Appendix A
Liftoff - Linear/Nonlinear Comparison

Table A-1. Pump Module IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	4.018	7.940	CLO1013	4.417	7.945	CLO1001	0.400	9.943
2	Net Load Factor - T2 (g)	4.174	7.307	CLO1023	4.214	5.611	CLO1002	0.040	0.965
3	Net Load Factor - T3 (g)	2.043	4.125	CLO1013	2.202	4.000	CLO1013	0.159	7.803
4	Net Load Factor - R1 (rad/sec^2)	29.597	7.392	CLO1020	35.501	5.527	CLO1002	5.904	19.946
5	Net Load Factor - R2 (rad/sec^2)	28.519	7.392	CLO1018	29.193	8.085	CLO1001	0.674	2.364
6	Net Load Factor - R3 (rad/sec^2)	29.631	7.941	CLO1001	45.389	7.886	CLO1001	15.758	53.180
7	ID 29047 - T2 (lbf)	3270.759	7.939	CLO1013	3942.137	7.945	CLO1013	671.378	20.527
8	ID 29048 - T1 (lbf)	1898.756	4.129	CLO1013	2073.513	5.213	CLO1002	174.756	9.204
9	ID 29048 - T2 (lbf)	2399.302	7.940	CLO1001	2842.366	5.284	CLO1014	443.064	18.466
10	ID 29050 - T1 (lbf)	2234.164	5.866	CLO1002	2374.285	5.521	CLO1002	140.122	6.272
11	ID 40016 - T3 (lbf)	2973.559	5.453	CLO1014	2883.312	5.447	CLO1002	-90.247	-3.035
12	ID 40030 - T3 (lbf)	2967.238	7.603	CLO1001	3353.146	7.947	CLO1013	385.908	13.006
13	ID 40515 - T3 (lbf)	3038.751	5.866	CLO1002	2850.177	5.527	CLO1002	-188.574	-6.206
14	ID 40516 - T3 (lbf)	2938.999	7.940	CLO1001	3054.574	7.951	CLO1001	115.576	3.932
15	Net Inertial Acc - T1 (in/sec^2)	1551.271	7.940	CLO1013	1705.515	7.945	CLO1001	154.245	9.943
16	Net Inertial Acc - T2 (in/sec^2)	1611.594	7.307	CLO1023	1627.146	5.611	CLO1002	15.552	0.965
17	Net Inertial Acc - T3 (in/sec^2)	788.717	4.125	CLO1013	850.263	4.000	CLO1013	61.546	7.803
18	Net Inertial Acc - R1 (rad/sec^2)	29.597	7.392	CLO1020	35.501	5.527	CLO1002	5.904	19.946
19	Net Inertial Acc - R2 (rad/sec^2)	28.519	7.392	CLO1018	29.193	8.085	CLO1001	0.674	2.364
20	Net Inertial Acc - R3 (rad/sec^2)	29.631	7.941	CLO1001	45.389	7.886	CLO1001	15.758	53.180

Table A-2. Pump Module IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.105	7.942	CLO1013	4.899	8.110	CLO1013	1.793	57.755
2	Net Load Factor - T2 (g)	3.887	7.308	CLO1023	4.895	7.933	CLO1013	1.008	25.944
3	Net Load Factor - T3 (g)	1.915	4.126	CLO1013	2.936	5.532	CLO1014	1.021	53.339
4	Net Load Factor - R1 (rad/sec^2)	24.644	7.323	CLO1020	55.707	7.936	CLO1013	31.063	126.048
5	Net Load Factor - R2 (rad/sec^2)	29.146	7.394	CLO1018	53.634	8.039	CLO1001	24.488	84.017
6	Net Load Factor - R3 (rad/sec^2)	29.859	7.947	CLO1001	64.769	7.952	CLO1013	34.911	116.920
7	ID 10942 - T1 (lbf)	1430.380	7.723	CLO1008	1445.678	7.503	CLO1001	15.297	1.069
8	ID 10942 - T3 (lbf)	1930.115	7.940	CLO1013	2249.455	7.943	CLO1013	319.340	16.545
9	ID 10942 - R1 (lbf-in)	37.479	7.345	CLO1016	33.670	8.113	CLO1013	-3.809	-10.163
10	ID 10942 - R2 (lbf-in)	0.049	7.938	CLO1013	0.057	7.945	CLO1001	0.008	17.377
11	ID 11715 - T1 (lbf)	1508.981	5.612	CLO1014	1628.105	5.778	CLO1002	119.124	7.894
12	ID 11715 - T2 (lbf)	1146.195	7.723	CLO1020	1548.982	5.529	CLO1014	402.786	35.141
13	ID 11715 - T3 (lbf)	1857.734	7.938	CLO1001	2257.388	7.945	CLO1013	399.654	21.513
14	ID 11715 - R1 (lbf-in)	294.780	7.723	CLO1020	417.305	5.529	CLO1014	122.525	41.565
15	ID 11715 - R2 (lbf-in)	0.225	7.723	CLO1020	0.321	5.529	CLO1014	0.096	42.573
16	ID 29047 - T2 (lbf)	3270.759	7.939	CLO1013	3942.137	7.945	CLO1013	671.378	20.527
17	ID 29048 - T1 (lbf)	1898.756	4.129	CLO1013	2073.513	5.213	CLO1002	174.756	9.204
18	ID 29048 - T2 (lbf)	2399.302	7.940	CLO1001	2842.366	5.284	CLO1014	443.064	18.466
19	ID 29050 - T1 (lbf)	2234.164	5.866	CLO1002	2374.285	5.521	CLO1002	140.122	6.272
20	ID 40016 - T3 (lbf)	2973.559	5.453	CLO1014	2883.312	5.447	CLO1002	-90.247	-3.035
21	ID 40030 - T3 (lbf)	2967.238	7.603	CLO1001	3353.146	7.947	CLO1013	385.908	13.006
22	ID 40515 - T3 (lbf)	3038.751	5.866	CLO1002	2850.177	5.527	CLO1002	-188.574	-6.206
23	ID 40516 - T3 (lbf)	2938.999	7.940	CLO1001	3054.574	7.951	CLO1001	115.576	3.932
24	ID 620001 - T1 (lbf)	1012.707	7.304	CLO1023	1250.119	7.938	CLO1013	237.412	23.443
25	ID 620001 - T2 (lbf)	1038.866	7.345	CLO1016	1034.590	7.982	CLO1013	-4.276	-0.412
26	ID 630001 - T1 (lbf)	1405.484	7.939	CLO1013	1508.869	7.950	CLO1001	103.385	7.356
27	Net Inertial Acc - T1 (in/sec^2)	1198.892	7.942	CLO1013	1891.305	8.110	CLO1013	692.414	57.755
28	Net Inertial Acc - T2 (in/sec^2)	1500.737	7.308	CLO1023	1890.093	7.933	CLO1013	389.356	25.944
29	Net Inertial Acc - T3 (in/sec^2)	739.348	4.126	CLO1013	1133.709	5.532	CLO1014	394.361	53.339
30	Net Inertial Acc - R1 (rad/sec^2)	24.644	7.323	CLO1020	55.707	7.936	CLO1013	31.063	126.048
31	Net Inertial Acc - R2 (rad/sec^2)	29.146	7.394	CLO1018	53.634	8.039	CLO1001	24.488	84.017
32	Net Inertial Acc - R3 (rad/sec^2)	29.859	7.947	CLO1001	64.769	7.952	CLO1013	34.911	116.920

Table A-3. Pump Module IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	4.743	7.939	CLO1013	5.478	7.944	CLO1013	0.735	15.495
2	Net Load Factor - T2 (g)	4.393	7.307	CLO1023	4.158	5.613	CLO1002	-0.235	-5.342
3	Net Load Factor - T3 (g)	2.432	7.723	CLO1020	2.541	5.515	CLO1002	0.109	4.477
4	Net Load Factor - R1 (rad/sec^2)	30.959	7.391	CLO1020	46.390	7.976	CLO1001	15.431	49.843
5	Net Load Factor - R2 (rad/sec^2)	31.226	7.409	CLO1006	44.293	8.081	CLO1001	13.066	41.844
6	Net Load Factor - R3 (rad/sec^2)	29.898	7.940	CLO1001	58.550	7.949	CLO1001	28.652	95.830
7	ID 250604 - T1 (lbf)	1430.380	7.723	CLO1008	1445.678	7.503	CLO1001	15.297	1.069
8	ID 250604 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
9	ID 250604 - T3 (lbf)	1930.115	7.940	CLO1013	2249.455	7.943	CLO1013	319.340	16.545
10	ID 250604 - R1 (lbf-in)	37.479	7.345	CLO1016	33.670	8.113	CLO1013	-3.809	-10.163
11	ID 250604 - R2 (lbf-in)	0.049	7.938	CLO1013	0.057	7.945	CLO1001	0.008	17.377
12	ID 250604 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
13	ID 250605 - T1 (lbf)	1508.981	5.612	CLO1014	1628.105	5.778	CLO1002	119.124	7.894
14	ID 250605 - T2 (lbf)	1146.195	7.723	CLO1020	1548.982	5.529	CLO1014	402.786	35.141
15	ID 250605 - T3 (lbf)	1857.734	7.938	CLO1001	2257.388	7.945	CLO1013	399.654	21.513
16	ID 250605 - R1 (lbf-in)	294.780	7.723	CLO1020	417.305	5.529	CLO1014	122.525	41.565
17	ID 250605 - R2 (lbf-in)	0.225	7.723	CLO1020	0.321	5.529	CLO1014	0.096	42.573
18	ID 250605 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
19	ID 250655 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
20	ID 250655 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
21	ID 250655 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
22	ID 250655 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
23	ID 250655 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
24	ID 250655 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
25	ID 250664 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
26	ID 250664 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
27	ID 250664 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
28	ID 250664 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
29	ID 250664 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
30	ID 250664 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
31	ID 250694 - T1 (lbf)	1405.484	7.939	CLO1013	1508.869	7.950	CLO1001	103.385	7.356
32	ID 250729 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
33	ID 250729 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
34	ID 250729 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
35	ID 250729 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
36	ID 250729 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
37	ID 250729 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
38	ID 250752 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
39	ID 250752 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
40	ID 250752 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
41	ID 250752 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
42	ID 250752 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
43	ID 250752 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
44	ID 250768 - T1 (lbf)	1012.707	7.304	CLO1023	1250.119	7.938	CLO1013	237.412	23.443
45	ID 250768 - T2 (lbf)	1038.866	7.345	CLO1016	1034.590	7.982	CLO1013	-4.276	-0.412
46	Net Inertial Acc - T1 (in/sec^2)	1831.281	7.939	CLO1013	2115.041	7.944	CLO1013	283.760	15.495
47	Net Inertial Acc - T2 (in/sec^2)	1696.047	7.307	CLO1023	1605.442	5.613	CLO1002	-90.605	-5.342
48	Net Inertial Acc - T3 (in/sec^2)	938.932	7.723	CLO1020	980.965	5.515	CLO1002	42.033	4.477
49	Net Inertial Acc - R1 (rad/sec^2)	30.959	7.391	CLO1020	46.390	7.976	CLO1001	15.431	49.843
50	Net Inertial Acc - R2 (rad/sec^2)	31.226	7.409	CLO1006	44.293	8.081	CLO1001	13.066	41.844

Table A-3. Pump Module IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

		Data-Set A			Data-Set B			Difference	
No	Description	Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	Net Inertial Acc - R3 (rad/sec^2)	29.898	7.940	CLO1001	58.550	7.949	CLO1001	28.652	95.830

Table A-4. Space-to-Ground Antenna IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.291	5.198	CLO1014	2.558	5.276	CLO1014	0.267	11.640
2	Net Load Factor - T2 (g)	2.038	7.186	CLO1008	2.459	7.192	CLO1014	0.421	20.662
3	Net Load Factor - T3 (g)	3.842	7.288	CLO1023	4.074	7.303	CLO1023	0.231	6.025
4	Net Load Factor - R1 (rad/sec^2)	28.157	7.268	CLO1003	38.027	5.936	CLO1002	9.871	35.055
5	Net Load Factor - R2 (rad/sec^2)	24.889	7.059	CLO1022	43.123	4.833	CLO1013	18.233	73.259
6	Net Load Factor - R3 (rad/sec^2)	15.780	6.945	CLO1006	23.966	7.147	CLO1004	8.186	51.875
7	ID 40301 - T1 (lbf)	1486.077	5.202	CLO1014	1495.472	5.346	CLO1014	9.395	0.632
8	ID 40301 - T2 (lbf)	1993.188	5.865	CLO1014	1691.705	5.443	CLO1014	-301.483	-15.126
9	ID 40302 - T1 (lbf)	955.515	5.864	CLO1002	946.254	4.909	CLO1013	-9.261	-0.969
10	ID 40303 - T2 (lbf)	830.277	7.835	CLO1023	751.450	7.924	CLO1006	-78.827	-9.494
11	ID 40311 - T3 (lbf)	1744.952	8.000	CLO1012	1876.480	7.235	CLO1014	131.528	7.538
12	ID 40312 - T3 (lbf)	1524.901	5.794	CLO1002	1517.879	5.452	CLO1014	-7.022	-0.461
13	ID 40313 - T3 (lbf)	1508.949	5.271	CLO1002	1437.701	5.290	CLO1014	-71.248	-4.722
14	ID 40314 - T3 (lbf)	737.918	8.129	CLO1006	662.592	6.938	CLO1025	-75.326	-10.208
15	Net Inertial Acc - T1 (in/sec^2)	884.627	5.198	CLO1014	987.528	5.276	CLO1014	102.901	11.632
16	Net Inertial Acc - T2 (in/sec^2)	786.789	7.186	CLO1008	949.353	7.192	CLO1014	162.564	20.662
17	Net Inertial Acc - T3 (in/sec^2)	1483.539	7.288	CLO1023	1572.916	7.303	CLO1023	89.377	6.025
18	Net Inertial Acc - R1 (rad/sec^2)	28.156	7.268	CLO1003	38.026	5.936	CLO1002	9.871	35.058
19	Net Inertial Acc - R2 (rad/sec^2)	24.886	7.059	CLO1022	43.121	4.833	CLO1013	18.234	73.271
20	Net Inertial Acc - R3 (rad/sec^2)	15.780	6.945	CLO1006	23.966	7.147	CLO1004	8.186	51.876

Table A-5. Space-to-Ground Antenna IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.914	6.945	CLO1023	3.714	3.979	CLO1013	0.801	27.481
2	Net Load Factor - T2 (g)	2.584	7.265	CLO1015	4.097	5.348	CLO1014	1.513	58.532
3	Net Load Factor - T3 (g)	4.086	7.284	CLO1023	4.378	5.633	CLO1014	0.292	7.150
4	Net Load Factor - R1 (rad/sec^2)	44.634	7.270	CLO1003	50.306	7.924	CLO1013	5.672	12.708
5	Net Load Factor - R2 (rad/sec^2)	28.754	7.222	CLO1011	63.394	4.108	CLO1001	34.641	120.475
6	Net Load Factor - R3 (rad/sec^2)	34.928	7.392	CLO1019	49.366	4.370	CLO1024	14.438	41.336
7	ID 3805 - T1 (lbf)	284.158	7.687	CLO1014	398.977	8.612	CLO1019	114.820	40.407
8	ID 3805 - T2 (lbf)	242.039	7.220	CLO1011	328.799	4.984	CLO1012	86.760	35.845
9	ID 3805 - T3 (lbf)	277.949	7.459	CLO1006	315.347	7.093	CLO1004	37.398	13.455
10	ID 3984 - T1 (lbf)	326.508	7.105	CLO1003	467.552	7.469	CLO1013	141.045	43.198
11	ID 3984 - T2 (lbf)	332.710	5.200	CLO1014	428.610	5.194	CLO1002	95.900	28.824
12	ID 3984 - T3 (lbf)	325.215	7.078	CLO1010	284.277	9.848	CLO1007	-40.938	-12.588
13	ID 4136 - T1 (lbf)	322.335	7.228	CLO1028	400.957	4.401	CLO1001	78.622	24.392
14	ID 4136 - T2 (lbf)	281.083	5.864	CLO1014	296.585	5.449	CLO1014	15.503	5.515
15	ID 4136 - T3 (lbf)	375.747	7.047	CLO1006	368.393	5.359	CLO1014	-7.355	-1.957
16	ID 4308 - T1 (lbf)	308.847	7.190	CLO1025	373.664	7.192	CLO1004	64.817	20.987
17	ID 4308 - T2 (lbf)	263.181	7.046	CLO1006	271.714	7.192	CLO1004	8.533	3.242
18	ID 4308 - T3 (lbf)	316.546	7.287	CLO1006	375.230	7.929	CLO1013	58.684	18.539
19	Net Inertial Acc - T1 (in/sec^2)	1124.794	6.945	CLO1023	1434.213	3.979	CLO1013	309.419	27.509
20	Net Inertial Acc - T2 (in/sec^2)	997.753	7.265	CLO1015	1581.919	5.348	CLO1014	584.166	58.548
21	Net Inertial Acc - T3 (in/sec^2)	1577.739	7.284	CLO1023	1690.500	5.633	CLO1014	112.762	7.147
22	Net Inertial Acc - R1 (rad/sec^2)	44.632	7.270	CLO1003	50.304	7.924	CLO1013	5.672	12.708
23	Net Inertial Acc - R2 (rad/sec^2)	28.720	7.222	CLO1011	63.374	4.108	CLO1001	34.655	120.665
24	Net Inertial Acc - R3 (rad/sec^2)	34.936	7.392	CLO1019	49.362	4.370	CLO1024	14.426	41.291

Table A-6. Space-to-Ground Antenna IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.212	5.198	CLO1014	2.704	5.203	CLO1002	0.493	22.278
2	Net Load Factor - T2 (g)	1.928	8.108	CLO1001	2.604	5.442	CLO1014	0.677	35.110
3	Net Load Factor - T3 (g)	3.892	7.290	CLO1023	4.274	7.255	CLO1015	0.382	9.804
4	Net Load Factor - R1 (rad/sec^2)	24.930	7.317	CLO1023	42.251	5.936	CLO1002	17.322	69.481
5	Net Load Factor - R2 (rad/sec^2)	23.624	7.060	CLO1010	41.118	8.257	CLO1013	17.494	74.051
6	Net Load Factor - R3 (rad/sec^2)	17.063	6.944	CLO1006	29.250	9.298	CLO1001	12.187	71.427
7	ID 5293 - T1 (lbf)	284.158	7.687	CLO1014	398.977	8.612	CLO1019	114.820	40.407
8	ID 5293 - T2 (lbf)	242.039	7.220	CLO1011	328.799	4.984	CLO1012	86.760	35.845
9	ID 5293 - T3 (lbf)	277.949	7.459	CLO1006	315.347	7.093	CLO1004	37.398	13.455
10	ID 5294 - T1 (lbf)	326.508	7.105	CLO1003	467.552	7.469	CLO1013	141.045	43.198
11	ID 5294 - T2 (lbf)	332.710	5.200	CLO1014	428.610	5.194	CLO1002	95.900	28.824
12	ID 5294 - T3 (lbf)	325.215	7.078	CLO1010	284.277	9.848	CLO1007	-40.938	-12.588
13	ID 5295 - T1 (lbf)	322.335	7.228	CLO1028	400.957	4.401	CLO1001	78.622	24.392
14	ID 5295 - T2 (lbf)	281.083	5.864	CLO1014	296.585	5.449	CLO1014	15.503	5.515
15	ID 5295 - T3 (lbf)	375.747	7.047	CLO1006	368.393	5.359	CLO1014	-7.355	-1.957
16	ID 5296 - T1 (lbf)	308.847	7.190	CLO1025	373.664	7.192	CLO1004	64.817	20.987
17	ID 5296 - T2 (lbf)	263.181	7.046	CLO1006	271.714	7.192	CLO1004	8.533	3.242
18	ID 5296 - T3 (lbf)	316.546	7.287	CLO1006	375.230	7.929	CLO1013	58.684	18.539
19	ID 40301 - T1 (lbf)	1486.077	5.202	CLO1014	1495.472	5.346	CLO1014	9.395	0.632
20	ID 40301 - T2 (lbf)	1993.188	5.865	CLO1014	1691.705	5.443	CLO1014	-301.483	-15.126
21	ID 40302 - T1 (lbf)	955.515	5.864	CLO1002	946.254	4.909	CLO1013	-9.261	-0.969
22	ID 40303 - T2 (lbf)	830.277	7.835	CLO1023	751.450	7.924	CLO1006	-78.827	-9.494
23	ID 40311 - T3 (lbf)	1744.952	8.000	CLO1012	1876.480	7.235	CLO1014	131.528	7.538
24	ID 40312 - T3 (lbf)	1524.901	5.794	CLO1002	1517.879	5.452	CLO1014	-7.022	-0.461
25	ID 40313 - T3 (lbf)	1508.949	5.271	CLO1002	1437.701	5.290	CLO1014	-71.248	-4.722
26	ID 40314 - T3 (lbf)	737.918	8.129	CLO1006	662.592	6.938	CLO1025	-75.326	-10.208
27	Net Inertial Acc - T1 (in/sec^2)	853.904	5.198	CLO1014	1044.134	5.203	CLO1002	190.230	22.278
28	Net Inertial Acc - T2 (in/sec^2)	744.209	8.108	CLO1001	1005.502	5.442	CLO1014	261.292	35.110
29	Net Inertial Acc - T3 (in/sec^2)	1502.760	7.290	CLO1023	1650.089	7.255	CLO1015	147.330	9.804
30	Net Inertial Acc - R1 (rad/sec^2)	24.930	7.317	CLO1023	42.251	5.936	CLO1002	17.322	69.481
31	Net Inertial Acc - R2 (rad/sec^2)	23.624	7.060	CLO1010	41.118	8.257	CLO1013	17.494	74.051
32	Net Inertial Acc - R3 (rad/sec^2)	17.063	6.944	CLO1006	29.250	9.298	CLO1001	12.187	71.427

Table A-7. Linear Drive Unit IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.253	7.187	CLO1002	3.059	7.906	CLO1013	0.806	35.776
2	Net Load Factor - T2 (g)	1.646	5.199	CLO1014	3.012	5.280	CLO1002	1.366	82.975
3	Net Load Factor - T3 (g)	6.020	5.786	CLO1014	6.615	5.784	CLO1002	0.596	9.893
4	Net Load Factor - R1 (rad/sec^2)	19.660	7.296	CLO1023	59.259	7.906	CLO1013	39.599	201.425
5	Net Load Factor - R2 (rad/sec^2)	33.891	7.133	CLO1011	90.416	7.185	CLO1016	56.525	166.786
6	Net Load Factor - R3 (rad/sec^2)	8.827	6.895	CLO1020	46.462	7.910	CLO1001	37.634	426.336
7	ID 40301 - T1 (lbf)	842.405	8.102	CLO1001	991.765	8.513	CLO1007	149.360	17.730
8	ID 40301 - T2 (lbf)	962.722	7.262	CLO1010	1710.671	5.280	CLO1002	747.949	77.691
9	ID 40302 - T1 (lbf)	827.353	5.787	CLO1014	1217.342	7.906	CLO1013	389.990	47.137
10	ID 40303 - T2 (lbf)	794.155	7.118	CLO1023	863.715	7.910	CLO1001	69.560	8.759
11	ID 40311 - T3 (lbf)	1066.320	5.791	CLO1002	1173.082	5.959	CLO1002	106.761	10.012
12	ID 40312 - T3 (lbf)	1737.166	5.785	CLO1014	2060.037	5.283	CLO1002	322.871	18.586
13	ID 40313 - T3 (lbf)	1164.022	7.077	CLO1010	1155.173	7.983	CLO1013	-8.849	-0.760
14	ID 40314 - T3 (lbf)	398.228	7.232	CLO1015	555.196	5.281	CLO1002	156.968	39.417
15	Net Inertial Acc - T1 (in/sec^2)	869.826	7.187	CLO1002	1181.012	7.906	CLO1013	311.186	35.776
16	Net Inertial Acc - T2 (in/sec^2)	635.548	5.199	CLO1014	1162.897	5.280	CLO1002	527.349	82.975
17	Net Inertial Acc - T3 (in/sec^2)	2324.158	5.786	CLO1014	2554.090	5.784	CLO1002	229.932	9.893
18	Net Inertial Acc - R1 (rad/sec^2)	19.660	7.296	CLO1023	59.259	7.906	CLO1013	39.599	201.425
19	Net Inertial Acc - R2 (rad/sec^2)	33.891	7.133	CLO1011	90.416	7.185	CLO1016	56.525	166.786
20	Net Inertial Acc - R3 (rad/sec^2)	8.827	6.895	CLO1020	46.462	7.910	CLO1001	37.634	426.336

Table A-8. Linear Drive Unit IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.780	7.186	CLO1002	3.607	5.366	CLO1014	0.827	29.751
2	Net Load Factor - T2 (g)	1.991	7.070	CLO1007	4.529	5.280	CLO1002	2.537	127.403
3	Net Load Factor - T3 (g)	5.926	5.785	CLO1014	7.345	5.943	CLO1002	1.419	23.939
4	Net Load Factor - R1 (rad/sec^2)	21.035	7.296	CLO1023	61.635	7.907	CLO1013	40.600	193.017
5	Net Load Factor - R2 (rad/sec^2)	45.873	7.132	CLO1011	127.112	7.006	CLO1008	81.239	177.095
6	Net Load Factor - R3 (rad/sec^2)	12.739	7.258	CLO1011	85.648	7.910	CLO1001	72.909	572.329
7	ID 97001 - T1 (lbf)	228.900	5.791	CLO1002	278.956	5.538	CLO1014	50.056	21.868
8	ID 97001 - T2 (lbf)	131.900	7.142	CLO1020	287.781	7.945	CLO1013	155.881	118.181
9	ID 97001 - T3 (lbf)	358.575	5.791	CLO1002	468.371	5.790	CLO1002	109.796	30.620
10	ID 97002 - T1 (lbf)	233.419	7.073	CLO1003	292.174	8.513	CLO1007	58.755	25.172
11	ID 97002 - T2 (lbf)	228.707	7.137	CLO1002	351.987	6.127	CLO1014	123.281	53.903
12	ID 97002 - T3 (lbf)	665.105	7.076	CLO1010	756.560	5.943	CLO1002	91.455	13.750
13	ID 97003 - T1 (lbf)	329.236	5.787	CLO1014	474.701	9.177	CLO1013	145.465	44.183
14	ID 97003 - T2 (lbf)	399.167	7.261	CLO1010	700.062	5.280	CLO1002	300.895	75.381
15	ID 97003 - T3 (lbf)	471.769	5.787	CLO1014	640.787	5.791	CLO1002	169.018	35.826
16	ID 97004 - T1 (lbf)	169.199	7.073	CLO1003	240.302	7.910	CLO1001	71.104	42.024
17	ID 97004 - T2 (lbf)	180.985	7.062	CLO1030	282.220	5.214	CLO1002	101.235	55.936
18	ID 97004 - T3 (lbf)	444.185	7.072	CLO1003	603.320	5.943	CLO1002	159.135	35.826
19	Net Inertial Acc - T1 (in/sec^2)	1073.350	7.186	CLO1002	1392.686	5.366	CLO1014	319.336	29.751
20	Net Inertial Acc - T2 (in/sec^2)	768.875	7.070	CLO1007	1748.449	5.280	CLO1002	979.573	127.403
21	Net Inertial Acc - T3 (in/sec^2)	2288.140	5.785	CLO1014	2835.903	5.943	CLO1002	547.764	23.939
22	Net Inertial Acc - R1 (rad/sec^2)	21.035	7.296	CLO1023	61.635	7.907	CLO1013	40.600	193.017
23	Net Inertial Acc - R2 (rad/sec^2)	45.873	7.132	CLO1011	127.112	7.006	CLO1008	81.239	177.095
24	Net Inertial Acc - R3 (rad/sec^2)	12.739	7.258	CLO1011	85.648	7.910	CLO1001	72.909	572.329

Table A-9. Linear Drive Unit IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.965	7.189	CLO1002	4.024	7.906	CLO1013	2.059	104.818
2	Net Load Factor - T2 (g)	1.590	5.199	CLO1014	3.130	5.276	CLO1002	1.540	96.896
3	Net Load Factor - T3 (g)	6.084	5.786	CLO1014	7.024	5.784	CLO1002	0.940	15.450
4	Net Load Factor - R1 (rad/sec^2)	19.028	7.297	CLO1023	69.360	7.905	CLO1013	50.332	264.509
5	Net Load Factor - R2 (rad/sec^2)	33.157	7.136	CLO1011	96.769	7.185	CLO1016	63.613	191.854
6	Net Load Factor - R3 (rad/sec^2)	8.320	7.015	CLO1023	51.225	7.288	CLO1002	42.904	515.661
7	ID 30001 - T1 (lbf)	228.900	5.791	CLO1002	278.956	5.538	CLO1014	50.056	21.868
8	ID 30001 - T2 (lbf)	131.900	7.142	CLO1020	287.781	7.945	CLO1013	155.881	118.181
9	ID 30001 - T3 (lbf)	358.575	5.791	CLO1002	468.371	5.790	CLO1002	109.796	30.620
10	ID 30002 - T1 (lbf)	233.419	7.073	CLO1003	292.174	8.513	CLO1007	58.755	25.172
11	ID 30002 - T2 (lbf)	228.707	7.137	CLO1002	351.987	6.127	CLO1014	123.281	53.903
12	ID 30002 - T3 (lbf)	665.105	7.076	CLO1010	756.560	5.943	CLO1002	91.455	13.750
13	ID 30003 - T1 (lbf)	329.236	5.787	CLO1014	474.701	9.177	CLO1013	145.465	44.183
14	ID 30003 - T2 (lbf)	399.167	7.261	CLO1010	700.062	5.280	CLO1002	300.895	75.381
15	ID 30003 - T3 (lbf)	471.769	5.787	CLO1014	640.787	5.791	CLO1002	169.018	35.826
16	ID 30004 - T1 (lbf)	169.199	7.073	CLO1003	240.302	7.910	CLO1001	71.104	42.024
17	ID 30004 - T2 (lbf)	180.985	7.062	CLO1030	282.220	5.214	CLO1002	101.235	55.936
18	ID 30004 - T3 (lbf)	444.185	7.072	CLO1003	603.320	5.943	CLO1002	159.135	35.826
19	ID 40301 - T1 (lbf)	842.405	8.102	CLO1001	991.765	8.513	CLO1007	149.360	17.730
20	ID 40301 - T2 (lbf)	962.722	7.262	CLO1010	1710.671	5.280	CLO1002	747.949	77.691
21	ID 40302 - T1 (lbf)	827.353	5.787	CLO1014	1217.342	7.906	CLO1013	389.990	47.137
22	ID 40303 - T2 (lbf)	794.155	7.118	CLO1023	863.715	7.910	CLO1001	69.560	8.759
23	ID 40311 - T3 (lbf)	1066.320	5.791	CLO1002	1173.082	5.959	CLO1002	106.761	10.012
24	ID 40312 - T3 (lbf)	1737.166	5.785	CLO1014	2060.037	5.283	CLO1002	322.871	18.586
25	ID 40313 - T3 (lbf)	1164.022	7.077	CLO1010	1155.173	7.983	CLO1013	-8.849	-0.760
26	ID 40314 - T3 (lbf)	398.228	7.232	CLO1015	555.196	5.281	CLO1002	156.968	39.417
27	Net Inertial Acc - T1 (in/sec^2)	758.493	7.189	CLO1002	1553.528	7.906	CLO1013	795.035	104.818
28	Net Inertial Acc - T2 (in/sec^2)	613.698	5.199	CLO1014	1208.350	5.276	CLO1002	594.652	96.896
29	Net Inertial Acc - T3 (in/sec^2)	2348.932	5.786	CLO1014	2711.848	5.784	CLO1002	362.916	15.450
30	Net Inertial Acc - R1 (rad/sec^2)	19.028	7.297	CLO1023	69.360	7.905	CLO1013	50.332	264.509
31	Net Inertial Acc - R2 (rad/sec^2)	33.157	7.136	CLO1011	96.769	7.185	CLO1016	63.613	191.854
32	Net Inertial Acc - R3 (rad/sec^2)	8.320	7.015	CLO1023	51.225	7.288	CLO1002	42.904	515.661

Table A-10. Battery 1 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.053	5.197	CLO1014	3.809	5.338	CLO1002	1.756	85.519
2	Net Load Factor - T2 (g)	1.858	7.868	CLO1013	3.211	8.116	CLO1001	1.353	72.835
3	Net Load Factor - T3 (g)	3.581	7.174	CLO1024	3.888	6.986	CLO1012	0.308	8.591
4	Net Load Factor - R1 (rad/sec^2)	21.207	5.866	CLO1002	75.879	8.147	CLO1001	54.673	257.809
5	Net Load Factor - R2 (rad/sec^2)	34.883	7.135	CLO1028	49.842	5.476	CLO1014	14.959	42.883
6	Net Load Factor - R3 (rad/sec^2)	18.092	7.570	CLO1018	70.278	4.984	CLO1024	52.186	288.443
7	GRID 653 - T2 (lbf)	1118.856	6.940	CLO1023	2561.081	4.984	CLO1024	1442.225	128.902
8	GRID 653 - T3 (lbf)	734.844	7.126	CLO1014	1046.045	5.465	CLO1014	311.201	42.349
9	GRID 654 - T3 (lbf)	253.670	7.113	CLO1028	454.175	4.984	CLO1024	200.505	79.042
10	GRID 655 - T1 (lbf)	1101.653	5.197	CLO1014	2043.775	5.338	CLO1002	942.122	85.519
11	GRID 655 - T3 (lbf)	655.696	7.627	CLO1008	955.901	5.339	CLO1002	300.205	45.784
12	GRID 2183 - T2 (lbf)	1173.086	7.555	CLO1018	3090.300	5.336	CLO1002	1917.215	163.433
13	GRID 2183 - T3 (lbf)	704.302	7.291	CLO1011	1009.126	8.105	CLO1001	304.824	43.280
14	GRID 2184 - T3 (lbf)	273.821	7.538	CLO1013	509.520	5.332	CLO1014	235.699	86.078
15	GRID 2185 - T3 (lbf)	846.202	7.315	CLO1023	1012.805	5.264	CLO1014	166.604	19.688
16	Net Inertial Acc - T1 (in/sec^2)	792.687	5.197	CLO1014	1470.585	5.338	CLO1002	677.898	85.519
17	Net Inertial Acc - T2 (in/sec^2)	717.219	7.868	CLO1013	1239.603	8.116	CLO1001	522.384	72.835
18	Net Inertial Acc - T3 (in/sec^2)	1382.447	7.174	CLO1024	1501.219	6.986	CLO1012	118.772	8.591
19	Net Inertial Acc - R1 (rad/sec^2)	21.207	5.866	CLO1002	75.879	8.147	CLO1001	54.673	257.809
20	Net Inertial Acc - R2 (rad/sec^2)	34.883	7.135	CLO1028	49.842	5.476	CLO1014	14.959	42.883
21	Net Inertial Acc - R3 (rad/sec^2)	18.092	7.570	CLO1018	70.278	4.984	CLO1024	52.186	288.443

Table A-11. Battery 1 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.957	5.199	CLO1002	4.992	5.476	CLO1014	3.035	155.032
2	FSE Net Load Factor, Y axis	1.859	8.107	CLO1001	4.698	8.122	CLO1013	2.839	152.707
3	FSE Net Load Factor, Z axis	3.622	7.311	CLO1014	5.708	7.068	CLO1019	2.087	57.615
4	FSE Net Load Factor, RX axis	24.393	7.067	CLO1020	79.422	8.147	CLO1001	55.029	225.592
5	FSE Net Load Factor, RY axis	52.875	7.193	CLO1006	98.598	5.469	CLO1014	45.722	86.472
6	FSE Net Load Factor, RZ axis	26.853	7.560	CLO1018	101.843	5.402	CLO1014	74.990	279.261
7	ORU I/F Force Grid 990 Z axis	187.010	7.145	CLO1028	314.965	5.333	CLO1014	127.956	68.422
8	ORU I/F Force Grid 991 Z axis	181.079	7.478	CLO1006	313.909	5.338	CLO1014	132.830	73.355
9	ORU I/F Force Grid 9998 X axis	404.290	5.198	CLO1002	948.607	5.339	CLO1002	544.318	134.636
10	ORU I/F Force Grid 9998 Z axis	711.004	7.483	CLO1008	1015.341	7.064	CLO1019	304.337	42.804
11	ORU I/F Moment Grid 9998 RX axis	179.208	5.273	CLO1014	334.007	5.132	CLO1014	154.799	86.379
12	ORU I/F Moment Grid 9998 RY axis	2891.941	5.280	CLO1014	3944.529	5.342	CLO1002	1052.588	36.397
13	ORU I/F Moment Grid 9998 RZ axis	369.670	5.864	CLO1002	474.599	5.213	CLO1014	104.928	28.384
14	ORU I/F Force Grid 9999 X axis	402.896	7.553	CLO1018	1059.127	5.334	CLO1002	656.231	162.878
15	ORU I/F Force Grid 9999 Y axis	704.917	7.867	CLO1013	1303.127	8.115	CLO1001	598.210	84.863
16	ORU I/F Force Grid 9999 Z axis	592.200	7.301	CLO1023	863.088	8.117	CLO1001	270.888	45.743
17	ORU I/F Moment Grid 9999 RX axis	429.502	7.868	CLO1013	751.413	7.955	CLO1013	321.912	74.950
18	ORU I/F Moment Grid 9999 RY axis	1340.802	7.550	CLO1019	2511.804	5.334	CLO1002	1171.002	87.336
19	ORU I/F Moment Grid 9999 RZ axis	462.663	5.865	CLO1014	675.091	5.188	CLO1014	212.429	45.914
20	ORU Net Load Factor, X axis	2.106	5.196	CLO1002	4.029	5.338	CLO1002	1.923	91.306
21	ORU Net Load Factor, Y axis	1.939	7.867	CLO1013	3.585	8.115	CLO1001	1.646	84.863
22	ORU Net Load Factor, Z axis	3.634	7.174	CLO1024	4.699	5.766	CLO1002	1.065	29.293
23	ORU Net Load Factor, RX axis	20.863	5.866	CLO1002	86.187	8.113	CLO1013	65.324	313.102
24	ORU Net Load Factor, RY axis	44.707	7.145	CLO1020	74.292	8.067	CLO1013	29.584	66.174
25	ORU Net Load Factor, RZ axis	25.678	7.567	CLO1018	119.116	2.685	CLO1008	93.438	363.880
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1118.856	6.940	CLO1023	2561.081	4.984	CLO1024	1442.225	128.902
27	FSE/ORU Assy I/F Force Grid 653 Z axis	734.844	7.126	CLO1014	1046.045	5.465	CLO1014	311.201	42.349
28	FSE/ORU Assy I/F Force Grid 654 Z axis	253.670	7.113	CLO1028	454.175	4.984	CLO1024	200.505	79.042
29	FSE/ORU Assy I/F Force Grid 655 X axis	1101.653	5.197	CLO1014	2043.775	5.338	CLO1002	942.122	85.519
30	FSE/ORU Assy I/F Force Grid 655 Z axis	655.696	7.627	CLO1008	955.901	5.339	CLO1002	300.205	45.784
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1173.086	7.555	CLO1018	3090.300	5.336	CLO1002	1917.215	163.433
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	704.302	7.291	CLO1011	1009.126	8.105	CLO1001	304.824	43.280
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	273.821	7.538	CLO1013	509.520	5.332	CLO1014	235.699	86.078
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	846.202	7.315	CLO1023	1012.805	5.264	CLO1014	166.604	19.688
35	FSE/ORU Assy Net Load Factor, X axis	2.053	5.197	CLO1014	3.809	5.338	CLO1002	1.756	85.519
36	FSE/ORU Assy Net Load Factor, Y axis	1.858	7.868	CLO1013	3.211	8.116	CLO1001	1.353	72.835
37	FSE/ORU Assy Net Load Factor, Z axis	3.581	7.174	CLO1024	3.888	6.986	CLO1012	0.308	8.591
38	FSE/ORU Assy Net Load Factor, RX axis	21.207	5.866	CLO1002	75.879	8.147	CLO1001	54.673	257.809
39	FSE/ORU Assy Net Load Factor, RY axis	34.883	7.135	CLO1028	49.842	5.476	CLO1014	14.959	42.883
40	FSE/ORU Assy Net Load Factor, RZ axis	18.092	7.570	CLO1018	70.278	4.984	CLO1024	52.186	288.443

Table A-12. Battery 2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.856	5.198	CLO1002	3.285	5.332	CLO1014	1.430	77.049
2	Net Load Factor - T2 (g)	2.267	7.443	CLO1001	3.352	7.913	CLO1013	1.085	47.875
3	Net Load Factor - T3 (g)	4.446	7.296	CLO1023	4.803	5.625	CLO1014	0.357	8.028
4	Net Load Factor - R1 (rad/sec^2)	25.410	5.866	CLO1014	82.490	7.939	CLO1013	57.080	224.636
5	Net Load Factor - R2 (rad/sec^2)	36.517	7.103	CLO1004	50.684	5.363	CLO1002	14.166	38.793
6	Net Load Factor - R3 (rad/sec^2)	20.050	7.052	CLO1004	65.470	4.916	CLO1012	45.420	226.534
7	GRID 653 - T2 (lbf)	1112.066	7.189	CLO1011	2770.620	5.260	CLO1014	1658.554	149.142
8	GRID 653 - T3 (lbf)	714.457	7.260	CLO1004	973.672	8.840	CLO1023	259.215	36.281
9	GRID 654 - T3 (lbf)	262.055	7.115	CLO1028	409.749	5.332	CLO1014	147.695	56.360
10	GRID 655 - T1 (lbf)	995.617	5.198	CLO1002	1762.728	5.332	CLO1014	767.111	77.049
11	GRID 655 - T3 (lbf)	722.855	7.115	CLO1028	918.651	7.944	CLO1013	195.796	27.086
12	GRID 2183 - T2 (lbf)	1273.483	7.874	CLO1022	2448.553	5.330	CLO1014	1175.070	92.272
13	GRID 2183 - T3 (lbf)	683.126	7.193	CLO1029	1007.359	6.481	CLO1002	324.233	47.463
14	GRID 2184 - T3 (lbf)	317.867	7.281	CLO1016	401.600	5.261	CLO1002	83.733	26.342
15	GRID 2185 - T3 (lbf)	779.365	7.277	CLO1016	774.596	5.288	CLO1002	-4.769	-0.612
16	Net Inertial Acc - T1 (in/sec^2)	716.390	5.198	CLO1002	1268.359	5.332	CLO1014	551.969	77.049
17	Net Inertial Acc - T2 (in/sec^2)	875.203	7.443	CLO1001	1294.203	7.913	CLO1013	419.000	47.875
18	Net Inertial Acc - T3 (in/sec^2)	1716.584	7.296	CLO1023	1854.393	5.625	CLO1014	137.809	8.028
19	Net Inertial Acc - R1 (rad/sec^2)	25.410	5.866	CLO1014	82.490	7.939	CLO1013	57.080	224.636
20	Net Inertial Acc - R2 (rad/sec^2)	36.517	7.103	CLO1004	50.684	5.363	CLO1002	14.166	38.793
21	Net Inertial Acc - R3 (rad/sec^2)	20.050	7.052	CLO1004	65.470	4.916	CLO1012	45.420	226.534

Table A-13. Battery 2 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.910	5.200	CLO1014	4.132	5.398	CLO1002	2.222	116.373
2	FSE Net Load Factor, Y axis	2.216	7.446	CLO1001	4.885	8.178	CLO1001	2.669	120.430
3	FSE Net Load Factor, Z axis	4.653	7.298	CLO1023	5.781	6.116	CLO1002	1.128	24.247
4	FSE Net Load Factor, RX axis	32.431	7.176	CLO1015	90.682	7.939	CLO1013	58.250	179.611
5	FSE Net Load Factor, RY axis	91.795	7.106	CLO1004	76.145	5.348	CLO1002	-15.650	-17.049
6	FSE Net Load Factor, RZ axis	28.855	7.192	CLO1011	105.217	5.262	CLO1014	76.362	264.639
7	ORU I/F Force Grid 990 Z axis	169.171	9.353	CLO1027	317.573	5.335	CLO1002	148.403	87.724
8	ORU I/F Force Grid 991 Z axis	177.872	7.124	CLO1018	291.353	5.335	CLO1002	113.481	63.799
9	ORU I/F Force Grid 9998 X axis	340.538	5.199	CLO1002	872.716	7.984	CLO1001	532.177	156.275
10	ORU I/F Force Grid 9998 Z axis	939.688	7.294	CLO1023	1002.400	7.942	CLO1013	62.712	6.674
11	ORU I/F Moment Grid 9998 RX axis	174.808	5.274	CLO1002	295.170	8.833	CLO1011	120.362	68.854
12	ORU I/F Moment Grid 9998 RY axis	1384.170	7.511	CLO1001	2307.254	7.984	CLO1001	923.084	66.689
13	ORU I/F Moment Grid 9998 RZ axis	137.953	7.261	CLO1004	351.868	8.015	CLO1001	213.915	155.064
14	ORU I/F Force Grid 9999 X axis	376.762	7.186	CLO1023	953.640	5.328	CLO1014	576.877	153.115
15	ORU I/F Force Grid 9999 Y axis	876.314	7.441	CLO1001	1540.297	7.911	CLO1013	663.983	75.770
16	ORU I/F Force Grid 9999 Z axis	694.603	5.616	CLO1014	856.845	5.624	CLO1002	162.242	23.357
17	ORU I/F Moment Grid 9999 RX axis	463.644	7.360	CLO1017	784.655	7.330	CLO1007	321.011	69.237
18	ORU I/F Moment Grid 9999 RY axis	1313.239	7.215	CLO1016	2296.755	5.215	CLO1002	983.517	74.892
19	ORU I/F Moment Grid 9999 RZ axis	188.423	7.635	CLO1013	461.141	5.258	CLO1014	272.718	144.737
20	ORU Net Load Factor, X axis	1.843	5.197	CLO1002	3.474	5.332	CLO1014	1.631	88.488
21	ORU Net Load Factor, Y axis	2.411	7.441	CLO1001	4.238	7.911	CLO1013	1.827	75.770
22	ORU Net Load Factor, Z axis	4.432	7.295	CLO1023	4.995	5.625	CLO1014	0.562	12.688
23	ORU Net Load Factor, RX axis	25.300	5.866	CLO1014	90.834	7.939	CLO1013	65.534	259.023
24	ORU Net Load Factor, RY axis	40.779	9.391	CLO1021	94.658	5.336	CLO1002	53.879	132.124
25	ORU Net Load Factor, RZ axis	29.558	7.051	CLO1016	109.419	4.914	CLO1012	79.861	270.186
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1112.066	7.189	CLO1011	2770.620	5.260	CLO1014	1658.554	149.142
27	FSE/ORU Assy I/F Force Grid 653 Z axis	714.457	7.260	CLO1004	973.672	8.840	CLO1023	259.215	36.281
28	FSE/ORU Assy I/F Force Grid 654 Z axis	262.055	7.115	CLO1028	409.749	5.332	CLO1014	147.695	56.360
29	FSE/ORU Assy I/F Force Grid 655 X axis	995.617	5.198	CLO1002	1762.728	5.332	CLO1014	767.111	77.049
30	FSE/ORU Assy I/F Force Grid 655 Z axis	722.855	7.115	CLO1028	918.651	7.944	CLO1013	195.796	27.086
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1273.483	7.874	CLO1022	2448.553	5.330	CLO1014	1175.070	92.272
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	683.126	7.193	CLO1029	1007.359	6.481	CLO1002	324.233	47.463
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	317.867	7.281	CLO1016	401.600	5.261	CLO1002	83.733	26.342
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	779.365	7.277	CLO1016	774.596	5.288	CLO1002	-4.769	-0.612
35	FSE/ORU Assy Net Load Factor, X axis	1.855	5.198	CLO1002	3.285	5.332	CLO1014	1.430	77.049
36	FSE/ORU Assy Net Load Factor, Y axis	2.267	7.443	CLO1001	3.352	7.913	CLO1013	1.085	47.875
37	FSE/ORU Assy Net Load Factor, Z axis	4.446	7.296	CLO1023	4.803	5.625	CLO1014	0.357	8.028
38	FSE/ORU Assy Net Load Factor, RX axis	25.410	5.866	CLO1014	82.490	7.939	CLO1013	57.080	224.636
39	FSE/ORU Assy Net Load Factor, RY axis	36.517	7.103	CLO1004	50.684	5.363	CLO1002	14.166	38.793
40	FSE/ORU Assy Net Load Factor, RZ axis	20.050	7.052	CLO1004	65.470	4.916	CLO1012	45.420	226.534

Table A-14. Battery 3 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.870	4.184	CLO1001	3.168	5.324	CLO1014	1.297	69.372
2	Net Load Factor - T2 (g)	2.144	7.318	CLO1023	3.176	7.982	CLO1013	1.032	48.120
3	Net Load Factor - T3 (g)	3.879	7.292	CLO1023	4.561	7.295	CLO1023	0.683	17.597
4	Net Load Factor - R1 (rad/sec^2)	31.436	7.273	CLO1003	100.031	8.010	CLO1013	68.596	218.209
5	Net Load Factor - R2 (rad/sec^2)	37.182	7.151	CLO1022	57.856	5.480	CLO1014	20.674	55.601
6	Net Load Factor - R3 (rad/sec^2)	20.675	6.946	CLO1007	65.372	5.260	CLO1002	44.696	216.182
7	GRID 653 - T2 (lbf)	1251.594	7.303	CLO1007	2692.198	5.261	CLO1014	1440.604	115.102
8	GRID 653 - T3 (lbf)	761.050	7.264	CLO1004	1122.884	5.480	CLO1014	361.835	47.544
9	GRID 654 - T3 (lbf)	293.221	7.053	CLO1003	409.090	6.656	CLO1002	115.869	39.516
10	GRID 655 - T1 (lbf)	1003.536	4.184	CLO1001	1699.708	5.324	CLO1014	696.172	69.372
11	GRID 655 - T3 (lbf)	929.630	7.294	CLO1023	1072.543	5.471	CLO1014	142.913	15.373
12	GRID 2183 - T2 (lbf)	1252.540	6.981	CLO1019	2170.727	5.261	CLO1014	918.187	73.306
13	GRID 2183 - T3 (lbf)	840.180	7.171	CLO1025	1022.246	5.280	CLO1002	182.067	21.670
14	GRID 2184 - T3 (lbf)	331.502	7.094	CLO1015	471.141	7.992	CLO1013	139.639	42.123
15	GRID 2185 - T3 (lbf)	793.278	5.865	CLO1002	1125.501	5.864	CLO1014	332.223	41.880
16	Net Inertial Acc - T1 (in/sec^2)	722.088	4.184	CLO1001	1223.014	5.324	CLO1014	500.926	69.372
17	Net Inertial Acc - T2 (in/sec^2)	827.799	7.318	CLO1023	1226.136	7.982	CLO1013	398.337	48.120
18	Net Inertial Acc - T3 (in/sec^2)	1497.609	7.292	CLO1023	1761.136	7.295	CLO1023	263.528	17.597
19	Net Inertial Acc - R1 (rad/sec^2)	31.436	7.273	CLO1003	100.031	8.010	CLO1013	68.596	218.209
20	Net Inertial Acc - R2 (rad/sec^2)	37.182	7.151	CLO1022	57.856	5.480	CLO1014	20.674	55.601
21	Net Inertial Acc - R3 (rad/sec^2)	20.675	6.946	CLO1007	65.372	5.260	CLO1002	44.696	216.182

Table A-15. Battery 3 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.851	4.185	CLO1001	3.553	5.325	CLO1014	1.702	91.969
2	FSE Net Load Factor, Y axis	2.313	7.315	CLO1015	4.876	7.831	CLO1005	2.563	110.799
3	FSE Net Load Factor, Z axis	4.180	7.290	CLO1014	5.858	8.154	CLO1001	1.678	40.136
4	FSE Net Load Factor, RX axis	54.606	7.315	CLO1015	101.434	8.011	CLO1013	46.828	85.757
5	FSE Net Load Factor, RY axis	61.032	7.154	CLO1010	85.015	4.248	CLO1015	23.983	39.295
6	FSE Net Load Factor, RZ axis	27.858	7.308	CLO1018	112.280	5.264	CLO1014	84.422	303.042
7	ORU I/F Force Grid 990 Z axis	214.805	9.065	CLO1007	357.692	5.406	CLO1014	142.887	66.519
8	ORU I/F Force Grid 991 Z axis	214.383	7.157	CLO1019	355.558	5.405	CLO1014	141.175	65.852
9	ORU I/F Force Grid 9998 X axis	346.530	4.185	CLO1013	863.808	5.202	CLO1002	517.278	149.273
10	ORU I/F Force Grid 9998 Z axis	789.533	7.292	CLO1023	1046.113	8.079	CLO1001	256.580	32.498
11	ORU I/F Moment Grid 9998 RX axis	198.863	7.290	CLO1014	317.910	7.986	CLO1013	119.047	59.864
12	ORU I/F Moment Grid 9998 RY axis	4037.687	5.864	CLO1002	4756.843	5.454	CLO1014	719.155	17.811
13	ORU I/F Moment Grid 9998 RZ axis	355.547	5.864	CLO1014	527.884	5.202	CLO1002	172.337	48.471
14	ORU I/F Force Grid 9999 X axis	402.825	9.064	CLO1007	992.237	5.259	CLO1002	589.411	146.319
15	ORU I/F Force Grid 9999 Y axis	850.804	7.316	CLO1023	1533.756	7.983	CLO1013	682.952	80.271
16	ORU I/F Force Grid 9999 Z axis	589.035	7.315	CLO1023	777.871	5.961	CLO1014	188.837	32.059
17	ORU I/F Moment Grid 9999 RX axis	553.378	7.093	CLO1015	766.245	8.009	CLO1013	212.867	38.467
18	ORU I/F Moment Grid 9999 RY axis	1549.798	9.065	CLO1007	2465.078	5.404	CLO1014	915.281	59.058
19	ORU I/F Moment Grid 9999 RZ axis	584.653	5.864	CLO1014	706.109	5.858	CLO1002	121.456	20.774
20	ORU Net Load Factor, X axis	1.882	4.184	CLO1001	3.134	5.324	CLO1014	1.252	66.491
21	ORU Net Load Factor, Y axis	2.341	7.316	CLO1023	4.220	7.983	CLO1013	1.879	80.271
22	ORU Net Load Factor, Z axis	3.835	7.292	CLO1023	4.662	7.295	CLO1023	0.827	21.556
23	ORU Net Load Factor, RX axis	25.305	7.320	CLO1023	96.716	5.461	CLO1014	71.411	282.200
24	ORU Net Load Factor, RY axis	48.971	7.174	CLO1022	88.646	5.406	CLO1014	39.675	81.016
25	ORU Net Load Factor, RZ axis	28.252	7.139	CLO1010	106.751	9.769	CLO1013	78.498	277.851
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1251.594	7.303	CLO1007	2692.198	5.261	CLO1014	1440.604	115.102
27	FSE/ORU Assy I/F Force Grid 653 Z axis	761.050	7.264	CLO1004	1122.884	5.480	CLO1014	361.835	47.544
28	FSE/ORU Assy I/F Force Grid 654 Z axis	293.221	7.053	CLO1003	409.090	6.656	CLO1002	115.869	39.516
29	FSE/ORU Assy I/F Force Grid 655 X axis	1003.536	4.184	CLO1001	1699.708	5.324	CLO1014	696.172	69.372
30	FSE/ORU Assy I/F Force Grid 655 Z axis	929.630	7.294	CLO1023	1072.543	5.471	CLO1014	142.913	15.373
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1252.540	6.981	CLO1019	2170.727	5.261	CLO1014	918.187	73.306
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	840.180	7.171	CLO1025	1022.246	5.280	CLO1002	182.067	21.670
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	331.502	7.094	CLO1015	471.141	7.992	CLO1013	139.639	42.123
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	793.278	5.865	CLO1002	1125.501	5.864	CLO1014	332.223	41.880
35	FSE/ORU Assy Net Load Factor, X axis	1.870	4.184	CLO1001	3.168	5.324	CLO1014	1.297	69.372
36	FSE/ORU Assy Net Load Factor, Y axis	2.144	7.318	CLO1023	3.176	7.982	CLO1013	1.032	48.120
37	FSE/ORU Assy Net Load Factor, Z axis	3.879	7.292	CLO1023	4.561	7.295	CLO1023	0.683	17.597
38	FSE/ORU Assy Net Load Factor, RX axis	31.436	7.273	CLO1003	100.031	8.010	CLO1013	68.596	218.209
39	FSE/ORU Assy Net Load Factor, RY axis	37.182	7.151	CLO1022	57.856	5.480	CLO1014	20.674	55.601
40	FSE/ORU Assy Net Load Factor, RZ axis	20.675	6.946	CLO1007	65.372	5.260	CLO1002	44.696	216.182

Table A-16. Battery 4 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.714	5.198	CLO1002	3.226	5.268	CLO1014	1.511	88.170
2	Net Load Factor - T2 (g)	2.016	8.108	CLO1001	4.016	8.115	CLO1013	2.000	99.214
3	Net Load Factor - T3 (g)	5.220	7.294	CLO1023	6.242	5.614	CLO1002	1.022	19.588
4	Net Load Factor - R1 (rad/sec^2)	30.254	7.287	CLO1002	80.307	7.900	CLO1013	50.053	165.442
5	Net Load Factor - R2 (rad/sec^2)	32.905	7.276	CLO1008	54.883	5.139	CLO1002	21.978	66.792
6	Net Load Factor - R3 (rad/sec^2)	22.792	6.996	CLO1023	74.383	8.018	CLO1013	51.590	226.351
7	GRID 653 - T2 (lbf)	1294.342	7.268	CLO1010	2884.415	8.117	CLO1001	1590.073	122.848
8	GRID 653 - T3 (lbf)	458.972	7.116	CLO1024	935.452	7.868	CLO1013	476.480	103.815
9	GRID 654 - T3 (lbf)	802.414	7.268	CLO1010	906.337	8.116	CLO1013	103.923	12.951
10	GRID 655 - T1 (lbf)	919.772	5.198	CLO1002	1730.736	5.268	CLO1014	810.964	88.170
11	GRID 655 - T3 (lbf)	1000.114	7.294	CLO1011	1254.693	5.270	CLO1002	254.578	25.455
12	GRID 2183 - T2 (lbf)	1093.611	7.500	CLO1018	2670.210	7.532	CLO1001	1576.599	144.165
13	GRID 2183 - T3 (lbf)	851.454	7.941	CLO1013	1297.237	8.087	CLO1001	445.783	52.356
14	GRID 2184 - T3 (lbf)	1045.718	5.787	CLO1002	1060.567	5.956	CLO1014	14.849	1.420
15	GRID 2185 - T3 (lbf)	491.339	7.271	CLO1020	711.994	7.901	CLO1013	220.655	44.909
16	Net Inertial Acc - T1 (in/sec^2)	661.816	5.198	CLO1002	1245.340	5.268	CLO1014	583.524	88.170
17	Net Inertial Acc - T2 (in/sec^2)	778.410	8.108	CLO1001	1550.699	8.115	CLO1013	772.289	99.214
18	Net Inertial Acc - T3 (in/sec^2)	2015.220	7.294	CLO1023	2409.956	5.614	CLO1002	394.736	19.588
19	Net Inertial Acc - R1 (rad/sec^2)	30.254	7.287	CLO1002	80.307	7.900	CLO1013	50.053	165.442
20	Net Inertial Acc - R2 (rad/sec^2)	32.905	7.276	CLO1008	54.883	5.139	CLO1002	21.978	66.792
21	Net Inertial Acc - R3 (rad/sec^2)	22.792	6.996	CLO1023	74.383	8.018	CLO1013	51.590	226.351

Table A-17. Battery 4 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.574	5.195	CLO1014	4.271	7.977	CLO1001	2.697	171.371
2	FSE Net Load Factor, Y axis	1.969	8.111	CLO1001	6.162	8.119	CLO1013	4.192	212.878
3	FSE Net Load Factor, Z axis	5.433	7.296	CLO1023	6.573	6.457	CLO1014	1.140	20.990
4	FSE Net Load Factor, RX axis	42.975	7.294	CLO1003	92.697	8.172	CLO1013	49.722	115.699
5	FSE Net Load Factor, RY axis	48.931	7.085	CLO1004	89.979	7.925	CLO1001	41.048	83.889
6	FSE Net Load Factor, RZ axis	38.419	6.999	CLO1023	118.653	8.021	CLO1013	80.234	208.840
7	ORU I/F Force Grid 990 Z axis	199.325	7.178	CLO1015	316.539	5.190	CLO1014	117.214	58.806
8	ORU I/F Force Grid 991 Z axis	224.872	7.092	CLO1001	317.976	5.188	CLO1014	93.104	41.403
9	ORU I/F Force Grid 9998 X axis	330.810	5.199	CLO1014	1055.363	8.022	CLO1013	724.553	219.024
10	ORU I/F Force Grid 9998 Z axis	1096.697	7.293	CLO1011	1337.551	5.291	CLO1014	240.855	21.962
11	ORU I/F Moment Grid 9998 RX axis	652.577	5.785	CLO1002	657.717	5.456	CLO1014	5.140	0.788
12	ORU I/F Moment Grid 9998 RY axis	3594.903	5.616	CLO1002	3819.955	5.269	CLO1002	225.052	6.260
13	ORU I/F Moment Grid 9998 RZ axis	379.919	7.293	CLO1023	645.846	5.610	CLO1002	265.927	69.996
14	ORU I/F Force Grid 9999 X axis	388.413	7.095	CLO1001	1038.089	5.261	CLO1002	649.675	167.264
15	ORU I/F Force Grid 9999 Y axis	807.031	7.268	CLO1010	1759.619	7.866	CLO1013	952.588	118.036
16	ORU I/F Force Grid 9999 Z axis	701.828	7.294	CLO1023	992.384	6.454	CLO1014	290.555	41.400
17	ORU I/F Moment Grid 9999 RX axis	1128.958	7.268	CLO1010	1295.739	5.939	CLO1002	166.781	14.773
18	ORU I/F Moment Grid 9999 RY axis	1530.162	7.093	CLO1001	2795.526	5.190	CLO1014	1265.364	82.695
19	ORU I/F Moment Grid 9999 RZ axis	541.563	7.293	CLO1023	856.884	5.610	CLO1002	315.321	58.224
20	ORU Net Load Factor, X axis	1.787	5.198	CLO1002	3.828	5.192	CLO1002	2.042	114.289
21	ORU Net Load Factor, Y axis	2.220	7.268	CLO1010	4.841	7.866	CLO1013	2.621	118.036
22	ORU Net Load Factor, Z axis	5.167	7.293	CLO1023	6.772	5.614	CLO1002	1.605	31.056
23	ORU Net Load Factor, RX axis	27.472	5.864	CLO1002	90.596	8.073	CLO1013	63.124	229.776
24	ORU Net Load Factor, RY axis	41.431	7.079	CLO1008	76.469	7.867	CLO1013	35.038	84.569
25	ORU Net Load Factor, RZ axis	30.155	6.994	CLO1022	142.306	8.015	CLO1013	112.151	371.921
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1294.342	7.268	CLO1010	2884.415	8.117	CLO1001	1590.073	122.848
27	FSE/ORU Assy I/F Force Grid 653 Z axis	458.972	7.116	CLO1024	935.452	7.868	CLO1013	476.480	103.815
28	FSE/ORU Assy I/F Force Grid 654 Z axis	802.414	7.268	CLO1010	906.337	8.116	CLO1013	103.923	12.951
29	FSE/ORU Assy I/F Force Grid 655 X axis	919.772	5.198	CLO1002	1730.736	5.268	CLO1014	810.964	88.170
30	FSE/ORU Assy I/F Force Grid 655 Z axis	1000.114	7.294	CLO1011	1254.693	5.270	CLO1002	254.578	25.455
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1093.611	7.500	CLO1018	2670.210	7.532	CLO1001	1576.599	144.165
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	851.454	7.941	CLO1013	1297.237	8.087	CLO1001	445.783	52.356
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	1045.718	5.787	CLO1002	1060.567	5.956	CLO1014	14.849	1.420
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	491.339	7.271	CLO1020	711.994	7.901	CLO1013	220.655	44.909
35	FSE/ORU Assy Net Load Factor, X axis	1.714	5.198	CLO1002	3.225	5.268	CLO1014	1.511	88.170
36	FSE/ORU Assy Net Load Factor, Y axis	2.016	8.108	CLO1001	4.016	8.115	CLO1013	2.000	99.214
37	FSE/ORU Assy Net Load Factor, Z axis	5.219	7.294	CLO1023	6.242	5.614	CLO1002	1.022	19.588
38	FSE/ORU Assy Net Load Factor, RX axis	30.254	7.287	CLO1002	80.307	7.900	CLO1013	50.053	165.442
39	FSE/ORU Assy Net Load Factor, RY axis	32.905	7.276	CLO1008	54.883	5.139	CLO1002	21.978	66.792
40	FSE/ORU Assy Net Load Factor, RZ axis	22.792	6.996	CLO1023	74.383	8.018	CLO1013	51.590	226.351

Table A-18. Battery 5 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.488	4.120	CLO1013	2.654	5.331	CLO1002	1.166	78.380
2	Net Load Factor - T2 (g)	2.261	7.871	CLO1013	3.689	7.985	CLO1013	1.428	63.166
3	Net Load Factor - T3 (g)	5.448	5.784	CLO1002	6.100	5.788	CLO1014	0.652	11.972
4	Net Load Factor - R1 (rad/sec^2)	27.630	5.864	CLO1002	84.272	8.174	CLO1001	56.642	205.004
5	Net Load Factor - R2 (rad/sec^2)	31.871	7.126	CLO1016	67.524	2.722	CLO1010	35.653	111.868
6	Net Load Factor - R3 (rad/sec^2)	20.081	6.981	CLO1015	82.661	8.017	CLO1001	62.580	311.635
7	GRID 653 - T2 (lbf)	1088.712	7.905	CLO1001	2805.515	8.017	CLO1001	1716.803	157.691
8	GRID 653 - T3 (lbf)	592.344	7.317	CLO1011	919.213	7.978	CLO1013	326.869	55.182
9	GRID 654 - T3 (lbf)	527.933	7.265	CLO1010	729.353	7.988	CLO1001	201.421	38.153
10	GRID 655 - T1 (lbf)	798.255	4.120	CLO1013	1423.924	5.331	CLO1002	625.669	78.380
11	GRID 655 - T3 (lbf)	762.278	7.264	CLO1010	1233.364	5.285	CLO1014	471.085	61.800
12	GRID 2183 - T2 (lbf)	1153.431	7.075	CLO1016	2191.214	3.923	CLO1001	1037.782	89.973
13	GRID 2183 - T3 (lbf)	787.189	7.941	CLO1013	957.707	8.284	CLO1001	170.519	21.662
14	GRID 2184 - T3 (lbf)	470.942	7.131	CLO1002	640.112	5.462	CLO1014	169.170	35.922
15	GRID 2185 - T3 (lbf)	845.800	5.788	CLO1002	1150.958	5.466	CLO1002	305.158	36.079
16	Net Inertial Acc - T1 (in/sec^2)	574.379	4.120	CLO1013	1024.575	5.331	CLO1002	450.196	78.380
17	Net Inertial Acc - T2 (in/sec^2)	872.990	7.871	CLO1013	1424.423	7.985	CLO1013	551.432	63.166
18	Net Inertial Acc - T3 (in/sec^2)	2103.295	5.784	CLO1002	2355.109	5.788	CLO1014	251.814	11.972
19	Net Inertial Acc - R1 (rad/sec^2)	27.630	5.864	CLO1002	84.272	8.174	CLO1001	56.642	205.004
20	Net Inertial Acc - R2 (rad/sec^2)	31.871	7.126	CLO1016	67.524	2.722	CLO1010	35.653	111.868
21	Net Inertial Acc - R3 (rad/sec^2)	20.081	6.981	CLO1015	82.661	8.017	CLO1001	62.580	311.635

Table A-19. Battery 5 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.970	7.078	CLO1016	4.196	7.988	CLO1013	2.226	113.009
2	FSE Net Load Factor, Y axis	2.157	7.542	CLO1013	4.832	7.910	CLO1001	2.675	123.990
3	FSE Net Load Factor, Z axis	5.391	5.786	CLO1014	7.066	5.792	CLO1014	1.675	31.063
4	FSE Net Load Factor, RX axis	28.015	5.866	CLO1014	96.951	7.989	CLO1013	68.936	246.065
5	FSE Net Load Factor, RY axis	82.778	7.083	CLO1016	127.045	2.722	CLO1010	44.266	53.476
6	FSE Net Load Factor, RZ axis	32.326	7.104	CLO1011	128.294	8.019	CLO1001	95.968	296.876
7	ORU I/F Force Grid 990 Z axis	176.533	7.267	CLO1020	303.931	7.932	CLO1001	127.398	72.166
8	ORU I/F Force Grid 991 Z axis	179.951	6.919	CLO1008	317.378	8.021	CLO1013	137.427	76.369
9	ORU I/F Force Grid 9998 X axis	265.778	4.122	CLO1013	995.990	7.994	CLO1001	730.212	274.745
10	ORU I/F Force Grid 9998 Z axis	1167.169	5.785	CLO1002	1443.764	5.622	CLO1002	276.595	23.698
11	ORU I/F Moment Grid 9998 RX axis	340.277	7.299	CLO1023	410.547	5.957	CLO1014	70.270	20.651
12	ORU I/F Moment Grid 9998 RY axis	973.836	9.389	CLO1028	2091.612	5.465	CLO1014	1117.776	114.781
13	ORU I/F Moment Grid 9998 RZ axis	111.444	6.996	CLO1020	401.475	7.995	CLO1001	290.031	260.249
14	ORU I/F Force Grid 9999 X axis	372.034	7.072	CLO1016	1016.012	8.014	CLO1001	643.978	173.097
15	ORU I/F Force Grid 9999 Y axis	888.926	7.870	CLO1013	1574.250	7.986	CLO1013	685.324	77.096
16	ORU I/F Force Grid 9999 Z axis	796.606	5.615	CLO1002	998.781	6.117	CLO1002	202.175	25.379
17	ORU I/F Moment Grid 9999 RX axis	734.248	7.262	CLO1010	1046.832	5.950	CLO1002	312.584	42.572
18	ORU I/F Moment Grid 9999 RY axis	1269.822	7.502	CLO1015	2242.953	8.014	CLO1001	973.131	76.635
19	ORU I/F Moment Grid 9999 RZ axis	137.500	7.109	CLO1023	500.089	7.649	CLO1001	362.589	263.702
20	ORU Net Load Factor, X axis	1.621	7.503	CLO1015	3.331	7.982	CLO1001	1.710	105.541
21	ORU Net Load Factor, Y axis	2.446	7.870	CLO1013	4.331	7.986	CLO1013	1.886	77.096
22	ORU Net Load Factor, Z axis	5.479	5.783	CLO1002	7.071	5.622	CLO1002	1.592	29.056
23	ORU Net Load Factor, RX axis	27.463	5.865	CLO1002	96.108	8.174	CLO1001	68.645	249.950
24	ORU Net Load Factor, RY axis	39.037	6.965	CLO1020	80.399	7.932	CLO1001	41.362	105.956
25	ORU Net Load Factor, RZ axis	26.794	7.071	CLO1016	119.195	3.921	CLO1013	92.401	344.859
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1088.712	7.905	CLO1001	2805.515	8.017	CLO1001	1716.803	157.691
27	FSE/ORU Assy I/F Force Grid 653 Z axis	592.344	7.317	CLO1011	919.213	7.978	CLO1013	326.869	55.182
28	FSE/ORU Assy I/F Force Grid 654 Z axis	527.933	7.265	CLO1010	729.353	7.988	CLO1001	201.421	38.153
29	FSE/ORU Assy I/F Force Grid 655 X axis	798.255	4.120	CLO1013	1423.924	5.331	CLO1002	625.669	78.380
30	FSE/ORU Assy I/F Force Grid 655 Z axis	762.278	7.264	CLO1010	1233.364	5.285	CLO1014	471.085	61.800
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1153.431	7.075	CLO1016	2191.214	3.923	CLO1001	1037.782	89.973
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	787.189	7.941	CLO1013	957.707	8.284	CLO1001	170.519	21.662
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	470.942	7.131	CLO1002	640.112	5.462	CLO1014	169.170	35.922
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	845.800	5.788	CLO1002	1150.958	5.466	CLO1002	305.158	36.079
35	FSE/ORU Assy Net Load Factor, X axis	1.488	4.120	CLO1013	2.654	5.331	CLO1002	1.166	78.380
36	FSE/ORU Assy Net Load Factor, Y axis	2.261	7.871	CLO1013	3.689	7.985	CLO1013	1.428	63.166
37	FSE/ORU Assy Net Load Factor, Z axis	5.448	5.784	CLO1002	6.100	5.788	CLO1014	0.652	11.972
38	FSE/ORU Assy Net Load Factor, RX axis	27.630	5.864	CLO1002	84.272	8.174	CLO1001	56.642	205.004
39	FSE/ORU Assy Net Load Factor, RY axis	31.871	7.126	CLO1016	67.524	2.722	CLO1010	35.653	111.868
40	FSE/ORU Assy Net Load Factor, RZ axis	20.081	6.981	CLO1015	82.661	8.017	CLO1001	62.580	311.635

Table A-20. Battery 6 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.603	7.322	CLO1018	2.763	5.461	CLO1002	1.159	72.307
2	Net Load Factor - T2 (g)	2.080	8.106	CLO1001	3.522	7.878	CLO1013	1.442	69.356
3	Net Load Factor - T3 (g)	4.759	5.785	CLO1002	5.329	5.456	CLO1014	0.570	11.978
4	Net Load Factor - R1 (rad/sec^2)	27.870	5.792	CLO1002	74.418	8.107	CLO1001	46.548	167.016
5	Net Load Factor - R2 (rad/sec^2)	33.695	7.201	CLO1021	53.659	7.983	CLO1013	19.964	59.250
6	Net Load Factor - R3 (rad/sec^2)	21.557	6.946	CLO1007	69.436	5.385	CLO1002	47.879	222.111
7	GRID 653 - T2 (lbf)	1354.969	6.953	CLO1023	2254.075	5.457	CLO1014	899.106	66.356
8	GRID 653 - T3 (lbf)	660.869	7.051	CLO1023	921.249	7.945	CLO1001	260.380	39.400
9	GRID 654 - T3 (lbf)	945.886	5.786	CLO1014	1019.026	5.283	CLO1002	73.139	7.732
10	GRID 655 - T1 (lbf)	860.266	7.322	CLO1018	1482.300	5.461	CLO1002	622.035	72.307
11	GRID 655 - T3 (lbf)	471.974	7.476	CLO1018	677.131	8.177	CLO1001	205.157	43.468
12	GRID 2183 - T2 (lbf)	1234.390	7.358	CLO1018	2149.811	5.457	CLO1002	915.422	74.160
13	GRID 2183 - T3 (lbf)	580.471	7.205	CLO1002	842.324	7.911	CLO1013	261.853	45.110
14	GRID 2184 - T3 (lbf)	552.696	5.789	CLO1002	744.214	5.456	CLO1002	191.518	34.652
15	GRID 2185 - T3 (lbf)	1017.005	7.091	CLO1006	1190.146	5.461	CLO1002	173.141	17.025
16	Net Inertial Acc - T1 (in/sec^2)	618.998	7.322	CLO1018	1066.579	5.461	CLO1002	447.581	72.307
17	Net Inertial Acc - T2 (in/sec^2)	802.988	8.106	CLO1001	1359.911	7.878	CLO1013	556.923	69.356
18	Net Inertial Acc - T3 (in/sec^2)	1837.483	5.785	CLO1002	2057.575	5.456	CLO1014	220.092	11.978
19	Net Inertial Acc - R1 (rad/sec^2)	27.870	5.792	CLO1002	74.418	8.107	CLO1001	46.548	167.016
20	Net Inertial Acc - R2 (rad/sec^2)	33.695	7.201	CLO1021	53.659	7.983	CLO1013	19.964	59.250
21	Net Inertial Acc - R3 (rad/sec^2)	21.557	6.946	CLO1007	69.436	5.385	CLO1002	47.879	222.111

Table A-21. Battery 6 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.576	7.176	CLO1011	3.781	5.352	CLO1002	2.205	139.845
2	FSE Net Load Factor, Y axis	2.037	8.108	CLO1001	5.629	7.979	CLO1001	3.592	176.333
3	FSE Net Load Factor, Z axis	5.160	7.309	CLO1014	6.155	7.311	CLO1014	0.996	19.295
4	FSE Net Load Factor, RX axis	33.092	7.310	CLO1002	94.617	8.178	CLO1001	61.524	185.916
5	FSE Net Load Factor, RY axis	51.698	7.191	CLO1004	97.134	8.117	CLO1001	45.435	87.886
6	FSE Net Load Factor, RZ axis	34.563	6.950	CLO1007	104.565	5.387	CLO1002	70.002	202.536
7	ORU I/F Force Grid 990 Z axis	226.060	7.103	CLO1019	256.336	7.980	CLO1013	30.276	13.393
8	ORU I/F Force Grid 991 Z axis	209.052	6.913	CLO1019	250.137	5.785	CLO1014	41.084	19.653
9	ORU I/F Force Grid 9998 X axis	331.667	7.090	CLO1018	1041.811	5.391	CLO1002	710.144	214.114
10	ORU I/F Force Grid 9998 Z axis	1035.997	5.786	CLO1002	1313.747	7.977	CLO1013	277.750	26.810
11	ORU I/F Moment Grid 9998 RX axis	620.446	5.786	CLO1002	604.644	5.787	CLO1014	-15.802	-2.547
12	ORU I/F Moment Grid 9998 RY axis	3027.646	7.091	CLO1018	3573.560	5.614	CLO1002	545.914	18.031
13	ORU I/F Moment Grid 9998 RZ axis	307.828	7.318	CLO1023	532.864	7.972	CLO1013	225.036	73.104
14	ORU I/F Force Grid 9999 X axis	422.729	6.950	CLO1023	822.302	5.260	CLO1014	399.574	94.523
15	ORU I/F Force Grid 9999 Y axis	814.032	7.294	CLO1007	1708.086	7.976	CLO1001	894.054	109.830
16	ORU I/F Force Grid 9999 Z axis	657.762	5.614	CLO1002	845.055	6.133	CLO1014	187.293	28.474
17	ORU I/F Moment Grid 9999 RX axis	993.835	5.788	CLO1002	1240.205	7.976	CLO1001	246.371	24.790
18	ORU I/F Moment Grid 9999 RY axis	1572.575	7.322	CLO1018	1997.176	7.983	CLO1013	424.601	27.000
19	ORU I/F Moment Grid 9999 RZ axis	405.271	5.613	CLO1002	644.437	5.455	CLO1002	239.166	59.014
20	ORU Net Load Factor, X axis	1.761	7.090	CLO1018	3.359	5.461	CLO1002	1.598	90.783
21	ORU Net Load Factor, Y axis	2.240	7.294	CLO1007	4.700	7.976	CLO1001	2.460	109.830
22	ORU Net Load Factor, Z axis	4.790	5.784	CLO1002	5.541	5.455	CLO1014	0.750	15.663
23	ORU Net Load Factor, RX axis	27.673	5.864	CLO1014	79.388	8.185	CLO1001	51.715	186.877
24	ORU Net Load Factor, RY axis	45.192	7.130	CLO1023	79.946	5.374	CLO1002	34.754	76.903
25	ORU Net Load Factor, RZ axis	29.852	6.943	CLO1007	110.946	5.384	CLO1002	81.094	271.655
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1354.969	6.953	CLO1023	2254.075	5.457	CLO1014	899.106	66.356
27	FSE/ORU Assy I/F Force Grid 653 Z axis	660.869	7.051	CLO1023	921.249	7.945	CLO1001	260.380	39.400
28	FSE/ORU Assy I/F Force Grid 654 Z axis	945.886	5.786	CLO1014	1019.026	5.283	CLO1002	73.139	7.732
29	FSE/ORU Assy I/F Force Grid 655 X axis	860.266	7.322	CLO1018	1482.300	5.461	CLO1002	622.035	72.307
30	FSE/ORU Assy I/F Force Grid 655 Z axis	471.974	7.476	CLO1018	677.131	8.177	CLO1001	205.157	43.468
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1234.390	7.358	CLO1018	2149.811	5.457	CLO1002	915.422	74.160
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	580.471	7.205	CLO1002	842.324	7.911	CLO1013	261.853	45.110
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	552.696	5.789	CLO1002	744.214	5.456	CLO1002	191.518	34.652
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	1017.005	7.091	CLO1006	1190.146	5.461	CLO1002	173.141	17.025
35	FSE/ORU Assy Net Load Factor, X axis	1.603	7.322	CLO1018	2.762	5.461	CLO1002	1.159	72.307
36	FSE/ORU Assy Net Load Factor, Y axis	2.080	8.106	CLO1001	3.522	7.878	CLO1013	1.442	69.356
37	FSE/ORU Assy Net Load Factor, Z axis	4.759	5.785	CLO1002	5.329	5.456	CLO1014	0.570	11.978
38	FSE/ORU Assy Net Load Factor, RX axis	27.870	5.792	CLO1002	74.418	8.107	CLO1001	46.548	167.016
39	FSE/ORU Assy Net Load Factor, RY axis	33.695	7.201	CLO1021	53.659	7.983	CLO1013	19.964	59.250
40	FSE/ORU Assy Net Load Factor, RZ axis	21.557	6.946	CLO1007	69.436	5.385	CLO1002	47.879	222.111

Table A-22. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.601	5.613	CLO1014	3.814	5.615	CLO1002	0.212	5.894
2	Net Load Factor - T2 (g)	1.550	5.195	CLO1002	2.357	5.271	CLO1002	0.806	51.998
3	Net Load Factor - T3 (g)	1.661	8.103	CLO1001	2.275	7.942	CLO1013	0.614	36.951
4	Net Load Factor - R1 (rad/sec^2)	3.983	6.877	CLO1020	8.086	8.174	CLO1013	4.104	103.045
5	Net Load Factor - R2 (rad/sec^2)	26.986	5.863	CLO1002	28.336	5.366	CLO1002	1.350	5.003
6	Net Load Factor - R3 (rad/sec^2)	2.985	7.538	CLO1013	6.814	8.140	CLO1001	3.829	128.284
7	GRID 1271 - T2 (lbf) [Orbiter IF]	13862.034	4.121	CLO1013	12950.314	5.271	CLO1002	-911.720	-6.577
8	GRID 6299 - T1 (lbf) [Battery 4 IF]	491.339	7.271	CLO1020	711.994	7.901	CLO1013	220.655	44.909
9	GRID 13067 - T1 (lbf) [Battery 4 IF]	1045.718	5.787	CLO1002	1060.567	5.956	CLO1014	14.849	1.420
10	GRID 13083 - T1 (lbf) [Battery 4 IF]	802.414	7.268	CLO1010	906.337	8.116	CLO1013	103.923	12.951
11	GRID 13115 - T1 (lbf) [Battery 5 IF]	470.942	7.131	CLO1002	640.112	5.462	CLO1014	169.170	35.922
12	GRID 13545 - T1 (lbf) [Battery 4 IF]	1000.114	7.294	CLO1011	1254.693	5.270	CLO1002	254.578	25.455
13	GRID 13545 - T2 (lbf) [Battery 4 IF]	919.772	5.198	CLO1002	1730.736	5.268	CLO1014	810.964	88.170
14	GRID 13576 - T1 (lbf) [Battery 5 IF]	845.800	5.788	CLO1002	1150.958	5.466	CLO1002	305.158	36.079
15	GRID 16250 - T1 (lbf) [Battery 6 IF]	471.974	7.476	CLO1018	677.131	8.177	CLO1001	205.157	43.468
16	GRID 16250 - T2 (lbf) [Battery 6 IF]	860.266	7.322	CLO1018	1482.300	5.461	CLO1002	622.035	72.307
17	GRID 23028 - T1 (lbf) [Battery 6 IF]	945.886	5.786	CLO1014	1019.026	5.283	CLO1002	73.139	7.732
18	GRID 23044 - T1 (lbf) [Battery 6 IF]	552.696	5.789	CLO1002	744.214	5.456	CLO1002	191.518	34.652
19	GRID 23076 - T1 (lbf) [Battery 5 IF]	527.933	7.265	CLO1010	729.353	7.988	CLO1001	201.421	38.153
20	GRID 23506 - T1 (lbf) [Battery 6 IF]	1017.005	7.091	CLO1006	1190.146	5.461	CLO1002	173.141	17.025
21	GRID 23537 - T1 (lbf) [Battery 5 IF]	762.278	7.264	CLO1010	1233.364	5.285	CLO1014	471.085	61.800
22	GRID 23537 - T2 (lbf) [Battery 5 IF]	798.255	4.120	CLO1013	1423.924	5.331	CLO1002	625.669	78.380
23	GRID 37940 - T1 (lbf) [Battery 1 IF]	655.696	7.627	CLO1008	955.901	5.339	CLO1002	300.205	45.784
24	GRID 37940 - T2 (lbf) [Battery 1 IF]	1101.653	5.197	CLO1014	2043.775	5.338	CLO1002	942.122	85.519
25	GRID 38067 - T1 (lbf) [Battery 1 IF]	846.202	7.315	CLO1023	1012.805	5.264	CLO1014	166.604	19.688
26	GRID 38323 - T1 (lbf) [Battery 2 IF]	722.855	7.115	CLO1028	918.651	7.944	CLO1013	195.796	27.086
27	GRID 38323 - T2 (lbf) [Battery 2 IF]	995.617	5.198	CLO1002	1762.728	5.332	CLO1014	767.111	77.049
28	GRID 45767 - T1 (lbf) [Battery 3 IF]	793.278	5.865	CLO1002	1125.501	5.864	CLO1014	332.223	41.880
29	GRID 45890 - T1 (lbf) [Battery 3 IF]	929.630	7.294	CLO1023	1072.543	5.471	CLO1014	142.913	15.373
30	GRID 45890 - T2 (lbf) [Battery 3 IF]	1003.536	4.184	CLO1001	1699.708	5.324	CLO1014	696.172	69.372
31	GRID 46151 - T1 (lbf) [Battery 2 IF]	779.365	7.277	CLO1016	774.596	5.288	CLO1002	-4.769	-0.612
32	GRID 53578 - T1 (lbf) [Battery 4 IF]	851.454	7.941	CLO1013	1297.237	8.087	CLO1001	445.783	52.356
33	GRID 53578 - T3 (lbf) [Battery 4 IF]	1093.611	7.500	CLO1018	2670.210	7.532	CLO1001	1576.599	144.165
34	GRID 53701 - T1 (lbf) [Battery 4 IF]	458.972	7.116	CLO1024	935.452	7.868	CLO1013	476.480	103.815
35	GRID 53701 - T3 (lbf) [Battery 4 IF]	1294.342	7.268	CLO1010	2884.415	8.117	CLO1001	1590.073	122.848
36	GRID 53956 - T1 (lbf) [Battery 5 IF]	787.189	7.941	CLO1013	957.707	8.284	CLO1001	170.519	21.662
37	GRID 53956 - T3 (lbf) [Battery 5 IF]	1153.431	7.075	CLO1016	2191.214	3.923	CLO1001	1037.782	89.973
38	GRID 61404 - T1 (lbf) [Battery 6 IF]	660.869	7.051	CLO1023	921.249	7.945	CLO1001	260.380	39.400
39	GRID 61404 - T3 (lbf) [Battery 6 IF]	1354.969	6.953	CLO1023	2254.075	5.457	CLO1014	899.106	66.356
40	GRID 61527 - T1 (lbf) [Battery 6 IF]	580.471	7.205	CLO1002	842.324	7.911	CLO1013	261.853	45.110
41	GRID 61527 - T3 (lbf) [Battery 6 IF]	1234.390	7.358	CLO1018	2149.811	5.457	CLO1002	915.422	74.160
42	GRID 61788 - T1 (lbf) [Battery 5 IF]	592.344	7.317	CLO1011	919.213	7.978	CLO1013	326.869	55.182
43	GRID 61788 - T3 (lbf) [Battery 5 IF]	1088.712	7.905	CLO1001	2805.515	8.017	CLO1001	1716.803	157.691
44	GRID 62589 - T1 (lbf) [Battery 3 IF]	331.502	7.094	CLO1015	471.141	7.992	CLO1013	139.639	42.123
45	GRID 62774 - T1 (lbf) [Battery 3 IF]	293.221	7.053	CLO1003	409.090	6.656	CLO1002	115.869	39.516
46	GRID 63043 - T1 (lbf) [Battery 3 IF]	840.180	7.171	CLO1025	1022.246	5.280	CLO1002	182.067	21.670
47	GRID 63043 - T3 (lbf) [Battery 3 IF]	1252.540	6.981	CLO1019	2170.727	5.261	CLO1014	918.187	73.306
48	GRID 63343 - T1 (lbf) [Battery 3 IF]	761.050	7.264	CLO1004	1122.884	5.480	CLO1014	361.835	47.544
49	GRID 63343 - T3 (lbf) [Battery 3 IF]	1251.594	7.303	CLO1007	2692.198	5.261	CLO1014	1440.604	115.102
50	GRID 63345 - T1 (lbf) [Battery 2 IF]	317.867	7.281	CLO1016	401.600	5.261	CLO1002	83.733	26.342

Table A-22. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 - T1 (lbf) [Battery 2 IF]	262.055	7.115	CLO1028	409.749	5.332	CLO1014	147.695	56.360
52	GRID 63942 - T1 (lbf) [Battery 2 IF]	683.126	7.193	CLO1029	1007.359	6.481	CLO1002	324.233	47.463
53	GRID 63942 - T3 (lbf) [Battery 2 IF]	1273.483	7.874	CLO1022	2448.553	5.330	CLO1014	1175.070	92.272
54	GRID 64244 - T1 (lbf) [Battery 2 IF]	714.457	7.260	CLO1004	973.672	8.840	CLO1023	259.215	36.281
55	GRID 64244 - T3 (lbf) [Battery 2 IF]	1112.066	7.189	CLO1011	2770.620	5.260	CLO1014	1658.554	149.142
56	GRID 64246 - T1 (lbf) [Battery 1 IF]	273.821	7.538	CLO1013	509.520	5.332	CLO1014	235.699	86.078
57	GRID 64540 - T1 (lbf) [Battery 1 IF]	253.670	7.113	CLO1028	454.175	4.984	CLO1024	200.505	79.042
58	GRID 64814 - T1 (lbf) [Battery 1 IF]	704.302	7.291	CLO1011	1009.126	8.105	CLO1001	304.824	43.280
59	GRID 64814 - T3 (lbf) [Battery 1 IF]	1173.086	7.555	CLO1018	3090.300	5.336	CLO1002	1917.215	163.433
60	GRID 65003 - T1 (lbf) [Battery 1 IF]	734.844	7.126	CLO1014	1046.045	5.465	CLO1014	311.201	42.349
61	GRID 65003 - T3 (lbf) [Battery 1 IF]	1118.856	6.940	CLO1023	2561.081	4.984	CLO1024	1442.225	128.902
62	GRID 111869 - T3 (lbf) [Orbiter IF]	18191.655	5.786	CLO1002	17456.269	5.952	CLO1014	-735.386	-4.042
63	GRID 111885 - T1 (lbf) [Orbiter IF]	18667.173	5.616	CLO1014	18393.981	5.622	CLO1014	-273.192	-1.463
64	GRID 111885 - T3 (lbf) [Orbiter IF]	21261.806	5.277	CLO1014	22105.014	5.281	CLO1002	843.208	3.966
65	GRID 113369 - T3 (lbf) [Orbiter IF]	17075.499	5.785	CLO1002	15929.083	5.953	CLO1002	-1146.416	-6.714
66	GRID 113385 - T1 (lbf) [Orbiter IF]	17699.057	5.615	CLO1014	16812.535	5.619	CLO1014	-886.522	-5.009
67	GRID 113385 - T3 (lbf) [Orbiter IF]	21017.552	5.449	CLO1002	20397.655	5.455	CLO1014	-619.898	-2.949
68	GRID 150301 - T1 (lbf) [LDU-IA IF]	842.405	8.102	CLO1001	991.765	8.513	CLO1007	149.360	17.730
69	GRID 150301 - T2 (lbf) [LDU-IA IF]	962.722	7.262	CLO1010	1710.671	5.280	CLO1002	747.949	77.691
70	GRID 150302 - T1 (lbf) [LDU-IA IF]	827.353	5.787	CLO1014	1217.342	7.906	CLO1013	389.990	47.137
71	GRID 150303 - T2 (lbf) [LDU-IA IF]	794.155	7.118	CLO1023	863.715	7.910	CLO1001	69.560	8.759
72	GRID 150311 - T3 (lbf) [LDU-IA IF]	1066.320	5.791	CLO1002	1173.082	5.959	CLO1002	106.761	10.012
73	GRID 150312 - T3 (lbf) [LDU-IA IF]	1737.166	5.785	CLO1014	2060.037	5.283	CLO1002	322.871	18.586
74	GRID 150313 - T3 (lbf) [LDU-IA IF]	1164.022	7.077	CLO1010	1155.173	7.983	CLO1013	-8.849	-0.760
75	GRID 150314 - T3 (lbf) [LDU-IA IF]	398.228	7.232	CLO1015	555.196	5.281	CLO1002	156.968	39.417
76	GRID 160301 - T1 (lbf) [PM-IA IF]	1898.756	4.129	CLO1013	2073.513	5.213	CLO1002	174.756	9.204
77	GRID 160301 - T2 (lbf) [PM-IA IF]	2399.302	7.940	CLO1001	2842.366	5.284	CLO1014	443.064	18.466
78	GRID 160302 - T1 (lbf) [PM-IA IF]	2234.164	5.866	CLO1002	2374.285	5.521	CLO1002	140.122	6.272
79	GRID 160303 - T2 (lbf) [PM-IA IF]	3270.759	7.939	CLO1013	3942.137	7.945	CLO1013	671.378	20.527
80	GRID 160311 - T3 (lbf) [PM-IA IF]	2938.999	7.940	CLO1001	3054.574	7.951	CLO1001	115.576	3.932
81	GRID 160312 - T3 (lbf) [PM-IA IF]	3038.751	5.866	CLO1002	2850.177	5.527	CLO1002	-188.574	-6.206
82	GRID 160313 - T3 (lbf) [PM-IA IF]	2967.238	7.603	CLO1001	3353.146	7.947	CLO1013	385.908	13.006
83	GRID 160314 - T3 (lbf) [PM-IA IF]	2973.559	5.453	CLO1014	2883.312	5.447	CLO1002	-90.247	-3.035
84	GRID 170301 - T1 (lbf) [SGANT-IA IF]	1486.077	5.202	CLO1014	1495.472	5.346	CLO1014	9.395	0.632
85	GRID 170301 - T2 (lbf) [SGANT-IA IF]	1993.188	5.865	CLO1014	1691.705	5.443	CLO1014	-301.483	-15.126
86	GRID 170302 - T1 (lbf) [SGANT-IA IF]	955.515	5.864	CLO1002	946.254	4.909	CLO1013	-9.261	-0.969
87	GRID 170303 - T2 (lbf) [SGANT-IA IF]	830.277	7.835	CLO1023	751.450	7.924	CLO1006	-78.827	-9.494
88	GRID 170311 - T3 (lbf) [SGANT-IA IF]	1744.952	8.000	CLO1012	1876.480	7.235	CLO1014	131.528	7.538
89	GRID 170312 - T3 (lbf) [SGANT-IA IF]	1524.901	5.794	CLO1002	1517.879	5.452	CLO1014	-7.022	-0.461
90	GRID 170313 - T3 (lbf) [SGANT-IA IF]	1508.949	5.271	CLO1002	1437.701	5.290	CLO1014	-71.248	-4.722
91	GRID 170314 - T3 (lbf) [SGANT-IA IF]	737.918	8.129	CLO1006	662.592	6.938	CLO1025	-75.326	-10.208
92	Net Inertial Acc - T1 (in/sec^2)	1390.417	5.613	CLO1014	1472.368	5.615	CLO1002	81.951	5.894
93	Net Inertial Acc - T2 (in/sec^2)	598.597	5.195	CLO1002	909.856	5.271	CLO1002	311.258	51.998
94	Net Inertial Acc - T3 (in/sec^2)	641.344	8.103	CLO1001	878.325	7.942	CLO1013	236.981	36.951
95	Net Inertial Acc - R1 (rad/sec^2)	3.983	6.877	CLO1020	8.086	8.174	CLO1013	4.104	103.045
96	Net Inertial Acc - R2 (rad/sec^2)	26.986	5.863	CLO1002	28.336	5.366	CLO1002	1.350	5.003
97	Net Inertial Acc - R3 (rad/sec^2)	2.985	7.538	CLO1013	6.814	8.140	CLO1001	3.829	128.284

Table A-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
1	NLF TX	1389.644	5.613	CLO1014	1471.564	5.615	CLO1002	81.920	5.895
2	NLF TY	598.657	5.195	CLO1002	909.871	5.271	CLO1002	311.214	51.985
3	NLF TZ	641.496	8.103	CLO1001	878.375	7.942	CLO1013	236.879	36.926
4	NLF RX	3.983	6.877	CLO1020	8.086	8.174	CLO1013	4.104	103.045
5	NLF RY	26.986	5.863	CLO1002	28.336	5.366	CLO1002	1.350	5.003
6	NLF RZ	2.985	7.538	CLO1013	6.814	8.140	CLO1001	3.829	128.284
7	Keel Grid 1271 DOF 2 I/F force	13862.034	4.121	CLO1013	12950.314	5.271	CLO1002	-911.720	-6.577
8	GRID 6299 TX NHP FORCE	491.339	7.271	CLO1020	711.994	7.901	CLO1013	220.655	44.909
9	GRID 13067 TX NHP FORCE	1045.718	5.787	CLO1002	1060.567	5.956	CLO1014	14.849	1.420
10	GRID 13083 TX NHP FORCE	802.414	7.268	CLO1010	906.337	8.116	CLO1013	103.923	12.951
11	GRID 13115 TX NHP FORCE	470.942	7.131	CLO1002	640.112	5.462	CLO1014	169.170	35.922
12	GRID 13545 TX NHP FORCE	1000.114	7.294	CLO1011	1254.693	5.270	CLO1002	254.578	25.455
13	GRID 13545 TY NHP FORCE	919.772	5.198	CLO1002	1730.736	5.268	CLO1014	810.964	88.170
14	GRID 13576 TX NHP FORCE	845.800	5.788	CLO1002	1150.958	5.466	CLO1002	305.158	36.079
15	GRID 16250 TX NHP FORCE	471.974	7.476	CLO1018	677.131	8.177	CLO1001	205.157	43.468
16	GRID 16250 TY NHP FORCE	860.266	7.322	CLO1018	1482.300	5.461	CLO1002	622.035	72.307
17	GRID 23028 TX NHP FORCE	945.886	5.786	CLO1014	1019.026	5.283	CLO1002	73.139	7.732
18	GRID 23044 TX NHP FORCE	552.696	5.789	CLO1002	744.214	5.456	CLO1002	191.518	34.652
19	GRID 23076 TX NHP FORCE	527.933	7.265	CLO1010	729.353	7.988	CLO1001	201.421	38.153
20	GRID 23506 TX NHP FORCE	1017.005	7.091	CLO1006	1190.146	5.461	CLO1002	173.141	17.025
21	GRID 23537 TX NHP FORCE	762.278	7.264	CLO1010	1233.364	5.285	CLO1014	471.085	61.800
22	GRID 23537 TY NHP FORCE	798.255	4.120	CLO1013	1423.924	5.331	CLO1002	625.669	78.380
23	GRID 37940 TX NHP FORCE	655.696	7.627	CLO1008	955.901	5.339	CLO1002	300.205	45.784
24	GRID 37940 TY NHP FORCE	1101.653	5.197	CLO1014	2043.775	5.338	CLO1002	942.122	85.519
25	GRID 38067 TX NHP FORCE	846.202	7.315	CLO1023	1012.805	5.264	CLO1014	166.604	19.688
26	GRID 38323 TX NHP FORCE	722.855	7.115	CLO1028	918.651	7.944	CLO1013	195.796	27.086
27	GRID 38323 TY NHP FORCE	995.617	5.198	CLO1002	1762.728	5.332	CLO1014	767.111	77.049
28	GRID 45767 TX NHP FORCE	793.278	5.865	CLO1002	1125.501	5.864	CLO1014	332.223	41.880
29	GRID 45890 TX NHP FORCE	929.630	7.294	CLO1023	1072.543	5.471	CLO1014	142.913	15.373
30	GRID 45890 TY NHP FORCE	1003.536	4.184	CLO1001	1699.708	5.324	CLO1014	696.172	69.372
31	GRID 46151 TX NHP FORCE	779.365	7.277	CLO1016	774.596	5.288	CLO1002	-4.769	-0.612
32	GRID 53578 TX NHP FORCE	851.454	7.941	CLO1013	1297.237	8.087	CLO1001	445.783	52.356
33	GRID 53578 TZ NHP FORCE	1093.611	7.500	CLO1018	2670.210	7.532	CLO1001	1576.599	144.165
34	GRID 53701 TX NHP FORCE	458.972	7.116	CLO1024	935.452	7.868	CLO1013	476.480	103.815
35	GRID 53701 TZ NHP FORCE	1294.342	7.268	CLO1010	2884.415	8.117	CLO1001	1590.073	122.848
36	GRID 53956 TX NHP FORCE	787.189	7.941	CLO1013	957.707	8.284	CLO1001	170.519	21.662
37	GRID 53956 TZ NHP FORCE	1153.431	7.075	CLO1016	2191.214	3.923	CLO1001	1037.782	89.973
38	GRID 61404 TX NHP FORCE	660.869	7.051	CLO1023	921.249	7.945	CLO1001	260.380	39.400
39	GRID 61404 TZ NHP FORCE	1354.969	6.953	CLO1023	2254.075	5.457	CLO1014	899.106	66.356
40	GRID 61527 TX NHP FORCE	580.471	7.205	CLO1002	842.324	7.911	CLO1013	261.853	45.110
41	GRID 61527 TZ NHP FORCE	1234.390	7.358	CLO1018	2149.811	5.457	CLO1002	915.422	74.160
42	GRID 61788 TX NHP FORCE	592.344	7.317	CLO1011	919.213	7.978	CLO1013	326.869	55.182
43	GRID 61788 TZ NHP FORCE	1088.712	7.905	CLO1001	2805.515	8.017	CLO1001	1716.803	157.691
44	GRID 62589 TX NHP FORCE	331.502	7.094	CLO1015	471.141	7.992	CLO1013	139.639	42.123
45	GRID 62774 TX NHP FORCE	293.221	7.053	CLO1003	409.090	6.656	CLO1002	115.869	39.516
46	GRID 63043 TX NHP FORCE	840.180	7.171	CLO1025	1022.246	5.280	CLO1002	182.067	21.670
47	GRID 63043 TZ NHP FORCE	1252.540	6.981	CLO1019	2170.727	5.261	CLO1014	918.187	73.306
48	GRID 63343 TX NHP FORCE	761.050	7.264	CLO1004	1122.884	5.480	CLO1014	361.835	47.544
49	GRID 63343 TZ NHP FORCE	1251.594	7.303	CLO1007	2692.198	5.261	CLO1014	1440.604	115.102
50	GRID 63345 TX NHP FORCE	317.867	7.281	CLO1016	401.600	5.261	CLO1002	83.733	26.342

Table A-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 TX NHP FORCE	262.055	7.115	CLO1028	409.749	5.332	CLO1014	147.695	56.360
52	GRID 63942 TX NHP FORCE	683.126	7.193	CLO1029	1007.359	6.481	CLO1002	324.233	47.463
53	GRID 63942 TZ NHP FORCE	1273.483	7.874	CLO1022	2448.553	5.330	CLO1014	1175.070	92.272
54	GRID 64244 TX NHP FORCE	714.457	7.260	CLO1004	973.672	8.840	CLO1023	259.215	36.281
55	GRID 64244 TZ NHP FORCE	1112.066	7.189	CLO1011	2770.620	5.260	CLO1014	1658.554	149.142
56	GRID 64246 TX NHP FORCE	273.821	7.538	CLO1013	509.520	5.332	CLO1014	235.699	86.078
57	GRID 64540 TX NHP FORCE	253.670	7.113	CLO1028	454.175	4.984	CLO1024	200.505	79.042
58	GRID 64814 TX NHP FORCE	704.302	7.291	CLO1011	1009.126	8.105	CLO1001	304.824	43.280
59	GRID 64814 TZ NHP FORCE	1173.086	7.555	CLO1018	3090.300	5.336	CLO1002	1917.215	163.433
60	GRID 65003 TX NHP FORCE	734.844	7.126	CLO1014	1046.045	5.465	CLO1014	311.201	42.349
61	GRID 65003 TZ NHP FORCE	1118.856	6.940	CLO1023	2561.081	4.984	CLO1024	1442.225	128.902
62	Secondary -Y: 111869 DOF 3 IF FORCE	18191.655	5.786	CLO1002	17456.269	5.952	CLO1014	-735.386	-4.042
63	Primary -Y: 111885 DOF 1 IF FORCE	18667.173	5.616	CLO1014	18393.981	5.622	CLO1014	-273.192	-1.463
64	Primary -Y: 111885 DOF 3 IF FORCE	21261.806	5.277	CLO1014	22105.014	5.281	CLO1002	843.208	3.966
65	Secondary +Y: 113369 DOF 3 IF FORCE	17075.499	5.785	CLO1002	15929.083	5.953	CLO1002	-1146.416	-6.714
66	Primary +Y: 113385 DOF 1 IF FORCE	17699.057	5.615	CLO1014	16812.535	5.619	CLO1014	-886.522	-5.009
67	Primary +Y: 113385 DOF 3 IF FORCE	21017.552	5.449	CLO1002	20397.655	5.455	CLO1014	-619.898	-2.949
68	GRID 150301 TX FRAM IF FORCE	842.405	8.102	CLO1001	991.765	8.513	CLO1007	149.360	17.730
69	GRID 150301 TY FRAM IF FORCE	962.722	7.262	CLO1010	1710.671	5.280	CLO1002	747.949	77.691
70	GRID 150302 TX FRAM IF FORCE	827.353	5.787	CLO1014	1217.342	7.906	CLO1013	389.990	47.137
71	GRID 150303 TY FRAM IF FORCE	794.155	7.118	CLO1023	863.715	7.910	CLO1001	69.560	8.759
72	GRID 150311 TZ FRAM IF FORCE	1066.320	5.791	CLO1002	1173.082	5.959	CLO1002	106.761	10.012
73	GRID 150312 TZ FRAM IF FORCE	1737.166	5.785	CLO1014	2060.037	5.283	CLO1002	322.871	18.586
74	GRID 150313 TZ FRAM IF FORCE	1164.022	7.077	CLO1010	1155.173	7.983	CLO1013	-8.849	-0.760
75	GRID 150314 TZ FRAM IF FORCE	398.228	7.232	CLO1015	555.196	5.281	CLO1002	156.968	39.417
76	GRID 160301 TX FRAM IF FORCE	1898.756	4.129	CLO1013	2073.513	5.213	CLO1002	174.756	9.204
77	GRID 160301 TY FRAM IF FORCE	2399.302	7.940	CLO1001	2842.366	5.284	CLO1014	443.064	18.466
78	GRID 160302 TX FRAM IF FORCE	2234.164	5.866	CLO1002	2374.285	5.521	CLO1002	140.122	6.272
79	GRID 160303 TY FRAM IF FORCE	3270.759	7.939	CLO1013	3942.137	7.945	CLO1013	671.378	20.527
80	GRID 160311 TZ FRAM IF FORCE	2938.999	7.940	CLO1001	3054.574	7.951	CLO1001	115.576	3.932
81	GRID 160312 TZ FRAM IF FORCE	3038.751	5.866	CLO1002	2850.177	5.527	CLO1002	-188.574	-6.206
82	GRID 160313 TZ FRAM IF FORCE	2967.238	7.603	CLO1001	3353.146	7.947	CLO1013	385.908	13.006
83	GRID 160314 TZ FRAM IF FORCE	2973.559	5.453	CLO1014	2883.312	5.447	CLO1002	-90.247	-3.035
84	GRID 170301 TX FRAM IF FORCE	1486.077	5.202	CLO1014	1495.472	5.346	CLO1014	9.395	0.632
85	GRID 170301 TY FRAM IF FORCE	1993.188	5.865	CLO1014	1691.705	5.443	CLO1014	-301.483	-15.126
86	GRID 170302 TX FRAM IF FORCE	955.515	5.864	CLO1002	946.254	4.909	CLO1013	-9.261	-0.969
87	GRID 170303 TY FRAM IF FORCE	830.277	7.835	CLO1023	751.450	7.924	CLO1006	-78.827	-9.494
88	GRID 170311 TZ FRAM IF FORCE	1744.952	8.000	CLO1012	1876.480	7.235	CLO1014	131.528	7.538
89	GRID 170312 TZ FRAM IF FORCE	1524.901	5.794	CLO1002	1517.879	5.452	CLO1014	-7.022	-0.461
90	GRID 170313 TZ FRAM IF FORCE	1508.949	5.271	CLO1002	1437.701	5.290	CLO1014	-71.248	-4.722
91	GRID 170314 TZ FRAM IF FORCE	737.918	8.129	CLO1006	662.592	6.938	CLO1025	-75.326	-10.208
92	GRID 200201 Fuse-1 Acceleration TX	1315.637	7.099	CLO1006	4029.980	7.445	CLO1019	2714.343	206.314
93	GRID 200201 Fuse-1 Acceleration TY	623.738	5.195	CLO1014	3804.342	7.848	CLO1001	3180.604	509.926
94	GRID 200201 Fuse-1 Acceleration TZ	657.457	6.888	CLO1008	3706.475	7.913	CLO1001	3049.018	463.759
95	GRID 200201 Fuse-1 Acceleration RX	64.870	9.572	CLO1008	504.784	9.890	CLO1007	439.915	678.152
96	GRID 200201 Fuse-1 Acceleration RY	31.270	7.353	CLO1023	341.061	8.129	CLO1013	309.791	990.706
97	GRID 200201 Fuse-1 Acceleration RZ	111.286	9.332	CLO1020	409.703	9.973	CLO1019	298.417	268.154
98	GRID 200202 Fuse-2 Acceleration TX	1757.225	7.292	CLO1004	4077.156	9.885	CLO1007	2319.931	132.022
99	GRID 200202 Fuse-2 Acceleration TY	659.101	5.264	CLO1002	2776.502	7.931	CLO1001	2117.402	321.256
100	GRID 200202 Fuse-2 Acceleration TZ	755.431	9.867	CLO1007	3414.253	7.849	CLO1001	2658.823	351.961

Table A-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
101	GRID 200202 Fuse-2 Acceleration RX	40.595	7.260	CLO1008	274.172	8.107	CLO1001	233.577	575.383
102	GRID 200202 Fuse-2 Acceleration RY	65.536	7.152	CLO1020	288.217	7.961	CLO1001	222.681	339.784
103	GRID 200202 Fuse-2 Acceleration RZ	137.067	7.273	CLO1023	674.475	7.839	CLO1001	537.408	392.076
104	GRID 200301 PVGF-1 Acceleration TX	1581.413	7.483	CLO1008	4495.243	7.962	CLO1001	2913.830	184.255
105	GRID 200301 PVGF-1 Acceleration TY	700.841	6.934	CLO1011	5467.125	7.591	CLO1013	4766.284	680.080
106	GRID 200301 PVGF-1 Acceleration TZ	1054.629	6.994	CLO1016	7323.567	7.472	CLO1013	6268.938	594.421
107	GRID 200301 PVGF-1 Acceleration RX	46.163	7.404	CLO1008	746.652	9.946	CLO1007	700.489	1517.420
108	GRID 200301 PVGF-1 Acceleration RY	49.219	7.108	CLO1020	514.264	8.158	CLO1001	465.044	944.840
109	GRID 200301 PVGF-1 Acceleration RZ	101.010	9.585	CLO1020	919.876	8.212	CLO1001	818.867	810.680
110	GRID 200302 PVGF-2 Acceleration TX	3108.291	5.787	CLO1014	4672.610	5.605	CLO1014	1564.319	50.327
111	GRID 200302 PVGF-2 Acceleration TY	581.244	7.632	CLO1013	3500.002	8.140	CLO1001	2918.758	502.157
112	GRID 200302 PVGF-2 Acceleration TZ	881.666	7.443	CLO1001	3792.574	8.178	CLO1001	2910.908	330.160
113	GRID 200302 PVGF-2 Acceleration RX	48.540	7.056	CLO1016	424.168	8.036	CLO1001	375.628	773.848
114	GRID 200302 PVGF-2 Acceleration RY	78.583	7.271	CLO1007	849.231	7.908	CLO1001	770.648	980.678
115	GRID 200302 PVGF-2 Acceleration RZ	54.152	6.999	CLO1011	562.821	8.140	CLO1001	508.669	939.337
116	Grid 504878 PDU Acceleration TX	523.515	7.865	CLO1013	4792.591	7.522	CLO1013	4269.076	815.464
117	Grid 504878 PDU Acceleration TY	791.965	5.196	CLO1014	4049.581	5.198	CLO1014	3257.616	411.333
118	Grid 504878 PDU Acceleration TZ	1309.592	7.170	CLO1024	8807.222	7.943	CLO1013	7497.630	572.516
119	Grid 504878 PDU Acceleration RX	80.826	9.042	CLO1007	727.568	9.992	CLO1019	646.742	800.168
120	Grid 504878 PDU Acceleration RY	71.342	6.888	CLO1020	757.331	8.291	CLO1013	685.989	961.549
121	Grid 504878 PDU Acceleration RZ	29.429	7.546	CLO1018	207.998	7.905	CLO1013	178.569	606.777
122	Element Force CBAR 27000 Shear 1	5042.919	5.617	CLO1014	4864.631	5.617	CLO1002	-178.288	-3.535
123	Element Force CBAR 27000 Shear 2	8433.479	5.790	CLO1002	8000.053	5.947	CLO1014	-433.426	-5.139
124	Element Force CBAR 27001 Shear 1	327.904	4.260	CLO1013	441.965	5.212	CLO1014	114.061	34.785
125	Element Force CBAR 27001 Shear 2	723.680	7.298	CLO1023	790.642	7.944	CLO1013	66.962	9.253
126	Element Force CBAR 27002 Shear 1	537.616	7.940	CLO1013	598.929	7.943	CLO1013	61.313	11.405
127	Element Force CBAR 27002 Shear 2	509.129	7.539	CLO1013	569.512	7.948	CLO1013	60.384	11.860
128	Element Force CBAR 27003 Shear 1	842.880	7.939	CLO1013	963.262	7.944	CLO1001	120.382	14.282
129	Element Force CBAR 27003 Shear 2	356.686	7.298	CLO1023	382.351	8.078	CLO1001	25.664	7.195
130	Element Force CBAR 27004 Shear 1	466.795	7.939	CLO1013	546.479	7.943	CLO1013	79.684	17.070
131	Element Force CBAR 27004 Shear 2	224.943	7.297	CLO1023	229.789	8.079	CLO1001	4.846	2.154
132	Element Force CBAR 27005 Shear 1	278.080	7.475	CLO1001	377.839	8.142	CLO1001	99.759	35.874
133	Element Force CBAR 27005 Shear 2	205.873	7.259	CLO1004	206.753	7.989	CLO1013	0.880	0.428
134	Element Force CBAR 27006 Tension	4356.531	5.791	CLO1002	4032.499	5.947	CLO1014	-324.031	-7.438
135	Element Force CBAR 27007 Tension	6163.277	5.789	CLO1002	5891.789	5.947	CLO1014	-271.488	-4.405
136	Element Force CBAR 27008 Tension	6059.702	5.787	CLO1002	5785.847	5.947	CLO1014	-273.855	-4.519
137	Element Force CBAR 27009 Tension	6494.237	5.786	CLO1002	6209.822	5.950	CLO1014	-284.415	-4.380
138	Element Force CBAR 27010 Tension	4266.328	5.787	CLO1002	4176.930	5.949	CLO1014	-89.398	-2.095
139	Element Force CBAR 27011 Tension	4433.148	5.785	CLO1002	4308.620	5.949	CLO1014	-124.528	-2.809
140	Element Force CBAR 27012 Tension	2931.737	5.787	CLO1002	2870.909	5.945	CLO1002	-60.828	-2.075
141	Element Force CBAR 27013 Tension	3000.187	5.785	CLO1014	2948.457	5.617	CLO1002	-51.729	-1.724
142	Element Force CBAR 27014 Tension	1956.921	5.786	CLO1002	1907.901	5.952	CLO1002	-49.019	-2.505
143	Element Force CBAR 27015 Tension	1863.681	5.784	CLO1014	1863.020	5.610	CLO1002	-0.661	-0.035
144	Element Force CBAR 27016 Tension	1399.773	5.787	CLO1002	1492.678	5.611	CLO1002	92.904	6.637
145	Element Force CBAR 27017 Tension	1313.514	7.296	CLO1023	1402.708	5.610	CLO1002	89.195	6.791
146	Element Force CBAR 27018 Shear 1	5393.470	5.784	CLO1002	5363.589	5.950	CLO1014	-29.881	-0.554
147	Element Force CBAR 27018 Shear 2	7433.689	5.788	CLO1002	7494.287	5.285	CLO1002	60.598	0.815
148	Element Force CBAR 27019 Shear 1	520.955	7.539	CLO1013	575.296	8.014	CLO1001	54.341	10.431
149	Element Force CBAR 27019 Shear 2	683.566	8.107	CLO1001	640.664	8.117	CLO1001	-42.901	-6.276
150	Element Force CBAR 27020 Shear 1	354.064	7.940	CLO1013	491.649	8.079	CLO1013	137.585	38.859

Table A-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
151	Element Force CBAR 27020 Shear 2	545.849	8.106	CLO1001	561.386	8.117	CLO1001	15.537	2.846
152	Element Force CBAR 27021 Shear 1	435.612	5.614	CLO1014	590.450	5.622	CLO1002	154.838	35.545
153	Element Force CBAR 27021 Shear 2	287.308	7.459	CLO1018	271.444	6.957	CLO1012	-15.864	-5.521
154	Element Force CBAR 27022 Shear 1	443.988	5.613	CLO1014	569.773	5.622	CLO1002	125.785	28.331
155	Element Force CBAR 27022 Shear 2	288.087	7.292	CLO1022	277.547	7.292	CLO1023	-10.540	-3.659
156	Element Force CBAR 27023 Shear 1	161.214	7.302	CLO1023	281.726	8.020	CLO1013	120.512	74.752
157	Element Force CBAR 27023 Shear 2	146.455	7.293	CLO1022	182.506	7.913	CLO1001	36.051	24.616
158	Element Force CBAR 27024 Tension	3148.020	5.283	CLO1014	3281.938	5.285	CLO1002	133.918	4.254
159	Element Force CBAR 27025 Tension	6818.856	5.787	CLO1002	6315.878	5.286	CLO1002	-502.978	-7.376
160	Element Force CBAR 27026 Tension	6561.452	5.787	CLO1002	6103.597	5.790	CLO1014	-457.855	-6.978
161	Element Force CBAR 27027 Tension	6206.781	5.785	CLO1002	5918.079	5.950	CLO1014	-288.702	-4.651
162	Element Force CBAR 27028 Tension	4106.917	5.786	CLO1014	3869.529	5.950	CLO1014	-237.388	-5.780
163	Element Force CBAR 27029 Tension	4243.902	5.785	CLO1014	4207.042	5.950	CLO1014	-36.860	-0.869
164	Element Force CBAR 27030 Tension	3179.258	7.444	CLO1001	3561.736	8.111	CLO1001	382.478	12.030
165	Element Force CBAR 27031 Tension	3493.299	7.444	CLO1001	3993.012	8.111	CLO1001	499.713	14.305
166	Element Force CBAR 27032 Tension	2098.536	7.264	CLO1010	2288.308	8.111	CLO1001	189.772	9.043
167	Element Force CBAR 27033 Tension	2105.376	7.263	CLO1010	2192.933	8.111	CLO1001	87.557	4.159
168	Element Force CBAR 27034 Tension	1546.839	7.264	CLO1010	1574.351	8.111	CLO1013	27.513	1.779
169	Element Force CBAR 27035 Tension	1457.470	7.263	CLO1010	1398.822	5.952	CLO1014	-58.648	-4.024
170	Element Force CBAR 27036 Tension	301.651	7.539	CLO1001	286.787	8.113	CLO1001	-14.864	-4.927
171	Element Force CBAR 27037 Tension	466.180	7.446	CLO1001	487.266	8.113	CLO1001	21.086	4.523
172	Element Force CBAR 27038 Shear 1	5418.760	5.786	CLO1002	5227.907	5.450	CLO1014	-190.854	-3.522
173	Element Force CBAR 27038 Shear 2	6891.157	5.279	CLO1002	7257.005	5.282	CLO1002	365.848	5.309
174	Element Force CBAR 27039 Shear 1	211.608	5.863	CLO1002	250.428	5.870	CLO1014	38.820	18.345
175	Element Force CBAR 27039 Shear 2	625.994	6.113	CLO1002	613.850	5.624	CLO1002	-12.144	-1.940
176	Element Force CBAR 27040 Shear 1	267.710	7.284	CLO1013	388.110	8.144	CLO1013	120.400	44.974
177	Element Force CBAR 27040 Shear 2	451.017	5.614	CLO1014	440.464	5.623	CLO1014	-10.553	-2.340
178	Element Force CBAR 27041 Shear 1	270.032	7.939	CLO1013	361.152	7.945	CLO1001	91.119	33.744
179	Element Force CBAR 27041 Shear 2	401.616	7.315	CLO1023	361.632	5.617	CLO1002	-39.984	-9.956
180	Element Force CBAR 27042 Shear 1	304.542	8.137	CLO1013	399.164	8.144	CLO1013	94.622	31.070
181	Element Force CBAR 27042 Shear 2	333.376	7.316	CLO1023	307.898	5.605	CLO1002	-25.478	-7.642
182	Element Force CBAR 27043 Shear 1	275.642	7.742	CLO1001	390.702	8.148	CLO1013	115.060	41.743
183	Element Force CBAR 27043 Shear 2	256.857	7.471	CLO1016	213.329	9.836	CLO1013	-43.528	-16.947
184	Element Force CBAR 27044 Tension	3452.726	5.280	CLO1002	3691.830	5.282	CLO1002	239.104	6.925
185	Element Force CBAR 27045 Tension	5125.818	5.787	CLO1002	5199.485	5.282	CLO1002	73.666	1.437
186	Element Force CBAR 27046 Tension	5857.420	5.787	CLO1002	5498.593	5.952	CLO1014	-358.827	-6.126
187	Element Force CBAR 27047 Tension	6456.320	5.785	CLO1002	6103.047	5.952	CLO1014	-353.273	-5.472
188	Element Force CBAR 27048 Tension	4044.813	5.786	CLO1002	3969.617	5.787	CLO1002	-75.196	-1.859
189	Element Force CBAR 27049 Tension	4281.900	5.785	CLO1002	4248.214	5.787	CLO1002	-33.686	-0.787
190	Element Force CBAR 27050 Tension	2520.693	5.785	CLO1002	2565.675	5.946	CLO1002	44.982	1.785
191	Element Force CBAR 27051 Tension	2824.761	5.616	CLO1014	2890.944	5.617	CLO1002	66.183	2.343
192	Element Force CBAR 27052 Tension	1715.446	7.296	CLO1011	1719.416	6.125	CLO1014	3.970	0.231
193	Element Force CBAR 27053 Tension	1984.465	5.784	CLO1002	2056.673	5.610	CLO1002	72.208	3.639
194	Element Force CBAR 27054 Tension	1479.341	7.296	CLO1023	1257.253	6.125	CLO1002	-222.088	-15.013
195	Element Force CBAR 27055 Tension	1478.691	7.294	CLO1023	1423.342	6.124	CLO1002	-55.349	-3.743
196	Element Force CBAR 27056 Shear 1	4886.176	5.618	CLO1002	4644.189	5.618	CLO1002	-241.987	-4.952
197	Element Force CBAR 27056 Shear 2	8529.914	5.790	CLO1014	7954.363	5.947	CLO1014	-575.551	-6.747
198	Element Force CBAR 27057 Shear 1	624.523	5.278	CLO1002	686.709	5.274	CLO1014	62.186	9.957
199	Element Force CBAR 27057 Shear 2	872.732	5.616	CLO1002	834.528	5.618	CLO1002	-38.204	-4.378
200	Element Force CBAR 27058 Shear 1	201.302	6.937	CLO1016	266.574	6.941	CLO1029	65.272	32.425

Table A-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
201	Element Force CBAR 27058 Shear 2	614.509	5.788	CLO1002	584.143	5.946	CLO1002	-30.366	-4.941
202	Element Force CBAR 27059 Shear 1	134.362	6.967	CLO1011	241.402	8.120	CLO1001	107.040	79.666
203	Element Force CBAR 27059 Shear 2	243.878	7.060	CLO1004	290.972	7.981	CLO1001	47.094	19.310
204	Element Force CBAR 27060 Shear 1	236.733	7.315	CLO1023	284.256	6.119	CLO1002	47.524	20.075
205	Element Force CBAR 27060 Shear 2	239.388	7.633	CLO1013	272.704	7.980	CLO1001	33.316	13.917
206	Element Force CBAR 27061 Shear 1	237.023	7.318	CLO1023	294.917	8.148	CLO1013	57.895	24.426
207	Element Force CBAR 27061 Shear 2	185.030	7.634	CLO1013	211.005	7.980	CLO1001	25.975	14.038
208	Element Force CBAR 27062 Tension	4526.492	5.791	CLO1002	4209.779	5.874	CLO1002	-316.713	-6.997
209	Element Force CBAR 27063 Tension	6155.331	5.789	CLO1002	5756.756	5.947	CLO1014	-398.575	-6.475
210	Element Force CBAR 27064 Tension	4771.409	5.788	CLO1002	4504.469	5.948	CLO1002	-266.940	-5.595
211	Element Force CBAR 27065 Tension	4359.838	5.787	CLO1002	4112.966	5.948	CLO1002	-246.872	-5.662
212	Element Force CBAR 27066 Tension	2758.432	5.785	CLO1002	2760.946	5.948	CLO1002	2.514	0.091
213	Element Force CBAR 27067 Tension	2997.602	5.785	CLO1002	3005.817	5.784	CLO1002	8.215	0.274
214	Element Force CBAR 27068 Tension	2563.620	5.785	CLO1002	2563.488	5.952	CLO1002	-0.132	-0.005
215	Element Force CBAR 27069 Tension	2582.666	5.784	CLO1014	2597.540	5.947	CLO1014	14.875	0.576
216	Element Force CBAR 27070 Tension	1636.384	7.260	CLO1010	1661.495	5.785	CLO1002	25.111	1.535
217	Element Force CBAR 27071 Tension	1863.446	7.262	CLO1010	1777.841	8.112	CLO1001	-85.605	-4.594
218	Element Force CBAR 27072 Tension	1337.649	5.787	CLO1002	1430.433	5.950	CLO1002	92.784	6.936
219	Element Force CBAR 27073 Tension	1455.027	7.263	CLO1010	1463.772	8.111	CLO1013	8.745	0.601
220	Element Force CBAR 27074 Tension	275.053	7.938	CLO1013	250.417	7.943	CLO1013	-24.636	-8.957
221	Element Force CBAR 27075 Tension	483.482	7.640	CLO1013	463.116	8.113	CLO1013	-20.367	-4.213

Table A-24. Japanese Experiment Module - Exposed Facility - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.602	6.947	CLO1012	3.575	6.948	CLO1012	-0.027	-0.754
2	Net Load Factor - T2 (g)	1.299	3.470	CLO1013	1.190	3.791	CLO1024	-0.108	-8.353
3	Net Load Factor - T3 (g)	2.380	8.203	CLO1019	2.320	8.204	CLO1019	-0.060	-2.542
4	Net Load Factor - R1 (rad/sec^2)	4.462	7.016	CLO1007	4.616	7.016	CLO1019	0.154	3.457
5	Net Load Factor - R2 (rad/sec^2)	9.098	7.036	CLO1011	9.057	7.036	CLO1011	-0.041	-0.450
6	Net Load Factor - R3 (rad/sec^2)	3.907	7.631	CLO1013	3.804	7.632	CLO1013	-0.103	-2.642
7	ID 600001 - T3 (lbf)	6066.333	8.203	CLO1019	5910.322	8.204	CLO1019	-156.011	-2.572
8	ID 600002 - T3 (lbf)	6682.038	8.203	CLO1019	6579.269	8.204	CLO1019	-102.769	-1.538
9	ID 600003 - T1 (lbf)	14914.482	6.947	CLO1026	15670.941	6.946	CLO1026	756.459	5.072
10	ID 600003 - T3 (lbf)	6903.550	7.698	CLO1027	6604.391	7.698	CLO1027	-299.159	-4.333
11	ID 600004 - T1 (lbf)	17067.488	6.946	CLO1025	16040.937	6.947	CLO1025	-1026.551	-6.015
12	ID 600004 - T3 (lbf)	6305.198	7.692	CLO1013	5935.778	7.693	CLO1013	-369.420	-5.859
13	ID 600005 - T2 (lbf)	10936.639	3.470	CLO1013	10023.226	3.791	CLO1024	-913.414	-8.352
14	Net Inertial Acc - T1 (in/sec^2)	1390.720	6.947	CLO1012	1380.268	6.948	CLO1012	-10.451	-0.752
15	Net Inertial Acc - T2 (in/sec^2)	501.371	3.470	CLO1013	459.491	3.791	CLO1024	-41.880	-8.353
16	Net Inertial Acc - T3 (in/sec^2)	918.903	8.203	CLO1019	895.545	8.204	CLO1019	-23.358	-2.542
17	Net Inertial Acc - R1 (rad/sec^2)	4.462	7.016	CLO1007	4.616	7.016	CLO1019	0.154	3.457
18	Net Inertial Acc - R2 (rad/sec^2)	9.098	7.036	CLO1011	9.057	7.036	CLO1011	-0.041	-0.450
19	Net Inertial Acc - R3 (rad/sec^2)	3.907	7.631	CLO1013	3.804	7.632	CLO1013	-0.103	-2.642

Table A-25. Experiment Logistics Module - Exposed Section - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.106	7.384	CLO1012	3.003	7.387	CLO1012	-0.103	-3.326
2	Net Load Factor - T2 (g)	1.521	3.605	CLO1001	1.393	3.784	CLO1013	-0.127	-8.357
3	Net Load Factor - T3 (g)	1.577	6.915	CLO1016	1.637	6.915	CLO1016	0.059	3.747
4	Net Load Factor - R1 (rad/sec^2)	3.519	7.037	CLO1013	3.603	7.037	CLO1013	0.084	2.400
5	Net Load Factor - R2 (rad/sec^2)	11.587	7.039	CLO1015	11.288	7.159	CLO1014	-0.298	-2.576
6	Net Load Factor - R3 (rad/sec^2)	3.883	7.932	CLO1028	3.397	7.931	CLO1028	-0.486	-12.522
7	ID 700001 - T2 (lbf)	8234.406	3.605	CLO1001	7548.465	3.784	CLO1013	-685.941	-8.330
8	ID 700002 - T1 (lbf)	9575.947	7.381	CLO1012	9082.884	7.385	CLO1012	-493.062	-5.149
9	ID 700002 - T3 (lbf)	5554.023	7.538	CLO1029	5527.873	8.134	CLO1023	-26.150	-0.471
10	ID 700003 - T1 (lbf)	8394.347	7.386	CLO1025	8207.800	7.388	CLO1025	-186.548	-2.222
11	ID 700003 - T3 (lbf)	5811.144	3.782	CLO1001	5435.799	3.782	CLO1013	-375.345	-6.459
12	ID 700004 - T3 (lbf)	4416.683	7.245	CLO1012	4075.295	7.527	CLO1001	-341.388	-7.730
13	ID 700005 - T3 (lbf)	3850.186	7.245	CLO1012	3848.658	7.526	CLO1001	-1.528	-0.040
14	Net Inertial Acc - T1 (in/sec^2)	1199.185	7.384	CLO1012	1159.289	7.387	CLO1012	-39.896	-3.327
15	Net Inertial Acc - T2 (in/sec^2)	587.070	3.605	CLO1013	538.010	3.784	CLO1013	-49.060	-8.357
16	Net Inertial Acc - T3 (in/sec^2)	609.026	6.915	CLO1004	631.847	6.915	CLO1016	22.821	3.747
17	Net Inertial Acc - R1 (rad/sec^2)	3.519	7.037	CLO1013	3.603	7.037	CLO1013	0.084	2.400
18	Net Inertial Acc - R2 (rad/sec^2)	11.587	7.039	CLO1015	11.288	7.159	CLO1014	-0.298	-2.576
19	Net Inertial Acc - R3 (rad/sec^2)	3.883	7.932	CLO1028	3.397	7.931	CLO1028	-0.486	-12.522

Table A-26. Atmospheric Nuetral Drag Experiment-2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
1	Net Load Factor - T1 (g)	3.478	9.745	CLO1019	3.522	9.745	CLO1007	0.043	1.249
2	Net Load Factor - T2 (g)	2.974	6.999	CLO1021	2.999	6.999	CLO1021	0.025	0.837
3	Net Load Factor - T3 (g)	2.789	7.242	CLO1002	2.562	7.242	CLO1002	-0.227	-8.133
4	Net Load Factor - R1 (rad/sec^2)	53.349	7.244	CLO1002	49.996	7.244	CLO1014	-3.353	-6.286
5	Net Load Factor - R2 (rad/sec^2)	35.394	6.843	CLO1023	35.103	6.843	CLO1023	-0.291	-0.822
6	Net Load Factor - R3 (rad/sec^2)	32.972	6.890	CLO1004	32.925	6.894	CLO1010	-0.047	-0.142
7	GRID 13 - T1 (lbf)	1360.153	9.653	CLO1024	1369.077	9.653	CLO1024	8.924	0.656
8	GRID 13 - T2 (lbf)	1375.340	7.976	CLO1013	1371.044	7.977	CLO1013	-4.296	-0.312
9	GRID 13 - T3 (lbf)	656.278	7.314	CLO1013	655.648	7.113	CLO1002	-0.630	-0.096
10	GRID 18 - T2 (lbf)	952.496	7.000	CLO1021	954.521	9.654	CLO1024	2.025	0.213
11	GRID 22 - T2 (lbf)	811.110	7.242	CLO1014	788.944	7.242	CLO1014	-22.166	-2.733
12	GRID 26 - T1 (lbf)	545.099	7.268	CLO1014	522.151	7.267	CLO1014	-22.948	-4.210
13	GRID 26 - T2 (lbf)	618.392	7.249	CLO1015	612.941	7.091	CLO1015	-5.451	-0.881
14	GRID 26 - T3 (lbf)	826.314	7.241	CLO1014	812.769	7.242	CLO1014	-13.544	-1.639
15	GRID 28 - T2 (lbf)	1261.905	7.242	CLO1014	1228.615	7.242	CLO1014	-33.291	-2.638
16	GRID 44 - T2 (lbf)	147.682	6.999	CLO1022	148.587	6.997	CLO1011	0.905	0.613
17	GRID 46 - T2 (lbf)	819.519	7.243	CLO1014	762.805	7.243	CLO1014	-56.714	-6.920
18	GRID 58 - T2 (lbf)	277.272	9.653	CLO1024	282.202	9.654	CLO1024	4.930	1.778
19	GRID 59 - T1 (lbf)	723.897	7.242	CLO1014	704.511	6.975	CLO1009	-19.386	-2.678
20	GRID 59 - T2 (lbf)	1161.973	7.113	CLO1014	1181.056	7.113	CLO1014	19.083	1.642
21	GRID 59 - T3 (lbf)	696.870	7.976	CLO1013	695.073	7.975	CLO1013	-1.797	-0.258
22	GRID 60 - T2 (lbf)	911.057	7.244	CLO1014	911.002	7.244	CLO1002	-0.055	-0.006
23	GRID 75 - T1 (lbf)	682.792	8.001	CLO1021	674.516	8.002	CLO1021	-8.277	-1.212
24	GRID 75 - T2 (lbf)	791.120	7.244	CLO1014	782.801	7.243	CLO1014	-8.319	-1.052
25	GRID 75 - T3 (lbf)	432.285	7.047	CLO1003	428.986	7.047	CLO1003	-3.299	-0.763
26	GRID 79 - T2 (lbf)	601.329	7.185	CLO1014	599.238	7.281	CLO1013	-2.091	-0.348
27	Net Inertial Acc - T1 (in/sec^2)	1342.882	9.745	CLO1019	1359.651	9.745	CLO1007	16.770	1.249
28	Net Inertial Acc - T2 (in/sec^2)	1148.357	6.999	CLO1021	1157.968	6.999	CLO1021	9.611	0.837
29	Net Inertial Acc - T3 (in/sec^2)	1076.819	7.242	CLO1002	989.243	7.242	CLO1002	-87.576	-8.133
30	Net Inertial Acc - R1 (rad/sec^2)	53.349	7.244	CLO1002	49.996	7.244	CLO1014	-3.353	-6.286
31	Net Inertial Acc - R2 (rad/sec^2)	35.394	6.843	CLO1023	35.103	6.843	CLO1023	-0.291	-0.822
32	Net Inertial Acc - R3 (rad/sec^2)	32.972	6.890	CLO1016	32.925	6.894	CLO1010	-0.047	-0.142

Appendix B
Abort Landing - Linear/Nonlinear Comparison

Table B-1. Pump Module IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	6.247	0.295	LF7103	6.724	0.298	LF7103	0.477	7.630
2	Net Load Factor - T2 (g)	1.154	0.609	LF7100	1.520	0.431	LF7103	0.365	31.662
3	Net Load Factor - T3 (g)	1.195	0.298	LF7106	1.436	0.302	LF7103	0.241	20.176
4	Net Load Factor - R1 (rad/sec^2)	13.483	0.379	LF7103	26.652	0.401	LF7105	13.169	97.677
5	Net Load Factor - R2 (rad/sec^2)	18.315	0.227	LF7103	25.290	0.328	LF7101	6.976	38.087
6	Net Load Factor - R3 (rad/sec^2)	30.553	0.328	LF7103	41.659	0.329	LF7103	11.106	36.352
7	ID 29047 - T2 (lbf)	5473.607	0.295	LF7103	6203.618	0.298	LF7103	730.010	13.337
8	ID 29048 - T1 (lbf)	2164.884	0.296	LF7103	2499.910	0.298	LF7103	335.026	15.475
9	ID 29048 - T2 (lbf)	3300.880	0.293	LF7103	3427.777	0.298	LF7105	126.897	3.844
10	ID 29050 - T1 (lbf)	1634.122	0.231	LF7105	1672.877	0.305	LF7105	38.755	2.372
11	ID 40016 - T3 (lbf)	2579.715	0.294	LF7103	2651.139	0.293	LF7103	71.423	2.769
12	ID 40030 - T3 (lbf)	2354.490	0.299	LF7105	2707.897	0.366	LF7105	353.407	15.010
13	ID 40515 - T3 (lbf)	2686.414	0.234	LF7105	2731.095	0.237	LF7103	44.680	1.663
14	ID 40516 - T3 (lbf)	3402.166	0.295	LF7103	3753.843	0.295	LF7103	351.677	10.337
15	Net Inertial Acc - T1 (in/sec^2)	2412.066	0.295	LF7103	2596.100	0.298	LF7103	184.035	7.630
16	Net Inertial Acc - T2 (in/sec^2)	445.618	0.609	LF7100	586.711	0.431	LF7103	141.093	31.662
17	Net Inertial Acc - T3 (in/sec^2)	461.405	0.298	LF7106	554.496	0.302	LF7103	93.091	20.176
18	Net Inertial Acc - R1 (rad/sec^2)	13.483	0.379	LF7103	26.652	0.401	LF7105	13.169	97.677
19	Net Inertial Acc - R2 (rad/sec^2)	18.315	0.227	LF7103	25.290	0.328	LF7101	6.976	38.087
20	Net Inertial Acc - R3 (rad/sec^2)	30.553	0.328	LF7103	41.659	0.329	LF7103	11.106	36.352

Table B-2. Pump Module IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	5.312	0.297	LF7103	5.832	0.297	LF7105	0.519	9.776
2	Net Load Factor - T2 (g)	1.123	0.611	LF7100	2.838	0.402	LF7106	1.715	152.760
3	Net Load Factor - T3 (g)	1.193	0.308	LF7103	2.276	0.388	LF7105	1.083	90.739
4	Net Load Factor - R1 (rad/sec^2)	13.330	0.381	LF7103	60.506	0.420	LF7105	47.176	353.917
5	Net Load Factor - R2 (rad/sec^2)	18.537	0.235	LF7105	46.826	0.328	LF7103	28.289	152.609
6	Net Load Factor - R3 (rad/sec^2)	28.290	0.332	LF7103	53.832	0.294	LF7103	25.542	90.284
7	ID 10942 - T1 (lbf)	1235.868	0.233	LF7105	1239.448	0.331	LF7101	3.579	0.290
8	ID 10942 - T3 (lbf)	2601.923	0.293	LF7103	2860.089	0.298	LF7103	258.166	9.922
9	ID 10942 - R1 (lbf-in)	28.969	0.296	LF7103	37.328	0.292	LF7103	8.360	28.857
10	ID 10942 - R2 (lbf-in)	0.071	0.294	LF7103	0.076	0.301	LF7103	0.005	7.553
11	ID 11715 - T1 (lbf)	517.023	1.108	LF7100	705.679	0.332	LF7102	188.655	36.489
12	ID 11715 - T2 (lbf)	640.105	0.230	LF7105	1159.846	0.723	LF7101	519.741	81.196
13	ID 11715 - T3 (lbf)	3009.243	0.294	LF7103	3247.781	0.300	LF7103	238.538	7.927
14	ID 11715 - R1 (lbf-in)	180.501	0.230	LF7105	316.230	0.403	LF7106	135.730	75.196
15	ID 11715 - R2 (lbf-in)	0.172	0.230	LF7105	0.253	0.403	LF7106	0.081	47.171
16	ID 29047 - T2 (lbf)	5473.607	0.295	LF7103	6203.618	0.298	LF7103	730.010	13.337
17	ID 29048 - T1 (lbf)	2164.884	0.296	LF7103	2499.910	0.298	LF7103	335.026	15.475
18	ID 29048 - T2 (lbf)	3300.880	0.293	LF7103	3427.777	0.298	LF7105	126.897	3.844
19	ID 29050 - T1 (lbf)	1634.122	0.231	LF7105	1672.877	0.305	LF7105	38.755	2.372
20	ID 40016 - T3 (lbf)	2579.715	0.294	LF7103	2651.139	0.293	LF7103	71.423	2.769
21	ID 40030 - T3 (lbf)	2354.490	0.299	LF7105	2707.897	0.366	LF7105	353.407	15.010
22	ID 40515 - T3 (lbf)	2686.414	0.234	LF7105	2731.095	0.237	LF7103	44.680	1.663
23	ID 40516 - T3 (lbf)	3402.166	0.295	LF7103	3753.843	0.295	LF7103	351.677	10.337
24	ID 620001 - T1 (lbf)	567.661	0.368	LF7101	887.879	0.370	LF7105	320.218	56.410
25	ID 620001 - T2 (lbf)	929.303	0.296	LF7103	1138.586	0.291	LF7103	209.283	22.520
26	ID 630001 - T1 (lbf)	1313.388	0.295	LF7103	1373.359	0.297	LF7103	59.971	4.566
27	Net Inertial Acc - T1 (in/sec^2)	2051.037	0.297	LF7103	2251.553	0.297	LF7105	200.517	9.776
28	Net Inertial Acc - T2 (in/sec^2)	433.493	0.611	LF7100	1095.697	0.402	LF7106	662.204	152.760
29	Net Inertial Acc - T3 (in/sec^2)	460.638	0.308	LF7103	878.618	0.388	LF7105	417.980	90.739
30	Net Inertial Acc - R1 (rad/sec^2)	13.330	0.381	LF7103	60.506	0.420	LF7105	47.176	353.917
31	Net Inertial Acc - R2 (rad/sec^2)	18.537	0.235	LF7105	46.826	0.328	LF7103	28.289	152.609
32	Net Inertial Acc - R3 (rad/sec^2)	28.290	0.332	LF7103	53.832	0.294	LF7103	25.542	90.284

Table B-3. Pump Module IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	7.030	0.294	LF7103	7.588	0.299	LF7103	0.557	7.930
2	Net Load Factor - T2 (g)	1.221	0.607	LF7100	2.070	0.370	LF7105	0.848	69.454
3	Net Load Factor - T3 (g)	1.311	0.408	LF7103	2.171	0.303	LF7103	0.859	65.530
4	Net Load Factor - R1 (rad/sec^2)	16.032	0.378	LF7103	42.868	0.355	LF7103	26.836	167.395
5	Net Load Factor - R2 (rad/sec^2)	21.233	0.224	LF7103	40.328	0.292	LF7103	19.095	89.935
6	Net Load Factor - R3 (rad/sec^2)	30.997	0.327	LF7103	45.821	0.292	LF7101	14.824	47.822
7	ID 250604 - T1 (lbf)	1235.868	0.233	LF7105	1239.448	0.331	LF7101	3.579	0.290
8	ID 250604 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
9	ID 250604 - T3 (lbf)	2601.923	0.293	LF7103	2860.089	0.298	LF7103	258.166	9.922
10	ID 250604 - R1 (lbf-in)	28.969	0.296	LF7103	37.328	0.292	LF7103	8.360	28.857
11	ID 250604 - R2 (lbf-in)	0.071	0.294	LF7103	0.076	0.301	LF7103	0.005	7.553
12	ID 250604 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
13	ID 250605 - T1 (lbf)	517.023	1.108	LF7100	705.679	0.332	LF7102	188.655	36.489
14	ID 250605 - T2 (lbf)	640.105	0.230	LF7105	1159.846	0.723	LF7101	519.741	81.196
15	ID 250605 - T3 (lbf)	3009.243	0.294	LF7103	3247.781	0.300	LF7103	238.538	7.927
16	ID 250605 - R1 (lbf-in)	180.501	0.230	LF7105	316.230	0.403	LF7106	135.730	75.196
17	ID 250605 - R2 (lbf-in)	0.172	0.230	LF7105	0.253	0.403	LF7106	0.081	47.171
18	ID 250605 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
19	ID 250655 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
20	ID 250655 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
21	ID 250655 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
22	ID 250655 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
23	ID 250655 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
24	ID 250655 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
25	ID 250664 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
26	ID 250664 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
27	ID 250664 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
28	ID 250664 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
29	ID 250664 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
30	ID 250664 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
31	ID 250694 - T1 (lbf)	1313.388	0.295	LF7103	1373.359	0.297	LF7103	59.971	4.566
32	ID 250729 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
33	ID 250729 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
34	ID 250729 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
35	ID 250729 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
36	ID 250729 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
37	ID 250729 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
38	ID 250752 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
39	ID 250752 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
40	ID 250752 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
41	ID 250752 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
42	ID 250752 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
43	ID 250752 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
44	ID 250768 - T1 (lbf)	567.661	0.368	LF7101	887.879	0.370	LF7105	320.218	56.410
45	ID 250768 - T2 (lbf)	929.303	0.296	LF7103	1138.586	0.291	LF7103	209.283	22.520
46	Net Inertial Acc - T1 (in/sec^2)	2714.366	0.294	LF7103	2929.610	0.299	LF7103	215.244	7.930
47	Net Inertial Acc - T2 (in/sec^2)	471.600	0.607	LF7100	799.143	0.370	LF7105	327.543	69.454
48	Net Inertial Acc - T3 (in/sec^2)	506.327	0.408	LF7103	838.125	0.303	LF7103	331.797	65.530
49	Net Inertial Acc - R1 (rad/sec^2)	16.032	0.378	LF7103	42.868	0.355	LF7103	26.836	167.395
50	Net Inertial Acc - R2 (rad/sec^2)	21.233	0.224	LF7103	40.328	0.292	LF7103	19.095	89.935

Table B-3. Pump Module IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

		Data-Set A			Data-Set B			Difference	
No	Description	Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	Net Inertial Acc - R3 (rad/sec^2)	30.997	0.327	LF7103	45.821	0.292	LF7101	14.824	47.822

Table B-4. Space-to-Ground Antenna IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.094	0.302	LF7103	1.947	0.438	LF7103	0.853	77.922
2	Net Load Factor - T2 (g)	3.818	0.223	LF7103	4.472	0.221	LF7103	0.654	17.123
3	Net Load Factor - T3 (g)	0.910	0.634	LF7100	1.782	0.364	LF7105	0.872	95.767
4	Net Load Factor - R1 (rad/sec^2)	17.846	0.777	LF7100	36.989	0.775	LF7100	19.143	107.265
5	Net Load Factor - R2 (rad/sec^2)	10.389	0.889	LF7100	48.888	0.373	LF7103	38.499	370.587
6	Net Load Factor - R3 (rad/sec^2)	12.877	0.201	LF7105	27.416	0.499	LF7105	14.540	112.916
7	ID 40301 - T1 (lbf)	570.311	0.417	LF7103	1279.372	0.438	LF7103	709.061	124.329
8	ID 40301 - T2 (lbf)	1839.294	0.228	LF7105	2213.801	0.220	LF7105	374.507	20.361
9	ID 40302 - T1 (lbf)	405.847	0.405	LF7105	645.384	0.275	LF7105	239.538	59.022
10	ID 40303 - T2 (lbf)	1056.627	0.294	LF7103	1323.605	0.219	LF7103	266.978	25.267
11	ID 40311 - T3 (lbf)	1111.738	0.733	LF7100	1345.602	0.430	LF7102	233.864	21.036
12	ID 40312 - T3 (lbf)	1036.629	0.225	LF7101	1384.109	0.224	LF7101	347.480	33.520
13	ID 40313 - T3 (lbf)	746.704	0.723	LF7100	843.786	0.317	LF7106	97.082	13.001
14	ID 40314 - T3 (lbf)	570.619	0.374	LF7103	832.053	0.448	LF7101	261.433	45.816
15	Net Inertial Acc - T1 (in/sec^2)	422.439	0.302	LF7103	751.616	0.438	LF7103	329.177	77.923
16	Net Inertial Acc - T2 (in/sec^2)	1474.198	0.223	LF7103	1726.617	0.221	LF7103	252.419	17.122
17	Net Inertial Acc - T3 (in/sec^2)	351.411	0.634	LF7100	687.923	0.364	LF7105	336.512	95.760
18	Net Inertial Acc - R1 (rad/sec^2)	17.846	0.777	LF7100	36.989	0.775	LF7100	19.143	107.262
19	Net Inertial Acc - R2 (rad/sec^2)	10.389	0.889	LF7100	48.888	0.373	LF7103	38.499	370.579
20	Net Inertial Acc - R3 (rad/sec^2)	12.877	0.201	LF7105	27.416	0.499	LF7105	14.540	112.917

Table B-5. Space-to-Ground Antenna IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.609	0.303	LF7103	3.625	0.433	LF7103	2.015	125.225
2	Net Load Factor - T2 (g)	4.065	0.224	LF7101	5.330	0.219	LF7101	1.264	31.101
3	Net Load Factor - T3 (g)	1.352	0.294	LF7103	2.616	0.444	LF7101	1.264	93.503
4	Net Load Factor - R1 (rad/sec^2)	25.171	0.777	LF7100	38.740	0.508	LF7103	13.569	53.908
5	Net Load Factor - R2 (rad/sec^2)	12.176	0.141	LF7105	58.888	0.372	LF7103	46.713	383.659
6	Net Load Factor - R3 (rad/sec^2)	29.709	0.153	LF7105	57.460	0.471	LF7101	27.751	93.409
7	ID 3805 - T1 (lbf)	282.070	0.288	LF7105	419.563	0.222	LF7101	137.493	48.744
8	ID 3805 - T2 (lbf)	290.239	0.285	LF7105	379.233	0.216	LF7105	88.994	30.662
9	ID 3805 - T3 (lbf)	224.073	0.305	LF7103	324.299	0.518	LF7105	100.226	44.729
10	ID 3984 - T1 (lbf)	329.035	0.223	LF7103	470.320	0.443	LF7103	141.285	42.939
11	ID 3984 - T2 (lbf)	319.560	0.299	LF7103	406.474	0.433	LF7103	86.914	27.198
12	ID 3984 - T3 (lbf)	261.266	0.284	LF7105	306.536	0.219	LF7105	45.270	17.327
13	ID 4136 - T1 (lbf)	268.268	0.729	LF7100	358.213	0.515	LF7101	89.945	33.528
14	ID 4136 - T2 (lbf)	313.858	0.222	LF7101	403.133	0.215	LF7103	89.275	28.444
15	ID 4136 - T3 (lbf)	224.946	0.777	LF7100	296.995	0.735	LF7100	72.049	32.030
16	ID 4308 - T1 (lbf)	259.073	0.724	LF7100	407.048	0.217	LF7101	147.975	57.117
17	ID 4308 - T2 (lbf)	261.800	0.219	LF7103	355.496	0.217	LF7101	93.696	35.789
18	ID 4308 - T3 (lbf)	267.482	0.219	LF7105	351.525	0.218	LF7103	84.043	31.420
19	Net Inertial Acc - T1 (in/sec^2)	621.319	0.303	LF7103	1399.392	0.433	LF7103	778.073	125.229
20	Net Inertial Acc - T2 (in/sec^2)	1569.590	0.224	LF7101	2057.747	0.219	LF7101	488.157	31.101
21	Net Inertial Acc - T3 (in/sec^2)	521.889	0.294	LF7103	1009.894	0.444	LF7101	488.005	93.508
22	Net Inertial Acc - R1 (rad/sec^2)	25.171	0.777	LF7100	38.740	0.508	LF7103	13.569	53.906
23	Net Inertial Acc - R2 (rad/sec^2)	12.174	0.141	LF7105	58.890	0.372	LF7103	46.716	383.740
24	Net Inertial Acc - R3 (rad/sec^2)	29.710	0.153	LF7105	57.461	0.471	LF7101	27.751	93.407

Table B-6. Space-to-Ground Antenna IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	0.988	0.316	LF7103	2.205	0.439	LF7103	1.217	123.230
2	Net Load Factor - T2 (g)	3.769	0.227	LF7101	4.521	0.221	LF7103	0.752	19.963
3	Net Load Factor - T3 (g)	0.863	0.634	LF7100	2.053	0.364	LF7101	1.190	137.830
4	Net Load Factor - R1 (rad/sec^2)	16.100	0.778	LF7100	35.996	0.775	LF7100	19.896	123.577
5	Net Load Factor - R2 (rad/sec^2)	9.777	0.890	LF7100	52.456	0.373	LF7103	42.679	436.522
6	Net Load Factor - R3 (rad/sec^2)	10.867	0.201	LF7105	34.177	0.407	LF7103	23.310	214.495
7	ID 5293 - T1 (lbf)	282.070	0.288	LF7105	419.563	0.222	LF7101	137.493	48.744
8	ID 5293 - T2 (lbf)	290.239	0.285	LF7105	379.233	0.216	LF7105	88.994	30.662
9	ID 5293 - T3 (lbf)	224.073	0.305	LF7103	324.299	0.518	LF7105	100.226	44.729
10	ID 5294 - T1 (lbf)	329.035	0.223	LF7103	470.320	0.443	LF7103	141.285	42.939
11	ID 5294 - T2 (lbf)	319.560	0.299	LF7103	406.474	0.433	LF7103	86.914	27.198
12	ID 5294 - T3 (lbf)	261.266	0.284	LF7105	306.536	0.219	LF7105	45.270	17.327
13	ID 5295 - T1 (lbf)	268.268	0.729	LF7100	358.213	0.515	LF7101	89.945	33.528
14	ID 5295 - T2 (lbf)	313.858	0.222	LF7101	403.133	0.215	LF7103	89.275	28.444
15	ID 5295 - T3 (lbf)	224.946	0.777	LF7100	296.995	0.735	LF7100	72.049	32.030
16	ID 5296 - T1 (lbf)	259.073	0.724	LF7100	407.048	0.217	LF7101	147.975	57.117
17	ID 5296 - T2 (lbf)	261.800	0.219	LF7103	355.496	0.217	LF7101	93.696	35.789
18	ID 5296 - T3 (lbf)	267.482	0.219	LF7105	351.525	0.218	LF7103	84.043	31.420
19	ID 40301 - T1 (lbf)	570.311	0.417	LF7103	1279.372	0.438	LF7103	709.061	124.329
20	ID 40301 - T2 (lbf)	1839.294	0.228	LF7105	2213.801	0.220	LF7105	374.507	20.361
21	ID 40302 - T1 (lbf)	405.847	0.405	LF7105	645.384	0.275	LF7105	239.538	59.022
22	ID 40303 - T2 (lbf)	1056.627	0.294	LF7103	1323.605	0.219	LF7103	266.978	25.267
23	ID 40311 - T3 (lbf)	1111.738	0.733	LF7100	1345.602	0.430	LF7102	233.864	21.036
24	ID 40312 - T3 (lbf)	1036.629	0.225	LF7101	1384.109	0.224	LF7101	347.480	33.520
25	ID 40313 - T3 (lbf)	746.704	0.723	LF7100	843.786	0.317	LF7106	97.082	13.001
26	ID 40314 - T3 (lbf)	570.619	0.374	LF7103	832.053	0.448	LF7101	261.433	45.816
27	Net Inertial Acc - T1 (in/sec^2)	381.393	0.316	LF7103	851.381	0.439	LF7103	469.989	123.230
28	Net Inertial Acc - T2 (in/sec^2)	1455.046	0.227	LF7101	1745.513	0.221	LF7103	290.467	19.963
29	Net Inertial Acc - T3 (in/sec^2)	333.332	0.634	LF7100	792.762	0.364	LF7101	459.431	137.830
30	Net Inertial Acc - R1 (rad/sec^2)	16.100	0.778	LF7100	35.996	0.775	LF7100	19.896	123.577
31	Net Inertial Acc - R2 (rad/sec^2)	9.777	0.890	LF7100	52.456	0.373	LF7103	42.679	436.522
32	Net Inertial Acc - R3 (rad/sec^2)	10.867	0.201	LF7105	34.177	0.407	LF7103	23.310	214.495

Table B-7. Linear Drive Unit IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.680	0.288	LF7105	4.080	0.288	LF7101	0.400	10.870
2	Net Load Factor - T2 (g)	1.154	0.294	LF7104	2.160	0.299	LF7103	1.005	87.071
3	Net Load Factor - T3 (g)	1.561	0.396	LF7105	2.830	0.401	LF7101	1.270	81.350
4	Net Load Factor - R1 (rad/sec^2)	16.834	0.360	LF7103	41.736	0.309	LF7101	24.902	147.925
5	Net Load Factor - R2 (rad/sec^2)	19.075	0.299	LF7101	47.166	0.443	LF7105	28.091	147.270
6	Net Load Factor - R3 (rad/sec^2)	6.404	0.322	LF7103	43.572	0.508	LF7103	37.168	580.393
7	ID 40301 - T1 (lbf)	1186.324	0.289	LF7105	1347.004	0.285	LF7101	160.680	13.544
8	ID 40301 - T2 (lbf)	515.239	0.392	LF7103	1038.917	1.197	LF7100	523.678	101.638
9	ID 40302 - T1 (lbf)	1144.210	0.231	LF7101	1357.258	0.287	LF7105	213.049	18.620
10	ID 40303 - T2 (lbf)	388.311	0.296	LF7103	589.100	0.299	LF7103	200.789	51.708
11	ID 40311 - T3 (lbf)	532.330	0.213	LF7105	855.214	0.401	LF7101	322.884	60.655
12	ID 40312 - T3 (lbf)	557.747	0.216	LF7103	859.738	0.327	LF7103	301.991	54.145
13	ID 40313 - T3 (lbf)	590.148	0.295	LF7103	771.532	0.309	LF7101	181.384	30.735
14	ID 40314 - T3 (lbf)	464.225	0.285	LF7105	646.966	0.439	LF7101	182.741	39.365
15	Net Inertial Acc - T1 (in/sec^2)	1420.679	0.288	LF7105	1575.101	0.288	LF7101	154.421	10.870
16	Net Inertial Acc - T2 (in/sec^2)	445.725	0.294	LF7104	833.823	0.299	LF7103	388.098	87.071
17	Net Inertial Acc - T3 (in/sec^2)	602.546	0.396	LF7105	1092.718	0.401	LF7101	490.172	81.350
18	Net Inertial Acc - R1 (rad/sec^2)	16.834	0.360	LF7103	41.736	0.309	LF7101	24.902	147.925
19	Net Inertial Acc - R2 (rad/sec^2)	19.075	0.299	LF7101	47.166	0.443	LF7105	28.091	147.271
20	Net Inertial Acc - R3 (rad/sec^2)	6.404	0.322	LF7103	43.572	0.508	LF7103	37.168	580.380

Table B-8. Linear Drive Unit IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.736	0.286	LF7105	4.601	0.284	LF7101	0.865	23.147
2	Net Load Factor - T2 (g)	1.390	0.222	LF7104	2.774	0.296	LF7103	1.384	99.614
3	Net Load Factor - T3 (g)	1.644	0.395	LF7105	2.966	0.398	LF7105	1.322	80.399
4	Net Load Factor - R1 (rad/sec^2)	16.617	0.889	LF7100	51.713	0.820	LF7100	35.097	211.215
5	Net Load Factor - R2 (rad/sec^2)	33.180	0.134	LF7103	89.788	0.651	LF7103	56.608	170.608
6	Net Load Factor - R3 (rad/sec^2)	9.088	0.320	LF7103	75.383	0.358	LF7103	66.294	729.433
7	ID 97001 - T1 (lbf)	241.991	0.285	LF7105	313.331	0.284	LF7101	71.340	29.481
8	ID 97001 - T2 (lbf)	133.421	0.282	LF7105	267.883	0.720	LF7100	134.462	100.780
9	ID 97001 - T3 (lbf)	304.299	0.233	LF7105	409.109	0.283	LF7101	104.811	34.443
10	ID 97002 - T1 (lbf)	257.214	0.288	LF7105	309.163	0.285	LF7101	51.949	20.197
11	ID 97002 - T2 (lbf)	95.364	0.378	LF7103	199.819	0.340	LF7103	104.456	109.534
12	ID 97002 - T3 (lbf)	366.377	0.288	LF7105	630.129	0.435	LF7101	263.753	71.990
13	ID 97003 - T1 (lbf)	244.895	0.231	LF7105	314.886	0.358	LF7103	69.991	28.580
14	ID 97003 - T2 (lbf)	180.653	0.390	LF7103	283.633	0.322	LF7103	102.979	57.004
15	ID 97003 - T3 (lbf)	300.904	0.215	LF7103	378.206	0.365	LF7101	77.302	25.690
16	ID 97004 - T1 (lbf)	245.055	0.286	LF7105	288.043	0.288	LF7101	42.988	17.542
17	ID 97004 - T2 (lbf)	122.318	0.295	LF7103	280.726	0.371	LF7103	158.408	129.505
18	ID 97004 - T3 (lbf)	347.513	0.284	LF7105	592.292	0.435	LF7101	244.779	70.437
19	Net Inertial Acc - T1 (in/sec^2)	1442.373	0.286	LF7105	1776.241	0.284	LF7101	333.869	23.147
20	Net Inertial Acc - T2 (in/sec^2)	536.496	0.222	LF7104	1070.921	0.296	LF7103	534.425	99.614
21	Net Inertial Acc - T3 (in/sec^2)	634.695	0.395	LF7105	1144.987	0.398	LF7105	510.292	80.399
22	Net Inertial Acc - R1 (rad/sec^2)	16.617	0.889	LF7100	51.713	0.820	LF7100	35.097	211.215
23	Net Inertial Acc - R2 (rad/sec^2)	33.180	0.134	LF7103	89.788	0.651	LF7103	56.608	170.611
24	Net Inertial Acc - R3 (rad/sec^2)	9.089	0.320	LF7103	75.382	0.358	LF7103	66.293	729.393

Table B-9. Linear Drive Unit IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	3.717	0.289	LF7105	4.230	0.289	LF7103	0.512	13.783
2	Net Load Factor - T2 (g)	1.110	0.295	LF7104	2.642	0.299	LF7103	1.531	137.896
3	Net Load Factor - T3 (g)	1.532	0.397	LF7105	3.331	0.401	LF7101	1.798	117.342
4	Net Load Factor - R1 (rad/sec^2)	16.938	0.893	LF7100	63.461	0.736	LF7100	46.523	274.663
5	Net Load Factor - R2 (rad/sec^2)	16.512	0.297	LF7103	61.618	0.441	LF7105	45.106	273.172
6	Net Load Factor - R3 (rad/sec^2)	5.820	0.110	LF7103	52.346	0.508	LF7103	46.525	799.349
7	ID 30001 - T1 (lbf)	241.991	0.285	LF7105	313.331	0.284	LF7101	71.340	29.481
8	ID 30001 - T2 (lbf)	133.421	0.282	LF7105	267.883	0.720	LF7100	134.462	100.780
9	ID 30001 - T3 (lbf)	304.299	0.233	LF7105	409.109	0.283	LF7101	104.811	34.443
10	ID 30002 - T1 (lbf)	257.214	0.288	LF7105	309.163	0.285	LF7101	51.949	20.197
11	ID 30002 - T2 (lbf)	95.364	0.378	LF7103	199.819	0.340	LF7103	104.456	109.534
12	ID 30002 - T3 (lbf)	366.377	0.288	LF7105	630.129	0.435	LF7101	263.753	71.990
13	ID 30003 - T1 (lbf)	244.895	0.231	LF7105	314.886	0.358	LF7103	69.991	28.580
14	ID 30003 - T2 (lbf)	180.653	0.390	LF7103	283.633	0.322	LF7103	102.979	57.004
15	ID 30003 - T3 (lbf)	300.904	0.215	LF7103	378.206	0.365	LF7101	77.302	25.690
16	ID 30004 - T1 (lbf)	245.055	0.286	LF7105	288.043	0.288	LF7101	42.988	17.542
17	ID 30004 - T2 (lbf)	122.318	0.295	LF7103	280.726	0.371	LF7103	158.408	129.505
18	ID 30004 - T3 (lbf)	347.513	0.284	LF7105	592.292	0.435	LF7101	244.779	70.437
19	ID 40301 - T1 (lbf)	1186.324	0.289	LF7105	1347.004	0.285	LF7101	160.680	13.544
20	ID 40301 - T2 (lbf)	515.239	0.392	LF7103	1038.917	1.197	LF7100	523.678	101.638
21	ID 40302 - T1 (lbf)	1144.210	0.231	LF7101	1357.258	0.287	LF7105	213.049	18.620
22	ID 40303 - T2 (lbf)	388.311	0.296	LF7103	589.100	0.299	LF7103	200.789	51.708
23	ID 40311 - T3 (lbf)	532.330	0.213	LF7105	855.214	0.401	LF7101	322.884	60.655
24	ID 40312 - T3 (lbf)	557.747	0.216	LF7103	859.738	0.327	LF7103	301.991	54.145
25	ID 40313 - T3 (lbf)	590.148	0.295	LF7103	771.532	0.309	LF7101	181.384	30.735
26	ID 40314 - T3 (lbf)	464.225	0.285	LF7105	646.966	0.439	LF7101	182.741	39.365
27	Net Inertial Acc - T1 (in/sec^2)	1435.161	0.289	LF7105	1632.967	0.289	LF7103	197.806	13.783
28	Net Inertial Acc - T2 (in/sec^2)	428.709	0.295	LF7104	1019.881	0.299	LF7103	591.173	137.896
29	Net Inertial Acc - T3 (in/sec^2)	591.677	0.397	LF7105	1285.962	0.401	LF7101	694.286	117.342
30	Net Inertial Acc - R1 (rad/sec^2)	16.938	0.893	LF7100	63.461	0.736	LF7100	46.523	274.663
31	Net Inertial Acc - R2 (rad/sec^2)	16.512	0.297	LF7103	61.618	0.441	LF7105	45.106	273.172
32	Net Inertial Acc - R3 (rad/sec^2)	5.820	0.110	LF7103	52.346	0.508	LF7103	46.525	799.349

Table B-10. Battery 1 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.311	0.306	LF7103	2.035	0.310	LF7103	0.724	55.192
2	Net Load Factor - T2 (g)	4.067	0.297	LF7105	4.995	0.293	LF7105	0.928	22.823
3	Net Load Factor - T3 (g)	1.086	0.612	LF7100	1.732	0.322	LF7101	0.645	59.407
4	Net Load Factor - R1 (rad/sec^2)	13.471	0.750	LF7100	77.348	0.360	LF7101	63.877	474.194
5	Net Load Factor - R2 (rad/sec^2)	14.984	0.372	LF7103	42.997	0.292	LF7101	28.013	186.957
6	Net Load Factor - R3 (rad/sec^2)	13.022	0.260	LF7103	48.219	0.407	LF7105	35.197	270.291
7	GRID 653 - T2 (lbf)	1453.642	0.294	LF7105	1849.633	0.289	LF7105	395.992	27.241
8	GRID 653 - T3 (lbf)	602.630	0.439	LF7103	944.866	0.445	LF7103	342.236	56.790
9	GRID 654 - T3 (lbf)	404.191	0.294	LF7105	397.583	0.292	LF7105	-6.607	-1.635
10	GRID 655 - T1 (lbf)	703.619	0.306	LF7103	1091.963	0.310	LF7103	388.344	55.192
11	GRID 655 - T3 (lbf)	462.200	0.300	LF7105	794.734	0.292	LF7105	332.533	71.946
12	GRID 2183 - T2 (lbf)	1612.313	0.305	LF7103	2197.279	0.309	LF7103	584.967	36.281
13	GRID 2183 - T3 (lbf)	597.661	0.290	LF7101	1039.932	0.292	LF7101	442.270	74.000
14	GRID 2184 - T3 (lbf)	488.193	0.295	LF7103	495.200	0.292	LF7103	7.008	1.435
15	GRID 2185 - T3 (lbf)	303.615	0.201	LF7103	577.959	0.442	LF7103	274.344	90.359
16	Net Inertial Acc - T1 (in/sec^2)	506.285	0.306	LF7103	785.715	0.310	LF7103	279.430	55.192
17	Net Inertial Acc - T2 (in/sec^2)	1570.273	0.297	LF7105	1928.662	0.293	LF7105	358.389	22.823
18	Net Inertial Acc - T3 (in/sec^2)	419.402	0.612	LF7100	668.555	0.322	LF7101	249.153	59.407
19	Net Inertial Acc - R1 (rad/sec^2)	13.471	0.750	LF7100	77.348	0.360	LF7101	63.877	474.194
20	Net Inertial Acc - R2 (rad/sec^2)	14.984	0.372	LF7103	42.997	0.292	LF7101	28.013	186.957
21	Net Inertial Acc - R3 (rad/sec^2)	13.022	0.260	LF7103	48.219	0.407	LF7105	35.197	270.291

Table B-11. Battery 1 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.257	0.308	LF7103	2.879	0.310	LF7103	1.622	128.990
2	FSE Net Load Factor, Y axis	4.149	0.300	LF7105	6.121	0.312	LF7101	1.971	47.515
3	FSE Net Load Factor, Z axis	1.148	0.614	LF7100	3.629	0.226	LF7101	2.481	216.047
4	FSE Net Load Factor, RX axis	15.126	0.703	LF7100	78.828	0.368	LF7101	63.702	421.139
5	FSE Net Load Factor, RY axis	17.387	0.271	LF7103	71.214	0.270	LF7103	53.828	309.588
6	FSE Net Load Factor, RZ axis	17.298	0.264	LF7103	78.435	0.408	LF7105	61.137	353.431
7	ORU I/F Force Grid 990 Z axis	140.835	0.302	LF7103	261.106	0.445	LF7103	120.271	85.399
8	ORU I/F Force Grid 991 Z axis	119.902	0.287	LF7105	237.502	0.288	LF7105	117.600	98.080
9	ORU I/F Force Grid 9998 X axis	222.659	0.307	LF7103	571.311	0.493	LF7102	348.651	156.585
10	ORU I/F Force Grid 9998 Z axis	435.276	0.218	LF7103	904.269	0.223	LF7101	468.992	107.746
11	ORU I/F Moment Grid 9998 RX axis	139.853	0.302	LF7103	249.058	0.464	LF7101	109.205	78.085
12	ORU I/F Moment Grid 9998 RY axis	1539.848	0.290	LF7105	2406.864	0.291	LF7105	867.016	56.305
13	ORU I/F Moment Grid 9998 RZ axis	129.261	0.756	LF7103	294.121	0.306	LF7101	164.860	127.540
14	ORU I/F Force Grid 9999 X axis	295.282	0.303	LF7103	789.076	0.405	LF7105	493.795	167.228
15	ORU I/F Force Grid 9999 Y axis	1503.464	0.295	LF7105	1886.235	0.291	LF7103	382.771	25.459
16	ORU I/F Force Grid 9999 Z axis	224.907	0.088	LF7104	457.083	0.445	LF7103	232.175	103.232
17	ORU I/F Moment Grid 9999 RX axis	845.689	0.288	LF7103	959.822	0.222	LF7105	114.133	13.496
18	ORU I/F Moment Grid 9999 RY axis	985.453	0.303	LF7103	1837.856	0.405	LF7105	852.403	86.499
19	ORU I/F Moment Grid 9999 RZ axis	182.645	0.293	LF7105	323.345	0.291	LF7101	140.700	77.034
20	ORU Net Load Factor, X axis	1.394	0.305	LF7103	2.460	0.376	LF7101	1.066	76.445
21	ORU Net Load Factor, Y axis	4.137	0.295	LF7105	5.190	0.291	LF7103	1.053	25.459
22	ORU Net Load Factor, Z axis	1.060	0.612	LF7100	2.619	0.322	LF7101	1.559	147.034
23	ORU Net Load Factor, RX axis	13.451	0.239	LF7105	86.393	0.360	LF7101	72.942	542.272
24	ORU Net Load Factor, RY axis	21.838	0.371	LF7103	65.988	0.418	LF7106	44.150	202.175
25	ORU Net Load Factor, RZ axis	15.980	0.258	LF7103	86.421	0.405	LF7105	70.442	440.818
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1453.642	0.294	LF7105	1849.633	0.289	LF7105	395.992	27.241
27	FSE/ORU Assy I/F Force Grid 653 Z axis	602.630	0.439	LF7103	944.866	0.445	LF7103	342.236	56.790
28	FSE/ORU Assy I/F Force Grid 654 Z axis	404.191	0.294	LF7105	397.583	0.292	LF7105	-6.607	-1.635
29	FSE/ORU Assy I/F Force Grid 655 X axis	703.619	0.306	LF7103	1091.963	0.310	LF7103	388.344	55.192
30	FSE/ORU Assy I/F Force Grid 655 Z axis	462.200	0.300	LF7105	794.734	0.292	LF7105	332.533	71.946
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1612.313	0.305	LF7103	2197.279	0.309	LF7103	584.967	36.281
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	597.661	0.290	LF7101	1039.932	0.292	LF7101	442.270	74.000
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	488.193	0.295	LF7103	495.200	0.292	LF7103	7.008	1.435
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	303.615	0.201	LF7103	577.959	0.442	LF7103	274.344	90.359
35	FSE/ORU Assy Net Load Factor, X axis	1.311	0.306	LF7103	2.035	0.310	LF7103	0.724	55.192
36	FSE/ORU Assy Net Load Factor, Y axis	4.067	0.297	LF7105	4.995	0.293	LF7105	0.928	22.823
37	FSE/ORU Assy Net Load Factor, Z axis	1.086	0.612	LF7100	1.732	0.322	LF7101	0.645	59.407
38	FSE/ORU Assy Net Load Factor, RX axis	13.471	0.750	LF7100	77.348	0.360	LF7101	63.877	474.194
39	FSE/ORU Assy Net Load Factor, RY axis	14.984	0.372	LF7103	42.997	0.292	LF7101	28.013	186.957
40	FSE/ORU Assy Net Load Factor, RZ axis	13.022	0.260	LF7103	48.219	0.407	LF7105	35.197	270.291

Table B-12. Battery 2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.016	0.294	LF7106	1.764	0.293	LF7105	0.748	73.614
2	Net Load Factor - T2 (g)	4.291	0.296	LF7101	4.854	0.296	LF7101	0.563	13.119
3	Net Load Factor - T3 (g)	0.924	0.364	LF7103	1.851	0.366	LF7103	0.926	100.188
4	Net Load Factor - R1 (rad/sec^2)	14.916	0.256	LF7103	58.700	0.501	LF7101	43.784	293.546
5	Net Load Factor - R2 (rad/sec^2)	21.095	1.265	LF7100	42.682	0.409	LF7103	21.587	102.333
6	Net Load Factor - R3 (rad/sec^2)	12.042	0.136	LF7103	48.406	0.227	LF7103	36.364	301.979
7	GRID 653 - T2 (lbf)	1632.511	0.294	LF7105	2261.749	0.227	LF7103	629.239	38.544
8	GRID 653 - T3 (lbf)	733.609	0.299	LF7101	847.112	0.375	LF7105	113.502	15.472
9	GRID 654 - T3 (lbf)	379.597	0.293	LF7105	363.676	0.228	LF7103	-15.921	-4.194
10	GRID 655 - T1 (lbf)	545.141	0.294	LF7106	946.442	0.293	LF7105	401.300	73.614
11	GRID 655 - T3 (lbf)	576.360	0.291	LF7105	925.000	0.295	LF7105	348.640	60.490
12	GRID 2183 - T2 (lbf)	1506.271	0.292	LF7103	1846.064	0.334	LF7106	339.793	22.559
13	GRID 2183 - T3 (lbf)	630.111	0.287	LF7105	928.552	0.379	LF7101	298.441	47.363
14	GRID 2184 - T3 (lbf)	337.455	0.293	LF7103	268.074	0.446	LF7103	-69.382	-20.560
15	GRID 2185 - T3 (lbf)	424.626	0.289	LF7103	535.113	0.224	LF7103	110.488	26.020
16	Net Inertial Acc - T1 (in/sec^2)	392.253	0.294	LF7106	681.006	0.293	LF7105	288.753	73.614
17	Net Inertial Acc - T2 (in/sec^2)	1656.763	0.296	LF7101	1874.108	0.296	LF7101	217.345	13.119
18	Net Inertial Acc - T3 (in/sec^2)	356.894	0.364	LF7103	714.460	0.366	LF7103	357.566	100.188
19	Net Inertial Acc - R1 (rad/sec^2)	14.916	0.256	LF7103	58.700	0.501	LF7101	43.784	293.546
20	Net Inertial Acc - R2 (rad/sec^2)	21.095	1.265	LF7100	42.682	0.409	LF7103	21.587	102.333
21	Net Inertial Acc - R3 (rad/sec^2)	12.042	0.136	LF7103	48.406	0.227	LF7103	36.364	301.979

Table B-13. Battery 2 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.053	1.199	LF7100	3.001	0.419	LF7103	1.948	185.053
2	FSE Net Load Factor, Y axis	4.286	0.289	LF7103	5.883	0.455	LF7101	1.597	37.261
3	FSE Net Load Factor, Z axis	1.177	0.234	LF7105	2.839	0.407	LF7106	1.662	141.234
4	FSE Net Load Factor, RX axis	22.773	0.261	LF7105	58.162	0.460	LF7103	35.389	155.399
5	FSE Net Load Factor, RY axis	51.292	1.266	LF7100	76.699	0.379	LF7101	25.407	49.535
6	FSE Net Load Factor, RZ axis	20.626	0.138	LF7103	76.124	0.337	LF7106	55.498	269.072
7	ORU I/F Force Grid 990 Z axis	127.681	0.299	LF7101	221.740	0.376	LF7105	94.059	73.668
8	ORU I/F Force Grid 991 Z axis	147.482	0.288	LF7105	235.679	0.408	LF7103	88.197	59.802
9	ORU I/F Force Grid 9998 X axis	198.246	0.303	LF7104	692.394	0.294	LF7105	494.148	249.260
10	ORU I/F Force Grid 9998 Z axis	529.713	0.226	LF7105	681.703	0.435	LF7103	151.990	28.693
11	ORU I/F Moment Grid 9998 RX axis	73.383	0.292	LF7105	248.703	0.296	LF7105	175.320	238.911
12	ORU I/F Moment Grid 9998 RY axis	1715.122	0.290	LF7105	2304.812	0.294	LF7105	589.690	34.382
13	ORU I/F Moment Grid 9998 RZ axis	164.574	0.297	LF7103	371.618	0.360	LF7101	207.044	125.805
14	ORU I/F Force Grid 9999 X axis	232.267	0.292	LF7106	654.705	0.303	LF7104	422.439	181.876
15	ORU I/F Force Grid 9999 Y axis	1636.089	0.225	LF7103	1832.375	0.449	LF7101	196.285	11.997
16	ORU I/F Force Grid 9999 Z axis	225.104	0.283	LF7105	572.489	0.460	LF7103	347.385	154.322
17	ORU I/F Moment Grid 9999 RX axis	862.854	0.225	LF7103	827.584	0.377	LF7101	-35.270	-4.088
18	ORU I/F Moment Grid 9999 RY axis	891.646	0.262	LF7105	1312.437	0.410	LF7103	420.791	47.193
19	ORU I/F Moment Grid 9999 RZ axis	223.984	0.292	LF7105	365.406	0.287	LF7105	141.422	63.140
20	ORU Net Load Factor, X axis	1.133	0.292	LF7106	2.581	0.414	LF7103	1.448	127.865
21	ORU Net Load Factor, Y axis	4.501	0.225	LF7103	5.042	0.449	LF7101	0.540	11.997
22	ORU Net Load Factor, Z axis	0.940	1.080	LF7105	2.058	0.460	LF7103	1.118	119.021
23	ORU Net Load Factor, RX axis	15.265	0.257	LF7103	66.714	0.501	LF7101	51.449	337.037
24	ORU Net Load Factor, RY axis	27.009	0.275	LF7105	73.310	0.376	LF7101	46.301	171.426
25	ORU Net Load Factor, RZ axis	13.198	0.133	LF7103	87.896	0.225	LF7103	74.699	566.001
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1632.511	0.294	LF7105	2261.749	0.227	LF7103	629.239	38.544
27	FSE/ORU Assy I/F Force Grid 653 Z axis	733.609	0.299	LF7101	847.112	0.375	LF7105	113.502	15.472
28	FSE/ORU Assy I/F Force Grid 654 Z axis	379.597	0.293	LF7105	363.676	0.228	LF7103	-15.921	-4.194
29	FSE/ORU Assy I/F Force Grid 655 X axis	545.141	0.294	LF7106	946.442	0.293	LF7105	401.300	73.614
30	FSE/ORU Assy I/F Force Grid 655 Z axis	576.360	0.291	LF7105	925.000	0.295	LF7105	348.640	60.490
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1506.271	0.292	LF7103	1846.064	0.334	LF7106	339.793	22.559
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	630.111	0.287	LF7105	928.552	0.379	LF7101	298.441	47.363
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	337.455	0.293	LF7103	268.074	0.446	LF7103	-69.382	-20.560
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	424.626	0.289	LF7103	535.113	0.224	LF7103	110.488	26.020
35	FSE/ORU Assy Net Load Factor, X axis	1.016	0.294	LF7106	1.764	0.293	LF7105	0.748	73.614
36	FSE/ORU Assy Net Load Factor, Y axis	4.291	0.296	LF7101	4.854	0.296	LF7101	0.563	13.119
37	FSE/ORU Assy Net Load Factor, Z axis	0.924	0.364	LF7103	1.850	0.366	LF7103	0.926	100.188
38	FSE/ORU Assy Net Load Factor, RX axis	14.916	0.256	LF7103	58.700	0.501	LF7101	43.784	293.546
39	FSE/ORU Assy Net Load Factor, RY axis	21.095	1.265	LF7100	42.682	0.409	LF7103	21.587	102.333
40	FSE/ORU Assy Net Load Factor, RZ axis	12.042	0.136	LF7103	48.406	0.227	LF7103	36.364	301.979

Table B-14. Battery 3 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.288	0.202	LF7103	2.682	0.297	LF7105	1.394	108.185
2	Net Load Factor - T2 (g)	4.543	0.293	LF7105	5.085	0.296	LF7103	0.542	11.919
3	Net Load Factor - T3 (g)	0.992	0.231	LF7105	1.929	0.356	LF7103	0.937	94.531
4	Net Load Factor - R1 (rad/sec^2)	15.323	0.261	LF7105	70.617	0.365	LF7105	55.294	360.855
5	Net Load Factor - R2 (rad/sec^2)	13.897	0.359	LF7103	43.043	0.419	LF7106	29.146	209.735
6	Net Load Factor - R3 (rad/sec^2)	13.277	0.266	LF7103	47.390	0.294	LF7101	34.113	256.943
7	GRID 653 - T2 (lbf)	1750.860	0.294	LF7105	2314.597	0.368	LF7105	563.737	32.198
8	GRID 653 - T3 (lbf)	546.766	0.294	LF7103	794.223	0.365	LF7105	247.457	45.258
9	GRID 654 - T3 (lbf)	365.126	0.294	LF7105	347.877	0.302	LF7105	-17.249	-4.724
10	GRID 655 - T1 (lbf)	691.297	0.202	LF7103	1439.177	0.297	LF7105	747.879	108.185
11	GRID 655 - T3 (lbf)	475.077	0.231	LF7105	880.502	0.293	LF7105	405.425	85.339
12	GRID 2183 - T2 (lbf)	1565.002	0.297	LF7103	1801.373	0.286	LF7101	236.371	15.104
13	GRID 2183 - T3 (lbf)	584.266	0.362	LF7103	984.918	0.301	LF7105	400.653	68.574
14	GRID 2184 - T3 (lbf)	323.746	0.296	LF7103	369.746	0.282	LF7103	46.000	14.209
15	GRID 2185 - T3 (lbf)	524.821	0.295	LF7103	716.374	0.289	LF7101	191.553	36.499
16	Net Inertial Acc - T1 (in/sec^2)	497.419	0.202	LF7103	1035.550	0.297	LF7105	538.131	108.185
17	Net Inertial Acc - T2 (in/sec^2)	1754.064	0.293	LF7105	1963.139	0.296	LF7103	209.075	11.919
18	Net Inertial Acc - T3 (in/sec^2)	382.812	0.231	LF7105	744.690	0.356	LF7103	361.878	94.531
19	Net Inertial Acc - R1 (rad/sec^2)	15.323	0.261	LF7105	70.617	0.365	LF7105	55.294	360.855
20	Net Inertial Acc - R2 (rad/sec^2)	13.897	0.359	LF7103	43.043	0.419	LF7106	29.146	209.735
21	Net Inertial Acc - R3 (rad/sec^2)	13.277	0.266	LF7103	47.390	0.294	LF7101	34.113	256.943

Table B-15. Battery 3 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.273	0.204	LF7103	5.041	0.302	LF7101	3.767	295.800
2	FSE Net Load Factor, Y axis	4.390	0.297	LF7105	7.393	0.370	LF7101	3.003	68.403
3	FSE Net Load Factor, Z axis	1.080	0.233	LF7105	3.615	0.292	LF7101	2.535	234.572
4	FSE Net Load Factor, RX axis	23.843	0.258	LF7105	69.692	0.420	LF7105	45.849	192.295
5	FSE Net Load Factor, RY axis	27.578	0.892	LF7100	71.035	0.417	LF7103	43.457	157.579
6	FSE Net Load Factor, RZ axis	18.867	0.270	LF7105	80.906	0.364	LF7105	62.039	328.828
7	ORU I/F Force Grid 990 Z axis	123.028	0.200	LF7104	200.043	0.597	LF7105	77.015	62.599
8	ORU I/F Force Grid 991 Z axis	141.674	0.359	LF7103	289.393	0.448	LF7101	147.719	104.267
9	ORU I/F Force Grid 9998 X axis	205.269	0.204	LF7103	791.924	0.298	LF7101	586.654	285.797
10	ORU I/F Force Grid 9998 Z axis	553.324	0.294	LF7103	736.140	0.289	LF7101	182.816	33.040
11	ORU I/F Moment Grid 9998 RX axis	134.021	0.292	LF7105	304.419	0.370	LF7101	170.398	127.143
12	ORU I/F Moment Grid 9998 RY axis	1118.437	0.243	LF7105	1665.815	0.380	LF7105	547.377	48.941
13	ORU I/F Moment Grid 9998 RZ axis	127.600	0.252	LF7105	370.716	0.511	LF7105	243.116	190.529
14	ORU I/F Force Grid 9999 X axis	332.571	0.199	LF7103	701.864	0.295	LF7105	369.293	111.042
15	ORU I/F Force Grid 9999 Y axis	1738.795	0.292	LF7105	2103.223	0.295	LF7103	364.428	20.959
16	ORU I/F Force Grid 9999 Z axis	221.782	0.294	LF7105	499.810	0.331	LF7103	278.028	125.361
17	ORU I/F Moment Grid 9999 RX axis	835.860	0.293	LF7103	957.285	0.295	LF7103	121.425	14.527
18	ORU I/F Moment Grid 9999 RY axis	992.204	0.199	LF7103	1657.760	0.300	LF7105	665.557	67.079
19	ORU I/F Moment Grid 9999 RZ axis	169.619	0.253	LF7101	386.659	0.511	LF7105	217.039	127.956
20	ORU Net Load Factor, X axis	1.378	0.200	LF7103	3.372	0.295	LF7105	1.994	144.771
21	ORU Net Load Factor, Y axis	4.784	0.292	LF7105	5.787	0.295	LF7103	1.003	20.959
22	ORU Net Load Factor, Z axis	0.960	0.230	LF7105	2.687	0.356	LF7103	1.727	180.005
23	ORU Net Load Factor, RX axis	16.172	0.297	LF7103	78.876	0.422	LF7105	62.704	387.726
24	ORU Net Load Factor, RY axis	18.625	0.358	LF7103	86.732	0.448	LF7101	68.108	365.688
25	ORU Net Load Factor, RZ axis	18.102	0.263	LF7103	88.667	0.511	LF7105	70.565	389.808
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1750.860	0.294	LF7105	2314.597	0.368	LF7105	563.737	32.198
27	FSE/ORU Assy I/F Force Grid 653 Z axis	546.766	0.294	LF7103	794.223	0.365	LF7105	247.457	45.258
28	FSE/ORU Assy I/F Force Grid 654 Z axis	365.126	0.294	LF7105	347.877	0.302	LF7105	-17.249	-4.724
29	FSE/ORU Assy I/F Force Grid 655 X axis	691.297	0.202	LF7103	1439.177	0.297	LF7105	747.879	108.185
30	FSE/ORU Assy I/F Force Grid 655 Z axis	475.077	0.231	LF7105	880.502	0.293	LF7105	405.425	85.339
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1565.002	0.297	LF7103	1801.373	0.286	LF7101	236.371	15.104
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	584.266	0.362	LF7103	984.918	0.301	LF7105	400.653	68.574
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	323.746	0.296	LF7103	369.746	0.282	LF7103	46.000	14.209
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	524.821	0.295	LF7103	716.374	0.289	LF7101	191.553	36.499
35	FSE/ORU Assy Net Load Factor, X axis	1.288	0.202	LF7103	2.682	0.297	LF7105	1.394	108.185
36	FSE/ORU Assy Net Load Factor, Y axis	4.543	0.293	LF7105	5.085	0.296	LF7103	0.542	11.919
37	FSE/ORU Assy Net Load Factor, Z axis	0.991	0.231	LF7105	1.929	0.356	LF7103	0.937	94.531
38	FSE/ORU Assy Net Load Factor, RX axis	15.323	0.261	LF7105	70.617	0.365	LF7105	55.294	360.855
39	FSE/ORU Assy Net Load Factor, RY axis	13.897	0.359	LF7103	43.043	0.419	LF7106	29.146	209.735
40	FSE/ORU Assy Net Load Factor, RZ axis	13.277	0.266	LF7103	47.390	0.294	LF7101	34.113	256.943

Table B-16. Battery 4 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.917	0.325	LF7103	2.837	0.297	LF7103	0.921	48.042
2	Net Load Factor - T2 (g)	4.379	0.292	LF7103	5.338	0.293	LF7103	0.958	21.883
3	Net Load Factor - T3 (g)	1.638	0.891	LF7100	2.015	0.378	LF7101	0.377	23.015
4	Net Load Factor - R1 (rad/sec^2)	14.725	0.256	LF7103	74.348	0.358	LF7101	59.623	404.920
5	Net Load Factor - R2 (rad/sec^2)	16.801	0.217	LF7104	49.444	0.291	LF7103	32.642	194.284
6	Net Load Factor - R3 (rad/sec^2)	17.101	0.326	LF7103	68.443	0.408	LF7101	51.341	300.217
7	GRID 653 - T2 (lbf)	2038.848	0.299	LF7105	2864.049	0.293	LF7103	825.202	40.474
8	GRID 653 - T3 (lbf)	700.657	0.228	LF7103	756.315	0.297	LF7103	55.658	7.944
9	GRID 654 - T3 (lbf)	536.288	0.298	LF7105	601.577	0.405	LF7101	65.288	12.174
10	GRID 655 - T1 (lbf)	1028.441	0.325	LF7103	1522.528	0.297	LF7103	494.087	48.042
11	GRID 655 - T3 (lbf)	318.698	0.296	LF7105	757.822	0.297	LF7103	439.124	137.787
12	GRID 2183 - T2 (lbf)	1326.390	0.325	LF7103	2221.114	0.276	LF7103	894.723	67.456
13	GRID 2183 - T3 (lbf)	1000.705	0.297	LF7105	1211.127	0.362	LF7101	210.422	21.027
14	GRID 2184 - T3 (lbf)	434.128	0.290	LF7103	458.078	0.281	LF7103	23.950	5.517
15	GRID 2185 - T3 (lbf)	407.223	0.323	LF7103	709.359	0.457	LF7103	302.136	74.194
16	Net Inertial Acc - T1 (in/sec^2)	740.008	0.325	LF7103	1095.525	0.297	LF7103	355.517	48.042
17	Net Inertial Acc - T2 (in/sec^2)	1690.812	0.292	LF7103	2060.808	0.293	LF7103	369.995	21.883
18	Net Inertial Acc - T3 (in/sec^2)	632.280	0.891	LF7100	777.797	0.378	LF7101	145.517	23.015
19	Net Inertial Acc - R1 (rad/sec^2)	14.725	0.256	LF7103	74.348	0.358	LF7101	59.623	404.920
20	Net Inertial Acc - R2 (rad/sec^2)	16.801	0.217	LF7104	49.444	0.291	LF7103	32.642	194.284
21	Net Inertial Acc - R3 (rad/sec^2)	17.101	0.326	LF7103	68.443	0.408	LF7101	51.341	300.217

Table B-17. Battery 4 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.886	0.329	LF7103	5.195	0.302	LF7103	3.309	175.429
2	FSE Net Load Factor, Y axis	4.395	0.297	LF7103	7.772	0.297	LF7103	3.377	76.852
3	FSE Net Load Factor, Z axis	1.759	0.893	LF7100	3.231	0.385	LF7105	1.471	83.645
4	FSE Net Load Factor, RX axis	18.719	0.196	LF7103	68.577	0.359	LF7101	49.858	266.356
5	FSE Net Load Factor, RY axis	23.610	0.209	LF7103	75.789	0.487	LF7101	52.179	221.009
6	FSE Net Load Factor, RZ axis	26.166	0.329	LF7103	101.373	0.456	LF7105	75.207	287.427
7	ORU I/F Force Grid 990 Z axis	162.198	0.322	LF7103	247.093	0.340	LF7101	84.895	52.340
8	ORU I/F Force Grid 991 Z axis	192.623	0.295	LF7105	323.353	0.292	LF7103	130.730	67.869
9	ORU I/F Force Grid 9998 X axis	272.069	0.326	LF7103	828.462	0.401	LF7106	556.393	204.504
10	ORU I/F Force Grid 9998 Z axis	442.082	0.779	LF7100	666.324	0.458	LF7103	224.242	50.724
11	ORU I/F Moment Grid 9998 RX axis	136.366	0.248	LF7103	306.158	0.435	LF7103	169.792	124.512
12	ORU I/F Moment Grid 9998 RY axis	1203.171	0.228	LF7103	1630.564	0.371	LF7101	427.393	35.522
13	ORU I/F Moment Grid 9998 RZ axis	157.672	0.361	LF7105	404.903	0.454	LF7105	247.230	156.800
14	ORU I/F Force Grid 9999 X axis	485.452	0.323	LF7103	830.709	0.401	LF7101	345.257	71.121
15	ORU I/F Force Grid 9999 Y axis	1650.522	0.291	LF7103	2355.899	0.294	LF7103	705.377	42.737
16	ORU I/F Force Grid 9999 Z axis	415.201	0.297	LF7103	590.869	0.366	LF7101	175.668	42.309
17	ORU I/F Moment Grid 9999 RX axis	962.924	0.291	LF7103	1284.542	0.294	LF7103	321.618	33.400
18	ORU I/F Moment Grid 9999 RY axis	1548.223	0.323	LF7103	2452.739	0.405	LF7101	904.516	58.423
19	ORU I/F Moment Grid 9999 RZ axis	172.550	0.361	LF7105	408.199	0.454	LF7105	235.650	136.569
20	ORU Net Load Factor, X axis	2.055	0.324	LF7103	3.457	0.298	LF7101	1.401	68.187
21	ORU Net Load Factor, Y axis	4.541	0.291	LF7103	6.482	0.294	LF7103	1.941	42.737
22	ORU Net Load Factor, Z axis	1.619	0.890	LF7100	2.253	0.275	LF7103	0.634	39.151
23	ORU Net Load Factor, RX axis	13.777	0.259	LF7103	79.759	0.358	LF7101	65.982	478.937
24	ORU Net Load Factor, RY axis	21.554	0.307	LF7103	85.722	0.435	LF7101	64.169	297.717
25	ORU Net Load Factor, RZ axis	20.076	0.323	LF7103	121.815	0.291	LF7103	101.739	506.779
26	FSE/ORU Assy I/F Force Grid 653 Y axis	2038.848	0.299	LF7105	2864.049	0.293	LF7103	825.202	40.474
27	FSE/ORU Assy I/F Force Grid 653 Z axis	700.657	0.228	LF7103	756.315	0.297	LF7103	55.658	7.944
28	FSE/ORU Assy I/F Force Grid 654 Z axis	536.288	0.298	LF7105	601.577	0.405	LF7101	65.288	12.174
29	FSE/ORU Assy I/F Force Grid 655 X axis	1028.441	0.325	LF7103	1522.528	0.297	LF7103	494.087	48.042
30	FSE/ORU Assy I/F Force Grid 655 Z axis	318.698	0.296	LF7105	757.822	0.297	LF7103	439.124	137.787
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1326.390	0.325	LF7103	2221.114	0.276	LF7103	894.723	67.456
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	1000.705	0.297	LF7105	1211.127	0.362	LF7101	210.422	21.027
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	434.128	0.290	LF7103	458.078	0.281	LF7103	23.950	5.517
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	407.223	0.323	LF7103	709.359	0.457	LF7103	302.136	74.194
35	FSE/ORU Assy Net Load Factor, X axis	1.917	0.325	LF7103	2.837	0.297	LF7103	0.921	48.042
36	FSE/ORU Assy Net Load Factor, Y axis	4.379	0.292	LF7103	5.337	0.293	LF7103	0.958	21.883
37	FSE/ORU Assy Net Load Factor, Z axis	1.638	0.891	LF7100	2.014	0.378	LF7101	0.377	23.015
38	FSE/ORU Assy Net Load Factor, RX axis	14.725	0.256	LF7103	74.348	0.358	LF7101	59.623	404.920
39	FSE/ORU Assy Net Load Factor, RY axis	16.801	0.217	LF7104	49.444	0.291	LF7103	32.642	194.284
40	FSE/ORU Assy Net Load Factor, RZ axis	17.101	0.326	LF7103	68.443	0.408	LF7101	51.341	300.217

Table B-18. Battery 5 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.569	0.327	LF7103	3.131	0.304	LF7105	1.562	99.552
2	Net Load Factor - T2 (g)	4.853	0.293	LF7103	5.322	0.302	LF7103	0.469	9.672
3	Net Load Factor - T3 (g)	1.032	0.256	LF7103	2.116	0.376	LF7101	1.084	104.991
4	Net Load Factor - R1 (rad/sec^2)	19.482	0.262	LF7103	77.588	0.438	LF7101	58.106	298.254
5	Net Load Factor - R2 (rad/sec^2)	20.009	0.324	LF7103	71.062	0.308	LF7105	51.053	255.147
6	Net Load Factor - R3 (rad/sec^2)	10.322	0.191	LF7103	48.223	0.445	LF7103	37.900	367.160
7	GRID 653 - T2 (lbf)	1860.817	0.297	LF7105	2476.832	0.337	LF7103	616.015	33.105
8	GRID 653 - T3 (lbf)	535.014	0.218	LF7103	811.469	0.356	LF7101	276.455	51.673
9	GRID 654 - T3 (lbf)	456.999	0.297	LF7105	587.382	0.337	LF7103	130.382	28.530
10	GRID 655 - T1 (lbf)	841.758	0.327	LF7103	1679.747	0.304	LF7105	837.989	99.552
11	GRID 655 - T3 (lbf)	554.715	0.297	LF7105	1058.894	0.368	LF7101	504.180	90.890
12	GRID 2183 - T2 (lbf)	1396.108	0.291	LF7103	2568.794	0.290	LF7101	1172.686	83.997
13	GRID 2183 - T3 (lbf)	878.520	0.291	LF7103	1315.559	0.308	LF7105	437.038	49.747
14	GRID 2184 - T3 (lbf)	461.688	0.293	LF7103	400.983	0.298	LF7103	-60.705	-13.148
15	GRID 2185 - T3 (lbf)	335.257	0.993	LF7100	777.395	0.282	LF7103	442.137	131.880
16	Net Inertial Acc - T1 (in/sec^2)	605.681	0.327	LF7103	1208.651	0.304	LF7105	602.970	99.552
17	Net Inertial Acc - T2 (in/sec^2)	1873.528	0.293	LF7103	2054.737	0.302	LF7103	181.209	9.672
18	Net Inertial Acc - T3 (in/sec^2)	398.613	0.256	LF7103	817.119	0.376	LF7101	418.506	104.991
19	Net Inertial Acc - R1 (rad/sec^2)	19.482	0.262	LF7103	77.588	0.438	LF7101	58.106	298.254
20	Net Inertial Acc - R2 (rad/sec^2)	20.009	0.324	LF7103	71.062	0.308	LF7105	51.053	255.147
21	Net Inertial Acc - R3 (rad/sec^2)	10.322	0.191	LF7103	48.223	0.445	LF7103	37.900	367.160

Table B-19. Battery 5 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.429	0.329	LF7103	5.274	0.372	LF7101	3.845	269.044
2	FSE Net Load Factor, Y axis	4.656	0.296	LF7103	6.296	0.442	LF7101	1.640	35.229
3	FSE Net Load Factor, Z axis	1.064	0.254	LF7105	2.707	0.380	LF7101	1.643	154.445
4	FSE Net Load Factor, RX axis	24.524	0.264	LF7103	69.945	0.426	LF7103	45.421	185.208
5	FSE Net Load Factor, RY axis	32.705	0.949	LF7100	88.091	0.313	LF7105	55.386	169.349
6	FSE Net Load Factor, RZ axis	19.408	0.121	LF7105	95.010	0.403	LF7101	75.602	389.531
7	ORU I/F Force Grid 990 Z axis	168.448	0.324	LF7103	301.538	0.332	LF7103	133.090	79.010
8	ORU I/F Force Grid 991 Z axis	166.721	0.297	LF7105	356.904	0.306	LF7105	190.183	114.073
9	ORU I/F Force Grid 9998 X axis	274.438	0.327	LF7103	887.703	0.368	LF7101	613.264	223.461
10	ORU I/F Force Grid 9998 Z axis	523.924	0.295	LF7101	778.355	0.366	LF7101	254.431	48.562
11	ORU I/F Moment Grid 9998 RX axis	96.544	0.201	LF7105	299.918	0.304	LF7105	203.374	210.655
12	ORU I/F Moment Grid 9998 RY axis	741.568	0.324	LF7103	1604.128	0.368	LF7101	862.560	116.316
13	ORU I/F Moment Grid 9998 RZ axis	104.684	0.331	LF7103	377.870	0.304	LF7105	273.186	260.962
14	ORU I/F Force Grid 9999 X axis	364.219	0.324	LF7103	804.121	0.334	LF7103	439.902	120.780
15	ORU I/F Force Grid 9999 Y axis	1846.857	0.292	LF7103	2201.749	0.302	LF7103	354.892	19.216
16	ORU I/F Force Grid 9999 Z axis	342.583	0.234	LF7101	580.835	0.375	LF7101	238.252	69.546
17	ORU I/F Moment Grid 9999 RX axis	1018.914	0.292	LF7103	1127.390	0.301	LF7103	108.476	10.646
18	ORU I/F Moment Grid 9999 RY axis	1405.141	0.324	LF7103	2485.309	0.334	LF7103	1080.168	76.873
19	ORU I/F Moment Grid 9999 RZ axis	98.008	0.178	LF7103	305.804	0.390	LF7103	207.795	212.018
20	ORU Net Load Factor, X axis	1.727	0.325	LF7103	3.527	0.369	LF7101	1.800	104.197
21	ORU Net Load Factor, Y axis	5.081	0.292	LF7103	6.058	0.302	LF7103	0.976	19.216
22	ORU Net Load Factor, Z axis	1.066	0.256	LF7103	2.886	0.407	LF7101	1.820	170.785
23	ORU Net Load Factor, RX axis	18.371	0.295	LF7103	82.453	0.438	LF7101	64.082	348.823
24	ORU Net Load Factor, RY axis	24.806	0.322	LF7103	85.419	0.374	LF7101	60.612	244.341
25	ORU Net Load Factor, RZ axis	14.201	0.188	LF7103	84.354	0.361	LF7101	70.153	493.990
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1860.817	0.297	LF7105	2476.832	0.337	LF7103	616.015	33.105
27	FSE/ORU Assy I/F Force Grid 653 Z axis	535.014	0.218	LF7103	811.469	0.356	LF7101	276.455	51.673
28	FSE/ORU Assy I/F Force Grid 654 Z axis	456.999	0.297	LF7105	587.382	0.337	LF7103	130.382	28.530
29	FSE/ORU Assy I/F Force Grid 655 X axis	841.758	0.327	LF7103	1679.747	0.304	LF7105	837.989	99.552
30	FSE/ORU Assy I/F Force Grid 655 Z axis	554.715	0.297	LF7105	1058.894	0.368	LF7101	504.180	90.890
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1396.108	0.291	LF7103	2568.794	0.290	LF7101	1172.686	83.997
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	878.520	0.291	LF7103	1315.559	0.308	LF7105	437.038	49.747
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	461.688	0.293	LF7103	400.983	0.298	LF7103	-60.705	-13.148
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	335.257	0.993	LF7100	777.395	0.282	LF7103	442.137	131.880
35	FSE/ORU Assy Net Load Factor, X axis	1.569	0.327	LF7103	3.130	0.304	LF7105	1.562	99.552
36	FSE/ORU Assy Net Load Factor, Y axis	4.852	0.293	LF7103	5.322	0.302	LF7103	0.469	9.672
37	FSE/ORU Assy Net Load Factor, Z axis	1.032	0.256	LF7103	2.116	0.376	LF7101	1.084	104.991
38	FSE/ORU Assy Net Load Factor, RX axis	19.482	0.262	LF7103	77.588	0.438	LF7101	58.106	298.254
39	FSE/ORU Assy Net Load Factor, RY axis	20.009	0.324	LF7103	71.062	0.308	LF7105	51.053	255.147
40	FSE/ORU Assy Net Load Factor, RZ axis	10.322	0.191	LF7103	48.223	0.445	LF7103	37.900	367.160

Table B-20. Battery 6 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.197	0.218	LF7103	2.241	0.369	LF7103	1.044	87.200
2	Net Load Factor - T2 (g)	4.556	0.295	LF7103	4.725	0.308	LF7103	0.169	3.704
3	Net Load Factor - T3 (g)	1.653	0.918	LF7100	2.680	0.398	LF7101	1.027	62.091
4	Net Load Factor - R1 (rad/sec^2)	24.463	0.299	LF7103	64.745	0.432	LF7101	40.282	164.662
5	Net Load Factor - R2 (rad/sec^2)	18.111	0.274	LF7103	46.019	0.336	LF7103	27.909	154.102
6	Net Load Factor - R3 (rad/sec^2)	13.277	0.102	LF7105	52.096	0.289	LF7101	38.819	292.371
7	GRID 653 - T2 (lbf)	1677.525	0.297	LF7105	1886.123	0.362	LF7103	208.598	12.435
8	GRID 653 - T3 (lbf)	676.337	0.217	LF7103	827.874	0.298	LF7105	151.537	22.406
9	GRID 654 - T3 (lbf)	437.900	0.297	LF7105	399.891	0.315	LF7101	-38.009	-8.680
10	GRID 655 - T1 (lbf)	642.430	0.218	LF7103	1202.630	0.369	LF7103	560.200	87.200
11	GRID 655 - T3 (lbf)	606.863	0.299	LF7105	1041.240	0.369	LF7103	434.377	71.577
12	GRID 2183 - T2 (lbf)	1688.607	0.219	LF7103	2455.257	0.289	LF7101	766.651	45.401
13	GRID 2183 - T3 (lbf)	659.825	0.299	LF7105	988.285	0.287	LF7105	328.460	49.780
14	GRID 2184 - T3 (lbf)	309.638	0.297	LF7103	367.108	0.297	LF7103	57.470	18.560
15	GRID 2185 - T3 (lbf)	551.676	0.299	LF7103	859.246	0.298	LF7101	307.571	55.752
16	Net Inertial Acc - T1 (in/sec^2)	462.256	0.218	LF7103	865.344	0.369	LF7103	403.088	87.200
17	Net Inertial Acc - T2 (in/sec^2)	1759.161	0.295	LF7103	1824.322	0.308	LF7103	65.161	3.704
18	Net Inertial Acc - T3 (in/sec^2)	638.327	0.918	LF7100	1034.670	0.398	LF7101	396.343	62.091
19	Net Inertial Acc - R1 (rad/sec^2)	24.463	0.299	LF7103	64.745	0.432	LF7101	40.282	164.662
20	Net Inertial Acc - R2 (rad/sec^2)	18.111	0.274	LF7103	46.019	0.336	LF7103	27.909	154.102
21	Net Inertial Acc - R3 (rad/sec^2)	13.277	0.102	LF7105	52.096	0.289	LF7101	38.819	292.371

Table B-21. Battery 6 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.102	0.322	LF7103	3.019	0.448	LF7105	1.918	174.064
2	FSE Net Load Factor, Y axis	4.374	0.296	LF7105	5.396	0.292	LF7105	1.022	23.376
3	FSE Net Load Factor, Z axis	1.758	0.919	LF7100	4.781	0.399	LF7103	3.023	171.981
4	FSE Net Load Factor, RX axis	31.178	0.300	LF7103	78.344	0.432	LF7101	47.167	151.283
5	FSE Net Load Factor, RY axis	24.014	0.245	LF7103	83.047	0.336	LF7103	59.032	245.821
6	FSE Net Load Factor, RZ axis	19.677	0.205	LF7105	87.822	0.521	LF7103	68.145	346.314
7	ORU I/F Force Grid 990 Z axis	175.171	0.216	LF7103	238.120	0.294	LF7103	62.949	35.936
8	ORU I/F Force Grid 991 Z axis	155.871	0.299	LF7105	226.496	0.315	LF7101	70.625	45.310
9	ORU I/F Force Grid 9998 X axis	218.547	0.302	LF7105	705.923	0.515	LF7103	487.376	223.008
10	ORU I/F Force Grid 9998 Z axis	689.575	0.297	LF7103	878.668	0.374	LF7101	189.093	27.422
11	ORU I/F Moment Grid 9998 RX axis	174.927	0.232	LF7105	285.278	0.432	LF7101	110.351	63.084
12	ORU I/F Moment Grid 9998 RY axis	763.341	0.167	LF7105	1888.038	0.369	LF7103	1124.697	147.339
13	ORU I/F Moment Grid 9998 RZ axis	122.356	0.327	LF7103	334.461	0.454	LF7103	212.105	173.350
14	ORU I/F Force Grid 9999 X axis	315.138	0.216	LF7103	630.704	0.360	LF7103	315.566	100.136
15	ORU I/F Force Grid 9999 Y axis	1733.404	0.291	LF7105	1950.691	0.287	LF7101	217.288	12.535
16	ORU I/F Force Grid 9999 Z axis	324.981	0.214	LF7103	453.227	0.327	LF7103	128.247	39.463
17	ORU I/F Moment Grid 9999 RX axis	923.740	0.295	LF7103	981.155	0.286	LF7103	57.415	6.216
18	ORU I/F Moment Grid 9999 RY axis	1119.367	0.216	LF7103	1505.943	0.311	LF7105	386.576	34.535
19	ORU I/F Moment Grid 9999 RZ axis	139.356	0.198	LF7105	307.972	0.454	LF7103	168.616	120.996
20	ORU Net Load Factor, X axis	1.348	0.216	LF7103	2.703	0.368	LF7103	1.356	100.608
21	ORU Net Load Factor, Y axis	4.769	0.291	LF7105	5.367	0.287	LF7101	0.598	12.535
22	ORU Net Load Factor, Z axis	1.618	0.917	LF7100	3.336	0.393	LF7103	1.719	106.216
23	ORU Net Load Factor, RX axis	23.956	0.300	LF7103	68.202	0.432	LF7101	44.246	184.698
24	ORU Net Load Factor, RY axis	20.914	0.273	LF7103	69.021	0.333	LF7103	48.108	230.029
25	ORU Net Load Factor, RZ axis	14.880	0.099	LF7105	88.085	0.360	LF7103	73.206	491.989
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1677.525	0.297	LF7105	1886.123	0.362	LF7103	208.598	12.435
27	FSE/ORU Assy I/F Force Grid 653 Z axis	676.337	0.217	LF7103	827.874	0.298	LF7105	151.537	22.406
28	FSE/ORU Assy I/F Force Grid 654 Z axis	437.900	0.297	LF7105	399.891	0.315	LF7101	-38.009	-8.680
29	FSE/ORU Assy I/F Force Grid 655 X axis	642.430	0.218	LF7103	1202.630	0.369	LF7103	560.200	87.200
30	FSE/ORU Assy I/F Force Grid 655 Z axis	606.863	0.299	LF7105	1041.240	0.369	LF7103	434.377	71.577
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1688.607	0.219	LF7103	2455.257	0.289	LF7101	766.651	45.401
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	659.825	0.299	LF7105	988.285	0.287	LF7105	328.460	49.780
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	309.638	0.297	LF7103	367.108	0.297	LF7103	57.470	18.560
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	551.676	0.299	LF7103	859.246	0.298	LF7101	307.571	55.752
35	FSE/ORU Assy Net Load Factor, X axis	1.197	0.218	LF7103	2.241	0.369	LF7103	1.044	87.200
36	FSE/ORU Assy Net Load Factor, Y axis	4.556	0.295	LF7103	4.725	0.308	LF7103	0.169	3.704
37	FSE/ORU Assy Net Load Factor, Z axis	1.653	0.918	LF7100	2.680	0.398	LF7101	1.027	62.091
38	FSE/ORU Assy Net Load Factor, RX axis	24.463	0.299	LF7103	64.745	0.432	LF7101	40.282	164.662
39	FSE/ORU Assy Net Load Factor, RY axis	18.111	0.274	LF7103	46.019	0.336	LF7103	27.909	154.102
40	FSE/ORU Assy Net Load Factor, RZ axis	13.277	0.102	LF7105	52.096	0.289	LF7101	38.819	292.371

Table B-22. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	0.707	0.398	LF7103	1.179	0.400	LF7105	0.472	66.712
2	Net Load Factor - T2 (g)	0.894	0.314	LF7103	1.255	0.321	LF7103	0.361	40.439
3	Net Load Factor - T3 (g)	3.930	0.289	LF7103	3.967	0.291	LF7103	0.038	0.961
4	Net Load Factor - R1 (rad/sec^2)	3.397	0.152	LF7104	6.847	0.409	LF7105	3.450	101.581
5	Net Load Factor - R2 (rad/sec^2)	7.587	0.299	LF7101	11.938	0.301	LF7101	4.352	57.359
6	Net Load Factor - R3 (rad/sec^2)	3.002	0.888	LF7100	6.671	0.325	LF7105	3.669	122.199
7	GRID 1271 - T2 (lbf) [Orbiter IF]	6572.186	0.315	LF7103	6495.133	0.300	LF7105	-77.054	-1.172
8	GRID 6299 - T1 (lbf) [Battery 4 IF]	407.223	0.323	LF7103	709.359	0.457	LF7103	302.136	74.194
9	GRID 13067 - T1 (lbf) [Battery 4 IF]	434.128	0.290	LF7103	458.078	0.281	LF7103	23.950	5.517
10	GRID 13083 - T1 (lbf) [Battery 4 IF]	536.288	0.298	LF7105	601.577	0.405	LF7101	65.288	12.174
11	GRID 13115 - T1 (lbf) [Battery 5 IF]	461.688	0.293	LF7103	400.983	0.298	LF7103	-60.705	-13.148
12	GRID 13545 - T1 (lbf) [Battery 4 IF]	318.698	0.296	LF7105	757.822	0.297	LF7103	439.124	137.787
13	GRID 13545 - T2 (lbf) [Battery 4 IF]	1028.441	0.325	LF7103	1522.528	0.297	LF7103	494.087	48.042
14	GRID 13576 - T1 (lbf) [Battery 5 IF]	335.257	0.993	LF7100	777.395	0.282	LF7103	442.137	131.880
15	GRID 16250 - T1 (lbf) [Battery 6 IF]	606.863	0.299	LF7105	1041.240	0.369	LF7103	434.377	71.577
16	GRID 16250 - T2 (lbf) [Battery 6 IF]	642.430	0.218	LF7103	1202.630	0.369	LF7103	560.200	87.200
17	GRID 23028 - T1 (lbf) [Battery 6 IF]	437.900	0.297	LF7105	399.891	0.315	LF7101	-38.009	-8.680
18	GRID 23044 - T1 (lbf) [Battery 6 IF]	309.638	0.297	LF7103	367.108	0.297	LF7103	57.470	18.560
19	GRID 23076 - T1 (lbf) [Battery 5 IF]	456.999	0.297	LF7105	587.382	0.337	LF7103	130.382	28.530
20	GRID 23506 - T1 (lbf) [Battery 6 IF]	551.676	0.299	LF7103	859.246	0.298	LF7101	307.571	55.752
21	GRID 23537 - T1 (lbf) [Battery 5 IF]	554.715	0.297	LF7105	1058.894	0.368	LF7101	504.180	90.890
22	GRID 23537 - T2 (lbf) [Battery 5 IF]	841.758	0.327	LF7103	1679.747	0.304	LF7105	837.989	99.552
23	GRID 37940 - T1 (lbf) [Battery 1 IF]	462.200	0.300	LF7105	794.734	0.292	LF7105	332.533	71.946
24	GRID 37940 - T2 (lbf) [Battery 1 IF]	703.619	0.306	LF7103	1091.963	0.310	LF7103	388.344	55.192
25	GRID 38067 - T1 (lbf) [Battery 1 IF]	303.615	0.201	LF7103	577.959	0.442	LF7103	274.344	90.359
26	GRID 38323 - T1 (lbf) [Battery 2 IF]	576.360	0.291	LF7105	925.000	0.295	LF7105	348.640	60.490
27	GRID 38323 - T2 (lbf) [Battery 2 IF]	545.141	0.294	LF7106	946.442	0.293	LF7105	401.300	73.614
28	GRID 45767 - T1 (lbf) [Battery 3 IF]	524.821	0.295	LF7103	716.374	0.289	LF7101	191.553	36.499
29	GRID 45890 - T1 (lbf) [Battery 3 IF]	475.077	0.231	LF7105	880.502	0.293	LF7105	405.425	85.339
30	GRID 45890 - T2 (lbf) [Battery 3 IF]	691.297	0.202	LF7103	1439.177	0.297	LF7105	747.879	108.185
31	GRID 46151 - T1 (lbf) [Battery 2 IF]	424.626	0.289	LF7103	535.113	0.224	LF7103	110.488	26.020
32	GRID 53578 - T1 (lbf) [Battery 4 IF]	1000.705	0.297	LF7105	1211.127	0.362	LF7101	210.422	21.027
33	GRID 53578 - T3 (lbf) [Battery 4 IF]	1326.390	0.325	LF7103	2221.114	0.276	LF7103	894.723	67.456
34	GRID 53701 - T1 (lbf) [Battery 4 IF]	700.657	0.228	LF7103	756.315	0.297	LF7103	55.658	7.944
35	GRID 53701 - T3 (lbf) [Battery 4 IF]	2038.848	0.299	LF7105	2864.049	0.293	LF7103	825.202	40.474
36	GRID 53956 - T1 (lbf) [Battery 5 IF]	878.520	0.291	LF7103	1315.559	0.308	LF7105	437.038	49.747
37	GRID 53956 - T3 (lbf) [Battery 5 IF]	1396.108	0.291	LF7103	2568.794	0.290	LF7101	1172.686	83.997
38	GRID 61404 - T1 (lbf) [Battery 6 IF]	676.337	0.217	LF7103	827.874	0.298	LF7105	151.537	22.406
39	GRID 61404 - T3 (lbf) [Battery 6 IF]	1677.525	0.297	LF7105	1886.123	0.362	LF7103	208.598	12.435
40	GRID 61527 - T1 (lbf) [Battery 6 IF]	659.825	0.299	LF7105	988.285	0.287	LF7105	328.460	49.780
41	GRID 61527 - T3 (lbf) [Battery 6 IF]	1688.607	0.219	LF7103	2455.257	0.289	LF7101	766.651	45.401
42	GRID 61788 - T1 (lbf) [Battery 5 IF]	535.014	0.218	LF7103	811.469	0.356	LF7101	276.455	51.673
43	GRID 61788 - T3 (lbf) [Battery 5 IF]	1860.817	0.297	LF7105	2476.832	0.337	LF7103	616.015	33.105
44	GRID 62589 - T1 (lbf) [Battery 3 IF]	323.746	0.296	LF7103	369.746	0.282	LF7103	46.000	14.209
45	GRID 62774 - T1 (lbf) [Battery 3 IF]	365.126	0.294	LF7105	347.877	0.302	LF7105	-17.249	-4.724
46	GRID 63043 - T1 (lbf) [Battery 3 IF]	584.266	0.362	LF7103	984.918	0.301	LF7105	400.653	68.574
47	GRID 63043 - T3 (lbf) [Battery 3 IF]	1565.002	0.297	LF7103	1801.373	0.286	LF7101	236.371	15.104
48	GRID 63343 - T1 (lbf) [Battery 3 IF]	546.766	0.294	LF7103	794.223	0.365	LF7105	247.457	45.258
49	GRID 63343 - T3 (lbf) [Battery 3 IF]	1750.860	0.294	LF7105	2314.597	0.368	LF7105	563.737	32.198
50	GRID 63345 - T1 (lbf) [Battery 2 IF]	337.455	0.293	LF7103	268.074	0.446	LF7103	-69.382	-20.560

Table B-22. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 - T1 (lbf) [Battery 2 IF]	379.597	0.293	LF7105	363.676	0.228	LF7103	-15.921	-4.194
52	GRID 63942 - T1 (lbf) [Battery 2 IF]	630.111	0.287	LF7105	928.552	0.379	LF7101	298.441	47.363
53	GRID 63942 - T3 (lbf) [Battery 2 IF]	1506.271	0.292	LF7103	1846.064	0.334	LF7106	339.793	22.559
54	GRID 64244 - T1 (lbf) [Battery 2 IF]	733.609	0.299	LF7101	847.112	0.375	LF7105	113.502	15.472
55	GRID 64244 - T3 (lbf) [Battery 2 IF]	1632.511	0.294	LF7105	2261.749	0.227	LF7103	629.239	38.544
56	GRID 64246 - T1 (lbf) [Battery 1 IF]	488.193	0.295	LF7103	495.200	0.292	LF7103	7.008	1.435
57	GRID 64540 - T1 (lbf) [Battery 1 IF]	404.191	0.294	LF7105	397.583	0.292	LF7105	-6.607	-1.635
58	GRID 64814 - T1 (lbf) [Battery 1 IF]	597.661	0.290	LF7101	1039.932	0.292	LF7101	442.270	74.000
59	GRID 64814 - T3 (lbf) [Battery 1 IF]	1612.313	0.305	LF7103	2197.279	0.309	LF7103	584.967	36.281
60	GRID 65003 - T1 (lbf) [Battery 1 IF]	602.630	0.439	LF7103	944.866	0.445	LF7103	342.236	56.790
61	GRID 65003 - T3 (lbf) [Battery 1 IF]	1453.642	0.294	LF7105	1849.633	0.289	LF7105	395.992	27.241
62	GRID 111869 - T3 (lbf) [Orbiter IF]	4108.341	0.241	LF7103	4671.449	0.243	LF7103	563.107	13.706
63	GRID 111885 - T1 (lbf) [Orbiter IF]	3299.991	0.611	LF7100	3343.196	0.384	LF7101	43.204	1.309
64	GRID 111885 - T3 (lbf) [Orbiter IF]	22943.360	0.293	LF7103	21313.318	0.299	LF7103	-1630.042	-7.105
65	GRID 113369 - T3 (lbf) [Orbiter IF]	3373.153	0.393	LF7105	3833.840	0.400	LF7105	460.687	13.657
66	GRID 113385 - T1 (lbf) [Orbiter IF]	2798.079	0.393	LF7103	3539.148	0.398	LF7103	741.070	26.485
67	GRID 113385 - T3 (lbf) [Orbiter IF]	18218.297	0.227	LF7105	18131.174	0.225	LF7105	-87.122	-0.478
68	GRID 150301 - T1 (lbf) [LDU-IA IF]	1186.324	0.289	LF7105	1347.004	0.285	LF7101	160.680	13.544
69	GRID 150301 - T2 (lbf) [LDU-IA IF]	515.239	0.392	LF7103	1038.917	1.197	LF7100	523.678	101.638
70	GRID 150302 - T1 (lbf) [LDU-IA IF]	1144.210	0.231	LF7101	1357.258	0.287	LF7105	213.049	18.620
71	GRID 150303 - T2 (lbf) [LDU-IA IF]	388.311	0.296	LF7103	589.100	0.299	LF7103	200.789	51.708
72	GRID 150311 - T3 (lbf) [LDU-IA IF]	532.330	0.213	LF7105	855.214	0.401	LF7101	322.884	60.655
73	GRID 150312 - T3 (lbf) [LDU-IA IF]	557.747	0.216	LF7103	859.738	0.327	LF7103	301.991	54.145
74	GRID 150313 - T3 (lbf) [LDU-IA IF]	590.148	0.295	LF7103	771.532	0.309	LF7101	181.384	30.735
75	GRID 150314 - T3 (lbf) [LDU-IA IF]	464.225	0.285	LF7105	646.966	0.439	LF7101	182.741	39.365
76	GRID 160301 - T1 (lbf) [PM-IA IF]	2164.884	0.296	LF7103	2499.910	0.298	LF7103	335.026	15.475
77	GRID 160301 - T2 (lbf) [PM-IA IF]	3300.880	0.293	LF7103	3427.777	0.298	LF7105	126.897	3.844
78	GRID 160302 - T1 (lbf) [PM-IA IF]	1634.122	0.231	LF7105	1672.877	0.305	LF7105	38.755	2.372
79	GRID 160303 - T2 (lbf) [PM-IA IF]	5473.607	0.295	LF7103	6203.618	0.298	LF7103	730.010	13.337
80	GRID 160311 - T3 (lbf) [PM-IA IF]	3402.166	0.295	LF7103	3753.843	0.295	LF7103	351.677	10.337
81	GRID 160312 - T3 (lbf) [PM-IA IF]	2686.414	0.234	LF7105	2731.095	0.237	LF7103	44.680	1.663
82	GRID 160313 - T3 (lbf) [PM-IA IF]	2354.490	0.299	LF7105	2707.897	0.366	LF7105	353.407	15.010
83	GRID 160314 - T3 (lbf) [PM-IA IF]	2579.715	0.294	LF7103	2651.139	0.293	LF7103	71.423	2.769
84	GRID 170301 - T1 (lbf) [SGANT-IA IF]	570.311	0.417	LF7103	1279.372	0.438	LF7103	709.061	124.329
85	GRID 170301 - T2 (lbf) [SGANT-IA IF]	1839.294	0.228	LF7105	2213.801	0.220	LF7105	374.507	20.361
86	GRID 170302 - T1 (lbf) [SGANT-IA IF]	405.847	0.405	LF7105	645.384	0.275	LF7105	239.538	59.022
87	GRID 170303 - T2 (lbf) [SGANT-IA IF]	1056.627	0.294	LF7103	1323.605	0.219	LF7103	266.978	25.267
88	GRID 170311 - T3 (lbf) [SGANT-IA IF]	1111.738	0.733	LF7100	1345.602	0.430	LF7102	233.864	21.036
89	GRID 170312 - T3 (lbf) [SGANT-IA IF]	1036.629	0.225	LF7101	1384.109	0.224	LF7101	347.480	33.520
90	GRID 170313 - T3 (lbf) [SGANT-IA IF]	746.704	0.723	LF7100	843.786	0.317	LF7106	97.082	13.001
91	GRID 170314 - T3 (lbf) [SGANT-IA IF]	570.619	0.374	LF7103	832.053	0.448	LF7101	261.433	45.816
92	Net Inertial Acc - T1 (in/sec^2)	272.957	0.398	LF7103	455.052	0.400	LF7105	182.095	66.712
93	Net Inertial Acc - T2 (in/sec^2)	344.994	0.314	LF7103	484.506	0.321	LF7103	139.511	40.439
94	Net Inertial Acc - T3 (in/sec^2)	1517.143	0.289	LF7103	1531.726	0.291	LF7103	14.583	0.961
95	Net Inertial Acc - R1 (rad/sec^2)	3.397	0.152	LF7104	6.847	0.409	LF7105	3.450	101.581
96	Net Inertial Acc - R2 (rad/sec^2)	7.587	0.299	LF7101	11.938	0.301	LF7101	4.352	57.359
97	Net Inertial Acc - R3 (rad/sec^2)	3.002	0.888	LF7100	6.671	0.325	LF7105	3.669	122.199

Table B-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
1	NLF TX	272.768	0.398	LF7103	455.417	0.400	LF7105	182.649	66.961
2	NLF TY	344.973	0.314	LF7103	484.358	0.321	LF7103	139.384	40.404
3	NLF TZ	1517.034	0.289	LF7103	1531.828	0.291	LF7103	14.793	0.975
4	NLF RX	3.397	0.152	LF7104	6.847	0.409	LF7105	3.450	101.581
5	NLF RY	7.587	0.299	LF7101	11.938	0.301	LF7101	4.352	57.359
6	NLF RZ	3.002	0.888	LF7100	6.671	0.325	LF7105	3.669	122.199
7	Keel Grid 1271 DOF 2 I/F force	6572.186	0.315	LF7103	6495.133	0.300	LF7105	-77.054	-1.172
8	GRID 6299 TX NHP FORCE	407.223	0.323	LF7103	709.359	0.457	LF7103	302.136	74.194
9	GRID 13067 TX NHP FORCE	434.128	0.290	LF7103	458.078	0.281	LF7103	23.950	5.517
10	GRID 13083 TX NHP FORCE	536.288	0.298	LF7105	601.577	0.405	LF7101	65.288	12.174
11	GRID 13115 TX NHP FORCE	461.688	0.293	LF7103	400.983	0.298	LF7103	-60.705	-13.148
12	GRID 13545 TX NHP FORCE	318.698	0.296	LF7105	757.822	0.297	LF7103	439.124	137.787
13	GRID 13545 TY NHP FORCE	1028.441	0.325	LF7103	1522.528	0.297	LF7103	494.087	48.042
14	GRID 13576 TX NHP FORCE	335.257	0.993	LF7100	777.395	0.282	LF7103	442.137	131.880
15	GRID 16250 TX NHP FORCE	606.863	0.299	LF7105	1041.240	0.369	LF7103	434.377	71.577
16	GRID 16250 TY NHP FORCE	642.430	0.218	LF7103	1202.630	0.369	LF7103	560.200	87.200
17	GRID 23028 TX NHP FORCE	437.900	0.297	LF7105	399.891	0.315	LF7101	-38.009	-8.680
18	GRID 23044 TX NHP FORCE	309.638	0.297	LF7103	367.108	0.297	LF7103	57.470	18.560
19	GRID 23076 TX NHP FORCE	456.999	0.297	LF7105	587.382	0.337	LF7103	130.382	28.530
20	GRID 23506 TX NHP FORCE	551.676	0.299	LF7103	859.246	0.298	LF7101	307.571	55.752
21	GRID 23537 TX NHP FORCE	554.715	0.297	LF7105	1058.894	0.368	LF7101	504.180	90.890
22	GRID 23537 TY NHP FORCE	841.758	0.327	LF7103	1679.747	0.304	LF7105	837.989	99.552
23	GRID 37940 TX NHP FORCE	462.200	0.300	LF7105	794.734	0.292	LF7105	332.533	71.946
24	GRID 37940 TY NHP FORCE	703.619	0.306	LF7103	1091.963	0.310	LF7103	388.344	55.192
25	GRID 38067 TX NHP FORCE	303.615	0.201	LF7103	577.959	0.442	LF7103	274.344	90.359
26	GRID 38323 TX NHP FORCE	576.360	0.291	LF7105	925.000	0.295	LF7105	348.640	60.490
27	GRID 38323 TY NHP FORCE	545.141	0.294	LF7106	946.442	0.293	LF7105	401.300	73.614
28	GRID 45767 TX NHP FORCE	524.821	0.295	LF7103	716.374	0.289	LF7101	191.553	36.499
29	GRID 45890 TX NHP FORCE	475.077	0.231	LF7105	880.502	0.293	LF7105	405.425	85.339
30	GRID 45890 TY NHP FORCE	691.297	0.202	LF7103	1439.177	0.297	LF7105	747.879	108.185
31	GRID 46151 TX NHP FORCE	424.626	0.289	LF7103	535.113	0.224	LF7103	110.488	26.020
32	GRID 53578 TX NHP FORCE	1000.705	0.297	LF7105	1211.127	0.362	LF7101	210.422	21.027
33	GRID 53578 TZ NHP FORCE	1326.390	0.325	LF7103	2221.114	0.276	LF7103	894.723	67.456
34	GRID 53701 TX NHP FORCE	700.657	0.228	LF7103	756.315	0.297	LF7103	55.658	7.944
35	GRID 53701 TZ NHP FORCE	2038.848	0.299	LF7105	2864.049	0.293	LF7103	825.202	40.474
36	GRID 53956 TX NHP FORCE	878.520	0.291	LF7103	1315.559	0.308	LF7105	437.038	49.747
37	GRID 53956 TZ NHP FORCE	1396.108	0.291	LF7103	2568.794	0.290	LF7101	1172.686	83.997
38	GRID 61404 TX NHP FORCE	676.337	0.217	LF7103	827.874	0.298	LF7105	151.537	22.406
39	GRID 61404 TZ NHP FORCE	1677.525	0.297	LF7105	1886.123	0.362	LF7103	208.598	12.435
40	GRID 61527 TX NHP FORCE	659.825	0.299	LF7105	988.285	0.287	LF7105	328.460	49.780
41	GRID 61527 TZ NHP FORCE	1688.607	0.219	LF7103	2455.257	0.289	LF7101	766.651	45.401
42	GRID 61788 TX NHP FORCE	535.014	0.218	LF7103	811.469	0.356	LF7101	276.455	51.673
43	GRID 61788 TZ NHP FORCE	1860.817	0.297	LF7105	2476.832	0.337	LF7103	616.015	33.105
44	GRID 62589 TX NHP FORCE	323.746	0.296	LF7103	369.746	0.282	LF7103	46.000	14.209
45	GRID 62774 TX NHP FORCE	365.126	0.294	LF7105	347.877	0.302	LF7105	-17.249	-4.724
46	GRID 63043 TX NHP FORCE	584.266	0.362	LF7103	984.918	0.301	LF7105	400.653	68.574
47	GRID 63043 TZ NHP FORCE	1565.002	0.297	LF7103	1801.373	0.286	LF7101	236.371	15.104
48	GRID 63343 TX NHP FORCE	546.766	0.294	LF7103	794.223	0.365	LF7105	247.457	45.258
49	GRID 63343 TZ NHP FORCE	1750.860	0.294	LF7105	2314.597	0.368	LF7105	563.737	32.198
50	GRID 63345 TX NHP FORCE	337.455	0.293	LF7103	268.074	0.446	LF7103	-69.382	-20.560

Table B-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
51	GRID 63645 TX NHP FORCE	379.597	0.293	LF7105	363.676	0.228	LF7103	-15.921	-4.194
52	GRID 63942 TX NHP FORCE	630.111	0.287	LF7105	928.552	0.379	LF7101	298.441	47.363
53	GRID 63942 TZ NHP FORCE	1506.271	0.292	LF7103	1846.064	0.334	LF7106	339.793	22.559
54	GRID 64244 TX NHP FORCE	733.609	0.299	LF7101	847.112	0.375	LF7105	113.502	15.472
55	GRID 64244 TZ NHP FORCE	1632.511	0.294	LF7105	2261.749	0.227	LF7103	629.239	38.544
56	GRID 64246 TX NHP FORCE	488.193	0.295	LF7103	495.200	0.292	LF7103	7.008	1.435
57	GRID 64540 TX NHP FORCE	404.191	0.294	LF7105	397.583	0.292	LF7105	-6.607	-1.635
58	GRID 64814 TX NHP FORCE	597.661	0.290	LF7101	1039.932	0.292	LF7101	442.270	74.000
59	GRID 64814 TZ NHP FORCE	1612.313	0.305	LF7103	2197.279	0.309	LF7103	584.967	36.281
60	GRID 65003 TX NHP FORCE	602.630	0.439	LF7103	944.866	0.445	LF7103	342.236	56.790
61	GRID 65003 TZ NHP FORCE	1453.642	0.294	LF7105	1849.633	0.289	LF7105	395.992	27.241
62	Secondary -Y: 111869 DOF 3 IF FORCE	4108.341	0.241	LF7103	4671.449	0.243	LF7103	563.107	13.706
63	Primary -Y: 111885 DOF 1 IF FORCE	3299.991	0.611	LF7100	3343.196	0.384	LF7101	43.204	1.309
64	Primary -Y: 111885 DOF 3 IF FORCE	22943.360	0.293	LF7103	21313.318	0.299	LF7103	-1630.042	-7.105
65	Secondary +Y: 113369 DOF 3 IF FORCE	3373.153	0.393	LF7105	3833.840	0.400	LF7105	460.687	13.657
66	Primary +Y: 113385 DOF 1 IF FORCE	2798.079	0.393	LF7103	3539.148	0.398	LF7103	741.070	26.485
67	Primary +Y: 113385 DOF 3 IF FORCE	18218.297	0.227	LF7105	18131.174	0.225	LF7105	-87.122	-0.478
68	GRID 150301 TX FRAM IF FORCE	1186.324	0.289	LF7105	1347.004	0.285	LF7101	160.680	13.544
69	GRID 150301 TY FRAM IF FORCE	515.239	0.392	LF7103	1038.917	1.197	LF7100	523.678	101.638
70	GRID 150302 TX FRAM IF FORCE	1144.210	0.231	LF7101	1357.258	0.287	LF7105	213.049	18.620
71	GRID 150303 TY FRAM IF FORCE	388.311	0.296	LF7103	589.100	0.299	LF7103	200.789	51.708
72	GRID 150311 TZ FRAM IF FORCE	532.330	0.213	LF7105	855.214	0.401	LF7101	322.884	60.655
73	GRID 150312 TZ FRAM IF FORCE	557.747	0.216	LF7103	859.738	0.327	LF7103	301.991	54.145
74	GRID 150313 TZ FRAM IF FORCE	590.148	0.295	LF7103	771.532	0.309	LF7101	181.384	30.735
75	GRID 150314 TZ FRAM IF FORCE	464.225	0.285	LF7105	646.966	0.439	LF7101	182.741	39.365
76	GRID 160301 TX FRAM IF FORCE	2164.884	0.296	LF7103	2499.910	0.298	LF7103	335.026	15.475
77	GRID 160301 TY FRAM IF FORCE	3300.880	0.293	LF7103	3427.777	0.298	LF7105	126.897	3.844
78	GRID 160302 TX FRAM IF FORCE	1634.122	0.231	LF7105	1672.877	0.305	LF7105	38.755	2.372
79	GRID 160303 TY FRAM IF FORCE	5473.607	0.295	LF7103	6203.618	0.298	LF7103	730.010	13.337
80	GRID 160311 TZ FRAM IF FORCE	3402.166	0.295	LF7103	3753.843	0.295	LF7103	351.677	10.337
81	GRID 160312 TZ FRAM IF FORCE	2686.414	0.234	LF7105	2731.095	0.237	LF7103	44.680	1.663
82	GRID 160313 TZ FRAM IF FORCE	2354.490	0.299	LF7105	2707.897	0.366	LF7105	353.407	15.010
83	GRID 160314 TZ FRAM IF FORCE	2579.715	0.294	LF7103	2651.139	0.293	LF7103	71.423	2.769
84	GRID 170301 TX FRAM IF FORCE	570.311	0.417	LF7103	1279.372	0.438	LF7103	709.061	124.329
85	GRID 170301 TY FRAM IF FORCE	1839.294	0.228	LF7105	2213.801	0.220	LF7105	374.507	20.361
86	GRID 170302 TX FRAM IF FORCE	405.847	0.405	LF7105	645.384	0.275	LF7105	239.538	59.022
87	GRID 170303 TY FRAM IF FORCE	1056.627	0.294	LF7103	1323.605	0.219	LF7103	266.978	25.267
88	GRID 170311 TZ FRAM IF FORCE	1111.738	0.733	LF7100	1345.602	0.430	LF7102	233.864	21.036
89	GRID 170312 TZ FRAM IF FORCE	1036.629	0.225	LF7101	1384.109	0.224	LF7101	347.480	33.520
90	GRID 170313 TZ FRAM IF FORCE	746.704	0.723	LF7100	843.786	0.317	LF7106	97.082	13.001
91	GRID 170314 TZ FRAM IF FORCE	570.619	0.374	LF7103	832.053	0.448	LF7101	261.433	45.816
92	GRID 200201 Fuse-1 Acceleration TX	1237.261	0.309	LF7103	3587.600	0.318	LF7105	2350.340	189.963
93	GRID 200201 Fuse-1 Acceleration TY	4201.411	0.308	LF7103	6435.542	0.400	LF7101	2234.131	53.176
94	GRID 200201 Fuse-1 Acceleration TZ	1099.191	0.290	LF7103	3237.511	0.334	LF7101	2138.320	194.536
95	GRID 200201 Fuse-1 Acceleration RX	1111.666	2.000	LF7100	1368.588	0.406	LF7101	256.922	23.111
96	GRID 200201 Fuse-1 Acceleration RY	283.173	1.994	LF7100	518.913	0.323	LF7105	235.740	83.250
97	GRID 200201 Fuse-1 Acceleration RZ	667.406	0.308	LF7103	922.147	0.324	LF7105	254.740	38.169
98	GRID 200202 Fuse-2 Acceleration TX	6495.810	1.992	LF7100	9180.633	0.326	LF7101	2684.823	41.332
99	GRID 200202 Fuse-2 Acceleration TY	2981.184	0.310	LF7105	4956.279	0.301	LF7105	1975.095	66.252
100	GRID 200202 Fuse-2 Acceleration TZ	3400.961	0.301	LF7105	5034.201	0.325	LF7105	1633.240	48.023

Table B-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
101	GRID 200202 Fuse-2 Acceleration RX	97.331	0.314	LF7103	259.932	0.600	LF7105	162.601	167.060
102	GRID 200202 Fuse-2 Acceleration RY	354.024	0.313	LF7103	555.817	0.371	LF7101	201.792	57.000
103	GRID 200202 Fuse-2 Acceleration RZ	137.798	0.316	LF7101	912.131	0.322	LF7101	774.333	561.935
104	GRID 200301 PVGF-1 Acceleration TX	792.154	0.751	LF7100	2477.995	0.397	LF7103	1685.841	212.817
105	GRID 200301 PVGF-1 Acceleration TY	622.699	0.291	LF7105	5288.908	0.380	LF7101	4666.209	749.353
106	GRID 200301 PVGF-1 Acceleration TZ	3429.010	0.406	LF7105	8605.525	0.292	LF7103	5176.515	150.962
107	GRID 200301 PVGF-1 Acceleration RX	129.274	0.340	LF7103	708.441	0.380	LF7101	579.167	448.013
108	GRID 200301 PVGF-1 Acceleration RY	29.971	0.356	LF7103	421.283	0.383	LF7101	391.311	1305.623
109	GRID 200301 PVGF-1 Acceleration RZ	524.223	0.340	LF7103	1207.369	0.477	LF7103	683.146	130.316
110	GRID 200302 PVGF-2 Acceleration TX	864.000	0.259	LF7103	2591.754	0.435	LF7101	1727.754	199.972
111	GRID 200302 PVGF-2 Acceleration TY	2351.575	0.354	LF7103	4737.474	0.295	LF7105	2385.898	101.460
112	GRID 200302 PVGF-2 Acceleration TZ	2119.997	0.291	LF7103	4054.975	0.439	LF7101	1934.979	91.273
113	GRID 200302 PVGF-2 Acceleration RX	260.012	1.885	LF7100	609.919	0.372	LF7101	349.907	134.574
114	GRID 200302 PVGF-2 Acceleration RY	61.988	0.207	LF7105	706.811	0.451	LF7105	644.824	1040.244
115	GRID 200302 PVGF-2 Acceleration RZ	563.368	1.952	LF7100	926.003	0.443	LF7105	362.635	64.369
116	Grid 504878 PDU Acceleration TX	817.256	0.287	LF7103	4302.707	0.332	LF7105	3485.451	426.482
117	Grid 504878 PDU Acceleration TY	836.624	0.310	LF7103	4572.748	0.348	LF7101	3736.125	446.572
118	Grid 504878 PDU Acceleration TZ	2200.809	0.354	LF7105	8585.325	0.364	LF7101	6384.515	290.099
119	Grid 504878 PDU Acceleration RX	929.195	1.996	LF7100	1500.214	0.399	LF7105	571.020	61.453
120	Grid 504878 PDU Acceleration RY	202.591	0.248	LF7103	936.137	0.334	LF7101	733.547	362.083
121	Grid 504878 PDU Acceleration RZ	62.201	0.351	LF7103	202.585	0.385	LF7101	140.383	225.693
122	Element Force CBAR 27000 Shear 1	2139.118	0.231	LF7103	2158.884	0.235	LF7103	19.766	0.924
123	Element Force CBAR 27000 Shear 2	14424.550	0.294	LF7103	14204.335	0.296	LF7103	-220.215	-1.527
124	Element Force CBAR 27001 Shear 1	832.213	0.827	LF7105	881.435	0.851	LF7105	49.222	5.915
125	Element Force CBAR 27001 Shear 2	1580.812	0.295	LF7103	1582.539	0.296	LF7103	1.727	0.109
126	Element Force CBAR 27002 Shear 1	621.608	0.295	LF7105	721.222	0.297	LF7103	99.614	16.025
127	Element Force CBAR 27002 Shear 2	1346.876	0.296	LF7103	1373.021	0.296	LF7103	26.145	1.941
128	Element Force CBAR 27003 Shear 1	1132.196	0.294	LF7103	1263.877	0.297	LF7103	131.681	11.631
129	Element Force CBAR 27003 Shear 2	1209.328	0.297	LF7103	1215.944	0.302	LF7103	6.616	0.547
130	Element Force CBAR 27004 Shear 1	579.856	0.293	LF7103	624.332	0.296	LF7105	44.476	7.670
131	Element Force CBAR 27004 Shear 2	1066.396	0.299	LF7103	1061.749	0.303	LF7103	-4.646	-0.436
132	Element Force CBAR 27005 Shear 1	312.384	0.293	LF7105	352.068	0.368	LF7101	39.683	12.703
133	Element Force CBAR 27005 Shear 2	996.074	0.299	LF7103	1019.420	0.310	LF7103	23.346	2.344
134	Element Force CBAR 27006 Tension	9737.666	0.295	LF7103	9616.186	0.296	LF7103	-121.480	-1.248
135	Element Force CBAR 27007 Tension	7759.173	0.294	LF7103	7683.869	0.299	LF7103	-75.304	-0.971
136	Element Force CBAR 27008 Tension	6489.589	0.294	LF7103	6605.401	0.295	LF7103	115.812	1.785
137	Element Force CBAR 27009 Tension	4798.156	0.339	LF7106	4910.024	0.340	LF7102	111.868	2.331
138	Element Force CBAR 27010 Tension	4553.360	0.296	LF7103	4954.942	0.295	LF7103	401.582	8.819
139	Element Force CBAR 27011 Tension	2515.102	0.338	LF7102	2798.232	0.346	LF7102	283.131	11.257
140	Element Force CBAR 27012 Tension	3096.394	0.295	LF7103	3202.290	0.299	LF7103	105.896	3.420
141	Element Force CBAR 27013 Tension	1413.573	1.590	LF7100	1654.797	0.850	LF7102	241.224	17.065
142	Element Force CBAR 27014 Tension	2404.047	0.296	LF7103	2511.038	0.302	LF7103	106.991	4.450
143	Element Force CBAR 27015 Tension	945.212	0.983	LF7100	1093.725	0.301	LF7101	148.513	15.712
144	Element Force CBAR 27016 Tension	1590.210	0.296	LF7103	1828.522	0.303	LF7103	238.312	14.986
145	Element Force CBAR 27017 Tension	623.757	0.267	LF7103	716.961	0.279	LF7103	93.204	14.942
146	Element Force CBAR 27018 Shear 1	1694.264	0.289	LF7103	1826.303	0.330	LF7104	132.038	7.793
147	Element Force CBAR 27018 Shear 2	9358.619	0.823	LF7105	9270.268	0.835	LF7103	-88.352	-0.944
148	Element Force CBAR 27019 Shear 1	1334.340	0.294	LF7103	1392.073	0.293	LF7103	57.733	4.327
149	Element Force CBAR 27019 Shear 2	1306.467	1.083	LF7105	1287.492	1.090	LF7105	-18.975	-1.452
150	Element Force CBAR 27020 Shear 1	273.938	0.297	LF7103	420.777	0.293	LF7103	146.840	53.603

Table B-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
151	Element Force CBAR 27020 Shear 2	961.877	0.822	LF7101	937.007	1.090	LF7105	-24.870	-2.586
152	Element Force CBAR 27021 Shear 1	270.843	0.625	LF7101	389.567	0.333	LF7103	118.723	43.835
153	Element Force CBAR 27021 Shear 2	900.073	1.083	LF7105	918.163	0.854	LF7105	18.091	2.010
154	Element Force CBAR 27022 Shear 1	343.921	1.083	LF7105	465.323	0.365	LF7101	121.402	35.299
155	Element Force CBAR 27022 Shear 2	843.736	0.299	LF7105	907.925	0.364	LF7101	64.189	7.608
156	Element Force CBAR 27023 Shear 1	94.651	0.372	LF7103	295.748	0.439	LF7101	201.097	212.462
157	Element Force CBAR 27023 Shear 2	914.477	0.299	LF7105	972.137	0.298	LF7105	57.660	6.305
158	Element Force CBAR 27024 Tension	5939.893	0.826	LF7105	5866.991	0.835	LF7103	-72.902	-1.227
159	Element Force CBAR 27025 Tension	6342.269	0.822	LF7105	6259.485	0.835	LF7103	-82.784	-1.305
160	Element Force CBAR 27026 Tension	6218.408	0.826	LF7105	6158.088	0.845	LF7105	-60.320	-0.970
161	Element Force CBAR 27027 Tension	4148.705	0.337	LF7106	4329.827	0.341	LF7106	181.123	4.366
162	Element Force CBAR 27028 Tension	4519.995	0.296	LF7105	4693.863	0.303	LF7105	173.868	3.847
163	Element Force CBAR 27029 Tension	4321.852	0.294	LF7103	4466.445	0.296	LF7103	144.593	3.346
164	Element Force CBAR 27030 Tension	6284.384	0.294	LF7103	6684.404	0.297	LF7103	400.020	6.365
165	Element Force CBAR 27031 Tension	5694.117	0.294	LF7103	6061.885	0.297	LF7103	367.768	6.459
166	Element Force CBAR 27032 Tension	3079.597	0.294	LF7103	3286.619	0.298	LF7103	207.022	6.722
167	Element Force CBAR 27033 Tension	2024.508	0.294	LF7103	2099.997	0.298	LF7103	75.488	3.729
168	Element Force CBAR 27034 Tension	1809.769	0.296	LF7105	1989.870	0.299	LF7103	180.101	9.952
169	Element Force CBAR 27035 Tension	764.675	0.398	LF7101	930.474	0.405	LF7103	165.800	21.682
170	Element Force CBAR 27036 Tension	566.680	0.293	LF7103	530.895	0.296	LF7103	-35.785	-6.315
171	Element Force CBAR 27037 Tension	1023.341	0.293	LF7103	970.740	0.299	LF7103	-52.600	-5.140
172	Element Force CBAR 27038 Shear 1	2905.380	0.223	LF7105	3009.421	0.224	LF7105	104.040	3.581
173	Element Force CBAR 27038 Shear 2	10986.985	0.401	LF7103	11365.501	0.402	LF7103	378.516	3.445
174	Element Force CBAR 27039 Shear 1	399.590	1.389	LF7105	422.851	1.399	LF7105	23.261	5.821
175	Element Force CBAR 27039 Shear 2	1117.495	0.752	LF7100	1129.389	0.627	LF7105	11.894	1.064
176	Element Force CBAR 27040 Shear 1	351.325	0.222	LF7103	375.722	0.225	LF7101	24.397	6.944
177	Element Force CBAR 27040 Shear 2	1064.821	0.753	LF7100	1033.499	0.630	LF7101	-31.322	-2.942
178	Element Force CBAR 27041 Shear 1	588.040	0.292	LF7105	648.929	0.287	LF7105	60.889	10.355
179	Element Force CBAR 27041 Shear 2	1109.621	0.753	LF7100	1083.018	1.906	LF7100	-26.603	-2.398
180	Element Force CBAR 27042 Shear 1	475.468	0.289	LF7105	517.807	0.439	LF7101	42.338	8.905
181	Element Force CBAR 27042 Shear 2	1059.088	1.959	LF7100	1049.667	1.907	LF7100	-9.421	-0.890
182	Element Force CBAR 27043 Shear 1	393.155	0.293	LF7103	423.935	0.300	LF7103	30.780	7.829
183	Element Force CBAR 27043 Shear 2	995.143	1.959	LF7100	987.322	0.311	LF7103	-7.821	-0.786
184	Element Force CBAR 27044 Tension	7313.709	0.402	LF7103	7488.776	0.402	LF7103	175.067	2.394
185	Element Force CBAR 27045 Tension	6247.845	0.400	LF7103	6530.688	0.402	LF7103	282.843	4.527
186	Element Force CBAR 27046 Tension	5615.059	0.396	LF7105	5799.712	0.401	LF7105	184.652	3.289
187	Element Force CBAR 27047 Tension	4416.178	0.395	LF7105	4615.655	0.400	LF7101	199.477	4.517
188	Element Force CBAR 27048 Tension	3964.782	0.396	LF7105	3982.207	0.400	LF7101	17.425	0.439
189	Element Force CBAR 27049 Tension	2286.028	0.237	LF7105	2434.565	0.400	LF7101	148.538	6.498
190	Element Force CBAR 27050 Tension	2807.667	0.234	LF7105	2851.535	0.237	LF7101	43.868	1.562
191	Element Force CBAR 27051 Tension	1499.145	0.219	LF7103	1573.517	0.237	LF7101	74.373	4.961
192	Element Force CBAR 27052 Tension	2023.360	0.233	LF7105	2088.912	0.250	LF7101	65.552	3.240
193	Element Force CBAR 27053 Tension	794.317	0.225	LF7105	801.114	0.366	LF7105	6.797	0.856
194	Element Force CBAR 27054 Tension	1353.336	1.007	LF7100	1478.443	0.320	LF7103	125.107	9.244
195	Element Force CBAR 27055 Tension	558.486	1.592	LF7100	663.607	0.847	LF7102	105.121	18.822
196	Element Force CBAR 27056 Shear 1	1993.542	0.397	LF7103	2304.268	0.401	LF7103	310.726	15.587
197	Element Force CBAR 27056 Shear 2	12675.804	0.229	LF7105	12495.284	0.230	LF7105	-180.520	-1.424
198	Element Force CBAR 27057 Shear 1	631.376	0.401	LF7103	697.910	0.401	LF7103	66.533	10.538
199	Element Force CBAR 27057 Shear 2	542.607	0.295	LF7105	525.184	0.295	LF7105	-17.423	-3.211
200	Element Force CBAR 27058 Shear 1	280.433	0.753	LF7100	335.780	0.368	LF7103	55.346	19.736

Table B-23. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
201	Element Force CBAR 27058 Shear 2	868.542	0.226	LF7105	892.381	0.235	LF7105	23.839	2.745
202	Element Force CBAR 27059 Shear 1	219.321	0.262	LF7103	320.875	0.389	LF7101	101.554	46.304
203	Element Force CBAR 27059 Shear 2	780.995	1.144	LF7105	839.613	0.302	LF7101	58.619	7.506
204	Element Force CBAR 27060 Shear 1	99.440	0.752	LF7100	159.774	0.488	LF7102	60.335	60.675
205	Element Force CBAR 27060 Shear 2	902.880	0.298	LF7105	939.765	0.300	LF7105	36.884	4.085
206	Element Force CBAR 27061 Shear 1	143.892	0.754	LF7100	230.162	0.378	LF7101	86.270	59.955
207	Element Force CBAR 27061 Shear 2	972.994	0.298	LF7105	1028.038	0.299	LF7105	55.045	5.657
208	Element Force CBAR 27062 Tension	8363.023	0.230	LF7105	8216.358	0.230	LF7105	-146.665	-1.754
209	Element Force CBAR 27063 Tension	7664.338	0.229	LF7105	7595.532	0.224	LF7105	-68.806	-0.898
210	Element Force CBAR 27064 Tension	4730.606	1.399	LF7105	4848.119	1.411	LF7105	117.512	2.484
211	Element Force CBAR 27065 Tension	3818.117	0.250	LF7105	3897.827	1.411	LF7105	79.710	2.088
212	Element Force CBAR 27066 Tension	2043.740	0.402	LF7101	2180.674	0.402	LF7101	136.934	6.700
213	Element Force CBAR 27067 Tension	1955.733	0.402	LF7101	2126.039	0.402	LF7101	170.305	8.708
214	Element Force CBAR 27068 Tension	2405.159	0.401	LF7101	2522.307	0.401	LF7101	117.148	4.871
215	Element Force CBAR 27069 Tension	1725.000	0.402	LF7101	1793.358	0.401	LF7101	68.358	3.963
216	Element Force CBAR 27070 Tension	1605.418	0.401	LF7101	1649.917	0.407	LF7103	44.499	2.772
217	Element Force CBAR 27071 Tension	937.539	0.297	LF7101	978.825	0.303	LF7103	41.286	4.404
218	Element Force CBAR 27072 Tension	1039.722	0.397	LF7105	1189.075	0.405	LF7105	149.353	14.365
219	Element Force CBAR 27073 Tension	1459.734	0.295	LF7103	1658.594	0.303	LF7103	198.859	13.623
220	Element Force CBAR 27074 Tension	618.395	0.292	LF7105	601.673	0.295	LF7105	-16.722	-2.704
221	Element Force CBAR 27075 Tension	1042.629	0.293	LF7105	1002.652	0.291	LF7105	-39.977	-3.834

Table B-24. Japanese Experiment Module - Exposed Facility - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.372	0.249	LF7105	1.367	0.249	LF7105	-0.005	-0.345
2	Net Load Factor - T2 (g)	0.611	0.223	LF7103	0.607	0.223	LF7103	-0.004	-0.618
3	Net Load Factor - T3 (g)	4.077	0.278	LF7103	4.026	0.278	LF7105	-0.051	-1.257
4	Net Load Factor - R1 (rad/sec^2)	3.205	0.453	LF7106	3.134	0.453	LF7106	-0.071	-2.210
5	Net Load Factor - R2 (rad/sec^2)	5.523	0.679	LF7100	5.451	0.678	LF7100	-0.072	-1.304
6	Net Load Factor - R3 (rad/sec^2)	4.148	0.389	LF7105	4.139	0.388	LF7105	-0.010	-0.233
7	ID 600001 - T3 (lbf)	8467.999	0.277	LF7103	8277.284	0.278	LF7103	-190.715	-2.252
8	ID 600002 - T3 (lbf)	9049.624	0.278	LF7105	8927.085	0.278	LF7105	-122.539	-1.354
9	ID 600003 - T1 (lbf)	8811.752	0.245	LF7105	8797.717	0.245	LF7105	-14.035	-0.159
10	ID 600003 - T3 (lbf)	10601.697	0.279	LF7105	10576.788	0.279	LF7105	-24.909	-0.235
11	ID 600004 - T1 (lbf)	8956.835	0.244	LF7103	8905.638	0.244	LF7103	-51.196	-0.572
12	ID 600004 - T3 (lbf)	10470.036	0.278	LF7103	10445.780	0.278	LF7103	-24.256	-0.232
13	ID 600005 - T2 (lbf)	5145.493	0.223	LF7103	5113.649	0.223	LF7103	-31.843	-0.619
14	Net Inertial Acc - T1 (in/sec^2)	529.771	0.249	LF7105	527.942	0.249	LF7105	-1.828	-0.345
15	Net Inertial Acc - T2 (in/sec^2)	236.007	0.223	LF7103	234.548	0.223	LF7103	-1.459	-0.618
16	Net Inertial Acc - T3 (in/sec^2)	1574.190	0.278	LF7103	1554.402	0.278	LF7105	-19.788	-1.257
17	Net Inertial Acc - R1 (rad/sec^2)	3.205	0.453	LF7106	3.134	0.453	LF7106	-0.071	-2.210
18	Net Inertial Acc - R2 (rad/sec^2)	5.523	0.679	LF7100	5.451	0.678	LF7100	-0.072	-1.304
19	Net Inertial Acc - R3 (rad/sec^2)	4.148	0.389	LF7105	4.139	0.388	LF7105	-0.010	-0.233

Table B-25. Experiment Logistics Module - Exposed Section - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.020	0.354	LF7105	1.008	0.354	LF7105	-0.013	-1.230
2	Net Load Factor - T2 (g)	1.121	0.307	LF7105	1.122	0.307	LF7105	0.001	0.092
3	Net Load Factor - T3 (g)	2.903	0.312	LF7103	2.784	0.312	LF7105	-0.119	-4.096
4	Net Load Factor - R1 (rad/sec^2)	4.041	1.251	LF7100	3.868	1.518	LF7100	-0.173	-4.286
5	Net Load Factor - R2 (rad/sec^2)	15.573	0.369	LF7103	14.589	0.226	LF7103	-0.984	-6.320
6	Net Load Factor - R3 (rad/sec^2)	2.445	1.349	LF7100	2.495	1.347	LF7100	0.050	2.027
7	ID 700001 - T2 (lbf)	6051.775	0.307	LF7105	6057.312	0.307	LF7105	5.537	0.091
8	ID 700002 - T1 (lbf)	3596.001	0.353	LF7105	3596.850	0.350	LF7105	0.849	0.024
9	ID 700002 - T3 (lbf)	7345.393	0.261	LF7105	7241.539	0.262	LF7105	-103.854	-1.414
10	ID 700003 - T1 (lbf)	2673.983	0.354	LF7103	2651.279	0.353	LF7103	-22.704	-0.849
11	ID 700003 - T3 (lbf)	6469.243	0.262	LF7103	6368.744	0.200	LF7105	-100.499	-1.553
12	ID 700004 - T3 (lbf)	5419.149	0.314	LF7103	5456.723	0.314	LF7103	37.575	0.693
13	ID 700005 - T3 (lbf)	4968.945	0.226	LF7103	4948.740	0.226	LF7103	-20.205	-0.407
14	Net Inertial Acc - T1 (in/sec^2)	393.865	0.354	LF7105	389.020	0.354	LF7105	-4.845	-1.230
15	Net Inertial Acc - T2 (in/sec^2)	432.781	0.307	LF7105	433.178	0.307	LF7105	0.398	0.092
16	Net Inertial Acc - T3 (in/sec^2)	1120.867	0.312	LF7103	1074.957	0.312	LF7105	-45.911	-4.096
17	Net Inertial Acc - R1 (rad/sec^2)	4.041	1.251	LF7100	3.868	1.518	LF7100	-0.173	-4.286
18	Net Inertial Acc - R2 (rad/sec^2)	15.573	0.369	LF7103	14.589	0.226	LF7103	-0.984	-6.320
19	Net Inertial Acc - R3 (rad/sec^2)	2.445	1.349	LF7100	2.495	1.347	LF7100	0.050	2.027

Table B-26. Atmospheric Nuetral Drag Experiment-2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.321	0.619	LF7100	2.247	0.619	LF7100	-0.074	-3.180
2	Net Load Factor - T2 (g)	1.836	0.666	LF7100	1.823	0.666	LF7100	-0.013	-0.692
3	Net Load Factor - T3 (g)	6.043	1.063	LF7100	5.771	1.063	LF7100	-0.272	-4.493
4	Net Load Factor - R1 (rad/sec^2)	87.508	1.063	LF7100	83.840	1.064	LF7100	-3.668	-4.191
5	Net Load Factor - R2 (rad/sec^2)	17.420	0.141	LF7106	17.167	0.026	LF7106	-0.253	-1.451
6	Net Load Factor - R3 (rad/sec^2)	27.780	0.957	LF7100	26.652	0.983	LF7100	-1.127	-4.058
7	GRID 13 - T1 (lbf)	1049.673	1.064	LF7100	1029.378	1.063	LF7100	-20.295	-1.933
8	GRID 13 - T2 (lbf)	1160.726	1.088	LF7100	1146.044	1.088	LF7100	-14.681	-1.265
9	GRID 13 - T3 (lbf)	996.147	1.063	LF7100	940.922	1.063	LF7100	-55.226	-5.544
10	GRID 18 - T2 (lbf)	527.328	0.343	LF7105	549.167	0.343	LF7105	21.838	4.141
11	GRID 22 - T2 (lbf)	1305.453	1.063	LF7100	1262.658	1.064	LF7100	-42.795	-3.278
12	GRID 26 - T1 (lbf)	565.730	1.064	LF7100	543.926	1.064	LF7100	-21.804	-3.854
13	GRID 26 - T2 (lbf)	933.358	1.063	LF7100	895.008	1.063	LF7100	-38.350	-4.109
14	GRID 26 - T3 (lbf)	1408.782	1.064	LF7100	1361.858	1.064	LF7100	-46.924	-3.331
15	GRID 28 - T2 (lbf)	2049.605	1.064	LF7100	1983.174	1.064	LF7100	-66.431	-3.241
16	GRID 44 - T2 (lbf)	138.393	1.086	LF7100	137.200	1.087	LF7100	-1.193	-0.862
17	GRID 46 - T2 (lbf)	1385.620	1.063	LF7100	1324.660	1.064	LF7100	-60.960	-4.399
18	GRID 58 - T2 (lbf)	201.223	0.345	LF7105	204.352	0.345	LF7105	3.129	1.555
19	GRID 59 - T1 (lbf)	1112.302	1.037	LF7100	1049.748	1.038	LF7100	-62.555	-5.624
20	GRID 59 - T2 (lbf)	1643.857	1.038	LF7100	1564.164	1.088	LF7100	-79.693	-4.848
21	GRID 59 - T3 (lbf)	529.578	1.088	LF7100	517.222	1.088	LF7100	-12.356	-2.333
22	GRID 60 - T2 (lbf)	1573.910	1.064	LF7100	1535.699	1.064	LF7100	-38.212	-2.428
23	GRID 75 - T1 (lbf)	887.500	1.111	LF7100	892.708	1.111	LF7100	5.208	0.587
24	GRID 75 - T2 (lbf)	1405.963	1.064	LF7100	1366.512	1.064	LF7100	-39.451	-2.806
25	GRID 75 - T3 (lbf)	765.106	1.063	LF7100	735.795	1.064	LF7100	-29.312	-3.831
26	GRID 79 - T2 (lbf)	676.447	1.010	LF7100	622.203	1.010	LF7100	-54.244	-8.019
27	Net Inertial Acc - T1 (in/sec^2)	896.092	0.619	LF7100	867.595	0.619	LF7100	-28.497	-3.180
28	Net Inertial Acc - T2 (in/sec^2)	708.850	0.666	LF7100	703.943	0.666	LF7100	-4.906	-0.692
29	Net Inertial Acc - T3 (in/sec^2)	2332.986	1.063	LF7100	2228.152	1.063	LF7100	-104.834	-4.494
30	Net Inertial Acc - R1 (rad/sec^2)	87.508	1.063	LF7100	83.840	1.064	LF7100	-3.668	-4.191
31	Net Inertial Acc - R2 (rad/sec^2)	17.420	0.141	LF7106	17.167	0.026	LF7106	-0.253	-1.451
32	Net Inertial Acc - R3 (rad/sec^2)	27.780	0.957	LF7100	26.652	0.983	LF7100	-1.127	-4.058

Appendix C
Nominal Landing - Linear/Nonlinear Comparison

Table C-1. Battery 1 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.641	1.017	LG7525	3.199	0.396	LG7525	0.558	21.146
2	Net Load Factor - T2 (g)	5.418	0.260	LG7523	5.974	0.259	LG7523	0.556	10.265
3	Net Load Factor - T3 (g)	2.656	0.159	LG7523	2.852	0.161	LG7525	0.196	7.375
4	Net Load Factor - R1 (rad/sec^2)	19.080	0.243	LG7523	58.198	0.385	LG7525	39.118	205.024
5	Net Load Factor - R2 (rad/sec^2)	25.180	0.285	LG7524	55.769	0.260	LG7523	30.589	121.482
6	Net Load Factor - R3 (rad/sec^2)	15.449	0.097	LG7526	74.584	1.022	LG7525	59.135	382.778
7	GRID 653 - T2 (lbf)	1995.431	0.258	LG7523	2843.720	1.113	LG7523	848.290	42.512
8	GRID 653 - T3 (lbf)	923.051	0.250	LG7525	935.414	0.272	LG7523	12.364	1.339
9	GRID 654 - T3 (lbf)	478.543	0.258	LG7523	518.606	0.395	LG7525	40.063	8.372
10	GRID 655 - T1 (lbf)	1417.077	1.017	LG7525	1716.735	0.396	LG7525	299.658	21.146
11	GRID 655 - T3 (lbf)	652.047	1.112	LG7523	888.399	0.252	LG7523	236.353	36.248
12	GRID 2183 - T2 (lbf)	1735.805	0.922	LG7525	2864.275	0.930	LG7525	1128.470	65.011
13	GRID 2183 - T3 (lbf)	883.753	0.287	LG7526	1225.243	0.260	LG7523	341.490	38.641
14	GRID 2184 - T3 (lbf)	364.324	0.268	LG7525	476.995	0.459	LG7525	112.670	30.926
15	GRID 2185 - T3 (lbf)	546.266	0.306	LG7523	698.411	0.978	LG7525	152.145	27.852
16	Net Inertial Acc - T1 (in/sec^2)	1019.648	1.017	LG7525	1235.265	0.396	LG7525	215.617	21.146
17	Net Inertial Acc - T2 (in/sec^2)	2091.692	0.260	LG7523	2306.407	0.259	LG7523	214.715	10.265
18	Net Inertial Acc - T3 (in/sec^2)	1025.593	0.159	LG7523	1101.235	0.161	LG7525	75.642	7.375
19	Net Inertial Acc - R1 (rad/sec^2)	19.080	0.243	LG7523	58.198	0.385	LG7525	39.118	205.024
20	Net Inertial Acc - R2 (rad/sec^2)	25.180	0.285	LG7524	55.769	0.260	LG7523	30.589	121.482
21	Net Inertial Acc - R3 (rad/sec^2)	15.449	0.097	LG7526	74.584	1.022	LG7525	59.135	382.778

Table C-2. Battery 1 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	2.605	1.019	LG7525	3.853	0.979	LG7525	1.248	47.914
2	FSE Net Load Factor, Y axis	5.801	0.263	LG7523	6.438	0.259	LG7525	0.637	10.984
3	FSE Net Load Factor, Z axis	2.785	0.162	LG7523	3.374	0.399	LG7523	0.589	21.145
4	FSE Net Load Factor, RX axis	22.555	0.193	LG7525	56.335	1.109	LG7523	33.780	149.770
5	FSE Net Load Factor, RY axis	28.882	0.232	LG7523	83.953	0.501	LG7524	55.071	190.675
6	FSE Net Load Factor, RZ axis	26.724	0.244	LG7523	131.556	1.072	LG7525	104.832	392.271
7	ORU I/F Force Grid 990 Z axis	203.708	0.246	LG7525	268.683	0.450	LG7525	64.974	31.896
8	ORU I/F Force Grid 991 Z axis	206.452	0.286	LG7526	324.667	0.198	LG7525	118.215	57.260
9	ORU I/F Force Grid 9998 X axis	505.358	1.018	LG7525	1088.364	1.073	LG7525	583.006	115.365
10	ORU I/F Force Grid 9998 Z axis	612.075	0.158	LG7525	660.182	0.162	LG7525	48.107	7.860
11	ORU I/F Moment Grid 9998 RX axis	124.688	0.303	LG7523	300.303	0.279	LG7522	175.615	140.843
12	ORU I/F Moment Grid 9998 RY axis	2258.044	0.261	LG7526	3220.863	1.117	LG7523	962.819	42.640
13	ORU I/F Moment Grid 9998 RZ axis	318.897	0.246	LG7525	535.912	1.067	LG7525	217.015	68.052
14	ORU I/F Force Grid 9999 X axis	491.054	1.014	LG7525	1128.908	1.067	LG7525	637.854	129.895
15	ORU I/F Force Grid 9999 Y axis	2034.116	0.259	LG7523	2332.848	0.258	LG7523	298.733	14.686
16	ORU I/F Force Grid 9999 Z axis	409.097	0.216	LG7522	665.769	0.215	LG7524	256.671	62.741
17	ORU I/F Moment Grid 9999 RX axis	999.085	0.258	LG7523	1003.982	0.257	LG7521	4.897	0.490
18	ORU I/F Moment Grid 9999 RY axis	1616.288	0.298	LG7523	2419.848	1.067	LG7525	803.560	49.716
19	ORU I/F Moment Grid 9999 RZ axis	373.852	0.256	LG7526	669.574	1.067	LG7525	295.722	79.101
20	ORU Net Load Factor, X axis	2.680	1.016	LG7525	3.355	0.977	LG7525	0.675	25.176
21	ORU Net Load Factor, Y axis	5.597	0.259	LG7523	6.419	0.258	LG7523	0.822	14.686
22	ORU Net Load Factor, Z axis	2.907	0.158	LG7523	3.177	0.161	LG7525	0.270	9.275
23	ORU Net Load Factor, RX axis	18.791	0.192	LG7523	60.795	0.385	LG7525	42.004	223.540
24	ORU Net Load Factor, RY axis	32.027	0.284	LG7524	76.124	0.425	LG7523	44.097	137.688
25	ORU Net Load Factor, RZ axis	20.662	0.239	LG7524	165.084	1.067	LG7525	144.422	698.984
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1995.431	0.258	LG7523	2843.720	1.113	LG7523	848.290	42.512
27	FSE/ORU Assy I/F Force Grid 653 Z axis	923.051	0.250	LG7525	935.414	0.272	LG7523	12.364	1.339
28	FSE/ORU Assy I/F Force Grid 654 Z axis	478.543	0.258	LG7523	518.606	0.395	LG7525	40.063	8.372
29	FSE/ORU Assy I/F Force Grid 655 X axis	1417.077	1.017	LG7525	1716.735	0.396	LG7525	299.658	21.146
30	FSE/ORU Assy I/F Force Grid 655 Z axis	652.047	1.112	LG7523	888.399	0.252	LG7523	236.353	36.248
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1735.805	0.922	LG7525	2864.275	0.930	LG7525	1128.470	65.011
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	883.753	0.287	LG7526	1225.243	0.260	LG7523	341.490	38.641
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	364.324	0.268	LG7525	476.995	0.459	LG7525	112.670	30.926
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	546.266	0.306	LG7523	698.411	0.978	LG7525	152.145	27.852
35	FSE/ORU Assy Net Load Factor, X axis	2.641	1.017	LG7525	3.199	0.396	LG7525	0.558	21.146
36	FSE/ORU Assy Net Load Factor, Y axis	5.417	0.260	LG7523	5.974	0.259	LG7523	0.556	10.265
37	FSE/ORU Assy Net Load Factor, Z axis	2.656	0.159	LG7523	2.852	0.161	LG7525	0.196	7.375
38	FSE/ORU Assy Net Load Factor, RX axis	19.080	0.243	LG7523	58.198	0.385	LG7525	39.118	205.024
39	FSE/ORU Assy Net Load Factor, RY axis	25.180	0.285	LG7524	55.769	0.260	LG7523	30.589	121.482
40	FSE/ORU Assy Net Load Factor, RZ axis	15.449	0.097	LG7526	74.584	1.022	LG7525	59.135	382.778

Table C-3. Battery 2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.635	1.066	LG7525	3.501	1.026	LG7525	0.867	32.895
2	Net Load Factor - T2 (g)	5.378	0.256	LG7525	5.547	0.267	LG7523	0.169	3.141
3	Net Load Factor - T3 (g)	3.102	0.164	LG7521	3.248	0.155	LG7525	0.146	4.723
4	Net Load Factor - R1 (rad/sec^2)	26.357	0.196	LG7521	71.405	0.393	LG7522	45.048	170.912
5	Net Load Factor - R2 (rad/sec^2)	14.023	0.190	LG7523	53.186	0.931	LG7525	39.162	279.264
6	Net Load Factor - R3 (rad/sec^2)	12.327	0.182	LG7524	86.885	1.068	LG7525	74.558	604.830
7	GRID 653 - T2 (lbf)	1896.898	0.256	LG7523	3235.222	1.115	LG7523	1338.323	70.553
8	GRID 653 - T3 (lbf)	793.148	0.255	LG7525	1035.438	0.213	LG7524	242.290	30.548
9	GRID 654 - T3 (lbf)	486.215	0.255	LG7523	566.998	1.067	LG7523	80.783	16.615
10	GRID 655 - T1 (lbf)	1413.692	1.066	LG7525	1878.732	1.026	LG7525	465.040	32.895
11	GRID 655 - T3 (lbf)	693.895	1.018	LG7523	753.595	0.929	LG7523	59.700	8.604
12	GRID 2183 - T2 (lbf)	1861.526	0.256	LG7525	3500.341	0.927	LG7525	1638.816	88.036
13	GRID 2183 - T3 (lbf)	821.727	0.257	LG7523	926.406	0.214	LG7526	104.679	12.739
14	GRID 2184 - T3 (lbf)	476.041	0.257	LG7525	487.161	1.068	LG7525	11.120	2.336
15	GRID 2185 - T3 (lbf)	641.232	0.308	LG7523	797.991	0.306	LG7523	156.759	24.446
16	Net Inertial Acc - T1 (in/sec^2)	1017.213	1.066	LG7525	1351.829	1.026	LG7525	334.616	32.895
17	Net Inertial Acc - T2 (in/sec^2)	2076.357	0.256	LG7525	2141.576	0.267	LG7523	65.219	3.141
18	Net Inertial Acc - T3 (in/sec^2)	1197.549	0.164	LG7521	1254.108	0.155	LG7525	56.559	4.723
19	Net Inertial Acc - R1 (rad/sec^2)	26.357	0.196	LG7521	71.405	0.393	LG7522	45.048	170.912
20	Net Inertial Acc - R2 (rad/sec^2)	14.023	0.190	LG7523	53.186	0.931	LG7525	39.162	279.264
21	Net Inertial Acc - R3 (rad/sec^2)	12.327	0.182	LG7524	86.885	1.068	LG7525	74.558	604.830

Table C-4. Battery 2 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	2.560	1.067	LG7525	4.514	0.922	LG7525	1.954	76.310
2	FSE Net Load Factor, Y axis	5.487	0.260	LG7525	6.494	0.270	LG7523	1.007	18.359
3	FSE Net Load Factor, Z axis	3.351	0.153	LG7523	4.073	0.199	LG7523	0.722	21.553
4	FSE Net Load Factor, RX axis	29.122	0.199	LG7521	69.541	1.110	LG7523	40.419	138.792
5	FSE Net Load Factor, RY axis	21.045	0.789	LG7523	73.800	1.332	LG7525	52.756	250.686
6	FSE Net Load Factor, RZ axis	21.269	0.274	LG7523	154.436	1.070	LG7523	133.167	626.118
7	ORU I/F Force Grid 990 Z axis	172.747	0.924	LG7525	244.111	1.063	LG7523	71.363	41.311
8	ORU I/F Force Grid 991 Z axis	167.215	1.066	LG7525	232.365	0.875	LG7525	65.150	38.962
9	ORU I/F Force Grid 9998 X axis	498.081	1.019	LG7525	1163.033	1.025	LG7525	664.952	133.503
10	ORU I/F Force Grid 9998 Z axis	729.619	0.165	LG7521	830.945	0.169	LG7525	101.326	13.888
11	ORU I/F Moment Grid 9998 RX axis	124.767	0.304	LG7523	294.052	0.194	LG7525	169.285	135.682
12	ORU I/F Moment Grid 9998 RY axis	1523.488	1.018	LG7525	2415.357	0.917	LG7525	891.870	58.541
13	ORU I/F Moment Grid 9998 RZ axis	114.195	0.926	LG7525	572.703	1.020	LG7525	458.508	401.514
14	ORU I/F Force Grid 9999 X axis	477.334	1.066	LG7525	1269.389	1.020	LG7525	792.055	165.933
15	ORU I/F Force Grid 9999 Y axis	2031.502	0.255	LG7525	2098.403	0.254	LG7521	66.901	3.293
16	ORU I/F Force Grid 9999 Z axis	516.410	0.215	LG7522	633.267	0.214	LG7524	116.858	22.629
17	ORU I/F Moment Grid 9999 RX axis	1058.243	0.255	LG7525	939.329	0.255	LG7525	-118.914	-11.237
18	ORU I/F Moment Grid 9999 RY axis	1512.998	1.066	LG7525	2548.886	1.065	LG7523	1035.888	68.466
19	ORU I/F Moment Grid 9999 RZ axis	154.609	0.313	LG7523	702.544	1.020	LG7525	547.935	354.400
20	ORU Net Load Factor, X axis	2.673	1.066	LG7525	3.421	0.304	LG7523	0.748	27.990
21	ORU Net Load Factor, Y axis	5.589	0.255	LG7525	5.773	0.254	LG7521	0.184	3.293
22	ORU Net Load Factor, Z axis	3.255	0.150	LG7523	3.196	0.151	LG7521	-0.059	-1.824
23	ORU Net Load Factor, RX axis	24.943	0.196	LG7521	79.141	0.393	LG7522	54.198	217.283
24	ORU Net Load Factor, RY axis	21.339	0.190	LG7523	87.345	0.929	LG7525	66.006	309.317
25	ORU Net Load Factor, RZ axis	15.320	0.212	LG7525	184.848	1.020	LG7525	169.527	1106.547
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1896.898	0.256	LG7523	3235.222	1.115	LG7523	1338.323	70.553
27	FSE/ORU Assy I/F Force Grid 653 Z axis	793.148	0.255	LG7525	1035.438	0.213	LG7524	242.290	30.548
28	FSE/ORU Assy I/F Force Grid 654 Z axis	486.215	0.255	LG7523	566.998	1.067	LG7523	80.783	16.615
29	FSE/ORU Assy I/F Force Grid 655 X axis	1413.692	1.066	LG7525	1878.732	1.026	LG7525	465.040	32.895
30	FSE/ORU Assy I/F Force Grid 655 Z axis	693.895	1.018	LG7523	753.595	0.929	LG7523	59.700	8.604
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1861.526	0.256	LG7525	3500.341	0.927	LG7525	1638.816	88.036
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	821.727	0.257	LG7523	926.406	0.214	LG7526	104.679	12.739
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	476.041	0.257	LG7525	487.161	1.068	LG7525	11.120	2.336
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	641.232	0.308	LG7523	797.991	0.306	LG7523	156.759	24.446
35	FSE/ORU Assy Net Load Factor, X axis	2.635	1.066	LG7525	3.501	1.026	LG7525	0.867	32.895
36	FSE/ORU Assy Net Load Factor, Y axis	5.378	0.256	LG7525	5.547	0.267	LG7523	0.169	3.141
37	FSE/ORU Assy Net Load Factor, Z axis	3.102	0.164	LG7521	3.248	0.155	LG7525	0.146	4.723
38	FSE/ORU Assy Net Load Factor, RX axis	26.357	0.196	LG7521	71.405	0.393	LG7522	45.048	170.912
39	FSE/ORU Assy Net Load Factor, RY axis	14.023	0.190	LG7523	53.186	0.931	LG7525	39.162	279.264
40	FSE/ORU Assy Net Load Factor, RZ axis	12.327	0.182	LG7524	86.885	1.068	LG7525	74.558	604.830

Table C-5. Battery 3 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.878	1.063	LG7523	3.566	1.067	LG7523	0.688	23.907
2	Net Load Factor - T2 (g)	5.204	0.260	LG7525	5.436	0.257	LG7525	0.232	4.459
3	Net Load Factor - T3 (g)	2.711	0.159	LG7525	2.730	0.163	LG7525	0.020	0.728
4	Net Load Factor - R1 (rad/sec^2)	19.197	0.190	LG7525	66.845	1.107	LG7525	47.648	248.202
5	Net Load Factor - R2 (rad/sec^2)	24.727	0.250	LG7524	58.598	0.200	LG7521	33.870	136.976
6	Net Load Factor - R3 (rad/sec^2)	14.504	0.364	LG7525	96.025	1.020	LG7525	81.521	562.064
7	GRID 653 - T2 (lbf)	1750.934	1.016	LG7523	3337.606	1.065	LG7523	1586.672	90.619
8	GRID 653 - T3 (lbf)	896.690	0.197	LG7523	1250.128	0.200	LG7521	353.438	39.416
9	GRID 654 - T3 (lbf)	428.479	0.253	LG7523	575.024	1.066	LG7523	146.545	34.201
10	GRID 655 - T1 (lbf)	1544.042	1.063	LG7523	1913.177	1.067	LG7523	369.135	23.907
11	GRID 655 - T3 (lbf)	630.874	1.016	LG7523	814.229	0.341	LG7523	183.355	29.064
12	GRID 2183 - T2 (lbf)	2015.177	0.257	LG7525	3259.910	0.928	LG7525	1244.733	61.768
13	GRID 2183 - T3 (lbf)	989.458	0.252	LG7523	926.376	0.264	LG7523	-63.082	-6.375
14	GRID 2184 - T3 (lbf)	466.662	0.258	LG7525	526.511	1.066	LG7523	59.849	12.825
15	GRID 2185 - T3 (lbf)	639.689	0.262	LG7525	882.397	0.264	LG7525	242.708	37.942
16	Net Inertial Acc - T1 (in/sec^2)	1111.005	1.063	LG7523	1376.614	1.067	LG7523	265.609	23.907
17	Net Inertial Acc - T2 (in/sec^2)	2009.091	0.260	LG7525	2098.668	0.257	LG7525	89.577	4.459
18	Net Inertial Acc - T3 (in/sec^2)	1046.500	0.159	LG7525	1054.120	0.163	LG7525	7.620	0.728
19	Net Inertial Acc - R1 (rad/sec^2)	19.197	0.190	LG7525	66.845	1.107	LG7525	47.648	248.202
20	Net Inertial Acc - R2 (rad/sec^2)	24.727	0.250	LG7524	58.598	0.200	LG7521	33.870	136.976
21	Net Inertial Acc - R3 (rad/sec^2)	14.504	0.364	LG7525	96.025	1.020	LG7525	81.521	562.064

Table C-6. Battery 3 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	2.752	1.066	LG7523	4.948	1.121	LG7525	2.197	79.831
2	FSE Net Load Factor, Y axis	5.353	0.263	LG7525	5.891	0.272	LG7525	0.538	10.054
3	FSE Net Load Factor, Z axis	2.711	0.161	LG7525	3.929	1.080	LG7525	1.218	44.938
4	FSE Net Load Factor, RX axis	26.829	0.193	LG7523	70.802	0.392	LG7524	43.973	163.905
5	FSE Net Load Factor, RY axis	26.165	0.232	LG7525	77.531	0.396	LG7525	51.366	196.315
6	FSE Net Load Factor, RZ axis	21.385	0.181	LG7523	167.355	1.023	LG7525	145.970	682.568
7	ORU I/F Force Grid 990 Z axis	208.615	0.195	LG7523	309.866	0.197	LG7521	101.251	48.535
8	ORU I/F Force Grid 991 Z axis	221.351	0.247	LG7523	320.126	1.064	LG7523	98.775	44.623
9	ORU I/F Force Grid 9998 X axis	538.566	1.063	LG7523	1164.143	0.402	LG7523	625.577	116.156
10	ORU I/F Force Grid 9998 Z axis	589.634	0.158	LG7523	663.011	0.263	LG7525	73.377	12.444
11	ORU I/F Moment Grid 9998 RX axis	144.288	1.111	LG7523	279.892	1.176	LG7525	135.604	93.982
12	ORU I/F Moment Grid 9998 RY axis	2273.751	0.261	LG7524	3037.295	0.402	LG7523	763.544	33.581
13	ORU I/F Moment Grid 9998 RZ axis	325.483	0.245	LG7523	437.954	0.242	LG7523	112.471	34.555
14	ORU I/F Force Grid 9999 X axis	540.130	1.015	LG7523	1266.348	1.062	LG7523	726.217	134.452
15	ORU I/F Force Grid 9999 Y axis	1953.237	0.258	LG7525	2099.215	0.257	LG7525	145.978	7.474
16	ORU I/F Force Grid 9999 Z axis	437.865	0.218	LG7522	638.160	0.214	LG7526	200.296	45.744
17	ORU I/F Moment Grid 9999 RX axis	988.425	0.258	LG7525	902.683	0.257	LG7525	-85.742	-8.675
18	ORU I/F Moment Grid 9999 RY axis	1848.655	1.061	LG7523	3153.458	1.062	LG7523	1304.803	70.581
19	ORU I/F Moment Grid 9999 RZ axis	379.748	0.230	LG7523	598.055	1.114	LG7525	218.307	57.487
20	ORU Net Load Factor, X axis	2.949	1.063	LG7523	4.283	1.067	LG7523	1.334	45.244
21	ORU Net Load Factor, Y axis	5.374	0.258	LG7525	5.776	0.257	LG7525	0.402	7.474
22	ORU Net Load Factor, Z axis	2.925	0.158	LG7525	2.897	0.162	LG7523	-0.028	-0.941
23	ORU Net Load Factor, RX axis	18.393	0.157	LG7521	71.730	1.107	LG7525	53.337	289.989
24	ORU Net Load Factor, RY axis	32.134	0.249	LG7524	85.612	0.506	LG7525	53.478	166.423
25	ORU Net Load Factor, RZ axis	18.207	0.213	LG7523	150.741	1.062	LG7523	132.534	727.926
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1750.934	1.016	LG7523	3337.606	1.065	LG7523	1586.672	90.619
27	FSE/ORU Assy I/F Force Grid 653 Z axis	896.690	0.197	LG7523	1250.128	0.200	LG7521	353.438	39.416
28	FSE/ORU Assy I/F Force Grid 654 Z axis	428.479	0.253	LG7523	575.024	1.066	LG7523	146.545	34.201
29	FSE/ORU Assy I/F Force Grid 655 X axis	1544.042	1.063	LG7523	1913.177	1.067	LG7523	369.135	23.907
30	FSE/ORU Assy I/F Force Grid 655 Z axis	630.874	1.016	LG7523	814.229	0.341	LG7523	183.355	29.064
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	2015.177	0.257	LG7525	3259.910	0.928	LG7525	1244.733	61.768
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	989.458	0.252	LG7523	926.376	0.264	LG7523	-63.082	-6.375
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	466.662	0.258	LG7525	526.511	1.066	LG7523	59.849	12.825
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	639.689	0.262	LG7525	882.397	0.264	LG7525	242.708	37.942
35	FSE/ORU Assy Net Load Factor, X axis	2.878	1.063	LG7523	3.565	1.067	LG7523	0.688	23.907
36	FSE/ORU Assy Net Load Factor, Y axis	5.204	0.260	LG7525	5.436	0.257	LG7525	0.232	4.459
37	FSE/ORU Assy Net Load Factor, Z axis	2.710	0.159	LG7525	2.730	0.163	LG7525	0.020	0.728
38	FSE/ORU Assy Net Load Factor, RX axis	19.197	0.190	LG7525	66.845	1.107	LG7525	47.648	248.202
39	FSE/ORU Assy Net Load Factor, RY axis	24.727	0.250	LG7524	58.598	0.200	LG7521	33.870	136.976
40	FSE/ORU Assy Net Load Factor, RZ axis	14.504	0.364	LG7525	96.025	1.020	LG7525	81.521	562.064

Table C-7. Battery 4 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.281	1.113	LG7523	2.911	0.300	LG7523	0.630	27.607
2	Net Load Factor - T2 (g)	5.318	0.260	LG7523	5.992	0.260	LG7523	0.674	12.681
3	Net Load Factor - T3 (g)	1.313	0.178	LG7525	2.059	0.539	LG7526	0.746	56.796
4	Net Load Factor - R1 (rad/sec^2)	22.101	0.232	LG7523	59.187	0.401	LG7524	37.086	167.799
5	Net Load Factor - R2 (rad/sec^2)	31.708	0.196	LG7524	49.454	0.923	LG7525	17.746	55.966
6	Net Load Factor - R3 (rad/sec^2)	20.249	0.172	LG7523	74.599	1.022	LG7525	54.350	268.410
7	GRID 653 - T2 (lbf)	2014.280	0.263	LG7523	2675.674	1.068	LG7523	661.394	32.835
8	GRID 653 - T3 (lbf)	839.469	0.195	LG7523	856.703	0.306	LG7523	17.234	2.053
9	GRID 654 - T3 (lbf)	497.476	0.261	LG7523	429.422	1.113	LG7523	-68.055	-13.680
10	GRID 655 - T1 (lbf)	1224.019	1.113	LG7523	1561.931	0.300	LG7523	337.911	27.607
11	GRID 655 - T3 (lbf)	480.733	0.399	LG7525	770.700	0.274	LG7524	289.967	60.318
12	GRID 2183 - T2 (lbf)	1833.480	0.254	LG7525	2859.022	0.303	LG7523	1025.542	55.934
13	GRID 2183 - T3 (lbf)	858.310	0.268	LG7525	1087.706	0.258	LG7523	229.396	26.726
14	GRID 2184 - T3 (lbf)	630.570	0.254	LG7525	464.931	1.118	LG7525	-165.640	-26.268
15	GRID 2185 - T3 (lbf)	480.389	0.926	LG7525	638.779	0.246	LG7525	158.390	32.971
16	Net Inertial Acc - T1 (in/sec^2)	880.735	1.113	LG7523	1123.877	0.300	LG7523	243.142	27.607
17	Net Inertial Acc - T2 (in/sec^2)	2053.236	0.260	LG7523	2313.598	0.260	LG7523	260.362	12.681
18	Net Inertial Acc - T3 (in/sec^2)	507.077	0.178	LG7525	795.078	0.539	LG7526	288.001	56.796
19	Net Inertial Acc - R1 (rad/sec^2)	22.101	0.232	LG7523	59.187	0.401	LG7524	37.086	167.799
20	Net Inertial Acc - R2 (rad/sec^2)	31.708	0.196	LG7524	49.454	0.923	LG7525	17.746	55.966
21	Net Inertial Acc - R3 (rad/sec^2)	20.249	0.172	LG7523	74.599	1.022	LG7525	54.350	268.410

Table C-8. Battery 4 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	2.292	1.115	LG7523	3.834	0.204	LG7523	1.543	67.312
2	FSE Net Load Factor, Y axis	5.712	0.263	LG7523	6.739	0.266	LG7523	1.027	17.975
3	FSE Net Load Factor, Z axis	1.351	0.136	LG7524	3.446	1.088	LG7523	2.095	155.117
4	FSE Net Load Factor, RX axis	26.660	0.361	LG7525	76.657	0.589	LG7523	49.996	187.531
5	FSE Net Load Factor, RY axis	33.403	0.330	LG7523	85.730	1.090	LG7523	52.327	156.654
6	FSE Net Load Factor, RZ axis	27.496	0.167	LG7525	117.082	1.070	LG7523	89.586	325.818
7	ORU I/F Force Grid 990 Z axis	191.186	0.195	LG7523	282.491	0.304	LG7523	91.305	47.757
8	ORU I/F Force Grid 991 Z axis	183.080	0.205	LG7525	248.397	0.348	LG7523	65.317	35.677
9	ORU I/F Force Grid 9998 X axis	429.764	1.114	LG7523	887.479	1.071	LG7523	457.715	106.504
10	ORU I/F Force Grid 9998 Z axis	493.709	0.255	LG7525	621.599	0.962	LG7525	127.890	25.904
11	ORU I/F Moment Grid 9998 RX axis	166.332	0.309	LG7525	348.398	0.470	LG7523	182.065	109.459
12	ORU I/F Moment Grid 9998 RY axis	1855.193	0.157	LG7523	2499.633	0.306	LG7523	644.440	34.737
13	ORU I/F Moment Grid 9998 RZ axis	180.828	0.162	LG7525	423.393	0.465	LG7525	242.565	134.142
14	ORU I/F Force Grid 9999 X axis	433.452	1.109	LG7523	1065.673	0.301	LG7523	632.221	145.857
15	ORU I/F Force Grid 9999 Y axis	2013.341	0.254	LG7525	2222.344	0.258	LG7523	209.003	10.381
16	ORU I/F Force Grid 9999 Z axis	386.058	0.259	LG7523	527.243	0.183	LG7523	141.185	36.571
17	ORU I/F Moment Grid 9999 RX axis	1174.483	0.254	LG7525	1066.470	0.257	LG7525	-108.013	-9.197
18	ORU I/F Moment Grid 9999 RY axis	1420.294	1.109	LG7523	2392.663	0.301	LG7523	972.369	68.462
19	ORU I/F Moment Grid 9999 RZ axis	281.869	0.162	LG7523	531.814	0.301	LG7523	249.944	88.674
20	ORU Net Load Factor, X axis	2.296	1.113	LG7523	3.011	1.069	LG7523	0.715	31.116
21	ORU Net Load Factor, Y axis	5.539	0.254	LG7525	6.114	0.258	LG7523	0.575	10.381
22	ORU Net Load Factor, Z axis	1.456	0.178	LG7523	2.410	0.454	LG7525	0.954	65.553
23	ORU Net Load Factor, RX axis	22.820	0.209	LG7526	68.901	0.401	LG7524	46.081	201.933
24	ORU Net Load Factor, RY axis	41.152	0.205	LG7524	73.767	1.170	LG7525	32.616	79.257
25	ORU Net Load Factor, RZ axis	28.018	0.171	LG7523	137.961	1.065	LG7523	109.943	392.396
26	FSE/ORU Assy I/F Force Grid 653 Y axis	2014.280	0.263	LG7523	2675.674	1.068	LG7523	661.394	32.835
27	FSE/ORU Assy I/F Force Grid 653 Z axis	839.469	0.195	LG7523	856.703	0.306	LG7523	17.234	2.053
28	FSE/ORU Assy I/F Force Grid 654 Z axis	497.476	0.261	LG7523	429.422	1.113	LG7523	-68.055	-13.680
29	FSE/ORU Assy I/F Force Grid 655 X axis	1224.019	1.113	LG7523	1561.931	0.300	LG7523	337.911	27.607
30	FSE/ORU Assy I/F Force Grid 655 Z axis	480.733	0.399	LG7525	770.700	0.274	LG7524	289.967	60.318
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1833.480	0.254	LG7525	2859.022	0.303	LG7523	1025.542	55.934
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	858.310	0.268	LG7525	1087.706	0.258	LG7523	229.396	26.726
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	630.570	0.254	LG7525	464.931	1.118	LG7525	-165.640	-26.268
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	480.389	0.926	LG7525	638.779	0.246	LG7525	158.390	32.971
35	FSE/ORU Assy Net Load Factor, X axis	2.281	1.113	LG7523	2.911	0.300	LG7523	0.630	27.607
36	FSE/ORU Assy Net Load Factor, Y axis	5.318	0.260	LG7523	5.992	0.260	LG7523	0.674	12.681
37	FSE/ORU Assy Net Load Factor, Z axis	1.313	0.178	LG7525	2.059	0.539	LG7526	0.746	56.796
38	FSE/ORU Assy Net Load Factor, RX axis	22.101	0.232	LG7523	59.187	0.401	LG7524	37.086	167.799
39	FSE/ORU Assy Net Load Factor, RY axis	31.708	0.196	LG7524	49.454	0.923	LG7525	17.746	55.966
40	FSE/ORU Assy Net Load Factor, RZ axis	20.249	0.172	LG7523	74.599	1.022	LG7525	54.350	268.410

Table C-9. Battery 5 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.254	0.921	LG7525	3.257	0.408	LG7523	1.003	44.474
2	Net Load Factor - T2 (g)	5.369	0.256	LG7523	5.834	0.257	LG7523	0.465	8.656
3	Net Load Factor - T3 (g)	1.720	0.169	LG7523	2.165	0.417	LG7526	0.445	25.865
4	Net Load Factor - R1 (rad/sec^2)	23.024	0.201	LG7523	57.065	0.416	LG7522	34.042	147.855
5	Net Load Factor - R2 (rad/sec^2)	17.186	0.212	LG7523	50.287	0.262	LG7525	33.101	192.601
6	Net Load Factor - R3 (rad/sec^2)	14.067	0.132	LG7526	76.149	1.066	LG7523	62.082	441.326
7	GRID 653 - T2 (lbf)	1874.156	0.260	LG7523	2924.140	1.068	LG7523	1049.984	56.024
8	GRID 653 - T3 (lbf)	713.827	0.260	LG7525	954.331	0.257	LG7523	240.504	33.692
9	GRID 654 - T3 (lbf)	462.084	0.258	LG7523	456.296	1.068	LG7525	-5.788	-1.253
10	GRID 655 - T1 (lbf)	1209.680	0.921	LG7525	1747.678	0.408	LG7523	537.997	44.474
11	GRID 655 - T3 (lbf)	527.015	1.111	LG7523	773.063	0.917	LG7523	246.048	46.687
12	GRID 2183 - T2 (lbf)	1714.238	0.257	LG7525	2891.803	0.927	LG7525	1177.565	68.693
13	GRID 2183 - T3 (lbf)	823.291	0.256	LG7523	967.849	0.213	LG7526	144.559	17.559
14	GRID 2184 - T3 (lbf)	453.328	0.258	LG7525	486.585	1.066	LG7523	33.256	7.336
15	GRID 2185 - T3 (lbf)	535.882	0.922	LG7525	816.167	0.254	LG7525	280.285	52.304
16	Net Inertial Acc - T1 (in/sec^2)	870.418	0.921	LG7525	1257.530	0.408	LG7523	387.112	44.474
17	Net Inertial Acc - T2 (in/sec^2)	2073.007	0.256	LG7523	2252.447	0.257	LG7523	179.440	8.656
18	Net Inertial Acc - T3 (in/sec^2)	664.036	0.169	LG7523	835.789	0.417	LG7526	171.753	25.865
19	Net Inertial Acc - R1 (rad/sec^2)	23.024	0.201	LG7523	57.065	0.416	LG7522	34.042	147.855
20	Net Inertial Acc - R2 (rad/sec^2)	17.186	0.212	LG7523	50.287	0.262	LG7525	33.101	192.601
21	Net Inertial Acc - R3 (rad/sec^2)	14.067	0.132	LG7526	76.149	1.066	LG7523	62.082	441.326

Table C-10. Battery 5 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	2.267	0.924	LG7525	4.049	1.156	LG7523	1.782	78.606
2	FSE Net Load Factor, Y axis	5.470	0.259	LG7523	6.236	0.258	LG7523	0.766	13.999
3	FSE Net Load Factor, Z axis	1.775	0.172	LG7523	3.433	0.393	LG7522	1.657	93.343
4	FSE Net Load Factor, RX axis	25.850	0.191	LG7523	73.401	0.417	LG7522	47.551	183.952
5	FSE Net Load Factor, RY axis	21.320	1.288	LE7520	81.261	1.122	LG7525	59.941	281.143
6	FSE Net Load Factor, RZ axis	22.941	0.237	LG7523	130.460	1.071	LG7525	107.519	468.677
7	ORU I/F Force Grid 990 Z axis	156.044	0.199	LG7523	241.868	0.409	LG7523	85.824	55.000
8	ORU I/F Force Grid 991 Z axis	157.437	1.160	LG7525	271.987	1.064	LG7525	114.550	72.759
9	ORU I/F Force Grid 9998 X axis	418.060	1.069	LG7525	832.271	0.410	LG7525	414.211	99.079
10	ORU I/F Force Grid 9998 Z axis	523.646	0.261	LG7525	730.404	0.416	LG7526	206.758	39.484
11	ORU I/F Moment Grid 9998 RX axis	141.198	1.015	LG7523	292.680	0.352	LG7524	151.483	107.284
12	ORU I/F Moment Grid 9998 RY axis	1154.650	1.160	LG7525	1745.928	1.134	LG7525	591.278	51.208
13	ORU I/F Moment Grid 9998 RZ axis	99.303	1.160	LG7525	429.184	1.065	LG7525	329.881	332.197
14	ORU I/F Force Grid 9999 X axis	438.827	1.012	LG7525	1288.668	1.065	LG7525	849.842	193.662
15	ORU I/F Force Grid 9999 Y axis	2021.205	0.255	LG7523	2268.119	0.255	LG7523	246.914	12.216
16	ORU I/F Force Grid 9999 Z axis	445.082	0.168	LG7523	509.109	0.337	LG7525	64.027	14.385
17	ORU I/F Moment Grid 9999 RX axis	1013.783	0.256	LG7525	967.479	0.253	LG7525	-46.304	-4.567
18	ORU I/F Moment Grid 9999 RY axis	1326.241	1.109	LG7525	2912.014	1.065	LG7525	1585.773	119.569
19	ORU I/F Moment Grid 9999 RZ axis	124.605	1.060	LG7523	602.877	1.065	LG7525	478.272	383.830
20	ORU Net Load Factor, X axis	2.296	0.920	LG7525	3.700	1.069	LG7525	1.404	61.170
21	ORU Net Load Factor, Y axis	5.561	0.255	LG7523	6.240	0.255	LG7523	0.679	12.216
22	ORU Net Load Factor, Z axis	1.931	0.168	LG7523	3.035	0.416	LG7526	1.104	57.149
23	ORU Net Load Factor, RX axis	25.677	0.201	LG7523	65.991	0.417	LG7522	40.315	157.010
24	ORU Net Load Factor, RY axis	25.811	0.199	LG7523	76.522	0.260	LG7525	50.711	196.469
25	ORU Net Load Factor, RZ axis	17.754	0.167	LG7526	155.308	1.065	LG7525	137.554	774.776
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1874.156	0.260	LG7523	2924.140	1.068	LG7523	1049.984	56.024
27	FSE/ORU Assy I/F Force Grid 653 Z axis	713.827	0.260	LG7525	954.331	0.257	LG7523	240.504	33.692
28	FSE/ORU Assy I/F Force Grid 654 Z axis	462.084	0.258	LG7523	456.296	1.068	LG7525	-5.788	-1.253
29	FSE/ORU Assy I/F Force Grid 655 X axis	1209.680	0.921	LG7525	1747.678	0.408	LG7523	537.997	44.474
30	FSE/ORU Assy I/F Force Grid 655 Z axis	527.015	1.111	LG7523	773.063	0.917	LG7523	246.048	46.687
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1714.238	0.257	LG7525	2891.803	0.927	LG7525	1177.565	68.693
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	823.291	0.256	LG7523	967.849	0.213	LG7526	144.559	17.559
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	453.328	0.258	LG7525	486.585	1.066	LG7523	33.256	7.336
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	535.882	0.922	LG7525	816.167	0.254	LG7525	280.285	52.304
35	FSE/ORU Assy Net Load Factor, X axis	2.254	0.921	LG7525	3.257	0.408	LG7523	1.003	44.474
36	FSE/ORU Assy Net Load Factor, Y axis	5.369	0.256	LG7523	5.834	0.257	LG7523	0.465	8.656
37	FSE/ORU Assy Net Load Factor, Z axis	1.720	0.169	LG7523	2.165	0.417	LG7526	0.445	25.865
38	FSE/ORU Assy Net Load Factor, RX axis	23.024	0.201	LG7523	57.065	0.416	LG7522	34.042	147.855
39	FSE/ORU Assy Net Load Factor, RY axis	17.186	0.212	LG7523	50.287	0.262	LG7525	33.101	192.601
40	FSE/ORU Assy Net Load Factor, RZ axis	14.067	0.132	LG7526	76.149	1.066	LG7523	62.082	441.326

Table C-11. Battery 6 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.424	0.923	LG7525	2.921	0.978	LG7525	0.497	20.479
2	Net Load Factor - T2 (g)	5.143	0.259	LG7525	5.624	0.262	LG7525	0.481	9.351
3	Net Load Factor - T3 (g)	1.401	0.193	LG7523	2.036	0.373	LG7525	0.635	45.348
4	Net Load Factor - R1 (rad/sec^2)	19.061	0.155	LG7523	64.548	1.071	LG7525	45.487	238.637
5	Net Load Factor - R2 (rad/sec^2)	27.061	0.195	LG7526	50.232	1.029	LG7525	23.171	85.623
6	Net Load Factor - R3 (rad/sec^2)	17.425	0.215	LG7524	67.342	1.069	LG7525	49.917	286.476
7	GRID 653 - T2 (lbf)	1837.531	0.257	LG7523	2798.463	1.070	LG7525	960.932	52.295
8	GRID 653 - T3 (lbf)	833.100	0.253	LG7523	1021.356	0.261	LG7525	188.256	22.597
9	GRID 654 - T3 (lbf)	594.767	0.254	LG7523	539.485	1.070	LG7525	-55.283	-9.295
10	GRID 655 - T1 (lbf)	1300.922	0.923	LG7525	1567.341	0.978	LG7525	266.419	20.479
11	GRID 655 - T3 (lbf)	504.223	0.923	LG7523	629.813	1.158	LG7525	125.590	24.908
12	GRID 2183 - T2 (lbf)	1929.359	0.214	LG7524	2690.286	0.397	LG7523	760.927	39.439
13	GRID 2183 - T3 (lbf)	681.500	0.196	LG7525	892.890	1.109	LG7523	211.391	31.018
14	GRID 2184 - T3 (lbf)	450.001	0.260	LG7525	437.163	0.261	LG7525	-12.838	-2.853
15	GRID 2185 - T3 (lbf)	499.712	0.924	LG7525	816.267	1.172	LG7525	316.555	63.347
16	Net Inertial Acc - T1 (in/sec^2)	936.070	0.923	LG7525	1127.770	0.978	LG7525	191.700	20.479
17	Net Inertial Acc - T2 (in/sec^2)	1985.675	0.259	LG7525	2171.363	0.262	LG7525	185.688	9.351
18	Net Inertial Acc - T3 (in/sec^2)	540.862	0.193	LG7523	786.135	0.373	LG7525	245.272	45.348
19	Net Inertial Acc - R1 (rad/sec^2)	19.061	0.155	LG7523	64.548	1.071	LG7525	45.487	238.637
20	Net Inertial Acc - R2 (rad/sec^2)	27.061	0.195	LG7526	50.232	1.029	LG7525	23.171	85.623
21	Net Inertial Acc - R3 (rad/sec^2)	17.425	0.215	LG7524	67.342	1.069	LG7525	49.917	286.476

Table C-12. Battery 6 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	2.342	0.926	LG7525	4.348	0.399	LG7523	2.006	85.617
2	FSE Net Load Factor, Y axis	5.456	0.263	LG7525	6.414	0.266	LG7525	0.957	17.548
3	FSE Net Load Factor, Z axis	1.370	0.328	LG7523	3.151	0.189	LG7521	1.781	130.044
4	FSE Net Load Factor, RX axis	21.997	0.199	LG7523	73.996	0.419	LG7522	51.999	236.397
5	FSE Net Load Factor, RY axis	27.161	0.198	LG7526	70.446	0.408	LG7523	43.285	159.362
6	FSE Net Load Factor, RZ axis	28.114	0.182	LG7524	117.491	1.072	LG7525	89.376	317.901
7	ORU I/F Force Grid 990 Z axis	183.033	0.339	LG7525	278.250	1.027	LG7525	95.217	52.022
8	ORU I/F Force Grid 991 Z axis	176.838	0.194	LG7526	304.342	0.978	LG7523	127.503	72.102
9	ORU I/F Force Grid 9998 X axis	432.967	1.067	LG7525	880.252	1.073	LG7525	447.285	103.307
10	ORU I/F Force Grid 9998 Z axis	474.826	0.255	LG7525	620.082	0.428	LG7526	145.256	30.591
11	ORU I/F Moment Grid 9998 RX axis	150.736	0.309	LG7525	267.163	1.123	LG7523	116.428	77.240
12	ORU I/F Moment Grid 9998 RY axis	1932.095	0.160	LG7525	2192.985	1.021	LG7523	260.889	13.503
13	ORU I/F Moment Grid 9998 RZ axis	152.068	0.313	LG7523	389.685	0.161	LG7525	237.617	156.257
14	ORU I/F Force Grid 9999 X axis	491.727	0.923	LG7525	1050.174	0.926	LG7525	558.447	113.568
15	ORU I/F Force Grid 9999 Y axis	1923.716	0.257	LG7525	2218.602	0.260	LG7525	294.886	15.329
16	ORU I/F Force Grid 9999 Z axis	371.759	0.331	LG7525	602.263	0.183	LG7525	230.504	62.003
17	ORU I/F Moment Grid 9999 RX axis	1069.805	0.253	LG7523	1065.759	0.260	LG7525	-4.046	-0.378
18	ORU I/F Moment Grid 9999 RY axis	1522.822	0.923	LG7525	2405.682	0.977	LG7523	882.860	57.975
19	ORU I/F Moment Grid 9999 RZ axis	260.287	0.158	LG7525	535.929	0.161	LG7525	275.642	105.899
20	ORU Net Load Factor, X axis	2.530	0.922	LG7525	3.232	1.170	LG7525	0.702	27.740
21	ORU Net Load Factor, Y axis	5.293	0.257	LG7525	6.104	0.260	LG7525	0.811	15.329
22	ORU Net Load Factor, Z axis	1.536	0.193	LG7523	2.505	0.189	LG7523	0.969	63.052
23	ORU Net Load Factor, RX axis	21.626	0.213	LG7524	74.252	1.071	LG7525	52.626	243.346
24	ORU Net Load Factor, RY axis	38.956	0.193	LG7526	82.039	1.035	LG7525	43.083	110.594
25	ORU Net Load Factor, RZ axis	22.993	0.239	LG7525	130.911	0.926	LG7525	107.919	469.365
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1837.531	0.257	LG7523	2798.463	1.070	LG7525	960.932	52.295
27	FSE/ORU Assy I/F Force Grid 653 Z axis	833.100	0.253	LG7523	1021.356	0.261	LG7525	188.256	22.597
28	FSE/ORU Assy I/F Force Grid 654 Z axis	594.767	0.254	LG7523	539.485	1.070	LG7525	-55.283	-9.295
29	FSE/ORU Assy I/F Force Grid 655 X axis	1300.922	0.923	LG7525	1567.341	0.978	LG7525	266.419	20.479
30	FSE/ORU Assy I/F Force Grid 655 Z axis	504.223	0.923	LG7523	629.813	1.158	LG7525	125.590	24.908
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1929.359	0.214	LG7524	2690.286	0.397	LG7523	760.927	39.439
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	681.500	0.196	LG7525	892.890	1.109	LG7523	211.391	31.018
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	450.001	0.260	LG7525	437.163	0.261	LG7525	-12.838	-2.853
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	499.712	0.924	LG7525	816.267	1.172	LG7525	316.555	63.347
35	FSE/ORU Assy Net Load Factor, X axis	2.424	0.923	LG7525	2.921	0.978	LG7525	0.497	20.479
36	FSE/ORU Assy Net Load Factor, Y axis	5.143	0.259	LG7525	5.624	0.262	LG7525	0.481	9.351
37	FSE/ORU Assy Net Load Factor, Z axis	1.401	0.193	LG7523	2.036	0.373	LG7525	0.635	45.348
38	FSE/ORU Assy Net Load Factor, RX axis	19.061	0.155	LG7523	64.548	1.071	LG7525	45.487	238.637
39	FSE/ORU Assy Net Load Factor, RY axis	27.061	0.195	LG7526	50.232	1.029	LG7525	23.171	85.623
40	FSE/ORU Assy Net Load Factor, RZ axis	17.425	0.215	LG7524	67.342	1.069	LG7525	49.917	286.476

Table C-13. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	0.999	0.156	LG7523	1.126	0.144	LG7523	0.127	12.725
2	Net Load Factor - T2 (g)	2.340	1.063	LG7523	2.535	1.075	LG7523	0.196	8.359
3	Net Load Factor - T3 (g)	5.144	0.262	LG7525	5.240	0.262	LG7521	0.095	1.855
4	Net Load Factor - R1 (rad/sec^2)	3.664	0.167	LG7523	7.048	0.373	LG7523	3.384	92.346
5	Net Load Factor - R2 (rad/sec^2)	13.095	0.209	LG7522	14.781	0.249	LG7526	1.686	12.878
6	Net Load Factor - R3 (rad/sec^2)	1.818	0.649	LG7523	6.017	0.962	LG7525	4.198	230.906
7	GRID 1271 - T2 (lbf) [Orbiter IF]	13994.964	1.065	LG7525	9379.793	0.408	LG7525	-4615.171	-32.977
8	GRID 6299 - T1 (lbf) [Battery 4 IF]	480.389	0.926	LG7525	638.779	0.246	LG7525	158.390	32.971
9	GRID 13067 - T1 (lbf) [Battery 4 IF]	630.570	0.254	LG7525	464.931	1.118	LG7525	-165.640	-26.268
10	GRID 13083 - T1 (lbf) [Battery 4 IF]	497.476	0.261	LG7523	429.422	1.113	LG7523	-68.055	-13.680
11	GRID 13115 - T1 (lbf) [Battery 5 IF]	453.328	0.258	LG7525	486.585	1.066	LG7523	33.256	7.336
12	GRID 13545 - T1 (lbf) [Battery 4 IF]	480.733	0.399	LG7525	770.700	0.274	LG7524	289.967	60.318
13	GRID 13545 - T2 (lbf) [Battery 4 IF]	1224.019	1.113	LG7523	1561.931	0.300	LG7523	337.911	27.607
14	GRID 13576 - T1 (lbf) [Battery 5 IF]	535.882	0.922	LG7525	816.167	0.254	LG7525	280.285	52.304
15	GRID 16250 - T1 (lbf) [Battery 6 IF]	504.223	0.923	LG7523	629.813	1.158	LG7525	125.590	24.908
16	GRID 16250 - T2 (lbf) [Battery 6 IF]	1300.922	0.923	LG7525	1567.341	0.978	LG7525	266.419	20.479
17	GRID 23028 - T1 (lbf) [Battery 6 IF]	594.767	0.254	LG7523	539.485	1.070	LG7525	-55.283	-9.295
18	GRID 23044 - T1 (lbf) [Battery 6 IF]	450.001	0.260	LG7525	437.163	0.261	LG7525	-12.838	-2.853
19	GRID 23076 - T1 (lbf) [Battery 5 IF]	462.084	0.258	LG7523	456.296	1.068	LG7525	-5.788	-1.253
20	GRID 23506 - T1 (lbf) [Battery 6 IF]	499.712	0.924	LG7525	816.267	1.172	LG7525	316.555	63.347
21	GRID 23537 - T1 (lbf) [Battery 5 IF]	527.015	1.111	LG7523	773.063	0.917	LG7523	246.048	46.687
22	GRID 23537 - T2 (lbf) [Battery 5 IF]	1209.680	0.921	LG7525	1747.678	0.408	LG7523	537.997	44.474
23	GRID 37940 - T1 (lbf) [Battery 1 IF]	652.047	1.112	LG7523	888.399	0.252	LG7523	236.353	36.248
24	GRID 37940 - T2 (lbf) [Battery 1 IF]	1417.077	1.017	LG7525	1716.735	0.396	LG7525	299.658	21.146
25	GRID 38067 - T1 (lbf) [Battery 1 IF]	546.266	0.306	LG7523	698.411	0.978	LG7525	152.145	27.852
26	GRID 38323 - T1 (lbf) [Battery 2 IF]	693.895	1.018	LG7523	753.595	0.929	LG7523	59.700	8.604
27	GRID 38323 - T2 (lbf) [Battery 2 IF]	1413.692	1.066	LG7525	1878.732	1.026	LG7525	465.040	32.895
28	GRID 45767 - T1 (lbf) [Battery 3 IF]	639.689	0.262	LG7525	882.397	0.264	LG7525	242.708	37.942
29	GRID 45890 - T1 (lbf) [Battery 3 IF]	630.874	1.016	LG7523	814.229	0.341	LG7523	183.355	29.064
30	GRID 45890 - T2 (lbf) [Battery 3 IF]	1544.042	1.063	LG7523	1913.177	1.067	LG7523	369.135	23.907
31	GRID 46151 - T1 (lbf) [Battery 2 IF]	641.232	0.308	LG7523	797.991	0.306	LG7523	156.759	24.446
32	GRID 53578 - T1 (lbf) [Battery 4 IF]	858.310	0.268	LG7525	1087.706	0.258	LG7523	229.396	26.726
33	GRID 53578 - T3 (lbf) [Battery 4 IF]	1833.480	0.254	LG7525	2859.022	0.303	LG7523	1025.542	55.934
34	GRID 53701 - T1 (lbf) [Battery 4 IF]	839.469	0.195	LG7523	856.703	0.306	LG7523	17.234	2.053
35	GRID 53701 - T3 (lbf) [Battery 4 IF]	2014.280	0.263	LG7523	2675.674	1.068	LG7523	661.394	32.835
36	GRID 53956 - T1 (lbf) [Battery 5 IF]	823.291	0.256	LG7523	967.849	0.213	LG7526	144.559	17.559
37	GRID 53956 - T3 (lbf) [Battery 5 IF]	1714.238	0.257	LG7525	2891.803	0.927	LG7525	1177.565	68.693
38	GRID 61404 - T1 (lbf) [Battery 6 IF]	833.100	0.253	LG7523	1021.356	0.261	LG7525	188.256	22.597
39	GRID 61404 - T3 (lbf) [Battery 6 IF]	1837.531	0.257	LG7523	2798.463	1.070	LG7525	960.932	52.295
40	GRID 61527 - T1 (lbf) [Battery 6 IF]	681.500	0.196	LG7525	892.890	1.109	LG7523	211.391	31.018
41	GRID 61527 - T3 (lbf) [Battery 6 IF]	1929.359	0.214	LG7524	2690.286	0.397	LG7523	760.927	39.439
42	GRID 61788 - T1 (lbf) [Battery 5 IF]	713.827	0.260	LG7525	954.331	0.257	LG7523	240.504	33.692
43	GRID 61788 - T3 (lbf) [Battery 5 IF]	1874.156	0.260	LG7523	2924.140	1.068	LG7523	1049.984	56.024
44	GRID 62589 - T1 (lbf) [Battery 3 IF]	466.662	0.258	LG7525	526.511	1.066	LG7523	59.849	12.825
45	GRID 62774 - T1 (lbf) [Battery 3 IF]	428.479	0.253	LG7523	575.024	1.066	LG7523	146.545	34.201
46	GRID 63043 - T1 (lbf) [Battery 3 IF]	989.458	0.252	LG7523	926.376	0.264	LG7523	-63.082	-6.375
47	GRID 63043 - T3 (lbf) [Battery 3 IF]	2015.177	0.257	LG7525	3259.910	0.928	LG7525	1244.733	61.768
48	GRID 63343 - T1 (lbf) [Battery 3 IF]	896.690	0.197	LG7523	1250.128	0.200	LG7521	353.438	39.416
49	GRID 63343 - T3 (lbf) [Battery 3 IF]	1750.934	1.016	LG7523	3337.606	1.065	LG7523	1586.672	90.619
50	GRID 63345 - T1 (lbf) [Battery 2 IF]	476.041	0.257	LG7525	487.161	1.068	LG7525	11.120	2.336

Table C-13. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 - T1 (lbf) [Battery 2 IF]	486.215	0.255	LG7523	566.998	1.067	LG7523	80.783	16.615
52	GRID 63942 - T1 (lbf) [Battery 2 IF]	821.727	0.257	LG7523	926.406	0.214	LG7526	104.679	12.739
53	GRID 63942 - T3 (lbf) [Battery 2 IF]	1861.526	0.256	LG7525	3500.341	0.927	LG7525	1638.816	88.036
54	GRID 64244 - T1 (lbf) [Battery 2 IF]	793.148	0.255	LG7525	1035.438	0.213	LG7524	242.290	30.548
55	GRID 64244 - T3 (lbf) [Battery 2 IF]	1896.898	0.256	LG7523	3235.222	1.115	LG7523	1338.323	70.553
56	GRID 64246 - T1 (lbf) [Battery 1 IF]	364.324	0.268	LG7525	476.995	0.459	LG7525	112.670	30.926
57	GRID 64540 - T1 (lbf) [Battery 1 IF]	478.543	0.258	LG7523	518.606	0.395	LG7525	40.063	8.372
58	GRID 64814 - T1 (lbf) [Battery 1 IF]	883.753	0.287	LG7526	1225.243	0.260	LG7523	341.490	38.641
59	GRID 64814 - T3 (lbf) [Battery 1 IF]	1735.805	0.922	LG7525	2864.275	0.930	LG7525	1128.470	65.011
60	GRID 65003 - T1 (lbf) [Battery 1 IF]	923.051	0.250	LG7525	935.414	0.272	LG7523	12.364	1.339
61	GRID 65003 - T3 (lbf) [Battery 1 IF]	1995.431	0.258	LG7523	2843.720	1.113	LG7523	848.290	42.512
62	GRID 111869 - T3 (lbf) [Orbiter IF]	4578.436	0.257	LG7526	4802.637	0.260	LG7526	224.201	4.897
63	GRID 111885 - T1 (lbf) [Orbiter IF]	4234.732	0.159	LG7525	4637.589	0.157	LG7521	402.856	9.513
64	GRID 111885 - T3 (lbf) [Orbiter IF]	13998.713	0.196	LG7523	14463.255	0.190	LG7523	464.542	3.318
65	GRID 113369 - T3 (lbf) [Orbiter IF]	4124.478	0.260	LG7524	4273.053	0.258	LG7524	148.575	3.602
66	GRID 113385 - T1 (lbf) [Orbiter IF]	4110.348	0.158	LG7523	4255.294	0.156	LG7523	144.946	3.526
67	GRID 113385 - T3 (lbf) [Orbiter IF]	13154.450	0.196	LG7525	13833.422	0.196	LG7525	678.972	5.162
68	GRID 150301 - T1 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
69	GRID 150301 - T2 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
70	GRID 150302 - T1 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
71	GRID 150303 - T2 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
72	GRID 150311 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
73	GRID 150312 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
74	GRID 150313 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
75	GRID 150314 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
76	GRID 160301 - T1 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
77	GRID 160301 - T2 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
78	GRID 160302 - T1 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
79	GRID 160303 - T2 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
80	GRID 160311 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
81	GRID 160312 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
82	GRID 160313 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
83	GRID 160314 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
84	GRID 170301 - T1 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
85	GRID 170301 - T2 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
86	GRID 170302 - T1 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
87	GRID 170303 - T2 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
88	GRID 170311 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
89	GRID 170312 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
90	GRID 170313 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
91	GRID 170314 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
92	Net Inertial Acc - T1 (in/sec^2)	385.676	0.156	LG7523	434.752	0.144	LG7523	49.076	12.725
93	Net Inertial Acc - T2 (in/sec^2)	903.319	1.063	LG7523	978.823	1.075	LG7523	75.504	8.359
94	Net Inertial Acc - T3 (in/sec^2)	1986.213	0.262	LG7525	2023.066	0.262	LG7521	36.853	1.855
95	Net Inertial Acc - R1 (rad/sec^2)	3.664	0.167	LG7523	7.048	0.373	LG7523	3.384	92.346
96	Net Inertial Acc - R2 (rad/sec^2)	13.095	0.209	LG7522	14.781	0.249	LG7526	1.686	12.878
97	Net Inertial Acc - R3 (rad/sec^2)	1.818	0.649	LG7523	6.017	0.962	LG7525	4.198	230.906

Table C-14. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
1	NLF TX	386.063	0.156	LG7523	434.957	0.144	LG7523	48.894	12.665
2	NLF TY	903.370	1.063	LG7523	978.763	1.075	LG7523	75.393	8.346
3	NLF TZ	1986.162	0.262	LG7525	2022.764	0.262	LG7521	36.602	1.843
4	NLF RX	3.664	0.167	LG7523	7.048	0.373	LG7523	3.384	92.346
5	NLF RY	13.095	0.209	LG7522	14.781	0.249	LG7526	1.686	12.878
6	NLF RZ	1.818	0.649	LG7523	6.017	0.962	LG7525	4.198	230.906
7	Keel Grid 1271 DOF 2 I/F force	13994.964	1.065	LG7525	9379.793	0.408	LG7525	-4615.171	-32.977
8	GRID 6299 TX NHP FORCE	480.389	0.926	LG7525	638.779	0.246	LG7525	158.390	32.971
9	GRID 13067 TX NHP FORCE	630.570	0.254	LG7525	464.931	1.118	LG7525	-165.640	-26.268
10	GRID 13083 TX NHP FORCE	497.476	0.261	LG7523	429.422	1.113	LG7523	-68.055	-13.680
11	GRID 13115 TX NHP FORCE	453.328	0.258	LG7525	486.585	1.066	LG7523	33.256	7.336
12	GRID 13545 TX NHP FORCE	480.733	0.399	LG7525	770.700	0.274	LG7524	289.967	60.318
13	GRID 13545 TY NHP FORCE	1224.019	1.113	LG7523	1561.931	0.300	LG7523	337.911	27.607
14	GRID 13576 TX NHP FORCE	535.882	0.922	LG7525	816.167	0.254	LG7525	280.285	52.304
15	GRID 16250 TX NHP FORCE	504.223	0.923	LG7523	629.813	1.158	LG7525	125.590	24.908
16	GRID 16250 TY NHP FORCE	1300.922	0.923	LG7525	1567.341	0.978	LG7525	266.419	20.479
17	GRID 23028 TX NHP FORCE	594.767	0.254	LG7523	539.485	1.070	LG7525	-55.283	-9.295
18	GRID 23044 TX NHP FORCE	450.001	0.260	LG7525	437.163	0.261	LG7525	-12.838	-2.853
19	GRID 23076 TX NHP FORCE	462.084	0.258	LG7523	456.296	1.068	LG7525	-5.788	-1.253
20	GRID 23506 TX NHP FORCE	499.712	0.924	LG7525	816.267	1.172	LG7525	316.555	63.347
21	GRID 23537 TX NHP FORCE	527.015	1.111	LG7523	773.063	0.917	LG7523	246.048	46.687
22	GRID 23537 TY NHP FORCE	1209.680	0.921	LG7525	1747.678	0.408	LG7523	537.997	44.474
23	GRID 37940 TX NHP FORCE	652.047	1.112	LG7523	888.399	0.252	LG7523	236.353	36.248
24	GRID 37940 TY NHP FORCE	1417.077	1.017	LG7525	1716.735	0.396	LG7525	299.658	21.146
25	GRID 38067 TX NHP FORCE	546.266	0.306	LG7523	698.411	0.978	LG7525	152.145	27.852
26	GRID 38323 TX NHP FORCE	693.895	1.018	LG7523	753.595	0.929	LG7523	59.700	8.604
27	GRID 38323 TY NHP FORCE	1413.692	1.066	LG7525	1878.732	1.026	LG7525	465.040	32.895
28	GRID 45767 TX NHP FORCE	639.689	0.262	LG7525	882.397	0.264	LG7525	242.708	37.942
29	GRID 45890 TX NHP FORCE	630.874	1.016	LG7523	814.229	0.341	LG7523	183.355	29.064
30	GRID 45890 TY NHP FORCE	1544.042	1.063	LG7523	1913.177	1.067	LG7523	369.135	23.907
31	GRID 46151 TX NHP FORCE	641.232	0.308	LG7523	797.991	0.306	LG7523	156.759	24.446
32	GRID 53578 TX NHP FORCE	858.310	0.268	LG7525	1087.706	0.258	LG7523	229.396	26.726
33	GRID 53578 TZ NHP FORCE	1833.480	0.254	LG7525	2859.022	0.303	LG7523	1025.542	55.934
34	GRID 53701 TX NHP FORCE	839.469	0.195	LG7523	856.703	0.306	LG7523	17.234	2.053
35	GRID 53701 TZ NHP FORCE	2014.280	0.263	LG7523	2675.674	1.068	LG7523	661.394	32.835
36	GRID 53956 TX NHP FORCE	823.291	0.256	LG7523	967.849	0.213	LG7526	144.559	17.559
37	GRID 53956 TZ NHP FORCE	1714.238	0.257	LG7525	2891.803	0.927	LG7525	1177.565	68.693
38	GRID 61404 TX NHP FORCE	833.100	0.253	LG7523	1021.356	0.261	LG7525	188.256	22.597
39	GRID 61404 TZ NHP FORCE	1837.531	0.257	LG7523	2798.463	1.070	LG7525	960.932	52.295
40	GRID 61527 TX NHP FORCE	681.500	0.196	LG7525	892.890	1.109	LG7523	211.391	31.018
41	GRID 61527 TZ NHP FORCE	1929.359	0.214	LG7524	2690.286	0.397	LG7523	760.927	39.439
42	GRID 61788 TX NHP FORCE	713.827	0.260	LG7525	954.331	0.257	LG7523	240.504	33.692
43	GRID 61788 TZ NHP FORCE	1874.156	0.260	LG7523	2924.140	1.068	LG7523	1049.984	56.024
44	GRID 62589 TX NHP FORCE	466.662	0.258	LG7525	526.511	1.066	LG7523	59.849	12.825
45	GRID 62774 TX NHP FORCE	428.479	0.253	LG7523	575.024	1.066	LG7523	146.545	34.201
46	GRID 63043 TX NHP FORCE	989.458	0.252	LG7523	926.376	0.264	LG7523	-63.082	-6.375
47	GRID 63043 TZ NHP FORCE	2015.177	0.257	LG7525	3259.910	0.928	LG7525	1244.733	61.768
48	GRID 63343 TX NHP FORCE	896.690	0.197	LG7523	1250.128	0.200	LG7521	353.438	39.416
49	GRID 63343 TZ NHP FORCE	1750.934	1.016	LG7523	3337.606	1.065	LG7523	1586.672	90.619
50	GRID 63345 TX NHP FORCE	476.041	0.257	LG7525	487.161	1.068	LG7525	11.120	2.336

Table C-14. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
51	GRID 63645 TX NHP FORCE	486.215	0.255	LG7523	566.998	1.067	LG7523	80.783	16.615
52	GRID 63942 TX NHP FORCE	821.727	0.257	LG7523	926.406	0.214	LG7526	104.679	12.739
53	GRID 63942 TZ NHP FORCE	1861.526	0.256	LG7525	3500.341	0.927	LG7525	1638.816	88.036
54	GRID 64244 TX NHP FORCE	793.148	0.255	LG7525	1035.438	0.213	LG7524	242.290	30.548
55	GRID 64244 TZ NHP FORCE	1896.898	0.256	LG7523	3235.222	1.115	LG7523	1338.323	70.553
56	GRID 64246 TX NHP FORCE	364.324	0.268	LG7525	476.995	0.459	LG7525	112.670	30.926
57	GRID 64540 TX NHP FORCE	478.543	0.258	LG7523	518.606	0.395	LG7525	40.063	8.372
58	GRID 64814 TX NHP FORCE	883.753	0.287	LG7526	1225.243	0.260	LG7523	341.490	38.641
59	GRID 64814 TZ NHP FORCE	1735.805	0.922	LG7525	2864.275	0.930	LG7525	1128.470	65.011
60	GRID 65003 TX NHP FORCE	923.051	0.250	LG7525	935.414	0.272	LG7523	12.364	1.339
61	GRID 65003 TZ NHP FORCE	1995.431	0.258	LG7523	2843.720	1.113	LG7523	848.290	42.512
62	Secondary -Y: 111869 DOF 3 IF FORCE	4578.436	0.257	LG7526	4802.637	0.260	LG7526	224.201	4.897
63	Primary -Y: 111885 DOF 1 IF FORCE	4234.732	0.159	LG7525	4637.589	0.157	LG7521	402.856	9.513
64	Primary -Y: 111885 DOF 3 IF FORCE	13998.713	0.196	LG7523	14463.255	0.190	LG7523	464.542	3.318
65	Secondary +Y: 113369 DOF 3 IF FORCE	4124.478	0.260	LG7524	4273.053	0.258	LG7524	148.575	3.602
66	Primary +Y: 113385 DOF 1 IF FORCE	4110.348	0.158	LG7523	4255.294	0.156	LG7523	144.946	3.526
67	Primary +Y: 113385 DOF 3 IF FORCE	13154.450	0.196	LG7525	13833.422	0.196	LG7525	678.972	5.162
68	GRID 150301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
69	GRID 150301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
70	GRID 150302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
71	GRID 150303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
72	GRID 150311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
73	GRID 150312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
74	GRID 150313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
75	GRID 150314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
76	GRID 160301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
77	GRID 160301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
78	GRID 160302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
79	GRID 160303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
80	GRID 160311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
81	GRID 160312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
82	GRID 160313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
83	GRID 160314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
84	GRID 170301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
85	GRID 170301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
86	GRID 170302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
87	GRID 170303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
88	GRID 170311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
89	GRID 170312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
90	GRID 170313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
91	GRID 170314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
92	GRID 200201 Fuse-1 Acceleration TX	1287.837	0.162	LG7525	3224.110	0.392	LG7525	1936.274	150.351
93	GRID 200201 Fuse-1 Acceleration TY	4689.101	1.061	LG7523	7855.066	1.013	LG7525	3165.965	67.518
94	GRID 200201 Fuse-1 Acceleration TZ	1730.545	0.263	LG7523	3872.684	1.013	LG7525	2142.139	123.784
95	GRID 200201 Fuse-1 Acceleration RX	1130.890	1.979	LE7520	1564.576	1.013	LG7525	433.686	38.349
96	GRID 200201 Fuse-1 Acceleration RY	285.975	1.967	LE7520	558.702	0.988	LG7525	272.727	95.367
97	GRID 200201 Fuse-1 Acceleration RZ	665.210	1.982	LE7520	905.386	1.021	LG7525	240.176	36.105
98	GRID 200202 Fuse-2 Acceleration TX	6599.430	1.965	LE7520	8026.934	1.218	LG7525	1427.504	21.631
99	GRID 200202 Fuse-2 Acceleration TY	3349.055	1.066	LG7525	4733.613	1.065	LG7525	1384.558	41.342
100	GRID 200202 Fuse-2 Acceleration TZ	4053.180	0.263	LG7523	5006.149	0.341	LG7523	952.969	23.512

Table C-14. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
101	GRID 200202 Fuse-2 Acceleration RX	92.456	0.082	LG7523	265.049	0.341	LG7523	172.593	186.676
102	GRID 200202 Fuse-2 Acceleration RY	346.353	0.082	LG7523	535.262	0.340	LG7525	188.910	54.543
103	GRID 200202 Fuse-2 Acceleration RZ	48.435	0.089	LG7524	344.474	0.505	LG7525	296.039	611.205
104	GRID 200301 PVGF-1 Acceleration TX	1428.771	0.194	LG7525	2809.762	0.203	LG7521	1380.991	96.656
105	GRID 200301 PVGF-1 Acceleration TY	1207.793	1.065	LG7525	6155.190	1.065	LG7525	4947.398	409.623
106	GRID 200301 PVGF-1 Acceleration TZ	3470.796	0.396	LG7522	8871.327	0.395	LG7525	5400.531	155.599
107	GRID 200301 PVGF-1 Acceleration RX	152.226	0.237	LG7524	845.050	0.340	LG7523	692.824	455.127
108	GRID 200301 PVGF-1 Acceleration RY	67.185	0.176	LG7523	345.113	0.317	LG7523	277.928	413.677
109	GRID 200301 PVGF-1 Acceleration RZ	526.800	0.147	LG7524	1287.665	0.339	LG7523	760.865	144.431
110	GRID 200302 PVGF-2 Acceleration TX	1149.675	0.200	LG7525	2290.033	0.587	LG7523	1140.358	99.190
111	GRID 200302 PVGF-2 Acceleration TY	2685.727	1.115	LG7523	4920.347	1.121	LG7525	2234.620	83.204
112	GRID 200302 PVGF-2 Acceleration TZ	2346.565	0.263	LG7525	3465.041	0.253	LG7525	1118.476	47.664
113	GRID 200302 PVGF-2 Acceleration RX	268.817	0.263	LG7523	590.560	1.117	LG7525	321.743	119.689
114	GRID 200302 PVGF-2 Acceleration RY	108.131	0.165	LG7523	713.902	0.954	LG7525	605.771	560.221
115	GRID 200302 PVGF-2 Acceleration RZ	571.062	1.986	LE7520	866.058	1.121	LG7525	294.996	51.658
116	Grid 504878 PDU Acceleration TX	1780.339	0.260	LG7525	3360.908	0.510	LG7525	1580.569	88.779
117	Grid 504878 PDU Acceleration TY	1416.818	1.016	LG7525	3989.269	0.359	LG7525	2572.451	181.565
118	Grid 504878 PDU Acceleration TZ	2320.033	0.141	LG7523	5858.335	0.404	LG7525	3538.302	152.511
119	Grid 504878 PDU Acceleration RX	935.854	1.987	LE7520	1507.827	1.192	LG7525	571.973	61.118
120	Grid 504878 PDU Acceleration RY	281.016	0.090	LG7523	604.374	0.501	LG7525	323.358	115.067
121	Grid 504878 PDU Acceleration RZ	70.346	0.282	LG7526	207.539	1.124	LG7525	137.194	195.028
122	Element Force CBAR 27000 Shear 1	996.999	0.333	LG7525	1056.959	0.326	LG7523	59.960	6.014
123	Element Force CBAR 27000 Shear 2	14061.836	0.253	LG7525	14093.078	0.254	LG7525	31.241	0.222
124	Element Force CBAR 27001 Shear 1	972.755	0.823	LG7523	971.127	0.160	LG7525	-1.628	-0.167
125	Element Force CBAR 27001 Shear 2	1326.258	0.254	LG7525	1319.217	0.251	LG7525	-7.041	-0.531
126	Element Force CBAR 27002 Shear 1	386.793	0.256	LG7523	400.651	0.260	LG7523	13.858	3.583
127	Element Force CBAR 27002 Shear 2	1114.017	0.257	LG7525	1108.380	0.251	LG7525	-5.636	-0.506
128	Element Force CBAR 27003 Shear 1	379.848	0.259	LG7525	435.839	0.257	LG7523	55.991	14.740
129	Element Force CBAR 27003 Shear 2	1077.011	0.257	LG7525	1091.958	0.246	LG7525	14.947	1.388
130	Element Force CBAR 27004 Shear 1	313.204	0.257	LG7525	364.473	0.252	LG7525	51.269	16.369
131	Element Force CBAR 27004 Shear 2	1083.712	0.257	LG7525	1073.503	0.254	LG7525	-10.210	-0.942
132	Element Force CBAR 27005 Shear 1	251.420	0.254	LG7523	244.303	0.251	LG7523	-7.117	-2.831
133	Element Force CBAR 27005 Shear 2	991.092	0.261	LG7525	989.286	1.334	LG7525	-1.806	-0.182
134	Element Force CBAR 27006 Tension	9347.999	0.253	LG7525	9402.046	0.254	LG7525	54.047	0.578
135	Element Force CBAR 27007 Tension	7939.387	0.252	LG7525	7962.955	0.254	LG7525	23.568	0.297
136	Element Force CBAR 27008 Tension	6389.010	0.251	LG7525	6408.252	0.250	LG7525	19.242	0.301
137	Element Force CBAR 27009 Tension	5197.930	0.260	LG7526	5245.114	0.263	LG7526	47.184	0.908
138	Element Force CBAR 27010 Tension	3954.866	0.262	LG7526	4106.554	0.263	LG7526	151.688	3.835
139	Element Force CBAR 27011 Tension	2630.165	0.541	LG7522	2753.626	0.547	LG7526	123.461	4.694
140	Element Force CBAR 27012 Tension	2807.368	0.255	LG7526	2986.205	0.365	LG7525	178.836	6.370
141	Element Force CBAR 27013 Tension	1617.009	0.390	LG7522	1952.343	0.400	LG7524	335.335	20.738
142	Element Force CBAR 27014 Tension	2113.737	0.255	LG7526	2244.872	0.365	LG7525	131.136	6.204
143	Element Force CBAR 27015 Tension	999.012	0.390	LG7526	1162.179	0.398	LG7526	163.168	16.333
144	Element Force CBAR 27016 Tension	1426.884	0.390	LG7524	1646.883	0.394	LG7522	220.000	15.418
145	Element Force CBAR 27017 Tension	848.440	0.208	LG7526	967.768	0.262	LG7525	119.329	14.064
146	Element Force CBAR 27018 Shear 1	2090.062	0.256	LG7525	2129.570	0.259	LG7525	39.508	1.890
147	Element Force CBAR 27018 Shear 2	10457.822	0.824	LG7523	10271.819	0.252	LG7526	-186.004	-1.779
148	Element Force CBAR 27019 Shear 1	1042.767	0.252	LG7525	1047.875	0.256	LG7525	5.108	0.490
149	Element Force CBAR 27019 Shear 2	1553.252	0.157	LG7525	1549.182	0.157	LG7525	-4.070	-0.262
150	Element Force CBAR 27020 Shear 1	129.852	0.197	LG7525	201.041	0.392	LG7525	71.190	54.824

Table C-14. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
151	Element Force CBAR 27020 Shear 2	1107.665	0.158	LG7525	1106.246	0.157	LG7525	-1.420	-0.128
152	Element Force CBAR 27021 Shear 1	258.714	0.262	LG7523	392.923	0.407	LG7525	134.209	51.875
153	Element Force CBAR 27021 Shear 2	992.719	0.158	LG7525	992.090	0.155	LG7525	-0.629	-0.063
154	Element Force CBAR 27022 Shear 1	381.165	0.155	LG7525	423.696	0.159	LG7525	42.531	11.158
155	Element Force CBAR 27022 Shear 2	902.642	0.158	LG7525	898.764	0.155	LG7525	-3.879	-0.430
156	Element Force CBAR 27023 Shear 1	124.395	0.202	LG7525	205.647	0.198	LG7525	81.252	65.318
157	Element Force CBAR 27023 Shear 2	906.269	1.298	LG7523	917.869	1.478	LG7525	11.600	1.280
158	Element Force CBAR 27024 Tension	6733.956	0.824	LG7523	6622.679	0.252	LG7526	-111.278	-1.652
159	Element Force CBAR 27025 Tension	6980.601	0.253	LG7526	7027.841	0.252	LG7526	47.240	0.677
160	Element Force CBAR 27026 Tension	7078.988	0.256	LG7526	7121.452	0.256	LG7526	42.464	0.600
161	Element Force CBAR 27027 Tension	4780.975	0.257	LG7526	4808.861	0.257	LG7526	27.886	0.583
162	Element Force CBAR 27028 Tension	4604.087	0.256	LG7526	4650.878	0.253	LG7526	46.791	1.016
163	Element Force CBAR 27029 Tension	3301.853	0.255	LG7525	3458.918	0.254	LG7525	157.065	4.757
164	Element Force CBAR 27030 Tension	3680.745	0.259	LG7526	3701.414	0.253	LG7526	20.669	0.562
165	Element Force CBAR 27031 Tension	2740.459	0.256	LG7525	2803.972	0.254	LG7525	63.513	2.318
166	Element Force CBAR 27032 Tension	1777.104	0.260	LG7526	1883.125	0.252	LG7525	106.021	5.966
167	Element Force CBAR 27033 Tension	1053.454	0.258	LG7525	1062.394	0.254	LG7525	8.940	0.849
168	Element Force CBAR 27034 Tension	1158.179	0.966	LG7525	1486.663	1.114	LG7523	328.483	28.362
169	Element Force CBAR 27035 Tension	436.996	0.602	LG7521	613.172	1.022	LG7525	176.176	40.315
170	Element Force CBAR 27036 Tension	389.890	0.259	LG7525	407.130	0.259	LG7525	17.241	4.422
171	Element Force CBAR 27037 Tension	795.159	0.257	LG7525	807.977	0.259	LG7525	12.818	1.612
172	Element Force CBAR 27038 Shear 1	2137.956	0.183	LG7525	2269.692	0.185	LG7525	131.736	6.162
173	Element Force CBAR 27038 Shear 2	11877.504	0.587	LG7523	11282.976	0.592	LG7523	-594.527	-5.005
174	Element Force CBAR 27039 Shear 1	438.052	0.198	LG7525	470.885	0.213	LG7526	32.832	7.495
175	Element Force CBAR 27039 Shear 2	1252.501	1.063	LG7523	1199.606	1.061	LG7523	-52.895	-4.223
176	Element Force CBAR 27040 Shear 1	288.686	0.256	LG7525	329.411	0.262	LG7525	40.725	14.107
177	Element Force CBAR 27040 Shear 2	1080.162	0.774	LG7523	1085.072	1.061	LG7523	4.910	0.455
178	Element Force CBAR 27041 Shear 1	420.826	0.263	LG7525	440.168	0.264	LG7521	19.342	4.596
179	Element Force CBAR 27041 Shear 2	1081.551	0.871	LG7523	1092.235	1.488	LG7525	10.683	0.988
180	Element Force CBAR 27042 Shear 1	273.929	0.255	LG7523	288.634	0.267	LG7521	14.705	5.368
181	Element Force CBAR 27042 Shear 2	1073.904	1.062	LG7523	1055.468	1.073	LG7523	-18.436	-1.717
182	Element Force CBAR 27043 Shear 1	294.425	0.257	LG7525	290.758	0.258	LG7523	-3.667	-1.245
183	Element Force CBAR 27043 Shear 2	953.004	1.432	LE7520	957.471	1.269	LG7525	4.467	0.469
184	Element Force CBAR 27044 Tension	8048.716	0.586	LG7523	7677.709	0.592	LG7523	-371.006	-4.610
185	Element Force CBAR 27045 Tension	6638.497	0.587	LG7523	6356.123	0.591	LG7523	-282.374	-4.254
186	Element Force CBAR 27046 Tension	5720.147	0.588	LG7523	5654.642	0.591	LG7523	-65.504	-1.145
187	Element Force CBAR 27047 Tension	4221.747	0.588	LG7523	4247.053	0.594	LG7523	25.307	0.599
188	Element Force CBAR 27048 Tension	3878.178	0.869	LG7523	3889.678	0.594	LG7523	11.500	0.297
189	Element Force CBAR 27049 Tension	2160.196	0.191	LG7523	2333.959	0.186	LG7525	173.764	8.044
190	Element Force CBAR 27050 Tension	2831.888	0.209	LG7526	2951.598	0.184	LG7525	119.711	4.227
191	Element Force CBAR 27051 Tension	1480.601	0.178	LG7523	1493.385	0.340	LG7525	12.784	0.863
192	Element Force CBAR 27052 Tension	2109.696	0.211	LG7526	2117.344	0.208	LG7526	7.648	0.363
193	Element Force CBAR 27053 Tension	784.222	0.336	LG7523	830.701	0.176	LG7521	46.479	5.927
194	Element Force CBAR 27054 Tension	1555.562	0.211	LG7526	1589.602	0.200	LG7523	34.040	2.188
195	Element Force CBAR 27055 Tension	761.212	0.391	LG7526	884.074	0.394	LG7522	122.862	16.140
196	Element Force CBAR 27056 Shear 1	1787.671	0.304	LG7523	1775.080	0.302	LG7523	-12.591	-0.704
197	Element Force CBAR 27056 Shear 2	11879.375	0.198	LG7525	12001.392	0.199	LG7525	122.017	1.027
198	Element Force CBAR 27057 Shear 1	659.086	0.587	LG7523	635.949	0.594	LG7523	-23.137	-3.510
199	Element Force CBAR 27057 Shear 2	522.592	0.287	LG7526	530.535	0.289	LG7526	7.943	1.520
200	Element Force CBAR 27058 Shear 1	359.257	0.196	LG7525	438.506	0.211	LG7526	79.249	22.059

Table C-14. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
201	Element Force CBAR 27058 Shear 2	820.115	0.198	LG7525	846.060	0.196	LG7525	25.945	3.164
202	Element Force CBAR 27059 Shear 1	226.920	0.161	LG7525	298.609	0.403	LG7526	71.689	31.592
203	Element Force CBAR 27059 Shear 2	743.060	1.940	LE7520	785.383	0.196	LG7525	42.323	5.696
204	Element Force CBAR 27060 Shear 1	166.996	0.214	LG7526	222.149	0.276	LG7526	55.153	33.026
205	Element Force CBAR 27060 Shear 2	807.180	1.258	LG7525	855.489	0.197	LG7525	48.309	5.985
206	Element Force CBAR 27061 Shear 1	183.463	0.211	LG7524	276.533	0.391	LG7523	93.070	50.729
207	Element Force CBAR 27061 Shear 2	877.076	1.256	LG7525	908.724	1.259	LG7525	31.648	3.608
208	Element Force CBAR 27062 Tension	8035.954	0.199	LG7525	8120.540	0.199	LG7525	84.585	1.053
209	Element Force CBAR 27063 Tension	7161.802	0.197	LG7525	7223.862	0.198	LG7525	62.060	0.867
210	Element Force CBAR 27064 Tension	4569.779	0.589	LG7521	4591.903	0.593	LG7521	22.124	0.484
211	Element Force CBAR 27065 Tension	3657.117	0.589	LG7521	3688.384	0.593	LG7521	31.267	0.855
212	Element Force CBAR 27066 Tension	1938.120	0.593	LG7521	2003.555	0.593	LG7521	65.436	3.376
213	Element Force CBAR 27067 Tension	1744.834	0.593	LG7521	1834.869	0.599	LG7526	90.035	5.160
214	Element Force CBAR 27068 Tension	2257.444	0.588	LG7523	2432.542	0.589	LG7523	175.098	7.756
215	Element Force CBAR 27069 Tension	1412.368	0.589	LG7523	1547.099	0.589	LG7523	134.732	9.539
216	Element Force CBAR 27070 Tension	1350.929	0.600	LG7521	1454.687	0.592	LG7521	103.758	7.680
217	Element Force CBAR 27071 Tension	501.383	0.306	LG7523	557.185	0.592	LG7521	55.801	11.129
218	Element Force CBAR 27072 Tension	869.437	0.308	LG7525	936.254	0.880	LG7525	66.817	7.685
219	Element Force CBAR 27073 Tension	804.132	0.255	LG7525	973.144	0.425	LG7526	169.012	21.018
220	Element Force CBAR 27074 Tension	477.972	0.259	LG7523	486.774	0.260	LG7523	8.802	1.842
221	Element Force CBAR 27075 Tension	809.148	0.259	LG7523	821.822	0.260	LG7523	12.674	1.566

Table C-15. Experiment Logistics Module - Exposed Section - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.198	0.395	LG7523	2.193	0.396	LG7523	-0.004	-0.193
2	Net Load Factor - T2 (g)	2.007	0.279	LG7524	1.966	0.279	LG7524	-0.041	-2.053
3	Net Load Factor - T3 (g)	4.480	0.252	LG7521	4.506	0.252	LG7521	0.026	0.571
4	Net Load Factor - R1 (rad/sec^2)	4.055	0.277	LG7525	4.028	0.278	LG7525	-0.027	-0.656
5	Net Load Factor - R2 (rad/sec^2)	24.733	0.270	LG7523	24.695	0.270	LG7523	-0.038	-0.152
6	Net Load Factor - R3 (rad/sec^2)	2.016	0.239	LG7524	2.044	0.239	LG7524	0.028	1.407
7	ID 700001 - T2 (lbf)	5090.092	0.279	LG7524	4985.918	0.279	LG7524	-104.174	-2.047
8	ID 700002 - T1 (lbf)	2835.382	0.395	LG7523	2906.509	0.395	LG7523	71.128	2.509
9	ID 700002 - T3 (lbf)	8131.346	0.280	LG7524	8022.687	0.280	LG7524	-108.659	-1.336
10	ID 700003 - T1 (lbf)	3354.370	0.396	LG7523	3297.687	0.397	LG7523	-56.683	-1.690
11	ID 700003 - T3 (lbf)	9481.714	0.271	LG7525	9416.677	0.271	LG7525	-65.038	-0.686
12	ID 700004 - T3 (lbf)	2915.820	0.235	LG7525	2890.081	0.235	LG7525	-25.740	-0.883
13	ID 700005 - T3 (lbf)	3337.799	0.235	LG7523	3322.345	0.235	LG7523	-15.454	-0.463
14	Net Inertial Acc - T1 (in/sec^2)	848.436	0.395	LG7523	846.800	0.396	LG7523	-1.636	-0.193
15	Net Inertial Acc - T2 (in/sec^2)	774.947	0.279	LG7524	759.036	0.279	LG7524	-15.911	-2.053
16	Net Inertial Acc - T3 (in/sec^2)	1729.660	0.252	LG7521	1739.545	0.252	LG7521	9.885	0.571
17	Net Inertial Acc - R1 (rad/sec^2)	4.055	0.277	LG7525	4.028	0.278	LG7525	-0.027	-0.656
18	Net Inertial Acc - R2 (rad/sec^2)	24.733	0.270	LG7523	24.695	0.270	LG7523	-0.038	-0.152
19	Net Inertial Acc - R3 (rad/sec^2)	2.016	0.239	LG7524	2.044	0.239	LG7524	0.028	1.407

Table C-16. Atmospheric Nuetral Drag Experiment-2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.037	0.202	LG7521	2.050	0.201	LG7521	0.013	0.620
2	Net Load Factor - T2 (g)	1.534	0.251	LG7526	1.572	0.165	LG7525	0.039	2.512
3	Net Load Factor - T3 (g)	4.676	0.225	LG7526	4.638	0.225	LG7526	-0.037	-0.798
4	Net Load Factor - R1 (rad/sec^2)	25.179	0.177	LG7525	25.200	0.178	LG7525	0.021	0.085
5	Net Load Factor - R2 (rad/sec^2)	10.084	0.151	LG7525	10.215	0.193	LG7525	0.130	1.293
6	Net Load Factor - R3 (rad/sec^2)	20.321	0.177	LG7525	19.476	0.138	LG7525	-0.846	-4.161
7	GRID 13 - T1 (lbf)	1068.864	0.320	LG7525	1085.787	0.318	LG7525	16.923	1.583
8	GRID 13 - T2 (lbf)	893.218	0.337	LG7526	888.530	0.338	LG7526	-4.688	-0.525
9	GRID 13 - T3 (lbf)	308.425	0.173	LG7525	310.017	0.173	LG7525	1.592	0.516
10	GRID 18 - T2 (lbf)	538.049	0.336	LG7526	535.058	0.336	LG7526	-2.991	-0.556
11	GRID 22 - T2 (lbf)	559.639	0.320	LG7525	564.994	0.320	LG7525	5.355	0.957
12	GRID 26 - T1 (lbf)	160.450	0.226	LG7524	157.893	0.226	LG7524	-2.557	-1.594
13	GRID 26 - T2 (lbf)	321.274	0.319	LG7525	327.963	0.318	LG7525	6.688	2.082
14	GRID 26 - T3 (lbf)	754.798	0.321	LG7525	762.047	0.321	LG7525	7.249	0.960
15	GRID 28 - T2 (lbf)	897.579	0.320	LG7525	906.974	0.320	LG7525	9.395	1.047
16	GRID 44 - T2 (lbf)	99.940	0.338	LG7526	101.675	0.318	LG7523	1.735	1.736
17	GRID 46 - T2 (lbf)	279.334	0.198	LG7525	280.118	0.199	LG7525	0.784	0.281
18	GRID 58 - T2 (lbf)	230.463	0.321	LG7525	230.253	0.319	LG7525	-0.210	-0.091
19	GRID 59 - T1 (lbf)	318.646	0.117	LG7526	319.961	0.116	LG7526	1.315	0.413
20	GRID 59 - T2 (lbf)	442.097	0.176	LG7525	439.671	0.176	LG7525	-2.426	-0.549
21	GRID 59 - T3 (lbf)	362.462	0.170	LG7525	362.001	0.170	LG7525	-0.461	-0.127
22	GRID 60 - T2 (lbf)	699.119	0.163	LG7525	693.165	0.162	LG7525	-5.954	-0.852
23	GRID 75 - T1 (lbf)	857.456	0.163	LG7525	851.479	0.163	LG7525	-5.977	-0.697
24	GRID 75 - T2 (lbf)	603.578	0.163	LG7525	600.578	0.162	LG7525	-3.000	-0.497
25	GRID 75 - T3 (lbf)	383.044	0.321	LG7525	387.740	0.321	LG7525	4.696	1.226
26	GRID 79 - T2 (lbf)	157.997	0.138	LG7525	162.435	0.199	LG7525	4.438	2.809
27	Net Inertial Acc - T1 (in/sec^2)	786.557	0.202	LG7521	791.430	0.201	LG7521	4.873	0.620
28	Net Inertial Acc - T2 (in/sec^2)	592.245	0.251	LG7526	607.122	0.165	LG7525	14.877	2.512
29	Net Inertial Acc - T3 (in/sec^2)	1805.165	0.225	LG7526	1790.758	0.225	LG7526	-14.407	-0.798
30	Net Inertial Acc - R1 (rad/sec^2)	25.179	0.177	LG7525	25.200	0.178	LG7525	0.021	0.085
31	Net Inertial Acc - R2 (rad/sec^2)	10.084	0.151	LG7525	10.215	0.193	LG7525	0.130	1.293
32	Net Inertial Acc - R3 (rad/sec^2)	20.321	0.177	LG7525	19.476	0.138	LG7525	-0.846	-4.161

Appendix D
Contingency Landing C11 - Linear/Nonlinear Comparison

Table D-1. Space-to Ground Antenna IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.474	0.299	LE7526	1.718	0.458	LE7524	0.244	16.565
2	Net Load Factor - T2 (g)	4.408	0.220	LE7521	5.123	0.222	LE7521	0.716	16.236
3	Net Load Factor - T3 (g)	1.189	0.177	LE7525	2.099	0.185	LE7521	0.910	76.537
4	Net Load Factor - R1 (rad/sec^2)	24.871	1.162	LE7520	40.696	1.160	LE7520	15.825	63.628
5	Net Load Factor - R2 (rad/sec^2)	17.397	1.438	LE7520	38.228	1.136	LE7520	20.830	119.735
6	Net Load Factor - R3 (rad/sec^2)	7.626	0.172	LE7526	21.763	0.473	LE7525	14.137	185.387
7	ID 40301 - T1 (lbf)	762.659	0.298	LE7526	1000.895	0.799	LE7520	238.237	31.238
8	ID 40301 - T2 (lbf)	2061.974	0.214	LE7525	2651.395	0.222	LE7525	589.421	28.585
9	ID 40302 - T1 (lbf)	549.556	0.426	LE7523	674.732	0.939	LE7523	125.177	22.778
10	ID 40303 - T2 (lbf)	1512.557	0.281	LE7523	1410.887	0.284	LE7525	-101.670	-6.722
11	ID 40311 - T3 (lbf)	1618.630	1.693	LE7520	1973.474	1.161	LE7520	354.844	21.923
12	ID 40312 - T3 (lbf)	1197.724	0.213	LE7525	1438.161	0.219	LE7521	240.438	20.075
13	ID 40313 - T3 (lbf)	1110.381	1.213	LE7520	1112.222	0.290	LE7525	1.841	0.166
14	ID 40314 - T3 (lbf)	841.636	0.282	LE7525	955.841	0.281	LE7523	114.205	13.569
15	Net Inertial Acc - T1 (in/sec^2)	569.044	0.299	LE7526	663.305	0.458	LE7524	94.261	16.565
16	Net Inertial Acc - T2 (in/sec^2)	1701.781	0.220	LE7521	1978.085	0.222	LE7521	276.304	16.236
17	Net Inertial Acc - T3 (in/sec^2)	459.028	0.177	LE7525	810.357	0.185	LE7521	351.329	76.538
18	Net Inertial Acc - R1 (rad/sec^2)	24.871	1.162	LE7520	40.696	1.160	LE7520	15.825	63.627
19	Net Inertial Acc - R2 (rad/sec^2)	17.397	1.438	LE7520	38.228	1.136	LE7520	20.831	119.739
20	Net Inertial Acc - R3 (rad/sec^2)	7.626	0.172	LE7526	21.763	0.473	LE7525	14.137	185.387

Table D-2. Space-to-Ground Antenna IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	2.084	1.436	LE7520	2.876	1.160	LE7520	0.792	38.002
2	Net Load Factor - T2 (g)	5.076	0.210	LE7525	6.405	0.216	LE7523	1.329	26.173
3	Net Load Factor - T3 (g)	1.678	0.174	LE7525	2.267	0.182	LE7523	0.590	35.139
4	Net Load Factor - R1 (rad/sec^2)	35.527	1.185	LE7520	57.891	1.166	LE7520	22.363	62.947
5	Net Load Factor - R2 (rad/sec^2)	19.350	1.435	LE7520	55.141	0.403	LE7526	35.791	184.964
6	Net Load Factor - R3 (rad/sec^2)	18.374	0.154	LE7525	48.381	0.433	LE7525	30.007	163.308
7	ID 3805 - T1 (lbf)	343.305	0.280	LE7525	434.830	0.217	LE7525	91.525	26.660
8	ID 3805 - T2 (lbf)	347.604	0.253	LE7524	421.472	0.291	LE7525	73.868	21.250
9	ID 3805 - T3 (lbf)	242.643	0.221	LE7523	388.185	1.112	LE7520	145.542	59.982
10	ID 3984 - T1 (lbf)	355.662	0.209	LE7525	501.900	0.428	LE7521	146.238	41.117
11	ID 3984 - T2 (lbf)	396.994	1.641	LE7520	504.560	1.160	LE7520	107.566	27.095
12	ID 3984 - T3 (lbf)	284.190	0.222	LE7525	342.786	0.222	LE7521	58.596	20.619
13	ID 4136 - T1 (lbf)	360.812	1.640	LE7520	466.755	1.161	LE7520	105.943	29.362
14	ID 4136 - T2 (lbf)	410.071	1.160	LE7520	465.137	0.220	LE7521	55.066	13.428
15	ID 4136 - T3 (lbf)	301.743	1.161	LE7520	380.071	1.165	LE7520	78.328	25.959
16	ID 4308 - T1 (lbf)	377.875	0.282	LE7523	500.577	0.283	LE7523	122.702	32.472
17	ID 4308 - T2 (lbf)	387.950	1.160	LE7520	436.218	1.646	LE7520	48.268	12.442
18	ID 4308 - T3 (lbf)	344.282	1.161	LE7520	377.398	0.215	LE7523	33.116	9.619
19	Net Inertial Acc - T1 (in/sec^2)	804.542	1.436	LE7520	1110.287	1.160	LE7520	305.746	38.002
20	Net Inertial Acc - T2 (in/sec^2)	1959.963	0.210	LE7525	2472.929	0.216	LE7523	512.966	26.172
21	Net Inertial Acc - T3 (in/sec^2)	647.705	0.174	LE7525	875.314	0.182	LE7523	227.608	35.141
22	Net Inertial Acc - R1 (rad/sec^2)	35.527	1.185	LE7520	57.891	1.166	LE7520	22.364	62.951
23	Net Inertial Acc - R2 (rad/sec^2)	19.349	1.435	LE7520	55.141	0.403	LE7526	35.791	184.973
24	Net Inertial Acc - R3 (rad/sec^2)	18.375	0.154	LE7525	48.380	0.433	LE7525	30.006	163.298

Table D-3. Space-to-Ground Antenna IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.496	0.302	LE7526	2.028	0.309	LE7526	0.532	35.561
2	Net Load Factor - T2 (g)	4.320	0.218	LE7521	5.291	0.221	LE7525	0.971	22.480
3	Net Load Factor - T3 (g)	1.201	0.182	LE7525	2.115	0.185	LE7521	0.913	76.014
4	Net Load Factor - R1 (rad/sec^2)	22.452	1.162	LE7520	43.541	1.160	LE7520	21.089	93.927
5	Net Load Factor - R2 (rad/sec^2)	16.085	1.439	LE7520	41.581	1.136	LE7520	25.496	158.510
6	Net Load Factor - R3 (rad/sec^2)	6.982	0.119	LE7525	24.967	1.163	LE7520	17.985	257.587
7	ID 5293 - T1 (lbf)	343.305	0.280	LE7525	434.830	0.217	LE7525	91.525	26.660
8	ID 5293 - T2 (lbf)	347.604	0.253	LE7524	421.472	0.291	LE7525	73.868	21.250
9	ID 5293 - T3 (lbf)	242.643	0.221	LE7523	388.185	1.112	LE7520	145.542	59.982
10	ID 5294 - T1 (lbf)	355.662	0.209	LE7525	501.900	0.428	LE7521	146.238	41.117
11	ID 5294 - T2 (lbf)	396.994	1.641	LE7520	504.560	1.160	LE7520	107.566	27.095
12	ID 5294 - T3 (lbf)	284.190	0.222	LE7525	342.786	0.222	LE7521	58.596	20.619
13	ID 5295 - T1 (lbf)	360.812	1.640	LE7520	466.755	1.161	LE7520	105.943	29.362
14	ID 5295 - T2 (lbf)	410.071	1.160	LE7520	465.137	0.220	LE7521	55.066	13.428
15	ID 5295 - T3 (lbf)	301.743	1.161	LE7520	380.071	1.165	LE7520	78.328	25.959
16	ID 5296 - T1 (lbf)	377.875	0.282	LE7523	500.577	0.283	LE7523	122.702	32.472
17	ID 5296 - T2 (lbf)	387.950	1.160	LE7520	436.218	1.646	LE7520	48.268	12.442
18	ID 5296 - T3 (lbf)	344.282	1.161	LE7520	377.398	0.215	LE7523	33.116	9.619
19	ID 40301 - T1 (lbf)	762.659	0.298	LE7526	1000.895	0.799	LE7520	238.237	31.238
20	ID 40301 - T2 (lbf)	2061.974	0.214	LE7525	2651.395	0.222	LE7525	589.421	28.585
21	ID 40302 - T1 (lbf)	549.556	0.426	LE7523	674.732	0.939	LE7523	125.177	22.778
22	ID 40303 - T2 (lbf)	1512.557	0.281	LE7523	1410.887	0.284	LE7525	-101.670	-6.722
23	ID 40311 - T3 (lbf)	1618.630	1.693	LE7520	1973.474	1.161	LE7520	354.844	21.923
24	ID 40312 - T3 (lbf)	1197.724	0.213	LE7525	1438.161	0.219	LE7521	240.438	20.075
25	ID 40313 - T3 (lbf)	1110.381	1.213	LE7520	1112.222	0.290	LE7525	1.841	0.166
26	ID 40314 - T3 (lbf)	841.636	0.282	LE7525	955.841	0.281	LE7523	114.205	13.569
27	Net Inertial Acc - T1 (in/sec^2)	577.532	0.302	LE7526	782.911	0.309	LE7526	205.378	35.561
28	Net Inertial Acc - T2 (in/sec^2)	1667.857	0.218	LE7521	2042.799	0.221	LE7525	374.942	22.480
29	Net Inertial Acc - T3 (in/sec^2)	463.844	0.182	LE7525	816.432	0.185	LE7521	352.587	76.014
30	Net Inertial Acc - R1 (rad/sec^2)	22.452	1.162	LE7520	43.541	1.160	LE7520	21.089	93.927
31	Net Inertial Acc - R2 (rad/sec^2)	16.085	1.439	LE7520	41.581	1.136	LE7520	25.496	158.510
32	Net Inertial Acc - R3 (rad/sec^2)	6.982	0.119	LE7525	24.967	1.163	LE7520	17.985	257.587

Table D-4. Battery 1 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.718	0.293	LE7526	2.545	0.405	LE7524	0.827	48.157
2	Net Load Factor - T2 (g)	3.965	0.217	LE7521	4.110	0.283	LE7523	0.145	3.669
3	Net Load Factor - T3 (g)	1.064	0.186	LE7525	1.329	0.730	LE7523	0.265	24.876
4	Net Load Factor - R1 (rad/sec^2)	10.122	1.162	LE7520	43.166	0.436	LE7523	33.044	326.459
5	Net Load Factor - R2 (rad/sec^2)	14.031	0.138	LE7523	37.509	0.342	LE7526	23.478	167.327
6	Net Load Factor - R3 (rad/sec^2)	12.762	0.216	LE7523	61.335	0.504	LE7526	48.573	380.593
7	GRID 653 - T2 (lbf)	1494.897	0.293	LE7525	2257.995	0.298	LE7526	763.097	51.047
8	GRID 653 - T3 (lbf)	648.019	0.276	LE7525	852.966	0.435	LE7523	204.947	31.627
9	GRID 654 - T3 (lbf)	338.742	0.292	LE7525	320.748	0.393	LE7526	-17.995	-5.312
10	GRID 655 - T1 (lbf)	921.793	0.293	LE7526	1365.697	0.405	LE7524	443.904	48.157
11	GRID 655 - T3 (lbf)	541.513	0.290	LE7525	742.222	0.417	LE7525	200.709	37.064
12	GRID 2183 - T2 (lbf)	1657.606	0.215	LE7523	1874.674	0.504	LE7526	217.068	13.095
13	GRID 2183 - T3 (lbf)	570.289	0.217	LE7525	652.957	0.227	LE7523	82.668	14.496
14	GRID 2184 - T3 (lbf)	398.422	0.216	LE7523	302.106	0.296	LE7526	-96.317	-24.174
15	GRID 2185 - T3 (lbf)	336.255	0.310	LE7523	521.599	0.203	LE7523	185.344	55.120
16	Net Inertial Acc - T1 (in/sec^2)	663.270	0.293	LE7526	982.679	0.405	LE7524	319.408	48.157
17	Net Inertial Acc - T2 (in/sec^2)	1530.669	0.217	LE7521	1586.827	0.283	LE7523	56.158	3.669
18	Net Inertial Acc - T3 (in/sec^2)	410.774	0.186	LE7525	512.959	0.730	LE7523	102.186	24.876
19	Net Inertial Acc - R1 (rad/sec^2)	10.122	1.162	LE7520	43.166	0.436	LE7523	33.044	326.459
20	Net Inertial Acc - R2 (rad/sec^2)	14.031	0.138	LE7523	37.509	0.342	LE7526	23.478	167.327
21	Net Inertial Acc - R3 (rad/sec^2)	12.762	0.216	LE7523	61.335	0.504	LE7526	48.573	380.593

Table D-5. Battery 1 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.600	0.297	LE7526	3.431	0.407	LE7524	1.832	114.496
2	FSE Net Load Factor, Y axis	4.156	0.219	LE7523	4.965	0.277	LE7523	0.809	19.475
3	FSE Net Load Factor, Z axis	1.160	0.188	LE7525	2.654	0.334	LE7524	1.493	128.712
4	FSE Net Load Factor, RX axis	13.539	1.140	LE7520	53.756	0.880	LE7520	40.217	297.050
5	FSE Net Load Factor, RY axis	18.710	0.269	LE7524	67.116	0.399	LE7526	48.405	258.709
6	FSE Net Load Factor, RZ axis	20.716	0.218	LE7523	90.765	0.508	LE7526	70.048	338.135
7	ORU I/F Force Grid 990 Z axis	156.392	0.305	LE7523	207.819	0.395	LE7526	51.427	32.884
8	ORU I/F Force Grid 991 Z axis	128.187	0.258	LE7524	198.440	0.353	LE7526	70.253	54.805
9	ORU I/F Force Grid 9998 X axis	304.850	0.292	LE7526	605.762	0.509	LE7526	300.912	98.708
10	ORU I/F Force Grid 9998 Z axis	396.306	0.290	LE7525	603.831	0.331	LE7524	207.525	52.365
11	ORU I/F Moment Grid 9998 RX axis	81.771	0.293	LE7526	261.129	0.418	LE7525	179.358	219.342
12	ORU I/F Moment Grid 9998 RY axis	1661.950	0.287	LE7525	2047.589	0.396	LE7526	385.639	23.204
13	ORU I/F Moment Grid 9998 RZ axis	135.007	0.311	LE7524	330.050	0.413	LE7525	195.043	144.468
14	ORU I/F Force Grid 9999 X axis	349.504	0.292	LE7526	767.259	0.502	LE7526	417.754	119.528
15	ORU I/F Force Grid 9999 Y axis	1509.076	0.216	LE7521	1568.680	0.272	LE7523	59.604	3.950
16	ORU I/F Force Grid 9999 Z axis	263.995	0.106	LE7524	398.745	0.355	LE7525	134.750	51.043
17	ORU I/F Moment Grid 9999 RX axis	794.467	0.214	LE7523	686.716	0.272	LE7523	-107.751	-13.563
18	ORU I/F Moment Grid 9999 RY axis	1152.897	0.302	LE7524	1672.019	0.502	LE7526	519.122	45.028
19	ORU I/F Moment Grid 9999 RZ axis	239.308	0.291	LE7525	453.803	0.413	LE7525	214.495	89.631
20	ORU Net Load Factor, X axis	1.800	0.292	LE7526	2.792	0.404	LE7524	0.991	55.064
21	ORU Net Load Factor, Y axis	4.152	0.216	LE7521	4.316	0.272	LE7523	0.164	3.950
22	ORU Net Load Factor, Z axis	1.047	0.186	LE7525	1.870	0.482	LE7524	0.823	78.607
23	ORU Net Load Factor, RX axis	10.202	0.180	LE7525	47.144	1.290	LE7525	36.942	362.086
24	ORU Net Load Factor, RY axis	21.589	0.111	LE7523	69.366	0.933	LE7525	47.777	221.305
25	ORU Net Load Factor, RZ axis	15.361	0.224	LE7524	101.399	0.502	LE7526	86.038	560.117
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1494.897	0.293	LE7525	2257.995	0.298	LE7526	763.097	51.047
27	FSE/ORU Assy I/F Force Grid 653 Z axis	648.019	0.276	LE7525	852.966	0.435	LE7523	204.947	31.627
28	FSE/ORU Assy I/F Force Grid 654 Z axis	338.742	0.292	LE7525	320.748	0.393	LE7526	-17.995	-5.312
29	FSE/ORU Assy I/F Force Grid 655 X axis	921.793	0.293	LE7526	1365.697	0.405	LE7524	443.904	48.157
30	FSE/ORU Assy I/F Force Grid 655 Z axis	541.513	0.290	LE7525	742.222	0.417	LE7525	200.709	37.064
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1657.606	0.215	LE7523	1874.674	0.504	LE7526	217.068	13.095
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	570.289	0.217	LE7525	652.957	0.227	LE7523	82.668	14.496
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	398.422	0.216	LE7523	302.106	0.296	LE7526	-96.317	-24.174
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	336.255	0.310	LE7523	521.599	0.203	LE7523	185.344	55.120
35	FSE/ORU Assy Net Load Factor, X axis	1.718	0.293	LE7526	2.545	0.405	LE7524	0.827	48.157
36	FSE/ORU Assy Net Load Factor, Y axis	3.964	0.217	LE7521	4.110	0.283	LE7523	0.145	3.669
37	FSE/ORU Assy Net Load Factor, Z axis	1.064	0.186	LE7525	1.329	0.730	LE7523	0.265	24.876
38	FSE/ORU Assy Net Load Factor, RX axis	10.122	1.162	LE7520	43.166	0.436	LE7523	33.044	326.459
39	FSE/ORU Assy Net Load Factor, RY axis	14.031	0.138	LE7523	37.509	0.342	LE7526	23.478	167.327
40	FSE/ORU Assy Net Load Factor, RZ axis	12.762	0.216	LE7523	61.335	0.504	LE7526	48.573	380.593

Table D-6. Battery 2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.632	0.294	LE7526	2.278	0.396	LE7524	0.646	39.558
2	Net Load Factor - T2 (g)	4.281	0.283	LE7525	4.266	0.272	LE7523	-0.015	-0.340
3	Net Load Factor - T3 (g)	1.486	0.178	LE7525	1.646	0.191	LE7525	0.160	10.783
4	Net Load Factor - R1 (rad/sec^2)	11.722	0.237	LE7521	73.872	0.405	LE7525	62.150	530.186
5	Net Load Factor - R2 (rad/sec^2)	18.669	1.390	LE7520	33.167	1.248	LE7523	14.498	77.661
6	Net Load Factor - R3 (rad/sec^2)	13.088	0.128	LE7523	50.599	0.393	LE7524	37.511	286.609
7	GRID 653 - T2 (lbf)	1401.679	0.282	LE7525	1894.862	0.408	LE7525	493.182	35.185
8	GRID 653 - T3 (lbf)	554.371	0.282	LE7523	694.608	0.876	LE7523	140.237	25.297
9	GRID 654 - T3 (lbf)	343.524	0.282	LE7525	317.278	0.476	LE7523	-26.246	-7.640
10	GRID 655 - T1 (lbf)	875.845	0.294	LE7526	1222.315	0.396	LE7524	346.470	39.558
11	GRID 655 - T3 (lbf)	403.955	0.286	LE7525	641.152	0.396	LE7524	237.197	58.719
12	GRID 2183 - T2 (lbf)	1387.877	0.251	LE7526	2292.237	0.415	LE7523	904.360	65.161
13	GRID 2183 - T3 (lbf)	635.799	0.285	LE7525	659.077	0.421	LE7525	23.278	3.661
14	GRID 2184 - T3 (lbf)	275.330	0.250	LE7526	269.296	0.838	LE7523	-6.035	-2.192
15	GRID 2185 - T3 (lbf)	458.715	0.208	LE7523	652.356	0.211	LE7523	193.641	42.214
16	Net Inertial Acc - T1 (in/sec^2)	630.209	0.294	LE7526	879.509	0.396	LE7524	249.300	39.558
17	Net Inertial Acc - T2 (in/sec^2)	1652.758	0.283	LE7525	1647.141	0.272	LE7523	-5.617	-0.340
18	Net Inertial Acc - T3 (in/sec^2)	573.582	0.178	LE7525	635.434	0.191	LE7525	61.851	10.783
19	Net Inertial Acc - R1 (rad/sec^2)	11.722	0.237	LE7521	73.872	0.405	LE7525	62.150	530.186
20	Net Inertial Acc - R2 (rad/sec^2)	18.669	1.390	LE7520	33.167	1.248	LE7523	14.498	77.661
21	Net Inertial Acc - R3 (rad/sec^2)	13.088	0.128	LE7523	50.599	0.393	LE7524	37.511	286.609

Table D-7. Battery 2 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.534	0.298	LE7526	3.084	0.417	LE7523	1.549	100.968
2	FSE Net Load Factor, Y axis	4.208	0.287	LE7525	4.778	0.275	LE7525	0.570	13.550
3	FSE Net Load Factor, Z axis	1.767	0.180	LE7525	2.744	0.447	LE7525	0.977	55.289
4	FSE Net Load Factor, RX axis	17.087	0.308	LE7525	77.636	0.405	LE7525	60.548	354.350
5	FSE Net Load Factor, RY axis	30.600	1.367	LE7520	54.968	1.133	LE7523	24.369	79.636
6	FSE Net Load Factor, RZ axis	23.859	0.129	LE7523	80.180	0.417	LE7523	56.321	236.059
7	ORU I/F Force Grid 990 Z axis	127.606	0.298	LE7524	175.611	0.874	LE7523	48.006	37.620
8	ORU I/F Force Grid 991 Z axis	126.270	0.291	LE7526	209.762	0.441	LE7525	83.492	66.121
9	ORU I/F Force Grid 9998 X axis	319.078	0.297	LE7524	786.269	0.423	LE7525	467.191	146.419
10	ORU I/F Force Grid 9998 Z axis	494.652	0.284	LE7525	641.071	0.432	LE7523	146.419	29.600
11	ORU I/F Moment Grid 9998 RX axis	80.446	0.291	LE7526	252.738	0.423	LE7525	172.292	214.170
12	ORU I/F Moment Grid 9998 RY axis	1178.724	0.405	LE7524	1467.631	0.400	LE7524	288.907	24.510
13	ORU I/F Moment Grid 9998 RZ axis	103.888	0.251	LE7524	379.489	0.423	LE7525	275.602	265.287
14	ORU I/F Force Grid 9999 X axis	322.719	0.293	LE7526	724.642	0.392	LE7524	401.923	124.543
15	ORU I/F Force Grid 9999 Y axis	1641.906	0.281	LE7525	1635.846	0.272	LE7525	-6.061	-0.369
16	ORU I/F Force Grid 9999 Z axis	293.989	0.279	LE7523	401.823	0.405	LE7525	107.834	36.680
17	ORU I/F Moment Grid 9999 RX axis	828.174	0.282	LE7525	690.584	0.272	LE7525	-137.590	-16.614
18	ORU I/F Moment Grid 9999 RY axis	1048.286	0.292	LE7526	1631.084	0.393	LE7524	582.798	55.595
19	ORU I/F Moment Grid 9999 RZ axis	145.625	0.219	LE7523	392.791	0.392	LE7524	247.166	169.727
20	ORU Net Load Factor, X axis	1.718	0.293	LE7526	2.571	0.280	LE7524	0.853	49.639
21	ORU Net Load Factor, Y axis	4.517	0.281	LE7525	4.501	0.272	LE7525	-0.017	-0.369
22	ORU Net Load Factor, Z axis	1.515	0.176	LE7525	1.864	0.432	LE7523	0.349	23.022
23	ORU Net Load Factor, RX axis	12.696	0.494	LE7523	86.258	0.405	LE7525	73.562	579.409
24	ORU Net Load Factor, RY axis	18.773	0.104	LE7523	57.877	0.442	LE7525	39.104	208.304
25	ORU Net Load Factor, RZ axis	14.039	0.172	LE7523	82.798	0.405	LE7525	68.759	489.767
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1401.679	0.282	LE7525	1894.862	0.408	LE7525	493.182	35.185
27	FSE/ORU Assy I/F Force Grid 653 Z axis	554.371	0.282	LE7523	694.608	0.876	LE7523	140.237	25.297
28	FSE/ORU Assy I/F Force Grid 654 Z axis	343.524	0.282	LE7525	317.278	0.476	LE7523	-26.246	-7.640
29	FSE/ORU Assy I/F Force Grid 655 X axis	875.845	0.294	LE7526	1222.315	0.396	LE7524	346.470	39.558
30	FSE/ORU Assy I/F Force Grid 655 Z axis	403.955	0.286	LE7525	641.152	0.396	LE7524	237.197	58.719
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1387.877	0.251	LE7526	2292.237	0.415	LE7523	904.360	65.161
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	635.799	0.285	LE7525	659.077	0.421	LE7525	23.278	3.661
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	275.330	0.250	LE7526	269.296	0.838	LE7523	-6.035	-2.192
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	458.715	0.208	LE7523	652.356	0.211	LE7523	193.641	42.214
35	FSE/ORU Assy Net Load Factor, X axis	1.632	0.294	LE7526	2.278	0.396	LE7524	0.646	39.558
36	FSE/ORU Assy Net Load Factor, Y axis	4.281	0.283	LE7525	4.266	0.272	LE7523	-0.015	-0.340
37	FSE/ORU Assy Net Load Factor, Z axis	1.486	0.178	LE7525	1.646	0.191	LE7525	0.160	10.783
38	FSE/ORU Assy Net Load Factor, RX axis	11.722	0.237	LE7521	73.872	0.405	LE7525	62.150	530.186
39	FSE/ORU Assy Net Load Factor, RY axis	18.669	1.390	LE7520	33.167	1.248	LE7523	14.498	77.661
40	FSE/ORU Assy Net Load Factor, RZ axis	13.088	0.128	LE7523	50.599	0.393	LE7524	37.511	286.609

Table D-8. Battery 3 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.578	0.396	LE7524	2.473	0.297	LE7524	0.895	56.731
2	Net Load Factor - T2 (g)	3.867	0.289	LE7525	4.239	0.284	LE7525	0.372	9.629
3	Net Load Factor - T3 (g)	1.267	0.186	LE7525	2.028	0.190	LE7521	0.761	60.061
4	Net Load Factor - R1 (rad/sec^2)	15.127	1.162	LE7520	57.247	0.457	LE7524	42.120	278.445
5	Net Load Factor - R2 (rad/sec^2)	15.664	0.289	LE7523	35.945	0.413	LE7525	20.281	129.477
6	Net Load Factor - R3 (rad/sec^2)	12.028	0.131	LE7523	59.752	0.503	LE7524	47.725	396.795
7	GRID 653 - T2 (lbf)	1418.410	0.252	LE7524	2145.554	0.299	LE7526	727.143	51.265
8	GRID 653 - T3 (lbf)	502.570	0.289	LE7523	663.968	0.496	LE7524	161.398	32.114
9	GRID 654 - T3 (lbf)	300.728	0.291	LE7525	370.253	0.393	LE7524	69.525	23.119
10	GRID 655 - T1 (lbf)	846.737	0.396	LE7524	1327.102	0.297	LE7524	480.365	56.731
11	GRID 655 - T3 (lbf)	390.573	0.187	LE7525	642.221	0.346	LE7524	251.649	64.431
12	GRID 2183 - T2 (lbf)	1342.026	0.295	LE7523	2468.419	0.393	LE7524	1126.393	83.932
13	GRID 2183 - T3 (lbf)	587.798	0.277	LE7523	844.354	0.478	LE7524	256.556	43.647
14	GRID 2184 - T3 (lbf)	265.731	0.201	LE7523	399.631	0.392	LE7524	133.900	50.389
15	GRID 2185 - T3 (lbf)	481.806	0.294	LE7523	803.176	0.211	LE7523	321.370	66.701
16	Net Inertial Acc - T1 (in/sec^2)	609.264	0.396	LE7524	954.908	0.297	LE7524	345.643	56.731
17	Net Inertial Acc - T2 (in/sec^2)	1492.831	0.289	LE7525	1636.569	0.284	LE7525	143.738	9.629
18	Net Inertial Acc - T3 (in/sec^2)	489.088	0.186	LE7525	782.842	0.190	LE7521	293.753	60.061
19	Net Inertial Acc - R1 (rad/sec^2)	15.127	1.162	LE7520	57.247	0.457	LE7524	42.120	278.445
20	Net Inertial Acc - R2 (rad/sec^2)	15.664	0.289	LE7523	35.945	0.413	LE7525	20.281	129.477
21	Net Inertial Acc - R3 (rad/sec^2)	12.028	0.131	LE7523	59.752	0.503	LE7524	47.725	396.795

Table D-9. Battery 3 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.602	0.398	LE7524	3.357	0.485	LE7526	1.755	109.576
2	FSE Net Load Factor, Y axis	3.968	0.278	LE7525	5.159	0.213	LE7523	1.191	30.014
3	FSE Net Load Factor, Z axis	1.401	0.190	LE7525	2.744	0.322	LE7521	1.343	95.893
4	FSE Net Load Factor, RX axis	18.092	0.113	LE7525	51.913	0.457	LE7524	33.821	186.944
5	FSE Net Load Factor, RY axis	26.007	0.840	LE7520	63.227	0.399	LE7524	37.219	143.111
6	FSE Net Load Factor, RZ axis	17.131	0.399	LE7525	89.184	0.396	LE7524	72.053	420.603
7	ORU I/F Force Grid 990 Z axis	124.245	0.288	LE7524	238.626	0.391	LE7524	114.381	92.060
8	ORU I/F Force Grid 991 Z axis	131.648	0.303	LE7526	232.617	0.392	LE7524	100.969	76.696
9	ORU I/F Force Grid 9998 X axis	298.527	0.302	LE7526	782.039	0.431	LE7523	483.512	161.966
10	ORU I/F Force Grid 9998 Z axis	423.875	0.198	LE7523	650.002	0.272	LE7521	226.127	53.348
11	ORU I/F Moment Grid 9998 RX axis	119.545	0.287	LE7525	274.314	0.288	LE7525	154.769	129.465
12	ORU I/F Moment Grid 9998 RY axis	1583.011	0.424	LE7523	2541.610	0.432	LE7523	958.599	60.555
13	ORU I/F Moment Grid 9998 RZ axis	154.974	0.336	LE7524	347.451	0.470	LE7526	192.477	124.200
14	ORU I/F Force Grid 9999 X axis	308.842	0.393	LE7524	818.377	0.501	LE7524	509.535	164.982
15	ORU I/F Force Grid 9999 Y axis	1482.045	0.289	LE7525	1624.821	0.272	LE7521	142.777	9.634
16	ORU I/F Force Grid 9999 Z axis	264.233	1.640	LE7520	512.113	0.478	LE7524	247.880	93.811
17	ORU I/F Moment Grid 9999 RX axis	688.390	0.289	LE7525	723.483	0.272	LE7521	35.092	5.098
18	ORU I/F Moment Grid 9999 RY axis	1025.869	0.384	LE7526	2232.810	0.391	LE7524	1206.941	117.651
19	ORU I/F Moment Grid 9999 RZ axis	193.571	0.295	LE7523	414.518	0.414	LE7523	220.947	114.142
20	ORU Net Load Factor, X axis	1.603	0.294	LE7524	2.748	0.394	LE7524	1.145	71.402
21	ORU Net Load Factor, Y axis	4.078	0.289	LE7525	4.470	0.272	LE7521	0.393	9.634
22	ORU Net Load Factor, Z axis	1.388	0.185	LE7525	2.556	0.189	LE7521	1.167	84.072
23	ORU Net Load Factor, RX axis	15.047	1.186	LE7520	61.716	0.457	LE7524	46.670	310.159
24	ORU Net Load Factor, RY axis	21.127	0.287	LE7523	53.968	0.442	LE7523	32.841	155.444
25	ORU Net Load Factor, RZ axis	14.080	0.129	LE7523	108.907	0.501	LE7524	94.828	673.510
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1418.410	0.252	LE7524	2145.554	0.299	LE7526	727.143	51.265
27	FSE/ORU Assy I/F Force Grid 653 Z axis	502.570	0.289	LE7523	663.968	0.496	LE7524	161.398	32.114
28	FSE/ORU Assy I/F Force Grid 654 Z axis	300.728	0.291	LE7525	370.253	0.393	LE7524	69.525	23.119
29	FSE/ORU Assy I/F Force Grid 655 X axis	846.737	0.396	LE7524	1327.102	0.297	LE7524	480.365	56.731
30	FSE/ORU Assy I/F Force Grid 655 Z axis	390.573	0.187	LE7525	642.221	0.346	LE7524	251.649	64.431
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1342.026	0.295	LE7523	2468.419	0.393	LE7524	1126.393	83.932
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	587.798	0.277	LE7523	844.354	0.478	LE7524	256.556	43.647
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	265.731	0.201	LE7523	399.631	0.392	LE7524	133.900	50.389
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	481.806	0.294	LE7523	803.176	0.211	LE7523	321.370	66.701
35	FSE/ORU Assy Net Load Factor, X axis	1.578	0.396	LE7524	2.473	0.297	LE7524	0.895	56.731
36	FSE/ORU Assy Net Load Factor, Y axis	3.866	0.289	LE7525	4.239	0.284	LE7525	0.372	9.629
37	FSE/ORU Assy Net Load Factor, Z axis	1.267	0.186	LE7525	2.028	0.190	LE7521	0.761	60.061
38	FSE/ORU Assy Net Load Factor, RX axis	15.127	1.162	LE7520	57.247	0.457	LE7524	42.120	278.445
39	FSE/ORU Assy Net Load Factor, RY axis	15.664	0.289	LE7523	35.945	0.413	LE7525	20.281	129.477
40	FSE/ORU Assy Net Load Factor, RZ axis	12.028	0.131	LE7523	59.752	0.503	LE7524	47.725	396.795

Table D-10. Battery 4 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.407	0.291	LE7524	2.037	0.401	LE7524	0.630	44.790
2	Net Load Factor - T2 (g)	4.027	0.283	LE7523	3.933	0.276	LE7523	-0.094	-2.338
3	Net Load Factor - T3 (g)	1.834	1.162	LE7520	1.517	0.489	LE7523	-0.317	-17.283
4	Net Load Factor - R1 (rad/sec^2)	17.284	1.162	LE7520	49.404	0.555	LE7525	32.120	185.837
5	Net Load Factor - R2 (rad/sec^2)	17.814	1.266	LE7520	35.504	0.446	LE7523	17.690	99.305
6	Net Load Factor - R3 (rad/sec^2)	13.223	0.101	LE7523	49.134	0.451	LE7526	35.911	271.591
7	GRID 653 - T2 (lbf)	1476.298	0.211	LE7525	1885.490	0.399	LE7526	409.192	27.717
8	GRID 653 - T3 (lbf)	575.151	0.225	LE7523	747.038	0.437	LE7523	171.887	29.885
9	GRID 654 - T3 (lbf)	397.665	0.279	LE7525	329.704	0.297	LE7526	-67.961	-17.090
10	GRID 655 - T1 (lbf)	754.743	0.291	LE7524	1092.792	0.401	LE7524	338.048	44.790
11	GRID 655 - T3 (lbf)	364.153	1.161	LE7520	579.981	0.433	LE7521	215.828	59.269
12	GRID 2183 - T2 (lbf)	1416.139	0.196	LE7524	2054.656	0.299	LE7524	638.517	45.089
13	GRID 2183 - T3 (lbf)	616.096	0.274	LE7525	653.579	0.401	LE7526	37.483	6.084
14	GRID 2184 - T3 (lbf)	410.754	0.286	LE7523	371.746	0.298	LE7524	-39.008	-9.497
15	GRID 2185 - T3 (lbf)	559.027	1.265	LE7520	536.638	0.433	LE7523	-22.390	-4.005
16	Net Inertial Acc - T1 (in/sec^2)	543.070	0.291	LE7524	786.311	0.401	LE7524	243.240	44.790
17	Net Inertial Acc - T2 (in/sec^2)	1554.750	0.283	LE7523	1518.404	0.276	LE7523	-36.346	-2.338
18	Net Inertial Acc - T3 (in/sec^2)	708.022	1.162	LE7520	585.658	0.489	LE7523	-122.365	-17.283
19	Net Inertial Acc - R1 (rad/sec^2)	17.284	1.162	LE7520	49.404	0.555	LE7525	32.120	185.837
20	Net Inertial Acc - R2 (rad/sec^2)	17.814	1.266	LE7520	35.504	0.446	LE7523	17.690	99.305
21	Net Inertial Acc - R3 (rad/sec^2)	13.223	0.101	LE7523	49.134	0.451	LE7526	35.911	271.591

Table D-11. Battery 4 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.421	0.292	LE7524	3.244	0.401	LE7524	1.823	128.289
2	FSE Net Load Factor, Y axis	3.971	0.287	LE7523	5.012	0.492	LE7523	1.042	26.238
3	FSE Net Load Factor, Z axis	1.973	1.164	LE7520	2.953	1.544	LE7520	0.979	49.627
4	FSE Net Load Factor, RX axis	24.195	1.139	LE7520	59.153	1.213	LE7520	34.958	144.480
5	FSE Net Load Factor, RY axis	35.311	1.268	LE7520	55.965	0.447	LE7525	20.654	58.493
6	FSE Net Load Factor, RZ axis	18.435	0.103	LE7523	88.877	0.466	LE7526	70.442	382.109
7	ORU I/F Force Grid 990 Z axis	120.216	0.225	LE7523	175.929	0.410	LE7524	55.713	46.344
8	ORU I/F Force Grid 991 Z axis	131.066	0.211	LE7525	175.420	0.289	LE7526	44.354	33.841
9	ORU I/F Force Grid 9998 X axis	252.129	0.399	LE7526	715.701	0.434	LE7523	463.573	183.864
10	ORU I/F Force Grid 9998 Z axis	620.297	1.161	LE7520	581.024	1.541	LE7520	-39.274	-6.331
11	ORU I/F Moment Grid 9998 RX axis	121.640	0.299	LE7524	238.188	0.448	LE7524	116.548	95.814
12	ORU I/F Moment Grid 9998 RY axis	1043.336	0.188	LE7523	1533.150	0.435	LE7523	489.815	46.947
13	ORU I/F Moment Grid 9998 RZ axis	134.400	0.181	LE7525	340.592	0.434	LE7523	206.192	153.417
14	ORU I/F Force Grid 9999 X axis	311.280	0.288	LE7524	696.452	0.296	LE7524	385.172	123.738
15	ORU I/F Force Grid 9999 Y axis	1518.898	0.281	LE7523	1526.086	0.285	LE7523	7.188	0.473
16	ORU I/F Force Grid 9999 Z axis	277.124	0.217	LE7521	495.209	0.355	LE7525	218.085	78.696
17	ORU I/F Moment Grid 9999 RX axis	849.643	0.281	LE7523	785.845	0.434	LE7523	-63.798	-7.509
18	ORU I/F Moment Grid 9999 RY axis	886.460	0.397	LE7526	1486.749	0.296	LE7524	600.289	67.718
19	ORU I/F Moment Grid 9999 RZ axis	174.022	0.193	LE7523	301.607	0.486	LE7523	127.585	73.316
20	ORU Net Load Factor, X axis	1.428	0.289	LE7524	2.263	0.410	LE7523	0.835	58.484
21	ORU Net Load Factor, Y axis	4.179	0.281	LE7523	4.199	0.285	LE7523	0.020	0.473
22	ORU Net Load Factor, Z axis	1.798	1.161	LE7520	2.193	0.355	LE7525	0.395	21.958
23	ORU Net Load Factor, RX axis	15.130	1.164	LE7520	55.769	1.213	LE7520	40.638	268.585
24	ORU Net Load Factor, RY axis	25.958	0.132	LE7525	50.049	0.439	LE7523	24.091	92.807
25	ORU Net Load Factor, RZ axis	15.877	0.100	LE7523	89.733	0.435	LE7523	73.856	465.184
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1476.298	0.211	LE7525	1885.490	0.399	LE7526	409.192	27.717
27	FSE/ORU Assy I/F Force Grid 653 Z axis	575.151	0.225	LE7523	747.038	0.437	LE7523	171.887	29.885
28	FSE/ORU Assy I/F Force Grid 654 Z axis	397.665	0.279	LE7525	329.704	0.297	LE7526	-67.961	-17.090
29	FSE/ORU Assy I/F Force Grid 655 X axis	754.743	0.291	LE7524	1092.792	0.401	LE7524	338.048	44.790
30	FSE/ORU Assy I/F Force Grid 655 Z axis	364.153	1.161	LE7520	579.981	0.433	LE7521	215.828	59.269
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1416.139	0.196	LE7524	2054.656	0.299	LE7524	638.517	45.089
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	616.096	0.274	LE7525	653.579	0.401	LE7526	37.483	6.084
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	410.754	0.286	LE7523	371.746	0.298	LE7524	-39.008	-9.497
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	559.027	1.265	LE7520	536.638	0.433	LE7523	-22.390	-4.005
35	FSE/ORU Assy Net Load Factor, X axis	1.407	0.291	LE7524	2.037	0.401	LE7524	0.630	44.790
36	FSE/ORU Assy Net Load Factor, Y axis	4.027	0.283	LE7523	3.933	0.276	LE7523	-0.094	-2.338
37	FSE/ORU Assy Net Load Factor, Z axis	1.834	1.162	LE7520	1.517	0.489	LE7523	-0.317	-17.283
38	FSE/ORU Assy Net Load Factor, RX axis	17.284	1.162	LE7520	49.404	0.555	LE7525	32.120	185.837
39	FSE/ORU Assy Net Load Factor, RY axis	17.814	1.266	LE7520	35.504	0.446	LE7523	17.690	99.305
40	FSE/ORU Assy Net Load Factor, RZ axis	13.223	0.101	LE7523	49.134	0.451	LE7526	35.911	271.591

Table D-12. Battery 5 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.309	1.264	LE7520	2.128	0.300	LE7526	0.819	62.513
2	Net Load Factor - T2 (g)	4.075	0.276	LE7525	5.090	0.287	LE7521	1.015	24.914
3	Net Load Factor - T3 (g)	1.186	0.197	LE7525	1.599	0.493	LE7523	0.413	34.860
4	Net Load Factor - R1 (rad/sec^2)	11.287	0.277	LE7525	44.402	0.885	LE7523	33.115	293.376
5	Net Load Factor - R2 (rad/sec^2)	27.068	1.264	LE7520	36.702	0.459	LE7523	9.634	35.593
6	Net Load Factor - R3 (rad/sec^2)	13.849	0.129	LE7523	47.451	0.456	LE7524	33.602	242.641
7	GRID 653 - T2 (lbf)	1328.581	0.423	LE7525	2062.083	0.297	LE7526	733.502	55.209
8	GRID 653 - T3 (lbf)	686.783	0.213	LE7523	807.445	0.287	LE7521	120.662	17.569
9	GRID 654 - T3 (lbf)	362.762	0.279	LE7525	356.777	0.298	LE7526	-5.986	-1.650
10	GRID 655 - T1 (lbf)	702.574	1.264	LE7520	1141.774	0.300	LE7526	439.200	62.513
11	GRID 655 - T3 (lbf)	333.529	1.288	LE7520	617.374	0.335	LE7524	283.845	85.104
12	GRID 2183 - T2 (lbf)	1406.491	1.163	LE7520	1874.752	0.298	LE7524	468.261	33.293
13	GRID 2183 - T3 (lbf)	589.445	0.274	LE7525	826.261	0.428	LE7525	236.816	40.176
14	GRID 2184 - T3 (lbf)	394.575	1.163	LE7520	321.056	0.316	LE7524	-73.519	-18.632
15	GRID 2185 - T3 (lbf)	466.306	1.214	LE7520	618.317	0.885	LE7523	152.011	32.599
16	Net Inertial Acc - T1 (in/sec^2)	505.533	1.264	LE7520	821.556	0.300	LE7526	316.024	62.513
17	Net Inertial Acc - T2 (in/sec^2)	1573.181	0.276	LE7525	1965.119	0.287	LE7521	391.938	24.914
18	Net Inertial Acc - T3 (in/sec^2)	457.750	0.197	LE7525	617.320	0.493	LE7523	159.570	34.860
19	Net Inertial Acc - R1 (rad/sec^2)	11.287	0.277	LE7525	44.402	0.885	LE7523	33.115	293.376
20	Net Inertial Acc - R2 (rad/sec^2)	27.068	1.264	LE7520	36.702	0.459	LE7523	9.634	35.593
21	Net Inertial Acc - R3 (rad/sec^2)	13.849	0.129	LE7523	47.451	0.456	LE7524	33.602	242.641

Table D-13. Battery 5 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.304	1.265	LE7520	3.338	0.284	LE7526	2.035	156.088
2	FSE Net Load Factor, Y axis	4.090	0.281	LE7525	5.066	0.287	LE7521	0.977	23.880
3	FSE Net Load Factor, Z axis	1.389	0.201	LE7525	2.829	0.350	LE7525	1.440	103.639
4	FSE Net Load Factor, RX axis	15.102	0.133	LE7523	47.136	0.413	LE7523	32.034	212.127
5	FSE Net Load Factor, RY axis	48.322	1.242	LE7520	63.130	1.217	LE7520	14.807	30.642
6	FSE Net Load Factor, RZ axis	18.844	0.132	LE7523	77.548	0.481	LE7526	58.703	311.521
7	ORU I/F Force Grid 990 Z axis	162.194	1.161	LE7520	195.983	0.434	LE7523	33.789	20.833
8	ORU I/F Force Grid 991 Z axis	123.412	1.237	LE7520	191.086	0.329	LE7524	67.675	54.836
9	ORU I/F Force Grid 9998 X axis	239.619	0.397	LE7526	640.840	0.430	LE7523	401.221	167.441
10	ORU I/F Force Grid 9998 Z axis	464.560	0.276	LE7525	680.946	0.282	LE7525	216.386	46.579
11	ORU I/F Moment Grid 9998 RX axis	100.082	1.162	LE7520	228.989	0.353	LE7523	128.907	128.801
12	ORU I/F Moment Grid 9998 RY axis	736.285	0.288	LE7526	1381.837	0.432	LE7523	645.552	87.677
13	ORU I/F Moment Grid 9998 RZ axis	104.489	1.266	LE7520	343.215	0.430	LE7523	238.726	228.469
14	ORU I/F Force Grid 9999 X axis	263.011	1.162	LE7520	675.438	0.295	LE7524	412.427	156.810
15	ORU I/F Force Grid 9999 Y axis	1547.139	0.275	LE7525	1853.653	0.287	LE7521	306.513	19.812
16	ORU I/F Force Grid 9999 Z axis	336.096	0.217	LE7521	469.519	0.285	LE7521	133.424	39.698
17	ORU I/F Moment Grid 9999 RX axis	855.670	0.275	LE7525	843.243	0.283	LE7521	-12.428	-1.452
18	ORU I/F Moment Grid 9999 RY axis	1117.291	1.263	LE7520	1389.367	0.296	LE7526	272.076	24.351
19	ORU I/F Moment Grid 9999 RZ axis	70.419	0.349	LE7526	322.546	1.207	LE7520	252.126	358.036
20	ORU Net Load Factor, X axis	1.314	1.264	LE7520	2.501	0.295	LE7524	1.188	90.421
21	ORU Net Load Factor, Y axis	4.257	0.275	LE7525	5.100	0.287	LE7521	0.843	19.812
22	ORU Net Load Factor, Z axis	1.351	0.196	LE7525	1.807	0.341	LE7523	0.455	33.686
23	ORU Net Load Factor, RX axis	10.832	0.277	LE7525	50.411	0.413	LE7523	39.579	365.399
24	ORU Net Load Factor, RY axis	20.388	1.211	LE7520	65.951	0.441	LE7523	45.564	223.489
25	ORU Net Load Factor, RZ axis	16.099	0.127	LE7523	78.685	0.425	LE7525	62.586	388.743
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1328.581	0.423	LE7525	2062.083	0.297	LE7526	733.502	55.209
27	FSE/ORU Assy I/F Force Grid 653 Z axis	686.783	0.213	LE7523	807.445	0.287	LE7521	120.662	17.569
28	FSE/ORU Assy I/F Force Grid 654 Z axis	362.762	0.279	LE7525	356.777	0.298	LE7526	-5.986	-1.650
29	FSE/ORU Assy I/F Force Grid 655 X axis	702.574	1.264	LE7520	1141.774	0.300	LE7526	439.200	62.513
30	FSE/ORU Assy I/F Force Grid 655 Z axis	333.529	1.288	LE7520	617.374	0.335	LE7524	283.845	85.104
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1406.491	1.163	LE7520	1874.752	0.298	LE7524	468.261	33.293
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	589.445	0.274	LE7525	826.261	0.428	LE7525	236.816	40.176
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	394.575	1.163	LE7520	321.056	0.316	LE7524	-73.519	-18.632
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	466.306	1.214	LE7520	618.317	0.885	LE7523	152.011	32.599
35	FSE/ORU Assy Net Load Factor, X axis	1.309	1.264	LE7520	2.128	0.300	LE7526	0.819	62.513
36	FSE/ORU Assy Net Load Factor, Y axis	4.075	0.276	LE7525	5.090	0.287	LE7521	1.015	24.914
37	FSE/ORU Assy Net Load Factor, Z axis	1.186	0.197	LE7525	1.599	0.493	LE7523	0.413	34.860
38	FSE/ORU Assy Net Load Factor, RX axis	11.287	0.277	LE7525	44.402	0.885	LE7523	33.115	293.376
39	FSE/ORU Assy Net Load Factor, RY axis	27.068	1.264	LE7520	36.702	0.459	LE7523	9.634	35.593
40	FSE/ORU Assy Net Load Factor, RZ axis	13.849	0.129	LE7523	47.451	0.456	LE7524	33.602	242.641

Table D-14. Battery 6 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.338	0.401	LE7524	2.110	0.323	LE7525	0.772	57.715
2	Net Load Factor - T2 (g)	4.267	0.284	LE7525	4.608	0.280	LE7521	0.341	7.998
3	Net Load Factor - T3 (g)	1.932	1.187	LE7520	1.778	0.866	LE7520	-0.154	-7.977
4	Net Load Factor - R1 (rad/sec^2)	11.199	0.282	LE7525	51.411	0.431	LE7523	40.212	359.063
5	Net Load Factor - R2 (rad/sec^2)	18.859	1.265	LE7520	45.939	1.183	LE7520	27.080	143.589
6	Net Load Factor - R3 (rad/sec^2)	15.752	0.154	LE7523	51.047	0.477	LE7523	35.295	224.068
7	GRID 653 - T2 (lbf)	1235.439	0.199	LE7525	1876.246	0.321	LE7525	640.808	51.869
8	GRID 653 - T3 (lbf)	818.598	0.213	LE7523	820.818	0.288	LE7523	2.220	0.271
9	GRID 654 - T3 (lbf)	380.758	0.283	LE7525	328.806	1.199	LE7520	-51.952	-13.644
10	GRID 655 - T1 (lbf)	717.897	0.401	LE7524	1132.229	0.323	LE7525	414.332	57.715
11	GRID 655 - T3 (lbf)	469.961	1.290	LE7520	580.152	0.342	LE7524	110.191	23.447
12	GRID 2183 - T2 (lbf)	1620.370	0.281	LE7523	2260.977	0.279	LE7521	640.606	39.535
13	GRID 2183 - T3 (lbf)	499.619	0.281	LE7521	821.046	0.282	LE7521	321.427	64.334
14	GRID 2184 - T3 (lbf)	440.439	0.280	LE7523	447.387	0.279	LE7521	6.948	1.578
15	GRID 2185 - T3 (lbf)	334.321	0.285	LE7524	557.021	0.431	LE7523	222.699	66.612
16	Net Inertial Acc - T1 (in/sec^2)	516.558	0.401	LE7524	814.688	0.323	LE7525	298.130	57.715
17	Net Inertial Acc - T2 (in/sec^2)	1647.267	0.284	LE7525	1779.016	0.280	LE7521	131.748	7.998
18	Net Inertial Acc - T3 (in/sec^2)	746.003	1.187	LE7520	686.497	0.866	LE7520	-59.506	-7.977
19	Net Inertial Acc - R1 (rad/sec^2)	11.199	0.282	LE7525	51.411	0.431	LE7523	40.212	359.063
20	Net Inertial Acc - R2 (rad/sec^2)	18.859	1.265	LE7520	45.939	1.183	LE7520	27.080	143.589
21	Net Inertial Acc - R3 (rad/sec^2)	15.752	0.154	LE7523	51.047	0.477	LE7523	35.295	224.068

Table D-15. Battery 6 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.362	0.293	LE7526	3.385	0.342	LE7524	2.023	148.564
2	FSE Net Load Factor, Y axis	4.173	0.288	LE7525	5.344	0.474	LE7524	1.171	28.059
3	FSE Net Load Factor, Z axis	2.027	1.187	LE7520	2.679	0.442	LE7524	0.651	32.122
4	FSE Net Load Factor, RX axis	14.850	0.093	LE7525	55.785	0.838	LE7523	40.935	275.665
5	FSE Net Load Factor, RY axis	35.828	1.243	LE7520	66.902	1.187	LE7520	31.074	86.732
6	FSE Net Load Factor, RZ axis	27.318	0.155	LE7523	85.374	0.471	LE7524	58.057	212.524
7	ORU I/F Force Grid 990 Z axis	178.192	0.212	LE7523	174.726	0.291	LE7521	-3.466	-1.945
8	ORU I/F Force Grid 991 Z axis	120.363	0.409	LE7526	196.967	0.443	LE7524	76.603	63.643
9	ORU I/F Force Grid 9998 X axis	257.556	0.215	LE7523	733.676	0.429	LE7523	476.120	184.861
10	ORU I/F Force Grid 9998 Z axis	465.646	0.283	LE7525	665.415	0.273	LE7525	199.769	42.902
11	ORU I/F Moment Grid 9998 RX axis	121.306	0.426	LE7523	237.440	0.347	LE7521	116.133	95.736
12	ORU I/F Moment Grid 9998 RY axis	1280.537	0.168	LE7525	1527.312	1.184	LE7520	246.776	19.271
13	ORU I/F Moment Grid 9998 RZ axis	130.364	0.161	LE7523	427.517	0.429	LE7523	297.153	227.941
14	ORU I/F Force Grid 9999 X axis	277.884	0.150	LE7523	723.742	0.295	LE7524	445.858	160.448
15	ORU I/F Force Grid 9999 Y axis	1612.831	0.283	LE7525	1714.356	0.281	LE7521	101.525	6.295
16	ORU I/F Force Grid 9999 Z axis	362.042	0.214	LE7525	511.733	0.212	LE7525	149.692	41.346
17	ORU I/F Moment Grid 9999 RX axis	914.372	0.283	LE7525	872.767	0.430	LE7523	-41.606	-4.550
18	ORU I/F Moment Grid 9999 RY axis	979.549	0.213	LE7523	1567.922	0.319	LE7525	588.373	60.066
19	ORU I/F Moment Grid 9999 RZ axis	153.638	0.233	LE7524	380.470	0.429	LE7523	226.832	147.641
20	ORU Net Load Factor, X axis	1.377	0.400	LE7524	2.193	0.320	LE7525	0.816	59.264
21	ORU Net Load Factor, Y axis	4.437	0.283	LE7525	4.717	0.281	LE7521	0.279	6.295
22	ORU Net Load Factor, Z axis	1.896	1.186	LE7520	2.135	0.438	LE7524	0.238	12.575
23	ORU Net Load Factor, RX axis	11.145	0.284	LE7525	56.510	1.098	LE7520	45.366	407.067
24	ORU Net Load Factor, RY axis	26.184	0.122	LE7523	68.769	1.183	LE7520	42.585	162.635
25	ORU Net Load Factor, RZ axis	19.149	0.162	LE7523	97.399	0.429	LE7523	78.250	408.646
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1235.439	0.199	LE7525	1876.246	0.321	LE7525	640.808	51.869
27	FSE/ORU Assy I/F Force Grid 653 Z axis	818.598	0.213	LE7523	820.818	0.288	LE7523	2.220	0.271
28	FSE/ORU Assy I/F Force Grid 654 Z axis	380.758	0.283	LE7525	328.806	1.199	LE7520	-51.952	-13.644
29	FSE/ORU Assy I/F Force Grid 655 X axis	717.897	0.401	LE7524	1132.229	0.323	LE7525	414.332	57.715
30	FSE/ORU Assy I/F Force Grid 655 Z axis	469.961	1.290	LE7520	580.152	0.342	LE7524	110.191	23.447
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1620.370	0.281	LE7523	2260.977	0.279	LE7521	640.606	39.535
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	499.619	0.281	LE7521	821.046	0.282	LE7521	321.427	64.334
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	440.439	0.280	LE7523	447.387	0.279	LE7521	6.948	1.578
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	334.321	0.285	LE7524	557.021	0.431	LE7523	222.699	66.612
35	FSE/ORU Assy Net Load Factor, X axis	1.338	0.401	LE7524	2.110	0.323	LE7525	0.772	57.715
36	FSE/ORU Assy Net Load Factor, Y axis	4.266	0.284	LE7525	4.608	0.280	LE7521	0.341	7.998
37	FSE/ORU Assy Net Load Factor, Z axis	1.932	1.187	LE7520	1.778	0.866	LE7520	-0.154	-7.977
38	FSE/ORU Assy Net Load Factor, RX axis	11.199	0.282	LE7525	51.411	0.431	LE7523	40.212	359.063
39	FSE/ORU Assy Net Load Factor, RY axis	18.859	1.265	LE7520	45.939	1.183	LE7520	27.080	143.589
40	FSE/ORU Assy Net Load Factor, RZ axis	15.752	0.154	LE7523	51.047	0.477	LE7523	35.295	224.068

Table D-16. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	0.669	0.183	LE7525	0.879	0.207	LE7521	0.211	31.507
2	Net Load Factor - T2 (g)	1.268	0.290	LE7526	1.828	0.289	LE7524	0.561	44.215
3	Net Load Factor - T3 (g)	3.590	0.278	LE7523	3.916	0.280	LE7523	0.326	9.078
4	Net Load Factor - R1 (rad/sec^2)	3.177	0.147	LE7526	5.489	0.526	LE7524	2.312	72.788
5	Net Load Factor - R2 (rad/sec^2)	7.349	0.488	LE7523	9.223	0.498	LE7523	1.874	25.499
6	Net Load Factor - R3 (rad/sec^2)	3.230	1.313	LE7520	4.408	1.187	LE7520	1.179	36.490
7	GRID 1271 - T2 (lbf) [Orbiter IF]	8785.021	0.294	LE7526	8156.671	0.297	LE7526	-628.350	-7.153
8	GRID 6299 - T1 (lbf) [Battery 4 IF]	559.027	1.265	LE7520	536.638	0.433	LE7523	-22.390	-4.005
9	GRID 13067 - T1 (lbf) [Battery 4 IF]	410.754	0.286	LE7523	371.746	0.298	LE7524	-39.008	-9.497
10	GRID 13083 - T1 (lbf) [Battery 4 IF]	397.665	0.279	LE7525	329.704	0.297	LE7526	-67.961	-17.090
11	GRID 13115 - T1 (lbf) [Battery 5 IF]	394.575	1.163	LE7520	321.056	0.316	LE7524	-73.519	-18.632
12	GRID 13545 - T1 (lbf) [Battery 4 IF]	364.153	1.161	LE7520	579.981	0.433	LE7521	215.828	59.269
13	GRID 13545 - T2 (lbf) [Battery 4 IF]	754.743	0.291	LE7524	1092.792	0.401	LE7524	338.048	44.790
14	GRID 13576 - T1 (lbf) [Battery 5 IF]	466.306	1.214	LE7520	618.317	0.885	LE7523	152.011	32.599
15	GRID 16250 - T1 (lbf) [Battery 6 IF]	469.961	1.290	LE7520	580.152	0.342	LE7524	110.191	23.447
16	GRID 16250 - T2 (lbf) [Battery 6 IF]	717.897	0.401	LE7524	1132.229	0.323	LE7525	414.332	57.715
17	GRID 23028 - T1 (lbf) [Battery 6 IF]	380.758	0.283	LE7525	328.806	1.199	LE7520	-51.952	-13.644
18	GRID 23044 - T1 (lbf) [Battery 6 IF]	440.439	0.280	LE7523	447.387	0.279	LE7521	6.948	1.578
19	GRID 23076 - T1 (lbf) [Battery 5 IF]	362.762	0.279	LE7525	356.777	0.298	LE7526	-5.986	-1.650
20	GRID 23506 - T1 (lbf) [Battery 6 IF]	334.321	0.285	LE7524	557.021	0.431	LE7523	222.699	66.612
21	GRID 23537 - T1 (lbf) [Battery 5 IF]	333.529	1.288	LE7520	617.374	0.335	LE7524	283.845	85.104
22	GRID 23537 - T2 (lbf) [Battery 5 IF]	702.574	1.264	LE7520	1141.774	0.300	LE7526	439.200	62.513
23	GRID 37940 - T1 (lbf) [Battery 1 IF]	541.513	0.290	LE7525	742.222	0.417	LE7525	200.709	37.064
24	GRID 37940 - T2 (lbf) [Battery 1 IF]	921.793	0.293	LE7526	1365.697	0.405	LE7524	443.904	48.157
25	GRID 38067 - T1 (lbf) [Battery 1 IF]	336.255	0.310	LE7523	521.599	0.203	LE7523	185.344	55.120
26	GRID 38323 - T1 (lbf) [Battery 2 IF]	403.955	0.286	LE7525	641.152	0.396	LE7524	237.197	58.719
27	GRID 38323 - T2 (lbf) [Battery 2 IF]	875.845	0.294	LE7526	1222.315	0.396	LE7524	346.470	39.558
28	GRID 45767 - T1 (lbf) [Battery 3 IF]	481.806	0.294	LE7523	803.176	0.211	LE7523	321.370	66.701
29	GRID 45890 - T1 (lbf) [Battery 3 IF]	390.573	0.187	LE7525	642.221	0.346	LE7524	251.649	64.431
30	GRID 45890 - T2 (lbf) [Battery 3 IF]	846.737	0.396	LE7524	1327.102	0.297	LE7524	480.365	56.731
31	GRID 46151 - T1 (lbf) [Battery 2 IF]	458.715	0.208	LE7523	652.356	0.211	LE7523	193.641	42.214
32	GRID 53578 - T1 (lbf) [Battery 4 IF]	616.096	0.274	LE7525	653.579	0.401	LE7526	37.483	6.084
33	GRID 53578 - T3 (lbf) [Battery 4 IF]	1416.139	0.196	LE7524	2054.656	0.299	LE7524	638.517	45.089
34	GRID 53701 - T1 (lbf) [Battery 4 IF]	575.151	0.225	LE7523	747.038	0.437	LE7523	171.887	29.885
35	GRID 53701 - T3 (lbf) [Battery 4 IF]	1476.298	0.211	LE7525	1885.490	0.399	LE7526	409.192	27.717
36	GRID 53956 - T1 (lbf) [Battery 5 IF]	589.445	0.274	LE7525	826.261	0.428	LE7525	236.816	40.176
37	GRID 53956 - T3 (lbf) [Battery 5 IF]	1406.491	1.163	LE7520	1874.752	0.298	LE7524	468.261	33.293
38	GRID 61404 - T1 (lbf) [Battery 6 IF]	818.598	0.213	LE7523	820.818	0.288	LE7523	2.220	0.271
39	GRID 61404 - T3 (lbf) [Battery 6 IF]	1235.439	0.199	LE7525	1876.246	0.321	LE7525	640.808	51.869
40	GRID 61527 - T1 (lbf) [Battery 6 IF]	499.619	0.281	LE7521	821.046	0.282	LE7521	321.427	64.334
41	GRID 61527 - T3 (lbf) [Battery 6 IF]	1620.370	0.281	LE7523	2260.977	0.279	LE7521	640.606	39.535
42	GRID 61788 - T1 (lbf) [Battery 5 IF]	686.783	0.213	LE7523	807.445	0.287	LE7521	120.662	17.569
43	GRID 61788 - T3 (lbf) [Battery 5 IF]	1328.581	0.423	LE7525	2062.083	0.297	LE7526	733.502	55.209
44	GRID 62589 - T1 (lbf) [Battery 3 IF]	265.731	0.201	LE7523	399.631	0.392	LE7524	133.900	50.389
45	GRID 62774 - T1 (lbf) [Battery 3 IF]	300.728	0.291	LE7525	370.253	0.393	LE7524	69.525	23.119
46	GRID 63043 - T1 (lbf) [Battery 3 IF]	587.798	0.277	LE7523	844.354	0.478	LE7524	256.556	43.647
47	GRID 63043 - T3 (lbf) [Battery 3 IF]	1342.026	0.295	LE7523	2468.419	0.393	LE7524	1126.393	83.932
48	GRID 63343 - T1 (lbf) [Battery 3 IF]	502.570	0.289	LE7523	663.968	0.496	LE7524	161.398	32.114
49	GRID 63343 - T3 (lbf) [Battery 3 IF]	1418.410	0.252	LE7524	2145.554	0.299	LE7526	727.143	51.265
50	GRID 63345 - T1 (lbf) [Battery 2 IF]	275.330	0.250	LE7526	269.296	0.838	LE7523	-6.035	-2.192

Table D-16. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 - T1 (lbf) [Battery 2 IF]	343.524	0.282	LE7525	317.278	0.476	LE7523	-26.246	-7.640
52	GRID 63942 - T1 (lbf) [Battery 2 IF]	635.799	0.285	LE7525	659.077	0.421	LE7525	23.278	3.661
53	GRID 63942 - T3 (lbf) [Battery 2 IF]	1387.877	0.251	LE7526	2292.237	0.415	LE7523	904.360	65.161
54	GRID 64244 - T1 (lbf) [Battery 2 IF]	554.371	0.282	LE7523	694.608	0.876	LE7523	140.237	25.297
55	GRID 64244 - T3 (lbf) [Battery 2 IF]	1401.679	0.282	LE7525	1894.862	0.408	LE7525	493.182	35.185
56	GRID 64246 - T1 (lbf) [Battery 1 IF]	398.422	0.216	LE7523	302.106	0.296	LE7526	-96.317	-24.174
57	GRID 64540 - T1 (lbf) [Battery 1 IF]	338.742	0.292	LE7525	320.748	0.393	LE7526	-17.995	-5.312
58	GRID 64814 - T1 (lbf) [Battery 1 IF]	570.289	0.217	LE7525	652.957	0.227	LE7523	82.668	14.496
59	GRID 64814 - T3 (lbf) [Battery 1 IF]	1657.606	0.215	LE7523	1874.674	0.504	LE7526	217.068	13.095
60	GRID 65003 - T1 (lbf) [Battery 1 IF]	648.019	0.276	LE7525	852.966	0.435	LE7523	204.947	31.627
61	GRID 65003 - T3 (lbf) [Battery 1 IF]	1494.897	0.293	LE7525	2257.995	0.298	LE7526	763.097	51.047
62	GRID 111869 - T3 (lbf) [Orbiter IF]	2865.999	0.278	LE7525	3006.241	0.426	LE7523	140.242	4.893
63	GRID 111885 - T1 (lbf) [Orbiter IF]	2794.165	0.183	LE7525	2734.481	0.179	LE7525	-59.685	-2.136
64	GRID 111885 - T3 (lbf) [Orbiter IF]	13159.645	0.214	LE7523	13191.560	0.215	LE7523	31.915	0.243
65	GRID 113369 - T3 (lbf) [Orbiter IF]	2484.259	1.186	LE7520	2517.849	0.434	LE7524	33.590	1.352
66	GRID 113385 - T1 (lbf) [Orbiter IF]	2752.259	0.184	LE7525	3119.477	0.184	LE7525	367.218	13.342
67	GRID 113385 - T3 (lbf) [Orbiter IF]	14302.593	0.215	LE7525	14896.531	0.216	LE7525	593.938	4.153
68	GRID 150301 - T1 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
69	GRID 150301 - T2 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
70	GRID 150302 - T1 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
71	GRID 150303 - T2 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
72	GRID 150311 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
73	GRID 150312 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
74	GRID 150313 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
75	GRID 150314 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
76	GRID 160301 - T1 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
77	GRID 160301 - T2 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
78	GRID 160302 - T1 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
79	GRID 160303 - T2 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
80	GRID 160311 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
81	GRID 160312 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
82	GRID 160313 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
83	GRID 160314 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
84	GRID 170301 - T1 (lbf) [SGANT-IA IF]	762.659	0.298	LE7526	1000.895	0.799	LE7520	238.237	31.238
85	GRID 170301 - T2 (lbf) [SGANT-IA IF]	2061.974	0.214	LE7525	2651.395	0.222	LE7525	589.421	28.585
86	GRID 170302 - T1 (lbf) [SGANT-IA IF]	549.556	0.426	LE7523	674.732	0.939	LE7523	125.177	22.778
87	GRID 170303 - T2 (lbf) [SGANT-IA IF]	1512.557	0.281	LE7523	1410.887	0.284	LE7525	-101.670	-6.722
88	GRID 170311 - T3 (lbf) [SGANT-IA IF]	1618.630	1.693	LE7520	1973.474	1.161	LE7520	354.844	21.923
89	GRID 170312 - T3 (lbf) [SGANT-IA IF]	1197.724	0.213	LE7525	1438.161	0.219	LE7521	240.438	20.075
90	GRID 170313 - T3 (lbf) [SGANT-IA IF]	1110.381	1.213	LE7520	1112.222	0.290	LE7525	1.841	0.166
91	GRID 170314 - T3 (lbf) [SGANT-IA IF]	841.636	0.282	LE7525	955.841	0.281	LE7523	114.205	13.569
92	Net Inertial Acc - T1 (in/sec^2)	258.150	0.183	LE7525	339.484	0.207	LE7521	81.335	31.507
93	Net Inertial Acc - T2 (in/sec^2)	489.469	0.290	LE7526	705.888	0.289	LE7524	216.419	44.215
94	Net Inertial Acc - T3 (in/sec^2)	1386.219	0.278	LE7523	1512.054	0.280	LE7523	125.835	9.078
95	Net Inertial Acc - R1 (rad/sec^2)	3.177	0.147	LE7526	5.489	0.526	LE7524	2.312	72.788
96	Net Inertial Acc - R2 (rad/sec^2)	7.349	0.488	LE7523	9.223	0.498	LE7523	1.874	25.499
97	Net Inertial Acc - R3 (rad/sec^2)	3.230	1.313	LE7520	4.408	1.187	LE7520	1.179	36.490

Table D-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
1	NLF TX	258.169	0.183	LE7525	339.599	0.207	LE7521	81.430	31.541
2	NLF TY	489.529	0.290	LE7526	705.909	0.289	LE7524	216.380	44.202
3	NLF TZ	1385.935	0.278	LE7523	1511.915	0.280	LE7523	125.980	9.090
4	NLF RX	3.177	0.147	LE7526	5.489	0.526	LE7524	2.312	72.788
5	NLF RY	7.349	0.488	LE7523	9.223	0.498	LE7523	1.874	25.499
6	NLF RZ	3.230	1.313	LE7520	4.408	1.187	LE7520	1.179	36.490
7	Keel Grid 1271 DOF 2 I/F force	8785.021	0.294	LE7526	8156.671	0.297	LE7526	-628.350	-7.153
8	GRID 6299 TX NHP FORCE	559.027	1.265	LE7520	536.638	0.433	LE7523	-22.390	-4.005
9	GRID 13067 TX NHP FORCE	410.754	0.286	LE7523	371.746	0.298	LE7524	-39.008	-9.497
10	GRID 13083 TX NHP FORCE	397.665	0.279	LE7525	329.704	0.297	LE7526	-67.961	-17.090
11	GRID 13115 TX NHP FORCE	394.575	1.163	LE7520	321.056	0.316	LE7524	-73.519	-18.632
12	GRID 13545 TX NHP FORCE	364.153	1.161	LE7520	579.981	0.433	LE7521	215.828	59.269
13	GRID 13545 TY NHP FORCE	754.743	0.291	LE7524	1092.792	0.401	LE7524	338.048	44.790
14	GRID 13576 TX NHP FORCE	466.306	1.214	LE7520	618.317	0.885	LE7523	152.011	32.599
15	GRID 16250 TX NHP FORCE	469.961	1.290	LE7520	580.152	0.342	LE7524	110.191	23.447
16	GRID 16250 TY NHP FORCE	717.897	0.401	LE7524	1132.229	0.323	LE7525	414.332	57.715
17	GRID 23028 TX NHP FORCE	380.758	0.283	LE7525	328.806	1.199	LE7520	-51.952	-13.644
18	GRID 23044 TX NHP FORCE	440.439	0.280	LE7523	447.387	0.279	LE7521	6.948	1.578
19	GRID 23076 TX NHP FORCE	362.762	0.279	LE7525	356.777	0.298	LE7526	-5.986	-1.650
20	GRID 23506 TX NHP FORCE	334.321	0.285	LE7524	557.021	0.431	LE7523	222.699	66.612
21	GRID 23537 TX NHP FORCE	333.529	1.288	LE7520	617.374	0.335	LE7524	283.845	85.104
22	GRID 23537 TY NHP FORCE	702.574	1.264	LE7520	1141.774	0.300	LE7526	439.200	62.513
23	GRID 37940 TX NHP FORCE	541.513	0.290	LE7525	742.222	0.417	LE7525	200.709	37.064
24	GRID 37940 TY NHP FORCE	921.793	0.293	LE7526	1365.697	0.405	LE7524	443.904	48.157
25	GRID 38067 TX NHP FORCE	336.255	0.310	LE7523	521.599	0.203	LE7523	185.344	55.120
26	GRID 38323 TX NHP FORCE	403.955	0.286	LE7525	641.152	0.396	LE7524	237.197	58.719
27	GRID 38323 TY NHP FORCE	875.845	0.294	LE7526	1222.315	0.396	LE7524	346.470	39.558
28	GRID 45767 TX NHP FORCE	481.806	0.294	LE7523	803.176	0.211	LE7523	321.370	66.701
29	GRID 45890 TX NHP FORCE	390.573	0.187	LE7525	642.221	0.346	LE7524	251.649	64.431
30	GRID 45890 TY NHP FORCE	846.737	0.396	LE7524	1327.102	0.297	LE7524	480.365	56.731
31	GRID 46151 TX NHP FORCE	458.715	0.208	LE7523	652.356	0.211	LE7523	193.641	42.214
32	GRID 53578 TX NHP FORCE	616.096	0.274	LE7525	653.579	0.401	LE7526	37.483	6.084
33	GRID 53578 TZ NHP FORCE	1416.139	0.196	LE7524	2054.656	0.299	LE7524	638.517	45.089
34	GRID 53701 TX NHP FORCE	575.151	0.225	LE7523	747.038	0.437	LE7523	171.887	29.885
35	GRID 53701 TZ NHP FORCE	1476.298	0.211	LE7525	1885.490	0.399	LE7526	409.192	27.717
36	GRID 53956 TX NHP FORCE	589.445	0.274	LE7525	826.261	0.428	LE7525	236.816	40.176
37	GRID 53956 TZ NHP FORCE	1406.491	1.163	LE7520	1874.752	0.298	LE7524	468.261	33.293
38	GRID 61404 TX NHP FORCE	818.598	0.213	LE7523	820.818	0.288	LE7523	2.220	0.271
39	GRID 61404 TZ NHP FORCE	1235.439	0.199	LE7525	1876.246	0.321	LE7525	640.808	51.869
40	GRID 61527 TX NHP FORCE	499.619	0.281	LE7521	821.046	0.282	LE7521	321.427	64.334
41	GRID 61527 TZ NHP FORCE	1620.370	0.281	LE7523	2260.977	0.279	LE7521	640.606	39.535
42	GRID 61788 TX NHP FORCE	686.783	0.213	LE7523	807.445	0.287	LE7521	120.662	17.569
43	GRID 61788 TZ NHP FORCE	1328.581	0.423	LE7525	2062.083	0.297	LE7526	733.502	55.209
44	GRID 62589 TX NHP FORCE	265.731	0.201	LE7523	399.631	0.392	LE7524	133.900	50.389
45	GRID 62774 TX NHP FORCE	300.728	0.291	LE7525	370.253	0.393	LE7524	69.525	23.119
46	GRID 63043 TX NHP FORCE	587.798	0.277	LE7523	844.354	0.478	LE7524	256.556	43.647
47	GRID 63043 TZ NHP FORCE	1342.026	0.295	LE7523	2468.419	0.393	LE7524	1126.393	83.932
48	GRID 63343 TX NHP FORCE	502.570	0.289	LE7523	663.968	0.496	LE7524	161.398	32.114
49	GRID 63343 TZ NHP FORCE	1418.410	0.252	LE7524	2145.554	0.299	LE7526	727.143	51.265
50	GRID 63345 TX NHP FORCE	275.330	0.250	LE7526	269.296	0.838	LE7523	-6.035	-2.192

Table D-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 TX NHP FORCE	343.524	0.282	LE7525	317.278	0.476	LE7523	-26.246	-7.640
52	GRID 63942 TX NHP FORCE	635.799	0.285	LE7525	659.077	0.421	LE7525	23.278	3.661
53	GRID 63942 TZ NHP FORCE	1387.877	0.251	LE7526	2292.237	0.415	LE7523	904.360	65.161
54	GRID 64244 TX NHP FORCE	554.371	0.282	LE7523	694.608	0.876	LE7523	140.237	25.297
55	GRID 64244 TZ NHP FORCE	1401.679	0.282	LE7525	1894.862	0.408	LE7525	493.182	35.185
56	GRID 64246 TX NHP FORCE	398.422	0.216	LE7523	302.106	0.296	LE7526	-96.317	-24.174
57	GRID 64540 TX NHP FORCE	338.742	0.292	LE7525	320.748	0.393	LE7526	-17.995	-5.312
58	GRID 64814 TX NHP FORCE	570.289	0.217	LE7525	652.957	0.227	LE7523	82.668	14.496
59	GRID 64814 TZ NHP FORCE	1657.606	0.215	LE7523	1874.674	0.504	LE7526	217.068	13.095
60	GRID 65003 TX NHP FORCE	648.019	0.276	LE7525	852.966	0.435	LE7523	204.947	31.627
61	GRID 65003 TZ NHP FORCE	1494.897	0.293	LE7525	2257.995	0.298	LE7526	763.097	51.047
62	Secondary -Y: 111869 DOF 3 IF FORCE	2865.999	0.278	LE7525	3006.241	0.426	LE7523	140.242	4.893
63	Primary -Y: 111885 DOF 1 IF FORCE	2794.165	0.183	LE7525	2734.481	0.179	LE7525	-59.685	-2.136
64	Primary -Y: 111885 DOF 3 IF FORCE	13159.645	0.214	LE7523	13191.560	0.215	LE7523	31.915	0.243
65	Secondary +Y: 113369 DOF 3 IF FORCE	2484.259	1.186	LE7520	2517.849	0.434	LE7524	33.590	1.352
66	Primary +Y: 113385 DOF 1 IF FORCE	2752.259	0.184	LE7525	3119.477	0.184	LE7525	367.218	13.342
67	Primary +Y: 113385 DOF 3 IF FORCE	14302.593	0.215	LE7525	14896.531	0.216	LE7525	593.938	4.153
68	GRID 150301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
69	GRID 150301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
70	GRID 150302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
71	GRID 150303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
72	GRID 150311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
73	GRID 150312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
74	GRID 150313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
75	GRID 150314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
76	GRID 160301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
77	GRID 160301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
78	GRID 160302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
79	GRID 160303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
80	GRID 160311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
81	GRID 160312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
82	GRID 160313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
83	GRID 160314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
84	GRID 170301 TX FRAM IF FORCE	762.659	0.298	LE7526	1000.895	0.799	LE7520	238.237	31.238
85	GRID 170301 TY FRAM IF FORCE	2061.974	0.214	LE7525	2651.395	0.222	LE7525	589.421	28.585
86	GRID 170302 TX FRAM IF FORCE	549.556	0.426	LE7523	674.732	0.939	LE7523	125.177	22.778
87	GRID 170303 TY FRAM IF FORCE	1512.557	0.281	LE7523	1410.887	0.284	LE7525	-101.670	-6.722
88	GRID 170311 TZ FRAM IF FORCE	1618.630	1.693	LE7520	1973.474	1.161	LE7520	354.844	21.923
89	GRID 170312 TZ FRAM IF FORCE	1197.724	0.213	LE7525	1438.161	0.219	LE7521	240.438	20.075
90	GRID 170313 TZ FRAM IF FORCE	1110.381	1.213	LE7520	1112.222	0.290	LE7525	1.841	0.166
91	GRID 170314 TZ FRAM IF FORCE	841.636	0.282	LE7525	955.841	0.281	LE7523	114.205	13.569
92	GRID 200201 Fuse-1 Acceleration TX	1053.161	0.170	LE7525	2754.208	0.415	LE7525	1701.047	161.518
93	GRID 200201 Fuse-1 Acceleration TY	4195.898	0.298	LE7524	5774.436	0.400	LE7524	1578.538	37.621
94	GRID 200201 Fuse-1 Acceleration TZ	1046.813	0.282	LE7523	2479.732	0.556	LE7524	1432.919	136.884
95	GRID 200201 Fuse-1 Acceleration RX	1129.355	1.997	LE7520	1303.073	0.836	LE7525	173.718	15.382
96	GRID 200201 Fuse-1 Acceleration RY	289.531	1.970	LE7520	487.357	0.364	LE7525	197.827	68.327
97	GRID 200201 Fuse-1 Acceleration RZ	667.425	2.000	LE7520	829.519	0.547	LE7524	162.094	24.286
98	GRID 200202 Fuse-2 Acceleration TX	6812.108	1.967	LE7520	7489.537	1.309	LE7523	677.429	9.944
99	GRID 200202 Fuse-2 Acceleration TY	2859.388	0.291	LE7526	4041.169	0.442	LE7523	1181.781	41.330
100	GRID 200202 Fuse-2 Acceleration TZ	3295.279	0.279	LE7523	4049.976	0.292	LE7521	754.697	22.902

Table D-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
101	GRID 200202 Fuse-2 Acceleration RX	88.869	0.095	LE7523	205.660	0.331	LE7526	116.792	131.421
102	GRID 200202 Fuse-2 Acceleration RY	344.307	1.971	LE7520	489.240	0.401	LE7524	144.933	42.094
103	GRID 200202 Fuse-2 Acceleration RZ	44.144	0.145	LE7523	269.680	0.489	LE7523	225.536	510.907
104	GRID 200301 PVGF-1 Acceleration TX	698.482	0.485	LE7524	2092.593	0.395	LE7526	1394.111	199.592
105	GRID 200301 PVGF-1 Acceleration TY	861.545	0.287	LE7526	3225.919	0.495	LE7523	2364.374	274.434
106	GRID 200301 PVGF-1 Acceleration TZ	3341.575	1.563	LE7520	6773.887	1.533	LE7520	3432.312	102.715
107	GRID 200301 PVGF-1 Acceleration RX	135.315	0.229	LE7523	483.692	0.462	LE7524	348.377	257.457
108	GRID 200301 PVGF-1 Acceleration RY	40.796	0.149	LE7523	306.716	0.553	LE7524	265.920	651.832
109	GRID 200301 PVGF-1 Acceleration RZ	517.261	0.139	LE7523	1013.717	0.510	LE7524	496.455	95.978
110	GRID 200302 PVGF-2 Acceleration TX	657.235	0.487	LE7523	1635.946	0.503	LE7525	978.711	148.914
111	GRID 200302 PVGF-2 Acceleration TY	2461.936	1.989	LE7520	4025.256	1.078	LE7520	1563.320	63.500
112	GRID 200302 PVGF-2 Acceleration TZ	1735.737	0.279	LE7525	2951.537	0.443	LE7521	1215.800	70.045
113	GRID 200302 PVGF-2 Acceleration RX	264.653	1.949	LE7520	539.541	0.901	LE7523	274.888	103.867
114	GRID 200302 PVGF-2 Acceleration RY	74.433	0.204	LE7525	529.749	0.438	LE7523	455.316	611.715
115	GRID 200302 PVGF-2 Acceleration RZ	588.262	1.986	LE7520	810.998	0.901	LE7523	222.736	37.863
116	Grid 504878 PDU Acceleration TX	1044.410	0.280	LE7523	2753.699	0.541	LE7524	1709.289	163.661
117	Grid 504878 PDU Acceleration TY	1019.330	0.296	LE7524	3246.042	0.371	LE7525	2226.712	218.448
118	Grid 504878 PDU Acceleration TZ	2084.363	1.835	LE7520	6048.062	0.841	LE7523	3963.699	190.164
119	Grid 504878 PDU Acceleration RX	934.693	2.000	LE7520	1242.088	0.921	LE7523	307.395	32.887
120	Grid 504878 PDU Acceleration RY	243.053	0.110	LE7523	479.855	0.541	LE7524	236.802	97.428
121	Grid 504878 PDU Acceleration RZ	68.595	0.220	LE7524	156.839	0.665	LE7524	88.245	128.647
122	Element Force CBAR 27000 Shear 1	957.654	0.209	LE7523	958.485	0.211	LE7523	0.831	0.087
123	Element Force CBAR 27000 Shear 2	12088.443	0.277	LE7525	12154.638	0.279	LE7525	66.194	0.548
124	Element Force CBAR 27001 Shear 1	875.168	1.477	LE7525	874.530	0.391	LE7525	-0.638	-0.073
125	Element Force CBAR 27001 Shear 2	1145.164	0.277	LE7525	1167.249	0.282	LE7525	22.085	1.929
126	Element Force CBAR 27002 Shear 1	293.329	0.290	LE7525	305.201	0.400	LE7526	11.872	4.047
127	Element Force CBAR 27002 Shear 2	1010.616	0.277	LE7525	1031.137	0.279	LE7525	20.522	2.031
128	Element Force CBAR 27003 Shear 1	302.295	0.212	LE7523	307.300	0.279	LE7525	5.005	1.656
129	Element Force CBAR 27003 Shear 2	1039.720	1.638	LE7520	1046.395	0.277	LE7525	6.675	0.642
130	Element Force CBAR 27004 Shear 1	267.802	0.212	LE7523	279.345	0.286	LE7523	11.543	4.310
131	Element Force CBAR 27004 Shear 2	1056.369	1.639	LE7520	1041.410	0.277	LE7525	-14.959	-1.416
132	Element Force CBAR 27005 Shear 1	200.230	0.277	LE7525	221.795	0.284	LE7525	21.565	10.770
133	Element Force CBAR 27005 Shear 2	1030.333	1.638	LE7520	979.323	0.272	LE7525	-51.010	-4.951
134	Element Force CBAR 27006 Tension	8089.865	0.277	LE7525	8133.864	0.279	LE7525	43.999	0.544
135	Element Force CBAR 27007 Tension	6859.206	0.277	LE7525	6883.626	0.279	LE7525	24.420	0.356
136	Element Force CBAR 27008 Tension	5629.107	0.277	LE7525	5650.406	0.280	LE7525	21.299	0.378
137	Element Force CBAR 27009 Tension	4462.304	0.277	LE7525	4482.546	0.280	LE7525	20.242	0.454
138	Element Force CBAR 27010 Tension	3529.328	0.277	LE7525	3651.334	0.468	LE7526	122.006	3.457
139	Element Force CBAR 27011 Tension	2314.041	1.499	LE7524	2423.838	0.876	LE7520	109.796	4.745
140	Element Force CBAR 27012 Tension	2516.573	1.500	LE7524	2653.519	0.890	LE7523	136.946	5.442
141	Element Force CBAR 27013 Tension	1523.150	1.613	LE7520	1485.554	0.582	LE7526	-37.596	-2.468
142	Element Force CBAR 27014 Tension	2007.930	1.904	LE7520	2143.614	1.334	LE7520	135.684	6.757
143	Element Force CBAR 27015 Tension	787.121	1.613	LE7520	859.050	0.576	LE7526	71.929	9.138
144	Element Force CBAR 27016 Tension	1409.515	1.638	LE7520	1569.130	1.334	LE7520	159.615	11.324
145	Element Force CBAR 27017 Tension	582.946	0.208	LE7523	668.069	0.350	LE7523	85.123	14.602
146	Element Force CBAR 27018 Shear 1	1795.203	1.161	LE7520	1791.289	0.281	LE7523	-3.914	-0.218
147	Element Force CBAR 27018 Shear 2	9386.315	0.588	LE7526	9277.126	0.400	LE7525	-109.189	-1.163
148	Element Force CBAR 27019 Shear 1	887.407	0.279	LE7525	895.301	0.285	LE7525	7.894	0.890
149	Element Force CBAR 27019 Shear 2	1362.388	0.393	LE7525	1346.833	0.390	LE7525	-15.555	-1.142
150	Element Force CBAR 27020 Shear 1	80.693	0.257	LE7524	165.740	0.486	LE7523	85.048	105.397

Table D-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
151	Element Force CBAR 27020 Shear 2	969.615	0.392	LE7525	971.324	0.394	LE7525	1.709	0.176
152	Element Force CBAR 27021 Shear 1	223.560	0.271	LE7523	316.426	0.316	LE7526	92.866	41.540
153	Element Force CBAR 27021 Shear 2	917.187	1.614	LE7520	922.141	0.393	LE7525	4.954	0.540
154	Element Force CBAR 27022 Shear 1	299.024	0.186	LE7525	342.135	0.804	LE7525	43.111	14.417
155	Element Force CBAR 27022 Shear 2	867.540	1.614	LE7520	854.941	0.394	LE7525	-12.599	-1.452
156	Element Force CBAR 27023 Shear 1	60.008	0.326	LE7523	145.210	1.674	LE7520	85.202	141.984
157	Element Force CBAR 27023 Shear 2	935.134	1.614	LE7520	896.574	1.616	LE7520	-38.560	-4.124
158	Element Force CBAR 27024 Tension	6105.907	1.475	LE7525	5982.390	0.401	LE7525	-123.518	-2.023
159	Element Force CBAR 27025 Tension	6301.612	0.588	LE7526	6178.515	0.401	LE7525	-123.097	-1.953
160	Element Force CBAR 27026 Tension	6222.226	1.474	LE7525	6159.446	1.194	LE7524	-62.780	-1.009
161	Element Force CBAR 27027 Tension	4064.299	1.913	LE7520	4098.858	1.194	LE7524	34.559	0.850
162	Element Force CBAR 27028 Tension	3980.847	1.474	LE7525	4022.297	0.417	LE7525	41.451	1.041
163	Element Force CBAR 27029 Tension	3041.281	0.276	LE7525	3061.951	0.284	LE7525	20.670	0.680
164	Element Force CBAR 27030 Tension	3318.321	0.274	LE7525	3362.085	0.437	LE7523	43.763	1.319
165	Element Force CBAR 27031 Tension	2577.323	0.275	LE7525	2642.136	0.286	LE7521	64.813	2.515
166	Element Force CBAR 27032 Tension	1744.765	0.275	LE7525	1825.415	0.286	LE7521	80.650	4.622
167	Element Force CBAR 27033 Tension	1114.329	0.276	LE7525	1296.609	0.286	LE7521	182.280	16.358
168	Element Force CBAR 27034 Tension	1292.865	1.161	LE7520	1375.879	0.428	LE7525	83.015	6.421
169	Element Force CBAR 27035 Tension	524.449	0.277	LE7525	676.469	0.282	LE7521	152.020	28.987
170	Element Force CBAR 27036 Tension	317.424	0.213	LE7523	321.380	0.212	LE7523	3.956	1.246
171	Element Force CBAR 27037 Tension	636.445	0.282	LE7523	640.084	0.281	LE7523	3.639	0.572
172	Element Force CBAR 27038 Shear 1	2421.529	0.214	LE7525	2446.771	0.216	LE7525	25.242	1.042
173	Element Force CBAR 27038 Shear 2	9820.860	0.612	LE7523	9645.812	1.238	LE7525	-175.049	-1.782
174	Element Force CBAR 27039 Shear 1	385.152	1.937	LE7520	414.360	0.479	LE7524	29.208	7.583
175	Element Force CBAR 27039 Shear 2	1187.425	1.988	LE7520	1113.723	0.594	LE7524	-73.702	-6.207
176	Element Force CBAR 27040 Shear 1	368.613	0.213	LE7523	421.455	0.212	LE7523	52.842	14.335
177	Element Force CBAR 27040 Shear 2	1128.157	1.989	LE7520	1021.899	1.619	LE7520	-106.257	-9.419
178	Element Force CBAR 27041 Shear 1	518.261	0.282	LE7525	547.222	0.213	LE7525	28.961	5.588
179	Element Force CBAR 27041 Shear 2	1168.644	1.989	LE7520	1072.250	1.736	LE7520	-96.394	-8.248
180	Element Force CBAR 27042 Shear 1	404.365	0.280	LE7525	417.844	0.284	LE7521	13.479	3.333
181	Element Force CBAR 27042 Shear 2	1110.713	1.990	LE7520	1038.939	1.736	LE7520	-71.774	-6.462
182	Element Force CBAR 27043 Shear 1	332.281	0.213	LE7523	348.837	0.285	LE7521	16.556	4.982
183	Element Force CBAR 27043 Shear 2	1044.266	1.990	LE7520	972.873	1.057	LE7520	-71.393	-6.837
184	Element Force CBAR 27044 Tension	6795.095	1.988	LE7520	6630.537	1.238	LE7525	-164.557	-2.422
185	Element Force CBAR 27045 Tension	5460.631	0.612	LE7523	5424.111	1.240	LE7525	-36.519	-0.669
186	Element Force CBAR 27046 Tension	4891.253	1.380	LE7523	4964.960	1.240	LE7525	73.707	1.507
187	Element Force CBAR 27047 Tension	3683.585	0.333	LE7525	3677.981	1.240	LE7525	-5.603	-0.152
188	Element Force CBAR 27048 Tension	3491.635	0.333	LE7525	3530.431	1.383	LE7523	38.796	1.111
189	Element Force CBAR 27049 Tension	1966.494	0.334	LE7525	1977.167	0.348	LE7525	10.673	0.543
190	Element Force CBAR 27050 Tension	2434.542	0.342	LE7525	2523.578	0.340	LE7525	89.036	3.657
191	Element Force CBAR 27051 Tension	1118.651	0.185	LE7521	1149.851	0.351	LE7525	31.200	2.789
192	Element Force CBAR 27052 Tension	1833.130	1.989	LE7520	1832.471	0.481	LE7525	-0.659	-0.036
193	Element Force CBAR 27053 Tension	539.712	0.185	LE7525	534.420	0.200	LE7523	-5.292	-0.981
194	Element Force CBAR 27054 Tension	1272.339	1.186	LE7520	1327.731	0.504	LE7523	55.391	4.354
195	Element Force CBAR 27055 Tension	615.559	1.162	LE7520	795.641	1.653	LE7520	180.082	29.255
196	Element Force CBAR 27056 Shear 1	1217.088	1.239	LE7525	1216.164	0.323	LE7523	-0.924	-0.076
197	Element Force CBAR 27056 Shear 2	11317.471	0.217	LE7525	11361.870	0.218	LE7525	44.399	0.392
198	Element Force CBAR 27057 Shear 1	515.795	1.562	LE7520	502.182	1.239	LE7525	-13.613	-2.639
199	Element Force CBAR 27057 Shear 2	456.778	1.638	LE7520	444.137	0.430	LE7525	-12.641	-2.767
200	Element Force CBAR 27058 Shear 1	310.722	1.186	LE7520	344.159	1.628	LE7520	33.438	10.761

Table D-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
201	Element Force CBAR 27058 Shear 2	776.838	0.340	LE7525	806.743	0.351	LE7525	29.905	3.850
202	Element Force CBAR 27059 Shear 1	195.217	0.168	LE7523	269.434	0.478	LE7523	74.217	38.018
203	Element Force CBAR 27059 Shear 2	743.794	1.929	LE7520	752.892	1.616	LE7520	9.098	1.223
204	Element Force CBAR 27060 Shear 1	119.967	1.184	LE7520	173.941	1.187	LE7520	53.974	44.991
205	Element Force CBAR 27060 Shear 2	805.290	1.930	LE7520	811.883	1.235	LE7520	6.593	0.819
206	Element Force CBAR 27061 Shear 1	137.534	1.187	LE7520	213.602	0.456	LE7524	76.068	55.309
207	Element Force CBAR 27061 Shear 2	892.831	1.614	LE7520	883.553	1.718	LE7520	-9.278	-1.039
208	Element Force CBAR 27062 Tension	7516.715	0.217	LE7525	7553.651	0.218	LE7525	36.936	0.491
209	Element Force CBAR 27063 Tension	6869.926	0.217	LE7525	6871.278	0.218	LE7525	1.352	0.020
210	Element Force CBAR 27064 Tension	4264.336	0.340	LE7525	4259.808	0.354	LE7525	-4.528	-0.106
211	Element Force CBAR 27065 Tension	3455.000	0.339	LE7525	3454.275	0.354	LE7525	-0.725	-0.021
212	Element Force CBAR 27066 Tension	1749.549	1.562	LE7520	1779.591	1.242	LE7525	30.042	1.717
213	Element Force CBAR 27067 Tension	1572.353	1.561	LE7520	1615.361	0.320	LE7525	43.008	2.735
214	Element Force CBAR 27068 Tension	2217.476	1.561	LE7520	2146.308	0.818	LE7520	-71.168	-3.209
215	Element Force CBAR 27069 Tension	1384.978	1.561	LE7520	1371.158	0.818	LE7520	-13.819	-0.998
216	Element Force CBAR 27070 Tension	1520.717	1.562	LE7520	1419.582	0.817	LE7520	-101.135	-6.650
217	Element Force CBAR 27071 Tension	809.407	0.279	LE7525	965.869	0.284	LE7521	156.461	19.330
218	Element Force CBAR 27072 Tension	883.227	1.614	LE7520	891.743	1.237	LE7520	8.516	0.964
219	Element Force CBAR 27073 Tension	1168.559	1.161	LE7520	1228.411	0.287	LE7521	59.852	5.122
220	Element Force CBAR 27074 Tension	428.775	0.284	LE7525	442.939	0.284	LE7525	14.164	3.303
221	Element Force CBAR 27075 Tension	723.302	0.283	LE7525	751.708	0.284	LE7525	28.407	3.927

Table D-18. Experiment Logistics Module - Exposed Section - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.476	0.413	LE7523	1.461	0.413	LE7523	-0.015	-1.018
2	Net Load Factor - T2 (g)	1.867	0.538	LE7526	1.899	0.463	LE7526	0.032	1.718
3	Net Load Factor - T3 (g)	3.447	0.245	LE7522	3.443	0.245	LE7522	-0.004	-0.114
4	Net Load Factor - R1 (rad/sec^2)	4.036	0.280	LE7525	4.109	0.280	LE7525	0.073	1.805
5	Net Load Factor - R2 (rad/sec^2)	14.637	0.322	LE7523	14.520	0.323	LE7523	-0.117	-0.796
6	Net Load Factor - R3 (rad/sec^2)	1.360	0.376	LE7524	1.506	0.376	LE7525	0.145	10.692
7	ID 700001 - T2 (lbf)	4737.946	0.538	LE7526	4817.553	0.463	LE7526	79.607	1.680
8	ID 700002 - T1 (lbf)	1957.643	0.413	LE7523	1963.657	0.413	LE7523	6.014	0.307
9	ID 700002 - T3 (lbf)	6154.169	0.276	LE7523	6078.148	0.276	LE7523	-76.021	-1.235
10	ID 700003 - T1 (lbf)	2214.415	0.413	LE7523	2171.424	0.414	LE7523	-42.992	-1.941
11	ID 700003 - T3 (lbf)	6904.193	0.280	LE7525	6831.528	0.280	LE7525	-72.664	-1.052
12	ID 700004 - T3 (lbf)	1772.877	0.325	LE7525	1771.612	0.325	LE7525	-1.264	-0.071
13	ID 700005 - T3 (lbf)	2218.188	0.323	LE7523	2210.139	0.323	LE7523	-8.049	-0.363
14	Net Inertial Acc - T1 (in/sec^2)	569.866	0.413	LE7523	564.063	0.413	LE7523	-5.803	-1.018
15	Net Inertial Acc - T2 (in/sec^2)	720.976	0.538	LE7526	733.364	0.463	LE7526	12.388	1.718
16	Net Inertial Acc - T3 (in/sec^2)	1330.947	0.245	LE7522	1329.431	0.245	LE7522	-1.516	-0.114
17	Net Inertial Acc - R1 (rad/sec^2)	4.036	0.280	LE7525	4.109	0.280	LE7525	0.073	1.805
18	Net Inertial Acc - R2 (rad/sec^2)	14.637	0.322	LE7523	14.520	0.323	LE7523	-0.117	-0.796
19	Net Inertial Acc - R3 (rad/sec^2)	1.360	0.376	LE7524	1.506	0.376	LE7525	0.145	10.692

Table D-19. Atmospheric Nuetral Drag Experiment-2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.393	0.625	LE7520	1.417	0.575	LE7520	0.024	1.720
2	Net Load Factor - T2 (g)	1.558	1.008	LE7520	1.460	1.009	LE7520	-0.098	-6.285
3	Net Load Factor - T3 (g)	3.102	0.230	LE7525	3.074	0.229	LE7525	-0.028	-0.887
4	Net Load Factor - R1 (rad/sec^2)	16.918	0.106	LE7525	17.097	0.117	LE7525	0.179	1.058
5	Net Load Factor - R2 (rad/sec^2)	6.923	0.106	LE7525	6.898	0.106	LE7525	-0.025	-0.355
6	Net Load Factor - R3 (rad/sec^2)	17.106	1.008	LE7520	16.899	1.008	LE7520	-0.207	-1.207
7	GRID 13 - T1 (lbf)	799.950	0.337	LE7525	808.611	0.337	LE7525	8.661	1.083
8	GRID 13 - T2 (lbf)	663.605	0.339	LE7525	668.051	0.340	LE7525	4.446	0.670
9	GRID 13 - T3 (lbf)	199.479	1.034	LE7520	202.446	1.034	LE7520	2.967	1.487
10	GRID 18 - T2 (lbf)	412.095	0.337	LE7525	418.501	0.337	LE7525	6.407	1.555
11	GRID 22 - T2 (lbf)	393.857	0.335	LE7525	398.734	0.334	LE7525	4.877	1.238
12	GRID 26 - T1 (lbf)	118.622	0.132	LE7524	119.681	0.132	LE7524	1.059	0.893
13	GRID 26 - T2 (lbf)	220.767	0.334	LE7525	224.282	0.332	LE7525	3.515	1.592
14	GRID 26 - T3 (lbf)	536.604	0.338	LE7525	542.897	0.339	LE7525	6.294	1.173
15	GRID 28 - T2 (lbf)	628.987	0.335	LE7525	636.611	0.334	LE7525	7.624	1.212
16	GRID 44 - T2 (lbf)	77.291	0.345	LE7525	77.735	0.339	LE7525	0.444	0.574
17	GRID 46 - T2 (lbf)	182.099	0.231	LE7525	185.249	0.231	LE7525	3.150	1.730
18	GRID 58 - T2 (lbf)	178.499	0.339	LE7525	180.522	0.338	LE7525	2.023	1.133
19	GRID 59 - T1 (lbf)	262.937	1.033	LE7520	250.537	1.035	LE7520	-12.400	-4.716
20	GRID 59 - T2 (lbf)	290.940	1.034	LE7520	294.334	1.035	LE7520	3.394	1.167
21	GRID 59 - T3 (lbf)	237.005	0.338	LE7525	238.140	0.338	LE7525	1.135	0.479
22	GRID 60 - T2 (lbf)	502.212	0.132	LE7526	506.263	0.131	LE7526	4.051	0.807
23	GRID 75 - T1 (lbf)	581.215	0.339	LE7525	581.140	0.343	LE7525	-0.075	-0.013
24	GRID 75 - T2 (lbf)	430.095	0.132	LE7526	433.860	0.131	LE7526	3.765	0.875
25	GRID 75 - T3 (lbf)	272.421	0.341	LE7525	276.553	0.339	LE7525	4.132	1.517
26	GRID 79 - T2 (lbf)	129.108	1.009	LE7520	122.668	1.009	LE7520	-6.440	-4.988
27	Net Inertial Acc - T1 (in/sec^2)	537.680	0.625	LE7520	546.928	0.575	LE7520	9.247	1.720
28	Net Inertial Acc - T2 (in/sec^2)	601.456	1.008	LE7520	563.657	1.009	LE7520	-37.800	-6.285
29	Net Inertial Acc - T3 (in/sec^2)	1197.599	0.230	LE7525	1186.971	0.229	LE7525	-10.628	-0.887
30	Net Inertial Acc - R1 (rad/sec^2)	16.918	0.106	LE7525	17.097	0.117	LE7525	0.179	1.058
31	Net Inertial Acc - R2 (rad/sec^2)	6.923	0.106	LE7525	6.898	0.106	LE7525	-0.025	-0.355
32	Net Inertial Acc - R3 (rad/sec^2)	17.106	1.008	LE7520	16.899	1.008	LE7520	-0.207	-1.207

Appendix E
Contingency Landing C12 - Linear/Nonlinear Comparison

Table E-1. Linear Drive Unit IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	4.433	0.218	LE7521	5.088	0.214	LE7521	0.655	14.770
2	Net Load Factor - T2 (g)	1.431	0.290	LE7524	1.837	1.169	LE7520	0.406	28.353
3	Net Load Factor - T3 (g)	1.010	0.216	LE7525	1.757	0.218	LE7523	0.748	74.031
4	Net Load Factor - R1 (rad/sec^2)	13.334	1.339	LE7520	47.855	0.397	LE7524	34.521	258.903
5	Net Load Factor - R2 (rad/sec^2)	21.615	0.216	LE7523	70.186	1.371	LE7520	48.572	224.719
6	Net Load Factor - R3 (rad/sec^2)	6.208	0.165	LE7526	39.328	0.407	LE7523	33.120	533.533
7	ID 40301 - T1 (lbf)	1362.183	0.218	LE7521	1594.320	0.214	LE7521	232.137	17.042
8	ID 40301 - T2 (lbf)	526.229	0.290	LE7524	1144.240	1.169	LE7520	618.012	117.442
9	ID 40302 - T1 (lbf)	1399.486	0.218	LE7521	1582.362	0.213	LE7521	182.875	13.067
10	ID 40303 - T2 (lbf)	370.380	0.289	LE7524	518.919	0.407	LE7523	148.539	40.105
11	ID 40311 - T3 (lbf)	745.549	0.219	LE7525	890.359	1.160	LE7520	144.810	19.423
12	ID 40312 - T3 (lbf)	836.722	0.216	LE7523	944.397	0.218	LE7523	107.674	12.869
13	ID 40313 - T3 (lbf)	466.189	0.285	LE7525	881.679	1.157	LE7520	415.490	89.125
14	ID 40314 - T3 (lbf)	546.877	1.207	LE7520	642.493	1.159	LE7520	95.615	17.484
15	Net Inertial Acc - T1 (in/sec^2)	1711.494	0.218	LE7521	1964.278	0.214	LE7521	252.784	14.770
16	Net Inertial Acc - T2 (in/sec^2)	552.479	0.290	LE7524	709.121	1.169	LE7520	156.642	28.353
17	Net Inertial Acc - T3 (in/sec^2)	389.884	0.216	LE7525	678.519	0.218	LE7523	288.635	74.031
18	Net Inertial Acc - R1 (rad/sec^2)	13.334	1.339	LE7520	47.855	0.397	LE7524	34.521	258.903
19	Net Inertial Acc - R2 (rad/sec^2)	21.615	0.216	LE7523	70.187	1.371	LE7520	48.572	224.717
20	Net Inertial Acc - R3 (rad/sec^2)	6.208	0.165	LE7526	39.328	0.407	LE7523	33.120	533.520

Table E-2. Linear Drive Unit IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	4.868	0.218	LE7521	5.643	0.214	LE7521	0.775	15.919
2	Net Load Factor - T2 (g)	1.590	0.289	LE7524	3.129	1.153	LE7520	1.538	96.726
3	Net Load Factor - T3 (g)	1.216	0.197	LE7523	2.065	1.157	LE7520	0.849	69.846
4	Net Load Factor - R1 (rad/sec^2)	13.459	1.338	LE7520	50.353	0.390	LE7524	36.894	274.112
5	Net Load Factor - R2 (rad/sec^2)	40.298	0.216	LE7525	94.619	1.636	LE7520	54.321	134.798
6	Net Load Factor - R3 (rad/sec^2)	8.960	0.164	LE7526	65.221	0.422	LE7523	56.261	627.929
7	ID 97001 - T1 (lbf)	333.575	0.218	LE7525	389.319	0.215	LE7521	55.743	16.711
8	ID 97001 - T2 (lbf)	164.686	0.221	LE7525	274.648	0.423	LE7525	109.962	66.771
9	ID 97001 - T3 (lbf)	454.272	0.217	LE7525	520.657	0.215	LE7521	66.385	14.614
10	ID 97002 - T1 (lbf)	279.753	0.220	LE7521	342.489	0.214	LE7521	62.736	22.426
11	ID 97002 - T2 (lbf)	73.932	0.245	LE7524	204.176	1.153	LE7520	130.244	176.166
12	ID 97002 - T3 (lbf)	341.740	0.288	LE7521	548.230	1.156	LE7520	206.490	60.423
13	ID 97003 - T1 (lbf)	352.147	0.215	LE7523	446.505	1.153	LE7520	94.358	26.795
14	ID 97003 - T2 (lbf)	203.702	0.217	LE7523	274.170	1.152	LE7520	70.468	34.594
15	ID 97003 - T3 (lbf)	464.839	0.215	LE7523	555.677	1.153	LE7520	90.838	19.542
16	ID 97004 - T1 (lbf)	277.384	0.221	LE7521	325.501	0.213	LE7521	48.117	17.347
17	ID 97004 - T2 (lbf)	118.631	0.288	LE7524	269.924	1.153	LE7520	151.294	127.533
18	ID 97004 - T3 (lbf)	357.467	0.279	LE7525	588.140	0.399	LE7524	230.673	64.530
19	Net Inertial Acc - T1 (in/sec^2)	1879.472	0.218	LE7521	2178.667	0.214	LE7521	299.195	15.919
20	Net Inertial Acc - T2 (in/sec^2)	613.996	0.289	LE7524	1207.890	1.153	LE7520	593.893	96.726
21	Net Inertial Acc - T3 (in/sec^2)	469.436	0.197	LE7523	797.318	1.157	LE7520	327.881	69.846
22	Net Inertial Acc - R1 (rad/sec^2)	13.459	1.338	LE7520	50.353	0.390	LE7524	36.894	274.112
23	Net Inertial Acc - R2 (rad/sec^2)	40.298	0.216	LE7525	94.619	1.636	LE7520	54.321	134.797
24	Net Inertial Acc - R3 (rad/sec^2)	8.960	0.164	LE7526	65.221	0.422	LE7523	56.261	627.893

Table E-3. Linear Drive Unit IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	4.140	0.218	LE7521	4.714	0.214	LE7521	0.574	13.860
2	Net Load Factor - T2 (g)	1.370	0.293	LE7524	2.771	1.168	LE7520	1.401	102.233
3	Net Load Factor - T3 (g)	0.988	0.203	LE7523	2.217	0.770	LE7525	1.230	124.528
4	Net Load Factor - R1 (rad/sec^2)	13.082	1.263	LE7520	57.809	1.581	LE7520	44.727	341.891
5	Net Load Factor - R2 (rad/sec^2)	19.877	0.222	LE7525	94.445	1.158	LE7520	74.568	375.141
6	Net Load Factor - R3 (rad/sec^2)	6.443	0.117	LE7523	36.377	0.406	LE7523	29.934	464.595
7	ID 30001 - T1 (lbf)	333.575	0.218	LE7525	389.319	0.215	LE7521	55.743	16.711
8	ID 30001 - T2 (lbf)	164.686	0.221	LE7525	274.648	0.423	LE7525	109.962	66.771
9	ID 30001 - T3 (lbf)	454.272	0.217	LE7525	520.657	0.215	LE7521	66.385	14.614
10	ID 30002 - T1 (lbf)	279.753	0.220	LE7521	342.489	0.214	LE7521	62.736	22.426
11	ID 30002 - T2 (lbf)	73.932	0.245	LE7524	204.176	1.153	LE7520	130.244	176.166
12	ID 30002 - T3 (lbf)	341.740	0.288	LE7521	548.230	1.156	LE7520	206.490	60.423
13	ID 30003 - T1 (lbf)	352.147	0.215	LE7523	446.505	1.153	LE7520	94.358	26.795
14	ID 30003 - T2 (lbf)	203.702	0.217	LE7523	274.170	1.152	LE7520	70.468	34.594
15	ID 30003 - T3 (lbf)	464.839	0.215	LE7523	555.677	1.153	LE7520	90.838	19.542
16	ID 30004 - T1 (lbf)	277.384	0.221	LE7521	325.501	0.213	LE7521	48.117	17.347
17	ID 30004 - T2 (lbf)	118.631	0.288	LE7524	269.924	1.153	LE7520	151.294	127.533
18	ID 30004 - T3 (lbf)	357.467	0.279	LE7525	588.140	0.399	LE7524	230.673	64.530
19	ID 40301 - T1 (lbf)	1362.183	0.218	LE7521	1594.320	0.214	LE7521	232.137	17.042
20	ID 40301 - T2 (lbf)	526.229	0.290	LE7524	1144.240	1.169	LE7520	618.012	117.442
21	ID 40302 - T1 (lbf)	1399.486	0.218	LE7521	1582.362	0.213	LE7521	182.875	13.067
22	ID 40303 - T2 (lbf)	370.380	0.289	LE7524	518.919	0.407	LE7523	148.539	40.105
23	ID 40311 - T3 (lbf)	745.549	0.219	LE7525	890.359	1.160	LE7520	144.810	19.423
24	ID 40312 - T3 (lbf)	836.722	0.216	LE7523	944.397	0.218	LE7523	107.674	12.869
25	ID 40313 - T3 (lbf)	466.189	0.285	LE7525	881.679	1.157	LE7520	415.490	89.125
26	ID 40314 - T3 (lbf)	546.877	1.207	LE7520	642.493	1.159	LE7520	95.615	17.484
27	Net Inertial Acc - T1 (in/sec^2)	1598.439	0.218	LE7521	1819.988	0.214	LE7521	221.548	13.860
28	Net Inertial Acc - T2 (in/sec^2)	529.004	0.293	LE7524	1069.821	1.168	LE7520	540.817	102.233
29	Net Inertial Acc - T3 (in/sec^2)	381.266	0.203	LE7523	856.048	0.770	LE7525	474.782	124.528
30	Net Inertial Acc - R1 (rad/sec^2)	13.082	1.263	LE7520	57.809	1.581	LE7520	44.727	341.891
31	Net Inertial Acc - R2 (rad/sec^2)	19.877	0.222	LE7525	94.445	1.158	LE7520	74.568	375.141
32	Net Inertial Acc - R3 (rad/sec^2)	6.443	0.117	LE7523	36.377	0.406	LE7523	29.934	464.595

Table E-4. Battery 1 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.625	0.302	LE7524	2.655	0.396	LE7526	1.030	63.343
2	Net Load Factor - T2 (g)	3.826	0.274	LE7523	3.999	0.277	LE7523	0.174	4.537
3	Net Load Factor - T3 (g)	1.153	0.179	LE7525	1.555	0.178	LE7525	0.402	34.857
4	Net Load Factor - R1 (rad/sec^2)	10.874	0.209	LE7525	39.948	0.397	LE7526	29.074	267.364
5	Net Load Factor - R2 (rad/sec^2)	13.919	0.215	LE7525	39.131	0.519	LE7525	25.212	181.134
6	Net Load Factor - R3 (rad/sec^2)	11.445	0.394	LE7523	44.941	0.391	LE7526	33.496	292.678
7	GRID 653 - T2 (lbf)	1401.866	0.292	LE7525	2006.851	0.392	LE7526	604.985	43.156
8	GRID 653 - T3 (lbf)	607.690	0.282	LE7523	723.776	0.427	LE7523	116.086	19.103
9	GRID 654 - T3 (lbf)	328.886	0.292	LE7525	424.523	0.392	LE7526	95.637	29.079
10	GRID 655 - T1 (lbf)	872.164	0.302	LE7524	1424.618	0.396	LE7526	552.454	63.343
11	GRID 655 - T3 (lbf)	488.172	0.290	LE7525	790.920	0.283	LE7525	302.748	62.017
12	GRID 2183 - T2 (lbf)	1506.445	0.274	LE7523	1775.255	0.296	LE7524	268.811	17.844
13	GRID 2183 - T3 (lbf)	672.906	0.216	LE7525	730.935	0.227	LE7521	58.029	8.624
14	GRID 2184 - T3 (lbf)	349.231	0.274	LE7523	303.587	0.397	LE7524	-45.644	-13.070
15	GRID 2185 - T3 (lbf)	318.194	0.300	LE7524	544.394	0.396	LE7526	226.200	71.089
16	Net Inertial Acc - T1 (in/sec^2)	627.560	0.302	LE7524	1025.075	0.396	LE7526	397.515	63.343
17	Net Inertial Acc - T2 (in/sec^2)	1477.143	0.274	LE7523	1544.160	0.277	LE7523	67.017	4.537
18	Net Inertial Acc - T3 (in/sec^2)	445.116	0.179	LE7525	600.268	0.178	LE7525	155.152	34.857
19	Net Inertial Acc - R1 (rad/sec^2)	10.874	0.209	LE7525	39.948	0.397	LE7526	29.074	267.364
20	Net Inertial Acc - R2 (rad/sec^2)	13.919	0.215	LE7525	39.131	0.519	LE7525	25.212	181.134
21	Net Inertial Acc - R3 (rad/sec^2)	11.445	0.394	LE7523	44.941	0.391	LE7526	33.496	292.678

Table E-5. Battery 1 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.497	0.397	LE7526	3.698	0.495	LE7526	2.201	146.978
2	FSE Net Load Factor, Y axis	4.010	0.277	LE7523	4.848	1.162	LE7520	0.839	20.912
3	FSE Net Load Factor, Z axis	1.187	0.183	LE7525	2.315	1.246	LE7520	1.128	95.018
4	FSE Net Load Factor, RX axis	12.680	0.210	LE7525	46.044	1.630	LE7520	33.364	263.110
5	FSE Net Load Factor, RY axis	17.822	0.217	LE7525	73.068	0.465	LE7525	55.245	309.976
6	FSE Net Load Factor, RZ axis	18.065	0.266	LE7523	80.910	1.165	LE7520	62.846	347.897
7	ORU I/F Force Grid 990 Z axis	155.507	0.303	LE7524	200.682	0.470	LE7525	45.175	29.050
8	ORU I/F Force Grid 991 Z axis	129.800	0.213	LE7525	231.037	0.516	LE7525	101.238	77.995
9	ORU I/F Force Grid 9998 X axis	323.599	0.291	LE7526	768.891	0.511	LE7525	445.291	137.606
10	ORU I/F Force Grid 9998 Z axis	390.466	0.271	LE7523	572.908	0.275	LE7523	182.443	46.724
11	ORU I/F Moment Grid 9998 RX axis	87.723	0.290	LE7526	238.181	0.298	LE7525	150.458	171.516
12	ORU I/F Moment Grid 9998 RY axis	1668.533	0.285	LE7525	2067.784	0.283	LE7525	399.252	23.928
13	ORU I/F Moment Grid 9998 RZ axis	172.218	0.264	LE7525	300.039	0.511	LE7525	127.821	74.220
14	ORU I/F Force Grid 9999 X axis	317.661	0.302	LE7524	728.877	0.389	LE7526	411.216	129.451
15	ORU I/F Force Grid 9999 Y axis	1439.117	0.272	LE7523	1524.055	0.274	LE7523	84.937	5.902
16	ORU I/F Force Grid 9999 Z axis	288.905	1.207	LE7520	444.462	0.386	LE7524	155.557	53.844
17	ORU I/F Moment Grid 9999 RX axis	749.261	0.271	LE7523	815.580	0.352	LE7523	66.319	8.851
18	ORU I/F Moment Grid 9999 RY axis	1190.943	0.302	LE7524	1971.618	0.389	LE7526	780.675	65.551
19	ORU I/F Moment Grid 9999 RZ axis	233.680	0.264	LE7525	424.340	0.389	LE7526	190.659	81.590
20	ORU Net Load Factor, X axis	1.721	0.302	LE7524	2.777	0.512	LE7525	1.056	61.331
21	ORU Net Load Factor, Y axis	3.960	0.272	LE7523	4.193	0.274	LE7523	0.234	5.902
22	ORU Net Load Factor, Z axis	1.206	0.178	LE7525	1.760	0.606	LE7525	0.554	45.944
23	ORU Net Load Factor, RX axis	12.930	0.209	LE7525	49.178	0.348	LE7523	36.248	280.341
24	ORU Net Load Factor, RY axis	19.037	0.248	LE7525	75.222	0.517	LE7525	56.184	295.126
25	ORU Net Load Factor, RZ axis	16.051	0.270	LE7523	91.372	0.388	LE7526	75.321	469.263
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1401.866	0.292	LE7525	2006.851	0.392	LE7526	604.985	43.156
27	FSE/ORU Assy I/F Force Grid 653 Z axis	607.690	0.282	LE7523	723.776	0.427	LE7523	116.086	19.103
28	FSE/ORU Assy I/F Force Grid 654 Z axis	328.886	0.292	LE7525	424.523	0.392	LE7526	95.637	29.079
29	FSE/ORU Assy I/F Force Grid 655 X axis	872.164	0.302	LE7524	1424.618	0.396	LE7526	552.454	63.343
30	FSE/ORU Assy I/F Force Grid 655 Z axis	488.172	0.290	LE7525	790.920	0.283	LE7525	302.748	62.017
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1506.445	0.274	LE7523	1775.255	0.296	LE7524	268.811	17.844
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	672.906	0.216	LE7525	730.935	0.227	LE7521	58.029	8.624
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	349.231	0.274	LE7523	303.587	0.397	LE7524	-45.644	-13.070
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	318.194	0.300	LE7524	544.394	0.396	LE7526	226.200	71.089
35	FSE/ORU Assy Net Load Factor, X axis	1.625	0.302	LE7524	2.655	0.396	LE7526	1.030	63.343
36	FSE/ORU Assy Net Load Factor, Y axis	3.826	0.274	LE7523	3.999	0.277	LE7523	0.174	4.537
37	FSE/ORU Assy Net Load Factor, Z axis	1.153	0.179	LE7525	1.555	0.178	LE7525	0.402	34.857
38	FSE/ORU Assy Net Load Factor, RX axis	10.874	0.209	LE7525	39.948	0.397	LE7526	29.074	267.364
39	FSE/ORU Assy Net Load Factor, RY axis	13.919	0.215	LE7525	39.131	0.519	LE7525	25.212	181.134
40	FSE/ORU Assy Net Load Factor, RZ axis	11.445	0.394	LE7523	44.941	0.391	LE7526	33.496	292.678

Table E-6. Battery 2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.626	0.296	LE7526	2.571	0.293	LE7526	0.945	58.091
2	Net Load Factor - T2 (g)	4.184	0.282	LE7523	4.203	0.284	LE7521	0.019	0.455
3	Net Load Factor - T3 (g)	1.671	0.179	LE7523	1.903	0.182	LE7523	0.231	13.835
4	Net Load Factor - R1 (rad/sec^2)	13.190	0.263	LE7521	51.183	0.651	LE7523	37.992	288.038
5	Net Load Factor - R2 (rad/sec^2)	14.452	1.312	LE7520	42.798	0.431	LE7525	28.346	196.139
6	Net Load Factor - R3 (rad/sec^2)	13.167	0.129	LE7523	45.842	0.608	LE7524	32.675	248.161
7	GRID 653 - T2 (lbf)	1301.415	0.209	LE7525	2280.219	0.393	LE7526	978.804	75.211
8	GRID 653 - T3 (lbf)	658.780	0.283	LE7523	706.144	0.479	LE7526	47.364	7.190
9	GRID 654 - T3 (lbf)	322.395	0.209	LE7525	280.193	0.393	LE7526	-42.202	-13.090
10	GRID 655 - T1 (lbf)	872.731	0.296	LE7526	1379.705	0.293	LE7526	506.974	58.091
11	GRID 655 - T3 (lbf)	405.790	0.291	LE7526	623.027	0.410	LE7525	217.237	53.534
12	GRID 2183 - T2 (lbf)	1398.329	0.290	LE7523	2235.910	0.296	LE7524	837.581	59.899
13	GRID 2183 - T3 (lbf)	655.191	0.286	LE7525	948.618	0.430	LE7525	293.427	44.785
14	GRID 2184 - T3 (lbf)	309.598	0.289	LE7523	306.975	0.298	LE7523	-2.623	-0.847
15	GRID 2185 - T3 (lbf)	367.222	0.189	LE7523	520.081	0.368	LE7525	152.859	41.626
16	Net Inertial Acc - T1 (in/sec^2)	627.967	0.296	LE7526	992.757	0.293	LE7526	364.790	58.091
17	Net Inertial Acc - T2 (in/sec^2)	1615.244	0.282	LE7523	1622.599	0.284	LE7521	7.355	0.455
18	Net Inertial Acc - T3 (in/sec^2)	645.347	0.179	LE7523	734.632	0.182	LE7523	89.286	13.835
19	Net Inertial Acc - R1 (rad/sec^2)	13.190	0.263	LE7521	51.183	0.651	LE7523	37.992	288.038
20	Net Inertial Acc - R2 (rad/sec^2)	14.452	1.312	LE7520	42.798	0.431	LE7525	28.346	196.139
21	Net Inertial Acc - R3 (rad/sec^2)	13.167	0.129	LE7523	45.842	0.608	LE7524	32.675	248.161

Table E-7. Battery 2 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.637	0.299	LE7526	3.609	0.395	LE7526	1.972	120.508
2	FSE Net Load Factor, Y axis	4.208	0.286	LE7523	4.520	0.285	LE7521	0.312	7.426
3	FSE Net Load Factor, Z axis	1.939	0.180	LE7523	3.093	1.203	LE7520	1.153	59.478
4	FSE Net Load Factor, RX axis	18.164	0.160	LE7523	52.614	0.651	LE7523	34.450	189.661
5	FSE Net Load Factor, RY axis	26.196	1.314	LE7520	61.941	0.639	LE7523	35.745	136.455
6	FSE Net Load Factor, RZ axis	21.101	0.131	LE7523	74.673	0.298	LE7524	53.572	253.883
7	ORU I/F Force Grid 990 Z axis	125.901	0.297	LE7524	204.461	0.410	LE7524	78.561	62.399
8	ORU I/F Force Grid 991 Z axis	113.606	0.286	LE7525	203.920	0.429	LE7525	90.314	79.497
9	ORU I/F Force Grid 9998 X axis	343.962	0.297	LE7524	663.934	0.301	LE7524	319.972	93.025
10	ORU I/F Force Grid 9998 Z axis	502.116	0.262	LE7523	547.860	0.650	LE7523	45.744	9.110
11	ORU I/F Moment Grid 9998 RX axis	83.734	0.295	LE7526	237.230	1.256	LE7520	153.496	183.313
12	ORU I/F Moment Grid 9998 RY axis	1086.056	0.297	LE7524	1524.642	0.428	LE7525	438.586	40.383
13	ORU I/F Moment Grid 9998 RZ axis	94.064	0.297	LE7524	279.701	0.301	LE7524	185.638	197.353
14	ORU I/F Force Grid 9999 X axis	319.857	0.295	LE7526	727.024	0.295	LE7524	407.167	127.297
15	ORU I/F Force Grid 9999 Y axis	1599.965	0.280	LE7523	1612.251	0.283	LE7521	12.286	0.768
16	ORU I/F Force Grid 9999 Z axis	315.188	0.282	LE7523	535.419	0.479	LE7526	220.231	69.873
17	ORU I/F Moment Grid 9999 RX axis	826.256	0.280	LE7523	682.303	0.272	LE7523	-143.954	-17.422
18	ORU I/F Moment Grid 9999 RY axis	929.698	0.294	LE7524	1561.184	0.295	LE7524	631.487	67.924
19	ORU I/F Moment Grid 9999 RZ axis	102.766	0.290	LE7523	324.337	0.406	LE7525	221.570	215.606
20	ORU Net Load Factor, X axis	1.666	0.295	LE7526	2.521	0.279	LE7526	0.855	51.333
21	ORU Net Load Factor, Y axis	4.402	0.280	LE7523	4.436	0.283	LE7521	0.034	0.768
22	ORU Net Load Factor, Z axis	1.664	0.177	LE7523	2.130	0.181	LE7523	0.466	27.995
23	ORU Net Load Factor, RX axis	13.167	0.201	LE7523	53.895	0.651	LE7523	40.729	309.329
24	ORU Net Load Factor, RY axis	17.907	0.123	LE7523	65.918	0.493	LE7526	48.011	268.113
25	ORU Net Load Factor, RZ axis	15.129	0.135	LE7523	75.410	1.253	LE7520	60.280	398.430
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1301.415	0.209	LE7525	2280.219	0.393	LE7526	978.804	75.211
27	FSE/ORU Assy I/F Force Grid 653 Z axis	658.780	0.283	LE7523	706.144	0.479	LE7526	47.364	7.190
28	FSE/ORU Assy I/F Force Grid 654 Z axis	322.395	0.209	LE7525	280.193	0.393	LE7526	-42.202	-13.090
29	FSE/ORU Assy I/F Force Grid 655 X axis	872.731	0.296	LE7526	1379.705	0.293	LE7526	506.974	58.091
30	FSE/ORU Assy I/F Force Grid 655 Z axis	405.790	0.291	LE7526	623.027	0.410	LE7525	217.237	53.534
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1398.329	0.290	LE7523	2235.910	0.296	LE7524	837.581	59.899
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	655.191	0.286	LE7525	948.618	0.430	LE7525	293.427	44.785
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	309.598	0.289	LE7523	306.975	0.298	LE7523	-2.623	-0.847
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	367.222	0.189	LE7523	520.081	0.368	LE7525	152.859	41.626
35	FSE/ORU Assy Net Load Factor, X axis	1.626	0.296	LE7526	2.571	0.293	LE7526	0.945	58.091
36	FSE/ORU Assy Net Load Factor, Y axis	4.183	0.282	LE7523	4.203	0.284	LE7521	0.019	0.455
37	FSE/ORU Assy Net Load Factor, Z axis	1.671	0.179	LE7523	1.903	0.182	LE7523	0.231	13.835
38	FSE/ORU Assy Net Load Factor, RX axis	13.190	0.263	LE7521	51.183	0.651	LE7523	37.992	288.038
39	FSE/ORU Assy Net Load Factor, RY axis	14.452	1.312	LE7520	42.798	0.431	LE7525	28.346	196.139
40	FSE/ORU Assy Net Load Factor, RZ axis	13.167	0.129	LE7523	45.842	0.608	LE7524	32.675	248.161

Table E-8. Battery 3 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.710	0.397	LE7524	2.368	0.292	LE7524	0.659	38.527
2	Net Load Factor - T2 (g)	3.989	0.278	LE7525	4.633	0.279	LE7523	0.644	16.143
3	Net Load Factor - T3 (g)	1.219	0.177	LE7525	1.671	0.249	LE7525	0.451	37.018
4	Net Load Factor - R1 (rad/sec^2)	11.095	0.226	LE7521	50.642	1.109	LE7520	39.547	356.444
5	Net Load Factor - R2 (rad/sec^2)	14.151	0.214	LE7523	43.948	0.513	LE7523	29.798	210.574
6	Net Load Factor - R3 (rad/sec^2)	14.020	0.395	LE7525	55.678	0.389	LE7524	41.657	297.117
7	GRID 653 - T2 (lbf)	1510.210	0.278	LE7525	2089.747	0.389	LE7524	579.537	38.375
8	GRID 653 - T3 (lbf)	626.124	0.214	LE7523	747.250	0.514	LE7523	121.126	19.345
9	GRID 654 - T3 (lbf)	360.704	0.278	LE7525	343.762	0.390	LE7524	-16.942	-4.697
10	GRID 655 - T1 (lbf)	917.334	0.397	LE7524	1270.758	0.292	LE7524	353.425	38.527
11	GRID 655 - T3 (lbf)	319.751	0.186	LE7525	572.556	0.492	LE7526	252.805	79.063
12	GRID 2183 - T2 (lbf)	1443.504	0.294	LE7523	2435.886	0.389	LE7524	992.383	68.748
13	GRID 2183 - T3 (lbf)	680.375	0.280	LE7525	814.198	0.496	LE7526	133.823	19.669
14	GRID 2184 - T3 (lbf)	337.772	0.205	LE7523	423.489	0.389	LE7524	85.717	25.377
15	GRID 2185 - T3 (lbf)	460.187	0.290	LE7523	645.872	0.336	LE7526	185.685	40.350
16	Net Inertial Acc - T1 (in/sec^2)	660.061	0.397	LE7524	914.366	0.292	LE7524	254.304	38.527
17	Net Inertial Acc - T2 (in/sec^2)	1540.231	0.278	LE7525	1788.869	0.279	LE7523	248.638	16.143
18	Net Inertial Acc - T3 (in/sec^2)	470.808	0.177	LE7525	645.090	0.249	LE7525	174.282	37.018
19	Net Inertial Acc - R1 (rad/sec^2)	11.095	0.226	LE7521	50.642	1.109	LE7520	39.547	356.444
20	Net Inertial Acc - R2 (rad/sec^2)	14.151	0.214	LE7523	43.948	0.513	LE7523	29.798	210.574
21	Net Inertial Acc - R3 (rad/sec^2)	14.020	0.395	LE7525	55.678	0.389	LE7524	41.657	297.117

Table E-9. Battery 3 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.663	0.399	LE7524	3.537	0.493	LE7524	1.874	112.719
2	FSE Net Load Factor, Y axis	4.084	0.281	LE7525	5.135	0.282	LE7523	1.051	25.746
3	FSE Net Load Factor, Z axis	1.284	0.180	LE7525	2.703	1.160	LE7520	1.419	110.513
4	FSE Net Load Factor, RX axis	12.688	0.200	LE7523	45.804	0.495	LE7523	33.116	260.993
5	FSE Net Load Factor, RY axis	21.563	0.259	LE7523	58.907	1.089	LE7520	37.345	173.193
6	FSE Net Load Factor, RZ axis	20.592	0.399	LE7525	76.921	0.391	LE7524	56.328	273.540
7	ORU I/F Force Grid 990 Z axis	127.214	0.505	LE7523	217.294	0.562	LE7523	90.081	70.810
8	ORU I/F Force Grid 991 Z axis	141.423	0.252	LE7523	235.832	0.494	LE7526	94.410	66.757
9	ORU I/F Force Grid 9998 X axis	315.431	0.398	LE7524	754.814	0.489	LE7524	439.383	139.296
10	ORU I/F Force Grid 9998 Z axis	382.511	0.260	LE7525	506.141	0.838	LE7520	123.630	32.321
11	ORU I/F Moment Grid 9998 RX axis	96.115	0.294	LE7526	251.547	0.420	LE7525	155.432	161.716
12	ORU I/F Moment Grid 9998 RY axis	1661.696	0.312	LE7524	2001.129	0.395	LE7524	339.433	20.427
13	ORU I/F Moment Grid 9998 RZ axis	170.427	0.254	LE7523	356.120	0.300	LE7526	185.693	108.958
14	ORU I/F Force Grid 9999 X axis	348.964	0.395	LE7524	837.154	0.388	LE7524	488.190	139.897
15	ORU I/F Force Grid 9999 Y axis	1488.156	0.276	LE7525	1771.952	0.278	LE7523	283.796	19.070
16	ORU I/F Force Grid 9999 Z axis	278.226	0.219	LE7521	456.241	0.405	LE7526	178.015	63.982
17	ORU I/F Moment Grid 9999 RX axis	736.474	0.276	LE7525	779.568	0.276	LE7523	43.094	5.851
18	ORU I/F Moment Grid 9999 RY axis	1060.060	0.302	LE7526	1928.558	0.388	LE7524	868.498	81.929
19	ORU I/F Moment Grid 9999 RZ axis	225.834	0.269	LE7523	406.423	0.388	LE7524	180.589	79.965
20	ORU Net Load Factor, X axis	1.782	0.396	LE7524	2.649	0.407	LE7525	0.867	48.658
21	ORU Net Load Factor, Y axis	4.094	0.276	LE7525	4.875	0.278	LE7523	0.781	19.070
22	ORU Net Load Factor, Z axis	1.262	0.181	LE7523	2.110	0.405	LE7526	0.848	67.186
23	ORU Net Load Factor, RX axis	10.235	0.103	LE7525	56.242	0.443	LE7521	46.008	449.524
24	ORU Net Load Factor, RY axis	20.314	0.426	LE7525	79.866	0.513	LE7523	59.553	293.163
25	ORU Net Load Factor, RZ axis	18.312	0.393	LE7525	82.999	0.388	LE7524	64.688	353.259
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1510.210	0.278	LE7525	2089.747	0.389	LE7524	579.537	38.375
27	FSE/ORU Assy I/F Force Grid 653 Z axis	626.124	0.214	LE7523	747.250	0.514	LE7523	121.126	19.345
28	FSE/ORU Assy I/F Force Grid 654 Z axis	360.704	0.278	LE7525	343.762	0.390	LE7524	-16.942	-4.697
29	FSE/ORU Assy I/F Force Grid 655 X axis	917.334	0.397	LE7524	1270.758	0.292	LE7524	353.425	38.527
30	FSE/ORU Assy I/F Force Grid 655 Z axis	319.751	0.186	LE7525	572.556	0.492	LE7526	252.805	79.063
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1443.504	0.294	LE7523	2435.886	0.389	LE7524	992.383	68.748
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	680.375	0.280	LE7525	814.198	0.496	LE7526	133.823	19.669
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	337.772	0.205	LE7523	423.489	0.389	LE7524	85.717	25.377
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	460.187	0.290	LE7523	645.872	0.336	LE7526	185.685	40.350
35	FSE/ORU Assy Net Load Factor, X axis	1.710	0.397	LE7524	2.368	0.292	LE7524	0.659	38.527
36	FSE/ORU Assy Net Load Factor, Y axis	3.989	0.278	LE7525	4.633	0.279	LE7523	0.644	16.143
37	FSE/ORU Assy Net Load Factor, Z axis	1.219	0.177	LE7525	1.671	0.249	LE7525	0.451	37.018
38	FSE/ORU Assy Net Load Factor, RX axis	11.095	0.226	LE7521	50.642	1.109	LE7520	39.547	356.444
39	FSE/ORU Assy Net Load Factor, RY axis	14.151	0.214	LE7523	43.948	0.513	LE7523	29.798	210.574
40	FSE/ORU Assy Net Load Factor, RZ axis	14.020	0.395	LE7525	55.678	0.389	LE7524	41.657	297.117

Table E-10. Battery 4 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.422	0.295	LE7524	2.258	0.407	LE7524	0.836	58.795
2	Net Load Factor - T2 (g)	3.738	0.282	LE7523	4.002	0.282	LE7523	0.264	7.064
3	Net Load Factor - T3 (g)	1.430	1.363	LE7520	1.728	1.169	LE7520	0.297	20.771
4	Net Load Factor - R1 (rad/sec^2)	13.931	0.220	LE7525	46.347	1.639	LE7520	32.416	232.692
5	Net Load Factor - R2 (rad/sec^2)	18.971	0.217	LE7523	36.860	0.692	LE7526	17.889	94.299
6	Net Load Factor - R3 (rad/sec^2)	14.526	0.190	LE7526	52.794	0.450	LE7526	38.268	263.436
7	GRID 653 - T2 (lbf)	1382.167	0.190	LE7526	2068.375	0.430	LE7521	686.208	49.647
8	GRID 653 - T3 (lbf)	565.689	0.208	LE7523	736.835	0.416	LE7524	171.146	30.255
9	GRID 654 - T3 (lbf)	301.317	0.279	LE7525	298.383	0.431	LE7521	-2.933	-0.974
10	GRID 655 - T1 (lbf)	762.846	0.295	LE7524	1211.362	0.407	LE7524	448.516	58.795
11	GRID 655 - T3 (lbf)	429.695	1.207	LE7520	607.154	0.332	LE7524	177.460	41.299
12	GRID 2183 - T2 (lbf)	1363.844	0.198	LE7524	1962.739	0.450	LE7526	598.895	43.912
13	GRID 2183 - T3 (lbf)	636.490	0.273	LE7525	708.795	0.283	LE7523	72.305	11.360
14	GRID 2184 - T3 (lbf)	375.402	0.288	LE7523	425.197	0.295	LE7524	49.795	13.264
15	GRID 2185 - T3 (lbf)	468.021	1.314	LE7520	594.586	0.418	LE7524	126.564	27.042
16	Net Inertial Acc - T1 (in/sec^2)	548.901	0.295	LE7524	871.628	0.407	LE7524	322.727	58.795
17	Net Inertial Acc - T2 (in/sec^2)	1443.090	0.282	LE7523	1545.027	0.282	LE7523	101.938	7.064
18	Net Inertial Acc - T3 (in/sec^2)	552.262	1.363	LE7520	666.972	1.169	LE7520	114.710	20.771
19	Net Inertial Acc - R1 (rad/sec^2)	13.931	0.220	LE7525	46.347	1.639	LE7520	32.416	232.692
20	Net Inertial Acc - R2 (rad/sec^2)	18.971	0.217	LE7523	36.860	0.692	LE7526	17.889	94.299
21	Net Inertial Acc - R3 (rad/sec^2)	14.526	0.190	LE7526	52.794	0.450	LE7526	38.268	263.436

Table E-11. Battery 4 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.545	0.294	LE7524	3.139	0.445	LE7524	1.593	103.107
2	FSE Net Load Factor, Y axis	3.757	0.277	LE7525	4.737	0.429	LE7523	0.980	26.080
3	FSE Net Load Factor, Z axis	1.570	1.366	LE7520	3.413	1.170	LE7520	1.842	117.333
4	FSE Net Load Factor, RX axis	17.728	0.171	LE7525	60.157	0.391	LE7526	42.429	239.339
5	FSE Net Load Factor, RY axis	35.862	1.316	LE7520	59.176	1.130	LE7520	23.314	65.012
6	FSE Net Load Factor, RZ axis	22.672	0.192	LE7526	79.926	0.840	LE7523	57.254	252.530
7	ORU I/F Force Grid 990 Z axis	117.630	0.298	LE7524	196.612	0.413	LE7524	78.982	67.145
8	ORU I/F Force Grid 991 Z axis	140.961	0.396	LE7526	218.820	0.289	LE7526	77.859	55.235
9	ORU I/F Force Grid 9998 X axis	277.742	0.298	LE7524	641.948	0.407	LE7524	364.206	131.131
10	ORU I/F Force Grid 9998 Z axis	471.122	1.208	LE7520	635.747	1.167	LE7520	164.625	34.943
11	ORU I/F Moment Grid 9998 RX axis	135.996	0.219	LE7525	264.251	0.609	LE7524	128.255	94.307
12	ORU I/F Moment Grid 9998 RY axis	1044.051	0.170	LE7523	1481.814	0.289	LE7526	437.763	41.929
13	ORU I/F Moment Grid 9998 RZ axis	111.714	0.181	LE7525	305.227	0.504	LE7523	193.512	173.221
14	ORU I/F Force Grid 9999 X axis	301.240	0.289	LE7524	713.634	0.448	LE7526	412.393	136.899
15	ORU I/F Force Grid 9999 Y axis	1372.763	0.281	LE7523	1541.658	0.429	LE7521	168.895	12.303
16	ORU I/F Force Grid 9999 Z axis	277.472	0.206	LE7525	390.975	0.467	LE7526	113.503	40.906
17	ORU I/F Moment Grid 9999 RX axis	740.022	0.274	LE7525	740.104	0.429	LE7521	0.082	0.011
18	ORU I/F Moment Grid 9999 RY axis	1036.964	0.396	LE7526	1531.540	0.294	LE7524	494.576	47.695
19	ORU I/F Moment Grid 9999 RZ axis	143.274	0.174	LE7523	349.686	0.448	LE7526	206.412	144.068
20	ORU Net Load Factor, X axis	1.500	0.396	LE7526	2.783	0.406	LE7524	1.284	85.597
21	ORU Net Load Factor, Y axis	3.777	0.281	LE7523	4.242	0.429	LE7521	0.465	12.303
22	ORU Net Load Factor, Z axis	1.405	1.362	LE7520	2.651	1.167	LE7520	1.246	88.676
23	ORU Net Load Factor, RX axis	14.910	0.208	LE7525	59.894	0.390	LE7526	44.983	301.691
24	ORU Net Load Factor, RY axis	24.494	0.216	LE7523	50.520	0.691	LE7526	26.027	106.259
25	ORU Net Load Factor, RZ axis	17.045	0.187	LE7526	88.237	0.448	LE7526	71.191	417.656
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1382.167	0.190	LE7526	2068.375	0.430	LE7521	686.208	49.647
27	FSE/ORU Assy I/F Force Grid 653 Z axis	565.689	0.208	LE7523	736.835	0.416	LE7524	171.146	30.255
28	FSE/ORU Assy I/F Force Grid 654 Z axis	301.317	0.279	LE7525	298.383	0.431	LE7521	-2.933	-0.974
29	FSE/ORU Assy I/F Force Grid 655 X axis	762.846	0.295	LE7524	1211.362	0.407	LE7524	448.516	58.795
30	FSE/ORU Assy I/F Force Grid 655 Z axis	429.695	1.207	LE7520	607.154	0.332	LE7524	177.460	41.299
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1363.844	0.198	LE7524	1962.739	0.450	LE7526	598.895	43.912
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	636.490	0.273	LE7525	708.795	0.283	LE7523	72.305	11.360
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	375.402	0.288	LE7523	425.197	0.295	LE7524	49.795	13.264
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	468.021	1.314	LE7520	594.586	0.418	LE7524	126.564	27.042
35	FSE/ORU Assy Net Load Factor, X axis	1.422	0.295	LE7524	2.258	0.407	LE7524	0.836	58.795
36	FSE/ORU Assy Net Load Factor, Y axis	3.738	0.282	LE7523	4.002	0.282	LE7523	0.264	7.064
37	FSE/ORU Assy Net Load Factor, Z axis	1.430	1.363	LE7520	1.727	1.169	LE7520	0.297	20.771
38	FSE/ORU Assy Net Load Factor, RX axis	13.931	0.220	LE7525	46.347	1.639	LE7520	32.416	232.692
39	FSE/ORU Assy Net Load Factor, RY axis	18.971	0.217	LE7523	36.860	0.692	LE7526	17.889	94.299
40	FSE/ORU Assy Net Load Factor, RZ axis	14.526	0.190	LE7526	52.794	0.450	LE7526	38.268	263.436

Table E-12. Battery 5 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.383	0.398	LE7524	2.336	0.393	LE7526	0.953	68.952
2	Net Load Factor - T2 (g)	3.932	0.277	LE7525	4.002	0.281	LE7525	0.070	1.779
3	Net Load Factor - T3 (g)	0.876	0.200	LE7525	1.461	1.208	LE7520	0.584	66.689
4	Net Load Factor - R1 (rad/sec^2)	13.399	0.221	LE7525	53.096	0.419	LE7521	39.697	296.269
5	Net Load Factor - R2 (rad/sec^2)	20.215	1.313	LE7520	39.115	0.569	LE7525	18.900	93.498
6	Net Load Factor - R3 (rad/sec^2)	14.048	0.146	LE7525	52.872	0.295	LE7526	38.824	276.370
7	GRID 653 - T2 (lbf)	1232.959	0.281	LE7525	2178.422	0.392	LE7526	945.463	76.682
8	GRID 653 - T3 (lbf)	577.936	0.276	LE7523	824.952	0.362	LE7525	247.016	42.741
9	GRID 654 - T3 (lbf)	203.985	0.278	LE7525	306.793	0.295	LE7526	102.808	50.400
10	GRID 655 - T1 (lbf)	741.922	0.398	LE7524	1253.493	0.393	LE7526	511.570	68.952
11	GRID 655 - T3 (lbf)	350.656	0.286	LE7526	716.411	1.208	LE7520	365.755	104.306
12	GRID 2183 - T2 (lbf)	1361.556	0.203	LE7523	2157.345	0.296	LE7524	795.789	58.447
13	GRID 2183 - T3 (lbf)	521.490	0.274	LE7525	626.495	0.493	LE7526	105.005	20.136
14	GRID 2184 - T3 (lbf)	257.815	0.292	LE7523	342.306	0.410	LE7523	84.491	32.772
15	GRID 2185 - T3 (lbf)	389.883	1.262	LE7520	630.190	0.402	LE7524	240.307	61.636
16	Net Inertial Acc - T1 (in/sec^2)	533.845	0.398	LE7524	901.942	0.393	LE7526	368.097	68.952
17	Net Inertial Acc - T2 (in/sec^2)	1518.281	0.277	LE7525	1545.295	0.281	LE7525	27.013	1.779
18	Net Inertial Acc - T3 (in/sec^2)	338.324	0.200	LE7525	563.949	1.208	LE7520	225.624	66.689
19	Net Inertial Acc - R1 (rad/sec^2)	13.399	0.221	LE7525	53.096	0.419	LE7521	39.697	296.269
20	Net Inertial Acc - R2 (rad/sec^2)	20.215	1.313	LE7520	39.115	0.569	LE7525	18.900	93.498
21	Net Inertial Acc - R3 (rad/sec^2)	14.048	0.146	LE7525	52.872	0.295	LE7526	38.824	276.370

Table E-13. Battery 5 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.376	0.293	LE7524	3.309	0.397	LE7526	1.933	140.462
2	FSE Net Load Factor, Y axis	3.959	0.281	LE7525	4.407	0.281	LE7523	0.448	11.323
3	FSE Net Load Factor, Z axis	1.021	0.201	LE7525	2.894	1.157	LE7520	1.873	183.401
4	FSE Net Load Factor, RX axis	14.760	0.221	LE7525	46.710	0.414	LE7521	31.950	216.465
5	FSE Net Load Factor, RY axis	35.214	1.290	LE7520	60.825	0.569	LE7525	25.611	72.729
6	FSE Net Load Factor, RZ axis	22.839	0.130	LE7525	98.519	0.299	LE7524	75.681	331.372
7	ORU I/F Force Grid 990 Z axis	128.567	0.296	LE7523	197.638	0.316	LE7524	69.071	53.724
8	ORU I/F Force Grid 991 Z axis	120.970	0.286	LE7526	184.755	1.200	LE7520	63.785	52.728
9	ORU I/F Force Grid 9998 X axis	265.224	0.288	LE7526	805.929	0.406	LE7526	540.705	203.867
10	ORU I/F Force Grid 9998 Z axis	394.549	0.281	LE7525	687.467	1.423	LE7520	292.918	74.241
11	ORU I/F Moment Grid 9998 RX axis	154.827	0.353	LE7523	272.541	0.226	LE7525	117.714	76.029
12	ORU I/F Moment Grid 9998 RY axis	872.893	0.287	LE7526	1467.320	0.289	LE7526	594.427	68.099
13	ORU I/F Moment Grid 9998 RZ axis	89.821	0.298	LE7523	346.402	0.299	LE7526	256.582	285.660
14	ORU I/F Force Grid 9999 X axis	271.961	0.395	LE7524	876.861	0.390	LE7526	604.900	222.422
15	ORU I/F Force Grid 9999 Y axis	1457.681	0.275	LE7525	1505.251	0.278	LE7523	47.570	3.263
16	ORU I/F Force Grid 9999 Z axis	285.090	0.200	LE7525	411.530	1.157	LE7520	126.441	44.351
17	ORU I/F Moment Grid 9999 RX axis	666.437	0.275	LE7525	667.149	0.440	LE7521	0.711	0.107
18	ORU I/F Moment Grid 9999 RY axis	925.536	0.396	LE7524	1751.895	0.390	LE7526	826.360	89.284
19	ORU I/F Moment Grid 9999 RZ axis	102.415	0.352	LE7523	393.979	0.390	LE7526	291.564	284.690
20	ORU Net Load Factor, X axis	1.446	0.397	LE7524	2.631	0.394	LE7526	1.185	81.922
21	ORU Net Load Factor, Y axis	4.011	0.275	LE7525	4.141	0.278	LE7523	0.131	3.263
22	ORU Net Load Factor, Z axis	0.898	0.199	LE7525	2.076	1.208	LE7520	1.178	131.236
23	ORU Net Load Factor, RX axis	15.178	0.209	LE7523	51.508	0.563	LE7524	36.330	239.358
24	ORU Net Load Factor, RY axis	21.280	0.132	LE7525	56.264	0.360	LE7525	34.984	164.399
25	ORU Net Load Factor, RZ axis	16.625	0.124	LE7525	103.811	0.390	LE7526	87.187	524.446
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1232.959	0.281	LE7525	2178.422	0.392	LE7526	945.463	76.682
27	FSE/ORU Assy I/F Force Grid 653 Z axis	577.936	0.276	LE7523	824.952	0.362	LE7525	247.016	42.741
28	FSE/ORU Assy I/F Force Grid 654 Z axis	203.985	0.278	LE7525	306.793	0.295	LE7526	102.808	50.400
29	FSE/ORU Assy I/F Force Grid 655 X axis	741.922	0.398	LE7524	1253.493	0.393	LE7526	511.570	68.952
30	FSE/ORU Assy I/F Force Grid 655 Z axis	350.656	0.286	LE7526	716.411	1.208	LE7520	365.755	104.306
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1361.556	0.203	LE7523	2157.345	0.296	LE7524	795.789	58.447
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	521.490	0.274	LE7525	626.495	0.493	LE7526	105.005	20.136
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	257.815	0.292	LE7523	342.306	0.410	LE7523	84.491	32.772
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	389.883	1.262	LE7520	630.190	0.402	LE7524	240.307	61.636
35	FSE/ORU Assy Net Load Factor, X axis	1.383	0.398	LE7524	2.336	0.393	LE7526	0.953	68.952
36	FSE/ORU Assy Net Load Factor, Y axis	3.932	0.277	LE7525	4.002	0.281	LE7525	0.070	1.779
37	FSE/ORU Assy Net Load Factor, Z axis	0.876	0.200	LE7525	1.461	1.208	LE7520	0.584	66.689
38	FSE/ORU Assy Net Load Factor, RX axis	13.399	0.221	LE7525	53.096	0.419	LE7521	39.697	296.269
39	FSE/ORU Assy Net Load Factor, RY axis	20.215	1.313	LE7520	39.115	0.569	LE7525	18.900	93.498
40	FSE/ORU Assy Net Load Factor, RZ axis	14.048	0.146	LE7525	52.872	0.295	LE7526	38.824	276.370

Table E-14. Battery 6 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.533	0.397	LE7524	2.050	0.315	LE7525	0.517	33.757
2	Net Load Factor - T2 (g)	3.883	0.284	LE7525	4.512	0.434	LE7521	0.629	16.200
3	Net Load Factor - T3 (g)	1.376	1.236	LE7520	1.622	1.193	LE7520	0.247	17.933
4	Net Load Factor - R1 (rad/sec^2)	15.669	0.219	LE7523	57.732	0.907	LE7525	42.063	268.452
5	Net Load Factor - R2 (rad/sec^2)	16.884	0.170	LE7523	34.710	0.448	LE7521	17.826	105.581
6	Net Load Factor - R3 (rad/sec^2)	11.230	0.329	LE7525	52.234	0.434	LE7521	41.005	365.149
7	GRID 653 - T2 (lbf)	1243.314	0.198	LE7526	2143.628	0.295	LE7526	900.314	72.412
8	GRID 653 - T3 (lbf)	618.939	0.285	LE7525	882.632	0.401	LE7524	263.694	42.604
9	GRID 654 - T3 (lbf)	329.508	0.267	LE7523	361.872	0.296	LE7526	32.364	9.822
10	GRID 655 - T1 (lbf)	822.326	0.397	LE7524	1099.918	0.315	LE7525	277.592	33.757
11	GRID 655 - T3 (lbf)	392.106	1.236	LE7520	668.532	0.413	LE7526	276.425	70.498
12	GRID 2183 - T2 (lbf)	1440.126	0.217	LE7523	2421.246	0.434	LE7521	981.120	68.127
13	GRID 2183 - T3 (lbf)	449.742	0.209	LE7525	734.180	0.273	LE7525	284.438	63.245
14	GRID 2184 - T3 (lbf)	265.950	0.280	LE7523	383.007	0.434	LE7521	117.058	44.015
15	GRID 2185 - T3 (lbf)	383.429	0.340	LE7526	643.766	0.292	LE7524	260.337	67.897
16	Net Inertial Acc - T1 (in/sec^2)	591.699	0.397	LE7524	791.438	0.315	LE7525	199.739	33.757
17	Net Inertial Acc - T2 (in/sec^2)	1499.306	0.284	LE7525	1742.192	0.434	LE7521	242.886	16.200
18	Net Inertial Acc - T3 (in/sec^2)	531.146	1.236	LE7520	626.397	1.193	LE7520	95.251	17.933
19	Net Inertial Acc - R1 (rad/sec^2)	15.669	0.219	LE7523	57.732	0.907	LE7525	42.063	268.452
20	Net Inertial Acc - R2 (rad/sec^2)	16.884	0.170	LE7523	34.710	0.448	LE7521	17.826	105.581
21	Net Inertial Acc - R3 (rad/sec^2)	11.230	0.329	LE7525	52.234	0.434	LE7521	41.005	365.149

Table E-15. Battery 6 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.510	0.294	LE7526	3.142	0.305	LE7525	1.632	108.045
2	FSE Net Load Factor, Y axis	3.757	0.283	LE7525	5.148	0.277	LE7525	1.391	37.038
3	FSE Net Load Factor, Z axis	1.478	1.389	LE7520	3.850	0.405	LE7524	2.373	160.596
4	FSE Net Load Factor, RX axis	19.515	0.112	LE7525	57.225	0.828	LE7520	37.710	193.242
5	FSE Net Load Factor, RY axis	29.756	1.263	LE7520	63.749	1.206	LE7520	33.994	114.243
6	FSE Net Load Factor, RZ axis	22.922	0.145	LE7523	99.284	0.436	LE7521	76.362	333.138
7	ORU I/F Force Grid 990 Z axis	147.990	0.214	LE7523	218.381	0.398	LE7524	70.391	47.564
8	ORU I/F Force Grid 991 Z axis	133.982	0.383	LE7526	201.129	0.424	LE7525	67.147	50.116
9	ORU I/F Force Grid 9998 X axis	280.574	0.400	LE7524	621.242	0.291	LE7524	340.668	121.418
10	ORU I/F Force Grid 9998 Z axis	398.585	0.272	LE7525	631.829	1.193	LE7520	233.244	58.518
11	ORU I/F Moment Grid 9998 RX axis	149.694	0.201	LE7525	259.497	0.354	LE7523	109.804	73.352
12	ORU I/F Moment Grid 9998 RY axis	1354.093	0.169	LE7525	1403.884	0.300	LE7526	49.791	3.677
13	ORU I/F Moment Grid 9998 RZ axis	113.406	0.159	LE7523	276.533	0.468	LE7524	163.127	143.844
14	ORU I/F Force Grid 9999 X axis	329.094	0.395	LE7524	732.085	0.409	LE7524	402.991	122.455
15	ORU I/F Force Grid 9999 Y axis	1437.420	0.285	LE7525	1765.303	0.271	LE7525	327.883	22.811
16	ORU I/F Force Grid 9999 Z axis	293.217	0.212	LE7525	483.396	0.349	LE7525	190.179	64.860
17	ORU I/F Moment Grid 9999 RX axis	703.495	0.270	LE7525	843.677	0.432	LE7521	140.182	19.927
18	ORU I/F Moment Grid 9999 RY axis	1056.272	0.396	LE7524	1556.918	0.885	LE7525	500.646	47.397
19	ORU I/F Moment Grid 9999 RZ axis	154.850	0.170	LE7525	318.138	0.885	LE7525	163.289	105.450
20	ORU Net Load Factor, X axis	1.604	0.396	LE7524	2.281	0.413	LE7526	0.677	42.175
21	ORU Net Load Factor, Y axis	3.955	0.285	LE7525	4.857	0.271	LE7525	0.902	22.811
22	ORU Net Load Factor, Z axis	1.372	1.235	LE7520	2.495	1.193	LE7520	1.124	81.932
23	ORU Net Load Factor, RX axis	15.597	0.220	LE7523	59.147	0.907	LE7525	43.550	279.224
24	ORU Net Load Factor, RY axis	25.448	0.122	LE7523	61.752	1.708	LE7520	36.304	142.657
25	ORU Net Load Factor, RZ axis	14.669	0.231	LE7523	76.400	0.885	LE7525	61.731	420.838
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1243.314	0.198	LE7526	2143.628	0.295	LE7526	900.314	72.412
27	FSE/ORU Assy I/F Force Grid 653 Z axis	618.939	0.285	LE7525	882.632	0.401	LE7524	263.694	42.604
28	FSE/ORU Assy I/F Force Grid 654 Z axis	329.508	0.267	LE7523	361.872	0.296	LE7526	32.364	9.822
29	FSE/ORU Assy I/F Force Grid 655 X axis	822.326	0.397	LE7524	1099.918	0.315	LE7525	277.592	33.757
30	FSE/ORU Assy I/F Force Grid 655 Z axis	392.106	1.236	LE7520	668.532	0.413	LE7526	276.425	70.498
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1440.126	0.217	LE7523	2421.246	0.434	LE7521	981.120	68.127
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	449.742	0.209	LE7525	734.180	0.273	LE7525	284.438	63.245
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	265.950	0.280	LE7523	383.007	0.434	LE7521	117.058	44.015
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	383.429	0.340	LE7526	643.766	0.292	LE7524	260.337	67.897
35	FSE/ORU Assy Net Load Factor, X axis	1.533	0.397	LE7524	2.050	0.315	LE7525	0.517	33.757
36	FSE/ORU Assy Net Load Factor, Y axis	3.883	0.284	LE7525	4.512	0.434	LE7521	0.629	16.200
37	FSE/ORU Assy Net Load Factor, Z axis	1.376	1.236	LE7520	1.622	1.193	LE7520	0.247	17.933
38	FSE/ORU Assy Net Load Factor, RX axis	15.669	0.219	LE7523	57.732	0.907	LE7525	42.063	268.452
39	FSE/ORU Assy Net Load Factor, RY axis	16.884	0.170	LE7523	34.710	0.448	LE7521	17.826	105.581
40	FSE/ORU Assy Net Load Factor, RZ axis	11.230	0.329	LE7525	52.234	0.434	LE7521	41.005	365.149

Table E-16. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	0.629	0.367	LE7525	0.812	0.365	LE7523	0.183	29.040
2	Net Load Factor - T2 (g)	1.371	0.289	LE7526	1.796	0.286	LE7524	0.425	30.974
3	Net Load Factor - T3 (g)	3.529	0.275	LE7523	3.648	0.278	LE7525	0.119	3.386
4	Net Load Factor - R1 (rad/sec^2)	2.957	0.409	LE7523	5.820	0.430	LE7523	2.863	96.815
5	Net Load Factor - R2 (rad/sec^2)	8.121	0.220	LE7521	10.596	0.496	LE7523	2.475	30.480
6	Net Load Factor - R3 (rad/sec^2)	2.760	1.258	LE7520	4.738	0.424	LE7524	1.978	71.690
7	GRID 1271 - T2 (lbf) [Orbiter IF]	8832.986	0.291	LE7526	8133.512	0.294	LE7526	-699.474	-7.919
8	GRID 6299 - T1 (lbf) [Battery 4 IF]	468.021	1.314	LE7520	594.586	0.418	LE7524	126.564	27.042
9	GRID 13067 - T1 (lbf) [Battery 4 IF]	375.402	0.288	LE7523	425.197	0.295	LE7524	49.795	13.264
10	GRID 13083 - T1 (lbf) [Battery 4 IF]	301.317	0.279	LE7525	298.383	0.431	LE7521	-2.933	-0.974
11	GRID 13115 - T1 (lbf) [Battery 5 IF]	257.815	0.292	LE7523	342.306	0.410	LE7523	84.491	32.772
12	GRID 13545 - T1 (lbf) [Battery 4 IF]	429.695	1.207	LE7520	607.154	0.332	LE7524	177.460	41.299
13	GRID 13545 - T2 (lbf) [Battery 4 IF]	762.846	0.295	LE7524	1211.362	0.407	LE7524	448.516	58.795
14	GRID 13576 - T1 (lbf) [Battery 5 IF]	389.883	1.262	LE7520	630.190	0.402	LE7524	240.307	61.636
15	GRID 16250 - T1 (lbf) [Battery 6 IF]	392.106	1.236	LE7520	668.532	0.413	LE7526	276.425	70.498
16	GRID 16250 - T2 (lbf) [Battery 6 IF]	822.326	0.397	LE7524	1099.918	0.315	LE7525	277.592	33.757
17	GRID 23028 - T1 (lbf) [Battery 6 IF]	329.508	0.267	LE7523	361.872	0.296	LE7526	32.364	9.822
18	GRID 23044 - T1 (lbf) [Battery 6 IF]	265.950	0.280	LE7523	383.007	0.434	LE7521	117.058	44.015
19	GRID 23076 - T1 (lbf) [Battery 5 IF]	203.985	0.278	LE7525	306.793	0.295	LE7526	102.808	50.400
20	GRID 23506 - T1 (lbf) [Battery 6 IF]	383.429	0.340	LE7526	643.766	0.292	LE7524	260.337	67.897
21	GRID 23537 - T1 (lbf) [Battery 5 IF]	350.656	0.286	LE7526	716.411	1.208	LE7520	365.755	104.306
22	GRID 23537 - T2 (lbf) [Battery 5 IF]	741.922	0.398	LE7524	1253.493	0.393	LE7526	511.570	68.952
23	GRID 37940 - T1 (lbf) [Battery 1 IF]	488.172	0.290	LE7525	790.920	0.283	LE7525	302.748	62.017
24	GRID 37940 - T2 (lbf) [Battery 1 IF]	872.164	0.302	LE7524	1424.618	0.396	LE7526	552.454	63.343
25	GRID 38067 - T1 (lbf) [Battery 1 IF]	318.194	0.300	LE7524	544.394	0.396	LE7526	226.200	71.089
26	GRID 38323 - T1 (lbf) [Battery 2 IF]	405.790	0.291	LE7526	623.027	0.410	LE7525	217.237	53.534
27	GRID 38323 - T2 (lbf) [Battery 2 IF]	872.731	0.296	LE7526	1379.705	0.293	LE7526	506.974	58.091
28	GRID 45767 - T1 (lbf) [Battery 3 IF]	460.187	0.290	LE7523	645.872	0.336	LE7526	185.685	40.350
29	GRID 45890 - T1 (lbf) [Battery 3 IF]	319.751	0.186	LE7525	572.556	0.492	LE7526	252.805	79.063
30	GRID 45890 - T2 (lbf) [Battery 3 IF]	917.334	0.397	LE7524	1270.758	0.292	LE7524	353.425	38.527
31	GRID 46151 - T1 (lbf) [Battery 2 IF]	367.222	0.189	LE7523	520.081	0.368	LE7525	152.859	41.626
32	GRID 53578 - T1 (lbf) [Battery 4 IF]	636.490	0.273	LE7525	708.795	0.283	LE7523	72.305	11.360
33	GRID 53578 - T3 (lbf) [Battery 4 IF]	1363.844	0.198	LE7524	1962.739	0.450	LE7526	598.895	43.912
34	GRID 53701 - T1 (lbf) [Battery 4 IF]	565.689	0.208	LE7523	736.835	0.416	LE7524	171.146	30.255
35	GRID 53701 - T3 (lbf) [Battery 4 IF]	1382.167	0.190	LE7526	2068.375	0.430	LE7521	686.208	49.647
36	GRID 53956 - T1 (lbf) [Battery 5 IF]	521.490	0.274	LE7525	626.495	0.493	LE7526	105.005	20.136
37	GRID 53956 - T3 (lbf) [Battery 5 IF]	1361.556	0.203	LE7523	2157.345	0.296	LE7524	795.789	58.447
38	GRID 61404 - T1 (lbf) [Battery 6 IF]	618.939	0.285	LE7525	882.632	0.401	LE7524	263.694	42.604
39	GRID 61404 - T3 (lbf) [Battery 6 IF]	1243.314	0.198	LE7526	2143.628	0.295	LE7526	900.314	72.412
40	GRID 61527 - T1 (lbf) [Battery 6 IF]	449.742	0.209	LE7525	734.180	0.273	LE7525	284.438	63.245
41	GRID 61527 - T3 (lbf) [Battery 6 IF]	1440.126	0.217	LE7523	2421.246	0.434	LE7521	981.120	68.127
42	GRID 61788 - T1 (lbf) [Battery 5 IF]	577.936	0.276	LE7523	824.952	0.362	LE7525	247.016	42.741
43	GRID 61788 - T3 (lbf) [Battery 5 IF]	1232.959	0.281	LE7525	2178.422	0.392	LE7526	945.463	76.682
44	GRID 62589 - T1 (lbf) [Battery 3 IF]	337.772	0.205	LE7523	423.489	0.389	LE7524	85.717	25.377
45	GRID 62774 - T1 (lbf) [Battery 3 IF]	360.704	0.278	LE7525	343.762	0.390	LE7524	-16.942	-4.697
46	GRID 63043 - T1 (lbf) [Battery 3 IF]	680.375	0.280	LE7525	814.198	0.496	LE7526	133.823	19.669
47	GRID 63043 - T3 (lbf) [Battery 3 IF]	1443.504	0.294	LE7523	2435.886	0.389	LE7524	992.383	68.748
48	GRID 63343 - T1 (lbf) [Battery 3 IF]	626.124	0.214	LE7523	747.250	0.514	LE7523	121.126	19.345
49	GRID 63343 - T3 (lbf) [Battery 3 IF]	1510.210	0.278	LE7525	2089.747	0.389	LE7524	579.537	38.375
50	GRID 63345 - T1 (lbf) [Battery 2 IF]	309.598	0.289	LE7523	306.975	0.298	LE7523	-2.623	-0.847

Table E-16. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 - T1 (lbf) [Battery 2 IF]	322.395	0.209	LE7525	280.193	0.393	LE7526	-42.202	-13.090
52	GRID 63942 - T1 (lbf) [Battery 2 IF]	655.191	0.286	LE7525	948.618	0.430	LE7525	293.427	44.785
53	GRID 63942 - T3 (lbf) [Battery 2 IF]	1398.329	0.290	LE7523	2235.910	0.296	LE7524	837.581	59.899
54	GRID 64244 - T1 (lbf) [Battery 2 IF]	658.780	0.283	LE7523	706.144	0.479	LE7526	47.364	7.190
55	GRID 64244 - T3 (lbf) [Battery 2 IF]	1301.415	0.209	LE7525	2280.219	0.393	LE7526	978.804	75.211
56	GRID 64246 - T1 (lbf) [Battery 1 IF]	349.231	0.274	LE7523	303.587	0.397	LE7524	-45.644	-13.070
57	GRID 64540 - T1 (lbf) [Battery 1 IF]	328.886	0.292	LE7525	424.523	0.392	LE7526	95.637	29.079
58	GRID 64814 - T1 (lbf) [Battery 1 IF]	672.906	0.216	LE7525	730.935	0.227	LE7521	58.029	8.624
59	GRID 64814 - T3 (lbf) [Battery 1 IF]	1506.445	0.274	LE7523	1775.255	0.296	LE7524	268.811	17.844
60	GRID 65003 - T1 (lbf) [Battery 1 IF]	607.690	0.282	LE7523	723.776	0.427	LE7523	116.086	19.103
61	GRID 65003 - T3 (lbf) [Battery 1 IF]	1401.866	0.292	LE7525	2006.851	0.392	LE7526	604.985	43.156
62	GRID 111869 - T3 (lbf) [Orbiter IF]	2514.335	0.323	LE7522	2657.139	0.313	LE7524	142.804	5.680
63	GRID 111885 - T1 (lbf) [Orbiter IF]	2624.827	0.182	LE7525	2713.906	0.180	LE7525	89.078	3.394
64	GRID 111885 - T3 (lbf) [Orbiter IF]	13234.104	0.212	LE7523	13519.232	0.212	LE7523	285.128	2.154
65	GRID 113369 - T3 (lbf) [Orbiter IF]	2611.211	0.320	LE7524	2645.379	0.326	LE7524	34.169	1.309
66	GRID 113385 - T1 (lbf) [Orbiter IF]	2452.268	0.184	LE7523	2737.698	0.368	LE7525	285.431	11.639
67	GRID 113385 - T3 (lbf) [Orbiter IF]	13176.338	0.213	LE7525	13366.790	0.214	LE7525	190.452	1.445
68	GRID 150301 - T1 (lbf) [LDU-IA IF]	1362.183	0.218	LE7521	1594.320	0.214	LE7521	232.137	17.042
69	GRID 150301 - T2 (lbf) [LDU-IA IF]	526.229	0.290	LE7524	1144.240	1.169	LE7520	618.012	117.442
70	GRID 150302 - T1 (lbf) [LDU-IA IF]	1399.486	0.218	LE7521	1582.362	0.213	LE7521	182.875	13.067
71	GRID 150303 - T2 (lbf) [LDU-IA IF]	370.380	0.289	LE7524	518.919	0.407	LE7523	148.539	40.105
72	GRID 150311 - T3 (lbf) [LDU-IA IF]	745.549	0.219	LE7525	890.359	1.160	LE7520	144.810	19.423
73	GRID 150312 - T3 (lbf) [LDU-IA IF]	836.722	0.216	LE7523	944.397	0.218	LE7523	107.674	12.869
74	GRID 150313 - T3 (lbf) [LDU-IA IF]	466.189	0.285	LE7525	881.679	1.157	LE7520	415.490	89.125
75	GRID 150314 - T3 (lbf) [LDU-IA IF]	546.877	1.207	LE7520	642.493	1.159	LE7520	95.615	17.484
76	GRID 160301 - T1 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
77	GRID 160301 - T2 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
78	GRID 160302 - T1 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
79	GRID 160303 - T2 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
80	GRID 160311 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
81	GRID 160312 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
82	GRID 160313 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
83	GRID 160314 - T3 (lbf) [PM-IA IF]	0.000	0.000		0.000	0.000		0.000	
84	GRID 170301 - T1 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
85	GRID 170301 - T2 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
86	GRID 170302 - T1 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
87	GRID 170303 - T2 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
88	GRID 170311 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
89	GRID 170312 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
90	GRID 170313 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
91	GRID 170314 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
92	Net Inertial Acc - T1 (in/sec^2)	242.981	0.367	LE7525	313.544	0.365	LE7523	70.563	29.040
93	Net Inertial Acc - T2 (in/sec^2)	529.408	0.289	LE7526	693.388	0.286	LE7524	163.980	30.974
94	Net Inertial Acc - T3 (in/sec^2)	1362.363	0.275	LE7523	1408.496	0.278	LE7525	46.132	3.386
95	Net Inertial Acc - R1 (rad/sec^2)	2.957	0.409	LE7523	5.820	0.430	LE7523	2.863	96.815
96	Net Inertial Acc - R2 (rad/sec^2)	8.121	0.220	LE7521	10.596	0.496	LE7523	2.475	30.480
97	Net Inertial Acc - R3 (rad/sec^2)	2.760	1.258	LE7520	4.738	0.424	LE7524	1.978	71.690

Table E-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	NLF TX	242.961	0.367	LE7525	313.406	0.365	LE7523	70.445	28.994
2	NLF TY	529.467	0.289	LE7526	693.374	0.286	LE7524	163.907	30.957
3	NLF TZ	1362.181	0.275	LE7523	1408.825	0.278	LE7525	46.644	3.424
4	NLF RX	2.957	0.409	LE7523	5.820	0.430	LE7523	2.863	96.815
5	NLF RY	8.121	0.220	LE7521	10.596	0.496	LE7523	2.475	30.480
6	NLF RZ	2.760	1.258	LE7520	4.738	0.424	LE7524	1.978	71.690
7	Keel Grid 1271 DOF 2 I/F force	8832.986	0.291	LE7526	8133.512	0.294	LE7526	-699.474	-7.919
8	GRID 6299 TX NHP FORCE	468.021	1.314	LE7520	594.586	0.418	LE7524	126.564	27.042
9	GRID 13067 TX NHP FORCE	375.402	0.288	LE7523	425.197	0.295	LE7524	49.795	13.264
10	GRID 13083 TX NHP FORCE	301.317	0.279	LE7525	298.383	0.431	LE7521	-2.933	-0.974
11	GRID 13115 TX NHP FORCE	257.815	0.292	LE7523	342.306	0.410	LE7523	84.491	32.772
12	GRID 13545 TX NHP FORCE	429.695	1.207	LE7520	607.154	0.332	LE7524	177.460	41.299
13	GRID 13545 TY NHP FORCE	762.846	0.295	LE7524	1211.362	0.407	LE7524	448.516	58.795
14	GRID 13576 TX NHP FORCE	389.883	1.262	LE7520	630.190	0.402	LE7524	240.307	61.636
15	GRID 16250 TX NHP FORCE	392.106	1.236	LE7520	668.532	0.413	LE7526	276.425	70.498
16	GRID 16250 TY NHP FORCE	822.326	0.397	LE7524	1099.918	0.315	LE7525	277.592	33.757
17	GRID 23028 TX NHP FORCE	329.508	0.267	LE7523	361.872	0.296	LE7526	32.364	9.822
18	GRID 23044 TX NHP FORCE	265.950	0.280	LE7523	383.007	0.434	LE7521	117.058	44.015
19	GRID 23076 TX NHP FORCE	203.985	0.278	LE7525	306.793	0.295	LE7526	102.808	50.400
20	GRID 23506 TX NHP FORCE	383.429	0.340	LE7526	643.766	0.292	LE7524	260.337	67.897
21	GRID 23537 TX NHP FORCE	350.656	0.286	LE7526	716.411	1.208	LE7520	365.755	104.306
22	GRID 23537 TY NHP FORCE	741.922	0.398	LE7524	1253.493	0.393	LE7526	511.570	68.952
23	GRID 37940 TX NHP FORCE	488.172	0.290	LE7525	790.920	0.283	LE7525	302.748	62.017
24	GRID 37940 TY NHP FORCE	872.164	0.302	LE7524	1424.618	0.396	LE7526	552.454	63.343
25	GRID 38067 TX NHP FORCE	318.194	0.300	LE7524	544.394	0.396	LE7526	226.200	71.089
26	GRID 38323 TX NHP FORCE	405.790	0.291	LE7526	623.027	0.410	LE7525	217.237	53.534
27	GRID 38323 TY NHP FORCE	872.731	0.296	LE7526	1379.705	0.293	LE7526	506.974	58.091
28	GRID 45767 TX NHP FORCE	460.187	0.290	LE7523	645.872	0.336	LE7526	185.685	40.350
29	GRID 45890 TX NHP FORCE	319.751	0.186	LE7525	572.556	0.492	LE7526	252.805	79.063
30	GRID 45890 TY NHP FORCE	917.334	0.397	LE7524	1270.758	0.292	LE7524	353.425	38.527
31	GRID 46151 TX NHP FORCE	367.222	0.189	LE7523	520.081	0.368	LE7525	152.859	41.626
32	GRID 53578 TX NHP FORCE	636.490	0.273	LE7525	708.795	0.283	LE7523	72.305	11.360
33	GRID 53578 TZ NHP FORCE	1363.844	0.198	LE7524	1962.739	0.450	LE7526	598.895	43.912
34	GRID 53701 TX NHP FORCE	565.689	0.208	LE7523	736.835	0.416	LE7524	171.146	30.255
35	GRID 53701 TZ NHP FORCE	1382.167	0.190	LE7526	2068.375	0.430	LE7521	686.208	49.647
36	GRID 53956 TX NHP FORCE	521.490	0.274	LE7525	626.495	0.493	LE7526	105.005	20.136
37	GRID 53956 TZ NHP FORCE	1361.556	0.203	LE7523	2157.345	0.296	LE7524	795.789	58.447
38	GRID 61404 TX NHP FORCE	618.939	0.285	LE7525	882.632	0.401	LE7524	263.694	42.604
39	GRID 61404 TZ NHP FORCE	1243.314	0.198	LE7526	2143.628	0.295	LE7526	900.314	72.412
40	GRID 61527 TX NHP FORCE	449.742	0.209	LE7525	734.180	0.273	LE7525	284.438	63.245
41	GRID 61527 TZ NHP FORCE	1440.126	0.217	LE7523	2421.246	0.434	LE7521	981.120	68.127
42	GRID 61788 TX NHP FORCE	577.936	0.276	LE7523	824.952	0.362	LE7525	247.016	42.741
43	GRID 61788 TZ NHP FORCE	1232.959	0.281	LE7525	2178.422	0.392	LE7526	945.463	76.682
44	GRID 62589 TX NHP FORCE	337.772	0.205	LE7523	423.489	0.389	LE7524	85.717	25.377
45	GRID 62774 TX NHP FORCE	360.704	0.278	LE7525	343.762	0.390	LE7524	-16.942	-4.697
46	GRID 63043 TX NHP FORCE	680.375	0.280	LE7525	814.198	0.496	LE7526	133.823	19.669
47	GRID 63043 TZ NHP FORCE	1443.504	0.294	LE7523	2435.886	0.389	LE7524	992.383	68.748
48	GRID 63343 TX NHP FORCE	626.124	0.214	LE7523	747.250	0.514	LE7523	121.126	19.345
49	GRID 63343 TZ NHP FORCE	1510.210	0.278	LE7525	2089.747	0.389	LE7524	579.537	38.375
50	GRID 63345 TX NHP FORCE	309.598	0.289	LE7523	306.975	0.298	LE7523	-2.623	-0.847

Table E-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 TX NHP FORCE	322.395	0.209	LE7525	280.193	0.393	LE7526	-42.202	-13.090
52	GRID 63942 TX NHP FORCE	655.191	0.286	LE7525	948.618	0.430	LE7525	293.427	44.785
53	GRID 63942 TZ NHP FORCE	1398.329	0.290	LE7523	2235.910	0.296	LE7524	837.581	59.899
54	GRID 64244 TX NHP FORCE	658.780	0.283	LE7523	706.144	0.479	LE7526	47.364	7.190
55	GRID 64244 TZ NHP FORCE	1301.415	0.209	LE7525	2280.219	0.393	LE7526	978.804	75.211
56	GRID 64246 TX NHP FORCE	349.231	0.274	LE7523	303.587	0.397	LE7524	-45.644	-13.070
57	GRID 64540 TX NHP FORCE	328.886	0.292	LE7525	424.523	0.392	LE7526	95.637	29.079
58	GRID 64814 TX NHP FORCE	672.906	0.216	LE7525	730.935	0.227	LE7521	58.029	8.624
59	GRID 64814 TZ NHP FORCE	1506.445	0.274	LE7523	1775.255	0.296	LE7524	268.811	17.844
60	GRID 65003 TX NHP FORCE	607.690	0.282	LE7523	723.776	0.427	LE7523	116.086	19.103
61	GRID 65003 TZ NHP FORCE	1401.866	0.292	LE7525	2006.851	0.392	LE7526	604.985	43.156
62	Secondary -Y: 111869 DOF 3 IF FORCE	2514.335	0.323	LE7522	2657.139	0.313	LE7524	142.804	5.680
63	Primary -Y: 111885 DOF 1 IF FORCE	2624.827	0.182	LE7525	2713.906	0.180	LE7525	89.078	3.394
64	Primary -Y: 111885 DOF 3 IF FORCE	13234.104	0.212	LE7523	13519.232	0.212	LE7523	285.128	2.154
65	Secondary +Y: 113369 DOF 3 IF FORCE	2611.211	0.320	LE7524	2645.379	0.326	LE7524	34.169	1.309
66	Primary +Y: 113385 DOF 1 IF FORCE	2452.268	0.184	LE7523	2737.698	0.368	LE7525	285.431	11.639
67	Primary +Y: 113385 DOF 3 IF FORCE	13176.338	0.213	LE7525	13366.790	0.214	LE7525	190.452	1.445
68	GRID 150301 TX FRAM IF FORCE	1362.183	0.218	LE7521	1594.320	0.214	LE7521	232.137	17.042
69	GRID 150301 TY FRAM IF FORCE	526.229	0.290	LE7524	1144.240	1.169	LE7520	618.012	117.442
70	GRID 150302 TX FRAM IF FORCE	1399.486	0.218	LE7521	1582.362	0.213	LE7521	182.875	13.067
71	GRID 150303 TY FRAM IF FORCE	370.380	0.289	LE7524	518.919	0.407	LE7523	148.539	40.105
72	GRID 150311 TZ FRAM IF FORCE	745.549	0.219	LE7525	890.359	1.160	LE7520	144.810	19.423
73	GRID 150312 TZ FRAM IF FORCE	836.722	0.216	LE7523	944.397	0.218	LE7523	107.674	12.869
74	GRID 150313 TZ FRAM IF FORCE	466.189	0.285	LE7525	881.679	1.157	LE7520	415.490	89.125
75	GRID 150314 TZ FRAM IF FORCE	546.877	1.207	LE7520	642.493	1.159	LE7520	95.615	17.484
76	GRID 160301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
77	GRID 160301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
78	GRID 160302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
79	GRID 160303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
80	GRID 160311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
81	GRID 160312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
82	GRID 160313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
83	GRID 160314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
84	GRID 170301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
85	GRID 170301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
86	GRID 170302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
87	GRID 170303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
88	GRID 170311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
89	GRID 170312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
90	GRID 170313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
91	GRID 170314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
92	GRID 200201 Fuse-1 Acceleration TX	1083.601	0.181	LE7525	2605.650	0.566	LE7525	1522.049	140.462
93	GRID 200201 Fuse-1 Acceleration TY	4183.443	0.298	LE7524	5646.349	1.204	LE7520	1462.906	34.969
94	GRID 200201 Fuse-1 Acceleration TZ	1080.008	0.279	LE7523	2656.596	0.429	LE7523	1576.588	145.979
95	GRID 200201 Fuse-1 Acceleration RX	1128.101	1.985	LE7520	1327.103	1.218	LE7520	199.002	17.640
96	GRID 200201 Fuse-1 Acceleration RY	285.329	1.859	LE7520	471.709	0.501	LE7523	186.379	65.321
97	GRID 200201 Fuse-1 Acceleration RZ	666.758	1.986	LE7520	829.042	1.177	LE7520	162.285	24.339
98	GRID 200202 Fuse-2 Acceleration TX	6668.944	2.000	LE7520	7458.074	1.248	LE7523	789.130	11.833
99	GRID 200202 Fuse-2 Acceleration TY	2895.649	0.295	LE7526	4066.216	0.426	LE7525	1170.567	40.425
100	GRID 200202 Fuse-2 Acceleration TZ	3316.003	0.279	LE7523	4173.779	0.419	LE7521	857.776	25.868

Table E-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
101	GRID 200202 Fuse-2 Acceleration RX	85.755	0.112	LE7523	181.170	0.463	LE7526	95.415	111.265
102	GRID 200202 Fuse-2 Acceleration RY	339.966	0.095	LE7523	482.581	1.168	LE7520	142.616	41.950
103	GRID 200202 Fuse-2 Acceleration RZ	47.180	0.220	LE7525	278.387	1.162	LE7520	231.207	490.049
104	GRID 200301 PVGF-1 Acceleration TX	769.754	0.213	LE7523	1976.654	1.257	LE7520	1206.900	156.790
105	GRID 200301 PVGF-1 Acceleration TY	804.336	0.385	LE7526	3546.065	0.360	LE7523	2741.728	340.868
106	GRID 200301 PVGF-1 Acceleration TZ	3234.513	1.607	LE7520	6599.462	0.502	LE7526	3364.949	104.033
107	GRID 200301 PVGF-1 Acceleration RX	128.416	0.123	LE7523	558.251	0.448	LE7526	429.835	334.721
108	GRID 200301 PVGF-1 Acceleration RY	42.659	0.236	LE7523	349.385	1.166	LE7520	306.726	719.024
109	GRID 200301 PVGF-1 Acceleration RZ	511.474	0.143	LE7523	1106.561	0.358	LE7523	595.088	116.348
110	GRID 200302 PVGF-2 Acceleration TX	843.960	0.220	LE7521	2590.597	0.329	LE7526	1746.637	206.957
111	GRID 200302 PVGF-2 Acceleration TY	2339.493	0.286	LE7526	4088.920	0.435	LE7525	1749.427	74.778
112	GRID 200302 PVGF-2 Acceleration TZ	1652.813	0.278	LE7525	3967.718	1.161	LE7520	2314.905	140.058
113	GRID 200302 PVGF-2 Acceleration RX	266.116	0.287	LE7523	556.744	1.634	LE7520	290.628	109.211
114	GRID 200302 PVGF-2 Acceleration RY	65.222	0.081	LE7523	687.006	1.161	LE7520	621.784	953.327
115	GRID 200302 PVGF-2 Acceleration RZ	575.652	1.979	LE7520	788.678	1.638	LE7520	213.026	37.006
116	Grid 504878 PDU Acceleration TX	1075.581	0.281	LE7523	2812.414	1.274	LE7520	1736.834	161.479
117	Grid 504878 PDU Acceleration TY	1024.413	0.193	LE7523	2479.006	0.415	LE7526	1454.593	141.993
118	Grid 504878 PDU Acceleration TZ	2078.914	0.163	LE7523	5107.671	1.659	LE7520	3028.757	145.689
119	Grid 504878 PDU Acceleration RX	937.398	1.990	LE7520	1242.147	0.434	LE7526	304.749	32.510
120	Grid 504878 PDU Acceleration RY	256.556	0.090	LE7523	590.787	1.274	LE7520	334.232	130.277
121	Grid 504878 PDU Acceleration RZ	66.044	0.333	LE7524	170.134	0.389	LE7526	104.090	157.608
122	Element Force CBAR 27000 Shear 1	935.959	0.210	LE7523	955.971	0.210	LE7523	20.012	2.138
123	Element Force CBAR 27000 Shear 2	11792.939	0.274	LE7525	11839.825	0.273	LE7525	46.886	0.398
124	Element Force CBAR 27001 Shear 1	874.375	1.072	LE7525	881.553	0.291	LE7526	7.177	0.821
125	Element Force CBAR 27001 Shear 2	1139.434	0.273	LE7525	1151.065	0.275	LE7525	11.631	1.021
126	Element Force CBAR 27002 Shear 1	292.943	0.272	LE7525	296.366	0.288	LE7526	3.424	1.169
127	Element Force CBAR 27002 Shear 2	985.461	0.274	LE7525	997.039	0.280	LE7525	11.578	1.175
128	Element Force CBAR 27003 Shear 1	282.757	0.277	LE7523	313.568	0.426	LE7523	30.812	10.897
129	Element Force CBAR 27003 Shear 2	1002.355	1.633	LE7520	1027.423	0.266	LE7525	25.068	2.501
130	Element Force CBAR 27004 Shear 1	259.498	0.273	LE7525	253.045	0.285	LE7523	-6.453	-2.487
131	Element Force CBAR 27004 Shear 2	1015.749	1.634	LE7520	1033.742	0.273	LE7525	17.993	1.771
132	Element Force CBAR 27005 Shear 1	182.707	0.276	LE7525	161.454	0.317	LE7526	-21.253	-11.632
133	Element Force CBAR 27005 Shear 2	980.831	1.832	LE7520	964.894	1.900	LE7520	-15.938	-1.625
134	Element Force CBAR 27006 Tension	7925.090	0.274	LE7525	7953.591	0.274	LE7525	28.501	0.360
135	Element Force CBAR 27007 Tension	6668.719	0.274	LE7525	6696.588	0.273	LE7525	27.869	0.418
136	Element Force CBAR 27008 Tension	5414.990	0.274	LE7525	5402.380	0.273	LE7525	-12.610	-0.233
137	Element Force CBAR 27009 Tension	4389.211	1.406	LE7522	4437.411	0.311	LE7524	48.200	1.098
138	Element Force CBAR 27010 Tension	3447.142	1.416	LE7526	3485.077	0.466	LE7526	37.935	1.100
139	Element Force CBAR 27011 Tension	2445.576	1.710	LE7520	2447.889	1.715	LE7520	2.313	0.095
140	Element Force CBAR 27012 Tension	2663.994	1.710	LE7520	2642.060	1.348	LE7520	-21.934	-0.823
141	Element Force CBAR 27013 Tension	1571.485	1.710	LE7520	1541.236	0.591	LE7525	-30.249	-1.925
142	Element Force CBAR 27014 Tension	2161.990	1.230	LE7520	2124.811	1.614	LE7520	-37.179	-1.720
143	Element Force CBAR 27015 Tension	885.446	1.711	LE7520	896.063	0.594	LE7525	10.618	1.199
144	Element Force CBAR 27016 Tension	1512.193	1.232	LE7520	1431.791	0.595	LE7525	-80.402	-5.317
145	Element Force CBAR 27017 Tension	981.876	0.218	LE7521	1158.876	0.214	LE7525	176.999	18.027
146	Element Force CBAR 27018 Shear 1	1700.745	0.283	LE7523	1720.411	0.282	LE7523	19.666	1.156
147	Element Force CBAR 27018 Shear 2	9603.040	1.070	LE7525	9369.217	1.072	LE7525	-233.823	-2.435
148	Element Force CBAR 27019 Shear 1	881.526	0.272	LE7525	887.760	0.272	LE7525	6.235	0.707
149	Element Force CBAR 27019 Shear 2	1352.115	1.130	LE7520	1315.705	1.071	LE7525	-36.410	-2.693
150	Element Force CBAR 27020 Shear 1	79.829	0.512	LE7525	160.956	0.470	LE7524	81.127	101.625

Table E-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
151	Element Force CBAR 27020 Shear 2	968.833	1.130	LE7520	945.112	1.461	LE7525	-23.722	-2.448
152	Element Force CBAR 27021 Shear 1	219.240	0.217	LE7525	355.393	1.161	LE7520	136.154	62.103
153	Element Force CBAR 27021 Shear 2	908.019	1.130	LE7520	901.290	1.982	LE7520	-6.730	-0.741
154	Element Force CBAR 27022 Shear 1	303.421	1.467	LE7525	328.132	0.853	LE7523	24.711	8.144
155	Element Force CBAR 27022 Shear 2	838.849	1.463	LE7525	841.439	1.983	LE7520	2.590	0.309
156	Element Force CBAR 27023 Shear 1	64.447	0.254	LE7525	132.907	0.448	LE7523	68.460	106.227
157	Element Force CBAR 27023 Shear 2	897.356	1.978	LE7520	905.242	1.983	LE7520	7.886	0.879
158	Element Force CBAR 27024 Tension	6138.181	1.070	LE7525	6034.248	1.072	LE7525	-103.934	-1.693
159	Element Force CBAR 27025 Tension	6476.774	1.070	LE7525	6338.842	1.072	LE7525	-137.931	-2.130
160	Element Force CBAR 27026 Tension	6375.422	1.068	LE7525	6310.881	1.071	LE7525	-64.540	-1.012
161	Element Force CBAR 27027 Tension	4061.930	1.066	LE7525	4063.186	1.412	LE7526	1.256	0.031
162	Element Force CBAR 27028 Tension	4057.699	1.065	LE7525	4075.376	1.074	LE7525	17.677	0.436
163	Element Force CBAR 27029 Tension	2801.943	0.275	LE7525	2873.320	0.467	LE7526	71.377	2.547
164	Element Force CBAR 27030 Tension	3246.359	1.710	LE7520	3331.253	1.367	LE7525	84.894	2.615
165	Element Force CBAR 27031 Tension	2277.844	0.276	LE7525	2370.860	0.467	LE7526	93.016	4.084
166	Element Force CBAR 27032 Tension	1540.522	1.710	LE7520	1599.103	0.310	LE7524	58.581	3.803
167	Element Force CBAR 27033 Tension	685.743	0.304	LE7524	797.307	0.286	LE7523	111.563	16.269
168	Element Force CBAR 27034 Tension	1147.423	1.711	LE7520	1192.648	1.071	LE7525	45.225	3.941
169	Element Force CBAR 27035 Tension	534.551	0.215	LE7523	639.979	0.212	LE7523	105.428	19.723
170	Element Force CBAR 27036 Tension	299.766	0.282	LE7523	307.275	0.281	LE7523	7.509	2.505
171	Element Force CBAR 27037 Tension	630.699	0.281	LE7523	639.182	0.281	LE7523	8.483	1.345
172	Element Force CBAR 27038 Shear 1	2292.902	0.213	LE7525	2322.001	0.214	LE7525	29.099	1.269
173	Element Force CBAR 27038 Shear 2	10213.473	1.315	LE7525	9933.148	0.843	LE7525	-280.325	-2.745
174	Element Force CBAR 27039 Shear 1	441.412	0.218	LE7525	458.023	0.212	LE7525	16.611	3.763
175	Element Force CBAR 27039 Shear 2	1121.481	1.979	LE7520	1090.404	0.607	LE7525	-31.077	-2.771
176	Element Force CBAR 27040 Shear 1	197.692	0.209	LE7523	295.055	0.401	LE7524	97.363	49.250
177	Element Force CBAR 27040 Shear 2	1068.367	1.979	LE7520	1018.447	0.607	LE7525	-49.920	-4.673
178	Element Force CBAR 27041 Shear 1	390.516	0.280	LE7525	465.053	0.273	LE7525	74.537	19.087
179	Element Force CBAR 27041 Shear 2	1111.848	1.979	LE7520	1070.840	2.000	LE7520	-41.008	-3.688
180	Element Force CBAR 27042 Shear 1	281.142	0.280	LE7525	305.599	0.273	LE7525	24.457	8.699
181	Element Force CBAR 27042 Shear 2	1062.135	1.979	LE7520	1031.011	1.995	LE7520	-31.123	-2.930
182	Element Force CBAR 27043 Shear 1	257.151	0.276	LE7523	267.217	0.360	LE7525	10.065	3.914
183	Element Force CBAR 27043 Shear 2	987.255	1.388	LE7520	955.333	1.964	LE7520	-31.922	-3.233
184	Element Force CBAR 27044 Tension	6980.133	1.315	LE7525	6746.893	0.843	LE7525	-233.241	-3.341
185	Element Force CBAR 27045 Tension	5784.243	1.315	LE7525	5610.175	0.843	LE7525	-174.068	-3.009
186	Element Force CBAR 27046 Tension	5335.434	1.314	LE7525	5209.289	1.315	LE7525	-126.145	-2.364
187	Element Force CBAR 27047 Tension	4000.932	1.314	LE7525	3897.587	1.315	LE7525	-103.345	-2.583
188	Element Force CBAR 27048 Tension	3871.871	0.218	LE7525	4152.483	0.211	LE7525	280.613	7.247
189	Element Force CBAR 27049 Tension	2410.823	0.217	LE7521	2600.903	0.219	LE7521	190.081	7.884
190	Element Force CBAR 27050 Tension	3141.282	0.217	LE7521	3265.345	0.214	LE7525	124.062	3.949
191	Element Force CBAR 27051 Tension	1720.657	0.217	LE7521	1763.167	0.215	LE7525	42.510	2.471
192	Element Force CBAR 27052 Tension	2382.341	0.217	LE7521	2499.922	0.214	LE7525	117.581	4.936
193	Element Force CBAR 27053 Tension	1034.041	0.218	LE7521	1105.284	0.218	LE7521	71.242	6.890
194	Element Force CBAR 27054 Tension	1743.454	0.218	LE7521	1841.084	0.218	LE7521	97.631	5.600
195	Element Force CBAR 27055 Tension	650.068	1.230	LE7520	667.749	0.595	LE7525	17.681	2.720
196	Element Force CBAR 27056 Shear 1	1365.431	0.840	LE7525	1400.186	0.846	LE7525	34.754	2.545
197	Element Force CBAR 27056 Shear 2	11986.723	0.215	LE7525	12141.198	0.213	LE7525	154.475	1.289
198	Element Force CBAR 27057 Shear 1	537.141	1.316	LE7525	544.004	0.846	LE7525	6.863	1.278
199	Element Force CBAR 27057 Shear 2	467.068	1.683	LE7520	483.383	0.426	LE7525	16.315	3.493
200	Element Force CBAR 27058 Shear 1	315.506	0.218	LE7521	427.801	0.211	LE7525	112.295	35.592

Table E-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
201	Element Force CBAR 27058 Shear 2	834.864	0.214	LE7525	848.320	0.216	LE7525	13.456	1.612
202	Element Force CBAR 27059 Shear 1	214.133	1.340	LE7520	281.392	1.103	LE7520	67.259	31.410
203	Element Force CBAR 27059 Shear 2	744.876	1.986	LE7520	757.984	1.952	LE7520	13.109	1.760
204	Element Force CBAR 27060 Shear 1	71.517	0.188	LE7522	133.338	0.906	LE7520	61.821	86.443
205	Element Force CBAR 27060 Shear 2	806.590	1.984	LE7520	812.745	1.638	LE7520	6.156	0.763
206	Element Force CBAR 27061 Shear 1	106.085	0.285	LE7524	197.296	1.169	LE7520	91.211	85.979
207	Element Force CBAR 27061 Shear 2	872.714	1.982	LE7520	884.519	1.638	LE7520	11.806	1.353
208	Element Force CBAR 27062 Tension	8029.037	0.216	LE7525	8123.745	0.213	LE7525	94.709	1.180
209	Element Force CBAR 27063 Tension	7322.344	0.215	LE7525	7405.924	0.213	LE7525	83.580	1.141
210	Element Force CBAR 27064 Tension	4808.575	0.216	LE7525	4869.494	0.213	LE7525	60.919	1.267
211	Element Force CBAR 27065 Tension	3869.150	0.216	LE7525	3918.370	0.213	LE7525	49.220	1.272
212	Element Force CBAR 27066 Tension	1869.952	1.310	LE7525	1892.486	1.306	LE7525	22.534	1.205
213	Element Force CBAR 27067 Tension	1686.787	1.310	LE7525	1760.024	0.992	LE7525	73.237	4.342
214	Element Force CBAR 27068 Tension	2207.150	1.312	LE7525	2283.976	0.213	LE7525	76.826	3.481
215	Element Force CBAR 27069 Tension	1410.120	0.218	LE7521	1569.756	0.213	LE7525	159.636	11.321
216	Element Force CBAR 27070 Tension	1363.262	0.218	LE7521	1469.124	0.217	LE7521	105.861	7.765
217	Element Force CBAR 27071 Tension	527.230	0.217	LE7523	615.802	0.213	LE7525	88.573	16.800
218	Element Force CBAR 27072 Tension	905.195	0.215	LE7525	1025.389	0.211	LE7525	120.193	13.278
219	Element Force CBAR 27073 Tension	717.603	1.230	LE7520	784.646	0.308	LE7524	67.042	9.343
220	Element Force CBAR 27074 Tension	395.464	0.282	LE7525	403.073	0.283	LE7525	7.609	1.924
221	Element Force CBAR 27075 Tension	662.946	0.282	LE7525	673.123	0.283	LE7525	10.177	1.535

Table E-18. Experiment Logistics Module - Exposed Section - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.455	0.413	LE7523	1.441	0.412	LE7523	-0.014	-0.976
2	Net Load Factor - T2 (g)	1.866	0.537	LE7526	1.842	0.501	LE7526	-0.024	-1.309
3	Net Load Factor - T3 (g)	3.484	0.245	LE7522	3.498	0.245	LE7522	0.015	0.422
4	Net Load Factor - R1 (rad/sec^2)	3.979	0.280	LE7525	4.253	0.280	LE7525	0.274	6.884
5	Net Load Factor - R2 (rad/sec^2)	14.725	0.322	LE7523	14.662	0.322	LE7523	-0.064	-0.431
6	Net Load Factor - R3 (rad/sec^2)	1.472	0.273	LE7525	1.545	0.376	LE7525	0.073	4.971
7	ID 700001 - T2 (lbf)	4735.595	0.537	LE7526	4664.729	0.501	LE7526	-70.866	-1.496
8	ID 700002 - T1 (lbf)	1933.150	0.413	LE7523	1922.636	0.412	LE7523	-10.513	-0.544
9	ID 700002 - T3 (lbf)	6149.637	0.276	LE7523	6126.004	0.276	LE7523	-23.633	-0.384
10	ID 700003 - T1 (lbf)	2181.587	0.413	LE7523	2154.021	0.413	LE7523	-27.566	-1.264
11	ID 700003 - T3 (lbf)	7014.563	0.280	LE7525	6959.832	0.280	LE7525	-54.731	-0.780
12	ID 700004 - T3 (lbf)	1779.220	0.324	LE7525	1777.964	0.325	LE7525	-1.256	-0.071
13	ID 700005 - T3 (lbf)	2224.512	0.323	LE7523	2223.832	0.323	LE7523	-0.680	-0.031
14	Net Inertial Acc - T1 (in/sec^2)	561.834	0.413	LE7523	556.352	0.412	LE7523	-5.482	-0.976
15	Net Inertial Acc - T2 (in/sec^2)	720.556	0.537	LE7526	711.127	0.501	LE7526	-9.429	-1.309
16	Net Inertial Acc - T3 (in/sec^2)	1344.948	0.245	LE7522	1350.627	0.245	LE7522	5.679	0.422
17	Net Inertial Acc - R1 (rad/sec^2)	3.979	0.280	LE7525	4.253	0.280	LE7525	0.274	6.884
18	Net Inertial Acc - R2 (rad/sec^2)	14.725	0.322	LE7523	14.662	0.322	LE7523	-0.064	-0.431
19	Net Inertial Acc - R3 (rad/sec^2)	1.472	0.273	LE7525	1.545	0.376	LE7525	0.073	4.971

Table E-19. Atmospheric Nuetral Drag Experiment-2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.411	0.625	LE7520	1.454	0.575	LE7520	0.043	3.035
2	Net Load Factor - T2 (g)	1.443	1.008	LE7520	1.468	1.031	LE7520	0.026	1.795
3	Net Load Factor - T3 (g)	3.021	0.229	LE7525	3.133	0.229	LE7525	0.112	3.696
4	Net Load Factor - R1 (rad/sec^2)	16.805	0.117	LE7525	17.155	0.117	LE7525	0.350	2.083
5	Net Load Factor - R2 (rad/sec^2)	6.982	0.106	LE7525	6.978	0.106	LE7525	-0.004	-0.058
6	Net Load Factor - R3 (rad/sec^2)	15.765	1.008	LE7520	16.648	1.008	LE7520	0.883	5.601
7	GRID 13 - T1 (lbf)	811.889	0.337	LE7525	811.365	0.346	LE7525	-0.524	-0.065
8	GRID 13 - T2 (lbf)	667.635	0.339	LE7525	658.280	0.346	LE7525	-9.354	-1.401
9	GRID 13 - T3 (lbf)	196.213	1.079	LE7520	206.132	1.081	LE7520	9.920	5.056
10	GRID 18 - T2 (lbf)	421.946	0.337	LE7525	418.119	0.335	LE7525	-3.827	-0.907
11	GRID 22 - T2 (lbf)	401.484	0.335	LE7525	400.210	0.338	LE7525	-1.274	-0.317
12	GRID 26 - T1 (lbf)	121.196	0.132	LE7524	121.760	0.132	LE7524	0.564	0.465
13	GRID 26 - T2 (lbf)	221.436	0.334	LE7525	220.689	0.333	LE7525	-0.747	-0.337
14	GRID 26 - T3 (lbf)	538.957	0.337	LE7525	541.796	0.341	LE7525	2.838	0.527
15	GRID 28 - T2 (lbf)	643.022	0.335	LE7525	640.463	0.337	LE7525	-2.559	-0.398
16	GRID 44 - T2 (lbf)	80.454	0.343	LE7525	80.195	0.344	LE7525	-0.258	-0.321
17	GRID 46 - T2 (lbf)	171.562	0.231	LE7525	173.023	0.231	LE7521	1.461	0.852
18	GRID 58 - T2 (lbf)	183.937	0.338	LE7525	183.329	0.346	LE7525	-0.608	-0.330
19	GRID 59 - T1 (lbf)	252.169	1.033	LE7520	263.218	1.078	LE7520	11.048	4.381
20	GRID 59 - T2 (lbf)	286.077	0.118	LE7525	305.178	1.079	LE7520	19.101	6.677
21	GRID 59 - T3 (lbf)	240.228	0.338	LE7525	232.741	0.336	LE7525	-7.487	-3.117
22	GRID 60 - T2 (lbf)	503.827	0.132	LE7526	508.268	0.131	LE7526	4.441	0.881
23	GRID 75 - T1 (lbf)	584.363	0.341	LE7525	590.973	0.340	LE7525	6.610	1.131
24	GRID 75 - T2 (lbf)	430.701	0.132	LE7526	434.374	0.132	LE7526	3.673	0.853
25	GRID 75 - T3 (lbf)	272.330	0.339	LE7525	276.910	0.341	LE7525	4.580	1.682
26	GRID 79 - T2 (lbf)	123.575	1.009	LE7520	125.475	1.009	LE7520	1.900	1.537
27	Net Inertial Acc - T1 (in/sec^2)	544.943	0.625	LE7520	561.483	0.575	LE7520	16.539	3.035
28	Net Inertial Acc - T2 (in/sec^2)	556.962	1.008	LE7520	566.961	1.031	LE7520	9.999	1.795
29	Net Inertial Acc - T3 (in/sec^2)	1166.524	0.229	LE7525	1209.640	0.229	LE7525	43.117	3.696
30	Net Inertial Acc - R1 (rad/sec^2)	16.805	0.117	LE7525	17.155	0.117	LE7525	0.350	2.083
31	Net Inertial Acc - R2 (rad/sec^2)	6.982	0.106	LE7525	6.978	0.106	LE7525	-0.004	-0.058
32	Net Inertial Acc - R3 (rad/sec^2)	15.765	1.008	LE7520	16.648	1.008	LE7520	0.883	5.601

Appendix F
Contingency Landing C13 - Linear/Nonlinear Comparison

Table F-1. Pump Module IA - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	6.227	0.289	LE7523	6.529	0.292	LE7523	0.302	4.844
2	Net Load Factor - T2 (g)	1.316	1.205	LE7520	1.738	0.361	LE7521	0.422	32.071
3	Net Load Factor - T3 (g)	1.390	0.302	LE7524	1.704	0.294	LE7526	0.314	22.587
4	Net Load Factor - R1 (rad/sec^2)	14.744	0.973	LE7520	33.016	0.390	LE7523	18.272	123.923
5	Net Load Factor - R2 (rad/sec^2)	19.097	0.254	LE7525	31.232	0.392	LE7523	12.135	63.541
6	Net Load Factor - R3 (rad/sec^2)	26.624	0.261	LE7523	42.709	0.494	LE7521	16.085	60.417
7	ID 29047 - T2 (lbf)	5606.890	0.289	LE7523	6262.557	0.295	LE7523	655.667	11.694
8	ID 29048 - T1 (lbf)	1887.040	0.323	LE7525	2291.397	0.431	LE7523	404.357	21.428
9	ID 29048 - T2 (lbf)	3118.578	0.288	LE7523	3182.521	0.361	LE7523	63.943	2.050
10	ID 29050 - T1 (lbf)	1410.020	0.361	LE7523	2153.748	0.396	LE7526	743.728	52.746
11	ID 40016 - T3 (lbf)	2595.629	0.286	LE7525	2615.306	0.291	LE7521	19.676	0.758
12	ID 40030 - T3 (lbf)	2528.077	0.357	LE7525	3141.231	0.360	LE7525	613.154	24.254
13	ID 40515 - T3 (lbf)	2387.516	0.357	LE7523	3226.332	0.362	LE7523	838.816	35.133
14	ID 40516 - T3 (lbf)	2986.492	0.289	LE7523	3171.097	0.296	LE7521	184.605	6.181
15	Net Inertial Acc - T1 (in/sec^2)	2404.250	0.289	LE7523	2520.719	0.292	LE7523	116.469	4.844
16	Net Inertial Acc - T2 (in/sec^2)	508.052	1.205	LE7520	670.991	0.361	LE7521	162.939	32.071
17	Net Inertial Acc - T3 (in/sec^2)	536.710	0.302	LE7524	657.935	0.294	LE7526	121.225	22.587
18	Net Inertial Acc - R1 (rad/sec^2)	14.744	0.973	LE7520	33.016	0.390	LE7523	18.272	123.923
19	Net Inertial Acc - R2 (rad/sec^2)	19.097	0.254	LE7525	31.232	0.392	LE7523	12.135	63.541
20	Net Inertial Acc - R3 (rad/sec^2)	26.624	0.261	LE7523	42.709	0.494	LE7521	16.085	60.417

Table F-2. Pump Module IA - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	5.427	0.291	LE7523	5.815	0.299	LE7521	0.388	7.145
2	Net Load Factor - T2 (g)	1.194	1.208	LE7520	2.729	0.559	LE7523	1.535	128.574
3	Net Load Factor - T3 (g)	1.319	0.304	LE7524	2.534	0.431	LE7523	1.216	92.218
4	Net Load Factor - R1 (rad/sec^2)	12.527	0.978	LE7520	61.041	0.346	LE7525	48.513	387.257
5	Net Load Factor - R2 (rad/sec^2)	16.809	0.257	LE7525	42.921	0.485	LE7521	26.112	155.351
6	Net Load Factor - R3 (rad/sec^2)	27.907	0.263	LE7523	57.636	0.372	LE7521	29.730	106.533
7	ID 10942 - T1 (lbf)	1003.754	0.356	LE7523	1349.857	0.362	LE7523	346.103	34.481
8	ID 10942 - T3 (lbf)	2602.144	0.288	LE7523	2764.315	0.295	LE7521	162.171	6.232
9	ID 10942 - R1 (lbf-in)	24.556	0.323	LE7525	36.063	0.293	LE7523	11.507	46.859
10	ID 10942 - R2 (lbf-in)	0.067	0.288	LE7523	0.079	0.293	LE7523	0.012	17.616
11	ID 11715 - T1 (lbf)	542.982	1.049	LE7520	734.787	0.322	LE7525	191.805	35.324
12	ID 11715 - T2 (lbf)	860.668	0.299	LE7524	1301.933	0.393	LE7526	441.265	51.270
13	ID 11715 - T3 (lbf)	2889.721	0.288	LE7523	3379.804	0.293	LE7523	490.083	16.960
14	ID 11715 - R1 (lbf-in)	228.992	0.299	LE7524	359.877	0.393	LE7526	130.885	57.157
15	ID 11715 - R2 (lbf-in)	0.178	0.299	LE7524	0.286	0.393	LE7526	0.107	60.176
16	ID 29047 - T2 (lbf)	5606.890	0.289	LE7523	6262.557	0.295	LE7523	655.667	11.694
17	ID 29048 - T1 (lbf)	1887.040	0.323	LE7525	2291.397	0.431	LE7523	404.357	21.428
18	ID 29048 - T2 (lbf)	3118.578	0.288	LE7523	3182.521	0.361	LE7523	63.943	2.050
19	ID 29050 - T1 (lbf)	1410.020	0.361	LE7523	2153.748	0.396	LE7526	743.728	52.746
20	ID 40016 - T3 (lbf)	2595.629	0.286	LE7525	2615.306	0.291	LE7521	19.676	0.758
21	ID 40030 - T3 (lbf)	2528.077	0.357	LE7525	3141.231	0.360	LE7525	613.154	24.254
22	ID 40515 - T3 (lbf)	2387.516	0.357	LE7523	3226.332	0.362	LE7523	838.816	35.133
23	ID 40516 - T3 (lbf)	2986.492	0.289	LE7523	3171.097	0.296	LE7521	184.605	6.181
24	ID 620001 - T1 (lbf)	613.622	0.354	LE7525	978.691	0.357	LE7521	365.069	59.494
25	ID 620001 - T2 (lbf)	828.072	0.321	LE7525	1019.040	0.297	LE7523	190.968	23.062
26	ID 630001 - T1 (lbf)	1226.133	0.288	LE7523	1560.349	0.297	LE7521	334.216	27.258
27	Net Inertial Acc - T1 (in/sec^2)	2095.290	0.291	LE7523	2244.992	0.299	LE7521	149.702	7.145
28	Net Inertial Acc - T2 (in/sec^2)	461.025	1.208	LE7520	1053.782	0.559	LE7523	592.757	128.574
29	Net Inertial Acc - T3 (in/sec^2)	509.077	0.304	LE7524	978.539	0.431	LE7523	469.462	92.218
30	Net Inertial Acc - R1 (rad/sec^2)	12.527	0.978	LE7520	61.041	0.346	LE7525	48.513	387.257
31	Net Inertial Acc - R2 (rad/sec^2)	16.809	0.257	LE7525	42.921	0.485	LE7521	26.112	155.351
32	Net Inertial Acc - R3 (rad/sec^2)	27.907	0.263	LE7523	57.636	0.372	LE7521	29.730	106.533

Table F-3. Pump Module IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	6.884	0.288	LE7523	7.684	0.293	LE7523	0.799	11.609
2	Net Load Factor - T2 (g)	1.450	1.204	LE7520	1.863	0.357	LE7521	0.414	28.533
3	Net Load Factor - T3 (g)	1.488	0.300	LE7524	2.242	0.424	LE7523	0.754	50.627
4	Net Load Factor - R1 (rad/sec^2)	14.933	0.193	LE7523	45.412	0.417	LE7523	30.478	204.092
5	Net Load Factor - R2 (rad/sec^2)	21.311	0.254	LE7525	44.760	0.357	LE7525	23.449	110.033
6	Net Load Factor - R3 (rad/sec^2)	27.283	0.319	LE7525	50.735	0.395	LE7525	23.452	85.957
7	ID 250604 - T1 (lbf)	1003.754	0.356	LE7523	1349.857	0.362	LE7523	346.103	34.481
8	ID 250604 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
9	ID 250604 - T3 (lbf)	2602.144	0.288	LE7523	2764.315	0.295	LE7521	162.171	6.232
10	ID 250604 - R1 (lbf-in)	24.556	0.323	LE7525	36.063	0.293	LE7523	11.507	46.859
11	ID 250604 - R2 (lbf-in)	0.067	0.288	LE7523	0.079	0.293	LE7523	0.012	17.616
12	ID 250604 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
13	ID 250605 - T1 (lbf)	542.982	1.049	LE7520	734.787	0.322	LE7525	191.805	35.324
14	ID 250605 - T2 (lbf)	860.668	0.299	LE7524	1301.933	0.393	LE7526	441.265	51.270
15	ID 250605 - T3 (lbf)	2889.721	0.288	LE7523	3379.804	0.293	LE7523	490.083	16.960
16	ID 250605 - R1 (lbf-in)	228.992	0.299	LE7524	359.877	0.393	LE7526	130.885	57.157
17	ID 250605 - R2 (lbf-in)	0.178	0.299	LE7524	0.286	0.393	LE7526	0.107	60.176
18	ID 250605 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
19	ID 250655 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
20	ID 250655 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
21	ID 250655 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
22	ID 250655 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
23	ID 250655 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
24	ID 250655 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
25	ID 250664 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
26	ID 250664 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
27	ID 250664 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
28	ID 250664 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
29	ID 250664 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
30	ID 250664 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
31	ID 250694 - T1 (lbf)	1226.133	0.288	LE7523	1560.349	0.297	LE7521	334.216	27.258
32	ID 250729 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
33	ID 250729 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
34	ID 250729 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
35	ID 250729 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
36	ID 250729 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
37	ID 250729 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
38	ID 250752 - T1 (lbf)	0.000	0.000		0.000	0.000		0.000	
39	ID 250752 - T2 (lbf)	0.000	0.000		0.000	0.000		0.000	
40	ID 250752 - T3 (lbf)	0.000	0.000		0.000	0.000		0.000	
41	ID 250752 - R1 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
42	ID 250752 - R2 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
43	ID 250752 - R3 (lbf-in)	0.000	0.000		0.000	0.000		0.000	
44	ID 250768 - T1 (lbf)	613.622	0.354	LE7525	978.691	0.357	LE7521	365.069	59.494
45	ID 250768 - T2 (lbf)	828.072	0.321	LE7525	1019.040	0.297	LE7523	190.968	23.062
46	Net Inertial Acc - T1 (in/sec^2)	2658.004	0.288	LE7523	2966.579	0.293	LE7523	308.575	11.609
47	Net Inertial Acc - T2 (in/sec^2)	559.757	1.204	LE7520	719.474	0.357	LE7521	159.717	28.533
48	Net Inertial Acc - T3 (in/sec^2)	574.665	0.300	LE7524	865.600	0.424	LE7523	290.935	50.627
49	Net Inertial Acc - R1 (rad/sec^2)	14.933	0.193	LE7523	45.412	0.417	LE7523	30.478	204.093
50	Net Inertial Acc - R2 (rad/sec^2)	21.311	0.254	LE7525	44.760	0.357	LE7525	23.449	110.034

Table F-3. Pump Module IA - OTM03 Recoveries
Set A - Linear / Set B - Nonlinear

		Data-Set A			Data-Set B			Difference	
No	Description	Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	Net Inertial Acc - R3 (rad/sec^2)	27.283	0.319	LE7525	50.735	0.395	LE7525	23.452	85.957

Table F-4. Battery 1 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.710	0.303	LE7524	2.847	0.411	LE7525	1.137	66.472
2	Net Load Factor - T2 (g)	4.550	0.288	LE7523	6.195	0.284	LE7523	1.645	36.148
3	Net Load Factor - T3 (g)	1.130	0.356	LE7525	2.112	0.464	LE7523	0.982	86.846
4	Net Load Factor - R1 (rad/sec^2)	15.351	0.226	LE7523	79.447	0.416	LE7523	64.095	417.523
5	Net Load Factor - R2 (rad/sec^2)	15.070	0.092	LE7523	51.179	0.443	LE7521	36.109	239.600
6	Net Load Factor - R3 (rad/sec^2)	13.995	0.321	LE7525	67.343	0.393	LE7526	53.348	381.197
7	GRID 653 - T2 (lbf)	1517.800	0.292	LE7525	2835.651	0.393	LE7526	1317.851	86.826
8	GRID 653 - T3 (lbf)	629.078	0.288	LE7523	1105.434	0.444	LE7521	476.356	75.723
9	GRID 654 - T3 (lbf)	432.860	0.291	LE7525	511.223	0.393	LE7526	78.363	18.104
10	GRID 655 - T1 (lbf)	917.553	0.303	LE7524	1527.468	0.411	LE7525	609.915	66.472
11	GRID 655 - T3 (lbf)	520.460	0.291	LE7525	842.485	0.355	LE7525	322.025	61.873
12	GRID 2183 - T2 (lbf)	1554.113	0.300	LE7523	2666.802	0.427	LE7525	1112.690	71.596
13	GRID 2183 - T3 (lbf)	620.807	0.291	LE7525	995.278	0.417	LE7523	374.471	60.320
14	GRID 2184 - T3 (lbf)	505.418	0.288	LE7523	616.932	0.443	LE7521	111.514	22.064
15	GRID 2185 - T3 (lbf)	355.246	0.304	LE7524	617.494	0.406	LE7524	262.248	73.821
16	Net Inertial Acc - T1 (in/sec^2)	660.219	0.303	LE7524	1099.080	0.411	LE7525	438.861	66.472
17	Net Inertial Acc - T2 (in/sec^2)	1756.644	0.288	LE7523	2391.630	0.284	LE7523	634.986	36.148
18	Net Inertial Acc - T3 (in/sec^2)	436.435	0.356	LE7525	815.461	0.464	LE7523	379.026	86.846
19	Net Inertial Acc - R1 (rad/sec^2)	15.351	0.226	LE7523	79.447	0.416	LE7523	64.095	417.523
20	Net Inertial Acc - R2 (rad/sec^2)	15.070	0.092	LE7523	51.179	0.443	LE7521	36.109	239.600
21	Net Inertial Acc - R3 (rad/sec^2)	13.995	0.321	LE7525	67.343	0.393	LE7526	53.348	381.197

Table F-5. Battery 1 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.509	0.305	LE7524	4.193	0.433	LE7521	2.683	177.777
2	FSE Net Load Factor, Y axis	4.562	0.291	LE7523	8.379	0.287	LE7523	3.817	83.678
3	FSE Net Load Factor, Z axis	1.195	0.356	LE7525	4.159	0.425	LE7523	2.964	247.981
4	FSE Net Load Factor, RX axis	18.142	0.229	LE7523	75.713	0.288	LE7523	57.571	317.332
5	FSE Net Load Factor, RY axis	17.905	0.907	LE7520	88.188	0.365	LE7525	70.282	392.523
6	FSE Net Load Factor, RZ axis	20.362	0.323	LE7525	117.655	0.395	LE7526	97.293	477.813
7	ORU I/F Force Grid 990 Z axis	147.767	0.302	LE7524	318.921	0.441	LE7521	171.154	115.827
8	ORU I/F Force Grid 991 Z axis	125.337	0.301	LE7524	297.831	0.394	LE7526	172.494	137.624
9	ORU I/F Force Grid 9998 X axis	343.656	0.305	LE7524	896.501	0.417	LE7522	552.846	160.872
10	ORU I/F Force Grid 9998 Z axis	470.418	0.289	LE7523	980.215	0.353	LE7525	509.797	108.371
11	ORU I/F Moment Grid 9998 RX axis	115.842	0.401	LE7524	251.783	0.350	LE7524	135.941	117.350
12	ORU I/F Moment Grid 9998 RY axis	2009.417	0.289	LE7525	2498.015	0.428	LE7521	488.598	24.315
13	ORU I/F Moment Grid 9998 RZ axis	177.746	0.337	LE7526	385.942	0.417	LE7522	208.196	117.132
14	ORU I/F Force Grid 9999 X axis	339.636	0.301	LE7524	906.982	0.390	LE7526	567.345	167.045
15	ORU I/F Force Grid 9999 Y axis	1708.253	0.287	LE7523	2796.903	0.284	LE7523	1088.650	63.729
16	ORU I/F Force Grid 9999 Z axis	232.236	1.363	LE7520	744.246	0.417	LE7523	512.010	220.470
17	ORU I/F Moment Grid 9999 RX axis	966.670	0.288	LE7523	1481.589	0.285	LE7523	514.919	53.267
18	ORU I/F Moment Grid 9999 RY axis	1173.955	0.302	LE7524	2295.060	0.393	LE7526	1121.105	95.498
19	ORU I/F Moment Grid 9999 RZ axis	248.269	0.289	LE7525	429.061	0.330	LE7526	180.791	72.821
20	ORU Net Load Factor, X axis	1.816	0.302	LE7524	3.048	0.411	LE7525	1.232	67.853
21	ORU Net Load Factor, Y axis	4.700	0.287	LE7523	7.695	0.284	LE7523	2.995	63.729
22	ORU Net Load Factor, Z axis	1.107	0.355	LE7525	3.573	0.353	LE7525	2.466	222.836
23	ORU Net Load Factor, RX axis	15.790	0.228	LE7523	96.479	0.416	LE7523	80.689	510.998
24	ORU Net Load Factor, RY axis	22.376	0.091	LE7523	77.899	0.455	LE7521	55.523	248.137
25	ORU Net Load Factor, RZ axis	16.153	0.318	LE7525	118.577	0.425	LE7525	102.424	634.092
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1517.800	0.292	LE7525	2835.651	0.393	LE7526	1317.851	86.826
27	FSE/ORU Assy I/F Force Grid 653 Z axis	629.078	0.288	LE7523	1105.434	0.444	LE7521	476.356	75.723
28	FSE/ORU Assy I/F Force Grid 654 Z axis	432.860	0.291	LE7525	511.223	0.393	LE7526	78.363	18.104
29	FSE/ORU Assy I/F Force Grid 655 X axis	917.553	0.303	LE7524	1527.468	0.411	LE7525	609.915	66.472
30	FSE/ORU Assy I/F Force Grid 655 Z axis	520.460	0.291	LE7525	842.485	0.355	LE7525	322.025	61.873
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1554.113	0.300	LE7523	2666.802	0.427	LE7525	1112.690	71.596
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	620.807	0.291	LE7525	995.278	0.417	LE7523	374.471	60.320
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	505.418	0.288	LE7523	616.932	0.443	LE7521	111.514	22.064
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	355.246	0.304	LE7524	617.494	0.406	LE7524	262.248	73.821
35	FSE/ORU Assy Net Load Factor, X axis	1.710	0.303	LE7524	2.847	0.411	LE7525	1.137	66.472
36	FSE/ORU Assy Net Load Factor, Y axis	4.550	0.288	LE7523	6.194	0.284	LE7523	1.645	36.148
37	FSE/ORU Assy Net Load Factor, Z axis	1.130	0.356	LE7525	2.112	0.464	LE7523	0.982	86.846
38	FSE/ORU Assy Net Load Factor, RX axis	15.351	0.226	LE7523	79.447	0.416	LE7523	64.095	417.523
39	FSE/ORU Assy Net Load Factor, RY axis	15.070	0.092	LE7523	51.179	0.443	LE7521	36.109	239.600
40	FSE/ORU Assy Net Load Factor, RZ axis	13.995	0.321	LE7525	67.343	0.393	LE7526	53.348	381.197

Table F-6. Battery 2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.480	0.296	LE7524	2.556	0.302	LE7524	1.076	72.716
2	Net Load Factor - T2 (g)	4.729	0.286	LE7521	5.113	0.434	LE7525	0.383	8.108
3	Net Load Factor - T3 (g)	1.297	0.767	LE7524	2.133	0.359	LE7525	0.835	64.392
4	Net Load Factor - R1 (rad/sec^2)	16.556	0.339	LE7526	73.442	0.421	LE7521	56.886	343.603
5	Net Load Factor - R2 (rad/sec^2)	19.981	0.844	LE7520	40.361	0.517	LE7526	20.379	101.993
6	Net Load Factor - R3 (rad/sec^2)	11.325	0.240	LE7523	53.330	0.432	LE7525	42.005	370.899
7	GRID 653 - T2 (lbf)	1622.405	0.431	LE7525	2315.293	0.438	LE7525	692.889	42.708
8	GRID 653 - T3 (lbf)	750.322	0.287	LE7523	969.549	0.443	LE7521	219.227	29.218
9	GRID 654 - T3 (lbf)	378.695	0.286	LE7525	441.387	0.437	LE7525	62.692	16.555
10	GRID 655 - T1 (lbf)	794.005	0.296	LE7524	1371.373	0.302	LE7524	577.368	72.716
11	GRID 655 - T3 (lbf)	589.173	0.286	LE7525	1011.088	0.432	LE7525	421.915	71.611
12	GRID 2183 - T2 (lbf)	1412.679	0.295	LE7523	1961.217	0.358	LE7525	548.539	38.830
13	GRID 2183 - T3 (lbf)	544.085	0.285	LE7525	1011.656	0.433	LE7525	467.571	85.937
14	GRID 2184 - T3 (lbf)	367.596	0.288	LE7523	392.454	0.358	LE7525	24.858	6.762
15	GRID 2185 - T3 (lbf)	419.437	0.338	LE7526	691.971	0.424	LE7523	272.534	64.976
16	Net Inertial Acc - T1 (in/sec^2)	571.321	0.296	LE7524	986.762	0.302	LE7524	415.441	72.716
17	Net Inertial Acc - T2 (in/sec^2)	1825.918	0.286	LE7521	1973.968	0.434	LE7525	148.050	8.108
18	Net Inertial Acc - T3 (in/sec^2)	500.879	0.767	LE7524	823.404	0.359	LE7525	322.525	64.392
19	Net Inertial Acc - R1 (rad/sec^2)	16.556	0.339	LE7526	73.442	0.421	LE7521	56.886	343.603
20	Net Inertial Acc - R2 (rad/sec^2)	19.981	0.844	LE7520	40.361	0.517	LE7526	20.379	101.993
21	Net Inertial Acc - R3 (rad/sec^2)	11.325	0.240	LE7523	53.330	0.432	LE7525	42.005	370.899

Table F-7. Battery 2 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.382	0.300	LE7524	3.602	0.302	LE7524	2.220	160.625
2	FSE Net Load Factor, Y axis	4.859	0.288	LE7525	6.326	0.446	LE7521	1.468	30.204
3	FSE Net Load Factor, Z axis	1.386	0.180	LE7525	4.643	0.363	LE7525	3.258	235.122
4	FSE Net Load Factor, RX axis	22.069	0.343	LE7526	70.455	0.358	LE7521	48.386	219.253
5	FSE Net Load Factor, RY axis	47.955	0.867	LE7520	69.155	0.502	LE7525	21.200	44.207
6	FSE Net Load Factor, RZ axis	16.732	0.146	LE7523	98.178	0.433	LE7525	81.446	486.765
7	ORU I/F Force Grid 990 Z axis	127.446	0.287	LE7523	228.693	0.300	LE7523	101.247	79.444
8	ORU I/F Force Grid 991 Z axis	94.571	0.296	LE7524	205.555	0.410	LE7526	110.985	117.356
9	ORU I/F Force Grid 9998 X axis	283.057	0.296	LE7524	776.218	0.430	LE7525	493.160	174.226
10	ORU I/F Force Grid 9998 Z axis	620.055	0.285	LE7523	969.560	0.360	LE7525	349.505	56.367
11	ORU I/F Moment Grid 9998 RX axis	81.868	0.289	LE7526	291.177	0.432	LE7525	209.309	255.665
12	ORU I/F Moment Grid 9998 RY axis	1850.239	0.288	LE7525	2321.912	0.430	LE7525	471.674	25.493
13	ORU I/F Moment Grid 9998 RZ axis	157.214	0.287	LE7523	395.195	0.471	LE7526	237.981	151.374
14	ORU I/F Force Grid 9999 X axis	287.873	0.294	LE7524	691.148	0.300	LE7523	403.275	140.088
15	ORU I/F Force Grid 9999 Y axis	1813.268	0.283	LE7525	2227.601	0.430	LE7525	414.332	22.850
16	ORU I/F Force Grid 9999 Z axis	253.199	0.113	LE7524	608.865	0.421	LE7521	355.665	140.469
17	ORU I/F Moment Grid 9999 RX axis	959.484	0.282	LE7525	1102.523	0.430	LE7525	143.039	14.908
18	ORU I/F Moment Grid 9999 RY axis	924.042	0.295	LE7524	1825.932	0.300	LE7523	901.890	97.603
19	ORU I/F Moment Grid 9999 RZ axis	254.063	0.288	LE7525	467.968	0.437	LE7525	213.905	84.194
20	ORU Net Load Factor, X axis	1.556	0.295	LE7524	2.703	0.300	LE7524	1.148	73.771
21	ORU Net Load Factor, Y axis	4.989	0.283	LE7525	6.129	0.430	LE7525	1.140	22.850
22	ORU Net Load Factor, Z axis	1.324	0.766	LE7524	3.572	0.360	LE7525	2.248	169.805
23	ORU Net Load Factor, RX axis	17.816	0.339	LE7526	78.180	0.398	LE7522	60.364	338.811
24	ORU Net Load Factor, RY axis	19.003	0.121	LE7523	65.355	0.499	LE7526	46.353	243.927
25	ORU Net Load Factor, RZ axis	13.814	0.238	LE7523	97.244	0.430	LE7525	83.430	603.953
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1622.405	0.431	LE7525	2315.293	0.438	LE7525	692.889	42.708
27	FSE/ORU Assy I/F Force Grid 653 Z axis	750.322	0.287	LE7523	969.549	0.443	LE7521	219.227	29.218
28	FSE/ORU Assy I/F Force Grid 654 Z axis	378.695	0.286	LE7525	441.387	0.437	LE7525	62.692	16.555
29	FSE/ORU Assy I/F Force Grid 655 X axis	794.005	0.296	LE7524	1371.373	0.302	LE7524	577.368	72.716
30	FSE/ORU Assy I/F Force Grid 655 Z axis	589.173	0.286	LE7525	1011.088	0.432	LE7525	421.915	71.611
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1412.679	0.295	LE7523	1961.217	0.358	LE7525	548.539	38.830
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	544.085	0.285	LE7525	1011.656	0.433	LE7525	467.571	85.937
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	367.596	0.288	LE7523	392.454	0.358	LE7525	24.858	6.762
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	419.437	0.338	LE7526	691.971	0.424	LE7523	272.534	64.976
35	FSE/ORU Assy Net Load Factor, X axis	1.480	0.296	LE7524	2.556	0.302	LE7524	1.076	72.716
36	FSE/ORU Assy Net Load Factor, Y axis	4.729	0.286	LE7521	5.113	0.434	LE7525	0.383	8.108
37	FSE/ORU Assy Net Load Factor, Z axis	1.297	0.767	LE7524	2.133	0.359	LE7525	0.835	64.392
38	FSE/ORU Assy Net Load Factor, RX axis	16.556	0.339	LE7526	73.442	0.421	LE7521	56.886	343.603
39	FSE/ORU Assy Net Load Factor, RY axis	19.981	0.844	LE7520	40.361	0.517	LE7526	20.379	101.993
40	FSE/ORU Assy Net Load Factor, RZ axis	11.325	0.240	LE7523	53.330	0.432	LE7525	42.005	370.899

Table F-8. Battery 3 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.546	0.297	LE7524	2.844	0.304	LE7524	1.298	83.972
2	Net Load Factor - T2 (g)	4.474	0.292	LE7523	4.667	0.430	LE7523	0.192	4.298
3	Net Load Factor - T3 (g)	1.379	1.181	LE7520	2.405	1.190	LE7520	1.026	74.421
4	Net Load Factor - R1 (rad/sec^2)	18.616	0.293	LE7523	94.028	0.420	LE7525	75.413	405.105
5	Net Load Factor - R2 (rad/sec^2)	16.667	0.221	LE7526	49.530	0.443	LE7521	32.863	197.175
6	Net Load Factor - R3 (rad/sec^2)	16.370	0.220	LE7523	48.508	0.370	LE7525	32.137	196.314
7	GRID 653 - T2 (lbf)	1861.040	0.217	LE7525	2363.807	0.440	LE7525	502.768	27.015
8	GRID 653 - T3 (lbf)	553.122	0.259	LE7526	804.615	0.454	LE7523	251.493	45.468
9	GRID 654 - T3 (lbf)	414.151	0.218	LE7525	387.438	0.441	LE7525	-26.712	-6.450
10	GRID 655 - T1 (lbf)	829.340	0.297	LE7524	1525.752	0.304	LE7524	696.413	83.972
11	GRID 655 - T3 (lbf)	500.165	0.220	LE7525	835.310	0.290	LE7525	335.145	67.007
12	GRID 2183 - T2 (lbf)	1533.699	0.298	LE7523	1932.129	0.303	LE7524	398.430	25.978
13	GRID 2183 - T3 (lbf)	626.888	0.219	LE7525	1030.560	0.420	LE7525	403.672	64.393
14	GRID 2184 - T3 (lbf)	328.339	0.260	LE7526	286.503	0.416	LE7524	-41.836	-12.742
15	GRID 2185 - T3 (lbf)	611.546	0.292	LE7523	765.664	0.367	LE7525	154.118	25.201
16	Net Inertial Acc - T1 (in/sec^2)	596.746	0.297	LE7524	1097.845	0.304	LE7524	501.099	83.972
17	Net Inertial Acc - T2 (in/sec^2)	1727.512	0.292	LE7523	1801.763	0.430	LE7523	74.251	4.298
18	Net Inertial Acc - T3 (in/sec^2)	532.313	1.181	LE7520	928.466	1.190	LE7520	396.153	74.421
19	Net Inertial Acc - R1 (rad/sec^2)	18.616	0.293	LE7523	94.028	0.420	LE7525	75.413	405.105
20	Net Inertial Acc - R2 (rad/sec^2)	16.667	0.221	LE7526	49.530	0.443	LE7521	32.863	197.175
21	Net Inertial Acc - R3 (rad/sec^2)	16.370	0.220	LE7523	48.508	0.370	LE7525	32.137	196.314

Table F-9. Battery 3 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.654	0.301	LE7524	4.219	0.294	LE7525	2.565	155.067
2	FSE Net Load Factor, Y axis	4.428	0.296	LE7523	5.618	0.444	LE7525	1.191	26.887
3	FSE Net Load Factor, Z axis	1.509	1.183	LE7520	3.418	0.344	LE7525	1.909	126.523
4	FSE Net Load Factor, RX axis	22.879	0.325	LE7523	86.527	0.420	LE7525	63.648	278.197
5	FSE Net Load Factor, RY axis	22.816	0.225	LE7526	71.808	0.435	LE7521	48.992	214.727
6	FSE Net Load Factor, RZ axis	26.464	0.222	LE7523	89.626	0.357	LE7521	63.162	238.676
7	ORU I/F Force Grid 990 Z axis	123.273	0.260	LE7526	206.693	1.313	LE7520	83.420	67.670
8	ORU I/F Force Grid 991 Z axis	159.237	0.218	LE7525	300.735	0.420	LE7525	141.498	88.860
9	ORU I/F Force Grid 9998 X axis	278.005	0.306	LE7524	791.773	0.290	LE7525	513.768	184.805
10	ORU I/F Force Grid 9998 Z axis	592.459	0.290	LE7523	765.923	0.437	LE7525	173.465	29.279
11	ORU I/F Moment Grid 9998 RX axis	93.411	0.289	LE7525	324.224	0.290	LE7525	230.813	247.093
12	ORU I/F Moment Grid 9998 RY axis	1356.619	0.288	LE7523	1929.310	0.431	LE7521	572.691	42.215
13	ORU I/F Moment Grid 9998 RZ axis	157.216	0.907	LE7525	366.324	0.493	LE7525	209.108	133.007
14	ORU I/F Force Grid 9999 X axis	345.840	0.297	LE7524	823.411	0.359	LE7521	477.571	138.090
15	ORU I/F Force Grid 9999 Y axis	1750.585	0.291	LE7523	2007.955	0.427	LE7523	257.370	14.702
16	ORU I/F Force Grid 9999 Z axis	299.784	1.181	LE7520	724.369	0.420	LE7525	424.584	141.630
17	ORU I/F Moment Grid 9999 RX axis	906.735	0.291	LE7523	945.368	0.428	LE7523	38.633	4.261
18	ORU I/F Moment Grid 9999 RY axis	1032.085	0.217	LE7525	1675.305	0.300	LE7524	643.219	62.322
19	ORU I/F Moment Grid 9999 RZ axis	197.292	0.263	LE7523	395.536	0.493	LE7525	198.244	100.483
20	ORU Net Load Factor, X axis	1.628	0.296	LE7524	3.352	0.290	LE7525	1.725	105.958
21	ORU Net Load Factor, Y axis	4.816	0.291	LE7523	5.525	0.427	LE7523	0.708	14.702
22	ORU Net Load Factor, Z axis	1.328	1.181	LE7520	2.786	1.189	LE7520	1.458	109.788
23	ORU Net Load Factor, RX axis	19.879	0.293	LE7523	95.637	0.420	LE7525	75.758	381.097
24	ORU Net Load Factor, RY axis	23.346	0.219	LE7526	72.852	0.290	LE7525	49.506	212.051
25	ORU Net Load Factor, RZ axis	20.201	0.261	LE7523	95.258	0.426	LE7521	75.057	371.551
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1861.040	0.217	LE7525	2363.807	0.440	LE7525	502.768	27.015
27	FSE/ORU Assy I/F Force Grid 653 Z axis	553.122	0.259	LE7526	804.615	0.454	LE7523	251.493	45.468
28	FSE/ORU Assy I/F Force Grid 654 Z axis	414.151	0.218	LE7525	387.438	0.441	LE7525	-26.712	-6.450
29	FSE/ORU Assy I/F Force Grid 655 X axis	829.340	0.297	LE7524	1525.752	0.304	LE7524	696.413	83.972
30	FSE/ORU Assy I/F Force Grid 655 Z axis	500.165	0.220	LE7525	835.310	0.290	LE7525	335.145	67.007
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1533.699	0.298	LE7523	1932.129	0.303	LE7524	398.430	25.978
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	626.888	0.219	LE7525	1030.560	0.420	LE7525	403.672	64.393
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	328.339	0.260	LE7526	286.503	0.416	LE7524	-41.836	-12.742
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	611.546	0.292	LE7523	765.664	0.367	LE7525	154.118	25.201
35	FSE/ORU Assy Net Load Factor, X axis	1.546	0.297	LE7524	2.843	0.304	LE7524	1.298	83.972
36	FSE/ORU Assy Net Load Factor, Y axis	4.474	0.292	LE7523	4.667	0.430	LE7523	0.192	4.298
37	FSE/ORU Assy Net Load Factor, Z axis	1.379	1.181	LE7520	2.405	1.190	LE7520	1.026	74.421
38	FSE/ORU Assy Net Load Factor, RX axis	18.616	0.293	LE7523	94.028	0.420	LE7525	75.413	405.105
39	FSE/ORU Assy Net Load Factor, RY axis	16.667	0.221	LE7526	49.530	0.443	LE7521	32.863	197.175
40	FSE/ORU Assy Net Load Factor, RZ axis	16.370	0.220	LE7523	48.508	0.370	LE7525	32.137	196.314

Table F-10. Battery 4 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.957	0.321	LE7523	2.973	0.323	LE7523	1.016	51.925
2	Net Load Factor - T2 (g)	4.785	0.287	LE7523	5.693	0.363	LE7525	0.908	18.976
3	Net Load Factor - T3 (g)	1.441	1.365	LE7520	2.433	0.357	LE7521	0.992	68.864
4	Net Load Factor - R1 (rad/sec^2)	16.443	0.337	LE7526	90.077	0.395	LE7525	73.634	447.802
5	Net Load Factor - R2 (rad/sec^2)	16.265	0.160	LE7523	59.608	0.284	LE7521	43.343	266.471
6	Net Load Factor - R3 (rad/sec^2)	13.796	0.389	LE7523	68.186	0.266	LE7521	54.390	394.247
7	GRID 653 - T2 (lbf)	1754.688	0.285	LE7525	3054.707	0.363	LE7525	1300.019	74.088
8	GRID 653 - T3 (lbf)	546.008	0.294	LE7523	1070.446	0.362	LE7525	524.437	96.049
9	GRID 654 - T3 (lbf)	555.589	0.288	LE7523	767.868	0.430	LE7525	212.278	38.208
10	GRID 655 - T1 (lbf)	1050.038	0.321	LE7523	1595.267	0.323	LE7523	545.229	51.925
11	GRID 655 - T3 (lbf)	312.199	0.433	LE7525	746.677	0.482	LE7522	434.479	139.167
12	GRID 2183 - T2 (lbf)	1202.449	0.423	LE7523	2410.856	0.325	LE7523	1208.407	100.495
13	GRID 2183 - T3 (lbf)	1071.699	0.288	LE7523	1316.684	0.299	LE7525	244.984	22.859
14	GRID 2184 - T3 (lbf)	498.694	0.287	LE7523	455.211	0.303	LE7524	-43.483	-8.719
15	GRID 2185 - T3 (lbf)	383.337	1.416	LE7520	609.354	0.272	LE7521	226.017	58.960
16	Net Inertial Acc - T1 (in/sec^2)	755.548	0.321	LE7523	1147.864	0.323	LE7523	392.316	51.925
17	Net Inertial Acc - T2 (in/sec^2)	1847.420	0.287	LE7523	2197.995	0.363	LE7525	350.575	18.976
18	Net Inertial Acc - T3 (in/sec^2)	556.330	1.365	LE7520	939.444	0.357	LE7521	383.114	68.864
19	Net Inertial Acc - R1 (rad/sec^2)	16.443	0.337	LE7526	90.077	0.395	LE7525	73.634	447.802
20	Net Inertial Acc - R2 (rad/sec^2)	16.265	0.160	LE7523	59.608	0.284	LE7521	43.343	266.471
21	Net Inertial Acc - R3 (rad/sec^2)	13.796	0.389	LE7523	68.186	0.266	LE7521	54.390	394.247

Table F-11. Battery 4 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.818	0.323	LE7523	5.679	0.365	LE7525	3.861	212.363
2	FSE Net Load Factor, Y axis	4.566	0.290	LE7523	7.278	0.289	LE7523	2.712	59.407
3	FSE Net Load Factor, Z axis	1.546	0.352	LE7521	3.963	0.351	LE7521	2.417	156.364
4	FSE Net Load Factor, RX axis	17.871	0.338	LE7526	92.295	0.396	LE7525	74.424	416.446
5	FSE Net Load Factor, RY axis	26.113	0.292	LE7523	92.468	0.456	LE7523	66.356	254.112
6	FSE Net Load Factor, RZ axis	20.428	0.391	LE7523	127.644	0.318	LE7523	107.216	524.845
7	ORU I/F Force Grid 990 Z axis	168.762	0.321	LE7523	229.143	0.330	LE7523	60.381	35.779
8	ORU I/F Force Grid 991 Z axis	190.858	0.214	LE7525	339.536	0.297	LE7525	148.678	77.900
9	ORU I/F Force Grid 9998 X axis	339.629	0.322	LE7523	964.218	0.289	LE7521	624.589	183.903
10	ORU I/F Force Grid 9998 Z axis	414.403	0.282	LE7521	823.063	0.428	LE7521	408.660	98.614
11	ORU I/F Moment Grid 9998 RX axis	132.386	0.425	LE7523	297.947	0.364	LE7525	165.561	125.059
12	ORU I/F Moment Grid 9998 RY axis	1579.394	0.356	LE7525	1856.050	0.358	LE7525	276.655	17.517
13	ORU I/F Moment Grid 9998 RZ axis	197.894	0.347	LE7525	456.561	0.365	LE7525	258.667	130.709
14	ORU I/F Force Grid 9999 X axis	442.560	0.317	LE7523	976.797	0.319	LE7523	534.237	120.715
15	ORU I/F Force Grid 9999 Y axis	1788.525	0.287	LE7523	2414.035	0.428	LE7521	625.510	34.974
16	ORU I/F Force Grid 9999 Z axis	403.139	0.360	LE7521	791.738	0.362	LE7525	388.599	96.393
17	ORU I/F Moment Grid 9999 RX axis	1066.624	0.285	LE7523	1502.139	0.428	LE7521	435.515	40.831
18	ORU I/F Moment Grid 9999 RY axis	1536.416	0.320	LE7523	2182.284	0.283	LE7521	645.868	42.037
19	ORU I/F Moment Grid 9999 RZ axis	204.208	0.351	LE7525	408.825	0.264	LE7521	204.617	100.200
20	ORU Net Load Factor, X axis	2.082	0.320	LE7523	3.618	0.290	LE7521	1.535	73.723
21	ORU Net Load Factor, Y axis	4.921	0.287	LE7523	6.642	0.428	LE7521	1.721	34.974
22	ORU Net Load Factor, Z axis	1.443	1.363	LE7520	2.826	0.268	LE7523	1.384	95.926
23	ORU Net Load Factor, RX axis	15.971	0.339	LE7526	103.018	0.395	LE7525	87.047	545.022
24	ORU Net Load Factor, RY axis	20.246	0.159	LE7523	90.023	0.285	LE7521	69.778	344.657
25	ORU Net Load Factor, RZ axis	18.248	0.314	LE7523	113.300	0.319	LE7523	95.052	520.886
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1754.688	0.285	LE7525	3054.707	0.363	LE7525	1300.019	74.088
27	FSE/ORU Assy I/F Force Grid 653 Z axis	546.008	0.294	LE7523	1070.446	0.362	LE7525	524.437	96.049
28	FSE/ORU Assy I/F Force Grid 654 Z axis	555.589	0.288	LE7523	767.868	0.430	LE7525	212.278	38.208
29	FSE/ORU Assy I/F Force Grid 655 X axis	1050.038	0.321	LE7523	1595.267	0.323	LE7523	545.229	51.925
30	FSE/ORU Assy I/F Force Grid 655 Z axis	312.199	0.433	LE7525	746.677	0.482	LE7522	434.479	139.167
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1202.449	0.423	LE7523	2410.856	0.325	LE7523	1208.407	100.495
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	1071.699	0.288	LE7523	1316.684	0.299	LE7525	244.984	22.859
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	498.694	0.287	LE7523	455.211	0.303	LE7524	-43.483	-8.719
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	383.337	1.416	LE7520	609.354	0.272	LE7521	226.017	58.960
35	FSE/ORU Assy Net Load Factor, X axis	1.957	0.321	LE7523	2.973	0.323	LE7523	1.016	51.925
36	FSE/ORU Assy Net Load Factor, Y axis	4.785	0.287	LE7523	5.693	0.363	LE7525	0.908	18.976
37	FSE/ORU Assy Net Load Factor, Z axis	1.441	1.365	LE7520	2.433	0.357	LE7521	0.992	68.864
38	FSE/ORU Assy Net Load Factor, RX axis	16.443	0.337	LE7526	90.077	0.395	LE7525	73.634	447.802
39	FSE/ORU Assy Net Load Factor, RY axis	16.265	0.160	LE7523	59.608	0.284	LE7521	43.343	266.471
40	FSE/ORU Assy Net Load Factor, RZ axis	13.796	0.389	LE7523	68.186	0.266	LE7521	54.390	394.247

Table F-12. Battery 5 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.473	0.320	LE7523	2.472	0.300	LE7524	0.998	67.776
2	Net Load Factor - T2 (g)	4.956	0.292	LE7523	5.721	0.433	LE7523	0.766	15.451
3	Net Load Factor - T3 (g)	1.115	0.328	LE7523	2.045	0.331	LE7523	0.930	83.411
4	Net Load Factor - R1 (rad/sec^2)	22.093	0.292	LE7523	65.512	0.420	LE7525	43.419	196.526
5	Net Load Factor - R2 (rad/sec^2)	21.535	1.467	LE7520	50.533	0.364	LE7523	28.998	134.656
6	Net Load Factor - R3 (rad/sec^2)	12.078	0.148	LE7523	56.542	0.430	LE7523	44.464	368.140
7	GRID 653 - T2 (lbf)	1647.110	0.222	LE7525	2738.307	0.362	LE7521	1091.197	66.249
8	GRID 653 - T3 (lbf)	566.365	0.276	LE7523	984.485	0.432	LE7523	418.120	73.825
9	GRID 654 - T3 (lbf)	500.718	0.291	LE7525	475.800	0.433	LE7523	-24.918	-4.977
10	GRID 655 - T1 (lbf)	790.491	0.320	LE7523	1326.252	0.300	LE7524	535.761	67.776
11	GRID 655 - T3 (lbf)	487.798	0.291	LE7521	1023.338	0.296	LE7521	535.541	109.787
12	GRID 2183 - T2 (lbf)	1460.853	0.424	LE7523	2087.418	0.335	LE7526	626.565	42.890
13	GRID 2183 - T3 (lbf)	903.050	0.291	LE7523	1214.580	0.364	LE7523	311.530	34.498
14	GRID 2184 - T3 (lbf)	478.781	0.294	LE7523	437.232	0.335	LE7526	-41.548	-8.678
15	GRID 2185 - T3 (lbf)	395.399	0.425	LE7523	727.737	0.343	LE7526	332.338	84.051
16	Net Inertial Acc - T1 (in/sec^2)	568.793	0.320	LE7523	954.296	0.300	LE7524	385.503	67.776
17	Net Inertial Acc - T2 (in/sec^2)	1913.345	0.292	LE7523	2208.971	0.433	LE7523	295.626	15.451
18	Net Inertial Acc - T3 (in/sec^2)	430.435	0.328	LE7523	789.466	0.331	LE7523	359.031	83.411
19	Net Inertial Acc - R1 (rad/sec^2)	22.093	0.292	LE7523	65.512	0.420	LE7525	43.419	196.526
20	Net Inertial Acc - R2 (rad/sec^2)	21.535	1.467	LE7520	50.533	0.364	LE7523	28.998	134.656
21	Net Inertial Acc - R3 (rad/sec^2)	12.078	0.148	LE7523	56.542	0.430	LE7523	44.464	368.140

Table F-13. Battery 5 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.372	0.318	LE7523	4.107	0.361	LE7523	2.735	199.283
2	FSE Net Load Factor, Y axis	4.680	0.295	LE7523	6.568	0.436	LE7523	1.887	40.328
3	FSE Net Load Factor, Z axis	1.210	0.203	LE7523	3.339	0.527	LE7525	2.130	176.011
4	FSE Net Load Factor, RX axis	24.001	0.332	LE7526	76.998	0.420	LE7525	52.996	220.805
5	FSE Net Load Factor, RY axis	39.706	1.469	LE7520	90.652	0.400	LE7521	50.945	128.306
6	FSE Net Load Factor, RZ axis	17.207	0.212	LE7523	96.615	0.427	LE7523	79.407	461.471
7	ORU I/F Force Grid 990 Z axis	153.515	0.322	LE7523	217.205	0.499	LE7521	63.691	41.488
8	ORU I/F Force Grid 991 Z axis	170.949	0.321	LE7523	283.206	0.361	LE7523	112.256	65.667
9	ORU I/F Force Grid 9998 X axis	330.831	0.322	LE7523	860.733	0.497	LE7521	529.902	160.173
10	ORU I/F Force Grid 9998 Z axis	631.084	0.291	LE7521	1080.396	0.362	LE7521	449.313	71.197
11	ORU I/F Moment Grid 9998 RX axis	88.128	0.314	LE7525	310.369	0.509	LE7525	222.241	252.180
12	ORU I/F Moment Grid 9998 RY axis	841.912	0.322	LE7523	1964.352	0.498	LE7521	1122.440	133.320
13	ORU I/F Moment Grid 9998 RZ axis	151.674	0.322	LE7523	400.660	0.497	LE7521	248.987	164.160
14	ORU I/F Force Grid 9999 X axis	287.201	0.316	LE7523	729.597	0.302	LE7524	442.396	154.037
15	ORU I/F Force Grid 9999 Y axis	1892.492	0.291	LE7523	2214.115	0.431	LE7523	321.623	16.995
16	ORU I/F Force Grid 9999 Z axis	336.272	0.219	LE7521	556.177	0.364	LE7523	219.904	65.395
17	ORU I/F Moment Grid 9999 RX axis	1091.910	0.291	LE7523	1162.868	0.430	LE7523	70.958	6.499
18	ORU I/F Moment Grid 9999 RY axis	1184.315	0.321	LE7523	1757.531	0.516	LE7524	573.216	48.401
19	ORU I/F Moment Grid 9999 RZ axis	90.787	0.208	LE7524	306.361	0.480	LE7526	215.573	237.448
20	ORU Net Load Factor, X axis	1.559	0.320	LE7523	2.993	0.300	LE7524	1.434	92.012
21	ORU Net Load Factor, Y axis	5.207	0.291	LE7523	6.092	0.431	LE7523	0.885	16.995
22	ORU Net Load Factor, Z axis	1.174	0.327	LE7523	2.360	0.328	LE7523	1.186	101.063
23	ORU Net Load Factor, RX axis	22.141	0.294	LE7523	76.513	0.420	LE7525	54.373	245.578
24	ORU Net Load Factor, RY axis	26.424	0.322	LE7523	70.331	0.388	LE7525	43.907	166.162
25	ORU Net Load Factor, RZ axis	15.556	0.146	LE7523	99.409	0.428	LE7523	83.853	539.031
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1647.110	0.222	LE7525	2738.307	0.362	LE7521	1091.197	66.249
27	FSE/ORU Assy I/F Force Grid 653 Z axis	566.365	0.276	LE7523	984.485	0.432	LE7523	418.120	73.825
28	FSE/ORU Assy I/F Force Grid 654 Z axis	500.718	0.291	LE7525	475.800	0.433	LE7523	-24.918	-4.977
29	FSE/ORU Assy I/F Force Grid 655 X axis	790.491	0.320	LE7523	1326.252	0.300	LE7524	535.761	67.776
30	FSE/ORU Assy I/F Force Grid 655 Z axis	487.798	0.291	LE7521	1023.338	0.296	LE7521	535.541	109.787
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1460.853	0.424	LE7523	2087.418	0.335	LE7526	626.565	42.890
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	903.050	0.291	LE7523	1214.580	0.364	LE7523	311.530	34.498
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	478.781	0.294	LE7523	437.232	0.335	LE7526	-41.548	-8.678
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	395.399	0.425	LE7523	727.737	0.343	LE7526	332.338	84.051
35	FSE/ORU Assy Net Load Factor, X axis	1.473	0.320	LE7523	2.472	0.300	LE7524	0.998	67.776
36	FSE/ORU Assy Net Load Factor, Y axis	4.956	0.292	LE7523	5.721	0.433	LE7523	0.766	15.451
37	FSE/ORU Assy Net Load Factor, Z axis	1.115	0.328	LE7523	2.045	0.331	LE7523	0.930	83.411
38	FSE/ORU Assy Net Load Factor, RX axis	22.093	0.292	LE7523	65.512	0.420	LE7525	43.419	196.526
39	FSE/ORU Assy Net Load Factor, RY axis	21.535	1.467	LE7520	50.533	0.364	LE7523	28.998	134.656
40	FSE/ORU Assy Net Load Factor, RZ axis	12.078	0.148	LE7523	56.542	0.430	LE7523	44.464	368.140

Table F-14. Battery 6 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.562	0.318	LE7523	2.383	0.308	LE7524	0.822	52.629
2	Net Load Factor - T2 (g)	4.637	0.287	LE7525	5.094	0.433	LE7521	0.457	9.857
3	Net Load Factor - T3 (g)	1.680	1.389	LE7520	2.593	1.187	LE7520	0.913	54.316
4	Net Load Factor - R1 (rad/sec^2)	22.172	0.284	LE7523	79.440	0.327	LE7525	57.268	258.294
5	Net Load Factor - R2 (rad/sec^2)	18.068	0.124	LE7523	45.121	0.310	LE7521	27.053	149.735
6	Net Load Factor - R3 (rad/sec^2)	18.625	0.282	LE7523	64.823	0.432	LE7525	46.198	248.044
7	GRID 653 - T2 (lbf)	1434.537	0.231	LE7525	1959.211	0.350	LE7525	524.674	36.574
8	GRID 653 - T3 (lbf)	642.995	0.291	LE7523	1163.784	0.297	LE7521	520.789	80.994
9	GRID 654 - T3 (lbf)	460.118	0.292	LE7523	405.742	0.298	LE7525	-54.376	-11.818
10	GRID 655 - T1 (lbf)	837.909	0.318	LE7523	1278.895	0.308	LE7524	440.985	52.629
11	GRID 655 - T3 (lbf)	484.673	0.296	LE7525	917.403	0.365	LE7523	432.730	89.283
12	GRID 2183 - T2 (lbf)	1903.115	0.282	LE7523	2670.350	0.432	LE7525	767.235	40.315
13	GRID 2183 - T3 (lbf)	657.249	0.226	LE7525	889.159	0.432	LE7525	231.910	35.285
14	GRID 2184 - T3 (lbf)	482.021	0.283	LE7523	516.905	0.432	LE7525	34.884	7.237
15	GRID 2185 - T3 (lbf)	539.070	0.288	LE7523	793.568	0.327	LE7525	254.498	47.211
16	Net Inertial Acc - T1 (in/sec^2)	602.912	0.318	LE7523	920.220	0.308	LE7524	317.308	52.629
17	Net Inertial Acc - T2 (in/sec^2)	1790.258	0.287	LE7525	1966.722	0.433	LE7521	176.463	9.857
18	Net Inertial Acc - T3 (in/sec^2)	648.681	1.389	LE7520	1001.020	1.187	LE7520	352.338	54.316
19	Net Inertial Acc - R1 (rad/sec^2)	22.172	0.284	LE7523	79.440	0.327	LE7525	57.268	258.294
20	Net Inertial Acc - R2 (rad/sec^2)	18.068	0.124	LE7523	45.121	0.310	LE7521	27.053	149.735
21	Net Inertial Acc - R3 (rad/sec^2)	18.625	0.282	LE7523	64.823	0.432	LE7525	46.198	248.044

Table F-15. Battery 6 - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	FSE Net Load Factor, X axis	1.539	0.321	LE7523	3.414	0.365	LE7523	1.875	121.854
2	FSE Net Load Factor, Y axis	4.398	0.290	LE7525	6.463	0.435	LE7525	2.065	46.955
3	FSE Net Load Factor, Z axis	1.797	1.391	LE7520	4.588	0.331	LE7525	2.790	155.253
4	FSE Net Load Factor, RX axis	23.943	0.256	LE7525	110.975	0.327	LE7525	87.032	363.497
5	FSE Net Load Factor, RY axis	22.516	1.495	LE7520	69.571	0.404	LE7522	47.055	208.988
6	FSE Net Load Factor, RZ axis	24.199	0.237	LE7523	110.830	0.354	LE7521	86.631	357.994
7	ORU I/F Force Grid 990 Z axis	134.343	0.313	LE7523	234.151	0.295	LE7521	99.809	74.294
8	ORU I/F Force Grid 991 Z axis	131.401	0.298	LE7525	267.255	0.310	LE7521	135.854	103.389
9	ORU I/F Force Grid 9998 X axis	291.007	0.321	LE7523	841.559	0.308	LE7524	550.552	189.189
10	ORU I/F Force Grid 9998 Z axis	698.599	0.288	LE7523	1054.135	0.432	LE7525	355.536	50.893
11	ORU I/F Moment Grid 9998 RX axis	118.820	0.199	LE7525	306.113	0.365	LE7523	187.294	157.628
12	ORU I/F Moment Grid 9998 RY axis	936.564	0.168	LE7525	1857.926	0.308	LE7521	921.362	98.377
13	ORU I/F Moment Grid 9998 RZ axis	146.038	0.323	LE7523	371.127	0.368	LE7521	225.088	154.130
14	ORU I/F Force Grid 9999 X axis	386.147	0.316	LE7523	827.246	0.301	LE7524	441.099	114.231
15	ORU I/F Force Grid 9999 Y axis	1767.219	0.286	LE7525	2341.653	0.430	LE7525	574.434	32.505
16	ORU I/F Force Grid 9999 Z axis	275.078	0.216	LE7521	509.370	0.643	LE7521	234.292	85.173
17	ORU I/F Moment Grid 9999 RX axis	1020.094	0.285	LE7525	1348.824	0.430	LE7525	328.730	32.225
18	ORU I/F Moment Grid 9999 RY axis	1200.247	0.315	LE7523	2084.902	0.301	LE7524	884.655	73.706
19	ORU I/F Moment Grid 9999 RZ axis	184.660	0.196	LE7525	409.075	0.301	LE7524	224.415	121.528
20	ORU Net Load Factor, X axis	1.705	0.316	LE7523	2.509	0.362	LE7523	0.804	47.144
21	ORU Net Load Factor, Y axis	4.862	0.286	LE7525	6.443	0.430	LE7525	1.580	32.505
22	ORU Net Load Factor, Z axis	1.650	1.388	LE7520	3.223	0.332	LE7521	1.574	95.398
23	ORU Net Load Factor, RX axis	20.598	0.284	LE7523	93.694	0.327	LE7525	73.095	354.860
24	ORU Net Load Factor, RY axis	27.849	0.123	LE7523	89.144	0.311	LE7521	61.294	220.095
25	ORU Net Load Factor, RZ axis	26.558	0.279	LE7523	108.553	0.368	LE7521	81.995	308.744
26	FSE/ORU Assy I/F Force Grid 653 Y axis	1434.537	0.231	LE7525	1959.211	0.350	LE7525	524.674	36.574
27	FSE/ORU Assy I/F Force Grid 653 Z axis	642.995	0.291	LE7523	1163.784	0.297	LE7521	520.789	80.994
28	FSE/ORU Assy I/F Force Grid 654 Z axis	460.118	0.292	LE7523	405.742	0.298	LE7525	-54.376	-11.818
29	FSE/ORU Assy I/F Force Grid 655 X axis	837.909	0.318	LE7523	1278.895	0.308	LE7524	440.985	52.629
30	FSE/ORU Assy I/F Force Grid 655 Z axis	484.673	0.296	LE7525	917.403	0.365	LE7523	432.730	89.283
31	FSE/ORU Assy I/F Force Grid 2183 Y axis	1903.115	0.282	LE7523	2670.350	0.432	LE7525	767.235	40.315
32	FSE/ORU Assy I/F Force Grid 2183 Z axis	657.249	0.226	LE7525	889.159	0.432	LE7525	231.910	35.285
33	FSE/ORU Assy I/F Force Grid 2184 Z axis	482.021	0.283	LE7523	516.905	0.432	LE7525	34.884	7.237
34	FSE/ORU Assy I/F Force Grid 2185 Z axis	539.070	0.288	LE7523	793.568	0.327	LE7525	254.498	47.211
35	FSE/ORU Assy Net Load Factor, X axis	1.562	0.318	LE7523	2.383	0.308	LE7524	0.822	52.629
36	FSE/ORU Assy Net Load Factor, Y axis	4.637	0.287	LE7525	5.094	0.433	LE7521	0.457	9.857
37	FSE/ORU Assy Net Load Factor, Z axis	1.680	1.389	LE7520	2.593	1.187	LE7520	0.913	54.316
38	FSE/ORU Assy Net Load Factor, RX axis	22.172	0.284	LE7523	79.440	0.327	LE7525	57.268	258.294
39	FSE/ORU Assy Net Load Factor, RY axis	18.068	0.124	LE7523	45.121	0.310	LE7521	27.053	149.735
40	FSE/ORU Assy Net Load Factor, RZ axis	18.625	0.282	LE7523	64.823	0.432	LE7525	46.198	248.044

Table F-16. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A Abs. Value	Data-Set A Time	Data-Set A LCID	Data-Set B Abs. Value	Data-Set B Time	Data-Set B LCID	Difference Amount	Difference Percentage
1	Net Load Factor - T1 (g)	0.700	0.203	LE7523	1.294	0.335	LE7525	0.594	84.888
2	Net Load Factor - T2 (g)	1.170	0.304	LE7524	1.756	0.295	LE7524	0.586	50.078
3	Net Load Factor - T3 (g)	3.948	0.286	LE7523	3.962	0.292	LE7525	0.014	0.350
4	Net Load Factor - R1 (rad/sec^2)	2.919	0.150	LE7526	8.370	0.280	LE7523	5.452	186.790
5	Net Load Factor - R2 (rad/sec^2)	10.542	0.286	LE7523	14.934	0.292	LE7523	4.393	41.671
6	Net Load Factor - R3 (rad/sec^2)	3.184	1.282	LE7520	7.682	0.320	LE7525	4.498	141.270
7	GRID 1271 - T2 (lbf) [Orbiter IF]	9326.231	0.300	LE7524	8717.618	0.306	LE7524	-608.613	-6.526
8	GRID 6299 - T1 (lbf) [Battery 4 IF]	383.337	1.416	LE7520	609.354	0.272	LE7521	226.017	58.960
9	GRID 13067 - T1 (lbf) [Battery 4 IF]	498.694	0.287	LE7523	455.211	0.303	LE7524	-43.483	-8.719
10	GRID 13083 - T1 (lbf) [Battery 4 IF]	555.589	0.288	LE7523	767.868	0.430	LE7525	212.278	38.208
11	GRID 13115 - T1 (lbf) [Battery 5 IF]	478.781	0.294	LE7523	437.232	0.335	LE7526	-41.548	-8.678
12	GRID 13545 - T1 (lbf) [Battery 4 IF]	312.199	0.433	LE7525	746.677	0.482	LE7522	434.479	139.167
13	GRID 13545 - T2 (lbf) [Battery 4 IF]	1050.038	0.321	LE7523	1595.267	0.323	LE7523	545.229	51.925
14	GRID 13576 - T1 (lbf) [Battery 5 IF]	395.399	0.425	LE7523	727.737	0.343	LE7526	332.338	84.051
15	GRID 16250 - T1 (lbf) [Battery 6 IF]	484.673	0.296	LE7525	917.403	0.365	LE7523	432.730	89.283
16	GRID 16250 - T2 (lbf) [Battery 6 IF]	837.909	0.318	LE7523	1278.895	0.308	LE7524	440.985	52.629
17	GRID 23028 - T1 (lbf) [Battery 6 IF]	460.118	0.292	LE7523	405.742	0.298	LE7525	-54.376	-11.818
18	GRID 23044 - T1 (lbf) [Battery 6 IF]	482.021	0.283	LE7523	516.905	0.432	LE7525	34.884	7.237
19	GRID 23076 - T1 (lbf) [Battery 5 IF]	500.718	0.291	LE7525	475.800	0.433	LE7523	-24.918	-4.977
20	GRID 23506 - T1 (lbf) [Battery 6 IF]	539.070	0.288	LE7523	793.568	0.327	LE7525	254.498	47.211
21	GRID 23537 - T1 (lbf) [Battery 5 IF]	487.798	0.291	LE7521	1023.338	0.296	LE7521	535.541	109.787
22	GRID 23537 - T2 (lbf) [Battery 5 IF]	790.491	0.320	LE7523	1326.252	0.300	LE7524	535.761	67.776
23	GRID 37940 - T1 (lbf) [Battery 1 IF]	520.460	0.291	LE7525	842.485	0.355	LE7525	322.025	61.873
24	GRID 37940 - T2 (lbf) [Battery 1 IF]	917.553	0.303	LE7524	1527.468	0.411	LE7525	609.915	66.472
25	GRID 38067 - T1 (lbf) [Battery 1 IF]	355.246	0.304	LE7524	617.494	0.406	LE7524	262.248	73.821
26	GRID 38323 - T1 (lbf) [Battery 2 IF]	589.173	0.286	LE7525	1011.088	0.432	LE7525	421.915	71.611
27	GRID 38323 - T2 (lbf) [Battery 2 IF]	794.005	0.296	LE7524	1371.373	0.302	LE7524	577.368	72.716
28	GRID 45767 - T1 (lbf) [Battery 3 IF]	611.546	0.292	LE7523	765.664	0.367	LE7525	154.118	25.201
29	GRID 45890 - T1 (lbf) [Battery 3 IF]	500.165	0.220	LE7525	835.310	0.290	LE7525	335.145	67.007
30	GRID 45890 - T2 (lbf) [Battery 3 IF]	829.340	0.297	LE7524	1525.752	0.304	LE7524	696.413	83.972
31	GRID 46151 - T1 (lbf) [Battery 2 IF]	419.437	0.338	LE7526	691.971	0.424	LE7523	272.534	64.976
32	GRID 53578 - T1 (lbf) [Battery 4 IF]	1071.699	0.288	LE7523	1316.684	0.299	LE7525	244.984	22.859
33	GRID 53578 - T3 (lbf) [Battery 4 IF]	1202.449	0.423	LE7523	2410.856	0.325	LE7523	1208.407	100.495
34	GRID 53701 - T1 (lbf) [Battery 4 IF]	546.008	0.294	LE7523	1070.446	0.362	LE7525	524.437	96.049
35	GRID 53701 - T3 (lbf) [Battery 4 IF]	1754.688	0.285	LE7525	3054.707	0.363	LE7525	1300.019	74.088
36	GRID 53956 - T1 (lbf) [Battery 5 IF]	903.050	0.291	LE7523	1214.580	0.364	LE7523	311.530	34.498
37	GRID 53956 - T3 (lbf) [Battery 5 IF]	1460.853	0.424	LE7523	2087.418	0.335	LE7526	626.565	42.890
38	GRID 61404 - T1 (lbf) [Battery 6 IF]	642.995	0.291	LE7523	1163.784	0.297	LE7521	520.789	80.994
39	GRID 61404 - T3 (lbf) [Battery 6 IF]	1434.537	0.231	LE7525	1959.211	0.350	LE7525	524.674	36.574
40	GRID 61527 - T1 (lbf) [Battery 6 IF]	657.249	0.226	LE7525	889.159	0.432	LE7525	231.910	35.285
41	GRID 61527 - T3 (lbf) [Battery 6 IF]	1903.115	0.282	LE7523	2670.350	0.432	LE7525	767.235	40.315
42	GRID 61788 - T1 (lbf) [Battery 5 IF]	566.365	0.276	LE7523	984.485	0.432	LE7523	418.120	73.825
43	GRID 61788 - T3 (lbf) [Battery 5 IF]	1647.110	0.222	LE7525	2738.307	0.362	LE7521	1091.197	66.249
44	GRID 62589 - T1 (lbf) [Battery 3 IF]	328.339	0.260	LE7526	286.503	0.416	LE7524	-41.836	-12.742
45	GRID 62774 - T1 (lbf) [Battery 3 IF]	414.151	0.218	LE7525	387.438	0.441	LE7525	-26.712	-6.450
46	GRID 63043 - T1 (lbf) [Battery 3 IF]	626.888	0.219	LE7525	1030.560	0.420	LE7525	403.672	64.393
47	GRID 63043 - T3 (lbf) [Battery 3 IF]	1533.699	0.298	LE7523	1932.129	0.303	LE7524	398.430	25.978
48	GRID 63343 - T1 (lbf) [Battery 3 IF]	553.122	0.259	LE7526	804.615	0.454	LE7523	251.493	45.468
49	GRID 63343 - T3 (lbf) [Battery 3 IF]	1861.040	0.217	LE7525	2363.807	0.440	LE7525	502.768	27.015
50	GRID 63345 - T1 (lbf) [Battery 2 IF]	367.596	0.288	LE7523	392.454	0.358	LE7525	24.858	6.762

Table F-16. Integrated Cargo Carrier - Vertical Light Deployable - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 - T1 (lbf) [Battery 2 IF]	378.695	0.286	LE7525	441.387	0.437	LE7525	62.692	16.555
52	GRID 63942 - T1 (lbf) [Battery 2 IF]	544.085	0.285	LE7525	1011.656	0.433	LE7525	467.571	85.937
53	GRID 63942 - T3 (lbf) [Battery 2 IF]	1412.679	0.295	LE7523	1961.217	0.358	LE7525	548.539	38.830
54	GRID 64244 - T1 (lbf) [Battery 2 IF]	750.322	0.287	LE7523	969.549	0.443	LE7521	219.227	29.218
55	GRID 64244 - T3 (lbf) [Battery 2 IF]	1622.405	0.431	LE7525	2315.293	0.438	LE7525	692.889	42.708
56	GRID 64246 - T1 (lbf) [Battery 1 IF]	505.418	0.288	LE7523	616.932	0.443	LE7521	111.514	22.064
57	GRID 64540 - T1 (lbf) [Battery 1 IF]	432.860	0.291	LE7525	511.223	0.393	LE7526	78.363	18.104
58	GRID 64814 - T1 (lbf) [Battery 1 IF]	620.807	0.291	LE7525	995.278	0.417	LE7523	374.471	60.320
59	GRID 64814 - T3 (lbf) [Battery 1 IF]	1554.113	0.300	LE7523	2666.802	0.427	LE7525	1112.690	71.596
60	GRID 65003 - T1 (lbf) [Battery 1 IF]	629.078	0.288	LE7523	1105.434	0.444	LE7521	476.356	75.723
61	GRID 65003 - T3 (lbf) [Battery 1 IF]	1517.800	0.292	LE7525	2835.651	0.393	LE7526	1317.851	86.826
62	GRID 111869 - T3 (lbf) [Orbiter IF]	3131.536	0.968	LE7525	3496.713	0.352	LE7523	365.177	11.661
63	GRID 111885 - T1 (lbf) [Orbiter IF]	3523.032	0.352	LE7525	4158.359	0.356	LE7525	635.326	18.034
64	GRID 111885 - T3 (lbf) [Orbiter IF]	19872.201	0.289	LE7523	19285.841	0.293	LE7523	-586.359	-2.951
65	GRID 113369 - T3 (lbf) [Orbiter IF]	3685.517	0.287	LE7523	3756.099	0.285	LE7523	70.583	1.915
66	GRID 113385 - T1 (lbf) [Orbiter IF]	2742.632	0.199	LE7523	3311.789	0.335	LE7525	569.157	20.752
67	GRID 113385 - T3 (lbf) [Orbiter IF]	14416.574	0.221	LE7525	13775.951	0.220	LE7525	-640.623	-4.444
68	GRID 150301 - T1 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
69	GRID 150301 - T2 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
70	GRID 150302 - T1 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
71	GRID 150303 - T2 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
72	GRID 150311 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
73	GRID 150312 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
74	GRID 150313 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
75	GRID 150314 - T3 (lbf) [LDU-IA IF]	0.000	0.000		0.000	0.000		0.000	
76	GRID 160301 - T1 (lbf) [PM-IA IF]	1887.040	0.323	LE7525	2291.397	0.431	LE7523	404.357	21.428
77	GRID 160301 - T2 (lbf) [PM-IA IF]	3118.578	0.288	LE7523	3182.521	0.361	LE7523	63.943	2.050
78	GRID 160302 - T1 (lbf) [PM-IA IF]	1410.020	0.361	LE7523	2153.748	0.396	LE7526	743.728	52.746
79	GRID 160303 - T2 (lbf) [PM-IA IF]	5606.890	0.289	LE7523	6262.557	0.295	LE7523	655.667	11.694
80	GRID 160311 - T3 (lbf) [PM-IA IF]	2986.492	0.289	LE7523	3171.097	0.296	LE7521	184.605	6.181
81	GRID 160312 - T3 (lbf) [PM-IA IF]	2387.516	0.357	LE7523	3226.332	0.362	LE7523	838.816	35.133
82	GRID 160313 - T3 (lbf) [PM-IA IF]	2528.077	0.357	LE7525	3141.231	0.360	LE7525	613.154	24.254
83	GRID 160314 - T3 (lbf) [PM-IA IF]	2595.629	0.286	LE7525	2615.306	0.291	LE7521	19.676	0.758
84	GRID 170301 - T1 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
85	GRID 170301 - T2 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
86	GRID 170302 - T1 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
87	GRID 170303 - T2 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
88	GRID 170311 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
89	GRID 170312 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
90	GRID 170313 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
91	GRID 170314 - T3 (lbf) [SGANT-IA IF]	0.000	0.000		0.000	0.000		0.000	
92	Net Inertial Acc - T1 (in/sec^2)	270.251	0.203	LE7523	499.663	0.335	LE7525	229.412	84.888
93	Net Inertial Acc - T2 (in/sec^2)	451.824	0.304	LE7524	678.090	0.295	LE7524	226.266	50.078
94	Net Inertial Acc - T3 (in/sec^2)	1524.370	0.286	LE7523	1529.707	0.292	LE7525	5.338	0.350
95	Net Inertial Acc - R1 (rad/sec^2)	2.919	0.150	LE7526	8.370	0.280	LE7523	5.452	186.790
96	Net Inertial Acc - R2 (rad/sec^2)	10.542	0.286	LE7523	14.934	0.292	LE7523	4.393	41.671
97	Net Inertial Acc - R3 (rad/sec^2)	3.184	1.282	LE7520	7.682	0.320	LE7525	4.498	141.270

Table F-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	NLF TX	270.302	0.203	LE7523	500.130	0.335	LE7525	229.827	85.026
2	NLF TY	451.839	0.304	LE7524	678.159	0.295	LE7524	226.320	50.089
3	NLF TZ	1524.160	0.286	LE7523	1529.174	0.292	LE7525	5.013	0.329
4	NLF RX	2.919	0.150	LE7526	8.370	0.280	LE7523	5.452	186.790
5	NLF RY	10.542	0.286	LE7523	14.934	0.292	LE7523	4.393	41.671
6	NLF RZ	3.184	1.282	LE7520	7.682	0.320	LE7525	4.498	141.270
7	Keel Grid 1271 DOF 2 I/F force	9326.231	0.300	LE7524	8717.618	0.306	LE7524	-608.613	-6.526
8	GRID 6299 TX NHP FORCE	383.337	1.416	LE7520	609.354	0.272	LE7521	226.017	58.960
9	GRID 13067 TX NHP FORCE	498.694	0.287	LE7523	455.211	0.303	LE7524	-43.483	-8.719
10	GRID 13083 TX NHP FORCE	555.589	0.288	LE7523	767.868	0.430	LE7525	212.278	38.208
11	GRID 13115 TX NHP FORCE	478.781	0.294	LE7523	437.232	0.335	LE7526	-41.548	-8.678
12	GRID 13545 TX NHP FORCE	312.199	0.433	LE7525	746.677	0.482	LE7522	434.479	139.167
13	GRID 13545 TY NHP FORCE	1050.038	0.321	LE7523	1595.267	0.323	LE7523	545.229	51.925
14	GRID 13576 TX NHP FORCE	395.399	0.425	LE7523	727.737	0.343	LE7526	332.338	84.051
15	GRID 16250 TX NHP FORCE	484.673	0.296	LE7525	917.403	0.365	LE7523	432.730	89.283
16	GRID 16250 TY NHP FORCE	837.909	0.318	LE7523	1278.895	0.308	LE7524	440.985	52.629
17	GRID 23028 TX NHP FORCE	460.118	0.292	LE7523	405.742	0.298	LE7525	-54.376	-11.818
18	GRID 23044 TX NHP FORCE	482.021	0.283	LE7523	516.905	0.432	LE7525	34.884	7.237
19	GRID 23076 TX NHP FORCE	500.718	0.291	LE7525	475.800	0.433	LE7523	-24.918	-4.977
20	GRID 23506 TX NHP FORCE	539.070	0.288	LE7523	793.568	0.327	LE7525	254.498	47.211
21	GRID 23537 TX NHP FORCE	487.798	0.291	LE7521	1023.338	0.296	LE7521	535.541	109.787
22	GRID 23537 TY NHP FORCE	790.491	0.320	LE7523	1326.252	0.300	LE7524	535.761	67.776
23	GRID 37940 TX NHP FORCE	520.460	0.291	LE7525	842.485	0.355	LE7525	322.025	61.873
24	GRID 37940 TY NHP FORCE	917.553	0.303	LE7524	1527.468	0.411	LE7525	609.915	66.472
25	GRID 38067 TX NHP FORCE	355.246	0.304	LE7524	617.494	0.406	LE7524	262.248	73.821
26	GRID 38323 TX NHP FORCE	589.173	0.286	LE7525	1011.088	0.432	LE7525	421.915	71.611
27	GRID 38323 TY NHP FORCE	794.005	0.296	LE7524	1371.373	0.302	LE7524	577.368	72.716
28	GRID 45767 TX NHP FORCE	611.546	0.292	LE7523	765.664	0.367	LE7525	154.118	25.201
29	GRID 45890 TX NHP FORCE	500.165	0.220	LE7525	835.310	0.290	LE7525	335.145	67.007
30	GRID 45890 TY NHP FORCE	829.340	0.297	LE7524	1525.752	0.304	LE7524	696.413	83.972
31	GRID 46151 TX NHP FORCE	419.437	0.338	LE7526	691.971	0.424	LE7523	272.534	64.976
32	GRID 53578 TX NHP FORCE	1071.699	0.288	LE7523	1316.684	0.299	LE7525	244.984	22.859
33	GRID 53578 TZ NHP FORCE	1202.449	0.423	LE7523	2410.856	0.325	LE7523	1208.407	100.495
34	GRID 53701 TX NHP FORCE	546.008	0.294	LE7523	1070.446	0.362	LE7525	524.437	96.049
35	GRID 53701 TZ NHP FORCE	1754.688	0.285	LE7525	3054.707	0.363	LE7525	1300.019	74.088
36	GRID 53956 TX NHP FORCE	903.050	0.291	LE7523	1214.580	0.364	LE7523	311.530	34.498
37	GRID 53956 TZ NHP FORCE	1460.853	0.424	LE7523	2087.418	0.335	LE7526	626.565	42.890
38	GRID 61404 TX NHP FORCE	642.995	0.291	LE7523	1163.784	0.297	LE7521	520.789	80.994
39	GRID 61404 TZ NHP FORCE	1434.537	0.231	LE7525	1959.211	0.350	LE7525	524.674	36.574
40	GRID 61527 TX NHP FORCE	657.249	0.226	LE7525	889.159	0.432	LE7525	231.910	35.285
41	GRID 61527 TZ NHP FORCE	1903.115	0.282	LE7523	2670.350	0.432	LE7525	767.235	40.315
42	GRID 61788 TX NHP FORCE	566.365	0.276	LE7523	984.485	0.432	LE7523	418.120	73.825
43	GRID 61788 TZ NHP FORCE	1647.110	0.222	LE7525	2738.307	0.362	LE7521	1091.197	66.249
44	GRID 62589 TX NHP FORCE	328.339	0.260	LE7526	286.503	0.416	LE7524	-41.836	-12.742
45	GRID 62774 TX NHP FORCE	414.151	0.218	LE7525	387.438	0.441	LE7525	-26.712	-6.450
46	GRID 63043 TX NHP FORCE	626.888	0.219	LE7525	1030.560	0.420	LE7525	403.672	64.393
47	GRID 63043 TZ NHP FORCE	1533.699	0.298	LE7523	1932.129	0.303	LE7524	398.430	25.978
48	GRID 63343 TX NHP FORCE	553.122	0.259	LE7526	804.615	0.454	LE7523	251.493	45.468
49	GRID 63343 TZ NHP FORCE	1861.040	0.217	LE7525	2363.807	0.440	LE7525	502.768	27.015
50	GRID 63345 TX NHP FORCE	367.596	0.288	LE7523	392.454	0.358	LE7525	24.858	6.762

Table F-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
51	GRID 63645 TX NHP FORCE	378.695	0.286	LE7525	441.387	0.437	LE7525	62.692	16.555
52	GRID 63942 TX NHP FORCE	544.085	0.285	LE7525	1011.656	0.433	LE7525	467.571	85.937
53	GRID 63942 TZ NHP FORCE	1412.679	0.295	LE7523	1961.217	0.358	LE7525	548.539	38.830
54	GRID 64244 TX NHP FORCE	750.322	0.287	LE7523	969.549	0.443	LE7521	219.227	29.218
55	GRID 64244 TZ NHP FORCE	1622.405	0.431	LE7525	2315.293	0.438	LE7525	692.889	42.708
56	GRID 64246 TX NHP FORCE	505.418	0.288	LE7523	616.932	0.443	LE7521	111.514	22.064
57	GRID 64540 TX NHP FORCE	432.860	0.291	LE7525	511.223	0.393	LE7526	78.363	18.104
58	GRID 64814 TX NHP FORCE	620.807	0.291	LE7525	995.278	0.417	LE7523	374.471	60.320
59	GRID 64814 TZ NHP FORCE	1554.113	0.300	LE7523	2666.802	0.427	LE7525	1112.690	71.596
60	GRID 65003 TX NHP FORCE	629.078	0.288	LE7523	1105.434	0.444	LE7521	476.356	75.723
61	GRID 65003 TZ NHP FORCE	1517.800	0.292	LE7525	2835.651	0.393	LE7526	1317.851	86.826
62	Secondary -Y: 111869 DOF 3 IF FORCE	3131.536	0.968	LE7525	3496.713	0.352	LE7523	365.177	11.661
63	Primary -Y: 111885 DOF 1 IF FORCE	3523.032	0.352	LE7525	4158.359	0.356	LE7525	635.326	18.034
64	Primary -Y: 111885 DOF 3 IF FORCE	19872.201	0.289	LE7523	19285.841	0.293	LE7523	-586.359	-2.951
65	Secondary +Y: 113369 DOF 3 IF FORCE	3685.517	0.287	LE7523	3756.099	0.285	LE7523	70.583	1.915
66	Primary +Y: 113385 DOF 1 IF FORCE	2742.632	0.199	LE7523	3311.789	0.335	LE7525	569.157	20.752
67	Primary +Y: 113385 DOF 3 IF FORCE	14416.574	0.221	LE7525	13775.951	0.220	LE7525	-640.623	-4.444
68	GRID 150301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
69	GRID 150301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
70	GRID 150302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
71	GRID 150303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
72	GRID 150311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
73	GRID 150312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
74	GRID 150313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
75	GRID 150314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
76	GRID 160301 TX FRAM IF FORCE	1887.040	0.323	LE7525	2291.397	0.431	LE7523	404.357	21.428
77	GRID 160301 TY FRAM IF FORCE	3118.578	0.288	LE7523	3182.521	0.361	LE7523	63.943	2.050
78	GRID 160302 TX FRAM IF FORCE	1410.020	0.361	LE7523	2153.748	0.396	LE7526	743.728	52.746
79	GRID 160303 TY FRAM IF FORCE	5606.890	0.289	LE7523	6262.557	0.295	LE7523	655.667	11.694
80	GRID 160311 TZ FRAM IF FORCE	2986.492	0.289	LE7523	3171.097	0.296	LE7521	184.605	6.181
81	GRID 160312 TZ FRAM IF FORCE	2387.516	0.357	LE7523	3226.332	0.362	LE7523	838.816	35.133
82	GRID 160313 TZ FRAM IF FORCE	2528.077	0.357	LE7525	3141.231	0.360	LE7525	613.154	24.254
83	GRID 160314 TZ FRAM IF FORCE	2595.629	0.286	LE7525	2615.306	0.291	LE7521	19.676	0.758
84	GRID 170301 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
85	GRID 170301 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
86	GRID 170302 TX FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
87	GRID 170303 TY FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
88	GRID 170311 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
89	GRID 170312 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
90	GRID 170313 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
91	GRID 170314 TZ FRAM IF FORCE	0.000	0.000		0.000	0.000		0.000	
92	GRID 200201 Fuse-1 Acceleration TX	1157.708	0.310	LE7521	4062.301	0.382	LE7523	2904.593	250.892
93	GRID 200201 Fuse-1 Acceleration TY	4285.567	0.306	LE7523	6503.593	0.436	LE7525	2218.026	51.756
94	GRID 200201 Fuse-1 Acceleration TZ	1311.976	0.288	LE7523	4107.341	0.356	LE7521	2795.365	213.065
95	GRID 200201 Fuse-1 Acceleration RX	1124.256	2.000	LE7520	1503.913	0.442	LE7525	379.657	33.770
96	GRID 200201 Fuse-1 Acceleration RY	289.277	1.994	LE7520	521.355	0.288	LE7521	232.078	80.227
97	GRID 200201 Fuse-1 Acceleration RZ	676.858	1.667	LE7520	995.144	0.438	LE7522	318.286	47.024
98	GRID 200202 Fuse-2 Acceleration TX	6693.621	1.986	LE7520	8485.279	0.314	LE7523	1791.659	26.767
99	GRID 200202 Fuse-2 Acceleration TY	2985.195	0.309	LE7525	5152.275	0.481	LE7522	2167.080	72.594
100	GRID 200202 Fuse-2 Acceleration TZ	3531.927	0.292	LE7523	4919.832	0.366	LE7523	1387.906	39.296

Table F-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
101	GRID 200202 Fuse-2 Acceleration RX	95.861	0.314	LE7523	315.430	0.346	LE7525	219.569	229.049
102	GRID 200202 Fuse-2 Acceleration RY	354.293	0.311	LE7523	623.837	0.432	LE7525	269.543	76.079
103	GRID 200202 Fuse-2 Acceleration RZ	129.399	0.305	LE7523	570.144	0.384	LE7521	440.745	340.609
104	GRID 200301 PVGF-1 Acceleration TX	797.753	0.652	LE7524	2855.046	0.386	LE7521	2057.294	257.886
105	GRID 200301 PVGF-1 Acceleration TY	751.939	0.283	LE7526	4588.951	0.453	LE7525	3837.012	510.282
106	GRID 200301 PVGF-1 Acceleration TZ	3635.313	0.393	LE7523	9564.462	0.343	LE7523	5929.149	163.099
107	GRID 200301 PVGF-1 Acceleration RX	131.606	0.334	LE7523	723.985	0.409	LE7522	592.378	450.113
108	GRID 200301 PVGF-1 Acceleration RY	34.375	0.220	LE7523	534.968	0.356	LE7521	500.594	1456.288
109	GRID 200301 PVGF-1 Acceleration RZ	529.469	0.333	LE7523	1247.871	0.483	LE7522	718.402	135.684
110	GRID 200302 PVGF-2 Acceleration TX	944.211	0.384	LE7525	3070.642	0.331	LE7525	2126.430	225.207
111	GRID 200302 PVGF-2 Acceleration TY	2376.971	0.292	LE7525	5052.477	0.415	LE7522	2675.506	112.559
112	GRID 200302 PVGF-2 Acceleration TZ	2145.211	0.288	LE7523	4771.110	0.497	LE7523	2625.899	122.407
113	GRID 200302 PVGF-2 Acceleration RX	263.946	2.000	LE7520	592.319	0.478	LE7525	328.373	124.409
114	GRID 200302 PVGF-2 Acceleration RY	57.297	0.205	LE7525	890.252	0.410	LE7521	832.955	1453.740
115	GRID 200302 PVGF-2 Acceleration RZ	575.681	1.959	LE7520	915.511	0.352	LE7521	339.830	59.031
116	Grid 504878 PDU Acceleration TX	954.249	0.288	LE7521	5648.878	0.490	LE7521	4694.629	491.971
117	Grid 504878 PDU Acceleration TY	980.987	0.309	LE7523	4274.631	0.311	LE7523	3293.643	335.748
118	Grid 504878 PDU Acceleration TZ	2143.795	0.296	LE7523	8736.851	0.304	LE7525	6593.056	307.541
119	Grid 504878 PDU Acceleration RX	936.836	1.999	LE7520	1777.396	0.490	LE7521	840.560	89.723
120	Grid 504878 PDU Acceleration RY	237.206	0.090	LE7523	1106.434	0.467	LE7521	869.228	366.444
121	Grid 504878 PDU Acceleration RZ	64.004	0.281	LE7525	185.151	0.775	LE7522	121.146	189.278
122	Element Force CBAR 27000 Shear 1	1830.977	0.356	LE7525	2020.374	0.360	LE7525	189.397	10.344
123	Element Force CBAR 27000 Shear 2	14764.956	0.289	LE7523	14730.973	0.293	LE7523	-33.983	-0.230
124	Element Force CBAR 27001 Shear 1	861.662	0.790	LE7525	892.659	0.816	LE7525	30.996	3.597
125	Element Force CBAR 27001 Shear 2	1544.534	0.289	LE7523	1576.719	0.295	LE7523	32.184	2.084
126	Element Force CBAR 27002 Shear 1	656.580	0.287	LE7523	706.753	0.290	LE7523	50.173	7.642
127	Element Force CBAR 27002 Shear 2	1290.843	0.290	LE7523	1357.467	0.295	LE7523	66.624	5.161
128	Element Force CBAR 27003 Shear 1	1111.307	0.288	LE7523	1191.498	0.289	LE7523	80.190	7.216
129	Element Force CBAR 27003 Shear 2	1132.979	0.292	LE7523	1219.999	0.295	LE7523	87.020	7.681
130	Element Force CBAR 27004 Shear 1	578.738	0.289	LE7523	635.878	0.363	LE7521	57.140	9.873
131	Element Force CBAR 27004 Shear 2	980.844	1.965	LE7520	1030.209	0.295	LE7523	49.365	5.033
132	Element Force CBAR 27005 Shear 1	296.148	0.291	LE7523	329.941	0.365	LE7523	33.794	11.411
133	Element Force CBAR 27005 Shear 2	966.175	1.439	LE7520	943.046	0.431	LE7523	-23.129	-2.394
134	Element Force CBAR 27006 Tension	9952.456	0.289	LE7523	9961.374	0.292	LE7523	8.918	0.090
135	Element Force CBAR 27007 Tension	8077.697	0.288	LE7523	8082.904	0.293	LE7523	5.207	0.064
136	Element Force CBAR 27008 Tension	6827.616	0.288	LE7523	6959.228	0.292	LE7523	131.612	1.928
137	Element Force CBAR 27009 Tension	5114.704	0.287	LE7523	5308.841	0.429	LE7521	194.137	3.796
138	Element Force CBAR 27010 Tension	4655.230	0.289	LE7523	5118.968	0.292	LE7523	463.737	9.962
139	Element Force CBAR 27011 Tension	2575.632	0.331	LE7526	3030.745	0.338	LE7526	455.112	17.670
140	Element Force CBAR 27012 Tension	3174.171	0.289	LE7523	3566.213	0.292	LE7523	392.042	12.351
141	Element Force CBAR 27013 Tension	1533.166	1.653	LE7520	1863.974	0.288	LE7525	330.808	21.577
142	Element Force CBAR 27014 Tension	2442.399	0.290	LE7523	2700.680	0.431	LE7521	258.281	10.575
143	Element Force CBAR 27015 Tension	1135.077	0.288	LE7523	1485.024	0.288	LE7525	349.947	30.830
144	Element Force CBAR 27016 Tension	1618.709	0.750	LE7520	1825.036	0.431	LE7521	206.326	12.746
145	Element Force CBAR 27017 Tension	506.693	0.260	LE7523	606.998	0.347	LE7521	100.305	19.796
146	Element Force CBAR 27018 Shear 1	1709.433	0.286	LE7523	1755.067	0.432	LE7523	45.634	2.670
147	Element Force CBAR 27018 Shear 2	9408.075	0.792	LE7525	9427.942	0.796	LE7525	19.867	0.211
148	Element Force CBAR 27019 Shear 1	1344.565	0.288	LE7523	1394.047	0.289	LE7523	49.481	3.680
149	Element Force CBAR 27019 Shear 2	1410.719	0.795	LE7525	1431.507	0.796	LE7525	20.788	1.474
150	Element Force CBAR 27020 Shear 1	250.545	0.290	LE7523	399.939	0.364	LE7521	149.394	59.627

Table F-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
151	Element Force CBAR 27020 Shear 2	1081.331	0.322	LE7525	1094.148	0.326	LE7525	12.817	1.185
152	Element Force CBAR 27021 Shear 1	265.759	1.678	LE7520	412.943	0.396	LE7525	147.185	55.383
153	Element Force CBAR 27021 Shear 2	915.250	0.794	LE7525	936.883	0.799	LE7525	21.634	2.364
154	Element Force CBAR 27022 Shear 1	391.923	0.354	LE7525	491.924	0.359	LE7521	100.001	25.515
155	Element Force CBAR 27022 Shear 2	901.579	0.349	LE7525	972.803	0.428	LE7525	71.224	7.900
156	Element Force CBAR 27023 Shear 1	65.960	0.726	LE7520	213.439	0.360	LE7521	147.479	223.589
157	Element Force CBAR 27023 Shear 2	979.252	0.290	LE7525	1030.318	0.428	LE7525	51.066	5.215
158	Element Force CBAR 27024 Tension	6049.549	0.791	LE7525	6159.627	0.796	LE7525	110.078	1.820
159	Element Force CBAR 27025 Tension	6178.403	0.791	LE7525	6216.295	1.051	LE7525	37.892	0.613
160	Element Force CBAR 27026 Tension	6336.883	0.902	LE7525	6410.656	0.912	LE7525	73.773	1.164
161	Element Force CBAR 27027 Tension	4376.879	0.430	LE7525	4483.796	0.431	LE7525	106.917	2.443
162	Element Force CBAR 27028 Tension	4873.331	0.288	LE7525	5106.988	0.287	LE7525	233.657	4.795
163	Element Force CBAR 27029 Tension	4547.424	0.288	LE7523	4741.173	0.291	LE7523	193.749	4.261
164	Element Force CBAR 27030 Tension	6586.209	0.288	LE7523	6978.832	0.290	LE7523	392.622	5.961
165	Element Force CBAR 27031 Tension	5720.816	0.289	LE7523	6144.182	0.290	LE7523	423.366	7.400
166	Element Force CBAR 27032 Tension	3215.333	0.288	LE7523	3453.848	0.290	LE7523	238.515	7.418
167	Element Force CBAR 27033 Tension	1912.568	0.290	LE7523	2146.426	0.294	LE7523	233.858	12.227
168	Element Force CBAR 27034 Tension	2046.336	0.290	LE7525	2223.842	0.292	LE7525	177.506	8.674
169	Element Force CBAR 27035 Tension	731.481	0.321	LE7523	1026.714	0.294	LE7523	295.232	40.361
170	Element Force CBAR 27036 Tension	503.029	0.289	LE7523	490.449	0.295	LE7523	-12.580	-2.501
171	Element Force CBAR 27037 Tension	949.286	0.289	LE7523	928.021	0.294	LE7523	-21.264	-2.240
172	Element Force CBAR 27038 Shear 1	2235.535	0.217	LE7525	2242.722	0.217	LE7525	7.188	0.322
173	Element Force CBAR 27038 Shear 2	11043.732	0.388	LE7525	11238.140	0.393	LE7525	194.409	1.760
174	Element Force CBAR 27039 Shear 1	400.618	0.494	LE7526	437.126	0.407	LE7526	36.508	9.113
175	Element Force CBAR 27039 Shear 2	1128.477	0.606	LE7525	1142.909	0.609	LE7525	14.431	1.279
176	Element Force CBAR 27040 Shear 1	237.918	0.289	LE7523	313.174	0.297	LE7521	75.256	31.631
177	Element Force CBAR 27040 Shear 2	1066.538	1.964	LE7520	1048.650	0.618	LE7525	-17.887	-1.677
178	Element Force CBAR 27041 Shear 1	439.926	0.287	LE7525	535.976	0.431	LE7521	96.050	21.833
179	Element Force CBAR 27041 Shear 2	1122.907	1.965	LE7520	1082.990	1.980	LE7520	-39.917	-3.555
180	Element Force CBAR 27042 Shear 1	298.766	0.219	LE7525	377.616	0.361	LE7521	78.850	26.392
181	Element Force CBAR 27042 Shear 2	1069.042	1.965	LE7520	1031.589	1.981	LE7520	-37.453	-3.503
182	Element Force CBAR 27043 Shear 1	294.052	0.291	LE7523	383.835	0.362	LE7521	89.783	30.533
183	Element Force CBAR 27043 Shear 2	992.275	1.966	LE7520	937.809	1.978	LE7520	-54.466	-5.489
184	Element Force CBAR 27044 Tension	7403.999	0.389	LE7525	7543.695	0.393	LE7525	139.696	1.887
185	Element Force CBAR 27045 Tension	6252.652	0.388	LE7525	6342.143	0.393	LE7525	89.491	1.431
186	Element Force CBAR 27046 Tension	5493.565	0.386	LE7525	5553.303	0.392	LE7525	59.737	1.087
187	Element Force CBAR 27047 Tension	4190.289	0.385	LE7525	4321.455	0.328	LE7523	131.166	3.130
188	Element Force CBAR 27048 Tension	3755.182	0.383	LE7525	3887.001	0.386	LE7525	131.819	3.510
189	Element Force CBAR 27049 Tension	2138.550	0.200	LE7523	2272.190	0.328	LE7523	133.641	6.249
190	Element Force CBAR 27050 Tension	2616.224	0.500	LE7525	2721.341	0.508	LE7525	105.118	4.018
191	Element Force CBAR 27051 Tension	1329.912	0.216	LE7521	1385.561	0.362	LE7525	55.649	4.184
192	Element Force CBAR 27052 Tension	1825.648	0.380	LE7525	1948.655	0.514	LE7525	123.007	6.738
193	Element Force CBAR 27053 Tension	670.948	0.212	LE7525	757.030	0.214	LE7525	86.082	12.830
194	Element Force CBAR 27054 Tension	1218.265	0.185	LE7523	1428.156	1.129	LE7525	209.891	17.229
195	Element Force CBAR 27055 Tension	567.848	1.338	LE7520	706.694	0.618	LE7525	138.846	24.451
196	Element Force CBAR 27056 Shear 1	2008.499	0.323	LE7523	2133.437	0.328	LE7523	124.938	6.220
197	Element Force CBAR 27056 Shear 2	11290.069	0.223	LE7525	11152.033	0.223	LE7525	-138.036	-1.223
198	Element Force CBAR 27057 Shear 1	625.378	0.388	LE7525	704.860	0.328	LE7523	79.482	12.709
199	Element Force CBAR 27057 Shear 2	543.065	0.290	LE7525	541.976	0.429	LE7525	-1.089	-0.201
200	Element Force CBAR 27058 Shear 1	283.764	0.496	LE7525	437.122	0.303	LE7525	153.359	54.045

Table F-17. Integrated Cargo Carrier - Vertical Light Deployable - OTM02 Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
201	Element Force CBAR 27058 Shear 2	837.236	0.965	LE7525	850.893	0.973	LE7525	13.656	1.631
202	Element Force CBAR 27059 Shear 1	207.877	0.392	LE7525	331.458	0.390	LE7521	123.581	59.449
203	Element Force CBAR 27059 Shear 2	802.785	0.287	LE7525	836.852	0.286	LE7525	34.067	4.244
204	Element Force CBAR 27060 Shear 1	146.827	0.288	LE7521	216.688	0.434	LE7523	69.861	47.581
205	Element Force CBAR 27060 Shear 2	939.856	0.288	LE7525	986.915	0.429	LE7525	47.058	5.007
206	Element Force CBAR 27061 Shear 1	140.737	0.264	LE7526	252.664	0.488	LE7526	111.927	79.529
207	Element Force CBAR 27061 Shear 2	1023.053	0.288	LE7525	1072.367	0.429	LE7525	49.314	4.820
208	Element Force CBAR 27062 Tension	7563.542	0.224	LE7525	7516.375	0.510	LE7525	-47.167	-0.624
209	Element Force CBAR 27063 Tension	6776.229	0.221	LE7525	6771.257	0.510	LE7525	-4.972	-0.073
210	Element Force CBAR 27064 Tension	4592.868	1.446	LE7523	4583.430	0.975	LE7525	-9.439	-0.206
211	Element Force CBAR 27065 Tension	3681.718	1.447	LE7523	3652.736	0.976	LE7525	-28.982	-0.787
212	Element Force CBAR 27066 Tension	1967.798	0.385	LE7525	2049.995	0.394	LE7525	82.197	4.177
213	Element Force CBAR 27067 Tension	1866.464	0.386	LE7525	1968.097	0.387	LE7525	101.633	5.445
214	Element Force CBAR 27068 Tension	2299.710	0.386	LE7525	2515.211	0.394	LE7525	215.501	9.371
215	Element Force CBAR 27069 Tension	1629.243	0.386	LE7525	1866.546	0.393	LE7521	237.303	14.565
216	Element Force CBAR 27070 Tension	1467.736	0.386	LE7525	1678.596	0.393	LE7521	210.860	14.366
217	Element Force CBAR 27071 Tension	909.508	0.289	LE7525	1035.677	0.288	LE7525	126.169	13.872
218	Element Force CBAR 27072 Tension	936.824	0.320	LE7525	1069.584	0.392	LE7521	132.760	14.171
219	Element Force CBAR 27073 Tension	1494.787	0.289	LE7523	1672.524	0.288	LE7525	177.737	11.890
220	Element Force CBAR 27074 Tension	486.834	0.289	LE7525	482.615	0.431	LE7525	-4.218	-0.866
221	Element Force CBAR 27075 Tension	825.961	0.289	LE7525	806.269	0.431	LE7525	-19.692	-2.384

Table F-18. Experiment Logistics Module - Exposed Section - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.287	0.415	LE7523	1.235	0.415	LE7523	-0.052	-4.032
2	Net Load Factor - T2 (g)	2.044	0.463	LE7526	2.123	0.464	LE7526	0.079	3.867
3	Net Load Factor - T3 (g)	3.590	0.244	LE7522	3.584	0.244	LE7522	-0.006	-0.160
4	Net Load Factor - R1 (rad/sec^2)	4.053	0.280	LE7525	4.356	0.280	LE7525	0.303	7.483
5	Net Load Factor - R2 (rad/sec^2)	12.278	0.323	LE7523	12.287	0.322	LE7523	0.009	0.074
6	Net Load Factor - R3 (rad/sec^2)	1.367	0.376	LE7524	1.791	0.376	LE7525	0.423	30.956
7	ID 700001 - T2 (lbf)	5182.493	0.463	LE7526	5383.227	0.464	LE7526	200.734	3.873
8	ID 700002 - T1 (lbf)	1708.024	0.415	LE7523	1655.921	0.235	LE7523	-52.103	-3.050
9	ID 700002 - T3 (lbf)	5749.499	0.275	LE7523	5978.424	0.275	LE7523	228.925	3.982
10	ID 700003 - T1 (lbf)	1945.624	0.415	LE7523	1918.620	0.415	LE7523	-27.004	-1.388
11	ID 700003 - T3 (lbf)	6635.490	0.279	LE7525	6757.631	0.279	LE7525	122.141	1.841
12	ID 700004 - T3 (lbf)	1691.762	0.248	LE7525	1692.954	0.248	LE7525	1.192	0.070
13	ID 700005 - T3 (lbf)	2028.872	0.324	LE7523	2040.016	0.323	LE7523	11.144	0.549
14	Net Inertial Acc - T1 (in/sec^2)	496.738	0.415	LE7523	476.709	0.415	LE7523	-20.030	-4.032
15	Net Inertial Acc - T2 (in/sec^2)	789.085	0.463	LE7526	819.598	0.464	LE7526	30.513	3.867
16	Net Inertial Acc - T3 (in/sec^2)	1385.910	0.244	LE7522	1383.690	0.244	LE7522	-2.221	-0.160
17	Net Inertial Acc - R1 (rad/sec^2)	4.053	0.280	LE7525	4.356	0.280	LE7525	0.303	7.483
18	Net Inertial Acc - R2 (rad/sec^2)	12.278	0.323	LE7523	12.287	0.322	LE7523	0.009	0.074
19	Net Inertial Acc - R3 (rad/sec^2)	1.367	0.376	LE7524	1.791	0.376	LE7525	0.423	30.956

Table F-19. Atmospheric Nuetral Drag Experiment-2 - Standard OTM Recoveries
Set A - Linear / Set B - Nonlinear

No	Description	Data-Set A			Data-Set B			Difference	
		Abs. Value	Time	LCID	Abs. Value	Time	LCID	Amount	Percentage
1	Net Load Factor - T1 (g)	1.473	0.574	LE7520	1.532	0.672	LE7520	0.060	4.046
2	Net Load Factor - T2 (g)	1.519	1.009	LE7520	1.490	1.008	LE7520	-0.028	-1.866
3	Net Load Factor - T3 (g)	3.010	0.230	LE7525	2.939	0.230	LE7525	-0.071	-2.359
4	Net Load Factor - R1 (rad/sec^2)	17.798	1.034	LE7520	18.363	1.034	LE7520	0.565	3.172
5	Net Load Factor - R2 (rad/sec^2)	7.067	0.106	LE7525	7.015	0.107	LE7525	-0.052	-0.740
6	Net Load Factor - R3 (rad/sec^2)	16.573	1.010	LE7520	17.239	1.033	LE7520	0.667	4.022
7	GRID 13 - T1 (lbf)	815.238	0.337	LE7525	833.656	0.339	LE7525	18.418	2.259
8	GRID 13 - T2 (lbf)	691.490	0.341	LE7525	707.849	0.339	LE7525	16.359	2.366
9	GRID 13 - T3 (lbf)	218.331	0.697	LE7523	226.806	0.698	LE7521	8.475	3.882
10	GRID 18 - T2 (lbf)	429.751	0.337	LE7525	447.025	0.338	LE7525	17.274	4.020
11	GRID 22 - T2 (lbf)	399.378	0.335	LE7525	410.211	0.348	LE7525	10.833	2.712
12	GRID 26 - T1 (lbf)	116.282	0.132	LE7524	117.024	0.292	LE7523	0.742	0.638
13	GRID 26 - T2 (lbf)	222.845	0.332	LE7525	215.986	0.333	LE7525	-6.859	-3.078
14	GRID 26 - T3 (lbf)	533.698	0.336	LE7525	538.799	0.347	LE7525	5.101	0.956
15	GRID 28 - T2 (lbf)	641.512	0.334	LE7525	648.345	0.348	LE7525	6.833	1.065
16	GRID 44 - T2 (lbf)	79.417	0.338	LE7525	82.478	0.337	LE7525	3.061	3.854
17	GRID 46 - T2 (lbf)	186.003	0.232	LE7525	185.041	0.232	LE7521	-0.962	-0.517
18	GRID 58 - T2 (lbf)	185.628	0.338	LE7525	188.962	0.339	LE7525	3.334	1.796
19	GRID 59 - T1 (lbf)	269.641	1.034	LE7520	274.741	1.034	LE7520	5.100	1.891
20	GRID 59 - T2 (lbf)	310.261	1.035	LE7520	317.453	1.035	LE7520	7.192	2.318
21	GRID 59 - T3 (lbf)	252.314	0.339	LE7525	264.019	0.338	LE7525	11.705	4.639
22	GRID 60 - T2 (lbf)	497.923	0.132	LE7526	497.998	0.132	LE7526	0.075	0.015
23	GRID 75 - T1 (lbf)	603.721	0.333	LE7525	608.600	0.335	LE7525	4.879	0.808
24	GRID 75 - T2 (lbf)	440.868	0.332	LE7525	431.069	0.132	LE7526	-9.799	-2.223
25	GRID 75 - T3 (lbf)	269.279	0.334	LE7525	272.687	0.344	LE7525	3.408	1.266
26	GRID 79 - T2 (lbf)	127.572	1.010	LE7520	122.968	1.055	LE7520	-4.605	-3.609
27	Net Inertial Acc - T1 (in/sec^2)	568.540	0.574	LE7520	591.544	0.672	LE7520	23.005	4.046
28	Net Inertial Acc - T2 (in/sec^2)	586.293	1.009	LE7520	575.354	1.008	LE7520	-10.939	-1.866
29	Net Inertial Acc - T3 (in/sec^2)	1162.034	0.230	LE7525	1134.615	0.230	LE7525	-27.419	-2.360
30	Net Inertial Acc - R1 (rad/sec^2)	17.798	1.034	LE7520	18.363	1.034	LE7520	0.565	3.172
31	Net Inertial Acc - R2 (rad/sec^2)	7.067	0.106	LE7525	7.015	0.107	LE7525	-0.052	-0.740
32	Net Inertial Acc - R3 (rad/sec^2)	16.573	1.010	LE7520	17.239	1.033	LE7520	0.667	4.022

Appendix G
Component Math Model Checks

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page    1


                        ************************************************
                        *                                              *
                        *                ASD/DMMP v1.11.0              *
                        *                                              *
                        *       Applied Structural Dynamics, Inc.      *
                        *    http://www.AppliedStructuralDynamics.com  *
                        *                                              *
                        *   Execution Time: Sun Jul 13 2008 14:34:26 CDT *
                        *                                              *
                        ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-07-0008A
     Name       : CM10A88Lift
     Description: CM10A88 Liftoff Model
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page    2

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-07-0008A
     Name        : CM10A88Lift
     Description : CM10A88 Liftoff Model
     Type        : Single

     DMM Type    : Hybrid
     DMM Size    : 4984 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : liftoff-msc.op4
        Geometry : liftoff.blk
        Label    : liftoff.txt

     Load Case 1
        ID       : clo1001
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1001.Z

     Load Case 2
        ID       : clo1002
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1002.Z

     Load Case 3
        ID       : clo1003
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1003.Z

     Load Case 4
        ID       : clo1004
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1004.Z

     Load Case 5
        ID       : clo1005
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1005.Z

     Load Case 6
        ID       : clo1006
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1006.Z

     Load Case 7
        ID       : clo1007
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1007.Z
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page    3

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     Load Case 8
        ID       : clo1008
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1008.Z

     Load Case 9
        ID       : clo1009
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1009.Z

     Load Case 10
        ID       : clo1010
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1010.Z

     Load Case 11
        ID       : clo1011
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1011.Z

     Load Case 12
        ID       : clo1012
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1012.Z

     Load Case 13
        ID       : clo1013
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1013.Z

     Load Case 14
        ID       : clo1014
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1014.Z

     Load Case 15
        ID       : clo1015
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1015.Z

     Load Case 16
        ID       : clo1016
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1016.Z
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page    4

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     Load Case 17
        ID       : clo1017
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1017.Z

     Load Case 18
        ID       : clo1018
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1018.Z

     Load Case 19
        ID       : clo1019
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1019.Z

     Load Case 20
        ID       : clo1020
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1020.Z

     Load Case 21
        ID       : clo1021
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1021.Z

     Load Case 22
        ID       : clo1022
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1022.Z

     Load Case 23
        ID       : clo1023
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1023.Z

     Load Case 24
        ID       : clo1024
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1024.Z

     Load Case 25
        ID       : clo1025
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1025.Z
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page    5

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     Load Case 26
        ID       : clo1026
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1026.Z

     Load Case 27
        ID       : clo1027
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1027.Z

     Load Case 28
        ID       : clo1028
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1028.Z

     Load Case 29
        ID       : clo1029
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1029.Z

     Load Case 30
        ID       : clo1030
        Type     : NASTRAN DLOAD
        Duration : 10.500
        File     : clo1030.Z
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 6

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
4590	RMS LUMPED NODE I/F L	67	0	679.50000	-96.50000	410.00000	0	1	2	3	4	5	6	
	9.5000 -96.5000 410.0000													
4591	RMS LUMPED NODE I/F L	91	0	911.00000	-96.50000	410.00000	0	7	8	9	10	11	12	
	1.0000 -96.5000 410.0000													
4592	RMS LUMPED NODE I/F L	118	0	1189.00000	-96.50000	410.00000	0	13	14	15	16	17	18	
	9.0000 -96.5000 410.0000													
4593	RMS LUMPED NODE I/F L	125	0	1256.50000	-96.50000	410.00000	0	19	20	21	22	23	24	
	6.5000 -96.5000 410.0000													
13001	PAYLOAD LONGERON ATTACH	61	0	616.67000	94.00000	414.00000	0	25	26	27	28		29	
	6.6700 94.0000 414.0000													
13002	PAYLOAD LONGERON ATTACH	65	0	659.93000	94.00000	414.00000	0	30	31	32	33		34	
	9.9300 94.0000 414.0000													
13003	PAYLOAD LONGERON ATTACH	76	0	762.20000	94.00000	414.00000	0	35	36	37	38		39	
	2.2000 94.0000 414.0000													
13004	PAYLOAD LONGERON ATTACH	95	0	954.93000	94.00000	414.00000	0	40	41	42	43		44	
	4.9300 94.0000 414.0000													
13005	PAYLOAD LONGERON ATTACH	101	0	1010.00000	94.00000	414.00000	0	45	46	47	48		49	
	0.0000 94.0000 414.0000													
13006	PAYLOAD LONGERON ATTACH	105	0	1057.20000	94.00000	414.00000	0	50	51	52	53		54	
	7.2000 94.0000 414.0000													
13007	PAYLOAD LONGERON ATTACH	117	0	1175.20000	94.00000	414.00000	0	55	56	57	58		59	
	5.2000 94.0000 414.0000													
13008	PAYLOAD LONGERON ATTACH	121	0	1218.47000	94.00000	414.00000	0	60	61	62	63		64	
	8.4700 94.0000 414.0000													
13009	PAYLOAD LONGERON ATTACH	61	0	616.67000	-94.00000	414.00000	0	65	66	67	68		69	
	6.6700 -94.0000 414.0000													
13010	PAYLOAD LONGERON ATTACH	65	0	659.93000	-94.00000	414.00000	0	70	71	72	73		74	
	9.9300 -94.0000 414.0000													
13011	PAYLOAD LONGERON ATTACH	76	0	762.20000	-94.00000	414.00000	0	75	76	77	78		79	
	2.2000 -94.0000 414.0000													
13012	PAYLOAD LONGERON ATTACH	95	0	954.93000	-94.00000	414.00000	0	80	81	82	83		84	
	4.9300 -94.0000 414.0000													
13013	PAYLOAD LONGERON ATTACH	101	0	1010.00000	-94.00000	414.00000	0	85	86	87	88		89	
	0.0000 -94.0000 414.0000													
13014	PAYLOAD LONGERON ATTACH	105	0	1057.20000	-94.00000	414.00000	0	90	91	92	93		94	
	7.2000 -94.0000 414.0000													
13015	PAYLOAD LONGERON ATTACH	117	0	1175.20000	-94.00000	414.00000	0	95	96	97	98		99	
	5.2000 -94.0000 414.0000													
13016	PAYLOAD LONGERON ATTACH	121	0	1218.47000	-94.00000	414.00000	0	100	101	102	103		104	
	8.4700 -94.0000 414.0000													
13017	PAYLOAD KEEL ATTACH	65	0	656.00000	0.00000	305.00000	0	105	106	107	108	109		
	6.0000 0.0000 305.0000													
13018	PAYLOAD KEEL ATTACH	94	0	947.07000	0.00000	305.00000	0	110	111	112	113	114		
	7.0700 0.0000 305.0000													
13019	PAYLOAD KEEL ATTACH	105	0	1057.20000	0.00000	305.00000	0	115	116	117	118	119		
	7.2000 0.0000 305.0000													
13020	PAYLOAD KEEL ATTACH	117	0	1175.20000	0.00000	305.00000	0	120	121	122	123	124		
	5.2000 0.0000 305.0000													
2171	Frame, Keel, and Sills	103	0	1033.40000	94.00000	410.00000	0		125	126				
	3.4000 94.0000 410.0000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 7

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
2197	Frame, Keel, and Sills	104	0	1040.00000	94.00000	410.00000	0	127	128				
	0.0000 94.0000 410.0000												
2322	Frame, Keel, and Sills	114	0	1140.67000	20.15000	307.20000	0	129	130				
	0.6700 20.1500 307.2000												
2663	Frame, Keel, and Sills	101	0	1011.40000	94.00000	408.25000	0	131	132				
	1.4000 94.0000 408.2500												
2808	Frame, Keel, and Sills	102	0	1024.87500	99.00000	410.00000	0	133	134				
	4.8750 99.0000 410.0000												
2809	Frame, Keel, and Sills	102	0	1024.87500	94.00000	410.00000	0	135	136				
	4.8750 94.0000 410.0000												
2833	Frame, Keel, and Sills	105	0	1052.58500	94.00000	410.00000	0	137	138				
	2.5850 94.0000 410.0000												
2922	Frame, Keel, and Sills	104	0	1044.22800	94.00000	410.00000	0	139	140				
	4.2280 94.0000 410.0000												
21081	Frame, Keel, and Sills	102	0	1029.50000	96.80000	410.00000	0	141	142				
	9.5000 96.8000 410.0000												
27106	Frame, Keel, and Sills	116	0	1165.83000	94.00000	368.50000	0	143	144				
	5.8300 94.0000 368.5000												
27111	Frame, Keel, and Sills	116	0	1165.83000	102.56000	420.00000	0	145	146				
	5.8300 102.5600 420.0000												
27150	Frame, Keel, and Sills	117	0	1179.00000	105.00000	420.00000	0	147	148				
	9.0000 105.0000 420.0000												
27164	Frame, Keel, and Sills	119	0	1191.00000	26.25000	310.47650	0	149	150				
	1.0000 26.2500 310.4765												
27167	Frame, Keel, and Sills	119	0	1191.00000	52.50000	321.47000	0	151	152				
	1.0000 52.5000 321.4700												
27178	Frame, Keel, and Sills	119	0	1191.00000	72.60000	334.25000	0	153	154				
	1.0000 72.6000 334.2500												
27186	Frame, Keel, and Sills	119	0	1191.00000	89.43570	368.50000	0	155	156				
	1.0000 89.4357 368.5000												
27193	Frame, Keel, and Sills	119	0	1191.00000	94.00000	388.15000	0	157	158				
	1.0000 94.0000 388.1500												
27564	Frame, Keel, and Sills	119	0	1191.00000	26.25000	308.47650	0	159	160				
	1.0000 26.2500 308.4765												
27837	Frame, Keel, and Sills	119	0	1191.00000	80.71800	347.34000	0	161	162				
	1.0000 80.7180 347.3400												
271012	Frame, Keel, and Sills	116	0	1165.83000	94.00000	388.15000	0	163	164				
	5.8300 94.0000 388.1500												
271013	Frame, Keel, and Sills	116	0	1165.83000	94.00000	376.60500	0	165	166				
	5.8300 94.0000 376.6050												
271055	Frame, Keel, and Sills	119	0	1191.00000	91.31840	376.60500	0	167	168				
	1.0000 91.3184 376.6050												
271265	Frame, Keel, and Sills	119	0	1191.00000	41.69510	313.70000	0	169	170				
	1.0000 41.6951 313.7000												
702171	Frame, Keel, and Sills	103	0	1033.40000	-94.00000	410.00000	0	171	172				
	3.4000 -94.0000 410.0000												
702197	Frame, Keel, and Sills	104	0	1040.00000	-94.00000	410.00000	0	173	174				
	0.0000 -94.0000 410.0000												
702322	Frame, Keel, and Sills	114	0	1140.67000	-20.15000	307.20000	0	175	176				
	0.6700 -20.1500 307.2000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 8

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
702663	Frame, Keel, and Sills	101	0	1011.40000	-94.00000	408.25000	0	177	178				
	1.4000 -94.0000 408.2500												
702808	Frame, Keel, and Sills	102	0	1024.87500	-99.00000	410.00000	0	179	180				
	4.8750 -99.0000 410.0000												
702809	Frame, Keel, and Sills	102	0	1024.87500	-94.00000	410.00000	0	181	182				
	4.8750 -94.0000 410.0000												
702833	Frame, Keel, and Sills	105	0	1052.58500	-94.00000	410.00000	0	183	184				
	2.5850 -94.0000 410.0000												
702922	Frame, Keel, and Sills	104	0	1044.22800	-94.00000	410.00000	0	185	186				
	4.2280 -94.0000 410.0000												
727106	Frame, Keel, and Sills	116	0	1165.83000	-94.00000	368.50000	0	187	188				
	5.8300 -94.0000 368.5000												
727111	Frame, Keel, and Sills	116	0	1165.83000	-102.56000	420.00000	0	189	190				
	5.8300 -102.5600 420.0000												
727150	Frame, Keel, and Sills	117	0	1179.00000	-105.00000	420.00000	0	191	192				
	9.0000 -105.0000 420.0000												
727164	Frame, Keel, and Sills	119	0	1191.00000	-26.25000	310.47650	0	193	194				
	1.0000 -26.2500 310.4765												
727167	Frame, Keel, and Sills	119	0	1191.00000	-52.50000	321.47000	0	195	196				
	1.0000 -52.5000 321.4700												
727178	Frame, Keel, and Sills	119	0	1191.00000	-72.60000	334.25000	0	197	198				
	1.0000 -72.6000 334.2500												
727186	Frame, Keel, and Sills	119	0	1191.00000	-89.43570	368.50000	0	199	200				
	1.0000 -89.4357 368.5000												
727193	Frame, Keel, and Sills	119	0	1191.00000	-94.00000	388.15000	0	201	202				
	1.0000 -94.0000 388.1500												
727564	Frame, Keel, and Sills	119	0	1191.00000	-26.25000	308.47650	0	203	204				
	1.0000 -26.2500 308.4765												
727837	Frame, Keel, and Sills	119	0	1191.00000	-80.71800	347.34000	0	205	206				
	1.0000 -80.7180 347.3400												
7021081	Frame, Keel, and Sills	102	0	1029.50000	-96.80000	410.00000	0	207	208				
	9.5000 -96.8000 410.0000												
7271012	Frame, Keel, and Sills	116	0	1165.83000	-94.00000	388.15000	0	209	210				
	5.8300 -94.0000 388.1500												
7271013	Frame, Keel, and Sills	116	0	1165.83000	-94.00000	376.60500	0	211	212				
	5.8300 -94.0000 376.6050												
7271055	Frame, Keel, and Sills	119	0	1191.00000	-91.31840	376.60500	0	213	214				
	1.0000 -91.3184 376.6050												
7271265	Frame, Keel, and Sills	119	0	1191.00000	-41.69510	313.70000	0	215	216				
	1.0000 -41.6951 313.7000												
212118	Cargo Bay Doors	96	0	966.35000	100.25000	438.50000	0	217	218				
	6.3500 100.2500 438.5000												
212120	Cargo Bay Doors	96	0	966.35000	100.25000	434.00000	0	219	220				
	6.3500 100.2500 434.0000												
212125	Cargo Bay Doors	96	0	966.35000	101.20000	424.75000	0	221	222				
	6.3500 101.2000 424.7500												
212385	Cargo Bay Doors	105	0	1055.75000	85.51450	466.75450	0	223	224				
	5.7500 85.5145 466.7545												
212388	Cargo Bay Doors	105	0	1055.75000	91.10200	462.16900	0	225	226				
	5.7500 91.1020 462.1690												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 9

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
212390	Cargo Bay Doors	105	0	1055.75000	95.34150	455.20850	0		227	228				
	5.7500 95.3415 455.2085													
213110	Cargo Bay Doors	114	0	1144.20000	95.34150	455.20850	0		229	230				
	4.2000 95.3415 455.2085													
213113	Cargo Bay Doors	114	0	1144.20000	99.58100	448.24800	0		231	232				
	4.2000 99.5810 448.2480													
213115	Cargo Bay Doors	114	0	1144.20000	99.91550	443.37400	0		233	234				
	4.2000 99.9155 443.3740													
213195	Cargo Bay Doors	116	0	1164.20000	101.20000	424.75000	0		235	236				
	4.2000 101.2000 424.7500													
213198	Cargo Bay Doors	116	0	1164.20000	102.15000	420.00000	0		237	238				
	4.2000 102.1500 420.0000													
213201	Cargo Bay Doors	117	0	1174.20000	100.25000	429.50000	0		239	240				
	4.2000 100.2500 429.5000													
213203	Cargo Bay Doors	117	0	1174.20000	102.15000	420.00000	0		241	242				
	4.2000 102.1500 420.0000													
213265	Cargo Bay Doors	118	0	1184.20000	101.20000	424.75000	0		243	244				
	4.2000 101.2000 424.7500													
213268	Cargo Bay Doors	118	0	1184.20000	102.15000	420.00000	0		245	246				
	4.2000 102.1500 420.0000													
312118	Cargo Bay Doors	96	0	966.35000	-100.25000	438.50000	0		247	248				
	6.3500 -100.2500 438.5000													
312120	Cargo Bay Doors	96	0	966.35000	-100.25000	434.00000	0		249	250				
	6.3500 -100.2500 434.0000													
312125	Cargo Bay Doors	96	0	966.35000	-101.20000	424.75000	0		251	252				
	6.3500 -101.2000 424.7500													
312385	Cargo Bay Doors	105	0	1055.75000	-85.51450	466.75450	0		253	254				
	5.7500 -85.5145 466.7545													
312388	Cargo Bay Doors	105	0	1055.75000	-91.10200	462.16900	0		255	256				
	5.7500 -91.1020 462.1690													
312390	Cargo Bay Doors	105	0	1055.75000	-95.34150	455.20850	0		257	258				
	5.7500 -95.3415 455.2085													
313195	Cargo Bay Doors	116	0	1164.20000	-101.20000	424.75000	0		259	260				
	4.2000 -101.2000 424.7500													
313198	Cargo Bay Doors	116	0	1164.20000	-102.15000	420.00000	0		261	262				
	4.2000 -102.1500 420.0000													
313201	Cargo Bay Doors	117	0	1174.20000	-100.25000	429.50000	0		263	264				
	4.2000 -100.2500 429.5000													
313203	Cargo Bay Doors	117	0	1174.20000	-102.15000	420.00000	0		265	266				
	4.2000 -102.1500 420.0000													
313265	Cargo Bay Doors	118	0	1184.20000	-101.20000	424.75000	0		267	268				
	4.2000 -101.2000 424.7500													
313268	Cargo Bay Doors	118	0	1184.20000	-102.15000	420.00000	0		269	270				
	4.2000 -102.1500 420.0000													
2423	B10S ATTACH 1	109	0	1090.33000	94.00000	396.00000	0		271	272				
	0.3300 94.0000 396.0000													
2433	B10S ATTACH 2	111	0	1115.50000	94.00000	396.88000	0		273					
	5.5000 94.0000 396.8800													
2665	B10S ATTACH 3	112	0	1123.30000	94.00000	408.25000	0	274	275					
	3.3000 94.0000 408.2500													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 10

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
2443	B10S ATTACH 4	114	0	1140.67000	94.00000	395.50000	0		276	277				
	0.6700 94.0000 395.5000													
2679	B10S ATTACH 5	113	0	1138.93900	102.57900	410.85000	0		278					
	8.9390 102.5790 410.8500													
2680	B10S ATTACH 6	108	0	1087.68300	102.65400	410.85000	0		279					
	7.6830 102.6540 410.8500													
702423	B10P ATTACH 1	109	0	1090.33000	-94.00000	396.00000	0		280	281				
	0.3300 -94.0000 396.0000													
702433	B10P ATTACH 2	111	0	1115.50000	-94.00000	396.88000	0		282					
	5.5000 -94.0000 396.8800													
702665	B10P ATTACH 3	112	0	1123.30000	-94.00000	408.25000	0	283	284					
	3.3000 -94.0000 408.2500													
702443	B10P ATTACH 4	114	0	1140.67000	-94.00000	395.50000	0		285	286				
	0.6700 -94.0000 395.5000													
702679	B10P ATTACH 5	113	0	1138.93900	-102.57900	410.85000	0		287					
	8.9390 -102.5790 410.8500													
702680	B10P ATTACH 6	108	0	1087.68300	-102.65400	410.85000	0		288					
	7.6830 -102.6540 410.8500													
2651	STARBOARD BOOM	91	0	911.00000	96.50000	410.00000	0	289	290	291	292	293	294	
	1.0000 96.5000 410.0000													
27895	STARBOARD BOOM	118	0	1189.00000	96.50000	410.00000	0	295	296	297	298	299	300	
	9.0000 96.5000 410.0000													
27896	STARBOARD BOOM	125	0	1256.50000	96.50000	410.00000	0	301	302	303	304	305	306	
	6.5000 96.5000 410.0000													
1651	STARBOARD BOOM	67	0	679.50000	96.50000	410.00000	0	307	308	309	310	311	312	
	9.5000 96.5000 410.0000													
3076	Aft Bulkhead	130	0	1307.00000	82.00000	439.58620	0	313	314	315				
	7.0000 82.0000 439.5862													
3401	Aft Bulkhead	130	0	1307.00000	91.80000	456.62000	0	316	317	318				
	7.0000 91.8000 456.6200													
1650	KU-Band Antenna I/F	58	0	589.00000	99.60000	410.00000	0	319	320	321	322	323	324	
	9.0000 99.6000 410.0000													
210388	Cargo Bay Doors	66	0	669.80000	91.10200	462.16900	0		325	326				
	9.8000 91.1020 462.1690													
210390	Cargo Bay Doors	66	0	669.80000	95.34150	455.20850	0		327	328				
	9.8000 95.3415 455.2085													
210393	Cargo Bay Doors	66	0	669.80000	99.58100	448.24800	0		329	330				
	9.8000 99.5810 448.2480													
210395	Cargo Bay Doors	66	0	669.80000	99.91550	443.37400	0		331	332				
	9.8000 99.9155 443.3740													
210398	Cargo Bay Doors	66	0	669.80000	100.25000	438.50000	0		333	334				
	9.8000 100.2500 438.5000													
210400	Cargo Bay Doors	66	0	669.80000	100.25000	434.00000	0		335	336				
	9.8000 100.2500 434.0000													
210405	Cargo Bay Doors	66	0	669.80000	101.20000	424.75000	0		337	338				
	9.8000 101.2000 424.7500													
210413	Cargo Bay Doors	68	0	681.05000	102.15000	420.00000	0		339	340				
	1.0500 102.1500 420.0000													
210458	Cargo Bay Doors	69	0	692.30000	91.10200	462.16900	0		341	342				
	2.3000 91.1020 462.1690													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 11

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
210460	Cargo Bay Doors	69	0	692.30000	95.34150	455.20850	0	343	344				
	2.3000 95.3415 455.2085												
210463	Cargo Bay Doors	69	0	692.30000	99.58100	448.24800	0	345	346				
	2.3000 99.5810 448.2480												
210465	Cargo Bay Doors	69	0	692.30000	99.91550	443.37400	0	347	348				
	2.3000 99.9155 443.3740												
210468	Cargo Bay Doors	69	0	692.30000	100.25000	438.50000	0	349	350				
	2.3000 100.2500 438.5000												
210470	Cargo Bay Doors	69	0	692.30000	100.25000	434.00000	0	351	352				
	2.3000 100.2500 434.0000												
210475	Cargo Bay Doors	69	0	692.30000	101.20000	424.75000	0	353	354				
	2.3000 101.2000 424.7500												
210530	Cargo Bay Doors	71	0	714.80000	95.34150	455.20850	0	355	356				
	4.8000 95.3415 455.2085												
210533	Cargo Bay Doors	71	0	714.80000	99.58100	448.24800	0	357	358				
	4.8000 99.5810 448.2480												
210535	Cargo Bay Doors	71	0	714.80000	99.91550	443.37400	0	359	360				
	4.8000 99.9155 443.3740												
210538	Cargo Bay Doors	71	0	714.80000	100.25000	438.50000	0	361	362				
	4.8000 100.2500 438.5000												
210600	Cargo Bay Doors	73	0	737.30000	95.34150	455.20850	0	363	364				
	7.3000 95.3415 455.2085												
210670	Cargo Bay Doors	75	0	756.08000	95.34150	455.20850	0	365	366				
	6.0800 95.3415 455.2085												
211040	Cargo Bay Doors	76	0	761.20000	95.34150	455.20850	0	367	368				
	1.2000 95.3415 455.2085												
211043	Cargo Bay Doors	76	0	761.20000	99.58100	448.24800	0	369	370				
	1.2000 99.5810 448.2480												
211180	Cargo Bay Doors	80	0	805.90000	95.34150	455.20850	0	371	372				
	5.9000 95.3415 455.2085												
211183	Cargo Bay Doors	80	0	805.90000	99.58100	448.24800	0	373	374				
	5.9000 99.5810 448.2480												
211320	Cargo Bay Doors	85	0	850.60000	95.34150	455.20850	0	375	376				
	0.6000 95.3415 455.2085												
211323	Cargo Bay Doors	85	0	850.60000	99.58100	448.24800	0	377	378				
	0.6000 99.5810 448.2480												
211325	Cargo Bay Doors	85	0	850.60000	99.91550	443.37400	0	379	380				
	0.6000 99.9155 443.3740												
211460	Cargo Bay Doors	89	0	895.30000	95.34150	455.20850	0	381	382				
	5.3000 95.3415 455.2085												
211463	Cargo Bay Doors	89	0	895.30000	99.58100	448.24800	0	383	384				
	5.3000 99.5810 448.2480												
211465	Cargo Bay Doors	89	0	895.30000	99.91550	443.37400	0	385	386				
	5.3000 99.9155 443.3740												
211468	Cargo Bay Doors	89	0	895.30000	100.25000	438.50000	0	387	388				
	5.3000 100.2500 438.5000												
211470	Cargo Bay Door	89	0	895.30000	100.25000	434.00000	0	389	390				
	5.3000 100.2500 434.0000												
211494	Cargo Bay Door	90	0	903.80000	101.20000	424.75000	0	391	392				
	3.8000 101.2000 424.7500												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 12

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
211528	Cargo Bay Doors	91	0	917.65000	91.10200	462.16900	0	393	394				
	7.6500 91.1020 462.1690												
211530	Cargo Bay Doors	91	0	917.65000	95.34150	455.20850	0	395	396				
	7.6500 95.3415 455.2085												
211533	Cargo Bay Doors	91	0	917.65000	99.58100	448.24800	0	397	398				
	7.6500 99.5810 448.2480												
211535	Cargo Bay Doors	91	0	917.65000	99.91550	443.37400	0	399	400				
	7.6500 99.9155 443.3740												
211538	Cargo Bay Doors	91	0	917.65000	100.25000	438.50000	0	401	402				
	7.6500 100.2500 438.5000												
211540	Cargo Bay Doors	91	0	917.65000	100.25000	434.00000	0	403	404				
	7.6500 100.2500 434.0000												
211545	Cargo Bay Doors	91	0	917.65000	101.20000	424.75000	0	405	406				
	7.6500 101.2000 424.7500												
211595	Cargo Bay Doors	93	0	939.92000	85.51450	466.75450	0	407	408				
	9.9200 85.5145 466.7545												
211598	Cargo Bay Doors	93	0	939.92000	91.10200	462.16900	0	409	410				
	9.9200 91.1020 462.1690												
211600	Cargo Bay Doors	93	0	939.92000	95.34150	455.20850	0	411	412				
	9.9200 95.3415 455.2085												
211603	Cargo Bay Doors	93	0	939.92000	99.58100	448.24800	0	413	414				
	9.9200 99.5810 448.2480												
211605	Cargo Bay Doors	93	0	939.92000	99.91550	443.37400	0	415	416				
	9.9200 99.9155 443.3740												
211608	Cargo Bay Doors	93	0	939.92000	100.25000	438.50000	0	417	418				
	9.9200 100.2500 438.5000												
212040	Cargo Bay Doors	94	0	943.58000	95.34150	455.20850	0	419	420				
	3.5800 95.3415 455.2085												
212043	Cargo Bay Doors	94	0	943.58000	99.58100	448.24800	0	421	422				
	3.5800 99.5810 448.2480												
212045	Cargo Bay Doors	94	0	943.58000	99.91550	443.37400	0	423	424				
	3.5800 99.9155 443.3740												
212250	Cargo Bay Doors	101	0	1011.05000	95.34150	455.20850	0	425	426				
	1.0500 95.3415 455.2085												
212253	Cargo Bay Doors	101	0	1011.05000	99.58100	448.24800	0	427	428				
	1.0500 99.5810 448.2480												
212255	Cargo Bay Doors	101	0	1011.05000	99.91550	443.37400	0	429	430				
	1.0500 99.9155 443.3740												
212530	Cargo Bay Doors	110	0	1100.45000	95.34150	455.20850	0	431	432				
	0.4500 95.3415 455.2085												
212533	Cargo Bay Doors	110	0	1100.45000	99.58100	448.24800	0	433	434				
	0.4500 99.5810 448.2480												
212535	Cargo Bay Doors	110	0	1100.45000	99.91550	443.37400	0	435	436				
	0.4500 99.9155 443.3740												
213180	Cargo Bay Doors	116	0	1164.20000	95.34150	455.20850	0	437	438				
	4.2000 95.3415 455.2085												
213183	Cargo Bay Doors	116	0	1164.20000	99.58100	448.24800	0	439	440				
	4.2000 99.5810 448.2480												
213185	Cargo Bay Doors	116	0	1164.20000	99.91550	443.37400	0	441	442				
	4.2000 99.9155 443.3740												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 13

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
213188	Cargo Bay Doors	116	0	1164.20000	100.25000	438.50000	0		443	444				
	4.2000 100.2500 438.5000													
213250	Cargo Bay Doors	118	0	1184.20000	95.34150	455.20850	0		445	446				
	4.2000 95.3415 455.2085													
213253	Cargo Bay Doors	118	0	1184.20000	99.58100	448.24800	0		447	448				
	4.2000 99.5810 448.2480													
213255	Cargo Bay Doors	118	0	1184.20000	99.91550	443.37400	0		449	450				
	4.2000 99.9155 443.3740													
213323	Cargo Bay Doors	120	0	1204.20000	99.58100	448.24800	0		451	452				
	4.2000 99.5810 448.2480													
213325	Cargo Bay Doors	120	0	1204.20000	99.91550	443.37400	0		453	454				
	4.2000 99.9155 443.3740													
213390	Cargo Bay Doors	122	0	1224.20000	95.34150	455.20850	0		455	456				
	4.2000 95.3415 455.2085													
213393	Cargo Bay Doors	122	0	1224.20000	99.58100	448.24800	0		457	458				
	4.2000 99.5810 448.2480													
213395	Cargo Bay Doors	122	0	1224.20000	99.91550	443.37400	0		459	460				
	4.2000 99.9155 443.3740													
213460	Cargo Bay Doors	124	0	1244.20000	95.34150	455.20850	0		461	462				
	4.2000 95.3415 455.2085													
213463	Cargo Bay Doors	124	0	1244.20000	99.58100	448.24800	0		463	464				
	4.2000 99.5810 448.2480													
213465	Cargo Bay Doors	124	0	1244.20000	99.91550	443.37400	0		465	466				
	4.2000 99.9155 443.3740													
213468	Cargo Bay Doors	124	0	1244.20000	100.25000	438.50000	0		467	468				
	4.2000 100.2500 438.5000													
213481	Cargo Bay Doors	125	0	1254.20000	100.25000	429.50000	0		469	470				
	4.2000 100.2500 429.5000													
213528	Cargo Bay Doors	126	0	1264.20000	91.10200	462.16900	0		471	472				
	4.2000 91.1020 462.1690													
213530	Cargo Bay Doors	126	0	1264.20000	95.34150	455.20850	0		473	474				
	4.2000 95.3415 455.2085													
213533	Cargo Bay Doors	126	0	1264.20000	99.58100	448.24800	0		475	476				
	4.2000 99.5810 448.2480													
213535	Cargo Bay Doors	126	0	1264.20000	99.91550	443.37400	0		477	478				
	4.2000 99.9155 443.3740													
213538	Cargo Bay Doors	126	0	1264.20000	100.25000	438.50000	0		479	480				
	4.2000 100.2500 438.5000													
213540	Cargo Bay Doors	126	0	1264.20000	100.25000	434.00000	0		481	482				
	4.2000 100.2500 434.0000													
213600	Cargo Bay Doors	128	0	1283.70000	95.34150	455.20850	0		483	484				
	3.7000 95.3415 455.2085													
959	TCL LATCH	60	0	602.30000	0.00000	496.62000	0	485	486	487				
	2.3000 0.0000 496.6200													
960	TCL LATCH	64	0	647.30000	0.00000	496.62000	0	488	489	490				
	7.3000 0.0000 496.6200													
961	TCL LATCH	69	0	692.30000	0.00000	496.62000	0	491	492	493				
	2.3000 0.0000 496.6200													
962	TCL LATCH	73	0	737.30000	0.00000	496.62000	0	494	495	496				
	7.3000 0.0000 496.6200													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 14

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
963	TCL LATCH	78	0	783.55000	0.00000	496.62000	0	497	498	499			
	3.5500 0.0000 496.6200												
964	TCL LATCH	82	0	828.25000	0.00000	496.62000	0	500	501	502			
	8.2500 0.0000 496.6200												
965	TCL LATCH	87	0	872.95000	0.00000	496.62000	0	503	504	505			
	2.9500 0.0000 496.6200												
967	TCL LATCH	91	0	917.65000	0.00000	496.62000	0	506	507	508			
	7.6500 0.0000 496.6200												
969	TCL LATCH	96	0	966.35000	0.00000	496.62000	0	509	510	511			
	6.3500 0.0000 496.6200												
970	TCL LATCH	101	0	1011.05000	0.00000	496.62000	0	512	513	514			
	1.0500 0.0000 496.6200												
971	TCL LATCH	105	0	1055.75000	0.00000	496.62000	0	515	516	517			
	5.7500 0.0000 496.6200												
972	TCL LATCH	110	0	1100.45000	0.00000	496.62000	0	518	519	520			
	0.4500 0.0000 496.6200												
973	TCL LATCH	114	0	1144.20000	0.00000	496.62000	0	521	522	523			
	4.2000 0.0000 496.6200												
974	TCL LATCH	118	0	1184.20000	0.00000	496.62000	0	524	525	526			
	4.2000 0.0000 496.6200												
975	TCL LATCH	122	0	1224.20000	0.00000	496.62000	0	527	528	529			
	4.2000 0.0000 496.6200												
977	TCL LATCH	126	0	1264.20000	0.00000	496.62000	0	530	531	532			
	4.2000 0.0000 496.6200												
271218	Bay 13 GAS Attach	129	0	1295.15000	95.50000	412.32000	0		533				
	5.1500 95.5000 412.3200												
271217	Bay 13 GAS Attach	127	0	1279.50000	94.00000	408.25000	0	534	535	536			
	9.5000 94.0000 408.2500												
271216	Bay 13 GAS Attach	126	0	1268.61600	102.57900	410.85000	0	537	538				
	8.6160 102.5790 410.8500												
271219	Bay 13 GAS Attach	130	0	1301.00000	94.00000	402.00000	0	539	540	541			
	1.0000 94.0000 402.0000												
27355	Bay 13 GAS Attach	124	0	1249.00000	94.00000	395.50000	0	542	543	544			
	9.0000 94.0000 395.5000												
701383	Bay 3 APC/ICAPC Attach	69	0	693.00000	-94.00000	396.00000	0		545	546			
	3.0000 -94.0000 396.0000												
701405	Bay 3 APC/ICAPC Attach	75	0	750.00000	-94.00000	401.75000	0		547	548			
	0.0000 -94.0000 401.7500												
701963	Bay 3 APC/ICAPC Attach	71	0	715.00000	-94.00000	408.25000	0	549	550	551			
	5.0000 -94.0000 408.2500												
701393	Bay 3 APC/ICAPC Attach	71	0	717.00000	-94.00000	396.50000	0		552				
	7.0000 -94.0000 396.5000												
1383	Bay 3 APC/ICAPC Attach	69	0	693.00000	94.00000	396.00000	0		553	554			
	3.0000 94.0000 396.0000												
1405	Bay 3 APC/ICAPC Attach	75	0	750.00000	94.00000	401.75000	0		555	556			
	0.0000 94.0000 401.7500												
901963	Bay 3 APC/ICAPC Attach	71	0	715.00000	94.00000	408.25000	0	557	558	559			
	5.0000 94.0000 408.2500												
1393	Bay 3 APC/ICAPC Attach	71	0	717.00000	94.00000	396.50000	0		560				
	7.0000 94.0000 396.5000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 15

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
701423	Bay 5 APC/ICAPC Attach	80	0	807.00000	-94.00000	396.00000	0		561	562				
	7.0000 -94.0000 396.0000													
701445	Bay 5 APC/ICAPC Attach	86	0	863.00000	-94.00000	401.75000	0		563	564				
	3.0000 -94.0000 401.7500													
701965	Bay 5 APC/ICAPC Attach	83	0	833.00000	-94.00000	408.25000	0	565	566	567				
	3.0000 -94.0000 408.2500													
701433	Bay 5 APC/ICAPC Attach	83	0	835.00000	-94.00000	396.50000	0		568					
	5.0000 -94.0000 396.5000													
1423	Bay 5 APC/ICAPC Attach	80	0	807.00000	94.00000	396.00000	0		569	570				
	7.0000 94.0000 396.0000													
1445	Bay 5 APC/ICAPC Attach	86	0	863.00000	94.00000	401.75000	0		571	572				
	3.0000 94.0000 401.7500													
901965	Bay 5 APC/ICAPC Attach	83	0	833.00000	94.00000	408.25000	0	573	574	575				
	3.0000 94.0000 408.2500													
1433	Bay 5 APC/ICAPC Attach	83	0	835.00000	94.00000	396.50000	0		576					
	5.0000 94.0000 396.5000													
701443	Bay 6 APC/ICAPC Attach	86	0	863.00000	-94.00000	396.00000	0		577	578				
	3.0000 -94.0000 396.0000													
702365	Bay 6 APC/ICAPC Attach	91	0	919.00000	-94.00000	401.75000	0		579	580				
	9.0000 -94.0000 401.7500													
702661	Bay 6 APC/ICAPC Attach	89	0	892.50000	-94.00000	408.25000	0	581	582	583				
	2.5000 -94.0000 408.2500													
702353	Bay 6 APC/ICAPC Attach	89	0	891.00000	-94.00000	396.50000	0		584					
	1.0000 -94.0000 396.5000													
1443	Bay 6 APC/ICAPC Attach	86	0	863.00000	94.00000	396.00000	0		585	586				
	3.0000 94.0000 396.0000													
2365	Bay 6 APC/ICAPC Attach	91	0	919.00000	94.00000	401.75000	0		587	588				
	9.0000 94.0000 401.7500													
2661	Bay 6 APC/ICAPC Attach	89	0	892.50000	94.00000	408.25000	0	589	590	591				
	2.5000 94.0000 408.2500													
2353	Bay 6 APC/ICAPC Attach	89	0	891.00000	94.00000	396.50000	0		592					
	1.0000 94.0000 396.5000													
727355	Bay 13 APC/ICAPC Attach	124	0	1249.00000	-94.00000	395.50000	0		593	594				
	9.0000 -94.0000 395.5000													
7271219	Bay 13 APC/ICAPC Attach	130	0	1301.00000	-94.00000	402.00000	0		595	596				
	1.0000 -94.0000 402.0000													
7271217	Bay 13 APC/ICAPC Attach	127	0	1279.50000	-94.00000	408.25000	0	597	598	599				
	9.5000 -94.0000 408.2500													
727435	Bay 13 APC/ICAPC Attach	127	0	1278.00000	-94.00000	396.50000	0		600					
	8.0000 -94.0000 396.5000													
6032	OV102/3 702-1073/1076	97	0	976.50000	-101.50000	407.50000	0	601	602	603				
	6.5000 -101.5000 407.5000													
6060	OV102/3 701-1033/1036	70	0	701.20000	-100.80000	407.00000	0	604	605	606				
	1.2000 -100.8000 407.0000													
6061	OV102/3 701-1035/1037	70	0	701.20000	-91.30000	407.50000	0	607	608	609				
	1.2000 -91.3000 407.5000													
6064	OV102/3 702-1061/1064	87	0	879.00000	-101.30000	407.50000	0	610	611	612				
	9.0000 -101.3000 407.5000													
6081	OV102 2- 203	104	0	1040.00000	0.00000	305.00000	0	613	614	615	616	617		
	0.0000 0.0000 305.0000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 16

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
6082	OV102 701-1040/1043	79	0	790.00000	-101.30000	407.50000	0	618	619	620			
	0.0000 -101.3000 407.5000												
6083	OV102 702-1079/1084	102	0	1029.50000	-101.30000	407.50000	0	621	622	623			
	9.5000 -101.3000 407.5000												
6084	OV102 702-1088/1090	111	0	1110.50000	-96.80000	407.30000	0	624	625	626			
	0.5000 -96.8000 407.3000												
6085	OV102 725-1247/1249	122	0	1229.00000	-97.00000	407.50000	0	627	628	629			
	9.0000 -97.0000 407.5000												
6067	OV103 702-1081/1083	102	0	1029.50000	-96.80000	408.00000	0	630	631	632			
	9.5000 -96.8000 408.0000												
6068	OV103 725-1241/1243	120	0	1207.00000	-97.00000	407.50000	0	633	634	635			
	7.0000 -97.0000 407.5000												
6071	OV103 25-1241/1243	120	0	1207.00000	97.00000	407.50000	0	636	637	638			
	7.0000 97.0000 407.5000												
6069	OV103 702-1067/1070	88	0	881.20000	-101.30000	407.50000	0	639	640	641			
	1.2000 -101.3000 407.5000												
6070	OV103 2-1067/1070	88	0	881.20000	101.30000	407.50000	0	642	643	644			
	1.2000 101.3000 407.5000												
6073	OV103 2-1061/1064	87	0	879.00000	101.30000	407.50000	0	645	646	647			
	9.0000 101.3000 407.5000												
6074	OV103 2-1079/1084	102	0	1029.50000	101.30000	407.50000	0	648	649	650			
	9.5000 101.3000 407.5000												
6076	OV103 2-1081/1083	102	0	1029.50000	96.80000	408.00000	0	651	652	653			
	9.5000 96.8000 408.0000												
6080	OV103 2- 83	91	0	919.00000	0.00000	305.00000	0	654	655	656	657	658	
	9.0000 0.0000 305.0000												
6086	IMU ON FLIGHT DECK FLR	50	0	505.00000	5.60000	421.30000	0	659	660	661			
	5.0000 5.6000 421.3000												
6089	CABIN CENTERLINE NODE	48	0	482.41910	0.00000	324.70970	0	662	663	664			
	2.4191 0.0000 324.7097												
6087	OV103 25- 202	120	0	1205.50000	0.00000	305.00000	0	665	666	667			
	5.5000 0.0000 305.0000												
6091	5245 2/3 701-1033/1036	70	0	701.20000	100.80000	407.00000	0	668	669	670			
	1.2000 100.8000 407.0000												
6092	5316 2 701-1040/1043	79	0	790.00000	101.30000	407.50000	0	671	672	673			
	0.0000 101.3000 407.5000												
6093	5459 2/3 702-1073/1076	97	0	976.50000	101.50000	407.50000	0	674	675	676			
	6.5000 101.5000 407.5000												
6094	5480 2 702-1088/1090	111	0	1110.50000	96.80000	407.30000	0	677	678	679			
	0.5000 96.8000 407.3000												
6095	5646 2 725-1247/1249	122	0	1229.00000	97.00000	407.50000	0	680	681	682			
	9.0000 97.0000 407.5000												
5001	FWD FUSE SHELL 4063	40	0	404.97530	0.00000	283.21290	0	683		684			
	4.9753 0.0000 283.2129												
5002	FWD FUSE SHELL 4162	45	0	459.38870	0.00000	280.10470	0	685		686			
	9.3887 0.0000 280.1047												
5003	FWD FUSE SHELL 4267	50	0	505.11940	7.82920	278.80930	0	687	688	689			
	5.1194 7.8292 278.8093												
5004	FWD FUSE SHELL 4267	50	0	505.11940	-7.82920	278.80930	0	690	691	692			
	5.1194 -7.8292 278.8093												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 17

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5005	FWD FUSE SHELL 4360	54	0	549.91920	0.00000	277.78420	0	693	694				
	9.9192 0.0000 277.7842												
5006	NOSE GEAR WELL 58054	26	0	265.72000	21.00000	314.71000	0	695	696	697			
	5.7200 21.0000 314.7100												
5007	NOSE GEAR WELL 58054	26	0	265.72000	-21.00000	314.71000	0	698	699	700			
	5.7200 -21.0000 314.7100												
5008	NOSE GEAR WELL 58164	31	0	311.00000	21.00000	297.82390	0	701	702	703			
	1.0000 21.0000 297.8239												
5009	NOSE GEAR WELL 58164	31	0	311.00000	-21.00000	297.82390	0	704	705	706			
	1.0000 -21.0000 297.8239												
5010	NOSE GEAR WELL 58324	35	0	359.00000	21.00000	288.73270	0	707	708	709			
	9.0000 21.0000 288.7327												
5011	NOSE GEAR WELL 58324	35	0	359.00000	-21.00000	288.73270	0	710	711	712			
	9.0000 -21.0000 288.7327												
5012	FWD FUSE SHELL 4059	40	0	404.41080	42.64690	287.04070	0	713	714	715			
	4.4108 42.6469 287.0407												
5013	FWD FUSE SHELL 4059	40	0	404.41080	-42.64690	287.04070	0	716	717	718			
	4.4108 -42.6469 287.0407												
5014	FWD FUSE SHELL 4159	45	0	458.95190	44.20620	283.14550	0	719	720	721			
	8.9519 44.2062 283.1455												
5015	FWD FUSE SHELL 4159	45	0	458.95190	-44.20620	283.14550	0	722	723	724			
	8.9519 -44.2062 283.1455												
5016	FWD FUSE SHELL 4264	50	0	504.75020	45.75980	281.37840	0	725	726	727			
	4.7502 45.7598 281.3784												
5017	FWD FUSE SHELL 4264	50	0	504.75020	-45.75980	281.37840	0	728	729	730			
	4.7502 -45.7598 281.3784												
5018	FWD FUSE SHELL 4357	54	0	549.57100	46.78950	280.20750	0	731	732	733			
	9.5710 46.7895 280.2075												
5019	FWD FUSE SHELL 4357	54	0	549.57100	-46.78950	280.20750	0	734	735	736			
	9.5710 -46.7895 280.2075												
5020	NOSE GEAR WELL 58169	31	0	311.00000	49.02740	312.91140	0	737	738	739			
	1.0000 49.0274 312.9114												
5021	NOSE GEAR WELL 58169	31	0	311.00000	-49.02740	312.91140	0	740	741	742			
	1.0000 -49.0274 312.9114												
5022	NOSE GEAR WELL 58329	35	0	359.00000	62.04270	304.86160	0	743	744	745			
	9.0000 62.0427 304.8616												
5023	NOSE GEAR WELL 58329	35	0	359.00000	-62.04270	304.86160	0	746	747	748			
	9.0000 -62.0427 304.8616												
5024	FWD FUSE SHELL 4057	40	0	403.08270	65.95310	296.17830	0	749	750	751			
	3.0827 65.9531 296.1783												
5025	FWD FUSE SHELL 4057	40	0	403.08270	-65.95310	296.17830	0	752	753	754			
	3.0827 -65.9531 296.1783												
5026	FWD FUSE SHELL 4157	45	0	457.82080	71.38330	291.02100	0	755	756	757			
	7.8208 71.3833 291.0210												
5027	FWD FUSE SHELL 4157	45	0	457.82080	-71.38330	291.02100	0	758	759	760			
	7.8208 -71.3833 291.0210												
5028	FWD FUSE SHELL 4262	50	0	503.75660	74.96410	288.26730	0	761	762	763			
	3.7566 74.9641 288.2673												
5029	FWD FUSE SHELL 4262	50	0	503.75660	-74.96410	288.26730	0	764	765	766			
	3.7566 -74.9641 288.2673												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 18

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5030	FWD FUSE SHELL 4355	54	0	548.66260	77.44860	286.53270	0	767	768	769			
	8.6626 77.4486 286.5327												
5031	FWD FUSE SHELL 4355	54	0	548.66260	-77.44860	286.53270	0	770	771	772			
	8.6626 -77.4486 286.5327												
5032	FWD FUSE SHELL 4055	40	0	400.27880	79.01820	315.90990	0	773	774	775			
	0.2788 79.0182 315.9099												
5033	FWD FUSE SHELL 4055	40	0	400.27880	-79.01820	315.90990	0	776	777	778			
	0.2788 -79.0182 315.9099												
5034	FWD FUSE SHELL 4154	45	0	453.88450	90.82390	318.42530	0	779	780	781			
	3.8845 90.8239 318.4253												
5035	FWD FUSE SHELL 4154	45	0	453.88450	-90.82390	318.42530	0	782	783	784			
	3.8845 -90.8239 318.4253												
5036	FWD FUSE SHELL 4259	49	0	499.12400	98.85600	320.54810	0	785	786	787			
	9.1240 98.8560 320.5481												
5037	FWD FUSE SHELL 4259	49	0	499.12400	-98.85600	320.54810	0	788	789	790			
	9.1240 -98.8560 320.5481												
5038	FWD FUSE SHELL 4351	54	0	544.66650	106.33140	314.35450	0	791	792	793			
	4.6665 106.3314 314.3545												
5039	FWD FUSE SHELL 4351	54	0	544.66650	-106.33140	314.35450	0	794	795	796			
	4.6665 -106.3314 314.3545												
5040	FWD FUSE SHELL 4381	56	0	568.00000	110.16120	313.22500	0	797	798	799			
	8.0000 110.1612 313.2250												
5041	FWD FUSE SHELL 4381	56	0	568.00000	-110.16120	313.22500	0	800	801	802			
	8.0000 -110.1612 313.2250												
5042	NOSE GEAR WELL 58059	26	0	262.78000	31.58000	335.00000	0		803	804			
	2.7800 31.5800 335.0000												
5043	NOSE GEAR WELL 58059	26	0	262.78000	-31.58000	335.00000	0		805	806			
	2.7800 -31.5800 335.0000												
5044	FWD RCS MODULE 14051	31	0	311.00000	53.54910	335.00000	0		807	808			
	1.0000 53.5491 335.0000												
5045	FWD RCS MODULE 14051	31	0	311.00000	-53.54910	335.00000	0		809	810			
	1.0000 -53.5491 335.0000												
5046	NOSE GEAR WELL 58332	35	0	359.00000	69.02630	335.00000	0		811	812			
	9.0000 69.0263 335.0000												
5047	NOSE GEAR WELL 58332	35	0	359.00000	-69.02630	335.00000	0		813	814			
	9.0000 -69.0263 335.0000												
5048	FWD FUSE SHELL 4052	39	0	395.24430	78.34270	351.04810	0		815	816			
	5.2443 78.3427 351.0481												
5049	FWD FUSE SHELL 4052	39	0	395.24430	-78.34270	351.04810	0		817	818			
	5.2443 -78.3427 351.0481												
5050	FWD FUSE SHELL 4151	44	0	448.70700	89.82910	354.47220	0		819	820			
	8.7070 89.8291 354.4722												
5051	FWD FUSE SHELL 4151	44	0	448.70700	-89.82910	354.47220	0		821	822			
	8.7070 -89.8291 354.4722												
5052	FWD FUSE SHELL 4247	49	0	493.94640	97.99670	356.59490	0		823	824			
	3.9464 97.9967 356.5949												
5053	FWD FUSE SHELL 4247	49	0	490.00000	-97.33190	356.40990	0		825	826			
	0.0000 -97.3319 356.4099												
5054	FWD FUSE SHELL 4347	53	0	538.30000	103.53980	358.67630	0		827	828			
	8.3000 103.5398 358.6763												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 19

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5055	FWD FUSE SHELL 4347	53	0	538.30000	-103.53980	358.67630	0		829	830				
	8.3000 -103.5398 358.6763													
5056	FWD FUSE SHELL 4446	57	0	572.39170	104.97230	360.27590	0		831	832				
	2.3917 104.9723 360.2759													
5057	FWD FUSE SHELL 4446	57	0	572.39170	-104.97230	360.27590	0		833	834				
	2.3917 -104.9723 360.2759													
5058	NOSE GEAR WELL 58061	26	0	260.23760	26.52710	352.92360	0	835	836	837				
	0.2376 26.5271 352.9236													
5059	NOSE GEAR WELL 58061	26	0	260.23760	-26.52710	352.92360	0	838	839	840				
	0.2376 -26.5271 352.9236													
5060	FWD RCS MODULE 14013	28	0	281.50000	35.09940	364.57750	0	841	842	843				
	1.5000 35.0994 364.5775													
5061	FWD RCS MODULE 14013	28	0	281.50000	-35.09940	364.57750	0	844	845	846				
	1.5000 -35.0994 364.5775													
5062	FWD RCS MODULE 14055	31	0	311.00000	46.06910	374.70340	0	847	848	849				
	1.0000 46.0691 374.7034													
5063	FWD RCS MODULE 14055	31	0	311.00000	-46.06910	374.70340	0	850	851	852				
	1.0000 -46.0691 374.7034													
5064	FWD RCS MODULE 14125	35	0	350.84070	63.14960	374.21480	0	853	854	855				
	0.8407 63.1496 374.2148													
5065	FWD RCS MODULE 14125	35	0	350.84070	-63.14960	374.21480	0	856	857	858				
	0.8407 -63.1496 374.2148													
5066	FWD FUSE SHELL 4050	38	0	387.68020	75.63960	378.75120	0	859	860	861				
	7.6802 75.6396 378.7512													
5067	FWD FUSE SHELL 4050	38	0	387.68020	-75.63960	378.75120	0	862	863	864				
	7.6802 -75.6396 378.7512													
5068	FWD FUSE SHELL 4148	44	0	443.93550	88.89240	387.69140	0	865	866	867				
	3.9355 88.8924 387.6914													
5069	FWD FUSE SHELL 4148	44	0	443.93550	-88.89240	387.69140	0	868	869	870				
	3.9355 -88.8924 387.6914													
5070	FWD FUSE SHELL 4253	48	0	489.22530	97.20040	389.46260	0		871	872				
	9.2253 97.2004 389.4626													
5071	FWD FUSE SHELL 4253	48	0	489.22530	-97.20040	389.46260	0		873	874				
	9.2253 -97.2004 389.4626													
5072	FWD FUSE SHELL 4345	53	0	533.72950	103.17120	390.49680	0		875	876				
	3.7295 103.1712 390.4968													
5073	FWD FUSE SHELL 4345	53	0	533.72950	-103.17120	390.49680	0		877	878				
	3.7295 -103.1712 390.4968													
5074	FWD FUSE SHELL 4444	57	0	570.10640	104.94500	392.20390	0		879					
	0.1064 104.9450 392.2039													
5075	FWD FUSE SHELL 4444	57	0	570.10640	-104.94500	392.20390	0		880					
	0.1064 -104.9450 392.2039													
5076	FWD FUSE SHELL 4341	52	0	529.63550	102.80320	419.00000	0	881	882	883				
	9.6355 102.8032 419.0000													
5077	FWD FUSE SHELL 4341	52	0	529.63550	-102.80320	419.00000	0	884	885	886				
	9.6355 -102.8032 419.0000													
5078	FWD FUSE SHELL 4441	56	0	562.78810	104.79330	425.63180	0	887	888	889				
	2.7881 104.7933 425.6318													
5079	FWD FUSE SHELL 4441	56	0	562.78810	-104.79330	425.63180	0	890	891	892				
	2.7881 -104.7933 425.6318													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 20

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5080	FWD FUSE SHELL 4048	38	0	383.76970	58.91260	406.34870	0	893	894	895				
	3.7697 58.9126 406.3487													
5081	FWD FUSE SHELL 4048	38	0	383.76970	-58.91260	406.34870	0	896	897	898				
	3.7697 -58.9126 406.3487													
5082	FWD FUSE SHELL 4146	43	0	439.41020	74.27420	419.19580	0	899	900	901				
	9.4102 74.2742 419.1958													
5083	FWD FUSE SHELL 4146	43	0	439.41020	-74.27420	419.19580	0	902	903	904				
	9.4102 -74.2742 419.1958													
5084	FWD FUSE SHELL 4250	48	0	483.30790	83.12020	430.66060	0	905	906	907				
	3.3079 83.1202 430.6606													
5085	FWD FUSE SHELL 4250	48	0	483.30790	-83.12020	430.66060	0	908	909	910				
	3.3079 -83.1202 430.6606													
5086	FWD FUSE SHELL 4340	52	0	526.45000	90.52510	441.17650	0	911	912	913				
	6.4500 90.5251 441.1765													
5087	FWD FUSE SHELL 4340	52	0	526.45000	-90.52510	441.17650	0	914	915	916				
	6.4500 -90.5251 441.1765													
5088	FWD FUSE SHELL 4440	55	0	559.74340	94.51780	448.28740	0	917	918	919				
	9.7434 94.5178 448.2874													
5089	FWD FUSE SHELL 4440	55	0	559.74340	-94.51780	448.28740	0	920	921	922				
	9.7434 -94.5178 448.2874													
5090	CREW MOD WINDOW 50020	49	0	493.73200	53.94620	460.83470	0	923	924	925				
	3.7320 53.9462 460.8347													
5091	CREW MOD WINDOW 50020	49	0	493.73200	-53.94620	460.83470	0	926	927	928				
	3.7320 -53.9462 460.8347													
5092	FWD FUSE CANOPY 57139	52	0	523.98890	75.03860	458.15470	0	929	930	931				
	3.9889 75.0386 458.1547													
5093	FWD FUSE CANOPY 57139	52	0	523.98890	-75.03860	458.15470	0	932	933	934				
	3.9889 -75.0386 458.1547													
5094	FWD FUSE CANOPY 57199	55	0	557.64440	79.61550	464.32610	0	935	936	937				
	7.6444 79.6155 464.3261													
5095	FWD FUSE CANOPY 57199	55	0	557.64440	-79.61550	464.32610	0	938	939	940				
	7.6444 -79.6155 464.3261													
5096	FWD RCS MODULE 14057	31	0	311.00000	24.20000	392.14510	0	941	942	943				
	1.0000 24.2000 392.1451													
5097	FWD RCS MODULE 14057	31	0	311.00000	-24.20000	392.14510	0	944	945	946				
	1.0000 -24.2000 392.1451													
5098	FWD RCS MODULE 14131	34	0	341.20000	34.70910	402.30720	0	947	948	949				
	1.2000 34.7091 402.3072													
5099	FWD RCS MODULE 14131	34	0	341.20000	-34.70910	402.30720	0	950	951	952				
	1.2000 -34.7091 402.3072													
5100	FWD FUSE SHELL 4046	38	0	381.61770	33.05390	421.12560	0	953	954	955				
	1.6177 33.0539 421.1256													
5101	FWD FUSE SHELL 4046	38	0	381.61770	-33.05390	421.12560	0	956	957	958				
	1.6177 -33.0539 421.1256													
5102	FWD FUSE SHELL 4144	43	0	436.16970	38.23630	441.75680	0	959	960	961				
	6.1697 38.2363 441.7568													
5103	FWD FUSE SHELL 4144	43	0	436.16970	-38.23630	441.75680	0	962	963	964				
	6.1697 -38.2363 441.7568													
5104	CREW MOD WINDOW 49020	47	0	475.06670	43.02700	459.96210	0	965	966	967				
	5.0667 43.0270 459.9621													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 21

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5105	CREW MOD WINDOW 49020	47	0	475.06670	-43.02700	459.96210	0	968	969	970				
	5.0667 -43.0270 459.9621													
5106	FWD FUSE CANOPY 57136	52	0	520.02060	50.56410	485.93990	0	971	972	973				
	0.0206 50.5641 485.9399													
5107	FWD FUSE CANOPY 57136	52	0	520.02060	-50.56410	485.93990	0	974	975	976				
	0.0206 -50.5641 485.9399													
5108	FWD FUSE CANOPY 57196	55	0	554.70280	54.00000	488.08560	0	977	978	979				
	4.7028 54.0000 488.0856													
5109	FWD FUSE CANOPY 57196	55	0	554.70280	-54.00000	488.08560	0	980	981	982				
	4.7028 -54.0000 488.0856													
5110	CREW MOD WINDOW 48025	46	0	461.72380	18.91800	462.30630	0	983	984	985				
	1.7238 18.9180 462.3063													
5111	CREW MOD WINDOW 48025	46	0	461.72380	-18.91800	462.30630	0	986	987	988				
	1.7238 -18.9180 462.3063													
5112	FWD FUSE CANOPY 57084	48	0	480.00000	28.00000	485.11820	0	989	990	991				
	0.0000 28.0000 485.1182													
5113	FWD FUSE CANOPY 57084	48	0	480.00000	-28.00000	485.11820	0	992	993	994				
	0.0000 -28.0000 485.1182													
5114	FWD FUSE CANOPY 57134	51	0	519.31530	28.00000	496.89580	0	995	996	997				
	9.3153 28.0000 496.8958													
5115	FWD FUSE CANOPY 57134	51	0	519.31530	-28.00000	496.89580	0	998	999	1000				
	9.3153 -28.0000 496.8958													
5116	FWD FUSE CANOPY 57194	55	0	553.27930	28.00000	497.09520	0		1001	1002				
	3.2793 28.0000 497.0952													
5117	FWD FUSE CANOPY 57194	55	0	553.27930	-28.00000	497.09520	0		1003	1004				
	3.2793 -28.0000 497.0952													
5118	NOSE GEAR WELL 58065	25	0	258.18580	0.00000	367.21630	0	1005	1006	1007				
	8.1858 0.0000 367.2163													
5119	FWD RCS MODULE 14017	28	0	281.50000	0.00000	381.72270	0	1008	1009	1010				
	1.5000 0.0000 381.7227													
5120	FWD RCS MODULE 14059	31	0	311.00000	7.00000	395.11400	0	1011	1012	1013				
	1.0000 7.0000 395.1140													
5121	FWD RCS MODULE 14059	31	0	311.00000	-7.00000	395.11400	0	1014	1015	1016				
	1.0000 -7.0000 395.1140													
5122	FWD RCS MODULE 14134	34	0	341.20000	0.00000	409.88910	0	1017		1018				
	1.2000 0.0000 409.8891													
5123	FWD FUSE SHELL 4040	38	0	380.84520	0.00000	426.33740	0	1019		1020				
	0.8452 0.0000 426.3374													
5124	FWD FUSE SHELL 4140	43	0	435.19630	0.00000	448.53390	0	1021	1022	1023				
	5.1963 0.0000 448.5339													
5125	FWD FUSE CANOPY 57051	45	0	455.50630	0.00000	468.84420	0	1024		1025				
	5.5063 0.0000 468.8442													
5126	FWD FUSE CANOPY 57081	48	0	480.00000	0.00000	490.56850	0	1026	1027	1028				
	0.0000 0.0000 490.5685													
5127	FWD FUSE CANOPY 57132	51	0	516.37500	3.50000	499.95090	0	1029	1030	1031				
	6.3750 3.5000 499.9509													
5128	FWD FUSE CANOPY 57132	51	0	516.37500	-3.50000	499.95090	0	1032	1033	1034				
	6.3750 -3.5000 499.9509													
5129	FWD FUSE CANOPY 57192	55	0	552.90000	0.00000	500.00000	0			1035				
	2.9000 0.0000 500.0000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 22

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
2934	FRCS POINT R	35	0	355.85000	66.90000	364.45270	0		1036	1037				
	5.8500 66.9000 364.4527													
2979	FRCS POINT L	35	0	355.85000	-66.90000	364.45270	0		1038	1039				
	5.8500 -66.9000 364.4527													
5130	LONGERON SILL 1011	58	0	582.00000	105.00000	410.00000	0	1040	1041	1042				
	2.0000 105.0000 410.0000													
5131	LONGERON SILL 1011	58	0	582.00000	-105.00000	410.00000	0	1043	1044	1045				
	2.0000 -105.0000 410.0000													
5132	MFUSE BOTTOM 1001	58	0	582.00000	0.00000	277.08740	0	1046	1047	1048				
	2.0000 0.0000 277.0874													
5133	MFUSE BOTTOM 1051	58	0	582.00000	47.44580	279.46090	0		1049	1050				
	2.0000 47.4458 279.4609													
5134	MFUSE BOTTOM 1051	58	0	582.00000	-47.44580	279.46090	0		1051	1052				
	2.0000 -47.4458 279.4609													
5135	MFUSE BOTTOM 1052	58	0	582.00000	78.80170	285.53150	0		1053	1054				
	2.0000 78.8017 285.5315													
5136	MFUSE BOTTOM 1052	58	0	582.00000	-78.80170	285.53150	0		1055	1056				
	2.0000 -78.8017 285.5315													
5137	MFUSE SIDEWALL 1006	58	0	582.00000	105.00000	299.44350	0		1057	1058				
	2.0000 105.0000 299.4435													
5138	MFUSE SIDEWALL 1006	58	0	582.00000	-105.00000	299.44350	0		1059	1060				
	2.0000 -105.0000 299.4435													
5139	MFUSE SIDEWALL 1007	58	0	582.00000	105.00000	334.19750	0		1061					
	2.0000 105.0000 334.1975													
5140	MFUSE SIDEWALL 1007	58	0	582.00000	-105.00000	334.19750	0		1062					
	2.0000 -105.0000 334.1975													
5141	MFUSE SIDEWALL 1024	58	0	582.00000	105.00000	360.72680	0		1063					
	2.0000 105.0000 360.7268													
5142	MFUSE SIDEWALL 1024	58	0	582.00000	-105.00000	360.72680	0		1064					
	2.0000 -105.0000 360.7268													
5143	MFUSE SIDEWALL 1025	58	0	582.00000	105.00000	392.76200	0		1065					
	2.0000 105.0000 392.7620													
5144	MFUSE SIDEWALL 1025	58	0	582.00000	-105.00000	392.76200	0		1066					
	2.0000 -105.0000 392.7620													
5145	MID FUSE GLOVE 20014	58	0	582.00000	112.48000	312.68750	0		1067					
	2.0000 112.4800 312.6875													
5146	MID FUSE GLOVE 20014	58	0	582.00000	-112.48000	312.68750	0		1068					
	2.0000 -112.4800 312.6875													
5147	FWD CBDOOR 210081	58	0	584.53000	5.56000	499.87400	0		1069	1070				
	4.5300 5.5600 499.8740													
5148	FWD CBDOOR 210081	58	0	584.53000	-5.56000	499.87400	0		1071	1072				
	4.5300 -5.5600 499.8740													
5149	FWD CBDOOR 210091	58	0	584.53000	46.25040	492.28060	0		1073	1074				
	4.5300 46.2504 492.2806													
5150	FWD CBDOOR 210091	58	0	584.53000	-46.25040	492.28060	0		1075	1076				
	4.5300 -46.2504 492.2806													
5151	FWD CBDOOR 210101	58	0	584.53000	76.98930	473.44370	0		1077	1078				
	4.5300 76.9893 473.4437													
5152	FWD CBDOOR 210101	58	0	584.53000	-76.98930	473.44370	0		1079	1080				
	4.5300 -76.9893 473.4437													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 23

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5153	FWD CBDOOR 210111	58	0	584.53000	99.75080	448.50400	0		1081	1082				
	4.5300 99.7508 448.5040													
5154	FWD CBDOOR 210111	58	0	584.53000	-99.75080	448.50400	0		1083	1084				
	4.5300 -99.7508 448.5040													
5155	FWD CBDOOR 210151	60	0	602.30000	5.56000	499.87400	0		1085	1086				
	2.3000 5.5600 499.8740													
5156	FWD CBDOOR 210151	60	0	602.30000	-5.56000	499.87400	0		1087	1088				
	2.3000 -5.5600 499.8740													
5157	FWD CBDOOR 210161	60	0	602.30000	45.37400	492.69000	0		1089	1090				
	2.3000 45.3740 492.6900													
5158	FWD CBDOOR 210161	60	0	602.30000	-45.37400	492.69000	0		1091	1092				
	2.3000 -45.3740 492.6900													
5159	FWD CBDOOR 210171	60	0	602.30000	78.05800	474.85300	0		1093	1094				
	2.3000 78.0580 474.8530													
5160	FWD CBDOOR 210171	60	0	602.30000	-78.05800	474.85300	0		1095	1096				
	2.3000 -78.0580 474.8530													
5161	FWD CBDOOR 210181	60	0	602.30000	101.61400	449.43300	0		1097	1098				
	2.3000 101.6140 449.4330													
5162	FWD CBDOOR 210181	60	0	602.30000	-101.61400	449.43300	0		1099	1100				
	2.3000 -101.6140 449.4330													
5163	MFUSE BOTTOM 1031	60	0	609.00000	0.00000	276.46550	0			1101				
	9.0000 0.0000 276.4655													
5164	MFUSE BOTTOM 1033	60	0	609.00000	40.30000	278.05360	0		1102	1103				
	9.0000 40.3000 278.0536													
5165	MFUSE BOTTOM 1033	60	0	609.00000	-40.30000	278.05360	0		1104	1105				
	9.0000 -40.3000 278.0536													
5166	MFUSE BOTTOM 1034	60	0	609.00000	72.60000	282.89660	0		1106	1107				
	9.0000 72.6000 282.8966													
5167	MFUSE BOTTOM 1034	60	0	609.00000	-72.60000	282.89660	0		1108	1109				
	9.0000 -72.6000 282.8966													
5168	MFUSE SIDEWALL 1036	60	0	609.00000	105.00000	296.17350	0		1110	1111				
	9.0000 105.0000 296.1735													
5169	MFUSE SIDEWALL 1036	60	0	609.00000	-105.00000	296.17350	0		1112	1113				
	9.0000 -105.0000 296.1735													
5170	MFUSE SIDEWALL 1654	60	0	609.00000	105.00000	336.35420	0		1114					
	9.0000 105.0000 336.3542													
5171	MFUSE SIDEWALL 1654	60	0	609.00000	-105.00000	336.35420	0		1115					
	9.0000 -105.0000 336.3542													
5172	MFUSE SIDEWALL 1040	60	0	609.00000	105.00000	368.50000	0		1116					
	9.0000 105.0000 368.5000													
5173	MFUSE SIDEWALL 1040	60	0	609.00000	-105.00000	368.50000	0		1117					
	9.0000 -105.0000 368.5000													
5174	MFUSE SIDEWALL 11307	60	0	609.00000	105.00000	398.50000	0		1118					
	9.0000 105.0000 398.5000													
5175	MFUSE SIDEWALL 11307	60	0	609.00000	-105.00000	398.50000	0		1119					
	9.0000 -105.0000 398.5000													
5176	LONGERON SILL 1041	60	0	609.00000	105.00000	410.00000	0	1120	1121	1122				
	9.0000 105.0000 410.0000													
5177	LONGERON SILL 1041	60	0	609.00000	-105.00000	410.00000	0	1123	1124	1125				
	9.0000 -105.0000 410.0000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 24

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5178	MID FUSE GLOVE 20034	60	0	609.00000	116.89000	311.37000	0	1126					
	9.0000 116.8900 311.3700												
5179	MID FUSE GLOVE 20034	60	0	609.00000	-116.89000	311.37000	0	1127					
	9.0000 -116.8900 311.3700												
5180	MFUSE BOTTOM 1061	63	0	636.00000	0.00000	275.84350	0		1128				
	6.0000 0.0000 275.8435												
5181	MFUSE BOTTOM 1063	63	0	636.00000	40.30000	277.38030	0	1129	1130				
	6.0000 40.3000 277.3803												
5182	MFUSE BOTTOM 1063	63	0	636.00000	-40.30000	277.38030	0	1131	1132				
	6.0000 -40.3000 277.3803												
5183	MFUSE BOTTOM 1064	63	0	636.00000	72.60000	281.96650	0	1133	1134				
	6.0000 72.6000 281.9665												
5184	MFUSE BOTTOM 1064	63	0	636.00000	-72.60000	281.96650	0	1135	1136				
	6.0000 -72.6000 281.9665												
5185	MFUSE SIDEWALL 1066	63	0	636.00000	105.00000	293.58570	0	1137	1138				
	6.0000 105.0000 293.5857												
5186	MFUSE SIDEWALL 1066	63	0	636.00000	-105.00000	293.58570	0	1139	1140				
	6.0000 -105.0000 293.5857												
5187	MFUSE SIDEWALL 1070	63	0	636.00000	105.00000	368.50000	0	1141					
	6.0000 105.0000 368.5000												
5188	MFUSE SIDEWALL 1070	63	0	636.00000	-105.00000	368.50000	0	1142					
	6.0000 -105.0000 368.5000												
5189	LONGERON SILL 1071	63	0	636.00000	105.00000	410.00000	0	1143	1144	1145			
	6.0000 105.0000 410.0000												
5190	LONGERON SILL 1071	63	0	636.00000	-105.00000	410.00000	0	1146	1147	1148			
	6.0000 -105.0000 410.0000												
5191	MFUSE SIDEWALL 1362	63	0	636.00000	105.00000	396.00000	0	1149					
	6.0000 105.0000 396.0000												
5192	MFUSE SIDEWALL 1362	63	0	636.00000	-105.00000	396.00000	0	1150					
	6.0000 -105.0000 396.0000												
5193	MFUSE SIDEWALL 1657	63	0	636.00000	105.00000	336.98200	0	1151					
	6.0000 105.0000 336.9820												
5194	MFUSE SIDEWALL 1657	63	0	636.00000	-105.00000	336.98200	0	1152					
	6.0000 -105.0000 336.9820												
5195	MID FUSE GLOVE 20054	63	0	636.00000	121.33000	310.00000	0	1153					
	6.0000 121.3300 310.0000												
5196	MID FUSE GLOVE 20054	63	0	636.00000	-121.33000	310.00000	0	1154					
	6.0000 -121.3300 310.0000												
5197	FWD CBDOOR 210291	64	0	647.30000	5.56000	499.87400	0	1155	1156				
	7.3000 5.5600 499.8740												
5198	FWD CBDOOR 210291	64	0	647.30000	-5.56000	499.87400	0	1157	1158				
	7.3000 -5.5600 499.8740												
5199	FWD CBDOOR 210301	64	0	647.30000	42.79800	493.47600	0	1159	1160				
	7.3000 42.7980 493.4760												
5200	FWD CBDOOR 210301	64	0	647.30000	-42.79800	493.47600	0	1161	1162				
	7.3000 -42.7980 493.4760												
5201	FWD CBDOOR 210311	64	0	647.30000	81.31900	475.46600	0	1163	1164				
	7.3000 81.3190 475.4660												
5202	FWD CBDOOR 210311	64	0	647.30000	-81.31900	475.46600	0	1165	1166				
	7.3000 -81.3190 475.4660												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 25

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5203	FWD CBDOOR 210321	64	0	647.30000	103.90300	450.54400	0		1167	1168				
	7.3000 103.9030 450.5440													
5204	FWD CBDOOR 210321	64	0	647.30000	-103.90300	450.54400	0		1169	1170				
	7.3000 -103.9030 450.5440													
5205	MFUSE BOTTOM 1091	66	0	664.50000	0.00000	275.18690	0			1171				
	4.5000 0.0000 275.1869													
5206	MFUSE BOTTOM 1093	66	0	664.50000	40.30000	276.67370	0		1172	1173				
	4.5000 40.3000 276.6737													
5207	MFUSE BOTTOM 1093	66	0	664.50000	-40.30000	276.67370	0		1174	1175				
	4.5000 -40.3000 276.6737													
5208	MFUSE BOTTOM 1094	66	0	664.50000	72.60000	280.99660	0		1176	1177				
	4.5000 72.6000 280.9966													
5209	MFUSE BOTTOM 1094	66	0	664.50000	-72.60000	280.99660	0		1178	1179				
	4.5000 -72.6000 280.9966													
5210	MFUSE SIDEWALL 1096	66	0	664.50000	105.00000	291.22060	0		1180	1181				
	4.5000 105.0000 291.2206													
5211	MFUSE SIDEWALL 1096	66	0	664.50000	-105.00000	291.22060	0		1182	1183				
	4.5000 -105.0000 291.2206													
5212	MFUSE SIDEWALL 1660	66	0	664.50000	105.00000	337.64470	0		1184					
	4.5000 105.0000 337.6447													
5213	MFUSE SIDEWALL 1660	66	0	664.50000	-105.00000	337.64470	0		1185					
	4.5000 -105.0000 337.6447													
5214	MFUSE SIDEWALL 1100	66	0	664.50000	105.00000	368.50000	0		1186					
	4.5000 105.0000 368.5000													
5215	MFUSE SIDEWALL 1100	66	0	664.50000	-105.00000	368.50000	0		1187					
	4.5000 -105.0000 368.5000													
5216	MFUSE SIDEWALL 11311	66	0	664.50000	105.00000	399.75000	0		1188					
	4.5000 105.0000 399.7500													
5217	MFUSE SIDEWALL 11311	66	0	664.50000	-105.00000	399.75000	0		1189					
	4.5000 -105.0000 399.7500													
5218	LONGERON SILL 1101	66	0	664.50000	105.00000	410.00000	0	1190	1191	1192				
	4.5000 105.0000 410.0000													
5219	LONGERON SILL 1101	66	0	664.50000	-105.00000	410.00000	0	1193	1194	1195				
	4.5000 -105.0000 410.0000													
5220	MID FUSE GLOVE 20076	66	0	664.50000	118.98700	300.15000	0		1196	1197				
	4.5000 118.9870 300.1500													
5221	MID FUSE GLOVE 20076	66	0	664.50000	-118.98700	300.15000	0		1198	1199				
	4.5000 -118.9870 300.1500													
5222	MID FUSE GLOVE 20072	66	0	664.50000	118.98700	318.60000	0		1200	1201				
	4.5000 118.9870 318.6000													
5223	MID FUSE GLOVE 20072	66	0	664.50000	-118.98700	318.60000	0		1202	1203				
	4.5000 -118.9870 318.6000													
5224	FWD CBDOOR 210431	69	0	692.30000	5.56000	499.87400	0		1204	1205				
	2.3000 5.5600 499.8740													
5225	FWD CBDOOR 210431	69	0	692.30000	-5.56000	499.87400	0		1206	1207				
	2.3000 -5.5600 499.8740													
5226	FWD CBDOOR 210441	69	0	692.30000	41.50000	493.83700	0		1208	1209				
	2.3000 41.5000 493.8370													
5227	FWD CBDOOR 210441	69	0	692.30000	-41.50000	493.83700	0		1210	1211				
	2.3000 -41.5000 493.8370													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 26

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5228	FWD CBDOOR 210451	69	0	692.30000	82.60300	475.26400	0		1212	1213				
	2.3000 82.6030 475.2640													
5229	FWD CBDOOR 210451	69	0	692.30000	-82.60300	475.26400	0		1214	1215				
	2.3000 -82.6030 475.2640													
5230	FWD CBDOOR 210461	69	0	692.30000	104.12900	450.62000	0		1216	1217				
	2.3000 104.1290 450.6200													
5231	FWD CBDOOR 210461	69	0	692.30000	-104.12900	450.62000	0		1218	1219				
	2.3000 -104.1290 450.6200													
5232	MFUSE BOTTOM 1121	69	0	693.00000	0.00000	274.53030	0			1220				
	3.0000 0.0000 274.5303													
5233	MFUSE BOTTOM 1123	69	0	693.00000	40.30000	275.96540	0		1221	1222				
	3.0000 40.3000 275.9654													
5234	MFUSE BOTTOM 1123	69	0	693.00000	-40.30000	275.96540	0		1223	1224				
	3.0000 -40.3000 275.9654													
5235	MFUSE BOTTOM 1124	69	0	693.00000	72.60000	280.03870	0		1225	1226				
	3.0000 72.6000 280.0387													
5236	MFUSE BOTTOM 1124	69	0	693.00000	-72.60000	280.03870	0		1227	1228				
	3.0000 -72.6000 280.0387													
5237	MFUSE SIDEWALL 1126	69	0	693.00000	105.00000	289.15230	0		1229	1230				
	3.0000 105.0000 289.1523													
5238	MFUSE SIDEWALL 1126	69	0	693.00000	-105.00000	289.15230	0		1231	1232				
	3.0000 -105.0000 289.1523													
5239	MFUSE SIDEWALL 1663	69	0	693.00000	105.00000	338.30730	0		1233					
	3.0000 105.0000 338.3073													
5240	MFUSE SIDEWALL 1663	69	0	693.00000	-105.00000	338.30730	0		1234					
	3.0000 -105.0000 338.3073													
5241	MFUSE SIDEWALL 1130	69	0	693.00000	105.00000	368.50000	0		1235					
	3.0000 105.0000 368.5000													
5242	MFUSE SIDEWALL 1130	69	0	693.00000	-105.00000	368.50000	0		1236					
	3.0000 -105.0000 368.5000													
5243	MFUSE SIDEWALL 1382	69	0	693.00000	105.00000	396.00000	0		1237					
	3.0000 105.0000 396.0000													
5244	MFUSE SIDEWALL 1382	69	0	693.00000	-105.00000	396.00000	0		1238					
	3.0000 -105.0000 396.0000													
5245	LONGERON SILL 1131	69	0	693.00000	105.00000	410.00000	0	1239	1240	1241				
	3.0000 105.0000 410.0000													
5246	LONGERON SILL 1131	69	0	693.00000	-105.00000	410.00000	0	1242	1243	1244				
	3.0000 -105.0000 410.0000													
5247	MID FUSE GLOVE 20096	69	0	693.00000	122.11300	298.51000	0		1245	1246				
	3.0000 122.1130 298.5100													
5248	MID FUSE GLOVE 20096	69	0	693.00000	-122.11300	298.51000	0		1247	1248				
	3.0000 -122.1130 298.5100													
5249	MID FUSE GLOVE 20092	69	0	693.00000	122.11300	318.78000	0		1249	1250				
	3.0000 122.1130 318.7800													
5250	MID FUSE GLOVE 20092	69	0	693.00000	-122.11300	318.78000	0		1251	1252				
	3.0000 -122.1130 318.7800													
5251	MFUSE BOTTOM 1151	71	0	717.00000	0.00000	273.97730	0			1253				
	7.0000 0.0000 273.9773													
5252	MFUSE BOTTOM 1153	71	0	717.00000	40.30000	275.36760	0		1254	1255				
	7.0000 40.3000 275.3676													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 27

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5253	MFUSE BOTTOM 1153	71	0	717.00000	-40.30000	275.36760	0		1256	1257			
	7.0000 -40.3000 275.3676												
5254	MFUSE BOTTOM 1154	71	0	717.00000	72.60000	279.24260	0		1258	1259			
	7.0000 72.6000 279.2426												
5255	MFUSE BOTTOM 1154	71	0	717.00000	-72.60000	279.24260	0		1260	1261			
	7.0000 -72.6000 279.2426												
5256	MFUSE SIDEWALL 1156	71	0	717.00000	105.00000	287.58290	0		1262	1263			
	7.0000 105.0000 287.5829												
5257	MFUSE SIDEWALL 1156	71	0	717.00000	-105.00000	287.58290	0		1264	1265			
	7.0000 -105.0000 287.5829												
5258	MFUSE SIDEWALL 1160	71	0	717.00000	105.00000	368.50000	0		1266				
	7.0000 105.0000 368.5000												
5259	MFUSE SIDEWALL 1160	71	0	717.00000	-105.00000	368.50000	0		1267				
	7.0000 -105.0000 368.5000												
5260	LONGERON SILL 1161	71	0	717.00000	105.00000	410.00000	0	1268	1269	1270			
	7.0000 105.0000 410.0000												
5261	LONGERON SILL 1161	71	0	717.00000	-105.00000	410.00000	0	1271	1272	1273			
	7.0000 -105.0000 410.0000												
5262	MFUSE SIDEWALL 1392	71	0	717.00000	105.00000	396.00000	0		1274				
	7.0000 105.0000 396.0000												
5263	MFUSE SIDEWALL 1392	71	0	717.00000	-105.00000	396.00000	0		1275				
	7.0000 -105.0000 396.0000												
5264	MFUSE SIDEWALL 1666	71	0	717.00000	105.00000	338.86530	0		1276				
	7.0000 105.0000 338.8653												
5265	MFUSE SIDEWALL 1666	71	0	717.00000	-105.00000	338.86530	0		1277				
	7.0000 -105.0000 338.8653												
5266	MID FUSE GLOVE 20112	71	0	717.00000	124.74700	318.96000	0		1278	1279			
	7.0000 124.7470 318.9600												
5267	MID FUSE GLOVE 20112	71	0	717.00000	-124.74700	318.96000	0		1280	1281			
	7.0000 -124.7470 318.9600												
5268	MID FUSE GLOVE 20116	71	0	717.00000	124.74700	297.15000	0		1282	1283			
	7.0000 124.7470 297.1500												
5269	MID FUSE GLOVE 20116	71	0	717.00000	-124.74700	297.15000	0		1284	1285			
	7.0000 -124.7470 297.1500												
5270	FWD CBDOOR 210571	73	0	737.30000	5.56000	499.87400	0		1286	1287			
	7.3000 5.5600 499.8740												
5271	FWD CBDOOR 210571	73	0	737.30000	-5.56000	499.87400	0		1288	1289			
	7.3000 -5.5600 499.8740												
5272	FWD CBDOOR 210581	73	0	737.30000	41.50000	493.83700	0		1290	1291			
	7.3000 41.5000 493.8370												
5273	FWD CBDOOR 210581	73	0	737.30000	-41.50000	493.83700	0		1292	1293			
	7.3000 -41.5000 493.8370												
5274	FWD CBDOOR 210591	73	0	737.30000	82.60300	475.26400	0		1294	1295			
	7.3000 82.6030 475.2640												
5275	FWD CBDOOR 210591	73	0	737.30000	-82.60300	475.26400	0		1296	1297			
	7.3000 -82.6030 475.2640												
5276	FWD CBDOOR 210601	73	0	737.30000	104.12900	450.62000	0		1298	1299			
	7.3000 104.1290 450.6200												
5277	FWD CBDOOR 210601	73	0	737.30000	-104.12900	450.62000	0		1300	1301			
	7.3000 -104.1290 450.6200												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 28

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION		CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5278	MFUSE BOTTOM	1181	75	0	750.00000	0.00000	273.21710	0			1302			
	0.0000	0.0000	273.2171											
5279	MFUSE BOTTOM	1183	75	0	750.00000	40.30000	274.54570	0		1303	1304			
	0.0000	40.3000	274.5457											
5280	MFUSE BOTTOM	1183	75	0	750.00000	-40.30000	274.54570	0		1305	1306			
	0.0000	-40.3000	274.5457											
5281	MFUSE BOTTOM	1184	75	0	750.00000	72.60000	278.16610	0		1307	1308			
	0.0000	72.6000	278.1661											
5282	MFUSE BOTTOM	1184	75	0	750.00000	-72.60000	278.16610	0		1309	1310			
	0.0000	-72.6000	278.1661											
5283	MFUSE SIDEWALL	1186	75	0	750.00000	105.00000	285.61740	0		1311	1312			
	0.0000	105.0000	285.6174											
5284	MFUSE SIDEWALL	1186	75	0	750.00000	-105.00000	285.61740	0		1313	1314			
	0.0000	-105.0000	285.6174											
5285	MFUSE SIDEWALL	1669	75	0	750.00000	105.00000	339.63250	0		1315				
	0.0000	105.0000	339.6325											
5286	MFUSE SIDEWALL	1669	75	0	750.00000	-105.00000	339.63250	0		1316				
	0.0000	-105.0000	339.6325											
5287	MFUSE SIDEWALL	1190	75	0	750.00000	105.00000	368.50000	0		1317				
	0.0000	105.0000	368.5000											
5288	MFUSE SIDEWALL	1190	75	0	750.00000	-105.00000	368.50000	0		1318				
	0.0000	-105.0000	368.5000											
5289	MFUSE SIDEWALL	1402	75	0	750.00000	105.00000	396.00000	0		1319				
	0.0000	105.0000	396.0000											
5290	MFUSE SIDEWALL	1402	75	0	750.00000	-105.00000	396.00000	0		1320				
	0.0000	-105.0000	396.0000											
453	LONGERON SILL	1191	75	0	750.00000	105.00000	410.00000	0	1321	1322	1323			
	0.0000	105.0000	410.0000											
793	LONGERON SILL	1191	75	0	750.00000	-105.00000	410.00000	0	1324	1325	1326			
	0.0000	-105.0000	410.0000											
5293	MID FUSE GLOVE	20136	75	0	750.00000	128.34700	295.43000	0		1327	1328			
	0.0000	128.3470	295.4300											
5294	MID FUSE GLOVE	20136	75	0	750.00000	-128.34700	295.43000	0		1329	1330			
	0.0000	-128.3470	295.4300											
5295	MID FUSE GLOVE	20132	75	0	750.00000	128.34700	319.28000	0		1331	1332			
	0.0000	128.3470	319.2800											
5296	MID FUSE GLOVE	20132	75	0	750.00000	-128.34700	319.28000	0		1333	1334			
	0.0000	-128.3470	319.2800											
5297	MFUSE BOTTOM	1211	77	0	778.50000	0.00000	272.56050	0			1335			
	8.5000	0.0000	272.5605											
5298	MFUSE BOTTOM	1213	77	0	778.50000	40.30000	273.83190	0		1336	1337			
	8.5000	40.3000	273.8319											
5299	MFUSE BOTTOM	1213	77	0	778.50000	-40.30000	273.83190	0		1338	1339			
	8.5000	-40.3000	273.8319											
5300	MFUSE BOTTOM	1214	77	0	778.50000	72.60000	277.23870	0		1340	1341			
	8.5000	72.6000	277.2387											
5301	MFUSE BOTTOM	1214	77	0	778.50000	-72.60000	277.23870	0		1342	1343			
	8.5000	-72.6000	277.2387											
5302	MFUSE SIDEWALL	1216	77	0	778.50000	105.00000	284.03340	0		1344	1345			
	8.5000	105.0000	284.0334											

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 29

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5303	MFUSE SIDEWALL 1216	77	0	778.50000	-105.00000	284.03340	0		1346	1347			
	8.5000 -105.0000 284.0334												
5304	MFUSE SIDEWALL 1672	77	0	778.50000	105.00000	340.29510	0		1348				
	8.5000 105.0000 340.2951												
5305	MFUSE SIDEWALL 1672	77	0	778.50000	-105.00000	340.29510	0		1349				
	8.5000 -105.0000 340.2951												
5306	MFUSE SIDEWALL 1220	77	0	778.50000	105.00000	368.50000	0		1350				
	8.5000 105.0000 368.5000												
5307	MFUSE SIDEWALL 1220	77	0	778.50000	-105.00000	368.50000	0		1351				
	8.5000 -105.0000 368.5000												
5308	MFUSE SIDEWALL 1412	77	0	778.50000	105.00000	396.00000	0		1352				
	8.5000 105.0000 396.0000												
5309	MFUSE SIDEWALL 1412	77	0	778.50000	-105.00000	396.00000	0		1353				
	8.5000 -105.0000 396.0000												
5310	LONGERON SILL 1221	77	0	778.50000	105.00000	410.00000	0	1354	1355	1356			
	8.5000 105.0000 410.0000												
5311	LONGERON SILL 1221	77	0	778.50000	-105.00000	410.00000	0	1357	1358	1359			
	8.5000 -105.0000 410.0000												
5312	MID FUSE GLOVE 20156	77	0	778.50000	131.46700	293.78000	0		1360	1361			
	8.5000 131.4670 293.7800												
5313	MID FUSE GLOVE 20156	77	0	778.50000	-131.46700	293.78000	0		1362	1363			
	8.5000 -131.4670 293.7800												
5314	MID FUSE GLOVE 20152	77	0	778.50000	131.46700	319.63000	0		1364	1365			
	8.5000 131.4670 319.6300												
5315	MID FUSE GLOVE 20152	77	0	778.50000	-131.46700	319.63000	0		1366	1367			
	8.5000 -131.4670 319.6300												
5316	MID FWD CBDOOR 211081	78	0	783.55000	5.56000	499.87400	0		1368	1369			
	3.5500 5.5600 499.8740												
5317	MID FWD CBDOOR 211081	78	0	783.55000	-5.56000	499.87400	0		1370	1371			
	3.5500 -5.5600 499.8740												
5318	MID FWD CBDOOR 211091	78	0	783.55000	41.50000	493.83700	0		1372	1373			
	3.5500 41.5000 493.8370												
5319	MID FWD CBDOOR 211091	78	0	783.55000	-41.50000	493.83700	0		1374	1375			
	3.5500 -41.5000 493.8370												
5320	MID FWD CBDOOR 211101	78	0	783.55000	82.60300	475.26400	0		1376	1377			
	3.5500 82.6030 475.2640												
5321	MID FWD CBDOOR 211101	78	0	783.55000	-82.60300	475.26400	0		1378	1379			
	3.5500 -82.6030 475.2640												
5322	MID FWD CBDOOR 211111	78	0	783.55000	104.12900	450.62000	0		1380	1381			
	3.5500 104.1290 450.6200												
5323	MID FWD CBDOOR 211111	78	0	783.55000	-104.12900	450.62000	0		1382	1383			
	3.5500 -104.1290 450.6200												
5324	MFUSE BOTTOM 1241	80	0	807.00000	0.00000	271.90390	0			1384			
	7.0000 0.0000 271.9039												
5325	MFUSE BOTTOM 1243	80	0	807.00000	40.30000	273.11080	0		1385	1386			
	7.0000 40.3000 273.1108												
5326	MFUSE BOTTOM 1243	80	0	807.00000	-40.30000	273.11080	0		1387	1388			
	7.0000 -40.3000 273.1108												
5327	MFUSE BOTTOM 1244	80	0	807.00000	72.60000	276.30070	0		1389	1390			
	7.0000 72.6000 276.3007												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 30

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5328	MFUSE BOTTOM 1244	80	0	807.00000	-72.60000	276.30070	0		1391	1392				
	7.0000 -72.6000 276.3007													
5329	MFUSE SIDEWALL 1246	80	0	807.00000	105.00000	282.50710	0		1393	1394				
	7.0000 105.0000 282.5071													
5330	MFUSE SIDEWALL 1246	80	0	807.00000	-105.00000	282.50710	0		1395	1396				
	7.0000 -105.0000 282.5071													
5331	MFUSE SIDEWALL 1675	80	0	807.00000	105.00000	340.95770	0		1397					
	7.0000 105.0000 340.9577													
5332	MFUSE SIDEWALL 1675	80	0	807.00000	-105.00000	340.95770	0		1398					
	7.0000 -105.0000 340.9577													
5333	MFUSE SIDEWALL 1250	80	0	807.00000	105.00000	368.50000	0		1399					
	7.0000 105.0000 368.5000													
5334	MFUSE SIDEWALL 1250	80	0	807.00000	-105.00000	368.50000	0		1400					
	7.0000 -105.0000 368.5000													
5335	MFUSE SIDEWALL 1422	80	0	807.00000	105.00000	396.00000	0		1401					
	7.0000 105.0000 396.0000													
5336	MFUSE SIDEWALL 1422	80	0	807.00000	-105.00000	396.00000	0		1402					
	7.0000 -105.0000 396.0000													
5337	LONGERON SILL 1251	80	0	807.00000	105.00000	410.00000	0	1403	1404	1405				
	7.0000 105.0000 410.0000													
5338	LONGERON SILL 1251	80	0	807.00000	-105.00000	410.00000	0	1406	1407	1408				
	7.0000 -105.0000 410.0000													
5339	MID FUSE GLOVE 20172	80	0	807.00000	135.45390	319.33860	0		1409	1410				
	7.0000 135.4539 319.3386													
5340	MID FUSE GLOVE 20172	80	0	807.00000	-135.45390	319.33860	0		1411	1412				
	7.0000 -135.4539 319.3386													
5341	MID FUSE GLOVE 20176	80	0	807.00000	137.77210	294.00770	0		1413	1414				
	7.0000 137.7721 294.0077													
5342	MID FUSE GLOVE 20176	80	0	807.00000	-137.77210	294.00770	0		1415	1416				
	7.0000 -137.7721 294.0077													
5343	MID FWD CBDOOR 211221	82	0	828.25000	5.56000	499.87400	0		1417	1418				
	8.2500 5.5600 499.8740													
5344	MID FWD CBDOOR 211221	82	0	828.25000	-5.56000	499.87400	0		1419	1420				
	8.2500 -5.5600 499.8740													
5345	MID FWD CBDOOR 211231	82	0	828.25000	41.50000	493.83700	0		1421	1422				
	8.2500 41.5000 493.8370													
5346	MID FWD CBDOOR 211231	82	0	828.25000	-41.50000	493.83700	0		1423	1424				
	8.2500 -41.5000 493.8370													
5347	MID FWD CBDOOR 211241	82	0	828.25000	82.60300	475.26400	0		1425	1426				
	8.2500 82.6030 475.2640													
5348	MID FWD CBDOOR 211241	82	0	828.25000	-82.60300	475.26400	0		1427	1428				
	8.2500 -82.6030 475.2640													
5349	MID FWD CBDOOR 211251	82	0	828.25000	104.12900	450.62000	0		1429	1430				
	8.2500 104.1290 450.6200													
5350	MID FWD CBDOOR 211251	82	0	828.25000	-104.12900	450.62000	0		1431	1432				
	8.2500 -104.1290 450.6200													
5351	MFUSE BOTTOM 1271	83	0	835.00000	0.00000	271.25880	0			1433				
	5.0000 0.0000 271.2588													
5352	MFUSE BOTTOM 1273	83	0	835.00000	40.30000	272.39800	0		1434	1435				
	5.0000 40.3000 272.3980													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 31

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5353	MFUSE BOTTOM 1273	83	0	835.00000	-40.30000	272.39800	0		1436	1437				
	5.0000 -40.3000 272.3980													
5354	MFUSE BOTTOM 1274	83	0	835.00000	72.60000	275.37550	0		1438	1439				
	5.0000 72.6000 275.3755													
5355	MFUSE BOTTOM 1274	83	0	835.00000	-72.60000	275.37550	0		1440	1441				
	5.0000 -72.6000 275.3755													
5356	MFUSE SIDEWALL 1276	83	0	835.00000	105.00000	281.05750	0		1442	1443				
	5.0000 105.0000 281.0575													
5357	MFUSE SIDEWALL 1276	83	0	835.00000	-105.00000	281.05750	0		1444	1445				
	5.0000 -105.0000 281.0575													
5358	MFUSE SIDEWALL 1280	83	0	835.00000	105.00000	368.50000	0		1446					
	5.0000 105.0000 368.5000													
5359	MFUSE SIDEWALL 1280	83	0	835.00000	-105.00000	368.50000	0		1447					
	5.0000 -105.0000 368.5000													
5360	LONGERON SILL 1281	83	0	835.00000	105.00000	410.00000	0	1448	1449	1450				
	5.0000 105.0000 410.0000													
5361	LONGERON SILL 1281	83	0	835.00000	-105.00000	410.00000	0	1451	1452	1453				
	5.0000 -105.0000 410.0000													
5362	MFUSE SIDEWALL 1432	83	0	835.00000	105.00000	396.00000	0		1454					
	5.0000 105.0000 396.0000													
5363	MFUSE SIDEWALL 1432	83	0	835.00000	-105.00000	396.00000	0		1455					
	5.0000 -105.0000 396.0000													
5364	MFUSE SIDEWALL 1678	83	0	835.00000	105.00000	341.60870	0		1456					
	5.0000 105.0000 341.6087													
5365	MFUSE SIDEWALL 1678	83	0	835.00000	-105.00000	341.60870	0		1457					
	5.0000 -105.0000 341.6087													
5366	MFUSE BOTTOM 1301	86	0	863.00000	0.00000	270.61370	0			1458				
	3.0000 0.0000 270.6137													
5367	MFUSE BOTTOM 1303	86	0	863.00000	40.30000	271.68340	0		1459	1460				
	3.0000 40.3000 271.6834													
5368	MFUSE BOTTOM 1303	86	0	863.00000	-40.30000	271.68340	0		1461	1462				
	3.0000 -40.3000 271.6834													
5369	MFUSE BOTTOM 1304	86	0	863.00000	72.60000	274.45220	0		1463	1464				
	3.0000 72.6000 274.4522													
5370	MFUSE BOTTOM 1304	86	0	863.00000	-72.60000	274.45220	0		1465	1466				
	3.0000 -72.6000 274.4522													
5371	MFUSE SIDEWALL 1306	86	0	863.00000	105.00000	279.65400	0		1467	1468				
	3.0000 105.0000 279.6540													
5372	MFUSE SIDEWALL 1306	86	0	863.00000	-105.00000	279.65400	0		1469	1470				
	3.0000 -105.0000 279.6540													
5373	MFUSE SIDEWALL 1310	86	0	863.00000	105.00000	368.50000	0		1471					
	3.0000 105.0000 368.5000													
5374	MFUSE SIDEWALL 1310	86	0	863.00000	-105.00000	368.50000	0		1472					
	3.0000 -105.0000 368.5000													
5375	LONGERON SILL 1311	86	0	863.00000	105.00000	410.00000	0	1473	1474	1475				
	3.0000 105.0000 410.0000													
5376	LONGERON SILL 1311	86	0	863.00000	-105.00000	410.00000	0	1476	1477	1478				
	3.0000 -105.0000 410.0000													
5377	MFUSE SIDEWALL 1442	86	0	863.00000	105.00000	396.00000	0		1479					
	3.0000 105.0000 396.0000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 32

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5378	MFUSE SIDEWALL 1442	86	0	863.00000	-105.00000	396.00000	0	1480					
	3.0000 -105.0000 396.0000												
5379	MFUSE SIDEWALL 1681	86	0	863.00000	105.00000	342.25970	0	1481					
	3.0000 105.0000 342.2597												
5380	MFUSE SIDEWALL 1681	86	0	863.00000	-105.00000	342.25970	0	1482					
	3.0000 -105.0000 342.2597												
5381	MID FWD CBDOOR 211361	87	0	872.95000	5.56000	499.87400	0	1483	1484				
	2.9500 5.5600 499.8740												
5382	MID FWD CBDOOR 211361	87	0	872.95000	-5.56000	499.87400	0	1485	1486				
	2.9500 -5.5600 499.8740												
5383	MID FWD CBDOOR 211371	87	0	872.95000	41.50000	493.83700	0	1487	1488				
	2.9500 41.5000 493.8370												
5384	MID FWD CBDOOR 211371	87	0	872.95000	-41.50000	493.83700	0	1489	1490				
	2.9500 -41.5000 493.8370												
5385	MID FWD CBDOOR 211381	87	0	872.95000	82.60300	475.26400	0	1491	1492				
	2.9500 82.6030 475.2640												
5386	MID FWD CBDOOR 211381	87	0	872.95000	-82.60300	475.26400	0	1493	1494				
	2.9500 -82.6030 475.2640												
5387	MID FWD CBDOOR 211391	87	0	872.95000	104.12900	450.62000	0	1495	1496				
	2.9500 104.1290 450.6200												
5388	MID FWD CBDOOR 211391	87	0	872.95000	-104.12900	450.62000	0	1497	1498				
	2.9500 -104.1290 450.6200												
5389	MFUSE BOTTOM 2031	89	0	891.00000	0.00000	269.96860	0		1499				
	1.0000 0.0000 269.9686												
5390	MFUSE BOTTOM 2033	89	0	891.00000	40.30000	270.96900	0	1500	1501				
	1.0000 40.3000 270.9690												
5391	MFUSE BOTTOM 2033	89	0	891.00000	-40.30000	270.96900	0	1502	1503				
	1.0000 -40.3000 270.9690												
5392	MFUSE BOTTOM 2034	89	0	891.00000	72.60000	273.53580	0	1504	1505				
	1.0000 72.6000 273.5358												
5393	MFUSE BOTTOM 2034	89	0	891.00000	-72.60000	273.53580	0	1506	1507				
	1.0000 -72.6000 273.5358												
5394	MFUSE SIDEWALL 2036	89	0	891.00000	105.00000	278.29530	0	1508	1509				
	1.0000 105.0000 278.2953												
5395	MFUSE SIDEWALL 2036	89	0	891.00000	-105.00000	278.29530	0	1510	1511				
	1.0000 -105.0000 278.2953												
5396	MFUSE SIDEWALL 2040	89	0	891.00000	105.00000	347.34000	0	1512					
	1.0000 105.0000 347.3400												
5397	MFUSE SIDEWALL 2040	89	0	891.00000	-105.00000	347.34000	0	1513					
	1.0000 -105.0000 347.3400												
5398	MFUSE SIDEWALL 2041	89	0	891.00000	105.00000	368.50000	0	1514					
	1.0000 105.0000 368.5000												
5399	MFUSE SIDEWALL 2041	89	0	891.00000	-105.00000	368.50000	0	1515					
	1.0000 -105.0000 368.5000												
5400	LONGERON SILL 2042	89	0	891.00000	105.00000	410.00000	0	1516	1517	1518			
	1.0000 105.0000 410.0000												
5401	LONGERON SILL 2042	89	0	891.00000	-105.00000	410.00000	0	1519	1520	1521			
	1.0000 -105.0000 410.0000												
5402	MFUSE SIDEWALL 2352	89	0	891.00000	105.00000	396.00000	0	1522					
	1.0000 105.0000 396.0000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 33

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5403	MFUSE SIDEWALL 2352	89	0	891.00000	-105.00000	396.00000	0	1523					
	1.0000 -105.0000 396.0000												
5404	MID FWD CBDOOR 211501	91	0	917.65000	5.56000	499.87400	0	1524	1525				
	7.6500 5.5600 499.8740												
5405	MID FWD CBDOOR 211501	91	0	917.65000	-5.56000	499.87400	0	1526	1527				
	7.6500 -5.5600 499.8740												
5406	MID FWD CBDOOR 211511	91	0	917.65000	41.50000	493.83700	0	1528	1529				
	7.6500 41.5000 493.8370												
5407	MID FWD CBDOOR 211511	91	0	917.65000	-41.50000	493.83700	0	1530	1531				
	7.6500 -41.5000 493.8370												
5408	MID FWD CBDOOR 211521	91	0	917.65000	82.60300	475.26400	0	1532	1533				
	7.6500 82.6030 475.2640												
5409	MID FWD CBDOOR 211521	91	0	917.65000	-82.60300	475.26400	0	1534	1535				
	7.6500 -82.6030 475.2640												
5410	MID FWD CBDOOR 211531	91	0	917.65000	104.12900	450.62000	0	1536	1537				
	7.6500 104.1290 450.6200												
5411	MID FWD CBDOOR 211531	91	0	917.65000	-104.12900	450.62000	0	1538	1539				
	7.6500 -104.1290 450.6200												
5412	MFUSE BOTTOM 2061	91	0	919.00000	0.00000	269.32350	0		1540				
	9.0000 0.0000 269.3235												
5413	MFUSE BOTTOM 2063	91	0	919.00000	40.30000	270.25700	0	1541	1542				
	9.0000 40.3000 270.2570												
5414	MFUSE BOTTOM 2063	91	0	919.00000	-40.30000	270.25700	0	1543	1544				
	9.0000 -40.3000 270.2570												
5415	MFUSE BOTTOM 2064	91	0	919.00000	72.60000	272.63100	0	1545	1546				
	9.0000 72.6000 272.6310												
5416	MFUSE BOTTOM 2064	91	0	919.00000	-72.60000	272.63100	0	1547	1548				
	9.0000 -72.6000 272.6310												
5417	MFUSE SIDEWALL 2066	91	0	919.00000	105.00000	276.98190	0	1549	1550				
	9.0000 105.0000 276.9819												
5418	MFUSE SIDEWALL 2066	91	0	919.00000	-105.00000	276.98190	0	1551	1552				
	9.0000 -105.0000 276.9819												
5419	MFUSE SIDEWALL 2070	91	0	919.00000	105.00000	347.34000	0	1553					
	9.0000 105.0000 347.3400												
5420	MFUSE SIDEWALL 2070	91	0	919.00000	-105.00000	347.34000	0	1554					
	9.0000 -105.0000 347.3400												
5421	MFUSE SIDEWALL 2071	91	0	919.00000	105.00000	368.50000	0	1555					
	9.0000 105.0000 368.5000												
5422	MFUSE SIDEWALL 2071	91	0	919.00000	-105.00000	368.50000	0	1556					
	9.0000 -105.0000 368.5000												
5423	LONGERON SILL 2072	91	0	919.00000	105.00000	410.00000	0	1557	1558	1559			
	9.0000 105.0000 410.0000												
5424	LONGERON SILL 2072	91	0	919.00000	-105.00000	410.00000	0	1560	1561	1562			
	9.0000 -105.0000 410.0000												
5425	MFUSE SIDEWALL 2362	91	0	919.00000	105.00000	396.00000	0	1563					
	9.0000 105.0000 396.0000												
5426	MFUSE SIDEWALL 2362	91	0	919.00000	-105.00000	396.00000	0	1564					
	9.0000 -105.0000 396.0000												
5427	MFUSE BOTTOM 2091	94	0	949.25000	0.00000	268.62670	0		1565				
	9.2500 0.0000 268.6267												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 34

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5428	MFUSE BOTTOM 2093	94	0	949.25000	40.30000	269.48980	0		1566	1567				
	9.2500 40.3000 269.4898													
5429	MFUSE BOTTOM 2093	94	0	949.25000	-40.30000	269.48980	0		1568	1569				
	9.2500 -40.3000 269.4898													
5430	MFUSE BOTTOM 2094	94	0	949.25000	72.60000	271.66680	0		1570	1571				
	9.2500 72.6000 271.6668													
5431	MFUSE BOTTOM 2094	94	0	949.25000	-72.60000	271.66680	0		1572	1573				
	9.2500 -72.6000 271.6668													
5432	MFUSE SIDEWALL 2096	94	0	949.25000	105.00000	275.61680	0		1574	1575				
	9.2500 105.0000 275.6168													
5433	MFUSE SIDEWALL 2096	94	0	949.25000	-105.00000	275.61680	0		1576	1577				
	9.2500 -105.0000 275.6168													
5434	MFUSE SIDEWALL 2101	94	0	949.25000	105.00000	368.50000	0		1578					
	9.2500 105.0000 368.5000													
5435	MFUSE SIDEWALL 2101	94	0	949.25000	-105.00000	368.50000	0		1579					
	9.2500 -105.0000 368.5000													
5436	LONGERON SILL 2102	94	0	949.25000	105.00000	410.00000	0	1580	1581	1582				
	9.2500 105.0000 410.0000													
5437	LONGERON SILL 2102	94	0	949.25000	-105.00000	410.00000	0	1583	1584	1585				
	9.2500 -105.0000 410.0000													
5438	MFUSE SIDEWALL 2372	94	0	949.25000	105.00000	396.00000	0		1586					
	9.2500 105.0000 396.0000													
5439	MFUSE SIDEWALL 2372	94	0	949.25000	-105.00000	396.00000	0		1587					
	9.2500 -105.0000 396.0000													
5440	MFUSE SIDEWALL 2936	94	0	949.25000	105.00000	347.34000	0		1588					
	9.2500 105.0000 347.3400													
5441	MFUSE SIDEWALL 2936	94	0	949.25000	-105.00000	347.34000	0		1589					
	9.2500 -105.0000 347.3400													
5442	MID AFT CBDOOR 212081	96	0	966.35000	5.56000	499.87400	0		1590	1591				
	6.3500 5.5600 499.8740													
5443	MID AFT CBDOOR 212081	96	0	966.35000	-5.56000	499.87400	0		1592	1593				
	6.3500 -5.5600 499.8740													
5444	MID AFT CBDOOR 212091	96	0	966.35000	41.50000	493.83700	0		1594	1595				
	6.3500 41.5000 493.8370													
5445	MID AFT CBDOOR 212091	96	0	966.35000	-41.50000	493.83700	0		1596	1597				
	6.3500 -41.5000 493.8370													
5446	MID AFT CBDOOR 212101	96	0	966.35000	82.60300	475.26400	0		1598	1599				
	6.3500 82.6030 475.2640													
5447	MID AFT CBDOOR 212101	96	0	966.35000	-82.60300	475.26400	0		1600	1601				
	6.3500 -82.6030 475.2640													
5448	MID AFT CBDOOR 212111	96	0	966.35000	104.12900	450.62000	0		1602	1603				
	6.3500 104.1290 450.6200													
5449	MID AFT CBDOOR 212111	96	0	966.35000	-104.12900	450.62000	0		1604	1605				
	6.3500 -104.1290 450.6200													
1094	MFUSE BOTTOM 2121	97	0	979.50000	0.00000	267.92970	0	1606	1607	1608				
	9.5000 0.0000 267.9297													
5451	MFUSE BOTTOM 2123	97	0	979.50000	40.30000	268.72400	0		1609	1610				
	9.5000 40.3000 268.7240													
5452	MFUSE BOTTOM 2123	97	0	979.50000	-40.30000	268.72400	0		1611	1612				
	9.5000 -40.3000 268.7240													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 35

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5453	MFUSE BOTTOM 2124	97	0	979.50000	72.60000	270.71830	0		1613	1614				
	9.5000 72.6000 270.7183													
5454	MFUSE BOTTOM 2124	97	0	979.50000	-72.60000	270.71830	0		1615	1616				
	9.5000 -72.6000 270.7183													
5455	MFUSE SIDEWALL 2126	97	0	979.50000	105.00000	274.31360	0		1617	1618				
	9.5000 105.0000 274.3136													
5456	MFUSE SIDEWALL 2126	97	0	979.50000	-105.00000	274.31360	0		1619	1620				
	9.5000 -105.0000 274.3136													
5457	MFUSE SIDEWALL 2131	97	0	979.50000	105.00000	368.50000	0		1621					
	9.5000 105.0000 368.5000													
5458	MFUSE SIDEWALL 2131	97	0	979.50000	-105.00000	368.50000	0		1622					
	9.5000 -105.0000 368.5000													
5459	LONGERON SILL 2132	97	0	979.50000	105.00000	410.00000	0	1623	1624	1625				
	9.5000 105.0000 410.0000													
5460	LONGERON SILL 2132	97	0	979.50000	-105.00000	410.00000	0	1626	1627	1628				
	9.5000 -105.0000 410.0000													
5461	MFUSE SIDEWALL 2382	97	0	979.50000	105.00000	396.00000	0		1629					
	9.5000 105.0000 396.0000													
5462	MFUSE SIDEWALL 2382	97	0	979.50000	-105.00000	396.00000	0		1630					
	9.5000 -105.0000 396.0000													
5463	MFUSE SIDEWALL 2937	97	0	979.50000	105.00000	347.34000	0		1631					
	9.5000 105.0000 347.3400													
5464	MFUSE SIDEWALL 2937	97	0	979.50000	-105.00000	347.34000	0		1632					
	9.5000 -105.0000 347.3400													
5465	MFUSE BOTTOM 2151	100	0	1009.75000	0.00000	267.23280	0			1633				
	9.7500 0.0000 267.2328													
5466	MFUSE BOTTOM 2153	100	0	1009.75000	40.30000	267.96100	0		1634	1635				
	9.7500 40.3000 267.9610													
5467	MFUSE BOTTOM 2153	100	0	1009.75000	-40.30000	267.96100	0		1636	1637				
	9.7500 -40.3000 267.9610													
5468	MFUSE BOTTOM 2154	100	0	1009.75000	72.60000	269.78910	0		1638	1639				
	9.7500 72.6000 269.7891													
5469	MFUSE BOTTOM 2154	100	0	1009.75000	-72.60000	269.78910	0		1640	1641				
	9.7500 -72.6000 269.7891													
5470	MFUSE SIDEWALL 2156	100	0	1009.75000	105.00000	273.08400	0		1642	1643				
	9.7500 105.0000 273.0840													
5471	MFUSE SIDEWALL 2156	100	0	1009.75000	-105.00000	273.08400	0		1644	1645				
	9.7500 -105.0000 273.0840													
5472	MFUSE SIDEWALL 2160	100	0	1009.75000	105.00000	355.00000	0		1646					
	9.7500 105.0000 355.0000													
5473	MFUSE SIDEWALL 2160	100	0	1009.75000	-105.00000	355.00000	0		1647					
	9.7500 -105.0000 355.0000													
5474	MFUSE SIDEWALL 2161	100	0	1009.75000	105.00000	368.50000	0		1648					
	9.7500 105.0000 368.5000													
5475	MFUSE SIDEWALL 2161	100	0	1009.75000	-105.00000	368.50000	0		1649					
	9.7500 -105.0000 368.5000													
5476	LONGERON SILL 2162	100	0	1009.75000	105.00000	410.00000	0	1650	1651	1652				
	9.7500 105.0000 410.0000													
5477	LONGERON SILL 2162	100	0	1009.75000	-105.00000	410.00000	0	1653	1654	1655				
	9.7500 -105.0000 410.0000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 36

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5478	MFUSE SIDEWALL 2392	100	0	1009.75000	105.00000	396.00000	0	1656					
	9.7500 105.0000 396.0000												
5479	MFUSE SIDEWALL 2392	100	0	1009.75000	-105.00000	396.00000	0	1657					
	9.7500 -105.0000 396.0000												
5480	MID AFT CBDOOR 212221	101	0	1011.05000	5.56000	499.87400	0	1658	1659				
	1.0500 5.5600 499.8740												
5481	MID AFT CBDOOR 212221	101	0	1011.05000	-5.56000	499.87400	0	1660	1661				
	1.0500 -5.5600 499.8740												
5482	MID AFT CBDOOR 212231	101	0	1011.05000	41.50000	493.83700	0	1662	1663				
	1.0500 41.5000 493.8370												
5483	MID AFT CBDOOR 212231	101	0	1011.05000	-41.50000	493.83700	0	1664	1665				
	1.0500 -41.5000 493.8370												
5484	MID AFT CBDOOR 212241	101	0	1011.05000	82.60300	475.26400	0	1666	1667				
	1.0500 82.6030 475.2640												
5485	MID AFT CBDOOR 212241	101	0	1011.05000	-82.60300	475.26400	0	1668	1669				
	1.0500 -82.6030 475.2640												
5486	MID AFT CBDOOR 212251	101	0	1011.05000	104.12900	450.62000	0	1670	1671				
	1.0500 104.1290 450.6200												
5487	MID AFT CBDOOR 212251	101	0	1011.05000	-104.12900	450.62000	0	1672	1673				
	1.0500 -104.1290 450.6200												
5488	MFUSE BOTTOM 2181	104	0	1040.00000	0.00000	266.53590	0		1674				
	0.0000 0.0000 266.5359												
5489	MFUSE BOTTOM 2183	104	0	1040.00000	40.30000	267.20720	0	1675	1676				
	0.0000 40.3000 267.2072												
5490	MFUSE BOTTOM 2183	104	0	1040.00000	-40.30000	267.20720	0	1677	1678				
	0.0000 -40.3000 267.2072												
5491	MFUSE BOTTOM 2184	104	0	1040.00000	72.60000	268.89630	0	1679	1680				
	0.0000 72.6000 268.8963												
5492	MFUSE BOTTOM 2184	104	0	1040.00000	-72.60000	268.89630	0	1681	1682				
	0.0000 -72.6000 268.8963												
536	MFUSE SIDEWALL 2186	104	0	1040.00000	105.00000	271.94990	0	1683	1684				
	0.0000 105.0000 271.9499												
1680	MFUSE SIDEWALL 2186	104	0	1040.00000	-105.00000	271.94990	0	1685	1686				
	0.0000 -105.0000 271.9499												
5495	MFUSE SIDEWALL 2191	104	0	1040.00000	105.00000	368.50000	0	1687					
	0.0000 105.0000 368.5000												
5496	MFUSE SIDEWALL 2191	104	0	1040.00000	-105.00000	368.50000	0	1688					
	0.0000 -105.0000 368.5000												
5497	LONGERON SILL 2192	104	0	1040.00000	105.00000	410.00000	0	1689	1690	1691			
	0.0000 105.0000 410.0000												
5498	LONGERON SILL 2192	104	0	1040.00000	-105.00000	410.00000	0	1692	1693	1694			
	0.0000 -105.0000 410.0000												
5499	MFUSE SIDEWALL 2402	104	0	1040.00000	105.00000	396.00000	0	1695					
	0.0000 105.0000 396.0000												
5500	MFUSE SIDEWALL 2402	104	0	1040.00000	-105.00000	396.00000	0	1696					
	0.0000 -105.0000 396.0000												
5501	MFUSE SIDEWALL 2938	104	0	1040.00000	105.00000	347.34000	0	1697					
	0.0000 105.0000 347.3400												
5502	MFUSE SIDEWALL 2938	104	0	1040.00000	-105.00000	347.34000	0	1698					
	0.0000 -105.0000 347.3400												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 37

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5503	MID AFT CBDOOR 212361	105	0	1055.75000	5.56000	499.87400	0	1699	1700				
	5.7500 5.5600 499.8740												
5504	MID AFT CBDOOR 212361	105	0	1055.75000	-5.56000	499.87400	0	1701	1702				
	5.7500 -5.5600 499.8740												
5505	MID AFT CBDOOR 212371	105	0	1055.75000	41.50000	493.83700	0	1703	1704				
	5.7500 41.5000 493.8370												
5506	MID AFT CBDOOR 212371	105	0	1055.75000	-41.50000	493.83700	0	1705	1706				
	5.7500 -41.5000 493.8370												
5507	MID AFT CBDOOR 212381	105	0	1055.75000	82.60300	475.26400	0	1707	1708				
	5.7500 82.6030 475.2640												
5508	MID AFT CBDOOR 212381	105	0	1055.75000	-82.60300	475.26400	0	1709	1710				
	5.7500 -82.6030 475.2640												
5509	MID AFT CBDOOR 212391	105	0	1055.75000	104.12900	450.62000	0	1711	1712				
	5.7500 104.1290 450.6200												
5510	MID AFT CBDOOR 212391	105	0	1055.75000	-104.12900	450.62000	0	1713	1714				
	5.7500 -104.1290 450.6200												
5511	MFUSE BOTTOM 2211	106	0	1065.17000	0.00000	265.95600	0		1715				
	5.1700 0.0000 265.9560												
5512	MFUSE BOTTOM 2213	106	0	1065.17000	40.30000	266.59600	0	1716	1717				
	5.1700 40.3000 266.5960												
5513	MFUSE BOTTOM 2213	106	0	1065.17000	-40.30000	266.59600	0	1718	1719				
	5.1700 -40.3000 266.5960												
5514	MFUSE BOTTOM 2214	106	0	1065.17000	72.60000	268.20540	0	1720	1721				
	5.1700 72.6000 268.2054												
5515	MFUSE BOTTOM 2214	106	0	1065.17000	-72.60000	268.20540	0	1722	1723				
	5.1700 -72.6000 268.2054												
5516	MFUSE SIDEWALL 2216	106	0	1065.17000	105.00000	271.16750	0	1724	1725				
	5.1700 105.0000 271.1675												
5517	MFUSE SIDEWALL 2216	106	0	1065.17000	-105.00000	271.16750	0	1726	1727				
	5.1700 -105.0000 271.1675												
5518	MFUSE SIDEWALL 2221	106	0	1065.17000	105.00000	368.50000	0	1728					
	5.1700 105.0000 368.5000												
5519	MFUSE SIDEWALL 2221	106	0	1065.17000	-105.00000	368.50000	0	1729					
	5.1700 -105.0000 368.5000												
5520	LONGERON SILL 2222	106	0	1065.17000	105.00000	410.00000	0	1730	1731	1732			
	5.1700 105.0000 410.0000												
5521	LONGERON SILL 2222	106	0	1065.17000	-105.00000	410.00000	0	1733	1734	1735			
	5.1700 -105.0000 410.0000												
5522	MFUSE SIDEWALL 2412	106	0	1065.17000	105.00000	396.00000	0	1736					
	5.1700 105.0000 396.0000												
5523	MFUSE SIDEWALL 2412	106	0	1065.17000	-105.00000	396.00000	0	1737					
	5.1700 -105.0000 396.0000												
5524	MFUSE SIDEWALL 2939	106	0	1065.17000	105.00000	347.34000	0	1738					
	5.1700 105.0000 347.3400												
5525	MFUSE SIDEWALL 2939	106	0	1065.17000	-105.00000	347.34000	0	1739					
	5.1700 -105.0000 347.3400												
5526	MFUSE BOTTOM 2241	109	0	1090.33000	0.00000	265.37630	0		1740				
	0.3300 0.0000 265.3763												
5527	MFUSE BOTTOM 2243	109	0	1090.33000	40.30000	266.01960	0	1741	1742				
	0.3300 40.3000 266.0196												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 38

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5528	MFUSE BOTTOM 2243	109	0	1090.33000	-40.30000	266.01960	0		1743	1744			
	0.3300 -40.3000 266.0196												
5529	MFUSE BOTTOM 2244	109	0	1090.33000	72.60000	267.61430	0		1745	1746			
	0.3300 72.6000 267.6143												
5530	MFUSE BOTTOM 2244	109	0	1090.33000	-72.60000	267.61430	0		1747	1748			
	0.3300 -72.6000 267.6143												
5531	MFUSE SIDEWALL 2246	109	0	1090.33000	105.00000	270.38540	0		1749	1750			
	0.3300 105.0000 270.3854												
5532	MFUSE SIDEWALL 2246	109	0	1090.33000	-105.00000	270.38540	0		1751	1752			
	0.3300 -105.0000 270.3854												
5533	MFUSE SIDEWALL 2251	109	0	1090.33000	105.00000	368.50000	0		1753				
	0.3300 105.0000 368.5000												
5534	MFUSE SIDEWALL 2251	109	0	1090.33000	-105.00000	368.50000	0		1754				
	0.3300 -105.0000 368.5000												
5535	LONGERON SILL 2252	109	0	1090.33000	105.00000	410.00000	0	1755	1756	1757			
	0.3300 105.0000 410.0000												
5536	LONGERON SILL 2252	109	0	1090.33000	-105.00000	410.00000	0	1758	1759	1760			
	0.3300 -105.0000 410.0000												
5537	MFUSE SIDEWALL 2422	109	0	1090.33000	105.00000	396.00000	0		1761				
	0.3300 105.0000 396.0000												
5538	MFUSE SIDEWALL 2422	109	0	1090.33000	-105.00000	396.00000	0		1762				
	0.3300 -105.0000 396.0000												
5539	MFUSE SIDEWALL 2940	109	0	1090.33000	105.00000	347.34000	0		1763				
	0.3300 105.0000 347.3400												
5540	MFUSE SIDEWALL 2940	109	0	1090.33000	-105.00000	347.34000	0		1764				
	0.3300 -105.0000 347.3400												
5541	MID AFT CBDOOR 212501	110	0	1100.45000	5.56000	499.87400	0		1765	1766			
	0.4500 5.5600 499.8740												
5542	MID AFT CBDOOR 212501	110	0	1100.45000	-5.56000	499.87400	0		1767	1768			
	0.4500 -5.5600 499.8740												
5543	MID AFT CBDOOR 212511	110	0	1100.45000	41.50000	493.83700	0		1769	1770			
	0.4500 41.5000 493.8370												
5544	MID AFT CBDOOR 212511	110	0	1100.45000	-41.50000	493.83700	0		1771	1772			
	0.4500 -41.5000 493.8370												
5545	MID AFT CBDOOR 212521	110	0	1100.45000	82.60300	475.26400	0		1773	1774			
	0.4500 82.6030 475.2640												
5546	MID AFT CBDOOR 212521	110	0	1100.45000	-82.60300	475.26400	0		1775	1776			
	0.4500 -82.6030 475.2640												
5547	MID AFT CBDOOR 212531	110	0	1100.45000	104.12900	450.62000	0		1777	1778			
	0.4500 104.1290 450.6200												
5548	MID AFT CBDOOR 212531	110	0	1100.45000	-104.12900	450.62000	0		1779	1780			
	0.4500 -104.1290 450.6200												
5549	MFUSE BOTTOM 2271	111	0	1115.50000	0.00000	264.79650	0			1781			
	5.5000 0.0000 264.7965												
5550	MFUSE BOTTOM 2273	111	0	1115.50000	40.30000	265.46630	0		1782	1783			
	5.5000 40.3000 265.4663												
5551	MFUSE BOTTOM 2273	111	0	1115.50000	-40.30000	265.46630	0		1784	1785			
	5.5000 -40.3000 265.4663												
5552	MFUSE BOTTOM 2274	111	0	1115.50000	72.60000	267.09200	0		1786	1787			
	5.5000 72.6000 267.0920												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 39

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5553	MFUSE BOTTOM 2274	111	0	1115.50000	-72.60000	267.09200	0		1788	1789			
	5.5000 -72.6000 267.0920												
5554	MFUSE SIDEWALL 2276	111	0	1115.50000	105.00000	269.97670	0		1790	1791			
	5.5000 105.0000 269.9767												
5555	MFUSE SIDEWALL 2276	111	0	1115.50000	-105.00000	269.97670	0		1792	1793			
	5.5000 -105.0000 269.9767												
5556	MFUSE SIDEWALL 2281	111	0	1115.50000	105.00000	368.50000	0		1794				
	5.5000 105.0000 368.5000												
5557	MFUSE SIDEWALL 2281	111	0	1115.50000	-105.00000	368.50000	0		1795				
	5.5000 -105.0000 368.5000												
5558	LONGERON SILL 2282	111	0	1115.50000	105.00000	410.00000	0	1796	1797	1798			
	5.5000 105.0000 410.0000												
5559	LONGERON SILL 2282	111	0	1115.50000	-105.00000	410.00000	0	1799	1800	1801			
	5.5000 -105.0000 410.0000												
5560	MFUSE SIDEWALL 2432	111	0	1115.50000	105.00000	396.00000	0		1802				
	5.5000 105.0000 396.0000												
5561	MFUSE SIDEWALL 2432	111	0	1115.50000	-105.00000	396.00000	0		1803				
	5.5000 -105.0000 396.0000												
5562	MFUSE SIDEWALL 21178	111	0	1115.50000	105.00000	346.41000	0		1804				
	5.5000 105.0000 346.4100												
5563	MFUSE SIDEWALL 21178	111	0	1115.50000	-105.00000	346.41000	0		1805				
	5.5000 -105.0000 346.4100												
5564	AFT CBDOOR 213011	112	0	1128.42000	5.56000	499.87400	0		1806	1807			
	8.4200 5.5600 499.8740												
5565	AFT CBDOOR 213011	112	0	1128.42000	-5.56000	499.87400	0		1808	1809			
	8.4200 -5.5600 499.8740												
5566	AFT CBDOOR 213021	112	0	1128.42000	41.50000	493.83700	0		1810	1811			
	8.4200 41.5000 493.8370												
5567	AFT CBDOOR 213021	112	0	1128.42000	-41.50000	493.83700	0		1812	1813			
	8.4200 -41.5000 493.8370												
5568	AFT CBDOOR 213031	112	0	1128.42000	82.60300	475.26400	0		1814	1815			
	8.4200 82.6030 475.2640												
5569	AFT CBDOOR 213031	112	0	1128.42000	-82.60300	475.26400	0		1816	1817			
	8.4200 -82.6030 475.2640												
5570	AFT CBDOOR 213041	112	0	1128.42000	104.12900	450.62000	0		1818	1819			
	8.4200 104.1290 450.6200												
5571	AFT CBDOOR 213041	112	0	1128.42000	-104.12900	450.62000	0		1820	1821			
	8.4200 -104.1290 450.6200												
1100	MFUSE BOTTOM 2301	114	0	1140.67000	0.00000	264.21660	0	1822	1823	1824			
	0.6700 0.0000 264.2166												
5573	MFUSE BOTTOM 2303	114	0	1140.67000	40.30000	264.90900	0		1825	1826			
	0.6700 40.3000 264.9090												
5574	MFUSE BOTTOM 2303	114	0	1140.67000	-40.30000	264.90900	0		1827	1828			
	0.6700 -40.3000 264.9090												
5575	MFUSE BOTTOM 2304	114	0	1140.67000	72.60000	266.56650	0		1829	1830			
	0.6700 72.6000 266.5665												
5576	MFUSE BOTTOM 2304	114	0	1140.67000	-72.60000	266.56650	0		1831	1832			
	0.6700 -72.6000 266.5665												
5577	MFUSE SIDEWALL 2306	114	0	1140.67000	105.00000	269.46780	0		1833	1834			
	0.6700 105.0000 269.4678												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 40

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5578	MFUSE SIDEWALL 2306	114	0	1140.67000	-105.00000	269.46780	0		1835	1836			
	0.6700 -105.0000 269.4678												
5579	MFUSE SIDEWALL 2311	114	0	1140.67000	105.00000	368.50000	0		1837				
	0.6700 105.0000 368.5000												
5580	MFUSE SIDEWALL 2311	114	0	1140.67000	-105.00000	368.50000	0		1838				
	0.6700 -105.0000 368.5000												
605	LONGERON SILL 2312	114	0	1140.67000	105.00000	410.00000	0	1839	1840	1841			
	0.6700 105.0000 410.0000												
945	LONGERON SILL 2312	114	0	1140.67000	-105.00000	410.00000	0	1842	1843	1844			
	0.6700 -105.0000 410.0000												
5583	MFUSE SIDEWALL 2442	114	0	1140.67000	105.00000	395.50000	0		1845				
	0.6700 105.0000 395.5000												
5584	MFUSE SIDEWALL 2442	114	0	1140.67000	-105.00000	395.50000	0		1846				
	0.6700 -105.0000 395.5000												
5585	MFUSE SIDEWALL 2941	114	0	1140.67000	105.00000	347.34000	0		1847				
	0.6700 105.0000 347.3400												
5586	MFUSE SIDEWALL 2941	114	0	1140.67000	-105.00000	347.34000	0		1848				
	0.6700 -105.0000 347.3400												
5587	AFT CBDOOR 213151	116	0	1164.20000	5.56000	499.87400	0		1849	1850			
	4.2000 5.5600 499.8740												
5588	AFT CBDOOR 213151	116	0	1164.20000	-5.56000	499.87400	0		1851	1852			
	4.2000 -5.5600 499.8740												
5589	AFT CBDOOR 213161	116	0	1164.20000	41.50000	493.83700	0		1853	1854			
	4.2000 41.5000 493.8370												
5590	AFT CBDOOR 213161	116	0	1164.20000	-41.50000	493.83700	0		1855	1856			
	4.2000 -41.5000 493.8370												
5591	AFT CBDOOR 213171	116	0	1164.20000	82.60300	475.26400	0		1857	1858			
	4.2000 82.6030 475.2640												
5592	AFT CBDOOR 213171	116	0	1164.20000	-82.60300	475.26400	0		1859	1860			
	4.2000 -82.6030 475.2640												
5593	AFT CBDOOR 213181	116	0	1164.20000	104.12900	450.62000	0		1861	1862			
	4.2000 104.1290 450.6200												
5594	AFT CBDOOR 213181	116	0	1164.20000	-104.12900	450.62000	0		1863	1864			
	4.2000 -104.1290 450.6200												
5595	MFUSE BOTTOM 27081	116	0	1165.83000	0.00000	263.63690	0			1865			
	5.8300 0.0000 263.6369												
5596	MFUSE BOTTOM 27085	116	0	1165.83000	40.30000	264.35270	0		1866	1867			
	5.8300 40.3000 264.3527												
5597	MFUSE BOTTOM 27085	116	0	1165.83000	-40.30000	264.35270	0		1868	1869			
	5.8300 -40.3000 264.3527												
5598	MFUSE BOTTOM 27088	116	0	1165.83000	72.60000	266.04220	0		1870	1871			
	5.8300 72.6000 266.0422												
5599	MFUSE BOTTOM 27088	116	0	1165.83000	-72.60000	266.04220	0		1872	1873			
	5.8300 -72.6000 266.0422												
5600	MFUSE SIDEWALL 27095	116	0	1165.83000	105.00000	268.85720	0		1874	1875			
	5.8300 105.0000 268.8572												
5601	MFUSE SIDEWALL 27095	116	0	1165.83000	-105.00000	268.85720	0		1876	1877			
	5.8300 -105.0000 268.8572												
5602	MFUSE SIDEWALL 27105	116	0	1165.83000	105.00000	368.50000	0		1878				
	5.8300 105.0000 368.5000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 41

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5603	MFUSE SIDEWALL 27105	116	0	1165.83000	-105.00000	368.50000	0		1879				
	5.8300 -105.0000 368.5000												
5604	LONGERON SILL 27107	116	0	1165.83000	105.00000	410.00000	0	1880	1881	1882			
	5.8300 105.0000 410.0000												
5605	LONGERON SILL 27107	116	0	1165.83000	-105.00000	410.00000	0	1883	1884	1885			
	5.8300 -105.0000 410.0000												
5606	MFUSE SIDEWALL 27114	116	0	1165.83000	105.00000	395.50000	0		1886				
	5.8300 105.0000 395.5000												
5607	MFUSE SIDEWALL 27114	116	0	1165.83000	-105.00000	395.50000	0		1887				
	5.8300 -105.0000 395.5000												
5608	MFUSE SIDEWALL 271019	116	0	1165.83000	105.00000	338.87700	0		1888				
	5.8300 105.0000 338.8770												
5609	MFUSE SIDEWALL 271019	116	0	1165.83000	-105.00000	338.87700	0		1889				
	5.8300 -105.0000 338.8770												
5610	MFUSE BOTTOM 27161	119	0	1191.00000	0.00000	263.05700	0			1890			
	1.0000 0.0000 263.0570												
5611	MFUSE BOTTOM 27163	119	0	1191.00000	26.25000	263.36780	0		1891	1892			
	1.0000 26.2500 263.3678												
5612	MFUSE BOTTOM 27163	119	0	1191.00000	-26.25000	263.36780	0		1893	1894			
	1.0000 -26.2500 263.3678												
5613	MFUSE BOTTOM 27165	119	0	1191.00000	52.50000	264.32460	0		1895	1896			
	1.0000 52.5000 264.3246												
5614	MFUSE BOTTOM 27165	119	0	1191.00000	-52.50000	264.32460	0		1897	1898			
	1.0000 -52.5000 264.3246												
5615	MFUSE BOTTOM 27168	119	0	1191.00000	78.75000	265.96690	0		1899	1900			
	1.0000 78.7500 265.9669												
5616	MFUSE BOTTOM 27168	119	0	1191.00000	-78.75000	265.96690	0		1901	1902			
	1.0000 -78.7500 265.9669												
5617	MFUSE SIDEWALL 27175	119	0	1191.00000	105.00000	268.50000	0		1903	1904			
	1.0000 105.0000 268.5000												
5618	MFUSE SIDEWALL 27175	119	0	1191.00000	-105.00000	268.50000	0		1905	1906			
	1.0000 -105.0000 268.5000												
5619	MFUSE SIDEWALL 27185	119	0	1191.00000	105.00000	368.50000	0		1907				
	1.0000 105.0000 368.5000												
5620	MFUSE SIDEWALL 27185	119	0	1191.00000	-105.00000	368.50000	0		1908				
	1.0000 -105.0000 368.5000												
5621	LONGERON SILL 27187	119	0	1191.00000	105.00000	410.00000	0	1909	1910	1911			
	1.0000 105.0000 410.0000												
5622	LONGERON SILL 27187	119	0	1191.00000	-105.00000	410.00000	0	1912	1913	1914			
	1.0000 -105.0000 410.0000												
5623	MFUSE SIDEWALL 27194	119	0	1191.00000	105.00000	395.50000	0		1915				
	1.0000 105.0000 395.5000												
5624	MFUSE SIDEWALL 27194	119	0	1191.00000	-105.00000	395.50000	0		1916				
	1.0000 -105.0000 395.5000												
5625	MFUSE SIDEWALL 271049	119	0	1191.00000	105.00000	338.87700	0		1917				
	1.0000 105.0000 338.8770												
5626	MFUSE SIDEWALL 271049	119	0	1191.00000	-105.00000	338.87700	0		1918				
	1.0000 -105.0000 338.8770												
5627	AFT CBDOOR 213291	120	0	1204.20000	5.56000	499.87400	0		1919	1920			
	4.2000 5.5600 499.8740												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 42

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5628	AFT CBDOOR 213291	120	0	1204.20000	-5.56000	499.87400	0		1921	1922				
	4.2000 -5.5600 499.8740													
5629	AFT CBDOOR 213301	120	0	1204.20000	41.50000	493.83700	0		1923	1924				
	4.2000 41.5000 493.8370													
5630	AFT CBDOOR 213301	120	0	1204.20000	-41.50000	493.83700	0		1925	1926				
	4.2000 -41.5000 493.8370													
5631	AFT CBDOOR 213311	120	0	1204.20000	82.60300	475.26400	0		1927	1928				
	4.2000 82.6030 475.2640													
5632	AFT CBDOOR 213311	120	0	1204.20000	-82.60300	475.26400	0		1929	1930				
	4.2000 -82.6030 475.2640													
5633	AFT CBDOOR 213321	120	0	1204.20000	104.12900	450.62000	0		1931	1932				
	4.2000 104.1290 450.6200													
5634	AFT CBDOOR 213321	120	0	1204.20000	-104.12900	450.62000	0		1933	1934				
	4.2000 -104.1290 450.6200													
5635	MFUSE BOTTOM 27241	122	0	1220.00000	0.00000	262.38890	0			1935				
	0.0000 0.0000 262.3889													
5636	MFUSE BOTTOM 27243	122	0	1220.00000	26.25000	262.71070	0		1936	1937				
	0.0000 26.2500 262.7107													
5637	MFUSE BOTTOM 27243	122	0	1220.00000	-26.25000	262.71070	0		1938	1939				
	0.0000 -26.2500 262.7107													
5638	MFUSE BOTTOM 27245	122	0	1220.00000	52.50000	263.69170	0		1940	1941				
	0.0000 52.5000 263.6917													
5639	MFUSE BOTTOM 27245	122	0	1220.00000	-52.50000	263.69170	0		1942	1943				
	0.0000 -52.5000 263.6917													
5640	MFUSE BOTTOM 27248	122	0	1220.00000	78.75000	265.35710	0		1944	1945				
	0.0000 78.7500 265.3571													
5641	MFUSE BOTTOM 27248	122	0	1220.00000	-78.75000	265.35710	0		1946	1947				
	0.0000 -78.7500 265.3571													
5642	MFUSE SIDEWALL 27255	122	0	1220.00000	105.00000	267.80000	0		1948	1949				
	0.0000 105.0000 267.8000													
5643	MFUSE SIDEWALL 27255	122	0	1220.00000	-105.00000	267.80000	0		1950	1951				
	0.0000 -105.0000 267.8000													
5644	MFUSE SIDEWALL 27265	122	0	1220.00000	105.00000	368.50000	0		1952					
	0.0000 105.0000 368.5000													
5645	MFUSE SIDEWALL 27265	122	0	1220.00000	-105.00000	368.50000	0		1953					
	0.0000 -105.0000 368.5000													
5646	LONGERON SILL 27267	122	0	1220.00000	105.00000	410.00000	0	1954	1955	1956				
	0.0000 105.0000 410.0000													
5647	LONGERON SILL 27267	122	0	1220.00000	-105.00000	410.00000	0	1957	1958	1959				
	0.0000 -105.0000 410.0000													
5648	MFUSE SIDEWALL 27274	122	0	1220.00000	105.00000	395.50000	0		1960					
	0.0000 105.0000 395.5000													
5649	MFUSE SIDEWALL 27274	122	0	1220.00000	-105.00000	395.50000	0		1961					
	0.0000 -105.0000 395.5000													
5650	MFUSE SIDEWALL 271079	122	0	1220.00000	105.00000	338.87700	0		1962					
	0.0000 105.0000 338.8770													
5651	MFUSE SIDEWALL 271079	122	0	1220.00000	-105.00000	338.87700	0		1963					
	0.0000 -105.0000 338.8770													
5652	AFT CBDOOR 213431	124	0	1244.20000	5.56000	499.87400	0		1964	1965				
	4.2000 5.5600 499.8740													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 43

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5653	AFT CBDOOR 213431	124	0	1244.20000	-5.56000	499.87400	0		1966	1967				
	4.2000 -5.5600 499.8740													
5654	AFT CBDOOR 213441	124	0	1244.20000	41.50000	493.83700	0		1968	1969				
	4.2000 41.5000 493.8370													
5655	AFT CBDOOR 213441	124	0	1244.20000	-41.50000	493.83700	0		1970	1971				
	4.2000 -41.5000 493.8370													
5656	AFT CBDOOR 213451	124	0	1244.20000	82.60300	475.26400	0		1972	1973				
	4.2000 82.6030 475.2640													
5657	AFT CBDOOR 213451	124	0	1244.20000	-82.60300	475.26400	0		1974	1975				
	4.2000 -82.6030 475.2640													
5658	AFT CBDOOR 213461	124	0	1244.20000	104.12900	450.62000	0		1976	1977				
	4.2000 104.1290 450.6200													
5659	AFT CBDOOR 213461	124	0	1244.20000	-104.12900	450.62000	0		1978	1979				
	4.2000 -104.1290 450.6200													
5660	MFUSE BOTTOM 27321	124	0	1249.00000	0.00000	261.72080	0			1980				
	9.0000 0.0000 261.7208													
5661	MFUSE BOTTOM 27323	124	0	1249.00000	26.25000	262.05340	0		1981	1982				
	9.0000 26.2500 262.0534													
5662	MFUSE BOTTOM 27323	124	0	1249.00000	-26.25000	262.05340	0		1983	1984				
	9.0000 -26.2500 262.0534													
5663	MFUSE BOTTOM 27325	124	0	1249.00000	52.50000	263.05680	0		1985	1986				
	9.0000 52.5000 263.0568													
5664	MFUSE BOTTOM 27325	124	0	1249.00000	-52.50000	263.05680	0		1987	1988				
	9.0000 -52.5000 263.0568													
5665	MFUSE BOTTOM 27328	124	0	1249.00000	78.75000	264.73920	0		1989	1990				
	9.0000 78.7500 264.7392													
5666	MFUSE BOTTOM 27328	124	0	1249.00000	-78.75000	264.73920	0		1991	1992				
	9.0000 -78.7500 264.7392													
5667	MFUSE SIDEWALL 27335	124	0	1249.00000	105.00000	267.20000	0		1993	1994				
	9.0000 105.0000 267.2000													
5668	MFUSE SIDEWALL 27335	124	0	1249.00000	-105.00000	267.20000	0		1995	1996				
	9.0000 -105.0000 267.2000													
5669	MFUSE SIDEWALL 27345	124	0	1249.00000	105.00000	368.50000	0		1997					
	9.0000 105.0000 368.5000													
5670	MFUSE SIDEWALL 27345	124	0	1249.00000	-105.00000	368.50000	0		1998					
	9.0000 -105.0000 368.5000													
5671	LONGERON SILL 27347	124	0	1249.00000	105.00000	410.00000	0	1999	2000	2001				
	9.0000 105.0000 410.0000													
5672	LONGERON SILL 27347	124	0	1249.00000	-105.00000	410.00000	0	2002	2003	2004				
	9.0000 -105.0000 410.0000													
5673	MFUSE SIDEWALL 27354	124	0	1249.00000	105.00000	395.50000	0		2005					
	9.0000 105.0000 395.5000													
5674	MFUSE SIDEWALL 27354	124	0	1249.00000	-105.00000	395.50000	0		2006					
	9.0000 -105.0000 395.5000													
5675	MFUSE SIDEWALL 271109	124	0	1249.00000	105.00000	338.87700	0		2007					
	9.0000 105.0000 338.8770													
5676	MFUSE SIDEWALL 271109	124	0	1249.00000	-105.00000	338.87700	0		2008					
	9.0000 -105.0000 338.8770													
5677	MFUSE BOTTOM 27401	127	0	1278.00000	0.00000	261.14590	0			2009				
	8.0000 0.0000 261.1459													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 44

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5678	MFUSE BOTTOM 27403	127	0	1278.00000	26.25000	261.50470	0		2010	2011				
	8.0000 26.2500 261.5047													
5679	MFUSE BOTTOM 27403	127	0	1278.00000	-26.25000	261.50470	0		2012	2013				
	8.0000 -26.2500 261.5047													
5680	MFUSE BOTTOM 27405	127	0	1278.00000	52.50000	262.55800	0		2014	2015				
	8.0000 52.5000 262.5580													
5681	MFUSE BOTTOM 27405	127	0	1278.00000	-52.50000	262.55800	0		2016	2017				
	8.0000 -52.5000 262.5580													
5682	MFUSE BOTTOM 27408	127	0	1278.00000	78.75000	264.27270	0		2018	2019				
	8.0000 78.7500 264.2727													
5683	MFUSE BOTTOM 27408	127	0	1278.00000	-78.75000	264.27270	0		2020	2021				
	8.0000 -78.7500 264.2727													
5684	MFUSE SIDEWALL 27415	127	0	1278.00000	105.00000	266.80000	0		2022	2023				
	8.0000 105.0000 266.8000													
5685	MFUSE SIDEWALL 27415	127	0	1278.00000	-105.00000	266.80000	0		2024	2025				
	8.0000 -105.0000 266.8000													
5686	MFUSE SIDEWALL 27425	127	0	1278.00000	105.00000	368.50000	0		2026					
	8.0000 105.0000 368.5000													
5687	MFUSE SIDEWALL 27425	127	0	1278.00000	-105.00000	368.50000	0		2027					
	8.0000 -105.0000 368.5000													
5688	LONGERON SILL 27427	127	0	1278.00000	105.00000	410.00000	0	2028	2029	2030				
	8.0000 105.0000 410.0000													
5689	LONGERON SILL 27427	127	0	1278.00000	-105.00000	410.00000	0	2031	2032	2033				
	8.0000 -105.0000 410.0000													
5690	MFUSE SIDEWALL 27434	127	0	1278.00000	105.00000	395.50000	0		2034					
	8.0000 105.0000 395.5000													
5691	MFUSE SIDEWALL 27434	127	0	1278.00000	-105.00000	395.50000	0		2035					
	8.0000 -105.0000 395.5000													
5692	MFUSE SIDEWALL 271139	127	0	1278.00000	105.00000	338.87700	0		2036					
	8.0000 105.0000 338.8770													
5693	MFUSE SIDEWALL 271139	127	0	1278.00000	-105.00000	338.87700	0		2037					
	8.0000 -105.0000 338.8770													
5694	AFT CBDOOR 213571	128	0	1283.70000	5.56000	499.87400	0		2038	2039				
	3.7000 5.5600 499.8740													
5695	AFT CBDOOR 213571	128	0	1283.70000	-5.56000	499.87400	0		2040	2041				
	3.7000 -5.5600 499.8740													
5696	AFT CBDOOR 213581	128	0	1283.70000	41.50000	493.83700	0		2042	2043				
	3.7000 41.5000 493.8370													
5697	AFT CBDOOR 213581	128	0	1283.70000	-41.50000	493.83700	0		2044	2045				
	3.7000 -41.5000 493.8370													
5698	AFT CBDOOR 213591	128	0	1283.70000	82.60300	475.26400	0		2046	2047				
	3.7000 82.6030 475.2640													
5699	AFT CBDOOR 213591	128	0	1283.70000	-82.60300	475.26400	0		2048	2049				
	3.7000 -82.6030 475.2640													
5700	AFT CBDOOR 213601	128	0	1283.70000	104.12900	450.62000	0		2050	2051				
	3.7000 104.1290 450.6200													
5701	AFT CBDOOR 213601	128	0	1283.70000	-104.12900	450.62000	0		2052	2053				
	3.7000 -104.1290 450.6200													
5702	MFUSE BOTTOM 27481	130	0	1307.00000	0.00000	261.03600	0	2054	2055	2056				
	7.0000 0.0000 261.0360													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 45

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5703	MFUSE BOTTOM 27483	130	0	1307.00000	26.25000	261.36770	0		2057				
	7.0000 26.2500 261.3677												
5704	MFUSE BOTTOM 27483	130	0	1307.00000	-26.25000	261.36770	0		2058				
	7.0000 -26.2500 261.3677												
5705	MFUSE BOTTOM 27485	130	0	1307.00000	52.50000	262.35830	0	2059	2060				
	7.0000 52.5000 262.3583												
5706	MFUSE BOTTOM 27485	130	0	1307.00000	-52.50000	262.35830	0	2061	2062				
	7.0000 -52.5000 262.3583												
5707	MFUSE BOTTOM 27488	130	0	1307.00000	78.75000	264.00260	0	2063	2064				
	7.0000 78.7500 264.0026												
5708	MFUSE BOTTOM 27488	130	0	1307.00000	-78.75000	264.00260	0	2065	2066				
	7.0000 -78.7500 264.0026												
5709	MFUSE SIDEWALL 27495	130	0	1307.00000	105.00000	266.40000	0	2067	2068	2069			
	7.0000 105.0000 266.4000												
5710	MFUSE SIDEWALL 27495	130	0	1307.00000	-105.00000	266.40000	0	2070	2071	2072			
	7.0000 -105.0000 266.4000												
5711	MFUSE SIDEWALL 27503	130	0	1307.00000	105.00000	338.87700	0		2073				
	7.0000 105.0000 338.8770												
5712	MFUSE SIDEWALL 27503	130	0	1307.00000	-105.00000	338.87700	0		2074				
	7.0000 -105.0000 338.8770												
5713	MFUSE SIDEWALL 27504	130	0	1307.00000	105.00000	368.00000	0		2075				
	7.0000 105.0000 368.0000												
5714	MFUSE SIDEWALL 27504	130	0	1307.00000	-105.00000	368.00000	0		2076				
	7.0000 -105.0000 368.0000												
5715	LONGERON SILL 27507	130	0	1307.00000	105.00000	409.00000	0	2077	2078	2079			
	7.0000 105.0000 409.0000												
5716	LONGERON SILL 27507	130	0	1307.00000	-105.00000	409.00000	0	2080	2081	2082			
	7.0000 -105.0000 409.0000												
5717	MFUSE SIDEWALL 27822	130	0	1307.00000	105.00000	395.50000	0		2083				
	7.0000 105.0000 395.5000												
5718	MFUSE SIDEWALL 27822	130	0	1307.00000	-105.00000	395.50000	0		2084				
	7.0000 -105.0000 395.5000												
5719	AFT FUSE SHELL 34502	149	0	1494.70060	126.67830	292.37200	0		2085	2086			
	4.7006 126.6783 292.3720												
5720	AFT FUSE SHELL 34502	149	0	1494.70060	-126.67830	292.37200	0		2087	2088			
	4.7006 -126.6783 292.3720												
5721	AFT FUSE SHELL 34412	145	0	1454.86740	122.16030	290.73780	0		2089	2090			
	4.8674 122.1603 290.7378												
5722	AFT FUSE SHELL 34412	145	0	1454.86740	-122.16030	290.73780	0		2091	2092			
	4.8674 -122.1603 290.7378												
5723	AFT FUSE SHELL 34319	142	0	1421.00000	118.27990	289.45410	0		2093	2094			
	1.0000 118.2799 289.4541												
5724	AFT FUSE SHELL 34319	142	0	1421.00000	-118.27990	289.45410	0		2095	2096			
	1.0000 -118.2799 289.4541												
5725	AFT FUSE SHELL 3244	138	0	1380.00000	113.53910	288.03490	0		2097	2098			
	0.0000 113.5391 288.0349												
5726	AFT FUSE SHELL 3244	138	0	1380.00000	-113.53910	288.03490	0		2099	2100			
	0.0000 -113.5391 288.0349												
5727	AFT FUSE SHELL 3163	134	0	1340.00000	108.87580	286.65030	0		2101	2102			
	0.0000 108.8758 286.6503												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 46

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5728	AFT FUSE SHELL 3163	134	0	1340.00000	-108.87580	286.65030	0		2103	2104			
	0.0000 -108.8758 286.6503												
5729	AFT FUSE SHELL 34501	148	0	1489.91340	124.62300	317.00000	0		2105	2106			
	9.9134 124.6230 317.0000												
5730	AFT FUSE SHELL 34501	148	0	1489.91340	-124.62300	317.00000	0		2107	2108			
	9.9134 -124.6230 317.0000												
5731	AFT FUSE SHELL 34452	145	0	1456.11720	121.20920	317.00000	0		2109	2110			
	6.1172 121.2092 317.0000												
5732	AFT FUSE SHELL 34452	145	0	1456.11720	-121.20920	317.00000	0		2111	2112			
	6.1172 -121.2092 317.0000												
5733	AFT FUSE SHELL 34317	142	0	1421.00000	117.20770	317.00000	0		2113	2114			
	1.0000 117.2077 317.0000												
5734	AFT FUSE SHELL 34317	142	0	1421.00000	-117.20770	317.00000	0		2115	2116			
	1.0000 -117.2077 317.0000												
5735	AFT FUSE SHELL 3242	138	0	1380.00000	112.81720	317.00000	0		2117	2118			
	0.0000 112.8172 317.0000												
5736	AFT FUSE SHELL 3242	138	0	1380.00000	-112.81720	317.00000	0		2119	2120			
	0.0000 -112.8172 317.0000												
5737	AFT FUSE SHELL 3161	134	0	1340.00000	108.53390	317.00000	0		2121	2122			
	0.0000 108.5339 317.0000												
5738	AFT FUSE SHELL 3161	134	0	1340.00000	-108.53390	317.00000	0		2123	2124			
	0.0000 -108.5339 317.0000												
5739	AFT FUSE SHELL 34500	148	0	1485.66090	122.79730	338.87700	0		2125	2126			
	5.6609 122.7973 338.8770												
5740	AFT FUSE SHELL 34500	148	0	1485.66090	-122.79730	338.87700	0		2127	2128			
	5.6609 -122.7973 338.8770												
5741	AFT FUSE SHELL 34408	145	0	1451.86480	119.69710	338.87700	0		2129	2130			
	1.8648 119.6971 338.8770												
5742	AFT FUSE SHELL 34408	145	0	1451.86480	-119.69710	338.87700	0		2131	2132			
	1.8648 -119.6971 338.8770												
5743	AFT FUSE SHELL 34316	142	0	1421.00000	116.35610	338.87700	0		2133	2134			
	1.0000 116.3561 338.8770												
5744	AFT FUSE SHELL 34316	142	0	1421.00000	-116.35610	338.87700	0		2135	2136			
	1.0000 -116.3561 338.8770												
5745	AFT FUSE SHELL 3241	138	0	1380.00000	112.27190	338.87700	0		2137	2138			
	0.0000 112.2719 338.8770												
5746	AFT FUSE SHELL 3241	138	0	1380.00000	-112.27190	338.87700	0		2139	2140			
	0.0000 -112.2719 338.8770												
5747	AFT FUSE SHELL 3160	134	0	1340.00000	108.28740	338.87700	0		2141	2142			
	0.0000 108.2874 338.8770												
5748	AFT FUSE SHELL 3160	134	0	1340.00000	-108.28740	338.87700	0		2143	2144			
	0.0000 -108.2874 338.8770												
5749	AFT FUSE SHELL 34471	148	0	1480.00000	120.51310	368.00000	0		2145	2146			
	0.0000 120.5131 368.0000												
5750	AFT FUSE SHELL 34471	148	0	1480.00000	-120.51310	368.00000	0		2147	2148			
	0.0000 -120.5131 368.0000												
5751	AFT FUSE SHELL 34406	144	0	1446.20390	117.48260	368.00000	0		2149	2150			
	6.2039 117.4826 368.0000												
5752	AFT FUSE SHELL 34406	144	0	1446.20390	-117.48260	368.00000	0		2151	2152			
	6.2039 -117.4826 368.0000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 47

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5753	AFT FUSE SHELL 3314	142	0	1421.00000	115.22250	368.00000	0		2153	2154			
	1.0000 115.2225 368.0000												
5754	AFT FUSE SHELL 3314	142	0	1421.00000	-115.22250	368.00000	0		2155	2156			
	1.0000 -115.2225 368.0000												
5755	AFT FUSE SHELL 3240	138	0	1380.00000	111.54600	368.00000	0		2157	2158			
	0.0000 111.5460 368.0000												
5756	AFT FUSE SHELL 3240	138	0	1380.00000	-111.54600	368.00000	0		2159	2160			
	0.0000 -111.5460 368.0000												
5757	AFT FUSE SHELL 3159	134	0	1340.00000	107.95920	368.00000	0		2161	2162			
	0.0000 107.9592 368.0000												
5758	AFT FUSE SHELL 3159	134	0	1340.00000	-107.95920	368.00000	0		2163	2164			
	0.0000 -107.9592 368.0000												
5759	AFT FUSE SHELL 34493	148	0	1487.50000	119.78260	391.50000	0		2165	2166			
	7.5000 119.7826 391.5000												
5760	AFT FUSE SHELL 34493	148	0	1487.50000	-119.78260	391.50000	0		2167	2168			
	7.5000 -119.7826 391.5000												
5761	AFT FUSE SHELL 34424	146	0	1462.50000	117.69620	391.50000	0		2169	2170			
	2.5000 117.6962 391.5000												
5762	AFT FUSE SHELL 34424	146	0	1462.50000	-117.69620	391.50000	0		2171	2172			
	2.5000 -117.6962 391.5000												
5763	AFT FUSE SHELL 3312	142	0	1421.00000	114.30780	391.50000	0		2173	2174			
	1.0000 114.3078 391.5000												
5764	AFT FUSE SHELL 3312	142	0	1421.00000	-114.30780	391.50000	0		2175	2176			
	1.0000 -114.3078 391.5000												
5765	AFT FUSE SHELL 3239	138	0	1380.00000	110.96030	391.50000	0		2177	2178			
	0.0000 110.9603 391.5000												
5766	AFT FUSE SHELL 3239	138	0	1380.00000	-110.96030	391.50000	0		2179	2180			
	0.0000 -110.9603 391.5000												
5767	AFT FUSE SHELL 3158	134	0	1340.00000	107.69440	391.50000	0		2181	2182			
	0.0000 107.6944 391.5000												
5768	AFT FUSE SHELL 3158	134	0	1340.00000	-107.69440	391.50000	0		2183	2184			
	0.0000 -107.6944 391.5000												
5769	AFT FUSE SHELL 34553	149	0	1498.00150	0.00000	274.55840	0	2185		2186			
	8.0015 0.0000 274.5584												
5770	AFT FUSE SHELL 34420	145	0	1454.00000	0.00000	269.73480	0	2187		2188			
	4.0000 0.0000 269.7348												
5771	AFT FUSE SHELL 3326	142	0	1421.00000	0.00000	266.28770	0	2189		2190			
	1.0000 0.0000 266.2877												
5772	AFT FUSE SHELL 3251	138	0	1380.00000	0.00000	263.24820	0	2191		2192			
	0.0000 0.0000 263.2482												
5773	AFT FUSE SHELL 3218	134	0	1345.66000	0.00000	261.73520	0	2193		2194			
	5.6600 0.0000 261.7352												
5774	AFT FUSE SHELL 34551	149	0	1498.00150	30.00000	274.59540	0	2195		2196			
	8.0015 30.0000 274.5954												
5775	AFT FUSE SHELL 34551	149	0	1498.00150	-30.00000	274.59540	0	2197		2198			
	8.0015 -30.0000 274.5954												
5776	AFT FUSE SHELL 34419	145	0	1454.00000	30.00000	269.86790	0	2199		2200			
	4.0000 30.0000 269.8679												
5777	AFT FUSE SHELL 34419	145	0	1454.00000	-30.00000	269.86790	0	2201		2202			
	4.0000 -30.0000 269.8679												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 48

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5778	AFT FUSE SHELL 34325	142	0	1421.00000	30.00000	266.49440	0	2203	2204	2205			
	1.0000 30.0000 266.4944												
5779	AFT FUSE SHELL 34325	142	0	1421.00000	-30.00000	266.49440	0	2206	2207	2208			
	1.0000 -30.0000 266.4944												
5780	AFT FUSE SHELL 3250	138	0	1380.00000	30.00000	263.50040	0	2209	2210	2211			
	0.0000 30.0000 263.5004												
5781	AFT FUSE SHELL 3250	138	0	1380.00000	-30.00000	263.50040	0	2212	2213	2214			
	0.0000 -30.0000 263.5004												
5782	AFT FUSE SHELL 3214	134	0	1345.66000	30.00000	262.07080	0	2215	2216	2217			
	5.6600 30.0000 262.0708												
5783	AFT FUSE SHELL 3214	134	0	1345.66000	-30.00000	262.07080	0	2218	2219	2220			
	5.6600 -30.0000 262.0708												
5784	AFT FUSE SHELL 34550	149	0	1498.00150	52.50000	274.67500	0	2221		2222			
	8.0015 52.5000 274.6750												
5785	AFT FUSE SHELL 34550	149	0	1498.00150	-52.50000	274.67500	0	2223		2224			
	8.0015 -52.5000 274.6750												
5786	AFT FUSE SHELL 34417	145	0	1454.00000	52.50000	270.15610	0	2225	2226	2227			
	4.0000 52.5000 270.1561												
5787	AFT FUSE SHELL 34417	145	0	1454.00000	-52.50000	270.15610	0	2228	2229	2230			
	4.0000 -52.5000 270.1561												
5788	AFT FUSE SHELL 34323	142	0	1421.00000	52.50000	266.94410	0	2231	2232	2233			
	1.0000 52.5000 266.9441												
5789	AFT FUSE SHELL 34323	142	0	1421.00000	-52.50000	266.94410	0	2234	2235	2236			
	1.0000 -52.5000 266.9441												
5790	AFT FUSE SHELL 3248	138	0	1380.00000	52.50000	264.05060	0	2237	2238	2239			
	0.0000 52.5000 264.0506												
5791	AFT FUSE SHELL 3248	138	0	1380.00000	-52.50000	264.05060	0	2240	2241	2242			
	0.0000 -52.5000 264.0506												
5792	AFT FUSE SHELL 3209	134	0	1345.66000	52.50000	262.77550	0	2243	2244	2245			
	5.6600 52.5000 262.7755												
5793	AFT FUSE SHELL 3209	134	0	1345.66000	-52.50000	262.77550	0	2246	2247	2248			
	5.6600 -52.5000 262.7755												
5794	AFT FUSE SHELL 34549	149	0	1498.00150	90.00000	274.93340	0	2249	2250	2251			
	8.0015 90.0000 274.9334												
5795	AFT FUSE SHELL 34549	149	0	1498.00150	-90.00000	274.93340	0	2252	2253	2254			
	8.0015 -90.0000 274.9334												
5796	AFT FUSE SHELL 34416	145	0	1454.00000	90.00000	271.10100	0	2255	2256	2257			
	4.0000 90.0000 271.1010												
5797	AFT FUSE SHELL 34416	145	0	1454.00000	-90.00000	271.10100	0	2258	2259	2260			
	4.0000 -90.0000 271.1010												
5798	AFT FUSE SHELL 34322	142	0	1421.00000	90.00000	268.43110	0	2261	2262	2263			
	1.0000 90.0000 268.4311												
5799	AFT FUSE SHELL 34322	142	0	1421.00000	-90.00000	268.43110	0	2264	2265	2266			
	1.0000 -90.0000 268.4311												
5800	AFT FUSE SHELL 3247	138	0	1380.00000	90.00000	265.87920	0	2267	2268	2269			
	0.0000 90.0000 265.8792												
5801	AFT FUSE SHELL 3247	138	0	1380.00000	-90.00000	265.87920	0	2270	2271	2272			
	0.0000 -90.0000 265.8792												
5802	AFT FUSE SHELL 3142	133	0	1333.27240	91.75700	276.14200	0	2273	2274	2275			
	3.2724 91.7570 276.1420												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 49

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5803	AFT FUSE SHELL 703142	133	0	1333.27240	-91.75700	276.14200	0	2276	2277	2278			
	3.2724 -91.7570 276.1420												
5804	AFT HEAT SHIELD 36590	151	0	1514.49170	54.05900	296.19120	0	2279		2280			
	4.4917 54.0590 296.1912												
5805	AFT HEAT SHIELD 36590	151	0	1514.49170	-54.05900	296.19120	0	2281		2282			
	4.4917 -54.0590 296.1912												
5806	UPR HEAT SHIELD 35577	151	0	1511.68340	89.99990	309.12520	0	2283		2284			
	1.6834 89.9999 309.1252												
5807	UPR HEAT SHIELD 35577	151	0	1511.68340	-89.99990	309.12520	0	2285		2286			
	1.6834 -89.9999 309.1252												
5808	AFT FUSE SHELL 34727	151	0	1512.76640	0.00000	310.35600	0	2287		2288			
	2.7664 0.0000 310.3560												
5809	UPR HEAT SHIELD 35443	150	0	1508.16340	112.67760	327.07910	0	2289		2290			
	8.1634 112.6776 327.0791												
5810	UPR HEAT SHIELD 35443	150	0	1508.16340	-112.67760	327.07910	0	2291		2292			
	8.1634 -112.6776 327.0791												
5811	AFT HEAT SHIELD 36620	150	0	1508.80890	0.00000	332.80000	0	2293		2294			
	8.8089 0.0000 332.8000												
5812	AFT FUSE SHELL 34491	150	0	1501.07980	105.14800	367.99980	0	2295		2296			
	1.0798 105.1480 367.9998												
5813	AFT FUSE SHELL 34491	150	0	1501.07980	-105.14800	367.99980	0	2297		2298			
	1.0798 -105.1480 367.9998												
5814	UPR HEAT SHIELD 35728	150	0	1502.14630	0.00000	370.58570	0	2299		2300			
	2.1463 0.0000 370.5857												
5815	UPR HEAT SHIELD 35446	149	0	1496.93510	103.74800	391.50110	0	2301		2302			
	6.9351 103.7480 391.5011												
5816	UPR HEAT SHIELD 35446	149	0	1496.93510	-103.74800	391.50110	0	2303		2304			
	6.9351 -103.7480 391.5011												
5817	AFT FUSE SHELL 34563	149	0	1496.51110	0.00000	401.56640	0	2305		2306			
	6.5111 0.0000 401.5664												
5818	AFT FUSE SHELL 34531	149	0	1495.77100	31.18090	404.14570	0	2307		2308			
	5.7710 31.1809 404.1457												
5819	AFT FUSE SHELL 34531	149	0	1495.77100	-31.18090	404.14570	0	2309		2310			
	5.7710 -31.1809 404.1457												
5820	AFT FUSE SHELL 34488	149	0	1494.89930	54.05900	407.18740	0	2311		2312			
	4.8993 54.0590 407.1874												
5821	AFT FUSE SHELL 34488	149	0	1494.89930	-54.05900	407.18740	0	2313		2314			
	4.8993 -54.0590 407.1874												
5822	UPR HEAT SHIELD 35480	149	0	1493.96690	78.50000	410.43700	0	2315		2316			
	3.9669 78.5000 410.4370												
5823	UPR HEAT SHIELD 35480	149	0	1493.96690	-78.50000	410.43700	0	2317		2318			
	3.9669 -78.5000 410.4370												
5824	UPR HEAT SHIELD 35445	149	0	1493.05460	102.43050	413.61850	0	2319		2320			
	3.0546 102.4305 413.6185												
5825	UPR HEAT SHIELD 35445	149	0	1493.05460	-102.43050	413.61850	0	2321		2322			
	3.0546 -102.4305 413.6185												
5826	AFT FUSE SHELL 34428	148	0	1484.61390	78.50000	443.05490	0	2323		2324			
	4.6139 78.5000 443.0549												
5827	AFT FUSE SHELL 34428	148	0	1484.61390	-78.50000	443.05490	0	2325		2326			
	4.6139 -78.5000 443.0549												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 50

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5828	AFT FUSE SHELL 34690	148	0	1484.31810	52.77390	444.08840	0	2327	2328				
	4.3181 52.7739 444.0884												
5829	AFT FUSE SHELL 34690	148	0	1484.31810	-52.77390	444.08840	0	2329	2330				
	4.3181 -52.7739 444.0884												
5830	AFT HEAT SHIELD 36434	147	0	1472.65720	43.14770	484.75490	0	2331	2332				
	2.6572 43.1477 484.7549												
5831	AFT HEAT SHIELD 36434	147	0	1472.65720	-43.14770	484.75490	0	2333	2334				
	2.6572 -43.1477 484.7549												
5832	AFT HEAT SHIELD 36481	146	0	1466.72760	0.00000	505.43410	0	2335	2336				
	6.7276 0.0000 505.4341												
5833	ENG.1 THROAT 32	149	0	1496.90730	0.00000	457.88510	0	2337	2338	2339			
	6.9073 0.0000 457.8851												
5834	ENG.3 THROAT 85	152	0	1521.24980	56.30100	351.99960	0	2340	2341	2342			
	1.2498 56.3010 351.9996												
5835	ENG.2 THROAT 85	152	0	1521.24980	-56.30100	351.99950	0	2343	2344	2345			
	1.2498 -56.3010 351.9995												
5836	BODYFLAP 17255	158	0	1585.50000	30.00000	286.87000	0		2346				
	5.5000 30.0000 286.8700												
5837	BODYFLAP 17255	158	0	1585.50000	-30.00000	286.87000	0		2347				
	5.5000 -30.0000 286.8700												
5838	BODYFLAP 17257	154	0	1549.50000	30.00000	286.87000	0		2348				
	9.5000 30.0000 286.8700												
5839	BODYFLAP 17257	154	0	1549.50000	-30.00000	286.87000	0		2349				
	9.5000 -30.0000 286.8700												
5840	BODYFLAP 17256	158	0	1585.50000	90.00000	286.87000	0		2350				
	5.5000 90.0000 286.8700												
5841	BODYFLAP 17256	158	0	1585.50000	-90.00000	286.87000	0		2351				
	5.5000 -90.0000 286.8700												
5842	BODYFLAP 17258	154	0	1549.50000	90.00000	286.87000	0		2352				
	9.5000 90.0000 286.8700												
5843	BODYFLAP 17258	154	0	1549.50000	-90.00000	286.87000	0		2353				
	9.5000 -90.0000 286.8700												
5844	AFT FUSE SHELL 3263	140	0	1400.50000	21.49570	509.34480	0	2354	2355	2356			
	0.5000 21.4957 509.3448												
5845	AFT FUSE SHELL 3263	140	0	1400.50000	-21.49570	509.34480	0	2357	2358	2359			
	0.5000 -21.4957 509.3448												
5846	OMS POD SHELL 16151	133	0	1339.25510	24.25460	501.83360	0	2360	2361	2362			
	9.2551 24.2546 501.8336												
5847	OMS POD SHELL 16151	133	0	1339.25510	-24.25460	501.83360	0	2363	2364	2365			
	9.2551 -24.2546 501.8336												
5848	OMS POD SHELL 16555	150	0	1507.77330	94.96650	521.92230	0	2366	2367	2368			
	7.7733 94.9665 521.9223												
5849	OMS POD SHELL 16555	150	0	1507.77330	-94.96650	521.92230	0	2369	2370	2371			
	7.7733 -94.9665 521.9223												
5850	OMS POD SHELL 16584	150	0	1509.94080	91.39450	466.49460	0	2372	2373	2374			
	9.9408 91.3945 466.4946												
5851	OMS POD SHELL 16584	150	0	1509.94080	-91.39450	466.49460	0	2375	2376	2377			
	9.9408 -91.3945 466.4946												
5852	OMS POD SHELL 16608	149	0	1493.74020	54.10550	482.65790	0	2378	2379	2380			
	3.7402 54.1055 482.6579												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 51

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5853	OMS POD SHELL 16608	149	0	1493.74020	-54.10550	482.65790	0	2381	2382	2383				
	3.7402 -54.1055 482.6579													
5854	OMS POD SHELL 16586	149	0	1493.74020	80.17600	455.66110	0	2384	2385	2386				
	3.7402 80.1760 455.6611													
5855	OMS POD SHELL 16586	149	0	1493.74020	-80.17600	455.66110	0	2387	2388	2389				
	3.7402 -80.1760 455.6611													
5856	AFT RCS MODULE 90079	153	0	1535.49750	106.65830	461.85590	0	2390	2391	2392				
	5.4975 106.6583 461.8559													
5857	AFT RCS MODULE 90079	153	0	1535.49750	-106.65830	461.85590	0	2393	2394	2395				
	5.4975 -106.6583 461.8559													
5858	AFT RCS MODULE 90053	153	0	1535.49830	151.52880	466.99900	0	2396	2397	2398				
	5.4983 151.5288 466.9990													
5859	AFT RCS MODULE 90053	153	0	1535.49830	-151.52880	466.99900	0	2399	2400	2401				
	5.4983 -151.5288 466.9990													
5860	AFT RCS MODULE 90063	153	0	1535.49950	120.94420	431.73820	0	2402	2403	2404				
	5.4995 120.9442 431.7382													
5861	AFT RCS MODULE 90063	153	0	1535.49950	-120.94420	431.73820	0	2405	2406	2407				
	5.4995 -120.9442 431.7382													
5862	AFT RCS MODULE 90072	153	0	1535.50030	122.94130	492.17680	0		2408	2409				
	5.5003 122.9413 492.1768													
5863	AFT RCS MODULE 90072	153	0	1535.50030	-122.94130	492.17680	0		2410	2411				
	5.5003 -122.9413 492.1768													
5864	AFT RCS MODULE 90124	156	0	1568.50410	123.82150	464.27830	0	2412						
	8.5041 123.8215 464.2783													
5865	AFT RCS MODULE 90124	156	0	1568.50410	-123.82150	464.27830	0	2413						
	8.5041 -123.8215 464.2783													
5866	OMS POD SHELL 16318	148	0	1484.04190	136.66160	436.36310	0	2414	2415	2416				
	4.0419 136.6616 436.3631													
5867	OMS POD SHELL 16318	148	0	1484.04190	-136.66160	436.36310	0	2417	2418	2419				
	4.0419 -136.6616 436.3631													
5868	OMS POD SHELL 16319	143	0	1437.59460	139.89900	443.46530	0	2420	2421	2422				
	7.5946 139.8990 443.4653													
5869	OMS POD SHELL 16319	143	0	1437.59460	-139.89900	443.46530	0	2423	2424	2425				
	7.5946 -139.8990 443.4653													
5870	OMS POD SHELL 16248	139	0	1391.95120	132.06700	438.73800	0	2426	2427	2428				
	1.9512 132.0670 438.7380													
5871	OMS POD SHELL 16248	139	0	1391.95120	-132.06700	438.73800	0	2429	2430	2431				
	1.9512 -132.0670 438.7380													
5872	OMS POD SHELL 16126	133	0	1337.88500	119.67730	440.39700	0	2432	2433	2434				
	7.8850 119.6773 440.3970													
5873	OMS POD SHELL 16126	133	0	1337.88500	-119.67730	440.39700	0	2435	2436	2437				
	7.8850 -119.6773 440.3970													
5874	OMS POD SHELL 16367	148	0	1482.00090	148.57520	479.70270	0	2438	2439	2440				
	2.0009 148.5752 479.7027													
5875	OMS POD SHELL 16367	148	0	1482.00090	-148.57520	479.70270	0	2441	2442	2443				
	2.0009 -148.5752 479.7027													
5876	OMS POD SHELL 16287	143	0	1436.13490	145.65380	477.32630	0	2444	2445	2446				
	6.1349 145.6538 477.3263													
5877	OMS POD SHELL 16287	143	0	1436.13490	-145.65380	477.32630	0	2447	2448	2449				
	6.1349 -145.6538 477.3263													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 52

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5878	OMS POD SHELL 16179	139	0	1390.29640	141.28550	474.33120	0	2450	2451	2452				
	0.2964 141.2855 474.3312													
5879	OMS POD SHELL 16179	139	0	1390.29640	-141.28550	474.33120	0	2453	2454	2455				
	0.2964 -141.2855 474.3312													
5880	OMS POD SHELL 16118	133	0	1336.71450	124.10730	467.73770	0	2456	2457	2458				
	6.7145 124.1073 467.7377													
5881	OMS POD SHELL 16118	133	0	1336.71450	-124.10730	467.73770	0	2459	2460	2461				
	6.7145 -124.1073 467.7377													
5882	OMS POD SHELL 16430	148	0	1481.69680	124.10010	513.34210	0	2462	2463	2464				
	1.6968 124.1001 513.3421													
5883	OMS POD SHELL 16430	148	0	1481.69680	-124.10010	513.34210	0	2465	2466	2467				
	1.6968 -124.1001 513.3421													
5884	OMS POD SHELL 16282	143	0	1435.90830	120.34500	509.71580	0	2468	2469	2470				
	5.9083 120.3450 509.7158													
5885	OMS POD SHELL 16282	143	0	1435.90830	-120.34500	509.71580	0	2471	2472	2473				
	5.9083 -120.3450 509.7158													
5886	OMS POD SHELL 16238	139	0	1390.08560	116.37250	505.87960	0	2474	2475	2476				
	0.0856 116.3725 505.8796													
5887	OMS POD SHELL 16238	139	0	1390.08560	-116.37250	505.87960	0	2477	2478	2479				
	0.0856 -116.3725 505.8796													
5888	OMS POD SHELL 16159	133	0	1336.49370	104.32540	494.24580	0	2480	2481	2482				
	6.4937 104.3254 494.2458													
5889	OMS POD SHELL 16159	133	0	1336.49370	-104.32540	494.24580	0	2483	2484	2485				
	6.4937 -104.3254 494.2458													
5890	OMS POD SHELL 16437	148	0	1482.23700	85.46360	538.61640	0	2486	2487	2488				
	2.2370 85.4636 538.6164													
5891	OMS POD SHELL 16437	148	0	1482.23700	-85.46360	538.61640	0	2489	2490	2491				
	2.2370 -85.4636 538.6164													
5892	OMS POD SHELL 16310	143	0	1436.33510	83.39190	536.33770	0	2492	2493	2494				
	6.3351 83.3919 536.3377													
5893	OMS POD SHELL 16310	143	0	1436.33510	-83.39190	536.33770	0	2495	2496	2497				
	6.3351 -83.3919 536.3377													
5894	OMS POD SHELL 16231	139	0	1390.44720	80.81020	532.84380	0	2498	2499	2500				
	0.4472 80.8102 532.8438													
5895	OMS POD SHELL 16231	139	0	1390.44720	-80.81020	532.84380	0	2501	2502	2503				
	0.4472 -80.8102 532.8438													
5896	OMS POD SHELL 16136	133	0	1336.78040	74.49300	517.31790	0	2504	2505	2506				
	6.7804 74.4930 517.3179													
5897	OMS POD SHELL 16136	133	0	1336.78040	-74.49300	517.31790	0	2507	2508	2509				
	6.7804 -74.4930 517.3179													
5898	OMS POD SHELL 16522	148	0	1484.06300	48.22210	527.36980	0		2510	2511				
	4.0630 48.2221 527.3698													
5899	OMS POD SHELL 16522	148	0	1484.06300	-48.22210	527.36980	0		2512	2513				
	4.0630 -48.2221 527.3698													
5900	OMS POD SHELL 16382	143	0	1437.82650	51.89270	528.27320	0	2514	2515	2516				
	7.8265 51.8927 528.2732													
5901	OMS POD SHELL 16382	143	0	1437.82650	-51.89270	528.27320	0	2517	2518	2519				
	7.8265 -51.8927 528.2732													
5902	OMS POD SHELL 16266	139	0	1391.94590	49.47450	524.40880	0	2520	2521	2522				
	1.9459 49.4745 524.4088													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 53

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5903	OMS POD SHELL 16266	139	0	1391.94590	-49.47450	524.40880	0	2523	2524	2525			
	1.9459 -49.4745 524.4088												
5904	OMS POD SHELL 16145	133	0	1337.93240	48.80090	512.49790	0	2526	2527	2528			
	7.9324 48.8009 512.4979												
5905	OMS POD SHELL 16145	133	0	1337.93240	-48.80090	512.49790	0	2529	2530	2531			
	7.9324 -48.8009 512.4979												
5971	FWD RCS MODULE 14007	26	0	263.50000	0.00000	371.00020	0	2532	2533	2534			
	3.5000 0.0000 371.0002												
5972	LONGERON SILL 4490	58	0	582.00000	94.00000	410.00000	0	2535	2536	2537			
	2.0000 94.0000 410.0000												
5973	LONGERON SILL 704490	58	0	582.00000	-94.00000	410.00000	0	2538	2539	2540			
	2.0000 -94.0000 410.0000												
5974	MFUSE KEEL 1202	75	0	750.00000	0.00000	305.00000	0	2541	2542	2543			
	0.0000 0.0000 305.0000												
2719	ENG.1 COMBUST ZONE	146	0	1462.06080	0.00000	447.89220	0	2544	2545	2546	2547	2548	2549
	2.0608 0.0000 447.8922												
2720	ENG.1 NOZZLE EXIT	158	0	1587.54600	0.00000	483.87750	0	2550	2551	2552			
	7.5460 0.0000 483.8775												
2747	ENG.3 COMBUST ZONE	148	0	1485.61630	54.08500	345.71640	0	2553	2554	2555	2556	2557	2558
	5.6163 54.0850 345.7164												
2748	ENG.3 NOZZLE EXIT	161	0	1613.93550	62.06500	368.34280	0	2559	2560	2561			
	3.9355 62.0650 368.3428												
2733	ENG.2 COMBUST ZONE	148	0	1485.61630	-54.08500	345.71630	0	2562	2563	2564	2565	2566	2567
	5.6163 -54.0850 345.7163												
2734	ENG.2 NOZZLE EXIT	161	0	1613.93570	-62.06500	368.34250	0	2568	2569	2570			
	3.9357 -62.0650 368.3425												
2329	TAIL REAR SPAR	151	0	1514.25940	0.00000	636.80450	0	2571	2572	2573			
	4.2594 0.0000 636.8045												
2335	TAIL REAR SPAR	158	0	1580.60200	0.00000	725.66850	0		2574				
	0.6020 0.0000 725.6685												
1629	LEADING EDGE PANEL R	122	0	1222.53170	366.55960	304.49980	0			2575			
	2.5317 366.5596 304.4998												
1779	LEADING EDGE PANEL	122	0	1222.53170	-366.55960	304.49980	0			2576			
	2.5317 -366.5596 304.4998												
1608	IN-BOARD WING 5044	104	0	1040.00000	158.54000	303.50000	0			2577			
	0.0000 158.5400 303.5000												
5906	IN-BOARD WING 5821	119	0	1191.00000	167.00000	300.91050	0			2578			
	1.0000 167.0000 300.9105												
5907	IN-BOARD WING 5822	130	0	1307.00000	145.40300	291.00020	0			2579			
	7.0000 145.4030 291.0002												
5908	IN-BOARD WING 5823	130	0	1307.00000	195.78750	294.56750	0			2580			
	7.0000 195.7875 294.5675												
5909	IN-BOARD WING 5824	113	0	1139.33000	194.95610	303.65270	0			2581			
	9.3300 194.9561 303.6527												
5910	IN-BOARD WING 5825	124	0	1249.00000	144.98070	295.61380	0			2582			
	9.0000 144.9807 295.6138												
1612	IN-BOARD WING 5826	124	0	1249.00000	195.37120	299.11650	0			2583			
	9.0000 195.3712 299.1165												
5911	IN-BOARD WING 5827	136	0	1365.00000	145.80640	286.59160	0			2584			
	5.0000 145.8064 286.5916												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 54

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5912	IN-BOARD WING 5828	136	0	1365.00000	196.20400	290.01660	0		2585				
	5.0000 196.2040 290.0166												
5913	IN-BOARD WING 5829	107	0	1071.29930	195.02250	302.92710	0		2586				
	1.2993 195.0225 302.9271												
5914	OUT-BOARD WING 18461	119	0	1191.00000	251.09320	304.71150	0		2587				
	1.0000 251.0932 304.7115												
5915	OUT-BOARD WING 18462	124	0	1249.00000	251.26680	302.81530	0		2588				
	9.0000 251.2668 302.8153												
5916	OUT-BOARD WING 18463	124	0	1249.00000	309.72770	305.91280	0		2589				
	9.0000 309.7277 305.9128												
5917	OUT-BOARD WING 18464	130	0	1307.00000	251.66020	298.51590	0		2590				
	7.0000 251.6602 298.5159												
5918	OUT-BOARD WING 18465	130	0	1307.00000	310.02770	302.63480	0		2591				
	7.0000 310.0277 302.6348												
5919	OUT-BOARD WING 18466	130	0	1307.00000	369.91130	306.64690	0		2592				
	7.0000 369.9113 306.6469												
1633	OUT-BOARD WING 18468	136	0	1365.00000	252.08740	293.84800	0		2593				
	5.0000 252.0874 293.8480												
5921	OUT-BOARD WING 18469	136	0	1365.00000	310.45580	297.95750	0		2594				
	5.0000 310.4558 297.9575												
5922	OUT-BOARD WING 18470	136	0	1365.00000	370.31690	302.21500	0		2595				
	5.0000 370.3169 302.2150												
1638	OUT-BOARD WING 18473	136	0	1365.00000	432.67060	306.66760	0		2596				
	5.0000 432.6706 306.6676												
1617	OUT-BOARD WING 18474	119	0	1191.00000	315.09880	304.91440	0		2597				
	1.0000 315.0988 304.9144												
1621	OUT-BOARD WING 18475	127	0	1275.70200	399.88970	308.25330	0		2598				
	5.7020 399.8897 308.2533												
5925	OUT-BOARD WING 18476	112	0	1127.27240	251.32080	302.22490	0		2599				
	7.2724 251.3208 302.2249												
5926	IN-BOARD ELEVON 7121	142	0	1425.55000	146.00890	284.37960	0		2600				
	5.5500 146.0089 284.3796												
1806	IN-BOARD ELEVON 7122	142	0	1421.90540	210.38650	288.66170	0		2601				
	1.9054 210.3865 288.6617												
5927	IN-BOARD ELEVON 7123	141	0	1417.95000	280.25170	293.33100	0		2602				
	7.9500 280.2517 293.3310												
5928	IN-BOARD ELEVON 7124	148	0	1485.20000	145.92270	285.32100	0		2603				
	5.2000 145.9227 285.3210												
5929	IN-BOARD ELEVON 7125	147	0	1473.49890	210.32170	289.37020	0		2604				
	3.4989 210.3217 289.3702												
5930	IN-BOARD ELEVON 7126	146	0	1460.80000	280.22390	293.63540	0		2605				
	0.8000 280.2239 293.6354												
1814	OUT-BOARD ELEVON 8131	141	0	1414.53000	340.63300	297.39150	0		2606				
	4.5300 340.6330 297.3915												
5931	OUT-BOARD ELEVON 8132	141	0	1411.98570	385.54220	300.43800	0		2607				
	1.9857 385.5422 300.4380												
1818	OUT-BOARD ELEVON 8133	140	0	1409.30000	432.94320	303.68910	0		2608				
	9.3000 432.9432 303.6891												
5932	OUT-BOARD ELEVON 8134	144	0	1449.65000	340.62350	297.49440	0		2609				
	9.6500 340.6235 297.4944												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 55

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
5933	OUT-BOARD ELEVON 8135	144	0	1440.97860	385.55400	300.30890	0		2610				
	0.9786 385.5540 300.3089												
5934	OUT-BOARD ELEVON 8136	143	0	1431.82530	432.97610	303.32950	0		2611				
	1.8253 432.9761 303.3295												
5965	WING LEADING EDGE 9371	83	0	835.00000	141.15960	305.89140	0		2612				
	5.0000 141.1596 305.8914												
5966	WING LEADING EDGE 9372	94	0	949.25000	159.64890	303.38640	0		2613				
	9.2500 159.6489 303.3864												
1758	IN-BOARD WING 705044	104	0	1040.00000	-158.54000	303.50000	0		2614				
	0.0000 -158.5400 303.5000												
5936	IN-BOARD WING 705821	119	0	1191.00000	-167.00000	300.91050	0		2615				
	1.0000 -167.0000 300.9105												
5937	IN-BOARD WING 705822	130	0	1307.00000	-145.40300	291.00020	0		2616				
	7.0000 -145.4030 291.0002												
5938	IN-BOARD WING 705823	130	0	1307.00000	-195.78750	294.56750	0		2617				
	7.0000 -195.7875 294.5675												
5939	IN-BOARD WING 705824	113	0	1139.33000	-194.95610	303.65270	0		2618				
	9.3300 -194.9561 303.6527												
5940	IN-BOARD WING 705825	124	0	1249.00000	-144.98070	295.61380	0		2619				
	9.0000 -144.9807 295.6138												
1762	IN-BOARD WING 705826	124	0	1249.00000	-195.37120	299.11650	0		2620				
	9.0000 -195.3712 299.1165												
5941	IN-BOARD WING 705827	136	0	1365.00000	-145.80640	286.59160	0		2621				
	5.0000 -145.8064 286.5916												
5942	IN-BOARD WING 705828	136	0	1365.00000	-196.20400	290.01660	0		2622				
	5.0000 -196.2040 290.0166												
5943	IN-BOARD WING 705829	107	0	1071.29930	-195.02250	302.92710	0		2623				
	1.2993 -195.0225 302.9271												
5944	OUT-BOARD WING 718461	119	0	1191.00000	-251.09320	304.71150	0		2624				
	1.0000 -251.0932 304.7115												
5945	OUT-BOARD WING 718462	124	0	1249.00000	-251.26680	302.81530	0		2625				
	9.0000 -251.2668 302.8153												
5946	OUT-BOARD WING 718463	124	0	1249.00000	-309.72770	305.91280	0		2626				
	9.0000 -309.7277 305.9128												
5947	OUT-BOARD WING 718464	130	0	1307.00000	-251.66020	298.51590	0		2627				
	7.0000 -251.6602 298.5159												
5948	OUT-BOARD WING 718465	130	0	1307.00000	-310.02770	302.63480	0		2628				
	7.0000 -310.0277 302.6348												
5949	OUT-BOARD WING 718466	130	0	1307.00000	-369.91130	306.64690	0		2629				
	7.0000 -369.9113 306.6469												
1783	OUT-BOARD WING 718468	136	0	1365.00000	-252.08740	293.84800	0		2630				
	5.0000 -252.0874 293.8480												
5951	OUT-BOARD WING 718469	136	0	1365.00000	-310.45580	297.95750	0		2631				
	5.0000 -310.4558 297.9575												
5952	OUT-BOARD WING 718470	136	0	1365.00000	-370.31690	302.21500	0		2632				
	5.0000 -370.3169 302.2150												
1788	OUT-BOARD WING 718473	136	0	1365.00000	-432.67060	306.66760	0		2633				
	5.0000 -432.6706 306.6676												
1767	OUT-BOARD WING 718474	119	0	1191.00000	-315.09880	304.91440	0		2634				
	1.0000 -315.0988 304.9144												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 56

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
1771	OUT-BOARD WING 718475	127	0	1275.70200	-399.88970	308.25330	0		2635				
	5.7020 -399.8897 308.2533												
5955	OUT-BOARD WING 718476	112	0	1127.27240	-251.32080	302.22490	0		2636				
	7.2724 -251.3208 302.2249												
5956	IN-BOARD ELEVON 707121	142	0	1425.55000	-146.00890	284.37960	0		2637				
	5.5500 -146.0089 284.3796												
1826	IN-BOARD ELEVON 707122	142	0	1421.90540	-210.38650	288.66170	0		2638				
	1.9054 -210.3865 288.6617												
5957	IN-BOARD ELEVON 707123	141	0	1417.95000	-280.25170	293.33100	0		2639				
	7.9500 -280.2517 293.3310												
5958	IN-BOARD ELEVON 707124	148	0	1485.20000	-145.92270	285.32100	0		2640				
	5.2000 -145.9227 285.3210												
5959	IN-BOARD ELEVON 707125	147	0	1473.49890	-210.32170	289.37020	0		2641				
	3.4989 -210.3217 289.3702												
5960	IN-BOARD ELEVON 707126	146	0	1460.80000	-280.22390	293.63540	0		2642				
	0.8000 -280.2239 293.6354												
1834	OUT-BOARD ELEVON 708131	141	0	1414.53000	-340.63300	297.39150	0		2643				
	4.5300 -340.6330 297.3915												
5961	OUT-BOARD ELEVON 708132	141	0	1411.98570	-385.54220	300.43800	0		2644				
	1.9857 -385.5422 300.4380												
1838	OUT-BOARD ELEVON 708133	140	0	1409.30000	-432.94320	303.68910	0		2645				
	9.3000 -432.9432 303.6891												
5962	OUT-BOARD ELEVON 708134	144	0	1449.65000	-340.62350	297.49440	0		2646				
	9.6500 -340.6235 297.4944												
5963	OUT-BOARD ELEVON 708135	144	0	1440.97860	-385.55400	300.30890	0		2647				
	0.9786 -385.5540 300.3089												
5964	OUT-BOARD ELEVON 708136	143	0	1431.82530	-432.97610	303.32950	0		2648				
	1.8253 -432.9761 303.3295												
5967	WING LEAD EDGE 709371	83	0	835.00000	-141.15960	305.89140	0		2649				
	5.0000 -141.1596 305.8914												
5968	WING LEAD EDGE 709372	94	0	949.25000	-159.64890	303.38640	0		2650				
	9.2500 -159.6489 303.3864												
90	ORB/ET FWD	38	0	388.04500	0.00000	283.84000	0	2651	2652	2653			
	8.0450 0.0000 283.8400												
91	ORB/ET I/F AFT R	131	0	1317.00000	96.50000	267.55600	0	2654	2655	2656			
	7.0000 96.5000 267.5560												
1091	ORB/ET I/F AFT L	131	0	1317.00000	-96.50000	267.55600	0	2657	2658	2659			
	7.0000 -96.5000 267.5560												
226	LOX FEEDLINE AFT	133	0	1330.50000	70.00000	227.83200	0	2660	2661	2662	2663	2664	2665
	0.5000 70.0000 227.8320												
200	FWD INTERTANK	15	0	156.10000	0.00000	63.50000	0		2666	2667		2668	2669
	6.1000 0.0000 63.5000												
216	LH2 TANK CYLINDER	123	0	1232.50000	0.00000	63.50000	0	2670	2671	2672			
	2.5000 0.0000 63.5000												
704	INTERSTAGE	24	0	248.67500	0.00000	63.50000	0		2673	2674			
	8.6750 0.0000 63.5000												
2874	FWD LH2 DOME	33	0	332.02500	0.00000	63.50000	0		2675	2676			
	2.0250 0.0000 63.5000												
662	LH2 TANK CYLINDER	77	0	778.75000	0.00000	63.50000	0		2677	2678			
	8.7500 0.0000 63.5000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 57

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
691	LH2 TANK CYLINDER	64	0	640.35000	0.00000	63.50000	0		2679				
	0.3500 0.0000 63.5000												
606	LH2 TANK CYLINDER	113	0	1130.00000	0.00000	63.50000	0	2680	2681				
	0.0000 0.0000 63.5000												
634	LH2 TANK CYLINDER	100	0	1006.65000	0.00000	63.50000	0	2682	2683				
	6.6500 0.0000 63.5000												
635	LH2 TANK CYLINDER	88	0	882.80000	0.00000	63.50000	0		2684				
	2.8000 0.0000 63.5000												
723	LH2 TANK CYLINDER	51	0	517.12000	0.00000	63.50000	0	2685	2686				
	7.1200 0.0000 63.5000												
546	LH2 DOME LAT K.	140	0	1401.14700	0.00000	63.50000	0	2687	2688				
	1.1470 0.0000 63.5000												
302	FRUSTUM	13	0	136.00000	250.50000	63.50000	0	2689	2690				
	6.0000 250.5000 63.5000												
307	FRUSTUM-SEP. RING INT.	20	0	201.00000	250.50000	63.50000	0	2691	2692				
	1.0000 250.5000 63.5000												
309	STA. X = 492.5 LWR	29	0	296.25000	250.50000	-8.94800	0		2693				
	6.2500 250.5000 -8.9480												
390	FWD PRESSURE POINT	33	0	337.98000	250.50000	63.50000	0	2694					
	7.9800 250.5000 63.5000												
313	STA. X = 691.48 INB	49	0	497.48000	177.76000	63.50000	0	2695					
	7.4800 177.7600 63.5000												
314	STA. X = 691.48 OTB	49	0	497.48000	323.24000	63.50000	0	2696					
	7.4800 323.2400 63.5000												
315	STA. X = 691.48 UPR	49	0	497.48000	250.50000	136.24000	0	2697	2698				
	7.4800 250.5000 136.2400												
316	STA. X = 691.48 LWR	49	0	497.48000	250.50000	-9.24000	0		2699				
	7.4800 250.5000 -9.2400												
317	STA. X = 851.48 INB	65	0	657.48000	177.76000	63.50000	0	2700					
	7.4800 177.7600 63.5000												
318	STA. X = 851.48 OTB	65	0	657.48000	323.24000	63.50000	0	2701					
	7.4800 323.2400 63.5000												
319	STA. X = 851.48 UPR	65	0	657.48000	250.50000	136.24000	0	2702	2703				
	7.4800 250.5000 136.2400												
320	STA. X = 851.48 LWR	65	0	657.48000	250.50000	-9.24000	0		2704				
	7.4800 250.5000 -9.2400												
321	STA. X = 1011.48 INB	81	0	817.48000	177.76000	63.50000	0	2705					
	7.4800 177.7600 63.5000												
322	STA. X = 1011.48 OTB	81	0	817.48000	323.24000	63.50000	0	2706					
	7.4800 323.2400 63.5000												
323	STA. X = 1011.48 UPR	81	0	817.48000	250.50000	136.24000	0		2707				
	7.4800 250.5000 136.2400												
324	STA. X = 1011.48 LWR	81	0	817.48000	250.50000	-9.24000	0		2708				
	7.4800 250.5000 -9.2400												
328	STA. X = 1203.48 LWR	97	0	977.48000	250.50000	-9.24000	0		2709				
	7.4800 250.5000 -9.2400												
329	STA. X = 1385.46 INB	119	0	1191.46000	177.76000	63.50000	0	2710					
	1.4600 177.7600 63.5000												
330	STA. X = 1385.46 OTB	119	0	1191.46000	323.24000	63.50000	0	2711					
	1.4600 323.2400 63.5000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 58

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
331	STA. X = 1385.46 UPR	119	0	1191.46000	250.50000	136.24000	0		2712				
	1.4600 250.5000 136.2400												
332	STA. X = 1385.46 LWR	119	0	1191.46000	250.50000	-9.24000	0		2713				
	1.4600 250.5000 -9.2400												
335	STA. X = 1511.00 LWR	131	0	1317.00000	250.50000	-9.24000	0		2714				
	7.0000 250.5000 -9.2400												
343	STA. X = 1800.72 INB	162	0	1629.85000	177.76000	63.50000	0	2715					
	9.8500 177.7600 63.5000												
344	STA. X = 1800.72 OTB	162	0	1629.85000	323.24000	63.50000	0	2716					
	9.8500 323.2400 63.5000												
345	STA. X = 1800.72 UPR	162	0	1629.85000	250.50000	136.24000	0		2717				
	9.8500 250.5000 136.2400												
346	STA. X = 1800.72 LWR	162	0	1629.85000	250.50000	-9.24000	0		2718				
	9.8500 250.5000 -9.2400												
391	STA 1873.52 CNTR-LINE	167	0	1679.52000	250.50000	63.50000	0	2719					
	9.5200 250.5000 63.5000												
356	NOZZLE PIVOT	166	0	1669.06000	250.50000	63.50000	0	2720	2721	2722	2723	2724	2725
	9.0600 250.5000 63.5000												
357	NOZZLE C.G.	168	0	1680.26000	250.50000	63.50000	0		2726	2727			
	0.2600 250.5000 63.5000												
350	SRB LAUNCH PAD NODE	174	0	1741.95000	304.30000	-29.68400	0	2728	2729	2730			
	1.9500 304.3000 -29.6840												
351	SRB LAUNCH PAD NODE	174	0	1741.95000	196.70000	-29.68400	0	2731	2732	2733			
	1.9500 196.7000 -29.6840												
352	SRB LAUNCH PAD NODE	174	0	1741.95000	196.70000	156.68400	0	2734	2735	2736			
	1.9500 196.7000 156.6840												
353	SRB LAUNCH PAD NODE	174	0	1741.95000	304.30000	156.68400	0	2737	2738	2739			
	1.9500 304.3000 156.6840												
1302	FRUSTUM	13	0	136.00000	-250.50000	63.50000	0		2740	2741			
	6.0000 -250.5000 63.5000												
1307	FRUSTUM-SEP. RING INT.	20	0	201.00000	-250.50000	63.50000	0		2742	2743			
	1.0000 -250.5000 63.5000												
1309	STA. X = 492.5 LWR	29	0	296.25000	-250.50000	-8.94800	0		2744				
	6.2500 -250.5000 -8.9480												
1390	FWD PRESSURE POINT	33	0	337.98000	-250.50000	63.50000	0	2745					
	7.9800 -250.5000 63.5000												
1313	STA. X = 691.48 INB	49	0	497.48000	-177.76000	63.50000	0		2746				
	7.4800 -177.7600 63.5000												
1314	STA. X = 691.48 OTB	49	0	497.48000	-323.24000	63.50000	0		2747				
	7.4800 -323.2400 63.5000												
1315	STA. X = 691.48 UPR	49	0	497.48000	-250.50000	136.24000	0		2748	2749			
	7.4800 -250.5000 136.2400												
1316	STA. X = 691.48 LWR	49	0	497.48000	-250.50000	-9.24000	0		2750				
	7.4800 -250.5000 -9.2400												
1317	STA. X = 851.48 INB	65	0	657.48000	-177.76000	63.50000	0		2751				
	7.4800 -177.7600 63.5000												
1318	STA. X = 851.48 OTB	65	0	657.48000	-323.24000	63.50000	0		2752				
	7.4800 -323.2400 63.5000												
1319	STA. X = 851.48 UPR	65	0	657.48000	-250.50000	136.24000	0		2753	2754			
	7.4800 -250.5000 136.2400												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 59

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
1320	STA. X = 851.48 LWR	65	0	657.48000	-250.50000	-9.24000	0		2755				
	7.4800 -250.5000 -9.2400												
1321	STA. X = 1011.48 INB	81	0	817.48000	-177.76000	63.50000	0	2756					
	7.4800 -177.7600 63.5000												
1322	STA. X = 1011.48 OTB	81	0	817.48000	-323.24000	63.50000	0	2757					
	7.4800 -323.2400 63.5000												
1323	STA. X = 1011.48 UPR	81	0	817.48000	-250.50000	136.24000	0		2758				
	7.4800 -250.5000 136.2400												
1324	STA. X = 1011.48 LWR	81	0	817.48000	-250.50000	-9.24000	0		2759				
	7.4800 -250.5000 -9.2400												
1328	STA. X = 1203.48 LWR	97	0	977.48000	-250.50000	-9.24000	0		2760				
	7.4800 -250.5000 -9.2400												
1329	STA. X = 1385.46 INB	119	0	1191.46000	-177.76000	63.50000	0	2761					
	1.4600 -177.7600 63.5000												
1330	STA. X = 1385.46 OTB	119	0	1191.46000	-323.24000	63.50000	0	2762					
	1.4600 -323.2400 63.5000												
1331	STA. X = 1385.46 UPR	119	0	1191.46000	-250.50000	136.24000	0		2763				
	1.4600 -250.5000 136.2400												
1332	STA. X = 1385.46 LWR	119	0	1191.46000	-250.50000	-9.24000	0		2764				
	1.4600 -250.5000 -9.2400												
1335	STA. X = 1511.00 LWR	131	0	1317.00000	-250.50000	-9.24000	0		2765				
	7.0000 -250.5000 -9.2400												
1343	STA. X = 1800.72 INB	162	0	1629.85000	-177.76000	63.50000	0	2766					
	9.8500 -177.7600 63.5000												
1344	STA. X = 1800.72 OTB	162	0	1629.85000	-323.24000	63.50000	0	2767					
	9.8500 -323.2400 63.5000												
1345	STA. X = 1800.72 UPR	162	0	1629.85000	-250.50000	136.24000	0		2768				
	9.8500 -250.5000 136.2400												
1346	STA. X = 1800.72 LWR	162	0	1629.85000	-250.50000	-9.24000	0		2769				
	9.8500 -250.5000 -9.2400												
1391	STA 1873.52 CNTR-LINE	167	0	1679.52000	-250.50000	63.50000	0	2770					
	9.5200 -250.5000 63.5000												
1356	NOZZLE PIVOT	166	0	1669.06000	-250.50000	63.50000	0	2771	2772	2773	2774	2775	2776
	9.0600 -250.5000 63.5000												
1357	NOZZLE C.G.	168	0	1680.26000	-250.50000	63.50000	0		2777	2778			
	0.2600 -250.5000 63.5000												
1350	SRB LAUNCH PAD NODE	174	0	1741.95000	-304.30000	-29.68400	0	2779	2780	2781			
	1.9500 -304.3000 -29.6840												
1351	SRB LAUNCH PAD NODE	174	0	1741.95000	-196.70000	-29.68400	0	2782	2783	2784			
	1.9500 -196.7000 -29.6840												
1352	SRB LAUNCH PAD NODE	174	0	1741.95000	-196.70000	156.68400	0	2785	2786	2787			
	1.9500 -196.7000 156.6840												
1353	SRB LAUNCH PAD NODE	174	0	1741.95000	-304.30000	156.68400	0	2788	2789	2790			
	1.9500 -304.3000 156.6840												
1117	ODS DOCKING I/F	64	0	649.00000	0.00000	462.73000	0	2791	2792	2793	2794	2795	2796
	9.0000 0.0000 462.7300												
100	BRIDGE 10 PAYLOAD ATTACH	10	0	1092.60000	94.00000	414.00000	0	2797	2798	2799	2800		2801
	92.600 94.000 414.000												
101	BRIDGE 10 PAYLOAD ATTACH	10	0	1096.53000	94.00000	414.00000	0	2802	2803	2804	2805		2806
	96.530 94.000 414.000												

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 60

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
102	BRIDGE 10 PAYLOAD ATTACH	11	0	1100.47000	94.00000	414.00000	0	2807	2808	2809	2810		2811	
	00.470 94.000 414.000													
103	BRIDGE 10 PAYLOAD ATTACH	11	0	1104.40000	94.00000	414.00000	0	2812	2813	2814	2815		2816	
	04.400 94.000 414.000													
104	BRIDGE 10 PAYLOAD ATTACH	11	0	1108.33000	94.00000	414.00000	0	2817	2818	2819	2820		2821	
	08.330 94.000 414.000													
105	BRIDGE 10 PAYLOAD ATTACH	11	0	1112.27000	94.00000	414.00000	0	2822	2823	2824	2825		2826	
	12.270 94.000 414.000													
106	BRIDGE 10 PAYLOAD ATTACH	11	0	1116.20000	94.00000	414.00000	0	2827	2828	2829	2830		2831	
	16.200 94.000 414.000													
107	BRIDGE 10 PAYLOAD ATTACH	11	0	1120.13000	94.00000	414.00000	0	2832	2833	2834	2835		2836	
	20.130 94.000 414.000													
108	BRIDGE 10 PAYLOAD ATTACH	11	0	1124.07000	94.00000	414.00000	0	2837	2838	2839	2840		2841	
	24.070 94.000 414.000													
109	BRIDGE 10 PAYLOAD ATTACH	11	0	1128.00000	94.00000	414.00000	0	2842	2843	2844	2845		2846	
	28.000 94.000 414.000													
110	BRIDGE 10 PAYLOAD ATTACH	11	0	1131.93000	94.00000	414.00000	0	2847	2848	2849	2850		2851	
	31.930 94.000 414.000													
111	BRIDGE 10 PAYLOAD ATTACH	11	0	1135.87000	94.00000	414.00000	0	2852	2853	2854	2855		2856	
	35.870 94.000 414.000													
112	IUS SPRING ATTACH	11	0	1102.43000	91.10000	408.20000	0		2857					
	02.430 91.100 408.200													
113	IUS SPRING ATTACH	11	0	1110.30000	91.10000	408.20000	0		2858					
	10.300 91.100 408.200													
114	IUS SPRING ATTACH	11	0	1114.23000	91.10000	408.20000	0		2859					
	14.230 91.100 408.200													
115	ROEU ATTACH	11	0	1108.34000	95.16000	411.60000	0	2860	2861	2862	2863	2864	2865	
	08.340 95.160 411.600													
116	PDA I/F	10	0	1076.99000	76.20000	416.00000	0	2866	2867	2868	2869	2870	2871	
	76.990 76.200 416.000													
10001	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	410.37000	0	2872	2873	2874				
	7.5000 93.8800 410.3700													
10002	Bay 13 GAS Payload Attach	129	0	1290.13000	93.88000	410.37000	0	2875	2876	2877				
	0.1300 93.8800 410.3700													
10004	Bay 13 GAS Payload Attach	129	0	1290.00000	87.19000	414.09000	0	2878	2879	2880				
	0.0000 87.1900 414.0900													
10005	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	411.93000	0	2881	2882	2883				
	7.5000 88.0000 411.9300													
10006	Bay 13 GAS Payload Attach	129	0	1290.00000	87.19000	411.09000	0	2884	2885	2886				
	0.0000 87.1900 411.0900													
10007	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	410.37000	0	2887	2888	2889				
	7.5000 88.2800 410.3700													
10008	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	409.93000	0	2890	2891	2892				
	7.5000 88.0000 409.9300													
10009	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	408.93000	0	2893	2894	2895				
	7.5000 88.0000 408.9300													
10010	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	406.93000	0	2896	2897	2898				
	7.5000 88.0000 406.9300													
10011	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	410.37000	0	2899	2900	2901				
	2.5000 93.8800 410.3700													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 61

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
10012	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	410.37000	0	2902	2903	2904				
	2.5000 88.2800 410.3700													
10013	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	411.93000	0	2905	2906	2907				
	2.5000 88.0000 411.9300													
10016	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	409.93000	0	2908	2909	2910				
	2.5000 88.0000 409.9300													
10017	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	408.93000	0	2911	2912	2913				
	2.5000 88.0000 408.9300													
10018	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	406.93000	0	2914	2915	2916				
	2.5000 88.0000 406.9300													
10019	Bay 13 GAS Payload Attach	126	0	1263.00000	87.19000	414.09000	0	2917	2918	2919				
	3.0000 87.1900 414.0900													
10020	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	409.93000	0	2920	2921	2922				
	0.5000 88.0000 409.9300													
10021	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	408.93000	0	2923	2924	2925				
	0.5000 88.0000 408.9300													
10022	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	406.93000	0	2926	2927	2928				
	0.5000 88.0000 406.9300													
10023	Bay 13 GAS Payload Attach	126	0	1264.88000	93.88000	410.37000	0	2929	2930	2931				
	4.8800 93.8800 410.3700													
10025	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	410.37000	0	2932	2933	2934				
	0.5000 93.8800 410.3700													
10026	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	411.93000	0	2935	2936	2937				
	5.5000 88.0000 411.9300													
10027	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	410.37000	0	2938	2939	2940				
	0.5000 88.2800 410.3700													
10028	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	411.93000	0	2941	2942	2943				
	0.5000 88.0000 411.9300													
10029	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	405.07000	0	2944	2945	2946				
	2.5000 93.8800 405.0700													
10030	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	405.07000	0	2947	2948	2949				
	2.5000 88.2800 405.0700													
10031	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	405.07000	0	2950	2951	2952				
	0.5000 93.8800 405.0700													
10032	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	405.07000	0	2953	2954	2955				
	0.5000 88.2800 405.0700													
10033	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	405.07000	0	2956	2957	2958				
	7.5000 88.2800 405.0700													
10034	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	405.07000	0	2959	2960	2961				
	7.5000 93.8800 405.0700													
10035	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	400.90000	0	2962	2963	2964				
	2.5000 93.8800 400.9000													
10036	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	400.90000	0	2965	2966	2967				
	0.5000 93.8800 400.9000													
10037	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	400.90000	0	2968	2969	2970				
	2.5000 88.2800 400.9000													
10038	Bay 13 GAS Payload Attach	129	0	1290.00000	86.99000	398.46000	0	2971	2972	2973				
	0.0000 86.9900 398.4600													
10039	Bay 13 GAS Payload Attach	127	0	1278.00000	94.00000	396.50000	0	2974	2975	2976				
	8.0000 94.0000 396.5000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 62

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
10040	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	395.77000	0	2977	2978	2979				
	2.5000 93.8800 395.7700													
10041	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	395.77000	0	2980	2981	2982				
	0.5000 93.8800 395.7700													
10042	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	400.90000	0	2983	2984	2985				
	0.5000 88.2800 400.9000													
10043	Bay 13 GAS Payload Attach	126	0	1263.00000	86.99000	398.46000	0	2986	2987	2988				
	3.0000 86.9900 398.4600													
10044	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	396.30000	0	2989	2990	2991				
	0.5000 88.0000 396.3000													
10045	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	395.77000	0	2992	2993	2994				
	0.5000 88.2800 395.7700													
10046	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	396.30000	0	2995	2996	2997				
	2.5000 88.0000 396.3000													
10047	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	394.30000	0	2998	2999	3000				
	0.5000 88.0000 394.3000													
10048	Bay 13 GAS Payload Attach	126	0	1263.00000	86.99000	395.46000	0	3001	3002	3003				
	3.0000 86.9900 395.4600													
10049	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	393.30000	0	3004	3005	3006				
	0.5000 88.0000 393.3000													
10050	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	395.77000	0	3007	3008	3009				
	2.5000 88.2800 395.7700													
10051	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	393.30000	0	3010	3011	3012				
	2.5000 88.0000 393.3000													
10052	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	394.30000	0	3013	3014	3015				
	2.5000 88.0000 394.3000													
10053	Bay 13 GAS Payload Attach	129	0	1290.00000	86.99000	395.46000	0	3016	3017	3018				
	0.0000 86.9900 395.4600													
10054	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	396.30000	0	3019	3020	3021				
	7.5000 88.0000 396.3000													
10055	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	400.90000	0	3022	3023	3024				
	7.5000 88.2800 400.9000													
10056	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	391.30000	0	3025	3026	3027				
	2.5000 93.8800 391.3000													
10057	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	391.30000	0	3028	3029	3030				
	0.5000 93.8800 391.3000													
10058	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	391.30000	0	3031	3032	3033				
	0.5000 88.0000 391.3000													
10059	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	391.30000	0	3034	3035	3036				
	2.5000 88.0000 391.3000													
10060	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	396.30000	0	3037	3038	3039				
	5.5000 88.0000 396.3000													
10061	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	393.30000	0	3040	3041	3042				
	5.5000 88.0000 393.3000													
10062	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	394.30000	0	3043	3044	3045				
	5.5000 88.0000 394.3000													
10063	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	393.30000	0	3046	3047	3048				
	7.5000 88.0000 393.3000													
10064	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	394.30000	0	3049	3050	3051				
	7.5000 88.0000 394.3000													

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 63

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
10065	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	400.90000	0	3052	3053	3054			
	7.5000 93.8800 400.9000												
10066	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	395.77000	0	3055	3056	3057			
	7.5000 93.8800 395.7700												
10067	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	391.30000	0	3058	3059	3060			
	7.5000 93.8800 391.3000												
10068	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	395.77000	0	3061	3062	3063			
	7.5000 88.2800 395.7700												
10069	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	391.30000	0	3064	3065	3066			
	7.5000 88.0000 391.3000												
10070	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	400.90000	0	3067	3068	3069			
	5.5000 93.8800 400.9000												
10071	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	400.90000	0	3070	3071	3072			
	5.5000 88.2800 400.9000												
10072	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	395.77000	0	3073	3074	3075			
	5.5000 93.8800 395.7700												
10073	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	395.77000	0	3076	3077	3078			
	5.5000 88.2800 395.7700												
10074	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	391.30000	0	3079	3080	3081			
	5.5000 93.8800 391.3000												
10075	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	391.30000	0	3082	3083	3084			
	5.5000 88.0000 391.3000												
10076	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	405.07000	0	3085	3086	3087			
	5.5000 88.2800 405.0700												
10077	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	405.07000	0	3088	3089	3090			
	5.5000 93.8800 405.0700												
10078	Bay 13 GAS Payload Attach	126	0	1263.00000	87.19000	411.09000	0	3091	3092	3093			
	3.0000 87.1900 411.0900												
10079	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	406.93000	0	3094	3095	3096			
	5.5000 88.0000 406.9300												
10080	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	408.93000	0	3097	3098	3099			
	5.5000 88.0000 408.9300												
10081	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	410.37000	0	3100	3101	3102			
	5.5000 88.2800 410.3700												
10082	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	409.93000	0	3103	3104	3105			
	5.5000 88.0000 409.9300												
10083	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	410.37000	0	3106	3107	3108			
	5.5000 93.8800 410.3700												
100001	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							3109
:													:
101876	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							4984

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 64

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    GRID   *90                                          388.045              0*
    2 -    *                 283.84                456
    3 -    GRID   *91                                             1317            96.5*
    4 -    *                 267.556               456
    5 -    GRID   *100                                         1092.6               94*
    6 -    *                    414                5
    7 -    GRID   *101                                        1096.53               94*
    8 -    *                    414                5
    9 -    GRID   *102                                        1100.47               94*
   10 -    *                    414                5
   11 -    GRID   *103                                         1104.4               94*
   12 -    *                    414                5
   13 -    GRID   *104                                        1108.33               94*
   14 -    *                    414                5
   15 -    GRID   *105                                        1112.27               94*
   16 -    *                    414                5
   17 -    GRID   *106                                         1116.2               94*
   18 -    *                    414                5
   19 -    GRID   *107                                        1120.13               94*
   20 -    *                    414                5
   21 -    GRID   *108                                        1124.07               94*
   22 -    *                    414                5
   23 -    GRID   *109                                           1128               94*
   24 -    *                    414                5
   25 -    GRID   *110                                        1131.93               94*
   26 -    *                    414                5
   27 -    GRID   *111                                        1135.87               94*
   28 -    *                    414                5
   29 -    GRID   *112                                        1102.43             91.1*
   30 -    *                  408.2                13456
   31 -    GRID   *113                                         1110.3             91.1*
   32 -    *                  408.2                13456
   33 -    GRID   *114                                        1114.23             91.1*
   34 -    *                  408.2                13456
   35 -    GRID   *115                                        1108.34            95.16*
   36 -    *                  411.6
   37 -    GRID   *116                                        1076.99             76.2*
   38 -    *                    416
   39 -    GRID   *200                                         156.1                0*
   40 -    *                   63.5                14
   41 -    GRID   *216                                         1232.5               0*
   42 -    *                   63.5                456
   43 -    GRID   *226                                         1330.5              70*
   44 -    *                 227.832
   45 -    GRID   *302                                            136            250.5*
   46 -    *                   63.5                1456
   47 -    GRID   *307                                            201            250.5*
   48 -    *                   63.5                1456
   49 -    GRID   *309                                        296.25             250.5*
   50 -    *                  -8.948               12456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 65

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
   51 -    GRID   *313                                      497.48          177.76*
   52 -    *                 63.5                13456
   53 -    GRID   *314                                      497.48          323.24*
   54 -    *                 63.5                13456
   55 -    GRID   *315                                      497.48           250.5*
   56 -    *                136.24                1456
   57 -    GRID   *316                                      497.48           250.5*
   58 -    *                 -9.24                12456
   59 -    GRID   *317                                      657.48          177.76*
   60 -    *                 63.5                13456
   61 -    GRID   *318                                      657.48          323.24*
   62 -    *                 63.5                13456
   63 -    GRID   *319                                      657.48           250.5*
   64 -    *                136.24                1456
   65 -    GRID   *320                                      657.48           250.5*
   66 -    *                 -9.24                12456
   67 -    GRID   *321                                      817.48          177.76*
   68 -    *                 63.5                13456
   69 -    GRID   *322                                      817.48          323.24*
   70 -    *                 63.5                13456
   71 -    GRID   *323                                      817.48           250.5*
   72 -    *                136.24                12456
   73 -    GRID   *324                                      817.48           250.5*
   74 -    *                 -9.24                12456
   75 -    GRID   *328                                      977.48           250.5*
   76 -    *                 -9.24                12456
   77 -    GRID   *329                                     1191.46          177.76*
   78 -    *                 63.5                13456
   79 -    GRID   *330                                     1191.46          323.24*
   80 -    *                 63.5                13456
   81 -    GRID   *331                                     1191.46           250.5*
   82 -    *                136.24                12456
   83 -    GRID   *332                                     1191.46           250.5*
   84 -    *                 -9.24                12456
   85 -    GRID   *335                                        1317           250.5*
   86 -    *                 -9.24                12456
   87 -    GRID   *343                                     1629.85          177.76*
   88 -    *                 63.5                13456
   89 -    GRID   *344                                     1629.85          323.24*
   90 -    *                 63.5                13456
   91 -    GRID   *345                                     1629.85           250.5*
   92 -    *                136.24                12456
   93 -    GRID   *346                                     1629.85           250.5*
   94 -    *                 -9.24                12456
   95 -    GRID   *350                                     1741.95           304.3*
   96 -    *               -29.684                 456
   97 -    GRID   *351                                     1741.95           196.7*
   98 -    *               -29.684                 456
   99 -    GRID   *352                                     1741.95           196.7*
  100 -    *               156.684                 456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 66

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  101 -    GRID   *353                                      1741.95           304.3*
  102 -    *                156.684                456
  103 -    GRID   *356                                      1669.06           250.5*
  104 -    *                   63.5
  105 -    GRID   *357                                      1680.26           250.5*
  106 -    *                   63.5                1456
  107 -    GRID   *390                                       337.98           250.5*
  108 -    *                   63.5                23456
  109 -    GRID   *391                                      1679.52           250.5*
  110 -    *                   63.5                23456
  111 -    GRID   *453                                          750             105*
  112 -    *                    410                456
  113 -    GRID   *536                                         1040             105*
  114 -    *                271.9499                1456
  115 -    GRID   *546                                     1401.147               0*
  116 -    *                   63.5                1456
  117 -    GRID   *605                                      1140.67             105*
  118 -    *                    410                456
  119 -    GRID   *606                                         1130               0*
  120 -    *                   63.5                1456
  121 -    GRID   *634                                      1006.65               0*
  122 -    *                   63.5                1456
  123 -    GRID   *635                                       882.8                0*
  124 -    *                   63.5                12456
  125 -    GRID   *662                                       778.75               0*
  126 -    *                   63.5                1456
  127 -    GRID   *691                                       640.35               0*
  128 -    *                   63.5                12456
  129 -    GRID   *704                                      248.675               0*
  130 -    *                   63.5                1456
  131 -    GRID   *723                                       517.12               0*
  132 -    *                   63.5                1456
  133 -    GRID   *793                                          750            -105*
  134 -    *                    410                456
  135 -    GRID   *945                                      1140.67             -105*
  136 -    *                    410                456
  137 -    GRID   *959                                       602.3                0*
  138 -    *                496.62                 456
  139 -    GRID   *960                                       647.3                0*
  140 -    *                496.62                 456
  141 -    GRID   *961                                       692.3                0*
  142 -    *                496.62                 456
  143 -    GRID   *962                                       737.3                0*
  144 -    *                496.62                 456
  145 -    GRID   *963                                       783.55               0*
  146 -    *                496.62                 456
  147 -    GRID   *964                                       828.25               0*
  148 -    *                496.62                 456
  149 -    GRID   *965                                       872.95               0*
  150 -    *                496.62                 456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 67

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  151 -    GRID   *967                                          917.65              0*
  152 -    *                496.62                456
  153 -    GRID   *969                                          966.35              0*
  154 -    *                496.62                456
  155 -    GRID   *970                                         1011.05              0*
  156 -    *                496.62                456
  157 -    GRID   *971                                         1055.75              0*
  158 -    *                496.62                456
  159 -    GRID   *972                                         1100.45              0*
  160 -    *                496.62                456
  161 -    GRID   *973                                          1144.2              0*
  162 -    *                496.62                456
  163 -    GRID   *974                                          1184.2              0*
  164 -    *                496.62                456
  165 -    GRID   *975                                          1224.2              0*
  166 -    *                496.62                456
  167 -    GRID   *977                                          1264.2              0*
  168 -    *                496.62                456
  169 -    GRID   *1091                                           1317           -96.5*
  170 -    *                267.556               456
  171 -    GRID   *1094                                          979.5              0*
  172 -    *                267.9297              456
  173 -    GRID   *1100                                        1140.67              0*
  174 -    *                264.2166              456
  175 -    GRID   *1117                                           649              0*
  176 -    *                462.73
  177 -    GRID   *1302                                           136          -250.5*
  178 -    *                  63.5                1456
  179 -    GRID   *1307                                           201          -250.5*
  180 -    *                  63.5                1456
  181 -    GRID   *1309                                        296.25          -250.5*
  182 -    *                -8.948                12456
  183 -    GRID   *1313                                        497.48         -177.76*
  184 -    *                  63.5                13456
  185 -    GRID   *1314                                        497.48         -323.24*
  186 -    *                  63.5                13456
  187 -    GRID   *1315                                        497.48          -250.5*
  188 -    *                136.24                1456
  189 -    GRID   *1316                                        497.48          -250.5*
  190 -    *                -9.24                 12456
  191 -    GRID   *1317                                        657.48         -177.76*
  192 -    *                  63.5                13456
  193 -    GRID   *1318                                        657.48         -323.24*
  194 -    *                  63.5                13456
  195 -    GRID   *1319                                        657.48          -250.5*
  196 -    *                136.24                1456
  197 -    GRID   *1320                                        657.48          -250.5*
  198 -    *                -9.24                 12456
  199 -    GRID   *1321                                        817.48         -177.76*
  200 -    *                  63.5                13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 68

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  201 -    GRID   *1322                                    817.48          -323.24*
  202 -    *                63.5                13456
  203 -    GRID   *1323                                    817.48           -250.5*
  204 -    *              136.24                12456
  205 -    GRID   *1324                                    817.48           -250.5*
  206 -    *               -9.24                12456
  207 -    GRID   *1328                                    977.48           -250.5*
  208 -    *               -9.24                12456
  209 -    GRID   *1329                                   1191.46          -177.76*
  210 -    *                63.5                13456
  211 -    GRID   *1330                                   1191.46          -323.24*
  212 -    *                63.5                13456
  213 -    GRID   *1331                                   1191.46           -250.5*
  214 -    *              136.24                12456
  215 -    GRID   *1332                                   1191.46           -250.5*
  216 -    *               -9.24                12456
  217 -    GRID   *1335                                      1317           -250.5*
  218 -    *               -9.24                12456
  219 -    GRID   *1343                                   1629.85          -177.76*
  220 -    *                63.5                13456
  221 -    GRID   *1344                                   1629.85          -323.24*
  222 -    *                63.5                13456
  223 -    GRID   *1345                                   1629.85           -250.5*
  224 -    *              136.24                12456
  225 -    GRID   *1346                                   1629.85           -250.5*
  226 -    *               -9.24                12456
  227 -    GRID   *1350                                   1741.95           -304.3*
  228 -    *             -29.684                  456
  229 -    GRID   *1351                                   1741.95           -196.7*
  230 -    *             -29.684                  456
  231 -    GRID   *1352                                   1741.95           -196.7*
  232 -    *             156.684                  456
  233 -    GRID   *1353                                   1741.95           -304.3*
  234 -    *             156.684                  456
  235 -    GRID   *1356                                   1669.06           -250.5*
  236 -    *                63.5
  237 -    GRID   *1357                                   1680.26           -250.5*
  238 -    *                63.5                 1456
  239 -    GRID   *1383                                       693              94*
  240 -    *                 396                 1456
  241 -    GRID   *1390                                    337.98           -250.5*
  242 -    *                63.5                23456
  243 -    GRID   *1391                                   1679.52           -250.5*
  244 -    *                63.5                23456
  245 -    GRID   *1393                                       717              94*
  246 -    *               396.5                13456
  247 -    GRID   *1405                                       750              94*
  248 -    *              401.75                 1456
  249 -    GRID   *1423                                       807              94*
  250 -    *                 396                 1456
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page   69

                              S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  251 -    GRID   *1433                                    835                94*
  252 -    *                396.5                13456
  253 -    GRID   *1443                                    863                94*
  254 -    *                  396                1456
  255 -    GRID   *1445                                    863                94*
  256 -    *                401.75                1456
  257 -    GRID   *1608                                   1040             158.54*
  258 -    *                303.5                12456
  259 -    GRID   *1612                                   1249            195.3712*
  260 -    *              299.1165                12456
  261 -    GRID   *1617                                   1191            315.0988*
  262 -    *              304.9144                12456
  263 -    GRID   *1621                                1275.702            399.8897*
  264 -    *              308.2533                12456
  265 -    GRID   *1629                               1222.5317            366.5596*
  266 -    *              304.4998                12456
  267 -    GRID   *1633                                   1365            252.0874*
  268 -    *               293.848                12456
  269 -    GRID   *1638                                   1365            432.6706*
  270 -    *              306.6676                12456
  271 -    GRID   *1650                                    589                99.6*
  272 -    *                  410
  273 -    GRID   *1651                                  679.5                96.5*
  274 -    *                  410
  275 -    GRID   *1680                                   1040                -105*
  276 -    *              271.9499                1456
  277 -    GRID   *1758                                   1040             -158.54*
  278 -    *                303.5                12456
  279 -    GRID   *1762                                   1249            -195.3712*
  280 -    *              299.1165                12456
  281 -    GRID   *1767                                   1191            -315.0988*
  282 -    *              304.9144                12456
  283 -    GRID   *1771                                1275.702            -399.8897*
  284 -    *              308.2533                12456
  285 -    GRID   *1779                               1222.5317            -366.5596*
  286 -    *              304.4998                12456
  287 -    GRID   *1783                                   1365            -252.0874*
  288 -    *               293.848                12456
  289 -    GRID   *1788                                   1365            -432.6706*
  290 -    *              306.6676                12456
  291 -    GRID   *1806                               1421.9054             210.3865*
  292 -    *              288.6617                12456
  293 -    GRID   *1814                                 1414.53              340.633*
  294 -    *              297.3915                12456
  295 -    GRID   *1818                                  1409.3             432.9432*
  296 -    *              303.6891                12456
  297 -    GRID   *1826                               1421.9054            -210.3865*
  298 -    *              288.6617                12456
  299 -    GRID   *1834                                 1414.53             -340.633*
  300 -    *              297.3915                12456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 70

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  301 -    GRID   *1838                                    1409.3       -432.9432*
  302 -    *                303.6891                12456
  303 -    GRID   *2171                                    1033.4             94*
  304 -    *                     410                1456
  305 -    GRID   *2197                                      1040             94*
  306 -    *                     410                1456
  307 -    GRID   *2322                                    1140.67           20.15*
  308 -    *                  307.2                 1456
  309 -    GRID   *2329                                   1514.2594              0*
  310 -    *                636.8045                 456
  311 -    GRID   *2335                                    1580.602              0*
  312 -    *                725.6685                13456
  313 -    GRID   *2353                                         891             94*
  314 -    *                  396.5                 13456
  315 -    GRID   *2365                                         919             94*
  316 -    *                401.75                  1456
  317 -    GRID   *2423                                    1090.33              94*
  318 -    *                     396                1456
  319 -    GRID   *2433                                     1115.5              94*
  320 -    *                396.88                  13456
  321 -    GRID   *2443                                    1140.67              94*
  322 -    *                  395.5                 1456
  323 -    GRID   *2651                                         911            96.5*
  324 -    *                     410
  325 -    GRID   *2661                                       892.5              94*
  326 -    *                408.25                   456
  327 -    GRID   *2663                                     1011.4              94*
  328 -    *                408.25                  1456
  329 -    GRID   *2665                                     1123.3              94*
  330 -    *                408.25                  3456
  331 -    GRID   *2679                                    1138.939         102.579*
  332 -    *                410.85                  13456
  333 -    GRID   *2680                                    1087.683         102.654*
  334 -    *                410.85                  13456
  335 -    GRID   *2719                                   1462.0608              0*
  336 -    *                447.8922
  337 -    GRID   *2720                                    1587.546              0*
  338 -    *                483.8775                 456
  339 -    GRID   *2733                                   1485.6163         -54.085*
  340 -    *                345.7163
  341 -    GRID   *2734                                   1613.9357         -62.065*
  342 -    *                368.3425                 456
  343 -    GRID   *2747                                   1485.6163          54.085*
  344 -    *                345.7164
  345 -    GRID   *2748                                   1613.9355          62.065*
  346 -    *                368.3428                 456
  347 -    GRID   *2808                                    1024.875              99*
  348 -    *                     410                1456
  349 -    GRID   *2809                                    1024.875              94*
  350 -    *                     410                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 71

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  351 -    GRID   *2833                                  1052.585                94*
  352 -    *                410                1456
  353 -    GRID   *2874                                   332.025                 0*
  354 -    *               63.5                1456
  355 -    GRID   *2922                                  1044.228                94*
  356 -    *                410                1456
  357 -    GRID   *2934                                    355.85              66.9*
  358 -    *              364.4527              1456
  359 -    GRID   *2979                                    355.85             -66.9*
  360 -    *              364.4527              1456
  361 -    GRID   *3076                                      1307                82*
  362 -    *              439.5862               456
  363 -    GRID   *3401                                      1307              91.8*
  364 -    *               456.62                456
  365 -    GRID   *4590                                     679.5             -96.5*
  366 -    *                410
  367 -    GRID   *4591                                       911             -96.5*
  368 -    *                410
  369 -    GRID   *4592                                      1189             -96.5*
  370 -    *                410
  371 -    GRID   *4593                                    1256.5             -96.5*
  372 -    *                410
  373 -    GRID   *5001                                  404.9753                 0*
  374 -    *              283.2129              2456
  375 -    GRID   *5002                                  459.3887                 0*
  376 -    *              280.1047              2456
  377 -    GRID   *5003                                  505.1194            7.8292*
  378 -    *              278.8093               456
  379 -    GRID   *5004                                  505.1194           -7.8292*
  380 -    *              278.8093               456
  381 -    GRID   *5005                                  549.9192                 0*
  382 -    *              277.7842              2456
  383 -    GRID   *5006                                    265.72                21*
  384 -    *               314.71                456
  385 -    GRID   *5007                                    265.72               -21*
  386 -    *               314.71                456
  387 -    GRID   *5008                                       311                21*
  388 -    *              297.8239               456
  389 -    GRID   *5009                                       311               -21*
  390 -    *              297.8239               456
  391 -    GRID   *5010                                       359                21*
  392 -    *              288.7327               456
  393 -    GRID   *5011                                       359               -21*
  394 -    *              288.7327               456
  395 -    GRID   *5012                                  404.4108            42.6469*
  396 -    *              287.0407               456
  397 -    GRID   *5013                                  404.4108           -42.6469*
  398 -    *              287.0407               456
  399 -    GRID   *5014                                  458.9519            44.2062*
  400 -    *              283.1455               456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 72

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  401 -    GRID   *5015                                    458.9519        -44.2062*
  402 -    *              283.1455               456
  403 -    GRID   *5016                                    504.7502         45.7598*
  404 -    *              281.3784               456
  405 -    GRID   *5017                                    504.7502        -45.7598*
  406 -    *              281.3784               456
  407 -    GRID   *5018                                     549.571         46.7895*
  408 -    *              280.2075               456
  409 -    GRID   *5019                                     549.571        -46.7895*
  410 -    *              280.2075               456
  411 -    GRID   *5020                                         311         49.0274*
  412 -    *              312.9114               456
  413 -    GRID   *5021                                         311        -49.0274*
  414 -    *              312.9114               456
  415 -    GRID   *5022                                         359         62.0427*
  416 -    *              304.8616               456
  417 -    GRID   *5023                                         359        -62.0427*
  418 -    *              304.8616               456
  419 -    GRID   *5024                                    403.0827         65.9531*
  420 -    *              296.1783               456
  421 -    GRID   *5025                                    403.0827        -65.9531*
  422 -    *              296.1783               456
  423 -    GRID   *5026                                    457.8208         71.3833*
  424 -    *               291.021               456
  425 -    GRID   *5027                                    457.8208        -71.3833*
  426 -    *               291.021               456
  427 -    GRID   *5028                                    503.7566         74.9641*
  428 -    *              288.2673               456
  429 -    GRID   *5029                                    503.7566        -74.9641*
  430 -    *              288.2673               456
  431 -    GRID   *5030                                    548.6626         77.4486*
  432 -    *              286.5327               456
  433 -    GRID   *5031                                    548.6626        -77.4486*
  434 -    *              286.5327               456
  435 -    GRID   *5032                                    400.2788         79.0182*
  436 -    *              315.9099               456
  437 -    GRID   *5033                                    400.2788        -79.0182*
  438 -    *              315.9099               456
  439 -    GRID   *5034                                    453.8845         90.8239*
  440 -    *              318.4253               456
  441 -    GRID   *5035                                    453.8845        -90.8239*
  442 -    *              318.4253               456
  443 -    GRID   *5036                                     499.124          98.856*
  444 -    *              320.5481               456
  445 -    GRID   *5037                                     499.124         -98.856*
  446 -    *              320.5481               456
  447 -    GRID   *5038                                    544.6665        106.3314*
  448 -    *              314.3545               456
  449 -    GRID   *5039                                    544.6665       -106.3314*
  450 -    *              314.3545               456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 73

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  451 -    GRID   *5040                                          568        110.1612*
  452 -    *               313.225                456
  453 -    GRID   *5041                                          568       -110.1612*
  454 -    *               313.225                456
  455 -    GRID   *5042                                       262.78          31.58*
  456 -    *                   335                1456
  457 -    GRID   *5043                                       262.78         -31.58*
  458 -    *                   335                1456
  459 -    GRID   *5044                                          311         53.5491*
  460 -    *                   335                1456
  461 -    GRID   *5045                                          311        -53.5491*
  462 -    *                   335                1456
  463 -    GRID   *5046                                          359         69.0263*
  464 -    *                   335                1456
  465 -    GRID   *5047                                          359        -69.0263*
  466 -    *                   335                1456
  467 -    GRID   *5048                                       395.2443         78.3427*
  468 -    *               351.0481               1456
  469 -    GRID   *5049                                       395.2443        -78.3427*
  470 -    *               351.0481               1456
  471 -    GRID   *5050                                        448.707         89.8291*
  472 -    *               354.4722               1456
  473 -    GRID   *5051                                        448.707        -89.8291*
  474 -    *               354.4722               1456
  475 -    GRID   *5052                                       493.9464         97.9967*
  476 -    *               356.5949               1456
  477 -    GRID   *5053                                          490        -97.3319*
  478 -    *               356.4099               1456
  479 -    GRID   *5054                                        538.3         103.5398*
  480 -    *               358.6763               1456
  481 -    GRID   *5055                                        538.3        -103.5398*
  482 -    *               358.6763               1456
  483 -    GRID   *5056                                       572.3917         104.9723*
  484 -    *               360.2759               1456
  485 -    GRID   *5057                                       572.3917        -104.9723*
  486 -    *               360.2759               1456
  487 -    GRID   *5058                                       260.2376         26.5271*
  488 -    *               352.9236               456
  489 -    GRID   *5059                                       260.2376        -26.5271*
  490 -    *               352.9236               456
  491 -    GRID   *5060                                          281.5         35.0994*
  492 -    *               364.5775               456
  493 -    GRID   *5061                                          281.5        -35.0994*
  494 -    *               364.5775               456
  495 -    GRID   *5062                                          311         46.0691*
  496 -    *               374.7034               456
  497 -    GRID   *5063                                          311        -46.0691*
  498 -    *               374.7034               456
  499 -    GRID   *5064                                       350.8407         63.1496*
  500 -    *               374.2148               456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 74

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  501 -    GRID   *5065                                    350.8407        -63.1496*
  502 -    *               374.2148               456
  503 -    GRID   *5066                                    387.6802         75.6396*
  504 -    *               378.7512               456
  505 -    GRID   *5067                                    387.6802        -75.6396*
  506 -    *               378.7512               456
  507 -    GRID   *5068                                    443.9355         88.8924*
  508 -    *               387.6914               456
  509 -    GRID   *5069                                    443.9355        -88.8924*
  510 -    *               387.6914               456
  511 -    GRID   *5070                                    489.2253         97.2004*
  512 -    *               389.4626              1456
  513 -    GRID   *5071                                    489.2253        -97.2004*
  514 -    *               389.4626              1456
  515 -    GRID   *5072                                    533.7295        103.1712*
  516 -    *               390.4968              1456
  517 -    GRID   *5073                                    533.7295       -103.1712*
  518 -    *               390.4968              1456
  519 -    GRID   *5074                                    570.1064         104.945*
  520 -    *               392.2039             13456
  521 -    GRID   *5075                                    570.1064        -104.945*
  522 -    *               392.2039             13456
  523 -    GRID   *5076                                    529.6355        102.8032*
  524 -    *                    419               456
  525 -    GRID   *5077                                    529.6355       -102.8032*
  526 -    *                    419               456
  527 -    GRID   *5078                                    562.7881        104.7933*
  528 -    *               425.6318               456
  529 -    GRID   *5079                                    562.7881       -104.7933*
  530 -    *               425.6318               456
  531 -    GRID   *5080                                    383.7697         58.9126*
  532 -    *               406.3487               456
  533 -    GRID   *5081                                    383.7697        -58.9126*
  534 -    *               406.3487               456
  535 -    GRID   *5082                                    439.4102         74.2742*
  536 -    *               419.1958               456
  537 -    GRID   *5083                                    439.4102        -74.2742*
  538 -    *               419.1958               456
  539 -    GRID   *5084                                    483.3079         83.1202*
  540 -    *               430.6606               456
  541 -    GRID   *5085                                    483.3079        -83.1202*
  542 -    *               430.6606               456
  543 -    GRID   *5086                                      526.45         90.5251*
  544 -    *               441.1765               456
  545 -    GRID   *5087                                      526.45        -90.5251*
  546 -    *               441.1765               456
  547 -    GRID   *5088                                    559.7434         94.5178*
  548 -    *               448.2874               456
  549 -    GRID   *5089                                    559.7434        -94.5178*
  550 -    *               448.2874               456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 75

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  551 -    GRID   *5090                                        493.732         53.9462*
  552 -    *               460.8347                456
  553 -    GRID   *5091                                        493.732        -53.9462*
  554 -    *               460.8347                456
  555 -    GRID   *5092                                       523.9889         75.0386*
  556 -    *               458.1547                456
  557 -    GRID   *5093                                       523.9889        -75.0386*
  558 -    *               458.1547                456
  559 -    GRID   *5094                                       557.6444         79.6155*
  560 -    *               464.3261                456
  561 -    GRID   *5095                                       557.6444        -79.6155*
  562 -    *               464.3261                456
  563 -    GRID   *5096                                            311            24.2*
  564 -    *               392.1451                456
  565 -    GRID   *5097                                            311           -24.2*
  566 -    *               392.1451                456
  567 -    GRID   *5098                                          341.2         34.7091*
  568 -    *               402.3072                456
  569 -    GRID   *5099                                          341.2        -34.7091*
  570 -    *               402.3072                456
  571 -    GRID   *5100                                       381.6177         33.0539*
  572 -    *               421.1256                456
  573 -    GRID   *5101                                       381.6177        -33.0539*
  574 -    *               421.1256                456
  575 -    GRID   *5102                                       436.1697         38.2363*
  576 -    *               441.7568                456
  577 -    GRID   *5103                                       436.1697        -38.2363*
  578 -    *               441.7568                456
  579 -    GRID   *5104                                       475.0667          43.027*
  580 -    *               459.9621                456
  581 -    GRID   *5105                                       475.0667         -43.027*
  582 -    *               459.9621                456
  583 -    GRID   *5106                                       520.0206         50.5641*
  584 -    *               485.9399                456
  585 -    GRID   *5107                                       520.0206        -50.5641*
  586 -    *               485.9399                456
  587 -    GRID   *5108                                       554.7028             54*
  588 -    *               488.0856                456
  589 -    GRID   *5109                                       554.7028            -54*
  590 -    *               488.0856                456
  591 -    GRID   *5110                                       461.7238          18.918*
  592 -    *               462.3063                456
  593 -    GRID   *5111                                       461.7238         -18.918*
  594 -    *               462.3063                456
  595 -    GRID   *5112                                            480             28*
  596 -    *               485.1182                456
  597 -    GRID   *5113                                            480            -28*
  598 -    *               485.1182                456
  599 -    GRID   *5114                                       519.3153             28*
  600 -    *               496.8958                456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 76

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  601 -    GRID   *5115                                    519.3153              -28*
  602 -    *               496.8958                456
  603 -    GRID   *5116                                    553.2793               28*
  604 -    *               497.0952                1456
  605 -    GRID   *5117                                    553.2793              -28*
  606 -    *               497.0952                1456
  607 -    GRID   *5118                                    258.1858                0*
  608 -    *               367.2163                456
  609 -    GRID   *5119                                       281.5                0*
  610 -    *               381.7227                456
  611 -    GRID   *5120                                         311                7*
  612 -    *                395.114                456
  613 -    GRID   *5121                                         311               -7*
  614 -    *                395.114                456
  615 -    GRID   *5122                                       341.2                0*
  616 -    *               409.8891                2456
  617 -    GRID   *5123                                    380.8452                0*
  618 -    *               426.3374                2456
  619 -    GRID   *5124                                    435.1963                0*
  620 -    *               448.5339                456
  621 -    GRID   *5125                                    455.5063                0*
  622 -    *               468.8442                2456
  623 -    GRID   *5126                                         480                0*
  624 -    *               490.5685                456
  625 -    GRID   *5127                                     516.375              3.5*
  626 -    *               499.9509                456
  627 -    GRID   *5128                                     516.375             -3.5*
  628 -    *               499.9509                456
  629 -    GRID   *5129                                       552.9                0*
  630 -    *                    500                12456
  631 -    GRID   *5130                                         582              105*
  632 -    *                    410                456
  633 -    GRID   *5131                                         582             -105*
  634 -    *                    410                456
  635 -    GRID   *5132                                         582                0*
  636 -    *               277.0874                456
  637 -    GRID   *5133                                         582         47.4458*
  638 -    *               279.4609                1456
  639 -    GRID   *5134                                         582        -47.4458*
  640 -    *               279.4609                1456
  641 -    GRID   *5135                                         582         78.8017*
  642 -    *               285.5315                1456
  643 -    GRID   *5136                                         582        -78.8017*
  644 -    *               285.5315                1456
  645 -    GRID   *5137                                         582              105*
  646 -    *               299.4435                1456
  647 -    GRID   *5138                                         582             -105*
  648 -    *               299.4435                1456
  649 -    GRID   *5139                                         582              105*
  650 -    *               334.1975                13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 77

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  651 -    GRID   *5140                                          582            -105*
  652 -    *               334.1975                13456
  653 -    GRID   *5141                                          582             105*
  654 -    *               360.7268                13456
  655 -    GRID   *5142                                          582            -105*
  656 -    *               360.7268                13456
  657 -    GRID   *5143                                          582             105*
  658 -    *                392.762                13456
  659 -    GRID   *5144                                          582            -105*
  660 -    *                392.762                13456
  661 -    GRID   *5145                                          582          112.48*
  662 -    *               312.6875                13456
  663 -    GRID   *5146                                          582         -112.48*
  664 -    *               312.6875                13456
  665 -    GRID   *5147                                       584.53            5.56*
  666 -    *                499.874                 1456
  667 -    GRID   *5148                                       584.53           -5.56*
  668 -    *                499.874                 1456
  669 -    GRID   *5149                                       584.53          46.2504*
  670 -    *               492.2806                 1456
  671 -    GRID   *5150                                       584.53         -46.2504*
  672 -    *               492.2806                 1456
  673 -    GRID   *5151                                       584.53          76.9893*
  674 -    *               473.4437                 1456
  675 -    GRID   *5152                                       584.53         -76.9893*
  676 -    *               473.4437                 1456
  677 -    GRID   *5153                                       584.53          99.7508*
  678 -    *                448.504                 1456
  679 -    GRID   *5154                                       584.53         -99.7508*
  680 -    *                448.504                 1456
  681 -    GRID   *5155                                        602.3            5.56*
  682 -    *                499.874                 1456
  683 -    GRID   *5156                                        602.3           -5.56*
  684 -    *                499.874                 1456
  685 -    GRID   *5157                                        602.3          45.374*
  686 -    *                 492.69                 1456
  687 -    GRID   *5158                                        602.3         -45.374*
  688 -    *                 492.69                 1456
  689 -    GRID   *5159                                        602.3          78.058*
  690 -    *                474.853                 1456
  691 -    GRID   *5160                                        602.3         -78.058*
  692 -    *                474.853                 1456
  693 -    GRID   *5161                                        602.3         101.614*
  694 -    *                449.433                 1456
  695 -    GRID   *5162                                        602.3        -101.614*
  696 -    *                449.433                 1456
  697 -    GRID   *5163                                          609              0*
  698 -    *               276.4655                12456
  699 -    GRID   *5164                                          609           40.3*
  700 -    *               278.0536                 1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 78

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  701 -    GRID   *5165                                        609          -40.3*
  702 -    *               278.0536               1456
  703 -    GRID   *5166                                        609           72.6*
  704 -    *               282.8966               1456
  705 -    GRID   *5167                                        609          -72.6*
  706 -    *               282.8966               1456
  707 -    GRID   *5168                                        609            105*
  708 -    *               296.1735               1456
  709 -    GRID   *5169                                        609           -105*
  710 -    *               296.1735               1456
  711 -    GRID   *5170                                        609            105*
  712 -    *               336.3542               13456
  713 -    GRID   *5171                                        609           -105*
  714 -    *               336.3542               13456
  715 -    GRID   *5172                                        609            105*
  716 -    *                  368.5               13456
  717 -    GRID   *5173                                        609           -105*
  718 -    *                  368.5               13456
  719 -    GRID   *5174                                        609            105*
  720 -    *                  398.5               13456
  721 -    GRID   *5175                                        609           -105*
  722 -    *                  398.5               13456
  723 -    GRID   *5176                                        609            105*
  724 -    *                    410               456
  725 -    GRID   *5177                                        609           -105*
  726 -    *                    410               456
  727 -    GRID   *5178                                        609         116.89*
  728 -    *                 311.37               13456
  729 -    GRID   *5179                                        609        -116.89*
  730 -    *                 311.37               13456
  731 -    GRID   *5180                                        636              0*
  732 -    *               275.8435               12456
  733 -    GRID   *5181                                        636           40.3*
  734 -    *               277.3803               1456
  735 -    GRID   *5182                                        636          -40.3*
  736 -    *               277.3803               1456
  737 -    GRID   *5183                                        636           72.6*
  738 -    *               281.9665               1456
  739 -    GRID   *5184                                        636          -72.6*
  740 -    *               281.9665               1456
  741 -    GRID   *5185                                        636            105*
  742 -    *               293.5857               1456
  743 -    GRID   *5186                                        636           -105*
  744 -    *               293.5857               1456
  745 -    GRID   *5187                                        636            105*
  746 -    *                  368.5               13456
  747 -    GRID   *5188                                        636           -105*
  748 -    *                  368.5               13456
  749 -    GRID   *5189                                        636            105*
  750 -    *                    410               456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 79

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  751 -    GRID   *5190                                          636             -105*
  752 -    *                410                456
  753 -    GRID   *5191                                          636              105*
  754 -    *                396                13456
  755 -    GRID   *5192                                          636             -105*
  756 -    *                396                13456
  757 -    GRID   *5193                                          636              105*
  758 -    *              336.982              13456
  759 -    GRID   *5194                                          636             -105*
  760 -    *              336.982              13456
  761 -    GRID   *5195                                          636           121.33*
  762 -    *                310                13456
  763 -    GRID   *5196                                          636          -121.33*
  764 -    *                310                13456
  765 -    GRID   *5197                                        647.3             5.56*
  766 -    *              499.874              1456
  767 -    GRID   *5198                                        647.3            -5.56*
  768 -    *              499.874              1456
  769 -    GRID   *5199                                        647.3            42.798*
  770 -    *              493.476              1456
  771 -    GRID   *5200                                        647.3           -42.798*
  772 -    *              493.476              1456
  773 -    GRID   *5201                                        647.3            81.319*
  774 -    *              475.466              1456
  775 -    GRID   *5202                                        647.3           -81.319*
  776 -    *              475.466              1456
  777 -    GRID   *5203                                        647.3           103.903*
  778 -    *              450.544              1456
  779 -    GRID   *5204                                        647.3          -103.903*
  780 -    *              450.544              1456
  781 -    GRID   *5205                                        664.5                 0*
  782 -    *              275.1869             12456
  783 -    GRID   *5206                                        664.5             40.3*
  784 -    *              276.6737             1456
  785 -    GRID   *5207                                        664.5            -40.3*
  786 -    *              276.6737             1456
  787 -    GRID   *5208                                        664.5             72.6*
  788 -    *              280.9966             1456
  789 -    GRID   *5209                                        664.5            -72.6*
  790 -    *              280.9966             1456
  791 -    GRID   *5210                                        664.5              105*
  792 -    *              291.2206             1456
  793 -    GRID   *5211                                        664.5             -105*
  794 -    *              291.2206             1456
  795 -    GRID   *5212                                        664.5              105*
  796 -    *              337.6447             13456
  797 -    GRID   *5213                                        664.5             -105*
  798 -    *              337.6447             13456
  799 -    GRID   *5214                                        664.5              105*
  800 -    *                368.5              13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 80

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  801 -    GRID   *5215                                    664.5             -105*
  802 -    *                368.5                13456
  803 -    GRID   *5216                                    664.5              105*
  804 -    *              399.75                13456
  805 -    GRID   *5217                                    664.5             -105*
  806 -    *              399.75                13456
  807 -    GRID   *5218                                    664.5              105*
  808 -    *                 410                  456
  809 -    GRID   *5219                                    664.5             -105*
  810 -    *                 410                  456
  811 -    GRID   *5220                                    664.5          118.987*
  812 -    *              300.15                 1456
  813 -    GRID   *5221                                    664.5         -118.987*
  814 -    *              300.15                 1456
  815 -    GRID   *5222                                    664.5          118.987*
  816 -    *               318.6                 1456
  817 -    GRID   *5223                                    664.5         -118.987*
  818 -    *               318.6                 1456
  819 -    GRID   *5224                                    692.3             5.56*
  820 -    *              499.874                1456
  821 -    GRID   *5225                                    692.3            -5.56*
  822 -    *              499.874                1456
  823 -    GRID   *5226                                    692.3             41.5*
  824 -    *              493.837                1456
  825 -    GRID   *5227                                    692.3            -41.5*
  826 -    *              493.837                1456
  827 -    GRID   *5228                                    692.3           82.603*
  828 -    *              475.264                1456
  829 -    GRID   *5229                                    692.3          -82.603*
  830 -    *              475.264                1456
  831 -    GRID   *5230                                    692.3          104.129*
  832 -    *               450.62                1456
  833 -    GRID   *5231                                    692.3         -104.129*
  834 -    *               450.62                1456
  835 -    GRID   *5232                                      693                0*
  836 -    *             274.5303                12456
  837 -    GRID   *5233                                      693             40.3*
  838 -    *             275.9654                1456
  839 -    GRID   *5234                                      693            -40.3*
  840 -    *             275.9654                1456
  841 -    GRID   *5235                                      693             72.6*
  842 -    *             280.0387                1456
  843 -    GRID   *5236                                      693            -72.6*
  844 -    *             280.0387                1456
  845 -    GRID   *5237                                      693              105*
  846 -    *             289.1523                1456
  847 -    GRID   *5238                                      693             -105*
  848 -    *             289.1523                1456
  849 -    GRID   *5239                                      693              105*
  850 -    *             338.3073                13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 81

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  851 -    GRID   *5240                                    693            -105*
  852 -    *               338.3073               13456
  853 -    GRID   *5241                                    693             105*
  854 -    *                  368.5               13456
  855 -    GRID   *5242                                    693            -105*
  856 -    *                  368.5               13456
  857 -    GRID   *5243                                    693             105*
  858 -    *                    396               13456
  859 -    GRID   *5244                                    693            -105*
  860 -    *                    396               13456
  861 -    GRID   *5245                                    693             105*
  862 -    *                    410                 456
  863 -    GRID   *5246                                    693            -105*
  864 -    *                    410                 456
  865 -    GRID   *5247                                    693          122.113*
  866 -    *                 298.51                1456
  867 -    GRID   *5248                                    693         -122.113*
  868 -    *                 298.51                1456
  869 -    GRID   *5249                                    693          122.113*
  870 -    *                 318.78                1456
  871 -    GRID   *5250                                    693         -122.113*
  872 -    *                 318.78                1456
  873 -    GRID   *5251                                    717                0*
  874 -    *               273.9773               12456
  875 -    GRID   *5252                                    717             40.3*
  876 -    *               275.3676                1456
  877 -    GRID   *5253                                    717            -40.3*
  878 -    *               275.3676                1456
  879 -    GRID   *5254                                    717             72.6*
  880 -    *               279.2426                1456
  881 -    GRID   *5255                                    717            -72.6*
  882 -    *               279.2426                1456
  883 -    GRID   *5256                                    717             105*
  884 -    *               287.5829                1456
  885 -    GRID   *5257                                    717            -105*
  886 -    *               287.5829                1456
  887 -    GRID   *5258                                    717             105*
  888 -    *                  368.5               13456
  889 -    GRID   *5259                                    717            -105*
  890 -    *                  368.5               13456
  891 -    GRID   *5260                                    717             105*
  892 -    *                    410                 456
  893 -    GRID   *5261                                    717            -105*
  894 -    *                    410                 456
  895 -    GRID   *5262                                    717             105*
  896 -    *                    396               13456
  897 -    GRID   *5263                                    717            -105*
  898 -    *                    396               13456
  899 -    GRID   *5264                                    717             105*
  900 -    *               338.8653               13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 82

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  901 -    GRID   *5265                                    717            -105*
  902 -    *                338.8653                13456
  903 -    GRID   *5266                                    717          124.747*
  904 -    *                 318.96                 1456
  905 -    GRID   *5267                                    717         -124.747*
  906 -    *                 318.96                 1456
  907 -    GRID   *5268                                    717          124.747*
  908 -    *                 297.15                 1456
  909 -    GRID   *5269                                    717         -124.747*
  910 -    *                 297.15                 1456
  911 -    GRID   *5270                                  737.3             5.56*
  912 -    *                 499.874                1456
  913 -    GRID   *5271                                  737.3            -5.56*
  914 -    *                 499.874                1456
  915 -    GRID   *5272                                  737.3             41.5*
  916 -    *                 493.837                1456
  917 -    GRID   *5273                                  737.3            -41.5*
  918 -    *                 493.837                1456
  919 -    GRID   *5274                                  737.3           82.603*
  920 -    *                 475.264                1456
  921 -    GRID   *5275                                  737.3          -82.603*
  922 -    *                 475.264                1456
  923 -    GRID   *5276                                  737.3          104.129*
  924 -    *                  450.62                1456
  925 -    GRID   *5277                                  737.3         -104.129*
  926 -    *                  450.62                1456
  927 -    GRID   *5278                                    750               0*
  928 -    *                273.2171                12456
  929 -    GRID   *5279                                    750             40.3*
  930 -    *                274.5457                1456
  931 -    GRID   *5280                                    750            -40.3*
  932 -    *                274.5457                1456
  933 -    GRID   *5281                                    750             72.6*
  934 -    *                278.1661                1456
  935 -    GRID   *5282                                    750            -72.6*
  936 -    *                278.1661                1456
  937 -    GRID   *5283                                    750              105*
  938 -    *                285.6174                1456
  939 -    GRID   *5284                                    750             -105*
  940 -    *                285.6174                1456
  941 -    GRID   *5285                                    750              105*
  942 -    *                339.6325                13456
  943 -    GRID   *5286                                    750             -105*
  944 -    *                339.6325                13456
  945 -    GRID   *5287                                    750              105*
  946 -    *                   368.5                13456
  947 -    GRID   *5288                                    750             -105*
  948 -    *                   368.5                13456
  949 -    GRID   *5289                                    750              105*
  950 -    *                     396                13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 83

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  951 -    GRID   *5290                                    750                -105*
  952 -    *                396                13456
  953 -    GRID   *5293                                    750              128.347*
  954 -    *              295.43                1456
  955 -    GRID   *5294                                    750             -128.347*
  956 -    *              295.43                1456
  957 -    GRID   *5295                                    750              128.347*
  958 -    *              319.28                1456
  959 -    GRID   *5296                                    750             -128.347*
  960 -    *              319.28                1456
  961 -    GRID   *5297                                  778.5                   0*
  962 -    *            272.5605                12456
  963 -    GRID   *5298                                  778.5                40.3*
  964 -    *              273.8319                1456
  965 -    GRID   *5299                                  778.5               -40.3*
  966 -    *              273.8319                1456
  967 -    GRID   *5300                                  778.5                72.6*
  968 -    *              277.2387                1456
  969 -    GRID   *5301                                  778.5               -72.6*
  970 -    *              277.2387                1456
  971 -    GRID   *5302                                  778.5                 105*
  972 -    *              284.0334                1456
  973 -    GRID   *5303                                  778.5                -105*
  974 -    *              284.0334                1456
  975 -    GRID   *5304                                  778.5                 105*
  976 -    *              340.2951                13456
  977 -    GRID   *5305                                  778.5                -105*
  978 -    *              340.2951                13456
  979 -    GRID   *5306                                  778.5                 105*
  980 -    *                368.5                13456
  981 -    GRID   *5307                                  778.5                -105*
  982 -    *                368.5                13456
  983 -    GRID   *5308                                  778.5                 105*
  984 -    *                  396                13456
  985 -    GRID   *5309                                  778.5                -105*
  986 -    *                  396                13456
  987 -    GRID   *5310                                  778.5                 105*
  988 -    *                  410                456
  989 -    GRID   *5311                                  778.5                -105*
  990 -    *                  410                456
  991 -    GRID   *5312                                  778.5              131.467*
  992 -    *              293.78                1456
  993 -    GRID   *5313                                  778.5             -131.467*
  994 -    *              293.78                1456
  995 -    GRID   *5314                                  778.5              131.467*
  996 -    *              319.63                1456
  997 -    GRID   *5315                                  778.5             -131.467*
  998 -    *              319.63                1456
  999 -    GRID   *5316                                 783.55                5.56*
 1000 -    *             499.874                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 84

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1001 -    GRID   *5317                                    783.55           -5.56*
 1002 -    *                499.874                1456
 1003 -    GRID   *5318                                    783.55            41.5*
 1004 -    *                493.837                1456
 1005 -    GRID   *5319                                    783.55            -41.5*
 1006 -    *                493.837                1456
 1007 -    GRID   *5320                                    783.55           82.603*
 1008 -    *                475.264                1456
 1009 -    GRID   *5321                                    783.55          -82.603*
 1010 -    *                475.264                1456
 1011 -    GRID   *5322                                    783.55          104.129*
 1012 -    *                 450.62                1456
 1013 -    GRID   *5323                                    783.55         -104.129*
 1014 -    *                 450.62                1456
 1015 -    GRID   *5324                                       807               0*
 1016 -    *               271.9039                12456
 1017 -    GRID   *5325                                       807            40.3*
 1018 -    *               273.1108                1456
 1019 -    GRID   *5326                                       807            -40.3*
 1020 -    *               273.1108                1456
 1021 -    GRID   *5327                                       807            72.6*
 1022 -    *               276.3007                1456
 1023 -    GRID   *5328                                       807            -72.6*
 1024 -    *               276.3007                1456
 1025 -    GRID   *5329                                       807             105*
 1026 -    *               282.5071                1456
 1027 -    GRID   *5330                                       807            -105*
 1028 -    *               282.5071                1456
 1029 -    GRID   *5331                                       807             105*
 1030 -    *               340.9577                13456
 1031 -    GRID   *5332                                       807            -105*
 1032 -    *               340.9577                13456
 1033 -    GRID   *5333                                       807             105*
 1034 -    *                  368.5                13456
 1035 -    GRID   *5334                                       807            -105*
 1036 -    *                  368.5                13456
 1037 -    GRID   *5335                                       807             105*
 1038 -    *                    396                13456
 1039 -    GRID   *5336                                       807            -105*
 1040 -    *                    396                13456
 1041 -    GRID   *5337                                       807             105*
 1042 -    *                    410                456
 1043 -    GRID   *5338                                       807            -105*
 1044 -    *                    410                456
 1045 -    GRID   *5339                                       807        135.4539*
 1046 -    *               319.3386                1456
 1047 -    GRID   *5340                                       807       -135.4539*
 1048 -    *               319.3386                1456
 1049 -    GRID   *5341                                       807        137.7721*
 1050 -    *               294.0077                1456
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page   85

                              S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1051 -    GRID   *5342                                      807      -137.7721*
 1052 -    *               294.0077               1456
 1053 -    GRID   *5343                                  828.25           5.56*
 1054 -    *                499.874               1456
 1055 -    GRID   *5344                                  828.25          -5.56*
 1056 -    *                499.874               1456
 1057 -    GRID   *5345                                  828.25           41.5*
 1058 -    *                493.837               1456
 1059 -    GRID   *5346                                  828.25          -41.5*
 1060 -    *                493.837               1456
 1061 -    GRID   *5347                                  828.25         82.603*
 1062 -    *                475.264               1456
 1063 -    GRID   *5348                                  828.25        -82.603*
 1064 -    *                475.264               1456
 1065 -    GRID   *5349                                  828.25         104.129*
 1066 -    *                 450.62               1456
 1067 -    GRID   *5350                                  828.25        -104.129*
 1068 -    *                 450.62               1456
 1069 -    GRID   *5351                                     835              0*
 1070 -    *               271.2588              12456
 1071 -    GRID   *5352                                     835           40.3*
 1072 -    *                272.398               1456
 1073 -    GRID   *5353                                     835          -40.3*
 1074 -    *                272.398               1456
 1075 -    GRID   *5354                                     835           72.6*
 1076 -    *               275.3755               1456
 1077 -    GRID   *5355                                     835          -72.6*
 1078 -    *               275.3755               1456
 1079 -    GRID   *5356                                     835            105*
 1080 -    *               281.0575               1456
 1081 -    GRID   *5357                                     835           -105*
 1082 -    *               281.0575               1456
 1083 -    GRID   *5358                                     835            105*
 1084 -    *                  368.5              13456
 1085 -    GRID   *5359                                     835           -105*
 1086 -    *                  368.5              13456
 1087 -    GRID   *5360                                     835            105*
 1088 -    *                    410                456
 1089 -    GRID   *5361                                     835           -105*
 1090 -    *                    410                456
 1091 -    GRID   *5362                                     835            105*
 1092 -    *                    396              13456
 1093 -    GRID   *5363                                     835           -105*
 1094 -    *                    396              13456
 1095 -    GRID   *5364                                     835            105*
 1096 -    *               341.6087              13456
 1097 -    GRID   *5365                                     835           -105*
 1098 -    *               341.6087              13456
 1099 -    GRID   *5366                                     863              0*
 1100 -    *               270.6137              12456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 86

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1101 -    GRID   *5367                                    863            40.3*
 1102 -    *               271.6834               1456
 1103 -    GRID   *5368                                    863           -40.3*
 1104 -    *               271.6834               1456
 1105 -    GRID   *5369                                    863            72.6*
 1106 -    *               274.4522               1456
 1107 -    GRID   *5370                                    863           -72.6*
 1108 -    *               274.4522               1456
 1109 -    GRID   *5371                                    863             105*
 1110 -    *                279.654               1456
 1111 -    GRID   *5372                                    863            -105*
 1112 -    *                279.654               1456
 1113 -    GRID   *5373                                    863             105*
 1114 -    *                  368.5              13456
 1115 -    GRID   *5374                                    863            -105*
 1116 -    *                  368.5              13456
 1117 -    GRID   *5375                                    863             105*
 1118 -    *                    410                456
 1119 -    GRID   *5376                                    863            -105*
 1120 -    *                    410                456
 1121 -    GRID   *5377                                    863             105*
 1122 -    *                    396              13456
 1123 -    GRID   *5378                                    863            -105*
 1124 -    *                    396              13456
 1125 -    GRID   *5379                                    863             105*
 1126 -    *               342.2597               13456
 1127 -    GRID   *5380                                    863            -105*
 1128 -    *               342.2597               13456
 1129 -    GRID   *5381                                 872.95            5.56*
 1130 -    *                499.874               1456
 1131 -    GRID   *5382                                 872.95           -5.56*
 1132 -    *                499.874               1456
 1133 -    GRID   *5383                                 872.95            41.5*
 1134 -    *                493.837               1456
 1135 -    GRID   *5384                                 872.95           -41.5*
 1136 -    *                493.837               1456
 1137 -    GRID   *5385                                 872.95          82.603*
 1138 -    *                475.264               1456
 1139 -    GRID   *5386                                 872.95         -82.603*
 1140 -    *                475.264               1456
 1141 -    GRID   *5387                                 872.95         104.129*
 1142 -    *                 450.62               1456
 1143 -    GRID   *5388                                 872.95        -104.129*
 1144 -    *                 450.62               1456
 1145 -    GRID   *5389                                    891               0*
 1146 -    *               269.9686               12456
 1147 -    GRID   *5390                                    891            40.3*
 1148 -    *                270.969               1456
 1149 -    GRID   *5391                                    891           -40.3*
 1150 -    *                270.969               1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 87

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1151 -    GRID   *5392                                          891            72.6*
 1152 -    *                273.5358                1456
 1153 -    GRID   *5393                                          891           -72.6*
 1154 -    *                273.5358                1456
 1155 -    GRID   *5394                                          891             105*
 1156 -    *                278.2953                1456
 1157 -    GRID   *5395                                          891            -105*
 1158 -    *                278.2953                1456
 1159 -    GRID   *5396                                          891             105*
 1160 -    *                  347.34                13456
 1161 -    GRID   *5397                                          891            -105*
 1162 -    *                  347.34                13456
 1163 -    GRID   *5398                                          891             105*
 1164 -    *                   368.5                13456
 1165 -    GRID   *5399                                          891            -105*
 1166 -    *                   368.5                13456
 1167 -    GRID   *5400                                          891             105*
 1168 -    *                     410                  456
 1169 -    GRID   *5401                                          891            -105*
 1170 -    *                     410                  456
 1171 -    GRID   *5402                                          891             105*
 1172 -    *                     396                13456
 1173 -    GRID   *5403                                          891            -105*
 1174 -    *                     396                13456
 1175 -    GRID   *5404                                       917.65            5.56*
 1176 -    *                499.874                1456
 1177 -    GRID   *5405                                       917.65           -5.56*
 1178 -    *                499.874                1456
 1179 -    GRID   *5406                                       917.65            41.5*
 1180 -    *                493.837                1456
 1181 -    GRID   *5407                                       917.65           -41.5*
 1182 -    *                493.837                1456
 1183 -    GRID   *5408                                       917.65          82.603*
 1184 -    *                475.264                1456
 1185 -    GRID   *5409                                       917.65         -82.603*
 1186 -    *                475.264                1456
 1187 -    GRID   *5410                                       917.65          104.129*
 1188 -    *                 450.62                1456
 1189 -    GRID   *5411                                       917.65         -104.129*
 1190 -    *                 450.62                1456
 1191 -    GRID   *5412                                          919               0*
 1192 -    *                269.3235                12456
 1193 -    GRID   *5413                                          919            40.3*
 1194 -    *                270.257                1456
 1195 -    GRID   *5414                                          919           -40.3*
 1196 -    *                270.257                1456
 1197 -    GRID   *5415                                          919            72.6*
 1198 -    *                272.631                1456
 1199 -    GRID   *5416                                          919           -72.6*
 1200 -    *                272.631                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 88

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1201 -    GRID   *5417                                    919            105*
 1202 -    *                276.9819                1456
 1203 -    GRID   *5418                                    919           -105*
 1204 -    *                276.9819                1456
 1205 -    GRID   *5419                                    919            105*
 1206 -    *                  347.34                13456
 1207 -    GRID   *5420                                    919           -105*
 1208 -    *                  347.34                13456
 1209 -    GRID   *5421                                    919            105*
 1210 -    *                   368.5                13456
 1211 -    GRID   *5422                                    919           -105*
 1212 -    *                   368.5                13456
 1213 -    GRID   *5423                                    919            105*
 1214 -    *                     410                 456
 1215 -    GRID   *5424                                    919           -105*
 1216 -    *                     410                 456
 1217 -    GRID   *5425                                    919            105*
 1218 -    *                     396                13456
 1219 -    GRID   *5426                                    919           -105*
 1220 -    *                     396                13456
 1221 -    GRID   *5427                              949.25              0*
 1222 -    *                268.6267                12456
 1223 -    GRID   *5428                              949.25            40.3*
 1224 -    *                269.4898                1456
 1225 -    GRID   *5429                              949.25           -40.3*
 1226 -    *                269.4898                1456
 1227 -    GRID   *5430                              949.25            72.6*
 1228 -    *                271.6668                1456
 1229 -    GRID   *5431                              949.25           -72.6*
 1230 -    *                271.6668                1456
 1231 -    GRID   *5432                              949.25            105*
 1232 -    *                275.6168                1456
 1233 -    GRID   *5433                              949.25           -105*
 1234 -    *                275.6168                1456
 1235 -    GRID   *5434                              949.25            105*
 1236 -    *                   368.5                13456
 1237 -    GRID   *5435                              949.25           -105*
 1238 -    *                   368.5                13456
 1239 -    GRID   *5436                              949.25            105*
 1240 -    *                     410                 456
 1241 -    GRID   *5437                              949.25           -105*
 1242 -    *                     410                 456
 1243 -    GRID   *5438                              949.25            105*
 1244 -    *                     396                13456
 1245 -    GRID   *5439                              949.25           -105*
 1246 -    *                     396                13456
 1247 -    GRID   *5440                              949.25            105*
 1248 -    *                  347.34                13456
 1249 -    GRID   *5441                              949.25           -105*
 1250 -    *                  347.34                13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 89

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1251 -    GRID   *5442                                    966.35             5.56*
 1252 -    *                499.874                1456
 1253 -    GRID   *5443                                    966.35            -5.56*
 1254 -    *                499.874                1456
 1255 -    GRID   *5444                                    966.35             41.5*
 1256 -    *                493.837                1456
 1257 -    GRID   *5445                                    966.35            -41.5*
 1258 -    *                493.837                1456
 1259 -    GRID   *5446                                    966.35           82.603*
 1260 -    *                475.264                1456
 1261 -    GRID   *5447                                    966.35           -82.603*
 1262 -    *                475.264                1456
 1263 -    GRID   *5448                                    966.35           104.129*
 1264 -    *                 450.62                1456
 1265 -    GRID   *5449                                    966.35          -104.129*
 1266 -    *                 450.62                1456
 1267 -    GRID   *5451                                     979.5             40.3*
 1268 -    *                268.724                1456
 1269 -    GRID   *5452                                     979.5            -40.3*
 1270 -    *                268.724                1456
 1271 -    GRID   *5453                                     979.5             72.6*
 1272 -    *               270.7183                1456
 1273 -    GRID   *5454                                     979.5            -72.6*
 1274 -    *               270.7183                1456
 1275 -    GRID   *5455                                     979.5              105*
 1276 -    *               274.3136                1456
 1277 -    GRID   *5456                                     979.5             -105*
 1278 -    *               274.3136                1456
 1279 -    GRID   *5457                                     979.5              105*
 1280 -    *                  368.5                13456
 1281 -    GRID   *5458                                     979.5             -105*
 1282 -    *                  368.5                13456
 1283 -    GRID   *5459                                     979.5              105*
 1284 -    *                    410                 456
 1285 -    GRID   *5460                                     979.5             -105*
 1286 -    *                    410                 456
 1287 -    GRID   *5461                                     979.5              105*
 1288 -    *                    396                13456
 1289 -    GRID   *5462                                     979.5             -105*
 1290 -    *                    396                13456
 1291 -    GRID   *5463                                     979.5              105*
 1292 -    *                 347.34                13456
 1293 -    GRID   *5464                                     979.5             -105*
 1294 -    *                 347.34                13456
 1295 -    GRID   *5465                                    1009.75               0*
 1296 -    *               267.2328                12456
 1297 -    GRID   *5466                                    1009.75             40.3*
 1298 -    *                267.961                1456
 1299 -    GRID   *5467                                    1009.75            -40.3*
 1300 -    *                267.961                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 90

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1301 -    GRID   *5468                                    1009.75            72.6*
 1302 -    *               269.7891                1456
 1303 -    GRID   *5469                                    1009.75           -72.6*
 1304 -    *               269.7891                1456
 1305 -    GRID   *5470                                    1009.75             105*
 1306 -    *                273.084                1456
 1307 -    GRID   *5471                                    1009.75            -105*
 1308 -    *                273.084                1456
 1309 -    GRID   *5472                                    1009.75             105*
 1310 -    *                   355                 13456
 1311 -    GRID   *5473                                    1009.75            -105*
 1312 -    *                   355                 13456
 1313 -    GRID   *5474                                    1009.75             105*
 1314 -    *                 368.5                 13456
 1315 -    GRID   *5475                                    1009.75            -105*
 1316 -    *                 368.5                 13456
 1317 -    GRID   *5476                                    1009.75             105*
 1318 -    *                   410                   456
 1319 -    GRID   *5477                                    1009.75            -105*
 1320 -    *                   410                   456
 1321 -    GRID   *5478                                    1009.75             105*
 1322 -    *                   396                 13456
 1323 -    GRID   *5479                                    1009.75            -105*
 1324 -    *                   396                 13456
 1325 -    GRID   *5480                                    1011.05             5.56*
 1326 -    *                499.874                1456
 1327 -    GRID   *5481                                    1011.05            -5.56*
 1328 -    *                499.874                1456
 1329 -    GRID   *5482                                    1011.05             41.5*
 1330 -    *                493.837                1456
 1331 -    GRID   *5483                                    1011.05            -41.5*
 1332 -    *                493.837                1456
 1333 -    GRID   *5484                                    1011.05           82.603*
 1334 -    *                475.264                1456
 1335 -    GRID   *5485                                    1011.05          -82.603*
 1336 -    *                475.264                1456
 1337 -    GRID   *5486                                    1011.05           104.129*
 1338 -    *                 450.62                1456
 1339 -    GRID   *5487                                    1011.05          -104.129*
 1340 -    *                 450.62                1456
 1341 -    GRID   *5488                                       1040               0*
 1342 -    *               266.5359                12456
 1343 -    GRID   *5489                                       1040             40.3*
 1344 -    *               267.2072                1456
 1345 -    GRID   *5490                                       1040             -40.3*
 1346 -    *               267.2072                1456
 1347 -    GRID   *5491                                       1040             72.6*
 1348 -    *               268.8963                1456
 1349 -    GRID   *5492                                       1040             -72.6*
 1350 -    *               268.8963                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 91

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1351 -    GRID   *5495                                    1040                105*
 1352 -    *                   368.5                13456
 1353 -    GRID   *5496                                    1040               -105*
 1354 -    *                   368.5                13456
 1355 -    GRID   *5497                                    1040                105*
 1356 -    *                     410                  456
 1357 -    GRID   *5498                                    1040               -105*
 1358 -    *                     410                  456
 1359 -    GRID   *5499                                    1040                105*
 1360 -    *                     396                13456
 1361 -    GRID   *5500                                    1040               -105*
 1362 -    *                     396                13456
 1363 -    GRID   *5501                                    1040                105*
 1364 -    *                   347.34               13456
 1365 -    GRID   *5502                                    1040               -105*
 1366 -    *                   347.34               13456
 1367 -    GRID   *5503                                 1055.75               5.56*
 1368 -    *                  499.874                1456
 1369 -    GRID   *5504                                 1055.75              -5.56*
 1370 -    *                  499.874                1456
 1371 -    GRID   *5505                                 1055.75               41.5*
 1372 -    *                  493.837                1456
 1373 -    GRID   *5506                                 1055.75              -41.5*
 1374 -    *                  493.837                1456
 1375 -    GRID   *5507                                 1055.75             82.603*
 1376 -    *                  475.264                1456
 1377 -    GRID   *5508                                 1055.75            -82.603*
 1378 -    *                  475.264                1456
 1379 -    GRID   *5509                                 1055.75             104.129*
 1380 -    *                   450.62                1456
 1381 -    GRID   *5510                                 1055.75            -104.129*
 1382 -    *                   450.62                1456
 1383 -    GRID   *5511                                 1065.17                   0*
 1384 -    *                  265.956               12456
 1385 -    GRID   *5512                                 1065.17               40.3*
 1386 -    *                  266.596                1456
 1387 -    GRID   *5513                                 1065.17              -40.3*
 1388 -    *                  266.596                1456
 1389 -    GRID   *5514                                 1065.17               72.6*
 1390 -    *                 268.2054                1456
 1391 -    GRID   *5515                                 1065.17              -72.6*
 1392 -    *                 268.2054                1456
 1393 -    GRID   *5516                                 1065.17                105*
 1394 -    *                 271.1675                1456
 1395 -    GRID   *5517                                 1065.17               -105*
 1396 -    *                 271.1675                1456
 1397 -    GRID   *5518                                 1065.17                105*
 1398 -    *                   368.5                13456
 1399 -    GRID   *5519                                 1065.17               -105*
 1400 -    *                   368.5                13456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 92

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1401 -    GRID   *5520                                    1065.17             105*
 1402 -    *                   410                 456
 1403 -    GRID   *5521                                    1065.17            -105*
 1404 -    *                   410                 456
 1405 -    GRID   *5522                                    1065.17             105*
 1406 -    *                   396                13456
 1407 -    GRID   *5523                                    1065.17            -105*
 1408 -    *                   396                13456
 1409 -    GRID   *5524                                    1065.17             105*
 1410 -    *                 347.34               13456
 1411 -    GRID   *5525                                    1065.17            -105*
 1412 -    *                 347.34               13456
 1413 -    GRID   *5526                                    1090.33               0*
 1414 -    *                265.3763               12456
 1415 -    GRID   *5527                                    1090.33             40.3*
 1416 -    *                266.0196                1456
 1417 -    GRID   *5528                                    1090.33            -40.3*
 1418 -    *                266.0196                1456
 1419 -    GRID   *5529                                    1090.33             72.6*
 1420 -    *                267.6143                1456
 1421 -    GRID   *5530                                    1090.33            -72.6*
 1422 -    *                267.6143                1456
 1423 -    GRID   *5531                                    1090.33             105*
 1424 -    *                270.3854                1456
 1425 -    GRID   *5532                                    1090.33            -105*
 1426 -    *                270.3854                1456
 1427 -    GRID   *5533                                    1090.33             105*
 1428 -    *                   368.5               13456
 1429 -    GRID   *5534                                    1090.33            -105*
 1430 -    *                   368.5               13456
 1431 -    GRID   *5535                                    1090.33             105*
 1432 -    *                   410                 456
 1433 -    GRID   *5536                                    1090.33            -105*
 1434 -    *                   410                 456
 1435 -    GRID   *5537                                    1090.33             105*
 1436 -    *                   396                13456
 1437 -    GRID   *5538                                    1090.33            -105*
 1438 -    *                   396                13456
 1439 -    GRID   *5539                                    1090.33             105*
 1440 -    *                 347.34               13456
 1441 -    GRID   *5540                                    1090.33            -105*
 1442 -    *                 347.34               13456
 1443 -    GRID   *5541                                    1100.45             5.56*
 1444 -    *                499.874                1456
 1445 -    GRID   *5542                                    1100.45            -5.56*
 1446 -    *                499.874                1456
 1447 -    GRID   *5543                                    1100.45             41.5*
 1448 -    *                493.837                1456
 1449 -    GRID   *5544                                    1100.45            -41.5*
 1450 -    *                493.837                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 93

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1451 -    GRID   *5545                                        1100.45          82.603*
 1452 -    *               475.264                1456
 1453 -    GRID   *5546                                        1100.45         -82.603*
 1454 -    *               475.264                1456
 1455 -    GRID   *5547                                        1100.45          104.129*
 1456 -    *                450.62                1456
 1457 -    GRID   *5548                                        1100.45         -104.129*
 1458 -    *                450.62                1456
 1459 -    GRID   *5549                                         1115.5                0*
 1460 -    *               264.7965               12456
 1461 -    GRID   *5550                                         1115.5            40.3*
 1462 -    *               265.4663                1456
 1463 -    GRID   *5551                                         1115.5           -40.3*
 1464 -    *               265.4663                1456
 1465 -    GRID   *5552                                         1115.5            72.6*
 1466 -    *                267.092                1456
 1467 -    GRID   *5553                                         1115.5           -72.6*
 1468 -    *                267.092                1456
 1469 -    GRID   *5554                                         1115.5             105*
 1470 -    *               269.9767                1456
 1471 -    GRID   *5555                                         1115.5            -105*
 1472 -    *               269.9767                1456
 1473 -    GRID   *5556                                         1115.5             105*
 1474 -    *                  368.5               13456
 1475 -    GRID   *5557                                         1115.5            -105*
 1476 -    *                  368.5                13456
 1477 -    GRID   *5558                                         1115.5             105*
 1478 -    *                    410                 456
 1479 -    GRID   *5559                                         1115.5            -105*
 1480 -    *                    410                 456
 1481 -    GRID   *5560                                         1115.5             105*
 1482 -    *                    396               13456
 1483 -    GRID   *5561                                         1115.5            -105*
 1484 -    *                    396               13456
 1485 -    GRID   *5562                                         1115.5             105*
 1486 -    *                 346.41               13456
 1487 -    GRID   *5563                                         1115.5            -105*
 1488 -    *                 346.41               13456
 1489 -    GRID   *5564                                        1128.42            5.56*
 1490 -    *               499.874                1456
 1491 -    GRID   *5565                                        1128.42           -5.56*
 1492 -    *               499.874                1456
 1493 -    GRID   *5566                                        1128.42            41.5*
 1494 -    *               493.837                1456
 1495 -    GRID   *5567                                        1128.42           -41.5*
 1496 -    *               493.837                1456
 1497 -    GRID   *5568                                        1128.42           82.603*
 1498 -    *               475.264                1456
 1499 -    GRID   *5569                                        1128.42          -82.603*
 1500 -    *               475.264                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 94

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1501 -    GRID   *5570                                    1128.42         104.129*
 1502 -    *                450.62                1456
 1503 -    GRID   *5571                                    1128.42        -104.129*
 1504 -    *                450.62                1456
 1505 -    GRID   *5573                                    1140.67            40.3*
 1506 -    *                264.909               1456
 1507 -    GRID   *5574                                    1140.67           -40.3*
 1508 -    *                264.909               1456
 1509 -    GRID   *5575                                    1140.67            72.6*
 1510 -    *                266.5665              1456
 1511 -    GRID   *5576                                    1140.67           -72.6*
 1512 -    *                266.5665              1456
 1513 -    GRID   *5577                                    1140.67             105*
 1514 -    *                269.4678              1456
 1515 -    GRID   *5578                                    1140.67            -105*
 1516 -    *                269.4678              1456
 1517 -    GRID   *5579                                    1140.67             105*
 1518 -    *                  368.5               13456
 1519 -    GRID   *5580                                    1140.67            -105*
 1520 -    *                  368.5               13456
 1521 -    GRID   *5583                                    1140.67             105*
 1522 -    *                  395.5               13456
 1523 -    GRID   *5584                                    1140.67            -105*
 1524 -    *                  395.5               13456
 1525 -    GRID   *5585                                    1140.67             105*
 1526 -    *                347.34                13456
 1527 -    GRID   *5586                                    1140.67            -105*
 1528 -    *                347.34                13456
 1529 -    GRID   *5587                                     1164.2            5.56*
 1530 -    *                499.874               1456
 1531 -    GRID   *5588                                     1164.2           -5.56*
 1532 -    *                499.874               1456
 1533 -    GRID   *5589                                     1164.2            41.5*
 1534 -    *                493.837               1456
 1535 -    GRID   *5590                                     1164.2           -41.5*
 1536 -    *                493.837               1456
 1537 -    GRID   *5591                                     1164.2          82.603*
 1538 -    *                475.264               1456
 1539 -    GRID   *5592                                     1164.2         -82.603*
 1540 -    *                475.264               1456
 1541 -    GRID   *5593                                     1164.2         104.129*
 1542 -    *                450.62                1456
 1543 -    GRID   *5594                                     1164.2        -104.129*
 1544 -    *                450.62                1456
 1545 -    GRID   *5595                                    1165.83               0*
 1546 -    *                263.6369              12456
 1547 -    GRID   *5596                                    1165.83            40.3*
 1548 -    *                264.3527              1456
 1549 -    GRID   *5597                                    1165.83           -40.3*
 1550 -    *                264.3527              1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 95

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1551 -    GRID   *5598                                    1165.83            72.6*
 1552 -    *                266.0422                1456
 1553 -    GRID   *5599                                    1165.83           -72.6*
 1554 -    *                266.0422                1456
 1555 -    GRID   *5600                                    1165.83             105*
 1556 -    *                268.8572                1456
 1557 -    GRID   *5601                                    1165.83            -105*
 1558 -    *                268.8572                1456
 1559 -    GRID   *5602                                    1165.83             105*
 1560 -    *                   368.5                13456
 1561 -    GRID   *5603                                    1165.83            -105*
 1562 -    *                   368.5                13456
 1563 -    GRID   *5604                                    1165.83             105*
 1564 -    *                     410                 456
 1565 -    GRID   *5605                                    1165.83            -105*
 1566 -    *                     410                 456
 1567 -    GRID   *5606                                    1165.83             105*
 1568 -    *                   395.5                13456
 1569 -    GRID   *5607                                    1165.83            -105*
 1570 -    *                   395.5                13456
 1571 -    GRID   *5608                                    1165.83             105*
 1572 -    *                  338.877               13456
 1573 -    GRID   *5609                                    1165.83            -105*
 1574 -    *                  338.877               13456
 1575 -    GRID   *5610                                       1191               0*
 1576 -    *                  263.057               12456
 1577 -    GRID   *5611                                       1191           26.25*
 1578 -    *                263.3678                1456
 1579 -    GRID   *5612                                       1191          -26.25*
 1580 -    *                263.3678                1456
 1581 -    GRID   *5613                                       1191            52.5*
 1582 -    *                264.3246                1456
 1583 -    GRID   *5614                                       1191           -52.5*
 1584 -    *                264.3246                1456
 1585 -    GRID   *5615                                       1191           78.75*
 1586 -    *                265.9669                1456
 1587 -    GRID   *5616                                       1191          -78.75*
 1588 -    *                265.9669                1456
 1589 -    GRID   *5617                                       1191             105*
 1590 -    *                   268.5                1456
 1591 -    GRID   *5618                                       1191            -105*
 1592 -    *                   268.5                1456
 1593 -    GRID   *5619                                       1191             105*
 1594 -    *                   368.5                13456
 1595 -    GRID   *5620                                       1191            -105*
 1596 -    *                   368.5                13456
 1597 -    GRID   *5621                                       1191             105*
 1598 -    *                     410                 456
 1599 -    GRID   *5622                                       1191            -105*
 1600 -    *                     410                 456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 96

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1601 -    GRID   *5623                                    1191             105*
 1602 -    *                 395.5                13456
 1603 -    GRID   *5624                                    1191            -105*
 1604 -    *                 395.5                13456
 1605 -    GRID   *5625                                    1191             105*
 1606 -    *                338.877               13456
 1607 -    GRID   *5626                                    1191            -105*
 1608 -    *                338.877               13456
 1609 -    GRID   *5627                                  1204.2            5.56*
 1610 -    *                499.874                1456
 1611 -    GRID   *5628                                  1204.2           -5.56*
 1612 -    *                499.874                1456
 1613 -    GRID   *5629                                  1204.2            41.5*
 1614 -    *                493.837                1456
 1615 -    GRID   *5630                                  1204.2           -41.5*
 1616 -    *                493.837                1456
 1617 -    GRID   *5631                                  1204.2          82.603*
 1618 -    *                475.264                1456
 1619 -    GRID   *5632                                  1204.2         -82.603*
 1620 -    *                475.264                1456
 1621 -    GRID   *5633                                  1204.2         104.129*
 1622 -    *                 450.62                1456
 1623 -    GRID   *5634                                  1204.2        -104.129*
 1624 -    *                 450.62                1456
 1625 -    GRID   *5635                                    1220               0*
 1626 -    *                262.3889               12456
 1627 -    GRID   *5636                                    1220           26.25*
 1628 -    *                262.7107                1456
 1629 -    GRID   *5637                                    1220          -26.25*
 1630 -    *                262.7107                1456
 1631 -    GRID   *5638                                    1220            52.5*
 1632 -    *                263.6917                1456
 1633 -    GRID   *5639                                    1220           -52.5*
 1634 -    *                263.6917                1456
 1635 -    GRID   *5640                                    1220           78.75*
 1636 -    *                265.3571                1456
 1637 -    GRID   *5641                                    1220          -78.75*
 1638 -    *                265.3571                1456
 1639 -    GRID   *5642                                    1220             105*
 1640 -    *                   267.8                1456
 1641 -    GRID   *5643                                    1220            -105*
 1642 -    *                   267.8                1456
 1643 -    GRID   *5644                                    1220             105*
 1644 -    *                   368.5               13456
 1645 -    GRID   *5645                                    1220            -105*
 1646 -    *                   368.5               13456
 1647 -    GRID   *5646                                    1220             105*
 1648 -    *                     410                 456
 1649 -    GRID   *5647                                    1220            -105*
 1650 -    *                     410                 456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 97

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1651 -    GRID   *5648                                    1220             105*
 1652 -    *                  395.5                13456
 1653 -    GRID   *5649                                    1220            -105*
 1654 -    *                  395.5                13456
 1655 -    GRID   *5650                                    1220             105*
 1656 -    *                338.877                13456
 1657 -    GRID   *5651                                    1220            -105*
 1658 -    *                338.877                13456
 1659 -    GRID   *5652                                  1244.2            5.56*
 1660 -    *                499.874                 1456
 1661 -    GRID   *5653                                  1244.2           -5.56*
 1662 -    *                499.874                 1456
 1663 -    GRID   *5654                                  1244.2            41.5*
 1664 -    *                493.837                 1456
 1665 -    GRID   *5655                                  1244.2           -41.5*
 1666 -    *                493.837                 1456
 1667 -    GRID   *5656                                  1244.2          82.603*
 1668 -    *                475.264                 1456
 1669 -    GRID   *5657                                  1244.2         -82.603*
 1670 -    *                475.264                 1456
 1671 -    GRID   *5658                                  1244.2          104.129*
 1672 -    *                 450.62                 1456
 1673 -    GRID   *5659                                  1244.2         -104.129*
 1674 -    *                 450.62                 1456
 1675 -    GRID   *5660                                    1249               0*
 1676 -    *                261.7208                12456
 1677 -    GRID   *5661                                    1249            26.25*
 1678 -    *                262.0534                 1456
 1679 -    GRID   *5662                                    1249           -26.25*
 1680 -    *                262.0534                 1456
 1681 -    GRID   *5663                                    1249             52.5*
 1682 -    *                263.0568                 1456
 1683 -    GRID   *5664                                    1249            -52.5*
 1684 -    *                263.0568                 1456
 1685 -    GRID   *5665                                    1249            78.75*
 1686 -    *                264.7392                 1456
 1687 -    GRID   *5666                                    1249           -78.75*
 1688 -    *                264.7392                 1456
 1689 -    GRID   *5667                                    1249             105*
 1690 -    *                   267.2                 1456
 1691 -    GRID   *5668                                    1249            -105*
 1692 -    *                   267.2                 1456
 1693 -    GRID   *5669                                    1249             105*
 1694 -    *                   368.5                13456
 1695 -    GRID   *5670                                    1249            -105*
 1696 -    *                   368.5                13456
 1697 -    GRID   *5671                                    1249             105*
 1698 -    *                     410                  456
 1699 -    GRID   *5672                                    1249            -105*
 1700 -    *                     410                  456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 98

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1701 -    GRID   *5673                                    1249                105*
 1702 -    *                   395.5                13456
 1703 -    GRID   *5674                                    1249               -105*
 1704 -    *                   395.5                13456
 1705 -    GRID   *5675                                    1249                105*
 1706 -    *                 338.877                13456
 1707 -    GRID   *5676                                    1249               -105*
 1708 -    *                 338.877                13456
 1709 -    GRID   *5677                                    1278                  0*
 1710 -    *                 261.1459                12456
 1711 -    GRID   *5678                                    1278              26.25*
 1712 -    *                 261.5047                 1456
 1713 -    GRID   *5679                                    1278             -26.25*
 1714 -    *                 261.5047                 1456
 1715 -    GRID   *5680                                    1278               52.5*
 1716 -    *                  262.558                 1456
 1717 -    GRID   *5681                                    1278              -52.5*
 1718 -    *                  262.558                 1456
 1719 -    GRID   *5682                                    1278              78.75*
 1720 -    *                 264.2727                 1456
 1721 -    GRID   *5683                                    1278             -78.75*
 1722 -    *                 264.2727                 1456
 1723 -    GRID   *5684                                    1278                105*
 1724 -    *                    266.8                 1456
 1725 -    GRID   *5685                                    1278               -105*
 1726 -    *                    266.8                 1456
 1727 -    GRID   *5686                                    1278                105*
 1728 -    *                    368.5                13456
 1729 -    GRID   *5687                                    1278               -105*
 1730 -    *                    368.5                13456
 1731 -    GRID   *5688                                    1278                105*
 1732 -    *                      410                  456
 1733 -    GRID   *5689                                    1278               -105*
 1734 -    *                      410                  456
 1735 -    GRID   *5690                                    1278                105*
 1736 -    *                    395.5                13456
 1737 -    GRID   *5691                                    1278               -105*
 1738 -    *                    395.5                13456
 1739 -    GRID   *5692                                    1278                105*
 1740 -    *                  338.877                13456
 1741 -    GRID   *5693                                    1278               -105*
 1742 -    *                  338.877                13456
 1743 -    GRID   *5694                                  1283.7               5.56*
 1744 -    *                  499.874                 1456
 1745 -    GRID   *5695                                  1283.7              -5.56*
 1746 -    *                  499.874                 1456
 1747 -    GRID   *5696                                  1283.7               41.5*
 1748 -    *                  493.837                 1456
 1749 -    GRID   *5697                                  1283.7              -41.5*
 1750 -    *                  493.837                 1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 99

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1751 -    GRID   *5698                                      1283.7          82.603*
 1752 -    *                475.264                1456
 1753 -    GRID   *5699                                      1283.7         -82.603*
 1754 -    *                475.264                1456
 1755 -    GRID   *5700                                      1283.7          104.129*
 1756 -    *                 450.62                1456
 1757 -    GRID   *5701                                      1283.7         -104.129*
 1758 -    *                 450.62                1456
 1759 -    GRID   *5702                                        1307               0*
 1760 -    *                261.036                 456
 1761 -    GRID   *5703                                        1307            26.25*
 1762 -    *               261.3677                12456
 1763 -    GRID   *5704                                        1307           -26.25*
 1764 -    *               261.3677                12456
 1765 -    GRID   *5705                                        1307            52.5*
 1766 -    *               262.3583                1456
 1767 -    GRID   *5706                                        1307           -52.5*
 1768 -    *               262.3583                1456
 1769 -    GRID   *5707                                        1307            78.75*
 1770 -    *               264.0026                1456
 1771 -    GRID   *5708                                        1307           -78.75*
 1772 -    *               264.0026                1456
 1773 -    GRID   *5709                                        1307             105*
 1774 -    *                  266.4                 456
 1775 -    GRID   *5710                                        1307            -105*
 1776 -    *                  266.4                 456
 1777 -    GRID   *5711                                        1307             105*
 1778 -    *                338.877                13456
 1779 -    GRID   *5712                                        1307            -105*
 1780 -    *                338.877                13456
 1781 -    GRID   *5713                                        1307             105*
 1782 -    *                    368                13456
 1783 -    GRID   *5714                                        1307            -105*
 1784 -    *                    368                13456
 1785 -    GRID   *5715                                        1307             105*
 1786 -    *                    409                 456
 1787 -    GRID   *5716                                        1307            -105*
 1788 -    *                    409                 456
 1789 -    GRID   *5717                                        1307             105*
 1790 -    *                  395.5                13456
 1791 -    GRID   *5718                                        1307            -105*
 1792 -    *                  395.5                13456
 1793 -    GRID   *5719                                   1494.7006        126.6783*
 1794 -    *                292.372                1456
 1795 -    GRID   *5720                                   1494.7006       -126.6783*
 1796 -    *                292.372                1456
 1797 -    GRID   *5721                                   1454.8674        122.1603*
 1798 -    *               290.7378                1456
 1799 -    GRID   *5722                                   1454.8674       -122.1603*
 1800 -    *               290.7378                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 100

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1801 -    GRID   *5723                                      1421        118.2799*
 1802 -    *               289.4541               1456
 1803 -    GRID   *5724                                      1421       -118.2799*
 1804 -    *               289.4541               1456
 1805 -    GRID   *5725                                      1380        113.5391*
 1806 -    *               288.0349               1456
 1807 -    GRID   *5726                                      1380       -113.5391*
 1808 -    *               288.0349               1456
 1809 -    GRID   *5727                                      1340        108.8758*
 1810 -    *               286.6503               1456
 1811 -    GRID   *5728                                      1340       -108.8758*
 1812 -    *               286.6503               1456
 1813 -    GRID   *5729                                 1489.9134         124.623*
 1814 -    *                    317               1456
 1815 -    GRID   *5730                                 1489.9134        -124.623*
 1816 -    *                    317               1456
 1817 -    GRID   *5731                                 1456.1172        121.2092*
 1818 -    *                    317               1456
 1819 -    GRID   *5732                                 1456.1172       -121.2092*
 1820 -    *                    317               1456
 1821 -    GRID   *5733                                      1421        117.2077*
 1822 -    *                    317               1456
 1823 -    GRID   *5734                                      1421       -117.2077*
 1824 -    *                    317               1456
 1825 -    GRID   *5735                                      1380        112.8172*
 1826 -    *                    317               1456
 1827 -    GRID   *5736                                      1380       -112.8172*
 1828 -    *                    317               1456
 1829 -    GRID   *5737                                      1340        108.5339*
 1830 -    *                    317               1456
 1831 -    GRID   *5738                                      1340       -108.5339*
 1832 -    *                    317               1456
 1833 -    GRID   *5739                                 1485.6609        122.7973*
 1834 -    *               338.877                1456
 1835 -    GRID   *5740                                 1485.6609       -122.7973*
 1836 -    *               338.877                1456
 1837 -    GRID   *5741                                 1451.8648        119.6971*
 1838 -    *               338.877                1456
 1839 -    GRID   *5742                                 1451.8648       -119.6971*
 1840 -    *               338.877                1456
 1841 -    GRID   *5743                                      1421        116.3561*
 1842 -    *               338.877                1456
 1843 -    GRID   *5744                                      1421       -116.3561*
 1844 -    *               338.877                1456
 1845 -    GRID   *5745                                      1380        112.2719*
 1846 -    *               338.877                1456
 1847 -    GRID   *5746                                      1380       -112.2719*
 1848 -    *               338.877                1456
 1849 -    GRID   *5747                                      1340        108.2874*
 1850 -    *               338.877                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 101

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1851 -    GRID   *5748                                      1340       -108.2874*
 1852 -    *                338.877                1456
 1853 -    GRID   *5749                                      1480        120.5131*
 1854 -    *                   368                 1456
 1855 -    GRID   *5750                                      1480       -120.5131*
 1856 -    *                   368                 1456
 1857 -    GRID   *5751                                 1446.2039        117.4826*
 1858 -    *                   368                 1456
 1859 -    GRID   *5752                                 1446.2039       -117.4826*
 1860 -    *                   368                 1456
 1861 -    GRID   *5753                                      1421        115.2225*
 1862 -    *                   368                 1456
 1863 -    GRID   *5754                                      1421       -115.2225*
 1864 -    *                   368                 1456
 1865 -    GRID   *5755                                      1380         111.546*
 1866 -    *                   368                 1456
 1867 -    GRID   *5756                                      1380        -111.546*
 1868 -    *                   368                 1456
 1869 -    GRID   *5757                                      1340        107.9592*
 1870 -    *                   368                 1456
 1871 -    GRID   *5758                                      1340       -107.9592*
 1872 -    *                   368                 1456
 1873 -    GRID   *5759                                    1487.5        119.7826*
 1874 -    *                 391.5                 1456
 1875 -    GRID   *5760                                    1487.5       -119.7826*
 1876 -    *                 391.5                 1456
 1877 -    GRID   *5761                                    1462.5        117.6962*
 1878 -    *                 391.5                 1456
 1879 -    GRID   *5762                                    1462.5       -117.6962*
 1880 -    *                 391.5                 1456
 1881 -    GRID   *5763                                      1421        114.3078*
 1882 -    *                 391.5                 1456
 1883 -    GRID   *5764                                      1421       -114.3078*
 1884 -    *                 391.5                 1456
 1885 -    GRID   *5765                                      1380        110.9603*
 1886 -    *                 391.5                 1456
 1887 -    GRID   *5766                                      1380       -110.9603*
 1888 -    *                 391.5                 1456
 1889 -    GRID   *5767                                      1340        107.6944*
 1890 -    *                 391.5                 1456
 1891 -    GRID   *5768                                      1340       -107.6944*
 1892 -    *                 391.5                 1456
 1893 -    GRID   *5769                                 1498.0015               0*
 1894 -    *               274.5584                2456
 1895 -    GRID   *5770                                      1454               0*
 1896 -    *               269.7348                2456
 1897 -    GRID   *5771                                      1421               0*
 1898 -    *               266.2877                2456
 1899 -    GRID   *5772                                      1380               0*
 1900 -    *               263.2482                2456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 102

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1901 -    GRID   *5773                                    1345.66                0*
 1902 -    *                261.7352                2456
 1903 -    GRID   *5774                                    1498.0015              30*
 1904 -    *                274.5954                2456
 1905 -    GRID   *5775                                    1498.0015             -30*
 1906 -    *                274.5954                2456
 1907 -    GRID   *5776                                         1454              30*
 1908 -    *                269.8679                2456
 1909 -    GRID   *5777                                         1454             -30*
 1910 -    *                269.8679                2456
 1911 -    GRID   *5778                                         1421              30*
 1912 -    *                266.4944                456
 1913 -    GRID   *5779                                         1421             -30*
 1914 -    *                266.4944                456
 1915 -    GRID   *5780                                         1380              30*
 1916 -    *                263.5004                456
 1917 -    GRID   *5781                                         1380             -30*
 1918 -    *                263.5004                456
 1919 -    GRID   *5782                                    1345.66                30*
 1920 -    *                262.0708                456
 1921 -    GRID   *5783                                    1345.66                -30*
 1922 -    *                262.0708                456
 1923 -    GRID   *5784                                    1498.0015              52.5*
 1924 -    *                 274.675                2456
 1925 -    GRID   *5785                                    1498.0015             -52.5*
 1926 -    *                 274.675                2456
 1927 -    GRID   *5786                                         1454              52.5*
 1928 -    *                270.1561                456
 1929 -    GRID   *5787                                         1454             -52.5*
 1930 -    *                270.1561                456
 1931 -    GRID   *5788                                         1421              52.5*
 1932 -    *                266.9441                456
 1933 -    GRID   *5789                                         1421             -52.5*
 1934 -    *                266.9441                456
 1935 -    GRID   *5790                                         1380              52.5*
 1936 -    *                264.0506                456
 1937 -    GRID   *5791                                         1380             -52.5*
 1938 -    *                264.0506                456
 1939 -    GRID   *5792                                    1345.66                52.5*
 1940 -    *                262.7755                456
 1941 -    GRID   *5793                                    1345.66                -52.5*
 1942 -    *                262.7755                456
 1943 -    GRID   *5794                                    1498.0015              90*
 1944 -    *                274.9334                456
 1945 -    GRID   *5795                                    1498.0015              -90*
 1946 -    *                274.9334                456
 1947 -    GRID   *5796                                         1454              90*
 1948 -    *                 271.101                456
 1949 -    GRID   *5797                                         1454             -90*
 1950 -    *                 271.101                456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 103

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1951 -    GRID   *5798                                        1421                90*
 1952 -    *                268.4311                456
 1953 -    GRID   *5799                                        1421               -90*
 1954 -    *                268.4311                456
 1955 -    GRID   *5800                                        1380                90*
 1956 -    *                265.8792                456
 1957 -    GRID   *5801                                        1380               -90*
 1958 -    *                265.8792                456
 1959 -    GRID   *5802                                   1333.2724            91.757*
 1960 -    *                 276.142                456
 1961 -    GRID   *5803                                   1333.2724           -91.757*
 1962 -    *                 276.142                456
 1963 -    GRID   *5804                                   1514.4917            54.059*
 1964 -    *                296.1912               2456
 1965 -    GRID   *5805                                   1514.4917           -54.059*
 1966 -    *                296.1912               2456
 1967 -    GRID   *5806                                   1511.6834            89.9999*
 1968 -    *                309.1252               2456
 1969 -    GRID   *5807                                   1511.6834           -89.9999*
 1970 -    *                309.1252               2456
 1971 -    GRID   *5808                                   1512.7664                 0*
 1972 -    *                 310.356               2456
 1973 -    GRID   *5809                                   1508.1634           112.6776*
 1974 -    *                327.0791               2456
 1975 -    GRID   *5810                                   1508.1634          -112.6776*
 1976 -    *                327.0791               2456
 1977 -    GRID   *5811                                   1508.8089                 0*
 1978 -    *                   332.8               2456
 1979 -    GRID   *5812                                   1501.0798           105.148*
 1980 -    *                367.9998               2456
 1981 -    GRID   *5813                                   1501.0798          -105.148*
 1982 -    *                367.9998               2456
 1983 -    GRID   *5814                                   1502.1463                 0*
 1984 -    *                370.5857               2456
 1985 -    GRID   *5815                                   1496.9351           103.748*
 1986 -    *                391.5011               2456
 1987 -    GRID   *5816                                   1496.9351          -103.748*
 1988 -    *                391.5011               2456
 1989 -    GRID   *5817                                   1496.5111                 0*
 1990 -    *                401.5664               2456
 1991 -    GRID   *5818                                    1495.771           31.1809*
 1992 -    *                404.1457               2456
 1993 -    GRID   *5819                                    1495.771          -31.1809*
 1994 -    *                404.1457               2456
 1995 -    GRID   *5820                                   1494.8993            54.059*
 1996 -    *                407.1874               2456
 1997 -    GRID   *5821                                   1494.8993           -54.059*
 1998 -    *                407.1874               2456
 1999 -    GRID   *5822                                   1493.9669              78.5*
 2000 -    *                 410.437               2456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 104

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2001 -    GRID   *5823                                    1493.9669          -78.5*
 2002 -    *                410.437                2456
 2003 -    GRID   *5824                                    1493.0546         102.4305*
 2004 -    *              413.6185                 2456
 2005 -    GRID   *5825                                    1493.0546        -102.4305*
 2006 -    *              413.6185                 2456
 2007 -    GRID   *5826                                    1484.6139            78.5*
 2008 -    *              443.0549                 2456
 2009 -    GRID   *5827                                    1484.6139           -78.5*
 2010 -    *              443.0549                 2456
 2011 -    GRID   *5828                                    1484.3181          52.7739*
 2012 -    *              444.0884                 2456
 2013 -    GRID   *5829                                    1484.3181         -52.7739*
 2014 -    *              444.0884                 2456
 2015 -    GRID   *5830                                    1472.6572          43.1477*
 2016 -    *              484.7549                 2456
 2017 -    GRID   *5831                                    1472.6572         -43.1477*
 2018 -    *              484.7549                 2456
 2019 -    GRID   *5832                                    1466.7276               0*
 2020 -    *              505.4341                 2456
 2021 -    GRID   *5833                                    1496.9073               0*
 2022 -    *              457.8851                 456
 2023 -    GRID   *5834                                    1521.2498           56.301*
 2024 -    *              351.9996                 456
 2025 -    GRID   *5835                                    1521.2498          -56.301*
 2026 -    *              351.9995                 456
 2027 -    GRID   *5836                                       1585.5              30*
 2028 -    *                286.87                 12456
 2029 -    GRID   *5837                                       1585.5             -30*
 2030 -    *                286.87                 12456
 2031 -    GRID   *5838                                       1549.5              30*
 2032 -    *                286.87                 12456
 2033 -    GRID   *5839                                       1549.5             -30*
 2034 -    *                286.87                 12456
 2035 -    GRID   *5840                                       1585.5              90*
 2036 -    *                286.87                 12456
 2037 -    GRID   *5841                                       1585.5             -90*
 2038 -    *                286.87                 12456
 2039 -    GRID   *5842                                       1549.5              90*
 2040 -    *                286.87                 12456
 2041 -    GRID   *5843                                       1549.5             -90*
 2042 -    *                286.87                 12456
 2043 -    GRID   *5844                                       1400.5          21.4957*
 2044 -    *              509.3448                 456
 2045 -    GRID   *5845                                       1400.5         -21.4957*
 2046 -    *              509.3448                 456
 2047 -    GRID   *5846                                    1339.2551          24.2546*
 2048 -    *              501.8336                 456
 2049 -    GRID   *5847                                    1339.2551         -24.2546*
 2050 -    *              501.8336                 456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 105

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2051 -    GRID   *5848                                    1507.7733         94.9665*
 2052 -    *                521.9223                456
 2053 -    GRID   *5849                                    1507.7733        -94.9665*
 2054 -    *                521.9223                456
 2055 -    GRID   *5850                                    1509.9408         91.3945*
 2056 -    *                466.4946                456
 2057 -    GRID   *5851                                    1509.9408        -91.3945*
 2058 -    *                466.4946                456
 2059 -    GRID   *5852                                    1493.7402         54.1055*
 2060 -    *                482.6579                456
 2061 -    GRID   *5853                                    1493.7402        -54.1055*
 2062 -    *                482.6579                456
 2063 -    GRID   *5854                                    1493.7402          80.176*
 2064 -    *                455.6611                456
 2065 -    GRID   *5855                                    1493.7402         -80.176*
 2066 -    *                455.6611                456
 2067 -    GRID   *5856                                    1535.4975        106.6583*
 2068 -    *                461.8559                456
 2069 -    GRID   *5857                                    1535.4975       -106.6583*
 2070 -    *                461.8559                456
 2071 -    GRID   *5858                                    1535.4983        151.5288*
 2072 -    *                 466.999                456
 2073 -    GRID   *5859                                    1535.4983       -151.5288*
 2074 -    *                 466.999                456
 2075 -    GRID   *5860                                    1535.4995        120.9442*
 2076 -    *                431.7382                456
 2077 -    GRID   *5861                                    1535.4995       -120.9442*
 2078 -    *                431.7382                456
 2079 -    GRID   *5862                                    1535.5003        122.9413*
 2080 -    *                492.1768               1456
 2081 -    GRID   *5863                                    1535.5003       -122.9413*
 2082 -    *                492.1768               1456
 2083 -    GRID   *5864                                    1568.5041        123.8215*
 2084 -    *                464.2783              23456
 2085 -    GRID   *5865                                    1568.5041       -123.8215*
 2086 -    *                464.2783              23456
 2087 -    GRID   *5866                                    1484.0419        136.6616*
 2088 -    *                436.3631                456
 2089 -    GRID   *5867                                    1484.0419       -136.6616*
 2090 -    *                436.3631                456
 2091 -    GRID   *5868                                    1437.5946         139.899*
 2092 -    *                443.4653                456
 2093 -    GRID   *5869                                    1437.5946        -139.899*
 2094 -    *                443.4653                456
 2095 -    GRID   *5870                                    1391.9512         132.067*
 2096 -    *                 438.738                456
 2097 -    GRID   *5871                                    1391.9512        -132.067*
 2098 -    *                 438.738                456
 2099 -    GRID   *5872                                     1337.885        119.6773*
 2100 -    *                 440.397                456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 106

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2101 -    GRID   *5873                                    1337.885       -119.6773*
 2102 -    *               440.397               456
 2103 -    GRID   *5874                                    1482.0009       148.5752*
 2104 -    *               479.7027              456
 2105 -    GRID   *5875                                    1482.0009      -148.5752*
 2106 -    *               479.7027              456
 2107 -    GRID   *5876                                    1436.1349       145.6538*
 2108 -    *               477.3263              456
 2109 -    GRID   *5877                                    1436.1349      -145.6538*
 2110 -    *               477.3263              456
 2111 -    GRID   *5878                                    1390.2964       141.2855*
 2112 -    *               474.3312              456
 2113 -    GRID   *5879                                    1390.2964      -141.2855*
 2114 -    *               474.3312              456
 2115 -    GRID   *5880                                    1336.7145       124.1073*
 2116 -    *               467.7377              456
 2117 -    GRID   *5881                                    1336.7145      -124.1073*
 2118 -    *               467.7377              456
 2119 -    GRID   *5882                                    1481.6968       124.1001*
 2120 -    *               513.3421              456
 2121 -    GRID   *5883                                    1481.6968      -124.1001*
 2122 -    *               513.3421              456
 2123 -    GRID   *5884                                    1435.9083        120.345*
 2124 -    *               509.7158              456
 2125 -    GRID   *5885                                    1435.9083       -120.345*
 2126 -    *               509.7158              456
 2127 -    GRID   *5886                                    1390.0856       116.3725*
 2128 -    *               505.8796              456
 2129 -    GRID   *5887                                    1390.0856      -116.3725*
 2130 -    *               505.8796              456
 2131 -    GRID   *5888                                    1336.4937       104.3254*
 2132 -    *               494.2458              456
 2133 -    GRID   *5889                                    1336.4937      -104.3254*
 2134 -    *               494.2458              456
 2135 -    GRID   *5890                                     1482.237        85.4636*
 2136 -    *               538.6164              456
 2137 -    GRID   *5891                                     1482.237       -85.4636*
 2138 -    *               538.6164              456
 2139 -    GRID   *5892                                    1436.3351        83.3919*
 2140 -    *               536.3377              456
 2141 -    GRID   *5893                                    1436.3351       -83.3919*
 2142 -    *               536.3377              456
 2143 -    GRID   *5894                                    1390.4472        80.8102*
 2144 -    *               532.8438              456
 2145 -    GRID   *5895                                    1390.4472       -80.8102*
 2146 -    *               532.8438              456
 2147 -    GRID   *5896                                    1336.7804         74.493*
 2148 -    *               517.3179              456
 2149 -    GRID   *5897                                    1336.7804        -74.493*
 2150 -    *               517.3179              456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 107

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2151 -    GRID   *5898                                    1484.063         48.2221*
 2152 -    *                527.3698                1456
 2153 -    GRID   *5899                                    1484.063        -48.2221*
 2154 -    *                527.3698                1456
 2155 -    GRID   *5900                                   1437.8265         51.8927*
 2156 -    *                528.2732                 456
 2157 -    GRID   *5901                                   1437.8265        -51.8927*
 2158 -    *                528.2732                 456
 2159 -    GRID   *5902                                   1391.9459         49.4745*
 2160 -    *                524.4088                 456
 2161 -    GRID   *5903                                   1391.9459        -49.4745*
 2162 -    *                524.4088                 456
 2163 -    GRID   *5904                                   1337.9324         48.8009*
 2164 -    *                512.4979                 456
 2165 -    GRID   *5905                                   1337.9324        -48.8009*
 2166 -    *                512.4979                 456
 2167 -    GRID   *5906                                        1191             167*
 2168 -    *                300.9105                12456
 2169 -    GRID   *5907                                        1307         145.403*
 2170 -    *                291.0002                12456
 2171 -    GRID   *5908                                        1307        195.7875*
 2172 -    *                294.5675                12456
 2173 -    GRID   *5909                                     1139.33        194.9561*
 2174 -    *                303.6527                12456
 2175 -    GRID   *5910                                        1249        144.9807*
 2176 -    *                295.6138                12456
 2177 -    GRID   *5911                                        1365        145.8064*
 2178 -    *                286.5916                12456
 2179 -    GRID   *5912                                        1365         196.204*
 2180 -    *                290.0166                12456
 2181 -    GRID   *5913                                   1071.2993        195.0225*
 2182 -    *                302.9271                12456
 2183 -    GRID   *5914                                        1191        251.0932*
 2184 -    *                304.7115                12456
 2185 -    GRID   *5915                                        1249        251.2668*
 2186 -    *                302.8153                12456
 2187 -    GRID   *5916                                        1249        309.7277*
 2188 -    *                305.9128                12456
 2189 -    GRID   *5917                                        1307        251.6602*
 2190 -    *                298.5159                12456
 2191 -    GRID   *5918                                        1307        310.0277*
 2192 -    *                302.6348                12456
 2193 -    GRID   *5919                                        1307        369.9113*
 2194 -    *                306.6469                12456
 2195 -    GRID   *5921                                        1365        310.4558*
 2196 -    *                297.9575                12456
 2197 -    GRID   *5922                                        1365        370.3169*
 2198 -    *                 302.215                12456
 2199 -    GRID   *5925                                   1127.2724        251.3208*
 2200 -    *                302.2249                12456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 108

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2201 -    GRID   *5926                                      1425.55        146.0089*
 2202 -    *               284.3796                12456
 2203 -    GRID   *5927                                      1417.95        280.2517*
 2204 -    *                293.331                12456
 2205 -    GRID   *5928                                       1485.2        145.9227*
 2206 -    *                285.321                12456
 2207 -    GRID   *5929                                     1473.4989        210.3217*
 2208 -    *               289.3702                12456
 2209 -    GRID   *5930                                       1460.8        280.2239*
 2210 -    *               293.6354                12456
 2211 -    GRID   *5931                                     1411.9857        385.5422*
 2212 -    *                300.438                12456
 2213 -    GRID   *5932                                       1449.65        340.6235*
 2214 -    *               297.4944                12456
 2215 -    GRID   *5933                                     1440.9786         385.554*
 2216 -    *               300.3089                12456
 2217 -    GRID   *5934                                     1431.8253        432.9761*
 2218 -    *               303.3295                12456
 2219 -    GRID   *5936                                          1191            -167*
 2220 -    *               300.9105                12456
 2221 -    GRID   *5937                                          1307        -145.403*
 2222 -    *               291.0002                12456
 2223 -    GRID   *5938                                          1307       -195.7875*
 2224 -    *               294.5675                12456
 2225 -    GRID   *5939                                       1139.33       -194.9561*
 2226 -    *               303.6527                12456
 2227 -    GRID   *5940                                          1249       -144.9807*
 2228 -    *               295.6138                12456
 2229 -    GRID   *5941                                          1365       -145.8064*
 2230 -    *               286.5916                12456
 2231 -    GRID   *5942                                          1365        -196.204*
 2232 -    *               290.0166                12456
 2233 -    GRID   *5943                                     1071.2993       -195.0225*
 2234 -    *               302.9271                12456
 2235 -    GRID   *5944                                          1191       -251.0932*
 2236 -    *               304.7115                12456
 2237 -    GRID   *5945                                          1249       -251.2668*
 2238 -    *               302.8153                12456
 2239 -    GRID   *5946                                          1249       -309.7277*
 2240 -    *               305.9128                12456
 2241 -    GRID   *5947                                          1307       -251.6602*
 2242 -    *               298.5159                12456
 2243 -    GRID   *5948                                          1307       -310.0277*
 2244 -    *               302.6348                12456
 2245 -    GRID   *5949                                          1307       -369.9113*
 2246 -    *               306.6469                12456
 2247 -    GRID   *5951                                          1365       -310.4558*
 2248 -    *               297.9575                12456
 2249 -    GRID   *5952                                          1365       -370.3169*
 2250 -    *                302.215                12456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 109

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2251 -    GRID   *5955                                      1127.2724       -251.3208*
 2252 -    *                302.2249                12456
 2253 -    GRID   *5956                                        1425.55       -146.0089*
 2254 -    *                284.3796                12456
 2255 -    GRID   *5957                                        1417.95       -280.2517*
 2256 -    *                 293.331                12456
 2257 -    GRID   *5958                                         1485.2       -145.9227*
 2258 -    *                 285.321                12456
 2259 -    GRID   *5959                                      1473.4989       -210.3217*
 2260 -    *                289.3702                12456
 2261 -    GRID   *5960                                         1460.8       -280.2239*
 2262 -    *                293.6354                12456
 2263 -    GRID   *5961                                      1411.9857       -385.5422*
 2264 -    *                 300.438                12456
 2265 -    GRID   *5962                                        1449.65       -340.6235*
 2266 -    *                297.4944                12456
 2267 -    GRID   *5963                                      1440.9786        -385.554*
 2268 -    *                300.3089                12456
 2269 -    GRID   *5964                                      1431.8253       -432.9761*
 2270 -    *                303.3295                12456
 2271 -    GRID   *5965                                            835        141.1596*
 2272 -    *                305.8914                12456
 2273 -    GRID   *5966                                         949.25        159.6489*
 2274 -    *                303.3864                12456
 2275 -    GRID   *5967                                            835       -141.1596*
 2276 -    *                305.8914                12456
 2277 -    GRID   *5968                                         949.25       -159.6489*
 2278 -    *                303.3864                12456
 2279 -    GRID   *5971                                          263.5               0*
 2280 -    *                371.0002                456
 2281 -    GRID   *5972                                            582              94*
 2282 -    *                     410                456
 2283 -    GRID   *5973                                            582             -94*
 2284 -    *                     410                456
 2285 -    GRID   *5974                                            750               0*
 2286 -    *                     305                456
 2287 -    GRID   *6032                                          976.5          -101.5*
 2288 -    *                   407.5                456
 2289 -    GRID   *6060                                          701.2          -100.8*
 2290 -    *                     407                456
 2291 -    GRID   *6061                                          701.2           -91.3*
 2292 -    *                   407.5                456
 2293 -    GRID   *6064                                            879          -101.3*
 2294 -    *                   407.5                456
 2295 -    GRID   *6067                                         1029.5           -96.8*
 2296 -    *                     408                456
 2297 -    GRID   *6068                                           1207             -97*
 2298 -    *                   407.5                456
 2299 -    GRID   *6069                                          881.2          -101.3*
 2300 -    *                   407.5                456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 110

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2301 -    GRID   *6070                                        881.2           101.3*
 2302 -    *                 407.5                456
 2303 -    GRID   *6071                                         1207              97*
 2304 -    *                 407.5                456
 2305 -    GRID   *6073                                          879           101.3*
 2306 -    *                 407.5                456
 2307 -    GRID   *6074                                       1029.5           101.3*
 2308 -    *                 407.5                456
 2309 -    GRID   *6076                                       1029.5            96.8*
 2310 -    *                   408                456
 2311 -    GRID   *6080                                          919               0*
 2312 -    *                   305                6
 2313 -    GRID   *6081                                         1040               0*
 2314 -    *                   305                6
 2315 -    GRID   *6082                                          790          -101.3*
 2316 -    *                 407.5                456
 2317 -    GRID   *6083                                       1029.5          -101.3*
 2318 -    *                 407.5                456
 2319 -    GRID   *6084                                       1110.5           -96.8*
 2320 -    *                 407.3                456
 2321 -    GRID   *6085                                         1229             -97*
 2322 -    *                 407.5                456
 2323 -    GRID   *6086                                          505             5.6*
 2324 -    *                 421.3                456
 2325 -    GRID   *6087                                       1205.5               0*
 2326 -    *                   305                456
 2327 -    GRID   *6089                                     482.4191               0*
 2328 -    *               324.7097                456
 2329 -    GRID   *6091                                        701.2           100.8*
 2330 -    *                   407                456
 2331 -    GRID   *6092                                          790           101.3*
 2332 -    *                 407.5                456
 2333 -    GRID   *6093                                        976.5           101.5*
 2334 -    *                 407.5                456
 2335 -    GRID   *6094                                       1110.5            96.8*
 2336 -    *                 407.3                456
 2337 -    GRID   *6095                                         1229              97*
 2338 -    *                 407.5                456
 2339 -    GRID   *10001                                      1297.5           93.88*
 2340 -    *                410.37                456
 2341 -    GRID   *10002                                    1290.13            93.88*
 2342 -    *                410.37                456
 2343 -    GRID   *10004                                        1290           87.19*
 2344 -    *                414.09                456
 2345 -    GRID   *10005                                      1297.5              88*
 2346 -    *                411.93                456
 2347 -    GRID   *10006                                        1290           87.19*
 2348 -    *                411.09                456
 2349 -    GRID   *10007                                      1297.5           88.28*
 2350 -    *                410.37                456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 111

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2351 -    GRID   *10008                                    1297.5              88*
 2352 -    *                 409.93               456
 2353 -    GRID   *10009                                    1297.5              88*
 2354 -    *                 408.93               456
 2355 -    GRID   *10010                                    1297.5              88*
 2356 -    *                 406.93               456
 2357 -    GRID   *10011                                    1282.5           93.88*
 2358 -    *                 410.37               456
 2359 -    GRID   *10012                                    1282.5           88.28*
 2360 -    *                 410.37               456
 2361 -    GRID   *10013                                    1282.5              88*
 2362 -    *                 411.93               456
 2363 -    GRID   *10016                                    1282.5              88*
 2364 -    *                 409.93               456
 2365 -    GRID   *10017                                    1282.5              88*
 2366 -    *                 408.93               456
 2367 -    GRID   *10018                                    1282.5              88*
 2368 -    *                 406.93               456
 2369 -    GRID   *10019                                      1263           87.19*
 2370 -    *                 414.09               456
 2371 -    GRID   *10020                                    1270.5              88*
 2372 -    *                 409.93               456
 2373 -    GRID   *10021                                    1270.5              88*
 2374 -    *                 408.93               456
 2375 -    GRID   *10022                                    1270.5              88*
 2376 -    *                 406.93               456
 2377 -    GRID   *10023                                   1264.88           93.88*
 2378 -    *                 410.37               456
 2379 -    GRID   *10025                                    1270.5           93.88*
 2380 -    *                 410.37               456
 2381 -    GRID   *10026                                    1255.5              88*
 2382 -    *                 411.93               456
 2383 -    GRID   *10027                                    1270.5           88.28*
 2384 -    *                 410.37               456
 2385 -    GRID   *10028                                    1270.5              88*
 2386 -    *                 411.93               456
 2387 -    GRID   *10029                                    1282.5           93.88*
 2388 -    *                 405.07               456
 2389 -    GRID   *10030                                    1282.5           88.28*
 2390 -    *                 405.07               456
 2391 -    GRID   *10031                                    1270.5           93.88*
 2392 -    *                 405.07               456
 2393 -    GRID   *10032                                    1270.5           88.28*
 2394 -    *                 405.07               456
 2395 -    GRID   *10033                                    1297.5           88.28*
 2396 -    *                 405.07               456
 2397 -    GRID   *10034                                    1297.5           93.88*
 2398 -    *                 405.07               456
 2399 -    GRID   *10035                                    1282.5           93.88*
 2400 -    *                  400.9               456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 112

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2401 -    GRID   *10036                                    1270.5           93.88*
 2402 -    *                400.9                456
 2403 -    GRID   *10037                                    1282.5           88.28*
 2404 -    *                400.9                456
 2405 -    GRID   *10038                                      1290           86.99*
 2406 -    *              398.46                 456
 2407 -    GRID   *10039                                      1278              94*
 2408 -    *                396.5                456
 2409 -    GRID   *10040                                    1282.5           93.88*
 2410 -    *              395.77                 456
 2411 -    GRID   *10041                                    1270.5           93.88*
 2412 -    *              395.77                 456
 2413 -    GRID   *10042                                    1270.5           88.28*
 2414 -    *                400.9                456
 2415 -    GRID   *10043                                      1263           86.99*
 2416 -    *              398.46                 456
 2417 -    GRID   *10044                                    1270.5              88*
 2418 -    *                396.3                456
 2419 -    GRID   *10045                                    1270.5           88.28*
 2420 -    *              395.77                 456
 2421 -    GRID   *10046                                    1282.5              88*
 2422 -    *                396.3                456
 2423 -    GRID   *10047                                    1270.5              88*
 2424 -    *                394.3                456
 2425 -    GRID   *10048                                      1263           86.99*
 2426 -    *              395.46                 456
 2427 -    GRID   *10049                                    1270.5              88*
 2428 -    *                393.3                456
 2429 -    GRID   *10050                                    1282.5           88.28*
 2430 -    *              395.77                 456
 2431 -    GRID   *10051                                    1282.5              88*
 2432 -    *                393.3                456
 2433 -    GRID   *10052                                    1282.5              88*
 2434 -    *                394.3                456
 2435 -    GRID   *10053                                      1290           86.99*
 2436 -    *              395.46                 456
 2437 -    GRID   *10054                                    1297.5              88*
 2438 -    *                396.3                456
 2439 -    GRID   *10055                                    1297.5           88.28*
 2440 -    *                400.9                456
 2441 -    GRID   *10056                                    1282.5           93.88*
 2442 -    *                391.3                456
 2443 -    GRID   *10057                                    1270.5           93.88*
 2444 -    *                391.3                456
 2445 -    GRID   *10058                                    1270.5              88*
 2446 -    *                391.3                456
 2447 -    GRID   *10059                                    1282.5              88*
 2448 -    *                391.3                456
 2449 -    GRID   *10060                                    1255.5              88*
 2450 -    *                396.3                456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 113

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2451 -    GRID   *10061                                    1255.5              88*
 2452 -    *                393.3                456
 2453 -    GRID   *10062                                    1255.5              88*
 2454 -    *                394.3                456
 2455 -    GRID   *10063                                    1297.5              88*
 2456 -    *                393.3                456
 2457 -    GRID   *10064                                    1297.5              88*
 2458 -    *                394.3                456
 2459 -    GRID   *10065                                    1297.5           93.88*
 2460 -    *                400.9                456
 2461 -    GRID   *10066                                    1297.5           93.88*
 2462 -    *               395.77                456
 2463 -    GRID   *10067                                    1297.5           93.88*
 2464 -    *                391.3                456
 2465 -    GRID   *10068                                    1297.5           88.28*
 2466 -    *               395.77                456
 2467 -    GRID   *10069                                    1297.5              88*
 2468 -    *                391.3                456
 2469 -    GRID   *10070                                    1255.5           93.88*
 2470 -    *                400.9                456
 2471 -    GRID   *10071                                    1255.5           88.28*
 2472 -    *                400.9                456
 2473 -    GRID   *10072                                    1255.5           93.88*
 2474 -    *               395.77                456
 2475 -    GRID   *10073                                    1255.5           88.28*
 2476 -    *               395.77                456
 2477 -    GRID   *10074                                    1255.5           93.88*
 2478 -    *                391.3                456
 2479 -    GRID   *10075                                    1255.5              88*
 2480 -    *                391.3                456
 2481 -    GRID   *10076                                    1255.5           88.28*
 2482 -    *               405.07                456
 2483 -    GRID   *10077                                    1255.5           93.88*
 2484 -    *               405.07                456
 2485 -    GRID   *10078                                      1263           87.19*
 2486 -    *               411.09                456
 2487 -    GRID   *10079                                    1255.5              88*
 2488 -    *               406.93                456
 2489 -    GRID   *10080                                    1255.5              88*
 2490 -    *               408.93                456
 2491 -    GRID   *10081                                    1255.5           88.28*
 2492 -    *               410.37                456
 2493 -    GRID   *10082                                    1255.5              88*
 2494 -    *               409.93                456
 2495 -    GRID   *10083                                    1255.5           93.88*
 2496 -    *               410.37                456
 2497 -    GRID   *13001                                    616.67              94*
 2498 -    *                  414                 5
 2499 -    GRID   *13002                                    659.93              94*
 2500 -    *                  414                 5
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 114

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2501 -    GRID   *13003                                    762.2                94*
 2502 -    *                    414                  5
 2503 -    GRID   *13004                                   954.93                94*
 2504 -    *                    414                  5
 2505 -    GRID   *13005                                     1010                94*
 2506 -    *                    414                  5
 2507 -    GRID   *13006                                   1057.2                94*
 2508 -    *                    414                  5
 2509 -    GRID   *13007                                   1175.2                94*
 2510 -    *                    414                  5
 2511 -    GRID   *13008                                  1218.47                94*
 2512 -    *                    414                  5
 2513 -    GRID   *13009                                   616.67               -94*
 2514 -    *                    414                  5
 2515 -    GRID   *13010                                   659.93               -94*
 2516 -    *                    414                  5
 2517 -    GRID   *13011                                    762.2               -94*
 2518 -    *                    414                  5
 2519 -    GRID   *13012                                   954.93               -94*
 2520 -    *                    414                  5
 2521 -    GRID   *13013                                     1010               -94*
 2522 -    *                    414                  5
 2523 -    GRID   *13014                                   1057.2               -94*
 2524 -    *                    414                  5
 2525 -    GRID   *13015                                   1175.2               -94*
 2526 -    *                    414                  5
 2527 -    GRID   *13016                                  1218.47               -94*
 2528 -    *                    414                  5
 2529 -    GRID   *13017                                      656                 0*
 2530 -    *                    305                  6
 2531 -    GRID   *13018                                   947.07                 0*
 2532 -    *                    305                  6
 2533 -    GRID   *13019                                   1057.2                 0*
 2534 -    *                    305                  6
 2535 -    GRID   *13020                                   1175.2                 0*
 2536 -    *                    305                  6
 2537 -    GRID   *21081                                   1029.5              96.8*
 2538 -    *                    410                 1456
 2539 -    GRID   *27106                                  1165.83                94*
 2540 -    *                  368.5                 1456
 2541 -    GRID   *27111                                  1165.83            102.56*
 2542 -    *                    420                 1456
 2543 -    GRID   *27150                                     1179               105*
 2544 -    *                    420                 1456
 2545 -    GRID   *27164                                     1191             26.25*
 2546 -    *                310.4765                 1456
 2547 -    GRID   *27167                                     1191              52.5*
 2548 -    *                  321.47                 1456
 2549 -    GRID   *27178                                     1191              72.6*
 2550 -    *                  334.25                 1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 115

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2551 -    GRID   *27186                                    1191          89.4357*
 2552 -    *                368.5                1456
 2553 -    GRID   *27193                                    1191               94*
 2554 -    *              388.15                 1456
 2555 -    GRID   *27355                                    1249               94*
 2556 -    *                395.5                456
 2557 -    GRID   *27564                                    1191            26.25*
 2558 -    *             308.4765                 1456
 2559 -    GRID   *27837                                    1191           80.718*
 2560 -    *               347.34                 1456
 2561 -    GRID   *27895                                    1189             96.5*
 2562 -    *                  410
 2563 -    GRID   *27896                                  1256.5             96.5*
 2564 -    *                  410
 2565 -    GRID   *210388                                   669.8           91.102*
 2566 -    *               462.169                 1456
 2567 -    GRID   *210390                                   669.8           95.3415*
 2568 -    *              455.2085                 1456
 2569 -    GRID   *210393                                   669.8           99.581*
 2570 -    *               448.248                 1456
 2571 -    GRID   *210395                                   669.8           99.9155*
 2572 -    *               443.374                 1456
 2573 -    GRID   *210398                                   669.8           100.25*
 2574 -    *                 438.5                 1456
 2575 -    GRID   *210400                                   669.8           100.25*
 2576 -    *                  434                  1456
 2577 -    GRID   *210405                                   669.8            101.2*
 2578 -    *               424.75                  1456
 2579 -    GRID   *210413                                  681.05           102.15*
 2580 -    *                  420                  1456
 2581 -    GRID   *210458                                   692.3           91.102*
 2582 -    *               462.169                 1456
 2583 -    GRID   *210460                                   692.3           95.3415*
 2584 -    *              455.2085                 1456
 2585 -    GRID   *210463                                   692.3           99.581*
 2586 -    *               448.248                 1456
 2587 -    GRID   *210465                                   692.3           99.9155*
 2588 -    *               443.374                 1456
 2589 -    GRID   *210468                                   692.3           100.25*
 2590 -    *                 438.5                 1456
 2591 -    GRID   *210470                                   692.3           100.25*
 2592 -    *                  434                  1456
 2593 -    GRID   *210475                                   692.3            101.2*
 2594 -    *               424.75                  1456
 2595 -    GRID   *210530                                   714.8           95.3415*
 2596 -    *              455.2085                 1456
 2597 -    GRID   *210533                                   714.8           99.581*
 2598 -    *               448.248                 1456
 2599 -    GRID   *210535                                   714.8           99.9155*
 2600 -    *               443.374                 1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 116

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2601 -    GRID   *210538                                    714.8          100.25*
 2602 -    *                   438.5                1456
 2603 -    GRID   *210600                                    737.3          95.3415*
 2604 -    *                455.2085                1456
 2605 -    GRID   *210670                                   756.08          95.3415*
 2606 -    *                455.2085                1456
 2607 -    GRID   *211040                                    761.2          95.3415*
 2608 -    *                455.2085                1456
 2609 -    GRID   *211043                                    761.2           99.581*
 2610 -    *                 448.248                1456
 2611 -    GRID   *211180                                    805.9          95.3415*
 2612 -    *                455.2085                1456
 2613 -    GRID   *211183                                    805.9           99.581*
 2614 -    *                 448.248                1456
 2615 -    GRID   *211320                                    850.6          95.3415*
 2616 -    *                455.2085                1456
 2617 -    GRID   *211323                                    850.6           99.581*
 2618 -    *                 448.248                1456
 2619 -    GRID   *211325                                    850.6          99.9155*
 2620 -    *                 443.374                1456
 2621 -    GRID   *211460                                    895.3          95.3415*
 2622 -    *                455.2085                1456
 2623 -    GRID   *211463                                    895.3           99.581*
 2624 -    *                 448.248                1456
 2625 -    GRID   *211465                                    895.3          99.9155*
 2626 -    *                 443.374                1456
 2627 -    GRID   *211468                                    895.3           100.25*
 2628 -    *                   438.5                1456
 2629 -    GRID   *211470                                    895.3           100.25*
 2630 -    *                     434                1456
 2631 -    GRID   *211494                                    903.8            101.2*
 2632 -    *                  424.75                1456
 2633 -    GRID   *211528                                   917.65          91.102*
 2634 -    *                 462.169                1456
 2635 -    GRID   *211530                                   917.65          95.3415*
 2636 -    *                455.2085                1456
 2637 -    GRID   *211533                                   917.65           99.581*
 2638 -    *                 448.248                1456
 2639 -    GRID   *211535                                   917.65          99.9155*
 2640 -    *                 443.374                1456
 2641 -    GRID   *211538                                   917.65           100.25*
 2642 -    *                   438.5                1456
 2643 -    GRID   *211540                                   917.65           100.25*
 2644 -    *                     434                1456
 2645 -    GRID   *211545                                   917.65            101.2*
 2646 -    *                  424.75                1456
 2647 -    GRID   *211595                                   939.92          85.5145*
 2648 -    *                466.7545                1456
 2649 -    GRID   *211598                                   939.92          91.102*
 2650 -    *                 462.169                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 117

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2651 -    GRID   *211600                                        939.92         95.3415*
 2652 -    *               455.2085                1456
 2653 -    GRID   *211603                                        939.92          99.581*
 2654 -    *                448.248                1456
 2655 -    GRID   *211605                                        939.92         99.9155*
 2656 -    *                443.374                1456
 2657 -    GRID   *211608                                        939.92          100.25*
 2658 -    *                  438.5                1456
 2659 -    GRID   *212040                                        943.58         95.3415*
 2660 -    *               455.2085                1456
 2661 -    GRID   *212043                                        943.58          99.581*
 2662 -    *                448.248                1456
 2663 -    GRID   *212045                                        943.58         99.9155*
 2664 -    *                443.374                1456
 2665 -    GRID   *212118                                        966.35          100.25*
 2666 -    *                  438.5                1456
 2667 -    GRID   *212120                                        966.35          100.25*
 2668 -    *                    434                1456
 2669 -    GRID   *212125                                        966.35           101.2*
 2670 -    *                 424.75                1456
 2671 -    GRID   *212250                                       1011.05         95.3415*
 2672 -    *               455.2085                1456
 2673 -    GRID   *212253                                       1011.05          99.581*
 2674 -    *                448.248                1456
 2675 -    GRID   *212255                                       1011.05         99.9155*
 2676 -    *                443.374                1456
 2677 -    GRID   *212385                                       1055.75         85.5145*
 2678 -    *                466.7545               1456
 2679 -    GRID   *212388                                       1055.75          91.102*
 2680 -    *                462.169                1456
 2681 -    GRID   *212390                                       1055.75         95.3415*
 2682 -    *               455.2085                1456
 2683 -    GRID   *212530                                       1100.45         95.3415*
 2684 -    *               455.2085                1456
 2685 -    GRID   *212533                                       1100.45          99.581*
 2686 -    *                448.248                1456
 2687 -    GRID   *212535                                       1100.45         99.9155*
 2688 -    *                443.374                1456
 2689 -    GRID   *213110                                        1144.2         95.3415*
 2690 -    *               455.2085                1456
 2691 -    GRID   *213113                                        1144.2          99.581*
 2692 -    *                448.248                1456
 2693 -    GRID   *213115                                        1144.2         99.9155*
 2694 -    *                443.374                1456
 2695 -    GRID   *213180                                        1164.2         95.3415*
 2696 -    *               455.2085                1456
 2697 -    GRID   *213183                                        1164.2          99.581*
 2698 -    *                448.248                1456
 2699 -    GRID   *213185                                        1164.2         99.9155*
 2700 -    *                443.374                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 118

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2701 -    GRID   *213188                                    1164.2          100.25*
 2702 -    *                438.5                1456
 2703 -    GRID   *213195                                    1164.2           101.2*
 2704 -    *              424.75                 1456
 2705 -    GRID   *213198                                    1164.2          102.15*
 2706 -    *                 420                 1456
 2707 -    GRID   *213201                                    1174.2          100.25*
 2708 -    *                429.5                1456
 2709 -    GRID   *213203                                    1174.2          102.15*
 2710 -    *                 420                 1456
 2711 -    GRID   *213250                                    1184.2          95.3415*
 2712 -    *             455.2085                 1456
 2713 -    GRID   *213253                                    1184.2           99.581*
 2714 -    *              448.248                 1456
 2715 -    GRID   *213255                                    1184.2          99.9155*
 2716 -    *              443.374                 1456
 2717 -    GRID   *213265                                    1184.2           101.2*
 2718 -    *              424.75                  1456
 2719 -    GRID   *213268                                    1184.2          102.15*
 2720 -    *                 420                 1456
 2721 -    GRID   *213323                                    1204.2           99.581*
 2722 -    *              448.248                 1456
 2723 -    GRID   *213325                                    1204.2          99.9155*
 2724 -    *              443.374                 1456
 2725 -    GRID   *213390                                    1224.2          95.3415*
 2726 -    *             455.2085                 1456
 2727 -    GRID   *213393                                    1224.2           99.581*
 2728 -    *              448.248                 1456
 2729 -    GRID   *213395                                    1224.2          99.9155*
 2730 -    *              443.374                 1456
 2731 -    GRID   *213460                                    1244.2          95.3415*
 2732 -    *             455.2085                 1456
 2733 -    GRID   *213463                                    1244.2           99.581*
 2734 -    *              448.248                 1456
 2735 -    GRID   *213465                                    1244.2          99.9155*
 2736 -    *              443.374                 1456
 2737 -    GRID   *213468                                    1244.2          100.25*
 2738 -    *                438.5                1456
 2739 -    GRID   *213481                                    1254.2          100.25*
 2740 -    *                429.5                1456
 2741 -    GRID   *213528                                    1264.2          91.102*
 2742 -    *              462.169                 1456
 2743 -    GRID   *213530                                    1264.2          95.3415*
 2744 -    *             455.2085                 1456
 2745 -    GRID   *213533                                    1264.2           99.581*
 2746 -    *              448.248                 1456
 2747 -    GRID   *213535                                    1264.2          99.9155*
 2748 -    *              443.374                 1456
 2749 -    GRID   *213538                                    1264.2          100.25*
 2750 -    *                438.5                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 119

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2751 -    GRID   *213540                                    1264.2          100.25*
 2752 -    *                      434                1456
 2753 -    GRID   *213600                                    1283.7          95.3415*
 2754 -    *                 455.2085                1456
 2755 -    GRID   *271012                                   1165.83               94*
 2756 -    *                  388.15                1456
 2757 -    GRID   *271013                                   1165.83               94*
 2758 -    *                 376.605                1456
 2759 -    GRID   *271055                                      1191          91.3184*
 2760 -    *                 376.605                1456
 2761 -    GRID   *271216                                   1268.616          102.579*
 2762 -    *                  410.85                3456
 2763 -    GRID   *271217                                    1279.5               94*
 2764 -    *                  408.25                 456
 2765 -    GRID   *271218                                   1295.15              95.5*
 2766 -    *                  412.32               13456
 2767 -    GRID   *271219                                      1301               94*
 2768 -    *                     402                 456
 2769 -    GRID   *271265                                      1191          41.6951*
 2770 -    *                   313.7                1456
 2771 -    GRID   *312118                                    966.35          -100.25*
 2772 -    *                   438.5                1456
 2773 -    GRID   *312120                                    966.35          -100.25*
 2774 -    *                     434                1456
 2775 -    GRID   *312125                                    966.35           -101.2*
 2776 -    *                  424.75                1456
 2777 -    GRID   *312385                                   1055.75         -85.5145*
 2778 -    *                 466.7545                1456
 2779 -    GRID   *312388                                   1055.75          -91.102*
 2780 -    *                 462.169                 1456
 2781 -    GRID   *312390                                   1055.75         -95.3415*
 2782 -    *                 455.2085                1456
 2783 -    GRID   *313195                                    1164.2           -101.2*
 2784 -    *                  424.75                1456
 2785 -    GRID   *313198                                    1164.2          -102.15*
 2786 -    *                     420                1456
 2787 -    GRID   *313201                                    1174.2          -100.25*
 2788 -    *                   429.5                1456
 2789 -    GRID   *313203                                    1174.2          -102.15*
 2790 -    *                     420                1456
 2791 -    GRID   *313265                                    1184.2           -101.2*
 2792 -    *                  424.75                1456
 2793 -    GRID   *313268                                    1184.2          -102.15*
 2794 -    *                     420                1456
 2795 -    GRID   *701383                                       693              -94*
 2796 -    *                     396                1456
 2797 -    GRID   *701393                                       717              -94*
 2798 -    *                   396.5               13456
 2799 -    GRID   *701405                                       750              -94*
 2800 -    *                  401.75                1456
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 120

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2801 -    GRID   *701423                                    807                -94*
 2802 -    *                    396                1456
 2803 -    GRID   *701433                                    835                -94*
 2804 -    *                  396.5                13456
 2805 -    GRID   *701443                                    863                -94*
 2806 -    *                    396                1456
 2807 -    GRID   *701445                                    863                -94*
 2808 -    *                 401.75                1456
 2809 -    GRID   *701963                                    715                -94*
 2810 -    *                 408.25                 456
 2811 -    GRID   *701965                                    833                -94*
 2812 -    *                 408.25                 456
 2813 -    GRID   *702171                                 1033.4                -94*
 2814 -    *                    410                1456
 2815 -    GRID   *702197                                    1040               -94*
 2816 -    *                    410                1456
 2817 -    GRID   *702322                                 1140.67             -20.15*
 2818 -    *                  307.2                1456
 2819 -    GRID   *702353                                    891                -94*
 2820 -    *                  396.5                13456
 2821 -    GRID   *702365                                    919                -94*
 2822 -    *                 401.75                1456
 2823 -    GRID   *702423                                 1090.33               -94*
 2824 -    *                    396                1456
 2825 -    GRID   *702433                                  1115.5               -94*
 2826 -    *                 396.88                13456
 2827 -    GRID   *702443                                 1140.67               -94*
 2828 -    *                  395.5                1456
 2829 -    GRID   *702661                                    892.5              -94*
 2830 -    *                 408.25                 456
 2831 -    GRID   *702663                                  1011.4               -94*
 2832 -    *                 408.25                1456
 2833 -    GRID   *702665                                  1123.3               -94*
 2834 -    *                 408.25                3456
 2835 -    GRID   *702679                                 1138.939           -102.579*
 2836 -    *                 410.85                13456
 2837 -    GRID   *702680                                 1087.683           -102.654*
 2838 -    *                 410.85                13456
 2839 -    GRID   *702808                                 1024.875              -99*
 2840 -    *                    410                1456
 2841 -    GRID   *702809                                 1024.875              -94*
 2842 -    *                    410                1456
 2843 -    GRID   *702833                                 1052.585              -94*
 2844 -    *                    410                1456
 2845 -    GRID   *702922                                 1044.228              -94*
 2846 -    *                    410                1456
 2847 -    GRID   *727106                                 1165.83               -94*
 2848 -    *                  368.5                1456
 2849 -    GRID   *727111                                 1165.83             -102.56*
 2850 -    *                    420                1456
```

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page  121

                              S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2851 -    GRID   *727150                                      1179             -105*
 2852 -    *                 420                 1456
 2853 -    GRID   *727164                                      1191           -26.25*
 2854 -    *              310.4765               1456
 2855 -    GRID   *727167                                      1191            -52.5*
 2856 -    *                321.47               1456
 2857 -    GRID   *727178                                      1191            -72.6*
 2858 -    *                334.25               1456
 2859 -    GRID   *727186                                      1191         -89.4357*
 2860 -    *                 368.5               1456
 2861 -    GRID   *727193                                      1191              -94*
 2862 -    *                388.15               1456
 2863 -    GRID   *727355                                      1249              -94*
 2864 -    *                 395.5               1456
 2865 -    GRID   *727435                                      1278              -94*
 2866 -    *                 396.5               13456
 2867 -    GRID   *727564                                      1191           -26.25*
 2868 -    *              308.4765               1456
 2869 -    GRID   *727837                                      1191          -80.718*
 2870 -    *                347.34               1456
 2871 -    GRID   *901963                                       715              94*
 2872 -    *                408.25               456
 2873 -    GRID   *901965                                       833              94*
 2874 -    *                408.25               456
 2875 -    GRID   *7021081                                    1029.5            -96.8*
 2876 -    *                   410               1456
 2877 -    GRID   *7271012                                  1165.83              -94*
 2878 -    *                388.15               1456
 2879 -    GRID   *7271013                                  1165.83              -94*
 2880 -    *               376.605               1456
 2881 -    GRID   *7271055                                     1191         -91.3184*
 2882 -    *               376.605               1456
 2883 -    GRID   *7271217                                   1279.5              -94*
 2884 -    *                408.25               456
 2885 -    GRID   *7271219                                     1301              -94*
 2886 -    *                   402               1456
 2887 -    GRID   *7271265                                     1191         -41.6951*
 2888 -    *                 313.7               1456
 2889 -    QSET1   0       100001  THRU    101876
 2890 -    SEQGP   4590    1       4591    2       4592    3       4593    4
 2891 -    SEQGP   13001   5       13002   6       13003   7       13004   8
 2892 -    SEQGP   13005   9       13006   10      13007   11      13008   12
 2893 -    SEQGP   13009   13      13010   14      13011   15      13012   16
 2894 -    SEQGP   13013   17      13014   18      13015   19      13016   20
 2895 -    SEQGP   13017   21      13018   22      13019   23      13020   24
 2896 -    SEQGP   2171    25      2197    26      2322    27      2663    28
 2897 -    SEQGP   2808    29      2809    30      2833    31      2922    32
 2898 -    SEQGP   21081   33      27106   34      27111   35      27150   36
 2899 -    SEQGP   27164   37      27167   38      27178   39      27186   40
 2900 -    SEQGP   27193   41      27564   42      27837   43      271012  44
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 122

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 2901 -    SEQGP  271013  45     271055  46     271265  47     702171  48
 2902 -    SEQGP  702197  49     702322  50     702663  51     702808  52
 2903 -    SEQGP  702809  53     702833  54     702922  55     727106  56
 2904 -    SEQGP  727111  57     727150  58     727164  59     727167  60
 2905 -    SEQGP  727178  61     727186  62     727193  63     727564  64
 2906 -    SEQGP  727837  65     7021081 66     7271012 67     7271013 68
 2907 -    SEQGP  7271055 69     7271265 70     212118  71     212120  72
 2908 -    SEQGP  212125  73     212385  74     212388  75     212390  76
 2909 -    SEQGP  213110  77     213113  78     213115  79     213195  80
 2910 -    SEQGP  213198  81     213201  82     213203  83     213265  84
 2911 -    SEQGP  213268  85     312118  86     312120  87     312125  88
 2912 -    SEQGP  312385  89     312388  90     312390  91     313195  92
 2913 -    SEQGP  313198  93     313201  94     313203  95     313265  96
 2914 -    SEQGP  313268  97     2423    98     2433    99     2665    100
 2915 -    SEQGP  2443    101    2679    102    2680    103    702423  104
 2916 -    SEQGP  702433  105    702665  106    702443  107    702679  108
 2917 -    SEQGP  702680  109    2651    110    27895   111    27896   112
 2918 -    SEQGP  1651    113    3076    114    3401    115    1650    116
 2919 -    SEQGP  210388  117    210390  118    210393  119    210395  120
 2920 -    SEQGP  210398  121    210400  122    210405  123    210413  124
 2921 -    SEQGP  210458  125    210460  126    210463  127    210465  128
 2922 -    SEQGP  210468  129    210470  130    210475  131    210530  132
 2923 -    SEQGP  210533  133    210535  134    210538  135    210600  136
 2924 -    SEQGP  210670  137    211040  138    211043  139    211180  140
 2925 -    SEQGP  211183  141    211320  142    211323  143    211325  144
 2926 -    SEQGP  211460  145    211463  146    211465  147    211468  148
 2927 -    SEQGP  211470  149    211494  150    211528  151    211530  152
 2928 -    SEQGP  211533  153    211535  154    211538  155    211540  156
 2929 -    SEQGP  211545  157    211595  158    211598  159    211600  160
 2930 -    SEQGP  211603  161    211605  162    211608  163    212040  164
 2931 -    SEQGP  212043  165    212045  166    212250  167    212253  168
 2932 -    SEQGP  212255  169    212530  170    212533  171    212535  172
 2933 -    SEQGP  213180  173    213183  174    213185  175    213188  176
 2934 -    SEQGP  213250  177    213253  178    213255  179    213323  180
 2935 -    SEQGP  213325  181    213390  182    213393  183    213395  184
 2936 -    SEQGP  213460  185    213463  186    213465  187    213468  188
 2937 -    SEQGP  213481  189    213528  190    213530  191    213533  192
 2938 -    SEQGP  213535  193    213538  194    213540  195    213600  196
 2939 -    SEQGP  959     197    960     198    961     199    962     200
 2940 -    SEQGP  963     201    964     202    965     203    967     204
 2941 -    SEQGP  969     205    970     206    971     207    972     208
 2942 -    SEQGP  973     209    974     210    975     211    977     212
 2943 -    SEQGP  271218  213    271217  214    271216  215    271219  216
 2944 -    SEQGP  27355   217    701383  218    701405  219    701963  220
 2945 -    SEQGP  701393  221    1383    222    1405    223    901963  224
 2946 -    SEQGP  1393    225    701423  226    701445  227    701965  228
 2947 -    SEQGP  701433  229    1423    230    1445    231    901965  232
 2948 -    SEQGP  1433    233    701443  234    702365  235    702661  236
 2949 -    SEQGP  702353  237    1443    238    2365    239    2661    240
 2950 -    SEQGP  2353    241    727355  242    7271219 243    7271217 244
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 123

S O R T E D B U L K D A T A E C H O

ENTRY COUNT	. 1 ..	2 ..	3 ..	4 ..	5 ..	6 ..	7 ..	8 ..	9 ..	10 .
2951 -	SEQGP	727435	245	6032	246	6060	247	6061	248	
2952 -	SEQGP	6064	249	6081	250	6082	251	6083	252	
2953 -	SEQGP	6084	253	6085	254	6067	255	6068	256	
2954 -	SEQGP	6071	257	6069	258	6070	259	6073	260	
2955 -	SEQGP	6074	261	6076	262	6080	263	6086	264	
2956 -	SEQGP	6089	265	6087	266	6091	267	6092	268	
2957 -	SEQGP	6093	269	6094	270	6095	271	5001	272	
2958 -	SEQGP	5002	273	5003	274	5004	275	5005	276	
2959 -	SEQGP	5006	277	5007	278	5008	279	5009	280	
2960 -	SEQGP	5010	281	5011	282	5012	283	5013	284	
2961 -	SEQGP	5014	285	5015	286	5016	287	5017	288	
2962 -	SEQGP	5018	289	5019	290	5020	291	5021	292	
2963 -	SEQGP	5022	293	5023	294	5024	295	5025	296	
2964 -	SEQGP	5026	297	5027	298	5028	299	5029	300	
2965 -	SEQGP	5030	301	5031	302	5032	303	5033	304	
2966 -	SEQGP	5034	305	5035	306	5036	307	5037	308	
2967 -	SEQGP	5038	309	5039	310	5040	311	5041	312	
2968 -	SEQGP	5042	313	5043	314	5044	315	5045	316	
2969 -	SEQGP	5046	317	5047	318	5048	319	5049	320	
2970 -	SEQGP	5050	321	5051	322	5052	323	5053	324	
2971 -	SEQGP	5054	325	5055	326	5056	327	5057	328	
2972 -	SEQGP	5058	329	5059	330	5060	331	5061	332	
2973 -	SEQGP	5062	333	5063	334	5064	335	5065	336	
2974 -	SEQGP	5066	337	5067	338	5068	339	5069	340	
2975 -	SEQGP	5070	341	5071	342	5072	343	5073	344	
2976 -	SEQGP	5074	345	5075	346	5076	347	5077	348	
2977 -	SEQGP	5078	349	5079	350	5080	351	5081	352	
2978 -	SEQGP	5082	353	5083	354	5084	355	5085	356	
2979 -	SEQGP	5086	357	5087	358	5088	359	5089	360	
2980 -	SEQGP	5090	361	5091	362	5092	363	5093	364	
2981 -	SEQGP	5094	365	5095	366	5096	367	5097	368	
2982 -	SEQGP	5098	369	5099	370	5100	371	5101	372	
2983 -	SEQGP	5102	373	5103	374	5104	375	5105	376	
2984 -	SEQGP	5106	377	5107	378	5108	379	5109	380	
2985 -	SEQGP	5110	381	5111	382	5112	383	5113	384	
2986 -	SEQGP	5114	385	5115	386	5116	387	5117	388	
2987 -	SEQGP	5118	389	5119	390	5120	391	5121	392	
2988 -	SEQGP	5122	393	5123	394	5124	395	5125	396	
2989 -	SEQGP	5126	397	5127	398	5128	399	5129	400	
2990 -	SEQGP	2934	401	2979	402	5130	403	5131	404	
2991 -	SEQGP	5132	405	5133	406	5134	407	5135	408	
2992 -	SEQGP	5136	409	5137	410	5138	411	5139	412	
2993 -	SEQGP	5140	413	5141	414	5142	415	5143	416	
2994 -	SEQGP	5144	417	5145	418	5146	419	5147	420	
2995 -	SEQGP	5148	421	5149	422	5150	423	5151	424	
2996 -	SEQGP	5152	425	5153	426	5154	427	5155	428	
2997 -	SEQGP	5156	429	5157	430	5158	431	5159	432	
2998 -	SEQGP	5160	433	5161	434	5162	435	5163	436	
2999 -	SEQGP	5164	437	5165	438	5166	439	5167	440	
3000 -	SEQGP	5168	441	5169	442	5170	443	5171	444	

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 124

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 3001 -    SEQGP   5172    445     5173    446     5174    447     5175    448
 3002 -    SEQGP   5176    449     5177    450     5178    451     5179    452
 3003 -    SEQGP   5180    453     5181    454     5182    455     5183    456
 3004 -    SEQGP   5184    457     5185    458     5186    459     5187    460
 3005 -    SEQGP   5188    461     5189    462     5190    463     5191    464
 3006 -    SEQGP   5192    465     5193    466     5194    467     5195    468
 3007 -    SEQGP   5196    469     5197    470     5198    471     5199    472
 3008 -    SEQGP   5200    473     5201    474     5202    475     5203    476
 3009 -    SEQGP   5204    477     5205    478     5206    479     5207    480
 3010 -    SEQGP   5208    481     5209    482     5210    483     5211    484
 3011 -    SEQGP   5212    485     5213    486     5214    487     5215    488
 3012 -    SEQGP   5216    489     5217    490     5218    491     5219    492
 3013 -    SEQGP   5220    493     5221    494     5222    495     5223    496
 3014 -    SEQGP   5224    497     5225    498     5226    499     5227    500
 3015 -    SEQGP   5228    501     5229    502     5230    503     5231    504
 3016 -    SEQGP   5232    505     5233    506     5234    507     5235    508
 3017 -    SEQGP   5236    509     5237    510     5238    511     5239    512
 3018 -    SEQGP   5240    513     5241    514     5242    515     5243    516
 3019 -    SEQGP   5244    517     5245    518     5246    519     5247    520
 3020 -    SEQGP   5248    521     5249    522     5250    523     5251    524
 3021 -    SEQGP   5252    525     5253    526     5254    527     5255    528
 3022 -    SEQGP   5256    529     5257    530     5258    531     5259    532
 3023 -    SEQGP   5260    533     5261    534     5262    535     5263    536
 3024 -    SEQGP   5264    537     5265    538     5266    539     5267    540
 3025 -    SEQGP   5268    541     5269    542     5270    543     5271    544
 3026 -    SEQGP   5272    545     5273    546     5274    547     5275    548
 3027 -    SEQGP   5276    549     5277    550     5278    551     5279    552
 3028 -    SEQGP   5280    553     5281    554     5282    555     5283    556
 3029 -    SEQGP   5284    557     5285    558     5286    559     5287    560
 3030 -    SEQGP   5288    561     5289    562     5290    563     453     564
 3031 -    SEQGP   793     565     5293    566     5294    567     5295    568
 3032 -    SEQGP   5296    569     5297    570     5298    571     5299    572
 3033 -    SEQGP   5300    573     5301    574     5302    575     5303    576
 3034 -    SEQGP   5304    577     5305    578     5306    579     5307    580
 3035 -    SEQGP   5308    581     5309    582     5310    583     5311    584
 3036 -    SEQGP   5312    585     5313    586     5314    587     5315    588
 3037 -    SEQGP   5316    589     5317    590     5318    591     5319    592
 3038 -    SEQGP   5320    593     5321    594     5322    595     5323    596
 3039 -    SEQGP   5324    597     5325    598     5326    599     5327    600
 3040 -    SEQGP   5328    601     5329    602     5330    603     5331    604
 3041 -    SEQGP   5332    605     5333    606     5334    607     5335    608
 3042 -    SEQGP   5336    609     5337    610     5338    611     5339    612
 3043 -    SEQGP   5340    613     5341    614     5342    615     5343    616
 3044 -    SEQGP   5344    617     5345    618     5346    619     5347    620
 3045 -    SEQGP   5348    621     5349    622     5350    623     5351    624
 3046 -    SEQGP   5352    625     5353    626     5354    627     5355    628
 3047 -    SEQGP   5356    629     5357    630     5358    631     5359    632
 3048 -    SEQGP   5360    633     5361    634     5362    635     5363    636
 3049 -    SEQGP   5364    637     5365    638     5366    639     5367    640
 3050 -    SEQGP   5368    641     5369    642     5370    643     5371    644
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 125

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 3051 -    SEQGP   5372    645     5373    646     5374    647     5375    648
 3052 -    SEQGP   5376    649     5377    650     5378    651     5379    652
 3053 -    SEQGP   5380    653     5381    654     5382    655     5383    656
 3054 -    SEQGP   5384    657     5385    658     5386    659     5387    660
 3055 -    SEQGP   5388    661     5389    662     5390    663     5391    664
 3056 -    SEQGP   5392    665     5393    666     5394    667     5395    668
 3057 -    SEQGP   5396    669     5397    670     5398    671     5399    672
 3058 -    SEQGP   5400    673     5401    674     5402    675     5403    676
 3059 -    SEQGP   5404    677     5405    678     5406    679     5407    680
 3060 -    SEQGP   5408    681     5409    682     5410    683     5411    684
 3061 -    SEQGP   5412    685     5413    686     5414    687     5415    688
 3062 -    SEQGP   5416    689     5417    690     5418    691     5419    692
 3063 -    SEQGP   5420    693     5421    694     5422    695     5423    696
 3064 -    SEQGP   5424    697     5425    698     5426    699     5427    700
 3065 -    SEQGP   5428    701     5429    702     5430    703     5431    704
 3066 -    SEQGP   5432    705     5433    706     5434    707     5435    708
 3067 -    SEQGP   5436    709     5437    710     5438    711     5439    712
 3068 -    SEQGP   5440    713     5441    714     5442    715     5443    716
 3069 -    SEQGP   5444    717     5445    718     5446    719     5447    720
 3070 -    SEQGP   5448    721     5449    722     1094    723     5451    724
 3071 -    SEQGP   5452    725     5453    726     5454    727     5455    728
 3072 -    SEQGP   5456    729     5457    730     5458    731     5459    732
 3073 -    SEQGP   5460    733     5461    734     5462    735     5463    736
 3074 -    SEQGP   5464    737     5465    738     5466    739     5467    740
 3075 -    SEQGP   5468    741     5469    742     5470    743     5471    744
 3076 -    SEQGP   5472    745     5473    746     5474    747     5475    748
 3077 -    SEQGP   5476    749     5477    750     5478    751     5479    752
 3078 -    SEQGP   5480    753     5481    754     5482    755     5483    756
 3079 -    SEQGP   5484    757     5485    758     5486    759     5487    760
 3080 -    SEQGP   5488    761     5489    762     5490    763     5491    764
 3081 -    SEQGP   5492    765     536     766     1680    767     5495    768
 3082 -    SEQGP   5496    769     5497    770     5498    771     5499    772
 3083 -    SEQGP   5500    773     5501    774     5502    775     5503    776
 3084 -    SEQGP   5504    777     5505    778     5506    779     5507    780
 3085 -    SEQGP   5508    781     5509    782     5510    783     5511    784
 3086 -    SEQGP   5512    785     5513    786     5514    787     5515    788
 3087 -    SEQGP   5516    789     5517    790     5518    791     5519    792
 3088 -    SEQGP   5520    793     5521    794     5522    795     5523    796
 3089 -    SEQGP   5524    797     5525    798     5526    799     5527    800
 3090 -    SEQGP   5528    801     5529    802     5530    803     5531    804
 3091 -    SEQGP   5532    805     5533    806     5534    807     5535    808
 3092 -    SEQGP   5536    809     5537    810     5538    811     5539    812
 3093 -    SEQGP   5540    813     5541    814     5542    815     5543    816
 3094 -    SEQGP   5544    817     5545    818     5546    819     5547    820
 3095 -    SEQGP   5548    821     5549    822     5550    823     5551    824
 3096 -    SEQGP   5552    825     5553    826     5554    827     5555    828
 3097 -    SEQGP   5556    829     5557    830     5558    831     5559    832
 3098 -    SEQGP   5560    833     5561    834     5562    835     5563    836
 3099 -    SEQGP   5564    837     5565    838     5566    839     5567    840
 3100 -    SEQGP   5568    841     5569    842     5570    843     5571    844
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 126

S O R T E D B U L K D A T A E C H O

ENTRY COUNT	. 1 ..	2 ..	3 ..	4 ..	5 ..	6 ..	7 ..	8 ..	9 ..	10 .
3101 -	SEQGP	1100	845	5573	846	5574	847	5575	848	
3102 -	SEQGP	5576	849	5577	850	5578	851	5579	852	
3103 -	SEQGP	5580	853	605	854	945	855	5583	856	
3104 -	SEQGP	5584	857	5585	858	5586	859	5587	860	
3105 -	SEQGP	5588	861	5589	862	5590	863	5591	864	
3106 -	SEQGP	5592	865	5593	866	5594	867	5595	868	
3107 -	SEQGP	5596	869	5597	870	5598	871	5599	872	
3108 -	SEQGP	5600	873	5601	874	5602	875	5603	876	
3109 -	SEQGP	5604	877	5605	878	5606	879	5607	880	
3110 -	SEQGP	5608	881	5609	882	5610	883	5611	884	
3111 -	SEQGP	5612	885	5613	886	5614	887	5615	888	
3112 -	SEQGP	5616	889	5617	890	5618	891	5619	892	
3113 -	SEQGP	5620	893	5621	894	5622	895	5623	896	
3114 -	SEQGP	5624	897	5625	898	5626	899	5627	900	
3115 -	SEQGP	5628	901	5629	902	5630	903	5631	904	
3116 -	SEQGP	5632	905	5633	906	5634	907	5635	908	
3117 -	SEQGP	5636	909	5637	910	5638	911	5639	912	
3118 -	SEQGP	5640	913	5641	914	5642	915	5643	916	
3119 -	SEQGP	5644	917	5645	918	5646	919	5647	920	
3120 -	SEQGP	5648	921	5649	922	5650	923	5651	924	
3121 -	SEQGP	5652	925	5653	926	5654	927	5655	928	
3122 -	SEQGP	5656	929	5657	930	5658	931	5659	932	
3123 -	SEQGP	5660	933	5661	934	5662	935	5663	936	
3124 -	SEQGP	5664	937	5665	938	5666	939	5667	940	
3125 -	SEQGP	5668	941	5669	942	5670	943	5671	944	
3126 -	SEQGP	5672	945	5673	946	5674	947	5675	948	
3127 -	SEQGP	5676	949	5677	950	5678	951	5679	952	
3128 -	SEQGP	5680	953	5681	954	5682	955	5683	956	
3129 -	SEQGP	5684	957	5685	958	5686	959	5687	960	
3130 -	SEQGP	5688	961	5689	962	5690	963	5691	964	
3131 -	SEQGP	5692	965	5693	966	5694	967	5695	968	
3132 -	SEQGP	5696	969	5697	970	5698	971	5699	972	
3133 -	SEQGP	5700	973	5701	974	5702	975	5703	976	
3134 -	SEQGP	5704	977	5705	978	5706	979	5707	980	
3135 -	SEQGP	5708	981	5709	982	5710	983	5711	984	
3136 -	SEQGP	5712	985	5713	986	5714	987	5715	988	
3137 -	SEQGP	5716	989	5717	990	5718	991	5719	992	
3138 -	SEQGP	5720	993	5721	994	5722	995	5723	996	
3139 -	SEQGP	5724	997	5725	998	5726	999	5727	1000	
3140 -	SEQGP	5728	1001	5729	1002	5730	1003	5731	1004	
3141 -	SEQGP	5732	1005	5733	1006	5734	1007	5735	1008	
3142 -	SEQGP	5736	1009	5737	1010	5738	1011	5739	1012	
3143 -	SEQGP	5740	1013	5741	1014	5742	1015	5743	1016	
3144 -	SEQGP	5744	1017	5745	1018	5746	1019	5747	1020	
3145 -	SEQGP	5748	1021	5749	1022	5750	1023	5751	1024	
3146 -	SEQGP	5752	1025	5753	1026	5754	1027	5755	1028	
3147 -	SEQGP	5756	1029	5757	1030	5758	1031	5759	1032	
3148 -	SEQGP	5760	1033	5761	1034	5762	1035	5763	1036	
3149 -	SEQGP	5764	1037	5765	1038	5766	1039	5767	1040	
3150 -	SEQGP	5768	1041	5769	1042	5770	1043	5771	1044	

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 127

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 3151 -    SEQGP   5772    1045    5773    1046    5774    1047    5775    1048
 3152 -    SEQGP   5776    1049    5777    1050    5778    1051    5779    1052
 3153 -    SEQGP   5780    1053    5781    1054    5782    1055    5783    1056
 3154 -    SEQGP   5784    1057    5785    1058    5786    1059    5787    1060
 3155 -    SEQGP   5788    1061    5789    1062    5790    1063    5791    1064
 3156 -    SEQGP   5792    1065    5793    1066    5794    1067    5795    1068
 3157 -    SEQGP   5796    1069    5797    1070    5798    1071    5799    1072
 3158 -    SEQGP   5800    1073    5801    1074    5802    1075    5803    1076
 3159 -    SEQGP   5804    1077    5805    1078    5806    1079    5807    1080
 3160 -    SEQGP   5808    1081    5809    1082    5810    1083    5811    1084
 3161 -    SEQGP   5812    1085    5813    1086    5814    1087    5815    1088
 3162 -    SEQGP   5816    1089    5817    1090    5818    1091    5819    1092
 3163 -    SEQGP   5820    1093    5821    1094    5822    1095    5823    1096
 3164 -    SEQGP   5824    1097    5825    1098    5826    1099    5827    1100
 3165 -    SEQGP   5828    1101    5829    1102    5830    1103    5831    1104
 3166 -    SEQGP   5832    1105    5833    1106    5834    1107    5835    1108
 3167 -    SEQGP   5836    1109    5837    1110    5838    1111    5839    1112
 3168 -    SEQGP   5840    1113    5841    1114    5842    1115    5843    1116
 3169 -    SEQGP   5844    1117    5845    1118    5846    1119    5847    1120
 3170 -    SEQGP   5848    1121    5849    1122    5850    1123    5851    1124
 3171 -    SEQGP   5852    1125    5853    1126    5854    1127    5855    1128
 3172 -    SEQGP   5856    1129    5857    1130    5858    1131    5859    1132
 3173 -    SEQGP   5860    1133    5861    1134    5862    1135    5863    1136
 3174 -    SEQGP   5864    1137    5865    1138    5866    1139    5867    1140
 3175 -    SEQGP   5868    1141    5869    1142    5870    1143    5871    1144
 3176 -    SEQGP   5872    1145    5873    1146    5874    1147    5875    1148
 3177 -    SEQGP   5876    1149    5877    1150    5878    1151    5879    1152
 3178 -    SEQGP   5880    1153    5881    1154    5882    1155    5883    1156
 3179 -    SEQGP   5884    1157    5885    1158    5886    1159    5887    1160
 3180 -    SEQGP   5888    1161    5889    1162    5890    1163    5891    1164
 3181 -    SEQGP   5892    1165    5893    1166    5894    1167    5895    1168
 3182 -    SEQGP   5896    1169    5897    1170    5898    1171    5899    1172
 3183 -    SEQGP   5900    1173    5901    1174    5902    1175    5903    1176
 3184 -    SEQGP   5904    1177    5905    1178    5971    1179    5972    1180
 3185 -    SEQGP   5973    1181    5974    1182    2719    1183    2720    1184
 3186 -    SEQGP   2747    1185    2748    1186    2733    1187    2734    1188
 3187 -    SEQGP   2329    1189    2335    1190    1629    1191    1779    1192
 3188 -    SEQGP   1608    1193    5906    1194    5907    1195    5908    1196
 3189 -    SEQGP   5909    1197    5910    1198    1612    1199    5911    1200
 3190 -    SEQGP   5912    1201    5913    1202    5914    1203    5915    1204
 3191 -    SEQGP   5916    1205    5917    1206    5918    1207    5919    1208
 3192 -    SEQGP   1633    1209    5921    1210    5922    1211    1638    1212
 3193 -    SEQGP   1617    1213    1621    1214    5925    1215    5926    1216
 3194 -    SEQGP   1806    1217    5927    1218    5928    1219    5929    1220
 3195 -    SEQGP   5930    1221    1814    1222    5931    1223    1818    1224
 3196 -    SEQGP   5932    1225    5933    1226    5934    1227    5965    1228
 3197 -    SEQGP   5966    1229    1758    1230    5936    1231    5937    1232
 3198 -    SEQGP   5938    1233    5939    1234    5940    1235    1762    1236
 3199 -    SEQGP   5941    1237    5942    1238    5943    1239    5944    1240
 3200 -    SEQGP   5945    1241    5946    1242    5947    1243    5948    1244
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Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 128

S O R T E D B U L K D A T A E C H O

ENTRY COUNT	. 1 ..	2 ..	3 ..	4 ..	5 ..	6 ..	7 ..	8 ..	9 ..	10 .
3201 -	SEQGP	5949	1245	1783	1246	5951	1247	5952	1248	
3202 -	SEQGP	1788	1249	1767	1250	1771	1251	5955	1252	
3203 -	SEQGP	5956	1253	1826	1254	5957	1255	5958	1256	
3204 -	SEQGP	5959	1257	5960	1258	1834	1259	5961	1260	
3205 -	SEQGP	1838	1261	5962	1262	5963	1263	5964	1264	
3206 -	SEQGP	5967	1265	5968	1266	90	1267	91	1268	
3207 -	SEQGP	1091	1269	226	1270	200	1271	216	1272	
3208 -	SEQGP	704	1273	2874	1274	662	1275	691	1276	
3209 -	SEQGP	606	1277	634	1278	635	1279	723	1280	
3210 -	SEQGP	546	1281	302	1282	307	1283	309	1284	
3211 -	SEQGP	390	1285	313	1286	314	1287	315	1288	
3212 -	SEQGP	316	1289	317	1290	318	1291	319	1292	
3213 -	SEQGP	320	1293	321	1294	322	1295	323	1296	
3214 -	SEQGP	324	1297	328	1298	329	1299	330	1300	
3215 -	SEQGP	331	1301	332	1302	335	1303	343	1304	
3216 -	SEQGP	344	1305	345	1306	346	1307	391	1308	
3217 -	SEQGP	356	1309	357	1310	350	1311	351	1312	
3218 -	SEQGP	352	1313	353	1314	1302	1315	1307	1316	
3219 -	SEQGP	1309	1317	1390	1318	1313	1319	1314	1320	
3220 -	SEQGP	1315	1321	1316	1322	1317	1323	1318	1324	
3221 -	SEQGP	1319	1325	1320	1326	1321	1327	1322	1328	
3222 -	SEQGP	1323	1329	1324	1330	1328	1331	1329	1332	
3223 -	SEQGP	1330	1333	1331	1334	1332	1335	1335	1336	
3224 -	SEQGP	1343	1337	1344	1338	1345	1339	1346	1340	
3225 -	SEQGP	1391	1341	1356	1342	1357	1343	1350	1344	
3226 -	SEQGP	1351	1345	1352	1346	1353	1347	1117	1348	
3227 -	SEQGP	100	1349	101	1350	102	1351	103	1352	
3228 -	SEQGP	104	1353	105	1354	106	1355	107	1356	
3229 -	SEQGP	108	1357	109	1358	110	1359	111	1360	
3230 -	SEQGP	112	1361	113	1362	114	1363	115	1364	
3231 -	SEQGP	116	1365	10001	1366	10002	1367	10004	1368	
3232 -	SEQGP	10005	1369	10006	1370	10007	1371	10008	1372	
3233 -	SEQGP	10009	1373	10010	1374	10011	1375	10012	1376	
3234 -	SEQGP	10013	1377	10016	1378	10017	1379	10018	1380	
3235 -	SEQGP	10019	1381	10020	1382	10021	1383	10022	1384	
3236 -	SEQGP	10023	1385	10025	1386	10026	1387	10027	1388	
3237 -	SEQGP	10028	1389	10029	1390	10030	1391	10031	1392	
3238 -	SEQGP	10032	1393	10033	1394	10034	1395	10035	1396	
3239 -	SEQGP	10036	1397	10037	1398	10038	1399	10039	1400	
3240 -	SEQGP	10040	1401	10041	1402	10042	1403	10043	1404	
3241 -	SEQGP	10044	1405	10045	1406	10046	1407	10047	1408	
3242 -	SEQGP	10048	1409	10049	1410	10050	1411	10051	1412	
3243 -	SEQGP	10052	1413	10053	1414	10054	1415	10055	1416	
3244 -	SEQGP	10056	1417	10057	1418	10058	1419	10059	1420	
3245 -	SEQGP	10060	1421	10061	1422	10062	1423	10063	1424	
3246 -	SEQGP	10064	1425	10065	1426	10066	1427	10067	1428	
3247 -	SEQGP	10068	1429	10069	1430	10070	1431	10071	1432	
3248 -	SEQGP	10072	1433	10073	1434	10074	1435	10075	1436	
3249 -	SEQGP	10076	1437	10077	1438	10078	1439	10079	1440	
3250 -	SEQGP	10080	1441	10081	1442	10082	1443	10083	1444	

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page  129

                              S O R T E D   B U L K   D A T A   E C H O

                    ENTRY
                    COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
                     3251 -    SPOINT  100001  THRU    101876
                     3252 -    ENDDATA

                               TOTAL ENTRY COUNT = 3252
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 130

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	4590	0	6.79500E+02	-9.65000E+01	4.10000E+02
2	4591	0	9.11000E+02	-9.65000E+01	4.10000E+02
3	4592	0	1.18900E+03	-9.65000E+01	4.10000E+02
4	4593	0	1.25650E+03	-9.65000E+01	4.10000E+02
5	13001	0	6.16670E+02	9.40000E+01	4.14000E+02
6	13002	0	6.59930E+02	9.40000E+01	4.14000E+02
7	13003	0	7.62200E+02	9.40000E+01	4.14000E+02
8	13004	0	9.54930E+02	9.40000E+01	4.14000E+02
9	13005	0	1.01000E+03	9.40000E+01	4.14000E+02
10	13006	0	1.05720E+03	9.40000E+01	4.14000E+02
11	13007	0	1.17520E+03	9.40000E+01	4.14000E+02
12	13008	0	1.21847E+03	9.40000E+01	4.14000E+02
13	13009	0	6.16670E+02	-9.40000E+01	4.14000E+02
14	13010	0	6.59930E+02	-9.40000E+01	4.14000E+02
15	13011	0	7.62200E+02	-9.40000E+01	4.14000E+02
16	13012	0	9.54930E+02	-9.40000E+01	4.14000E+02
17	13013	0	1.01000E+03	-9.40000E+01	4.14000E+02
18	13014	0	1.05720E+03	-9.40000E+01	4.14000E+02
19	13015	0	1.17520E+03	-9.40000E+01	4.14000E+02
20	13016	0	1.21847E+03	-9.40000E+01	4.14000E+02
21	13017	0	6.56000E+02	0.00000E+00	3.05000E+02
22	13018	0	9.47070E+02	0.00000E+00	3.05000E+02
23	13019	0	1.05720E+03	0.00000E+00	3.05000E+02
24	13020	0	1.17520E+03	0.00000E+00	3.05000E+02
25	2171	0	1.03340E+03	9.40000E+01	4.10000E+02
26	2197	0	1.04000E+03	9.40000E+01	4.10000E+02
27	2322	0	1.14067E+03	2.01500E+01	3.07200E+02
28	2663	0	1.01140E+03	9.40000E+01	4.08250E+02
29	2808	0	1.02488E+03	9.90000E+01	4.10000E+02
30	2809	0	1.02488E+03	9.40000E+01	4.10000E+02
31	2833	0	1.05259E+03	9.40000E+01	4.10000E+02
32	2922	0	1.04423E+03	9.40000E+01	4.10000E+02
33	21081	0	1.02950E+03	9.68000E+01	4.10000E+02
34	27106	0	1.16583E+03	9.40000E+01	3.68500E+02
35	27111	0	1.16583E+03	1.02560E+02	4.20000E+02
36	27150	0	1.17900E+03	1.05000E+02	4.20000E+02
37	27164	0	1.19100E+03	2.62500E+01	3.10476E+02
38	27167	0	1.19100E+03	5.25000E+01	3.21470E+02
39	27178	0	1.19100E+03	7.26000E+01	3.34250E+02
40	27186	0	1.19100E+03	8.94357E+01	3.68500E+02
41	27193	0	1.19100E+03	9.40000E+01	3.88150E+02
42	27564	0	1.19100E+03	2.62500E+01	3.08476E+02
43	27837	0	1.19100E+03	8.07180E+01	3.47340E+02
44	271012	0	1.16583E+03	9.40000E+01	3.88150E+02
45	271013	0	1.16583E+03	9.40000E+01	3.76605E+02
46	271055	0	1.19100E+03	9.13184E+01	3.76605E+02
47	271265	0	1.19100E+03	4.16951E+01	3.13700E+02
48	702171	0	1.03340E+03	-9.40000E+01	4.10000E+02
49	702197	0	1.04000E+03	-9.40000E+01	4.10000E+02
50	702322	0	1.14067E+03	-2.01500E+01	3.07200E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 131

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
51	702663	0	1.01140E+03	-9.40000E+01	4.08250E+02
52	702808	0	1.02488E+03	-9.90000E+01	4.10000E+02
53	702809	0	1.02488E+03	-9.40000E+01	4.10000E+02
54	702833	0	1.05259E+03	-9.40000E+01	4.10000E+02
55	702922	0	1.04423E+03	-9.40000E+01	4.10000E+02
56	727106	0	1.16583E+03	-9.40000E+01	3.68500E+02
57	727111	0	1.16583E+03	-1.02560E+02	4.20000E+02
58	727150	0	1.17900E+03	-1.05000E+02	4.20000E+02
59	727164	0	1.19100E+03	-2.62500E+01	3.10476E+02
60	727167	0	1.19100E+03	-5.25000E+01	3.21470E+02
61	727178	0	1.19100E+03	-7.26000E+01	3.34250E+02
62	727186	0	1.19100E+03	-8.94357E+01	3.68500E+02
63	727193	0	1.19100E+03	-9.40000E+01	3.88150E+02
64	727564	0	1.19100E+03	-2.62500E+01	3.08476E+02
65	727837	0	1.19100E+03	-8.07180E+01	3.47340E+02
66	7021081	0	1.02950E+03	-9.68000E+01	4.10000E+02
67	7271012	0	1.16583E+03	-9.40000E+01	3.88150E+02
68	7271013	0	1.16583E+03	-9.40000E+01	3.76605E+02
69	7271055	0	1.19100E+03	-9.13184E+01	3.76605E+02
70	7271265	0	1.19100E+03	-4.16951E+01	3.13700E+02
71	212118	0	9.66350E+02	1.00250E+02	4.38500E+02
72	212120	0	9.66350E+02	1.00250E+02	4.34000E+02
73	212125	0	9.66350E+02	1.01200E+02	4.24750E+02
74	212385	0	1.05575E+03	8.55145E+01	4.66755E+02
75	212388	0	1.05575E+03	9.11020E+01	4.62169E+02
76	212390	0	1.05575E+03	9.53415E+01	4.55209E+02
77	213110	0	1.14420E+03	9.53415E+01	4.55209E+02
78	213113	0	1.14420E+03	9.95810E+01	4.48248E+02
79	213115	0	1.14420E+03	9.99155E+01	4.43374E+02
80	213195	0	1.16420E+03	1.01200E+02	4.24750E+02
81	213198	0	1.16420E+03	1.02150E+02	4.20000E+02
82	213201	0	1.17420E+03	1.00250E+02	4.29500E+02
83	213203	0	1.17420E+03	1.02150E+02	4.20000E+02
84	213265	0	1.18420E+03	1.01200E+02	4.24750E+02
85	213268	0	1.18420E+03	1.02150E+02	4.20000E+02
86	312118	0	9.66350E+02	-1.00250E+02	4.38500E+02
87	312120	0	9.66350E+02	-1.00250E+02	4.34000E+02
88	312125	0	9.66350E+02	-1.01200E+02	4.24750E+02
89	312385	0	1.05575E+03	-8.55145E+01	4.66755E+02
90	312388	0	1.05575E+03	-9.11020E+01	4.62169E+02
91	312390	0	1.05575E+03	-9.53415E+01	4.55209E+02
92	313195	0	1.16420E+03	-1.01200E+02	4.24750E+02
93	313198	0	1.16420E+03	-1.02150E+02	4.20000E+02
94	313201	0	1.17420E+03	-1.00250E+02	4.29500E+02
95	313203	0	1.17420E+03	-1.02150E+02	4.20000E+02
96	313265	0	1.18420E+03	-1.01200E+02	4.24750E+02
97	313268	0	1.18420E+03	-1.02150E+02	4.20000E+02
98	2423	0	1.09033E+03	9.40000E+01	3.96000E+02
99	2433	0	1.11550E+03	9.40000E+01	3.96880E+02
100	2665	0	1.12330E+03	9.40000E+01	4.08250E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 132

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
101	2443	0	1.14067E+03	9.40000E+01	3.95500E+02
102	2679	0	1.13894E+03	1.02579E+02	4.10850E+02
103	2680	0	1.08768E+03	1.02654E+02	4.10850E+02
104	702423	0	1.09033E+03	-9.40000E+01	3.96000E+02
105	702433	0	1.11550E+03	-9.40000E+01	3.96880E+02
106	702665	0	1.12330E+03	-9.40000E+01	4.08250E+02
107	702443	0	1.14067E+03	-9.40000E+01	3.95500E+02
108	702679	0	1.13894E+03	-1.02579E+02	4.10850E+02
109	702680	0	1.08768E+03	-1.02654E+02	4.10850E+02
110	2651	0	9.11000E+02	9.65000E+01	4.10000E+02
111	27895	0	1.18900E+03	9.65000E+01	4.10000E+02
112	27896	0	1.25650E+03	9.65000E+01	4.10000E+02
113	1651	0	6.79500E+02	9.65000E+01	4.10000E+02
114	3076	0	1.30700E+03	8.20000E+01	4.39586E+02
115	3401	0	1.30700E+03	9.18000E+01	4.56620E+02
116	1650	0	5.89000E+02	9.96000E+01	4.10000E+02
117	210388	0	6.69800E+02	9.11020E+01	4.62169E+02
118	210390	0	6.69800E+02	9.53415E+01	4.55209E+02
119	210393	0	6.69800E+02	9.95810E+01	4.48248E+02
120	210395	0	6.69800E+02	9.99155E+01	4.43374E+02
121	210398	0	6.69800E+02	1.00250E+02	4.38500E+02
122	210400	0	6.69800E+02	1.00250E+02	4.34000E+02
123	210405	0	6.69800E+02	1.01200E+02	4.24750E+02
124	210413	0	6.81050E+02	1.02150E+02	4.20000E+02
125	210458	0	6.92300E+02	9.11020E+01	4.62169E+02
126	210460	0	6.92300E+02	9.53415E+01	4.55209E+02
127	210463	0	6.92300E+02	9.95810E+01	4.48248E+02
128	210465	0	6.92300E+02	9.99155E+01	4.43374E+02
129	210468	0	6.92300E+02	1.00250E+02	4.38500E+02
130	210470	0	6.92300E+02	1.00250E+02	4.34000E+02
131	210475	0	6.92300E+02	1.01200E+02	4.24750E+02
132	210530	0	7.14800E+02	9.53415E+01	4.55209E+02
133	210533	0	7.14800E+02	9.95810E+01	4.48248E+02
134	210535	0	7.14800E+02	9.99155E+01	4.43374E+02
135	210538	0	7.14800E+02	1.00250E+02	4.38500E+02
136	210600	0	7.37300E+02	9.53415E+01	4.55209E+02
137	210670	0	7.56080E+02	9.53415E+01	4.55209E+02
138	211040	0	7.61200E+02	9.53415E+01	4.55209E+02
139	211043	0	7.61200E+02	9.95810E+01	4.48248E+02
140	211180	0	8.05900E+02	9.53415E+01	4.55209E+02
141	211183	0	8.05900E+02	9.95810E+01	4.48248E+02
142	211320	0	8.50600E+02	9.53415E+01	4.55209E+02
143	211323	0	8.50600E+02	9.95810E+01	4.48248E+02
144	211325	0	8.50600E+02	9.99155E+01	4.43374E+02
145	211460	0	8.95300E+02	9.53415E+01	4.55209E+02
146	211463	0	8.95300E+02	9.95810E+01	4.48248E+02
147	211465	0	8.95300E+02	9.99155E+01	4.43374E+02
148	211468	0	8.95300E+02	1.00250E+02	4.38500E+02
149	211470	0	8.95300E+02	1.00250E+02	4.34000E+02
150	211494	0	9.03800E+02	1.01200E+02	4.24750E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 133

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
151	211528	0	9.17650E+02	9.11020E+01	4.62169E+02
152	211530	0	9.17650E+02	9.53415E+01	4.55209E+02
153	211533	0	9.17650E+02	9.95810E+01	4.48248E+02
154	211535	0	9.17650E+02	9.99155E+01	4.43374E+02
155	211538	0	9.17650E+02	1.00250E+02	4.38500E+02
156	211540	0	9.17650E+02	1.00250E+02	4.34000E+02
157	211545	0	9.17650E+02	1.01200E+02	4.24750E+02
158	211595	0	9.39920E+02	8.55145E+01	4.66755E+02
159	211598	0	9.39920E+02	9.11020E+01	4.62169E+02
160	211600	0	9.39920E+02	9.53415E+01	4.55209E+02
161	211603	0	9.39920E+02	9.95810E+01	4.48248E+02
162	211605	0	9.39920E+02	9.99155E+01	4.43374E+02
163	211608	0	9.39920E+02	1.00250E+02	4.38500E+02
164	212040	0	9.43580E+02	9.53415E+01	4.55209E+02
165	212043	0	9.43580E+02	9.95810E+01	4.48248E+02
166	212045	0	9.43580E+02	9.99155E+01	4.43374E+02
167	212250	0	1.01105E+03	9.53415E+01	4.55209E+02
168	212253	0	1.01105E+03	9.95810E+01	4.48248E+02
169	212255	0	1.01105E+03	9.99155E+01	4.43374E+02
170	212530	0	1.10045E+03	9.53415E+01	4.55209E+02
171	212533	0	1.10045E+03	9.95810E+01	4.48248E+02
172	212535	0	1.10045E+03	9.99155E+01	4.43374E+02
173	213180	0	1.16420E+03	9.53415E+01	4.55209E+02
174	213183	0	1.16420E+03	9.95810E+01	4.48248E+02
175	213185	0	1.16420E+03	9.99155E+01	4.43374E+02
176	213188	0	1.16420E+03	1.00250E+02	4.38500E+02
177	213250	0	1.18420E+03	9.53415E+01	4.55209E+02
178	213253	0	1.18420E+03	9.95810E+01	4.48248E+02
179	213255	0	1.18420E+03	9.99155E+01	4.43374E+02
180	213323	0	1.20420E+03	9.95810E+01	4.48248E+02
181	213325	0	1.20420E+03	9.99155E+01	4.43374E+02
182	213390	0	1.22420E+03	9.53415E+01	4.55209E+02
183	213393	0	1.22420E+03	9.95810E+01	4.48248E+02
184	213395	0	1.22420E+03	9.99155E+01	4.43374E+02
185	213460	0	1.24420E+03	9.53415E+01	4.55209E+02
186	213463	0	1.24420E+03	9.95810E+01	4.48248E+02
187	213465	0	1.24420E+03	9.99155E+01	4.43374E+02
188	213468	0	1.24420E+03	1.00250E+02	4.38500E+02
189	213481	0	1.25420E+03	1.00250E+02	4.29500E+02
190	213528	0	1.26420E+03	9.11020E+01	4.62169E+02
191	213530	0	1.26420E+03	9.53415E+01	4.55209E+02
192	213533	0	1.26420E+03	9.95810E+01	4.48248E+02
193	213535	0	1.26420E+03	9.99155E+01	4.43374E+02
194	213538	0	1.26420E+03	1.00250E+02	4.38500E+02
195	213540	0	1.26420E+03	1.00250E+02	4.34000E+02
196	213600	0	1.28370E+03	9.53415E+01	4.55209E+02
197	959	0	6.02300E+02	0.00000E+00	4.96620E+02
198	960	0	6.47300E+02	0.00000E+00	4.96620E+02
199	961	0	6.92300E+02	0.00000E+00	4.96620E+02
200	962	0	7.37300E+02	0.00000E+00	4.96620E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 134

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
201	963	0	7.83550E+02	0.00000E+00	4.96620E+02
202	964	0	8.28250E+02	0.00000E+00	4.96620E+02
203	965	0	8.72950E+02	0.00000E+00	4.96620E+02
204	967	0	9.17650E+02	0.00000E+00	4.96620E+02
205	969	0	9.66350E+02	0.00000E+00	4.96620E+02
206	970	0	1.01105E+03	0.00000E+00	4.96620E+02
207	971	0	1.05575E+03	0.00000E+00	4.96620E+02
208	972	0	1.10045E+03	0.00000E+00	4.96620E+02
209	973	0	1.14420E+03	0.00000E+00	4.96620E+02
210	974	0	1.18420E+03	0.00000E+00	4.96620E+02
211	975	0	1.22420E+03	0.00000E+00	4.96620E+02
212	977	0	1.26420E+03	0.00000E+00	4.96620E+02
213	271218	0	1.29515E+03	9.55000E+01	4.12320E+02
214	271217	0	1.27950E+03	9.40000E+01	4.08250E+02
215	271216	0	1.26862E+03	1.02579E+02	4.10850E+02
216	271219	0	1.30100E+03	9.40000E+01	4.02000E+02
217	27355	0	1.24900E+03	9.40000E+01	3.95500E+02
218	701383	0	6.93000E+02	-9.40000E+01	3.96000E+02
219	701405	0	7.50000E+02	-9.40000E+01	4.01750E+02
220	701963	0	7.15000E+02	-9.40000E+01	4.08250E+02
221	701393	0	7.17000E+02	-9.40000E+01	3.96500E+02
222	1383	0	6.93000E+02	9.40000E+01	3.96000E+02
223	1405	0	7.50000E+02	9.40000E+01	4.01750E+02
224	901963	0	7.15000E+02	9.40000E+01	4.08250E+02
225	1393	0	7.17000E+02	9.40000E+01	3.96500E+02
226	701423	0	8.07000E+02	-9.40000E+01	3.96000E+02
227	701445	0	8.63000E+02	-9.40000E+01	4.01750E+02
228	701965	0	8.33000E+02	-9.40000E+01	4.08250E+02
229	701433	0	8.35000E+02	-9.40000E+01	3.96500E+02
230	1423	0	8.07000E+02	9.40000E+01	3.96000E+02
231	1445	0	8.63000E+02	9.40000E+01	4.01750E+02
232	901965	0	8.33000E+02	9.40000E+01	4.08250E+02
233	1433	0	8.35000E+02	9.40000E+01	3.96500E+02
234	701443	0	8.63000E+02	-9.40000E+01	3.96000E+02
235	702365	0	9.19000E+02	-9.40000E+01	4.01750E+02
236	702661	0	8.92500E+02	-9.40000E+01	4.08250E+02
237	702353	0	8.91000E+02	-9.40000E+01	3.96500E+02
238	1443	0	8.63000E+02	9.40000E+01	3.96000E+02
239	2365	0	9.19000E+02	9.40000E+01	4.01750E+02
240	2661	0	8.92500E+02	9.40000E+01	4.08250E+02
241	2353	0	8.91000E+02	9.40000E+01	3.96500E+02
242	727355	0	1.24900E+03	-9.40000E+01	3.95500E+02
243	7271219	0	1.30100E+03	-9.40000E+01	4.02000E+02
244	7271217	0	1.27950E+03	-9.40000E+01	4.08250E+02
245	727435	0	1.27800E+03	-9.40000E+01	3.96500E+02
246	6032	0	9.76500E+02	-1.01500E+02	4.07500E+02
247	6060	0	7.01200E+02	-1.00800E+02	4.07000E+02
248	6061	0	7.01200E+02	-9.13000E+01	4.07500E+02
249	6064	0	8.79000E+02	-1.01300E+02	4.07500E+02
250	6081	0	1.04000E+03	0.00000E+00	3.05000E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 135

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
251	6082	0	7.90000E+02	-1.01300E+02	4.07500E+02
252	6083	0	1.02950E+03	-1.01300E+02	4.07500E+02
253	6084	0	1.11050E+03	-9.68000E+01	4.07300E+02
254	6085	0	1.22900E+03	-9.70000E+01	4.07500E+02
255	6067	0	1.02950E+03	-9.68000E+01	4.08000E+02
256	6068	0	1.20700E+03	-9.70000E+01	4.07500E+02
257	6071	0	1.20700E+03	9.70000E+01	4.07500E+02
258	6069	0	8.81200E+02	-1.01300E+02	4.07500E+02
259	6070	0	8.81200E+02	1.01300E+02	4.07500E+02
260	6073	0	8.79000E+02	1.01300E+02	4.07500E+02
261	6074	0	1.02950E+03	1.01300E+02	4.07500E+02
262	6076	0	1.02950E+03	9.68000E+01	4.08000E+02
263	6080	0	9.19000E+02	0.00000E+00	3.05000E+02
264	6086	0	5.05000E+02	5.60000E+00	4.21300E+02
265	6089	0	4.82419E+02	0.00000E+00	3.24710E+02
266	6087	0	1.20550E+03	0.00000E+00	3.05000E+02
267	6091	0	7.01200E+02	1.00800E+02	4.07000E+02
268	6092	0	7.90000E+02	1.01300E+02	4.07500E+02
269	6093	0	9.76500E+02	1.01500E+02	4.07500E+02
270	6094	0	1.11050E+03	9.68000E+01	4.07300E+02
271	6095	0	1.22900E+03	9.70000E+01	4.07500E+02
272	5001	0	4.04975E+02	0.00000E+00	2.83213E+02
273	5002	0	4.59389E+02	0.00000E+00	2.80105E+02
274	5003	0	5.05119E+02	7.82920E+00	2.78809E+02
275	5004	0	5.05119E+02	-7.82920E+00	2.78809E+02
276	5005	0	5.49919E+02	0.00000E+00	2.77784E+02
277	5006	0	2.65720E+02	2.10000E+01	3.14710E+02
278	5007	0	2.65720E+02	-2.10000E+01	3.14710E+02
279	5008	0	3.11000E+02	2.10000E+01	2.97824E+02
280	5009	0	3.11000E+02	-2.10000E+01	2.97824E+02
281	5010	0	3.59000E+02	2.10000E+01	2.88733E+02
282	5011	0	3.59000E+02	-2.10000E+01	2.88733E+02
283	5012	0	4.04411E+02	4.26469E+01	2.87041E+02
284	5013	0	4.04411E+02	-4.26469E+01	2.87041E+02
285	5014	0	4.58952E+02	4.42062E+01	2.83146E+02
286	5015	0	4.58952E+02	-4.42062E+01	2.83146E+02
287	5016	0	5.04750E+02	4.57598E+01	2.81378E+02
288	5017	0	5.04750E+02	-4.57598E+01	2.81378E+02
289	5018	0	5.49571E+02	4.67895E+01	2.80207E+02
290	5019	0	5.49571E+02	-4.67895E+01	2.80207E+02
291	5020	0	3.11000E+02	4.90274E+01	3.12911E+02
292	5021	0	3.11000E+02	-4.90274E+01	3.12911E+02
293	5022	0	3.59000E+02	6.20427E+01	3.04862E+02
294	5023	0	3.59000E+02	-6.20427E+01	3.04862E+02
295	5024	0	4.03083E+02	6.59531E+01	2.96178E+02
296	5025	0	4.03083E+02	-6.59531E+01	2.96178E+02
297	5026	0	4.57821E+02	7.13833E+01	2.91021E+02
298	5027	0	4.57821E+02	-7.13833E+01	2.91021E+02
299	5028	0	5.03757E+02	7.49641E+01	2.88267E+02
300	5029	0	5.03757E+02	-7.49641E+01	2.88267E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 136

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
301	5030	0	5.48663E+02	7.74486E+01	2.86533E+02
302	5031	0	5.48663E+02	-7.74486E+01	2.86533E+02
303	5032	0	4.00279E+02	7.90182E+01	3.15910E+02
304	5033	0	4.00279E+02	-7.90182E+01	3.15910E+02
305	5034	0	4.53885E+02	9.08239E+01	3.18425E+02
306	5035	0	4.53885E+02	-9.08239E+01	3.18425E+02
307	5036	0	4.99124E+02	9.88560E+01	3.20548E+02
308	5037	0	4.99124E+02	-9.88560E+01	3.20548E+02
309	5038	0	5.44667E+02	1.06331E+02	3.14354E+02
310	5039	0	5.44667E+02	-1.06331E+02	3.14354E+02
311	5040	0	5.68000E+02	1.10161E+02	3.13225E+02
312	5041	0	5.68000E+02	-1.10161E+02	3.13225E+02
313	5042	0	2.62780E+02	3.15800E+01	3.35000E+02
314	5043	0	2.62780E+02	-3.15800E+01	3.35000E+02
315	5044	0	3.11000E+02	5.35491E+01	3.35000E+02
316	5045	0	3.11000E+02	-5.35491E+01	3.35000E+02
317	5046	0	3.59000E+02	6.90263E+01	3.35000E+02
318	5047	0	3.59000E+02	-6.90263E+01	3.35000E+02
319	5048	0	3.95244E+02	7.83427E+01	3.51048E+02
320	5049	0	3.95244E+02	-7.83427E+01	3.51048E+02
321	5050	0	4.48707E+02	8.98291E+01	3.54472E+02
322	5051	0	4.48707E+02	-8.98291E+01	3.54472E+02
323	5052	0	4.93946E+02	9.79967E+01	3.56595E+02
324	5053	0	4.90000E+02	-9.73319E+01	3.56410E+02
325	5054	0	5.38300E+02	1.03540E+02	3.58676E+02
326	5055	0	5.38300E+02	-1.03540E+02	3.58676E+02
327	5056	0	5.72392E+02	1.04972E+02	3.60276E+02
328	5057	0	5.72392E+02	-1.04972E+02	3.60276E+02
329	5058	0	2.60238E+02	2.65271E+01	3.52924E+02
330	5059	0	2.60238E+02	-2.65271E+01	3.52924E+02
331	5060	0	2.81500E+02	3.50994E+01	3.64577E+02
332	5061	0	2.81500E+02	-3.50994E+01	3.64577E+02
333	5062	0	3.11000E+02	4.60691E+01	3.74703E+02
334	5063	0	3.11000E+02	-4.60691E+01	3.74703E+02
335	5064	0	3.50841E+02	6.31496E+01	3.74215E+02
336	5065	0	3.50841E+02	-6.31496E+01	3.74215E+02
337	5066	0	3.87680E+02	7.56396E+01	3.78751E+02
338	5067	0	3.87680E+02	-7.56396E+01	3.78751E+02
339	5068	0	4.43935E+02	8.88924E+01	3.87691E+02
340	5069	0	4.43935E+02	-8.88924E+01	3.87691E+02
341	5070	0	4.89225E+02	9.72004E+01	3.89463E+02
342	5071	0	4.89225E+02	-9.72004E+01	3.89463E+02
343	5072	0	5.33730E+02	1.03171E+02	3.90497E+02
344	5073	0	5.33730E+02	-1.03171E+02	3.90497E+02
345	5074	0	5.70106E+02	1.04945E+02	3.92204E+02
346	5075	0	5.70106E+02	-1.04945E+02	3.92204E+02
347	5076	0	5.29635E+02	1.02803E+02	4.19000E+02
348	5077	0	5.29635E+02	-1.02803E+02	4.19000E+02
349	5078	0	5.62788E+02	1.04793E+02	4.25632E+02
350	5079	0	5.62788E+02	-1.04793E+02	4.25632E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 137

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
351	5080	0	3.83770E+02	5.89126E+01	4.06349E+02
352	5081	0	3.83770E+02	-5.89126E+01	4.06349E+02
353	5082	0	4.39410E+02	7.42742E+01	4.19196E+02
354	5083	0	4.39410E+02	-7.42742E+01	4.19196E+02
355	5084	0	4.83308E+02	8.31202E+01	4.30661E+02
356	5085	0	4.83308E+02	-8.31202E+01	4.30661E+02
357	5086	0	5.26450E+02	9.05251E+01	4.41176E+02
358	5087	0	5.26450E+02	-9.05251E+01	4.41176E+02
359	5088	0	5.59743E+02	9.45178E+01	4.48287E+02
360	5089	0	5.59743E+02	-9.45178E+01	4.48287E+02
361	5090	0	4.93732E+02	5.39462E+01	4.60835E+02
362	5091	0	4.93732E+02	-5.39462E+01	4.60835E+02
363	5092	0	5.23989E+02	7.50386E+01	4.58155E+02
364	5093	0	5.23989E+02	-7.50386E+01	4.58155E+02
365	5094	0	5.57644E+02	7.96155E+01	4.64326E+02
366	5095	0	5.57644E+02	-7.96155E+01	4.64326E+02
367	5096	0	3.11000E+02	2.42000E+01	3.92145E+02
368	5097	0	3.11000E+02	-2.42000E+01	3.92145E+02
369	5098	0	3.41200E+02	3.47091E+01	4.02307E+02
370	5099	0	3.41200E+02	-3.47091E+01	4.02307E+02
371	5100	0	3.81618E+02	3.30539E+01	4.21126E+02
372	5101	0	3.81618E+02	-3.30539E+01	4.21126E+02
373	5102	0	4.36170E+02	3.82363E+01	4.41757E+02
374	5103	0	4.36170E+02	-3.82363E+01	4.41757E+02
375	5104	0	4.75067E+02	4.30270E+01	4.59962E+02
376	5105	0	4.75067E+02	-4.30270E+01	4.59962E+02
377	5106	0	5.20021E+02	5.05641E+01	4.85940E+02
378	5107	0	5.20021E+02	-5.05641E+01	4.85940E+02
379	5108	0	5.54703E+02	5.40000E+01	4.88086E+02
380	5109	0	5.54703E+02	-5.40000E+01	4.88086E+02
381	5110	0	4.61724E+02	1.89180E+01	4.62306E+02
382	5111	0	4.61724E+02	-1.89180E+01	4.62306E+02
383	5112	0	4.80000E+02	2.80000E+01	4.85118E+02
384	5113	0	4.80000E+02	-2.80000E+01	4.85118E+02
385	5114	0	5.19315E+02	2.80000E+01	4.96896E+02
386	5115	0	5.19315E+02	-2.80000E+01	4.96896E+02
387	5116	0	5.53279E+02	2.80000E+01	4.97095E+02
388	5117	0	5.53279E+02	-2.80000E+01	4.97095E+02
389	5118	0	2.58186E+02	0.00000E+00	3.67216E+02
390	5119	0	2.81500E+02	0.00000E+00	3.81723E+02
391	5120	0	3.11000E+02	7.00000E+00	3.95114E+02
392	5121	0	3.11000E+02	-7.00000E+00	3.95114E+02
393	5122	0	3.41200E+02	0.00000E+00	4.09889E+02
394	5123	0	3.80845E+02	0.00000E+00	4.26337E+02
395	5124	0	4.35196E+02	0.00000E+00	4.48534E+02
396	5125	0	4.55506E+02	0.00000E+00	4.68844E+02
397	5126	0	4.80000E+02	0.00000E+00	4.90568E+02
398	5127	0	5.16375E+02	3.50000E+00	4.99951E+02
399	5128	0	5.16375E+02	-3.50000E+00	4.99951E+02
400	5129	0	5.52900E+02	0.00000E+00	5.00000E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 138

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
401	2934	0	3.55850E+02	6.69000E+01	3.64453E+02
402	2979	0	3.55850E+02	-6.69000E+01	3.64453E+02
403	5130	0	5.82000E+02	1.05000E+02	4.10000E+02
404	5131	0	5.82000E+02	-1.05000E+02	4.10000E+02
405	5132	0	5.82000E+02	0.00000E+00	2.77087E+02
406	5133	0	5.82000E+02	4.74458E+01	2.79461E+02
407	5134	0	5.82000E+02	-4.74458E+01	2.79461E+02
408	5135	0	5.82000E+02	7.88017E+01	2.85531E+02
409	5136	0	5.82000E+02	-7.88017E+01	2.85531E+02
410	5137	0	5.82000E+02	1.05000E+02	2.99443E+02
411	5138	0	5.82000E+02	-1.05000E+02	2.99443E+02
412	5139	0	5.82000E+02	1.05000E+02	3.34197E+02
413	5140	0	5.82000E+02	-1.05000E+02	3.34197E+02
414	5141	0	5.82000E+02	1.05000E+02	3.60727E+02
415	5142	0	5.82000E+02	-1.05000E+02	3.60727E+02
416	5143	0	5.82000E+02	1.05000E+02	3.92762E+02
417	5144	0	5.82000E+02	-1.05000E+02	3.92762E+02
418	5145	0	5.82000E+02	1.12480E+02	3.12688E+02
419	5146	0	5.82000E+02	-1.12480E+02	3.12688E+02
420	5147	0	5.84530E+02	5.56000E+00	4.99874E+02
421	5148	0	5.84530E+02	-5.56000E+00	4.99874E+02
422	5149	0	5.84530E+02	4.62504E+01	4.92281E+02
423	5150	0	5.84530E+02	-4.62504E+01	4.92281E+02
424	5151	0	5.84530E+02	7.69893E+01	4.73444E+02
425	5152	0	5.84530E+02	-7.69893E+01	4.73444E+02
426	5153	0	5.84530E+02	9.97508E+01	4.48504E+02
427	5154	0	5.84530E+02	-9.97508E+01	4.48504E+02
428	5155	0	6.02300E+02	5.56000E+00	4.99874E+02
429	5156	0	6.02300E+02	-5.56000E+00	4.99874E+02
430	5157	0	6.02300E+02	4.53740E+01	4.92690E+02
431	5158	0	6.02300E+02	-4.53740E+01	4.92690E+02
432	5159	0	6.02300E+02	7.80580E+01	4.74853E+02
433	5160	0	6.02300E+02	-7.80580E+01	4.74853E+02
434	5161	0	6.02300E+02	1.01614E+02	4.49433E+02
435	5162	0	6.02300E+02	-1.01614E+02	4.49433E+02
436	5163	0	6.09000E+02	0.00000E+00	2.76466E+02
437	5164	0	6.09000E+02	4.03000E+01	2.78054E+02
438	5165	0	6.09000E+02	-4.03000E+01	2.78054E+02
439	5166	0	6.09000E+02	7.26000E+01	2.82897E+02
440	5167	0	6.09000E+02	-7.26000E+01	2.82897E+02
441	5168	0	6.09000E+02	1.05000E+02	2.96173E+02
442	5169	0	6.09000E+02	-1.05000E+02	2.96173E+02
443	5170	0	6.09000E+02	1.05000E+02	3.36354E+02
444	5171	0	6.09000E+02	-1.05000E+02	3.36354E+02
445	5172	0	6.09000E+02	1.05000E+02	3.68500E+02
446	5173	0	6.09000E+02	-1.05000E+02	3.68500E+02
447	5174	0	6.09000E+02	1.05000E+02	3.98500E+02
448	5175	0	6.09000E+02	-1.05000E+02	3.98500E+02
449	5176	0	6.09000E+02	1.05000E+02	4.10000E+02
450	5177	0	6.09000E+02	-1.05000E+02	4.10000E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 139

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
451	5178	0	6.09000E+02	1.16890E+02	3.11370E+02
452	5179	0	6.09000E+02	-1.16890E+02	3.11370E+02
453	5180	0	6.36000E+02	0.00000E+00	2.75844E+02
454	5181	0	6.36000E+02	4.03000E+01	2.77380E+02
455	5182	0	6.36000E+02	-4.03000E+01	2.77380E+02
456	5183	0	6.36000E+02	7.26000E+01	2.81966E+02
457	5184	0	6.36000E+02	-7.26000E+01	2.81966E+02
458	5185	0	6.36000E+02	1.05000E+02	2.93586E+02
459	5186	0	6.36000E+02	-1.05000E+02	2.93586E+02
460	5187	0	6.36000E+02	1.05000E+02	3.68500E+02
461	5188	0	6.36000E+02	-1.05000E+02	3.68500E+02
462	5189	0	6.36000E+02	1.05000E+02	4.10000E+02
463	5190	0	6.36000E+02	-1.05000E+02	4.10000E+02
464	5191	0	6.36000E+02	1.05000E+02	3.96000E+02
465	5192	0	6.36000E+02	-1.05000E+02	3.96000E+02
466	5193	0	6.36000E+02	1.05000E+02	3.36982E+02
467	5194	0	6.36000E+02	-1.05000E+02	3.36982E+02
468	5195	0	6.36000E+02	1.21330E+02	3.10000E+02
469	5196	0	6.36000E+02	-1.21330E+02	3.10000E+02
470	5197	0	6.47300E+02	5.56000E+00	4.99874E+02
471	5198	0	6.47300E+02	-5.56000E+00	4.99874E+02
472	5199	0	6.47300E+02	4.27980E+01	4.93476E+02
473	5200	0	6.47300E+02	-4.27980E+01	4.93476E+02
474	5201	0	6.47300E+02	8.13190E+01	4.75466E+02
475	5202	0	6.47300E+02	-8.13190E+01	4.75466E+02
476	5203	0	6.47300E+02	1.03903E+02	4.50544E+02
477	5204	0	6.47300E+02	-1.03903E+02	4.50544E+02
478	5205	0	6.64500E+02	0.00000E+00	2.75187E+02
479	5206	0	6.64500E+02	4.03000E+01	2.76674E+02
480	5207	0	6.64500E+02	-4.03000E+01	2.76674E+02
481	5208	0	6.64500E+02	7.26000E+01	2.80997E+02
482	5209	0	6.64500E+02	-7.26000E+01	2.80997E+02
483	5210	0	6.64500E+02	1.05000E+02	2.91221E+02
484	5211	0	6.64500E+02	-1.05000E+02	2.91221E+02
485	5212	0	6.64500E+02	1.05000E+02	3.37645E+02
486	5213	0	6.64500E+02	-1.05000E+02	3.37645E+02
487	5214	0	6.64500E+02	1.05000E+02	3.68500E+02
488	5215	0	6.64500E+02	-1.05000E+02	3.68500E+02
489	5216	0	6.64500E+02	1.05000E+02	3.99750E+02
490	5217	0	6.64500E+02	-1.05000E+02	3.99750E+02
491	5218	0	6.64500E+02	1.05000E+02	4.10000E+02
492	5219	0	6.64500E+02	-1.05000E+02	4.10000E+02
493	5220	0	6.64500E+02	1.18987E+02	3.00150E+02
494	5221	0	6.64500E+02	-1.18987E+02	3.00150E+02
495	5222	0	6.64500E+02	1.18987E+02	3.18600E+02
496	5223	0	6.64500E+02	-1.18987E+02	3.18600E+02
497	5224	0	6.92300E+02	5.56000E+00	4.99874E+02
498	5225	0	6.92300E+02	-5.56000E+00	4.99874E+02
499	5226	0	6.92300E+02	4.15000E+01	4.93837E+02
500	5227	0	6.92300E+02	-4.15000E+01	4.93837E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 140

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
501	5228	0	6.92300E+02	8.26030E+01	4.75264E+02
502	5229	0	6.92300E+02	-8.26030E+01	4.75264E+02
503	5230	0	6.92300E+02	1.04129E+02	4.50620E+02
504	5231	0	6.92300E+02	-1.04129E+02	4.50620E+02
505	5232	0	6.93000E+02	0.00000E+00	2.74530E+02
506	5233	0	6.93000E+02	4.03000E+01	2.75965E+02
507	5234	0	6.93000E+02	-4.03000E+01	2.75965E+02
508	5235	0	6.93000E+02	7.26000E+01	2.80039E+02
509	5236	0	6.93000E+02	-7.26000E+01	2.80039E+02
510	5237	0	6.93000E+02	1.05000E+02	2.89152E+02
511	5238	0	6.93000E+02	-1.05000E+02	2.89152E+02
512	5239	0	6.93000E+02	1.05000E+02	3.38307E+02
513	5240	0	6.93000E+02	-1.05000E+02	3.38307E+02
514	5241	0	6.93000E+02	1.05000E+02	3.68500E+02
515	5242	0	6.93000E+02	-1.05000E+02	3.68500E+02
516	5243	0	6.93000E+02	1.05000E+02	3.96000E+02
517	5244	0	6.93000E+02	-1.05000E+02	3.96000E+02
518	5245	0	6.93000E+02	1.05000E+02	4.10000E+02
519	5246	0	6.93000E+02	-1.05000E+02	4.10000E+02
520	5247	0	6.93000E+02	1.22113E+02	2.98510E+02
521	5248	0	6.93000E+02	-1.22113E+02	2.98510E+02
522	5249	0	6.93000E+02	1.22113E+02	3.18780E+02
523	5250	0	6.93000E+02	-1.22113E+02	3.18780E+02
524	5251	0	7.17000E+02	0.00000E+00	2.73977E+02
525	5252	0	7.17000E+02	4.03000E+01	2.75368E+02
526	5253	0	7.17000E+02	-4.03000E+01	2.75368E+02
527	5254	0	7.17000E+02	7.26000E+01	2.79243E+02
528	5255	0	7.17000E+02	-7.26000E+01	2.79243E+02
529	5256	0	7.17000E+02	1.05000E+02	2.87583E+02
530	5257	0	7.17000E+02	-1.05000E+02	2.87583E+02
531	5258	0	7.17000E+02	1.05000E+02	3.68500E+02
532	5259	0	7.17000E+02	-1.05000E+02	3.68500E+02
533	5260	0	7.17000E+02	1.05000E+02	4.10000E+02
534	5261	0	7.17000E+02	-1.05000E+02	4.10000E+02
535	5262	0	7.17000E+02	1.05000E+02	3.96000E+02
536	5263	0	7.17000E+02	-1.05000E+02	3.96000E+02
537	5264	0	7.17000E+02	1.05000E+02	3.38865E+02
538	5265	0	7.17000E+02	-1.05000E+02	3.38865E+02
539	5266	0	7.17000E+02	1.24747E+02	3.18960E+02
540	5267	0	7.17000E+02	-1.24747E+02	3.18960E+02
541	5268	0	7.17000E+02	1.24747E+02	2.97150E+02
542	5269	0	7.17000E+02	-1.24747E+02	2.97150E+02
543	5270	0	7.37300E+02	5.56000E+00	4.99874E+02
544	5271	0	7.37300E+02	-5.56000E+00	4.99874E+02
545	5272	0	7.37300E+02	4.15000E+01	4.93837E+02
546	5273	0	7.37300E+02	-4.15000E+01	4.93837E+02
547	5274	0	7.37300E+02	8.26030E+01	4.75264E+02
548	5275	0	7.37300E+02	-8.26030E+01	4.75264E+02
549	5276	0	7.37300E+02	1.04129E+02	4.50620E+02
550	5277	0	7.37300E+02	-1.04129E+02	4.50620E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 141

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
551	5278	0	7.50000E+02	0.00000E+00	2.73217E+02
552	5279	0	7.50000E+02	4.03000E+01	2.74546E+02
553	5280	0	7.50000E+02	-4.03000E+01	2.74546E+02
554	5281	0	7.50000E+02	7.26000E+01	2.78166E+02
555	5282	0	7.50000E+02	-7.26000E+01	2.78166E+02
556	5283	0	7.50000E+02	1.05000E+02	2.85617E+02
557	5284	0	7.50000E+02	-1.05000E+02	2.85617E+02
558	5285	0	7.50000E+02	1.05000E+02	3.39632E+02
559	5286	0	7.50000E+02	-1.05000E+02	3.39632E+02
560	5287	0	7.50000E+02	1.05000E+02	3.68500E+02
561	5288	0	7.50000E+02	-1.05000E+02	3.68500E+02
562	5289	0	7.50000E+02	1.05000E+02	3.96000E+02
563	5290	0	7.50000E+02	-1.05000E+02	3.96000E+02
564	453	0	7.50000E+02	1.05000E+02	4.10000E+02
565	793	0	7.50000E+02	-1.05000E+02	4.10000E+02
566	5293	0	7.50000E+02	1.28347E+02	2.95430E+02
567	5294	0	7.50000E+02	-1.28347E+02	2.95430E+02
568	5295	0	7.50000E+02	1.28347E+02	3.19280E+02
569	5296	0	7.50000E+02	-1.28347E+02	3.19280E+02
570	5297	0	7.78500E+02	0.00000E+00	2.72560E+02
571	5298	0	7.78500E+02	4.03000E+01	2.73832E+02
572	5299	0	7.78500E+02	-4.03000E+01	2.73832E+02
573	5300	0	7.78500E+02	7.26000E+01	2.77239E+02
574	5301	0	7.78500E+02	-7.26000E+01	2.77239E+02
575	5302	0	7.78500E+02	1.05000E+02	2.84033E+02
576	5303	0	7.78500E+02	-1.05000E+02	2.84033E+02
577	5304	0	7.78500E+02	1.05000E+02	3.40295E+02
578	5305	0	7.78500E+02	-1.05000E+02	3.40295E+02
579	5306	0	7.78500E+02	1.05000E+02	3.68500E+02
580	5307	0	7.78500E+02	-1.05000E+02	3.68500E+02
581	5308	0	7.78500E+02	1.05000E+02	3.96000E+02
582	5309	0	7.78500E+02	-1.05000E+02	3.96000E+02
583	5310	0	7.78500E+02	1.05000E+02	4.10000E+02
584	5311	0	7.78500E+02	-1.05000E+02	4.10000E+02
585	5312	0	7.78500E+02	1.31467E+02	2.93780E+02
586	5313	0	7.78500E+02	-1.31467E+02	2.93780E+02
587	5314	0	7.78500E+02	1.31467E+02	3.19630E+02
588	5315	0	7.78500E+02	-1.31467E+02	3.19630E+02
589	5316	0	7.83550E+02	5.56000E+00	4.99874E+02
590	5317	0	7.83550E+02	-5.56000E+00	4.99874E+02
591	5318	0	7.83550E+02	4.15000E+01	4.93837E+02
592	5319	0	7.83550E+02	-4.15000E+01	4.93837E+02
593	5320	0	7.83550E+02	8.26030E+01	4.75264E+02
594	5321	0	7.83550E+02	-8.26030E+01	4.75264E+02
595	5322	0	7.83550E+02	1.04129E+02	4.50620E+02
596	5323	0	7.83550E+02	-1.04129E+02	4.50620E+02
597	5324	0	8.07000E+02	0.00000E+00	2.71904E+02
598	5325	0	8.07000E+02	4.03000E+01	2.73111E+02
599	5326	0	8.07000E+02	-4.03000E+01	2.73111E+02
600	5327	0	8.07000E+02	7.26000E+01	2.76301E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 142

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
601	5328	0	8.07000E+02	-7.26000E+01	2.76301E+02
602	5329	0	8.07000E+02	1.05000E+02	2.82507E+02
603	5330	0	8.07000E+02	-1.05000E+02	2.82507E+02
604	5331	0	8.07000E+02	1.05000E+02	3.40958E+02
605	5332	0	8.07000E+02	-1.05000E+02	3.40958E+02
606	5333	0	8.07000E+02	1.05000E+02	3.68500E+02
607	5334	0	8.07000E+02	-1.05000E+02	3.68500E+02
608	5335	0	8.07000E+02	1.05000E+02	3.96000E+02
609	5336	0	8.07000E+02	-1.05000E+02	3.96000E+02
610	5337	0	8.07000E+02	1.05000E+02	4.10000E+02
611	5338	0	8.07000E+02	-1.05000E+02	4.10000E+02
612	5339	0	8.07000E+02	1.35454E+02	3.19339E+02
613	5340	0	8.07000E+02	-1.35454E+02	3.19339E+02
614	5341	0	8.07000E+02	1.37772E+02	2.94008E+02
615	5342	0	8.07000E+02	-1.37772E+02	2.94008E+02
616	5343	0	8.28250E+02	5.56000E+00	4.99874E+02
617	5344	0	8.28250E+02	-5.56000E+00	4.99874E+02
618	5345	0	8.28250E+02	4.15000E+01	4.93837E+02
619	5346	0	8.28250E+02	-4.15000E+01	4.93837E+02
620	5347	0	8.28250E+02	8.26030E+01	4.75264E+02
621	5348	0	8.28250E+02	-8.26030E+01	4.75264E+02
622	5349	0	8.28250E+02	1.04129E+02	4.50620E+02
623	5350	0	8.28250E+02	-1.04129E+02	4.50620E+02
624	5351	0	8.35000E+02	0.00000E+00	2.71259E+02
625	5352	0	8.35000E+02	4.03000E+01	2.72398E+02
626	5353	0	8.35000E+02	-4.03000E+01	2.72398E+02
627	5354	0	8.35000E+02	7.26000E+01	2.75375E+02
628	5355	0	8.35000E+02	-7.26000E+01	2.75375E+02
629	5356	0	8.35000E+02	1.05000E+02	2.81058E+02
630	5357	0	8.35000E+02	-1.05000E+02	2.81058E+02
631	5358	0	8.35000E+02	1.05000E+02	3.68500E+02
632	5359	0	8.35000E+02	-1.05000E+02	3.68500E+02
633	5360	0	8.35000E+02	1.05000E+02	4.10000E+02
634	5361	0	8.35000E+02	-1.05000E+02	4.10000E+02
635	5362	0	8.35000E+02	1.05000E+02	3.96000E+02
636	5363	0	8.35000E+02	-1.05000E+02	3.96000E+02
637	5364	0	8.35000E+02	1.05000E+02	3.41609E+02
638	5365	0	8.35000E+02	-1.05000E+02	3.41609E+02
639	5366	0	8.63000E+02	0.00000E+00	2.70614E+02
640	5367	0	8.63000E+02	4.03000E+01	2.71683E+02
641	5368	0	8.63000E+02	-4.03000E+01	2.71683E+02
642	5369	0	8.63000E+02	7.26000E+01	2.74452E+02
643	5370	0	8.63000E+02	-7.26000E+01	2.74452E+02
644	5371	0	8.63000E+02	1.05000E+02	2.79654E+02
645	5372	0	8.63000E+02	-1.05000E+02	2.79654E+02
646	5373	0	8.63000E+02	1.05000E+02	3.68500E+02
647	5374	0	8.63000E+02	-1.05000E+02	3.68500E+02
648	5375	0	8.63000E+02	1.05000E+02	4.10000E+02
649	5376	0	8.63000E+02	-1.05000E+02	4.10000E+02
650	5377	0	8.63000E+02	1.05000E+02	3.96000E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 143

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
651	5378	0	8.63000E+02	-1.05000E+02	3.96000E+02
652	5379	0	8.63000E+02	1.05000E+02	3.42260E+02
653	5380	0	8.63000E+02	-1.05000E+02	3.42260E+02
654	5381	0	8.72950E+02	5.56000E+00	4.99874E+02
655	5382	0	8.72950E+02	-5.56000E+00	4.99874E+02
656	5383	0	8.72950E+02	4.15000E+01	4.93837E+02
657	5384	0	8.72950E+02	-4.15000E+01	4.93837E+02
658	5385	0	8.72950E+02	8.26030E+01	4.75264E+02
659	5386	0	8.72950E+02	-8.26030E+01	4.75264E+02
660	5387	0	8.72950E+02	1.04129E+02	4.50620E+02
661	5388	0	8.72950E+02	-1.04129E+02	4.50620E+02
662	5389	0	8.91000E+02	0.00000E+00	2.69969E+02
663	5390	0	8.91000E+02	4.03000E+01	2.70969E+02
664	5391	0	8.91000E+02	-4.03000E+01	2.70969E+02
665	5392	0	8.91000E+02	7.26000E+01	2.73536E+02
666	5393	0	8.91000E+02	-7.26000E+01	2.73536E+02
667	5394	0	8.91000E+02	1.05000E+02	2.78295E+02
668	5395	0	8.91000E+02	-1.05000E+02	2.78295E+02
669	5396	0	8.91000E+02	1.05000E+02	3.47340E+02
670	5397	0	8.91000E+02	-1.05000E+02	3.47340E+02
671	5398	0	8.91000E+02	1.05000E+02	3.68500E+02
672	5399	0	8.91000E+02	-1.05000E+02	3.68500E+02
673	5400	0	8.91000E+02	1.05000E+02	4.10000E+02
674	5401	0	8.91000E+02	-1.05000E+02	4.10000E+02
675	5402	0	8.91000E+02	1.05000E+02	3.96000E+02
676	5403	0	8.91000E+02	-1.05000E+02	3.96000E+02
677	5404	0	9.17650E+02	5.56000E+00	4.99874E+02
678	5405	0	9.17650E+02	-5.56000E+00	4.99874E+02
679	5406	0	9.17650E+02	4.15000E+01	4.93837E+02
680	5407	0	9.17650E+02	-4.15000E+01	4.93837E+02
681	5408	0	9.17650E+02	8.26030E+01	4.75264E+02
682	5409	0	9.17650E+02	-8.26030E+01	4.75264E+02
683	5410	0	9.17650E+02	1.04129E+02	4.50620E+02
684	5411	0	9.17650E+02	-1.04129E+02	4.50620E+02
685	5412	0	9.19000E+02	0.00000E+00	2.69324E+02
686	5413	0	9.19000E+02	4.03000E+01	2.70257E+02
687	5414	0	9.19000E+02	-4.03000E+01	2.70257E+02
688	5415	0	9.19000E+02	7.26000E+01	2.72631E+02
689	5416	0	9.19000E+02	-7.26000E+01	2.72631E+02
690	5417	0	9.19000E+02	1.05000E+02	2.76982E+02
691	5418	0	9.19000E+02	-1.05000E+02	2.76982E+02
692	5419	0	9.19000E+02	1.05000E+02	3.47340E+02
693	5420	0	9.19000E+02	-1.05000E+02	3.47340E+02
694	5421	0	9.19000E+02	1.05000E+02	3.68500E+02
695	5422	0	9.19000E+02	-1.05000E+02	3.68500E+02
696	5423	0	9.19000E+02	1.05000E+02	4.10000E+02
697	5424	0	9.19000E+02	-1.05000E+02	4.10000E+02
698	5425	0	9.19000E+02	1.05000E+02	3.96000E+02
699	5426	0	9.19000E+02	-1.05000E+02	3.96000E+02
700	5427	0	9.49250E+02	0.00000E+00	2.68627E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 144

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
701	5428	0	9.49250E+02	4.03000E+01	2.69490E+02
702	5429	0	9.49250E+02	-4.03000E+01	2.69490E+02
703	5430	0	9.49250E+02	7.26000E+01	2.71667E+02
704	5431	0	9.49250E+02	-7.26000E+01	2.71667E+02
705	5432	0	9.49250E+02	1.05000E+02	2.75617E+02
706	5433	0	9.49250E+02	-1.05000E+02	2.75617E+02
707	5434	0	9.49250E+02	1.05000E+02	3.68500E+02
708	5435	0	9.49250E+02	-1.05000E+02	3.68500E+02
709	5436	0	9.49250E+02	1.05000E+02	4.10000E+02
710	5437	0	9.49250E+02	-1.05000E+02	4.10000E+02
711	5438	0	9.49250E+02	1.05000E+02	3.96000E+02
712	5439	0	9.49250E+02	-1.05000E+02	3.96000E+02
713	5440	0	9.49250E+02	1.05000E+02	3.47340E+02
714	5441	0	9.49250E+02	-1.05000E+02	3.47340E+02
715	5442	0	9.66350E+02	5.56000E+00	4.99874E+02
716	5443	0	9.66350E+02	-5.56000E+00	4.99874E+02
717	5444	0	9.66350E+02	4.15000E+01	4.93837E+02
718	5445	0	9.66350E+02	-4.15000E+01	4.93837E+02
719	5446	0	9.66350E+02	8.26030E+01	4.75264E+02
720	5447	0	9.66350E+02	-8.26030E+01	4.75264E+02
721	5448	0	9.66350E+02	1.04129E+02	4.50620E+02
722	5449	0	9.66350E+02	-1.04129E+02	4.50620E+02
723	1094	0	9.79500E+02	0.00000E+00	2.67930E+02
724	5451	0	9.79500E+02	4.03000E+01	2.68724E+02
725	5452	0	9.79500E+02	-4.03000E+01	2.68724E+02
726	5453	0	9.79500E+02	7.26000E+01	2.70718E+02
727	5454	0	9.79500E+02	-7.26000E+01	2.70718E+02
728	5455	0	9.79500E+02	1.05000E+02	2.74314E+02
729	5456	0	9.79500E+02	-1.05000E+02	2.74314E+02
730	5457	0	9.79500E+02	1.05000E+02	3.68500E+02
731	5458	0	9.79500E+02	-1.05000E+02	3.68500E+02
732	5459	0	9.79500E+02	1.05000E+02	4.10000E+02
733	5460	0	9.79500E+02	-1.05000E+02	4.10000E+02
734	5461	0	9.79500E+02	1.05000E+02	3.96000E+02
735	5462	0	9.79500E+02	-1.05000E+02	3.96000E+02
736	5463	0	9.79500E+02	1.05000E+02	3.47340E+02
737	5464	0	9.79500E+02	-1.05000E+02	3.47340E+02
738	5465	0	1.00975E+03	0.00000E+00	2.67233E+02
739	5466	0	1.00975E+03	4.03000E+01	2.67961E+02
740	5467	0	1.00975E+03	-4.03000E+01	2.67961E+02
741	5468	0	1.00975E+03	7.26000E+01	2.69789E+02
742	5469	0	1.00975E+03	-7.26000E+01	2.69789E+02
743	5470	0	1.00975E+03	1.05000E+02	2.73084E+02
744	5471	0	1.00975E+03	-1.05000E+02	2.73084E+02
745	5472	0	1.00975E+03	1.05000E+02	3.55000E+02
746	5473	0	1.00975E+03	-1.05000E+02	3.55000E+02
747	5474	0	1.00975E+03	1.05000E+02	3.68500E+02
748	5475	0	1.00975E+03	-1.05000E+02	3.68500E+02
749	5476	0	1.00975E+03	1.05000E+02	4.10000E+02
750	5477	0	1.00975E+03	-1.05000E+02	4.10000E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 145

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
751	5478	0	1.00975E+03	1.05000E+02	3.96000E+02
752	5479	0	1.00975E+03	-1.05000E+02	3.96000E+02
753	5480	0	1.01105E+03	5.56000E+00	4.99874E+02
754	5481	0	1.01105E+03	-5.56000E+00	4.99874E+02
755	5482	0	1.01105E+03	4.15000E+01	4.93837E+02
756	5483	0	1.01105E+03	-4.15000E+01	4.93837E+02
757	5484	0	1.01105E+03	8.26030E+01	4.75264E+02
758	5485	0	1.01105E+03	-8.26030E+01	4.75264E+02
759	5486	0	1.01105E+03	1.04129E+02	4.50620E+02
760	5487	0	1.01105E+03	-1.04129E+02	4.50620E+02
761	5488	0	1.04000E+03	0.00000E+00	2.66536E+02
762	5489	0	1.04000E+03	4.03000E+01	2.67207E+02
763	5490	0	1.04000E+03	-4.03000E+01	2.67207E+02
764	5491	0	1.04000E+03	7.26000E+01	2.68896E+02
765	5492	0	1.04000E+03	-7.26000E+01	2.68896E+02
766	536	0	1.04000E+03	1.05000E+02	2.71950E+02
767	1680	0	1.04000E+03	-1.05000E+02	2.71950E+02
768	5495	0	1.04000E+03	1.05000E+02	3.68500E+02
769	5496	0	1.04000E+03	-1.05000E+02	3.68500E+02
770	5497	0	1.04000E+03	1.05000E+02	4.10000E+02
771	5498	0	1.04000E+03	-1.05000E+02	4.10000E+02
772	5499	0	1.04000E+03	1.05000E+02	3.96000E+02
773	5500	0	1.04000E+03	-1.05000E+02	3.96000E+02
774	5501	0	1.04000E+03	1.05000E+02	3.47340E+02
775	5502	0	1.04000E+03	-1.05000E+02	3.47340E+02
776	5503	0	1.05575E+03	5.56000E+00	4.99874E+02
777	5504	0	1.05575E+03	-5.56000E+00	4.99874E+02
778	5505	0	1.05575E+03	4.15000E+01	4.93837E+02
779	5506	0	1.05575E+03	-4.15000E+01	4.93837E+02
780	5507	0	1.05575E+03	8.26030E+01	4.75264E+02
781	5508	0	1.05575E+03	-8.26030E+01	4.75264E+02
782	5509	0	1.05575E+03	1.04129E+02	4.50620E+02
783	5510	0	1.05575E+03	-1.04129E+02	4.50620E+02
784	5511	0	1.06517E+03	0.00000E+00	2.65956E+02
785	5512	0	1.06517E+03	4.03000E+01	2.66596E+02
786	5513	0	1.06517E+03	-4.03000E+01	2.66596E+02
787	5514	0	1.06517E+03	7.26000E+01	2.68205E+02
788	5515	0	1.06517E+03	-7.26000E+01	2.68205E+02
789	5516	0	1.06517E+03	1.05000E+02	2.71168E+02
790	5517	0	1.06517E+03	-1.05000E+02	2.71168E+02
791	5518	0	1.06517E+03	1.05000E+02	3.68500E+02
792	5519	0	1.06517E+03	-1.05000E+02	3.68500E+02
793	5520	0	1.06517E+03	1.05000E+02	4.10000E+02
794	5521	0	1.06517E+03	-1.05000E+02	4.10000E+02
795	5522	0	1.06517E+03	1.05000E+02	3.96000E+02
796	5523	0	1.06517E+03	-1.05000E+02	3.96000E+02
797	5524	0	1.06517E+03	1.05000E+02	3.47340E+02
798	5525	0	1.06517E+03	-1.05000E+02	3.47340E+02
799	5526	0	1.09033E+03	0.00000E+00	2.65376E+02
800	5527	0	1.09033E+03	4.03000E+01	2.66020E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 146

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
801	5528	0	1.09033E+03	-4.03000E+01	2.66020E+02
802	5529	0	1.09033E+03	7.26000E+01	2.67614E+02
803	5530	0	1.09033E+03	-7.26000E+01	2.67614E+02
804	5531	0	1.09033E+03	1.05000E+02	2.70385E+02
805	5532	0	1.09033E+03	-1.05000E+02	2.70385E+02
806	5533	0	1.09033E+03	1.05000E+02	3.68500E+02
807	5534	0	1.09033E+03	-1.05000E+02	3.68500E+02
808	5535	0	1.09033E+03	1.05000E+02	4.10000E+02
809	5536	0	1.09033E+03	-1.05000E+02	4.10000E+02
810	5537	0	1.09033E+03	1.05000E+02	3.96000E+02
811	5538	0	1.09033E+03	-1.05000E+02	3.96000E+02
812	5539	0	1.09033E+03	1.05000E+02	3.47340E+02
813	5540	0	1.09033E+03	-1.05000E+02	3.47340E+02
814	5541	0	1.10045E+03	5.56000E+00	4.99874E+02
815	5542	0	1.10045E+03	-5.56000E+00	4.99874E+02
816	5543	0	1.10045E+03	4.15000E+01	4.93837E+02
817	5544	0	1.10045E+03	-4.15000E+01	4.93837E+02
818	5545	0	1.10045E+03	8.26030E+01	4.75264E+02
819	5546	0	1.10045E+03	-8.26030E+01	4.75264E+02
820	5547	0	1.10045E+03	1.04129E+02	4.50620E+02
821	5548	0	1.10045E+03	-1.04129E+02	4.50620E+02
822	5549	0	1.11550E+03	0.00000E+00	2.64796E+02
823	5550	0	1.11550E+03	4.03000E+01	2.65466E+02
824	5551	0	1.11550E+03	-4.03000E+01	2.65466E+02
825	5552	0	1.11550E+03	7.26000E+01	2.67092E+02
826	5553	0	1.11550E+03	-7.26000E+01	2.67092E+02
827	5554	0	1.11550E+03	1.05000E+02	2.69977E+02
828	5555	0	1.11550E+03	-1.05000E+02	2.69977E+02
829	5556	0	1.11550E+03	1.05000E+02	3.68500E+02
830	5557	0	1.11550E+03	-1.05000E+02	3.68500E+02
831	5558	0	1.11550E+03	1.05000E+02	4.10000E+02
832	5559	0	1.11550E+03	-1.05000E+02	4.10000E+02
833	5560	0	1.11550E+03	1.05000E+02	3.96000E+02
834	5561	0	1.11550E+03	-1.05000E+02	3.96000E+02
835	5562	0	1.11550E+03	1.05000E+02	3.46410E+02
836	5563	0	1.11550E+03	-1.05000E+02	3.46410E+02
837	5564	0	1.12842E+03	5.56000E+00	4.99874E+02
838	5565	0	1.12842E+03	-5.56000E+00	4.99874E+02
839	5566	0	1.12842E+03	4.15000E+01	4.93837E+02
840	5567	0	1.12842E+03	-4.15000E+01	4.93837E+02
841	5568	0	1.12842E+03	8.26030E+01	4.75264E+02
842	5569	0	1.12842E+03	-8.26030E+01	4.75264E+02
843	5570	0	1.12842E+03	1.04129E+02	4.50620E+02
844	5571	0	1.12842E+03	-1.04129E+02	4.50620E+02
845	1100	0	1.14067E+03	0.00000E+00	2.64217E+02
846	5573	0	1.14067E+03	4.03000E+01	2.64909E+02
847	5574	0	1.14067E+03	-4.03000E+01	2.64909E+02
848	5575	0	1.14067E+03	7.26000E+01	2.66567E+02
849	5576	0	1.14067E+03	-7.26000E+01	2.66567E+02
850	5577	0	1.14067E+03	1.05000E+02	2.69468E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 147

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
851	5578	0	1.14067E+03	-1.05000E+02	2.69468E+02
852	5579	0	1.14067E+03	1.05000E+02	3.68500E+02
853	5580	0	1.14067E+03	-1.05000E+02	3.68500E+02
854	605	0	1.14067E+03	1.05000E+02	4.10000E+02
855	945	0	1.14067E+03	-1.05000E+02	4.10000E+02
856	5583	0	1.14067E+03	1.05000E+02	3.95500E+02
857	5584	0	1.14067E+03	-1.05000E+02	3.95500E+02
858	5585	0	1.14067E+03	1.05000E+02	3.47340E+02
859	5586	0	1.14067E+03	-1.05000E+02	3.47340E+02
860	5587	0	1.16420E+03	5.56000E+00	4.99874E+02
861	5588	0	1.16420E+03	-5.56000E+00	4.99874E+02
862	5589	0	1.16420E+03	4.15000E+01	4.93837E+02
863	5590	0	1.16420E+03	-4.15000E+01	4.93837E+02
864	5591	0	1.16420E+03	8.26030E+01	4.75264E+02
865	5592	0	1.16420E+03	-8.26030E+01	4.75264E+02
866	5593	0	1.16420E+03	1.04129E+02	4.50620E+02
867	5594	0	1.16420E+03	-1.04129E+02	4.50620E+02
868	5595	0	1.16583E+03	0.00000E+00	2.63637E+02
869	5596	0	1.16583E+03	4.03000E+01	2.64353E+02
870	5597	0	1.16583E+03	-4.03000E+01	2.64353E+02
871	5598	0	1.16583E+03	7.26000E+01	2.66042E+02
872	5599	0	1.16583E+03	-7.26000E+01	2.66042E+02
873	5600	0	1.16583E+03	1.05000E+02	2.68857E+02
874	5601	0	1.16583E+03	-1.05000E+02	2.68857E+02
875	5602	0	1.16583E+03	1.05000E+02	3.68500E+02
876	5603	0	1.16583E+03	-1.05000E+02	3.68500E+02
877	5604	0	1.16583E+03	1.05000E+02	4.10000E+02
878	5605	0	1.16583E+03	-1.05000E+02	4.10000E+02
879	5606	0	1.16583E+03	1.05000E+02	3.95500E+02
880	5607	0	1.16583E+03	-1.05000E+02	3.95500E+02
881	5608	0	1.16583E+03	1.05000E+02	3.38877E+02
882	5609	0	1.16583E+03	-1.05000E+02	3.38877E+02
883	5610	0	1.19100E+03	0.00000E+00	2.63057E+02
884	5611	0	1.19100E+03	2.62500E+01	2.63368E+02
885	5612	0	1.19100E+03	-2.62500E+01	2.63368E+02
886	5613	0	1.19100E+03	5.25000E+01	2.64325E+02
887	5614	0	1.19100E+03	-5.25000E+01	2.64325E+02
888	5615	0	1.19100E+03	7.87500E+01	2.65967E+02
889	5616	0	1.19100E+03	-7.87500E+01	2.65967E+02
890	5617	0	1.19100E+03	1.05000E+02	2.68500E+02
891	5618	0	1.19100E+03	-1.05000E+02	2.68500E+02
892	5619	0	1.19100E+03	1.05000E+02	3.68500E+02
893	5620	0	1.19100E+03	-1.05000E+02	3.68500E+02
894	5621	0	1.19100E+03	1.05000E+02	4.10000E+02
895	5622	0	1.19100E+03	-1.05000E+02	4.10000E+02
896	5623	0	1.19100E+03	1.05000E+02	3.95500E+02
897	5624	0	1.19100E+03	-1.05000E+02	3.95500E+02
898	5625	0	1.19100E+03	1.05000E+02	3.38877E+02
899	5626	0	1.19100E+03	-1.05000E+02	3.38877E+02
900	5627	0	1.20420E+03	5.56000E+00	4.99874E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 148

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
901	5628	0	1.20420E+03	-5.56000E+00	4.99874E+02
902	5629	0	1.20420E+03	4.15000E+01	4.93837E+02
903	5630	0	1.20420E+03	-4.15000E+01	4.93837E+02
904	5631	0	1.20420E+03	8.26030E+01	4.75264E+02
905	5632	0	1.20420E+03	-8.26030E+01	4.75264E+02
906	5633	0	1.20420E+03	1.04129E+02	4.50620E+02
907	5634	0	1.20420E+03	-1.04129E+02	4.50620E+02
908	5635	0	1.22000E+03	0.00000E+00	2.62389E+02
909	5636	0	1.22000E+03	2.62500E+01	2.62711E+02
910	5637	0	1.22000E+03	-2.62500E+01	2.62711E+02
911	5638	0	1.22000E+03	5.25000E+01	2.63692E+02
912	5639	0	1.22000E+03	-5.25000E+01	2.63692E+02
913	5640	0	1.22000E+03	7.87500E+01	2.65357E+02
914	5641	0	1.22000E+03	-7.87500E+01	2.65357E+02
915	5642	0	1.22000E+03	1.05000E+02	2.67800E+02
916	5643	0	1.22000E+03	-1.05000E+02	2.67800E+02
917	5644	0	1.22000E+03	1.05000E+02	3.68500E+02
918	5645	0	1.22000E+03	-1.05000E+02	3.68500E+02
919	5646	0	1.22000E+03	1.05000E+02	4.10000E+02
920	5647	0	1.22000E+03	-1.05000E+02	4.10000E+02
921	5648	0	1.22000E+03	1.05000E+02	3.95500E+02
922	5649	0	1.22000E+03	-1.05000E+02	3.95500E+02
923	5650	0	1.22000E+03	1.05000E+02	3.38877E+02
924	5651	0	1.22000E+03	-1.05000E+02	3.38877E+02
925	5652	0	1.24420E+03	5.56000E+00	4.99874E+02
926	5653	0	1.24420E+03	-5.56000E+00	4.99874E+02
927	5654	0	1.24420E+03	4.15000E+01	4.93837E+02
928	5655	0	1.24420E+03	-4.15000E+01	4.93837E+02
929	5656	0	1.24420E+03	8.26030E+01	4.75264E+02
930	5657	0	1.24420E+03	-8.26030E+01	4.75264E+02
931	5658	0	1.24420E+03	1.04129E+02	4.50620E+02
932	5659	0	1.24420E+03	-1.04129E+02	4.50620E+02
933	5660	0	1.24900E+03	0.00000E+00	2.61721E+02
934	5661	0	1.24900E+03	2.62500E+01	2.62053E+02
935	5662	0	1.24900E+03	-2.62500E+01	2.62053E+02
936	5663	0	1.24900E+03	5.25000E+01	2.63057E+02
937	5664	0	1.24900E+03	-5.25000E+01	2.63057E+02
938	5665	0	1.24900E+03	7.87500E+01	2.64739E+02
939	5666	0	1.24900E+03	-7.87500E+01	2.64739E+02
940	5667	0	1.24900E+03	1.05000E+02	2.67200E+02
941	5668	0	1.24900E+03	-1.05000E+02	2.67200E+02
942	5669	0	1.24900E+03	1.05000E+02	3.68500E+02
943	5670	0	1.24900E+03	-1.05000E+02	3.68500E+02
944	5671	0	1.24900E+03	1.05000E+02	4.10000E+02
945	5672	0	1.24900E+03	-1.05000E+02	4.10000E+02
946	5673	0	1.24900E+03	1.05000E+02	3.95500E+02
947	5674	0	1.24900E+03	-1.05000E+02	3.95500E+02
948	5675	0	1.24900E+03	1.05000E+02	3.38877E+02
949	5676	0	1.24900E+03	-1.05000E+02	3.38877E+02
950	5677	0	1.27800E+03	0.00000E+00	2.61146E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 149

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
951	5678	0	1.27800E+03	2.62500E+01	2.61505E+02
952	5679	0	1.27800E+03	-2.62500E+01	2.61505E+02
953	5680	0	1.27800E+03	5.25000E+01	2.62558E+02
954	5681	0	1.27800E+03	-5.25000E+01	2.62558E+02
955	5682	0	1.27800E+03	7.87500E+01	2.64273E+02
956	5683	0	1.27800E+03	-7.87500E+01	2.64273E+02
957	5684	0	1.27800E+03	1.05000E+02	2.66800E+02
958	5685	0	1.27800E+03	-1.05000E+02	2.66800E+02
959	5686	0	1.27800E+03	1.05000E+02	3.68500E+02
960	5687	0	1.27800E+03	-1.05000E+02	3.68500E+02
961	5688	0	1.27800E+03	1.05000E+02	4.10000E+02
962	5689	0	1.27800E+03	-1.05000E+02	4.10000E+02
963	5690	0	1.27800E+03	1.05000E+02	3.95500E+02
964	5691	0	1.27800E+03	-1.05000E+02	3.95500E+02
965	5692	0	1.27800E+03	1.05000E+02	3.38877E+02
966	5693	0	1.27800E+03	-1.05000E+02	3.38877E+02
967	5694	0	1.28370E+03	5.56000E+00	4.99874E+02
968	5695	0	1.28370E+03	-5.56000E+00	4.99874E+02
969	5696	0	1.28370E+03	4.15000E+01	4.93837E+02
970	5697	0	1.28370E+03	-4.15000E+01	4.93837E+02
971	5698	0	1.28370E+03	8.26030E+01	4.75264E+02
972	5699	0	1.28370E+03	-8.26030E+01	4.75264E+02
973	5700	0	1.28370E+03	1.04129E+02	4.50620E+02
974	5701	0	1.28370E+03	-1.04129E+02	4.50620E+02
975	5702	0	1.30700E+03	0.00000E+00	2.61036E+02
976	5703	0	1.30700E+03	2.62500E+01	2.61368E+02
977	5704	0	1.30700E+03	-2.62500E+01	2.61368E+02
978	5705	0	1.30700E+03	5.25000E+01	2.62358E+02
979	5706	0	1.30700E+03	-5.25000E+01	2.62358E+02
980	5707	0	1.30700E+03	7.87500E+01	2.64003E+02
981	5708	0	1.30700E+03	-7.87500E+01	2.64003E+02
982	5709	0	1.30700E+03	1.05000E+02	2.66400E+02
983	5710	0	1.30700E+03	-1.05000E+02	2.66400E+02
984	5711	0	1.30700E+03	1.05000E+02	3.38877E+02
985	5712	0	1.30700E+03	-1.05000E+02	3.38877E+02
986	5713	0	1.30700E+03	1.05000E+02	3.68000E+02
987	5714	0	1.30700E+03	-1.05000E+02	3.68000E+02
988	5715	0	1.30700E+03	1.05000E+02	4.09000E+02
989	5716	0	1.30700E+03	-1.05000E+02	4.09000E+02
990	5717	0	1.30700E+03	1.05000E+02	3.95500E+02
991	5718	0	1.30700E+03	-1.05000E+02	3.95500E+02
992	5719	0	1.49470E+03	1.26678E+02	2.92372E+02
993	5720	0	1.49470E+03	-1.26678E+02	2.92372E+02
994	5721	0	1.45487E+03	1.22160E+02	2.90738E+02
995	5722	0	1.45487E+03	-1.22160E+02	2.90738E+02
996	5723	0	1.42100E+03	1.18280E+02	2.89454E+02
997	5724	0	1.42100E+03	-1.18280E+02	2.89454E+02
998	5725	0	1.38000E+03	1.13539E+02	2.88035E+02
999	5726	0	1.38000E+03	-1.13539E+02	2.88035E+02
1000	5727	0	1.34000E+03	1.08876E+02	2.86650E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 150

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1001	5728	0	1.34000E+03	-1.08876E+02	2.86650E+02
1002	5729	0	1.48991E+03	1.24623E+02	3.17000E+02
1003	5730	0	1.48991E+03	-1.24623E+02	3.17000E+02
1004	5731	0	1.45612E+03	1.21209E+02	3.17000E+02
1005	5732	0	1.45612E+03	-1.21209E+02	3.17000E+02
1006	5733	0	1.42100E+03	1.17208E+02	3.17000E+02
1007	5734	0	1.42100E+03	-1.17208E+02	3.17000E+02
1008	5735	0	1.38000E+03	1.12817E+02	3.17000E+02
1009	5736	0	1.38000E+03	-1.12817E+02	3.17000E+02
1010	5737	0	1.34000E+03	1.08534E+02	3.17000E+02
1011	5738	0	1.34000E+03	-1.08534E+02	3.17000E+02
1012	5739	0	1.48566E+03	1.22797E+02	3.38877E+02
1013	5740	0	1.48566E+03	-1.22797E+02	3.38877E+02
1014	5741	0	1.45186E+03	1.19697E+02	3.38877E+02
1015	5742	0	1.45186E+03	-1.19697E+02	3.38877E+02
1016	5743	0	1.42100E+03	1.16356E+02	3.38877E+02
1017	5744	0	1.42100E+03	-1.16356E+02	3.38877E+02
1018	5745	0	1.38000E+03	1.12272E+02	3.38877E+02
1019	5746	0	1.38000E+03	-1.12272E+02	3.38877E+02
1020	5747	0	1.34000E+03	1.08287E+02	3.38877E+02
1021	5748	0	1.34000E+03	-1.08287E+02	3.38877E+02
1022	5749	0	1.48000E+03	1.20513E+02	3.68000E+02
1023	5750	0	1.48000E+03	-1.20513E+02	3.68000E+02
1024	5751	0	1.44620E+03	1.17483E+02	3.68000E+02
1025	5752	0	1.44620E+03	-1.17483E+02	3.68000E+02
1026	5753	0	1.42100E+03	1.15222E+02	3.68000E+02
1027	5754	0	1.42100E+03	-1.15222E+02	3.68000E+02
1028	5755	0	1.38000E+03	1.11546E+02	3.68000E+02
1029	5756	0	1.38000E+03	-1.11546E+02	3.68000E+02
1030	5757	0	1.34000E+03	1.07959E+02	3.68000E+02
1031	5758	0	1.34000E+03	-1.07959E+02	3.68000E+02
1032	5759	0	1.48750E+03	1.19783E+02	3.91500E+02
1033	5760	0	1.48750E+03	-1.19783E+02	3.91500E+02
1034	5761	0	1.46250E+03	1.17696E+02	3.91500E+02
1035	5762	0	1.46250E+03	-1.17696E+02	3.91500E+02
1036	5763	0	1.42100E+03	1.14308E+02	3.91500E+02
1037	5764	0	1.42100E+03	-1.14308E+02	3.91500E+02
1038	5765	0	1.38000E+03	1.10960E+02	3.91500E+02
1039	5766	0	1.38000E+03	-1.10960E+02	3.91500E+02
1040	5767	0	1.34000E+03	1.07694E+02	3.91500E+02
1041	5768	0	1.34000E+03	-1.07694E+02	3.91500E+02
1042	5769	0	1.49800E+03	0.00000E+00	2.74558E+02
1043	5770	0	1.45400E+03	0.00000E+00	2.69735E+02
1044	5771	0	1.42100E+03	0.00000E+00	2.66288E+02
1045	5772	0	1.38000E+03	0.00000E+00	2.63248E+02
1046	5773	0	1.34566E+03	0.00000E+00	2.61735E+02
1047	5774	0	1.49800E+03	3.00000E+01	2.74595E+02
1048	5775	0	1.49800E+03	-3.00000E+01	2.74595E+02
1049	5776	0	1.45400E+03	3.00000E+01	2.69868E+02
1050	5777	0	1.45400E+03	-3.00000E+01	2.69868E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 151

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1051	5778	0	1.42100E+03	3.00000E+01	2.66494E+02
1052	5779	0	1.42100E+03	-3.00000E+01	2.66494E+02
1053	5780	0	1.38000E+03	3.00000E+01	2.63500E+02
1054	5781	0	1.38000E+03	-3.00000E+01	2.63500E+02
1055	5782	0	1.34566E+03	3.00000E+01	2.62071E+02
1056	5783	0	1.34566E+03	-3.00000E+01	2.62071E+02
1057	5784	0	1.49800E+03	5.25000E+01	2.74675E+02
1058	5785	0	1.49800E+03	-5.25000E+01	2.74675E+02
1059	5786	0	1.45400E+03	5.25000E+01	2.70156E+02
1060	5787	0	1.45400E+03	-5.25000E+01	2.70156E+02
1061	5788	0	1.42100E+03	5.25000E+01	2.66944E+02
1062	5789	0	1.42100E+03	-5.25000E+01	2.66944E+02
1063	5790	0	1.38000E+03	5.25000E+01	2.64051E+02
1064	5791	0	1.38000E+03	-5.25000E+01	2.64051E+02
1065	5792	0	1.34566E+03	5.25000E+01	2.62776E+02
1066	5793	0	1.34566E+03	-5.25000E+01	2.62776E+02
1067	5794	0	1.49800E+03	9.00000E+01	2.74933E+02
1068	5795	0	1.49800E+03	-9.00000E+01	2.74933E+02
1069	5796	0	1.45400E+03	9.00000E+01	2.71101E+02
1070	5797	0	1.45400E+03	-9.00000E+01	2.71101E+02
1071	5798	0	1.42100E+03	9.00000E+01	2.68431E+02
1072	5799	0	1.42100E+03	-9.00000E+01	2.68431E+02
1073	5800	0	1.38000E+03	9.00000E+01	2.65879E+02
1074	5801	0	1.38000E+03	-9.00000E+01	2.65879E+02
1075	5802	0	1.33327E+03	9.17570E+01	2.76142E+02
1076	5803	0	1.33327E+03	-9.17570E+01	2.76142E+02
1077	5804	0	1.51449E+03	5.40590E+01	2.96191E+02
1078	5805	0	1.51449E+03	-5.40590E+01	2.96191E+02
1079	5806	0	1.51168E+03	8.99999E+01	3.09125E+02
1080	5807	0	1.51168E+03	-8.99999E+01	3.09125E+02
1081	5808	0	1.51277E+03	0.00000E+00	3.10356E+02
1082	5809	0	1.50816E+03	1.12678E+02	3.27079E+02
1083	5810	0	1.50816E+03	-1.12678E+02	3.27079E+02
1084	5811	0	1.50881E+03	0.00000E+00	3.32800E+02
1085	5812	0	1.50108E+03	1.05148E+02	3.68000E+02
1086	5813	0	1.50108E+03	-1.05148E+02	3.68000E+02
1087	5814	0	1.50215E+03	0.00000E+00	3.70586E+02
1088	5815	0	1.49694E+03	1.03748E+02	3.91501E+02
1089	5816	0	1.49694E+03	-1.03748E+02	3.91501E+02
1090	5817	0	1.49651E+03	0.00000E+00	4.01566E+02
1091	5818	0	1.49577E+03	3.11809E+01	4.04146E+02
1092	5819	0	1.49577E+03	-3.11809E+01	4.04146E+02
1093	5820	0	1.49490E+03	5.40590E+01	4.07187E+02
1094	5821	0	1.49490E+03	-5.40590E+01	4.07187E+02
1095	5822	0	1.49397E+03	7.85000E+01	4.10437E+02
1096	5823	0	1.49397E+03	-7.85000E+01	4.10437E+02
1097	5824	0	1.49305E+03	1.02430E+02	4.13618E+02
1098	5825	0	1.49305E+03	-1.02430E+02	4.13618E+02
1099	5826	0	1.48461E+03	7.85000E+01	4.43055E+02
1100	5827	0	1.48461E+03	-7.85000E+01	4.43055E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 152

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1101	5828	0	1.48432E+03	5.27739E+01	4.44088E+02
1102	5829	0	1.48432E+03	-5.27739E+01	4.44088E+02
1103	5830	0	1.47266E+03	4.31477E+01	4.84755E+02
1104	5831	0	1.47266E+03	-4.31477E+01	4.84755E+02
1105	5832	0	1.46673E+03	0.00000E+00	5.05434E+02
1106	5833	0	1.49691E+03	0.00000E+00	4.57885E+02
1107	5834	0	1.52125E+03	5.63010E+01	3.52000E+02
1108	5835	0	1.52125E+03	-5.63010E+01	3.52000E+02
1109	5836	0	1.58550E+03	3.00000E+01	2.86870E+02
1110	5837	0	1.58550E+03	-3.00000E+01	2.86870E+02
1111	5838	0	1.54950E+03	3.00000E+01	2.86870E+02
1112	5839	0	1.54950E+03	-3.00000E+01	2.86870E+02
1113	5840	0	1.58550E+03	9.00000E+01	2.86870E+02
1114	5841	0	1.58550E+03	-9.00000E+01	2.86870E+02
1115	5842	0	1.54950E+03	9.00000E+01	2.86870E+02
1116	5843	0	1.54950E+03	-9.00000E+01	2.86870E+02
1117	5844	0	1.40050E+03	2.14957E+01	5.09345E+02
1118	5845	0	1.40050E+03	-2.14957E+01	5.09345E+02
1119	5846	0	1.33926E+03	2.42546E+01	5.01834E+02
1120	5847	0	1.33926E+03	-2.42546E+01	5.01834E+02
1121	5848	0	1.50777E+03	9.49665E+01	5.21922E+02
1122	5849	0	1.50777E+03	-9.49665E+01	5.21922E+02
1123	5850	0	1.50994E+03	9.13945E+01	4.66495E+02
1124	5851	0	1.50994E+03	-9.13945E+01	4.66495E+02
1125	5852	0	1.49374E+03	5.41055E+01	4.82658E+02
1126	5853	0	1.49374E+03	-5.41055E+01	4.82658E+02
1127	5854	0	1.49374E+03	8.01760E+01	4.55661E+02
1128	5855	0	1.49374E+03	-8.01760E+01	4.55661E+02
1129	5856	0	1.53550E+03	1.06658E+02	4.61856E+02
1130	5857	0	1.53550E+03	-1.06658E+02	4.61856E+02
1131	5858	0	1.53550E+03	1.51529E+02	4.66999E+02
1132	5859	0	1.53550E+03	-1.51529E+02	4.66999E+02
1133	5860	0	1.53550E+03	1.20944E+02	4.31738E+02
1134	5861	0	1.53550E+03	-1.20944E+02	4.31738E+02
1135	5862	0	1.53550E+03	1.22941E+02	4.92177E+02
1136	5863	0	1.53550E+03	-1.22941E+02	4.92177E+02
1137	5864	0	1.56850E+03	1.23822E+02	4.64278E+02
1138	5865	0	1.56850E+03	-1.23822E+02	4.64278E+02
1139	5866	0	1.48404E+03	1.36662E+02	4.36363E+02
1140	5867	0	1.48404E+03	-1.36662E+02	4.36363E+02
1141	5868	0	1.43759E+03	1.39899E+02	4.43465E+02
1142	5869	0	1.43759E+03	-1.39899E+02	4.43465E+02
1143	5870	0	1.39195E+03	1.32067E+02	4.38738E+02
1144	5871	0	1.39195E+03	-1.32067E+02	4.38738E+02
1145	5872	0	1.33788E+03	1.19677E+02	4.40397E+02
1146	5873	0	1.33788E+03	-1.19677E+02	4.40397E+02
1147	5874	0	1.48200E+03	1.48575E+02	4.79703E+02
1148	5875	0	1.48200E+03	-1.48575E+02	4.79703E+02
1149	5876	0	1.43613E+03	1.45654E+02	4.77326E+02
1150	5877	0	1.43613E+03	-1.45654E+02	4.77326E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 153

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1151	5878	0	1.39030E+03	1.41286E+02	4.74331E+02
1152	5879	0	1.39030E+03	-1.41286E+02	4.74331E+02
1153	5880	0	1.33671E+03	1.24107E+02	4.67738E+02
1154	5881	0	1.33671E+03	-1.24107E+02	4.67738E+02
1155	5882	0	1.48170E+03	1.24100E+02	5.13342E+02
1156	5883	0	1.48170E+03	-1.24100E+02	5.13342E+02
1157	5884	0	1.43591E+03	1.20345E+02	5.09716E+02
1158	5885	0	1.43591E+03	-1.20345E+02	5.09716E+02
1159	5886	0	1.39009E+03	1.16373E+02	5.05880E+02
1160	5887	0	1.39009E+03	-1.16373E+02	5.05880E+02
1161	5888	0	1.33649E+03	1.04325E+02	4.94246E+02
1162	5889	0	1.33649E+03	-1.04325E+02	4.94246E+02
1163	5890	0	1.48224E+03	8.54636E+01	5.38616E+02
1164	5891	0	1.48224E+03	-8.54636E+01	5.38616E+02
1165	5892	0	1.43634E+03	8.33919E+01	5.36338E+02
1166	5893	0	1.43634E+03	-8.33919E+01	5.36338E+02
1167	5894	0	1.39045E+03	8.08102E+01	5.32844E+02
1168	5895	0	1.39045E+03	-8.08102E+01	5.32844E+02
1169	5896	0	1.33678E+03	7.44930E+01	5.17318E+02
1170	5897	0	1.33678E+03	-7.44930E+01	5.17318E+02
1171	5898	0	1.48406E+03	4.82221E+01	5.27370E+02
1172	5899	0	1.48406E+03	-4.82221E+01	5.27370E+02
1173	5900	0	1.43783E+03	5.18927E+01	5.28273E+02
1174	5901	0	1.43783E+03	-5.18927E+01	5.28273E+02
1175	5902	0	1.39195E+03	4.94745E+01	5.24409E+02
1176	5903	0	1.39195E+03	-4.94745E+01	5.24409E+02
1177	5904	0	1.33793E+03	4.88009E+01	5.12498E+02
1178	5905	0	1.33793E+03	-4.88009E+01	5.12498E+02
1179	5971	0	2.63500E+02	0.00000E+00	3.71000E+02
1180	5972	0	5.82000E+02	9.40000E+01	4.10000E+02
1181	5973	0	5.82000E+02	-9.40000E+01	4.10000E+02
1182	5974	0	7.50000E+02	0.00000E+00	3.05000E+02
1183	2719	0	1.46206E+03	0.00000E+00	4.47892E+02
1184	2720	0	1.58755E+03	0.00000E+00	4.83877E+02
1185	2747	0	1.48562E+03	5.40850E+01	3.45716E+02
1186	2748	0	1.61394E+03	6.20650E+01	3.68343E+02
1187	2733	0	1.48562E+03	-5.40850E+01	3.45716E+02
1188	2734	0	1.61394E+03	-6.20650E+01	3.68342E+02
1189	2329	0	1.51426E+03	0.00000E+00	6.36804E+02
1190	2335	0	1.58060E+03	0.00000E+00	7.25668E+02
1191	1629	0	1.22253E+03	3.66560E+02	3.04500E+02
1192	1779	0	1.22253E+03	-3.66560E+02	3.04500E+02
1193	1608	0	1.04000E+03	1.58540E+02	3.03500E+02
1194	5906	0	1.19100E+03	1.67000E+02	3.00911E+02
1195	5907	0	1.30700E+03	1.45403E+02	2.91000E+02
1196	5908	0	1.30700E+03	1.95787E+02	2.94567E+02
1197	5909	0	1.13933E+03	1.94956E+02	3.03653E+02
1198	5910	0	1.24900E+03	1.44981E+02	2.95614E+02
1199	1612	0	1.24900E+03	1.95371E+02	2.99116E+02
1200	5911	0	1.36500E+03	1.45806E+02	2.86592E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 154

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1201	5912	0	1.36500E+03	1.96204E+02	2.90017E+02
1202	5913	0	1.07130E+03	1.95023E+02	3.02927E+02
1203	5914	0	1.19100E+03	2.51093E+02	3.04712E+02
1204	5915	0	1.24900E+03	2.51267E+02	3.02815E+02
1205	5916	0	1.24900E+03	3.09728E+02	3.05913E+02
1206	5917	0	1.30700E+03	2.51660E+02	2.98516E+02
1207	5918	0	1.30700E+03	3.10028E+02	3.02635E+02
1208	5919	0	1.30700E+03	3.69911E+02	3.06647E+02
1209	1633	0	1.36500E+03	2.52087E+02	2.93848E+02
1210	5921	0	1.36500E+03	3.10456E+02	2.97957E+02
1211	5922	0	1.36500E+03	3.70317E+02	3.02215E+02
1212	1638	0	1.36500E+03	4.32671E+02	3.06668E+02
1213	1617	0	1.19100E+03	3.15099E+02	3.04914E+02
1214	1621	0	1.27570E+03	3.99890E+02	3.08253E+02
1215	5925	0	1.12727E+03	2.51321E+02	3.02225E+02
1216	5926	0	1.42555E+03	1.46009E+02	2.84380E+02
1217	1806	0	1.42191E+03	2.10387E+02	2.88662E+02
1218	5927	0	1.41795E+03	2.80252E+02	2.93331E+02
1219	5928	0	1.48520E+03	1.45923E+02	2.85321E+02
1220	5929	0	1.47350E+03	2.10322E+02	2.89370E+02
1221	5930	0	1.46080E+03	2.80224E+02	2.93635E+02
1222	1814	0	1.41453E+03	3.40633E+02	2.97392E+02
1223	5931	0	1.41199E+03	3.85542E+02	3.00438E+02
1224	1818	0	1.40930E+03	4.32943E+02	3.03689E+02
1225	5932	0	1.44965E+03	3.40623E+02	2.97494E+02
1226	5933	0	1.44098E+03	3.85554E+02	3.00309E+02
1227	5934	0	1.43183E+03	4.32976E+02	3.03329E+02
1228	5965	0	8.35000E+02	1.41160E+02	3.05891E+02
1229	5966	0	9.49250E+02	1.59649E+02	3.03386E+02
1230	1758	0	1.04000E+03	-1.58540E+02	3.03500E+02
1231	5936	0	1.19100E+03	-1.67000E+02	3.00911E+02
1232	5937	0	1.30700E+03	-1.45403E+02	2.91000E+02
1233	5938	0	1.30700E+03	-1.95787E+02	2.94567E+02
1234	5939	0	1.13933E+03	-1.94956E+02	3.03653E+02
1235	5940	0	1.24900E+03	-1.44981E+02	2.95614E+02
1236	1762	0	1.24900E+03	-1.95371E+02	2.99116E+02
1237	5941	0	1.36500E+03	-1.45806E+02	2.86592E+02
1238	5942	0	1.36500E+03	-1.96204E+02	2.90017E+02
1239	5943	0	1.07130E+03	-1.95023E+02	3.02927E+02
1240	5944	0	1.19100E+03	-2.51093E+02	3.04712E+02
1241	5945	0	1.24900E+03	-2.51267E+02	3.02815E+02
1242	5946	0	1.24900E+03	-3.09728E+02	3.05913E+02
1243	5947	0	1.30700E+03	-2.51660E+02	2.98516E+02
1244	5948	0	1.30700E+03	-3.10028E+02	3.02635E+02
1245	5949	0	1.30700E+03	-3.69911E+02	3.06647E+02
1246	1783	0	1.36500E+03	-2.52087E+02	2.93848E+02
1247	5951	0	1.36500E+03	-3.10456E+02	2.97957E+02
1248	5952	0	1.36500E+03	-3.70317E+02	3.02215E+02
1249	1788	0	1.36500E+03	-4.32671E+02	3.06668E+02
1250	1767	0	1.19100E+03	-3.15099E+02	3.04914E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 155

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1251	1771	0	1.27570E+03	-3.99890E+02	3.08253E+02
1252	5955	0	1.12727E+03	-2.51321E+02	3.02225E+02
1253	5956	0	1.42555E+03	-1.46009E+02	2.84380E+02
1254	1826	0	1.42191E+03	-2.10387E+02	2.88662E+02
1255	5957	0	1.41795E+03	-2.80252E+02	2.93331E+02
1256	5958	0	1.48520E+03	-1.45923E+02	2.85321E+02
1257	5959	0	1.47350E+03	-2.10322E+02	2.89370E+02
1258	5960	0	1.46080E+03	-2.80224E+02	2.93635E+02
1259	1834	0	1.41453E+03	-3.40633E+02	2.97392E+02
1260	5961	0	1.41199E+03	-3.85542E+02	3.00438E+02
1261	1838	0	1.40930E+03	-4.32943E+02	3.03689E+02
1262	5962	0	1.44965E+03	-3.40623E+02	2.97494E+02
1263	5963	0	1.44098E+03	-3.85554E+02	3.00309E+02
1264	5964	0	1.43183E+03	-4.32976E+02	3.03329E+02
1265	5967	0	8.35000E+02	-1.41160E+02	3.05891E+02
1266	5968	0	9.49250E+02	-1.59649E+02	3.03386E+02
1267	90	0	3.88045E+02	0.00000E+00	2.83840E+02
1268	91	0	1.31700E+03	9.65000E+01	2.67556E+02
1269	1091	0	1.31700E+03	-9.65000E+01	2.67556E+02
1270	226	0	1.33050E+03	7.00000E+01	2.27832E+02
1271	200	0	1.56100E+02	0.00000E+00	6.35000E+01
1272	216	0	1.23250E+03	0.00000E+00	6.35000E+01
1273	704	0	2.48675E+02	0.00000E+00	6.35000E+01
1274	2874	0	3.32025E+02	0.00000E+00	6.35000E+01
1275	662	0	7.78750E+02	0.00000E+00	6.35000E+01
1276	691	0	6.40350E+02	0.00000E+00	6.35000E+01
1277	606	0	1.13000E+03	0.00000E+00	6.35000E+01
1278	634	0	1.00665E+03	0.00000E+00	6.35000E+01
1279	635	0	8.82800E+02	0.00000E+00	6.35000E+01
1280	723	0	5.17120E+02	0.00000E+00	6.35000E+01
1281	546	0	1.40115E+03	0.00000E+00	6.35000E+01
1282	302	0	1.36000E+02	2.50500E+02	6.35000E+01
1283	307	0	2.01000E+02	2.50500E+02	6.35000E+01
1284	309	0	2.96250E+02	2.50500E+02	-8.94800E+00
1285	390	0	3.37980E+02	2.50500E+02	6.35000E+01
1286	313	0	4.97480E+02	1.77760E+02	6.35000E+01
1287	314	0	4.97480E+02	3.23240E+02	6.35000E+01
1288	315	0	4.97480E+02	2.50500E+02	1.36240E+02
1289	316	0	4.97480E+02	2.50500E+02	-9.24000E+00
1290	317	0	6.57480E+02	1.77760E+02	6.35000E+01
1291	318	0	6.57480E+02	3.23240E+02	6.35000E+01
1292	319	0	6.57480E+02	2.50500E+02	1.36240E+02
1293	320	0	6.57480E+02	2.50500E+02	-9.24000E+00
1294	321	0	8.17480E+02	1.77760E+02	6.35000E+01
1295	322	0	8.17480E+02	3.23240E+02	6.35000E+01
1296	323	0	8.17480E+02	2.50500E+02	1.36240E+02
1297	324	0	8.17480E+02	2.50500E+02	-9.24000E+00
1298	328	0	9.77480E+02	2.50500E+02	-9.24000E+00
1299	329	0	1.19146E+03	1.77760E+02	6.35000E+01
1300	330	0	1.19146E+03	3.23240E+02	6.35000E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 156

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1301	331	0	1.19146E+03	2.50500E+02	1.36240E+02
1302	332	0	1.19146E+03	2.50500E+02	-9.24000E+00
1303	335	0	1.31700E+03	2.50500E+02	-9.24000E+00
1304	343	0	1.62985E+03	1.77760E+02	6.35000E+01
1305	344	0	1.62985E+03	3.23240E+02	6.35000E+01
1306	345	0	1.62985E+03	2.50500E+02	1.36240E+02
1307	346	0	1.62985E+03	2.50500E+02	-9.24000E+00
1308	391	0	1.67952E+03	2.50500E+02	6.35000E+01
1309	356	0	1.66906E+03	2.50500E+02	6.35000E+01
1310	357	0	1.68026E+03	2.50500E+02	6.35000E+01
1311	350	0	1.74195E+03	3.04300E+02	-2.96840E+01
1312	351	0	1.74195E+03	1.96700E+02	-2.96840E+01
1313	352	0	1.74195E+03	1.96700E+02	1.56684E+02
1314	353	0	1.74195E+03	3.04300E+02	1.56684E+02
1315	1302	0	1.36000E+02	-2.50500E+02	6.35000E+01
1316	1307	0	2.01000E+02	-2.50500E+02	6.35000E+01
1317	1309	0	2.96250E+02	-2.50500E+02	-8.94800E+00
1318	1390	0	3.37980E+02	-2.50500E+02	6.35000E+01
1319	1313	0	4.97480E+02	-1.77760E+02	6.35000E+01
1320	1314	0	4.97480E+02	-3.23240E+02	6.35000E+01
1321	1315	0	4.97480E+02	-2.50500E+02	1.36240E+02
1322	1316	0	4.97480E+02	-2.50500E+02	-9.24000E+00
1323	1317	0	6.57480E+02	-1.77760E+02	6.35000E+01
1324	1318	0	6.57480E+02	-3.23240E+02	6.35000E+01
1325	1319	0	6.57480E+02	-2.50500E+02	1.36240E+02
1326	1320	0	6.57480E+02	-2.50500E+02	-9.24000E+00
1327	1321	0	8.17480E+02	-1.77760E+02	6.35000E+01
1328	1322	0	8.17480E+02	-3.23240E+02	6.35000E+01
1329	1323	0	8.17480E+02	-2.50500E+02	1.36240E+02
1330	1324	0	8.17480E+02	-2.50500E+02	-9.24000E+00
1331	1328	0	9.77480E+02	-2.50500E+02	-9.24000E+00
1332	1329	0	1.19146E+03	-1.77760E+02	6.35000E+01
1333	1330	0	1.19146E+03	-3.23240E+02	6.35000E+01
1334	1331	0	1.19146E+03	-2.50500E+02	1.36240E+02
1335	1332	0	1.19146E+03	-2.50500E+02	-9.24000E+00
1336	1335	0	1.31700E+03	-2.50500E+02	-9.24000E+00
1337	1343	0	1.62985E+03	-1.77760E+02	6.35000E+01
1338	1344	0	1.62985E+03	-3.23240E+02	6.35000E+01
1339	1345	0	1.62985E+03	-2.50500E+02	1.36240E+02
1340	1346	0	1.62985E+03	-2.50500E+02	-9.24000E+00
1341	1391	0	1.67952E+03	-2.50500E+02	6.35000E+01
1342	1356	0	1.66906E+03	-2.50500E+02	6.35000E+01
1343	1357	0	1.68026E+03	-2.50500E+02	6.35000E+01
1344	1350	0	1.74195E+03	-3.04300E+02	-2.96840E+01
1345	1351	0	1.74195E+03	-1.96700E+02	-2.96840E+01
1346	1352	0	1.74195E+03	-1.96700E+02	1.56684E+02
1347	1353	0	1.74195E+03	-3.04300E+02	1.56684E+02
1348	1117	0	6.49000E+02	0.00000E+00	4.62730E+02
1349	100	0	1.09260E+03	9.40000E+01	4.14000E+02
1350	101	0	1.09653E+03	9.40000E+01	4.14000E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 157

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1351	102	0	1.10047E+03	9.40000E+01	4.14000E+02
1352	103	0	1.10440E+03	9.40000E+01	4.14000E+02
1353	104	0	1.10833E+03	9.40000E+01	4.14000E+02
1354	105	0	1.11227E+03	9.40000E+01	4.14000E+02
1355	106	0	1.11620E+03	9.40000E+01	4.14000E+02
1356	107	0	1.12013E+03	9.40000E+01	4.14000E+02
1357	108	0	1.12407E+03	9.40000E+01	4.14000E+02
1358	109	0	1.12800E+03	9.40000E+01	4.14000E+02
1359	110	0	1.13193E+03	9.40000E+01	4.14000E+02
1360	111	0	1.13587E+03	9.40000E+01	4.14000E+02
1361	112	0	1.10243E+03	9.11000E+01	4.08200E+02
1362	113	0	1.11030E+03	9.11000E+01	4.08200E+02
1363	114	0	1.11423E+03	9.11000E+01	4.08200E+02
1364	115	0	1.10834E+03	9.51600E+01	4.11600E+02
1365	116	0	1.07699E+03	7.62000E+01	4.16000E+02
1366	10001	0	1.29750E+03	9.38800E+01	4.10370E+02
1367	10002	0	1.29013E+03	9.38800E+01	4.10370E+02
1368	10004	0	1.29000E+03	8.71900E+01	4.14090E+02
1369	10005	0	1.29750E+03	8.80000E+01	4.11930E+02
1370	10006	0	1.29000E+03	8.71900E+01	4.11090E+02
1371	10007	0	1.29750E+03	8.82800E+01	4.10370E+02
1372	10008	0	1.29750E+03	8.80000E+01	4.09930E+02
1373	10009	0	1.29750E+03	8.80000E+01	4.08930E+02
1374	10010	0	1.29750E+03	8.80000E+01	4.06930E+02
1375	10011	0	1.28250E+03	9.38800E+01	4.10370E+02
1376	10012	0	1.28250E+03	8.82800E+01	4.10370E+02
1377	10013	0	1.28250E+03	8.80000E+01	4.11930E+02
1378	10016	0	1.28250E+03	8.80000E+01	4.09930E+02
1379	10017	0	1.28250E+03	8.80000E+01	4.08930E+02
1380	10018	0	1.28250E+03	8.80000E+01	4.06930E+02
1381	10019	0	1.26300E+03	8.71900E+01	4.14090E+02
1382	10020	0	1.27050E+03	8.80000E+01	4.09930E+02
1383	10021	0	1.27050E+03	8.80000E+01	4.08930E+02
1384	10022	0	1.27050E+03	8.80000E+01	4.06930E+02
1385	10023	0	1.26488E+03	9.38800E+01	4.10370E+02
1386	10025	0	1.27050E+03	9.38800E+01	4.10370E+02
1387	10026	0	1.25550E+03	8.80000E+01	4.11930E+02
1388	10027	0	1.27050E+03	8.82800E+01	4.10370E+02
1389	10028	0	1.27050E+03	8.80000E+01	4.11930E+02
1390	10029	0	1.28250E+03	9.38800E+01	4.05070E+02
1391	10030	0	1.28250E+03	8.82800E+01	4.05070E+02
1392	10031	0	1.27050E+03	9.38800E+01	4.05070E+02
1393	10032	0	1.27050E+03	8.82800E+01	4.05070E+02
1394	10033	0	1.29750E+03	8.82800E+01	4.05070E+02
1395	10034	0	1.29750E+03	9.38800E+01	4.05070E+02
1396	10035	0	1.28250E+03	9.38800E+01	4.00900E+02
1397	10036	0	1.27050E+03	9.38800E+01	4.00900E+02
1398	10037	0	1.28250E+03	8.82800E+01	4.00900E+02
1399	10038	0	1.29000E+03	8.69900E+01	3.98460E+02
1400	10039	0	1.27800E+03	9.40000E+01	3.96500E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 158

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1401	10040	0	1.28250E+03	9.38800E+01	3.95770E+02
1402	10041	0	1.27050E+03	9.38800E+01	3.95770E+02
1403	10042	0	1.27050E+03	8.82800E+01	4.00900E+02
1404	10043	0	1.26300E+03	8.69900E+01	3.98460E+02
1405	10044	0	1.27050E+03	8.80000E+01	3.96300E+02
1406	10045	0	1.27050E+03	8.82800E+01	3.95770E+02
1407	10046	0	1.28250E+03	8.80000E+01	3.96300E+02
1408	10047	0	1.27050E+03	8.80000E+01	3.94300E+02
1409	10048	0	1.26300E+03	8.69900E+01	3.95460E+02
1410	10049	0	1.27050E+03	8.80000E+01	3.93300E+02
1411	10050	0	1.28250E+03	8.82800E+01	3.95770E+02
1412	10051	0	1.28250E+03	8.80000E+01	3.93300E+02
1413	10052	0	1.28250E+03	8.80000E+01	3.94300E+02
1414	10053	0	1.29000E+03	8.69900E+01	3.95460E+02
1415	10054	0	1.29750E+03	8.80000E+01	3.96300E+02
1416	10055	0	1.29750E+03	8.82800E+01	4.00900E+02
1417	10056	0	1.28250E+03	9.38800E+01	3.91300E+02
1418	10057	0	1.27050E+03	9.38800E+01	3.91300E+02
1419	10058	0	1.27050E+03	8.80000E+01	3.91300E+02
1420	10059	0	1.28250E+03	8.80000E+01	3.91300E+02
1421	10060	0	1.25550E+03	8.80000E+01	3.96300E+02
1422	10061	0	1.25550E+03	8.80000E+01	3.93300E+02
1423	10062	0	1.25550E+03	8.80000E+01	3.94300E+02
1424	10063	0	1.29750E+03	8.80000E+01	3.93300E+02
1425	10064	0	1.29750E+03	8.80000E+01	3.94300E+02
1426	10065	0	1.29750E+03	9.38800E+01	4.00900E+02
1427	10066	0	1.29750E+03	9.38800E+01	3.95770E+02
1428	10067	0	1.29750E+03	9.38800E+01	3.91300E+02
1429	10068	0	1.29750E+03	8.82800E+01	3.95770E+02
1430	10069	0	1.29750E+03	8.80000E+01	3.91300E+02
1431	10070	0	1.25550E+03	9.38800E+01	4.00900E+02
1432	10071	0	1.25550E+03	8.82800E+01	4.00900E+02
1433	10072	0	1.25550E+03	9.38800E+01	3.95770E+02
1434	10073	0	1.25550E+03	8.82800E+01	3.95770E+02
1435	10074	0	1.25550E+03	9.38800E+01	3.91300E+02
1436	10075	0	1.25550E+03	8.80000E+01	3.91300E+02
1437	10076	0	1.25550E+03	8.82800E+01	4.05070E+02
1438	10077	0	1.25550E+03	9.38800E+01	4.05070E+02
1439	10078	0	1.26300E+03	8.71900E+01	4.11090E+02
1440	10079	0	1.25550E+03	8.80000E+01	4.06930E+02
1441	10080	0	1.25550E+03	8.80000E+01	4.08930E+02
1442	10081	0	1.25550E+03	8.82800E+01	4.10370E+02
1443	10082	0	1.25550E+03	8.80000E+01	4.09930E+02
1444	10083	0	1.25550E+03	9.38800E+01	4.10370E+02
1445	100001	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
3320	101876	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 159

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	13001-5	13002-5	13003-5	13004-5	13005-5	13006-5	13007-5	13008-5	13009-5	13010-5 =	10
11 =	13011-5	13012-5	13013-5	13014-5	13015-5	13016-5	13017-6	13018-6	13019-6	13020-6 =	20
21 =	2171-1	2171-4	2171-5	2171-6	2197-1	2197-4	2197-5	2197-6	2322-1	2322-4 =	30
31 =	2322-5	2322-6	2663-1	2663-4	2663-5	2663-6	2808-1	2808-4	2808-5	2808-6 =	40
41 =	2809-1	2809-4	2809-5	2809-6	2833-1	2833-4	2833-5	2833-6	2922-1	2922-4 =	50
51 =	2922-5	2922-6	21081-1	21081-4	21081-5	21081-6	27106-1	27106-4	27106-5	27106-6 =	60
61 =	27111-1	27111-4	27111-5	27111-6	27150-1	27150-4	27150-5	27150-6	27164-1	27164-4 =	70
71 =	27164-5	27164-6	27167-1	27167-4	27167-5	27167-6	27178-1	27178-4	27178-5	27178-6 =	80
81 =	27186-1	27186-4	27186-5	27186-6	27193-1	27193-4	27193-5	27193-6	27564-1	27564-4 =	90
91 =	27564-5	27564-6	27837-1	27837-4	27837-5	27837-6	271012-1	271012-4	271012-5	271012-6 =	100
101 =	271013-1	271013-4	271013-5	271013-6	271055-1	271055-4	271055-5	271055-6	271265-1	271265-4 =	110
111 =	271265-5	271265-6	702171-1	702171-4	702171-5	702171-6	702197-1	702197-4	702197-5	702197-6 =	120
121 =	702322-1	702322-4	702322-5	702322-6	702663-1	702663-4	702663-5	702663-6	702808-1	702808-4 =	130
131 =	702808-5	702808-6	702809-1	702809-4	702809-5	702809-6	702833-1	702833-4	702833-5	702833-6 =	140
141 =	702922-1	702922-4	702922-5	702922-6	727106-1	727106-4	727106-5	727106-6	727111-1	727111-4 =	150
151 =	727111-5	727111-6	727150-1	727150-4	727150-5	727150-6	727164-1	727164-4	727164-5	727164-6 =	160
161 =	727167-1	727167-4	727167-5	727167-6	727178-1	727178-4	727178-5	727178-6	727186-1	727186-4 =	170
171 =	727186-5	727186-6	727193-1	727193-4	727193-5	727193-6	727564-1	727564-4	727564-5	727564-6 =	180
181 =	727837-1	727837-4	727837-5	727837-6	7021081-1	7021081-4	7021081-5	7021081-6	7271012-1	7271012-4 =	190
191 =	7271012-5	7271012-6	7271013-1	7271013-4	7271013-5	7271013-6	7271055-1	7271055-4	7271055-5	7271055-6 =	200
201 =	7271265-1	7271265-4	7271265-5	7271265-6	212118-1	212118-4	212118-5	212118-6	212120-1	212120-4 =	210
211 =	212120-5	212120-6	212125-1	212125-4	212125-5	212125-6	212385-1	212385-4	212385-5	212385-6 =	220
221 =	212388-1	212388-4	212388-5	212388-6	212390-1	212390-4	212390-5	212390-6	213110-1	213110-4 =	230
231 =	213110-5	213110-6	213113-1	213113-4	213113-5	213113-6	213115-1	213115-4	213115-5	213115-6 =	240
241 =	213195-1	213195-4	213195-5	213195-6	213198-1	213198-4	213198-5	213198-6	213201-1	213201-4 =	250
251 =	213201-5	213201-6	213203-1	213203-4	213203-5	213203-6	213265-1	213265-4	213265-5	213265-6 =	260
261 =	213268-1	213268-4	213268-5	213268-6	312118-1	312118-4	312118-5	312118-6	312120-1	312120-4 =	270
271 =	312120-5	312120-6	312125-1	312125-4	312125-5	312125-6	312385-1	312385-4	312385-5	312385-6 =	280
281 =	312388-1	312388-4	312388-5	312388-6	312390-1	312390-4	312390-5	312390-6	313195-1	313195-4 =	290
291 =	313195-5	313195-6	313198-1	313198-4	313198-5	313198-6	313201-1	313201-4	313201-5	313201-6 =	300
301 =	313203-1	313203-4	313203-5	313203-6	313265-1	313265-4	313265-5	313265-6	313268-1	313268-4 =	310
311 =	313268-5	313268-6	2423-1	2423-4	2423-5	2423-6	2433-1	2433-3	2433-4	2433-5 =	320
321 =	2433-6	2665-3	2665-4	2665-5	2665-6	2443-1	2443-4	2443-5	2443-6	2679-1 =	330
331 =	2679-3	2679-4	2679-5	2679-6	2680-1	2680-3	2680-4	2680-5	2680-6	702423-1 =	340
341 =	702423-4	702423-5	702423-6	702433-1	702433-3	702433-4	702433-5	702433-6	702665-3	702665-4 =	350
351 =	702665-5	702665-6	702443-1	702443-4	702443-5	702443-6	702679-1	702679-3	702679-4	702679-5 =	360
361 =	702679-6	702680-1	702680-3	702680-4	702680-5	702680-6	3076-4	3076-5	3076-6	3401-4 =	370
371 =	3401-5	3401-6	210388-1	210388-4	210388-5	210388-6	210390-1	210390-4	210390-5	210390-6 =	380
381 =	210393-1	210393-4	210393-5	210393-6	210395-1	210395-4	210395-5	210395-6	210398-1	210398-4 =	390
391 =	210398-5	210398-6	210400-1	210400-4	210400-5	210400-6	210405-1	210405-4	210405-5	210405-6 =	400
401 =	210413-1	210413-4	210413-5	210413-6	210458-1	210458-4	210458-5	210458-6	210460-1	210460-4 =	410
411 =	210460-5	210460-6	210463-1	210463-4	210463-5	210463-6	210465-1	210465-4	210465-5	210465-6 =	420
421 =	210468-1	210468-4	210468-5	210468-6	210470-1	210470-4	210470-5	210470-6	210475-1	210475-4 =	430
431 =	210475-5	210475-6	210530-1	210530-4	210530-5	210530-6	210533-1	210533-4	210533-5	210533-6 =	440
441 =	210535-1	210535-4	210535-5	210535-6	210538-1	210538-4	210538-5	210538-6	210600-1	210600-4 =	450
451 =	210600-5	210600-6	210670-1	210670-4	210670-5	210670-6	211040-1	211040-4	211040-5	211040-6 =	460
461 =	211043-1	211043-4	211043-5	211043-6	211180-1	211180-4	211180-5	211180-6	211183-1	211183-4 =	470
471 =	211183-5	211183-6	211320-1	211320-4	211320-5	211320-6	211323-1	211323-4	211323-5	211323-6 =	480
481 =	211325-1	211325-4	211325-5	211325-6	211460-1	211460-4	211460-5	211460-6	211463-1	211463-4 =	490
491 =	211463-5	211463-6	211465-1	211465-4	211465-5	211465-6	211468-1	211468-4	211468-5	211468-6 =	500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 160

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
501 =	211470-1	211470-4	211470-5	211470-6	211494-1	211494-4	211494-5	211494-6	211528-1	211528-4	= 510
511 =	211528-5	211528-6	211530-1	211530-4	211530-5	211530-6	211533-1	211533-4	211533-5	211533-6	= 520
521 =	211535-1	211535-4	211535-5	211535-6	211538-1	211538-4	211538-5	211538-6	211540-1	211540-4	= 530
531 =	211540-5	211540-6	211545-1	211545-4	211545-5	211545-6	211595-1	211595-4	211595-5	211595-6	= 540
541 =	211598-1	211598-4	211598-5	211598-6	211600-1	211600-4	211600-5	211600-6	211603-1	211603-4	= 550
551 =	211603-5	211603-6	211605-1	211605-4	211605-5	211605-6	211608-1	211608-4	211608-5	211608-6	= 560
561 =	212040-1	212040-4	212040-5	212040-6	212043-1	212043-4	212043-5	212043-6	212045-1	212045-4	= 570
571 =	212045-5	212045-6	212250-1	212250-4	212250-5	212250-6	212253-1	212253-4	212253-5	212253-6	= 580
581 =	212255-1	212255-4	212255-5	212255-6	212530-1	212530-4	212530-5	212530-6	212533-1	212533-4	= 590
591 =	212533-5	212533-6	212535-1	212535-4	212535-5	212535-6	213180-1	213180-4	213180-5	213180-6	= 600
601 =	213183-1	213183-4	213183-5	213183-6	213185-1	213185-4	213185-5	213185-6	213188-1	213188-4	= 610
611 =	213188-5	213188-6	213250-1	213250-4	213250-5	213250-6	213253-1	213253-4	213253-5	213253-6	= 620
621 =	213255-1	213255-4	213255-5	213255-6	213323-1	213323-4	213323-5	213323-6	213325-1	213325-4	= 630
631 =	213325-5	213325-6	213390-1	213390-4	213390-5	213390-6	213393-1	213393-4	213393-5	213393-6	= 640
641 =	213395-1	213395-4	213395-5	213395-6	213460-1	213460-4	213460-5	213460-6	213463-1	213463-4	= 650
651 =	213463-5	213463-6	213465-1	213465-4	213465-5	213465-6	213468-1	213468-4	213468-5	213468-6	= 660
661 =	213481-1	213481-4	213481-5	213481-6	213528-1	213528-4	213528-5	213528-6	213530-1	213530-4	= 670
671 =	213530-5	213530-6	213533-1	213533-4	213533-5	213533-6	213535-1	213535-4	213535-5	213535-6	= 680
681 =	213538-1	213538-4	213538-5	213538-6	213540-1	213540-4	213540-5	213540-6	213600-1	213600-4	= 690
691 =	213600-5	213600-6	959-4	959-5	959-6	960-4	960-5	960-6	961-4	961-5	= 700
701 =	961-6	962-4	962-5	962-6	963-4	963-5	963-6	964-4	964-5	964-6	= 710
711 =	965-4	965-5	965-6	967-4	967-5	967-6	969-4	969-5	969-6	970-4	= 720
721 =	970-5	970-6	971-4	971-5	971-6	972-4	972-5	972-6	973-4	973-5	= 730
731 =	973-6	974-4	974-5	974-6	975-4	975-5	975-6	977-4	977-5	977-6	= 740
741 =	271218-1	271218-3	271218-4	271218-5	271218-6	271217-4	271217-5	271217-6	271216-3	271216-4	= 750
751 =	271216-5	271216-6	271219-4	271219-5	271219-6	27355-4	27355-5	27355-6	701383-1	701383-4	= 760
761 =	701383-5	701383-6	701405-1	701405-4	701405-5	701405-6	701963-4	701963-5	701963-6	701393-1	= 770
771 =	701393-3	701393-4	701393-5	701393-6	1383-1	1383-4	1383-5	1383-6	1405-1	1405-4	= 780
781 =	1405-5	1405-6	901963-4	901963-5	901963-6	1393-1	1393-3	1393-4	1393-5	1393-6	= 790
791 =	701423-1	701423-4	701423-5	701423-6	701445-1	701445-4	701445-5	701445-6	701965-4	701965-5	= 800
801 =	701965-6	701433-1	701433-3	701433-4	701433-5	701433-6	1423-1	1423-4	1423-5	1423-6	= 810
811 =	1445-1	1445-4	1445-5	1445-6	901965-4	901965-5	901965-6	1433-1	1433-3	1433-4	= 820
821 =	1433-5	1433-6	701443-1	701443-4	701443-5	701443-6	702365-1	702365-4	702365-5	702365-6	= 830
831 =	702661-4	702661-5	702661-6	702353-1	702353-3	702353-4	702353-5	702353-6	1443-1	1443-4	= 840
841 =	1443-5	1443-6	2365-1	2365-4	2365-5	2365-6	2661-4	2661-5	2661-6	2353-1	= 850
851 =	2353-3	2353-4	2353-5	2353-6	727355-1	727355-4	727355-5	727355-6	7271219-1	7271219-4	= 860
861 =	7271219-5	7271219-6	7271217-4	7271217-5	7271217-6	727435-1	727435-3	727435-4	727435-5	727435-6	= 870
871 =	6032-4	6032-5	6032-6	6060-4	6060-5	6060-6	6061-4	6061-5	6061-6	6064-4	= 880
881 =	6064-5	6064-6	6081-6	6082-4	6082-5	6082-6	6083-4	6083-5	6083-6	6084-4	= 890
891 =	6084-5	6084-6	6085-4	6085-5	6085-6	6067-4	6067-5	6067-6	6068-4	6068-5	= 900
901 =	6068-6	6071-4	6071-5	6071-6	6069-4	6069-5	6069-6	6070-4	6070-5	6070-6	= 910
911 =	6073-4	6073-5	6073-6	6074-4	6074-5	6074-6	6076-4	6076-5	6076-6	6080-6	= 920
921 =	6086-4	6086-5	6086-6	6089-4	6089-5	6089-6	6087-4	6087-5	6087-6	6091-4	= 930
931 =	6091-5	6091-6	6092-4	6092-5	6092-6	6093-4	6093-5	6093-6	6094-4	6094-5	= 940
941 =	6094-6	6095-4	6095-5	6095-6	5001-2	5001-4	5001-5	5001-6	5002-2	5002-4	= 950
951 =	5002-5	5002-6	5003-4	5003-5	5003-6	5004-4	5004-5	5004-6	5005-2	5005-4	= 960
961 =	5005-5	5005-6	5006-4	5006-5	5006-6	5007-4	5007-5	5007-6	5008-4	5008-5	= 970
971 =	5008-6	5009-4	5009-5	5009-6	5010-4	5010-5	5010-6	5011-4	5011-5	5011-6	= 980
981 =	5012-4	5012-5	5012-6	5013-4	5013-5	5013-6	5014-4	5014-5	5014-6	5015-4	= 990
991 =	5015-5	5015-6	5016-4	5016-5	5016-6	5017-4	5017-5	5017-6	5018-4	5018-5	= 1000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 161

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1001 =	5018-6	5019-4	5019-5	5019-6	5020-4	5020-5	5020-6	5021-4	5021-5	5021-6 =	1010
1011 =	5022-4	5022-5	5022-6	5023-4	5023-5	5023-6	5024-4	5024-5	5024-6	5025-4 =	1020
1021 =	5025-5	5025-6	5026-4	5026-5	5026-6	5027-4	5027-5	5027-6	5028-4	5028-5 =	1030
1031 =	5028-6	5029-4	5029-5	5029-6	5030-4	5030-5	5030-6	5031-4	5031-5	5031-6 =	1040
1041 =	5032-4	5032-5	5032-6	5033-4	5033-5	5033-6	5034-4	5034-5	5034-6	5035-4 =	1050
1051 =	5035-5	5035-6	5036-4	5036-5	5036-6	5037-4	5037-5	5037-6	5038-4	5038-5 =	1060
1061 =	5038-6	5039-4	5039-5	5039-6	5040-4	5040-5	5040-6	5041-4	5041-5	5041-6 =	1070
1071 =	5042-1	5042-4	5042-5	5042-6	5043-1	5043-4	5043-5	5043-6	5044-1	5044-4 =	1080
1081 =	5044-5	5044-6	5045-1	5045-4	5045-5	5045-6	5046-1	5046-4	5046-5	5046-6 =	1090
1091 =	5047-1	5047-4	5047-5	5047-6	5048-1	5048-4	5048-5	5048-6	5049-1	5049-4 =	1100
1101 =	5049-5	5049-6	5050-1	5050-4	5050-5	5050-6	5051-1	5051-4	5051-5	5051-6 =	1110
1111 =	5052-1	5052-4	5052-5	5052-6	5053-1	5053-4	5053-5	5053-6	5054-1	5054-4 =	1120
1121 =	5054-5	5054-6	5055-1	5055-4	5055-5	5055-6	5056-1	5056-4	5056-5	5056-6 =	1130
1131 =	5057-1	5057-4	5057-5	5057-6	5058-4	5058-5	5058-6	5059-4	5059-5	5059-6 =	1140
1141 =	5060-4	5060-5	5060-6	5061-4	5061-5	5061-6	5062-4	5062-5	5062-6	5063-4 =	1150
1151 =	5063-5	5063-6	5064-4	5064-5	5064-6	5065-4	5065-5	5065-6	5066-4	5066-5 =	1160
1161 =	5066-6	5067-4	5067-5	5067-6	5068-4	5068-5	5068-6	5069-4	5069-5	5069-6 =	1170
1171 =	5070-1	5070-4	5070-5	5070-6	5071-1	5071-4	5071-5	5071-6	5072-1	5072-4 =	1180
1181 =	5072-5	5072-6	5073-1	5073-4	5073-5	5073-6	5074-1	5074-3	5074-4	5074-5 =	1190
1191 =	5074-6	5075-1	5075-3	5075-4	5075-5	5075-6	5076-4	5076-5	5076-6	5077-4 =	1200
1201 =	5077-5	5077-6	5078-4	5078-5	5078-6	5079-4	5079-5	5079-6	5080-4	5080-5 =	1210
1211 =	5080-6	5081-4	5081-5	5081-6	5082-4	5082-5	5082-6	5083-4	5083-5	5083-6 =	1220
1221 =	5084-4	5084-5	5084-6	5085-4	5085-5	5085-6	5086-4	5086-5	5086-6	5087-4 =	1230
1231 =	5087-5	5087-6	5088-4	5088-5	5088-6	5089-4	5089-5	5089-6	5090-4	5090-5 =	1240
1241 =	5090-6	5091-4	5091-5	5091-6	5092-4	5092-5	5092-6	5093-4	5093-5	5093-6 =	1250
1251 =	5094-4	5094-5	5094-6	5095-4	5095-5	5095-6	5096-4	5096-5	5096-6	5097-4 =	1260
1261 =	5097-5	5097-6	5098-4	5098-5	5098-6	5099-4	5099-5	5099-6	5100-4	5100-5 =	1270
1271 =	5100-6	5101-4	5101-5	5101-6	5102-4	5102-5	5102-6	5103-4	5103-5	5103-6 =	1280
1281 =	5104-4	5104-5	5104-6	5105-4	5105-5	5105-6	5106-4	5106-5	5106-6	5107-4 =	1290
1291 =	5107-5	5107-6	5108-4	5108-5	5108-6	5109-4	5109-5	5109-6	5110-4	5110-5 =	1300
1301 =	5110-6	5111-4	5111-5	5111-6	5112-4	5112-5	5112-6	5113-4	5113-5	5113-6 =	1310
1311 =	5114-4	5114-5	5114-6	5115-4	5115-5	5115-6	5116-1	5116-4	5116-5	5116-6 =	1320
1321 =	5117-1	5117-4	5117-5	5117-6	5118-4	5118-5	5118-6	5119-4	5119-5	5119-6 =	1330
1331 =	5120-4	5120-5	5120-6	5121-4	5121-5	5121-6	5122-2	5122-4	5122-5	5122-6 =	1340
1341 =	5123-2	5123-4	5123-5	5123-6	5124-4	5124-5	5124-6	5125-2	5125-4	5125-5 =	1350
1351 =	5125-6	5126-4	5126-5	5126-6	5127-4	5127-5	5127-6	5128-4	5128-5	5128-6 =	1360
1361 =	5129-1	5129-2	5129-4	5129-5	5129-6	2934-1	2934-4	2934-5	2934-6	2979-1 =	1370
1371 =	2979-4	2979-5	2979-6	5130-4	5130-5	5130-6	5131-4	5131-5	5131-6	5132-4 =	1380
1381 =	5132-5	5132-6	5133-1	5133-4	5133-5	5133-6	5134-1	5134-4	5134-5	5134-6 =	1390
1391 =	5135-1	5135-4	5135-5	5135-6	5136-1	5136-4	5136-5	5136-6	5137-1	5137-4 =	1400
1401 =	5137-5	5137-6	5138-1	5138-4	5138-5	5138-6	5139-1	5139-3	5139-4	5139-5 =	1410
1411 =	5139-6	5140-1	5140-3	5140-4	5140-5	5140-6	5141-1	5141-3	5141-4	5141-5 =	1420
1421 =	5141-6	5142-1	5142-3	5142-4	5142-5	5142-6	5143-1	5143-3	5143-4	5143-5 =	1430
1431 =	5143-6	5144-1	5144-3	5144-4	5144-5	5144-6	5145-1	5145-3	5145-4	5145-5 =	1440
1441 =	5145-6	5146-1	5146-3	5146-4	5146-5	5146-6	5147-1	5147-4	5147-5	5147-6 =	1450
1451 =	5148-1	5148-4	5148-5	5148-6	5149-1	5149-4	5149-5	5149-6	5150-1	5150-4 =	1460
1461 =	5150-5	5150-6	5151-1	5151-4	5151-5	5151-6	5152-1	5152-4	5152-5	5152-6 =	1470
1471 =	5153-1	5153-4	5153-5	5153-6	5154-1	5154-4	5154-5	5154-6	5155-1	5155-4 =	1480
1481 =	5155-5	5155-6	5156-1	5156-4	5156-5	5156-6	5157-1	5157-4	5157-5	5157-6 =	1490
1491 =	5158-1	5158-4	5158-5	5158-6	5159-1	5159-4	5159-5	5159-6	5160-1	5160-4 =	1500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 162

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1501 =	5160-5	5160-6	5161-1	5161-4	5161-5	5161-6	5162-1	5162-4	5162-5	5162-6 =	1510
1511 =	5163-1	5163-2	5163-4	5163-5	5163-6	5164-1	5164-4	5164-5	5164-6	5165-1 =	1520
1521 =	5165-4	5165-5	5165-6	5166-1	5166-4	5166-5	5166-6	5167-1	5167-4	5167-5 =	1530
1531 =	5167-6	5168-1	5168-4	5168-5	5168-6	5169-1	5169-4	5169-5	5169-6	5170-1 =	1540
1541 =	5170-3	5170-4	5170-5	5170-6	5171-1	5171-3	5171-4	5171-5	5171-6	5172-1 =	1550
1551 =	5172-3	5172-4	5172-5	5172-6	5173-1	5173-3	5173-4	5173-5	5173-6	5174-1 =	1560
1561 =	5174-3	5174-4	5174-5	5174-6	5175-1	5175-3	5175-4	5175-5	5175-6	5176-4 =	1570
1571 =	5176-5	5176-6	5177-4	5177-5	5177-6	5178-1	5178-3	5178-4	5178-5	5178-6 =	1580
1581 =	5179-1	5179-3	5179-4	5179-5	5179-6	5180-1	5180-2	5180-4	5180-5	5180-6 =	1590
1591 =	5181-1	5181-4	5181-5	5181-6	5182-1	5182-4	5182-5	5182-6	5183-1	5183-4 =	1600
1601 =	5183-5	5183-6	5184-1	5184-4	5184-5	5184-6	5185-1	5185-4	5185-5	5185-6 =	1610
1611 =	5186-1	5186-4	5186-5	5186-6	5187-1	5187-3	5187-4	5187-5	5187-6	5188-1 =	1620
1621 =	5188-3	5188-4	5188-5	5188-6	5189-4	5189-5	5189-6	5190-4	5190-5	5190-6 =	1630
1631 =	5191-1	5191-3	5191-4	5191-5	5191-6	5192-1	5192-3	5192-4	5192-5	5192-6 =	1640
1641 =	5193-1	5193-3	5193-4	5193-5	5193-6	5194-1	5194-3	5194-4	5194-5	5194-6 =	1650
1651 =	5195-1	5195-3	5195-4	5195-5	5195-6	5196-1	5196-3	5196-4	5196-5	5196-6 =	1660
1661 =	5197-1	5197-4	5197-5	5197-6	5198-1	5198-4	5198-5	5198-6	5199-1	5199-4 =	1670
1671 =	5199-5	5199-6	5200-1	5200-4	5200-5	5200-6	5201-1	5201-4	5201-5	5201-6 =	1680
1681 =	5202-1	5202-4	5202-5	5202-6	5203-1	5203-4	5203-5	5203-6	5204-1	5204-4 =	1690
1691 =	5204-5	5204-6	5205-1	5205-2	5205-4	5205-5	5205-6	5206-1	5206-4	5206-5 =	1700
1701 =	5206-6	5207-1	5207-4	5207-5	5207-6	5208-1	5208-4	5208-5	5208-6	5209-1 =	1710
1711 =	5209-4	5209-5	5209-6	5210-1	5210-4	5210-5	5210-6	5211-1	5211-4	5211-5 =	1720
1721 =	5211-6	5212-1	5212-3	5212-4	5212-5	5212-6	5213-1	5213-3	5213-4	5213-5 =	1730
1731 =	5213-6	5214-1	5214-3	5214-4	5214-5	5214-6	5215-1	5215-3	5215-4	5215-5 =	1740
1741 =	5215-6	5216-1	5216-3	5216-4	5216-5	5216-6	5217-1	5217-3	5217-4	5217-5 =	1750
1751 =	5217-6	5218-4	5218-5	5218-6	5219-4	5219-5	5219-6	5220-1	5220-4	5220-5 =	1760
1761 =	5220-6	5221-1	5221-4	5221-5	5221-6	5222-1	5222-4	5222-5	5222-6	5223-1 =	1770
1771 =	5223-4	5223-5	5223-6	5224-1	5224-4	5224-5	5224-6	5225-1	5225-4	5225-5 =	1780
1781 =	5225-6	5226-1	5226-4	5226-5	5226-6	5227-1	5227-4	5227-5	5227-6	5228-1 =	1790
1791 =	5228-4	5228-5	5228-6	5229-1	5229-4	5229-5	5229-6	5230-1	5230-4	5230-5 =	1800
1801 =	5230-6	5231-1	5231-4	5231-5	5231-6	5232-1	5232-2	5232-4	5232-5	5232-6 =	1810
1811 =	5233-1	5233-4	5233-5	5233-6	5234-1	5234-4	5234-5	5234-6	5235-1	5235-4 =	1820
1821 =	5235-5	5235-6	5236-1	5236-4	5236-5	5236-6	5237-1	5237-4	5237-5	5237-6 =	1830
1831 =	5238-1	5238-4	5238-5	5238-6	5239-1	5239-3	5239-4	5239-5	5239-6	5240-1 =	1840
1841 =	5240-3	5240-4	5240-5	5240-6	5241-1	5241-3	5241-4	5241-5	5241-6	5242-1 =	1850
1851 =	5242-3	5242-4	5242-5	5242-6	5243-1	5243-3	5243-4	5243-5	5243-6	5244-1 =	1860
1861 =	5244-3	5244-4	5244-5	5244-6	5245-4	5245-5	5245-6	5246-4	5246-5	5246-6 =	1870
1871 =	5247-1	5247-4	5247-5	5247-6	5248-1	5248-4	5248-5	5248-6	5249-1	5249-4 =	1880
1881 =	5249-5	5249-6	5250-1	5250-4	5250-5	5250-6	5251-1	5251-2	5251-4	5251-5 =	1890
1891 =	5251-6	5252-1	5252-4	5252-5	5252-6	5253-1	5253-4	5253-5	5253-6	5254-1 =	1900
1901 =	5254-4	5254-5	5254-6	5255-1	5255-4	5255-5	5255-6	5256-1	5256-4	5256-5 =	1910
1911 =	5256-6	5257-1	5257-4	5257-5	5257-6	5258-1	5258-3	5258-4	5258-5	5258-6 =	1920
1921 =	5259-1	5259-3	5259-4	5259-5	5259-6	5260-4	5260-5	5260-6	5261-4	5261-5 =	1930
1931 =	5261-6	5262-1	5262-3	5262-4	5262-5	5262-6	5263-1	5263-3	5263-4	5263-5 =	1940
1941 =	5263-6	5264-1	5264-3	5264-4	5264-5	5264-6	5265-1	5265-3	5265-4	5265-5 =	1950
1951 =	5265-6	5266-1	5266-4	5266-5	5266-6	5267-1	5267-4	5267-5	5267-6	5268-1 =	1960
1961 =	5268-4	5268-5	5268-6	5269-1	5269-4	5269-5	5269-6	5270-1	5270-4	5270-5 =	1970
1971 =	5270-6	5271-1	5271-4	5271-5	5271-6	5272-1	5272-4	5272-5	5272-6	5273-1 =	1980
1981 =	5273-4	5273-5	5273-6	5274-1	5274-4	5274-5	5274-6	5275-1	5275-4	5275-5 =	1990
1991 =	5275-6	5276-1	5276-4	5276-5	5276-6	5277-1	5277-4	5277-5	5277-6	5278-1 =	2000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 163

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
2001 =	5278-2	5278-4	5278-5	5278-6	5279-1	5279-4	5279-5	5279-6	5280-1	5280-4 =	2010
2011 =	5280-5	5280-6	5281-1	5281-4	5281-5	5281-6	5282-1	5282-4	5282-5	5282-6 =	2020
2021 =	5283-1	5283-4	5283-5	5283-6	5284-1	5284-4	5284-5	5284-6	5285-1	5285-3 =	2030
2031 =	5285-4	5285-5	5285-6	5286-1	5286-3	5286-4	5286-5	5286-6	5287-1	5287-3 =	2040
2041 =	5287-4	5287-5	5287-6	5288-1	5288-3	5288-4	5288-5	5288-6	5289-1	5289-3 =	2050
2051 =	5289-4	5289-5	5289-6	5290-1	5290-3	5290-4	5290-5	5290-6	453-4	453-5 =	2060
2061 =	453-6	793-4	793-5	793-6	5293-1	5293-4	5293-5	5293-6	5294-1	5294-4 =	2070
2071 =	5294-5	5294-6	5295-1	5295-4	5295-5	5295-6	5296-1	5296-4	5296-5	5296-6 =	2080
2081 =	5297-1	5297-2	5297-4	5297-5	5297-6	5298-1	5298-4	5298-5	5298-6	5299-1 =	2090
2091 =	5299-4	5299-5	5299-6	5300-1	5300-4	5300-5	5300-6	5301-1	5301-4	5301-5 =	2100
2101 =	5301-6	5302-1	5302-4	5302-5	5302-6	5303-1	5303-4	5303-5	5303-6	5304-1 =	2110
2111 =	5304-3	5304-4	5304-5	5304-6	5305-1	5305-3	5305-4	5305-5	5305-6	5306-1 =	2120
2121 =	5306-3	5306-4	5306-5	5306-6	5307-1	5307-3	5307-4	5307-5	5307-6	5308-1 =	2130
2131 =	5308-3	5308-4	5308-5	5308-6	5309-1	5309-3	5309-4	5309-5	5309-6	5310-4 =	2140
2141 =	5310-5	5310-6	5311-4	5311-5	5311-6	5312-1	5312-4	5312-5	5312-6	5313-1 =	2150
2151 =	5313-4	5313-5	5313-6	5314-1	5314-4	5314-5	5314-6	5315-1	5315-4	5315-5 =	2160
2161 =	5315-6	5316-1	5316-4	5316-5	5316-6	5317-1	5317-4	5317-5	5317-6	5318-1 =	2170
2171 =	5318-4	5318-5	5318-6	5319-1	5319-4	5319-5	5319-6	5320-1	5320-4	5320-5 =	2180
2181 =	5320-6	5321-1	5321-4	5321-5	5321-6	5322-1	5322-4	5322-5	5322-6	5323-1 =	2190
2191 =	5323-4	5323-5	5323-6	5324-1	5324-2	5324-4	5324-5	5324-6	5325-1	5325-4 =	2200
2201 =	5325-5	5325-6	5326-1	5326-4	5326-5	5326-6	5327-1	5327-4	5327-5	5327-6 =	2210
2211 =	5328-1	5328-4	5328-5	5328-6	5329-1	5329-4	5329-5	5329-6	5330-1	5330-4 =	2220
2221 =	5330-5	5330-6	5331-1	5331-3	5331-4	5331-5	5331-6	5332-1	5332-3	5332-4 =	2230
2231 =	5332-5	5332-6	5333-1	5333-3	5333-4	5333-5	5333-6	5334-1	5334-3	5334-4 =	2240
2241 =	5334-5	5334-6	5335-1	5335-3	5335-4	5335-5	5335-6	5336-1	5336-3	5336-4 =	2250
2251 =	5336-5	5336-6	5337-4	5337-5	5337-6	5338-4	5338-5	5338-6	5339-1	5339-4 =	2260
2261 =	5339-5	5339-6	5340-1	5340-4	5340-5	5340-6	5341-1	5341-4	5341-5	5341-6 =	2270
2271 =	5342-1	5342-4	5342-5	5342-6	5343-1	5343-4	5343-5	5343-6	5344-1	5344-4 =	2280
2281 =	5344-5	5344-6	5345-1	5345-4	5345-5	5345-6	5346-1	5346-4	5346-5	5346-6 =	2290
2291 =	5347-1	5347-4	5347-5	5347-6	5348-1	5348-4	5348-5	5348-6	5349-1	5349-4 =	2300
2301 =	5349-5	5349-6	5350-1	5350-4	5350-5	5350-6	5351-1	5351-2	5351-4	5351-5 =	2310
2311 =	5351-6	5352-1	5352-4	5352-5	5352-6	5353-1	5353-4	5353-5	5353-6	5354-1 =	2320
2321 =	5354-4	5354-5	5354-6	5355-1	5355-4	5355-5	5355-6	5356-1	5356-4	5356-5 =	2330
2331 =	5356-6	5357-1	5357-4	5357-5	5357-6	5358-1	5358-3	5358-4	5358-5	5358-6 =	2340
2341 =	5359-1	5359-3	5359-4	5359-5	5359-6	5360-4	5360-5	5360-6	5361-4	5361-5 =	2350
2351 =	5361-6	5362-1	5362-3	5362-4	5362-5	5362-6	5363-1	5363-3	5363-4	5363-5 =	2360
2361 =	5363-6	5364-1	5364-3	5364-4	5364-5	5364-6	5365-1	5365-3	5365-4	5365-5 =	2370
2371 =	5365-6	5366-1	5366-2	5366-4	5366-5	5366-6	5367-1	5367-4	5367-5	5367-6 =	2380
2381 =	5368-1	5368-4	5368-5	5368-6	5369-1	5369-4	5369-5	5369-6	5370-1	5370-4 =	2390
2391 =	5370-5	5370-6	5371-1	5371-4	5371-5	5371-6	5372-1	5372-4	5372-5	5372-6 =	2400
2401 =	5373-1	5373-3	5373-4	5373-5	5373-6	5374-1	5374-3	5374-4	5374-5	5374-6 =	2410
2411 =	5375-4	5375-5	5375-6	5376-4	5376-5	5376-6	5377-1	5377-3	5377-4	5377-5 =	2420
2421 =	5377-6	5378-1	5378-3	5378-4	5378-5	5378-6	5379-1	5379-3	5379-4	5379-5 =	2430
2431 =	5379-6	5380-1	5380-3	5380-4	5380-5	5380-6	5381-1	5381-4	5381-5	5381-6 =	2440
2441 =	5382-1	5382-4	5382-5	5382-6	5383-1	5383-4	5383-5	5383-6	5384-1	5384-4 =	2450
2451 =	5384-5	5384-6	5385-1	5385-4	5385-5	5385-6	5386-1	5386-4	5386-5	5386-6 =	2460
2461 =	5387-1	5387-4	5387-5	5387-6	5388-1	5388-4	5388-5	5388-6	5389-1	5389-2 =	2470
2471 =	5389-4	5389-5	5389-6	5390-1	5390-4	5390-5	5390-6	5391-1	5391-4	5391-5 =	2480
2481 =	5391-6	5392-1	5392-4	5392-5	5392-6	5393-1	5393-4	5393-5	5393-6	5394-1 =	2490
2491 =	5394-4	5394-5	5394-6	5395-1	5395-4	5395-5	5395-6	5396-1	5396-3	5396-4 =	2500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 164

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
2501 =	5396-5	5396-6	5397-1	5397-3	5397-4	5397-5	5397-6	5398-1	5398-3	5398-4 =	2510
2511 =	5398-5	5398-6	5399-1	5399-3	5399-4	5399-5	5399-6	5400-4	5400-5	5400-6 =	2520
2521 =	5401-4	5401-5	5401-6	5402-1	5402-3	5402-4	5402-5	5402-6	5403-1	5403-3 =	2530
2531 =	5403-4	5403-5	5403-6	5404-1	5404-4	5404-5	5404-6	5405-1	5405-4	5405-5 =	2540
2541 =	5405-6	5406-1	5406-4	5406-5	5406-6	5407-1	5407-4	5407-5	5407-6	5408-1 =	2550
2551 =	5408-4	5408-5	5408-6	5409-1	5409-4	5409-5	5409-6	5410-1	5410-4	5410-5 =	2560
2561 =	5410-6	5411-1	5411-4	5411-5	5411-6	5412-1	5412-2	5412-4	5412-5	5412-6 =	2570
2571 =	5413-1	5413-4	5413-5	5413-6	5414-1	5414-4	5414-5	5414-6	5415-1	5415-4 =	2580
2581 =	5415-5	5415-6	5416-1	5416-4	5416-5	5416-6	5417-1	5417-4	5417-5	5417-6 =	2590
2591 =	5418-1	5418-4	5418-5	5418-6	5419-1	5419-3	5419-4	5419-5	5419-6	5420-1 =	2600
2601 =	5420-3	5420-4	5420-5	5420-6	5421-1	5421-3	5421-4	5421-5	5421-6	5422-1 =	2610
2611 =	5422-3	5422-4	5422-5	5422-6	5423-4	5423-5	5423-6	5424-4	5424-5	5424-6 =	2620
2621 =	5425-1	5425-3	5425-4	5425-5	5425-6	5426-1	5426-3	5426-4	5426-5	5426-6 =	2630
2631 =	5427-1	5427-2	5427-4	5427-5	5427-6	5428-1	5428-4	5428-5	5428-6	5429-1 =	2640
2641 =	5429-4	5429-5	5429-6	5430-1	5430-4	5430-5	5430-6	5431-1	5431-4	5431-5 =	2650
2651 =	5431-6	5432-1	5432-4	5432-5	5432-6	5433-1	5433-4	5433-5	5433-6	5434-1 =	2660
2661 =	5434-3	5434-4	5434-5	5434-6	5435-1	5435-3	5435-4	5435-5	5435-6	5436-4 =	2670
2671 =	5436-5	5436-6	5437-4	5437-5	5437-6	5438-1	5438-3	5438-4	5438-5	5438-6 =	2680
2681 =	5439-1	5439-3	5439-4	5439-5	5439-6	5440-1	5440-3	5440-4	5440-5	5440-6 =	2690
2691 =	5441-1	5441-3	5441-4	5441-5	5441-6	5442-1	5442-4	5442-5	5442-6	5443-1 =	2700
2701 =	5443-4	5443-5	5443-6	5444-1	5444-4	5444-5	5444-6	5445-1	5445-4	5445-5 =	2710
2711 =	5445-6	5446-1	5446-4	5446-5	5446-6	5447-1	5447-4	5447-5	5447-6	5448-1 =	2720
2721 =	5448-4	5448-5	5448-6	5449-1	5449-4	5449-5	5449-6	1094-4	1094-5	1094-6 =	2730
2731 =	5451-1	5451-4	5451-5	5451-6	5452-1	5452-4	5452-5	5452-6	5453-1	5453-4 =	2740
2741 =	5453-5	5453-6	5454-1	5454-4	5454-5	5454-6	5455-1	5455-4	5455-5	5455-6 =	2750
2751 =	5456-1	5456-4	5456-5	5456-6	5457-1	5457-3	5457-4	5457-5	5457-6	5458-1 =	2760
2761 =	5458-3	5458-4	5458-5	5458-6	5459-4	5459-5	5459-6	5460-4	5460-5	5460-6 =	2770
2771 =	5461-1	5461-3	5461-4	5461-5	5461-6	5462-1	5462-3	5462-4	5462-5	5462-6 =	2780
2781 =	5463-1	5463-3	5463-4	5463-5	5463-6	5464-1	5464-3	5464-4	5464-5	5464-6 =	2790
2791 =	5465-1	5465-2	5465-4	5465-5	5465-6	5466-1	5466-4	5466-5	5466-6	5467-1 =	2800
2801 =	5467-4	5467-5	5467-6	5468-1	5468-4	5468-5	5468-6	5469-1	5469-4	5469-5 =	2810
2811 =	5469-6	5470-1	5470-4	5470-5	5470-6	5471-1	5471-4	5471-5	5471-6	5472-1 =	2820
2821 =	5472-3	5472-4	5472-5	5472-6	5473-1	5473-3	5473-4	5473-5	5473-6	5474-1 =	2830
2831 =	5474-3	5474-4	5474-5	5474-6	5475-1	5475-3	5475-4	5475-5	5475-6	5476-4 =	2840
2841 =	5476-5	5476-6	5477-4	5477-5	5477-6	5478-1	5478-3	5478-4	5478-5	5478-6 =	2850
2851 =	5479-1	5479-3	5479-4	5479-5	5479-6	5480-1	5480-4	5480-5	5480-6	5481-1 =	2860
2861 =	5481-4	5481-5	5481-6	5482-1	5482-4	5482-5	5482-6	5483-1	5483-4	5483-5 =	2870
2871 =	5483-6	5484-1	5484-4	5484-5	5484-6	5485-1	5485-4	5485-5	5485-6	5486-1 =	2880
2881 =	5486-4	5486-5	5486-6	5487-1	5487-4	5487-5	5487-6	5488-1	5488-2	5488-4 =	2890
2891 =	5488-5	5488-6	5489-1	5489-4	5489-5	5489-6	5490-1	5490-4	5490-5	5490-6 =	2900
2901 =	5491-1	5491-4	5491-5	5491-6	5492-1	5492-4	5492-5	5492-6	536-1	536-4 =	2910
2911 =	536-5	536-6	1680-1	1680-4	1680-5	1680-6	5495-1	5495-3	5495-4	5495-5 =	2920
2921 =	5495-6	5496-1	5496-3	5496-4	5496-5	5496-6	5497-4	5497-5	5497-6	5498-4 =	2930
2931 =	5498-5	5498-6	5499-1	5499-3	5499-4	5499-5	5499-6	5500-1	5500-3	5500-4 =	2940
2941 =	5500-5	5500-6	5501-1	5501-3	5501-4	5501-5	5501-6	5502-1	5502-3	5502-4 =	2950
2951 =	5502-5	5502-6	5503-1	5503-4	5503-5	5503-6	5504-1	5504-4	5504-5	5504-6 =	2960
2961 =	5505-1	5505-4	5505-5	5505-6	5506-1	5506-4	5506-5	5506-6	5507-1	5507-4 =	2970
2971 =	5507-5	5507-6	5508-1	5508-4	5508-5	5508-6	5509-1	5509-4	5509-5	5509-6 =	2980
2981 =	5510-1	5510-4	5510-5	5510-6	5511-1	5511-2	5511-4	5511-5	5511-6	5512-1 =	2990
2991 =	5512-4	5512-5	5512-6	5513-1	5513-4	5513-5	5513-6	5514-1	5514-4	5514-5 =	3000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 165

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
3001 =	5514-6	5515-1	5515-4	5515-5	5515-6	5516-1	5516-4	5516-5	5516-6	5517-1 =	3010
3011 =	5517-4	5517-5	5517-6	5518-1	5518-3	5518-4	5518-5	5518-6	5519-1	5519-3 =	3020
3021 =	5519-4	5519-5	5519-6	5520-4	5520-5	5520-6	5521-4	5521-5	5521-6	5522-1 =	3030
3031 =	5522-3	5522-4	5522-5	5522-6	5523-1	5523-3	5523-4	5523-5	5523-6	5524-1 =	3040
3041 =	5524-3	5524-4	5524-5	5524-6	5525-1	5525-3	5525-4	5525-5	5525-6	5526-1 =	3050
3051 =	5526-2	5526-4	5526-5	5526-6	5527-1	5527-4	5527-5	5527-6	5528-1	5528-4 =	3060
3061 =	5528-5	5528-6	5529-1	5529-4	5529-5	5529-6	5530-1	5530-4	5530-5	5530-6 =	3070
3071 =	5531-1	5531-4	5531-5	5531-6	5532-1	5532-4	5532-5	5532-6	5533-1	5533-3 =	3080
3081 =	5533-4	5533-5	5533-6	5534-1	5534-3	5534-4	5534-5	5534-6	5535-4	5535-5 =	3090
3091 =	5535-6	5536-4	5536-5	5536-6	5537-1	5537-3	5537-4	5537-5	5537-6	5538-1 =	3100
3101 =	5538-3	5538-4	5538-5	5538-6	5539-1	5539-3	5539-4	5539-5	5539-6	5540-1 =	3110
3111 =	5540-3	5540-4	5540-5	5540-6	5541-1	5541-4	5541-5	5541-6	5542-1	5542-4 =	3120
3121 =	5542-5	5542-6	5543-1	5543-4	5543-5	5543-6	5544-1	5544-4	5544-5	5544-6 =	3130
3131 =	5545-1	5545-4	5545-5	5545-6	5546-1	5546-4	5546-5	5546-6	5547-1	5547-4 =	3140
3141 =	5547-5	5547-6	5548-1	5548-4	5548-5	5548-6	5549-1	5549-2	5549-4	5549-5 =	3150
3151 =	5549-6	5550-1	5550-4	5550-5	5550-6	5551-1	5551-4	5551-5	5551-6	5552-1 =	3160
3161 =	5552-4	5552-5	5552-6	5553-1	5553-4	5553-5	5553-6	5554-1	5554-4	5554-5 =	3170
3171 =	5554-6	5555-1	5555-4	5555-5	5555-6	5556-1	5556-3	5556-4	5556-5	5556-6 =	3180
3181 =	5557-1	5557-3	5557-4	5557-5	5557-6	5558-4	5558-5	5558-6	5559-4	5559-5 =	3190
3191 =	5559-6	5560-1	5560-3	5560-4	5560-5	5560-6	5561-1	5561-3	5561-4	5561-5 =	3200
3201 =	5561-6	5562-1	5562-3	5562-4	5562-5	5562-6	5563-1	5563-3	5563-4	5563-5 =	3210
3211 =	5563-6	5564-1	5564-4	5564-5	5564-6	5565-1	5565-4	5565-5	5565-6	5566-1 =	3220
3221 =	5566-4	5566-5	5566-6	5567-1	5567-4	5567-5	5567-6	5568-1	5568-4	5568-5 =	3230
3231 =	5568-6	5569-1	5569-4	5569-5	5569-6	5570-1	5570-4	5570-5	5570-6	5571-1 =	3240
3241 =	5571-4	5571-5	5571-6	1100-4	1100-5	1100-6	5573-1	5573-4	5573-5	5573-6 =	3250
3251 =	5574-1	5574-4	5574-5	5574-6	5575-1	5575-4	5575-5	5575-6	5576-1	5576-4 =	3260
3261 =	5576-5	5576-6	5577-1	5577-4	5577-5	5577-6	5578-1	5578-4	5578-5	5578-6 =	3270
3271 =	5579-1	5579-3	5579-4	5579-5	5579-6	5580-1	5580-3	5580-4	5580-5	5580-6 =	3280
3281 =	605-4	605-5	605-6	945-4	945-5	945-6	5583-1	5583-3	5583-4	5583-5 =	3290
3291 =	5583-6	5584-1	5584-3	5584-4	5584-5	5584-6	5585-1	5585-3	5585-4	5585-5 =	3300
3301 =	5585-6	5586-1	5586-3	5586-4	5586-5	5586-6	5587-1	5587-4	5587-5	5587-6 =	3310
3311 =	5588-1	5588-4	5588-5	5588-6	5589-1	5589-4	5589-5	5589-6	5590-1	5590-4 =	3320
3321 =	5590-5	5590-6	5591-1	5591-4	5591-5	5591-6	5592-1	5592-4	5592-5	5592-6 =	3330
3331 =	5593-1	5593-4	5593-5	5593-6	5594-1	5594-4	5594-5	5594-6	5595-1	5595-2 =	3340
3341 =	5595-4	5595-5	5595-6	5596-1	5596-4	5596-5	5596-6	5597-1	5597-4	5597-5 =	3350
3351 =	5597-6	5598-1	5598-4	5598-5	5598-6	5599-1	5599-4	5599-5	5599-6	5600-1 =	3360
3361 =	5600-4	5600-5	5600-6	5601-1	5601-4	5601-5	5601-6	5602-1	5602-3	5602-4 =	3370
3371 =	5602-5	5602-6	5603-1	5603-3	5603-4	5603-5	5603-6	5604-4	5604-5	5604-6 =	3380
3381 =	5605-4	5605-5	5605-6	5606-1	5606-3	5606-4	5606-5	5606-6	5607-1	5607-3 =	3390
3391 =	5607-4	5607-5	5607-6	5608-1	5608-3	5608-4	5608-5	5608-6	5609-1	5609-3 =	3400
3401 =	5609-4	5609-5	5609-6	5610-1	5610-2	5610-4	5610-5	5610-6	5611-1	5611-4 =	3410
3411 =	5611-5	5611-6	5612-1	5612-4	5612-5	5612-6	5613-1	5613-4	5613-5	5613-6 =	3420
3421 =	5614-1	5614-4	5614-5	5614-6	5615-1	5615-4	5615-5	5615-6	5616-1	5616-4 =	3430
3431 =	5616-5	5616-6	5617-1	5617-4	5617-5	5617-6	5618-1	5618-4	5618-5	5618-6 =	3440
3441 =	5619-1	5619-3	5619-4	5619-5	5619-6	5620-1	5620-3	5620-4	5620-5	5620-6 =	3450
3451 =	5621-4	5621-5	5621-6	5622-4	5622-5	5622-6	5623-1	5623-3	5623-4	5623-5 =	3460
3461 =	5623-6	5624-1	5624-3	5624-4	5624-5	5624-6	5625-1	5625-3	5625-4	5625-5 =	3470
3471 =	5625-6	5626-1	5626-3	5626-4	5626-5	5626-6	5627-1	5627-4	5627-5	5627-6 =	3480
3481 =	5628-1	5628-4	5628-5	5628-6	5629-1	5629-4	5629-5	5629-6	5630-1	5630-4 =	3490
3491 =	5630-5	5630-6	5631-1	5631-4	5631-5	5631-6	5632-1	5632-4	5632-5	5632-6 =	3500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 166

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
3501 =	5633-1	5633-4	5633-5	5633-6	5634-1	5634-4	5634-5	5634-6	5635-1	5635-2 =	3510
3511 =	5635-4	5635-5	5635-6	5636-1	5636-4	5636-5	5636-6	5637-1	5637-4	5637-5 =	3520
3521 =	5637-6	5638-1	5638-4	5638-5	5638-6	5639-1	5639-4	5639-5	5639-6	5640-1 =	3530
3531 =	5640-4	5640-5	5640-6	5641-1	5641-4	5641-5	5641-6	5642-1	5642-4	5642-5 =	3540
3541 =	5642-6	5643-1	5643-4	5643-5	5643-6	5644-1	5644-3	5644-4	5644-5	5644-6 =	3550
3551 =	5645-1	5645-3	5645-4	5645-5	5645-6	5646-4	5646-5	5646-6	5647-4	5647-5 =	3560
3561 =	5647-6	5648-1	5648-3	5648-4	5648-5	5648-6	5649-1	5649-3	5649-4	5649-5 =	3570
3571 =	5649-6	5650-1	5650-3	5650-4	5650-5	5650-6	5651-1	5651-3	5651-4	5651-5 =	3580
3581 =	5651-6	5652-1	5652-4	5652-5	5652-6	5653-1	5653-4	5653-5	5653-6	5654-1 =	3590
3591 =	5654-4	5654-5	5654-6	5655-1	5655-4	5655-5	5655-6	5656-1	5656-4	5656-5 =	3600
3601 =	5656-6	5657-1	5657-4	5657-5	5657-6	5658-1	5658-4	5658-5	5658-6	5659-1 =	3610
3611 =	5659-4	5659-5	5659-6	5660-1	5660-2	5660-4	5660-5	5660-6	5661-1	5661-4 =	3620
3621 =	5661-5	5661-6	5662-1	5662-4	5662-5	5662-6	5663-1	5663-4	5663-5	5663-6 =	3630
3631 =	5664-1	5664-4	5664-5	5664-6	5665-1	5665-4	5665-5	5665-6	5666-1	5666-4 =	3640
3641 =	5666-5	5666-6	5667-1	5667-4	5667-5	5667-6	5668-1	5668-4	5668-5	5668-6 =	3650
3651 =	5669-1	5669-3	5669-4	5669-5	5669-6	5670-1	5670-3	5670-4	5670-5	5670-6 =	3660
3661 =	5671-4	5671-5	5671-6	5672-4	5672-5	5672-6	5673-1	5673-3	5673-4	5673-5 =	3670
3671 =	5673-6	5674-1	5674-3	5674-4	5674-5	5674-6	5675-1	5675-3	5675-4	5675-5 =	3680
3681 =	5675-6	5676-1	5676-3	5676-4	5676-5	5676-6	5677-1	5677-2	5677-4	5677-5 =	3690
3691 =	5677-6	5678-1	5678-4	5678-5	5678-6	5679-1	5679-4	5679-5	5679-6	5680-1 =	3700
3701 =	5680-4	5680-5	5680-6	5681-1	5681-4	5681-5	5681-6	5682-1	5682-4	5682-5 =	3710
3711 =	5682-6	5683-1	5683-4	5683-5	5683-6	5684-1	5684-4	5684-5	5684-6	5685-1 =	3720
3721 =	5685-4	5685-5	5685-6	5686-1	5686-3	5686-4	5686-5	5686-6	5687-1	5687-3 =	3730
3731 =	5687-4	5687-5	5687-6	5688-4	5688-5	5688-6	5689-4	5689-5	5689-6	5690-1 =	3740
3741 =	5690-3	5690-4	5690-5	5690-6	5691-1	5691-3	5691-4	5691-5	5691-6	5692-1 =	3750
3751 =	5692-3	5692-4	5692-5	5692-6	5693-1	5693-3	5693-4	5693-5	5693-6	5694-1 =	3760
3761 =	5694-4	5694-5	5694-6	5695-1	5695-4	5695-5	5695-6	5696-1	5696-4	5696-5 =	3770
3771 =	5696-6	5697-1	5697-4	5697-5	5697-6	5698-1	5698-4	5698-5	5698-6	5699-1 =	3780
3781 =	5699-4	5699-5	5699-6	5700-1	5700-4	5700-5	5700-6	5701-1	5701-4	5701-5 =	3790
3791 =	5701-6	5702-4	5702-5	5702-6	5703-1	5703-2	5703-4	5703-5	5703-6	5704-1 =	3800
3801 =	5704-2	5704-4	5704-5	5704-6	5705-1	5705-4	5705-5	5705-6	5706-1	5706-4 =	3810
3811 =	5706-5	5706-6	5707-1	5707-4	5707-5	5707-6	5708-1	5708-4	5708-5	5708-6 =	3820
3821 =	5709-4	5709-5	5709-6	5710-4	5710-5	5710-6	5711-1	5711-3	5711-4	5711-5 =	3830
3831 =	5711-6	5712-1	5712-3	5712-4	5712-5	5712-6	5713-1	5713-3	5713-4	5713-5 =	3840
3841 =	5713-6	5714-1	5714-3	5714-4	5714-5	5714-6	5715-4	5715-5	5715-6	5716-4 =	3850
3851 =	5716-5	5716-6	5717-1	5717-3	5717-4	5717-5	5717-6	5718-1	5718-3	5718-4 =	3860
3861 =	5718-5	5718-6	5719-1	5719-4	5719-5	5719-6	5720-1	5720-4	5720-5	5720-6 =	3870
3871 =	5721-1	5721-4	5721-5	5721-6	5722-1	5722-4	5722-5	5722-6	5723-1	5723-4 =	3880
3881 =	5723-5	5723-6	5724-1	5724-4	5724-5	5724-6	5725-1	5725-4	5725-5	5725-6 =	3890
3891 =	5726-1	5726-4	5726-5	5726-6	5727-1	5727-4	5727-5	5727-6	5728-1	5728-4 =	3900
3901 =	5728-5	5728-6	5729-1	5729-4	5729-5	5729-6	5730-1	5730-4	5730-5	5730-6 =	3910
3911 =	5731-1	5731-4	5731-5	5731-6	5732-1	5732-4	5732-5	5732-6	5733-1	5733-4 =	3920
3921 =	5733-5	5733-6	5734-1	5734-4	5734-5	5734-6	5735-1	5735-4	5735-5	5735-6 =	3930
3931 =	5736-1	5736-4	5736-5	5736-6	5737-1	5737-4	5737-5	5737-6	5738-1	5738-4 =	3940
3941 =	5738-5	5738-6	5739-1	5739-4	5739-5	5739-6	5740-1	5740-4	5740-5	5740-6 =	3950
3951 =	5741-1	5741-4	5741-5	5741-6	5742-1	5742-4	5742-5	5742-6	5743-1	5743-4 =	3960
3961 =	5743-5	5743-6	5744-1	5744-4	5744-5	5744-6	5745-1	5745-4	5745-5	5745-6 =	3970
3971 =	5746-1	5746-4	5746-5	5746-6	5747-1	5747-4	5747-5	5747-6	5748-1	5748-4 =	3980
3981 =	5748-5	5748-6	5749-1	5749-4	5749-5	5749-6	5750-1	5750-4	5750-5	5750-6 =	3990
3991 =	5751-1	5751-4	5751-5	5751-6	5752-1	5752-4	5752-5	5752-6	5753-1	5753-4 =	4000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 167

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
4001 =	5753-5	5753-6	5754-1	5754-4	5754-5	5754-6	5755-1	5755-4	5755-5	5755-6 =	4010
4011 =	5756-1	5756-4	5756-5	5756-6	5757-1	5757-4	5757-5	5757-6	5758-1	5758-4 =	4020
4021 =	5758-5	5758-6	5759-1	5759-4	5759-5	5759-6	5760-1	5760-4	5760-5	5760-6 =	4030
4031 =	5761-1	5761-4	5761-5	5761-6	5762-1	5762-4	5762-5	5762-6	5763-1	5763-4 =	4040
4041 =	5763-5	5763-6	5764-1	5764-4	5764-5	5764-6	5765-1	5765-4	5765-5	5765-6 =	4050
4051 =	5766-1	5766-4	5766-5	5766-6	5767-1	5767-4	5767-5	5767-6	5768-1	5768-4 =	4060
4061 =	5768-5	5768-6	5769-2	5769-4	5769-5	5769-6	5770-2	5770-4	5770-5	5770-6 =	4070
4071 =	5771-2	5771-4	5771-5	5771-6	5772-2	5772-4	5772-5	5772-6	5773-2	5773-4 =	4080
4081 =	5773-5	5773-6	5774-2	5774-4	5774-5	5774-6	5775-2	5775-4	5775-5	5775-6 =	4090
4091 =	5776-2	5776-4	5776-5	5776-6	5777-2	5777-4	5777-5	5777-6	5778-4	5778-5 =	4100
4101 =	5778-6	5779-4	5779-5	5779-6	5780-4	5780-5	5780-6	5781-4	5781-5	5781-6 =	4110
4111 =	5782-4	5782-5	5782-6	5783-4	5783-5	5783-6	5784-2	5784-4	5784-5	5784-6 =	4120
4121 =	5785-2	5785-4	5785-5	5785-6	5786-4	5786-5	5786-6	5787-4	5787-5	5787-6 =	4130
4131 =	5788-4	5788-5	5788-6	5789-4	5789-5	5789-6	5790-4	5790-5	5790-6	5791-4 =	4140
4141 =	5791-5	5791-6	5792-4	5792-5	5792-6	5793-4	5793-5	5793-6	5794-4	5794-5 =	4150
4151 =	5794-6	5795-4	5795-5	5795-6	5796-4	5796-5	5796-6	5797-4	5797-5	5797-6 =	4160
4161 =	5798-4	5798-5	5798-6	5799-4	5799-5	5799-6	5800-4	5800-5	5800-6	5801-4 =	4170
4171 =	5801-5	5801-6	5802-4	5802-5	5802-6	5803-4	5803-5	5803-6	5804-2	5804-4 =	4180
4181 =	5804-5	5804-6	5805-2	5805-4	5805-5	5805-6	5806-2	5806-4	5806-5	5806-6 =	4190
4191 =	5807-2	5807-4	5807-5	5807-6	5808-2	5808-4	5808-5	5808-6	5809-2	5809-4 =	4200
4201 =	5809-5	5809-6	5810-2	5810-4	5810-5	5810-6	5811-2	5811-4	5811-5	5811-6 =	4210
4211 =	5812-2	5812-4	5812-5	5812-6	5813-2	5813-4	5813-5	5813-6	5814-2	5814-4 =	4220
4221 =	5814-5	5814-6	5815-2	5815-4	5815-5	5815-6	5816-2	5816-4	5816-5	5816-6 =	4230
4231 =	5817-2	5817-4	5817-5	5817-6	5818-2	5818-4	5818-5	5818-6	5819-2	5819-4 =	4240
4241 =	5819-5	5819-6	5820-2	5820-4	5820-5	5820-6	5821-2	5821-4	5821-5	5821-6 =	4250
4251 =	5822-2	5822-4	5822-5	5822-6	5823-2	5823-4	5823-5	5823-6	5824-2	5824-4 =	4260
4261 =	5824-5	5824-6	5825-2	5825-4	5825-5	5825-6	5826-2	5826-4	5826-5	5826-6 =	4270
4271 =	5827-2	5827-4	5827-5	5827-6	5828-2	5828-4	5828-5	5828-6	5829-2	5829-4 =	4280
4281 =	5829-5	5829-6	5830-2	5830-4	5830-5	5830-6	5831-2	5831-4	5831-5	5831-6 =	4290
4291 =	5832-2	5832-4	5832-5	5832-6	5833-4	5833-5	5833-6	5834-4	5834-5	5834-6 =	4300
4301 =	5835-4	5835-5	5835-6	5836-1	5836-2	5836-4	5836-5	5836-6	5837-1	5837-2 =	4310
4311 =	5837-4	5837-5	5837-6	5838-1	5838-2	5838-4	5838-5	5838-6	5839-1	5839-2 =	4320
4321 =	5839-4	5839-5	5839-6	5840-1	5840-2	5840-4	5840-5	5840-6	5841-1	5841-2 =	4330
4331 =	5841-4	5841-5	5841-6	5842-1	5842-2	5842-4	5842-5	5842-6	5843-1	5843-2 =	4340
4341 =	5843-4	5843-5	5843-6	5844-4	5844-5	5844-6	5845-4	5845-5	5845-6	5846-4 =	4350
4351 =	5846-5	5846-6	5847-4	5847-5	5847-6	5848-4	5848-5	5848-6	5849-4	5849-5 =	4360
4361 =	5849-6	5850-4	5850-5	5850-6	5851-4	5851-5	5851-6	5852-4	5852-5	5852-6 =	4370
4371 =	5853-4	5853-5	5853-6	5854-4	5854-5	5854-6	5855-4	5855-5	5855-6	5856-4 =	4380
4381 =	5856-5	5856-6	5857-4	5857-5	5857-6	5858-4	5858-5	5858-6	5859-4	5859-5 =	4390
4391 =	5859-6	5860-4	5860-5	5860-6	5861-4	5861-5	5861-6	5862-1	5862-4	5862-5 =	4400
4401 =	5862-6	5863-1	5863-4	5863-5	5863-6	5864-2	5864-3	5864-4	5864-5	5864-6 =	4410
4411 =	5865-2	5865-3	5865-4	5865-5	5865-6	5866-4	5866-5	5866-6	5867-4	5867-5 =	4420
4421 =	5867-6	5868-4	5868-5	5868-6	5869-4	5869-5	5869-6	5870-4	5870-5	5870-6 =	4430
4431 =	5871-4	5871-5	5871-6	5872-4	5872-5	5872-6	5873-4	5873-5	5873-6	5874-4 =	4440
4441 =	5874-5	5874-6	5875-4	5875-5	5875-6	5876-4	5876-5	5876-6	5877-4	5877-5 =	4450
4451 =	5877-6	5878-4	5878-5	5878-6	5879-4	5879-5	5879-6	5880-4	5880-5	5880-6 =	4460
4461 =	5881-4	5881-5	5881-6	5882-4	5882-5	5882-6	5883-4	5883-5	5883-6	5884-4 =	4470
4471 =	5884-5	5884-6	5885-4	5885-5	5885-6	5886-4	5886-5	5886-6	5887-4	5887-5 =	4480
4481 =	5887-6	5888-4	5888-5	5888-6	5889-4	5889-5	5889-6	5890-4	5890-5	5890-6 =	4490
4491 =	5891-4	5891-5	5891-6	5892-4	5892-5	5892-6	5893-4	5893-5	5893-6	5894-4 =	4500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 168

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
4501 =	5894-5	5894-6	5895-4	5895-5	5895-6	5896-4	5896-5	5896-6	5897-4	5897-5 =	4510
4511 =	5897-6	5898-1	5898-4	5898-5	5898-6	5899-1	5899-4	5899-5	5899-6	5900-4 =	4520
4521 =	5900-5	5900-6	5901-4	5901-5	5901-6	5902-4	5902-5	5902-6	5903-4	5903-5 =	4530
4531 =	5903-6	5904-4	5904-5	5904-6	5905-4	5905-5	5905-6	5971-4	5971-5	5971-6 =	4540
4541 =	5972-4	5972-5	5972-6	5973-4	5973-5	5973-6	5974-4	5974-5	5974-6	2720-4 =	4550
4551 =	2720-5	2720-6	2748-4	2748-5	2748-6	2734-4	2734-5	2734-6	2329-4	2329-5 =	4560
4561 =	2329-6	2335-1	2335-3	2335-4	2335-5	2335-6	1629-1	1629-2	1629-4	1629-5 =	4570
4571 =	1629-6	1779-1	1779-2	1779-4	1779-5	1779-6	1608-1	1608-2	1608-4	1608-5 =	4580
4581 =	1608-6	5906-1	5906-2	5906-4	5906-5	5906-6	5907-1	5907-2	5907-4	5907-5 =	4590
4591 =	5907-6	5908-1	5908-2	5908-4	5908-5	5908-6	5909-1	5909-2	5909-4	5909-5 =	4600
4601 =	5909-6	5910-1	5910-2	5910-4	5910-5	5910-6	1612-1	1612-2	1612-4	1612-5 =	4610
4611 =	1612-6	5911-1	5911-2	5911-4	5911-5	5911-6	5912-1	5912-2	5912-4	5912-5 =	4620
4621 =	5912-6	5913-1	5913-2	5913-4	5913-5	5913-6	5914-1	5914-2	5914-4	5914-5 =	4630
4631 =	5914-6	5915-1	5915-2	5915-4	5915-5	5915-6	5916-1	5916-2	5916-4	5916-5 =	4640
4641 =	5916-6	5917-1	5917-2	5917-4	5917-5	5917-6	5918-1	5918-2	5918-4	5918-5 =	4650
4651 =	5918-6	5919-1	5919-2	5919-4	5919-5	5919-6	1633-1	1633-2	1633-4	1633-5 =	4660
4661 =	1633-6	5921-1	5921-2	5921-4	5921-5	5921-6	5922-1	5922-2	5922-4	5922-5 =	4670
4671 =	5922-6	1638-1	1638-2	1638-4	1638-5	1638-6	1617-1	1617-2	1617-4	1617-5 =	4680
4681 =	1617-6	1621-1	1621-2	1621-4	1621-5	1621-6	5925-1	5925-2	5925-4	5925-5 =	4690
4691 =	5925-6	5926-1	5926-2	5926-4	5926-5	5926-6	1806-1	1806-2	1806-4	1806-5 =	4700
4701 =	1806-6	5927-1	5927-2	5927-4	5927-5	5927-6	5928-1	5928-2	5928-4	5928-5 =	4710
4711 =	5928-6	5929-1	5929-2	5929-4	5929-5	5929-6	5930-1	5930-2	5930-4	5930-5 =	4720
4721 =	5930-6	1814-1	1814-2	1814-4	1814-5	1814-6	5931-1	5931-2	5931-4	5931-5 =	4730
4731 =	5931-6	1818-1	1818-2	1818-4	1818-5	1818-6	5932-1	5932-2	5932-4	5932-5 =	4740
4741 =	5932-6	5933-1	5933-2	5933-4	5933-5	5933-6	5934-1	5934-2	5934-4	5934-5 =	4750
4751 =	5934-6	5965-1	5965-2	5965-4	5965-5	5965-6	5966-1	5966-2	5966-4	5966-5 =	4760
4761 =	5966-6	1758-1	1758-2	1758-4	1758-5	1758-6	5936-1	5936-2	5936-4	5936-5 =	4770
4771 =	5936-6	5937-1	5937-2	5937-4	5937-5	5937-6	5938-1	5938-2	5938-4	5938-5 =	4780
4781 =	5938-6	5939-1	5939-2	5939-4	5939-5	5939-6	5940-1	5940-2	5940-4	5940-5 =	4790
4791 =	5940-6	1762-1	1762-2	1762-4	1762-5	1762-6	5941-1	5941-2	5941-4	5941-5 =	4800
4801 =	5941-6	5942-1	5942-2	5942-4	5942-5	5942-6	5943-1	5943-2	5943-4	5943-5 =	4810
4811 =	5943-6	5944-1	5944-2	5944-4	5944-5	5944-6	5945-1	5945-2	5945-4	5945-5 =	4820
4821 =	5945-6	5946-1	5946-2	5946-4	5946-5	5946-6	5947-1	5947-2	5947-4	5947-5 =	4830
4831 =	5947-6	5948-1	5948-2	5948-4	5948-5	5948-6	5949-1	5949-2	5949-4	5949-5 =	4840
4841 =	5949-6	1783-1	1783-2	1783-4	1783-5	1783-6	5951-1	5951-2	5951-4	5951-5 =	4850
4851 =	5951-6	5952-1	5952-2	5952-4	5952-5	5952-6	1788-1	1788-2	1788-4	1788-5 =	4860
4861 =	1788-6	1767-1	1767-2	1767-4	1767-5	1767-6	1771-1	1771-2	1771-4	1771-5 =	4870
4871 =	1771-6	5955-1	5955-2	5955-4	5955-5	5955-6	5956-1	5956-2	5956-4	5956-5 =	4880
4881 =	5956-6	1826-1	1826-2	1826-4	1826-5	1826-6	5957-1	5957-2	5957-4	5957-5 =	4890
4891 =	5957-6	5958-1	5958-2	5958-4	5958-5	5958-6	5959-1	5959-2	5959-4	5959-5 =	4900
4901 =	5959-6	5960-1	5960-2	5960-4	5960-5	5960-6	1834-1	1834-2	1834-4	1834-5 =	4910
4911 =	1834-6	5961-1	5961-2	5961-4	5961-5	5961-6	1838-1	1838-2	1838-4	1838-5 =	4920
4921 =	1838-6	5962-1	5962-2	5962-4	5962-5	5962-6	5963-1	5963-2	5963-4	5963-5 =	4930
4931 =	5963-6	5964-1	5964-2	5964-4	5964-5	5964-6	5967-1	5967-2	5967-4	5967-5 =	4940
4941 =	5967-6	5968-1	5968-2	5968-4	5968-5	5968-6	90-4	90-5	90-6	91-4 =	4950
4951 =	91-5	91-6	1091-4	1091-5	1091-6	200-1	200-4	216-4	216-5	216-6 =	4960
4961 =	704-1	704-4	704-5	704-6	2874-1	2874-4	2874-5	2874-6	662-1	662-4 =	4970
4971 =	662-5	662-6	691-1	691-2	691-4	691-5	691-6	606-1	606-4	606-5 =	4980
4981 =	606-6	634-1	634-4	634-5	634-6	635-1	635-2	635-4	635-5	635-6 =	4990
4991 =	723-1	723-4	723-5	723-6	546-1	546-4	546-5	546-6	302-1	302-4 =	5000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 169

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
5001 =	302-5	302-6	307-1	307-4	307-5	307-6	309-1	309-2	309-4	309-5 =	5010
5011 =	309-6	390-2	390-3	390-4	390-5	390-6	313-1	313-3	313-4	313-5 =	5020
5021 =	313-6	314-1	314-3	314-4	314-5	314-6	315-1	315-4	315-5	315-6 =	5030
5031 =	316-1	316-2	316-4	316-5	316-6	317-1	317-3	317-4	317-5	317-6 =	5040
5041 =	318-1	318-3	318-4	318-5	318-6	319-1	319-4	319-5	319-6	320-1 =	5050
5051 =	320-2	320-4	320-5	320-6	321-1	321-3	321-4	321-5	321-6	322-1 =	5060
5061 =	322-3	322-4	322-5	322-6	323-1	323-2	323-4	323-5	323-6	324-1 =	5070
5071 =	324-2	324-4	324-5	324-6	328-1	328-2	328-4	328-5	328-6	329-1 =	5080
5081 =	329-3	329-4	329-5	329-6	330-1	330-3	330-4	330-5	330-6	331-1 =	5090
5091 =	331-2	331-4	331-5	331-6	332-1	332-2	332-4	332-5	332-6	335-1 =	5100
5101 =	335-2	335-4	335-5	335-6	343-1	343-3	343-4	343-5	343-6	344-1 =	5110
5111 =	344-3	344-4	344-5	344-6	345-1	345-2	345-4	345-5	345-6	346-1 =	5120
5121 =	346-2	346-4	346-5	346-6	391-2	391-3	391-4	391-5	391-6	357-1 =	5130
5131 =	357-4	357-5	357-6	350-4	350-5	350-6	351-4	351-5	351-6	352-4 =	5140
5141 =	352-5	352-6	353-4	353-5	353-6	1302-1	1302-4	1302-5	1302-6	1307-1 =	5150
5151 =	1307-4	1307-5	1307-6	1309-1	1309-2	1309-4	1309-5	1309-6	1390-2	1390-3 =	5160
5161 =	1390-4	1390-5	1390-6	1313-1	1313-3	1313-4	1313-5	1313-6	1314-1	1314-3 =	5170
5171 =	1314-4	1314-5	1314-6	1315-1	1315-4	1315-5	1315-6	1316-1	1316-2	1316-4 =	5180
5181 =	1316-5	1316-6	1317-1	1317-3	1317-4	1317-5	1317-6	1318-1	1318-3	1318-4 =	5190
5191 =	1318-5	1318-6	1319-1	1319-4	1319-5	1319-6	1320-1	1320-2	1320-4	1320-5 =	5200
5201 =	1320-6	1321-1	1321-3	1321-4	1321-5	1321-6	1322-1	1322-3	1322-4	1322-5 =	5210
5211 =	1322-6	1323-1	1323-2	1323-4	1323-5	1323-6	1324-1	1324-2	1324-4	1324-5 =	5220
5221 =	1324-6	1328-1	1328-2	1328-4	1328-5	1328-6	1329-1	1329-3	1329-4	1329-5 =	5230
5231 =	1329-6	1330-1	1330-3	1330-4	1330-5	1330-6	1331-1	1331-2	1331-4	1331-5 =	5240
5241 =	1331-6	1332-1	1332-2	1332-4	1332-5	1332-6	1335-1	1335-2	1335-4	1335-5 =	5250
5251 =	1335-6	1343-1	1343-3	1343-4	1343-5	1343-6	1344-1	1344-3	1344-4	1344-5 =	5260
5261 =	1344-6	1345-1	1345-2	1345-4	1345-5	1345-6	1346-1	1346-2	1346-4	1346-5 =	5270
5271 =	1346-6	1391-2	1391-3	1391-4	1391-5	1391-6	1357-1	1357-4	1357-5	1357-6 =	5280
5281 =	1350-4	1350-5	1350-6	1351-4	1351-5	1351-6	1352-4	1352-5	1352-6	1353-4 =	5290
5291 =	1353-5	1353-6	100-5	101-5	102-5	103-5	104-5	105-5	106-5	107-5 =	5300
5301 =	108-5	109-5	110-5	111-5	112-1	112-3	112-4	112-5	112-6	113-1 =	5310
5311 =	113-3	113-4	113-5	113-6	114-1	114-3	114-4	114-5	114-6	10001-4 =	5320
5321 =	10001-5	10001-6	10002-4	10002-5	10002-6	10004-4	10004-5	10004-6	10005-4	10005-5 =	5330
5331 =	10005-6	10006-4	10006-5	10006-6	10007-4	10007-5	10007-6	10008-4	10008-5	10008-6 =	5340
5341 =	10009-4	10009-5	10009-6	10010-4	10010-5	10010-6	10011-4	10011-5	10011-6	10012-4 =	5350
5351 =	10012-5	10012-6	10013-4	10013-5	10013-6	10016-4	10016-5	10016-6	10017-4	10017-5 =	5360
5361 =	10017-6	10018-4	10018-5	10018-6	10019-4	10019-5	10019-6	10020-4	10020-5	10020-6 =	5370
5371 =	10021-4	10021-5	10021-6	10022-4	10022-5	10022-6	10023-4	10023-5	10023-6	10025-4 =	5380
5381 =	10025-5	10025-6	10026-4	10026-5	10026-6	10027-4	10027-5	10027-6	10028-4	10028-5 =	5390
5391 =	10028-6	10029-4	10029-5	10029-6	10030-4	10030-5	10030-6	10031-4	10031-5	10031-6 =	5400
5401 =	10032-4	10032-5	10032-6	10033-4	10033-5	10033-6	10034-4	10034-5	10034-6	10035-4 =	5410
5411 =	10035-5	10035-6	10036-4	10036-5	10036-6	10037-4	10037-5	10037-6	10038-4	10038-5 =	5420
5421 =	10038-6	10039-4	10039-5	10039-6	10040-4	10040-5	10040-6	10041-4	10041-5	10041-6 =	5430
5431 =	10042-4	10042-5	10042-6	10043-4	10043-5	10043-6	10044-4	10044-5	10044-6	10045-4 =	5440
5441 =	10045-5	10045-6	10046-4	10046-5	10046-6	10047-4	10047-5	10047-6	10048-4	10048-5 =	5450
5451 =	10048-6	10049-4	10049-5	10049-6	10050-4	10050-5	10050-6	10051-4	10051-5	10051-6 =	5460
5461 =	10052-4	10052-5	10052-6	10053-4	10053-5	10053-6	10054-4	10054-5	10054-6	10055-4 =	5470
5471 =	10055-5	10055-6	10056-4	10056-5	10056-6	10057-4	10057-5	10057-6	10058-4	10058-5 =	5480
5481 =	10058-6	10059-4	10059-5	10059-6	10060-4	10060-5	10060-6	10061-4	10061-5	10061-6 =	5490
5491 =	10062-4	10062-5	10062-6	10063-4	10063-5	10063-6	10064-4	10064-5	10064-6	10065-4 =	5500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 170

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
5501 =	10065-5	10065-6	10066-4	10066-5	10066-6	10067-4	10067-5	10067-6	10068-4	10068-5 =	5510
5511 =	10068-6	10069-4	10069-5	10069-6	10070-4	10070-5	10070-6	10071-4	10071-5	10071-6 =	5520
5521 =	10072-4	10072-5	10072-6	10073-4	10073-5	10073-6	10074-4	10074-5	10074-6	10075-4 =	5530
5531 =	10075-5	10075-6	10076-4	10076-5	10076-6	10077-4	10077-5	10077-6	10078-4	10078-5 =	5540
5541 =	10078-6	10079-4	10079-5	10079-6	10080-4	10080-5	10080-6	10081-4	10081-5	10081-6 =	5550
5551 =	10082-4	10082-5	10082-6	10083-4	10083-5	10083-6					

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 171

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	4590-1	4590-2	4590-3	4590-4	4590-5	4590-6	4591-1	4591-2	4591-3	4591-4 =	10
11 =	4591-5	4591-6	4592-1	4592-2	4592-3	4592-4	4592-5	4592-6	4593-1	4593-2 =	20
21 =	4593-3	4593-4	4593-5	4593-6	13001-1	13001-2	13001-3	13001-4	13001-6	13002-1 =	30
31 =	13002-2	13002-3	13002-4	13002-6	13003-1	13003-2	13003-3	13003-4	13003-6	13004-1 =	40
41 =	13004-2	13004-3	13004-4	13004-6	13005-1	13005-2	13005-3	13005-4	13005-6	13006-1 =	50
51 =	13006-2	13006-3	13006-4	13006-6	13007-1	13007-2	13007-3	13007-4	13007-6	13008-1 =	60
61 =	13008-2	13008-3	13008-4	13008-6	13009-1	13009-2	13009-3	13009-4	13009-6	13010-1 =	70
71 =	13010-2	13010-3	13010-4	13010-6	13011-1	13011-2	13011-3	13011-4	13011-6	13012-1 =	80
81 =	13012-2	13012-3	13012-4	13012-6	13013-1	13013-2	13013-3	13013-4	13013-6	13014-1 =	90
91 =	13014-2	13014-3	13014-4	13014-6	13015-1	13015-2	13015-3	13015-4	13015-6	13016-1 =	100
101 =	13016-2	13016-3	13016-4	13016-6	13017-1	13017-2	13017-3	13017-4	13017-5	13018-1 =	110
111 =	13018-2	13018-3	13018-4	13018-5	13019-1	13019-2	13019-3	13019-4	13019-5	13020-1 =	120
121 =	13020-2	13020-3	13020-4	13020-5	2171-2	2171-3	2197-2	2197-3	2322-2	2322-3 =	130
131 =	2663-2	2663-3	2808-2	2808-3	2809-2	2809-3	2833-2	2833-3	2922-2	2922-3 =	140
141 =	21081-2	21081-3	27106-2	27106-3	27111-2	27111-3	27150-2	27150-3	27164-2	27164-3 =	150
151 =	27167-2	27167-3	27178-2	27178-3	27186-2	27186-3	27193-2	27193-3	27564-2	27564-3 =	160
161 =	27837-2	27837-3	271012-2	271012-3	271013-2	271013-3	271055-2	271055-3	271265-2	271265-3 =	170
171 =	702171-2	702171-3	702197-2	702197-3	702322-2	702322-3	702663-2	702663-3	702808-2	702808-3 =	180
181 =	702809-2	702809-3	702833-2	702833-3	702922-2	702922-3	727106-2	727106-3	727111-2	727111-3 =	190
191 =	727150-2	727150-3	727164-2	727164-3	727167-2	727167-3	727178-2	727178-3	727186-2	727186-3 =	200
201 =	727193-2	727193-3	727564-2	727564-3	727837-2	727837-3	7021081-2	7021081-3	7271012-2	7271012-3 =	210
211 =	7271013-2	7271013-3	7271055-2	7271055-3	7271265-2	7271265-3	212118-2	212118-3	212120-2	212120-3 =	220
221 =	212125-2	212125-3	212385-2	212385-3	212388-2	212388-3	212390-2	212390-3	213110-2	213110-3 =	230
231 =	213113-2	213113-3	213115-2	213115-3	213195-2	213195-3	213198-2	213198-3	213201-2	213201-3 =	240
241 =	213203-2	213203-3	213265-2	213265-3	213268-2	213268-3	312118-2	312118-3	312120-2	312120-3 =	250
251 =	312125-2	312125-3	312385-2	312385-3	312388-2	312388-3	312390-2	312390-3	313195-2	313195-3 =	260
261 =	313198-2	313198-3	313201-2	313201-3	313203-2	313203-3	313265-2	313265-3	313268-2	313268-3 =	270
271 =	2423-2	2423-3	2433-2	2665-1	2665-2	2443-2	2443-3	2679-2	2680-2	702423-2 =	280
281 =	702423-3	702433-2	702665-1	702665-2	702443-2	702443-3	702679-2	702680-2	2651-1	2651-2 =	290
291 =	2651-3	2651-4	2651-5	2651-6	27895-1	27895-2	27895-3	27895-4	27895-5	27895-6 =	300
301 =	27896-1	27896-2	27896-3	27896-4	27896-5	27896-6	1651-1	1651-2	1651-3	1651-4 =	310
311 =	1651-5	1651-6	3076-1	3076-2	3076-3	3401-1	3401-2	3401-3	1650-1	1650-2 =	320
321 =	1650-3	1650-4	1650-5	1650-6	210388-2	210388-3	210390-2	210390-3	210393-2	210393-3 =	330
331 =	210395-2	210395-3	210398-2	210398-3	210400-2	210400-3	210405-2	210405-3	210413-2	210413-3 =	340
341 =	210458-2	210458-3	210460-2	210460-3	210463-2	210463-3	210465-2	210465-3	210468-2	210468-3 =	350
351 =	210470-2	210470-3	210475-2	210475-3	210530-2	210530-3	210533-2	210533-3	210535-2	210535-3 =	360
361 =	210538-2	210538-3	210600-2	210600-3	210670-2	210670-3	211040-2	211040-3	211043-2	211043-3 =	370
371 =	211180-2	211180-3	211183-2	211183-3	211320-2	211320-3	211323-2	211323-3	211325-2	211325-3 =	380
381 =	211460-2	211460-3	211463-2	211463-3	211465-2	211465-3	211468-2	211468-3	211470-2	211470-3 =	390
391 =	211494-2	211494-3	211528-2	211528-3	211530-2	211530-3	211533-2	211533-3	211535-2	211535-3 =	400
401 =	211538-2	211538-3	211540-2	211540-3	211545-2	211545-3	211595-2	211595-3	211598-2	211598-3 =	410
411 =	211600-2	211600-3	211603-2	211603-3	211605-2	211605-3	211608-2	211608-3	212040-2	212040-3 =	420
421 =	212043-2	212043-3	212045-2	212045-3	212250-2	212250-3	212253-2	212253-3	212255-2	212255-3 =	430
431 =	212530-2	212530-3	212533-2	212533-3	212535-2	212535-3	213180-2	213180-3	213183-2	213183-3 =	440
441 =	213185-2	213185-3	213188-2	213188-3	213250-2	213250-3	213253-2	213253-3	213255-2	213255-3 =	450
451 =	213323-2	213323-3	213325-2	213325-3	213390-2	213390-3	213393-2	213393-3	213395-2	213395-3 =	460
461 =	213460-2	213460-3	213463-2	213463-3	213465-2	213465-3	213468-2	213468-3	213481-2	213481-3 =	470
471 =	213528-2	213528-3	213530-2	213530-3	213533-2	213533-3	213535-2	213535-3	213538-2	213538-3 =	480
481 =	213540-2	213540-3	213600-2	213600-3	959-1	959-2	959-3	960-1	960-2	960-3 =	490
491 =	961-1	961-2	961-3	962-1	962-2	962-3	963-1	963-2	963-3	964-1 =	500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 172

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
501 =	964-2	964-3	965-1	965-2	965-3	967-1	967-2	967-3	969-1	969-2	= 510
511 =	969-3	970-1	970-2	970-3	971-1	971-2	971-3	972-1	972-2	972-3	= 520
521 =	973-1	973-2	973-3	974-1	974-2	974-3	975-1	975-2	975-3	977-1	= 530
531 =	977-2	977-3	271218-2	271217-1	271217-2	271217-3	271216-1	271216-2	271219-1	271219-2	= 540
541 =	271219-3	27355-1	27355-2	27355-3	701383-2	701383-3	701405-2	701405-3	701963-1	701963-2	= 550
551 =	701963-3	701393-2	1383-2	1383-3	1405-2	1405-3	901963-1	901963-2	901963-3	1393-2	= 560
561 =	701423-2	701423-3	701445-2	701445-3	701965-1	701965-2	701965-3	701433-2	1423-2	1423-3	= 570
571 =	1445-2	1445-3	901965-1	901965-2	901965-3	1433-2	701443-2	701443-3	702365-2	702365-3	= 580
581 =	702661-1	702661-2	702661-3	702353-2	1443-2	1443-3	2365-2	2365-3	2661-1	2661-2	= 590
591 =	2661-3	2353-2	727355-2	727355-3	7271219-2	7271219-3	7271217-1	7271217-2	7271217-3	727435-2	= 600
601 =	6032-1	6032-2	6032-3	6060-1	6060-2	6060-3	6061-1	6061-2	6061-3	6064-1	= 610
611 =	6064-2	6064-3	6081-1	6081-2	6081-3	6081-4	6081-5	6082-1	6082-2	6082-3	= 620
621 =	6083-1	6083-2	6083-3	6084-1	6084-2	6084-3	6085-1	6085-2	6085-3	6067-1	= 630
631 =	6067-2	6067-3	6068-1	6068-2	6068-3	6071-1	6071-2	6071-3	6069-1	6069-2	= 640
641 =	6069-3	6070-1	6070-2	6070-3	6073-1	6073-2	6073-3	6074-1	6074-2	6074-3	= 650
651 =	6076-1	6076-2	6076-3	6080-1	6080-2	6080-3	6080-4	6080-5	6086-1	6086-2	= 660
661 =	6086-3	6089-1	6089-2	6089-3	6087-1	6087-2	6087-3	6091-1	6091-2	6091-3	= 670
671 =	6092-1	6092-2	6092-3	6093-1	6093-2	6093-3	6094-1	6094-2	6094-3	6095-1	= 680
681 =	6095-2	6095-3	5001-1	5001-3	5002-1	5002-3	5003-1	5003-2	5003-3	5004-1	= 690
691 =	5004-2	5004-3	5005-1	5005-3	5006-1	5006-2	5006-3	5007-1	5007-2	5007-3	= 700
701 =	5008-1	5008-2	5008-3	5009-1	5009-2	5009-3	5010-1	5010-2	5010-3	5011-1	= 710
711 =	5011-2	5011-3	5012-1	5012-2	5012-3	5013-1	5013-2	5013-3	5014-1	5014-2	= 720
721 =	5014-3	5015-1	5015-2	5015-3	5016-1	5016-2	5016-3	5017-1	5017-2	5017-3	= 730
731 =	5018-1	5018-2	5018-3	5019-1	5019-2	5019-3	5020-1	5020-2	5020-3	5021-1	= 740
741 =	5021-2	5021-3	5022-1	5022-2	5022-3	5023-1	5023-2	5023-3	5024-1	5024-2	= 750
751 =	5024-3	5025-1	5025-2	5025-3	5026-1	5026-2	5026-3	5027-1	5027-2	5027-3	= 760
761 =	5028-1	5028-2	5028-3	5029-1	5029-2	5029-3	5030-1	5030-2	5030-3	5031-1	= 770
771 =	5031-2	5031-3	5032-1	5032-2	5032-3	5033-1	5033-2	5033-3	5034-1	5034-2	= 780
781 =	5034-3	5035-1	5035-2	5035-3	5036-1	5036-2	5036-3	5037-1	5037-2	5037-3	= 790
791 =	5038-1	5038-2	5038-3	5039-1	5039-2	5039-3	5040-1	5040-2	5040-3	5041-1	= 800
801 =	5041-2	5041-3	5042-2	5042-3	5043-2	5043-3	5044-2	5044-3	5045-2	5045-3	= 810
811 =	5046-2	5046-3	5047-2	5047-3	5048-2	5048-3	5049-2	5049-3	5050-2	5050-3	= 820
821 =	5051-2	5051-3	5052-2	5052-3	5053-2	5053-3	5054-2	5054-3	5055-2	5055-3	= 830
831 =	5056-2	5056-3	5057-2	5057-3	5058-1	5058-2	5058-3	5059-1	5059-2	5059-3	= 840
841 =	5060-1	5060-2	5060-3	5061-1	5061-2	5061-3	5062-1	5062-2	5062-3	5063-1	= 850
851 =	5063-2	5063-3	5064-1	5064-2	5064-3	5065-1	5065-2	5065-3	5066-1	5066-2	= 860
861 =	5066-3	5067-1	5067-2	5067-3	5068-1	5068-2	5068-3	5069-1	5069-2	5069-3	= 870
871 =	5070-2	5070-3	5071-2	5071-3	5072-2	5072-3	5073-2	5073-3	5074-2	5075-2	= 880
881 =	5076-1	5076-2	5076-3	5077-1	5077-2	5077-3	5078-1	5078-2	5078-3	5079-1	= 890
891 =	5079-2	5079-3	5080-1	5080-2	5080-3	5081-1	5081-2	5081-3	5082-1	5082-2	= 900
901 =	5082-3	5083-1	5083-2	5083-3	5084-1	5084-2	5084-3	5085-1	5085-2	5085-3	= 910
911 =	5086-1	5086-2	5086-3	5087-1	5087-2	5087-3	5088-1	5088-2	5088-3	5089-1	= 920
921 =	5089-2	5089-3	5090-1	5090-2	5090-3	5091-1	5091-2	5091-3	5092-1	5092-2	= 930
931 =	5092-3	5093-1	5093-2	5093-3	5094-1	5094-2	5094-3	5095-1	5095-2	5095-3	= 940
941 =	5096-1	5096-2	5096-3	5097-1	5097-2	5097-3	5098-1	5098-2	5098-3	5099-1	= 950
951 =	5099-2	5099-3	5100-1	5100-2	5100-3	5101-1	5101-2	5101-3	5102-1	5102-2	= 960
961 =	5102-3	5103-1	5103-2	5103-3	5104-1	5104-2	5104-3	5105-1	5105-2	5105-3	= 970
971 =	5106-1	5106-2	5106-3	5107-1	5107-2	5107-3	5108-1	5108-2	5108-3	5109-1	= 980
981 =	5109-2	5109-3	5110-1	5110-2	5110-3	5111-1	5111-2	5111-3	5112-1	5112-2	= 990
991 =	5112-3	5113-1	5113-2	5113-3	5114-1	5114-2	5114-3	5115-1	5115-2	5115-3	= 1000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 173

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1001 =	5116-2	5116-3	5117-2	5117-3	5118-1	5118-2	5118-3	5119-1	5119-2	5119-3 =	1010
1011 =	5120-1	5120-2	5120-3	5121-1	5121-2	5121-3	5122-1	5122-3	5123-1	5123-3 =	1020
1021 =	5124-1	5124-2	5124-3	5125-1	5125-3	5126-1	5126-2	5126-3	5127-1	5127-2 =	1030
1031 =	5127-3	5128-1	5128-2	5128-3	5129-3	2934-2	2934-3	2979-2	2979-3	5130-1 =	1040
1041 =	5130-2	5130-3	5131-1	5131-2	5131-3	5132-1	5132-2	5132-3	5133-2	5133-3 =	1050
1051 =	5134-2	5134-3	5135-2	5135-3	5136-2	5136-3	5137-2	5137-3	5138-2	5138-3 =	1060
1061 =	5139-2	5140-2	5141-2	5142-2	5143-2	5144-2	5145-2	5146-2	5147-2	5147-3 =	1070
1071 =	5148-2	5148-3	5149-2	5149-3	5150-2	5150-3	5151-2	5151-3	5152-2	5152-3 =	1080
1081 =	5153-2	5153-3	5154-2	5154-3	5155-2	5155-3	5156-2	5156-3	5157-2	5157-3 =	1090
1091 =	5158-2	5158-3	5159-2	5159-3	5160-2	5160-3	5161-2	5161-3	5162-2	5162-3 =	1100
1101 =	5163-3	5164-2	5164-3	5165-2	5165-3	5166-2	5166-3	5167-2	5167-3	5168-2 =	1110
1111 =	5168-3	5169-2	5169-3	5170-2	5171-2	5172-2	5173-2	5174-2	5175-2	5176-1 =	1120
1121 =	5176-2	5176-3	5177-1	5177-2	5177-3	5178-2	5179-2	5180-3	5181-2	5181-3 =	1130
1131 =	5182-2	5182-3	5183-2	5183-3	5184-2	5184-3	5185-2	5185-3	5186-2	5186-3 =	1140
1141 =	5187-2	5188-2	5189-1	5189-2	5189-3	5190-1	5190-2	5190-3	5191-2	5192-2 =	1150
1151 =	5193-2	5194-2	5195-2	5196-2	5197-2	5197-3	5198-2	5198-3	5199-2	5199-3 =	1160
1161 =	5200-2	5200-3	5201-2	5201-3	5202-2	5202-3	5203-2	5203-3	5204-2	5204-3 =	1170
1171 =	5205-3	5206-2	5206-3	5207-2	5207-3	5208-2	5208-3	5209-2	5209-3	5210-2 =	1180
1181 =	5210-3	5211-2	5211-3	5212-2	5213-2	5214-2	5215-2	5216-2	5217-2	5218-1 =	1190
1191 =	5218-2	5218-3	5219-1	5219-2	5219-3	5220-2	5220-3	5221-2	5221-3	5222-2 =	1200
1201 =	5222-3	5223-2	5223-3	5224-2	5224-3	5225-2	5225-3	5226-2	5226-3	5227-2 =	1210
1211 =	5227-3	5228-2	5228-3	5229-2	5229-3	5230-2	5230-3	5231-2	5231-3	5232-3 =	1220
1221 =	5233-2	5233-3	5234-2	5234-3	5235-2	5235-3	5236-2	5236-3	5237-2	5237-3 =	1230
1231 =	5238-2	5238-3	5239-2	5240-2	5241-2	5242-2	5243-2	5244-2	5245-1	5245-2 =	1240
1241 =	5245-3	5246-1	5246-2	5246-3	5247-2	5247-3	5248-2	5248-3	5249-2	5249-3 =	1250
1251 =	5250-2	5250-3	5251-3	5252-2	5252-3	5253-2	5253-3	5254-2	5254-3	5255-2 =	1260
1261 =	5255-3	5256-2	5256-3	5257-2	5257-3	5258-2	5259-2	5260-1	5260-2	5260-3 =	1270
1271 =	5261-1	5261-2	5261-3	5262-2	5263-2	5264-2	5265-2	5266-2	5266-3	5267-2 =	1280
1281 =	5267-3	5268-2	5268-3	5269-2	5269-3	5270-2	5270-3	5271-2	5271-3	5272-2 =	1290
1291 =	5272-3	5273-2	5273-3	5274-2	5274-3	5275-2	5275-3	5276-2	5276-3	5277-2 =	1300
1301 =	5277-3	5278-3	5279-2	5279-3	5280-2	5280-3	5281-2	5281-3	5282-2	5282-3 =	1310
1311 =	5283-2	5283-3	5284-2	5284-3	5285-2	5286-2	5287-2	5288-2	5289-2	5290-2 =	1320
1321 =	453-1	453-2	453-3	793-1	793-2	793-3	5293-2	5293-3	5294-2	5294-3 =	1330
1331 =	5295-2	5295-3	5296-2	5296-3	5297-3	5298-2	5298-3	5299-2	5299-3	5300-2 =	1340
1341 =	5300-3	5301-2	5301-3	5302-2	5302-3	5303-2	5303-3	5304-2	5305-2	5306-2 =	1350
1351 =	5307-2	5308-2	5309-2	5310-1	5310-2	5310-3	5311-1	5311-2	5311-3	5312-2 =	1360
1361 =	5312-3	5313-2	5313-3	5314-2	5314-3	5315-2	5315-3	5316-2	5316-3	5317-2 =	1370
1371 =	5317-3	5318-2	5318-3	5319-2	5319-3	5320-2	5320-3	5321-2	5321-3	5322-2 =	1380
1381 =	5322-3	5323-2	5323-3	5324-3	5325-2	5325-3	5326-2	5326-3	5327-2	5327-3 =	1390
1391 =	5328-2	5328-3	5329-2	5329-3	5330-2	5330-3	5331-2	5332-2	5333-2	5334-2 =	1400
1401 =	5335-2	5336-2	5337-1	5337-2	5337-3	5338-1	5338-2	5338-3	5339-2	5339-3 =	1410
1411 =	5340-2	5340-3	5341-2	5341-3	5342-2	5342-3	5343-2	5343-3	5344-2	5344-3 =	1420
1421 =	5345-2	5345-3	5346-2	5346-3	5347-2	5347-3	5348-2	5348-3	5349-2	5349-3 =	1430
1431 =	5350-2	5350-3	5351-3	5352-2	5352-3	5353-2	5353-3	5354-2	5354-3	5355-2 =	1440
1441 =	5355-3	5356-2	5356-3	5357-2	5357-3	5358-2	5359-2	5360-1	5360-2	5360-3 =	1450
1451 =	5361-1	5361-2	5361-3	5362-2	5363-2	5364-2	5365-2	5366-3	5367-2	5367-3 =	1460
1461 =	5368-2	5368-3	5369-2	5369-3	5370-2	5370-3	5371-2	5371-3	5372-2	5372-3 =	1470
1471 =	5373-2	5374-2	5375-1	5375-2	5375-3	5376-1	5376-2	5376-3	5377-2	5378-2 =	1480
1481 =	5379-2	5380-2	5381-2	5381-3	5382-2	5382-3	5383-2	5383-3	5384-2	5384-3 =	1490
1491 =	5385-2	5385-3	5386-2	5386-3	5387-2	5387-3	5388-2	5388-3	5389-3	5390-2 =	1500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 174

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1501 =	5390-3	5391-2	5391-3	5392-2	5392-3	5393-2	5393-3	5394-2	5394-3	5395-2 =	1510
1511 =	5395-3	5396-2	5397-2	5398-2	5399-2	5400-1	5400-2	5400-3	5401-1	5401-2 =	1520
1521 =	5401-3	5402-2	5403-2	5404-2	5404-3	5405-2	5405-3	5406-2	5406-3	5407-2 =	1530
1531 =	5407-3	5408-2	5408-3	5409-2	5409-3	5410-2	5410-3	5411-2	5411-3	5412-3 =	1540
1541 =	5413-2	5413-3	5414-2	5414-3	5415-2	5415-3	5416-2	5416-3	5417-2	5417-3 =	1550
1551 =	5418-2	5418-3	5419-2	5420-2	5421-2	5422-2	5423-1	5423-2	5423-3	5424-1 =	1560
1561 =	5424-2	5424-3	5425-2	5426-2	5427-3	5428-2	5428-3	5429-2	5429-3	5430-2 =	1570
1571 =	5430-3	5431-2	5431-3	5432-2	5432-3	5433-2	5433-3	5434-2	5435-2	5436-1 =	1580
1581 =	5436-2	5436-3	5437-1	5437-2	5437-3	5438-2	5439-2	5440-2	5441-2	5442-2 =	1590
1591 =	5442-3	5443-2	5443-3	5444-2	5444-3	5445-2	5445-3	5446-2	5446-3	5447-2 =	1600
1601 =	5447-3	5448-2	5448-3	5449-2	5449-3	1094-1	1094-2	1094-3	5451-2	5451-3 =	1610
1611 =	5452-2	5452-3	5453-2	5453-3	5454-2	5454-3	5455-2	5455-3	5456-2	5456-3 =	1620
1621 =	5457-2	5458-2	5459-1	5459-2	5459-3	5460-1	5460-2	5460-3	5461-2	5462-2 =	1630
1631 =	5463-2	5464-2	5465-3	5466-2	5466-3	5467-2	5467-3	5468-2	5468-3	5469-2 =	1640
1641 =	5469-3	5470-2	5470-3	5471-2	5471-3	5472-2	5473-2	5474-2	5475-2	5476-1 =	1650
1651 =	5476-2	5476-3	5477-1	5477-2	5477-3	5478-2	5479-2	5480-2	5480-3	5481-2 =	1660
1661 =	5481-3	5482-2	5482-3	5483-2	5483-3	5484-2	5484-3	5485-2	5485-3	5486-2 =	1670
1671 =	5486-3	5487-2	5487-3	5488-3	5489-2	5489-3	5490-2	5490-3	5491-2	5491-3 =	1680
1681 =	5492-2	5492-3	536-2	536-3	1680-2	1680-3	5495-2	5496-2	5497-1	5497-2 =	1690
1691 =	5497-3	5498-1	5498-2	5498-3	5499-2	5500-2	5501-2	5502-2	5503-2	5503-3 =	1700
1701 =	5504-2	5504-3	5505-2	5505-3	5506-2	5506-3	5507-2	5507-3	5508-2	5508-3 =	1710
1711 =	5509-2	5509-3	5510-2	5510-3	5511-3	5512-2	5512-3	5513-2	5513-3	5514-2 =	1720
1721 =	5514-3	5515-2	5515-3	5516-2	5516-3	5517-2	5517-3	5518-2	5519-2	5520-1 =	1730
1731 =	5520-2	5520-3	5521-1	5521-2	5521-3	5522-2	5523-2	5524-2	5525-2	5526-3 =	1740
1741 =	5527-2	5527-3	5528-2	5528-3	5529-2	5529-3	5530-2	5530-3	5531-2	5531-3 =	1750
1751 =	5532-2	5532-3	5533-2	5534-2	5535-1	5535-2	5535-3	5536-1	5536-2	5536-3 =	1760
1761 =	5537-2	5538-2	5539-2	5540-2	5541-2	5541-3	5542-2	5542-3	5543-2	5543-3 =	1770
1771 =	5544-2	5544-3	5545-2	5545-3	5546-2	5546-3	5547-2	5547-3	5548-2	5548-3 =	1780
1781 =	5549-3	5550-2	5550-3	5551-2	5551-3	5552-2	5552-3	5553-2	5553-3	5554-2 =	1790
1791 =	5554-3	5555-2	5555-3	5556-2	5557-2	5558-1	5558-2	5558-3	5559-1	5559-2 =	1800
1801 =	5559-3	5560-2	5561-2	5562-2	5563-2	5564-2	5564-3	5565-2	5565-3	5566-2 =	1810
1811 =	5566-3	5567-2	5567-3	5568-2	5568-3	5569-2	5569-3	5570-2	5570-3	5571-2 =	1820
1821 =	5571-3	1100-1	1100-2	1100-3	5573-2	5573-3	5574-2	5574-3	5575-2	5575-3 =	1830
1831 =	5576-2	5576-3	5577-2	5577-3	5578-2	5578-3	5579-2	5580-2	605-1	605-2 =	1840
1841 =	605-3	945-1	945-2	945-3	5583-2	5584-2	5585-2	5586-2	5587-2	5587-3 =	1850
1851 =	5588-2	5588-3	5589-2	5589-3	5590-2	5590-3	5591-2	5591-3	5592-2	5592-3 =	1860
1861 =	5593-2	5593-3	5594-2	5594-3	5595-3	5596-2	5596-3	5597-2	5597-3	5598-2 =	1870
1871 =	5598-3	5599-2	5599-3	5600-2	5600-3	5601-2	5601-3	5602-2	5603-2	5604-1 =	1880
1881 =	5604-2	5604-3	5605-1	5605-2	5605-3	5606-2	5607-2	5608-2	5609-2	5610-3 =	1890
1891 =	5611-2	5611-3	5612-2	5612-3	5613-2	5613-3	5614-2	5614-3	5615-2	5615-3 =	1900
1901 =	5616-2	5616-3	5617-2	5617-3	5618-2	5618-3	5619-2	5620-2	5621-1	5621-2 =	1910
1911 =	5621-3	5622-1	5622-2	5622-3	5623-2	5624-2	5625-2	5626-2	5627-2	5627-3 =	1920
1921 =	5628-2	5628-3	5629-2	5629-3	5630-2	5630-3	5631-2	5631-3	5632-2	5632-3 =	1930
1931 =	5633-2	5633-3	5634-2	5634-3	5635-3	5636-2	5636-3	5637-2	5637-3	5638-2 =	1940
1941 =	5638-3	5639-2	5639-3	5640-2	5640-3	5641-2	5641-3	5642-2	5642-3	5643-2 =	1950
1951 =	5643-3	5644-2	5645-2	5646-1	5646-2	5646-3	5647-1	5647-2	5647-3	5648-2 =	1960
1961 =	5649-2	5650-2	5651-2	5652-2	5652-3	5653-2	5653-3	5654-2	5654-3	5655-2 =	1970
1971 =	5655-3	5656-2	5656-3	5657-2	5657-3	5658-2	5658-3	5659-2	5659-3	5660-3 =	1980
1981 =	5661-2	5661-3	5662-2	5662-3	5663-2	5663-3	5664-2	5664-3	5665-2	5665-3 =	1990
1991 =	5666-2	5666-3	5667-2	5667-3	5668-2	5668-3	5669-2	5670-2	5671-1	5671-2 =	2000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 175

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
2001 =	5671-3	5672-1	5672-2	5672-3	5673-2	5674-2	5675-2	5676-2	5677-3	5678-2 =	2010
2011 =	5678-3	5679-2	5679-3	5680-2	5680-3	5681-2	5681-3	5682-2	5682-3	5683-2 =	2020
2021 =	5683-3	5684-2	5684-3	5685-2	5685-3	5686-2	5687-2	5688-1	5688-2	5688-3 =	2030
2031 =	5689-1	5689-2	5689-3	5690-2	5691-2	5692-2	5693-2	5694-2	5694-3	5695-2 =	2040
2041 =	5695-3	5696-2	5696-3	5697-2	5697-3	5698-2	5698-3	5699-2	5699-3	5700-2 =	2050
2051 =	5700-3	5701-2	5701-3	5702-1	5702-2	5702-3	5703-3	5704-3	5705-2	5705-3 =	2060
2061 =	5706-2	5706-3	5707-2	5707-3	5708-2	5708-3	5709-1	5709-2	5709-3	5710-1 =	2070
2071 =	5710-2	5710-3	5711-2	5712-2	5713-2	5714-2	5715-1	5715-2	5715-3	5716-1 =	2080
2081 =	5716-2	5716-3	5717-2	5718-2	5719-2	5719-3	5720-2	5720-3	5721-2	5721-3 =	2090
2091 =	5722-2	5722-3	5723-2	5723-3	5724-2	5724-3	5725-2	5725-3	5726-2	5726-3 =	2100
2101 =	5727-2	5727-3	5728-2	5728-3	5729-2	5729-3	5730-2	5730-3	5731-2	5731-3 =	2110
2111 =	5732-2	5732-3	5733-2	5733-3	5734-2	5734-3	5735-2	5735-3	5736-2	5736-3 =	2120
2121 =	5737-2	5737-3	5738-2	5738-3	5739-2	5739-3	5740-2	5740-3	5741-2	5741-3 =	2130
2131 =	5742-2	5742-3	5743-2	5743-3	5744-2	5744-3	5745-2	5745-3	5746-2	5746-3 =	2140
2141 =	5747-2	5747-3	5748-2	5748-3	5749-2	5749-3	5750-2	5750-3	5751-2	5751-3 =	2150
2151 =	5752-2	5752-3	5753-2	5753-3	5754-2	5754-3	5755-2	5755-3	5756-2	5756-3 =	2160
2161 =	5757-2	5757-3	5758-2	5758-3	5759-2	5759-3	5760-2	5760-3	5761-2	5761-3 =	2170
2171 =	5762-2	5762-3	5763-2	5763-3	5764-2	5764-3	5765-2	5765-3	5766-2	5766-3 =	2180
2181 =	5767-2	5767-3	5768-2	5768-3	5769-1	5769-3	5770-1	5770-3	5771-1	5771-3 =	2190
2191 =	5772-1	5772-3	5773-1	5773-3	5774-1	5774-3	5775-1	5775-3	5776-1	5776-3 =	2200
2201 =	5777-1	5777-3	5778-1	5778-2	5778-3	5779-1	5779-2	5779-3	5780-1	5780-2 =	2210
2211 =	5780-3	5781-1	5781-2	5781-3	5782-1	5782-2	5782-3	5783-1	5783-2	5783-3 =	2220
2221 =	5784-1	5784-3	5785-1	5785-3	5786-1	5786-2	5786-3	5787-1	5787-2	5787-3 =	2230
2231 =	5788-1	5788-2	5788-3	5789-1	5789-2	5789-3	5790-1	5790-2	5790-3	5791-1 =	2240
2241 =	5791-2	5791-3	5792-1	5792-2	5792-3	5793-1	5793-2	5793-3	5794-1	5794-2 =	2250
2251 =	5794-3	5795-1	5795-2	5795-3	5796-1	5796-2	5796-3	5797-1	5797-2	5797-3 =	2260
2261 =	5798-1	5798-2	5798-3	5799-1	5799-2	5799-3	5800-1	5800-2	5800-3	5801-1 =	2270
2271 =	5801-2	5801-3	5802-1	5802-2	5802-3	5803-1	5803-2	5803-3	5804-1	5804-3 =	2280
2281 =	5805-1	5805-3	5806-1	5806-3	5807-1	5807-3	5808-1	5808-3	5809-1	5809-3 =	2290
2291 =	5810-1	5810-3	5811-1	5811-3	5812-1	5812-3	5813-1	5813-3	5814-1	5814-3 =	2300
2301 =	5815-1	5815-3	5816-1	5816-3	5817-1	5817-3	5818-1	5818-3	5819-1	5819-3 =	2310
2311 =	5820-1	5820-3	5821-1	5821-3	5822-1	5822-3	5823-1	5823-3	5824-1	5824-3 =	2320
2321 =	5825-1	5825-3	5826-1	5826-3	5827-1	5827-3	5828-1	5828-3	5829-1	5829-3 =	2330
2331 =	5830-1	5830-3	5831-1	5831-3	5832-1	5832-3	5833-1	5833-2	5833-3	5834-1 =	2340
2341 =	5834-2	5834-3	5835-1	5835-2	5835-3	5836-3	5837-3	5838-3	5839-3	5840-3 =	2350
2351 =	5841-3	5842-3	5843-3	5844-1	5844-2	5844-3	5845-1	5845-2	5845-3	5846-1 =	2360
2361 =	5846-2	5846-3	5847-1	5847-2	5847-3	5848-1	5848-2	5848-3	5849-1	5849-2 =	2370
2371 =	5849-3	5850-1	5850-2	5850-3	5851-1	5851-2	5851-3	5852-1	5852-2	5852-3 =	2380
2381 =	5853-1	5853-2	5853-3	5854-1	5854-2	5854-3	5855-1	5855-2	5855-3	5856-1 =	2390
2391 =	5856-2	5856-3	5857-1	5857-2	5857-3	5858-1	5858-2	5858-3	5859-1	5859-2 =	2400
2401 =	5859-3	5860-1	5860-2	5860-3	5861-1	5861-2	5861-3	5862-2	5862-3	5863-2 =	2410
2411 =	5863-3	5864-1	5865-1	5866-1	5866-2	5866-3	5867-1	5867-2	5867-3	5868-1 =	2420
2421 =	5868-2	5868-3	5869-1	5869-2	5869-3	5870-1	5870-2	5870-3	5871-1	5871-2 =	2430
2431 =	5871-3	5872-1	5872-2	5872-3	5873-1	5873-2	5873-3	5874-1	5874-2	5874-3 =	2440
2441 =	5875-1	5875-2	5875-3	5876-1	5876-2	5876-3	5877-1	5877-2	5877-3	5878-1 =	2450
2451 =	5878-2	5878-3	5879-1	5879-2	5879-3	5880-1	5880-2	5880-3	5881-1	5881-2 =	2460
2461 =	5881-3	5882-1	5882-2	5882-3	5883-1	5883-2	5883-3	5884-1	5884-2	5884-3 =	2470
2471 =	5885-1	5885-2	5885-3	5886-1	5886-2	5886-3	5887-1	5887-2	5887-3	5888-1 =	2480
2481 =	5888-2	5888-3	5889-1	5889-2	5889-3	5890-1	5890-2	5890-3	5891-1	5891-2 =	2490
2491 =	5891-3	5892-1	5892-2	5892-3	5893-1	5893-2	5893-3	5894-1	5894-2	5894-3 =	2500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 176

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
2501 =	5895-1	5895-2	5895-3	5896-1	5896-2	5896-3	5897-1	5897-2	5897-3	5898-2 =	2510
2511 =	5898-3	5899-2	5899-3	5900-1	5900-2	5900-3	5901-1	5901-2	5901-3	5902-1 =	2520
2521 =	5902-2	5902-3	5903-1	5903-2	5903-3	5904-1	5904-2	5904-3	5905-1	5905-2 =	2530
2531 =	5905-3	5971-1	5971-2	5971-3	5972-1	5972-2	5972-3	5973-1	5973-2	5973-3 =	2540
2541 =	5974-1	5974-2	5974-3	2719-1	2719-2	2719-3	2719-4	2719-5	2719-6	2720-1 =	2550
2551 =	2720-2	2720-3	2747-1	2747-2	2747-3	2747-4	2747-5	2747-6	2748-1	2748-2 =	2560
2561 =	2748-3	2733-1	2733-2	2733-3	2733-4	2733-5	2733-6	2734-1	2734-2	2734-3 =	2570
2571 =	2329-1	2329-2	2329-3	2335-2	1629-3	1779-3	1608-3	5906-3	5907-3	5908-3 =	2580
2581 =	5909-3	5910-3	1612-3	5911-3	5912-3	5913-3	5914-3	5915-3	5916-3	5917-3 =	2590
2591 =	5918-3	5919-3	1633-3	5921-3	5922-3	1638-3	1617-3	1621-3	5925-3	5926-3 =	2600
2601 =	1806-3	5927-3	5928-3	5929-3	5930-3	1814-3	5931-3	1818-3	5932-3	5933-3 =	2610
2611 =	5934-3	5965-3	5966-3	1758-3	5936-3	5937-3	5938-3	5939-3	5940-3	1762-3 =	2620
2621 =	5941-3	5942-3	5943-3	5944-3	5945-3	5946-3	5947-3	5948-3	5949-3	1783-3 =	2630
2631 =	5951-3	5952-3	1788-3	1767-3	1771-3	5955-3	5956-3	1826-3	5957-3	5958-3 =	2640
2641 =	5959-3	5960-3	1834-3	5961-3	1838-3	5962-3	5963-3	5964-3	5967-3	5968-3 =	2650
2651 =	90-1	90-2	90-3	91-1	91-2	91-3	1091-1	1091-2	1091-3	226-1 =	2660
2661 =	226-2	226-3	226-4	226-5	226-6	200-2	200-3	200-5	200-6	216-1 =	2670
2671 =	216-2	216-3	704-2	704-3	2874-2	2874-3	662-2	662-3	691-3	606-2 =	2680
2681 =	606-3	634-2	634-3	635-3	723-2	723-3	546-2	546-3	302-2	302-3 =	2690
2691 =	307-2	307-3	309-3	390-1	313-2	314-2	315-2	315-3	316-3	317-2 =	2700
2701 =	318-2	319-2	319-3	320-3	321-2	322-2	323-3	324-3	328-3	329-2 =	2710
2711 =	330-2	331-3	332-3	335-3	343-2	344-2	345-3	346-3	391-1	356-1 =	2720
2721 =	356-2	356-3	356-4	356-5	356-6	357-2	357-3	350-1	350-2	350-3 =	2730
2731 =	351-1	351-2	351-3	352-1	352-2	352-3	353-1	353-2	353-3	1302-2 =	2740
2741 =	1302-3	1307-2	1307-3	1309-3	1390-1	1313-2	1314-2	1315-2	1315-3	1316-3 =	2750
2751 =	1317-2	1318-2	1319-2	1319-3	1320-3	1321-2	1322-2	1323-3	1324-3	1328-3 =	2760
2761 =	1329-2	1330-2	1331-3	1332-3	1335-3	1343-2	1344-2	1345-3	1346-3	1391-1 =	2770
2771 =	1356-1	1356-2	1356-3	1356-4	1356-5	1356-6	1357-2	1357-3	1350-1	1350-2 =	2780
2781 =	1350-3	1351-1	1351-2	1351-3	1352-1	1352-2	1352-3	1353-1	1353-2	1353-3 =	2790
2791 =	1117-1	1117-2	1117-3	1117-4	1117-5	1117-6	100-1	100-2	100-3	100-4 =	2800
2801 =	100-6	101-1	101-2	101-3	101-4	101-6	102-1	102-2	102-3	102-4 =	2810
2811 =	102-6	103-1	103-2	103-3	103-4	103-6	104-1	104-2	104-3	104-4 =	2820
2821 =	104-6	105-1	105-2	105-3	105-4	105-6	106-1	106-2	106-3	106-4 =	2830
2831 =	106-6	107-1	107-2	107-3	107-4	107-6	108-1	108-2	108-3	108-4 =	2840
2841 =	108-6	109-1	109-2	109-3	109-4	109-6	110-1	110-2	110-3	110-4 =	2850
2851 =	110-6	111-1	111-2	111-3	111-4	111-6	112-2	113-2	114-2	115-1 =	2860
2861 =	115-2	115-3	115-4	115-5	115-6	116-1	116-2	116-3	116-4	116-5 =	2870
2871 =	116-6	10001-1	10001-2	10001-3	10002-1	10002-2	10002-3	10004-1	10004-2	10004-3 =	2880
2881 =	10005-1	10005-2	10005-3	10006-1	10006-2	10006-3	10007-1	10007-2	10007-3	10008-1 =	2890
2891 =	10008-2	10008-3	10009-1	10009-2	10009-3	10010-1	10010-2	10010-3	10011-1	10011-2 =	2900
2901 =	10011-3	10012-1	10012-2	10012-3	10013-1	10013-2	10013-3	10016-1	10016-2	10016-3 =	2910
2911 =	10017-1	10017-2	10017-3	10018-1	10018-2	10018-3	10019-1	10019-2	10019-3	10020-1 =	2920
2921 =	10020-2	10020-3	10021-1	10021-2	10021-3	10022-1	10022-2	10022-3	10023-1	10023-2 =	2930
2931 =	10023-3	10025-1	10025-2	10025-3	10026-1	10026-2	10026-3	10027-1	10027-2	10027-3 =	2940
2941 =	10028-1	10028-2	10028-3	10029-1	10029-2	10029-3	10030-1	10030-2	10030-3	10031-1 =	2950
2951 =	10031-2	10031-3	10032-1	10032-2	10032-3	10033-1	10033-2	10033-3	10034-1	10034-2 =	2960
2961 =	10034-3	10035-1	10035-2	10035-3	10036-1	10036-2	10036-3	10037-1	10037-2	10037-3 =	2970
2971 =	10038-1	10038-2	10038-3	10039-1	10039-2	10039-3	10040-1	10040-2	10040-3	10041-1 =	2980
2981 =	10041-2	10041-3	10042-1	10042-2	10042-3	10043-1	10043-2	10043-3	10044-1	10044-2 =	2990
2991 =	10044-3	10045-1	10045-2	10045-3	10046-1	10046-2	10046-3	10047-1	10047-2	10047-3 =	3000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 177

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
3001 =	10048-1	10048-2	10048-3	10049-1	10049-2	10049-3	10050-1	10050-2	10050-3	10051-1 =	3010
3011 =	10051-2	10051-3	10052-1	10052-2	10052-3	10053-1	10053-2	10053-3	10054-1	10054-2 =	3020
3021 =	10054-3	10055-1	10055-2	10055-3	10056-1	10056-2	10056-3	10057-1	10057-2	10057-3 =	3030
3031 =	10058-1	10058-2	10058-3	10059-1	10059-2	10059-3	10060-1	10060-2	10060-3	10061-1 =	3040
3041 =	10061-2	10061-3	10062-1	10062-2	10062-3	10063-1	10063-2	10063-3	10064-1	10064-2 =	3050
3051 =	10064-3	10065-1	10065-2	10065-3	10066-1	10066-2	10066-3	10067-1	10067-2	10067-3 =	3060
3061 =	10068-1	10068-2	10068-3	10069-1	10069-2	10069-3	10070-1	10070-2	10070-3	10071-1 =	3070
3071 =	10071-2	10071-3	10072-1	10072-2	10072-3	10073-1	10073-2	10073-3	10074-1	10074-2 =	3080
3081 =	10074-3	10075-1	10075-2	10075-3	10076-1	10076-2	10076-3	10077-1	10077-2	10077-3 =	3090
3091 =	10078-1	10078-2	10078-3	10079-1	10079-2	10079-3	10080-1	10080-2	10080-3	10081-1 =	3100
3101 =	10081-2	10081-3	10082-1	10082-2	10082-3	10083-1	10083-2	10083-3			

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 178

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	100001-0	100002-0	100003-0	100004-0	100005-0	100006-0	100007-0	100008-0	100009-0	100010-0 =	10
11 =	100011-0	100012-0	100013-0	100014-0	100015-0	100016-0	100017-0	100018-0	100019-0	100020-0 =	20
21 =	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0 =	30
31 =	100031-0	100032-0	100033-0	100034-0	100035-0	100036-0	100037-0	100038-0	100039-0	100040-0 =	40
41 =	100041-0	100042-0	100043-0	100044-0	100045-0	100046-0	100047-0	100048-0	100049-0	100050-0 =	50
51 =	100051-0	100052-0	100053-0	100054-0	100055-0	100056-0	100057-0	100058-0	100059-0	100060-0 =	60
61 =	100061-0	100062-0	100063-0	100064-0	100065-0	100066-0	100067-0	100068-0	100069-0	100070-0 =	70
71 =	100071-0	100072-0	100073-0	100074-0	100075-0	100076-0	100077-0	100078-0	100079-0	100080-0 =	80
81 =	100081-0	100082-0	100083-0	100084-0	100085-0	100086-0	100087-0	100088-0	100089-0	100090-0 =	90
91 =	100091-0	100092-0	100093-0	100094-0	100095-0	100096-0	100097-0	100098-0	100099-0	100100-0 =	100
101 =	100101-0	100102-0	100103-0	100104-0	100105-0	100106-0	100107-0	100108-0	100109-0	100110-0 =	110
111 =	100111-0	100112-0	100113-0	100114-0	100115-0	100116-0	100117-0	100118-0	100119-0	100120-0 =	120
121 =	100121-0	100122-0	100123-0	100124-0	100125-0	100126-0	100127-0	100128-0	100129-0	100130-0 =	130
131 =	100131-0	100132-0	100133-0	100134-0	100135-0	100136-0	100137-0	100138-0	100139-0	100140-0 =	140
141 =	100141-0	100142-0	100143-0	100144-0	100145-0	100146-0	100147-0	100148-0	100149-0	100150-0 =	150
151 =	100151-0	100152-0	100153-0	100154-0	100155-0	100156-0	100157-0	100158-0	100159-0	100160-0 =	160
161 =	100161-0	100162-0	100163-0	100164-0	100165-0	100166-0	100167-0	100168-0	100169-0	100170-0 =	170
171 =	100171-0	100172-0	100173-0	100174-0	100175-0	100176-0	100177-0	100178-0	100179-0	100180-0 =	180
181 =	100181-0	100182-0	100183-0	100184-0	100185-0	100186-0	100187-0	100188-0	100189-0	100190-0 =	190
191 =	100191-0	100192-0	100193-0	100194-0	100195-0	100196-0	100197-0	100198-0	100199-0	100200-0 =	200
201 =	100201-0	100202-0	100203-0	100204-0	100205-0	100206-0	100207-0	100208-0	100209-0	100210-0 =	210
211 =	100211-0	100212-0	100213-0	100214-0	100215-0	100216-0	100217-0	100218-0	100219-0	100220-0 =	220
221 =	100221-0	100222-0	100223-0	100224-0	100225-0	100226-0	100227-0	100228-0	100229-0	100230-0 =	230
231 =	100231-0	100232-0	100233-0	100234-0	100235-0	100236-0	100237-0	100238-0	100239-0	100240-0 =	240
241 =	100241-0	100242-0	100243-0	100244-0	100245-0	100246-0	100247-0	100248-0	100249-0	100250-0 =	250
251 =	100251-0	100252-0	100253-0	100254-0	100255-0	100256-0	100257-0	100258-0	100259-0	100260-0 =	260
261 =	100261-0	100262-0	100263-0	100264-0	100265-0	100266-0	100267-0	100268-0	100269-0	100270-0 =	270
271 =	100271-0	100272-0	100273-0	100274-0	100275-0	100276-0	100277-0	100278-0	100279-0	100280-0 =	280
281 =	100281-0	100282-0	100283-0	100284-0	100285-0	100286-0	100287-0	100288-0	100289-0	100290-0 =	290
291 =	100291-0	100292-0	100293-0	100294-0	100295-0	100296-0	100297-0	100298-0	100299-0	100300-0 =	300
301 =	100301-0	100302-0	100303-0	100304-0	100305-0	100306-0	100307-0	100308-0	100309-0	100310-0 =	310
311 =	100311-0	100312-0	100313-0	100314-0	100315-0	100316-0	100317-0	100318-0	100319-0	100320-0 =	320
321 =	100321-0	100322-0	100323-0	100324-0	100325-0	100326-0	100327-0	100328-0	100329-0	100330-0 =	330
331 =	100331-0	100332-0	100333-0	100334-0	100335-0	100336-0	100337-0	100338-0	100339-0	100340-0 =	340
341 =	100341-0	100342-0	100343-0	100344-0	100345-0	100346-0	100347-0	100348-0	100349-0	100350-0 =	350
351 =	100351-0	100352-0	100353-0	100354-0	100355-0	100356-0	100357-0	100358-0	100359-0	100360-0 =	360
361 =	100361-0	100362-0	100363-0	100364-0	100365-0	100366-0	100367-0	100368-0	100369-0	100370-0 =	370
371 =	100371-0	100372-0	100373-0	100374-0	100375-0	100376-0	100377-0	100378-0	100379-0	100380-0 =	380
381 =	100381-0	100382-0	100383-0	100384-0	100385-0	100386-0	100387-0	100388-0	100389-0	100390-0 =	390
391 =	100391-0	100392-0	100393-0	100394-0	100395-0	100396-0	100397-0	100398-0	100399-0	100400-0 =	400
401 =	100401-0	100402-0	100403-0	100404-0	100405-0	100406-0	100407-0	100408-0	100409-0	100410-0 =	410
411 =	100411-0	100412-0	100413-0	100414-0	100415-0	100416-0	100417-0	100418-0	100419-0	100420-0 =	420
421 =	100421-0	100422-0	100423-0	100424-0	100425-0	100426-0	100427-0	100428-0	100429-0	100430-0 =	430
431 =	100431-0	100432-0	100433-0	100434-0	100435-0	100436-0	100437-0	100438-0	100439-0	100440-0 =	440
441 =	100441-0	100442-0	100443-0	100444-0	100445-0	100446-0	100447-0	100448-0	100449-0	100450-0 =	450
451 =	100451-0	100452-0	100453-0	100454-0	100455-0	100456-0	100457-0	100458-0	100459-0	100460-0 =	460
461 =	100461-0	100462-0	100463-0	100464-0	100465-0	100466-0	100467-0	100468-0	100469-0	100470-0 =	470
471 =	100471-0	100472-0	100473-0	100474-0	100475-0	100476-0	100477-0	100478-0	100479-0	100480-0 =	480
481 =	100481-0	100482-0	100483-0	100484-0	100485-0	100486-0	100487-0	100488-0	100489-0	100490-0 =	490
491 =	100491-0	100492-0	100493-0	100494-0	100495-0	100496-0	100497-0	100498-0	100499-0	100500-0 =	500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 179

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
501 =	100501-0	100502-0	100503-0	100504-0	100505-0	100506-0	100507-0	100508-0	100509-0	100510-0 =	510
511 =	100511-0	100512-0	100513-0	100514-0	100515-0	100516-0	100517-0	100518-0	100519-0	100520-0 =	520
521 =	100521-0	100522-0	100523-0	100524-0	100525-0	100526-0	100527-0	100528-0	100529-0	100530-0 =	530
531 =	100531-0	100532-0	100533-0	100534-0	100535-0	100536-0	100537-0	100538-0	100539-0	100540-0 =	540
541 =	100541-0	100542-0	100543-0	100544-0	100545-0	100546-0	100547-0	100548-0	100549-0	100550-0 =	550
551 =	100551-0	100552-0	100553-0	100554-0	100555-0	100556-0	100557-0	100558-0	100559-0	100560-0 =	560
561 =	100561-0	100562-0	100563-0	100564-0	100565-0	100566-0	100567-0	100568-0	100569-0	100570-0 =	570
571 =	100571-0	100572-0	100573-0	100574-0	100575-0	100576-0	100577-0	100578-0	100579-0	100580-0 =	580
581 =	100581-0	100582-0	100583-0	100584-0	100585-0	100586-0	100587-0	100588-0	100589-0	100590-0 =	590
591 =	100591-0	100592-0	100593-0	100594-0	100595-0	100596-0	100597-0	100598-0	100599-0	100600-0 =	600
601 =	100601-0	100602-0	100603-0	100604-0	100605-0	100606-0	100607-0	100608-0	100609-0	100610-0 =	610
611 =	100611-0	100612-0	100613-0	100614-0	100615-0	100616-0	100617-0	100618-0	100619-0	100620-0 =	620
621 =	100621-0	100622-0	100623-0	100624-0	100625-0	100626-0	100627-0	100628-0	100629-0	100630-0 =	630
631 =	100631-0	100632-0	100633-0	100634-0	100635-0	100636-0	100637-0	100638-0	100639-0	100640-0 =	640
641 =	100641-0	100642-0	100643-0	100644-0	100645-0	100646-0	100647-0	100648-0	100649-0	100650-0 =	650
651 =	100651-0	100652-0	100653-0	100654-0	100655-0	100656-0	100657-0	100658-0	100659-0	100660-0 =	660
661 =	100661-0	100662-0	100663-0	100664-0	100665-0	100666-0	100667-0	100668-0	100669-0	100670-0 =	670
671 =	100671-0	100672-0	100673-0	100674-0	100675-0	100676-0	100677-0	100678-0	100679-0	100680-0 =	680
681 =	100681-0	100682-0	100683-0	100684-0	100685-0	100686-0	100687-0	100688-0	100689-0	100690-0 =	690
691 =	100691-0	100692-0	100693-0	100694-0	100695-0	100696-0	100697-0	100698-0	100699-0	100700-0 =	700
701 =	100701-0	100702-0	100703-0	100704-0	100705-0	100706-0	100707-0	100708-0	100709-0	100710-0 =	710
711 =	100711-0	100712-0	100713-0	100714-0	100715-0	100716-0	100717-0	100718-0	100719-0	100720-0 =	720
721 =	100721-0	100722-0	100723-0	100724-0	100725-0	100726-0	100727-0	100728-0	100729-0	100730-0 =	730
731 =	100731-0	100732-0	100733-0	100734-0	100735-0	100736-0	100737-0	100738-0	100739-0	100740-0 =	740
741 =	100741-0	100742-0	100743-0	100744-0	100745-0	100746-0	100747-0	100748-0	100749-0	100750-0 =	750
751 =	100751-0	100752-0	100753-0	100754-0	100755-0	100756-0	100757-0	100758-0	100759-0	100760-0 =	760
761 =	100761-0	100762-0	100763-0	100764-0	100765-0	100766-0	100767-0	100768-0	100769-0	100770-0 =	770
771 =	100771-0	100772-0	100773-0	100774-0	100775-0	100776-0	100777-0	100778-0	100779-0	100780-0 =	780
781 =	100781-0	100782-0	100783-0	100784-0	100785-0	100786-0	100787-0	100788-0	100789-0	100790-0 =	790
791 =	100791-0	100792-0	100793-0	100794-0	100795-0	100796-0	100797-0	100798-0	100799-0	100800-0 =	800
801 =	100801-0	100802-0	100803-0	100804-0	100805-0	100806-0	100807-0	100808-0	100809-0	100810-0 =	810
811 =	100811-0	100812-0	100813-0	100814-0	100815-0	100816-0	100817-0	100818-0	100819-0	100820-0 =	820
821 =	100821-0	100822-0	100823-0	100824-0	100825-0	100826-0	100827-0	100828-0	100829-0	100830-0 =	830
831 =	100831-0	100832-0	100833-0	100834-0	100835-0	100836-0	100837-0	100838-0	100839-0	100840-0 =	840
841 =	100841-0	100842-0	100843-0	100844-0	100845-0	100846-0	100847-0	100848-0	100849-0	100850-0 =	850
851 =	100851-0	100852-0	100853-0	100854-0	100855-0	100856-0	100857-0	100858-0	100859-0	100860-0 =	860
861 =	100861-0	100862-0	100863-0	100864-0	100865-0	100866-0	100867-0	100868-0	100869-0	100870-0 =	870
871 =	100871-0	100872-0	100873-0	100874-0	100875-0	100876-0	100877-0	100878-0	100879-0	100880-0 =	880
881 =	100881-0	100882-0	100883-0	100884-0	100885-0	100886-0	100887-0	100888-0	100889-0	100890-0 =	890
891 =	100891-0	100892-0	100893-0	100894-0	100895-0	100896-0	100897-0	100898-0	100899-0	100900-0 =	900
901 =	100901-0	100902-0	100903-0	100904-0	100905-0	100906-0	100907-0	100908-0	100909-0	100910-0 =	910
911 =	100911-0	100912-0	100913-0	100914-0	100915-0	100916-0	100917-0	100918-0	100919-0	100920-0 =	920
921 =	100921-0	100922-0	100923-0	100924-0	100925-0	100926-0	100927-0	100928-0	100929-0	100930-0 =	930
931 =	100931-0	100932-0	100933-0	100934-0	100935-0	100936-0	100937-0	100938-0	100939-0	100940-0 =	940
941 =	100941-0	100942-0	100943-0	100944-0	100945-0	100946-0	100947-0	100948-0	100949-0	100950-0 =	950
951 =	100951-0	100952-0	100953-0	100954-0	100955-0	100956-0	100957-0	100958-0	100959-0	100960-0 =	960
961 =	100961-0	100962-0	100963-0	100964-0	100965-0	100966-0	100967-0	100968-0	100969-0	100970-0 =	970
971 =	100971-0	100972-0	100973-0	100974-0	100975-0	100976-0	100977-0	100978-0	100979-0	100980-0 =	980
981 =	100981-0	100982-0	100983-0	100984-0	100985-0	100986-0	100987-0	100988-0	100989-0	100990-0 =	990
991 =	100991-0	100992-0	100993-0	100994-0	100995-0	100996-0	100997-0	100998-0	100999-0	101000-0 =	1000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 180

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1001 =	101001-0	101002-0	101003-0	101004-0	101005-0	101006-0	101007-0	101008-0	101009-0	101010-0 =	1010
1011 =	101011-0	101012-0	101013-0	101014-0	101015-0	101016-0	101017-0	101018-0	101019-0	101020-0 =	1020
1021 =	101021-0	101022-0	101023-0	101024-0	101025-0	101026-0	101027-0	101028-0	101029-0	101030-0 =	1030
1031 =	101031-0	101032-0	101033-0	101034-0	101035-0	101036-0	101037-0	101038-0	101039-0	101040-0 =	1040
1041 =	101041-0	101042-0	101043-0	101044-0	101045-0	101046-0	101047-0	101048-0	101049-0	101050-0 =	1050
1051 =	101051-0	101052-0	101053-0	101054-0	101055-0	101056-0	101057-0	101058-0	101059-0	101060-0 =	1060
1061 =	101061-0	101062-0	101063-0	101064-0	101065-0	101066-0	101067-0	101068-0	101069-0	101070-0 =	1070
1071 =	101071-0	101072-0	101073-0	101074-0	101075-0	101076-0	101077-0	101078-0	101079-0	101080-0 =	1080
1081 =	101081-0	101082-0	101083-0	101084-0	101085-0	101086-0	101087-0	101088-0	101089-0	101090-0 =	1090
1091 =	101091-0	101092-0	101093-0	101094-0	101095-0	101096-0	101097-0	101098-0	101099-0	101100-0 =	1100
1101 =	101101-0	101102-0	101103-0	101104-0	101105-0	101106-0	101107-0	101108-0	101109-0	101110-0 =	1110
1111 =	101111-0	101112-0	101113-0	101114-0	101115-0	101116-0	101117-0	101118-0	101119-0	101120-0 =	1120
1121 =	101121-0	101122-0	101123-0	101124-0	101125-0	101126-0	101127-0	101128-0	101129-0	101130-0 =	1130
1131 =	101131-0	101132-0	101133-0	101134-0	101135-0	101136-0	101137-0	101138-0	101139-0	101140-0 =	1140
1141 =	101141-0	101142-0	101143-0	101144-0	101145-0	101146-0	101147-0	101148-0	101149-0	101150-0 =	1150
1151 =	101151-0	101152-0	101153-0	101154-0	101155-0	101156-0	101157-0	101158-0	101159-0	101160-0 =	1160
1161 =	101161-0	101162-0	101163-0	101164-0	101165-0	101166-0	101167-0	101168-0	101169-0	101170-0 =	1170
1171 =	101171-0	101172-0	101173-0	101174-0	101175-0	101176-0	101177-0	101178-0	101179-0	101180-0 =	1180
1181 =	101181-0	101182-0	101183-0	101184-0	101185-0	101186-0	101187-0	101188-0	101189-0	101190-0 =	1190
1191 =	101191-0	101192-0	101193-0	101194-0	101195-0	101196-0	101197-0	101198-0	101199-0	101200-0 =	1200
1201 =	101201-0	101202-0	101203-0	101204-0	101205-0	101206-0	101207-0	101208-0	101209-0	101210-0 =	1210
1211 =	101211-0	101212-0	101213-0	101214-0	101215-0	101216-0	101217-0	101218-0	101219-0	101220-0 =	1220
1221 =	101221-0	101222-0	101223-0	101224-0	101225-0	101226-0	101227-0	101228-0	101229-0	101230-0 =	1230
1231 =	101231-0	101232-0	101233-0	101234-0	101235-0	101236-0	101237-0	101238-0	101239-0	101240-0 =	1240
1241 =	101241-0	101242-0	101243-0	101244-0	101245-0	101246-0	101247-0	101248-0	101249-0	101250-0 =	1250
1251 =	101251-0	101252-0	101253-0	101254-0	101255-0	101256-0	101257-0	101258-0	101259-0	101260-0 =	1260
1261 =	101261-0	101262-0	101263-0	101264-0	101265-0	101266-0	101267-0	101268-0	101269-0	101270-0 =	1270
1271 =	101271-0	101272-0	101273-0	101274-0	101275-0	101276-0	101277-0	101278-0	101279-0	101280-0 =	1280
1281 =	101281-0	101282-0	101283-0	101284-0	101285-0	101286-0	101287-0	101288-0	101289-0	101290-0 =	1290
1291 =	101291-0	101292-0	101293-0	101294-0	101295-0	101296-0	101297-0	101298-0	101299-0	101300-0 =	1300
1301 =	101301-0	101302-0	101303-0	101304-0	101305-0	101306-0	101307-0	101308-0	101309-0	101310-0 =	1310
1311 =	101311-0	101312-0	101313-0	101314-0	101315-0	101316-0	101317-0	101318-0	101319-0	101320-0 =	1320
1321 =	101321-0	101322-0	101323-0	101324-0	101325-0	101326-0	101327-0	101328-0	101329-0	101330-0 =	1330
1331 =	101331-0	101332-0	101333-0	101334-0	101335-0	101336-0	101337-0	101338-0	101339-0	101340-0 =	1340
1341 =	101341-0	101342-0	101343-0	101344-0	101345-0	101346-0	101347-0	101348-0	101349-0	101350-0 =	1350
1351 =	101351-0	101352-0	101353-0	101354-0	101355-0	101356-0	101357-0	101358-0	101359-0	101360-0 =	1360
1361 =	101361-0	101362-0	101363-0	101364-0	101365-0	101366-0	101367-0	101368-0	101369-0	101370-0 =	1370
1371 =	101371-0	101372-0	101373-0	101374-0	101375-0	101376-0	101377-0	101378-0	101379-0	101380-0 =	1380
1381 =	101381-0	101382-0	101383-0	101384-0	101385-0	101386-0	101387-0	101388-0	101389-0	101390-0 =	1390
1391 =	101391-0	101392-0	101393-0	101394-0	101395-0	101396-0	101397-0	101398-0	101399-0	101400-0 =	1400
1401 =	101401-0	101402-0	101403-0	101404-0	101405-0	101406-0	101407-0	101408-0	101409-0	101410-0 =	1410
1411 =	101411-0	101412-0	101413-0	101414-0	101415-0	101416-0	101417-0	101418-0	101419-0	101420-0 =	1420
1421 =	101421-0	101422-0	101423-0	101424-0	101425-0	101426-0	101427-0	101428-0	101429-0	101430-0 =	1430
1431 =	101431-0	101432-0	101433-0	101434-0	101435-0	101436-0	101437-0	101438-0	101439-0	101440-0 =	1440
1441 =	101441-0	101442-0	101443-0	101444-0	101445-0	101446-0	101447-0	101448-0	101449-0	101450-0 =	1450
1451 =	101451-0	101452-0	101453-0	101454-0	101455-0	101456-0	101457-0	101458-0	101459-0	101460-0 =	1460
1461 =	101461-0	101462-0	101463-0	101464-0	101465-0	101466-0	101467-0	101468-0	101469-0	101470-0 =	1470
1471 =	101471-0	101472-0	101473-0	101474-0	101475-0	101476-0	101477-0	101478-0	101479-0	101480-0 =	1480
1481 =	101481-0	101482-0	101483-0	101484-0	101485-0	101486-0	101487-0	101488-0	101489-0	101490-0 =	1490
1491 =	101491-0	101492-0	101493-0	101494-0	101495-0	101496-0	101497-0	101498-0	101499-0	101500-0 =	1500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 181

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1501 =	101501-0	101502-0	101503-0	101504-0	101505-0	101506-0	101507-0	101508-0	101509-0	101510-0 =	1510
1511 =	101511-0	101512-0	101513-0	101514-0	101515-0	101516-0	101517-0	101518-0	101519-0	101520-0 =	1520
1521 =	101521-0	101522-0	101523-0	101524-0	101525-0	101526-0	101527-0	101528-0	101529-0	101530-0 =	1530
1531 =	101531-0	101532-0	101533-0	101534-0	101535-0	101536-0	101537-0	101538-0	101539-0	101540-0 =	1540
1541 =	101541-0	101542-0	101543-0	101544-0	101545-0	101546-0	101547-0	101548-0	101549-0	101550-0 =	1550
1551 =	101551-0	101552-0	101553-0	101554-0	101555-0	101556-0	101557-0	101558-0	101559-0	101560-0 =	1560
1561 =	101561-0	101562-0	101563-0	101564-0	101565-0	101566-0	101567-0	101568-0	101569-0	101570-0 =	1570
1571 =	101571-0	101572-0	101573-0	101574-0	101575-0	101576-0	101577-0	101578-0	101579-0	101580-0 =	1580
1581 =	101581-0	101582-0	101583-0	101584-0	101585-0	101586-0	101587-0	101588-0	101589-0	101590-0 =	1590
1591 =	101591-0	101592-0	101593-0	101594-0	101595-0	101596-0	101597-0	101598-0	101599-0	101600-0 =	1600
1601 =	101601-0	101602-0	101603-0	101604-0	101605-0	101606-0	101607-0	101608-0	101609-0	101610-0 =	1610
1611 =	101611-0	101612-0	101613-0	101614-0	101615-0	101616-0	101617-0	101618-0	101619-0	101620-0 =	1620
1621 =	101621-0	101622-0	101623-0	101624-0	101625-0	101626-0	101627-0	101628-0	101629-0	101630-0 =	1630
1631 =	101631-0	101632-0	101633-0	101634-0	101635-0	101636-0	101637-0	101638-0	101639-0	101640-0 =	1640
1641 =	101641-0	101642-0	101643-0	101644-0	101645-0	101646-0	101647-0	101648-0	101649-0	101650-0 =	1650
1651 =	101651-0	101652-0	101653-0	101654-0	101655-0	101656-0	101657-0	101658-0	101659-0	101660-0 =	1660
1661 =	101661-0	101662-0	101663-0	101664-0	101665-0	101666-0	101667-0	101668-0	101669-0	101670-0 =	1670
1671 =	101671-0	101672-0	101673-0	101674-0	101675-0	101676-0	101677-0	101678-0	101679-0	101680-0 =	1680
1681 =	101681-0	101682-0	101683-0	101684-0	101685-0	101686-0	101687-0	101688-0	101689-0	101690-0 =	1690
1691 =	101691-0	101692-0	101693-0	101694-0	101695-0	101696-0	101697-0	101698-0	101699-0	101700-0 =	1700
1701 =	101701-0	101702-0	101703-0	101704-0	101705-0	101706-0	101707-0	101708-0	101709-0	101710-0 =	1710
1711 =	101711-0	101712-0	101713-0	101714-0	101715-0	101716-0	101717-0	101718-0	101719-0	101720-0 =	1720
1721 =	101721-0	101722-0	101723-0	101724-0	101725-0	101726-0	101727-0	101728-0	101729-0	101730-0 =	1730
1731 =	101731-0	101732-0	101733-0	101734-0	101735-0	101736-0	101737-0	101738-0	101739-0	101740-0 =	1740
1741 =	101741-0	101742-0	101743-0	101744-0	101745-0	101746-0	101747-0	101748-0	101749-0	101750-0 =	1750
1751 =	101751-0	101752-0	101753-0	101754-0	101755-0	101756-0	101757-0	101758-0	101759-0	101760-0 =	1760
1761 =	101761-0	101762-0	101763-0	101764-0	101765-0	101766-0	101767-0	101768-0	101769-0	101770-0 =	1770
1771 =	101771-0	101772-0	101773-0	101774-0	101775-0	101776-0	101777-0	101778-0	101779-0	101780-0 =	1780
1781 =	101781-0	101782-0	101783-0	101784-0	101785-0	101786-0	101787-0	101788-0	101789-0	101790-0 =	1790
1791 =	101791-0	101792-0	101793-0	101794-0	101795-0	101796-0	101797-0	101798-0	101799-0	101800-0 =	1800
1801 =	101801-0	101802-0	101803-0	101804-0	101805-0	101806-0	101807-0	101808-0	101809-0	101810-0 =	1810
1811 =	101811-0	101812-0	101813-0	101814-0	101815-0	101816-0	101817-0	101818-0	101819-0	101820-0 =	1820
1821 =	101821-0	101822-0	101823-0	101824-0	101825-0	101826-0	101827-0	101828-0	101829-0	101830-0 =	1830
1831 =	101831-0	101832-0	101833-0	101834-0	101835-0	101836-0	101837-0	101838-0	101839-0	101840-0 =	1840
1841 =	101841-0	101842-0	101843-0	101844-0	101845-0	101846-0	101847-0	101848-0	101849-0	101850-0 =	1850
1851 =	101851-0	101852-0	101853-0	101854-0	101855-0	101856-0	101857-0	101858-0	101859-0	101860-0 =	1860
1861 =	101861-0	101862-0	101863-0	101864-0	101865-0	101866-0	101867-0	101868-0	101869-0	101870-0 =	1870
1871 =	101871-0	101872-0	101873-0	101874-0	101875-0	101876-0					

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 182

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	4590-1	4590-2	4590-3	4590-4	4590-5	4590-6	4591-1	4591-2	4591-3	4591-4 =	10
11 =	4591-5	4591-6	4592-1	4592-2	4592-3	4592-4	4592-5	4592-6	4593-1	4593-2 =	20
21 =	4593-3	4593-4	4593-5	4593-6	13001-1	13001-2	13001-3	13001-4	13001-6	13002-1 =	30
31 =	13002-2	13002-3	13002-4	13002-6	13003-1	13003-2	13003-3	13003-4	13003-6	13004-1 =	40
41 =	13004-2	13004-3	13004-4	13004-6	13005-1	13005-2	13005-3	13005-4	13005-6	13006-1 =	50
51 =	13006-2	13006-3	13006-4	13006-6	13007-1	13007-2	13007-3	13007-4	13007-6	13008-1 =	60
61 =	13008-2	13008-3	13008-4	13008-6	13009-1	13009-2	13009-3	13009-4	13009-6	13010-1 =	70
71 =	13010-2	13010-3	13010-4	13010-6	13011-1	13011-2	13011-3	13011-4	13011-6	13012-1 =	80
81 =	13012-2	13012-3	13012-4	13012-6	13013-1	13013-2	13013-3	13013-4	13013-6	13014-1 =	90
91 =	13014-2	13014-3	13014-4	13014-6	13015-1	13015-2	13015-3	13015-4	13015-6	13016-1 =	100
101 =	13016-2	13016-3	13016-4	13016-6	13017-1	13017-2	13017-3	13017-4	13017-5	13018-1 =	110
111 =	13018-2	13018-3	13018-4	13018-5	13019-1	13019-2	13019-3	13019-4	13019-5	13020-1 =	120
121 =	13020-2	13020-3	13020-4	13020-5	2171-2	2171-3	2197-2	2197-3	2322-2	2322-3 =	130
131 =	2663-2	2663-3	2808-2	2808-3	2809-2	2809-3	2833-2	2833-3	2922-2	2922-3 =	140
141 =	21081-2	21081-3	27106-2	27106-3	27111-2	27111-3	27150-2	27150-3	27164-2	27164-3 =	150
151 =	27167-2	27167-3	27178-2	27178-3	27186-2	27186-3	27193-2	27193-3	27564-2	27564-3 =	160
161 =	27837-2	27837-3	271012-2	271012-3	271013-2	271013-3	271055-2	271055-3	271265-2	271265-3 =	170
171 =	702171-2	702171-3	702197-2	702197-3	702322-2	702322-3	702663-2	702663-3	702808-2	702808-3 =	180
181 =	702809-2	702809-3	702833-2	702833-3	702922-2	702922-3	727106-2	727106-3	727111-2	727111-3 =	190
191 =	727150-2	727150-3	727164-2	727164-3	727167-2	727167-3	727178-2	727178-3	727186-2	727186-3 =	200
201 =	727193-2	727193-3	727564-2	727564-3	727837-2	727837-3	7021081-2	7021081-3	7271012-2	7271012-3 =	210
211 =	7271013-2	7271013-3	7271055-2	7271055-3	7271265-2	7271265-3	212118-2	212118-3	212120-2	212120-3 =	220
221 =	212125-2	212125-3	212385-2	212385-3	212388-2	212388-3	212390-2	212390-3	213110-2	213110-3 =	230
231 =	213113-2	213113-3	213115-2	213115-3	213195-2	213195-3	213198-2	213198-3	213201-2	213201-3 =	240
241 =	213203-2	213203-3	213265-2	213265-3	213268-2	213268-3	312118-2	312118-3	312120-2	312120-3 =	250
251 =	312125-2	312125-3	312385-2	312385-3	312388-2	312388-3	312390-2	312390-3	313195-2	313195-3 =	260
261 =	313198-2	313198-3	313201-2	313201-3	313203-2	313203-3	313265-2	313265-3	313268-2	313268-3 =	270
271 =	2423-2	2423-3	2433-2	2665-1	2665-2	2443-2	2443-3	2679-2	2680-2	702423-2 =	280
281 =	702423-3	702433-2	702665-1	702665-2	702443-2	702443-3	702679-2	702680-2	2651-1	2651-2 =	290
291 =	2651-3	2651-4	2651-5	2651-6	27895-1	27895-2	27895-3	27895-4	27895-5	27895-6 =	300
301 =	27896-1	27896-2	27896-3	27896-4	27896-5	27896-6	1651-1	1651-2	1651-3	1651-4 =	310
311 =	1651-5	1651-6	3076-1	3076-2	3076-3	3401-1	3401-2	3401-3	1650-1	1650-2 =	320
321 =	1650-3	1650-4	1650-5	1650-6	210388-2	210388-3	210390-2	210390-3	210393-2	210393-3 =	330
331 =	210395-2	210395-3	210398-2	210398-3	210400-2	210400-3	210405-2	210405-3	210413-2	210413-3 =	340
341 =	210458-2	210458-3	210460-2	210460-3	210463-2	210463-3	210465-2	210465-3	210468-2	210468-3 =	350
351 =	210470-2	210470-3	210475-2	210475-3	210530-2	210530-3	210533-2	210533-3	210535-2	210535-3 =	360
361 =	210538-2	210538-3	210600-2	210600-3	210670-2	210670-3	211040-2	211040-3	211043-2	211043-3 =	370
371 =	211180-2	211180-3	211183-2	211183-3	211320-2	211320-3	211323-2	211323-3	211325-2	211325-3 =	380
381 =	211460-2	211460-3	211463-2	211463-3	211465-2	211465-3	211468-2	211468-3	211470-2	211470-3 =	390
391 =	211494-2	211494-3	211528-2	211528-3	211530-2	211530-3	211533-2	211533-3	211535-2	211535-3 =	400
401 =	211538-2	211538-3	211540-2	211540-3	211545-2	211545-3	211595-2	211595-3	211598-2	211598-3 =	410
411 =	211600-2	211600-3	211603-2	211603-3	211605-2	211605-3	211608-2	211608-3	212040-2	212040-3 =	420
421 =	212043-2	212043-3	212045-2	212045-3	212250-2	212250-3	212253-2	212253-3	212255-2	212255-3 =	430
431 =	212530-2	212530-3	212533-2	212533-3	212535-2	212535-3	213180-2	213180-3	213183-2	213183-3 =	440
441 =	213185-2	213185-3	213188-2	213188-3	213250-2	213250-3	213253-2	213253-3	213255-2	213255-3 =	450
451 =	213323-2	213323-3	213325-2	213325-3	213390-2	213390-3	213393-2	213393-3	213395-2	213395-3 =	460
461 =	213460-2	213460-3	213463-2	213463-3	213465-2	213465-3	213468-2	213468-3	213481-2	213481-3 =	470
471 =	213528-2	213528-3	213530-2	213530-3	213533-2	213533-3	213535-2	213535-3	213538-2	213538-3 =	480
481 =	213540-2	213540-3	213600-2	213600-3	959-1	959-2	959-3	960-1	960-2	960-3 =	490
491 =	961-1	961-2	961-3	962-1	962-2	962-3	963-1	963-2	963-3	964-1 =	500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 183

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
501 =	964-2	964-3	965-1	965-2	965-3	967-1	967-2	967-3	969-1	969-2	= 510
511 =	969-3	970-1	970-2	970-3	971-1	971-2	971-3	972-1	972-2	972-3	= 520
521 =	973-1	973-2	973-3	974-1	974-2	974-3	975-1	975-2	975-3	977-1	= 530
531 =	977-2	977-3	271218-2	271217-1	271217-2	271217-3	271216-1	271216-2	271219-1	271219-2	= 540
541 =	271219-3	27355-1	27355-2	27355-3	701383-2	701383-3	701405-2	701405-3	701963-1	701963-2	= 550
551 =	701963-3	701393-2	1383-2	1383-3	1405-2	1405-3	901963-1	901963-2	901963-3	1393-2	= 560
561 =	701423-2	701423-3	701445-2	701445-3	701965-1	701965-2	701965-3	701433-2	1423-2	1423-3	= 570
571 =	1445-2	1445-3	901965-1	901965-2	901965-3	1433-2	701443-2	701443-3	702365-2	702365-3	= 580
581 =	702661-1	702661-2	702661-3	702353-2	1443-2	1443-3	2365-2	2365-3	2661-1	2661-2	= 590
591 =	2661-3	2353-2	727355-2	727355-3	7271219-2	7271219-3	7271217-1	7271217-2	7271217-3	727435-2	= 600
601 =	6032-1	6032-2	6032-3	6060-1	6060-2	6060-3	6061-1	6061-2	6061-3	6064-1	= 610
611 =	6064-2	6064-3	6081-1	6081-2	6081-3	6081-4	6081-5	6082-1	6082-2	6082-3	= 620
621 =	6083-1	6083-2	6083-3	6084-1	6084-2	6084-3	6085-1	6085-2	6085-3	6067-1	= 630
631 =	6067-2	6067-3	6068-1	6068-2	6068-3	6071-1	6071-2	6071-3	6069-1	6069-2	= 640
641 =	6069-3	6070-1	6070-2	6070-3	6073-1	6073-2	6073-3	6074-1	6074-2	6074-3	= 650
651 =	6076-1	6076-2	6076-3	6080-1	6080-2	6080-3	6080-4	6080-5	6086-1	6086-2	= 660
661 =	6086-3	6089-1	6089-2	6089-3	6087-1	6087-2	6087-3	6091-1	6091-2	6091-3	= 670
671 =	6092-1	6092-2	6092-3	6093-1	6093-2	6093-3	6094-1	6094-2	6094-3	6095-1	= 680
681 =	6095-2	6095-3	5001-1	5001-3	5002-1	5002-3	5003-1	5003-2	5003-3	5004-1	= 690
691 =	5004-2	5004-3	5005-1	5005-3	5006-1	5006-2	5006-3	5007-1	5007-2	5007-3	= 700
701 =	5008-1	5008-2	5008-3	5009-1	5009-2	5009-3	5010-1	5010-2	5010-3	5011-1	= 710
711 =	5011-2	5011-3	5012-1	5012-2	5012-3	5013-1	5013-2	5013-3	5014-1	5014-2	= 720
721 =	5014-3	5015-1	5015-2	5015-3	5016-1	5016-2	5016-3	5017-1	5017-2	5017-3	= 730
731 =	5018-1	5018-2	5018-3	5019-1	5019-2	5019-3	5020-1	5020-2	5020-3	5021-1	= 740
741 =	5021-2	5021-3	5022-1	5022-2	5022-3	5023-1	5023-2	5023-3	5024-1	5024-2	= 750
751 =	5024-3	5025-1	5025-2	5025-3	5026-1	5026-2	5026-3	5027-1	5027-2	5027-3	= 760
761 =	5028-1	5028-2	5028-3	5029-1	5029-2	5029-3	5030-1	5030-2	5030-3	5031-1	= 770
771 =	5031-2	5031-3	5032-1	5032-2	5032-3	5033-1	5033-2	5033-3	5034-1	5034-2	= 780
781 =	5034-3	5035-1	5035-2	5035-3	5036-1	5036-2	5036-3	5037-1	5037-2	5037-3	= 790
791 =	5038-1	5038-2	5038-3	5039-1	5039-2	5039-3	5040-1	5040-2	5040-3	5041-1	= 800
801 =	5041-2	5041-3	5042-2	5042-3	5043-2	5043-3	5044-2	5044-3	5045-2	5045-3	= 810
811 =	5046-2	5046-3	5047-2	5047-3	5048-2	5048-3	5049-2	5049-3	5050-2	5050-3	= 820
821 =	5051-2	5051-3	5052-2	5052-3	5053-2	5053-3	5054-2	5054-3	5055-2	5055-3	= 830
831 =	5056-2	5056-3	5057-2	5057-3	5058-1	5058-2	5058-3	5059-1	5059-2	5059-3	= 840
841 =	5060-1	5060-2	5060-3	5061-1	5061-2	5061-3	5062-1	5062-2	5062-3	5063-1	= 850
851 =	5063-2	5063-3	5064-1	5064-2	5064-3	5065-1	5065-2	5065-3	5066-1	5066-2	= 860
861 =	5066-3	5067-1	5067-2	5067-3	5068-1	5068-2	5068-3	5069-1	5069-2	5069-3	= 870
871 =	5070-2	5070-3	5071-2	5071-3	5072-2	5072-3	5073-2	5073-3	5074-2	5075-2	= 880
881 =	5076-1	5076-2	5076-3	5077-1	5077-2	5077-3	5078-1	5078-2	5078-3	5079-1	= 890
891 =	5079-2	5079-3	5080-1	5080-2	5080-3	5081-1	5081-2	5081-3	5082-1	5082-2	= 900
901 =	5082-3	5083-1	5083-2	5083-3	5084-1	5084-2	5084-3	5085-1	5085-2	5085-3	= 910
911 =	5086-1	5086-2	5086-3	5087-1	5087-2	5087-3	5088-1	5088-2	5088-3	5089-1	= 920
921 =	5089-2	5089-3	5090-1	5090-2	5090-3	5091-1	5091-2	5091-3	5092-1	5092-2	= 930
931 =	5092-3	5093-1	5093-2	5093-3	5094-1	5094-2	5094-3	5095-1	5095-2	5095-3	= 940
941 =	5096-1	5096-2	5096-3	5097-1	5097-2	5097-3	5098-1	5098-2	5098-3	5099-1	= 950
951 =	5099-2	5099-3	5100-1	5100-2	5100-3	5101-1	5101-2	5101-3	5102-1	5102-2	= 960
961 =	5102-3	5103-1	5103-2	5103-3	5104-1	5104-2	5104-3	5105-1	5105-2	5105-3	= 970
971 =	5106-1	5106-2	5106-3	5107-1	5107-2	5107-3	5108-1	5108-2	5108-3	5109-1	= 980
981 =	5109-2	5109-3	5110-1	5110-2	5110-3	5111-1	5111-2	5111-3	5112-1	5112-2	= 990
991 =	5112-3	5113-1	5113-2	5113-3	5114-1	5114-2	5114-3	5115-1	5115-2	5115-3	= 1000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 184

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1001 =	5116-2	5116-3	5117-2	5117-3	5118-1	5118-2	5118-3	5119-1	5119-2	5119-3 =	1010
1011 =	5120-1	5120-2	5120-3	5121-1	5121-2	5121-3	5122-1	5122-3	5123-1	5123-3 =	1020
1021 =	5124-1	5124-2	5124-3	5125-1	5125-3	5126-1	5126-2	5126-3	5127-1	5127-2 =	1030
1031 =	5127-3	5128-1	5128-2	5128-3	5129-3	2934-2	2934-3	2979-2	2979-3	5130-1 =	1040
1041 =	5130-2	5130-3	5131-1	5131-2	5131-3	5132-1	5132-2	5132-3	5133-2	5133-3 =	1050
1051 =	5134-2	5134-3	5135-2	5135-3	5136-2	5136-3	5137-2	5137-3	5138-2	5138-3 =	1060
1061 =	5139-2	5140-2	5141-2	5142-2	5143-2	5144-2	5145-2	5146-2	5147-2	5147-3 =	1070
1071 =	5148-2	5148-3	5149-2	5149-3	5150-2	5150-3	5151-2	5151-3	5152-2	5152-3 =	1080
1081 =	5153-2	5153-3	5154-2	5154-3	5155-2	5155-3	5156-2	5156-3	5157-2	5157-3 =	1090
1091 =	5158-2	5158-3	5159-2	5159-3	5160-2	5160-3	5161-2	5161-3	5162-2	5162-3 =	1100
1101 =	5163-3	5164-2	5164-3	5165-2	5165-3	5166-2	5166-3	5167-2	5167-3	5168-2 =	1110
1111 =	5168-3	5169-2	5169-3	5170-2	5171-2	5172-2	5173-2	5174-2	5175-2	5176-1 =	1120
1121 =	5176-2	5176-3	5177-1	5177-2	5177-3	5178-2	5179-2	5180-3	5181-2	5181-3 =	1130
1131 =	5182-2	5182-3	5183-2	5183-3	5184-2	5184-3	5185-2	5185-3	5186-2	5186-3 =	1140
1141 =	5187-2	5188-2	5189-1	5189-2	5189-3	5190-1	5190-2	5190-3	5191-2	5192-2 =	1150
1151 =	5193-2	5194-2	5195-2	5196-2	5197-2	5197-3	5198-2	5198-3	5199-2	5199-3 =	1160
1161 =	5200-2	5200-3	5201-2	5201-3	5202-2	5202-3	5203-2	5203-3	5204-2	5204-3 =	1170
1171 =	5205-3	5206-2	5206-3	5207-2	5207-3	5208-2	5208-3	5209-2	5209-3	5210-2 =	1180
1181 =	5210-3	5211-2	5211-3	5212-2	5213-2	5214-2	5215-2	5216-2	5217-2	5218-1 =	1190
1191 =	5218-2	5218-3	5219-1	5219-2	5219-3	5220-2	5220-3	5221-2	5221-3	5222-2 =	1200
1201 =	5222-3	5223-2	5223-3	5224-2	5224-3	5225-2	5225-3	5226-2	5226-3	5227-2 =	1210
1211 =	5227-3	5228-2	5228-3	5229-2	5229-3	5230-2	5230-3	5231-2	5231-3	5232-3 =	1220
1221 =	5233-2	5233-3	5234-2	5234-3	5235-2	5235-3	5236-2	5236-3	5237-2	5237-3 =	1230
1231 =	5238-2	5238-3	5239-2	5240-2	5241-2	5242-2	5243-2	5244-2	5245-1	5245-2 =	1240
1241 =	5245-3	5246-1	5246-2	5246-3	5247-2	5247-3	5248-2	5248-3	5249-2	5249-3 =	1250
1251 =	5250-2	5250-3	5251-3	5252-2	5252-3	5253-2	5253-3	5254-2	5254-3	5255-2 =	1260
1261 =	5255-3	5256-2	5256-3	5257-2	5257-3	5258-2	5259-2	5260-1	5260-2	5260-3 =	1270
1271 =	5261-1	5261-2	5261-3	5262-2	5263-2	5264-2	5265-2	5266-2	5266-3	5267-2 =	1280
1281 =	5267-3	5268-2	5268-3	5269-2	5269-3	5270-2	5270-3	5271-2	5271-3	5272-2 =	1290
1291 =	5272-3	5273-2	5273-3	5274-2	5274-3	5275-2	5275-3	5276-2	5276-3	5277-2 =	1300
1301 =	5277-3	5278-3	5279-2	5279-3	5280-2	5280-3	5281-2	5281-3	5282-2	5282-3 =	1310
1311 =	5283-2	5283-3	5284-2	5284-3	5285-2	5286-2	5287-2	5288-2	5289-2	5290-2 =	1320
1321 =	453-1	453-2	453-3	793-1	793-2	793-3	5293-2	5293-3	5294-2	5294-3 =	1330
1331 =	5295-2	5295-3	5296-2	5296-3	5297-3	5298-2	5298-3	5299-2	5299-3	5300-2 =	1340
1341 =	5300-3	5301-2	5301-3	5302-2	5302-3	5303-2	5303-3	5304-2	5305-2	5306-2 =	1350
1351 =	5307-2	5308-2	5309-2	5310-1	5310-2	5310-3	5311-1	5311-2	5311-3	5312-2 =	1360
1361 =	5312-3	5313-2	5313-3	5314-2	5314-3	5315-2	5315-3	5316-2	5316-3	5317-2 =	1370
1371 =	5317-3	5318-2	5318-3	5319-2	5319-3	5320-2	5320-3	5321-2	5321-3	5322-2 =	1380
1381 =	5322-3	5323-2	5323-3	5324-3	5325-2	5325-3	5326-2	5326-3	5327-2	5327-3 =	1390
1391 =	5328-2	5328-3	5329-2	5329-3	5330-2	5330-3	5331-2	5332-2	5333-2	5334-2 =	1400
1401 =	5335-2	5336-2	5337-1	5337-2	5337-3	5338-1	5338-2	5338-3	5339-2	5339-3 =	1410
1411 =	5340-2	5340-3	5341-2	5341-3	5342-2	5342-3	5343-2	5343-3	5344-2	5344-3 =	1420
1421 =	5345-2	5345-3	5346-2	5346-3	5347-2	5347-3	5348-2	5348-3	5349-2	5349-3 =	1430
1431 =	5350-2	5350-3	5351-3	5352-2	5352-3	5353-2	5353-3	5354-2	5354-3	5355-2 =	1440
1441 =	5355-3	5356-2	5356-3	5357-2	5357-3	5358-2	5359-2	5360-1	5360-2	5360-3 =	1450
1451 =	5361-1	5361-2	5361-3	5362-2	5363-2	5364-2	5365-2	5366-3	5367-2	5367-3 =	1460
1461 =	5368-2	5368-3	5369-2	5369-3	5370-2	5370-3	5371-2	5371-3	5372-2	5372-3 =	1470
1471 =	5373-2	5374-2	5375-1	5375-2	5375-3	5376-1	5376-2	5376-3	5377-2	5378-2 =	1480
1481 =	5379-2	5380-2	5381-2	5381-3	5382-2	5382-3	5383-2	5383-3	5384-2	5384-3 =	1490
1491 =	5385-2	5385-3	5386-2	5386-3	5387-2	5387-3	5388-2	5388-3	5389-3	5390-2 =	1500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 185

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1501 =	5390-3	5391-2	5391-3	5392-2	5392-3	5393-2	5393-3	5394-2	5394-3	5395-2 =	1510
1511 =	5395-3	5396-2	5397-2	5398-2	5399-2	5400-1	5400-2	5400-3	5401-1	5401-2 =	1520
1521 =	5401-3	5402-2	5403-2	5404-2	5404-3	5405-2	5405-3	5406-2	5406-3	5407-2 =	1530
1531 =	5407-3	5408-2	5408-3	5409-2	5409-3	5410-2	5410-3	5411-2	5411-3	5412-3 =	1540
1541 =	5413-2	5413-3	5414-2	5414-3	5415-2	5415-3	5416-2	5416-3	5417-2	5417-3 =	1550
1551 =	5418-2	5418-3	5419-2	5420-2	5421-2	5422-2	5423-1	5423-2	5423-3	5424-1 =	1560
1561 =	5424-2	5424-3	5425-2	5426-2	5427-3	5428-2	5428-3	5429-2	5429-3	5430-2 =	1570
1571 =	5430-3	5431-2	5431-3	5432-2	5432-3	5433-2	5433-3	5434-2	5435-2	5436-1 =	1580
1581 =	5436-2	5436-3	5437-1	5437-2	5437-3	5438-2	5439-2	5440-2	5441-2	5442-2 =	1590
1591 =	5442-3	5443-2	5443-3	5444-2	5444-3	5445-2	5445-3	5446-2	5446-3	5447-2 =	1600
1601 =	5447-3	5448-2	5448-3	5449-2	5449-3	1094-1	1094-2	1094-3	5451-2	5451-3 =	1610
1611 =	5452-2	5452-3	5453-2	5453-3	5454-2	5454-3	5455-2	5455-3	5456-2	5456-3 =	1620
1621 =	5457-2	5458-2	5459-1	5459-2	5459-3	5460-1	5460-2	5460-3	5461-2	5462-2 =	1630
1631 =	5463-2	5464-2	5465-3	5466-2	5466-3	5467-2	5467-3	5468-2	5468-3	5469-2 =	1640
1641 =	5469-3	5470-2	5470-3	5471-2	5471-3	5472-2	5473-2	5474-2	5475-2	5476-1 =	1650
1651 =	5476-2	5476-3	5477-1	5477-2	5477-3	5478-2	5479-2	5480-2	5480-3	5481-2 =	1660
1661 =	5481-3	5482-2	5482-3	5483-2	5483-3	5484-2	5484-3	5485-2	5485-3	5486-2 =	1670
1671 =	5486-3	5487-2	5487-3	5488-3	5489-2	5489-3	5490-2	5490-3	5491-2	5491-3 =	1680
1681 =	5492-2	5492-3	536-2	536-3	1680-2	1680-3	5495-2	5496-2	5497-1	5497-2 =	1690
1691 =	5497-3	5498-1	5498-2	5498-3	5499-2	5500-2	5501-2	5502-2	5503-2	5503-3 =	1700
1701 =	5504-2	5504-3	5505-2	5505-3	5506-2	5506-3	5507-2	5507-3	5508-2	5508-3 =	1710
1711 =	5509-2	5509-3	5510-2	5510-3	5511-3	5512-2	5512-3	5513-2	5513-3	5514-2 =	1720
1721 =	5514-3	5515-2	5515-3	5516-2	5516-3	5517-2	5517-3	5518-2	5519-2	5520-1 =	1730
1731 =	5520-2	5520-3	5521-1	5521-2	5521-3	5522-2	5523-2	5524-2	5525-2	5526-3 =	1740
1741 =	5527-2	5527-3	5528-2	5528-3	5529-2	5529-3	5530-2	5530-3	5531-2	5531-3 =	1750
1751 =	5532-2	5532-3	5533-2	5534-2	5535-1	5535-2	5535-3	5536-1	5536-2	5536-3 =	1760
1761 =	5537-2	5538-2	5539-2	5540-2	5541-2	5541-3	5542-2	5542-3	5543-2	5543-3 =	1770
1771 =	5544-2	5544-3	5545-2	5545-3	5546-2	5546-3	5547-2	5547-3	5548-2	5548-3 =	1780
1781 =	5549-3	5550-2	5550-3	5551-2	5551-3	5552-2	5552-3	5553-2	5553-3	5554-2 =	1790
1791 =	5554-3	5555-2	5555-3	5556-2	5557-2	5558-1	5558-2	5558-3	5559-1	5559-2 =	1800
1801 =	5559-3	5560-2	5561-2	5562-2	5563-2	5564-2	5564-3	5565-2	5565-3	5566-2 =	1810
1811 =	5566-3	5567-2	5567-3	5568-2	5568-3	5569-2	5569-3	5570-2	5570-3	5571-2 =	1820
1821 =	5571-3	1100-1	1100-2	1100-3	5573-2	5573-3	5574-2	5574-3	5575-2	5575-3 =	1830
1831 =	5576-2	5576-3	5577-2	5577-3	5578-2	5578-3	5579-2	5580-2	605-1	605-2 =	1840
1841 =	605-3	945-1	945-2	945-3	5583-2	5584-2	5585-2	5586-2	5587-2	5587-3 =	1850
1851 =	5588-2	5588-3	5589-2	5589-3	5590-2	5590-3	5591-2	5591-3	5592-2	5592-3 =	1860
1861 =	5593-2	5593-3	5594-2	5594-3	5595-3	5596-2	5596-3	5597-2	5597-3	5598-2 =	1870
1871 =	5598-3	5599-2	5599-3	5600-2	5600-3	5601-2	5601-3	5602-2	5603-2	5604-1 =	1880
1881 =	5604-2	5604-3	5605-1	5605-2	5605-3	5606-2	5607-2	5608-2	5609-2	5610-3 =	1890
1891 =	5611-2	5611-3	5612-2	5612-3	5613-2	5613-3	5614-2	5614-3	5615-2	5615-3 =	1900
1901 =	5616-2	5616-3	5617-2	5617-3	5618-2	5618-3	5619-2	5620-2	5621-1	5621-2 =	1910
1911 =	5621-3	5622-1	5622-2	5622-3	5623-2	5624-2	5625-2	5626-2	5627-2	5627-3 =	1920
1921 =	5628-2	5628-3	5629-2	5629-3	5630-2	5630-3	5631-2	5631-3	5632-2	5632-3 =	1930
1931 =	5633-2	5633-3	5634-2	5634-3	5635-3	5636-2	5636-3	5637-2	5637-3	5638-2 =	1940
1941 =	5638-3	5639-2	5639-3	5640-2	5640-3	5641-2	5641-3	5642-2	5642-3	5643-2 =	1950
1951 =	5643-3	5644-2	5645-2	5646-1	5646-2	5646-3	5647-1	5647-2	5647-3	5648-2 =	1960
1961 =	5649-2	5650-2	5651-2	5652-2	5652-3	5653-2	5653-3	5654-2	5654-3	5655-2 =	1970
1971 =	5655-3	5656-2	5656-3	5657-2	5657-3	5658-2	5658-3	5659-2	5659-3	5660-3 =	1980
1981 =	5661-2	5661-3	5662-2	5662-3	5663-2	5663-3	5664-2	5664-3	5665-2	5665-3 =	1990
1991 =	5666-2	5666-3	5667-2	5667-3	5668-2	5668-3	5669-2	5670-2	5671-1	5671-2 =	2000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 186

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
2001 =	5671-3	5672-1	5672-2	5672-3	5673-2	5674-2	5675-2	5676-2	5677-3	5678-2 =	2010
2011 =	5678-3	5679-2	5679-3	5680-2	5680-3	5681-2	5681-3	5682-2	5682-3	5683-2 =	2020
2021 =	5683-3	5684-2	5684-3	5685-2	5685-3	5686-2	5687-2	5688-1	5688-2	5688-3 =	2030
2031 =	5689-1	5689-2	5689-3	5690-2	5691-2	5692-2	5693-2	5694-2	5694-3	5695-2 =	2040
2041 =	5695-3	5696-2	5696-3	5697-2	5697-3	5698-2	5698-3	5699-2	5699-3	5700-2 =	2050
2051 =	5700-3	5701-2	5701-3	5702-1	5702-2	5702-3	5703-3	5704-3	5705-2	5705-3 =	2060
2061 =	5706-2	5706-3	5707-2	5707-3	5708-2	5708-3	5709-1	5709-2	5709-3	5710-1 =	2070
2071 =	5710-2	5710-3	5711-2	5712-2	5713-2	5714-2	5715-1	5715-2	5715-3	5716-1 =	2080
2081 =	5716-2	5716-3	5717-2	5718-2	5719-2	5719-3	5720-2	5720-3	5721-2	5721-3 =	2090
2091 =	5722-2	5722-3	5723-2	5723-3	5724-2	5724-3	5725-2	5725-3	5726-2	5726-3 =	2100
2101 =	5727-2	5727-3	5728-2	5728-3	5729-2	5729-3	5730-2	5730-3	5731-2	5731-3 =	2110
2111 =	5732-2	5732-3	5733-2	5733-3	5734-2	5734-3	5735-2	5735-3	5736-2	5736-3 =	2120
2121 =	5737-2	5737-3	5738-2	5738-3	5739-2	5739-3	5740-2	5740-3	5741-2	5741-3 =	2130
2131 =	5742-2	5742-3	5743-2	5743-3	5744-2	5744-3	5745-2	5745-3	5746-2	5746-3 =	2140
2141 =	5747-2	5747-3	5748-2	5748-3	5749-2	5749-3	5750-2	5750-3	5751-2	5751-3 =	2150
2151 =	5752-2	5752-3	5753-2	5753-3	5754-2	5754-3	5755-2	5755-3	5756-2	5756-3 =	2160
2161 =	5757-2	5757-3	5758-2	5758-3	5759-2	5759-3	5760-2	5760-3	5761-2	5761-3 =	2170
2171 =	5762-2	5762-3	5763-2	5763-3	5764-2	5764-3	5765-2	5765-3	5766-2	5766-3 =	2180
2181 =	5767-2	5767-3	5768-2	5768-3	5769-1	5769-3	5770-1	5770-3	5771-1	5771-3 =	2190
2191 =	5772-1	5772-3	5773-1	5773-3	5774-1	5774-3	5775-1	5775-3	5776-1	5776-3 =	2200
2201 =	5777-1	5777-3	5778-1	5778-2	5778-3	5779-1	5779-2	5779-3	5780-1	5780-2 =	2210
2211 =	5780-3	5781-1	5781-2	5781-3	5782-1	5782-2	5782-3	5783-1	5783-2	5783-3 =	2220
2221 =	5784-1	5784-3	5785-1	5785-3	5786-1	5786-2	5786-3	5787-1	5787-2	5787-3 =	2230
2231 =	5788-1	5788-2	5788-3	5789-1	5789-2	5789-3	5790-1	5790-2	5790-3	5791-1 =	2240
2241 =	5791-2	5791-3	5792-1	5792-2	5792-3	5793-1	5793-2	5793-3	5794-1	5794-2 =	2250
2251 =	5794-3	5795-1	5795-2	5795-3	5796-1	5796-2	5796-3	5797-1	5797-2	5797-3 =	2260
2261 =	5798-1	5798-2	5798-3	5799-1	5799-2	5799-3	5800-1	5800-2	5800-3	5801-1 =	2270
2271 =	5801-2	5801-3	5802-1	5802-2	5802-3	5803-1	5803-2	5803-3	5804-1	5804-3 =	2280
2281 =	5805-1	5805-3	5806-1	5806-3	5807-1	5807-3	5808-1	5808-3	5809-1	5809-3 =	2290
2291 =	5810-1	5810-3	5811-1	5811-3	5812-1	5812-3	5813-1	5813-3	5814-1	5814-3 =	2300
2301 =	5815-1	5815-3	5816-1	5816-3	5817-1	5817-3	5818-1	5818-3	5819-1	5819-3 =	2310
2311 =	5820-1	5820-3	5821-1	5821-3	5822-1	5822-3	5823-1	5823-3	5824-1	5824-3 =	2320
2321 =	5825-1	5825-3	5826-1	5826-3	5827-1	5827-3	5828-1	5828-3	5829-1	5829-3 =	2330
2331 =	5830-1	5830-3	5831-1	5831-3	5832-1	5832-3	5833-1	5833-2	5833-3	5834-1 =	2340
2341 =	5834-2	5834-3	5835-1	5835-2	5835-3	5836-3	5837-3	5838-3	5839-3	5840-3 =	2350
2351 =	5841-3	5842-3	5843-3	5844-1	5844-2	5844-3	5845-1	5845-2	5845-3	5846-1 =	2360
2361 =	5846-2	5846-3	5847-1	5847-2	5847-3	5848-1	5848-2	5848-3	5849-1	5849-2 =	2370
2371 =	5849-3	5850-1	5850-2	5850-3	5851-1	5851-2	5851-3	5852-1	5852-2	5852-3 =	2380
2381 =	5853-1	5853-2	5853-3	5854-1	5854-2	5854-3	5855-1	5855-2	5855-3	5856-1 =	2390
2391 =	5856-2	5856-3	5857-1	5857-2	5857-3	5858-1	5858-2	5858-3	5859-1	5859-2 =	2400
2401 =	5859-3	5860-1	5860-2	5860-3	5861-1	5861-2	5861-3	5862-2	5862-3	5863-2 =	2410
2411 =	5863-3	5864-1	5865-1	5866-1	5866-2	5866-3	5867-1	5867-2	5867-3	5868-1 =	2420
2421 =	5868-2	5868-3	5869-1	5869-2	5869-3	5870-1	5870-2	5870-3	5871-1	5871-2 =	2430
2431 =	5871-3	5872-1	5872-2	5872-3	5873-1	5873-2	5873-3	5874-1	5874-2	5874-3 =	2440
2441 =	5875-1	5875-2	5875-3	5876-1	5876-2	5876-3	5877-1	5877-2	5877-3	5878-1 =	2450
2451 =	5878-2	5878-3	5879-1	5879-2	5879-3	5880-1	5880-2	5880-3	5881-1	5881-2 =	2460
2461 =	5881-3	5882-1	5882-2	5882-3	5883-1	5883-2	5883-3	5884-1	5884-2	5884-3 =	2470
2471 =	5885-1	5885-2	5885-3	5886-1	5886-2	5886-3	5887-1	5887-2	5887-3	5888-1 =	2480
2481 =	5888-2	5888-3	5889-1	5889-2	5889-3	5890-1	5890-2	5890-3	5891-1	5891-2 =	2490
2491 =	5891-3	5892-1	5892-2	5892-3	5893-1	5893-2	5893-3	5894-1	5894-2	5894-3 =	2500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 187

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
2501 =	5895-1	5895-2	5895-3	5896-1	5896-2	5896-3	5897-1	5897-2	5897-3	5898-2 =	2510
2511 =	5898-3	5899-2	5899-3	5900-1	5900-2	5900-3	5901-1	5901-2	5901-3	5902-1 =	2520
2521 =	5902-2	5902-3	5903-1	5903-2	5903-3	5904-1	5904-2	5904-3	5905-1	5905-2 =	2530
2531 =	5905-3	5971-1	5971-2	5971-3	5972-1	5972-2	5972-3	5973-1	5973-2	5973-3 =	2540
2541 =	5974-1	5974-2	5974-3	2719-1	2719-2	2719-3	2719-4	2719-5	2719-6	2720-1 =	2550
2551 =	2720-2	2720-3	2747-1	2747-2	2747-3	2747-4	2747-5	2747-6	2748-1	2748-2 =	2560
2561 =	2748-3	2733-1	2733-2	2733-3	2733-4	2733-5	2733-6	2734-1	2734-2	2734-3 =	2570
2571 =	2329-1	2329-2	2329-3	2335-2	1629-3	1779-3	1608-3	5906-3	5907-3	5908-3 =	2580
2581 =	5909-3	5910-3	1612-3	5911-3	5912-3	5913-3	5914-3	5915-3	5916-3	5917-3 =	2590
2591 =	5918-3	5919-3	1633-3	5921-3	5922-3	1638-3	1617-3	1621-3	5925-3	5926-3 =	2600
2601 =	1806-3	5927-3	5928-3	5929-3	5930-3	1814-3	5931-3	1818-3	5932-3	5933-3 =	2610
2611 =	5934-3	5965-3	5966-3	1758-3	5936-3	5937-3	5938-3	5939-3	5940-3	1762-3 =	2620
2621 =	5941-3	5942-3	5943-3	5944-3	5945-3	5946-3	5947-3	5948-3	5949-3	1783-3 =	2630
2631 =	5951-3	5952-3	1788-3	1767-3	1771-3	5955-3	5956-3	1826-3	5957-3	5958-3 =	2640
2641 =	5959-3	5960-3	1834-3	5961-3	1838-3	5962-3	5963-3	5964-3	5967-3	5968-3 =	2650
2651 =	90-1	90-2	90-3	91-1	91-2	91-3	1091-1	1091-2	1091-3	226-1 =	2660
2661 =	226-2	226-3	226-4	226-5	226-6	200-2	200-3	200-5	200-6	216-1 =	2670
2671 =	216-2	216-3	704-2	704-3	2874-2	2874-3	662-2	662-3	691-3	606-2 =	2680
2681 =	606-3	634-2	634-3	635-3	723-2	723-3	546-2	546-3	302-2	302-3 =	2690
2691 =	307-2	307-3	309-3	390-1	313-2	314-2	315-2	315-3	316-3	317-2 =	2700
2701 =	318-2	319-2	319-3	320-3	321-2	322-2	323-3	324-3	328-3	329-2 =	2710
2711 =	330-2	331-3	332-3	335-3	343-2	344-2	345-3	346-3	391-1	356-1 =	2720
2721 =	356-2	356-3	356-4	356-5	356-6	357-2	357-3	350-1	350-2	350-3 =	2730
2731 =	351-1	351-2	351-3	352-1	352-2	352-3	353-1	353-2	353-3	1302-2 =	2740
2741 =	1302-3	1307-2	1307-3	1309-3	1390-1	1313-2	1314-2	1315-2	1315-3	1316-3 =	2750
2751 =	1317-2	1318-2	1319-2	1319-3	1320-3	1321-2	1322-2	1323-3	1324-3	1328-3 =	2760
2761 =	1329-2	1330-2	1331-3	1332-3	1335-3	1343-2	1344-2	1345-3	1346-3	1391-1 =	2770
2771 =	1356-1	1356-2	1356-3	1356-4	1356-5	1356-6	1357-2	1357-3	1350-1	1350-2 =	2780
2781 =	1350-3	1351-1	1351-2	1351-3	1352-1	1352-2	1352-3	1353-1	1353-2	1353-3 =	2790
2791 =	1117-1	1117-2	1117-3	1117-4	1117-5	1117-6	100-1	100-2	100-3	100-4 =	2800
2801 =	100-6	101-1	101-2	101-3	101-4	101-6	102-1	102-2	102-3	102-4 =	2810
2811 =	102-6	103-1	103-2	103-3	103-4	103-6	104-1	104-2	104-3	104-4 =	2820
2821 =	104-6	105-1	105-2	105-3	105-4	105-6	106-1	106-2	106-3	106-4 =	2830
2831 =	106-6	107-1	107-2	107-3	107-4	107-6	108-1	108-2	108-3	108-4 =	2840
2841 =	108-6	109-1	109-2	109-3	109-4	109-6	110-1	110-2	110-3	110-4 =	2850
2851 =	110-6	111-1	111-2	111-3	111-4	111-6	112-2	113-2	114-2	115-1 =	2860
2861 =	115-2	115-3	115-4	115-5	115-6	116-1	116-2	116-3	116-4	116-5 =	2870
2871 =	116-6	10001-1	10001-2	10001-3	10002-1	10002-2	10002-3	10004-1	10004-2	10004-3 =	2880
2881 =	10005-1	10005-2	10005-3	10006-1	10006-2	10006-3	10007-1	10007-2	10007-3	10008-1 =	2890
2891 =	10008-2	10008-3	10009-1	10009-2	10009-3	10010-1	10010-2	10010-3	10011-1	10011-2 =	2900
2901 =	10011-3	10012-1	10012-2	10012-3	10013-1	10013-2	10013-3	10016-1	10016-2	10016-3 =	2910
2911 =	10017-1	10017-2	10017-3	10018-1	10018-2	10018-3	10019-1	10019-2	10019-3	10020-1 =	2920
2921 =	10020-2	10020-3	10021-1	10021-2	10021-3	10022-1	10022-2	10022-3	10023-1	10023-2 =	2930
2931 =	10023-3	10025-1	10025-2	10025-3	10026-1	10026-2	10026-3	10027-1	10027-2	10027-3 =	2940
2941 =	10028-1	10028-2	10028-3	10029-1	10029-2	10029-3	10030-1	10030-2	10030-3	10031-1 =	2950
2951 =	10031-2	10031-3	10032-1	10032-2	10032-3	10033-1	10033-2	10033-3	10034-1	10034-2 =	2960
2961 =	10034-3	10035-1	10035-2	10035-3	10036-1	10036-2	10036-3	10037-1	10037-2	10037-3 =	2970
2971 =	10038-1	10038-2	10038-3	10039-1	10039-2	10039-3	10040-1	10040-2	10040-3	10041-1 =	2980
2981 =	10041-2	10041-3	10042-1	10042-2	10042-3	10043-1	10043-2	10043-3	10044-1	10044-2 =	2990
2991 =	10044-3	10045-1	10045-2	10045-3	10046-1	10046-2	10046-3	10047-1	10047-2	10047-3 =	3000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 188

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
3001 =	10048-1	10048-2	10048-3	10049-1	10049-2	10049-3	10050-1	10050-2	10050-3	10051-1 =	3010
3011 =	10051-2	10051-3	10052-1	10052-2	10052-3	10053-1	10053-2	10053-3	10054-1	10054-2 =	3020
3021 =	10054-3	10055-1	10055-2	10055-3	10056-1	10056-2	10056-3	10057-1	10057-2	10057-3 =	3030
3031 =	10058-1	10058-2	10058-3	10059-1	10059-2	10059-3	10060-1	10060-2	10060-3	10061-1 =	3040
3041 =	10061-2	10061-3	10062-1	10062-2	10062-3	10063-1	10063-2	10063-3	10064-1	10064-2 =	3050
3051 =	10064-3	10065-1	10065-2	10065-3	10066-1	10066-2	10066-3	10067-1	10067-2	10067-3 =	3060
3061 =	10068-1	10068-2	10068-3	10069-1	10069-2	10069-3	10070-1	10070-2	10070-3	10071-1 =	3070
3071 =	10071-2	10071-3	10072-1	10072-2	10072-3	10073-1	10073-2	10073-3	10074-1	10074-2 =	3080
3081 =	10074-3	10075-1	10075-2	10075-3	10076-1	10076-2	10076-3	10077-1	10077-2	10077-3 =	3090
3091 =	10078-1	10078-2	10078-3	10079-1	10079-2	10079-3	10080-1	10080-2	10080-3	10081-1 =	3100
3101 =	10081-2	10081-3	10082-1	10082-2	10082-3	10083-1	10083-2	10083-3	100001-0	100002-0 =	3110
3111 =	100003-0	100004-0	100005-0	100006-0	100007-0	100008-0	100009-0	100010-0	100011-0	100012-0 =	3120
3121 =	100013-0	100014-0	100015-0	100016-0	100017-0	100018-0	100019-0	100020-0	100021-0	100022-0 =	3130
3131 =	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0	100031-0	100032-0 =	3140
3141 =	100033-0	100034-0	100035-0	100036-0	100037-0	100038-0	100039-0	100040-0	100041-0	100042-0 =	3150
3151 =	100043-0	100044-0	100045-0	100046-0	100047-0	100048-0	100049-0	100050-0	100051-0	100052-0 =	3160
3161 =	100053-0	100054-0	100055-0	100056-0	100057-0	100058-0	100059-0	100060-0	100061-0	100062-0 =	3170
3171 =	100063-0	100064-0	100065-0	100066-0	100067-0	100068-0	100069-0	100070-0	100071-0	100072-0 =	3180
3181 =	100073-0	100074-0	100075-0	100076-0	100077-0	100078-0	100079-0	100080-0	100081-0	100082-0 =	3190
3191 =	100083-0	100084-0	100085-0	100086-0	100087-0	100088-0	100089-0	100090-0	100091-0	100092-0 =	3200
3201 =	100093-0	100094-0	100095-0	100096-0	100097-0	100098-0	100099-0	100100-0	100101-0	100102-0 =	3210
3211 =	100103-0	100104-0	100105-0	100106-0	100107-0	100108-0	100109-0	100110-0	100111-0	100112-0 =	3220
3221 =	100113-0	100114-0	100115-0	100116-0	100117-0	100118-0	100119-0	100120-0	100121-0	100122-0 =	3230
3231 =	100123-0	100124-0	100125-0	100126-0	100127-0	100128-0	100129-0	100130-0	100131-0	100132-0 =	3240
3241 =	100133-0	100134-0	100135-0	100136-0	100137-0	100138-0	100139-0	100140-0	100141-0	100142-0 =	3250
3251 =	100143-0	100144-0	100145-0	100146-0	100147-0	100148-0	100149-0	100150-0	100151-0	100152-0 =	3260
3261 =	100153-0	100154-0	100155-0	100156-0	100157-0	100158-0	100159-0	100160-0	100161-0	100162-0 =	3270
3271 =	100163-0	100164-0	100165-0	100166-0	100167-0	100168-0	100169-0	100170-0	100171-0	100172-0 =	3280
3281 =	100173-0	100174-0	100175-0	100176-0	100177-0	100178-0	100179-0	100180-0	100181-0	100182-0 =	3290
3291 =	100183-0	100184-0	100185-0	100186-0	100187-0	100188-0	100189-0	100190-0	100191-0	100192-0 =	3300
3301 =	100193-0	100194-0	100195-0	100196-0	100197-0	100198-0	100199-0	100200-0	100201-0	100202-0 =	3310
3311 =	100203-0	100204-0	100205-0	100206-0	100207-0	100208-0	100209-0	100210-0	100211-0	100212-0 =	3320
3321 =	100213-0	100214-0	100215-0	100216-0	100217-0	100218-0	100219-0	100220-0	100221-0	100222-0 =	3330
3331 =	100223-0	100224-0	100225-0	100226-0	100227-0	100228-0	100229-0	100230-0	100231-0	100232-0 =	3340
3341 =	100233-0	100234-0	100235-0	100236-0	100237-0	100238-0	100239-0	100240-0	100241-0	100242-0 =	3350
3351 =	100243-0	100244-0	100245-0	100246-0	100247-0	100248-0	100249-0	100250-0	100251-0	100252-0 =	3360
3361 =	100253-0	100254-0	100255-0	100256-0	100257-0	100258-0	100259-0	100260-0	100261-0	100262-0 =	3370
3371 =	100263-0	100264-0	100265-0	100266-0	100267-0	100268-0	100269-0	100270-0	100271-0	100272-0 =	3380
3381 =	100273-0	100274-0	100275-0	100276-0	100277-0	100278-0	100279-0	100280-0	100281-0	100282-0 =	3390
3391 =	100283-0	100284-0	100285-0	100286-0	100287-0	100288-0	100289-0	100290-0	100291-0	100292-0 =	3400
3401 =	100293-0	100294-0	100295-0	100296-0	100297-0	100298-0	100299-0	100300-0	100301-0	100302-0 =	3410
3411 =	100303-0	100304-0	100305-0	100306-0	100307-0	100308-0	100309-0	100310-0	100311-0	100312-0 =	3420
3421 =	100313-0	100314-0	100315-0	100316-0	100317-0	100318-0	100319-0	100320-0	100321-0	100322-0 =	3430
3431 =	100323-0	100324-0	100325-0	100326-0	100327-0	100328-0	100329-0	100330-0	100331-0	100332-0 =	3440
3441 =	100333-0	100334-0	100335-0	100336-0	100337-0	100338-0	100339-0	100340-0	100341-0	100342-0 =	3450
3451 =	100343-0	100344-0	100345-0	100346-0	100347-0	100348-0	100349-0	100350-0	100351-0	100352-0 =	3460
3461 =	100353-0	100354-0	100355-0	100356-0	100357-0	100358-0	100359-0	100360-0	100361-0	100362-0 =	3470
3471 =	100363-0	100364-0	100365-0	100366-0	100367-0	100368-0	100369-0	100370-0	100371-0	100372-0 =	3480
3481 =	100373-0	100374-0	100375-0	100376-0	100377-0	100378-0	100379-0	100380-0	100381-0	100382-0 =	3490
3491 =	100383-0	100384-0	100385-0	100386-0	100387-0	100388-0	100389-0	100390-0	100391-0	100392-0 =	3500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 189

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
3501 =	100393-0	100394-0	100395-0	100396-0	100397-0	100398-0	100399-0	100400-0	100401-0	100402-0 =	3510
3511 =	100403-0	100404-0	100405-0	100406-0	100407-0	100408-0	100409-0	100410-0	100411-0	100412-0 =	3520
3521 =	100413-0	100414-0	100415-0	100416-0	100417-0	100418-0	100419-0	100420-0	100421-0	100422-0 =	3530
3531 =	100423-0	100424-0	100425-0	100426-0	100427-0	100428-0	100429-0	100430-0	100431-0	100432-0 =	3540
3541 =	100433-0	100434-0	100435-0	100436-0	100437-0	100438-0	100439-0	100440-0	100441-0	100442-0 =	3550
3551 =	100443-0	100444-0	100445-0	100446-0	100447-0	100448-0	100449-0	100450-0	100451-0	100452-0 =	3560
3561 =	100453-0	100454-0	100455-0	100456-0	100457-0	100458-0	100459-0	100460-0	100461-0	100462-0 =	3570
3571 =	100463-0	100464-0	100465-0	100466-0	100467-0	100468-0	100469-0	100470-0	100471-0	100472-0 =	3580
3581 =	100473-0	100474-0	100475-0	100476-0	100477-0	100478-0	100479-0	100480-0	100481-0	100482-0 =	3590
3591 =	100483-0	100484-0	100485-0	100486-0	100487-0	100488-0	100489-0	100490-0	100491-0	100492-0 =	3600
3601 =	100493-0	100494-0	100495-0	100496-0	100497-0	100498-0	100499-0	100500-0	100501-0	100502-0 =	3610
3611 =	100503-0	100504-0	100505-0	100506-0	100507-0	100508-0	100509-0	100510-0	100511-0	100512-0 =	3620
3621 =	100513-0	100514-0	100515-0	100516-0	100517-0	100518-0	100519-0	100520-0	100521-0	100522-0 =	3630
3631 =	100523-0	100524-0	100525-0	100526-0	100527-0	100528-0	100529-0	100530-0	100531-0	100532-0 =	3640
3641 =	100533-0	100534-0	100535-0	100536-0	100537-0	100538-0	100539-0	100540-0	100541-0	100542-0 =	3650
3651 =	100543-0	100544-0	100545-0	100546-0	100547-0	100548-0	100549-0	100550-0	100551-0	100552-0 =	3660
3661 =	100553-0	100554-0	100555-0	100556-0	100557-0	100558-0	100559-0	100560-0	100561-0	100562-0 =	3670
3671 =	100563-0	100564-0	100565-0	100566-0	100567-0	100568-0	100569-0	100570-0	100571-0	100572-0 =	3680
3681 =	100573-0	100574-0	100575-0	100576-0	100577-0	100578-0	100579-0	100580-0	100581-0	100582-0 =	3690
3691 =	100583-0	100584-0	100585-0	100586-0	100587-0	100588-0	100589-0	100590-0	100591-0	100592-0 =	3700
3701 =	100593-0	100594-0	100595-0	100596-0	100597-0	100598-0	100599-0	100600-0	100601-0	100602-0 =	3710
3711 =	100603-0	100604-0	100605-0	100606-0	100607-0	100608-0	100609-0	100610-0	100611-0	100612-0 =	3720
3721 =	100613-0	100614-0	100615-0	100616-0	100617-0	100618-0	100619-0	100620-0	100621-0	100622-0 =	3730
3731 =	100623-0	100624-0	100625-0	100626-0	100627-0	100628-0	100629-0	100630-0	100631-0	100632-0 =	3740
3741 =	100633-0	100634-0	100635-0	100636-0	100637-0	100638-0	100639-0	100640-0	100641-0	100642-0 =	3750
3751 =	100643-0	100644-0	100645-0	100646-0	100647-0	100648-0	100649-0	100650-0	100651-0	100652-0 =	3760
3761 =	100653-0	100654-0	100655-0	100656-0	100657-0	100658-0	100659-0	100660-0	100661-0	100662-0 =	3770
3771 =	100663-0	100664-0	100665-0	100666-0	100667-0	100668-0	100669-0	100670-0	100671-0	100672-0 =	3780
3781 =	100673-0	100674-0	100675-0	100676-0	100677-0	100678-0	100679-0	100680-0	100681-0	100682-0 =	3790
3791 =	100683-0	100684-0	100685-0	100686-0	100687-0	100688-0	100689-0	100690-0	100691-0	100692-0 =	3800
3801 =	100693-0	100694-0	100695-0	100696-0	100697-0	100698-0	100699-0	100700-0	100701-0	100702-0 =	3810
3811 =	100703-0	100704-0	100705-0	100706-0	100707-0	100708-0	100709-0	100710-0	100711-0	100712-0 =	3820
3821 =	100713-0	100714-0	100715-0	100716-0	100717-0	100718-0	100719-0	100720-0	100721-0	100722-0 =	3830
3831 =	100723-0	100724-0	100725-0	100726-0	100727-0	100728-0	100729-0	100730-0	100731-0	100732-0 =	3840
3841 =	100733-0	100734-0	100735-0	100736-0	100737-0	100738-0	100739-0	100740-0	100741-0	100742-0 =	3850
3851 =	100743-0	100744-0	100745-0	100746-0	100747-0	100748-0	100749-0	100750-0	100751-0	100752-0 =	3860
3861 =	100753-0	100754-0	100755-0	100756-0	100757-0	100758-0	100759-0	100760-0	100761-0	100762-0 =	3870
3871 =	100763-0	100764-0	100765-0	100766-0	100767-0	100768-0	100769-0	100770-0	100771-0	100772-0 =	3880
3881 =	100773-0	100774-0	100775-0	100776-0	100777-0	100778-0	100779-0	100780-0	100781-0	100782-0 =	3890
3891 =	100783-0	100784-0	100785-0	100786-0	100787-0	100788-0	100789-0	100790-0	100791-0	100792-0 =	3900
3901 =	100793-0	100794-0	100795-0	100796-0	100797-0	100798-0	100799-0	100800-0	100801-0	100802-0 =	3910
3911 =	100803-0	100804-0	100805-0	100806-0	100807-0	100808-0	100809-0	100810-0	100811-0	100812-0 =	3920
3921 =	100813-0	100814-0	100815-0	100816-0	100817-0	100818-0	100819-0	100820-0	100821-0	100822-0 =	3930
3931 =	100823-0	100824-0	100825-0	100826-0	100827-0	100828-0	100829-0	100830-0	100831-0	100832-0 =	3940
3941 =	100833-0	100834-0	100835-0	100836-0	100837-0	100838-0	100839-0	100840-0	100841-0	100842-0 =	3950
3951 =	100843-0	100844-0	100845-0	100846-0	100847-0	100848-0	100849-0	100850-0	100851-0	100852-0 =	3960
3961 =	100853-0	100854-0	100855-0	100856-0	100857-0	100858-0	100859-0	100860-0	100861-0	100862-0 =	3970
3971 =	100863-0	100864-0	100865-0	100866-0	100867-0	100868-0	100869-0	100870-0	100871-0	100872-0 =	3980
3981 =	100873-0	100874-0	100875-0	100876-0	100877-0	100878-0	100879-0	100880-0	100881-0	100882-0 =	3990
3991 =	100883-0	100884-0	100885-0	100886-0	100887-0	100888-0	100889-0	100890-0	100891-0	100892-0 =	4000

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 190

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
4001 =	100893-0	100894-0	100895-0	100896-0	100897-0	100898-0	100899-0	100900-0	100901-0	100902-0 =	4010
4011 =	100903-0	100904-0	100905-0	100906-0	100907-0	100908-0	100909-0	100910-0	100911-0	100912-0 =	4020
4021 =	100913-0	100914-0	100915-0	100916-0	100917-0	100918-0	100919-0	100920-0	100921-0	100922-0 =	4030
4031 =	100923-0	100924-0	100925-0	100926-0	100927-0	100928-0	100929-0	100930-0	100931-0	100932-0 =	4040
4041 =	100933-0	100934-0	100935-0	100936-0	100937-0	100938-0	100939-0	100940-0	100941-0	100942-0 =	4050
4051 =	100943-0	100944-0	100945-0	100946-0	100947-0	100948-0	100949-0	100950-0	100951-0	100952-0 =	4060
4061 =	100953-0	100954-0	100955-0	100956-0	100957-0	100958-0	100959-0	100960-0	100961-0	100962-0 =	4070
4071 =	100963-0	100964-0	100965-0	100966-0	100967-0	100968-0	100969-0	100970-0	100971-0	100972-0 =	4080
4081 =	100973-0	100974-0	100975-0	100976-0	100977-0	100978-0	100979-0	100980-0	100981-0	100982-0 =	4090
4091 =	100983-0	100984-0	100985-0	100986-0	100987-0	100988-0	100989-0	100990-0	100991-0	100992-0 =	4100
4101 =	100993-0	100994-0	100995-0	100996-0	100997-0	100998-0	100999-0	101000-0	101001-0	101002-0 =	4110
4111 =	101003-0	101004-0	101005-0	101006-0	101007-0	101008-0	101009-0	101010-0	101011-0	101012-0 =	4120
4121 =	101013-0	101014-0	101015-0	101016-0	101017-0	101018-0	101019-0	101020-0	101021-0	101022-0 =	4130
4131 =	101023-0	101024-0	101025-0	101026-0	101027-0	101028-0	101029-0	101030-0	101031-0	101032-0 =	4140
4141 =	101033-0	101034-0	101035-0	101036-0	101037-0	101038-0	101039-0	101040-0	101041-0	101042-0 =	4150
4151 =	101043-0	101044-0	101045-0	101046-0	101047-0	101048-0	101049-0	101050-0	101051-0	101052-0 =	4160
4161 =	101053-0	101054-0	101055-0	101056-0	101057-0	101058-0	101059-0	101060-0	101061-0	101062-0 =	4170
4171 =	101063-0	101064-0	101065-0	101066-0	101067-0	101068-0	101069-0	101070-0	101071-0	101072-0 =	4180
4181 =	101073-0	101074-0	101075-0	101076-0	101077-0	101078-0	101079-0	101080-0	101081-0	101082-0 =	4190
4191 =	101083-0	101084-0	101085-0	101086-0	101087-0	101088-0	101089-0	101090-0	101091-0	101092-0 =	4200
4201 =	101093-0	101094-0	101095-0	101096-0	101097-0	101098-0	101099-0	101100-0	101101-0	101102-0 =	4210
4211 =	101103-0	101104-0	101105-0	101106-0	101107-0	101108-0	101109-0	101110-0	101111-0	101112-0 =	4220
4221 =	101113-0	101114-0	101115-0	101116-0	101117-0	101118-0	101119-0	101120-0	101121-0	101122-0 =	4230
4231 =	101123-0	101124-0	101125-0	101126-0	101127-0	101128-0	101129-0	101130-0	101131-0	101132-0 =	4240
4241 =	101133-0	101134-0	101135-0	101136-0	101137-0	101138-0	101139-0	101140-0	101141-0	101142-0 =	4250
4251 =	101143-0	101144-0	101145-0	101146-0	101147-0	101148-0	101149-0	101150-0	101151-0	101152-0 =	4260
4261 =	101153-0	101154-0	101155-0	101156-0	101157-0	101158-0	101159-0	101160-0	101161-0	101162-0 =	4270
4271 =	101163-0	101164-0	101165-0	101166-0	101167-0	101168-0	101169-0	101170-0	101171-0	101172-0 =	4280
4281 =	101173-0	101174-0	101175-0	101176-0	101177-0	101178-0	101179-0	101180-0	101181-0	101182-0 =	4290
4291 =	101183-0	101184-0	101185-0	101186-0	101187-0	101188-0	101189-0	101190-0	101191-0	101192-0 =	4300
4301 =	101193-0	101194-0	101195-0	101196-0	101197-0	101198-0	101199-0	101200-0	101201-0	101202-0 =	4310
4311 =	101203-0	101204-0	101205-0	101206-0	101207-0	101208-0	101209-0	101210-0	101211-0	101212-0 =	4320
4321 =	101213-0	101214-0	101215-0	101216-0	101217-0	101218-0	101219-0	101220-0	101221-0	101222-0 =	4330
4331 =	101223-0	101224-0	101225-0	101226-0	101227-0	101228-0	101229-0	101230-0	101231-0	101232-0 =	4340
4341 =	101233-0	101234-0	101235-0	101236-0	101237-0	101238-0	101239-0	101240-0	101241-0	101242-0 =	4350
4351 =	101243-0	101244-0	101245-0	101246-0	101247-0	101248-0	101249-0	101250-0	101251-0	101252-0 =	4360
4361 =	101253-0	101254-0	101255-0	101256-0	101257-0	101258-0	101259-0	101260-0	101261-0	101262-0 =	4370
4371 =	101263-0	101264-0	101265-0	101266-0	101267-0	101268-0	101269-0	101270-0	101271-0	101272-0 =	4380
4381 =	101273-0	101274-0	101275-0	101276-0	101277-0	101278-0	101279-0	101280-0	101281-0	101282-0 =	4390
4391 =	101283-0	101284-0	101285-0	101286-0	101287-0	101288-0	101289-0	101290-0	101291-0	101292-0 =	4400
4401 =	101293-0	101294-0	101295-0	101296-0	101297-0	101298-0	101299-0	101300-0	101301-0	101302-0 =	4410
4411 =	101303-0	101304-0	101305-0	101306-0	101307-0	101308-0	101309-0	101310-0	101311-0	101312-0 =	4420
4421 =	101313-0	101314-0	101315-0	101316-0	101317-0	101318-0	101319-0	101320-0	101321-0	101322-0 =	4430
4431 =	101323-0	101324-0	101325-0	101326-0	101327-0	101328-0	101329-0	101330-0	101331-0	101332-0 =	4440
4441 =	101333-0	101334-0	101335-0	101336-0	101337-0	101338-0	101339-0	101340-0	101341-0	101342-0 =	4450
4451 =	101343-0	101344-0	101345-0	101346-0	101347-0	101348-0	101349-0	101350-0	101351-0	101352-0 =	4460
4461 =	101353-0	101354-0	101355-0	101356-0	101357-0	101358-0	101359-0	101360-0	101361-0	101362-0 =	4470
4471 =	101363-0	101364-0	101365-0	101366-0	101367-0	101368-0	101369-0	101370-0	101371-0	101372-0 =	4480
4481 =	101373-0	101374-0	101375-0	101376-0	101377-0	101378-0	101379-0	101380-0	101381-0	101382-0 =	4490
4491 =	101383-0	101384-0	101385-0	101386-0	101387-0	101388-0	101389-0	101390-0	101391-0	101392-0 =	4500

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:26 CDT Page 191

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
4501 =	101393-0	101394-0	101395-0	101396-0	101397-0	101398-0	101399-0	101400-0	101401-0	101402-0 =	4510
4511 =	101403-0	101404-0	101405-0	101406-0	101407-0	101408-0	101409-0	101410-0	101411-0	101412-0 =	4520
4521 =	101413-0	101414-0	101415-0	101416-0	101417-0	101418-0	101419-0	101420-0	101421-0	101422-0 =	4530
4531 =	101423-0	101424-0	101425-0	101426-0	101427-0	101428-0	101429-0	101430-0	101431-0	101432-0 =	4540
4541 =	101433-0	101434-0	101435-0	101436-0	101437-0	101438-0	101439-0	101440-0	101441-0	101442-0 =	4550
4551 =	101443-0	101444-0	101445-0	101446-0	101447-0	101448-0	101449-0	101450-0	101451-0	101452-0 =	4560
4561 =	101453-0	101454-0	101455-0	101456-0	101457-0	101458-0	101459-0	101460-0	101461-0	101462-0 =	4570
4571 =	101463-0	101464-0	101465-0	101466-0	101467-0	101468-0	101469-0	101470-0	101471-0	101472-0 =	4580
4581 =	101473-0	101474-0	101475-0	101476-0	101477-0	101478-0	101479-0	101480-0	101481-0	101482-0 =	4590
4591 =	101483-0	101484-0	101485-0	101486-0	101487-0	101488-0	101489-0	101490-0	101491-0	101492-0 =	4600
4601 =	101493-0	101494-0	101495-0	101496-0	101497-0	101498-0	101499-0	101500-0	101501-0	101502-0 =	4610
4611 =	101503-0	101504-0	101505-0	101506-0	101507-0	101508-0	101509-0	101510-0	101511-0	101512-0 =	4620
4621 =	101513-0	101514-0	101515-0	101516-0	101517-0	101518-0	101519-0	101520-0	101521-0	101522-0 =	4630
4631 =	101523-0	101524-0	101525-0	101526-0	101527-0	101528-0	101529-0	101530-0	101531-0	101532-0 =	4640
4641 =	101533-0	101534-0	101535-0	101536-0	101537-0	101538-0	101539-0	101540-0	101541-0	101542-0 =	4650
4651 =	101543-0	101544-0	101545-0	101546-0	101547-0	101548-0	101549-0	101550-0	101551-0	101552-0 =	4660
4661 =	101553-0	101554-0	101555-0	101556-0	101557-0	101558-0	101559-0	101560-0	101561-0	101562-0 =	4670
4671 =	101563-0	101564-0	101565-0	101566-0	101567-0	101568-0	101569-0	101570-0	101571-0	101572-0 =	4680
4681 =	101573-0	101574-0	101575-0	101576-0	101577-0	101578-0	101579-0	101580-0	101581-0	101582-0 =	4690
4691 =	101583-0	101584-0	101585-0	101586-0	101587-0	101588-0	101589-0	101590-0	101591-0	101592-0 =	4700
4701 =	101593-0	101594-0	101595-0	101596-0	101597-0	101598-0	101599-0	101600-0	101601-0	101602-0 =	4710
4711 =	101603-0	101604-0	101605-0	101606-0	101607-0	101608-0	101609-0	101610-0	101611-0	101612-0 =	4720
4721 =	101613-0	101614-0	101615-0	101616-0	101617-0	101618-0	101619-0	101620-0	101621-0	101622-0 =	4730
4731 =	101623-0	101624-0	101625-0	101626-0	101627-0	101628-0	101629-0	101630-0	101631-0	101632-0 =	4740
4741 =	101633-0	101634-0	101635-0	101636-0	101637-0	101638-0	101639-0	101640-0	101641-0	101642-0 =	4750
4751 =	101643-0	101644-0	101645-0	101646-0	101647-0	101648-0	101649-0	101650-0	101651-0	101652-0 =	4760
4761 =	101653-0	101654-0	101655-0	101656-0	101657-0	101658-0	101659-0	101660-0	101661-0	101662-0 =	4770
4771 =	101663-0	101664-0	101665-0	101666-0	101667-0	101668-0	101669-0	101670-0	101671-0	101672-0 =	4780
4781 =	101673-0	101674-0	101675-0	101676-0	101677-0	101678-0	101679-0	101680-0	101681-0	101682-0 =	4790
4791 =	101683-0	101684-0	101685-0	101686-0	101687-0	101688-0	101689-0	101690-0	101691-0	101692-0 =	4800
4801 =	101693-0	101694-0	101695-0	101696-0	101697-0	101698-0	101699-0	101700-0	101701-0	101702-0 =	4810
4811 =	101703-0	101704-0	101705-0	101706-0	101707-0	101708-0	101709-0	101710-0	101711-0	101712-0 =	4820
4821 =	101713-0	101714-0	101715-0	101716-0	101717-0	101718-0	101719-0	101720-0	101721-0	101722-0 =	4830
4831 =	101723-0	101724-0	101725-0	101726-0	101727-0	101728-0	101729-0	101730-0	101731-0	101732-0 =	4840
4841 =	101733-0	101734-0	101735-0	101736-0	101737-0	101738-0	101739-0	101740-0	101741-0	101742-0 =	4850
4851 =	101743-0	101744-0	101745-0	101746-0	101747-0	101748-0	101749-0	101750-0	101751-0	101752-0 =	4860
4861 =	101753-0	101754-0	101755-0	101756-0	101757-0	101758-0	101759-0	101760-0	101761-0	101762-0 =	4870
4871 =	101763-0	101764-0	101765-0	101766-0	101767-0	101768-0	101769-0	101770-0	101771-0	101772-0 =	4880
4881 =	101773-0	101774-0	101775-0	101776-0	101777-0	101778-0	101779-0	101780-0	101781-0	101782-0 =	4890
4891 =	101783-0	101784-0	101785-0	101786-0	101787-0	101788-0	101789-0	101790-0	101791-0	101792-0 =	4900
4901 =	101793-0	101794-0	101795-0	101796-0	101797-0	101798-0	101799-0	101800-0	101801-0	101802-0 =	4910
4911 =	101803-0	101804-0	101805-0	101806-0	101807-0	101808-0	101809-0	101810-0	101811-0	101812-0 =	4920
4921 =	101813-0	101814-0	101815-0	101816-0	101817-0	101818-0	101819-0	101820-0	101821-0	101822-0 =	4930
4931 =	101823-0	101824-0	101825-0	101826-0	101827-0	101828-0	101829-0	101830-0	101831-0	101832-0 =	4940
4941 =	101833-0	101834-0	101835-0	101836-0	101837-0	101838-0	101839-0	101840-0	101841-0	101842-0 =	4950
4951 =	101843-0	101844-0	101845-0	101846-0	101847-0	101848-0	101849-0	101850-0	101851-0	101852-0 =	4960
4961 =	101853-0	101854-0	101855-0	101856-0	101857-0	101858-0	101859-0	101860-0	101861-0	101862-0 =	4970
4971 =	101863-0	101864-0	101865-0	101866-0	101867-0	101868-0	101869-0	101870-0	101871-0	101872-0 =	4980
4981 =	101873-0	101874-0	101875-0	101876-0							

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 14:34:26 CDT                    Page  192

                                  Z E R O   M A S S   D O F S

                The mass matrix is not positive definite. The following DOFs have mass less than 1.0E-09:

     ---  1 --- ---  2 --- ---  3 --- ---  4 --- ---  5 --- ---  6 --- ---  7 --- ---  8 --- ---  9 --- --- 10 ---
1 =   213201-3   213203-3   313201-3   313203-3   210413-3   213481-3
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 193

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  1.164998E+04 -3.038172E-04  1.119353E-03  8.922905E-01  9.386369E+05 -4.394631E+02 *
* -3.038172E-04  1.165116E+04  3.159382E-05 -9.389882E+05 -2.208727E+00  7.811412E+06 *
*  1.119353E-03  3.159382E-05  1.165113E+04  4.389970E+02 -7.811985E+06  2.439704E-04 *
*  8.922905E-01 -9.389882E+05  4.389970E+02  5.953642E+08 -6.119005E+05 -7.217457E+08 *
*  9.386369E+05 -2.208727E+00 -7.811985E+06 -6.119005E+05  9.182495E+09 -1.377850E+05 *
* -4.394631E+02  7.811412E+06  2.439702E-04 -7.217457E+08 -1.377850E+05  9.474481E+09 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.164998E+04	7.659157E-05	3.772221E-02	8.056981E+01
Y	1.165116E+04	6.704405E+02	-1.895714E-04	8.059181E+01
Z	1.165113E+04	6.704917E+02	3.767850E-02	2.093964E-08

I(S)

```
*  5.196894E+08  3.175567E+05  9.220990E+07 *
*  3.175567E+05  3.868997E+09  1.023776E+05 *
*  9.220990E+07  1.023776E+05  4.237393E+09 *
```

I(Q)

```
*  5.174037E+08                            *
*                3.868997E+09              *
*                            4.239679E+09 *
```

Q

```
* -9.996929E-01  1.017623E-04  2.478004E-02 *
* -9.547580E-05 -1.000000E+00  2.548738E-04 *
* -2.478007E-02 -2.524296E-04 -9.996929E-01 *
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 194

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
6.704661E+02	3.770035E-02	8.058081E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 195

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = C.G.

M O

```
*  1.164998E+04 -3.038172E-04  1.119353E-03  8.677665E-01 -1.273862E+02 -5.091380E-02 *
* -3.038172E-04  1.165116E+04  3.159382E-05 -1.281496E+02 -2.163062E+00 -2.982358E+02 *
*  1.119353E-03  3.159382E-05  1.165113E+04 -2.520921E-01 -2.983251E+02 -2.089642E-02 *
*  8.677665E-01 -1.281496E+02 -2.520921E-01  5.196894E+08 -3.178029E+05 -9.220990E+07 *
* -1.273862E+02 -2.163062E+00 -2.983251E+02 -3.178029E+05  3.868997E+09 -1.009271E+05 *
* -5.091380E-02 -2.982358E+02 -2.089642E-02 -9.220990E+07 -1.009271E+05  4.237394E+09 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.164998E+04	7.448650E-05	4.370289E-06	-1.093445E-02
Y	1.165116E+04	-2.559708E-02	-1.856521E-04	1.099887E-02
Z	1.165113E+04	2.560482E-02	-2.163671E-05	-1.793510E-06

I(S)

```
*  5.196894E+08  3.178029E+05  9.220990E+07 *
*  3.178029E+05  3.868997E+09  1.009271E+05 *
*  9.220990E+07  1.009271E+05  4.237393E+09 *
```

I(Q)

```
*  5.174037E+08                             *
*                3.868997E+09               *
*                            4.239679E+09 *
```

Q

```
* -9.996929E-01  1.017276E-04  2.478004E-02 *
* -9.553852E-05 -1.000000E+00  2.509455E-04 *
* -2.478007E-02 -2.485010E-04 -9.996929E-01 *
```

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 196

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.16500E+04	-3.03817E-04	1.11935E-03	8.67767E-01	-1.27386E+02	-5.09138E-02
T2:	-3.03817E-04	1.16512E+04	3.15938E-05	-1.28150E+02	-2.16306E+00	-2.98236E+02
T3:	1.11935E-03	3.15938E-05	1.16511E+04	-2.52092E-01	-2.98325E+02	-2.08964E-02
R1:	8.67767E-01	-1.28150E+02	-2.52092E-01	5.19689E+08	-3.17803E+05	-9.22099E+07
R2:	-1.27386E+02	-2.16306E+00	-2.98325E+02	-3.17803E+05	3.86900E+09	-1.00927E+05
R3:	-5.09138E-02	-2.98236E+02	-2.08964E-02	-9.22099E+07	-1.00927E+05	4.23739E+09

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	4.36630E-03	-4.19074E-03	1.29679E-03	8.60491E-01	-1.79801E+00	-3.93480E+00
T2:	-4.19162E-03	9.63872E-01	1.14682E-04	-3.19936E+02	-8.82869E-01	3.78277E+02
T3:	1.29694E-03	1.15050E-04	4.25062E-02	-1.87377E-01	-5.84175E+00	4.68927E-03
R1:	8.60798E-01	-3.19936E+02	-1.87301E-01	1.44837E+05	-9.53451E+01	-1.25631E+05
R2:	-1.79798E+00	-8.82738E-01	-5.84177E+00	-9.54175E+01	2.44980E+04	-3.74054E+01
R3:	-3.93548E+00	3.78277E+02	4.62041E-03	-1.25631E+05	-3.76034E+01	1.51449E+05

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 197

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	4590-1	8.77925E-05	-7.26638E-05	-1.22075E-05	-8.71352E-01	-1.69249E+01	1.36764E+00
2	4590-2	-5.37604E-05	2.12826E-04	1.32947E-05	9.26087E-01	1.82225E+00	-2.74973E-01
3	4590-3	3.83953E-06	-5.90927E-07	1.16770E-05	-6.95168E-01	6.56565E+00	4.57056E-01
4	4590-4	8.48493E-05	-3.89279E-04	-1.01261E-04	4.27119E+00	-6.86745E+01	-5.00141E+00
5	4590-5	5.96845E-05	-4.38669E-05	7.94999E-05	-4.92664E+00	5.77324E+01	5.45996E+00
6	4590-6	9.39842E-04	-2.69415E-03	-1.37364E-04	-1.18708E+01	-1.50336E+02	9.66463E+00
7	4591-1	5.26085E-06	5.45373E-04	7.08471E-06	-1.80790E-01	-1.89527E-01	1.35377E-01
8	4591-2	3.29359E-05	8.90873E-04	2.30671E-05	-2.99605E-01	-1.04917E+00	2.21783E-01
9	4591-3	-1.39508E-05	-2.70191E-04	-1.12025E-05	1.04351E-01	1.76526E+00	-6.93082E-02
10	4591-4	-4.86098E-05	-1.10818E-03	-4.15002E-05	3.83473E-01	-9.30270E+00	-2.60029E-01
11	4591-5	6.97723E-05	1.58551E-03	1.27568E-04	-2.90774E-01	8.47069E+00	3.79367E-01
12	4591-6	-1.50976E-04	5.15478E-03	-1.59484E-05	-1.69294E+00	3.52695E+00	1.27222E+00
13	4592-1	3.53439E-04	-9.38481E-05	-3.67884E-05	1.89856E+00	8.16589E+01	-4.40100E+00
14	4592-2	-1.32466E-04	4.74962E-04	6.99489E-05	4.30703E+00	-1.74969E+02	1.01168E+01
15	4592-3	-4.96786E-05	-7.83543E-05	4.06326E-04	-6.56244E+00	-1.49093E+02	8.30078E+00
16	4592-4	2.66694E-05	-2.50394E-05	9.92070E-04	-1.48046E+01	-3.15070E+02	1.91906E+01
17	4592-5	-2.27775E-04	1.25516E-04	-7.42725E-04	1.80150E+01	5.48018E+01	-4.90956E+00
18	4592-6	7.19632E-04	2.33955E-03	-6.89292E-04	-5.46578E+01	1.79254E+03	-1.00322E+02
19	4593-1	1.49919E-04	1.17640E-04	-4.02392E-06	-1.01291E-01	7.14396E+00	5.23512E-02
20	4593-2	-4.27535E-05	3.79033E-05	9.59446E-07	-2.90581E-03	-1.89779E+00	4.02960E-02
21	4593-3	-2.60276E-05	-1.77993E-04	1.91250E-04	2.97603E-01	1.43034E+01	-3.81312E-01
22	4593-4	-1.05702E-04	9.36249E-04	4.90704E-04	-4.35378E-01	-4.15730E+01	4.09759E-01
23	4593-5	-4.39867E-04	7.81619E-05	1.45108E-03	7.06345E-01	1.07286E+01	-9.29126E-01
24	4593-6	-7.56555E-05	-8.70935E-05	1.39128E-05	1.13239E-01	-2.19522E+01	-1.33607E-01
25	13001-1	6.03889E-04	1.05108E-04	-2.47881E-04	-1.58201E+00	-1.20730E+01	1.26003E+01
26	13001-2	3.50671E-05	3.94865E-05	-5.05551E-06	2.43421E-02	1.67707E+00	5.47065E-01
27	13001-3	-1.81014E-04	-1.81336E-04	6.01466E-04	-1.55176E+01	1.11167E+01	4.19775E+01
28	13001-4	1.61210E-04	5.43217E-04	-1.47799E-05	-2.33923E+00	-6.04463E+01	-7.27129E+00
29	13001-6	-1.36244E-03	3.56560E-04	2.77397E-04	-3.93152E+00	-2.58446E+01	6.17871E+00
30	13002-1	5.90708E-04	2.84218E-04	4.32469E-05	-5.03863E+00	6.29451E+01	4.92993E+00
31	13002-2	1.14900E-04	4.51830E-03	7.00436E-06	4.91043E-01	-3.85608E+00	-3.76343E-01
32	13002-3	-8.57732E-05	3.04278E-04	1.17187E-03	-7.46417E+00	-8.84067E+01	-9.27715E+00
33	13002-4	1.88593E-04	1.37608E-02	1.68833E-05	4.91574E+00	-2.61395E+02	9.79191E+00
34	13002-6	-1.31876E-03	7.93105E-03	-1.74373E-04	8.59902E+00	6.85048E+01	2.44849E+01
35	13003-1	5.79871E-04	-4.11229E-04	-1.36017E-04	1.45133E-01	-2.98359E+00	-1.16000E-01
36	13003-2	2.10825E-05	-7.17765E-05	5.53782E-06	9.37841E-03	7.76933E-03	-1.93206E-02
37	13003-3	9.21094E-05	9.18471E-04	1.66241E-03	-1.61387E-01	6.67538E-01	1.32246E-01
38	13003-4	-1.01646E-04	-1.57441E-03	2.59546E-05	4.81479E-01	-8.21518E-02	-2.20519E-01
39	13003-6	-5.37272E-04	1.40300E-03	3.46788E-05	-5.46086E-01	3.19396E+00	2.38657E-01
40	13004-1	1.21721E-03	9.17002E-05	-5.92294E-04	-9.51765E-02	-6.10286E+00	-1.35560E-01
41	13004-2	1.28102E-04	8.73369E-04	1.43677E-04	-2.73898E-01	-7.22171E-03	2.39470E-01
42	13004-3	-2.16005E-04	1.78480E-03	3.46447E-03	-2.54816E-01	3.44817E+00	6.43191E-01
43	13004-4	2.38997E-04	1.90334E-03	4.33044E-04	-5.78394E-01	-5.41344E-01	5.23878E-01
44	13004-6	-2.13426E-03	-1.45786E-03	4.99486E-04	5.33924E-01	5.50027E+00	-1.53909E-02
45	13005-1	6.07894E-03	5.08810E-03	6.99815E-04	-1.65112E+00	-1.03235E-02	1.50876E+00
46	13005-2	-3.77631E-05	4.34810E-05	5.15591E-04	3.72961E-02	-1.55882E-01	-4.50614E-02
47	13005-3	-7.75850E-04	-5.30009E-03	4.93444E-03	2.26269E+00	2.97194E+00	-2.07606E+00
48	13005-4	-5.48588E-04	-5.14670E-04	1.54902E-03	3.29001E-01	2.80993E-02	-3.34493E-01
49	13005-6	-7.67035E-03	-5.83701E-03	-6.32956E-04	1.90340E+00	-9.07483E-01	-1.55781E+00
50	13006-1	5.47662E-03	-3.63567E-02	-6.84188E-04	1.19659E+01	5.98453E+00	-1.57552E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 198

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
51	13006-2	-5.95017E-05	1.13723E-03	2.02368E-04	-3.51335E-01	1.75721E+00	-9.18616E-02
52	13006-3	3.60402E-04	6.23853E-02	7.37531E-03	-1.97686E+01	-2.24787E+00	2.55116E+01
53	13006-4	-6.95272E-04	-8.77861E-02	2.31628E-04	2.90091E+01	6.15971E+00	-3.82025E+01
54	13006-6	-6.26414E-03	8.36626E-02	3.69028E-04	-2.76054E+01	-1.32753E+00	3.79432E+01
55	13007-1	4.03916E-04	-6.02396E-05	-3.47770E-06	4.93542E+00	-2.54209E+02	-1.43320E+01
56	13007-2	-5.46514E-05	2.42119E-04	-3.46788E-05	-5.83548E+00	-1.26967E+02	-7.00160E+00
57	13007-3	-1.89398E-04	-6.25480E-05	1.16477E-03	-3.04015E+01	5.95445E+02	3.37825E+01
58	13007-4	-3.72568E-04	8.97339E-04	1.62410E-04	-2.04444E+01	-1.06812E+02	-5.49373E+00
59	13007-6	-2.98530E-04	-4.71462E-04	4.37818E-05	2.39690E+01	6.22985E+02	3.48557E+01
60	13008-1	1.76689E-03	9.33714E-06	-2.06458E-04	1.29511E-01	3.24175E+00	-1.16537E-01
61	13008-2	9.99853E-05	7.49174E-04	1.02803E-04	-1.34957E-01	-1.97403E+00	3.22855E-01
62	13008-3	-7.34929E-05	1.75303E-04	1.36528E-03	8.95992E-01	-1.48270E+01	-7.07683E-01
63	13008-4	-2.16696E-04	2.78950E-03	2.36482E-04	-7.53443E-01	-8.58599E+00	1.26972E+00
64	13008-6	-1.72309E-03	1.76342E-04	2.77361E-04	-1.67304E-01	-4.89677E+00	1.77009E-01
65	13009-1	6.09233E-04	-1.04775E-04	-2.47402E-04	1.60700E+00	-1.23391E+01	-1.25685E+01
66	13009-2	-3.50112E-05	3.94975E-05	5.06367E-06	2.42992E-02	-1.67450E+00	5.48516E-01
67	13009-3	-2.35060E-04	1.05580E-04	6.00683E-04	-6.96485E+00	1.81471E+01	-4.19535E+01
68	13009-4	-1.61150E-04	5.43296E-04	1.48370E-05	-2.33891E+00	6.04512E+01	-7.26045E+00
69	13009-6	1.36656E-03	3.56761E-04	-2.77069E-04	-3.91574E+00	2.56727E+01	6.19951E+00
70	13010-1	5.87720E-04	-2.40498E-04	4.33065E-05	7.77984E+00	6.05608E+01	-4.92738E+00
71	13010-2	-1.14944E-04	4.51836E-03	-7.00635E-06	4.91300E-01	3.85592E+00	-3.76269E-01
72	13010-3	-1.39013E-04	-2.58580E-04	1.17032E-03	5.43147E+00	-9.98149E+01	9.28511E+00
73	13010-4	-1.89133E-04	1.37607E-02	-1.68569E-05	4.91701E+00	2.61391E+02	9.79208E+00
74	13010-6	1.31950E-03	7.93188E-03	1.74424E-04	8.60590E+00	-6.85558E+01	2.44950E+01
75	13011-1	5.82676E-04	4.10641E-04	-1.35977E-04	-1.46011E-01	-2.96786E+00	1.19557E-01
76	13011-2	-2.12547E-05	-7.18037E-05	-5.53624E-06	9.35092E-03	-7.90959E-03	-1.93703E-02
77	13011-3	8.88302E-05	-9.18657E-04	1.66240E-03	1.61478E-01	6.67390E-01	-1.16049E-01
78	13011-4	9.97627E-05	-1.57475E-03	-2.59493E-05	4.81211E-01	8.06707E-02	-2.17902E-01
79	13011-6	5.40089E-04	1.40228E-03	-3.46339E-05	-5.46992E-01	-3.18175E+00	2.40843E-01
80	13012-1	1.22062E-03	-9.05378E-05	-5.92229E-04	1.41498E-01	-6.03755E+00	1.36357E-01
81	13012-2	-1.28188E-04	8.73548E-04	-1.43670E-04	-2.66449E-01	2.07755E-02	2.39507E-01
82	13012-3	-2.11394E-04	-1.78534E-03	3.46443E-03	5.71723E-02	3.11382E+00	-6.43234E-01
83	13012-4	-2.37887E-04	1.90330E-03	-4.33024E-04	-5.90537E-01	5.14371E-01	5.23917E-01
84	13012-6	2.13696E-03	-1.46009E-03	-4.99486E-04	5.81118E-01	-5.44285E+00	-1.54235E-02
85	13013-1	6.08258E-03	-5.08979E-03	6.99821E-04	1.58316E+00	-1.08786E-01	-1.50874E+00
86	13013-2	3.73395E-05	4.32491E-05	-5.15590E-04	6.44831E-02	2.03912E-01	-4.51540E-02
87	13013-3	-7.72091E-04	5.30157E-03	4.93444E-03	-2.47624E+00	2.62495E+00	2.07666E+00
88	13013-4	5.47641E-04	-5.15456E-04	-1.54902E-03	3.95654E-01	8.23946E-02	-3.34754E-01
89	13013-6	7.67342E-03	-5.83863E-03	6.32965E-04	1.85712E+00	8.46876E-01	-1.55767E+00
90	13014-1	5.47825E-03	3.63513E-02	-6.84016E-04	-1.19806E+01	6.00864E+00	1.57535E+01
91	13014-2	5.95978E-05	1.13793E-03	-2.02389E-04	-3.52610E-01	-1.76844E+00	-9.15587E-02
92	13014-3	3.61102E-04	-6.23954E-02	7.37573E-03	1.97614E+01	-2.14201E+00	-2.55158E+01
93	13014-4	6.96006E-04	-8.77858E-02	-2.31612E-04	2.90007E+01	-6.18188E+00	-3.82023E+01
94	13014-6	6.26590E-03	8.36603E-02	-3.68946E-04	-2.76217E+01	1.31032E+00	3.79429E+01
95	13015-1	4.04146E-04	6.05842E-05	-3.47512E-06	-4.93808E+00	-2.54206E+02	1.43328E+01
96	13015-2	5.45959E-05	2.42152E-04	3.46711E-05	-5.83495E+00	1.26966E+02	-7.00171E+00
97	13015-3	-1.89293E-04	6.29566E-05	1.16485E-03	3.03994E+01	5.95463E+02	-3.37806E+01
98	13015-4	3.72376E-04	8.97601E-04	-1.62417E-04	-2.04424E+01	1.06813E+02	-5.49356E+00
99	13015-6	2.98645E-04	-4.70916E-04	-4.37028E-05	2.39659E+01	-6.22962E+02	3.48581E+01
100	13016-1	1.76720E-03	-5.89682E-06	-2.06798E-04	-1.34693E-01	3.28248E+00	1.22373E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 199

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
101	13016-2	-9.99467E-05	7.49721E-04	-1.02831E-04	-1.35458E-01	1.97625E+00	3.23800E-01
102	13016-3	-7.34845E-05	-1.75458E-04	1.36529E-03	-8.96059E-01	-1.48241E+01	7.07355E-01
103	13016-4	2.16902E-04	2.79194E-03	-2.36610E-04	-7.55814E-01	8.59956E+00	1.27393E+00
104	13016-6	1.72338E-03	1.79736E-04	-2.77717E-04	-1.72838E-01	4.93106E+00	1.82588E-01
105	13017-1	1.01784E-04	2.40619E-05	-5.24424E-07	-1.19499E-02	-2.52732E+00	1.56022E-03
106	13017-2	6.22630E-05	7.10361E-05	6.02434E-07	-4.58863E+00	3.81825E+00	-2.37513E-02
107	13017-3	3.70232E-08	-2.31699E-07	3.17924E-05	5.29777E-03	-4.87984E-02	2.89620E-05
108	13017-4	1.21870E-06	4.67089E-06	3.04005E-04	2.77561E-01	-2.08196E-01	-3.86778E-03
109	13017-5	-1.19580E-06	-3.73946E-07	-9.28645E-05	-1.50289E-01	1.62131E+00	-4.78748E-04
110	13018-1	6.84812E-04	-4.29466E-05	3.12986E-06	1.04423E-01	-1.29717E+00	-1.68659E-02
111	13018-2	9.70459E-07	3.66520E-04	-1.39186E-06	-1.01970E+00	-8.91635E-01	1.02791E-01
112	13018-3	1.36042E-06	6.94734E-07	4.73237E-04	6.90540E-02	-4.64877E-01	1.98235E-04
113	13018-4	7.23695E-06	1.74259E-05	4.16435E-03	-8.13945E-01	-2.23773E+00	5.40983E-03
114	13018-5	-1.86189E-05	-8.76377E-06	4.32609E-04	-9.46304E-01	4.50243E+00	-2.47692E-03
115	13019-1	9.04213E-07	-5.15109E-06	6.21566E-07	2.00507E-02	-3.37755E+00	-1.94139E-03
116	13019-2	-2.83198E-06	-2.60082E-04	-4.20627E-07	-7.31644E-01	1.30685E+00	-1.14974E-01
117	13019-3	8.64508E-08	-2.33547E-06	-5.01857E-05	1.30583E-02	4.52757E+00	-1.04454E-03
118	13019-4	1.29922E-07	-1.25815E-04	8.08585E-05	5.55686E-01	1.02093E+01	-5.60597E-02
119	13019-5	-1.87534E-06	4.84658E-05	-5.57738E-05	-2.71426E-01	-9.77140E+01	2.16802E-02
120	13020-1	5.84851E-07	3.11194E-04	8.04092E-06	2.77229E+00	8.25932E+00	1.75987E-01
121	13020-2	-6.12677E-07	-5.01786E-04	-4.32418E-06	-4.59956E+00	-4.34221E+00	-2.85148E-01
122	13020-3	-9.07364E-08	5.30216E-06	1.07933E-05	-4.45381E-01	1.20572E+00	3.40512E-03
123	13020-4	1.12414E-07	9.50521E-05	-3.15848E-07	-1.49527E+01	8.65001E-01	6.63058E-02
124	13020-5	1.18348E-06	-6.15820E-05	-4.31850E-04	5.12863E+00	-1.19614E+01	-3.95464E-02
125	2171-2	4.43256E-05	-1.70737E-04	-3.22058E-05	6.16600E-02	-1.48748E-01	-8.21374E-02
126	2171-3	5.29841E-05	8.41250E-04	1.03735E-05	-2.79131E-01	1.02844E+00	3.29033E-01
127	2197-2	2.97256E-06	5.84237E-04	-1.23268E-05	-1.82527E-01	4.62978E+00	1.96441E-01
128	2197-3	-2.33858E-05	-2.28863E-02	-3.44762E-04	7.72978E+00	-1.57976E+00	-9.41229E+00
129	2322-2	-9.69314E-07	-3.20056E-04	-1.69347E-05	1.80917E+00	-6.08689E+01	-1.50072E-01
130	2322-3	7.71378E-07	-1.24943E-04	-8.91442E-06	-1.14004E-01	-2.03001E+01	-5.90293E-02
131	2663-2	3.63251E-04	1.06758E-04	-3.54196E-04	-6.61211E-02	1.49408E+00	1.21862E-02
132	2663-3	2.17185E-06	-1.10398E-04	1.16623E-04	6.32026E-02	3.62792E+00	-4.31485E-02
133	2808-2	1.74116E-04	-1.43909E-03	-4.89376E-05	4.67587E-01	-2.91258E-01	-6.06890E-01
134	2808-3	-3.03278E-06	-6.93130E-05	-4.42407E-06	2.08920E-02	2.14572E-01	-2.62316E-02
135	2809-2	1.02866E-05	1.30718E-04	1.96691E-09	-4.27290E-02	4.67253E-01	4.74850E-02
136	2809-3	-7.54987E-06	8.10671E-06	-6.21199E-05	-1.11135E-02	-3.25008E-01	-3.58101E-04
137	2833-2	-1.88263E-04	1.08481E-03	-4.21553E-05	-3.60075E-01	-2.40305E+00	1.97057E-01
138	2833-3	-3.31267E-05	1.88370E-03	1.20676E-05	-6.11128E-01	-1.45814E+01	7.59857E-01
139	2922-2	-5.75428E-05	6.71134E-03	-3.55151E-05	-2.22142E+00	-9.94048E-01	2.43548E+00
140	2922-3	4.42145E-05	-8.80515E-04	-1.69641E-05	2.84182E-01	8.24876E+00	-3.31538E-01
141	21081-2	1.42443E-06	-1.18508E-03	-4.08194E-05	3.98535E-01	-1.84455E-01	-4.93771E-01
142	21081-3	-7.46515E-08	-1.20880E-05	-3.74608E-07	4.03523E-03	1.46127E-03	-4.93306E-03
143	27106-2	-3.41697E-07	1.96584E-05	1.75789E-06	1.28448E-01	7.04037E+00	1.31138E-01
144	27106-3	2.51836E-07	5.86779E-05	5.24984E-06	2.58034E-01	1.34463E+01	6.94467E-02
145	27111-2	-3.03436E-06	-7.90097E-06	2.93325E-06	-1.19882E-01	-4.25601E+00	-2.94277E-01
146	27111-3	-3.41144E-06	-7.59248E-06	2.00622E-06	-1.09313E-01	-6.08934E+00	-2.66487E-01
147	27150-2	2.50132E-07	1.03996E-05	-2.78771E-07	-5.32405E-03	3.18934E-01	2.19783E-02
148	27150-3	1.75797E-05	2.98780E-05	-7.38033E-06	4.10409E-01	1.48960E+01	1.08235E+00
149	27164-2	-1.32538E-06	-3.79866E-04	2.31033E-05	5.84972E+01	7.52150E+00	-3.45697E-01
150	27164-3	-2.35056E-07	-5.46096E-05	6.65101E-07	2.49611E+01	1.82159E+00	-5.11229E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 200

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
151	27167-2	-4.96781E-07	1.89128E-04	-9.58787E-06	1.73573E+01	-1.82231E+02	4.45540E-02
152	27167-3	-2.43117E-08	-9.06879E-06	1.56635E-06	2.09305E+01	2.36845E+01	-4.84648E-03
153	27178-2	-6.33095E-07	5.25180E-04	-3.81334E-05	-1.35306E+01	-6.01208E+02	1.61327E-01
154	27178-3	-3.37841E-07	5.71046E-05	1.07758E-06	-1.91281E+01	2.82210E+01	3.04170E-02
155	27186-2	2.56063E-07	-1.29846E-05	-2.09837E-07	-7.26101E+01	-3.40779E+00	-2.39849E-01
156	27186-3	-6.29116E-08	1.35979E-04	-3.81911E-06	-3.19928E+02	-7.95548E+00	5.74642E-02
157	27193-2	-3.38760E-07	-6.83363E-06	-9.05466E-06	-2.64706E+01	-3.73384E+01	-1.93149E+00
158	27193-3	5.66422E-05	9.60225E-06	2.04296E-04	-7.91773E+01	-2.96764E+02	-1.72772E+01
159	27564-2	-3.13284E-09	-2.82236E-06	2.07381E-07	1.60348E+00	1.32263E-01	-1.85871E-03
160	27564-3	-2.14163E-09	1.65021E-08	-9.36951E-08	-5.24321E-03	-8.61895E-02	1.85640E-04
161	27837-2	1.10096E-07	2.80684E-05	-6.03810E-07	2.65934E+01	-2.35183E+01	3.06225E-02
162	27837-3	2.00052E-08	4.56183E-05	-5.86249E-07	5.06545E+01	2.13042E+01	5.32685E-02
163	271012-2	-4.04532E-06	4.52755E-06	-1.93971E-06	1.20053E+00	2.37729E+01	1.21164E+00
164	271012-3	-7.67689E-06	1.26506E-05	2.88587E-06	2.24756E-01	-1.28148E+01	-1.17512E-01
165	271013-2	1.34844E-07	9.94773E-06	-7.66240E-08	-3.28151E-02	-2.44977E-01	-9.26588E-03
166	271013-3	-8.02848E-08	2.58329E-05	-6.34662E-07	1.33758E-01	-6.35705E+00	1.01368E-01
167	271055-2	-4.68759E-08	1.34141E-05	-2.73121E-07	9.00800E+01	5.85206E-01	1.18194E-01
168	271055-3	2.72191E-07	6.26952E-05	-1.82042E-06	3.80232E+02	3.17729E+00	-1.80382E-01
169	271265-2	-1.85058E-06	1.74005E-04	5.77900E-06	-7.18242E+01	-2.45145E+02	-8.17235E-02
170	271265-3	-3.71645E-08	-3.05125E-05	4.22544E-06	-4.66076E+01	-5.24917E-01	-4.00318E-02
171	702171-2	-4.36905E-05	-1.70943E-04	3.21930E-05	5.43933E-02	1.34318E-01	-8.21475E-02
172	702171-3	5.28845E-05	-8.42965E-04	1.02513E-05	2.80521E-01	1.06546E+00	-3.29618E-01
173	702197-2	-2.50227E-06	5.84859E-04	1.23056E-05	-1.92845E-01	-4.65483E+00	1.96715E-01
174	702197-3	-2.29879E-05	2.28925E-02	-3.44668E-04	-7.71700E+00	-1.65209E+00	9.41497E+00
175	702322-2	-2.79187E-07	-3.22445E-04	1.88438E-05	1.77860E+00	6.22234E+01	-1.50717E-01
176	702322-3	6.34079E-08	1.25041E-04	-8.21257E-06	1.39239E-01	-2.04240E+01	5.93707E-02
177	702663-2	-3.62883E-04	1.06879E-04	3.54204E-04	-7.89677E-02	-1.51707E+00	1.22101E-02
178	702663-3	3.09948E-06	1.10344E-04	1.16658E-04	-1.40194E-01	3.46821E+00	4.31577E-02
179	702808-2	-1.75101E-04	-1.43929E-03	4.89595E-05	4.81863E-01	3.25008E-01	-6.07087E-01
180	702808-3	-3.16558E-06	6.94441E-05	-4.42110E-06	-1.70296E-02	2.20028E-01	2.62727E-02
181	702809-2	-1.02560E-05	1.30855E-04	1.15780E-09	-4.00671E-02	-4.63403E-01	4.75392E-02
182	702809-3	-7.62733E-06	-8.18093E-06	-6.21252E-05	2.34903E-02	-3.00883E-01	3.38254E-04
183	702833-2	1.88358E-04	1.08237E-03	4.22042E-05	-3.61164E-01	2.43144E+00	1.96069E-01
184	702833-3	-3.24178E-05	-1.87986E-03	1.20097E-05	6.02825E-01	-1.46466E+01	-7.58230E-01
185	702922-2	5.72654E-05	6.71044E-03	3.55331E-05	-2.21916E+00	1.01238E+00	2.43508E+00
186	702922-3	4.36937E-05	8.77539E-04	-1.69215E-05	-2.76743E-01	8.30225E+00	3.30281E-01
187	727106-2	2.38542E-07	1.95726E-05	-1.75106E-06	1.29129E-01	-7.03548E+00	1.31202E-01
188	727106-3	8.66885E-07	-5.76107E-05	5.20089E-06	-2.55255E-01	1.34298E+01	-6.87241E-02
189	727111-2	3.03868E-06	-7.97760E-06	-3.08638E-06	-1.17290E-01	4.19864E+00	-2.97550E-01
190	727111-3	-3.32440E-06	7.54932E-06	2.02001E-06	1.08830E-01	-6.09464E+00	2.66628E-01
191	727150-2	-2.49496E-07	1.02946E-05	3.24433E-07	-6.14708E-03	-3.04167E-01	2.27061E-02
192	727150-3	1.81204E-05	-3.04667E-05	-7.34906E-06	-4.12771E-01	1.48767E+01	-1.08330E+00
193	727164-2	-3.70544E-06	-3.64326E-04	-1.98967E-05	5.84062E+01	-5.20761E+00	-3.38219E-01
194	727164-3	5.19109E-07	5.24795E-05	-4.07489E-07	-2.48472E+01	1.65982E+00	5.00769E-02
195	727167-2	-2.68780E-06	1.88695E-04	9.78289E-06	1.73586E+01	1.82556E+02	4.39058E-02
196	727167-3	-7.14424E-08	9.18147E-06	1.49698E-06	-2.09255E+01	2.37278E+01	4.99144E-03
197	727178-2	-6.70679E-06	5.24835E-04	3.83126E-05	-1.35232E+01	6.02215E+02	1.60694E-01
198	727178-3	4.30861E-07	-5.66910E-05	9.56107E-07	1.91310E+01	2.82424E+01	-2.96367E-02
199	727186-2	-2.30862E-07	-1.29344E-05	1.88827E-07	-7.26091E+01	3.40867E+00	-2.39728E-01
200	727186-3	1.00220E-06	-1.35461E-04	-3.85516E-06	3.19931E+02	-7.98455E+00	-5.62666E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 201

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
201	727193-2	4.56965E-07	-6.81829E-06	9.04796E-06	-2.64702E+01	3.73356E+01	-1.93145E+00
202	727193-3	5.73016E-05	-9.51424E-06	2.04298E-04	7.91775E+01	-2.96786E+02	1.72771E+01
203	727564-2	-5.80736E-09	-2.73064E-06	-2.12287E-07	1.60947E+00	-9.87424E-02	-1.80922E-03
204	727564-3	-1.63980E-08	-6.57311E-08	-9.27872E-08	4.99524E-03	-8.64813E-02	-2.17640E-04
205	727837-2	-4.33074E-07	2.80318E-05	6.01518E-07	2.65942E+01	2.35450E+01	3.05005E-02
206	727837-3	3.34325E-07	-4.53924E-05	-6.01183E-07	-5.06532E+01	2.13102E+01	-5.27682E-02
207	7021081-2	-1.05874E-06	-1.18416E-03	4.09140E-05	3.99249E-01	1.61710E-01	-4.93438E-01
208	7021081-3	-8.11244E-08	1.20808E-05	-3.75537E-07	-3.96653E-03	1.80889E-03	4.93027E-03
209	7271012-2	4.15195E-06	4.63926E-06	1.94202E-06	1.20051E+00	-2.37743E+01	1.21188E+00
210	7271012-3	-7.13825E-06	-1.24485E-05	2.90714E-06	-2.26215E-01	-1.28364E+01	1.17867E-01
211	7271013-2	-1.02199E-07	1.00381E-05	7.34686E-08	-3.24917E-02	2.45381E-01	-9.15068E-03
212	7271013-3	3.15996E-07	-2.55800E-05	-6.44445E-07	-1.34049E-01	-6.37769E+00	-1.01437E-01
213	7271055-2	4.44056E-08	1.33754E-05	2.68659E-07	9.00804E+01	-5.84971E-01	1.18110E-01
214	7271055-3	7.33058E-07	-6.24701E-05	-1.80906E-06	-3.80232E+02	3.16880E+00	1.80895E-01
215	7271265-2	-6.35323E-06	1.72601E-04	-4.70689E-06	-7.17814E+01	2.46040E+02	-8.41177E-02
216	7271265-3	9.56385E-07	2.99724E-05	4.28537E-06	4.65585E+01	-8.55450E-01	3.99652E-02
217	212118-2	-1.32694E-07	-8.40965E-06	-1.54253E-05	1.61820E-03	-9.15724E-02	-3.62641E-03
218	212118-3	1.19934E-07	7.78814E-06	1.40079E-05	-1.52689E-03	8.78180E-02	3.36867E-03
219	212120-2	-6.17132E-07	-3.52479E-05	-7.47266E-05	5.92220E-03	-3.57366E-01	-1.52214E-02
220	212120-3	8.44513E-07	5.13439E-05	1.01646E-04	-9.25670E-03	5.34259E-01	2.21367E-02
221	212125-2	2.58580E-06	1.27483E-04	2.60210E-04	-2.10907E-02	8.27493E-01	5.23589E-02
222	212125-3	-8.82880E-07	-2.19746E-05	-8.55591E-05	-4.46422E-04	1.96837E-01	-7.36578E-03
223	212385-2	9.52818E-08	1.85332E-05	1.21657E-08	-6.65905E-03	1.52132E-01	7.50653E-03
224	212385-3	4.52371E-11	-8.70094E-07	2.16606E-09	3.15891E-04	-9.16243E-03	-3.49525E-04
225	212388-2	6.63723E-08	7.79914E-06	-5.42290E-10	-2.81124E-03	4.70327E-02	3.17577E-03
226	212388-3	-5.44169E-08	-1.17379E-05	1.18136E-08	4.23326E-03	-1.01504E-01	-4.75921E-03
227	212390-2	6.14898E-08	5.80179E-06	2.34251E-08	-2.05624E-03	3.39217E-02	2.34989E-03
228	212390-3	-1.08423E-06	-1.20863E-04	-3.97386E-07	4.29951E-02	-7.94314E-01	-4.90290E-02
229	213110-2	8.78870E-08	2.86483E-07	-4.02442E-07	-6.64817E-03	5.90891E-01	1.11924E-02
230	213110-3	-4.46105E-08	-3.44701E-07	1.61163E-07	2.80254E-03	-2.57655E-01	-4.64456E-03
231	213113-2	1.61392E-07	5.12119E-07	-8.39254E-07	-1.45326E-02	5.86202E-01	2.10719E-02
232	213113-3	-2.59447E-07	-4.87848E-07	1.41352E-06	2.39244E-02	-1.06643E+00	-3.52410E-02
233	213115-2	-4.77362E-07	-1.52281E-06	3.08888E-06	5.33704E-02	-6.64476E-01	-7.07433E-02
234	213115-3	7.97466E-07	4.37772E-06	-5.62939E-06	-1.00794E-01	-2.25282E+00	1.16512E-01
235	213195-2	-2.05153E-07	-1.01029E-06	5.83276E-07	1.10675E-02	-1.90114E-01	-1.41189E-02
236	213195-3	-1.33917E-07	5.68508E-07	-9.24032E-08	-1.12201E-03	-1.43212E-01	3.37354E-03
237	213198-2	-8.96995E-08	-2.28838E-06	5.66317E-07	1.12895E-02	-1.83855E-01	-1.62421E-02
238	213198-3	-1.59464E-07	8.83191E-06	-7.89218E-07	-1.90222E-02	-1.41743E-01	3.01055E-02
239	213201-2	5.72012E-07	-3.56620E-06	-5.53402E-07	-8.78600E-03	5.99891E-02	4.14640E-03
240	213201-3	-3.37765E-11	1.46915E-10	2.02503E-11	3.64036E-07	-1.96741E-06	-5.64832E-08
241	213203-2	2.37330E-07	-2.39406E-06	-2.71253E-07	-3.05250E-03	8.64508E-02	2.45932E-03
242	213203-3	1.19791E-10	-6.81234E-10	-3.64538E-11	-8.52439E-07	3.00736E-05	3.62941E-07
243	213265-2	-8.26391E-07	6.24185E-06	1.49027E-07	7.71836E-04	6.94643E-02	1.00429E-02
244	213265-3	5.14623E-08	-5.85700E-07	-1.63953E-08	-8.17929E-04	1.10531E-01	-1.27633E-03
245	213268-2	-7.46823E-07	5.82187E-06	4.89893E-08	-7.33028E-04	7.65057E-02	1.14139E-02
246	213268-3	1.22386E-06	-1.02324E-05	3.03523E-07	5.79521E-03	1.89376E-02	-3.06214E-02
247	312118-2	3.92011E-07	-8.64762E-06	1.55939E-05	-4.90008E-03	9.08261E-02	-3.71542E-03
248	312118-3	3.68200E-07	-8.07505E-06	1.41919E-05	-4.63982E-03	8.86693E-02	-3.47541E-03
249	312120-2	1.77318E-06	-3.45362E-05	7.46487E-05	-2.41144E-02	3.03144E-01	-1.49337E-02
250	312120-3	2.46680E-06	-5.09548E-05	1.01955E-04	-3.23435E-02	4.84105E-01	-2.20046E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 202

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
251	312125-2	-4.18331E-06	1.29074E-04	-2.60561E-04	3.26469E-02	-7.49985E-01	5.26585E-02
252	312125-3	8.62520E-08	2.04719E-05	-8.44348E-05	-1.16018E-02	2.55900E-01	6.53927E-03
253	312385-2	-1.19409E-07	2.33488E-05	-1.09862E-07	-9.12410E-03	-2.21164E-01	9.53860E-03
254	312385-3	-1.18481E-09	1.14293E-06	-2.34698E-09	-4.56391E-04	-1.31307E-02	4.63566E-04
255	312388-2	-8.47981E-08	1.04030E-05	-5.55602E-08	-4.02575E-03	-8.22697E-02	4.27963E-03
256	312388-3	-7.09028E-08	1.49822E-05	-5.52609E-08	-5.87990E-03	-1.48018E-01	6.12921E-03
257	312390-2	-6.64671E-08	6.74891E-06	-4.66410E-08	-2.57491E-03	-4.69931E-02	2.75465E-03
258	312390-3	-1.22055E-06	1.45989E-04	-9.58821E-07	-5.59983E-02	-1.14736E+00	5.97069E-02
259	313195-2	3.13065E-07	-1.97518E-06	-1.04815E-06	1.98899E-02	3.89944E-02	-2.43522E-02
260	313195-3	-1.39515E-07	-9.40466E-07	-1.59192E-07	2.54231E-03	-4.32209E-01	-4.29002E-03
261	313198-2	6.85782E-08	-2.22966E-06	-4.93123E-07	9.89632E-03	2.15382E-01	-1.47292E-02
262	313198-3	-1.20592E-07	-1.05864E-05	-1.21486E-06	2.73018E-02	-6.51945E-01	-3.95192E-02
263	313201-2	-6.27121E-07	-3.78131E-06	6.32787E-07	-1.01935E-02	-2.30220E-03	4.89142E-03
264	313201-3	-3.70668E-11	-1.25679E-10	2.33137E-11	-3.99492E-07	2.16496E-06	8.73755E-08
265	313203-2	-3.06804E-07	-2.79964E-06	3.08726E-07	-3.78415E-03	-1.29872E-01	2.27785E-03
266	313203-3	1.00270E-10	5.60693E-10	-4.45321E-11	3.96172E-07	3.62988E-05	-7.93749E-08
267	313265-2	1.15643E-06	8.79737E-06	-1.81921E-07	1.55010E-03	-1.66845E-02	1.55602E-02
268	313265-3	1.43841E-07	1.07339E-06	5.18383E-08	5.90310E-04	2.25236E-01	4.62480E-03
269	313268-2	6.73026E-07	5.35054E-06	-2.39526E-08	-1.33270E-03	-7.33556E-02	1.05934E-02
270	313268-3	1.39814E-06	1.21279E-05	4.11956E-07	-7.61852E-03	1.72356E-01	3.67968E-02
271	2423-2	-3.36902E-06	4.38649E-03	-1.22092E-04	-1.38187E+00	-5.39077E+00	1.67279E+00
272	2423-3	3.22365E-04	-1.67044E-02	-1.44955E-03	1.05829E+00	-3.16528E+02	-8.98481E+00
273	2433-2	-5.77218E-07	1.23038E-04	-3.65628E-05	2.53419E-01	-2.39395E+01	4.08047E+00
274	2665-1	4.14792E-04	-8.49956E-03	-6.09227E-03	1.80673E+00	-8.65459E+00	-6.35537E+00
275	2665-2	-4.43916E-06	-2.68567E-05	4.66464E-03	3.77411E+00	2.40018E+01	-4.40376E+01
276	2443-2	2.06430E-06	1.38200E-04	-1.83472E-05	-2.98138E-01	7.86272E+00	4.57199E-01
277	2443-3	-5.21571E-05	6.10285E-05	4.91886E-03	4.08912E+00	-3.84511E+02	-1.28256E+01
278	2679-2	-3.03894E-06	8.59637E-06	1.19344E-03	1.48078E+00	-8.03027E+00	6.12984E+00
279	2680-2	2.17531E-04	2.37236E-01	-7.15097E-04	-7.73428E+01	-6.35585E-01	9.23694E+01
280	702423-2	3.17840E-06	4.37764E-03	1.03131E-04	-1.49184E+00	6.27080E+00	1.81155E+00
281	702423-3	3.29036E-04	1.66224E-02	2.55078E-03	-5.62273E+00	-2.82211E+02	6.82764E+00
282	702433-2	6.19356E-07	1.22169E-04	-2.49464E-06	-3.98725E-02	2.36819E+01	5.40742E-02
283	702665-1	4.16786E-04	8.53608E-03	2.61800E-05	-2.51216E+00	3.27753E+01	2.75929E+00
284	702665-2	4.38649E-06	-2.03408E-05	-1.40994E-06	-5.88608E-02	-1.51896E+01	7.91299E-04
285	702443-2	-1.90872E-06	1.38769E-04	9.40077E-06	-3.81539E-01	-7.96035E+00	-4.86443E-02
286	702443-3	-4.98380E-05	-5.12926E-05	3.51883E-04	-8.23860E+00	-3.85954E+02	7.12631E+00
287	702679-2	3.29962E-06	1.03675E-05	-1.23906E-05	2.36838E-01	6.23294E+00	-4.25906E-01
288	702680-2	-2.17441E-04	2.37272E-01	-1.38081E-04	-7.83548E+01	-2.18882E+00	9.86017E+01
289	2651-1	3.69857E-06	-5.21782E-04	6.72053E-06	1.72581E-01	-2.24953E-01	-1.29435E-01
290	2651-2	-3.46960E-05	8.54071E-04	-1.89162E-05	-2.89039E-01	1.10857E+00	2.16333E-01
291	2651-3	-1.83137E-05	1.42627E-05	-8.55351E-06	-2.44789E-02	2.24297E+00	7.59919E-03
292	2651-4	2.05853E-05	-8.77785E-04	-7.29731E-05	2.22029E-01	9.47045E+00	-2.60630E-01
293	2651-5	4.55645E-05	-7.27793E-05	1.02678E-04	6.72461E-02	5.68309E+00	1.98860E-02
294	2651-6	1.67999E-04	4.91002E-03	2.12446E-05	-1.59954E+00	-2.94810E+00	1.13729E+00
295	27895-1	3.51685E-04	9.52260E-05	-3.65912E-05	-1.90218E+00	8.16544E+01	4.40302E+00
296	27895-2	1.32727E-04	4.73797E-04	-6.99656E-05	4.30734E+00	1.74976E+02	1.01146E+01
297	27895-3	-4.95873E-05	7.43341E-05	4.06123E-04	6.55633E+00	-1.48993E+02	-8.31104E+00
298	27895-4	-2.52027E-05	-1.97351E-05	-9.87712E-04	-1.47959E+01	3.15272E+02	1.91712E+01
299	27895-5	-2.39408E-04	-1.16690E-04	-7.42933E-04	-1.80410E+01	5.47468E+01	4.93101E+00
300	27895-6	-7.21992E-04	2.33975E-03	6.89908E-04	-5.46650E+01	-1.79246E+03	-1.00328E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 203

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
301	27896-1	1.50074E-04	-9.35665E-05	-9.59111E-07	4.59908E-02	5.99779E+00	-1.20223E-02
302	27896-2	3.76505E-05	7.97318E-05	-1.20448E-06	-5.68293E-02	5.59493E+00	7.70756E-02
303	27896-3	-2.80650E-05	2.24656E-04	1.89277E-04	-3.51533E-01	1.63827E+01	3.95842E-01
304	27896-4	1.27262E-04	1.00885E-03	-5.21022E-04	-5.25390E-01	4.36837E+01	4.25749E-01
305	27896-5	-4.37240E-04	-5.19078E-04	1.46073E-03	-1.35100E-03	-1.24523E+01	8.63892E-01
306	27896-6	4.55602E-05	2.33447E-04	-1.35025E-05	-3.14195E-01	5.17658E+01	9.49416E-02
307	1651-1	6.26875E-05	7.12615E-05	-1.30147E-05	8.69211E-01	-1.69152E+01	-1.36253E+00
308	1651-2	5.47615E-05	1.98481E-04	-9.86211E-06	8.93620E-01	-1.85705E+00	-3.09515E-01
309	1651-3	1.04586E-05	3.47800E-06	6.76733E-06	6.56269E-01	6.21420E+00	-4.81141E-01
310	1651-4	-2.54663E-05	-2.54029E-04	-3.43537E-05	4.66243E+00	6.93332E+01	-4.43120E+00
311	1651-5	-1.43671E-04	1.99170E-06	9.40070E-05	6.43385E+00	5.46573E+01	-5.47177E+00
312	1651-6	-8.51337E-04	-2.61153E-03	1.38542E-04	-1.10051E+01	1.55248E+02	9.62536E+00
313	3076-1	-1.54300E-05	-5.85684E-04	2.51066E-05	9.34561E-01	1.91519E+01	-5.37659E+00
314	3076-2	-1.05051E-05	-1.87303E-04	4.19623E-05	-4.49605E+01	6.04943E+00	-8.14633E-01
315	3076-3	2.43750E-06	1.93209E-04	-3.97101E-05	3.95822E+00	-3.56758E+00	5.30099E-01
316	3401-1	-7.91475E-07	-5.67299E-06	-7.64589E-07	-1.74534E-01	-2.13180E-01	7.32407E-02
317	3401-2	-2.54689E-06	-1.16171E-04	1.93752E-05	2.38314E+01	5.98180E-02	-2.10109E+00
318	3401-3	-2.60556E-06	9.38310E-05	-1.11651E-05	6.37904E+00	1.54271E-01	9.18179E-01
319	1650-1	2.46600E-04	-7.51263E-06	3.46875E-06	1.45177E-01	-5.93232E+00	-2.01435E+00
320	1650-2	-4.69937E-05	1.58447E-04	-2.33107E-05	-1.15485E-02	6.67720E-01	9.01874E-01
321	1650-3	-1.42176E-05	-1.31287E-05	7.57269E-05	3.45388E-01	1.53548E+00	-3.08236E-01
322	1650-4	1.22266E-04	-2.45232E-03	-2.86332E-04	8.61679E-01	6.88876E+00	-1.11449E+00
323	1650-5	4.16189E-03	9.44606E-04	-3.95166E-03	-1.42192E+00	-4.30703E+00	-3.22511E-01
324	1650-6	7.69634E-04	1.48392E-03	-1.03147E-03	-1.03164E+00	2.58701E+01	5.36996E+00
325	210388-2	-1.33349E-09	-5.26158E-08	-3.83255E-09	-4.86515E-04	-5.81966E-03	-3.20082E-04
326	210388-3	6.07395E-10	1.27449E-08	-1.37810E-08	3.27431E-04	1.63316E-03	-4.13454E-04
327	210390-2	2.69455E-09	-6.61013E-08	-1.07279E-08	-5.59979E-04	-8.38807E-03	-7.35361E-04
328	210390-3	-2.42192E-09	6.62670E-08	8.11565E-09	7.09535E-04	7.78904E-03	4.10418E-04
329	210393-2	1.38749E-09	-6.79116E-08	-8.12698E-09	-6.60789E-04	-9.14352E-03	-3.90937E-04
330	210393-3	-7.02343E-09	1.64838E-07	2.78853E-08	1.59200E-03	1.86698E-02	9.40029E-04
331	210395-2	1.55678E-09	-3.97238E-07	-4.18121E-08	-3.24137E-03	-3.60225E-02	-1.76494E-03
332	210395-3	-1.25816E-08	6.02900E-07	7.17212E-08	5.43907E-03	6.00724E-02	2.53744E-03
333	210398-2	5.81195E-09	-2.04792E-07	-2.88362E-08	-2.04382E-03	-2.38360E-02	-6.27005E-04
334	210398-3	-1.09841E-08	2.47090E-07	4.00060E-08	2.68246E-03	3.24888E-02	8.03317E-04
335	210400-2	4.14033E-08	-2.19181E-06	-2.39164E-07	-1.93938E-02	-2.03317E-01	-8.52886E-03
336	210400-3	-6.35827E-09	3.48597E-06	4.00253E-07	2.92659E-02	3.40536E-01	1.54553E-02
337	210405-2	2.10815E-07	1.52157E-05	5.36078E-07	9.08362E-02	5.84299E-01	8.26934E-02
338	210405-3	-1.76586E-07	-9.57124E-06	5.64536E-09	-4.67393E-02	-1.14061E-01	-5.78363E-02
339	210413-2	7.02371E-08	6.26862E-07	5.15413E-08	3.32912E-03	4.97071E-02	3.48710E-03
340	210413-3	-1.14487E-11	-1.64027E-12	1.70312E-11	2.82389E-07	5.34509E-06	1.36703E-07
341	210458-2	2.32454E-09	-7.98450E-09	-2.15778E-09	-5.50598E-05	-5.36838E-04	-7.21713E-05
342	210458-3	-2.02890E-09	-7.51766E-10	-2.63917E-09	8.25170E-05	3.59570E-04	-3.80038E-05
343	210460-2	-4.46279E-10	7.43397E-10	7.14068E-10	1.71142E-05	1.75435E-05	-4.62452E-06
344	210460-3	-4.06323E-09	6.23134E-10	4.56758E-10	1.40857E-04	6.21015E-04	-4.05714E-05
345	210463-2	1.08959E-09	-1.97521E-10	2.88499E-10	-3.54533E-06	-5.02037E-04	-2.70882E-05
346	210463-3	-6.76970E-10	4.58474E-10	-1.65718E-09	-1.89673E-05	3.15560E-04	6.85750E-05
347	210465-2	6.53598E-09	2.67194E-08	2.45672E-09	1.90197E-04	9.89104E-04	-1.02494E-04
348	210465-3	-6.58803E-09	-2.47545E-08	-1.85553E-09	-1.71582E-04	-5.83781E-04	1.24531E-04
349	210468-2	-6.81775E-10	1.97367E-08	1.48054E-09	1.47720E-04	8.82294E-05	-6.23300E-05
350	210468-3	-2.08575E-09	-1.47711E-08	4.11878E-10	-1.02108E-04	1.85656E-03	1.94043E-04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 204

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
351	210470-2	3.72109E-08	5.18385E-08	6.84062E-09	-1.33630E-04	1.06586E-02	8.18092E-04
352	210470-3	-3.53130E-08	-2.22215E-07	-3.56494E-08	-1.73887E-03	-3.56138E-02	-1.01284E-03
353	210475-2	-4.55323E-08	-4.55400E-07	-3.22847E-08	-3.00682E-03	-2.63443E-02	-1.39134E-03
354	210475-3	-3.01265E-08	3.09017E-07	4.50342E-09	2.14626E-03	-8.68921E-04	3.72490E-04
355	210530-2	5.60846E-08	1.70407E-07	-1.81581E-08	-4.36576E-05	-1.70847E-02	6.66432E-06
356	210530-3	-2.34845E-08	-6.21386E-08	-3.59641E-09	6.49321E-05	6.93671E-03	-7.09804E-05
357	210533-2	8.96394E-08	3.12824E-07	-1.24617E-08	6.06580E-04	-1.50447E-02	1.78694E-04
358	210533-3	-1.22853E-07	-4.26982E-07	2.18505E-08	-4.02454E-04	2.95201E-02	-1.73675E-04
359	210535-2	5.04690E-09	3.09889E-08	-2.65816E-09	8.74113E-05	-2.10363E-03	3.44708E-05
360	210535-3	-1.64327E-07	-5.84074E-07	3.56316E-08	-5.51401E-04	4.12343E-02	-3.19513E-04
361	210538-2	-2.93373E-07	-9.80220E-07	1.51471E-08	-2.80532E-03	1.94316E-02	-9.41833E-04
362	210538-3	4.38286E-07	1.05424E-06	1.06503E-07	8.78287E-03	1.24112E-01	2.50115E-03
363	210600-2	-2.60062E-08	-3.89145E-08	-3.19215E-08	-1.65212E-03	-3.79619E-02	-2.03632E-04
364	210600-3	3.32726E-07	2.83063E-07	3.17846E-07	1.65042E-02	3.55697E-01	1.43791E-03
365	210670-2	3.19085E-08	1.35876E-06	6.56473E-08	-6.83613E-04	1.07214E-02	-6.15652E-04
366	210670-3	6.42293E-08	-9.67425E-07	3.07444E-08	3.90514E-03	8.84383E-02	4.09171E-03
367	211040-2	-6.08333E-07	-8.59948E-06	-4.80108E-07	-3.78346E-03	-6.88665E-02	-2.23212E-03
368	211040-3	2.63902E-07	3.66167E-06	2.24663E-07	1.00127E-03	2.19035E-02	8.98464E-04
369	211043-2	9.30136E-07	1.33794E-05	7.04104E-07	7.10151E-03	7.82040E-02	2.72754E-03
370	211043-3	-9.80303E-07	-1.28444E-05	-6.70843E-07	-1.14362E-02	3.37933E-02	-1.62191E-03
371	211180-2	-5.63522E-07	-7.15068E-06	-3.24563E-07	-3.86309E-03	-5.07315E-02	-1.16277E-03
372	211180-3	2.32808E-07	2.95075E-06	1.26620E-07	1.66219E-03	1.96608E-02	4.88497E-04
373	211183-2	1.08246E-06	1.35900E-05	6.38811E-07	9.06365E-03	6.35031E-02	2.14757E-03
374	211183-3	-1.49894E-06	-1.83722E-05	-9.23884E-07	-1.84053E-02	3.24124E-02	-2.62596E-03
375	211320-2	2.73180E-08	1.32003E-06	8.26016E-08	5.74408E-03	-1.26918E-01	4.97546E-05
376	211320-3	-1.05975E-08	-5.12064E-07	-2.60080E-08	-2.44470E-03	5.35286E-02	-1.82680E-05
377	211323-2	1.84185E-08	2.10152E-06	1.50138E-07	1.69054E-03	-8.07458E-02	1.96576E-04
378	211323-3	-3.61947E-08	-3.84248E-06	-2.65789E-07	-5.48624E-03	1.89816E-01	-3.13076E-04
379	211325-2	-6.69125E-09	-7.92557E-06	-5.91437E-07	1.02129E-02	3.87060E-02	-9.94632E-04
380	211325-3	-1.90561E-07	1.42614E-05	1.17590E-06	-6.54673E-02	6.72810E-01	2.50571E-03
381	211460-2	3.09555E-09	-4.31517E-08	9.54400E-09	5.38546E-05	-2.35080E-03	-1.83327E-05
382	211460-3	-7.53202E-10	6.12563E-08	-8.97673E-09	-3.87978E-05	9.17120E-04	2.48477E-05
383	211463-2	2.36998E-09	-5.53538E-08	5.65253E-09	9.58192E-06	-4.62047E-04	-2.00864E-05
384	211463-3	-5.21890E-09	1.02368E-07	-1.35325E-08	-5.33758E-05	2.54337E-03	4.35579E-05
385	211465-2	5.66248E-09	2.84597E-07	1.99718E-08	-2.99181E-04	6.74353E-05	3.79139E-05
386	211465-3	-1.31253E-08	-7.34624E-08	-4.11516E-08	1.81088E-04	3.41059E-03	4.15929E-05
387	211468-2	4.37437E-09	3.53034E-07	1.53665E-08	-2.05793E-04	-1.06290E-03	6.00075E-05
388	211468-3	-1.03454E-08	-6.10142E-07	-3.29201E-08	3.90996E-04	2.90587E-03	-9.02085E-05
389	211470-2	3.05420E-09	-5.42907E-06	-5.25128E-08	2.33923E-03	1.26304E-02	-1.16171E-03
390	211470-3	1.57751E-08	4.20441E-06	7.03720E-08	-1.41623E-03	-1.82341E-02	8.67072E-04
391	211494-2	-8.48857E-08	8.91264E-06	-1.31453E-07	-3.11917E-03	-9.72637E-03	2.18673E-03
392	211494-3	4.60784E-08	-4.23168E-06	1.00602E-07	1.65716E-03	3.38043E-03	-1.05536E-03
393	211528-2	5.56182E-10	-6.63456E-08	7.64851E-09	3.44802E-05	1.05045E-04	-1.20654E-05
394	211528-3	2.49258E-10	-1.09606E-08	-5.27569E-09	6.30778E-07	4.24634E-04	-3.17406E-06
395	211530-2	-1.12509E-09	1.56615E-07	-2.22434E-09	-5.25706E-05	-1.65033E-04	3.80288E-05
396	211530-3	-3.45966E-10	3.40219E-08	-2.81783E-09	-2.04952E-05	3.67373E-04	7.55652E-06
397	211533-2	1.53489E-08	-1.65644E-06	1.70753E-08	5.92140E-04	3.87248E-04	-4.12160E-04
398	211533-3	-8.47438E-09	8.95386E-07	-7.95428E-09	-3.23669E-04	-1.70937E-04	2.21490E-04
399	211535-2	9.18925E-08	-1.09532E-05	1.17130E-07	3.77131E-03	6.77963E-03	-2.71114E-03
400	211535-3	-9.64463E-08	1.13466E-05	-1.16919E-07	-3.92682E-03	-6.36853E-03	2.81031E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 205

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
401	211538-2	3.87719E-08	-4.34808E-06	1.14247E-08	1.54429E-03	6.43264E-04	-1.08277E-03
402	211538-3	-4.36573E-08	4.53634E-06	-4.37984E-08	-1.65697E-03	-4.12451E-04	1.12623E-03
403	211540-2	4.94041E-07	-5.90043E-05	6.42323E-07	2.03307E-02	3.28634E-02	-1.46134E-02
404	211540-3	-7.64931E-07	9.14639E-05	-1.00732E-06	-3.15473E-02	-5.21469E-02	2.26288E-02
405	211545-2	-2.29264E-06	3.28463E-04	-5.23680E-06	-1.05688E-01	-4.36489E-01	8.07655E-02
406	211545-3	1.17460E-06	-1.89599E-04	3.60555E-06	5.84648E-02	3.35068E-01	-4.64848E-02
407	211595-2	2.66570E-08	-6.12872E-07	-4.21243E-08	7.04153E-04	3.24569E-03	-1.98254E-04
408	211595-3	-1.92070E-09	6.94120E-07	2.46549E-08	-2.60888E-04	-1.12822E-02	2.67326E-04
409	211598-2	1.35620E-08	-3.62572E-07	-5.43965E-08	3.03846E-04	-6.32446E-03	-6.35907E-05
410	211598-3	-1.49142E-08	-2.89964E-08	-1.23643E-08	-2.53051E-04	1.83644E-03	-4.83654E-05
411	211600-2	1.41294E-08	-5.73870E-07	6.69039E-09	3.41980E-04	1.01104E-03	-1.24760E-04
412	211600-3	-2.35980E-08	4.92203E-07	-2.77120E-09	-5.00908E-04	3.38717E-04	8.07884E-05
413	211603-2	1.86140E-08	-1.52725E-06	-2.55726E-08	6.03432E-04	1.45634E-03	-3.74581E-04
414	211603-3	-2.78271E-08	1.94840E-06	2.79935E-08	-8.28552E-04	-1.46415E-03	4.64860E-04
415	211605-2	6.75615E-09	-6.31109E-07	7.44699E-08	2.28679E-04	1.97918E-03	-1.41257E-04
416	211605-3	-4.22196E-08	3.28852E-06	-6.50637E-08	-1.32332E-03	-5.43300E-03	7.82946E-04
417	211608-2	-4.66792E-08	4.33276E-06	2.27550E-07	-1.59186E-03	6.06550E-05	1.10446E-03
418	211608-3	4.62551E-08	-5.40805E-06	2.05616E-07	1.73805E-03	5.67789E-03	-1.40005E-03
419	212040-2	-2.32905E-08	-1.70807E-06	-1.95892E-06	2.68467E-05	-9.68312E-02	-8.13190E-04
420	212040-3	1.59473E-09	1.24639E-06	8.81545E-07	-2.74845E-04	3.66968E-02	5.35459E-04
421	212043-2	-2.89272E-09	-1.32322E-06	-1.60251E-06	2.57535E-04	-3.69014E-02	-5.99727E-04
422	212043-3	1.17366E-08	2.62871E-06	3.45879E-06	-3.60846E-04	1.01978E-01	1.22434E-03
423	212045-2	-2.29008E-09	3.17299E-06	3.20797E-06	-7.18780E-04	7.39899E-02	1.43070E-03
424	212045-3	-2.12683E-08	-2.83460E-06	-1.65778E-06	1.07681E-03	5.99859E-02	-1.15440E-03
425	212250-2	-5.09143E-08	1.62399E-06	-1.27267E-07	-6.93373E-04	2.26470E-02	5.93160E-04
426	212250-3	7.81856E-08	-2.24657E-06	2.11407E-07	9.68636E-04	-3.66711E-02	-8.24616E-04
427	212253-2	-9.31328E-08	1.23358E-06	-5.44312E-08	-2.61650E-04	-4.71217E-02	9.20703E-04
428	212253-3	1.64765E-07	-4.20029E-06	1.69761E-07	1.42996E-03	2.50497E-02	-2.08654E-03
429	212255-2	1.35823E-07	-4.07588E-06	-1.14656E-07	8.50626E-04	1.20896E-01	-2.77649E-03
430	212255-3	1.06264E-06	-4.71398E-05	2.26037E-06	2.02772E-02	-6.98521E-01	-1.58204E-02
431	212530-2	1.20927E-07	1.27070E-05	2.50770E-07	-4.01744E-03	2.09707E-01	5.03472E-03
432	212530-3	-1.72684E-07	-1.68968E-05	-3.05759E-07	5.82972E-03	-2.71126E-01	-7.34050E-03
433	212533-2	-2.82158E-06	-1.36636E-04	-5.33680E-06	4.48840E-02	9.07506E-01	-5.67653E-02
434	212533-3	2.74417E-06	1.17168E-04	5.19027E-06	-3.84432E-02	-1.46231E+00	4.87520E-02
435	212535-2	7.90994E-06	5.51537E-04	1.50856E-05	-1.82527E-01	3.54559E+00	2.29346E-01
436	212535-3	-1.79793E-05	-1.71388E-03	-3.42371E-05	5.69267E-01	-2.48770E+01	-7.12428E-01
437	213180-2	2.16521E-09	-3.94721E-08	-8.25386E-09	-7.30830E-05	5.06234E-03	9.59585E-05
438	213180-3	-3.20983E-09	3.30803E-08	1.55471E-08	2.38090E-04	-1.08975E-02	-3.84990E-04
439	213183-2	2.09438E-08	-5.28421E-08	-1.03919E-08	-2.29155E-04	3.13496E-02	1.67283E-04
440	213183-3	-1.10314E-08	4.32250E-08	8.37040E-09	1.16424E-04	-1.66181E-02	-7.65520E-05
441	213185-2	-7.33839E-09	-2.08784E-07	1.92140E-08	5.20861E-04	3.85926E-02	-4.54473E-04
442	213185-3	7.35266E-09	1.96127E-07	-2.40451E-08	-5.84728E-04	-4.42397E-02	5.02386E-04
443	213188-2	-7.63120E-08	-1.94705E-07	9.21758E-08	2.03526E-03	-4.33281E-02	-1.97137E-03
444	213188-3	1.41011E-08	1.48976E-06	-3.24998E-07	-6.43759E-03	-6.34029E-02	9.00155E-03
445	213250-2	3.68758E-08	-3.43370E-07	-1.86728E-08	4.12055E-05	-1.87973E-02	-8.46673E-05
446	213250-3	-1.47284E-08	1.65971E-07	1.33539E-08	1.57250E-05	6.42282E-03	-3.15653E-05
447	213253-2	3.20089E-08	-2.53024E-07	-6.59096E-09	7.50336E-05	-1.44759E-02	-2.54956E-04
448	213253-3	-8.23534E-08	6.63191E-07	2.53894E-08	-8.97743E-05	3.25065E-02	5.88417E-04
449	213255-2	-1.59706E-07	1.15583E-06	5.35778E-08	5.53412E-04	2.12671E-02	1.29479E-03
450	213255-3	2.96922E-07	-2.35120E-06	-1.02415E-09	-3.28442E-04	6.46347E-02	-5.92222E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 206

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
451	213323-2	9.73885E-07	-7.32590E-06	-5.48444E-08	1.99560E-03	-2.35985E-01	-1.38565E-02
452	213323-3	-1.00563E-06	7.57143E-06	6.06520E-08	-2.34347E-03	2.65530E-01	1.40177E-02
453	213325-2	-2.27094E-06	1.68492E-05	8.92604E-08	-4.01679E-04	1.52418E-01	3.70724E-02
454	213325-3	3.80922E-06	-2.74083E-05	-1.79823E-07	-1.28223E-02	8.42953E-01	-7.13874E-02
455	213390-2	3.27144E-07	-2.74847E-06	-9.16663E-09	9.09420E-04	-8.55867E-02	-5.32362E-03
456	213390-3	-1.37853E-07	1.12552E-06	1.16042E-09	-3.86630E-04	3.41929E-02	2.12782E-03
457	213393-2	5.51318E-07	-4.19173E-06	-2.38346E-08	5.41956E-04	-1.06576E-01	-8.39833E-03
458	213393-3	-8.90879E-07	6.85790E-06	4.33435E-08	-1.11481E-03	1.86470E-01	1.34410E-02
459	213395-2	-1.45793E-06	1.10132E-05	6.84264E-08	-1.14129E-03	2.65990E-01	2.20265E-02
460	213395-3	1.96035E-06	-1.40044E-05	-1.19475E-07	-2.14622E-03	-5.83283E-02	-3.05363E-02
461	213460-2	7.24199E-09	-8.80480E-08	-1.34150E-09	6.17987E-05	-2.86777E-03	-1.12735E-04
462	213460-3	-9.79457E-09	1.13702E-07	-1.60941E-09	-2.20515E-04	3.12151E-03	1.85396E-04
463	213463-2	1.37232E-07	-1.43815E-06	-8.19871E-09	2.91601E-04	-4.54218E-02	-2.28296E-03
464	213463-3	-6.87988E-08	7.31001E-07	5.07816E-09	-1.45687E-04	2.32351E-02	1.14460E-03
465	213465-2	9.55158E-08	-6.20653E-07	-6.08991E-09	-2.60964E-04	-6.45093E-03	-1.36913E-03
466	213465-3	-1.38055E-07	9.31985E-07	1.10370E-08	2.83334E-04	1.26668E-02	1.96944E-03
467	213468-2	-3.25418E-07	3.00536E-06	2.21538E-08	-6.56397E-04	8.85094E-02	5.03272E-03
468	213468-3	3.46086E-07	2.21832E-06	-2.54281E-08	-3.12845E-03	2.07460E-01	-1.04158E-03
469	213481-2	-1.27079E-07	-2.10441E-06	1.91460E-08	5.49132E-03	-1.84704E-01	-6.91304E-04
470	213481-3	-1.76151E-12	6.89367E-10	1.07823E-11	1.93705E-06	3.98827E-05	-3.63228E-07
471	213528-2	-2.29466E-08	3.25121E-07	-5.68535E-08	-6.77138E-03	3.52247E-03	5.62166E-03
472	213528-3	-2.60509E-08	-3.74271E-07	-3.76606E-08	-4.42742E-03	-4.70223E-02	-1.25498E-04
473	213530-2	9.05899E-09	-5.45625E-07	-3.81971E-09	1.15619E-03	-3.27829E-02	-3.51015E-04
474	213530-3	-1.08775E-08	1.64301E-07	9.29726E-09	1.28827E-03	1.00212E-02	-7.01057E-04
475	213533-2	6.77693E-10	2.01162E-07	7.04792E-09	2.79056E-04	1.45926E-02	-1.36304E-04
476	213533-3	-2.84193E-09	4.27630E-07	2.05259E-08	3.15888E-04	2.92313E-02	-4.19633E-04
477	213535-2	4.39413E-08	-3.92381E-06	-3.64967E-08	1.94019E-03	-2.18666E-01	-2.35158E-03
478	213535-3	-5.84312E-08	4.61679E-06	3.85342E-08	-5.40939E-03	2.55933E-01	3.77328E-03
479	213538-2	-5.32429E-08	3.08878E-07	-2.69102E-08	4.63829E-03	-1.44970E-03	5.55457E-04
480	213538-3	9.43374E-08	-4.20998E-06	3.61808E-08	5.97163E-03	-2.27717E-01	-5.59868E-03
481	213540-2	6.00174E-07	-2.78952E-05	-5.63696E-08	1.01680E-02	-1.48107E+00	-2.34052E-02
482	213540-3	-1.31466E-06	7.65201E-05	2.66866E-07	-3.74259E-02	4.15226E+00	6.10282E-02
483	213600-2	2.07819E-07	-2.54027E-06	2.31265E-07	1.89120E-02	-9.77435E-03	-1.17782E-02
484	213600-3	-1.85067E-07	7.54772E-06	8.98648E-08	2.69043E-02	3.63288E-01	7.63324E-03
485	959-1	3.90188E-09	-1.95479E-09	-3.79852E-09	3.38755E-05	-7.99666E-04	-1.20501E-04
486	959-2	7.81447E-09	-2.64123E-08	-1.28574E-08	-3.19768E-03	-3.52095E-04	3.91401E-03
487	959-3	-1.16945E-08	1.42211E-09	1.60264E-08	-2.27027E-05	8.44970E-04	-1.87677E-06
488	960-1	3.26419E-09	-1.54062E-09	-3.22499E-09	-1.84172E-06	-7.47875E-04	-1.49594E-06
489	960-2	-5.89279E-10	-1.15824E-08	3.60582E-09	-5.71286E-04	9.50005E-05	6.77713E-04
490	960-3	-3.56672E-09	-3.34711E-09	7.91107E-10	-3.95131E-05	-2.03965E-04	-4.02825E-05
491	961-1	3.19198E-09	-1.53383E-09	-3.18800E-09	7.75757E-06	-7.49643E-04	-1.82203E-05
492	961-2	-1.51469E-10	8.49152E-09	-1.16799E-09	-1.35325E-04	2.19097E-05	1.50559E-04
493	961-3	-4.80858E-10	3.40509E-09	-4.72850E-09	-8.57571E-06	-4.52825E-05	-5.06478E-05
494	962-1	3.36646E-09	-1.54299E-09	-3.46079E-09	1.13344E-05	-8.03081E-04	-2.42791E-05
495	962-2	5.97925E-09	-7.52835E-08	-3.06681E-09	-1.41290E-04	-2.23897E-03	2.72478E-04
496	962-3	4.37587E-09	-3.52963E-08	1.36668E-08	3.98923E-05	-8.69845E-04	-7.53513E-06
497	963-1	1.36434E-08	4.06083E-10	-4.24343E-09	5.58476E-06	-3.34154E-03	-3.94643E-06
498	963-2	4.78390E-09	-4.88180E-07	1.79314E-09	-5.33358E-04	-3.26738E-05	-4.99491E-06
499	963-3	1.94690E-08	-5.11205E-08	8.66660E-10	-3.76699E-05	-6.86418E-04	3.18760E-06
500	964-1	1.37262E-08	6.64520E-10	-4.22644E-09	5.21788E-06	-3.33997E-03	-2.53356E-06

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 207

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
501	964-2	-4.42731E-09	-2.09749E-08	2.50594E-09	-1.91618E-04	-7.71029E-04	-1.83988E-05
502	964-3	-6.49127E-10	-5.36213E-10	-7.37987E-09	-7.43678E-05	-3.78786E-04	-1.70347E-06
503	965-1	1.37829E-08	5.43770E-10	-4.22133E-09	5.76807E-06	-3.36970E-03	-2.30850E-06
504	965-2	-9.20751E-09	-3.83866E-08	-3.42675E-09	-1.05522E-04	-6.81773E-04	-2.69280E-05
505	965-3	-4.42257E-09	-2.45738E-08	-7.11791E-09	-3.36223E-05	-5.59880E-04	-8.11356E-06
506	967-1	1.62452E-08	5.50951E-09	-5.19907E-09	7.93380E-06	-3.94261E-03	2.90646E-08
507	967-2	-3.32179E-08	-4.31774E-07	-5.30102E-09	-1.60825E-04	-1.90656E-03	-1.81575E-04
508	967-3	-3.36780E-09	-2.21180E-07	-6.95488E-09	7.52953E-05	-1.02561E-03	-5.48203E-05
509	969-1	2.19513E-08	-2.70913E-08	-3.24358E-08	1.09515E-05	1.00199E-03	-1.14738E-05
510	969-2	2.28712E-08	-1.43634E-06	2.24606E-08	7.57903E-04	7.94798E-03	-4.81573E-04
511	969-3	-1.86717E-09	-9.01356E-08	-3.64741E-08	3.49333E-05	-1.35540E-03	-2.05973E-05
512	970-1	1.98306E-08	-1.03232E-08	-3.00197E-08	3.70589E-06	8.07499E-04	-5.14623E-06
513	970-2	-2.77650E-09	-2.66076E-07	1.73776E-09	1.69827E-04	2.56510E-03	-8.68916E-05
514	970-3	-5.66064E-09	-2.35523E-08	-2.82503E-08	3.69459E-05	2.09374E-03	-5.77038E-06
515	971-1	1.96139E-08	-7.00330E-09	-2.99118E-08	2.12787E-06	8.10291E-04	-3.94425E-06
516	971-2	1.94044E-09	-1.05994E-06	-5.47338E-10	4.01933E-04	2.72618E-03	-4.32413E-04
517	971-3	3.77677E-09	-1.05876E-07	-4.29472E-09	4.85297E-05	5.06410E-03	-4.48170E-05
518	972-1	2.02825E-08	-3.43658E-09	-3.11603E-08	8.08624E-07	8.22802E-04	-2.80698E-06
519	972-2	4.43749E-08	-4.39122E-06	8.82959E-08	1.52883E-03	6.17088E-02	-1.88881E-03
520	972-3	2.78955E-08	-2.19139E-06	3.57146E-08	7.36130E-04	2.97667E-02	-9.16594E-04
521	973-1	2.17801E-09	4.79496E-10	1.63162E-09	4.19890E-06	9.54821E-04	2.89626E-05
522	973-2	-2.04504E-08	-7.93069E-07	2.13482E-07	-2.77643E-03	4.00050E-02	3.33767E-03
523	973-3	-3.62467E-09	6.72276E-09	4.46370E-08	-5.06909E-04	8.06854E-03	6.18619E-04
524	974-1	2.06015E-09	9.00905E-10	1.59006E-09	3.24512E-06	9.39821E-04	3.01691E-05
525	974-2	-1.78510E-08	-1.20516E-07	-5.84248E-09	-6.52257E-05	-1.42315E-03	-3.06895E-04
526	974-3	-1.92355E-09	-7.58199E-09	1.25395E-08	2.82879E-06	-8.79219E-04	-4.26528E-05
527	975-1	2.34537E-09	2.19428E-09	1.57762E-09	6.21219E-07	9.52053E-04	3.56286E-05
528	975-2	-1.20259E-07	-9.80298E-07	4.81518E-08	5.06093E-04	1.29644E-03	-2.55534E-03
529	975-3	-1.74449E-08	-1.33089E-07	3.50503E-08	7.49427E-06	1.74228E-03	-2.82234E-04
530	977-1	2.53571E-09	-1.25770E-09	3.14091E-09	1.71830E-04	1.19063E-03	-1.27939E-05
531	977-2	1.96148E-07	4.07903E-07	-2.93887E-08	-2.18178E-02	-8.64668E-02	4.78692E-03
532	977-3	-2.48505E-08	4.06773E-07	-3.33600E-08	1.55828E-03	-6.45757E-03	-9.60073E-05
533	271218-2	1.76781E-05	-1.39927E-04	-4.54027E-05	4.38569E+03	-6.55021E+03	-7.25446E+03
534	271217-1	-2.00407E-05	2.54520E-04	1.66180E-04	-3.13491E+02	-1.02936E+03	3.39815E+04
535	271217-2	5.84673E-06	-9.56546E-05	-2.28138E-05	4.44741E+02	3.23937E+01	-3.30476E+02
536	271217-3	7.01641E-09	2.26464E-09	5.00695E-08	-2.15184E+04	5.15378E+01	5.70667E+02
537	271216-1	8.75064E-06	-1.67245E-04	1.47392E-05	-1.99304E+01	-2.98767E+01	-5.46808E+01
538	271216-2	5.83918E-06	-1.45711E-05	9.24105E-07	-1.44574E+02	-3.05165E+02	-3.89907E+02
539	271219-1	-7.46536E-08	-1.71172E-08	-1.79118E-07	4.21293E+03	-6.91133E+02	3.89942E+04
540	271219-2	9.54726E-06	-5.30252E-05	-2.39367E-05	2.93325E+03	-4.47373E+02	4.26598E+03
541	271219-3	-9.23308E-06	6.94612E-05	1.79206E-05	-3.47770E+04	1.01959E+03	-4.09971E+03
542	27355-1	8.89413E-08	4.22588E-08	-3.78641E-08	-2.49412E+03	-2.62291E+01	2.10128E+04
543	27355-2	-1.67399E-06	9.57772E-06	-5.53264E-06	5.90421E+02	4.81963E+01	-2.88122E+03
544	27355-3	-7.35515E-05	2.54315E-04	2.55982E-04	-1.04441E+04	-1.43935E+02	2.79626E+03
545	701383-2	1.42892E-06	1.59131E-05	-3.63252E-06	7.47522E-03	8.95727E-01	-2.51291E-01
546	701383-3	3.68140E-05	1.11879E-04	-7.57752E-05	1.09128E-02	3.97581E+01	-3.43575E+00
547	701405-2	3.77597E-06	-8.09115E-07	-6.56376E-06	2.82323E-03	3.51596E-01	7.98967E-05
548	701405-3	-1.54882E-04	6.38430E-04	2.30476E-04	-2.34139E-01	3.77076E+00	7.05578E-02
549	701963-1	4.13297E-05	-2.21189E-05	-5.95667E-06	-2.71599E-01	-5.77136E+00	2.91523E-01
550	701963-2	-6.73214E-07	-8.14573E-07	2.89922E-07	2.83668E-04	2.58810E-02	-1.74971E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 208

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
551	701963-3	-3.15522E-06	5.03223E-06	1.61482E-06	9.84915E-02	8.49692E-01	5.00752E-02
552	701393-2	-1.90231E-07	6.44273E-07	8.44978E-08	-1.18109E-01	1.60535E-01	2.02790E-03
553	1383-2	-1.88564E-06	1.61281E-05	3.77285E-06	5.36569E-03	-9.30618E-01	-2.54594E-01
554	1383-3	4.28977E-05	-1.15282E-04	-7.77625E-05	3.44934E-02	4.03934E+01	3.49463E+00
555	1405-2	-4.73801E-06	-7.99087E-07	6.53275E-06	2.75869E-03	-3.51616E-01	3.26948E-03
556	1405-3	-1.44026E-04	-6.38761E-04	2.30649E-04	2.35704E-01	3.78739E+00	-3.00925E-02
557	901963-1	3.56221E-05	2.35587E-05	-4.95515E-06	2.51385E-01	-6.08728E+00	-3.19962E-01
558	901963-2	1.15942E-06	-1.09490E-06	-4.94986E-07	5.61221E-03	1.49773E-02	-1.32022E-02
559	901963-3	6.30476E-07	-7.70561E-06	-9.84181E-08	-6.03962E-02	1.37736E+00	1.85271E-03
560	1393-2	3.86057E-08	5.36024E-07	-1.61222E-07	-1.16783E-01	-1.40295E-01	3.67081E-03
561	701423-2	9.11611E-06	1.40657E-04	1.79160E-05	-7.30644E-02	9.73431E-02	1.96676E-02
562	701423-3	-5.11321E-05	-4.54397E-04	5.86781E-04	-7.01363E-01	2.59343E+00	-7.68928E-02
563	701445-2	4.16525E-07	1.63927E-06	1.74928E-08	2.42505E-02	3.94995E-01	3.47978E-04
564	701445-3	6.09515E-06	1.50013E-05	-4.81888E-07	4.14460E-02	7.00332E-01	2.76771E-03
565	701965-1	3.45582E-05	3.29745E-04	-6.07589E-06	-1.27102E-01	-7.25614E+00	5.63648E-02
566	701965-2	-2.98662E-06	-1.78943E-05	-1.18795E-06	1.92395E-02	2.21403E-02	-2.82076E-03
567	701965-3	1.04788E-05	-7.12177E-05	6.67839E-06	-1.13987E-01	1.01635E+00	-8.79543E-03
568	701433-2	1.20969E-06	-1.15447E-06	-3.20607E-07	5.66390E-02	-2.86794E-02	-1.43269E-03
569	1423-2	-2.36007E-06	1.40968E-04	-1.80388E-05	-7.26917E-02	-9.97890E-02	1.87775E-02
570	1423-3	-2.72521E-05	4.53581E-04	5.86221E-04	6.98118E-01	2.67916E+00	7.92759E-02
571	1445-2	1.77247E-07	2.00585E-06	-1.45353E-08	2.52513E-02	-4.04102E-01	3.39082E-04
572	1445-3	3.96149E-07	-1.30336E-05	-3.77465E-07	-5.19529E-02	7.89238E-01	-1.85988E-03
573	901965-1	2.70752E-05	-3.29321E-04	-6.04440E-06	1.22849E-01	-7.25089E+00	-5.44568E-02
574	901965-2	1.75862E-06	-1.76353E-05	1.20834E-06	1.77917E-02	-7.56277E-03	-2.69803E-03
575	901965-3	-4.60028E-07	7.25275E-05	6.66557E-06	1.09229E-01	1.06507E+00	1.00660E-02
576	1433-2	4.55499E-08	-1.53476E-06	3.22102E-07	5.75091E-02	2.06103E-02	-1.63663E-03
577	701443-2	2.65849E-05	3.22529E-07	8.53648E-08	3.46642E-02	-2.66004E-01	9.18893E-04
578	701443-3	-4.26231E-05	3.89686E-05	1.31110E-07	-7.43635E-01	3.89244E+00	1.17060E-02
579	702365-2	6.46405E-06	2.42154E-05	7.11677E-06	-1.09462E-02	9.31551E-02	4.50115E-03
580	702365-3	-8.16731E-05	6.72004E-04	-1.36892E-04	-2.02544E-01	2.62931E+00	2.17061E-01
581	702661-1	8.69474E-05	-3.05784E-05	2.97095E-05	1.54104E-02	-9.15010E+00	3.89039E-03
582	702661-2	4.60636E-06	-1.08635E-05	1.61893E-06	2.42761E-03	-2.56819E-01	-2.62787E-03
583	702661-3	4.57522E-06	1.41191E-05	-2.97328E-07	2.06116E-02	1.21004E+00	6.55899E-03
584	702353-2	2.67413E-06	-1.19104E-05	1.25186E-07	6.36844E-03	-2.25783E-01	-4.37504E-03
585	1443-2	-9.76956E-07	-6.94062E-06	1.53278E-07	3.64986E-02	2.98908E-01	-2.45955E-03
586	1443-3	-2.71562E-06	-5.61206E-05	4.95158E-07	7.34850E-01	4.05702E+00	-1.83327E-02
587	2365-2	-5.02101E-06	2.70524E-05	-7.15153E-06	9.74831E-03	-1.23794E-01	5.09374E-03
588	2365-3	-9.27534E-05	-6.65812E-04	-1.37114E-04	2.90343E-01	2.62330E+00	-2.14848E-01
589	2661-1	8.13991E-05	2.65735E-05	2.97339E-05	-2.01680E-02	-9.16326E+00	-3.87745E-03
590	2661-2	-4.44550E-06	-1.09284E-05	-1.62128E-06	3.07510E-03	2.54101E-01	-2.69549E-03
591	2661-3	-2.17731E-06	-1.40320E-05	-4.54151E-07	-2.81969E-02	1.22930E+00	-6.15216E-03
592	2353-2	3.33174E-08	-1.24241E-05	-9.38864E-08	8.91025E-03	2.11785E-01	-4.68232E-03
593	727355-2	1.67781E-06	9.99219E-06	5.52826E-06	2.04799E-02	3.08181E-01	2.92960E-03
594	727355-3	-7.34316E-05	-2.57367E-04	2.56318E-04	-1.94602E-01	2.75321E+01	-4.10872E-01
595	7271219-2	-1.55678E-05	-1.82968E-05	9.72182E-06	-3.35922E-01	1.26820E+00	1.86415E-01
596	7271219-3	-7.38338E-06	-1.08179E-05	5.59725E-06	-2.19341E-01	1.71093E+00	2.61953E-01
597	7271217-1	-6.84147E-05	3.27208E-05	7.28769E-05	-2.26669E+00	1.11965E+01	1.49082E+00
598	7271217-2	-1.56988E-05	-3.62789E-05	1.10171E-05	-3.78880E-01	8.15676E-01	1.67035E-01
599	7271217-3	2.84759E-06	-3.44274E-05	-8.43757E-07	1.03474E-01	1.92240E+00	2.76875E-02
600	727435-2	3.68828E-08	-6.05145E-06	4.30979E-07	1.32855E-02	1.58222E-01	-5.48807E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 209

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
601	6032-1	3.43292E-06	-2.49830E-06	2.58636E-06	-4.41069E-05	-5.53330E-02	-9.02801E-04
602	6032-2	2.01052E-05	-5.28245E-05	2.08615E-04	-3.28537E-02	8.84438E-02	-2.57369E-02
603	6032-3	1.86801E-05	-5.37062E-05	2.11385E-04	-3.37098E-02	1.07710E-01	-2.61764E-02
604	6060-1	7.36519E-07	5.23039E-08	-2.18069E-07	-7.39239E-03	-8.99140E-02	7.13130E-03
605	6060-2	-1.45857E-07	4.77945E-07	-1.66100E-07	-1.92458E-03	1.36494E-01	-1.38352E-02
606	6060-3	-1.39616E-07	8.92189E-07	-3.32258E-07	-4.75934E-03	2.18708E-01	-2.19256E-02
607	6061-1	2.36694E-07	-2.94840E-08	-3.55169E-08	-2.21905E-03	-7.45512E-02	5.93360E-03
608	6061-2	-4.57886E-06	-5.67010E-06	3.75584E-06	7.78724E-02	-1.09148E+00	1.06126E-01
609	6061-3	4.04721E-06	5.13630E-06	-3.37972E-06	-6.97577E-02	1.01176E+00	-9.80907E-02
610	6064-1	2.83590E-07	3.71461E-07	5.02997E-08	1.27911E-04	-8.54920E-02	1.84903E-04
611	6064-2	-4.97433E-07	-1.55909E-06	-2.54080E-08	1.19772E-03	1.41341E-01	-4.12187E-04
612	6064-3	-6.48360E-07	-1.90515E-06	-7.18635E-08	1.64194E-03	1.90693E-01	-5.39687E-04
613	6081-1	1.20902E-06	2.79740E-08	7.15128E-07	3.47733E-03	-5.53530E-01	1.19528E-04
614	6081-2	1.10758E-06	-1.49042E-04	-4.30514E-07	-1.44945E+00	-7.72395E-01	-9.81262E-02
615	6081-3	-1.47940E-06	4.01119E-07	-3.72507E-06	9.20528E-03	5.54766E+00	1.12950E-04
616	6081-4	1.47887E-07	-1.55245E-04	-5.59978E-07	-1.19728E+00	-4.66537E-01	-8.76608E-02
617	6081-5	-1.39585E-06	-3.96676E-09	-1.03006E-06	1.87628E-03	1.19967E+00	-3.03416E-05
618	6082-1	1.68353E-07	3.75951E-05	3.75094E-07	-1.30941E-02	2.38022E-02	5.08355E-03
619	6082-2	-1.87052E-06	-8.85306E-06	2.24857E-06	-9.37476E-03	2.69040E-01	-1.75826E-03
620	6082-3	-2.11906E-06	-3.47376E-05	2.46519E-06	-1.33905E-03	3.10303E-01	-5.32373E-03
621	6083-1	1.11688E-05	-6.59382E-05	-1.29127E-06	2.29705E-02	1.99692E-02	-2.43490E-02
622	6083-2	-5.10022E-07	9.94441E-05	3.89992E-06	-5.28511E-02	-7.04913E-01	3.50416E-02
623	6083-3	-9.58113E-07	1.25212E-04	4.63304E-06	-6.58929E-02	-8.60373E-01	4.46058E-02
624	6084-1	9.59665E-05	1.36427E-03	-2.10613E-06	-4.65037E-01	-1.33916E+01	5.65856E-01
625	6084-2	1.59442E-05	-7.12555E-04	4.16314E-05	2.00523E-01	-7.79609E+01	-2.93182E-01
626	6084-3	1.02994E-05	-1.26643E-03	4.88911E-05	3.78703E-01	-8.88457E+01	-5.17089E-01
627	6085-1	1.47935E-04	2.27789E-05	-1.68680E-05	3.85304E-02	1.41789E+00	-5.13229E-02
628	6085-2	-6.87709E-05	-4.73683E-05	2.04611E-05	-5.52710E-02	2.64464E+00	-6.19151E-03
629	6085-3	-1.33596E-06	-4.86605E-05	6.37375E-06	-3.64123E-02	2.93817E+00	-1.68525E-02
630	6067-1	2.15157E-04	-8.82660E-04	-3.36141E-05	3.00648E-01	1.04158E-01	-3.43230E-01
631	6067-2	8.99424E-05	5.19551E-04	-2.95267E-05	-1.70965E-01	1.12718E-01	2.24015E-01
632	6067-3	1.25741E-05	6.59945E-04	-1.75036E-05	-2.21265E-01	-7.01218E-02	2.72359E-01
633	6068-1	8.88767E-05	-1.13324E-04	-4.96384E-06	1.17393E-01	7.68767E+00	-3.98477E-01
634	6068-2	3.44808E-05	1.55266E-04	-1.99835E-06	-1.25095E-01	1.07901E+01	-3.95966E-01
635	6068-3	3.04892E-05	-7.07947E-06	-1.29533E-06	-3.79248E-02	1.60109E+01	-6.45370E-01
636	6071-1	8.88667E-05	1.12850E-04	-4.93503E-06	-1.18539E-01	7.69560E+00	3.96948E-01
637	6071-2	-3.46458E-05	1.56613E-04	1.98953E-06	-1.24156E-01	-1.08130E+01	-3.92378E-01
638	6071-3	3.07769E-05	3.92671E-06	-1.30533E-06	3.59917E-02	1.60593E+01	6.37223E-01
639	6069-1	3.34944E-07	-6.30268E-08	9.27055E-08	-1.15432E-04	-5.16597E-02	2.69994E-05
640	6069-2	5.35686E-07	2.52679E-06	8.20695E-08	-8.69875E-04	-1.26896E-01	7.53314E-04
641	6069-3	6.71558E-07	2.84393E-06	1.05591E-07	-9.62843E-04	-1.61684E-01	8.53535E-04
642	6070-1	3.21462E-07	-6.79795E-08	9.39423E-08	1.37381E-04	-5.14206E-02	-5.45355E-05
643	6070-2	-3.68581E-07	1.78093E-06	-6.64732E-08	-5.51283E-04	1.28730E-01	5.46689E-04
644	6070-3	4.80568E-07	-1.97664E-06	8.77297E-08	6.29795E-04	-1.64048E-01	-6.11505E-04
645	6073-1	1.83102E-07	-3.13698E-07	5.27664E-08	-1.95229E-04	-8.57569E-02	-1.55207E-04
646	6073-2	4.27317E-07	-1.31016E-06	2.61312E-08	1.06289E-03	-1.41198E-01	-3.33815E-04
647	6073-3	-5.89606E-07	1.57370E-06	-6.96338E-08	-1.52359E-03	1.91345E-01	4.38506E-04
648	6074-1	1.11592E-05	6.59580E-05	-1.29269E-06	-2.24847E-02	1.95903E-02	2.43582E-02
649	6074-2	8.87490E-07	9.99296E-05	-3.91376E-06	-4.01763E-02	6.88070E-01	3.52019E-02
650	6074-3	-1.41385E-06	-1.25795E-04	4.64993E-06	5.03785E-02	-8.39617E-01	-4.47984E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 210

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
651	6076-1	2.14940E-04	8.82429E-04	-3.36301E-05	-2.98362E-01	1.00548E-01	3.43169E-01
652	6076-2	-8.99677E-05	5.19380E-04	2.95239E-05	-1.70435E-01	-1.16457E-01	2.23939E-01
653	6076-3	1.26486E-05	-6.59884E-04	-1.74905E-05	2.19805E-01	-6.79160E-02	-2.72333E-01
654	6080-1	1.13205E-07	5.05562E-08	6.62118E-08	2.31655E-02	-5.23637E-02	1.76523E-05
655	6080-2	5.23124E-05	1.50962E-04	4.53194E-07	7.63241E+00	-1.29791E+00	4.79852E-02
656	6080-3	6.09773E-07	-1.06578E-07	1.56522E-05	-7.99710E-01	-2.82411E+00	5.03543E-05
657	6080-4	-8.16201E-07	4.05165E-05	-4.35498E-07	-5.13268E+00	1.33329E+01	1.32661E-02
658	6080-5	-2.38958E-07	1.05697E-07	1.20971E-07	-3.33253E-02	8.96585E-01	1.43675E-05
659	6086-1	1.02293E-07	4.00296E-09	7.83151E-09	3.08626E-03	-7.34365E-02	5.28146E-03
660	6086-2	2.70921E-08	1.53708E-09	1.56031E-09	4.07184E-03	-2.08627E-02	1.28214E-02
661	6086-3	3.28095E-09	1.23013E-10	5.81235E-09	-5.18545E-03	4.34195E-02	-2.87647E-03
662	6089-1	7.47753E-06	6.78258E-07	1.86330E-07	-8.76444E-02	4.18898E-01	1.68744E-01
663	6089-2	-1.21998E-07	-1.34422E-06	2.40653E-07	-5.98282E+00	6.41418E-01	2.22787E+01
664	6089-3	4.43911E-06	4.44480E-08	1.95845E-06	2.37610E-01	-3.11704E+01	-4.04434E-01
665	6087-1	7.96004E-06	-2.87411E-04	2.17511E-04	-2.66466E+00	2.65916E+02	-1.57941E-01
666	6087-2	-1.85197E-06	1.00014E-03	1.30929E-06	-9.04077E+00	1.07105E+00	4.56217E-01
667	6087-3	-1.15697E-08	2.52157E-07	-3.35240E-06	6.16149E-02	-3.15497E+01	6.63018E-05
668	6091-1	7.06714E-07	-5.25079E-08	-2.21952E-07	7.55426E-03	-9.22755E-02	-7.27603E-03
669	6091-2	5.81975E-08	5.59423E-07	2.02485E-07	-2.59867E-03	-1.28372E-01	-1.30962E-02
670	6091-3	-3.31023E-08	-1.01041E-06	-3.80852E-07	5.45902E-03	2.18752E-01	2.18348E-02
671	6092-1	2.54921E-07	-3.76544E-05	3.71795E-07	1.30274E-02	2.40973E-02	-5.02154E-03
672	6092-2	1.10852E-06	-8.41046E-06	-2.23130E-06	-8.86724E-03	-2.71915E-01	-2.27945E-03
673	6092-3	-1.22019E-06	3.42508E-05	2.44637E-06	7.90511E-04	3.13552E-01	5.94122E-03
674	6093-1	3.37188E-06	2.52748E-06	2.58531E-06	-7.58059E-04	-5.40996E-02	9.14892E-04
675	6093-2	-1.92326E-05	-5.26118E-05	-2.08613E-04	-7.82300E-04	-1.45760E-01	-2.57307E-02
676	6093-3	1.77840E-05	5.34863E-05	2.11382E-04	7.33706E-04	1.66696E-01	2.61695E-02
677	6094-1	9.56578E-05	-1.36525E-03	-2.12706E-06	4.63497E-01	-1.33932E+01	-5.66291E-01
678	6094-2	-1.44947E-05	-6.27760E-04	-3.98426E-05	1.73741E-01	7.90726E+01	-2.57812E-01
679	6094-3	8.44789E-06	1.15084E-03	4.64429E-05	-3.41897E-01	-9.03603E+01	4.68935E-01
680	6095-1	1.47920E-04	-2.16796E-05	-1.67421E-05	-4.05539E-02	1.40485E+00	5.28865E-02
681	6095-2	6.88295E-05	-4.50195E-05	-2.02388E-05	-5.86984E-02	-2.62912E+00	-3.50550E-03
682	6095-3	-1.39901E-06	4.63225E-05	6.15604E-06	4.00057E-02	2.93023E+00	1.41381E-02
683	5001-1	2.11177E-07	-1.60495E-08	-2.18133E-08	-2.89452E-03	4.93995E+00	-1.24125E-03
684	5001-3	2.72157E-08	1.41223E-08	1.72367E-08	3.36152E-03	-1.96300E+00	6.71864E-04
685	5002-1	6.02115E-07	3.05106E-09	6.79165E-09	1.96100E-02	2.63544E+00	1.38601E-03
686	5002-3	2.83512E-08	-2.00852E-08	2.30632E-09	-9.71730E-03	-2.40192E-01	-6.40903E-04
687	5003-1	2.60834E-06	-6.32029E-06	7.13228E-08	5.65995E-02	-3.96595E+00	8.23616E-02
688	5003-2	1.88200E-07	-1.54782E-06	2.59703E-08	5.86757E-01	-7.55902E-01	4.62917E-01
689	5003-3	-7.25709E-08	1.20793E-07	-6.24406E-09	9.58019E-04	9.13590E-02	1.46094E-02
690	5004-1	4.54151E-06	6.23794E-06	5.08592E-08	-5.03268E-02	-3.97783E+00	-8.90493E-02
691	5004-2	-6.58445E-07	-1.29470E-06	-7.11258E-09	3.36679E-01	6.98383E-01	4.27803E-01
692	5004-3	-1.08712E-07	-9.62684E-08	-5.35517E-09	-2.51262E-02	8.84982E-02	-8.75858E-03
693	5005-1	9.30702E-06	-7.50033E-08	1.76429E-07	5.33771E-03	-1.30023E+01	3.88227E-03
694	5005-3	-1.67142E-07	4.21896E-08	-5.78550E-09	-1.47186E-02	2.50270E-01	2.62708E-03
695	5006-1	-4.04725E-10	-5.37319E-07	1.07520E-07	1.27184E+00	-2.14589E+00	3.16831E-01
696	5006-2	-2.41816E-07	-1.16766E-06	-2.39128E-07	1.30536E-02	-2.16799E-01	-1.22169E+00
697	5006-3	6.11667E-08	-1.30681E-07	-1.77391E-07	-3.26823E+00	5.48652E+00	-3.38978E-01
698	5007-1	3.78051E-07	5.00712E-07	1.04492E-07	-1.26875E+00	-2.13666E+00	-3.16160E-01
699	5007-2	2.35485E-07	-1.27465E-06	-1.19050E-07	1.31929E-02	2.09134E-01	-1.22173E+00
700	5007-3	6.95011E-08	-1.50865E-07	3.39761E-07	3.26808E+00	5.48642E+00	3.39109E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 211

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
701	5008-1	2.58005E-08	-1.09460E-07	4.15894E-08	-1.24607E+00	2.33743E+01	1.80698E-01
702	5008-2	3.45983E-09	-6.85377E-08	-1.96928E-09	-7.17275E+00	-1.21731E-01	3.25391E-02
703	5008-3	-1.04383E-07	5.93864E-08	5.74018E-08	-2.85469E+00	-4.09798E+00	-1.40972E-01
704	5009-1	1.09205E-07	1.03068E-07	7.01402E-09	1.25771E+00	2.33727E+01	-1.78641E-01
705	5009-2	-3.58376E-08	-6.04869E-08	-1.54664E-08	-7.17129E+00	1.14320E-01	3.29997E-02
706	5009-3	-1.58287E-07	-7.59064E-08	7.52252E-08	2.86754E+00	-4.16166E+00	1.44371E-01
707	5010-1	3.20142E-10	-6.63727E-07	-1.42427E-08	1.41249E+00	-3.69861E+01	-5.90142E-02
708	5010-2	1.90994E-09	1.61526E-08	-1.27720E-08	1.45019E+01	-8.49442E-01	2.33119E-02
709	5010-3	-2.12283E-07	7.35743E-08	-3.77331E-08	3.84408E+00	4.32181E+00	-2.34430E-03
710	5011-1	1.89815E-07	6.19402E-07	-6.69206E-09	-1.42524E+00	-3.70113E+01	5.49936E-02
711	5011-2	1.12777E-09	1.50030E-08	9.82254E-09	1.45110E+01	8.38622E-01	2.37946E-02
712	5011-3	-2.30430E-07	-1.12595E-07	-3.78204E-08	-3.86886E+00	4.23363E+00	-7.02518E-03
713	5012-1	2.13025E-07	-9.12706E-07	3.65833E-09	1.03337E+00	-3.88974E+01	-4.39848E-01
714	5012-2	-4.91418E-08	-1.50758E-07	-4.83851E-10	2.92531E+01	-5.58305E-01	-9.34867E-02
715	5012-3	-2.70411E-08	6.19402E-08	-9.78162E-10	6.76977E+00	3.80167E+00	1.50627E-02
716	5013-1	5.29530E-07	8.84016E-07	5.09738E-09	-1.06177E+00	-3.89499E+01	4.46866E-01
717	5013-2	-5.36747E-08	-1.73226E-07	-1.12777E-09	3.05992E+01	5.25102E-01	-9.15964E-02
718	5013-3	-4.20659E-08	-4.59186E-08	-9.45874E-10	-7.17783E+00	3.80244E+00	-1.60294E-02
719	5014-1	5.64974E-07	-2.25035E-06	1.91343E-08	6.45133E-01	8.13985E+00	-1.68674E+00
720	5014-2	-2.54100E-07	1.96949E-07	-7.77374E-09	-1.15312E+00	1.40597E+00	-8.78502E-01
721	5014-3	-6.73067E-08	7.53580E-08	-4.56794E-10	-2.44680E-01	-5.41515E-01	-8.85602E-03
722	5015-1	1.35646E-06	2.22948E-06	1.35013E-08	-4.75559E-01	8.23291E+00	1.70068E+00
723	5015-2	2.48070E-07	2.10061E-07	4.91718E-09	-1.09395E+00	-1.49118E+00	-9.00937E-01
724	5015-3	-1.17022E-07	-1.15741E-07	-1.70340E-09	1.61490E-01	-4.74192E-01	1.18409E-02
725	5016-1	1.35412E-06	-6.92992E-06	2.55010E-08	-8.85064E-02	-2.54325E+00	-3.21888E+00
726	5016-2	1.83054E-08	-1.36915E-06	-5.34506E-08	2.97960E+00	-9.15923E-01	2.67211E+00
727	5016-3	-8.80181E-08	2.27242E-07	-2.55939E-08	4.27237E-01	9.77133E-02	6.13441E-01
728	5017-1	3.66737E-06	6.92417E-06	3.44764E-09	7.93346E-02	-2.46301E+00	3.26908E+00
729	5017-2	-4.13567E-07	-1.60101E-06	9.68599E-08	3.08826E+00	5.81643E-01	2.73978E+00
730	5017-3	-1.81750E-07	-5.55158E-08	-1.29818E-08	-6.26552E-01	2.64753E-02	-6.01626E-01
731	5018-1	1.60331E-05	-9.59023E-05	6.85476E-07	-6.28427E-01	-4.58422E+01	-2.96013E+00
732	5018-2	-8.74561E-07	-1.34137E-05	-1.06151E-07	7.14050E-01	-2.11047E+00	1.86249E+00
733	5018-3	-5.04778E-07	2.53635E-06	-2.16744E-07	9.54254E-02	1.80148E+00	2.38611E-01
734	5019-1	4.76867E-05	9.58463E-05	5.18686E-07	6.81701E-01	-4.51966E+01	2.98664E+00
735	5019-2	-3.49620E-06	-1.35011E-05	1.59156E-07	7.19266E-01	1.95727E+00	1.85802E+00
736	5019-3	-2.01756E-06	-2.37781E-06	-1.92731E-07	-2.06582E-01	1.76495E+00	-2.08172E-01
737	5020-1	6.27024E-08	-5.44427E-07	3.45608E-09	1.52857E+00	9.78257E-01	7.01552E-01
738	5020-2	1.56160E-08	-2.80748E-07	6.02262E-08	2.58562E+00	-2.91033E+00	7.48319E-02
739	5020-3	-4.94128E-09	-9.88998E-08	1.24232E-07	-1.97041E+00	-3.97734E+00	-6.35943E-01
740	5021-1	4.16398E-07	4.94162E-07	6.16938E-08	-1.53562E+00	1.07966E+00	-7.02351E-01
741	5021-2	-1.98742E-07	-2.45762E-07	-9.15003E-08	2.59173E+00	2.86406E+00	7.47219E-02
742	5021-3	5.24360E-08	6.75550E-08	1.18977E-07	1.96442E+00	-3.95692E+00	6.37013E-01
743	5022-1	1.06570E-07	-5.60360E-07	-4.58303E-08	2.38219E+00	-9.31086E-01	2.56883E-01
744	5022-2	2.47855E-08	-1.81957E-07	2.97568E-08	-6.70888E+00	-1.71430E+00	-3.24455E-02
745	5022-3	9.45874E-10	-9.87857E-08	9.74414E-08	-7.54278E+00	-8.56982E-01	-2.92139E-01
746	5023-1	4.51768E-07	4.79797E-07	-1.97606E-08	-2.41922E+00	-7.31367E-01	-2.59140E-01
747	5023-2	-1.54476E-07	-1.43802E-07	-2.93276E-08	-6.66925E+00	1.68256E+00	-2.97970E-02
748	5023-3	7.85421E-08	5.80840E-08	7.96408E-08	7.50455E+00	-8.91589E-01	2.89403E-01
749	5024-1	1.34798E-07	-1.16986E-06	2.67755E-08	8.27665E-02	2.39332E+01	-1.26145E+00
750	5024-2	-4.04816E-09	-3.30692E-08	4.23643E-09	-1.32640E+01	7.19234E-01	2.76638E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 212

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
751	5024-3	-2.79570E-08	1.91845E-07	-1.81353E-09	-8.09060E+00	-3.25659E+00	2.37588E-01
752	5025-1	7.53832E-07	1.13888E-06	3.13084E-08	-2.11719E-02	2.38689E+01	1.28337E+00
753	5025-2	-4.30509E-08	-7.15663E-08	-3.16140E-09	-1.48111E+01	-7.60007E-01	3.14572E-02
754	5025-3	-1.08224E-07	-1.54301E-07	-3.19415E-09	8.88441E+00	-3.31873E+00	-2.43988E-01
755	5026-1	4.25730E-07	-4.58278E-06	8.06019E-08	-1.85338E+00	-2.33413E+00	-1.27893E+01
756	5026-2	-4.84879E-08	-6.45785E-07	2.26689E-08	-1.60488E+00	8.53912E-01	-2.14972E-01
757	5026-3	-6.15196E-08	1.60437E-07	2.01265E-09	-4.98788E-01	1.03166E+00	9.44760E-01
758	5027-1	2.61115E-06	4.51002E-06	8.40644E-08	1.75877E+00	-2.30469E+00	1.30094E+01
759	5027-2	-3.16616E-07	-5.72803E-07	-2.04464E-08	-1.23809E+00	-7.66113E-01	-2.51853E-01
760	5027-3	-1.42690E-07	-1.16192E-07	5.66553E-09	2.91225E-01	8.22739E-01	-9.43400E-01
761	5028-1	1.83050E-06	-1.98036E-05	2.92002E-07	2.48788E+00	-1.28285E+01	4.81506E+01
762	5028-2	-5.14905E-07	4.20277E-07	-2.09784E-07	-7.25486E+00	3.00542E+00	-2.56881E+00
763	5028-3	-3.32035E-07	1.51853E-06	-1.07438E-07	-3.76042E+00	2.28064E+00	-4.36011E+00
764	5029-1	1.01233E-05	1.99710E-05	2.83351E-07	-2.36016E+00	-1.27664E+01	-4.88921E+01
765	5029-2	2.60623E-07	-2.53349E-07	1.63127E-07	-6.35327E+00	-2.56745E+00	-2.65072E+00
766	5029-3	-7.43999E-07	-1.18973E-06	-7.40053E-08	3.27309E+00	2.00554E+00	4.45916E+00
767	5030-1	1.36418E-05	-1.58144E-04	1.17347E-06	-1.02973E+00	-6.16005E+01	-1.61701E+01
768	5030-2	-1.38388E-06	1.02956E-06	-6.07424E-07	5.27743E-01	2.98836E+00	-8.11639E-01
769	5030-3	-7.30556E-07	5.87696E-06	-2.57489E-07	1.55744E-01	3.10869E+00	7.84716E-01
770	5031-1	7.26871E-05	1.57971E-04	9.45666E-07	1.35055E+00	-6.02979E+01	1.64288E+01
771	5031-2	2.67397E-06	8.30653E-07	4.43940E-07	9.49692E-01	-2.86409E+00	-9.35403E-01
772	5031-3	-4.21715E-06	-6.32799E-06	-1.91488E-07	-4.19347E-01	3.39274E+00	-7.68014E-01
773	5032-1	3.92425E-07	-3.00037E-06	4.51510E-08	3.20583E-02	-5.99001E+00	-6.14268E-01
774	5032-2	8.39875E-08	-6.64473E-07	9.90076E-09	3.97407E-01	-1.09066E+00	-8.53283E-02
775	5032-3	-1.40794E-08	-1.13214E-08	6.11544E-09	3.78414E+00	9.98738E-01	1.94312E-01
776	5033-1	2.33018E-06	2.45074E-06	1.07924E-07	-3.13081E-01	-5.41896E+00	6.03086E-01
777	5033-2	-5.14675E-07	-5.25793E-07	-2.45927E-08	5.25089E-01	1.02642E+00	-7.88562E-02
778	5033-3	-3.55603E-08	-8.89886E-08	6.47560E-09	-4.12011E+00	7.00500E-01	-2.09542E-01
779	5034-1	8.10544E-07	-7.74372E-06	3.38021E-07	-1.04737E+00	-5.70201E+00	-2.06375E+00
780	5034-2	1.02342E-07	-1.06300E-06	4.84911E-08	-1.70210E-01	-9.63493E-01	4.72252E-02
781	5034-3	2.94280E-08	6.40471E-08	2.62430E-08	-7.61834E-01	1.54437E-02	1.20548E+00
782	5035-1	7.36057E-06	8.18684E-06	5.07707E-07	4.48815E-01	-6.10885E+00	2.09807E+00
783	5035-2	-1.00420E-06	-1.10574E-06	-7.33882E-08	1.28227E-02	1.09279E+00	4.64599E-02
784	5035-3	7.14595E-07	1.95433E-07	6.04996E-08	-3.98554E-01	-1.13390E+00	-1.16844E+00
785	5036-1	2.29024E-06	-2.79391E-05	1.65515E-06	2.96549E-01	-1.74081E+01	-2.26163E+00
786	5036-2	3.69382E-07	-4.57771E-06	2.61014E-07	-6.31442E-02	-2.77537E+00	-3.44677E-01
787	5036-3	1.58796E-07	3.58842E-07	-7.01419E-08	-7.39353E+00	3.59516E+00	6.09607E-01
788	5037-1	2.47236E-05	2.99652E-05	1.94297E-06	-4.42710E-02	-1.84911E+01	2.31931E+00
789	5037-2	-4.08787E-06	-4.92008E-06	-3.10828E-07	1.60118E-03	3.06093E+00	-3.61175E-01
790	5037-3	3.51890E-06	-3.83381E-07	2.28265E-08	1.44648E+00	-2.47966E+00	-6.60564E-01
791	5038-1	2.80757E-06	-4.04445E-05	2.41844E-06	4.03534E-01	-2.19113E+01	-1.53109E+00
792	5038-2	2.62554E-08	-7.49356E-07	-9.12373E-09	7.15013E-02	-3.31758E-01	-3.62269E-01
793	5038-3	-1.77557E-07	4.54232E-06	1.16661E-06	1.32504E-01	-8.07848E-01	-8.66780E-01
794	5039-1	2.79082E-05	4.00808E-05	2.51708E-06	-3.14285E-01	-2.13023E+01	1.57202E+00
795	5039-2	-3.08083E-07	-6.48380E-07	-1.32727E-08	1.31213E-01	2.01658E-01	-3.89981E-01
796	5039-3	2.60542E-06	-4.48793E-06	1.17960E-06	-6.21345E-01	-1.49584E+00	8.31658E-01
797	5040-1	5.38724E-06	-8.46856E-05	3.99201E-06	1.99586E-01	-4.38122E+01	-1.02950E+00
798	5040-2	4.49485E-07	-7.40091E-06	1.56506E-07	3.55146E-02	-4.06606E+00	-1.93498E-01
799	5040-3	-9.17524E-07	1.35195E-05	1.84840E-06	3.83114E-01	3.51203E+00	-1.93112E-01
800	5041-1	5.56960E-05	8.43541E-05	4.08383E-06	-1.87402E-02	-4.29193E+01	1.03478E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 213

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
801	5041-2	-4.86510E-06	-7.14880E-06	-1.20359E-07	3.21797E-02	3.70414E+00	-1.73219E-01
802	5041-3	-3.28447E-06	-1.32316E-05	1.95078E-06	-4.11128E-01	3.11050E+00	2.29128E-01
803	5042-2	-6.62767E-08	-5.92629E-07	5.74764E-08	4.00976E+00	4.63770E-01	-3.77511E+00
804	5042-3	-6.08561E-08	-2.94950E-07	2.62089E-08	-1.31322E+01	8.17952E+00	3.83257E+00
805	5043-2	1.53024E-07	-1.68618E-07	-2.66988E-07	4.00983E+00	-4.69733E-01	-3.77532E+00
806	5043-3	5.25774E-08	2.49033E-07	5.89604E-07	1.31330E+01	8.19571E+00	-3.83217E+00
807	5044-2	1.76883E-10	4.83203E-09	-1.86674E-08	2.69599E-01	3.69800E-02	1.74202E-01
808	5044-3	-1.03511E-07	1.65419E-08	2.24784E-07	1.10616E+01	-2.23910E+00	-1.60678E+00
809	5045-2	1.04386E-09	-2.06910E-10	1.23187E-08	2.69408E-01	-3.28598E-02	1.74139E-01
810	5045-3	-1.25148E-07	-2.33067E-08	2.08273E-07	-1.10597E+01	-2.25690E+00	1.60856E+00
811	5046-2	5.44049E-08	2.61571E-08	8.24616E-09	8.71038E-01	4.39424E-01	1.98148E-01
812	5046-3	1.90894E-08	-1.77901E-07	1.41866E-07	9.58158E+00	-3.02806E-01	-2.83651E-01
813	5047-2	-6.46442E-08	2.36651E-08	-4.32965E-09	8.69772E-01	-4.84917E-01	1.98358E-01
814	5047-3	1.47051E-07	1.32145E-07	1.18734E-07	-9.60562E+00	-3.24051E-01	2.81730E-01
815	5048-2	-5.08521E-09	4.21928E-08	-2.02732E-10	-6.56810E-02	6.96690E-02	4.87964E-03
816	5048-3	-3.06854E-08	2.13598E-07	-3.22634E-08	-6.04872E+00	7.72525E-01	1.46652E-01
817	5049-2	2.83867E-08	2.81627E-08	1.26853E-09	-1.05069E-01	-7.55911E-02	-1.18538E-03
818	5049-3	-1.79369E-07	-2.21437E-07	-2.63535E-08	5.67985E+00	2.11097E-01	-1.59895E-01
819	5050-2	-1.19835E-08	4.15861E-08	2.46362E-09	1.02565E-01	3.01341E-02	6.85960E-02
820	5050-3	1.87909E-07	-4.68375E-07	-9.14848E-08	-3.07953E-02	-5.61591E-01	2.63423E-01
821	5051-2	1.18842E-07	8.07580E-08	7.32016E-09	-9.95459E-03	-7.15221E-02	3.66020E-02
822	5051-3	2.05688E-07	-1.25089E-07	-5.42435E-08	-6.30839E-01	-4.68284E-01	-2.54995E-01
823	5052-2	-7.43940E-08	3.88523E-07	-6.15188E-10	1.09757E+00	3.23066E-01	4.78235E-01
824	5052-3	1.06041E-07	1.17785E-06	-3.28629E-07	2.56916E+01	-1.59356E+01	3.56031E-01
825	5053-2	1.09694E-07	-8.19927E-08	-2.46489E-08	-3.02262E-01	-2.27461E-01	-1.70852E-01
826	5053-3	1.26157E-06	5.54207E-07	4.18233E-08	-4.59361E+00	-1.22208E+00	-6.19381E-01
827	5054-2	-3.14422E-07	1.98902E-06	-1.13312E-07	9.17527E-02	1.90797E+00	9.42933E-02
828	5054-3	-1.12847E-07	6.54259E-06	-5.26215E-07	-2.16652E-01	2.53837E+00	-1.74025E-01
829	5055-2	2.01972E-06	1.84561E-06	1.38269E-07	2.73503E-01	-1.92169E+00	-2.49862E-01
830	5055-3	-2.54225E-06	-8.17891E-06	-7.81447E-07	-6.19136E-01	2.17273E+00	2.84855E-02
831	5056-2	-1.18743E-07	1.13708E-07	1.47925E-08	-1.66816E-03	5.16066E-01	2.71381E-01
832	5056-3	-9.25794E-07	8.72226E-06	2.15410E-06	-6.30729E+00	6.82740E+00	-1.05904E+00
833	5057-2	9.02162E-07	1.67858E-07	3.24926E-08	4.41202E-04	-5.68831E-01	2.63153E-01
834	5057-3	-8.50454E-06	-8.96509E-06	2.21581E-06	6.33009E+00	7.27415E+00	1.04737E+00
835	5058-1	6.85282E-07	-5.77589E-07	1.63052E-07	-2.42948E+00	6.76632E+00	-3.22476E+00
836	5058-2	9.89697E-08	3.77282E-07	-3.63625E-07	-1.73332E+01	5.12418E+00	1.11703E+01
837	5058-3	3.15102E-07	3.21963E-08	-4.60273E-07	2.41033E+01	-1.92119E+01	-2.36375E+00
838	5059-1	8.06324E-07	3.84892E-07	3.01206E-08	2.42676E+00	6.78387E+00	3.22475E+00
839	5059-2	-2.60631E-07	3.06211E-07	2.21786E-07	-1.73313E+01	-5.13805E+00	1.11705E+01
840	5059-3	1.38554E-07	-2.55958E-07	2.85127E-09	-2.40999E+01	-1.92284E+01	2.36468E+00
841	5060-1	6.81580E-07	-1.54025E-07	-6.80555E-07	5.02302E+00	-9.49405E+00	-6.56800E-01
842	5060-2	1.37821E-07	-9.91191E-08	-4.74246E-07	7.86610E+00	-5.50020E+00	-5.10357E-01
843	5060-3	2.14340E-07	3.10068E-08	1.22106E-07	-4.58605E+00	6.06692E-01	6.48738E-01
844	5061-1	7.53379E-07	1.23421E-07	-6.93251E-07	-5.02535E+00	-9.47563E+00	6.58576E-01
845	5061-2	-2.11432E-07	-1.12049E-07	4.79000E-07	7.86777E+00	5.48486E+00	-5.10613E-01
846	5061-3	1.24904E-07	-1.02871E-07	9.86529E-08	4.58817E+00	5.91366E-01	-6.47093E-01
847	5062-1	3.49563E-08	-6.25612E-08	-1.09487E-06	5.74282E+00	-2.52846E+00	-1.90299E+01
848	5062-2	-8.38600E-08	-4.70197E-09	7.63815E-07	-5.36123E+00	-7.67294E-01	-5.47088E+00
849	5062-3	9.66754E-08	-3.81717E-08	-1.38638E-06	9.49466E+00	-7.61227E-01	-6.81944E+00
850	5063-1	7.19587E-08	5.16500E-08	-1.08895E-06	-5.75045E+00	-2.61858E+00	1.90582E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 214

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
851	5063-2	7.79120E-08	-2.89674E-09	-7.63243E-07	-5.35725E+00	8.00291E-01	-5.47956E+00
852	5063-3	1.10843E-07	2.91098E-08	-1.38736E-06	-9.49590E+00	-7.83749E-01	6.82847E+00
853	5064-1	1.15512E-07	-3.06803E-07	7.94790E-07	-5.94419E+00	1.57628E+01	6.90486E+00
854	5064-2	5.54092E-08	-1.07216E-07	3.06001E-07	-1.81058E+00	-5.19685E+00	-2.05887E+00
855	5064-3	-4.19986E-08	-1.54437E-08	3.88274E-07	-6.67976E+00	3.57932E+01	1.13263E+01
856	5065-1	3.11886E-07	2.51806E-07	8.07335E-07	5.86259E+00	1.50117E+01	-6.74872E+00
857	5065-2	-1.35238E-07	-8.84220E-08	-3.32986E-07	-1.79594E+00	5.31974E+00	-2.11079E+00
858	5065-3	-4.66474E-08	1.08485E-08	3.03638E-07	6.62352E+00	3.53096E+01	-1.12938E+01
859	5066-1	1.38544E-07	-4.62082E-07	2.60807E-08	-2.37178E-01	-1.61589E+00	-8.64339E-01
860	5066-2	5.02100E-08	-1.64059E-07	5.77529E-09	-7.99080E-01	-3.62154E-01	-3.00417E-01
861	5066-3	-2.44976E-08	9.61204E-08	5.44605E-09	2.25078E+00	-5.14165E-01	5.46078E-02
862	5067-1	4.16359E-07	2.65900E-07	4.01214E-08	-8.09516E-01	-1.87612E+00	6.91932E-01
863	5067-2	-1.47208E-07	-1.02370E-07	-9.85528E-09	-4.31295E-01	3.99605E-01	-2.01472E-01
864	5067-3	-7.45067E-08	-8.56703E-08	4.83851E-09	-2.13579E+00	-6.60218E-01	8.45286E-02
865	5068-1	1.39304E-06	-6.01958E-06	-3.56506E-07	7.00954E-01	-5.81247E+00	-1.15088E-01
866	5068-2	2.85667E-07	-1.27290E-06	-6.32624E-08	-1.24768E-01	-9.18458E-01	-8.51117E-03
867	5068-3	-7.67270E-08	8.18836E-07	-4.46860E-08	6.04590E-01	4.49891E-01	1.74387E-01
868	5069-1	6.68865E-06	4.20697E-06	-1.75804E-07	-5.63158E-01	-3.98831E+00	-3.07007E-03
869	5069-2	-1.29841E-06	-8.76337E-07	2.01449E-08	3.81555E-02	6.79036E-01	-1.55030E-03
870	5069-3	-1.32414E-07	-4.80073E-07	-1.05267E-07	-9.93211E-01	-2.33774E-01	-1.84644E-01
871	5070-2	-5.83721E-08	2.19008E-07	2.12366E-08	-1.06208E-01	2.18885E-01	5.49856E-03
872	5070-3	-4.26014E-07	2.79347E-06	1.27458E-08	-9.29420E+00	8.21702E+00	2.18655E-01
873	5071-2	1.31051E-07	3.15483E-08	-1.78738E-08	3.95347E-01	-5.92841E-01	-7.84821E-02
874	5071-3	-3.51637E-06	-1.57622E-06	2.46777E-07	1.62136E+00	2.31767E+00	-1.74656E-01
875	5072-2	-1.48259E-07	7.36375E-09	2.15550E-07	-2.39730E-02	2.02300E-01	2.17606E-02
876	5072-3	-2.31335E-07	2.93442E-06	-1.09667E-07	-7.47655E-01	3.09836E+00	6.26677E-02
877	5073-2	1.64982E-07	1.11418E-07	-1.97124E-07	9.42080E-02	-4.13998E-01	4.57933E-02
878	5073-3	-4.27661E-06	-3.91352E-06	-1.42219E-07	-3.49885E-01	3.44158E+00	2.86303E-02
879	5074-2	-1.32848E-07	5.41393E-08	9.15833E-08	-4.21570E-02	1.86913E-01	-1.32891E+00
880	5075-2	4.38187E-07	8.38464E-08	-5.43510E-08	-3.26261E-02	-1.78564E-01	-1.35769E+00
881	5076-1	1.24947E-06	-3.17168E-06	-7.03097E-07	-3.26195E-01	-3.87011E+00	8.47924E-02
882	5076-2	6.75034E-07	-2.74821E-07	-1.08566E-07	5.93906E-01	-3.83414E-01	1.36551E-01
883	5076-3	-4.63832E-07	1.97642E-06	2.77674E-07	-4.74538E-01	2.62407E+00	8.60546E-02
884	5077-1	5.30467E-06	2.39699E-06	-4.70512E-07	1.92610E-01	-3.11680E+00	-5.29448E-02
885	5077-2	-1.33343E-06	-2.18272E-07	7.52068E-08	7.06698E-01	3.63838E-01	2.36476E-01
886	5077-3	-4.74656E-06	-2.60520E-06	3.52543E-07	-1.06967E-01	3.27856E+00	-1.13823E-01
887	5078-1	3.03193E-06	-1.78082E-06	-9.58738E-07	-1.85386E-01	-2.68755E+00	6.58630E-01
888	5078-2	8.12068E-08	-1.96362E-07	-9.98173E-08	1.07935E-01	-4.98253E-01	-6.57200E-02
889	5078-3	-9.07459E-07	2.44726E-06	5.99014E-07	2.26696E-01	3.62771E+00	7.46727E-01
890	5079-1	6.41388E-06	1.31943E-06	-7.44505E-07	1.31593E-01	-2.18918E+00	-6.46943E-01
891	5079-2	-4.03082E-07	-1.99328E-07	1.23087E-07	1.07288E-01	5.28093E-01	-1.01492E-01
892	5079-3	-4.78102E-06	-2.71510E-06	6.04240E-07	-2.79251E-01	3.85944E+00	-6.83321E-01
893	5080-1	5.60071E-08	-2.50810E-07	1.85164E-08	6.86353E+00	-2.41989E+01	-1.66326E-01
894	5080-2	3.47636E-08	-3.80842E-08	-6.30207E-08	8.59755E+00	-6.62029E+00	1.73608E-01
895	5080-3	-1.53717E-08	-6.00085E-08	8.13379E-08	-4.92298E+00	-5.81880E+00	-2.53837E-01
896	5081-1	2.26841E-07	1.69305E-07	5.89807E-10	-3.10674E+00	-8.01669E+00	6.56594E-02
897	5081-2	-1.16038E-07	-5.08680E-08	3.88645E-08	5.63115E+00	2.56725E+00	9.56029E-02
898	5081-3	-2.92977E-08	1.55123E-08	3.88700E-08	4.04604E+00	-1.10893E+00	8.98805E-02
899	5082-1	1.44544E-07	-4.33314E-07	-5.40784E-08	-3.52196E+00	1.14037E+01	-1.07122E-01
900	5082-2	7.18358E-08	-1.79906E-07	-2.16112E-08	-1.67488E+00	2.61431E+00	2.42704E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 215

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
901	5082-3	-4.42129E-08	2.13116E-07	3.63838E-09	-1.54460E-01	3.23542E+00	-1.54761E-01
902	5083-1	5.30101E-07	3.32414E-07	-2.41523E-08	-1.79442E-01	-3.44101E-01	1.72789E-02
903	5083-2	-3.69048E-07	-2.05255E-07	2.61798E-08	-8.94743E-02	3.91521E-01	3.37716E-01
904	5083-3	-3.39749E-07	-2.43195E-07	5.10076E-09	-1.06228E-01	2.29222E-01	1.82258E-01
905	5084-1	2.21326E-07	-2.82166E-07	-2.06343E-08	-2.30639E-01	1.62537E-01	2.81097E-02
906	5084-2	1.81216E-07	-1.40994E-07	-8.07728E-08	-2.99515E-01	1.42095E-01	3.99097E-01
907	5084-3	1.61347E-08	6.61281E-08	-5.15641E-10	-3.48918E-01	4.39105E-01	-6.44571E-02
908	5085-1	6.09738E-07	2.18817E-07	-5.06467E-08	-1.78785E-02	-3.42738E-01	-5.75848E-02
909	5085-2	-6.18084E-08	-2.44912E-08	3.54311E-09	-2.46655E-01	8.20437E-03	4.50905E-01
910	5085-3	1.48520E-08	-9.64277E-08	-1.35733E-08	2.77244E-02	4.44702E-02	7.98667E-02
911	5086-1	9.06818E-08	-2.57899E-07	-6.98835E-08	-1.24480E-01	3.31110E-03	5.67465E-02
912	5086-2	6.94429E-08	3.45502E-08	-9.06261E-09	1.40922E-01	-6.02978E-02	-2.17236E-01
913	5086-3	4.36644E-08	1.38856E-07	2.09818E-08	-2.82660E-01	5.28834E-01	1.29238E-01
914	5087-1	2.75768E-07	1.28721E-07	-5.27690E-08	-3.95859E-02	-3.30004E-02	-1.89090E-02
915	5087-2	7.42058E-08	4.75036E-08	-1.35974E-08	1.46947E-01	1.49068E-01	-2.33560E-01
916	5087-3	-6.44963E-07	-3.66486E-07	8.08137E-08	8.60535E-02	6.53056E-01	-8.77659E-02
917	5088-1	8.93176E-08	1.40763E-07	1.11438E-07	-6.23664E-02	2.70595E-01	2.31332E-01
918	5088-2	1.20124E-08	1.86454E-07	-2.39708E-08	6.48175E-01	-7.05050E-01	-1.29697E+00
919	5088-3	-4.75456E-07	4.93884E-07	1.48484E-07	-3.02555E-01	1.28352E+00	6.72868E-01
920	5089-1	1.14673E-07	-1.27054E-07	9.59760E-08	7.46982E-02	2.75920E-01	-2.39429E-01
921	5089-2	1.48544E-07	1.68761E-07	3.77993E-08	6.29932E-01	6.90456E-01	-1.28616E+00
922	5089-3	-1.06417E-06	-4.85452E-07	1.74441E-07	2.99071E-01	1.30647E+00	-6.98386E-01
923	5090-1	7.05448E-06	-2.77732E-08	-8.59200E-08	3.77807E+00	1.15951E+01	-1.62774E+01
924	5090-2	8.20986E-07	9.42595E-08	-2.12922E-07	-2.57863E+01	2.05761E+00	5.57174E+00
925	5090-3	1.10036E-06	-1.49043E-07	2.47010E-07	3.55234E+01	3.90578E+00	-1.26381E+01
926	5091-1	8.05462E-06	4.71321E-07	1.49175E-08	-3.71728E+00	1.10234E+01	1.60333E+01
927	5091-2	-5.61609E-07	5.15464E-08	1.29990E-07	-2.58300E+01	-2.02141E+00	5.65911E+00
928	5091-3	1.68313E-06	2.54845E-07	2.93441E-07	-3.57581E+01	4.09331E+00	1.29309E+01
929	5092-1	7.00449E-08	-7.60404E-09	2.08751E-09	-1.41269E-01	7.51843E-03	1.72683E-01
930	5092-2	-4.53224E-09	-3.97941E-08	-1.33601E-08	2.24570E-01	-3.62046E-01	-4.07666E-01
931	5092-3	4.26804E-08	5.75963E-08	2.29484E-08	-3.07230E-01	4.74466E-01	4.58935E-01
932	5093-1	1.42687E-07	7.55989E-09	8.67281E-10	8.30376E-02	-7.97733E-02	-1.66657E-01
933	5093-2	-8.24494E-08	-7.57313E-08	2.23634E-08	1.86007E-01	3.97029E-01	-4.08246E-01
934	5093-3	-5.79057E-08	-1.05776E-07	3.93030E-08	2.24078E-01	4.67142E-01	-4.58531E-01
935	5094-1	1.92271E-07	2.34811E-08	-1.62605E-08	6.97333E-01	-2.38964E+00	-1.62975E+00
936	5094-2	3.41627E-07	-3.43974E-08	-4.34338E-08	1.11512E+00	-2.00208E+00	-2.57940E+00
937	5094-3	-3.50458E-07	5.24049E-08	3.75549E-08	-9.41165E-01	1.49715E+00	2.13817E+00
938	5095-1	1.45688E-07	-2.13998E-08	-3.23238E-08	-6.95040E-01	-2.40221E+00	1.62014E+00
939	5095-2	-4.25356E-07	-5.36647E-08	4.78143E-08	1.10979E+00	2.02621E+00	-2.57916E+00
940	5095-3	-4.62849E-07	-7.22988E-08	4.12685E-08	9.35679E-01	1.52465E+00	-2.14681E+00
941	5096-1	4.78669E-07	-1.24051E-08	1.89529E-06	2.04018E+00	-1.51970E+01	-2.24216E+00
942	5096-2	1.67781E-08	3.59307E-09	2.63645E-07	8.28287E+00	-2.99282E+00	-1.63848E-01
943	5096-3	3.20825E-07	-9.92856E-09	-9.70373E-07	-4.57658E+00	-6.57770E+00	-1.03862E+00
944	5097-1	4.77129E-07	2.37338E-09	1.89160E-06	-2.01633E+00	-1.52285E+01	2.25984E+00
945	5097-2	-1.39987E-08	4.55691E-09	-2.60873E-07	8.29076E+00	3.01148E+00	-1.69546E-01
946	5097-3	3.21627E-07	4.80151E-09	-9.70630E-07	4.59011E+00	-6.57835E+00	1.04404E+00
947	5098-1	-1.03046E-09	4.61569E-11	-2.10526E-07	-1.11070E+01	1.88785E+01	1.82357E+01
948	5098-2	1.40996E-07	8.28823E-09	3.99644E-06	-9.28938E+00	6.25053E+00	2.55609E+00
949	5098-3	-1.84682E-07	1.38834E-09	-5.15898E-06	-3.53513E+00	5.15763E+00	7.33824E+00
950	5099-1	-5.54604E-09	-4.50268E-09	-2.09408E-07	1.11680E+01	1.88820E+01	-1.81945E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 216

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
951	5099-2	-1.38330E-07	6.71116E-09	-3.98645E-06	-9.30029E+00	-6.49171E+00	2.53728E+00
952	5099-3	-1.87254E-07	-2.32558E-09	-5.15116E-06	3.56069E+00	5.06564E+00	-7.33391E+00
953	5100-1	2.47844E-08	-7.71558E-09	4.55326E-07	1.99955E+00	-9.52135E+00	-1.47637E+00
954	5100-2	1.10938E-08	5.93573E-08	-3.68527E-09	1.92476E+00	-4.90132E-01	5.43634E-01
955	5100-3	5.94027E-09	-2.79433E-08	1.95943E-07	3.44650E-01	-3.88202E+00	-8.15463E-01
956	5101-1	3.39026E-08	9.57243E-10	4.91588E-07	-3.36388E-01	-3.04192E+00	1.62227E+00
957	5101-2	2.24103E-08	5.47061E-08	-9.84437E-09	1.89915E+00	-1.50743E-01	5.32073E-01
958	5101-3	2.19978E-08	2.21653E-08	2.07967E-07	4.77133E-01	-1.31223E+00	8.83295E-01
959	5102-1	4.53482E-08	-2.87132E-08	9.59471E-08	-6.73054E-01	7.66006E+00	-2.77513E-02
960	5102-2	3.00949E-08	-8.29987E-09	7.50214E-09	-1.20258E+00	-8.34881E-02	2.49273E-01
961	5102-3	1.65829E-09	-4.80884E-09	4.17601E-08	2.70322E-01	3.25490E+00	-1.76845E-01
962	5103-1	5.84628E-08	2.44106E-08	4.83556E-08	4.34347E-01	5.92075E-01	-2.33023E-01
963	5103-2	-6.48313E-08	-3.02494E-08	2.34105E-08	-1.42900E-01	1.09406E+00	3.61856E-01
964	5103-3	-1.40884E-08	-1.82818E-09	3.26407E-08	9.13377E-02	7.65792E-01	1.39652E-01
965	5104-1	4.04943E-06	-3.30461E-08	-8.94825E-08	-8.39264E+00	-1.47561E+01	5.39298E+00
966	5104-2	2.81821E-06	2.30415E-08	-6.30656E-08	1.79076E+01	4.74761E+00	1.49500E+00
967	5104-3	-5.75493E-07	-9.35743E-08	-1.62969E-07	-2.95295E+01	-1.30491E+01	6.54895E+00
968	5105-1	5.28351E-06	3.68789E-07	3.35710E-07	8.15359E+00	-1.50879E+01	-4.87833E+00
969	5105-2	-3.10619E-06	-2.18435E-07	1.56830E-08	1.79436E+01	-4.40862E+00	1.39452E+00
970	5105-3	8.37656E-08	2.71785E-08	2.86481E-07	2.92746E+01	-1.28390E+01	-5.90002E+00
971	5106-1	2.54726E-08	-3.01370E-09	-8.23271E-09	1.11791E-01	-2.25055E+00	-2.69200E-01
972	5106-2	4.43747E-09	-2.01062E-08	-8.46980E-10	2.23784E-01	-4.55442E-01	-4.95728E-01
973	5106-3	2.83224E-09	1.72543E-08	1.53481E-09	-1.34731E-01	-1.04360E-01	2.65753E-01
974	5107-1	3.60371E-08	4.76788E-09	-1.65857E-08	-1.21453E-01	-2.27793E+00	2.77201E-01
975	5107-2	-2.61515E-08	-2.31829E-08	2.77518E-09	2.08407E-01	4.52418E-01	-4.93738E-01
976	5107-3	-1.22748E-08	-2.23214E-08	2.11984E-09	1.14970E-01	-1.17233E-01	-2.62360E-01
977	5108-1	2.68884E-07	-1.97518E-08	-4.27316E-08	-8.19213E-01	6.31148E+00	2.13627E+00
978	5108-2	2.11056E-07	9.67673E-10	-3.65593E-08	-5.98883E+00	9.07596E+00	1.48078E+01
979	5108-3	-1.35178E-07	3.08485E-09	1.95370E-08	3.25735E+00	-5.70751E+00	-8.06531E+00
980	5109-1	3.20877E-07	2.72740E-08	-2.64528E-08	8.19070E-01	6.28948E+00	-2.12724E+00
981	5109-2	-2.50507E-07	-1.82966E-08	5.66540E-08	-5.99078E+00	-9.06174E+00	1.48090E+01
982	5109-3	-1.66091E-07	-1.51991E-08	3.04544E-08	-3.25924E+00	-5.69891E+00	8.06518E+00
983	5110-1	-6.21735E-08	-6.57052E-08	-7.19228E-08	-1.02947E+00	5.87408E+00	-1.18918E+00
984	5110-2	7.77652E-07	-2.43301E-08	-2.13552E-07	6.67909E+00	-6.27429E+00	-1.27941E+01
985	5110-3	-1.57577E-06	-2.87786E-08	9.18808E-08	-3.80251E+00	1.42591E+01	5.83761E+00
986	5111-1	5.79234E-08	-4.23930E-08	3.68000E-07	1.08679E+00	5.80210E+00	1.16157E+00
987	5111-2	-9.95995E-07	-3.86515E-08	1.24515E-07	6.88939E+00	6.58430E+00	-1.35056E+01
988	5111-3	-1.56599E-06	-1.18172E-07	4.99695E-07	3.98792E+00	1.42326E+01	-6.26529E+00
989	5112-1	-1.53583E-08	2.53741E-08	2.19664E-09	3.53824E-02	1.77620E+00	-1.33977E-01
990	5112-2	4.80607E-09	-2.00632E-08	-4.26460E-09	-2.16790E-02	8.97387E-02	6.12260E-02
991	5112-3	-1.81558E-08	3.57684E-08	4.45482E-09	4.54834E-02	1.81101E+00	-1.62412E-01
992	5113-1	-2.08020E-08	-1.79914E-08	2.43843E-09	-4.74282E-02	1.75329E+00	1.64284E-01
993	5113-2	-1.07759E-08	-1.30653E-08	-4.07956E-10	-3.36940E-02	-1.06836E-01	6.89339E-02
994	5113-3	-2.89802E-08	-2.50940E-08	2.39016E-09	-6.21565E-02	1.78241E+00	1.94592E-01
995	5114-1	5.47792E-08	8.17153E-09	-9.82681E-09	1.58539E-01	-1.42243E+00	-3.73823E-01
996	5114-2	2.58739E-09	-6.59339E-09	2.25285E-09	5.66137E-01	-8.33429E-01	-1.37989E+00
997	5114-3	-2.26028E-09	3.02264E-09	-8.80904E-10	-1.53677E-01	2.86560E-01	3.70874E-01
998	5115-1	6.14186E-08	-9.85007E-10	-1.54876E-08	-1.62078E-01	-1.43587E+00	3.78902E-01
999	5115-2	-8.21657E-09	-4.86014E-09	-2.59237E-09	5.61345E-01	8.24548E-01	-1.37616E+00
1000	5115-3	-4.50675E-09	-2.54699E-09	-9.33337E-10	1.51105E-01	2.82085E-01	-3.69025E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 217

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1001	5116-2	2.63365E-08	1.48221E-08	-5.50207E-09	2.34796E+00	-2.00707E+00	-5.74818E+00
1002	5116-3	-1.36374E-08	-1.09787E-09	5.81966E-09	-7.67012E-01	7.60665E-01	1.87547E+00
1003	5117-2	-1.61451E-08	1.05665E-08	1.93882E-08	2.34785E+00	2.01008E+00	-5.74666E+00
1004	5117-3	-1.64758E-08	-1.07803E-09	7.57066E-09	7.66829E-01	7.61252E-01	-1.87476E+00
1005	5118-1	2.75301E-07	-1.87776E-07	4.64893E-07	-3.05571E-06	8.12554E-01	1.28617E-04
1006	5118-2	-1.46190E-07	5.07856E-08	2.48635E-07	1.57984E+01	-6.69876E-04	-6.30042E+00
1007	5118-3	8.78269E-07	1.98920E-07	-7.91123E-07	2.85132E-04	6.43378E+00	9.02970E-06
1008	5119-1	2.18070E-07	-8.61979E-10	-4.87993E-07	1.62440E-04	1.57029E+01	2.66182E-04
1009	5119-2	-2.33126E-09	-2.67085E-08	5.77758E-09	-1.56009E+01	3.97878E-05	-1.00418E-01
1010	5119-3	2.01730E-07	-2.54328E-10	-2.94500E-07	1.26448E-04	8.46287E+00	8.17344E-05
1011	5120-1	9.80544E-08	-3.62439E-09	-4.02511E-07	-1.04236E-01	-8.33135E-02	4.09034E-01
1012	5120-2	1.24488E-08	1.17660E-09	2.54858E-07	4.44966E+00	-2.28412E-01	-8.21645E-01
1013	5120-3	4.42918E-08	-2.22059E-09	-4.31397E-07	-7.29535E-01	4.91397E-01	2.59598E-01
1014	5121-1	9.73337E-08	-4.14332E-10	-4.01945E-07	1.31029E-01	-1.02208E-01	-4.01673E-01
1015	5121-2	-1.17128E-08	1.03762E-09	-2.55615E-07	4.45021E+00	2.12751E-01	-8.21543E-01
1016	5121-3	4.38021E-08	6.65068E-12	-4.31167E-07	7.41787E-01	4.80746E-01	-2.56197E-01
1017	5122-1	8.10004E-09	-5.41903E-10	1.80252E-07	1.40152E-02	-4.00861E+00	3.56620E-03
1018	5122-3	-6.82334E-08	-2.03023E-10	-2.11973E-06	7.85646E-03	-1.27487E+00	1.79572E-03
1019	5123-1	6.51838E-09	-5.02843E-09	2.00098E-07	2.20951E-01	1.63465E+00	4.30611E-02
1020	5123-3	3.17396E-09	-2.03647E-09	8.57233E-08	8.32798E-02	6.53027E-01	1.74293E-02
1021	5124-1	2.11532E-08	-3.09474E-09	1.02626E-07	2.14704E-01	1.25137E+01	1.79773E-02
1022	5124-2	-3.25782E-08	6.47003E-09	1.07247E-08	-1.50573E+00	1.02580E-02	3.06299E-01
1023	5124-3	-1.13020E-08	-4.56903E-09	2.32579E-08	5.74901E-02	1.28512E+01	2.05403E-02
1024	5125-1	-3.20901E-09	-1.34255E-09	2.10038E-08	4.99190E-02	-2.35234E+01	9.56489E-03
1025	5125-3	-1.35228E-09	-1.67305E-09	2.23517E-08	5.45116E-02	-2.25864E+01	9.07722E-03
1026	5126-1	-1.73032E-09	6.06162E-10	2.40887E-09	3.56418E-03	5.39355E+00	2.16578E-03
1027	5126-2	5.34328E-10	1.77368E-09	-7.09075E-10	7.11071E-03	-6.24235E-03	-3.65718E-02
1028	5126-3	-9.21372E-10	4.46244E-10	3.01985E-09	5.14264E-03	4.64548E+00	1.13246E-03
1029	5127-1	4.84904E-08	1.65417E-09	1.83100E-09	5.51771E-02	-3.15750E-01	-1.36843E-01
1030	5127-2	-2.34332E-09	-1.08830E-09	-7.67921E-10	1.76915E-01	-1.35994E-01	-4.31651E-01
1031	5127-3	-1.11045E-10	2.34833E-10	-5.12417E-11	-1.32588E-02	3.80251E-02	3.20615E-02
1032	5128-1	4.86047E-08	1.63805E-09	3.21144E-09	-5.50898E-02	-3.17277E-01	1.36823E-01
1033	5128-2	1.30109E-09	3.78273E-11	-3.73463E-11	1.76367E-01	1.33006E-01	-4.30964E-01
1034	5128-3	-2.66669E-10	-1.29085E-10	-9.46969E-11	1.32047E-02	3.76356E-02	-3.18729E-02
1035	5129-3	-3.16634E-09	-7.71812E-10	5.81608E-09	6.69488E-05	1.65970E-01	2.24769E-04
1036	2934-2	1.00883E-08	2.12951E-08	-3.65157E-08	9.06917E-01	5.93682E+00	2.19278E+00
1037	2934-3	8.21746E-09	-9.13444E-08	3.51252E-07	1.53238E-01	-2.31376E+01	-7.14979E+00
1038	2979-2	1.87982E-09	1.70726E-08	3.73240E-08	9.10205E-01	-5.89069E+00	2.18064E+00
1039	2979-3	7.55801E-08	6.63799E-08	3.28824E-07	-1.92390E-01	-2.31976E+01	7.11419E+00
1040	5130-1	2.94636E-05	-7.40711E-06	-5.37278E-06	8.80865E-01	-1.44745E+01	2.95328E-01
1041	5130-2	-1.35191E-05	4.21611E-06	-1.35696E-05	3.52995E+00	-2.48917E+00	-1.44538E+00
1042	5130-3	-5.48899E-06	6.56173E-06	-3.34971E-06	-2.47276E+00	1.41860E+01	-1.27643E+00
1043	5131-1	1.07967E-04	1.30781E-05	5.83795E-07	-1.01576E+00	-2.05111E+01	1.00140E+00
1044	5131-2	4.42649E-05	6.74455E-06	1.97014E-05	3.52750E+00	1.64789E+00	-7.22917E-01
1045	5131-3	-1.61688E-05	-6.40317E-06	-2.39506E-06	2.33185E+00	1.42508E+01	1.40401E+00
1046	5132-1	5.83819E-05	-1.16696E-06	1.15940E-06	1.15623E-01	-8.49173E+01	2.36497E-03
1047	5132-2	-1.00051E-05	-6.53164E-05	4.54405E-08	-9.21545E-02	-1.62292E-01	-2.29715E+00
1048	5132-3	-9.45269E-07	-1.00709E-08	7.01009E-08	4.92724E-03	1.35892E+00	1.12904E-03
1049	5133-2	-4.27426E-06	-4.43847E-05	1.20175E-07	-1.35501E-01	-5.23713E+00	-2.33097E+00
1050	5133-3	-2.77807E-07	-6.85197E-06	2.06796E-07	2.01718E-01	-1.23723E+00	1.18819E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 218

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1051	5134-2	-1.16169E-05	-4.47844E-05	-5.36199E-08	-1.30474E-01	5.05955E+00	-2.33549E+00
1052	5134-3	1.95167E-06	6.85878E-06	1.98645E-07	-1.83289E-01	-1.16743E+00	-1.18103E+00
1053	5135-2	-2.89428E-06	-4.62365E-06	1.45693E-07	-8.89137E-02	-1.46818E-01	-8.28429E-01
1054	5135-3	-6.55185E-07	-3.61519E-06	2.87231E-07	1.70526E-01	-7.39939E-01	7.44714E-02
1055	5136-2	-3.44230E-06	-4.60292E-06	-1.94833E-07	-8.24683E-02	1.51759E-01	-8.31534E-01
1056	5136-3	1.78307E-06	3.58703E-06	2.96428E-07	-1.61701E-01	-7.32541E-01	-7.48707E-02
1057	5137-2	-1.16987E-06	8.34584E-06	1.65032E-06	1.12857E-01	3.03311E-01	-2.66442E-01
1058	5137-3	-5.77696E-07	-5.01911E-06	4.60593E-06	1.17399E+00	-2.21828E+00	-6.58743E-01
1059	5138-2	-1.00067E-06	8.51545E-06	-1.69051E-06	1.09317E-01	-2.52603E-01	-2.70137E-01
1060	5138-3	3.78837E-06	5.29766E-06	4.53523E-06	-1.20785E+00	-2.33613E+00	6.44366E-01
1061	5139-2	2.20621E-07	-4.98838E-06	4.73942E-07	-5.49455E-02	-1.08330E+00	-2.92667E-01
1062	5140-2	-1.30561E-06	-5.16539E-06	-5.29512E-07	-6.40336E-02	1.11849E+00	-2.83513E-01
1063	5141-2	5.18308E-07	-1.75862E-06	2.61578E-06	-1.96559E-01	-8.41142E-01	3.37041E-01
1064	5142-2	-9.16615E-07	-1.78062E-06	-2.63193E-06	-1.96602E-01	9.25528E-01	3.28750E-01
1065	5143-2	4.66690E-07	-9.77450E-07	5.20331E-06	-4.40050E-01	-5.15514E+00	1.16125E+00
1066	5144-2	-4.70896E-07	-9.83663E-07	-5.22483E-06	-4.37244E-01	5.16195E+00	1.16453E+00
1067	5145-2	1.85931E-07	-1.81964E-06	-1.29859E-06	-2.38615E-01	-5.95215E-01	7.80276E-02
1068	5146-2	-5.96479E-07	-1.87911E-06	1.30922E-06	-2.57347E-01	5.94509E-01	9.10495E-02
1069	5147-2	-3.24887E-08	1.67049E-07	-9.31838E-09	1.55302E-01	-3.69413E-02	-3.77084E-01
1070	5147-3	-1.95818E-08	-5.80265E-09	-1.02961E-07	-4.67944E-02	1.33055E-01	1.07006E-01
1071	5148-2	3.52546E-09	7.54333E-08	6.64980E-09	1.55624E-01	3.98426E-02	-3.77221E-01
1072	5148-3	3.00917E-08	-2.50096E-08	3.54629E-09	4.72823E-02	1.33944E-01	-1.07664E-01
1073	5149-2	-2.31634E-08	1.51561E-07	9.61918E-08	2.02664E-01	-4.76692E-02	-4.95309E-01
1074	5149-3	-4.38993E-08	-1.72912E-08	3.12045E-07	2.30800E-03	1.91241E-01	-5.93483E-02
1075	5150-2	9.69747E-09	2.69567E-08	6.88085E-09	2.03011E-01	5.07772E-02	-4.95530E-01
1076	5150-3	-4.36849E-08	-3.90773E-09	4.77371E-08	-2.03242E-03	1.95739E-01	5.84415E-02
1077	5151-2	-1.97201E-07	4.51824E-08	-1.02956E-07	1.59636E-01	-2.03912E-01	-3.57832E-01
1078	5151-3	3.63542E-07	2.76721E-08	1.54223E-08	1.42395E-04	6.18186E-02	-9.78958E-02
1079	5152-2	3.34847E-07	-7.85182E-08	5.74859E-08	1.61499E-01	2.06151E-01	-3.58873E-01
1080	5152-3	5.84691E-07	-1.45847E-07	-3.28200E-11	1.63642E-03	5.73334E-02	9.58788E-02
1081	5153-2	1.54690E-07	-3.80462E-08	-7.07634E-08	8.88076E-02	-1.65309E-01	-1.42841E-01
1082	5153-3	2.26932E-07	-1.76820E-07	3.58826E-07	-6.53980E-04	1.44906E-01	-4.99871E-03
1083	5154-2	-1.80535E-07	-2.79157E-08	9.32150E-08	8.83989E-02	1.76627E-01	-1.42593E-01
1084	5154-3	1.95783E-08	-7.28867E-09	2.24722E-07	-1.88194E-03	1.50461E-01	5.63584E-03
1085	5155-2	3.40158E-08	-3.54003E-08	3.20831E-09	-8.62014E-04	-1.17674E-02	-2.89857E-04
1086	5155-3	1.17372E-08	-2.15036E-08	-1.01803E-08	8.72455E-03	-3.17433E-02	-2.21738E-02
1087	5156-2	-2.73953E-08	-5.32467E-08	5.15421E-09	-1.10440E-03	1.17718E-02	-4.77771E-04
1088	5156-3	-1.98697E-08	2.53309E-08	-3.92578E-09	-8.87795E-03	-3.10706E-02	2.23337E-02
1089	5157-2	7.06744E-08	-1.50723E-08	-2.03811E-08	1.10226E-03	-6.89592E-03	-3.33738E-03
1090	5157-3	-5.66869E-08	5.67675E-10	-7.78881E-08	-1.28955E-02	-4.06568E-02	4.60428E-02
1091	5158-2	-9.17770E-08	-4.65730E-08	-5.23138E-09	7.39024E-04	7.84530E-03	-3.54692E-03
1092	5158-3	-8.54296E-08	4.70899E-10	-3.42596E-08	1.25606E-02	-4.06165E-02	-4.58960E-02
1093	5159-2	-3.42105E-07	3.25385E-08	-2.55396E-08	3.58782E-03	-3.43871E-02	1.95483E-02
1094	5159-3	7.74987E-07	-4.91292E-08	1.05500E-07	-4.67110E-02	1.18706E-01	6.90397E-02
1095	5160-2	5.04630E-07	8.72161E-08	5.03252E-08	5.56908E-03	2.98268E-02	1.96619E-02
1096	5160-3	1.12326E-06	1.44419E-07	1.68730E-07	5.10694E-02	1.10208E-01	-6.86480E-02
1097	5161-2	-6.21168E-07	8.88666E-08	-3.52117E-07	8.57285E-03	-1.81745E-01	1.35877E-02
1098	5161-3	2.47260E-06	-3.80369E-07	1.91548E-06	-3.48553E-02	9.69937E-01	-7.23127E-02
1099	5162-2	6.99614E-07	1.53183E-07	4.02851E-07	9.14748E-03	1.88766E-01	1.58993E-02
1100	5162-3	2.42815E-06	5.90550E-07	2.18480E-06	3.19116E-02	1.02731E+00	8.58441E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 219

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1101	5163-3	5.53396E-08	1.16723E-08	-1.80415E-09	9.54191E-05	-8.31292E-02	5.68972E-06
1102	5164-2	-6.92161E-06	-4.61101E-05	-6.26335E-08	-3.38097E-02	-3.90622E-02	-1.15092E-01
1103	5164-3	-3.26445E-07	-3.89618E-06	-2.30770E-09	-1.19339E-03	-3.93370E-01	7.75981E-03
1104	5165-2	-7.11409E-06	-4.65901E-05	1.84880E-07	-1.93785E-02	-2.64304E-01	-1.12522E-01
1105	5165-3	8.77333E-07	3.92563E-06	-1.27834E-08	1.07852E-03	-3.67813E-01	-8.07770E-03
1106	5166-2	-2.97740E-06	-3.14833E-06	-3.81390E-07	-5.47388E-02	6.59248E-01	-4.83835E-02
1107	5166-3	-5.96376E-07	-7.75761E-07	-8.78477E-08	-1.31380E-02	-2.39355E-02	-1.53156E-02
1108	5167-2	-1.94788E-06	-3.30803E-06	2.25224E-07	-3.46397E-02	-6.59308E-01	-4.65235E-02
1109	5167-3	6.20221E-07	8.13804E-07	-6.56462E-08	8.71057E-03	-2.30021E-02	1.49909E-02
1110	5168-2	-3.11923E-07	8.89657E-06	7.72023E-07	5.85606E-01	-1.74576E+00	-9.50011E-02
1111	5168-3	-5.05295E-07	5.07272E-06	6.09898E-06	7.18396E-01	-1.30468E+00	-3.48290E-01
1112	5169-2	-2.83644E-06	8.94102E-06	-8.93733E-07	6.07468E-01	1.81947E+00	-9.67307E-02
1113	5169-3	2.20349E-06	-5.12743E-06	6.18398E-06	-7.36201E-01	-1.31824E+00	3.52923E-01
1114	5170-2	1.62032E-07	-3.28335E-06	1.16121E-06	3.03879E+00	-4.24207E-01	-5.73804E-02
1115	5171-2	-4.89567E-07	-3.30677E-06	-1.17830E-06	3.03172E+00	3.95532E-01	-5.54514E-02
1116	5172-2	9.86409E-07	9.71746E-07	-2.70560E-06	-1.41429E+00	2.54123E+00	2.97995E-01
1117	5173-2	-1.21266E-06	9.35396E-07	2.67954E-06	-1.41609E+00	-2.50431E+00	3.01758E-01
1118	5174-2	3.07238E-06	1.19022E-06	-2.39341E-06	7.12073E-01	1.43146E+01	8.79788E-01
1119	5175-2	-3.77661E-06	1.16262E-06	2.37033E-06	7.03965E-01	-1.42961E+01	8.91058E-01
1120	5176-1	1.43141E-04	-1.67065E-05	-2.50530E-05	7.01644E-01	-1.83149E+01	-2.37869E+00
1121	5176-2	-1.44586E-05	-1.15662E-06	1.80876E-05	-6.79713E-02	3.09753E+00	1.88685E-01
1122	5176-3	-1.28574E-06	-1.50957E-05	5.27444E-05	1.38393E+00	1.39445E+01	-2.71678E+00
1123	5177-1	1.68362E-04	1.74293E-05	-2.46175E-05	-7.81228E-01	-1.94453E+01	2.57781E+00
1124	5177-2	2.48156E-05	-3.55151E-07	-1.66913E-05	-4.36549E-02	-3.49893E+00	3.53052E-01
1125	5177-3	-1.33660E-05	1.49877E-05	5.29732E-05	-1.48730E+00	1.41538E+01	2.81776E+00
1126	5178-2	4.42835E-07	-8.95897E-06	-3.23203E-06	-1.70939E+00	-1.00519E+00	1.03218E-01
1127	5179-2	-6.50954E-07	-9.02203E-06	3.22557E-06	-1.72449E+00	9.53669E-01	1.07412E-01
1128	5180-3	-3.37286E-07	-2.13847E-06	2.40016E-06	5.21331E-03	4.81191E-01	-8.42475E-04
1129	5181-2	-5.92094E-06	-4.34949E-05	-2.10886E-07	-3.53059E-02	3.50837E-01	3.07520E-02
1130	5181-3	-9.20892E-10	-4.24384E-06	1.76538E-06	2.20071E-02	-1.10079E+00	-3.26997E-02
1131	5182-2	-5.37062E-06	-4.36019E-05	3.38746E-07	-2.05826E-02	-6.84347E-01	3.31668E-02
1132	5182-3	1.54052E-06	4.17795E-06	1.75921E-06	-1.88718E-02	-1.09354E+00	3.24720E-02
1133	5183-2	-2.61584E-06	-6.87348E-06	-5.97940E-07	-7.07192E-02	5.39168E-01	-3.11461E-02
1134	5183-3	-8.66435E-07	-9.23977E-06	1.21617E-05	1.50835E-01	-4.56917E-01	-4.66537E-01
1135	5184-2	-1.69169E-06	-6.97096E-06	4.32593E-07	-4.84288E-02	-5.74988E-01	-2.92948E-02
1136	5184-3	1.32932E-06	9.28894E-06	1.23176E-05	-1.50024E-01	-4.21714E-01	4.66812E-01
1137	5185-2	-1.26698E-06	2.31568E-05	1.68363E-06	1.92255E-01	3.93409E+00	-1.45164E-01
1138	5185-3	-1.65949E-06	6.95484E-06	2.02031E-05	5.09479E-01	3.27322E+00	-8.39859E-01
1139	5186-2	4.29212E-06	2.32265E-05	-1.91291E-06	2.11143E-01	-3.79231E+00	-1.46816E-01
1140	5186-3	-2.94852E-06	-7.02919E-06	2.02954E-05	-5.18073E-01	3.23380E+00	8.43197E-01
1141	5187-2	3.00311E-06	1.87562E-05	-5.75163E-05	-3.40985E-01	-2.96054E+00	2.29393E+00
1142	5188-2	-3.06585E-06	1.86900E-05	5.74933E-05	-3.38928E-01	2.95179E+00	2.29478E+00
1143	5189-1	2.31655E-04	-6.45118E-05	-2.45526E-05	2.41811E+00	-2.63536E+01	-4.05343E+00
1144	5189-2	1.09378E-06	6.68537E-05	1.47998E-04	-6.72587E-02	6.84863E+00	-7.32056E+00
1145	5189-3	-1.70377E-05	-9.21570E-05	2.56133E-04	2.79863E+00	2.88469E+01	-1.12608E+01
1146	5190-1	2.53986E-04	6.46821E-05	-2.41722E-05	-2.45026E+00	-2.66220E+01	4.10245E+00
1147	5190-2	-1.75291E-06	6.65588E-05	-1.48048E-04	-7.23556E-02	-6.82018E+00	-7.33001E+00
1148	5190-3	-2.79168E-05	9.23328E-05	2.56094E-04	-2.80167E+00	2.87550E+01	1.12666E+01
1149	5191-2	2.60404E-06	3.12040E-05	-8.46733E-05	-3.65813E-01	-2.75172E+00	4.66612E+00
1150	5192-2	-3.08165E-06	3.12010E-05	8.46772E-05	-3.63863E-01	2.74927E+00	4.66708E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 220

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1151	5193-2	9.55368E-07	2.11635E-07	-1.35126E-05	-2.95756E-01	-1.86808E+00	4.71460E-01
1152	5194-2	-1.51176E-06	2.02189E-07	1.35266E-05	-2.97835E-01	1.81962E+00	4.71858E-01
1153	5195-2	3.22178E-07	-3.61591E-06	-4.37407E-06	-4.37837E-01	6.80737E-01	1.48000E-01
1154	5196-2	1.49447E-06	-3.64407E-06	4.38267E-06	-4.44509E-01	-6.99343E-01	1.49577E-01
1155	5197-2	3.03750E-08	-1.11434E-08	-1.00949E-08	-3.34332E-03	2.97887E-03	6.32064E-03
1156	5197-3	-6.77308E-09	1.72747E-09	1.04566E-08	2.78511E-04	-5.98726E-04	-4.71404E-04
1157	5198-2	-3.76761E-08	-8.01877E-08	-3.10912E-09	-3.90907E-03	-2.76757E-03	5.57012E-03
1158	5198-3	-8.61225E-09	-4.55310E-08	7.99160E-09	-4.18201E-04	-7.44359E-04	2.70460E-04
1159	5199-2	3.53280E-08	-1.31682E-08	1.84429E-09	-2.50041E-03	4.45206E-03	3.47005E-03
1160	5199-3	-1.82585E-08	1.09148E-08	-3.60340E-09	1.09389E-03	-1.80770E-03	-1.35702E-03
1161	5200-2	-4.62926E-08	-1.24338E-07	-7.02807E-09	-3.15945E-03	-3.82793E-03	2.72464E-03
1162	5200-3	-2.52098E-08	-7.46185E-08	-2.16246E-09	-1.50330E-03	-1.22230E-03	9.51873E-04
1163	5201-2	-3.87376E-08	7.49684E-09	5.82604E-09	1.08471E-03	-3.48436E-03	-1.27214E-03
1164	5201-3	1.04119E-07	-3.11509E-08	2.11875E-09	-2.94365E-03	7.80451E-03	1.33745E-03
1165	5202-2	4.03350E-08	2.14167E-07	5.85916E-09	2.10888E-03	4.95406E-03	2.57909E-04
1166	5202-3	1.32841E-07	5.64021E-07	1.56381E-08	5.76669E-03	5.49526E-03	1.68906E-03
1167	5203-2	-9.77741E-08	1.79256E-08	-7.60565E-09	3.03185E-03	-1.14049E-02	-1.74968E-03
1168	5203-3	1.79804E-08	1.43379E-07	1.39371E-07	1.53039E-03	6.98259E-02	-2.07414E-03
1169	5204-2	1.21123E-07	5.43287E-07	1.80876E-08	5.65285E-03	8.66503E-03	1.20575E-03
1170	5204-3	-1.67099E-07	1.38121E-06	2.27075E-07	1.87025E-03	1.26930E-01	1.35798E-02
1171	5205-3	1.89734E-07	3.43197E-08	-6.98504E-09	3.99524E-04	-2.78921E-01	1.98263E-05
1172	5206-2	-6.94002E-06	-6.31396E-05	-1.22897E-07	1.11760E-02	-1.75618E+00	5.74529E-02
1173	5206-3	-3.25993E-07	-4.98370E-06	-1.25101E-08	3.17089E-05	-4.74038E-01	7.40409E-03
1174	5207-2	-9.14669E-06	-6.30011E-05	1.31618E-07	3.21245E-02	1.27664E+00	5.91246E-02
1175	5207-3	9.45379E-07	4.98080E-06	-1.07422E-08	-8.52408E-04	-4.37003E-01	-7.55245E-03
1176	5208-2	-1.73878E-06	-1.07609E-05	-2.82220E-07	1.14741E-01	-6.97234E-01	-1.45389E-03
1177	5208-3	2.32191E-07	-3.23783E-06	2.96095E-07	2.37318E-02	-5.81757E-01	2.80994E-03
1178	5209-2	-5.68661E-06	-9.79963E-06	3.45159E-07	1.34179E-01	7.20860E-01	-1.04473E-02
1179	5209-3	1.65462E-06	3.04366E-06	-5.45100E-08	-2.66278E-02	-5.77217E-01	-4.30031E-04
1180	5210-2	-1.23076E-06	1.66703E-06	-2.90318E-07	-4.79467E-02	-2.56729E+00	-1.85243E-02
1181	5210-3	-5.95135E-07	-4.22230E-06	4.50632E-06	2.65970E-01	-1.43582E+00	-1.96464E-01
1182	5211-2	-2.60440E-06	9.31911E-07	3.10314E-07	-3.50889E-02	2.63322E+00	-7.41283E-03
1183	5211-3	1.73483E-06	4.52854E-06	4.50356E-06	-2.67897E-01	-1.42963E+00	1.92594E-01
1184	5212-2	-2.99169E-07	-1.96363E-06	1.71185E-06	-3.36063E+00	-5.26016E-02	-5.08655E-02
1185	5213-2	2.15536E-07	-2.04396E-06	-1.70735E-06	-3.36330E+00	4.22808E-02	-5.10579E-02
1186	5214-2	2.59218E-08	4.43134E-06	-3.03558E-06	1.11215E+00	3.00085E-01	-5.68163E-02
1187	5215-2	2.62361E-07	4.27813E-06	3.05434E-06	1.11186E+00	-2.94238E-01	-5.70329E-02
1188	5216-2	3.81311E-06	3.13540E-05	-5.47631E-06	-1.37339E+00	1.96611E+00	-8.51681E-01
1189	5217-2	-4.09484E-06	3.09808E-05	5.50378E-06	-1.37419E+00	-1.96507E+00	-8.53147E-01
1190	5218-1	1.14197E-04	-1.29849E-04	-2.13678E-05	4.21516E-01	-2.86408E+01	-3.40841E+00
1191	5218-2	2.51347E-05	4.11325E-04	-1.11838E-05	-1.29152E+00	-8.85205E+00	-7.20658E-01
1192	5218-3	-1.90727E-07	-2.87658E-05	4.00966E-05	2.48495E-01	7.59995E+00	-2.04062E+00
1193	5219-1	1.29425E-04	1.30433E-04	-2.11288E-05	-4.24170E-01	-2.87059E+01	3.42701E+00
1194	5219-2	-2.47325E-05	4.13093E-04	1.12861E-05	-1.27963E+00	8.76675E+00	-7.05128E-01
1195	5219-3	-6.98611E-06	3.15409E-05	4.01724E-05	-2.31357E-01	7.51730E+00	2.06167E+00
1196	5220-2	-3.82424E-07	2.70078E-05	-1.68603E-06	1.85567E-01	3.49304E+00	5.90387E-02
1197	5220-3	-3.36545E-07	1.52613E-05	3.00914E-06	-3.60061E-01	2.65317E+00	-1.36082E-01
1198	5221-2	4.49497E-06	2.71575E-05	1.75803E-06	1.94757E-01	-3.35969E+00	5.94888E-02
1199	5221-3	-3.31982E-06	-1.53636E-05	2.96134E-06	3.55924E-01	2.59001E+00	1.36613E-01
1200	5222-2	6.66566E-07	-3.20722E-05	9.31523E-07	1.95966E+00	-4.07391E+00	-5.54383E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 221

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1201	5222-3	-6.22421E-07	2.77181E-05	2.81922E-07	-6.45665E-01	3.32582E+00	1.06654E-03
1202	5223-2	-4.45710E-06	-3.23448E-05	-1.02933E-06	1.94922E+00	3.93908E+00	-5.52510E-02
1203	5223-3	-3.51231E-06	-2.78899E-05	2.04183E-07	6.36455E-01	3.21852E+00	-1.41279E-03
1204	5224-2	8.70588E-10	-7.21943E-10	-1.70579E-09	-3.36277E-04	-4.45361E-04	9.04268E-04
1205	5224-3	-6.00150E-10	-1.31117E-08	1.98002E-08	-3.64684E-05	-1.65388E-04	-2.97060E-05
1206	5225-2	-4.67466E-09	4.08896E-08	-9.10303E-09	-4.91089E-04	-1.57993E-03	1.45945E-04
1207	5225-3	-1.89538E-09	3.50142E-08	1.91774E-08	3.20686E-05	-4.79880E-04	-1.66764E-04
1208	5226-2	4.45662E-09	4.77759E-09	-3.19139E-09	-7.49938E-04	1.03680E-04	1.52239E-03
1209	5226-3	-1.17303E-09	-1.87150E-10	-1.32069E-09	2.34214E-04	8.95568E-05	-5.09497E-04
1210	5227-2	-8.07725E-09	6.99746E-08	-1.40455E-08	-9.05927E-04	-2.25312E-03	4.33631E-04
1211	5227-3	-1.50053E-09	1.37817E-08	-5.63650E-09	-3.42394E-04	-3.39742E-04	-1.04841E-04
1212	5228-2	5.80088E-09	-5.75592E-09	-4.49147E-09	-1.83921E-04	-2.73004E-04	-1.64735E-04
1213	5228-3	-2.98098E-09	1.77084E-09	1.73369E-09	1.62049E-04	2.80741E-04	-2.72236E-05
1214	5229-2	-1.81616E-08	4.03356E-09	2.21634E-08	1.76516E-04	6.14487E-03	1.58550E-03
1215	5229-3	-2.48608E-08	8.90716E-08	3.97622E-08	5.72095E-04	3.77782E-03	3.85458E-03
1216	5230-2	2.70271E-09	2.17383E-09	-2.30988E-09	1.07206E-04	-9.88753E-04	-3.18131E-04
1217	5230-3	-2.74100E-08	-4.39535E-08	4.36836E-09	1.54648E-04	7.82502E-03	6.40090E-04
1218	5231-2	-2.43319E-08	9.12017E-08	2.73991E-08	6.17947E-04	4.60330E-03	3.01630E-03
1219	5231-3	-3.02695E-07	1.48766E-06	1.63210E-07	5.36443E-04	1.39890E-01	8.08937E-03
1220	5232-3	1.26363E-06	1.85602E-06	7.78208E-06	-5.02417E-03	-1.81120E+00	1.73188E-03
1221	5233-2	-4.48300E-06	-3.93113E-05	-3.77468E-07	5.28463E-01	-1.54121E+00	5.63510E-02
1222	5233-3	1.00820E-06	-1.00914E-05	1.13748E-06	4.58898E-01	-1.00907E+00	-2.63716E-03
1223	5234-2	-7.16894E-06	-3.90182E-05	-8.04761E-08	5.36619E-01	1.16073E+00	4.91617E-02
1224	5234-3	4.01980E-07	1.02732E-05	2.22622E-08	-4.57401E-01	-9.90312E-01	4.39835E-03
1225	5235-2	9.47703E-07	-1.00222E-05	-2.00013E-06	9.41306E-01	-2.31481E+00	-4.07963E-02
1226	5235-3	-5.52402E-06	-1.37207E-05	5.96794E-06	1.10798E+00	-1.57889E+00	-5.86565E-02
1227	5236-2	-6.74074E-06	-1.17488E-05	-3.99857E-07	9.64260E-01	2.31100E+00	-1.46446E-02
1228	5236-3	1.55429E-06	1.34806E-05	1.15337E-06	-1.11119E+00	-1.55364E+00	4.14588E-02
1229	5237-2	-1.76842E-06	1.15586E-05	1.73126E-06	5.96337E-01	-6.95757E-01	-3.89539E-02
1230	5237-3	-1.78722E-06	-2.97289E-06	4.71826E-06	-1.04447E+00	-9.32837E-01	-1.01273E-01
1231	5238-2	-1.58366E-06	1.16117E-05	-3.21572E-07	6.14122E-01	8.25857E-01	-2.62736E-02
1232	5238-3	1.09011E-06	3.19785E-06	2.08683E-06	1.04323E+00	-9.36008E-01	7.52017E-02
1233	5239-2	1.18541E-07	2.49200E-06	2.17052E-07	-7.65820E+00	-4.47544E-01	-4.69217E-03
1234	5240-2	-1.46201E-06	2.09328E-06	-7.86575E-07	-7.66313E+00	4.22164E-01	-2.69964E-02
1235	5241-2	-5.34780E-07	2.86836E-06	-1.98658E-07	2.43113E+00	2.32912E-01	1.19741E-02
1236	5242-2	-4.75425E-07	2.84417E-06	2.27761E-07	2.43438E+00	-2.38036E-01	1.04526E-02
1237	5243-2	-1.84973E-06	1.49006E-05	3.62295E-06	1.81928E-03	-1.00836E+00	-2.38438E-01
1238	5244-2	1.37561E-06	1.46899E-05	-3.48795E-06	3.91339E-03	9.74325E-01	-2.35223E-01
1239	5245-1	5.29581E-05	-1.59199E-05	-1.04205E-05	7.40380E-01	-2.52383E+01	-9.80272E-01
1240	5245-2	1.26560E-05	2.65383E-06	-1.13928E-05	6.69272E-02	-6.43800E-01	8.59975E-02
1241	5245-3	1.60482E-06	-1.66462E-05	5.70303E-06	8.44358E-01	1.14498E+01	-1.67493E-01
1242	5246-1	8.23587E-05	1.66109E-05	-1.08360E-05	-7.55808E-01	-2.50017E+01	9.67367E-01
1243	5246-2	-1.26155E-05	6.34810E-06	9.48227E-06	3.31338E-02	1.17157E+00	3.72226E-02
1244	5246-3	-9.94557E-06	1.71462E-05	5.83478E-06	-8.31432E-01	1.13203E+01	1.80066E-01
1245	5247-2	-3.62122E-07	2.59057E-05	-3.55359E-07	1.98748E-01	2.49396E+00	1.13315E-02
1246	5247-3	-3.36677E-07	1.55300E-05	7.80187E-07	-6.58082E-01	1.18128E+00	-2.65312E-02
1247	5248-2	3.48321E-06	2.59617E-05	3.95487E-07	2.05251E-01	-2.38237E+00	1.25213E-02
1248	5248-3	-1.86289E-06	-1.55914E-05	6.57613E-07	6.54850E-01	1.12002E+00	2.30598E-02
1249	5249-2	6.48952E-07	-2.31307E-05	-6.68881E-07	2.64902E+00	-1.02294E+00	1.25289E-02
1250	5249-3	-4.45119E-07	2.33674E-05	3.97329E-07	-8.48568E-01	8.33270E-01	-7.73270E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 222

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1251	5250-2	-1.24829E-06	-2.32278E-05	3.31255E-07	2.64473E+00	9.60763E-01	-3.96208E-04
1252	5250-3	-2.73329E-07	-2.33817E-05	2.92027E-07	8.44341E-01	7.77228E-01	9.68169E-04
1253	5251-3	1.66874E-07	-4.86674E-08	1.38670E-08	6.35024E-04	-2.56518E-01	-1.15760E-05
1254	5252-2	-3.86008E-06	-7.52368E-05	-6.49185E-07	9.34188E-03	-3.36495E+00	2.39870E-02
1255	5252-3	-1.08682E-07	-5.32162E-06	-5.36805E-08	2.02903E-04	-4.42008E-01	2.51245E-03
1256	5253-2	-1.01938E-05	-7.50710E-05	-2.23117E-08	-2.83614E-02	2.73612E+00	2.23007E-02
1257	5253-3	8.56693E-07	5.31114E-06	1.85268E-09	3.60700E-03	-3.98031E-01	-2.30804E-03
1258	5254-2	-3.14814E-06	-2.60785E-05	-3.83170E-06	1.27625E-01	-4.37532E+00	1.15765E-02
1259	5254-3	-4.93895E-07	-5.64260E-06	-1.03593E-06	2.59612E-02	-1.08798E+00	3.34298E-03
1260	5255-2	-5.96365E-07	-2.77059E-05	7.16455E-07	1.89446E-01	4.51137E+00	-1.54029E-02
1261	5255-3	5.15145E-07	5.87919E-06	2.80751E-07	-2.90369E-02	-1.09338E+00	1.84436E-03
1262	5256-2	1.25029E-06	-8.34611E-06	4.58959E-06	-4.04137E-02	-5.05234E+00	-4.24929E-02
1263	5256-3	3.09272E-07	-1.01706E-05	2.24811E-06	3.15838E-02	-2.82493E+00	-2.95838E-02
1264	5257-2	-1.55396E-05	-6.91983E-06	-5.24294E-08	-2.33819E-02	5.06290E+00	-1.31653E-02
1265	5257-3	6.13667E-06	9.72895E-06	7.45742E-07	-3.55642E-02	-2.79357E+00	1.74526E-02
1266	5258-2	2.20981E-08	1.11163E-06	-2.17326E-07	1.53487E+00	5.42125E-01	6.94170E-03
1267	5259-2	8.74544E-07	1.14270E-06	1.89634E-07	1.53442E+00	-5.27970E-01	6.07521E-03
1268	5260-1	4.64276E-05	3.90705E-05	-3.33396E-06	4.54899E-01	-2.95715E+01	-3.20792E-01
1269	5260-2	-6.05474E-06	-2.79438E-05	-4.33934E-06	1.62222E-02	-4.13187E-01	-2.58825E-02
1270	5260-3	-2.73520E-06	-2.41744E-05	7.68291E-06	4.59456E-01	1.08033E+01	-1.11113E-01
1271	5261-1	8.30124E-05	-4.06459E-05	-2.04578E-06	-4.33817E-01	-2.97087E+01	3.51955E-01
1272	5261-2	6.94547E-06	-2.62963E-05	3.29106E-06	-7.00148E-03	7.17034E-01	-5.48849E-02
1273	5261-3	-1.96123E-05	2.48317E-05	7.15229E-06	-4.62027E-01	1.08904E+01	1.13849E-01
1274	5262-2	4.50599E-08	5.68769E-07	-1.53069E-07	-1.05039E-01	-9.99729E-02	3.03261E-03
1275	5263-2	-1.35350E-07	6.87001E-07	6.87547E-08	-1.06519E-01	1.22579E-01	1.09882E-03
1276	5264-2	2.00108E-07	-2.28807E-06	2.77040E-07	-3.87339E+00	-3.39607E-01	5.94131E-04
1277	5265-2	-2.63430E-07	-2.26415E-06	-2.88629E-07	-3.87385E+00	3.33428E-01	-4.31037E-03
1278	5266-2	1.56727E-06	-8.83172E-05	-5.34045E-07	1.91771E+00	-3.31100E+00	3.61679E-02
1279	5266-3	-1.02655E-06	7.61716E-05	4.35757E-07	-4.26350E-01	1.45586E+00	-1.72789E-02
1280	5267-2	1.32191E-06	-8.79774E-05	5.08320E-07	1.90328E+00	3.11161E+00	-3.04025E-02
1281	5267-3	4.08096E-06	-7.59454E-05	4.42575E-07	4.14325E-01	1.29628E+00	-2.34986E-02
1282	5268-2	-1.39787E-06	9.57424E-05	-2.22403E-07	2.32966E-01	-9.06992E-01	3.17743E-02
1283	5268-3	-8.31248E-07	5.07142E-05	4.47133E-07	-6.04265E-01	-5.90443E-01	2.20371E-03
1284	5269-2	1.66202E-06	9.60850E-05	3.86221E-07	2.59109E-01	1.26380E+00	3.75118E-02
1285	5269-3	-8.95328E-07	-5.08552E-05	3.48261E-07	5.92097E-01	-7.56617E-01	-9.59188E-03
1286	5270-2	4.90906E-09	-6.52654E-08	2.37122E-08	-1.59921E-03	-1.49770E-03	1.74200E-03
1287	5270-3	-2.61588E-10	3.93970E-08	1.20967E-08	6.08498E-05	7.82302E-04	1.44801E-04
1288	5271-2	4.25968E-08	-8.58236E-07	3.84769E-08	-2.16531E-03	1.31821E-03	1.72282E-03
1289	5271-3	5.49523E-09	-1.40676E-07	9.32570E-10	-2.59722E-04	1.08921E-03	-8.45661E-05
1290	5272-2	2.58634E-10	-1.82183E-07	-1.21855E-08	-2.27972E-03	-9.97625E-03	1.71703E-03
1291	5272-3	6.90474E-10	5.68091E-08	-3.64176E-09	7.48236E-04	5.32029E-03	-4.36164E-04
1292	5273-2	6.67115E-08	-6.14234E-07	1.37369E-08	-1.85077E-03	-2.02727E-02	1.66935E-03
1293	5273-3	3.19562E-08	-1.61745E-07	6.38959E-09	-6.92055E-05	-1.59865E-02	4.27025E-04
1294	5274-2	-1.92660E-08	-2.32594E-07	-5.06123E-08	-2.45488E-03	-3.96401E-02	-5.87362E-05
1295	5274-3	1.00633E-08	1.61017E-07	2.36347E-08	1.32737E-03	2.24136E-02	1.07257E-04
1296	5275-2	-9.49785E-08	1.30612E-06	-3.52782E-08	-1.90539E-03	2.19594E-02	3.69529E-07
1297	5275-3	-1.98729E-07	8.61047E-07	8.70573E-08	-5.81038E-03	1.15690E-01	1.78313E-04
1298	5276-2	-1.97420E-08	5.63933E-08	-1.16214E-07	-4.32627E-03	-1.17478E-01	-2.13912E-04
1299	5276-3	-8.36826E-07	-3.12897E-06	8.16278E-07	2.16524E-02	8.33256E-01	-3.54821E-04
1300	5277-2	-3.05286E-07	9.09394E-07	1.17714E-07	-5.55760E-03	1.47895E-01	2.90445E-04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 223

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1301	5277-3	-3.06209E-06	5.13619E-06	1.05575E-06	-3.45837E-02	1.19691E+00	1.60098E-03
1302	5278-3	-3.87817E-07	1.30227E-07	2.63411E-07	-4.42936E-03	-7.42092E-02	1.11693E-02
1303	5279-2	-2.72699E-06	-8.09933E-05	-3.45100E-07	-4.73204E-02	-4.51932E+00	1.26626E-02
1304	5279-3	-1.63303E-07	-9.17765E-06	3.90541E-07	-1.06172E-02	-8.61158E-01	2.91856E-02
1305	5280-2	-7.68700E-06	-8.12221E-05	1.27136E-06	-5.33451E-02	3.84291E+00	-9.89928E-04
1306	5280-3	-1.09083E-08	9.46954E-06	3.74222E-07	2.01322E-02	-7.87322E-01	-9.92867E-04
1307	5281-2	-3.00150E-06	-4.45721E-05	-2.90536E-06	-4.50931E-02	-6.47407E+00	-3.92352E-02
1308	5281-3	9.86337E-06	-1.39071E-05	7.24595E-06	8.10175E-04	-1.46139E+00	-2.47551E-02
1309	5282-2	-1.19918E-05	-4.47536E-05	-2.02221E-06	-2.02284E-02	6.36817E+00	-1.83847E-02
1310	5282-3	3.96057E-06	1.48289E-05	-5.18614E-06	6.50037E-03	-1.22814E+00	1.34514E-03
1311	5283-2	1.64003E-06	-1.32086E-05	1.28097E-06	-1.00317E-01	-2.52807E+00	7.35428E-04
1312	5283-3	1.00544E-06	-2.18691E-05	4.36448E-06	-2.49223E-02	-7.87765E-01	-8.56998E-02
1313	5284-2	2.70177E-06	-1.47161E-05	2.40460E-06	-8.33674E-02	2.80485E+00	-2.15700E-02
1314	5284-3	-8.35633E-07	2.12414E-05	2.46373E-06	2.66668E-02	-8.76344E-01	8.41089E-03
1315	5285-2	2.06085E-06	1.34660E-06	-6.54917E-07	-6.34091E-02	-1.06962E+00	-3.00812E-01
1316	5286-2	1.69679E-06	-1.43639E-06	1.55070E-06	-6.34003E-02	1.06246E+00	-5.17817E-04
1317	5287-2	2.94000E-06	1.71717E-05	-5.18910E-06	-2.64193E-03	2.60955E-01	-1.39246E-03
1318	5288-2	-3.38470E-06	1.67232E-05	5.19023E-06	-1.76561E-03	-2.60155E-01	7.11479E-06
1319	5289-2	-1.28829E-06	4.41517E-06	1.60932E-06	4.53541E-03	9.20962E-02	1.22934E-02
1320	5290-2	1.20198E-06	4.39988E-06	-1.64542E-06	4.63724E-03	-9.30531E-02	-6.42794E-04
1321	453-1	1.10457E-04	1.16868E-04	1.05106E-05	3.18459E-01	-3.85920E+01	-1.32779E-01
1322	453-2	-6.20173E-05	-1.31307E-04	-7.09058E-07	8.51271E-02	-5.03107E-01	-1.01539E-02
1323	453-3	-1.02691E-05	-4.43966E-05	1.62930E-05	1.22633E-02	1.19951E+01	1.87495E-02
1324	793-1	1.58957E-04	-1.17249E-04	1.10985E-05	-3.11156E-01	-3.85257E+01	1.50858E-01
1325	793-2	6.11819E-05	-1.30423E-04	5.59057E-07	8.13808E-02	5.69736E-01	-1.35397E-02
1326	793-3	-3.69264E-05	4.46083E-05	1.59661E-05	-1.14014E-02	1.20156E+01	2.22911E-02
1327	5293-2	-2.47479E-07	1.04205E-04	2.23579E-07	-1.26930E-01	5.90811E+00	3.46094E-02
1328	5293-3	-2.96329E-07	5.43684E-05	7.30382E-07	-1.08351E-01	3.31867E+00	2.55722E-03
1329	5294-2	1.02030E-05	1.04070E-04	4.89833E-08	-1.20039E-01	-5.68747E+00	2.62480E-02
1330	5294-3	-5.02850E-06	-5.47106E-05	6.77783E-07	1.07169E-01	3.23202E+00	-1.22200E-02
1331	5295-2	3.15374E-07	-9.74208E-05	-3.74893E-07	-1.18795E-01	2.29756E+00	1.25243E-01
1332	5295-3	3.66504E-08	7.98071E-05	3.73579E-07	-5.04430E-02	-3.84779E+00	-4.40583E-02
1333	5296-2	3.93479E-05	-9.94534E-05	1.18895E-06	-1.28914E-01	-2.41080E+00	-1.58485E-02
1334	5296-3	2.87063E-05	-8.06891E-05	8.26896E-07	4.33368E-02	-3.91042E+00	-1.14133E-02
1335	5297-3	-5.03235E-09	-4.25236E-09	2.49188E-09	6.95099E-04	2.68032E-02	3.45848E-06
1336	5298-2	-1.93182E-06	-9.45669E-05	-1.49181E-07	-1.24795E-01	-5.67462E+00	-1.33003E-02
1337	5298-3	-5.12826E-08	-5.76210E-06	-4.61117E-09	-4.94654E-03	-4.23760E-01	-2.96784E-04
1338	5299-2	-2.38169E-06	-9.44307E-05	5.31141E-08	5.51841E-02	4.45859E+00	-1.30629E-02
1339	5299-3	3.57619E-08	5.74558E-06	3.18542E-09	-1.39128E-02	-3.40314E-01	2.64330E-04
1340	5300-2	8.73235E-07	-6.69920E-05	2.71519E-07	-1.55490E-01	-8.37364E+00	-1.18795E-02
1341	5300-3	-2.33074E-07	-1.12158E-05	-1.78727E-07	-2.57590E-02	-1.36627E+00	-1.11121E-03
1342	5301-2	-9.15187E-05	-6.64704E-05	-3.10509E-06	-1.97673E-01	8.48991E+00	-3.82606E-02
1343	5301-3	1.72948E-05	1.14458E-05	1.92961E-07	8.99451E-02	-1.56860E+00	5.86003E-03
1344	5302-2	-9.28807E-07	-8.69301E-05	-1.42445E-06	-4.43402E-01	-1.01982E+01	-6.07124E-02
1345	5302-3	-4.70402E-07	-3.57435E-05	1.92582E-07	-4.32783E-01	-3.07147E+00	-1.24816E-02
1346	5303-2	1.42887E-04	-8.65517E-05	5.36787E-06	-5.00362E-01	1.09031E+01	-3.59798E-02
1347	5303-3	-3.75920E-05	3.54379E-05	-8.19574E-07	4.51064E-01	-3.23730E+00	1.17807E-02
1348	5304-2	-3.16761E-07	1.20167E-05	-8.60465E-08	4.25251E+00	-1.35552E+00	5.14398E-03
1349	5305-2	2.82290E-05	1.19530E-05	3.50122E-07	4.25101E+00	1.36595E+00	7.07186E-03
1350	5306-2	1.71753E-07	-5.76664E-05	8.37876E-08	-1.44526E+00	4.30214E-01	-1.05769E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 224

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1351	5307-2	-2.24887E-06	-5.79981E-05	-8.96891E-08	-1.44640E+00	-4.33391E-01	-8.43110E-03
1352	5308-2	3.35380E-09	-1.33266E-04	5.79809E-07	7.73313E-02	-3.37097E-01	-2.05706E-02
1353	5309-2	-2.36404E-06	-1.33810E-04	-5.69737E-07	7.67885E-02	3.31506E-01	-1.89013E-02
1354	5310-1	1.22743E-04	-5.88840E-04	3.87565E-06	4.67998E-01	-4.09597E+01	-1.58540E-01
1355	5310-2	3.54139E-05	1.24791E-03	-2.56884E-05	-2.48918E-01	-3.14753E-02	1.64116E-01
1356	5310-3	2.39385E-06	-2.03637E-05	7.00759E-06	-1.68967E-01	1.24691E+01	4.55797E-02
1357	5311-1	1.66059E-04	5.89196E-04	4.04425E-06	-4.69516E-01	-4.07704E+01	1.74264E-01
1358	5311-2	-3.44839E-05	1.25163E-03	2.54853E-05	-2.45112E-01	3.28149E-02	1.62627E-01
1359	5311-3	-3.89053E-05	2.14248E-05	6.65985E-06	1.72523E-01	1.23856E+01	-7.23105E-03
1360	5312-2	-1.12647E-06	2.27771E-04	-1.89195E-08	-2.89762E+00	-5.23232E-01	8.08297E-02
1361	5312-3	-4.39745E-07	8.61000E-05	4.80339E-07	-1.17117E+00	5.15692E-01	3.54461E-02
1362	5313-2	2.94140E-05	2.28724E-04	2.73638E-07	-2.85714E+00	1.14380E+00	8.69855E-02
1363	5313-3	-8.98675E-06	-8.66554E-05	4.24976E-07	1.15901E+00	3.14983E-01	-3.27942E-02
1364	5314-2	-1.04542E-06	-1.36799E-04	-2.26134E-07	8.41421E+00	9.65384E-01	-6.79859E-02
1365	5314-3	5.68290E-07	1.15709E-04	2.82243E-07	-6.00509E+00	-2.25621E+00	5.34367E-02
1366	5315-2	2.30065E-04	-1.36782E-04	2.48101E-06	8.39935E+00	-1.11894E+00	-3.89971E-02
1367	5315-3	1.21073E-04	-1.15883E-04	1.47708E-06	5.99364E+00	-2.36662E+00	-3.63650E-02
1368	5316-2	2.48152E-08	3.18796E-07	3.45010E-08	-5.23834E-05	-4.46409E-03	4.42011E-04
1369	5316-3	-1.85891E-08	-2.43322E-07	2.18400E-08	-2.74993E-04	2.28656E-03	4.68556E-05
1370	5317-2	4.13545E-08	-1.09079E-06	6.60965E-08	-1.02700E-03	-3.88149E-04	5.06775E-04
1371	5317-3	1.42245E-09	-3.85813E-08	1.32556E-08	9.25390E-05	-2.08901E-04	-2.65734E-05
1372	5318-2	-1.37012E-07	-1.71558E-06	-6.29513E-08	-2.05573E-03	-2.05748E-03	5.84237E-05
1373	5318-3	1.16897E-07	1.47473E-06	7.11523E-08	1.58111E-03	-2.51963E-03	1.21997E-04
1374	5319-2	1.51552E-07	-2.37966E-06	1.07298E-07	-2.58419E-03	-9.69998E-03	2.38563E-04
1375	5319-3	1.25373E-07	-1.72485E-06	7.44609E-08	-1.70299E-03	-5.70961E-03	-6.45209E-05
1376	5320-2	1.93722E-10	-3.84871E-08	2.12377E-09	1.93665E-04	-1.19987E-02	3.76682E-06
1377	5320-3	-7.13300E-07	-8.94078E-06	-4.76701E-07	-9.45885E-03	4.17378E-02	-1.23371E-03
1378	5321-2	-2.97444E-07	4.00185E-06	-2.11981E-07	3.26773E-03	4.64578E-03	2.60591E-04
1379	5321-3	-9.69225E-07	1.26622E-05	-6.77211E-07	1.25226E-02	3.97366E-02	1.33966E-03
1380	5322-2	5.28763E-07	6.35039E-06	3.50871E-07	9.06265E-03	-6.59912E-02	7.77827E-04
1381	5322-3	-8.87910E-07	-6.70880E-06	-5.96217E-07	-4.20204E-02	6.03599E-01	5.82599E-04
1382	5323-2	-8.28161E-07	9.58095E-06	-5.15439E-07	1.15831E-02	6.48412E-02	9.41892E-04
1383	5323-3	-3.42394E-06	1.84960E-05	-1.26322E-06	5.54619E-02	6.78677E-01	3.43075E-04
1384	5324-3	1.78033E-06	-2.72467E-06	1.69911E-07	3.51613E-02	-5.09999E+00	-1.29879E-04
1385	5325-2	-5.35257E-07	-8.92676E-05	1.04454E-07	-6.92726E-01	-5.66725E+00	-2.45262E-02
1386	5325-3	-9.90142E-07	-7.97477E-06	4.76758E-09	-3.75122E-01	-4.97848E-01	-6.12143E-04
1387	5326-2	-4.51994E-05	-8.92209E-05	3.97723E-07	-7.19754E-01	4.33256E+00	-2.80330E-02
1388	5326-3	-1.51098E-05	4.23733E-06	1.77896E-07	3.76466E-01	-4.57976E-01	-9.32198E-04
1389	5327-2	1.03071E-06	-8.05526E-05	1.92165E-06	-2.35768E-01	-9.58746E+00	-3.78618E-02
1390	5327-3	-1.01226E-06	-1.51592E-05	3.42968E-06	-3.65237E-02	-1.06212E+00	-3.24468E-03
1391	5328-2	4.30670E-04	-7.85734E-05	2.83196E-06	-1.35713E-01	1.01605E+01	-4.26411E-03
1392	5328-3	-3.24707E-04	2.21199E-05	-3.77504E-06	-3.12515E-01	-1.54723E+00	-2.10492E-02
1393	5329-2	-2.02999E-08	-1.19251E-04	-2.19224E-06	-5.36476E+00	-5.95374E+00	-5.90664E-02
1394	5329-3	-2.30756E-06	2.22198E-04	2.99567E-08	1.73881E+00	-1.82083E+01	1.02032E-01
1395	5330-2	-3.69162E-04	-1.07660E-04	-4.68160E-07	-5.22206E+00	6.74596E+00	-9.00745E-02
1396	5330-3	-1.48568E-04	-1.99154E-04	3.78709E-07	-1.83142E+00	-1.90234E+01	-1.08739E-01
1397	5331-2	-3.21182E-06	6.97504E-05	6.60139E-08	1.43235E+01	-3.48474E+00	2.90147E-02
1398	5332-2	-1.19533E-03	1.10066E-04	-1.06997E-05	1.43066E+01	3.23274E+00	-6.29045E-02
1399	5333-2	5.74846E-07	-1.51379E-05	8.84694E-07	-3.55235E+00	3.81563E-01	-4.22884E-03
1400	5334-2	5.85321E-05	-1.45224E-05	-9.73495E-07	-3.54750E+00	-4.09799E-01	5.07045E-04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 225

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1401	5335-2	-1.79719E-06	1.14650E-04	-1.73444E-05	-5.97851E-02	-1.25279E-01	1.49886E-02
1402	5336-2	7.06941E-06	1.14372E-04	1.72442E-05	-6.02163E-02	1.21955E-01	1.57949E-02
1403	5337-1	9.60148E-05	1.45161E-03	1.04777E-05	-3.29427E-01	-4.71934E+01	1.40911E-01
1404	5337-2	5.75848E-05	1.00018E-02	2.68531E-05	-3.21165E+00	-7.73280E-01	1.34274E+00
1405	5337-3	-4.14587E-06	-6.30973E-04	3.54409E-05	-5.54616E-01	1.08000E+01	-5.58414E-02
1406	5338-1	1.27456E-04	-1.45411E-03	1.07347E-05	3.24407E-01	-4.70045E+01	-1.24279E-01
1407	5338-2	-5.90626E-05	1.00028E-02	-2.68897E-05	-3.21058E+00	7.70499E-01	1.34339E+00
1408	5338-3	-2.28096E-05	6.31771E-04	3.56140E-05	5.51808E-01	1.06924E+01	7.07068E-02
1409	5339-2	-7.00909E-06	1.17277E-03	-7.42188E-06	-3.30764E+01	-2.92579E+01	4.45262E-01
1410	5339-3	3.77149E-06	-6.80643E-04	4.45470E-06	1.34089E+01	2.06843E+01	-2.59116E-01
1411	5340-2	1.22597E-03	1.15888E-03	1.91683E-05	-3.29712E+01	3.04865E+01	5.46611E-01
1412	5340-3	5.63329E-04	6.71230E-04	9.95939E-06	-1.33421E+01	2.13900E+01	3.07120E-01
1413	5341-2	6.53545E-07	-1.43956E-04	2.65176E-07	1.81990E+01	9.20483E+00	-6.54264E-02
1414	5341-3	3.76389E-07	-2.43402E-04	2.42202E-07	-1.08059E+00	3.88076E+00	-9.94892E-02
1415	5342-2	1.49347E-04	-1.45267E-04	9.35604E-07	1.82069E+01	-9.15285E+00	-5.84530E-02
1416	5342-3	-2.00767E-05	2.42992E-04	2.43353E-07	1.08081E+00	3.89557E+00	1.01148E-01
1417	5343-2	-1.15317E-09	-6.44308E-08	-1.42924E-08	1.09976E-04	-5.76277E-04	-5.10333E-05
1418	5343-3	-2.08666E-09	1.77745E-08	1.45083E-08	-5.53334E-05	-4.07112E-05	-3.26918E-05
1419	5344-2	-2.43844E-08	-3.65004E-07	1.38687E-08	-1.49563E-03	-8.58119E-03	-1.18882E-04
1420	5344-3	-1.23259E-08	-6.78242E-08	3.15581E-08	-3.75496E-04	-2.02551E-03	4.57027E-06
1421	5345-2	-2.60779E-08	-2.12607E-07	-6.41870E-09	-2.24716E-04	-3.32955E-03	-7.51022E-05
1422	5345-3	1.53754E-08	1.01341E-07	-6.33462E-09	2.18675E-04	1.58182E-03	3.04513E-05
1423	5346-2	-3.62098E-08	-2.39611E-07	1.66756E-08	-1.98424E-03	-9.92162E-03	-1.15337E-04
1424	5346-3	-1.57964E-08	-8.04320E-08	6.77416E-09	-1.03848E-03	-4.75451E-03	-3.74031E-05
1425	5347-2	-2.75137E-08	-3.23185E-07	-1.34058E-08	-4.30463E-05	-6.00737E-03	-5.37410E-05
1426	5347-3	-4.65169E-08	-7.04142E-08	1.59168E-08	-1.33751E-03	-3.31227E-04	-2.26614E-05
1427	5348-2	9.53576E-08	2.85546E-07	9.81627E-09	3.74738E-03	2.88224E-02	5.15283E-05
1428	5348-3	1.05209E-07	5.83713E-07	-7.41744E-09	6.98729E-03	3.90053E-02	9.08546E-05
1429	5349-2	2.39978E-08	2.26567E-08	-6.87277E-09	6.35223E-04	1.05981E-03	1.11504E-05
1430	5349-3	3.18874E-07	4.23891E-06	2.23604E-07	-3.54616E-03	1.21479E-01	7.45623E-04
1431	5350-2	9.19927E-08	5.03857E-07	-2.23067E-08	5.87843E-03	3.31157E-02	9.15931E-05
1432	5350-3	1.74265E-06	-6.23496E-07	1.05047E-07	2.73767E-02	3.70762E-01	-2.65641E-05
1433	5351-3	-4.25142E-08	1.34290E-09	4.42761E-09	-3.93752E-04	3.38688E-02	1.88630E-08
1434	5352-2	-9.05918E-08	-9.34367E-05	4.94322E-07	-1.87572E-01	-5.86653E+00	-2.88269E-02
1435	5352-3	6.13773E-08	-4.90386E-06	4.16185E-08	-8.35631E-03	-2.75836E-01	-1.12258E-03
1436	5353-2	-5.54614E-07	-9.42461E-05	-1.84648E-08	-1.10247E+00	4.15240E+00	-2.89465E-02
1437	5353-3	-1.86558E-07	4.96474E-06	2.08075E-09	-9.64762E-03	-7.77489E-02	1.12876E-03
1438	5354-2	-3.38378E-06	-1.27020E-04	-7.47617E-07	3.51584E-02	-1.00326E+01	-5.90904E-02
1439	5354-3	5.98320E-07	-1.77507E-05	2.15487E-07	4.27714E-04	-1.17450E+00	-7.75117E-03
1440	5355-2	-8.12738E-05	-1.24892E-04	1.12320E-06	3.65017E-01	9.40675E+00	-6.28934E-02
1441	5355-3	1.03458E-05	1.69293E-05	-8.08955E-07	8.43883E-01	-8.44472E-01	8.03389E-03
1442	5356-2	1.62570E-06	-3.40111E-04	-1.25031E-06	-1.16687E+00	-9.62852E+00	-1.44007E-01
1443	5356-3	-7.73197E-07	-9.45949E-05	6.14178E-07	-4.95243E-01	-8.11267E+00	-4.00608E-02
1444	5357-2	1.26321E-04	-3.45301E-04	4.73548E-07	-4.99849E-01	1.13729E+01	-1.38039E-01
1445	5357-3	-1.39480E-04	1.05603E-04	2.88621E-07	3.54093E-01	-8.57330E+00	3.25229E-02
1446	5358-2	-1.08985E-07	-6.31736E-06	2.15102E-07	-1.55456E+00	7.31024E-01	-2.21625E-03
1447	5359-2	4.73394E-06	-5.66098E-06	-1.77527E-07	-1.55627E+00	-7.41346E-01	-2.05766E-03
1448	5360-1	2.68116E-05	-1.87143E-04	7.48320E-06	7.12744E-02	-5.24471E+01	-7.39907E-02
1449	5360-2	6.80592E-06	-3.32831E-05	4.47394E-06	1.01665E-01	2.72614E-02	-5.90010E-03
1450	5360-3	-2.19373E-06	-6.28694E-05	-4.85634E-07	-5.56202E-01	1.07440E+01	6.81702E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 226

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1451	5361-1	5.96158E-05	1.83904E-04	7.86200E-06	-7.09271E-02	-5.21843E+01	8.57086E-02
1452	5361-2	-7.56683E-06	-3.37091E-05	-4.36948E-06	1.05193E-01	5.78901E-03	-5.48275E-03
1453	5361-3	4.16267E-05	6.44476E-05	2.75812E-07	5.64063E-01	1.08325E+01	3.02986E-03
1454	5362-2	3.29537E-08	-9.95601E-07	3.21139E-07	5.29397E-02	2.44301E-02	-1.41957E-03
1455	5363-2	1.24186E-06	-6.23834E-07	-3.19245E-07	5.21115E-02	-3.21919E-02	-1.22887E-03
1456	5364-2	-9.30387E-07	1.58612E-04	-1.18724E-06	4.49470E+00	-4.89214E+00	5.85298E-02
1457	5365-2	-1.05209E-05	1.52877E-04	1.18790E-06	4.50627E+00	4.98857E+00	5.65346E-02
1458	5366-3	3.98366E-05	6.42970E-06	-8.27253E-08	-8.48308E-02	-1.49129E+00	4.18241E-03
1459	5367-2	-1.44369E-05	-7.35992E-05	4.52825E-07	-5.46531E-01	-5.18658E+00	-2.67870E-02
1460	5367-3	1.40509E-05	-2.12437E-06	-4.11533E-08	-1.84988E-01	-6.15405E-01	9.36436E-04
1461	5368-2	-7.07655E-06	-7.13214E-05	1.04499E-06	-4.40113E-01	2.02053E+00	-2.53920E-02
1462	5368-3	8.31914E-06	3.24173E-06	7.91408E-09	5.76975E-01	-6.43070E-01	9.69211E-04
1463	5369-2	-1.25008E-05	-1.77961E-04	-1.91388E-06	-3.18596E-02	-1.13620E+01	-7.88993E-02
1464	5369-3	1.26409E-05	-1.10018E-04	3.95435E-07	1.03216E+00	2.87688E+00	-3.94395E-02
1465	5370-2	-6.26125E-05	-1.95547E-04	-1.88936E-06	2.31412E-01	1.10533E+01	-8.70017E-02
1466	5370-3	-2.44895E-04	4.55056E-05	3.94756E-06	-4.02271E+00	1.30168E+00	9.43399E-03
1467	5371-2	6.72499E-07	-9.38214E-04	-1.69775E-06	9.75894E-01	-1.68383E+01	-3.82227E-01
1468	5371-3	-6.07863E-07	-4.12403E-04	2.20763E-06	4.05507E-03	-1.35806E+01	-1.69096E-01
1469	5372-2	4.70749E-06	-9.34505E-04	2.36315E-06	1.45340E+00	1.87108E+01	-3.81697E-01
1470	5372-3	6.57933E-05	4.42567E-04	4.60571E-06	2.19559E-02	-1.34963E+01	1.78888E-01
1471	5373-2	-5.55876E-06	3.14569E-05	-1.45359E-07	-2.56205E+00	-6.25057E-01	1.15151E-02
1472	5374-2	2.49805E-05	4.35019E-05	4.46075E-07	-2.56196E+00	6.93339E-01	1.56675E-02
1473	5375-1	1.40606E-05	-5.04362E-05	-1.19792E-06	-9.48805E-02	-5.73453E+01	-6.22762E-02
1474	5375-2	-2.00545E-07	-4.53087E-06	-1.34087E-07	2.06390E-02	-7.93892E-01	-1.26530E-03
1475	5375-3	-2.47527E-06	-2.49931E-05	1.71090E-06	-6.19556E-01	1.13440E+01	2.90450E-03
1476	5376-1	5.80131E-05	4.91164E-05	-9.96434E-07	7.94343E-02	-5.72471E+01	7.14490E-02
1477	5376-2	2.67716E-06	-5.24467E-06	3.24555E-07	2.61113E-02	8.48902E-01	-9.91301E-04
1478	5376-3	6.15068E-05	2.61907E-05	2.57545E-06	6.14460E-01	1.14336E+01	4.27685E-03
1479	5377-2	-7.86612E-07	-5.34157E-06	1.40086E-07	3.08044E-02	1.99988E-01	-1.91504E-03
1480	5378-2	2.24519E-05	6.80546E-07	6.13409E-08	2.90003E-02	-1.74469E-01	9.15459E-04
1481	5379-2	-1.39614E-05	3.00247E-04	-2.99873E-06	7.89026E+00	-1.25434E+01	1.05917E-01
1482	5380-2	-4.62085E-04	2.10988E-04	-6.02562E-07	7.93186E+00	1.23809E+01	5.54646E-02
1483	5381-2	-9.08836E-09	-1.80890E-07	-3.60483E-09	-6.24351E-07	-3.58049E-04	-8.18301E-05
1484	5381-3	-5.28354E-09	-1.86300E-07	2.64662E-08	-5.62897E-05	1.18542E-03	-8.96572E-05
1485	5382-2	-8.15401E-08	-4.93037E-07	-3.11165E-08	-8.83052E-04	-9.09504E-03	-2.01428E-04
1486	5382-3	-1.64639E-08	1.67586E-07	-9.29280E-09	-2.18929E-04	-5.30856E-03	8.28987E-05
1487	5383-2	-7.53736E-09	6.57410E-08	9.66496E-09	-1.31055E-04	-1.61408E-03	-3.16207E-05
1488	5383-3	1.06181E-09	-8.65018E-08	-2.36453E-09	1.10615E-04	5.09789E-04	-4.13213E-08
1489	5384-2	-1.07889E-07	-4.45621E-07	-4.69951E-08	-1.03174E-03	-1.15125E-02	-2.03441E-04
1490	5384-3	-5.10769E-08	-2.46910E-07	-2.72236E-08	-4.79337E-04	-5.68036E-03	-1.01870E-04
1491	5385-2	-4.46439E-09	-5.35039E-09	2.39221E-09	1.03577E-04	-4.14486E-03	-5.33321E-06
1492	5385-3	1.28841E-08	6.64798E-07	4.55567E-08	-7.64735E-04	3.12546E-03	9.97740E-05
1493	5386-2	2.01387E-07	6.79201E-07	1.38440E-07	2.15785E-03	3.09143E-02	2.54297E-04
1494	5386-3	3.40519E-07	1.60068E-06	2.68394E-07	3.42853E-03	4.71267E-02	5.72656E-04
1495	5387-2	-1.48344E-08	-5.19987E-07	-2.66209E-08	2.50552E-04	-4.66264E-04	-8.07553E-05
1496	5387-3	-5.72192E-08	-1.06073E-06	-3.32191E-08	-6.75174E-03	1.10864E-01	-7.59972E-05
1497	5388-2	2.97306E-07	1.06734E-06	2.03358E-07	2.90954E-03	3.89586E-02	4.30331E-04
1498	5388-3	1.95877E-06	1.17586E-06	1.12438E-07	2.29524E-02	3.33606E-01	3.56798E-04
1499	5389-3	-1.21221E-07	-1.28823E-09	1.06830E-08	1.26399E-02	6.93154E-02	-5.16763E-06
1500	5390-2	5.77269E-07	-7.00504E-05	2.92632E-08	4.53694E-01	-6.80106E+00	-2.85431E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 227

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1501	5390-3	-8.13026E-09	-3.40944E-06	6.32135E-09	1.55552E-02	-2.01756E-01	-1.26924E-03
1502	5391-2	-1.93222E-06	-6.98523E-05	1.31332E-06	1.01486E+01	-8.49706E+00	-2.86291E-02
1503	5391-3	1.64397E-07	3.36005E-06	-1.94522E-07	-1.62172E+00	2.12122E+00	1.27197E-03
1504	5392-2	3.40397E-06	-1.41780E-04	1.23462E-06	1.75234E+00	-1.23687E+01	-6.56979E-02
1505	5392-3	-3.11997E-07	-1.55469E-05	-3.18907E-07	2.28022E-01	-1.04372E+00	-6.81229E-03
1506	5393-2	3.35079E-05	-1.40196E-04	1.07924E-06	1.03769E+01	1.01158E+01	-6.33739E-02
1507	5393-3	-4.32214E-06	1.56053E-05	3.71654E-07	1.15506E+01	4.47627E+00	6.61908E-03
1508	5394-2	-1.08175E-07	4.02311E-04	-4.18803E-06	-1.29592E+01	-2.75940E+01	1.39776E-01
1509	5394-3	1.47003E-07	-9.26057E-05	9.77778E-06	-2.69612E+00	-2.10980E+01	-4.57851E-02
1510	5395-2	-4.42728E-05	3.97186E-04	3.06686E-06	-1.22688E+01	2.43648E+01	1.35876E-01
1511	5395-3	5.08085E-05	1.06200E-04	1.04220E-05	2.57637E+00	-2.08948E+01	5.11578E-02
1512	5396-2	-6.84052E-07	2.42627E-04	-2.58855E-06	-2.81090E-01	-6.89006E+00	8.86991E-02
1513	5397-2	-3.71391E-05	2.37155E-04	2.15788E-06	-2.54320E-01	7.13675E+00	8.47679E-02
1514	5398-2	-6.61030E-08	-7.91315E-06	-2.04682E-07	-1.08696E-03	9.91211E-01	-2.30022E-03
1515	5399-2	4.72636E-06	-7.39695E-06	2.55994E-07	-7.02036E-03	-1.01449E+00	-1.93250E-03
1516	5400-1	5.23339E-05	-1.41186E-04	1.88015E-06	-1.21795E-01	-6.33812E+01	-1.02061E-01
1517	5400-2	-2.85101E-06	-3.77849E-05	-1.39787E-06	1.93459E-02	-1.21938E+00	-1.08106E-02
1518	5400-3	9.87988E-07	-4.72579E-05	7.06087E-06	-2.94427E-01	1.23297E+01	-5.88470E-03
1519	5401-1	1.09085E-04	1.53823E-04	2.56321E-06	9.28102E-02	-6.32506E+01	1.12908E-01
1520	5401-2	4.01480E-06	-3.80220E-05	1.39955E-06	1.69107E-02	1.20484E+00	-1.07700E-02
1521	5401-3	6.44855E-05	7.68338E-05	8.09306E-06	2.15136E-01	1.20573E+01	1.85098E-02
1522	5402-2	2.33369E-08	-1.12536E-05	-1.33996E-07	6.33649E-03	2.03273E-01	-4.23240E-03
1523	5403-2	2.28625E-06	-1.08248E-05	1.60739E-07	4.17652E-03	-2.15556E-01	-3.97616E-03
1524	5404-2	-5.04747E-09	1.05840E-06	-2.71293E-08	-3.14927E-04	-7.45505E-03	3.92357E-04
1525	5404-3	-1.12548E-08	3.47010E-07	-9.43006E-09	-2.28522E-04	-7.76387E-04	1.06486E-04
1526	5405-2	-1.04595E-08	-1.35924E-07	-8.13472E-08	5.27250E-05	-1.32717E-02	8.06268E-05
1527	5405-3	1.93858E-08	-3.96406E-07	1.81175E-08	2.68763E-04	4.49063E-03	-1.25782E-04
1528	5406-2	2.42736E-08	4.90221E-07	-1.67338E-08	2.54494E-04	-5.06493E-03	2.43672E-04
1529	5406-3	-5.18880E-09	-1.56746E-07	1.07316E-08	-4.07169E-05	1.69794E-03	-7.55161E-05
1530	5407-2	5.71212E-09	-2.44202E-06	-1.28198E-07	1.38826E-03	-6.05217E-03	-4.98860E-04
1531	5407-3	-1.97489E-08	-1.91484E-06	-7.09715E-08	8.29694E-04	-4.19828E-03	-4.31766E-04
1532	5408-2	6.92789E-09	1.06084E-07	-3.75016E-09	8.97519E-05	-1.08220E-03	5.66591E-05
1533	5408-3	-2.39628E-09	-4.59115E-08	5.05433E-09	-3.19949E-05	1.05232E-03	-2.77233E-05
1534	5409-2	1.29563E-07	3.71427E-06	3.24289E-08	-8.89086E-04	2.32550E-02	9.72847E-04
1535	5409-3	3.36693E-07	1.40242E-05	2.86743E-07	-4.41426E-03	3.99999E-02	3.49186E-03
1536	5410-2	8.21963E-09	-8.19955E-07	6.65348E-09	3.09298E-04	1.68307E-05	-2.01566E-04
1537	5410-3	-8.18966E-08	9.04580E-06	-9.89994E-08	-3.21745E-03	-3.09587E-03	2.24689E-03
1538	5411-2	3.04997E-07	1.15776E-05	2.71410E-07	-3.68420E-03	3.56249E-02	2.85126E-03
1539	5411-3	1.44144E-06	2.22568E-05	1.79109E-06	-8.10026E-03	1.50531E-01	5.45748E-03
1540	5412-3	1.34571E-06	3.30830E-08	-1.25808E-07	-1.42835E+00	-5.18331E-01	1.24915E-04
1541	5413-2	4.00078E-06	-5.86722E-05	-2.00653E-08	-4.09107E-01	-6.83856E+00	-2.78688E-02
1542	5413-3	-2.75118E-07	2.76539E-05	-2.65087E-07	2.12213E-01	-2.46959E+00	9.65966E-03
1543	5414-2	6.73713E-07	-5.81749E-05	-1.09550E-06	2.63419E+01	4.67083E+00	-2.79660E-02
1544	5414-3	-1.52366E-09	-2.65488E-05	3.28806E-07	3.90690E+00	-1.02716E+01	-9.37735E-03
1545	5415-2	2.78197E-07	-1.06947E-04	-3.25534E-06	-4.66292E+00	-1.41992E+01	-5.46066E-02
1546	5415-3	-1.36056E-06	-3.53427E-05	-1.59956E-07	-1.38429E-01	1.31859E+00	-1.21863E-02
1547	5416-2	1.26246E-05	-1.08785E-04	5.38231E-06	-9.36924E+01	2.58273E+01	-5.43549E-02
1548	5416-3	-1.42115E-05	3.58636E-05	-2.24673E-06	-5.71910E+00	3.32797E+01	1.14182E-02
1549	5417-2	1.66683E-06	-7.71739E-04	-6.50348E-06	3.43584E+01	-4.11019E+01	-3.31808E-01
1550	5417-3	3.30818E-06	-4.00844E-04	5.08579E-05	4.91198E+00	-2.15931E+01	-1.56646E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 228

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1551	5418-2	-2.13039E-05	-7.71090E-04	5.49432E-06	5.25439E+01	4.20495E+01	-3.33242E-01
1552	5418-3	5.99409E-06	4.04959E-04	5.10959E-05	-1.16506E+00	-1.90678E+01	1.57014E-01
1553	5419-2	-2.23855E-06	3.18721E-04	-4.19463E-06	-2.89131E-01	-2.31933E+01	1.04526E-01
1554	5420-2	-2.39491E-05	3.16252E-04	3.68659E-06	1.14934E-01	2.63025E+01	1.02206E-01
1555	5421-2	5.67065E-07	8.37062E-05	1.14181E-06	7.61712E-02	-4.64730E+00	2.71768E-02
1556	5422-2	-5.13160E-06	8.28608E-05	-1.24790E-06	4.27998E-02	5.48027E+00	2.65846E-02
1557	5423-1	2.29712E-04	5.61404E-04	2.35736E-05	-3.27641E-01	-7.08855E+01	4.94224E-02
1558	5423-2	-7.35408E-05	3.17181E-03	-6.16240E-05	-1.04606E+00	4.87463E-02	7.86155E-01
1559	5423-3	-3.67450E-06	4.89334E-05	3.21702E-05	-5.09543E-02	7.44426E+00	2.71212E-02
1560	5424-1	2.84386E-04	-5.94362E-04	2.33859E-05	3.00511E-01	-7.09628E+01	-5.11919E-02
1561	5424-2	7.78448E-05	3.38313E-03	6.51904E-05	-1.12707E+00	2.44501E-01	8.38390E-01
1562	5424-3	3.68817E-05	1.99995E-04	3.73974E-05	-1.49246E-01	7.41977E+00	3.71536E-02
1563	5425-2	-2.69689E-06	1.50135E-05	-2.66167E-06	5.71878E-02	1.89567E-01	3.06290E-03
1564	5426-2	3.74239E-06	1.37046E-05	2.65239E-06	2.06598E-03	-2.06677E-01	2.79486E-03
1565	5427-3	-1.63393E-07	-3.07389E-08	5.66085E-08	-1.42314E-02	3.51430E-02	-6.64510E-06
1566	5428-2	7.46248E-06	-4.19147E-05	1.68771E-07	3.00756E-01	-9.07656E+00	-2.11992E-02
1567	5428-3	1.97742E-07	-1.60950E-06	5.59037E-11	2.40668E-03	-1.04578E-01	-7.58317E-04
1568	5429-2	3.28847E-06	-4.14863E-05	-1.87793E-06	-4.11784E+00	1.14732E+01	-2.13346E-02
1569	5429-3	-7.02608E-07	1.63071E-06	2.10098E-07	1.40806E+00	-1.88433E+00	7.36327E-04
1570	5430-2	2.67473E-06	-1.06113E-04	-5.71470E-06	1.37260E+01	-1.05616E+01	-5.57627E-02
1571	5430-3	-2.70810E-07	-9.04441E-06	-5.41332E-07	1.46876E+00	-5.14067E-01	-4.42645E-03
1572	5431-2	-3.95354E-07	-1.06329E-04	4.26237E-06	6.65472E+00	2.78277E+01	-5.57876E-02
1573	5431-3	-2.07926E-06	8.94345E-06	-4.51273E-07	-1.62530E+01	-1.63639E+01	4.26115E-03
1574	5432-2	1.18509E-06	-5.75929E-04	-1.30831E-05	-4.73183E+01	-5.73913E+01	-2.62118E-01
1575	5432-3	4.13524E-06	-2.56907E-04	1.00411E-04	-7.84708E+00	-2.50445E+01	-1.18057E-01
1576	5433-2	-1.02687E-05	-5.74694E-04	1.23911E-05	-4.75234E+01	5.82292E+01	-2.62518E-01
1577	5433-3	4.52601E-06	2.57800E-04	1.00600E-04	6.62481E+00	-2.82851E+01	1.17486E-01
1578	5434-2	-1.44683E-06	-3.06059E-05	1.77232E-06	2.25954E-02	3.85819E+00	-8.01514E-03
1579	5435-2	2.52815E-06	-3.06873E-05	-1.74853E-06	1.89216E-02	-3.87436E+00	-7.99596E-03
1580	5436-1	4.23419E-04	-9.01742E-05	-9.78239E-05	-1.17245E-01	-6.99866E+01	-1.32088E-01
1581	5436-2	-2.17236E-04	1.40203E-04	-1.29278E-05	-5.18410E-02	5.69422E-01	4.94429E-02
1582	5436-3	-1.10122E-05	1.34469E-04	2.46536E-04	-6.22407E-02	6.09947E+00	7.20561E-02
1583	5437-1	4.69186E-04	9.08156E-05	-9.75745E-05	5.24523E-02	-7.01666E+01	1.37026E-01
1584	5437-2	2.17085E-04	1.40613E-04	1.29218E-05	-3.09668E-02	-5.44258E-01	4.95692E-02
1585	5437-3	1.76697E-05	-1.27999E-04	2.46808E-04	-3.17916E-01	5.42890E+00	-6.84666E-02
1586	5438-2	-6.11841E-06	-2.60272E-05	8.33678E-06	1.37771E-02	1.20616E+00	-6.54744E-03
1587	5439-2	7.52325E-06	-2.60400E-05	-8.31922E-06	6.35137E-03	-1.22804E+00	-6.46980E-03
1588	5440-2	-1.41870E-06	3.27086E-04	-5.83017E-06	-2.40193E-01	-3.44620E+01	1.01598E-01
1589	5441-2	-1.29456E-05	3.26018E-04	5.61945E-06	-3.40333E-01	3.44872E+01	1.00510E-01
1590	5442-2	8.42430E-09	1.05171E-06	-2.05461E-07	-2.79347E-04	-1.66116E-02	4.38055E-04
1591	5442-3	1.95236E-08	-2.34785E-07	5.67234E-08	2.47053E-04	4.22424E-03	-5.55049E-05
1592	5443-2	-6.96629E-09	-5.14812E-07	2.02007E-07	2.09107E-04	9.72552E-03	-5.59939E-05
1593	5443-3	-6.20779E-09	-8.17916E-08	8.64363E-08	-1.73593E-04	3.22326E-03	-5.18625E-05
1594	5444-2	-2.43040E-08	1.85570E-06	-4.31505E-08	-8.56156E-04	-2.38846E-02	6.85454E-04
1595	5444-3	5.85063E-09	-5.49370E-07	-1.01032E-07	2.38914E-04	6.23594E-03	-2.05739E-04
1596	5445-2	-1.54086E-08	1.03809E-07	7.91282E-08	-3.50082E-04	1.53288E-02	6.61247E-05
1597	5445-3	-6.22227E-09	6.25670E-08	-6.80508E-08	-5.97193E-05	5.26805E-03	2.75825E-05
1598	5446-2	-2.22180E-08	-4.26933E-07	-1.29188E-07	2.40581E-05	-1.48467E-02	-2.02818E-04
1599	5446-3	2.26414E-08	9.03035E-07	1.06219E-06	-1.56465E-04	1.36424E-02	3.95873E-04
1600	5447-2	4.58435E-08	-3.89537E-07	4.22732E-07	-3.89754E-04	4.95362E-02	-4.43545E-04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 229

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1601	5447-3	5.78358E-08	-8.07312E-07	1.30329E-06	-5.78443E-04	4.02213E-02	-5.45091E-04
1602	5448-2	-5.93435E-08	-5.16041E-06	-6.35089E-06	1.24870E-03	-5.56569E-02	-2.18693E-03
1603	5448-3	1.58989E-07	1.05596E-05	1.94826E-05	-2.04196E-03	1.27302E-01	4.52241E-03
1604	5449-2	1.81264E-07	-4.83115E-06	6.58909E-06	-1.69544E-03	7.30812E-02	-2.19682E-03
1605	5449-3	5.25024E-07	-1.05573E-05	2.02568E-05	-6.74541E-03	1.71066E-01	-4.76534E-03
1606	1094-1	1.47248E-04	8.44329E-07	2.52228E-05	1.28469E+00	-2.11700E+02	7.86051E-03
1607	1094-2	-8.93692E-06	3.48503E-06	2.17436E-06	-2.03294E-01	-1.21405E+00	-9.60869E-03
1608	1094-3	4.02281E-06	5.40924E-07	2.99258E-05	3.83171E-01	-2.17604E+00	-1.42764E-04
1609	5451-2	-1.00190E-05	-2.06009E-05	-1.99907E-06	-1.19293E+00	-3.56583E-01	-1.90491E-02
1610	5451-3	1.22530E-05	1.71129E-05	2.63805E-05	2.82441E-01	-3.63399E+00	6.22155E-03
1611	5452-2	-6.70849E-06	-2.09225E-05	-4.36815E-07	-1.59792E+01	-1.79546E+01	-1.91828E-02
1612	5452-3	-1.00033E-05	-1.63323E-05	1.17426E-05	-1.48834E+00	-1.39834E+01	-6.00444E-03
1613	5453-2	-6.78322E-06	-1.14716E-04	-1.24366E-05	-2.85900E+00	-2.04897E+01	-6.88559E-02
1614	5453-3	8.90249E-06	-2.84845E-05	4.72714E-05	2.69812E-01	3.91509E+00	-8.35836E-03
1615	5454-2	-3.31071E-06	-1.09827E-04	1.25978E-05	5.55942E+01	7.35131E+01	-6.72450E-02
1616	5454-3	-2.93049E-06	3.07857E-05	4.76758E-05	1.50631E+01	1.33743E+01	9.10161E-03
1617	5455-2	-3.40830E-06	-7.28905E-04	-5.96196E-05	1.73418E+01	-1.43739E+02	-3.74924E-01
1618	5455-3	1.03233E-05	-5.43405E-04	2.41696E-04	2.35650E+00	1.70636E+01	-2.23446E-01
1619	5456-2	-1.57371E-05	-7.22819E-04	5.98767E-05	1.31712E+00	1.12749E+02	-3.73232E-01
1620	5456-3	3.59576E-06	5.46618E-04	2.42829E-04	-6.66985E+00	1.06639E+01	2.24012E-01
1621	5457-2	-1.86091E-05	-6.29760E-05	-3.77580E-04	-1.13855E-01	-1.14140E+01	-3.71842E-02
1622	5458-2	8.21666E-06	-6.21669E-05	3.78030E-04	-3.58519E-01	1.08570E+01	-3.69682E-02
1623	5459-1	9.16619E-04	3.67947E-04	-8.82889E-05	-3.08507E-01	-6.26683E+01	4.14631E-03
1624	5459-2	-2.63763E-04	3.01077E-03	6.60219E-04	-9.39923E-01	6.30369E-01	1.00598E+00
1625	5459-3	4.84168E-05	3.37939E-04	1.38790E-03	3.69473E-02	4.44423E+00	1.86622E-01
1626	5460-1	9.56516E-04	-3.65026E-04	-8.81262E-05	1.20491E-01	-6.30996E+01	3.87384E-04
1627	5460-2	2.62849E-04	3.00953E-03	-6.60241E-04	-9.16932E-01	-6.67084E-01	1.00569E+00
1628	5460-3	6.96306E-05	-3.38896E-04	1.38791E-03	-6.96779E-01	3.31225E+00	-1.85955E-01
1629	5461-2	-3.09626E-05	-6.53738E-05	-3.80115E-04	-1.48546E-02	-4.04197E-01	-3.70366E-02
1630	5462-2	2.91306E-05	-6.55988E-05	3.80208E-04	-1.12088E-01	2.23053E-02	-3.70890E-02
1631	5463-2	-1.33367E-05	4.33908E-04	-8.12240E-05	-6.37621E-01	-6.62629E+01	1.29069E-01
1632	5464-2	-1.26770E-05	4.38025E-04	8.21056E-05	-8.48947E-01	6.68304E+01	1.30217E-01
1633	5465-3	1.12012E-08	3.35760E-08	-1.78464E-08	-3.95863E-03	3.05008E-01	3.08444E-06
1634	5466-2	-5.66114E-06	3.32153E-06	-2.61222E-07	-2.68324E+00	1.62146E+01	-4.88651E-03
1635	5466-3	-2.00521E-07	6.51205E-07	2.61966E-08	-1.00763E-01	7.60817E-01	1.34038E-04
1636	5467-2	1.14115E-05	3.37638E-06	5.97275E-07	-1.78836E+00	-1.77576E+01	-4.19142E-03
1637	5467-3	-4.95970E-07	-6.47136E-07	2.82665E-08	9.99226E-02	8.06749E-01	-1.60509E-04
1638	5468-2	-7.55955E-07	-2.95364E-05	-2.69643E-06	-9.13596E+00	2.55415E+00	-1.86001E-02
1639	5468-3	-1.52971E-07	-1.39320E-07	-1.69964E-07	-8.13080E-01	7.69597E-01	-1.94026E-04
1640	5469-2	6.20180E-06	-3.00705E-05	3.32599E-06	-1.39840E+01	-1.55183E+01	-1.85936E-02
1641	5469-3	-9.20265E-07	1.38842E-07	-3.21530E-07	2.15116E+00	9.57713E+00	1.56762E-04
1642	5470-2	3.30849E-06	-1.01985E-03	-5.84922E-05	-9.80778E+00	-1.76927E+02	-4.49660E-01
1643	5470-3	1.09510E-06	-7.67878E-04	9.88954E-05	-1.02004E+00	1.09536E+02	-3.30331E-01
1644	5471-2	-6.84230E-06	-1.01440E-03	5.68730E-05	-8.46657E+00	1.81865E+02	-4.47247E-01
1645	5471-3	-1.70218E-06	7.68280E-04	9.91509E-05	-2.54046E-01	1.06426E+02	3.29958E-01
1646	5472-2	4.49390E-07	1.68900E-04	-6.14260E-06	-1.70852E-01	-3.42480E+01	5.32228E-02
1647	5473-2	-2.37533E-06	1.69523E-04	6.08867E-06	-1.95133E-01	3.42849E+01	5.34420E-02
1648	5474-2	-2.37032E-06	1.34389E-05	-2.75766E-06	-7.23861E-04	1.38329E+00	6.47998E-03
1649	5475-2	2.24529E-06	1.34132E-05	2.75076E-06	-1.86124E-02	-1.43378E+00	6.45767E-03
1650	5476-1	1.17981E-03	3.05199E-03	1.78320E-05	-1.20986E+00	-3.26124E+01	1.04286E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 230

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1651	5476-2	-4.38130E-04	-1.98554E-04	1.76543E-04	8.42353E-02	3.02303E+00	-4.79327E-02
1652	5476-3	-3.82221E-05	-7.52817E-04	2.56667E-04	4.32957E-01	-8.27917E-01	-2.74516E-01
1653	5477-1	1.21183E-03	-3.05347E-03	1.79683E-05	9.04426E-01	-3.33150E+01	-1.04055E+00
1654	5477-2	4.37915E-04	-1.98640E-04	-1.76523E-04	1.03527E-01	-2.99368E+00	-4.79479E-02
1655	5477-3	-2.45555E-05	7.52410E-04	2.56848E-04	-1.05303E+00	-2.10778E+00	2.74988E-01
1656	5478-2	-1.01381E-05	-2.05066E-05	-1.62912E-06	1.85849E-02	3.00048E+00	-6.48935E-03
1657	5479-2	1.04201E-05	-2.06360E-05	1.63388E-06	7.45148E-03	-3.03857E+00	-6.53635E-03
1658	5480-2	6.82066E-08	-3.21668E-06	1.46614E-07	1.37659E-03	-2.98840E-02	-1.15914E-03
1659	5480-3	-1.88133E-08	1.53994E-07	-6.52089E-09	-9.46721E-05	1.10094E-02	3.11492E-05
1660	5481-2	-7.01935E-08	-2.69622E-06	-1.26746E-07	1.64101E-03	3.48099E-02	-9.78553E-04
1661	5481-3	-2.94346E-08	1.39219E-07	-2.38795E-08	1.06086E-04	1.00519E-03	7.04820E-05
1662	5482-2	5.94474E-08	-2.02143E-06	1.09812E-07	9.18987E-04	-9.96089E-03	-6.97178E-04
1663	5482-3	-1.51586E-08	4.84590E-07	-2.03127E-08	-2.25474E-04	1.15154E-03	1.64149E-04
1664	5483-2	-8.65133E-08	-2.04069E-06	-1.36771E-07	1.51434E-03	2.59538E-02	-6.61925E-04
1665	5483-3	-3.94945E-08	-8.50735E-07	-6.95980E-08	6.67440E-04	1.35990E-02	-2.59460E-04
1666	5484-2	-1.60380E-07	5.31926E-06	-4.43627E-07	-2.28455E-03	9.23141E-02	1.94875E-03
1667	5484-3	1.10669E-07	-3.73865E-06	3.04941E-07	1.60035E-03	-6.53998E-02	-1.37398E-03
1668	5485-2	2.17377E-07	5.20598E-06	5.53487E-07	-3.47502E-03	-1.02255E-01	1.88360E-03
1669	5485-3	3.21326E-07	7.59068E-06	7.60977E-07	-5.42583E-03	-1.57588E-01	2.48856E-03
1670	5486-2	-3.09840E-07	1.33822E-05	-5.41556E-07	-5.26301E-03	1.09851E-01	5.24864E-03
1671	5486-3	1.04140E-06	-2.60450E-05	2.10039E-06	1.03317E-02	-1.34677E-01	-1.08878E-02
1672	5487-2	3.03709E-07	6.82844E-06	6.95087E-07	-4.86965E-03	-1.26513E-01	2.22572E-03
1673	5487-3	2.42843E-06	6.90121E-05	3.83607E-06	-3.90016E-02	-6.83256E-01	2.62339E-02
1674	5488-3	-1.00223E-05	-5.15032E-06	-7.29950E-07	5.04343E-02	4.95251E+00	-1.99133E-03
1675	5489-2	-1.08185E-06	-8.95297E-07	2.72228E-06	-1.51383E+01	1.40696E+01	-9.49921E-03
1676	5489-3	-1.25851E-06	-7.57957E-05	-2.34196E-06	-8.48844E-01	6.81030E+00	-3.54999E-02
1677	5490-2	8.83235E-06	-1.43398E-06	-4.32445E-06	-1.54067E+01	-1.73122E+01	-9.12426E-03
1678	5490-3	-1.82311E-06	7.51953E-05	-4.54213E-07	1.03369E+00	7.94723E+00	3.54249E-02
1679	5491-2	7.31093E-08	3.96927E-05	-2.90744E-06	-3.10607E+01	-7.78613E+00	1.41522E-02
1680	5491-3	-2.15385E-06	-3.20519E-04	-1.06990E-06	-1.54569E+00	3.21968E+00	-1.26088E-01
1681	5492-2	-3.61274E-06	4.12760E-05	7.55128E-06	-3.10382E+01	8.54719E+00	1.40945E-02
1682	5492-3	-7.78690E-06	3.20086E-04	8.42713E-06	1.45475E+00	1.54540E+00	1.25662E-01
1683	536-2	5.29852E-06	-1.87336E-04	-1.07627E-04	5.69797E+01	1.74194E+01	8.50629E-02
1684	536-3	-5.76676E-06	-1.72186E-03	4.03668E-05	7.21451E+00	7.36753E+02	-6.99296E-01
1685	1680-2	7.20983E-06	-1.81035E-04	1.05969E-04	5.69723E+01	-1.42426E+01	8.90352E-02
1686	1680-3	-7.56805E-06	1.72342E-03	4.10120E-05	-7.57757E+00	7.35384E+02	6.99465E-01
1687	5495-2	6.67154E-06	1.50963E-03	-5.18270E-06	-3.95675E-01	-5.02621E+00	6.06351E-01
1688	5496-2	-6.96885E-06	1.51071E-03	4.62563E-06	-4.03281E-01	5.11489E+00	6.06827E-01
1689	5497-1	1.54103E-03	5.86675E-03	5.84644E-06	-2.12718E+00	2.53876E+01	2.33606E+00
1690	5497-2	-3.16776E-05	5.96587E-03	-1.58946E-04	-1.97445E+00	1.05862E+00	1.95148E+00
1691	5497-3	1.84929E-06	-5.51385E-03	4.49748E-05	2.09946E+00	-6.56077E+01	-2.20093E+00
1692	5498-1	1.56738E-03	-5.87790E-03	6.08531E-06	1.80460E+00	2.47210E+01	-2.33798E+00
1693	5498-2	3.18724E-05	5.96506E-03	1.59096E-04	-1.98850E+00	-1.08141E+00	1.95101E+00
1694	5498-3	1.07080E-05	5.51579E-03	4.56341E-05	-2.34591E+00	-6.61406E+01	2.20180E+00
1695	5499-2	-1.18587E-05	1.23739E-03	3.79413E-05	-2.73170E-01	3.46989E+00	5.10075E-01
1696	5500-2	1.19654E-05	1.23751E-03	-3.81569E-05	-2.74471E-01	-3.44380E+00	5.10122E-01
1697	5501-2	4.09585E-07	1.16941E-03	-6.01078E-05	-1.69980E+00	-1.91324E+02	3.78257E-01
1698	5502-2	-3.52601E-06	1.17405E-03	5.89179E-05	-1.84288E+00	1.91242E+02	3.80605E-01
1699	5503-2	-7.10266E-08	-1.17159E-05	-4.99600E-08	4.18978E-03	-7.66750E-02	-4.75529E-03
1700	5503-3	1.61077E-08	3.51649E-06	1.72689E-08	-1.25604E-03	3.03776E-02	1.42377E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 231

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1701	5504-2	9.49247E-08	-1.52361E-05	1.32279E-07	5.87922E-03	1.27464E-01	-6.24012E-03
1702	5504-3	1.97687E-08	-4.35015E-06	5.36951E-08	1.68694E-03	4.32090E-02	-1.77334E-03
1703	5505-2	-5.72940E-08	-1.08568E-05	-5.84671E-08	3.86762E-03	-9.05701E-02	-4.40980E-03
1704	5505-3	1.82476E-08	3.38948E-06	1.25061E-08	-1.20908E-03	2.75840E-02	1.37816E-03
1705	5506-2	6.45736E-08	-1.24368E-05	1.01093E-07	4.81768E-03	1.18058E-01	-5.08263E-03
1706	5506-3	1.99212E-08	-3.84936E-06	3.75881E-08	1.49624E-03	3.56578E-02	-1.57524E-03
1707	5507-2	4.29946E-09	1.17606E-05	-9.80498E-08	-4.37995E-03	9.44316E-02	4.77847E-03
1708	5507-3	-8.92524E-09	-9.23728E-06	6.78412E-08	3.41992E-03	-7.69554E-02	-3.75287E-03
1709	5508-2	-5.17049E-08	1.85899E-05	-2.62829E-08	-7.46301E-03	-1.88457E-01	7.65582E-03
1710	5508-3	-4.32457E-08	1.42521E-05	-2.27234E-08	-5.69426E-03	-1.46286E-01	5.86432E-03
1711	5509-2	5.24926E-08	1.78143E-05	-1.25167E-07	-6.53155E-03	1.53096E-01	7.18049E-03
1712	5509-3	2.62398E-06	-3.83568E-05	1.82893E-06	1.59274E-02	-1.69274E+00	-1.43203E-02
1713	5510-2	-9.00097E-08	2.40510E-05	-1.53128E-08	-9.62287E-03	-2.38494E-01	9.81148E-03
1714	5510-3	2.87472E-06	4.31409E-05	1.86582E-06	-2.44168E-02	-1.85467E+00	1.60430E-02
1715	5511-3	-2.34950E-08	1.94299E-08	2.91177E-08	-7.09894E-04	1.75819E-01	7.02651E-06
1716	5512-2	1.47816E-06	1.19580E-05	3.95776E-06	1.02631E+01	1.83257E+01	-1.74365E-03
1717	5512-3	-4.91747E-09	9.50478E-07	1.87743E-07	3.48166E-01	8.79052E-01	1.97203E-04
1718	5513-2	5.71076E-06	1.18787E-05	-3.67278E-06	9.96768E+00	-2.09139E+01	-1.44160E-03
1719	5513-3	-3.24763E-07	-9.44135E-07	1.67803E-07	-3.42218E-01	9.33576E-01	-2.31910E-04
1720	5514-2	8.27475E-07	6.52089E-05	6.57134E-06	1.64171E+01	3.54691E+01	2.12402E-02
1721	5514-3	-6.86910E-07	6.13739E-06	8.38724E-07	1.12666E+00	3.41466E+00	1.95608E-03
1722	5515-2	1.15796E-05	6.42466E-05	-7.92042E-06	1.67554E+01	-3.40722E+01	2.11054E-02
1723	5515-3	-1.43707E-06	-5.75959E-06	1.72807E-06	-1.06340E+00	4.04822E+00	-2.11536E-03
1724	5516-2	1.81220E-06	-1.98365E-05	-4.90584E-06	1.03546E+00	4.76198E+00	-7.73275E-03
1725	5516-3	-3.85279E-06	-9.35907E-04	1.85900E-05	7.32852E-01	1.26928E+02	-4.14504E-01
1726	5517-2	-7.53112E-06	-1.87262E-05	6.01486E-06	9.64322E-01	-3.72385E+00	-7.79040E-03
1727	5517-3	-3.81978E-06	9.39746E-04	1.81656E-05	-7.61672E-01	1.26649E+02	4.16247E-01
1728	5518-2	6.47192E-06	-1.21148E-03	-1.00813E-06	4.83959E-01	-1.56056E+02	-4.92779E-01
1729	5519-2	-6.62649E-06	-1.21113E-03	1.09709E-06	4.94609E-01	1.56054E+02	-4.92764E-01
1730	5520-1	1.31799E-03	-3.50230E-02	1.12554E-04	1.14344E+01	5.77774E+01	-1.47566E+01
1731	5520-2	2.93650E-05	8.21738E-02	-2.20045E-04	-2.71555E+01	8.36389E-01	3.43021E+01
1732	5520-3	-4.98618E-06	-2.25429E-03	-6.06483E-07	8.63740E-01	-1.78120E+02	-9.05740E-01
1733	5521-1	1.33603E-03	3.50152E-02	1.12778E-04	-1.16389E+01	5.73420E+01	1.47555E+01
1734	5521-2	-2.93710E-05	8.21692E-02	2.20141E-04	-2.71567E+01	-7.80422E-01	3.43001E+01
1735	5521-3	5.37022E-06	2.26386E-03	-5.01579E-07	-1.00762E+00	-1.78526E+02	9.10249E-01
1736	5522-2	1.63314E-05	-4.73058E-03	-3.70727E-05	1.56396E+00	-1.63102E+00	-1.96317E+00
1737	5523-2	-1.60815E-05	-4.72764E-03	3.70272E-05	1.56022E+00	1.58451E+00	-1.96194E+00
1738	5524-2	1.40973E-06	-1.72392E-04	-6.32440E-05	-4.58987E-01	9.83489E+02	-1.35971E-01
1739	5525-2	-1.64925E-06	-1.69924E-04	6.23749E-05	-4.88207E-01	-9.83476E+02	-1.34225E-01
1740	5526-3	1.41682E-06	4.89037E-06	-6.47607E-06	2.36084E-03	7.02671E+01	2.11320E-03
1741	5527-2	3.05675E-06	-1.39626E-04	2.28802E-06	6.99904E+01	3.42146E+01	-7.76112E-02
1742	5527-3	1.46483E-06	-1.10738E-04	-9.17190E-06	1.14104E+00	6.20391E+01	-4.93447E-02
1743	5528-2	9.01406E-07	-1.40622E-04	-4.53060E-06	7.00051E+01	-3.49636E+01	-7.72799E-02
1744	5528-3	-1.62896E-06	1.11601E-04	-7.16312E-06	-1.19315E+00	6.20837E+01	5.04329E-02
1745	5529-2	-6.71004E-07	-1.56179E-04	1.20993E-06	-6.39683E+01	1.09177E+02	-7.97804E-02
1746	5529-3	2.76207E-06	-3.02625E-04	-8.43263E-06	-4.16641E+00	3.38897E+01	-1.37028E-01
1747	5530-2	5.79114E-06	-1.56512E-04	-8.02522E-07	-6.40184E+01	-1.09502E+02	-8.36169E-02
1748	5530-3	9.08198E-06	3.05380E-04	-5.79054E-06	4.09961E+00	3.33497E+01	1.38011E-01
1749	5531-2	4.04640E-06	-1.96199E-04	-1.27148E-05	6.70788E+00	7.99468E+01	-9.69318E-02
1750	5531-3	-5.43938E-06	-6.81313E-04	2.66770E-05	1.86218E+00	-6.76775E+02	-3.39707E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 232

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1751	5532-2	-4.29350E-06	-1.98471E-04	9.84912E-06	6.78596E+00	-7.90733E+01	-9.63997E-02
1752	5532-3	4.40464E-07	6.86274E-04	2.40840E-05	-1.82943E+00	-6.76528E+02	3.42903E-01
1753	5533-2	-4.12254E-07	-1.07170E-03	3.07751E-06	1.23876E-01	4.45223E+01	-4.47552E-01
1754	5534-2	3.12808E-07	-1.07601E-03	-3.28285E-06	1.31694E-01	-4.45224E+01	-4.49277E-01
1755	5535-1	1.20673E-03	6.85250E-02	1.38390E-04	-2.28628E+01	1.09400E+02	2.84240E+01
1756	5535-2	4.39579E-04	1.23504E-01	1.31431E-04	-4.07530E+01	-3.68586E+00	5.12758E+01
1757	5535-3	4.29568E-05	-2.51526E-03	1.99503E-04	8.65286E-01	-2.41299E+02	-1.03313E+00
1758	5536-1	1.21929E-03	-6.84058E-02	1.35906E-04	2.26894E+01	1.07440E+02	-2.83720E+01
1759	5536-2	-4.41118E-04	1.23657E-01	-1.34657E-04	-4.08055E+01	1.68136E+00	5.13390E+01
1760	5536-3	4.71549E-05	2.76168E-03	1.94546E-04	-1.01197E+00	-2.44837E+02	1.13588E+00
1761	5537-2	-3.64017E-06	6.43728E-03	-1.07384E-04	-2.16613E+00	-5.02631E+00	2.67179E+00
1762	5538-2	3.59610E-06	6.42515E-03	1.07769E-04	-2.16289E+00	5.17838E+00	2.66673E+00
1763	5539-2	-9.65960E-07	-1.50287E-03	-7.76626E-05	-2.76630E-01	8.49466E+02	-6.94044E-01
1764	5540-2	-7.96916E-07	-1.50110E-03	7.66902E-05	-2.87515E-01	-8.49597E+02	-6.92394E-01
1765	5541-2	-1.81097E-07	-1.21860E-05	-2.91029E-07	4.17631E-03	-3.34939E-02	-5.02975E-03
1766	5541-3	6.03818E-08	4.15932E-06	1.28725E-07	-1.35597E-03	2.51069E-02	1.69757E-03
1767	5542-2	9.89542E-08	-2.59409E-06	1.30546E-07	9.91756E-04	-9.14731E-02	-1.03381E-03
1768	5542-3	1.51131E-09	1.83775E-06	1.35591E-08	-6.69600E-04	-5.91485E-02	8.14649E-04
1769	5543-2	-1.53505E-07	-9.93872E-06	-1.96608E-07	3.65566E-03	-7.24304E-03	-4.30185E-03
1770	5543-3	2.95006E-08	1.69892E-06	1.90831E-08	-7.46516E-04	-8.98022E-03	8.50791E-04
1771	5544-2	4.30843E-07	-3.42737E-05	7.20005E-07	1.18608E-02	3.76453E-01	-1.44971E-02
1772	5544-3	3.22299E-07	-2.91523E-05	5.79887E-07	9.98130E-03	3.89204E-01	-1.23329E-02
1773	5545-2	2.36467E-07	1.99502E-05	5.04239E-07	-6.01961E-03	2.59842E-01	7.74476E-03
1774	5545-3	-2.01712E-07	-1.71171E-05	-4.33105E-07	5.17005E-03	-2.15276E-01	-6.59762E-03
1775	5546-2	-5.59267E-07	5.35926E-05	-1.19968E-06	-1.71069E-02	-7.16619E-01	2.15029E-02
1776	5546-3	-2.44400E-06	2.34882E-04	-4.86127E-06	-7.79131E-02	-3.29834E+00	9.70822E-02
1777	5547-2	-1.17668E-07	7.02749E-05	-2.27912E-07	-2.34682E-02	2.83938E+00	2.90626E-02
1778	5547-3	6.02652E-06	8.67541E-05	1.12934E-05	-2.71899E-02	-9.44570E+00	3.60263E-02
1779	5548-2	-2.12206E-06	2.38842E-04	-4.26150E-06	-7.96539E-02	-4.10963E+00	9.89565E-02
1780	5548-3	-3.41638E-06	1.01382E-03	-7.76646E-06	-3.42669E-01	-2.87430E+01	4.21584E-01
1781	5549-3	-2.86054E-08	-2.59169E-08	6.41821E-08	-1.86170E-04	2.29758E-01	-7.33130E-06
1782	5550-2	2.67053E-06	1.43003E-06	7.92877E-06	-3.92726E+00	2.12248E+01	-5.43621E-03
1783	5550-3	1.11416E-07	1.62690E-08	4.21191E-07	-9.68856E-02	9.72946E-01	-4.88433E-04
1784	5551-2	1.93465E-06	1.33809E-06	-6.60294E-06	-3.91058E+00	-2.19083E+01	-5.55325E-03
1785	5551-3	-1.33477E-07	1.02333E-07	2.55862E-07	9.69694E-02	9.98578E-01	3.37023E-04
1786	5552-2	5.15747E-07	-7.32181E-06	5.50686E-06	9.40069E+00	6.10139E+01	-1.05473E-02
1787	5552-3	2.92457E-07	-2.08341E-07	-3.82234E-08	7.48747E-01	4.72591E+00	2.99279E-04
1788	5553-2	4.04146E-06	-8.10865E-06	-6.71738E-06	9.34164E+00	-6.12632E+01	-1.03862E-02
1789	5553-3	-6.14945E-07	-4.42861E-08	3.05922E-07	-7.38245E-01	4.80069E+00	6.21234E-04
1790	5554-2	6.52186E-07	-1.05063E-05	-3.83414E-06	-2.45008E+01	-4.36615E+01	-4.62104E-03
1791	5554-3	-9.05064E-07	-4.96248E-04	1.64274E-05	-2.89963E+00	-7.86313E+02	-2.47579E-01
1792	5555-2	-6.18368E-06	-1.09434E-05	3.35600E-06	-2.44492E+01	4.44453E+01	-3.60641E-03
1793	5555-3	-7.01283E-07	5.02497E-04	1.59512E-05	2.92654E+00	-7.86602E+02	2.50784E-01
1794	5556-2	-1.57055E-06	2.26703E-04	7.68395E-06	-3.37640E-02	-1.11491E+02	1.03378E-01
1795	5557-2	1.48358E-06	2.23904E-04	-7.55535E-06	-2.97212E-02	1.11531E+02	1.02156E-01
1796	5558-1	4.21086E-04	-2.87173E-03	1.03541E-04	5.64054E-01	9.65233E+00	-8.73979E-01
1797	5558-2	2.20325E-04	6.32191E-04	8.77550E-05	-3.27341E-02	-8.70678E+01	3.73623E-02
1798	5558-3	1.59460E-05	-1.30284E-03	9.46363E-06	5.53295E-01	-3.58887E+02	-5.45962E-01
1799	5559-1	4.33545E-04	2.74956E-03	1.06008E-04	-6.06140E-01	1.10084E+01	8.24422E-01
1800	5559-2	-2.22555E-04	7.94625E-04	-9.11909E-05	-8.65719E-02	8.49390E+01	1.05004E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 233

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1801	5559-3	1.90307E-05	1.47532E-03	5.96875E-06	-6.43250E-01	-3.61386E+02	6.16826E-01
1802	5560-2	-1.08256E-06	-2.48426E-04	1.97494E-06	7.51140E-02	-2.84886E+01	-9.48998E-02
1803	5561-2	1.14142E-06	-2.52484E-04	-1.86817E-06	7.66363E-02	2.85441E+01	-9.65827E-02
1804	5562-2	-6.89070E-07	-1.51798E-03	-5.69940E-05	1.89048E-01	1.18194E+03	-6.85583E-01
1805	5563-2	-2.95815E-07	-1.51642E-03	5.66918E-05	1.85833E-01	-1.18195E+03	-6.84348E-01
1806	5564-2	-3.11280E-08	-2.07581E-06	-3.69222E-08	1.06636E-03	-7.40347E-03	-1.55629E-03
1807	5564-3	1.49851E-08	1.08652E-06	3.12451E-08	-4.01777E-04	5.05177E-03	5.20427E-04
1808	5565-2	3.31986E-08	-3.45054E-06	9.96602E-08	1.08242E-03	4.54918E-02	-1.58579E-03
1809	5565-3	2.09711E-08	-1.84364E-06	4.25491E-08	4.71174E-04	2.36757E-02	-6.24534E-04
1810	5566-2	-4.00273E-08	-3.27200E-06	-1.30305E-07	8.50669E-04	8.61371E-03	-1.59299E-03
1811	5566-3	-1.55264E-08	-6.94826E-07	1.98652E-08	6.80680E-04	-1.84369E-02	-7.31257E-04
1812	5567-2	6.49458E-09	-2.93072E-06	1.90227E-07	1.34551E-04	3.09382E-02	-6.71068E-04
1813	5567-3	-5.71222E-08	3.64941E-06	-3.21474E-08	-1.88436E-03	-4.06582E-02	2.23728E-03
1814	5568-2	-1.03606E-07	-8.80485E-06	-2.24273E-08	5.75853E-03	-1.23062E-01	-7.88360E-03
1815	5568-3	-1.96028E-07	-1.83159E-05	-1.15945E-06	-4.65628E-03	2.27707E-02	6.85368E-03
1816	5569-2	1.41411E-07	-1.12614E-05	-1.77047E-07	1.15522E-02	6.06396E-02	-1.45940E-02
1817	5569-3	-2.30449E-07	2.50195E-05	-1.65797E-06	8.61083E-03	-2.31050E-01	-1.11244E-02
1818	5570-2	2.69641E-07	1.38461E-05	7.03761E-07	-1.95288E-03	-9.66263E-02	2.23081E-03
1819	5570-3	3.26130E-08	-4.16804E-06	1.88462E-07	1.75166E-03	-1.00133E+00	-4.49354E-03
1820	5571-2	-2.81112E-07	1.79682E-05	-1.09905E-06	1.98464E-03	-5.94223E-02	-2.26633E-03
1821	5571-3	1.08477E-07	7.54521E-06	-4.93329E-07	8.61737E-03	-1.95355E+00	-4.34637E-03
1822	1100-1	6.33868E-05	-7.71967E-06	8.56665E-05	-4.68894E-02	7.41737E+01	1.07971E-03
1823	1100-2	1.28789E-06	7.40636E-06	1.54262E-06	4.93228E+00	-3.44955E-01	-2.53849E-03
1824	1100-3	-1.96369E-06	-6.70160E-06	-7.49553E-06	-1.32693E-02	8.45067E-01	-4.12348E-03
1825	5573-2	4.96202E-06	-6.86910E-05	3.50605E-07	-8.29094E+01	1.86358E+01	-4.23177E-02
1826	5573-3	4.29862E-06	-9.03630E-05	-6.37736E-06	-1.27112E+00	-1.90783E+01	-4.53431E-02
1827	5574-2	2.23639E-06	-6.91976E-05	-3.18520E-06	-8.29395E+01	-1.91264E+01	-4.51488E-02
1828	5574-3	8.06709E-08	8.95303E-05	-3.73394E-06	1.28206E+00	-1.90172E+01	4.42363E-02
1829	5575-2	-4.74744E-06	-2.61786E-04	7.64957E-06	7.54284E+01	5.30219E+01	-1.52601E-01
1830	5575-3	1.95493E-06	-3.59392E-04	-1.77798E-05	5.76916E+00	-6.34090E+01	-1.76966E-01
1831	5576-2	2.16906E-06	-2.63733E-04	-3.93786E-06	7.54448E+01	-5.30072E+01	-1.52061E-01
1832	5576-3	3.88887E-07	3.63315E-04	-1.38598E-05	-5.75590E+00	-6.33703E+01	1.79036E-01
1833	5577-2	-8.18611E-07	-3.30738E-04	-1.14924E-05	-8.87350E+00	3.19614E+01	-1.76550E-01
1834	5577-3	5.30261E-07	-1.26741E-06	2.61893E-05	-7.78724E-01	-3.69001E+02	-6.08315E-02
1835	5578-2	-4.13800E-06	-3.33355E-04	1.05141E-05	-8.87746E+00	-3.16043E+01	-1.78001E-01
1836	5578-3	-2.72556E-06	3.85318E-06	2.64882E-05	8.03899E-01	-3.69049E+02	6.31232E-02
1837	5579-2	-7.61632E-08	-1.25285E-04	-5.89445E-06	1.27959E-01	4.84227E+00	-4.96627E-02
1838	5580-2	-6.15667E-08	-1.25419E-04	5.92172E-06	1.30648E-01	-4.83107E+00	-4.94543E-02
1839	605-1	1.50557E-04	-1.42212E-03	1.42318E-06	-9.94795E-03	-2.27294E-01	1.17387E+00
1840	605-2	-8.41448E-06	3.20283E-04	2.50527E-05	-2.69790E-01	-1.59845E+01	-1.36478E+00
1841	605-3	-4.60024E-06	1.70117E-05	2.63989E-05	7.26595E-01	-2.09074E+02	-7.32848E-01
1842	945-1	1.59659E-04	1.41314E-03	1.07133E-06	-3.37436E-02	-4.75087E-01	-1.18269E+00
1843	945-2	8.83081E-06	3.20427E-04	-2.57922E-05	-2.58916E-01	1.57830E+01	-1.38029E+00
1844	945-3	-5.87565E-07	-9.62845E-06	2.37372E-05	-7.05136E-01	-2.10820E+02	6.84829E-01
1845	5583-2	1.83814E-06	-5.77397E-05	-1.01183E-05	-3.45372E-01	1.34649E+01	-8.68953E-02
1846	5584-2	-1.61765E-06	-5.64487E-05	1.01448E-05	-3.47105E-01	-1.34587E+01	-8.49628E-02
1847	5585-2	-3.46773E-07	-7.41341E-04	-3.59760E-05	-2.26053E-02	-1.29563E+02	-3.57014E-01
1848	5586-2	-7.39291E-07	-7.41924E-04	3.61990E-05	-2.24970E-02	1.29574E+02	-3.56855E-01
1849	5587-2	-1.04907E-09	-1.42912E-07	-1.51082E-08	-2.54464E-05	3.27419E-03	6.46281E-05
1850	5587-3	1.00415E-11	5.15110E-08	3.32534E-09	3.01041E-05	-2.00253E-03	-5.05660E-05

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 234

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1851	5588-2	-3.78567E-09	-2.26164E-07	4.51547E-08	-5.30275E-04	1.69175E-02	5.91080E-04
1852	5588-3	-1.95344E-09	-7.32865E-08	2.08800E-08	-2.72051E-04	8.69075E-03	3.13962E-04
1853	5589-2	-1.52355E-09	-1.84421E-07	-2.46103E-08	-7.74040E-05	9.18924E-03	9.08091E-05
1854	5589-3	5.09895E-10	4.99907E-08	-3.68490E-09	3.03883E-05	-3.10500E-03	-3.38046E-05
1855	5590-2	-4.91613E-09	-1.75210E-07	5.68964E-08	-6.10610E-04	2.18897E-02	6.87302E-04
1856	5590-3	-2.36973E-09	-2.91375E-08	2.20801E-08	-2.29035E-04	7.60825E-03	2.56830E-04
1857	5591-2	1.72754E-09	-1.41086E-07	-2.79081E-08	-2.74322E-04	2.24954E-02	4.78888E-04
1858	5591-3	3.24165E-10	4.30791E-08	2.20905E-08	1.49904E-04	-1.46593E-02	-2.87685E-04
1859	5592-2	4.52238E-08	-1.67818E-07	-1.72808E-07	3.30595E-03	-7.91997E-02	-3.32654E-03
1860	5592-3	4.98636E-08	-2.12229E-07	-1.70375E-07	3.51342E-03	-8.65550E-02	-3.60566E-03
1861	5593-2	-9.77503E-10	-7.29497E-08	-1.69603E-08	-1.62696E-04	1.12336E-02	3.61017E-04
1862	5593-3	-6.54700E-08	7.64150E-07	1.35130E-07	1.76546E-03	-1.66233E-01	-2.43095E-03
1863	5594-2	7.09065E-08	-2.46101E-07	-2.01327E-07	4.00169E-03	-1.27679E-01	-3.71883E-03
1864	5594-3	4.25163E-08	-1.92812E-06	-5.20448E-07	1.06421E-02	-6.27657E-01	-1.11752E-02
1865	5595-3	-9.14750E-08	-8.15510E-08	2.58313E-08	-2.25745E-03	2.58087E-01	-6.08704E-05
1866	5596-2	-4.99067E-07	2.59282E-05	2.75945E-07	1.10175E+01	3.89095E+00	1.40660E-02
1867	5596-3	-2.09695E-07	-9.11362E-07	1.00903E-07	2.81203E-01	5.57549E-01	-5.49818E-04
1868	5597-2	5.16854E-06	2.57620E-05	-6.22175E-08	1.09949E+01	-4.41016E+00	1.44165E-02
1869	5597-3	-2.78253E-07	7.73547E-07	2.12442E-07	-2.84005E-01	5.67644E-01	6.51881E-04
1870	5598-2	-9.19305E-07	-2.57312E-05	1.05928E-05	-2.16698E+00	2.03956E+00	-1.43237E-02
1871	5598-3	3.20166E-07	-2.83337E-06	1.36361E-06	-2.07650E-01	3.32564E-01	-2.56912E-03
1872	5599-2	3.74559E-06	-2.56973E-05	-1.03376E-05	-2.15315E+00	-2.10132E+00	-1.42102E-02
1873	5599-3	-4.81361E-07	3.01727E-06	9.66333E-07	2.05652E-01	3.47421E-01	1.72928E-03
1874	5600-2	-3.99194E-07	-5.18680E-05	1.76158E-06	-4.37614E+00	-3.16187E+01	-2.62255E-02
1875	5600-3	-1.93445E-06	-2.04183E-04	2.20950E-05	5.53127E-01	5.80553E+02	-1.84568E-01
1876	5601-2	-3.82674E-06	-5.16745E-05	-1.88993E-06	-4.37753E+00	3.19809E+01	-2.72874E-02
1877	5601-3	-3.68567E-06	2.07315E-04	2.18579E-05	-5.30508E-01	5.80861E+02	1.88739E-01
1878	5602-2	-4.10326E-08	1.63147E-05	1.83772E-06	1.15972E-02	7.53136E+00	2.81927E-02
1879	5603-2	-7.62281E-08	1.62441E-05	-1.83026E-06	1.25125E-02	-7.52585E+00	2.82763E-02
1880	5604-1	1.63401E-04	-6.70728E-04	-2.32423E-06	-1.07416E+00	3.24943E+01	1.73608E+00
1881	5604-2	-5.64511E-05	1.71786E-05	8.55643E-06	2.44669E+00	1.99733E+01	8.80735E-01
1882	5604-3	-1.07849E-06	1.29809E-04	-1.48585E-06	5.05613E-01	-3.99431E+01	5.42110E-01
1883	5605-1	1.70019E-04	6.77285E-04	-2.49860E-06	1.03528E+00	3.24369E+01	-1.72423E+00
1884	5605-2	5.66672E-05	1.72212E-05	-8.57233E-06	2.44605E+00	-1.99707E+01	8.80003E-01
1885	5605-3	1.23525E-06	-1.32757E-04	-1.60358E-06	-5.11045E-01	-4.01617E+01	-5.49588E-01
1886	5606-2	3.17098E-07	-5.08780E-05	-2.31319E-06	5.48583E-01	1.44241E+01	6.20849E-01
1887	5607-2	-1.57129E-07	-5.06606E-05	2.32972E-06	5.47964E-01	-1.44254E+01	6.21386E-01
1888	5608-2	5.83930E-08	-2.00558E-04	-3.28247E-05	-1.58083E-02	-1.23326E+02	-1.19666E-01
1889	5609-2	-8.26845E-07	-1.99586E-04	3.27729E-05	-1.98075E-02	1.23379E+02	-1.18937E-01
1890	5610-3	-1.02788E-06	-1.52592E-07	-5.96731E-06	6.71597E-02	-4.10300E+00	-2.00575E-04
1891	5611-2	1.60108E-06	1.39104E-04	-1.45758E-06	1.53807E+00	-1.06987E+01	9.52759E-02
1892	5611-3	-9.37853E-08	4.43325E-06	-5.18486E-06	6.68941E-01	3.49519E+00	3.47629E-03
1893	5612-2	7.46251E-06	1.40953E-04	1.50267E-06	1.64885E+00	1.01226E+01	9.70968E-02
1894	5612-3	-8.39576E-07	-1.40349E-06	-5.00165E-06	-4.74728E-01	3.80064E+00	-1.90399E-03
1895	5613-2	1.48128E-06	1.15455E-04	-5.77162E-06	-4.23625E-01	-1.93640E+01	8.15602E-02
1896	5613-3	-1.04337E-07	-5.36920E-05	2.77255E-06	2.71932E+00	1.17194E+01	-3.64297E-02
1897	5614-2	3.91841E-06	1.15180E-04	5.73287E-06	-4.27292E-01	1.90777E+01	8.22937E-02
1898	5614-3	-8.77675E-07	5.36883E-05	2.72105E-06	-2.72233E+00	1.17818E+01	3.63748E-02
1899	5615-2	1.75571E-06	1.87642E-04	-7.43106E-06	6.64713E-01	-1.16980E+02	1.15504E-01
1900	5615-3	-5.11570E-08	1.38569E-05	-7.18665E-07	1.80574E-01	-5.93418E+01	-5.57362E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 235

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1901	5616-2	1.14067E-06	1.87058E-04	7.45174E-06	6.57733E-01	1.16939E+02	1.15118E-01
1902	5616-3	-4.19078E-07	-1.38050E-05	-7.66876E-07	-1.80047E-01	-5.92523E+01	5.94276E-03
1903	5617-2	-4.84306E-06	-2.28550E-03	-1.49549E-04	-1.03014E+00	-4.24990E+02	-1.72949E+00
1904	5617-3	4.83456E-06	1.44812E-04	-1.53959E-08	1.79927E+00	3.18534E+02	8.54904E-02
1905	5618-2	-1.73009E-05	-2.26967E-03	1.49683E-04	-1.00489E+00	4.30490E+02	-1.72369E+00
1906	5618-3	3.19592E-06	-1.44828E-04	-1.78552E-07	-1.76251E+00	3.18822E+02	-8.26086E-02
1907	5619-2	1.93725E-07	-3.95405E-05	1.02608E-06	1.17890E+00	1.32113E+00	-8.38667E-02
1908	5620-2	1.01125E-07	-3.93515E-05	-1.05344E-06	1.18054E+00	-1.32875E+00	-8.34857E-02
1909	5621-1	2.83019E-04	-9.20721E-04	-2.24087E-05	-5.86588E-01	5.74878E+01	1.81790E+00
1910	5621-2	-6.10325E-05	1.10145E-03	1.38506E-05	-9.84878E-01	-1.13603E+01	-1.30292E-01
1911	5621-3	2.07242E-06	9.22001E-05	4.13775E-06	-1.24987E+00	-1.71444E+01	-1.32502E+00
1912	5622-1	2.89708E-04	9.29126E-04	-2.31816E-05	5.62244E-01	5.74778E+01	-1.79876E+00
1913	5622-2	6.15430E-05	1.10465E-03	-1.39055E-05	-9.84719E-01	1.14094E+01	-1.22620E-01
1914	5622-3	4.60923E-06	-8.62952E-05	4.28881E-06	1.24597E+00	-1.70531E+01	1.34095E+00
1915	5623-2	-2.54295E-06	-4.67575E-05	-1.84977E-05	-2.13103E+00	-1.05707E+01	-4.33489E-01
1916	5624-2	2.73459E-06	-4.66518E-05	1.84988E-05	-2.13122E+00	1.05641E+01	-4.33402E-01
1917	5625-2	-9.88075E-09	1.12788E-04	-6.56089E-06	-4.63470E+00	-1.32395E+02	5.74577E-02
1918	5626-2	-1.08817E-06	1.12646E-04	6.56051E-06	-4.63434E+00	1.32526E+02	5.71368E-02
1919	5627-2	1.13478E-09	-5.57926E-08	-1.11478E-08	6.89778E-05	-3.27032E-04	-1.02384E-04
1920	5627-3	-1.36705E-09	1.73625E-08	6.38177E-09	-2.92813E-05	2.57163E-04	1.35552E-05
1921	5628-2	1.88179E-09	-1.73136E-08	4.88371E-09	7.36889E-05	1.37675E-03	-3.97228E-06
1922	5628-3	2.14605E-09	6.77634E-09	1.00821E-08	4.85864E-05	3.39185E-04	2.54076E-05
1923	5629-2	2.66664E-09	-1.54442E-07	-1.04860E-08	1.38239E-04	-1.10726E-03	-4.74839E-04
1924	5629-3	-1.22414E-09	4.25360E-08	1.28107E-09	-2.95993E-05	3.67024E-04	1.29547E-04
1925	5630-2	-9.24007E-08	-6.83633E-07	8.58856E-09	-2.08415E-05	-1.83942E-02	-2.00474E-03
1926	5630-3	-7.54013E-08	-5.29390E-07	-1.10357E-09	-1.55779E-04	-1.44016E-02	-1.43456E-03
1927	5631-2	5.42869E-09	-1.95339E-07	-7.67868E-09	2.16800E-04	8.35059E-04	-3.64628E-04
1928	5631-3	-1.35198E-09	9.38631E-08	6.73614E-09	-1.14572E-04	-1.07877E-03	9.93562E-05
1929	5632-2	1.10851E-07	4.26575E-07	-3.22857E-09	5.18377E-04	-2.07545E-04	1.17490E-03
1930	5632-3	5.44866E-07	3.49224E-06	-6.99562E-09	1.63421E-03	8.40819E-02	9.17638E-03
1931	5633-2	2.74276E-07	-2.26656E-06	-6.91983E-10	2.56325E-03	-2.22630E-01	-2.89836E-03
1932	5633-3	-2.38916E-06	1.84284E-05	1.28375E-07	-9.17216E-03	9.20399E-01	3.13926E-02
1933	5634-2	4.97043E-07	3.12447E-06	1.43750E-09	2.44392E-03	2.04973E-01	9.95243E-03
1934	5634-3	-3.08181E-07	-5.66752E-06	5.67395E-08	2.18305E-02	1.81780E+00	7.98039E-03
1935	5635-3	1.64037E-07	1.80134E-06	6.89703E-06	3.28010E-02	-1.40943E-01	1.07291E-03
1936	5636-2	1.22176E-06	7.94196E-05	-2.45166E-06	-7.11730E-02	-9.48405E+00	5.29681E-02
1937	5636-3	1.05747E-07	3.86356E-06	-1.09333E-06	2.18864E-02	-1.74784E+00	5.47133E-03
1938	5637-2	3.53048E-06	7.93665E-05	2.43365E-06	-6.98687E-02	9.09951E+00	5.32783E-02
1939	5637-3	-4.34379E-08	-3.90254E-06	-1.04967E-06	-2.13874E-02	-1.73680E+00	-5.53231E-03
1940	5638-2	6.25394E-07	6.06147E-05	-2.44592E-06	-8.09291E-02	-1.15718E+01	3.72926E-02
1941	5638-3	1.17693E-07	-3.53063E-06	-8.07770E-07	1.24315E-02	-2.27115E+00	-8.95147E-04
1942	5639-2	9.18862E-07	6.00737E-05	2.39649E-06	-8.30427E-02	1.14353E+01	3.71293E-02
1943	5639-3	1.35073E-07	3.47717E-06	-7.75428E-07	-1.19428E-02	-2.27235E+00	8.91495E-04
1944	5640-2	1.85230E-06	1.60405E-04	-6.62527E-06	-8.28078E-03	-3.85598E+01	1.01637E-01
1945	5640-3	7.04676E-08	-1.85166E-05	-1.15723E-06	4.12691E-02	-4.26947E+00	-1.51474E-02
1946	5641-2	3.70426E-07	1.58011E-04	6.43294E-06	-1.12871E-02	3.83757E+01	1.00322E-01
1947	5641-3	1.04273E-06	1.85991E-05	-1.10919E-06	-4.18930E-02	-4.32151E+00	1.53809E-02
1948	5642-2	3.28359E-06	1.00676E-03	-1.11702E-04	-9.77813E-01	-2.02855E+02	4.09097E-01
1949	5642-3	-2.53298E-07	3.91169E-05	-9.11471E-06	7.69724E-01	-8.47148E+01	-1.76185E-02
1950	5643-2	-1.55377E-05	9.97441E-04	1.08954E-04	-9.61842E-01	1.99472E+02	4.02197E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 236

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1951	5643-3	-2.10793E-07	-3.72421E-05	-9.14160E-06	-7.58678E-01	-8.42737E+01	2.20010E-02
1952	5644-2	2.42415E-07	-9.97317E-06	-3.66097E-06	-5.40469E-02	1.74019E+00	-1.16446E-02
1953	5645-2	-1.75258E-07	-9.89886E-06	3.61724E-06	-5.33990E-02	-1.74977E+00	-1.14474E-02
1954	5646-1	2.33785E-04	-4.04337E-04	-1.22796E-07	-1.47070E-01	5.00500E+01	5.42607E-01
1955	5646-2	4.69133E-05	2.25853E-04	-6.26020E-05	-4.78586E-02	1.70961E+01	7.67307E-01
1956	5646-3	-3.60949E-06	4.05739E-04	-1.35117E-05	6.49387E-02	3.85456E+01	3.01038E-01
1957	5647-1	2.38990E-04	4.13521E-04	-1.86031E-06	1.19880E-01	5.01513E+01	-5.23202E-01
1958	5647-2	-4.66609E-05	2.31181E-04	6.23878E-05	-5.08402E-02	-1.70948E+01	7.76803E-01
1959	5647-3	-1.93562E-06	-4.02905E-04	-1.30566E-05	-6.72834E-02	3.85798E+01	-2.93465E-01
1960	5648-2	1.89065E-06	-4.44986E-05	-6.78865E-06	-1.40737E-02	-1.73804E+00	-2.35151E-02
1961	5649-2	-1.84892E-06	-4.46129E-05	6.78513E-06	-1.42570E-02	1.73978E+00	-2.36281E-02
1962	5650-2	1.54733E-07	1.36321E-04	4.57955E-07	-5.67433E-02	-8.09395E-01	7.14704E-02
1963	5651-2	-4.40262E-07	1.36065E-04	-3.98729E-07	-5.68847E-02	8.78426E-01	7.13575E-02
1964	5652-2	-1.21327E-09	-1.75233E-07	-2.38397E-08	-1.75943E-03	-2.58516E-03	1.20796E-04
1965	5652-3	-4.14165E-10	-9.58545E-08	1.78470E-08	8.99027E-04	-3.44316E-04	-4.24157E-04
1966	5653-2	7.74714E-09	1.90123E-07	1.79308E-08	-2.65906E-03	-2.38170E-02	8.53300E-04
1967	5653-3	-3.76876E-12	3.04003E-07	-5.82400E-09	-1.31207E-03	-1.30521E-02	7.19602E-04
1968	5654-2	-1.41577E-08	-3.21316E-07	-2.04608E-08	-2.30897E-03	-3.13926E-03	-7.95199E-04
1969	5654-3	2.72705E-09	7.18459E-08	-1.11947E-08	7.75262E-04	1.12897E-03	8.42243E-05
1970	5655-2	-3.80103E-08	6.73570E-07	1.61543E-08	-4.01607E-03	-6.73297E-02	4.22105E-04
1971	5655-3	-2.08371E-08	3.27231E-07	-1.04819E-08	-1.49494E-03	-3.11790E-02	2.48113E-04
1972	5656-2	8.84539E-09	-1.44441E-07	-7.64627E-09	-7.67720E-04	4.82640E-04	4.00639E-04
1973	5656-3	-5.24142E-09	8.99747E-08	1.22316E-08	4.33230E-04	-5.06745E-04	-1.96030E-04
1974	5657-2	1.30158E-07	-1.16799E-06	1.67146E-08	-1.13204E-03	1.24503E-01	2.60587E-03
1975	5657-3	2.43517E-07	-2.29195E-06	2.95750E-08	1.62937E-03	2.44246E-01	2.39048E-03
1976	5658-2	1.01782E-08	-6.23034E-09	-2.50046E-09	-1.89206E-04	-4.59778E-05	-5.62934E-07
1977	5658-3	-3.83668E-07	3.68836E-06	2.88123E-08	-9.03438E-04	1.17736E-01	6.09267E-03
1978	5659-2	1.66915E-07	-2.71148E-06	1.48460E-08	2.90593E-03	2.57124E-01	7.77970E-04
1979	5659-3	-4.19582E-07	-2.34990E-05	1.84559E-07	1.71261E-02	1.51397E+00	-1.40601E-02
1980	5660-3	1.76113E-07	8.23572E-07	1.63127E-05	2.28848E-03	-8.34009E+00	3.13212E-07
1981	5661-2	1.28580E-06	2.13456E-04	-5.55649E-06	-1.33963E-01	-6.25277E+00	1.33309E-01
1982	5661-3	3.03977E-07	-1.25459E-04	8.63933E-06	2.39448E-02	-3.58679E+00	-6.77195E-02
1983	5662-2	2.66044E-06	2.13675E-04	5.72915E-06	-1.31232E-01	5.98384E+00	1.33577E-01
1984	5662-3	-5.61543E-07	1.26322E-04	8.99991E-06	-2.38536E-02	-3.47432E+00	6.78930E-02
1985	5663-2	6.67784E-07	1.17424E-04	2.62455E-06	-1.86747E-01	-1.08887E+01	7.35042E-02
1986	5663-3	3.37077E-07	-1.06647E-04	-1.19651E-06	-3.11988E-02	2.02439E+00	-6.77338E-02
1987	5664-2	9.20954E-07	1.16312E-04	-2.64227E-06	-1.87515E-01	1.07235E+01	7.30792E-02
1988	5664-3	-3.90558E-07	1.06218E-04	-9.63985E-07	2.93032E-02	2.10132E+00	6.77809E-02
1989	5665-2	1.81941E-06	4.43475E-04	9.82577E-06	-1.69293E-01	-4.18902E+01	2.74778E-01
1990	5665-3	-6.01631E-09	-1.24725E-04	-8.64972E-06	2.34165E-01	-7.35927E+00	-7.50066E-02
1991	5666-2	1.67814E-06	4.37794E-04	-9.95843E-06	-1.74101E-01	4.14859E+01	2.71126E-01
1992	5666-3	-6.83461E-07	1.24163E-04	-8.58310E-06	-2.32184E-01	-7.22909E+00	7.56611E-02
1993	5667-2	8.69419E-07	1.96355E-03	2.06463E-04	3.12628E+00	-8.83144E+01	1.05376E+00
1994	5667-3	-3.29038E-06	-2.50676E-04	2.61645E-05	6.64555E+00	-4.00470E+01	-2.91634E-01
1995	5668-2	-1.04936E-05	1.93094E-03	-2.08362E-04	3.13358E+00	8.55715E+01	1.03089E+00
1996	5668-3	-1.41982E-06	2.56396E-04	2.50368E-05	-6.62423E+00	-3.96910E+01	3.04937E-01
1997	5669-2	1.47937E-07	1.33750E-04	5.57324E-06	-2.58171E-01	-5.52201E+00	8.36756E-02
1998	5670-2	3.65230E-08	1.34254E-04	-5.60571E-06	-2.56885E-01	5.52547E+00	8.49399E-02
1999	5671-1	2.02718E-04	-9.56440E-04	1.26351E-05	7.37372E-01	4.44258E+01	-7.14115E-01
2000	5671-2	8.13056E-05	1.92969E-04	-1.27679E-05	-1.15714E-01	3.65674E-01	1.84663E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 237

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2001	5671-3	2.33325E-06	6.58757E-04	5.08317E-06	-1.44999E-01	3.13484E+01	5.31750E-01
2002	5672-1	2.09672E-04	1.00793E-03	8.19963E-06	-8.12396E-01	4.81432E+01	8.44652E-01
2003	5672-2	-8.21959E-05	1.90361E-04	1.16982E-05	-1.20506E-01	-1.06611E-01	1.88274E-01
2004	5672-3	8.40899E-07	-6.80457E-04	6.51621E-06	1.62709E-01	3.25387E+01	-5.46709E-01
2005	5673-2	5.90083E-08	-3.17979E-05	-5.45911E-06	2.37511E-04	-1.15682E+00	-1.70915E-02
2006	5674-2	6.24341E-09	-3.09243E-05	5.44105E-06	-5.73926E-04	1.09491E+00	-1.64479E-02
2007	5675-2	-1.92056E-07	1.75950E-04	9.55651E-06	-9.20206E-02	6.89144E-01	9.82933E-02
2008	5676-2	-6.09342E-08	1.74864E-04	-9.42342E-06	-9.24346E-02	-6.11262E-01	9.72829E-02
2009	5677-3	-5.31945E-07	-7.66022E-07	9.29612E-06	-8.12282E-03	-1.97736E+00	-2.76144E-03
2010	5678-2	1.40928E-06	1.57446E-04	1.34410E-06	-3.37652E+00	-5.61553E+00	1.11863E-01
2011	5678-3	1.01038E-07	2.42985E-05	-6.24791E-07	-1.02089E-02	-1.56509E+00	1.68204E-02
2012	5679-2	2.07211E-06	1.57270E-04	-1.15631E-06	-3.37333E+00	5.35230E+00	1.12251E-01
2013	5679-3	6.41535E-09	-2.43110E-05	-6.09338E-07	1.01658E-02	-1.56626E+00	-1.69880E-02
2014	5680-2	6.72786E-07	1.31463E-04	3.56633E-06	-5.70680E-01	-8.11832E+00	8.92913E-02
2015	5680-3	-1.62527E-09	5.32027E-05	-1.74985E-06	5.04021E-02	-3.12963E+00	3.77665E-02
2016	5681-2	8.92906E-07	1.30628E-04	-3.21829E-06	-5.70152E-01	7.98750E+00	8.89947E-02
2017	5681-3	2.18461E-09	-5.31676E-05	-1.75282E-06	-4.97985E-02	-3.13528E+00	-3.79365E-02
2018	5682-2	3.16132E-06	7.98923E-04	6.46082E-06	8.10496E+00	-4.91842E+01	5.47932E-01
2019	5682-3	2.20431E-07	6.66200E-05	-1.26866E-06	7.71380E-01	-3.25706E+00	4.57083E-02
2020	5683-2	4.38520E-06	7.95816E-04	-3.67524E-06	8.11005E+00	4.85198E+01	5.47662E-01
2021	5683-3	-2.29220E-07	-6.65051E-05	-1.58115E-06	-7.72138E-01	-3.20517E+00	-4.56930E-02
2022	5684-2	-1.52097E-07	2.22687E-03	3.69202E-04	6.60351E+00	-1.93166E+01	1.40685E+00
2023	5684-3	-3.93592E-06	-1.04575E-03	5.14408E-05	1.11153E+00	-1.28529E+01	-8.43464E-01
2024	5685-2	-5.75540E-06	2.12265E-03	-3.62267E-04	6.65349E+00	1.71017E+01	1.33549E+00
2025	5685-3	-7.61273E-07	1.06262E-03	4.96816E-05	-1.09116E+00	-1.26363E+01	8.64689E-01
2026	5686-2	8.65055E-09	-2.41425E-05	-3.32477E-06	-4.40764E-02	-4.89784E-01	-9.82274E-03
2027	5687-2	1.01260E-07	-1.96262E-05	3.11331E-06	-5.25345E-02	2.65790E-01	-1.05199E-02
2028	5688-1	-2.97319E-05	-1.16415E-03	1.33870E-04	1.83198E+00	4.33291E+01	-2.24449E+00
2029	5688-2	1.88245E-05	-5.18474E-05	-2.80456E-05	-3.36543E-01	7.19947E-01	1.87204E-01
2030	5688-3	3.55987E-06	7.84001E-04	1.55679E-06	-1.15656E+00	3.49190E+01	6.18858E-01
2031	5689-1	-5.55695E-05	1.40398E-03	8.16541E-05	-2.73193E+00	5.03526E+01	2.83178E+00
2032	5689-2	-3.84859E-05	-7.57026E-05	1.92937E-05	-5.61016E-01	2.50241E+00	3.09160E-01
2033	5689-3	-2.25275E-06	-8.17153E-04	4.38287E-06	1.20258E+00	3.53532E+01	-6.00538E-01
2034	5690-2	-2.06333E-07	-2.26134E-05	-1.26632E-06	2.36722E-02	-4.67224E-01	-2.96164E-03
2035	5691-2	-1.06838E-07	-1.10023E-05	9.40096E-07	-5.89621E-03	-5.02370E-02	4.72261E-04
2036	5692-2	5.19344E-09	1.20974E-04	1.30278E-05	-1.92358E-02	2.68405E+00	7.78619E-02
2037	5693-2	-1.48671E-08	1.20491E-04	-1.30062E-05	-2.18144E-02	-2.66288E+00	7.60691E-02
2038	5694-2	5.53856E-08	-2.38325E-07	3.80467E-07	4.87453E-02	4.06689E-02	-1.32160E-02
2039	5694-3	-1.65466E-07	-5.09056E-07	6.08478E-08	-8.45181E-03	-3.65097E-02	-2.17233E-02
2040	5695-2	-2.73136E-07	-3.32546E-07	-2.78861E-07	4.56476E-02	-8.92726E-02	-2.01373E-02
2041	5695-3	3.54838E-07	9.03848E-08	9.50458E-08	-2.30323E-03	-3.81534E-02	2.30192E-02
2042	5696-2	2.73363E-08	-2.87998E-06	8.49818E-07	1.02700E-01	6.49689E-02	-3.69229E-02
2043	5696-3	-5.48967E-08	6.20475E-07	-4.94387E-08	-1.24348E-02	6.16641E-02	1.73335E-02
2044	5697-2	-7.06094E-07	-2.55714E-06	-5.88103E-07	1.00686E-01	-1.93942E-01	-5.15483E-02
2045	5697-3	2.32234E-08	-5.00554E-07	-3.68560E-08	1.59217E-02	3.59647E-02	-1.73534E-02
2046	5698-2	2.92055E-07	-9.03274E-07	5.49459E-07	7.76611E-02	1.11715E-01	-1.46070E-02
2047	5698-3	-9.70967E-08	1.23163E-06	-1.55348E-07	-2.52593E-02	3.53469E-02	4.19830E-03
2048	5699-2	-3.72046E-07	-5.16853E-06	-3.66168E-07	7.05239E-02	-8.64942E-03	-2.39835E-02
2049	5699-3	-7.79129E-08	-8.55842E-06	8.43337E-08	3.25246E-02	4.03870E-01	-1.01970E-02
2050	5700-2	5.83620E-08	1.81186E-07	-3.09304E-09	-1.75035E-02	4.60951E-02	1.72093E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 238

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2051	5700-3	3.05393E-07	2.48793E-07	-1.76014E-07	-8.84860E-02	2.69231E-01	1.42773E-02
2052	5701-2	-4.40988E-07	-6.45791E-06	-4.59765E-08	1.91175E-02	1.80335E-01	-6.94880E-03
2053	5701-3	5.22523E-07	-2.25471E-05	2.03891E-07	7.42876E-02	1.52354E+00	-4.34726E-02
2054	5702-1	5.44894E-06	-1.10167E-06	3.63108E-05	-2.29561E-02	3.35999E+01	-1.23940E-03
2055	5702-2	1.43447E-06	9.70016E-04	1.59270E-06	5.62317E+01	-1.65304E-02	6.71310E-01
2056	5702-3	-4.65960E-06	-5.01924E-06	2.21107E-05	-3.78263E-02	-1.71075E+01	-1.71806E-02
2057	5703-3	-1.95236E-06	3.27621E-04	2.83856E-05	3.12028E-01	-1.28018E+01	2.29897E-01
2058	5704-3	-6.36363E-06	-3.33089E-04	2.83481E-05	-3.62666E-01	-1.28613E+01	-2.60555E-01
2059	5705-2	9.79533E-07	9.98259E-04	7.65735E-05	1.51836E+02	5.40175E+00	6.85003E-01
2060	5705-3	-6.31394E-06	4.89987E-04	5.21917E-05	4.86943E-01	-1.19215E+01	3.67054E-01
2061	5706-2	-1.05001E-06	9.91569E-04	-7.22740E-05	1.51800E+02	-5.37398E+00	6.71163E-01
2062	5706-3	-9.68655E-06	-4.90119E-04	5.12975E-05	-4.72432E-01	-1.18944E+01	-3.94127E-01
2063	5707-2	1.92721E-06	2.06125E-03	2.86315E-05	-3.95133E+02	-4.61542E+01	1.42288E+00
2064	5707-3	-1.03840E-06	5.55388E-04	7.60966E-05	-3.56207E+01	-4.63735E+00	3.69493E-01
2065	5708-2	7.50188E-06	2.05492E-03	-2.20697E-05	-3.95139E+02	4.56158E+01	1.41277E+00
2066	5708-3	-3.76851E-06	-5.48482E-04	7.44874E-05	3.56944E+01	-4.64610E+00	-3.63328E-01
2067	5709-1	-3.88362E-06	4.58745E-03	2.42160E-06	9.46848E+00	1.71434E+02	3.33199E+00
2068	5709-2	1.08033E-07	5.89465E-03	8.55820E-04	1.24480E+02	8.48164E+00	4.02739E+00
2069	5709-3	-3.48524E-06	-2.06309E-03	-9.11653E-05	1.29788E+01	-3.94786E+01	-1.57950E+00
2070	5710-1	2.04444E-05	-4.56295E-03	-1.29210E-06	-9.67973E+00	1.70963E+02	-3.30235E+00
2071	5710-2	-3.53903E-08	5.97688E-03	-8.41006E-04	1.24532E+02	-7.92516E+00	4.08215E+00
2072	5710-3	-3.76487E-07	2.07439E-03	-8.41175E-05	-1.28945E+01	-3.95875E+01	1.59668E+00
2073	5711-2	-1.11998E-05	6.49904E-04	1.31078E-04	3.91185E-01	1.11412E+01	4.05580E-01
2074	5712-2	-1.07215E-05	6.38667E-04	-1.14253E-04	3.92185E-01	-1.09694E+01	3.89390E-01
2075	5713-2	-1.16774E-05	5.85796E-05	3.19068E-05	1.43931E+00	7.35418E-01	1.42665E-02
2076	5714-2	-1.30523E-05	5.62739E-05	-1.38479E-05	1.44054E+00	-8.77208E-01	3.49447E-03
2077	5715-1	-4.43603E-04	-2.21083E-03	4.92988E-04	8.26343E+00	5.21833E+01	-9.48065E+00
2078	5715-2	4.84797E-04	-8.39015E-04	-2.50504E-04	1.46213E+01	-7.89543E+00	3.93100E+00
2079	5715-3	-1.20768E-04	7.75073E-04	1.57673E-04	-1.68494E+01	4.07320E+01	8.09087E-02
2080	5716-1	-1.20927E-04	3.03073E-03	1.51961E-04	-7.93628E+00	6.00255E+01	1.18192E+01
2081	5716-2	4.31604E-05	-7.77241E-04	-1.94978E-05	6.33016E-03	6.05314E+00	3.42638E+00
2082	5716-3	-4.84415E-05	-7.79213E-04	3.73668E-05	8.06006E+00	3.86113E+01	-8.59589E-01
2083	5717-2	3.45206E-06	-8.47117E-05	-4.68798E-06	-3.11430E-01	-1.70551E+00	-1.11491E-01
2084	5718-2	-9.27946E-06	-7.86875E-05	3.48202E-06	1.34894E-01	1.59198E+00	-1.07290E-01
2085	5719-2	-1.16986E-05	1.96642E-06	-7.76450E-09	2.12231E+00	1.54320E+00	-1.64786E+00
2086	5719-3	1.02417E-05	4.24550E-04	-2.88327E-05	4.84543E+01	-8.89159E+00	-3.19868E-01
2087	5720-2	-1.98043E-07	1.96407E-06	-6.69801E-06	2.12889E+00	-1.56048E+00	-1.64635E+00
2088	5720-3	7.38366E-07	-4.36516E-04	-8.31667E-06	-4.85609E+01	-8.99267E+00	3.20509E-01
2089	5721-2	-1.13346E-05	-1.97049E-05	3.11369E-06	7.22652E-02	2.45670E-02	1.69004E+00
2090	5721-3	5.83578E-05	1.11292E-03	-5.14248E-05	3.54657E+01	-4.19848E+01	-5.05566E+00
2091	5722-2	2.83779E-07	-1.98917E-05	-4.97992E-06	7.09954E-02	-4.93267E-02	1.69082E+00
2092	5722-3	1.86425E-06	-1.12206E-03	-2.02761E-05	-3.55879E+01	-4.21218E+01	5.06390E+00
2093	5723-2	5.69858E-05	-6.59394E-06	-1.87815E-05	1.77469E+01	-4.90114E-01	1.29139E-01
2094	5723-3	-3.19754E-04	-1.65634E-04	7.44201E-05	3.46938E+01	2.10086E+00	-9.10613E-01
2095	5724-2	7.82075E-06	8.44371E-06	-1.17443E-05	1.80114E+01	3.65451E-01	1.10578E-01
2096	5724-3	3.80492E-05	2.40161E-04	-8.72662E-05	-3.33041E+01	1.55646E+00	8.04480E-01
2097	5725-2	1.28126E-06	2.16509E-02	-1.19541E-04	5.11425E-01	3.03032E+00	1.55026E+01
2098	5725-3	-2.36905E-05	-8.06796E-02	-5.03008E-04	-6.38853E+01	3.23156E+01	-5.73571E+01
2099	5726-2	7.97917E-07	2.16668E-02	1.18011E-04	5.13727E-01	-3.01026E+00	1.55130E+01
2100	5726-3	-4.69207E-06	8.07209E-02	-5.10265E-04	6.39512E+01	3.23995E+01	5.73642E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 239

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2101	5727-2	-3.72695E-07	1.86124E-03	1.90263E-04	5.52862E+00	3.42773E+01	1.37182E+00
2102	5727-3	-3.64252E-06	8.66048E-03	-1.38017E-04	-8.93729E+01	-1.35611E+01	6.05193E+00
2103	5728-2	2.20331E-06	1.89626E-03	-1.88692E-04	5.52327E+00	-3.45173E+01	1.39538E+00
2104	5728-3	-5.93398E-06	-8.62984E-03	-1.37306E-04	8.94131E+01	-1.36055E+01	-6.03694E+00
2105	5729-2	3.36458E-06	3.44921E-05	2.72158E-07	2.44715E+00	-2.95171E-01	4.46231E+00
2106	5729-3	1.29116E-05	-3.08391E-04	-1.57528E-05	-2.55910E+01	-4.06894E+01	-5.70831E+00
2107	5730-2	2.11312E-07	3.45725E-05	1.64957E-06	2.44484E+00	2.97703E-01	4.46098E+00
2108	5730-3	1.67011E-06	3.05651E-04	-9.59312E-06	2.55674E+01	-4.07475E+01	5.71056E+00
2109	5731-2	1.80786E-04	-1.81219E-04	-5.68130E-07	5.31677E+00	-8.87868E+00	-2.79395E+01
2110	5731-3	3.14580E-04	-4.67246E-04	-2.52352E-04	-1.46908E+02	1.80126E+02	7.57833E+00
2111	5732-2	2.40987E-05	-7.71073E-05	2.83769E-05	4.93346E+00	8.61017E+00	-2.83804E+01
2112	5732-3	2.67852E-05	4.75705E-04	-1.22241E-04	1.46272E+02	1.79083E+02	-7.61004E+00
2113	5733-2	-2.09915E-05	1.24930E-04	7.69294E-06	-9.07161E+00	1.38155E-01	1.28763E-01
2114	5733-3	-5.15621E-05	-2.38843E-03	-5.33669E-06	8.99215E+01	-1.22836E+00	-2.64723E+00
2115	5734-2	-3.11726E-06	1.21411E-04	4.51731E-06	-9.17940E+00	-8.65314E-02	1.19937E-01
2116	5734-3	3.27529E-06	2.40929E-03	-3.11813E-05	-8.97741E+01	-1.29179E+00	2.56038E+00
2117	5735-2	1.09730E-06	-1.97041E-03	1.51749E-05	-5.48693E+00	-6.04635E-01	-1.39421E+00
2118	5735-3	-2.97003E-05	1.27564E-03	8.20706E-05	9.00560E+01	-1.09339E+01	5.17746E-01
2119	5736-2	-1.06628E-07	-1.97087E-03	-1.55459E-05	-5.48373E+00	6.04469E-01	-1.39630E+00
2120	5736-3	2.27781E-06	-1.25141E-03	6.77498E-05	-8.99789E+01	-1.09661E+01	-5.54930E-01
2121	5737-2	9.62282E-08	1.22114E-03	1.53699E-04	-3.99476E+00	2.37480E+01	9.09209E-01
2122	5737-3	-5.91920E-06	7.75463E-03	1.19783E-04	6.63428E+01	2.37818E+01	5.41052E+00
2123	5738-2	1.40259E-06	1.25222E-03	-1.52275E-04	-3.99766E+00	-2.39741E+01	9.29529E-01
2124	5738-3	-3.01719E-06	-7.78339E-03	1.16636E-04	-6.62986E+01	2.39458E+01	-5.43306E+00
2125	5739-2	6.09305E-07	9.02532E-06	-4.83429E-07	2.93701E+00	-5.40261E+00	-5.04102E+00
2126	5739-3	-1.33142E-05	-4.97545E-04	1.02940E-05	-9.05938E+01	1.08030E+02	4.23259E+00
2127	5740-2	1.82422E-08	9.32842E-06	5.11567E-07	2.93679E+00	5.40721E+00	-5.04049E+00
2128	5740-3	9.30771E-07	5.01036E-04	7.67302E-06	9.05869E+01	1.08003E+02	-4.27322E+00
2129	5741-2	2.13015E-03	-2.84179E-03	-9.09910E-04	-2.63288E+01	1.67012E+01	5.21695E+01
2130	5741-3	5.91949E-04	-6.90934E-04	-8.04810E-04	5.25889E+01	-1.21972E+02	1.05291E+01
2131	5742-2	2.07563E-04	-1.56956E-03	6.78533E-04	-3.38811E+01	-1.96773E+01	4.58561E+01
2132	5742-3	9.41019E-05	6.67663E-04	-3.10685E-04	-5.25283E+01	-1.23715E+02	-1.01090E+01
2133	5743-2	2.09522E-05	-5.16946E-05	1.08802E-05	7.69975E+00	-8.10463E-02	3.78930E-01
2134	5743-3	3.55453E-08	-6.08875E-04	-6.21772E-06	-7.49816E+01	5.13763E+00	-5.02523E-01
2135	5744-2	4.80010E-06	-1.56582E-05	1.02988E-07	7.68084E+00	-2.26877E-02	8.13159E-02
2136	5744-3	2.59492E-06	6.10610E-04	-4.76455E-06	7.49725E+01	5.09993E+00	4.97757E-01
2137	5745-2	6.37203E-08	-4.40722E-04	3.14077E-06	3.48825E+00	-1.53192E-01	-3.14108E-01
2138	5745-3	-4.34940E-06	1.51481E-03	2.36547E-05	-1.24947E+01	9.83211E-01	1.04547E+00
2139	5746-2	7.96373E-09	-4.41010E-04	-3.11526E-06	3.48757E+00	1.51460E-01	-3.14406E-01
2140	5746-3	3.20153E-07	-1.51583E-03	2.13773E-05	1.24958E+01	9.86562E-01	-1.04184E+00
2141	5747-2	1.50178E-08	-1.66966E-04	-1.52257E-05	2.77963E+00	-2.33244E+00	-1.30889E-01
2142	5747-3	-3.78085E-06	3.30559E-03	4.24955E-05	9.10539E+01	1.38744E+00	2.19874E+00
2143	5748-2	-8.39027E-08	-1.70203E-04	1.51777E-05	2.76881E+00	2.34687E+00	-1.34587E-01
2144	5748-3	2.20274E-07	-3.30827E-03	4.11242E-05	-9.10279E+01	1.38241E+00	-2.17662E+00
2145	5749-2	-5.04707E-06	-3.21978E-04	-1.11435E-06	-2.25031E+00	8.26997E+00	-4.64335E+00
2146	5749-3	-1.39852E-05	-3.54464E-04	1.78908E-05	1.40234E+01	-1.96824E+01	-7.70858E-01
2147	5750-2	-3.98625E-06	-3.29185E-04	-5.79250E-07	-2.23930E+00	-8.49060E+00	-4.64957E+00
2148	5750-3	-2.48281E-06	3.56270E-04	1.01527E-05	-1.40402E+01	-1.97748E+01	6.96011E-01
2149	5751-2	1.31115E-04	-2.94048E-04	2.09029E-06	1.79089E+00	-6.16892E+00	1.74002E+01
2150	5751-3	3.38922E-04	4.55910E-04	-3.07781E-04	2.43014E-01	-1.12812E+02	-1.07669E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 240

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2151	5752-2	1.01992E-04	-2.13003E-04	5.57237E-06	1.35453E+00	5.74665E+00	1.69523E+01
2152	5752-3	4.87764E-05	-5.56331E-04	-1.47889E-04	4.26440E-01	-1.12318E+02	1.16078E+01
2153	5753-2	1.06209E-05	-1.06670E-04	-2.76762E-05	-3.44650E+00	-1.04599E+00	-8.91435E+00
2154	5753-3	-4.36775E-07	-5.86849E-04	3.02651E-05	-2.57146E+01	7.57418E+00	4.61091E-01
2155	5754-2	-2.07417E-05	-1.05099E-04	1.25991E-05	-3.43719E+00	1.17376E+00	-8.90259E+00
2156	5754-3	-2.60003E-05	5.79047E-04	1.43521E-05	2.56867E+01	7.66501E+00	-3.77003E-01
2157	5755-2	3.66298E-06	3.29820E-04	-4.59449E-06	1.25463E+00	2.03579E-01	2.04658E+00
2158	5755-3	3.79847E-06	6.30982E-04	2.23620E-05	-5.17295E+01	2.88515E+00	2.10982E-01
2159	5756-2	-3.75734E-06	3.36649E-04	-1.28202E-06	1.34738E+00	-2.91393E-02	2.08607E+00
2160	5756-3	-3.92643E-06	-6.30398E-04	1.72829E-05	5.17668E+01	3.06216E+00	-1.13682E-01
2161	5757-2	-5.81073E-07	3.66014E-04	3.02785E-05	2.39992E+00	2.70548E+00	-3.01347E-02
2162	5757-3	-5.98964E-07	1.35294E-03	3.77856E-05	-3.38357E+01	1.25904E+01	3.79235E-01
2163	5758-2	-5.67441E-07	3.74275E-04	-3.10395E-05	2.49465E+00	-2.65543E+00	7.12791E-03
2164	5758-3	-7.59321E-07	-1.34041E-03	3.55884E-05	3.41003E+01	1.31362E+01	-2.23950E-01
2165	5759-2	-5.11195E-08	1.02385E-04	4.37140E-06	-1.47596E+00	3.58043E-01	3.55709E-01
2166	5759-3	-1.69520E-05	-1.03494E-03	-6.60144E-06	8.49706E+00	-6.15640E+00	-3.29683E+00
2167	5760-2	3.86904E-06	1.02901E-04	-3.13482E-08	-1.47270E+00	-3.67235E-01	3.49929E-01
2168	5760-3	1.88911E-05	1.03757E-03	8.14045E-06	-8.47249E+00	-6.29221E+00	3.06938E+00
2169	5761-2	-3.67895E-05	3.94349E-05	6.61612E-05	-3.08936E+00	-3.80502E+00	-3.82674E+00
2170	5761-3	2.43003E-05	-6.32680E-04	-5.37924E-05	6.16289E+01	4.49170E+01	6.79173E-01
2171	5762-2	6.51723E-05	4.14885E-05	-3.32233E-05	-3.05697E+00	3.63903E+00	-3.81736E+00
2172	5762-3	3.64663E-05	6.37194E-04	-9.91334E-06	-6.16556E+01	4.48119E+01	-7.15906E-01
2173	5763-2	-3.61093E-05	-1.01503E-04	7.87483E-05	2.65237E-01	7.92780E-01	9.00680E-02
2174	5763-3	2.91404E-05	-2.00912E-04	-4.07809E-05	1.95035E+01	1.45243E+01	-1.91870E+00
2175	5764-2	5.27435E-05	-1.07592E-04	-3.25580E-05	2.28948E-01	-1.10615E+00	8.05434E-02
2176	5764-3	2.03327E-05	1.82126E-04	-5.10142E-06	-1.97007E+01	1.41046E+01	1.87892E+00
2177	5765-2	-6.43214E-06	-6.58275E-05	1.29805E-05	-4.37152E-01	4.46496E-01	2.68995E-02
2178	5765-3	2.18924E-05	3.66535E-04	-2.58023E-05	2.39801E+01	7.78333E+00	-1.44356E+00
2179	5766-2	8.73018E-06	-7.67398E-05	3.32752E-07	-6.10415E-01	-7.65637E-01	-4.05034E-02
2180	5766-3	2.35182E-05	-4.01740E-04	4.23024E-06	-2.43787E+01	6.77028E+00	1.24783E+00
2181	5767-2	-2.77748E-06	-3.61940E-05	4.96553E-06	-5.33640E-01	5.07748E-01	6.48609E-02
2182	5767-3	9.93840E-06	6.12602E-04	-5.18160E-06	-6.71692E+00	1.52954E+01	-2.44068E+00
2183	5768-2	3.51342E-06	-5.38961E-05	1.32533E-06	-1.04382E+00	-9.99172E-01	-5.49273E-02
2184	5768-3	1.31164E-05	-6.83918E-04	8.31783E-06	5.12703E+00	1.32156E+01	1.93355E+00
2185	5769-1	2.76578E-05	6.10873E-06	-3.00162E-05	2.39067E-01	-7.05146E+01	2.51035E-02
2186	5769-3	3.37286E-05	7.49747E-07	-6.60744E-05	1.89325E-01	-9.44021E+00	5.43209E-02
2187	5770-1	-2.04425E-05	-1.70875E-06	2.21198E-05	-9.16867E-02	1.63443E+02	-1.61511E-02
2188	5770-3	-1.66844E-06	1.85769E-07	1.21490E-06	3.12432E-03	1.75600E+01	-5.04121E-04
2189	5771-1	-2.10751E-06	-2.14674E-06	2.26695E-06	-6.51118E-02	-1.58105E+02	-3.58595E-03
2190	5771-3	-1.82839E-07	-2.24569E-07	2.24177E-07	-6.57873E-03	-1.47590E+01	-3.42256E-04
2191	5772-1	5.30277E-08	-1.60397E-06	6.75801E-06	1.30476E-03	8.96686E+01	-1.12954E-03
2192	5772-3	1.46242E-08	-1.71662E-07	-5.17651E-06	1.09228E-05	5.77003E+00	-9.89168E-05
2193	5773-1	1.31410E-06	1.30849E-06	2.93180E-06	-5.08754E-03	4.99167E-01	8.12051E-04
2194	5773-3	2.29899E-08	-5.47659E-09	8.24741E-08	-1.09756E-04	-3.76659E-01	-8.35865E-06
2195	5774-1	-1.50373E-05	3.31644E-05	-3.68455E-05	5.51692E-01	1.92462E+01	3.70524E-01
2196	5774-3	1.83782E-04	3.11730E-05	-2.56257E-04	-2.41063E+00	-3.75151E+00	-4.45806E-01
2197	5775-1	5.28536E-05	-1.88829E-05	-3.36771E-07	-7.87580E-02	1.93362E+01	-2.90794E-01
2198	5775-3	8.22209E-05	-3.04797E-05	-1.76097E-04	3.46734E+00	-4.09582E+00	8.01452E-01
2199	5776-1	-7.11459E-05	-3.23098E-09	1.29449E-04	-3.15134E+00	2.64579E+01	1.47068E-01
2200	5776-3	-9.28020E-06	-7.40351E-07	1.14082E-05	-4.39880E-02	2.86854E+00	-6.72840E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 241

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2201	5777-1	-6.00015E-05	-1.38792E-05	6.39944E-05	2.31772E+00	2.66283E+01	-2.94988E-01
2202	5777-3	-5.56036E-06	-8.86245E-07	9.56697E-06	-4.88055E-02	2.88793E+00	5.13419E-02
2203	5778-1	-2.15364E-06	1.23999E-04	2.09935E-05	1.84981E+00	-4.54089E+01	3.49237E-01
2204	5778-2	-2.99156E-05	-2.76357E-04	-1.79182E-05	6.45001E+01	8.09202E+00	-1.01692E+00
2205	5778-3	-6.03572E-06	-1.43959E-05	1.05691E-06	-1.74725E+00	-3.68598E+00	-7.11402E-02
2206	5779-1	-3.98827E-06	-1.25281E-04	2.10237E-06	-1.87223E+00	-4.53984E+01	-3.49829E-01
2207	5779-2	-5.44783E-06	-2.77639E-04	-2.52909E-05	6.45197E+01	-8.13411E+00	-1.00423E+00
2208	5779-3	1.07384E-06	1.56775E-05	1.23102E-06	1.76817E+00	-3.69464E+00	6.96922E-02
2209	5780-1	-3.49179E-07	2.97382E-05	5.15518E-05	-1.94951E+00	2.18708E+01	3.48996E-02
2210	5780-2	3.73952E-06	2.34075E-03	-7.87419E-05	-4.19119E+01	2.33074E+00	1.73087E+00
2211	5780-3	-3.62471E-07	2.14237E-04	-3.65775E-06	1.54012E+00	1.92386E+00	1.57470E-01
2212	5781-1	4.22316E-07	-3.23820E-05	5.04205E-05	1.94262E+00	2.18732E+01	-3.74178E-02
2213	5781-2	3.52196E-06	2.34242E-03	7.29851E-05	-4.19012E+01	-2.35628E+00	1.73118E+00
2214	5781-3	-1.36923E-07	-2.14805E-04	-3.62632E-06	-1.54094E+00	1.92562E+00	-1.58176E-01
2215	5782-1	-1.03909E-06	-2.93599E-04	-4.17058E-05	-1.78247E+00	2.85716E+01	-1.96528E-01
2216	5782-2	2.00013E-06	1.86829E-03	-4.92136E-05	-1.72989E+00	1.06167E+01	1.37928E+00
2217	5782-3	2.62653E-08	3.41604E-05	-2.38181E-06	-1.06537E-01	7.69720E-01	2.57547E-02
2218	5783-1	3.23881E-06	2.96297E-04	-4.16523E-05	1.76731E+00	2.83663E+01	1.98127E-01
2219	5783-2	2.90888E-06	1.86988E-03	4.68992E-05	-1.72844E+00	-1.07188E+01	1.38031E+00
2220	5783-3	-1.11538E-08	-3.41003E-05	-2.32915E-06	1.06149E-01	7.68683E-01	-2.57238E-02
2221	5784-1	1.27313E-04	1.07310E-04	-6.03762E-05	9.67200E-01	2.95357E+01	-2.33940E-01
2222	5784-3	1.11676E-05	1.25126E-05	-6.67906E-06	5.28326E-02	2.86841E+00	1.85662E-01
2223	5785-1	8.97051E-06	-1.17589E-04	-1.01661E-05	-1.17011E+00	2.92696E+01	2.49911E-01
2224	5785-3	8.21465E-07	-1.38836E-05	9.84541E-07	-8.42721E-02	2.84352E+00	-1.85106E-01
2225	5786-1	2.46045E-04	1.82334E-04	-1.80085E-04	-6.01494E+00	-1.19731E+02	-3.97712E-01
2226	5786-2	-2.24925E-04	-1.91895E-04	-7.84850E-06	2.67895E+01	1.12638E+01	-6.32557E+00
2227	5786-3	1.40700E-03	5.61074E-05	-9.65619E-04	1.51174E+00	-1.77596E+01	-1.42057E+00
2228	5787-1	4.00284E-05	-1.78405E-04	-1.58005E-04	6.69498E+00	-1.20623E+02	6.08553E-01
2229	5787-2	8.12392E-05	-1.20847E-04	-2.93339E-04	2.92515E+01	-1.16502E+01	-6.09126E+00
2230	5787-3	1.58051E-04	-1.12483E-04	-6.68341E-04	-2.35249E-01	-2.15205E+01	2.36226E+00
2231	5788-1	-7.05632E-04	4.52550E-05	1.63591E-05	-2.28694E+00	1.24334E+02	1.03983E+00
2232	5788-2	4.52977E-04	-9.10678E-04	1.43028E-04	-6.09478E+01	5.50623E+00	3.37747E-01
2233	5788-3	2.95040E-04	1.49328E-04	5.40453E-04	-4.59075E+00	8.31503E+00	-2.50692E-01
2234	5789-1	-1.30939E-04	2.41802E-05	1.24603E-04	3.85401E+00	1.25791E+02	-1.32045E+00
2235	5789-2	2.86897E-04	-8.77295E-04	-6.62988E-06	-5.94172E+01	-7.70884E+00	4.23559E-01
2236	5789-3	1.05818E-04	-2.13391E-04	1.66447E-04	1.81436E+00	7.77659E+00	1.86274E-01
2237	5790-1	-5.44431E-05	-8.32667E-04	6.40479E-05	5.97341E+00	-9.03951E+01	-5.37845E-01
2238	5790-2	7.47674E-06	3.61352E-03	-2.43472E-04	1.19436E+02	2.00590E+01	2.70723E+00
2239	5790-3	-2.50110E-05	2.59621E-03	4.00946E-05	1.94997E+00	8.58784E+00	1.89422E+00
2240	5791-1	-5.33396E-06	8.43216E-04	5.04874E-05	-6.01948E+00	-9.02869E+01	5.07894E-01
2241	5791-2	4.70461E-06	3.61818E-03	2.35321E-04	1.19464E+02	-2.00480E+01	2.70723E+00
2242	5791-3	-3.61825E-06	-2.62029E-03	3.42629E-05	-1.95781E+00	8.65376E+00	-1.92833E+00
2243	5792-1	-2.40123E-05	-2.03758E-04	8.86141E-05	-3.27240E+00	4.92239E+01	-1.42586E-01
2244	5792-2	2.36454E-07	5.58683E-04	-2.66689E-05	2.80838E-01	8.32786E+00	4.16071E-01
2245	5792-3	-1.16471E-05	1.42925E-03	6.07396E-05	-8.98856E-01	8.45600E+00	1.02374E+00
2246	5793-1	3.33448E-06	1.98429E-04	8.16435E-05	3.25103E+00	4.89706E+01	1.23771E-01
2247	5793-2	2.99720E-07	5.59876E-04	2.58927E-05	2.82675E-01	-8.30627E+00	4.16878E-01
2248	5793-3	-1.47209E-06	-1.44961E-03	5.76972E-05	8.98630E-01	8.46450E+00	-1.04612E+00
2249	5794-1	3.33400E-05	-6.48462E-04	-1.25777E-05	2.97289E+00	-1.44408E+01	2.40093E+00
2250	5794-2	-2.70027E-04	5.94095E-04	-5.00777E-05	-2.57032E+00	-4.61546E-02	1.98355E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 242

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2251	5794-3	2.39382E-04	-6.98026E-06	-4.78369E-05	-1.92123E+00	-2.47988E+00	5.74219E-01
2252	5795-1	-1.81265E-05	6.44119E-04	4.62636E-06	-3.33498E+00	-1.42797E+01	-2.40549E+00
2253	5795-2	-1.27024E-05	6.15139E-04	-1.88249E-04	-2.05113E+00	-2.21447E-01	1.98988E+01
2254	5795-3	-5.89212E-07	-3.41529E-06	-5.89073E-05	1.68674E+00	-2.90279E+00	-5.44323E-01
2255	5796-1	-1.10598E-04	2.52300E-04	-9.08924E-06	1.86686E+00	-7.65401E+01	6.15670E-01
2256	5796-2	-3.58237E-04	-3.79650E-04	-1.86803E-05	3.22545E+01	-6.34916E+00	-5.02721E+00
2257	5796-3	-1.77658E-05	-2.26541E-05	4.59306E-07	1.25168E+00	-6.34736E+00	-9.20120E-02
2258	5797-1	3.44708E-06	-2.45011E-04	-4.79285E-06	-1.62013E+00	-7.62277E+01	-5.85438E-01
2259	5797-2	1.45711E-05	-3.57272E-04	-1.68409E-04	3.27781E+01	5.66470E+00	-5.00145E+00
2260	5797-3	-7.32332E-07	2.27986E-05	3.12885E-06	-1.24751E+00	-6.30269E+00	9.33100E-02
2261	5798-1	1.83917E-05	3.75553E-03	8.29840E-06	-3.17769E+00	6.76335E+01	3.18442E+00
2262	5798-2	2.48068E-04	-3.87441E-03	-1.66707E-04	-6.55189E+01	-3.75711E+00	-2.42294E+00
2263	5798-3	-1.31999E-05	6.26061E-05	2.68375E-06	-8.85311E+00	6.01625E+00	4.45111E-02
2264	5799-1	-3.95875E-06	-3.76939E-03	1.48521E-05	3.05816E+00	6.77852E+01	-3.18677E+00
2265	5799-2	3.83098E-05	-3.80777E-03	6.10985E-06	-6.42473E+01	3.12729E+00	-2.51497E+00
2266	5799-3	1.77911E-06	-5.90351E-05	-3.79352E-06	8.91236E+00	5.99414E+00	-4.81424E-02
2267	5800-1	2.52551E-05	3.59737E-03	-1.23740E-04	1.02302E+01	3.09392E+01	2.81514E+00
2268	5800-2	3.54517E-05	-3.90216E-02	-2.20428E-03	-8.83265E+01	1.15495E+02	-2.69254E+01
2269	5800-3	3.05745E-06	1.85521E-03	-1.63450E-04	-6.97604E+00	8.81272E+00	1.41570E+00
2270	5801-1	-2.76425E-06	-3.63614E-03	-1.12093E-04	-1.04169E+01	3.11616E+01	-2.83057E+00
2271	5801-2	2.36987E-05	-3.90773E-02	2.16283E-03	-8.82034E+01	-1.15250E+02	-2.69795E+01
2272	5801-3	-1.82413E-06	-1.85807E-03	-1.60276E-04	6.95941E+00	8.80474E+00	-1.41657E+00
2273	5802-1	8.16543E-04	1.74971E-03	-1.94506E-03	-8.66961E+00	1.66775E+01	7.70383E+00
2274	5802-2	-2.09411E-04	-1.02730E-03	6.76789E-04	-4.22045E+00	7.95903E+00	-2.60111E+00
2275	5802-3	3.63205E-04	2.00575E-03	-9.61122E-04	-5.67101E+00	3.36023E+01	4.88575E+00
2276	5803-1	-7.08347E-04	-2.00414E-03	-1.21179E-03	-3.63797E+00	7.61976E+01	-1.71579E+01
2277	5803-2	-2.11990E-04	-1.12780E-03	-4.66574E-04	-7.78079E+00	9.41673E+00	-5.40062E+00
2278	5803-3	-3.75683E-04	-2.12763E-03	-5.86851E-04	-5.58998E-01	6.54755E+01	-9.93683E+00
2279	5804-1	1.63326E-05	1.44048E-05	-1.68791E-05	-7.41233E-01	8.67367E-01	-1.03201E+00
2280	5804-3	-1.97850E-05	-5.51042E-05	1.42735E-05	9.98207E+00	9.99953E+00	1.28429E+00
2281	5805-1	4.90037E-06	-1.24959E-05	-1.26297E-05	9.06545E-01	6.78380E-01	9.99909E-01
2282	5805-3	-3.47244E-06	5.83778E-05	1.58779E-05	-9.81026E+00	9.65144E+00	-1.35805E+00
2283	5806-1	1.53008E-05	-1.02688E-05	-1.64242E-06	-1.19528E+00	3.49056E-01	-5.08248E-01
2284	5806-3	-3.58529E-05	1.52426E-04	1.01190E-05	6.11771E+00	-1.50911E+01	2.62082E+00
2285	5807-1	-7.81064E-07	8.82881E-06	-2.58916E-06	1.10035E+00	4.67085E-01	5.09340E-01
2286	5807-3	-1.96817E-07	-1.56556E-04	8.93741E-06	-6.12185E+00	-1.47944E+01	-2.68393E+00
2287	5808-1	9.00150E-06	1.73451E-08	-1.66757E-05	3.76541E-02	-5.33189E+00	1.06041E-02
2288	5808-3	-3.57824E-05	-3.24946E-08	6.93228E-05	-1.74211E-01	3.19098E+01	-3.59916E-02
2289	5809-1	-1.00384E-06	-1.34331E-04	4.11672E-06	-2.06534E+00	7.67843E+00	-3.71300E-01
2290	5809-3	4.53643E-06	5.51676E-04	-2.23579E-05	1.23041E+01	-4.36226E+01	1.12704E+00
2291	5810-1	-9.92621E-07	1.37194E-04	9.89492E-07	2.04656E+00	7.65540E+00	3.75528E-01
2292	5810-3	5.79738E-06	-5.69776E-04	-6.00362E-06	-1.23543E+01	-4.36991E+01	-1.19292E+00
2293	5811-1	1.27723E-05	-2.66350E-07	-2.02001E-05	7.71359E-03	7.00700E+00	1.41805E-02
2294	5811-3	-8.54663E-06	8.67067E-08	1.56058E-05	-7.58724E-02	-4.06154E+01	4.15022E-02
2295	5812-1	-2.53168E-05	-7.18918E-04	3.04640E-05	1.31787E+00	4.28091E+00	6.93799E-01
2296	5812-3	1.10788E-05	2.95717E-04	-9.85134E-06	-8.48281E+00	3.08160E+01	4.15137E-01
2297	5813-1	-9.71080E-06	7.40303E-04	1.58528E-05	-1.26743E+00	4.64005E+00	-6.17100E-01
2298	5813-3	1.94125E-06	-3.16881E-04	-1.36202E-05	8.27834E+00	3.04732E+01	-4.88638E-01
2299	5814-1	-2.74092E-06	4.77529E-07	4.39487E-06	1.59461E-02	-1.25005E+00	-3.66804E-02
2300	5814-3	-7.94146E-06	-1.68621E-07	1.13016E-05	-2.05316E-02	6.47568E+00	1.93359E-02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 243

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2301	5815-1	-8.38434E-07	-1.80512E-05	9.87988E-07	4.44156E+00	2.54443E-01	1.04581E+00
2302	5815-3	3.78453E-06	7.19113E-05	-4.15881E-06	-3.07467E+01	2.51360E+00	-5.02238E+00
2303	5816-1	-5.19306E-07	1.79981E-05	9.56144E-07	-4.42126E+00	3.48065E-01	-1.06742E+00
2304	5816-3	2.28862E-06	-7.00374E-05	-3.72913E-06	3.07570E+01	2.10207E+00	5.10761E+00
2305	5817-1	1.16636E-06	3.02407E-07	-1.24466E-06	4.45581E-03	-4.33696E+00	8.07067E-04
2306	5817-3	-4.67585E-06	-5.96569E-07	5.22233E-06	-5.16997E-02	5.51408E+00	2.43544E-02
2307	5818-1	7.14498E-07	1.19261E-05	-5.24964E-07	1.60180E+00	7.94019E+00	7.98847E-01
2308	5818-3	-2.81881E-06	-3.88142E-05	1.57907E-06	-5.07684E+00	-1.03721E+01	-1.52445E+00
2309	5819-1	3.60260E-07	-1.26628E-05	-5.89126E-07	-1.55611E+00	9.19721E+00	-8.65674E-01
2310	5819-3	-2.24609E-06	3.82718E-05	3.96094E-06	5.09172E+00	-1.03277E+01	1.55912E+00
2311	5820-1	7.70306E-06	-8.77335E-06	-1.73781E-05	4.72810E+00	8.43684E-01	1.69783E+00
2312	5820-3	-1.75301E-06	-4.96729E-05	5.61298E-06	-1.91235E+01	-2.68747E+01	-6.55587E+00
2313	5821-1	1.25327E-05	1.27769E-05	-8.02503E-06	-4.87596E+00	-5.14252E-01	-1.48986E+00
2314	5821-3	-3.38507E-06	5.22956E-05	3.74811E-07	1.91911E+01	-2.72467E+01	6.60790E+00
2315	5822-1	1.26488E-06	4.22391E-05	-2.37293E-06	1.57915E+00	-9.06791E+00	1.87183E+00
2316	5822-3	-1.14606E-06	-6.66504E-05	5.93974E-06	-6.06336E+00	4.35198E+01	-2.42568E+00
2317	5823-1	1.35990E-06	-5.45726E-05	-8.70308E-07	-1.47240E+00	-8.17098E+00	-2.20299E+00
2318	5823-3	-3.43672E-06	6.84236E-05	-7.12985E-07	6.08935E+00	4.39667E+01	2.30513E+00
2319	5824-1	-5.65165E-06	-1.16463E-04	8.75663E-06	-1.04368E+01	3.70373E+00	-4.75032E+00
2320	5824-3	1.16509E-05	1.57105E-04	-1.94150E-05	5.34389E+01	-2.25520E+01	1.18067E+01
2321	5825-1	-5.54659E-06	1.36913E-04	4.55205E-06	1.03540E+01	3.49878E+00	5.14312E+00
2322	5825-3	1.32197E-05	-1.65720E-04	-9.63222E-06	-5.34423E+01	-2.32032E+01	-1.17510E+01
2323	5826-1	-3.59240E-06	-2.20183E-05	7.27389E-06	6.70088E+00	5.20563E+00	1.73537E+00
2324	5826-3	1.25022E-05	7.44403E-05	-2.54199E-05	-2.34611E+01	-1.82611E+01	-6.17706E+00
2325	5827-1	-5.01895E-06	2.24324E-05	2.21612E-06	-6.69383E+00	5.20432E+00	-1.73294E+00
2326	5827-3	1.75518E-05	-7.55467E-05	-7.74189E-06	2.34313E+01	-1.82475E+01	6.16977E+00
2327	5828-1	1.49970E-07	8.18874E-06	4.10673E-08	-1.77651E+01	-1.18650E+01	-6.94268E+00
2328	5828-3	-1.25764E-06	-5.68678E-05	-2.17511E-06	6.56173E+01	3.80682E+01	1.77791E+01
2329	5829-1	7.84957E-08	-3.60762E-06	-5.08754E-07	1.77478E+01	-1.18099E+01	6.96806E+00
2330	5829-3	5.09583E-07	5.40474E-05	1.98121E-06	-6.53700E+01	3.77204E+01	-1.78671E+01
2331	5830-1	-6.86535E-06	-4.49486E-06	7.65872E-06	5.93787E+00	-3.74078E+00	1.07930E+00
2332	5830-3	1.74282E-05	-1.35609E-05	-2.16222E-05	-2.09981E+01	1.04251E+01	-3.63637E+00
2333	5831-1	-7.66818E-06	2.63736E-06	5.29046E-06	-5.96793E+00	-3.67936E+00	-1.03735E+00
2334	5831-3	2.01833E-05	2.14712E-05	-1.58644E-05	2.08564E+01	1.04725E+01	3.64335E+00
2335	5832-1	-1.22112E-05	-4.58279E-07	9.34955E-06	1.10993E-02	-8.37917E+00	-3.48187E-02
2336	5832-3	2.49577E-05	4.97336E-06	-2.46516E-05	-5.03736E-02	5.10104E+00	9.07717E-02
2337	5833-1	3.23015E-04	1.52881E-04	-6.38952E-04	4.31601E-01	6.65791E+01	7.58774E-02
2338	5833-2	-2.20016E-05	-7.76973E-04	-3.10947E-04	-2.27458E+01	2.46937E-01	1.55287E+01
2339	5833-3	-1.96102E-03	5.79976E-05	2.61726E-04	-1.07350E+00	-1.43521E+00	-3.96950E-01
2340	5834-1	1.22491E-03	2.28815E-04	-2.50294E-06	-4.49321E+00	-8.17549E+01	6.11628E+01
2341	5834-2	-1.08765E-03	-1.52528E-03	-7.71893E-04	1.52627E+01	-1.68943E+00	1.69745E+01
2342	5834-3	-2.69359E-03	-1.29812E-04	-9.91112E-04	-1.62415E+01	-3.11487E+01	8.52824E+00
2343	5835-1	-7.62485E-04	-3.12846E-04	4.24996E-04	1.63266E+01	3.51654E+02	1.53228E+01
2344	5835-2	7.44996E-04	-1.02400E-03	3.04825E-04	-7.89627E+01	-1.38347E+01	-2.10996E+01
2345	5835-3	4.54571E-04	3.69806E-04	-1.52172E-03	-7.91998E-01	6.87448E+01	1.98835E+00
2346	5836-3	9.18381E-06	1.67938E-06	-1.12697E-05	4.94098E-01	-2.52488E-01	8.84533E-02
2347	5837-3	4.50726E-06	-1.81194E-06	-9.44703E-06	-4.51194E-01	-2.62488E-01	-7.23561E-02
2348	5838-3	-5.25868E-05	-1.31398E-05	6.88573E-05	-2.37095E+00	-4.72403E-02	-4.42483E-01
2349	5839-3	-2.27964E-05	1.37717E-05	5.37953E-05	2.09733E+00	1.30594E-02	3.42076E-01
2350	5840-3	1.13327E-05	5.46463E-08	-4.37186E-06	6.89811E-01	-1.19485E+00	1.38045E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 244

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2351	5841-3	5.85575E-07	-2.67974E-07	-4.49159E-06	-6.88383E-01	-1.21425E+00	-1.32586E-01
2352	5842-3	-6.54691E-05	2.08659E-06	1.48226E-05	-3.01770E+00	5.27734E+00	-6.70218E-01
2353	5843-3	-6.24035E-07	-6.16651E-07	1.76432E-05	3.06304E+00	5.39196E+00	6.54454E-01
2354	5844-1	-1.25620E-04	-3.34819E-04	-8.55389E-08	-7.82053E+00	2.88582E+01	5.60520E+01
2355	5844-2	-3.84956E-05	-3.86735E-04	1.25896E-04	-1.06799E+01	4.08938E+00	1.03850E+00
2356	5844-3	7.46784E-05	2.95154E-04	-1.81094E-04	-3.36186E+00	-3.47824E+00	1.85786E+00
2357	5845-1	-1.24782E-04	4.76015E-04	8.00730E-05	5.43701E+00	3.33008E+01	-5.47520E+01
2358	5845-2	7.60042E-05	-4.28387E-04	5.43196E-05	-1.12379E+01	-5.40457E+00	9.43430E-01
2359	5845-3	9.88872E-05	-3.51799E-04	1.15092E-04	2.59559E+00	-4.54167E+00	-1.87990E+00
2360	5846-1	7.88656E-07	9.66788E-06	5.90847E-07	3.73592E-01	-1.75132E+00	7.70173E+00
2361	5846-2	-3.70146E-07	6.42705E-06	1.26690E-07	-1.34531E-01	1.66782E-01	-3.98386E+00
2362	5846-3	2.54036E-06	6.37681E-07	-6.32280E-06	4.22259E-01	1.01981E-01	1.11893E+00
2363	5847-1	9.72640E-07	-6.90264E-06	5.16249E-07	-2.63278E-01	-1.80907E+00	-7.68457E+00
2364	5847-2	6.96531E-07	5.85757E-06	3.52808E-06	-1.45080E-01	-2.62071E-01	-3.98755E+00
2365	5847-3	2.32812E-06	-6.42057E-06	4.78089E-06	-6.06783E-01	8.25441E-02	-1.15251E+00
2366	5848-1	4.16982E-07	-6.45197E-06	3.17244E-06	1.11677E+00	1.96057E-01	-3.11436E+00
2367	5848-2	-4.03162E-06	2.49839E-05	1.32089E-05	-4.53915E+00	-5.00101E-01	-2.73589E+01
2368	5848-3	1.38275E-06	2.04366E-05	-3.38911E-05	-5.32316E+00	2.14828E+01	4.71652E+00
2369	5849-1	5.05989E-07	6.90681E-06	2.56858E-06	-1.12401E+00	2.39868E-01	3.12538E+00
2370	5849-2	3.98613E-06	3.08483E-05	-4.73230E-06	-4.54406E+00	4.69352E-01	-2.73627E+01
2371	5849-3	9.98436E-07	-4.32642E-06	-2.22601E-05	5.30928E+00	2.15261E+01	-4.68588E+00
2372	5850-1	1.57553E-07	-3.47420E-06	-1.01369E-06	1.17389E+00	2.10916E+00	-1.33708E+01
2373	5850-2	1.36335E-06	4.49148E-05	5.24163E-06	-1.16381E+01	-4.86583E+00	-1.71725E+01
2374	5850-3	-4.99823E-06	1.35324E-05	-9.29185E-05	3.17915E+01	6.01931E+00	1.17092E+00
2375	5851-1	5.26121E-07	4.92963E-06	-3.44245E-07	-1.17771E+00	2.13106E+00	1.33762E+01
2376	5851-2	1.28454E-07	2.96096E-05	-4.31403E-06	-1.16303E+01	4.81822E+00	-1.72005E+01
2377	5851-3	-4.56994E-06	9.64823E-07	-5.82544E-05	-3.18160E+01	6.07640E+00	-1.13582E+00
2378	5852-1	4.21147E-07	-5.15000E-06	-3.21977E-07	1.71216E+00	-1.47506E+01	1.47697E+00
2379	5852-2	-6.30090E-06	2.39117E-05	1.43632E-05	3.64852E+00	-1.36888E+00	1.29267E+01
2380	5852-3	5.90440E-06	-2.16969E-05	-1.32748E-05	-2.85657E+00	-8.56247E+00	-4.58957E+00
2381	5853-1	3.18646E-06	1.78406E-05	-1.24760E-06	-1.73418E+00	-1.44833E+01	-1.40494E+00
2382	5853-2	8.86389E-06	1.49890E-05	-7.24233E-06	3.64868E+00	1.26956E+00	1.29043E+01
2383	5853-3	8.14134E-06	1.52362E-05	-7.60368E-06	2.84801E+00	-8.58020E+00	4.59192E+00
2384	5854-1	2.37534E-06	-9.83555E-05	-5.16443E-06	-3.56884E+00	-5.58402E+00	2.19150E+01
2385	5854-2	-8.91972E-06	8.65605E-05	1.50010E-05	1.13261E+01	3.36000E+00	1.39215E+01
2386	5854-3	8.20020E-06	-8.31179E-05	-1.51061E-05	-2.31406E+01	-1.70403E+01	-9.57835E-01
2387	5855-1	8.99301E-06	1.17403E-04	-2.78936E-06	3.48375E+00	-5.04097E+00	-2.17792E+01
2388	5855-2	1.13375E-05	6.48166E-05	-5.59071E-06	1.13413E+01	-3.49664E+00	1.38837E+01
2389	5855-3	9.88459E-06	6.76785E-05	-7.47031E-06	2.31346E+01	-1.70205E+01	9.68926E-01
2390	5856-1	2.06430E-06	2.94281E-06	-3.31849E-05	-2.74738E+00	2.48624E+00	5.35019E+00
2391	5856-2	-3.16040E-07	4.20358E-06	-5.68340E-06	-2.61734E+01	4.21498E+00	-1.65988E+00
2392	5856-3	-2.73810E-06	2.42862E-05	-2.65760E-05	-4.84313E+01	8.78733E+00	-2.17613E+00
2393	5857-1	1.39993E-06	6.59334E-06	-2.49140E-05	2.73983E+00	2.49516E+00	-5.33889E+00
2394	5857-2	3.16839E-07	3.32521E-06	3.57096E-06	-2.61725E+01	-4.21562E+00	-1.66111E+00
2395	5857-3	-2.48282E-06	-1.92401E-05	-1.78367E-05	4.84276E+01	8.78586E+00	2.18142E+00
2396	5858-1	-1.25682E-06	6.30782E-06	6.10360E-06	2.78952E-01	-3.78076E-01	1.93826E+00
2397	5858-2	-1.63904E-07	1.16201E-06	-5.33610E-07	-9.09595E-01	-2.39850E-02	1.62033E-01
2398	5858-3	2.77210E-06	-9.23494E-06	-5.47731E-06	-1.39285E+00	7.62605E-02	1.53104E+00
2399	5859-1	-1.37589E-06	-1.24002E-05	5.51225E-06	-2.76976E-01	-3.72150E-01	-1.94218E+00
2400	5859-2	1.36856E-07	1.72612E-06	2.51678E-07	-9.09670E-01	2.34466E-02	1.62327E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 245

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2401	5859-3	2.27919E-06	1.21967E-05	-2.36063E-06	1.39106E+00	7.44164E-02	-1.52852E+00
2402	5860-1	5.76270E-06	-2.59835E-05	1.42026E-05	2.36816E+00	-3.61492E+00	-4.20375E+00
2403	5860-2	1.44160E-06	-9.41800E-06	1.00432E-05	1.56637E+00	-8.94973E-03	-3.44975E-01
2404	5860-3	1.16375E-06	1.47056E-06	-6.84350E-06	4.20858E+00	-6.42858E-01	-8.29591E-01
2405	5861-1	3.97883E-06	1.96204E-05	9.08174E-06	-2.36562E+00	-3.60993E+00	4.19811E+00
2406	5861-2	-1.09914E-06	-7.27765E-06	-7.64069E-06	1.56523E+00	6.98921E-03	-3.43210E-01
2407	5861-3	5.08920E-07	-2.48010E-06	-3.93540E-06	-4.20901E+00	-6.42186E-01	8.29098E-01
2408	5862-2	-1.88295E-07	6.07572E-06	-2.61140E-06	2.68231E+01	-5.14716E+00	1.76581E+00
2409	5862-3	-3.70347E-07	3.88751E-06	-4.78981E-06	4.35644E+01	-6.18469E+00	3.80991E+00
2410	5863-2	3.80660E-07	1.29070E-05	-1.54104E-07	2.68220E+01	5.14102E+00	1.76970E+00
2411	5863-3	-3.50651E-07	-2.78037E-06	-2.99032E-06	-4.35653E+01	-6.18425E+00	-3.80857E+00
2412	5864-1	3.29748E-07	2.75711E-08	-1.17133E-06	4.12290E-01	2.53023E+00	-6.27929E+00
2413	5865-1	8.05857E-08	6.72704E-07	-3.64782E-07	-4.12944E-01	2.53207E+00	6.28038E+00
2414	5866-1	-8.53205E-06	-1.70340E-04	2.58646E-05	-9.36718E-01	7.66941E+00	-1.29728E+01
2415	5866-2	-1.59549E-05	3.07252E-05	1.57807E-06	-1.38622E+00	-3.38037E+00	2.88022E-01
2416	5866-3	-1.78494E-05	5.17118E-05	-1.88051E-06	-8.03500E-01	-5.04131E+00	1.17951E+00
2417	5867-1	-1.24702E-05	1.74662E-04	1.33309E-05	8.76447E-01	7.90153E+00	1.30020E+01
2418	5867-2	2.07813E-05	4.54852E-05	3.48753E-06	-1.36363E+00	3.30204E+00	2.99332E-01
2419	5867-3	-2.35359E-05	-7.07183E-05	-5.69893E-06	7.80061E-01	-4.96995E+00	-1.19655E+00
2420	5868-1	3.84751E-06	-7.73663E-05	-1.84915E-06	1.60203E+00	3.51827E+00	-1.93890E+00
2421	5868-2	-2.15014E-05	1.37032E-05	4.92787E-05	-2.05090E+00	7.56595E+00	-6.78460E+00
2422	5868-3	-2.67056E-05	2.09699E-05	6.06273E-05	-4.10900E+00	1.28306E+01	-7.96582E+00
2423	5869-1	5.61856E-06	8.38700E-05	3.29501E-07	-1.61300E+00	3.59490E+00	1.95998E+00
2424	5869-2	3.41277E-05	1.41708E-05	-2.07620E-05	-2.03028E+00	-7.65419E+00	-6.77105E+00
2425	5869-3	-4.24186E-05	-2.20201E-05	2.55351E-05	4.08835E+00	1.29381E+01	7.94885E+00
2426	5870-1	2.44760E-06	-8.81681E-05	-9.57069E-06	-1.56817E+00	1.40103E+01	1.92076E+01
2427	5870-2	-1.23951E-05	-1.57054E-05	2.82022E-05	-8.04583E+00	-6.08449E+00	8.09156E+00
2428	5870-3	-1.39055E-05	-1.74801E-05	3.21764E-05	-1.27739E+01	-1.42840E+01	6.58027E+00
2429	5871-1	6.32728E-06	8.98795E-05	-4.16399E-06	1.52894E+00	1.41088E+01	-1.91851E+01
2430	5871-2	1.88351E-05	-2.22011E-05	-9.41181E-06	-8.15140E+00	5.86115E+00	8.05693E+00
2431	5871-3	-2.15049E-05	2.40567E-05	1.17504E-05	1.28831E+01	-1.40529E+01	-6.54599E+00
2432	5872-1	-3.00044E-06	-5.96010E-05	3.60689E-06	-4.46253E+00	1.19362E+01	9.99044E+00
2433	5872-2	-2.79663E-06	-2.72753E-05	6.25897E-06	-8.89804E+00	-1.12985E+00	8.67638E+00
2434	5872-3	-2.67319E-06	-1.73555E-05	7.25948E-06	-1.59644E+01	-1.77032E+01	6.73113E+00
2435	5873-1	-2.63946E-06	6.36865E-05	2.93399E-07	4.56296E+00	1.20900E+01	-9.96054E+00
2436	5873-2	4.47986E-06	-4.83698E-05	-1.20865E-06	-9.60865E+00	5.22033E-01	8.52204E+00
2437	5873-3	-5.29520E-06	4.45710E-05	2.18653E-06	1.69323E+01	-1.69222E+01	-6.52807E+00
2438	5874-1	7.16771E-08	-1.32971E-05	7.74536E-06	-1.08045E+00	1.63316E+01	2.27006E+01
2439	5874-2	-2.65206E-06	6.85265E-06	7.88685E-06	-3.68330E+00	2.15230E+00	4.19927E+00
2440	5874-3	2.56977E-06	-5.23171E-06	-7.14898E-06	-1.65742E+00	-4.88875E+00	-2.37703E+00
2441	5875-1	-1.27881E-06	2.05434E-05	4.82584E-06	1.07456E+00	1.63696E+01	-2.26875E+01
2442	5875-2	3.59624E-06	8.28884E-06	-3.03087E-06	-3.68176E+00	-2.18039E+00	4.19482E+00
2443	5875-3	1.02231E-06	9.32694E-06	4.80643E-07	1.65104E+00	-4.89802E+00	2.37823E+00
2444	5876-1	2.31861E-06	-5.01912E-06	-4.07576E-07	1.42564E+00	-2.12913E+01	-1.54615E+01
2445	5876-2	5.52230E-08	-5.77341E-06	7.58870E-07	-2.40687E+00	-2.19663E+00	-9.72186E-01
2446	5876-3	2.60772E-06	2.25333E-05	-6.42419E-06	8.82170E+00	-8.74399E+00	-3.11261E+00
2447	5877-1	2.54584E-06	7.48673E-06	5.21750E-07	-1.42470E+00	-2.12931E+01	1.54656E+01
2448	5877-2	-1.73709E-08	-6.52376E-06	-4.99682E-07	-2.40828E+00	2.18782E+00	-9.74388E-01
2449	5877-3	3.63103E-06	-2.41448E-05	-2.94549E-06	-8.82684E+00	-8.79166E+00	3.10631E+00
2450	5878-1	-4.27732E-07	-5.58832E-06	1.73054E-06	2.98433E+00	-2.06503E+01	-1.29078E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 246

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2451	5878-2	-1.47429E-07	-1.99359E-06	4.75485E-07	2.94019E+00	-1.21121E+00	-1.78138E+00
2452	5878-3	1.93621E-06	1.23324E-05	-4.50377E-06	1.06015E+01	8.62374E+00	-4.41574E+00
2453	5879-1	-7.16365E-07	6.50278E-06	8.45468E-07	-2.97214E+00	-2.06329E+01	1.29112E+01
2454	5879-2	2.16447E-07	-2.28312E-06	-1.43116E-07	2.93567E+00	1.20487E+00	-1.78266E+00
2455	5879-3	2.84470E-06	-1.27674E-05	-2.06906E-06	-1.05961E+01	8.60247E+00	4.41436E+00
2456	5880-1	-8.77185E-09	-3.24330E-06	5.37327E-07	5.64732E+00	-5.81303E+00	-1.45119E+01
2457	5880-2	-7.09063E-08	-3.70260E-06	4.28010E-07	1.63454E+00	-2.27617E+00	-8.61902E+00
2458	5880-3	1.03590E-07	6.42812E-06	1.14477E-08	1.84409E+01	2.03811E+01	-2.52010E+00
2459	5881-1	-2.74056E-07	5.62463E-06	3.22666E-07	-5.48717E+00	-5.75655E+00	1.45290E+01
2460	5881-2	2.54680E-07	-6.06445E-06	-3.14160E-07	1.49229E+00	2.21986E+00	-8.63561E+00
2461	5881-3	-5.30656E-08	-7.82703E-06	-1.32480E-08	-1.84706E+01	2.03477E+01	2.51188E+00
2462	5882-1	-6.43394E-07	-4.23721E-06	8.97232E-07	-1.59138E+00	1.26939E+01	9.04321E+00
2463	5882-2	-1.40821E-06	-3.13983E-07	4.79559E-06	8.87403E-01	-7.72367E-02	8.91088E-01
2464	5882-3	1.35423E-06	-1.94806E-07	-4.74203E-06	-1.16001E+00	1.68090E+00	3.28423E-01
2465	5883-1	-6.86004E-08	2.77234E-06	-1.84387E-07	1.59099E+00	1.27059E+01	-9.04347E+00
2466	5883-2	1.27841E-06	2.51019E-06	-1.45975E-06	8.86121E-01	6.79873E-02	8.92236E-01
2467	5883-3	1.28656E-06	2.88897E-06	-1.49125E-06	1.15862E+00	1.67301E+00	-3.27263E-01
2468	5884-1	1.03160E-07	-7.14848E-06	-2.81977E-07	-4.22890E-02	-1.81388E+01	4.38912E+00
2469	5884-2	-3.66303E-07	9.60377E-06	1.45575E-06	8.97608E+00	2.21000E+00	7.40691E+00
2470	5884-3	1.78313E-07	1.66268E-05	-4.52098E-07	-9.35564E+00	-6.94382E+00	-3.29866E+00
2471	5885-1	7.48070E-07	8.36406E-06	5.45129E-08	4.14772E-02	-1.81050E+01	-4.38185E+00
2472	5885-2	1.02872E-06	9.94669E-06	-3.65373E-07	8.97271E+00	-2.18993E+00	7.40961E+00
2473	5885-3	-2.95994E-07	-1.74653E-05	-5.68242E-07	9.36012E+00	-6.97835E+00	3.29266E+00
2474	5886-1	-1.72740E-07	-6.69171E-06	3.52070E-07	-4.33628E+00	1.42276E+01	-2.16777E+00
2475	5886-2	2.33453E-08	4.48802E-06	3.21506E-08	2.89627E-02	-9.18111E+00	-1.65900E+01
2476	5886-3	-6.43466E-08	5.22879E-06	1.06950E-07	-2.23589E+00	1.44219E+01	1.28959E+01
2477	5887-1	3.83637E-07	8.23908E-06	1.73753E-07	4.34116E+00	1.42529E+01	2.17140E+00
2478	5887-2	7.89767E-08	4.63282E-06	1.36606E-07	2.20496E-02	9.19529E+00	-1.65870E+01
2479	5887-3	-2.58615E-07	-5.66353E-06	2.77669E-07	2.23620E+00	1.44026E+01	-1.29007E+01
2480	5888-1	-1.00501E-07	1.70514E-06	2.33683E-09	6.05443E+00	-1.27057E+01	-8.10813E+00
2481	5888-2	1.46731E-08	6.06834E-08	7.32305E-08	1.90009E+01	-4.93935E+00	-8.41712E+00
2482	5888-3	3.03870E-07	7.49682E-06	-7.84623E-07	-9.08367E+00	7.47922E-01	2.59894E+00
2483	5889-1	7.54651E-07	-9.49330E-07	1.11099E-07	-6.04925E+00	-1.27441E+01	8.08923E+00
2484	5889-2	1.45877E-07	-1.41500E-06	-1.83649E-07	1.88859E+01	4.90381E+00	-8.42436E+00
2485	5889-3	4.23570E-07	-1.06845E-05	-9.70833E-08	8.96092E+00	6.70969E-01	-2.62469E+00
2486	5890-1	5.83660E-07	6.01803E-06	-8.05455E-07	-7.71409E-01	-3.58488E+00	2.25114E+01
2487	5890-2	-1.02431E-06	-1.06974E-06	4.70427E-06	4.52575E+00	5.20028E+00	1.07207E+01
2488	5890-3	1.45555E-06	1.00992E-05	-4.23690E-06	-3.13714E+00	-9.31146E+00	-5.37603E+00
2489	5891-1	8.26145E-07	-5.93759E-06	-1.32274E-06	7.66905E-01	-3.57412E+00	-2.25053E+01
2490	5891-2	1.37118E-06	9.12057E-07	-1.23181E-06	4.52734E+00	-5.20249E+00	1.07209E+01
2491	5891-3	1.43116E-06	-8.62198E-06	-2.67568E-06	3.13471E+00	-9.31632E+00	5.38151E+00
2492	5892-1	2.18259E-07	2.56158E-06	-4.36794E-07	3.80393E+00	-1.41974E+01	-5.02071E+01
2493	5892-2	-3.50086E-08	1.38999E-06	1.43433E-06	9.11849E+00	-4.20189E+00	-2.65443E+01
2494	5892-3	1.07001E-07	1.58683E-06	-2.81053E-07	7.32653E+00	5.35515E+00	9.94435E-01
2495	5893-1	3.30806E-07	-2.78379E-06	-3.95442E-07	-3.80575E+00	-1.41978E+01	5.02064E+01
2496	5893-2	6.93541E-07	1.07909E-06	5.50761E-07	9.12253E+00	4.19970E+00	-2.65476E+01
2497	5893-3	1.24811E-07	-1.55922E-06	-4.63119E-07	-7.32733E+00	5.35428E+00	-9.94572E-01
2498	5894-1	-1.60079E-08	-5.11154E-07	-4.59555E-08	-1.12968E+01	2.58032E+01	4.87365E+01
2499	5894-2	2.49780E-07	-9.10392E-07	-4.26315E-07	-8.48226E+00	1.13967E+01	3.04292E+01
2500	5894-3	4.70366E-08	6.22321E-07	-1.27308E-07	-1.95715E+00	-6.21782E+00	-1.38627E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 247

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2501	5895-1	8.00304E-08	2.62839E-07	4.77631E-07	1.12893E+01	2.58015E+01	-4.87379E+01
2502	5895-2	-1.38869E-07	-4.49035E-07	-1.09943E-06	-8.47747E+00	-1.13909E+01	3.04308E+01
2503	5895-3	4.59659E-08	-6.89724E-07	6.83280E-08	1.95415E+00	-6.21777E+00	1.38596E+00
2504	5896-1	4.57697E-07	2.18686E-06	-1.67303E-06	4.98909E+00	-9.57948E+00	-2.01196E+01
2505	5896-2	3.02800E-07	-1.72047E-06	-9.21366E-07	-4.79465E-01	6.58623E+00	-5.13625E+00
2506	5896-3	3.12801E-07	2.69450E-06	-1.21737E-06	1.05786E+01	-6.32458E+00	-1.15923E+01
2507	5897-1	4.04955E-07	-5.19288E-06	-2.97392E-07	-5.11215E+00	-9.59806E+00	2.01019E+01
2508	5897-2	-4.60832E-08	-2.00875E-06	-7.06188E-07	-5.33520E-01	-6.63002E+00	-5.14263E+00
2509	5897-3	3.46670E-07	-5.72487E-06	-5.53459E-07	-1.07198E+01	-6.36055E+00	1.15728E+01
2510	5898-2	1.23686E-06	6.89939E-06	5.53534E-07	3.90980E+00	-2.41673E+00	1.30195E+01
2511	5898-3	8.37862E-07	4.56346E-06	2.01943E-07	2.42490E+00	-1.27186E+00	7.24834E+00
2512	5899-2	-4.22655E-07	7.06868E-06	2.60236E-06	3.91633E+00	2.43350E+00	1.30130E+01
2513	5899-3	3.40165E-07	-4.62782E-06	-1.72266E-06	-2.42877E+00	-1.28355E+00	-7.24442E+00
2514	5900-1	8.78128E-07	8.11631E-06	-1.66062E-06	-9.09652E-01	1.47065E+00	1.23856E+01
2515	5900-2	2.92624E-06	1.93872E-05	-1.20458E-06	-1.27145E+01	-1.35732E+00	7.19775E+00
2516	5900-3	1.94809E-06	1.00197E-05	-1.20018E-06	-4.40749E+00	-4.98512E-01	2.01182E+00
2517	5901-1	1.05750E-06	-8.21094E-06	-2.28514E-06	9.18287E-01	1.45637E+00	-1.23872E+01
2518	5901-2	-9.72202E-07	1.81916E-05	1.03520E-05	-1.26863E+01	1.36175E+00	7.18703E+00
2519	5901-3	8.42826E-07	-9.49045E-06	-5.96233E-06	4.39040E+00	-5.02138E-01	-2.00575E+00
2520	5902-1	-7.36697E-07	6.37056E-07	1.10927E-06	-3.98240E+00	1.79822E+01	9.35757E+00
2521	5902-2	5.01848E-06	1.29412E-05	-9.72108E-06	-2.10996E+00	1.94899E-01	-4.21335E+00
2522	5902-3	3.19009E-06	4.55981E-06	-6.09174E-06	-1.91902E+00	1.39008E+00	9.17874E-01
2523	5903-1	-3.89074E-07	-3.91037E-07	-8.76334E-07	3.98824E+00	1.79765E+01	-9.36003E+00
2524	5903-2	-4.17034E-06	1.68854E-05	-1.19853E-05	-2.08031E+00	-1.54434E-01	-4.20855E+00
2525	5903-3	2.68693E-06	-7.13587E-06	7.35895E-06	1.89716E+00	1.36292E+00	-9.21286E-01
2526	5904-1	5.84912E-07	-4.74193E-06	-1.35080E-06	6.91978E+00	-1.44760E+00	-2.66223E+01
2527	5904-2	6.39767E-06	5.47731E-06	-1.76930E-05	-4.04980E+00	-1.27845E+00	1.24903E+01
2528	5904-3	4.14837E-06	3.42343E-06	-1.11165E-05	3.60278E+00	-8.18020E-01	-5.31571E+00
2529	5905-1	7.80697E-07	2.82573E-06	-7.23108E-07	-7.01245E+00	-1.48476E+00	2.66086E+01
2530	5905-2	-5.32764E-06	2.21636E-05	-1.05603E-05	-3.51197E+00	1.21432E+00	1.25795E+01
2531	5905-3	3.72871E-06	-1.42619E-05	7.34546E-06	-3.97299E+00	-8.18266E-01	5.25374E+00
2532	5971-1	1.83528E-07	-8.07661E-09	-2.31984E-07	1.04240E-04	-5.23280E+00	2.70212E-04
2533	5971-2	-6.63042E-09	-1.59791E-07	4.43815E-08	6.62782E+00	9.08730E-04	5.13022E-01
2534	5971-3	2.76880E-07	5.86194E-09	-2.81018E-07	-1.77975E-05	-2.87882E+00	1.09736E-04
2535	5972-1	7.57648E-05	-6.19075E-06	1.35715E-05	-1.67740E-02	-3.95993E+00	-1.79221E-01
2536	5972-2	4.83114E-06	-6.97180E-07	1.66056E-06	3.75092E-01	-2.57623E+00	-1.33157E+00
2537	5972-3	-1.97206E-05	2.04208E-05	-7.29828E-05	3.21973E+00	2.38542E+01	-1.63437E+01
2538	5973-1	8.04769E-05	6.82945E-06	1.27951E-05	-5.61124E-02	-5.32325E+00	3.35819E-01
2539	5973-2	6.13684E-07	-2.74876E-07	2.20040E-07	4.08672E-01	2.82841E+00	-1.24650E+00
2540	5973-3	-2.94704E-05	-2.06998E-05	-7.37705E-05	-3.30484E+00	2.37707E+01	1.63044E+01
2541	5974-1	5.87198E-06	2.81851E-09	1.63984E-07	1.81617E-02	-8.88518E+00	3.12148E-04
2542	5974-2	1.51382E-06	-1.00468E-05	5.42083E-07	-2.79902E-02	-1.47829E-02	6.59072E-02
2543	5974-3	-3.46524E-06	1.26181E-07	1.35696E-07	-9.48148E-03	4.64369E+00	9.68068E-03
2544	2719-1	-2.80781E-02	-4.54490E-04	-6.29476E-03	-3.43385E+00	-2.14144E+02	-1.18170E+00
2545	2719-2	-5.66345E-04	1.04009E-03	6.75514E-04	6.10879E+01	-5.16950E-01	-3.66630E+01
2546	2719-3	-5.47174E-03	8.00005E-04	-2.10520E-03	1.35476E+01	-3.39110E+01	2.12934E+00
2547	2719-4	1.73460E-02	-2.15794E-01	-1.03243E-01	1.46753E+02	1.11468E+02	-2.34224E+02
2548	2719-5	-2.42144E-01	4.03536E-02	-4.03321E-01	3.56815E+02	-1.07213E+02	6.67129E+01
2549	2719-6	-2.40205E-01	1.04891E-01	-4.01333E-02	-2.43454E+02	-5.15654E+01	2.82286E+02
2550	2720-1	9.77564E-04	1.91158E-05	-9.89829E-05	1.38268E-02	1.05035E+02	-2.54155E-03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 248

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2551	2720-2	1.42005E-06	-6.47793E-05	-2.42419E-06	4.46207E-02	-3.68422E-03	-1.73317E+00
2552	2720-3	-1.35310E-04	2.06085E-06	4.78679E-05	5.91289E-03	3.15493E+01	5.62353E-04
2553	2747-1	-2.55009E-02	-6.92143E-04	1.07185E-02	2.86109E+01	2.40634E+01	-1.40585E+02
2554	2747-2	-2.68002E-03	-2.47668E-03	-2.52248E-04	-3.59727E+01	-3.72957E+00	-4.67689E+01
2555	2747-3	8.13357E-03	-1.00063E-03	-2.35188E-03	3.56649E+01	4.47862E+01	-2.79034E+01
2556	2747-4	-1.77068E-01	-2.12964E-01	-1.11493E-01	1.67742E-01	6.87765E+00	-2.55789E+02
2557	2747-5	2.50391E-01	-1.31039E-02	-1.86587E-01	-1.33555E+02	6.46441E+02	-1.98820E+02
2558	2747-6	3.74444E-01	5.96768E-02	1.56296E-01	3.23871E+02	8.69139E+01	4.86572E+02
2559	2748-1	6.22175E-04	6.12362E-06	1.92616E-05	-1.58398E+01	6.73690E+01	6.64115E+01
2560	2748-2	1.02503E-06	-1.63833E-05	-2.01263E-06	-2.60970E+00	4.06952E+00	8.74438E-01
2561	2748-3	2.94971E-05	-1.17428E-06	7.62161E-05	-2.90343E+00	1.47532E+01	1.16897E+01
2562	2733-1	-1.04048E-02	-3.41287E-03	2.94727E-03	-1.08611E+01	-4.42020E+02	1.54805E+01
2563	2733-2	-3.28281E-03	-6.50005E-03	1.25045E-03	1.23714E+02	9.89679E+00	-1.64712E+01
2564	2733-3	3.08332E-03	1.23210E-04	-7.88704E-03	-2.40330E+01	-6.56875E+01	8.24942E+00
2565	2733-4	-6.41973E-02	1.25048E-01	6.44800E-02	5.31968E+01	-7.13789E+01	-5.96675E+01
2566	2733-5	1.70179E-01	6.95419E-02	9.92413E-02	-6.61816E+02	1.01450E+02	1.56078E+02
2567	2733-6	-4.75782E-01	2.07960E-01	-4.71861E-02	7.23573E+02	5.51999E+01	1.08381E+03
2568	2734-1	1.11673E-03	-5.30048E-05	3.38445E-05	4.09837E+00	3.16233E+01	-9.77614E+00
2569	2734-2	-4.31189E-05	-2.37757E-05	-1.19946E-05	4.35443E+00	-2.25030E+00	3.22351E+00
2570	2734-3	-3.07736E-05	-6.40200E-06	-5.54029E-05	9.66128E-01	3.72982E+00	-1.68996E+00
2571	2329-1	3.46606E-05	-6.49340E-08	-2.23468E-04	-7.70777E-02	-2.54433E+00	-2.55810E-02
2572	2329-2	5.79048E-06	5.57372E-06	-7.65190E-07	1.10763E+00	4.85587E-02	-1.12425E-01
2573	2329-3	-2.59142E-05	4.85759E-08	1.66879E-04	5.75097E-02	1.89727E+00	1.91033E-02
2574	2335-2	-2.31437E-06	1.07801E-04	-1.53386E-06	-7.39472E-01	-4.52397E-04	3.48558E-01
2575	1629-3	4.44699E-08	9.82283E-05	1.43773E-06	-7.55245E-01	-3.61661E+00	6.32718E-02
2576	1779-3	3.59502E-08	-1.00321E-04	1.39778E-06	7.57109E-01	-3.61844E+00	-6.47518E-02
2577	1608-3	1.35636E-05	-5.89392E-03	1.35199E-06	-2.65180E+00	9.65653E+02	-2.00322E+00
2578	5906-3	1.12709E-05	-7.39864E-03	9.18441E-05	5.92227E+00	1.91821E+02	-3.85819E+00
2579	5907-3	-1.38030E-07	1.04437E-03	-8.63609E-05	1.46982E+01	-7.10378E+00	6.86526E-01
2580	5908-3	2.74641E-07	5.76645E-03	-1.84472E-04	-1.12776E+01	-5.19296E+01	3.45307E+00
2581	5909-3	1.80058E-07	7.03325E-04	-2.11972E-06	3.98366E-01	1.58819E+01	3.64051E-01
2582	5910-3	-8.38508E-07	-2.89963E-04	-2.22941E-05	-1.66225E+01	2.39943E+01	-2.23096E-01
2583	1612-3	-1.36283E-07	9.51001E-04	-1.43914E-05	-7.62204E+00	1.88324E+01	3.40327E-01
2584	5911-3	-2.89388E-07	4.54023E-02	-1.42303E-03	-1.65566E+01	2.11285E+00	3.22884E+01
2585	5912-3	-1.55573E-07	6.93885E-04	2.25622E-03	3.67392E+00	7.97753E+01	6.38998E-01
2586	5913-3	5.27529E-07	1.37277E-02	4.27569E-06	-3.77764E+00	1.88908E+02	5.49076E+00
2587	5914-3	-2.84646E-07	-1.15374E-02	-1.57106E-05	-4.78250E+00	2.80604E+01	-6.32058E+00
2588	5915-3	-1.02317E-07	4.19185E-04	-3.95475E-05	2.08305E+01	1.87590E+01	-1.59144E-01
2589	5916-3	-5.48835E-08	-5.83057E-04	-2.26589E-05	-1.37008E+01	1.62333E+01	-3.25374E-01
2590	5917-3	2.47046E-08	3.15535E-03	1.53628E-07	7.57145E-01	-9.59012E+00	1.62180E+00
2591	5918-3	-1.35248E-08	1.66932E-03	-7.61546E-05	-5.73782E+00	3.45517E+00	1.18989E+00
2592	5919-3	-2.11385E-08	-1.06928E-03	1.09902E-04	1.60781E+00	5.76647E+00	-7.08632E-01
2593	1633-3	-3.34568E-07	-1.17571E-02	-7.48324E-04	3.66627E+00	4.21843E+01	-8.22129E+00
2594	5921-3	-1.09802E-07	4.13354E-02	-3.01894E-04	-6.39115E+00	7.29496E+00	2.92816E+01
2595	5922-3	-1.24328E-07	-1.58079E-02	1.40453E-04	2.49132E+00	1.30999E+01	-1.11173E+01
2596	1638-3	-2.04947E-08	4.30054E-04	6.04112E-05	-7.72542E-01	6.91543E+00	3.40770E-01
2597	1617-3	4.42172E-07	3.88212E-03	1.75282E-05	5.53701E+00	-7.15794E+01	1.84234E+00
2598	1621-3	-1.79577E-07	4.26654E-04	6.33285E-05	3.69440E+00	7.52964E+00	2.34933E-01
2599	5925-3	-2.61887E-07	-6.27041E-03	-4.75467E-05	2.28189E+00	-1.45730E+02	-2.83138E+00
2600	5926-3	2.29192E-07	-1.68920E-03	-1.28131E-04	3.69484E+00	8.70535E+00	-1.20974E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 249

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2601	1806-3	-1.27716E-08	1.64510E-04	7.51468E-04	-2.50964E+00	1.42198E+01	1.74146E-01
2602	5927-3	-2.42294E-08	-1.33735E-02	-3.61739E-04	1.38004E+00	1.10268E+01	-9.41834E+00
2603	5928-3	-6.62969E-08	5.78761E-04	3.90418E-05	-1.26449E+00	-2.61598E+00	4.12856E-01
2604	5929-3	-3.10621E-08	8.13172E-04	4.30977E-05	5.22071E-01	-1.49271E+00	5.73702E-01
2605	5930-3	-2.40163E-09	3.89485E-03	1.08743E-04	3.50638E-02	-3.48577E+00	2.74326E+00
2606	1814-3	-7.55842E-08	-1.92513E-02	-6.32900E-05	8.27949E+00	5.60806E+00	-1.35937E+01
2607	5931-3	-3.83413E-08	4.76863E-03	-6.92017E-05	-3.00157E+00	2.74850E+00	3.38575E+00
2608	1818-3	1.81402E-08	2.25038E-03	-1.27392E-05	6.83106E-01	-4.01266E-01	1.59005E+00
2609	5932-3	2.45631E-08	5.95194E-03	2.21460E-05	-3.08831E+00	-1.85023E+00	4.20222E+00
2610	5933-3	1.49792E-08	-1.63327E-04	2.16490E-05	3.88393E-01	-1.09961E+00	-1.20715E-01
2611	5934-3	-7.63483E-09	-1.78675E-04	8.31858E-06	-1.34676E-01	-1.22303E-01	-1.26920E-01
2612	5965-3	2.78019E-07	1.40417E-04	1.04222E-06	-2.15016E+00	-2.93299E+00	5.60887E-02
2613	5966-3	1.34117E-06	1.96948E-03	1.21464E-05	2.32354E+00	5.43869E+01	8.52930E-01
2614	1758-3	1.34105E-05	5.89543E-03	1.44436E-06	2.57423E+00	9.65992E+02	2.00343E+00
2615	5936-3	1.09648E-05	7.40749E-03	9.19710E-05	-5.91770E+00	1.90147E+02	3.86525E+00
2616	5937-3	-1.04028E-08	-1.07729E-03	-8.46840E-05	-1.46850E+01	-7.37583E+00	-7.07145E-01
2617	5938-3	9.65582E-07	-5.78356E-03	-1.81360E-04	1.12829E+01	-5.12661E+01	-3.45982E+00
2618	5939-3	8.65944E-07	-7.03229E-04	-2.00876E-06	-3.98451E-01	1.57930E+01	-3.63878E-01
2619	5940-3	-4.31026E-07	2.93424E-04	-2.20493E-05	1.66269E+01	2.39323E+01	2.27378E-01
2620	1762-3	2.58502E-07	-9.46286E-04	-1.42100E-05	7.62181E+00	1.86904E+01	-3.37084E-01
2621	5941-3	1.82641E-07	-4.54301E-02	-1.42951E-03	1.65640E+01	2.09009E+00	-3.23070E+01
2622	5942-3	-8.86699E-07	-6.87688E-04	2.25855E-03	-3.67899E+00	7.97702E+01	-6.36627E-01
2623	5943-3	-4.59471E-06	-1.37254E-02	4.54171E-06	3.72294E+00	1.88931E+02	-5.48949E+00
2624	5944-3	9.01507E-07	1.15419E-02	-1.53095E-05	4.78436E+00	2.73260E+01	6.32273E+00
2625	5945-3	2.83543E-07	-4.14356E-04	-3.91288E-05	-2.08293E+01	1.90395E+01	1.62075E-01
2626	5946-3	6.07697E-08	5.84739E-04	-2.32524E-05	1.37005E+01	1.65038E+01	3.25864E-01
2627	5947-3	4.06571E-07	-3.11796E-03	1.08513E-06	-7.67808E-01	-9.82352E+00	-1.59966E+00
2628	5948-3	5.15629E-08	-1.66007E-03	-7.55594E-05	5.73514E+00	3.39928E+00	-1.18435E+00
2629	5949-3	1.16587E-07	1.05396E-03	1.05880E-04	-1.60018E+00	5.87461E+00	6.97721E-01
2630	1783-3	-5.55633E-07	1.19281E-02	-7.44673E-04	-3.70270E+00	4.21875E+01	8.33264E+00
2631	5951-3	-5.60847E-08	-4.13973E-02	-3.07642E-04	6.41189E+00	7.33976E+00	-2.93227E+01
2632	5952-3	-1.75514E-07	1.57407E-02	1.45813E-04	-2.48261E+00	1.28727E+01	1.10722E+01
2633	1788-3	-5.75627E-08	-4.24963E-04	6.05515E-05	7.63468E-01	6.84338E+00	-3.35908E-01
2634	1767-3	8.55776E-07	-3.87327E-03	1.81750E-05	-5.56425E+00	-7.17392E+01	-1.83424E+00
2635	1771-3	2.58557E-08	-4.53683E-04	6.36010E-05	-3.67294E+00	7.58065E+00	-2.53913E-01
2636	5955-3	1.23673E-06	6.24956E-03	-4.74321E-05	-2.28216E+00	-1.45622E+02	2.81843E+00
2637	5956-3	-2.78337E-07	1.69441E-03	-1.28553E-04	-3.69484E+00	8.72361E+00	1.21358E+00
2638	1826-3	-3.21028E-07	-1.53511E-04	7.53678E-04	2.50665E+00	1.41787E+01	-1.67241E-01
2639	5957-3	-2.75928E-07	1.33711E-02	-3.61348E-04	-1.37833E+00	1.09551E+01	9.41675E+00
2640	5958-3	8.35216E-08	-5.80512E-04	3.90504E-05	1.26460E+00	-2.62060E+00	-4.14132E-01
2641	5959-3	4.79957E-08	-8.14762E-04	4.26583E-05	-5.21657E-01	-1.49178E+00	-5.74827E-01
2642	5960-3	8.92449E-08	-3.89457E-03	1.08549E-04	-3.54520E-02	-3.46577E+00	-2.74309E+00
2643	1834-3	-9.98499E-08	1.92511E-02	-6.48883E-05	-8.27703E+00	5.64257E+00	1.35935E+01
2644	5961-3	-6.82687E-08	-4.76837E-03	-7.01738E-05	3.00233E+00	2.76493E+00	-3.38550E+00
2645	1838-3	-3.28757E-08	-2.24517E-03	-1.27173E-05	-6.84545E-01	-4.00416E-01	-1.58638E+00
2646	5962-3	3.40179E-08	-5.95207E-03	2.26970E-05	3.08753E+00	-1.86224E+00	-4.20232E+00
2647	5963-3	2.27568E-08	1.62242E-04	2.21983E-05	-3.88818E-01	-1.11252E+00	1.19953E-01
2648	5964-3	1.21422E-08	1.76697E-04	8.40614E-06	1.35085E-01	-1.24758E-01	1.25529E-01
2649	5967-3	-4.18841E-06	-1.40697E-04	9.73050E-07	2.14658E+00	-2.87277E+00	-5.59716E-02
2650	5968-3	-1.65580E-05	-1.97365E-03	1.22093E-05	-2.29036E+00	5.47212E+01	-8.54927E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 250

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2651	90-1	1.27080E-06	9.93089E-07	-2.91163E-04	1.35353E-02	2.21873E+01	8.38692E-03
2652	90-2	-1.84205E-06	3.68806E-03	1.29780E-04	-8.03859E+00	-1.83997E-01	-4.82379E+00
2653	90-3	5.21956E-06	-3.74178E-07	3.42457E-03	-1.35630E-01	1.54278E+01	-3.51002E-02
2654	91-1	-3.82188E-05	1.49942E-02	-7.35452E-03	-7.49466E+01	2.98628E+02	1.76088E+01
2655	91-2	5.45916E-06	2.23954E-03	-5.15545E-03	3.44446E+02	1.75485E+02	4.90903E+01
2656	91-3	-8.84474E-05	1.28205E-03	-5.74720E-03	-4.58449E+02	-8.29018E+01	-2.85038E+01
2657	1091-1	8.88625E-05	-1.69078E-02	-9.19605E-03	7.74034E+01	2.47144E+02	-1.42966E+01
2658	1091-2	-2.67327E-06	3.71627E-03	-2.61746E-03	2.51020E+02	-1.75357E+02	1.58700E+01
2659	1091-3	-8.75040E-05	-2.11432E-03	-2.84400E-04	4.74341E+02	-9.09464E+01	4.03539E+01
2660	226-1	3.41941E-05	2.32032E-03	-3.40402E-03	-3.49756E+00	-6.60467E+01	-3.35460E+00
2661	226-2	-2.64144E-06	-7.68689E-04	1.00287E-03	4.45027E+01	2.24792E+00	2.26297E+00
2662	226-3	1.12695E-05	4.04693E-04	-8.27166E-04	9.69823E+00	-1.06637E+01	-5.01852E+00
2663	226-4	2.57841E-04	1.04855E-02	-1.22809E-02	-6.49965E+02	-5.06256E+01	-3.22604E+01
2664	226-5	-9.43379E-04	5.43972E-02	-7.61004E-02	7.96239E+01	-2.08302E+03	-2.17750E+02
2665	226-6	-1.04245E-03	9.90158E-03	-1.22166E-02	-5.59249E+02	1.12275E+02	-1.69678E+01
2666	200-2	-6.81810E-05	-3.24381E-03	-1.78900E-06	2.24332E+00	3.09093E-02	1.57963E+01
2667	200-3	2.94000E-06	-5.58733E-05	-1.29380E-03	-1.53070E-01	-4.86262E+00	-3.40475E-02
2668	200-5	1.00024E-05	8.08020E-05	-1.30930E-01	4.60284E+01	2.91482E+03	1.31932E+01
2669	200-6	1.29359E-02	-7.88200E-02	-1.81266E-02	-4.94039E+03	-2.61500E+01	5.18958E+03
2670	216-1	-2.57000E-04	-3.09359E-04	1.68937E-02	5.30979E-01	-4.60842E+00	1.07412E-02
2671	216-2	-3.56123E-05	-8.33020E-03	2.07656E-03	-5.46915E+01	1.99272E-01	1.21196E+02
2672	216-3	-5.81000E-06	1.17841E-04	-1.26886E-02	-6.73170E+00	-1.46921E+02	-1.80840E+00
2673	704-2	-5.88001E-07	-1.88047E-03	-9.20863E-06	-8.20142E-01	1.68594E-02	8.02740E-01
2674	704-3	1.93200E-06	9.44206E-07	-2.96712E-03	-2.32165E-02	7.18007E+00	-9.05107E-03
2675	2874-2	7.34000E-06	5.99545E-03	-8.05879E-05	-1.02748E+01	1.15300E-01	-3.31209E+01
2676	2874-3	3.51000E-06	-2.63700E-06	4.90087E-03	7.36924E-02	4.34321E+01	8.53434E-03
2677	662-2	-9.66800E-06	-2.75530E-04	-1.66451E-05	1.02119E+01	2.53739E-01	9.83002E+00
2678	662-3	1.69501E-06	-1.08353E-05	1.48922E-03	1.54643E-01	-2.04149E+01	3.92162E-02
2679	691-3	1.84825E-05	-8.58290E-06	-9.92863E-04	1.51550E-01	-4.01009E+01	3.70481E-02
2680	606-2	-2.91300E-06	-1.37690E-03	3.25361E-04	-1.98798E+01	-1.73215E+00	5.50124E+01
2681	606-3	-7.41999E-06	6.82230E-05	6.70111E-03	-2.37678E+00	-7.11712E+01	-5.95146E-01
2682	634-2	1.51040E-06	5.01986E-04	9.36356E-05	6.88157E+00	-2.75135E-01	-2.15648E+01
2683	634-3	-2.77600E-05	-6.12570E-06	3.98267E-03	-4.54144E-01	-3.48089E-01	-1.15805E-01
2684	635-3	1.21930E-05	-1.19482E-05	1.64069E-03	5.71491E-02	6.45657E+01	1.42796E-02
2685	723-2	-1.33001E-06	-5.40239E-03	-6.20430E-05	-2.96704E+00	2.05415E-01	1.73669E+01
2686	723-3	2.89000E-06	-1.46609E-05	-5.28200E-03	1.15278E-01	3.41334E+00	2.38599E-02
2687	546-2	7.84302E-06	1.29245E-02	2.06271E-03	-5.80898E+01	2.71497E-01	1.89218E+02
2688	546-3	-2.15280E-05	1.74170E-04	8.90608E-03	-8.66006E+00	-2.06752E+02	-2.37935E+00
2689	302-2	-8.53000E-05	-3.71200E-04	1.65260E-04	-1.24771E+01	9.61714E+00	1.00196E+01
2690	302-3	-8.50000E-07	-3.29800E-05	-3.76976E-06	-2.00476E+00	-1.49227E+01	4.08923E-01
2691	307-2	-3.77000E-06	7.10620E-04	-5.58839E-04	4.29698E+01	-1.70774E+01	-3.94291E+01
2692	307-3	-1.27000E-06	2.42620E-04	1.03734E-03	-3.69324E+01	2.62158E+01	-5.22812E+00
2693	309-3	1.04200E-05	-5.32260E-05	5.67078E-05	-9.43946E+00	1.22431E+01	-1.27566E+00
2694	390-1	3.59956E-06	-3.88800E-04	1.16880E-03	-3.94974E+00	2.31117E+01	3.47976E+01
2695	313-2	1.66000E-06	-7.30103E-06	-1.72936E-04	7.77561E+00	-5.33769E+00	-3.50181E+00
2696	314-2	5.45995E-07	-3.48648E-06	-1.91010E-04	5.90784E+00	-5.60215E+00	-3.65431E+00
2697	315-2	1.60001E-06	-3.21410E-04	1.06591E-03	-5.14265E+01	2.28292E+01	-3.93636E-01
2698	315-3	4.78900E-06	-2.81950E-06	2.78000E-05	3.46013E-01	3.18291E+00	-6.51148E-02
2699	316-3	2.00000E-07	2.01599E-05	5.27700E-05	1.22806E+00	2.96633E+00	-1.99184E-01
2700	317-2	1.91800E-06	4.16290E-05	-1.71943E-04	4.50474E+00	-6.54802E+00	-4.46908E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 251

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2701	318-2	-4.26830E-06	8.66244E-06	-1.78820E-04	2.81281E+00	-7.12685E+00	-4.52017E+00
2702	319-2	1.39000E-05	2.12700E-05	1.18299E-03	-2.85527E+01	2.18392E+01	-6.87487E+00
2703	319-3	1.12000E-06	-1.84500E-05	-7.49840E-05	7.70072E+00	2.46261E+00	1.60729E-01
2704	320-3	9.68699E-07	-8.75700E-06	-1.01167E-04	8.86576E+00	1.95752E+00	1.75715E-01
2705	321-2	7.52800E-06	5.37400E-05	-9.25220E-05	-1.79431E+00	-7.35543E+00	2.17591E+00
2706	322-2	-1.59250E-05	3.70700E-05	-2.89770E-05	-7.13719E+00	-6.95354E+00	1.87414E+00
2707	323-3	-9.44999E-07	-2.68994E-05	-2.30344E-04	1.99086E+01	-8.52759E+00	6.28475E-01
2708	324-3	1.95300E-06	-2.88500E-05	-1.12882E-04	1.75921E+01	-8.50727E+00	4.00092E-01
2709	328-3	3.15000E-06	-5.90765E-05	-2.36830E-04	3.38959E+01	-3.62244E+01	8.40259E-01
2710	329-2	4.97400E-06	9.42499E-05	3.02671E-04	-1.81294E+01	-3.65586E+01	6.23971E+01
2711	330-2	-1.00699E-06	8.84100E-05	2.04872E-04	-2.87992E+01	2.20831E+01	6.51195E+01
2712	331-3	-1.91901E-06	-4.05040E-05	-2.54130E-04	4.38669E+01	-1.13601E+02	-6.98226E-01
2713	332-3	1.53400E-06	-6.39663E-05	-3.69440E-04	3.58329E+01	-5.53097E+01	1.99900E+00
2714	335-3	-1.28490E-04	-3.51866E-04	-6.69080E-04	2.54704E+02	-5.38097E+02	4.05748E+01
2715	343-2	-2.62072E-06	2.36810E-05	1.13091E-04	-7.50241E+00	1.05788E+00	2.66221E+02
2716	344-2	-5.99959E-06	-4.12193E-06	1.04343E-04	-1.26958E+01	1.73371E+00	2.61079E+02
2717	345-3	6.21022E-07	-2.17354E-05	-4.56360E-05	1.04088E+01	-3.15492E+02	-2.93593E-01
2718	346-3	6.27101E-06	-1.45978E-05	-9.74540E-05	9.09588E+00	-3.07556E+02	3.25834E-01
2719	391-1	2.56128E-03	-1.31365E-04	4.34767E-05	8.75137E+00	8.86926E+01	8.05535E+01
2720	356-1	3.22877E-03	-2.72029E-05	3.51472E-05	2.29413E+00	-2.42250E+01	-6.63619E+01
2721	356-2	-2.77699E-05	6.98417E-04	7.33908E-04	-5.97104E+01	-3.38626E+01	7.82933E+03
2722	356-3	-2.60310E-05	-1.01991E-04	2.13820E-04	6.02072E+01	-6.69568E+03	-1.57000E-01
2723	356-4	-2.49999E-04	6.07199E-03	-3.01169E-01	5.12016E+04	-1.49343E+04	-2.00529E+03
2724	356-5	-1.71641E-03	-2.46426E-03	-3.58450E-02	4.03187E+03	-1.89284E+04	-2.76339E+02
2725	356-6	-8.81670E-03	-1.03690E-02	-4.25184E-02	3.10699E+03	4.39446E+02	3.86746E+04
2726	357-2	-5.50469E-05	8.51834E-05	-3.69739E-05	3.10903E+00	-1.72737E-01	1.90247E+02
2727	357-3	8.40110E-06	9.99276E-06	6.84459E-04	-9.23301E+00	-7.39165E+01	1.31559E+00
2728	350-1	-3.28536E-04	2.73533E-04	4.28960E-04	-5.33525E+02	-2.71095E+03	-3.22308E+03
2729	350-2	-3.18600E-05	1.61000E-04	-1.52169E-04	-2.98387E+02	4.06694E+02	-2.21490E+03
2730	350-3	-4.57592E-04	-1.07322E-04	-6.76222E-04	7.50184E+01	2.12955E+03	2.88068E+02
2731	351-1	-9.73403E-05	-3.38201E-05	5.42791E-04	2.94871E+02	-2.72411E+03	3.18161E+03
2732	351-2	-6.60700E-05	-2.61650E-04	-5.68655E-04	-2.39034E+02	-4.15221E+02	-2.19950E+03
2733	351-3	-3.07120E-04	-8.55197E-06	1.03305E-04	1.19125E+00	2.08999E+03	-2.79679E+02
2734	352-1	7.08200E-04	-4.08760E-04	-2.31196E-03	-2.42147E+02	2.67107E+03	3.25143E+03
2735	352-2	-2.73402E-05	-2.36647E-04	6.37835E-04	2.47899E+02	4.51520E+02	-2.22007E+03
2736	352-3	-2.74997E-04	-1.35720E-04	-4.18900E-04	2.09510E+01	2.09244E+03	3.07263E+02
2737	353-1	-1.96996E-04	5.47799E-05	3.69890E-04	4.62728E+02	2.68134E+03	-3.24188E+03
2738	353-2	-2.81700E-05	3.79767E-04	3.51370E-04	2.81035E+02	-4.23127E+02	-2.19312E+03
2739	353-3	2.07864E-04	1.04030E-05	-1.51120E-04	4.61785E+01	2.09875E+03	-3.03519E+02
2740	1302-2	-1.73000E-05	-3.53340E-04	-2.75340E-04	-1.22530E+01	-9.59278E+00	1.00395E+01
2741	1302-3	-1.24600E-06	3.88740E-05	1.55080E-04	1.96170E+00	-1.47752E+01	-4.05934E-01
2742	1307-2	-1.48900E-05	3.92388E-04	7.37265E-04	4.34825E+01	1.69760E+01	-3.91159E+01
2743	1307-3	6.49994E-07	-2.57820E-04	2.00118E-03	3.72107E+01	2.62518E+01	5.32145E+00
2744	1309-3	6.77000E-06	1.06746E-04	1.55806E-04	9.48120E+00	1.22186E+01	1.26729E+00
2745	1390-1	3.90300E-04	1.85200E-04	1.30026E-03	4.12196E+00	2.31092E+01	-3.45474E+01
2746	1313-2	-5.65701E-06	5.33230E-05	2.36157E-04	7.74620E+00	5.31932E+00	-3.53981E+00
2747	1314-2	-5.82000E-06	-6.54181E-05	2.59580E-04	5.87686E+00	5.58442E+00	-3.64543E+00
2748	1315-2	-2.70000E-06	-2.46190E-04	-1.55973E-03	-5.03574E+01	-2.27583E+01	-1.70555E-01
2749	1315-3	-2.38800E-06	-1.60790E-05	3.66320E-05	-3.53056E-01	3.16241E+00	6.30869E-02
2750	1316-3	-8.29991E-08	-1.99410E-05	1.12562E-04	-1.25033E+00	2.97113E+00	1.94004E-01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 252

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2751	1317-2	3.39999E-06	-1.72080E-05	3.00844E-04	4.09878E+00	6.54466E+00	-4.58720E+00
2752	1318-2	-2.50001E-06	1.17790E-05	2.87150E-04	2.41108E+00	7.11472E+00	-4.62997E+00
2753	1319-2	-7.69999E-06	3.21290E-04	-1.04529E-03	-3.10148E+01	-2.16706E+01	-7.43611E+00
2754	1319-3	1.79997E-07	1.68730E-05	6.88295E-06	-7.79988E+00	2.46505E+00	-1.86506E-01
2755	1320-3	-7.65401E-07	6.10900E-06	-1.11691E-05	-8.97102E+00	1.95930E+00	-2.04415E-01
2756	1321-2	-9.29992E-07	1.03200E-04	2.34246E-04	-2.72157E+00	7.36747E+00	1.92558E+00
2757	1322-2	-5.19999E-07	1.70900E-05	2.22389E-04	-8.11948E+00	6.99149E+00	1.60826E+00
2758	1323-3	7.19400E-06	4.48630E-05	-9.61802E-06	-2.01700E+01	-8.53471E+00	-6.91110E-01
2759	1324-3	-3.68800E-06	4.30848E-05	-8.55400E-05	-1.77597E+01	-8.49489E+00	-4.50396E-01
2760	1328-3	-6.59300E-06	6.07070E-05	-1.50290E-04	-3.42394E+01	-3.61707E+01	-9.43299E-01
2761	1329-2	-6.94004E-07	7.81300E-05	2.23990E-05	-2.04579E+01	3.66486E+01	6.17566E+01
2762	1330-2	-5.03898E-06	1.71340E-04	1.08672E-04	-3.09086E+01	-2.19962E+01	6.45814E+01
2763	1331-3	-1.37198E-06	6.48360E-05	-1.67100E-05	-4.41440E+01	-1.13609E+02	6.38493E-01
2764	1332-3	-1.47200E-06	6.90500E-05	-9.85000E-05	-3.63319E+01	-5.53227E+01	-2.13217E+00
2765	1335-3	1.37320E-04	3.86147E-04	1.18921E-03	-2.58677E+02	-5.38401E+02	-4.15767E+01
2766	1343-2	-2.13371E-06	1.89970E-05	5.61000E-07	-8.35937E+00	-1.01988E+00	2.65975E+02
2767	1344-2	-2.17512E-06	-1.32315E-05	9.02860E-06	-1.35183E+01	-1.70058E+00	2.60837E+02
2768	1345-3	-1.30201E-06	2.27820E-05	5.66055E-07	-1.05155E+01	-3.15475E+02	2.62778E-01
2769	1346-3	-6.36299E-06	2.72490E-05	-1.18688E-04	-9.21959E+00	-3.07467E+02	-3.58647E-01
2770	1391-1	-8.95972E-04	-8.47270E-05	5.87930E-06	-8.73680E+00	8.87406E+01	-8.16018E+01
2771	1356-1	3.30612E-03	-3.09303E-05	-5.72760E-05	-2.20380E+00	-2.41349E+01	6.63413E+01
2772	1356-2	1.26650E-04	-1.76770E-04	-1.79780E-05	-6.49021E+01	3.40771E+01	7.82703E+03
2773	1356-3	3.05051E-05	1.16806E-04	2.14580E-04	-6.06492E+01	-6.69541E+03	5.63693E-02
2774	1356-4	5.74000E-03	-2.20901E-03	3.60208E-01	5.11993E+04	1.49067E+04	-2.01972E+03
2775	1356-5	8.45540E-03	1.17790E-03	-5.82800E-03	-4.07869E+03	-1.89334E+04	2.64604E+02
2776	1356-6	-6.74060E-03	-1.69330E-02	-4.29650E-03	3.40702E+03	-4.45487E+02	3.87547E+04
2777	1357-2	-1.70336E-05	-1.01014E-04	-6.05274E-06	3.38832E+00	1.66079E-01	1.90124E+02
2778	1357-3	1.15989E-06	9.74802E-07	-9.46818E-05	9.41473E+00	-7.31328E+01	-1.30821E+00
2779	1350-1	5.76528E-04	-4.61150E-04	6.63800E-05	5.38358E+02	-2.71194E+03	3.22459E+03
2780	1350-2	-1.38140E-04	7.90005E-06	3.99800E-04	-2.99167E+02	-4.06669E+02	-2.21534E+03
2781	1350-3	4.15200E-05	1.36340E-04	-3.18381E-04	-7.69570E+01	2.12956E+03	-2.88429E+02
2782	1351-1	-5.55701E-04	-4.18200E-05	5.01750E-04	-2.97514E+02	-2.72413E+03	-3.18252E+03
2783	1351-2	-6.46208E-05	4.87640E-04	5.39662E-04	-2.39136E+02	4.15241E+02	-2.19878E+03
2784	1351-3	-2.77340E-04	-3.37603E-06	6.54399E-05	3.39691E-02	2.09000E+03	2.80006E+02
2785	1352-1	8.86998E-05	4.76850E-04	-1.19599E-03	2.36233E+02	2.67156E+03	-3.25319E+03
2786	1352-2	9.91999E-06	2.56731E-04	-4.85423E-04	2.47110E+02	-4.51485E+02	-2.21975E+03
2787	1352-3	-5.45949E-04	1.78750E-04	1.77720E-04	-2.32218E+01	2.09244E+03	-3.07928E+02
2788	1353-1	-6.48076E-04	1.17601E-05	4.50456E-04	-4.59219E+02	2.68100E+03	3.24282E+03
2789	1353-2	-1.41001E-05	-3.68611E-05	-4.26222E-04	2.80739E+02	4.23117E+02	-2.19365E+03
2790	1353-3	3.22280E-04	-5.38960E-05	-3.27027E-04	-4.47041E+01	2.09875E+03	3.03919E+02
2791	1117-1	2.13864E-04	8.68296E-05	-6.96427E-07	-2.76774E+00	-9.41965E-01	2.88144E-04
2792	1117-2	9.71854E-05	-1.82302E-04	-6.42775E-07	4.84288E+00	-3.53262E+00	-2.00516E-02
2793	1117-3	5.30233E-05	3.00586E-05	-8.48639E-06	2.45193E+01	-4.11993E+01	-2.76412E-02
2794	1117-4	4.59967E-03	-8.66926E-03	6.55501E-04	1.31373E+03	-1.04045E+03	-7.79948E+00
2795	1117-5	-3.12342E-02	-1.51142E-02	-2.21720E-04	7.71489E+02	-3.79350E+02	-4.64125E-01
2796	1117-6	-6.12572E-04	-1.16420E-03	-3.69823E-07	-1.53258E+02	1.95255E+02	7.81878E-01
2797	100-1	-2.94938E-07	-3.74857E-08	-1.95534E-01	-2.19378E+01	2.90440E+02	1.72796E+01
2798	100-2	5.16884E-08	4.09782E-08	7.24291E-04	-3.40195E+00	7.30737E+00	2.05727E+02
2799	100-3	4.05067E-07	-2.90456E-08	3.75776E-02	6.59684E+00	-5.99946E+02	-2.82802E+00
2800	100-4	4.45638E-07	2.59606E-07	6.72758E-03	-5.75284E+00	-3.91178E+02	3.96901E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 253

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2801	100-6	1.96858E-07	-7.79983E-09	1.77445E-01	2.06388E+01	-2.07006E+02	4.11645E+01
2802	101-1	-1.61817E-07	1.58325E-08	3.72935E-01	3.74319E+01	-1.29584E+02	-2.94646E+00
2803	101-2	-1.11992E-07	7.82311E-08	1.10946E-03	4.22771E+00	3.20483E+01	-5.76086E+02
2804	101-3	-3.36673E-07	6.34464E-08	-2.61409E-02	-3.02349E+00	1.32338E+03	-1.43272E+01
2805	101-4	-4.29805E-07	2.41678E-07	-2.42830E-03	5.00189E+00	8.48262E+02	-1.03167E+03
2806	101-6	1.94181E-07	-3.93484E-08	-3.67367E-01	-3.59453E+01	1.38267E+02	-2.94404E+01
2807	102-1	6.33299E-08	3.31202E-08	-3.12912E-01	-2.43360E+01	-1.39878E+02	2.21309E+01
2808	102-2	8.77189E-08	-6.44359E-08	5.99303E-03	4.01763E+00	-8.97250E+01	6.42513E+02
2809	102-3	-2.05240E-07	3.43352E-08	-4.32055E-02	-5.58863E+00	-7.25603E+02	1.48507E+01
2810	102-4	-1.55356E-07	5.14556E-08	-2.22920E-02	-9.05811E+00	-4.66545E+02	9.07489E+02
2811	102-6	1.28057E-08	-3.88827E-08	3.13213E-01	2.04549E+01	7.98794E+01	-9.29006E+01
2812	103-1	1.34110E-07	7.21775E-09	9.66445E-02	6.15071E+00	-1.97635E+02	-9.46671E+01
2813	103-2	-2.11294E-08	5.58794E-08	-2.18759E-02	-2.49381E+01	3.02316E+01	-4.78121E+02
2814	103-3	1.39349E-07	-1.31549E-08	5.64682E-02	8.95235E+00	5.89838E+02	1.97822E+01
2815	103-4	1.37370E-08	8.94070E-08	1.04564E-02	-5.38663E+01	2.08318E+02	-4.57305E+02
2816	103-6	-2.83122E-07	-1.11759E-08	-9.11828E-02	-1.61591E+01	1.44338E+02	7.96020E+01
2817	104-1	-4.23752E-08	-3.14321E-09	3.30132E-01	3.13919E+01	-4.39314E+01	-2.32243E+01
2818	104-2	-2.16532E-08	-3.07336E-08	1.02315E-02	-3.99492E+01	1.68796E+02	7.92371E+02
2819	104-3	1.90921E-08	7.33417E-09	-4.47654E-02	-5.47399E-01	-1.93313E+03	-1.57408E+02
2820	104-4	5.28526E-08	-3.72529E-08	-1.39231E-02	-8.92040E+01	-1.21998E+03	1.79126E+03
2821	104-6	8.70787E-08	2.44472E-09	-3.06709E-01	-2.92805E+01	4.57334E+01	1.21404E+02
2822	105-1	-1.38301E-07	-9.02219E-09	-2.64215E-01	-2.21606E+01	2.91517E+02	3.33130E+01
2823	105-2	8.84756E-09	-7.50879E-08	4.18010E-02	-2.06592E+01	8.98288E+01	1.28521E+03
2824	105-3	7.68341E-09	-1.77533E-08	-7.16528E-02	-3.64788E+00	-1.87046E+03	-1.83716E+02
2825	105-4	2.96859E-08	-7.86968E-08	-1.51150E-03	-5.68532E+01	-1.12763E+03	1.97104E+03
2826	105-6	2.05822E-07	1.59780E-08	2.52181E-01	3.16326E+01	-2.44722E+02	-1.83246E+02
2827	106-1	-1.38767E-07	-2.70084E-08	-3.41102E-02	-7.62402E+00	3.75769E+02	1.78705E+02
2828	106-2	-3.95812E-09	4.19095E-09	2.38786E-02	7.27492E+00	-1.21358E+02	-5.71465E+02
2829	106-3	1.72295E-08	3.94648E-08	-5.50252E-02	-7.33186E+00	1.26279E+03	1.60754E+02
2830	106-4	7.68341E-09	1.60187E-07	-1.14028E-02	-8.28878E+00	6.01486E+02	-5.47158E+02
2831	106-6	8.05594E-08	5.62286E-08	3.31337E-02	1.11230E+01	-2.84796E+02	-1.91017E+02
2832	107-1	-1.34925E-07	-1.31549E-08	2.72080E-01	2.49215E+01	-4.10080E+02	-1.00118E+02
2833	107-2	-1.43191E-08	1.32248E-07	-3.34803E-02	3.33396E-01	-1.33809E+02	-7.88456E+02
2834	107-3	5.58794E-09	1.27766E-08	3.10576E-02	1.29368E+00	1.63976E+03	1.32946E+02
2835	107-4	-2.06055E-08	1.90455E-07	-1.72677E-02	-4.24718E-02	8.70958E+02	-1.09777E+03
2836	107-6	1.64961E-07	8.14907E-09	-2.66315E-01	-2.57629E+01	3.66173E+02	4.29503E+01
2837	108-1	-2.42377E-07	4.15603E-08	-2.73805E-01	-2.32724E+01	3.24070E+01	-1.87675E+02
2838	108-2	-3.49246E-09	1.65310E-08	-1.36977E-02	-8.05128E+00	1.79640E+02	1.16674E+03
2839	108-3	-1.58034E-08	-6.51926E-09	5.36922E-02	6.36456E+00	-2.39294E+03	-1.49468E+02
2840	108-4	-7.26141E-09	4.77303E-08	1.79200E-02	-8.45690E+00	-1.18851E+03	1.65209E+03
2841	108-6	1.82074E-07	-9.15024E-08	2.64452E-01	2.26940E+01	-8.13001E+01	1.32064E+02
2842	109-1	-4.21656E-07	-6.98492E-09	1.63014E-02	-1.94197E-01	-1.11611E+01	1.57098E+02
2843	109-2	-3.63216E-08	-1.35507E-07	1.50498E-02	2.64015E+00	-2.98987E+01	-1.41190E+02
2844	109-3	1.99187E-07	-2.76486E-09	-5.30325E-02	-4.79650E+00	-1.93074E+01	-4.86244E+01
2845	109-4	1.39407E-07	-2.72645E-07	-3.32963E-02	-6.12506E+00	-9.17229E+01	-7.63990E+01
2846	109-6	2.30270E-07	-9.89530E-09	-2.09986E-02	5.51657E-01	5.81205E+01	-4.71098E+01
2847	110-1	-4.20725E-07	-1.99652E-08	1.47279E-01	1.33344E+01	5.20692E+02	1.77227E+02
2848	110-2	7.31816E-08	-2.78233E-08	1.13190E-02	2.06415E+00	-7.10050E+01	-5.55004E+02
2849	110-3	9.06002E-08	-1.77824E-08	-7.57378E-02	-5.61076E+00	1.50665E+03	6.91805E+01
2850	110-4	1.41037E-07	-1.39233E-07	-6.33371E-02	-7.36243E+00	7.99718E+02	-8.06928E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 254

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2851	110-6	3.05590E-07	7.35163E-08	-1.44294E-01	-1.32652E+01	-4.54419E+02	-8.33038E+01
2852	111-1	-3.83588E-07	-2.15368E-09	-4.24232E-02	-3.18117E+00	-3.69175E+02	-1.79150E+02
2853	111-2	-7.04313E-08	1.74608E-07	-1.16177E-02	-3.26570E+00	4.68264E+01	2.68458E+02
2854	111-3	-5.67408E-07	-2.92202E-08	7.26712E-02	9.72360E+00	-6.26805E+02	-6.12031E+00
2855	111-4	-7.59261E-07	4.32017E-07	6.20397E-02	-6.84257E-01	-3.09886E+02	3.14485E+02
2856	111-6	1.30967E-08	1.32437E-07	7.43073E-02	5.51982E+00	2.61251E+02	8.15204E-02
2857	112-2	-2.05546E-10	5.74437E-09	-1.00211E-03	9.58623E-01	1.26482E+00	-4.91548E+00
2858	113-2	-6.54836E-10	1.12050E-09	3.01225E-09	1.28055E+00	-1.54164E-06	5.50877E-07
2859	114-2	3.19415E-09	2.69574E-09	-6.01915E-04	9.97566E-01	3.59978E+00	4.36104E+00
2860	115-1	5.75185E-06	-3.26778E-07	-1.06252E-01	-9.84565E+00	-1.67462E+02	5.63956E+00
2861	115-2	-3.00177E-07	1.64970E-05	-3.27553E-02	6.99045E+01	-1.19031E+02	-1.21082E+03
2862	115-3	3.39001E-07	6.92962E-07	1.17526E-01	6.32113E+00	1.87758E+03	1.72819E+02
2863	115-4	2.18430E-06	-3.87421E-05	-6.77251E-03	9.16275E+00	-4.99290E+02	-1.30920E+02
2864	115-5	2.41855E-05	-8.63732E-06	-5.67161E-01	-5.37490E+01	-6.04016E+02	1.31977E+02
2865	115-6	8.66735E-06	-2.66973E-05	-1.66028E-01	-1.85987E+01	9.44589E+01	-1.07909E+03
2866	116-1	1.34000E-06	0.00000E+00	0.00000E+00	-3.26160E-06	3.08048E-04	-1.32001E-03
2867	116-2	-4.00000E-08	1.48400E-06	1.40000E-09	-4.99127E-04	-5.01381E-05	2.94272E-04
2868	116-3	1.74000E-07	1.18000E-08	-3.95000E-05	-2.59998E-03	3.75742E-02	2.88427E-05
2869	116-4	1.38000E-06	-1.05600E-06	-6.60000E-05	-1.06077E-03	1.96972E-01	-2.38507E-04
2870	116-5	-1.90790E-06	6.40000E-10	-1.00000E-08	-3.34641E-05	-2.04026E-03	1.61748E-04
2871	116-6	-7.90000E-06	0.00000E+00	3.00000E-08	2.19289E-05	-1.83338E-03	1.02386E-02
2872	10001-1	1.62836E-08	3.01769E-08	-6.32045E-09	2.18216E+03	-5.49916E+03	-6.14857E+03
2873	10001-2	-9.56400E-09	-4.70442E-08	5.01743E-09	1.12371E+04	-7.37959E+03	-6.00090E+03
2874	10001-3	-2.67993E-08	-3.52561E-08	7.92114E-09	2.65665E+03	3.36156E+03	3.47228E+03
2875	10002-1	5.07316E-09	9.73159E-10	-3.27998E-09	4.65023E+03	-1.07206E+04	-1.52762E+04
2876	10002-2	-1.74680E-10	1.84130E-09	4.80892E-10	5.57890E+03	6.80174E+03	2.17971E+04
2877	10002-3	3.02293E-10	-7.14579E-10	-2.99042E-09	2.77688E+03	-1.22167E+04	-5.02126E+03
2878	10004-1	-6.32099E-11	1.24095E-09	4.15241E-10	-3.98451E+02	2.97254E+03	2.11210E+03
2879	10004-2	-1.17585E-09	2.75367E-09	6.55839E-09	6.33569E+03	-1.90401E+03	-3.15274E+02
2880	10004-3	2.44572E-09	-4.62035E-09	-2.05334E-08	-1.60193E+04	4.69001E+03	7.45277E+02
2881	10005-1	-2.47496E-10	1.10735E-10	-1.18272E-10	-4.28305E+02	1.05936E+03	1.19389E+03
2882	10005-2	5.17531E-09	-1.11852E-08	-7.79657E-09	-4.92971E+03	-6.18414E+02	-5.82551E+02
2883	10005-3	-1.93157E-09	5.46343E-09	6.79901E-09	-6.95533E+03	7.37557E+02	7.98703E+02
2884	10006-1	-5.56611E-10	-1.40635E-08	-5.17593E-09	-6.42873E+03	3.10709E+04	2.21105E+04
2885	10006-2	9.17680E-10	-7.30734E-09	-4.14363E-09	-2.59057E+04	8.42754E+03	-5.49270E+03
2886	10006-3	-1.97269E-09	1.45486E-08	2.55303E-08	7.18491E+03	-1.69629E+03	4.14678E+03
2887	10007-1	3.73848E-09	-2.05516E-08	2.16237E-09	-9.55081E+03	-1.65223E+04	-1.15305E+04
2888	10007-2	2.93144E-09	-2.56968E-08	-5.53133E-09	3.04478E+04	5.47804E+02	-1.64263E+03
2889	10007-3	-5.21823E-09	2.05717E-08	-7.15028E-09	2.64036E+04	1.54826E+03	7.80514E+02
2890	10008-1	4.61049E-09	-1.14996E-09	2.14047E-09	4.39637E+03	1.09263E+04	1.10022E+04
2891	10008-2	-8.72149E-10	-5.05373E-09	-4.33857E-10	-2.58808E+04	-2.69294E+03	-2.43326E+03
2892	10008-3	3.28644E-09	2.97470E-10	3.52706E-08	-1.26384E+04	-2.17766E+03	-2.23377E+03
2893	10009-1	2.52174E-09	-1.12566E-10	1.38639E-09	7.77256E+02	2.51154E+02	4.56509E+02
2894	10009-2	-6.96623E-10	-6.67619E-09	-8.94588E-10	-4.44138E+03	-1.13450E+03	-1.12990E+03
2895	10009-3	1.00761E-09	1.17567E-09	3.39786E-09	-2.52910E+03	-4.68897E+02	-4.93391E+02
2896	10010-1	1.82342E-09	-1.02471E-09	5.70722E-10	1.66984E+01	2.68124E+03	2.75127E+03
2897	10010-2	-2.51249E-09	-1.32639E-08	1.42820E-09	-9.57769E+03	-2.83902E+02	-3.38210E+02
2898	10010-3	-7.20433E-10	1.45668E-09	2.23616E-09	-3.23137E+03	3.22462E+02	2.96300E+02
2899	10011-1	-3.37604E-09	5.67525E-10	1.32422E-09	3.22382E+03	-3.21370E+03	-1.29228E+04
2900	10011-2	1.97178E-09	7.01584E-09	8.61746E-09	1.23989E+04	1.88815E+03	1.93298E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 255

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2901	10011-3	5.45424E-09	3.47109E-09	1.20967E-07	8.61165E+03	1.91595E+02	-2.43513E+03
2902	10012-1	5.76983E-08	-4.13638E-09	-2.96404E-09	2.14594E+03	-2.41183E+04	-2.42349E+04
2903	10012-2	-1.60617E-09	-2.05259E-08	1.75169E-09	2.87310E+04	1.64429E+02	-1.29481E+02
2904	10012-3	1.02068E-08	-7.88305E-10	4.31742E-08	3.83307E+04	-1.77993E+03	-1.00646E+03
2905	10013-1	3.50929E-09	-3.62206E-10	-9.10586E-09	5.98507E+02	2.96419E+03	3.36671E+03
2906	10013-2	7.71252E-10	1.44837E-10	-1.80758E-08	-7.27176E+03	7.80625E+02	8.66720E+02
2907	10013-3	1.32695E-09	1.15597E-09	-1.16743E-08	-1.51978E+04	-3.17316E+02	-4.59389E+02
2908	10016-1	1.82445E-09	-8.74252E-10	4.28281E-09	3.01341E+02	1.24223E+04	1.25869E+04
2909	10016-2	5.83213E-10	6.59725E-09	4.27735E-09	-1.58371E+04	5.76945E+02	6.30762E+02
2910	10016-3	-1.22250E-08	-4.12001E-09	2.61172E-08	-1.17453E+04	-9.04712E+01	-8.65818E+01
2911	10017-1	-1.06047E-09	-1.30967E-09	6.66887E-09	-1.44061E+03	4.20940E+03	4.38941E+03
2912	10017-2	1.25510E-10	1.23050E-08	3.48990E-09	-1.08898E+04	3.45514E+02	5.03023E+02
2913	10017-3	-2.96495E-10	3.22757E-09	1.85298E-08	-9.07671E+03	1.71442E+02	2.63153E+02
2914	10018-1	5.79303E-09	-3.66867E-10	8.01151E-10	2.39097E+02	7.26755E+03	7.42278E+03
2915	10018-2	7.79892E-10	5.15155E-09	2.97200E-09	-1.69324E+04	2.56742E+02	4.58115E+02
2916	10018-3	-6.47788E-10	1.61361E-09	-7.17284E-09	-1.07634E+04	-7.20189E+01	4.10484E+01
2917	10019-1	-2.04891E-08	1.68802E-09	-8.61473E-09	-1.14014E+03	-9.78233E+01	-1.25943E+01
2918	10019-2	9.66247E-09	-3.49246E-09	-9.77889E-09	4.60448E+03	-7.07652E+01	1.65399E+03
2919	10019-3	-2.84053E-08	6.05360E-09	2.98023E-08	-1.14940E+04	7.13474E+01	-4.20654E+03
2920	10020-1	-1.32131E-08	-2.47383E-09	-5.86442E-09	-1.53161E+03	2.00581E+04	1.99864E+04
2921	10020-2	-1.81171E-09	-2.97732E-08	1.54978E-09	-1.61648E+04	-1.35243E+03	-1.36486E+03
2922	10020-3	8.84029E-09	-2.09184E-09	1.09685E-08	-1.72969E+04	9.86959E+02	9.28363E+02
2923	10021-1	-1.62981E-09	1.05501E-09	2.12822E-10	1.65750E+03	3.60927E+03	3.82915E+03
2924	10021-2	-3.78350E-10	-2.05182E-09	4.22006E-10	-1.23300E+04	-1.87424E+01	-7.62258E+01
2925	10021-3	-3.14503E-09	6.21185E-10	-3.29146E-09	-6.28363E+03	-6.32147E+02	-6.80080E+02
2926	10022-1	2.03727E-09	1.01863E-09	-3.07409E-09	3.57654E+02	5.67352E+03	5.81803E+03
2927	10022-2	-4.72937E-10	3.84171E-09	5.52973E-10	-1.57269E+04	9.99479E+00	-5.91087E+01
2928	10022-3	-7.45786E-10	-4.37467E-10	-2.25555E-10	-6.97365E+03	-5.41628E+01	-1.40949E+02
2929	10023-1	5.77420E-08	-9.48785E-09	-4.05707E-08	8.19811E+02	-1.25907E+03	-1.31386E+03
2930	10023-2	4.77303E-09	-2.79397E-09	-4.65661E-10	6.34876E+03	-1.08098E+03	9.55765E+03
2931	10023-3	-5.12227E-09	9.45874E-11	1.13505E-08	1.39154E+02	-5.67937E+03	-5.27465E+01
2932	10025-1	2.64263E-08	-7.21775E-09	-5.20959E-09	8.88239E+01	-1.77581E+03	-4.76931E+03
2933	10025-2	1.74623E-10	1.00117E-08	6.11180E-09	1.15556E+04	-1.35101E+03	-1.86851E+03
2934	10025-3	-9.82254E-10	1.12414E-09	1.96596E-08	3.21804E+03	5.17158E+02	5.81613E+01
2935	10026-1	-3.49246E-08	3.87627E-09	2.05764E-08	7.29357E+02	2.32608E+03	2.79607E+03
2936	10026-2	9.26811E-08	-4.28408E-08	6.21658E-08	-5.05632E+03	1.20684E+03	1.13759E+03
2937	10026-3	-4.67990E-08	2.25846E-08	-3.30620E-08	-9.32576E+03	-1.39540E+03	-1.52863E+03
2938	10027-1	4.44707E-08	4.16185E-09	-1.50176E-08	-8.54893E+02	-3.38132E+04	-3.17611E+04
2939	10027-2	-1.86265E-09	-3.29455E-08	-2.25555E-09	2.73279E+04	-2.28958E+02	-2.13740E+03
2940	10027-3	-5.18048E-09	1.09867E-08	2.56405E-08	2.82722E+04	1.66616E+03	8.98609E+02
2941	10028-1	-4.07454E-10	1.50976E-10	1.93040E-10	3.98220E+01	1.10359E+03	1.10776E+03
2942	10028-2	-2.91038E-11	-1.67347E-09	-8.13452E-09	-5.79920E+03	-3.49209E+02	-2.93820E+02
2943	10028-3	-2.11003E-10	-4.22006E-10	2.01180E-09	-4.68683E+03	-1.16648E+02	-1.53199E+02
2944	10029-1	3.89700E-08	5.36602E-10	2.26601E-09	-2.92420E+03	-2.67855E+01	-9.80616E+03
2945	10029-2	8.82210E-10	3.95767E-09	-6.64471E-10	5.42524E+03	3.16363E+02	5.79831E+02
2946	10029-3	8.99320E-10	-1.07093E-09	7.31995E-08	5.03453E+03	1.02155E+03	2.61756E+03
2947	10030-1	2.95477E-08	-4.31191E-09	-9.27184E-09	-6.40111E+01	-6.66504E+03	-8.24061E+03
2948	10030-2	-6.79393E-10	1.35333E-09	1.45469E-08	6.53467E+03	3.17781E+02	5.11428E+02
2949	10030-3	-2.57842E-09	2.61377E-09	8.02771E-09	1.33332E+04	-9.50551E+02	-4.85618E+02
2950	10031-1	3.29455E-08	-7.15954E-09	-1.64418E-08	3.98070E+02	-1.46514E+03	-3.85917E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 256

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
2951	10031-2	-8.73115E-11	-5.12227E-09	-3.15958E-09	5.16870E+03	-2.16344E+02	-4.45191E+02
2952	10031-3	-3.84534E-09	3.48246E-09	5.62286E-08	-8.51745E+02	1.03947E+03	-2.06374E+02
2953	10032-1	2.60770E-08	6.37374E-09	-7.12316E-09	-7.63561E+02	-6.22528E+03	-7.49451E+03
2954	10032-2	-3.29601E-09	-3.17232E-09	1.06120E-08	7.34933E+03	-1.20928E+02	-6.76904E+02
2955	10032-3	-9.89530E-10	2.50293E-09	2.61061E-08	1.23179E+04	1.28970E+03	3.15472E+02
2956	10033-1	1.25251E-08	-4.91019E-08	-3.02151E-08	-1.21492E+03	-3.30211E+03	-4.63138E+03
2957	10033-2	-1.03682E-08	-9.05668E-08	-6.05960E-09	2.53919E+03	-1.81808E+02	-7.99977E+02
2958	10033-3	-1.53076E-08	1.07835E-09	1.84381E-08	7.54771E+03	1.40198E+03	1.07781E+03
2959	10034-1	9.76361E-08	1.21102E-07	-1.01084E-07	-8.59214E+03	-1.54690E+03	-1.49130E+04
2960	10034-2	1.20095E-08	-1.99991E-07	-4.29955E-08	2.86182E+03	-2.15846E+02	-1.59038E+02
2961	10034-3	-4.39381E-08	-6.40411E-08	2.60063E-08	8.84910E+03	1.29381E+03	8.66278E+03
2962	10035-1	3.28873E-09	8.17636E-10	-3.40788E-09	3.18241E+03	1.82623E+02	-1.02229E+04
2963	10035-2	7.13044E-10	6.37010E-09	-2.80727E-09	5.24226E+02	2.69791E+01	7.59582E+02
2964	10035-3	-9.96806E-10	4.01269E-09	1.77384E-08	8.65846E+03	9.97608E+02	-3.91418E+03
2965	10036-1	3.36440E-08	1.81899E-09	-7.70888E-09	5.20684E+02	-7.26973E+02	-5.00652E+03
2966	10036-2	6.43922E-10	6.25096E-09	-8.40373E-10	7.31453E+02	-2.00520E+01	-6.37669E+02
2967	10036-3	-1.03173E-08	3.35604E-09	1.77242E-08	2.65496E+03	9.36159E+02	1.43499E+02
2968	10037-1	8.55653E-09	-3.38605E-09	-4.12660E-09	4.81756E+01	-6.50062E+02	-4.50078E+03
2969	10037-2	1.41654E-10	5.14183E-09	4.73960E-10	3.86253E+02	3.07606E+01	5.56173E+02
2970	10037-3	-1.72258E-09	-1.75316E-09	-8.98922E-10	6.04626E+03	-3.92443E+02	2.31225E+02
2971	10038-1	-4.26371E-09	-2.25387E-09	3.40606E-10	9.84194E+00	-2.33938E+02	3.91699E+03
2972	10038-2	-2.04523E-10	-1.72716E-09	-5.70566E-10	3.95012E+01	-1.21624E+01	2.80338E+02
2973	10038-3	9.01764E-10	-1.12857E-09	1.80418E-08	-1.75135E+03	1.12013E+02	1.86151E+02
2974	10039-1	1.77824E-08	2.20098E-10	1.62981E-09	-1.76937E+02	-8.42465E+00	4.22933E+04
2975	10039-2	-1.91812E-09	3.70983E-09	1.01636E-10	5.04246E+02	1.01492E+01	-1.65847E+03
2976	10039-3	-2.20462E-09	-1.77897E-09	1.22245E-08	-2.55641E+04	1.59341E+02	-5.68292E+02
2977	10040-1	8.74570E-09	5.77870E-10	2.83762E-10	-5.13433E+02	1.18634E+02	-1.63853E+04
2978	10040-2	2.26100E-09	1.24646E-09	-1.26943E-09	1.12972E+03	-2.54389E+00	2.06409E+03
2979	10040-3	-1.74623E-10	-2.12049E-09	1.12695E-08	8.08478E+03	6.08267E+02	1.16280E+03
2980	10041-1	1.56579E-08	5.52973E-10	7.67614E-10	1.34961E+02	-1.54976E+02	-6.67278E+03
2981	10041-2	-2.51384E-09	5.80985E-09	3.87081E-09	1.02665E+03	2.52024E+00	-1.28947E+03
2982	10041-3	-8.40373E-09	3.12866E-10	1.74623E-08	3.07495E+03	4.82546E+02	-6.50677E+02
2983	10042-1	3.24217E-08	5.76256E-09	-7.47241E-09	-7.38843E+01	-8.58808E+02	-4.38589E+03
2984	10042-2	-4.06726E-09	-2.56887E-09	2.93221E-09	5.57868E+02	-1.92827E+01	-5.70937E+02
2985	10042-3	-5.20959E-09	-1.17871E-09	-6.98492E-10	4.73276E+03	6.73814E+02	-1.33843E+02
2986	10043-1	4.01051E-08	1.18744E-08	-8.14907E-10	2.23854E+02	-1.61772E+02	3.79875E+03
2987	10043-2	-3.87081E-09	-2.94676E-09	3.05954E-09	1.05120E+02	-5.54418E+00	-2.43004E+02
2988	10043-3	-9.57516E-09	-2.00816E-09	-3.30620E-08	-1.79850E+03	8.94808E+01	-1.56167E+02
2989	10044-1	-7.10861E-09	3.17959E-09	-1.21645E-09	-9.81976E+02	-3.16438E+01	4.90441E+03
2990	10044-2	-3.29237E-10	2.40061E-09	-2.98314E-10	6.93376E+02	-2.14714E+00	-4.07380E+02
2991	10044-3	-1.01863E-09	1.04865E-09	6.60839E-09	-8.18879E+03	2.41273E+01	5.72470E+02
2992	10045-1	2.92785E-08	-7.85803E-10	-2.53203E-09	1.09375E+03	-9.13620E+01	-1.07527E+04
2993	10045-2	-3.60887E-09	7.57791E-09	9.14952E-10	-3.12833E+02	1.21171E+01	-2.25908E+02
2994	10045-3	-5.53155E-09	1.98270E-10	1.16852E-08	1.86841E+04	1.24311E+02	-1.54488E+03
2995	10046-1	2.59425E-08	-2.43892E-09	-7.17478E-10	8.44517E+02	-2.16760E+01	5.33458E+03
2996	10046-2	9.82254E-11	-1.75817E-10	2.10383E-09	1.68499E+03	1.07571E+00	1.07929E+03
2997	10046-3	5.32395E-10	-6.67754E-09	1.02605E-08	-1.00053E+04	-5.18161E+00	-3.55938E+02
2998	10047-1	-1.63491E-08	2.49565E-09	-2.14641E-10	9.15488E+01	3.28620E+00	2.37277E+03
2999	10047-2	4.29281E-10	5.62022E-09	-5.34192E-09	1.03044E+03	-2.33144E+00	-9.57659E+01
3000	10047-3	-2.26282E-09	1.21781E-09	1.45374E-08	-5.38924E+03	1.51781E+01	8.71225E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 257

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
3001	10048-1	1.36206E-08	2.80852E-09	-5.63523E-09	-5.78511E+02	-3.28746E+01	4.73577E+03
3002	10048-2	1.13505E-09	-6.51926E-09	-1.70985E-09	-2.93629E+02	-6.90872E+00	1.29173E+03
3003	10048-3	-8.16726E-10	-4.67116E-09	1.51922E-08	-1.48481E+03	7.63119E+01	3.01218E+02
3004	10049-1	1.59926E-08	1.06229E-09	2.44108E-09	-8.89449E+01	-1.59441E+00	1.97946E+03
3005	10049-2	-1.16415E-09	1.35788E-09	5.04315E-10	-7.29291E+02	6.98959E+00	-2.12390E+02
3006	10049-3	-4.08363E-09	-2.22826E-10	4.18731E-09	-5.59126E+03	3.43126E+01	-1.44104E+02
3007	10050-1	3.32766E-08	1.30422E-09	-6.58474E-10	1.12322E+02	-6.62804E+01	-9.57046E+03
3008	10050-2	5.01859E-09	1.34673E-09	-3.32875E-10	-1.53158E+03	-7.56972E+00	1.31615E+01
3009	10050-3	-2.55795E-09	6.54825E-09	-2.83862E-08	1.73602E+04	-3.08262E+01	4.53300E+02
3010	10051-1	8.32370E-09	-1.90357E-09	7.45786E-11	-6.46249E+02	-4.00328E+00	1.72265E+03
3011	10051-2	2.38060E-09	2.21303E-09	1.81967E-09	-1.32394E+03	3.23866E+00	1.38953E+02
3012	10051-3	-4.14070E-09	7.70569E-10	-1.02675E-08	-5.21675E+03	9.84700E-01	2.62884E+02
3013	10052-1	-7.83803E-09	-1.58730E-09	-1.69302E-09	3.51093E+01	3.71629E-01	2.04066E+03
3014	10052-2	3.21825E-09	4.15184E-10	-3.36195E-09	1.80977E+03	1.38325E+00	4.85802E+02
3015	10052-3	-4.26780E-09	3.41061E-12	-1.17309E-08	-4.19567E+03	-1.15219E+00	2.37280E+02
3016	10053-1	-1.00499E-08	2.14573E-09	-1.11049E-09	4.70803E+02	-9.76321E+01	4.97886E+03
3017	10053-2	-1.71531E-09	4.52388E-09	2.49054E-09	-1.31982E+02	1.75313E+01	-1.11448E+03
3018	10053-3	2.33183E-09	-2.03534E-09	2.46176E-08	-1.45579E+03	9.72641E+01	-2.99098E+02
3019	10054-1	-4.09204E-09	-8.24684E-10	4.95334E-10	-2.40636E+02	-3.82820E+01	4.49239E+03
3020	10054-2	-9.89726E-10	-2.23398E-09	-4.22975E-09	7.03555E+02	-1.16575E+01	-9.85829E+02
3021	10054-3	-1.29607E-09	-1.35235E-09	-1.24520E-09	-3.42134E+03	1.55992E+01	2.60169E+02
3022	10055-1	-1.13632E-08	-4.83930E-08	4.71516E-09	3.46242E+02	-6.56533E+02	-3.59234E+03
3023	10055-2	-3.09656E-08	-1.01638E-07	2.35226E-08	1.11613E+03	-4.89861E+01	-1.16704E+03
3024	10055-3	-4.37617E-08	-8.95824E-08	2.70513E-08	3.92999E+03	3.77716E+02	-7.73363E+02
3025	10056-1	9.54606E-09	-8.54016E-10	-1.94996E-09	-4.38126E+03	3.23438E+02	-8.85871E+03
3026	10056-2	1.04410E-09	2.71484E-09	1.55524E-09	-4.75637E+02	7.69304E+00	3.78163E+01
3027	10056-3	-1.97770E-09	1.02909E-09	-8.03431E-09	5.25240E+03	2.98683E+02	3.24467E+03
3028	10057-1	7.39237E-09	6.69388E-10	-1.51340E-09	9.40500E+02	-2.19298E+02	-5.73902E+03
3029	10057-2	-4.11274E-09	1.04046E-08	-7.35781E-10	-5.44794E+02	9.84734E+00	-1.48092E+02
3030	10057-3	-4.87489E-09	2.23736E-10	6.73754E-09	1.51479E+03	2.26237E+02	-7.36633E+02
3031	10058-1	-6.31553E-09	-7.42148E-10	2.32831E-10	1.51259E+02	-1.28313E+00	3.22721E+03
3032	10058-2	-2.13913E-09	1.58761E-08	2.83762E-09	-1.92563E+03	1.92465E+01	-1.20570E+02
3033	10058-3	-3.04135E-09	-1.96815E-09	1.12996E-08	-4.19014E+03	4.04803E+01	-2.71251E+01
3034	10059-1	2.46328E-08	6.14818E-10	-7.27596E-10	-1.17058E+02	-1.52450E+00	3.49759E+03
3035	10059-2	4.92037E-10	9.41145E-09	-4.77485E-12	-1.58849E+03	1.22766E+01	7.34789E+01
3036	10059-3	-4.18459E-09	-8.46512E-10	5.87920E-09	-3.73187E+03	-5.90890E+00	1.60039E+02
3037	10060-1	-6.98492E-10	1.28057E-09	-1.45519E-10	2.35947E+02	-2.98017E+01	4.50434E+03
3038	10060-2	-9.31323E-10	-8.84756E-09	8.73115E-10	5.51275E+02	2.98014E+00	1.05250E+03
3039	10060-3	5.82077E-11	-2.15368E-09	6.75209E-09	-3.42035E+03	-4.53049E+00	-2.76818E+02
3040	10061-1	1.92085E-09	6.65750E-10	-2.14641E-10	-2.33777E+02	-3.79291E+00	1.51575E+03
3041	10061-2	-1.32422E-09	2.32831E-09	2.41562E-09	-2.76607E+02	3.83755E+00	1.32540E+02
3042	10061-3	2.69210E-09	1.30967E-10	-5.82077E-10	-2.90947E+03	-2.11198E+00	2.47088E+02
3043	10062-1	3.95812E-09	1.81899E-10	-1.45519E-10	4.05645E+02	-4.93329E+00	2.31796E+03
3044	10062-2	-2.82307E-09	0.00000E+00	8.14907E-10	9.82965E+02	5.25287E+00	4.41031E+02
3045	10062-3	1.37743E-09	5.52973E-10	4.19095E-09	-4.12518E+03	-1.87105E+00	1.74403E+02
3046	10063-1	6.19593E-10	1.16245E-10	-8.16783E-10	1.96186E+02	-9.81808E+00	1.48681E+03
3047	10063-2	-1.33932E-09	1.46471E-09	1.18511E-09	-3.23923E+02	7.58372E+00	-6.93330E+01
3048	10063-3	1.55391E-09	-1.50747E-09	-3.37047E-09	-2.80007E+03	2.04630E+01	-2.15870E+02
3049	10064-1	1.51658E-10	-3.11786E-11	-6.23231E-10	-4.44853E+02	-1.09438E+01	2.31675E+03
3050	10064-2	-1.55148E-09	-2.45920E-09	-1.29295E-09	1.07971E+03	5.26722E+00	-4.07930E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 258

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
3051	10064-3	-2.07848E-10	-1.25198E-09	5.42587E-09	-4.05258E+03	1.87655E+01	-1.56362E+02
3052	10065-1	7.86622E-09	3.71263E-08	-4.24577E-08	5.89566E+03	-7.25061E+02	-1.79418E+04
3053	10065-2	-6.04696E-08	-6.96560E-08	8.89685E-08	-3.32233E+01	-2.28957E+01	-2.53704E+03
3054	10065-3	-8.04590E-08	5.68734E-08	9.01740E-08	1.08914E+04	9.33399E+02	-3.18380E+03
3055	10066-1	-5.68434E-09	-6.72992E-09	3.06688E-08	1.65027E+03	-2.98595E+02	-4.72050E+03
3056	10066-2	1.33639E-09	-5.66138E-09	-2.04997E-08	2.53088E+03	-1.52083E+00	-6.66395E+02
3057	10066-3	2.18392E-10	-7.44819E-10	1.74974E-08	5.11750E+03	7.19994E+02	-1.93298E+03
3058	10067-1	1.23255E-08	1.08230E-09	1.65460E-08	1.14450E+03	-3.35543E+02	-2.53386E+03
3059	10067-2	-8.66339E-09	9.04038E-09	-1.92553E-08	-1.83371E+03	-9.03746E+00	-4.23303E+02
3060	10067-3	1.16142E-08	-4.55111E-09	3.14554E-08	3.07361E+03	3.20178E+02	-7.78477E+02
3061	10068-1	1.99179E-10	-6.21071E-10	-1.53573E-08	1.34827E+03	-9.58354E+01	-8.47768E+03
3062	10068-2	-3.80226E-09	-5.00271E-09	-1.13811E-08	7.73066E+02	-1.40526E+00	5.10441E+02
3063	10068-3	-3.38810E-09	-7.99434E-09	-7.94080E-09	1.09092E+04	1.57734E+02	-1.29151E+03
3064	10069-1	4.77485E-09	-1.78204E-09	6.95081E-10	5.68037E+02	-1.90588E+01	3.63435E+03
3065	10069-2	1.55552E-09	2.16441E-08	-6.77346E-09	-2.79635E+03	3.22660E+01	-1.01444E+03
3066	10069-3	3.34757E-09	-7.13385E-10	-2.59058E-09	-4.21312E+03	4.02525E+01	-6.73705E+01
3067	10070-1	-9.08040E-08	-1.10071E-07	1.15251E-08	2.73877E+03	1.32015E+02	-5.04757E+03
3068	10070-2	7.83766E-08	-3.11993E-07	1.38825E-08	7.79458E+02	1.75086E+02	9.23983E+02
3069	10070-3	-4.23825E-08	-2.50293E-09	-6.89179E-08	2.94318E+03	3.19930E+02	-1.87117E+03
3070	10071-1	1.07335E-07	5.16011E-08	-6.87578E-10	6.60525E+02	-6.81220E+02	-3.44056E+03
3071	10071-2	-9.32050E-09	-1.90921E-08	-4.01633E-09	3.29610E+02	1.10767E+02	7.70989E+02
3072	10071-3	-2.40616E-08	-2.38651E-09	-1.67638E-08	3.83442E+03	-3.79771E+02	-1.19911E+02
3073	10072-1	4.19095E-08	-2.10130E-08	-4.42378E-09	-2.08222E+01	1.22519E+02	-9.45296E+03
3074	10072-2	-1.74623E-09	-6.51926E-09	-1.03500E-09	1.16764E+03	1.89669E+01	1.30093E+03
3075	10072-3	-1.57597E-08	1.97906E-09	2.98023E-08	2.95549E+03	3.41551E+02	-1.04563E+01
3076	10073-1	-6.98492E-09	7.33417E-09	-3.78350E-10	-6.22194E+02	-5.64623E+01	-8.64515E+03
3077	10073-2	-2.61934E-09	-5.58794E-09	1.15688E-09	2.21784E+01	1.31786E+01	-7.83513E+02
3078	10073-3	5.63159E-09	-2.12458E-09	2.00234E-08	1.04784E+04	-4.23382E+01	1.40859E+03
3079	10074-1	-1.69966E-08	-1.00699E-08	1.30676E-08	-2.74865E+03	2.21241E+02	-5.52196E+03
3080	10074-2	-8.73115E-10	7.56700E-09	5.64614E-09	-7.65736E+02	4.66513E+00	9.75989E+02
3081	10074-3	-6.40284E-10	-2.91038E-10	4.07454E-09	1.93826E+03	1.60142E+02	1.28833E+03
3082	10075-1	-5.35510E-09	9.02219E-10	-5.09317E-10	-7.28836E+02	5.36978E+00	2.94856E+03
3083	10075-2	2.38651E-09	1.02445E-08	9.91713E-09	-2.35076E+03	2.75815E+01	1.44840E+03
3084	10075-3	4.36557E-11	4.10364E-09	-3.37604E-09	-3.96538E+03	-9.37633E+00	2.06802E+02
3085	10076-1	5.82077E-08	3.72529E-09	-4.15603E-08	1.24077E+02	-5.11563E+03	-5.71453E+03
3086	10076-2	-3.54194E-08	-8.48668E-08	-3.80496E-08	7.74138E+03	2.54564E+02	2.56037E+02
3087	10076-3	-1.03137E-07	-1.72295E-08	-4.65661E-08	1.25609E+04	-1.54410E+03	-1.16263E+03
3088	10077-1	9.59262E-08	-2.52985E-08	-6.35046E-08	1.61150E+03	-4.00214E+02	-1.30996E+03
3089	10077-2	3.03462E-08	-9.70904E-08	-7.10133E-09	6.45358E+03	7.23874E+02	7.13847E+02
3090	10077-3	-1.29032E-07	1.16415E-08	-1.03377E-07	-1.92634E+03	-8.71060E+01	-8.61372E+02
3091	10078-1	3.70666E-07	-2.10712E-08	-2.02446E-07	-1.36324E+03	2.76329E+04	1.60762E+04
3092	10078-2	-1.18394E-07	-1.86265E-09	6.98492E-08	-1.56221E+04	-4.49162E+02	-1.06781E+04
3093	10078-3	5.51518E-08	-7.91624E-09	-5.12227E-08	4.96468E+03	2.28351E+02	5.31566E+03
3094	10079-1	-6.02158E-08	-4.60568E-09	-3.14394E-08	4.73952E+01	4.02661E+03	4.19620E+03
3095	10079-2	-3.54394E-08	-6.43195E-08	-1.07102E-08	-1.63047E+04	4.75665E+02	4.57379E+02
3096	10079-3	-3.39933E-08	5.52973E-10	-3.75439E-09	-5.15682E+03	-4.37833E+02	-4.76197E+02
3097	10080-1	-1.25496E-07	1.71713E-08	-1.94123E-08	3.36971E+02	1.65790E+03	2.25633E+03
3098	10080-2	-1.37079E-08	-5.20668E-08	-7.94171E-09	-1.06200E+04	2.76773E+02	1.72259E+02
3099	10080-3	5.13683E-09	4.77303E-09	-3.34694E-08	-4.12188E+03	-4.07436E+02	-4.04918E+02
3100	10081-1	1.75554E-07	-2.33867E-08	-6.91944E-08	2.66205E+03	-2.50441E+04	-2.27780E+04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 259

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
3101	10081-2	6.87724E-08	-4.40050E-08	-9.66247E-09	4.21068E+04	-1.46585E+03	-1.34140E+03
3102	10081-3	-9.84874E-08	3.21306E-08	-5.58794E-09	2.15405E+04	1.32070E+02	2.88136E+02
3103	10082-1	-2.61625E-08	1.19544E-08	2.09839E-08	-1.06531E+03	1.41011E+04	1.41505E+04
3104	10082-2	-4.77303E-09	-2.24682E-08	-1.10012E-08	-3.74397E+04	2.66492E+03	2.40123E+03
3105	10082-3	-1.52359E-08	-1.42245E-09	-4.41214E-08	-9.29648E+03	9.11220E+02	9.38985E+02
3106	10083-1	1.99769E-07	-1.18016E-08	-7.13626E-08	-1.47856E+03	-2.18479E+03	-1.37761E+03
3107	10083-2	-8.88831E-08	-1.44006E-07	-1.49012E-08	1.47511E+04	1.89696E+03	1.36774E+03
3108	10083-3	-9.22446E-08	-3.99305E-08	-1.32713E-07	3.90543E+03	9.61028E+01	-2.36271E+02
	Total:	4.36633E-03	9.63872E-01	4.25062E-02	1.44837E+05	2.44979E+04	1.51449E+05

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:34:27 CDT Page 260

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	2567	2733-6	-4.75782E-01
T2 -	288	702680-2	2.37272E-01
T3 -	2864	115-5	-5.67161E-01
R1 -	2723	356-4	5.12016E+04
R2 -	2938	10027-1	-3.38132E+04
R3 -	2974	10039-1	4.22933E+04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 261

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-4.926455E-06	2.219562E-03	3.532542E-04	51	1.264403E+03	3.555845E+01	5.659303E+00
2	-7.458594E-07	8.636315E-04	1.374512E-04	52	1.266064E+03	3.558179E+01	5.663018E+00
3	3.300252E-06	1.816660E-03	2.891304E-04	53	1.273113E+03	3.568070E+01	5.678761E+00
4	7.585916E-06	2.754254E-03	4.383532E-04	54	1.278062E+03	3.574999E+01	5.689788E+00
5	2.219210E-05	4.710850E-03	7.497550E-04	55	1.366661E+03	3.696838E+01	5.883700E+00
6	7.147864E-05	8.454504E-03	1.345576E-03	56	1.385227E+03	3.721864E+01	5.923531E+00
7	3.417224E-04	1.848574E-02	2.942096E-03	57	1.388494E+03	3.726250E+01	5.930510E+00
8	1.347679E+01	3.671075E+00	5.842697E-01	58	1.390302E+03	3.728675E+01	5.934370E+00
9	1.349547E+01	3.673618E+00	5.846744E-01	59	1.392227E+03	3.731255E+01	5.938477E+00
10	6.828049E+01	8.263201E+00	1.315129E+00	60	1.422851E+03	3.772070E+01	6.003436E+00
11	6.828743E+01	8.263621E+00	1.315196E+00	61	1.441665E+03	3.796927E+01	6.042997E+00
12	1.216716E+02	1.103049E+01	1.755556E+00	62	1.542164E+03	3.927040E+01	6.250078E+00
13	1.323349E+02	1.150369E+01	1.830870E+00	63	1.585121E+03	3.981358E+01	6.336527E+00
14	1.442687E+02	1.201119E+01	1.911640E+00	64	1.590472E+03	3.988072E+01	6.347213E+00
15	1.634859E+02	1.278616E+01	2.034981E+00	65	1.614874E+03	4.018549E+01	6.395719E+00
16	1.944668E+02	1.394514E+01	2.219437E+00	66	1.625338E+03	4.031548E+01	6.416407E+00
17	2.282289E+02	1.510725E+01	2.404393E+00	67	1.671129E+03	4.087945E+01	6.506166E+00
18	2.325283E+02	1.524888E+01	2.426934E+00	68	1.679695E+03	4.098408E+01	6.522818E+00
19	2.397794E+02	1.548481E+01	2.464485E+00	69	1.697052E+03	4.119529E+01	6.556435E+00
20	2.436167E+02	1.560822E+01	2.484126E+00	70	1.702839E+03	4.126547E+01	6.567603E+00
21	2.438263E+02	1.561494E+01	2.485195E+00	71	1.742044E+03	4.173780E+01	6.642776E+00
22	2.528812E+02	1.590224E+01	2.530920E+00	72	1.771561E+03	4.208991E+01	6.698818E+00
23	2.719859E+02	1.649199E+01	2.624782E+00	73	1.784442E+03	4.224265E+01	6.723127E+00
24	2.996814E+02	1.731131E+01	2.755180E+00	74	1.826943E+03	4.274275E+01	6.802721E+00
25	3.259666E+02	1.805455E+01	2.873470E+00	75	1.871486E+03	4.326068E+01	6.885151E+00
26	3.415036E+02	1.847982E+01	2.941154E+00	76	1.895409E+03	4.353629E+01	6.929016E+00
27	3.947931E+02	1.986940E+01	3.162313E+00	77	1.907692E+03	4.367713E+01	6.951432E+00
28	4.038342E+02	2.009563E+01	3.198318E+00	78	1.959920E+03	4.427099E+01	7.045946E+00
29	4.063432E+02	2.015796E+01	3.208238E+00	79	2.004728E+03	4.477419E+01	7.126033E+00
30	4.192917E+02	2.047661E+01	3.258954E+00	80	2.009257E+03	4.482474E+01	7.134079E+00
31	4.231907E+02	2.057160E+01	3.274072E+00	81	2.028987E+03	4.504427E+01	7.169019E+00
32	4.307252E+02	2.075392E+01	3.303089E+00	82	2.049708E+03	4.527371E+01	7.205534E+00
33	4.754615E+02	2.180508E+01	3.470386E+00	83	2.058162E+03	4.536697E+01	7.220378E+00
34	5.311434E+02	2.304655E+01	3.667972E+00	84	2.067955E+03	4.547477E+01	7.237535E+00
35	5.520009E+02	2.349470E+01	3.739298E+00	85	2.071657E+03	4.551545E+01	7.244009E+00
36	6.488005E+02	2.547156E+01	4.053925E+00	86	2.084718E+03	4.565871E+01	7.266809E+00
37	6.556912E+02	2.560647E+01	4.075396E+00	87	2.142530E+03	4.628747E+01	7.366880E+00
38	7.178868E+02	2.679341E+01	4.264304E+00	88	2.167605E+03	4.655754E+01	7.409863E+00
39	7.301971E+02	2.702216E+01	4.300710E+00	89	2.171657E+03	4.660104E+01	7.416786E+00
40	8.147469E+02	2.854377E+01	4.542882E+00	90	2.177156E+03	4.666000E+01	7.426170E+00
41	8.312805E+02	2.883194E+01	4.588745E+00	91	2.219814E+03	4.711491E+01	7.498570E+00
42	8.836483E+02	2.972622E+01	4.731075E+00	92	2.245205E+03	4.738359E+01	7.541333E+00
43	8.853821E+02	2.975537E+01	4.735714E+00	93	2.329014E+03	4.825986E+01	7.680796E+00
44	8.946462E+02	2.991064E+01	4.760426E+00	94	2.380381E+03	4.878915E+01	7.765034E+00
45	9.019011E+02	3.003167E+01	4.779688E+00	95	2.421897E+03	4.921278E+01	7.832456E+00
46	9.140311E+02	3.023295E+01	4.811723E+00	96	2.432643E+03	4.932183E+01	7.849813E+00
47	9.383231E+02	3.063206E+01	4.875244E+00	97	2.456679E+03	4.956490E+01	7.888498E+00
48	1.017258E+03	3.189449E+01	5.076165E+00	98	2.489113E+03	4.989101E+01	7.940402E+00
49	1.040346E+03	3.225440E+01	5.133446E+00	99	2.497107E+03	4.997107E+01	7.953142E+00
50	1.064069E+03	3.262007E+01	5.191645E+00	100	2.530660E+03	5.030567E+01	8.006395E+00

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 262

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
101	2.561283E+03	5.060911E+01	8.054691E+00	151	5.149453E+03	7.175969E+01	1.142091E+01
102	2.592232E+03	5.091396E+01	8.103209E+00	152	5.166557E+03	7.187876E+01	1.143986E+01
103	2.641181E+03	5.139242E+01	8.179357E+00	153	5.208854E+03	7.217239E+01	1.148659E+01
104	2.725020E+03	5.220173E+01	8.308163E+00	154	5.260617E+03	7.253011E+01	1.154353E+01
105	2.837617E+03	5.326929E+01	8.478071E+00	155	5.316983E+03	7.291764E+01	1.160520E+01
106	2.873551E+03	5.360551E+01	8.531582E+00	156	5.381796E+03	7.336072E+01	1.167572E+01
107	3.027453E+03	5.502229E+01	8.757070E+00	157	5.467798E+03	7.394456E+01	1.176864E+01
108	3.099621E+03	5.567424E+01	8.860830E+00	158	5.504053E+03	7.418930E+01	1.180759E+01
109	3.104141E+03	5.571482E+01	8.867289E+00	159	5.628285E+03	7.502190E+01	1.194011E+01
110	3.150478E+03	5.612912E+01	8.933227E+00	160	5.668408E+03	7.528883E+01	1.198259E+01
111	3.189456E+03	5.647527E+01	8.988318E+00	161	5.723069E+03	7.565097E+01	1.204023E+01
112	3.235842E+03	5.688446E+01	9.053443E+00	162	5.758266E+03	7.588324E+01	1.207719E+01
113	3.358942E+03	5.795638E+01	9.224044E+00	163	5.838479E+03	7.640994E+01	1.216102E+01
114	3.430234E+03	5.856820E+01	9.321418E+00	164	5.887512E+03	7.673013E+01	1.221198E+01
115	3.487583E+03	5.905576E+01	9.399016E+00	165	5.960647E+03	7.720522E+01	1.228759E+01
116	3.507061E+03	5.922044E+01	9.425226E+00	166	6.018992E+03	7.758217E+01	1.234759E+01
117	3.532459E+03	5.943449E+01	9.459293E+00	167	6.052768E+03	7.779954E+01	1.238218E+01
118	3.549759E+03	5.957985E+01	9.482428E+00	168	6.104552E+03	7.813163E+01	1.243504E+01
119	3.701434E+03	6.083941E+01	9.682893E+00	169	6.114828E+03	7.819737E+01	1.244550E+01
120	3.792257E+03	6.158131E+01	9.800970E+00	170	6.152074E+03	7.843516E+01	1.248334E+01
121	3.798513E+03	6.163208E+01	9.809050E+00	171	6.265017E+03	7.915186E+01	1.259741E+01
122	3.838390E+03	6.195474E+01	9.860403E+00	172	6.295622E+03	7.934496E+01	1.262814E+01
123	3.858419E+03	6.211617E+01	9.886096E+00	173	6.441515E+03	8.025905E+01	1.277362E+01
124	3.879575E+03	6.228624E+01	9.913162E+00	174	6.475218E+03	8.046874E+01	1.280700E+01
125	3.899249E+03	6.244397E+01	9.938267E+00	175	6.498869E+03	8.061557E+01	1.283037E+01
126	3.951276E+03	6.285918E+01	1.000435E+01	176	6.629325E+03	8.142067E+01	1.295850E+01
127	3.972662E+03	6.302906E+01	1.003139E+01	177	6.742579E+03	8.211321E+01	1.306872E+01
128	3.997393E+03	6.322494E+01	1.006256E+01	178	6.755604E+03	8.219248E+01	1.308134E+01
129	4.024229E+03	6.343681E+01	1.009628E+01	179	6.855681E+03	8.279904E+01	1.317788E+01
130	4.065947E+03	6.376478E+01	1.014848E+01	180	6.889423E+03	8.300255E+01	1.321027E+01
131	4.205708E+03	6.485143E+01	1.032143E+01	181	6.942236E+03	8.332008E+01	1.326080E+01
132	4.304941E+03	6.561205E+01	1.044248E+01	182	6.959407E+03	8.342306E+01	1.327719E+01
133	4.379491E+03	6.617772E+01	1.053251E+01	183	7.019114E+03	8.378015E+01	1.333403E+01
134	4.473648E+03	6.688533E+01	1.064513E+01	184	7.038796E+03	8.389753E+01	1.335271E+01
135	4.482224E+03	6.694941E+01	1.065533E+01	185	7.082606E+03	8.415822E+01	1.339420E+01
136	4.544176E+03	6.741050E+01	1.072871E+01	186	7.143225E+03	8.451760E+01	1.345139E+01
137	4.596317E+03	6.779614E+01	1.079009E+01	187	7.179645E+03	8.473278E+01	1.348564E+01
138	4.600223E+03	6.782495E+01	1.079468E+01	188	7.198895E+03	8.484630E+01	1.350371E+01
139	4.604190E+03	6.785418E+01	1.079933E+01	189	7.212917E+03	8.492890E+01	1.351685E+01
140	4.637563E+03	6.809966E+01	1.083840E+01	190	7.238765E+03	8.508093E+01	1.354105E+01
141	4.727320E+03	6.875551E+01	1.094278E+01	191	7.247764E+03	8.513380E+01	1.354947E+01
142	4.758270E+03	6.898022E+01	1.097854E+01	192	7.317433E+03	8.554200E+01	1.361443E+01
143	4.762206E+03	6.900874E+01	1.098308E+01	193	7.328883E+03	8.560890E+01	1.362508E+01
144	4.767875E+03	6.904980E+01	1.098962E+01	194	7.372922E+03	8.586572E+01	1.366595E+01
145	4.868007E+03	6.977111E+01	1.110442E+01	195	7.394901E+03	8.599361E+01	1.368631E+01
146	4.899065E+03	6.999332E+01	1.113978E+01	196	7.402631E+03	8.603854E+01	1.369346E+01
147	4.912697E+03	7.009063E+01	1.115527E+01	197	7.433314E+03	8.621667E+01	1.372181E+01
148	4.940687E+03	7.029002E+01	1.118700E+01	198	7.488146E+03	8.653408E+01	1.377233E+01
149	5.055715E+03	7.110355E+01	1.131648E+01	199	7.498096E+03	8.659155E+01	1.378147E+01
150	5.114715E+03	7.151723E+01	1.138232E+01	200	7.528740E+03	8.676831E+01	1.380961E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 263

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
201	7.557917E+03	8.693628E+01	1.383634E+01	251	9.849250E+03	9.924339E+01	1.579508E+01
202	7.591789E+03	8.713087E+01	1.386731E+01	252	9.991012E+03	9.995505E+01	1.590834E+01
203	7.629951E+03	8.734959E+01	1.390212E+01	253	1.001420E+04	1.000710E+02	1.592679E+01
204	7.656673E+03	8.750242E+01	1.392644E+01	254	1.004325E+04	1.002160E+02	1.594988E+01
205	7.672795E+03	8.759449E+01	1.394110E+01	255	1.009113E+04	1.004546E+02	1.598785E+01
206	7.676948E+03	8.761820E+01	1.394487E+01	256	1.017494E+04	1.008709E+02	1.605411E+01
207	7.701822E+03	8.776002E+01	1.396744E+01	257	1.027269E+04	1.013543E+02	1.613103E+01
208	7.713780E+03	8.782813E+01	1.397828E+01	258	1.027675E+04	1.013743E+02	1.613422E+01
209	7.741309E+03	8.798471E+01	1.400320E+01	259	1.028889E+04	1.014341E+02	1.614375E+01
210	7.751533E+03	8.804279E+01	1.401245E+01	260	1.029923E+04	1.014851E+02	1.615186E+01
211	7.773716E+03	8.816868E+01	1.403248E+01	261	1.031740E+04	1.015746E+02	1.616610E+01
212	7.816084E+03	8.840862E+01	1.407067E+01	262	1.032464E+04	1.016102E+02	1.617177E+01
213	7.948527E+03	8.915451E+01	1.418938E+01	263	1.034858E+04	1.017280E+02	1.619051E+01
214	8.001726E+03	8.945237E+01	1.423679E+01	264	1.038423E+04	1.019030E+02	1.621837E+01
215	8.056254E+03	8.975664E+01	1.428521E+01	265	1.058458E+04	1.028814E+02	1.637408E+01
216	8.096586E+03	8.998103E+01	1.432093E+01	266	1.080303E+04	1.039376E+02	1.654219E+01
217	8.136752E+03	9.020395E+01	1.435640E+01	267	1.094870E+04	1.046360E+02	1.665334E+01
218	8.139226E+03	9.021766E+01	1.435859E+01	268	1.102219E+04	1.049866E+02	1.670914E+01
219	8.174560E+03	9.041327E+01	1.438972E+01	269	1.107877E+04	1.052558E+02	1.675197E+01
220	8.216068E+03	9.064253E+01	1.442621E+01	270	1.120785E+04	1.058672E+02	1.684928E+01
221	8.309755E+03	9.115786E+01	1.450822E+01	271	1.123124E+04	1.059775E+02	1.686685E+01
222	8.339205E+03	9.131925E+01	1.453391E+01	272	1.125158E+04	1.060735E+02	1.688212E+01
223	8.374239E+03	9.151087E+01	1.456441E+01	273	1.133716E+04	1.064761E+02	1.694620E+01
224	8.401134E+03	9.165770E+01	1.458778E+01	274	1.135294E+04	1.065502E+02	1.695799E+01
225	8.422603E+03	9.177474E+01	1.460640E+01	275	1.147384E+04	1.071160E+02	1.704804E+01
226	8.431259E+03	9.182189E+01	1.461391E+01	276	1.152185E+04	1.073399E+02	1.708367E+01
227	8.533996E+03	9.237963E+01	1.470267E+01	277	1.161409E+04	1.077687E+02	1.715192E+01
228	8.578160E+03	9.261836E+01	1.474067E+01	278	1.165408E+04	1.079541E+02	1.718143E+01
229	8.655391E+03	9.303435E+01	1.480688E+01	279	1.169203E+04	1.081297E+02	1.720938E+01
230	8.689933E+03	9.321981E+01	1.483639E+01	280	1.169445E+04	1.081409E+02	1.721116E+01
231	8.741949E+03	9.349839E+01	1.488073E+01	281	1.174964E+04	1.083958E+02	1.725172E+01
232	8.807242E+03	9.384690E+01	1.493620E+01	282	1.189330E+04	1.090564E+02	1.735687E+01
233	8.837968E+03	9.401047E+01	1.496223E+01	283	1.193653E+04	1.092544E+02	1.738838E+01
234	8.932084E+03	9.450970E+01	1.504169E+01	284	1.195372E+04	1.093331E+02	1.740090E+01
235	8.934286E+03	9.452135E+01	1.504354E+01	285	1.195601E+04	1.093435E+02	1.740257E+01
236	9.119602E+03	9.549661E+01	1.519876E+01	286	1.198117E+04	1.094585E+02	1.742086E+01
237	9.169040E+03	9.575510E+01	1.523990E+01	287	1.201533E+04	1.096144E+02	1.744568E+01
238	9.206815E+03	9.595215E+01	1.527126E+01	288	1.205416E+04	1.097914E+02	1.747385E+01
239	9.234361E+03	9.609558E+01	1.529409E+01	289	1.206490E+04	1.098403E+02	1.748163E+01
240	9.276902E+03	9.631667E+01	1.532927E+01	290	1.207664E+04	1.098938E+02	1.749014E+01
241	9.387811E+03	9.689072E+01	1.542064E+01	291	1.224122E+04	1.106400E+02	1.760891E+01
242	9.411809E+03	9.701448E+01	1.544033E+01	292	1.226314E+04	1.107390E+02	1.762467E+01
243	9.450411E+03	9.721323E+01	1.547197E+01	293	1.240614E+04	1.113828E+02	1.772713E+01
244	9.519650E+03	9.756869E+01	1.552854E+01	294	1.242191E+04	1.114536E+02	1.773840E+01
245	9.531759E+03	9.763073E+01	1.553841E+01	295	1.247481E+04	1.116907E+02	1.777612E+01
246	9.574632E+03	9.785005E+01	1.557332E+01	296	1.251247E+04	1.118591E+02	1.780294E+01
247	9.623368E+03	9.809877E+01	1.561290E+01	297	1.256217E+04	1.120811E+02	1.783826E+01
248	9.633347E+03	9.814962E+01	1.562100E+01	298	1.257009E+04	1.121164E+02	1.784388E+01
249	9.742906E+03	9.870616E+01	1.570957E+01	299	1.268663E+04	1.126349E+02	1.792640E+01
250	9.752520E+03	9.875485E+01	1.571732E+01	300	1.270012E+04	1.126948E+02	1.793594E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 264

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
301	1.277920E+04	1.130451E+02	1.799169E+01	351	1.627838E+04	1.275867E+02	2.030606E+01
302	1.288731E+04	1.135223E+02	1.806763E+01	352	1.635127E+04	1.278721E+02	2.035147E+01
303	1.297034E+04	1.138874E+02	1.812574E+01	353	1.641047E+04	1.281033E+02	2.038828E+01
304	1.306221E+04	1.142900E+02	1.818982E+01	354	1.647140E+04	1.283410E+02	2.042610E+01
305	1.313953E+04	1.146278E+02	1.824358E+01	355	1.647420E+04	1.283519E+02	2.042783E+01
306	1.325984E+04	1.151514E+02	1.832691E+01	356	1.649785E+04	1.284440E+02	2.044249E+01
307	1.329476E+04	1.153029E+02	1.835102E+01	357	1.651778E+04	1.285215E+02	2.045483E+01
308	1.333975E+04	1.154979E+02	1.838205E+01	358	1.659267E+04	1.288125E+02	2.050115E+01
309	1.334798E+04	1.155334E+02	1.838772E+01	359	1.665122E+04	1.290396E+02	2.053729E+01
310	1.341267E+04	1.158131E+02	1.843222E+01	360	1.670808E+04	1.292597E+02	2.057232E+01
311	1.347718E+04	1.160912E+02	1.847650E+01	361	1.673300E+04	1.293561E+02	2.058766E+01
312	1.353942E+04	1.163590E+02	1.851911E+01	362	1.684456E+04	1.297866E+02	2.065618E+01
313	1.372715E+04	1.171629E+02	1.864706E+01	363	1.692879E+04	1.301107E+02	2.070776E+01
314	1.385008E+04	1.176863E+02	1.873036E+01	364	1.699543E+04	1.303665E+02	2.074848E+01
315	1.405508E+04	1.185541E+02	1.886848E+01	365	1.703477E+04	1.305173E+02	2.077248E+01
316	1.414019E+04	1.189125E+02	1.892552E+01	366	1.704549E+04	1.305584E+02	2.077901E+01
317	1.419538E+04	1.191443E+02	1.896241E+01	367	1.711777E+04	1.308349E+02	2.082302E+01
318	1.427547E+04	1.194800E+02	1.901583E+01	368	1.716945E+04	1.310322E+02	2.085443E+01
319	1.432361E+04	1.196813E+02	1.904787E+01	369	1.723783E+04	1.312929E+02	2.089592E+01
320	1.436750E+04	1.198645E+02	1.907703E+01	370	1.736178E+04	1.317641E+02	2.097091E+01
321	1.440591E+04	1.200246E+02	1.910251E+01	371	1.745495E+04	1.321172E+02	2.102710E+01
322	1.447001E+04	1.202914E+02	1.914497E+01	372	1.747874E+04	1.322072E+02	2.104143E+01
323	1.455467E+04	1.206427E+02	1.920089E+01	373	1.760475E+04	1.326829E+02	2.111714E+01
324	1.458762E+04	1.207792E+02	1.922261E+01	374	1.772075E+04	1.331193E+02	2.118660E+01
325	1.467883E+04	1.211562E+02	1.928261E+01	375	1.784144E+04	1.335719E+02	2.125862E+01
326	1.481898E+04	1.217332E+02	1.937444E+01	376	1.792731E+04	1.338929E+02	2.130972E+01
327	1.490303E+04	1.220780E+02	1.942931E+01	377	1.797795E+04	1.340819E+02	2.133979E+01
328	1.493489E+04	1.222084E+02	1.945007E+01	378	1.802122E+04	1.342432E+02	2.136546E+01
329	1.494811E+04	1.222625E+02	1.945868E+01	379	1.808975E+04	1.344981E+02	2.140604E+01
330	1.503856E+04	1.226318E+02	1.951746E+01	380	1.814353E+04	1.346979E+02	2.143784E+01
331	1.508511E+04	1.228214E+02	1.954764E+01	381	1.816496E+04	1.347774E+02	2.145049E+01
332	1.509025E+04	1.228424E+02	1.955097E+01	382	1.819520E+04	1.348896E+02	2.146834E+01
333	1.514943E+04	1.230830E+02	1.958927E+01	383	1.828521E+04	1.352228E+02	2.152138E+01
334	1.516247E+04	1.231360E+02	1.959770E+01	384	1.835879E+04	1.354946E+02	2.156464E+01
335	1.519402E+04	1.232640E+02	1.961808E+01	385	1.840132E+04	1.356515E+02	2.158960E+01
336	1.524585E+04	1.234741E+02	1.965151E+01	386	1.842934E+04	1.357547E+02	2.160604E+01
337	1.530831E+04	1.237268E+02	1.969173E+01	387	1.850201E+04	1.360221E+02	2.164859E+01
338	1.541673E+04	1.241641E+02	1.976133E+01	388	1.856468E+04	1.362523E+02	2.168522E+01
339	1.549385E+04	1.244743E+02	1.981070E+01	389	1.858084E+04	1.363116E+02	2.169466E+01
340	1.561662E+04	1.249665E+02	1.988903E+01	390	1.858989E+04	1.363448E+02	2.169994E+01
341	1.567744E+04	1.252096E+02	1.992773E+01	391	1.861860E+04	1.364500E+02	2.171669E+01
342	1.568937E+04	1.252572E+02	1.993530E+01	392	1.864241E+04	1.365372E+02	2.173057E+01
343	1.573659E+04	1.254456E+02	1.996528E+01	393	1.879659E+04	1.371006E+02	2.182025E+01
344	1.576896E+04	1.255745E+02	1.998580E+01	394	1.880218E+04	1.371211E+02	2.182349E+01
345	1.581272E+04	1.257486E+02	2.001351E+01	395	1.882508E+04	1.372045E+02	2.183678E+01
346	1.585136E+04	1.259022E+02	2.003795E+01	396	1.897088E+04	1.377348E+02	2.192118E+01
347	1.595582E+04	1.263163E+02	2.010387E+01	397	1.904068E+04	1.379880E+02	2.196147E+01
348	1.599005E+04	1.264518E+02	2.012543E+01	398	1.906098E+04	1.380615E+02	2.197317E+01
349	1.601403E+04	1.265466E+02	2.014051E+01	399	1.925511E+04	1.387628E+02	2.208478E+01
350	1.619756E+04	1.272696E+02	2.025559E+01	400	1.929641E+04	1.389115E+02	2.210846E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 265

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
401	1.932698E+04	1.390215E+02	2.212596E+01	451	2.192323E+04	1.480650E+02	2.356527E+01
402	1.941801E+04	1.393485E+02	2.217801E+01	452	2.195157E+04	1.481606E+02	2.358050E+01
403	1.942786E+04	1.393839E+02	2.218363E+01	453	2.207349E+04	1.485715E+02	2.364589E+01
404	1.945915E+04	1.394961E+02	2.220149E+01	454	2.213835E+04	1.487896E+02	2.368060E+01
405	1.954889E+04	1.398173E+02	2.225262E+01	455	2.213997E+04	1.487951E+02	2.368147E+01
406	1.954902E+04	1.398178E+02	2.225270E+01	456	2.218085E+04	1.489324E+02	2.370332E+01
407	1.955899E+04	1.398535E+02	2.225837E+01	457	2.219657E+04	1.489851E+02	2.371172E+01
408	1.957725E+04	1.399187E+02	2.226876E+01	458	2.229826E+04	1.493260E+02	2.376597E+01
409	1.963927E+04	1.401402E+02	2.230400E+01	459	2.237296E+04	1.495759E+02	2.380575E+01
410	1.968212E+04	1.402930E+02	2.232832E+01	460	2.237892E+04	1.495958E+02	2.380892E+01
411	1.972462E+04	1.404444E+02	2.235242E+01	461	2.244047E+04	1.498014E+02	2.384164E+01
412	1.977477E+04	1.406228E+02	2.238081E+01	462	2.256242E+04	1.502079E+02	2.390633E+01
413	1.980264E+04	1.407219E+02	2.239658E+01	463	2.270375E+04	1.506776E+02	2.398109E+01
414	1.982258E+04	1.407927E+02	2.240785E+01	464	2.274086E+04	1.508007E+02	2.400068E+01
415	1.986257E+04	1.409346E+02	2.243044E+01	465	2.279720E+04	1.509874E+02	2.403040E+01
416	1.998494E+04	1.413681E+02	2.249943E+01	466	2.298333E+04	1.516025E+02	2.412829E+01
417	2.002739E+04	1.415181E+02	2.252331E+01	467	2.314908E+04	1.521482E+02	2.421514E+01
418	2.005041E+04	1.415995E+02	2.253625E+01	468	2.327426E+04	1.525590E+02	2.428053E+01
419	2.005648E+04	1.416209E+02	2.253967E+01	469	2.330857E+04	1.526714E+02	2.429841E+01
420	2.010082E+04	1.417773E+02	2.256457E+01	470	2.347563E+04	1.532176E+02	2.438534E+01
421	2.012296E+04	1.418554E+02	2.257699E+01	471	2.353255E+04	1.534032E+02	2.441488E+01
422	2.016436E+04	1.420013E+02	2.260020E+01	472	2.364015E+04	1.537535E+02	2.447064E+01
423	2.021633E+04	1.421841E+02	2.262931E+01	473	2.368124E+04	1.538871E+02	2.449189E+01
424	2.025162E+04	1.423082E+02	2.264905E+01	474	2.382691E+04	1.543597E+02	2.456711E+01
425	2.028685E+04	1.424319E+02	2.266874E+01	475	2.389801E+04	1.545898E+02	2.460373E+01
426	2.037135E+04	1.427282E+02	2.271590E+01	476	2.397919E+04	1.548522E+02	2.464549E+01
427	2.042160E+04	1.429042E+02	2.274390E+01	477	2.420331E+04	1.555741E+02	2.476039E+01
428	2.061443E+04	1.435773E+02	2.285103E+01	478	2.438583E+04	1.561596E+02	2.485358E+01
429	2.067609E+04	1.437918E+02	2.288518E+01	479	2.439029E+04	1.561739E+02	2.485585E+01
430	2.070192E+04	1.438816E+02	2.289947E+01	480	2.441856E+04	1.562644E+02	2.487025E+01
431	2.085956E+04	1.444284E+02	2.298649E+01	481	2.445339E+04	1.563758E+02	2.488798E+01
432	2.086590E+04	1.444503E+02	2.298999E+01	482	2.446913E+04	1.564261E+02	2.489599E+01
433	2.088108E+04	1.445029E+02	2.299835E+01	483	2.452617E+04	1.566083E+02	2.492499E+01
434	2.093725E+04	1.446971E+02	2.302926E+01	484	2.459273E+04	1.568207E+02	2.495879E+01
435	2.094917E+04	1.447383E+02	2.303581E+01	485	2.462507E+04	1.569238E+02	2.497520E+01
436	2.101903E+04	1.449794E+02	2.307419E+01	486	2.471382E+04	1.572063E+02	2.502016E+01
437	2.109706E+04	1.452483E+02	2.311698E+01	487	2.473654E+04	1.572785E+02	2.503166E+01
438	2.118182E+04	1.455398E+02	2.316337E+01	488	2.474154E+04	1.572944E+02	2.503419E+01
439	2.120021E+04	1.456029E+02	2.317342E+01	489	2.475290E+04	1.573305E+02	2.503993E+01
440	2.120404E+04	1.456161E+02	2.317552E+01	490	2.476264E+04	1.573615E+02	2.504486E+01
441	2.136215E+04	1.461580E+02	2.326176E+01	491	2.485410E+04	1.576518E+02	2.509107E+01
442	2.141319E+04	1.463325E+02	2.328953E+01	492	2.489449E+04	1.577799E+02	2.511145E+01
443	2.150391E+04	1.466421E+02	2.333881E+01	493	2.489451E+04	1.577799E+02	2.511146E+01
444	2.156314E+04	1.468439E+02	2.337094E+01	494	2.492816E+04	1.578865E+02	2.512842E+01
445	2.158883E+04	1.469314E+02	2.338486E+01	495	2.501981E+04	1.581765E+02	2.517457E+01
446	2.160474E+04	1.469855E+02	2.339347E+01	496	2.503703E+04	1.582309E+02	2.518324E+01
447	2.165075E+04	1.471419E+02	2.341837E+01	497	2.508729E+04	1.583897E+02	2.520850E+01
448	2.176496E+04	1.475295E+02	2.348006E+01	498	2.514912E+04	1.585847E+02	2.523954E+01
449	2.178044E+04	1.475820E+02	2.348840E+01	499	2.519826E+04	1.587396E+02	2.526419E+01
450	2.180067E+04	1.476505E+02	2.349931E+01	500	2.526149E+04	1.589386E+02	2.529587E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 266

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
501	2.526398E+04	1.589465E+02	2.529711E+01	551	2.791187E+04	1.670685E+02	2.658977E+01
502	2.529904E+04	1.590567E+02	2.531466E+01	552	2.804648E+04	1.674708E+02	2.665381E+01
503	2.530032E+04	1.590607E+02	2.531530E+01	553	2.810799E+04	1.676544E+02	2.668302E+01
504	2.537766E+04	1.593037E+02	2.535397E+01	554	2.821803E+04	1.679822E+02	2.673520E+01
505	2.537875E+04	1.593071E+02	2.535451E+01	555	2.824332E+04	1.680575E+02	2.674718E+01
506	2.537920E+04	1.593085E+02	2.535474E+01	556	2.828000E+04	1.681666E+02	2.676454E+01
507	2.546841E+04	1.595882E+02	2.539926E+01	557	2.838055E+04	1.684653E+02	2.681208E+01
508	2.549864E+04	1.596830E+02	2.541433E+01	558	2.843711E+04	1.686331E+02	2.683879E+01
509	2.558865E+04	1.599645E+02	2.545914E+01	559	2.851017E+04	1.688496E+02	2.687324E+01
510	2.559366E+04	1.599802E+02	2.546164E+01	560	2.852464E+04	1.688924E+02	2.688006E+01
511	2.568070E+04	1.602520E+02	2.550490E+01	561	2.853302E+04	1.689172E+02	2.688401E+01
512	2.589063E+04	1.609057E+02	2.560893E+01	562	2.865260E+04	1.692708E+02	2.694028E+01
513	2.591912E+04	1.609942E+02	2.562302E+01	563	2.881217E+04	1.697415E+02	2.701519E+01
514	2.603723E+04	1.613606E+02	2.568133E+01	564	2.881898E+04	1.697615E+02	2.701839E+01
515	2.609971E+04	1.615540E+02	2.571212E+01	565	2.882067E+04	1.697665E+02	2.701918E+01
516	2.611729E+04	1.616085E+02	2.572078E+01	566	2.882810E+04	1.697884E+02	2.702266E+01
517	2.622640E+04	1.619457E+02	2.577445E+01	567	2.886054E+04	1.698839E+02	2.703786E+01
518	2.628012E+04	1.621114E+02	2.580084E+01	568	2.889905E+04	1.699972E+02	2.705589E+01
519	2.632764E+04	1.622579E+02	2.582415E+01	569	2.900127E+04	1.702976E+02	2.710370E+01
520	2.639390E+04	1.624620E+02	2.585663E+01	570	2.900403E+04	1.703057E+02	2.710499E+01
521	2.644485E+04	1.626187E+02	2.588157E+01	571	2.907067E+04	1.705012E+02	2.713612E+01
522	2.647793E+04	1.627204E+02	2.589776E+01	572	2.910300E+04	1.705960E+02	2.715120E+01
523	2.648549E+04	1.627436E+02	2.590145E+01	573	2.928700E+04	1.711344E+02	2.723689E+01
524	2.649758E+04	1.627808E+02	2.590737E+01	574	2.935708E+04	1.713391E+02	2.726946E+01
525	2.652585E+04	1.628676E+02	2.592118E+01	575	2.936343E+04	1.713576E+02	2.727241E+01
526	2.653230E+04	1.628874E+02	2.592433E+01	576	2.937160E+04	1.713815E+02	2.727621E+01
527	2.660844E+04	1.631209E+02	2.596150E+01	577	2.938611E+04	1.714238E+02	2.728294E+01
528	2.660902E+04	1.631227E+02	2.596179E+01	578	2.939224E+04	1.714416E+02	2.728578E+01
529	2.673021E+04	1.634938E+02	2.602084E+01	579	2.956270E+04	1.719381E+02	2.736480E+01
530	2.675749E+04	1.635772E+02	2.603412E+01	580	2.976295E+04	1.725194E+02	2.745732E+01
531	2.676511E+04	1.636005E+02	2.603782E+01	581	3.006397E+04	1.733896E+02	2.759582E+01
532	2.677997E+04	1.636459E+02	2.604505E+01	582	3.013328E+04	1.735894E+02	2.762761E+01
533	2.694037E+04	1.641352E+02	2.612293E+01	583	3.014406E+04	1.736205E+02	2.763255E+01
534	2.695202E+04	1.641707E+02	2.612858E+01	584	3.022179E+04	1.738442E+02	2.766816E+01
535	2.703571E+04	1.644254E+02	2.616912E+01	585	3.027497E+04	1.739971E+02	2.769249E+01
536	2.723874E+04	1.650416E+02	2.626719E+01	586	3.039203E+04	1.743331E+02	2.774598E+01
537	2.731363E+04	1.652683E+02	2.630327E+01	587	3.047839E+04	1.745806E+02	2.778537E+01
538	2.739285E+04	1.655078E+02	2.634139E+01	588	3.062140E+04	1.749897E+02	2.785048E+01
539	2.743964E+04	1.656491E+02	2.636388E+01	589	3.062781E+04	1.750080E+02	2.785339E+01
540	2.749252E+04	1.658087E+02	2.638927E+01	590	3.065101E+04	1.750743E+02	2.786394E+01
541	2.752442E+04	1.659048E+02	2.640458E+01	591	3.075411E+04	1.753685E+02	2.791076E+01
542	2.763841E+04	1.662480E+02	2.645919E+01	592	3.079835E+04	1.754946E+02	2.793083E+01
543	2.767750E+04	1.663656E+02	2.647790E+01	593	3.082142E+04	1.755603E+02	2.794129E+01
544	2.768888E+04	1.663997E+02	2.648334E+01	594	3.095189E+04	1.759315E+02	2.800037E+01
545	2.769497E+04	1.664180E+02	2.648625E+01	595	3.103019E+04	1.761539E+02	2.803576E+01
546	2.772058E+04	1.664950E+02	2.649850E+01	596	3.116245E+04	1.765289E+02	2.809544E+01
547	2.774621E+04	1.665719E+02	2.651075E+01	597	3.117471E+04	1.765636E+02	2.810097E+01
548	2.776369E+04	1.666244E+02	2.651910E+01	598	3.118961E+04	1.766058E+02	2.810769E+01
549	2.777681E+04	1.666638E+02	2.652536E+01	599	3.119752E+04	1.766282E+02	2.811125E+01
550	2.784062E+04	1.668551E+02	2.655581E+01	600	3.121071E+04	1.766655E+02	2.811719E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 267

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
601	3.138962E+04	1.771712E+02	2.819766E+01	651	3.474162E+04	1.863910E+02	2.966505E+01
602	3.144131E+04	1.773170E+02	2.822087E+01	652	3.490297E+04	1.868234E+02	2.973386E+01
603	3.147553E+04	1.774134E+02	2.823623E+01	653	3.493913E+04	1.869201E+02	2.974926E+01
604	3.167350E+04	1.779705E+02	2.832488E+01	654	3.502473E+04	1.871490E+02	2.978568E+01
605	3.168295E+04	1.779971E+02	2.832911E+01	655	3.512168E+04	1.874078E+02	2.982687E+01
606	3.173978E+04	1.781566E+02	2.835451E+01	656	3.512337E+04	1.874123E+02	2.982759E+01
607	3.177483E+04	1.782550E+02	2.837016E+01	657	3.521684E+04	1.876615E+02	2.986726E+01
608	3.179633E+04	1.783153E+02	2.837976E+01	658	3.538342E+04	1.881048E+02	2.993781E+01
609	3.190032E+04	1.786066E+02	2.842613E+01	659	3.540410E+04	1.881598E+02	2.994656E+01
610	3.203935E+04	1.789954E+02	2.848800E+01	660	3.549094E+04	1.883904E+02	2.998326E+01
611	3.205211E+04	1.790310E+02	2.849368E+01	661	3.562627E+04	1.887492E+02	3.004037E+01
612	3.211832E+04	1.792158E+02	2.852309E+01	662	3.570242E+04	1.889508E+02	3.007246E+01
613	3.211873E+04	1.792170E+02	2.852327E+01	663	3.573836E+04	1.890459E+02	3.008759E+01
614	3.221054E+04	1.794730E+02	2.856401E+01	664	3.593241E+04	1.895585E+02	3.016917E+01
615	3.229621E+04	1.797115E+02	2.860197E+01	665	3.596802E+04	1.896524E+02	3.018411E+01
616	3.231796E+04	1.797720E+02	2.861160E+01	666	3.600011E+04	1.897370E+02	3.019758E+01
617	3.234090E+04	1.798357E+02	2.862175E+01	667	3.607861E+04	1.899437E+02	3.023048E+01
618	3.246221E+04	1.801727E+02	2.867538E+01	668	3.616675E+04	1.901756E+02	3.026738E+01
619	3.255751E+04	1.804370E+02	2.871744E+01	669	3.616916E+04	1.901819E+02	3.026839E+01
620	3.263815E+04	1.806603E+02	2.875298E+01	670	3.622467E+04	1.903278E+02	3.029161E+01
621	3.280943E+04	1.811337E+02	2.882833E+01	671	3.629068E+04	1.905011E+02	3.031920E+01
622	3.285119E+04	1.812490E+02	2.884667E+01	672	3.636673E+04	1.907006E+02	3.035095E+01
623	3.290607E+04	1.814003E+02	2.887075E+01	673	3.646630E+04	1.909615E+02	3.039247E+01
624	3.291590E+04	1.814274E+02	2.887507E+01	674	3.650298E+04	1.910575E+02	3.040775E+01
625	3.291865E+04	1.814350E+02	2.887627E+01	675	3.654360E+04	1.911638E+02	3.042466E+01
626	3.296847E+04	1.815722E+02	2.889812E+01	676	3.658679E+04	1.912767E+02	3.044264E+01
627	3.300697E+04	1.816782E+02	2.891499E+01	677	3.660873E+04	1.913341E+02	3.045176E+01
628	3.307242E+04	1.818582E+02	2.894364E+01	678	3.672375E+04	1.916344E+02	3.049957E+01
629	3.310132E+04	1.819377E+02	2.895628E+01	679	3.678206E+04	1.917865E+02	3.052377E+01
630	3.310209E+04	1.819398E+02	2.895662E+01	680	3.684134E+04	1.919410E+02	3.054836E+01
631	3.318884E+04	1.821781E+02	2.899454E+01	681	3.686721E+04	1.920084E+02	3.055908E+01
632	3.324038E+04	1.823195E+02	2.901704E+01	682	3.698413E+04	1.923126E+02	3.060750E+01
633	3.325990E+04	1.823730E+02	2.902556E+01	683	3.706824E+04	1.925311E+02	3.064228E+01
634	3.327235E+04	1.824071E+02	2.903099E+01	684	3.715862E+04	1.927657E+02	3.067962E+01
635	3.330141E+04	1.824868E+02	2.904367E+01	685	3.717078E+04	1.927973E+02	3.068464E+01
636	3.340315E+04	1.827653E+02	2.908800E+01	686	3.719501E+04	1.928601E+02	3.069463E+01
637	3.353254E+04	1.831189E+02	2.914428E+01	687	3.725645E+04	1.930193E+02	3.071998E+01
638	3.361646E+04	1.833479E+02	2.918073E+01	688	3.728085E+04	1.930825E+02	3.073003E+01
639	3.370133E+04	1.835792E+02	2.921754E+01	689	3.729593E+04	1.931215E+02	3.073625E+01
640	3.397263E+04	1.843167E+02	2.933491E+01	690	3.734344E+04	1.932445E+02	3.075582E+01
641	3.409727E+04	1.846545E+02	2.938867E+01	691	3.740595E+04	1.934062E+02	3.078155E+01
642	3.421968E+04	1.849856E+02	2.944137E+01	692	3.744419E+04	1.935050E+02	3.079728E+01
643	3.425039E+04	1.850686E+02	2.945458E+01	693	3.746429E+04	1.935569E+02	3.080554E+01
644	3.428213E+04	1.851543E+02	2.946823E+01	694	3.749368E+04	1.936329E+02	3.081763E+01
645	3.429528E+04	1.851898E+02	2.947388E+01	695	3.770080E+04	1.941670E+02	3.090263E+01
646	3.433609E+04	1.853000E+02	2.949141E+01	696	3.777251E+04	1.943515E+02	3.093200E+01
647	3.438606E+04	1.854348E+02	2.951286E+01	697	3.782436E+04	1.944848E+02	3.095322E+01
648	3.451592E+04	1.857846E+02	2.956854E+01	698	3.789376E+04	1.946632E+02	3.098161E+01
649	3.455183E+04	1.858812E+02	2.958391E+01	699	3.795148E+04	1.948114E+02	3.100520E+01
650	3.467927E+04	1.862237E+02	2.963842E+01	700	3.803124E+04	1.950160E+02	3.103776E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 268

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
701	3.805583E+04	1.950790E+02	3.104779E+01	751	4.262343E+04	2.064544E+02	3.285824E+01
702	3.814325E+04	1.953030E+02	3.108343E+01	752	4.270892E+04	2.066614E+02	3.289118E+01
703	3.823493E+04	1.955376E+02	3.112077E+01	753	4.272763E+04	2.067066E+02	3.289838E+01
704	3.835078E+04	1.958335E+02	3.116788E+01	754	4.281440E+04	2.069164E+02	3.293177E+01
705	3.836094E+04	1.958595E+02	3.117201E+01	755	4.283064E+04	2.069556E+02	3.293801E+01
706	3.838767E+04	1.959277E+02	3.118286E+01	756	4.304752E+04	2.074790E+02	3.302130E+01
707	3.842541E+04	1.960240E+02	3.119819E+01	757	4.315430E+04	2.077361E+02	3.306223E+01
708	3.846938E+04	1.961361E+02	3.121604E+01	758	4.318930E+04	2.078204E+02	3.307564E+01
709	3.854943E+04	1.963401E+02	3.124849E+01	759	4.320685E+04	2.078626E+02	3.308236E+01
710	3.873715E+04	1.968176E+02	3.132449E+01	760	4.325699E+04	2.079832E+02	3.310155E+01
711	3.882399E+04	1.970381E+02	3.135958E+01	761	4.331620E+04	2.081255E+02	3.312419E+01
712	3.896811E+04	1.974034E+02	3.141773E+01	762	4.339168E+04	2.083067E+02	3.315304E+01
713	3.917440E+04	1.979252E+02	3.150078E+01	763	4.344784E+04	2.084414E+02	3.317449E+01
714	3.922883E+04	1.980627E+02	3.152266E+01	764	4.345598E+04	2.084610E+02	3.317759E+01
715	3.945510E+04	1.986331E+02	3.161344E+01	765	4.356200E+04	2.087151E+02	3.321804E+01
716	3.949243E+04	1.987270E+02	3.162839E+01	766	4.367386E+04	2.089829E+02	3.326066E+01
717	3.953009E+04	1.988218E+02	3.164347E+01	767	4.379842E+04	2.092807E+02	3.330806E+01
718	3.964482E+04	1.991101E+02	3.168935E+01	768	4.393046E+04	2.095959E+02	3.335823E+01
719	3.979360E+04	1.994833E+02	3.174876E+01	769	4.408682E+04	2.099686E+02	3.341754E+01
720	3.989745E+04	1.997435E+02	3.179016E+01	770	4.420148E+04	2.102415E+02	3.346097E+01
721	3.997441E+04	1.999360E+02	3.182080E+01	771	4.423216E+04	2.103144E+02	3.347258E+01
722	3.997785E+04	1.999446E+02	3.182218E+01	772	4.423920E+04	2.103312E+02	3.347524E+01
723	3.998458E+04	1.999614E+02	3.182485E+01	773	4.425913E+04	2.103785E+02	3.348278E+01
724	4.000106E+04	2.000027E+02	3.183141E+01	774	4.442463E+04	2.107715E+02	3.354533E+01
725	4.010885E+04	2.002719E+02	3.187427E+01	775	4.450476E+04	2.109615E+02	3.357557E+01
726	4.033486E+04	2.008354E+02	3.196395E+01	776	4.475482E+04	2.115534E+02	3.366976E+01
727	4.045398E+04	2.011317E+02	3.201111E+01	777	4.479488E+04	2.116480E+02	3.368483E+01
728	4.052249E+04	2.013020E+02	3.203821E+01	778	4.490239E+04	2.119018E+02	3.372523E+01
729	4.056015E+04	2.013955E+02	3.205309E+01	779	4.494648E+04	2.120058E+02	3.374178E+01
730	4.056335E+04	2.014035E+02	3.205436E+01	780	4.495217E+04	2.120193E+02	3.374391E+01
731	4.060216E+04	2.014998E+02	3.206968E+01	781	4.496254E+04	2.120437E+02	3.374781E+01
732	4.073524E+04	2.018297E+02	3.212220E+01	782	4.497616E+04	2.120758E+02	3.375292E+01
733	4.082361E+04	2.020485E+02	3.215702E+01	783	4.498993E+04	2.121083E+02	3.375808E+01
734	4.085556E+04	2.021276E+02	3.216960E+01	784	4.500720E+04	2.121490E+02	3.376456E+01
735	4.088273E+04	2.021948E+02	3.218030E+01	785	4.501015E+04	2.121559E+02	3.376567E+01
736	4.088734E+04	2.022062E+02	3.218212E+01	786	4.541396E+04	2.131055E+02	3.391679E+01
737	4.100813E+04	2.025046E+02	3.222961E+01	787	4.551313E+04	2.133381E+02	3.395381E+01
738	4.101961E+04	2.025330E+02	3.223412E+01	788	4.553313E+04	2.133849E+02	3.396127E+01
739	4.105814E+04	2.026281E+02	3.224926E+01	789	4.557561E+04	2.134845E+02	3.397711E+01
740	4.124090E+04	2.030786E+02	3.232096E+01	790	4.568079E+04	2.137306E+02	3.401629E+01
741	4.154768E+04	2.038325E+02	3.244094E+01	791	4.575617E+04	2.139069E+02	3.404434E+01
742	4.167649E+04	2.041482E+02	3.249120E+01	792	4.588197E+04	2.142008E+02	3.409111E+01
743	4.178535E+04	2.044146E+02	3.253360E+01	793	4.600422E+04	2.144859E+02	3.413650E+01
744	4.184843E+04	2.045689E+02	3.255815E+01	794	4.608020E+04	2.146630E+02	3.416468E+01
745	4.196241E+04	2.048473E+02	3.260246E+01	795	4.623789E+04	2.150300E+02	3.422308E+01
746	4.203618E+04	2.050273E+02	3.263110E+01	796	4.634683E+04	2.152831E+02	3.426338E+01
747	4.210220E+04	2.051882E+02	3.265672E+01	797	4.638209E+04	2.153650E+02	3.427641E+01
748	4.219862E+04	2.054230E+02	3.269409E+01	798	4.657507E+04	2.158126E+02	3.434764E+01
749	4.236166E+04	2.058195E+02	3.275719E+01	799	4.662425E+04	2.159265E+02	3.436577E+01
750	4.245779E+04	2.060529E+02	3.279434E+01	800	4.670375E+04	2.161105E+02	3.439505E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 269

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
801	4.680188E+04	2.163374E+02	3.443117E+01	851	5.099345E+04	2.258173E+02	3.593994E+01
802	4.686858E+04	2.164915E+02	3.445569E+01	852	5.103607E+04	2.259116E+02	3.595495E+01
803	4.693761E+04	2.166509E+02	3.448106E+01	853	5.114418E+04	2.261508E+02	3.599302E+01
804	4.696429E+04	2.167125E+02	3.449086E+01	854	5.115730E+04	2.261798E+02	3.599763E+01
805	4.713866E+04	2.171144E+02	3.455483E+01	855	5.121048E+04	2.262973E+02	3.601634E+01
806	4.720197E+04	2.172601E+02	3.457803E+01	856	5.121916E+04	2.263165E+02	3.601939E+01
807	4.726885E+04	2.174140E+02	3.460251E+01	857	5.130529E+04	2.265067E+02	3.604966E+01
808	4.733253E+04	2.175604E+02	3.462582E+01	858	5.152722E+04	2.269961E+02	3.612755E+01
809	4.738515E+04	2.176813E+02	3.464506E+01	859	5.163990E+04	2.272441E+02	3.616703E+01
810	4.740030E+04	2.177161E+02	3.465059E+01	860	5.171515E+04	2.274097E+02	3.619337E+01
811	4.750548E+04	2.179575E+02	3.468902E+01	861	5.190948E+04	2.278365E+02	3.626131E+01
812	4.752358E+04	2.179990E+02	3.469563E+01	862	5.198848E+04	2.280098E+02	3.628889E+01
813	4.754732E+04	2.180535E+02	3.470429E+01	863	5.217998E+04	2.284294E+02	3.635566E+01
814	4.757153E+04	2.181090E+02	3.471312E+01	864	5.224212E+04	2.285654E+02	3.637731E+01
815	4.773119E+04	2.184747E+02	3.477133E+01	865	5.245175E+04	2.290235E+02	3.645022E+01
816	4.785591E+04	2.187599E+02	3.481673E+01	866	5.248994E+04	2.291068E+02	3.646349E+01
817	4.793600E+04	2.189429E+02	3.484585E+01	867	5.263939E+04	2.294328E+02	3.651536E+01
818	4.798931E+04	2.190646E+02	3.486522E+01	868	5.284828E+04	2.298875E+02	3.658774E+01
819	4.801166E+04	2.191156E+02	3.487334E+01	869	5.294261E+04	2.300926E+02	3.662038E+01
820	4.823442E+04	2.196234E+02	3.495414E+01	870	5.305582E+04	2.303385E+02	3.665951E+01
821	4.825633E+04	2.196732E+02	3.496208E+01	871	5.308925E+04	2.304110E+02	3.667106E+01
822	4.839509E+04	2.199888E+02	3.501231E+01	872	5.313032E+04	2.305001E+02	3.668524E+01
823	4.857218E+04	2.203910E+02	3.507631E+01	873	5.315095E+04	2.305449E+02	3.669236E+01
824	4.865316E+04	2.205746E+02	3.510554E+01	874	5.321254E+04	2.306784E+02	3.671361E+01
825	4.869310E+04	2.206651E+02	3.511995E+01	875	5.328337E+04	2.308319E+02	3.673804E+01
826	4.873322E+04	2.207560E+02	3.513441E+01	876	5.339660E+04	2.310770E+02	3.677705E+01
827	4.890757E+04	2.211506E+02	3.519720E+01	877	5.342107E+04	2.311300E+02	3.678548E+01
828	4.907376E+04	2.215260E+02	3.525695E+01	878	5.352733E+04	2.313597E+02	3.682204E+01
829	4.916357E+04	2.217286E+02	3.528920E+01	879	5.352983E+04	2.313651E+02	3.682290E+01
830	4.927534E+04	2.219805E+02	3.532929E+01	880	5.357909E+04	2.314716E+02	3.683985E+01
831	4.936222E+04	2.221761E+02	3.536042E+01	881	5.361065E+04	2.315397E+02	3.685069E+01
832	4.943596E+04	2.223420E+02	3.538683E+01	882	5.402213E+04	2.324266E+02	3.699184E+01
833	4.946692E+04	2.224116E+02	3.539791E+01	883	5.411063E+04	2.326169E+02	3.702213E+01
834	4.953881E+04	2.225732E+02	3.542362E+01	884	5.412757E+04	2.326533E+02	3.702793E+01
835	4.955391E+04	2.226071E+02	3.542902E+01	885	5.416783E+04	2.327398E+02	3.704170E+01
836	4.973059E+04	2.230036E+02	3.549212E+01	886	5.419184E+04	2.327914E+02	3.704990E+01
837	4.988034E+04	2.233391E+02	3.554552E+01	887	5.423793E+04	2.328904E+02	3.706566E+01
838	5.005287E+04	2.237250E+02	3.560694E+01	888	5.437310E+04	2.331804E+02	3.711181E+01
839	5.009695E+04	2.238235E+02	3.562261E+01	889	5.439395E+04	2.332251E+02	3.711893E+01
840	5.011323E+04	2.238598E+02	3.562840E+01	890	5.446355E+04	2.333743E+02	3.714267E+01
841	5.018224E+04	2.240139E+02	3.565292E+01	891	5.448744E+04	2.334254E+02	3.715081E+01
842	5.025583E+04	2.241781E+02	3.567905E+01	892	5.448884E+04	2.334285E+02	3.715129E+01
843	5.027806E+04	2.242277E+02	3.568695E+01	893	5.450979E+04	2.334733E+02	3.715843E+01
844	5.031559E+04	2.243114E+02	3.570026E+01	894	5.482321E+04	2.341436E+02	3.726511E+01
845	5.035675E+04	2.244031E+02	3.571486E+01	895	5.487232E+04	2.342484E+02	3.728179E+01
846	5.036438E+04	2.244201E+02	3.571757E+01	896	5.512783E+04	2.347932E+02	3.736849E+01
847	5.048466E+04	2.246879E+02	3.576019E+01	897	5.516505E+04	2.348724E+02	3.738111E+01
848	5.050888E+04	2.247418E+02	3.576877E+01	898	5.557059E+04	2.357341E+02	3.751825E+01
849	5.057819E+04	2.248960E+02	3.579330E+01	899	5.564684E+04	2.358958E+02	3.754399E+01
850	5.063100E+04	2.250133E+02	3.581198E+01	900	5.566703E+04	2.359386E+02	3.755080E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 270

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
901	5.567404E+04	2.359535E+02	3.755316E+01	951	6.091210E+04	2.468038E+02	3.928004E+01
902	5.569683E+04	2.360018E+02	3.756085E+01	952	6.112221E+04	2.472291E+02	3.934773E+01
903	5.570367E+04	2.360163E+02	3.756315E+01	953	6.113023E+04	2.472453E+02	3.935031E+01
904	5.572127E+04	2.360535E+02	3.756909E+01	954	6.135212E+04	2.476936E+02	3.942166E+01
905	5.598600E+04	2.366136E+02	3.765823E+01	955	6.138046E+04	2.477508E+02	3.943076E+01
906	5.606652E+04	2.367837E+02	3.768530E+01	956	6.142417E+04	2.478390E+02	3.944480E+01
907	5.618813E+04	2.370404E+02	3.772615E+01	957	6.153957E+04	2.480717E+02	3.948184E+01
908	5.636286E+04	2.374086E+02	3.778476E+01	958	6.163387E+04	2.482617E+02	3.951208E+01
909	5.676521E+04	2.382545E+02	3.791938E+01	959	6.168768E+04	2.483700E+02	3.952932E+01
910	5.698881E+04	2.387233E+02	3.799399E+01	960	6.172860E+04	2.484524E+02	3.954243E+01
911	5.720112E+04	2.391675E+02	3.806470E+01	961	6.183969E+04	2.486759E+02	3.957800E+01
912	5.725734E+04	2.392851E+02	3.808340E+01	962	6.192568E+04	2.488487E+02	3.960550E+01
913	5.751691E+04	2.398268E+02	3.816963E+01	963	6.193784E+04	2.488731E+02	3.960939E+01
914	5.791072E+04	2.406465E+02	3.830008E+01	964	6.209864E+04	2.491960E+02	3.966077E+01
915	5.808063E+04	2.409992E+02	3.835622E+01	965	6.213134E+04	2.492616E+02	3.967121E+01
916	5.808749E+04	2.410135E+02	3.835848E+01	966	6.231878E+04	2.496373E+02	3.973101E+01
917	5.817688E+04	2.411988E+02	3.838799E+01	967	6.237443E+04	2.497487E+02	3.974874E+01
918	5.818171E+04	2.412088E+02	3.838958E+01	968	6.260974E+04	2.502194E+02	3.982365E+01
919	5.818578E+04	2.412173E+02	3.839092E+01	969	6.265410E+04	2.503080E+02	3.983776E+01
920	5.819803E+04	2.412427E+02	3.839496E+01	970	6.281371E+04	2.506266E+02	3.988847E+01
921	5.820651E+04	2.412603E+02	3.839776E+01	971	6.295636E+04	2.509111E+02	3.993374E+01
922	5.830025E+04	2.414545E+02	3.842867E+01	972	6.304273E+04	2.510831E+02	3.996112E+01
923	5.839698E+04	2.416547E+02	3.846054E+01	973	6.306992E+04	2.511372E+02	3.996973E+01
924	5.840379E+04	2.416688E+02	3.846278E+01	974	6.317212E+04	2.513406E+02	4.000211E+01
925	5.841685E+04	2.416958E+02	3.846708E+01	975	6.317526E+04	2.513469E+02	4.000310E+01
926	5.843516E+04	2.417337E+02	3.847311E+01	976	6.337832E+04	2.517505E+02	4.006734E+01
927	5.862198E+04	2.421198E+02	3.853456E+01	977	6.343171E+04	2.518565E+02	4.008421E+01
928	5.881289E+04	2.425137E+02	3.859725E+01	978	6.354750E+04	2.520863E+02	4.012078E+01
929	5.890049E+04	2.426942E+02	3.862599E+01	979	6.358188E+04	2.521545E+02	4.013163E+01
930	5.896801E+04	2.428333E+02	3.864812E+01	980	6.370188E+04	2.523923E+02	4.016949E+01
931	5.901746E+04	2.429351E+02	3.866432E+01	981	6.378608E+04	2.525591E+02	4.019602E+01
932	5.920230E+04	2.433152E+02	3.872482E+01	982	6.385537E+04	2.526962E+02	4.021785E+01
933	5.923017E+04	2.433725E+02	3.873393E+01	983	6.388264E+04	2.527502E+02	4.022644E+01
934	5.933557E+04	2.435889E+02	3.876838E+01	984	6.401964E+04	2.530210E+02	4.026955E+01
935	5.941784E+04	2.437577E+02	3.879525E+01	985	6.419782E+04	2.533729E+02	4.032555E+01
936	5.952787E+04	2.439833E+02	3.883115E+01	986	6.430561E+04	2.535855E+02	4.035939E+01
937	5.957138E+04	2.440725E+02	3.884534E+01	987	6.431705E+04	2.536081E+02	4.036298E+01
938	5.973222E+04	2.444018E+02	3.889775E+01	988	6.445225E+04	2.538745E+02	4.040538E+01
939	5.997260E+04	2.448930E+02	3.897594E+01	989	6.447469E+04	2.539187E+02	4.041241E+01
940	6.005208E+04	2.450553E+02	3.900175E+01	990	6.456594E+04	2.540983E+02	4.044100E+01
941	6.011689E+04	2.451874E+02	3.902279E+01	991	6.469205E+04	2.543463E+02	4.048047E+01
942	6.024397E+04	2.454465E+02	3.906402E+01	992	6.474491E+04	2.544502E+02	4.049701E+01
943	6.036913E+04	2.457013E+02	3.910458E+01	993	6.480257E+04	2.545635E+02	4.051504E+01
944	6.042709E+04	2.458192E+02	3.912334E+01	994	6.491137E+04	2.547771E+02	4.054903E+01
945	6.049272E+04	2.459527E+02	3.914459E+01	995	6.502387E+04	2.549978E+02	4.058416E+01
946	6.059779E+04	2.461662E+02	3.917856E+01	996	6.511500E+04	2.551764E+02	4.061259E+01
947	6.060799E+04	2.461869E+02	3.918186E+01	997	6.522845E+04	2.553986E+02	4.064795E+01
948	6.074574E+04	2.464665E+02	3.922636E+01	998	6.530263E+04	2.555438E+02	4.067106E+01
949	6.080632E+04	2.465894E+02	3.924592E+01	999	6.539544E+04	2.557253E+02	4.069995E+01
950	6.090400E+04	2.467874E+02	3.927743E+01	1000	6.546643E+04	2.558641E+02	4.072203E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 271

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1001	6.553921E+04	2.560063E+02	4.074466E+01	1051	7.070430E+04	2.659028E+02	4.231974E+01
1002	6.564861E+04	2.562198E+02	4.077865E+01	1052	7.077692E+04	2.660393E+02	4.234147E+01
1003	6.574340E+04	2.564048E+02	4.080809E+01	1053	7.085386E+04	2.661839E+02	4.236448E+01
1004	6.612596E+04	2.571497E+02	4.092664E+01	1054	7.086298E+04	2.662010E+02	4.236721E+01
1005	6.616074E+04	2.572173E+02	4.093740E+01	1055	7.093004E+04	2.663269E+02	4.238725E+01
1006	6.635040E+04	2.575857E+02	4.099604E+01	1056	7.113376E+04	2.667091E+02	4.244808E+01
1007	6.641780E+04	2.577165E+02	4.101686E+01	1057	7.123986E+04	2.669080E+02	4.247972E+01
1008	6.646094E+04	2.578002E+02	4.103017E+01	1058	7.140016E+04	2.672081E+02	4.252749E+01
1009	6.672225E+04	2.583065E+02	4.111076E+01	1059	7.155200E+04	2.674921E+02	4.257268E+01
1010	6.702311E+04	2.588882E+02	4.120334E+01	1060	7.170646E+04	2.677806E+02	4.261861E+01
1011	6.707484E+04	2.589881E+02	4.121924E+01	1061	7.212841E+04	2.685673E+02	4.274382E+01
1012	6.710589E+04	2.590481E+02	4.122878E+01	1062	7.214759E+04	2.686030E+02	4.274950E+01
1013	6.720537E+04	2.592400E+02	4.125933E+01	1063	7.219703E+04	2.686951E+02	4.276415E+01
1014	6.727133E+04	2.593672E+02	4.127957E+01	1064	7.234855E+04	2.689769E+02	4.280900E+01
1015	6.747645E+04	2.597623E+02	4.134245E+01	1065	7.277913E+04	2.697761E+02	4.293620E+01
1016	6.762360E+04	2.600454E+02	4.138751E+01	1066	7.298124E+04	2.701504E+02	4.299577E+01
1017	6.764349E+04	2.600836E+02	4.139359E+01	1067	7.310814E+04	2.703852E+02	4.303313E+01
1018	6.765319E+04	2.601023E+02	4.139656E+01	1068	7.321653E+04	2.705855E+02	4.306502E+01
1019	6.772473E+04	2.602398E+02	4.141844E+01	1069	7.350414E+04	2.711165E+02	4.314953E+01
1020	6.775007E+04	2.602884E+02	4.142619E+01	1070	7.356866E+04	2.712354E+02	4.316846E+01
1021	6.777024E+04	2.603272E+02	4.143236E+01	1071	7.369429E+04	2.714669E+02	4.320530E+01
1022	6.781647E+04	2.604160E+02	4.144649E+01	1072	7.393804E+04	2.719155E+02	4.327670E+01
1023	6.786139E+04	2.605022E+02	4.146021E+01	1073	7.411281E+04	2.722367E+02	4.332781E+01
1024	6.789675E+04	2.605700E+02	4.147101E+01	1074	7.423706E+04	2.724648E+02	4.336412E+01
1025	6.801012E+04	2.607875E+02	4.150562E+01	1075	7.460489E+04	2.731390E+02	4.347141E+01
1026	6.809607E+04	2.609522E+02	4.153184E+01	1076	7.496054E+04	2.737892E+02	4.357491E+01
1027	6.817796E+04	2.611091E+02	4.155680E+01	1077	7.512085E+04	2.740818E+02	4.362148E+01
1028	6.824181E+04	2.612313E+02	4.157626E+01	1078	7.517215E+04	2.741754E+02	4.363637E+01
1029	6.827371E+04	2.612924E+02	4.158597E+01	1079	7.525632E+04	2.743289E+02	4.366079E+01
1030	6.831496E+04	2.613713E+02	4.159854E+01	1080	7.527203E+04	2.743575E+02	4.366535E+01
1031	6.863174E+04	2.619766E+02	4.169487E+01	1081	7.531865E+04	2.744424E+02	4.367887E+01
1032	6.870869E+04	2.621234E+02	4.171824E+01	1082	7.533708E+04	2.744760E+02	4.368421E+01
1033	6.872796E+04	2.621602E+02	4.172409E+01	1083	7.536286E+04	2.745230E+02	4.369169E+01
1034	6.878739E+04	2.622735E+02	4.174212E+01	1084	7.540413E+04	2.745981E+02	4.370365E+01
1035	6.890282E+04	2.624935E+02	4.177713E+01	1085	7.548669E+04	2.747484E+02	4.372757E+01
1036	6.896178E+04	2.626058E+02	4.179500E+01	1086	7.555362E+04	2.748702E+02	4.374695E+01
1037	6.902376E+04	2.627237E+02	4.181378E+01	1087	7.578530E+04	2.752913E+02	4.381397E+01
1038	6.908177E+04	2.628341E+02	4.183135E+01	1088	7.588386E+04	2.754703E+02	4.384245E+01
1039	6.927302E+04	2.631977E+02	4.188921E+01	1089	7.592000E+04	2.755358E+02	4.385289E+01
1040	6.929751E+04	2.632442E+02	4.189662E+01	1090	7.593821E+04	2.755689E+02	4.385815E+01
1041	6.944431E+04	2.635229E+02	4.194097E+01	1091	7.612792E+04	2.759129E+02	4.391290E+01
1042	6.953216E+04	2.636895E+02	4.196749E+01	1092	7.618117E+04	2.760094E+02	4.392826E+01
1043	6.971844E+04	2.640425E+02	4.202367E+01	1093	7.621687E+04	2.760740E+02	4.393855E+01
1044	6.985225E+04	2.642958E+02	4.206398E+01	1094	7.628612E+04	2.761994E+02	4.395850E+01
1045	6.999402E+04	2.645638E+02	4.210664E+01	1095	7.641332E+04	2.764296E+02	4.399514E+01
1046	7.005824E+04	2.646852E+02	4.212595E+01	1096	7.650591E+04	2.765970E+02	4.402178E+01
1047	7.028952E+04	2.651217E+02	4.219543E+01	1097	7.653559E+04	2.766507E+02	4.403032E+01
1048	7.041667E+04	2.653614E+02	4.223358E+01	1098	7.670867E+04	2.769633E+02	4.408008E+01
1049	7.055424E+04	2.656205E+02	4.227481E+01	1099	7.684732E+04	2.772135E+02	4.411990E+01
1050	7.056371E+04	2.656383E+02	4.227765E+01	1100	7.689338E+04	2.772966E+02	4.413312E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 272

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1101	7.695547E+04	2.774085E+02	4.415093E+01	1151	8.256083E+04	2.873340E+02	4.573063E+01
1102	7.712845E+04	2.777201E+02	4.420053E+01	1152	8.263347E+04	2.874604E+02	4.575074E+01
1103	7.736407E+04	2.781440E+02	4.426799E+01	1153	8.274506E+04	2.876544E+02	4.578162E+01
1104	7.749700E+04	2.783828E+02	4.430600E+01	1154	8.277601E+04	2.877082E+02	4.579018E+01
1105	7.758378E+04	2.785386E+02	4.433080E+01	1155	8.277690E+04	2.877098E+02	4.579043E+01
1106	7.777603E+04	2.788835E+02	4.438569E+01	1156	8.281617E+04	2.877780E+02	4.580129E+01
1107	7.792930E+04	2.791582E+02	4.442941E+01	1157	8.281722E+04	2.877798E+02	4.580158E+01
1108	7.804333E+04	2.793624E+02	4.446190E+01	1158	8.296066E+04	2.880289E+02	4.584123E+01
1109	7.814397E+04	2.795424E+02	4.449056E+01	1159	8.316790E+04	2.883885E+02	4.589845E+01
1110	7.824432E+04	2.797219E+02	4.451912E+01	1160	8.324007E+04	2.885136E+02	4.591836E+01
1111	7.829575E+04	2.798138E+02	4.453375E+01	1161	8.335978E+04	2.887209E+02	4.595137E+01
1112	7.841966E+04	2.800351E+02	4.456897E+01	1162	8.345504E+04	2.888859E+02	4.597761E+01
1113	7.847233E+04	2.801291E+02	4.458394E+01	1163	8.349762E+04	2.889595E+02	4.598934E+01
1114	7.856232E+04	2.802897E+02	4.460949E+01	1164	8.357548E+04	2.890942E+02	4.601078E+01
1115	7.865235E+04	2.804503E+02	4.463505E+01	1165	8.373374E+04	2.893678E+02	4.605432E+01
1116	7.866860E+04	2.804792E+02	4.463966E+01	1166	8.376204E+04	2.894167E+02	4.606210E+01
1117	7.868897E+04	2.805155E+02	4.464543E+01	1167	8.383661E+04	2.895455E+02	4.608260E+01
1118	7.890140E+04	2.808939E+02	4.470566E+01	1168	8.385011E+04	2.895688E+02	4.608631E+01
1119	7.901811E+04	2.811016E+02	4.473871E+01	1169	8.404104E+04	2.898983E+02	4.613875E+01
1120	7.906480E+04	2.811846E+02	4.475192E+01	1170	8.417699E+04	2.901327E+02	4.617606E+01
1121	7.915373E+04	2.813427E+02	4.477709E+01	1171	8.433872E+04	2.904113E+02	4.622039E+01
1122	7.929253E+04	2.815893E+02	4.481633E+01	1172	8.443232E+04	2.905724E+02	4.624603E+01
1123	7.933095E+04	2.816575E+02	4.482719E+01	1173	8.450028E+04	2.906893E+02	4.626464E+01
1124	7.945537E+04	2.818783E+02	4.486232E+01	1174	8.451929E+04	2.907220E+02	4.626985E+01
1125	7.958693E+04	2.821115E+02	4.489945E+01	1175	8.470105E+04	2.910345E+02	4.631957E+01
1126	7.985419E+04	2.825848E+02	4.497477E+01	1176	8.477935E+04	2.911689E+02	4.634098E+01
1127	8.008246E+04	2.829885E+02	4.503901E+01	1177	8.501349E+04	2.915707E+02	4.640492E+01
1128	8.015463E+04	2.831159E+02	4.505930E+01	1178	8.511788E+04	2.917497E+02	4.643340E+01
1129	8.019801E+04	2.831925E+02	4.507149E+01	1179	8.511834E+04	2.917505E+02	4.643353E+01
1130	8.020282E+04	2.832010E+02	4.507284E+01	1180	8.527351E+04	2.920163E+02	4.647584E+01
1131	8.028430E+04	2.833448E+02	4.509573E+01	1181	8.538908E+04	2.922141E+02	4.650732E+01
1132	8.046759E+04	2.836681E+02	4.514718E+01	1182	8.561108E+04	2.925937E+02	4.656774E+01
1133	8.058892E+04	2.838819E+02	4.518121E+01	1183	8.568350E+04	2.927174E+02	4.658743E+01
1134	8.059665E+04	2.838955E+02	4.518337E+01	1184	8.590611E+04	2.930974E+02	4.664791E+01
1135	8.071204E+04	2.840987E+02	4.521571E+01	1185	8.603358E+04	2.933148E+02	4.668250E+01
1136	8.078281E+04	2.842232E+02	4.523552E+01	1186	8.627254E+04	2.937219E+02	4.674729E+01
1137	8.078593E+04	2.842287E+02	4.523639E+01	1187	8.641788E+04	2.939692E+02	4.678665E+01
1138	8.098471E+04	2.845781E+02	4.529202E+01	1188	8.655088E+04	2.941953E+02	4.682264E+01
1139	8.106778E+04	2.847240E+02	4.531524E+01	1189	8.689693E+04	2.947829E+02	4.691615E+01
1140	8.121918E+04	2.849898E+02	4.535753E+01	1190	8.693895E+04	2.948541E+02	4.692749E+01
1141	8.136048E+04	2.852376E+02	4.539697E+01	1191	8.711149E+04	2.951466E+02	4.697403E+01
1142	8.159478E+04	2.856480E+02	4.546229E+01	1192	8.715472E+04	2.952198E+02	4.698569E+01
1143	8.172326E+04	2.858728E+02	4.549807E+01	1193	8.716990E+04	2.952455E+02	4.698978E+01
1144	8.190427E+04	2.861892E+02	4.554843E+01	1194	8.724752E+04	2.953769E+02	4.701069E+01
1145	8.192647E+04	2.862280E+02	4.555460E+01	1195	8.727294E+04	2.954199E+02	4.701754E+01
1146	8.199939E+04	2.863553E+02	4.557487E+01	1196	8.757505E+04	2.959308E+02	4.709885E+01
1147	8.221722E+04	2.867355E+02	4.563537E+01	1197	8.790331E+04	2.964849E+02	4.718704E+01
1148	8.226006E+04	2.868101E+02	4.564725E+01	1198	8.795237E+04	2.965676E+02	4.720021E+01
1149	8.233763E+04	2.869454E+02	4.566877E+01	1199	8.817910E+04	2.969497E+02	4.726101E+01
1150	8.249622E+04	2.872216E+02	4.571273E+01	1200	8.852995E+04	2.975398E+02	4.735493E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 273

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1201	8.862940E+04	2.977069E+02	4.738153E+01	1251	9.435306E+04	3.071694E+02	4.888753E+01
1202	8.865756E+04	2.977542E+02	4.738905E+01	1252	9.449482E+04	3.074001E+02	4.892425E+01
1203	8.870816E+04	2.978391E+02	4.740257E+01	1253	9.452518E+04	3.074495E+02	4.893210E+01
1204	8.881073E+04	2.980113E+02	4.742997E+01	1254	9.453638E+04	3.074677E+02	4.893500E+01
1205	8.893221E+04	2.982150E+02	4.746240E+01	1255	9.474137E+04	3.078009E+02	4.898803E+01
1206	8.913046E+04	2.985472E+02	4.751527E+01	1256	9.484152E+04	3.079635E+02	4.901391E+01
1207	8.919426E+04	2.986541E+02	4.753227E+01	1257	9.490215E+04	3.080619E+02	4.902958E+01
1208	8.927062E+04	2.987819E+02	4.755261E+01	1258	9.494482E+04	3.081312E+02	4.904060E+01
1209	8.931094E+04	2.988494E+02	4.756335E+01	1259	9.510951E+04	3.083983E+02	4.908311E+01
1210	8.947173E+04	2.991183E+02	4.760615E+01	1260	9.514301E+04	3.084526E+02	4.909176E+01
1211	8.960082E+04	2.993340E+02	4.764048E+01	1261	9.516477E+04	3.084879E+02	4.909737E+01
1212	8.969403E+04	2.994896E+02	4.766525E+01	1262	9.517643E+04	3.085068E+02	4.910038E+01
1213	8.993609E+04	2.998935E+02	4.772953E+01	1263	9.530552E+04	3.087159E+02	4.913366E+01
1214	9.003594E+04	3.000599E+02	4.775601E+01	1264	9.541382E+04	3.088913E+02	4.916157E+01
1215	9.013631E+04	3.002271E+02	4.778263E+01	1265	9.560778E+04	3.092051E+02	4.921152E+01
1216	9.021258E+04	3.003541E+02	4.780284E+01	1266	9.570142E+04	3.093565E+02	4.923561E+01
1217	9.037121E+04	3.006181E+02	4.784485E+01	1267	9.580281E+04	3.095203E+02	4.926169E+01
1218	9.038283E+04	3.006374E+02	4.784792E+01	1268	9.604107E+04	3.099049E+02	4.932290E+01
1219	9.051754E+04	3.008613E+02	4.788357E+01	1269	9.618840E+04	3.101425E+02	4.936072E+01
1220	9.063370E+04	3.010543E+02	4.791428E+01	1270	9.625610E+04	3.102517E+02	4.937809E+01
1221	9.088705E+04	3.014748E+02	4.798120E+01	1271	9.634510E+04	3.103951E+02	4.940091E+01
1222	9.098079E+04	3.016302E+02	4.800594E+01	1272	9.647950E+04	3.106115E+02	4.943535E+01
1223	9.124433E+04	3.020668E+02	4.807542E+01	1273	9.659909E+04	3.108039E+02	4.946598E+01
1224	9.134193E+04	3.022283E+02	4.810112E+01	1274	9.664224E+04	3.108733E+02	4.947703E+01
1225	9.149928E+04	3.024885E+02	4.814254E+01	1275	9.665051E+04	3.108867E+02	4.947915E+01
1226	9.178366E+04	3.029582E+02	4.821729E+01	1276	9.704469E+04	3.115200E+02	4.957994E+01
1227	9.192368E+04	3.031892E+02	4.825406E+01	1277	9.715875E+04	3.117030E+02	4.960907E+01
1228	9.195846E+04	3.032465E+02	4.826318E+01	1278	9.723895E+04	3.118316E+02	4.962954E+01
1229	9.212065E+04	3.035138E+02	4.830573E+01	1279	9.729542E+04	3.119221E+02	4.964395E+01
1230	9.226466E+04	3.037510E+02	4.834347E+01	1280	9.734973E+04	3.120092E+02	4.965780E+01
1231	9.232109E+04	3.038439E+02	4.835825E+01	1281	9.744595E+04	3.121633E+02	4.968234E+01
1232	9.234895E+04	3.038897E+02	4.836555E+01	1282	9.744959E+04	3.121692E+02	4.968327E+01
1233	9.271515E+04	3.044916E+02	4.846135E+01	1283	9.760067E+04	3.124111E+02	4.972176E+01
1234	9.277043E+04	3.045824E+02	4.847579E+01	1284	9.780289E+04	3.127345E+02	4.977325E+01
1235	9.282357E+04	3.046696E+02	4.848967E+01	1285	9.794039E+04	3.129543E+02	4.980822E+01
1236	9.289070E+04	3.047798E+02	4.850721E+01	1286	9.795296E+04	3.129744E+02	4.981142E+01
1237	9.295482E+04	3.048849E+02	4.852394E+01	1287	9.800813E+04	3.130625E+02	4.982545E+01
1238	9.297816E+04	3.049232E+02	4.853003E+01	1288	9.803407E+04	3.131039E+02	4.983204E+01
1239	9.304529E+04	3.050333E+02	4.854755E+01	1289	9.807707E+04	3.131726E+02	4.984297E+01
1240	9.310756E+04	3.051353E+02	4.856379E+01	1290	9.809251E+04	3.131972E+02	4.984689E+01
1241	9.316448E+04	3.052286E+02	4.857863E+01	1291	9.813354E+04	3.132627E+02	4.985731E+01
1242	9.327975E+04	3.054173E+02	4.860868E+01	1292	9.832606E+04	3.135699E+02	4.990619E+01
1243	9.337478E+04	3.055729E+02	4.863343E+01	1293	9.835350E+04	3.136136E+02	4.991316E+01
1244	9.362039E+04	3.059745E+02	4.869735E+01	1294	9.836549E+04	3.136327E+02	4.991620E+01
1245	9.371999E+04	3.061372E+02	4.872325E+01	1295	9.839458E+04	3.136791E+02	4.992358E+01
1246	9.381959E+04	3.062998E+02	4.874913E+01	1296	9.847302E+04	3.138041E+02	4.994348E+01
1247	9.389725E+04	3.064266E+02	4.876931E+01	1297	9.865377E+04	3.140920E+02	4.998929E+01
1248	9.398833E+04	3.065752E+02	4.879295E+01	1298	9.872365E+04	3.142032E+02	5.000699E+01
1249	9.416860E+04	3.068690E+02	4.883972E+01	1299	9.886132E+04	3.144222E+02	5.004185E+01
1250	9.422653E+04	3.069634E+02	4.885474E+01	1300	9.901573E+04	3.146677E+02	5.008091E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 274

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1301	9.903874E+04	3.147042E+02	5.008673E+01	1351	1.042615E+05	3.228955E+02	5.139042E+01
1302	9.926195E+04	3.150587E+02	5.014314E+01	1352	1.042996E+05	3.229545E+02	5.139981E+01
1303	9.931802E+04	3.151476E+02	5.015730E+01	1353	1.044337E+05	3.231620E+02	5.143284E+01
1304	9.950375E+04	3.154422E+02	5.020418E+01	1354	1.045462E+05	3.233360E+02	5.146052E+01
1305	9.962922E+04	3.156410E+02	5.023582E+01	1355	1.046473E+05	3.234924E+02	5.148541E+01
1306	9.969035E+04	3.157378E+02	5.025123E+01	1356	1.048733E+05	3.238415E+02	5.154098E+01
1307	9.973532E+04	3.158090E+02	5.026256E+01	1357	1.048744E+05	3.238431E+02	5.154123E+01
1308	9.986480E+04	3.160139E+02	5.029518E+01	1358	1.049742E+05	3.239972E+02	5.156575E+01
1309	9.987495E+04	3.160300E+02	5.029773E+01	1359	1.050931E+05	3.241807E+02	5.159496E+01
1310	9.988323E+04	3.160431E+02	5.029982E+01	1360	1.051951E+05	3.243380E+02	5.161999E+01
1311	9.992370E+04	3.161071E+02	5.031001E+01	1361	1.053462E+05	3.245708E+02	5.165704E+01
1312	1.000599E+05	3.163224E+02	5.034428E+01	1362	1.054576E+05	3.247423E+02	5.168435E+01
1313	1.001005E+05	3.163867E+02	5.035450E+01	1363	1.055268E+05	3.248489E+02	5.170131E+01
1314	1.003570E+05	3.167917E+02	5.041896E+01	1364	1.057671E+05	3.252185E+02	5.176013E+01
1315	1.003796E+05	3.168274E+02	5.042465E+01	1365	1.058917E+05	3.254100E+02	5.179062E+01
1316	1.004038E+05	3.168655E+02	5.043071E+01	1366	1.059778E+05	3.255423E+02	5.181167E+01
1317	1.004341E+05	3.169134E+02	5.043833E+01	1367	1.060297E+05	3.256221E+02	5.182436E+01
1318	1.005020E+05	3.170205E+02	5.045538E+01	1368	1.061212E+05	3.257625E+02	5.184671E+01
1319	1.006174E+05	3.172025E+02	5.048435E+01	1369	1.061362E+05	3.257855E+02	5.185037E+01
1320	1.007145E+05	3.173555E+02	5.050869E+01	1370	1.061444E+05	3.257981E+02	5.185239E+01
1321	1.007755E+05	3.174516E+02	5.052399E+01	1371	1.061783E+05	3.258501E+02	5.186065E+01
1322	1.008454E+05	3.175617E+02	5.054151E+01	1372	1.062967E+05	3.260318E+02	5.188956E+01
1323	1.008851E+05	3.176242E+02	5.055146E+01	1373	1.063807E+05	3.261605E+02	5.191005E+01
1324	1.009430E+05	3.177153E+02	5.056597E+01	1374	1.065827E+05	3.264701E+02	5.195933E+01
1325	1.010633E+05	3.179045E+02	5.059607E+01	1375	1.067208E+05	3.266816E+02	5.199299E+01
1326	1.010839E+05	3.179369E+02	5.060122E+01	1376	1.067617E+05	3.267442E+02	5.200295E+01
1327	1.011920E+05	3.181069E+02	5.062829E+01	1377	1.069217E+05	3.269888E+02	5.204188E+01
1328	1.011960E+05	3.181132E+02	5.062929E+01	1378	1.070549E+05	3.271925E+02	5.207430E+01
1329	1.014071E+05	3.184448E+02	5.068206E+01	1379	1.071994E+05	3.274133E+02	5.210944E+01
1330	1.016767E+05	3.188678E+02	5.074939E+01	1380	1.073430E+05	3.276324E+02	5.214431E+01
1331	1.016923E+05	3.188923E+02	5.075328E+01	1381	1.074712E+05	3.278280E+02	5.217544E+01
1332	1.017042E+05	3.189110E+02	5.075625E+01	1382	1.075396E+05	3.279323E+02	5.219205E+01
1333	1.018528E+05	3.191438E+02	5.079332E+01	1383	1.077021E+05	3.281799E+02	5.223146E+01
1334	1.019608E+05	3.193130E+02	5.082025E+01	1384	1.077813E+05	3.283006E+02	5.225066E+01
1335	1.021892E+05	3.196704E+02	5.087713E+01	1385	1.078766E+05	3.284458E+02	5.227377E+01
1336	1.022909E+05	3.198294E+02	5.090244E+01	1386	1.079652E+05	3.285806E+02	5.229522E+01
1337	1.024041E+05	3.200064E+02	5.093060E+01	1387	1.082151E+05	3.289607E+02	5.235572E+01
1338	1.026159E+05	3.203371E+02	5.098323E+01	1388	1.082902E+05	3.290748E+02	5.237388E+01
1339	1.026382E+05	3.203719E+02	5.098877E+01	1389	1.086577E+05	3.296327E+02	5.246267E+01
1340	1.026933E+05	3.204579E+02	5.100247E+01	1390	1.086729E+05	3.296557E+02	5.246634E+01
1341	1.027367E+05	3.205257E+02	5.101325E+01	1391	1.087026E+05	3.297008E+02	5.247352E+01
1342	1.027881E+05	3.206058E+02	5.102600E+01	1392	1.088415E+05	3.299113E+02	5.250701E+01
1343	1.028380E+05	3.206837E+02	5.103839E+01	1393	1.089412E+05	3.300625E+02	5.253108E+01
1344	1.029532E+05	3.208633E+02	5.106697E+01	1394	1.089626E+05	3.300948E+02	5.253622E+01
1345	1.030391E+05	3.209970E+02	5.108825E+01	1395	1.090323E+05	3.302004E+02	5.255303E+01
1346	1.032741E+05	3.213628E+02	5.114648E+01	1396	1.091208E+05	3.303343E+02	5.257434E+01
1347	1.036471E+05	3.219427E+02	5.123877E+01	1397	1.091864E+05	3.304337E+02	5.259016E+01
1348	1.038581E+05	3.222702E+02	5.129089E+01	1398	1.094295E+05	3.308013E+02	5.264867E+01
1349	1.040120E+05	3.225089E+02	5.132889E+01	1399	1.094583E+05	3.308449E+02	5.265559E+01
1350	1.040551E+05	3.225757E+02	5.133951E+01	1400	1.096127E+05	3.310781E+02	5.269271E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 275

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1401	1.096983E+05	3.312074E+02	5.271329E+01	1451	1.163689E+05	3.411289E+02	5.429235E+01
1402	1.097155E+05	3.312333E+02	5.271741E+01	1452	1.167644E+05	3.417080E+02	5.438452E+01
1403	1.097159E+05	3.312340E+02	5.271752E+01	1453	1.168771E+05	3.418729E+02	5.441077E+01
1404	1.100393E+05	3.317217E+02	5.279514E+01	1454	1.170671E+05	3.421508E+02	5.445498E+01
1405	1.102684E+05	3.320669E+02	5.285008E+01	1455	1.171066E+05	3.422084E+02	5.446416E+01
1406	1.103563E+05	3.321992E+02	5.287114E+01	1456	1.171722E+05	3.423042E+02	5.447940E+01
1407	1.104392E+05	3.323240E+02	5.289100E+01	1457	1.171966E+05	3.423399E+02	5.448509E+01
1408	1.107424E+05	3.327797E+02	5.296354E+01	1458	1.172253E+05	3.423818E+02	5.449176E+01
1409	1.108636E+05	3.329619E+02	5.299253E+01	1459	1.173223E+05	3.425234E+02	5.451430E+01
1410	1.111191E+05	3.333453E+02	5.305355E+01	1460	1.173418E+05	3.425519E+02	5.451883E+01
1411	1.111722E+05	3.334250E+02	5.306624E+01	1461	1.174153E+05	3.426591E+02	5.453589E+01
1412	1.113971E+05	3.337621E+02	5.311989E+01	1462	1.174707E+05	3.427400E+02	5.454876E+01
1413	1.114682E+05	3.338685E+02	5.313683E+01	1463	1.177311E+05	3.431196E+02	5.460919E+01
1414	1.115196E+05	3.339455E+02	5.314907E+01	1464	1.178123E+05	3.432380E+02	5.462803E+01
1415	1.115231E+05	3.339508E+02	5.314992E+01	1465	1.178352E+05	3.432713E+02	5.463332E+01
1416	1.116216E+05	3.340983E+02	5.317339E+01	1466	1.178499E+05	3.432927E+02	5.463673E+01
1417	1.116383E+05	3.341231E+02	5.317735E+01	1467	1.181111E+05	3.436729E+02	5.469724E+01
1418	1.116816E+05	3.341879E+02	5.318766E+01	1468	1.183014E+05	3.439497E+02	5.474129E+01
1419	1.117368E+05	3.342705E+02	5.320081E+01	1469	1.186315E+05	3.444292E+02	5.481762E+01
1420	1.118395E+05	3.344241E+02	5.322525E+01	1470	1.188514E+05	3.447483E+02	5.486840E+01
1421	1.118426E+05	3.344288E+02	5.322599E+01	1471	1.190979E+05	3.451057E+02	5.492527E+01
1422	1.125462E+05	3.354791E+02	5.339315E+01	1472	1.192805E+05	3.453701E+02	5.496735E+01
1423	1.125614E+05	3.355018E+02	5.339677E+01	1473	1.193082E+05	3.454102E+02	5.497375E+01
1424	1.125741E+05	3.355206E+02	5.339976E+01	1474	1.193537E+05	3.454760E+02	5.498421E+01
1425	1.127575E+05	3.357938E+02	5.344324E+01	1475	1.193854E+05	3.455220E+02	5.499153E+01
1426	1.134095E+05	3.367632E+02	5.359753E+01	1476	1.194934E+05	3.456782E+02	5.501640E+01
1427	1.135753E+05	3.370093E+02	5.363670E+01	1477	1.197789E+05	3.460908E+02	5.508207E+01
1428	1.135997E+05	3.370456E+02	5.364247E+01	1478	1.201102E+05	3.465692E+02	5.515820E+01
1429	1.137049E+05	3.372015E+02	5.366729E+01	1479	1.202465E+05	3.467657E+02	5.518948E+01
1430	1.139283E+05	3.375327E+02	5.371999E+01	1480	1.203202E+05	3.468721E+02	5.520641E+01
1431	1.140270E+05	3.376788E+02	5.374325E+01	1481	1.205603E+05	3.472179E+02	5.526145E+01
1432	1.142127E+05	3.379537E+02	5.378699E+01	1482	1.206134E+05	3.472944E+02	5.527363E+01
1433	1.142702E+05	3.380387E+02	5.380053E+01	1483	1.207585E+05	3.475032E+02	5.530685E+01
1434	1.142969E+05	3.380783E+02	5.380683E+01	1484	1.208832E+05	3.476826E+02	5.533540E+01
1435	1.144653E+05	3.383272E+02	5.384645E+01	1485	1.209988E+05	3.478488E+02	5.536186E+01
1436	1.144687E+05	3.383323E+02	5.384725E+01	1486	1.210688E+05	3.479494E+02	5.537787E+01
1437	1.145630E+05	3.384715E+02	5.386941E+01	1487	1.213348E+05	3.483314E+02	5.543867E+01
1438	1.146943E+05	3.386654E+02	5.390027E+01	1488	1.218066E+05	3.490080E+02	5.554634E+01
1439	1.147945E+05	3.388133E+02	5.392381E+01	1489	1.220559E+05	3.493650E+02	5.560316E+01
1440	1.149260E+05	3.390073E+02	5.395469E+01	1490	1.221390E+05	3.494839E+02	5.562209E+01
1441	1.152046E+05	3.394180E+02	5.402005E+01	1491	1.222063E+05	3.495802E+02	5.563741E+01
1442	1.153468E+05	3.396275E+02	5.405339E+01	1492	1.223073E+05	3.497246E+02	5.566040E+01
1443	1.156330E+05	3.400485E+02	5.412040E+01	1493	1.223919E+05	3.498455E+02	5.567965E+01
1444	1.156880E+05	3.401294E+02	5.413327E+01	1494	1.224112E+05	3.498732E+02	5.568405E+01
1445	1.158797E+05	3.404110E+02	5.417810E+01	1495	1.224755E+05	3.499650E+02	5.569866E+01
1446	1.159252E+05	3.404779E+02	5.418874E+01	1496	1.228168E+05	3.504522E+02	5.577621E+01
1447	1.159497E+05	3.405139E+02	5.419447E+01	1497	1.229655E+05	3.506644E+02	5.580997E+01
1448	1.160964E+05	3.407292E+02	5.422873E+01	1498	1.230466E+05	3.507800E+02	5.582837E+01
1449	1.162208E+05	3.409117E+02	5.425778E+01	1499	1.232209E+05	3.510284E+02	5.586790E+01
1450	1.162479E+05	3.409515E+02	5.426411E+01	1500	1.232970E+05	3.511368E+02	5.588515E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 276

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1501	1.233751E+05	3.512479E+02	5.590283E+01	1551	1.294756E+05	3.598271E+02	5.726826E+01
1502	1.236064E+05	3.515770E+02	5.595521E+01	1552	1.294834E+05	3.598380E+02	5.726999E+01
1503	1.239009E+05	3.519956E+02	5.602184E+01	1553	1.294915E+05	3.598492E+02	5.727179E+01
1504	1.239909E+05	3.521234E+02	5.604217E+01	1554	1.294991E+05	3.598599E+02	5.727348E+01
1505	1.241424E+05	3.523385E+02	5.607642E+01	1555	1.299836E+05	3.605324E+02	5.738051E+01
1506	1.241712E+05	3.523793E+02	5.608290E+01	1556	1.303975E+05	3.611060E+02	5.747181E+01
1507	1.242420E+05	3.524797E+02	5.609889E+01	1557	1.304841E+05	3.612258E+02	5.749087E+01
1508	1.243467E+05	3.526282E+02	5.612252E+01	1558	1.305619E+05	3.613335E+02	5.750802E+01
1509	1.244997E+05	3.528451E+02	5.615705E+01	1559	1.307736E+05	3.616264E+02	5.755463E+01
1510	1.247055E+05	3.531366E+02	5.620343E+01	1560	1.308461E+05	3.617266E+02	5.757058E+01
1511	1.247732E+05	3.532325E+02	5.621871E+01	1561	1.309550E+05	3.618770E+02	5.759452E+01
1512	1.248204E+05	3.532993E+02	5.622933E+01	1562	1.310941E+05	3.620692E+02	5.762510E+01
1513	1.253543E+05	3.540541E+02	5.634945E+01	1563	1.312162E+05	3.622378E+02	5.765194E+01
1514	1.257083E+05	3.545537E+02	5.642897E+01	1564	1.314084E+05	3.625029E+02	5.769413E+01
1515	1.259069E+05	3.548336E+02	5.647352E+01	1565	1.314254E+05	3.625264E+02	5.769786E+01
1516	1.260482E+05	3.550327E+02	5.650520E+01	1566	1.314285E+05	3.625308E+02	5.769856E+01
1517	1.261241E+05	3.551395E+02	5.652221E+01	1567	1.315618E+05	3.627145E+02	5.772780E+01
1518	1.262030E+05	3.552506E+02	5.653989E+01	1568	1.318200E+05	3.630702E+02	5.778442E+01
1519	1.262159E+05	3.552688E+02	5.654279E+01	1569	1.320406E+05	3.633739E+02	5.783275E+01
1520	1.262821E+05	3.553619E+02	5.655760E+01	1570	1.320900E+05	3.634419E+02	5.784357E+01
1521	1.264672E+05	3.556222E+02	5.659904E+01	1571	1.326069E+05	3.641523E+02	5.795664E+01
1522	1.265762E+05	3.557755E+02	5.662342E+01	1572	1.328685E+05	3.645114E+02	5.801378E+01
1523	1.265774E+05	3.557771E+02	5.662369E+01	1573	1.330588E+05	3.647722E+02	5.805530E+01
1524	1.266598E+05	3.558929E+02	5.664212E+01	1574	1.333005E+05	3.651034E+02	5.810800E+01
1525	1.266604E+05	3.558938E+02	5.664225E+01	1575	1.334347E+05	3.652871E+02	5.813725E+01
1526	1.267774E+05	3.560582E+02	5.666842E+01	1576	1.335066E+05	3.653855E+02	5.815291E+01
1527	1.268907E+05	3.562172E+02	5.669372E+01	1577	1.335182E+05	3.654015E+02	5.815545E+01
1528	1.269104E+05	3.562448E+02	5.669813E+01	1578	1.335274E+05	3.654141E+02	5.815746E+01
1529	1.272191E+05	3.566779E+02	5.676705E+01	1579	1.335904E+05	3.655003E+02	5.817117E+01
1530	1.272817E+05	3.567656E+02	5.678100E+01	1580	1.336374E+05	3.655645E+02	5.818140E+01
1531	1.273498E+05	3.568610E+02	5.679620E+01	1581	1.336832E+05	3.656271E+02	5.819136E+01
1532	1.273574E+05	3.568717E+02	5.679790E+01	1582	1.336910E+05	3.656379E+02	5.819307E+01
1533	1.274373E+05	3.569836E+02	5.681570E+01	1583	1.338973E+05	3.659199E+02	5.823795E+01
1534	1.274559E+05	3.570097E+02	5.681986E+01	1584	1.340987E+05	3.661949E+02	5.828172E+01
1535	1.274987E+05	3.570695E+02	5.682938E+01	1585	1.341506E+05	3.662658E+02	5.829301E+01
1536	1.277078E+05	3.573623E+02	5.687597E+01	1586	1.342171E+05	3.663566E+02	5.830746E+01
1537	1.277167E+05	3.573747E+02	5.687795E+01	1587	1.343217E+05	3.664992E+02	5.833016E+01
1538	1.278141E+05	3.575110E+02	5.689964E+01	1588	1.343608E+05	3.665526E+02	5.833866E+01
1539	1.278915E+05	3.576192E+02	5.691686E+01	1589	1.343704E+05	3.665656E+02	5.834073E+01
1540	1.283276E+05	3.582284E+02	5.701382E+01	1590	1.344034E+05	3.666107E+02	5.834790E+01
1541	1.284397E+05	3.583849E+02	5.703872E+01	1591	1.344076E+05	3.666164E+02	5.834881E+01
1542	1.284574E+05	3.584095E+02	5.704265E+01	1592	1.344133E+05	3.666241E+02	5.835004E+01
1543	1.284576E+05	3.584099E+02	5.704270E+01	1593	1.344142E+05	3.666255E+02	5.835026E+01
1544	1.285872E+05	3.585905E+02	5.707145E+01	1594	1.344156E+05	3.666273E+02	5.835054E+01
1545	1.288368E+05	3.589384E+02	5.712682E+01	1595	1.344180E+05	3.666306E+02	5.835108E+01
1546	1.290235E+05	3.591984E+02	5.716820E+01	1596	1.344272E+05	3.666431E+02	5.835306E+01
1547	1.290876E+05	3.592877E+02	5.718241E+01	1597	1.344275E+05	3.666436E+02	5.835314E+01
1548	1.293133E+05	3.596016E+02	5.723237E+01	1598	1.345706E+05	3.668387E+02	5.838419E+01
1549	1.294413E+05	3.597794E+02	5.726068E+01	1599	1.346369E+05	3.669290E+02	5.839857E+01
1550	1.294567E+05	3.598008E+02	5.726408E+01	1600	1.346866E+05	3.669967E+02	5.840934E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 277

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1601	1.348015E+05	3.671532E+02	5.843425E+01	1651	1.399375E+05	3.740822E+02	5.953703E+01
1602	1.349019E+05	3.672899E+02	5.845600E+01	1652	1.400076E+05	3.741758E+02	5.955193E+01
1603	1.349381E+05	3.673393E+02	5.846386E+01	1653	1.401548E+05	3.743726E+02	5.958325E+01
1604	1.349761E+05	3.673909E+02	5.847208E+01	1654	1.402198E+05	3.744594E+02	5.959706E+01
1605	1.350055E+05	3.674309E+02	5.847845E+01	1655	1.402247E+05	3.744659E+02	5.959810E+01
1606	1.350345E+05	3.674704E+02	5.848473E+01	1656	1.402311E+05	3.744745E+02	5.959947E+01
1607	1.350484E+05	3.674893E+02	5.848774E+01	1657	1.402399E+05	3.744862E+02	5.960133E+01
1608	1.353185E+05	3.678566E+02	5.854619E+01	1658	1.403137E+05	3.745847E+02	5.961700E+01
1609	1.353686E+05	3.679248E+02	5.855705E+01	1659	1.403656E+05	3.746540E+02	5.962803E+01
1610	1.354579E+05	3.680460E+02	5.857635E+01	1660	1.404097E+05	3.747128E+02	5.963740E+01
1611	1.356272E+05	3.682759E+02	5.861294E+01	1661	1.404206E+05	3.747274E+02	5.963971E+01
1612	1.356835E+05	3.683524E+02	5.862511E+01	1662	1.404257E+05	3.747342E+02	5.964080E+01
1613	1.358252E+05	3.685447E+02	5.865570E+01	1663	1.406116E+05	3.749821E+02	5.968025E+01
1614	1.359314E+05	3.686887E+02	5.867863E+01	1664	1.406608E+05	3.750477E+02	5.969070E+01
1615	1.360457E+05	3.688437E+02	5.870330E+01	1665	1.407747E+05	3.751996E+02	5.971486E+01
1616	1.360487E+05	3.688477E+02	5.870394E+01	1666	1.408197E+05	3.752595E+02	5.972441E+01
1617	1.361410E+05	3.689729E+02	5.872386E+01	1667	1.408436E+05	3.752913E+02	5.972946E+01
1618	1.362052E+05	3.690599E+02	5.873771E+01	1668	1.409103E+05	3.753802E+02	5.974362E+01
1619	1.362859E+05	3.691693E+02	5.875511E+01	1669	1.410090E+05	3.755117E+02	5.976454E+01
1620	1.363914E+05	3.693120E+02	5.877784E+01	1670	1.412931E+05	3.758897E+02	5.982470E+01
1621	1.364536E+05	3.693963E+02	5.879124E+01	1671	1.415397E+05	3.762176E+02	5.987689E+01
1622	1.366392E+05	3.696475E+02	5.883122E+01	1672	1.419224E+05	3.767259E+02	5.995779E+01
1623	1.367911E+05	3.698529E+02	5.886391E+01	1673	1.423126E+05	3.772435E+02	6.004017E+01
1624	1.369725E+05	3.700979E+02	5.890291E+01	1674	1.423948E+05	3.773523E+02	6.005749E+01
1625	1.370047E+05	3.701415E+02	5.890985E+01	1675	1.424397E+05	3.774118E+02	6.006696E+01
1626	1.370165E+05	3.701574E+02	5.891239E+01	1676	1.426387E+05	3.776754E+02	6.010891E+01
1627	1.371020E+05	3.702728E+02	5.893075E+01	1677	1.429822E+05	3.781299E+02	6.018124E+01
1628	1.372157E+05	3.704264E+02	5.895519E+01	1678	1.430259E+05	3.781877E+02	6.019044E+01
1629	1.373056E+05	3.705477E+02	5.897450E+01	1679	1.430699E+05	3.782458E+02	6.019968E+01
1630	1.375214E+05	3.708387E+02	5.902082E+01	1680	1.430750E+05	3.782526E+02	6.020077E+01
1631	1.376936E+05	3.710709E+02	5.905776E+01	1681	1.431937E+05	3.784094E+02	6.022573E+01
1632	1.378209E+05	3.712424E+02	5.908506E+01	1682	1.433842E+05	3.786611E+02	6.026578E+01
1633	1.379455E+05	3.714102E+02	5.911176E+01	1683	1.436495E+05	3.790111E+02	6.032150E+01
1634	1.379974E+05	3.714799E+02	5.912287E+01	1684	1.438298E+05	3.792490E+02	6.035935E+01
1635	1.380349E+05	3.715305E+02	5.913091E+01	1685	1.441463E+05	3.796660E+02	6.042572E+01
1636	1.381041E+05	3.716236E+02	5.914573E+01	1686	1.442803E+05	3.798424E+02	6.045380E+01
1637	1.382824E+05	3.718634E+02	5.918391E+01	1687	1.446292E+05	3.803015E+02	6.052686E+01
1638	1.384750E+05	3.721223E+02	5.922511E+01	1688	1.447762E+05	3.804947E+02	6.055761E+01
1639	1.386665E+05	3.723795E+02	5.926604E+01	1689	1.448281E+05	3.805629E+02	6.056847E+01
1640	1.386965E+05	3.724198E+02	5.927245E+01	1690	1.450400E+05	3.808411E+02	6.061275E+01
1641	1.388295E+05	3.725983E+02	5.930085E+01	1691	1.451922E+05	3.810409E+02	6.064454E+01
1642	1.388697E+05	3.726523E+02	5.930946E+01	1692	1.453258E+05	3.812162E+02	6.067245E+01
1643	1.388968E+05	3.726886E+02	5.931524E+01	1693	1.453294E+05	3.812209E+02	6.067320E+01
1644	1.389590E+05	3.727720E+02	5.932850E+01	1694	1.454781E+05	3.814160E+02	6.070423E+01
1645	1.391376E+05	3.730115E+02	5.936662E+01	1695	1.455029E+05	3.814484E+02	6.070940E+01
1646	1.392970E+05	3.732252E+02	5.940064E+01	1696	1.458381E+05	3.818876E+02	6.077930E+01
1647	1.395384E+05	3.735483E+02	5.945206E+01	1697	1.459556E+05	3.820413E+02	6.080377E+01
1648	1.395944E+05	3.736234E+02	5.946401E+01	1698	1.459588E+05	3.820456E+02	6.080444E+01
1649	1.398374E+05	3.739484E+02	5.951573E+01	1699	1.460207E+05	3.821265E+02	6.081733E+01
1650	1.398913E+05	3.740205E+02	5.952720E+01	1700	1.461614E+05	3.823105E+02	6.084661E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 278

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1701	1.462970E+05	3.824879E+02	6.087484E+01	1751	1.525803E+05	3.906153E+02	6.216835E+01
1702	1.463932E+05	3.826137E+02	6.089486E+01	1752	1.525892E+05	3.906267E+02	6.217017E+01
1703	1.465126E+05	3.827697E+02	6.091969E+01	1753	1.527567E+05	3.908411E+02	6.220429E+01
1704	1.465535E+05	3.828231E+02	6.092819E+01	1754	1.528003E+05	3.908967E+02	6.221315E+01
1705	1.466303E+05	3.829234E+02	6.094415E+01	1755	1.528967E+05	3.910201E+02	6.223278E+01
1706	1.466356E+05	3.829303E+02	6.094525E+01	1756	1.530175E+05	3.911745E+02	6.225736E+01
1707	1.466489E+05	3.829477E+02	6.094802E+01	1757	1.530330E+05	3.911943E+02	6.226051E+01
1708	1.467639E+05	3.830978E+02	6.097191E+01	1758	1.530684E+05	3.912396E+02	6.226772E+01
1709	1.469542E+05	3.833460E+02	6.101141E+01	1759	1.532470E+05	3.914677E+02	6.230402E+01
1710	1.474560E+05	3.840000E+02	6.111550E+01	1760	1.533332E+05	3.915779E+02	6.232155E+01
1711	1.474933E+05	3.840486E+02	6.112324E+01	1761	1.538036E+05	3.921780E+02	6.241706E+01
1712	1.474941E+05	3.840496E+02	6.112340E+01	1762	1.540221E+05	3.924565E+02	6.246139E+01
1713	1.475221E+05	3.840861E+02	6.112920E+01	1763	1.540493E+05	3.924912E+02	6.246691E+01
1714	1.477535E+05	3.843871E+02	6.117711E+01	1764	1.541021E+05	3.925584E+02	6.247761E+01
1715	1.477944E+05	3.844404E+02	6.118559E+01	1765	1.542566E+05	3.927552E+02	6.250893E+01
1716	1.479104E+05	3.845913E+02	6.120960E+01	1766	1.545057E+05	3.930722E+02	6.255938E+01
1717	1.479829E+05	3.846854E+02	6.122458E+01	1767	1.545509E+05	3.931296E+02	6.256853E+01
1718	1.481199E+05	3.848635E+02	6.125293E+01	1768	1.548731E+05	3.935392E+02	6.263371E+01
1719	1.481871E+05	3.849508E+02	6.126682E+01	1769	1.549674E+05	3.936590E+02	6.265277E+01
1720	1.481933E+05	3.849589E+02	6.126811E+01	1770	1.553383E+05	3.941298E+02	6.272770E+01
1721	1.482567E+05	3.850412E+02	6.128121E+01	1771	1.556194E+05	3.944862E+02	6.278443E+01
1722	1.484197E+05	3.852527E+02	6.131487E+01	1772	1.556955E+05	3.945827E+02	6.279979E+01
1723	1.484853E+05	3.853379E+02	6.132844E+01	1773	1.557855E+05	3.946967E+02	6.281793E+01
1724	1.486704E+05	3.855780E+02	6.136665E+01	1774	1.561111E+05	3.951090E+02	6.288356E+01
1725	1.488069E+05	3.857549E+02	6.139480E+01	1775	1.562216E+05	3.952488E+02	6.290580E+01
1726	1.488665E+05	3.858322E+02	6.140710E+01	1776	1.563605E+05	3.954244E+02	6.293375E+01
1727	1.489824E+05	3.859824E+02	6.143100E+01	1777	1.564099E+05	3.954869E+02	6.294369E+01
1728	1.490289E+05	3.860426E+02	6.144059E+01	1778	1.564828E+05	3.955791E+02	6.295836E+01
1729	1.492098E+05	3.862768E+02	6.147786E+01	1779	1.566708E+05	3.958166E+02	6.299617E+01
1730	1.494024E+05	3.865261E+02	6.151754E+01	1780	1.567662E+05	3.959371E+02	6.301534E+01
1731	1.495544E+05	3.867227E+02	6.154882E+01	1781	1.569135E+05	3.961231E+02	6.304495E+01
1732	1.496673E+05	3.868685E+02	6.157204E+01	1782	1.570490E+05	3.962940E+02	6.307215E+01
1733	1.497052E+05	3.869176E+02	6.157985E+01	1783	1.571862E+05	3.964671E+02	6.309971E+01
1734	1.499533E+05	3.872380E+02	6.163085E+01	1784	1.572455E+05	3.965419E+02	6.311160E+01
1735	1.503357E+05	3.877314E+02	6.170937E+01	1785	1.573086E+05	3.966215E+02	6.312428E+01
1736	1.504043E+05	3.878199E+02	6.172346E+01	1786	1.573395E+05	3.966605E+02	6.313047E+01
1737	1.504910E+05	3.879317E+02	6.174124E+01	1787	1.573798E+05	3.967112E+02	6.313856E+01
1738	1.505660E+05	3.880284E+02	6.175664E+01	1788	1.574469E+05	3.967958E+02	6.315201E+01
1739	1.507553E+05	3.882721E+02	6.179543E+01	1789	1.577520E+05	3.971801E+02	6.321318E+01
1740	1.508169E+05	3.883515E+02	6.180806E+01	1790	1.578717E+05	3.973307E+02	6.323714E+01
1741	1.508380E+05	3.883787E+02	6.181239E+01	1791	1.579656E+05	3.974489E+02	6.325596E+01
1742	1.510088E+05	3.885985E+02	6.184738E+01	1792	1.581255E+05	3.976499E+02	6.328795E+01
1743	1.511499E+05	3.887800E+02	6.187625E+01	1793	1.582700E+05	3.978316E+02	6.331686E+01
1744	1.513665E+05	3.890585E+02	6.192059E+01	1794	1.584988E+05	3.981190E+02	6.336261E+01
1745	1.515576E+05	3.893040E+02	6.195966E+01	1795	1.586148E+05	3.982647E+02	6.338580E+01
1746	1.518740E+05	3.897102E+02	6.202430E+01	1796	1.586789E+05	3.983452E+02	6.339861E+01
1747	1.522762E+05	3.902258E+02	6.210637E+01	1797	1.589137E+05	3.986398E+02	6.344550E+01
1748	1.524305E+05	3.904235E+02	6.213783E+01	1798	1.589481E+05	3.986829E+02	6.345235E+01
1749	1.524805E+05	3.904875E+02	6.214801E+01	1799	1.590599E+05	3.988231E+02	6.347466E+01
1750	1.525201E+05	3.905382E+02	6.215609E+01	1800	1.590885E+05	3.988590E+02	6.348039E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 279

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1801	1.591856E+05	3.989807E+02	6.349975E+01	1851	1.670869E+05	4.087627E+02	6.505660E+01
1802	1.592697E+05	3.990861E+02	6.351652E+01	1852	1.671676E+05	4.088613E+02	6.507230E+01
1803	1.593886E+05	3.992351E+02	6.354023E+01	1853	1.672174E+05	4.089223E+02	6.508200E+01
1804	1.594521E+05	3.993145E+02	6.355288E+01	1854	1.672993E+05	4.090223E+02	6.509792E+01
1805	1.596628E+05	3.995783E+02	6.359486E+01	1855	1.673623E+05	4.090994E+02	6.511019E+01
1806	1.596827E+05	3.996031E+02	6.359881E+01	1856	1.674884E+05	4.092534E+02	6.513471E+01
1807	1.598100E+05	3.997624E+02	6.362417E+01	1857	1.677457E+05	4.095677E+02	6.518472E+01
1808	1.600653E+05	4.000817E+02	6.367497E+01	1858	1.678795E+05	4.097310E+02	6.521071E+01
1809	1.601491E+05	4.001864E+02	6.369164E+01	1859	1.681071E+05	4.100086E+02	6.525490E+01
1810	1.604571E+05	4.005709E+02	6.375284E+01	1860	1.683885E+05	4.103516E+02	6.530949E+01
1811	1.607040E+05	4.008790E+02	6.380187E+01	1861	1.684223E+05	4.103929E+02	6.531606E+01
1812	1.607683E+05	4.009592E+02	6.381464E+01	1862	1.684519E+05	4.104289E+02	6.532179E+01
1813	1.608474E+05	4.010579E+02	6.383034E+01	1863	1.685492E+05	4.105475E+02	6.534066E+01
1814	1.610250E+05	4.012792E+02	6.386558E+01	1864	1.687134E+05	4.107474E+02	6.537248E+01
1815	1.613198E+05	4.016464E+02	6.392400E+01	1865	1.690519E+05	4.111592E+02	6.543802E+01
1816	1.617768E+05	4.022149E+02	6.401449E+01	1866	1.690690E+05	4.111801E+02	6.544134E+01
1817	1.619441E+05	4.024228E+02	6.404758E+01	1867	1.694857E+05	4.116864E+02	6.552192E+01
1818	1.621069E+05	4.026250E+02	6.407975E+01	1868	1.695818E+05	4.118031E+02	6.554049E+01
1819	1.622312E+05	4.027794E+02	6.410433E+01	1869	1.700286E+05	4.123453E+02	6.562679E+01
1820	1.622792E+05	4.028390E+02	6.411381E+01	1870	1.700758E+05	4.124025E+02	6.563590E+01
1821	1.623209E+05	4.028907E+02	6.412205E+01	1871	1.702466E+05	4.126095E+02	6.566885E+01
1822	1.624993E+05	4.031120E+02	6.415726E+01	1872	1.703415E+05	4.127245E+02	6.568714E+01
1823	1.628654E+05	4.035659E+02	6.422950E+01	1873	1.704065E+05	4.128032E+02	6.569967E+01
1824	1.630563E+05	4.038023E+02	6.426713E+01	1874	1.704726E+05	4.128832E+02	6.571241E+01
1825	1.630914E+05	4.038458E+02	6.427406E+01	1875	1.707524E+05	4.132219E+02	6.576631E+01
1826	1.632734E+05	4.040710E+02	6.430990E+01	1876	1.708465E+05	4.133358E+02	6.578444E+01
1827	1.635650E+05	4.044317E+02	6.436730E+01	1877	1.711329E+05	4.136821E+02	6.583955E+01
1828	1.636997E+05	4.045982E+02	6.439381E+01	1878	1.712307E+05	4.138004E+02	6.585838E+01
1829	1.638466E+05	4.047797E+02	6.442269E+01	1879	1.712352E+05	4.138058E+02	6.585923E+01
1830	1.639763E+05	4.049399E+02	6.444819E+01	1880	1.714986E+05	4.141240E+02	6.590987E+01
1831	1.642783E+05	4.053126E+02	6.450751E+01	1881	1.716223E+05	4.142732E+02	6.593363E+01
1832	1.644107E+05	4.054759E+02	6.453349E+01	1882	1.717663E+05	4.144470E+02	6.596129E+01
1833	1.646666E+05	4.057913E+02	6.458370E+01	1883	1.718220E+05	4.145142E+02	6.597198E+01
1834	1.648114E+05	4.059697E+02	6.461208E+01	1884	1.719259E+05	4.146395E+02	6.599192E+01
1835	1.648767E+05	4.060501E+02	6.462488E+01	1885	1.720156E+05	4.147477E+02	6.600914E+01
1836	1.650363E+05	4.062467E+02	6.465616E+01	1886	1.720580E+05	4.147988E+02	6.601728E+01
1837	1.651581E+05	4.063965E+02	6.468002E+01	1887	1.722013E+05	4.149715E+02	6.604476E+01
1838	1.652798E+05	4.065462E+02	6.470383E+01	1888	1.723307E+05	4.151273E+02	6.606957E+01
1839	1.653488E+05	4.066310E+02	6.471733E+01	1889	1.724737E+05	4.152995E+02	6.609697E+01
1840	1.654078E+05	4.067036E+02	6.472889E+01	1890	1.730570E+05	4.160012E+02	6.620865E+01
1841	1.656478E+05	4.069986E+02	6.477584E+01	1891	1.731324E+05	4.160918E+02	6.622306E+01
1842	1.658057E+05	4.071925E+02	6.480670E+01	1892	1.731829E+05	4.161525E+02	6.623273E+01
1843	1.658475E+05	4.072437E+02	6.481485E+01	1893	1.734332E+05	4.164532E+02	6.628058E+01
1844	1.660730E+05	4.075205E+02	6.485891E+01	1894	1.735465E+05	4.165892E+02	6.630222E+01
1845	1.661054E+05	4.075603E+02	6.486523E+01	1895	1.736012E+05	4.166547E+02	6.631266E+01
1846	1.662665E+05	4.077579E+02	6.489668E+01	1896	1.738776E+05	4.169863E+02	6.636543E+01
1847	1.664615E+05	4.079969E+02	6.493473E+01	1897	1.745146E+05	4.177495E+02	6.648689E+01
1848	1.665616E+05	4.081195E+02	6.495424E+01	1898	1.747582E+05	4.180409E+02	6.653327E+01
1849	1.667121E+05	4.083039E+02	6.498358E+01	1899	1.748237E+05	4.181192E+02	6.654574E+01
1850	1.668815E+05	4.085113E+02	6.501660E+01	1900	1.749550E+05	4.182762E+02	6.657073E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 280

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1901	1.751430E+05	4.185009E+02	6.660649E+01	1951	1.827031E+05	4.274378E+02	6.802884E+01
1902	1.752217E+05	4.185949E+02	6.662144E+01	1952	1.830296E+05	4.278196E+02	6.808961E+01
1903	1.753027E+05	4.186917E+02	6.663686E+01	1953	1.832212E+05	4.280434E+02	6.812523E+01
1904	1.754819E+05	4.189056E+02	6.667090E+01	1954	1.832837E+05	4.281164E+02	6.813684E+01
1905	1.755790E+05	4.190215E+02	6.668934E+01	1955	1.838426E+05	4.287687E+02	6.824066E+01
1906	1.756108E+05	4.190594E+02	6.669538E+01	1956	1.839404E+05	4.288827E+02	6.825880E+01
1907	1.756264E+05	4.190781E+02	6.669834E+01	1957	1.841494E+05	4.291263E+02	6.829758E+01
1908	1.757550E+05	4.192315E+02	6.672276E+01	1958	1.842677E+05	4.292642E+02	6.831952E+01
1909	1.758845E+05	4.193859E+02	6.674734E+01	1959	1.845769E+05	4.296242E+02	6.837681E+01
1910	1.763583E+05	4.199503E+02	6.683717E+01	1960	1.846908E+05	4.297567E+02	6.839791E+01
1911	1.765191E+05	4.201418E+02	6.686764E+01	1961	1.847621E+05	4.298396E+02	6.841110E+01
1912	1.767026E+05	4.203601E+02	6.690238E+01	1962	1.853399E+05	4.305112E+02	6.851799E+01
1913	1.769099E+05	4.206066E+02	6.694162E+01	1963	1.859025E+05	4.311642E+02	6.862191E+01
1914	1.770345E+05	4.207546E+02	6.696518E+01	1964	1.860190E+05	4.312992E+02	6.864339E+01
1915	1.772528E+05	4.210140E+02	6.700646E+01	1965	1.862672E+05	4.315868E+02	6.868917E+01
1916	1.773240E+05	4.210986E+02	6.701992E+01	1966	1.864204E+05	4.317642E+02	6.871741E+01
1917	1.775162E+05	4.213267E+02	6.705622E+01	1967	1.867720E+05	4.321713E+02	6.878219E+01
1918	1.775622E+05	4.213813E+02	6.706491E+01	1968	1.869262E+05	4.323497E+02	6.881059E+01
1919	1.778190E+05	4.216859E+02	6.711340E+01	1969	1.870255E+05	4.324645E+02	6.882886E+01
1920	1.779222E+05	4.218083E+02	6.713287E+01	1970	1.874123E+05	4.329114E+02	6.889999E+01
1921	1.781664E+05	4.220976E+02	6.717893E+01	1971	1.875658E+05	4.330887E+02	6.892821E+01
1922	1.782596E+05	4.222080E+02	6.719649E+01	1972	1.876347E+05	4.331682E+02	6.894086E+01
1923	1.785535E+05	4.225559E+02	6.725186E+01	1973	1.878196E+05	4.333816E+02	6.897482E+01
1924	1.785559E+05	4.225588E+02	6.725232E+01	1974	1.879634E+05	4.335474E+02	6.900122E+01
1925	1.786021E+05	4.226134E+02	6.726101E+01	1975	1.880634E+05	4.336627E+02	6.901957E+01
1926	1.787242E+05	4.227579E+02	6.728401E+01	1976	1.883030E+05	4.339389E+02	6.906353E+01
1927	1.789085E+05	4.229758E+02	6.731869E+01	1977	1.883604E+05	4.340050E+02	6.907405E+01
1928	1.790692E+05	4.231657E+02	6.734892E+01	1978	1.885269E+05	4.341968E+02	6.910457E+01
1929	1.791066E+05	4.232099E+02	6.735595E+01	1979	1.888733E+05	4.345956E+02	6.916803E+01
1930	1.791304E+05	4.232380E+02	6.736042E+01	1980	1.890636E+05	4.348144E+02	6.920287E+01
1931	1.791425E+05	4.232523E+02	6.736270E+01	1981	1.892930E+05	4.350782E+02	6.924484E+01
1932	1.794123E+05	4.235709E+02	6.741340E+01	1982	1.893200E+05	4.351092E+02	6.924978E+01
1933	1.794271E+05	4.235884E+02	6.741618E+01	1983	1.895918E+05	4.354214E+02	6.929947E+01
1934	1.795092E+05	4.236852E+02	6.743160E+01	1984	1.899062E+05	4.357823E+02	6.935691E+01
1935	1.795919E+05	4.237829E+02	6.744714E+01	1985	1.901775E+05	4.360934E+02	6.940643E+01
1936	1.797864E+05	4.240123E+02	6.748366E+01	1986	1.902899E+05	4.362223E+02	6.942694E+01
1937	1.799335E+05	4.241857E+02	6.751125E+01	1987	1.905736E+05	4.365474E+02	6.947868E+01
1938	1.800130E+05	4.242793E+02	6.752615E+01	1988	1.907310E+05	4.367276E+02	6.950735E+01
1939	1.802284E+05	4.245331E+02	6.756654E+01	1989	1.907774E+05	4.367807E+02	6.951581E+01
1940	1.804891E+05	4.248401E+02	6.761540E+01	1990	1.911644E+05	4.372235E+02	6.958628E+01
1941	1.805923E+05	4.249615E+02	6.763472E+01	1991	1.912045E+05	4.372694E+02	6.959358E+01
1942	1.809211E+05	4.253482E+02	6.769627E+01	1992	1.914419E+05	4.375408E+02	6.963678E+01
1943	1.812122E+05	4.256902E+02	6.775071E+01	1993	1.915225E+05	4.376329E+02	6.965143E+01
1944	1.812774E+05	4.257668E+02	6.776289E+01	1994	1.917894E+05	4.379377E+02	6.969994E+01
1945	1.814410E+05	4.259589E+02	6.779346E+01	1995	1.918393E+05	4.379947E+02	6.970902E+01
1946	1.818341E+05	4.264202E+02	6.786687E+01	1996	1.920520E+05	4.382374E+02	6.974764E+01
1947	1.818853E+05	4.264801E+02	6.787641E+01	1997	1.921602E+05	4.383608E+02	6.976728E+01
1948	1.820655E+05	4.266913E+02	6.791003E+01	1998	1.923421E+05	4.385682E+02	6.980030E+01
1949	1.823272E+05	4.269979E+02	6.795883E+01	1999	1.925453E+05	4.387998E+02	6.983716E+01
1950	1.824775E+05	4.271738E+02	6.798682E+01	2000	1.926657E+05	4.389370E+02	6.985900E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 281

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2001	1.928014E+05	4.390916E+02	6.988360E+01	2051	2.010111E+05	4.483426E+02	7.135595E+01
2002	1.929251E+05	4.392324E+02	6.990601E+01	2052	2.011323E+05	4.484777E+02	7.137744E+01
2003	1.930516E+05	4.393764E+02	6.992893E+01	2053	2.011470E+05	4.484941E+02	7.138006E+01
2004	1.931173E+05	4.394511E+02	6.994082E+01	2054	2.012937E+05	4.486577E+02	7.140609E+01
2005	1.932928E+05	4.396507E+02	6.997259E+01	2055	2.013227E+05	4.486900E+02	7.141123E+01
2006	1.933435E+05	4.397084E+02	6.998177E+01	2056	2.014850E+05	4.488709E+02	7.144002E+01
2007	1.933604E+05	4.397277E+02	6.998483E+01	2057	2.015101E+05	4.488988E+02	7.144446E+01
2008	1.934472E+05	4.398263E+02	7.000053E+01	2058	2.016039E+05	4.490033E+02	7.146109E+01
2009	1.935406E+05	4.399325E+02	7.001743E+01	2059	2.017765E+05	4.491954E+02	7.149167E+01
2010	1.936541E+05	4.400615E+02	7.003796E+01	2060	2.020782E+05	4.495311E+02	7.154509E+01
2011	1.938037E+05	4.402315E+02	7.006501E+01	2061	2.022251E+05	4.496944E+02	7.157109E+01
2012	1.939086E+05	4.403506E+02	7.008397E+01	2062	2.023816E+05	4.498684E+02	7.159878E+01
2013	1.939626E+05	4.404118E+02	7.009371E+01	2063	2.026205E+05	4.501339E+02	7.164103E+01
2014	1.940694E+05	4.405331E+02	7.011302E+01	2064	2.026999E+05	4.502220E+02	7.165506E+01
2015	1.942150E+05	4.406983E+02	7.013932E+01	2065	2.029527E+05	4.505028E+02	7.169974E+01
2016	1.946983E+05	4.412463E+02	7.022653E+01	2066	2.030035E+05	4.505591E+02	7.170871E+01
2017	1.949369E+05	4.415166E+02	7.026955E+01	2067	2.033223E+05	4.509127E+02	7.176499E+01
2018	1.951612E+05	4.417706E+02	7.030997E+01	2068	2.034269E+05	4.510288E+02	7.178346E+01
2019	1.953022E+05	4.419301E+02	7.033536E+01	2069	2.035280E+05	4.511408E+02	7.180128E+01
2020	1.954069E+05	4.420485E+02	7.035420E+01	2070	2.036097E+05	4.512313E+02	7.181569E+01
2021	1.955844E+05	4.422492E+02	7.038615E+01	2071	2.038732E+05	4.515232E+02	7.186216E+01
2022	1.957967E+05	4.424893E+02	7.042435E+01	2072	2.042497E+05	4.519400E+02	7.192848E+01
2023	1.960557E+05	4.427818E+02	7.047091E+01	2073	2.043120E+05	4.520089E+02	7.193945E+01
2024	1.962971E+05	4.430543E+02	7.051428E+01	2074	2.045806E+05	4.523059E+02	7.198672E+01
2025	1.963722E+05	4.431390E+02	7.052777E+01	2075	2.046333E+05	4.523641E+02	7.199599E+01
2026	1.965281E+05	4.433149E+02	7.055575E+01	2076	2.048930E+05	4.526511E+02	7.204166E+01
2027	1.966889E+05	4.434962E+02	7.058462E+01	2077	2.051142E+05	4.528953E+02	7.208053E+01
2028	1.971242E+05	4.439867E+02	7.066268E+01	2078	2.051586E+05	4.529444E+02	7.208834E+01
2029	1.972476E+05	4.441257E+02	7.068480E+01	2079	2.054751E+05	4.532936E+02	7.214391E+01
2030	1.974268E+05	4.443274E+02	7.071690E+01	2080	2.056752E+05	4.535143E+02	7.217904E+01
2031	1.975967E+05	4.445186E+02	7.074733E+01	2081	2.061699E+05	4.540594E+02	7.226579E+01
2032	1.976798E+05	4.446120E+02	7.076220E+01	2082	2.062260E+05	4.541212E+02	7.227563E+01
2033	1.978098E+05	4.447581E+02	7.078546E+01	2083	2.063227E+05	4.542276E+02	7.229257E+01
2034	1.982033E+05	4.452003E+02	7.085582E+01	2084	2.063680E+05	4.542774E+02	7.230049E+01
2035	1.983679E+05	4.453851E+02	7.088524E+01	2085	2.065187E+05	4.544433E+02	7.232690E+01
2036	1.983899E+05	4.454098E+02	7.088918E+01	2086	2.066770E+05	4.546174E+02	7.235461E+01
2037	1.984255E+05	4.454498E+02	7.089553E+01	2087	2.067044E+05	4.546476E+02	7.235941E+01
2038	1.986518E+05	4.457037E+02	7.093595E+01	2088	2.070852E+05	4.550661E+02	7.242602E+01
2039	1.987599E+05	4.458250E+02	7.095525E+01	2089	2.071736E+05	4.551633E+02	7.244149E+01
2040	1.993852E+05	4.465257E+02	7.106677E+01	2090	2.075536E+05	4.555805E+02	7.250789E+01
2041	1.996462E+05	4.468179E+02	7.111327E+01	2091	2.080101E+05	4.560812E+02	7.258758E+01
2042	1.998930E+05	4.470940E+02	7.115722E+01	2092	2.082991E+05	4.563979E+02	7.263799E+01
2043	2.001504E+05	4.473817E+02	7.120301E+01	2093	2.086218E+05	4.567513E+02	7.269423E+01
2044	2.006804E+05	4.479737E+02	7.129722E+01	2094	2.090691E+05	4.572408E+02	7.277213E+01
2045	2.007531E+05	4.480548E+02	7.131014E+01	2095	2.092539E+05	4.574428E+02	7.280428E+01
2046	2.007999E+05	4.481071E+02	7.131845E+01	2096	2.096160E+05	4.578384E+02	7.286725E+01
2047	2.008239E+05	4.481338E+02	7.132271E+01	2097	2.098439E+05	4.580872E+02	7.290684E+01
2048	2.008366E+05	4.481479E+02	7.132496E+01	2098	2.101706E+05	4.584437E+02	7.296358E+01
2049	2.008923E+05	4.482101E+02	7.133485E+01	2099	2.102428E+05	4.585225E+02	7.297612E+01
2050	2.009527E+05	4.482775E+02	7.134558E+01	2100	2.102647E+05	4.585463E+02	7.297991E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 282

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2101	2.105453E+05	4.588522E+02	7.302859E+01	2151	2.320968E+05	4.817643E+02	7.667516E+01
2102	2.107306E+05	4.590541E+02	7.306072E+01	2152	2.326989E+05	4.823887E+02	7.677455E+01
2103	2.117385E+05	4.601505E+02	7.323523E+01	2153	2.335129E+05	4.832317E+02	7.690871E+01
2104	2.120554E+05	4.604947E+02	7.329001E+01	2154	2.336437E+05	4.833670E+02	7.693025E+01
2105	2.120627E+05	4.605026E+02	7.329127E+01	2155	2.343398E+05	4.840866E+02	7.704477E+01
2106	2.121309E+05	4.605767E+02	7.330306E+01	2156	2.352570E+05	4.850330E+02	7.719539E+01
2107	2.125769E+05	4.610607E+02	7.338008E+01	2157	2.357310E+05	4.855214E+02	7.727312E+01
2108	2.127391E+05	4.612364E+02	7.340806E+01	2158	2.360580E+05	4.858580E+02	7.732670E+01
2109	2.128411E+05	4.613471E+02	7.342567E+01	2159	2.365039E+05	4.863166E+02	7.739970E+01
2110	2.128429E+05	4.613490E+02	7.342598E+01	2160	2.379563E+05	4.878076E+02	7.763699E+01
2111	2.130947E+05	4.616218E+02	7.346939E+01	2161	2.387766E+05	4.886478E+02	7.777071E+01
2112	2.133259E+05	4.618722E+02	7.350924E+01	2162	2.389071E+05	4.887813E+02	7.779196E+01
2113	2.137044E+05	4.622817E+02	7.357442E+01	2163	2.391006E+05	4.889792E+02	7.782345E+01
2114	2.145995E+05	4.632489E+02	7.372835E+01	2164	2.395607E+05	4.894494E+02	7.789829E+01
2115	2.147240E+05	4.633832E+02	7.374972E+01	2165	2.396170E+05	4.895069E+02	7.790744E+01
2116	2.147864E+05	4.634506E+02	7.376045E+01	2166	2.402155E+05	4.901179E+02	7.800469E+01
2117	2.153870E+05	4.640981E+02	7.386351E+01	2167	2.414845E+05	4.914107E+02	7.821045E+01
2118	2.158170E+05	4.645610E+02	7.393719E+01	2168	2.421451E+05	4.920824E+02	7.831734E+01
2119	2.163411E+05	4.651248E+02	7.402692E+01	2169	2.426303E+05	4.925752E+02	7.839577E+01
2120	2.166430E+05	4.654493E+02	7.407855E+01	2170	2.430352E+05	4.929860E+02	7.846115E+01
2121	2.170418E+05	4.658774E+02	7.414669E+01	2171	2.439263E+05	4.938889E+02	7.860487E+01
2122	2.171113E+05	4.659520E+02	7.415857E+01	2172	2.452679E+05	4.952453E+02	7.882074E+01
2123	2.171536E+05	4.659974E+02	7.416580E+01	2173	2.456080E+05	4.955885E+02	7.887536E+01
2124	2.177100E+05	4.665940E+02	7.426074E+01	2174	2.461153E+05	4.961001E+02	7.895678E+01
2125	2.182910E+05	4.672162E+02	7.435977E+01	2175	2.470525E+05	4.970437E+02	7.910697E+01
2126	2.184251E+05	4.673597E+02	7.438261E+01	2176	2.479234E+05	4.979191E+02	7.924629E+01
2127	2.194145E+05	4.684170E+02	7.455088E+01	2177	2.482693E+05	4.982663E+02	7.930154E+01
2128	2.196116E+05	4.686274E+02	7.458437E+01	2178	2.487539E+05	4.987523E+02	7.937889E+01
2129	2.197922E+05	4.688200E+02	7.461503E+01	2179	2.488568E+05	4.988555E+02	7.939532E+01
2130	2.207161E+05	4.698043E+02	7.477168E+01	2180	2.489183E+05	4.989171E+02	7.940512E+01
2131	2.213244E+05	4.704512E+02	7.487464E+01	2181	2.489593E+05	4.989582E+02	7.941167E+01
2132	2.217049E+05	4.708555E+02	7.493897E+01	2182	2.492761E+05	4.992756E+02	7.946217E+01
2133	2.221378E+05	4.713150E+02	7.501210E+01	2183	2.500851E+05	5.000851E+02	7.959101E+01
2134	2.228397E+05	4.720590E+02	7.513052E+01	2184	2.508069E+05	5.008062E+02	7.970579E+01
2135	2.233384E+05	4.725869E+02	7.521454E+01	2185	2.512007E+05	5.011993E+02	7.976835E+01
2136	2.235236E+05	4.727828E+02	7.524572E+01	2186	2.520639E+05	5.020597E+02	7.990528E+01
2137	2.238582E+05	4.731366E+02	7.530202E+01	2187	2.522910E+05	5.022857E+02	7.994126E+01
2138	2.246094E+05	4.739298E+02	7.542827E+01	2188	2.524037E+05	5.023979E+02	7.995912E+01
2139	2.251055E+05	4.744529E+02	7.551152E+01	2189	2.531759E+05	5.031658E+02	8.008133E+01
2140	2.259668E+05	4.753596E+02	7.565583E+01	2190	2.538998E+05	5.038847E+02	8.019574E+01
2141	2.266717E+05	4.761005E+02	7.577375E+01	2191	2.539377E+05	5.039223E+02	8.020173E+01
2142	2.269980E+05	4.764430E+02	7.582826E+01	2192	2.540209E+05	5.040048E+02	8.021486E+01
2143	2.273790E+05	4.768428E+02	7.589188E+01	2193	2.543659E+05	5.043470E+02	8.026932E+01
2144	2.276454E+05	4.771220E+02	7.593632E+01	2194	2.544639E+05	5.044442E+02	8.028479E+01
2145	2.282522E+05	4.777574E+02	7.603746E+01	2195	2.545158E+05	5.044956E+02	8.029297E+01
2146	2.290466E+05	4.785882E+02	7.616968E+01	2196	2.546193E+05	5.045981E+02	8.030929E+01
2147	2.296192E+05	4.791860E+02	7.626482E+01	2197	2.554289E+05	5.053998E+02	8.043687E+01
2148	2.301893E+05	4.797805E+02	7.635943E+01	2198	2.560965E+05	5.060597E+02	8.054191E+01
2149	2.306812E+05	4.802928E+02	7.644097E+01	2199	2.573996E+05	5.073457E+02	8.074657E+01
2150	2.314449E+05	4.810872E+02	7.656740E+01	2200	2.592931E+05	5.092083E+02	8.104302E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 283

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2201	2.596182E+05	5.095274E+02	8.109380E+01	2251	2.989242E+05	5.467396E+02	8.701631E+01
2202	2.598790E+05	5.097833E+02	8.113453E+01	2252	3.000017E+05	5.477241E+02	8.717300E+01
2203	2.601786E+05	5.100771E+02	8.118129E+01	2253	3.006499E+05	5.483155E+02	8.726712E+01
2204	2.606140E+05	5.105037E+02	8.124919E+01	2254	3.016729E+05	5.492476E+02	8.741547E+01
2205	2.612273E+05	5.111040E+02	8.134473E+01	2255	3.018048E+05	5.493676E+02	8.743458E+01
2206	2.633911E+05	5.132164E+02	8.168093E+01	2256	3.024422E+05	5.499475E+02	8.752686E+01
2207	2.635501E+05	5.133713E+02	8.170559E+01	2257	3.035809E+05	5.509817E+02	8.769146E+01
2208	2.643481E+05	5.141479E+02	8.182918E+01	2258	3.038889E+05	5.512612E+02	8.773595E+01
2209	2.650396E+05	5.148200E+02	8.193615E+01	2259	3.041389E+05	5.514879E+02	8.777203E+01
2210	2.654919E+05	5.152590E+02	8.200602E+01	2260	3.049231E+05	5.521985E+02	8.788512E+01
2211	2.670605E+05	5.167790E+02	8.224793E+01	2261	3.067260E+05	5.538285E+02	8.814454E+01
2212	2.677296E+05	5.174260E+02	8.235090E+01	2262	3.069894E+05	5.540663E+02	8.818238E+01
2213	2.683016E+05	5.179783E+02	8.243881E+01	2263	3.082014E+05	5.551589E+02	8.835628E+01
2214	2.696635E+05	5.192913E+02	8.264778E+01	2264	3.090996E+05	5.559673E+02	8.848494E+01
2215	2.717356E+05	5.212827E+02	8.296472E+01	2265	3.091676E+05	5.560284E+02	8.849467E+01
2216	2.720124E+05	5.215481E+02	8.300695E+01	2266	3.095041E+05	5.563309E+02	8.854282E+01
2217	2.730267E+05	5.225196E+02	8.316157E+01	2267	3.099562E+05	5.567371E+02	8.860746E+01
2218	2.746693E+05	5.240890E+02	8.341136E+01	2268	3.109039E+05	5.575876E+02	8.874282E+01
2219	2.750926E+05	5.244928E+02	8.347561E+01	2269	3.124354E+05	5.589592E+02	8.896112E+01
2220	2.757119E+05	5.250828E+02	8.356952E+01	2270	3.140548E+05	5.604059E+02	8.919138E+01
2221	2.763232E+05	5.256645E+02	8.366211E+01	2271	3.146225E+05	5.609122E+02	8.927194E+01
2222	2.770940E+05	5.263972E+02	8.377871E+01	2272	3.154832E+05	5.616789E+02	8.939397E+01
2223	2.784032E+05	5.276392E+02	8.397639E+01	2273	3.162661E+05	5.623754E+02	8.950483E+01
2224	2.788500E+05	5.280625E+02	8.404376E+01	2274	3.178517E+05	5.637834E+02	8.972891E+01
2225	2.796494E+05	5.288189E+02	8.416414E+01	2275	3.183148E+05	5.641939E+02	8.979425E+01
2226	2.811208E+05	5.302083E+02	8.438527E+01	2276	3.191033E+05	5.648923E+02	8.990540E+01
2227	2.814535E+05	5.305219E+02	8.443518E+01	2277	3.202107E+05	5.658717E+02	9.006127E+01
2228	2.832243E+05	5.321883E+02	8.470039E+01	2278	3.206047E+05	5.662196E+02	9.011666E+01
2229	2.841755E+05	5.330811E+02	8.484250E+01	2279	3.210920E+05	5.666498E+02	9.018511E+01
2230	2.845014E+05	5.333867E+02	8.489114E+01	2280	3.212110E+05	5.667548E+02	9.020182E+01
2231	2.848632E+05	5.337258E+02	8.494510E+01	2281	3.212347E+05	5.667757E+02	9.020516E+01
2232	2.853507E+05	5.341823E+02	8.501775E+01	2282	3.220526E+05	5.674968E+02	9.031991E+01
2233	2.858169E+05	5.346184E+02	8.508716E+01	2283	3.231819E+05	5.684909E+02	9.047814E+01
2234	2.862296E+05	5.350043E+02	8.514859E+01	2284	3.246359E+05	5.697683E+02	9.068144E+01
2235	2.872474E+05	5.359547E+02	8.529984E+01	2285	3.268923E+05	5.717450E+02	9.099604E+01
2236	2.875515E+05	5.362383E+02	8.534498E+01	2286	3.276876E+05	5.724400E+02	9.110666E+01
2237	2.885784E+05	5.371949E+02	8.549722E+01	2287	3.286204E+05	5.732542E+02	9.123625E+01
2238	2.889190E+05	5.375119E+02	8.554767E+01	2288	3.290849E+05	5.736592E+02	9.130070E+01
2239	2.891573E+05	5.377335E+02	8.558294E+01	2289	3.295801E+05	5.740907E+02	9.136937E+01
2240	2.906258E+05	5.390972E+02	8.579998E+01	2290	3.300514E+05	5.745010E+02	9.143468E+01
2241	2.916972E+05	5.400900E+02	8.595800E+01	2291	3.306170E+05	5.749931E+02	9.151299E+01
2242	2.920848E+05	5.404487E+02	8.601508E+01	2292	3.315549E+05	5.758081E+02	9.164270E+01
2243	2.924303E+05	5.407683E+02	8.606594E+01	2293	3.322126E+05	5.763789E+02	9.173355E+01
2244	2.928693E+05	5.411740E+02	8.613052E+01	2294	3.332094E+05	5.772429E+02	9.187107E+01
2245	2.937345E+05	5.419728E+02	8.625765E+01	2295	3.338263E+05	5.777770E+02	9.195607E+01
2246	2.952466E+05	5.433660E+02	8.647938E+01	2296	3.353428E+05	5.790879E+02	9.216470E+01
2247	2.963323E+05	5.443641E+02	8.663824E+01	2297	3.378453E+05	5.812446E+02	9.250795E+01
2248	2.965173E+05	5.445340E+02	8.666528E+01	2298	3.381820E+05	5.815342E+02	9.255404E+01
2249	2.979069E+05	5.458085E+02	8.686812E+01	2299	3.383306E+05	5.816620E+02	9.257438E+01
2250	2.981561E+05	5.460367E+02	8.690444E+01	2300	3.392568E+05	5.824576E+02	9.270100E+01

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 284

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2301	3.393163E+05	5.825086E+02	9.270913E+01	2351	3.917734E+05	6.259180E+02	9.961795E+01
2302	3.409504E+05	5.839096E+02	9.293210E+01	2352	3.935461E+05	6.273325E+02	9.984307E+01
2303	3.419094E+05	5.847302E+02	9.306271E+01	2353	3.943847E+05	6.280005E+02	9.994939E+01
2304	3.433723E+05	5.859798E+02	9.326158E+01	2354	3.960723E+05	6.293428E+02	1.001630E+02
2305	3.456299E+05	5.879029E+02	9.356766E+01	2355	3.967482E+05	6.298795E+02	1.002484E+02
2306	3.458438E+05	5.880848E+02	9.359661E+01	2356	3.974152E+05	6.304087E+02	1.003327E+02
2307	3.460320E+05	5.882449E+02	9.362208E+01	2357	3.978058E+05	6.307185E+02	1.003820E+02
2308	3.463758E+05	5.885370E+02	9.366858E+01	2358	3.984019E+05	6.311909E+02	1.004571E+02
2309	3.466130E+05	5.887385E+02	9.370065E+01	2359	3.991031E+05	6.317461E+02	1.005455E+02
2310	3.470304E+05	5.890929E+02	9.375704E+01	2360	3.997623E+05	6.322676E+02	1.006285E+02
2311	3.483441E+05	5.902068E+02	9.393433E+01	2361	4.001720E+05	6.325915E+02	1.006801E+02
2312	3.498540E+05	5.914845E+02	9.413769E+01	2362	4.010641E+05	6.332962E+02	1.007922E+02
2313	3.514314E+05	5.928165E+02	9.434967E+01	2363	4.014773E+05	6.336223E+02	1.008441E+02
2314	3.525112E+05	5.937265E+02	9.449451E+01	2364	4.022886E+05	6.342622E+02	1.009460E+02
2315	3.529295E+05	5.940787E+02	9.455057E+01	2365	4.039951E+05	6.356061E+02	1.011598E+02
2316	3.544960E+05	5.953956E+02	9.476016E+01	2366	4.061633E+05	6.373095E+02	1.014309E+02
2317	3.554275E+05	5.961774E+02	9.488459E+01	2367	4.066466E+05	6.376885E+02	1.014913E+02
2318	3.562341E+05	5.968535E+02	9.499218E+01	2368	4.068133E+05	6.378192E+02	1.015121E+02
2319	3.575289E+05	5.979372E+02	9.516466E+01	2369	4.077449E+05	6.385491E+02	1.016282E+02
2320	3.589217E+05	5.991007E+02	9.534984E+01	2370	4.081961E+05	6.389022E+02	1.016844E+02
2321	3.597142E+05	5.997617E+02	9.545505E+01	2371	4.098099E+05	6.401639E+02	1.018853E+02
2322	3.613762E+05	6.011457E+02	9.567531E+01	2372	4.103031E+05	6.405490E+02	1.019465E+02
2323	3.618804E+05	6.015650E+02	9.574204E+01	2373	4.112289E+05	6.412713E+02	1.020615E+02
2324	3.635976E+05	6.029906E+02	9.596893E+01	2374	4.124200E+05	6.421993E+02	1.022092E+02
2325	3.649763E+05	6.041327E+02	9.615071E+01	2375	4.151737E+05	6.443397E+02	1.025499E+02
2326	3.657800E+05	6.047975E+02	9.625652E+01	2376	4.153113E+05	6.444465E+02	1.025668E+02
2327	3.688892E+05	6.073625E+02	9.666475E+01	2377	4.167216E+05	6.455398E+02	1.027408E+02
2328	3.693804E+05	6.077668E+02	9.672908E+01	2378	4.183874E+05	6.468287E+02	1.029460E+02
2329	3.705896E+05	6.087607E+02	9.688728E+01	2379	4.196791E+05	6.478264E+02	1.031048E+02
2330	3.720337E+05	6.099457E+02	9.707587E+01	2380	4.203873E+05	6.483728E+02	1.031917E+02
2331	3.730581E+05	6.107848E+02	9.720942E+01	2381	4.212905E+05	6.490689E+02	1.033025E+02
2332	3.737138E+05	6.113213E+02	9.729481E+01	2382	4.215368E+05	6.492587E+02	1.033327E+02
2333	3.743328E+05	6.118274E+02	9.737536E+01	2383	4.235389E+05	6.507987E+02	1.035778E+02
2334	3.755639E+05	6.128327E+02	9.753535E+01	2384	4.272778E+05	6.536649E+02	1.040340E+02
2335	3.771290E+05	6.141083E+02	9.773837E+01	2385	4.288706E+05	6.548821E+02	1.042277E+02
2336	3.782906E+05	6.150534E+02	9.788878E+01	2386	4.299869E+05	6.557339E+02	1.043633E+02
2337	3.800512E+05	6.164829E+02	9.811631E+01	2387	4.306730E+05	6.562568E+02	1.044465E+02
2338	3.802279E+05	6.166262E+02	9.813911E+01	2388	4.326281E+05	6.577447E+02	1.046833E+02
2339	3.806429E+05	6.169627E+02	9.819266E+01	2389	4.329029E+05	6.579535E+02	1.047166E+02
2340	3.815910E+05	6.177306E+02	9.831487E+01	2390	4.335405E+05	6.584380E+02	1.047937E+02
2341	3.817328E+05	6.178453E+02	9.833313E+01	2391	4.336290E+05	6.585052E+02	1.048044E+02
2342	3.825144E+05	6.184775E+02	9.843375E+01	2392	4.336353E+05	6.585099E+02	1.048051E+02
2343	3.843753E+05	6.199801E+02	9.867289E+01	2393	4.336516E+05	6.585223E+02	1.048071E+02
2344	3.849593E+05	6.204509E+02	9.874782E+01	2394	4.338162E+05	6.586473E+02	1.048270E+02
2345	3.853165E+05	6.207387E+02	9.879363E+01	2395	4.346024E+05	6.592438E+02	1.049219E+02
2346	3.860352E+05	6.213173E+02	9.888572E+01	2396	4.347870E+05	6.593838E+02	1.049442E+02
2347	3.866929E+05	6.218464E+02	9.896992E+01	2397	4.354070E+05	6.598538E+02	1.050190E+02
2348	3.873704E+05	6.223909E+02	9.905659E+01	2398	4.362539E+05	6.604952E+02	1.051211E+02
2349	3.885022E+05	6.232994E+02	9.920118E+01	2399	4.380035E+05	6.618183E+02	1.053317E+02
2350	3.904278E+05	6.248422E+02	9.944672E+01	2400	4.393874E+05	6.628630E+02	1.054979E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 285

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2401	4.420984E+05	6.649048E+02	1.058229E+02	2451	5.057395E+05	7.111537E+02	1.131836E+02
2402	4.437984E+05	6.661820E+02	1.060262E+02	2452	5.064760E+05	7.116713E+02	1.132660E+02
2403	4.469560E+05	6.685477E+02	1.064027E+02	2453	5.095157E+05	7.138037E+02	1.136054E+02
2404	4.480793E+05	6.693873E+02	1.065363E+02	2454	5.106210E+05	7.145775E+02	1.137285E+02
2405	4.484408E+05	6.696572E+02	1.065793E+02	2455	5.122534E+05	7.157188E+02	1.139102E+02
2406	4.486447E+05	6.698094E+02	1.066035E+02	2456	5.132320E+05	7.164021E+02	1.140189E+02
2407	4.501168E+05	6.709074E+02	1.067782E+02	2457	5.157816E+05	7.181794E+02	1.143018E+02
2408	4.501674E+05	6.709452E+02	1.067842E+02	2458	5.177136E+05	7.195231E+02	1.145157E+02
2409	4.521795E+05	6.724430E+02	1.070226E+02	2459	5.197292E+05	7.209225E+02	1.147384E+02
2410	4.531612E+05	6.731725E+02	1.071387E+02	2460	5.198595E+05	7.210128E+02	1.147528E+02
2411	4.538080E+05	6.736528E+02	1.072152E+02	2461	5.210944E+05	7.218687E+02	1.148890E+02
2412	4.553602E+05	6.748038E+02	1.073984E+02	2462	5.219154E+05	7.224371E+02	1.149794E+02
2413	4.580827E+05	6.768181E+02	1.077189E+02	2463	5.231045E+05	7.232596E+02	1.151103E+02
2414	4.593216E+05	6.777327E+02	1.078645E+02	2464	5.241071E+05	7.239524E+02	1.152206E+02
2415	4.614104E+05	6.792719E+02	1.081095E+02	2465	5.256919E+05	7.250461E+02	1.153947E+02
2416	4.627341E+05	6.802456E+02	1.082644E+02	2466	5.265081E+05	7.256088E+02	1.154842E+02
2417	4.639516E+05	6.811399E+02	1.084068E+02	2467	5.277964E+05	7.264959E+02	1.156254E+02
2418	4.664617E+05	6.829800E+02	1.086996E+02	2468	5.278983E+05	7.265661E+02	1.156366E+02
2419	4.667497E+05	6.831908E+02	1.087332E+02	2469	5.301853E+05	7.281382E+02	1.158868E+02
2420	4.674483E+05	6.837019E+02	1.088145E+02	2470	5.305338E+05	7.283775E+02	1.159249E+02
2421	4.688358E+05	6.847159E+02	1.089759E+02	2471	5.318952E+05	7.293114E+02	1.160735E+02
2422	4.702018E+05	6.857126E+02	1.091346E+02	2472	5.332220E+05	7.302205E+02	1.162182E+02
2423	4.721816E+05	6.871547E+02	1.093641E+02	2473	5.339101E+05	7.306916E+02	1.162932E+02
2424	4.724189E+05	6.873274E+02	1.093915E+02	2474	5.349632E+05	7.314118E+02	1.164078E+02
2425	4.747288E+05	6.890057E+02	1.096587E+02	2475	5.353443E+05	7.316723E+02	1.164493E+02
2426	4.752517E+05	6.893850E+02	1.097190E+02	2476	5.361474E+05	7.322209E+02	1.165366E+02
2427	4.764363E+05	6.902437E+02	1.098557E+02	2477	5.373540E+05	7.330443E+02	1.166676E+02
2428	4.783929E+05	6.916595E+02	1.100810E+02	2478	5.375732E+05	7.331938E+02	1.166914E+02
2429	4.796489E+05	6.925669E+02	1.102254E+02	2479	5.376578E+05	7.332515E+02	1.167006E+02
2430	4.805811E+05	6.932396E+02	1.103325E+02	2480	5.378985E+05	7.334156E+02	1.167267E+02
2431	4.814743E+05	6.938835E+02	1.104350E+02	2481	5.394316E+05	7.344601E+02	1.168930E+02
2432	4.815896E+05	6.939666E+02	1.104482E+02	2482	5.409151E+05	7.354693E+02	1.170536E+02
2433	4.833081E+05	6.952037E+02	1.106451E+02	2483	5.428495E+05	7.367832E+02	1.172627E+02
2434	4.836709E+05	6.954645E+02	1.106866E+02	2484	5.438112E+05	7.374356E+02	1.173665E+02
2435	4.855959E+05	6.968471E+02	1.109067E+02	2485	5.452081E+05	7.383821E+02	1.175172E+02
2436	4.866238E+05	6.975843E+02	1.110240E+02	2486	5.460151E+05	7.389283E+02	1.176041E+02
2437	4.873893E+05	6.981327E+02	1.111113E+02	2487	5.481637E+05	7.403808E+02	1.178353E+02
2438	4.887421E+05	6.991009E+02	1.112654E+02	2488	5.486401E+05	7.407024E+02	1.178865E+02
2439	4.912204E+05	7.008712E+02	1.115471E+02	2489	5.509539E+05	7.422627E+02	1.181348E+02
2440	4.920611E+05	7.014707E+02	1.116425E+02	2490	5.520920E+05	7.430289E+02	1.182567E+02
2441	4.922543E+05	7.016084E+02	1.116644E+02	2491	5.523156E+05	7.431794E+02	1.182807E+02
2442	4.949636E+05	7.035365E+02	1.119713E+02	2492	5.549556E+05	7.449534E+02	1.185630E+02
2443	4.969320E+05	7.049341E+02	1.121937E+02	2493	5.556811E+05	7.454402E+02	1.186405E+02
2444	4.975094E+05	7.053435E+02	1.122589E+02	2494	5.575911E+05	7.467202E+02	1.188442E+02
2445	4.978599E+05	7.055919E+02	1.122984E+02	2495	5.596629E+05	7.481062E+02	1.190648E+02
2446	4.989459E+05	7.063610E+02	1.124209E+02	2496	5.603985E+05	7.485977E+02	1.191430E+02
2447	4.995623E+05	7.067972E+02	1.124903E+02	2497	5.612415E+05	7.491605E+02	1.192326E+02
2448	5.010563E+05	7.078533E+02	1.126584E+02	2498	5.623543E+05	7.499029E+02	1.193508E+02
2449	5.024389E+05	7.088292E+02	1.128137E+02	2499	5.635558E+05	7.507035E+02	1.194782E+02
2450	5.049614E+05	7.106064E+02	1.130965E+02	2500	5.647471E+05	7.514966E+02	1.196044E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 286

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2501	5.652956E+05	7.518614E+02	1.196625E+02	2551	6.428027E+05	8.017498E+02	1.276024E+02
2502	5.665086E+05	7.526677E+02	1.197908E+02	2552	6.438044E+05	8.023742E+02	1.277018E+02
2503	5.675034E+05	7.533282E+02	1.198959E+02	2553	6.464326E+05	8.040103E+02	1.279622E+02
2504	5.694016E+05	7.545871E+02	1.200963E+02	2554	6.480999E+05	8.050465E+02	1.281271E+02
2505	5.715939E+05	7.560383E+02	1.203272E+02	2555	6.488083E+05	8.054864E+02	1.281971E+02
2506	5.724864E+05	7.566283E+02	1.204211E+02	2556	6.502262E+05	8.063660E+02	1.283371E+02
2507	5.747886E+05	7.581481E+02	1.206630E+02	2557	6.523441E+05	8.076782E+02	1.285460E+02
2508	5.755345E+05	7.586399E+02	1.207413E+02	2558	6.524215E+05	8.077261E+02	1.285536E+02
2509	5.786490E+05	7.606898E+02	1.210675E+02	2559	6.532677E+05	8.082498E+02	1.286369E+02
2510	5.800680E+05	7.616220E+02	1.212159E+02	2560	6.538268E+05	8.085956E+02	1.286920E+02
2511	5.827717E+05	7.633949E+02	1.214981E+02	2561	6.555082E+05	8.096346E+02	1.288574E+02
2512	5.838148E+05	7.640778E+02	1.216068E+02	2562	6.588694E+05	8.117077E+02	1.291873E+02
2513	5.862632E+05	7.656783E+02	1.218615E+02	2563	6.591326E+05	8.118698E+02	1.292131E+02
2514	5.865795E+05	7.658848E+02	1.218944E+02	2564	6.629120E+05	8.141941E+02	1.295830E+02
2515	5.875904E+05	7.665445E+02	1.219993E+02	2565	6.640232E+05	8.148762E+02	1.296916E+02
2516	5.884770E+05	7.671225E+02	1.220913E+02	2566	6.652920E+05	8.156543E+02	1.298154E+02
2517	5.891928E+05	7.675890E+02	1.221656E+02	2567	6.667473E+05	8.165460E+02	1.299573E+02
2518	5.921275E+05	7.694982E+02	1.224694E+02	2568	6.683430E+05	8.175225E+02	1.301127E+02
2519	5.927982E+05	7.699339E+02	1.225388E+02	2569	6.710528E+05	8.191782E+02	1.303763E+02
2520	5.957249E+05	7.718322E+02	1.228409E+02	2570	6.726276E+05	8.201388E+02	1.305291E+02
2521	5.976526E+05	7.730799E+02	1.230395E+02	2571	6.748092E+05	8.214677E+02	1.307406E+02
2522	5.999280E+05	7.745502E+02	1.232735E+02	2572	6.768736E+05	8.227233E+02	1.309405E+02
2523	6.009801E+05	7.752291E+02	1.233815E+02	2573	6.771438E+05	8.228875E+02	1.309666E+02
2524	6.016745E+05	7.756768E+02	1.234528E+02	2574	6.802891E+05	8.247964E+02	1.312704E+02
2525	6.017525E+05	7.757271E+02	1.234608E+02	2575	6.817910E+05	8.257064E+02	1.314153E+02
2526	6.019158E+05	7.758324E+02	1.234776E+02	2576	6.841025E+05	8.271049E+02	1.316378E+02
2527	6.040057E+05	7.771781E+02	1.236917E+02	2577	6.853714E+05	8.278716E+02	1.317599E+02
2528	6.057990E+05	7.783309E+02	1.238752E+02	2578	6.871602E+05	8.289513E+02	1.319317E+02
2529	6.082280E+05	7.798898E+02	1.241233E+02	2579	6.894680E+05	8.303421E+02	1.321530E+02
2530	6.096508E+05	7.808014E+02	1.242684E+02	2580	6.909915E+05	8.312590E+02	1.322990E+02
2531	6.099016E+05	7.809620E+02	1.242940E+02	2581	6.922271E+05	8.320019E+02	1.324172E+02
2532	6.119120E+05	7.822480E+02	1.244986E+02	2582	6.928549E+05	8.323791E+02	1.324772E+02
2533	6.134109E+05	7.832055E+02	1.246510E+02	2583	6.929772E+05	8.324525E+02	1.324889E+02
2534	6.153023E+05	7.844120E+02	1.248431E+02	2584	6.946108E+05	8.334332E+02	1.326450E+02
2535	6.158946E+05	7.847895E+02	1.249031E+02	2585	6.961669E+05	8.343662E+02	1.327935E+02
2536	6.169205E+05	7.854429E+02	1.250071E+02	2586	6.976857E+05	8.352758E+02	1.329383E+02
2537	6.191231E+05	7.868437E+02	1.252301E+02	2587	6.987509E+05	8.359132E+02	1.330397E+02
2538	6.196971E+05	7.872084E+02	1.252881E+02	2588	6.998359E+05	8.365619E+02	1.331430E+02
2539	6.213219E+05	7.882398E+02	1.254523E+02	2589	7.003866E+05	8.368910E+02	1.331953E+02
2540	6.233401E+05	7.895189E+02	1.256558E+02	2590	7.030370E+05	8.384730E+02	1.334471E+02
2541	6.242302E+05	7.900824E+02	1.257455E+02	2591	7.035481E+05	8.387778E+02	1.334956E+02
2542	6.274738E+05	7.921324E+02	1.260718E+02	2592	7.058144E+05	8.401276E+02	1.337105E+02
2543	6.285828E+05	7.928322E+02	1.261832E+02	2593	7.069526E+05	8.408047E+02	1.338182E+02
2544	6.303337E+05	7.939356E+02	1.263588E+02	2594	7.078934E+05	8.413640E+02	1.339072E+02
2545	6.306429E+05	7.941303E+02	1.263898E+02	2595	7.108627E+05	8.431268E+02	1.341878E+02
2546	6.320772E+05	7.950328E+02	1.265334E+02	2596	7.123273E+05	8.439948E+02	1.343260E+02
2547	6.348119E+05	7.967509E+02	1.268068E+02	2597	7.132689E+05	8.445525E+02	1.344147E+02
2548	6.373155E+05	7.983205E+02	1.270566E+02	2598	7.157934E+05	8.460457E+02	1.346524E+02
2549	6.388548E+05	7.992840E+02	1.272100E+02	2599	7.160329E+05	8.461873E+02	1.346749E+02
2550	6.398918E+05	7.999324E+02	1.273132E+02	2600	7.162791E+05	8.463327E+02	1.346980E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 287

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2601	7.166994E+05	8.465810E+02	1.347376E+02	2651	8.062435E+05	8.979106E+02	1.429069E+02
2602	7.200356E+05	8.485491E+02	1.350508E+02	2652	8.074733E+05	8.985952E+02	1.430159E+02
2603	7.220590E+05	8.497406E+02	1.352404E+02	2653	8.093154E+05	8.996196E+02	1.431789E+02
2604	7.225844E+05	8.500497E+02	1.352896E+02	2654	8.142241E+05	9.023437E+02	1.436125E+02
2605	7.257806E+05	8.519276E+02	1.355885E+02	2655	8.157926E+05	9.032124E+02	1.437507E+02
2606	7.273617E+05	8.528550E+02	1.357361E+02	2656	8.173921E+05	9.040974E+02	1.438916E+02
2607	7.286758E+05	8.536251E+02	1.358587E+02	2657	8.185782E+05	9.047531E+02	1.439959E+02
2608	7.302795E+05	8.545639E+02	1.360081E+02	2658	8.229880E+05	9.071868E+02	1.443833E+02
2609	7.316380E+05	8.553584E+02	1.361345E+02	2659	8.244815E+05	9.080096E+02	1.445142E+02
2610	7.337352E+05	8.565835E+02	1.363295E+02	2660	8.264740E+05	9.091062E+02	1.446887E+02
2611	7.357622E+05	8.577658E+02	1.365177E+02	2661	8.294577E+05	9.107457E+02	1.449497E+02
2612	7.366089E+05	8.582592E+02	1.365962E+02	2662	8.300010E+05	9.110439E+02	1.449971E+02
2613	7.416807E+05	8.612089E+02	1.370656E+02	2663	8.307628E+05	9.114619E+02	1.450637E+02
2614	7.431626E+05	8.620688E+02	1.372025E+02	2664	8.346800E+05	9.136083E+02	1.454053E+02
2615	7.440964E+05	8.626102E+02	1.372887E+02	2665	8.370144E+05	9.148849E+02	1.456085E+02
2616	7.457831E+05	8.635873E+02	1.374442E+02	2666	8.394200E+05	9.161987E+02	1.458176E+02
2617	7.483020E+05	8.650445E+02	1.376761E+02	2667	8.422980E+05	9.177679E+02	1.460673E+02
2618	7.496038E+05	8.657966E+02	1.377958E+02	2668	8.439306E+05	9.186569E+02	1.462088E+02
2619	7.516638E+05	8.669855E+02	1.379850E+02	2669	8.476184E+05	9.206619E+02	1.465279E+02
2620	7.547173E+05	8.687447E+02	1.382650E+02	2670	8.492426E+05	9.215436E+02	1.466682E+02
2621	7.577308E+05	8.704773E+02	1.385408E+02	2671	8.513773E+05	9.227011E+02	1.468524E+02
2622	7.591398E+05	8.712863E+02	1.386695E+02	2672	8.570414E+05	9.257653E+02	1.473401E+02
2623	7.607249E+05	8.721955E+02	1.388142E+02	2673	8.586688E+05	9.266438E+02	1.474799E+02
2624	7.630392E+05	8.735211E+02	1.390252E+02	2674	8.619063E+05	9.283891E+02	1.477577E+02
2625	7.647012E+05	8.744719E+02	1.391765E+02	2675	8.649492E+05	9.300265E+02	1.480183E+02
2626	7.659956E+05	8.752118E+02	1.392943E+02	2676	8.682828E+05	9.318169E+02	1.483033E+02
2627	7.685068E+05	8.766452E+02	1.395224E+02	2677	8.701508E+05	9.328187E+02	1.484627E+02
2628	7.696833E+05	8.773159E+02	1.396292E+02	2678	8.712238E+05	9.333937E+02	1.485542E+02
2629	7.741341E+05	8.798489E+02	1.400323E+02	2679	8.729453E+05	9.343154E+02	1.487009E+02
2630	7.749706E+05	8.803241E+02	1.401079E+02	2680	8.739581E+05	9.348572E+02	1.487872E+02
2631	7.752682E+05	8.804932E+02	1.401348E+02	2681	8.792845E+05	9.377017E+02	1.492399E+02
2632	7.766550E+05	8.812803E+02	1.402601E+02	2682	8.815317E+05	9.388992E+02	1.494304E+02
2633	7.779489E+05	8.820141E+02	1.403769E+02	2683	8.830407E+05	9.397024E+02	1.495583E+02
2634	7.798525E+05	8.830926E+02	1.405485E+02	2684	8.848152E+05	9.406461E+02	1.497085E+02
2635	7.812464E+05	8.838814E+02	1.406741E+02	2685	8.870035E+05	9.418086E+02	1.498935E+02
2636	7.826211E+05	8.846587E+02	1.407978E+02	2686	8.881868E+05	9.424367E+02	1.499935E+02
2637	7.838552E+05	8.853560E+02	1.409088E+02	2687	8.908047E+05	9.438245E+02	1.502143E+02
2638	7.859013E+05	8.865107E+02	1.410926E+02	2688	8.952542E+05	9.461787E+02	1.505890E+02
2639	7.872058E+05	8.872462E+02	1.412096E+02	2689	8.962547E+05	9.467073E+02	1.506731E+02
2640	7.887732E+05	8.881291E+02	1.413501E+02	2690	9.007172E+05	9.490612E+02	1.510478E+02
2641	7.893040E+05	8.884278E+02	1.413977E+02	2691	9.018407E+05	9.496530E+02	1.511420E+02
2642	7.920359E+05	8.899640E+02	1.416422E+02	2692	9.068577E+05	9.522908E+02	1.515618E+02
2643	7.935490E+05	8.908137E+02	1.417774E+02	2693	9.080554E+05	9.529194E+02	1.516618E+02
2644	7.946257E+05	8.914178E+02	1.418736E+02	2694	9.114447E+05	9.546962E+02	1.519446E+02
2645	7.971809E+05	8.928499E+02	1.421015E+02	2695	9.136348E+05	9.558425E+02	1.521271E+02
2646	7.989057E+05	8.938152E+02	1.422551E+02	2696	9.147132E+05	9.564064E+02	1.522168E+02
2647	8.005929E+05	8.947586E+02	1.424053E+02	2697	9.179833E+05	9.581145E+02	1.524887E+02
2648	8.010068E+05	8.949898E+02	1.424421E+02	2698	9.196524E+05	9.589851E+02	1.526272E+02
2649	8.020864E+05	8.955927E+02	1.425380E+02	2699	9.224983E+05	9.604678E+02	1.528632E+02
2650	8.062348E+05	8.979058E+02	1.429061E+02	2700	9.237901E+05	9.611400E+02	1.529702E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 288

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2701	9.294388E+05	9.640740E+02	1.534371E+02	2751	1.042974E+06	1.021261E+03	1.625388E+02
2702	9.311632E+05	9.649680E+02	1.535794E+02	2752	1.044618E+06	1.022066E+03	1.626668E+02
2703	9.332636E+05	9.660557E+02	1.537525E+02	2753	1.044739E+06	1.022125E+03	1.626762E+02
2704	9.358844E+05	9.674112E+02	1.539683E+02	2754	1.049121E+06	1.024266E+03	1.630170E+02
2705	9.385742E+05	9.688004E+02	1.541894E+02	2755	1.055888E+06	1.027564E+03	1.635419E+02
2706	9.388098E+05	9.689220E+02	1.542087E+02	2756	1.059426E+06	1.029284E+03	1.638157E+02
2707	9.410668E+05	9.700860E+02	1.543940E+02	2757	1.063697E+06	1.031357E+03	1.641455E+02
2708	9.423754E+05	9.707602E+02	1.545013E+02	2758	1.064445E+06	1.031720E+03	1.642033E+02
2709	9.468300E+05	9.730519E+02	1.548660E+02	2759	1.069063E+06	1.033955E+03	1.645591E+02
2710	9.482250E+05	9.737685E+02	1.549801E+02	2760	1.069920E+06	1.034369E+03	1.646250E+02
2711	9.490369E+05	9.741853E+02	1.550464E+02	2761	1.075876E+06	1.037245E+03	1.650826E+02
2712	9.506306E+05	9.750029E+02	1.551765E+02	2762	1.078858E+06	1.038681E+03	1.653112E+02
2713	9.517292E+05	9.755661E+02	1.552662E+02	2763	1.079943E+06	1.039203E+03	1.653943E+02
2714	9.527798E+05	9.761044E+02	1.553518E+02	2764	1.082462E+06	1.040415E+03	1.655871E+02
2715	9.533111E+05	9.763765E+02	1.553952E+02	2765	1.084907E+06	1.041589E+03	1.657740E+02
2716	9.542721E+05	9.768685E+02	1.554734E+02	2766	1.088391E+06	1.043260E+03	1.660399E+02
2717	9.546207E+05	9.770469E+02	1.555018E+02	2767	1.091445E+06	1.044723E+03	1.662728E+02
2718	9.605318E+05	9.800672E+02	1.559825E+02	2768	1.097156E+06	1.047452E+03	1.667072E+02
2719	9.617323E+05	9.806795E+02	1.560800E+02	2769	1.098763E+06	1.048219E+03	1.668293E+02
2720	9.640999E+05	9.818859E+02	1.562720E+02	2770	1.099838E+06	1.048731E+03	1.669108E+02
2721	9.654833E+05	9.825901E+02	1.563841E+02	2771	1.100379E+06	1.048989E+03	1.669519E+02
2722	9.687910E+05	9.842718E+02	1.566517E+02	2772	1.101708E+06	1.049623E+03	1.670526E+02
2723	9.713774E+05	9.855848E+02	1.568607E+02	2773	1.102297E+06	1.049903E+03	1.670973E+02
2724	9.737569E+05	9.867912E+02	1.570527E+02	2774	1.110335E+06	1.053724E+03	1.677054E+02
2725	9.784028E+05	9.891425E+02	1.574269E+02	2775	1.112323E+06	1.054667E+03	1.678555E+02
2726	9.810489E+05	9.904791E+02	1.576396E+02	2776	1.113879E+06	1.055405E+03	1.679729E+02
2727	9.842811E+05	9.921094E+02	1.578991E+02	2777	1.116422E+06	1.056609E+03	1.681645E+02
2728	9.878743E+05	9.939187E+02	1.581871E+02	2778	1.118137E+06	1.057420E+03	1.682936E+02
2729	9.893659E+05	9.946687E+02	1.583064E+02	2779	1.120389E+06	1.058484E+03	1.684630E+02
2730	9.920254E+05	9.960047E+02	1.585191E+02	2780	1.124807E+06	1.060569E+03	1.687948E+02
2731	9.929747E+05	9.964812E+02	1.585949E+02	2781	1.127725E+06	1.061944E+03	1.690136E+02
2732	9.934761E+05	9.967327E+02	1.586349E+02	2782	1.129733E+06	1.062889E+03	1.691640E+02
2733	9.953100E+05	9.976523E+02	1.587813E+02	2783	1.130749E+06	1.063367E+03	1.692401E+02
2734	9.987025E+05	9.993510E+02	1.590517E+02	2784	1.134178E+06	1.064978E+03	1.694965E+02
2735	1.000414E+06	1.000207E+03	1.591879E+02	2785	1.136980E+06	1.066293E+03	1.697058E+02
2736	1.001899E+06	1.000949E+03	1.593060E+02	2786	1.137394E+06	1.066487E+03	1.697367E+02
2737	1.004175E+06	1.002085E+03	1.594868E+02	2787	1.140712E+06	1.068041E+03	1.699840E+02
2738	1.005761E+06	1.002876E+03	1.596127E+02	2788	1.141650E+06	1.068480E+03	1.700539E+02
2739	1.009003E+06	1.004492E+03	1.598698E+02	2789	1.148406E+06	1.071637E+03	1.705563E+02
2740	1.011144E+06	1.005556E+03	1.600393E+02	2790	1.149794E+06	1.072284E+03	1.706593E+02
2741	1.014218E+06	1.007084E+03	1.602824E+02	2791	1.149877E+06	1.072323E+03	1.706655E+02
2742	1.016807E+06	1.008368E+03	1.604868E+02	2792	1.151366E+06	1.073017E+03	1.707760E+02
2743	1.018495E+06	1.009205E+03	1.606200E+02	2793	1.156186E+06	1.075261E+03	1.711331E+02
2744	1.021324E+06	1.010606E+03	1.608429E+02	2794	1.162405E+06	1.078149E+03	1.715927E+02
2745	1.023283E+06	1.011575E+03	1.609971E+02	2795	1.163210E+06	1.078522E+03	1.716521E+02
2746	1.028616E+06	1.014207E+03	1.614161E+02	2796	1.165730E+06	1.079690E+03	1.718379E+02
2747	1.030079E+06	1.014928E+03	1.615308E+02	2797	1.168888E+06	1.081151E+03	1.720706E+02
2748	1.034677E+06	1.017191E+03	1.618909E+02	2798	1.174257E+06	1.083632E+03	1.724653E+02
2749	1.036061E+06	1.017871E+03	1.619992E+02	2799	1.178300E+06	1.085495E+03	1.727620E+02
2750	1.039987E+06	1.019798E+03	1.623058E+02	2800	1.179534E+06	1.086064E+03	1.728524E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 289

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2801	1.182690E+06	1.087515E+03	1.730835E+02	2851	1.319664E+06	1.148766E+03	1.828318E+02
2802	1.185384E+06	1.088753E+03	1.732805E+02	2852	1.322169E+06	1.149856E+03	1.830053E+02
2803	1.188985E+06	1.090406E+03	1.735435E+02	2853	1.324977E+06	1.151076E+03	1.831995E+02
2804	1.193032E+06	1.092260E+03	1.738386E+02	2854	1.328241E+06	1.152493E+03	1.834250E+02
2805	1.196374E+06	1.093789E+03	1.740819E+02	2855	1.331990E+06	1.154119E+03	1.836837E+02
2806	1.200030E+06	1.095459E+03	1.743476E+02	2856	1.333599E+06	1.154815E+03	1.837946E+02
2807	1.201242E+06	1.096012E+03	1.744357E+02	2857	1.334877E+06	1.155369E+03	1.838826E+02
2808	1.212241E+06	1.101018E+03	1.752325E+02	2858	1.340934E+06	1.157987E+03	1.842993E+02
2809	1.214105E+06	1.101864E+03	1.753672E+02	2859	1.346761E+06	1.160500E+03	1.846994E+02
2810	1.216100E+06	1.102769E+03	1.755112E+02	2860	1.351756E+06	1.162650E+03	1.850415E+02
2811	1.218067E+06	1.103661E+03	1.756530E+02	2861	1.355971E+06	1.164462E+03	1.853298E+02
2812	1.219954E+06	1.104515E+03	1.757891E+02	2862	1.358391E+06	1.165500E+03	1.854951E+02
2813	1.221915E+06	1.105403E+03	1.759303E+02	2863	1.361062E+06	1.166645E+03	1.856774E+02
2814	1.223835E+06	1.106271E+03	1.760684E+02	2864	1.367462E+06	1.169385E+03	1.861134E+02
2815	1.224484E+06	1.106564E+03	1.761151E+02	2865	1.368245E+06	1.169720E+03	1.861667E+02
2816	1.227296E+06	1.107834E+03	1.763172E+02	2866	1.371382E+06	1.171060E+03	1.863800E+02
2817	1.230115E+06	1.109105E+03	1.765196E+02	2867	1.375637E+06	1.172876E+03	1.866690E+02
2818	1.230470E+06	1.109265E+03	1.765451E+02	2868	1.379446E+06	1.174498E+03	1.869272E+02
2819	1.232788E+06	1.110310E+03	1.767113E+02	2869	1.386891E+06	1.177664E+03	1.874310E+02
2820	1.236177E+06	1.111835E+03	1.769540E+02	2870	1.387569E+06	1.177951E+03	1.874768E+02
2821	1.239067E+06	1.113134E+03	1.771608E+02	2871	1.390536E+06	1.179210E+03	1.876771E+02
2822	1.239969E+06	1.113539E+03	1.772252E+02	2872	1.393029E+06	1.180266E+03	1.878452E+02
2823	1.241893E+06	1.114403E+03	1.773627E+02	2873	1.394583E+06	1.180925E+03	1.879500E+02
2824	1.247016E+06	1.116699E+03	1.777281E+02	2874	1.398701E+06	1.182667E+03	1.882273E+02
2825	1.248467E+06	1.117348E+03	1.778315E+02	2875	1.402295E+06	1.184185E+03	1.884690E+02
2826	1.249733E+06	1.117915E+03	1.779217E+02	2876	1.405425E+06	1.185506E+03	1.886792E+02
2827	1.251331E+06	1.118629E+03	1.780354E+02	2877	1.409285E+06	1.187133E+03	1.889381E+02
2828	1.252808E+06	1.119289E+03	1.781404E+02	2878	1.410332E+06	1.187574E+03	1.890083E+02
2829	1.254096E+06	1.119864E+03	1.782319E+02	2879	1.412890E+06	1.188650E+03	1.891796E+02
2830	1.258649E+06	1.121895E+03	1.785552E+02	2880	1.413656E+06	1.188973E+03	1.892309E+02
2831	1.261243E+06	1.123051E+03	1.787391E+02	2881	1.417021E+06	1.190387E+03	1.894560E+02
2832	1.263443E+06	1.124030E+03	1.788949E+02	2882	1.419947E+06	1.191615E+03	1.896515E+02
2833	1.266625E+06	1.125444E+03	1.791200E+02	2883	1.420995E+06	1.192055E+03	1.897214E+02
2834	1.266915E+06	1.125573E+03	1.791406E+02	2884	1.426862E+06	1.194513E+03	1.901127E+02
2835	1.267013E+06	1.125617E+03	1.791475E+02	2885	1.427156E+06	1.194636E+03	1.901323E+02
2836	1.271313E+06	1.127525E+03	1.794512E+02	2886	1.432439E+06	1.196845E+03	1.904838E+02
2837	1.273727E+06	1.128595E+03	1.796215E+02	2887	1.442843E+06	1.201184E+03	1.911744E+02
2838	1.278566E+06	1.130737E+03	1.799624E+02	2888	1.445552E+06	1.202311E+03	1.913538E+02
2839	1.281908E+06	1.132214E+03	1.801974E+02	2889	1.448415E+06	1.203501E+03	1.915432E+02
2840	1.284806E+06	1.133493E+03	1.804010E+02	2890	1.452846E+06	1.205340E+03	1.918359E+02
2841	1.293486E+06	1.137315E+03	1.810094E+02	2891	1.455129E+06	1.206287E+03	1.919866E+02
2842	1.295280E+06	1.138104E+03	1.811348E+02	2892	1.458632E+06	1.207738E+03	1.922175E+02
2843	1.297393E+06	1.139032E+03	1.812825E+02	2893	1.462698E+06	1.209420E+03	1.924852E+02
2844	1.299833E+06	1.140102E+03	1.814529E+02	2894	1.464393E+06	1.210121E+03	1.925968E+02
2845	1.306683E+06	1.143102E+03	1.819304E+02	2895	1.468395E+06	1.211773E+03	1.928597E+02
2846	1.310240E+06	1.144657E+03	1.821778E+02	2896	1.470596E+06	1.212681E+03	1.930042E+02
2847	1.311196E+06	1.145075E+03	1.822443E+02	2897	1.475595E+06	1.214741E+03	1.933320E+02
2848	1.313481E+06	1.146072E+03	1.824031E+02	2898	1.477412E+06	1.215488E+03	1.934510E+02
2849	1.313779E+06	1.146202E+03	1.824237E+02	2899	1.480544E+06	1.216776E+03	1.936560E+02
2850	1.315418E+06	1.146917E+03	1.825375E+02	2900	1.487046E+06	1.219445E+03	1.940807E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 290

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2901	1.488970E+06	1.220234E+03	1.942062E+02	2951	1.704843E+06	1.305696E+03	2.078080E+02
2902	1.490161E+06	1.220722E+03	1.942839E+02	2952	1.707389E+06	1.306671E+03	2.079632E+02
2903	1.495882E+06	1.223063E+03	1.946564E+02	2953	1.709443E+06	1.307457E+03	2.080882E+02
2904	1.500222E+06	1.224835E+03	1.949386E+02	2954	1.711943E+06	1.308413E+03	2.082403E+02
2905	1.502575E+06	1.225796E+03	1.950914E+02	2955	1.716095E+06	1.309998E+03	2.084926E+02
2906	1.510232E+06	1.228915E+03	1.955879E+02	2956	1.719232E+06	1.311195E+03	2.086831E+02
2907	1.515730E+06	1.231150E+03	1.959436E+02	2957	1.724331E+06	1.313138E+03	2.089924E+02
2908	1.517910E+06	1.232035E+03	1.960844E+02	2958	1.730174E+06	1.315361E+03	2.093462E+02
2909	1.520868E+06	1.233235E+03	1.962754E+02	2959	1.731660E+06	1.315926E+03	2.094360E+02
2910	1.527591E+06	1.235958E+03	1.967088E+02	2960	1.736657E+06	1.317823E+03	2.097380E+02
2911	1.533924E+06	1.238517E+03	1.971161E+02	2961	1.738874E+06	1.318664E+03	2.098719E+02
2912	1.535401E+06	1.239113E+03	1.972110E+02	2962	1.745126E+06	1.321032E+03	2.102488E+02
2913	1.537993E+06	1.240159E+03	1.973774E+02	2963	1.753905E+06	1.324351E+03	2.107770E+02
2914	1.546927E+06	1.243755E+03	1.979498E+02	2964	1.754206E+06	1.324464E+03	2.107950E+02
2915	1.550033E+06	1.245003E+03	1.981484E+02	2965	1.760558E+06	1.326860E+03	2.111763E+02
2916	1.557175E+06	1.247868E+03	1.986044E+02	2966	1.763208E+06	1.327858E+03	2.113352E+02
2917	1.560744E+06	1.249297E+03	1.988319E+02	2967	1.773072E+06	1.331568E+03	2.119256E+02
2918	1.562165E+06	1.249866E+03	1.989224E+02	2968	1.776406E+06	1.332819E+03	2.121247E+02
2919	1.568114E+06	1.252244E+03	1.993008E+02	2969	1.782144E+06	1.334970E+03	2.124670E+02
2920	1.574022E+06	1.254600E+03	1.996758E+02	2970	1.784142E+06	1.335718E+03	2.125861E+02
2921	1.580897E+06	1.257337E+03	2.001114E+02	2971	1.787230E+06	1.336873E+03	2.127700E+02
2922	1.586217E+06	1.259451E+03	2.004479E+02	2972	1.790266E+06	1.338008E+03	2.129506E+02
2923	1.595983E+06	1.263322E+03	2.010640E+02	2973	1.793145E+06	1.339084E+03	2.131218E+02
2924	1.600767E+06	1.265214E+03	2.013651E+02	2974	1.800673E+06	1.341892E+03	2.135687E+02
2925	1.602192E+06	1.265777E+03	2.014547E+02	2975	1.802789E+06	1.342680E+03	2.136941E+02
2926	1.606489E+06	1.267473E+03	2.017246E+02	2976	1.809240E+06	1.345080E+03	2.140761E+02
2927	1.607814E+06	1.267996E+03	2.018078E+02	2977	1.811379E+06	1.345875E+03	2.142026E+02
2928	1.613938E+06	1.270409E+03	2.021918E+02	2978	1.815422E+06	1.347376E+03	2.144416E+02
2929	1.618328E+06	1.272135E+03	2.024666E+02	2979	1.821281E+06	1.349549E+03	2.147873E+02
2930	1.624554E+06	1.274580E+03	2.028557E+02	2980	1.836820E+06	1.355293E+03	2.157017E+02
2931	1.630525E+06	1.276920E+03	2.032281E+02	2981	1.837882E+06	1.355685E+03	2.157640E+02
2932	1.633661E+06	1.278147E+03	2.034235E+02	2982	1.843606E+06	1.357794E+03	2.160997E+02
2933	1.635668E+06	1.278932E+03	2.035484E+02	2983	1.846350E+06	1.358805E+03	2.162605E+02
2934	1.636425E+06	1.279228E+03	2.035955E+02	2984	1.850567E+06	1.360356E+03	2.165073E+02
2935	1.636460E+06	1.279242E+03	2.035977E+02	2985	1.853951E+06	1.361599E+03	2.167051E+02
2936	1.641452E+06	1.281192E+03	2.039080E+02	2986	1.861351E+06	1.364314E+03	2.171372E+02
2937	1.646147E+06	1.283023E+03	2.041994E+02	2987	1.863798E+06	1.365210E+03	2.172799E+02
2938	1.653518E+06	1.285892E+03	2.046561E+02	2988	1.870347E+06	1.367606E+03	2.176613E+02
2939	1.654626E+06	1.286323E+03	2.047246E+02	2989	1.872214E+06	1.368289E+03	2.177699E+02
2940	1.659024E+06	1.288031E+03	2.049965E+02	2990	1.876660E+06	1.369912E+03	2.180283E+02
2941	1.669463E+06	1.292077E+03	2.056405E+02	2991	1.878139E+06	1.370452E+03	2.181142E+02
2942	1.670664E+06	1.292542E+03	2.057144E+02	2992	1.884650E+06	1.372825E+03	2.184919E+02
2943	1.672990E+06	1.293441E+03	2.058576E+02	2993	1.892252E+06	1.375592E+03	2.189322E+02
2944	1.676956E+06	1.294974E+03	2.061014E+02	2994	1.898121E+06	1.377723E+03	2.192715E+02
2945	1.683240E+06	1.297397E+03	2.064872E+02	2995	1.904351E+06	1.379982E+03	2.196310E+02
2946	1.685168E+06	1.298140E+03	2.066054E+02	2996	1.907704E+06	1.381197E+03	2.198243E+02
2947	1.685904E+06	1.298424E+03	2.066505E+02	2997	1.909375E+06	1.381801E+03	2.199205E+02
2948	1.689841E+06	1.299939E+03	2.068917E+02	2998	1.911691E+06	1.382639E+03	2.200538E+02
2949	1.696697E+06	1.302573E+03	2.073110E+02	2999	1.920057E+06	1.385661E+03	2.205348E+02
2950	1.700141E+06	1.303895E+03	2.075213E+02	3000	1.925823E+06	1.387740E+03	2.208657E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 291

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3001	1.929201E+06	1.388957E+03	2.210593E+02	3051	2.143830E+06	1.464182E+03	2.330319E+02
3002	1.930094E+06	1.389278E+03	2.211105E+02	3052	2.152836E+06	1.467255E+03	2.335208E+02
3003	1.937788E+06	1.392045E+03	2.215508E+02	3053	2.162807E+06	1.470649E+03	2.340610E+02
3004	1.940828E+06	1.393136E+03	2.217245E+02	3054	2.169220E+06	1.472827E+03	2.344077E+02
3005	1.947397E+06	1.395492E+03	2.220994E+02	3055	2.173305E+06	1.474213E+03	2.346283E+02
3006	1.950412E+06	1.396571E+03	2.222712E+02	3056	2.175928E+06	1.475103E+03	2.347699E+02
3007	1.958519E+06	1.399471E+03	2.227327E+02	3057	2.178203E+06	1.475874E+03	2.348926E+02
3008	1.959724E+06	1.399902E+03	2.228013E+02	3058	2.186887E+06	1.478813E+03	2.353604E+02
3009	1.963671E+06	1.401310E+03	2.230255E+02	3059	2.190460E+06	1.480020E+03	2.355525E+02
3010	1.967926E+06	1.402828E+03	2.232670E+02	3060	2.191972E+06	1.480531E+03	2.356338E+02
3011	1.976981E+06	1.406051E+03	2.237800E+02	3061	2.194008E+06	1.481218E+03	2.357432E+02
3012	1.979186E+06	1.406836E+03	2.239048E+02	3062	2.194710E+06	1.481455E+03	2.357810E+02
3013	1.985081E+06	1.408929E+03	2.242380E+02	3063	2.198700E+06	1.482801E+03	2.359952E+02
3014	1.991840E+06	1.411325E+03	2.246194E+02	3064	2.204044E+06	1.484602E+03	2.362818E+02
3015	1.993667E+06	1.411973E+03	2.247224E+02	3065	2.206688E+06	1.485493E+03	2.364235E+02
3016	1.995628E+06	1.412667E+03	2.248330E+02	3066	2.210737E+06	1.486855E+03	2.366403E+02
3017	2.002808E+06	1.415206E+03	2.252371E+02	3067	2.217357E+06	1.489079E+03	2.369943E+02
3018	2.008085E+06	1.417069E+03	2.255336E+02	3068	2.218233E+06	1.489373E+03	2.370411E+02
3019	2.012314E+06	1.418561E+03	2.257709E+02	3069	2.223927E+06	1.491284E+03	2.373452E+02
3020	2.015064E+06	1.419529E+03	2.259251E+02	3070	2.231422E+06	1.493794E+03	2.377448E+02
3021	2.022879E+06	1.422279E+03	2.263628E+02	3071	2.233491E+06	1.494487E+03	2.378550E+02
3022	2.027912E+06	1.424048E+03	2.266443E+02	3072	2.242596E+06	1.497530E+03	2.383393E+02
3023	2.035082E+06	1.426563E+03	2.270446E+02	3073	2.252467E+06	1.500822E+03	2.388632E+02
3024	2.040488E+06	1.428457E+03	2.273459E+02	3074	2.254634E+06	1.501544E+03	2.389781E+02
3025	2.042029E+06	1.428996E+03	2.274317E+02	3075	2.260957E+06	1.503648E+03	2.393130E+02
3026	2.045041E+06	1.430049E+03	2.275994E+02	3076	2.262866E+06	1.504283E+03	2.394140E+02
3027	2.049648E+06	1.431659E+03	2.278557E+02	3077	2.266629E+06	1.505533E+03	2.396130E+02
3028	2.053183E+06	1.432893E+03	2.280521E+02	3078	2.273529E+06	1.507823E+03	2.399774E+02
3029	2.056000E+06	1.433876E+03	2.282084E+02	3079	2.281366E+06	1.510419E+03	2.403907E+02
3030	2.064265E+06	1.436755E+03	2.286666E+02	3080	2.283889E+06	1.511254E+03	2.405236E+02
3031	2.067541E+06	1.437895E+03	2.288481E+02	3081	2.286809E+06	1.512220E+03	2.406773E+02
3032	2.070813E+06	1.439032E+03	2.290290E+02	3082	2.289507E+06	1.513112E+03	2.408192E+02
3033	2.071810E+06	1.439378E+03	2.290842E+02	3083	2.296874E+06	1.515544E+03	2.412063E+02
3034	2.075630E+06	1.440705E+03	2.292953E+02	3084	2.298575E+06	1.516105E+03	2.412956E+02
3035	2.078651E+06	1.441753E+03	2.294621E+02	3085	2.309260E+06	1.519625E+03	2.418558E+02
3036	2.084128E+06	1.443651E+03	2.297642E+02	3086	2.311466E+06	1.520351E+03	2.419713E+02
3037	2.088467E+06	1.445153E+03	2.300032E+02	3087	2.318409E+06	1.522632E+03	2.423344E+02
3038	2.091411E+06	1.446171E+03	2.301653E+02	3088	2.321404E+06	1.523616E+03	2.424909E+02
3039	2.093482E+06	1.446887E+03	2.302792E+02	3089	2.327619E+06	1.525654E+03	2.428153E+02
3040	2.098745E+06	1.448705E+03	2.305685E+02	3090	2.333703E+06	1.527646E+03	2.431324E+02
3041	2.103522E+06	1.450352E+03	2.308308E+02	3091	2.338840E+06	1.529327E+03	2.433999E+02
3042	2.107204E+06	1.451621E+03	2.310327E+02	3092	2.345119E+06	1.531378E+03	2.437264E+02
3043	2.110988E+06	1.452924E+03	2.312400E+02	3093	2.346200E+06	1.531731E+03	2.437826E+02
3044	2.112876E+06	1.453573E+03	2.313434E+02	3094	2.352905E+06	1.533918E+03	2.441307E+02
3045	2.116956E+06	1.454976E+03	2.315667E+02	3095	2.358333E+06	1.535687E+03	2.444121E+02
3046	2.122776E+06	1.456975E+03	2.318848E+02	3096	2.365389E+06	1.537982E+03	2.447775E+02
3047	2.125589E+06	1.457940E+03	2.320384E+02	3097	2.370547E+06	1.539658E+03	2.450442E+02
3048	2.129537E+06	1.459293E+03	2.322538E+02	3098	2.371747E+06	1.540048E+03	2.451062E+02
3049	2.136681E+06	1.461739E+03	2.326430E+02	3099	2.378807E+06	1.542338E+03	2.454707E+02
3050	2.140221E+06	1.462949E+03	2.328356E+02	3100	2.385258E+06	1.544428E+03	2.458034E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 292

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3101	2.398561E+06	1.548729E+03	2.464878E+02	3151	2.698477E+06	1.642704E+03	2.614445E+02
3102	2.406923E+06	1.551426E+03	2.469172E+02	3152	2.703003E+06	1.644081E+03	2.616636E+02
3103	2.411437E+06	1.552880E+03	2.471486E+02	3153	2.708568E+06	1.645773E+03	2.619329E+02
3104	2.415054E+06	1.554044E+03	2.473339E+02	3154	2.710524E+06	1.646367E+03	2.620274E+02
3105	2.424946E+06	1.557224E+03	2.478399E+02	3155	2.722938E+06	1.650133E+03	2.626268E+02
3106	2.429962E+06	1.558834E+03	2.480961E+02	3156	2.733473E+06	1.653322E+03	2.631343E+02
3107	2.436615E+06	1.560966E+03	2.484355E+02	3157	2.742088E+06	1.655925E+03	2.635487E+02
3108	2.441735E+06	1.562605E+03	2.486963E+02	3158	2.754008E+06	1.659520E+03	2.641209E+02
3109	2.451203E+06	1.565632E+03	2.491780E+02	3159	2.756866E+06	1.660381E+03	2.642579E+02
3110	2.452104E+06	1.565920E+03	2.492238E+02	3160	2.762483E+06	1.662072E+03	2.645269E+02
3111	2.454047E+06	1.566540E+03	2.493226E+02	3161	2.767471E+06	1.663572E+03	2.647657E+02
3112	2.458520E+06	1.567967E+03	2.495497E+02	3162	2.776371E+06	1.666245E+03	2.651911E+02
3113	2.468199E+06	1.571050E+03	2.500404E+02	3163	2.779178E+06	1.667087E+03	2.653251E+02
3114	2.473218E+06	1.572647E+03	2.502945E+02	3164	2.784946E+06	1.668816E+03	2.656003E+02
3115	2.484371E+06	1.576189E+03	2.508582E+02	3165	2.794449E+06	1.671661E+03	2.660530E+02
3116	2.491712E+06	1.578516E+03	2.512286E+02	3166	2.798879E+06	1.672985E+03	2.662638E+02
3117	2.500006E+06	1.581141E+03	2.516464E+02	3167	2.800974E+06	1.673611E+03	2.663635E+02
3118	2.505036E+06	1.582731E+03	2.518994E+02	3168	2.807484E+06	1.675555E+03	2.666728E+02
3119	2.510588E+06	1.584484E+03	2.521784E+02	3169	2.823913E+06	1.680450E+03	2.674520E+02
3120	2.519221E+06	1.587206E+03	2.526116E+02	3170	2.825742E+06	1.680994E+03	2.675385E+02
3121	2.524115E+06	1.588746E+03	2.528568E+02	3171	2.830788E+06	1.682495E+03	2.677773E+02
3122	2.537220E+06	1.592865E+03	2.535124E+02	3172	2.836320E+06	1.684138E+03	2.680388E+02
3123	2.545074E+06	1.595329E+03	2.539045E+02	3173	2.840670E+06	1.685429E+03	2.682443E+02
3124	2.546928E+06	1.595910E+03	2.539969E+02	3174	2.849547E+06	1.688060E+03	2.686631E+02
3125	2.551673E+06	1.597396E+03	2.542334E+02	3175	2.853098E+06	1.689112E+03	2.688305E+02
3126	2.558763E+06	1.599614E+03	2.545864E+02	3176	2.862299E+06	1.691833E+03	2.692636E+02
3127	2.564025E+06	1.601257E+03	2.548480E+02	3177	2.868877E+06	1.693776E+03	2.695728E+02
3128	2.569363E+06	1.602923E+03	2.551132E+02	3178	2.873183E+06	1.695047E+03	2.697750E+02
3129	2.574058E+06	1.604387E+03	2.553461E+02	3179	2.888759E+06	1.699635E+03	2.705053E+02
3130	2.590503E+06	1.609504E+03	2.561605E+02	3180	2.892184E+06	1.700642E+03	2.706656E+02
3131	2.593442E+06	1.610417E+03	2.563058E+02	3181	2.900102E+06	1.702968E+03	2.710359E+02
3132	2.595357E+06	1.611011E+03	2.564004E+02	3182	2.907130E+06	1.705031E+03	2.713641E+02
3133	2.601061E+06	1.612781E+03	2.566820E+02	3183	2.910189E+06	1.705928E+03	2.715068E+02
3134	2.607349E+06	1.614729E+03	2.569921E+02	3184	2.915306E+06	1.707427E+03	2.717454E+02
3135	2.608772E+06	1.615169E+03	2.570622E+02	3185	2.921880E+06	1.709351E+03	2.720516E+02
3136	2.614017E+06	1.616792E+03	2.573205E+02	3186	2.926441E+06	1.710685E+03	2.722639E+02
3137	2.624313E+06	1.619973E+03	2.578268E+02	3187	2.931266E+06	1.712094E+03	2.724882E+02
3138	2.626690E+06	1.620707E+03	2.579435E+02	3188	2.936109E+06	1.713508E+03	2.727132E+02
3139	2.632667E+06	1.622550E+03	2.582368E+02	3189	2.954228E+06	1.718787E+03	2.735534E+02
3140	2.634628E+06	1.623154E+03	2.583329E+02	3190	2.956331E+06	1.719398E+03	2.736508E+02
3141	2.642796E+06	1.625668E+03	2.587331E+02	3191	2.962601E+06	1.721221E+03	2.739408E+02
3142	2.645287E+06	1.626434E+03	2.588550E+02	3192	2.970167E+06	1.723417E+03	2.742904E+02
3143	2.650998E+06	1.628189E+03	2.591343E+02	3193	2.979322E+06	1.726071E+03	2.747128E+02
3144	2.661153E+06	1.631304E+03	2.596301E+02	3194	2.983693E+06	1.727337E+03	2.749142E+02
3145	2.663364E+06	1.631982E+03	2.597379E+02	3195	2.985457E+06	1.727847E+03	2.749955E+02
3146	2.669048E+06	1.633722E+03	2.600149E+02	3196	2.992843E+06	1.729984E+03	2.753354E+02
3147	2.674986E+06	1.635539E+03	2.603040E+02	3197	3.005126E+06	1.733530E+03	2.758998E+02
3148	2.679015E+06	1.636770E+03	2.605000E+02	3198	3.011585E+06	1.735392E+03	2.761962E+02
3149	2.683050E+06	1.638002E+03	2.606961E+02	3199	3.013783E+06	1.736025E+03	2.762970E+02
3150	2.696955E+06	1.642241E+03	2.613708E+02	3200	3.019963E+06	1.737804E+03	2.765801E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 293

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3201	3.032229E+06	1.741330E+03	2.771412E+02	3251	3.396998E+06	1.843095E+03	2.933376E+02
3202	3.037650E+06	1.742886E+03	2.773889E+02	3252	3.405578E+06	1.845421E+03	2.937079E+02
3203	3.039700E+06	1.743473E+03	2.774824E+02	3253	3.412095E+06	1.847186E+03	2.939887E+02
3204	3.047381E+06	1.745675E+03	2.778328E+02	3254	3.427250E+06	1.851283E+03	2.946409E+02
3205	3.059795E+06	1.749227E+03	2.783981E+02	3255	3.441354E+06	1.855089E+03	2.952465E+02
3206	3.060595E+06	1.749456E+03	2.784345E+02	3256	3.451542E+06	1.857832E+03	2.956832E+02
3207	3.071877E+06	1.752677E+03	2.789472E+02	3257	3.453588E+06	1.858383E+03	2.957709E+02
3208	3.079609E+06	1.754881E+03	2.792981E+02	3258	3.461417E+06	1.860488E+03	2.961059E+02
3209	3.087598E+06	1.757156E+03	2.796601E+02	3259	3.472978E+06	1.863593E+03	2.966000E+02
3210	3.096563E+06	1.759705E+03	2.800658E+02	3260	3.474131E+06	1.863902E+03	2.966492E+02
3211	3.107399E+06	1.762781E+03	2.805554E+02	3261	3.481637E+06	1.865915E+03	2.969695E+02
3212	3.110621E+06	1.763695E+03	2.807008E+02	3262	3.484472E+06	1.866674E+03	2.970904E+02
3213	3.116609E+06	1.765392E+03	2.809708E+02	3263	3.502043E+06	1.871375E+03	2.978385E+02
3214	3.129957E+06	1.769168E+03	2.815719E+02	3264	3.504241E+06	1.871962E+03	2.979320E+02
3215	3.133406E+06	1.770143E+03	2.817270E+02	3265	3.512681E+06	1.874215E+03	2.982905E+02
3216	3.137604E+06	1.771328E+03	2.819157E+02	3266	3.517490E+06	1.875497E+03	2.984947E+02
3217	3.142595E+06	1.772737E+03	2.821398E+02	3267	3.524731E+06	1.877427E+03	2.988017E+02
3218	3.146623E+06	1.773872E+03	2.823205E+02	3268	3.529620E+06	1.878728E+03	2.990089E+02
3219	3.155580E+06	1.776395E+03	2.827221E+02	3269	3.536721E+06	1.880617E+03	2.993095E+02
3220	3.157472E+06	1.776928E+03	2.828068E+02	3270	3.540609E+06	1.881651E+03	2.994740E+02
3221	3.161023E+06	1.777926E+03	2.829658E+02	3271	3.549619E+06	1.884043E+03	2.998548E+02
3222	3.165768E+06	1.779261E+03	2.831781E+02	3272	3.561665E+06	1.887237E+03	3.003632E+02
3223	3.170946E+06	1.780715E+03	2.834096E+02	3273	3.568867E+06	1.889145E+03	3.006667E+02
3224	3.175791E+06	1.782075E+03	2.836260E+02	3274	3.581755E+06	1.892552E+03	3.012091E+02
3225	3.183672E+06	1.784285E+03	2.839777E+02	3275	3.583965E+06	1.893136E+03	3.013020E+02
3226	3.201518E+06	1.789279E+03	2.847725E+02	3276	3.592863E+06	1.895485E+03	3.016758E+02
3227	3.212130E+06	1.792242E+03	2.852441E+02	3277	3.614009E+06	1.901055E+03	3.025622E+02
3228	3.215256E+06	1.793113E+03	2.853829E+02	3278	3.616983E+06	1.901837E+03	3.026867E+02
3229	3.224730E+06	1.795753E+03	2.858030E+02	3279	3.623582E+06	1.903571E+03	3.029627E+02
3230	3.234548E+06	1.798485E+03	2.862377E+02	3280	3.632490E+06	1.905909E+03	3.033349E+02
3231	3.239942E+06	1.799984E+03	2.864763E+02	3281	3.638569E+06	1.907503E+03	3.035886E+02
3232	3.246805E+06	1.801889E+03	2.867796E+02	3282	3.642839E+06	1.908622E+03	3.037667E+02
3233	3.247978E+06	1.802215E+03	2.868314E+02	3283	3.652414E+06	1.911129E+03	3.041656E+02
3234	3.257905E+06	1.804967E+03	2.872694E+02	3284	3.660223E+06	1.913171E+03	3.044906E+02
3235	3.267121E+06	1.807518E+03	2.876754E+02	3285	3.665035E+06	1.914428E+03	3.046907E+02
3236	3.281948E+06	1.811615E+03	2.883274E+02	3286	3.673295E+06	1.916584E+03	3.050338E+02
3237	3.294480E+06	1.815070E+03	2.888774E+02	3287	3.675347E+06	1.917119E+03	3.051190E+02
3238	3.307991E+06	1.818788E+03	2.894691E+02	3288	3.680553E+06	1.918477E+03	3.053350E+02
3239	3.311323E+06	1.819704E+03	2.896149E+02	3289	3.689817E+06	1.920890E+03	3.057191E+02
3240	3.318723E+06	1.821736E+03	2.899383E+02	3290	3.704359E+06	1.924671E+03	3.063209E+02
3241	3.329008E+06	1.824557E+03	2.903873E+02	3291	3.713844E+06	1.927134E+03	3.067128E+02
3242	3.329278E+06	1.824631E+03	2.903990E+02	3292	3.719466E+06	1.928592E+03	3.069449E+02
3243	3.347547E+06	1.829630E+03	2.911947E+02	3293	3.728452E+06	1.930920E+03	3.073155E+02
3244	3.349826E+06	1.830253E+03	2.912938E+02	3294	3.743619E+06	1.934843E+03	3.079399E+02
3245	3.351489E+06	1.830707E+03	2.913661E+02	3295	3.754633E+06	1.937687E+03	3.083925E+02
3246	3.358797E+06	1.832702E+03	2.916836E+02	3296	3.763180E+06	1.939892E+03	3.087434E+02
3247	3.365612E+06	1.834561E+03	2.919794E+02	3297	3.769306E+06	1.941470E+03	3.089946E+02
3248	3.369674E+06	1.835667E+03	2.921555E+02	3298	3.771707E+06	1.942088E+03	3.090929E+02
3249	3.387584E+06	1.840539E+03	2.929309E+02	3299	3.775319E+06	1.943018E+03	3.092409E+02
3250	3.390718E+06	1.841390E+03	2.930664E+02	3300	3.789210E+06	1.946589E+03	3.098093E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 294

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3301	3.795198E+06	1.948127E+03	3.100540E+02	3351	4.204703E+06	2.050537E+03	3.263531E+02
3302	3.805879E+06	1.950866E+03	3.104900E+02	3352	4.219310E+06	2.054096E+03	3.269195E+02
3303	3.806641E+06	1.951061E+03	3.105211E+02	3353	4.228941E+06	2.056439E+03	3.272924E+02
3304	3.819314E+06	1.954306E+03	3.110375E+02	3354	4.230564E+06	2.056834E+03	3.273552E+02
3305	3.827364E+06	1.956365E+03	3.113652E+02	3355	4.247072E+06	2.060843E+03	3.279933E+02
3306	3.839437E+06	1.959448E+03	3.118558E+02	3356	4.255790E+06	2.062957E+03	3.283298E+02
3307	3.842939E+06	1.960342E+03	3.119980E+02	3357	4.276565E+06	2.067986E+03	3.291301E+02
3308	3.846819E+06	1.961331E+03	3.121555E+02	3358	4.290205E+06	2.071281E+03	3.296546E+02
3309	3.868812E+06	1.966929E+03	3.130465E+02	3359	4.301816E+06	2.074082E+03	3.301004E+02
3310	3.870832E+06	1.967443E+03	3.131283E+02	3360	4.316951E+06	2.077727E+03	3.306806E+02
3311	3.887759E+06	1.971740E+03	3.138122E+02	3361	4.333987E+06	2.081823E+03	3.313324E+02
3312	3.889722E+06	1.972238E+03	3.138914E+02	3362	4.336450E+06	2.082414E+03	3.314265E+02
3313	3.900630E+06	1.975001E+03	3.143312E+02	3363	4.342196E+06	2.083794E+03	3.316460E+02
3314	3.904951E+06	1.976095E+03	3.145053E+02	3364	4.358506E+06	2.087704E+03	3.322683E+02
3315	3.911129E+06	1.977657E+03	3.147540E+02	3365	4.361580E+06	2.088440E+03	3.323855E+02
3316	3.918324E+06	1.979476E+03	3.150433E+02	3366	4.366071E+06	2.089514E+03	3.325566E+02
3317	3.921408E+06	1.980255E+03	3.151673E+02	3367	4.370437E+06	2.090559E+03	3.327228E+02
3318	3.925051E+06	1.981174E+03	3.153136E+02	3368	4.387415E+06	2.094616E+03	3.333685E+02
3319	3.929264E+06	1.982237E+03	3.154828E+02	3369	4.413454E+06	2.100822E+03	3.343562E+02
3320	3.934094E+06	1.983455E+03	3.156767E+02	3370	4.420925E+06	2.102600E+03	3.346391E+02
3321	3.936802E+06	1.984138E+03	3.157853E+02	3371	4.421636E+06	2.102769E+03	3.346660E+02
3322	3.955073E+06	1.988736E+03	3.165172E+02	3372	4.428794E+06	2.104470E+03	3.349368E+02
3323	3.967729E+06	1.991916E+03	3.170233E+02	3373	4.452208E+06	2.110026E+03	3.358210E+02
3324	3.970092E+06	1.992509E+03	3.171176E+02	3374	4.455400E+06	2.110782E+03	3.359414E+02
3325	3.983727E+06	1.995927E+03	3.176617E+02	3375	4.458370E+06	2.111485E+03	3.360533E+02
3326	3.987827E+06	1.996954E+03	3.178252E+02	3376	4.466465E+06	2.113401E+03	3.363583E+02
3327	4.002459E+06	2.000615E+03	3.184077E+02	3377	4.482738E+06	2.117248E+03	3.369704E+02
3328	4.010428E+06	2.002605E+03	3.187245E+02	3378	4.490881E+06	2.119170E+03	3.372764E+02
3329	4.015498E+06	2.003871E+03	3.189259E+02	3379	4.508459E+06	2.123313E+03	3.379358E+02
3330	4.024651E+06	2.006153E+03	3.192892E+02	3380	4.515029E+06	2.124860E+03	3.381819E+02
3331	4.040028E+06	2.009982E+03	3.198986E+02	3381	4.535933E+06	2.129773E+03	3.389639E+02
3332	4.043526E+06	2.010852E+03	3.200371E+02	3382	4.540886E+06	2.130935E+03	3.391489E+02
3333	4.049536E+06	2.012346E+03	3.202748E+02	3383	4.548464E+06	2.132713E+03	3.394318E+02
3334	4.052032E+06	2.012966E+03	3.203735E+02	3384	4.569294E+06	2.137591E+03	3.402081E+02
3335	4.062351E+06	2.015527E+03	3.207811E+02	3385	4.573381E+06	2.138547E+03	3.403602E+02
3336	4.069940E+06	2.017409E+03	3.210806E+02	3386	4.582920E+06	2.140776E+03	3.407150E+02
3337	4.072491E+06	2.018041E+03	3.211813E+02	3387	4.587894E+06	2.141937E+03	3.408999E+02
3338	4.077126E+06	2.019190E+03	3.213640E+02	3388	4.607063E+06	2.146407E+03	3.416113E+02
3339	4.083522E+06	2.020773E+03	3.216159E+02	3389	4.608727E+06	2.146795E+03	3.416730E+02
3340	4.096898E+06	2.024080E+03	3.221423E+02	3390	4.616981E+06	2.148716E+03	3.419788E+02
3341	4.097552E+06	2.024241E+03	3.221680E+02	3391	4.635280E+06	2.152970E+03	3.426558E+02
3342	4.108041E+06	2.026830E+03	3.225801E+02	3392	4.642347E+06	2.154611E+03	3.429169E+02
3343	4.114014E+06	2.028303E+03	3.228145E+02	3393	4.651733E+06	2.156788E+03	3.432634E+02
3344	4.132552E+06	2.032868E+03	3.235410E+02	3394	4.662656E+06	2.159319E+03	3.436662E+02
3345	4.137104E+06	2.033987E+03	3.237191E+02	3395	4.667640E+06	2.160472E+03	3.438498E+02
3346	4.160443E+06	2.039716E+03	3.246309E+02	3396	4.672686E+06	2.161640E+03	3.440357E+02
3347	4.169669E+06	2.041977E+03	3.249907E+02	3397	4.686262E+06	2.164778E+03	3.445351E+02
3348	4.177757E+06	2.043956E+03	3.253057E+02	3398	4.694474E+06	2.166674E+03	3.448368E+02
3349	4.182914E+06	2.045217E+03	3.255065E+02	3399	4.699431E+06	2.167817E+03	3.450188E+02
3350	4.191515E+06	2.047319E+03	3.258409E+02	3400	4.707966E+06	2.169785E+03	3.453320E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 295

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3401	4.718809E+06	2.172282E+03	3.457294E+02	3451	5.227600E+06	2.286395E+03	3.638910E+02
3402	4.721428E+06	2.172885E+03	3.458253E+02	3452	5.241217E+06	2.289370E+03	3.643646E+02
3403	4.729402E+06	2.174719E+03	3.461173E+02	3453	5.251972E+06	2.291718E+03	3.647383E+02
3404	4.740420E+06	2.177250E+03	3.465202E+02	3454	5.260090E+06	2.293489E+03	3.650200E+02
3405	4.750281E+06	2.179514E+03	3.468804E+02	3455	5.288327E+06	2.299636E+03	3.659985E+02
3406	4.760329E+06	2.181818E+03	3.472471E+02	3456	5.297719E+06	2.301677E+03	3.663233E+02
3407	4.763828E+06	2.182619E+03	3.473747E+02	3457	5.306082E+06	2.303493E+03	3.666124E+02
3408	4.781837E+06	2.186741E+03	3.480307E+02	3458	5.310443E+06	2.304440E+03	3.667630E+02
3409	4.788024E+06	2.188155E+03	3.482557E+02	3459	5.326484E+06	2.307918E+03	3.673165E+02
3410	4.803446E+06	2.191677E+03	3.488162E+02	3460	5.327033E+06	2.308037E+03	3.673354E+02
3411	4.810097E+06	2.193193E+03	3.490575E+02	3461	5.337244E+06	2.310248E+03	3.676873E+02
3412	4.828927E+06	2.197482E+03	3.497401E+02	3462	5.353535E+06	2.313771E+03	3.682480E+02
3413	4.840768E+06	2.200175E+03	3.501687E+02	3463	5.367735E+06	2.316837E+03	3.687361E+02
3414	4.854211E+06	2.203227E+03	3.506545E+02	3464	5.380689E+06	2.319631E+03	3.691808E+02
3415	4.859726E+06	2.204479E+03	3.508537E+02	3465	5.388864E+06	2.321393E+03	3.694611E+02
3416	4.869288E+06	2.206646E+03	3.511987E+02	3466	5.392197E+06	2.322111E+03	3.695754E+02
3417	4.883843E+06	2.209942E+03	3.517232E+02	3467	5.409750E+06	2.325887E+03	3.701764E+02
3418	4.905187E+06	2.214766E+03	3.524909E+02	3468	5.422624E+06	2.328653E+03	3.706166E+02
3419	4.908226E+06	2.215452E+03	3.526001E+02	3469	5.441048E+06	2.332606E+03	3.712457E+02
3420	4.922386E+06	2.218645E+03	3.531083E+02	3470	5.461172E+06	2.336915E+03	3.719316E+02
3421	4.926547E+06	2.219583E+03	3.532575E+02	3471	5.485088E+06	2.342026E+03	3.727451E+02
3422	4.948374E+06	2.224494E+03	3.540392E+02	3472	5.497273E+06	2.344627E+03	3.731589E+02
3423	4.958627E+06	2.226797E+03	3.544058E+02	3473	5.502002E+06	2.345635E+03	3.733193E+02
3424	4.964328E+06	2.228077E+03	3.546095E+02	3474	5.516190E+06	2.348657E+03	3.738004E+02
3425	4.968091E+06	2.228922E+03	3.547439E+02	3475	5.518678E+06	2.349187E+03	3.738847E+02
3426	4.969142E+06	2.229157E+03	3.547814E+02	3476	5.534482E+06	2.352548E+03	3.744196E+02
3427	4.977037E+06	2.230927E+03	3.550631E+02	3477	5.549479E+06	2.355733E+03	3.749266E+02
3428	4.984973E+06	2.232705E+03	3.553461E+02	3478	5.559485E+06	2.357856E+03	3.752644E+02
3429	4.994803E+06	2.234906E+03	3.556963E+02	3479	5.573959E+06	2.360923E+03	3.757526E+02
3430	5.000248E+06	2.236123E+03	3.558901E+02	3480	5.591178E+06	2.364567E+03	3.763326E+02
3431	5.003684E+06	2.236892E+03	3.560124E+02	3481	5.597238E+06	2.365848E+03	3.765364E+02
3432	5.015933E+06	2.239628E+03	3.564478E+02	3482	5.620068E+06	2.370668E+03	3.773036E+02
3433	5.024235E+06	2.241480E+03	3.567427E+02	3483	5.635709E+06	2.373965E+03	3.778282E+02
3434	5.032176E+06	2.243251E+03	3.570245E+02	3484	5.644967E+06	2.375914E+03	3.781385E+02
3435	5.044989E+06	2.246105E+03	3.574788E+02	3485	5.650692E+06	2.377118E+03	3.783302E+02
3436	5.056963E+06	2.248769E+03	3.579027E+02	3486	5.683551E+06	2.384020E+03	3.794286E+02
3437	5.067348E+06	2.251077E+03	3.582701E+02	3487	5.694029E+06	2.386216E+03	3.797781E+02
3438	5.079884E+06	2.253860E+03	3.587129E+02	3488	5.707801E+06	2.389100E+03	3.802371E+02
3439	5.081333E+06	2.254181E+03	3.587641E+02	3489	5.718158E+06	2.391267E+03	3.805820E+02
3440	5.091298E+06	2.256391E+03	3.591157E+02	3490	5.731257E+06	2.394004E+03	3.810176E+02
3441	5.093970E+06	2.256982E+03	3.592099E+02	3491	5.745922E+06	2.397065E+03	3.815048E+02
3442	5.111523E+06	2.260868E+03	3.598283E+02	3492	5.749859E+06	2.397886E+03	3.816355E+02
3443	5.123684E+06	2.263556E+03	3.602561E+02	3493	5.765114E+06	2.401065E+03	3.821414E+02
3444	5.129762E+06	2.264898E+03	3.604697E+02	3494	5.774491E+06	2.403017E+03	3.824520E+02
3445	5.143740E+06	2.267981E+03	3.609605E+02	3495	5.796294E+06	2.407549E+03	3.831734E+02
3446	5.169430E+06	2.273638E+03	3.618607E+02	3496	5.810487E+06	2.410495E+03	3.836422E+02
3447	5.182397E+06	2.276488E+03	3.623143E+02	3497	5.818235E+06	2.412102E+03	3.838979E+02
3448	5.188028E+06	2.277724E+03	3.625111E+02	3498	5.824113E+06	2.413320E+03	3.840918E+02
3449	5.196207E+06	2.279519E+03	3.627967E+02	3499	5.885938E+06	2.426095E+03	3.861250E+02
3450	5.223201E+06	2.285432E+03	3.637379E+02	3500	5.895607E+06	2.428087E+03	3.864421E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 296

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3501	5.914470E+06	2.431968E+03	3.870598E+02	3551	6.591269E+06	2.567347E+03	4.086059E+02
3502	5.929376E+06	2.435031E+03	3.875472E+02	3552	6.598968E+06	2.568846E+03	4.088445E+02
3503	5.948984E+06	2.439054E+03	3.881875E+02	3553	6.641405E+06	2.577092E+03	4.101570E+02
3504	5.960851E+06	2.441485E+03	3.885745E+02	3554	6.676212E+06	2.583837E+03	4.112304E+02
3505	5.971621E+06	2.443690E+03	3.889254E+02	3555	6.683484E+06	2.585243E+03	4.114543E+02
3506	5.976625E+06	2.444714E+03	3.890883E+02	3556	6.708372E+06	2.590052E+03	4.122197E+02
3507	5.993780E+06	2.448220E+03	3.896463E+02	3557	6.756619E+06	2.599350E+03	4.136994E+02
3508	5.996565E+06	2.448788E+03	3.897368E+02	3558	6.773963E+06	2.602684E+03	4.142300E+02
3509	6.002009E+06	2.449900E+03	3.899137E+02	3559	6.786079E+06	2.605010E+03	4.146003E+02
3510	6.009426E+06	2.451413E+03	3.901545E+02	3560	6.800873E+06	2.607848E+03	4.150520E+02
3511	6.025810E+06	2.454753E+03	3.906860E+02	3561	6.815218E+06	2.610597E+03	4.154895E+02
3512	6.052912E+06	2.460267E+03	3.915636E+02	3562	6.832627E+06	2.613929E+03	4.160198E+02
3513	6.062104E+06	2.462134E+03	3.918608E+02	3563	6.841189E+06	2.615567E+03	4.162803E+02
3514	6.075961E+06	2.464946E+03	3.923084E+02	3564	6.867217E+06	2.620537E+03	4.170715E+02
3515	6.084915E+06	2.466762E+03	3.925974E+02	3565	6.884396E+06	2.623813E+03	4.175929E+02
3516	6.097386E+06	2.469289E+03	3.929995E+02	3566	6.896045E+06	2.626032E+03	4.179460E+02
3517	6.106883E+06	2.471211E+03	3.933054E+02	3567	6.899842E+06	2.626755E+03	4.180610E+02
3518	6.130871E+06	2.476060E+03	3.940771E+02	3568	6.931732E+06	2.632818E+03	4.190260E+02
3519	6.136474E+06	2.477191E+03	3.942572E+02	3569	6.933463E+06	2.633147E+03	4.190784E+02
3520	6.174349E+06	2.484824E+03	3.954720E+02	3570	6.950807E+06	2.636438E+03	4.196022E+02
3521	6.183680E+06	2.486701E+03	3.957707E+02	3571	6.957134E+06	2.637638E+03	4.197931E+02
3522	6.200037E+06	2.489987E+03	3.962938E+02	3572	6.979356E+06	2.641847E+03	4.204630E+02
3523	6.217830E+06	2.493558E+03	3.968620E+02	3573	6.980704E+06	2.642102E+03	4.205036E+02
3524	6.234116E+06	2.496821E+03	3.973814E+02	3574	6.995094E+06	2.644824E+03	4.209368E+02
3525	6.249931E+06	2.499986E+03	3.978852E+02	3575	7.018860E+06	2.649313E+03	4.216513E+02
3526	6.259836E+06	2.501966E+03	3.982003E+02	3576	7.038735E+06	2.653061E+03	4.222478E+02
3527	6.271715E+06	2.504339E+03	3.985780E+02	3577	7.063122E+06	2.657653E+03	4.229787E+02
3528	6.296377E+06	2.509258E+03	3.993609E+02	3578	7.075257E+06	2.659936E+03	4.233419E+02
3529	6.309465E+06	2.511865E+03	3.997757E+02	3579	7.081153E+06	2.661044E+03	4.235182E+02
3530	6.323059E+06	2.514569E+03	4.002062E+02	3580	7.110229E+06	2.666501E+03	4.243869E+02
3531	6.339974E+06	2.517930E+03	4.007411E+02	3581	7.121798E+06	2.668670E+03	4.247320E+02
3532	6.357357E+06	2.521380E+03	4.012901E+02	3582	7.151315E+06	2.674194E+03	4.256112E+02
3533	6.360982E+06	2.522099E+03	4.014045E+02	3583	7.175224E+06	2.678661E+03	4.263221E+02
3534	6.382277E+06	2.526317E+03	4.020758E+02	3584	7.182259E+06	2.679974E+03	4.265311E+02
3535	6.387359E+06	2.527323E+03	4.022359E+02	3585	7.199429E+06	2.683175E+03	4.270406E+02
3536	6.407377E+06	2.531280E+03	4.028657E+02	3586	7.209165E+06	2.684989E+03	4.273293E+02
3537	6.421064E+06	2.533982E+03	4.032957E+02	3587	7.227364E+06	2.688376E+03	4.278683E+02
3538	6.427935E+06	2.535337E+03	4.035115E+02	3588	7.242176E+06	2.691129E+03	4.283065E+02
3539	6.442608E+06	2.538229E+03	4.039718E+02	3589	7.255000E+06	2.693511E+03	4.286855E+02
3540	6.447391E+06	2.539171E+03	4.041217E+02	3590	7.271744E+06	2.696617E+03	4.291799E+02
3541	6.467336E+06	2.543096E+03	4.047463E+02	3591	7.283954E+06	2.698880E+03	4.295401E+02
3542	6.473995E+06	2.544405E+03	4.049546E+02	3592	7.295797E+06	2.701073E+03	4.298892E+02
3543	6.482705E+06	2.546116E+03	4.052269E+02	3593	7.309341E+06	2.703579E+03	4.302880E+02
3544	6.496645E+06	2.548852E+03	4.056624E+02	3594	7.319321E+06	2.705424E+03	4.305817E+02
3545	6.501053E+06	2.549716E+03	4.057999E+02	3595	7.330651E+06	2.707518E+03	4.309148E+02
3546	6.517063E+06	2.552854E+03	4.062993E+02	3596	7.338462E+06	2.708960E+03	4.311443E+02
3547	6.526602E+06	2.554721E+03	4.065965E+02	3597	7.345520E+06	2.710262E+03	4.313516E+02
3548	6.537338E+06	2.556822E+03	4.069308E+02	3598	7.396201E+06	2.719596E+03	4.328371E+02
3549	6.550752E+06	2.559444E+03	4.073481E+02	3599	7.482691E+06	2.735451E+03	4.353605E+02
3550	6.579513E+06	2.565056E+03	4.082414E+02	3600	7.515717E+06	2.741481E+03	4.363202E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 297

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3601	7.526981E+06	2.743534E+03	4.366471E+02	3651	8.430903E+06	2.903602E+03	4.621226E+02
3602	7.541037E+06	2.746095E+03	4.370546E+02	3652	8.450950E+06	2.907052E+03	4.626717E+02
3603	7.571585E+06	2.751651E+03	4.379389E+02	3653	8.470355E+06	2.910387E+03	4.632025E+02
3604	7.591177E+06	2.755209E+03	4.385051E+02	3654	8.479899E+06	2.912027E+03	4.634634E+02
3605	7.606985E+06	2.758076E+03	4.389615E+02	3655	8.499060E+06	2.915315E+03	4.639867E+02
3606	7.613895E+06	2.759329E+03	4.391608E+02	3656	8.510335E+06	2.917248E+03	4.642944E+02
3607	7.636606E+06	2.763441E+03	4.398153E+02	3657	8.517765E+06	2.918521E+03	4.644970E+02
3608	7.657617E+06	2.767240E+03	4.404199E+02	3658	8.528121E+06	2.920295E+03	4.647793E+02
3609	7.678522E+06	2.771015E+03	4.410207E+02	3659	8.547380E+06	2.923590E+03	4.653038E+02
3610	7.696243E+06	2.774210E+03	4.415293E+02	3660	8.558373E+06	2.925470E+03	4.656030E+02
3611	7.708038E+06	2.776335E+03	4.418675E+02	3661	8.609415E+06	2.934181E+03	4.669893E+02
3612	7.733986E+06	2.781005E+03	4.426106E+02	3662	8.620986E+06	2.936152E+03	4.673030E+02
3613	7.741629E+06	2.782378E+03	4.428293E+02	3663	8.638825E+06	2.939188E+03	4.677863E+02
3614	7.772917E+06	2.787995E+03	4.437232E+02	3664	8.664556E+06	2.943562E+03	4.684824E+02
3615	7.782385E+06	2.789693E+03	4.439934E+02	3665	8.698606E+06	2.949340E+03	4.694020E+02
3616	7.806274E+06	2.793971E+03	4.446743E+02	3666	8.703550E+06	2.950178E+03	4.695354E+02
3617	7.821792E+06	2.796747E+03	4.451161E+02	3667	8.722704E+06	2.953422E+03	4.700518E+02
3618	7.829898E+06	2.798196E+03	4.453467E+02	3668	8.728160E+06	2.954346E+03	4.701988E+02
3619	7.833249E+06	2.798794E+03	4.454419E+02	3669	8.742856E+06	2.956832E+03	4.705944E+02
3620	7.851037E+06	2.801970E+03	4.459474E+02	3670	8.775615E+06	2.962366E+03	4.714753E+02
3621	7.877393E+06	2.806669E+03	4.466953E+02	3671	8.812694E+06	2.968618E+03	4.724703E+02
3622	7.883963E+06	2.807840E+03	4.468815E+02	3672	8.841392E+06	2.973448E+03	4.732389E+02
3623	7.911450E+06	2.812730E+03	4.476599E+02	3673	8.871441E+06	2.978496E+03	4.740424E+02
3624	7.934902E+06	2.816896E+03	4.483229E+02	3674	8.905246E+06	2.984166E+03	4.749447E+02
3625	7.945064E+06	2.818699E+03	4.486099E+02	3675	8.930879E+06	2.988458E+03	4.756278E+02
3626	7.958352E+06	2.821055E+03	4.489849E+02	3676	8.975874E+06	2.995976E+03	4.768244E+02
3627	7.981441E+06	2.825144E+03	4.496357E+02	3677	9.006212E+06	3.001035E+03	4.776296E+02
3628	7.986463E+06	2.826033E+03	4.497771E+02	3678	9.030181E+06	3.005026E+03	4.782647E+02
3629	8.020964E+06	2.832131E+03	4.507476E+02	3679	9.044373E+06	3.007386E+03	4.786404E+02
3630	8.039824E+06	2.835458E+03	4.512772E+02	3680	9.075944E+06	3.012631E+03	4.794751E+02
3631	8.068092E+06	2.840439E+03	4.520698E+02	3681	9.098464E+06	3.016366E+03	4.800696E+02
3632	8.109401E+06	2.847701E+03	4.532257E+02	3682	9.129162E+06	3.021450E+03	4.808788E+02
3633	8.120501E+06	2.849649E+03	4.535358E+02	3683	9.192406E+06	3.031898E+03	4.825416E+02
3634	8.129338E+06	2.851199E+03	4.537825E+02	3684	9.206951E+06	3.034296E+03	4.829232E+02
3635	8.133151E+06	2.851868E+03	4.538889E+02	3685	9.233078E+06	3.038598E+03	4.836079E+02
3636	8.153275E+06	2.855394E+03	4.544501E+02	3686	9.264222E+06	3.043719E+03	4.844228E+02
3637	8.166768E+06	2.857756E+03	4.548259E+02	3687	9.282282E+06	3.046684E+03	4.848948E+02
3638	8.182059E+06	2.860430E+03	4.552516E+02	3688	9.291704E+06	3.048230E+03	4.851408E+02
3639	8.193516E+06	2.862432E+03	4.555702E+02	3689	9.308295E+06	3.050950E+03	4.855738E+02
3640	8.216165E+06	2.866385E+03	4.561994E+02	3690	9.349973E+06	3.057772E+03	4.866596E+02
3641	8.224320E+06	2.867808E+03	4.564258E+02	3691	9.372319E+06	3.061424E+03	4.872408E+02
3642	8.229972E+06	2.868793E+03	4.565825E+02	3692	9.378507E+06	3.062435E+03	4.874016E+02
3643	8.247255E+06	2.871803E+03	4.570617E+02	3693	9.408324E+06	3.067299E+03	4.881758E+02
3644	8.251822E+06	2.872598E+03	4.571882E+02	3694	9.453732E+06	3.074692E+03	4.893525E+02
3645	8.289000E+06	2.879062E+03	4.582170E+02	3695	9.462151E+06	3.076061E+03	4.895703E+02
3646	8.293910E+06	2.879915E+03	4.583527E+02	3696	9.493236E+06	3.081109E+03	4.903738E+02
3647	8.327074E+06	2.885667E+03	4.592682E+02	3697	9.495904E+06	3.081543E+03	4.904427E+02
3648	8.354771E+06	2.890462E+03	4.600313E+02	3698	9.506938E+06	3.083332E+03	4.907276E+02
3649	8.367619E+06	2.892684E+03	4.603849E+02	3699	9.552547E+06	3.090720E+03	4.919033E+02
3650	8.406833E+06	2.899454E+03	4.614624E+02	3700	9.568004E+06	3.093219E+03	4.923011E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 298

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3701	9.597216E+06	3.097937E+03	4.930520E+02	3751	1.079835E+07	3.286084E+03	5.229966E+02
3702	9.636140E+06	3.104213E+03	4.940509E+02	3752	1.083956E+07	3.292348E+03	5.239935E+02
3703	9.642415E+06	3.105224E+03	4.942117E+02	3753	1.088241E+07	3.298850E+03	5.250283E+02
3704	9.658983E+06	3.107890E+03	4.946361E+02	3754	1.090550E+07	3.302348E+03	5.255850E+02
3705	9.681394E+06	3.111494E+03	4.952096E+02	3755	1.097441E+07	3.312765E+03	5.272429E+02
3706	9.695788E+06	3.113806E+03	4.955776E+02	3756	1.098417E+07	3.314238E+03	5.274774E+02
3707	9.706741E+06	3.115564E+03	4.958575E+02	3757	1.100720E+07	3.317710E+03	5.280300E+02
3708	9.722996E+06	3.118172E+03	4.962725E+02	3758	1.100965E+07	3.318079E+03	5.280886E+02
3709	9.740780E+06	3.121022E+03	4.967261E+02	3759	1.103356E+07	3.321680E+03	5.286617E+02
3710	9.782866E+06	3.127757E+03	4.977980E+02	3760	1.106704E+07	3.326716E+03	5.294633E+02
3711	9.803862E+06	3.131112E+03	4.983319E+02	3761	1.110332E+07	3.332164E+03	5.303304E+02
3712	9.830089E+06	3.135297E+03	4.989981E+02	3762	1.110988E+07	3.333149E+03	5.304872E+02
3713	9.844129E+06	3.137535E+03	4.993543E+02	3763	1.115233E+07	3.339510E+03	5.314995E+02
3714	9.869823E+06	3.141627E+03	5.000055E+02	3764	1.117379E+07	3.342721E+03	5.320106E+02
3715	9.911539E+06	3.148260E+03	5.010611E+02	3765	1.119232E+07	3.345493E+03	5.324518E+02
3716	9.979883E+06	3.159095E+03	5.027856E+02	3766	1.121467E+07	3.348831E+03	5.329831E+02
3717	9.979978E+06	3.159110E+03	5.027880E+02	3767	1.123940E+07	3.352521E+03	5.335703E+02
3718	9.991661E+06	3.160959E+03	5.030822E+02	3768	1.126744E+07	3.356700E+03	5.342355E+02
3719	9.995841E+06	3.161620E+03	5.031875E+02	3769	1.130924E+07	3.362921E+03	5.352254E+02
3720	1.002147E+07	3.165671E+03	5.038322E+02	3770	1.132351E+07	3.365042E+03	5.355631E+02
3721	1.005825E+07	3.171474E+03	5.047558E+02	3771	1.136098E+07	3.370606E+03	5.364485E+02
3722	1.006436E+07	3.172437E+03	5.049090E+02	3772	1.138377E+07	3.373985E+03	5.369864E+02
3723	1.007997E+07	3.174897E+03	5.053006E+02	3773	1.139449E+07	3.375573E+03	5.372391E+02
3724	1.010663E+07	3.179092E+03	5.059683E+02	3774	1.141590E+07	3.378742E+03	5.377435E+02
3725	1.011134E+07	3.179833E+03	5.060862E+02	3775	1.152604E+07	3.395002E+03	5.403313E+02
3726	1.011551E+07	3.180488E+03	5.061904E+02	3776	1.154005E+07	3.397065E+03	5.406596E+02
3727	1.013905E+07	3.184188E+03	5.067792E+02	3777	1.158583E+07	3.403796E+03	5.417310E+02
3728	1.016273E+07	3.187903E+03	5.073706E+02	3778	1.159260E+07	3.404790E+03	5.418892E+02
3729	1.019331E+07	3.192696E+03	5.081334E+02	3779	1.160830E+07	3.407096E+03	5.422561E+02
3730	1.020632E+07	3.194733E+03	5.084576E+02	3780	1.163199E+07	3.410570E+03	5.428091E+02
3731	1.025577E+07	3.202464E+03	5.096879E+02	3781	1.165782E+07	3.414355E+03	5.434114E+02
3732	1.028433E+07	3.206919E+03	5.103971E+02	3782	1.168463E+07	3.418279E+03	5.440360E+02
3733	1.031724E+07	3.212046E+03	5.112131E+02	3783	1.173808E+07	3.426088E+03	5.452788E+02
3734	1.034445E+07	3.216278E+03	5.118866E+02	3784	1.176563E+07	3.430107E+03	5.459185E+02
3735	1.038196E+07	3.222105E+03	5.128140E+02	3785	1.177402E+07	3.431329E+03	5.461130E+02
3736	1.038691E+07	3.222873E+03	5.129362E+02	3786	1.179269E+07	3.434049E+03	5.465459E+02
3737	1.045413E+07	3.233285E+03	5.145932E+02	3787	1.184582E+07	3.441775E+03	5.477756E+02
3738	1.048812E+07	3.238537E+03	5.154292E+02	3788	1.187103E+07	3.445436E+03	5.483582E+02
3739	1.051370E+07	3.242483E+03	5.160573E+02	3789	1.188302E+07	3.447176E+03	5.486352E+02
3740	1.054062E+07	3.246632E+03	5.167175E+02	3790	1.189710E+07	3.449217E+03	5.489600E+02
3741	1.059529E+07	3.255040E+03	5.180557E+02	3791	1.192342E+07	3.453031E+03	5.495669E+02
3742	1.060530E+07	3.256578E+03	5.183004E+02	3792	1.196636E+07	3.459243E+03	5.505556E+02
3743	1.063072E+07	3.260479E+03	5.189213E+02	3793	1.200717E+07	3.465137E+03	5.514937E+02
3744	1.069704E+07	3.270633E+03	5.205375E+02	3794	1.204545E+07	3.470656E+03	5.523720E+02
3745	1.069964E+07	3.271030E+03	5.206007E+02	3795	1.211364E+07	3.480465E+03	5.539333E+02
3746	1.070781E+07	3.272279E+03	5.207994E+02	3796	1.216354E+07	3.487627E+03	5.550730E+02
3747	1.072215E+07	3.274469E+03	5.211479E+02	3797	1.222648E+07	3.496639E+03	5.565073E+02
3748	1.074414E+07	3.277826E+03	5.216822E+02	3798	1.224220E+07	3.498886E+03	5.568649E+02
3749	1.075158E+07	3.278960E+03	5.218627E+02	3799	1.228383E+07	3.504829E+03	5.578109E+02
3750	1.076454E+07	3.280936E+03	5.221771E+02	3800	1.232281E+07	3.510386E+03	5.586952E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 299

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3801	1.233492E+07	3.512110E+03	5.589696E+02	3851	1.374860E+07	3.707910E+03	5.901323E+02
3802	1.233978E+07	3.512802E+03	5.590799E+02	3852	1.379903E+07	3.714704E+03	5.912136E+02
3803	1.237336E+07	3.517579E+03	5.598401E+02	3853	1.382215E+07	3.717816E+03	5.917087E+02
3804	1.237789E+07	3.518223E+03	5.599425E+02	3854	1.384142E+07	3.720405E+03	5.921209E+02
3805	1.240457E+07	3.522012E+03	5.605457E+02	3855	1.395124E+07	3.735136E+03	5.944654E+02
3806	1.246080E+07	3.529986E+03	5.618147E+02	3856	1.397968E+07	3.738941E+03	5.950709E+02
3807	1.248236E+07	3.533038E+03	5.623005E+02	3857	1.401814E+07	3.744081E+03	5.958890E+02
3808	1.249704E+07	3.535115E+03	5.626310E+02	3858	1.405545E+07	3.749060E+03	5.966814E+02
3809	1.250357E+07	3.536038E+03	5.627780E+02	3859	1.405965E+07	3.749621E+03	5.967707E+02
3810	1.251486E+07	3.537635E+03	5.630321E+02	3860	1.409204E+07	3.753936E+03	5.974575E+02
3811	1.258414E+07	3.547413E+03	5.645884E+02	3861	1.410585E+07	3.755775E+03	5.977502E+02
3812	1.261949E+07	3.552393E+03	5.653808E+02	3862	1.415708E+07	3.762589E+03	5.988347E+02
3813	1.264259E+07	3.555642E+03	5.658980E+02	3863	1.419064E+07	3.767047E+03	5.995441E+02
3814	1.265851E+07	3.557880E+03	5.662541E+02	3864	1.420719E+07	3.769243E+03	5.998936E+02
3815	1.268626E+07	3.561778E+03	5.668745E+02	3865	1.422781E+07	3.771976E+03	6.003287E+02
3816	1.271741E+07	3.566148E+03	5.675701E+02	3866	1.428966E+07	3.780166E+03	6.016322E+02
3817	1.274148E+07	3.569521E+03	5.681070E+02	3867	1.432403E+07	3.784711E+03	6.023554E+02
3818	1.277057E+07	3.573594E+03	5.687551E+02	3868	1.436045E+07	3.789518E+03	6.031205E+02
3819	1.279437E+07	3.576921E+03	5.692847E+02	3869	1.437739E+07	3.791753E+03	6.034762E+02
3820	1.283628E+07	3.582776E+03	5.702164E+02	3870	1.443979E+07	3.799973E+03	6.047844E+02
3821	1.285823E+07	3.585837E+03	5.707037E+02	3871	1.446955E+07	3.803887E+03	6.054074E+02
3822	1.287025E+07	3.587513E+03	5.709704E+02	3872	1.450372E+07	3.808375E+03	6.061218E+02
3823	1.288807E+07	3.589996E+03	5.713656E+02	3873	1.450733E+07	3.808849E+03	6.061971E+02
3824	1.296235E+07	3.600327E+03	5.730098E+02	3874	1.457029E+07	3.817104E+03	6.075110E+02
3825	1.298645E+07	3.603672E+03	5.735422E+02	3875	1.461492E+07	3.822947E+03	6.084409E+02
3826	1.301495E+07	3.607624E+03	5.741712E+02	3876	1.464474E+07	3.826844E+03	6.090612E+02
3827	1.302761E+07	3.609377E+03	5.744503E+02	3877	1.465276E+07	3.827892E+03	6.092279E+02
3828	1.304804E+07	3.612207E+03	5.749006E+02	3878	1.471332E+07	3.835795E+03	6.104857E+02
3829	1.305884E+07	3.613702E+03	5.751385E+02	3879	1.473445E+07	3.838548E+03	6.109239E+02
3830	1.311003E+07	3.620777E+03	5.762646E+02	3880	1.475555E+07	3.841295E+03	6.113610E+02
3831	1.316068E+07	3.627765E+03	5.773767E+02	3881	1.478189E+07	3.844722E+03	6.119065E+02
3832	1.317402E+07	3.629603E+03	5.776692E+02	3882	1.482153E+07	3.849874E+03	6.127265E+02
3833	1.319077E+07	3.631910E+03	5.780364E+02	3883	1.486325E+07	3.855289E+03	6.135883E+02
3834	1.319679E+07	3.632739E+03	5.781684E+02	3884	1.488432E+07	3.858020E+03	6.140229E+02
3835	1.320766E+07	3.634235E+03	5.784064E+02	3885	1.490082E+07	3.860159E+03	6.143633E+02
3836	1.323494E+07	3.637986E+03	5.790034E+02	3886	1.490735E+07	3.861004E+03	6.144978E+02
3837	1.329384E+07	3.646071E+03	5.802903E+02	3887	1.492438E+07	3.863209E+03	6.148488E+02
3838	1.329670E+07	3.646464E+03	5.803527E+02	3888	1.497960E+07	3.870349E+03	6.159852E+02
3839	1.332897E+07	3.650886E+03	5.810565E+02	3889	1.500945E+07	3.874203E+03	6.165985E+02
3840	1.338378E+07	3.658385E+03	5.822500E+02	3890	1.505593E+07	3.880197E+03	6.175526E+02
3841	1.341105E+07	3.662110E+03	5.828428E+02	3891	1.510655E+07	3.886715E+03	6.185898E+02
3842	1.344231E+07	3.666376E+03	5.835219E+02	3892	1.525163E+07	3.905333E+03	6.215531E+02
3843	1.347158E+07	3.670365E+03	5.841567E+02	3893	1.526753E+07	3.907369E+03	6.218771E+02
3844	1.349492E+07	3.673543E+03	5.846625E+02	3894	1.533856E+07	3.916447E+03	6.233219E+02
3845	1.352971E+07	3.678276E+03	5.854158E+02	3895	1.534418E+07	3.917165E+03	6.234361E+02
3846	1.358923E+07	3.686358E+03	5.867020E+02	3896	1.536347E+07	3.919626E+03	6.238278E+02
3847	1.361922E+07	3.690422E+03	5.873489E+02	3897	1.546028E+07	3.931956E+03	6.257902E+02
3848	1.367149E+07	3.697498E+03	5.884751E+02	3898	1.547874E+07	3.934303E+03	6.261637E+02
3849	1.369157E+07	3.700213E+03	5.889071E+02	3899	1.560483E+07	3.950295E+03	6.287089E+02
3850	1.371084E+07	3.702815E+03	5.893213E+02	3900	1.562624E+07	3.953005E+03	6.291402E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 300

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
3901	1.567590E+07	3.959280E+03	6.301390E+02	3951	1.774651E+07	4.212661E+03	6.704657E+02
3902	1.569454E+07	3.961633E+03	6.305135E+02	3952	1.779921E+07	4.218911E+03	6.714605E+02
3903	1.573852E+07	3.967181E+03	6.313965E+02	3953	1.784241E+07	4.224028E+03	6.722749E+02
3904	1.576077E+07	3.969983E+03	6.318425E+02	3954	1.793365E+07	4.234814E+03	6.739915E+02
3905	1.579933E+07	3.974838E+03	6.326150E+02	3955	1.797918E+07	4.240186E+03	6.748466E+02
3906	1.581292E+07	3.976546E+03	6.328870E+02	3956	1.805887E+07	4.249573E+03	6.763405E+02
3907	1.582893E+07	3.978559E+03	6.332074E+02	3957	1.808632E+07	4.252802E+03	6.768544E+02
3908	1.586673E+07	3.983307E+03	6.339630E+02	3958	1.812883E+07	4.257796E+03	6.776493E+02
3909	1.588594E+07	3.985717E+03	6.343466E+02	3959	1.814859E+07	4.260116E+03	6.780186E+02
3910	1.591689E+07	3.989598E+03	6.349643E+02	3960	1.817253E+07	4.262925E+03	6.784655E+02
3911	1.595486E+07	3.994353E+03	6.357211E+02	3961	1.818368E+07	4.264233E+03	6.786737E+02
3912	1.596798E+07	3.995995E+03	6.359824E+02	3962	1.819629E+07	4.265711E+03	6.789090E+02
3913	1.597351E+07	3.996688E+03	6.360926E+02	3963	1.826072E+07	4.273256E+03	6.801098E+02
3914	1.600440E+07	4.000550E+03	6.367073E+02	3964	1.835668E+07	4.284469E+03	6.818945E+02
3915	1.607502E+07	4.009366E+03	6.381105E+02	3965	1.843662E+07	4.293789E+03	6.833777E+02
3916	1.611087E+07	4.013834E+03	6.388216E+02	3966	1.851520E+07	4.302930E+03	6.848325E+02
3917	1.612161E+07	4.015172E+03	6.390345E+02	3967	1.852832E+07	4.304453E+03	6.850750E+02
3918	1.615281E+07	4.019056E+03	6.396526E+02	3968	1.858060E+07	4.310522E+03	6.860409E+02
3919	1.617726E+07	4.022097E+03	6.401366E+02	3969	1.861208E+07	4.314173E+03	6.866219E+02
3920	1.621959E+07	4.027356E+03	6.409736E+02	3970	1.863206E+07	4.316487E+03	6.869902E+02
3921	1.623088E+07	4.028756E+03	6.411965E+02	3971	1.869003E+07	4.323197E+03	6.880582E+02
3922	1.627699E+07	4.034475E+03	6.421066E+02	3972	1.871181E+07	4.325715E+03	6.884589E+02
3923	1.632668E+07	4.040628E+03	6.430860E+02	3973	1.875547E+07	4.330759E+03	6.892617E+02
3924	1.633119E+07	4.041187E+03	6.431748E+02	3974	1.879348E+07	4.335145E+03	6.899597E+02
3925	1.635976E+07	4.044720E+03	6.437372E+02	3975	1.885704E+07	4.342469E+03	6.911255E+02
3926	1.640377E+07	4.050157E+03	6.446026E+02	3976	1.887644E+07	4.344703E+03	6.914809E+02
3927	1.641566E+07	4.051624E+03	6.448359E+02	3977	1.900537E+07	4.359514E+03	6.938383E+02
3928	1.644830E+07	4.055650E+03	6.454768E+02	3978	1.902199E+07	4.361421E+03	6.941416E+02
3929	1.647455E+07	4.058886E+03	6.459917E+02	3979	1.904158E+07	4.363666E+03	6.944991E+02
3930	1.656316E+07	4.069786E+03	6.477266E+02	3980	1.909243E+07	4.369489E+03	6.954257E+02
3931	1.660277E+07	4.074649E+03	6.485006E+02	3981	1.918040E+07	4.379544E+03	6.970261E+02
3932	1.664944E+07	4.080372E+03	6.494114E+02	3982	1.923252E+07	4.385490E+03	6.979724E+02
3933	1.666698E+07	4.082522E+03	6.497535E+02	3983	1.924249E+07	4.386626E+03	6.981533E+02
3934	1.669944E+07	4.086495E+03	6.503858E+02	3984	1.928760E+07	4.391765E+03	6.989711E+02
3935	1.672069E+07	4.089094E+03	6.507996E+02	3985	1.933483E+07	4.397139E+03	6.998265E+02
3936	1.677785E+07	4.096077E+03	6.519109E+02	3986	1.937946E+07	4.402210E+03	7.006335E+02
3937	1.692210E+07	4.113648E+03	6.547074E+02	3987	1.939870E+07	4.404395E+03	7.009813E+02
3938	1.692843E+07	4.114418E+03	6.548299E+02	3988	1.957204E+07	4.424030E+03	7.041063E+02
3939	1.699058E+07	4.121963E+03	6.560308E+02	3989	1.957669E+07	4.424556E+03	7.041899E+02
3940	1.705820E+07	4.130158E+03	6.573350E+02	3990	1.961347E+07	4.428710E+03	7.048510E+02
3941	1.706789E+07	4.131330E+03	6.575216E+02	3991	1.969689E+07	4.438118E+03	7.063485E+02
3942	1.708074E+07	4.132885E+03	6.577691E+02	3992	1.975145E+07	4.444260E+03	7.073260E+02
3943	1.711923E+07	4.137539E+03	6.585097E+02	3993	1.983913E+07	4.454114E+03	7.088943E+02
3944	1.714010E+07	4.140060E+03	6.589110E+02	3994	1.987178E+07	4.457777E+03	7.094773E+02
3945	1.715867E+07	4.142302E+03	6.592678E+02	3995	1.992131E+07	4.463330E+03	7.103610E+02
3946	1.732302E+07	4.162093E+03	6.624177E+02	3996	1.998273E+07	4.470205E+03	7.114552E+02
3947	1.738323E+07	4.169320E+03	6.635680E+02	3997	2.002243E+07	4.474642E+03	7.121615E+02
3948	1.744488E+07	4.176707E+03	6.647435E+02	3998	2.006054E+07	4.478900E+03	7.128390E+02
3949	1.755783E+07	4.190206E+03	6.668921E+02	3999	2.009482E+07	4.482725E+03	7.134478E+02
3950	1.772890E+07	4.210570E+03	6.701331E+02	4000	2.013186E+07	4.486855E+03	7.141051E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 301

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4001	2.015101E+07	4.488988E+03	7.144446E+02	4051	2.282304E+07	4.777347E+03	7.603384E+02
4002	2.020051E+07	4.494498E+03	7.153215E+02	4052	2.284753E+07	4.779909E+03	7.607461E+02
4003	2.027150E+07	4.502388E+03	7.165773E+02	4053	2.290514E+07	4.785932E+03	7.617047E+02
4004	2.031990E+07	4.507760E+03	7.174323E+02	4054	2.295586E+07	4.791227E+03	7.625475E+02
4005	2.033073E+07	4.508961E+03	7.176235E+02	4055	2.301637E+07	4.797538E+03	7.635519E+02
4006	2.036991E+07	4.513304E+03	7.183147E+02	4056	2.311476E+07	4.807781E+03	7.651821E+02
4007	2.043816E+07	4.520858E+03	7.195170E+02	4057	2.314740E+07	4.811175E+03	7.657223E+02
4008	2.049554E+07	4.527200E+03	7.205263E+02	4058	2.318050E+07	4.814613E+03	7.662695E+02
4009	2.056612E+07	4.534988E+03	7.217658E+02	4059	2.319614E+07	4.816237E+03	7.665280E+02
4010	2.059320E+07	4.537973E+03	7.222408E+02	4060	2.321025E+07	4.817702E+03	7.667611E+02
4011	2.061128E+07	4.539965E+03	7.225578E+02	4061	2.333770E+07	4.830911E+03	7.688634E+02
4012	2.068465E+07	4.548038E+03	7.238427E+02	4062	2.336914E+07	4.834164E+03	7.693811E+02
4013	2.071157E+07	4.550997E+03	7.243137E+02	4063	2.338774E+07	4.836087E+03	7.696872E+02
4014	2.074338E+07	4.554490E+03	7.248696E+02	4064	2.344076E+07	4.841566E+03	7.705591E+02
4015	2.080467E+07	4.561214E+03	7.259397E+02	4065	2.363427E+07	4.861509E+03	7.737332E+02
4016	2.083260E+07	4.564275E+03	7.264269E+02	4066	2.366090E+07	4.864247E+03	7.741689E+02
4017	2.083659E+07	4.564712E+03	7.264965E+02	4067	2.368981E+07	4.867218E+03	7.746418E+02
4018	2.087724E+07	4.569161E+03	7.272046E+02	4068	2.373606E+07	4.871967E+03	7.753976E+02
4019	2.091248E+07	4.573016E+03	7.278181E+02	4069	2.375265E+07	4.873669E+03	7.756686E+02
4020	2.098107E+07	4.580510E+03	7.290108E+02	4070	2.379305E+07	4.877812E+03	7.763279E+02
4021	2.104113E+07	4.587061E+03	7.300535E+02	4071	2.384940E+07	4.883585E+03	7.772466E+02
4022	2.104909E+07	4.587928E+03	7.301915E+02	4072	2.390503E+07	4.889277E+03	7.781526E+02
4023	2.106740E+07	4.589924E+03	7.305091E+02	4073	2.398139E+07	4.897080E+03	7.793944E+02
4024	2.108209E+07	4.591524E+03	7.307637E+02	4074	2.402917E+07	4.901956E+03	7.801705E+02
4025	2.116052E+07	4.600056E+03	7.321217E+02	4075	2.409874E+07	4.909047E+03	7.812991E+02
4026	2.127340E+07	4.612309E+03	7.340718E+02	4076	2.417776E+07	4.917088E+03	7.825789E+02
4027	2.130538E+07	4.615775E+03	7.346234E+02	4077	2.420273E+07	4.919627E+03	7.829830E+02
4028	2.131795E+07	4.617137E+03	7.348401E+02	4078	2.422554E+07	4.921945E+03	7.833519E+02
4029	2.137788E+07	4.623622E+03	7.358723E+02	4079	2.442074E+07	4.941734E+03	7.865014E+02
4030	2.140313E+07	4.626352E+03	7.363068E+02	4080	2.451557E+07	4.951320E+03	7.880270E+02
4031	2.145470E+07	4.631922E+03	7.371933E+02	4081	2.453930E+07	4.953716E+03	7.884084E+02
4032	2.150613E+07	4.637471E+03	7.380764E+02	4082	2.456305E+07	4.956112E+03	7.887897E+02
4033	2.167278E+07	4.655403E+03	7.409304E+02	4083	2.463716E+07	4.963583E+03	7.899788E+02
4034	2.171687E+07	4.660136E+03	7.416836E+02	4084	2.466848E+07	4.966737E+03	7.904808E+02
4035	2.175927E+07	4.664684E+03	7.424074E+02	4085	2.469324E+07	4.969230E+03	7.908775E+02
4036	2.192244E+07	4.682140E+03	7.451858E+02	4086	2.473918E+07	4.973849E+03	7.916127E+02
4037	2.195237E+07	4.685336E+03	7.456943E+02	4087	2.475012E+07	4.974949E+03	7.917878E+02
4038	2.198733E+07	4.689065E+03	7.462879E+02	4088	2.482819E+07	4.982789E+03	7.930356E+02
4039	2.211556E+07	4.702718E+03	7.484609E+02	4089	2.495382E+07	4.995380E+03	7.950395E+02
4040	2.220434E+07	4.712148E+03	7.499616E+02	4090	2.514113E+07	5.014093E+03	7.980177E+02
4041	2.223417E+07	4.715312E+03	7.504652E+02	4091	2.521169E+07	5.021125E+03	7.991368E+02
4042	2.234157E+07	4.726687E+03	7.522757E+02	4092	2.527379E+07	5.027305E+03	8.001204E+02
4043	2.243185E+07	4.736227E+03	7.537940E+02	4093	2.530777E+07	5.030683E+03	8.006581E+02
4044	2.247163E+07	4.740425E+03	7.544621E+02	4094	2.532845E+07	5.032738E+03	8.009851E+02
4045	2.249551E+07	4.742943E+03	7.548628E+02	4095	2.540821E+07	5.040655E+03	8.022452E+02
4046	2.257723E+07	4.751550E+03	7.562327E+02	4096	2.546363E+07	5.046150E+03	8.031197E+02
4047	2.258712E+07	4.752591E+03	7.563983E+02	4097	2.557521E+07	5.057194E+03	8.048775E+02
4048	2.264382E+07	4.758552E+03	7.573471E+02	4098	2.558414E+07	5.058077E+03	8.050179E+02
4049	2.271191E+07	4.765701E+03	7.584849E+02	4099	2.571345E+07	5.070843E+03	8.070498E+02
4050	2.277333E+07	4.772141E+03	7.595098E+02	4100	2.576459E+07	5.075883E+03	8.078519E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 302

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4101	2.581035E+07	5.080389E+03	8.085691E+02	4151	2.888624E+07	5.374592E+03	8.553929E+02
4102	2.592379E+07	5.091541E+03	8.103439E+02	4152	2.891011E+07	5.376812E+03	8.557463E+02
4103	2.595071E+07	5.094184E+03	8.107645E+02	4153	2.895414E+07	5.380905E+03	8.563976E+02
4104	2.596802E+07	5.095882E+03	8.110349E+02	4154	2.903413E+07	5.388333E+03	8.575799E+02
4105	2.609707E+07	5.108529E+03	8.130476E+02	4155	2.907752E+07	5.392358E+03	8.582204E+02
4106	2.613347E+07	5.112090E+03	8.136145E+02	4156	2.909449E+07	5.393931E+03	8.584708E+02
4107	2.614074E+07	5.112801E+03	8.137276E+02	4157	2.912726E+07	5.396968E+03	8.589541E+02
4108	2.625481E+07	5.123945E+03	8.155012E+02	4158	2.918608E+07	5.402414E+03	8.598209E+02
4109	2.629011E+07	5.127388E+03	8.160492E+02	4159	2.925337E+07	5.408638E+03	8.608115E+02
4110	2.638008E+07	5.136154E+03	8.174443E+02	4160	2.929661E+07	5.412635E+03	8.614476E+02
4111	2.646366E+07	5.144284E+03	8.187382E+02	4161	2.930252E+07	5.413180E+03	8.615344E+02
4112	2.648529E+07	5.146386E+03	8.190727E+02	4162	2.934037E+07	5.416675E+03	8.620906E+02
4113	2.655752E+07	5.153398E+03	8.201888E+02	4163	2.937230E+07	5.419621E+03	8.625595E+02
4114	2.659163E+07	5.156708E+03	8.207155E+02	4164	2.946561E+07	5.428224E+03	8.639286E+02
4115	2.662976E+07	5.160403E+03	8.213036E+02	4165	2.957176E+07	5.437992E+03	8.654834E+02
4116	2.664163E+07	5.161553E+03	8.214867E+02	4166	2.964514E+07	5.444735E+03	8.665565E+02
4117	2.673804E+07	5.170883E+03	8.229717E+02	4167	2.970085E+07	5.449849E+03	8.673704E+02
4118	2.676131E+07	5.173134E+03	8.233298E+02	4168	2.976746E+07	5.455956E+03	8.683424E+02
4119	2.688764E+07	5.185329E+03	8.252708E+02	4169	2.984204E+07	5.462787E+03	8.694295E+02
4120	2.695873E+07	5.192180E+03	8.263611E+02	4170	2.986896E+07	5.465250E+03	8.698216E+02
4121	2.703244E+07	5.199273E+03	8.274900E+02	4171	2.996116E+07	5.473679E+03	8.711631E+02
4122	2.704830E+07	5.200798E+03	8.277328E+02	4172	2.996539E+07	5.474065E+03	8.712246E+02
4123	2.709891E+07	5.205661E+03	8.285067E+02	4173	3.028659E+07	5.503325E+03	8.758814E+02
4124	2.732666E+07	5.227491E+03	8.319810E+02	4174	3.059667E+07	5.531426E+03	8.803538E+02
4125	2.738350E+07	5.232925E+03	8.328458E+02	4175	3.070712E+07	5.541401E+03	8.819413E+02
4126	2.743349E+07	5.237699E+03	8.336057E+02	4176	3.073229E+07	5.543671E+03	8.823027E+02
4127	2.746831E+07	5.241022E+03	8.341346E+02	4177	3.074154E+07	5.544506E+03	8.824355E+02
4128	2.750905E+07	5.244907E+03	8.347529E+02	4178	3.076506E+07	5.546626E+03	8.827729E+02
4129	2.764615E+07	5.257961E+03	8.368305E+02	4179	3.081872E+07	5.551461E+03	8.835424E+02
4130	2.768730E+07	5.261872E+03	8.374530E+02	4180	3.085585E+07	5.554805E+03	8.840746E+02
4131	2.774433E+07	5.267289E+03	8.383151E+02	4181	3.095509E+07	5.563730E+03	8.854951E+02
4132	2.784252E+07	5.276601E+03	8.397972E+02	4182	3.100815E+07	5.568496E+03	8.862537E+02
4133	2.787186E+07	5.279380E+03	8.402395E+02	4183	3.102306E+07	5.569834E+03	8.864667E+02
4134	2.793069E+07	5.284950E+03	8.411259E+02	4184	3.107494E+07	5.574490E+03	8.872076E+02
4135	2.797705E+07	5.289334E+03	8.418236E+02	4185	3.122238E+07	5.587699E+03	8.893099E+02
4136	2.800501E+07	5.291976E+03	8.422441E+02	4186	3.137221E+07	5.601090E+03	8.914411E+02
4137	2.806183E+07	5.297342E+03	8.430982E+02	4187	3.138723E+07	5.602430E+03	8.916545E+02
4138	2.810468E+07	5.301384E+03	8.437415E+02	4188	3.143528E+07	5.606717E+03	8.923368E+02
4139	2.815259E+07	5.305901E+03	8.444604E+02	4189	3.150279E+07	5.612735E+03	8.932945E+02
4140	2.819497E+07	5.309893E+03	8.450958E+02	4190	3.158390E+07	5.619955E+03	8.944436E+02
4141	2.824486E+07	5.314589E+03	8.458431E+02	4191	3.161833E+07	5.623018E+03	8.949310E+02
4142	2.835835E+07	5.325256E+03	8.475407E+02	4192	3.165688E+07	5.626445E+03	8.954765E+02
4143	2.848581E+07	5.337210E+03	8.494433E+02	4193	3.177069E+07	5.636549E+03	8.970847E+02
4144	2.849994E+07	5.338533E+03	8.496540E+02	4194	3.187505E+07	5.645799E+03	8.985568E+02
4145	2.853632E+07	5.341939E+03	8.501960E+02	4195	3.193795E+07	5.651367E+03	8.994431E+02
4146	2.860739E+07	5.348588E+03	8.512542E+02	4196	3.199779E+07	5.656659E+03	9.002852E+02
4147	2.870588E+07	5.357787E+03	8.527183E+02	4197	3.205261E+07	5.661502E+03	9.010561E+02
4148	2.872436E+07	5.359511E+03	8.529927E+02	4198	3.206613E+07	5.662696E+03	9.012460E+02
4149	2.877804E+07	5.364517E+03	8.537894E+02	4199	3.215766E+07	5.670773E+03	9.025315E+02
4150	2.879649E+07	5.366236E+03	8.540630E+02	4200	3.218932E+07	5.673563E+03	9.029756E+02

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 303

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4201	3.223663E+07	5.677731E+03	9.036390E+02	4251	3.683482E+07	6.069170E+03	9.659384E+02
4202	3.228467E+07	5.681960E+03	9.043121E+02	4252	3.688427E+07	6.073242E+03	9.665865E+02
4203	3.232896E+07	5.685857E+03	9.049322E+02	4253	3.703606E+07	6.085726E+03	9.685734E+02
4204	3.238464E+07	5.690751E+03	9.057111E+02	4254	3.718174E+07	6.097683E+03	9.704764E+02
4205	3.248523E+07	5.699582E+03	9.071166E+02	4255	3.723867E+07	6.102350E+03	9.712191E+02
4206	3.250940E+07	5.701701E+03	9.074539E+02	4256	3.732356E+07	6.109301E+03	9.723254E+02
4207	3.253002E+07	5.703509E+03	9.077417E+02	4257	3.746233E+07	6.120648E+03	9.741313E+02
4208	3.268136E+07	5.716761E+03	9.098508E+02	4258	3.763313E+07	6.134585E+03	9.763495E+02
4209	3.269036E+07	5.717548E+03	9.099761E+02	4259	3.782920E+07	6.150544E+03	9.788896E+02
4210	3.282605E+07	5.729403E+03	9.118627E+02	4260	3.801710E+07	6.165801E+03	9.813177E+02
4211	3.287954E+07	5.734068E+03	9.126053E+02	4261	3.816997E+07	6.178185E+03	9.832886E+02
4212	3.298184E+07	5.742982E+03	9.140240E+02	4262	3.820211E+07	6.180786E+03	9.837026E+02
4213	3.306168E+07	5.749929E+03	9.151296E+02	4263	3.832691E+07	6.190873E+03	9.853081E+02
4214	3.321448E+07	5.763201E+03	9.172419E+02	4264	3.837426E+07	6.194696E+03	9.859165E+02
4215	3.323089E+07	5.764624E+03	9.174685E+02	4265	3.866187E+07	6.217867E+03	9.896042E+02
4216	3.323612E+07	5.765078E+03	9.175406E+02	4266	3.888029E+07	6.235406E+03	9.923957E+02
4217	3.327221E+07	5.768207E+03	9.180386E+02	4267	3.893100E+07	6.239471E+03	9.930427E+02
4218	3.339351E+07	5.778712E+03	9.197105E+02	4268	3.908244E+07	6.251595E+03	9.949722E+02
4219	3.359148E+07	5.795816E+03	9.224327E+02	4269	3.925977E+07	6.265762E+03	9.972269E+02
4220	3.367554E+07	5.803063E+03	9.235862E+02	4270	3.928639E+07	6.267885E+03	9.975650E+02
4221	3.370262E+07	5.805396E+03	9.239574E+02	4271	3.935387E+07	6.273266E+03	9.984213E+02
4222	3.379124E+07	5.813023E+03	9.251714E+02	4272	3.964827E+07	6.296687E+03	1.002149E+03
4223	3.386412E+07	5.819288E+03	9.261685E+02	4273	3.966932E+07	6.298358E+03	1.002415E+03
4224	3.390279E+07	5.822610E+03	9.266971E+02	4274	3.969625E+07	6.300496E+03	1.002755E+03
4225	3.394571E+07	5.826295E+03	9.272836E+02	4275	3.987195E+07	6.314424E+03	1.004972E+03
4226	3.411569E+07	5.840864E+03	9.296023E+02	4276	4.005679E+07	6.329043E+03	1.007299E+03
4227	3.419722E+07	5.847839E+03	9.307124E+02	4277	4.019541E+07	6.339985E+03	1.009040E+03
4228	3.431184E+07	5.857631E+03	9.322709E+02	4278	4.033407E+07	6.350911E+03	1.010779E+03
4229	3.432219E+07	5.858514E+03	9.324115E+02	4279	4.042317E+07	6.357922E+03	1.011895E+03
4230	3.433882E+07	5.859933E+03	9.326374E+02	4280	4.052593E+07	6.365998E+03	1.013180E+03
4231	3.436665E+07	5.862308E+03	9.330153E+02	4281	4.056962E+07	6.369428E+03	1.013726E+03
4232	3.451493E+07	5.874941E+03	9.350258E+02	4282	4.070563E+07	6.380096E+03	1.015424E+03
4233	3.472351E+07	5.892666E+03	9.378469E+02	4283	4.079450E+07	6.387057E+03	1.016532E+03
4234	3.483159E+07	5.901829E+03	9.393053E+02	4284	4.082036E+07	6.389082E+03	1.016854E+03
4235	3.521317E+07	5.934068E+03	9.444363E+02	4285	4.088193E+07	6.393898E+03	1.017620E+03
4236	3.530551E+07	5.941844E+03	9.456738E+02	4286	4.097492E+07	6.401165E+03	1.018777E+03
4237	3.536048E+07	5.946468E+03	9.464097E+02	4287	4.099029E+07	6.402366E+03	1.018968E+03
4238	3.555670E+07	5.962944E+03	9.490320E+02	4288	4.119065E+07	6.417994E+03	1.021456E+03
4239	3.563240E+07	5.969288E+03	9.500417E+02	4289	4.119554E+07	6.418375E+03	1.021516E+03
4240	3.572954E+07	5.977419E+03	9.513358E+02	4290	4.120846E+07	6.419382E+03	1.021676E+03
4241	3.582317E+07	5.985246E+03	9.525815E+02	4291	4.127692E+07	6.424711E+03	1.022525E+03
4242	3.595077E+07	5.995896E+03	9.542765E+02	4292	4.161201E+07	6.450737E+03	1.026667E+03
4243	3.606234E+07	6.005193E+03	9.557561E+02	4293	4.168404E+07	6.456318E+03	1.027555E+03
4244	3.634524E+07	6.028701E+03	9.594976E+02	4294	4.179823E+07	6.465155E+03	1.028961E+03
4245	3.638013E+07	6.031595E+03	9.599581E+02	4295	4.185202E+07	6.469314E+03	1.029623E+03
4246	3.648994E+07	6.040690E+03	9.614057E+02	4296	4.208983E+07	6.487667E+03	1.032544E+03
4247	3.656165E+07	6.046623E+03	9.623500E+02	4297	4.220189E+07	6.496298E+03	1.033918E+03
4248	3.666856E+07	6.055457E+03	9.637559E+02	4298	4.229081E+07	6.503138E+03	1.035007E+03
4249	3.678031E+07	6.064677E+03	9.652233E+02	4299	4.243245E+07	6.514019E+03	1.036738E+03
4250	3.679052E+07	6.065519E+03	9.653573E+02	4300	4.247041E+07	6.516932E+03	1.037202E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 304

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4301	4.270386E+07	6.534819E+03	1.040049E+03	4351	5.205237E+07	7.214733E+03	1.148260E+03
4302	4.272525E+07	6.536456E+03	1.040309E+03	4352	5.237955E+07	7.237372E+03	1.151864E+03
4303	4.293403E+07	6.552406E+03	1.042848E+03	4353	5.252696E+07	7.247549E+03	1.153483E+03
4304	4.302377E+07	6.559251E+03	1.043937E+03	4354	5.328807E+07	7.299868E+03	1.161810E+03
4305	4.325461E+07	6.576824E+03	1.046734E+03	4355	5.369590E+07	7.327749E+03	1.166247E+03
4306	4.368195E+07	6.609232E+03	1.051892E+03	4356	5.421429E+07	7.363035E+03	1.171863E+03
4307	4.370734E+07	6.611153E+03	1.052198E+03	4357	5.438156E+07	7.374385E+03	1.173670E+03
4308	4.385876E+07	6.622595E+03	1.054019E+03	4358	5.440796E+07	7.376175E+03	1.173955E+03
4309	4.400745E+07	6.633811E+03	1.055804E+03	4359	5.446736E+07	7.380200E+03	1.174595E+03
4310	4.410251E+07	6.640972E+03	1.056943E+03	4360	5.491477E+07	7.410450E+03	1.179410E+03
4311	4.415341E+07	6.644803E+03	1.057553E+03	4361	5.538113E+07	7.441850E+03	1.184407E+03
4312	4.473203E+07	6.688201E+03	1.064460E+03	4362	5.543812E+07	7.445678E+03	1.185016E+03
4313	4.492460E+07	6.702581E+03	1.066749E+03	4363	5.569610E+07	7.462982E+03	1.187771E+03
4314	4.531232E+07	6.731443E+03	1.071342E+03	4364	5.641120E+07	7.510739E+03	1.195371E+03
4315	4.535308E+07	6.734470E+03	1.071824E+03	4365	5.678497E+07	7.535580E+03	1.199325E+03
4316	4.545159E+07	6.741780E+03	1.072988E+03	4366	5.693478E+07	7.545514E+03	1.200906E+03
4317	4.573171E+07	6.762522E+03	1.076289E+03	4367	5.705601E+07	7.553543E+03	1.202184E+03
4318	4.595122E+07	6.778733E+03	1.078869E+03	4368	5.790031E+07	7.609226E+03	1.211046E+03
4319	4.626933E+07	6.802156E+03	1.082597E+03	4369	5.818657E+07	7.628012E+03	1.214036E+03
4320	4.634918E+07	6.808024E+03	1.083531E+03	4370	5.832715E+07	7.637221E+03	1.215501E+03
4321	4.639020E+07	6.811035E+03	1.084010E+03	4371	5.849972E+07	7.648511E+03	1.217298E+03
4322	4.642409E+07	6.813523E+03	1.084406E+03	4372	5.956590E+07	7.717895E+03	1.228341E+03
4323	4.648327E+07	6.817864E+03	1.085097E+03	4373	5.979298E+07	7.732592E+03	1.230680E+03
4324	4.701274E+07	6.856584E+03	1.091259E+03	4374	6.020195E+07	7.758991E+03	1.234882E+03
4325	4.705482E+07	6.859651E+03	1.091747E+03	4375	6.078570E+07	7.796518E+03	1.240854E+03
4326	4.720509E+07	6.870596E+03	1.093489E+03	4376	6.185421E+07	7.864745E+03	1.251713E+03
4327	4.787248E+07	6.918994E+03	1.101192E+03	4377	6.218902E+07	7.886001E+03	1.255096E+03
4328	4.826363E+07	6.947203E+03	1.105682E+03	4378	6.225081E+07	7.889918E+03	1.255719E+03
4329	4.860317E+07	6.971597E+03	1.109564E+03	4379	6.333247E+07	7.958170E+03	1.266582E+03
4330	4.872330E+07	6.980208E+03	1.110935E+03	4380	6.369892E+07	7.981161E+03	1.270241E+03
4331	4.876880E+07	6.983466E+03	1.111453E+03	4381	6.389532E+07	7.993455E+03	1.272198E+03
4332	4.895638E+07	6.996884E+03	1.113589E+03	4382	6.415447E+07	8.009649E+03	1.274775E+03
4333	4.919863E+07	7.014174E+03	1.116340E+03	4383	6.502923E+07	8.064070E+03	1.283437E+03
4334	4.921570E+07	7.015390E+03	1.116534E+03	4384	6.506974E+07	8.066582E+03	1.283836E+03
4335	4.928753E+07	7.020508E+03	1.117349E+03	4385	6.541961E+07	8.088239E+03	1.287283E+03
4336	4.943686E+07	7.031135E+03	1.119040E+03	4386	6.547838E+07	8.091871E+03	1.287861E+03
4337	4.954562E+07	7.038865E+03	1.120270E+03	4387	6.557165E+07	8.097633E+03	1.288778E+03
4338	4.971233E+07	7.050697E+03	1.122153E+03	4388	6.654289E+07	8.157383E+03	1.298288E+03
4339	4.988975E+07	7.063268E+03	1.124154E+03	4389	6.675916E+07	8.170628E+03	1.300396E+03
4340	5.024676E+07	7.088495E+03	1.128169E+03	4390	6.689166E+07	8.178732E+03	1.301686E+03
4341	5.061441E+07	7.114381E+03	1.132289E+03	4391	6.711743E+07	8.192523E+03	1.303881E+03
4342	5.075028E+07	7.123923E+03	1.133808E+03	4392	6.715195E+07	8.194629E+03	1.304216E+03
4343	5.095332E+07	7.138159E+03	1.136073E+03	4393	6.726662E+07	8.201623E+03	1.305329E+03
4344	5.121710E+07	7.156613E+03	1.139010E+03	4394	6.735214E+07	8.206835E+03	1.306158E+03
4345	5.154725E+07	7.179641E+03	1.142675E+03	4395	6.752846E+07	8.217570E+03	1.307867E+03
4346	5.161275E+07	7.184201E+03	1.143401E+03	4396	6.754489E+07	8.218570E+03	1.308026E+03
4347	5.178080E+07	7.195888E+03	1.145261E+03	4397	6.788052E+07	8.238964E+03	1.311272E+03
4348	5.185090E+07	7.200757E+03	1.146036E+03	4398	6.791318E+07	8.240945E+03	1.311587E+03
4349	5.194257E+07	7.207120E+03	1.147049E+03	4399	6.833411E+07	8.266445E+03	1.315646E+03
4350	5.201095E+07	7.211862E+03	1.147803E+03	4400	6.849076E+07	8.275914E+03	1.317153E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 305

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4401	6.888027E+07	8.299414E+03	1.320893E+03	4451	8.823480E+07	9.393338E+03	1.494996E+03
4402	6.917680E+07	8.317259E+03	1.323733E+03	4452	8.862602E+07	9.414139E+03	1.498307E+03
4403	6.932999E+07	8.326463E+03	1.325198E+03	4453	9.008655E+07	9.491393E+03	1.510602E+03
4404	6.936718E+07	8.328696E+03	1.325553E+03	4454	9.040341E+07	9.508071E+03	1.513256E+03
4405	6.952449E+07	8.338135E+03	1.327055E+03	4455	9.052470E+07	9.514447E+03	1.514271E+03
4406	6.993254E+07	8.362568E+03	1.330944E+03	4456	9.062386E+07	9.519656E+03	1.515100E+03
4407	7.008750E+07	8.371828E+03	1.332418E+03	4457	9.106987E+07	9.543054E+03	1.518824E+03
4408	7.016596E+07	8.376512E+03	1.333163E+03	4458	9.156267E+07	9.568839E+03	1.522928E+03
4409	7.025611E+07	8.381892E+03	1.334020E+03	4459	9.177058E+07	9.579696E+03	1.524656E+03
4410	7.043369E+07	8.392478E+03	1.335704E+03	4460	9.240938E+07	9.612980E+03	1.529953E+03
4411	7.065814E+07	8.405840E+03	1.337831E+03	4461	9.307777E+07	9.647682E+03	1.535476E+03
4412	7.121034E+07	8.438622E+03	1.343048E+03	4462	9.340269E+07	9.664507E+03	1.538154E+03
4413	7.139062E+07	8.449297E+03	1.344747E+03	4463	9.429739E+07	9.710684E+03	1.545503E+03
4414	7.152401E+07	8.457187E+03	1.346003E+03	4464	9.435811E+07	9.713810E+03	1.546001E+03
4415	7.201608E+07	8.486229E+03	1.350625E+03	4465	9.518220E+07	9.756137E+03	1.552737E+03
4416	7.240058E+07	8.508853E+03	1.354226E+03	4466	9.627145E+07	9.811802E+03	1.561597E+03
4417	7.304904E+07	8.546873E+03	1.360277E+03	4467	9.645498E+07	9.821150E+03	1.563085E+03
4418	7.391010E+07	8.597098E+03	1.368271E+03	4468	9.804535E+07	9.901785E+03	1.575918E+03
4419	7.412843E+07	8.609787E+03	1.370290E+03	4469	9.888071E+07	9.943878E+03	1.582617E+03
4420	7.435671E+07	8.623034E+03	1.372398E+03	4470	9.894232E+07	9.946975E+03	1.583110E+03
4421	7.445759E+07	8.628881E+03	1.373329E+03	4471	9.912508E+07	9.956158E+03	1.584572E+03
4422	7.527760E+07	8.676266E+03	1.380871E+03	4472	9.973622E+07	9.986802E+03	1.589449E+03
4423	7.589667E+07	8.711870E+03	1.386537E+03	4473	1.009855E+08	1.004915E+04	1.599372E+03
4424	7.618610E+07	8.728465E+03	1.389178E+03	4474	1.010148E+08	1.005061E+04	1.599605E+03
4425	7.626911E+07	8.733219E+03	1.389935E+03	4475	1.017729E+08	1.008826E+04	1.605596E+03
4426	7.702163E+07	8.776197E+03	1.396775E+03	4476	1.022609E+08	1.011241E+04	1.609441E+03
4427	7.719970E+07	8.786336E+03	1.398389E+03	4477	1.025580E+08	1.012709E+04	1.611777E+03
4428	7.743144E+07	8.799514E+03	1.400486E+03	4478	1.026865E+08	1.013343E+04	1.612786E+03
4429	7.767992E+07	8.813621E+03	1.402731E+03	4479	1.032884E+08	1.016309E+04	1.617506E+03
4430	7.781474E+07	8.821266E+03	1.403948E+03	4480	1.036710E+08	1.018189E+04	1.620499E+03
4431	7.825513E+07	8.846193E+03	1.407915E+03	4481	1.036870E+08	1.018268E+04	1.620624E+03
4432	7.858599E+07	8.864874E+03	1.410888E+03	4482	1.061550E+08	1.030316E+04	1.639798E+03
4433	7.881293E+07	8.877665E+03	1.412924E+03	4483	1.065338E+08	1.032152E+04	1.642721E+03
4434	7.893313E+07	8.884432E+03	1.414001E+03	4484	1.083801E+08	1.041058E+04	1.656894E+03
4435	7.928516E+07	8.904222E+03	1.417151E+03	4485	1.104103E+08	1.050763E+04	1.672342E+03
4436	7.972302E+07	8.928775E+03	1.421059E+03	4486	1.104597E+08	1.050998E+04	1.672715E+03
4437	8.013248E+07	8.951675E+03	1.424703E+03	4487	1.106718E+08	1.052007E+04	1.674320E+03
4438	8.016819E+07	8.953669E+03	1.425021E+03	4488	1.120622E+08	1.058594E+04	1.684805E+03
4439	8.055482E+07	8.975233E+03	1.428453E+03	4489	1.128182E+08	1.062159E+04	1.690479E+03
4440	8.206811E+07	9.059145E+03	1.441808E+03	4490	1.129736E+08	1.062891E+04	1.691643E+03
4441	8.259511E+07	9.088185E+03	1.446430E+03	4491	1.129876E+08	1.062956E+04	1.691748E+03
4442	8.267951E+07	9.092828E+03	1.447168E+03	4492	1.161159E+08	1.077571E+04	1.715007E+03
4443	8.312924E+07	9.117524E+03	1.451099E+03	4493	1.173748E+08	1.083396E+04	1.724279E+03
4444	8.373386E+07	9.150621E+03	1.456367E+03	4494	1.174382E+08	1.083689E+04	1.724745E+03
4445	8.457702E+07	9.196576E+03	1.463681E+03	4495	1.187307E+08	1.089636E+04	1.734210E+03
4446	8.498818E+07	9.218904E+03	1.467234E+03	4496	1.191922E+08	1.091752E+04	1.737577E+03
4447	8.517617E+07	9.229093E+03	1.468856E+03	4497	1.203065E+08	1.096843E+04	1.745680E+03
4448	8.527859E+07	9.234641E+03	1.469739E+03	4498	1.205165E+08	1.097800E+04	1.747203E+03
4449	8.553462E+07	9.248493E+03	1.471943E+03	4499	1.209331E+08	1.099696E+04	1.750220E+03
4450	8.691231E+07	9.322677E+03	1.483750E+03	4500	1.215255E+08	1.102386E+04	1.754502E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 306

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4501	1.227019E+08	1.107709E+04	1.762973E+03	4551	1.747587E+08	1.321963E+04	2.103970E+03
4502	1.228203E+08	1.108243E+04	1.763824E+03	4552	1.752278E+08	1.323736E+04	2.106792E+03
4503	1.230095E+08	1.109096E+04	1.765182E+03	4553	1.766817E+08	1.329217E+04	2.115514E+03
4504	1.237052E+08	1.112228E+04	1.770166E+03	4554	1.800507E+08	1.341830E+04	2.135588E+03
4505	1.242726E+08	1.114776E+04	1.774222E+03	4555	1.808225E+08	1.344702E+04	2.140160E+03
4506	1.244247E+08	1.115458E+04	1.775307E+03	4556	1.820489E+08	1.349255E+04	2.147406E+03
4507	1.250520E+08	1.118266E+04	1.779776E+03	4557	1.823408E+08	1.350336E+04	2.149127E+03
4508	1.267286E+08	1.125738E+04	1.791668E+03	4558	1.831107E+08	1.353184E+04	2.153659E+03
4509	1.274772E+08	1.129058E+04	1.796952E+03	4559	1.879972E+08	1.371121E+04	2.182206E+03
4510	1.287883E+08	1.134850E+04	1.806169E+03	4560	1.898979E+08	1.378034E+04	2.193210E+03
4511	1.310768E+08	1.144888E+04	1.822146E+03	4561	1.904246E+08	1.379944E+04	2.196250E+03
4512	1.314746E+08	1.146624E+04	1.824908E+03	4562	1.909817E+08	1.381961E+04	2.199460E+03
4513	1.325392E+08	1.151257E+04	1.832282E+03	4563	1.911553E+08	1.382589E+04	2.200459E+03
4514	1.344569E+08	1.159556E+04	1.845490E+03	4564	1.920446E+08	1.385802E+04	2.205572E+03
4515	1.354014E+08	1.163621E+04	1.851960E+03	4565	1.939858E+08	1.392788E+04	2.216690E+03
4516	1.357587E+08	1.165156E+04	1.854403E+03	4566	1.958743E+08	1.399551E+04	2.227455E+03
4517	1.370076E+08	1.170503E+04	1.862913E+03	4567	1.976136E+08	1.405751E+04	2.237322E+03
4518	1.372297E+08	1.171451E+04	1.864422E+03	4568	1.987206E+08	1.409683E+04	2.243580E+03
4519	1.386433E+08	1.177469E+04	1.874000E+03	4569	1.992434E+08	1.411536E+04	2.246529E+03
4520	1.398435E+08	1.182555E+04	1.882094E+03	4570	2.011854E+08	1.418398E+04	2.257451E+03
4521	1.411430E+08	1.188036E+04	1.890818E+03	4571	2.025183E+08	1.423089E+04	2.264917E+03
4522	1.428736E+08	1.195297E+04	1.902375E+03	4572	2.029760E+08	1.424696E+04	2.267475E+03
4523	1.431220E+08	1.196336E+04	1.904028E+03	4573	2.047791E+08	1.431011E+04	2.277524E+03
4524	1.432443E+08	1.196847E+04	1.904841E+03	4574	2.054881E+08	1.433485E+04	2.281463E+03
4525	1.437026E+08	1.198760E+04	1.907886E+03	4575	2.056533E+08	1.434062E+04	2.282380E+03
4526	1.470450E+08	1.212621E+04	1.929946E+03	4576	2.069022E+08	1.438410E+04	2.289300E+03
4527	1.496391E+08	1.223270E+04	1.946895E+03	4577	2.089057E+08	1.445357E+04	2.300357E+03
4528	1.508734E+08	1.228305E+04	1.954909E+03	4578	2.097905E+08	1.448415E+04	2.305223E+03
4529	1.530160E+08	1.236996E+04	1.968741E+03	4579	2.127599E+08	1.458629E+04	2.321480E+03
4530	1.550961E+08	1.245376E+04	1.982077E+03	4580	2.132108E+08	1.460174E+04	2.323939E+03
4531	1.572293E+08	1.253911E+04	1.995661E+03	4581	2.134359E+08	1.460944E+04	2.325165E+03
4532	1.574328E+08	1.254722E+04	1.996952E+03	4582	2.174415E+08	1.474590E+04	2.346882E+03
4533	1.600653E+08	1.265169E+04	2.013579E+03	4583	2.183318E+08	1.477606E+04	2.351682E+03
4534	1.606743E+08	1.267574E+04	2.017406E+03	4584	2.184814E+08	1.478112E+04	2.352488E+03
4535	1.610029E+08	1.268869E+04	2.019468E+03	4585	2.284343E+08	1.511404E+04	2.405474E+03
4536	1.629242E+08	1.276418E+04	2.031482E+03	4586	2.290521E+08	1.513447E+04	2.408725E+03
4537	1.630608E+08	1.276953E+04	2.032333E+03	4587	2.292845E+08	1.514214E+04	2.409947E+03
4538	1.641376E+08	1.281162E+04	2.039032E+03	4588	2.300154E+08	1.516626E+04	2.413785E+03
4539	1.651005E+08	1.284914E+04	2.045005E+03	4589	2.305494E+08	1.518385E+04	2.416585E+03
4540	1.670364E+08	1.292426E+04	2.056959E+03	4590	2.311486E+08	1.520357E+04	2.419723E+03
4541	1.675325E+08	1.294343E+04	2.060011E+03	4591	2.345108E+08	1.531374E+04	2.437258E+03
4542	1.679465E+08	1.295942E+04	2.062556E+03	4592	2.347294E+08	1.532088E+04	2.438394E+03
4543	1.683371E+08	1.297448E+04	2.064952E+03	4593	2.355520E+08	1.534770E+04	2.442663E+03
4544	1.696585E+08	1.302530E+04	2.073041E+03	4594	2.366798E+08	1.538440E+04	2.448503E+03
4545	1.701803E+08	1.304532E+04	2.076226E+03	4595	2.372464E+08	1.540281E+04	2.451433E+03
4546	1.706564E+08	1.306355E+04	2.079129E+03	4596	2.387385E+08	1.545116E+04	2.459129E+03
4547	1.716910E+08	1.310309E+04	2.085422E+03	4597	2.409885E+08	1.552380E+04	2.470690E+03
4548	1.718461E+08	1.310901E+04	2.086364E+03	4598	2.417369E+08	1.554789E+04	2.474524E+03
4549	1.729317E+08	1.315035E+04	2.092943E+03	4599	2.482489E+08	1.575592E+04	2.507632E+03
4550	1.736600E+08	1.317801E+04	2.097346E+03	4600	2.490247E+08	1.578052E+04	2.511547E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 307

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4601	2.509309E+08	1.584080E+04	2.521142E+03	4651	4.752673E+08	2.180063E+04	3.469677E+03
4602	2.558705E+08	1.599595E+04	2.545835E+03	4652	4.804788E+08	2.191983E+04	3.488649E+03
4603	2.603086E+08	1.613408E+04	2.567819E+03	4653	4.871490E+08	2.207145E+04	3.512781E+03
4604	2.701098E+08	1.643502E+04	2.615714E+03	4654	4.894059E+08	2.212252E+04	3.520908E+03
4605	2.713406E+08	1.647242E+04	2.621667E+03	4655	4.901488E+08	2.213930E+04	3.523580E+03
4606	2.722576E+08	1.650023E+04	2.626093E+03	4656	4.912494E+08	2.216415E+04	3.527533E+03
4607	2.743466E+08	1.656341E+04	2.636149E+03	4657	4.981592E+08	2.231948E+04	3.552255E+03
4608	2.765901E+08	1.663100E+04	2.646905E+03	4658	5.132559E+08	2.265515E+04	3.605679E+03
4609	2.801246E+08	1.673692E+04	2.663764E+03	4659	5.240113E+08	2.289129E+04	3.643262E+03
4610	2.859464E+08	1.690995E+04	2.691302E+03	4660	5.267689E+08	2.295145E+04	3.652836E+03
4611	2.886927E+08	1.699096E+04	2.704195E+03	4661	5.377446E+08	2.318932E+04	3.690695E+03
4612	2.889669E+08	1.699903E+04	2.705479E+03	4662	5.401748E+08	2.324166E+04	3.699025E+03
4613	2.899960E+08	1.702927E+04	2.710292E+03	4663	5.404671E+08	2.324795E+04	3.700026E+03
4614	2.946731E+08	1.716605E+04	2.732061E+03	4664	5.441906E+08	2.332789E+04	3.712750E+03
4615	3.030076E+08	1.740711E+04	2.770428E+03	4665	5.443224E+08	2.333072E+04	3.713199E+03
4616	3.084197E+08	1.756188E+04	2.795061E+03	4666	5.545584E+08	2.354906E+04	3.747950E+03
4617	3.113236E+08	1.764437E+04	2.808188E+03	4667	5.560394E+08	2.358049E+04	3.752951E+03
4618	3.131347E+08	1.769561E+04	2.816344E+03	4668	5.617427E+08	2.370111E+04	3.772149E+03
4619	3.171797E+08	1.780954E+04	2.834476E+03	4669	5.642862E+08	2.375471E+04	3.780679E+03
4620	3.176665E+08	1.782320E+04	2.836651E+03	4670	5.922775E+08	2.433675E+04	3.873314E+03
4621	3.195724E+08	1.787659E+04	2.845147E+03	4671	5.930986E+08	2.435362E+04	3.875998E+03
4622	3.243446E+08	1.800957E+04	2.866312E+03	4672	6.061713E+08	2.462055E+04	3.918482E+03
4623	3.372923E+08	1.836552E+04	2.922963E+03	4673	6.130749E+08	2.476035E+04	3.940732E+03
4624	3.380450E+08	1.838600E+04	2.926223E+03	4674	6.437511E+08	2.537225E+04	4.038119E+03
4625	3.448379E+08	1.856981E+04	2.955477E+03	4675	6.467156E+08	2.543060E+04	4.047406E+03
4626	3.530135E+08	1.878865E+04	2.990307E+03	4676	6.557418E+08	2.560746E+04	4.075553E+03
4627	3.576112E+08	1.891061E+04	3.009717E+03	4677	6.671654E+08	2.582955E+04	4.110900E+03
4628	3.588927E+08	1.894446E+04	3.015105E+03	4678	6.772308E+08	2.602366E+04	4.141794E+03
4629	3.595469E+08	1.896172E+04	3.017852E+03	4679	6.898300E+08	2.626461E+04	4.180143E+03
4630	3.601029E+08	1.897638E+04	3.020184E+03	4680	6.907685E+08	2.628248E+04	4.182986E+03
4631	3.621026E+08	1.902899E+04	3.028558E+03	4681	7.084066E+08	2.661591E+04	4.236053E+03
4632	3.662394E+08	1.913738E+04	3.045809E+03	4682	7.142837E+08	2.672609E+04	4.253589E+03
4633	3.682190E+08	1.918903E+04	3.054030E+03	4683	7.569523E+08	2.751277E+04	4.378793E+03
4634	3.692163E+08	1.921500E+04	3.058163E+03	4684	7.878077E+08	2.806791E+04	4.467147E+03
4635	3.697521E+08	1.922894E+04	3.060381E+03	4685	7.915091E+08	2.813377E+04	4.477629E+03
4636	3.720507E+08	1.928862E+04	3.069879E+03	4686	7.971030E+08	2.823301E+04	4.493424E+03
4637	3.740747E+08	1.934101E+04	3.078217E+03	4687	8.067955E+08	2.840415E+04	4.520660E+03
4638	3.758894E+08	1.938787E+04	3.085675E+03	4688	8.093493E+08	2.844907E+04	4.527809E+03
4639	3.882009E+08	1.970282E+04	3.135801E+03	4689	8.190252E+08	2.861862E+04	4.554794E+03
4640	3.921514E+08	1.980281E+04	3.151716E+03	4690	8.408739E+08	2.899783E+04	4.615147E+03
4641	3.924153E+08	1.980948E+04	3.152776E+03	4691	8.422577E+08	2.902168E+04	4.618943E+03
4642	4.006872E+08	2.001717E+04	3.185832E+03	4692	8.490974E+08	2.913928E+04	4.637660E+03
4643	4.011588E+08	2.002895E+04	3.187706E+03	4693	8.715002E+08	2.952118E+04	4.698442E+03
4644	4.164484E+08	2.040707E+04	3.247886E+03	4694	8.728451E+08	2.954395E+04	4.702066E+03
4645	4.219722E+08	2.054196E+04	3.269355E+03	4695	8.774020E+08	2.962097E+04	4.714324E+03
4646	4.375608E+08	2.091795E+04	3.329196E+03	4696	8.851155E+08	2.975089E+04	4.735001E+03
4647	4.429045E+08	2.104530E+04	3.349463E+03	4697	9.087755E+08	3.014590E+04	4.797870E+03
4648	4.513256E+08	2.124442E+04	3.381155E+03	4698	9.088572E+08	3.014726E+04	4.798085E+03
4649	4.659895E+08	2.158679E+04	3.435645E+03	4699	9.522307E+08	3.085824E+04	4.911241E+03
4650	4.713081E+08	2.170963E+04	3.455195E+03	4700	9.583867E+08	3.095782E+04	4.927090E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 308

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4701	9.778857E+08	3.127116E+04	4.976960E+03	4751	2.120871E+09	4.605291E+04	7.329549E+03
4702	9.861375E+08	3.140283E+04	4.997915E+03	4752	2.158827E+09	4.646318E+04	7.394845E+03
4703	1.042985E+09	3.229527E+04	5.139952E+03	4753	2.173679E+09	4.662273E+04	7.420239E+03
4704	1.048161E+09	3.237532E+04	5.152692E+03	4754	2.244926E+09	4.738065E+04	7.540865E+03
4705	1.073546E+09	3.276502E+04	5.214715E+03	4755	2.273311E+09	4.767925E+04	7.588388E+03
4706	1.115079E+09	3.339280E+04	5.314630E+03	4756	2.304863E+09	4.800898E+04	7.640867E+03
4707	1.157556E+09	3.402287E+04	5.414908E+03	4757	2.325183E+09	4.822015E+04	7.674475E+03
4708	1.160133E+09	3.406072E+04	5.420932E+03	4758	2.341900E+09	4.839318E+04	7.702014E+03
4709	1.180969E+09	3.436523E+04	5.469397E+03	4759	2.346698E+09	4.844273E+04	7.709900E+03
4710	1.219361E+09	3.491935E+04	5.557586E+03	4760	2.378922E+09	4.877420E+04	7.762654E+03
4711	1.231645E+09	3.509480E+04	5.585512E+03	4761	2.384288E+09	4.882918E+04	7.771405E+03
4712	1.235932E+09	3.515582E+04	5.595223E+03	4762	2.404444E+09	4.903513E+04	7.804183E+03
4713	1.241617E+09	3.523658E+04	5.608076E+03	4763	2.412518E+09	4.911739E+04	7.817276E+03
4714	1.245736E+09	3.529498E+04	5.617371E+03	4764	2.494954E+09	4.994952E+04	7.949712E+03
4715	1.250222E+09	3.535848E+04	5.627477E+03	4765	2.506452E+09	5.006447E+04	7.968009E+03
4716	1.273593E+09	3.568743E+04	5.679831E+03	4766	2.566596E+09	5.066158E+04	8.063042E+03
4717	1.290446E+09	3.592278E+04	5.717287E+03	4767	2.596285E+09	5.095375E+04	8.109542E+03
4718	1.311616E+09	3.621624E+04	5.763993E+03	4768	2.615550E+09	5.114245E+04	8.139574E+03
4719	1.314543E+09	3.625662E+04	5.770421E+03	4769	2.639969E+09	5.138063E+04	8.177481E+03
4720	1.337305E+09	3.656918E+04	5.820165E+03	4770	2.718861E+09	5.214270E+04	8.298768E+03
4721	1.379508E+09	3.714173E+04	5.911290E+03	4771	2.780749E+09	5.273281E+04	8.392687E+03
4722	1.394708E+09	3.734578E+04	5.943766E+03	4772	2.843670E+09	5.332607E+04	8.487108E+03
4723	1.401558E+09	3.743739E+04	5.958346E+03	4773	2.888001E+09	5.374012E+04	8.553006E+03
4724	1.436152E+09	3.789659E+04	6.031430E+03	4774	2.905430E+09	5.390204E+04	8.578776E+03
4725	1.457831E+09	3.818156E+04	6.076783E+03	4775	2.935727E+09	5.418235E+04	8.623389E+03
4726	1.468548E+09	3.832164E+04	6.099079E+03	4776	2.938553E+09	5.420842E+04	8.627538E+03
4727	1.476019E+09	3.841899E+04	6.114572E+03	4777	2.943792E+09	5.425673E+04	8.635226E+03
4728	1.489344E+09	3.859202E+04	6.142111E+03	4778	2.959330E+09	5.439972E+04	8.657984E+03
4729	1.517228E+09	3.895161E+04	6.199341E+03	4779	2.997753E+09	5.475174E+04	8.714010E+03
4730	1.535568E+09	3.918633E+04	6.236698E+03	4780	3.007285E+09	5.483872E+04	8.727853E+03
4731	1.555605E+09	3.944116E+04	6.277255E+03	4781	3.025262E+09	5.500238E+04	8.753901E+03
4732	1.563675E+09	3.954333E+04	6.293516E+03	4782	3.059721E+09	5.531474E+04	8.803615E+03
4733	1.607534E+09	4.009407E+04	6.381169E+03	4783	3.063001E+09	5.534439E+04	8.808332E+03
4734	1.617431E+09	4.021730E+04	6.400782E+03	4784	3.190895E+09	5.648801E+04	8.990345E+03
4735	1.638689E+09	4.048073E+04	6.442708E+03	4785	3.208918E+09	5.664731E+04	9.015700E+03
4736	1.667201E+09	4.083137E+04	6.498514E+03	4786	3.280668E+09	5.727712E+04	9.115936E+03
4737	1.679024E+09	4.097589E+04	6.521516E+03	4787	3.324876E+09	5.766174E+04	9.177151E+03
4738	1.713912E+09	4.139941E+04	6.588921E+03	4788	3.367116E+09	5.802685E+04	9.235261E+03
4739	1.762599E+09	4.198332E+04	6.681852E+03	4789	3.415438E+09	5.844175E+04	9.301294E+03
4740	1.783274E+09	4.222883E+04	6.720927E+03	4790	3.426509E+09	5.853639E+04	9.316356E+03
4741	1.801443E+09	4.244341E+04	6.755079E+03	4791	3.447917E+09	5.871897E+04	9.345414E+03
4742	1.872617E+09	4.327374E+04	6.887230E+03	4792	3.474681E+09	5.894643E+04	9.381615E+03
4743	1.903997E+09	4.363482E+04	6.944697E+03	4793	3.513939E+09	5.927849E+04	9.434464E+03
4744	1.916867E+09	4.378204E+04	6.968127E+03	4794	3.567110E+09	5.972529E+04	9.505575E+03
4745	1.936524E+09	4.400595E+04	7.003765E+03	4795	3.567861E+09	5.973158E+04	9.506576E+03
4746	1.977747E+09	4.447187E+04	7.077918E+03	4796	3.596856E+09	5.997379E+04	9.545125E+03
4747	1.982528E+09	4.452559E+04	7.086467E+03	4797	3.625905E+09	6.021549E+04	9.583593E+03
4748	1.991351E+09	4.462455E+04	7.102218E+03	4798	3.668545E+09	6.056852E+04	9.639779E+03
4749	2.058391E+09	4.536950E+04	7.220780E+03	4799	3.685247E+09	6.070623E+04	9.661697E+03
4750	2.108500E+09	4.591841E+04	7.308142E+03	4800	3.718218E+09	6.097719E+04	9.704821E+03

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 309

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
4801	3.759376E+09	6.131375E+04	9.758387E+03	4851	7.229234E+09	8.502490E+04	1.353213E+04
4802	3.873835E+09	6.224014E+04	9.905826E+03	4852	7.306989E+09	8.548093E+04	1.360471E+04
4803	3.890918E+09	6.237722E+04	9.927643E+03	4853	7.514671E+09	8.668720E+04	1.379670E+04
4804	3.974231E+09	6.304150E+04	1.003337E+04	4854	7.565978E+09	8.698263E+04	1.384372E+04
4805	4.062955E+09	6.374131E+04	1.014474E+04	4855	7.653761E+09	8.748578E+04	1.392379E+04
4806	4.076837E+09	6.385011E+04	1.016206E+04	4856	8.458962E+09	9.197262E+04	1.463790E+04
4807	4.101451E+09	6.404257E+04	1.019269E+04	4857	8.695820E+09	9.325138E+04	1.484142E+04
4808	4.148598E+09	6.440961E+04	1.025111E+04	4858	8.794648E+09	9.377979E+04	1.492552E+04
4809	4.214022E+09	6.491550E+04	1.033162E+04	4859	8.917951E+09	9.443490E+04	1.502978E+04
4810	4.248980E+09	6.518420E+04	1.037439E+04	4860	8.951839E+09	9.461416E+04	1.505831E+04
4811	4.308826E+09	6.564165E+04	1.044719E+04	4861	9.307185E+09	9.647375E+04	1.535427E+04
4812	4.359164E+09	6.602396E+04	1.050804E+04	4862	9.370977E+09	9.680381E+04	1.540680E+04
4813	4.475021E+09	6.689560E+04	1.064676E+04	4863	9.456076E+09	9.724236E+04	1.547660E+04
4814	4.489937E+09	6.700699E+04	1.066449E+04	4864	9.482096E+09	9.737605E+04	1.549788E+04
4815	4.555818E+09	6.749680E+04	1.074245E+04	4865	9.510290E+09	9.752072E+04	1.552090E+04
4816	4.732290E+09	6.879164E+04	1.094853E+04	4866	9.704802E+09	9.851295E+04	1.567882E+04
4817	4.803233E+09	6.930536E+04	1.103029E+04	4867	9.977794E+09	9.988891E+04	1.589781E+04
4818	4.827987E+09	6.948372E+04	1.105868E+04	4868	9.982375E+09	9.991183E+04	1.590146E+04
4819	4.874233E+09	6.981571E+04	1.111152E+04	4869	1.004633E+10	1.002314E+05	1.595232E+04
4820	4.911621E+09	7.008296E+04	1.115405E+04	4870	1.041455E+10	1.020517E+05	1.624203E+04
4821	4.932490E+09	7.023169E+04	1.117772E+04	4871	1.063709E+10	1.031363E+05	1.641465E+04
4822	4.985665E+09	7.060924E+04	1.123781E+04	4872	1.070502E+10	1.034651E+05	1.646698E+04
4823	5.036047E+09	7.096511E+04	1.129445E+04	4873	1.083965E+10	1.041136E+05	1.657020E+04
4824	5.093730E+09	7.137037E+04	1.135895E+04	4874	1.087033E+10	1.042609E+05	1.659364E+04
4825	5.109859E+09	7.148328E+04	1.137692E+04	4875	1.099430E+10	1.048537E+05	1.668799E+04
4826	5.257512E+09	7.250870E+04	1.154012E+04	4876	1.105707E+10	1.051526E+05	1.673555E+04
4827	5.361437E+09	7.322183E+04	1.165362E+04	4877	1.119770E+10	1.058192E+05	1.684164E+04
4828	5.382025E+09	7.336228E+04	1.167597E+04	4878	1.155580E+10	1.074979E+05	1.710882E+04
4829	5.433492E+09	7.371222E+04	1.173166E+04	4879	1.185728E+10	1.088911E+05	1.733056E+04
4830	5.513408E+09	7.425233E+04	1.181763E+04	4880	1.195297E+10	1.093296E+05	1.740035E+04
4831	5.603162E+09	7.485427E+04	1.191343E+04	4881	1.201436E+10	1.096100E+05	1.744498E+04
4832	5.620391E+09	7.496926E+04	1.193173E+04	4882	1.264597E+10	1.124543E+05	1.789766E+04
4833	5.836745E+09	7.639859E+04	1.215921E+04	4883	1.274950E+10	1.129137E+05	1.797077E+04
4834	5.858172E+09	7.653870E+04	1.218151E+04	4884	1.276573E+10	1.129855E+05	1.798220E+04
4835	5.919026E+09	7.693521E+04	1.224462E+04	4885	1.290100E+10	1.135826E+05	1.807723E+04
4836	5.983286E+09	7.735170E+04	1.231091E+04	4886	1.291074E+10	1.136254E+05	1.808405E+04
4837	6.218363E+09	7.885660E+04	1.255042E+04	4887	1.308739E+10	1.144001E+05	1.820735E+04
4838	6.320588E+09	7.950213E+04	1.265316E+04	4888	1.367323E+10	1.169326E+05	1.861040E+04
4839	6.346999E+09	7.966805E+04	1.267956E+04	4889	1.371445E+10	1.171087E+05	1.863843E+04
4840	6.549249E+09	8.092743E+04	1.288000E+04	4890	1.396071E+10	1.181554E+05	1.880502E+04
4841	6.612963E+09	8.132013E+04	1.294250E+04	4891	1.440774E+10	1.200323E+05	1.910373E+04
4842	6.645906E+09	8.152243E+04	1.297470E+04	4892	1.479545E+10	1.216366E+05	1.935906E+04
4843	6.688508E+09	8.178330E+04	1.301622E+04	4893	1.489175E+10	1.220318E+05	1.942196E+04
4844	6.723072E+09	8.199434E+04	1.304980E+04	4894	1.503330E+10	1.226103E+05	1.951404E+04
4845	6.744256E+09	8.212342E+04	1.307035E+04	4895	1.554853E+10	1.246937E+05	1.984562E+04
4846	6.804049E+09	8.248666E+04	1.312816E+04	4896	1.560886E+10	1.249354E+05	1.988409E+04
4847	6.975473E+09	8.351930E+04	1.329251E+04	4897	1.710406E+10	1.307825E+05	2.081468E+04
4848	7.073564E+09	8.410448E+04	1.338564E+04	4898	1.732485E+10	1.316239E+05	2.094860E+04
4849	7.122371E+09	8.439414E+04	1.343174E+04	4899	1.838284E+10	1.355833E+05	2.157876E+04
4850	7.217779E+09	8.495751E+04	1.352141E+04	4900	1.874098E+10	1.368977E+05	2.178794E+04

Figure G-1. CM1.0A88 Liftoff Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 14:35:41 CDT Page 310

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
4901	1.951515E+10	1.396966E+05	2.223341E+04
4902	1.960796E+10	1.400284E+05	2.228622E+04
4903	1.967459E+10	1.402662E+05	2.232405E+04
4904	2.011520E+10	1.418281E+05	2.257264E+04
4905	2.066179E+10	1.437421E+05	2.287727E+04
4906	2.133365E+10	1.460604E+05	2.324624E+04
4907	2.139348E+10	1.462651E+05	2.327881E+04
4908	2.168925E+10	1.472727E+05	2.343918E+04
4909	2.260949E+10	1.503645E+05	2.393125E+04
4910	2.273742E+10	1.507893E+05	2.399887E+04
4911	2.341489E+10	1.530192E+05	2.435377E+04
4912	2.379372E+10	1.542521E+05	2.454999E+04
4913	2.437893E+10	1.561375E+05	2.485006E+04
4914	2.480099E+10	1.574833E+05	2.506424E+04
4915	2.502112E+10	1.581807E+05	2.517524E+04
4916	2.547611E+10	1.596124E+05	2.540310E+04
4917	2.611141E+10	1.615903E+05	2.571789E+04
4918	2.639683E+10	1.624710E+05	2.585806E+04
4919	2.701713E+10	1.643689E+05	2.616012E+04
4920	2.710683E+10	1.646415E+05	2.620351E+04
4921	2.917272E+10	1.708002E+05	2.718370E+04
4922	2.939145E+10	1.714393E+05	2.728542E+04
4923	3.005043E+10	1.733506E+05	2.758961E+04
4924	3.040068E+10	1.743579E+05	2.774992E+04
4925	3.069038E+10	1.751867E+05	2.788183E+04
4926	3.112585E+10	1.764252E+05	2.807894E+04
4927	3.517112E+10	1.875396E+05	2.984786E+04
4928	3.550073E+10	1.884164E+05	2.998740E+04
4929	3.781147E+10	1.944517E+05	3.094795E+04
4930	3.835262E+10	1.958383E+05	3.116863E+04
4931	3.922878E+10	1.980626E+05	3.152263E+04
4932	4.134915E+10	2.033449E+05	3.236335E+04
4933	4.163571E+10	2.040483E+05	3.247530E+04
4934	4.185367E+10	2.045817E+05	3.256019E+04
4935	4.206662E+10	2.051015E+05	3.264291E+04
4936	4.336581E+10	2.082446E+05	3.314316E+04
4937	4.360133E+10	2.088093E+05	3.323303E+04
4938	4.597392E+10	2.144153E+05	3.412526E+04
4939	4.612496E+10	2.147672E+05	3.418126E+04
4940	5.006913E+10	2.237613E+05	3.561272E+04
4941	5.072837E+10	2.252296E+05	3.584640E+04
4942	5.086322E+10	2.255288E+05	3.589402E+04
4943	5.142686E+10	2.267749E+05	3.609235E+04
4944	5.271735E+10	2.296026E+05	3.654239E+04
4945	5.283982E+10	2.298691E+05	3.658481E+04
4946	5.500345E+10	2.345281E+05	3.732631E+04
4947	5.533822E+10	2.352408E+05	3.743973E+04
4948	5.538069E+10	2.353310E+05	3.745409E+04
4949	5.836433E+10	2.415871E+05	3.844978E+04
4950	5.845557E+10	2.417759E+05	3.847983E+04
4951	5.918300E+10	2.432756E+05	3.871851E+04
4952	6.033617E+10	2.456342E+05	3.909390E+04
4953	6.475748E+10	2.544749E+05	4.050094E+04
4954	7.250030E+10	2.692588E+05	4.285387E+04
4955	8.051006E+10	2.837429E+05	4.515909E+04
4956	8.250616E+10	2.872389E+05	4.571548E+04
4957	9.723939E+10	3.118323E+05	4.962965E+04
4958	9.976281E+10	3.158525E+05	5.026949E+04
4959	1.013584E+11	3.183683E+05	5.066990E+04
4960	1.068067E+11	3.268130E+05	5.201390E+04
4961	1.216840E+11	3.488324E+05	5.551840E+04
4962	1.250577E+11	3.536349E+05	5.628275E+04
4963	1.781252E+11	4.220488E+05	6.717116E+04
4964	1.923859E+11	4.386182E+05	6.980825E+04
4965	2.135424E+11	4.621065E+05	7.354654E+04
4966	3.009051E+11	5.485481E+05	8.730415E+04
4967	4.571231E+11	6.761088E+05	1.076061E+05
4968	6.336546E+11	7.960242E+05	1.266912E+05
4969	9.706269E+11	9.852040E+05	1.568001E+05
4970	1.193047E+12	1.092267E+06	1.738397E+05
4971	1.266229E+12	1.125268E+06	1.790920E+05
4972	1.542692E+12	1.242051E+06	1.976786E+05
4973	1.669112E+12	1.291941E+06	2.056188E+05
4974	1.024053E+13	3.200083E+06	5.093090E+05
4975	2.220095E+13	4.711788E+06	7.499044E+05
4976	2.953075E+13	5.434220E+06	8.648830E+05
4977	4.870011E+13	6.978547E+06	1.110670E+06
4978	9.490871E+13	9.742110E+06	1.550505E+06
4979	1.591330E+14	1.261479E+07	2.007707E+06
4980	1.888935E+14	1.374385E+07	2.187402E+06
4981	5.629773E+14	2.372714E+07	3.776292E+06
4982	6.222978E+14	2.494590E+07	3.970263E+06
4983	1.372787E+15	3.705115E+07	5.896873E+06
4984	1.792542E+16	1.338858E+08	2.130859E+07

Figure G-1. CM1.0A88 Liftoff Model

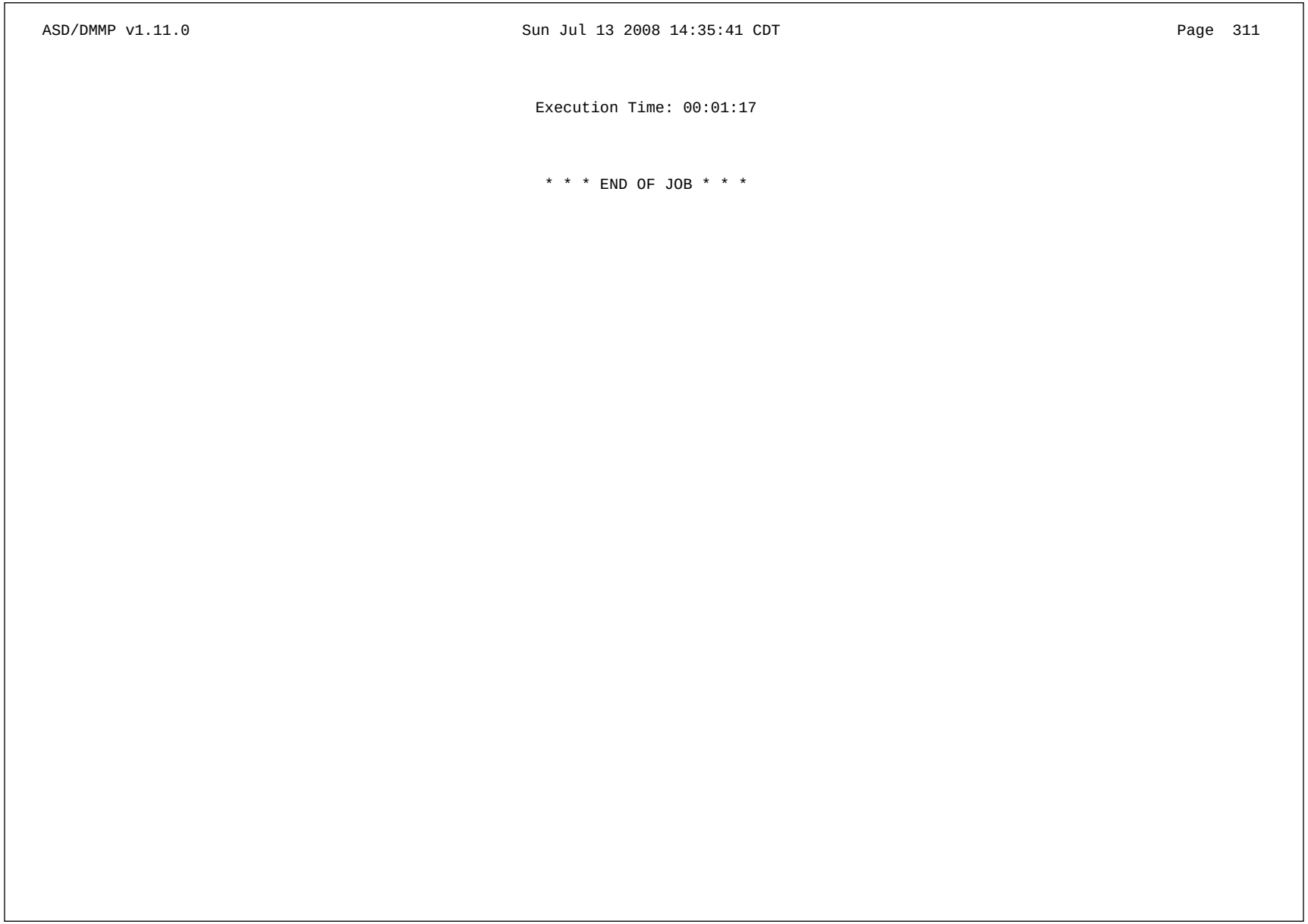

Figure G-1. CM1.0A88 Liftoff Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:36 CDT                    Page    1


                        ************************************************
                        *                                              *
                        *                ASD/DMMP v1.12.0              *
                        *                                              *
                        *       Applied Structural Dynamics, Inc.      *
                        *    http://www.AppliedStructuralDynamics.com  *
                        *                                              *
                        *   Execution Time: Mon Sep 01 2008 12:30:36 CDT *
                        *                                              *
                        ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-07-0009A
     Name       : CM10A88land
     Description: CM10A88 Landing Model
```

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:36 CDT                    Page    2

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-07-0009A
     Name        : CM10A88land
     Description : CM10A88 Landing Model
     Type        : Single

     DMM Size    : 2767 DOFs
     DMM Type    : Hybrid
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : landing-msc.op4
        Geometry : landing.blk
        Label    : landing.txt

     Load Case 1
        ID       : le7520
        Type     : NASTRAN DLOAD
        Duration : 2.000
        File     : le7520.Z

     Load Case 2
        ID       : le7521
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : le7521.Z

     Load Case 3
        ID       : le7522
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : le7522.Z

     Load Case 4
        ID       : le7523
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : le7523.Z

     Load Case 5
        ID       : le7524
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : le7524.Z

     Load Case 6
        ID       : le7525
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : le7525.Z

     Load Case 7
        ID       : le7526
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : le7526.Z
```

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:36 CDT                    Page    3

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     Load Case 8
        ID       : lf7100
        Type     : NASTRAN DLOAD
        Duration : 2.000
        File     : lf7100.Z

     Load Case 9
        ID       : lf7101
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lf7101.Z

     Load Case 10
        ID       : lf7102
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lf7102.Z

     Load Case 11
        ID       : lf7103
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lf7103.Z

     Load Case 12
        ID       : lf7104
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lf7104.Z

     Load Case 13
        ID       : lf7105
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lf7105.Z

     Load Case 14
        ID       : lf7106
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lf7106.Z

     Load Case 15
        ID       : lg7521
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lg7521.Z

     Load Case 16
        ID       : lg7522
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lg7522.Z
```

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:36 CDT                    Page    4

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     Load Case 17
        ID       : lg7523
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lg7523.Z

     Load Case 18
        ID       : lg7524
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lg7524.Z

     Load Case 19
        ID       : lg7525
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lg7525.Z

     Load Case 20
        ID       : lg7526
        Type     : NASTRAN DLOAD
        Duration : 1.500
        File     : lg7526.Z
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 5

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
90	ORB/ET FWD	38	0	388.04500	0.00000	283.84000	0	1	2	3			
	8.0450 0.0000 283.8400												
91	ORB/ET I/F AFT R	131	0	1317.00000	96.50000	267.55600	0	4	5	6			
	7.0000 96.5000 267.5560												
1091	ORB/ET I/F AFT L	131	0	1317.00000	-96.50000	267.55600	0	7	8	9			
	7.0000 -96.5000 267.5560												
4590	RMS LUMPED NODE I/F L	67	0	679.50000	-96.50000	410.00000	0	10	11	12	13	14	15
	9.5000 -96.5000 410.0000												
4591	RMS LUMPED NODE I/F L	91	0	911.00000	-96.50000	410.00000	0	16	17	18	19	20	21
	1.0000 -96.5000 410.0000												
4592	RMS LUMPED NODE I/F L	118	0	1189.00000	-96.50000	410.00000	0	22	23	24	25	26	27
	9.0000 -96.5000 410.0000												
4593	RMS LUMPED NODE I/F L	125	0	1256.50000	-96.50000	410.00000	0	28	29	30	31	32	33
	6.5000 -96.5000 410.0000												
13001	PAYLOAD LONGERON ATTACH	61	0	616.67000	94.00000	414.00000	0	34	35	36	37		38
	6.6700 94.0000 414.0000												
13002	PAYLOAD LONGERON ATTACH	65	0	659.93000	94.00000	414.00000	0	39	40	41	42		43
	9.9300 94.0000 414.0000												
13003	PAYLOAD LONGERON ATTACH	76	0	762.20000	94.00000	414.00000	0	44	45	46	47		48
	2.2000 94.0000 414.0000												
13004	PAYLOAD LONGERON ATTACH	95	0	954.93000	94.00000	414.00000	0	49	50	51	52		53
	4.9300 94.0000 414.0000												
13005	PAYLOAD LONGERON ATTACH	101	0	1010.00000	94.00000	414.00000	0	54	55	56	57		58
	0.0000 94.0000 414.0000												
13006	PAYLOAD LONGERON ATTACH	105	0	1057.20000	94.00000	414.00000	0	59	60	61	62		63
	7.2000 94.0000 414.0000												
13007	PAYLOAD LONGERON ATTACH	117	0	1175.20000	94.00000	414.00000	0	64	65	66	67		68
	5.2000 94.0000 414.0000												
13008	PAYLOAD LONGERON ATTACH	121	0	1218.47000	94.00000	414.00000	0	69	70	71	72		73
	8.4700 94.0000 414.0000												
13009	PAYLOAD LONGERON ATTACH	61	0	616.67000	-94.00000	414.00000	0	74	75	76	77		78
	6.6700 -94.0000 414.0000												
13010	PAYLOAD LONGERON ATTACH	65	0	659.93000	-94.00000	414.00000	0	79	80	81	82		83
	9.9300 -94.0000 414.0000												
13011	PAYLOAD LONGERON ATTACH	76	0	762.20000	-94.00000	414.00000	0	84	85	86	87		88
	2.2000 -94.0000 414.0000												
13012	PAYLOAD LONGERON ATTACH	95	0	954.93000	-94.00000	414.00000	0	89	90	91	92		93
	4.9300 -94.0000 414.0000												
13013	PAYLOAD LONGERON ATTACH	101	0	1010.00000	-94.00000	414.00000	0	94	95	96	97		98
	0.0000 -94.0000 414.0000												
13014	PAYLOAD LONGERON ATTACH	105	0	1057.20000	-94.00000	414.00000	0	99	100	101	102		103
	7.2000 -94.0000 414.0000												
13015	PAYLOAD LONGERON ATTACH	117	0	1175.20000	-94.00000	414.00000	0	104	105	106	107		108
	5.2000 -94.0000 414.0000												
13016	PAYLOAD LONGERON ATTACH	121	0	1218.47000	-94.00000	414.00000	0	109	110	111	112		113
	8.4700 -94.0000 414.0000												
13017	PAYLOAD KEEL ATTACH	65	0	656.00000	0.00000	305.00000	0	114	115	116	117	118	
	6.0000 0.0000 305.0000												
13018	PAYLOAD KEEL ATTACH	94	0	947.07000	0.00000	305.00000	0	119	120	121	122	123	
	7.0700 0.0000 305.0000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 6

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
13019	PAYLOAD KEEL ATTACH	105	0	1057.20000	0.00000	305.00000	0	124	125	126	127	128	
	7.2000 0.0000 305.0000												
13020	PAYLOAD KEEL ATTACH	117	0	1175.20000	0.00000	305.00000	0	129	130	131	132	133	
	5.2000 0.0000 305.0000												
2171	Frame, Keel, and Sills	103	0	1033.40000	94.00000	410.00000	0		134	135			
	3.4000 94.0000 410.0000												
2197	Frame, Keel, and Sills	104	0	1040.00000	94.00000	410.00000	0		136	137			
	0.0000 94.0000 410.0000												
2322	Frame, Keel, and Sills	114	0	1140.67000	20.15000	307.20000	0		138	139			
	0.6700 20.1500 307.2000												
2663	Frame, Keel, and Sills	101	0	1011.40000	94.00000	408.25000	0		140	141			
	1.4000 94.0000 408.2500												
2808	Frame, Keel, and Sills	102	0	1024.87500	99.00000	410.00000	0		142	143			
	4.8750 99.0000 410.0000												
2809	Frame, Keel, and Sills	102	0	1024.87500	94.00000	410.00000	0		144	145			
	4.8750 94.0000 410.0000												
2833	Frame, Keel, and Sills	105	0	1052.58500	94.00000	410.00000	0		146	147			
	2.5850 94.0000 410.0000												
2922	Frame, Keel, and Sills	104	0	1044.22800	94.00000	410.00000	0		148	149			
	4.2280 94.0000 410.0000												
21081	Frame, Keel, and Sills	102	0	1029.50000	96.80000	410.00000	0		150	151			
	9.5000 96.8000 410.0000												
27106	Frame, Keel, and Sills	116	0	1165.83000	94.00000	368.50000	0		152	153			
	5.8300 94.0000 368.5000												
27111	Frame, Keel, and Sills	116	0	1165.83000	102.56000	420.00000	0		154	155			
	5.8300 102.5600 420.0000												
27150	Frame, Keel, and Sills	117	0	1179.00000	105.00000	420.00000	0		156	157			
	9.0000 105.0000 420.0000												
27164	Frame, Keel, and Sills	119	0	1191.00000	26.25000	310.47650	0		158	159			
	1.0000 26.2500 310.4765												
27167	Frame, Keel, and Sills	119	0	1191.00000	52.50000	321.47000	0		160	161			
	1.0000 52.5000 321.4700												
27178	Frame, Keel, and Sills	119	0	1191.00000	72.60000	334.25000	0		162	163			
	1.0000 72.6000 334.2500												
27186	Frame, Keel, and Sills	119	0	1191.00000	89.43570	368.50000	0		164	165			
	1.0000 89.4357 368.5000												
27193	Frame, Keel, and Sills	119	0	1191.00000	94.00000	388.15000	0		166	167			
	1.0000 94.0000 388.1500												
27564	Frame, Keel, and Sills	119	0	1191.00000	26.25000	308.47650	0		168	169			
	1.0000 26.2500 308.4765												
27837	Frame, Keel, and Sills	119	0	1191.00000	80.71800	347.34000	0		170	171			
	1.0000 80.7180 347.3400												
271012	Frame, Keel, and Sills	116	0	1165.83000	94.00000	388.15000	0		172	173			
	5.8300 94.0000 388.1500												
271013	Frame, Keel, and Sills	116	0	1165.83000	94.00000	376.60500	0		174	175			
	5.8300 94.0000 376.6050												
271055	Frame, Keel, and Sills	119	0	1191.00000	91.31840	376.60500	0		176	177			
	1.0000 91.3184 376.6050												
271265	Frame, Keel, and Sills	119	0	1191.00000	41.69510	313.70000	0		178	179			
	1.0000 41.6951 313.7000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 7

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
702171	Frame, Keel, and Sills	103	0	1033.40000	-94.00000	410.00000	0	180	181				
	3.4000 -94.0000 410.0000												
702197	Frame, Keel, and Sills	104	0	1040.00000	-94.00000	410.00000	0	182	183				
	0.0000 -94.0000 410.0000												
702322	Frame, Keel, and Sills	114	0	1140.67000	-20.15000	307.20000	0	184	185				
	0.6700 -20.1500 307.2000												
702663	Frame, Keel, and Sills	101	0	1011.40000	-94.00000	408.25000	0	186	187				
	1.4000 -94.0000 408.2500												
702808	Frame, Keel, and Sills	102	0	1024.87500	-99.00000	410.00000	0	188	189				
	4.8750 -99.0000 410.0000												
702809	Frame, Keel, and Sills	102	0	1024.87500	-94.00000	410.00000	0	190	191				
	4.8750 -94.0000 410.0000												
702833	Frame, Keel, and Sills	105	0	1052.58500	-94.00000	410.00000	0	192	193				
	2.5850 -94.0000 410.0000												
702922	Frame, Keel, and Sills	104	0	1044.22800	-94.00000	410.00000	0	194	195				
	4.2280 -94.0000 410.0000												
727106	Frame, Keel, and Sills	116	0	1165.83000	-94.00000	368.50000	0	196	197				
	5.8300 -94.0000 368.5000												
727111	Frame, Keel, and Sills	116	0	1165.83000	-102.56000	420.00000	0	198	199				
	5.8300 -102.5600 420.0000												
727150	Frame, Keel, and Sills	117	0	1179.00000	-105.00000	420.00000	0	200	201				
	9.0000 -105.0000 420.0000												
727164	Frame, Keel, and Sills	119	0	1191.00000	-26.25000	310.47650	0	202	203				
	1.0000 -26.2500 310.4765												
727167	Frame, Keel, and Sills	119	0	1191.00000	-52.50000	321.47000	0	204	205				
	1.0000 -52.5000 321.4700												
727178	Frame, Keel, and Sills	119	0	1191.00000	-72.60000	334.25000	0	206	207				
	1.0000 -72.6000 334.2500												
727186	Frame, Keel, and Sills	119	0	1191.00000	-89.43570	368.50000	0	208	209				
	1.0000 -89.4357 368.5000												
727193	Frame, Keel, and Sills	119	0	1191.00000	-94.00000	388.15000	0	210	211				
	1.0000 -94.0000 388.1500												
727564	Frame, Keel, and Sills	119	0	1191.00000	-26.25000	308.47650	0	212	213				
	1.0000 -26.2500 308.4765												
727837	Frame, Keel, and Sills	119	0	1191.00000	-80.71800	347.34000	0	214	215				
	1.0000 -80.7180 347.3400												
7021081	Frame, Keel, and Sills	102	0	1029.50000	-96.80000	410.00000	0	216	217				
	9.5000 -96.8000 410.0000												
7271012	Frame, Keel, and Sills	116	0	1165.83000	-94.00000	388.15000	0	218	219				
	5.8300 -94.0000 388.1500												
7271013	Frame, Keel, and Sills	116	0	1165.83000	-94.00000	376.60500	0	220	221				
	5.8300 -94.0000 376.6050												
7271055	Frame, Keel, and Sills	119	0	1191.00000	-91.31840	376.60500	0	222	223				
	1.0000 -91.3184 376.6050												
7271265	Frame, Keel, and Sills	119	0	1191.00000	-41.69510	313.70000	0	224	225				
	1.0000 -41.6951 313.7000												
212118	Cargo Bay Doors	96	0	966.35000	100.25000	438.50000	0	226	227				
	6.3500 100.2500 438.5000												
212120	Cargo Bay Doors	96	0	966.35000	100.25000	434.00000	0	228	229				
	6.3500 100.2500 434.0000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 8

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
212125	Cargo Bay Doors	96	0	966.35000	101.20000	424.75000	0	230	231				
	6.3500 101.2000 424.7500												
212385	Cargo Bay Doors	105	0	1055.75000	85.51450	466.75450	0	232	233				
	5.7500 85.5145 466.7545												
212388	Cargo Bay Doors	105	0	1055.75000	91.10200	462.16900	0	234	235				
	5.7500 91.1020 462.1690												
212390	Cargo Bay Doors	105	0	1055.75000	95.34150	455.20850	0	236	237				
	5.7500 95.3415 455.2085												
213110	Cargo Bay Doors	114	0	1144.20000	95.34150	455.20850	0	238	239				
	4.2000 95.3415 455.2085												
213113	Cargo Bay Doors	114	0	1144.20000	99.58100	448.24800	0	240	241				
	4.2000 99.5810 448.2480												
213115	Cargo Bay Doors	114	0	1144.20000	99.91550	443.37400	0	242	243				
	4.2000 99.9155 443.3740												
213195	Cargo Bay Doors	116	0	1164.20000	101.20000	424.75000	0	244	245				
	4.2000 101.2000 424.7500												
213198	Cargo Bay Doors	116	0	1164.20000	102.15000	420.00000	0	246	247				
	4.2000 102.1500 420.0000												
213201	Cargo Bay Doors	117	0	1174.20000	100.25000	429.50000	0	248	249				
	4.2000 100.2500 429.5000												
213203	Cargo Bay Doors	117	0	1174.20000	102.15000	420.00000	0	250	251				
	4.2000 102.1500 420.0000												
213265	Cargo Bay Doors	118	0	1184.20000	101.20000	424.75000	0	252	253				
	4.2000 101.2000 424.7500												
213268	Cargo Bay Doors	118	0	1184.20000	102.15000	420.00000	0	254	255				
	4.2000 102.1500 420.0000												
312118	Cargo Bay Doors	96	0	966.35000	-100.25000	438.50000	0	256	257				
	6.3500 -100.2500 438.5000												
312120	Cargo Bay Doors	96	0	966.35000	-100.25000	434.00000	0	258	259				
	6.3500 -100.2500 434.0000												
312125	Cargo Bay Doors	96	0	966.35000	-101.20000	424.75000	0	260	261				
	6.3500 -101.2000 424.7500												
312385	Cargo Bay Doors	105	0	1055.75000	-85.51450	466.75450	0	262	263				
	5.7500 -85.5145 466.7545												
312388	Cargo Bay Doors	105	0	1055.75000	-91.10200	462.16900	0	264	265				
	5.7500 -91.1020 462.1690												
312390	Cargo Bay Doors	105	0	1055.75000	-95.34150	455.20850	0	266	267				
	5.7500 -95.3415 455.2085												
313195	Cargo Bay Doors	116	0	1164.20000	-101.20000	424.75000	0	268	269				
	4.2000 -101.2000 424.7500												
313198	Cargo Bay Doors	116	0	1164.20000	-102.15000	420.00000	0	270	271				
	4.2000 -102.1500 420.0000												
313201	Cargo Bay Doors	117	0	1174.20000	-100.25000	429.50000	0	272	273				
	4.2000 -100.2500 429.5000												
313203	Cargo Bay Doors	117	0	1174.20000	-102.15000	420.00000	0	274	275				
	4.2000 -102.1500 420.0000												
313265	Cargo Bay Doors	118	0	1184.20000	-101.20000	424.75000	0	276	277				
	4.2000 -101.2000 424.7500												
313268	Cargo Bay Doors	118	0	1184.20000	-102.15000	420.00000	0	278	279				
	4.2000 -102.1500 420.0000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 9

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
2423	B10S ATTACH 1	109	0	1090.33000	94.00000	396.00000	0		280	281			
	0.3300 94.0000 396.0000												
2433	B10S ATTACH 2	111	0	1115.50000	94.00000	396.88000	0		282				
	5.5000 94.0000 396.8800												
2665	B10S ATTACH 3	112	0	1123.30000	94.00000	408.25000	0	283	284				
	3.3000 94.0000 408.2500												
2443	B10S ATTACH 4	114	0	1140.67000	94.00000	395.50000	0		285	286			
	0.6700 94.0000 395.5000												
2679	B10S ATTACH 5	113	0	1138.93900	102.57900	410.85000	0		287				
	8.9390 102.5790 410.8500												
2680	B10S ATTACH 6	108	0	1087.68300	102.65400	410.85000	0		288				
	7.6830 102.6540 410.8500												
702423	B10P ATTACH 1	109	0	1090.33000	-94.00000	396.00000	0		289	290			
	0.3300 -94.0000 396.0000												
702433	B10P ATTACH 2	111	0	1115.50000	-94.00000	396.88000	0		291				
	5.5000 -94.0000 396.8800												
702665	B10P ATTACH 3	112	0	1123.30000	-94.00000	408.25000	0	292	293				
	3.3000 -94.0000 408.2500												
702443	B10P ATTACH 4	114	0	1140.67000	-94.00000	395.50000	0		294	295			
	0.6700 -94.0000 395.5000												
702679	B10P ATTACH 5	113	0	1138.93900	-102.57900	410.85000	0		296				
	8.9390 -102.5790 410.8500												
702680	B10P ATTACH 6	108	0	1087.68300	-102.65400	410.85000	0		297				
	7.6830 -102.6540 410.8500												
2651	STARBOARD BOOM	91	0	911.00000	96.50000	410.00000	0	298	299	300	301	302	303
	1.0000 96.5000 410.0000												
27895	STARBOARD BOOM	118	0	1189.00000	96.50000	410.00000	0	304	305	306	307	308	309
	9.0000 96.5000 410.0000												
27896	STARBOARD BOOM	125	0	1256.50000	96.50000	410.00000	0	310	311	312	313	314	315
	6.5000 96.5000 410.0000												
1651	STARBOARD BOOM	67	0	679.50000	96.50000	410.00000	0	316	317	318	319	320	321
	9.5000 96.5000 410.0000												
3076	Aft Bulkhead	130	0	1307.00000	82.00000	439.58620	0	322	323	324			
	7.0000 82.0000 439.5862												
3401	Aft Bulkhead	130	0	1307.00000	91.80000	456.62000	0	325	326	327			
	7.0000 91.8000 456.6200												
5218	LONGERON SILL 1101	66	0	664.50000	105.00000	410.00000	0	328	329	330			
	4.5000 105.0000 410.0000												
5400	LONGERON SILL 2042	89	0	891.00000	105.00000	410.00000	0	331	332	333			
	1.0000 105.0000 410.0000												
5423	LONGERON SILL 2072	91	0	919.00000	105.00000	410.00000	0	334	335	336			
	9.0000 105.0000 410.0000												
1650	KU-Band Antenna I/F	58	0	589.00000	99.60000	410.00000	0	337	338	339	340	341	342
	9.0000 99.6000 410.0000												
210388	Cargo Bay Doors	66	0	669.80000	91.10200	462.16900	0		343	344			
	9.8000 91.1020 462.1690												
210390	Cargo Bay Doors	66	0	669.80000	95.34150	455.20850	0		345	346			
	9.8000 95.3415 455.2085												
210393	Cargo Bay Doors	66	0	669.80000	99.58100	448.24800	0		347	348			
	9.8000 99.5810 448.2480												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 10

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
210395	Cargo Bay Doors	66	0	669.80000	99.91550	443.37400	0	349	350				
	9.8000 99.9155 443.3740												
210398	Cargo Bay Doors	66	0	669.80000	100.25000	438.50000	0	351	352				
	9.8000 100.2500 438.5000												
210400	Cargo Bay Doors	66	0	669.80000	100.25000	434.00000	0	353	354				
	9.8000 100.2500 434.0000												
210405	Cargo Bay Doors	66	0	669.80000	101.20000	424.75000	0	355	356				
	9.8000 101.2000 424.7500												
210413	Cargo Bay Doors	68	0	681.05000	102.15000	420.00000	0	357	358				
	1.0500 102.1500 420.0000												
210458	Cargo Bay Doors	69	0	692.30000	91.10200	462.16900	0	359	360				
	2.3000 91.1020 462.1690												
210460	Cargo Bay Doors	69	0	692.30000	95.34150	455.20850	0	361	362				
	2.3000 95.3415 455.2085												
210463	Cargo Bay Doors	69	0	692.30000	99.58100	448.24800	0	363	364				
	2.3000 99.5810 448.2480												
210465	Cargo Bay Doors	69	0	692.30000	99.91550	443.37400	0	365	366				
	2.3000 99.9155 443.3740												
210468	Cargo Bay Doors	69	0	692.30000	100.25000	438.50000	0	367	368				
	2.3000 100.2500 438.5000												
210470	Cargo Bay Doors	69	0	692.30000	100.25000	434.00000	0	369	370				
	2.3000 100.2500 434.0000												
210475	Cargo Bay Doors	69	0	692.30000	101.20000	424.75000	0	371	372				
	2.3000 101.2000 424.7500												
210530	Cargo Bay Doors	71	0	714.80000	95.34150	455.20850	0	373	374				
	4.8000 95.3415 455.2085												
210533	Cargo Bay Doors	71	0	714.80000	99.58100	448.24800	0	375	376				
	4.8000 99.5810 448.2480												
210535	Cargo Bay Doors	71	0	714.80000	99.91550	443.37400	0	377	378				
	4.8000 99.9155 443.3740												
210538	Cargo Bay Doors	71	0	714.80000	100.25000	438.50000	0	379	380				
	4.8000 100.2500 438.5000												
210600	Cargo Bay Doors	73	0	737.30000	95.34150	455.20850	0	381	382				
	7.3000 95.3415 455.2085												
210670	Cargo Bay Doors	75	0	756.08000	95.34150	455.20850	0	383	384				
	6.0800 95.3415 455.2085												
211040	Cargo Bay Doors	76	0	761.20000	95.34150	455.20850	0	385	386				
	1.2000 95.3415 455.2085												
211043	Cargo Bay Doors	76	0	761.20000	99.58100	448.24800	0	387	388				
	1.2000 99.5810 448.2480												
211180	Cargo Bay Doors	80	0	805.90000	95.34150	455.20850	0	389	390				
	5.9000 95.3415 455.2085												
211183	Cargo Bay Doors	80	0	805.90000	99.58100	448.24800	0	391	392				
	5.9000 99.5810 448.2480												
211320	Cargo Bay Doors	85	0	850.60000	95.34150	455.20850	0	393	394				
	0.6000 95.3415 455.2085												
211323	Cargo Bay Doors	85	0	850.60000	99.58100	448.24800	0	395	396				
	0.6000 99.5810 448.2480												
211325	Cargo Bay Doors	85	0	850.60000	99.91550	443.37400	0	397	398				
	0.6000 99.9155 443.3740												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 11

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
211460	Cargo Bay Doors	89	0	895.30000	95.34150	455.20850	0	399	400				
	5.3000 95.3415 455.2085												
211463	Cargo Bay Doors	89	0	895.30000	99.58100	448.24800	0	401	402				
	5.3000 99.5810 448.2480												
211465	Cargo Bay Doors	89	0	895.30000	99.91550	443.37400	0	403	404				
	5.3000 99.9155 443.3740												
211468	Cargo Bay Doors	89	0	895.30000	100.25000	438.50000	0	405	406				
	5.3000 100.2500 438.5000												
211470	Cargo Bay Door	89	0	895.30000	100.25000	434.00000	0	407	408				
	5.3000 100.2500 434.0000												
211494	Cargo Bay Door	90	0	903.80000	101.20000	424.75000	0	409	410				
	3.8000 101.2000 424.7500												
211528	Cargo Bay Doors	91	0	917.65000	91.10200	462.16900	0	411	412				
	7.6500 91.1020 462.1690												
211530	Cargo Bay Doors	91	0	917.65000	95.34150	455.20850	0	413	414				
	7.6500 95.3415 455.2085												
211533	Cargo Bay Doors	91	0	917.65000	99.58100	448.24800	0	415	416				
	7.6500 99.5810 448.2480												
211535	Cargo Bay Doors	91	0	917.65000	99.91550	443.37400	0	417	418				
	7.6500 99.9155 443.3740												
211538	Cargo Bay Doors	91	0	917.65000	100.25000	438.50000	0	419	420				
	7.6500 100.2500 438.5000												
211540	Cargo Bay Doors	91	0	917.65000	100.25000	434.00000	0	421	422				
	7.6500 100.2500 434.0000												
211545	Cargo Bay Doors	91	0	917.65000	101.20000	424.75000	0	423	424				
	7.6500 101.2000 424.7500												
211595	Cargo Bay Doors	93	0	939.92000	85.51450	466.75450	0	425	426				
	9.9200 85.5145 466.7545												
211598	Cargo Bay Doors	93	0	939.92000	91.10200	462.16900	0	427	428				
	9.9200 91.1020 462.1690												
211600	Cargo Bay Doors	93	0	939.92000	95.34150	455.20850	0	429	430				
	9.9200 95.3415 455.2085												
211603	Cargo Bay Doors	93	0	939.92000	99.58100	448.24800	0	431	432				
	9.9200 99.5810 448.2480												
211605	Cargo Bay Doors	93	0	939.92000	99.91550	443.37400	0	433	434				
	9.9200 99.9155 443.3740												
211608	Cargo Bay Doors	93	0	939.92000	100.25000	438.50000	0	435	436				
	9.9200 100.2500 438.5000												
212040	Cargo Bay Doors	94	0	943.58000	95.34150	455.20850	0	437	438				
	3.5800 95.3415 455.2085												
212043	Cargo Bay Doors	94	0	943.58000	99.58100	448.24800	0	439	440				
	3.5800 99.5810 448.2480												
212045	Cargo Bay Doors	94	0	943.58000	99.91550	443.37400	0	441	442				
	3.5800 99.9155 443.3740												
212250	Cargo Bay Doors	101	0	1011.05000	95.34150	455.20850	0	443	444				
	1.0500 95.3415 455.2085												
212253	Cargo Bay Doors	101	0	1011.05000	99.58100	448.24800	0	445	446				
	1.0500 99.5810 448.2480												
212255	Cargo Bay Doors	101	0	1011.05000	99.91550	443.37400	0	447	448				
	1.0500 99.9155 443.3740												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 12

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
212530	Cargo Bay Doors	110	0	1100.45000	95.34150	455.20850	0	449	450				
	0.4500 95.3415 455.2085												
212533	Cargo Bay Doors	110	0	1100.45000	99.58100	448.24800	0	451	452				
	0.4500 99.5810 448.2480												
212535	Cargo Bay Doors	110	0	1100.45000	99.91550	443.37400	0	453	454				
	0.4500 99.9155 443.3740												
213180	Cargo Bay Doors	116	0	1164.20000	95.34150	455.20850	0	455	456				
	4.2000 95.3415 455.2085												
213183	Cargo Bay Doors	116	0	1164.20000	99.58100	448.24800	0	457	458				
	4.2000 99.5810 448.2480												
213185	Cargo Bay Doors	116	0	1164.20000	99.91550	443.37400	0	459	460				
	4.2000 99.9155 443.3740												
213188	Cargo Bay Doors	116	0	1164.20000	100.25000	438.50000	0	461	462				
	4.2000 100.2500 438.5000												
213250	Cargo Bay Doors	118	0	1184.20000	95.34150	455.20850	0	463	464				
	4.2000 95.3415 455.2085												
213253	Cargo Bay Doors	118	0	1184.20000	99.58100	448.24800	0	465	466				
	4.2000 99.5810 448.2480												
213255	Cargo Bay Doors	118	0	1184.20000	99.91550	443.37400	0	467	468				
	4.2000 99.9155 443.3740												
213323	Cargo Bay Doors	120	0	1204.20000	99.58100	448.24800	0	469	470				
	4.2000 99.5810 448.2480												
213325	Cargo Bay Doors	120	0	1204.20000	99.91550	443.37400	0	471	472				
	4.2000 99.9155 443.3740												
213390	Cargo Bay Doors	122	0	1224.20000	95.34150	455.20850	0	473	474				
	4.2000 95.3415 455.2085												
213393	Cargo Bay Doors	122	0	1224.20000	99.58100	448.24800	0	475	476				
	4.2000 99.5810 448.2480												
213395	Cargo Bay Doors	122	0	1224.20000	99.91550	443.37400	0	477	478				
	4.2000 99.9155 443.3740												
213460	Cargo Bay Doors	124	0	1244.20000	95.34150	455.20850	0	479	480				
	4.2000 95.3415 455.2085												
213463	Cargo Bay Doors	124	0	1244.20000	99.58100	448.24800	0	481	482				
	4.2000 99.5810 448.2480												
213465	Cargo Bay Doors	124	0	1244.20000	99.91550	443.37400	0	483	484				
	4.2000 99.9155 443.3740												
213468	Cargo Bay Doors	124	0	1244.20000	100.25000	438.50000	0	485	486				
	4.2000 100.2500 438.5000												
213481	Cargo Bay Doors	125	0	1254.20000	100.25000	429.50000	0	487	488				
	4.2000 100.2500 429.5000												
213528	Cargo Bay Doors	126	0	1264.20000	91.10200	462.16900	0	489	490				
	4.2000 91.1020 462.1690												
213530	Cargo Bay Doors	126	0	1264.20000	95.34150	455.20850	0	491	492				
	4.2000 95.3415 455.2085												
213533	Cargo Bay Doors	126	0	1264.20000	99.58100	448.24800	0	493	494				
	4.2000 99.5810 448.2480												
213535	Cargo Bay Doors	126	0	1264.20000	99.91550	443.37400	0	495	496				
	4.2000 99.9155 443.3740												
213538	Cargo Bay Doors	126	0	1264.20000	100.25000	438.50000	0	497	498				
	4.2000 100.2500 438.5000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 13

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
213540	Cargo Bay Doors	126	0	1264.20000	100.25000	434.00000	0		499	500				
	4.2000 100.2500 434.0000													
213600	Cargo Bay Doors	128	0	1283.70000	95.34150	455.20850	0		501	502				
	3.7000 95.3415 455.2085													
960	TCL LATCH	64	0	647.30000	0.00000	496.62000	0	503	504	505				
	7.3000 0.0000 496.6200													
961	TCL LATCH	69	0	692.30000	0.00000	496.62000	0	506	507	508				
	2.3000 0.0000 496.6200													
962	TCL LATCH	73	0	737.30000	0.00000	496.62000	0	509	510	511				
	7.3000 0.0000 496.6200													
964	TCL LATCH	82	0	828.25000	0.00000	496.62000	0	512	513	514				
	8.2500 0.0000 496.6200													
965	TCL LATCH	87	0	872.95000	0.00000	496.62000	0	515	516	517				
	2.9500 0.0000 496.6200													
967	TCL LATCH	91	0	917.65000	0.00000	496.62000	0	518	519	520				
	7.6500 0.0000 496.6200													
970	TCL LATCH	101	0	1011.05000	0.00000	496.62000	0	521	522	523				
	1.0500 0.0000 496.6200													
971	TCL LATCH	105	0	1055.75000	0.00000	496.62000	0	524	525	526				
	5.7500 0.0000 496.6200													
972	TCL LATCH	110	0	1100.45000	0.00000	496.62000	0	527	528	529				
	0.4500 0.0000 496.6200													
974	TCL LATCH	118	0	1184.20000	0.00000	496.62000	0	530	531	532				
	4.2000 0.0000 496.6200													
975	TCL LATCH	122	0	1224.20000	0.00000	496.62000	0	533	534	535				
	4.2000 0.0000 496.6200													
271218	Bay 13 GAS Attach	129	0	1295.15000	95.50000	412.32000	0		536					
	5.1500 95.5000 412.3200													
271217	Bay 13 GAS Attach	127	0	1279.50000	94.00000	408.25000	0	537	538	539				
	9.5000 94.0000 408.2500													
271216	Bay 13 GAS Attach	126	0	1268.61600	102.57900	410.85000	0	540	541					
	8.6160 102.5790 410.8500													
271219	Bay 13 GAS Attach	130	0	1301.00000	94.00000	402.00000	0	542	543	544				
	1.0000 94.0000 402.0000													
27355	Bay 13 GAS Attach	124	0	1249.00000	94.00000	395.50000	0	545	546	547				
	9.0000 94.0000 395.5000													
701383	Bay 3 APC/ICAPC Attach	69	0	693.00000	-94.00000	396.00000	0		548	549				
	3.0000 -94.0000 396.0000													
701405	Bay 3 APC/ICAPC Attach	75	0	750.00000	-94.00000	401.75000	0		550	551				
	0.0000 -94.0000 401.7500													
701963	Bay 3 APC/ICAPC Attach	71	0	715.00000	-94.00000	408.25000	0	552	553	554				
	5.0000 -94.0000 408.2500													
701393	Bay 3 APC/ICAPC Attach	71	0	717.00000	-94.00000	396.50000	0		555					
	7.0000 -94.0000 396.5000													
1383	Bay 3 APC/ICAPC Attach	69	0	693.00000	94.00000	396.00000	0		556	557				
	3.0000 94.0000 396.0000													
1405	Bay 3 APC/ICAPC Attach	75	0	750.00000	94.00000	401.75000	0		558	559				
	0.0000 94.0000 401.7500													
901963	Bay 3 APC/ICAPC Attach	71	0	715.00000	94.00000	408.25000	0	560	561	562				
	5.0000 94.0000 408.2500													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 14

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
1393	Bay 3 APC/ICAPC Attach	71	0	717.00000	94.00000	396.50000	0		563				
	7.0000 94.0000 396.5000												
701423	Bay 5 APC/ICAPC Attach	80	0	807.00000	-94.00000	396.00000	0		564	565			
	7.0000 -94.0000 396.0000												
701445	Bay 5 APC/ICAPC Attach	86	0	863.00000	-94.00000	401.75000	0		566	567			
	3.0000 -94.0000 401.7500												
701965	Bay 5 APC/ICAPC Attach	83	0	833.00000	-94.00000	408.25000	0	568	569	570			
	3.0000 -94.0000 408.2500												
701433	Bay 5 APC/ICAPC Attach	83	0	835.00000	-94.00000	396.50000	0		571				
	5.0000 -94.0000 396.5000												
1423	Bay 5 APC/ICAPC Attach	80	0	807.00000	94.00000	396.00000	0		572	573			
	7.0000 94.0000 396.0000												
1445	Bay 5 APC/ICAPC Attach	86	0	863.00000	94.00000	401.75000	0		574	575			
	3.0000 94.0000 401.7500												
901965	Bay 5 APC/ICAPC Attach	83	0	833.00000	94.00000	408.25000	0	576	577	578			
	3.0000 94.0000 408.2500												
1433	Bay 5 APC/ICAPC Attach	83	0	835.00000	94.00000	396.50000	0		579				
	5.0000 94.0000 396.5000												
701443	Bay 6 APC/ICAPC Attach	86	0	863.00000	-94.00000	396.00000	0		580	581			
	3.0000 -94.0000 396.0000												
702365	Bay 6 APC/ICAPC Attach	91	0	919.00000	-94.00000	401.75000	0		582	583			
	9.0000 -94.0000 401.7500												
702661	Bay 6 APC/ICAPC Attach	89	0	892.50000	-94.00000	408.25000	0	584	585	586			
	2.5000 -94.0000 408.2500												
702353	Bay 6 APC/ICAPC Attach	89	0	891.00000	-94.00000	396.50000	0		587				
	1.0000 -94.0000 396.5000												
1443	Bay 6 APC/ICAPC Attach	86	0	863.00000	94.00000	396.00000	0		588	589			
	3.0000 94.0000 396.0000												
2365	Bay 6 APC/ICAPC Attach	91	0	919.00000	94.00000	401.75000	0		590	591			
	9.0000 94.0000 401.7500												
2661	Bay 6 APC/ICAPC Attach	89	0	892.50000	94.00000	408.25000	0	592	593	594			
	2.5000 94.0000 408.2500												
2353	Bay 6 APC/ICAPC Attach	89	0	891.00000	94.00000	396.50000	0		595				
	1.0000 94.0000 396.5000												
727355	Bay 13 APC/ICAPC Attach	124	0	1249.00000	-94.00000	395.50000	0		596	597			
	9.0000 -94.0000 395.5000												
7271219	Bay 13 APC/ICAPC Attach	130	0	1301.00000	-94.00000	402.00000	0		598	599			
	1.0000 -94.0000 402.0000												
7271217	Bay 13 APC/ICAPC Attach	127	0	1279.50000	-94.00000	408.25000	0	600	601	602			
	9.5000 -94.0000 408.2500												
727435	Bay 13 APC/ICAPC Attach	127	0	1278.00000	-94.00000	396.50000	0		603				
	8.0000 -94.0000 396.5000												
6032	OV102/3 702-1073/1076	97	0	976.50000	-101.50000	407.50000	0	604	605	606			
	6.5000 -101.5000 407.5000												
6060	OV102/3 701-1033/1036	70	0	701.20000	-100.80000	407.00000	0	607	608	609			
	1.2000 -100.8000 407.0000												
6061	OV102/3 701-1035/1037	70	0	701.20000	-91.30000	407.50000	0	610	611	612			
	1.2000 -91.3000 407.5000												
6064	OV102/3 702-1061/1064	87	0	879.00000	-101.30000	407.50000	0	613	614	615			
	9.0000 -101.3000 407.5000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 15

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
6081	OV102 2- 203	104	0	1040.00000	0.00000	305.00000	0	616	617	618	619	620	
	0.0000 0.0000 305.0000												
6082	OV102 701-1040/1043	79	0	790.00000	-101.30000	407.50000	0	621	622	623			
	0.0000 -101.3000 407.5000												
6083	OV102 702-1079/1084	102	0	1029.50000	-101.30000	407.50000	0	624	625	626			
	9.5000 -101.3000 407.5000												
6084	OV102 702-1088/1090	111	0	1110.50000	-96.80000	407.30000	0	627	628	629			
	0.5000 -96.8000 407.3000												
6085	OV102 725-1247/1249	122	0	1229.00000	-97.00000	407.50000	0	630	631	632			
	9.0000 -97.0000 407.5000												
6067	OV103 702-1081/1083	102	0	1029.50000	-96.80000	408.00000	0	633	634	635			
	9.5000 -96.8000 408.0000												
6068	OV103 725-1241/1243	120	0	1207.00000	-97.00000	407.50000	0	636	637	638			
	7.0000 -97.0000 407.5000												
6071	OV103 25-1241/1243	120	0	1207.00000	97.00000	407.50000	0	639	640	641			
	7.0000 97.0000 407.5000												
6069	OV103 702-1067/1070	88	0	881.20000	-101.30000	407.50000	0	642	643	644			
	1.2000 -101.3000 407.5000												
6070	OV103 2-1067/1070	88	0	881.20000	101.30000	407.50000	0	645	646	647			
	1.2000 101.3000 407.5000												
6073	OV103 2-1061/1064	87	0	879.00000	101.30000	407.50000	0	648	649	650			
	9.0000 101.3000 407.5000												
6074	OV103 2-1079/1084	102	0	1029.50000	101.30000	407.50000	0	651	652	653			
	9.5000 101.3000 407.5000												
6076	OV103 2-1081/1083	102	0	1029.50000	96.80000	408.00000	0	654	655	656			
	9.5000 96.8000 408.0000												
6080	OV103 2- 83	91	0	919.00000	0.00000	305.00000	0	657	658	659	660	661	
	9.0000 0.0000 305.0000												
6086	IMU ON FLIGHT DECK FLR	50	0	505.00000	5.60000	421.30000	0	662	663	664			
	5.0000 5.6000 421.3000												
6089	CABIN CENTERLINE NODE	48	0	482.41910	0.00000	324.70970	0	665	666	667			
	2.4191 0.0000 324.7097												
6087	OV103 25- 202	120	0	1205.50000	0.00000	305.00000	0	668	669	670			
	5.5000 0.0000 305.0000												
6091	5245 2/3 701-1033/1036	70	0	701.20000	100.80000	407.00000	0	671	672	673			
	1.2000 100.8000 407.0000												
6092	5316 2 701-1040/1043	79	0	790.00000	101.30000	407.50000	0	674	675	676			
	0.0000 101.3000 407.5000												
6093	5459 2/3 702-1073/1076	97	0	976.50000	101.50000	407.50000	0	677	678	679			
	6.5000 101.5000 407.5000												
6094	5480 2 702-1088/1090	111	0	1110.50000	96.80000	407.30000	0	680	681	682			
	0.5000 96.8000 407.3000												
6095	5646 2 725-1247/1249	122	0	1229.00000	97.00000	407.50000	0	683	684	685			
	9.0000 97.0000 407.5000												
1	FWD GEAR DRAG	32	0	327.84000	21.00000	329.34000	0	686		687			
	7.8400 21.0000 329.3400												
2	FWD GEAR TRNN	37	0	375.50000	21.00000	298.00000	0	688		689			
	5.5000 21.0000 298.0000												
3	FWD/MID I/F	58	0	582.00000	94.00000	410.00000	0	690	691	692			
	2.0000 94.0000 410.0000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 16

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
12	FORWARD THRUST AREA	37	0	376.94750	73.82710	340.00000	0	693	694	695				
	6.9475 73.8271 340.0000													
14	FWD FUSELAGE	45	0	453.88450	90.82390	318.42530	0	696	697	698				
	3.8845 90.8239 318.4253													
84	WING/MID FUSLG I/F	80	0	807.00000	105.00000	282.50710	0			699				
	7.0000 105.0000 282.5071													
119	PAYLOAD	75	0	750.00000	94.00000	388.15000	0	700	701	702				
	0.0000 94.0000 388.1500													
153	MID FUSLG NEAR ACCEL. #4	97	0	979.50000	105.00000	410.00000	0	703	704	705				
	9.5000 105.0000 410.0000													
161	WING/MID FUSLG I/F	104	0	1040.00000	105.00000	271.94990	0			706				
	0.0000 105.0000 271.9499													
192	MID FUSELAGE	114	0	1140.67000	105.00000	410.00000	0	707	708	709				
	0.6700 105.0000 410.0000													
233	WING/MID FUSLG I/F	119	0	1191.00000	105.00000	268.50000	0	710		711				
	1.0000 105.0000 268.5000													
249	WING/MID FUSLG I/F	124	0	1249.00000	105.00000	267.20000	0			712				
	9.0000 105.0000 267.2000													
297	WING	119	0	1191.00000	167.00000	300.91050	0	713		714				
	1.0000 167.0000 300.9105													
299	WING	130	0	1307.00000	195.78750	294.56750	0			715				
	7.0000 195.7875 294.5675													
322	WING GLOVE	83	0	835.00000	141.15960	305.89140	0		716	717				
	5.0000 141.1596 305.8914													
323	WING GLOVE	94	0	949.25000	159.64890	303.38640	0		718	719				
	9.2500 159.6489 303.3864													
324	WING LEADING EDGE SPAR	104	0	1040.00000	158.54000	303.50000	0			720				
	0.0000 158.5400 303.5000													
325	WING LEADING EDGE SPAR	107	0	1071.29930	195.02250	302.92710	0			721				
	1.2993 195.0225 302.9271													
326	WING	113	0	1139.33000	194.95610	303.65270	0			722				
	9.3300 194.9561 303.6527													
327	WING	124	0	1249.00000	144.98070	295.61380	0			723				
	9.0000 144.9807 295.6138													
328	WING	124	0	1249.00000	195.37120	299.11650	0			724				
	9.0000 195.3712 299.1165													
329	WING	136	0	1365.00000	145.80640	286.59160	0	725		726				
	5.0000 145.8064 286.5916													
330	WING	136	0	1365.00000	196.20400	290.01660	0	727		728				
	5.0000 196.2040 290.0166													
331	WING LEADING EDGE SPAR	112	0	1127.27240	251.32080	302.22490	0			729				
	7.2724 251.3208 302.2249													
332	WING	119	0	1191.00000	251.09320	304.71150	0	730	731	732				
	1.0000 251.0932 304.7115													
333	WING LEADING EDGE SPAR	119	0	1191.00000	315.09880	304.91440	0	733		734				
	1.0000 315.0988 304.9144													
334	WING	124	0	1249.00000	251.26680	302.81530	0		735	736				
	9.0000 251.2668 302.8153													
335	WING	124	0	1249.00000	309.72770	305.91280	0			737				
	9.0000 309.7277 305.9128													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 17

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
337	WING LEADING EDGE SPAR	127	0	1275.70200	399.88970	308.25330	0		738	739				
	5.7020 399.8897 308.2533													
338	WING	130	0	1307.00000	251.66020	298.51590	0		740	741				
	7.0000 251.6602 298.5159													
339	WING	130	0	1307.00000	310.02770	302.63480	0			742				
	7.0000 310.0277 302.6348													
340	WING	130	0	1307.00000	369.91130	306.64690	0			743				
	7.0000 369.9113 306.6469													
341	WING	130	0	1307.00000	399.89000	308.24900	0			744				
	7.0000 399.8900 308.2490													
343	LEADING EDGE PANEL	110	0	1103.45000	247.41950	299.07840	0			745				
	3.4500 247.4195 299.0784													
344	LEADING EDGE PANEL	116	0	1163.29860	307.29530	301.82680	0			746				
	3.2986 307.2953 301.8268													
345	LEADING EDGE PANEL	122	0	1222.53170	366.55960	304.49980	0			747				
	2.5317 366.5596 304.4998													
346	LEADING EDGE PANEL	125	0	1252.51730	396.56380	305.82380	0			748				
	2.5173 396.5638 305.8238													
347	LEADING EDGE PANEL	128	0	1282.19750	423.50010	307.16580	0			749				
	2.1975 423.5001 307.1658													
349	WING	136	0	1365.00000	252.08740	293.84800	0	750	751	752				
	5.0000 252.0874 293.8480													
350	WING	136	0	1365.00000	310.45580	297.95750	0	753		754				
	5.0000 310.4558 297.9575													
351	WING	136	0	1365.00000	370.31690	302.21500	0	755		756				
	5.0000 370.3169 302.2150													
352	WING	136	0	1365.00000	400.24710	304.34700	0			757				
	5.0000 400.2471 304.3470													
354	WING	136	0	1365.00000	432.67060	306.66760	0	758		759				
	5.0000 432.6706 306.6676													
356	INBOARD ELEVON R	142	0	1425.55000	146.00890	284.37960	0	760		761				
	5.5500 146.0089 284.3796													
357	INBOARD ELEVON R	148	0	1485.20000	145.92270	285.32100	0			762				
	5.2000 145.9227 285.3210													
358	INBOARD ELEVON R	142	0	1421.90540	210.38650	288.66170	0	763	764	765				
	1.9054 210.3865 288.6617													
359	INBOARD ELEVON R	147	0	1473.49890	210.32170	289.37020	0		766	767				
	3.4989 210.3217 289.3702													
360	INBOARD ELEVON R	141	0	1417.95000	280.25170	293.33100	0	768		769				
	7.9500 280.2517 293.3310													
361	INBOARD ELEVON R	146	0	1460.80000	280.22390	293.63540	0			770				
	0.8000 280.2239 293.6354													
363	OTBOARD ELEVON R	141	0	1414.53000	340.63300	297.39150	0	771		772				
	4.5300 340.6330 297.3915													
364	OTBOARD ELEVON R	144	0	1449.65000	340.62350	297.49440	0			773				
	9.6500 340.6235 297.4944													
365	OTBOARD ELEVON R	141	0	1411.98570	385.54220	300.43800	0	774	775	776				
	1.9857 385.5422 300.4380													
366	OTBOARD ELEVON R	144	0	1440.97860	385.55400	300.30890	0		777	778				
	0.9786 385.5540 300.3089													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 18

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
367	OTBOARD ELEVON R	140	0	1409.30000	432.94320	303.68910	0	779	780				
	9.3000 432.9432 303.6891												
368	OTBOARD ELEVON R	143	0	1431.82530	432.97610	303.32950	0		781				
	1.8253 432.9761 303.3295												
456	FWD GEAR DRAG	32	0	327.84000	-21.00000	329.34000	0	782	783				
	7.8400 -21.0000 329.3400												
457	FWD GEAR TRNN	37	0	375.50000	-21.00000	298.00000	0	784	785				
	5.5000 -21.0000 298.0000												
458	FWD/MID I/F	58	0	582.00000	-94.00000	410.00000	0	786	787	788			
	2.0000 -94.0000 410.0000												
467	FORWARD THRUST AREA	37	0	376.94750	-73.82710	340.00000	0	789	790	791			
	6.9475 -73.8271 340.0000												
469	FWD FUSELAGE	45	0	453.88450	-90.82390	318.42530	0	792	793	794			
	3.8845 -90.8239 318.4253												
539	WING/MID FUSLG I/F	80	0	807.00000	-105.00000	282.50710	0		795				
	7.0000 -105.0000 282.5071												
574	PAYLOAD	75	0	750.00000	-94.00000	388.15000	0	796	797	798			
	0.0000 -94.0000 388.1500												
608	MID FUSLG NEAR ACCEL. #5	97	0	979.50000	-105.00000	410.00000	0	799	800	801			
	9.5000 -105.0000 410.0000												
616	WING/MID FUSLG I/F	104	0	1040.00000	-105.00000	271.94990	0		802				
	0.0000 -105.0000 271.9499												
647	MID FUSELAGE	114	0	1140.67000	-105.00000	410.00000	0	803	804	805			
	0.6700 -105.0000 410.0000												
688	WING/MID FUSLG I/F	119	0	1191.00000	-105.00000	268.50000	0	806		807			
	1.0000 -105.0000 268.5000												
704	WING/MID FUSLG I/F	124	0	1249.00000	-105.00000	267.20000	0		808				
	9.0000 -105.0000 267.2000												
752	WING	119	0	1191.00000	-167.00000	300.91050	0	809		810			
	1.0000 -167.0000 300.9105												
754	WING	130	0	1307.00000	-195.78750	294.56750	0		811				
	7.0000 -195.7875 294.5675												
777	WING GLOVE	83	0	835.00000	-141.15960	305.89140	0		812	813			
	5.0000 -141.1596 305.8914												
778	WING GLOVE	94	0	949.25000	-159.64890	303.38640	0		814	815			
	9.2500 -159.6489 303.3864												
779	WING LEADING EDGE SPAR	104	0	1040.00000	-158.54000	303.50000	0			816			
	0.0000 -158.5400 303.5000												
780	WING LEADING EDGE SPAR	107	0	1071.29930	-195.02250	302.92710	0			817			
	1.2993 -195.0225 302.9271												
781	WING	113	0	1139.33000	-194.95610	303.65270	0			818			
	9.3300 -194.9561 303.6527												
782	WING	124	0	1249.00000	-144.98070	295.61380	0			819			
	9.0000 -144.9807 295.6138												
783	WING	124	0	1249.00000	-195.37120	299.11650	0			820			
	9.0000 -195.3712 299.1165												
784	WING	136	0	1365.00000	-145.80640	286.59160	0	821		822			
	5.0000 -145.8064 286.5916												
785	WING	136	0	1365.00000	-196.20400	290.01660	0	823		824			
	5.0000 -196.2040 290.0166												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 19

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
786	WING LEADING EDGE SPAR	112	0	1127.27240	-251.32080	302.22490	0		825				
	7.2724 -251.3208 302.2249												
787	WING	119	0	1191.00000	-251.09320	304.71150	0	826	827	828			
	1.0000 -251.0932 304.7115												
788	WING LEADING EDGE SPAR	119	0	1191.00000	-315.09880	304.91440	0	829		830			
	1.0000 -315.0988 304.9144												
789	WING	124	0	1249.00000	-251.26680	302.81530	0		831	832			
	9.0000 -251.2668 302.8153												
790	WING	124	0	1249.00000	-309.72770	305.91280	0			833			
	9.0000 -309.7277 305.9128												
792	WING LEADING EDGE SPAR	127	0	1275.70200	-399.88970	308.25330	0		834	835			
	5.7020 -399.8897 308.2533												
793	WING	130	0	1307.00000	-251.66020	298.51590	0		836	837			
	7.0000 -251.6602 298.5159												
794	WING	130	0	1307.00000	-310.02770	302.63480	0			838			
	7.0000 -310.0277 302.6348												
795	WING	130	0	1307.00000	-369.91130	306.64690	0			839			
	7.0000 -369.9113 306.6469												
796	WING	130	0	1307.00000	-399.89000	308.24900	0			840			
	7.0000 -399.8900 308.2490												
798	LEADING EDGE PANEL	110	0	1103.45000	-247.41950	299.07840	0			841			
	3.4500 -247.4195 299.0784												
799	LEADING EDGE PANEL	116	0	1163.29860	-307.29530	301.82680	0			842			
	3.2986 -307.2953 301.8268												
800	LEADING EDGE PANEL	122	0	1222.53170	-366.55960	304.49980	0			843			
	2.5317 -366.5596 304.4998												
801	LEADING EDGE PANEL	125	0	1252.51730	-396.56380	305.82380	0			844			
	2.5173 -396.5638 305.8238												
802	LEADING EDGE PANEL	128	0	1282.19750	-423.50010	307.16580	0			845			
	2.1975 -423.5001 307.1658												
804	WING	136	0	1365.00000	-252.08740	293.84800	0	846	847	848			
	5.0000 -252.0874 293.8480												
805	WING	136	0	1365.00000	-310.45580	297.95750	0	849		850			
	5.0000 -310.4558 297.9575												
806	WING	136	0	1365.00000	-370.31690	302.21500	0	851		852			
	5.0000 -370.3169 302.2150												
807	WING	136	0	1365.00000	-400.24710	304.34700	0			853			
	5.0000 -400.2471 304.3470												
809	WING	136	0	1365.00000	-432.67060	306.66760	0	854		855			
	5.0000 -432.6706 306.6676												
811	INBOARD ELEVON L	142	0	1425.55000	-146.00890	284.37960	0	856		857			
	5.5500 -146.0089 284.3796												
812	INBOARD ELEVON L	148	0	1485.20000	-145.92270	285.32100	0			858			
	5.2000 -145.9227 285.3210												
813	INBOARD ELEVON L	142	0	1421.90540	-210.38650	288.66170	0	859	860	861			
	1.9054 -210.3865 288.6617												
814	INBOARD ELEVON L	147	0	1473.49890	-210.32170	289.37020	0		862	863			
	3.4989 -210.3217 289.3702												
815	INBOARD ELEVON L	141	0	1417.95000	-280.25170	293.33100	0	864		865			
	7.9500 -280.2517 293.3310												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 20

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
816	INBOARD ELEVON L	146	0	1460.80000	-280.22390	293.63540	0		866				
	0.8000 -280.2239 293.6354												
818	OTBOARD ELEVON L	141	0	1414.53000	-340.63300	297.39150	0	867	868				
	4.5300 -340.6330 297.3915												
819	OTBOARD ELEVON L	144	0	1449.65000	-340.62350	297.49440	0		869				
	9.6500 -340.6235 297.4944												
820	OTBOARD ELEVON L	141	0	1411.98570	-385.54220	300.43800	0	870	871	872			
	1.9857 -385.5422 300.4380												
821	OTBOARD ELEVON L	144	0	1440.97860	-385.55400	300.30890	0		873	874			
	0.9786 -385.5540 300.3089												
822	OTBOARD ELEVON L	140	0	1409.30000	-432.94320	303.68910	0	875		876			
	9.3000 -432.9432 303.6891												
823	OTBOARD ELEVON L	143	0	1431.82530	-432.97610	303.32950	0			877			
	1.8253 -432.9761 303.3295												
912	FWD/MID I/F ON CL	58	0	582.00000	0.00000	277.08740	0	878	879	880			
	2.0000 0.0000 277.0874												
913	FWD FUSELAGE	26	0	263.50000	0.00000	371.00020	0	881	882	883			
	3.5000 0.0000 371.0002												
918	FWD FUSELAGE	45	0	459.38870	0.00000	280.10470	0	884	885	886			
	9.3887 0.0000 280.1047												
919	FWD FUSELAGE	44	0	445.85060	0.00000	459.18840	0	887	888	889			
	5.8506 0.0000 459.1884												
942	C.L. MID FUSELAGE	97	0	979.50000	0.00000	267.92970	0	890	891	892			
	9.5000 0.0000 267.9297												
948	C.L. MID FUSELAGE	114	0	1140.67000	0.00000	264.21660	0	893	894	895			
	0.6700 0.0000 264.2166												
958	CBD TCL SHEAR PIN	59	0	592.41500	0.00000	496.16000	0	896					
	2.4150 0.0000 496.1600												
959	CBD TCL LATCH	60	0	602.30000	0.00000	496.62000	0	897	898	899			
	2.3000 0.0000 496.6200												
963	CBD TCL LATCH	78	0	783.55000	0.00000	496.62000	0	900	901	902			
	3.5500 0.0000 496.6200												
966	CBD TCL SHEAR PIN	92	0	929.70800	0.00000	496.16000	0	903					
	9.7080 0.0000 496.1600												
968	CBD TCL SHEAR PIN	95	0	954.29200	0.00000	496.16000	0	904					
	4.2920 0.0000 496.1600												
969	CBD TCL LATCH	96	0	966.35000	0.00000	496.62000	0	905	906	907			
	6.3500 0.0000 496.6200												
973	CBD TCL LATCH	114	0	1144.20000	0.00000	496.62000	0	908	909	910			
	4.2000 0.0000 496.6200												
976	CBD TCL SHEAR PIN	127	0	1274.87300	0.00000	496.16000	0	911					
	4.8730 0.0000 496.1600												
977	CBD TCL LATCH	126	0	1264.20000	0.00000	496.62000	0	912	913	914			
	4.2000 0.0000 496.6200												
980	LANDING GEAR	118	0	1180.00000	136.00000	283.00000	0	915	916	917	918	919	
	0.0000 136.0000 283.0000												
981	LANDING GEAR	118	0	1180.00000	-136.00000	283.00000	0	920	921	922	923	924	
	0.0000 -136.0000 283.0000												
982	LANDING GEAR	109	0	1097.50000	136.00000	321.70000	0	925		926			
	7.5000 136.0000 321.7000												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 21

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
983	LANDING GEAR	109	0	1097.50000	-136.00000	321.70000	0	927		928				
	7.5000 -136.0000 321.7000													
1012	WING/MID/AFT I/F	130	0	1307.00000	105.00000	266.40000	0	929	930	931				
	7.0000 105.0000 266.4000													
1016	MID/AFT I/F	130	0	1307.00000	94.00000	409.00000	0	932	933	934				
	7.0000 94.0000 409.0000													
1036	MID/AFT I/F NEAR #7,8,9	130	0	1307.00000	0.00000	261.03600	0	935	936	937				
	7.0000 0.0000 261.0360													
1047	ENGINE #1 GIMBAL	144	0	1444.99950	0.00000	442.99960	0	938	939	940	941	942	943	
	4.9995 0.0000 442.9996													
1048	ENGINE #3 GIMBAL	146	0	1468.16970	53.00000	342.64000	0	944	945	946	947	948	949	
	8.1697 53.0000 342.6400													
1065	AFT FUSELAGE	143	0	1436.91850	114.53100	415.76900	0	950	951	952				
	6.9185 114.5310 415.7690													
1067	AFT FUSELAGE	146	0	1464.62930	124.23660	273.20910	0	953	954	955				
	4.6293 124.2366 273.2091													
1069	AFT FUSELAGE	143	0	1436.91850	-114.53100	415.76900	0	956	957	958				
	6.9185 -114.5310 415.7690													
1071	AFT FUSELAGE	146	0	1464.62930	-124.23660	273.20910	0	959	960	961				
	4.6293 -124.2366 273.2091													
1090	WING/MID/AFT I/F	130	0	1307.00000	-105.00000	266.40000	0	962	963	964				
	7.0000 -105.0000 266.4000													
1093	MID/AFT I/F	130	0	1307.00000	-94.00000	409.00000	0	965	966	967				
	7.0000 -94.0000 409.0000													
1127	ENGINE #2 GIMBAL	146	0	1468.16970	-53.00000	342.64000	0	968	969	970	971	972	973	
	8.1697 -53.0000 342.6400													
1137	TAIL FRONT SPAR	135	0	1353.28170	0.00000	551.63970	0	974	975	976				
	3.2817 0.0000 551.6397													
1142	TAIL FRONT SPAR	142	0	1421.84540	0.00000	623.80770	0	977	978	979				
	1.8454 0.0000 623.8077													
1143	TAIL REAR SPAR	147	0	1474.95530	0.00000	584.15780	0	980	981	982				
	4.9553 0.0000 584.1578													
1145	TAIL CHUTE COMP	158	0	1581.69530	0.00000	576.26800	0	983	984	985				
	1.6953 0.0000 576.2680													
1148	TAIL REAR SPAR	151	0	1514.25940	0.00000	636.80450	0	986	987	988				
	4.2594 0.0000 636.8045													
1150	TAIL FRONT SPAR	151	0	1511.50180	0.00000	718.15250	0	989	990	991				
	1.5018 0.0000 718.1525													
1151	TAIL REAR SPAR	155	0	1552.26960	0.00000	687.71800	0	992	993	994				
	2.2696 0.0000 687.7180													
1154	TAIL REAR SPAR	158	0	1580.60200	0.00000	725.66850	0	995	996	997				
	0.6020 0.0000 725.6685													
1156	TAIL FRONT SPAR	157	0	1579.77970	0.00000	790.00000	0	998	999	1000				
	9.7797 0.0000 790.0000													
1157	TAIL REAR SPAR	161	0	1611.52780	0.00000	767.09270	0	1001	1002	1003				
	1.5278 0.0000 767.0927													
1160	TAIL TIP	159	0	1594.78420	0.00000	806.63000	0	1004	1005	1006				
	4.7842 0.0000 806.6300													
1161	TAIL TIP	168	0	1685.12380	0.00000	806.62950	0	1007	1008	1009				
	5.1238 0.0000 806.6295													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 22

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
1167	LOWER RUDDER R	156	0	1569.80660	0.12500	602.06400	0	1010	1011	1012			
	9.8066 0.1250 602.0640												
1168	LOWER RUDDER L	156	0	1566.74670	-0.12500	596.36700	0	1013	1014	1015			
	6.7467 -0.1250 596.3670												
1169	LOWER RUDDER R	155	0	1554.73990	0.12500	638.13280	0	1016	1017	1018			
	4.7399 0.1250 638.1328												
1170	LOWER RUDDER L	155	0	1551.23360	-0.12500	632.74640	0	1019	1020	1021			
	1.2336 -0.1250 632.7464												
1173	LOWER RUDDER R	158	0	1589.81230	0.12500	639.31090	0	1022	1023	1024			
	9.8123 0.1250 639.3109												
1174	LOWER RUDDER L	158	0	1586.75240	-0.12500	633.61390	0	1025	1026	1027			
	6.7524 -0.1250 633.6139												
1183	UPPER RUDDER R	161	0	1610.07430	0.12500	677.03500	0	1028	1029	1030			
	0.0743 0.1250 677.0350												
1184	UPPER RUDDER L	160	0	1607.45450	-0.12500	672.15740	0	1031	1032	1033			
	7.4545 -0.1250 672.1574												
1185	UPPER RUDDER R	161	0	1610.57430	0.12500	723.89600	0	1034	1035	1036			
	0.5743 0.1250 723.8960												
1186	UPPER RUDDER L	160	0	1607.57200	-0.12500	719.28450	0	1037	1038	1039			
	7.5720 -0.1250 719.2845												
1189	UPPER RUDDER R	164	0	1646.98960	0.12500	745.76440	0	1040	1041	1042			
	6.9896 0.1250 745.7644												
1190	UPPER RUDDER L	164	0	1644.36980	-0.12500	740.88680	0	1043	1044	1045			
	4.3698 -0.1250 740.8868												
1203	BODY FLAP	158	0	1585.50000	10.00000	289.43240	0			1046			
	5.5000 10.0000 289.4324												
1204	BODY FLAP	153	0	1537.50000	90.00000	294.37670	0			1047			
	7.5000 90.0000 294.3767												
1205	BODY FLAP	161	0	1611.50000	50.00000	286.80000	0	1048	1049	1050			
	1.5000 50.0000 286.8000												
1206	BODY FLAP	158	0	1585.50000	-10.00000	289.43240	0			1051			
	5.5000 -10.0000 289.4324												
1207	BODY FLAP	153	0	1537.50000	-90.00000	294.37670	0			1052			
	7.5000 -90.0000 294.3767												
1208	BODY FLAP	161	0	1611.50000	-50.00000	286.80000	0	1053	1054	1055			
	1.5000 -50.0000 286.8000												
1214	OMS POD STRUCTURE R	145	0	1457.54320	81.70200	526.37870	0	1056	1057	1058			
	7.5432 81.7020 526.3787												
1215	OMS POD STRUCTURE R	141	0	1415.47170	115.67940	505.21030	0	1059	1060	1061			
	5.4717 115.6794 505.2103												
1216	OMS POD STRUCTURE R	136	0	1365.24820	109.58770	499.32760	0	1062	1063	1064			
	5.2482 109.5877 499.3276												
1243	OMS STRUCTURE L	145	0	1457.54320	-81.70200	526.37870	0	1065	1066	1067			
	7.5432 -81.7020 526.3787												
1244	OMS STRUCTURE L	141	0	1415.47170	-115.67940	505.21030	0	1068	1069	1070			
	5.4717 -115.6794 505.2103												
1245	OMS STRUCTURE L	136	0	1365.24820	-109.58770	499.32760	0	1071	1072	1073			
	5.2482 -109.5877 499.3276												
1117	ODS DOCKING I/F	64	0	649.00000	0.00000	462.73000	0	1074	1075	1076	1077	1078	1079
	9.0000 0.0000 462.7300												

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 23

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
100	BRIDGE 10 PAYLOAD ATTACH	10	0	1092.60000	94.00000	414.00000	0	1080	1081	1082	1083		1084	
	92.600 94.000 414.000													
101	BRIDGE 10 PAYLOAD ATTACH	10	0	1096.53000	94.00000	414.00000	0	1085	1086	1087	1088		1089	
	96.530 94.000 414.000													
102	BRIDGE 10 PAYLOAD ATTACH	11	0	1100.47000	94.00000	414.00000	0	1090	1091	1092	1093		1094	
	00.470 94.000 414.000													
103	BRIDGE 10 PAYLOAD ATTACH	11	0	1104.40000	94.00000	414.00000	0	1095	1096	1097	1098		1099	
	04.400 94.000 414.000													
104	BRIDGE 10 PAYLOAD ATTACH	11	0	1108.33000	94.00000	414.00000	0	1100	1101	1102	1103		1104	
	08.330 94.000 414.000													
105	BRIDGE 10 PAYLOAD ATTACH	11	0	1112.27000	94.00000	414.00000	0	1105	1106	1107	1108		1109	
	12.270 94.000 414.000													
106	BRIDGE 10 PAYLOAD ATTACH	11	0	1116.20000	94.00000	414.00000	0	1110	1111	1112	1113		1114	
	16.200 94.000 414.000													
107	BRIDGE 10 PAYLOAD ATTACH	11	0	1120.13000	94.00000	414.00000	0	1115	1116	1117	1118		1119	
	20.130 94.000 414.000													
108	BRIDGE 10 PAYLOAD ATTACH	11	0	1124.07000	94.00000	414.00000	0	1120	1121	1122	1123		1124	
	24.070 94.000 414.000													
109	BRIDGE 10 PAYLOAD ATTACH	11	0	1128.00000	94.00000	414.00000	0	1125	1126	1127	1128		1129	
	28.000 94.000 414.000													
110	BRIDGE 10 PAYLOAD ATTACH	11	0	1131.93000	94.00000	414.00000	0	1130	1131	1132	1133		1134	
	31.930 94.000 414.000													
111	BRIDGE 10 PAYLOAD ATTACH	11	0	1135.87000	94.00000	414.00000	0	1135	1136	1137	1138		1139	
	35.870 94.000 414.000													
112	IUS SPRING ATTACH	11	0	1102.43000	91.10000	408.20000	0		1140					
	02.430 91.100 408.200													
113	IUS SPRING ATTACH	11	0	1110.30000	91.10000	408.20000	0		1141					
	10.300 91.100 408.200													
114	IUS SPRING ATTACH	11	0	1114.23000	91.10000	408.20000	0		1142					
	14.230 91.100 408.200													
115	ROEU ATTACH	11	0	1108.34000	95.16000	411.60000	0	1143	1144	1145	1146	1147	1148	
	08.340 95.160 411.600													
116	PDA I/F	10	0	1076.99000	76.20000	416.00000	0	1149	1150	1151	1152	1153	1154	
	76.990 76.200 416.000													
10001	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	410.37000	0	1155	1156	1157				
	7.5000 93.8800 410.3700													
10002	Bay 13 GAS Payload Attach	129	0	1290.13000	93.88000	410.37000	0	1158	1159	1160				
	0.1300 93.8800 410.3700													
10004	Bay 13 GAS Payload Attach	129	0	1290.00000	87.19000	414.09000	0	1161	1162	1163				
	0.0000 87.1900 414.0900													
10005	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	411.93000	0	1164	1165	1166				
	7.5000 88.0000 411.9300													
10006	Bay 13 GAS Payload Attach	129	0	1290.00000	87.19000	411.09000	0	1167	1168	1169				
	0.0000 87.1900 411.0900													
10007	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	410.37000	0	1170	1171	1172				
	7.5000 88.2800 410.3700													
10008	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	409.93000	0	1173	1174	1175				
	7.5000 88.0000 409.9300													
10009	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	408.93000	0	1176	1177	1178				
	7.5000 88.0000 408.9300													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 24

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
10010	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	406.93000	0	1179	1180	1181				
	7.5000 88.0000 406.9300													
10011	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	410.37000	0	1182	1183	1184				
	2.5000 93.8800 410.3700													
10012	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	410.37000	0	1185	1186	1187				
	2.5000 88.2800 410.3700													
10013	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	411.93000	0	1188	1189	1190				
	2.5000 88.0000 411.9300													
10016	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	409.93000	0	1191	1192	1193				
	2.5000 88.0000 409.9300													
10017	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	408.93000	0	1194	1195	1196				
	2.5000 88.0000 408.9300													
10018	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	406.93000	0	1197	1198	1199				
	2.5000 88.0000 406.9300													
10019	Bay 13 GAS Payload Attach	126	0	1263.00000	87.19000	414.09000	0	1200	1201	1202				
	3.0000 87.1900 414.0900													
10020	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	409.93000	0	1203	1204	1205				
	0.5000 88.0000 409.9300													
10021	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	408.93000	0	1206	1207	1208				
	0.5000 88.0000 408.9300													
10022	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	406.93000	0	1209	1210	1211				
	0.5000 88.0000 406.9300													
10023	Bay 13 GAS Payload Attach	126	0	1264.88000	93.88000	410.37000	0	1212	1213	1214				
	4.8800 93.8800 410.3700													
10025	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	410.37000	0	1215	1216	1217				
	0.5000 93.8800 410.3700													
10026	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	411.93000	0	1218	1219	1220				
	5.5000 88.0000 411.9300													
10027	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	410.37000	0	1221	1222	1223				
	0.5000 88.2800 410.3700													
10028	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	411.93000	0	1224	1225	1226				
	0.5000 88.0000 411.9300													
10029	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	405.07000	0	1227	1228	1229				
	2.5000 93.8800 405.0700													
10030	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	405.07000	0	1230	1231	1232				
	2.5000 88.2800 405.0700													
10031	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	405.07000	0	1233	1234	1235				
	0.5000 93.8800 405.0700													
10032	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	405.07000	0	1236	1237	1238				
	0.5000 88.2800 405.0700													
10033	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	405.07000	0	1239	1240	1241				
	7.5000 88.2800 405.0700													
10034	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	405.07000	0	1242	1243	1244				
	7.5000 93.8800 405.0700													
10035	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	400.90000	0	1245	1246	1247				
	2.5000 93.8800 400.9000													
10036	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	400.90000	0	1248	1249	1250				
	0.5000 93.8800 400.9000													
10037	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	400.90000	0	1251	1252	1253				
	2.5000 88.2800 400.9000													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 25

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
10038	Bay 13 GAS Payload Attach	129	0	1290.00000	86.99000	398.46000	0	1254	1255	1256				
	0.0000 86.9900 398.4600													
10039	Bay 13 GAS Payload Attach	127	0	1278.00000	94.00000	396.50000	0	1257	1258	1259				
	8.0000 94.0000 396.5000													
10040	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	395.77000	0	1260	1261	1262				
	2.5000 93.8800 395.7700													
10041	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	395.77000	0	1263	1264	1265				
	0.5000 93.8800 395.7700													
10042	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	400.90000	0	1266	1267	1268				
	0.5000 88.2800 400.9000													
10043	Bay 13 GAS Payload Attach	126	0	1263.00000	86.99000	398.46000	0	1269	1270	1271				
	3.0000 86.9900 398.4600													
10044	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	396.30000	0	1272	1273	1274				
	0.5000 88.0000 396.3000													
10045	Bay 13 GAS Payload Attach	127	0	1270.50000	88.28000	395.77000	0	1275	1276	1277				
	0.5000 88.2800 395.7700													
10046	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	396.30000	0	1278	1279	1280				
	2.5000 88.0000 396.3000													
10047	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	394.30000	0	1281	1282	1283				
	0.5000 88.0000 394.3000													
10048	Bay 13 GAS Payload Attach	126	0	1263.00000	86.99000	395.46000	0	1284	1285	1286				
	3.0000 86.9900 395.4600													
10049	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	393.30000	0	1287	1288	1289				
	0.5000 88.0000 393.3000													
10050	Bay 13 GAS Payload Attach	128	0	1282.50000	88.28000	395.77000	0	1290	1291	1292				
	2.5000 88.2800 395.7700													
10051	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	393.30000	0	1293	1294	1295				
	2.5000 88.0000 393.3000													
10052	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	394.30000	0	1296	1297	1298				
	2.5000 88.0000 394.3000													
10053	Bay 13 GAS Payload Attach	129	0	1290.00000	86.99000	395.46000	0	1299	1300	1301				
	0.0000 86.9900 395.4600													
10054	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	396.30000	0	1302	1303	1304				
	7.5000 88.0000 396.3000													
10055	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	400.90000	0	1305	1306	1307				
	7.5000 88.2800 400.9000													
10056	Bay 13 GAS Payload Attach	128	0	1282.50000	93.88000	391.30000	0	1308	1309	1310				
	2.5000 93.8800 391.3000													
10057	Bay 13 GAS Payload Attach	127	0	1270.50000	93.88000	391.30000	0	1311	1312	1313				
	0.5000 93.8800 391.3000													
10058	Bay 13 GAS Payload Attach	127	0	1270.50000	88.00000	391.30000	0	1314	1315	1316				
	0.5000 88.0000 391.3000													
10059	Bay 13 GAS Payload Attach	128	0	1282.50000	88.00000	391.30000	0	1317	1318	1319				
	2.5000 88.0000 391.3000													
10060	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	396.30000	0	1320	1321	1322				
	5.5000 88.0000 396.3000													
10061	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	393.30000	0	1323	1324	1325				
	5.5000 88.0000 393.3000													
10062	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	394.30000	0	1326	1327	1328				
	5.5000 88.0000 394.3000													

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 26

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
10063	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	393.30000	0	1329	1330	1331			
	7.5000 88.0000 393.3000												
10064	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	394.30000	0	1332	1333	1334			
	7.5000 88.0000 394.3000												
10065	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	400.90000	0	1335	1336	1337			
	7.5000 93.8800 400.9000												
10066	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	395.77000	0	1338	1339	1340			
	7.5000 93.8800 395.7700												
10067	Bay 13 GAS Payload Attach	129	0	1297.50000	93.88000	391.30000	0	1341	1342	1343			
	7.5000 93.8800 391.3000												
10068	Bay 13 GAS Payload Attach	129	0	1297.50000	88.28000	395.77000	0	1344	1345	1346			
	7.5000 88.2800 395.7700												
10069	Bay 13 GAS Payload Attach	129	0	1297.50000	88.00000	391.30000	0	1347	1348	1349			
	7.5000 88.0000 391.3000												
10070	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	400.90000	0	1350	1351	1352			
	5.5000 93.8800 400.9000												
10071	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	400.90000	0	1353	1354	1355			
	5.5000 88.2800 400.9000												
10072	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	395.77000	0	1356	1357	1358			
	5.5000 93.8800 395.7700												
10073	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	395.77000	0	1359	1360	1361			
	5.5000 88.2800 395.7700												
10074	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	391.30000	0	1362	1363	1364			
	5.5000 93.8800 391.3000												
10075	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	391.30000	0	1365	1366	1367			
	5.5000 88.0000 391.3000												
10076	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	405.07000	0	1368	1369	1370			
	5.5000 88.2800 405.0700												
10077	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	405.07000	0	1371	1372	1373			
	5.5000 93.8800 405.0700												
10078	Bay 13 GAS Payload Attach	126	0	1263.00000	87.19000	411.09000	0	1374	1375	1376			
	3.0000 87.1900 411.0900												
10079	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	406.93000	0	1377	1378	1379			
	5.5000 88.0000 406.9300												
10080	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	408.93000	0	1380	1381	1382			
	5.5000 88.0000 408.9300												
10081	Bay 13 GAS Payload Attach	125	0	1255.50000	88.28000	410.37000	0	1383	1384	1385			
	5.5000 88.2800 410.3700												
10082	Bay 13 GAS Payload Attach	125	0	1255.50000	88.00000	409.93000	0	1386	1387	1388			
	5.5000 88.0000 409.9300												
10083	Bay 13 GAS Payload Attach	125	0	1255.50000	93.88000	410.37000	0	1389	1390	1391			
	5.5000 93.8800 410.3700												
100001	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							1392
:													:
101376	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							2767

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 27

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    GRID   *1                                          327.84              21*
    2 -    *                329.34                2456
    3 -    GRID   *2                                          375.5               21*
    4 -    *                   298                2456
    5 -    GRID   *3                                           582                94*
    6 -    *                   410                 456
    7 -    GRID   *12                                      376.9475           73.8271*
    8 -    *                   340                 456
    9 -    GRID   *14                                      453.8845           90.8239*
   10 -    *                318.4253                 456
   11 -    GRID   *84                                          807                105*
   12 -    *                282.5071               12456
   13 -    GRID   *90                                       388.045                 0*
   14 -    *                 283.84                 456
   15 -    GRID   *91                                         1317               96.5*
   16 -    *                 267.556                 456
   17 -    GRID   *100                                       1092.6                94*
   18 -    *                   414                   5
   19 -    GRID   *101                                     1096.53                 94*
   20 -    *                   414                   5
   21 -    GRID   *102                                     1100.47                 94*
   22 -    *                   414                   5
   23 -    GRID   *103                                      1104.4                 94*
   24 -    *                   414                   5
   25 -    GRID   *104                                     1108.33                 94*
   26 -    *                   414                   5
   27 -    GRID   *105                                     1112.27                 94*
   28 -    *                   414                   5
   29 -    GRID   *106                                      1116.2                 94*
   30 -    *                   414                   5
   31 -    GRID   *107                                     1120.13                 94*
   32 -    *                   414                   5
   33 -    GRID   *108                                     1124.07                 94*
   34 -    *                   414                   5
   35 -    GRID   *109                                        1128                 94*
   36 -    *                   414                   5
   37 -    GRID   *110                                     1131.93                 94*
   38 -    *                   414                   5
   39 -    GRID   *111                                     1135.87                 94*
   40 -    *                   414                   5
   41 -    GRID   *112                                     1102.43              91.1*
   42 -    *                 408.2                13456
   43 -    GRID   *113                                      1110.3              91.1*
   44 -    *                 408.2                13456
   45 -    GRID   *114                                     1114.23              91.1*
   46 -    *                 408.2                13456
   47 -    GRID   *115                                     1108.34             95.16*
   48 -    *                 411.6
   49 -    GRID   *116                                     1076.99              76.2*
   50 -    *                   416
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 28

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
   51 -    GRID   *119                                          750                94*
   52 -    *                   388.15                456
   53 -    GRID   *153                                        979.5                105*
   54 -    *                      410                456
   55 -    GRID   *161                                         1040                105*
   56 -    *                  271.9499               12456
   57 -    GRID   *192                                      1140.67                105*
   58 -    *                      410                456
   59 -    GRID   *233                                         1191                105*
   60 -    *                    268.5                2456
   61 -    GRID   *249                                         1249                105*
   62 -    *                    267.2               12456
   63 -    GRID   *297                                         1191                167*
   64 -    *                  300.9105                2456
   65 -    GRID   *299                                         1307           195.7875*
   66 -    *                  294.5675               12456
   67 -    GRID   *322                                          835           141.1596*
   68 -    *                  305.8914                1456
   69 -    GRID   *323                                       949.25           159.6489*
   70 -    *                  303.3864                1456
   71 -    GRID   *324                                         1040             158.54*
   72 -    *                     303.5               12456
   73 -    GRID   *325                                    1071.2993           195.0225*
   74 -    *                  302.9271               12456
   75 -    GRID   *326                                     1139.33           194.9561*
   76 -    *                  303.6527               12456
   77 -    GRID   *327                                         1249           144.9807*
   78 -    *                  295.6138               12456
   79 -    GRID   *328                                         1249           195.3712*
   80 -    *                  299.1165               12456
   81 -    GRID   *329                                         1365           145.8064*
   82 -    *                  286.5916                2456
   83 -    GRID   *330                                         1365            196.204*
   84 -    *                  290.0166                2456
   85 -    GRID   *331                                    1127.2724           251.3208*
   86 -    *                  302.2249               12456
   87 -    GRID   *332                                         1191           251.0932*
   88 -    *                  304.7115                456
   89 -    GRID   *333                                         1191           315.0988*
   90 -    *                  304.9144                2456
   91 -    GRID   *334                                         1249           251.2668*
   92 -    *                  302.8153                1456
   93 -    GRID   *335                                         1249           309.7277*
   94 -    *                  305.9128               12456
   95 -    GRID   *337                                     1275.702           399.8897*
   96 -    *                  308.2533                1456
   97 -    GRID   *338                                         1307           251.6602*
   98 -    *                  298.5159                1456
   99 -    GRID   *339                                         1307           310.0277*
  100 -    *                  302.6348               12456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 29

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  101 -    GRID   *340                                          1307          369.9113*
  102 -    *                306.6469                 12456
  103 -    GRID   *341                                          1307            399.89*
  104 -    *                 308.249                 12456
  105 -    GRID   *343                                        1103.45          247.4195*
  106 -    *                299.0784                 12456
  107 -    GRID   *344                                       1163.2986          307.2953*
  108 -    *                301.8268                 12456
  109 -    GRID   *345                                       1222.5317          366.5596*
  110 -    *                304.4998                 12456
  111 -    GRID   *346                                       1252.5173          396.5638*
  112 -    *                305.8238                 12456
  113 -    GRID   *347                                       1282.1975          423.5001*
  114 -    *                307.1658                 12456
  115 -    GRID   *349                                          1365          252.0874*
  116 -    *                 293.848                   456
  117 -    GRID   *350                                          1365          310.4558*
  118 -    *                297.9575                  2456
  119 -    GRID   *351                                          1365          370.3169*
  120 -    *                 302.215                  2456
  121 -    GRID   *352                                          1365          400.2471*
  122 -    *                 304.347                 12456
  123 -    GRID   *354                                          1365          432.6706*
  124 -    *                306.6676                  2456
  125 -    GRID   *356                                        1425.55          146.0089*
  126 -    *                284.3796                  2456
  127 -    GRID   *357                                         1485.2          145.9227*
  128 -    *                 285.321                 12456
  129 -    GRID   *358                                       1421.9054          210.3865*
  130 -    *                288.6617                   456
  131 -    GRID   *359                                       1473.4989          210.3217*
  132 -    *                289.3702                  1456
  133 -    GRID   *360                                        1417.95          280.2517*
  134 -    *                 293.331                  2456
  135 -    GRID   *361                                         1460.8          280.2239*
  136 -    *                293.6354                 12456
  137 -    GRID   *363                                        1414.53           340.633*
  138 -    *                297.3915                  2456
  139 -    GRID   *364                                        1449.65          340.6235*
  140 -    *                297.4944                 12456
  141 -    GRID   *365                                       1411.9857          385.5422*
  142 -    *                 300.438                   456
  143 -    GRID   *366                                       1440.9786           385.554*
  144 -    *                300.3089                  1456
  145 -    GRID   *367                                         1409.3          432.9432*
  146 -    *                303.6891                  2456
  147 -    GRID   *368                                       1431.8253          432.9761*
  148 -    *                303.3295                 12456
  149 -    GRID   *456                                          327.84             -21*
  150 -    *                  329.34                  2456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 30

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  151 -    GRID   *457                                          375.5             -21*
  152 -    *                298                2456
  153 -    GRID   *458                                            582             -94*
  154 -    *                410                456
  155 -    GRID   *467                                         376.9475        -73.8271*
  156 -    *                340                456
  157 -    GRID   *469                                         453.8845        -90.8239*
  158 -    *              318.4253             456
  159 -    GRID   *539                                            807             -105*
  160 -    *              282.5071             12456
  161 -    GRID   *574                                            750             -94*
  162 -    *                388.15             456
  163 -    GRID   *608                                          979.5             -105*
  164 -    *                410                456
  165 -    GRID   *616                                           1040             -105*
  166 -    *              271.9499             12456
  167 -    GRID   *647                                         1140.67             -105*
  168 -    *                410                456
  169 -    GRID   *688                                           1191             -105*
  170 -    *                268.5              2456
  171 -    GRID   *704                                           1249             -105*
  172 -    *                267.2              12456
  173 -    GRID   *752                                           1191             -167*
  174 -    *              300.9105             2456
  175 -    GRID   *754                                           1307        -195.7875*
  176 -    *              294.5675             12456
  177 -    GRID   *777                                            835        -141.1596*
  178 -    *              305.8914             1456
  179 -    GRID   *778                                          949.25        -159.6489*
  180 -    *              303.3864             1456
  181 -    GRID   *779                                           1040          -158.54*
  182 -    *                303.5              12456
  183 -    GRID   *780                                        1071.2993        -195.0225*
  184 -    *              302.9271             12456
  185 -    GRID   *781                                         1139.33        -194.9561*
  186 -    *              303.6527             12456
  187 -    GRID   *782                                           1249        -144.9807*
  188 -    *              295.6138             12456
  189 -    GRID   *783                                           1249        -195.3712*
  190 -    *              299.1165             12456
  191 -    GRID   *784                                           1365        -145.8064*
  192 -    *              286.5916             2456
  193 -    GRID   *785                                           1365         -196.204*
  194 -    *              290.0166             2456
  195 -    GRID   *786                                        1127.2724        -251.3208*
  196 -    *              302.2249             12456
  197 -    GRID   *787                                           1191        -251.0932*
  198 -    *              304.7115             456
  199 -    GRID   *788                                           1191        -315.0988*
  200 -    *              304.9144             2456
```

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:36 CDT                    Page   31

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  201 -    GRID   *789                                          1249       -251.2668*
  202 -    *              302.8153                1456
  203 -    GRID   *790                                          1249       -309.7277*
  204 -    *              305.9128                12456
  205 -    GRID   *792                                       1275.702      -399.8897*
  206 -    *              308.2533                1456
  207 -    GRID   *793                                          1307       -251.6602*
  208 -    *              298.5159                1456
  209 -    GRID   *794                                          1307       -310.0277*
  210 -    *              302.6348                12456
  211 -    GRID   *795                                          1307       -369.9113*
  212 -    *              306.6469                12456
  213 -    GRID   *796                                          1307         -399.89*
  214 -    *               308.249                12456
  215 -    GRID   *798                                        1103.45      -247.4195*
  216 -    *              299.0784                12456
  217 -    GRID   *799                                       1163.2986      -307.2953*
  218 -    *              301.8268                12456
  219 -    GRID   *800                                       1222.5317      -366.5596*
  220 -    *              304.4998                12456
  221 -    GRID   *801                                       1252.5173      -396.5638*
  222 -    *              305.8238                12456
  223 -    GRID   *802                                       1282.1975      -423.5001*
  224 -    *              307.1658                12456
  225 -    GRID   *804                                          1365       -252.0874*
  226 -    *               293.848                456
  227 -    GRID   *805                                          1365       -310.4558*
  228 -    *              297.9575                2456
  229 -    GRID   *806                                          1365       -370.3169*
  230 -    *               302.215                2456
  231 -    GRID   *807                                          1365       -400.2471*
  232 -    *               304.347                12456
  233 -    GRID   *809                                          1365       -432.6706*
  234 -    *              306.6676                2456
  235 -    GRID   *811                                        1425.55      -146.0089*
  236 -    *              284.3796                2456
  237 -    GRID   *812                                         1485.2      -145.9227*
  238 -    *               285.321                12456
  239 -    GRID   *813                                       1421.9054      -210.3865*
  240 -    *              288.6617                456
  241 -    GRID   *814                                       1473.4989      -210.3217*
  242 -    *              289.3702                1456
  243 -    GRID   *815                                        1417.95       -280.2517*
  244 -    *               293.331                2456
  245 -    GRID   *816                                         1460.8       -280.2239*
  246 -    *              293.6354                12456
  247 -    GRID   *818                                        1414.53        -340.633*
  248 -    *              297.3915                2456
  249 -    GRID   *819                                        1449.65       -340.6235*
  250 -    *              297.4944                12456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 32

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  251 -    GRID   *820                                        1411.9857       -385.5422*
  252 -    *                300.438                456
  253 -    GRID   *821                                        1440.9786        -385.554*
  254 -    *                300.3089               1456
  255 -    GRID   *822                                           1409.3       -432.9432*
  256 -    *                303.6891               2456
  257 -    GRID   *823                                        1431.8253       -432.9761*
  258 -    *                303.3295              12456
  259 -    GRID   *912                                            582               0*
  260 -    *                277.0874               456
  261 -    GRID   *913                                            263.5             0*
  262 -    *                371.0002               456
  263 -    GRID   *918                                         459.3887             0*
  264 -    *                280.1047               456
  265 -    GRID   *919                                         445.8506             0*
  266 -    *                459.1884               456
  267 -    GRID   *942                                            979.5             0*
  268 -    *                267.9297               456
  269 -    GRID   *948                                          1140.67             0*
  270 -    *                264.2166               456
  271 -    GRID   *958                                          592.415             0*
  272 -    *                  496.16              23456
  273 -    GRID   *959                                            602.3             0*
  274 -    *                496.62                 456
  275 -    GRID   *960                                            647.3             0*
  276 -    *                496.62                 456
  277 -    GRID   *961                                            692.3             0*
  278 -    *                496.62                 456
  279 -    GRID   *962                                            737.3             0*
  280 -    *                496.62                 456
  281 -    GRID   *963                                           783.55             0*
  282 -    *                496.62                 456
  283 -    GRID   *964                                           828.25             0*
  284 -    *                496.62                 456
  285 -    GRID   *965                                           872.95             0*
  286 -    *                496.62                 456
  287 -    GRID   *966                                          929.708             0*
  288 -    *                  496.16              23456
  289 -    GRID   *967                                           917.65             0*
  290 -    *                496.62                 456
  291 -    GRID   *968                                          954.292             0*
  292 -    *                  496.16              23456
  293 -    GRID   *969                                           966.35             0*
  294 -    *                496.62                 456
  295 -    GRID   *970                                          1011.05             0*
  296 -    *                496.62                 456
  297 -    GRID   *971                                          1055.75             0*
  298 -    *                496.62                 456
  299 -    GRID   *972                                          1100.45             0*
  300 -    *                496.62                 456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 33

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  301 -    GRID   *973                                          1144.2                0*
  302 -    *                496.62                456
  303 -    GRID   *974                                          1184.2                0*
  304 -    *                496.62                456
  305 -    GRID   *975                                          1224.2                0*
  306 -    *                496.62                456
  307 -    GRID   *976                                         1274.873               0*
  308 -    *                496.16               23456
  309 -    GRID   *977                                          1264.2                0*
  310 -    *                496.62                456
  311 -    GRID   *980                                            1180              136*
  312 -    *                   283                  5
  313 -    GRID   *981                                            1180             -136*
  314 -    *                   283                  5
  315 -    GRID   *982                                          1097.5              136*
  316 -    *                 321.7                2456
  317 -    GRID   *983                                          1097.5             -136*
  318 -    *                 321.7                2456
  319 -    GRID   *1012                                           1307              105*
  320 -    *                 266.4                456
  321 -    GRID   *1016                                           1307               94*
  322 -    *                   409                456
  323 -    GRID   *1036                                           1307                0*
  324 -    *                261.036                456
  325 -    GRID   *1047                                        1444.9995              0*
  326 -    *                442.9996
  327 -    GRID   *1048                                        1468.1697              53*
  328 -    *                 342.64
  329 -    GRID   *1065                                        1436.9185          114.531*
  330 -    *                 415.769                456
  331 -    GRID   *1067                                        1464.6293          124.2366*
  332 -    *                273.2091                456
  333 -    GRID   *1069                                        1436.9185          -114.531*
  334 -    *                 415.769                456
  335 -    GRID   *1071                                        1464.6293         -124.2366*
  336 -    *                273.2091                456
  337 -    GRID   *1090                                           1307             -105*
  338 -    *                   266.4                456
  339 -    GRID   *1091                                           1317             -96.5*
  340 -    *                 267.556                456
  341 -    GRID   *1093                                           1307               -94*
  342 -    *                   409                456
  343 -    GRID   *1117                                            649                0*
  344 -    *                 462.73
  345 -    GRID   *1127                                        1468.1697              -53*
  346 -    *                 342.64
  347 -    GRID   *1137                                        1353.2817              0*
  348 -    *                551.6397                456
  349 -    GRID   *1142                                        1421.8454              0*
  350 -    *                623.8077                456
```

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:36 CDT                    Page   34

                              S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  351 -    GRID   *1143                                  1474.9553                0*
  352 -    *                584.1578                456
  353 -    GRID   *1145                                  1581.6953                0*
  354 -    *                 576.268                456
  355 -    GRID   *1148                                  1514.2594                0*
  356 -    *                636.8045                456
  357 -    GRID   *1150                                  1511.5018                0*
  358 -    *                718.1525                456
  359 -    GRID   *1151                                  1552.2696                0*
  360 -    *                 687.718                456
  361 -    GRID   *1154                                   1580.602                0*
  362 -    *                725.6685                456
  363 -    GRID   *1156                                  1579.7797                0*
  364 -    *                     790                456
  365 -    GRID   *1157                                  1611.5278                0*
  366 -    *                767.0927                456
  367 -    GRID   *1160                                  1594.7842                0*
  368 -    *                 806.63                456
  369 -    GRID   *1161                                  1685.1238                0*
  370 -    *                806.6295                456
  371 -    GRID   *1167                                  1569.8066            0.125*
  372 -    *                 602.064                456
  373 -    GRID   *1168                                  1566.7467           -0.125*
  374 -    *                 596.367                456
  375 -    GRID   *1169                                  1554.7399            0.125*
  376 -    *                638.1328                456
  377 -    GRID   *1170                                  1551.2336           -0.125*
  378 -    *                632.7464                456
  379 -    GRID   *1173                                  1589.8123            0.125*
  380 -    *                639.3109                456
  381 -    GRID   *1174                                  1586.7524           -0.125*
  382 -    *                633.6139                456
  383 -    GRID   *1183                                  1610.0743            0.125*
  384 -    *                 677.035                456
  385 -    GRID   *1184                                  1607.4545           -0.125*
  386 -    *                672.1574                456
  387 -    GRID   *1185                                  1610.5743            0.125*
  388 -    *                 723.896                456
  389 -    GRID   *1186                                   1607.572           -0.125*
  390 -    *                719.2845                456
  391 -    GRID   *1189                                  1646.9896            0.125*
  392 -    *                745.7644                456
  393 -    GRID   *1190                                  1644.3698           -0.125*
  394 -    *                740.8868                456
  395 -    GRID   *1203                                     1585.5              10*
  396 -    *                289.4324               12456
  397 -    GRID   *1204                                     1537.5              90*
  398 -    *                294.3767               12456
  399 -    GRID   *1205                                     1611.5              50*
  400 -    *                   286.8                456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 35

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  401 -    GRID   *1206                                    1585.5             -10*
  402 -    *               289.4324               12456
  403 -    GRID   *1207                                    1537.5             -90*
  404 -    *               294.3767               12456
  405 -    GRID   *1208                                    1611.5             -50*
  406 -    *                  286.8               456
  407 -    GRID   *1214                                 1457.5432            81.702*
  408 -    *               526.3787               456
  409 -    GRID   *1215                                 1415.4717           115.6794*
  410 -    *               505.2103               456
  411 -    GRID   *1216                                 1365.2482           109.5877*
  412 -    *               499.3276               456
  413 -    GRID   *1243                                 1457.5432           -81.702*
  414 -    *               526.3787               456
  415 -    GRID   *1244                                 1415.4717          -115.6794*
  416 -    *               505.2103               456
  417 -    GRID   *1245                                 1365.2482          -109.5877*
  418 -    *               499.3276               456
  419 -    GRID   *1383                                       693                94*
  420 -    *                  396                 1456
  421 -    GRID   *1393                                       717                94*
  422 -    *                396.5                 13456
  423 -    GRID   *1405                                       750                94*
  424 -    *               401.75                 1456
  425 -    GRID   *1423                                       807                94*
  426 -    *                  396                 1456
  427 -    GRID   *1433                                       835                94*
  428 -    *                396.5                 13456
  429 -    GRID   *1443                                       863                94*
  430 -    *                  396                 1456
  431 -    GRID   *1445                                       863                94*
  432 -    *               401.75                 1456
  433 -    GRID   *1650                                       589              99.6*
  434 -    *                  410
  435 -    GRID   *1651                                     679.5              96.5*
  436 -    *                  410
  437 -    GRID   *2171                                    1033.4                94*
  438 -    *                  410                 1456
  439 -    GRID   *2197                                      1040                94*
  440 -    *                  410                 1456
  441 -    GRID   *2322                                    1140.67             20.15*
  442 -    *                307.2                 1456
  443 -    GRID   *2353                                       891                94*
  444 -    *                396.5                 13456
  445 -    GRID   *2365                                       919                94*
  446 -    *               401.75                 1456
  447 -    GRID   *2423                                    1090.33                94*
  448 -    *                  396                 1456
  449 -    GRID   *2433                                     1115.5                94*
  450 -    *               396.88                 13456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 36

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  451 -    GRID   *2443                                    1140.67              94*
  452 -    *                395.5                1456
  453 -    GRID   *2651                                        911            96.5*
  454 -    *                  410
  455 -    GRID   *2661                                      892.5              94*
  456 -    *                408.25                456
  457 -    GRID   *2663                                     1011.4              94*
  458 -    *                408.25                1456
  459 -    GRID   *2665                                     1123.3              94*
  460 -    *                408.25                3456
  461 -    GRID   *2679                                    1138.939         102.579*
  462 -    *                410.85                13456
  463 -    GRID   *2680                                    1087.683         102.654*
  464 -    *                410.85                13456
  465 -    GRID   *2808                                    1024.875              99*
  466 -    *                  410                 1456
  467 -    GRID   *2809                                    1024.875              94*
  468 -    *                  410                 1456
  469 -    GRID   *2833                                    1052.585              94*
  470 -    *                  410                 1456
  471 -    GRID   *2922                                    1044.228              94*
  472 -    *                  410                 1456
  473 -    GRID   *3076                                        1307              82*
  474 -    *              439.5862                456
  475 -    GRID   *3401                                        1307            91.8*
  476 -    *                456.62                456
  477 -    GRID   *4590                                      679.5           -96.5*
  478 -    *                  410
  479 -    GRID   *4591                                        911           -96.5*
  480 -    *                  410
  481 -    GRID   *4592                                       1189           -96.5*
  482 -    *                  410
  483 -    GRID   *4593                                     1256.5           -96.5*
  484 -    *                  410
  485 -    GRID   *5218                                      664.5             105*
  486 -    *                  410                 456
  487 -    GRID   *5400                                        891             105*
  488 -    *                  410                 456
  489 -    GRID   *5423                                        919             105*
  490 -    *                  410                 456
  491 -    GRID   *6032                                      976.5          -101.5*
  492 -    *                407.5                 456
  493 -    GRID   *6060                                      701.2          -100.8*
  494 -    *                  407                 456
  495 -    GRID   *6061                                      701.2           -91.3*
  496 -    *                407.5                 456
  497 -    GRID   *6064                                        879          -101.3*
  498 -    *                407.5                 456
  499 -    GRID   *6067                                     1029.5           -96.8*
  500 -    *                  408                 456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 37

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  501 -    GRID   *6068                                          1207                -97*
  502 -    *                   407.5                456
  503 -    GRID   *6069                                        881.2              -101.3*
  504 -    *                   407.5                456
  505 -    GRID   *6070                                        881.2               101.3*
  506 -    *                   407.5                456
  507 -    GRID   *6071                                         1207                  97*
  508 -    *                   407.5                456
  509 -    GRID   *6073                                          879               101.3*
  510 -    *                   407.5                456
  511 -    GRID   *6074                                       1029.5               101.3*
  512 -    *                   407.5                456
  513 -    GRID   *6076                                       1029.5                96.8*
  514 -    *                     408                456
  515 -    GRID   *6080                                          919                   0*
  516 -    *                     305                6
  517 -    GRID   *6081                                         1040                   0*
  518 -    *                     305                6
  519 -    GRID   *6082                                          790              -101.3*
  520 -    *                   407.5                456
  521 -    GRID   *6083                                       1029.5              -101.3*
  522 -    *                   407.5                456
  523 -    GRID   *6084                                       1110.5               -96.8*
  524 -    *                   407.3                456
  525 -    GRID   *6085                                         1229                 -97*
  526 -    *                   407.5                456
  527 -    GRID   *6086                                          505                5.6*
  528 -    *                   421.3                456
  529 -    GRID   *6087                                       1205.5                   0*
  530 -    *                     305                456
  531 -    GRID   *6089                                     482.4191                   0*
  532 -    *                 324.7097                456
  533 -    GRID   *6091                                        701.2               100.8*
  534 -    *                     407                456
  535 -    GRID   *6092                                          790               101.3*
  536 -    *                   407.5                456
  537 -    GRID   *6093                                        976.5               101.5*
  538 -    *                   407.5                456
  539 -    GRID   *6094                                       1110.5                96.8*
  540 -    *                   407.3                456
  541 -    GRID   *6095                                         1229                  97*
  542 -    *                   407.5                456
  543 -    GRID   *10001                                      1297.5               93.88*
  544 -    *                 410.37                 456
  545 -    GRID   *10002                                    1290.13                93.88*
  546 -    *                 410.37                 456
  547 -    GRID   *10004                                        1290               87.19*
  548 -    *                 414.09                 456
  549 -    GRID   *10005                                      1297.5                  88*
  550 -    *                 411.93                 456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 38

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  551 -    GRID   *10006                                          1290           87.19*
  552 -    *                411.09                456
  553 -    GRID   *10007                                       1297.5           88.28*
  554 -    *                410.37                456
  555 -    GRID   *10008                                       1297.5              88*
  556 -    *                409.93                456
  557 -    GRID   *10009                                       1297.5              88*
  558 -    *                408.93                456
  559 -    GRID   *10010                                       1297.5              88*
  560 -    *                406.93                456
  561 -    GRID   *10011                                       1282.5           93.88*
  562 -    *                410.37                456
  563 -    GRID   *10012                                       1282.5           88.28*
  564 -    *                410.37                456
  565 -    GRID   *10013                                       1282.5              88*
  566 -    *                411.93                456
  567 -    GRID   *10016                                       1282.5              88*
  568 -    *                409.93                456
  569 -    GRID   *10017                                       1282.5              88*
  570 -    *                408.93                456
  571 -    GRID   *10018                                       1282.5              88*
  572 -    *                406.93                456
  573 -    GRID   *10019                                         1263           87.19*
  574 -    *                414.09                456
  575 -    GRID   *10020                                       1270.5              88*
  576 -    *                409.93                456
  577 -    GRID   *10021                                       1270.5              88*
  578 -    *                408.93                456
  579 -    GRID   *10022                                       1270.5              88*
  580 -    *                406.93                456
  581 -    GRID   *10023                                      1264.88           93.88*
  582 -    *                410.37                456
  583 -    GRID   *10025                                       1270.5           93.88*
  584 -    *                410.37                456
  585 -    GRID   *10026                                       1255.5              88*
  586 -    *                411.93                456
  587 -    GRID   *10027                                       1270.5           88.28*
  588 -    *                410.37                456
  589 -    GRID   *10028                                       1270.5              88*
  590 -    *                411.93                456
  591 -    GRID   *10029                                       1282.5           93.88*
  592 -    *                405.07                456
  593 -    GRID   *10030                                       1282.5           88.28*
  594 -    *                405.07                456
  595 -    GRID   *10031                                       1270.5           93.88*
  596 -    *                405.07                456
  597 -    GRID   *10032                                       1270.5           88.28*
  598 -    *                405.07                456
  599 -    GRID   *10033                                       1297.5           88.28*
  600 -    *                405.07                456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 39

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  601 -    GRID   *10034                                      1297.5           93.88*
  602 -    *                405.07                456
  603 -    GRID   *10035                                      1282.5           93.88*
  604 -    *                 400.9                456
  605 -    GRID   *10036                                      1270.5           93.88*
  606 -    *                 400.9                456
  607 -    GRID   *10037                                      1282.5           88.28*
  608 -    *                 400.9                456
  609 -    GRID   *10038                                        1290           86.99*
  610 -    *                398.46                456
  611 -    GRID   *10039                                        1278              94*
  612 -    *                 396.5                456
  613 -    GRID   *10040                                      1282.5           93.88*
  614 -    *                395.77                456
  615 -    GRID   *10041                                      1270.5           93.88*
  616 -    *                395.77                456
  617 -    GRID   *10042                                      1270.5           88.28*
  618 -    *                 400.9                456
  619 -    GRID   *10043                                        1263           86.99*
  620 -    *                398.46                456
  621 -    GRID   *10044                                      1270.5              88*
  622 -    *                 396.3                456
  623 -    GRID   *10045                                      1270.5           88.28*
  624 -    *                395.77                456
  625 -    GRID   *10046                                      1282.5              88*
  626 -    *                 396.3                456
  627 -    GRID   *10047                                      1270.5              88*
  628 -    *                 394.3                456
  629 -    GRID   *10048                                        1263           86.99*
  630 -    *                395.46                456
  631 -    GRID   *10049                                      1270.5              88*
  632 -    *                 393.3                456
  633 -    GRID   *10050                                      1282.5           88.28*
  634 -    *                395.77                456
  635 -    GRID   *10051                                      1282.5              88*
  636 -    *                 393.3                456
  637 -    GRID   *10052                                      1282.5              88*
  638 -    *                 394.3                456
  639 -    GRID   *10053                                        1290           86.99*
  640 -    *                395.46                456
  641 -    GRID   *10054                                      1297.5              88*
  642 -    *                 396.3                456
  643 -    GRID   *10055                                      1297.5           88.28*
  644 -    *                 400.9                456
  645 -    GRID   *10056                                      1282.5           93.88*
  646 -    *                 391.3                456
  647 -    GRID   *10057                                      1270.5           93.88*
  648 -    *                 391.3                456
  649 -    GRID   *10058                                      1270.5              88*
  650 -    *                 391.3                456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 40

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  651 -    GRID   *10059                                      1282.5              88*
  652 -    *                391.3                456
  653 -    GRID   *10060                                      1255.5              88*
  654 -    *                396.3                456
  655 -    GRID   *10061                                      1255.5              88*
  656 -    *                393.3                456
  657 -    GRID   *10062                                      1255.5              88*
  658 -    *                394.3                456
  659 -    GRID   *10063                                      1297.5              88*
  660 -    *                393.3                456
  661 -    GRID   *10064                                      1297.5              88*
  662 -    *                394.3                456
  663 -    GRID   *10065                                      1297.5           93.88*
  664 -    *                400.9                456
  665 -    GRID   *10066                                      1297.5           93.88*
  666 -    *               395.77                456
  667 -    GRID   *10067                                      1297.5           93.88*
  668 -    *                391.3                456
  669 -    GRID   *10068                                      1297.5           88.28*
  670 -    *               395.77                456
  671 -    GRID   *10069                                      1297.5              88*
  672 -    *                391.3                456
  673 -    GRID   *10070                                      1255.5           93.88*
  674 -    *                400.9                456
  675 -    GRID   *10071                                      1255.5           88.28*
  676 -    *                400.9                456
  677 -    GRID   *10072                                      1255.5           93.88*
  678 -    *               395.77                456
  679 -    GRID   *10073                                      1255.5           88.28*
  680 -    *               395.77                456
  681 -    GRID   *10074                                      1255.5           93.88*
  682 -    *                391.3                456
  683 -    GRID   *10075                                      1255.5              88*
  684 -    *                391.3                456
  685 -    GRID   *10076                                      1255.5           88.28*
  686 -    *               405.07                456
  687 -    GRID   *10077                                      1255.5           93.88*
  688 -    *               405.07                456
  689 -    GRID   *10078                                        1263           87.19*
  690 -    *               411.09                456
  691 -    GRID   *10079                                      1255.5              88*
  692 -    *               406.93                456
  693 -    GRID   *10080                                      1255.5              88*
  694 -    *               408.93                456
  695 -    GRID   *10081                                      1255.5           88.28*
  696 -    *               410.37                456
  697 -    GRID   *10082                                      1255.5              88*
  698 -    *               409.93                456
  699 -    GRID   *10083                                      1255.5           93.88*
  700 -    *               410.37                456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 41

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  701 -    GRID   *13001                                        616.67              94*
  702 -    *                      414                 5
  703 -    GRID   *13002                                        659.93              94*
  704 -    *                      414                 5
  705 -    GRID   *13003                                         762.2              94*
  706 -    *                      414                 5
  707 -    GRID   *13004                                        954.93              94*
  708 -    *                      414                 5
  709 -    GRID   *13005                                          1010              94*
  710 -    *                      414                 5
  711 -    GRID   *13006                                        1057.2              94*
  712 -    *                      414                 5
  713 -    GRID   *13007                                        1175.2              94*
  714 -    *                      414                 5
  715 -    GRID   *13008                                       1218.47              94*
  716 -    *                      414                 5
  717 -    GRID   *13009                                        616.67             -94*
  718 -    *                      414                 5
  719 -    GRID   *13010                                        659.93             -94*
  720 -    *                      414                 5
  721 -    GRID   *13011                                         762.2             -94*
  722 -    *                      414                 5
  723 -    GRID   *13012                                        954.93             -94*
  724 -    *                      414                 5
  725 -    GRID   *13013                                          1010             -94*
  726 -    *                      414                 5
  727 -    GRID   *13014                                        1057.2             -94*
  728 -    *                      414                 5
  729 -    GRID   *13015                                        1175.2             -94*
  730 -    *                      414                 5
  731 -    GRID   *13016                                       1218.47             -94*
  732 -    *                      414                 5
  733 -    GRID   *13017                                           656               0*
  734 -    *                      305                 6
  735 -    GRID   *13018                                        947.07               0*
  736 -    *                      305                 6
  737 -    GRID   *13019                                        1057.2               0*
  738 -    *                      305                 6
  739 -    GRID   *13020                                        1175.2               0*
  740 -    *                      305                 6
  741 -    GRID   *21081                                        1029.5            96.8*
  742 -    *                      410              1456
  743 -    GRID   *27106                                       1165.83              94*
  744 -    *                    368.5              1456
  745 -    GRID   *27111                                       1165.83          102.56*
  746 -    *                      420              1456
  747 -    GRID   *27150                                          1179             105*
  748 -    *                      420              1456
  749 -    GRID   *27164                                          1191           26.25*
  750 -    *                310.4765              1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 42

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  751 -    GRID   *27167                                      1191             52.5*
  752 -    *                 321.47                1456
  753 -    GRID   *27178                                      1191             72.6*
  754 -    *                 334.25                1456
  755 -    GRID   *27186                                      1191          89.4357*
  756 -    *                  368.5                1456
  757 -    GRID   *27193                                      1191               94*
  758 -    *                 388.15                1456
  759 -    GRID   *27355                                      1249               94*
  760 -    *                  395.5                 456
  761 -    GRID   *27564                                      1191            26.25*
  762 -    *                308.4765                1456
  763 -    GRID   *27837                                      1191            80.718*
  764 -    *                 347.34                1456
  765 -    GRID   *27895                                      1189             96.5*
  766 -    *                    410
  767 -    GRID   *27896                                    1256.5             96.5*
  768 -    *                    410
  769 -    GRID   *210388                                     669.8            91.102*
  770 -    *                 462.169                1456
  771 -    GRID   *210390                                     669.8            95.3415*
  772 -    *                455.2085                1456
  773 -    GRID   *210393                                     669.8             99.581*
  774 -    *                 448.248                1456
  775 -    GRID   *210395                                     669.8            99.9155*
  776 -    *                 443.374                1456
  777 -    GRID   *210398                                     669.8             100.25*
  778 -    *                   438.5                1456
  779 -    GRID   *210400                                     669.8             100.25*
  780 -    *                    434                 1456
  781 -    GRID   *210405                                     669.8              101.2*
  782 -    *                 424.75                 1456
  783 -    GRID   *210413                                   681.05             102.15*
  784 -    *                    420                 1456
  785 -    GRID   *210458                                     692.3            91.102*
  786 -    *                 462.169                1456
  787 -    GRID   *210460                                     692.3            95.3415*
  788 -    *                455.2085                1456
  789 -    GRID   *210463                                     692.3             99.581*
  790 -    *                 448.248                1456
  791 -    GRID   *210465                                     692.3            99.9155*
  792 -    *                 443.374                1456
  793 -    GRID   *210468                                     692.3             100.25*
  794 -    *                   438.5                1456
  795 -    GRID   *210470                                     692.3             100.25*
  796 -    *                    434                 1456
  797 -    GRID   *210475                                     692.3              101.2*
  798 -    *                 424.75                 1456
  799 -    GRID   *210530                                     714.8            95.3415*
  800 -    *                455.2085                1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 43

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  801 -    GRID   *210533                                      714.8          99.581*
  802 -    *                448.248                1456
  803 -    GRID   *210535                                      714.8         99.9155*
  804 -    *                443.374                1456
  805 -    GRID   *210538                                      714.8          100.25*
  806 -    *                  438.5                1456
  807 -    GRID   *210600                                      737.3         95.3415*
  808 -    *                455.2085                1456
  809 -    GRID   *210670                                     756.08         95.3415*
  810 -    *                455.2085                1456
  811 -    GRID   *211040                                      761.2         95.3415*
  812 -    *                455.2085                1456
  813 -    GRID   *211043                                      761.2          99.581*
  814 -    *                448.248                 1456
  815 -    GRID   *211180                                      805.9         95.3415*
  816 -    *                455.2085                1456
  817 -    GRID   *211183                                      805.9          99.581*
  818 -    *                448.248                 1456
  819 -    GRID   *211320                                      850.6         95.3415*
  820 -    *                455.2085                1456
  821 -    GRID   *211323                                      850.6          99.581*
  822 -    *                448.248                 1456
  823 -    GRID   *211325                                      850.6         99.9155*
  824 -    *                443.374                 1456
  825 -    GRID   *211460                                      895.3         95.3415*
  826 -    *                455.2085                1456
  827 -    GRID   *211463                                      895.3          99.581*
  828 -    *                448.248                 1456
  829 -    GRID   *211465                                      895.3         99.9155*
  830 -    *                443.374                 1456
  831 -    GRID   *211468                                      895.3          100.25*
  832 -    *                  438.5                1456
  833 -    GRID   *211470                                      895.3          100.25*
  834 -    *                    434                1456
  835 -    GRID   *211494                                      903.8           101.2*
  836 -    *                424.75                 1456
  837 -    GRID   *211528                                     917.65          91.102*
  838 -    *                462.169                1456
  839 -    GRID   *211530                                     917.65         95.3415*
  840 -    *                455.2085                1456
  841 -    GRID   *211533                                     917.65          99.581*
  842 -    *                448.248                 1456
  843 -    GRID   *211535                                     917.65         99.9155*
  844 -    *                443.374                 1456
  845 -    GRID   *211538                                     917.65          100.25*
  846 -    *                  438.5                1456
  847 -    GRID   *211540                                     917.65          100.25*
  848 -    *                    434                1456
  849 -    GRID   *211545                                     917.65           101.2*
  850 -    *                424.75                 1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 44

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  851 -    GRID   *211595                                    939.92          85.5145*
  852 -    *               466.7545                1456
  853 -    GRID   *211598                                    939.92           91.102*
  854 -    *               462.169                 1456
  855 -    GRID   *211600                                    939.92          95.3415*
  856 -    *               455.2085                1456
  857 -    GRID   *211603                                    939.92           99.581*
  858 -    *               448.248                 1456
  859 -    GRID   *211605                                    939.92          99.9155*
  860 -    *               443.374                 1456
  861 -    GRID   *211608                                    939.92           100.25*
  862 -    *                 438.5                 1456
  863 -    GRID   *212040                                    943.58          95.3415*
  864 -    *               455.2085                1456
  865 -    GRID   *212043                                    943.58           99.581*
  866 -    *               448.248                 1456
  867 -    GRID   *212045                                    943.58          99.9155*
  868 -    *               443.374                 1456
  869 -    GRID   *212118                                    966.35           100.25*
  870 -    *                 438.5                 1456
  871 -    GRID   *212120                                    966.35           100.25*
  872 -    *                   434                 1456
  873 -    GRID   *212125                                    966.35            101.2*
  874 -    *               424.75                  1456
  875 -    GRID   *212250                                   1011.05          95.3415*
  876 -    *               455.2085                1456
  877 -    GRID   *212253                                   1011.05           99.581*
  878 -    *               448.248                 1456
  879 -    GRID   *212255                                   1011.05          99.9155*
  880 -    *               443.374                 1456
  881 -    GRID   *212385                                   1055.75          85.5145*
  882 -    *               466.7545                1456
  883 -    GRID   *212388                                   1055.75           91.102*
  884 -    *               462.169                 1456
  885 -    GRID   *212390                                   1055.75          95.3415*
  886 -    *               455.2085                1456
  887 -    GRID   *212530                                   1100.45          95.3415*
  888 -    *               455.2085                1456
  889 -    GRID   *212533                                   1100.45           99.581*
  890 -    *               448.248                 1456
  891 -    GRID   *212535                                   1100.45          99.9155*
  892 -    *               443.374                 1456
  893 -    GRID   *213110                                    1144.2          95.3415*
  894 -    *               455.2085                1456
  895 -    GRID   *213113                                    1144.2           99.581*
  896 -    *               448.248                 1456
  897 -    GRID   *213115                                    1144.2          99.9155*
  898 -    *               443.374                 1456
  899 -    GRID   *213180                                    1164.2          95.3415*
  900 -    *               455.2085                1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 45

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  901 -    GRID   *213183                                  1164.2          99.581*
  902 -    *                448.248                1456
  903 -    GRID   *213185                                  1164.2         99.9155*
  904 -    *                443.374                1456
  905 -    GRID   *213188                                  1164.2          100.25*
  906 -    *                  438.5                1456
  907 -    GRID   *213195                                  1164.2           101.2*
  908 -    *                424.75                 1456
  909 -    GRID   *213198                                  1164.2          102.15*
  910 -    *                   420                 1456
  911 -    GRID   *213201                                  1174.2          100.25*
  912 -    *                  429.5                1456
  913 -    GRID   *213203                                  1174.2          102.15*
  914 -    *                   420                 1456
  915 -    GRID   *213250                                  1184.2         95.3415*
  916 -    *               455.2085                1456
  917 -    GRID   *213253                                  1184.2          99.581*
  918 -    *                448.248                1456
  919 -    GRID   *213255                                  1184.2         99.9155*
  920 -    *                443.374                1456
  921 -    GRID   *213265                                  1184.2           101.2*
  922 -    *                424.75                 1456
  923 -    GRID   *213268                                  1184.2          102.15*
  924 -    *                   420                 1456
  925 -    GRID   *213323                                  1204.2          99.581*
  926 -    *                448.248                1456
  927 -    GRID   *213325                                  1204.2         99.9155*
  928 -    *                443.374                1456
  929 -    GRID   *213390                                  1224.2         95.3415*
  930 -    *               455.2085                1456
  931 -    GRID   *213393                                  1224.2          99.581*
  932 -    *                448.248                1456
  933 -    GRID   *213395                                  1224.2         99.9155*
  934 -    *                443.374                1456
  935 -    GRID   *213460                                  1244.2         95.3415*
  936 -    *               455.2085                1456
  937 -    GRID   *213463                                  1244.2          99.581*
  938 -    *                448.248                1456
  939 -    GRID   *213465                                  1244.2         99.9155*
  940 -    *                443.374                1456
  941 -    GRID   *213468                                  1244.2          100.25*
  942 -    *                  438.5                1456
  943 -    GRID   *213481                                  1254.2          100.25*
  944 -    *                  429.5                1456
  945 -    GRID   *213528                                  1264.2          91.102*
  946 -    *                462.169                1456
  947 -    GRID   *213530                                  1264.2         95.3415*
  948 -    *               455.2085                1456
  949 -    GRID   *213533                                  1264.2          99.581*
  950 -    *                448.248                1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 46

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  951 -    GRID   *213535                                    1264.2          99.9155*
  952 -    *                443.374                1456
  953 -    GRID   *213538                                    1264.2           100.25*
  954 -    *                  438.5                1456
  955 -    GRID   *213540                                    1264.2           100.25*
  956 -    *                    434                1456
  957 -    GRID   *213600                                    1283.7          95.3415*
  958 -    *              455.2085                 1456
  959 -    GRID   *271012                                   1165.83              94*
  960 -    *                388.15                 1456
  961 -    GRID   *271013                                   1165.83              94*
  962 -    *                376.605                1456
  963 -    GRID   *271055                                      1191          91.3184*
  964 -    *                376.605                1456
  965 -    GRID   *271216                                   1268.616          102.579*
  966 -    *                410.85                 3456
  967 -    GRID   *271217                                    1279.5              94*
  968 -    *                408.25                 456
  969 -    GRID   *271218                                   1295.15             95.5*
  970 -    *                412.32                 13456
  971 -    GRID   *271219                                      1301              94*
  972 -    *                  402                  456
  973 -    GRID   *271265                                      1191          41.6951*
  974 -    *                313.7                  1456
  975 -    GRID   *312118                                    966.35          -100.25*
  976 -    *                  438.5                1456
  977 -    GRID   *312120                                    966.35          -100.25*
  978 -    *                    434                1456
  979 -    GRID   *312125                                    966.35           -101.2*
  980 -    *                424.75                 1456
  981 -    GRID   *312385                                    1055.75         -85.5145*
  982 -    *              466.7545                 1456
  983 -    GRID   *312388                                    1055.75          -91.102*
  984 -    *                462.169                1456
  985 -    GRID   *312390                                    1055.75         -95.3415*
  986 -    *              455.2085                 1456
  987 -    GRID   *313195                                    1164.2           -101.2*
  988 -    *                424.75                 1456
  989 -    GRID   *313198                                    1164.2          -102.15*
  990 -    *                  420                  1456
  991 -    GRID   *313201                                    1174.2           -100.25*
  992 -    *                  429.5                1456
  993 -    GRID   *313203                                    1174.2          -102.15*
  994 -    *                  420                  1456
  995 -    GRID   *313265                                    1184.2           -101.2*
  996 -    *                424.75                 1456
  997 -    GRID   *313268                                    1184.2          -102.15*
  998 -    *                  420                  1456
  999 -    GRID   *701383                                       693             -94*
 1000 -    *                  396                  1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 47

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1001 -    GRID   *701393                                    717             -94*
 1002 -    *                   396.5                 13456
 1003 -    GRID   *701405                                    750             -94*
 1004 -    *                  401.75                 1456
 1005 -    GRID   *701423                                    807             -94*
 1006 -    *                     396                 1456
 1007 -    GRID   *701433                                    835             -94*
 1008 -    *                   396.5                 13456
 1009 -    GRID   *701443                                    863             -94*
 1010 -    *                     396                 1456
 1011 -    GRID   *701445                                    863             -94*
 1012 -    *                  401.75                 1456
 1013 -    GRID   *701963                                    715             -94*
 1014 -    *                  408.25                 456
 1015 -    GRID   *701965                                    833             -94*
 1016 -    *                  408.25                 456
 1017 -    GRID   *702171                                  1033.4            -94*
 1018 -    *                     410                 1456
 1019 -    GRID   *702197                                    1040            -94*
 1020 -    *                     410                 1456
 1021 -    GRID   *702322                                  1140.67         -20.15*
 1022 -    *                   307.2                 1456
 1023 -    GRID   *702353                                    891             -94*
 1024 -    *                   396.5                 13456
 1025 -    GRID   *702365                                    919             -94*
 1026 -    *                  401.75                 1456
 1027 -    GRID   *702423                                  1090.33           -94*
 1028 -    *                     396                 1456
 1029 -    GRID   *702433                                   1115.5           -94*
 1030 -    *                  396.88                 13456
 1031 -    GRID   *702443                                  1140.67           -94*
 1032 -    *                   395.5                 1456
 1033 -    GRID   *702661                                    892.5           -94*
 1034 -    *                  408.25                 456
 1035 -    GRID   *702663                                   1011.4           -94*
 1036 -    *                  408.25                 1456
 1037 -    GRID   *702665                                   1123.3           -94*
 1038 -    *                  408.25                 3456
 1039 -    GRID   *702679                                  1138.939        -102.579*
 1040 -    *                  410.85                 13456
 1041 -    GRID   *702680                                  1087.683        -102.654*
 1042 -    *                  410.85                 13456
 1043 -    GRID   *702808                                  1024.875            -99*
 1044 -    *                     410                 1456
 1045 -    GRID   *702809                                  1024.875            -94*
 1046 -    *                     410                 1456
 1047 -    GRID   *702833                                  1052.585            -94*
 1048 -    *                     410                 1456
 1049 -    GRID   *702922                                  1044.228            -94*
 1050 -    *                     410                 1456
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 48

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1051 -    GRID   *727106                                    1165.83             -94*
 1052 -    *                368.5                1456
 1053 -    GRID   *727111                                    1165.83          -102.56*
 1054 -    *                  420                1456
 1055 -    GRID   *727150                                       1179            -105*
 1056 -    *                  420                1456
 1057 -    GRID   *727164                                       1191           -26.25*
 1058 -    *              310.4765               1456
 1059 -    GRID   *727167                                       1191            -52.5*
 1060 -    *                321.47               1456
 1061 -    GRID   *727178                                       1191            -72.6*
 1062 -    *                334.25               1456
 1063 -    GRID   *727186                                       1191         -89.4357*
 1064 -    *                 368.5               1456
 1065 -    GRID   *727193                                       1191             -94*
 1066 -    *                388.15               1456
 1067 -    GRID   *727355                                       1249             -94*
 1068 -    *                 395.5               1456
 1069 -    GRID   *727435                                       1278             -94*
 1070 -    *                 396.5               13456
 1071 -    GRID   *727564                                       1191           -26.25*
 1072 -    *              308.4765               1456
 1073 -    GRID   *727837                                       1191          -80.718*
 1074 -    *                347.34               1456
 1075 -    GRID   *901963                                        715              94*
 1076 -    *                408.25               456
 1077 -    GRID   *901965                                        833              94*
 1078 -    *                408.25               456
 1079 -    GRID   *7021081                                      1029.5            -96.8*
 1080 -    *                  410                1456
 1081 -    GRID   *7271012                                   1165.83             -94*
 1082 -    *                388.15               1456
 1083 -    GRID   *7271013                                   1165.83             -94*
 1084 -    *                376.605              1456
 1085 -    GRID   *7271055                                      1191         -91.3184*
 1086 -    *                376.605              1456
 1087 -    GRID   *7271217                                     1279.5             -94*
 1088 -    *                408.25               456
 1089 -    GRID   *7271219                                      1301             -94*
 1090 -    *                  402                1456
 1091 -    GRID   *7271265                                      1191         -41.6951*
 1092 -    *                313.7                1456
 1093 -    QSET1   0       100001  THRU    101376
 1094 -    SEQGP   90      1       91      2       1091    3       4590    4
 1095 -    SEQGP   4591    5       4592    6       4593    7       13001   8
 1096 -    SEQGP   13002   9       13003   10      13004   11      13005   12
 1097 -    SEQGP   13006   13      13007   14      13008   15      13009   16
 1098 -    SEQGP   13010   17      13011   18      13012   19      13013   20
 1099 -    SEQGP   13014   21      13015   22      13016   23      13017   24
 1100 -    SEQGP   13018   25      13019   26      13020   27      2171    28
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 49

S O R T E D B U L K D A T A E C H O

ENTRY COUNT	. 1 ..	2 ..	3 ..	4 ..	5 ..	6 ..	7 ..	8 ..	9 ..	10 .
1101 -	SEQGP	2197	29	2322	30	2663	31	2808	32	
1102 -	SEQGP	2809	33	2833	34	2922	35	21081	36	
1103 -	SEQGP	27106	37	27111	38	27150	39	27164	40	
1104 -	SEQGP	27167	41	27178	42	27186	43	27193	44	
1105 -	SEQGP	27564	45	27837	46	271012	47	271013	48	
1106 -	SEQGP	271055	49	271265	50	702171	51	702197	52	
1107 -	SEQGP	702322	53	702663	54	702808	55	702809	56	
1108 -	SEQGP	702833	57	702922	58	727106	59	727111	60	
1109 -	SEQGP	727150	61	727164	62	727167	63	727178	64	
1110 -	SEQGP	727186	65	727193	66	727564	67	727837	68	
1111 -	SEQGP	7021081	69	7271012	70	7271013	71	7271055	72	
1112 -	SEQGP	7271265	73	212118	74	212120	75	212125	76	
1113 -	SEQGP	212385	77	212388	78	212390	79	213110	80	
1114 -	SEQGP	213113	81	213115	82	213195	83	213198	84	
1115 -	SEQGP	213201	85	213203	86	213265	87	213268	88	
1116 -	SEQGP	312118	89	312120	90	312125	91	312385	92	
1117 -	SEQGP	312388	93	312390	94	313195	95	313198	96	
1118 -	SEQGP	313201	97	313203	98	313265	99	313268	100	
1119 -	SEQGP	2423	101	2433	102	2665	103	2443	104	
1120 -	SEQGP	2679	105	2680	106	702423	107	702433	108	
1121 -	SEQGP	702665	109	702443	110	702679	111	702680	112	
1122 -	SEQGP	2651	113	27895	114	27896	115	1651	116	
1123 -	SEQGP	3076	117	3401	118	5218	119	5400	120	
1124 -	SEQGP	5423	121	1650	122	210388	123	210390	124	
1125 -	SEQGP	210393	125	210395	126	210398	127	210400	128	
1126 -	SEQGP	210405	129	210413	130	210458	131	210460	132	
1127 -	SEQGP	210463	133	210465	134	210468	135	210470	136	
1128 -	SEQGP	210475	137	210530	138	210533	139	210535	140	
1129 -	SEQGP	210538	141	210600	142	210670	143	211040	144	
1130 -	SEQGP	211043	145	211180	146	211183	147	211320	148	
1131 -	SEQGP	211323	149	211325	150	211460	151	211463	152	
1132 -	SEQGP	211465	153	211468	154	211470	155	211494	156	
1133 -	SEQGP	211528	157	211530	158	211533	159	211535	160	
1134 -	SEQGP	211538	161	211540	162	211545	163	211595	164	
1135 -	SEQGP	211598	165	211600	166	211603	167	211605	168	
1136 -	SEQGP	211608	169	212040	170	212043	171	212045	172	
1137 -	SEQGP	212250	173	212253	174	212255	175	212530	176	
1138 -	SEQGP	212533	177	212535	178	213180	179	213183	180	
1139 -	SEQGP	213185	181	213188	182	213250	183	213253	184	
1140 -	SEQGP	213255	185	213323	186	213325	187	213390	188	
1141 -	SEQGP	213393	189	213395	190	213460	191	213463	192	
1142 -	SEQGP	213465	193	213468	194	213481	195	213528	196	
1143 -	SEQGP	213530	197	213533	198	213535	199	213538	200	
1144 -	SEQGP	213540	201	213600	202	960	203	961	204	
1145 -	SEQGP	962	205	964	206	965	207	967	208	
1146 -	SEQGP	970	209	971	210	972	211	974	212	
1147 -	SEQGP	975	213	271218	214	271217	215	271216	216	
1148 -	SEQGP	271219	217	27355	218	701383	219	701405	220	
1149 -	SEQGP	701963	221	701393	222	1383	223	1405	224	
1150 -	SEQGP	901963	225	1393	226	701423	227	701445	228	

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 50

S O R T E D B U L K D A T A E C H O

ENTRY COUNT	. 1 ..	2 ..	3 ..	4 ..	5 ..	6 ..	7 ..	8 ..	9 ..	10 .
1151 -	SEQGP	701965 229		701433 230		1423 231		1445 232		
1152 -	SEQGP	901965 233		1433 234		701443 235		702365 236		
1153 -	SEQGP	702661 237		702353 238		1443 239		2365 240		
1154 -	SEQGP	2661 241		2353 242		727355 243		7271219 244		
1155 -	SEQGP	7271217 245		727435 246		6032 247		6060 248		
1156 -	SEQGP	6061 249		6064 250		6081 251		6082 252		
1157 -	SEQGP	6083 253		6084 254		6085 255		6067 256		
1158 -	SEQGP	6068 257		6071 258		6069 259		6070 260		
1159 -	SEQGP	6073 261		6074 262		6076 263		6080 264		
1160 -	SEQGP	6086 265		6089 266		6087 267		6091 268		
1161 -	SEQGP	6092 269		6093 270		6094 271		6095 272		
1162 -	SEQGP	1 273		2 274		3 275		12 276		
1163 -	SEQGP	14 277		84 278		119 279		153 280		
1164 -	SEQGP	161 281		192 282		233 283		249 284		
1165 -	SEQGP	297 285		299 286		322 287		323 288		
1166 -	SEQGP	324 289		325 290		326 291		327 292		
1167 -	SEQGP	328 293		329 294		330 295		331 296		
1168 -	SEQGP	332 297		333 298		334 299		335 300		
1169 -	SEQGP	337 301		338 302		339 303		340 304		
1170 -	SEQGP	341 305		343 306		344 307		345 308		
1171 -	SEQGP	346 309		347 310		349 311		350 312		
1172 -	SEQGP	351 313		352 314		354 315		356 316		
1173 -	SEQGP	357 317		358 318		359 319		360 320		
1174 -	SEQGP	361 321		363 322		364 323		365 324		
1175 -	SEQGP	366 325		367 326		368 327		456 328		
1176 -	SEQGP	457 329		458 330		467 331		469 332		
1177 -	SEQGP	539 333		574 334		608 335		616 336		
1178 -	SEQGP	647 337		688 338		704 339		752 340		
1179 -	SEQGP	754 341		777 342		778 343		779 344		
1180 -	SEQGP	780 345		781 346		782 347		783 348		
1181 -	SEQGP	784 349		785 350		786 351		787 352		
1182 -	SEQGP	788 353		789 354		790 355		792 356		
1183 -	SEQGP	793 357		794 358		795 359		796 360		
1184 -	SEQGP	798 361		799 362		800 363		801 364		
1185 -	SEQGP	802 365		804 366		805 367		806 368		
1186 -	SEQGP	807 369		809 370		811 371		812 372		
1187 -	SEQGP	813 373		814 374		815 375		816 376		
1188 -	SEQGP	818 377		819 378		820 379		821 380		
1189 -	SEQGP	822 381		823 382		912 383		913 384		
1190 -	SEQGP	918 385		919 386		942 387		948 388		
1191 -	SEQGP	958 389		959 390		963 391		966 392		
1192 -	SEQGP	968 393		969 394		973 395		976 396		
1193 -	SEQGP	977 397		980 398		981 399		982 400		
1194 -	SEQGP	983 401		1012 402		1016 403		1036 404		
1195 -	SEQGP	1047 405		1048 406		1065 407		1067 408		
1196 -	SEQGP	1069 409		1071 410		1090 411		1093 412		
1197 -	SEQGP	1127 413		1137 414		1142 415		1143 416		
1198 -	SEQGP	1145 417		1148 418		1150 419		1151 420		
1199 -	SEQGP	1154 421		1156 422		1157 423		1160 424		
1200 -	SEQGP	1161 425		1167 426		1168 427		1169 428		

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 51

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
 1201 -    SEQGP  1170   429    1173   430    1174   431    1183   432
 1202 -    SEQGP  1184   433    1185   434    1186   435    1189   436
 1203 -    SEQGP  1190   437    1203   438    1204   439    1205   440
 1204 -    SEQGP  1206   441    1207   442    1208   443    1214   444
 1205 -    SEQGP  1215   445    1216   446    1243   447    1244   448
 1206 -    SEQGP  1245   449    1117   450    100    451    101    452
 1207 -    SEQGP  102    453    103    454    104    455    105    456
 1208 -    SEQGP  106    457    107    458    108    459    109    460
 1209 -    SEQGP  110    461    111    462    112    463    113    464
 1210 -    SEQGP  114    465    115    466    116    467    10001  468
 1211 -    SEQGP  10002  469    10004  470    10005  471    10006  472
 1212 -    SEQGP  10007  473    10008  474    10009  475    10010  476
 1213 -    SEQGP  10011  477    10012  478    10013  479    10016  480
 1214 -    SEQGP  10017  481    10018  482    10019  483    10020  484
 1215 -    SEQGP  10021  485    10022  486    10023  487    10025  488
 1216 -    SEQGP  10026  489    10027  490    10028  491    10029  492
 1217 -    SEQGP  10030  493    10031  494    10032  495    10033  496
 1218 -    SEQGP  10034  497    10035  498    10036  499    10037  500
 1219 -    SEQGP  10038  501    10039  502    10040  503    10041  504
 1220 -    SEQGP  10042  505    10043  506    10044  507    10045  508
 1221 -    SEQGP  10046  509    10047  510    10048  511    10049  512
 1222 -    SEQGP  10050  513    10051  514    10052  515    10053  516
 1223 -    SEQGP  10054  517    10055  518    10056  519    10057  520
 1224 -    SEQGP  10058  521    10059  522    10060  523    10061  524
 1225 -    SEQGP  10062  525    10063  526    10064  527    10065  528
 1226 -    SEQGP  10066  529    10067  530    10068  531    10069  532
 1227 -    SEQGP  10070  533    10071  534    10072  535    10073  536
 1228 -    SEQGP  10074  537    10075  538    10076  539    10077  540
 1229 -    SEQGP  10078  541    10079  542    10080  543    10081  544
 1230 -    SEQGP  10082  545    10083  546
 1231 -    SPOINT 100001 THRU   101376
 1232 -    ENDDATA

           TOTAL ENTRY COUNT = 1232
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 52

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	90	0	3.88045E+02	0.00000E+00	2.83840E+02
2	91	0	1.31700E+03	9.65000E+01	2.67556E+02
3	1091	0	1.31700E+03	-9.65000E+01	2.67556E+02
4	4590	0	6.79500E+02	-9.65000E+01	4.10000E+02
5	4591	0	9.11000E+02	-9.65000E+01	4.10000E+02
6	4592	0	1.18900E+03	-9.65000E+01	4.10000E+02
7	4593	0	1.25650E+03	-9.65000E+01	4.10000E+02
8	13001	0	6.16670E+02	9.40000E+01	4.14000E+02
9	13002	0	6.59930E+02	9.40000E+01	4.14000E+02
10	13003	0	7.62200E+02	9.40000E+01	4.14000E+02
11	13004	0	9.54930E+02	9.40000E+01	4.14000E+02
12	13005	0	1.01000E+03	9.40000E+01	4.14000E+02
13	13006	0	1.05720E+03	9.40000E+01	4.14000E+02
14	13007	0	1.17520E+03	9.40000E+01	4.14000E+02
15	13008	0	1.21847E+03	9.40000E+01	4.14000E+02
16	13009	0	6.16670E+02	-9.40000E+01	4.14000E+02
17	13010	0	6.59930E+02	-9.40000E+01	4.14000E+02
18	13011	0	7.62200E+02	-9.40000E+01	4.14000E+02
19	13012	0	9.54930E+02	-9.40000E+01	4.14000E+02
20	13013	0	1.01000E+03	-9.40000E+01	4.14000E+02
21	13014	0	1.05720E+03	-9.40000E+01	4.14000E+02
22	13015	0	1.17520E+03	-9.40000E+01	4.14000E+02
23	13016	0	1.21847E+03	-9.40000E+01	4.14000E+02
24	13017	0	6.56000E+02	0.00000E+00	3.05000E+02
25	13018	0	9.47070E+02	0.00000E+00	3.05000E+02
26	13019	0	1.05720E+03	0.00000E+00	3.05000E+02
27	13020	0	1.17520E+03	0.00000E+00	3.05000E+02
28	2171	0	1.03340E+03	9.40000E+01	4.10000E+02
29	2197	0	1.04000E+03	9.40000E+01	4.10000E+02
30	2322	0	1.14067E+03	2.01500E+01	3.07200E+02
31	2663	0	1.01140E+03	9.40000E+01	4.08250E+02
32	2808	0	1.02488E+03	9.90000E+01	4.10000E+02
33	2809	0	1.02488E+03	9.40000E+01	4.10000E+02
34	2833	0	1.05259E+03	9.40000E+01	4.10000E+02
35	2922	0	1.04423E+03	9.40000E+01	4.10000E+02
36	21081	0	1.02950E+03	9.68000E+01	4.10000E+02
37	27106	0	1.16583E+03	9.40000E+01	3.68500E+02
38	27111	0	1.16583E+03	1.02560E+02	4.20000E+02
39	27150	0	1.17900E+03	1.05000E+02	4.20000E+02
40	27164	0	1.19100E+03	2.62500E+01	3.10476E+02
41	27167	0	1.19100E+03	5.25000E+01	3.21470E+02
42	27178	0	1.19100E+03	7.26000E+01	3.34250E+02
43	27186	0	1.19100E+03	8.94357E+01	3.68500E+02
44	27193	0	1.19100E+03	9.40000E+01	3.88150E+02
45	27564	0	1.19100E+03	2.62500E+01	3.08476E+02
46	27837	0	1.19100E+03	8.07180E+01	3.47340E+02
47	271012	0	1.16583E+03	9.40000E+01	3.88150E+02
48	271013	0	1.16583E+03	9.40000E+01	3.76605E+02
49	271055	0	1.19100E+03	9.13184E+01	3.76605E+02
50	271265	0	1.19100E+03	4.16951E+01	3.13700E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 53

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
51	702171	0	1.03340E+03	-9.40000E+01	4.10000E+02
52	702197	0	1.04000E+03	-9.40000E+01	4.10000E+02
53	702322	0	1.14067E+03	-2.01500E+01	3.07200E+02
54	702663	0	1.01140E+03	-9.40000E+01	4.08250E+02
55	702808	0	1.02488E+03	-9.90000E+01	4.10000E+02
56	702809	0	1.02488E+03	-9.40000E+01	4.10000E+02
57	702833	0	1.05259E+03	-9.40000E+01	4.10000E+02
58	702922	0	1.04423E+03	-9.40000E+01	4.10000E+02
59	727106	0	1.16583E+03	-9.40000E+01	3.68500E+02
60	727111	0	1.16583E+03	-1.02560E+02	4.20000E+02
61	727150	0	1.17900E+03	-1.05000E+02	4.20000E+02
62	727164	0	1.19100E+03	-2.62500E+01	3.10476E+02
63	727167	0	1.19100E+03	-5.25000E+01	3.21470E+02
64	727178	0	1.19100E+03	-7.26000E+01	3.34250E+02
65	727186	0	1.19100E+03	-8.94357E+01	3.68500E+02
66	727193	0	1.19100E+03	-9.40000E+01	3.88150E+02
67	727564	0	1.19100E+03	-2.62500E+01	3.08476E+02
68	727837	0	1.19100E+03	-8.07180E+01	3.47340E+02
69	7021081	0	1.02950E+03	-9.68000E+01	4.10000E+02
70	7271012	0	1.16583E+03	-9.40000E+01	3.88150E+02
71	7271013	0	1.16583E+03	-9.40000E+01	3.76605E+02
72	7271055	0	1.19100E+03	-9.13184E+01	3.76605E+02
73	7271265	0	1.19100E+03	-4.16951E+01	3.13700E+02
74	212118	0	9.66350E+02	1.00250E+02	4.38500E+02
75	212120	0	9.66350E+02	1.00250E+02	4.34000E+02
76	212125	0	9.66350E+02	1.01200E+02	4.24750E+02
77	212385	0	1.05575E+03	8.55145E+01	4.66755E+02
78	212388	0	1.05575E+03	9.11020E+01	4.62169E+02
79	212390	0	1.05575E+03	9.53415E+01	4.55209E+02
80	213110	0	1.14420E+03	9.53415E+01	4.55209E+02
81	213113	0	1.14420E+03	9.95810E+01	4.48248E+02
82	213115	0	1.14420E+03	9.99155E+01	4.43374E+02
83	213195	0	1.16420E+03	1.01200E+02	4.24750E+02
84	213198	0	1.16420E+03	1.02150E+02	4.20000E+02
85	213201	0	1.17420E+03	1.00250E+02	4.29500E+02
86	213203	0	1.17420E+03	1.02150E+02	4.20000E+02
87	213265	0	1.18420E+03	1.01200E+02	4.24750E+02
88	213268	0	1.18420E+03	1.02150E+02	4.20000E+02
89	312118	0	9.66350E+02	-1.00250E+02	4.38500E+02
90	312120	0	9.66350E+02	-1.00250E+02	4.34000E+02
91	312125	0	9.66350E+02	-1.01200E+02	4.24750E+02
92	312385	0	1.05575E+03	-8.55145E+01	4.66755E+02
93	312388	0	1.05575E+03	-9.11020E+01	4.62169E+02
94	312390	0	1.05575E+03	-9.53415E+01	4.55209E+02
95	313195	0	1.16420E+03	-1.01200E+02	4.24750E+02
96	313198	0	1.16420E+03	-1.02150E+02	4.20000E+02
97	313201	0	1.17420E+03	-1.00250E+02	4.29500E+02
98	313203	0	1.17420E+03	-1.02150E+02	4.20000E+02
99	313265	0	1.18420E+03	-1.01200E+02	4.24750E+02
100	313268	0	1.18420E+03	-1.02150E+02	4.20000E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 54

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
101	2423	0	1.09033E+03	9.40000E+01	3.96000E+02
102	2433	0	1.11550E+03	9.40000E+01	3.96880E+02
103	2665	0	1.12330E+03	9.40000E+01	4.08250E+02
104	2443	0	1.14067E+03	9.40000E+01	3.95500E+02
105	2679	0	1.13894E+03	1.02579E+02	4.10850E+02
106	2680	0	1.08768E+03	1.02654E+02	4.10850E+02
107	702423	0	1.09033E+03	-9.40000E+01	3.96000E+02
108	702433	0	1.11550E+03	-9.40000E+01	3.96880E+02
109	702665	0	1.12330E+03	-9.40000E+01	4.08250E+02
110	702443	0	1.14067E+03	-9.40000E+01	3.95500E+02
111	702679	0	1.13894E+03	-1.02579E+02	4.10850E+02
112	702680	0	1.08768E+03	-1.02654E+02	4.10850E+02
113	2651	0	9.11000E+02	9.65000E+01	4.10000E+02
114	27895	0	1.18900E+03	9.65000E+01	4.10000E+02
115	27896	0	1.25650E+03	9.65000E+01	4.10000E+02
116	1651	0	6.79500E+02	9.65000E+01	4.10000E+02
117	3076	0	1.30700E+03	8.20000E+01	4.39586E+02
118	3401	0	1.30700E+03	9.18000E+01	4.56620E+02
119	5218	0	6.64500E+02	1.05000E+02	4.10000E+02
120	5400	0	8.91000E+02	1.05000E+02	4.10000E+02
121	5423	0	9.19000E+02	1.05000E+02	4.10000E+02
122	1650	0	5.89000E+02	9.96000E+01	4.10000E+02
123	210388	0	6.69800E+02	9.11020E+01	4.62169E+02
124	210390	0	6.69800E+02	9.53415E+01	4.55209E+02
125	210393	0	6.69800E+02	9.95810E+01	4.48248E+02
126	210395	0	6.69800E+02	9.99155E+01	4.43374E+02
127	210398	0	6.69800E+02	1.00250E+02	4.38500E+02
128	210400	0	6.69800E+02	1.00250E+02	4.34000E+02
129	210405	0	6.69800E+02	1.01200E+02	4.24750E+02
130	210413	0	6.81050E+02	1.02150E+02	4.20000E+02
131	210458	0	6.92300E+02	9.11020E+01	4.62169E+02
132	210460	0	6.92300E+02	9.53415E+01	4.55209E+02
133	210463	0	6.92300E+02	9.95810E+01	4.48248E+02
134	210465	0	6.92300E+02	9.99155E+01	4.43374E+02
135	210468	0	6.92300E+02	1.00250E+02	4.38500E+02
136	210470	0	6.92300E+02	1.00250E+02	4.34000E+02
137	210475	0	6.92300E+02	1.01200E+02	4.24750E+02
138	210530	0	7.14800E+02	9.53415E+01	4.55209E+02
139	210533	0	7.14800E+02	9.95810E+01	4.48248E+02
140	210535	0	7.14800E+02	9.99155E+01	4.43374E+02
141	210538	0	7.14800E+02	1.00250E+02	4.38500E+02
142	210600	0	7.37300E+02	9.53415E+01	4.55209E+02
143	210670	0	7.56080E+02	9.53415E+01	4.55209E+02
144	211040	0	7.61200E+02	9.53415E+01	4.55209E+02
145	211043	0	7.61200E+02	9.95810E+01	4.48248E+02
146	211180	0	8.05900E+02	9.53415E+01	4.55209E+02
147	211183	0	8.05900E+02	9.95810E+01	4.48248E+02
148	211320	0	8.50600E+02	9.53415E+01	4.55209E+02
149	211323	0	8.50600E+02	9.95810E+01	4.48248E+02
150	211325	0	8.50600E+02	9.99155E+01	4.43374E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 55

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
151	211460	0	8.95300E+02	9.53415E+01	4.55209E+02
152	211463	0	8.95300E+02	9.95810E+01	4.48248E+02
153	211465	0	8.95300E+02	9.99155E+01	4.43374E+02
154	211468	0	8.95300E+02	1.00250E+02	4.38500E+02
155	211470	0	8.95300E+02	1.00250E+02	4.34000E+02
156	211494	0	9.03800E+02	1.01200E+02	4.24750E+02
157	211528	0	9.17650E+02	9.11020E+01	4.62169E+02
158	211530	0	9.17650E+02	9.53415E+01	4.55209E+02
159	211533	0	9.17650E+02	9.95810E+01	4.48248E+02
160	211535	0	9.17650E+02	9.99155E+01	4.43374E+02
161	211538	0	9.17650E+02	1.00250E+02	4.38500E+02
162	211540	0	9.17650E+02	1.00250E+02	4.34000E+02
163	211545	0	9.17650E+02	1.01200E+02	4.24750E+02
164	211595	0	9.39920E+02	8.55145E+01	4.66755E+02
165	211598	0	9.39920E+02	9.11020E+01	4.62169E+02
166	211600	0	9.39920E+02	9.53415E+01	4.55209E+02
167	211603	0	9.39920E+02	9.95810E+01	4.48248E+02
168	211605	0	9.39920E+02	9.99155E+01	4.43374E+02
169	211608	0	9.39920E+02	1.00250E+02	4.38500E+02
170	212040	0	9.43580E+02	9.53415E+01	4.55209E+02
171	212043	0	9.43580E+02	9.95810E+01	4.48248E+02
172	212045	0	9.43580E+02	9.99155E+01	4.43374E+02
173	212250	0	1.01105E+03	9.53415E+01	4.55209E+02
174	212253	0	1.01105E+03	9.95810E+01	4.48248E+02
175	212255	0	1.01105E+03	9.99155E+01	4.43374E+02
176	212530	0	1.10045E+03	9.53415E+01	4.55209E+02
177	212533	0	1.10045E+03	9.95810E+01	4.48248E+02
178	212535	0	1.10045E+03	9.99155E+01	4.43374E+02
179	213180	0	1.16420E+03	9.53415E+01	4.55209E+02
180	213183	0	1.16420E+03	9.95810E+01	4.48248E+02
181	213185	0	1.16420E+03	9.99155E+01	4.43374E+02
182	213188	0	1.16420E+03	1.00250E+02	4.38500E+02
183	213250	0	1.18420E+03	9.53415E+01	4.55209E+02
184	213253	0	1.18420E+03	9.95810E+01	4.48248E+02
185	213255	0	1.18420E+03	9.99155E+01	4.43374E+02
186	213323	0	1.20420E+03	9.95810E+01	4.48248E+02
187	213325	0	1.20420E+03	9.99155E+01	4.43374E+02
188	213390	0	1.22420E+03	9.53415E+01	4.55209E+02
189	213393	0	1.22420E+03	9.95810E+01	4.48248E+02
190	213395	0	1.22420E+03	9.99155E+01	4.43374E+02
191	213460	0	1.24420E+03	9.53415E+01	4.55209E+02
192	213463	0	1.24420E+03	9.95810E+01	4.48248E+02
193	213465	0	1.24420E+03	9.99155E+01	4.43374E+02
194	213468	0	1.24420E+03	1.00250E+02	4.38500E+02
195	213481	0	1.25420E+03	1.00250E+02	4.29500E+02
196	213528	0	1.26420E+03	9.11020E+01	4.62169E+02
197	213530	0	1.26420E+03	9.53415E+01	4.55209E+02
198	213533	0	1.26420E+03	9.95810E+01	4.48248E+02
199	213535	0	1.26420E+03	9.99155E+01	4.43374E+02
200	213538	0	1.26420E+03	1.00250E+02	4.38500E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 56

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
201	213540	0	1.26420E+03	1.00250E+02	4.34000E+02
202	213600	0	1.28370E+03	9.53415E+01	4.55209E+02
203	960	0	6.47300E+02	0.00000E+00	4.96620E+02
204	961	0	6.92300E+02	0.00000E+00	4.96620E+02
205	962	0	7.37300E+02	0.00000E+00	4.96620E+02
206	964	0	8.28250E+02	0.00000E+00	4.96620E+02
207	965	0	8.72950E+02	0.00000E+00	4.96620E+02
208	967	0	9.17650E+02	0.00000E+00	4.96620E+02
209	970	0	1.01105E+03	0.00000E+00	4.96620E+02
210	971	0	1.05575E+03	0.00000E+00	4.96620E+02
211	972	0	1.10045E+03	0.00000E+00	4.96620E+02
212	974	0	1.18420E+03	0.00000E+00	4.96620E+02
213	975	0	1.22420E+03	0.00000E+00	4.96620E+02
214	271218	0	1.29515E+03	9.55000E+01	4.12320E+02
215	271217	0	1.27950E+03	9.40000E+01	4.08250E+02
216	271216	0	1.26862E+03	1.02579E+02	4.10850E+02
217	271219	0	1.30100E+03	9.40000E+01	4.02000E+02
218	27355	0	1.24900E+03	9.40000E+01	3.95500E+02
219	701383	0	6.93000E+02	-9.40000E+01	3.96000E+02
220	701405	0	7.50000E+02	-9.40000E+01	4.01750E+02
221	701963	0	7.15000E+02	-9.40000E+01	4.08250E+02
222	701393	0	7.17000E+02	-9.40000E+01	3.96500E+02
223	1383	0	6.93000E+02	9.40000E+01	3.96000E+02
224	1405	0	7.50000E+02	9.40000E+01	4.01750E+02
225	901963	0	7.15000E+02	9.40000E+01	4.08250E+02
226	1393	0	7.17000E+02	9.40000E+01	3.96500E+02
227	701423	0	8.07000E+02	-9.40000E+01	3.96000E+02
228	701445	0	8.63000E+02	-9.40000E+01	4.01750E+02
229	701965	0	8.33000E+02	-9.40000E+01	4.08250E+02
230	701433	0	8.35000E+02	-9.40000E+01	3.96500E+02
231	1423	0	8.07000E+02	9.40000E+01	3.96000E+02
232	1445	0	8.63000E+02	9.40000E+01	4.01750E+02
233	901965	0	8.33000E+02	9.40000E+01	4.08250E+02
234	1433	0	8.35000E+02	9.40000E+01	3.96500E+02
235	701443	0	8.63000E+02	-9.40000E+01	3.96000E+02
236	702365	0	9.19000E+02	-9.40000E+01	4.01750E+02
237	702661	0	8.92500E+02	-9.40000E+01	4.08250E+02
238	702353	0	8.91000E+02	-9.40000E+01	3.96500E+02
239	1443	0	8.63000E+02	9.40000E+01	3.96000E+02
240	2365	0	9.19000E+02	9.40000E+01	4.01750E+02
241	2661	0	8.92500E+02	9.40000E+01	4.08250E+02
242	2353	0	8.91000E+02	9.40000E+01	3.96500E+02
243	727355	0	1.24900E+03	-9.40000E+01	3.95500E+02
244	7271219	0	1.30100E+03	-9.40000E+01	4.02000E+02
245	7271217	0	1.27950E+03	-9.40000E+01	4.08250E+02
246	727435	0	1.27800E+03	-9.40000E+01	3.96500E+02
247	6032	0	9.76500E+02	-1.01500E+02	4.07500E+02
248	6060	0	7.01200E+02	-1.00800E+02	4.07000E+02
249	6061	0	7.01200E+02	-9.13000E+01	4.07500E+02
250	6064	0	8.79000E+02	-1.01300E+02	4.07500E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 57

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
251	6081	0	1.04000E+03	0.00000E+00	3.05000E+02
252	6082	0	7.90000E+02	-1.01300E+02	4.07500E+02
253	6083	0	1.02950E+03	-1.01300E+02	4.07500E+02
254	6084	0	1.11050E+03	-9.68000E+01	4.07300E+02
255	6085	0	1.22900E+03	-9.70000E+01	4.07500E+02
256	6067	0	1.02950E+03	-9.68000E+01	4.08000E+02
257	6068	0	1.20700E+03	-9.70000E+01	4.07500E+02
258	6071	0	1.20700E+03	9.70000E+01	4.07500E+02
259	6069	0	8.81200E+02	-1.01300E+02	4.07500E+02
260	6070	0	8.81200E+02	1.01300E+02	4.07500E+02
261	6073	0	8.79000E+02	1.01300E+02	4.07500E+02
262	6074	0	1.02950E+03	1.01300E+02	4.07500E+02
263	6076	0	1.02950E+03	9.68000E+01	4.08000E+02
264	6080	0	9.19000E+02	0.00000E+00	3.05000E+02
265	6086	0	5.05000E+02	5.60000E+00	4.21300E+02
266	6089	0	4.82419E+02	0.00000E+00	3.24710E+02
267	6087	0	1.20550E+03	0.00000E+00	3.05000E+02
268	6091	0	7.01200E+02	1.00800E+02	4.07000E+02
269	6092	0	7.90000E+02	1.01300E+02	4.07500E+02
270	6093	0	9.76500E+02	1.01500E+02	4.07500E+02
271	6094	0	1.11050E+03	9.68000E+01	4.07300E+02
272	6095	0	1.22900E+03	9.70000E+01	4.07500E+02
273	1	0	3.27840E+02	2.10000E+01	3.29340E+02
274	2	0	3.75500E+02	2.10000E+01	2.98000E+02
275	3	0	5.82000E+02	9.40000E+01	4.10000E+02
276	12	0	3.76947E+02	7.38271E+01	3.40000E+02
277	14	0	4.53885E+02	9.08239E+01	3.18425E+02
278	84	0	8.07000E+02	1.05000E+02	2.82507E+02
279	119	0	7.50000E+02	9.40000E+01	3.88150E+02
280	153	0	9.79500E+02	1.05000E+02	4.10000E+02
281	161	0	1.04000E+03	1.05000E+02	2.71950E+02
282	192	0	1.14067E+03	1.05000E+02	4.10000E+02
283	233	0	1.19100E+03	1.05000E+02	2.68500E+02
284	249	0	1.24900E+03	1.05000E+02	2.67200E+02
285	297	0	1.19100E+03	1.67000E+02	3.00911E+02
286	299	0	1.30700E+03	1.95787E+02	2.94567E+02
287	322	0	8.35000E+02	1.41160E+02	3.05891E+02
288	323	0	9.49250E+02	1.59649E+02	3.03386E+02
289	324	0	1.04000E+03	1.58540E+02	3.03500E+02
290	325	0	1.07130E+03	1.95023E+02	3.02927E+02
291	326	0	1.13933E+03	1.94956E+02	3.03653E+02
292	327	0	1.24900E+03	1.44981E+02	2.95614E+02
293	328	0	1.24900E+03	1.95371E+02	2.99116E+02
294	329	0	1.36500E+03	1.45806E+02	2.86592E+02
295	330	0	1.36500E+03	1.96204E+02	2.90017E+02
296	331	0	1.12727E+03	2.51321E+02	3.02225E+02
297	332	0	1.19100E+03	2.51093E+02	3.04712E+02
298	333	0	1.19100E+03	3.15099E+02	3.04914E+02
299	334	0	1.24900E+03	2.51267E+02	3.02815E+02
300	335	0	1.24900E+03	3.09728E+02	3.05913E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 58

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
301	337	0	1.27570E+03	3.99890E+02	3.08253E+02
302	338	0	1.30700E+03	2.51660E+02	2.98516E+02
303	339	0	1.30700E+03	3.10028E+02	3.02635E+02
304	340	0	1.30700E+03	3.69911E+02	3.06647E+02
305	341	0	1.30700E+03	3.99890E+02	3.08249E+02
306	343	0	1.10345E+03	2.47419E+02	2.99078E+02
307	344	0	1.16330E+03	3.07295E+02	3.01827E+02
308	345	0	1.22253E+03	3.66560E+02	3.04500E+02
309	346	0	1.25252E+03	3.96564E+02	3.05824E+02
310	347	0	1.28220E+03	4.23500E+02	3.07166E+02
311	349	0	1.36500E+03	2.52087E+02	2.93848E+02
312	350	0	1.36500E+03	3.10456E+02	2.97957E+02
313	351	0	1.36500E+03	3.70317E+02	3.02215E+02
314	352	0	1.36500E+03	4.00247E+02	3.04347E+02
315	354	0	1.36500E+03	4.32671E+02	3.06668E+02
316	356	0	1.42555E+03	1.46009E+02	2.84380E+02
317	357	0	1.48520E+03	1.45923E+02	2.85321E+02
318	358	0	1.42191E+03	2.10387E+02	2.88662E+02
319	359	0	1.47350E+03	2.10322E+02	2.89370E+02
320	360	0	1.41795E+03	2.80252E+02	2.93331E+02
321	361	0	1.46080E+03	2.80224E+02	2.93635E+02
322	363	0	1.41453E+03	3.40633E+02	2.97392E+02
323	364	0	1.44965E+03	3.40623E+02	2.97494E+02
324	365	0	1.41199E+03	3.85542E+02	3.00438E+02
325	366	0	1.44098E+03	3.85554E+02	3.00309E+02
326	367	0	1.40930E+03	4.32943E+02	3.03689E+02
327	368	0	1.43183E+03	4.32976E+02	3.03329E+02
328	456	0	3.27840E+02	-2.10000E+01	3.29340E+02
329	457	0	3.75500E+02	-2.10000E+01	2.98000E+02
330	458	0	5.82000E+02	-9.40000E+01	4.10000E+02
331	467	0	3.76947E+02	-7.38271E+01	3.40000E+02
332	469	0	4.53885E+02	-9.08239E+01	3.18425E+02
333	539	0	8.07000E+02	-1.05000E+02	2.82507E+02
334	574	0	7.50000E+02	-9.40000E+01	3.88150E+02
335	608	0	9.79500E+02	-1.05000E+02	4.10000E+02
336	616	0	1.04000E+03	-1.05000E+02	2.71950E+02
337	647	0	1.14067E+03	-1.05000E+02	4.10000E+02
338	688	0	1.19100E+03	-1.05000E+02	2.68500E+02
339	704	0	1.24900E+03	-1.05000E+02	2.67200E+02
340	752	0	1.19100E+03	-1.67000E+02	3.00911E+02
341	754	0	1.30700E+03	-1.95787E+02	2.94567E+02
342	777	0	8.35000E+02	-1.41160E+02	3.05891E+02
343	778	0	9.49250E+02	-1.59649E+02	3.03386E+02
344	779	0	1.04000E+03	-1.58540E+02	3.03500E+02
345	780	0	1.07130E+03	-1.95023E+02	3.02927E+02
346	781	0	1.13933E+03	-1.94956E+02	3.03653E+02
347	782	0	1.24900E+03	-1.44981E+02	2.95614E+02
348	783	0	1.24900E+03	-1.95371E+02	2.99116E+02
349	784	0	1.36500E+03	-1.45806E+02	2.86592E+02
350	785	0	1.36500E+03	-1.96204E+02	2.90017E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 59

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
351	786	0	1.12727E+03	-2.51321E+02	3.02225E+02
352	787	0	1.19100E+03	-2.51093E+02	3.04712E+02
353	788	0	1.19100E+03	-3.15099E+02	3.04914E+02
354	789	0	1.24900E+03	-2.51267E+02	3.02815E+02
355	790	0	1.24900E+03	-3.09728E+02	3.05913E+02
356	792	0	1.27570E+03	-3.99890E+02	3.08253E+02
357	793	0	1.30700E+03	-2.51660E+02	2.98516E+02
358	794	0	1.30700E+03	-3.10028E+02	3.02635E+02
359	795	0	1.30700E+03	-3.69911E+02	3.06647E+02
360	796	0	1.30700E+03	-3.99890E+02	3.08249E+02
361	798	0	1.10345E+03	-2.47419E+02	2.99078E+02
362	799	0	1.16330E+03	-3.07295E+02	3.01827E+02
363	800	0	1.22253E+03	-3.66560E+02	3.04500E+02
364	801	0	1.25252E+03	-3.96564E+02	3.05824E+02
365	802	0	1.28220E+03	-4.23500E+02	3.07166E+02
366	804	0	1.36500E+03	-2.52087E+02	2.93848E+02
367	805	0	1.36500E+03	-3.10456E+02	2.97957E+02
368	806	0	1.36500E+03	-3.70317E+02	3.02215E+02
369	807	0	1.36500E+03	-4.00247E+02	3.04347E+02
370	809	0	1.36500E+03	-4.32671E+02	3.06668E+02
371	811	0	1.42555E+03	-1.46009E+02	2.84380E+02
372	812	0	1.48520E+03	-1.45923E+02	2.85321E+02
373	813	0	1.42191E+03	-2.10387E+02	2.88662E+02
374	814	0	1.47350E+03	-2.10322E+02	2.89370E+02
375	815	0	1.41795E+03	-2.80252E+02	2.93331E+02
376	816	0	1.46080E+03	-2.80224E+02	2.93635E+02
377	818	0	1.41453E+03	-3.40633E+02	2.97392E+02
378	819	0	1.44965E+03	-3.40623E+02	2.97494E+02
379	820	0	1.41199E+03	-3.85542E+02	3.00438E+02
380	821	0	1.44098E+03	-3.85554E+02	3.00309E+02
381	822	0	1.40930E+03	-4.32943E+02	3.03689E+02
382	823	0	1.43183E+03	-4.32976E+02	3.03329E+02
383	912	0	5.82000E+02	0.00000E+00	2.77087E+02
384	913	0	2.63500E+02	0.00000E+00	3.71000E+02
385	918	0	4.59389E+02	0.00000E+00	2.80105E+02
386	919	0	4.45851E+02	0.00000E+00	4.59188E+02
387	942	0	9.79500E+02	0.00000E+00	2.67930E+02
388	948	0	1.14067E+03	0.00000E+00	2.64217E+02
389	958	0	5.92415E+02	0.00000E+00	4.96160E+02
390	959	0	6.02300E+02	0.00000E+00	4.96620E+02
391	963	0	7.83550E+02	0.00000E+00	4.96620E+02
392	966	0	9.29708E+02	0.00000E+00	4.96160E+02
393	968	0	9.54292E+02	0.00000E+00	4.96160E+02
394	969	0	9.66350E+02	0.00000E+00	4.96620E+02
395	973	0	1.14420E+03	0.00000E+00	4.96620E+02
396	976	0	1.27487E+03	0.00000E+00	4.96160E+02
397	977	0	1.26420E+03	0.00000E+00	4.96620E+02
398	980	0	1.18000E+03	1.36000E+02	2.83000E+02
399	981	0	1.18000E+03	-1.36000E+02	2.83000E+02
400	982	0	1.09750E+03	1.36000E+02	3.21700E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 60

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
401	983	0	1.09750E+03	-1.36000E+02	3.21700E+02
402	1012	0	1.30700E+03	1.05000E+02	2.66400E+02
403	1016	0	1.30700E+03	9.40000E+01	4.09000E+02
404	1036	0	1.30700E+03	0.00000E+00	2.61036E+02
405	1047	0	1.44500E+03	0.00000E+00	4.43000E+02
406	1048	0	1.46817E+03	5.30000E+01	3.42640E+02
407	1065	0	1.43692E+03	1.14531E+02	4.15769E+02
408	1067	0	1.46463E+03	1.24237E+02	2.73209E+02
409	1069	0	1.43692E+03	-1.14531E+02	4.15769E+02
410	1071	0	1.46463E+03	-1.24237E+02	2.73209E+02
411	1090	0	1.30700E+03	-1.05000E+02	2.66400E+02
412	1093	0	1.30700E+03	-9.40000E+01	4.09000E+02
413	1127	0	1.46817E+03	-5.30000E+01	3.42640E+02
414	1137	0	1.35328E+03	0.00000E+00	5.51640E+02
415	1142	0	1.42185E+03	0.00000E+00	6.23808E+02
416	1143	0	1.47496E+03	0.00000E+00	5.84158E+02
417	1145	0	1.58170E+03	0.00000E+00	5.76268E+02
418	1148	0	1.51426E+03	0.00000E+00	6.36804E+02
419	1150	0	1.51150E+03	0.00000E+00	7.18153E+02
420	1151	0	1.55227E+03	0.00000E+00	6.87718E+02
421	1154	0	1.58060E+03	0.00000E+00	7.25668E+02
422	1156	0	1.57978E+03	0.00000E+00	7.90000E+02
423	1157	0	1.61153E+03	0.00000E+00	7.67093E+02
424	1160	0	1.59478E+03	0.00000E+00	8.06630E+02
425	1161	0	1.68512E+03	0.00000E+00	8.06630E+02
426	1167	0	1.56981E+03	1.25000E-01	6.02064E+02
427	1168	0	1.56675E+03	-1.25000E-01	5.96367E+02
428	1169	0	1.55474E+03	1.25000E-01	6.38133E+02
429	1170	0	1.55123E+03	-1.25000E-01	6.32746E+02
430	1173	0	1.58981E+03	1.25000E-01	6.39311E+02
431	1174	0	1.58675E+03	-1.25000E-01	6.33614E+02
432	1183	0	1.61007E+03	1.25000E-01	6.77035E+02
433	1184	0	1.60745E+03	-1.25000E-01	6.72157E+02
434	1185	0	1.61057E+03	1.25000E-01	7.23896E+02
435	1186	0	1.60757E+03	-1.25000E-01	7.19284E+02
436	1189	0	1.64699E+03	1.25000E-01	7.45764E+02
437	1190	0	1.64437E+03	-1.25000E-01	7.40887E+02
438	1203	0	1.58550E+03	1.00000E+01	2.89432E+02
439	1204	0	1.53750E+03	9.00000E+01	2.94377E+02
440	1205	0	1.61150E+03	5.00000E+01	2.86800E+02
441	1206	0	1.58550E+03	-1.00000E+01	2.89432E+02
442	1207	0	1.53750E+03	-9.00000E+01	2.94377E+02
443	1208	0	1.61150E+03	-5.00000E+01	2.86800E+02
444	1214	0	1.45754E+03	8.17020E+01	5.26379E+02
445	1215	0	1.41547E+03	1.15679E+02	5.05210E+02
446	1216	0	1.36525E+03	1.09588E+02	4.99328E+02
447	1243	0	1.45754E+03	-8.17020E+01	5.26379E+02
448	1244	0	1.41547E+03	-1.15679E+02	5.05210E+02
449	1245	0	1.36525E+03	-1.09588E+02	4.99328E+02
450	1117	0	6.49000E+02	0.00000E+00	4.62730E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 61

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
451	100	0	1.09260E+03	9.40000E+01	4.14000E+02
452	101	0	1.09653E+03	9.40000E+01	4.14000E+02
453	102	0	1.10047E+03	9.40000E+01	4.14000E+02
454	103	0	1.10440E+03	9.40000E+01	4.14000E+02
455	104	0	1.10833E+03	9.40000E+01	4.14000E+02
456	105	0	1.11227E+03	9.40000E+01	4.14000E+02
457	106	0	1.11620E+03	9.40000E+01	4.14000E+02
458	107	0	1.12013E+03	9.40000E+01	4.14000E+02
459	108	0	1.12407E+03	9.40000E+01	4.14000E+02
460	109	0	1.12800E+03	9.40000E+01	4.14000E+02
461	110	0	1.13193E+03	9.40000E+01	4.14000E+02
462	111	0	1.13587E+03	9.40000E+01	4.14000E+02
463	112	0	1.10243E+03	9.11000E+01	4.08200E+02
464	113	0	1.11030E+03	9.11000E+01	4.08200E+02
465	114	0	1.11423E+03	9.11000E+01	4.08200E+02
466	115	0	1.10834E+03	9.51600E+01	4.11600E+02
467	116	0	1.07699E+03	7.62000E+01	4.16000E+02
468	10001	0	1.29750E+03	9.38800E+01	4.10370E+02
469	10002	0	1.29013E+03	9.38800E+01	4.10370E+02
470	10004	0	1.29000E+03	8.71900E+01	4.14090E+02
471	10005	0	1.29750E+03	8.80000E+01	4.11930E+02
472	10006	0	1.29000E+03	8.71900E+01	4.11090E+02
473	10007	0	1.29750E+03	8.82800E+01	4.10370E+02
474	10008	0	1.29750E+03	8.80000E+01	4.09930E+02
475	10009	0	1.29750E+03	8.80000E+01	4.08930E+02
476	10010	0	1.29750E+03	8.80000E+01	4.06930E+02
477	10011	0	1.28250E+03	9.38800E+01	4.10370E+02
478	10012	0	1.28250E+03	8.82800E+01	4.10370E+02
479	10013	0	1.28250E+03	8.80000E+01	4.11930E+02
480	10016	0	1.28250E+03	8.80000E+01	4.09930E+02
481	10017	0	1.28250E+03	8.80000E+01	4.08930E+02
482	10018	0	1.28250E+03	8.80000E+01	4.06930E+02
483	10019	0	1.26300E+03	8.71900E+01	4.14090E+02
484	10020	0	1.27050E+03	8.80000E+01	4.09930E+02
485	10021	0	1.27050E+03	8.80000E+01	4.08930E+02
486	10022	0	1.27050E+03	8.80000E+01	4.06930E+02
487	10023	0	1.26488E+03	9.38800E+01	4.10370E+02
488	10025	0	1.27050E+03	9.38800E+01	4.10370E+02
489	10026	0	1.25550E+03	8.80000E+01	4.11930E+02
490	10027	0	1.27050E+03	8.82800E+01	4.10370E+02
491	10028	0	1.27050E+03	8.80000E+01	4.11930E+02
492	10029	0	1.28250E+03	9.38800E+01	4.05070E+02
493	10030	0	1.28250E+03	8.82800E+01	4.05070E+02
494	10031	0	1.27050E+03	9.38800E+01	4.05070E+02
495	10032	0	1.27050E+03	8.82800E+01	4.05070E+02
496	10033	0	1.29750E+03	8.82800E+01	4.05070E+02
497	10034	0	1.29750E+03	9.38800E+01	4.05070E+02
498	10035	0	1.28250E+03	9.38800E+01	4.00900E+02
499	10036	0	1.27050E+03	9.38800E+01	4.00900E+02
500	10037	0	1.28250E+03	8.82800E+01	4.00900E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 62

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
501	10038	0	1.29000E+03	8.69900E+01	3.98460E+02
502	10039	0	1.27800E+03	9.40000E+01	3.96500E+02
503	10040	0	1.28250E+03	9.38800E+01	3.95770E+02
504	10041	0	1.27050E+03	9.38800E+01	3.95770E+02
505	10042	0	1.27050E+03	8.82800E+01	4.00900E+02
506	10043	0	1.26300E+03	8.69900E+01	3.98460E+02
507	10044	0	1.27050E+03	8.80000E+01	3.96300E+02
508	10045	0	1.27050E+03	8.82800E+01	3.95770E+02
509	10046	0	1.28250E+03	8.80000E+01	3.96300E+02
510	10047	0	1.27050E+03	8.80000E+01	3.94300E+02
511	10048	0	1.26300E+03	8.69900E+01	3.95460E+02
512	10049	0	1.27050E+03	8.80000E+01	3.93300E+02
513	10050	0	1.28250E+03	8.82800E+01	3.95770E+02
514	10051	0	1.28250E+03	8.80000E+01	3.93300E+02
515	10052	0	1.28250E+03	8.80000E+01	3.94300E+02
516	10053	0	1.29000E+03	8.69900E+01	3.95460E+02
517	10054	0	1.29750E+03	8.80000E+01	3.96300E+02
518	10055	0	1.29750E+03	8.82800E+01	4.00900E+02
519	10056	0	1.28250E+03	9.38800E+01	3.91300E+02
520	10057	0	1.27050E+03	9.38800E+01	3.91300E+02
521	10058	0	1.27050E+03	8.80000E+01	3.91300E+02
522	10059	0	1.28250E+03	8.80000E+01	3.91300E+02
523	10060	0	1.25550E+03	8.80000E+01	3.96300E+02
524	10061	0	1.25550E+03	8.80000E+01	3.93300E+02
525	10062	0	1.25550E+03	8.80000E+01	3.94300E+02
526	10063	0	1.29750E+03	8.80000E+01	3.93300E+02
527	10064	0	1.29750E+03	8.80000E+01	3.94300E+02
528	10065	0	1.29750E+03	9.38800E+01	4.00900E+02
529	10066	0	1.29750E+03	9.38800E+01	3.95770E+02
530	10067	0	1.29750E+03	9.38800E+01	3.91300E+02
531	10068	0	1.29750E+03	8.82800E+01	3.95770E+02
532	10069	0	1.29750E+03	8.80000E+01	3.91300E+02
533	10070	0	1.25550E+03	9.38800E+01	4.00900E+02
534	10071	0	1.25550E+03	8.82800E+01	4.00900E+02
535	10072	0	1.25550E+03	9.38800E+01	3.95770E+02
536	10073	0	1.25550E+03	8.82800E+01	3.95770E+02
537	10074	0	1.25550E+03	9.38800E+01	3.91300E+02
538	10075	0	1.25550E+03	8.80000E+01	3.91300E+02
539	10076	0	1.25550E+03	8.82800E+01	4.05070E+02
540	10077	0	1.25550E+03	9.38800E+01	4.05070E+02
541	10078	0	1.26300E+03	8.71900E+01	4.11090E+02
542	10079	0	1.25550E+03	8.80000E+01	4.06930E+02
543	10080	0	1.25550E+03	8.80000E+01	4.08930E+02
544	10081	0	1.25550E+03	8.82800E+01	4.10370E+02
545	10082	0	1.25550E+03	8.80000E+01	4.09930E+02
546	10083	0	1.25550E+03	9.38800E+01	4.10370E+02
547	100001	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
1922	101376	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 63

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	90-4	90-5	90-6	91-4	91-5	91-6	1091-4	1091-5	1091-6	13001-5 =	10
11 =	13002-5	13003-5	13004-5	13005-5	13006-5	13007-5	13008-5	13009-5	13010-5	13011-5 =	20
21 =	13012-5	13013-5	13014-5	13015-5	13016-5	13017-6	13018-6	13019-6	13020-6	2171-1 =	30
31 =	2171-4	2171-5	2171-6	2197-1	2197-4	2197-5	2197-6	2322-1	2322-4	2322-5 =	40
41 =	2322-6	2663-1	2663-4	2663-5	2663-6	2808-1	2808-4	2808-5	2808-6	2809-1 =	50
51 =	2809-4	2809-5	2809-6	2833-1	2833-4	2833-5	2833-6	2922-1	2922-4	2922-5 =	60
61 =	2922-6	21081-1	21081-4	21081-5	21081-6	27106-1	27106-4	27106-5	27106-6	27111-1 =	70
71 =	27111-4	27111-5	27111-6	27150-1	27150-4	27150-5	27150-6	27164-1	27164-4	27164-5 =	80
81 =	27164-6	27167-1	27167-4	27167-5	27167-6	27178-1	27178-4	27178-5	27178-6	27186-1 =	90
91 =	27186-4	27186-5	27186-6	27193-1	27193-4	27193-5	27193-6	27564-1	27564-4	27564-5 =	100
101 =	27564-6	27837-1	27837-4	27837-5	27837-6	271012-1	271012-4	271012-5	271012-6	271013-1 =	110
111 =	271013-4	271013-5	271013-6	271055-1	271055-4	271055-5	271055-6	271265-1	271265-4	271265-5 =	120
121 =	271265-6	702171-1	702171-4	702171-5	702171-6	702197-1	702197-4	702197-5	702197-6	702322-1 =	130
131 =	702322-4	702322-5	702322-6	702663-1	702663-4	702663-5	702663-6	702808-1	702808-4	702808-5 =	140
141 =	702808-6	702809-1	702809-4	702809-5	702809-6	702833-1	702833-4	702833-5	702833-6	702922-1 =	150
151 =	702922-4	702922-5	702922-6	727106-1	727106-4	727106-5	727106-6	727111-1	727111-4	727111-5 =	160
161 =	727111-6	727150-1	727150-4	727150-5	727150-6	727164-1	727164-4	727164-5	727164-6	727167-1 =	170
171 =	727167-4	727167-5	727167-6	727178-1	727178-4	727178-5	727178-6	727186-1	727186-4	727186-5 =	180
181 =	727186-6	727193-1	727193-4	727193-5	727193-6	727564-1	727564-4	727564-5	727564-6	727837-1 =	190
191 =	727837-4	727837-5	727837-6	7021081-1	7021081-4	7021081-5	7021081-6	7271012-1	7271012-4	7271012-5 =	200
201 =	7271012-6	7271013-1	7271013-4	7271013-5	7271013-6	7271055-1	7271055-4	7271055-5	7271055-6	7271265-1 =	210
211 =	7271265-4	7271265-5	7271265-6	212118-1	212118-4	212118-5	212118-6	212120-1	212120-4	212120-5 =	220
221 =	212120-6	212125-1	212125-4	212125-5	212125-6	212385-1	212385-4	212385-5	212385-6	212388-1 =	230
231 =	212388-4	212388-5	212388-6	212390-1	212390-4	212390-5	212390-6	213110-1	213110-4	213110-5 =	240
241 =	213110-6	213113-1	213113-4	213113-5	213113-6	213115-1	213115-4	213115-5	213115-6	213195-1 =	250
251 =	213195-4	213195-5	213195-6	213198-1	213198-4	213198-5	213198-6	213201-1	213201-4	213201-5 =	260
261 =	213201-6	213203-1	213203-4	213203-5	213203-6	213265-1	213265-4	213265-5	213265-6	213268-1 =	270
271 =	213268-4	213268-5	213268-6	312118-1	312118-4	312118-5	312118-6	312120-1	312120-4	312120-5 =	280
281 =	312120-6	312125-1	312125-4	312125-5	312125-6	312385-1	312385-4	312385-5	312385-6	312388-1 =	290
291 =	312388-4	312388-5	312388-6	312390-1	312390-4	312390-5	312390-6	313195-1	313195-4	313195-5 =	300
301 =	313195-6	313198-1	313198-4	313198-5	313198-6	313201-1	313201-4	313201-5	313201-6	313203-1 =	310
311 =	313203-4	313203-5	313203-6	313265-1	313265-4	313265-5	313265-6	313268-4	313268-5	313268-6 =	320
321 =	313268-6	2423-1	2423-4	2423-5	2423-6	2433-1	2433-3	2433-4	2433-5	2433-6 =	330
331 =	2665-3	2665-4	2665-5	2665-6	2443-1	2443-4	2443-5	2443-6	2679-1	2679-3 =	340
341 =	2679-4	2679-5	2679-6	2680-1	2680-3	2680-4	2680-5	2680-6	702423-1	702423-4 =	350
351 =	702423-5	702423-6	702433-1	702433-3	702433-4	702433-5	702433-6	702665-3	702665-4	702665-5 =	360
361 =	702665-6	702443-1	702443-4	702443-5	702443-6	702679-1	702679-3	702679-4	702679-5	702679-6 =	370
371 =	702680-1	702680-3	702680-4	702680-5	702680-6	3076-4	3076-5	3076-6	3401-4	3401-5 =	380
381 =	3401-6	5218-4	5218-5	5218-6	5400-4	5400-5	5400-6	5423-4	5423-5	5423-6 =	390
391 =	210388-1	210388-4	210388-5	210388-6	210390-1	210390-4	210390-5	210390-6	210393-1	210393-4 =	400
401 =	210393-5	210393-6	210395-1	210395-4	210395-5	210395-6	210398-1	210398-4	210398-5	210398-6 =	410
411 =	210400-1	210400-4	210400-5	210400-6	210405-1	210405-4	210405-5	210405-6	210413-1	210413-4 =	420
421 =	210413-5	210413-6	210458-1	210458-4	210458-5	210458-6	210460-1	210460-4	210460-5	210460-6 =	430
431 =	210463-1	210463-4	210463-5	210463-6	210465-1	210465-4	210465-5	210465-6	210468-1	210468-4 =	440
441 =	210468-5	210468-6	210470-1	210470-4	210470-5	210470-6	210475-1	210475-4	210475-5	210475-6 =	450
451 =	210530-1	210530-4	210530-5	210530-6	210533-1	210533-4	210533-5	210533-6	210535-1	210535-4 =	460
461 =	210535-5	210535-6	210538-1	210538-4	210538-5	210538-6	210600-1	210600-4	210600-5	210600-6 =	470
471 =	210670-1	210670-4	210670-5	210670-6	211040-1	211040-4	211040-5	211040-6	211043-1	211043-4 =	480
481 =	211043-5	211043-6	211180-1	211180-4	211180-5	211180-6	211183-1	211183-4	211183-5	211183-6 =	490
491 =	211320-1	211320-4	211320-5	211320-6	211323-1	211323-4	211323-5	211323-6	211325-1	211325-4 =	500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 64

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
501 =	211325-5	211325-6	211460-1	211460-4	211460-5	211460-6	211463-1	211463-4	211463-5	211463-6	= 510
511 =	211465-1	211465-4	211465-5	211465-6	211468-1	211468-4	211468-5	211468-6	211470-1	211470-4	= 520
521 =	211470-5	211470-6	211494-1	211494-4	211494-5	211494-6	211528-1	211528-4	211528-5	211528-6	= 530
531 =	211530-1	211530-4	211530-5	211530-6	211533-1	211533-4	211533-5	211533-6	211535-1	211535-4	= 540
541 =	211535-5	211535-6	211538-1	211538-4	211538-5	211538-6	211540-1	211540-4	211540-5	211540-6	= 550
551 =	211545-1	211545-4	211545-5	211545-6	211595-1	211595-4	211595-5	211595-6	211598-1	211598-4	= 560
561 =	211598-5	211598-6	211600-1	211600-4	211600-5	211600-6	211603-1	211603-4	211603-5	211603-6	= 570
571 =	211605-1	211605-4	211605-5	211605-6	211608-1	211608-4	211608-5	211608-6	212040-1	212040-4	= 580
581 =	212040-5	212040-6	212043-1	212043-4	212043-5	212043-6	212045-1	212045-4	212045-5	212045-6	= 590
591 =	212250-1	212250-4	212250-5	212250-6	212253-1	212253-4	212253-5	212253-6	212255-1	212255-4	= 600
601 =	212255-5	212255-6	212530-1	212530-4	212530-5	212530-6	212533-1	212533-4	212533-5	212533-6	= 610
611 =	212535-1	212535-4	212535-5	212535-6	213180-1	213180-4	213180-5	213180-6	213183-1	213183-4	= 620
621 =	213183-5	213183-6	213185-1	213185-4	213185-5	213185-6	213188-1	213188-4	213188-5	213188-6	= 630
631 =	213250-1	213250-4	213250-5	213250-6	213253-1	213253-4	213253-5	213253-6	213255-1	213255-4	= 640
641 =	213255-5	213255-6	213323-1	213323-4	213323-5	213323-6	213325-1	213325-4	213325-5	213325-6	= 650
651 =	213390-1	213390-4	213390-5	213390-6	213393-1	213393-4	213393-5	213393-6	213395-1	213395-4	= 660
661 =	213395-5	213395-6	213460-1	213460-4	213460-5	213460-6	213463-1	213463-4	213463-5	213463-6	= 670
671 =	213465-1	213465-4	213465-5	213465-6	213468-1	213468-4	213468-5	213468-6	213481-1	213481-4	= 680
681 =	213481-5	213481-6	213528-1	213528-4	213528-5	213528-6	213530-1	213530-4	213530-5	213530-6	= 690
691 =	213533-1	213533-4	213533-5	213533-6	213535-1	213535-4	213535-5	213535-6	213538-1	213538-4	= 700
701 =	213538-5	213538-6	213540-1	213540-4	213540-5	213540-6	213600-1	213600-4	213600-5	213600-6	= 710
711 =	960-4	960-5	960-6	961-4	961-5	961-6	962-4	962-5	962-6	964-4	= 720
721 =	964-5	964-6	965-4	965-5	965-6	967-4	967-5	967-6	970-4	970-5	= 730
731 =	970-6	971-4	971-5	971-6	972-4	972-5	972-6	974-4	974-5	974-6	= 740
741 =	975-4	975-5	975-6	271218-1	271218-3	271218-4	271218-5	271218-6	271217-4	271217-5	= 750
751 =	271217-6	271216-3	271216-4	271216-5	271216-6	271219-4	271219-5	271219-6	27355-4	27355-5	= 760
761 =	27355-6	701383-1	701383-4	701383-5	701383-6	701405-1	701405-4	701405-5	701405-6	701963-4	= 770
771 =	701963-5	701963-6	701393-1	701393-3	701393-4	701393-5	701393-6	1383-1	1383-4	1383-5	= 780
781 =	1383-6	1405-1	1405-4	1405-5	1405-6	901963-4	901963-5	901963-6	1393-1	1393-3	= 790
791 =	1393-4	1393-5	1393-6	701423-1	701423-4	701423-5	701423-6	701445-1	701445-4	701445-5	= 800
801 =	701445-6	701965-4	701965-5	701965-6	701433-1	701433-3	701433-4	701433-5	701433-6	1423-1	= 810
811 =	1423-4	1423-5	1423-6	1445-1	1445-4	1445-5	1445-6	901965-4	901965-5	901965-6	= 820
821 =	1433-1	1433-3	1433-4	1433-5	1433-6	701443-1	701443-4	701443-5	701443-6	702365-1	= 830
831 =	702365-4	702365-5	702365-6	702661-4	702661-5	702661-6	702353-1	702353-3	702353-4	702353-5	= 840
841 =	702353-6	1443-1	1443-4	1443-5	1443-6	2365-1	2365-4	2365-5	2365-6	2661-4	= 850
851 =	2661-5	2661-6	2353-1	2353-3	2353-4	2353-5	2353-6	727355-1	727355-4	727355-5	= 860
861 =	727355-6	7271219-1	7271219-4	7271219-5	7271219-6	7271217-4	7271217-5	7271217-6	727435-1	727435-3	= 870
871 =	727435-4	727435-5	727435-6	6032-4	6032-5	6032-6	6060-4	6060-5	6060-6	6061-4	= 880
881 =	6061-5	6061-6	6064-4	6064-5	6064-6	6081-6	6082-4	6082-5	6082-6	6083-4	= 890
891 =	6083-5	6083-6	6084-4	6084-5	6084-6	6085-4	6085-5	6085-6	6067-4	6067-5	= 900
901 =	6067-6	6068-4	6068-5	6068-6	6071-4	6071-5	6071-6	6069-4	6069-5	6069-6	= 910
911 =	6070-4	6070-5	6070-6	6073-4	6073-5	6073-6	6074-4	6074-5	6074-6	6076-4	= 920
921 =	6076-5	6076-6	6080-6	6086-4	6086-5	6086-6	6089-4	6089-5	6089-6	6087-4	= 930
931 =	6087-5	6087-6	6091-4	6091-5	6091-6	6092-4	6092-5	6092-6	6093-4	6093-5	= 940
941 =	6093-6	6094-4	6094-5	6094-6	6095-4	6095-5	6095-6	1-2	1-4	1-5	= 950
951 =	1-6	2-2	2-4	2-5	2-6	3-4	3-5	3-6	12-4	12-5	= 960
961 =	12-6	14-4	14-5	14-6	84-1	84-2	84-4	84-5	84-6	119-4	= 970
971 =	119-5	119-6	153-4	153-5	153-6	161-1	161-2	161-4	161-5	161-6	= 980
981 =	192-4	192-5	192-6	233-2	233-4	233-5	233-6	249-1	249-2	249-4	= 990
991 =	249-5	249-6	297-2	297-4	297-5	297-6	299-1	299-2	299-4	299-5	= 1000

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 65

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

---	1 ---	2 ---	3 ---	4 ---	5 ---	6 ---	7 ---	8 ---	9 ---	10 ---	
1001 =	299-6	322-1	322-4	322-5	322-6	323-1	323-4	323-5	323-6	324-1 =	1010
1011 =	324-2	324-4	324-5	324-6	325-1	325-2	325-4	325-5	325-6	326-1 =	1020
1021 =	326-2	326-4	326-5	326-6	327-1	327-2	327-4	327-5	327-6	328-1 =	1030
1031 =	328-2	328-4	328-5	328-6	329-2	329-4	329-5	329-6	330-2	330-4 =	1040
1041 =	330-5	330-6	331-1	331-2	331-4	331-5	331-6	332-4	332-5	332-6 =	1050
1051 =	333-2	333-4	333-5	333-6	334-1	334-4	334-5	334-6	335-1	335-2 =	1060
1061 =	335-4	335-5	335-6	337-1	337-4	337-5	337-6	338-1	338-4	338-5 =	1070
1071 =	338-6	339-1	339-2	339-4	339-5	339-6	340-1	340-2	340-4	340-5 =	1080
1081 =	340-6	341-1	341-2	341-4	341-5	341-6	343-1	343-2	343-4	343-5 =	1090
1091 =	343-6	344-1	344-2	344-4	344-5	344-6	345-1	345-2	345-4	345-5 =	1100
1101 =	345-6	346-1	346-2	346-4	346-5	346-6	347-1	347-2	347-4	347-5 =	1110
1111 =	347-6	349-4	349-5	349-6	350-2	350-4	350-5	350-6	351-2	351-4 =	1120
1121 =	351-5	351-6	352-1	352-2	352-4	352-5	352-6	354-2	354-4	354-5 =	1130
1131 =	354-6	356-2	356-4	356-5	356-6	357-1	357-2	357-4	357-5	357-6 =	1140
1141 =	358-4	358-5	358-6	359-1	359-4	359-5	359-6	360-2	360-4	360-5 =	1150
1151 =	360-6	361-1	361-2	361-4	361-5	361-6	363-2	363-4	363-5	363-6 =	1160
1161 =	364-1	364-2	364-4	364-5	364-6	365-4	365-5	365-6	366-1	366-4 =	1170
1171 =	366-5	366-6	367-2	367-4	367-5	367-6	368-1	368-2	368-4	368-5 =	1180
1181 =	368-6	456-2	456-4	456-5	456-6	457-2	457-4	457-5	457-6	458-4 =	1190
1191 =	458-5	458-6	467-4	467-5	467-6	469-4	469-5	469-6	539-1	539-2 =	1200
1201 =	539-4	539-5	539-6	574-4	574-5	574-6	608-4	608-5	608-6	616-1 =	1210
1211 =	616-2	616-4	616-5	616-6	647-4	647-5	647-6	688-2	688-4	688-5 =	1220
1221 =	688-6	704-1	704-2	704-4	704-5	704-6	752-2	752-4	752-5	752-6 =	1230
1231 =	754-1	754-2	754-4	754-5	754-6	777-1	777-4	777-5	777-6	778-1 =	1240
1241 =	778-4	778-5	778-6	779-1	779-2	779-4	779-5	779-6	780-1	780-2 =	1250
1251 =	780-4	780-5	780-6	781-1	781-2	781-4	781-5	781-6	782-1	782-2 =	1260
1261 =	782-4	782-5	782-6	783-1	783-2	783-4	783-5	783-6	784-2	784-4 =	1270
1271 =	784-5	784-6	785-2	785-4	785-5	785-6	786-1	786-2	786-4	786-5 =	1280
1281 =	786-6	787-4	787-5	787-6	788-2	788-4	788-5	788-6	789-1	789-4 =	1290
1291 =	789-5	789-6	790-1	790-2	790-4	790-5	790-6	792-1	792-4	792-5 =	1300
1301 =	792-6	793-1	793-4	793-5	793-6	794-1	794-2	794-4	794-5	794-6 =	1310
1311 =	795-1	795-2	795-4	795-5	795-6	796-1	796-2	796-4	796-5	796-6 =	1320
1321 =	798-1	798-2	798-4	798-5	798-6	799-1	799-2	799-4	799-5	799-6 =	1330
1331 =	800-1	800-2	800-4	800-5	800-6	801-1	801-2	801-4	801-5	801-6 =	1340
1341 =	802-1	802-2	802-4	802-5	802-6	804-4	804-5	804-6	805-2	805-4 =	1350
1351 =	805-5	805-6	806-2	806-4	806-5	806-6	807-1	807-2	807-4	807-5 =	1360
1361 =	807-6	809-2	809-4	809-5	809-6	811-2	811-4	811-5	811-6	812-1 =	1370
1371 =	812-2	812-4	812-5	812-6	813-4	813-5	813-6	814-1	814-4	814-5 =	1380
1381 =	814-6	815-2	815-4	815-5	815-6	816-1	816-2	816-4	816-5	816-6 =	1390
1391 =	818-2	818-4	818-5	818-6	819-1	819-2	819-4	819-5	819-6	820-4 =	1400
1401 =	820-5	820-6	821-1	821-4	821-5	821-6	822-2	822-4	822-5	822-6 =	1410
1411 =	823-1	823-2	823-4	823-5	823-6	912-4	912-5	912-6	913-4	913-5 =	1420
1421 =	913-6	918-4	918-5	918-6	919-4	919-5	919-6	942-4	942-5	942-6 =	1430
1431 =	948-4	948-5	948-6	958-2	958-3	958-4	958-5	958-6	959-4	959-5 =	1440
1441 =	959-6	963-4	963-5	963-6	966-2	966-3	966-4	966-5	966-6	968-2 =	1450
1451 =	968-3	968-4	968-5	968-6	969-4	969-5	969-6	973-4	973-5	973-6 =	1460
1461 =	976-2	976-3	976-4	976-5	976-6	977-4	977-5	977-6	980-5	981-5 =	1470
1471 =	982-2	982-4	982-5	982-6	983-2	983-4	983-5	983-6	1012-4	1012-5 =	1480
1481 =	1012-6	1016-4	1016-5	1016-6	1036-4	1036-5	1036-6	1065-4	1065-5	1065-6 =	1490
1491 =	1067-4	1067-5	1067-6	1069-4	1069-5	1069-6	1071-4	1071-5	1071-6	1090-4 =	1500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 66

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1501 =	1090-5	1090-6	1093-4	1093-5	1093-6	1137-4	1137-5	1137-6	1142-4	1142-5 =	1510
1511 =	1142-6	1143-4	1143-5	1143-6	1145-4	1145-5	1145-6	1148-4	1148-5	1148-6 =	1520
1521 =	1150-4	1150-5	1150-6	1151-4	1151-5	1151-6	1154-4	1154-5	1154-6	1156-4 =	1530
1531 =	1156-5	1156-6	1157-4	1157-5	1157-6	1160-4	1160-5	1160-6	1161-4	1161-5 =	1540
1541 =	1161-6	1167-4	1167-5	1167-6	1168-4	1168-5	1168-6	1169-4	1169-5	1169-6 =	1550
1551 =	1170-4	1170-5	1170-6	1173-4	1173-5	1173-6	1174-4	1174-5	1174-6	1183-4 =	1560
1561 =	1183-5	1183-6	1184-4	1184-5	1184-6	1185-4	1185-5	1185-6	1186-4	1186-5 =	1570
1571 =	1186-6	1189-4	1189-5	1189-6	1190-4	1190-5	1190-6	1203-1	1203-2	1203-4 =	1580
1581 =	1203-5	1203-6	1204-1	1204-2	1204-4	1204-5	1204-6	1205-4	1205-5	1205-6 =	1590
1591 =	1206-1	1206-2	1206-4	1206-5	1206-6	1207-1	1207-2	1207-4	1207-5	1207-6 =	1600
1601 =	1208-4	1208-5	1208-6	1214-4	1214-5	1214-6	1215-4	1215-5	1215-6	1216-4 =	1610
1611 =	1216-5	1216-6	1243-4	1243-5	1243-6	1244-4	1244-5	1244-6	1245-4	1245-5 =	1620
1621 =	1245-6	100-5	101-5	102-5	103-5	104-5	105-5	106-5	107-5	108-5 =	1630
1631 =	109-5	110-5	111-5	112-1	112-3	112-4	112-5	112-6	113-1	113-3 =	1640
1641 =	113-4	113-5	113-6	114-1	114-3	114-4	114-5	114-6	10001-4	10001-5 =	1650
1651 =	10001-6	10002-4	10002-5	10002-6	10004-4	10004-5	10004-6	10005-4	10005-5	10005-6 =	1660
1661 =	10006-4	10006-5	10006-6	10007-4	10007-5	10007-6	10008-4	10008-5	10008-6	10009-4 =	1670
1671 =	10009-5	10009-6	10010-4	10010-5	10010-6	10011-4	10011-5	10011-6	10012-4	10012-5 =	1680
1681 =	10012-6	10013-4	10013-5	10013-6	10016-4	10016-5	10016-6	10017-4	10017-5	10017-6 =	1690
1691 =	10018-4	10018-5	10018-6	10019-4	10019-5	10019-6	10020-4	10020-5	10020-6	10021-4 =	1700
1701 =	10021-5	10021-6	10022-4	10022-5	10022-6	10023-4	10023-5	10023-6	10025-4	10025-5 =	1710
1711 =	10025-6	10026-4	10026-5	10026-6	10027-4	10027-5	10027-6	10028-4	10028-5	10028-6 =	1720
1721 =	10029-4	10029-5	10029-6	10030-4	10030-5	10030-6	10031-4	10031-5	10031-6	10032-4 =	1730
1731 =	10032-5	10032-6	10033-4	10033-5	10033-6	10034-4	10034-5	10034-6	10035-4	10035-5 =	1740
1741 =	10035-6	10036-4	10036-5	10036-6	10037-4	10037-5	10037-6	10038-4	10038-5	10038-6 =	1750
1751 =	10039-4	10039-5	10039-6	10040-4	10040-5	10040-6	10041-4	10041-5	10041-6	10042-4 =	1760
1761 =	10042-5	10042-6	10043-4	10043-5	10043-6	10044-4	10044-5	10044-6	10045-4	10045-5 =	1770
1771 =	10045-6	10046-4	10046-5	10046-6	10047-4	10047-5	10047-6	10048-4	10048-5	10048-6 =	1780
1781 =	10049-4	10049-5	10049-6	10050-4	10050-5	10050-6	10051-4	10051-5	10051-6	10052-4 =	1790
1791 =	10052-5	10052-6	10053-4	10053-5	10053-6	10054-4	10054-5	10054-6	10055-4	10055-5 =	1800
1801 =	10055-6	10056-4	10056-5	10056-6	10057-4	10057-5	10057-6	10058-4	10058-5	10058-6 =	1810
1811 =	10059-4	10059-5	10059-6	10060-4	10060-5	10060-6	10061-4	10061-5	10061-6	10062-4 =	1820
1821 =	10062-5	10062-6	10063-4	10063-5	10063-6	10064-4	10064-5	10064-6	10065-4	10065-5 =	1830
1831 =	10065-6	10066-4	10066-5	10066-6	10067-4	10067-5	10067-6	10068-4	10068-5	10068-6 =	1840
1841 =	10069-4	10069-5	10069-6	10070-4	10070-5	10070-6	10071-4	10071-5	10071-6	10072-4 =	1850
1851 =	10072-5	10072-6	10073-4	10073-5	10073-6	10074-4	10074-5	10074-6	10075-4	10075-5 =	1860
1861 =	10075-6	10076-4	10076-5	10076-6	10077-4	10077-5	10077-6	10078-4	10078-5	10078-6 =	1870
1871 =	10079-4	10079-5	10079-6	10080-4	10080-5	10080-6	10081-4	10081-5	10081-6	10082-4 =	1880
1881 =	10082-5	10082-6	10083-4	10083-5	10083-6						

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 67

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	90-1	90-2	90-3	91-1	91-2	91-3	1091-1	1091-2	1091-3	4590-1 =	10
11 =	4590-2	4590-3	4590-4	4590-5	4590-6	4591-1	4591-2	4591-3	4591-4	4591-5 =	20
21 =	4591-6	4592-1	4592-2	4592-3	4592-4	4592-5	4592-6	4593-1	4593-2	4593-3 =	30
31 =	4593-4	4593-5	4593-6	13001-1	13001-2	13001-3	13001-4	13001-6	13002-1	13002-2 =	40
41 =	13002-3	13002-4	13002-6	13003-1	13003-2	13003-3	13003-4	13003-6	13004-1	13004-2 =	50
51 =	13004-3	13004-4	13004-6	13005-1	13005-2	13005-3	13005-4	13005-6	13006-1	13006-2 =	60
61 =	13006-3	13006-4	13006-6	13007-1	13007-2	13007-3	13007-4	13007-6	13008-1	13008-2 =	70
71 =	13008-3	13008-4	13008-6	13009-1	13009-2	13009-3	13009-4	13009-6	13010-1	13010-2 =	80
81 =	13010-3	13010-4	13010-6	13011-1	13011-2	13011-3	13011-4	13011-6	13012-1	13012-2 =	90
91 =	13012-3	13012-4	13012-6	13013-1	13013-2	13013-3	13013-4	13013-6	13014-1	13014-2 =	100
101 =	13014-3	13014-4	13014-6	13015-1	13015-2	13015-3	13015-4	13015-6	13016-1	13016-2 =	110
111 =	13016-3	13016-4	13016-6	13017-1	13017-2	13017-3	13017-4	13017-5	13018-1	13018-2 =	120
121 =	13018-3	13018-4	13018-5	13019-1	13019-2	13019-3	13019-4	13019-5	13020-1	13020-2 =	130
131 =	13020-3	13020-4	13020-5	2171-2	2171-3	2197-2	2197-3	2322-2	2322-3	2663-2 =	140
141 =	2663-3	2808-2	2808-3	2809-2	2809-3	2833-2	2833-3	2922-2	2922-3	21081-2 =	150
151 =	21081-3	27106-2	27106-3	27111-2	27111-3	27150-2	27150-3	27164-2	27164-3	27167-2 =	160
161 =	27167-3	27178-2	27178-3	27186-2	27186-3	27193-2	27193-3	27564-2	27564-3	27837-2 =	170
171 =	27837-3	271012-2	271012-3	271013-2	271013-3	271055-2	271055-3	271265-2	271265-3	702171-2 =	180
181 =	702171-3	702197-2	702197-3	702322-2	702322-3	702663-2	702663-3	702808-2	702808-3	702809-2 =	190
191 =	702809-3	702833-2	702833-3	702922-2	702922-3	727106-2	727106-3	727111-2	727111-3	727150-2 =	200
201 =	727150-3	727164-2	727164-3	727167-2	727167-3	727178-2	727178-3	727186-2	727186-3	727193-2 =	210
211 =	727193-3	727564-2	727564-3	727837-2	727837-3	7021081-2	7021081-3	7271012-2	7271012-3	7271013-2 =	220
221 =	7271013-3	7271055-2	7271055-3	7271265-2	7271265-3	212118-2	212118-3	212120-2	212120-3	212125-2 =	230
231 =	212125-3	212385-2	212385-3	212388-2	212388-3	212390-2	212390-3	213110-2	213110-3	213113-2 =	240
241 =	213113-3	213115-2	213115-3	213195-2	213195-3	213198-2	213198-3	213201-2	213201-3	213203-2 =	250
251 =	213203-3	213265-2	213265-3	213268-2	213268-3	312118-2	312118-3	312120-2	312120-3	312125-2 =	260
261 =	312125-3	312385-2	312385-3	312388-2	312388-3	312390-2	312390-3	313195-2	313195-3	313198-2 =	270
271 =	313198-3	313201-2	313201-3	313203-2	313203-3	313265-2	313265-3	313268-2	313268-3	2423-2 =	280
281 =	2423-3	2433-2	2665-1	2665-2	2443-2	2443-3	2679-2	2680-2	702423-2	702423-3 =	290
291 =	702433-2	702665-1	702665-2	702443-2	702443-3	702679-2	702680-2	2651-1	2651-2	2651-3 =	300
301 =	2651-4	2651-5	2651-6	27895-1	27895-2	27895-3	27895-4	27895-5	27895-6	27896-1 =	310
311 =	27896-2	27896-3	27896-4	27896-5	27896-6	1651-1	1651-2	1651-3	1651-4	1651-5 =	320
321 =	1651-6	3076-1	3076-2	3076-3	3401-1	3401-2	3401-3	5218-1	5218-2	5218-3 =	330
331 =	5400-1	5400-2	5400-3	5423-1	5423-2	5423-3	1650-1	1650-2	1650-3	1650-4 =	340
341 =	1650-5	1650-6	210388-2	210388-3	210390-2	210390-3	210393-2	210393-3	210395-2	210395-3 =	350
351 =	210398-2	210398-3	210400-2	210400-3	210405-2	210405-3	210413-2	210413-3	210458-2	210458-3 =	360
361 =	210460-2	210460-3	210463-2	210463-3	210465-2	210465-3	210468-2	210468-3	210470-2	210470-3 =	370
371 =	210475-2	210475-3	210530-2	210530-3	210533-2	210533-3	210535-2	210535-3	210538-2	210538-3 =	380
381 =	210600-2	210600-3	210670-2	210670-3	211040-2	211040-3	211043-2	211043-3	211180-2	211180-3 =	390
391 =	211183-2	211183-3	211320-2	211320-3	211323-2	211323-3	211325-2	211325-3	211460-2	211460-3 =	400
401 =	211463-2	211463-3	211465-2	211465-3	211468-2	211468-3	211470-2	211470-3	211494-2	211494-3 =	410
411 =	211528-2	211528-3	211530-2	211530-3	211533-2	211533-3	211535-2	211535-3	211538-2	211538-3 =	420
421 =	211540-2	211540-3	211545-2	211545-3	211595-2	211595-3	211598-2	211598-3	211600-2	211600-3 =	430
431 =	211603-2	211603-3	211605-2	211605-3	211608-2	211608-3	212040-2	212040-3	212043-2	212043-3 =	440
441 =	212045-2	212045-3	212250-2	212250-3	212253-2	212253-3	212255-2	212255-3	212530-2	212530-3 =	450
451 =	212533-2	212533-3	212535-2	212535-3	213180-2	213180-3	213183-2	213183-3	213185-2	213185-3 =	460
461 =	213188-2	213188-3	213250-2	213250-3	213253-2	213253-3	213255-2	213255-3	213323-2	213323-3 =	470
471 =	213325-2	213325-3	213390-2	213390-3	213393-2	213393-3	213395-2	213395-3	213460-2	213460-3 =	480
481 =	213463-2	213463-3	213465-2	213465-3	213468-2	213468-3	213481-2	213481-3	213528-2	213528-3 =	490
491 =	213530-2	213530-3	213533-2	213533-3	213535-2	213535-3	213538-2	213538-3	213540-2	213540-3 =	500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 68

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
501 =	213600-2	213600-3	960-1	960-2	960-3	961-1	961-2	961-3	962-1	962-2 =	510
511 =	962-3	964-1	964-2	964-3	965-1	965-2	965-3	967-1	967-2	967-3 =	520
521 =	970-1	970-2	970-3	971-1	971-2	971-3	972-1	972-2	972-3	974-1 =	530
531 =	974-2	974-3	975-1	975-2	975-3	271218-2	271217-1	271217-2	271217-3	271216-1 =	540
541 =	271216-2	271219-1	271219-2	271219-3	27355-1	27355-2	27355-3	701383-2	701383-3	701405-2 =	550
551 =	701405-3	701963-1	701963-2	701963-3	701393-2	1383-2	1383-3	1405-2	1405-3	901963-1 =	560
561 =	901963-2	901963-3	1393-2	701423-2	701423-3	701445-2	701445-3	701965-1	701965-2	701965-3 =	570
571 =	701433-2	1423-2	1423-3	1445-2	1445-3	901965-1	901965-2	901965-3	1433-2	701443-2 =	580
581 =	701443-3	702365-2	702365-3	702661-1	702661-2	702661-3	702353-2	1443-2	1443-3	2365-2 =	590
591 =	2365-3	2661-1	2661-2	2661-3	2353-2	727355-2	727355-3	7271219-2	7271219-3	7271217-1 =	600
601 =	7271217-2	7271217-3	727435-2	6032-1	6032-2	6032-3	6060-1	6060-2	6060-3	6061-1 =	610
611 =	6061-2	6061-3	6064-1	6064-2	6064-3	6081-1	6081-2	6081-3	6081-4	6081-5 =	620
621 =	6082-1	6082-2	6082-3	6083-1	6083-2	6083-3	6084-1	6084-2	6084-3	6085-1 =	630
631 =	6085-2	6085-3	6067-1	6067-2	6067-3	6068-1	6068-2	6068-3	6071-1	6071-2 =	640
641 =	6071-3	6069-1	6069-2	6069-3	6070-1	6070-2	6070-3	6073-1	6073-2	6073-3 =	650
651 =	6074-1	6074-2	6074-3	6076-1	6076-2	6076-3	6080-1	6080-2	6080-3	6080-4 =	660
661 =	6080-5	6086-1	6086-2	6086-3	6089-1	6089-2	6089-3	6087-1	6087-2	6087-3 =	670
671 =	6091-1	6091-2	6091-3	6092-1	6092-2	6092-3	6093-1	6093-2	6093-3	6094-1 =	680
681 =	6094-2	6094-3	6095-1	6095-2	6095-3	1-1	1-3	2-1	2-3	3-1 =	690
691 =	3-2	3-3	12-1	12-2	12-3	14-1	14-2	14-3	84-3	119-1 =	700
701 =	119-2	119-3	153-1	153-2	153-3	161-3	192-1	192-2	192-3	233-1 =	710
711 =	233-3	249-3	297-1	297-3	299-3	322-2	322-3	323-2	323-3	324-3 =	720
721 =	325-3	326-3	327-3	328-3	329-1	329-3	330-1	330-3	331-3	332-1 =	730
731 =	332-2	332-3	333-1	333-3	334-2	334-3	335-3	337-2	337-3	338-2 =	740
741 =	338-3	339-3	340-3	341-3	343-3	344-3	345-3	346-3	347-3	349-1 =	750
751 =	349-2	349-3	350-1	350-3	351-1	351-3	352-3	354-1	354-3	356-1 =	760
761 =	356-3	357-3	358-1	358-2	358-3	359-2	359-3	360-1	360-3	361-3 =	770
771 =	363-1	363-3	364-3	365-1	365-2	365-3	366-2	366-3	367-1	367-3 =	780
781 =	368-3	456-1	456-3	457-1	457-3	458-1	458-2	458-3	467-1	467-2 =	790
791 =	467-3	469-1	469-2	469-3	539-3	574-1	574-2	574-3	608-1	608-2 =	800
801 =	608-3	616-3	647-1	647-2	647-3	688-1	688-3	704-3	752-1	752-3 =	810
811 =	754-3	777-2	777-3	778-2	778-3	779-3	780-3	781-3	782-3	783-3 =	820
821 =	784-1	784-3	785-1	785-3	786-3	787-1	787-2	787-3	788-1	788-3 =	830
831 =	789-2	789-3	790-3	792-2	792-3	793-2	793-3	794-3	795-3	796-3 =	840
841 =	798-3	799-3	800-3	801-3	802-3	804-1	804-2	804-3	805-1	805-3 =	850
851 =	806-1	806-3	807-3	809-1	809-3	811-1	811-3	812-3	813-1	813-2 =	860
861 =	813-3	814-2	814-3	815-1	815-3	816-3	818-1	818-3	819-3	820-1 =	870
871 =	820-2	820-3	821-2	821-3	822-1	822-3	823-3	912-1	912-2	912-3 =	880
881 =	913-1	913-2	913-3	918-1	918-2	918-3	919-1	919-2	919-3	942-1 =	890
891 =	942-2	942-3	948-1	948-2	948-3	958-1	959-1	959-2	959-3	963-1 =	900
901 =	963-2	963-3	966-1	968-1	969-1	969-2	969-3	973-1	973-2	973-3 =	910
911 =	976-1	977-1	977-2	977-3	980-1	980-2	980-3	980-4	980-6	981-1 =	920
921 =	981-2	981-3	981-4	981-6	982-1	982-3	983-1	983-3	1012-1	1012-2 =	930
931 =	1012-3	1016-1	1016-2	1016-3	1036-1	1036-2	1036-3	1047-1	1047-2	1047-3 =	940
941 =	1047-4	1047-5	1047-6	1048-1	1048-2	1048-3	1048-4	1048-5	1048-6	1065-1 =	950
951 =	1065-2	1065-3	1067-1	1067-2	1067-3	1069-1	1069-2	1069-3	1071-1	1071-2 =	960
961 =	1071-3	1090-1	1090-2	1090-3	1093-1	1093-2	1093-3	1127-1	1127-2	1127-3 =	970
971 =	1127-4	1127-5	1127-6	1137-1	1137-2	1137-3	1142-1	1142-2	1142-3	1143-1 =	980
981 =	1143-2	1143-3	1145-1	1145-2	1145-3	1148-1	1148-2	1148-3	1150-1	1150-2 =	990
991 =	1150-3	1151-1	1151-2	1151-3	1154-1	1154-2	1154-3	1156-1	1156-2	1156-3 =	1000

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 69

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1001 =	1157-1	1157-2	1157-3	1160-1	1160-2	1160-3	1161-1	1161-2	1161-3	1167-1 =	1010
1011 =	1167-2	1167-3	1168-1	1168-2	1168-3	1169-1	1169-2	1169-3	1170-1	1170-2 =	1020
1021 =	1170-3	1173-1	1173-2	1173-3	1174-1	1174-2	1174-3	1183-1	1183-2	1183-3 =	1030
1031 =	1184-1	1184-2	1184-3	1185-1	1185-2	1185-3	1186-1	1186-2	1186-3	1189-1 =	1040
1041 =	1189-2	1189-3	1190-1	1190-2	1190-3	1203-3	1204-3	1205-1	1205-2	1205-3 =	1050
1051 =	1206-3	1207-3	1208-1	1208-2	1208-3	1214-1	1214-2	1214-3	1215-1	1215-2 =	1060
1061 =	1215-3	1216-1	1216-2	1216-3	1243-1	1243-2	1243-3	1244-1	1244-2	1244-3 =	1070
1071 =	1245-1	1245-2	1245-3	1117-1	1117-2	1117-3	1117-4	1117-5	1117-6	100-1 =	1080
1081 =	100-2	100-3	100-4	100-6	101-1	101-2	101-3	101-4	101-6	102-1 =	1090
1091 =	102-2	102-3	102-4	102-6	103-1	103-2	103-3	103-4	103-6	104-1 =	1100
1101 =	104-2	104-3	104-4	104-6	105-1	105-2	105-3	105-4	105-6	106-1 =	1110
1111 =	106-2	106-3	106-4	106-6	107-1	107-2	107-3	107-4	107-6	108-1 =	1120
1121 =	108-2	108-3	108-4	108-6	109-1	109-2	109-3	109-4	109-6	110-1 =	1130
1131 =	110-2	110-3	110-4	110-6	111-1	111-2	111-3	111-4	111-6	112-2 =	1140
1141 =	113-2	114-2	115-1	115-2	115-3	115-4	115-5	115-6	116-1	116-2 =	1150
1151 =	116-3	116-4	116-5	116-6	10001-1	10001-2	10001-3	10002-1	10002-2	10002-3 =	1160
1161 =	10004-1	10004-2	10004-3	10005-1	10005-2	10005-3	10006-1	10006-2	10006-3	10007-1 =	1170
1171 =	10007-2	10007-3	10008-1	10008-2	10008-3	10009-1	10009-2	10009-3	10010-1	10010-2 =	1180
1181 =	10010-3	10011-1	10011-2	10011-3	10012-1	10012-2	10012-3	10013-1	10013-2	10013-3 =	1190
1191 =	10016-1	10016-2	10016-3	10017-1	10017-2	10017-3	10018-1	10018-2	10018-3	10019-1 =	1200
1201 =	10019-2	10019-3	10020-1	10020-2	10020-3	10021-1	10021-2	10021-3	10022-1	10022-2 =	1210
1211 =	10022-3	10023-1	10023-2	10023-3	10025-1	10025-2	10025-3	10026-1	10026-2	10026-3 =	1220
1221 =	10027-1	10027-2	10027-3	10028-1	10028-2	10028-3	10029-1	10029-2	10029-3	10030-1 =	1230
1231 =	10030-2	10030-3	10031-1	10031-2	10031-3	10032-1	10032-2	10032-3	10033-1	10033-2 =	1240
1241 =	10033-3	10034-1	10034-2	10034-3	10035-1	10035-2	10035-3	10036-1	10036-2	10036-3 =	1250
1251 =	10037-1	10037-2	10037-3	10038-1	10038-2	10038-3	10039-1	10039-2	10039-3	10040-1 =	1260
1261 =	10040-2	10040-3	10041-1	10041-2	10041-3	10042-1	10042-2	10042-3	10043-1	10043-2 =	1270
1271 =	10043-3	10044-1	10044-2	10044-3	10045-1	10045-2	10045-3	10046-1	10046-2	10046-3 =	1280
1281 =	10047-1	10047-2	10047-3	10048-1	10048-2	10048-3	10049-1	10049-2	10049-3	10050-1 =	1290
1291 =	10050-2	10050-3	10051-1	10051-2	10051-3	10052-1	10052-2	10052-3	10053-1	10053-2 =	1300
1301 =	10053-3	10054-1	10054-2	10054-3	10055-1	10055-2	10055-3	10056-1	10056-2	10056-3 =	1310
1311 =	10057-1	10057-2	10057-3	10058-1	10058-2	10058-3	10059-1	10059-2	10059-3	10060-1 =	1320
1321 =	10060-2	10060-3	10061-1	10061-2	10061-3	10062-1	10062-2	10062-3	10063-1	10063-2 =	1330
1331 =	10063-3	10064-1	10064-2	10064-3	10065-1	10065-2	10065-3	10066-1	10066-2	10066-3 =	1340
1341 =	10067-1	10067-2	10067-3	10068-1	10068-2	10068-3	10069-1	10069-2	10069-3	10070-1 =	1350
1351 =	10070-2	10070-3	10071-1	10071-2	10071-3	10072-1	10072-2	10072-3	10073-1	10073-2 =	1360
1361 =	10073-3	10074-1	10074-2	10074-3	10075-1	10075-2	10075-3	10076-1	10076-2	10076-3 =	1370
1371 =	10077-1	10077-2	10077-3	10078-1	10078-2	10078-3	10079-1	10079-2	10079-3	10080-1 =	1380
1381 =	10080-2	10080-3	10081-1	10081-2	10081-3	10082-1	10082-2	10082-3	10083-1	10083-2 =	1390
1391 =	10083-3										

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 70

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	100001-0	100002-0	100003-0	100004-0	100005-0	100006-0	100007-0	100008-0	100009-0	100010-0 =	10
11 =	100011-0	100012-0	100013-0	100014-0	100015-0	100016-0	100017-0	100018-0	100019-0	100020-0 =	20
21 =	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0 =	30
31 =	100031-0	100032-0	100033-0	100034-0	100035-0	100036-0	100037-0	100038-0	100039-0	100040-0 =	40
41 =	100041-0	100042-0	100043-0	100044-0	100045-0	100046-0	100047-0	100048-0	100049-0	100050-0 =	50
51 =	100051-0	100052-0	100053-0	100054-0	100055-0	100056-0	100057-0	100058-0	100059-0	100060-0 =	60
61 =	100061-0	100062-0	100063-0	100064-0	100065-0	100066-0	100067-0	100068-0	100069-0	100070-0 =	70
71 =	100071-0	100072-0	100073-0	100074-0	100075-0	100076-0	100077-0	100078-0	100079-0	100080-0 =	80
81 =	100081-0	100082-0	100083-0	100084-0	100085-0	100086-0	100087-0	100088-0	100089-0	100090-0 =	90
91 =	100091-0	100092-0	100093-0	100094-0	100095-0	100096-0	100097-0	100098-0	100099-0	100100-0 =	100
101 =	100101-0	100102-0	100103-0	100104-0	100105-0	100106-0	100107-0	100108-0	100109-0	100110-0 =	110
111 =	100111-0	100112-0	100113-0	100114-0	100115-0	100116-0	100117-0	100118-0	100119-0	100120-0 =	120
121 =	100121-0	100122-0	100123-0	100124-0	100125-0	100126-0	100127-0	100128-0	100129-0	100130-0 =	130
131 =	100131-0	100132-0	100133-0	100134-0	100135-0	100136-0	100137-0	100138-0	100139-0	100140-0 =	140
141 =	100141-0	100142-0	100143-0	100144-0	100145-0	100146-0	100147-0	100148-0	100149-0	100150-0 =	150
151 =	100151-0	100152-0	100153-0	100154-0	100155-0	100156-0	100157-0	100158-0	100159-0	100160-0 =	160
161 =	100161-0	100162-0	100163-0	100164-0	100165-0	100166-0	100167-0	100168-0	100169-0	100170-0 =	170
171 =	100171-0	100172-0	100173-0	100174-0	100175-0	100176-0	100177-0	100178-0	100179-0	100180-0 =	180
181 =	100181-0	100182-0	100183-0	100184-0	100185-0	100186-0	100187-0	100188-0	100189-0	100190-0 =	190
191 =	100191-0	100192-0	100193-0	100194-0	100195-0	100196-0	100197-0	100198-0	100199-0	100200-0 =	200
201 =	100201-0	100202-0	100203-0	100204-0	100205-0	100206-0	100207-0	100208-0	100209-0	100210-0 =	210
211 =	100211-0	100212-0	100213-0	100214-0	100215-0	100216-0	100217-0	100218-0	100219-0	100220-0 =	220
221 =	100221-0	100222-0	100223-0	100224-0	100225-0	100226-0	100227-0	100228-0	100229-0	100230-0 =	230
231 =	100231-0	100232-0	100233-0	100234-0	100235-0	100236-0	100237-0	100238-0	100239-0	100240-0 =	240
241 =	100241-0	100242-0	100243-0	100244-0	100245-0	100246-0	100247-0	100248-0	100249-0	100250-0 =	250
251 =	100251-0	100252-0	100253-0	100254-0	100255-0	100256-0	100257-0	100258-0	100259-0	100260-0 =	260
261 =	100261-0	100262-0	100263-0	100264-0	100265-0	100266-0	100267-0	100268-0	100269-0	100270-0 =	270
271 =	100271-0	100272-0	100273-0	100274-0	100275-0	100276-0	100277-0	100278-0	100279-0	100280-0 =	280
281 =	100281-0	100282-0	100283-0	100284-0	100285-0	100286-0	100287-0	100288-0	100289-0	100290-0 =	290
291 =	100291-0	100292-0	100293-0	100294-0	100295-0	100296-0	100297-0	100298-0	100299-0	100300-0 =	300
301 =	100301-0	100302-0	100303-0	100304-0	100305-0	100306-0	100307-0	100308-0	100309-0	100310-0 =	310
311 =	100311-0	100312-0	100313-0	100314-0	100315-0	100316-0	100317-0	100318-0	100319-0	100320-0 =	320
321 =	100321-0	100322-0	100323-0	100324-0	100325-0	100326-0	100327-0	100328-0	100329-0	100330-0 =	330
331 =	100331-0	100332-0	100333-0	100334-0	100335-0	100336-0	100337-0	100338-0	100339-0	100340-0 =	340
341 =	100341-0	100342-0	100343-0	100344-0	100345-0	100346-0	100347-0	100348-0	100349-0	100350-0 =	350
351 =	100351-0	100352-0	100353-0	100354-0	100355-0	100356-0	100357-0	100358-0	100359-0	100360-0 =	360
361 =	100361-0	100362-0	100363-0	100364-0	100365-0	100366-0	100367-0	100368-0	100369-0	100370-0 =	370
371 =	100371-0	100372-0	100373-0	100374-0	100375-0	100376-0	100377-0	100378-0	100379-0	100380-0 =	380
381 =	100381-0	100382-0	100383-0	100384-0	100385-0	100386-0	100387-0	100388-0	100389-0	100390-0 =	390
391 =	100391-0	100392-0	100393-0	100394-0	100395-0	100396-0	100397-0	100398-0	100399-0	100400-0 =	400
401 =	100401-0	100402-0	100403-0	100404-0	100405-0	100406-0	100407-0	100408-0	100409-0	100410-0 =	410
411 =	100411-0	100412-0	100413-0	100414-0	100415-0	100416-0	100417-0	100418-0	100419-0	100420-0 =	420
421 =	100421-0	100422-0	100423-0	100424-0	100425-0	100426-0	100427-0	100428-0	100429-0	100430-0 =	430
431 =	100431-0	100432-0	100433-0	100434-0	100435-0	100436-0	100437-0	100438-0	100439-0	100440-0 =	440
441 =	100441-0	100442-0	100443-0	100444-0	100445-0	100446-0	100447-0	100448-0	100449-0	100450-0 =	450
451 =	100451-0	100452-0	100453-0	100454-0	100455-0	100456-0	100457-0	100458-0	100459-0	100460-0 =	460
461 =	100461-0	100462-0	100463-0	100464-0	100465-0	100466-0	100467-0	100468-0	100469-0	100470-0 =	470
471 =	100471-0	100472-0	100473-0	100474-0	100475-0	100476-0	100477-0	100478-0	100479-0	100480-0 =	480
481 =	100481-0	100482-0	100483-0	100484-0	100485-0	100486-0	100487-0	100488-0	100489-0	100490-0 =	490
491 =	100491-0	100492-0	100493-0	100494-0	100495-0	100496-0	100497-0	100498-0	100499-0	100500-0 =	500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 71

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
501 =	100501-0	100502-0	100503-0	100504-0	100505-0	100506-0	100507-0	100508-0	100509-0	100510-0 =	510
511 =	100511-0	100512-0	100513-0	100514-0	100515-0	100516-0	100517-0	100518-0	100519-0	100520-0 =	520
521 =	100521-0	100522-0	100523-0	100524-0	100525-0	100526-0	100527-0	100528-0	100529-0	100530-0 =	530
531 =	100531-0	100532-0	100533-0	100534-0	100535-0	100536-0	100537-0	100538-0	100539-0	100540-0 =	540
541 =	100541-0	100542-0	100543-0	100544-0	100545-0	100546-0	100547-0	100548-0	100549-0	100550-0 =	550
551 =	100551-0	100552-0	100553-0	100554-0	100555-0	100556-0	100557-0	100558-0	100559-0	100560-0 =	560
561 =	100561-0	100562-0	100563-0	100564-0	100565-0	100566-0	100567-0	100568-0	100569-0	100570-0 =	570
571 =	100571-0	100572-0	100573-0	100574-0	100575-0	100576-0	100577-0	100578-0	100579-0	100580-0 =	580
581 =	100581-0	100582-0	100583-0	100584-0	100585-0	100586-0	100587-0	100588-0	100589-0	100590-0 =	590
591 =	100591-0	100592-0	100593-0	100594-0	100595-0	100596-0	100597-0	100598-0	100599-0	100600-0 =	600
601 =	100601-0	100602-0	100603-0	100604-0	100605-0	100606-0	100607-0	100608-0	100609-0	100610-0 =	610
611 =	100611-0	100612-0	100613-0	100614-0	100615-0	100616-0	100617-0	100618-0	100619-0	100620-0 =	620
621 =	100621-0	100622-0	100623-0	100624-0	100625-0	100626-0	100627-0	100628-0	100629-0	100630-0 =	630
631 =	100631-0	100632-0	100633-0	100634-0	100635-0	100636-0	100637-0	100638-0	100639-0	100640-0 =	640
641 =	100641-0	100642-0	100643-0	100644-0	100645-0	100646-0	100647-0	100648-0	100649-0	100650-0 =	650
651 =	100651-0	100652-0	100653-0	100654-0	100655-0	100656-0	100657-0	100658-0	100659-0	100660-0 =	660
661 =	100661-0	100662-0	100663-0	100664-0	100665-0	100666-0	100667-0	100668-0	100669-0	100670-0 =	670
671 =	100671-0	100672-0	100673-0	100674-0	100675-0	100676-0	100677-0	100678-0	100679-0	100680-0 =	680
681 =	100681-0	100682-0	100683-0	100684-0	100685-0	100686-0	100687-0	100688-0	100689-0	100690-0 =	690
691 =	100691-0	100692-0	100693-0	100694-0	100695-0	100696-0	100697-0	100698-0	100699-0	100700-0 =	700
701 =	100701-0	100702-0	100703-0	100704-0	100705-0	100706-0	100707-0	100708-0	100709-0	100710-0 =	710
711 =	100711-0	100712-0	100713-0	100714-0	100715-0	100716-0	100717-0	100718-0	100719-0	100720-0 =	720
721 =	100721-0	100722-0	100723-0	100724-0	100725-0	100726-0	100727-0	100728-0	100729-0	100730-0 =	730
731 =	100731-0	100732-0	100733-0	100734-0	100735-0	100736-0	100737-0	100738-0	100739-0	100740-0 =	740
741 =	100741-0	100742-0	100743-0	100744-0	100745-0	100746-0	100747-0	100748-0	100749-0	100750-0 =	750
751 =	100751-0	100752-0	100753-0	100754-0	100755-0	100756-0	100757-0	100758-0	100759-0	100760-0 =	760
761 =	100761-0	100762-0	100763-0	100764-0	100765-0	100766-0	100767-0	100768-0	100769-0	100770-0 =	770
771 =	100771-0	100772-0	100773-0	100774-0	100775-0	100776-0	100777-0	100778-0	100779-0	100780-0 =	780
781 =	100781-0	100782-0	100783-0	100784-0	100785-0	100786-0	100787-0	100788-0	100789-0	100790-0 =	790
791 =	100791-0	100792-0	100793-0	100794-0	100795-0	100796-0	100797-0	100798-0	100799-0	100800-0 =	800
801 =	100801-0	100802-0	100803-0	100804-0	100805-0	100806-0	100807-0	100808-0	100809-0	100810-0 =	810
811 =	100811-0	100812-0	100813-0	100814-0	100815-0	100816-0	100817-0	100818-0	100819-0	100820-0 =	820
821 =	100821-0	100822-0	100823-0	100824-0	100825-0	100826-0	100827-0	100828-0	100829-0	100830-0 =	830
831 =	100831-0	100832-0	100833-0	100834-0	100835-0	100836-0	100837-0	100838-0	100839-0	100840-0 =	840
841 =	100841-0	100842-0	100843-0	100844-0	100845-0	100846-0	100847-0	100848-0	100849-0	100850-0 =	850
851 =	100851-0	100852-0	100853-0	100854-0	100855-0	100856-0	100857-0	100858-0	100859-0	100860-0 =	860
861 =	100861-0	100862-0	100863-0	100864-0	100865-0	100866-0	100867-0	100868-0	100869-0	100870-0 =	870
871 =	100871-0	100872-0	100873-0	100874-0	100875-0	100876-0	100877-0	100878-0	100879-0	100880-0 =	880
881 =	100881-0	100882-0	100883-0	100884-0	100885-0	100886-0	100887-0	100888-0	100889-0	100890-0 =	890
891 =	100891-0	100892-0	100893-0	100894-0	100895-0	100896-0	100897-0	100898-0	100899-0	100900-0 =	900
901 =	100901-0	100902-0	100903-0	100904-0	100905-0	100906-0	100907-0	100908-0	100909-0	100910-0 =	910
911 =	100911-0	100912-0	100913-0	100914-0	100915-0	100916-0	100917-0	100918-0	100919-0	100920-0 =	920
921 =	100921-0	100922-0	100923-0	100924-0	100925-0	100926-0	100927-0	100928-0	100929-0	100930-0 =	930
931 =	100931-0	100932-0	100933-0	100934-0	100935-0	100936-0	100937-0	100938-0	100939-0	100940-0 =	940
941 =	100941-0	100942-0	100943-0	100944-0	100945-0	100946-0	100947-0	100948-0	100949-0	100950-0 =	950
951 =	100951-0	100952-0	100953-0	100954-0	100955-0	100956-0	100957-0	100958-0	100959-0	100960-0 =	960
961 =	100961-0	100962-0	100963-0	100964-0	100965-0	100966-0	100967-0	100968-0	100969-0	100970-0 =	970
971 =	100971-0	100972-0	100973-0	100974-0	100975-0	100976-0	100977-0	100978-0	100979-0	100980-0 =	980
981 =	100981-0	100982-0	100983-0	100984-0	100985-0	100986-0	100987-0	100988-0	100989-0	100990-0 =	990
991 =	100991-0	100992-0	100993-0	100994-0	100995-0	100996-0	100997-0	100998-0	100999-0	101000-0 =	1000

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 72

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1001 =	101001-0	101002-0	101003-0	101004-0	101005-0	101006-0	101007-0	101008-0	101009-0	101010-0 =	1010
1011 =	101011-0	101012-0	101013-0	101014-0	101015-0	101016-0	101017-0	101018-0	101019-0	101020-0 =	1020
1021 =	101021-0	101022-0	101023-0	101024-0	101025-0	101026-0	101027-0	101028-0	101029-0	101030-0 =	1030
1031 =	101031-0	101032-0	101033-0	101034-0	101035-0	101036-0	101037-0	101038-0	101039-0	101040-0 =	1040
1041 =	101041-0	101042-0	101043-0	101044-0	101045-0	101046-0	101047-0	101048-0	101049-0	101050-0 =	1050
1051 =	101051-0	101052-0	101053-0	101054-0	101055-0	101056-0	101057-0	101058-0	101059-0	101060-0 =	1060
1061 =	101061-0	101062-0	101063-0	101064-0	101065-0	101066-0	101067-0	101068-0	101069-0	101070-0 =	1070
1071 =	101071-0	101072-0	101073-0	101074-0	101075-0	101076-0	101077-0	101078-0	101079-0	101080-0 =	1080
1081 =	101081-0	101082-0	101083-0	101084-0	101085-0	101086-0	101087-0	101088-0	101089-0	101090-0 =	1090
1091 =	101091-0	101092-0	101093-0	101094-0	101095-0	101096-0	101097-0	101098-0	101099-0	101100-0 =	1100
1101 =	101101-0	101102-0	101103-0	101104-0	101105-0	101106-0	101107-0	101108-0	101109-0	101110-0 =	1110
1111 =	101111-0	101112-0	101113-0	101114-0	101115-0	101116-0	101117-0	101118-0	101119-0	101120-0 =	1120
1121 =	101121-0	101122-0	101123-0	101124-0	101125-0	101126-0	101127-0	101128-0	101129-0	101130-0 =	1130
1131 =	101131-0	101132-0	101133-0	101134-0	101135-0	101136-0	101137-0	101138-0	101139-0	101140-0 =	1140
1141 =	101141-0	101142-0	101143-0	101144-0	101145-0	101146-0	101147-0	101148-0	101149-0	101150-0 =	1150
1151 =	101151-0	101152-0	101153-0	101154-0	101155-0	101156-0	101157-0	101158-0	101159-0	101160-0 =	1160
1161 =	101161-0	101162-0	101163-0	101164-0	101165-0	101166-0	101167-0	101168-0	101169-0	101170-0 =	1170
1171 =	101171-0	101172-0	101173-0	101174-0	101175-0	101176-0	101177-0	101178-0	101179-0	101180-0 =	1180
1181 =	101181-0	101182-0	101183-0	101184-0	101185-0	101186-0	101187-0	101188-0	101189-0	101190-0 =	1190
1191 =	101191-0	101192-0	101193-0	101194-0	101195-0	101196-0	101197-0	101198-0	101199-0	101200-0 =	1200
1201 =	101201-0	101202-0	101203-0	101204-0	101205-0	101206-0	101207-0	101208-0	101209-0	101210-0 =	1210
1211 =	101211-0	101212-0	101213-0	101214-0	101215-0	101216-0	101217-0	101218-0	101219-0	101220-0 =	1220
1221 =	101221-0	101222-0	101223-0	101224-0	101225-0	101226-0	101227-0	101228-0	101229-0	101230-0 =	1230
1231 =	101231-0	101232-0	101233-0	101234-0	101235-0	101236-0	101237-0	101238-0	101239-0	101240-0 =	1240
1241 =	101241-0	101242-0	101243-0	101244-0	101245-0	101246-0	101247-0	101248-0	101249-0	101250-0 =	1250
1251 =	101251-0	101252-0	101253-0	101254-0	101255-0	101256-0	101257-0	101258-0	101259-0	101260-0 =	1260
1261 =	101261-0	101262-0	101263-0	101264-0	101265-0	101266-0	101267-0	101268-0	101269-0	101270-0 =	1270
1271 =	101271-0	101272-0	101273-0	101274-0	101275-0	101276-0	101277-0	101278-0	101279-0	101280-0 =	1280
1281 =	101281-0	101282-0	101283-0	101284-0	101285-0	101286-0	101287-0	101288-0	101289-0	101290-0 =	1290
1291 =	101291-0	101292-0	101293-0	101294-0	101295-0	101296-0	101297-0	101298-0	101299-0	101300-0 =	1300
1301 =	101301-0	101302-0	101303-0	101304-0	101305-0	101306-0	101307-0	101308-0	101309-0	101310-0 =	1310
1311 =	101311-0	101312-0	101313-0	101314-0	101315-0	101316-0	101317-0	101318-0	101319-0	101320-0 =	1320
1321 =	101321-0	101322-0	101323-0	101324-0	101325-0	101326-0	101327-0	101328-0	101329-0	101330-0 =	1330
1331 =	101331-0	101332-0	101333-0	101334-0	101335-0	101336-0	101337-0	101338-0	101339-0	101340-0 =	1340
1341 =	101341-0	101342-0	101343-0	101344-0	101345-0	101346-0	101347-0	101348-0	101349-0	101350-0 =	1350
1351 =	101351-0	101352-0	101353-0	101354-0	101355-0	101356-0	101357-0	101358-0	101359-0	101360-0 =	1360
1361 =	101361-0	101362-0	101363-0	101364-0	101365-0	101366-0	101367-0	101368-0	101369-0	101370-0 =	1370
1371 =	101371-0	101372-0	101373-0	101374-0	101375-0	101376-0					

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 73

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	90-1	90-2	90-3	91-1	91-2	91-3	1091-1	1091-2	1091-3	4590-1	= 10
11 =	4590-2	4590-3	4590-4	4590-5	4590-6	4591-1	4591-2	4591-3	4591-4	4591-5	= 20
21 =	4591-6	4592-1	4592-2	4592-3	4592-4	4592-5	4592-6	4593-1	4593-2	4593-3	= 30
31 =	4593-4	4593-5	4593-6	13001-1	13001-2	13001-3	13001-4	13001-6	13002-1	13002-2	= 40
41 =	13002-3	13002-4	13002-6	13003-1	13003-2	13003-3	13003-4	13003-6	13004-1	13004-2	= 50
51 =	13004-3	13004-4	13004-6	13005-1	13005-2	13005-3	13005-4	13005-6	13006-1	13006-2	= 60
61 =	13006-3	13006-4	13006-6	13007-1	13007-2	13007-3	13007-4	13007-6	13008-1	13008-2	= 70
71 =	13008-3	13008-4	13008-6	13009-1	13009-2	13009-3	13009-4	13009-6	13010-1	13010-2	= 80
81 =	13010-3	13010-4	13010-6	13011-1	13011-2	13011-3	13011-4	13011-6	13012-1	13012-2	= 90
91 =	13012-3	13012-4	13012-6	13013-1	13013-2	13013-3	13013-4	13013-6	13014-1	13014-2	= 100
101 =	13014-3	13014-4	13014-6	13015-1	13015-2	13015-3	13015-4	13015-6	13016-1	13016-2	= 110
111 =	13016-3	13016-4	13016-6	13017-1	13017-2	13017-3	13017-4	13017-5	13018-1	13018-2	= 120
121 =	13018-3	13018-4	13018-5	13019-1	13019-2	13019-3	13019-4	13019-5	13020-1	13020-2	= 130
131 =	13020-3	13020-4	13020-5	2171-2	2171-3	2197-2	2197-3	2322-2	2322-3	2663-2	= 140
141 =	2663-3	2808-2	2808-3	2809-2	2809-3	2833-2	2833-3	2922-2	2922-3	21081-2	= 150
151 =	21081-3	27106-2	27106-3	27111-2	27111-3	27150-2	27150-3	27164-2	27164-3	27167-2	= 160
161 =	27167-3	27178-2	27178-3	27186-2	27186-3	27193-2	27193-3	27564-2	27564-3	27837-2	= 170
171 =	27837-3	271012-2	271012-3	271013-2	271013-3	271055-2	271055-3	271265-2	271265-3	702171-2	= 180
181 =	702171-3	702197-2	702197-3	702322-2	702322-3	702663-2	702663-3	702808-2	702808-3	702809-2	= 190
191 =	702809-3	702833-2	702833-3	702922-2	702922-3	727106-2	727106-3	727111-2	727111-3	727150-2	= 200
201 =	727150-3	727164-2	727164-3	727167-2	727167-3	727178-2	727178-3	727186-2	727186-3	727193-2	= 210
211 =	727193-3	727564-2	727564-3	727837-2	727837-3	7021081-2	7021081-3	7271012-2	7271012-3	7271013-2	= 220
221 =	7271013-3	7271055-2	7271055-3	7271265-2	7271265-3	212118-2	212118-3	212120-2	212120-3	212125-2	= 230
231 =	212125-3	212385-2	212385-3	212388-2	212388-3	212390-2	212390-3	213110-2	213110-3	213113-2	= 240
241 =	213113-3	213115-2	213115-3	213195-2	213195-3	213198-2	213198-3	213201-2	213201-3	213203-2	= 250
251 =	213203-3	213265-2	213265-3	213268-2	213268-3	312118-2	312118-3	312120-2	312120-3	312125-2	= 260
261 =	312125-3	312385-2	312385-3	312388-2	312388-3	312390-2	312390-3	313195-2	313195-3	313198-2	= 270
271 =	313198-3	313201-2	313201-3	313203-2	313203-3	313265-2	313265-3	313268-2	313268-3	2423-2	= 280
281 =	2423-3	2433-2	2665-1	2665-2	2443-2	2443-3	2679-2	2680-2	702423-2	702423-3	= 290
291 =	702433-2	702665-1	702665-2	702443-2	702443-3	702679-2	702680-2	2651-1	2651-2	2651-3	= 300
301 =	2651-4	2651-5	2651-6	27895-1	27895-2	27895-3	27895-4	27895-5	27895-6	27896-1	= 310
311 =	27896-2	27896-3	27896-4	27896-5	27896-6	1651-1	1651-2	1651-3	1651-4	1651-5	= 320
321 =	1651-6	3076-1	3076-2	3076-3	3401-1	3401-2	3401-3	5218-1	5218-2	5218-3	= 330
331 =	5400-1	5400-2	5400-3	5423-1	5423-2	5423-3	1650-1	1650-2	1650-3	1650-4	= 340
341 =	1650-5	1650-6	210388-2	210388-3	210390-2	210390-3	210393-2	210393-3	210395-2	210395-3	= 350
351 =	210398-2	210398-3	210400-2	210400-3	210405-2	210405-3	210413-2	210413-3	210458-2	210458-3	= 360
361 =	210460-2	210460-3	210463-2	210463-3	210465-2	210465-3	210468-2	210468-3	210470-2	210470-3	= 370
371 =	210475-2	210475-3	210530-2	210530-3	210533-2	210533-3	210535-2	210535-3	210538-2	210538-3	= 380
381 =	210600-2	210600-3	210670-2	210670-3	211040-2	211040-3	211043-2	211043-3	211180-2	211180-3	= 390
391 =	211183-2	211183-3	211320-2	211320-3	211323-2	211323-3	211325-2	211325-3	211460-2	211460-3	= 400
401 =	211463-2	211463-3	211465-2	211465-3	211468-2	211468-3	211470-2	211470-3	211494-2	211494-3	= 410
411 =	211528-2	211528-3	211530-2	211530-3	211533-2	211533-3	211535-2	211535-3	211538-2	211538-3	= 420
421 =	211540-2	211540-3	211545-2	211545-3	211595-2	211595-3	211598-2	211598-3	211600-2	211600-3	= 430
431 =	211603-2	211603-3	211605-2	211605-3	211608-2	211608-3	212040-2	212040-3	212043-2	212043-3	= 440
441 =	212045-2	212045-3	212250-2	212250-3	212253-2	212253-3	212255-2	212255-3	212530-2	212530-3	= 450
451 =	212533-2	212533-3	212535-2	212535-3	213180-2	213180-3	213183-2	213183-3	213185-2	213185-3	= 460
461 =	213188-2	213188-3	213250-2	213250-3	213253-2	213253-3	213255-2	213255-3	213323-2	213323-3	= 470
471 =	213325-2	213325-3	213390-2	213390-3	213393-2	213393-3	213395-2	213395-3	213460-2	213460-3	= 480
481 =	213463-2	213463-3	213465-2	213465-3	213468-2	213468-3	213481-2	213481-3	213528-2	213528-3	= 490
491 =	213530-2	213530-3	213533-2	213533-3	213535-2	213535-3	213538-2	213538-3	213540-2	213540-3	= 500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 74

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
501 =	213600-2	213600-3	960-1	960-2	960-3	961-1	961-2	961-3	962-1	962-2 =	510
511 =	962-3	964-1	964-2	964-3	965-1	965-2	965-3	967-1	967-2	967-3 =	520
521 =	970-1	970-2	970-3	971-1	971-2	971-3	972-1	972-2	972-3	974-1 =	530
531 =	974-2	974-3	975-1	975-2	975-3	271218-2	271217-1	271217-2	271217-3	271216-1 =	540
541 =	271216-2	271219-1	271219-2	271219-3	27355-1	27355-2	27355-3	701383-2	701383-3	701405-2 =	550
551 =	701405-3	701963-1	701963-2	701963-3	701393-2	1383-2	1383-3	1405-2	1405-3	901963-1 =	560
561 =	901963-2	901963-3	1393-2	701423-2	701423-3	701445-2	701445-3	701965-1	701965-2	701965-3 =	570
571 =	701433-2	1423-2	1423-3	1445-2	1445-3	901965-1	901965-2	901965-3	1433-2	701443-2 =	580
581 =	701443-3	702365-2	702365-3	702661-1	702661-2	702661-3	702353-2	1443-2	1443-3	2365-2 =	590
591 =	2365-3	2661-1	2661-2	2661-3	2353-2	727355-2	727355-3	7271219-2	7271219-3	7271217-1 =	600
601 =	7271217-2	7271217-3	727435-2	6032-1	6032-2	6032-3	6060-1	6060-2	6060-3	6061-1 =	610
611 =	6061-2	6061-3	6064-1	6064-2	6064-3	6081-1	6081-2	6081-3	6081-4	6081-5 =	620
621 =	6082-1	6082-2	6082-3	6083-1	6083-2	6083-3	6084-1	6084-2	6084-3	6085-1 =	630
631 =	6085-2	6085-3	6067-1	6067-2	6067-3	6068-1	6068-2	6068-3	6071-1	6071-2 =	640
641 =	6071-3	6069-1	6069-2	6069-3	6070-1	6070-2	6070-3	6073-1	6073-2	6073-3 =	650
651 =	6074-1	6074-2	6074-3	6076-1	6076-2	6076-3	6080-1	6080-2	6080-3	6080-4 =	660
661 =	6080-5	6086-1	6086-2	6086-3	6089-1	6089-2	6089-3	6087-1	6087-2	6087-3 =	670
671 =	6091-1	6091-2	6091-3	6092-1	6092-2	6092-3	6093-1	6093-2	6093-3	6094-1 =	680
681 =	6094-2	6094-3	6095-1	6095-2	6095-3	1-1	1-3	2-1	2-3	3-1 =	690
691 =	3-2	3-3	12-1	12-2	12-3	14-1	14-2	14-3	84-3	119-1 =	700
701 =	119-2	119-3	153-1	153-2	153-3	161-3	192-1	192-2	192-3	233-1 =	710
711 =	233-3	249-3	297-1	297-3	299-3	322-2	322-3	323-2	323-3	324-3 =	720
721 =	325-3	326-3	327-3	328-3	329-1	329-3	330-1	330-3	331-3	332-1 =	730
731 =	332-2	332-3	333-1	333-3	334-2	334-3	335-3	337-2	337-3	338-2 =	740
741 =	338-3	339-3	340-3	341-3	343-3	344-3	345-3	346-3	347-3	349-1 =	750
751 =	349-2	349-3	350-1	350-3	351-1	351-3	352-3	354-1	354-3	356-1 =	760
761 =	356-3	357-3	358-1	358-2	358-3	359-2	359-3	360-1	360-3	361-3 =	770
771 =	363-1	363-3	364-3	365-1	365-2	365-3	366-2	366-3	367-1	367-3 =	780
781 =	368-3	456-1	456-3	457-1	457-3	458-1	458-2	458-3	467-1	467-2 =	790
791 =	467-3	469-1	469-2	469-3	539-3	574-1	574-2	574-3	608-1	608-2 =	800
801 =	608-3	616-3	647-1	647-2	647-3	688-1	688-3	704-3	752-1	752-3 =	810
811 =	754-3	777-2	777-3	778-2	778-3	779-3	780-3	781-3	782-3	783-3 =	820
821 =	784-1	784-3	785-1	785-3	786-3	787-1	787-2	787-3	788-1	788-3 =	830
831 =	789-2	789-3	790-3	792-2	792-3	793-2	793-3	794-3	795-3	796-3 =	840
841 =	798-3	799-3	800-3	801-3	802-3	804-1	804-2	804-3	805-1	805-3 =	850
851 =	806-1	806-3	807-3	809-1	809-3	811-1	811-3	812-3	813-1	813-2 =	860
861 =	813-3	814-2	814-3	815-1	815-3	816-3	818-1	818-3	819-3	820-1 =	870
871 =	820-2	820-3	821-2	821-3	822-1	822-3	823-3	912-1	912-2	912-3 =	880
881 =	913-1	913-2	913-3	918-1	918-2	918-3	919-1	919-2	919-3	942-1 =	890
891 =	942-2	942-3	948-1	948-2	948-3	958-1	959-1	959-2	959-3	963-1 =	900
901 =	963-2	963-3	966-1	968-1	969-1	969-2	969-3	973-1	973-2	973-3 =	910
911 =	976-1	977-1	977-2	977-3	980-1	980-2	980-3	980-4	980-6	981-1 =	920
921 =	981-2	981-3	981-4	981-6	982-1	982-3	983-1	983-3	1012-1	1012-2 =	930
931 =	1012-3	1016-1	1016-2	1016-3	1036-1	1036-2	1036-3	1047-1	1047-2	1047-3 =	940
941 =	1047-4	1047-5	1047-6	1048-1	1048-2	1048-3	1048-4	1048-5	1048-6	1065-1 =	950
951 =	1065-2	1065-3	1067-1	1067-2	1067-3	1069-1	1069-2	1069-3	1071-1	1071-2 =	960
961 =	1071-3	1090-1	1090-2	1090-3	1093-1	1093-2	1093-3	1127-1	1127-2	1127-3 =	970
971 =	1127-4	1127-5	1127-6	1137-1	1137-2	1137-3	1142-1	1142-2	1142-3	1143-1 =	980
981 =	1143-2	1143-3	1145-1	1145-2	1145-3	1148-1	1148-2	1148-3	1150-1	1150-2 =	990
991 =	1150-3	1151-1	1151-2	1151-3	1154-1	1154-2	1154-3	1156-1	1156-2	1156-3 =	1000

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 75

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1001 =	1157-1	1157-2	1157-3	1160-1	1160-2	1160-3	1161-1	1161-2	1161-3	1167-1 =	1010
1011 =	1167-2	1167-3	1168-1	1168-2	1168-3	1169-1	1169-2	1169-3	1170-1	1170-2 =	1020
1021 =	1170-3	1173-1	1173-2	1173-3	1174-1	1174-2	1174-3	1183-1	1183-2	1183-3 =	1030
1031 =	1184-1	1184-2	1184-3	1185-1	1185-2	1185-3	1186-1	1186-2	1186-3	1189-1 =	1040
1041 =	1189-2	1189-3	1190-1	1190-2	1190-3	1203-3	1204-3	1205-1	1205-2	1205-3 =	1050
1051 =	1206-3	1207-3	1208-1	1208-2	1208-3	1214-1	1214-2	1214-3	1215-1	1215-2 =	1060
1061 =	1215-3	1216-1	1216-2	1216-3	1243-1	1243-2	1243-3	1244-1	1244-2	1244-3 =	1070
1071 =	1245-1	1245-2	1245-3	1117-1	1117-2	1117-3	1117-4	1117-5	1117-6	100-1 =	1080
1081 =	100-2	100-3	100-4	100-6	101-1	101-2	101-3	101-4	101-6	102-1 =	1090
1091 =	102-2	102-3	102-4	102-6	103-1	103-2	103-3	103-4	103-6	104-1 =	1100
1101 =	104-2	104-3	104-4	104-6	105-1	105-2	105-3	105-4	105-6	106-1 =	1110
1111 =	106-2	106-3	106-4	106-6	107-1	107-2	107-3	107-4	107-6	108-1 =	1120
1121 =	108-2	108-3	108-4	108-6	109-1	109-2	109-3	109-4	109-6	110-1 =	1130
1131 =	110-2	110-3	110-4	110-6	111-1	111-2	111-3	111-4	111-6	112-2 =	1140
1141 =	113-2	114-2	115-1	115-2	115-3	115-4	115-5	115-6	116-1	116-2 =	1150
1151 =	116-3	116-4	116-5	116-6	10001-1	10001-2	10001-3	10002-1	10002-2	10002-3 =	1160
1161 =	10004-1	10004-2	10004-3	10005-1	10005-2	10005-3	10006-1	10006-2	10006-3	10007-1 =	1170
1171 =	10007-2	10007-3	10008-1	10008-2	10008-3	10009-1	10009-2	10009-3	10010-1	10010-2 =	1180
1181 =	10010-3	10011-1	10011-2	10011-3	10012-1	10012-2	10012-3	10013-1	10013-2	10013-3 =	1190
1191 =	10016-1	10016-2	10016-3	10017-1	10017-2	10017-3	10018-1	10018-2	10018-3	10019-1 =	1200
1201 =	10019-2	10019-3	10020-1	10020-2	10020-3	10021-1	10021-2	10021-3	10022-1	10022-2 =	1210
1211 =	10022-3	10023-1	10023-2	10023-3	10025-1	10025-2	10025-3	10026-1	10026-2	10026-3 =	1220
1221 =	10027-1	10027-2	10027-3	10028-1	10028-2	10028-3	10029-1	10029-2	10029-3	10030-1 =	1230
1231 =	10030-2	10030-3	10031-1	10031-2	10031-3	10032-1	10032-2	10032-3	10033-1	10033-2 =	1240
1241 =	10033-3	10034-1	10034-2	10034-3	10035-1	10035-2	10035-3	10036-1	10036-2	10036-3 =	1250
1251 =	10037-1	10037-2	10037-3	10038-1	10038-2	10038-3	10039-1	10039-2	10039-3	10040-1 =	1260
1261 =	10040-2	10040-3	10041-1	10041-2	10041-3	10042-1	10042-2	10042-3	10043-1	10043-2 =	1270
1271 =	10043-3	10044-1	10044-2	10044-3	10045-1	10045-2	10045-3	10046-1	10046-2	10046-3 =	1280
1281 =	10047-1	10047-2	10047-3	10048-1	10048-2	10048-3	10049-1	10049-2	10049-3	10050-1 =	1290
1291 =	10050-2	10050-3	10051-1	10051-2	10051-3	10052-1	10052-2	10052-3	10053-1	10053-2 =	1300
1301 =	10053-3	10054-1	10054-2	10054-3	10055-1	10055-2	10055-3	10056-1	10056-2	10056-3 =	1310
1311 =	10057-1	10057-2	10057-3	10058-1	10058-2	10058-3	10059-1	10059-2	10059-3	10060-1 =	1320
1321 =	10060-2	10060-3	10061-1	10061-2	10061-3	10062-1	10062-2	10062-3	10063-1	10063-2 =	1330
1331 =	10063-3	10064-1	10064-2	10064-3	10065-1	10065-2	10065-3	10066-1	10066-2	10066-3 =	1340
1341 =	10067-1	10067-2	10067-3	10068-1	10068-2	10068-3	10069-1	10069-2	10069-3	10070-1 =	1350
1351 =	10070-2	10070-3	10071-1	10071-2	10071-3	10072-1	10072-2	10072-3	10073-1	10073-2 =	1360
1361 =	10073-3	10074-1	10074-2	10074-3	10075-1	10075-2	10075-3	10076-1	10076-2	10076-3 =	1370
1371 =	10077-1	10077-2	10077-3	10078-1	10078-2	10078-3	10079-1	10079-2	10079-3	10080-1 =	1380
1381 =	10080-2	10080-3	10081-1	10081-2	10081-3	10082-1	10082-2	10082-3	10083-1	10083-2 =	1390
1391 =	10083-3	100001-0	100002-0	100003-0	100004-0	100005-0	100006-0	100007-0	100008-0	100009-0 =	1400
1401 =	100010-0	100011-0	100012-0	100013-0	100014-0	100015-0	100016-0	100017-0	100018-0	100019-0 =	1410
1411 =	100020-0	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0 =	1420
1421 =	100030-0	100031-0	100032-0	100033-0	100034-0	100035-0	100036-0	100037-0	100038-0	100039-0 =	1430
1431 =	100040-0	100041-0	100042-0	100043-0	100044-0	100045-0	100046-0	100047-0	100048-0	100049-0 =	1440
1441 =	100050-0	100051-0	100052-0	100053-0	100054-0	100055-0	100056-0	100057-0	100058-0	100059-0 =	1450
1451 =	100060-0	100061-0	100062-0	100063-0	100064-0	100065-0	100066-0	100067-0	100068-0	100069-0 =	1460
1461 =	100070-0	100071-0	100072-0	100073-0	100074-0	100075-0	100076-0	100077-0	100078-0	100079-0 =	1470
1471 =	100080-0	100081-0	100082-0	100083-0	100084-0	100085-0	100086-0	100087-0	100088-0	100089-0 =	1480
1481 =	100090-0	100091-0	100092-0	100093-0	100094-0	100095-0	100096-0	100097-0	100098-0	100099-0 =	1490
1491 =	100100-0	100101-0	100102-0	100103-0	100104-0	100105-0	100106-0	100107-0	100108-0	100109-0 =	1500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 76

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1501 =	100110-0	100111-0	100112-0	100113-0	100114-0	100115-0	100116-0	100117-0	100118-0	100119-0 =	1510
1511 =	100120-0	100121-0	100122-0	100123-0	100124-0	100125-0	100126-0	100127-0	100128-0	100129-0 =	1520
1521 =	100130-0	100131-0	100132-0	100133-0	100134-0	100135-0	100136-0	100137-0	100138-0	100139-0 =	1530
1531 =	100140-0	100141-0	100142-0	100143-0	100144-0	100145-0	100146-0	100147-0	100148-0	100149-0 =	1540
1541 =	100150-0	100151-0	100152-0	100153-0	100154-0	100155-0	100156-0	100157-0	100158-0	100159-0 =	1550
1551 =	100160-0	100161-0	100162-0	100163-0	100164-0	100165-0	100166-0	100167-0	100168-0	100169-0 =	1560
1561 =	100170-0	100171-0	100172-0	100173-0	100174-0	100175-0	100176-0	100177-0	100178-0	100179-0 =	1570
1571 =	100180-0	100181-0	100182-0	100183-0	100184-0	100185-0	100186-0	100187-0	100188-0	100189-0 =	1580
1581 =	100190-0	100191-0	100192-0	100193-0	100194-0	100195-0	100196-0	100197-0	100198-0	100199-0 =	1590
1591 =	100200-0	100201-0	100202-0	100203-0	100204-0	100205-0	100206-0	100207-0	100208-0	100209-0 =	1600
1601 =	100210-0	100211-0	100212-0	100213-0	100214-0	100215-0	100216-0	100217-0	100218-0	100219-0 =	1610
1611 =	100220-0	100221-0	100222-0	100223-0	100224-0	100225-0	100226-0	100227-0	100228-0	100229-0 =	1620
1621 =	100230-0	100231-0	100232-0	100233-0	100234-0	100235-0	100236-0	100237-0	100238-0	100239-0 =	1630
1631 =	100240-0	100241-0	100242-0	100243-0	100244-0	100245-0	100246-0	100247-0	100248-0	100249-0 =	1640
1641 =	100250-0	100251-0	100252-0	100253-0	100254-0	100255-0	100256-0	100257-0	100258-0	100259-0 =	1650
1651 =	100260-0	100261-0	100262-0	100263-0	100264-0	100265-0	100266-0	100267-0	100268-0	100269-0 =	1660
1661 =	100270-0	100271-0	100272-0	100273-0	100274-0	100275-0	100276-0	100277-0	100278-0	100279-0 =	1670
1671 =	100280-0	100281-0	100282-0	100283-0	100284-0	100285-0	100286-0	100287-0	100288-0	100289-0 =	1680
1681 =	100290-0	100291-0	100292-0	100293-0	100294-0	100295-0	100296-0	100297-0	100298-0	100299-0 =	1690
1691 =	100300-0	100301-0	100302-0	100303-0	100304-0	100305-0	100306-0	100307-0	100308-0	100309-0 =	1700
1701 =	100310-0	100311-0	100312-0	100313-0	100314-0	100315-0	100316-0	100317-0	100318-0	100319-0 =	1710
1711 =	100320-0	100321-0	100322-0	100323-0	100324-0	100325-0	100326-0	100327-0	100328-0	100329-0 =	1720
1721 =	100330-0	100331-0	100332-0	100333-0	100334-0	100335-0	100336-0	100337-0	100338-0	100339-0 =	1730
1731 =	100340-0	100341-0	100342-0	100343-0	100344-0	100345-0	100346-0	100347-0	100348-0	100349-0 =	1740
1741 =	100350-0	100351-0	100352-0	100353-0	100354-0	100355-0	100356-0	100357-0	100358-0	100359-0 =	1750
1751 =	100360-0	100361-0	100362-0	100363-0	100364-0	100365-0	100366-0	100367-0	100368-0	100369-0 =	1760
1761 =	100370-0	100371-0	100372-0	100373-0	100374-0	100375-0	100376-0	100377-0	100378-0	100379-0 =	1770
1771 =	100380-0	100381-0	100382-0	100383-0	100384-0	100385-0	100386-0	100387-0	100388-0	100389-0 =	1780
1781 =	100390-0	100391-0	100392-0	100393-0	100394-0	100395-0	100396-0	100397-0	100398-0	100399-0 =	1790
1791 =	100400-0	100401-0	100402-0	100403-0	100404-0	100405-0	100406-0	100407-0	100408-0	100409-0 =	1800
1801 =	100410-0	100411-0	100412-0	100413-0	100414-0	100415-0	100416-0	100417-0	100418-0	100419-0 =	1810
1811 =	100420-0	100421-0	100422-0	100423-0	100424-0	100425-0	100426-0	100427-0	100428-0	100429-0 =	1820
1821 =	100430-0	100431-0	100432-0	100433-0	100434-0	100435-0	100436-0	100437-0	100438-0	100439-0 =	1830
1831 =	100440-0	100441-0	100442-0	100443-0	100444-0	100445-0	100446-0	100447-0	100448-0	100449-0 =	1840
1841 =	100450-0	100451-0	100452-0	100453-0	100454-0	100455-0	100456-0	100457-0	100458-0	100459-0 =	1850
1851 =	100460-0	100461-0	100462-0	100463-0	100464-0	100465-0	100466-0	100467-0	100468-0	100469-0 =	1860
1861 =	100470-0	100471-0	100472-0	100473-0	100474-0	100475-0	100476-0	100477-0	100478-0	100479-0 =	1870
1871 =	100480-0	100481-0	100482-0	100483-0	100484-0	100485-0	100486-0	100487-0	100488-0	100489-0 =	1880
1881 =	100490-0	100491-0	100492-0	100493-0	100494-0	100495-0	100496-0	100497-0	100498-0	100499-0 =	1890
1891 =	100500-0	100501-0	100502-0	100503-0	100504-0	100505-0	100506-0	100507-0	100508-0	100509-0 =	1900
1901 =	100510-0	100511-0	100512-0	100513-0	100514-0	100515-0	100516-0	100517-0	100518-0	100519-0 =	1910
1911 =	100520-0	100521-0	100522-0	100523-0	100524-0	100525-0	100526-0	100527-0	100528-0	100529-0 =	1920
1921 =	100530-0	100531-0	100532-0	100533-0	100534-0	100535-0	100536-0	100537-0	100538-0	100539-0 =	1930
1931 =	100540-0	100541-0	100542-0	100543-0	100544-0	100545-0	100546-0	100547-0	100548-0	100549-0 =	1940
1941 =	100550-0	100551-0	100552-0	100553-0	100554-0	100555-0	100556-0	100557-0	100558-0	100559-0 =	1950
1951 =	100560-0	100561-0	100562-0	100563-0	100564-0	100565-0	100566-0	100567-0	100568-0	100569-0 =	1960
1961 =	100570-0	100571-0	100572-0	100573-0	100574-0	100575-0	100576-0	100577-0	100578-0	100579-0 =	1970
1971 =	100580-0	100581-0	100582-0	100583-0	100584-0	100585-0	100586-0	100587-0	100588-0	100589-0 =	1980
1981 =	100590-0	100591-0	100592-0	100593-0	100594-0	100595-0	100596-0	100597-0	100598-0	100599-0 =	1990
1991 =	100600-0	100601-0	100602-0	100603-0	100604-0	100605-0	100606-0	100607-0	100608-0	100609-0 =	2000

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 77

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
2001 =	100610-0	100611-0	100612-0	100613-0	100614-0	100615-0	100616-0	100617-0	100618-0	100619-0 =	2010
2011 =	100620-0	100621-0	100622-0	100623-0	100624-0	100625-0	100626-0	100627-0	100628-0	100629-0 =	2020
2021 =	100630-0	100631-0	100632-0	100633-0	100634-0	100635-0	100636-0	100637-0	100638-0	100639-0 =	2030
2031 =	100640-0	100641-0	100642-0	100643-0	100644-0	100645-0	100646-0	100647-0	100648-0	100649-0 =	2040
2041 =	100650-0	100651-0	100652-0	100653-0	100654-0	100655-0	100656-0	100657-0	100658-0	100659-0 =	2050
2051 =	100660-0	100661-0	100662-0	100663-0	100664-0	100665-0	100666-0	100667-0	100668-0	100669-0 =	2060
2061 =	100670-0	100671-0	100672-0	100673-0	100674-0	100675-0	100676-0	100677-0	100678-0	100679-0 =	2070
2071 =	100680-0	100681-0	100682-0	100683-0	100684-0	100685-0	100686-0	100687-0	100688-0	100689-0 =	2080
2081 =	100690-0	100691-0	100692-0	100693-0	100694-0	100695-0	100696-0	100697-0	100698-0	100699-0 =	2090
2091 =	100700-0	100701-0	100702-0	100703-0	100704-0	100705-0	100706-0	100707-0	100708-0	100709-0 =	2100
2101 =	100710-0	100711-0	100712-0	100713-0	100714-0	100715-0	100716-0	100717-0	100718-0	100719-0 =	2110
2111 =	100720-0	100721-0	100722-0	100723-0	100724-0	100725-0	100726-0	100727-0	100728-0	100729-0 =	2120
2121 =	100730-0	100731-0	100732-0	100733-0	100734-0	100735-0	100736-0	100737-0	100738-0	100739-0 =	2130
2131 =	100740-0	100741-0	100742-0	100743-0	100744-0	100745-0	100746-0	100747-0	100748-0	100749-0 =	2140
2141 =	100750-0	100751-0	100752-0	100753-0	100754-0	100755-0	100756-0	100757-0	100758-0	100759-0 =	2150
2151 =	100760-0	100761-0	100762-0	100763-0	100764-0	100765-0	100766-0	100767-0	100768-0	100769-0 =	2160
2161 =	100770-0	100771-0	100772-0	100773-0	100774-0	100775-0	100776-0	100777-0	100778-0	100779-0 =	2170
2171 =	100780-0	100781-0	100782-0	100783-0	100784-0	100785-0	100786-0	100787-0	100788-0	100789-0 =	2180
2181 =	100790-0	100791-0	100792-0	100793-0	100794-0	100795-0	100796-0	100797-0	100798-0	100799-0 =	2190
2191 =	100800-0	100801-0	100802-0	100803-0	100804-0	100805-0	100806-0	100807-0	100808-0	100809-0 =	2200
2201 =	100810-0	100811-0	100812-0	100813-0	100814-0	100815-0	100816-0	100817-0	100818-0	100819-0 =	2210
2211 =	100820-0	100821-0	100822-0	100823-0	100824-0	100825-0	100826-0	100827-0	100828-0	100829-0 =	2220
2221 =	100830-0	100831-0	100832-0	100833-0	100834-0	100835-0	100836-0	100837-0	100838-0	100839-0 =	2230
2231 =	100840-0	100841-0	100842-0	100843-0	100844-0	100845-0	100846-0	100847-0	100848-0	100849-0 =	2240
2241 =	100850-0	100851-0	100852-0	100853-0	100854-0	100855-0	100856-0	100857-0	100858-0	100859-0 =	2250
2251 =	100860-0	100861-0	100862-0	100863-0	100864-0	100865-0	100866-0	100867-0	100868-0	100869-0 =	2260
2261 =	100870-0	100871-0	100872-0	100873-0	100874-0	100875-0	100876-0	100877-0	100878-0	100879-0 =	2270
2271 =	100880-0	100881-0	100882-0	100883-0	100884-0	100885-0	100886-0	100887-0	100888-0	100889-0 =	2280
2281 =	100890-0	100891-0	100892-0	100893-0	100894-0	100895-0	100896-0	100897-0	100898-0	100899-0 =	2290
2291 =	100900-0	100901-0	100902-0	100903-0	100904-0	100905-0	100906-0	100907-0	100908-0	100909-0 =	2300
2301 =	100910-0	100911-0	100912-0	100913-0	100914-0	100915-0	100916-0	100917-0	100918-0	100919-0 =	2310
2311 =	100920-0	100921-0	100922-0	100923-0	100924-0	100925-0	100926-0	100927-0	100928-0	100929-0 =	2320
2321 =	100930-0	100931-0	100932-0	100933-0	100934-0	100935-0	100936-0	100937-0	100938-0	100939-0 =	2330
2331 =	100940-0	100941-0	100942-0	100943-0	100944-0	100945-0	100946-0	100947-0	100948-0	100949-0 =	2340
2341 =	100950-0	100951-0	100952-0	100953-0	100954-0	100955-0	100956-0	100957-0	100958-0	100959-0 =	2350
2351 =	100960-0	100961-0	100962-0	100963-0	100964-0	100965-0	100966-0	100967-0	100968-0	100969-0 =	2360
2361 =	100970-0	100971-0	100972-0	100973-0	100974-0	100975-0	100976-0	100977-0	100978-0	100979-0 =	2370
2371 =	100980-0	100981-0	100982-0	100983-0	100984-0	100985-0	100986-0	100987-0	100988-0	100989-0 =	2380
2381 =	100990-0	100991-0	100992-0	100993-0	100994-0	100995-0	100996-0	100997-0	100998-0	100999-0 =	2390
2391 =	101000-0	101001-0	101002-0	101003-0	101004-0	101005-0	101006-0	101007-0	101008-0	101009-0 =	2400
2401 =	101010-0	101011-0	101012-0	101013-0	101014-0	101015-0	101016-0	101017-0	101018-0	101019-0 =	2410
2411 =	101020-0	101021-0	101022-0	101023-0	101024-0	101025-0	101026-0	101027-0	101028-0	101029-0 =	2420
2421 =	101030-0	101031-0	101032-0	101033-0	101034-0	101035-0	101036-0	101037-0	101038-0	101039-0 =	2430
2431 =	101040-0	101041-0	101042-0	101043-0	101044-0	101045-0	101046-0	101047-0	101048-0	101049-0 =	2440
2441 =	101050-0	101051-0	101052-0	101053-0	101054-0	101055-0	101056-0	101057-0	101058-0	101059-0 =	2450
2451 =	101060-0	101061-0	101062-0	101063-0	101064-0	101065-0	101066-0	101067-0	101068-0	101069-0 =	2460
2461 =	101070-0	101071-0	101072-0	101073-0	101074-0	101075-0	101076-0	101077-0	101078-0	101079-0 =	2470
2471 =	101080-0	101081-0	101082-0	101083-0	101084-0	101085-0	101086-0	101087-0	101088-0	101089-0 =	2480
2481 =	101090-0	101091-0	101092-0	101093-0	101094-0	101095-0	101096-0	101097-0	101098-0	101099-0 =	2490
2491 =	101100-0	101101-0	101102-0	101103-0	101104-0	101105-0	101106-0	101107-0	101108-0	101109-0 =	2500

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:36 CDT Page 78

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
2501 =	101110-0	101111-0	101112-0	101113-0	101114-0	101115-0	101116-0	101117-0	101118-0	101119-0 =	2510
2511 =	101120-0	101121-0	101122-0	101123-0	101124-0	101125-0	101126-0	101127-0	101128-0	101129-0 =	2520
2521 =	101130-0	101131-0	101132-0	101133-0	101134-0	101135-0	101136-0	101137-0	101138-0	101139-0 =	2530
2531 =	101140-0	101141-0	101142-0	101143-0	101144-0	101145-0	101146-0	101147-0	101148-0	101149-0 =	2540
2541 =	101150-0	101151-0	101152-0	101153-0	101154-0	101155-0	101156-0	101157-0	101158-0	101159-0 =	2550
2551 =	101160-0	101161-0	101162-0	101163-0	101164-0	101165-0	101166-0	101167-0	101168-0	101169-0 =	2560
2561 =	101170-0	101171-0	101172-0	101173-0	101174-0	101175-0	101176-0	101177-0	101178-0	101179-0 =	2570
2571 =	101180-0	101181-0	101182-0	101183-0	101184-0	101185-0	101186-0	101187-0	101188-0	101189-0 =	2580
2581 =	101190-0	101191-0	101192-0	101193-0	101194-0	101195-0	101196-0	101197-0	101198-0	101199-0 =	2590
2591 =	101200-0	101201-0	101202-0	101203-0	101204-0	101205-0	101206-0	101207-0	101208-0	101209-0 =	2600
2601 =	101210-0	101211-0	101212-0	101213-0	101214-0	101215-0	101216-0	101217-0	101218-0	101219-0 =	2610
2611 =	101220-0	101221-0	101222-0	101223-0	101224-0	101225-0	101226-0	101227-0	101228-0	101229-0 =	2620
2621 =	101230-0	101231-0	101232-0	101233-0	101234-0	101235-0	101236-0	101237-0	101238-0	101239-0 =	2630
2631 =	101240-0	101241-0	101242-0	101243-0	101244-0	101245-0	101246-0	101247-0	101248-0	101249-0 =	2640
2641 =	101250-0	101251-0	101252-0	101253-0	101254-0	101255-0	101256-0	101257-0	101258-0	101259-0 =	2650
2651 =	101260-0	101261-0	101262-0	101263-0	101264-0	101265-0	101266-0	101267-0	101268-0	101269-0 =	2660
2661 =	101270-0	101271-0	101272-0	101273-0	101274-0	101275-0	101276-0	101277-0	101278-0	101279-0 =	2670
2671 =	101280-0	101281-0	101282-0	101283-0	101284-0	101285-0	101286-0	101287-0	101288-0	101289-0 =	2680
2681 =	101290-0	101291-0	101292-0	101293-0	101294-0	101295-0	101296-0	101297-0	101298-0	101299-0 =	2690
2691 =	101300-0	101301-0	101302-0	101303-0	101304-0	101305-0	101306-0	101307-0	101308-0	101309-0 =	2700
2701 =	101310-0	101311-0	101312-0	101313-0	101314-0	101315-0	101316-0	101317-0	101318-0	101319-0 =	2710
2711 =	101320-0	101321-0	101322-0	101323-0	101324-0	101325-0	101326-0	101327-0	101328-0	101329-0 =	2720
2721 =	101330-0	101331-0	101332-0	101333-0	101334-0	101335-0	101336-0	101337-0	101338-0	101339-0 =	2730
2731 =	101340-0	101341-0	101342-0	101343-0	101344-0	101345-0	101346-0	101347-0	101348-0	101349-0 =	2740
2741 =	101350-0	101351-0	101352-0	101353-0	101354-0	101355-0	101356-0	101357-0	101358-0	101359-0 =	2750
2751 =	101360-0	101361-0	101362-0	101363-0	101364-0	101365-0	101366-0	101367-0	101368-0	101369-0 =	2760
2761 =	101370-0	101371-0	101372-0	101373-0	101374-0	101375-0	101376-0				

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                        Mon Sep 01 2008 12:30:36 CDT                        Page   79

                                        Z E R O   M A S S   D O F S

                                The following DOFs have mass less than 1.0E-09:

     ---  1 --- ---  2 --- ---  3 --- ---  4 --- ---  5 --- ---  6 --- ---  7 --- ---  8 --- ---  9 --- --- 10 ---
1 =   213201-3   213203-3   313201-3   313203-3   210413-3   213481-3
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 80

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  5.237171E+02 -1.417024E-06  1.086452E-03  3.157567E-01  1.953086E+05 -3.932641E+02 *
* -1.417024E-06  5.248957E+02  3.796654E-07 -1.956999E+05 -8.222648E-01  5.686831E+05 *
*  1.086452E-03  3.796654E-07  5.248618E+02  3.917894E+02 -5.685901E+05  2.008035E-04 *
*  3.157567E-01 -1.956999E+05  3.917894E+02  8.394406E+07 -5.339380E+05 -2.136465E+08 *
*  1.953086E+05 -8.222648E-01 -5.685901E+05 -5.339380E+05  7.744825E+08 -1.248652E+05 *
* -3.932641E+02  5.686831E+05  2.008035E-04 -2.136465E+08 -1.248652E+05  7.053649E+08 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	5.237171E+02	6.029146E-04	7.509095E-01	3.729277E+02
Y	5.248957E+02	1.083421E+03	-1.566530E-03	3.728357E+02
Z	5.248618E+02	1.083314E+03	7.464620E-01	3.825836E-07

I(S)

```
*  1.097987E+07  1.095072E+05  1.621161E+06 *
*  1.095072E+05  8.568501E+07 -2.179394E+04 *
*  1.621161E+06 -2.179394E+04  8.924140E+07 *
```

I(Q)

```
*  1.094615E+07                              *
*                8.568501E+07                *
*                              8.927512E+07 *
```

Q

```
* -9.997846E-01 -1.319787E-03 -2.071020E-02 *
* -1.458845E-03  9.999765E-01  6.700813E-03 *
* -2.070087E-02 -6.729583E-03  9.997631E-01 *
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 81

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
1.083367E+03	7.486857E-01	3.728817E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 82

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = C.G.

M O

```
*  5.237171E+02 -1.417024E-06  1.086452E-03  3.144149E-01  2.526405E+01 -1.163080E+00 *
* -1.417024E-06  5.248957E+02  3.796654E-07  2.414123E+01 -8.213251E-01  2.812673E+01 *
*  1.086452E-03  3.796654E-07  5.248618E+02 -1.167019E+00  2.771979E+01  6.028976E-04 *
*  3.144149E-01  2.414123E+01 -1.167019E+00  1.097987E+07 -1.099309E+05 -1.621159E+06 *
*  2.526405E+01 -8.213251E-01  2.771979E+01 -1.099309E+05  8.568413E+07  2.268478E+04 *
* -1.163080E+00  2.812673E+01  6.028976E-04 -1.621159E+06  2.268478E+04  8.924140E+07 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	5.237171E+02	6.003525E-04	2.220817E-03	4.823987E-02
Y	5.248957E+02	5.358536E-02	-1.564740E-03	-4.599242E-02
Z	5.248618E+02	-5.281350E-02	-2.223479E-03	1.148679E-06

I(S)

```
*  1.097987E+07  1.099309E+05  1.621160E+06 *
*  1.099309E+05  8.568413E+07 -2.268484E+04 *
*  1.621160E+06 -2.268484E+04  8.924140E+07 *
```

I(Q)

```
*  1.094614E+07                              *
*                8.568412E+07                *
*                             8.927514E+07 *
```

Q

```
* -9.997846E-01 -1.320071E-03 -2.071054E-02 *
* -1.464283E-03  9.999748E-01  6.949628E-03 *
* -2.070085E-02 -6.978458E-03  9.997614E-01 *
```

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 83

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	5.23717E+02	-1.41702E-06	1.08645E-03	3.14415E-01	2.52640E+01	-1.16308E+00
T2:	-1.41702E-06	5.24896E+02	3.79665E-07	2.41412E+01	-8.21325E-01	2.81267E+01
T3:	1.08645E-03	3.79665E-07	5.24862E+02	-1.16702E+00	2.77198E+01	6.02898E-04
R1:	3.14415E-01	2.41412E+01	-1.16702E+00	1.09799E+07	-1.09931E+05	-1.62116E+06
R2:	2.52640E+01	-8.21325E-01	2.77198E+01	-1.09931E+05	8.56841E+07	2.26848E+04
R3:	-1.16308E+00	2.81267E+01	6.02898E-04	-1.62116E+06	2.26848E+04	8.92414E+07

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-3.36150E-03	-3.61490E-03	2.64725E-03	4.26876E-02	-1.12643E+00	-1.34195E+00
T2:	-3.61349E-03	9.63909E-01	1.43046E-04	-3.80708E+01	2.02143E-01	-2.11398E+01
T3:	2.64765E-03	1.44156E-04	4.09050E-02	-4.52800E-02	1.12753E+01	-2.58590E-01
R1:	4.28365E-02	-3.80708E+01	-4.53606E-02	7.21739E+03	-1.67236E+02	2.77555E+02
R2:	-1.12639E+00	2.02432E-01	1.12753E+01	-1.67218E+02	6.89522E+03	8.32341E+02
R3:	-1.34204E+00	-2.11397E+01	-2.58407E-01	2.77584E+02	8.32357E+02	3.26652E+03

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.99988E-04	6.13461E-06	-1.85799E-04	-5.79590E-04	8.13646E-02	2.58841E-03
T2:	2.97954E-05	-2.52463E-06	-3.08744E-05	3.79033E-04	1.94277E-02	1.76391E-03
T3:	-2.06573E-04	-5.28071E-06	1.88576E-04	4.47743E-04	-8.08044E-02	-3.41181E-03
R1:	-5.11480E-03	3.24198E-04	5.50558E-03	-4.96160E-02	-3.48080E+00	-2.38599E-01
R2:	8.68356E-02	4.35589E-03	-7.28396E-02	-4.79769E-01	2.37822E+01	8.87420E-01
R3:	1.20220E-02	1.75994E-03	-1.37692E-02	-2.25423E-01	6.90274E+00	-7.18325E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 84

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	90-1	2.13534E-05	5.09247E-06	4.80220E-06	7.76535E-02	-8.93522E-01	6.99841E-02
2	90-2	-4.67371E-06	-5.18365E-06	3.74993E-08	-2.56841E+00	8.65944E-02	1.45852E-01
3	90-3	6.10683E-06	2.43855E-07	-2.22044E-06	7.77214E-02	7.34768E+00	9.21811E-02
4	91-1	-3.15983E-05	3.24758E-03	-2.56741E-03	7.46283E+00	5.99306E+01	5.71805E+00
5	91-2	5.35624E-06	3.35205E-03	-7.53378E-04	2.13752E+00	-1.47746E+01	-1.63137E+00
6	91-3	1.02656E-04	-5.55829E-03	-6.87522E-04	3.06243E+00	2.20419E+01	9.50189E+00
7	1091-1	-1.37568E-04	-2.86008E-03	-1.79995E-03	-1.04855E+01	5.20476E+01	-7.98738E+00
8	1091-2	-2.68143E-05	3.47750E-03	8.62261E-04	1.58343E+00	1.31149E+01	-2.32734E+00
9	1091-3	-4.41149E-07	6.04124E-03	-4.18226E-04	-6.26122E+00	1.83122E+01	-9.41907E+00
10	4590-1	4.59235E-04	-1.82433E-04	-1.95120E-05	-2.37742E+00	-2.47393E+01	8.21308E+00
11	4590-2	-9.07726E-05	6.86864E-04	2.37148E-05	-8.71885E-01	5.88168E+00	-1.76761E+00
12	4590-3	-1.76687E-05	4.31531E-04	1.42484E-04	-1.08483E+00	1.52777E+01	6.18724E+00
13	4590-4	2.71979E-04	-4.30551E-03	-1.05826E-03	1.63825E+00	-1.43846E+02	-5.15969E+01
14	4590-5	-1.34430E-04	3.89164E-03	1.37712E-03	-1.04362E+01	1.42059E+02	6.08572E+01
15	4590-6	3.50616E-03	-7.50613E-03	-1.24496E-05	1.35027E+00	-1.98730E+02	8.13718E+01
16	4591-1	3.44715E-04	-1.69115E-03	-2.41068E-05	-1.46400E-01	1.59294E-01	3.63336E-01
17	4591-2	1.84741E-04	4.11840E-03	1.29939E-04	8.77396E-02	-7.16684E-02	-6.53659E-01
18	4591-3	9.62808E-05	5.53885E-04	1.33432E-04	-9.70956E-01	2.60865E+00	-7.84443E-02
19	4591-4	-1.12932E-03	-7.37247E-03	-1.16825E-03	8.06264E+00	-2.06048E+01	1.11690E+00
20	4591-5	-5.10808E-04	-2.88610E-03	-7.80294E-04	6.47620E+00	-1.18427E+01	3.06223E-01
21	4591-6	2.68824E-03	1.07339E-02	4.19613E-04	-1.66494E+00	2.33399E-01	-1.36302E+00
22	4592-1	6.10451E-04	-8.01003E-04	-4.60373E-05	2.38284E+00	1.03108E+02	-6.65840E+00
23	4592-2	-1.07486E-04	1.53511E-03	7.36537E-05	4.36279E+00	-1.77611E+02	1.04295E+01
24	4592-3	-5.90388E-05	-1.84365E-04	4.15482E-04	-5.99053E+00	-1.70233E+02	9.67777E+00
25	4592-4	3.92228E-05	9.87788E-04	9.63217E-04	-2.75154E+01	-1.48646E+02	7.77773E+00
26	4592-5	-4.08835E-04	1.16967E-03	-7.11216E-04	1.66315E+01	9.33529E+01	-4.54136E+00
27	4592-6	6.53994E-04	1.91576E-03	-6.13078E-04	-7.15870E+01	1.96490E+03	-1.09872E+02
28	4593-1	3.17879E-04	-1.46148E-05	1.08518E-05	1.78070E-01	1.39199E+01	-3.45746E+00
29	4593-2	-9.27970E-05	2.86086E-04	9.61359E-06	5.62729E-02	-1.89838E+00	1.94984E+00
30	4593-3	-2.04038E-06	-6.25716E-04	2.20401E-04	-6.91491E-01	3.45815E+00	-3.27506E-01
31	4593-4	-1.91827E-04	4.85328E-03	3.14502E-04	6.70405E+00	1.72456E+01	-4.79500E+00
32	4593-5	-4.88896E-04	-3.52606E-03	1.46140E-03	-3.66364E+00	9.85290E+00	5.90543E+00
33	4593-6	1.32387E-04	-6.38138E-04	-2.77767E-04	9.34493E-01	-8.34246E+00	1.12059E+01
34	13001-1	6.47692E-04	1.45426E-04	-2.90816E-04	-1.58258E+00	-1.56446E+01	1.27576E+01
35	13001-2	3.07138E-05	5.30764E-05	9.76952E-06	6.67752E-02	5.56629E+00	8.08280E-02
36	13001-3	-1.95325E-04	-2.16390E-04	7.20585E-04	-1.48100E+01	1.64072E+01	3.68236E+01
37	13001-4	1.39836E-04	6.16002E-04	2.57400E-05	-2.01551E+00	-3.56663E+01	-7.80864E+00
38	13001-6	-1.41175E-03	3.96206E-04	4.02586E-04	-3.94031E+00	-1.18154E+01	2.01694E+00
39	13002-1	6.28511E-04	2.61373E-04	5.29555E-05	-4.21446E+00	6.07858E+01	3.50556E+00
40	13002-2	1.12418E-04	4.52747E-03	1.45136E-05	1.67439E+00	-2.81396E+00	-2.58990E+00
41	13002-3	-8.59640E-05	2.83900E-04	1.23838E-03	-6.73043E+00	-8.46930E+01	-1.23305E+01
42	13002-4	1.81553E-04	1.38198E-02	2.19798E-05	7.44266E+00	-2.56565E+02	3.18569E+00
43	13002-6	-1.32113E-03	7.89959E-03	-2.28809E-04	1.08798E+01	6.35753E+01	2.36910E+01
44	13003-1	6.97321E-04	2.31653E-03	-1.29913E-04	1.68557E-01	-3.51906E-01	-9.56556E-01
45	13003-2	2.47872E-05	1.37046E-03	-3.69666E-06	-2.96764E-02	-3.11550E-02	-3.48627E-01
46	13003-3	1.15388E-04	1.84679E-03	1.63693E-03	1.62913E-01	5.27820E-01	-5.37656E-01
47	13003-4	-9.40728E-05	3.48334E-03	-4.69228E-06	-2.98480E-01	-1.12562E-01	-8.07812E-01
48	13003-6	-5.80771E-04	2.29132E-03	1.96016E-05	-4.82447E-01	3.54636E-01	-4.41428E-01
49	13004-1	1.38271E-03	6.68692E-04	-6.76990E-04	-6.08986E-02	1.95949E-02	-1.90089E-01
50	13004-2	2.34609E-05	8.68172E-04	1.48969E-04	-3.54569E-02	9.82405E-03	-1.23222E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 85

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
51	13004-3	-1.98163E-04	1.44849E-03	3.82305E-03	3.49259E-01	6.44929E-01	-6.75813E-02
52	13004-4	-3.05312E-04	2.01994E-03	3.13285E-04	-2.01314E-01	-9.21476E-02	-2.84953E-01
53	13004-6	-2.09440E-03	-1.97977E-03	5.82006E-04	1.34121E-01	-2.93157E-02	6.05687E-01
54	13005-1	6.88104E-03	9.94805E-03	7.73120E-04	-2.72001E-01	1.09348E+00	-5.93962E-01
55	13005-2	-5.53472E-05	-1.98226E-04	5.48183E-04	3.64616E-02	6.27258E-02	-6.01512E-02
56	13005-3	-7.65009E-04	-6.29590E-03	5.20924E-03	6.91568E-01	6.03804E-01	1.24751E-01
57	13005-4	-6.59875E-04	-1.56112E-03	1.61162E-03	1.59541E-01	7.94073E-02	-1.15294E-01
58	13005-6	-8.39668E-03	-1.00864E-02	-6.88228E-04	2.73754E-01	-1.04897E+00	8.36342E-01
59	13006-1	6.44969E-03	-3.18633E-02	-5.85219E-04	1.12007E+00	2.22662E+00	-7.06000E-01
60	13006-2	-9.07927E-05	1.42567E-02	1.62940E-04	-5.21188E-01	-4.93592E-02	-5.08797E-01
61	13006-3	3.79251E-04	6.24664E-02	7.38877E-03	-1.76223E+00	2.20410E-01	-2.51478E-01
62	13006-4	-8.56336E-04	-3.05426E-02	3.34439E-05	1.30018E+00	-3.80804E-01	-1.71532E+00
63	13006-6	-7.17261E-03	1.16990E-01	1.91481E-04	-4.37921E+00	-2.12222E+00	3.55722E+00
64	13007-1	5.10934E-04	4.39291E-04	-6.83738E-06	4.35153E+00	-2.46862E+02	-1.38205E+01
65	13007-2	-5.13309E-05	2.80149E-04	-3.44432E-05	-5.59293E+00	-1.24364E+02	-6.97670E+00
66	13007-3	-1.86768E-04	5.30180E-06	1.16615E-03	-3.04044E+01	6.00131E+02	3.38280E+01
67	13007-4	-3.55904E-04	1.09882E-03	1.62651E-04	-1.92925E+01	-9.46533E+01	-5.19019E+00
68	13007-6	-3.83270E-04	-9.59867E-04	4.47719E-05	2.41655E+01	6.15572E+02	3.45998E+01
69	13008-1	1.86432E-03	7.57882E-05	-2.03796E-04	4.61782E-02	9.42330E+00	8.16383E-01
70	13008-2	1.01769E-04	8.11828E-04	8.58992E-05	8.56728E-02	-4.98789E-01	1.07266E-01
71	13008-3	-7.21299E-05	1.95223E-04	1.36253E-03	9.73171E-01	-1.43866E+01	-7.42367E-01
72	13008-4	-2.07523E-04	3.12537E-03	1.51170E-04	4.46658E-02	-6.89192E-01	5.06808E-01
73	13008-6	-1.80696E-03	1.37581E-04	2.57246E-04	-2.31319E-02	-8.25800E+00	-6.40033E-01
74	13009-1	7.17589E-04	-1.37714E-04	-3.02488E-04	1.42819E+00	-2.16938E+01	-1.17122E+01
75	13009-2	-1.38787E-05	7.46032E-05	-1.33255E-05	-5.48279E-02	-7.60412E+00	3.13806E-01
76	13009-3	-2.55005E-04	1.47559E-04	7.29387E-04	-7.64351E+00	2.54639E+01	-3.66120E+01
77	13009-4	-4.36570E-05	7.31402E-04	-4.47181E-05	-2.64386E+00	2.43025E+01	-6.44624E+00
78	13009-6	1.49874E-03	4.95579E-04	-4.21218E-04	-4.60886E+00	2.85333E+00	2.98273E+00
79	13010-1	6.76168E-04	-1.96526E-04	5.11670E-05	6.81839E+00	5.50588E+01	-2.57277E+00
80	13010-2	-1.06658E-04	4.59444E-03	-1.55867E-05	1.26614E+00	2.75735E+00	-2.80045E+00
81	13010-3	-1.31287E-04	-2.31044E-04	1.24092E-03	4.72472E+00	-9.57746E+01	1.25874E+01
82	13010-4	-1.54314E-04	1.41104E-02	-2.87132E-05	5.67079E+00	2.56172E+02	2.09481E+00
83	13010-6	1.34560E-03	7.92509E-03	2.33271E-04	1.06866E+01	-6.39836E+01	2.43653E+01
84	13011-1	7.47375E-04	-2.41157E-03	-1.30579E-04	-2.71015E-01	-5.93688E-01	1.14295E+00
85	13011-2	-2.91183E-05	1.58954E-03	5.34195E-06	3.82554E-02	9.65290E-02	-3.70420E-01
86	13011-3	1.20174E-04	-1.90848E-03	1.63661E-03	-1.77419E-01	5.05175E-01	5.61507E-01
87	13011-4	8.16746E-05	4.20288E-03	1.02378E-05	-7.24584E-02	2.92559E-01	-8.57023E-01
88	13011-6	6.32009E-04	2.27790E-03	-1.99845E-05	-5.75774E-01	-6.93163E-01	-3.35924E-01
89	13012-1	1.49255E-03	-6.08078E-04	-6.66197E-04	1.82153E-01	3.64814E-01	2.13066E-01
90	13012-2	9.05147E-07	9.21150E-04	-1.45007E-04	1.58582E-02	-5.74148E-03	-1.28780E-01
91	13012-3	-2.02676E-04	-1.39683E-03	3.82806E-03	-1.42057E+00	3.68889E-01	5.98406E-02
92	13012-4	4.22741E-04	2.29186E-03	-2.92893E-04	-2.63122E-01	-8.78068E-02	-3.13203E-01
93	13012-6	2.14190E-03	-2.05428E-03	-5.81632E-04	1.99259E-01	3.52500E-01	6.41580E-01
94	13013-1	6.92006E-03	-9.95930E-03	7.76661E-04	-6.41144E-02	7.00645E-01	6.10073E-01
95	13013-2	5.72808E-05	-1.99960E-04	-5.48240E-04	1.90000E-01	4.19776E-02	-5.90901E-02
96	13013-3	-7.61688E-04	6.38781E-03	5.21328E-03	-1.52654E+00	-1.28108E-01	-1.30062E-01
97	13013-4	6.66459E-04	-1.57731E-03	-1.61177E-03	4.27279E-01	1.39060E-01	-1.11508E-01
98	13013-6	8.43400E-03	-1.00877E-02	6.91771E-04	6.20464E-02	7.37667E-01	8.54756E-01
99	13014-1	6.47445E-03	3.17404E-02	-5.83194E-04	-1.26184E+00	1.85436E+00	7.14175E-01
100	13014-2	9.18119E-05	1.42480E-02	-1.62970E-04	-5.36642E-01	2.33660E-02	-5.08655E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 86

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
101	13014-3	3.83184E-04	-6.23838E-02	7.39075E-03	1.77072E+00	6.81462E-02	2.51410E-01
102	13014-4	8.61630E-04	-3.06229E-02	-3.41563E-05	1.18145E+00	1.15206E-01	-1.71559E+00
103	13014-6	7.19642E-03	1.16868E-01	-1.90312E-04	-4.51952E+00	1.78719E+00	3.56690E+00
104	13015-1	5.14020E-04	-4.18208E-04	-5.81015E-06	-4.35871E+00	-2.46765E+02	1.37229E+01
105	13015-2	5.10941E-05	2.82505E-04	3.43681E-05	-5.59254E+00	1.24362E+02	-6.97017E+00
106	13015-3	-1.86469E-04	-1.58937E-05	1.16635E-03	3.04002E+01	6.00083E+02	-3.38293E+01
107	13015-4	3.54823E-04	1.10869E-03	-1.62962E-04	-1.92912E+01	9.46238E+01	-5.15663E+00
108	13015-6	3.85739E-04	-9.56089E-04	-4.38480E-05	2.41578E+01	-6.15545E+02	3.45301E+01
109	13016-1	1.87140E-03	-7.26937E-05	-2.00805E-04	-1.30089E-02	9.88696E+00	-1.16878E+00
110	13016-2	-1.01590E-04	8.14773E-04	-8.58438E-05	8.31128E-02	4.10827E-01	1.23861E-01
111	13016-3	-7.20625E-05	-1.95324E-04	1.36255E-03	-9.74621E-01	-1.43441E+01	7.30034E-01
112	13016-4	2.08342E-04	3.14055E-03	-1.50851E-04	3.19908E-02	3.54816E-01	5.62633E-01
113	13016-6	1.81367E-03	1.42461E-04	-2.54410E-04	4.09361E-03	8.64088E+00	-9.59671E-01
114	13017-1	1.05280E-04	2.41943E-05	-6.76612E-06	3.93453E-02	5.05500E-01	-1.50810E-02
115	13017-2	6.52927E-05	-2.95441E-05	5.71884E-07	-5.38731E+00	3.24403E+00	4.08285E-01
116	13017-3	-3.80066E-06	2.31971E-06	3.05911E-05	3.99458E-03	4.72432E-01	1.13224E-02
117	13017-4	-4.79385E-06	3.19101E-05	3.06978E-04	1.21645E-01	1.08602E+00	-5.91871E-02
118	13017-5	7.11411E-05	-9.64117E-05	-1.43874E-04	-1.86429E-01	-2.60369E+00	5.74696E-05
119	13018-1	6.86083E-04	-4.22144E-05	-4.02152E-06	6.95234E-02	-2.12177E-01	2.61706E-03
120	13018-2	-8.31104E-06	2.96793E-04	-1.51697E-06	-2.93697E-02	-1.81530E+00	-7.22971E-02
121	13018-3	1.34174E-06	1.24837E-06	4.65354E-04	3.11865E-02	1.49476E-01	-1.11452E-04
122	13018-4	1.95018E-05	2.12750E-05	4.14915E-03	-2.99800E+00	4.23706E+00	7.39358E-04
123	13018-5	-1.76929E-05	-1.62918E-05	5.41939E-04	-5.40391E-01	-9.15799E-01	1.59758E-03
124	13019-1	5.98169E-07	-9.12922E-06	2.03049E-07	3.61709E-02	1.01392E-01	1.99244E-04
125	13019-2	-2.13498E-06	-6.95279E-04	-1.15930E-07	6.42893E-01	-2.52810E-01	-5.57914E-03
126	13019-3	1.88948E-07	1.31251E-05	-4.96371E-05	-9.33975E-03	-1.51417E-01	1.29111E-03
127	13019-4	-2.35045E-07	-1.01268E-03	7.98089E-05	3.25294E-01	1.93060E-01	1.81263E-02
128	13019-5	-4.10803E-06	-3.03258E-04	-6.77058E-05	2.11728E-01	3.25792E+00	-2.77167E-02
129	13020-1	5.44904E-07	2.64277E-04	1.16389E-06	2.76159E+00	-2.32347E-01	7.10018E-02
130	13020-2	-3.91904E-07	-4.25445E-04	-8.69561E-07	-4.58272E+00	1.17134E-01	-1.19201E-01
131	13020-3	9.81652E-09	3.32392E-06	5.87588E-06	-4.18647E-01	-1.46524E-01	3.14008E-03
132	13020-4	5.53626E-08	5.17820E-05	-5.52401E-06	-1.49600E+01	-1.52068E-01	5.18352E-02
133	13020-5	1.14764E-06	-6.34571E-05	-3.75667E-04	4.78793E+00	1.74598E+00	-3.66102E-02
134	2171-2	1.35011E-04	6.86919E-05	-6.05305E-05	5.97958E-03	4.59035E-02	-1.31391E-01
135	2171-3	6.32187E-06	1.25033E-03	9.86546E-06	-4.90991E-02	2.39834E-03	-2.26511E-02
136	2197-2	-2.60832E-05	1.63391E-03	-7.20071E-05	-9.15647E-03	-4.93038E-02	-2.79013E-01
137	2197-3	1.36777E-05	-2.88068E-02	-3.94731E-04	9.15508E-01	-8.79760E-02	6.05378E-02
138	2322-2	-2.74538E-06	-8.17370E-04	-2.05140E-06	2.47365E+00	-2.80218E-01	-1.62205E-02
139	2322-3	7.36608E-07	-7.95725E-04	-6.57604E-06	6.35598E-01	-1.03224E-01	1.32891E-02
140	2663-2	2.37881E-04	-6.04349E-04	-2.44809E-04	3.80607E-02	1.64520E-02	-2.47296E-02
141	2663-3	1.48271E-05	-8.57669E-04	2.23119E-04	2.20030E-02	1.08259E-01	1.38930E-02
142	2808-2	5.46071E-05	-3.40908E-03	-2.69357E-05	1.29187E-01	-5.51171E-02	-5.32961E-03
143	2808-3	-8.98036E-06	4.09625E-05	-1.05787E-05	-1.19675E-02	-1.02852E-02	3.61146E-03
144	2809-2	-3.17440E-05	-1.31962E-05	2.13994E-05	-2.29917E-04	3.67096E-02	-5.29954E-03
145	2809-3	5.79282E-05	1.53529E-04	-8.09648E-05	-8.94715E-03	3.63779E-02	-1.12989E-02
146	2833-2	-7.74339E-05	5.11832E-02	-1.81324E-04	-1.96124E+00	3.27884E-01	-6.53326E-02
147	2833-3	-4.90607E-05	2.53707E-03	4.75447E-05	-1.46328E-01	8.77949E-02	-2.45470E-02
148	2922-2	-7.01521E-05	1.11885E-02	-7.98246E-05	-4.27544E-01	4.28197E-02	-4.39802E-01
149	2922-3	4.26387E-05	5.22236E-03	-5.46008E-05	-1.73531E-01	4.70255E-04	5.70285E-02
150	21081-2	5.33390E-06	-3.14790E-03	-3.78712E-05	1.40559E-01	-6.61646E-02	-4.56506E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 87

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
151	21081-3	-5.70008E-07	-2.81811E-05	-4.40123E-07	1.18027E-03	-1.18619E-03	-2.20839E-04
152	27106-2	-7.05235E-07	-4.75420E-05	7.16315E-08	2.99713E-01	2.83601E+00	1.63642E-01
153	27106-3	-5.45274E-06	-1.31186E-04	2.56025E-06	-2.85689E-01	9.75537E-01	9.83436E-02
154	27111-2	1.67841E-06	-5.39431E-06	3.66716E-06	1.25885E-02	-3.99962E+00	-2.22752E-01
155	27111-3	-7.07079E-06	-1.78648E-04	2.73777E-06	-4.87948E-02	-3.80681E+00	-2.09052E-01
156	27150-2	-8.22003E-07	3.61751E-05	-5.75886E-08	-4.90953E-03	3.34181E-01	2.14011E-02
157	27150-3	1.87078E-05	-6.83673E-06	-4.81827E-06	5.14694E-01	2.07052E+01	1.17177E+00
158	27164-2	1.49663E-06	1.08354E-04	-2.67046E-05	5.98232E+01	-1.82340E-01	-4.92955E-01
159	27164-3	6.31139E-07	-2.60173E-05	-1.65833E-05	2.66739E+01	-1.89872E-01	-6.67458E-02
160	27167-2	8.71537E-07	5.47207E-04	-8.20971E-07	1.91539E+01	-1.18021E-01	-2.22152E-01
161	27167-3	-4.02249E-07	-1.54840E-04	-9.79708E-07	2.10453E+01	5.28217E-02	9.20768E-02
162	27178-2	2.12249E-06	1.37428E-03	-6.40373E-07	-8.59264E+00	-1.59720E-01	-4.96426E-01
163	27178-3	-1.60555E-06	-2.35550E-05	3.05972E-07	-1.92026E+01	8.59042E-02	7.62407E-02
164	27186-2	1.11901E-06	2.61701E-05	-2.04867E-06	-7.30359E+01	-4.71430E+00	-2.95829E-01
165	27186-3	-2.61493E-06	-6.76532E-05	2.16199E-06	-3.17520E+02	-6.59565E-01	8.30395E-02
166	27193-2	-1.71389E-06	2.54797E-05	-1.67942E-05	-2.71552E+01	-3.74611E+01	-2.13734E+00
167	27193-3	5.75921E-05	-1.00050E-05	2.04197E-04	-7.97475E+01	-3.09312E+02	-1.74069E+01
168	27564-2	-1.29391E-09	-1.80456E-06	3.07556E-07	1.60111E+00	3.13108E-03	-1.27433E-03
169	27564-3	2.51076E-08	-3.39638E-07	-1.97923E-09	-6.29904E-03	-6.52102E-03	1.04046E-03
170	27837-2	-4.45233E-08	1.31120E-04	5.92025E-07	2.49004E+01	-1.14545E-01	-3.38888E-02
171	27837-3	-8.23710E-07	7.41290E-06	9.83597E-07	5.05187E+01	-6.33655E-03	3.60826E-02
172	271012-2	-3.48592E-06	8.07905E-05	-2.83618E-06	1.55538E+00	2.72546E+01	1.53161E+00
173	271012-3	-7.27651E-06	-1.76985E-04	4.99386E-06	4.12459E-01	1.56366E-01	2.82608E-02
174	271013-2	8.14909E-07	2.96024E-05	-3.05986E-07	1.05515E-01	1.76271E+00	9.61143E-02
175	271013-3	-1.40164E-06	-6.06111E-05	4.74782E-07	2.12232E-01	3.07077E+00	1.86030E-01
176	271055-2	2.95641E-07	2.54791E-05	-3.40771E-06	8.99319E+01	5.88812E-01	1.53391E-02
177	271055-3	-7.28162E-07	2.52351E-05	-1.40535E-06	3.79878E+02	-4.70450E+00	-2.25094E-01
178	271265-2	2.40463E-06	1.04073E-03	-5.15309E-06	-6.77418E+01	-2.20958E-01	-6.63266E-01
179	271265-3	4.88583E-07	2.94185E-05	3.59925E-07	-4.61120E+01	1.31867E-02	-6.80396E-02
180	702171-2	-1.36671E-04	4.17882E-05	5.97798E-05	-2.71443E-02	-9.16326E-02	-1.31924E-01
181	702171-3	4.20394E-06	-1.31939E-03	6.75270E-06	6.17242E-02	5.36396E-02	2.34221E-02
182	702197-2	2.87190E-05	1.69235E-03	7.27511E-05	-2.55932E-01	-4.99019E-01	-2.79948E-01
183	702197-3	2.16439E-05	2.90694E-02	-3.93262E-04	-9.30287E-01	-6.63293E-01	-5.98780E-02
184	702322-2	1.86415E-06	-8.72599E-04	4.53494E-06	2.49484E+00	1.88495E-01	-2.31880E-02
185	702322-3	-2.75940E-06	8.80387E-04	-2.80046E-06	-5.83942E-01	-3.48562E-02	-1.11832E-02
186	702663-2	-2.50815E-04	-6.29941E-04	2.43342E-04	-6.56639E-02	7.07874E-02	-2.73610E-02
187	702663-3	1.86351E-05	8.95316E-04	2.24293E-04	-3.58258E-01	-4.46498E-01	-1.45547E-02
188	702808-2	-5.56447E-05	-3.40624E-03	2.71784E-05	1.10892E-01	-1.36860E-02	-6.08058E-03
189	702808-3	-9.96174E-06	-5.96961E-05	-1.10277E-05	1.53124E-02	2.27981E-03	-3.85041E-03
190	702809-2	3.20359E-05	-3.03942E-06	-2.10898E-05	-2.16570E-03	-4.76468E-02	-5.09208E-03
191	702809-3	6.04573E-05	-1.63009E-04	-8.10576E-05	6.49461E-02	9.91293E-02	1.19772E-02
192	702833-2	7.80553E-05	5.11669E-02	1.81317E-04	-1.99167E+00	-3.89375E-01	-6.39692E-02
193	702833-3	-4.72875E-05	-2.40119E-03	4.80128E-05	9.83105E-02	-3.79061E-02	2.40298E-02
194	702922-2	7.07241E-05	1.11747E-02	8.03346E-05	-4.77772E-01	-1.41077E-01	-4.39796E-01
195	702922-3	4.06840E-05	-5.31142E-03	-5.49914E-05	2.13685E-01	9.34961E-02	-5.70949E-02
196	727106-2	5.89378E-07	-5.76716E-05	-7.23890E-08	3.00140E-01	-2.83537E+00	1.63257E-01
197	727106-3	-4.52989E-06	1.82148E-04	2.84008E-06	2.74861E-01	9.09404E-01	-1.06037E-01
198	727111-2	-1.97876E-06	4.51649E-06	-3.98425E-06	1.61109E-02	4.08314E+00	-2.23517E-01
199	727111-3	-6.63820E-06	1.82817E-04	2.59717E-06	4.66746E-02	-3.79507E+00	2.10100E-01
200	727150-2	9.38118E-07	3.06702E-05	1.34225E-07	-5.29291E-03	-3.62420E-01	2.25551E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 88

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
201	727150-3	1.97639E-05	3.80456E-06	-4.95491E-06	-5.19676E-01	2.06807E+01	-1.17024E+00
202	727164-2	-3.09210E-06	1.19458E-04	2.64491E-05	5.96398E+01	1.06639E-01	-4.80518E-01
203	727164-3	-2.22128E-07	2.71396E-05	-1.73603E-05	-2.64070E+01	-1.77208E-01	6.99280E-02
204	727167-2	-1.17881E-06	5.35596E-04	5.06327E-07	1.91537E+01	1.15106E-01	-2.29092E-01
205	727167-3	-7.43118E-07	1.53832E-04	-8.71897E-07	-2.10490E+01	3.60613E-02	-9.39846E-02
206	727178-2	-3.04587E-06	1.34761E-03	2.12161E-08	-8.59172E+00	1.62484E-01	-5.15951E-01
207	727178-3	-1.49301E-06	3.28280E-05	4.69768E-07	1.91944E+01	6.16145E-02	-7.84953E-02
208	727186-2	-1.27081E-06	2.99874E-05	2.05570E-06	-7.30367E+01	4.73174E+00	-2.99085E-01
209	727186-3	-2.25824E-06	8.59241E-05	2.20950E-06	3.17515E+02	-6.89849E-01	-8.62915E-02
210	727193-2	1.79510E-06	3.21819E-05	1.67986E-05	-2.71568E+01	3.74699E+01	-2.14100E+00
211	727193-3	5.81897E-05	2.43801E-05	2.04129E-04	7.97446E+01	-3.09397E+02	1.74233E+01
212	727564-2	-2.66423E-09	-1.66885E-06	-3.60735E-07	1.60863E+00	-4.70876E-03	-1.20493E-03
213	727564-3	-1.70310E-08	3.90497E-07	-1.25459E-09	6.05547E-03	-6.11856E-03	-8.20846E-04
214	727837-2	-3.06571E-07	1.23746E-04	-6.46657E-07	2.49013E+01	1.32688E-01	-3.65364E-02
215	727837-3	-5.97468E-07	1.17353E-06	1.01112E-06	-5.05205E+01	-2.45075E-02	-3.64358E-02
216	7021081-2	-5.92752E-06	-3.17439E-03	3.82791E-05	1.25562E-01	9.07613E-02	-4.66583E-02
217	7021081-3	-5.91952E-07	2.82867E-05	-4.48805E-07	-8.47629E-04	-7.28395E-04	2.25683E-04
218	7271012-2	3.53079E-06	8.93997E-05	2.87615E-06	1.55429E+00	-2.72706E+01	1.53221E+00
219	7271012-3	-6.64660E-06	1.97163E-04	5.06818E-06	-4.17225E-01	1.30266E-01	-3.09994E-02
220	7271013-2	-8.26864E-07	3.34931E-05	3.36993E-07	1.05166E-01	-1.76927E+00	9.58933E-02
221	7271013-3	-1.10852E-06	8.07610E-05	5.15835E-07	-2.15114E-01	3.05754E+00	-1.87214E-01
222	7271055-2	-3.59650E-07	2.94083E-05	3.41324E-06	8.99309E+01	-5.75682E-01	1.26089E-02
223	7271055-3	-2.96829E-07	-1.66928E-05	-1.37164E-06	-3.79880E+02	-4.74462E+00	2.26903E-01
224	7271265-2	-3.66055E-06	1.02025E-03	3.79047E-06	-6.76920E+01	2.08424E-01	-6.70955E-01
225	7271265-3	6.15508E-07	-2.95691E-05	1.15859E-06	4.60490E+01	2.38820E-02	6.72479E-02
226	212118-2	1.86346E-06	-2.85789E-06	-3.06303E-05	4.24945E-04	-2.90452E-03	-4.96304E-04
227	212118-3	5.20446E-08	-7.01677E-06	2.54074E-05	-4.49118E-04	3.54549E-03	2.41418E-04
228	212120-2	4.05048E-06	2.91277E-05	-9.85617E-05	-1.35453E-03	-1.23481E-02	-1.38264E-03
229	212120-3	-6.14329E-06	-2.40961E-05	1.43818E-04	3.26338E-04	1.73363E-02	2.03820E-03
230	212125-2	-3.18820E-05	-5.47179E-05	3.32443E-04	4.01754E-02	4.84431E-02	4.25926E-03
231	212125-3	2.00295E-05	9.89567E-05	-8.79071E-05	-3.96972E-02	-2.08590E-02	-7.35805E-04
232	212385-2	-1.09664E-06	1.62079E-04	-5.11189E-06	-1.43887E-02	4.59816E-03	-6.78548E-04
233	212385-3	-3.23211E-08	-3.30304E-05	6.80778E-07	2.48608E-03	-6.27111E-04	2.07613E-04
234	212388-2	-2.03726E-06	1.24870E-04	-6.43456E-06	-1.50928E-02	2.18106E-03	-6.60634E-04
235	212388-3	1.28739E-06	-1.20482E-04	4.82379E-06	1.24116E-02	-2.71331E-03	5.96392E-04
236	212390-2	3.32312E-06	2.38705E-05	5.66229E-06	7.94873E-03	5.47342E-03	-6.64908E-06
237	212390-3	-1.22761E-06	-8.81156E-04	1.56746E-05	6.14922E-02	-1.80133E-02	4.89207E-03
238	213110-2	5.15586E-07	4.41448E-05	-4.62946E-08	-1.73470E-03	1.53321E-01	3.48573E-02
239	213110-3	-3.54151E-07	-3.84265E-05	-4.64967E-08	4.26613E-03	-2.71975E-02	-1.79451E-03
240	213113-2	1.20980E-07	9.48345E-06	-8.85573E-07	-1.62670E-02	3.40607E-01	2.51752E-02
241	213113-3	-2.47029E-07	-1.38686E-05	1.49983E-06	2.48950E-02	-5.79262E-01	-5.11459E-02
242	213115-2	5.39452E-07	2.06901E-05	3.52080E-06	5.37741E-02	-1.19316E+00	-7.63303E-02
243	213115-3	-2.61841E-06	-6.38429E-05	-5.62841E-06	-8.50009E-02	1.98343E+00	9.28290E-02
244	213195-2	-1.23833E-07	-1.32211E-05	5.17464E-07	1.16418E-02	-2.22257E-01	-1.30352E-02
245	213195-3	-3.18961E-07	-9.99559E-06	-2.24333E-07	-8.00433E-04	6.18780E-02	2.81073E-03
246	213198-2	-1.37290E-09	-1.98527E-05	4.90455E-07	1.18085E-02	-2.45073E-01	-1.44801E-02
247	213198-3	-3.77460E-07	5.49272E-05	-7.13378E-07	-1.52872E-02	4.18216E-01	2.93764E-02
248	213201-2	4.71472E-07	-1.01811E-05	-4.26277E-07	-8.66549E-03	9.99164E-02	3.94567E-03
249	213201-3	-4.84543E-11	-8.32843E-10	-7.91465E-13	3.25501E-07	-1.77821E-06	-5.06271E-08
250	213203-2	1.68049E-07	-1.24639E-05	-2.63735E-07	-4.51496E-03	7.35538E-02	3.18274E-03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 89

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
251	213203-3	1.37328E-10	3.28310E-10	-1.59806E-12	-1.28791E-06	1.46519E-05	5.49482E-07
252	213265-2	-9.22258E-07	1.07098E-05	-1.50198E-07	6.42848E-04	1.14445E-01	9.71078E-03
253	213265-3	1.03657E-08	-2.44817E-06	-1.72944E-08	-1.43575E-03	-3.08483E-02	-5.47403E-03
254	213268-2	-8.80393E-07	9.09858E-06	-2.51663E-07	-1.08248E-03	1.43340E-01	1.10437E-02
255	213268-3	1.66284E-06	-1.28162E-05	8.48988E-07	8.59347E-03	-4.62538E-01	-3.11967E-02
256	312118-2	1.80864E-07	6.46811E-05	3.83880E-05	-3.63545E-02	1.05686E-02	-4.33287E-03
257	312118-3	7.47146E-07	1.14846E-05	2.61796E-05	-3.12962E-02	7.62624E-03	1.22650E-03
258	312120-2	-2.05703E-06	4.02441E-05	9.86552E-05	-8.22919E-02	1.60238E-02	-2.89344E-03
259	312120-3	-1.69000E-06	1.16133E-04	1.52143E-04	-1.35307E-01	2.89327E-02	-6.83124E-03
260	312125-2	3.99586E-05	-8.98045E-05	-3.34587E-04	2.41103E-01	-5.69091E-03	6.54806E-03
261	312125-3	3.45437E-05	4.58024E-05	-7.09499E-05	7.03069E-03	3.41113E-02	-4.49575E-03
262	312385-2	1.49293E-06	7.81954E-04	8.26415E-06	-5.84696E-02	-1.76631E-02	1.09184E-04
263	312385-3	-7.39533E-10	9.48267E-05	1.07850E-06	-7.34937E-03	-5.57182E-03	-2.33876E-04
264	312388-2	3.08404E-06	6.34252E-04	1.05103E-05	-5.52494E-02	-3.16094E-02	-5.04718E-04
265	312388-3	1.96315E-06	5.49634E-04	7.81573E-06	-4.52145E-02	-2.29737E-02	-3.15677E-04
266	312390-2	-4.94402E-06	-2.79800E-04	-1.02957E-05	3.70404E-02	2.71581E-02	5.98438E-04
267	312390-3	3.10341E-07	1.96016E-03	2.18863E-05	-1.45930E-01	-1.05880E-01	-3.65919E-03
268	313195-2	-3.77957E-07	5.04917E-05	-1.55653E-06	2.52877E-02	4.71612E-01	-9.35409E-03
269	313195-3	-8.48639E-07	5.84654E-05	-2.34270E-07	3.00059E-03	1.68693E-01	-9.34019E-04
270	313198-2	3.34062E-07	-8.34207E-05	7.93994E-08	4.47090E-03	1.59715E-01	-2.71343E-02
271	313198-3	-9.32846E-07	-4.91932E-05	-1.06615E-06	2.26578E-02	6.60603E-01	-4.01232E-02
272	313201-2	-5.56598E-07	6.13530E-06	2.69394E-07	-2.57031E-03	-8.77399E-02	1.55339E-02
273	313201-3	-3.90025E-11	-1.27411E-09	-1.20712E-12	-6.27273E-07	-1.29754E-06	-1.07529E-06
274	313203-2	-1.99123E-07	-3.75684E-05	3.35048E-07	-5.80550E-03	-7.65407E-02	-1.46641E-03
275	313203-3	1.03727E-10	-2.45818E-09	-2.98706E-12	1.14585E-06	1.23663E-05	-3.11479E-07
276	313265-2	1.58799E-06	3.56999E-05	2.84548E-07	1.17475E-02	-3.28784E-01	5.17223E-02
277	313265-3	1.28311E-07	-3.61544E-06	1.67711E-07	7.25053E-03	-2.38199E-01	4.39871E-02
278	313268-2	7.39003E-07	-9.94478E-06	3.13150E-07	-1.07674E-02	-8.55327E-02	-1.16185E-02
279	313268-3	2.16858E-06	7.70957E-06	1.01523E-06	-4.63080E-03	-7.36118E-01	6.78499E-02
280	2423-2	3.24462E-05	2.05502E-02	-1.57893E-04	-4.05377E-01	5.03648E-01	-8.80108E-02
281	2423-3	4.01518E-04	-9.79970E-03	-1.30527E-03	-4.11132E+00	-3.46126E+01	-2.08304E+00
282	2433-2	1.12868E-05	-4.18719E-04	-2.94272E-05	3.70515E-01	-4.25361E-01	4.02251E+00
283	2665-1	1.33844E-03	-1.23980E-02	-6.02970E-03	-4.15510E-01	-1.40541E+01	-1.98268E+00
284	2665-2	1.76715E-05	1.71340E-03	4.69032E-03	3.73908E+00	8.66087E+00	-4.41576E+01
285	2443-2	4.91966E-06	-2.79238E-04	-2.92429E-05	-4.10459E-01	-2.16075E+00	3.89479E-01
286	2443-3	-1.09922E-04	-3.52505E-04	4.93342E-03	3.72299E+00	-1.23772E+02	-1.28708E+01
287	2679-2	-6.15467E-05	-3.58022E-04	1.19221E-03	1.52223E+00	-9.92483E+00	6.05688E+00
288	2680-2	5.23332E-04	3.60758E-01	-7.41441E-04	-1.27404E+01	-3.04913E+00	-5.23349E+00
289	702423-2	-3.40234E-05	1.99758E-02	1.36936E-04	-3.90893E-01	4.12132E-01	5.04907E-02
290	702423-3	4.15314E-04	1.06445E-02	2.69879E-03	-6.97724E-01	-2.47734E-01	-4.12833E-02
291	702433-2	-1.18079E-05	-6.32954E-04	-1.00055E-05	1.00163E-01	1.61413E-01	-5.14071E-03
292	702665-1	1.35825E-03	1.32100E-02	8.98056E-05	-4.67960E-01	3.00580E+01	-1.68092E+00
293	702665-2	-1.84915E-05	2.07465E-03	-2.76632E-05	-1.11451E-01	2.19336E+00	-1.24930E-01
294	702443-2	-4.63349E-06	-3.07580E-04	1.99864E-05	-5.08460E-01	1.96175E+00	-1.16528E-01
295	702443-3	-1.07499E-04	6.18746E-04	3.68433E-04	-7.92942E+00	-1.27707E+02	7.16283E+00
296	702679-2	6.26102E-05	-1.57496E-04	-1.11981E-05	2.55742E-01	8.83616E+00	-5.02291E-01
297	702680-2	-5.24684E-04	3.62569E-01	-1.11955E-04	-1.38770E+01	2.71537E-01	9.88839E-01
298	2651-1	4.76840E-06	-5.15611E-04	6.56069E-06	2.36457E-02	2.99188E-05	8.54069E-02
299	2651-2	-3.76020E-05	7.81959E-04	-1.44929E-05	-3.93063E-02	-5.13837E-03	-1.27983E-01
300	2651-3	-2.16268E-05	-6.91280E-05	1.80386E-06	-7.22535E-02	3.66500E-02	1.09519E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 90

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
301	2651-4	3.73641E-05	-1.01768E-03	-5.57401E-05	-4.11223E-01	3.80260E-01	1.27341E-01
302	2651-5	7.77688E-05	2.38931E-04	1.09444E-05	-4.83470E-01	-3.79765E-01	6.42476E-02
303	2651-6	1.66263E-04	5.29844E-03	-7.21148E-06	-2.40935E-01	3.12636E-01	-9.37299E-01
304	27895-1	6.00188E-04	8.42282E-04	-4.95620E-05	-2.37164E+00	1.02619E+02	6.27951E+00
305	27895-2	1.06970E-04	1.52329E-03	-7.40753E-05	4.37023E+00	1.77171E+02	1.02955E+01
306	27895-3	-6.06786E-05	1.86854E-04	4.15542E-04	5.98540E+00	-1.69812E+02	-9.58792E+00
307	27895-4	-5.74087E-05	9.51297E-04	-9.61778E-04	-2.74542E+01	1.52817E+02	8.43183E+00
308	27895-5	-4.11112E-04	-1.10847E-03	-7.08605E-04	-1.66902E+01	9.35337E+01	4.81253E+00
309	27895-6	-6.55559E-04	1.95856E-03	6.12958E-04	-7.15559E+01	-1.96588E+03	-1.10167E+02
310	27896-1	2.90306E-04	3.61805E-06	4.47940E-07	-1.30928E-01	1.18315E+01	2.11526E+00
311	27896-2	7.63665E-05	2.92108E-04	-1.60742E-05	-1.16370E-01	3.92420E-02	6.67351E-01
312	27896-3	-1.34893E-05	6.48464E-04	2.19740E-04	1.21762E-01	2.72872E+00	2.76342E-01
313	27896-4	1.85190E-04	4.94493E-03	-3.46986E-04	4.07510E+00	-1.51531E+01	-2.47964E+00
314	27896-5	-4.64466E-04	3.47733E-03	1.43687E-03	5.79819E+00	2.00944E+01	-2.99716E+00
315	27896-6	-2.41444E-04	-5.08683E-04	2.22720E-04	-8.44280E-01	-2.08126E+00	2.42777E+00
316	1651-1	1.60497E-04	1.38440E-04	-6.92444E-06	1.81607E+00	-7.45943E+00	-2.92150E+00
317	1651-2	9.73861E-05	2.29351E-04	-2.42320E-05	1.56193E+00	-3.52386E+00	-5.58157E-01
318	1651-3	-2.42974E-06	-1.48803E-04	4.62031E-05	9.03032E-01	4.54300E+00	-1.55958E+00
319	1651-4	-9.81177E-05	-1.33367E-03	1.56212E-04	-1.67727E-01	5.56962E+01	-1.20399E+01
320	1651-5	-2.77692E-04	-1.30962E-03	4.84167E-04	9.75232E+00	3.80003E+01	-1.58872E+01
321	1651-6	-1.51102E-03	-2.94550E-03	-1.10896E-04	-1.93055E+01	5.42998E+01	2.74292E+01
322	3076-1	-1.26719E-05	3.47439E-04	3.80302E-05	-4.51639E-01	2.38200E+01	9.62632E+00
323	3076-2	-1.14369E-05	1.12411E-03	-6.94091E-06	-4.27536E+01	2.26896E+00	4.90761E+00
324	3076-3	1.47786E-06	-1.03594E-03	1.74844E-05	1.54091E+00	-2.34454E-02	-4.18791E+00
325	3401-1	-3.06180E-06	1.01494E-05	-1.09557E-06	-1.27459E-01	-2.83881E-01	2.23770E-01
326	3401-2	-3.22656E-06	5.63772E-04	-3.92141E-06	2.53156E+01	-3.57029E-01	3.33321E+00
327	3401-3	1.98854E-06	-4.48355E-04	9.42162E-06	3.96113E+00	-5.54205E-01	-1.70135E+00
328	5218-1	2.10331E-04	-8.86881E-06	-1.11319E-05	1.05861E+00	-1.78720E+01	-5.37789E+00
329	5218-2	-3.67667E-06	4.82059E-04	1.29588E-06	-3.12737E+00	-3.36857E+00	-1.96430E+00
330	5218-3	-5.04862E-07	-1.28215E-04	1.02138E-04	3.59315E-01	1.05056E+01	-5.12646E+00
331	5400-1	1.75155E-04	1.32295E-03	-1.65269E-05	2.46601E-01	-1.36322E-01	-4.17428E-01
332	5400-2	-6.24975E-06	-8.54929E-05	-5.86916E-06	4.96669E-02	-8.99805E-03	2.61320E-02
333	5400-3	1.43842E-05	-5.77018E-04	5.55227E-05	-4.16469E-01	3.09204E-01	9.09988E-02
334	5423-1	5.97366E-04	1.44526E-03	2.88247E-05	1.59929E-01	1.42760E-01	-2.50448E-01
335	5423-2	-1.23807E-04	3.24482E-03	-9.12838E-05	-1.75563E-01	-1.78730E-03	-5.33388E-01
336	5423-3	8.22041E-06	-2.54899E-04	1.67152E-04	-4.58065E-01	2.14018E-01	2.45324E-02
337	1650-1	4.43118E-04	5.79000E-05	-3.60247E-05	1.38689E+00	-1.71709E+01	-5.16919E+00
338	1650-2	-5.89198E-05	1.83600E-04	-2.12585E-06	1.34648E-02	1.46782E+01	8.23057E-01
339	1650-3	-2.14422E-05	-9.17698E-05	1.21360E-04	4.06203E-01	5.49588E+00	-2.00815E+00
340	1650-4	1.12042E-04	-2.78058E-03	-1.16776E-04	2.75540E+00	3.22142E+01	-1.20494E+01
341	1650-5	4.17368E-03	1.06323E-03	-4.04778E-03	-1.19971E+00	-1.16806E+01	1.18233E+00
342	1650-6	1.45139E-04	1.44953E-03	-7.14144E-04	-3.29154E+00	1.43054E+02	1.34110E+01
343	210388-2	7.47076E-09	3.34843E-06	-1.00401E-06	-1.34526E-02	-2.59704E-01	6.17014E-02
344	210388-3	2.47240E-08	-3.19366E-08	1.54489E-07	4.81323E-03	4.69254E-02	-8.62065E-03
345	210390-2	1.41147E-08	1.53249E-06	-5.05352E-07	-7.88389E-03	-1.22730E-01	2.79094E-02
346	210390-3	-9.01372E-09	-2.43837E-06	8.11292E-07	1.19085E-02	2.02828E-01	-4.76967E-02
347	210393-2	1.54805E-08	2.62676E-07	-1.14771E-07	-2.78582E-03	-2.79245E-02	4.82184E-03
348	210393-3	-5.51059E-08	-1.79643E-06	6.27970E-07	1.00426E-02	1.45293E-01	-3.20785E-02
349	210395-2	8.10758E-08	2.44762E-07	-2.34159E-07	-8.23267E-03	-4.67347E-02	4.24074E-03
350	210395-3	-1.49040E-07	-9.65659E-07	6.52417E-07	1.73042E-02	1.33346E-01	-2.02200E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 91

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
351	210398-2	6.51581E-08	2.27347E-08	-9.34770E-08	-3.38291E-03	-1.22263E-02	-9.52923E-04
352	210398-3	-9.85801E-08	-7.82873E-07	3.64027E-07	7.23819E-03	7.36753E-02	-1.25632E-02
353	210400-2	4.89672E-07	-7.67877E-07	-4.75474E-07	-3.33386E-02	-8.37855E-02	-1.72475E-02
354	210400-3	-6.60366E-07	-1.83688E-06	1.79613E-06	7.22192E-02	3.80940E-01	-2.76999E-02
355	210405-2	-3.13023E-08	1.67083E-05	1.39388E-06	2.64280E-01	2.04056E-01	1.44371E-01
356	210405-3	-9.48089E-07	-2.08522E-05	2.66333E-06	-1.29523E-01	6.05219E-01	-2.32393E-01
357	210413-2	1.76101E-07	-9.78369E-07	-2.79302E-09	8.62037E-03	1.95132E-02	6.14339E-03
358	210413-3	-4.77659E-11	1.55208E-10	-7.49980E-11	-1.08813E-06	-1.77031E-05	4.43033E-06
359	210458-2	4.92445E-09	1.18889E-06	-2.30632E-07	-4.14372E-04	-4.03029E-02	1.40548E-02
360	210458-3	-8.01501E-09	1.55026E-07	3.63835E-08	9.98525E-04	8.36122E-03	-1.17956E-03
361	210460-2	2.00081E-08	4.65020E-07	-2.01469E-08	6.18198E-04	-2.04803E-03	1.63097E-03
362	210460-3	-1.63552E-08	-6.10602E-07	8.92548E-08	-2.93972E-04	1.31879E-02	-5.89056E-03
363	210463-2	1.07186E-08	1.45367E-07	5.22255E-09	1.66006E-04	1.06508E-03	-3.31128E-04
364	210463-3	-2.96713E-08	-6.49292E-07	4.66754E-08	-4.78337E-04	7.31946E-03	-3.70115E-03
365	210465-2	2.27790E-08	1.10094E-08	3.02878E-08	3.36858E-04	3.90081E-03	-9.12203E-04
366	210465-3	-6.77353E-08	-2.58788E-07	-4.81723E-08	-6.28287E-04	-8.09853E-03	1.49698E-03
367	210468-2	-1.68173E-09	1.99591E-07	1.44031E-08	1.04907E-04	1.11943E-03	-3.96639E-04
368	210468-3	-2.58423E-08	-5.86741E-07	1.42965E-08	7.07368E-05	4.75414E-03	-1.16776E-03
369	210470-2	1.24038E-07	-1.86328E-06	7.57569E-08	1.37333E-03	2.37808E-02	-4.07068E-03
370	210470-3	-2.07371E-08	3.14860E-06	-6.17573E-07	-1.00384E-02	-1.25642E-01	2.16781E-02
371	210475-2	-2.26495E-07	-8.95439E-07	-2.28044E-08	-2.13881E-03	1.39244E-02	-6.43780E-03
372	210475-3	-1.61337E-07	4.70610E-06	-4.33786E-07	-8.11088E-04	-9.15081E-02	2.46900E-02
373	210530-2	3.32464E-07	4.79614E-06	-1.75031E-07	9.11212E-03	1.36248E-02	4.20230E-03
374	210530-3	-1.76536E-07	-1.20704E-06	3.92052E-08	-1.55567E-03	3.42015E-03	1.53505E-03
375	210533-2	5.19134E-07	3.68558E-06	-3.04992E-08	4.14608E-03	1.96852E-03	1.70515E-04
376	210533-3	-6.84323E-07	-6.52318E-06	1.45470E-07	-9.35967E-03	-8.03787E-03	-3.47441E-03
377	210535-2	4.97851E-08	5.09588E-07	-1.79551E-08	1.34722E-04	-4.42364E-03	-5.58406E-05
378	210535-3	-9.24445E-07	-7.70690E-06	1.49612E-07	-9.57420E-03	-1.64347E-04	-1.93033E-03
379	210538-2	-1.67492E-06	-5.52733E-06	-1.88670E-07	-4.60891E-03	-7.72259E-03	3.88244E-03
380	210538-3	2.27610E-06	-2.66989E-05	1.78714E-06	-2.96109E-02	7.09663E-02	-2.57013E-02
381	210600-2	-1.14305E-06	3.14860E-06	-4.67401E-07	8.96132E-03	1.47809E-02	1.04929E-02
382	210600-3	1.99972E-06	-6.89092E-05	3.86642E-06	-8.09290E-02	1.41121E-01	-4.63655E-02
383	210670-2	-5.61078E-07	5.32147E-05	3.53931E-07	5.06519E-03	9.50474E-02	-1.47825E-02
384	210670-3	1.23345E-06	-5.69081E-05	2.57244E-07	-3.57807E-02	-1.32668E-01	9.19557E-03
385	211040-2	1.05307E-07	-1.42191E-04	-1.39794E-06	3.80265E-02	1.95451E-02	4.48789E-02
386	211040-3	5.06442E-07	5.84302E-05	4.16547E-07	-1.24503E-02	4.16526E-02	-1.82115E-02
387	211043-2	3.26917E-06	3.94253E-04	3.11114E-07	-1.12548E-02	-2.66553E-02	-1.11855E-01
388	211043-3	-6.73398E-06	-5.74168E-04	2.62850E-06	-1.01361E-01	-9.44736E-03	1.48049E-01
389	211180-2	-1.28537E-06	-1.62819E-04	-8.92116E-07	3.15696E-02	-2.13543E-03	4.97284E-02
390	211180-3	6.95812E-07	5.93357E-05	2.66145E-07	-1.23928E-02	7.91667E-03	-1.81364E-02
391	211183-2	4.77355E-06	5.02132E-04	9.84338E-09	3.34717E-03	8.25286E-03	-1.40398E-01
392	211183-3	-7.44986E-06	-7.80471E-04	3.23776E-06	-1.40320E-01	1.90158E-02	2.01236E-01
393	211320-2	6.12836E-07	2.10827E-05	-9.87682E-07	2.39530E-02	-1.06879E-02	-4.20402E-03
394	211320-3	-1.40373E-07	-1.13297E-05	3.75877E-07	-9.80374E-03	5.76024E-03	2.56963E-03
395	211323-2	4.04236E-07	-1.12269E-05	-2.73846E-07	7.71354E-03	-5.93339E-03	3.24885E-03
396	211323-3	-9.05348E-07	1.33971E-05	9.36223E-07	-2.36266E-02	1.48882E-02	-4.71123E-03
397	211325-2	-8.41115E-07	1.32308E-04	-9.98846E-07	2.06805E-02	-5.71424E-04	-3.37369E-02
398	211325-3	-3.63967E-07	-4.75852E-04	8.18364E-06	-1.89719E-01	7.51830E-02	1.16012E-01
399	211460-2	5.93401E-08	-1.88230E-07	-7.77725E-08	1.74963E-03	-7.64231E-04	2.63202E-04
400	211460-3	4.64964E-08	-1.26627E-06	4.57248E-08	-8.67475E-04	6.29732E-04	3.93330E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 92

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
401	211463-2	3.11180E-08	6.70923E-07	-1.58808E-08	4.14399E-04	-1.73848E-04	-1.59389E-04
402	211463-3	-1.25444E-07	-9.61532E-07	5.68610E-08	-1.33110E-03	5.97010E-04	1.12870E-04
403	211465-2	7.58067E-08	1.97735E-06	5.38395E-09	1.13306E-04	-2.17143E-04	-6.13945E-04
404	211465-3	-1.98949E-07	-4.09341E-06	6.31165E-08	-1.68107E-03	1.07872E-03	1.10740E-03
405	211468-2	6.14056E-08	1.62947E-06	-1.16805E-09	1.07876E-04	-2.16167E-04	-4.80286E-04
406	211468-3	-1.34039E-07	-2.52218E-06	4.38697E-09	-3.60173E-04	4.68086E-04	7.56577E-04
407	211470-2	-4.02687E-07	-8.37273E-06	6.71167E-08	1.78532E-04	1.06174E-03	2.14223E-03
408	211470-3	-2.98344E-07	-1.92720E-05	4.74700E-07	-8.01356E-03	3.02800E-03	4.57861E-03
409	211494-2	2.73052E-07	7.28505E-06	-3.68365E-07	-5.36525E-04	-5.19195E-04	-8.32727E-04
410	211494-3	-1.74703E-07	-2.48941E-06	3.06766E-07	4.99613E-04	2.01829E-04	3.04475E-05
411	211528-2	-3.43434E-09	-3.62819E-06	4.41707E-08	-4.95160E-05	-4.17917E-04	1.17249E-03
412	211528-3	-1.52844E-07	9.23452E-07	9.76104E-08	1.45750E-04	-3.92282E-05	-2.73497E-04
413	211530-2	4.18578E-09	-1.51660E-06	1.53130E-08	1.66406E-04	-9.60088E-05	2.93813E-04
414	211530-3	1.63123E-08	1.95193E-06	-2.71449E-08	-1.85367E-04	2.39523E-04	-4.99579E-04
415	211533-2	1.99377E-08	-1.44465E-06	7.68639E-10	1.80919E-04	-3.82468E-05	2.21921E-04
416	211533-3	-5.46773E-09	3.63183E-06	-4.67720E-08	-3.37600E-04	2.24853E-04	-7.09216E-04
417	211535-2	8.16717E-08	-9.31334E-06	1.26568E-07	5.47319E-04	-5.66538E-05	1.56223E-03
418	211535-3	-1.42668E-07	1.32554E-05	-1.38559E-07	-9.96283E-04	2.01701E-04	-2.16361E-03
419	211538-2	4.93977E-08	-4.04881E-06	-3.58047E-08	4.14821E-04	-1.10526E-04	6.63540E-04
420	211538-3	-2.77649E-08	4.29715E-06	-3.74655E-09	-5.71193E-04	2.17263E-04	-7.24368E-04
421	211540-2	5.91678E-07	-5.78996E-05	6.68518E-07	3.89298E-03	-7.61559E-04	9.86245E-03
422	211540-3	-8.17916E-07	9.20962E-05	-1.09542E-06	-5.82193E-03	1.01506E-03	-1.57517E-02
423	211545-2	-3.83821E-06	3.32572E-04	-1.07211E-05	-1.55287E-03	-8.50556E-03	-5.46772E-02
424	211545-3	2.81073E-06	-1.88240E-04	8.42015E-06	-4.85934E-03	8.42895E-03	2.97998E-02
425	211595-2	-1.74323E-06	-6.02265E-06	3.21382E-07	1.25344E-04	-1.86648E-03	4.69688E-04
426	211595-3	1.36616E-06	4.82607E-06	-5.15378E-07	-3.94123E-04	2.29083E-04	9.35524E-05
427	211598-2	1.26591E-07	2.25375E-07	-2.63974E-07	-2.27185E-04	-3.10019E-04	1.35306E-04
428	211598-3	2.94488E-07	8.02590E-07	-7.52509E-08	1.20212E-04	6.90930E-04	-2.88259E-04
429	211600-2	-2.28292E-07	-3.30997E-07	1.09200E-07	-1.17727E-04	2.42754E-05	-7.64818E-05
430	211600-3	4.69329E-07	1.05751E-06	-1.54491E-07	1.89066E-04	5.13263E-04	-1.32069E-04
431	211603-2	-1.56165E-07	-1.20851E-06	3.75550E-08	-1.17030E-04	9.35904E-05	4.53005E-05
432	211603-3	2.28035E-07	1.25128E-06	-6.77631E-08	2.18885E-04	-1.74472E-04	-1.34775E-06
433	211605-2	-2.25756E-08	-3.39603E-07	1.23253E-07	-2.79129E-06	7.54385E-05	4.19139E-05
434	211605-3	3.74016E-07	2.24377E-06	-2.72774E-07	2.33084E-04	-2.87901E-04	-4.20204E-05
435	211608-2	8.81170E-08	2.33864E-06	2.66697E-07	2.12347E-04	-1.96440E-04	5.11239E-05
436	211608-3	8.73004E-07	3.77159E-06	-2.79087E-08	1.03561E-03	-9.24874E-04	-1.24728E-03
437	212040-2	3.92173E-06	6.82871E-06	-5.70668E-06	-5.73968E-04	2.12647E-03	-9.10030E-04
438	212040-3	-2.48327E-07	3.23515E-06	1.91371E-06	-3.35080E-04	-1.11314E-03	1.04587E-04
439	212043-2	8.57789E-07	-2.71799E-07	-2.81910E-06	7.46813E-06	2.11104E-04	-2.25858E-04
440	212043-3	-3.31459E-06	-3.87084E-06	6.93457E-06	3.44853E-04	-1.06809E-03	7.16401E-04
441	212045-2	-1.43385E-06	3.38760E-06	5.43750E-06	-1.48322E-04	-2.13757E-04	5.10108E-04
442	212045-3	-2.78600E-06	-1.38692E-05	-1.28278E-06	3.37898E-04	-2.43737E-03	-7.12043E-05
443	212250-2	-3.07534E-07	1.60981E-04	-6.85760E-06	-1.31696E-02	3.63340E-03	-4.27010E-04
444	212250-3	3.58927E-07	-8.49267E-05	2.94699E-06	6.93243E-03	-1.89095E-03	3.70056E-04
445	212253-2	-1.93177E-07	6.79195E-05	-1.50965E-06	-3.96538E-03	6.78924E-04	1.20731E-03
446	212253-3	4.69007E-07	-1.34989E-04	4.29804E-06	9.08800E-03	-2.22411E-03	-1.67355E-03
447	212255-2	3.89325E-07	-8.77175E-05	2.37220E-07	2.62590E-03	-4.52377E-04	-4.03767E-03
448	212255-3	2.13825E-06	-5.82700E-04	2.44160E-05	5.41376E-02	-9.47251E-03	9.81549E-03
449	212530-2	-7.35255E-06	-2.28254E-04	-7.50530E-06	-5.52142E-03	5.58117E-03	2.41238E-03
450	212530-3	1.08155E-06	6.14336E-06	2.81094E-06	6.91015E-03	-3.47665E-03	6.32522E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 93

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
451	212533-2	-7.61624E-06	-8.21218E-04	-8.55524E-06	2.39190E-02	3.66581E-02	1.61778E-04
452	212533-3	1.48776E-05	1.34524E-03	1.63663E-05	-3.32970E-02	-6.47190E-02	-1.64421E-03
453	212535-2	2.27992E-05	3.20126E-03	2.15222E-05	-1.24713E-01	-1.14315E-01	5.43180E-04
454	212535-3	-2.67886E-05	-6.69964E-03	-8.72832E-06	3.56446E-01	1.43562E-01	-3.42199E-03
455	213180-2	3.83285E-08	-3.12236E-06	-4.13709E-08	1.19912E-03	2.65914E-02	7.66999E-03
456	213180-3	6.81966E-09	-4.58232E-07	5.51797E-08	1.36457E-03	-6.58732E-03	2.47907E-03
457	213183-2	4.39536E-08	4.84770E-07	-6.43022E-09	3.68883E-07	8.14809E-03	1.96112E-03
458	213183-3	-6.16228E-08	2.63363E-06	5.01234E-08	-3.17276E-04	-2.56917E-02	-6.29076E-03
459	213185-2	-9.49313E-09	1.83628E-07	4.59602E-08	5.58287E-04	-1.71665E-02	-1.89780E-03
460	213185-3	-5.41839E-08	2.46678E-06	3.40520E-08	2.60459E-04	-1.28263E-02	-3.00198E-03
461	213188-2	-1.00687E-07	-5.44964E-06	5.04692E-08	1.89741E-03	-3.05512E-02	-2.52225E-03
462	213188-3	-1.42494E-07	6.27100E-06	-3.31882E-07	-5.82375E-03	1.33897E-01	6.83170E-03
463	213250-2	1.43364E-07	-4.87080E-06	-2.86065E-08	2.80492E-03	8.85788E-03	5.81116E-03
464	213250-3	-7.34630E-09	2.02715E-06	1.51258E-08	8.08061E-04	-1.26030E-03	1.44240E-03
465	213253-2	5.61377E-08	-1.19632E-06	4.32405E-09	5.77325E-04	6.02702E-04	1.19375E-03
466	213253-3	-1.52870E-07	3.79079E-06	4.55431E-09	-1.91456E-03	-4.52958E-03	-4.08557E-03
467	213255-2	-1.96124E-07	3.34721E-06	8.70965E-09	-3.20654E-04	8.24954E-03	-7.15197E-04
468	213255-3	3.12650E-07	-2.99476E-06	1.09177E-07	-8.78579E-04	-9.87805E-02	-1.07772E-02
469	213323-2	1.92504E-06	-2.49899E-05	4.86062E-07	7.79662E-03	-1.99558E-01	-8.64425E-03
470	213323-3	-2.01517E-06	2.37946E-05	-5.48520E-07	-4.00844E-03	2.35430E-01	1.73587E-02
471	213325-2	-3.61640E-06	3.01142E-05	-1.09437E-06	-6.72942E-03	6.04276E-01	4.25088E-02
472	213325-3	4.21414E-06	-5.79662E-06	1.51087E-06	-3.78315E-03	-1.17947E+00	-9.80539E-02
473	213390-2	5.44385E-07	-4.22196E-06	6.69483E-08	1.15400E-02	-5.43480E-02	1.29967E-02
474	213390-3	-2.56560E-07	1.72078E-06	-7.14287E-08	1.34915E-03	2.08867E-02	1.18293E-03
475	213393-2	7.03927E-07	-5.46752E-06	1.81368E-07	2.30260E-03	-9.99606E-02	-9.34639E-04
476	213393-3	-1.16537E-06	9.32394E-06	-2.59229E-07	-7.93792E-03	1.52846E-01	-3.90208E-03
477	213395-2	-1.79631E-06	1.46411E-05	-4.82288E-07	-2.89687E-03	2.66115E-01	9.68108E-03
478	213395-3	2.08102E-06	-1.69024E-05	7.36614E-07	-1.02671E-02	-4.61546E-01	-5.29274E-02
479	213460-2	2.22773E-08	-1.10675E-06	-3.44100E-08	1.42030E-02	-2.25949E-02	6.13478E-03
480	213460-3	-1.64564E-07	1.49523E-06	-8.04473E-08	7.10151E-03	-2.51516E-04	7.52770E-03
481	213463-2	1.55667E-07	-1.64842E-06	1.19642E-08	3.11049E-03	-2.92252E-02	1.25101E-03
482	213463-3	-1.43690E-07	1.98050E-06	2.32245E-08	-1.12860E-02	3.90702E-02	-5.89280E-03
483	213465-2	1.39471E-08	4.05666E-07	3.10084E-08	-3.25478E-03	-8.09305E-03	-1.55284E-03
484	213465-3	-2.76181E-07	2.55959E-06	-6.11345E-08	-3.47718E-03	5.70450E-02	-4.77751E-04
485	213468-2	-3.91280E-07	3.82817E-06	-7.36671E-08	-3.59697E-04	6.42320E-02	2.89757E-03
486	213468-3	1.43360E-07	-5.74270E-07	3.64649E-07	-1.43285E-02	-9.49335E-02	-2.36376E-02
487	213481-2	2.68498E-08	-2.76003E-06	-1.72770E-07	1.21005E-02	5.76123E-02	2.09955E-04
488	213481-3	-5.56651E-12	1.12548E-09	5.86198E-11	3.02368E-06	-6.31653E-06	-1.05298E-06
489	213528-2	-4.32724E-07	2.11626E-06	-2.98043E-07	6.31165E-02	-2.92813E-02	1.46654E-02
490	213528-3	-6.92120E-08	2.69011E-06	1.32982E-09	1.21314E-02	-2.53571E-03	4.66934E-03
491	213530-2	-1.17794E-07	3.21486E-07	-7.40133E-08	2.37611E-02	-5.49730E-03	1.97960E-03
492	213530-3	2.46415E-07	-8.24348E-07	1.61774E-07	-4.08837E-02	1.66218E-02	-7.00393E-03
493	213533-2	-1.18861E-08	1.28958E-07	2.10578E-08	-1.59340E-04	-1.80867E-03	-1.00903E-03
494	213533-3	1.95210E-07	-9.11586E-07	1.02274E-07	-3.14256E-02	1.07525E-02	-3.39600E-03
495	213535-2	-5.44427E-08	-3.18864E-06	-1.86621E-07	1.47914E-02	1.46039E-02	2.01400E-03
496	213535-3	1.16183E-07	3.87976E-06	1.75692E-07	-2.55708E-02	-1.42553E-02	4.34897E-03
497	213538-2	-2.05142E-07	6.71895E-08	4.38872E-08	7.35647E-03	-1.42472E-03	-1.03421E-02
498	213538-3	4.18124E-07	-2.91984E-06	-1.54037E-07	-1.38198E-03	2.95994E-02	1.28715E-02
499	213540-2	1.34690E-06	-2.46513E-05	-1.26943E-06	-1.13773E-03	1.15821E-01	6.49966E-02
500	213540-3	-2.06273E-06	6.53592E-05	3.50927E-06	-1.21885E-01	-3.49465E-01	-1.19373E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 94

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
501	213600-2	3.19538E-07	5.92649E-06	-1.38781E-07	3.18940E-02	-1.93663E-02	4.52455E-02
502	213600-3	1.06174E-07	-9.17717E-06	-5.35210E-07	-4.60368E-02	-4.45729E-02	4.39655E-02
503	960-1	6.19082E-09	3.73916E-09	1.76496E-09	4.88613E-05	2.28591E-05	1.07467E-04
504	960-2	1.71317E-07	1.54769E-05	4.33481E-07	1.80638E-02	3.47267E-02	4.22653E-02
505	960-3	-5.00172E-07	7.01044E-06	-1.77288E-07	4.80854E-03	-1.53558E-02	-9.57110E-03
506	961-1	7.32079E-09	4.39382E-09	3.12868E-10	5.97306E-05	-2.06192E-04	9.64340E-05
507	961-2	4.41901E-07	4.05257E-05	3.34060E-08	-3.19775E-03	-4.03492E-02	3.33666E-02
508	961-3	2.05795E-07	4.16039E-06	1.90383E-07	-1.23619E-03	1.53635E-02	8.82728E-03
509	962-1	8.69603E-09	3.48386E-09	3.49320E-11	6.07421E-05	-2.98343E-04	9.87680E-05
510	962-2	1.68846E-06	-9.09167E-06	-3.64836E-07	-2.03617E-02	-1.00022E-01	5.10177E-02
511	962-3	5.78888E-08	1.88017E-05	5.41374E-08	-1.04864E-03	-2.63225E-02	1.28206E-03
512	964-1	7.26350E-09	3.98928E-08	-5.92820E-09	-5.95074E-06	-3.81161E-05	-1.34775E-05
513	964-2	-1.72033E-06	-2.17019E-05	2.55971E-07	-1.66881E-02	-2.20952E-02	1.17516E-02
514	964-3	-3.41919E-07	1.32660E-05	2.71219E-07	-1.37051E-03	-1.45251E-04	-3.24041E-03
515	965-1	5.46907E-09	3.68949E-08	-5.29222E-09	-3.18129E-06	-2.30986E-05	-1.30631E-05
516	965-2	-2.16688E-06	2.04643E-05	8.68137E-08	-9.51063E-03	-1.54366E-02	-6.58411E-03
517	965-3	2.90515E-07	3.06231E-05	-2.22300E-07	4.17805E-03	-2.12700E-03	-4.93708E-03
518	967-1	2.24187E-09	1.38969E-08	-2.25507E-09	-1.02986E-06	-5.89596E-06	-5.05309E-06
519	967-2	1.56485E-06	1.08499E-04	5.01106E-07	2.81434E-02	-1.75518E-03	-1.25387E-02
520	967-3	1.34356E-06	-1.11602E-05	6.28732E-07	4.54125E-03	3.14233E-03	-1.63864E-03
521	970-1	2.68154E-08	6.55687E-08	-2.89172E-09	-6.44925E-06	2.87170E-05	4.12543E-06
522	970-2	2.36906E-07	-8.10847E-05	-9.77180E-07	6.06436E-03	1.87715E-02	4.86428E-04
523	970-3	-1.45551E-06	1.96997E-05	-1.80814E-07	1.01792E-03	-1.50006E-03	-3.96254E-04
524	971-1	3.03443E-08	6.10923E-08	-3.59512E-09	-7.38947E-06	5.06446E-05	6.45588E-06
525	971-2	-4.21406E-08	2.75659E-05	2.20214E-07	-1.54584E-03	2.00106E-02	2.46695E-03
526	971-3	3.36453E-07	2.17197E-05	-8.46355E-08	-1.49996E-03	4.33305E-03	-4.79831E-05
527	972-1	3.47900E-08	1.29845E-07	-3.62916E-09	-8.60929E-06	2.06693E-05	6.95748E-06
528	972-2	1.70397E-06	-4.66898E-04	7.73124E-08	2.00899E-02	-9.38203E-05	9.84120E-03
529	972-3	5.93667E-07	-2.10148E-05	5.08749E-08	2.09298E-03	1.66657E-03	7.52251E-04
530	974-1	1.26533E-08	3.26349E-08	4.02606E-09	-5.41235E-06	5.79479E-04	-6.41491E-05
531	974-2	-3.11788E-07	5.10346E-05	-3.62656E-07	1.58385E-02	4.12974E-02	3.43685E-02
532	974-3	-1.54783E-07	3.64579E-06	-2.70353E-08	2.27290E-03	7.06970E-05	6.68717E-03
533	975-1	1.21801E-08	6.24999E-09	3.82233E-09	7.91665E-06	5.75710E-04	-8.30748E-05
534	975-2	-1.56825E-09	1.40865E-05	1.10479E-07	5.97633E-02	5.84820E-02	7.51353E-02
535	975-3	4.04158E-07	9.28455E-06	1.86055E-07	7.29027E-03	4.51265E-02	-6.67946E-03
536	271218-2	-1.00724E-06	1.32289E-04	1.96940E-05	4.38659E+03	-6.54785E+03	-7.25329E+03
537	271217-1	1.13402E-04	9.92698E-05	6.17114E-05	-3.14910E+02	-1.03425E+03	3.39879E+04
538	271217-2	1.32875E-06	8.91128E-05	1.47998E-05	4.44966E+02	3.37533E+01	-3.29928E+02
539	271217-3	6.95582E-09	2.24827E-09	5.03205E-08	-2.15184E+04	5.15378E+01	5.70667E+02
540	271216-1	1.17726E-04	1.00887E-05	2.21218E-05	-1.96023E+01	-3.61343E+01	-5.04199E+01
541	271216-2	1.18395E-05	-3.73268E-05	6.18010E-06	-1.44484E+02	-3.01411E+02	-3.89164E+02
542	271219-1	-7.35745E-08	-1.69966E-08	-1.79745E-07	4.21293E+03	-6.91133E+02	3.89942E+04
543	271219-2	5.19381E-06	-7.65498E-05	1.29076E-05	2.93320E+03	-4.46434E+02	4.26638E+03
544	271219-3	-6.44149E-06	3.72005E-06	-1.00662E-05	-3.47782E+04	1.01705E+03	-4.09963E+03
545	27355-1	8.89413E-08	4.20259E-08	-3.78350E-08	-2.49412E+03	-2.62292E+01	2.10128E+04
546	27355-2	1.20024E-06	1.35973E-04	-8.94982E-06	5.90632E+02	4.84421E+01	-2.88130E+03
547	27355-3	-7.14338E-05	-1.79362E-04	2.72496E-04	-1.04449E+04	-1.67590E+02	2.79646E+03
548	701383-2	1.97556E-05	-6.21178E-05	-9.80220E-06	-2.72851E-01	7.01892E-02	-6.07750E-01
549	701383-3	7.08914E-05	3.79655E-04	-7.36722E-05	-8.47927E-01	3.80035E+01	-3.53725E+00
550	701405-2	1.95401E-05	8.82599E-04	3.23996E-06	2.23936E-02	1.71469E-01	-1.19033E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 95

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
551	701405-3	-1.34837E-04	5.33335E-04	1.63593E-04	2.80571E-01	6.56888E-01	-1.03242E-01
552	701963-1	2.28614E-04	-9.72532E-04	-9.63011E-06	-1.29190E+00	-5.38050E+00	1.56246E+00
553	701963-2	6.72938E-06	-6.28382E-05	6.42687E-06	9.40742E-02	6.54917E-01	1.47654E-01
554	701963-3	-2.39296E-07	1.79177E-04	8.60425E-06	-8.76146E-02	5.08814E-01	2.39601E-01
555	701393-2	1.29450E-05	-9.18632E-05	-1.08806E-06	-6.61629E-02	-1.10278E-01	3.27861E-02
556	1383-2	-5.52705E-06	-3.51402E-05	9.64489E-06	-2.48212E-01	-3.29495E-01	-5.38199E-01
557	1383-3	5.18945E-05	-2.31539E-04	-7.95725E-05	1.00101E+00	3.85992E+01	3.77002E+00
558	1405-2	-2.01039E-05	6.98178E-04	-1.61204E-06	-4.56216E-02	-7.39129E-02	-1.20677E-01
559	1405-3	-1.24206E-04	-4.89327E-04	1.63730E-04	-1.96380E-01	4.23113E-01	7.13520E-02
560	901963-1	1.39544E-04	8.39781E-04	-7.03541E-06	9.02568E-01	-4.48429E+00	-1.16115E+00
561	901963-2	-8.49170E-06	-1.33389E-04	-7.42975E-06	9.27581E-02	-2.38492E-01	1.62972E-01
562	901963-3	-2.73953E-06	-1.49393E-04	4.45947E-06	1.94402E-01	9.36792E-01	-1.22883E-01
563	1393-2	-3.33202E-06	-6.75655E-05	5.52809E-07	-5.85727E-02	1.10787E-01	3.97974E-02
564	701423-2	-8.43057E-05	4.02701E-03	2.18023E-05	-8.04897E-01	7.38110E-02	-1.10691E+00
565	701423-3	-9.86498E-05	-3.31107E-03	6.23073E-04	-3.28609E-01	6.09271E-01	1.04798E+00
566	701445-2	1.73898E-05	2.32861E-04	5.20778E-06	-1.61131E-01	-2.27305E-03	-4.79122E-02
567	701445-3	5.08045E-05	7.84670E-05	9.89559E-06	1.64726E-01	3.29577E-01	-9.23163E-03
568	701965-1	2.52747E-04	4.61306E-03	-3.86033E-06	-4.15383E-01	-6.59506E-01	-9.39866E-01
569	701965-2	-1.50330E-05	4.00577E-03	-1.13425E-07	1.61194E-01	1.70485E-01	-1.08517E+00
570	701965-3	3.91957E-05	-9.72457E-04	1.68574E-05	-1.18296E-01	2.39651E-01	3.01781E-01
571	701433-2	-3.18293E-05	2.40651E-04	-3.71569E-06	-4.03926E-01	-1.30408E-01	-6.94922E-02
572	1423-2	1.97553E-05	3.97959E-03	-2.21722E-05	-8.15726E-01	-5.08091E-02	-1.08861E+00
573	1423-3	5.83885E-06	3.55941E-03	6.16908E-04	7.22235E-01	3.90174E-01	-1.07801E+00
574	1445-2	-2.23930E-06	9.86671E-05	-1.25055E-06	-1.28316E-02	3.20443E-02	-2.03746E-02
575	1445-3	-4.52167E-06	-1.58450E-04	6.25551E-06	-1.03269E-01	7.46536E-02	3.84702E-02
576	901965-1	1.06535E-04	-4.71278E-03	-1.26542E-06	3.81264E-01	-2.94826E-01	1.13369E+00
577	901965-2	2.52086E-05	3.67909E-03	5.93691E-06	3.09817E-02	-9.68819E-03	-1.01581E+00
578	901965-3	6.78722E-06	9.79914E-04	1.45689E-05	2.21412E-01	3.11708E-02	-2.95226E-01
579	1433-2	3.53695E-08	2.80297E-04	2.39524E-06	-2.38480E-01	4.01245E-02	-7.41637E-02
580	701443-2	1.04987E-05	-1.47527E-04	-7.39451E-06	-1.77367E+00	-1.19586E+00	2.60742E-02
581	701443-3	-1.22124E-04	1.03288E-03	3.80360E-05	9.65878E-01	2.25372E+00	-1.83996E-01
582	702365-2	3.17634E-05	1.85669E-04	4.15295E-06	9.60741E-01	-1.46867E+00	-1.81273E-02
583	702365-3	-7.32232E-05	1.19310E-03	-1.82810E-04	-1.70452E-01	2.74739E+00	-1.20580E-01
584	702661-1	3.92209E-04	-5.73063E-04	4.28044E-05	1.08591E-01	3.84705E-02	2.88320E-01
585	702661-2	7.58367E-06	-3.97413E-05	4.62481E-06	6.37830E-02	5.25785E-02	1.35482E-02
586	702661-3	7.24168E-06	2.72441E-04	1.10075E-05	-1.14846E-01	2.63084E-01	-4.20278E-02
587	702353-2	-2.25908E-05	-2.58101E-05	-3.87138E-06	-6.31921E-02	-2.58664E-01	5.47765E-03
588	1443-2	6.05738E-06	-7.10880E-05	3.01587E-06	-2.29396E-01	2.59342E-01	1.08249E-02
589	1443-3	2.72411E-05	-7.11447E-04	2.05252E-05	7.08515E-01	2.53084E-02	1.12657E-01
590	2365-2	-1.21796E-05	1.30775E-04	-8.28290E-06	-1.99622E-01	6.99694E-02	-1.37996E-02
591	2365-3	-8.96593E-05	-1.01044E-03	-2.05497E-04	4.02567E-01	-4.89793E-02	8.73388E-02
592	2661-1	1.33379E-04	4.28460E-04	2.81370E-05	1.08469E-02	-4.17326E-02	-1.36768E-01
593	2661-2	-8.02768E-06	-4.83413E-05	-2.06345E-06	1.75076E-02	-5.55791E-04	1.37759E-02
594	2661-3	-2.69762E-06	-1.80201E-04	5.20912E-06	1.88176E-01	-2.78427E-02	2.52452E-02
595	2353-2	1.92993E-07	3.44466E-05	-1.51049E-06	-8.62105E-02	4.10940E-02	-2.48052E-03
596	727355-2	-1.37294E-06	1.33254E-04	8.66740E-06	2.41151E-01	1.29706E-01	-9.69670E-02
597	727355-3	-7.00776E-05	1.93037E-04	2.73055E-04	3.96510E-01	3.51566E+00	-5.55591E-01
598	7271219-2	-4.34241E-06	-1.38937E-04	-1.60513E-05	-2.74953E-01	-6.02232E-02	5.04228E-01
599	7271219-3	-3.05565E-07	-5.84784E-05	-7.42474E-06	-3.99786E-02	-2.01148E-01	-7.97894E-02
600	7271217-1	1.49192E-04	-1.70006E-04	8.75969E-05	-2.83359E-01	8.90658E+00	-8.52078E+00

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 96

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
601	7271217-2	1.07778E-06	6.44407E-05	-2.42966E-05	7.20754E-02	-5.41467E-02	1.58369E+00
602	7271217-3	-4.09739E-06	5.29668E-05	9.22562E-06	1.21695E-01	-4.42259E-01	-4.09315E-01
603	727435-2	-2.71598E-07	1.80952E-05	-2.16037E-06	1.98549E-02	1.16628E-01	-2.47234E-02
604	6032-1	7.56797E-06	-1.07350E-05	1.88692E-06	4.74622E-04	6.21606E-05	6.92842E-04
605	6032-2	5.28166E-05	-3.00571E-05	2.92627E-04	-2.61742E-01	-3.56290E-03	-8.69281E-03
606	6032-3	5.04126E-05	-2.62724E-05	2.97870E-04	-2.68776E-01	-3.81174E-03	-9.08050E-03
607	6060-1	2.59869E-06	-2.36161E-06	-3.03966E-07	-1.68895E-02	-9.57946E-02	1.79077E-02
608	6060-2	-1.31789E-06	8.62139E-06	7.33211E-07	7.16457E-03	2.47814E-01	4.09377E-03
609	6060-3	-1.99413E-06	1.71419E-05	1.13004E-06	1.32325E-02	4.09012E-01	7.80801E-03
610	6061-1	1.36327E-06	-7.52749E-07	-3.75161E-08	-9.11447E-03	-9.07184E-02	1.47112E-02
611	6061-2	-1.30336E-05	1.77243E-05	7.62791E-06	1.58487E-01	-1.00253E+00	1.96869E-01
612	6061-3	1.13924E-05	-1.59773E-05	-6.68404E-06	-1.41559E-01	9.40916E-01	-1.75974E-01
613	6064-1	3.28887E-06	-1.16148E-05	2.70409E-07	-2.58179E-03	1.10540E-03	4.87563E-03
614	6064-2	-6.66784E-07	3.01900E-05	-1.03859E-07	3.32726E-02	9.40987E-03	-7.05677E-03
615	6064-3	-1.88941E-06	3.32112E-05	-4.45643E-07	3.93044E-02	6.48449E-03	-8.61106E-03
616	6081-1	1.28142E-06	-3.20048E-05	-2.09599E-07	4.07725E-02	-2.86436E-02	-2.37722E-04
617	6081-2	-3.97641E-06	-3.05564E-04	1.94427E-06	1.98434E+00	2.38032E+00	-8.65949E-02
618	6081-3	-5.80974E-06	7.34462E-05	7.72777E-06	4.38247E-01	9.36602E-01	3.27633E-03
619	6081-4	5.08248E-06	-1.48692E-03	-2.02595E-05	-1.79159E+00	-8.85966E+00	-1.07516E-01
620	6081-5	-1.62956E-06	3.33825E-05	4.21301E-07	-2.63682E-03	1.31253E-01	3.18485E-04
621	6082-1	1.78307E-06	1.49281E-04	7.50779E-07	-1.00916E-03	7.30234E-06	-3.57130E-02
622	6082-2	-6.40200E-06	1.18396E-03	6.09814E-06	1.82256E-02	6.32161E-02	-3.08641E-01
623	6082-3	-5.22633E-06	1.11454E-03	6.57630E-06	2.92876E-02	6.91314E-02	-2.87225E-01
624	6083-1	2.42163E-05	-1.60264E-04	-1.95512E-06	5.48890E-03	1.50706E-02	2.92003E-03
625	6083-2	5.08169E-06	6.63832E-04	2.19179E-05	-6.22514E-02	-8.08559E-02	2.16019E-04
626	6083-3	6.49177E-06	8.21279E-04	2.65461E-05	-7.65996E-02	-9.96231E-02	5.83391E-04
627	6084-1	1.99022E-04	-3.38989E-06	6.08920E-06	-2.41068E-02	1.07592E+00	-4.89715E-02
628	6084-2	-1.41344E-05	5.74642E-03	2.53194E-05	-2.48360E-01	8.86870E-01	-4.31610E-02
629	6084-3	-1.36017E-05	2.47691E-03	4.89616E-05	-1.69500E-01	4.12552E-02	-6.26631E-03
630	6085-1	1.65255E-04	-9.74172E-06	-2.01987E-05	6.34215E-02	3.38932E+00	-3.00344E-01
631	6085-2	-9.11728E-05	2.14085E-05	3.53535E-05	-9.64080E-02	-3.07107E+00	4.00104E-01
632	6085-3	-2.04847E-05	-5.89659E-06	1.55679E-05	-8.62047E-02	-2.28135E+00	3.18210E-01
633	6067-1	3.46746E-04	-2.27224E-03	-3.79364E-05	8.14790E-02	1.31854E-01	1.98741E-02
634	6067-2	6.96750E-05	1.12965E-03	-2.92094E-05	-3.84964E-02	-2.35377E-02	1.65323E-02
635	6067-3	-3.88508E-05	1.57107E-03	-1.65575E-05	-5.56920E-02	-6.78827E-02	5.81811E-03
636	6068-1	1.08652E-04	-1.83157E-04	-8.04900E-06	1.48098E-01	7.39553E+00	-6.10052E-01
637	6068-2	3.88991E-05	2.25099E-04	1.45523E-05	-1.18499E-01	9.02489E+00	-4.48503E-01
638	6068-3	4.72439E-05	-4.25894E-05	4.00682E-06	-3.10171E-02	1.26752E+01	-8.43654E-01
639	6071-1	1.07381E-04	1.81076E-04	-8.55138E-06	-1.40900E-01	7.23355E+00	5.27176E-01
640	6071-2	-3.90444E-05	2.20333E-04	-1.47419E-05	-1.08320E-01	-9.00368E+00	-4.55739E-01
641	6071-3	4.66746E-05	4.08781E-05	3.97264E-06	2.71382E-02	1.24477E+01	7.75874E-01
642	6069-1	1.65557E-06	-1.52236E-05	-3.38079E-07	-4.67103E-03	-1.46479E-02	4.45511E-03
643	6069-2	4.60273E-06	1.23331E-05	2.81801E-06	-1.59471E-02	5.89709E-02	-3.96695E-04
644	6069-3	6.29337E-06	8.75635E-06	3.21388E-06	-2.05159E-02	6.54097E-02	1.28583E-03
645	6070-1	6.86253E-07	5.42557E-06	1.01305E-08	9.81359E-04	-9.23861E-04	-1.57264E-03
646	6070-2	-5.49895E-07	-1.48214E-05	2.42345E-07	-9.82276E-03	5.07405E-03	3.71033E-03
647	6070-3	7.33293E-07	1.90073E-05	-3.31563E-07	1.17506E-02	-6.32418E-03	-4.69267E-03
648	6073-1	6.74761E-07	8.80490E-06	1.58677E-08	1.47889E-03	-1.33899E-03	-2.79841E-03
649	6073-2	1.75030E-07	1.35954E-05	-5.81311E-07	1.07464E-02	-5.38337E-03	-2.27565E-03
650	6073-3	-5.81515E-07	-1.90468E-05	6.61659E-07	-1.36370E-02	7.39151E-03	3.78363E-03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 97

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
651	6074-1	2.38066E-05	1.57485E-04	-1.92799E-06	-7.06978E-03	1.33052E-02	-2.81291E-03
652	6074-2	-2.65908E-06	6.06130E-04	-2.05736E-05	-5.24845E-02	4.98630E-03	-3.07774E-04
653	6074-3	3.55468E-06	-7.50749E-04	2.49042E-05	6.44155E-02	-6.22430E-03	5.06298E-05
654	6076-1	3.42906E-04	2.25557E-03	-3.79617E-05	-9.29756E-02	1.54289E-01	-1.88742E-02
655	6076-2	-6.99598E-05	1.13015E-03	2.90844E-05	-3.85136E-02	2.95886E-02	1.63411E-02
656	6076-3	-3.75726E-05	-1.55757E-03	-1.66034E-05	6.19770E-02	-7.16355E-02	-5.90285E-03
657	6080-1	4.95064E-07	7.95812E-07	7.62916E-07	-3.91182E-02	6.87006E-02	-1.02936E-04
658	6080-2	1.33696E-05	-1.89606E-04	-2.33973E-06	9.74453E-01	5.33982E+00	-6.28019E-02
659	6080-3	1.32636E-05	2.68248E-05	2.95050E-05	-1.64498E+00	-3.94228E-02	-4.33751E-03
660	6080-4	-1.64110E-05	-3.37224E-06	-5.46368E-06	-3.50052E+00	1.12669E+01	-9.07444E-03
661	6080-5	-1.76505E-06	-9.75695E-07	1.08477E-06	-1.04624E-01	2.05364E-01	-7.21169E-05
662	6086-1	5.27142E-07	1.83130E-07	-1.82685E-07	1.36684E-03	-4.95011E-03	-2.70478E-02
663	6086-2	1.03862E-07	1.64489E-07	-2.81337E-08	1.70036E-03	-4.09286E-03	-2.30761E-02
664	6086-3	5.00792E-08	-1.67696E-08	-2.16569E-08	-2.08539E-04	9.48603E-02	-8.66105E-05
665	6089-1	2.22061E-05	4.20540E-06	-4.82996E-06	1.43856E-02	1.16974E+00	-6.63892E-01
666	6089-2	-1.23105E-05	-4.64186E-05	2.66748E-06	-3.71032E-02	8.84555E-01	1.17358E+01
667	6089-3	4.34162E-06	1.13789E-06	7.90695E-07	1.13520E-02	-2.49722E+01	2.76317E-04
668	6087-1	1.23150E-05	-2.62878E-04	-6.79729E-05	-2.57539E+00	1.01965E+00	-1.17162E-01
669	6087-2	-7.64847E-07	1.86261E-03	-5.63621E-07	-2.80313E+00	-3.42566E-02	-8.30037E-01
670	6087-3	-2.64723E-07	7.06219E-06	-1.59209E-05	1.27904E-01	-1.03944E+00	1.58834E-02
671	6091-1	1.84218E-06	3.04071E-06	-3.10741E-07	1.27100E-02	-7.75652E-02	-1.26364E-02
672	6091-2	2.54819E-07	1.94156E-06	-5.26698E-07	3.69611E-03	-1.99066E-01	1.79379E-03
673	6091-3	-3.06109E-07	-4.92599E-06	8.78613E-07	-7.82889E-03	3.46369E-01	-4.09514E-03
674	6092-1	5.80372E-07	-1.44230E-04	6.52356E-07	4.76282E-03	-1.48072E-03	3.67318E-02
675	6092-2	9.64476E-06	1.12055E-03	-5.23915E-06	-2.43603E-02	-2.54458E-02	-3.00515E-01
676	6092-3	-9.28961E-06	-1.04891E-03	5.64691E-06	1.73725E-02	2.76919E-02	2.79381E-01
677	6093-1	6.66634E-06	1.09619E-05	1.82383E-06	1.03112E-04	2.28830E-03	-4.03501E-04
678	6093-2	-4.56986E-05	-4.60142E-05	-2.90738E-04	-2.67153E-02	-7.05048E-02	-8.09921E-03
679	6093-3	4.34040E-05	4.25572E-05	2.95939E-04	2.70534E-02	7.10657E-02	8.36427E-03
680	6094-1	1.96689E-04	5.69307E-05	5.85537E-06	1.24925E-03	1.11705E+00	4.71043E-02
681	6094-2	1.62365E-05	5.76181E-03	-2.46214E-05	-2.28051E-01	-9.56569E-01	-4.23698E-02
682	6094-3	-1.70119E-05	-2.69301E-03	4.71381E-05	1.51746E-01	1.46148E-01	6.24106E-03
683	6095-1	1.64071E-04	9.44388E-06	-2.06796E-05	-5.95486E-02	3.30428E+00	2.39856E-01
684	6095-2	8.92162E-05	1.71095E-05	-3.61364E-05	-7.85800E-02	2.85706E+00	2.72416E-01
685	6095-3	-1.88465E-05	9.22271E-06	1.62399E-05	7.20198E-02	-2.10132E+00	-2.09685E-01
686	1-1	2.62258E-06	3.10248E-06	-2.01001E-06	2.78993E-01	2.77036E-01	4.21618E-01
687	1-3	6.56355E-07	-2.01243E-08	-3.99365E-06	-1.05602E+00	-1.23878E-01	-1.83811E-01
688	2-1	7.84201E-06	5.28613E-06	3.19595E-06	1.82827E+00	5.70954E-01	7.60984E-01
689	2-3	2.09656E-07	-2.08601E-06	-1.68256E-06	-3.32446E+00	2.51160E+00	-1.24580E+00
690	3-1	1.13949E-04	4.86031E-05	3.02775E-05	7.53192E-01	5.75759E+00	-3.69040E+00
691	3-2	1.57385E-05	-1.18163E-05	-7.24571E-06	-2.12588E-01	-8.02393E+00	-1.49617E+00
692	3-3	-3.08574E-05	-7.31389E-05	-4.85083E-05	3.34223E+00	3.28785E+01	-1.91872E+01
693	12-1	7.94523E-06	1.47809E-05	1.23446E-06	-2.46094E+00	-1.44954E-01	-9.20805E+00
694	12-2	2.32390E-06	4.66886E-06	7.82521E-07	-1.33852E-01	-3.48200E-02	-2.30962E+00
695	12-3	-1.93907E-06	-1.08142E-05	-3.37815E-06	9.68347E+00	7.56624E-02	2.61221E+00
696	14-1	3.78746E-05	8.71996E-05	8.49654E-06	1.46390E+00	3.50418E-01	3.03266E+00
697	14-2	4.18461E-06	-2.29553E-07	2.60100E-06	-4.08712E-01	2.05804E-01	2.16442E-01
698	14-3	-4.13087E-06	-5.01548E-05	5.76034E-06	-3.47898E+00	8.65809E-01	-1.98681E+00
699	84-3	2.80345E-05	-7.52108E-04	2.25033E-05	7.28316E-01	2.51645E-01	-3.54193E-02
700	119-1	9.27251E-07	1.72428E-05	-3.19164E-08	-2.76393E-03	-8.76323E-03	-7.40724E-03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 98

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
701	119-2	-4.21863E-06	2.25918E-05	9.65071E-07	-5.68445E-01	1.51210E-01	-6.65756E-02
702	119-3	-7.79134E-05	-1.00305E-03	1.34524E-04	7.07237E-01	7.80054E-01	1.36364E-01
703	153-1	2.07550E-03	4.05161E-03	-6.16729E-05	7.75935E-03	9.21873E-01	-1.72508E-01
704	153-2	-2.92995E-04	3.16295E-03	2.92410E-04	-1.19475E-01	-7.86822E-02	-2.56633E-01
705	153-3	4.94855E-05	-1.03405E-03	1.25491E-03	6.91897E-02	-1.33772E-01	2.29731E-02
706	161-3	1.47930E-05	-5.21623E-03	2.57742E-04	2.80017E-01	2.52507E-01	2.68786E-02
707	192-1	1.12779E-03	1.96613E-02	1.09159E-04	-2.05302E+00	5.60151E+01	3.26629E+00
708	192-2	-1.01031E-05	1.53278E-03	3.39177E-05	3.03916E-01	-1.80316E+01	-9.86727E-01
709	192-3	-1.69033E-06	-1.27179E-03	4.47014E-05	1.02286E+00	-1.25501E+01	-6.85583E-01
710	233-1	3.33499E-05	-1.84033E-03	-7.56338E-05	1.07855E+00	-3.92394E-01	-3.15034E+00
711	233-3	-1.27716E-05	-4.17002E-05	1.51831E-06	2.23619E+00	-2.24338E-01	2.97836E-01
712	249-3	-6.06022E-06	-8.65533E-04	-8.66749E-06	5.93502E+00	-2.95955E-01	4.18057E-01
713	297-1	2.59827E-05	-1.61893E-02	-1.42793E-05	2.62869E+00	-4.58672E+00	-1.61310E+01
714	297-3	-7.96350E-06	-5.43783E-03	2.04360E-06	4.10807E+00	-4.22178E-01	-6.32768E-01
715	299-3	2.53665E-07	5.62471E-03	-1.49122E-04	-6.41790E+00	5.31328E-01	9.64084E-01
716	322-2	-8.91681E-05	3.78699E-04	-1.78132E-05	1.04200E+01	-1.17882E+00	8.46260E-02
717	322-3	1.42394E-05	-1.52066E-04	7.81537E-06	-2.56780E+00	1.32442E-01	-4.68720E-02
718	323-2	-6.08216E-05	6.77560E-04	-1.82589E-04	1.26823E+00	-9.49698E-01	-3.58566E-01
719	323-3	1.18716E-05	1.61236E-03	4.41587E-05	3.69612E+00	6.63902E-02	1.05545E-01
720	324-3	9.48664E-06	-6.52951E-03	3.51307E-05	-2.32973E+00	1.53019E-01	3.76135E-01
721	325-3	2.56587E-06	1.34870E-02	2.03057E-05	7.54951E-01	1.19746E+00	-2.66938E-01
722	326-3	9.34814E-08	6.12539E-04	2.02920E-06	5.75468E-01	-5.20652E-02	-7.57760E-02
723	327-3	-6.46218E-07	-8.73454E-05	1.84063E-06	-1.59179E+01	-2.13630E-01	9.69042E-02
724	328-3	1.39337E-07	9.76412E-04	-4.37161E-06	-7.31519E+00	-1.56640E-01	6.86120E-04
725	329-1	-4.04884E-05	5.05953E-03	3.60248E-04	1.05927E+00	4.13074E+01	4.92881E+01
726	329-3	3.57625E-05	3.41563E-02	-1.44051E-03	-8.47131E+00	-4.05953E+00	7.37686E+00
727	330-1	-9.93372E-06	1.59803E-02	2.73963E-04	-1.13904E+00	-5.03793E+01	1.41977E+01
728	330-3	-3.50170E-06	-1.48768E-04	2.03954E-03	3.24632E+00	1.73435E+00	-4.58167E-01
729	331-3	-1.73746E-06	-5.96900E-03	2.21531E-05	1.45493E+00	-3.08345E+00	-2.34925E-01
730	332-1	4.03883E-06	1.07327E-02	1.86846E-04	-2.15771E+00	2.55468E+01	2.17567E+01
731	332-2	1.47953E-05	-8.76177E-03	6.84865E-06	3.34682E-02	1.13941E+00	1.89902E+00
732	332-3	5.80195E-07	-1.16999E-02	-1.07543E-05	-7.91008E+00	3.61310E-01	-1.11588E+00
733	333-1	2.69648E-06	6.32282E-03	2.01500E-04	-2.12383E+00	-2.86567E+00	-3.45457E+01
734	333-3	3.16117E-07	3.71923E-03	4.42863E-05	6.85255E+00	1.71387E+00	-5.40658E-01
735	334-2	1.50021E-05	2.73315E-03	8.67445E-05	-7.86016E+01	7.96080E-01	-1.35076E+01
736	334-3	1.29002E-06	5.15507E-04	-1.00722E-05	1.65724E+01	-4.35213E-01	-7.03800E-01
737	335-3	2.11172E-07	-1.04498E-03	-1.83501E-05	-1.35693E+01	1.00512E+00	1.88556E+00
738	337-2	4.58790E-06	-5.17118E-03	4.97939E-04	4.06845E+01	5.43590E-01	4.41710E+01
739	337-3	1.21525E-07	-2.25185E-05	4.60583E-05	7.52740E+00	-3.45670E+00	1.16493E+00
740	338-2	4.15675E-05	7.71180E-03	4.37257E-04	-4.11911E+01	-2.33509E+00	-9.47169E+00
741	338-3	2.82814E-06	3.44930E-03	5.27702E-05	-1.39026E+00	-3.10213E-01	-3.26609E-01
742	339-3	5.13562E-08	1.73627E-03	-7.09008E-05	-5.58777E+00	4.74706E-03	1.00191E+00
743	340-3	2.29607E-07	-1.90479E-03	7.80371E-05	7.55351E+00	5.29285E-01	6.70860E-01
744	341-3	1.79323E-07	3.56001E-04	8.47307E-05	-1.01211E+01	1.99510E+00	8.06999E-01
745	343-3	-3.06310E-08	-6.10648E-04	2.73992E-06	-7.93959E-01	2.67223E-01	-3.10907E-02
746	344-3	-5.39823E-08	3.11845E-04	1.54848E-06	-6.35182E-02	-4.13053E-01	2.83419E-02
747	345-3	-1.43433E-08	6.12354E-05	8.72081E-07	-7.66837E-01	-3.58034E-01	6.38590E-02
748	346-3	1.22994E-09	8.91035E-07	1.87866E-07	1.49329E-01	1.35200E-01	4.58806E-03
749	347-3	4.04503E-08	-5.25854E-05	8.42376E-06	3.52291E-01	5.62208E-01	-2.76493E-02
750	349-1	-6.51068E-06	3.17538E-02	4.67413E-04	2.55805E+00	2.50302E+01	1.59499E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 99

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
751	349-2	8.78821E-05	-1.06904E-02	4.47156E-03	-1.82460E+01	-3.18311E+00	-1.33123E+01
752	349-3	5.60831E-06	-1.35098E-02	-6.07915E-04	-1.36741E+00	-1.87093E+00	-5.37375E+00
753	350-1	-2.08641E-06	-3.81991E-02	-3.77064E-04	-1.14329E+00	-1.78922E+01	-1.58602E+01
754	350-3	4.93358E-07	4.49126E-02	-2.75210E-04	5.91819E+00	1.20831E+00	1.36114E+01
755	351-1	-6.87080E-07	1.05173E-02	-2.47205E-04	4.09148E+00	2.74237E+00	7.17624E+00
756	351-3	4.75945E-07	-1.60631E-02	2.05413E-04	9.58368E-02	-5.66570E-01	-5.19855E+00
757	352-3	-1.93344E-07	1.54963E-04	-1.09362E-04	-6.49761E+00	-5.59339E-01	-3.54108E-01
758	354-1	-2.11989E-06	5.63691E-04	-8.33209E-04	-3.07043E+00	-1.19812E+01	-8.15037E+00
759	354-3	4.16746E-07	8.56549E-04	1.70868E-04	4.06689E+00	1.12230E+00	5.48178E-01
760	356-1	9.62877E-07	1.29993E-03	5.02122E-04	2.51706E+00	3.05239E+00	-1.27600E+01
761	356-3	-4.68050E-09	-2.89356E-03	-1.50309E-04	3.03472E+00	1.06237E-01	-5.17264E-01
762	357-3	1.00849E-07	1.19172E-03	9.78076E-05	-1.05664E+00	1.83229E-01	-2.61317E-01
763	358-1	-5.28407E-06	-7.71577E-03	2.62900E-03	-3.63036E-01	1.07988E+01	1.46784E+01
764	358-2	1.38151E-06	1.65109E-03	-5.19728E-05	8.02735E+00	6.33061E+00	-5.74474E+00
765	358-3	-5.14263E-07	-6.23883E-05	7.92377E-04	-1.99130E+00	2.53092E-01	3.08921E-01
766	359-2	1.79042E-07	-3.11768E-05	-4.36196E-06	-8.13543E+00	-6.78611E+00	6.56910E+00
767	359-3	2.58850E-08	7.77628E-04	1.12369E-04	2.45867E-01	-2.16815E-01	6.63704E-01
768	360-1	2.77773E-07	-2.94938E-03	-1.85496E-05	-3.41550E+00	-4.48283E+00	-2.28350E+00
769	360-3	-1.96875E-07	-1.43163E-02	-3.05911E-04	-2.61152E+00	-2.60206E-01	-4.13034E+00
770	361-3	6.70452E-08	4.11287E-03	1.08032E-04	1.15662E+00	5.27334E-02	1.15099E+00
771	363-1	-6.42215E-07	-1.28940E-02	-2.63972E-04	-8.49104E+00	4.07755E-01	-2.25126E+01
772	363-3	-2.01444E-07	-1.98306E-02	-8.84064E-05	3.02683E+00	1.66531E-01	-6.33045E+00
773	364-3	5.38404E-09	5.18517E-03	5.14779E-06	-2.18290E+00	3.82593E-02	3.57595E-01
774	365-1	-5.97537E-07	7.79423E-03	-1.99738E-04	3.33130E+00	1.99218E+00	4.50117E+01
775	365-2	1.14408E-06	-5.33381E-03	4.64675E-04	-1.83875E+01	-5.11253E+00	-9.39602E+00
776	365-3	3.19360E-08	4.82976E-03	-6.85814E-06	-2.27677E+00	-1.21442E+00	5.78965E-01
777	366-2	3.44826E-07	7.83178E-03	1.36391E-04	2.11063E+01	5.00280E+00	1.03999E+01
778	366-3	5.13936E-08	1.40237E-03	2.82317E-05	1.82477E+00	6.82048E-01	3.36720E+00
779	367-1	3.45618E-07	-9.43737E-04	1.29116E-04	5.64353E+00	7.76630E+00	-1.42483E+01
780	367-3	3.31345E-08	9.15167E-04	6.03883E-06	1.07970E+00	-1.36677E+00	1.73303E-01
781	368-3	2.52516E-08	2.13202E-04	1.49136E-05	3.64571E-01	1.00424E+00	-7.44914E-01
782	456-1	6.19613E-06	-8.40707E-07	-2.06943E-06	-3.46384E-01	2.17777E-01	-3.94673E-01
783	456-3	-1.18915E-07	2.80779E-07	-4.04753E-06	9.38550E-01	-2.03372E-01	1.69274E-01
784	457-1	1.99875E-05	1.03292E-06	3.32585E-06	-1.72470E+00	6.55150E-01	-6.52350E-01
785	457-3	-1.22938E-06	9.87053E-07	-1.75864E-06	3.49694E+00	2.42229E+00	1.35269E+00
786	458-1	2.27121E-04	-6.43328E-05	3.24547E-05	-1.13094E+00	6.66920E+00	5.22562E+00
787	458-2	1.59724E-05	6.25775E-07	-2.06531E-06	-1.22095E-01	-3.83486E+00	-1.45739E+00
788	458-3	-5.23480E-05	1.41781E-04	-1.31620E-05	-3.74688E+00	3.72281E+01	2.03451E+01
789	467-1	2.13884E-05	-7.78478E-06	5.74639E-07	2.34796E+00	-4.98458E-01	9.30835E+00
790	467-2	-5.83160E-06	2.65748E-06	-5.86154E-07	-7.77676E-02	1.39222E-01	-2.33760E+00
791	467-3	-1.47453E-06	1.00201E-05	-3.71963E-06	-9.05291E+00	-1.87938E-01	-2.33768E+00
792	469-1	1.08739E-04	-5.27852E-05	7.27047E-06	-1.06575E+00	-5.40450E-01	-2.11397E+00
793	469-2	-1.99156E-05	-7.48893E-06	-2.73783E-06	-5.87520E-01	-8.08982E-03	-1.27365E-01
794	469-3	-6.69991E-07	5.30207E-05	8.11952E-06	3.19868E+00	7.37693E-01	2.30320E+00
795	539-3	-2.69223E-04	1.16164E-03	2.99874E-05	-6.79264E-01	-1.92039E-01	-8.30114E-02
796	574-1	3.18492E-06	-1.51829E-05	4.49175E-09	2.28491E-03	-1.03430E-02	7.94422E-03
797	574-2	3.87469E-05	-1.15606E-04	3.43665E-07	-6.41987E-01	-4.17095E-01	-3.18452E-02
798	574-3	-2.55817E-05	1.37146E-03	1.36346E-04	-3.87833E-01	1.05169E+00	-4.01648E-02
799	608-1	2.27114E-03	-3.92241E-03	-4.74661E-05	-6.52742E-01	9.27701E-01	2.38420E-01
800	608-2	2.93882E-04	3.19210E-03	-2.90186E-04	-1.17693E+00	-2.60792E-02	-2.55873E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 100

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
801	608-3	9.88053E-05	1.24360E-03	1.26588E-03	5.50625E-01	-1.92783E+00	-3.50509E-02
802	616-3	1.11995E-05	5.86988E-03	2.71953E-04	2.12733E-01	-3.93269E-02	-4.40179E-02
803	647-1	1.15494E-03	-2.03823E-02	1.13484E-04	1.91068E+00	5.58493E+01	-3.43576E+00
804	647-2	9.30401E-06	1.99755E-03	-3.56404E-05	2.79356E-01	1.83263E+01	-9.83027E-01
805	647-3	-6.92285E-07	2.59489E-03	4.30373E-05	-1.11157E+00	-1.16195E+01	6.67304E-01
806	688-1	1.10724E-04	1.70048E-03	-7.68530E-05	-1.01629E+00	-4.43649E+00	3.15653E+00
807	688-3	-1.52947E-05	1.04440E-04	2.39692E-06	-2.25644E+00	-1.68074E-01	-3.01485E-01
808	704-3	-8.82705E-06	8.94898E-04	-5.33337E-06	-6.09449E+00	-1.88075E-01	-3.65687E-01
809	752-1	7.32316E-05	1.62336E-02	-5.03878E-06	-2.53271E+00	-4.54560E+00	1.61628E+01
810	752-3	-9.90089E-06	5.49248E-03	-3.30237E-06	-4.14112E+00	-4.12445E-01	6.85384E-01
811	754-3	-1.66780E-06	-5.62112E-03	-1.45410E-04	6.41401E+00	5.15935E-01	-9.61756E-01
812	777-2	4.19441E-04	1.39579E-04	1.77355E-05	9.65133E+00	1.16273E-01	1.59881E-01
813	777-3	1.20783E-04	1.26199E-04	9.11981E-06	2.64120E+00	4.17649E-01	5.85067E-02
814	778-2	-1.85523E-04	6.18453E-04	1.76714E-04	2.47562E-01	5.00874E+00	-3.78078E-01
815	778-3	-3.58464E-05	-1.61392E-03	4.46369E-05	-3.48368E+00	1.42869E+00	-1.12760E-01
816	779-3	1.29179E-05	6.47948E-03	3.52832E-05	2.19854E+00	1.23878E-01	-3.78286E-01
817	780-3	-3.85768E-06	-1.34884E-02	2.06255E-05	-8.20987E-01	1.20356E+00	2.61244E-01
818	781-3	7.79853E-07	-6.12001E-04	2.01228E-06	-5.75829E-01	-5.85673E-02	7.70044E-02
819	782-3	-2.11773E-06	9.74120E-05	2.25138E-06	1.59012E+01	-1.89761E-01	-8.53190E-02
820	783-3	-1.98520E-07	-9.71544E-04	-4.32154E-06	7.32189E+00	-1.54128E-01	2.21257E-03
821	784-1	3.07582E-05	-5.13892E-03	3.49355E-04	-8.40230E-01	4.13991E+01	-4.94372E+01
822	784-3	7.54569E-06	-3.41654E-02	-1.44979E-03	8.36297E+00	-4.08887E+00	-7.24948E+00
823	785-1	1.51164E-05	-1.59337E-02	2.00821E-04	1.26051E+00	-5.04095E+01	-1.41748E+01
824	785-3	-9.85219E-06	1.24331E-04	2.05101E-03	-3.22401E+00	1.71992E+00	4.59189E-01
825	786-3	-2.23912E-06	5.91405E-03	2.15798E-05	-1.47685E+00	-3.10495E+00	2.70022E-01
826	787-1	3.55124E-05	-1.09380E-02	1.91909E-04	2.40244E+00	2.56075E+01	-2.10086E+01
827	787-2	-2.18150E-05	-8.74358E-03	-8.42054E-06	-1.71288E-01	-1.20760E+00	1.29772E+00
828	787-3	8.73290E-07	1.17001E-02	-1.07631E-05	7.91184E+00	3.69990E-01	1.12159E+00
829	788-1	1.09281E-05	-5.31412E-03	1.85533E-04	2.12824E+00	-2.72418E+00	3.19826E+01
830	788-3	-3.73470E-08	-3.69116E-03	4.43008E-05	-6.86833E+00	1.71787E+00	4.96212E-01
831	789-2	-4.88590E-06	2.63403E-03	-8.54821E-05	-7.88894E+01	-8.68647E-01	-1.35094E+01
832	789-3	-3.76430E-07	-5.12901E-04	-9.69262E-06	-1.65546E+01	-4.25168E-01	7.11994E-01
833	790-3	-5.77157E-07	1.00092E-03	-1.78531E-05	1.35603E+01	9.94491E-01	-1.78836E+00
834	792-2	1.47829E-06	-5.21212E-03	-5.18888E-04	4.18716E+01	-5.29354E-01	4.53915E+01
835	792-3	-5.03072E-07	3.91014E-06	4.81475E-05	-7.58244E+00	-3.44227E+00	-1.23464E+00
836	793-2	1.68266E-05	8.09775E-03	-4.16971E-04	-4.15985E+01	2.30787E+00	-9.61915E+00
837	793-3	-2.88614E-06	-3.44201E-03	5.29431E-05	1.41658E+00	-3.09869E-01	3.44971E-01
838	794-3	-2.70567E-07	-1.73917E-03	-7.03015E-05	5.58573E+00	5.85115E-04	-9.76459E-01
839	795-3	-7.07532E-07	1.87064E-03	7.59206E-05	-7.58093E+00	5.36884E-01	-6.82491E-01
840	796-3	-4.70674E-07	-3.73469E-04	8.37129E-05	1.01527E+01	1.99852E+00	-7.67761E-01
841	798-3	-2.55815E-07	6.06321E-04	2.73277E-06	7.87278E-01	2.68476E-01	3.46520E-02
842	799-3	-3.70378E-08	-3.09997E-04	1.60140E-06	6.21458E-02	-4.12853E-01	-3.29449E-02
843	800-3	-2.85472E-08	-6.36914E-05	8.08570E-07	7.67732E-01	-3.58327E-01	-6.29086E-02
844	801-3	-8.87788E-09	-1.35734E-06	2.41122E-07	-1.48448E-01	1.35532E-01	-4.60404E-03
845	802-3	-5.58620E-08	5.10701E-05	8.43132E-06	-3.51147E-01	5.62335E-01	2.75045E-02
846	804-1	1.02300E-05	-3.22743E-02	4.83566E-04	-2.83320E+00	2.50813E+01	-1.57634E+01
847	804-2	5.30180E-05	-1.13439E-02	-4.54557E-03	-1.80531E+01	3.64679E+00	-1.36496E+01
848	804-3	-5.92984E-06	1.37781E-02	-6.04220E-04	1.38635E+00	-1.94850E+00	5.42618E+00
849	805-1	3.72886E-06	3.79579E-02	-3.79357E-04	1.06092E+00	-1.79205E+01	1.63297E+01
850	805-3	-1.41231E-06	-4.49715E-02	-2.77761E-04	-5.90799E+00	1.22317E+00	-1.36667E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 101

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
851	806-1	1.49014E-06	-1.06309E-02	-2.26469E-04	-4.17717E+00	2.70150E+00	-6.86210E+00
852	806-3	-9.08349E-07	1.60213E-02	2.08105E-04	-9.70233E-02	-5.75912E-01	5.15981E+00
853	807-3	2.71046E-07	-1.45343E-04	-1.08537E-04	6.46900E+00	-5.54886E-01	3.36097E-01
854	809-1	2.08933E-06	-5.92616E-04	-8.47066E-04	3.29034E+00	-1.19769E+01	8.51658E+00
855	809-3	-6.95761E-07	-8.47485E-04	1.72898E-04	-4.06081E+00	1.11351E+00	-5.64751E-01
856	811-1	1.99839E-06	-1.29022E-03	4.98806E-04	-2.51653E+00	3.04764E+00	1.27707E+01
857	811-3	9.92132E-07	2.89966E-03	-1.51743E-04	-3.03518E+00	1.04063E-01	5.25486E-01
858	812-3	-1.08368E-07	-1.19262E-03	9.78954E-05	1.05682E+00	1.83784E-01	2.60249E-01
859	813-1	7.33826E-06	7.85922E-03	2.63331E-03	4.01029E-01	1.08292E+01	-1.45998E+01
860	813-2	1.37519E-06	1.65739E-03	4.94928E-05	8.03001E+00	-6.33181E+00	-5.74469E+00
861	813-3	1.86194E-07	7.54566E-05	7.94887E-04	1.99447E+00	2.54526E-01	-3.04580E-01
862	814-2	1.34558E-07	-3.05887E-05	4.08470E-06	-8.13509E+00	6.78630E+00	6.56911E+00
863	814-3	1.09195E-07	-7.76706E-04	1.12118E-04	-2.45377E-01	-2.15247E-01	-6.62330E-01
864	815-1	-2.81703E-07	2.95088E-03	-1.75389E-05	3.41585E+00	-4.48228E+00	2.28388E+00
865	815-3	1.39715E-07	1.43200E-02	-3.05433E-04	2.61354E+00	-2.62662E-01	4.12576E+00
866	816-3	-3.51758E-08	-4.11373E-03	1.07892E-04	-1.15707E+00	5.37772E-02	-1.14950E+00
867	818-1	6.34454E-07	1.28981E-02	-2.65896E-04	8.48024E+00	4.11889E-01	2.24969E+01
868	818-3	1.95401E-07	1.98270E-02	-8.99942E-05	-3.02928E+00	1.68691E-01	6.31935E+00
869	819-3	-4.54127E-09	-5.18390E-03	5.54738E-06	2.18291E+00	3.79622E-02	-3.54584E-01
870	820-1	9.29305E-07	-7.85140E-03	-1.91852E-04	-3.37163E+00	1.98267E+00	-4.48543E+01
871	820-2	1.09015E-06	-5.31297E-03	-4.67573E-04	-1.84086E+01	5.11877E+00	-9.43094E+00
872	820-3	-2.89135E-08	-4.82913E-03	-7.83842E-06	2.27537E+00	-1.21527E+00	-5.92153E-01
873	821-2	3.17615E-07	7.83296E-03	-1.37544E-04	2.11028E+01	-4.99989E+00	1.03909E+01
874	821-3	-3.63658E-08	-1.40474E-03	2.91694E-05	-1.82307E+00	6.81192E-01	-3.35524E+00
875	822-1	-3.04864E-07	9.39794E-04	1.29573E-04	-5.63397E+00	7.75921E+00	1.42759E+01
876	822-3	-2.27119E-08	-9.11704E-04	6.02521E-06	-1.08395E+00	-1.36955E+00	-1.73001E-01
877	823-3	-3.22859E-08	-2.15015E-04	1.51004E-05	-3.62114E-01	1.00466E+00	7.47950E-01
878	912-1	1.56053E-04	3.29442E-05	2.19370E-05	7.05419E-01	2.83704E+00	1.21782E-01
879	912-2	-6.23775E-05	-1.23618E-03	-5.16046E-06	-4.65609E+00	-3.29604E+00	-2.64012E+00
880	912-3	-2.69832E-06	1.70181E-07	6.07509E-06	-4.07761E-02	8.14954E-01	1.51361E-01
881	913-1	8.69922E-06	1.69101E-06	-3.02011E-06	-1.03290E-01	-5.54554E-01	7.11515E-03
882	913-2	-5.31811E-06	8.45463E-06	2.33382E-07	2.16937E+00	1.73914E-01	2.28687E+00
883	913-3	4.00243E-06	9.53456E-07	-2.77348E-06	-6.74418E-02	-3.29525E-01	-2.82439E-03
884	918-1	1.09045E-05	2.40579E-06	1.73031E-06	2.49239E-02	4.34165E-01	2.91337E-02
885	918-2	-4.09330E-06	-4.41095E-05	-4.76043E-07	-2.73146E-01	-1.62951E-01	-4.38937E-01
886	918-3	-2.60687E-07	7.26993E-08	1.02361E-07	-4.62830E-03	2.25160E-03	4.69826E-03
887	919-1	4.90867E-06	3.09521E-06	-2.47173E-06	-5.71498E-01	-5.39782E-01	-9.14307E-02
888	919-2	-5.00833E-06	2.07550E-05	2.42722E-06	1.51604E+00	5.65026E-01	-3.96746E-01
889	919-3	4.20445E-06	3.03413E-06	-2.12236E-06	-5.93522E-01	-4.74269E-01	-1.02861E-01
890	942-1	1.97837E-04	2.93068E-05	-4.21953E-06	-7.27588E-01	-3.08296E-01	6.64645E-02
891	942-2	-6.57035E-05	-4.30089E-03	-1.89937E-06	-6.71939E+00	-1.45287E-01	-2.77568E-01
892	942-3	-9.86463E-07	1.50967E-05	-1.02753E-04	2.34536E+00	-3.32127E+00	-3.55545E-03
893	948-1	7.14018E-05	1.75405E-05	-1.27104E-05	2.72285E-01	1.67687E+01	2.96966E-02
894	948-2	1.58800E-05	-4.70801E-04	-1.66334E-06	-3.05016E+00	-1.53435E+00	-1.05063E+00
895	948-3	-2.17452E-06	-3.01676E-06	-7.42224E-06	-2.64461E-02	4.92755E-01	-2.36690E-03
896	958-1	1.19650E-05	-8.03234E-05	-3.01629E-06	-5.45035E-02	-7.12526E-01	1.19370E-01
897	959-1	1.95201E-09	2.21330E-08	2.47287E-10	8.44326E-05	-1.30468E-04	1.85268E-04
898	959-2	-1.21873E-07	2.53428E-05	1.99495E-06	1.00316E-01	2.54590E-01	2.62450E-01
899	959-3	-8.07042E-07	2.40564E-06	1.77695E-06	-4.38252E-03	2.27654E-01	3.22400E-02
900	963-1	8.04099E-09	4.96584E-08	-6.27047E-09	-2.98118E-06	-5.03866E-05	-1.60845E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 102

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
901	963-2	-6.49895E-07	-1.65309E-04	5.38077E-07	-2.77458E-02	-2.39239E-02	5.51572E-02
902	963-3	2.10609E-07	2.89886E-05	1.28285E-07	2.36186E-03	-1.32381E-02	-4.29124E-03
903	966-1	1.58246E-05	1.51262E-04	-4.90129E-06	6.69338E-02	-2.50408E-02	-3.22687E-02
904	968-1	2.44747E-05	-3.19722E-04	1.77568E-07	1.40450E-02	3.37230E-02	-5.57013E-03
905	969-1	8.09649E-09	1.90122E-08	-1.33015E-09	-1.84803E-06	7.56620E-06	1.45537E-06
906	969-2	6.84191E-07	6.14553E-05	2.01199E-06	2.02648E-02	-7.96720E-03	-7.81510E-03
907	969-3	9.82032E-08	-1.55750E-05	1.15148E-06	-2.42371E-03	3.59621E-03	1.02157E-03
908	973-1	1.31633E-08	4.14305E-08	4.26478E-09	-3.32272E-06	6.00296E-04	-6.18482E-05
909	973-2	1.37235E-07	-1.54763E-04	-5.34572E-07	1.29905E-02	-8.63265E-02	7.01161E-02
910	973-3	8.49425E-08	2.86058E-05	-1.20328E-07	-4.56099E-04	-1.69823E-02	3.46285E-03
911	976-1	4.62788E-06	5.91939E-05	-1.17201E-06	-3.38186E-03	3.91834E-01	-8.66978E-02
912	977-1	4.61203E-09	9.45370E-09	1.68007E-09	7.67881E-05	2.79593E-04	-7.37381E-06
913	977-2	-2.20543E-06	5.98873E-05	1.22237E-06	3.06868E-01	-3.97766E-02	3.15450E-01
914	977-3	-3.99605E-07	-2.57277E-06	-9.67324E-08	5.31803E-03	-4.31784E-02	3.77486E-02
915	980-1	4.06641E-05	-7.92407E-03	-3.24890E-05	1.28794E+00	-1.03169E+00	-5.01656E+00
916	980-2	9.67253E-07	2.50430E-04	-7.50031E-07	2.90629E+00	-3.31701E-01	-3.17079E-01
917	980-3	-2.84284E-05	-1.29283E-03	-2.54864E-06	1.85777E+00	-4.37901E-02	5.99256E-01
918	980-4	1.99547E-03	5.57114E-02	-4.82745E-04	-6.46636E+01	2.34020E+01	1.35335E+01
919	980-6	2.72166E-03	1.98712E-01	-1.43027E-03	-6.85166E+01	8.68859E+01	1.02587E+02
920	981-1	9.63305E-05	7.99405E-03	-3.65477E-05	-1.39557E+00	-3.12522E+00	5.04982E+00
921	981-2	7.07012E-07	2.33079E-04	5.40228E-07	2.88758E+00	1.61780E-01	-3.26950E-01
922	981-3	-3.08297E-05	1.48314E-03	5.59586E-06	-1.79960E+00	-2.37862E-01	-6.83442E-01
923	981-4	-2.00478E-03	7.22632E-02	5.01677E-04	-6.62835E+01	-3.29579E+01	1.37547E+01
924	981-6	-3.50194E-03	2.10082E-01	1.12508E-03	-6.75947E+01	-2.27195E+01	1.06833E+02
925	982-1	1.95763E-04	2.34624E-03	-1.17801E-05	-1.04377E+00	-6.76731E-01	-2.56338E+00
926	982-3	-4.89298E-05	-2.28833E-03	4.64400E-05	-3.78592E-01	2.85486E-01	1.20371E-01
927	983-1	3.89574E-04	-2.41667E-03	-1.01913E-05	9.13201E-01	-3.15498E+00	2.59372E+00
928	983-3	-5.44531E-05	2.73571E-03	4.99404E-05	2.05873E-01	-3.25969E-02	-1.34927E-01
929	1012-1	3.21393E-05	4.27429E-03	-7.39465E-04	2.39530E-01	-1.10683E-01	-7.05296E+00
930	1012-2	7.14189E-05	6.30333E-03	-5.37906E-04	1.36621E+01	-2.69481E+00	-3.75479E+00
931	1012-3	1.26464E-05	-2.91319E-03	4.88031E-05	3.21772E-01	1.55742E-02	1.43647E-01
932	1016-1	4.53167E-04	7.58111E-04	4.00166E-04	5.33599E-01	9.27527E-02	2.12844E+00
933	1016-2	3.46777E-05	-1.44337E-04	-3.87845E-04	1.83175E+01	1.40243E+00	1.24500E+00
934	1016-3	1.30862E-04	-2.04227E-03	1.28403E-04	-2.67675E+00	-3.37629E+00	-1.77935E+00
935	1036-1	-7.11261E-05	-2.84829E-05	-7.29342E-05	4.84039E-02	-1.61119E+01	-2.40091E-03
936	1036-2	5.54287E-05	2.44892E-03	-3.47519E-05	6.68819E+01	-6.09308E-02	1.51474E+00
937	1036-3	-1.69707E-05	4.91402E-05	2.51984E-05	-1.97503E-01	5.23934E-01	2.50382E-01
938	1047-1	-2.79222E-02	3.96062E-05	-7.66417E-03	-4.65225E+00	3.67076E+00	-1.13032E-01
939	1047-2	-2.61437E-04	-1.92600E-04	-2.44416E-04	3.15424E+00	9.05633E-01	-6.64225E+00
940	1047-3	-7.48088E-03	8.42186E-04	-1.46428E-03	1.49032E+01	2.32864E+00	-2.57140E-02
941	1047-4	9.91372E-03	-2.07798E-01	-1.09360E-01	1.78125E+01	7.65410E+01	-9.53239E+01
942	1047-5	-9.81255E-02	1.34070E-02	-3.61046E-01	2.23010E+02	-6.27990E+01	-4.46092E+00
943	1047-6	-2.03555E-01	6.59243E-02	-3.08225E-02	-4.32996E+01	-7.07197E+01	3.32415E+01
944	1048-1	-2.18752E-02	4.36512E-04	1.02933E-02	-3.12554E+00	-6.09362E+01	-4.40301E+00
945	1048-2	-3.73860E-04	-6.03995E-03	-9.63561E-04	1.80950E+01	1.69972E+01	2.24645E+01
946	1048-3	7.35877E-03	-2.99699E-03	-6.03589E-03	-4.39441E+00	-3.70157E+01	-9.76408E+00
947	1048-4	-1.39181E-01	-2.03499E-01	-1.05924E-01	6.37848E+00	3.67541E+01	-7.17333E+00
948	1048-5	1.84905E-01	-2.81539E-02	-1.14865E-01	-3.49062E+01	-1.33052E+02	-1.08535E+02
949	1048-6	1.98454E-01	-3.64334E-02	7.98464E-02	-9.66485E+01	-1.45929E+01	-2.28259E+02
950	1065-1	-1.82913E-04	-5.81780E-03	4.00560E-05	-7.16131E-01	-3.28364E+00	-6.36170E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 103

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
951	1065-2	-2.08631E-04	-9.67180E-04	4.61708E-04	-1.50601E+01	-5.74163E+00	-1.21426E+01
952	1065-3	9.07767E-04	-1.64314E-02	-4.84653E-04	6.15178E+01	7.41775E-03	4.21605E+00
953	1067-1	-5.02676E-05	1.54640E-03	-4.09605E-04	8.12312E+00	-3.81261E+01	1.49736E-01
954	1067-2	-1.30726E-04	-4.97275E-03	-5.69877E-04	1.15873E+01	-5.54059E+00	-2.44139E+01
955	1067-3	2.79174E-04	-7.45988E-03	-2.43164E-04	-3.15904E+01	2.59740E+01	-4.63258E-01
956	1069-1	-1.64437E-05	5.57559E-03	-7.20947E-05	1.19457E+00	6.27997E+00	5.84949E+01
957	1069-2	5.49660E-04	-6.37559E-04	1.47723E-04	-1.61340E+01	4.11103E+00	-1.03429E+01
958	1069-3	3.14740E-04	1.68307E-02	-1.28786E-04	-6.20716E+01	-1.33816E+00	-2.23806E+00
959	1071-1	-1.26528E-04	-1.66318E-03	-3.49010E-04	-7.98159E+00	-3.84227E+01	-6.73316E-01
960	1071-2	3.81519E-04	-4.71988E-03	-1.88278E-04	1.31846E+01	5.67776E+00	-2.34037E+01
961	1071-3	2.40475E-04	7.77613E-03	-1.10651E-04	3.22304E+01	2.49495E+01	1.91592E+00
962	1090-1	4.14787E-05	-4.27065E-03	-7.53601E-04	2.28077E-02	-2.16216E-01	6.93824E+00
963	1090-2	1.04882E-05	6.36708E-03	5.45850E-04	1.33882E+01	2.46193E+00	-3.76811E+00
964	1090-3	-2.37383E-05	2.99926E-03	9.15135E-05	-8.01242E-01	-1.32308E-01	1.75203E-01
965	1093-1	-1.65128E-04	-1.84095E-04	5.31156E-04	-3.39814E-01	3.29248E+00	-2.89325E+00
966	1093-2	1.13112E-04	1.07286E-03	3.80088E-04	6.63036E+00	-3.35892E-01	4.10924E+00
967	1093-3	-3.32492E-05	2.89380E-03	1.75280E-04	3.20125E+00	-3.92635E+00	4.38061E+00
968	1127-1	-1.16198E-02	-5.32340E-03	2.55345E-03	1.04229E+01	-5.16664E+01	5.38860E+00
969	1127-2	-4.16071E-03	-1.15154E-02	1.51407E-03	3.34576E+00	-1.52252E+01	1.51787E+01
970	1127-3	2.98504E-03	1.20077E-03	-1.16230E-02	-1.03739E+01	-2.83603E+01	9.01114E+00
971	1127-4	-8.85133E-02	1.48584E-01	6.53145E-02	3.35067E+02	-7.19373E+01	6.04152E+01
972	1127-5	6.35758E-02	3.50188E-02	2.40790E-01	-3.12793E+01	-3.85509E+02	7.66004E+01
973	1127-6	-3.80609E-01	8.74342E-02	-1.51189E-02	1.80676E+01	1.87434E+02	-1.12316E+02
974	1137-1	-1.21062E-05	2.94043E-05	1.11085E-05	-2.47250E-01	-2.22345E+00	-1.71097E-02
975	1137-2	5.95379E-06	2.52598E-04	5.09156E-06	3.09300E-01	-2.17560E-01	5.22432E+00
976	1137-3	-5.98432E-06	3.39778E-05	8.54262E-06	-2.09544E-01	-5.34256E+00	8.98696E-02
977	1142-1	-1.84332E-05	1.91599E-05	5.42913E-06	-1.56289E-01	1.00415E+00	-3.22263E-02
978	1142-2	4.63387E-06	1.06860E-04	7.65491E-06	-2.17281E-01	-7.40574E-02	-1.87342E+00
979	1142-3	5.44276E-07	2.47262E-05	4.97509E-06	-1.34028E-01	4.48516E+00	6.49581E-02
980	1143-1	-1.41419E-05	1.80673E-06	2.13835E-06	-5.98822E-02	-1.44717E+00	-7.13130E-02
981	1143-2	4.11931E-06	3.29977E-04	1.24949E-05	3.81062E+00	1.86869E-01	1.15084E+00
982	1143-3	9.00049E-06	4.63382E-06	1.33181E-06	-1.30074E-02	7.96971E-01	3.42642E-02
983	1145-1	-4.84009E-05	3.78901E-05	3.12949E-05	-6.20257E-01	1.71098E+00	-4.84150E-01
984	1145-2	-2.16854E-07	2.48860E-06	6.63329E-07	-5.75092E-01	3.41160E-02	3.49067E-01
985	1145-3	-8.64255E-06	9.21870E-06	8.27579E-06	-1.54063E-01	-5.96149E-02	-1.19247E-01
986	1148-1	-5.76922E-06	-1.40002E-07	-1.12319E-06	-1.19415E-03	-2.81833E+00	-2.05936E-02
987	1148-2	2.39318E-06	3.29203E-05	6.24374E-06	4.12035E+00	1.68933E-01	-6.12344E+00
988	1148-3	4.29627E-06	1.11581E-07	8.42133E-07	8.22637E-04	2.10385E+00	1.53548E-02
989	1150-1	-1.91656E-05	1.30540E-05	-1.31018E-07	-1.31152E-01	6.07497E+00	-2.50719E-02
990	1150-2	-2.90498E-07	-5.89262E-07	1.68896E-06	-1.98004E+00	-1.93409E-01	-1.03244E+00
991	1150-3	-1.21175E-05	1.59728E-05	5.71985E-06	-1.43717E-01	3.27398E+00	-2.76253E-03
992	1151-1	-9.04254E-06	-4.58406E-07	-4.38768E-06	-8.48322E-03	2.75424E+00	-2.70724E-02
993	1151-2	-1.23878E-06	4.76569E-05	1.58669E-06	-7.14902E-01	5.49597E-01	7.96022E+00
994	1151-3	6.73732E-06	3.50131E-07	3.28104E-06	6.27091E-03	-2.05952E+00	2.01812E-02
995	1154-1	-3.07280E-06	-1.41782E-07	-7.77032E-06	-3.50145E-02	-3.64082E+00	8.18631E-04
996	1154-2	1.98516E-06	4.35838E-05	-1.49746E-06	2.70492E-01	2.04117E-01	-2.85933E+00
997	1154-3	2.27692E-06	1.12732E-07	5.80458E-06	2.60858E-02	2.71907E+00	-6.32021E-04
998	1156-1	-6.17425E-06	8.50004E-06	-6.60600E-06	-1.76788E-01	2.31839E+00	4.67905E-02
999	1156-2	5.18278E-07	-4.47210E-06	1.04689E-06	-1.07202E+00	-4.26940E-01	1.49470E+00
1000	1156-3	-2.56479E-05	1.65870E-05	1.91187E-05	-6.97920E-02	1.27014E+00	-4.27232E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 104

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1001	1157-1	-1.18756E-05	3.08754E-06	-1.46989E-05	-1.21569E-01	-1.47613E+01	2.98573E-02
1002	1157-2	-2.28308E-06	3.26163E-05	2.04017E-06	3.41930E+00	1.33409E+00	-4.35155E+00
1003	1157-3	-3.32514E-05	6.42711E-06	2.32575E-06	2.40627E-02	1.12256E+01	-6.16970E-02
1004	1160-1	-2.39693E-06	6.98160E-06	3.30605E-06	-1.05202E-01	-8.42730E+00	3.33670E-02
1005	1160-2	-2.48252E-07	-3.06843E-07	2.55181E-07	-1.41326E-01	-4.73205E-02	6.67076E-01
1006	1160-3	-1.61635E-05	8.34329E-06	6.05376E-06	-4.69802E-02	-1.07040E+01	-2.36086E-02
1007	1161-1	-3.59995E-06	3.03747E-06	-1.36665E-06	-5.79971E-02	2.45087E+00	1.66060E-02
1008	1161-2	-3.82165E-07	9.97874E-08	1.83585E-07	-2.59521E-01	1.97832E-02	1.69783E-01
1009	1161-3	-6.82318E-06	2.49489E-06	-8.85635E-07	-2.73274E-02	-4.16268E-01	-3.56196E-03
1010	1167-1	-1.57331E-05	-1.11358E-06	-3.33225E-07	2.55739E-01	-1.46940E+00	4.84177E-01
1011	1167-2	1.75397E-06	1.00536E-06	9.17594E-08	-2.01586E-01	6.14155E-01	-4.28374E-01
1012	1167-3	7.67935E-06	7.46385E-07	2.28247E-06	-1.08835E-01	1.18811E+01	-4.32770E-01
1013	1168-1	-2.28474E-05	1.28122E-06	-5.39516E-06	-3.50607E-01	2.71227E+00	-3.40525E-01
1014	1168-2	-1.62671E-06	2.69456E-07	-4.90423E-07	-3.01794E-01	-1.94303E-01	-2.28214E-01
1015	1168-3	9.37691E-06	1.26078E-06	3.62677E-06	2.88521E-01	6.11924E+00	2.53645E-01
1016	1169-1	1.41839E-07	-5.15566E-07	-1.16915E-06	4.89509E-01	3.22972E+00	-1.08864E+00
1017	1169-2	-3.38370E-07	7.41852E-07	-1.46516E-06	-9.43018E-01	-2.27997E+00	2.74600E+00
1018	1169-3	3.91756E-06	2.53087E-07	-1.40191E-06	-1.93871E-01	-1.50611E+01	4.33160E-01
1019	1170-1	2.80628E-06	2.11233E-06	8.61579E-07	-1.67307E-01	-8.51500E-01	6.58171E-01
1020	1170-2	1.14655E-06	7.29626E-06	2.86136E-06	-7.67012E-02	1.19035E+00	1.66389E+00
1021	1170-3	6.71110E-06	-3.83301E-06	7.23521E-08	-3.96877E-02	-8.33310E+00	-2.55261E-01
1022	1173-1	-1.28032E-05	6.83272E-07	-1.05695E-05	-2.82759E-01	-6.40029E+00	1.67718E+00
1023	1173-2	1.92578E-07	-1.56775E-06	-1.92558E-07	2.64872E-01	-1.09734E-01	-1.20070E+00
1024	1173-3	5.21278E-06	-2.49206E-07	7.36456E-06	-1.86455E-02	6.35172E+00	-7.47104E-01
1025	1174-1	-3.56557E-06	-4.94088E-07	-4.52810E-06	-6.07267E-02	-1.06345E+00	-1.11052E+00
1026	1174-2	8.77339E-07	1.53714E-07	8.73115E-09	5.64969E-02	2.11148E-01	-7.44880E-01
1027	1174-3	-2.53846E-06	5.41911E-07	2.32912E-06	1.51245E-01	1.61594E+00	5.54357E-01
1028	1183-1	-1.62202E-05	-7.81227E-06	-2.15692E-05	4.67834E-01	1.09155E+01	-7.29597E-02
1029	1183-2	2.36078E-07	6.68290E-06	6.09136E-07	-3.02543E-01	-1.80998E-01	-3.28119E-01
1030	1183-3	7.55974E-06	4.60423E-06	1.38165E-05	1.08377E-01	1.39964E+00	-9.31594E-01
1031	1184-1	-3.09069E-05	5.83869E-06	-1.56109E-05	-3.41133E-01	4.62565E+00	5.16735E-02
1032	1184-2	-6.29445E-07	4.60679E-06	-7.07648E-07	-1.81052E-01	4.23797E-01	-2.32107E-01
1033	1184-3	1.80987E-05	-3.19869E-06	1.04639E-05	2.88115E-01	-3.82464E+00	-5.20389E-02
1034	1185-1	-3.99906E-06	-5.45201E-06	-3.34255E-06	4.13246E-01	-3.64543E-01	-2.90285E-01
1035	1185-2	-3.48349E-07	4.84121E-06	8.11096E-08	-6.10733E-01	-5.83740E-01	8.85334E-01
1036	1185-3	-9.63950E-06	-5.88162E-07	-3.81036E-06	-3.24501E-01	-4.49136E+00	8.84449E-01
1037	1186-1	-5.06945E-06	4.02301E-06	-3.85932E-06	1.68616E-01	7.53361E-01	-1.20487E+00
1038	1186-2	1.69578E-07	3.89008E-06	-4.41931E-07	1.94563E-01	-1.07484E-01	-1.07854E+00
1039	1186-3	-8.14503E-06	1.07483E-07	-3.51846E-06	5.00981E-02	1.42587E+01	-3.96977E-01
1040	1189-1	1.86114E-05	3.81485E-07	-1.75794E-05	3.63968E-01	8.90951E+00	-5.88432E-01
1041	1189-2	-1.65269E-06	-2.31767E-07	1.06676E-06	-5.65670E-01	-4.59493E-01	8.75533E-01
1042	1189-3	-1.79512E-05	5.19916E-06	9.24008E-06	-6.76416E-01	-1.08989E+01	7.07305E-01
1043	1190-1	-4.70568E-06	-1.54141E-06	-3.08403E-05	-6.47063E-01	-4.53604E+00	1.81610E+00
1044	1190-2	-1.16325E-06	7.44365E-07	-3.48418E-06	-3.33618E-01	-1.13653E-01	1.10860E+00
1045	1190-3	-2.64293E-06	-2.74504E-06	1.93738E-05	2.69152E-01	-1.07548E+01	-4.10575E-02
1046	1203-3	-6.28354E-06	2.07639E-05	6.34382E-06	7.49655E-02	-1.64670E-02	1.00611E-01
1047	1204-3	-5.84242E-05	-4.16099E-04	-2.29352E-05	-1.45590E+00	-5.02491E-01	-2.49294E+00
1048	1205-1	5.93334E-05	1.65615E-04	1.51781E-05	-1.08051E-01	1.94819E+00	-3.40811E-01
1049	1205-2	2.45691E-06	-4.87740E-05	-1.27741E-06	-2.81819E-01	-2.33701E-01	2.21818E-01
1050	1205-3	-1.58290E-06	8.24896E-06	4.44075E-07	2.80618E-02	1.29632E-02	4.24513E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 105

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1051	1206-3	-5.31974E-07	-2.34253E-05	4.94334E-06	-1.11054E-01	-8.77611E-03	-9.87596E-02
1052	1207-3	1.83872E-05	4.18444E-04	2.83768E-06	1.51728E+00	-4.84619E-01	2.51306E+00
1053	1208-1	1.39400E-05	-1.53633E-04	2.00110E-05	2.98279E-01	1.89063E+00	3.64628E-01
1054	1208-2	-3.14386E-06	-5.35705E-05	-4.81966E-06	-3.66250E-01	2.88902E-01	2.26061E-01
1055	1208-3	-5.54268E-07	-8.63020E-06	2.61221E-07	-3.21943E-02	1.44763E-02	-4.34226E-02
1056	1214-1	-7.82123E-07	4.19222E-06	-9.97080E-07	-1.83060E-01	-1.93235E-01	1.46628E-01
1057	1214-2	8.61213E-06	2.94706E-04	-6.70984E-05	8.79515E+00	1.69818E-01	-5.53486E+00
1058	1214-3	1.44649E-05	-3.10701E-04	6.55245E-05	-9.50072E-01	4.33000E+00	7.50143E-02
1059	1215-1	-4.73746E-06	-4.09841E-05	-2.11269E-05	1.41116E-01	3.42340E+00	-3.39020E-01
1060	1215-2	2.98519E-06	-2.22288E-05	-1.01591E-05	-4.07506E+00	1.03349E+00	2.44027E+00
1061	1215-3	8.43988E-06	-2.65999E-04	1.95215E-05	1.23358E+00	-2.07961E+00	-1.43575E+00
1062	1216-1	-4.40826E-06	-1.90011E-04	-2.59352E-05	5.43253E-01	-1.71647E+00	1.83976E+00
1063	1216-2	1.96748E-06	-3.85554E-04	-9.44404E-06	1.20546E+00	-1.88201E+00	2.31829E+00
1064	1216-3	2.81250E-06	-3.96993E-04	-9.30205E-06	1.11276E+00	-2.25897E+00	1.70826E+00
1065	1243-1	-7.76254E-07	-4.71242E-06	-1.56964E-06	1.83096E-01	-1.91746E-01	-1.46657E-01
1066	1243-2	-1.37738E-05	2.87761E-04	6.18249E-05	8.88662E+00	-2.35361E-01	-5.44014E+00
1067	1243-3	1.16248E-05	3.20810E-04	7.58749E-05	9.85546E-01	4.27033E+00	-3.31245E-02
1068	1244-1	-3.58830E-06	3.77291E-05	-2.71858E-05	-1.89419E-01	3.58281E+00	2.15891E-01
1069	1244-2	-3.03295E-06	-1.59945E-05	4.65652E-06	-4.15786E+00	-1.04879E+00	2.46899E+00
1070	1244-3	5.22561E-06	2.75391E-04	2.03376E-05	-1.28545E+00	-2.08076E+00	1.44807E+00
1071	1245-1	-2.33599E-06	1.86461E-04	-3.06430E-05	-6.01086E-01	-1.48601E+00	-2.02867E+00
1072	1245-2	-2.24124E-06	-3.86908E-04	-3.93789E-06	1.13797E+00	1.81320E+00	2.30244E+00
1073	1245-3	2.67564E-06	4.03200E-04	2.25756E-06	-1.09730E+00	-2.20179E+00	-1.68174E+00
1074	1117-1	2.13864E-04	8.68296E-05	-6.96427E-07	-2.74236E+00	-1.00476E+00	-3.54118E-02
1075	1117-2	9.71854E-05	-1.82302E-04	-6.42775E-07	4.78960E+00	-3.56129E+00	5.52901E-02
1076	1117-3	5.30233E-05	3.00586E-05	-8.48639E-06	2.45281E+01	-4.12183E+01	-4.00147E-02
1077	1117-4	4.59967E-03	-8.66926E-03	6.55501E-04	1.31119E+03	-1.04152E+03	-4.21666E+00
1078	1117-5	-3.12342E-02	-1.51142E-02	-2.21720E-04	7.67071E+02	-3.70311E+02	5.75436E+00
1079	1117-6	-6.12572E-04	-1.16420E-03	-3.69823E-07	-1.53598E+02	1.95434E+02	1.26214E+00
1080	100-1	-2.94953E-07	-3.75185E-08	-1.95534E-01	-2.17988E+01	2.09704E+02	1.72796E+01
1081	100-2	5.18412E-08	4.08036E-08	7.24291E-04	-3.40245E+00	7.60642E+00	2.05727E+02
1082	100-3	4.05009E-07	-2.90020E-08	3.75776E-02	6.57012E+00	-5.84430E+02	-2.82801E+00
1083	100-4	4.45580E-07	2.59839E-07	6.72758E-03	-5.75754E+00	-3.88400E+02	3.96901E+02
1084	100-6	1.96866E-07	-7.94535E-09	1.77445E-01	2.05126E+01	-1.33739E+02	4.11645E+01
1085	101-1	-1.61963E-07	1.56215E-08	3.72935E-01	3.71668E+01	2.44017E+01	-2.94647E+00
1086	101-2	-1.11873E-07	7.92788E-08	1.10946E-03	4.22695E+00	3.25065E+01	-5.76086E+02
1087	101-3	-3.36702E-07	6.34391E-08	-2.61409E-02	-3.00489E+00	1.31259E+03	-1.43273E+01
1088	101-4	-4.29700E-07	2.41300E-07	-2.42830E-03	5.00369E+00	8.47259E+02	-1.03167E+03
1089	101-6	1.94152E-07	-3.91665E-08	-3.67367E-01	-3.56841E+01	-1.34195E+01	-2.94404E+01
1090	102-1	6.24568E-08	3.31165E-08	-3.12912E-01	-2.41135E+01	-2.69080E+02	2.21308E+01
1091	102-2	8.77844E-08	-6.41885E-08	5.99303E-03	4.01335E+00	-8.72505E+01	6.42513E+02
1092	102-3	-2.05939E-07	3.43371E-08	-4.32055E-02	-5.55790E+00	-7.43442E+02	1.48507E+01
1093	102-4	-1.55371E-07	5.18485E-08	-2.22920E-02	-9.04224E+00	-4.75749E+02	9.07489E+02
1094	102-6	1.26602E-08	-3.93993E-08	3.13213E-01	2.02322E+01	2.09205E+02	-9.29006E+01
1095	103-1	1.34241E-07	7.21775E-09	9.66445E-02	6.08200E+00	-1.57730E+02	-9.46671E+01
1096	103-2	-2.12021E-08	5.66943E-08	-2.18759E-02	-2.49226E+01	2.11990E+01	-4.78121E+02
1097	103-3	1.38869E-07	-1.32350E-08	5.64683E-02	8.91219E+00	6.13154E+02	1.97823E+01
1098	103-4	1.43482E-08	8.94288E-08	1.04564E-02	-5.38738E+01	2.12635E+02	-4.57305E+02
1099	103-6	-2.82278E-07	-1.14414E-08	-9.11828E-02	-1.60942E+01	1.06688E+02	7.96020E+01
1100	104-1	-4.33647E-08	-3.00133E-09	3.30132E-01	3.11572E+01	9.23804E+01	-2.32243E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 106

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1101	104-2	-2.14204E-08	-3.04135E-08	1.02315E-02	-3.99565E+01	1.73021E+02	7.92371E+02
1102	104-3	1.94268E-08	7.29779E-09	-4.47654E-02	-5.15569E-01	-1.95162E+03	-1.57408E+02
1103	104-4	5.28817E-08	-3.57686E-08	-1.39230E-02	-8.91941E+01	-1.22573E+03	1.79126E+03
1104	104-6	8.66130E-08	2.53749E-09	-3.06709E-01	-2.90624E+01	-8.09071E+01	1.21404E+02
1105	105-1	-1.39349E-07	-9.08040E-09	-2.64215E-01	-2.19728E+01	1.82422E+02	3.33130E+01
1106	105-2	8.38190E-09	-7.36400E-08	4.18010E-02	-2.06889E+01	1.07089E+02	1.28521E+03
1107	105-3	8.14907E-09	-1.78843E-08	-7.16528E-02	-3.59694E+00	-1.90004E+03	-1.83716E+02
1108	105-4	2.93367E-08	-8.29314E-08	-1.51150E-03	-5.68521E+01	-1.12825E+03	1.97104E+03
1109	105-6	2.04600E-07	1.56870E-08	2.52181E-01	3.14533E+01	-1.40596E+02	-1.83246E+02
1110	106-1	-1.39698E-07	-2.69793E-08	-3.41102E-02	-7.59977E+00	3.61685E+02	1.78705E+02
1111	106-2	-4.42378E-09	3.57977E-09	2.38786E-02	7.25794E+00	-1.11498E+02	-5.71465E+02
1112	106-3	1.66474E-08	3.94757E-08	-5.50252E-02	-7.29272E+00	1.24007E+03	1.60754E+02
1113	106-4	7.45058E-09	1.59489E-07	-1.14028E-02	-8.28062E+00	5.96778E+02	-5.47158E+02
1114	106-6	8.16071E-08	5.59085E-08	3.31337E-02	1.10994E+01	-2.71115E+02	-1.91017E+02
1115	107-1	-1.35042E-07	-1.31113E-08	2.72080E-01	2.47281E+01	-2.97738E+02	-1.00118E+02
1116	107-2	-1.42245E-08	1.31957E-07	-3.34803E-02	3.57239E-01	-1.47633E+02	-7.88456E+02
1117	107-3	5.18048E-09	1.27038E-08	3.10576E-02	1.27160E+00	1.65258E+03	1.32946E+02
1118	107-4	-2.06055E-08	1.88709E-07	-1.72677E-02	-3.01392E-02	8.63828E+02	-1.09777E+03
1119	107-6	1.64844E-07	8.11997E-09	-2.66315E-01	-2.55736E+01	2.56212E+02	4.29503E+01
1120	108-1	-2.42144E-07	4.16185E-08	-2.73805E-01	-2.30777E+01	-8.06475E+01	-1.87675E+02
1121	108-2	-3.31784E-09	1.52504E-08	-1.36977E-02	-8.04154E+00	1.73984E+02	1.16674E+03
1122	108-3	-1.60944E-08	-6.54836E-09	5.36922E-02	6.32638E+00	-2.37077E+03	-1.49468E+02
1123	108-4	-7.31961E-09	4.70318E-08	1.79200E-02	-8.46963E+00	-1.18111E+03	1.65209E+03
1124	108-6	1.82539E-07	-9.15024E-08	2.64452E-01	2.25060E+01	2.78923E+01	1.32064E+02
1125	109-1	-4.21656E-07	-6.79574E-09	1.63014E-02	-2.05789E-01	-4.43014E+00	1.57098E+02
1126	109-2	-3.62779E-08	-1.34998E-07	1.50498E-02	2.62941E+00	-2.36847E+01	-1.41190E+02
1127	109-3	1.98517E-07	-2.80852E-09	-5.30325E-02	-4.75879E+00	-4.12046E+01	-4.86244E+01
1128	109-4	1.39000E-07	-2.73227E-07	-3.32963E-02	-6.10147E+00	-1.05471E+02	-7.63989E+01
1129	109-6	2.29804E-07	-1.00117E-08	-2.09986E-02	5.66583E-01	4.94501E+01	-4.71098E+01
1130	110-1	-4.20958E-07	-2.00234E-08	1.47279E-01	1.32296E+01	5.81504E+02	1.77227E+02
1131	110-2	7.32398E-08	-2.77068E-08	1.13190E-02	2.05609E+00	-6.63314E+01	-5.55004E+02
1132	110-3	9.02219E-08	-1.77679E-08	-7.57378E-02	-5.55691E+00	1.47538E+03	6.91805E+01
1133	110-4	1.41372E-07	-1.38985E-07	-6.33371E-02	-7.31744E+00	7.73566E+02	-8.06928E+02
1134	110-6	3.05357E-07	7.35090E-08	-1.44294E-01	-1.31626E+01	-5.13998E+02	-8.33038E+01
1135	111-1	-3.83705E-07	-2.16096E-09	-4.24232E-02	-3.15101E+00	-3.86692E+02	-1.79150E+02
1136	111-2	-7.03731E-08	1.74536E-07	-1.16177E-02	-3.25739E+00	4.20294E+01	2.68458E+02
1137	111-3	-5.67175E-07	-2.91620E-08	7.26712E-02	9.67192E+00	-5.96799E+02	-6.12030E+00
1138	111-4	-7.59261E-07	4.30911E-07	6.20397E-02	-7.28240E-01	-2.84270E+02	3.14485E+02
1139	111-6	1.36206E-08	1.32102E-07	7.43073E-02	5.46703E+00	2.91932E+02	8.14658E-02
1140	112-2	-2.02363E-10	5.75466E-09	-1.00211E-03	9.59337E-01	8.51048E-01	-4.91549E+00
1141	113-2	-6.54836E-10	1.12050E-09	3.01225E-09	1.28055E+00	-1.06471E-07	9.17353E-08
1142	114-2	3.18573E-09	2.69233E-09	-6.01915E-04	9.97995E-01	3.35124E+00	4.36104E+00
1143	115-1	5.75162E-06	-3.26967E-07	-1.06252E-01	-9.77020E+00	-2.11335E+02	5.63970E+00
1144	115-2	-3.00119E-07	1.64977E-05	-3.27553E-02	6.99326E+01	-1.32555E+02	-1.21083E+03
1145	115-3	3.39438E-07	6.92962E-07	1.17526E-01	6.23777E+00	1.92610E+03	1.72819E+02
1146	115-4	2.18437E-06	-3.87417E-05	-6.77251E-03	9.15624E+00	-5.02087E+02	-1.30904E+02
1147	115-5	2.41854E-05	-8.63713E-06	-5.67161E-01	-5.33483E+01	-8.38204E+02	1.31980E+02
1148	115-6	8.66839E-06	-2.66997E-05	-1.66028E-01	-1.84884E+01	2.59032E+01	-1.07908E+03
1149	116-1	1.34000E-06	0.00000E+00	0.00000E+00	-3.26160E-06	-8.36355E-05	-1.31906E-03
1150	116-2	-4.00000E-08	1.48400E-06	1.40000E-09	-6.53530E-05	-3.78680E-05	-3.18502E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 107

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1151	116-3	1.74000E-07	1.18000E-08	-3.95000E-05	-2.56845E-03	2.12137E-02	2.40942E-05
1152	116-4	1.38000E-06	-1.05600E-06	-6.60000E-05	-1.32251E-03	1.69317E-01	1.98498E-04
1153	116-5	-1.90790E-06	6.40000E-10	-1.00000E-08	-3.32700E-05	-1.48671E-03	1.60128E-04
1154	116-6	-7.90000E-06	0.00000E+00	3.00000E-08	2.19075E-05	4.88185E-04	1.02330E-02
1155	10001-1	1.63564E-08	3.04566E-08	-6.33008E-09	2.18216E+03	-5.49916E+03	-6.14857E+03
1156	10001-2	-9.58971E-09	-4.69890E-08	5.03496E-09	1.12371E+04	-7.37959E+03	-6.00090E+03
1157	10001-3	-2.67464E-08	-3.50096E-08	8.26549E-09	2.65665E+03	3.36156E+03	3.47228E+03
1158	10002-1	5.19503E-09	8.44011E-10	-3.20142E-09	4.65023E+03	-1.07206E+04	-1.52762E+04
1159	10002-2	-1.78261E-10	1.86560E-09	4.76575E-10	5.57890E+03	6.80174E+03	2.17971E+04
1160	10002-3	4.07454E-10	-7.45786E-10	-2.91038E-09	2.77688E+03	-1.22167E+04	-5.02126E+03
1161	10004-1	-5.09317E-11	1.23237E-09	4.07454E-10	-3.98451E+02	2.97254E+03	2.11210E+03
1162	10004-2	-1.18598E-09	2.77669E-09	6.75209E-09	6.33569E+03	-1.90401E+03	-3.15274E+02
1163	10004-3	2.47383E-09	-4.76575E-09	-2.03727E-08	-1.60193E+04	4.69001E+03	7.45277E+02
1164	10005-1	-2.49770E-10	1.13118E-10	-1.16870E-10	-4.28305E+02	1.05936E+03	1.19389E+03
1165	10005-2	5.16684E-09	-1.11049E-08	-7.78527E-09	-4.92971E+03	-6.18414E+02	-5.82551E+02
1166	10005-3	-1.92995E-09	5.45970E-09	6.81757E-09	-6.95533E+03	7.37557E+02	7.98703E+02
1167	10006-1	-1.07684E-09	-1.40917E-08	-5.14410E-09	-6.42873E+03	3.10709E+04	2.21105E+04
1168	10006-2	9.27685E-10	-7.32916E-09	-4.13274E-09	-2.59057E+04	8.42754E+03	-5.49270E+03
1169	10006-3	-1.95723E-09	1.45301E-08	2.55532E-08	7.18491E+03	-1.69629E+03	4.14678E+03
1170	10007-1	3.76167E-09	-2.05305E-08	2.13913E-09	-9.55081E+03	-1.65223E+04	-1.15305E+04
1171	10007-2	2.93949E-09	-2.56896E-08	-5.51518E-09	3.04478E+04	5.47804E+02	-1.64263E+03
1172	10007-3	-5.18412E-09	2.04163E-08	-7.10133E-09	2.64036E+04	1.54826E+03	7.80514E+02
1173	10008-1	4.60659E-09	-1.15824E-09	2.17551E-09	4.39637E+03	1.09263E+04	1.10022E+04
1174	10008-2	-8.79936E-10	-5.04679E-09	-4.22006E-10	-2.58808E+04	-2.69294E+03	-2.43326E+03
1175	10008-3	3.29146E-09	3.04681E-10	3.53102E-08	-1.26384E+04	-2.17766E+03	-2.23377E+03
1176	10009-1	2.47019E-09	-1.00044E-10	1.35333E-09	7.77256E+02	2.51154E+02	4.56509E+02
1177	10009-2	-6.99629E-10	-6.57383E-09	-8.93124E-10	-4.44138E+03	-1.13450E+03	-1.12990E+03
1178	10009-3	1.01318E-09	1.18234E-09	3.57977E-09	-2.52910E+03	-4.68897E+02	-4.93391E+02
1179	10010-1	1.83354E-09	-1.03182E-09	5.23869E-10	1.66984E+01	2.68124E+03	2.75127E+03
1180	10010-2	-2.49565E-09	-1.42027E-08	1.39698E-09	-9.57769E+03	-2.83902E+02	-3.38210E+02
1181	10010-3	-7.64885E-10	1.43882E-09	2.22644E-09	-3.23137E+03	3.22462E+02	2.96300E+02
1182	10011-1	-3.20142E-09	5.80258E-10	1.12050E-09	3.22382E+03	-3.21370E+03	-1.29228E+04
1183	10011-2	1.97906E-09	7.06132E-09	8.61110E-09	1.23989E+04	1.88815E+03	1.93298E+03
1184	10011-3	5.50062E-09	3.15777E-09	1.21101E-07	8.61165E+03	1.91595E+02	-2.43513E+03
1185	10012-1	5.76692E-08	-4.13092E-09	-2.96859E-09	2.14594E+03	-2.41183E+04	-2.42349E+04
1186	10012-2	-1.62390E-09	-2.04658E-08	1.75066E-09	2.87310E+04	1.64429E+02	-1.29481E+02
1187	10012-3	1.02591E-08	-8.17636E-10	4.28408E-08	3.83307E+04	-1.77993E+03	-1.00646E+03
1188	10013-1	3.50974E-09	-3.64594E-10	-9.10040E-09	5.98507E+02	2.96419E+03	3.36671E+03
1189	10013-2	7.76708E-10	1.70985E-10	-1.83754E-08	-7.27176E+03	7.80625E+02	8.66720E+02
1190	10013-3	1.32695E-09	1.18621E-09	-1.17416E-08	-1.51978E+04	-3.17316E+02	-4.59389E+02
1191	10016-1	1.81353E-09	-8.70614E-10	4.27644E-09	3.01341E+02	1.24223E+04	1.25869E+04
1192	10016-2	5.84294E-10	6.57974E-09	4.27735E-09	-1.58371E+04	5.76945E+02	6.30762E+02
1193	10016-3	-1.22309E-08	-4.11728E-09	2.61101E-08	-1.17453E+04	-9.04712E+01	-8.65818E+01
1194	10017-1	-1.09867E-09	-1.31467E-09	6.65750E-09	-1.44061E+03	4.20940E+03	4.38941E+03
1195	10017-2	1.27329E-10	1.22573E-08	3.49519E-09	-1.08898E+04	3.45514E+02	5.03023E+02
1196	10017-3	-3.01952E-10	3.17573E-09	1.83500E-08	-9.07671E+03	1.71442E+02	2.63153E+02
1197	10018-1	5.78439E-09	-3.71074E-10	8.00355E-10	2.39097E+02	7.26755E+03	7.42278E+03
1198	10018-2	7.76254E-10	5.69798E-09	2.96131E-09	-1.69324E+04	2.56742E+02	4.58115E+02
1199	10018-3	-6.58474E-10	1.51408E-09	-7.85076E-09	-1.07634E+04	-7.20189E+01	4.10484E+01
1200	10019-1	-2.14204E-08	1.68802E-09	-8.14907E-09	-1.14014E+03	-9.78233E+01	-1.25943E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 108

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1201	10019-2	9.77889E-09	-3.25963E-09	-9.77889E-09	4.60448E+03	-7.07652E+01	1.65399E+03
1202	10019-3	-2.79397E-08	5.58794E-09	2.88710E-08	-1.14940E+04	7.13474E+01	-4.20654E+03
1203	10020-1	-1.32277E-08	-2.47383E-09	-5.89353E-09	-1.53161E+03	2.00581E+04	1.99864E+04
1204	10020-2	-1.78989E-09	-2.97732E-08	1.54250E-09	-1.61648E+04	-1.35243E+03	-1.36486E+03
1205	10020-3	8.86212E-09	-2.07729E-09	1.09249E-08	-1.72969E+04	9.86959E+02	9.28363E+02
1206	10021-1	-1.80444E-09	1.04774E-09	2.11003E-10	1.65750E+03	3.60927E+03	3.82915E+03
1207	10021-2	-3.63798E-10	-2.45927E-09	4.14730E-10	-1.23300E+04	-1.87424E+01	-7.62258E+01
1208	10021-3	-3.14685E-09	6.43922E-10	-3.36877E-09	-6.28363E+03	-6.32147E+02	-6.80080E+02
1209	10022-1	1.92085E-09	1.01863E-09	-3.11411E-09	3.57654E+02	5.67352E+03	5.81803E+03
1210	10022-2	-4.80213E-10	4.42378E-09	4.72937E-10	-1.57269E+04	9.99479E+00	-5.91087E+01
1211	10022-3	-7.47605E-10	-3.83807E-10	1.81899E-10	-6.97365E+03	-5.41628E+01	-1.40949E+02
1212	10023-1	5.72763E-08	-9.25502E-09	-4.06872E-08	8.19811E+02	-1.25907E+03	-1.31386E+03
1213	10023-2	4.65661E-09	-2.56114E-09	-2.32831E-10	6.34876E+03	-1.08098E+03	9.55765E+03
1214	10023-3	-5.02041E-09	1.01863E-10	1.14669E-08	1.39154E+02	-5.67937E+03	-5.27465E+01
1215	10025-1	2.64263E-08	-7.21775E-09	-5.23869E-09	8.88239E+01	-1.77581E+03	-4.76931E+03
1216	10025-2	1.74623E-10	9.77889E-09	6.11180E-09	1.15556E+04	-1.35101E+03	-1.86851E+03
1217	10025-3	-9.89530E-10	1.21872E-09	1.97033E-08	3.21804E+03	5.17158E+02	5.81613E+01
1218	10026-1	-3.49246E-08	3.88809E-09	2.06201E-08	7.29357E+02	2.32608E+03	2.79607E+03
1219	10026-2	9.27248E-08	-4.28408E-08	6.19330E-08	-5.05632E+03	1.20684E+03	1.13759E+03
1220	10026-3	-4.66825E-08	2.30502E-08	-3.30620E-08	-9.32576E+03	-1.39540E+03	-1.52863E+03
1221	10027-1	4.37722E-08	4.14730E-09	-1.50467E-08	-8.54893E+02	-3.38132E+04	-3.17611E+04
1222	10027-2	-1.80444E-09	-3.29455E-08	-2.29920E-09	2.73279E+04	-2.28958E+02	-2.13740E+03
1223	10027-3	-5.23869E-09	1.09576E-08	2.55532E-08	2.82722E+04	1.66616E+03	8.98609E+02
1224	10028-1	-4.05635E-10	1.49157E-10	1.92927E-10	3.98220E+01	1.10359E+03	1.10776E+03
1225	10028-2	-2.91038E-11	-1.70257E-09	-8.35280E-09	-5.79920E+03	-3.49209E+02	-2.93820E+02
1226	10028-3	-2.07365E-10	-4.07454E-10	2.02635E-09	-4.68683E+03	-1.16648E+02	-1.53199E+02
1227	10029-1	3.87663E-08	5.16593E-10	2.19734E-09	-2.92420E+03	-2.67855E+01	-9.80616E+03
1228	10029-2	9.04947E-10	4.26371E-09	-6.36646E-10	5.42524E+03	3.16363E+02	5.79831E+02
1229	10029-3	1.04774E-09	-1.28784E-09	7.18283E-08	5.03453E+03	1.02155E+03	2.61756E+03
1230	10030-1	2.91620E-08	-4.28463E-09	-9.22591E-09	-6.40111E+01	-6.66504E+03	-8.24061E+03
1231	10030-2	-6.85759E-10	6.47560E-10	1.45583E-08	6.53467E+03	3.17781E+02	5.11428E+02
1232	10030-3	-2.51748E-09	2.89856E-09	9.13860E-09	1.33332E+04	-9.50551E+02	-4.85618E+02
1233	10031-1	3.31784E-08	-7.21775E-09	-1.64255E-08	3.98070E+02	-1.46514E+03	-3.85917E+03
1234	10031-2	-1.74623E-10	-4.45289E-09	-3.05590E-09	5.16870E+03	-2.16344E+02	-4.45191E+02
1235	10031-3	-3.87445E-09	3.39060E-09	5.63450E-08	-8.51745E+02	1.03947E+03	-2.06374E+02
1236	10032-1	2.63099E-08	6.46105E-09	-7.09406E-09	-7.63561E+02	-6.22528E+03	-7.49451E+03
1237	10032-2	-3.37604E-09	-3.17232E-09	1.07793E-08	7.34933E+03	-1.20928E+02	-6.76904E+02
1238	10032-3	-8.87667E-10	2.91038E-09	2.68919E-08	1.23179E+04	1.28970E+03	3.15472E+02
1239	10033-1	1.17579E-08	-4.87707E-08	-3.00643E-08	-1.21492E+03	-3.30211E+03	-4.63138E+03
1240	10033-2	-1.03755E-08	-8.97562E-08	-5.88625E-09	2.53919E+03	-1.81808E+02	-7.99977E+02
1241	10033-3	-1.53377E-08	9.31323E-10	1.95578E-08	7.54771E+03	1.40198E+03	1.07781E+03
1242	10034-1	9.45292E-08	1.21276E-07	-1.01514E-07	-8.59214E+03	-1.54690E+03	-1.49130E+04
1243	10034-2	1.19526E-08	-1.99536E-07	-4.30737E-08	2.86182E+03	-2.15846E+02	-1.59038E+02
1244	10034-3	-4.47035E-08	-6.37956E-08	2.65427E-08	8.84910E+03	1.29381E+03	8.66278E+03
1245	10035-1	3.60887E-09	7.85803E-10	-3.27418E-09	3.18241E+03	1.82623E+02	-1.02229E+04
1246	10035-2	7.10315E-10	6.31553E-09	-2.83762E-09	5.24226E+02	2.69791E+01	7.59582E+02
1247	10035-3	-8.87667E-10	3.92902E-09	1.69966E-08	8.65846E+03	9.97608E+02	-3.91418E+03
1248	10036-1	3.35276E-08	1.80444E-09	-7.69796E-09	5.20684E+02	-7.26973E+02	-5.00652E+03
1249	10036-2	6.54836E-10	6.28643E-09	-9.20409E-10	7.31453E+02	-2.00520E+01	-6.37669E+02
1250	10036-3	-1.03028E-08	3.24508E-09	1.72295E-08	2.65496E+03	9.36159E+02	1.43499E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 109

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1251	10037-1	8.14907E-09	-3.34694E-09	-4.01633E-09	4.81756E+01	-6.50062E+02	-4.50078E+03
1252	10037-2	1.23691E-10	5.32600E-09	4.07454E-10	3.86253E+02	3.07606E+01	5.56173E+02
1253	10037-3	-1.68802E-09	-1.74623E-09	1.16415E-09	6.04626E+03	-3.92443E+02	2.31225E+02
1254	10038-1	-4.65661E-09	-2.29920E-09	3.29237E-10	9.84194E+00	-2.33938E+02	3.91699E+03
1255	10038-2	-2.25555E-10	-1.97906E-09	-6.98492E-10	3.95012E+01	-1.21624E+01	2.80338E+02
1256	10038-3	9.31323E-10	-1.12050E-09	1.78115E-08	-1.75135E+03	1.12013E+02	1.86151E+02
1257	10039-1	1.67638E-08	2.03727E-10	2.09548E-09	-1.76937E+02	-8.42465E+00	4.22933E+04
1258	10039-2	-1.94996E-09	3.31784E-09	8.00355E-11	5.04246E+02	1.01492E+01	-1.65847E+03
1259	10039-3	-1.97906E-09	-1.80444E-09	1.21072E-08	-2.55641E+04	1.59341E+02	-5.68292E+02
1260	10040-1	8.84756E-09	5.23869E-10	3.31056E-10	-5.13433E+02	1.18634E+02	-1.63853E+04
1261	10040-2	2.27010E-09	2.09548E-09	-1.25146E-09	1.12972E+03	-2.54390E+00	2.06409E+03
1262	10040-3	-2.32831E-10	-2.15368E-09	1.25729E-08	8.08478E+03	6.08267E+02	1.16280E+03
1263	10041-1	1.55997E-08	5.23869E-10	7.71252E-10	1.34961E+02	-1.54976E+02	-6.67278E+03
1264	10041-2	-2.44472E-09	5.58794E-09	3.92902E-09	1.02665E+03	2.52024E+00	-1.28947E+03
1265	10041-3	-8.35280E-09	4.07454E-10	1.69966E-08	3.07495E+03	4.82546E+02	-6.50677E+02
1266	10042-1	3.30620E-08	5.76256E-09	-7.46513E-09	-7.38843E+01	-8.58808E+02	-4.38589E+03
1267	10042-2	-4.08909E-09	-2.38651E-09	2.88856E-09	5.57868E+02	-1.92827E+01	-5.70937E+02
1268	10042-3	-5.22959E-09	-1.10595E-09	-5.82077E-10	4.73276E+03	6.73814E+02	-1.33843E+02
1269	10043-1	3.93484E-08	1.18453E-08	-7.85803E-10	2.23854E+02	-1.61772E+02	3.79875E+03
1270	10043-2	-3.87445E-09	-2.79397E-09	3.08501E-09	1.05120E+02	-5.54417E+00	-2.43004E+02
1271	10043-3	-9.54606E-09	-2.06637E-09	-3.35276E-08	-1.79850E+03	8.94807E+01	-1.56167E+02
1272	10044-1	-7.10133E-09	3.17959E-09	-1.20781E-09	-9.81976E+02	-3.16438E+01	4.90441E+03
1273	10044-2	-3.23780E-10	2.34286E-09	-3.20142E-10	6.93376E+02	-2.14714E+00	-4.07380E+02
1274	10044-3	-1.01136E-09	1.04774E-09	6.72298E-09	-8.18879E+03	2.41273E+01	5.72470E+02
1275	10045-1	2.95695E-08	-7.85803E-10	-2.51748E-09	1.09375E+03	-9.13621E+01	-1.07527E+04
1276	10045-2	-3.79805E-09	7.33417E-09	8.14907E-10	-3.12833E+02	1.21171E+01	-2.25908E+02
1277	10045-3	-5.55883E-09	2.32831E-10	1.30385E-08	1.86841E+04	1.24311E+02	-1.54488E+03
1278	10046-1	2.53785E-08	-2.41562E-09	-7.05768E-10	8.44517E+02	-2.16760E+01	5.33458E+03
1279	10046-2	1.16415E-10	2.32831E-10	2.12458E-09	1.68499E+03	1.07571E+00	1.07929E+03
1280	10046-3	5.23869E-10	-7.10133E-09	9.54606E-09	-1.00053E+04	-5.18161E+00	-3.55938E+02
1281	10047-1	-1.62981E-08	2.48110E-09	-2.18279E-10	9.15488E+01	3.28620E+00	2.37277E+03
1282	10047-2	4.65661E-10	5.70435E-09	-5.29690E-09	1.03044E+03	-2.33144E+00	-9.57659E+01
1283	10047-3	-2.28829E-09	1.28057E-09	1.55997E-08	-5.38924E+03	1.51781E+01	8.71225E+01
1284	10048-1	1.42027E-08	2.91038E-09	-5.58794E-09	-5.78511E+02	-3.28746E+01	4.73577E+03
1285	10048-2	8.14907E-10	-6.98492E-09	-1.58616E-09	-2.93629E+02	-6.90872E+00	1.29173E+03
1286	10048-3	-8.73115E-10	-4.65661E-09	1.47847E-08	-1.48481E+03	7.63119E+01	3.01218E+02
1287	10049-1	1.60362E-08	1.06229E-09	2.43745E-09	-8.89449E+01	-1.59441E+00	1.97946E+03
1288	10049-2	-1.16597E-09	1.30967E-09	4.94765E-10	-7.29291E+02	6.98959E+00	-2.12390E+02
1289	10049-3	-4.09273E-09	-3.01952E-10	3.95812E-09	-5.59126E+03	3.43126E+01	-1.44104E+02
1290	10050-1	3.21306E-08	1.33878E-09	-6.83940E-10	1.12322E+02	-6.62804E+01	-9.57046E+03
1291	10050-2	4.88944E-09	0.00000E+00	-3.49246E-10	-1.53158E+03	-7.56972E+00	1.31615E+01
1292	10050-3	-2.56114E-09	6.50471E-09	-2.79397E-08	1.73602E+04	-3.08262E+01	4.53300E+02
1293	10051-1	8.11997E-09	-1.90585E-09	1.30967E-10	-6.46249E+02	-4.00329E+00	1.72265E+03
1294	10051-2	2.38288E-09	2.32831E-09	1.74623E-09	-1.32394E+03	3.23866E+00	1.38953E+02
1295	10051-3	-4.14730E-09	7.85803E-10	-1.02445E-08	-5.21675E+03	9.84697E-01	2.62884E+02
1296	10052-1	-7.97445E-09	-1.58616E-09	-1.70257E-09	3.51093E+01	3.71631E-01	2.04066E+03
1297	10052-2	3.20142E-09	4.07454E-10	-3.46517E-09	1.80977E+03	1.38325E+00	4.85802E+02
1298	10052-3	-4.23825E-09	8.73115E-11	-1.17871E-08	-4.19567E+03	-1.15219E+00	2.37280E+02
1299	10053-1	-1.04774E-08	2.21189E-09	-9.89530E-10	4.70803E+02	-9.76321E+01	4.97886E+03
1300	10053-2	-1.62981E-09	4.42378E-09	2.48838E-09	-1.31982E+02	1.75313E+01	-1.11448E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 110

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1301	10053-3	2.29920E-09	-2.09548E-09	2.42144E-08	-1.45579E+03	9.72642E+01	-2.99098E+02
1302	10054-1	-4.19095E-09	-8.36735E-10	5.02041E-10	-2.40636E+02	-3.82820E+01	4.49239E+03
1303	10054-2	-1.02227E-09	-2.17551E-09	-4.20732E-09	7.03555E+02	-1.16575E+01	-9.85829E+02
1304	10054-3	-1.30785E-09	-1.36424E-09	-1.23691E-09	-3.42134E+02	1.55992E+01	2.60169E+02
1305	10055-1	-1.14087E-08	-4.83997E-08	4.72937E-09	3.46242E+02	-6.56533E+02	-3.59234E+03
1306	10055-2	-3.09374E-08	-1.01048E-07	2.39816E-08	1.11613E+03	-4.89861E+01	-1.16704E+03
1307	10055-3	-4.38304E-08	-8.96398E-08	2.70084E-08	3.92999E+03	3.77716E+02	-7.73363E+02
1308	10056-1	8.14907E-09	-8.58563E-10	-1.97906E-09	-4.38126E+03	3.23438E+02	-8.85871E+03
1309	10056-2	9.96806E-10	2.61934E-09	1.58252E-09	-4.75637E+02	7.69304E+00	3.78163E+01
1310	10056-3	-2.09548E-09	1.01863E-09	-6.98492E-09	5.25240E+03	2.98683E+02	3.24467E+03
1311	10057-1	8.14907E-09	7.27596E-10	-1.51340E-09	9.40500E+02	-2.19298E+02	-5.73902E+03
1312	10057-2	-4.09636E-09	1.00699E-08	-7.27596E-10	-5.44794E+02	9.84734E+00	-1.48092E+02
1313	10057-3	-4.97676E-09	2.32831E-10	5.58794E-09	1.51479E+03	2.26237E+02	-7.36633E+02
1314	10058-1	-6.19912E-09	-8.11269E-10	2.03727E-10	1.51259E+02	-1.28312E+00	3.22721E+03
1315	10058-2	-2.13913E-09	1.58325E-08	2.85218E-09	-1.92563E+03	1.92465E+01	-1.20570E+02
1316	10058-3	-3.04317E-09	-1.86265E-09	1.14087E-08	-4.19014E+03	4.04803E+01	-2.71251E+01
1317	10059-1	2.48547E-08	5.96629E-10	-7.16682E-10	-1.17058E+02	-1.52451E+00	3.49759E+03
1318	10059-2	5.34783E-10	9.40054E-09	-1.16415E-10	-1.58849E+03	1.22766E+01	7.34789E+01
1319	10059-3	-4.16549E-09	-8.73115E-10	5.87897E-09	-3.73187E+03	-5.90889E+00	1.60039E+02
1320	10060-1	-7.27596E-10	1.27056E-09	-1.63709E-10	2.35947E+02	-2.98017E+01	4.50434E+03
1321	10060-2	-9.13133E-10	-8.77480E-09	8.87667E-10	5.51275E+02	2.98014E+00	1.05250E+03
1322	10060-3	6.18456E-11	-2.09911E-09	6.78483E-09	-3.42035E+03	-4.53048E+00	-2.76818E+02
1323	10061-1	1.83354E-09	6.76664E-10	-2.40107E-10	-2.33777E+02	-3.79291E+00	1.51575E+03
1324	10061-2	-1.30149E-09	2.27737E-09	2.37196E-09	-2.76607E+02	3.83755E+00	1.32540E+02
1325	10061-3	2.69938E-09	1.69166E-10	-5.60249E-10	-2.90947E+03	-2.11198E+00	2.47088E+02
1326	10062-1	3.87081E-09	1.74623E-10	-1.70985E-10	4.05645E+02	-4.93329E+00	2.31796E+03
1327	10062-2	-2.81761E-09	-2.11003E-10	8.03993E-10	9.82965E+02	5.25287E+00	4.41031E+02
1328	10062-3	1.36788E-09	5.87534E-10	4.26371E-09	-4.12518E+03	-1.87105E+00	1.74403E+02
1329	10063-1	5.09317E-10	1.13687E-10	-7.93079E-10	1.96186E+02	-9.81808E+00	1.48681E+03
1330	10063-2	-1.35105E-09	1.81626E-09	1.17507E-09	-3.23923E+02	7.58372E+00	-6.93330E+01
1331	10063-3	1.56069E-09	-1.51704E-09	-3.37604E-09	-2.80007E+03	2.04630E+01	-2.15870E+02
1332	10064-1	1.60071E-10	-6.82121E-12	-6.22094E-10	-4.44853E+02	-1.09438E+01	2.31675E+03
1333	10064-2	-1.54796E-09	-2.32831E-09	-1.33150E-09	1.07971E+03	5.26722E+00	-4.07930E+02
1334	10064-3	-2.25555E-10	-1.26238E-09	5.45697E-09	-4.05258E+03	1.87655E+01	-1.56362E+02
1335	10065-1	7.45058E-09	3.70783E-08	-4.16767E-08	5.89566E+03	-7.25061E+02	-1.79418E+04
1336	10065-2	-6.04196E-08	-7.00820E-08	8.90577E-08	-3.32234E+01	-2.28956E+01	-2.53704E+03
1337	10065-3	-7.98609E-08	5.65778E-08	8.94070E-08	1.08914E+04	9.33399E+02	-3.18380E+03
1338	10066-1	-5.35510E-09	-6.65750E-09	3.07045E-08	1.65027E+03	-2.98595E+02	-4.72050E+03
1339	10066-2	1.42609E-09	-5.64614E-09	-2.04600E-08	2.53088E+03	-1.52084E+00	-6.66395E+02
1340	10066-3	1.16415E-10	-7.05768E-10	1.72295E-08	5.11750E+03	7.19994E+02	-1.93298E+03
1341	10067-1	1.23982E-08	1.11322E-09	1.64364E-08	1.14450E+03	-3.35543E+02	-2.53386E+03
1342	10067-2	-8.67658E-09	9.00764E-09	-1.92376E-08	-1.83371E+03	-9.03746E+00	-4.23303E+02
1343	10067-3	1.15833E-08	-4.53292E-09	3.17814E-08	3.07361E+03	3.20178E+02	-7.78477E+02
1344	10068-1	-1.16415E-10	-4.51109E-10	-1.52650E-08	1.34827E+03	-9.58354E+01	-8.47768E+03
1345	10068-2	-3.79623E-09	-4.39468E-09	-1.13505E-08	7.73066E+02	-1.40526E+00	5.10441E+02
1346	10068-3	-3.37604E-09	-8.10542E-09	-8.14907E-09	1.09092E+04	1.57734E+02	-1.29151E+03
1347	10069-1	4.91855E-09	-1.78989E-09	5.09317E-10	5.68037E+02	-1.90588E+01	3.63435E+03
1348	10069-2	1.52068E-09	2.16096E-08	-6.81030E-09	-2.79635E+03	3.22660E+01	-1.01444E+03
1349	10069-3	3.34694E-09	-7.27596E-10	-2.67755E-09	-4.21312E+03	4.02525E+01	-6.73705E+01
1350	10070-1	-9.01055E-08	-1.10245E-07	1.14087E-08	2.73877E+03	1.32015E+02	-5.04757E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 111

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1351	10070-2	7.84348E-08	-3.11818E-07	1.38416E-08	7.79458E+02	1.75086E+02	9.23983E+02
1352	10070-3	-4.24916E-08	-2.59024E-09	-6.89179E-08	2.94318E+03	3.19930E+02	-1.87117E+03
1353	10071-1	1.07102E-07	5.16302E-08	-6.11180E-10	6.60525E+02	-6.81220E+02	-3.44056E+03
1354	10071-2	-9.27685E-09	-1.87720E-08	-4.00905E-09	3.29610E+02	1.10767E+02	7.70989E+02
1355	10071-3	-2.40107E-08	-2.44472E-09	-1.71713E-08	3.83442E+03	-3.79771E+02	-1.19911E+02
1356	10072-1	4.14439E-08	-2.11876E-08	-4.45289E-09	-2.08222E+01	1.22519E+02	-9.45296E+03
1357	10072-2	-1.89175E-09	-6.63567E-09	-9.96806E-10	1.16764E+03	1.89669E+01	1.30093E+03
1358	10072-3	-1.57743E-08	1.98634E-09	2.98023E-08	2.95549E+03	3.41551E+02	-1.04563E+01
1359	10073-1	-7.79983E-09	7.29051E-09	-4.07454E-10	-6.22194E+02	-5.64623E+01	-8.64515E+03
1360	10073-2	-2.50293E-09	-5.88625E-09	1.16779E-09	2.21784E+01	1.31786E+01	-7.83513E+02
1361	10073-3	5.55883E-09	-2.07729E-09	1.99652E-08	1.04784E+04	-4.23382E+01	1.40859E+03
1362	10074-1	-1.69966E-08	-1.00554E-08	1.31549E-08	-2.74865E+03	2.21241E+02	-5.52196E+03
1363	10074-2	-9.31323E-10	7.50151E-09	5.70799E-09	-7.65736E+02	4.66513E+00	9.75989E+02
1364	10074-3	-5.67525E-10	-2.83762E-10	3.89991E-09	1.93826E+03	1.60142E+02	1.28833E+03
1365	10075-1	-5.00586E-09	9.74978E-10	-5.82077E-10	-7.28836E+02	5.36978E+00	2.94856E+03
1366	10075-2	2.42107E-09	1.04410E-08	9.89530E-09	-2.35076E+03	2.75815E+01	1.44840E+03
1367	10075-3	8.73115E-11	4.12911E-09	-3.43425E-09	-3.96538E+03	-9.37633E+00	2.06802E+02
1368	10076-1	5.84405E-08	3.66708E-09	-4.15603E-08	1.24077E+02	-5.11563E+03	-5.71453E+03
1369	10076-2	-3.54194E-08	-8.54052E-08	-3.79332E-08	7.74138E+03	2.54564E+02	2.56037E+02
1370	10076-3	-1.03144E-07	-1.71713E-08	-4.57512E-08	1.25609E+04	-1.54410E+03	-1.16263E+03
1371	10077-1	9.63919E-08	-2.52621E-08	-6.35337E-08	1.61150E+03	-4.00214E+02	-1.30996E+03
1372	10077-2	3.03262E-08	-9.64501E-08	-7.13044E-09	6.45358E+03	7.23874E+02	7.13848E+02
1373	10077-3	-1.28915E-07	1.15251E-08	-1.02911E-07	-1.92634E+03	-8.71060E+01	-8.61372E+02
1374	10078-1	3.70666E-07	-2.09548E-08	-2.02795E-07	-1.36324E+03	2.76329E+04	1.60762E+04
1375	10078-2	-1.18336E-07	-9.31323E-10	7.07805E-08	-1.56221E+04	-4.49162E+02	-1.06781E+04
1376	10078-3	5.51809E-08	-9.31323E-09	-5.12227E-08	4.96468E+03	2.28351E+02	5.31566E+03
1377	10079-1	-6.00994E-08	-4.61478E-09	-3.13885E-08	4.73952E+01	4.02661E+03	4.19620E+03
1378	10079-2	-3.54212E-08	-6.39120E-08	-1.08557E-08	-1.63047E+04	4.75665E+02	4.57379E+02
1379	10079-3	-3.40005E-08	5.52973E-10	-3.76895E-09	-5.15682E+03	-4.37833E+02	-4.76197E+02
1380	10080-1	-1.25234E-07	1.71567E-08	-1.94414E-08	3.36971E+02	1.65790E+03	2.25633E+03
1381	10080-2	-1.36642E-08	-5.21541E-08	-7.91624E-09	-1.06200E+04	2.76773E+02	1.72259E+02
1382	10080-3	5.08157E-09	4.83851E-09	-3.37350E-08	-4.12188E+03	-4.07436E+02	-4.04918E+02
1383	10081-1	1.75991E-07	-2.33704E-08	-6.91975E-08	2.66205E+03	-2.50441E+04	-2.27780E+04
1384	10081-2	6.88015E-08	-4.35393E-08	-9.66247E-09	4.21068E+04	-1.46585E+03	-1.34140E+03
1385	10081-3	-9.84874E-08	3.21452E-08	-5.12227E-09	2.15405E+04	1.32070E+02	2.88136E+02
1386	10082-1	-2.61971E-08	1.19981E-08	2.09839E-08	-1.06531E+03	1.41011E+04	1.41505E+04
1387	10082-2	-4.80213E-09	-2.19443E-08	-1.09721E-08	-3.74397E+04	2.66492E+03	2.40123E+03
1388	10082-3	-1.52286E-08	-1.44064E-09	-4.39759E-08	-9.29648E+03	9.11220E+02	9.38985E+02
1389	10083-1	1.99943E-07	-1.17871E-08	-7.14208E-08	-1.47856E+03	-2.18479E+03	-1.37761E+03
1390	10083-2	-8.88249E-08	-1.43889E-07	-1.49012E-08	1.47511E+04	1.89696E+03	1.36774E+03
1391	10083-3	-9.22446E-08	-4.03961E-08	-1.32946E-07	3.90543E+03	9.61027E+01	-2.36271E+02
	Total:	-3.36154E-03	9.63909E-01	4.09050E-02	7.21739E+03	6.89522E+03	3.26652E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 112

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	973	1127-6	-3.80609E-01
T2 -	297	702680-2	3.62569E-01
T3 -	1147	115-5	-5.67161E-01
R1 -	1384	10081-2	4.21068E+04
R2 -	1221	10027-1	-3.38132E+04
R3 -	1257	10039-1	4.22933E+04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 113

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	90-1	4.64639E-10	5.35166E-08	3.05089E-07	-1.40727E-07	9.55234E-05	1.63549E-05
2	90-2	-3.62173E-08	-9.91143E-06	2.12676E-08	2.48223E-04	-9.65494E-05	3.65635E-05
3	90-3	2.22074E-07	-3.21495E-08	-1.01823E-06	2.67066E-05	-6.61437E-05	1.79629E-05
4	91-1	-3.84371E-06	3.58995E-06	3.51586E-06	-8.55358E-05	-1.39006E-03	4.00884E-04
5	91-2	2.56454E-08	-9.51503E-07	5.21846E-08	-3.32628E-05	-1.44080E-04	-8.75035E-05
6	91-3	-1.52191E-06	-1.74662E-07	1.21614E-06	-3.28058E-03	-1.45835E-04	-9.11949E-04
7	1091-1	-7.34670E-07	-4.29170E-07	3.38605E-07	-3.46729E-04	7.03555E-04	-4.43986E-05
8	1091-2	1.04367E-06	-4.33651E-07	-9.31887E-07	8.03413E-05	6.59650E-04	-1.69321E-04
9	1091-3	-1.30418E-06	1.48146E-06	1.07102E-06	-6.14642E-04	-3.11046E-04	4.54656E-05
10	4590-1	2.94188E-07	1.34422E-06	-3.62694E-07	-9.09763E-05	-6.51383E-06	4.17523E-05
11	4590-2	-1.02009E-08	-3.44374E-07	3.38188E-08	-2.32722E-05	9.92948E-04	-1.48732E-04
12	4590-3	-2.07442E-08	-7.20855E-07	3.11232E-07	-8.88790E-05	7.14969E-04	9.75649E-05
13	4590-4	1.16513E-07	1.11321E-05	-1.45220E-06	3.50519E-04	-4.69504E-03	6.47913E-04
14	4590-5	1.48720E-06	-1.38153E-05	-4.35720E-07	-6.80353E-04	8.83978E-03	1.19921E-03
15	4590-6	1.16687E-06	1.51501E-05	-9.96486E-07	-6.47192E-04	-1.10163E-02	6.90489E-04
16	4591-1	1.07639E-07	-1.84527E-07	-6.99808E-08	1.09976E-05	4.85681E-05	4.35305E-05
17	4591-2	6.49236E-08	2.79851E-06	6.41758E-09	-1.28633E-04	-1.50680E-04	-1.21604E-04
18	4591-3	-2.95436E-08	1.61784E-06	5.52220E-07	-1.52657E-04	3.05747E-04	-1.45054E-05
19	4591-4	-6.91277E-07	-3.85197E-05	-1.52387E-06	2.38982E-03	1.66873E-03	1.36034E-03
20	4591-5	1.40741E-07	-6.11907E-06	-2.11387E-06	6.49592E-04	-1.00201E-03	1.26847E-04
21	4591-6	6.82095E-07	6.54608E-06	-3.23283E-07	-2.15961E-04	6.97808E-05	3.06547E-05
22	4592-1	4.45611E-07	2.44744E-08	-3.98923E-07	4.38835E-06	3.20673E-03	-1.71031E-04
23	4592-2	-8.48201E-08	4.45233E-06	4.75993E-08	-1.09705E-04	-4.63553E-03	2.81807E-04
24	4592-3	-3.69623E-08	8.54165E-07	1.52195E-07	-1.77156E-04	-2.76176E-03	1.57357E-04
25	4592-4	-5.07176E-07	-4.00763E-05	1.14956E-06	1.58702E-03	5.19497E-03	-3.87910E-04
26	4592-5	-3.60968E-07	2.16878E-06	4.54772E-07	2.11260E-04	-2.60362E-03	1.36170E-04
27	4592-6	-4.49086E-08	-1.45969E-05	1.21239E-07	1.05849E-04	2.94163E-02	-1.66314E-03
28	4593-1	1.42639E-06	-2.90279E-09	-1.48652E-06	-1.70442E-05	1.25024E-03	-1.56755E-05
29	4593-2	-7.26088E-07	8.30091E-07	7.13762E-07	-2.14309E-05	-7.41731E-04	5.49533E-05
30	4593-3	2.83676E-07	1.58060E-07	-2.92575E-07	-7.38069E-05	2.01798E-04	1.00921E-05
31	4593-4	-2.93808E-06	-1.76714E-05	4.16924E-06	9.10147E-04	2.26039E-03	-6.99704E-04
32	4593-5	7.33499E-07	-6.19989E-07	-9.74708E-07	-1.36910E-04	-8.83649E-04	6.38578E-05
33	4593-6	-3.81729E-06	-3.82612E-06	3.87185E-06	1.82689E-04	-2.13432E-03	-5.05088E-05
34	13001-1	9.38743E-08	-1.03027E-06	-1.67679E-07	8.92968E-05	-6.92845E-05	9.23319E-05
35	13001-2	7.10918E-09	-1.52887E-07	-4.70157E-09	1.70959E-05	4.28025E-04	5.69925E-06
36	13001-3	-4.98521E-08	3.75302E-07	7.40432E-08	-1.16146E-04	3.82231E-04	6.04751E-04
37	13001-4	3.23959E-08	-6.76850E-07	-6.32771E-08	-4.64186E-05	-9.19283E-04	-1.67980E-04
38	13001-6	-5.96353E-08	6.42025E-07	1.23660E-07	-1.69216E-04	-3.28163E-04	-2.73303E-05
39	13002-1	8.87032E-08	-9.03702E-08	-6.32978E-08	-2.37254E-04	8.21816E-04	1.35367E-04
40	13002-2	8.34783E-09	8.73531E-08	4.95852E-10	-4.52967E-06	9.55045E-04	-1.73021E-04
41	13002-3	3.59847E-08	-2.55293E-07	2.62319E-08	-2.78699E-04	-1.58737E-03	-1.59200E-05
42	13002-4	1.25463E-08	3.24305E-08	-9.30799E-09	8.45942E-06	-3.15058E-03	-1.46691E-04
43	13002-6	-4.90577E-08	-2.78571E-08	1.09650E-08	1.67454E-04	-5.41384E-04	6.07705E-04
44	13003-1	6.58815E-08	7.65654E-09	-3.83683E-08	3.52695E-06	7.86977E-06	-4.24455E-06
45	13003-2	-1.84561E-09	4.25324E-07	6.02639E-09	-7.80422E-06	-7.13003E-06	-9.49310E-05
46	13003-3	6.34761E-09	-1.30799E-07	5.48000E-08	6.29744E-06	3.31935E-05	-1.17645E-05
47	13003-4	-1.26124E-08	1.10515E-06	1.62142E-08	-1.64162E-05	-2.87975E-05	-2.14356E-04
48	13003-6	-5.35169E-08	5.95048E-07	5.35196E-08	-2.19347E-05	1.94656E-05	-1.48515E-04
49	13004-1	8.01104E-08	6.74673E-07	-3.42899E-08	-6.98805E-06	6.96825E-06	4.97579E-05
50	13004-2	-2.02663E-08	1.52404E-06	4.53040E-08	-4.75620E-05	-3.39987E-06	-4.56003E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 114

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
51	13004-3	-1.10083E-08	-1.31266E-06	2.19659E-07	4.46822E-05	3.81313E-05	3.00128E-05
52	13004-4	-6.80049E-08	3.92203E-06	8.77491E-08	-1.16230E-04	-1.34295E-05	-1.28614E-04
53	13004-6	-3.58723E-08	-2.31024E-06	-1.49027E-08	5.92675E-05	-5.90909E-06	4.35274E-05
54	13005-1	1.38603E-07	3.93252E-07	2.21206E-08	2.42538E-06	4.47271E-05	1.33186E-04
55	13005-2	-5.62775E-09	3.22329E-06	5.96122E-08	-1.15113E-04	-1.74966E-05	-2.84923E-05
56	13005-3	-1.76291E-08	-1.06420E-06	2.72390E-07	3.69684E-05	3.31380E-05	2.99078E-05
57	13005-4	-2.34774E-08	1.02024E-06	7.32361E-08	-3.89324E-05	-1.00678E-05	-2.49101E-05
58	13005-6	-1.27928E-07	1.20317E-06	-1.47449E-08	-6.27500E-05	-4.92914E-05	-1.22176E-04
59	13006-1	1.42684E-07	2.42314E-07	2.37468E-08	1.59107E-05	9.01415E-05	2.25678E-04
60	13006-2	4.31558E-09	7.99661E-06	3.69619E-08	-2.98552E-04	-3.07401E-05	-2.80168E-05
61	13006-3	-6.88772E-09	7.89267E-07	2.26455E-07	-2.89396E-05	9.28328E-06	2.10659E-05
62	13006-4	-1.07909E-08	1.13359E-05	5.35053E-08	-4.27790E-04	-5.14872E-05	-6.22890E-05
63	13006-6	-9.72076E-08	8.92305E-06	9.01708E-09	-3.56386E-04	-1.11915E-04	-1.60269E-04
64	13007-1	5.65730E-08	-6.69536E-07	-7.00155E-09	9.37110E-05	-7.88317E-03	1.48681E-04
65	13007-2	7.95506E-09	2.00999E-06	7.51134E-09	-1.28734E-04	-4.38095E-03	-2.00041E-04
66	13007-3	-1.32658E-08	1.24484E-07	5.56458E-08	-1.71433E-04	6.64504E-03	3.86050E-04
67	13007-4	1.84334E-08	3.10886E-06	4.77826E-09	-2.32199E-04	2.05802E-02	1.32587E-03
68	13007-6	-4.91382E-08	-1.66566E-06	1.72036E-08	1.64175E-04	1.75352E-02	6.07422E-04
69	13008-1	9.70716E-08	-2.06682E-07	-5.35087E-08	2.49269E-04	1.32137E-04	2.07014E-03
70	13008-2	1.40538E-08	7.39021E-07	1.03410E-08	-4.06447E-04	2.72045E-04	-3.55884E-04
71	13008-3	-8.76952E-09	-3.96367E-08	4.17870E-08	-1.73711E-03	-2.47900E-04	-2.13739E-04
72	13008-4	2.15975E-08	1.34588E-06	1.71632E-08	-1.09863E-03	5.55757E-04	-1.98140E-03
73	13008-6	-1.54263E-07	2.55004E-07	1.42340E-07	-7.50304E-04	-3.58153E-05	-2.97102E-03
74	13009-1	1.93112E-07	2.02400E-06	-3.23734E-07	-4.63276E-05	6.54864E-05	-1.08578E-04
75	13009-2	1.77442E-08	1.30768E-07	-3.25546E-08	2.01570E-05	-3.26525E-04	-1.34031E-05
76	13009-3	-9.78851E-08	-8.80037E-07	1.74347E-07	1.99036E-04	4.51881E-04	-6.08372E-04
77	13009-4	1.07780E-07	8.46263E-07	-1.52892E-07	-2.57105E-05	1.48274E-03	-2.66501E-04
78	13009-6	1.95857E-07	2.14095E-06	-3.36242E-07	-6.76149E-05	8.06969E-04	-9.76235E-05
79	13010-1	1.43221E-07	5.00653E-07	-1.31235E-07	-1.43043E-04	1.00083E-03	-1.34341E-04
80	13010-2	-8.61785E-10	1.61593E-07	-9.76503E-09	1.03623E-05	-8.23975E-04	-1.86617E-04
81	13010-3	1.94271E-08	2.09575E-07	6.38863E-08	-8.95702E-05	-1.71292E-03	1.50779E-05
82	13010-4	1.78085E-08	3.56711E-07	-2.77174E-08	2.08179E-05	3.81818E-03	-2.03065E-04
83	13010-6	5.46941E-08	-4.24933E-08	-7.05413E-09	7.40865E-05	5.61606E-04	6.07146E-04
84	13011-1	8.24732E-08	6.33231E-08	-5.64560E-08	6.27222E-07	3.74416E-05	4.85360E-05
85	13011-2	4.58182E-10	5.87166E-07	3.06099E-08	-4.94650E-05	4.94965E-05	-1.17310E-04
86	13011-3	7.62620E-09	9.49910E-08	4.61736E-08	-5.31038E-06	3.62057E-05	2.37717E-05
87	13011-4	1.17735E-08	1.62902E-06	1.00425E-07	-1.36210E-04	1.65943E-04	-2.81570E-04
88	13011-6	7.57924E-08	6.46432E-07	-8.86572E-08	-4.03454E-05	-3.78250E-05	-9.77620E-05
89	13012-1	1.11087E-07	-4.77959E-07	-4.19591E-08	2.67975E-05	2.67823E-05	1.47106E-05
90	13012-2	2.81766E-08	1.59239E-06	-4.63932E-08	-6.73054E-05	-1.95337E-05	-3.80851E-05
91	13012-3	-1.16651E-08	1.39170E-06	2.37663E-07	-1.13959E-04	7.96165E-05	-6.89255E-06
92	13012-4	1.01585E-07	4.19500E-06	-9.13491E-08	-1.82696E-04	-1.97103E-05	-9.19141E-05
93	13012-6	4.76684E-08	-2.26946E-06	8.26556E-09	9.70535E-05	6.36165E-05	7.54407E-05
94	13013-1	1.55627E-07	-3.83917E-07	1.50525E-08	-3.06770E-06	6.84049E-05	7.53690E-06
95	13013-2	7.13284E-09	3.30967E-06	-6.07056E-08	-1.31115E-04	9.89523E-06	-2.37873E-05
96	13013-3	-1.62350E-08	1.17934E-06	2.83178E-07	-1.03801E-04	3.98906E-05	-6.30950E-06
97	13013-4	2.56726E-08	1.03935E-06	-7.65684E-08	-2.98612E-05	4.18655E-06	-1.08463E-05
98	13013-6	1.45593E-07	1.30103E-06	6.25437E-09	-5.73416E-05	7.34046E-05	6.12834E-06
99	13014-1	1.71460E-07	-3.90357E-07	-6.75717E-10	4.37604E-06	1.32835E-04	1.31671E-06
100	13014-2	-2.55025E-09	8.28433E-06	-3.86228E-08	-3.26365E-04	2.88559E-05	-2.31684E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 115

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
101	13014-3	-6.27449E-09	-7.57069E-07	2.33430E-07	7.39623E-06	1.87897E-05	1.78087E-06
102	13014-4	1.83059E-08	1.17555E-05	-6.09156E-08	-4.68225E-04	6.08519E-05	-2.74802E-05
103	13014-6	1.21632E-07	9.10170E-06	-3.21173E-08	-3.60447E-04	1.52896E-04	1.20190E-05
104	13015-1	1.37675E-07	6.84602E-07	-9.11745E-08	-9.69030E-05	-7.75910E-03	4.38610E-04
105	13015-2	-1.11547E-08	2.15835E-06	-3.66550E-09	-1.45240E-04	4.42996E-03	-2.43109E-04
106	13015-3	-1.37437E-08	-2.65366E-07	5.59890E-08	2.27977E-04	6.68403E-03	-3.76354E-04
107	13015-4	-4.08070E-08	3.43355E-06	1.74921E-08	-2.71148E-04	-2.04088E-02	1.16237E-03
108	13015-6	1.05582E-07	-1.93129E-06	-7.52548E-08	2.13131E-04	-1.74225E-02	9.81600E-04
109	13016-1	3.95623E-07	2.91321E-07	-3.63263E-07	-1.76345E-05	5.19387E-04	-1.81758E-05
110	13016-2	-1.53926E-08	8.20557E-07	-4.24776E-09	-2.42718E-05	-1.97688E-04	2.29682E-05
111	13016-3	-4.22684E-09	1.33848E-08	3.55692E-08	-2.76596E-05	-2.04524E-04	1.06335E-05
112	13016-4	7.85572E-09	1.69531E-06	-3.79561E-08	-4.83342E-05	-2.70549E-04	4.07833E-05
113	13016-6	4.18793E-07	3.64817E-07	-4.15853E-07	-1.66803E-05	5.23144E-04	-9.49269E-06
114	13017-1	2.14412E-08	-1.60114E-08	-1.47727E-08	1.10297E-06	2.86685E-05	1.06705E-06
115	13017-2	9.02994E-09	-1.14940E-06	-9.87206E-09	-8.40138E-06	3.43044E-05	4.68357E-05
116	13017-3	3.75573E-09	-9.38069E-09	6.32566E-09	-1.02393E-05	4.41776E-06	-6.21759E-06
117	13017-4	7.98420E-09	-1.12090E-07	2.29015E-08	-2.68877E-05	-4.71343E-05	-3.18224E-05
118	13017-5	-1.71261E-08	5.77990E-08	-1.81903E-07	1.06532E-04	2.38414E-04	4.37156E-05
119	13018-1	7.16677E-08	-4.42743E-08	-1.27707E-08	3.56210E-05	-6.69998E-05	6.22920E-06
120	13018-2	-1.06411E-08	1.52600E-06	3.38772E-09	-7.16958E-05	1.26933E-05	-1.81154E-05
121	13018-3	-6.20693E-09	-3.33366E-09	7.13807E-08	7.90652E-06	-1.50814E-05	5.45342E-07
122	13018-4	-6.70597E-09	-4.31813E-08	9.05041E-08	-7.84726E-06	1.34532E-05	3.77195E-06
123	13018-5	2.01642E-08	-1.63062E-08	-1.95659E-07	-1.41847E-04	1.53256E-04	1.60689E-06
124	13019-1	8.66536E-09	8.73356E-09	-9.83504E-09	1.91107E-05	1.48523E-05	2.58001E-06
125	13019-2	-1.04420E-09	2.15823E-06	7.78793E-09	-9.97455E-05	1.63282E-05	-1.46898E-05
126	13019-3	-1.65616E-08	-4.94853E-08	9.65125E-08	-3.07414E-08	1.84799E-05	7.18648E-06
127	13019-4	-1.13624E-08	2.06931E-06	1.17029E-07	-9.95729E-05	3.08494E-05	4.76162E-05
128	13019-5	2.26972E-07	9.42405E-07	-1.40070E-06	7.92209E-05	-2.78545E-04	-1.32421E-04
129	13020-1	-1.05460E-08	-1.39609E-07	1.06561E-08	7.64583E-06	1.07685E-05	-3.74678E-05
130	13020-2	7.56958E-09	5.39232E-07	-6.76944E-09	-3.24145E-05	-9.84454E-07	1.21945E-05
131	13020-3	-2.87930E-08	-2.49166E-08	6.17336E-08	-2.72809E-05	-2.12013E-05	-2.81483E-06
132	13020-4	-2.03529E-08	-4.19728E-08	3.33445E-08	-3.26017E-05	-2.34016E-05	-1.27575E-05
133	13020-5	2.27739E-07	4.45493E-08	-2.87837E-07	2.60135E-04	3.28560E-04	7.50727E-05
134	2171-2	2.55125E-09	1.27690E-06	1.86484E-08	-4.58974E-05	-2.81301E-06	-2.94914E-06
135	2171-3	-2.19899E-09	1.20999E-06	1.14121E-08	-4.35653E-05	-5.72804E-06	-1.05397E-05
136	2197-2	-5.00612E-09	3.62080E-06	1.99738E-08	-1.30331E-04	-1.34600E-05	-3.60788E-05
137	2197-3	-1.09309E-08	-1.49848E-06	1.26926E-07	5.06031E-05	-4.27378E-06	3.96565E-05
138	2322-2	1.76728E-08	2.30036E-06	-3.11464E-08	-6.21774E-05	3.02310E-06	-7.95000E-05
139	2322-3	-2.92335E-08	1.27882E-06	1.35173E-07	-9.15820E-05	3.82191E-05	2.89296E-05
140	2663-2	5.76696E-10	2.52309E-06	4.88796E-08	-8.60301E-05	-8.26351E-06	-8.03694E-06
141	2663-3	-1.36242E-09	-6.20828E-07	6.20859E-08	2.01645E-05	8.60385E-06	1.79383E-05
142	2808-2	-9.95886E-10	6.86750E-07	1.41062E-09	-2.40441E-05	-7.27016E-06	-8.86973E-06
143	2808-3	8.35311E-11	-1.45496E-07	-7.55715E-09	5.58580E-06	-5.95601E-07	-8.75099E-07
144	2809-2	-8.49681E-10	4.50579E-07	3.14634E-09	-1.55414E-05	-1.79591E-06	-1.91462E-06
145	2809-3	3.34844E-09	5.82879E-08	-6.43803E-09	-4.71048E-07	1.71996E-06	4.39881E-06
146	2833-2	5.54670E-09	6.16847E-06	2.09818E-08	-2.28256E-04	-1.51141E-05	7.19972E-06
147	2833-3	-4.92347E-09	-1.36021E-06	4.05495E-08	4.75890E-05	9.52855E-07	2.05229E-05
148	2922-2	-1.29614E-09	1.78388E-06	1.65435E-08	-6.52144E-05	-7.13523E-06	-7.86796E-06
149	2922-3	1.40793E-09	1.39524E-06	-1.56544E-08	-5.04104E-05	4.37779E-07	-1.25106E-05
150	21081-2	-4.93295E-09	1.51796E-06	3.96896E-08	-5.69811E-05	-7.19700E-06	-1.24801E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 116

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
151	21081-3	-7.88769E-11	1.36591E-08	5.56496E-10	-5.29067E-07	-5.03370E-08	-1.27371E-07
152	27106-2	3.95478E-09	4.91704E-07	5.33301E-09	1.47428E-05	5.82896E-04	5.03350E-05
153	27106-3	-1.13421E-08	-5.20674E-07	3.33714E-08	-1.14939E-05	-9.24984E-05	4.96113E-05
154	27111-2	2.03784E-09	3.03177E-07	3.94065E-10	-1.00787E-05	-4.84463E-05	2.23693E-05
155	27111-3	-2.54947E-09	-7.58310E-08	1.41294E-08	-7.67742E-06	-8.21585E-05	-6.77996E-06
156	27150-2	-2.63067E-11	4.70726E-08	5.34621E-10	9.89732E-06	3.45274E-05	-1.14188E-07
157	27150-3	7.72112E-10	6.24209E-08	1.51699E-08	-1.56798E-05	3.47740E-04	3.22929E-05
158	27164-2	-5.54252E-08	3.30513E-07	6.90482E-08	7.19343E-05	-4.90007E-05	1.05979E-04
159	27164-3	-3.86289E-08	8.56180E-09	6.30597E-08	7.02362E-05	-5.53539E-05	2.60180E-06
160	27167-2	4.29883E-08	2.66849E-07	-3.71914E-08	2.25250E-05	1.75934E-05	-8.77104E-07
161	27167-3	-1.68525E-08	-1.56116E-07	2.83107E-08	5.82109E-05	-5.89405E-05	-1.42067E-05
162	27178-2	7.92222E-08	6.75085E-07	-6.35337E-08	8.61779E-06	1.94115E-05	-1.34086E-05
163	27178-3	1.85824E-09	-9.79894E-08	1.08668E-08	-5.63855E-05	-7.04629E-05	6.37636E-06
164	27186-2	8.22174E-10	2.10089E-07	2.07811E-10	-1.22428E-04	-1.08232E-04	-1.27763E-05
165	27186-3	-8.68359E-10	-2.26756E-07	1.89256E-08	-6.80548E-04	-2.84804E-04	1.40067E-05
166	27193-2	4.51943E-10	2.74792E-07	-2.21490E-09	-2.27476E-05	-6.74016E-05	-3.32481E-05
167	27193-3	-1.08145E-09	-3.92223E-08	2.40035E-08	1.19914E-04	-2.20146E-03	-1.02763E-04
168	27564-2	4.91605E-10	9.49688E-09	-7.13146E-10	7.27296E-06	1.76339E-07	-3.75115E-06
169	27564-3	-3.26220E-10	7.64656E-11	1.26484E-09	-3.37050E-06	-2.16225E-06	-2.08315E-06
170	27837-2	8.83301E-09	2.40356E-07	-6.48840E-09	5.85118E-05	-7.19414E-05	1.99495E-05
171	27837-3	-7.17209E-12	1.19690E-07	9.14579E-09	1.18284E-04	-1.14610E-04	2.69454E-05
172	271012-2	2.54804E-09	3.53928E-07	-1.95602E-09	2.66539E-05	3.79953E-04	2.68133E-05
173	271012-3	-1.31281E-09	6.03369E-08	1.36509E-08	-1.26480E-05	-1.70379E-04	1.76605E-05
174	271013-2	1.04230E-09	1.70695E-07	5.38361E-11	9.38960E-06	2.12569E-04	1.80198E-05
175	271013-3	-3.83035E-10	-2.34600E-08	6.95287E-09	-8.18736E-06	-3.20009E-05	1.40745E-05
176	271055-2	-1.83102E-09	1.25330E-07	-9.37640E-10	8.16922E-05	-6.84569E-05	-4.39215E-05
177	271055-3	3.59322E-10	-8.19901E-10	8.47144E-09	3.40203E-04	-1.09897E-04	1.89822E-05
178	271265-2	7.85198E-08	5.26644E-07	-7.16332E-08	9.96583E-06	3.36288E-05	9.63328E-05
179	271265-3	-6.96790E-09	5.46258E-08	2.93949E-08	-3.48430E-04	-4.82139E-05	4.94872E-05
180	702171-2	-2.62649E-09	1.33860E-06	-1.99917E-08	-5.53973E-05	-1.23003E-07	-8.10104E-06
181	702171-3	-1.85978E-09	-1.60052E-06	5.56776E-09	6.51993E-05	-8.60828E-06	8.26572E-06
182	702197-2	4.28997E-09	3.91457E-06	-1.17523E-08	-1.68047E-04	1.19480E-05	-2.09341E-05
183	702197-3	-1.11615E-08	1.79821E-06	1.36791E-07	-8.64139E-05	1.58361E-07	-1.80797E-06
184	702322-2	-1.66928E-08	2.22058E-06	3.68825E-08	-1.00297E-04	1.10011E-05	1.58267E-05
185	702322-3	-3.08461E-08	-1.49025E-06	1.21675E-07	5.41084E-05	2.33866E-05	4.64795E-06
186	702663-2	-1.83477E-09	2.55078E-06	-4.88014E-08	-1.19974E-04	2.65051E-06	-1.96155E-05
187	702663-3	3.09748E-10	6.64701E-07	6.42159E-08	-4.41396E-05	1.07237E-05	-1.37152E-06
188	702808-2	7.93265E-10	7.57171E-07	-6.71960E-10	-3.39139E-05	6.78167E-06	-6.35801E-06
189	702808-3	1.61144E-10	1.44162E-07	-8.71650E-09	-5.80799E-06	-1.36416E-06	-7.21459E-07
190	702809-2	7.29046E-10	4.93447E-07	-2.19683E-09	-2.15376E-05	7.39480E-07	-3.61193E-06
191	702809-3	4.05886E-09	-7.14152E-08	-7.27826E-09	5.92902E-06	2.68911E-06	8.93146E-07
192	702833-2	-6.74603E-09	6.37822E-06	-1.94761E-08	-2.50932E-04	9.80968E-06	-1.01067E-05
193	702833-3	-3.50075E-09	1.57839E-06	4.24315E-08	-6.96092E-05	7.01043E-06	-1.13953E-06
194	702922-2	9.26899E-10	1.87618E-06	-1.41298E-08	-7.67245E-05	4.90168E-06	-9.73766E-06
195	702922-3	6.70752E-10	-1.57777E-06	-1.71316E-08	6.59459E-05	-4.36520E-06	3.74680E-07
196	727106-2	-1.01646E-09	4.98934E-07	-8.19384E-09	1.93944E-05	-5.76231E-04	3.21117E-05
197	727106-3	6.64241E-09	5.92158E-07	1.78568E-08	-3.36884E-05	-7.32868E-05	3.94775E-06
198	727111-2	-6.30251E-09	4.82483E-07	4.83367E-09	-2.05769E-05	4.08160E-05	-2.25291E-06
199	727111-3	-1.70656E-10	1.38397E-07	1.23519E-08	-9.05859E-06	-7.09904E-05	4.41078E-06
200	727150-2	1.14920E-09	1.29440E-08	-1.57153E-09	4.32469E-07	-3.28373E-05	2.30755E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 117

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
201	727150-3	-4.08417E-09	-1.09749E-08	2.16953E-08	-1.50555E-05	3.49406E-04	-1.98059E-05
202	727164-2	8.96180E-08	4.06264E-07	-1.09313E-07	9.84311E-05	5.51562E-05	-1.08529E-05
203	727164-3	-4.26213E-08	-5.08850E-08	6.93852E-08	-1.13756E-04	-6.11107E-05	-3.84897E-06
204	727167-2	-3.94881E-08	2.64976E-07	3.58680E-08	1.29671E-05	-1.59084E-05	-4.72778E-06
205	727167-3	-7.42315E-09	1.42393E-07	2.12969E-08	-7.00762E-05	-5.26170E-05	6.33097E-06
206	727178-2	-2.22558E-08	6.73739E-07	6.01216E-09	-1.27832E-05	2.55346E-05	-3.76886E-06
207	727178-3	1.07675E-08	9.60466E-08	3.20419E-09	-2.24924E-06	-6.26163E-05	6.28306E-06
208	727186-2	7.74007E-10	2.06820E-07	-1.39944E-09	-9.48501E-05	1.17941E-04	-7.45240E-06
209	727186-3	1.56844E-08	2.71396E-07	2.17627E-09	6.49487E-04	-2.48028E-04	1.32609E-05
210	727193-2	3.69315E-09	2.88553E-07	-1.95352E-09	-2.01721E-05	1.06372E-04	-4.71188E-06
211	727193-3	1.18650E-08	1.64870E-07	1.02579E-08	-5.26059E-05	-2.11165E-03	1.20261E-04
212	727564-2	-3.73512E-10	8.81873E-09	6.58408E-10	7.86792E-06	-3.05968E-08	-1.54477E-06
213	727564-3	1.39514E-10	-5.33654E-10	7.25356E-10	-4.19713E-06	-1.32945E-06	7.60363E-07
214	727837-2	-1.34600E-08	2.28168E-07	1.31366E-08	1.20859E-04	7.25568E-05	-8.91949E-06
215	727837-3	9.77923E-09	-1.04465E-07	-1.89450E-09	-2.05262E-04	-1.04091E-04	9.46702E-06
216	7021081-2	5.94405E-09	1.77512E-06	-4.10955E-08	-7.22899E-05	8.95759E-06	-9.91264E-06
217	7021081-3	-1.00050E-10	-1.60723E-08	5.73778E-10	6.44607E-07	-1.40825E-07	9.61946E-08
218	7271012-2	-2.31831E-09	3.69719E-07	1.86148E-09	1.30462E-05	-3.71374E-04	2.18089E-05
219	7271012-3	3.96492E-09	-4.72621E-08	9.07824E-09	-2.18678E-06	-1.57169E-04	9.35965E-06
220	7271013-2	-2.34950E-10	1.77826E-07	-7.19721E-10	4.59493E-06	-2.11399E-04	1.21447E-05
221	7271013-3	2.24569E-09	5.88918E-08	4.96285E-09	-6.01831E-06	-3.10434E-05	2.08040E-06
222	7271055-2	3.36020E-09	1.25669E-07	-4.56409E-10	7.04686E-05	8.11711E-05	-4.23185E-06
223	7271055-3	1.24958E-08	4.13871E-08	-4.28478E-09	-4.15377E-04	-9.90034E-05	6.33012E-06
224	7271265-2	-1.60472E-07	5.67617E-07	1.60658E-07	-1.34431E-04	-9.01710E-05	1.04843E-06
225	7271265-3	3.77037E-10	-1.31765E-07	2.42058E-08	3.26233E-04	-4.42411E-05	8.01770E-07
226	212118-2	-1.18000E-10	6.35852E-07	-1.87362E-08	-1.80456E-05	-6.80725E-06	-9.33487E-06
227	212118-3	-1.82590E-09	4.07588E-07	2.99663E-08	-1.06183E-05	1.14792E-06	-3.14619E-06
228	212120-2	1.65057E-09	1.36928E-07	-2.65004E-08	-5.44245E-06	-3.20163E-06	-3.87447E-06
229	212120-3	-6.31618E-09	-3.30848E-07	5.69128E-08	1.00402E-05	7.61325E-06	5.35863E-06
230	212125-2	-1.28161E-08	2.79870E-07	8.21012E-08	-9.39881E-06	4.85434E-06	-6.43974E-06
231	212125-3	1.31286E-08	-5.47708E-07	2.99927E-08	1.49596E-05	1.44436E-05	2.46906E-05
232	212385-2	4.92443E-09	1.30326E-06	-1.82292E-08	-4.21027E-05	-2.22845E-06	-3.73079E-06
233	212385-3	-2.87420E-09	-8.68731E-07	1.42670E-08	3.02594E-05	6.03118E-06	5.58014E-06
234	212388-2	8.92890E-10	-7.42866E-07	-3.03402E-08	3.06463E-05	9.49636E-07	1.13601E-06
235	212388-3	-9.11715E-10	1.95775E-07	1.91255E-08	-1.02078E-05	-4.64904E-08	1.23562E-06
236	212390-2	5.44525E-09	2.99503E-06	4.99934E-08	-1.12098E-04	-3.87640E-06	-1.09115E-06
237	212390-3	-1.55766E-08	-2.92751E-06	3.48426E-08	1.01291E-04	1.38241E-05	5.29703E-06
238	213110-2	-2.70706E-08	1.17819E-06	2.14868E-08	-4.72765E-05	1.54665E-05	1.01471E-04
239	213110-3	1.65905E-09	-1.88681E-07	9.72618E-09	6.64034E-06	1.90580E-06	4.58874E-05
240	213113-2	-1.20851E-08	8.45121E-08	8.39651E-09	-3.28750E-06	-5.93417E-06	2.93755E-05
241	213113-3	4.74627E-08	-3.30835E-07	-4.28146E-08	2.01970E-05	2.40336E-05	-9.79898E-05
242	213115-2	1.55718E-08	5.31000E-07	1.04000E-09	-1.62264E-05	3.31662E-05	-3.33939E-05
243	213115-3	1.16265E-08	-1.62417E-06	-1.38717E-09	6.09272E-05	-5.91797E-05	-5.74329E-05
244	213195-2	1.94859E-09	1.63168E-07	-2.47059E-10	-5.67650E-06	1.35660E-05	3.93930E-06
245	213195-3	4.55152E-09	-6.75684E-08	-1.95534E-09	-3.73418E-06	-5.74255E-07	4.88726E-05
246	213198-2	1.02816E-09	-2.03515E-09	-1.55887E-10	-3.03519E-06	1.01273E-06	9.34892E-06
247	213198-3	-8.40983E-09	1.32204E-07	8.13563E-09	1.06763E-05	1.53249E-05	-1.01042E-04
248	213201-2	-2.14981E-09	-1.07618E-07	2.35576E-09	4.30772E-07	-5.84002E-06	-2.73816E-05
249	213201-3	-9.71718E-14	-5.45685E-12	-3.93585E-13	-3.52609E-10	-2.00461E-10	3.42537E-09
250	213203-2	-7.79484E-11	-6.54079E-08	-1.26633E-10	4.15357E-06	-2.36211E-06	1.46569E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 118

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
251	213203-3	4.99540E-13	7.05625E-12	1.96871E-13	1.47695E-09	-4.12900E-11	8.94442E-10
252	213265-2	1.24019E-09	1.79298E-07	1.29188E-09	-5.32385E-06	3.96097E-05	-1.71481E-05
253	213265-3	6.68164E-09	-3.63018E-07	-3.29298E-10	-1.08266E-05	-2.79141E-05	8.42648E-06
254	213268-2	1.01902E-09	1.58668E-07	-8.03227E-10	-9.00269E-07	2.33811E-05	2.17791E-05
255	213268-3	-1.36665E-08	-1.12795E-07	1.36117E-08	-8.66311E-06	-2.70058E-05	-1.13589E-04
256	312118-2	7.04618E-09	1.27933E-06	4.08903E-08	-6.35293E-05	9.92151E-06	-1.52092E-05
257	312118-3	-8.67178E-09	-7.76779E-07	3.52929E-08	3.07023E-05	5.51555E-06	1.02500E-05
258	312120-2	-3.41876E-09	1.33710E-07	2.79149E-08	-8.12025E-06	7.98069E-06	7.94882E-07
259	312120-3	-3.36739E-09	7.22948E-07	8.63696E-08	-4.24703E-05	2.09530E-05	-6.21708E-06
260	312125-2	1.81191E-08	3.27885E-07	-9.98657E-08	-3.05913E-06	-2.47559E-05	-9.79143E-06
261	312125-3	2.20689E-08	1.12490E-06	8.50162E-08	-6.24195E-05	2.43659E-05	-2.06774E-05
262	312385-2	-7.03821E-09	3.06981E-06	2.91326E-08	-1.28968E-04	-2.34314E-06	-6.82242E-06
263	312385-3	-4.24164E-09	9.31019E-07	1.61832E-08	-4.03592E-05	4.45329E-06	-2.56850E-06
264	312388-2	-5.83900E-09	1.40421E-07	4.99632E-08	-1.11623E-05	-5.11309E-06	-1.18034E-06
265	312388-3	-2.99910E-09	6.76812E-07	3.11330E-08	-3.12173E-05	-1.37768E-06	-2.91440E-06
266	312390-2	-2.81640E-09	3.14505E-06	-7.00755E-08	-1.18694E-04	3.63350E-06	-5.25483E-06
267	312390-3	-2.16597E-08	4.66445E-06	6.51746E-08	-1.90676E-04	7.35190E-06	-8.09290E-06
268	313195-2	1.23271E-08	1.77133E-06	-1.30817E-08	-7.28212E-05	-7.67521E-05	3.78795E-06
269	313195-3	-1.70199E-08	-5.29112E-08	3.85110E-08	-2.53467E-06	-1.63818E-05	-6.35250E-06
270	313198-2	-3.13941E-08	-1.20675E-06	3.15149E-08	5.09494E-05	3.95489E-05	1.25775E-06
271	313198-3	-9.56348E-09	1.49775E-07	2.36330E-08	-8.96070E-06	-1.24262E-05	1.05690E-05
272	313201-2	4.23353E-09	7.69264E-07	-3.49104E-09	-3.18808E-05	-4.53441E-05	-3.25000E-06
273	313201-3	-1.21702E-12	-4.46790E-11	1.05260E-12	1.92310E-09	2.88465E-09	1.10366E-10
274	313203-2	-1.02878E-08	-2.78189E-07	1.19546E-08	1.08146E-05	1.11370E-05	-1.24988E-06
275	313203-3	-3.05689E-13	-3.83041E-12	7.13341E-13	-3.06277E-11	4.76172E-10	-7.46085E-10
276	313265-2	3.94387E-08	1.02417E-06	-4.28302E-08	-4.10894E-05	-1.14527E-04	5.96247E-06
277	313265-3	2.03689E-08	5.90466E-07	-4.01140E-09	-3.00926E-05	-5.57481E-05	-4.43916E-07
278	313268-2	-3.65119E-08	-5.95964E-07	3.86080E-08	2.53268E-05	2.53803E-05	2.01048E-06
279	313268-3	-2.08404E-09	2.92637E-07	6.96686E-09	-1.79227E-05	-8.56301E-05	8.38033E-06
280	2423-2	2.78153E-09	5.58615E-06	6.44899E-08	-2.24020E-04	7.03025E-06	1.85925E-05
281	2423-3	-2.29305E-08	1.85739E-06	2.79048E-07	-1.17511E-04	-7.65475E-05	1.41927E-04
282	2433-2	4.40659E-09	1.84261E-06	1.25423E-08	-6.92111E-05	-3.83394E-05	1.34856E-05
283	2665-1	1.13371E-07	-3.92185E-06	-4.13637E-08	1.99957E-04	7.89857E-04	6.55502E-04
284	2665-2	2.79033E-09	3.02765E-06	2.24368E-08	-1.17332E-04	-3.95072E-05	-1.00868E-04
285	2443-2	-2.12215E-09	1.82578E-06	2.84125E-08	-7.37551E-05	3.97587E-06	1.65786E-06
286	2443-3	-4.06219E-08	2.23914E-07	1.72049E-07	-8.92975E-05	1.22915E-04	1.77873E-04
287	2679-2	-5.25087E-09	1.11331E-06	6.47720E-09	-3.99552E-05	-9.40806E-05	-5.36159E-05
288	2680-2	2.61265E-08	1.31712E-05	1.94576E-08	-4.84986E-04	-1.47248E-05	2.31504E-07
289	702423-2	1.04498E-08	4.56663E-06	-8.89710E-08	-1.75817E-04	9.56999E-06	-2.67536E-06
290	702423-3	-1.56710E-08	-1.17864E-06	2.95276E-07	2.69063E-07	1.94128E-05	-7.11139E-07
291	702433-2	6.80642E-10	1.12550E-06	-1.68109E-08	-4.63381E-05	4.33622E-05	-1.98590E-06
292	702665-1	1.43840E-07	4.87332E-06	-7.61788E-08	-1.91700E-04	9.06810E-04	-3.65786E-05
293	702665-2	5.31946E-11	3.11090E-06	-2.00691E-08	-1.20195E-04	5.26699E-05	1.97195E-07
294	702443-2	2.79502E-09	1.49984E-06	-2.67526E-08	-5.81303E-05	3.57232E-06	1.55542E-06
295	702443-3	-3.16693E-08	-7.72815E-07	1.67218E-07	-2.46945E-05	1.36158E-04	-8.05351E-06
296	702679-2	1.62092E-08	1.69712E-06	-1.55430E-08	-6.69544E-05	1.02087E-04	-3.38227E-06
297	702680-2	-3.23768E-08	1.60708E-05	-4.74832E-09	-6.24349E-04	8.81806E-06	1.11975E-05
298	2651-1	1.90370E-08	2.96864E-08	-6.14472E-09	-3.72070E-05	-4.14967E-07	6.08598E-05
299	2651-2	-2.56665E-08	9.56971E-07	4.44838E-08	-1.83496E-05	2.36685E-05	-2.52101E-06
300	2651-3	-1.35013E-08	-8.54417E-07	1.77000E-07	-1.86377E-06	4.14408E-05	-4.50003E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 119

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
301	2651-4	4.32137E-07	-1.44147E-05	-1.25511E-06	4.26360E-04	-7.33775E-04	-9.02140E-04
302	2651-5	1.97605E-07	3.11874E-06	-3.41648E-07	-2.88625E-04	-5.28675E-06	6.22057E-04
303	2651-6	3.71587E-08	2.27425E-06	2.10692E-08	-1.85009E-04	1.23142E-04	6.24763E-04
304	27895-1	1.80522E-07	6.85002E-08	-1.38529E-07	-6.43801E-05	2.81878E-03	2.37612E-03
305	27895-2	4.63670E-08	2.20217E-06	-2.30068E-08	3.43131E-05	4.15546E-03	5.27276E-04
306	27895-3	-9.35322E-09	-1.29329E-07	5.92737E-08	1.40784E-04	-2.09693E-03	-4.30539E-04
307	27895-4	-6.10581E-08	3.83233E-07	1.97636E-07	-2.13623E-03	1.32118E-03	-4.42507E-04
308	27895-5	-1.60309E-07	-1.04809E-06	1.46127E-07	-8.82612E-05	-2.03066E-03	-1.06917E-03
309	27895-6	1.18878E-08	-1.31500E-05	-9.20639E-08	-6.97171E-04	-2.97224E-02	-2.24651E-03
310	27896-1	2.67661E-07	-2.02340E-08	-2.27409E-07	-3.81500E-04	-1.09607E-04	5.85516E-03
311	27896-2	9.51739E-08	5.04412E-07	-5.75184E-08	6.68450E-04	9.51863E-04	-1.91009E-03
312	27896-3	6.58963E-09	-4.77476E-07	3.23341E-08	-8.19731E-03	1.53425E-04	-9.63329E-04
313	27896-4	2.97112E-07	-5.59430E-06	-9.82699E-07	6.18998E-03	-1.92119E-03	-5.74526E-03
314	27896-5	-5.89512E-07	-2.01999E-06	1.35404E-06	-2.95008E-02	-9.94287E-04	-1.15086E-02
315	27896-6	9.00901E-07	-3.93202E-06	-1.11937E-06	1.02285E-02	4.55472E-04	1.03484E-02
316	1651-1	1.24872E-07	-8.66196E-08	-1.50083E-07	1.91714E-05	1.37702E-04	2.17529E-05
317	1651-2	2.13222E-08	-1.24330E-07	-2.33741E-08	1.91531E-05	-1.45399E-04	-4.88988E-05
318	1651-3	1.55565E-08	-1.02665E-07	9.08734E-08	-9.16942E-05	4.31504E-04	-6.04231E-05
319	1651-4	7.63017E-08	2.60898E-06	-1.63658E-07	-8.14230E-04	1.24830E-03	-2.92314E-04
320	1651-5	1.36956E-06	4.76880E-06	-1.81939E-06	-5.79972E-04	6.45690E-03	-4.60898E-04
321	1651-6	-3.96024E-07	4.65506E-06	-2.30858E-08	2.21395E-04	6.53765E-04	-3.17558E-04
322	3076-1	1.85502E-05	2.94446E-07	-2.00770E-05	-3.04957E-04	1.17698E-02	1.67192E-03
323	3076-2	6.29010E-08	-1.49868E-06	4.06486E-07	-2.12964E-04	-6.46123E-04	9.42597E-04
324	3076-3	5.35041E-06	1.19594E-06	-6.29971E-06	-6.19114E-04	3.92709E-03	-2.58485E-04
325	3401-1	5.17973E-07	1.82804E-07	-5.64574E-07	4.06048E-05	3.50552E-04	4.69278E-05
326	3401-2	5.75709E-07	-9.40426E-07	-5.43989E-07	9.73984E-05	2.44562E-04	2.89108E-04
327	3401-3	5.25245E-07	3.11018E-07	-6.38370E-07	-1.06239E-03	4.56374E-04	4.56157E-05
328	5218-1	7.43025E-08	-5.63684E-07	-7.92844E-08	3.24405E-05	-2.12654E-04	1.14316E-05
329	5218-2	-5.53295E-09	-1.24173E-08	6.99411E-09	-3.91615E-05	-8.08046E-04	-1.07750E-04
330	5218-3	2.56949E-08	5.22143E-07	-1.22658E-08	-1.42772E-04	-4.32583E-05	-1.37473E-04
331	5400-1	1.03490E-07	4.93806E-08	-6.05515E-08	2.43919E-05	2.60077E-05	3.87132E-05
332	5400-2	-7.08948E-09	2.26933E-07	-1.09060E-08	-1.31481E-05	8.28166E-07	-2.31793E-05
333	5400-3	2.51167E-09	-6.69235E-07	2.37028E-07	3.57329E-05	8.66508E-05	3.22974E-05
334	5423-1	1.45739E-07	-4.60616E-07	-5.44132E-08	4.52454E-05	4.21708E-05	1.09728E-04
335	5423-2	-1.29428E-08	8.40973E-07	2.19013E-08	-2.48560E-05	8.97881E-06	-6.10415E-05
336	5423-3	-1.93047E-08	-3.62084E-07	2.83961E-07	1.01476E-05	6.19179E-05	2.85440E-05
337	1650-1	3.89595E-07	-6.08503E-06	-5.72126E-07	3.86683E-04	2.57494E-04	3.12551E-04
338	1650-2	-1.05389E-07	-4.95478E-06	2.71921E-07	2.36334E-04	-6.47691E-05	8.70408E-05
339	1650-3	6.48857E-09	4.93219E-06	-8.74716E-08	-3.97828E-04	3.04893E-04	-3.74303E-04
340	1650-4	5.91099E-07	2.83178E-05	-1.60363E-06	-1.85128E-03	7.67800E-04	-1.13686E-03
341	1650-5	7.95692E-07	-3.53718E-06	-8.54051E-07	5.51828E-04	2.90064E-04	1.40325E-04
342	1650-6	-8.58967E-07	3.26431E-05	1.31450E-06	-2.07110E-03	-6.09677E-04	-1.75658E-03
343	210388-2	-4.73911E-08	-3.45990E-07	1.42664E-07	4.61774E-05	3.86792E-06	1.16217E-04
344	210388-3	-8.07565E-08	-7.39887E-07	2.99828E-07	7.50973E-05	1.76987E-04	2.67621E-04
345	210390-2	-5.11844E-08	-3.89965E-07	1.75739E-07	4.65509E-05	6.38381E-05	1.44563E-04
346	210390-3	6.85870E-08	5.87147E-07	-2.37004E-07	-6.75374E-05	-7.96125E-05	-1.98239E-04
347	210393-2	-1.00682E-08	-4.88193E-08	3.37291E-08	7.20790E-06	1.15436E-05	2.21983E-05
348	210393-3	5.25608E-08	4.26241E-07	-1.78483E-07	-4.98065E-05	-6.55964E-05	-1.52855E-04
349	210395-2	-3.37209E-09	-4.02273E-08	1.40942E-08	4.87003E-06	7.97840E-07	1.15586E-05
350	210395-3	-3.72052E-09	8.48967E-09	1.35895E-08	-2.52920E-06	2.15221E-05	5.28670E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 120

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
351	210398-2	1.29421E-08	8.34266E-08	-4.47293E-08	-9.77526E-06	-2.12955E-05	-3.51054E-05
352	210398-3	1.29748E-08	1.04357E-07	-4.53660E-08	-1.35376E-05	-1.37939E-05	-3.88856E-05
353	210400-2	3.62985E-09	1.30765E-08	-1.22746E-08	-3.47767E-06	-1.90580E-05	-1.16508E-05
354	210400-3	1.90097E-08	1.84075E-07	-6.42555E-08	-2.55912E-05	7.76334E-07	-5.95725E-05
355	210405-2	-1.96585E-08	-1.83823E-07	6.52519E-08	1.14370E-05	3.07946E-05	4.51609E-05
356	210405-3	4.64760E-08	4.01695E-07	-1.49041E-07	-5.54658E-05	-2.68145E-06	-1.32023E-04
357	210413-2	-1.50986E-10	-3.25897E-08	4.96411E-09	5.12742E-06	2.14802E-06	1.00062E-05
358	210413-3	-1.62430E-13	-1.19718E-12	-1.95790E-13	2.10934E-10	-1.89660E-09	-5.10515E-10
359	210458-2	-3.25036E-08	-2.22752E-07	1.17728E-07	3.16544E-05	3.11193E-05	1.02016E-04
360	210458-3	-3.13509E-08	-3.23940E-07	1.29525E-07	3.02432E-05	7.88262E-05	1.12945E-04
361	210460-2	-2.29682E-08	-1.52088E-07	7.31796E-08	1.92311E-05	2.91508E-05	6.27770E-05
362	210460-3	2.78383E-08	2.11586E-07	-9.21263E-08	-2.60631E-05	-3.41101E-05	-8.56833E-05
363	210463-2	-1.06130E-08	-6.07386E-08	2.81390E-08	8.23428E-06	1.03516E-05	2.76473E-05
364	210463-3	2.23704E-08	1.73699E-07	-8.29843E-08	-2.08969E-05	-3.59172E-05	-7.11968E-05
365	210465-2	-5.86060E-09	-2.68368E-08	1.99016E-08	3.85594E-06	7.26162E-06	1.01007E-05
366	210465-3	-6.59449E-09	-4.29193E-08	1.73042E-08	4.28316E-06	8.91058E-06	1.86164E-05
367	210468-2	6.40394E-09	5.44884E-08	-1.82647E-08	-6.11942E-06	-7.61463E-06	-2.39638E-05
368	210468-3	6.87909E-09	4.85331E-08	-2.29955E-08	-6.41464E-06	-8.81225E-06	-1.91748E-05
369	210470-2	4.35760E-09	4.95425E-08	-1.60809E-08	-5.71902E-06	-9.07022E-06	-1.66702E-05
370	210470-3	1.70659E-09	1.62552E-08	-7.23984E-09	-2.11994E-06	-9.01551E-06	-9.43525E-06
371	210475-2	4.95837E-09	3.31944E-09	-1.01221E-08	-1.96047E-06	-1.34238E-06	-7.25826E-06
372	210475-3	1.68973E-09	1.06059E-08	-1.03105E-08	-2.36393E-06	-1.33989E-05	-1.11426E-05
373	210530-2	2.21192E-09	8.50968E-08	-1.92551E-08	-6.42998E-07	-2.54134E-05	-1.39355E-05
374	210530-3	-3.38629E-08	-3.05464E-07	1.29883E-07	2.97339E-05	6.57753E-05	1.16404E-04
375	210533-2	-3.64301E-09	-2.66996E-08	1.15190E-08	4.21893E-06	4.76856E-06	1.39907E-05
376	210533-3	1.38401E-08	8.70640E-08	-4.37414E-08	-1.36379E-05	-1.54954E-05	-4.45958E-05
377	210535-2	1.30984E-10	-9.03036E-10	3.77754E-10	-3.28375E-07	5.48190E-08	-1.11608E-06
378	210535-3	5.20197E-09	2.61552E-08	-1.13982E-08	-6.50219E-06	-1.59963E-06	-1.91291E-05
379	210538-2	4.29561E-09	4.93105E-08	-1.37100E-08	-5.68159E-06	-1.19295E-05	-2.15798E-05
380	210538-3	3.09554E-09	-4.42244E-08	4.16148E-09	-3.67483E-06	2.11633E-05	-1.54514E-06
381	210600-2	1.09125E-08	2.37790E-07	-5.31285E-08	-1.53436E-05	-4.05212E-05	-5.34621E-05
382	210600-3	-1.00911E-08	-2.45262E-07	7.23184E-08	4.99015E-06	5.36359E-05	4.55822E-05
383	210670-2	-2.79556E-09	5.75734E-08	5.98114E-09	1.20026E-07	3.88133E-07	-5.01980E-06
384	210670-3	6.68459E-09	1.82359E-08	-1.13506E-08	-1.16148E-05	-1.05594E-05	-1.62169E-05
385	211040-2	1.78269E-09	1.72992E-07	-3.54174E-08	-5.18577E-06	-1.63538E-05	-4.18732E-06
386	211040-3	2.51121E-09	-1.10290E-09	1.01297E-08	-1.05489E-06	3.23800E-06	3.40437E-06
387	211043-2	-1.82499E-10	-3.06732E-08	2.67215E-08	4.88056E-06	1.22437E-05	-1.28030E-05
388	211043-3	-8.50307E-11	-1.85514E-07	1.53604E-08	-1.02177E-07	2.01761E-05	1.86720E-05
389	211180-2	1.80746E-09	2.04478E-07	-3.80881E-08	-1.40297E-06	-1.81939E-05	-4.44078E-06
390	211180-3	2.93457E-09	2.75026E-08	2.79776E-08	-1.37810E-06	1.02381E-05	6.21048E-06
391	211183-2	-1.95715E-10	1.48069E-07	1.40640E-08	-5.86186E-06	9.61434E-06	-3.75674E-05
392	211183-3	-2.32467E-09	-3.63111E-07	4.26321E-08	6.44665E-06	2.73711E-05	3.64008E-05
393	211320-2	3.29813E-09	2.44828E-07	-2.56334E-08	-2.04994E-06	-1.05108E-05	-1.77204E-05
394	211320-3	6.63179E-09	9.70050E-08	2.95163E-08	-3.06718E-06	1.00255E-05	7.87493E-06
395	211323-2	1.25393E-09	3.08532E-08	-7.02638E-09	-8.42493E-07	-3.40055E-06	2.27592E-06
396	211323-3	-1.93253E-09	-1.82688E-07	2.14295E-08	4.31852E-06	1.02376E-05	-1.12578E-07
397	211325-2	-3.35783E-09	1.13355E-07	7.63937E-09	-3.53203E-06	5.84651E-06	-2.41016E-05
398	211325-3	4.38352E-09	-5.37587E-07	8.02464E-08	1.58409E-05	3.10944E-05	5.52839E-05
399	211460-2	2.22449E-09	1.37292E-07	1.12735E-10	2.11753E-06	-1.61421E-06	-9.15794E-06
400	211460-3	5.90468E-09	1.59132E-07	2.39961E-08	-5.67806E-06	6.45068E-06	3.92663E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 121

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
401	211463-2	1.34413E-09	3.38498E-08	1.03473E-09	-5.20196E-07	-7.40263E-09	-7.49412E-07
402	211463-3	-8.21328E-09	-1.35370E-07	-9.83851E-09	7.06209E-07	-1.44529E-06	1.29324E-06
403	211465-2	-2.58533E-10	-6.96960E-09	-7.73597E-10	-5.02209E-07	-6.89327E-07	1.95244E-06
404	211465-3	-3.07965E-09	-3.41546E-08	2.55814E-09	-5.74694E-07	2.47968E-06	-5.19412E-07
405	211468-2	7.35005E-11	-2.04951E-08	-1.28242E-10	6.27423E-07	-7.03409E-07	1.83037E-06
406	211468-3	-1.38457E-09	1.41437E-08	1.36721E-09	-2.36899E-07	1.54786E-06	-3.33028E-06
407	211470-2	-2.42294E-09	1.54332E-07	-1.86157E-09	-3.79960E-06	3.96602E-06	-1.45287E-05
408	211470-3	5.42807E-09	-1.83580E-07	1.34592E-08	3.45296E-06	5.72215E-06	1.52825E-05
409	211494-2	-5.23142E-09	1.65900E-09	1.35585E-08	-4.08357E-07	-1.13096E-07	-2.71792E-06
410	211494-3	4.93933E-09	-1.72124E-08	-5.18706E-09	1.28707E-06	8.71094E-07	3.51413E-06
411	211528-2	1.01021E-08	5.94186E-08	1.36575E-08	4.10732E-06	4.00455E-07	-3.77099E-06
412	211528-3	3.49551E-08	1.98042E-07	3.56613E-08	-6.18442E-06	1.13713E-05	1.35341E-06
413	211530-2	2.97699E-08	-4.45784E-08	5.99657E-08	1.23281E-05	1.28831E-05	1.73362E-05
414	211530-3	-2.09610E-08	-5.48858E-08	-3.86007E-08	-5.81850E-06	-7.97849E-06	-8.22395E-06
415	211533-2	1.96216E-08	-8.53540E-08	4.49658E-08	1.07009E-05	9.46095E-06	1.40625E-05
416	211533-3	-9.86766E-09	-1.00123E-07	-6.39546E-09	2.81912E-06	-1.53850E-06	4.54352E-06
417	211535-2	1.16892E-09	1.64664E-08	5.75014E-09	7.21896E-07	1.12962E-06	1.75072E-06
418	211535-3	1.71480E-08	-6.66364E-08	3.69692E-08	7.72582E-06	8.28200E-06	1.03178E-05
419	211538-2	-1.31520E-08	3.37552E-08	-2.20709E-08	-4.45047E-06	-4.97298E-06	-5.06226E-06
420	211538-3	-8.98793E-09	1.26062E-08	-1.57609E-08	-3.35955E-06	-3.34043E-06	-4.20523E-06
421	211540-2	-9.15224E-09	4.17855E-08	-1.07471E-08	-3.73603E-06	-3.21431E-06	-4.71800E-06
422	211540-3	-1.08376E-08	1.29206E-08	-1.12323E-08	-2.41374E-06	-2.48072E-06	-1.93352E-06
423	211545-2	-1.06247E-09	2.84050E-07	-2.23466E-08	-6.75499E-06	-1.59887E-06	-1.04611E-05
424	211545-3	-9.10279E-09	-2.69502E-07	3.41961E-08	5.89650E-06	1.58277E-06	7.99643E-06
425	211595-2	-3.92250E-09	4.99457E-08	2.58955E-09	-7.15360E-08	-1.81751E-06	-7.93847E-06
426	211595-3	1.36632E-08	1.76042E-07	2.12699E-08	-4.21598E-06	4.68542E-06	5.96764E-06
427	211598-2	5.07951E-09	9.20817E-08	7.66486E-09	-1.63477E-06	1.53269E-06	9.72761E-07
428	211598-3	9.14767E-11	-9.85544E-08	-3.20101E-09	3.38796E-06	1.79920E-07	2.74860E-06
429	211600-2	2.26437E-09	1.21002E-08	4.77399E-10	2.19816E-07	9.39054E-07	7.67429E-07
430	211600-3	-4.47245E-09	-5.79145E-08	-4.64481E-09	7.47480E-07	-1.43344E-06	-3.55051E-07
431	211603-2	2.39002E-09	-3.63934E-08	8.29247E-10	1.94392E-06	9.42611E-07	2.72032E-06
432	211603-3	-4.58061E-09	3.35310E-08	-9.84868E-10	-2.19905E-06	-1.54865E-06	-3.42164E-06
433	211605-2	5.26012E-10	6.91593E-09	1.47429E-09	-1.05787E-08	4.45587E-07	-8.41145E-08
434	211605-3	-6.01825E-09	6.64396E-08	-7.71567E-10	-3.66529E-06	-2.05828E-06	-4.38865E-06
435	211608-2	-9.25898E-09	1.37471E-07	-9.37060E-09	-6.50229E-06	-2.93529E-06	-9.00481E-06
436	211608-3	-5.42858E-09	-2.56543E-07	4.30448E-08	8.99215E-06	7.95733E-07	1.13176E-05
437	212040-2	8.48605E-10	3.47386E-07	-9.67190E-09	-8.41047E-06	-2.98081E-06	-3.61322E-06
438	212040-3	8.11961E-09	3.69428E-08	1.40932E-08	-5.42284E-07	4.33785E-06	3.53492E-06
439	212043-2	-4.60155E-10	1.19856E-07	-3.10228E-09	-3.97125E-06	-1.40110E-06	-9.95274E-07
440	212043-3	-2.32274E-09	-3.63072E-07	5.20728E-09	1.04317E-05	2.57117E-06	8.80366E-07
441	212045-2	-1.92110E-09	-2.53228E-07	9.69864E-09	8.92582E-06	2.93629E-06	-3.12675E-07
442	212045-3	2.09269E-08	1.58789E-07	-3.83554E-09	-4.67318E-06	3.73634E-06	1.10714E-05
443	212250-2	4.95063E-09	1.11106E-06	-2.25030E-08	-3.36793E-05	-5.85440E-06	-6.10944E-06
444	212250-3	-2.01884E-09	-3.48829E-07	2.67016E-08	1.22551E-05	7.01489E-06	6.65968E-06
445	212253-2	2.39442E-09	-1.96409E-07	-1.39457E-08	7.52045E-06	1.47197E-06	3.46910E-06
446	212253-3	-5.44248E-09	3.63314E-07	2.80900E-08	-1.54438E-05	-2.02232E-06	-5.58096E-06
447	212255-2	-5.47625E-09	1.47834E-06	3.85768E-08	-5.19374E-05	-6.71520E-06	-1.31904E-05
448	212255-3	-1.11343E-08	-1.55333E-06	4.81647E-08	4.76090E-05	1.37710E-05	1.65116E-05
449	212530-2	6.65603E-09	2.11949E-06	-1.62794E-08	-7.16440E-05	5.07207E-06	1.38705E-05
450	212530-3	-8.07351E-09	-1.14863E-06	2.34248E-08	3.98100E-05	1.04533E-05	5.83807E-08

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 122

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
451	212533-2	1.09981E-09	-3.47015E-08	-7.08216E-09	2.86439E-06	9.37469E-07	-4.34813E-08
452	212533-3	-6.03813E-09	2.56784E-07	2.70643E-08	-1.29846E-05	-3.88728E-06	-1.00820E-05
453	212535-2	-1.16562E-10	2.29565E-06	2.70881E-08	-8.67184E-05	6.60239E-06	-2.30899E-06
454	212535-3	-2.37010E-08	-4.38205E-06	5.42772E-08	1.47329E-04	-9.67818E-06	2.44937E-05
455	213180-2	-1.47871E-09	7.30105E-07	-1.44893E-09	-1.74584E-05	3.32103E-05	4.26392E-05
456	213180-3	-2.58346E-09	-5.17044E-07	1.27941E-08	6.76890E-06	-3.67948E-05	1.90475E-05
457	213183-2	-4.88160E-10	1.57026E-07	-3.84337E-11	-2.58619E-06	7.57977E-06	-1.14862E-05
458	213183-3	1.25710E-08	-1.21057E-08	-1.46918E-08	1.03358E-06	1.17535E-05	-1.66201E-05
459	213185-2	-2.70633E-10	1.70356E-07	2.05234E-09	-6.16794E-06	9.94580E-06	-6.76451E-06
460	213185-3	-1.04715E-09	-5.41585E-09	2.56531E-09	-2.00468E-06	-5.54588E-07	-1.20862E-05
461	213188-2	3.36405E-09	4.05954E-08	-2.46475E-09	-2.33442E-06	5.65909E-06	1.41041E-05
462	213188-3	1.63041E-09	-1.19860E-07	-7.50922E-10	-6.33635E-07	-7.79090E-06	3.23428E-05
463	213250-2	-1.11564E-08	3.56235E-07	1.23201E-08	2.14112E-06	2.32200E-05	1.12603E-05
464	213250-3	-4.62351E-09	-1.29143E-07	1.24644E-08	-6.94482E-06	-4.61798E-05	-1.69107E-07
465	213253-2	-3.33436E-11	5.67130E-08	-1.69354E-10	3.20370E-06	2.46599E-06	-7.46527E-06
466	213253-3	9.02132E-09	-1.06717E-07	-1.00471E-08	-3.08072E-06	6.49016E-06	1.49420E-05
467	213255-2	7.59429E-09	6.25204E-08	-5.18062E-09	-8.45455E-06	1.68984E-05	2.93953E-05
468	213255-3	6.58591E-09	-2.13959E-07	-6.10983E-09	-1.02600E-05	-3.13551E-05	4.57066E-05
469	213323-2	-5.20730E-09	2.83078E-07	1.85320E-09	2.95520E-05	4.96147E-05	3.84247E-05
470	213323-3	1.76812E-10	1.20845E-07	1.05228E-08	7.74928E-06	-1.83857E-05	-3.71340E-05
471	213325-2	9.32507E-09	5.01137E-08	-4.94874E-09	-2.99387E-06	6.72867E-05	-2.61562E-05
472	213325-3	9.69487E-09	-3.45328E-07	-7.30433E-09	-1.21924E-04	-1.50683E-04	2.54054E-05
473	213390-2	-6.64322E-09	1.56855E-07	-1.51476E-09	1.21363E-05	1.46880E-05	3.68370E-05
474	213390-3	-2.12998E-08	4.09460E-08	2.73706E-08	-1.01455E-05	-4.05978E-05	-5.50319E-05
475	213393-2	-3.83651E-08	-6.39927E-08	4.16875E-08	3.21428E-06	-4.55010E-05	-2.94684E-05
476	213393-3	5.98080E-08	1.31148E-07	-6.32176E-08	-4.77814E-06	8.71004E-05	1.28748E-05
477	213395-2	3.84867E-08	4.47089E-07	-4.26564E-08	-1.30178E-05	1.21036E-04	2.31154E-05
478	213395-3	3.54371E-08	-5.12397E-07	-1.97241E-08	-6.92806E-05	-1.19296E-04	8.67500E-05
479	213460-2	-3.89961E-08	9.39636E-08	3.80441E-08	2.18588E-05	-6.36828E-07	5.40518E-05
480	213460-3	-5.60697E-08	8.04973E-08	5.85732E-08	-3.47718E-05	-4.45955E-05	-7.50835E-05
481	213463-2	-1.32065E-08	2.77664E-08	1.15297E-08	-1.85958E-06	-1.69444E-05	4.51578E-06
482	213463-3	7.01269E-08	-6.79251E-08	-7.05937E-08	-1.38089E-06	5.26734E-05	-2.75168E-05
483	213465-2	8.27480E-09	-6.57167E-09	-6.75256E-09	-8.61177E-06	-6.96981E-06	2.29485E-05
484	213465-3	1.26994E-08	-1.17271E-08	-1.00746E-08	-1.05100E-05	4.12893E-05	-8.96628E-05
485	213468-2	4.10898E-09	-8.96459E-09	3.03429E-10	5.99794E-06	5.01004E-05	-4.41947E-05
486	213468-3	3.29374E-08	-1.36967E-07	-2.99811E-08	-8.29186E-05	-7.88576E-05	2.17133E-04
487	213481-2	6.22935E-09	5.73898E-08	-5.81295E-09	1.57397E-05	2.49916E-05	-1.51134E-05
488	213481-3	-1.87414E-12	4.23673E-12	1.37637E-12	8.42637E-09	-4.52780E-09	-3.09254E-08
489	213528-2	-2.32924E-07	-4.73402E-09	2.49625E-07	7.80113E-05	-1.11198E-04	-1.28179E-05
490	213528-3	-1.60935E-08	4.64783E-08	2.02617E-08	-7.74552E-05	-2.66335E-05	-8.92631E-05
491	213530-2	-4.09000E-08	1.77734E-08	4.41111E-08	4.65098E-06	-2.38270E-05	-6.22347E-06
492	213530-3	1.06799E-07	-7.22940E-08	-1.12560E-07	-3.83364E-05	4.95076E-05	1.08302E-04
493	213533-2	-8.90144E-10	7.47885E-09	1.35168E-09	-1.78470E-05	8.79032E-07	1.07432E-05
494	213533-3	6.63404E-08	-9.03159E-09	-7.20198E-08	1.01674E-05	3.43630E-05	1.32124E-05
495	213535-2	-6.44689E-09	-7.23208E-09	9.54993E-09	1.84307E-05	-1.42000E-05	2.63465E-05
496	213535-3	-2.65663E-08	1.02130E-08	2.81212E-08	-2.76780E-05	-5.22690E-06	-9.78024E-06
497	213538-2	2.15626E-08	2.28874E-09	-2.26943E-08	3.65104E-05	6.23725E-06	1.46830E-05
498	213538-3	9.71276E-09	-2.15140E-08	-9.97559E-09	7.86392E-05	1.47235E-05	-6.64394E-05
499	213540-2	9.05957E-09	-4.72546E-08	-7.67776E-09	1.07105E-04	3.29401E-05	3.08170E-05
500	213540-3	-1.11363E-08	2.44720E-07	-9.00630E-09	-5.18229E-04	-1.44116E-05	-1.64661E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 123

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
501	213600-2	-1.07438E-07	-2.64734E-07	1.34083E-07	-7.94589E-05	-5.22203E-05	3.68687E-05
502	213600-3	-5.13733E-07	5.25997E-07	4.82851E-07	-3.46295E-05	-2.40422E-04	-1.98996E-04
503	960-1	1.76989E-11	-1.54213E-09	4.46449E-11	9.00894E-08	2.98004E-07	1.26465E-07
504	960-2	6.04652E-08	-5.33695E-07	-2.01382E-07	2.37317E-06	-6.52286E-05	-1.57953E-04
505	960-3	1.62614E-08	1.05916E-07	-5.71586E-08	-1.51682E-05	-2.19379E-05	-5.56401E-05
506	961-1	-7.67224E-12	-1.82699E-09	1.60440E-10	1.32295E-07	3.66267E-07	2.45643E-07
507	961-2	-1.73210E-08	-5.17895E-07	5.91083E-08	3.67728E-05	3.84939E-05	6.34344E-05
508	961-3	2.12926E-08	1.14190E-07	-7.19955E-08	-1.94563E-05	-8.93018E-06	-6.67024E-05
509	962-1	1.91289E-11	-1.92819E-09	8.92755E-11	1.26357E-07	3.79248E-07	2.03139E-07
510	962-2	-3.31880E-08	-4.26623E-07	1.28421E-07	3.92138E-05	8.08597E-05	1.37779E-04
511	962-3	4.29170E-09	7.03398E-08	-1.41164E-08	-1.11289E-05	6.98360E-06	-2.64114E-05
512	964-1	8.54813E-11	-5.86044E-10	-1.02914E-10	3.65397E-08	5.55676E-08	2.90144E-08
513	964-2	4.61953E-09	6.42759E-07	2.35182E-09	-2.19531E-05	1.70044E-06	1.86748E-05
514	964-3	-3.31469E-12	5.21289E-08	3.70555E-09	-8.41223E-06	5.30975E-07	-3.92300E-06
515	965-1	5.73413E-11	-6.01445E-10	-9.81376E-11	3.49126E-08	4.05855E-08	2.22787E-08
516	965-2	2.16520E-09	7.77157E-07	-4.78158E-09	-2.82673E-05	-1.04199E-06	9.96422E-06
517	965-3	3.87559E-09	5.50984E-08	1.39287E-09	-7.56478E-06	2.63735E-06	-1.17520E-06
518	967-1	1.91049E-11	-4.91060E-10	-4.17188E-11	2.43142E-08	1.22778E-08	9.89965E-09
519	967-2	5.13098E-09	1.71893E-06	-1.52866E-08	-6.17421E-05	-3.65968E-06	-3.93379E-06
520	967-3	3.70144E-09	5.04369E-08	2.46990E-10	-9.24286E-06	-3.94821E-07	2.75318E-06
521	970-1	1.56122E-10	1.47031E-09	7.74005E-12	-4.44262E-08	5.29060E-08	1.04540E-07
522	970-2	6.24196E-09	-1.11923E-06	-2.47116E-10	4.73284E-05	2.13879E-06	9.26564E-06
523	970-3	-5.50646E-09	7.51697E-08	-4.05028E-09	-7.53890E-06	-2.19135E-06	-2.84602E-06
524	971-1	1.82401E-10	1.40600E-09	3.44345E-11	-4.31829E-08	5.43196E-08	1.49062E-07
525	971-2	1.98559E-09	-1.12779E-06	-2.13520E-09	4.41106E-05	-1.19484E-06	1.42673E-05
526	971-3	-1.49406E-09	1.55298E-07	-2.17717E-09	-1.01443E-05	-1.49788E-06	-1.83339E-06
527	972-1	2.06643E-10	2.24098E-09	-1.18372E-11	-8.30777E-08	4.98331E-08	1.93589E-07
528	972-2	3.70727E-09	-2.99745E-06	-6.94510E-09	1.17150E-04	-1.29514E-06	1.66394E-05
529	972-3	-2.68603E-09	1.67980E-07	-5.08274E-09	-1.01859E-05	-1.48672E-05	-5.09875E-06
530	974-1	-1.66588E-10	-1.54357E-09	7.08264E-10	3.77959E-07	-5.89192E-07	5.34069E-07
531	974-2	7.59032E-08	2.41642E-07	-8.47085E-08	-8.56471E-06	8.05704E-06	1.18199E-05
532	974-3	-3.08409E-10	1.44085E-07	-8.80367E-09	-9.05842E-06	-1.14841E-05	-9.24919E-06
533	975-1	1.86148E-09	-1.67648E-09	-1.60263E-09	4.67644E-07	8.64168E-07	-1.23298E-07
534	975-2	6.03312E-08	8.16895E-08	-6.76886E-08	5.59038E-06	1.35480E-05	2.22322E-05
535	975-3	1.17776E-07	1.53236E-07	-9.99968E-08	-3.36449E-06	3.07649E-05	1.27093E-05
536	271218-2	3.66504E-07	8.49630E-08	-3.94429E-07	6.78539E-03	-3.62515E-03	2.14820E-04
537	271217-1	1.20855E-06	3.63375E-07	-1.34201E-06	7.42987E-04	-3.52440E-03	3.34089E-02
538	271217-2	1.11794E-07	1.24979E-07	-1.16812E-07	3.14197E-03	1.38434E-05	1.91437E-04
539	271217-3	-4.67871E-10	-2.38620E-09	6.08795E-10	-9.87540E-03	4.91683E-04	-5.52228E-05
540	271216-1	1.13772E-06	2.41606E-07	-1.20650E-06	8.45493E-04	-2.72362E-05	8.65008E-03
541	271216-2	1.36056E-07	3.70035E-09	-1.41618E-07	6.31372E-04	-2.27758E-04	3.51437E-04
542	271219-1	4.86475E-10	-9.36635E-10	2.88611E-10	2.86461E-04	-1.14461E-03	1.12393E-02
543	271219-2	1.61129E-07	6.11684E-08	-1.97790E-07	-2.34298E-03	-7.00132E-04	9.73506E-04
544	271219-3	4.74341E-07	-7.22294E-08	-4.83924E-07	-5.41740E-02	5.30259E-03	4.76366E-03
545	27355-1	4.30273E-10	-1.92061E-09	7.26674E-11	-2.18468E-03	-4.47883E-04	1.06873E-02
546	27355-2	-2.28528E-09	1.16656E-07	1.12411E-08	2.16463E-03	4.48819E-04	-1.30168E-03
547	27355-3	-3.82081E-08	-2.46988E-07	4.52656E-08	-2.03229E-02	-7.09743E-04	1.57482E-03
548	701383-2	1.11150E-09	8.08518E-08	-3.14241E-08	3.62306E-06	8.03168E-05	-4.08143E-05
549	701383-3	1.14999E-08	4.10495E-07	1.25599E-07	-3.58094E-05	5.49484E-04	-3.33164E-05
550	701405-2	1.46989E-09	3.87465E-07	4.10838E-08	-3.59995E-05	7.16348E-05	-6.21848E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 124

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
551	701405-3	-5.19999E-09	1.06292E-08	9.55827E-08	-9.24695E-06	6.44768E-05	4.41288E-05
552	701963-1	9.88628E-08	2.03256E-07	-1.15357E-07	2.70842E-06	1.11355E-04	3.95914E-05
553	701963-2	-2.48657E-10	1.03460E-07	2.05877E-08	-1.41418E-05	5.05779E-05	-2.02550E-05
554	701963-3	1.36608E-10	8.82038E-08	4.87335E-08	-8.42103E-06	6.36035E-05	3.93308E-06
555	701393-2	3.82170E-10	5.91941E-08	-1.27418E-08	-8.24077E-07	-2.26312E-05	-1.43302E-05
556	1383-2	4.58512E-09	6.74754E-08	1.65094E-08	-2.83219E-05	-9.71683E-05	-5.75188E-05
557	1383-3	1.74178E-08	-3.71166E-07	8.59811E-08	-2.93940E-05	4.89187E-04	2.29280E-05
558	1405-2	-3.98112E-09	2.35613E-07	-1.88077E-09	-3.46238E-06	-2.05772E-05	-3.84416E-05
559	1405-3	-8.42526E-09	-9.42292E-08	1.11184E-07	1.61345E-06	8.66924E-05	-1.84885E-05
560	901963-1	5.78410E-08	-8.77880E-08	-3.20276E-08	1.59416E-05	3.36856E-05	2.15336E-05
561	901963-2	-2.62101E-09	2.56657E-08	3.72910E-09	1.54523E-06	-9.87374E-06	-4.60402E-06
562	901963-3	5.90898E-10	-1.36585E-07	4.53167E-08	-1.09611E-05	6.94181E-05	7.90804E-06
563	1393-2	1.91681E-09	7.40273E-08	4.15922E-09	-5.81674E-06	1.38118E-05	-2.02564E-05
564	701423-2	4.01516E-09	5.83482E-07	-5.10144E-08	-3.66294E-05	-2.47481E-05	-1.09964E-04
565	701423-3	7.11628E-09	8.99476E-07	2.48651E-07	-3.77940E-05	2.12836E-04	3.99163E-05
566	701445-2	5.40130E-09	3.08660E-07	2.42334E-08	-3.82543E-05	-7.05581E-06	-3.16595E-05
567	701445-3	-6.48619E-09	-6.71516E-08	6.34803E-08	1.66852E-05	7.09524E-05	3.49759E-05
568	701965-1	1.10723E-07	4.69153E-07	-6.91594E-08	-2.01624E-05	6.82133E-05	-3.41779E-05
569	701965-2	2.90391E-09	7.37064E-07	5.94135E-08	-7.72823E-05	7.43594E-06	-1.16973E-04
570	701965-3	-1.29542E-09	1.28323E-07	6.71209E-08	2.55874E-06	6.58140E-05	3.14774E-05
571	701433-2	2.36448E-09	1.76333E-07	-2.90869E-08	-1.41931E-05	-2.51248E-05	-2.54564E-05
572	1423-2	-2.05501E-09	5.72908E-07	5.55002E-08	-5.00905E-06	2.70509E-05	-1.07472E-04
573	1423-3	8.68682E-09	-6.59424E-07	1.92733E-07	9.17133E-06	1.15025E-04	-3.95384E-05
574	1445-2	-5.55061E-09	1.74269E-07	-1.66685E-10	-6.05764E-06	4.46106E-06	-2.31894E-05
575	1445-3	-6.06618E-09	-3.66304E-08	6.09259E-08	8.95178E-06	2.54782E-05	-1.83143E-05
576	901965-1	6.71266E-08	-3.76641E-07	-2.86408E-08	2.41214E-05	1.78160E-05	1.01048E-04
577	901965-2	-2.34204E-09	4.32761E-07	-9.24458E-09	-1.62223E-05	6.57000E-07	-9.12349E-05
578	901965-3	-7.61665E-10	-1.44275E-07	5.76685E-08	4.21497E-06	2.66530E-05	-2.36880E-05
579	1433-2	-1.95128E-09	2.10998E-07	2.04237E-08	1.31184E-06	1.41853E-05	-2.83337E-05
580	701443-2	1.33284E-08	3.64305E-08	-1.04331E-07	-3.04734E-05	-8.52585E-05	-2.14166E-05
581	701443-3	-2.39823E-09	1.69225E-06	2.63726E-07	-6.00675E-05	1.92666E-04	-2.94231E-05
582	702365-2	1.85082E-08	4.04592E-07	-5.97830E-08	1.57093E-05	-3.55565E-05	-1.15692E-05
583	702365-3	-2.82385E-09	1.16328E-06	1.90799E-07	-4.40726E-05	1.21861E-04	-2.33517E-05
584	702661-1	1.20538E-07	6.17647E-07	1.17371E-09	-5.29722E-05	3.53763E-05	-1.45082E-05
585	702661-2	4.44121E-09	1.85971E-07	1.62230E-08	-2.24111E-05	-1.39750E-05	-2.20101E-05
586	702661-3	-5.64781E-10	3.65790E-07	4.30824E-08	-1.11976E-05	3.58202E-05	-3.63719E-06
587	702353-2	1.97701E-09	1.12810E-07	-2.92005E-08	-8.28750E-07	-2.53920E-05	-9.01710E-06
588	1443-2	-9.88552E-09	1.44317E-07	7.47197E-08	2.92915E-06	4.21065E-05	-2.07391E-05
589	1443-3	-7.76250E-10	-1.23019E-06	1.55436E-07	1.43653E-05	4.35204E-05	3.00071E-05
590	2365-2	-1.01600E-08	4.17154E-07	2.71379E-08	-1.70514E-05	1.30685E-05	-2.38457E-05
591	2365-3	1.95883E-09	-8.65075E-07	1.04830E-07	2.62132E-05	3.42420E-06	6.78465E-05
592	2661-1	4.66258E-08	-9.22164E-08	-3.24289E-09	1.64462E-05	9.99239E-06	5.06073E-05
593	2661-2	-4.14456E-09	2.81027E-08	-3.03491E-10	-3.01925E-06	-9.19363E-07	-5.37241E-06
594	2661-3	-2.02286E-09	-2.78764E-07	1.80004E-08	1.11301E-05	-3.14533E-06	3.70987E-06
595	2353-2	-2.97303E-09	1.78401E-07	7.83736E-09	-6.87255E-06	9.83323E-06	-8.96091E-06
596	727355-2	-1.04553E-08	1.10741E-07	8.11725E-09	5.29499E-06	4.11034E-06	1.02518E-07
597	727355-3	2.04118E-07	2.56492E-07	-2.31422E-07	-4.07650E-05	1.53663E-04	1.25425E-05
598	7271219-2	-5.40176E-07	7.34405E-08	6.26443E-07	2.61942E-05	-4.04571E-04	-1.92731E-05
599	7271219-3	7.64535E-07	1.16113E-07	-7.96015E-07	2.77192E-06	4.07061E-04	-9.37107E-06
600	7271217-1	3.33807E-06	-8.98263E-08	-3.50499E-06	-4.91681E-05	2.32673E-03	5.18893E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 125

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
601	7271217-2	-7.35908E-07	-3.65240E-08	8.03053E-07	2.25621E-05	-4.90897E-04	-4.02628E-05
602	7271217-3	2.80980E-07	5.06875E-08	-3.26859E-07	-1.42999E-05	1.89794E-04	2.41808E-05
603	727435-2	-4.58623E-08	3.40763E-08	5.37226E-08	5.14885E-06	-3.52711E-05	6.13355E-07
604	6032-1	6.63022E-10	-7.65562E-09	4.44302E-10	3.89723E-07	3.08860E-07	2.47135E-07
605	6032-2	5.72893E-09	3.57960E-07	2.02732E-08	-2.40558E-05	8.66727E-06	-4.02771E-06
606	6032-3	5.47473E-09	3.59424E-07	2.13450E-08	-2.43431E-05	8.95136E-06	-4.05481E-06
607	6060-1	1.07567E-09	5.50205E-09	-8.64147E-10	-2.45099E-07	2.77272E-06	-1.44771E-08
608	6060-2	-4.42552E-10	5.35524E-09	4.27726E-09	-1.34579E-06	8.45019E-06	-5.72061E-07
609	6060-3	-6.12986E-10	1.00195E-08	7.70445E-09	-2.31263E-06	1.46490E-05	-5.38263E-07
610	6061-1	6.05847E-10	2.79918E-09	-7.38902E-10	-1.04889E-07	9.18315E-07	-1.02343E-07
611	6061-2	-4.82289E-09	-3.18797E-09	1.62752E-08	-3.51510E-06	-8.98815E-06	-9.88613E-07
612	6061-3	4.20190E-09	3.71673E-09	-1.42481E-08	2.85459E-06	9.65581E-06	3.19284E-07
613	6064-1	1.13991E-09	3.30005E-09	-1.92590E-10	-3.54535E-08	6.13638E-07	5.14428E-07
614	6064-2	-2.97727E-10	3.39271E-08	4.91026E-09	-2.92402E-06	2.06473E-06	-3.41007E-06
615	6064-3	-7.30595E-10	3.08533E-08	4.78599E-09	-2.65055E-06	2.05106E-06	-3.40050E-06
616	6081-1	1.06245E-08	8.66728E-08	-5.10950E-08	6.43162E-06	-4.96502E-06	-2.20099E-06
617	6081-2	1.96853E-08	4.36621E-06	-2.01137E-08	-1.64862E-04	1.11612E-04	-1.24453E-05
618	6081-3	-4.30464E-08	6.40164E-08	2.69809E-07	3.29463E-05	6.07458E-05	5.91480E-06
619	6081-4	-2.65334E-08	8.50362E-06	6.86410E-08	-4.61288E-04	-6.67125E-05	-2.64579E-05
620	6081-5	-1.16243E-08	-7.01166E-08	5.93677E-08	-2.03913E-07	1.41320E-05	2.44577E-06
621	6082-1	6.98065E-10	1.84834E-08	2.01153E-09	-1.49652E-06	2.40137E-06	-1.87987E-06
622	6082-2	-5.03838E-10	1.84419E-07	2.42012E-08	-1.48004E-05	2.15896E-05	-2.52170E-05
623	6082-3	-5.43921E-10	1.87713E-07	2.73521E-08	-1.49888E-05	2.41862E-05	-2.39047E-05
624	6083-1	1.46678E-09	2.52991E-08	-2.06914E-09	-1.03234E-06	8.80176E-07	-2.04695E-08
625	6083-2	-3.59055E-09	-4.58669E-07	3.70985E-08	1.77682E-05	1.65980E-06	2.01717E-06
626	6083-3	-4.28755E-09	-5.63558E-07	4.53341E-08	2.18287E-05	2.07633E-06	2.49157E-06
627	6084-1	1.14263E-08	1.50171E-07	6.19914E-10	-7.68093E-06	4.33819E-05	-1.32441E-06
628	6084-2	-6.37432E-09	1.51881E-06	2.89364E-08	-6.40594E-05	4.19281E-05	-3.68741E-07
629	6084-3	-6.36304E-09	-7.25094E-07	5.59905E-08	2.03631E-05	3.01934E-05	-1.40440E-06
630	6085-1	5.71591E-08	-2.18711E-08	-5.20145E-08	7.35365E-07	9.25422E-05	-3.92800E-06
631	6085-2	-9.94820E-08	2.41374E-07	9.65495E-08	-1.36006E-05	-1.05538E-04	6.99890E-06
632	6085-3	-1.04390E-07	1.63895E-07	1.07433E-07	-1.22819E-05	-9.42554E-05	3.99521E-06
633	6067-1	1.43687E-08	-2.38480E-08	-8.07820E-09	7.48176E-07	9.65516E-06	6.10691E-07
634	6067-2	6.62893E-10	7.13195E-09	-1.65183E-10	-5.13956E-07	-2.60858E-06	5.05290E-07
635	6067-3	-4.34200E-09	-2.59289E-07	9.77149E-09	1.04278E-05	-5.88899E-06	1.51802E-06
636	6068-1	6.83608E-08	-1.58548E-07	-6.15692E-08	-3.17663E-07	2.76138E-04	-1.75376E-05
637	6068-2	-2.99875E-08	2.52917E-07	3.10978E-08	-1.26404E-05	1.83754E-04	-6.38936E-06
638	6068-3	2.23041E-08	-1.61699E-07	-1.36191E-08	-8.81043E-06	3.97792E-04	-2.39087E-05
639	6071-1	2.87131E-08	8.27011E-08	-2.04783E-08	-8.46671E-05	2.18008E-04	3.05164E-04
640	6071-2	9.27558E-09	2.92775E-07	-8.02419E-09	-4.69671E-05	-1.22308E-04	-2.65757E-04
641	6071-3	1.37994E-08	-5.11710E-08	-3.94229E-09	-1.61927E-04	3.03600E-04	2.66147E-04
642	6069-1	9.29900E-10	-7.67294E-09	-2.88016E-09	7.87082E-07	-1.00862E-06	6.64383E-07
643	6069-2	6.95295E-11	2.96129E-08	8.79383E-09	-2.32555E-06	4.70292E-06	8.40406E-08
644	6069-3	4.66007E-10	3.14302E-08	9.43364E-09	-2.32277E-06	5.40871E-06	5.45484E-07
645	6070-1	3.21578E-10	1.58256E-09	-5.52719E-10	2.71939E-08	-5.64707E-08	6.45088E-08
646	6070-2	-3.85876E-11	-1.10198E-08	2.40965E-09	5.57719E-07	9.23072E-07	1.17007E-06
647	6070-3	8.27103E-11	1.46187E-08	-3.15031E-09	-6.83218E-07	-1.14173E-06	-1.50083E-06
648	6073-1	3.75149E-10	6.84159E-10	-3.45596E-10	4.78266E-08	-1.47559E-08	8.36591E-08
649	6073-2	-9.20612E-11	2.50616E-08	-4.72406E-09	-8.76479E-07	-1.62518E-06	-2.03569E-06
650	6073-3	-4.67521E-11	-2.86455E-08	5.95362E-09	1.04275E-06	2.00845E-06	2.10991E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 126

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
651	6074-1	1.25201E-09	-2.22849E-08	-1.77346E-09	1.10574E-06	5.41013E-07	1.57195E-06
652	6074-2	2.62179E-09	-4.46480E-07	-3.27129E-08	1.78206E-05	-1.59671E-06	-1.86598E-07
653	6074-3	-3.26426E-09	5.49309E-07	4.01498E-08	-2.19331E-05	1.90228E-06	2.65008E-07
654	6076-1	1.20402E-08	2.96315E-08	-5.69300E-09	1.52773E-06	5.93665E-06	1.64408E-05
655	6076-2	-7.52007E-10	1.34539E-08	-2.46889E-11	-1.77231E-07	1.56913E-06	1.06328E-06
656	6076-3	-3.36397E-09	2.37954E-07	8.58634E-09	-1.00048E-05	-3.91851E-06	-6.88688E-06
657	6080-1	8.83795E-10	1.55540E-09	2.99672E-09	-1.77629E-05	1.72428E-05	1.95801E-06
658	6080-2	1.10174E-08	2.15456E-06	6.48612E-09	1.77886E-06	1.76766E-04	-3.48665E-05
659	6080-3	-2.76747E-08	2.43968E-08	2.07533E-07	-1.00296E-04	5.31043E-05	-6.71230E-07
660	6080-4	2.45080E-09	-2.03753E-07	-5.73835E-08	2.96554E-05	6.48990E-06	-2.19188E-05
661	6080-5	1.15601E-09	-3.47028E-09	-1.22896E-08	-1.97300E-06	5.86852E-06	-5.29505E-07
662	6086-1	1.78648E-08	-8.30847E-08	-1.78018E-08	4.87451E-06	1.79097E-05	4.32970E-06
663	6086-2	1.84207E-09	-1.66789E-07	1.39303E-08	8.50273E-06	6.49064E-06	5.23084E-06
664	6086-3	2.45658E-08	-1.84179E-07	-2.41170E-07	2.90165E-06	-1.94298E-05	8.62297E-06
665	6089-1	6.35917E-07	-1.10558E-06	1.91590E-09	2.79488E-05	1.48089E-03	9.21248E-05
666	6089-2	-1.25930E-07	-5.28144E-05	9.83702E-08	1.97769E-03	-2.96707E-05	3.22568E-03
667	6089-3	7.25023E-07	-2.15023E-08	-4.35274E-06	-5.19000E-04	4.95444E-04	-6.88065E-05
668	6087-1	-1.45661E-06	-4.12948E-08	1.52559E-06	1.42060E-04	-7.25671E-04	2.93425E-04
669	6087-2	-1.16646E-08	6.07221E-07	2.16393E-08	2.61515E-04	7.93844E-06	-4.12837E-05
670	6087-3	-6.41101E-08	-9.17553E-09	8.70673E-08	-1.10634E-05	-6.19048E-05	-2.96956E-05
671	6091-1	6.43856E-10	-1.66325E-09	-3.53660E-10	1.90024E-07	7.85844E-07	2.56569E-07
672	6091-2	-2.39108E-10	8.09062E-10	-1.29380E-09	1.39810E-06	-4.88867E-06	1.37955E-06
673	6091-3	4.77055E-10	-1.95815E-09	2.56869E-09	-2.61575E-06	8.70930E-06	-2.69364E-06
674	6092-1	5.27213E-10	-1.38568E-08	1.28618E-09	5.62516E-07	1.11196E-06	2.07373E-06
675	6092-2	2.56175E-10	1.44998E-07	-1.44707E-08	-3.94496E-06	-1.03077E-05	-2.15248E-05
676	6092-3	-1.17206E-10	-1.46801E-07	1.69126E-08	4.04758E-06	1.19805E-05	2.02554E-05
677	6093-1	4.07914E-10	9.39259E-09	5.46137E-10	-1.87889E-07	1.51982E-07	3.88188E-07
678	6093-2	-3.84786E-09	3.30437E-07	-1.73569E-08	-1.07688E-05	-6.05776E-06	-8.67311E-06
679	6093-3	3.60319E-09	-3.31923E-07	1.84087E-08	1.07813E-05	6.13223E-06	8.58592E-06
680	6094-1	8.51867E-09	-7.46284E-08	2.21233E-09	5.21328E-06	3.79858E-05	3.97361E-05
681	6094-2	6.99532E-09	1.48305E-06	-2.58518E-08	-4.86746E-05	-3.52608E-05	-2.74122E-05
682	6094-3	-6.90241E-09	2.81781E-07	4.94369E-08	-2.18589E-05	2.65067E-05	1.42094E-05
683	6095-1	1.83918E-08	2.76079E-08	-1.33359E-08	2.85702E-05	4.21112E-05	3.70269E-04
684	6095-2	4.16660E-08	2.26293E-07	-3.69872E-08	2.66666E-04	5.68601E-05	2.63268E-04
685	6095-3	-2.89332E-08	-1.55177E-07	2.87713E-08	-3.81223E-04	-1.33146E-05	-3.29998E-04
686	1-1	9.14716E-08	-5.59032E-07	-2.62451E-07	2.44648E-05	2.61208E-05	1.95379E-05
687	1-3	1.01054E-07	-1.15597E-06	-4.99717E-07	9.03705E-06	1.25939E-04	1.22110E-05
688	2-1	2.46930E-08	1.03111E-06	1.67086E-07	-4.34797E-05	-3.22279E-05	1.48190E-05
689	2-3	9.41384E-08	5.99261E-07	-4.76260E-07	-2.40107E-05	5.47317E-05	-4.73824E-06
690	3-1	2.40301E-07	-2.75699E-06	-3.73504E-07	1.62282E-04	-5.03733E-05	2.01655E-04
691	3-2	-7.14024E-09	-1.15392E-05	7.60870E-08	5.57324E-04	9.56566E-05	2.76061E-04
692	3-3	1.31564E-07	1.73475E-06	-3.42185E-07	-3.22040E-04	1.73040E-03	-2.71890E-04
693	12-1	4.69417E-08	-2.31502E-06	3.28115E-08	5.74577E-05	-5.28056E-05	-1.63735E-04
694	12-2	3.53419E-09	-2.14143E-06	2.09438E-08	8.88748E-05	-2.12315E-05	-1.32566E-05
695	12-3	8.69571E-08	2.76806E-06	-4.90167E-07	2.06932E-04	2.27912E-04	-7.63924E-06
696	14-1	1.29986E-07	-2.42711E-06	-3.24365E-08	1.33572E-04	-2.62553E-05	7.11556E-05
697	14-2	2.81100E-08	-2.26862E-06	-5.55776E-08	6.69917E-05	8.59860E-05	3.04748E-05
698	14-3	9.08862E-08	-1.00097E-07	-3.50392E-07	-1.36158E-04	4.22365E-04	-1.15327E-04
699	84-3	8.38813E-09	-1.47771E-06	3.40291E-07	1.99539E-05	1.82958E-04	4.23687E-05
700	119-1	2.77739E-09	9.41444E-09	-1.58721E-09	6.23029E-07	8.71113E-07	-1.24433E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 127

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
701	119-2	-9.93051E-10	1.64940E-07	6.57844E-08	-1.23994E-05	4.03164E-05	-4.72089E-05
702	119-3	4.37476E-09	-7.29105E-07	1.55516E-07	-2.24086E-05	1.54047E-04	2.35030E-05
703	153-1	2.12626E-07	-1.37024E-08	1.47240E-08	4.14121E-05	8.14500E-05	2.31226E-04
704	153-2	-3.63222E-08	2.82968E-06	8.49573E-08	-8.72530E-05	-2.21976E-05	-4.16897E-05
705	153-3	-4.77658E-08	4.72801E-07	4.25156E-07	-9.21774E-06	2.80643E-05	1.86387E-05
706	161-3	-7.42812E-08	-7.63318E-08	6.34500E-07	-4.90189E-05	5.36505E-05	1.74002E-04
707	192-1	1.51721E-07	3.06009E-06	-9.68614E-10	-6.71908E-05	1.63353E-03	1.55007E-03
708	192-2	1.73439E-08	5.01355E-06	7.81825E-09	-1.50835E-04	-3.01780E-04	1.30935E-04
709	192-3	2.21485E-08	1.80529E-07	8.13039E-08	-5.05849E-05	-1.29030E-05	3.20280E-05
710	233-1	-7.06771E-08	1.49131E-06	1.86448E-08	-2.70639E-04	4.67544E-05	3.50961E-04
711	233-3	-9.49853E-09	-3.66585E-07	5.91144E-08	-4.30626E-04	-1.00382E-04	4.20809E-05
712	249-3	-3.20060E-08	-2.34117E-07	3.42145E-08	-9.66060E-04	-4.38918E-05	2.17286E-04
713	297-1	-8.72109E-08	2.84805E-07	1.59086E-07	1.52586E-05	1.09994E-05	6.14860E-04
714	297-3	-5.73394E-08	-1.12794E-06	8.95598E-08	-1.28507E-04	-2.68100E-05	-1.63877E-04
715	299-3	-2.67038E-08	3.43160E-07	1.75130E-08	-3.47479E-04	-1.90212E-06	1.61006E-04
716	322-2	-1.47442E-08	4.40554E-06	1.00358E-07	3.86919E-04	4.51411E-05	-1.96565E-04
717	322-3	3.14668E-09	-1.15278E-06	5.60393E-08	-9.47208E-05	2.01285E-05	3.73380E-05
718	323-2	-1.47385E-08	8.05611E-06	1.81990E-08	-2.08555E-04	7.54967E-05	-1.37572E-04
719	323-3	-1.78636E-08	-2.82558E-06	2.43352E-07	2.40008E-04	3.07333E-05	4.88423E-05
720	324-3	-1.25856E-08	-1.86933E-06	1.40341E-07	3.46127E-05	2.06113E-05	2.14028E-05
721	325-3	-1.89538E-08	-1.17811E-06	1.17939E-07	6.52719E-05	2.86285E-05	1.22756E-05
722	326-3	-1.51075E-08	-6.15814E-07	4.85681E-08	3.52875E-05	3.61064E-06	8.21214E-06
723	327-3	-4.27081E-08	-3.43847E-07	5.85803E-08	-7.15022E-04	-1.96879E-05	2.51097E-05
724	328-3	-3.00046E-08	-3.40698E-07	4.43250E-08	-2.42576E-04	-6.00786E-06	1.58753E-05
725	329-1	-1.43668E-07	1.12352E-06	1.56463E-07	2.72784E-04	2.75804E-04	1.32128E-03
726	329-3	-7.77387E-07	8.15340E-07	7.14108E-07	-3.98616E-04	-3.53680E-04	2.19477E-05
727	330-1	1.63191E-08	1.53554E-06	1.05881E-08	9.32436E-05	-3.26821E-04	4.85115E-04
728	330-3	-6.70089E-09	4.86047E-07	2.27222E-08	-1.20073E-04	-9.56320E-06	8.95255E-05
729	331-3	-1.43793E-08	-1.41902E-06	4.24000E-08	6.55303E-05	-8.17629E-05	4.85266E-06
730	332-1	3.28570E-08	3.65730E-06	1.34422E-08	-8.48347E-05	4.81283E-04	4.18450E-04
731	332-2	1.42413E-07	6.21701E-06	-8.20089E-08	-8.17641E-04	8.01612E-05	-2.12258E-04
732	332-3	-3.07721E-08	-1.37259E-06	7.34318E-08	-1.55174E-04	1.67019E-05	-3.22454E-05
733	333-1	3.38329E-08	3.65082E-06	-1.39690E-08	-1.36681E-04	8.32769E-05	-5.43005E-04
734	333-3	-2.05667E-08	-8.35338E-07	4.75296E-08	1.40881E-04	1.64983E-05	-2.42280E-05
735	334-2	2.17106E-07	2.26539E-06	-1.70609E-07	-1.14160E-03	9.54540E-05	-9.78097E-05
736	334-3	-2.03226E-08	-3.28181E-07	3.39847E-08	3.19826E-04	5.73847E-06	1.56782E-05
737	335-3	-2.66418E-08	-6.21061E-07	3.34236E-08	-2.96397E-04	7.83533E-06	9.85001E-06
738	337-2	2.72858E-08	5.13544E-07	2.63375E-08	7.74487E-05	-1.71709E-06	6.88536E-04
739	337-3	-1.40223E-08	-1.98060E-07	1.46191E-08	1.48091E-04	-1.16519E-04	1.12705E-05
740	338-2	2.70876E-08	-7.74480E-08	8.72257E-08	-8.32417E-04	-3.76768E-05	-4.09863E-06
741	338-3	-1.81562E-08	1.90330E-07	1.14094E-08	-9.88946E-05	1.45525E-07	8.19045E-05
742	339-3	-2.46915E-08	2.20080E-07	2.05680E-09	-1.91726E-04	1.50152E-06	1.04573E-04
743	340-3	-2.19598E-08	-8.01794E-08	6.80914E-09	1.23761E-05	6.04556E-06	-4.07030E-07
744	341-3	-1.66280E-08	5.99387E-08	1.55614E-09	-2.56716E-04	2.16469E-05	2.35519E-05
745	343-3	-7.44657E-09	-5.15455E-07	3.09199E-08	-3.20677E-05	3.48151E-06	-1.35342E-06
746	344-3	-9.02259E-09	-4.56154E-07	2.28215E-08	3.11593E-07	-3.16174E-05	4.21736E-06
747	345-3	-8.45668E-09	-2.89925E-07	1.36381E-08	-3.45469E-05	-3.01003E-05	6.80409E-06
748	346-3	-2.43613E-09	-6.45106E-08	2.83084E-09	1.09781E-05	3.19949E-06	1.83786E-06
749	347-3	-8.77007E-09	-1.31962E-07	6.25183E-09	2.23414E-05	1.57264E-05	8.06163E-06
750	349-1	4.21843E-08	1.91463E-06	-2.97167E-08	3.78100E-05	2.63010E-04	2.99274E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 128

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
751	349-2	-7.93364E-08	-1.27965E-06	2.22999E-07	-5.24597E-04	-7.94415E-05	-1.44234E-04
752	349-3	-3.36736E-08	7.10354E-08	-6.13410E-09	-8.75606E-05	-1.85894E-05	-1.26080E-07
753	350-1	3.26884E-08	1.47232E-06	-4.53048E-08	-7.77698E-05	-1.03308E-04	-2.22891E-04
754	350-3	-2.02322E-08	1.20694E-06	-2.68248E-08	1.57770E-04	2.25164E-06	3.56872E-04
755	351-1	3.25952E-08	2.07560E-06	-5.22818E-08	-6.25915E-05	-1.22304E-05	-3.33834E-05
756	351-3	-2.24806E-08	-1.29982E-07	-6.53211E-09	-5.38143E-05	-2.01772E-06	-4.70276E-05
757	352-3	-1.04096E-08	1.24313E-07	-1.05088E-08	-2.05770E-04	-3.99198E-06	7.18422E-06
758	354-1	2.65671E-08	2.36068E-06	-9.46824E-08	-1.96504E-07	-2.70298E-04	-1.04348E-04
759	354-3	-1.69170E-08	2.30615E-07	-3.76154E-09	6.71128E-05	1.97467E-05	3.13969E-05
760	356-1	-1.04565E-07	5.87884E-07	1.18652E-07	1.75588E-05	1.16018E-04	-1.88997E-04
761	356-3	-4.10983E-08	2.68815E-07	3.54726E-08	7.65604E-05	-2.32354E-05	1.93010E-05
762	357-3	4.43967E-09	1.59758E-07	4.61353E-09	-1.79055E-05	1.08125E-05	1.29833E-05
763	358-1	-1.38006E-08	1.92715E-06	8.64171E-08	-4.39206E-05	2.59674E-04	6.07252E-04
764	358-2	1.43081E-08	-9.59076E-07	-2.13446E-09	5.88399E-05	6.85523E-06	2.18673E-05
765	358-3	-2.93839E-08	4.03715E-07	5.62344E-08	-1.61383E-04	-2.19739E-05	3.35073E-05
766	359-2	1.07319E-09	-4.68530E-07	-3.39062E-10	-1.29071E-04	-6.08362E-05	8.84038E-05
767	359-3	-7.59328E-10	1.74047E-07	1.74756E-08	2.22708E-05	-8.42022E-06	2.24329E-05
768	360-1	1.15380E-08	4.43022E-07	1.35885E-08	-5.46519E-05	-1.35362E-04	3.34799E-05
769	360-3	-9.29591E-09	-3.28861E-07	-2.23408E-08	-1.35967E-04	-7.05461E-06	-1.57149E-04
770	361-3	-1.59636E-09	1.05609E-07	8.88008E-09	3.40799E-05	-5.87247E-06	-6.85957E-07
771	363-1	7.87601E-09	3.46726E-07	-3.46508E-08	-5.97440E-05	1.67802E-05	-4.46456E-04
772	363-3	-1.21075E-08	-5.64661E-07	-2.63339E-08	5.49312E-05	-5.81769E-06	-2.82127E-04
773	364-3	-1.09652E-09	1.44327E-07	-7.57752E-09	-7.10851E-05	3.87886E-06	-6.86834E-06
774	365-1	1.78919E-08	3.60903E-06	-1.05023E-07	-1.94409E-04	7.28569E-05	5.46492E-04
775	365-2	1.01388E-08	-8.14717E-07	6.63923E-08	-6.62077E-05	-2.24714E-05	-1.01675E-04
776	365-3	-3.04738E-08	6.70475E-07	-3.27749E-08	-7.87058E-05	-1.25661E-05	1.24282E-04
777	366-2	1.94164E-09	-2.32086E-07	2.66851E-08	1.62656E-04	1.76845E-05	6.99388E-05
778	366-3	5.32831E-09	1.78111E-07	8.29547E-10	-2.48715E-05	2.26473E-06	2.71771E-05
779	367-1	4.39671E-09	9.79130E-07	-1.29739E-08	1.67756E-05	1.69501E-04	-2.02551E-04
780	367-3	-9.09238E-09	5.75501E-07	-1.08154E-08	5.32083E-05	-2.96209E-06	8.68591E-05
781	368-3	-6.72465E-10	2.60762E-07	-4.12327E-09	-9.43926E-06	1.97450E-06	2.71410E-05
782	456-1	9.92845E-08	7.13398E-07	-2.69657E-07	-2.23115E-05	4.56998E-05	8.03844E-06
783	456-3	1.14205E-07	1.30486E-06	-5.17781E-07	-3.60710E-05	1.53729E-04	-4.34132E-06
784	457-1	1.95289E-08	-9.62045E-07	1.64132E-07	6.75270E-05	-5.22182E-05	1.99546E-05
785	457-3	9.09848E-08	-6.85084E-07	-4.71534E-07	2.31608E-05	7.37615E-05	9.87919E-06
786	458-1	3.95513E-07	4.68810E-06	-5.91753E-07	-1.71774E-04	-1.78220E-04	-5.30378E-05
787	458-2	-2.14894E-07	-1.55717E-05	4.21947E-07	7.32281E-04	2.10870E-04	2.01227E-04
788	458-3	4.59734E-08	-5.42634E-06	-2.48122E-07	-8.44957E-05	2.10339E-03	3.36769E-04
789	467-1	8.30611E-08	2.72827E-06	-7.30106E-09	-3.49863E-05	-1.22242E-05	1.95200E-04
790	467-2	-2.30151E-08	-2.27576E-06	-4.25363E-09	8.21424E-05	-1.49308E-06	-2.10100E-05
791	467-3	7.19745E-08	-2.95249E-06	-4.77383E-07	-2.84333E-04	3.14136E-04	-1.29250E-05
792	469-1	2.10008E-07	3.53580E-06	-1.15494E-07	-1.32267E-04	1.61095E-04	-1.69525E-05
793	469-2	-4.97403E-08	-2.64582E-06	9.34649E-08	1.01678E-04	-1.13635E-04	2.92056E-05
794	469-3	4.71595E-08	5.36092E-07	-2.12432E-07	-4.41892E-05	5.61280E-04	5.80516E-05
795	539-3	-4.55699E-09	2.03670E-06	4.54048E-07	-8.87869E-05	3.31263E-04	-3.99651E-05
796	574-1	3.34062E-09	-6.72882E-09	-1.81565E-09	4.68416E-08	1.16028E-06	2.96888E-06
797	574-2	5.80483E-09	8.03182E-08	-8.75368E-08	7.08158E-06	-6.11670E-05	-3.06703E-05
798	574-3	6.02134E-10	9.19139E-07	2.23385E-07	-4.78816E-05	2.61530E-04	-4.40420E-05
799	608-1	2.54647E-07	6.09198E-07	1.83564E-08	-4.56669E-05	1.48386E-04	3.84938E-05
800	608-2	3.91351E-08	2.87778E-06	-8.33335E-08	-1.59051E-04	1.52898E-05	-3.62945E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 129

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
801	608-3	-5.20537E-08	-1.77927E-07	4.63724E-07	8.22430E-06	4.83568E-05	4.64089E-06
802	616-3	-7.09681E-08	4.74316E-08	6.36248E-07	-1.42332E-05	1.00277E-04	-3.04797E-06
803	647-1	2.89194E-07	-4.00386E-06	-1.26956E-07	1.47130E-04	1.83347E-03	-9.16123E-05
804	647-2	-3.31007E-08	6.67436E-06	8.64246E-09	-2.56795E-04	2.76293E-04	-8.56289E-06
805	647-3	7.79390E-08	3.37439E-06	6.32963E-08	-1.71776E-04	-1.04540E-04	1.04267E-05
806	688-1	-2.36790E-08	-1.50397E-06	-3.70246E-08	3.14681E-05	-4.22676E-05	4.19586E-05
807	688-3	5.68446E-08	3.75204E-07	-1.19382E-08	-4.03762E-05	-4.91372E-05	1.74511E-05
808	704-3	1.74113E-07	2.33368E-07	-1.94037E-07	-8.26250E-05	8.21165E-05	2.55975E-05
809	752-1	8.47146E-08	-2.99072E-07	-7.72278E-09	-4.11889E-05	9.33256E-05	-2.01734E-05
810	752-3	-8.80909E-08	1.15050E-06	1.26100E-07	-7.38076E-06	-6.06525E-05	3.01287E-05
811	754-3	-1.82375E-08	-3.39630E-07	1.23696E-08	2.23968E-04	-7.34179E-06	-1.30541E-04
812	777-2	5.69092E-08	4.31851E-06	-1.57828E-07	3.08649E-04	1.09353E-04	-1.59109E-04
813	777-3	9.36808E-09	1.14058E-06	5.48836E-08	7.44856E-05	8.74332E-05	-2.45588E-05
814	778-2	3.45347E-08	8.20867E-06	-3.71315E-08	-3.19071E-04	2.96677E-04	-6.96137E-05
815	778-3	-2.20242E-08	2.89702E-06	2.57027E-07	-2.89494E-04	1.77010E-04	-1.56474E-05
816	779-3	-1.00361E-08	1.99395E-06	1.40020E-07	-7.53741E-05	5.25943E-05	-4.64458E-06
817	780-3	-1.85286E-08	1.20928E-06	1.22163E-07	-1.13407E-04	5.90347E-05	1.14953E-05
818	781-3	-1.36421E-08	6.28756E-07	4.92901E-08	-6.07945E-05	1.09768E-05	4.01761E-06
819	782-3	-1.03642E-08	3.46025E-07	2.45246E-08	3.31256E-04	-9.25892E-06	7.17306E-07
820	783-3	-3.18145E-08	3.44464E-07	4.83388E-08	1.67304E-04	-1.14601E-05	-3.45388E-06
821	784-1	-6.22389E-08	-1.11877E-06	7.63385E-08	-2.31293E-05	3.45907E-04	-6.51851E-04
822	784-3	-8.84575E-07	-8.65819E-07	8.33985E-07	1.20764E-04	-4.67255E-04	-2.07544E-04
823	785-1	4.24058E-08	-1.55130E-06	-1.81251E-08	-2.58937E-06	-3.39923E-04	-4.12063E-04
824	785-3	-2.75107E-08	-4.88654E-07	4.72571E-08	6.72257E-05	-3.23453E-05	-1.05577E-04
825	786-3	-1.30437E-08	1.46060E-06	4.13846E-08	-9.12258E-05	-6.95650E-05	7.67838E-06
826	787-1	4.58436E-08	-3.76510E-06	4.66324E-09	1.42053E-04	3.97245E-04	-3.48799E-04
827	787-2	-3.07437E-08	6.37587E-06	8.05048E-09	-8.67805E-04	6.46262E-05	-1.05986E-04
828	787-3	-3.45484E-08	1.38832E-06	7.91732E-08	1.12140E-04	1.84990E-05	5.29012E-05
829	788-1	3.43838E-08	-3.52743E-06	-1.62157E-08	1.74011E-04	1.49634E-05	5.45943E-04
830	788-3	-2.15759E-08	8.56280E-07	5.12288E-08	-1.53460E-04	1.87212E-05	4.66117E-05
831	789-2	-7.63668E-08	2.27208E-06	5.23194E-08	-1.30126E-03	1.52279E-05	-4.60381E-05
832	789-3	-2.35712E-08	3.34527E-07	3.79620E-08	-3.54516E-04	2.01447E-06	-7.77827E-07
833	790-3	-2.79201E-08	6.21884E-07	3.85208E-08	2.77325E-04	7.99678E-06	5.75918E-06
834	792-2	3.25577E-10	5.68667E-07	-3.62501E-08	1.36877E-04	2.67575E-05	7.24342E-04
835	792-3	-1.39575E-08	1.93918E-07	1.69463E-08	-1.54101E-04	-1.18488E-04	-2.91787E-06
836	793-2	-6.12020E-08	-7.59659E-08	-8.00365E-09	-8.43559E-04	-7.59915E-06	-6.46047E-05
837	793-3	-2.19847E-08	-1.86772E-07	1.65801E-08	5.84160E-05	-7.25354E-06	-6.42748E-05
838	794-3	-2.39775E-08	-2.19370E-07	4.87311E-09	1.74956E-04	-3.10457E-06	-9.29655E-05
839	795-3	-2.32641E-08	7.40605E-08	1.21066E-08	-2.30186E-05	-9.64431E-07	1.15782E-05
840	796-3	-1.66322E-08	-6.38758E-08	5.11685E-09	2.52627E-04	1.50851E-05	-1.32442E-05
841	798-3	-8.95584E-09	5.24044E-07	3.28838E-08	1.93974E-05	9.22139E-06	4.58237E-06
842	799-3	-1.08065E-08	4.62914E-07	2.55077E-08	-9.22360E-06	-2.88897E-05	-1.35331E-07
843	800-3	-9.71825E-09	2.92237E-07	1.58707E-08	2.89743E-05	-2.93090E-05	-2.29152E-06
844	801-3	-2.74056E-09	6.50317E-08	3.47379E-09	-1.23536E-05	3.19470E-06	-5.07913E-07
845	802-3	-9.20922E-09	1.33225E-07	7.86344E-09	-2.57991E-05	1.50111E-05	-3.73584E-06
846	804-1	5.66345E-08	-1.96781E-06	-4.40179E-08	1.99432E-05	2.39117E-04	-2.59817E-04
847	804-2	6.95817E-08	-1.28427E-06	-1.90055E-07	-4.81466E-04	4.83755E-05	-2.43733E-04
848	804-3	-3.74809E-08	-6.09024E-08	-1.28055E-09	4.97559E-05	-2.67064E-05	-1.51635E-06
849	805-1	4.11730E-08	-1.54010E-06	-5.08459E-08	1.07395E-04	-1.36068E-04	2.58781E-04
850	805-3	-2.04392E-08	-1.20581E-06	-2.49227E-08	-1.70511E-04	-1.27720E-06	-3.55688E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 130

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
851	806-1	4.27171E-08	-2.11978E-06	-5.81628E-08	8.33331E-05	-4.41847E-05	5.63119E-05
852	806-3	-2.15431E-08	1.27774E-07	-4.51321E-09	4.65426E-05	-6.69316E-06	4.91524E-05
853	807-3	-8.66052E-09	-1.24258E-07	-1.03981E-08	2.01884E-04	-6.87055E-06	-2.95996E-06
854	809-1	4.83590E-08	-2.37339E-06	-1.09256E-07	2.61327E-05	-2.97485E-04	1.27327E-04
855	809-3	-1.83609E-08	-2.30203E-07	1.37355E-09	-7.04490E-05	1.28526E-05	-2.61127E-05
856	811-1	-6.10518E-08	-5.94267E-07	7.27185E-08	-2.54154E-05	1.28202E-04	1.88401E-04
857	811-3	-7.95227E-08	-2.72164E-07	7.94045E-08	-9.59396E-05	-5.46961E-05	-2.56060E-05
858	812-3	2.64652E-09	-1.60683E-07	6.91616E-09	1.96091E-05	7.84825E-06	-1.25291E-05
859	813-1	-1.09594E-09	-1.93984E-06	7.72599E-08	5.96302E-05	2.15887E-04	-5.66581E-04
860	813-2	1.34143E-08	-9.56951E-07	-4.23468E-09	6.25229E-05	-4.14418E-06	2.03457E-05
861	813-3	-3.18240E-08	-4.06043E-07	5.86433E-08	1.34551E-04	-3.31312E-05	-3.39123E-05
862	814-2	9.65754E-09	-4.67344E-07	-1.18549E-09	-1.26453E-04	5.99662E-05	8.62984E-05
863	814-3	-7.52745E-10	-1.76229E-07	1.69616E-08	-1.91268E-05	-1.04343E-05	-2.17419E-05
864	815-1	1.22622E-08	-4.46817E-07	1.20895E-08	6.17415E-05	-1.47540E-04	-1.94960E-05
865	815-3	-9.90781E-09	3.27737E-07	-2.04349E-08	1.31098E-04	-1.38005E-05	1.59185E-04
866	816-3	-1.01192E-09	-1.07560E-07	8.55683E-09	-3.20150E-05	-7.35162E-06	2.37179E-06
867	818-1	1.70775E-08	-3.52916E-07	-4.07204E-08	7.00515E-05	8.16035E-06	4.53420E-04
868	818-3	-1.09857E-08	5.59932E-07	-2.59707E-08	-5.96293E-05	-1.17551E-05	2.84629E-04
869	819-3	-2.68435E-10	-1.45924E-07	-8.12478E-09	7.17963E-05	2.59273E-06	7.17625E-06
870	820-1	3.93383E-08	-3.65230E-06	-1.17087E-07	2.18543E-04	1.79399E-05	-5.11684E-04
871	820-2	1.04533E-08	-8.13735E-07	-7.38416E-08	-5.82983E-05	2.77682E-05	-1.04625E-04
872	820-3	-2.98466E-08	-6.78534E-07	-2.94572E-08	6.70061E-05	-2.30838E-05	-1.16764E-04
873	821-2	5.56926E-09	-2.31949E-07	-2.90638E-08	1.64993E-04	-1.73816E-05	6.69995E-05
874	821-3	4.96993E-09	-1.78837E-07	1.34763E-10	2.74149E-05	1.80039E-06	-2.78345E-05
875	822-1	6.70044E-09	-9.87607E-07	-1.42397E-08	-1.13601E-05	1.54501E-04	2.10770E-04
876	822-3	-7.96797E-09	-5.78289E-07	-9.84216E-09	-5.48092E-05	-7.14348E-06	-8.32925E-05
877	823-3	-4.04349E-10	-2.62227E-07	-4.24444E-09	9.79362E-06	2.89754E-07	-2.65789E-05
878	912-1	2.12570E-07	1.93009E-07	6.22797E-08	2.04136E-05	1.03152E-04	9.84227E-05
879	912-2	2.91229E-08	3.87628E-06	-7.75465E-08	-3.30160E-04	-2.53264E-04	-6.73364E-04
880	912-3	1.29552E-08	-6.10379E-08	-4.59841E-08	-3.62694E-05	1.02867E-04	-3.24886E-05
881	913-1	1.33391E-07	1.74394E-07	-3.21154E-07	5.61067E-06	4.63364E-05	2.22579E-05
882	913-2	-3.52586E-08	-8.12119E-06	3.07416E-08	3.34154E-04	-5.55805E-05	7.52305E-05
883	913-3	8.69552E-08	9.82551E-08	-2.78917E-07	-1.41386E-06	4.90952E-05	9.43255E-06
884	918-1	3.01516E-08	3.33195E-08	-1.71068E-08	2.37478E-06	2.03219E-05	9.73600E-06
885	918-2	1.84744E-09	-5.45111E-07	-1.26206E-08	-2.41247E-05	-4.06398E-05	-4.36799E-05
886	918-3	3.17947E-09	1.05138E-08	-2.19312E-08	-4.15603E-06	2.70381E-05	3.72184E-07
887	919-1	1.05455E-07	1.78672E-07	-2.92948E-07	-2.58779E-05	1.49339E-04	9.58424E-07
888	919-2	-8.85032E-08	-1.17522E-05	2.12311E-07	5.65302E-04	9.82001E-05	2.70301E-04
889	919-3	1.01576E-07	1.57170E-07	-2.87488E-07	-2.76608E-05	1.54335E-04	-1.28646E-06
890	942-1	2.24120E-07	3.26986E-07	-6.38478E-08	7.47996E-06	5.65809E-05	1.41312E-04
891	942-2	2.25314E-08	7.97274E-06	-1.06315E-08	-4.52640E-04	1.38403E-04	-6.20274E-05
892	942-3	-4.21209E-08	7.86868E-08	2.97610E-07	1.27937E-04	-1.51055E-04	-7.00099E-07
893	948-1	-1.66007E-07	3.17284E-08	2.20305E-07	7.12163E-06	-2.26680E-07	1.01460E-04
894	948-2	2.56800E-08	6.28542E-06	1.47701E-09	-4.84639E-04	5.34747E-05	-3.17008E-05
895	948-3	-1.62444E-08	-3.86712E-08	5.70115E-08	-1.64308E-05	2.70737E-05	-5.35529E-06
896	958-1	7.97018E-08	-9.29903E-08	-1.55430E-07	9.63017E-06	1.57471E-04	3.75603E-05
897	959-1	-8.79557E-11	-3.18598E-09	3.16072E-10	2.16921E-07	2.43484E-07	2.76791E-07
898	959-2	-6.97705E-08	-4.25291E-06	2.13541E-07	2.55113E-04	1.37891E-04	1.78899E-04
899	959-3	1.79458E-08	7.37824E-08	-6.53798E-08	-2.29777E-05	5.61303E-06	-5.96197E-05
900	963-1	7.90444E-11	-5.60154E-10	-1.37927E-10	3.63292E-08	5.12950E-08	1.99680E-08

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 131

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
901	963-2	3.01463E-09	2.85717E-07	1.43465E-08	-6.65153E-06	5.28830E-06	3.26517E-05
902	963-3	-1.07092E-09	5.55699E-08	5.08689E-09	-8.39729E-06	9.33512E-06	-5.15969E-06
903	966-1	9.63604E-08	-6.23184E-08	-5.46003E-08	9.89680E-06	6.78832E-05	1.36411E-05
904	968-1	1.21288E-07	-6.88349E-07	-1.96792E-09	2.78042E-05	5.46799E-05	3.82018E-05
905	969-1	4.48415E-11	5.14353E-10	1.52245E-11	-1.67262E-08	1.64750E-08	2.74992E-08
906	969-2	7.31514E-09	7.89821E-07	9.30117E-10	-2.75720E-05	7.26853E-06	-5.19929E-07
907	969-3	2.39153E-09	1.13361E-07	1.78186E-09	-1.11991E-05	-6.30749E-07	-2.93801E-07
908	973-1	4.03867E-09	-1.09981E-09	-4.08946E-09	4.29228E-07	2.33358E-06	4.39796E-07
909	973-2	8.42481E-09	-1.32591E-06	-1.45412E-08	5.71309E-05	-3.13388E-05	8.33007E-05
910	973-3	2.73383E-08	3.09782E-07	-3.76794E-08	-1.49677E-05	-8.11196E-06	-1.23868E-05
911	976-1	-1.38315E-06	7.06483E-07	1.57639E-06	-2.78769E-06	-8.46481E-04	2.71854E-04
912	977-1	5.14141E-10	-9.09827E-10	-4.17936E-10	3.15720E-07	2.20523E-07	-2.00939E-07
913	977-2	5.28225E-08	1.24677E-06	-4.17860E-08	-3.07088E-05	-3.41097E-05	-9.50670E-05
914	977-3	-3.54864E-07	-2.03532E-08	3.33425E-07	-1.02280E-05	-1.96709E-04	-4.12269E-05
915	980-1	-1.66190E-08	1.08072E-06	7.76987E-10	-4.16511E-05	1.42332E-05	2.92275E-04
916	980-2	1.70511E-08	1.84326E-06	6.84653E-09	-4.36609E-05	-2.43231E-05	-3.96986E-05
917	980-3	-1.36365E-07	-2.50202E-06	4.94615E-07	-5.59682E-04	-1.53807E-04	4.64796E-04
918	980-4	2.14482E-06	-3.69423E-05	-7.69177E-06	1.36553E-02	4.66648E-03	-6.17244E-03
919	980-6	-2.02495E-06	4.49328E-06	2.61190E-06	-7.73731E-03	-4.72755E-04	2.47287E-02
920	981-1	6.85506E-08	-1.09171E-06	-6.71361E-08	-4.79350E-05	-4.63021E-05	1.48565E-04
921	981-2	-2.78518E-09	1.75916E-06	2.03164E-09	-3.51651E-05	4.80039E-05	-2.02132E-05
922	981-3	-4.16298E-08	2.65899E-06	4.04252E-07	-2.36733E-04	-6.26375E-05	7.51375E-05
923	981-4	4.04027E-07	-2.88692E-05	5.69247E-06	-2.04241E-03	-3.16584E-03	-5.85526E-04
924	981-6	-7.37814E-06	9.55633E-06	8.39225E-06	-2.05322E-03	-5.77320E-03	1.02125E-03
925	982-1	2.73978E-07	-1.95737E-06	-1.25112E-07	1.76726E-04	8.94505E-05	7.11824E-04
926	982-3	-1.11674E-07	-2.83210E-06	5.12924E-07	-7.53633E-05	7.35282E-05	4.11508E-05
927	983-1	2.51254E-07	2.23433E-06	-8.47154E-08	-1.52769E-04	4.74642E-05	1.16512E-04
928	983-3	-1.28485E-07	3.01043E-06	5.70999E-07	-1.31755E-04	8.30974E-05	6.60553E-06
929	1012-1	-1.34602E-06	9.92896E-07	1.31699E-06	4.75523E-04	-5.19502E-04	3.95938E-04
930	1012-2	-8.45364E-08	7.15561E-07	-2.50292E-08	3.92425E-04	9.26938E-05	-1.96839E-04
931	1012-3	-2.16011E-07	1.77259E-07	1.77865E-07	-1.40434E-03	1.86229E-06	3.70485E-04
932	1016-1	6.42207E-07	1.16547E-06	-6.30452E-07	-3.96326E-04	-5.10728E-04	1.20308E-02
933	1016-2	-1.81852E-06	-3.16954E-06	2.02411E-06	2.26668E-03	-1.90941E-03	2.08430E-03
934	1016-3	-1.42085E-06	6.42770E-08	1.40827E-06	-2.18355E-04	-6.77961E-04	-1.08165E-03
935	1036-1	-1.60524E-07	-2.94368E-08	1.77861E-08	-2.89666E-05	-3.85349E-04	9.99424E-05
936	1036-2	-3.50658E-08	2.66094E-07	5.19218E-08	5.30832E-04	-3.23527E-05	-5.90770E-05
937	1036-3	1.96436E-07	-6.30992E-08	-1.98108E-07	-6.59259E-04	2.59760E-05	5.07492E-05
938	1047-1	1.35259E-06	-2.66524E-06	-5.83093E-06	-1.18309E-03	2.83162E-03	2.45949E-03
939	1047-2	-4.13395E-08	-1.75212E-05	-9.05693E-07	9.14416E-04	2.63465E-04	-1.28399E-03
940	1047-3	-5.56383E-07	-5.85168E-07	1.30810E-06	1.81383E-03	-2.23481E-04	7.39015E-04
941	1047-4	3.46420E-06	6.02597E-05	-2.62460E-05	-4.64448E-03	1.49266E-02	-2.37933E-02
942	1047-5	-1.67293E-04	-1.38119E-05	5.04894E-05	-1.10508E-02	-6.35814E-02	-5.23990E-03
943	1047-6	-5.97884E-05	-3.55481E-04	-1.75122E-06	1.61501E-02	-1.91514E-02	4.09894E-03
944	1048-1	-1.41609E-06	1.39345E-06	7.80773E-07	-1.72438E-04	-4.12513E-03	3.81357E-04
945	1048-2	4.65534E-06	-2.29755E-05	-2.67182E-06	3.55411E-03	1.90474E-03	7.39729E-04
946	1048-3	-1.42036E-06	1.45736E-06	2.59767E-07	4.87187E-04	-3.68351E-03	-8.57486E-04
947	1048-4	-3.68974E-06	3.64189E-05	-5.53263E-05	-1.09946E-02	1.92607E-02	-2.23591E-02
948	1048-5	-1.96776E-04	-6.52775E-05	2.23711E-04	-7.13284E-03	-7.74179E-02	-1.18516E-04
949	1048-6	2.48698E-05	-5.33608E-04	2.96454E-05	4.09289E-02	3.13589E-03	-5.10845E-03
950	1065-1	2.38039E-05	5.05117E-06	-2.39121E-05	-1.49298E-04	1.24941E-02	3.11888E-03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 132

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
951	1065-2	5.65791E-05	-7.49023E-06	-5.49764E-05	-1.25822E-04	2.62823E-02	-8.80520E-05
952	1065-3	-8.07478E-05	-1.38841E-07	8.24585E-05	7.67642E-04	-4.25239E-02	-9.31882E-04
953	1067-1	-1.87660E-06	1.53132E-06	1.73728E-06	4.02072E-04	-1.55485E-03	1.02852E-03
954	1067-2	8.74527E-08	-3.01518E-06	-6.96954E-08	5.79841E-04	-9.68587E-05	-8.50872E-04
955	1067-3	-1.33164E-05	-8.21696E-07	1.35622E-05	-2.29981E-04	-6.68015E-03	-4.86445E-04
956	1069-1	3.13163E-05	-3.68594E-06	-3.22766E-05	1.46594E-04	1.79467E-02	1.92599E-03
957	1069-2	-3.82571E-05	-1.01611E-05	3.50816E-05	-1.09488E-04	-1.45753E-02	-1.09102E-03
958	1069-3	-6.29493E-05	-3.35549E-06	6.25438E-05	-1.32727E-03	-3.09559E-02	-6.32427E-04
959	1071-1	-2.44162E-06	-1.52867E-06	2.42688E-06	-4.67831E-05	-1.88118E-03	-1.63784E-04
960	1071-2	-1.01753E-07	-2.79275E-06	-2.83939E-08	5.66223E-04	1.46379E-04	-9.38734E-04
961	1071-3	-7.03628E-06	2.61509E-07	5.98404E-06	1.22841E-05	-1.92650E-03	-7.94849E-05
962	1090-1	-1.98816E-06	-8.85108E-07	2.02461E-06	-5.62248E-05	-9.57821E-04	-7.44951E-05
963	1090-2	1.78419E-07	7.39783E-07	-6.55385E-08	-1.37042E-04	-3.61900E-05	4.47768E-06
964	1090-3	5.62782E-08	-2.60771E-07	-8.95798E-08	-1.13485E-04	7.75981E-05	7.26377E-05
965	1093-1	1.78617E-06	3.88316E-07	-1.87419E-06	-8.44831E-05	1.31991E-03	1.87246E-04
966	1093-2	3.73057E-06	-2.78557E-06	-4.01265E-06	-9.45036E-05	2.37600E-03	1.38403E-03
967	1093-3	7.54494E-07	-7.74851E-08	-1.17012E-06	-4.64419E-04	7.77541E-04	4.11108E-05
968	1127-1	-1.19022E-06	-4.63335E-06	-7.31195E-08	1.10563E-03	-3.79506E-03	3.44427E-04
969	1127-2	-3.70168E-06	-2.16911E-05	9.15873E-07	2.52932E-03	-7.03637E-04	7.90337E-04
970	1127-3	-1.97109E-06	-3.69848E-06	-1.87431E-06	-2.74313E-03	-2.37599E-03	5.75719E-04
971	1127-4	-4.00289E-05	1.74037E-04	3.58929E-05	8.53071E-02	-1.47300E-02	4.74724E-03
972	1127-5	-1.60640E-04	1.10039E-04	2.81267E-04	3.62034E-02	-1.20177E-01	-2.89628E-03
973	1127-6	-4.82863E-05	-4.19080E-04	-4.39556E-05	4.82103E-02	2.29088E-02	1.09992E-02
974	1137-1	1.70687E-05	3.95041E-07	-1.73903E-05	-1.91605E-04	9.01377E-03	1.98368E-04
975	1137-2	-1.01014E-07	-3.41901E-07	1.09028E-07	-2.45891E-06	-5.94022E-05	1.82326E-04
976	1137-3	6.65915E-06	1.66217E-07	-6.58476E-06	-1.75533E-04	3.21678E-03	1.05007E-04
977	1142-1	4.18367E-05	9.32562E-07	-4.36160E-05	-1.41458E-04	2.32902E-02	4.03529E-04
978	1142-2	-3.35086E-07	-1.77056E-07	3.51918E-07	5.10641E-05	-1.90893E-04	-2.49177E-05
979	1142-3	-2.30660E-05	-5.12814E-07	2.41740E-05	-1.58135E-05	-1.29924E-02	-1.54508E-04
980	1143-1	2.87273E-05	7.52552E-07	-2.86102E-05	-8.88425E-05	1.42963E-02	3.14075E-04
981	1143-2	6.17271E-07	-3.78155E-06	-6.32408E-07	2.50535E-04	3.51508E-04	-4.91878E-05
982	1143-3	-2.27651E-05	-6.49481E-07	2.21081E-05	5.31377E-05	-1.05928E-02	-2.38639E-04
983	1145-1	4.87144E-05	1.07568E-06	-5.00619E-05	-2.59568E-04	2.66012E-02	6.72374E-04
984	1145-2	5.70178E-08	-5.20073E-07	-5.97667E-08	7.78332E-06	3.54690E-05	9.84812E-06
985	1145-3	-2.48996E-07	-5.23815E-08	-3.53474E-08	-3.63066E-05	3.30946E-04	5.40093E-05
986	1148-1	2.60479E-05	7.23363E-07	-2.56113E-05	-6.86862E-05	1.24218E-02	2.65054E-04
987	1148-2	1.06394E-06	-2.18516E-06	-1.06710E-06	3.08172E-04	5.41883E-04	-7.23926E-05
988	1148-3	-2.54936E-05	-5.69614E-07	2.66242E-05	4.86606E-05	-1.42438E-02	-2.09966E-04
989	1150-1	-1.39927E-05	-2.98553E-07	1.48299E-05	-1.76519E-05	-8.08356E-03	-7.23122E-05
990	1150-2	2.82982E-07	-2.25026E-07	-3.12512E-07	-4.73411E-05	1.87178E-04	-1.09455E-05
991	1150-3	-4.56216E-06	-2.64388E-07	3.03021E-06	-1.96032E-05	-1.99291E-04	-5.17355E-05
992	1151-1	-1.87393E-05	-2.31583E-07	2.16651E-05	1.03630E-05	-1.32652E-02	-8.65058E-05
993	1151-2	-1.25728E-07	-2.74368E-06	1.49082E-07	1.12357E-04	-1.00691E-04	3.18878E-04
994	1151-3	7.07788E-06	1.17001E-07	-7.81795E-06	-7.91942E-06	4.55051E-03	4.30170E-05
995	1154-1	-1.01004E-05	-1.84475E-07	1.09909E-05	1.47686E-05	-6.25305E-03	-6.85860E-05
996	1154-2	-1.07655E-07	-1.57658E-06	1.35362E-07	7.26214E-05	-8.66046E-05	-9.05237E-06
997	1154-3	9.04956E-06	1.44465E-07	-1.00863E-05	-1.03308E-05	5.91764E-03	5.40167E-05
998	1156-1	-1.99612E-06	-7.31738E-08	1.87830E-06	-2.42700E-05	-8.52830E-04	4.67275E-06
999	1156-2	7.99516E-09	-1.41702E-07	-7.02605E-09	-2.81715E-05	1.28222E-05	3.71588E-05
1000	1156-3	2.06349E-05	3.24520E-07	-2.29918E-05	-7.94720E-05	1.34737E-02	1.74008E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 133

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1001	1157-1	-5.14644E-06	-1.10224E-07	5.48047E-06	-2.74109E-06	-3.05341E-03	-2.54680E-05
1002	1157-2	3.77437E-07	-4.16736E-06	-3.91634E-07	4.33956E-04	1.89896E-04	-1.07396E-04
1003	1157-3	2.37496E-06	6.47728E-08	-2.36866E-06	-2.81341E-05	1.21212E-03	4.70449E-05
1004	1160-1	3.46405E-06	5.15850E-08	-3.81233E-06	-2.97824E-05	2.16929E-03	4.54728E-05
1005	1160-2	-5.78874E-08	-2.97783E-07	6.64773E-08	1.13697E-05	-3.96031E-05	4.01813E-05
1006	1160-3	4.97628E-06	7.84887E-08	-5.51935E-06	-3.61990E-05	3.18851E-03	5.85719E-05
1007	1161-1	-6.90923E-07	-1.63664E-08	7.51112E-07	-1.34532E-05	-4.11227E-04	7.11692E-06
1008	1161-2	-7.15944E-08	-6.51821E-07	8.20158E-08	2.97318E-05	-4.96885E-05	1.99641E-05
1009	1161-3	-7.50730E-07	-6.51733E-09	9.10531E-07	-1.16255E-05	-6.02984E-04	7.91996E-06
1010	1167-1	5.23713E-05	1.52518E-06	-5.27989E-05	-1.36488E-04	2.68484E-02	5.01877E-04
1011	1167-2	2.93713E-06	-2.04744E-07	-3.56069E-06	5.95400E-06	2.29263E-03	-1.50213E-05
1012	1167-3	-9.62558E-06	-2.98103E-07	8.00902E-06	3.71958E-05	-2.59108E-03	-1.62961E-04
1013	1168-1	1.15357E-05	5.45217E-07	-6.66033E-06	-7.64971E-05	-5.60971E-04	2.65129E-04
1014	1168-2	6.51883E-06	-4.41015E-08	-6.84958E-06	-1.14351E-05	3.70156E-03	3.97989E-05
1015	1168-3	-4.28280E-06	-4.45393E-07	1.68524E-06	5.11805E-05	1.33974E-03	-1.11262E-04
1016	1169-1	-9.63514E-06	-1.78393E-07	9.82866E-06	1.18528E-05	-5.08337E-03	-9.94316E-05
1017	1169-2	-3.41052E-06	-6.52960E-07	3.47114E-06	3.39498E-05	-1.80022E-03	5.30135E-05
1018	1169-3	-2.20087E-05	-8.25733E-07	2.26140E-05	6.30027E-05	-1.19986E-02	-1.68246E-04
1019	1170-1	-7.97847E-06	-2.59186E-07	8.42548E-06	2.49169E-05	-4.61807E-03	-5.58966E-05
1020	1170-2	2.64350E-06	-5.31778E-07	-2.80961E-06	4.06876E-05	1.55176E-03	8.44117E-05
1021	1170-3	-2.16375E-05	-2.41016E-07	2.21711E-05	2.40453E-05	-1.16910E-02	-2.13687E-04
1022	1173-1	-9.05432E-06	1.10959E-07	1.26514E-05	-2.04509E-05	-9.47719E-03	1.69442E-05
1023	1173-2	-1.58671E-07	-3.86160E-07	-4.58030E-09	3.12813E-05	1.61000E-04	-2.98448E-05
1024	1173-3	2.79071E-05	4.17891E-07	-3.18224E-05	-2.02459E-05	1.92963E-02	1.49603E-04
1025	1174-1	1.96158E-06	3.75074E-07	1.49069E-06	-5.45139E-05	-3.65671E-03	1.45078E-04
1026	1174-2	3.37446E-07	-3.87595E-07	-2.42326E-08	2.01900E-05	-2.59848E-04	6.32004E-06
1027	1174-3	7.05860E-06	-1.16918E-08	-9.16641E-06	9.24692E-06	6.40895E-03	1.41857E-06
1028	1183-1	-3.68380E-05	-3.59605E-07	4.19825E-05	1.41195E-05	-2.50631E-02	-1.99248E-04
1029	1183-2	7.96922E-06	-4.70281E-07	-8.87802E-06	-4.21904E-06	5.20952E-03	5.81756E-05
1030	1183-3	1.33487E-05	1.74245E-07	-1.51402E-05	-1.86872E-05	9.02298E-03	8.97475E-05
1031	1184-1	-1.60195E-05	-3.93347E-07	1.81631E-05	2.25453E-05	-1.08456E-02	-6.80666E-05
1032	1184-2	-8.36752E-06	-6.42231E-07	9.53109E-06	2.42532E-05	-5.74000E-03	-3.23167E-05
1033	1184-3	1.83054E-05	3.19159E-07	-2.09582E-05	-1.41061E-05	1.26306E-02	8.18974E-05
1034	1185-1	3.20026E-06	8.68067E-08	-3.56621E-06	-1.62577E-05	2.13018E-03	1.72212E-05
1035	1185-2	1.30418E-06	-2.69093E-07	-1.43146E-06	-1.20896E-05	8.31079E-04	5.79009E-05
1036	1185-3	-2.43545E-07	2.50281E-07	2.28959E-07	-1.12057E-05	-2.03417E-04	-1.82045E-05
1037	1186-1	3.25337E-06	-2.65838E-08	-3.61531E-06	8.69051E-07	2.09353E-03	2.95308E-05
1038	1186-2	-1.69291E-06	-2.73858E-07	1.84737E-06	2.38865E-05	-1.06677E-03	-4.90860E-05
1039	1186-3	-7.77601E-08	-3.64214E-07	-4.17544E-08	1.70656E-05	2.68046E-04	2.34739E-05
1040	1189-1	-5.65785E-06	-1.79767E-07	6.01637E-06	4.62805E-06	-3.21783E-03	-2.81400E-05
1041	1189-2	3.19789E-06	-6.47170E-07	-3.53029E-06	2.43194E-05	2.04788E-03	6.43429E-05
1042	1189-3	1.21947E-06	-2.47865E-07	-1.15987E-06	2.10663E-05	4.02284E-04	1.57168E-05
1043	1190-1	-9.49653E-06	-4.26630E-08	1.03468E-05	1.54812E-05	-5.90826E-03	-9.20437E-05
1044	1190-2	-3.83986E-06	-8.23455E-07	4.20921E-06	5.39935E-05	-2.40031E-03	2.63734E-05
1045	1190-3	2.63520E-06	3.83858E-07	-2.71091E-06	-3.59266E-05	1.31793E-03	1.31497E-05
1046	1203-3	8.30537E-08	6.83670E-08	-1.32814E-07	-1.93963E-05	5.22530E-05	-1.55613E-05
1047	1204-3	-2.15604E-07	3.16634E-08	2.14298E-09	-1.22155E-04	-1.25095E-04	-1.74403E-04
1048	1205-1	2.31559E-07	4.72667E-08	-2.25947E-07	3.41251E-05	5.81480E-05	9.18356E-06
1049	1205-2	1.47939E-07	-1.67743E-06	-1.24006E-07	1.78987E-05	6.11324E-05	-1.62584E-05
1050	1205-3	8.35318E-08	1.93327E-08	-8.53289E-08	-4.34273E-06	3.42359E-05	-3.45750E-06

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 134

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1051	1206-3	7.65128E-08	-7.15701E-08	-1.21107E-07	6.56628E-06	4.34981E-05	1.18966E-05
1052	1207-3	-3.36942E-08	-8.41597E-08	-1.94064E-07	8.90061E-05	-2.16178E-05	1.25829E-04
1053	1208-1	1.99438E-08	-1.36394E-08	2.89307E-09	-1.55742E-05	-7.81562E-05	5.95058E-06
1054	1208-2	-2.39786E-07	-1.69198E-06	2.25907E-07	1.05756E-05	-1.20888E-04	-3.54260E-05
1055	1208-3	1.06623E-07	-1.51647E-08	-1.09019E-07	2.48436E-06	4.70820E-05	4.60223E-06
1056	1214-1	4.72787E-07	1.05005E-07	-4.77257E-07	-1.25442E-05	2.42646E-04	1.36045E-05
1057	1214-2	4.34410E-06	-7.54630E-06	-4.68485E-06	7.59937E-04	2.74793E-03	-1.77004E-04
1058	1214-3	-1.16427E-05	2.17935E-06	1.16440E-05	-1.66780E-04	-5.87668E-03	-2.08105E-04
1059	1215-1	4.74066E-06	1.04286E-06	-4.81108E-06	-6.96746E-05	2.77416E-03	6.63949E-05
1060	1215-2	5.62237E-07	-2.01515E-06	-4.76251E-07	5.52921E-05	2.27968E-04	1.23985E-04
1061	1215-3	-1.46420E-06	8.52733E-07	1.30304E-06	-7.91490E-06	-6.00136E-04	-1.13537E-04
1062	1216-1	8.92839E-06	1.23220E-06	-9.36971E-06	-1.24418E-04	5.45576E-03	1.21605E-04
1063	1216-2	-3.62070E-07	-1.45868E-06	5.07281E-07	-1.26432E-04	-4.29540E-04	1.38135E-04
1064	1216-3	-2.58658E-07	-9.27845E-07	2.68084E-07	-1.58990E-04	-2.05655E-04	9.45623E-05
1065	1243-1	6.06300E-07	-8.06148E-08	-6.28315E-07	1.19965E-05	3.34255E-04	-4.02435E-06
1066	1243-2	-4.89590E-06	-7.70735E-06	5.43886E-06	7.63221E-04	-3.20243E-03	-3.02687E-04
1067	1243-3	-1.25882E-05	-2.78330E-06	1.25681E-05	1.45360E-04	-6.33230E-03	-2.97479E-05
1068	1244-1	6.43345E-06	-8.32862E-07	-6.67454E-06	-2.92140E-05	3.85065E-03	1.84338E-04
1069	1244-2	-5.84960E-07	-2.05613E-06	5.70052E-07	4.92783E-06	-3.07469E-04	8.26297E-05
1070	1244-3	-4.66545E-07	-9.52231E-07	1.72060E-07	-9.05622E-05	6.48733E-05	1.23539E-04
1071	1245-1	8.15593E-06	-9.44639E-07	-8.38813E-06	-6.33472E-05	4.78949E-03	2.53335E-04
1072	1245-2	5.54254E-07	-1.44933E-06	-5.76022E-07	5.35130E-05	4.12327E-04	1.62456E-04
1073	1245-3	-6.48392E-07	8.99424E-07	6.63134E-07	-6.80175E-05	-4.55257E-04	-1.13405E-04
1074	1117-1	3.78245E-07	1.00782E-07	-3.66731E-07	-3.84646E-04	1.18285E-03	3.54104E-05
1075	1117-2	4.73363E-08	-8.74929E-06	-1.43953E-08	1.01972E-03	-3.43392E-04	-4.16577E-04
1076	1117-3	1.15261E-07	-7.80402E-08	1.55227E-07	2.83662E-03	-1.19207E-02	-2.24665E-05
1077	1117-4	1.66265E-06	-3.29727E-04	-3.07032E-07	1.19740E-01	-7.80563E-02	-5.80163E-03
1078	1117-5	-2.69715E-05	-7.70847E-06	1.32556E-05	1.39459E-01	1.18428E-01	-9.60625E-04
1079	1117-6	6.20485E-07	3.23036E-06	-6.33303E-07	-7.46455E-03	1.23206E-02	1.07746E-03
1080	100-1	1.78264E-09	-5.14564E-08	-1.21966E-07	-9.21528E-06	9.53617E-05	2.70770E-05
1081	100-2	9.29353E-10	5.36423E-07	2.14914E-09	-2.33626E-05	2.10140E-05	1.03787E-04
1082	100-3	-4.54638E-10	6.89881E-08	2.34278E-08	2.90237E-06	-1.82038E-04	-1.42824E-05
1083	100-4	8.88569E-11	2.94423E-08	1.61680E-09	-1.12150E-05	-8.42647E-05	8.31139E-05
1084	100-6	-8.56990E-11	-5.26848E-08	6.35732E-08	9.87744E-06	-3.48834E-05	-7.32126E-06
1085	101-1	1.79909E-09	-4.23321E-08	2.18930E-07	2.55034E-05	6.74838E-06	1.11223E-06
1086	101-2	7.10603E-10	4.53389E-07	1.62124E-09	-1.69942E-05	-1.93733E-05	-2.67878E-04
1087	101-3	-5.12542E-10	7.06619E-08	-1.99707E-10	-7.06419E-07	6.00313E-04	2.77365E-05
1088	101-4	-1.03423E-10	2.28898E-08	6.10925E-10	-9.31724E-06	1.75528E-04	-2.69724E-04
1089	101-6	-6.20817E-11	-4.16877E-08	-1.36755E-07	-1.25880E-05	6.13397E-06	-3.24129E-05
1090	102-1	1.81635E-09	-3.57489E-08	-1.89454E-07	-1.34001E-05	-1.09197E-04	-3.02647E-05
1091	102-2	6.80953E-10	3.93276E-07	2.79809E-09	-1.64171E-05	-2.26166E-05	1.79448E-04
1092	102-3	-5.37514E-10	6.90553E-08	-5.86670E-09	-1.53136E-06	-2.12353E-04	-1.16974E-05
1093	102-4	2.02325E-12	1.52464E-08	-6.27130E-09	-1.42430E-05	-7.41374E-05	1.54819E-04
1094	102-6	-4.64928E-11	-3.05405E-08	1.14646E-07	7.45644E-06	6.86786E-05	-3.73628E-05
1095	103-1	1.87373E-09	-3.30820E-08	2.82207E-08	2.72573E-06	1.89438E-05	-4.16158E-05
1096	103-2	6.32362E-10	3.51568E-07	-7.80559E-09	-2.68421E-05	1.31118E-07	-1.29406E-04
1097	103-3	-4.51598E-10	6.50488E-08	1.67349E-08	2.92883E-06	1.37404E-04	-2.70490E-06
1098	103-4	1.31394E-10	9.73313E-09	8.81977E-10	-2.34746E-05	7.78947E-06	-3.31728E-05
1099	103-6	-8.70200E-11	-1.99328E-08	-2.14660E-08	-3.99929E-06	-6.64421E-07	4.27089E-06
1100	104-1	1.82118E-09	-3.22012E-08	2.07826E-07	2.20938E-05	1.05626E-04	3.13972E-05

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 135

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1101	104-2	4.95202E-10	3.20896E-07	6.43746E-09	-3.07293E-05	1.02322E-04	4.63184E-04
1102	104-3	-5.37695E-10	5.99829E-08	-9.84010E-09	1.27777E-06	-9.18309E-04	-9.49516E-05
1103	104-4	-3.89450E-11	6.82154E-09	-1.73059E-09	-3.03000E-05	-3.18431E-04	5.38197E-04
1104	104-6	-1.43474E-11	-1.41833E-08	-1.14285E-07	-1.09953E-05	-3.34498E-05	8.70102E-05
1105	105-1	1.82686E-09	-3.16059E-08	-1.77515E-07	-1.12519E-05	3.02830E-05	-1.38626E-05
1106	105-2	4.89738E-10	2.96922E-07	2.14881E-08	-2.25495E-05	7.66070E-05	5.07773E-04
1107	105-3	-5.67385E-10	5.45804E-08	-2.25293E-08	-5.79198E-07	-7.39942E-04	-7.98227E-05
1108	105-4	-5.68824E-11	5.60049E-09	-3.17665E-10	-2.43610E-05	-2.68240E-04	4.99365E-04
1109	105-6	2.43967E-11	-1.19589E-08	1.00165E-07	1.22911E-05	-2.31837E-05	-6.99830E-05
1110	106-1	1.88139E-09	-3.06740E-08	-1.59683E-08	-6.61477E-08	8.38025E-05	3.80746E-05
1111	106-2	5.48499E-10	2.78892E-07	1.23429E-08	-1.11098E-05	-2.59643E-05	-1.17420E-04
1112	106-3	-5.21010E-10	4.89843E-08	-1.55576E-08	-2.25446E-06	2.57862E-04	4.28726E-05
1113	106-4	9.40928E-11	4.34420E-09	-1.88417E-09	-1.46584E-05	6.10869E-05	2.77463E-06
1114	106-6	-1.56875E-11	-8.71914E-09	9.39820E-09	5.66005E-06	-4.12170E-05	-7.98953E-05
1115	107-1	1.86418E-09	-3.03767E-08	1.76578E-07	1.71796E-05	-2.33286E-05	-2.88265E-05
1116	107-2	4.84498E-10	2.64233E-07	-1.12876E-08	-1.05811E-05	-7.83413E-05	-2.46619E-04
1117	107-3	-5.19384E-10	4.36783E-08	1.08092E-08	1.72851E-07	4.58414E-04	5.42035E-05
1118	107-4	3.14313E-11	3.73286E-09	-2.55007E-09	-9.96398E-06	1.45837E-04	-1.39675E-04
1119	107-6	1.00356E-11	-7.29037E-09	-1.04841E-07	-7.95083E-06	4.20730E-05	-7.61794E-06
1120	108-1	1.88432E-09	-3.03257E-08	-1.76111E-07	-1.45531E-05	4.64118E-05	-4.20006E-05
1121	108-2	5.28629E-10	2.51581E-07	-4.81113E-09	-1.21101E-05	5.78517E-05	4.46639E-04
1122	108-3	-5.95471E-10	3.82270E-08	1.14535E-08	1.81801E-06	-8.24601E-04	-5.86124E-05
1123	108-4	4.34197E-11	2.72260E-09	-9.71652E-10	-9.53277E-06	-2.24465E-04	4.09051E-04
1124	108-6	-1.64125E-11	-7.22168E-09	1.01867E-07	1.00457E-05	-1.73060E-05	1.99599E-05
1125	109-1	1.84842E-09	-3.04528E-08	3.93844E-09	1.34062E-06	-9.18509E-05	6.34275E-05
1126	109-2	5.49624E-10	2.39806E-07	9.28202E-09	-8.34329E-06	4.15503E-06	1.62011E-07
1127	109-3	-5.89085E-10	3.29119E-08	-1.38302E-08	2.29410E-07	-8.86462E-05	-1.27191E-05
1128	109-4	5.39538E-11	1.46354E-09	-1.16478E-08	-9.07939E-06	-2.99542E-05	5.11617E-05
1129	109-6	2.21282E-11	-7.54445E-09	-3.44529E-09	8.58013E-07	5.82971E-05	-2.24337E-05
1130	110-1	1.87925E-09	-3.12011E-08	1.37241E-07	1.39829E-05	2.06303E-04	6.34192E-05
1131	110-2	5.08461E-10	2.27253E-07	8.28477E-09	-7.81382E-06	-1.69997E-05	-2.56589E-04
1132	110-3	-5.61405E-10	2.77477E-08	-1.39035E-08	2.27366E-06	4.85041E-04	2.28236E-05
1133	110-4	5.65182E-11	3.33590E-10	-1.39045E-08	-9.10810E-06	1.44870E-04	-1.94737E-04
1134	110-6	-2.56106E-11	-7.89431E-09	-7.03205E-08	-6.80908E-06	-1.27595E-04	-3.37651E-05
1135	111-1	1.84723E-09	-3.20440E-08	-5.15749E-08	-3.42669E-06	-4.20278E-05	-6.04512E-05
1136	111-2	4.94616E-10	2.13244E-07	-7.66527E-09	-1.06314E-05	2.26231E-05	5.49916E-05
1137	111-3	-6.37325E-10	2.29514E-08	2.33692E-08	7.82408E-06	-1.31138E-04	-2.09192E-05
1138	111-4	2.00520E-11	-5.24586E-10	1.81699E-08	-8.14533E-06	-3.44834E-05	1.50746E-05
1139	111-6	-3.42268E-12	-8.16567E-09	3.85221E-08	2.08219E-06	4.69614E-05	-1.94275E-05
1140	112-2	6.55282E-10	3.76342E-07	8.43072E-10	-8.90356E-06	1.81661E-06	-3.51911E-05
1141	113-2	6.11279E-10	3.20183E-07	1.27331E-09	-4.74376E-06	3.94333E-07	-9.74624E-06
1142	114-2	6.15245E-10	2.95975E-07	9.55213E-10	-5.36082E-06	-2.76333E-06	3.90799E-05
1143	115-1	1.78667E-08	1.71223E-07	-2.49022E-08	1.68851E-07	-1.52107E-04	7.42335E-05
1144	115-2	5.41120E-09	2.04677E-06	-6.52559E-09	-3.13374E-05	-8.40544E-05	-6.60149E-04
1145	115-3	-3.39623E-09	3.18070E-07	6.83138E-08	-8.69458E-06	1.27938E-03	9.35794E-05
1146	115-4	-1.38151E-08	-6.42727E-06	-5.65273E-08	1.40392E-04	-8.06422E-04	5.13321E-04
1147	115-5	6.29687E-08	-4.47541E-07	-3.77956E-07	1.83290E-06	-4.18642E-03	6.13052E-04
1148	115-6	3.53548E-08	7.98064E-06	-8.25535E-08	-2.42932E-04	1.17322E-04	-2.21195E-03
1149	116-1	5.81865E-10	7.23554E-09	1.86112E-11	-2.38112E-07	-1.51174E-07	-2.22555E-07
1150	116-2	1.50692E-10	1.87396E-09	4.81301E-12	-6.16702E-08	-3.91521E-08	-5.76416E-08

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 136

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1151	116-3	-2.20481E-09	1.74206E-07	-9.02424E-09	-6.99941E-06	-1.81318E-05	6.37527E-06
1152	116-4	-1.77385E-08	1.26350E-06	7.03999E-08	-4.24904E-05	-1.41972E-04	4.74226E-05
1153	116-5	-2.21547E-10	1.76494E-07	1.71151E-10	-6.07717E-06	-8.07614E-06	3.69605E-06
1154	116-6	5.44460E-09	-6.01246E-08	-1.04453E-10	2.19717E-06	3.64438E-06	-2.23873E-06
1155	10001-1	8.66855E-11	-2.47852E-10	1.01349E-10	-9.03636E-04	-1.17019E-03	-3.16098E-03
1156	10001-2	4.85199E-11	-9.94580E-10	9.65954E-11	1.43649E-03	-8.47419E-04	-8.25091E-04
1157	10001-3	-1.97410E-10	-1.24644E-09	2.38028E-10	4.93732E-03	3.15701E-04	1.10290E-03
1158	10002-1	1.08097E-10	-9.11721E-10	2.20805E-10	5.31732E-04	-3.52138E-03	-7.09051E-03
1159	10002-2	4.13837E-11	-2.20734E-10	3.52996E-11	1.76441E-03	1.85992E-03	8.31517E-03
1160	10002-3	-4.07642E-10	-1.75087E-09	4.12608E-10	4.83304E-03	-7.15622E-03	-8.02316E-04
1161	10004-1	-1.79157E-11	-2.51403E-10	3.18788E-11	-5.23612E-04	3.59337E-03	2.94448E-03
1162	10004-2	1.98729E-10	1.04901E-09	-2.33442E-10	1.81645E-03	-1.33474E-04	-8.06081E-05
1163	10004-3	-4.35602E-10	-2.81495E-09	6.10296E-10	-5.88241E-03	2.34129E-04	4.71113E-05
1164	10005-1	5.87468E-12	-4.31860E-11	7.43979E-12	-1.10598E-04	4.95410E-04	4.53007E-04
1165	10005-2	9.48627E-11	-2.21425E-11	-4.34967E-11	-2.20689E-03	-2.29024E-04	-9.41725E-05
1166	10005-3	-4.93683E-11	-7.16686E-11	3.85147E-11	-5.58569E-04	8.57770E-05	5.02423E-05
1167	10006-1	3.86302E-10	-2.26470E-09	2.72075E-10	-3.42871E-03	1.39371E-02	3.73109E-03
1168	10006-2	2.64422E-10	-1.77912E-09	3.11604E-10	-1.41820E-02	1.66626E-03	-1.24659E-03
1169	10006-3	-3.33288E-10	-2.07923E-10	8.56060E-11	6.21506E-03	-8.66078E-05	1.02865E-03
1170	10007-1	1.49333E-10	-5.59165E-10	9.11124E-11	-1.11709E-03	-4.57059E-03	-5.61636E-03
1171	10007-2	9.26972E-11	-7.81583E-10	7.19430E-11	2.32892E-03	2.27612E-05	-2.74188E-04
1172	10007-3	-2.47049E-10	-5.62748E-10	1.45281E-10	5.02570E-03	1.68376E-03	1.21386E-03
1173	10008-1	-1.95297E-11	9.06558E-11	-1.28817E-11	1.03297E-03	1.76077E-03	2.02049E-03
1174	10008-2	-2.94446E-11	-1.78745E-10	1.00659E-11	-3.12413E-03	-1.99822E-05	7.33629E-05
1175	10008-3	6.58276E-12	-1.11729E-10	1.42951E-11	-2.84319E-03	-4.89264E-04	-5.51766E-04
1176	10009-1	-1.76527E-11	-5.03240E-11	1.35899E-11	1.15289E-03	1.20203E-03	1.14757E-03
1177	10009-2	3.59511E-11	-2.92116E-10	9.41690E-12	-2.90556E-03	-7.93546E-04	-8.37636E-04
1178	10009-3	-1.10937E-11	-1.10640E-10	3.35382E-11	2.37675E-04	-3.34488E-04	-4.64432E-04
1179	10010-1	-1.12171E-11	-1.10638E-10	2.00746E-11	5.57124E-04	1.19914E-03	9.75119E-04
1180	10010-2	7.25411E-11	-3.36633E-10	1.98890E-11	-2.87601E-03	-3.58734E-04	-2.80489E-04
1181	10010-3	-2.75268E-11	-8.92647E-11	2.21666E-11	-2.05225E-04	9.08156E-05	3.85348E-05
1182	10011-1	1.74092E-10	-2.34599E-10	1.00641E-10	-1.85870E-04	-3.96405E-04	-5.93257E-03
1183	10011-2	8.70365E-11	-2.15199E-10	1.65951E-10	2.59387E-03	1.06957E-04	-7.57101E-04
1184	10011-3	-2.10426E-10	-1.10832E-09	2.73144E-10	3.55498E-03	-2.00135E-04	-3.35673E-04
1185	10012-1	1.10166E-10	-9.10561E-10	1.19126E-10	1.85414E-05	-5.52233E-03	-7.63981E-03
1186	10012-2	9.47900E-11	8.65051E-11	7.68548E-11	4.20338E-03	-3.79408E-05	-7.42264E-05
1187	10012-3	-2.57842E-10	-8.31718E-10	2.12365E-10	7.21600E-03	-1.47278E-03	-6.80239E-04
1188	10013-1	-3.04999E-11	-3.40644E-10	6.85562E-11	-6.10115E-04	1.14091E-03	8.30905E-04
1189	10013-2	1.44795E-10	4.36680E-10	-5.88425E-11	-2.67656E-03	-3.49097E-06	-6.50449E-05
1190	10013-3	-8.81380E-11	-4.80759E-10	8.45354E-11	-2.46323E-03	7.44361E-05	-1.30750E-04
1191	10016-1	1.94835E-11	1.86213E-10	-4.96972E-11	-2.39835E-04	1.91611E-03	2.21566E-03
1192	10016-2	5.31632E-11	7.09969E-12	1.62080E-11	-1.70741E-03	4.55044E-05	-7.19130E-05
1193	10016-3	1.02795E-11	-1.15312E-10	2.76059E-11	-2.06211E-03	3.97784E-04	4.28786E-04
1194	10017-1	8.03536E-11	1.53192E-10	-4.60632E-11	-1.72413E-04	1.99845E-03	1.86149E-03
1195	10017-2	4.79308E-11	-2.70452E-11	6.44238E-11	-4.17770E-03	4.86060E-04	3.32521E-04
1196	10017-3	-1.01496E-10	-4.04189E-10	9.48383E-11	-1.44526E-03	1.75028E-04	1.18118E-04
1197	10018-1	4.90140E-11	-2.16378E-10	2.89571E-11	-4.30435E-04	2.33531E-03	1.92177E-03
1198	10018-2	9.96401E-11	2.56527E-11	6.30059E-11	-4.29657E-03	2.45479E-04	2.01143E-04
1199	10018-3	-7.70321E-11	-4.00329E-10	8.97604E-11	-7.19840E-04	-4.25649E-05	-7.08467E-05
1200	10019-1	-1.15450E-10	-7.16740E-10	1.71233E-10	-1.08795E-04	1.74658E-03	1.26476E-03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 137

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1201	10019-2	2.24293E-10	1.34977E-09	-4.45155E-10	1.90763E-03	1.13554E-04	6.86821E-04
1202	10019-3	-5.01589E-10	-2.74319E-09	1.14548E-09	-5.45235E-03	-5.10229E-04	-2.15623E-03
1203	10020-1	-1.09638E-11	1.12737E-10	8.59675E-12	-8.72983E-04	3.21573E-03	3.68798E-03
1204	10020-2	1.50815E-11	1.18654E-10	3.32535E-12	-2.41266E-03	-2.70323E-05	-4.24302E-04
1205	10020-3	-1.73647E-11	4.00483E-11	6.56155E-11	-3.31038E-03	1.22204E-04	-7.76963E-05
1206	10021-1	-4.28108E-11	-4.49636E-10	4.64465E-11	1.37323E-03	1.74661E-03	1.53788E-03
1207	10021-2	5.33625E-11	5.07886E-10	3.11138E-11	-4.53904E-03	1.22690E-04	-5.17853E-04
1208	10021-3	-6.91424E-11	-3.32292E-10	5.32146E-11	-3.74268E-04	-6.41821E-05	-2.31500E-04
1209	10022-1	3.62873E-11	-4.05751E-10	2.71921E-11	1.02474E-04	1.82088E-03	1.43333E-03
1210	10022-2	6.90667E-11	7.96186E-10	6.43906E-11	-4.24075E-03	3.71058E-05	-6.06557E-04
1211	10022-3	-4.24845E-11	-3.29793E-10	8.18460E-11	-1.12343E-03	-8.88578E-05	-3.24986E-04
1212	10023-1	1.48629E-10	-3.67008E-10	1.75600E-10	1.83656E-03	-1.38790E-03	-1.80967E-03
1213	10023-2	4.90848E-11	8.04883E-10	7.37698E-11	2.94764E-03	-6.36087E-05	5.06353E-03
1214	10023-3	-2.90589E-10	-1.89353E-09	4.51100E-10	2.06825E-03	-3.51367E-03	-6.53397E-05
1215	10025-1	6.95838E-11	-1.13660E-09	2.00819E-10	-7.12812E-04	-1.16426E-03	-5.11416E-03
1216	10025-2	9.61700E-11	6.91343E-10	1.60890E-10	3.65700E-03	-2.28655E-04	2.23767E-04
1217	10025-3	-2.19399E-10	-1.27240E-09	4.16243E-10	1.94704E-03	2.59101E-05	-1.34584E-04
1218	10026-1	3.10620E-11	2.21307E-11	-8.76349E-12	1.92044E-04	5.63402E-04	6.03844E-04
1219	10026-2	2.05131E-10	1.65632E-09	-1.75346E-10	-1.71724E-03	4.38586E-04	1.89199E-05
1220	10026-3	-1.37230E-10	-8.74888E-10	1.28716E-10	-1.10061E-03	-2.84036E-04	-1.41275E-04
1221	10027-1	2.12620E-10	-7.39519E-10	2.10559E-10	4.91471E-05	-7.40612E-03	-1.00279E-02
1222	10027-2	1.02970E-10	6.98822E-10	8.74121E-11	5.33452E-03	-2.68618E-04	-1.48092E-03
1223	10027-3	-3.34217E-10	-2.41690E-09	5.06576E-10	6.29929E-03	1.30755E-03	-1.65352E-05
1224	10028-1	9.06580E-12	-5.97769E-11	7.98667E-12	5.27113E-07	4.12946E-04	3.19115E-04
1225	10028-2	1.61322E-10	1.00841E-09	-1.33423E-10	-2.59599E-03	-2.90941E-04	-5.45892E-04
1226	10028-3	-8.47728E-11	-5.06084E-10	7.96514E-11	-4.01952E-04	1.16889E-04	9.04642E-05
1227	10029-1	2.12670E-10	-1.57890E-10	1.20922E-10	-5.36482E-04	-7.10444E-04	-7.31991E-03
1228	10029-2	3.12543E-10	3.77733E-10	9.13594E-11	1.24987E-03	1.68001E-04	3.87297E-04
1229	10029-3	-3.20997E-10	-1.44938E-09	3.70386E-10	4.16062E-03	-3.00449E-04	5.59737E-04
1230	10030-1	2.52541E-10	-1.99190E-09	2.37447E-10	-4.10052E-04	-1.37906E-03	-5.12247E-03
1231	10030-2	2.77796E-10	1.54950E-10	1.54806E-10	2.05857E-03	2.66121E-04	4.01155E-04
1232	10030-3	-3.20796E-10	-1.58278E-09	3.52286E-10	3.22767E-03	-6.21064E-05	-1.90687E-04
1233	10031-1	2.78982E-10	-4.91897E-12	2.39391E-10	1.49176E-04	-9.04776E-04	-5.86299E-03
1234	10031-2	2.92837E-10	2.52731E-09	9.76458E-11	1.11128E-03	-6.61984E-05	-1.09573E-03
1235	10031-3	-3.88893E-10	-2.38530E-09	6.02732E-10	2.56379E-03	1.28887E-04	-4.47522E-04
1236	10032-1	2.31685E-10	-1.89524E-09	5.39719E-11	4.08941E-05	-1.29842E-03	-4.60982E-03
1237	10032-2	2.34786E-10	2.32779E-09	2.07998E-10	2.20523E-03	5.74719E-05	-1.17528E-03
1238	10032-3	-3.66018E-10	-2.31833E-09	5.23985E-10	3.86743E-03	6.38116E-04	-4.04496E-04
1239	10033-1	1.16078E-10	-1.06672E-09	1.28517E-10	-2.68995E-04	-1.04165E-03	-4.06913E-03
1240	10033-2	2.41395E-10	-1.28563E-09	9.83990E-11	2.14146E-04	-1.09313E-04	1.58629E-04
1241	10033-3	-2.66472E-10	-8.27495E-10	1.94781E-10	3.25479E-03	5.32938E-04	1.67467E-04
1242	10034-1	4.87562E-10	-8.01620E-10	2.37928E-10	-3.34363E-03	-1.07706E-03	-6.16548E-03
1243	10034-2	2.77287E-10	-2.39552E-09	1.87266E-10	2.24099E-03	-4.75806E-05	5.26050E-04
1244	10034-3	-5.36612E-10	-1.99324E-09	4.07415E-10	1.08388E-02	4.71245E-04	6.74606E-04
1245	10035-1	2.74939E-10	-4.58188E-10	2.56303E-10	2.53565E-04	-5.12848E-04	-6.68249E-03
1246	10035-2	3.17279E-10	6.40612E-10	1.80222E-10	1.11331E-03	-2.58812E-05	2.21782E-04
1247	10035-3	-4.06542E-10	-1.92537E-09	5.02405E-10	5.14386E-03	-4.66336E-05	-5.23722E-05
1248	10036-1	3.49148E-10	1.55298E-10	6.66013E-11	-2.78189E-04	-5.17323E-04	-5.48599E-03
1249	10036-2	2.57306E-10	2.78246E-09	1.36451E-10	8.59474E-04	8.20291E-05	-4.47433E-04
1250	10036-3	-4.86150E-10	-2.54381E-09	6.82476E-10	2.64389E-03	1.67940E-04	-4.69170E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 138

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1251	10037-1	4.27230E-10	-1.43986E-09	2.52912E-11	-1.45828E-04	-7.39495E-04	-5.46782E-03
1252	10037-2	3.23312E-10	6.22101E-10	1.50183E-10	9.15449E-04	3.96828E-05	-5.79248E-05
1253	10037-3	-4.40140E-10	-2.31031E-09	5.02969E-10	4.13896E-03	2.60407E-04	4.78953E-04
1254	10038-1	1.41106E-10	-9.89084E-10	7.85009E-11	2.98372E-04	-4.18145E-04	3.58124E-03
1255	10038-2	2.06808E-10	-4.58323E-10	9.61101E-11	1.93118E-04	-5.78144E-05	2.94309E-04
1256	10038-3	-1.71818E-10	-1.53823E-09	3.28554E-10	-2.18950E-05	-2.25661E-05	-1.44801E-04
1257	10039-1	5.09219E-10	-7.35490E-10	1.42503E-10	7.46996E-05	-5.03249E-04	1.01802E-02
1258	10039-2	2.03016E-10	1.36087E-09	8.86024E-11	-8.09736E-05	4.93577E-05	-9.91414E-04
1259	10039-3	-8.96622E-10	-4.61941E-09	1.12988E-09	-1.32808E-02	9.97337E-04	7.33755E-05
1260	10040-1	2.39346E-10	-1.53467E-10	1.01728E-10	-1.56717E-04	-2.66274E-04	-4.73176E-03
1261	10040-2	2.27229E-10	6.18417E-10	7.32187E-11	2.55394E-04	-1.43857E-05	3.13574E-04
1262	10040-3	-4.43000E-10	-2.01672E-09	4.81981E-10	3.85643E-03	1.52515E-05	1.28605E-04
1263	10041-1	2.31498E-10	-3.96942E-10	4.53312E-11	1.28134E-04	-2.17146E-04	-3.69771E-03
1264	10041-2	1.31847E-10	1.63824E-09	4.37522E-11	4.05451E-05	2.55151E-05	-4.63695E-04
1265	10041-3	-4.47421E-10	-2.56376E-09	6.48483E-10	2.29439E-03	6.68631E-05	-2.30787E-04
1266	10042-1	1.72207E-10	-2.70577E-09	2.63489E-10	4.52564E-04	-6.04960E-04	-5.01742E-03
1267	10042-2	2.81867E-10	2.86394E-09	1.34697E-10	5.20020E-04	9.01546E-05	-2.88399E-04
1268	10042-3	-4.10593E-10	-2.61226E-09	6.19662E-10	3.78494E-03	4.32110E-04	-6.89425E-04
1269	10043-1	9.09370E-11	-1.45145E-09	-3.66416E-11	-3.02467E-04	-3.84230E-04	3.44861E-03
1270	10043-2	1.77709E-10	2.90747E-09	9.43323E-11	1.11362E-04	-2.83379E-06	-4.26252E-04
1271	10043-3	-2.16080E-10	-8.22193E-10	5.33722E-10	-4.41903E-04	8.15788E-06	-3.20219E-04
1272	10044-1	4.59092E-11	5.64653E-11	4.42781E-11	4.76658E-04	9.88201E-06	2.62922E-03
1273	10044-2	7.55187E-11	7.72136E-10	1.43568E-12	2.54293E-04	2.29117E-06	4.06089E-04
1274	10044-3	-4.69950E-11	-2.39210E-10	1.05924E-10	-6.67413E-04	5.40598E-05	3.40193E-04
1275	10045-1	1.68414E-10	-1.71496E-09	2.44938E-11	3.17750E-04	-2.12018E-04	-6.62796E-03
1276	10045-2	7.74333E-11	1.49397E-09	2.98687E-11	-1.42373E-04	5.23290E-05	7.22847E-04
1277	10045-3	-2.92637E-10	-2.04447E-09	4.58511E-10	1.70444E-03	2.56845E-04	-3.61122E-04
1278	10046-1	2.68835E-11	1.16774E-11	-2.90271E-11	6.85859E-05	-1.88699E-05	1.21262E-03
1279	10046-2	9.38773E-11	2.43174E-10	-5.59545E-12	2.40884E-04	-2.24704E-05	2.17134E-04
1280	10046-3	-4.11434E-11	-2.17393E-10	7.33852E-11	-6.72217E-04	2.88468E-05	-2.89894E-04
1281	10047-1	5.12614E-11	1.95597E-10	-2.86984E-11	-2.04029E-04	-3.71298E-05	2.70231E-03
1282	10047-2	9.71063E-11	8.99501E-10	1.46280E-11	1.02855E-04	-3.56795E-06	1.18070E-03
1283	10047-3	-4.25771E-11	-1.84842E-10	8.86065E-11	-6.04694E-04	5.66690E-05	-2.52116E-04
1284	10048-1	2.75432E-10	3.96006E-10	2.77825E-10	-8.87304E-05	-1.85966E-04	9.08670E-04
1285	10048-2	3.22297E-10	4.43163E-09	2.78083E-10	6.33115E-04	-1.97267E-05	1.00546E-03
1286	10048-3	-2.92755E-10	-2.65146E-09	4.01484E-10	-1.00723E-03	5.79852E-05	-4.64154E-05
1287	10049-1	7.61320E-11	-3.57763E-11	6.50507E-12	-5.67741E-05	-4.00261E-05	2.18639E-03
1288	10049-2	2.84122E-11	3.74219E-10	2.27892E-11	-2.44885E-05	1.64730E-05	-5.71383E-04
1289	10049-3	-1.30203E-10	-8.21482E-10	1.61204E-10	-1.26609E-03	1.06431E-04	-4.01023E-04
1290	10050-1	2.16912E-10	-8.69050E-10	1.08514E-10	1.19398E-04	-1.96987E-04	-4.18264E-03
1291	10050-2	1.66127E-10	2.26552E-10	5.89350E-11	-2.03460E-05	-4.94887E-05	-8.90072E-04
1292	10050-3	-2.41549E-10	-1.25951E-09	2.80821E-10	1.76699E-03	1.16373E-04	-6.99440E-05
1293	10051-1	-9.38363E-12	-6.16911E-10	2.28186E-11	-1.99370E-05	-3.04070E-05	2.33544E-03
1294	10051-2	4.44758E-11	1.06993E-10	3.70774E-11	-1.43474E-04	1.15825E-05	-1.52511E-04
1295	10051-3	-1.31760E-10	-6.90452E-10	1.33807E-10	-1.29999E-03	6.23240E-05	3.18371E-04
1296	10052-1	-2.24384E-11	-3.75575E-10	1.91966E-11	8.49071E-05	-1.41257E-05	1.18492E-03
1297	10052-2	1.05928E-10	4.64706E-10	-2.21825E-12	2.72304E-04	-1.65050E-05	-5.45057E-04
1298	10052-3	-4.24424E-11	-2.09426E-10	8.19536E-11	-5.60848E-04	3.13094E-05	-3.82165E-04
1299	10053-1	1.60978E-10	-6.29101E-10	-9.76181E-11	2.42094E-04	-2.44579E-04	1.06709E-03
1300	10053-2	2.53669E-10	-3.28180E-10	1.78628E-10	1.18929E-03	-1.80549E-05	-6.41005E-04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 139

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1301	10053-3	-3.16667E-10	-1.01049E-09	2.24657E-10	-7.91559E-04	8.24139E-05	-2.59392E-04
1302	10054-1	9.93985E-12	-8.57730E-11	1.38220E-11	2.10351E-04	1.68290E-06	2.81008E-04
1303	10054-2	9.59558E-11	-1.52850E-10	-8.82052E-12	8.37019E-05	-5.23739E-05	7.21315E-06
1304	10054-3	-1.98604E-11	-1.14809E-10	2.13617E-11	-2.45568E-04	1.14070E-05	-4.87463E-05
1305	10055-1	6.94427E-11	-1.27879E-09	1.68306E-10	1.03362E-03	-3.48607E-04	-4.00774E-03
1306	10055-2	1.70641E-10	-1.41719E-09	1.11699E-10	2.45361E-03	-1.33615E-05	3.27855E-04
1307	10055-3	-3.12800E-10	-2.03082E-09	3.60919E-10	6.18011E-03	3.12161E-04	-5.06692E-04
1308	10056-1	3.50697E-10	3.34647E-10	-4.55298E-11	8.20922E-04	-5.16202E-04	-4.06064E-03
1309	10056-2	2.87924E-10	1.06189E-09	5.20250E-11	-1.54299E-04	1.17403E-05	1.69428E-05
1310	10056-3	-2.54016E-10	-1.24481E-09	2.87536E-10	3.25016E-03	6.06178E-05	1.48238E-04
1311	10057-1	2.77873E-10	4.33141E-10	-2.93122E-12	-3.41440E-04	5.56655E-05	-3.28981E-03
1312	10057-2	2.38317E-10	2.82013E-09	4.20909E-11	-2.01560E-04	1.62013E-05	3.94025E-04
1313	10057-3	-2.46732E-10	-1.43301E-09	3.48647E-10	1.70723E-03	1.04024E-04	-1.74083E-05
1314	10058-1	6.29136E-11	-7.32319E-10	-2.92773E-11	-3.54420E-04	-3.66509E-05	1.04381E-03
1315	10058-2	1.96527E-10	2.68583E-09	1.12953E-10	-2.23770E-05	7.72068E-05	2.18121E-05
1316	10058-3	-1.44607E-10	-8.82075E-10	2.43471E-10	-2.26296E-03	1.08807E-04	-9.89515E-05
1317	10059-1	1.19626E-10	-3.19667E-10	1.68147E-11	4.43700E-04	-9.40627E-05	1.02709E-03
1318	10059-2	2.34349E-10	7.93611E-10	8.93853E-11	9.77256E-05	4.07350E-05	2.98728E-04
1319	10059-3	-1.58670E-10	-8.14311E-10	2.08360E-10	-2.22140E-03	5.95906E-05	2.14343E-04
1320	10060-1	3.78471E-11	5.30861E-11	3.47950E-12	-1.51240E-04	-1.27680E-05	1.96730E-04
1321	10060-2	8.25009E-11	1.16363E-09	-2.45315E-11	-3.57741E-05	1.63502E-05	-1.28202E-05
1322	10060-3	-1.44093E-11	-6.32456E-11	5.01689E-11	-3.58804E-04	7.51274E-06	6.68267E-05
1323	10061-1	3.20545E-11	-3.55868E-12	1.89657E-11	-1.21593E-04	-1.91480E-05	4.15200E-04
1324	10061-2	3.48264E-11	7.81442E-10	2.65765E-11	9.16273E-06	2.00528E-05	2.02579E-04
1325	10061-3	-5.80456E-11	-4.03814E-10	9.42513E-11	-3.22330E-04	2.19710E-06	-2.51635E-04
1326	10062-1	2.60768E-11	2.07089E-11	5.89960E-12	1.32191E-04	-1.31296E-05	4.93284E-04
1327	10062-2	1.65841E-11	7.12614E-10	3.15096E-11	1.73351E-04	2.06259E-05	2.41758E-04
1328	10062-3	-4.37289E-11	-2.50545E-10	8.24587E-11	-2.16330E-04	7.41822E-06	5.44907E-07
1329	10063-1	1.74654E-11	-4.16855E-11	-4.50720E-12	1.02718E-04	-2.58570E-05	5.14205E-04
1330	10063-2	4.70202E-11	-1.94445E-10	2.36106E-11	1.60253E-04	7.08391E-06	-1.10814E-04
1331	10063-3	-5.51879E-11	-2.32176E-10	4.73870E-11	-1.89798E-04	2.96441E-05	2.00697E-04
1332	10064-1	1.85892E-11	-5.66520E-11	1.94319E-12	-1.08252E-04	-2.27904E-05	5.36731E-04
1333	10064-2	1.80198E-11	-2.26973E-10	1.68378E-11	3.48654E-04	-5.03640E-07	-2.14201E-04
1334	10064-3	-3.52654E-11	-2.13397E-10	4.50946E-11	-7.89320E-05	2.46059E-05	-2.98101E-05
1335	10065-1	3.33477E-10	-1.05738E-09	2.37707E-10	2.96079E-03	-5.01178E-04	-5.08011E-03
1336	10065-2	3.50892E-10	-1.26038E-09	1.82667E-11	2.34269E-04	-2.64189E-06	3.73343E-04
1337	10065-3	-5.67776E-10	-2.03413E-09	5.46735E-10	1.09927E-02	2.51432E-04	-1.30442E-03
1338	10066-1	2.94468E-10	-4.54061E-10	1.13343E-10	1.73795E-03	-3.74298E-04	-4.74809E-03
1339	10066-2	2.17976E-10	-1.02868E-09	6.86132E-11	4.54029E-04	-8.85155E-05	2.62363E-04
1340	10066-3	-4.34962E-10	-1.51359E-09	3.69230E-10	6.42401E-03	-3.07746E-05	6.74706E-04
1341	10067-1	2.92625E-10	-1.83756E-10	2.63396E-11	7.48758E-04	3.32740E-05	-2.20621E-03
1342	10067-2	3.17441E-10	-3.58037E-10	-2.66551E-11	-6.65994E-04	-1.11523E-04	-4.45665E-04
1343	10067-3	-3.22328E-10	-8.47521E-10	2.14848E-10	4.26892E-03	1.02458E-04	1.38869E-04
1344	10068-1	1.98087E-10	-7.43564E-10	6.05797E-11	1.96763E-04	-2.60630E-04	-3.22594E-03
1345	10068-2	1.54941E-10	-5.22669E-10	2.36626E-11	2.49326E-04	-5.20693E-05	3.15303E-04
1346	10068-3	-2.41787E-10	-1.14700E-09	2.30078E-10	2.80487E-03	1.16864E-04	-2.15261E-06
1347	10069-1	1.04679E-10	-1.32004E-10	-3.88619E-11	2.69127E-04	-1.25810E-04	1.20137E-03
1348	10069-2	1.45218E-10	-9.04658E-10	1.35086E-10	7.63409E-04	7.86018E-05	-3.90527E-04
1349	10069-3	-5.76814E-11	-5.84055E-10	9.55377E-11	-7.55634E-04	5.16203E-05	-8.93865E-05
1350	10070-1	4.14528E-10	6.52329E-11	2.47606E-10	1.68793E-03	-5.50012E-04	-6.42384E-03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 140

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1351	10070-2	4.31778E-10	6.67840E-09	1.64854E-10	8.40827E-04	3.61118E-04	-7.47936E-04
1352	10070-3	-5.51107E-10	-3.28624E-09	1.02842E-09	5.30075E-03	-4.44480E-04	-5.66394E-04
1353	10071-1	3.52990E-10	7.78036E-11	-2.77756E-11	-4.70255E-04	-4.77145E-04	-3.57801E-03
1354	10071-2	2.19223E-10	4.10776E-09	1.65111E-10	7.89865E-04	2.81765E-04	-2.73966E-05
1355	10071-3	-3.04681E-10	-2.04129E-09	5.70036E-10	3.38980E-03	-1.12230E-04	-3.08093E-04
1356	10072-1	3.04711E-10	-2.26162E-10	4.07702E-13	-8.75619E-04	-2.08027E-04	-4.17854E-03
1357	10072-2	1.61281E-10	3.65242E-09	9.82741E-11	2.11131E-05	1.30063E-04	-4.08245E-05
1358	10072-3	-5.03602E-10	-3.20469E-09	9.25839E-10	4.67985E-03	-2.90399E-04	-5.04931E-04
1359	10073-1	1.67093E-10	-1.29464E-10	-1.05335E-11	-2.90415E-04	-1.48924E-04	-2.10481E-03
1360	10073-2	1.59737E-10	1.84498E-09	4.40800E-11	-9.77174E-05	1.60200E-05	-2.13161E-04
1361	10073-3	-2.63305E-10	-1.55336E-09	4.48928E-10	1.94404E-03	4.29773E-05	-1.26008E-04
1362	10074-1	9.37883E-11	-1.34086E-09	6.69444E-11	-1.37829E-03	-2.45413E-04	-3.23532E-03
1363	10074-2	2.46659E-10	4.40878E-09	-6.07440E-11	-7.52601E-04	8.69324E-05	2.19995E-04
1364	10074-3	-3.08171E-10	-2.36403E-09	4.52222E-10	2.85520E-03	-1.31204E-04	1.09824E-04
1365	10075-1	7.77635E-11	1.05159E-10	1.13930E-10	1.10179E-04	-2.14258E-05	1.26488E-03
1366	10075-2	1.83168E-10	3.22889E-09	1.28055E-10	4.47709E-05	6.75896E-05	6.35036E-04
1367	10075-3	-6.95272E-11	-4.75661E-10	1.51553E-10	-1.15961E-03	8.15272E-06	3.25133E-05
1368	10076-1	3.09003E-10	7.51264E-10	1.11714E-10	6.16215E-04	-7.05868E-04	-3.42193E-03
1369	10076-2	1.94028E-10	3.05119E-09	2.11726E-10	1.87335E-03	2.07547E-04	-5.41754E-04
1370	10076-3	-3.46137E-10	-2.30933E-09	5.63602E-10	4.48181E-03	-6.23561E-05	-1.13500E-04
1371	10077-1	8.56644E-11	-2.09872E-09	2.20481E-10	1.10855E-03	-4.31354E-04	-3.05582E-03
1372	10077-2	2.26327E-10	3.89909E-09	1.78844E-10	1.60601E-03	3.55384E-04	-8.48604E-05
1373	10077-3	-5.00432E-10	-2.93582E-09	8.57459E-10	5.05966E-03	-5.48455E-04	-3.20851E-04
1374	10078-1	5.04491E-10	-2.52578E-09	2.00682E-10	-5.80858E-04	1.30039E-02	2.61173E-03
1375	10078-2	2.06236E-10	3.81665E-09	4.79899E-10	-1.00101E-02	-7.75892E-04	-5.10783E-03
1376	10078-3	-2.26585E-10	-2.84477E-09	-3.21385E-11	4.58558E-03	7.36893E-04	2.73780E-03
1377	10079-1	8.84512E-11	1.24697E-10	-1.36591E-11	-2.78200E-05	1.34961E-03	9.02208E-04
1378	10079-2	1.34178E-10	1.69711E-09	3.37357E-11	-2.98859E-03	4.38831E-04	1.67785E-04
1379	10079-3	-7.91825E-11	-5.14646E-10	7.07426E-11	-1.16259E-03	-1.46227E-04	1.89924E-05
1380	10080-1	-2.70802E-11	-2.54929E-12	2.64027E-11	-8.97838E-05	1.14508E-03	8.83081E-04
1381	10080-2	6.75103E-11	1.21801E-09	6.17325E-11	-2.73250E-03	3.96468E-04	3.14878E-06
1382	10080-3	-2.60650E-11	-3.64770E-10	6.17246E-11	-2.58569E-04	-2.08344E-04	-2.82000E-04
1383	10081-1	1.50540E-11	5.21175E-12	4.03221E-11	4.40804E-04	-2.65075E-03	-3.63361E-03
1384	10081-2	8.84274E-11	9.82130E-10	5.82782E-12	2.35921E-03	-8.25842E-05	-7.22364E-04
1385	10081-3	-2.65673E-10	-1.89389E-09	4.62738E-10	4.23571E-03	-3.18098E-04	-3.13016E-04
1386	10082-1	1.39355E-10	7.69837E-11	-9.82032E-12	-1.53402E-04	1.36112E-03	1.71551E-03
1387	10082-2	8.48836E-11	8.52965E-10	6.53890E-11	-2.79693E-03	4.83192E-04	-2.01691E-05
1388	10082-3	-2.35174E-11	-2.56260E-10	2.07802E-11	-5.18668E-04	4.84342E-05	1.48451E-04
1389	10083-1	1.87763E-10	1.96934E-11	-5.93190E-11	-3.99490E-04	-2.53674E-04	-1.62407E-03
1390	10083-2	-4.21760E-11	7.05881E-10	2.45814E-10	2.36250E-03	4.88628E-04	8.68367E-05
1391	10083-3	-2.78123E-10	-1.14099E-09	5.57226E-10	2.61789E-03	-1.77939E-04	4.31147E-05
	Total:	1.99988E-04	-2.52463E-06	1.88576E-04	-4.96160E-02	2.37822E+01	-7.18325E-01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:37 CDT Page 141

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

Dir	DOF	GRID-C	Max. Force
T1 -	948	1048-5	-1.96776E-04
T2 -	949	1048-6	-5.33608E-04
T3 -	972	1127-5	2.81267E-04
R1 -	1078	1117-5	1.39459E-01
R2 -	972	1127-5	-1.20177E-01
R3 -	537	271217-1	3.34089E-02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 142

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-1.005970E-05	3.171704E-03	5.047923E-04	51	2.421507E+03	4.920881E+01	7.831826E+00
2	1.123673E-05	3.352123E-03	5.335069E-04	52	2.450952E+03	4.950709E+01	7.879298E+00
3	1.405134E-05	3.748511E-03	5.965941E-04	53	2.501874E+03	5.001873E+01	7.960729E+00
4	2.399143E-05	4.898105E-03	7.795576E-04	54	2.519209E+03	5.019173E+01	7.988261E+00
5	1.276698E-04	1.129911E-02	1.798309E-03	55	2.558488E+03	5.058149E+01	8.050295E+00
6	2.466240E-04	1.570427E-02	2.499412E-03	56	2.622746E+03	5.121275E+01	8.150762E+00
7	2.003419E-03	4.475957E-02	7.123707E-03	57	2.675021E+03	5.172061E+01	8.231591E+00
8	1.408835E+02	1.186944E+01	1.889079E+00	58	2.821459E+03	5.311740E+01	8.453898E+00
9	2.436490E+02	1.560926E+01	2.484291E+00	59	2.866502E+03	5.353972E+01	8.521111E+00
10	2.436638E+02	1.560973E+01	2.484366E+00	60	3.083500E+03	5.552927E+01	8.837758E+00
11	2.799794E+02	1.673259E+01	2.663074E+00	61	3.129785E+03	5.594448E+01	8.903841E+00
12	4.706942E+02	2.169549E+01	3.452944E+00	62	3.247008E+03	5.698253E+01	9.069051E+00
13	4.978207E+02	2.231190E+01	3.551049E+00	63	3.299337E+03	5.743985E+01	9.141837E+00
14	5.475036E+02	2.339879E+01	3.724034E+00	64	3.551938E+03	5.959814E+01	9.485339E+00
15	6.616901E+02	2.572334E+01	4.093996E+00	65	3.659809E+03	6.049636E+01	9.628294E+00
16	7.922593E+02	2.814710E+01	4.479750E+00	66	3.816947E+03	6.178144E+01	9.832822E+00
17	8.630342E+02	2.937744E+01	4.675565E+00	67	3.843330E+03	6.199459E+01	9.866746E+00
18	8.878033E+02	2.979603E+01	4.742185E+00	68	3.863969E+03	6.216083E+01	9.893204E+00
19	9.588617E+02	3.096549E+01	4.928311E+00	69	3.880550E+03	6.229406E+01	9.914408E+00
20	1.064070E+03	3.262008E+01	5.191647E+00	70	3.903945E+03	6.248155E+01	9.944248E+00
21	1.116917E+03	3.342031E+01	5.319007E+00	71	4.019579E+03	6.340015E+01	1.009045E+01
22	1.336016E+03	3.655155E+01	5.817360E+00	72	4.035584E+03	6.352625E+01	1.011052E+01
23	1.386069E+03	3.722994E+01	5.925329E+00	73	4.039986E+03	6.356089E+01	1.011603E+01
24	1.441670E+03	3.796934E+01	6.043007E+00	74	4.103921E+03	6.406185E+01	1.019576E+01
25	1.547680E+03	3.934056E+01	6.261245E+00	75	4.217460E+03	6.494197E+01	1.033584E+01
26	1.563383E+03	3.953964E+01	6.292929E+00	76	4.333015E+03	6.582564E+01	1.047648E+01
27	1.586318E+03	3.982861E+01	6.338920E+00	77	4.376785E+03	6.615727E+01	1.052926E+01
28	1.588532E+03	3.985639E+01	6.343341E+00	78	4.522890E+03	6.725244E+01	1.070356E+01
29	1.594429E+03	3.993030E+01	6.355105E+00	79	4.528743E+03	6.729594E+01	1.071048E+01
30	1.682128E+03	4.101375E+01	6.527541E+00	80	4.595386E+03	6.778928E+01	1.078900E+01
31	1.691273E+03	4.112509E+01	6.545262E+00	81	4.687448E+03	6.846494E+01	1.089653E+01
32	1.701983E+03	4.125509E+01	6.565952E+00	82	4.726885E+03	6.875235E+01	1.094228E+01
33	1.825226E+03	4.272266E+01	6.799523E+00	83	4.767960E+03	6.905042E+01	1.098972E+01
34	1.856920E+03	4.309199E+01	6.858303E+00	84	4.794793E+03	6.924445E+01	1.102060E+01
35	1.880310E+03	4.336255E+01	6.901363E+00	85	4.911057E+03	7.007893E+01	1.115341E+01
36	1.903948E+03	4.363425E+01	6.944607E+00	86	4.967959E+03	7.048375E+01	1.121784E+01
37	1.921784E+03	4.383816E+01	6.977059E+00	87	5.011680E+03	7.079322E+01	1.126709E+01
38	1.962992E+03	4.430567E+01	7.051466E+00	88	5.117215E+03	7.153471E+01	1.138510E+01
39	2.007942E+03	4.481007E+01	7.131744E+00	89	5.173900E+03	7.192983E+01	1.144799E+01
40	2.048590E+03	4.526136E+01	7.203569E+00	90	5.252030E+03	7.247089E+01	1.153410E+01
41	2.070515E+03	4.550291E+01	7.242014E+00	91	5.321197E+03	7.294653E+01	1.160980E+01
42	2.091150E+03	4.572909E+01	7.278011E+00	92	5.355935E+03	7.318425E+01	1.164764E+01
43	2.108530E+03	4.591874E+01	7.308194E+00	93	5.397505E+03	7.346771E+01	1.169275E+01
44	2.127502E+03	4.612485E+01	7.340998E+00	94	5.494470E+03	7.412469E+01	1.179731E+01
45	2.153836E+03	4.640944E+01	7.386291E+00	95	5.575383E+03	7.466849E+01	1.188386E+01
46	2.190636E+03	4.680423E+01	7.449125E+00	96	5.751107E+03	7.583606E+01	1.206968E+01
47	2.197025E+03	4.687243E+01	7.459979E+00	97	5.766256E+03	7.593587E+01	1.208557E+01
48	2.207124E+03	4.698003E+01	7.477105E+00	98	5.872055E+03	7.662934E+01	1.219594E+01
49	2.258318E+03	4.752177E+01	7.563324E+00	99	6.081313E+03	7.798277E+01	1.241134E+01
50	2.363451E+03	4.861534E+01	7.737371E+00	100	6.094689E+03	7.806849E+01	1.242499E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 143

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
101	6.250320E+03	7.905896E+01	1.258262E+01	151	9.672099E+03	9.834683E+01	1.565238E+01
102	6.297992E+03	7.935989E+01	1.263052E+01	152	9.744967E+03	9.871660E+01	1.571123E+01
103	6.333253E+03	7.958174E+01	1.266583E+01	153	9.770486E+03	9.884577E+01	1.573179E+01
104	6.639918E+03	8.148569E+01	1.296885E+01	154	9.817910E+03	9.908537E+01	1.576993E+01
105	6.727669E+03	8.202237E+01	1.305427E+01	155	1.000364E+04	1.000182E+02	1.591839E+01
106	6.750460E+03	8.216118E+01	1.307636E+01	156	1.017296E+04	1.008611E+02	1.605254E+01
107	6.817645E+03	8.256903E+01	1.314127E+01	157	1.034430E+04	1.017069E+02	1.618716E+01
108	6.887471E+03	8.299079E+01	1.320839E+01	158	1.036138E+04	1.017909E+02	1.620052E+01
109	6.916683E+03	8.316660E+01	1.323638E+01	159	1.037718E+04	1.018685E+02	1.621287E+01
110	7.009080E+03	8.372025E+01	1.332449E+01	160	1.038525E+04	1.019080E+02	1.621917E+01
111	7.107772E+03	8.430760E+01	1.341797E+01	161	1.046831E+04	1.023148E+02	1.628390E+01
112	7.224072E+03	8.499454E+01	1.352730E+01	162	1.072523E+04	1.035627E+02	1.648251E+01
113	7.246629E+03	8.512714E+01	1.354840E+01	163	1.084972E+04	1.041620E+02	1.657790E+01
114	7.254680E+03	8.517441E+01	1.355593E+01	164	1.105488E+04	1.051422E+02	1.673390E+01
115	7.301027E+03	8.544604E+01	1.359916E+01	165	1.135374E+04	1.065539E+02	1.695858E+01
116	7.315626E+03	8.553143E+01	1.361275E+01	166	1.144018E+04	1.069588E+02	1.702302E+01
117	7.380011E+03	8.590699E+01	1.367252E+01	167	1.165644E+04	1.079650E+02	1.718317E+01
118	7.391756E+03	8.597532E+01	1.368340E+01	168	1.169835E+04	1.081589E+02	1.721403E+01
119	7.418215E+03	8.612906E+01	1.370787E+01	169	1.170495E+04	1.081894E+02	1.721888E+01
120	7.512968E+03	8.667738E+01	1.379513E+01	170	1.186240E+04	1.089147E+02	1.733431E+01
121	7.523283E+03	8.673686E+01	1.380460E+01	171	1.195580E+04	1.093426E+02	1.740241E+01
122	7.556507E+03	8.692817E+01	1.383505E+01	172	1.198857E+04	1.094923E+02	1.742624E+01
123	7.597471E+03	8.716347E+01	1.387250E+01	173	1.203774E+04	1.097166E+02	1.746195E+01
124	7.631665E+03	8.735940E+01	1.390368E+01	174	1.203988E+04	1.097264E+02	1.746350E+01
125	7.653462E+03	8.748407E+01	1.392352E+01	175	1.208572E+04	1.099351E+02	1.749671E+01
126	7.672840E+03	8.759475E+01	1.394114E+01	176	1.221265E+04	1.105108E+02	1.758835E+01
127	7.699238E+03	8.774530E+01	1.396510E+01	177	1.224577E+04	1.106606E+02	1.761218E+01
128	7.741692E+03	8.798689E+01	1.400355E+01	178	1.236581E+04	1.112016E+02	1.769829E+01
129	7.747405E+03	8.801934E+01	1.400871E+01	179	1.249243E+04	1.117695E+02	1.778868E+01
130	7.771840E+03	8.815804E+01	1.403079E+01	180	1.260224E+04	1.122597E+02	1.786668E+01
131	7.783768E+03	8.822567E+01	1.404155E+01	181	1.265127E+04	1.124779E+02	1.790141E+01
132	7.879866E+03	8.876861E+01	1.412796E+01	182	1.270826E+04	1.127309E+02	1.794168E+01
133	7.925159E+03	8.902336E+01	1.416851E+01	183	1.295575E+04	1.138233E+02	1.811555E+01
134	8.083843E+03	8.991019E+01	1.430965E+01	184	1.297144E+04	1.138922E+02	1.812651E+01
135	8.111677E+03	9.006485E+01	1.433427E+01	185	1.307967E+04	1.143664E+02	1.820198E+01
136	8.127650E+03	9.015348E+01	1.434837E+01	186	1.325232E+04	1.151187E+02	1.832171E+01
137	8.142727E+03	9.023706E+01	1.436167E+01	187	1.330312E+04	1.153392E+02	1.835680E+01
138	8.172363E+03	9.040112E+01	1.438779E+01	188	1.332412E+04	1.154302E+02	1.837128E+01
139	8.306695E+03	9.114107E+01	1.450555E+01	189	1.337925E+04	1.156687E+02	1.840925E+01
140	8.368800E+03	9.148114E+01	1.455968E+01	190	1.348669E+04	1.161322E+02	1.848302E+01
141	8.472351E+03	9.204537E+01	1.464948E+01	191	1.382762E+04	1.175909E+02	1.871517E+01
142	8.543400E+03	9.243051E+01	1.471077E+01	192	1.396205E+04	1.181611E+02	1.880593E+01
143	8.745096E+03	9.351522E+01	1.488341E+01	193	1.425121E+04	1.193784E+02	1.899967E+01
144	8.899874E+03	9.433914E+01	1.501454E+01	194	1.434728E+04	1.197802E+02	1.906360E+01
145	8.947551E+03	9.459150E+01	1.505470E+01	195	1.458581E+04	1.207717E+02	1.922142E+01
146	9.170690E+03	9.576372E+01	1.524127E+01	196	1.464300E+04	1.210083E+02	1.925907E+01
147	9.221578E+03	9.602905E+01	1.528350E+01	197	1.486803E+04	1.219345E+02	1.940648E+01
148	9.399604E+03	9.695155E+01	1.543032E+01	198	1.490750E+04	1.220963E+02	1.943223E+01
149	9.539618E+03	9.767097E+01	1.554482E+01	199	1.496700E+04	1.223397E+02	1.947096E+01
150	9.625049E+03	9.810733E+01	1.561427E+01	200	1.502191E+04	1.225639E+02	1.950665E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 144

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
201	1.511694E+04	1.229510E+02	1.956825E+01	251	1.966756E+04	1.402411E+02	2.232006E+01
202	1.515293E+04	1.230973E+02	1.959154E+01	252	1.976480E+04	1.405873E+02	2.237517E+01
203	1.521626E+04	1.233542E+02	1.963243E+01	253	1.981854E+04	1.407783E+02	2.240557E+01
204	1.542398E+04	1.241933E+02	1.976598E+01	254	1.994045E+04	1.412107E+02	2.247437E+01
205	1.550132E+04	1.245043E+02	1.981547E+01	255	2.001491E+04	1.414740E+02	2.251629E+01
206	1.566740E+04	1.251695E+02	1.992134E+01	256	2.019303E+04	1.421022E+02	2.261626E+01
207	1.567705E+04	1.252080E+02	1.992748E+01	257	2.023090E+04	1.422354E+02	2.263746E+01
208	1.572633E+04	1.254047E+02	1.995878E+01	258	2.029600E+04	1.424640E+02	2.267386E+01
209	1.579465E+04	1.256767E+02	2.000208E+01	259	2.036253E+04	1.426973E+02	2.271099E+01
210	1.585931E+04	1.259338E+02	2.004298E+01	260	2.060585E+04	1.435474E+02	2.284627E+01
211	1.592539E+04	1.261958E+02	2.008469E+01	261	2.074562E+04	1.440334E+02	2.292363E+01
212	1.611398E+04	1.269408E+02	2.020326E+01	262	2.089574E+04	1.445536E+02	2.300642E+01
213	1.618329E+04	1.272136E+02	2.024667E+01	263	2.096529E+04	1.447939E+02	2.304467E+01
214	1.636914E+04	1.279419E+02	2.036259E+01	264	2.104464E+04	1.450677E+02	2.308824E+01
215	1.648866E+04	1.284082E+02	2.043679E+01	265	2.111713E+04	1.453173E+02	2.312797E+01
216	1.654980E+04	1.286460E+02	2.047465E+01	266	2.122971E+04	1.457042E+02	2.318954E+01
217	1.655004E+04	1.286470E+02	2.047480E+01	267	2.125831E+04	1.458023E+02	2.320515E+01
218	1.664502E+04	1.290156E+02	2.053347E+01	268	2.143049E+04	1.463916E+02	2.329894E+01
219	1.671840E+04	1.292997E+02	2.057868E+01	269	2.145650E+04	1.464804E+02	2.331308E+01
220	1.678779E+04	1.295677E+02	2.062134E+01	270	2.152514E+04	1.467145E+02	2.335034E+01
221	1.688991E+04	1.299612E+02	2.068397E+01	271	2.156426E+04	1.468477E+02	2.337154E+01
222	1.697513E+04	1.302886E+02	2.073608E+01	272	2.164813E+04	1.471330E+02	2.341695E+01
223	1.710375E+04	1.307813E+02	2.081449E+01	273	2.174157E+04	1.474502E+02	2.346743E+01
224	1.721866E+04	1.312199E+02	2.088430E+01	274	2.177276E+04	1.475560E+02	2.348426E+01
225	1.734570E+04	1.317031E+02	2.096119E+01	275	2.204411E+04	1.484726E+02	2.363015E+01
226	1.747874E+04	1.322072E+02	2.104143E+01	276	2.211409E+04	1.487081E+02	2.366763E+01
227	1.757115E+04	1.325562E+02	2.109698E+01	277	2.229343E+04	1.493099E+02	2.376340E+01
228	1.764873E+04	1.328485E+02	2.114350E+01	278	2.232883E+04	1.494283E+02	2.378226E+01
229	1.777562E+04	1.333252E+02	2.121937E+01	279	2.233594E+04	1.494521E+02	2.378605E+01
230	1.781454E+04	1.334711E+02	2.124259E+01	280	2.250239E+04	1.500080E+02	2.387451E+01
231	1.784919E+04	1.336008E+02	2.126323E+01	281	2.261574E+04	1.503853E+02	2.393457E+01
232	1.794455E+04	1.339573E+02	2.131996E+01	282	2.272269E+04	1.507405E+02	2.399109E+01
233	1.804405E+04	1.343282E+02	2.137899E+01	283	2.282356E+04	1.510747E+02	2.404428E+01
234	1.806521E+04	1.344069E+02	2.139152E+01	284	2.295322E+04	1.515032E+02	2.411249E+01
235	1.814870E+04	1.347171E+02	2.144089E+01	285	2.300871E+04	1.516862E+02	2.414161E+01
236	1.823421E+04	1.350341E+02	2.149134E+01	286	2.308509E+04	1.519378E+02	2.418165E+01
237	1.830469E+04	1.352948E+02	2.153284E+01	287	2.324187E+04	1.524528E+02	2.426362E+01
238	1.833525E+04	1.354077E+02	2.155081E+01	288	2.351113E+04	1.533334E+02	2.440377E+01
239	1.857777E+04	1.363003E+02	2.169287E+01	289	2.354130E+04	1.534317E+02	2.441942E+01
240	1.868419E+04	1.366901E+02	2.175491E+01	290	2.371263E+04	1.539891E+02	2.450812E+01
241	1.887508E+04	1.373866E+02	2.186576E+01	291	2.394097E+04	1.547287E+02	2.462584E+01
242	1.898027E+04	1.377689E+02	2.192660E+01	292	2.395098E+04	1.547610E+02	2.463098E+01
243	1.902532E+04	1.379323E+02	2.195261E+01	293	2.412239E+04	1.553139E+02	2.471897E+01
244	1.916329E+04	1.384315E+02	2.203206E+01	294	2.430280E+04	1.558935E+02	2.481123E+01
245	1.924874E+04	1.387398E+02	2.208113E+01	295	2.441740E+04	1.562607E+02	2.486966E+01
246	1.932635E+04	1.390193E+02	2.212560E+01	296	2.460077E+04	1.568463E+02	2.496287E+01
247	1.933790E+04	1.390608E+02	2.213221E+01	297	2.467641E+04	1.570873E+02	2.500122E+01
248	1.944486E+04	1.394448E+02	2.219333E+01	298	2.472134E+04	1.572302E+02	2.502397E+01
249	1.958777E+04	1.399563E+02	2.227474E+01	299	2.475349E+04	1.573324E+02	2.504023E+01
250	1.962354E+04	1.400840E+02	2.229507E+01	300	2.476269E+04	1.573616E+02	2.504488E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 145

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
301	2.482779E+04	1.575684E+02	2.507778E+01	351	2.833545E+04	1.683314E+02	2.679077E+01
302	2.489020E+04	1.577663E+02	2.510928E+01	352	2.835941E+04	1.684025E+02	2.680209E+01
303	2.499703E+04	1.581045E+02	2.516311E+01	353	2.844629E+04	1.686603E+02	2.684312E+01
304	2.507403E+04	1.583478E+02	2.520184E+01	354	2.846905E+04	1.687277E+02	2.685385E+01
305	2.512293E+04	1.585021E+02	2.522640E+01	355	2.867610E+04	1.693402E+02	2.695133E+01
306	2.520510E+04	1.587611E+02	2.526762E+01	356	2.875602E+04	1.695760E+02	2.698886E+01
307	2.521235E+04	1.587840E+02	2.527126E+01	357	2.881969E+04	1.697636E+02	2.701872E+01
308	2.526880E+04	1.589616E+02	2.529953E+01	358	2.883854E+04	1.698191E+02	2.702755E+01
309	2.548815E+04	1.596501E+02	2.540910E+01	359	2.886455E+04	1.698957E+02	2.703974E+01
310	2.557778E+04	1.599306E+02	2.545374E+01	360	2.899474E+04	1.702784E+02	2.710065E+01
311	2.559167E+04	1.599740E+02	2.546065E+01	361	2.903312E+04	1.703911E+02	2.711858E+01
312	2.559385E+04	1.599808E+02	2.546173E+01	362	2.920848E+04	1.709049E+02	2.720036E+01
313	2.569684E+04	1.603024E+02	2.551291E+01	363	2.932639E+04	1.712495E+02	2.725520E+01
314	2.580258E+04	1.606318E+02	2.556535E+01	364	2.935119E+04	1.713219E+02	2.726672E+01
315	2.589131E+04	1.609078E+02	2.560927E+01	365	2.937453E+04	1.713900E+02	2.727756E+01
316	2.592440E+04	1.610106E+02	2.562563E+01	366	2.940796E+04	1.714875E+02	2.729308E+01
317	2.603172E+04	1.613435E+02	2.567861E+01	367	2.957271E+04	1.719672E+02	2.736943E+01
318	2.607229E+04	1.614692E+02	2.569861E+01	368	2.966779E+04	1.722434E+02	2.741339E+01
319	2.619248E+04	1.618409E+02	2.575778E+01	369	2.970895E+04	1.723628E+02	2.743240E+01
320	2.622506E+04	1.619415E+02	2.577380E+01	370	3.006729E+04	1.733992E+02	2.759735E+01
321	2.628731E+04	1.621336E+02	2.580437E+01	371	3.038320E+04	1.743078E+02	2.774195E+01
322	2.632111E+04	1.622378E+02	2.582095E+01	372	3.050784E+04	1.746649E+02	2.779879E+01
323	2.634898E+04	1.623237E+02	2.583462E+01	373	3.056044E+04	1.748155E+02	2.782274E+01
324	2.642159E+04	1.625472E+02	2.587019E+01	374	3.062310E+04	1.749946E+02	2.785125E+01
325	2.647153E+04	1.627007E+02	2.589463E+01	375	3.063809E+04	1.750374E+02	2.785807E+01
326	2.648466E+04	1.627411E+02	2.590105E+01	376	3.070005E+04	1.752143E+02	2.788622E+01
327	2.649340E+04	1.627679E+02	2.590532E+01	377	3.075462E+04	1.753700E+02	2.791100E+01
328	2.659540E+04	1.630810E+02	2.595514E+01	378	3.085789E+04	1.756641E+02	2.795781E+01
329	2.661491E+04	1.631408E+02	2.596466E+01	379	3.093163E+04	1.758739E+02	2.799120E+01
330	2.670518E+04	1.634172E+02	2.600866E+01	380	3.098536E+04	1.760266E+02	2.801550E+01
331	2.677273E+04	1.636238E+02	2.604153E+01	381	3.109061E+04	1.763253E+02	2.806304E+01
332	2.690505E+04	1.640276E+02	2.610580E+01	382	3.124315E+04	1.767573E+02	2.813180E+01
333	2.693945E+04	1.641324E+02	2.612248E+01	383	3.141600E+04	1.772456E+02	2.820951E+01
334	2.703321E+04	1.644178E+02	2.616791E+01	384	3.149614E+04	1.774715E+02	2.824547E+01
335	2.709348E+04	1.646010E+02	2.619706E+01	385	3.159699E+04	1.777554E+02	2.829065E+01
336	2.713747E+04	1.647345E+02	2.621832E+01	386	3.176223E+04	1.782196E+02	2.836453E+01
337	2.720652E+04	1.649440E+02	2.625165E+01	387	3.178738E+04	1.782902E+02	2.837576E+01
338	2.726604E+04	1.651243E+02	2.628035E+01	388	3.180927E+04	1.783515E+02	2.838553E+01
339	2.759227E+04	1.661092E+02	2.643710E+01	389	3.197684E+04	1.788207E+02	2.846020E+01
340	2.763725E+04	1.662446E+02	2.645864E+01	390	3.201926E+04	1.789393E+02	2.847907E+01
341	2.765417E+04	1.662954E+02	2.646674E+01	391	3.204296E+04	1.790055E+02	2.848961E+01
342	2.773153E+04	1.665279E+02	2.650373E+01	392	3.213347E+04	1.792581E+02	2.852981E+01
343	2.778259E+04	1.666811E+02	2.652812E+01	393	3.215482E+04	1.793176E+02	2.853929E+01
344	2.785420E+04	1.668958E+02	2.656229E+01	394	3.230390E+04	1.797328E+02	2.860537E+01
345	2.796459E+04	1.672262E+02	2.661487E+01	395	3.241022E+04	1.800284E+02	2.865241E+01
346	2.799872E+04	1.673282E+02	2.663111E+01	396	3.247762E+04	1.802155E+02	2.868218E+01
347	2.803679E+04	1.674419E+02	2.664921E+01	397	3.259655E+04	1.805451E+02	2.873465E+01
348	2.817732E+04	1.678610E+02	2.671591E+01	398	3.277872E+04	1.810490E+02	2.881484E+01
349	2.820590E+04	1.679461E+02	2.672946E+01	399	3.283878E+04	1.812147E+02	2.884122E+01
350	2.832090E+04	1.682882E+02	2.678389E+01	400	3.289866E+04	1.813799E+02	2.886750E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 146

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
401	3.290573E+04	1.813994E+02	2.887061E+01	451	3.734762E+04	1.932553E+02	3.075754E+01
402	3.291213E+04	1.814170E+02	2.887341E+01	452	3.742172E+04	1.934469E+02	3.078804E+01
403	3.291675E+04	1.814297E+02	2.887544E+01	453	3.751517E+04	1.936883E+02	3.082646E+01
404	3.293938E+04	1.814921E+02	2.888536E+01	454	3.756026E+04	1.938047E+02	3.084497E+01
405	3.301115E+04	1.816897E+02	2.891682E+01	455	3.765115E+04	1.940391E+02	3.088227E+01
406	3.306167E+04	1.818287E+02	2.893893E+01	456	3.770057E+04	1.941663E+02	3.090253E+01
407	3.308575E+04	1.818949E+02	2.894947E+01	457	3.788939E+04	1.946520E+02	3.097982E+01
408	3.316101E+04	1.821017E+02	2.898238E+01	458	3.799498E+04	1.949230E+02	3.102296E+01
409	3.329929E+04	1.824809E+02	2.904274E+01	459	3.806898E+04	1.951127E+02	3.105316E+01
410	3.338811E+04	1.827241E+02	2.908145E+01	460	3.814993E+04	1.953201E+02	3.108615E+01
411	3.349099E+04	1.830054E+02	2.912622E+01	461	3.819663E+04	1.954396E+02	3.110518E+01
412	3.358668E+04	1.832667E+02	2.916780E+01	462	3.827354E+04	1.956362E+02	3.113648E+01
413	3.374464E+04	1.836971E+02	2.923631E+01	463	3.834462E+04	1.958178E+02	3.116538E+01
414	3.376230E+04	1.837452E+02	2.924396E+01	464	3.839852E+04	1.959554E+02	3.118727E+01
415	3.392635E+04	1.841911E+02	2.931492E+01	465	3.850025E+04	1.962148E+02	3.122856E+01
416	3.401768E+04	1.844388E+02	2.935435E+01	466	3.856005E+04	1.963671E+02	3.125280E+01
417	3.410603E+04	1.846782E+02	2.939245E+01	467	3.872866E+04	1.967960E+02	3.132105E+01
418	3.416198E+04	1.848296E+02	2.941654E+01	468	3.883231E+04	1.970592E+02	3.136294E+01
419	3.422140E+04	1.849903E+02	2.944212E+01	469	3.913930E+04	1.978366E+02	3.148667E+01
420	3.428590E+04	1.851645E+02	2.946985E+01	470	3.935625E+04	1.983841E+02	3.157381E+01
421	3.429672E+04	1.851937E+02	2.947450E+01	471	3.944747E+04	1.986139E+02	3.161038E+01
422	3.431207E+04	1.852352E+02	2.948109E+01	472	3.948651E+04	1.987121E+02	3.162602E+01
423	3.434369E+04	1.853205E+02	2.949468E+01	473	3.954601E+04	1.988618E+02	3.164984E+01
424	3.448156E+04	1.856921E+02	2.955382E+01	474	3.966268E+04	1.991549E+02	3.169649E+01
425	3.452717E+04	1.858149E+02	2.957336E+01	475	3.988554E+04	1.997136E+02	3.178541E+01
426	3.456838E+04	1.859257E+02	2.959100E+01	476	4.003930E+04	2.000982E+02	3.184662E+01
427	3.462831E+04	1.860868E+02	2.961664E+01	477	4.029465E+04	2.007353E+02	3.194801E+01
428	3.484708E+04	1.866737E+02	2.971005E+01	478	4.048645E+04	2.012125E+02	3.202396E+01
429	3.496383E+04	1.869862E+02	2.975977E+01	479	4.050888E+04	2.012682E+02	3.203283E+01
430	3.504062E+04	1.871914E+02	2.979244E+01	480	4.056716E+04	2.014129E+02	3.205586E+01
431	3.526834E+04	1.877987E+02	2.988909E+01	481	4.068032E+04	2.016936E+02	3.210054E+01
432	3.535047E+04	1.880172E+02	2.992387E+01	482	4.073863E+04	2.018381E+02	3.212354E+01
433	3.564457E+04	1.887977E+02	3.004809E+01	483	4.092802E+04	2.023068E+02	3.219812E+01
434	3.573097E+04	1.890264E+02	3.008448E+01	484	4.116563E+04	2.028932E+02	3.229145E+01
435	3.590826E+04	1.894947E+02	3.015903E+01	485	4.141274E+04	2.035012E+02	3.238822E+01
436	3.599417E+04	1.897213E+02	3.019508E+01	486	4.153599E+04	2.038038E+02	3.243638E+01
437	3.607262E+04	1.899279E+02	3.022797E+01	487	4.158108E+04	2.039144E+02	3.245398E+01
438	3.619954E+04	1.902618E+02	3.028110E+01	488	4.191598E+04	2.047339E+02	3.258442E+01
439	3.621079E+04	1.902913E+02	3.028581E+01	489	4.201300E+04	2.049707E+02	3.262210E+01
440	3.622841E+04	1.903376E+02	3.029317E+01	490	4.216643E+04	2.053447E+02	3.268162E+01
441	3.634815E+04	1.906519E+02	3.034319E+01	491	4.238078E+04	2.058659E+02	3.276458E+01
442	3.649182E+04	1.910283E+02	3.040310E+01	492	4.243370E+04	2.059944E+02	3.278503E+01
443	3.650231E+04	1.910558E+02	3.040747E+01	493	4.262310E+04	2.064536E+02	3.285812E+01
444	3.654583E+04	1.911696E+02	3.042559E+01	494	4.263346E+04	2.064787E+02	3.286211E+01
445	3.659474E+04	1.912975E+02	3.044595E+01	495	4.279240E+04	2.068632E+02	3.292331E+01
446	3.672989E+04	1.916504E+02	3.050211E+01	496	4.295083E+04	2.072458E+02	3.298420E+01
447	3.677994E+04	1.917810E+02	3.052289E+01	497	4.300125E+04	2.073674E+02	3.300355E+01
448	3.702441E+04	1.924173E+02	3.062416E+01	498	4.304792E+04	2.074799E+02	3.302146E+01
449	3.705585E+04	1.924990E+02	3.063716E+01	499	4.308689E+04	2.075738E+02	3.303640E+01
450	3.723495E+04	1.929636E+02	3.071111E+01	500	4.327809E+04	2.080339E+02	3.310962E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 147

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
501	4.340039E+04	2.083276E+02	3.315637E+01	551	4.972973E+04	2.230016E+02	3.549181E+01
502	4.357828E+04	2.087541E+02	3.322425E+01	552	4.983217E+04	2.232312E+02	3.552835E+01
503	4.370855E+04	2.090659E+02	3.327387E+01	553	4.987384E+04	2.233245E+02	3.554320E+01
504	4.383415E+04	2.093661E+02	3.332164E+01	554	4.995522E+04	2.235066E+02	3.557219E+01
505	4.403533E+04	2.098460E+02	3.339802E+01	555	5.008716E+04	2.238016E+02	3.561913E+01
506	4.409290E+04	2.099831E+02	3.341985E+01	556	5.016087E+04	2.239662E+02	3.564533E+01
507	4.428724E+04	2.104453E+02	3.349341E+01	557	5.025555E+04	2.241775E+02	3.567896E+01
508	4.440824E+04	2.107326E+02	3.353914E+01	558	5.035420E+04	2.243974E+02	3.571396E+01
509	4.463115E+04	2.112609E+02	3.362321E+01	559	5.053011E+04	2.247890E+02	3.577629E+01
510	4.471804E+04	2.114664E+02	3.365592E+01	560	5.055262E+04	2.248391E+02	3.578425E+01
511	4.477278E+04	2.115958E+02	3.367652E+01	561	5.063449E+04	2.250211E+02	3.581322E+01
512	4.482979E+04	2.117305E+02	3.369795E+01	562	5.083041E+04	2.254560E+02	3.588244E+01
513	4.495063E+04	2.120156E+02	3.374334E+01	563	5.093267E+04	2.256827E+02	3.591851E+01
514	4.501662E+04	2.121712E+02	3.376810E+01	564	5.098586E+04	2.258005E+02	3.593726E+01
515	4.507475E+04	2.123082E+02	3.378989E+01	565	5.109874E+04	2.260503E+02	3.597702E+01
516	4.514305E+04	2.124690E+02	3.381548E+01	566	5.115571E+04	2.261763E+02	3.599707E+01
517	4.531325E+04	2.128691E+02	3.387917E+01	567	5.137517E+04	2.266609E+02	3.607420E+01
518	4.550942E+04	2.133294E+02	3.395243E+01	568	5.158084E+04	2.271142E+02	3.614634E+01
519	4.563986E+04	2.136349E+02	3.400105E+01	569	5.158582E+04	2.271251E+02	3.614809E+01
520	4.575271E+04	2.138988E+02	3.404306E+01	570	5.171639E+04	2.274124E+02	3.619381E+01
521	4.593817E+04	2.143319E+02	3.411198E+01	571	5.192043E+04	2.278606E+02	3.626513E+01
522	4.604598E+04	2.145833E+02	3.415199E+01	572	5.220361E+04	2.284811E+02	3.636390E+01
523	4.615283E+04	2.148321E+02	3.419159E+01	573	5.238085E+04	2.288686E+02	3.642557E+01
524	4.631437E+04	2.152077E+02	3.425137E+01	574	5.249451E+04	2.291168E+02	3.646507E+01
525	4.635702E+04	2.153068E+02	3.426714E+01	575	5.276787E+04	2.297126E+02	3.655989E+01
526	4.652080E+04	2.156868E+02	3.432762E+01	576	5.288125E+04	2.299592E+02	3.659915E+01
527	4.661281E+04	2.159000E+02	3.436155E+01	577	5.294947E+04	2.301075E+02	3.662275E+01
528	4.676919E+04	2.162619E+02	3.441914E+01	578	5.301514E+04	2.302502E+02	3.664545E+01
529	4.693791E+04	2.166516E+02	3.448117E+01	579	5.308296E+04	2.303974E+02	3.666888E+01
530	4.696811E+04	2.167213E+02	3.449226E+01	580	5.310587E+04	2.304471E+02	3.667680E+01
531	4.710853E+04	2.170450E+02	3.454378E+01	581	5.320645E+04	2.306652E+02	3.671151E+01
532	4.715607E+04	2.171545E+02	3.456121E+01	582	5.326059E+04	2.307826E+02	3.673019E+01
533	4.727711E+04	2.174330E+02	3.460554E+01	583	5.327156E+04	2.308063E+02	3.673397E+01
534	4.740920E+04	2.177365E+02	3.465385E+01	584	5.337078E+04	2.310212E+02	3.676816E+01
535	4.755845E+04	2.180790E+02	3.470835E+01	585	5.355793E+04	2.314259E+02	3.683257E+01
536	4.762529E+04	2.182322E+02	3.473273E+01	586	5.387613E+04	2.321123E+02	3.694182E+01
537	4.769852E+04	2.183999E+02	3.475943E+01	587	5.398952E+04	2.323565E+02	3.698068E+01
538	4.785215E+04	2.187513E+02	3.481536E+01	588	5.405828E+04	2.325044E+02	3.700422E+01
539	4.791916E+04	2.189045E+02	3.483973E+01	589	5.420003E+04	2.328090E+02	3.705270E+01
540	4.796351E+04	2.190057E+02	3.485585E+01	590	5.436486E+04	2.331627E+02	3.710900E+01
541	4.808879E+04	2.192916E+02	3.490134E+01	591	5.440325E+04	2.332450E+02	3.712210E+01
542	4.822962E+04	2.196124E+02	3.495241E+01	592	5.455373E+04	2.335674E+02	3.717341E+01
543	4.839557E+04	2.199899E+02	3.501249E+01	593	5.461717E+04	2.337032E+02	3.719501E+01
544	4.861450E+04	2.204870E+02	3.509159E+01	594	5.487315E+04	2.342502E+02	3.728207E+01
545	4.886742E+04	2.210598E+02	3.518275E+01	595	5.496080E+04	2.344372E+02	3.731184E+01
546	4.889906E+04	2.211313E+02	3.519414E+01	596	5.507319E+04	2.346768E+02	3.734997E+01
547	4.915023E+04	2.216985E+02	3.528441E+01	597	5.545151E+04	2.354814E+02	3.747804E+01
548	4.936229E+04	2.221763E+02	3.536045E+01	598	5.557999E+04	2.357541E+02	3.752143E+01
549	4.945607E+04	2.223872E+02	3.539402E+01	599	5.564284E+04	2.358874E+02	3.754264E+01
550	4.966544E+04	2.228574E+02	3.546886E+01	600	5.565654E+04	2.359164E+02	3.754726E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 148

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
601	5.592108E+04	2.364764E+02	3.763638E+01	651	6.333111E+04	2.516567E+02	4.005241E+01
602	5.609417E+04	2.368421E+02	3.769459E+01	652	6.352288E+04	2.520375E+02	4.011301E+01
603	5.623290E+04	2.371348E+02	3.774117E+01	653	6.360552E+04	2.522013E+02	4.013909E+01
604	5.645095E+04	2.375941E+02	3.781427E+01	654	6.374580E+04	2.524793E+02	4.018333E+01
605	5.674439E+04	2.382108E+02	3.791243E+01	655	6.384696E+04	2.526796E+02	4.021520E+01
606	5.694913E+04	2.386402E+02	3.798076E+01	656	6.402388E+04	2.530294E+02	4.027088E+01
607	5.732536E+04	2.394272E+02	3.810601E+01	657	6.408078E+04	2.531418E+02	4.028877E+01
608	5.753407E+04	2.398626E+02	3.817532E+01	658	6.411805E+04	2.532154E+02	4.030049E+01
609	5.766834E+04	2.401423E+02	3.821984E+01	659	6.418241E+04	2.533425E+02	4.032071E+01
610	5.787386E+04	2.405699E+02	3.828788E+01	660	6.421933E+04	2.534153E+02	4.033230E+01
611	5.796441E+04	2.407580E+02	3.831782E+01	661	6.444767E+04	2.538655E+02	4.040394E+01
612	5.832379E+04	2.415032E+02	3.843643E+01	662	6.470388E+04	2.543696E+02	4.048417E+01
613	5.834560E+04	2.415483E+02	3.844361E+01	663	6.477682E+04	2.545129E+02	4.050699E+01
614	5.855491E+04	2.419812E+02	3.851251E+01	664	6.482839E+04	2.546142E+02	4.052311E+01
615	5.884434E+04	2.425785E+02	3.860757E+01	665	6.496732E+04	2.548869E+02	4.056651E+01
616	5.901462E+04	2.429292E+02	3.866339E+01	666	6.539956E+04	2.557334E+02	4.070123E+01
617	5.907001E+04	2.430432E+02	3.868153E+01	667	6.550626E+04	2.559419E+02	4.073442E+01
618	5.925337E+04	2.434202E+02	3.874152E+01	668	6.555503E+04	2.560372E+02	4.074958E+01
619	5.937582E+04	2.436715E+02	3.878153E+01	669	6.566024E+04	2.562425E+02	4.078227E+01
620	5.956485E+04	2.440591E+02	3.884322E+01	670	6.581053E+04	2.565356E+02	4.082891E+01
621	5.961960E+04	2.441712E+02	3.886106E+01	671	6.607096E+04	2.570427E+02	4.090962E+01
622	5.984031E+04	2.446228E+02	3.893293E+01	672	6.622309E+04	2.573385E+02	4.095669E+01
623	5.995411E+04	2.448553E+02	3.896993E+01	673	6.635911E+04	2.576026E+02	4.099873E+01
624	6.014015E+04	2.452349E+02	3.903034E+01	674	6.638770E+04	2.576581E+02	4.100756E+01
625	6.024307E+04	2.454446E+02	3.906373E+01	675	6.659971E+04	2.580692E+02	4.107299E+01
626	6.034282E+04	2.456478E+02	3.909606E+01	676	6.680480E+04	2.584662E+02	4.113618E+01
627	6.037337E+04	2.457099E+02	3.910595E+01	677	6.686270E+04	2.585782E+02	4.115400E+01
628	6.044948E+04	2.458648E+02	3.913059E+01	678	6.725056E+04	2.593271E+02	4.127319E+01
629	6.048851E+04	2.459441E+02	3.914322E+01	679	6.742111E+04	2.596558E+02	4.132550E+01
630	6.071233E+04	2.463987E+02	3.921557E+01	680	6.743275E+04	2.596782E+02	4.132906E+01
631	6.086119E+04	2.467006E+02	3.926362E+01	681	6.745954E+04	2.597297E+02	4.133727E+01
632	6.102003E+04	2.470223E+02	3.931482E+01	682	6.769897E+04	2.601903E+02	4.141057E+01
633	6.117079E+04	2.473273E+02	3.936336E+01	683	6.775902E+04	2.603056E+02	4.142893E+01
634	6.129124E+04	2.475707E+02	3.940210E+01	684	6.782451E+04	2.604314E+02	4.144894E+01
635	6.132467E+04	2.476382E+02	3.941284E+01	685	6.793565E+04	2.606447E+02	4.148289E+01
636	6.148329E+04	2.479582E+02	3.946378E+01	686	6.797970E+04	2.607292E+02	4.149634E+01
637	6.150140E+04	2.479948E+02	3.946959E+01	687	6.801308E+04	2.607932E+02	4.150652E+01
638	6.166630E+04	2.483270E+02	3.952247E+01	688	6.819949E+04	2.611503E+02	4.156337E+01
639	6.178476E+04	2.485654E+02	3.956041E+01	689	6.845560E+04	2.616402E+02	4.164133E+01
640	6.185478E+04	2.487062E+02	3.958282E+01	690	6.847374E+04	2.616749E+02	4.164685E+01
641	6.203527E+04	2.490688E+02	3.964053E+01	691	6.854192E+04	2.618051E+02	4.166758E+01
642	6.215017E+04	2.492994E+02	3.967723E+01	692	6.889678E+04	2.624820E+02	4.177530E+01
643	6.237246E+04	2.497448E+02	3.974812E+01	693	6.898756E+04	2.626548E+02	4.180281E+01
644	6.253279E+04	2.500656E+02	3.979917E+01	694	6.925145E+04	2.631567E+02	4.188269E+01
645	6.265945E+04	2.503187E+02	3.983946E+01	695	6.925701E+04	2.631673E+02	4.188437E+01
646	6.295654E+04	2.509114E+02	3.993379E+01	696	6.953310E+04	2.636913E+02	4.196777E+01
647	6.307292E+04	2.511432E+02	3.997069E+01	697	6.965117E+04	2.639151E+02	4.200339E+01
648	6.323842E+04	2.514725E+02	4.002309E+01	698	6.971001E+04	2.640265E+02	4.202113E+01
649	6.324723E+04	2.514900E+02	4.002588E+01	699	6.983732E+04	2.642675E+02	4.205948E+01
650	6.332144E+04	2.516375E+02	4.004935E+01	700	7.011815E+04	2.647983E+02	4.214396E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 149

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
701	7.031118E+04	2.651625E+02	4.220193E+01	751	7.789222E+04	2.790918E+02	4.441884E+01
702	7.049959E+04	2.655176E+02	4.225844E+01	752	7.805347E+04	2.793805E+02	4.446479E+01
703	7.051947E+04	2.655550E+02	4.226439E+01	753	7.812592E+04	2.795101E+02	4.448542E+01
704	7.067129E+04	2.658407E+02	4.230986E+01	754	7.831373E+04	2.798459E+02	4.453886E+01
705	7.083824E+04	2.661545E+02	4.235981E+01	755	7.841244E+04	2.800222E+02	4.456692E+01
706	7.095182E+04	2.663678E+02	4.239376E+01	756	7.846286E+04	2.801122E+02	4.458124E+01
707	7.097487E+04	2.664111E+02	4.240064E+01	757	7.851636E+04	2.802077E+02	4.459644E+01
708	7.109909E+04	2.666441E+02	4.243773E+01	758	7.871108E+04	2.805550E+02	4.465171E+01
709	7.155870E+04	2.675046E+02	4.257468E+01	759	7.879632E+04	2.807068E+02	4.467588E+01
710	7.163287E+04	2.676432E+02	4.259674E+01	760	7.908969E+04	2.812289E+02	4.475897E+01
711	7.185277E+04	2.680537E+02	4.266207E+01	761	7.932690E+04	2.816503E+02	4.482604E+01
712	7.200570E+04	2.683388E+02	4.270744E+01	762	7.934788E+04	2.816876E+02	4.483197E+01
713	7.243117E+04	2.691304E+02	4.283343E+01	763	7.939534E+04	2.817718E+02	4.484537E+01
714	7.252946E+04	2.693129E+02	4.286249E+01	764	7.942226E+04	2.818196E+02	4.485298E+01
715	7.271112E+04	2.696500E+02	4.291613E+01	765	7.952275E+04	2.819978E+02	4.488134E+01
716	7.275479E+04	2.697310E+02	4.292901E+01	766	7.966533E+04	2.822505E+02	4.492156E+01
717	7.297207E+04	2.701334E+02	4.299307E+01	767	7.997857E+04	2.828048E+02	4.500979E+01
718	7.302424E+04	2.702300E+02	4.300844E+01	768	8.025530E+04	2.832937E+02	4.508759E+01
719	7.321270E+04	2.705785E+02	4.306390E+01	769	8.030105E+04	2.833744E+02	4.510044E+01
720	7.346717E+04	2.710483E+02	4.313867E+01	770	8.037869E+04	2.835114E+02	4.512223E+01
721	7.359146E+04	2.712775E+02	4.317515E+01	771	8.063109E+04	2.839561E+02	4.519302E+01
722	7.374126E+04	2.715534E+02	4.321907E+01	772	8.086349E+04	2.843651E+02	4.525811E+01
723	7.385239E+04	2.717580E+02	4.325162E+01	773	8.101426E+04	2.846300E+02	4.530028E+01
724	7.414162E+04	2.722896E+02	4.333623E+01	774	8.116742E+04	2.848990E+02	4.534308E+01
725	7.439619E+04	2.727567E+02	4.341057E+01	775	8.128066E+04	2.850976E+02	4.537470E+01
726	7.451248E+04	2.729697E+02	4.344448E+01	776	8.154461E+04	2.855602E+02	4.544831E+01
727	7.466235E+04	2.732441E+02	4.348815E+01	777	8.174805E+04	2.859162E+02	4.550497E+01
728	7.480557E+04	2.735061E+02	4.352984E+01	778	8.179045E+04	2.859903E+02	4.551677E+01
729	7.507379E+04	2.739960E+02	4.360781E+01	779	8.188316E+04	2.861523E+02	4.554256E+01
730	7.512970E+04	2.740980E+02	4.362405E+01	780	8.201687E+04	2.863859E+02	4.557973E+01
731	7.522992E+04	2.742807E+02	4.365314E+01	781	8.218284E+04	2.866755E+02	4.562582E+01
732	7.529275E+04	2.743952E+02	4.367136E+01	782	8.225551E+04	2.868022E+02	4.564599E+01
733	7.535288E+04	2.745048E+02	4.368879E+01	783	8.231574E+04	2.869072E+02	4.566270E+01
734	7.536643E+04	2.745295E+02	4.369272E+01	784	8.240221E+04	2.870579E+02	4.568668E+01
735	7.540565E+04	2.746009E+02	4.370409E+01	785	8.246361E+04	2.871648E+02	4.570369E+01
736	7.554675E+04	2.748577E+02	4.374496E+01	786	8.264949E+04	2.874882E+02	4.575518E+01
737	7.573879E+04	2.752068E+02	4.380052E+01	787	8.269974E+04	2.875756E+02	4.576908E+01
738	7.593632E+04	2.755655E+02	4.385761E+01	788	8.288811E+04	2.879029E+02	4.582118E+01
739	7.612303E+04	2.759040E+02	4.391149E+01	789	8.308529E+04	2.882452E+02	4.587565E+01
740	7.621223E+04	2.760656E+02	4.393721E+01	790	8.311623E+04	2.882988E+02	4.588419E+01
741	7.651428E+04	2.766122E+02	4.402419E+01	791	8.319251E+04	2.884311E+02	4.590524E+01
742	7.671734E+04	2.769790E+02	4.408257E+01	792	8.331996E+04	2.886520E+02	4.594039E+01
743	7.678754E+04	2.771056E+02	4.410273E+01	793	8.339174E+04	2.887763E+02	4.596017E+01
744	7.691032E+04	2.773271E+02	4.413798E+01	794	8.351698E+04	2.889930E+02	4.599467E+01
745	7.692844E+04	2.773598E+02	4.414318E+01	795	8.359040E+04	2.891200E+02	4.601488E+01
746	7.707239E+04	2.776192E+02	4.418446E+01	796	8.370764E+04	2.893227E+02	4.604714E+01
747	7.726339E+04	2.779629E+02	4.423917E+01	797	8.384439E+04	2.895590E+02	4.608474E+01
748	7.746190E+04	2.783198E+02	4.429597E+01	798	8.386154E+04	2.895886E+02	4.608945E+01
749	7.755233E+04	2.784822E+02	4.432182E+01	799	8.400197E+04	2.898309E+02	4.612803E+01
750	7.772829E+04	2.787979E+02	4.437207E+01	800	8.404573E+04	2.899064E+02	4.614004E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 150

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
801	8.420236E+04	2.901764E+02	4.618301E+01	851	9.222813E+04	3.036908E+02	4.833390E+01
802	8.430663E+04	2.903560E+02	4.621160E+01	852	9.256407E+04	3.042434E+02	4.842185E+01
803	8.454993E+04	2.907747E+02	4.627823E+01	853	9.262119E+04	3.043373E+02	4.843679E+01
804	8.496720E+04	2.914913E+02	4.639229E+01	854	9.265184E+04	3.043877E+02	4.844480E+01
805	8.523398E+04	2.919486E+02	4.646506E+01	855	9.274833E+04	3.045461E+02	4.847002E+01
806	8.535174E+04	2.921502E+02	4.649715E+01	856	9.288854E+04	3.047762E+02	4.850664E+01
807	8.542851E+04	2.922816E+02	4.651806E+01	857	9.294898E+04	3.048753E+02	4.852242E+01
808	8.552466E+04	2.924460E+02	4.654423E+01	858	9.300253E+04	3.049632E+02	4.853640E+01
809	8.570788E+04	2.927591E+02	4.659405E+01	859	9.317875E+04	3.052519E+02	4.858235E+01
810	8.599770E+04	2.932536E+02	4.667277E+01	860	9.335942E+04	3.055477E+02	4.862943E+01
811	8.616510E+04	2.935389E+02	4.671817E+01	861	9.354495E+04	3.058512E+02	4.867773E+01
812	8.641707E+04	2.939678E+02	4.678643E+01	862	9.355482E+04	3.058673E+02	4.868030E+01
813	8.646378E+04	2.940472E+02	4.679907E+01	863	9.367286E+04	3.060602E+02	4.871100E+01
814	8.673363E+04	2.945057E+02	4.687204E+01	864	9.372411E+04	3.061439E+02	4.872432E+01
815	8.685540E+04	2.947124E+02	4.690494E+01	865	9.376373E+04	3.062086E+02	4.873462E+01
816	8.708267E+04	2.950977E+02	4.696626E+01	866	9.394608E+04	3.065062E+02	4.878198E+01
817	8.722592E+04	2.953403E+02	4.700488E+01	867	9.397207E+04	3.065486E+02	4.878873E+01
818	8.724907E+04	2.953795E+02	4.701111E+01	868	9.403354E+04	3.066489E+02	4.880469E+01
819	8.736571E+04	2.955769E+02	4.704253E+01	869	9.417342E+04	3.068769E+02	4.884097E+01
820	8.744682E+04	2.957141E+02	4.706436E+01	870	9.421519E+04	3.069449E+02	4.885180E+01
821	8.767111E+04	2.960931E+02	4.712468E+01	871	9.429797E+04	3.070797E+02	4.887326E+01
822	8.788353E+04	2.964516E+02	4.718173E+01	872	9.439730E+04	3.072414E+02	4.889899E+01
823	8.810203E+04	2.968199E+02	4.724035E+01	873	9.445650E+04	3.073378E+02	4.891432E+01
824	8.838869E+04	2.973024E+02	4.731714E+01	874	9.462234E+04	3.076074E+02	4.895724E+01
825	8.868813E+04	2.978055E+02	4.739722E+01	875	9.483073E+04	3.079460E+02	4.901112E+01
826	8.874277E+04	2.978972E+02	4.741182E+01	876	9.492416E+04	3.080976E+02	4.903526E+01
827	8.891675E+04	2.981891E+02	4.745827E+01	877	9.495294E+04	3.081444E+02	4.904270E+01
828	8.905568E+04	2.984220E+02	4.749533E+01	878	9.506840E+04	3.083316E+02	4.907251E+01
829	8.914687E+04	2.985747E+02	4.751965E+01	879	9.526279E+04	3.086467E+02	4.912265E+01
830	8.926372E+04	2.987704E+02	4.755078E+01	880	9.529673E+04	3.087017E+02	4.913140E+01
831	8.933807E+04	2.988947E+02	4.757058E+01	881	9.549759E+04	3.090269E+02	4.918315E+01
832	8.945675E+04	2.990932E+02	4.760216E+01	882	9.576310E+04	3.094561E+02	4.925147E+01
833	8.953224E+04	2.992194E+02	4.762224E+01	883	9.581727E+04	3.095437E+02	4.926540E+01
834	8.983712E+04	2.997284E+02	4.770326E+01	884	9.602699E+04	3.098822E+02	4.931929E+01
835	8.996586E+04	2.999431E+02	4.773743E+01	885	9.614000E+04	3.100645E+02	4.934830E+01
836	9.010261E+04	3.001710E+02	4.777369E+01	886	9.630168E+04	3.103251E+02	4.938978E+01
837	9.023404E+04	3.003898E+02	4.780852E+01	887	9.646779E+04	3.105926E+02	4.943235E+01
838	9.025365E+04	3.004225E+02	4.781372E+01	888	9.656807E+04	3.107540E+02	4.945804E+01
839	9.044348E+04	3.007382E+02	4.786398E+01	889	9.678845E+04	3.111084E+02	4.951444E+01
840	9.061776E+04	3.010278E+02	4.791007E+01	890	9.695314E+04	3.113730E+02	4.955655E+01
841	9.070447E+04	3.011718E+02	4.793299E+01	891	9.712899E+04	3.116552E+02	4.960147E+01
842	9.089529E+04	3.014884E+02	4.798338E+01	892	9.728691E+04	3.119085E+02	4.964178E+01
843	9.118040E+04	3.019609E+02	4.805857E+01	893	9.734025E+04	3.119940E+02	4.965539E+01
844	9.131677E+04	3.021866E+02	4.809450E+01	894	9.749262E+04	3.122381E+02	4.969423E+01
845	9.137122E+04	3.022767E+02	4.810884E+01	895	9.775131E+04	3.126521E+02	4.976012E+01
846	9.142249E+04	3.023615E+02	4.812233E+01	896	9.784286E+04	3.127984E+02	4.978342E+01
847	9.185066E+04	3.030687E+02	4.823489E+01	897	9.798684E+04	3.130285E+02	4.982003E+01
848	9.192382E+04	3.031894E+02	4.825409E+01	898	9.799246E+04	3.130375E+02	4.982146E+01
849	9.197328E+04	3.032710E+02	4.826707E+01	899	9.816452E+04	3.133122E+02	4.986518E+01
850	9.212347E+04	3.035185E+02	4.830647E+01	900	9.822459E+04	3.134080E+02	4.988044E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 151

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
901	9.832859E+04	3.135739E+02	4.990684E+01	951	1.060755E+05	3.256923E+02	5.183554E+01
902	9.859163E+04	3.139930E+02	4.997354E+01	952	1.064052E+05	3.261980E+02	5.191603E+01
903	9.870064E+04	3.141666E+02	5.000116E+01	953	1.064935E+05	3.263334E+02	5.193757E+01
904	9.876833E+04	3.142743E+02	5.001831E+01	954	1.065617E+05	3.264379E+02	5.195420E+01
905	9.891526E+04	3.145080E+02	5.005550E+01	955	1.065787E+05	3.264639E+02	5.195834E+01
906	9.893067E+04	3.145325E+02	5.005940E+01	956	1.066891E+05	3.266330E+02	5.198526E+01
907	9.907595E+04	3.147633E+02	5.009614E+01	957	1.068199E+05	3.268331E+02	5.201711E+01
908	9.915159E+04	3.148835E+02	5.011526E+01	958	1.069549E+05	3.270396E+02	5.204996E+01
909	9.920438E+04	3.149673E+02	5.012860E+01	959	1.071941E+05	3.274050E+02	5.210813E+01
910	9.942491E+04	3.153172E+02	5.018429E+01	960	1.072786E+05	3.275341E+02	5.212867E+01
911	9.966482E+04	3.156973E+02	5.024479E+01	961	1.073197E+05	3.275969E+02	5.213866E+01
912	9.973599E+04	3.158101E+02	5.026273E+01	962	1.075354E+05	3.279258E+02	5.219102E+01
913	9.976095E+04	3.158496E+02	5.026902E+01	963	1.075475E+05	3.279443E+02	5.219396E+01
914	9.990775E+04	3.160819E+02	5.030599E+01	964	1.076569E+05	3.281112E+02	5.222051E+01
915	1.000301E+05	3.162754E+02	5.033679E+01	965	1.077127E+05	3.281961E+02	5.223403E+01
916	1.000378E+05	3.162876E+02	5.033873E+01	966	1.078594E+05	3.284195E+02	5.226958E+01
917	1.002449E+05	3.166148E+02	5.039081E+01	967	1.080010E+05	3.286351E+02	5.230390E+01
918	1.003551E+05	3.167887E+02	5.041849E+01	968	1.082843E+05	3.290658E+02	5.237245E+01
919	1.005340E+05	3.170709E+02	5.046341E+01	969	1.084169E+05	3.292672E+02	5.240449E+01
920	1.006546E+05	3.172611E+02	5.049367E+01	970	1.085560E+05	3.294784E+02	5.243812E+01
921	1.007908E+05	3.174757E+02	5.052782E+01	971	1.085984E+05	3.295428E+02	5.244836E+01
922	1.011578E+05	3.180531E+02	5.061972E+01	972	1.087366E+05	3.297523E+02	5.248172E+01
923	1.012401E+05	3.181824E+02	5.064031E+01	973	1.088695E+05	3.299539E+02	5.251379E+01
924	1.016363E+05	3.188045E+02	5.073931E+01	974	1.092145E+05	3.304762E+02	5.259693E+01
925	1.017065E+05	3.189146E+02	5.075683E+01	975	1.094505E+05	3.308330E+02	5.265371E+01
926	1.017996E+05	3.190605E+02	5.078006E+01	976	1.095392E+05	3.309671E+02	5.267505E+01
927	1.019796E+05	3.193425E+02	5.082494E+01	977	1.097119E+05	3.312278E+02	5.271655E+01
928	1.020599E+05	3.194682E+02	5.084494E+01	978	1.097157E+05	3.312336E+02	5.271746E+01
929	1.021953E+05	3.196801E+02	5.087866E+01	979	1.097481E+05	3.312824E+02	5.272524E+01
930	1.022577E+05	3.197776E+02	5.089419E+01	980	1.099031E+05	3.315164E+02	5.276247E+01
931	1.024392E+05	3.200612E+02	5.093933E+01	981	1.100136E+05	3.316830E+02	5.278899E+01
932	1.024868E+05	3.201356E+02	5.095116E+01	982	1.100601E+05	3.317531E+02	5.280014E+01
933	1.026042E+05	3.203188E+02	5.098033E+01	983	1.103100E+05	3.321295E+02	5.286005E+01
934	1.027823E+05	3.205968E+02	5.102457E+01	984	1.103470E+05	3.321852E+02	5.286892E+01
935	1.029066E+05	3.207906E+02	5.105541E+01	985	1.106121E+05	3.325840E+02	5.293239E+01
936	1.030970E+05	3.210873E+02	5.110262E+01	986	1.107684E+05	3.328189E+02	5.296977E+01
937	1.033777E+05	3.215240E+02	5.117213E+01	987	1.112509E+05	3.335430E+02	5.308502E+01
938	1.034750E+05	3.216752E+02	5.119620E+01	988	1.114490E+05	3.338398E+02	5.313225E+01
939	1.035480E+05	3.217887E+02	5.121426E+01	989	1.118616E+05	3.344572E+02	5.323052E+01
940	1.038545E+05	3.222646E+02	5.129001E+01	990	1.119614E+05	3.346063E+02	5.325424E+01
941	1.038749E+05	3.222962E+02	5.129504E+01	991	1.121007E+05	3.348144E+02	5.328737E+01
942	1.041108E+05	3.226621E+02	5.135327E+01	992	1.122591E+05	3.350508E+02	5.332500E+01
943	1.044513E+05	3.231892E+02	5.143717E+01	993	1.123502E+05	3.351868E+02	5.334664E+01
944	1.046282E+05	3.234629E+02	5.148072E+01	994	1.124648E+05	3.353577E+02	5.337384E+01
945	1.048908E+05	3.238685E+02	5.154528E+01	995	1.129015E+05	3.360081E+02	5.347736E+01
946	1.053397E+05	3.245609E+02	5.165546E+01	996	1.130722E+05	3.362620E+02	5.351777E+01
947	1.056152E+05	3.249849E+02	5.172295E+01	997	1.134801E+05	3.368680E+02	5.361421E+01
948	1.056580E+05	3.250508E+02	5.173344E+01	998	1.138258E+05	3.373807E+02	5.369581E+01
949	1.059072E+05	3.254339E+02	5.179442E+01	999	1.139396E+05	3.375494E+02	5.372265E+01
950	1.059257E+05	3.254623E+02	5.179894E+01	1000	1.140752E+05	3.377502E+02	5.375461E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 152

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1001	1.141680E+05	3.378876E+02	5.377648E+01	1051	1.243720E+05	3.526641E+02	5.612824E+01
1002	1.143252E+05	3.381200E+02	5.381347E+01	1052	1.249393E+05	3.534675E+02	5.625610E+01
1003	1.143861E+05	3.382101E+02	5.382781E+01	1053	1.250043E+05	3.535595E+02	5.627074E+01
1004	1.144646E+05	3.383261E+02	5.384628E+01	1054	1.251421E+05	3.537543E+02	5.630175E+01
1005	1.145290E+05	3.384213E+02	5.386143E+01	1055	1.255863E+05	3.543816E+02	5.640158E+01
1006	1.146055E+05	3.385343E+02	5.387940E+01	1056	1.257727E+05	3.546445E+02	5.644343E+01
1007	1.147556E+05	3.387559E+02	5.391468E+01	1057	1.260099E+05	3.549788E+02	5.649662E+01
1008	1.149956E+05	3.391101E+02	5.397104E+01	1058	1.261650E+05	3.551971E+02	5.653137E+01
1009	1.151504E+05	3.393382E+02	5.400735E+01	1059	1.263979E+05	3.555249E+02	5.658354E+01
1010	1.152331E+05	3.394600E+02	5.402673E+01	1060	1.267603E+05	3.560342E+02	5.666460E+01
1011	1.155239E+05	3.398881E+02	5.409486E+01	1061	1.271165E+05	3.565340E+02	5.674415E+01
1012	1.157397E+05	3.402054E+02	5.414538E+01	1062	1.272498E+05	3.567209E+02	5.677389E+01
1013	1.158853E+05	3.404193E+02	5.417941E+01	1063	1.272594E+05	3.567343E+02	5.677603E+01
1014	1.162803E+05	3.409990E+02	5.427168E+01	1064	1.274835E+05	3.570483E+02	5.682600E+01
1015	1.166098E+05	3.414817E+02	5.434850E+01	1065	1.277422E+05	3.574105E+02	5.688364E+01
1016	1.167629E+05	3.417059E+02	5.438418E+01	1066	1.279867E+05	3.577523E+02	5.693804E+01
1017	1.168335E+05	3.418092E+02	5.440062E+01	1067	1.283245E+05	3.582241E+02	5.701313E+01
1018	1.169037E+05	3.419118E+02	5.441695E+01	1068	1.284968E+05	3.584645E+02	5.705140E+01
1019	1.170142E+05	3.420733E+02	5.444266E+01	1069	1.286923E+05	3.587370E+02	5.709477E+01
1020	1.170741E+05	3.421609E+02	5.445660E+01	1070	1.287304E+05	3.587901E+02	5.710322E+01
1021	1.171181E+05	3.422252E+02	5.446684E+01	1071	1.290685E+05	3.592610E+02	5.717817E+01
1022	1.172312E+05	3.423905E+02	5.449313E+01	1072	1.292714E+05	3.595433E+02	5.722310E+01
1023	1.176871E+05	3.430555E+02	5.459898E+01	1073	1.294505E+05	3.597923E+02	5.726273E+01
1024	1.180586E+05	3.435966E+02	5.468510E+01	1074	1.294567E+05	3.598010E+02	5.726410E+01
1025	1.186604E+05	3.444711E+02	5.482428E+01	1075	1.294788E+05	3.598316E+02	5.726898E+01
1026	1.190014E+05	3.449658E+02	5.490301E+01	1076	1.294802E+05	3.598335E+02	5.726929E+01
1027	1.191548E+05	3.451881E+02	5.493840E+01	1077	1.294897E+05	3.598468E+02	5.727139E+01
1028	1.196335E+05	3.458808E+02	5.504863E+01	1078	1.294982E+05	3.598586E+02	5.727327E+01
1029	1.199446E+05	3.463301E+02	5.512015E+01	1079	1.295381E+05	3.599141E+02	5.728210E+01
1030	1.202912E+05	3.468302E+02	5.519974E+01	1080	1.298699E+05	3.603746E+02	5.735540E+01
1031	1.203135E+05	3.468623E+02	5.520485E+01	1081	1.299526E+05	3.604895E+02	5.737368E+01
1032	1.203958E+05	3.469810E+02	5.522373E+01	1082	1.301222E+05	3.607245E+02	5.741109E+01
1033	1.204194E+05	3.470150E+02	5.522915E+01	1083	1.302391E+05	3.608865E+02	5.743687E+01
1034	1.206586E+05	3.473595E+02	5.528398E+01	1084	1.306699E+05	3.614829E+02	5.753180E+01
1035	1.208148E+05	3.475843E+02	5.531976E+01	1085	1.308871E+05	3.617832E+02	5.757958E+01
1036	1.210186E+05	3.478773E+02	5.536640E+01	1086	1.310272E+05	3.619768E+02	5.761040E+01
1037	1.213804E+05	3.483969E+02	5.544908E+01	1087	1.312099E+05	3.622291E+02	5.765054E+01
1038	1.214822E+05	3.485430E+02	5.547234E+01	1088	1.313649E+05	3.624429E+02	5.768458E+01
1039	1.216599E+05	3.487978E+02	5.551290E+01	1089	1.316519E+05	3.628387E+02	5.774757E+01
1040	1.219237E+05	3.491757E+02	5.557304E+01	1090	1.319333E+05	3.632262E+02	5.780925E+01
1041	1.221331E+05	3.494755E+02	5.562075E+01	1091	1.319942E+05	3.633101E+02	5.782260E+01
1042	1.225099E+05	3.500142E+02	5.570648E+01	1092	1.322744E+05	3.636955E+02	5.788394E+01
1043	1.226328E+05	3.501897E+02	5.573443E+01	1093	1.324323E+05	3.639125E+02	5.791847E+01
1044	1.226797E+05	3.502566E+02	5.574507E+01	1094	1.325743E+05	3.641076E+02	5.794952E+01
1045	1.231878E+05	3.509812E+02	5.586039E+01	1095	1.332053E+05	3.649730E+02	5.808725E+01
1046	1.233323E+05	3.511870E+02	5.589314E+01	1096	1.334518E+05	3.653106E+02	5.814099E+01
1047	1.234913E+05	3.514133E+02	5.592916E+01	1097	1.334884E+05	3.653606E+02	5.814895E+01
1048	1.239258E+05	3.520309E+02	5.602746E+01	1098	1.335068E+05	3.653858E+02	5.815295E+01
1049	1.241468E+05	3.523447E+02	5.607740E+01	1099	1.335287E+05	3.654158E+02	5.815772E+01
1050	1.241924E+05	3.524094E+02	5.608770E+01	1100	1.336163E+05	3.655356E+02	5.817680E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 153

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1101	1.339108E+05	3.659382E+02	5.824088E+01	1151	1.393706E+05	3.733237E+02	5.941631E+01
1102	1.339448E+05	3.659847E+02	5.824827E+01	1152	1.395796E+05	3.736035E+02	5.946084E+01
1103	1.340434E+05	3.661194E+02	5.826971E+01	1153	1.397623E+05	3.738479E+02	5.949974E+01
1104	1.341229E+05	3.662280E+02	5.828699E+01	1154	1.400513E+05	3.742343E+02	5.956124E+01
1105	1.343746E+05	3.665715E+02	5.834166E+01	1155	1.400940E+05	3.742914E+02	5.957032E+01
1106	1.343892E+05	3.665913E+02	5.834481E+01	1156	1.401941E+05	3.744251E+02	5.959160E+01
1107	1.344017E+05	3.666083E+02	5.834753E+01	1157	1.403432E+05	3.746240E+02	5.962327E+01
1108	1.344076E+05	3.666164E+02	5.834882E+01	1158	1.404649E+05	3.747865E+02	5.964913E+01
1109	1.344133E+05	3.666242E+02	5.835005E+01	1159	1.407140E+05	3.751186E+02	5.970199E+01
1110	1.344147E+05	3.666262E+02	5.835037E+01	1160	1.407371E+05	3.751494E+02	5.970689E+01
1111	1.344154E+05	3.666271E+02	5.835051E+01	1161	1.407824E+05	3.752098E+02	5.971649E+01
1112	1.344166E+05	3.666287E+02	5.835077E+01	1162	1.408451E+05	3.752933E+02	5.972979E+01
1113	1.344271E+05	3.666431E+02	5.835306E+01	1163	1.411261E+05	3.756675E+02	5.978934E+01
1114	1.344275E+05	3.666435E+02	5.835313E+01	1164	1.413147E+05	3.759184E+02	5.982927E+01
1115	1.345951E+05	3.668721E+02	5.838951E+01	1165	1.415314E+05	3.762065E+02	5.987513E+01
1116	1.347069E+05	3.670244E+02	5.841375E+01	1166	1.419450E+05	3.767559E+02	5.996256E+01
1117	1.347552E+05	3.670902E+02	5.842422E+01	1167	1.421111E+05	3.769763E+02	5.999764E+01
1118	1.350126E+05	3.674405E+02	5.847998E+01	1168	1.423605E+05	3.773069E+02	6.005026E+01
1119	1.350336E+05	3.674692E+02	5.848454E+01	1169	1.423891E+05	3.773448E+02	6.005629E+01
1120	1.350729E+05	3.675226E+02	5.849304E+01	1170	1.425851E+05	3.776044E+02	6.009760E+01
1121	1.350783E+05	3.675300E+02	5.849422E+01	1171	1.429251E+05	3.780544E+02	6.016922E+01
1122	1.352996E+05	3.678309E+02	5.854211E+01	1172	1.429880E+05	3.781376E+02	6.018247E+01
1123	1.353640E+05	3.679185E+02	5.855605E+01	1173	1.430638E+05	3.782378E+02	6.019842E+01
1124	1.354300E+05	3.680082E+02	5.857032E+01	1174	1.433988E+05	3.786803E+02	6.026884E+01
1125	1.356390E+05	3.682920E+02	5.861550E+01	1175	1.435951E+05	3.789394E+02	6.031008E+01
1126	1.358098E+05	3.685239E+02	5.865240E+01	1176	1.437962E+05	3.792047E+02	6.035230E+01
1127	1.360341E+05	3.688280E+02	5.870079E+01	1177	1.439576E+05	3.794174E+02	6.038616E+01
1128	1.360460E+05	3.688441E+02	5.870337E+01	1178	1.441703E+05	3.796976E+02	6.043075E+01
1129	1.360538E+05	3.688547E+02	5.870504E+01	1179	1.445289E+05	3.801696E+02	6.050588E+01
1130	1.362876E+05	3.691715E+02	5.875547E+01	1180	1.445681E+05	3.802212E+02	6.051408E+01
1131	1.363271E+05	3.692250E+02	5.876399E+01	1181	1.449375E+05	3.807065E+02	6.059132E+01
1132	1.364262E+05	3.693591E+02	5.878533E+01	1182	1.451240E+05	3.809515E+02	6.063031E+01
1133	1.367456E+05	3.697913E+02	5.885411E+01	1183	1.453585E+05	3.812591E+02	6.067928E+01
1134	1.367600E+05	3.698108E+02	5.885721E+01	1184	1.455081E+05	3.814553E+02	6.071050E+01
1135	1.369028E+05	3.700038E+02	5.888793E+01	1185	1.456278E+05	3.816121E+02	6.073544E+01
1136	1.372205E+05	3.704329E+02	5.895622E+01	1186	1.456871E+05	3.816898E+02	6.074782E+01
1137	1.375059E+05	3.708179E+02	5.901750E+01	1187	1.459838E+05	3.820783E+02	6.080964E+01
1138	1.377458E+05	3.711412E+02	5.906895E+01	1188	1.462504E+05	3.824270E+02	6.086515E+01
1139	1.378049E+05	3.712208E+02	5.908163E+01	1189	1.463725E+05	3.825866E+02	6.089055E+01
1140	1.379663E+05	3.714381E+02	5.911621E+01	1190	1.465114E+05	3.827681E+02	6.091943E+01
1141	1.380749E+05	3.715843E+02	5.913947E+01	1191	1.467351E+05	3.830602E+02	6.096593E+01
1142	1.381670E+05	3.717082E+02	5.915920E+01	1192	1.468293E+05	3.831832E+02	6.098550E+01
1143	1.382850E+05	3.718668E+02	5.918445E+01	1193	1.469751E+05	3.833733E+02	6.101576E+01
1144	1.384570E+05	3.720982E+02	5.922126E+01	1194	1.472730E+05	3.837616E+02	6.107756E+01
1145	1.385049E+05	3.721625E+02	5.923150E+01	1195	1.472802E+05	3.837710E+02	6.107906E+01
1146	1.386643E+05	3.723766E+02	5.926558E+01	1196	1.473789E+05	3.838996E+02	6.109952E+01
1147	1.387092E+05	3.724368E+02	5.927516E+01	1197	1.474629E+05	3.840089E+02	6.111692E+01
1148	1.387729E+05	3.725224E+02	5.928878E+01	1198	1.475484E+05	3.841203E+02	6.113464E+01
1149	1.388623E+05	3.726423E+02	5.930786E+01	1199	1.478339E+05	3.844917E+02	6.119375E+01
1150	1.390651E+05	3.729143E+02	5.935115E+01	1200	1.479984E+05	3.847056E+02	6.122780E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 154

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1201	1.481927E+05	3.849580E+02	6.126797E+01	1251	1.577018E+05	3.971169E+02	6.320311E+01
1202	1.481988E+05	3.849660E+02	6.126924E+01	1252	1.579952E+05	3.974861E+02	6.326188E+01
1203	1.483269E+05	3.851324E+02	6.129572E+01	1253	1.580937E+05	3.976100E+02	6.328160E+01
1204	1.484775E+05	3.853278E+02	6.132682E+01	1254	1.583072E+05	3.978784E+02	6.332431E+01
1205	1.486655E+05	3.855716E+02	6.136562E+01	1255	1.585423E+05	3.981737E+02	6.337132E+01
1206	1.486994E+05	3.856156E+02	6.137263E+01	1256	1.587138E+05	3.983890E+02	6.340558E+01
1207	1.489608E+05	3.859543E+02	6.142654E+01	1257	1.588819E+05	3.985999E+02	6.343915E+01
1208	1.492650E+05	3.863483E+02	6.148924E+01	1258	1.589006E+05	3.986234E+02	6.344288E+01
1209	1.494183E+05	3.865466E+02	6.152080E+01	1259	1.591673E+05	3.989577E+02	6.349609E+01
1210	1.496170E+05	3.868035E+02	6.156169E+01	1260	1.592480E+05	3.990589E+02	6.351219E+01
1211	1.497692E+05	3.870003E+02	6.159301E+01	1261	1.593987E+05	3.992477E+02	6.354225E+01
1212	1.498882E+05	3.871539E+02	6.161746E+01	1262	1.595717E+05	3.994642E+02	6.357670E+01
1213	1.502918E+05	3.876748E+02	6.170037E+01	1263	1.596328E+05	3.995407E+02	6.358888E+01
1214	1.506637E+05	3.881543E+02	6.177667E+01	1264	1.598553E+05	3.998191E+02	6.363319E+01
1215	1.507904E+05	3.883174E+02	6.180264E+01	1265	1.599336E+05	3.999170E+02	6.364877E+01
1216	1.510004E+05	3.885877E+02	6.184566E+01	1266	1.600912E+05	4.001140E+02	6.368012E+01
1217	1.515185E+05	3.892537E+02	6.195165E+01	1267	1.601928E+05	4.002409E+02	6.370032E+01
1218	1.517302E+05	3.895256E+02	6.199493E+01	1268	1.602108E+05	4.002635E+02	6.370391E+01
1219	1.521500E+05	3.900641E+02	6.208062E+01	1269	1.603849E+05	4.004808E+02	6.373850E+01
1220	1.521623E+05	3.900798E+02	6.208313E+01	1270	1.605468E+05	4.006829E+02	6.377066E+01
1221	1.525951E+05	3.906342E+02	6.217137E+01	1271	1.609183E+05	4.011462E+02	6.384441E+01
1222	1.526467E+05	3.907003E+02	6.218188E+01	1272	1.611940E+05	4.014897E+02	6.389907E+01
1223	1.529428E+05	3.910790E+02	6.224216E+01	1273	1.614197E+05	4.017707E+02	6.394379E+01
1224	1.531885E+05	3.913931E+02	6.229214E+01	1274	1.614495E+05	4.018079E+02	6.394971E+01
1225	1.533761E+05	3.916326E+02	6.233027E+01	1275	1.616637E+05	4.020743E+02	6.399211E+01
1226	1.534980E+05	3.917882E+02	6.235504E+01	1276	1.620210E+05	4.025183E+02	6.406278E+01
1227	1.538767E+05	3.922712E+02	6.243190E+01	1277	1.622838E+05	4.028446E+02	6.411471E+01
1228	1.538822E+05	3.922782E+02	6.243301E+01	1278	1.623649E+05	4.029453E+02	6.413073E+01
1229	1.540962E+05	3.925509E+02	6.247642E+01	1279	1.625786E+05	4.032103E+02	6.417292E+01
1230	1.542269E+05	3.927174E+02	6.250291E+01	1280	1.628314E+05	4.035237E+02	6.422280E+01
1231	1.543691E+05	3.928983E+02	6.253171E+01	1281	1.630558E+05	4.038017E+02	6.426704E+01
1232	1.546130E+05	3.932086E+02	6.258108E+01	1282	1.630802E+05	4.038318E+02	6.427183E+01
1233	1.549353E+05	3.936182E+02	6.264628E+01	1283	1.631448E+05	4.039119E+02	6.428457E+01
1234	1.550621E+05	3.937792E+02	6.267191E+01	1284	1.634347E+05	4.042706E+02	6.434166E+01
1235	1.552848E+05	3.940620E+02	6.271691E+01	1285	1.635669E+05	4.044340E+02	6.436767E+01
1236	1.555594E+05	3.944102E+02	6.277234E+01	1286	1.636983E+05	4.045964E+02	6.439352E+01
1237	1.556927E+05	3.945792E+02	6.279923E+01	1287	1.638059E+05	4.047294E+02	6.441469E+01
1238	1.560150E+05	3.949873E+02	6.286419E+01	1288	1.639357E+05	4.048898E+02	6.444021E+01
1239	1.561282E+05	3.951306E+02	6.288698E+01	1289	1.640507E+05	4.050317E+02	6.446279E+01
1240	1.562646E+05	3.953031E+02	6.291445E+01	1290	1.643580E+05	4.054109E+02	6.452314E+01
1241	1.563310E+05	3.953871E+02	6.292782E+01	1291	1.644277E+05	4.054969E+02	6.453683E+01
1242	1.565009E+05	3.956020E+02	6.296201E+01	1292	1.646616E+05	4.057851E+02	6.458271E+01
1243	1.565803E+05	3.957022E+02	6.297797E+01	1293	1.647887E+05	4.059417E+02	6.460763E+01
1244	1.568416E+05	3.960323E+02	6.303050E+01	1294	1.649296E+05	4.061153E+02	6.463526E+01
1245	1.569337E+05	3.961486E+02	6.304901E+01	1295	1.649874E+05	4.061864E+02	6.464658E+01
1246	1.571486E+05	3.964197E+02	6.309215E+01	1296	1.650474E+05	4.062603E+02	6.465833E+01
1247	1.573648E+05	3.966923E+02	6.313554E+01	1297	1.650694E+05	4.062874E+02	6.466264E+01
1248	1.574225E+05	3.967650E+02	6.314711E+01	1298	1.654282E+05	4.067286E+02	6.473287E+01
1249	1.574779E+05	3.968348E+02	6.315822E+01	1299	1.657198E+05	4.070870E+02	6.478991E+01
1250	1.576853E+05	3.970961E+02	6.319981E+01	1300	1.659712E+05	4.073957E+02	6.483903E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 155

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1301	1.660649E+05	4.075106E+02	6.485733E+01	1351	1.762403E+05	4.198098E+02	6.681480E+01
1302	1.661547E+05	4.076207E+02	6.487486E+01	1352	1.762544E+05	4.198267E+02	6.681749E+01
1303	1.662123E+05	4.076914E+02	6.488610E+01	1353	1.764657E+05	4.200782E+02	6.685752E+01
1304	1.665075E+05	4.080534E+02	6.494371E+01	1354	1.766369E+05	4.202819E+02	6.688994E+01
1305	1.665777E+05	4.081393E+02	6.495738E+01	1355	1.768292E+05	4.205106E+02	6.692634E+01
1306	1.667456E+05	4.083449E+02	6.499012E+01	1356	1.770897E+05	4.208203E+02	6.697563E+01
1307	1.669565E+05	4.086031E+02	6.503121E+01	1357	1.772446E+05	4.210043E+02	6.700491E+01
1308	1.671286E+05	4.088137E+02	6.506472E+01	1358	1.775666E+05	4.213866E+02	6.706576E+01
1309	1.673427E+05	4.090754E+02	6.510638E+01	1359	1.776860E+05	4.215281E+02	6.708828E+01
1310	1.675034E+05	4.092718E+02	6.513763E+01	1360	1.779768E+05	4.218729E+02	6.714316E+01
1311	1.677882E+05	4.096196E+02	6.519298E+01	1361	1.781876E+05	4.221227E+02	6.718292E+01
1312	1.680696E+05	4.099629E+02	6.524763E+01	1362	1.782939E+05	4.222487E+02	6.720296E+01
1313	1.682178E+05	4.101436E+02	6.527638E+01	1363	1.785549E+05	4.225576E+02	6.725213E+01
1314	1.684546E+05	4.104322E+02	6.532232E+01	1364	1.785555E+05	4.225583E+02	6.725224E+01
1315	1.686482E+05	4.106679E+02	6.535983E+01	1365	1.786494E+05	4.226693E+02	6.726992E+01
1316	1.688271E+05	4.108857E+02	6.539450E+01	1366	1.788442E+05	4.228998E+02	6.730660E+01
1317	1.690997E+05	4.112173E+02	6.544727E+01	1367	1.791225E+05	4.232287E+02	6.735894E+01
1318	1.698174E+05	4.120890E+02	6.558600E+01	1368	1.794497E+05	4.236150E+02	6.742042E+01
1319	1.698418E+05	4.121186E+02	6.559072E+01	1369	1.795791E+05	4.237677E+02	6.744473E+01
1320	1.702249E+05	4.125831E+02	6.566465E+01	1370	1.799897E+05	4.242520E+02	6.752180E+01
1321	1.702866E+05	4.126580E+02	6.567656E+01	1371	1.802099E+05	4.245114E+02	6.756308E+01
1322	1.707202E+05	4.131830E+02	6.576012E+01	1372	1.804222E+05	4.247613E+02	6.760286E+01
1323	1.709366E+05	4.134448E+02	6.580179E+01	1373	1.806082E+05	4.249802E+02	6.763770E+01
1324	1.713253E+05	4.139146E+02	6.587656E+01	1374	1.807551E+05	4.251530E+02	6.766521E+01
1325	1.715264E+05	4.141575E+02	6.591521E+01	1375	1.810496E+05	4.254992E+02	6.772030E+01
1326	1.716327E+05	4.142858E+02	6.593563E+01	1376	1.815168E+05	4.260478E+02	6.780762E+01
1327	1.717983E+05	4.144856E+02	6.596743E+01	1377	1.816447E+05	4.261979E+02	6.783151E+01
1328	1.719953E+05	4.147231E+02	6.600523E+01	1378	1.817912E+05	4.263697E+02	6.785885E+01
1329	1.722188E+05	4.149925E+02	6.604810E+01	1379	1.819152E+05	4.265152E+02	6.788200E+01
1330	1.722986E+05	4.150886E+02	6.606340E+01	1380	1.821049E+05	4.267375E+02	6.791738E+01
1331	1.724899E+05	4.153190E+02	6.610008E+01	1381	1.823574E+05	4.270333E+02	6.796446E+01
1332	1.727183E+05	4.155939E+02	6.614383E+01	1382	1.828273E+05	4.275831E+02	6.805196E+01
1333	1.730200E+05	4.159567E+02	6.620157E+01	1383	1.831206E+05	4.279259E+02	6.810653E+01
1334	1.731095E+05	4.160643E+02	6.621870E+01	1384	1.831568E+05	4.279682E+02	6.811326E+01
1335	1.731583E+05	4.161229E+02	6.622802E+01	1385	1.833111E+05	4.281484E+02	6.814194E+01
1336	1.732541E+05	4.162380E+02	6.624634E+01	1386	1.834005E+05	4.282528E+02	6.815855E+01
1337	1.733500E+05	4.163532E+02	6.626467E+01	1387	1.838196E+05	4.287419E+02	6.823639E+01
1338	1.737105E+05	4.167859E+02	6.633354E+01	1388	1.839317E+05	4.288725E+02	6.825719E+01
1339	1.740074E+05	4.171420E+02	6.639021E+01	1389	1.841036E+05	4.290730E+02	6.828909E+01
1340	1.742363E+05	4.174162E+02	6.643385E+01	1390	1.844850E+05	4.295172E+02	6.835978E+01
1341	1.743910E+05	4.176015E+02	6.646334E+01	1391	1.847547E+05	4.298311E+02	6.840974E+01
1342	1.746636E+05	4.179277E+02	6.651526E+01	1392	1.850765E+05	4.302052E+02	6.846928E+01
1343	1.748970E+05	4.182068E+02	6.655968E+01	1393	1.853004E+05	4.304654E+02	6.851069E+01
1344	1.749181E+05	4.182321E+02	6.656370E+01	1394	1.857151E+05	4.309468E+02	6.858731E+01
1345	1.751607E+05	4.185220E+02	6.660984E+01	1395	1.859101E+05	4.311730E+02	6.862331E+01
1346	1.753414E+05	4.187379E+02	6.664420E+01	1396	1.859752E+05	4.312484E+02	6.863532E+01
1347	1.755747E+05	4.190164E+02	6.668853E+01	1397	1.862499E+05	4.315668E+02	6.868599E+01
1348	1.758595E+05	4.193561E+02	6.674260E+01	1398	1.865358E+05	4.318979E+02	6.873868E+01
1349	1.760857E+05	4.196257E+02	6.678550E+01	1399	1.866717E+05	4.320552E+02	6.876371E+01
1350	1.761807E+05	4.197389E+02	6.680352E+01	1400	1.868420E+05	4.322523E+02	6.879509E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 156

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1401	1.872875E+05	4.327672E+02	6.887704E+01	1451	1.978122E+05	4.447608E+02	7.078588E+01
1402	1.874087E+05	4.329073E+02	6.889933E+01	1452	1.978508E+05	4.448043E+02	7.079280E+01
1403	1.876670E+05	4.332056E+02	6.894680E+01	1453	1.979914E+05	4.449622E+02	7.081794E+01
1404	1.880391E+05	4.336347E+02	6.901511E+01	1454	1.984378E+05	4.454635E+02	7.089773E+01
1405	1.883218E+05	4.339606E+02	6.906698E+01	1455	1.989481E+05	4.460360E+02	7.098884E+01
1406	1.884675E+05	4.341285E+02	6.909369E+01	1456	1.991586E+05	4.462719E+02	7.102637E+01
1407	1.886411E+05	4.343283E+02	6.912550E+01	1457	1.993729E+05	4.465119E+02	7.106458E+01
1408	1.887293E+05	4.344298E+02	6.914165E+01	1458	1.994436E+05	4.465911E+02	7.107719E+01
1409	1.887733E+05	4.344804E+02	6.914971E+01	1459	1.998949E+05	4.470960E+02	7.115754E+01
1410	1.889270E+05	4.346573E+02	6.917786E+01	1460	2.000431E+05	4.472618E+02	7.118392E+01
1411	1.891524E+05	4.349165E+02	6.921911E+01	1461	2.002171E+05	4.474562E+02	7.121487E+01
1412	1.892054E+05	4.349775E+02	6.922882E+01	1462	2.005350E+05	4.478113E+02	7.127139E+01
1413	1.892656E+05	4.350467E+02	6.923983E+01	1463	2.005986E+05	4.478823E+02	7.128268E+01
1414	1.896620E+05	4.355020E+02	6.931230E+01	1464	2.007219E+05	4.480200E+02	7.130460E+01
1415	1.897528E+05	4.356062E+02	6.932888E+01	1465	2.010749E+05	4.484138E+02	7.136727E+01
1416	1.900927E+05	4.359963E+02	6.939096E+01	1466	2.011155E+05	4.484591E+02	7.137448E+01
1417	1.907081E+05	4.367013E+02	6.950318E+01	1467	2.014194E+05	4.487977E+02	7.142837E+01
1418	1.909199E+05	4.369438E+02	6.954177E+01	1468	2.015988E+05	4.489975E+02	7.146018E+01
1419	1.910798E+05	4.371267E+02	6.957088E+01	1469	2.018609E+05	4.492893E+02	7.150661E+01
1420	1.912998E+05	4.373784E+02	6.961093E+01	1470	2.018887E+05	4.493203E+02	7.151155E+01
1421	1.917046E+05	4.378408E+02	6.968453E+01	1471	2.020165E+05	4.494624E+02	7.153416E+01
1422	1.920963E+05	4.382880E+02	6.975569E+01	1472	2.021886E+05	4.496538E+02	7.156463E+01
1423	1.921606E+05	4.383613E+02	6.976736E+01	1473	2.023168E+05	4.497965E+02	7.158733E+01
1424	1.924816E+05	4.387272E+02	6.982561E+01	1474	2.027346E+05	4.502606E+02	7.166120E+01
1425	1.925874E+05	4.388478E+02	6.984480E+01	1475	2.030962E+05	4.506619E+02	7.172508E+01
1426	1.927666E+05	4.390519E+02	6.987728E+01	1476	2.031379E+05	4.507082E+02	7.173244E+01
1427	1.929658E+05	4.392787E+02	6.991338E+01	1477	2.032848E+05	4.508711E+02	7.175837E+01
1428	1.931646E+05	4.395050E+02	6.994939E+01	1478	2.035998E+05	4.512204E+02	7.181395E+01
1429	1.935097E+05	4.398974E+02	7.001185E+01	1479	2.037780E+05	4.514178E+02	7.184538E+01
1430	1.935437E+05	4.399360E+02	7.001799E+01	1480	2.038844E+05	4.515356E+02	7.186413E+01
1431	1.937490E+05	4.401693E+02	7.005512E+01	1481	2.041107E+05	4.517862E+02	7.190400E+01
1432	1.940288E+05	4.404870E+02	7.010568E+01	1482	2.041737E+05	4.518558E+02	7.191509E+01
1433	1.946065E+05	4.411423E+02	7.020997E+01	1483	2.045719E+05	4.522962E+02	7.198518E+01
1434	1.947858E+05	4.413454E+02	7.024230E+01	1484	2.047840E+05	4.525306E+02	7.202249E+01
1435	1.949973E+05	4.415850E+02	7.028044E+01	1485	2.053914E+05	4.532013E+02	7.212923E+01
1436	1.950270E+05	4.416186E+02	7.028578E+01	1486	2.056969E+05	4.535382E+02	7.218285E+01
1437	1.951478E+05	4.417554E+02	7.030755E+01	1487	2.058818E+05	4.537420E+02	7.221529E+01
1438	1.955557E+05	4.422168E+02	7.038099E+01	1488	2.063498E+05	4.542575E+02	7.229732E+01
1439	1.956481E+05	4.423213E+02	7.039761E+01	1489	2.066239E+05	4.545591E+02	7.234532E+01
1440	1.958922E+05	4.425971E+02	7.044152E+01	1490	2.066681E+05	4.546076E+02	7.235305E+01
1441	1.959786E+05	4.426947E+02	7.045705E+01	1491	2.072197E+05	4.552139E+02	7.244955E+01
1442	1.961712E+05	4.429122E+02	7.049167E+01	1492	2.075103E+05	4.555330E+02	7.250032E+01
1443	1.962524E+05	4.430038E+02	7.050625E+01	1493	2.078264E+05	4.558798E+02	7.255553E+01
1444	1.963704E+05	4.431370E+02	7.052745E+01	1494	2.092006E+05	4.573845E+02	7.279501E+01
1445	1.967591E+05	4.435754E+02	7.059721E+01	1495	2.100572E+05	4.583199E+02	7.294388E+01
1446	1.969501E+05	4.437906E+02	7.063147E+01	1496	2.109765E+05	4.593217E+02	7.310333E+01
1447	1.970620E+05	4.439166E+02	7.065153E+01	1497	2.120320E+05	4.604694E+02	7.328597E+01
1448	1.972177E+05	4.440920E+02	7.067943E+01	1498	2.129306E+05	4.614440E+02	7.344109E+01
1449	1.973569E+05	4.442487E+02	7.070437E+01	1499	2.141561E+05	4.627700E+02	7.365213E+01
1450	1.977213E+05	4.446586E+02	7.076962E+01	1500	2.144601E+05	4.630984E+02	7.370439E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 157

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1501	2.151820E+05	4.638772E+02	7.382834E+01	1551	2.794147E+05	5.285969E+02	8.412882E+01
1502	2.157921E+05	4.645343E+02	7.393293E+01	1552	2.824682E+05	5.314774E+02	8.458725E+01
1503	2.164772E+05	4.652711E+02	7.405020E+01	1553	2.847051E+05	5.335777E+02	8.492152E+01
1504	2.179962E+05	4.669007E+02	7.430955E+01	1554	2.861911E+05	5.349683E+02	8.514286E+01
1505	2.184953E+05	4.674348E+02	7.439455E+01	1555	2.889018E+05	5.374959E+02	8.554512E+01
1506	2.205839E+05	4.696636E+02	7.474929E+01	1556	2.905510E+05	5.390278E+02	8.578894E+01
1507	2.220138E+05	4.711834E+02	7.499117E+01	1557	2.918069E+05	5.401915E+02	8.597415E+01
1508	2.238087E+05	4.730843E+02	7.529370E+01	1558	2.937582E+05	5.419946E+02	8.626112E+01
1509	2.245546E+05	4.738720E+02	7.541907E+01	1559	2.987239E+05	5.465564E+02	8.698715E+01
1510	2.251548E+05	4.745048E+02	7.551979E+01	1560	2.999190E+05	5.476486E+02	8.716098E+01
1511	2.253639E+05	4.747251E+02	7.555484E+01	1561	3.004191E+05	5.481050E+02	8.723362E+01
1512	2.261596E+05	4.755624E+02	7.568811E+01	1562	3.011421E+05	5.487642E+02	8.733853E+01
1513	2.270717E+05	4.765204E+02	7.584057E+01	1563	3.024774E+05	5.499794E+02	8.753194E+01
1514	2.284077E+05	4.779202E+02	7.606336E+01	1564	3.033902E+05	5.508087E+02	8.766392E+01
1515	2.295641E+05	4.791285E+02	7.625566E+01	1565	3.056794E+05	5.528828E+02	8.799403E+01
1516	2.302241E+05	4.798168E+02	7.636521E+01	1566	3.072316E+05	5.542847E+02	8.821716E+01
1517	2.318918E+05	4.815515E+02	7.664130E+01	1567	3.075038E+05	5.545302E+02	8.825623E+01
1518	2.329884E+05	4.826887E+02	7.682229E+01	1568	3.095200E+05	5.563452E+02	8.854510E+01
1519	2.331773E+05	4.828843E+02	7.685342E+01	1569	3.126766E+05	5.591750E+02	8.899546E+01
1520	2.341056E+05	4.838446E+02	7.700627E+01	1570	3.142838E+05	5.606102E+02	8.922389E+01
1521	2.352549E+05	4.850309E+02	7.719506E+01	1571	3.145940E+05	5.608868E+02	8.926790E+01
1522	2.369082E+05	4.867321E+02	7.746582E+01	1572	3.162554E+05	5.623659E+02	8.950331E+01
1523	2.388010E+05	4.886727E+02	7.777468E+01	1573	3.200003E+05	5.656857E+02	9.003168E+01
1524	2.423221E+05	4.922622E+02	7.834597E+01	1574	3.245474E+05	5.696906E+02	9.066907E+01
1525	2.429927E+05	4.929429E+02	7.845430E+01	1575	3.267216E+05	5.715956E+02	9.097227E+01
1526	2.442088E+05	4.941749E+02	7.865038E+01	1576	3.284826E+05	5.731340E+02	9.121711E+01
1527	2.458284E+05	4.958108E+02	7.891074E+01	1577	3.307932E+05	5.751462E+02	9.153736E+01
1528	2.469238E+05	4.969143E+02	7.908637E+01	1578	3.326288E+05	5.767398E+02	9.179099E+01
1529	2.476945E+05	4.976891E+02	7.920968E+01	1579	3.356451E+05	5.793489E+02	9.220623E+01
1530	2.487724E+05	4.987709E+02	7.938185E+01	1580	3.365358E+05	5.801171E+02	9.232850E+01
1531	2.520626E+05	5.020584E+02	7.990507E+01	1581	3.374132E+05	5.808728E+02	9.244877E+01
1532	2.545425E+05	5.045221E+02	8.029718E+01	1582	3.383696E+05	5.816954E+02	9.257970E+01
1533	2.558993E+05	5.058649E+02	8.051091E+01	1583	3.393158E+05	5.825082E+02	9.270906E+01
1534	2.571997E+05	5.071486E+02	8.071521E+01	1584	3.467637E+05	5.888665E+02	9.372101E+01
1535	2.577028E+05	5.076444E+02	8.079411E+01	1585	3.474013E+05	5.894076E+02	9.380713E+01
1536	2.589519E+05	5.088732E+02	8.098968E+01	1586	3.494600E+05	5.911514E+02	9.408467E+01
1537	2.610190E+05	5.109002E+02	8.131229E+01	1587	3.513700E+05	5.927647E+02	9.434143E+01
1538	2.610688E+05	5.109489E+02	8.132005E+01	1588	3.516312E+05	5.929850E+02	9.437650E+01
1539	2.623508E+05	5.122019E+02	8.151946E+01	1589	3.523785E+05	5.936147E+02	9.447672E+01
1540	2.643592E+05	5.141587E+02	8.183091E+01	1590	3.530073E+05	5.941442E+02	9.456099E+01
1541	2.655834E+05	5.153479E+02	8.202016E+01	1591	3.547186E+05	5.955826E+02	9.478992E+01
1542	2.685855E+05	5.182524E+02	8.248242E+01	1592	3.553588E+05	5.961198E+02	9.487541E+01
1543	2.697244E+05	5.193500E+02	8.265712E+01	1593	3.572208E+05	5.976795E+02	9.512365E+01
1544	2.715883E+05	5.211414E+02	8.294223E+01	1594	3.583185E+05	5.985971E+02	9.526969E+01
1545	2.732943E+05	5.227756E+02	8.320232E+01	1595	3.598317E+05	5.998597E+02	9.547064E+01
1546	2.741698E+05	5.236122E+02	8.333547E+01	1596	3.613431E+05	6.011182E+02	9.567094E+01
1547	2.747716E+05	5.241866E+02	8.342689E+01	1597	3.643198E+05	6.035891E+02	9.606419E+01
1548	2.764897E+05	5.258229E+02	8.368731E+01	1598	3.655363E+05	6.045960E+02	9.622443E+01
1549	2.770428E+05	5.263485E+02	8.377097E+01	1599	3.681038E+05	6.067156E+02	9.656179E+01
1550	2.787023E+05	5.279226E+02	8.402150E+01	1600	3.698442E+05	6.081482E+02	9.678979E+01

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 158

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1601	3.736904E+05	6.113022E+02	9.729177E+01	1651	4.972909E+05	7.051885E+02	1.122342E+02
1602	3.761251E+05	6.132904E+02	9.760820E+01	1652	5.008466E+05	7.077052E+02	1.126348E+02
1603	3.799374E+05	6.163906E+02	9.810161E+01	1653	5.048706E+05	7.105425E+02	1.130863E+02
1604	3.819294E+05	6.180044E+02	9.835845E+01	1654	5.064737E+05	7.116696E+02	1.132657E+02
1605	3.832456E+05	6.190683E+02	9.852778E+01	1655	5.100188E+05	7.141560E+02	1.136615E+02
1606	3.841441E+05	6.197936E+02	9.864321E+01	1656	5.151087E+05	7.177107E+02	1.142272E+02
1607	3.848954E+05	6.203994E+02	9.873963E+01	1657	5.170102E+05	7.190342E+02	1.144379E+02
1608	3.928060E+05	6.267423E+02	9.974914E+01	1658	5.201826E+05	7.212368E+02	1.147884E+02
1609	3.932761E+05	6.271173E+02	9.980881E+01	1659	5.246719E+05	7.243424E+02	1.152827E+02
1610	3.943976E+05	6.280108E+02	9.995102E+01	1660	5.263710E+05	7.255143E+02	1.154692E+02
1611	3.955982E+05	6.289659E+02	1.001030E+02	1661	5.271643E+05	7.260608E+02	1.155562E+02
1612	4.001732E+05	6.325924E+02	1.006802E+02	1662	5.305857E+05	7.284131E+02	1.159306E+02
1613	4.028846E+05	6.347319E+02	1.010207E+02	1663	5.318802E+05	7.293012E+02	1.160719E+02
1614	4.063298E+05	6.374401E+02	1.014517E+02	1664	5.352227E+05	7.315891E+02	1.164360E+02
1615	4.074219E+05	6.382961E+02	1.015880E+02	1665	5.384873E+05	7.338169E+02	1.167906E+02
1616	4.104817E+05	6.406885E+02	1.019687E+02	1666	5.405139E+05	7.351965E+02	1.170102E+02
1617	4.126440E+05	6.423737E+02	1.022370E+02	1667	5.455684E+05	7.386260E+02	1.175560E+02
1618	4.177525E+05	6.463377E+02	1.028678E+02	1668	5.493078E+05	7.411531E+02	1.179582E+02
1619	4.203869E+05	6.483725E+02	1.031917E+02	1669	5.519938E+05	7.429629E+02	1.182462E+02
1620	4.224080E+05	6.499292E+02	1.034395E+02	1670	5.571696E+05	7.464379E+02	1.187993E+02
1621	4.232225E+05	6.505555E+02	1.035391E+02	1671	5.592644E+05	7.478398E+02	1.190224E+02
1622	4.237778E+05	6.509822E+02	1.036070E+02	1672	5.658815E+05	7.522510E+02	1.197245E+02
1623	4.248862E+05	6.518329E+02	1.037424E+02	1673	5.674354E+05	7.532831E+02	1.198887E+02
1624	4.261531E+05	6.528041E+02	1.038970E+02	1674	5.720512E+05	7.563406E+02	1.203754E+02
1625	4.290676E+05	6.550325E+02	1.042517E+02	1675	5.743560E+05	7.578628E+02	1.206176E+02
1626	4.315860E+05	6.569520E+02	1.045572E+02	1676	5.751384E+05	7.583788E+02	1.206997E+02
1627	4.357005E+05	6.600762E+02	1.050544E+02	1677	5.765203E+05	7.592894E+02	1.208447E+02
1628	4.390326E+05	6.625953E+02	1.054553E+02	1678	5.801448E+05	7.616723E+02	1.212239E+02
1629	4.405032E+05	6.637041E+02	1.056318E+02	1679	5.899121E+05	7.680574E+02	1.222401E+02
1630	4.479588E+05	6.692972E+02	1.065220E+02	1680	5.952268E+05	7.715094E+02	1.227895E+02
1631	4.482404E+05	6.695076E+02	1.065554E+02	1681	5.972377E+05	7.728115E+02	1.229968E+02
1632	4.506503E+05	6.713050E+02	1.068415E+02	1682	5.993381E+05	7.741693E+02	1.232129E+02
1633	4.538446E+05	6.736799E+02	1.072195E+02	1683	6.044460E+05	7.774613E+02	1.237368E+02
1634	4.569988E+05	6.760169E+02	1.075914E+02	1684	6.099176E+05	7.809722E+02	1.242956E+02
1635	4.570889E+05	6.760835E+02	1.076020E+02	1685	6.127415E+05	7.827781E+02	1.245830E+02
1636	4.602525E+05	6.784191E+02	1.079738E+02	1686	6.143475E+05	7.838032E+02	1.247462E+02
1637	4.632305E+05	6.806104E+02	1.083225E+02	1687	6.187156E+05	7.865848E+02	1.251889E+02
1638	4.646553E+05	6.816563E+02	1.084890E+02	1688	6.201931E+05	7.875234E+02	1.253382E+02
1639	4.662824E+05	6.828488E+02	1.086788E+02	1689	6.243771E+05	7.901754E+02	1.257603E+02
1640	4.677898E+05	6.839516E+02	1.088543E+02	1690	6.276864E+05	7.922666E+02	1.260932E+02
1641	4.717903E+05	6.868699E+02	1.093187E+02	1691	6.311539E+05	7.944520E+02	1.264410E+02
1642	4.735803E+05	6.881717E+02	1.095259E+02	1692	6.341856E+05	7.963577E+02	1.267443E+02
1643	4.753773E+05	6.894761E+02	1.097335E+02	1693	6.390683E+05	7.994175E+02	1.272312E+02
1644	4.777674E+05	6.912072E+02	1.100090E+02	1694	6.440367E+05	8.025190E+02	1.277249E+02
1645	4.787510E+05	6.919184E+02	1.101222E+02	1695	6.484317E+05	8.052525E+02	1.281599E+02
1646	4.834054E+05	6.952736E+02	1.106562E+02	1696	6.531210E+05	8.081590E+02	1.286225E+02
1647	4.839609E+05	6.956730E+02	1.107198E+02	1697	6.542507E+05	8.088576E+02	1.287337E+02
1648	4.887322E+05	6.990938E+02	1.112642E+02	1698	6.637181E+05	8.146890E+02	1.296618E+02
1649	4.910215E+05	7.007293E+02	1.115245E+02	1699	6.661211E+05	8.161624E+02	1.298963E+02
1650	4.943028E+05	7.030667E+02	1.118965E+02	1700	6.725202E+05	8.200733E+02	1.305187E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 159

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1701	6.778274E+05	8.233028E+02	1.310327E+02	1751	9.067964E+05	9.522586E+02	1.515567E+02
1702	6.801750E+05	8.247272E+02	1.312594E+02	1752	9.096039E+05	9.537315E+02	1.517911E+02
1703	6.837438E+05	8.268880E+02	1.316033E+02	1753	9.164465E+05	9.573121E+02	1.523610E+02
1704	6.867793E+05	8.287215E+02	1.318951E+02	1754	9.194024E+05	9.588547E+02	1.526065E+02
1705	6.900898E+05	8.307164E+02	1.322126E+02	1755	9.237644E+05	9.611267E+02	1.529681E+02
1706	6.965330E+05	8.345855E+02	1.328284E+02	1756	9.350226E+05	9.669657E+02	1.538974E+02
1707	7.032549E+05	8.386030E+02	1.334678E+02	1757	9.412237E+05	9.701668E+02	1.544068E+02
1708	7.050410E+05	8.396672E+02	1.336372E+02	1758	9.484184E+05	9.738677E+02	1.549959E+02
1709	7.115600E+05	8.435401E+02	1.342536E+02	1759	9.513791E+05	9.753866E+02	1.552376E+02
1710	7.122000E+05	8.439195E+02	1.343140E+02	1760	9.626976E+05	9.811715E+02	1.561583E+02
1711	7.201210E+05	8.485994E+02	1.350588E+02	1761	9.678827E+05	9.838103E+02	1.565783E+02
1712	7.249081E+05	8.514154E+02	1.355070E+02	1762	9.741930E+05	9.870122E+02	1.570879E+02
1713	7.278869E+05	8.531629E+02	1.357851E+02	1763	9.780433E+05	9.889607E+02	1.573980E+02
1714	7.303380E+05	8.545981E+02	1.360135E+02	1764	9.821940E+05	9.910570E+02	1.577316E+02
1715	7.424902E+05	8.616787E+02	1.371404E+02	1765	9.904121E+05	9.951945E+02	1.583901E+02
1716	7.486599E+05	8.652513E+02	1.377090E+02	1766	1.001631E+06	1.000815E+03	1.592847E+02
1717	7.495554E+05	8.657687E+02	1.377914E+02	1767	1.003513E+06	1.001755E+03	1.594343E+02
1718	7.561035E+05	8.695421E+02	1.383919E+02	1768	1.007863E+06	1.003924E+03	1.597794E+02
1719	7.598199E+05	8.716765E+02	1.387316E+02	1769	1.009831E+06	1.004904E+03	1.599354E+02
1720	7.628503E+05	8.734130E+02	1.390080E+02	1770	1.012766E+06	1.006363E+03	1.601676E+02
1721	7.653107E+05	8.748204E+02	1.392320E+02	1771	1.012960E+06	1.006459E+03	1.601829E+02
1722	7.667083E+05	8.756188E+02	1.393591E+02	1772	1.018212E+06	1.009065E+03	1.605977E+02
1723	7.706541E+05	8.778690E+02	1.397172E+02	1773	1.019200E+06	1.009554E+03	1.606755E+02
1724	7.790291E+05	8.826263E+02	1.404743E+02	1774	1.031419E+06	1.015588E+03	1.616359E+02
1725	7.845658E+05	8.857572E+02	1.409726E+02	1775	1.041983E+06	1.020775E+03	1.624615E+02
1726	7.862566E+05	8.867111E+02	1.411245E+02	1776	1.046748E+06	1.023107E+03	1.628325E+02
1727	7.906976E+05	8.892118E+02	1.415224E+02	1777	1.049146E+06	1.024278E+03	1.630190E+02
1728	7.922780E+05	8.901000E+02	1.416638E+02	1778	1.061153E+06	1.030123E+03	1.639492E+02
1729	7.976402E+05	8.931071E+02	1.421424E+02	1779	1.064601E+06	1.031795E+03	1.642153E+02
1730	8.050034E+05	8.972198E+02	1.427970E+02	1780	1.068557E+06	1.033710E+03	1.645201E+02
1731	8.084801E+05	8.991552E+02	1.431050E+02	1781	1.072997E+06	1.035856E+03	1.648615E+02
1732	8.119868E+05	9.011031E+02	1.434150E+02	1782	1.078374E+06	1.038448E+03	1.652742E+02
1733	8.140260E+05	9.022339E+02	1.435950E+02	1783	1.079882E+06	1.039174E+03	1.653896E+02
1734	8.181825E+05	9.045344E+02	1.439611E+02	1784	1.081860E+06	1.040125E+03	1.655410E+02
1735	8.224895E+05	9.069120E+02	1.443395E+02	1785	1.087761E+06	1.042958E+03	1.659919E+02
1736	8.252985E+05	9.084594E+02	1.445858E+02	1786	1.089830E+06	1.043949E+03	1.661497E+02
1737	8.291488E+05	9.105761E+02	1.449227E+02	1787	1.100048E+06	1.048832E+03	1.669268E+02
1738	8.336335E+05	9.130353E+02	1.453141E+02	1788	1.104963E+06	1.051172E+03	1.672993E+02
1739	8.365562E+05	9.146345E+02	1.455686E+02	1789	1.109074E+06	1.053126E+03	1.676102E+02
1740	8.381116E+05	9.154844E+02	1.457039E+02	1790	1.111409E+06	1.054234E+03	1.677865E+02
1741	8.464253E+05	9.200138E+02	1.464247E+02	1791	1.118392E+06	1.057541E+03	1.683128E+02
1742	8.512614E+05	9.226383E+02	1.468424E+02	1792	1.123331E+06	1.059873E+03	1.686840E+02
1743	8.578024E+05	9.261762E+02	1.474055E+02	1793	1.125150E+06	1.060731E+03	1.688205E+02
1744	8.593902E+05	9.270330E+02	1.475419E+02	1794	1.138581E+06	1.067043E+03	1.698252E+02
1745	8.657487E+05	9.304562E+02	1.480867E+02	1795	1.142531E+06	1.068892E+03	1.701195E+02
1746	8.755205E+05	9.356925E+02	1.489201E+02	1796	1.149055E+06	1.071940E+03	1.706045E+02
1747	8.801567E+05	9.381666E+02	1.493139E+02	1797	1.158602E+06	1.076384E+03	1.713118E+02
1748	8.875660E+05	9.421072E+02	1.499410E+02	1798	1.160667E+06	1.077343E+03	1.714644E+02
1749	8.912918E+05	9.440825E+02	1.502554E+02	1799	1.168897E+06	1.081156E+03	1.720712E+02
1750	9.042395E+05	9.509151E+02	1.513428E+02	1800	1.185488E+06	1.088801E+03	1.732881E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 160

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1801	1.193455E+06	1.092454E+03	1.738694E+02	1851	1.553615E+06	1.246441E+03	1.983772E+02
1802	1.199592E+06	1.095259E+03	1.743159E+02	1852	1.565041E+06	1.251016E+03	1.991054E+02
1803	1.202486E+06	1.096579E+03	1.745260E+02	1853	1.569944E+06	1.252974E+03	1.994170E+02
1804	1.209223E+06	1.099647E+03	1.750142E+02	1854	1.589363E+06	1.260700E+03	2.006466E+02
1805	1.219138E+06	1.104146E+03	1.757303E+02	1855	1.599600E+06	1.264753E+03	2.012917E+02
1806	1.225804E+06	1.107161E+03	1.762101E+02	1856	1.608706E+06	1.268348E+03	2.018638E+02
1807	1.229598E+06	1.108873E+03	1.764825E+02	1857	1.629734E+06	1.276610E+03	2.031788E+02
1808	1.234234E+06	1.110961E+03	1.768149E+02	1858	1.651945E+06	1.285280E+03	2.045587E+02
1809	1.236822E+06	1.112125E+03	1.770002E+02	1859	1.659243E+06	1.288116E+03	2.050100E+02
1810	1.241915E+06	1.114412E+03	1.773642E+02	1860	1.665972E+06	1.290726E+03	2.054254E+02
1811	1.247158E+06	1.116762E+03	1.777382E+02	1861	1.680835E+06	1.296470E+03	2.063397E+02
1812	1.253039E+06	1.119392E+03	1.781568E+02	1862	1.699920E+06	1.303810E+03	2.075078E+02
1813	1.270207E+06	1.127034E+03	1.793731E+02	1863	1.703886E+06	1.305330E+03	2.077497E+02
1814	1.273908E+06	1.128675E+03	1.796342E+02	1864	1.729122E+06	1.314961E+03	2.092825E+02
1815	1.282528E+06	1.132487E+03	1.802410E+02	1865	1.732466E+06	1.316232E+03	2.094848E+02
1816	1.284393E+06	1.133311E+03	1.803720E+02	1866	1.757110E+06	1.325560E+03	2.109695E+02
1817	1.295199E+06	1.138068E+03	1.811291E+02	1867	1.763994E+06	1.328154E+03	2.113823E+02
1818	1.296274E+06	1.138540E+03	1.812043E+02	1868	1.769899E+06	1.330376E+03	2.117359E+02
1819	1.306701E+06	1.143110E+03	1.819316E+02	1869	1.786981E+06	1.336780E+03	2.127551E+02
1820	1.309475E+06	1.144323E+03	1.821247E+02	1870	1.794290E+06	1.339511E+03	2.131898E+02
1821	1.314490E+06	1.146512E+03	1.824731E+02	1871	1.808666E+06	1.344866E+03	2.140422E+02
1822	1.323808E+06	1.150568E+03	1.831187E+02	1872	1.824981E+06	1.350919E+03	2.150054E+02
1823	1.334096E+06	1.155031E+03	1.838288E+02	1873	1.828367E+06	1.352171E+03	2.152048E+02
1824	1.345537E+06	1.159973E+03	1.846154E+02	1874	1.835747E+06	1.354897E+03	2.156386E+02
1825	1.355919E+06	1.164439E+03	1.853263E+02	1875	1.855736E+06	1.362254E+03	2.168095E+02
1826	1.369435E+06	1.170228E+03	1.862476E+02	1876	1.865713E+06	1.365911E+03	2.173915E+02
1827	1.375754E+06	1.172925E+03	1.866768E+02	1877	1.876564E+06	1.369877E+03	2.180228E+02
1828	1.383467E+06	1.176209E+03	1.871995E+02	1878	1.901488E+06	1.378945E+03	2.194659E+02
1829	1.391515E+06	1.179625E+03	1.877432E+02	1879	1.926616E+06	1.388026E+03	2.209112E+02
1830	1.394266E+06	1.180790E+03	1.879286E+02	1880	1.932913E+06	1.390293E+03	2.212719E+02
1831	1.417214E+06	1.190468E+03	1.894689E+02	1881	1.937975E+06	1.392112E+03	2.215615E+02
1832	1.418329E+06	1.190936E+03	1.895434E+02	1882	1.944597E+06	1.394488E+03	2.219396E+02
1833	1.425035E+06	1.193748E+03	1.899910E+02	1883	1.950393E+06	1.396565E+03	2.222702E+02
1834	1.429815E+06	1.195749E+03	1.903093E+02	1884	1.958368E+06	1.399417E+03	2.227241E+02
1835	1.436764E+06	1.198651E+03	1.907712E+02	1885	1.961043E+06	1.400372E+03	2.228762E+02
1836	1.447295E+06	1.203036E+03	1.914691E+02	1886	1.971252E+06	1.404013E+03	2.234556E+02
1837	1.457410E+06	1.207232E+03	1.921370E+02	1887	1.983275E+06	1.408288E+03	2.241360E+02
1838	1.467675E+06	1.211477E+03	1.928125E+02	1888	1.996555E+06	1.412995E+03	2.248852E+02
1839	1.480586E+06	1.216794E+03	1.936587E+02	1889	2.008914E+06	1.417362E+03	2.255801E+02
1840	1.480910E+06	1.216926E+03	1.936799E+02	1890	2.023533E+06	1.422510E+03	2.263994E+02
1841	1.489650E+06	1.220512E+03	1.942505E+02	1891	2.024684E+06	1.422914E+03	2.264638E+02
1842	1.501747E+06	1.225458E+03	1.950377E+02	1892	2.047368E+06	1.430863E+03	2.277289E+02
1843	1.506663E+06	1.227462E+03	1.953567E+02	1893	2.049112E+06	1.431472E+03	2.278258E+02
1844	1.509179E+06	1.228487E+03	1.955197E+02	1894	2.060509E+06	1.435447E+03	2.284586E+02
1845	1.514338E+06	1.230585E+03	1.958536E+02	1895	2.086962E+06	1.444632E+03	2.299203E+02
1846	1.515735E+06	1.231152E+03	1.959439E+02	1896	2.095551E+06	1.447602E+03	2.303930E+02
1847	1.528905E+06	1.236489E+03	1.967933E+02	1897	2.100585E+06	1.449339E+03	2.306695E+02
1848	1.538740E+06	1.240460E+03	1.974253E+02	1898	2.126868E+06	1.458378E+03	2.321081E+02
1849	1.546357E+06	1.243526E+03	1.979133E+02	1899	2.131841E+06	1.460082E+03	2.323793E+02
1850	1.549064E+06	1.244614E+03	1.980865E+02	1900	2.136244E+06	1.461590E+03	2.326192E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 161

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1901	2.145984E+06	1.464918E+03	2.331489E+02	1951	2.912402E+06	1.706576E+03	2.716100E+02
1902	2.156942E+06	1.468653E+03	2.337434E+02	1952	2.935236E+06	1.713253E+03	2.726727E+02
1903	2.163212E+06	1.470786E+03	2.340829E+02	1953	2.940530E+06	1.714797E+03	2.729185E+02
1904	2.173043E+06	1.474124E+03	2.346142E+02	1954	2.971504E+06	1.723805E+03	2.743521E+02
1905	2.180283E+06	1.476578E+03	2.350047E+02	1955	3.006729E+06	1.733992E+03	2.759734E+02
1906	2.183754E+06	1.477753E+03	2.351917E+02	1956	3.037032E+06	1.742708E+03	2.773606E+02
1907	2.195850E+06	1.481840E+03	2.358421E+02	1957	3.037448E+06	1.742828E+03	2.773796E+02
1908	2.203729E+06	1.484496E+03	2.362649E+02	1958	3.074990E+06	1.753565E+03	2.790885E+02
1909	2.238251E+06	1.496079E+03	2.381083E+02	1959	3.085203E+06	1.756475E+03	2.795516E+02
1910	2.246973E+06	1.498991E+03	2.385718E+02	1960	3.129124E+06	1.768933E+03	2.815344E+02
1911	2.256020E+06	1.502005E+03	2.390516E+02	1961	3.149486E+06	1.774679E+03	2.824490E+02
1912	2.315943E+06	1.521822E+03	2.422055E+02	1962	3.170291E+06	1.780531E+03	2.833803E+02
1913	2.320899E+06	1.523450E+03	2.424645E+02	1963	3.189823E+06	1.786008E+03	2.842519E+02
1914	2.348052E+06	1.532336E+03	2.438788E+02	1964	3.218031E+06	1.793887E+03	2.855060E+02
1915	2.355643E+06	1.534810E+03	2.442727E+02	1965	3.226392E+06	1.796216E+03	2.858766E+02
1916	2.357112E+06	1.535289E+03	2.443488E+02	1966	3.286247E+06	1.812801E+03	2.885162E+02
1917	2.377566E+06	1.541936E+03	2.454067E+02	1967	3.322907E+06	1.822884E+03	2.901210E+02
1918	2.390930E+06	1.546263E+03	2.460954E+02	1968	3.350163E+06	1.830345E+03	2.913085E+02
1919	2.395033E+06	1.547589E+03	2.463065E+02	1969	3.394396E+06	1.842389E+03	2.932253E+02
1920	2.403144E+06	1.550208E+03	2.467232E+02	1970	3.420813E+06	1.849544E+03	2.943641E+02
1921	2.407997E+06	1.551772E+03	2.469722E+02	1971	3.442875E+06	1.855499E+03	2.953118E+02
1922	2.430617E+06	1.559043E+03	2.481295E+02	1972	3.471466E+06	1.863187E+03	2.965354E+02
1923	2.435623E+06	1.560648E+03	2.483849E+02	1973	3.492925E+06	1.868937E+03	2.974505E+02
1924	2.444998E+06	1.563649E+03	2.488624E+02	1974	3.503484E+06	1.871760E+03	2.978998E+02
1925	2.479261E+06	1.574567E+03	2.506001E+02	1975	3.524860E+06	1.877461E+03	2.988072E+02
1926	2.511549E+06	1.584787E+03	2.522266E+02	1976	3.535996E+06	1.880424E+03	2.992788E+02
1927	2.523021E+06	1.588402E+03	2.528020E+02	1977	3.552330E+06	1.884763E+03	2.999693E+02
1928	2.540740E+06	1.593970E+03	2.536882E+02	1978	3.559260E+06	1.886600E+03	3.002617E+02
1929	2.543920E+06	1.594967E+03	2.538469E+02	1979	3.593370E+06	1.895619E+03	3.016971E+02
1930	2.553584E+06	1.597994E+03	2.543286E+02	1980	3.597475E+06	1.896701E+03	3.018693E+02
1931	2.567026E+06	1.602194E+03	2.549971E+02	1981	3.621322E+06	1.902977E+03	3.028682E+02
1932	2.578715E+06	1.605838E+03	2.555770E+02	1982	3.683433E+06	1.919227E+03	3.054545E+02
1933	2.603573E+06	1.613559E+03	2.568059E+02	1983	3.697645E+06	1.922926E+03	3.060432E+02
1934	2.619804E+06	1.618581E+03	2.576052E+02	1984	3.719044E+06	1.928482E+03	3.069275E+02
1935	2.633731E+06	1.622877E+03	2.582890E+02	1985	3.733116E+06	1.932127E+03	3.075076E+02
1936	2.642761E+06	1.625657E+03	2.587314E+02	1986	3.793406E+06	1.947667E+03	3.099808E+02
1937	2.667578E+06	1.633272E+03	2.599433E+02	1987	3.814649E+06	1.953113E+03	3.108475E+02
1938	2.680061E+06	1.637089E+03	2.605508E+02	1988	3.831532E+06	1.957430E+03	3.115347E+02
1939	2.691610E+06	1.640613E+03	2.611116E+02	1989	3.861196E+06	1.964993E+03	3.127383E+02
1940	2.711367E+06	1.646623E+03	2.620682E+02	1990	3.874412E+06	1.968353E+03	3.132731E+02
1941	2.731492E+06	1.652723E+03	2.630390E+02	1991	3.893576E+06	1.973215E+03	3.140469E+02
1942	2.747342E+06	1.657511E+03	2.638010E+02	1992	3.913588E+06	1.978279E+03	3.148529E+02
1943	2.757425E+06	1.660549E+03	2.642847E+02	1993	3.931972E+06	1.982920E+03	3.155915E+02
1944	2.767669E+06	1.663631E+03	2.647751E+02	1994	3.948671E+06	1.987126E+03	3.162610E+02
1945	2.815697E+06	1.678004E+03	2.670626E+02	1995	3.961958E+06	1.990467E+03	3.167926E+02
1946	2.824186E+06	1.680531E+03	2.674649E+02	1996	3.979424E+06	1.994849E+03	3.174902E+02
1947	2.832869E+06	1.683113E+03	2.678757E+02	1997	4.016952E+06	2.004233E+03	3.189837E+02
1948	2.844959E+06	1.686701E+03	2.684468E+02	1998	4.043406E+06	2.010822E+03	3.200323E+02
1949	2.877726E+06	1.696386E+03	2.699882E+02	1999	4.061263E+06	2.015257E+03	3.207382E+02
1950	2.896343E+06	1.701865E+03	2.708602E+02	2000	4.091919E+06	2.022849E+03	3.219465E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 162

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2001	4.124820E+06	2.030965E+03	3.232382E+02	2051	5.721509E+06	2.391968E+03	3.806935E+02
2002	4.127953E+06	2.031736E+03	3.233609E+02	2052	5.753177E+06	2.398578E+03	3.817456E+02
2003	4.136910E+06	2.033940E+03	3.237115E+02	2053	5.818525E+06	2.412162E+03	3.839075E+02
2004	4.151603E+06	2.037548E+03	3.242859E+02	2054	5.872670E+06	2.423359E+03	3.856896E+02
2005	4.190759E+06	2.047134E+03	3.258116E+02	2055	5.912637E+06	2.431591E+03	3.869998E+02
2006	4.197900E+06	2.048878E+03	3.260890E+02	2056	5.992557E+06	2.447970E+03	3.896065E+02
2007	4.219031E+06	2.054028E+03	3.269087E+02	2057	5.998957E+06	2.449277E+03	3.898145E+02
2008	4.233196E+06	2.057473E+03	3.274570E+02	2058	6.057843E+06	2.461269E+03	3.917231E+02
2009	4.287673E+06	2.070670E+03	3.295573E+02	2059	6.074818E+06	2.464715E+03	3.922715E+02
2010	4.302678E+06	2.074290E+03	3.301335E+02	2060	6.101742E+06	2.470170E+03	3.931398E+02
2011	4.331913E+06	2.081325E+03	3.312531E+02	2061	6.117671E+06	2.473393E+03	3.936526E+02
2012	4.349293E+06	2.085496E+03	3.319170E+02	2062	6.149927E+06	2.479905E+03	3.946891E+02
2013	4.366960E+06	2.089727E+03	3.325904E+02	2063	6.192138E+06	2.488401E+03	3.960413E+02
2014	4.379037E+06	2.092615E+03	3.330500E+02	2064	6.228959E+06	2.495788E+03	3.972170E+02
2015	4.401739E+06	2.098032E+03	3.339122E+02	2065	6.253414E+06	2.500683E+03	3.979960E+02
2016	4.477641E+06	2.116044E+03	3.367788E+02	2066	6.328511E+06	2.515653E+03	4.003786E+02
2017	4.487641E+06	2.118405E+03	3.371547E+02	2067	6.371052E+06	2.524094E+03	4.017221E+02
2018	4.524499E+06	2.127087E+03	3.385364E+02	2068	6.394858E+06	2.528806E+03	4.024719E+02
2019	4.568477E+06	2.137400E+03	3.401777E+02	2069	6.421142E+06	2.533997E+03	4.032982E+02
2020	4.603691E+06	2.145621E+03	3.414862E+02	2070	6.435856E+06	2.536899E+03	4.037600E+02
2021	4.676177E+06	2.162447E+03	3.441641E+02	2071	6.463104E+06	2.542264E+03	4.046138E+02
2022	4.728841E+06	2.174590E+03	3.460967E+02	2072	6.468845E+06	2.543392E+03	4.047935E+02
2023	4.821239E+06	2.195732E+03	3.494616E+02	2073	6.495544E+06	2.548636E+03	4.056280E+02
2024	4.853715E+06	2.203115E+03	3.506366E+02	2074	6.502703E+06	2.550040E+03	4.058514E+02
2025	4.910533E+06	2.215972E+03	3.526829E+02	2075	6.529711E+06	2.555330E+03	4.066934E+02
2026	5.003856E+06	2.236930E+03	3.560185E+02	2076	6.591630E+06	2.567417E+03	4.086171E+02
2027	5.051398E+06	2.247531E+03	3.577057E+02	2077	6.599799E+06	2.569007E+03	4.088702E+02
2028	5.085161E+06	2.255030E+03	3.588992E+02	2078	6.650520E+06	2.578860E+03	4.104384E+02
2029	5.088759E+06	2.255828E+03	3.590261E+02	2079	6.655032E+06	2.579735E+03	4.105775E+02
2030	5.104923E+06	2.259408E+03	3.595959E+02	2080	6.696463E+06	2.587753E+03	4.118536E+02
2031	5.164043E+06	2.272453E+03	3.616722E+02	2081	6.708621E+06	2.590100E+03	4.122273E+02
2032	5.181359E+06	2.276260E+03	3.622780E+02	2082	6.761729E+06	2.600333E+03	4.138558E+02
2033	5.248018E+06	2.290855E+03	3.646009E+02	2083	6.786393E+06	2.605071E+03	4.146099E+02
2034	5.251412E+06	2.291596E+03	3.647188E+02	2084	6.830162E+06	2.613458E+03	4.159447E+02
2035	5.277429E+06	2.297266E+03	3.656212E+02	2085	6.845765E+06	2.616441E+03	4.164196E+02
2036	5.323334E+06	2.307235E+03	3.672079E+02	2086	6.873677E+06	2.621770E+03	4.172676E+02
2037	5.356429E+06	2.314396E+03	3.683476E+02	2087	6.915992E+06	2.629827E+03	4.185500E+02
2038	5.408390E+06	2.325595E+03	3.701299E+02	2088	6.949791E+06	2.636246E+03	4.195715E+02
2039	5.411360E+06	2.326233E+03	3.702315E+02	2089	7.003702E+06	2.646451E+03	4.211957E+02
2040	5.440188E+06	2.332421E+03	3.712164E+02	2090	7.074537E+06	2.659800E+03	4.233203E+02
2041	5.452023E+06	2.334957E+03	3.716199E+02	2091	7.085277E+06	2.661818E+03	4.236416E+02
2042	5.464333E+06	2.337591E+03	3.720392E+02	2092	7.115022E+06	2.667400E+03	4.245299E+02
2043	5.480086E+06	2.340958E+03	3.725751E+02	2093	7.148914E+06	2.673745E+03	4.255398E+02
2044	5.520205E+06	2.349512E+03	3.739364E+02	2094	7.226342E+06	2.688186E+03	4.278380E+02
2045	5.534165E+06	2.352481E+03	3.744089E+02	2095	7.246376E+06	2.691909E+03	4.284307E+02
2046	5.541222E+06	2.353980E+03	3.746475E+02	2096	7.255303E+06	2.693567E+03	4.286945E+02
2047	5.550113E+06	2.355868E+03	3.749480E+02	2097	7.365566E+06	2.713958E+03	4.319398E+02
2048	5.607733E+06	2.368065E+03	3.768893E+02	2098	7.418822E+06	2.723752E+03	4.334985E+02
2049	5.654720E+06	2.377965E+03	3.784650E+02	2099	7.442677E+06	2.728127E+03	4.341949E+02
2050	5.693496E+06	2.386105E+03	3.797604E+02	2100	7.503539E+06	2.739259E+03	4.359666E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 163

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2101	7.511395E+06	2.740692E+03	4.361948E+02	2151	1.071421E+07	3.273257E+03	5.209551E+02
2102	7.526463E+06	2.743440E+03	4.366320E+02	2152	1.076249E+07	3.280623E+03	5.221274E+02
2103	7.549339E+06	2.747606E+03	4.372951E+02	2153	1.092808E+07	3.305764E+03	5.261288E+02
2104	7.613010E+06	2.759168E+03	4.391353E+02	2154	1.107064E+07	3.327257E+03	5.295494E+02
2105	7.791995E+06	2.791414E+03	4.442674E+02	2155	1.156458E+07	3.400673E+03	5.412340E+02
2106	7.839056E+06	2.799831E+03	4.456070E+02	2156	1.159458E+07	3.405082E+03	5.419356E+02
2107	7.882154E+06	2.807517E+03	4.468303E+02	2157	1.167269E+07	3.416531E+03	5.437578E+02
2108	7.948979E+06	2.819393E+03	4.487204E+02	2158	1.170192E+07	3.420808E+03	5.444384E+02
2109	7.961947E+06	2.821692E+03	4.490863E+02	2159	1.177159E+07	3.430975E+03	5.460566E+02
2110	8.096597E+06	2.845452E+03	4.528678E+02	2160	1.202492E+07	3.467697E+03	5.519011E+02
2111	8.117221E+06	2.849074E+03	4.534442E+02	2161	1.208190E+07	3.475903E+03	5.532072E+02
2112	8.137863E+06	2.852694E+03	4.540204E+02	2162	1.239827E+07	3.521117E+03	5.604032E+02
2113	8.276057E+06	2.876814E+03	4.578591E+02	2163	1.242654E+07	3.525130E+03	5.610419E+02
2114	8.318707E+06	2.884217E+03	4.590374E+02	2164	1.255817E+07	3.543751E+03	5.640055E+02
2115	8.398350E+06	2.897991E+03	4.612295E+02	2165	1.256737E+07	3.545048E+03	5.642120E+02
2116	8.439144E+06	2.905021E+03	4.623484E+02	2166	1.272119E+07	3.566677E+03	5.676543E+02
2117	8.491573E+06	2.914030E+03	4.637823E+02	2167	1.284915E+07	3.584571E+03	5.705022E+02
2118	8.547138E+06	2.923549E+03	4.652973E+02	2168	1.287967E+07	3.588826E+03	5.711793E+02
2119	8.607576E+06	2.933867E+03	4.669394E+02	2169	1.306040E+07	3.613917E+03	5.751728E+02
2120	8.676591E+06	2.945605E+03	4.688077E+02	2170	1.311249E+07	3.621117E+03	5.763187E+02
2121	8.699639E+06	2.949515E+03	4.694299E+02	2171	1.315633E+07	3.627166E+03	5.772814E+02
2122	8.750481E+06	2.958121E+03	4.707996E+02	2172	1.334051E+07	3.652466E+03	5.813081E+02
2123	8.779458E+06	2.963015E+03	4.715785E+02	2173	1.342143E+07	3.663527E+03	5.830684E+02
2124	8.807662E+06	2.967771E+03	4.723354E+02	2174	1.342734E+07	3.664334E+03	5.831969E+02
2125	8.850903E+06	2.975047E+03	4.734934E+02	2175	1.351973E+07	3.676919E+03	5.851998E+02
2126	8.865114E+06	2.977434E+03	4.738734E+02	2176	1.354430E+07	3.680258E+03	5.857312E+02
2127	9.072853E+06	3.012118E+03	4.793934E+02	2177	1.371619E+07	3.703537E+03	5.894362E+02
2128	9.208322E+06	3.034522E+03	4.829591E+02	2178	1.386389E+07	3.723425E+03	5.926014E+02
2129	9.221677E+06	3.036721E+03	4.833092E+02	2179	1.409975E+07	3.754963E+03	5.976210E+02
2130	9.222110E+06	3.036793E+03	4.833206E+02	2180	1.415331E+07	3.762088E+03	5.987549E+02
2131	9.273511E+06	3.045244E+03	4.846656E+02	2181	1.420317E+07	3.768709E+03	5.998086E+02
2132	9.471026E+06	3.077503E+03	4.897998E+02	2182	1.442946E+07	3.798613E+03	6.045680E+02
2133	9.631535E+06	3.103471E+03	4.939328E+02	2183	1.447508E+07	3.804613E+03	6.055229E+02
2134	9.663829E+06	3.108670E+03	4.947602E+02	2184	1.457749E+07	3.818047E+03	6.076611E+02
2135	9.716569E+06	3.117141E+03	4.961084E+02	2185	1.473911E+07	3.839155E+03	6.110205E+02
2136	9.750743E+06	3.122618E+03	4.969801E+02	2186	1.493233E+07	3.864238E+03	6.150125E+02
2137	9.781945E+06	3.127610E+03	4.977746E+02	2187	1.498669E+07	3.871264E+03	6.161308E+02
2138	9.871399E+06	3.141878E+03	5.000454E+02	2188	1.531889E+07	3.913935E+03	6.229222E+02
2139	9.948093E+06	3.154060E+03	5.019842E+02	2189	1.538177E+07	3.921960E+03	6.241994E+02
2140	9.964029E+06	3.156585E+03	5.023861E+02	2190	1.541742E+07	3.926503E+03	6.249223E+02
2141	9.985167E+06	3.159932E+03	5.029187E+02	2191	1.556350E+07	3.945060E+03	6.278758E+02
2142	1.004296E+07	3.169062E+03	5.043719E+02	2192	1.565712E+07	3.956908E+03	6.297614E+02
2143	1.004474E+07	3.169344E+03	5.044168E+02	2193	1.605668E+07	4.007079E+03	6.377465E+02
2144	1.021882E+07	3.196689E+03	5.087688E+02	2194	1.617400E+07	4.021691E+03	6.400721E+02
2145	1.039670E+07	3.224391E+03	5.131778E+02	2195	1.632666E+07	4.040626E+03	6.430857E+02
2146	1.048804E+07	3.238524E+03	5.154271E+02	2196	1.644699E+07	4.055488E+03	6.454510E+02
2147	1.049489E+07	3.239582E+03	5.155954E+02	2197	1.649191E+07	4.061023E+03	6.463319E+02
2148	1.052326E+07	3.243958E+03	5.162919E+02	2198	1.652333E+07	4.064890E+03	6.469473E+02
2149	1.055586E+07	3.248978E+03	5.170909E+02	2199	1.657730E+07	4.071523E+03	6.480030E+02
2150	1.069662E+07	3.270569E+03	5.205272E+02	2200	1.679003E+07	4.097563E+03	6.521475E+02

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 164

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2201	1.709203E+07	4.134250E+03	6.579864E+02	2251	2.828909E+07	5.318749E+03	8.465052E+02
2202	1.745825E+07	4.178307E+03	6.649983E+02	2252	2.914619E+07	5.398721E+03	8.592332E+02
2203	1.750260E+07	4.183611E+03	6.658424E+02	2253	3.069070E+07	5.539919E+03	8.817054E+02
2204	1.778148E+07	4.216809E+03	6.711260E+02	2254	3.105151E+07	5.572388E+03	8.868731E+02
2205	1.781671E+07	4.220984E+03	6.717905E+02	2255	3.134706E+07	5.598844E+03	8.910838E+02
2206	1.814183E+07	4.259323E+03	6.778922E+02	2256	3.156588E+07	5.618352E+03	8.941885E+02
2207	1.833463E+07	4.281896E+03	6.814849E+02	2257	3.175389E+07	5.635059E+03	8.968475E+02
2208	1.840298E+07	4.289870E+03	6.827540E+02	2258	3.204446E+07	5.660783E+03	9.009415E+02
2209	1.851096E+07	4.302437E+03	6.847541E+02	2259	3.284486E+07	5.731044E+03	9.121240E+02
2210	1.894855E+07	4.352993E+03	6.928004E+02	2260	3.370698E+07	5.805772E+03	9.240172E+02
2211	1.926104E+07	4.388740E+03	6.984897E+02	2261	3.385679E+07	5.818659E+03	9.260683E+02
2212	1.942119E+07	4.406948E+03	7.013876E+02	2262	3.419432E+07	5.847591E+03	9.306730E+02
2213	1.977213E+07	4.446586E+03	7.076962E+02	2263	3.514103E+07	5.927987E+03	9.434684E+02
2214	1.980674E+07	4.450477E+03	7.083153E+02	2264	3.686851E+07	6.071944E+03	9.663800E+02
2215	1.988519E+07	4.459281E+03	7.097167E+02	2265	3.705419E+07	6.087215E+03	9.688104E+02
2216	1.997363E+07	4.469187E+03	7.112932E+02	2266	3.719029E+07	6.098384E+03	9.705879E+02
2217	2.006136E+07	4.478990E+03	7.128535E+02	2267	3.750081E+07	6.123790E+03	9.746315E+02
2218	2.022701E+07	4.497444E+03	7.157905E+02	2268	3.810336E+07	6.172792E+03	9.824303E+02
2219	2.041651E+07	4.518463E+03	7.191358E+02	2269	3.842120E+07	6.198484E+03	9.865193E+02
2220	2.068318E+07	4.547877E+03	7.238171E+02	2270	3.866839E+07	6.218391E+03	9.896877E+02
2221	2.113109E+07	4.596857E+03	7.316125E+02	2271	3.882579E+07	6.231035E+03	9.917000E+02
2222	2.139625E+07	4.625608E+03	7.361884E+02	2272	3.920804E+07	6.261632E+03	9.965697E+02
2223	2.142456E+07	4.628667E+03	7.366752E+02	2273	3.941604E+07	6.278219E+03	9.992096E+02
2224	2.174781E+07	4.663455E+03	7.422119E+02	2274	3.986804E+07	6.314115E+03	1.004923E+03
2225	2.202999E+07	4.693611E+03	7.470115E+02	2275	3.995181E+07	6.320744E+03	1.005978E+03
2226	2.223851E+07	4.715772E+03	7.505384E+02	2276	4.003797E+07	6.327556E+03	1.007062E+03
2227	2.228408E+07	4.720601E+03	7.513070E+02	2277	4.046273E+07	6.361032E+03	1.012390E+03
2228	2.254023E+07	4.747655E+03	7.556128E+02	2278	4.360794E+07	6.603631E+03	1.051001E+03
2229	2.257866E+07	4.751701E+03	7.562567E+02	2279	4.379351E+07	6.617667E+03	1.053234E+03
2230	2.261785E+07	4.755822E+03	7.569127E+02	2280	4.409443E+07	6.640364E+03	1.056847E+03
2231	2.277526E+07	4.772343E+03	7.595420E+02	2281	4.526487E+07	6.727917E+03	1.070781E+03
2232	2.350793E+07	4.848498E+03	7.716624E+02	2282	4.557245E+07	6.750737E+03	1.074413E+03
2233	2.362411E+07	4.860464E+03	7.735669E+02	2283	4.562392E+07	6.754548E+03	1.075020E+03
2234	2.380350E+07	4.878883E+03	7.764983E+02	2284	4.568760E+07	6.759261E+03	1.075770E+03
2235	2.390724E+07	4.889503E+03	7.781886E+02	2285	4.630190E+07	6.804550E+03	1.082978E+03
2236	2.413257E+07	4.912491E+03	7.818473E+02	2286	4.659156E+07	6.825801E+03	1.086360E+03
2237	2.416074E+07	4.915357E+03	7.823034E+02	2287	4.678360E+07	6.839854E+03	1.088597E+03
2238	2.440438E+07	4.940079E+03	7.862379E+02	2288	4.725751E+07	6.874410E+03	1.094096E+03
2239	2.444346E+07	4.944033E+03	7.868673E+02	2289	4.763071E+07	6.901501E+03	1.098408E+03
2240	2.460536E+07	4.960379E+03	7.894688E+02	2290	4.786380E+07	6.918367E+03	1.101092E+03
2241	2.505803E+07	5.005800E+03	7.966977E+02	2291	4.832862E+07	6.951879E+03	1.106426E+03
2242	2.611636E+07	5.110417E+03	8.133480E+02	2292	4.939414E+07	7.028097E+03	1.118556E+03
2243	2.674843E+07	5.171889E+03	8.231316E+02	2293	4.971342E+07	7.050774E+03	1.122166E+03
2244	2.699433E+07	5.195607E+03	8.269065E+02	2294	4.994164E+07	7.066940E+03	1.124738E+03
2245	2.705067E+07	5.201026E+03	8.277690E+02	2295	5.104460E+07	7.144550E+03	1.137090E+03
2246	2.728234E+07	5.223250E+03	8.313061E+02	2296	5.149089E+07	7.175715E+03	1.142051E+03
2247	2.732324E+07	5.227164E+03	8.319290E+02	2297	5.473184E+07	7.398097E+03	1.177444E+03
2248	2.773656E+07	5.266551E+03	8.381976E+02	2298	5.527866E+07	7.434962E+03	1.183311E+03
2249	2.783423E+07	5.275815E+03	8.396721E+02	2299	5.696841E+07	7.547742E+03	1.201260E+03
2250	2.790916E+07	5.282912E+03	8.408016E+02	2300	5.834965E+07	7.638694E+03	1.215736E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 165

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2301	5.849621E+07	7.648282E+03	1.217262E+03	2351	9.847841E+07	9.923629E+03	1.579395E+03
2302	6.004256E+07	7.748713E+03	1.233246E+03	2352	1.003820E+08	1.001908E+04	1.594586E+03
2303	6.031887E+07	7.766522E+03	1.236080E+03	2353	1.020845E+08	1.010369E+04	1.608051E+03
2304	6.035891E+07	7.769100E+03	1.236491E+03	2354	1.025644E+08	1.012741E+04	1.611827E+03
2305	6.097050E+07	7.808361E+03	1.242739E+03	2355	1.028993E+08	1.014393E+04	1.614457E+03
2306	6.176854E+07	7.859297E+03	1.250846E+03	2356	1.045399E+08	1.022448E+04	1.627276E+03
2307	6.199103E+07	7.873438E+03	1.253097E+03	2357	1.048737E+08	1.024079E+04	1.629872E+03
2308	6.363846E+07	7.977372E+03	1.269638E+03	2358	1.052102E+08	1.025720E+04	1.632485E+03
2309	6.377155E+07	7.985709E+03	1.270965E+03	2359	1.062456E+08	1.030755E+04	1.640498E+03
2310	6.420626E+07	8.012881E+03	1.275290E+03	2360	1.073011E+08	1.035862E+04	1.648626E+03
2311	6.567732E+07	8.104155E+03	1.289816E+03	2361	1.073962E+08	1.036321E+04	1.649356E+03
2312	6.634112E+07	8.145006E+03	1.296318E+03	2362	1.104061E+08	1.050743E+04	1.672309E+03
2313	6.767323E+07	8.226374E+03	1.309268E+03	2363	1.120203E+08	1.058396E+04	1.684490E+03
2314	6.815519E+07	8.255615E+03	1.313922E+03	2364	1.136696E+08	1.066159E+04	1.696845E+03
2315	6.872090E+07	8.289807E+03	1.319364E+03	2365	1.143194E+08	1.069202E+04	1.701688E+03
2316	6.981682E+07	8.355646E+03	1.329842E+03	2366	1.161967E+08	1.077946E+04	1.715604E+03
2317	7.078208E+07	8.413208E+03	1.339004E+03	2367	1.183740E+08	1.087998E+04	1.731603E+03
2318	7.181400E+07	8.474314E+03	1.348729E+03	2368	1.190847E+08	1.091259E+04	1.736793E+03
2319	7.192848E+07	8.481066E+03	1.349804E+03	2369	1.198872E+08	1.094930E+04	1.742636E+03
2320	7.208202E+07	8.490113E+03	1.351243E+03	2370	1.200909E+08	1.095860E+04	1.744115E+03
2321	7.269927E+07	8.526386E+03	1.357017E+03	2371	1.223883E+08	1.106292E+04	1.760719E+03
2322	7.317742E+07	8.554380E+03	1.361472E+03	2372	1.225779E+08	1.107149E+04	1.762083E+03
2323	7.508443E+07	8.665127E+03	1.379098E+03	2373	1.230883E+08	1.109452E+04	1.765747E+03
2324	7.584875E+07	8.709119E+03	1.386099E+03	2374	1.248892E+08	1.117538E+04	1.778618E+03
2325	7.599102E+07	8.717283E+03	1.387399E+03	2375	1.306639E+08	1.143083E+04	1.819273E+03
2326	7.601665E+07	8.718753E+03	1.387633E+03	2376	1.326078E+08	1.151555E+04	1.832756E+03
2327	7.686658E+07	8.767359E+03	1.395369E+03	2377	1.326581E+08	1.151773E+04	1.833104E+03
2328	7.784161E+07	8.822789E+03	1.404191E+03	2378	1.341343E+08	1.158163E+04	1.843274E+03
2329	7.812011E+07	8.838558E+03	1.406700E+03	2379	1.429903E+08	1.195786E+04	1.903152E+03
2330	7.850400E+07	8.860249E+03	1.410152E+03	2380	1.450800E+08	1.204491E+04	1.917008E+03
2331	7.879940E+07	8.876902E+03	1.412803E+03	2381	1.465298E+08	1.210495E+04	1.926563E+03
2332	8.111255E+07	9.006250E+03	1.433389E+03	2382	1.480059E+08	1.216577E+04	1.936242E+03
2333	8.131924E+07	9.017718E+03	1.435214E+03	2383	1.489973E+08	1.220644E+04	1.942716E+03
2334	8.302258E+07	9.111673E+03	1.450168E+03	2384	1.561499E+08	1.249599E+04	1.988799E+03
2335	8.450105E+07	9.192445E+03	1.463023E+03	2385	1.580930E+08	1.257350E+04	2.001135E+03
2336	8.619128E+07	9.283926E+03	1.477583E+03	2386	1.591497E+08	1.261545E+04	2.007812E+03
2337	8.720560E+07	9.338394E+03	1.486252E+03	2387	1.632756E+08	1.277793E+04	2.033671E+03
2338	8.723875E+07	9.340169E+03	1.486534E+03	2388	1.636614E+08	1.279302E+04	2.036072E+03
2339	8.790751E+07	9.375900E+03	1.492221E+03	2389	1.648981E+08	1.284127E+04	2.043751E+03
2340	9.116062E+07	9.547807E+03	1.519581E+03	2390	1.672726E+08	1.293339E+04	2.058413E+03
2341	9.185269E+07	9.583981E+03	1.525338E+03	2391	1.728943E+08	1.314893E+04	2.092717E+03
2342	9.350832E+07	9.669970E+03	1.539024E+03	2392	1.786809E+08	1.336716E+04	2.127449E+03
2343	9.357718E+07	9.673530E+03	1.539590E+03	2393	1.790145E+08	1.337963E+04	2.129434E+03
2344	9.362999E+07	9.676259E+03	1.540024E+03	2394	1.813510E+08	1.346666E+04	2.143286E+03
2345	9.446562E+07	9.719343E+03	1.546881E+03	2395	1.818278E+08	1.348435E+04	2.146102E+03
2346	9.460472E+07	9.726496E+03	1.548020E+03	2396	1.833714E+08	1.354147E+04	2.155192E+03
2347	9.497194E+07	9.745355E+03	1.551021E+03	2397	1.838745E+08	1.356003E+04	2.158146E+03
2348	9.539745E+07	9.767162E+03	1.554492E+03	2398	1.900226E+08	1.378487E+04	2.193930E+03
2349	9.714705E+07	9.856320E+03	1.568682E+03	2399	1.902605E+08	1.379349E+04	2.195303E+03
2350	9.771322E+07	9.885000E+03	1.573247E+03	2400	1.942157E+08	1.393613E+04	2.218004E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 166

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2401	1.986410E+08	1.409401E+04	2.243131E+03	2451	3.717079E+08	1.927973E+04	3.068464E+03
2402	2.006422E+08	1.416482E+04	2.254401E+03	2452	3.723851E+08	1.929728E+04	3.071258E+03
2403	2.028530E+08	1.424265E+04	2.266787E+03	2453	3.744490E+08	1.935068E+04	3.079757E+03
2404	2.052347E+08	1.432601E+04	2.280056E+03	2454	3.776913E+08	1.943428E+04	3.093062E+03
2405	2.070907E+08	1.439065E+04	2.290343E+03	2455	3.892203E+08	1.972867E+04	3.139915E+03
2406	2.088791E+08	1.445265E+04	2.300210E+03	2456	3.919679E+08	1.979818E+04	3.150978E+03
2407	2.105373E+08	1.450990E+04	2.309323E+03	2457	4.047531E+08	2.011848E+04	3.201955E+03
2408	2.115927E+08	1.454623E+04	2.315104E+03	2458	4.085297E+08	2.021212E+04	3.216858E+03
2409	2.130122E+08	1.459494E+04	2.322856E+03	2459	4.220001E+08	2.054264E+04	3.269463E+03
2410	2.151201E+08	1.466697E+04	2.334321E+03	2460	4.224684E+08	2.055404E+04	3.271276E+03
2411	2.161748E+08	1.470288E+04	2.340036E+03	2461	4.408786E+08	2.099711E+04	3.341794E+03
2412	2.177802E+08	1.475738E+04	2.348710E+03	2462	4.530167E+08	2.128419E+04	3.387484E+03
2413	2.198949E+08	1.482885E+04	2.360086E+03	2463	4.545626E+08	2.132047E+04	3.393259E+03
2414	2.236949E+08	1.495643E+04	2.380391E+03	2464	4.555601E+08	2.134385E+04	3.396980E+03
2415	2.278967E+08	1.509625E+04	2.402642E+03	2465	4.666149E+08	2.160127E+04	3.437949E+03
2416	2.295369E+08	1.515048E+04	2.411273E+03	2466	4.711930E+08	2.170698E+04	3.454773E+03
2417	2.362587E+08	1.537071E+04	2.446324E+03	2467	4.800721E+08	2.191055E+04	3.487172E+03
2418	2.403654E+08	1.550372E+04	2.467494E+03	2468	4.885700E+08	2.210362E+04	3.517900E+03
2419	2.438863E+08	1.561686E+04	2.485500E+03	2469	5.200884E+08	2.280545E+04	3.629600E+03
2420	2.457574E+08	1.567665E+04	2.495017E+03	2470	5.238992E+08	2.288884E+04	3.642873E+03
2421	2.506672E+08	1.583247E+04	2.519817E+03	2471	5.267215E+08	2.295041E+04	3.652672E+03
2422	2.516945E+08	1.586488E+04	2.524974E+03	2472	5.330136E+08	2.308709E+04	3.674424E+03
2423	2.571658E+08	1.603639E+04	2.552271E+03	2473	5.359191E+08	2.314993E+04	3.684425E+03
2424	2.614376E+08	1.616903E+04	2.573381E+03	2474	5.527340E+08	2.351029E+04	3.741780E+03
2425	2.638239E+08	1.624266E+04	2.585099E+03	2475	5.560045E+08	2.357975E+04	3.752833E+03
2426	2.719353E+08	1.649046E+04	2.624539E+03	2476	5.592250E+08	2.364794E+04	3.763686E+03
2427	2.741294E+08	1.655685E+04	2.635105E+03	2477	5.922362E+08	2.433590E+04	3.873179E+03
2428	2.742748E+08	1.656125E+04	2.635804E+03	2478	5.975260E+08	2.444434E+04	3.890438E+03
2429	2.748579E+08	1.657884E+04	2.638604E+03	2479	6.119549E+08	2.473772E+04	3.937131E+03
2430	2.760989E+08	1.661622E+04	2.644554E+03	2480	6.218521E+08	2.493696E+04	3.968841E+03
2431	2.841244E+08	1.685599E+04	2.682714E+03	2481	6.407587E+08	2.531321E+04	4.028723E+03
2432	2.899079E+08	1.702668E+04	2.709880E+03	2482	6.417456E+08	2.533270E+04	4.031824E+03
2433	2.948456E+08	1.717107E+04	2.732861E+03	2483	6.454497E+08	2.540570E+04	4.043443E+03
2434	2.995349E+08	1.730708E+04	2.754507E+03	2484	6.550167E+08	2.559329E+04	4.073299E+03
2435	3.078823E+08	1.754658E+04	2.792624E+03	2485	6.667513E+08	2.582153E+04	4.109624E+03
2436	3.110794E+08	1.763744E+04	2.807086E+03	2486	6.750614E+08	2.598194E+04	4.135155E+03
2437	3.142018E+08	1.772574E+04	2.821139E+03	2487	6.892212E+08	2.625302E+04	4.178298E+03
2438	3.152104E+08	1.775417E+04	2.825663E+03	2488	7.083412E+08	2.661468E+04	4.235858E+03
2439	3.163783E+08	1.778703E+04	2.830893E+03	2489	7.134075E+08	2.670969E+04	4.250979E+03
2440	3.206317E+08	1.790619E+04	2.849859E+03	2490	7.571131E+08	2.751569E+04	4.379258E+03
2441	3.256372E+08	1.804542E+04	2.872018E+03	2491	7.656126E+08	2.766971E+04	4.403770E+03
2442	3.295198E+08	1.815268E+04	2.889089E+03	2492	7.854681E+08	2.802620E+04	4.460509E+03
2443	3.357038E+08	1.832222E+04	2.916072E+03	2493	7.877609E+08	2.806708E+04	4.467014E+03
2444	3.400581E+08	1.844066E+04	2.934923E+03	2494	7.888454E+08	2.808639E+04	4.470088E+03
2445	3.401730E+08	1.844378E+04	2.935419E+03	2495	8.158686E+08	2.856341E+04	4.546009E+03
2446	3.419134E+08	1.849090E+04	2.942918E+03	2496	8.226218E+08	2.868138E+04	4.564784E+03
2447	3.523895E+08	1.877204E+04	2.987663E+03	2497	8.408158E+08	2.899682E+04	4.614988E+03
2448	3.590163E+08	1.894772E+04	3.015624E+03	2498	8.446174E+08	2.906230E+04	4.625409E+03
2449	3.606231E+08	1.899008E+04	3.022365E+03	2499	8.627014E+08	2.937178E+04	4.674664E+03
2450	3.668971E+08	1.915456E+04	3.048543E+03	2500	8.709263E+08	2.951146E+04	4.696895E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 167

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2501	8.848031E+08	2.974564E+04	4.734166E+03	2551	2.056217E+09	4.534553E+04	7.216966E+03
2502	9.076950E+08	3.012798E+04	4.795016E+03	2552	2.064026E+09	4.543156E+04	7.230657E+03
2503	9.412573E+08	3.067992E+04	4.882860E+03	2553	2.069251E+09	4.548902E+04	7.239802E+03
2504	9.521930E+08	3.085762E+04	4.911143E+03	2554	2.112307E+09	4.595984E+04	7.314735E+03
2505	9.733201E+08	3.119808E+04	4.965328E+03	2555	2.120870E+09	4.605290E+04	7.329547E+03
2506	1.004502E+09	3.169389E+04	5.044239E+03	2556	2.159931E+09	4.647506E+04	7.396736E+03
2507	1.038624E+09	3.222769E+04	5.129197E+03	2557	2.174631E+09	4.663294E+04	7.421862E+03
2508	1.047589E+09	3.236649E+04	5.151286E+03	2558	2.218215E+09	4.709793E+04	7.495868E+03
2509	1.072688E+09	3.275192E+04	5.212630E+03	2559	2.244924E+09	4.738063E+04	7.540861E+03
2510	1.117318E+09	3.342630E+04	5.319961E+03	2560	2.265165E+09	4.759375E+04	7.574780E+03
2511	1.144916E+09	3.383661E+04	5.385263E+03	2561	2.306160E+09	4.802249E+04	7.643017E+03
2512	1.150733E+09	3.392245E+04	5.398926E+03	2562	2.325525E+09	4.822369E+04	7.675039E+03
2513	1.179103E+09	3.433807E+04	5.465073E+03	2563	2.341368E+09	4.838768E+04	7.701139E+03
2514	1.180391E+09	3.435682E+04	5.468058E+03	2564	2.384274E+09	4.882903E+04	7.771381E+03
2515	1.234156E+09	3.513055E+04	5.591201E+03	2565	2.404399E+09	4.903467E+04	7.804110E+03
2516	1.241575E+09	3.523599E+04	5.607982E+03	2566	2.413074E+09	4.912305E+04	7.818175E+03
2517	1.245644E+09	3.529368E+04	5.617163E+03	2567	2.414618E+09	4.913876E+04	7.820677E+03
2518	1.257163E+09	3.545649E+04	5.643076E+03	2568	2.500619E+09	5.000619E+04	7.958733E+03
2519	1.273363E+09	3.568421E+04	5.679318E+03	2569	2.506668E+09	5.006664E+04	7.968353E+03
2520	1.290440E+09	3.592269E+04	5.717274E+03	2570	2.566061E+09	5.065631E+04	8.062202E+03
2521	1.312555E+09	3.622921E+04	5.766057E+03	2571	2.615480E+09	5.114177E+04	8.139465E+03
2522	1.335517E+09	3.654472E+04	5.816273E+03	2572	2.640303E+09	5.138388E+04	8.177999E+03
2523	1.371129E+09	3.702876E+04	5.893310E+03	2573	2.717924E+09	5.213371E+04	8.297338E+03
2524	1.385191E+09	3.721815E+04	5.923453E+03	2574	2.781204E+09	5.273712E+04	8.393373E+03
2525	1.394920E+09	3.734863E+04	5.944219E+03	2575	2.843451E+09	5.332402E+04	8.486781E+03
2526	1.401102E+09	3.743130E+04	5.957376E+03	2576	2.889489E+09	5.375396E+04	8.555209E+03
2527	1.416167E+09	3.763199E+04	5.989318E+03	2577	2.906975E+09	5.391637E+04	8.581057E+03
2528	1.457181E+09	3.817304E+04	6.075428E+03	2578	2.947513E+09	5.429100E+04	8.640681E+03
2529	1.467881E+09	3.831294E+04	6.097693E+03	2579	3.001049E+09	5.478183E+04	8.718800E+03
2530	1.482829E+09	3.850752E+04	6.128663E+03	2580	3.005656E+09	5.482387E+04	8.725489E+03
2531	1.486180E+09	3.855100E+04	6.135582E+03	2581	3.007282E+09	5.483869E+04	8.727849E+03
2532	1.530285E+09	3.911886E+04	6.225960E+03	2582	3.025205E+09	5.500187E+04	8.753819E+03
2533	1.555501E+09	3.943984E+04	6.277046E+03	2583	3.059939E+09	5.531671E+04	8.803929E+03
2534	1.562516E+09	3.952867E+04	6.291183E+03	2584	3.062393E+09	5.533890E+04	8.807459E+03
2535	1.601733E+09	4.002166E+04	6.369645E+03	2585	3.191319E+09	5.649176E+04	8.990943E+03
2536	1.638231E+09	4.047507E+04	6.441807E+03	2586	3.201611E+09	5.658278E+04	9.005429E+03
2537	1.668861E+09	4.085170E+04	6.501750E+03	2587	3.208621E+09	5.664469E+04	9.015283E+03
2538	1.679039E+09	4.097607E+04	6.521545E+03	2588	3.279585E+09	5.726766E+04	9.114432E+03
2539	1.710266E+09	4.135536E+04	6.581911E+03	2589	3.316624E+09	5.759014E+04	9.165756E+03
2540	1.762910E+09	4.198703E+04	6.682443E+03	2590	3.324440E+09	5.765796E+04	9.176549E+03
2541	1.777542E+09	4.216090E+04	6.710116E+03	2591	3.366420E+09	5.802086E+04	9.234307E+03
2542	1.783274E+09	4.222883E+04	6.720927E+03	2592	3.415406E+09	5.844148E+04	9.301250E+03
2543	1.794233E+09	4.235839E+04	6.741547E+03	2593	3.426110E+09	5.853299E+04	9.315814E+03
2544	1.805312E+09	4.248896E+04	6.762329E+03	2594	3.447550E+09	5.871584E+04	9.344916E+03
2545	1.903343E+09	4.362732E+04	6.943503E+03	2595	3.475694E+09	5.895502E+04	9.382982E+03
2546	1.921640E+09	4.383651E+04	6.976798E+03	2596	3.513200E+09	5.927225E+04	9.433472E+03
2547	1.978717E+09	4.448277E+04	7.079653E+03	2597	3.525339E+09	5.937456E+04	9.449755E+03
2548	1.982516E+09	4.452546E+04	7.086446E+03	2598	3.567081E+09	5.972505E+04	9.505537E+03
2549	1.990339E+09	4.461322E+04	7.100414E+03	2599	3.627186E+09	6.022612E+04	9.585285E+03
2550	2.045885E+09	4.523146E+04	7.198810E+03	2600	3.629697E+09	6.024696E+04	9.588602E+03

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 168

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2601	3.683994E+09	6.069591E+04	9.660054E+03	2651	7.122311E+09	8.439378E+04	1.343169E+04
2602	3.717070E+09	6.096778E+04	9.703323E+03	2652	7.217655E+09	8.495678E+04	1.352129E+04
2603	3.756572E+09	6.129088E+04	9.754746E+03	2653	7.229232E+09	8.502489E+04	1.353213E+04
2604	3.866643E+09	6.218234E+04	9.896627E+03	2654	7.305283E+09	8.547095E+04	1.360312E+04
2605	3.890005E+09	6.236990E+04	9.926479E+03	2655	7.425210E+09	8.616966E+04	1.371433E+04
2606	3.974452E+09	6.304326E+04	1.003365E+04	2656	7.513462E+09	8.668023E+04	1.379559E+04
2607	4.062613E+09	6.373863E+04	1.014432E+04	2657	7.565965E+09	8.698255E+04	1.384370E+04
2608	4.076506E+09	6.384752E+04	1.016165E+04	2658	7.653969E+09	8.748697E+04	1.392398E+04
2609	4.101445E+09	6.404252E+04	1.019268E+04	2659	8.459694E+09	9.197660E+04	1.463853E+04
2610	4.214014E+09	6.491544E+04	1.033161E+04	2660	8.695794E+09	9.325124E+04	1.484140E+04
2611	4.248824E+09	6.518301E+04	1.037420E+04	2661	8.794404E+09	9.377848E+04	1.492531E+04
2612	4.308151E+09	6.563650E+04	1.044637E+04	2662	8.917926E+09	9.443477E+04	1.502976E+04
2613	4.359163E+09	6.602396E+04	1.050804E+04	2663	8.951530E+09	9.461253E+04	1.505805E+04
2614	4.474997E+09	6.689542E+04	1.064674E+04	2664	9.230443E+09	9.607520E+04	1.529084E+04
2615	4.489041E+09	6.700031E+04	1.066343E+04	2665	9.369537E+09	9.679637E+04	1.540562E+04
2616	4.555231E+09	6.749245E+04	1.074176E+04	2666	9.457885E+09	9.725166E+04	1.547808E+04
2617	4.731771E+09	6.878787E+04	1.094793E+04	2667	9.511319E+09	9.752599E+04	1.552174E+04
2618	4.803106E+09	6.930445E+04	1.103015E+04	2668	9.704374E+09	9.851078E+04	1.567848E+04
2619	4.827507E+09	6.948027E+04	1.105813E+04	2669	9.977996E+09	9.988992E+04	1.589797E+04
2620	4.932489E+09	7.023168E+04	1.117772E+04	2670	9.982331E+09	9.991162E+04	1.590143E+04
2621	4.986587E+09	7.061577E+04	1.123885E+04	2671	1.041523E+10	1.020551E+05	1.624257E+04
2622	5.035052E+09	7.095810E+04	1.129333E+04	2672	1.055021E+10	1.027142E+05	1.634748E+04
2623	5.093673E+09	7.136997E+04	1.135888E+04	2673	1.063700E+10	1.031359E+05	1.641458E+04
2624	5.109864E+09	7.148331E+04	1.137692E+04	2674	1.070418E+10	1.034610E+05	1.646633E+04
2625	5.261782E+09	7.253814E+04	1.154480E+04	2675	1.083885E+10	1.041098E+05	1.656959E+04
2626	5.361584E+09	7.322284E+04	1.165378E+04	2676	1.086985E+10	1.042586E+05	1.659327E+04
2627	5.381039E+09	7.335556E+04	1.167490E+04	2677	1.099407E+10	1.048526E+05	1.668781E+04
2628	5.431352E+09	7.369771E+04	1.172935E+04	2678	1.105631E+10	1.051490E+05	1.673498E+04
2629	5.513399E+09	7.425226E+04	1.181761E+04	2679	1.119762E+10	1.058188E+05	1.684159E+04
2630	5.581316E+09	7.470820E+04	1.189018E+04	2680	1.141077E+10	1.068212E+05	1.700113E+04
2631	5.603154E+09	7.485422E+04	1.191342E+04	2681	1.155575E+10	1.074977E+05	1.710879E+04
2632	5.620384E+09	7.496922E+04	1.193172E+04	2682	1.195368E+10	1.093329E+05	1.740087E+04
2633	5.856679E+09	7.652894E+04	1.217996E+04	2683	1.201349E+10	1.096061E+05	1.744435E+04
2634	5.917245E+09	7.692363E+04	1.224278E+04	2684	1.264571E+10	1.124532E+05	1.789748E+04
2635	5.956846E+09	7.718060E+04	1.228367E+04	2685	1.290944E+10	1.136197E+05	1.808314E+04
2636	5.982900E+09	7.734921E+04	1.231051E+04	2686	1.308519E+10	1.143905E+05	1.820581E+04
2637	5.987107E+09	7.737640E+04	1.231484E+04	2687	1.371319E+10	1.171033E+05	1.863757E+04
2638	6.011158E+09	7.753166E+04	1.233955E+04	2688	1.396056E+10	1.181548E+05	1.880492E+04
2639	6.218786E+09	7.885928E+04	1.255084E+04	2689	1.440673E+10	1.200280E+05	1.910305E+04
2640	6.320774E+09	7.950329E+04	1.265334E+04	2690	1.489152E+10	1.220308E+05	1.942181E+04
2641	6.347092E+09	7.966864E+04	1.267966E+04	2691	1.503329E+10	1.226103E+05	1.951404E+04
2642	6.605604E+09	8.127487E+04	1.293530E+04	2692	1.541314E+10	1.241497E+05	1.975904E+04
2643	6.610855E+09	8.130717E+04	1.294044E+04	2693	1.560835E+10	1.249334E+05	1.988377E+04
2644	6.644271E+09	8.151240E+04	1.297310E+04	2694	1.710416E+10	1.307829E+05	2.081474E+04
2645	6.688591E+09	8.178381E+04	1.301630E+04	2695	1.732442E+10	1.316223E+05	2.094834E+04
2646	6.722884E+09	8.199319E+04	1.304962E+04	2696	1.792100E+10	1.338693E+05	2.130596E+04
2647	6.742544E+09	8.211300E+04	1.306869E+04	2697	1.835789E+10	1.354913E+05	2.156411E+04
2648	6.802632E+09	8.247807E+04	1.312679E+04	2698	1.874088E+10	1.368973E+05	2.178789E+04
2649	6.974776E+09	8.351513E+04	1.329185E+04	2699	1.892619E+10	1.375725E+05	2.189534E+04
2650	7.074255E+09	8.410859E+04	1.338630E+04	2700	1.910390E+10	1.382169E+05	2.199790E+04

Figure G-2. CM1.0A88 Landing Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 12:30:50 CDT Page 169

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
2701	1.960787E+10	1.400281E+05	2.228616E+04	2751	1.923781E+11	4.386093E+05	6.980684E+04
2702	1.967456E+10	1.402660E+05	2.232403E+04	2752	2.135354E+11	4.620989E+05	7.354532E+04
2703	2.011478E+10	1.418266E+05	2.257240E+04	2753	2.474657E+11	4.974592E+05	7.917309E+04
2704	2.066246E+10	1.437444E+05	2.287764E+04	2754	2.677601E+11	5.174554E+05	8.235559E+04
2705	2.133481E+10	1.460644E+05	2.324687E+04	2755	4.421279E+11	6.649270E+05	1.058264E+05
2706	2.168985E+10	1.472747E+05	2.343950E+04	2756	5.001281E+11	7.071973E+05	1.125540E+05
2707	2.273259E+10	1.507733E+05	2.399632E+04	2757	6.641298E+11	8.149416E+05	1.297020E+05
2708	2.427241E+10	1.557960E+05	2.479571E+04	2758	1.075185E+12	1.036911E+06	1.650295E+05
2709	2.480042E+10	1.574815E+05	2.506396E+04	2759	1.294642E+12	1.137823E+06	1.810902E+05
2710	2.502026E+10	1.581779E+05	2.517480E+04	2760	1.811749E+12	1.346012E+06	2.142245E+05
2711	2.547619E+10	1.596126E+05	2.540314E+04	2761	2.009845E+12	1.417690E+06	2.256324E+05
2712	2.639654E+10	1.624701E+05	2.585792E+04	2762	2.831776E+12	1.682788E+06	2.678241E+05
2713	2.701713E+10	1.643689E+05	2.616012E+04	2763	3.586145E+12	1.893712E+06	3.013936E+05
2714	2.710682E+10	1.646415E+05	2.620351E+04	2764	1.119155E+13	3.345377E+06	5.324333E+05
2715	2.928298E+10	1.711227E+05	2.723502E+04	2765	1.166221E+13	3.414998E+06	5.435138E+05
2716	3.005042E+10	1.733506E+05	2.758960E+04	2766	2.356884E+13	4.854775E+06	7.726614E+05
2717	3.040057E+10	1.743576E+05	2.774987E+04	2767	3.964700E+13	6.296586E+06	1.002133E+06
2718	3.409027E+10	1.846355E+05	2.938565E+04				
2719	3.517080E+10	1.875388E+05	2.984773E+04				
2720	3.519577E+10	1.876053E+05	2.985832E+04				
2721	3.550166E+10	1.884188E+05	2.998779E+04				
2722	3.780213E+10	1.944277E+05	3.094413E+04				
2723	3.855235E+10	1.963475E+05	3.124968E+04				
2724	3.922924E+10	1.980637E+05	3.152282E+04				
2725	4.141638E+10	2.035101E+05	3.238964E+04				
2726	4.163427E+10	2.040448E+05	3.247473E+04				
2727	4.185347E+10	2.045812E+05	3.256011E+04				
2728	4.336471E+10	2.082419E+05	3.314274E+04				
2729	4.360200E+10	2.088109E+05	3.323329E+04				
2730	4.597453E+10	2.144167E+05	3.412548E+04				
2731	4.612494E+10	2.147672E+05	3.418126E+04				
2732	4.764092E+10	2.182680E+05	3.473843E+04				
2733	4.765018E+10	2.182892E+05	3.474181E+04				
2734	5.006906E+10	2.237612E+05	3.561270E+04				
2735	5.143689E+10	2.267970E+05	3.609587E+04				
2736	5.271761E+10	2.296032E+05	3.654248E+04				
2737	5.499548E+10	2.345112E+05	3.732361E+04				
2738	5.537998E+10	2.353295E+05	3.745386E+04				
2739	5.845602E+10	2.417768E+05	3.847997E+04				
2740	6.475700E+10	2.544740E+05	4.050079E+04				
2741	7.250031E+10	2.692588E+05	4.285387E+04				
2742	8.051003E+10	2.837429E+05	4.515908E+04				
2743	8.251149E+10	2.872481E+05	4.571696E+04				
2744	9.976259E+10	3.158522E+05	5.026943E+04				
2745	1.013587E+11	3.183688E+05	5.066996E+04				
2746	1.068053E+11	3.268108E+05	5.201356E+04				
2747	1.205033E+11	3.471359E+05	5.524839E+04				
2748	1.216837E+11	3.488319E+05	5.551831E+04				
2749	1.250625E+11	3.536417E+05	5.628383E+04				
2750	1.481550E+11	3.849090E+05	6.126017E+04				

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 12:30:50 CDT                    Page  170


                                  Execution Time: 00:00:17


                                   * * * END OF JOB * * *
```

Figure G-2. CM1.0A88 Landing Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:11:16 CDT                    Page    1


                        ************************************************
                        *                                              *
                        *                ASD/DMMP v1.11.0              *
                        *                                              *
                        *       Applied Structural Dynamics, Inc.      *
                        *    http://www.AppliedStructuralDynamics.com  *
                        *                                              *
                        *   Execution Time: Sun Jul 13 2008 15:11:16 CDT *
                        *                                              *
                        ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-06-0002A
     Name       : JEM-EF
     Description: JEM-EF Launch Model
```

Figure G-3. JEM-EF Launch Model/OTMs

```
ASD/DMMP v1.11.0                          Sun Jul 13 2008 15:11:16 CDT                          Page    2

                                C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-06-0002A
     Name        : JEM-EF
     Description : JEM-EF Launch Model
     Type        : Single

     DMM Type    : Craig-Bampton
     DMM Size    : 71 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : EF_full_r.op4
        Geometry : EF_full_grid.bdf
        Label    : <not specified>

     OTM-01:
        Description : JEM-EF Launch NLF & IFF OTM
        No. of Items: 19
        Ignore      : No
        Matrix File : DMM-2008-06-0002A.OTM.op4
        Label File  : DMM-2008-06-0002A.OTM.txt
```

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
600001	ID 600001	0	762.20000	94.00000	414.00000	0			1				
600002	ID 600002	0	762.20000	-94.00000	414.00000	0			2				
600003	ID 600003	0	954.93000	94.00000	414.00000	0	3		4				
600004	ID 600004	0	954.93000	-94.00000	414.00000	0	5		6				
600005	ID 600005	0	947.07000	0.00000	305.00000	0		7					
600101	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							8
:													:
600164	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							71

Figure G-3. JEM-EF Launch Model/OTMs

```
ASD/DMMP v1.11.0                        Sun Jul 13 2008 15:11:16 CDT                        Page    4

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   2       600005
    2 -    BSET1   3       600001  600002
    3 -    BSET1   13      600003  600004
    4 -    GRID   *600001                                    762.2             94*
    5 -    *                    414                12456
    6 -    GRID   *600002                                    762.2            -94*
    7 -    *                    414                12456
    8 -    GRID   *600003                                   954.93             94*
    9 -    *                    414                2456
   10 -    GRID   *600004                                   954.93            -94*
   11 -    *                    414                2456
   12 -    GRID   *600005                                   947.07              0*
   13 -    *                    305                13456
   14 -    QSET1   0       600101  THRU    600164
   15 -    SPOINT  600101  THRU    600164
   16 -    ENDDATA

           TOTAL ENTRY COUNT = 16
```

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 5

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	600001	0	7.62200E+02	9.40000E+01	4.14000E+02
2	600002	0	7.62200E+02	-9.40000E+01	4.14000E+02
3	600003	0	9.54930E+02	9.40000E+01	4.14000E+02
4	600004	0	9.54930E+02	-9.40000E+01	4.14000E+02
5	600005	0	9.47070E+02	0.00000E+00	3.05000E+02
6	600101	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
69	600164	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 6

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	600001-1	600001-2	600001-4	600001-5	600001-6	600002-1	600002-2	600002-4	600002-5	600002-6	= 10
11 =	600003-2	600003-4	600003-5	600003-6	600004-2	600004-4	600004-5	600004-6	600005-1	600005-3	= 20
21 =	600005-4	600005-5	600005-6								

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	600001-3	600002-3	600003-1	600003-3	600004-1	600004-3	600005-2			

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	600101-0	600102-0	600103-0	600104-0	600105-0	600106-0	600107-0	600108-0	600109-0	600110-0	= 10
11 =	600111-0	600112-0	600113-0	600114-0	600115-0	600116-0	600117-0	600118-0	600119-0	600120-0	= 20
21 =	600121-0	600122-0	600123-0	600124-0	600125-0	600126-0	600127-0	600128-0	600129-0	600130-0	= 30
31 =	600131-0	600132-0	600133-0	600134-0	600135-0	600136-0	600137-0	600138-0	600139-0	600140-0	= 40
41 =	600141-0	600142-0	600143-0	600144-0	600145-0	600146-0	600147-0	600148-0	600149-0	600150-0	= 50
51 =	600151-0	600152-0	600153-0	600154-0	600155-0	600156-0	600157-0	600158-0	600159-0	600160-0	= 60
61 =	600161-0	600162-0	600163-0	600164-0							

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	600001-3	600002-3	600003-1	600003-3	600004-1	600004-3	600005-2	600101-0	600102-0	600103-0	= 10
11 =	600104-0	600105-0	600106-0	600107-0	600108-0	600109-0	600110-0	600111-0	600112-0	600113-0	= 20
21 =	600114-0	600115-0	600116-0	600117-0	600118-0	600119-0	600120-0	600121-0	600122-0	600123-0	= 30
31 =	600124-0	600125-0	600126-0	600127-0	600128-0	600129-0	600130-0	600131-0	600132-0	600133-0	= 40
41 =	600134-0	600135-0	600136-0	600137-0	600138-0	600139-0	600140-0	600141-0	600142-0	600143-0	= 50
51 =	600144-0	600145-0	600146-0	600147-0	600148-0	600149-0	600150-0	600151-0	600152-0	600153-0	= 60
61 =	600154-0	600155-0	600156-0	600157-0	600158-0	600159-0	600160-0	600161-0	600162-0	600163-0	= 70
71 =	600164-0										

Figure G-3. JEM-EF Launch Model/OTMs

```
ASD/DMMP v1.11.0                        Sun Jul 13 2008 15:11:16 CDT                        Page   10

                                    Z E R O   S T I F F N E S S   D O F S

                                The following DOFs have stiffness less than 1.0E-09:

        ---  1 --- ---  2 --- ---  3 --- ---  4 --- ---  5 --- ---  6 --- ---  7 --- ---  8 --- ---  9 --- --- 10 ---
    1 =   600003-1   600004-1
```

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 11

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  2.259958E+01  1.187903E-08 -1.335275E-09 -4.716900E-06  8.916549E+03  2.642903E+01 *
*  1.187907E-08  2.180857E+01 -2.144951E-11 -8.612037E+03  4.572496E-06  1.875366E+04 *
* -1.335176E-09 -2.144596E-11  2.180857E+01 -2.642902E+01 -1.875366E+04 -5.213115E-08 *
* -4.716915E-06 -8.612037E+03 -2.642902E+01  3.451802E+06  2.279010E+04 -7.404951E+06 *
*  8.916549E+03  4.572468E-06 -1.875366E+04  2.279010E+04  1.973302E+07  1.081832E+04 *
*  2.642903E+01  1.875366E+04 -5.213587E-08 -7.404951E+06  1.081832E+04  1.624785E+07 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	2.259958E+01	-2.087163E-07	-1.169448E+00	3.945449E+02
Y	2.180857E+01	8.599216E+02	2.096651E-07	3.948923E+02
Z	2.180857E+01	8.599216E+02	-1.211864E+00	-2.390397E-09

I(S)

```
*  5.094241E+04 -6.321039E+01 -7.247038E+02 *
* -6.321039E+01  8.837031E+04 -3.908819E+02 *
* -7.247038E+02 -3.908819E+02  1.211479E+05 *
```

I(Q)

```
*  5.093484E+04                             *
*                8.836573E+04               *
*                             1.211601E+05 *
```

Q

```
*  9.999456E-01 -1.457434E-03  1.033028E-02 *
* -1.580750E-03 -9.999275E-01  1.193927E-02 *
* -1.031213E-02  1.195495E-02  9.998754E-01 *
```

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 12

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
8.599216E+02	-1.190656E+00	3.947186E+02

Figure G-3. JEM-EF Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:11:16 CDT                    Page   13

                O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                    REFERENCE POINT = C.G.

                                              M O
*  2.259958E+01  1.187903E-08 -1.335275E-09 -2.961627E-08 -3.925921E+00 -4.793047E-01 *
*  1.187907E-08  2.180857E+01 -2.144951E-11 -3.788508E+00 -1.348432E-07 -1.210465E-06 *
* -1.335176E-09 -2.144596E-11  2.180857E+01 -4.625187E-01 -6.693026E-07 -3.209957E-08 *
* -2.961360E-08 -3.788508E+00 -4.625187E-01  5.094308E+04  6.321220E+01  7.247038E+02 *
* -3.925921E+00 -1.348467E-07 -6.693060E-07  6.321220E+01  8.837100E+04  3.909652E+02 *
* -4.793047E-01 -1.210456E-06 -3.210025E-08  7.247038E+02  3.909652E+02  1.211479E+05 *

                                               S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
            X              2.259958E+01     -1.310479E-09  2.120857E-02 -1.737166E-01
            Y              2.180857E+01     -5.550409E-08 -6.183036E-09  1.737165E-01
            Z              2.180857E+01      3.068989E-08 -2.120811E-02 -1.471879E-09

                                             I(S)
                                *  5.094241E+04 -6.321220E+01 -7.247038E+02 *
                                * -6.321220E+01  8.837031E+04 -3.908819E+02 *
                                * -7.247038E+02 -3.908819E+02  1.211479E+05 *

                                             I(Q)
                                *  5.093484E+04                             *
                                *                8.836573E+04               *
                                *                             1.211601E+05 *

                                               Q
                                *  9.999456E-01 -1.457482E-03  1.033028E-02 *
                                * -1.580798E-03 -9.999275E-01  1.193928E-02 *
                                * -1.031213E-02  1.195496E-02  9.998754E-01 *
```

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 14

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	2.25996E+01	1.18790E-08	-1.33528E-09	-2.96163E-08	-3.92592E+00	-4.79305E-01
T2:	1.18791E-08	2.18086E+01	-2.14495E-11	-3.78851E+00	-1.34843E-07	-1.21046E-06
T3:	-1.33518E-09	-2.14460E-11	2.18086E+01	-4.62519E-01	-6.69303E-07	-3.20996E-08
R1:	-2.96136E-08	-3.78851E+00	-4.62519E-01	5.09431E+04	6.32122E+01	7.24704E+02
R2:	-3.92592E+00	-1.34847E-07	-6.69306E-07	6.32122E+01	8.83710E+04	3.90965E+02
R3:	-4.79305E-01	-1.21046E-06	-3.21002E-08	7.24704E+02	3.90965E+02	1.21148E+05

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-4.19121E-04	-6.05728E-07	-7.36303E-08	4.62166E-05	6.15208E-03	9.76200E-03
T2:	-6.05914E-07	5.51082E-05	4.31509E-07	9.54005E-04	-8.86874E-05	4.54813E-03
T3:	-7.42712E-08	4.31308E-07	7.69498E-05	4.24340E-04	-5.86383E-03	4.99333E-05
R1:	4.62844E-05	9.54019E-04	4.24379E-04	2.41607E-02	-5.07897E-02	6.34526E-02
R2:	6.15220E-03	-8.86835E-05	-5.86382E-03	-5.07938E-02	3.54079E-01	-1.33623E-01
R3:	9.76200E-03	4.54814E-03	5.00261E-05	6.34385E-02	-1.33631E-01	-8.93868E-01

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 15

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	600001-3	3.75545E-05	-3.41868E-06	3.65031E-06	-6.57451E-05	-8.89137E-04	-1.17492E-03
2	600002-3	3.62606E-05	3.23175E-06	3.86529E-06	6.75569E-06	-7.79804E-04	-4.70408E-04
3	600003-1	-2.59112E-04	1.05447E-06	-1.02417E-07	1.27611E-04	3.70677E-03	1.16821E-02
4	600003-3	-3.70558E-05	-1.75929E-05	3.63886E-05	-5.15343E-05	-2.23348E-03	-6.33406E-04
5	600004-1	-1.60008E-04	-1.66020E-06	2.87864E-08	-8.13943E-05	2.44531E-03	-1.92010E-03
6	600004-3	-3.68335E-05	1.82112E-05	3.30455E-05	5.34864E-04	-1.96142E-03	2.32867E-03
7	600005-2	-6.05914E-07	5.51082E-05	4.31509E-07	9.54005E-04	-8.86874E-05	4.54813E-03
	Total:	-4.19121E-04	5.51082E-05	7.69498E-05	2.41607E-02	3.54080E-01	-8.93868E-01

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 16

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	3	600003-1	-2.59112E-04
T2 -	7	600005-2	5.51082E-05
T3 -	4	600003-3	3.63886E-05
R1 -	7	600005-2	9.54005E-04
R2 -	3	600003-1	3.70677E-03
R3 -	3	600003-1	1.16821E-02

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 17

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	600001-3	-4.57414E+02	-6.97158E+02	2.03137E+03	1.24362E+02	2.29356E+02	-4.10465E+00
2	600002-3	-4.23375E+02	6.97158E+02	2.11938E+03	-1.24262E+02	2.29559E+02	6.18117E+00
3	600003-1	4.30844E+03	3.90316E+03	-1.92418E-07	-5.61099E+00	-4.01770E+00	-6.44641E+02
4	600003-3	4.57414E+02	-3.32889E+03	2.12437E+03	1.48191E+02	-2.29019E+02	7.95946E+00
5	600004-1	4.41700E+03	-3.90316E+03	-3.23116E-07	5.61099E+00	9.17777E-02	6.44161E+02
6	600004-3	4.23375E+02	3.32889E+03	2.14491E+03	-1.48754E+02	-2.29896E+02	-1.00360E+01
7	600005-2	4.58637E-06	8.42004E+03	-8.28140E-09	-3.78851E+00	-1.34843E-07	-1.21046E-06
	Total:	8.72544E+03	8.42004E+03	8.42004E+03	5.09431E+04	8.83710E+04	1.21148E+05

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 18

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-2.190777E-05	4.680574E-03	7.449365E-04
2	-5.730548E-06	2.393856E-03	3.809940E-04
3	-1.275929E-07	3.572014E-04	5.685037E-05
4	1.858585E-07	4.311131E-04	6.861378E-05
5	3.726554E-06	1.930428E-03	3.072372E-04
6	8.495710E-06	2.914740E-03	4.638953E-04
7	4.078409E+04	2.019507E+02	3.214146E+01
8	4.609246E+04	2.146916E+02	3.416922E+01
9	5.007259E+04	2.237690E+02	3.561395E+01
10	5.951780E+04	2.439627E+02	3.882787E+01
11	6.097137E+04	2.469238E+02	3.929914E+01
12	6.543379E+04	2.558003E+02	4.071188E+01
13	6.888178E+04	2.624534E+02	4.177075E+01
14	6.947191E+04	2.635753E+02	4.194930E+01
15	7.099584E+04	2.664504E+02	4.240691E+01
16	7.178046E+04	2.679188E+02	4.264059E+01
17	7.476629E+04	2.734343E+02	4.351841E+01
18	7.709477E+04	2.776594E+02	4.419087E+01
19	8.087438E+04	2.843842E+02	4.526115E+01
20	8.097212E+04	2.845560E+02	4.528850E+01
21	8.217569E+04	2.866630E+02	4.562384E+01
22	8.378720E+04	2.894602E+02	4.606902E+01
23	8.727231E+04	2.954189E+02	4.701738E+01
24	9.042630E+04	3.007097E+02	4.785943E+01
25	9.122024E+04	3.020269E+02	4.806907E+01
26	9.254540E+04	3.042127E+02	4.841696E+01
27	9.382600E+04	3.063103E+02	4.875080E+01
28	9.568237E+04	3.093257E+02	4.923071E+01
29	9.709628E+04	3.116028E+02	4.959312E+01
30	1.012078E+05	3.181317E+02	5.063223E+01
31	1.054095E+05	3.246683E+02	5.167257E+01
32	1.063641E+05	3.261351E+02	5.190601E+01
33	1.100444E+05	3.317294E+02	5.279637E+01
34	1.109450E+05	3.330841E+02	5.301198E+01
35	1.134393E+05	3.368075E+02	5.360458E+01
36	1.177594E+05	3.431609E+02	5.461576E+01
37	1.219064E+05	3.491510E+02	5.556911E+01
38	1.231648E+05	3.509485E+02	5.585518E+01
39	1.278876E+05	3.576138E+02	5.691601E+01
40	1.337364E+05	3.656999E+02	5.820295E+01
41	1.377728E+05	3.711776E+02	5.907475E+01
42	1.400057E+05	3.741734E+02	5.955154E+01
43	1.420663E+05	3.769169E+02	5.998818E+01
44	1.431929E+05	3.784084E+02	6.022557E+01
45	1.436893E+05	3.790638E+02	6.032987E+01
46	1.456451E+05	3.816347E+02	6.073905E+01
47	1.470128E+05	3.834225E+02	6.102359E+01
48	1.510355E+05	3.886329E+02	6.185285E+01
49	1.514945E+05	3.892230E+02	6.194676E+01
50	1.539120E+05	3.923161E+02	6.243905E+01
51	1.587487E+05	3.984328E+02	6.341255E+01
52	1.591901E+05	3.989864E+02	6.350066E+01
53	1.617643E+05	4.021993E+02	6.401201E+01
54	1.638391E+05	4.047704E+02	6.442121E+01
55	1.643900E+05	4.054504E+02	6.452944E+01
56	1.682749E+05	4.102132E+02	6.528746E+01
57	1.703198E+05	4.126982E+02	6.568296E+01
58	1.705630E+05	4.129927E+02	6.572983E+01
59	1.727061E+05	4.155792E+02	6.614148E+01
60	1.752127E+05	4.185842E+02	6.661975E+01
61	1.763625E+05	4.199553E+02	6.683796E+01
62	1.799763E+05	4.242362E+02	6.751929E+01
63	1.883350E+05	4.339758E+02	6.906939E+01
64	1.907338E+05	4.367309E+02	6.950788E+01
65	2.656221E+05	5.153854E+02	8.202614E+01
66	4.244312E+05	6.514839E+02	1.036869E+02
67	5.280495E+05	7.266701E+02	1.156531E+02
68	7.862616E+05	8.867140E+02	1.411249E+02
69	9.392566E+05	9.691525E+02	1.542454E+02
70	1.151682E+06	1.073165E+03	1.707995E+02
71	3.253054E+06	1.803622E+03	2.870554E+02

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 19

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1	2.708168E+03	5.204006E+01	8.282433E+00	51	1.595472E+05	3.994337E+02	6.357184E+01
2	6.106602E+03	7.814475E+01	1.243712E+01	52	1.636211E+05	4.045010E+02	6.437834E+01
3	1.055261E+04	1.027259E+02	1.634933E+01	53	1.640525E+05	4.050339E+02	6.446315E+01
4	1.529138E+04	1.236583E+02	1.968083E+01	54	1.658650E+05	4.072653E+02	6.481829E+01
5	2.816959E+04	1.678380E+02	2.671224E+01	55	1.695114E+05	4.117177E+02	6.552690E+01
6	4.185620E+04	2.045879E+02	3.256117E+01	56	1.705839E+05	4.130181E+02	6.573387E+01
7	4.611730E+04	2.147494E+02	3.417843E+01	57	1.712858E+05	4.138669E+02	6.586897E+01
8	5.076648E+04	2.253142E+02	3.585987E+01	58	1.729908E+05	4.159216E+02	6.619598E+01
9	5.131127E+04	2.265199E+02	3.605176E+01	59	1.751323E+05	4.184881E+02	6.660445E+01
10	5.985238E+04	2.446475E+02	3.893685E+01	60	1.760336E+05	4.195636E+02	6.677561E+01
11	6.454183E+04	2.540508E+02	4.043345E+01	61	1.794366E+05	4.235995E+02	6.741796E+01
12	6.628902E+04	2.574665E+02	4.097707E+01	62	1.861643E+05	4.314676E+02	6.867020E+01
13	6.948880E+04	2.636073E+02	4.195440E+01	63	1.892285E+05	4.350040E+02	6.923304E+01
14	7.096720E+04	2.663967E+02	4.239835E+01	64	1.911938E+05	4.372571E+02	6.959163E+01
15	7.256889E+04	2.693861E+02	4.287414E+01				
16	7.472623E+04	2.733610E+02	4.350675E+01				
17	7.496277E+04	2.737933E+02	4.357556E+01				
18	7.716348E+04	2.777832E+02	4.421056E+01				
19	8.100762E+04	2.846184E+02	4.529842E+01				
20	8.112777E+04	2.848294E+02	4.533200E+01				
21	8.379749E+04	2.894780E+02	4.607185E+01				
22	8.769081E+04	2.961263E+02	4.712997E+01				
23	8.977189E+04	2.996196E+02	4.768594E+01				
24	9.101433E+04	3.016858E+02	4.801479E+01				
25	9.201762E+04	3.033441E+02	4.827871E+01				
26	9.383041E+04	3.063175E+02	4.875194E+01				
27	9.461466E+04	3.075950E+02	4.895526E+01				
28	9.650525E+04	3.106529E+02	4.944195E+01				
29	9.929211E+04	3.151065E+02	5.015076E+01				
30	1.026461E+05	3.203843E+02	5.099074E+01				
31	1.059073E+05	3.254340E+02	5.179443E+01				
32	1.103130E+05	3.321340E+02	5.286077E+01				
33	1.126106E+05	3.355751E+02	5.340844E+01				
34	1.134621E+05	3.368414E+02	5.360997E+01				
35	1.177980E+05	3.432172E+02	5.462471E+01				
36	1.229650E+05	3.506636E+02	5.580984E+01				
37	1.232768E+05	3.511080E+02	5.588058E+01				
38	1.278876E+05	3.576138E+02	5.691601E+01				
39	1.338055E+05	3.657944E+02	5.821799E+01				
40	1.360189E+05	3.688074E+02	5.869752E+01				
41	1.394722E+05	3.734598E+02	5.943797E+01				
42	1.406087E+05	3.749782E+02	5.967964E+01				
43	1.428062E+05	3.778971E+02	6.014419E+01				
44	1.439367E+05	3.793899E+02	6.038178E+01				
45	1.457327E+05	3.817496E+02	6.075733E+01				
46	1.478970E+05	3.845739E+02	6.120683E+01				
47	1.490245E+05	3.860370E+02	6.143969E+01				
48	1.525297E+05	3.905505E+02	6.215804E+01				
49	1.541922E+05	3.926732E+02	6.249588E+01				
50	1.555602E+05	3.944112E+02	6.277249E+01				

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 20

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	8.282433E+00	0.00%	88.06%	0.00%	0.39%	0.00%	11.40%
2	1.243712E+01	96.75%	0.00%	0.40%	0.00%	1.80%	0.00%
3	1.634933E+01	0.20%	0.00%	94.09%	0.03%	1.84%	0.01%
4	1.968083E+01	0.00%	9.94%	0.02%	4.89%	0.00%	81.63%
5	2.671224E+01	1.77%	0.00%	1.29%	0.03%	84.98%	0.01%
6	3.256117E+01	0.11%	0.00%	0.68%	0.00%	0.47%	0.00%
7	3.417843E+01	0.01%	0.00%	0.00%	0.85%	0.01%	0.00%
8	3.585987E+01	0.03%	0.13%	0.30%	7.14%	0.08%	0.30%
9	3.605176E+01	0.01%	1.33%	0.07%	68.25%	0.10%	3.14%
10	3.893685E+01	0.00%	0.00%	0.00%	0.00%	0.08%	0.00%
11	4.043345E+01	0.07%	0.00%	0.03%	0.03%	2.81%	0.01%
12	4.097707E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
13	4.195440E+01	0.00%	0.00%	0.00%	0.07%	0.00%	0.01%
14	4.239835E+01	0.00%	0.01%	0.01%	0.25%	0.00%	0.02%
15	4.287414E+01	0.00%	0.00%	0.07%	0.04%	0.10%	0.00%
16	4.350675E+01	0.00%	0.00%	0.03%	0.38%	0.35%	0.00%
17	4.357556E+01	0.01%	0.01%	0.04%	1.31%	0.98%	0.01%
18	4.421056E+01	0.00%	0.00%	0.00%	0.05%	0.04%	0.00%
19	4.529842E+01	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
20	4.533200E+01	0.00%	0.00%	0.00%	0.10%	0.02%	0.01%
21	4.607185E+01	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
22	4.712997E+01	0.00%	0.00%	0.02%	0.30%	0.00%	0.02%
23	4.768594E+01	0.00%	0.00%	0.13%	0.29%	0.07%	0.01%
24	4.801479E+01	0.00%	0.00%	0.03%	0.00%	0.14%	0.00%
25	4.827871E+01	0.00%	0.00%	0.01%	0.15%	0.02%	0.02%
26	4.875194E+01	0.00%	0.01%	0.01%	0.85%	0.03%	0.04%
27	4.895526E+01	0.01%	0.00%	0.08%	0.15%	0.25%	0.02%
28	4.944195E+01	0.00%	0.01%	0.00%	0.47%	0.03%	0.02%
29	5.015076E+01	0.00%	0.02%	0.00%	2.63%	0.02%	0.03%
30	5.099074E+01	0.00%	0.00%	0.07%	0.05%	0.33%	0.00%
31	5.179443E+01	0.00%	0.00%	0.00%	0.02%	0.01%	0.00%
32	5.286077E+01	0.01%	0.00%	0.14%	0.00%	0.02%	0.00%
33	5.340844E+01	0.00%	0.00%	0.09%	0.06%	0.34%	0.00%
34	5.360997E+01	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
35	5.462471E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
36	5.580984E+01	0.00%	0.00%	0.04%	0.00%	0.08%	0.00%
37	5.588058E+01	0.00%	0.00%	0.03%	0.01%	0.03%	0.00%
38	5.691601E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39	5.821799E+01	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
40	5.869752E+01	0.00%	0.00%	0.00%	0.05%	0.02%	0.00%
41	5.943797E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
42	5.967964E+01	0.00%	0.00%	0.01%	0.05%	0.00%	0.00%
43	6.014419E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
44	6.038178E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
45	6.075733E+01	0.00%	0.00%	0.01%	0.00%	0.06%	0.00%
46	6.120683E+01	0.01%	0.00%	0.01%	0.09%	0.06%	0.00%
47	6.143969E+01	0.01%	0.00%	0.08%	0.00%	0.00%	0.02%
48	6.215804E+01	0.01%	0.00%	0.02%	0.04%	0.06%	0.00%
49	6.249588E+01	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%
50	6.277249E+01	0.00%	0.01%	0.00%	0.19%	0.03%	0.02%

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 21

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
51	6.357184E+01	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%
52	6.437834E+01	0.00%	0.01%	0.00%	0.02%	0.01%	0.02%
53	6.446315E+01	0.00%	0.00%	0.01%	0.01%	0.01%	0.00%
54	6.481829E+01	0.00%	0.04%	0.05%	0.00%	0.02%	0.09%
55	6.552690E+01	0.00%	0.00%	0.01%	0.06%	0.00%	0.00%
56	6.573387E+01	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%
57	6.586897E+01	0.00%	0.00%	0.01%	0.01%	0.17%	0.01%
58	6.619598E+01	0.01%	0.00%	0.05%	0.00%	0.30%	0.00%
59	6.660445E+01	0.00%	0.00%	0.00%	0.05%	0.05%	0.00%
60	6.677561E+01	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%
61	6.741796E+01	0.00%	0.00%	0.00%	0.10%	0.01%	0.01%
62	6.867020E+01	0.00%	0.01%	0.01%	0.27%	0.01%	0.10%
63	6.923304E+01	0.00%	0.00%	0.01%	0.02%	0.03%	0.01%
64	6.959163E+01	0.00%	0.00%	0.00%	0.02%	0.01%	0.00%
Total:		99.06%	99.63%	98.01%	89.81%	95.93%	97.05%

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 22

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-4.79983E-08	-6.79107E-11	-3.90839E-11	5.05860E-09	7.06873E-07	1.11772E-06
2	Net Load Factor - T2 (g)	-8.02618E-11	6.55100E-09	5.79428E-11	1.13510E-07	-1.10896E-08	5.41331E-07
3	Net Load Factor - T3 (g)	-1.32960E-11	5.23108E-11	9.14367E-09	5.04599E-08	-6.96731E-07	6.10058E-09
4	Net Load Factor - R1 (rad/sec^2)	-2.87302E-10	1.83838E-08	8.40590E-09	4.70705E-07	-9.87003E-07	1.36719E-06
5	Net Load Factor - R2 (rad/sec^2)	6.84035E-08	-1.18094E-09	-6.63277E-08	-5.77017E-07	4.02230E-06	-1.46009E-06
6	Net Load Factor - R3 (rad/sec^2)	8.02861E-08	3.74358E-08	5.77316E-10	5.22705E-07	-1.10908E-06	-7.38006E-06
7	ID 600001 - T3 (lbf)	3.75545E-05	-3.41868E-06	3.65031E-06	-6.57451E-05	-8.89137E-04	-1.17492E-03
8	ID 600002 - T3 (lbf)	3.62606E-05	3.23175E-06	3.86529E-06	6.75569E-06	-7.79804E-04	-4.70408E-04
9	ID 600003 - T1 (lbf)	-2.59112E-04	1.05447E-06	-1.02417E-07	1.27611E-04	3.70677E-03	1.16821E-02
10	ID 600003 - T3 (lbf)	-3.70558E-05	-1.75929E-05	3.63886E-05	-5.15343E-05	-2.23348E-03	-6.33406E-04
11	ID 600004 - T1 (lbf)	-1.60008E-04	-1.66020E-06	2.87864E-08	-8.13943E-05	2.44531E-03	-1.92010E-03
12	ID 600004 - T3 (lbf)	-3.68335E-05	1.82112E-05	3.30455E-05	5.34864E-04	-1.96142E-03	2.32867E-03
13	ID 600005 - T2 (lbf)	-6.05914E-07	5.51082E-05	4.31509E-07	9.54005E-04	-8.86874E-05	4.54813E-03
14	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
15	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
16	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-3. JEM-EF Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:11:16 CDT Page 23

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	3.57280E-17	-6.93889E-18	-1.42490E-17	1.23268E-05	-7.52022E-17
2	Net Load Factor - T2 (g)	0.00000E+00	1.00000E+00	-5.55112E-17	1.25675E-05	-4.26423E-05	-6.51941E-05
3	Net Load Factor - T3 (g)	2.92692E-17	-4.05517E-17	1.00000E+00	-9.42333E-18	-6.51335E-05	-1.38219E-17
4	Net Load Factor - R1 (rad/sec^2)	1.33951E-15	0.00000E+00	-6.66134E-16	1.00000E+00	4.86719E-04	3.21997E-16
5	Net Load Factor - R2 (rad/sec^2)	-6.80222E-17	4.60458E-16	0.00000E+00	1.34756E-16	9.99481E-01	-1.17834E-17
6	Net Load Factor - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	-4.19803E-16	-1.43982E-16	-1.13971E-05	1.00000E+00
7	ID 600001 - T3 (lbf)	-4.57414E+02	-6.97158E+02	2.03137E+03	1.24362E+02	2.29356E+02	-4.10465E+00
8	ID 600002 - T3 (lbf)	-4.23375E+02	6.97158E+02	2.11938E+03	-1.24262E+02	2.29559E+02	6.18117E+00
9	ID 600003 - T1 (lbf)	4.30844E+03	3.90316E+03	-1.92418E-07	-5.61099E+00	-4.01770E+00	-6.44641E+02
10	ID 600003 - T3 (lbf)	4.57414E+02	-3.32889E+03	2.12437E+03	1.48191E+02	-2.29019E+02	7.95946E+00
11	ID 600004 - T1 (lbf)	4.41700E+03	-3.90316E+03	-3.23116E-07	5.61099E+00	9.17777E-02	6.44161E+02
12	ID 600004 - T3 (lbf)	4.23375E+02	3.32889E+03	2.14491E+03	-1.48754E+02	-2.29896E+02	-1.00360E+01
13	ID 600005 - T2 (lbf)	4.58637E-06	8.42004E+03	-8.28140E-09	-3.78851E+00	-1.34843E-07	-1.21046E-06
14	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	9.25102E-15	-1.06581E-14	-4.06751E-15	4.75924E-03	-1.21227E-14
15	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	3.86089E+02	0.00000E+00	4.85219E-03	-1.64637E-02	-2.51707E-02
16	Net Inertial Acc - T3 (in/sec^2)	-6.02781E-15	-1.94648E-14	3.86089E+02	2.58223E-15	-2.51473E-02	-5.21074E-15
17	Net Inertial Acc - R1 (rad/sec^2)	1.33951E-15	0.00000E+00	-6.66134E-16	1.00000E+00	4.86719E-04	3.21997E-16
18	Net Inertial Acc - R2 (rad/sec^2)	-6.80222E-17	4.60458E-16	0.00000E+00	1.34756E-16	9.99481E-01	-1.17834E-17
19	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	-4.19803E-16	-1.43982E-16	-1.13971E-05	1.00000E+00

Figure G-3. JEM-EF Launch Model/OTMs

```
ASD/DMMP v1.11.0                Sun Jul 13 2008 15:11:16 CDT                Page   24


                                Execution Time: 00:00:00


                                 * * * END OF JOB * * *
```

Figure G-3. JEM-EF Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:02:09 CDT                    Page    1


                    ************************************************
                    *                                              *
                    *                ASD/DMMP v1.11.0              *
                    *                                              *
                    *       Applied Structural Dynamics, Inc.      *
                    *    http://www.AppliedStructuralDynamics.com  *
                    *                                              *
                    *   Execution Time: Sun Jul 13 2008 13:02:09 CDT *
                    *                                              *
                    ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-06-0003A
     Name       : ELM-ES-LO
     Description: ELM-ES Launch Model
```

Figure G-4. ELM-ES Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:02:09 CDT                    Page    2

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-06-0003A
     Name        : ELM-ES-LO
     Description : ELM-ES Launch Model
     Type        : Single

     DMM Type    : Hybrid
     DMM Size    : 70 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : ES_full_r.op4
        Geometry : ES_full_grids.bdf
        Label    : <not specified>

     OTM-01:
        Description : ELM-ES NLFs & IFFs
        No. of Items: 19
        Ignore      : No
        Matrix File : DMM-2008-06-0003A.OTM.op4
        Label File  : DMM-2008-06-0003A.OTM.txt
```

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
700001	ID 700001	0	1057.20000	0.00000	305.00000	0		1					
700002	ID 700002	0	1057.20000	-94.00000	414.00000	0	2		3				
700003	ID 700003	0	1057.20000	94.00000	414.00000	0	4		5				
700004	ID 700004	0	1010.00000	-94.00000	414.00000	0			6				
700005	ID 700005	0	1010.00000	94.00000	414.00000	0			7				
700101	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							8
:													:
700163	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							70

Figure G-4. ELM-ES Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:02:09 CDT                    Page    4

                              S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   2       700001
    2 -    BSET1   3       700004  700005
    3 -    BSET1   13      700002  700003
    4 -    GRID   *700001                                    1057.2              0*
    5 -    *                    305                13456
    6 -    GRID   *700002                                    1057.2             -94*
    7 -    *                    414                2456
    8 -    GRID   *700003                                    1057.2              94*
    9 -    *                    414                2456
   10 -    GRID   *700004                                      1010             -94*
   11 -    *                    414                12456
   12 -    GRID   *700005                                      1010              94*
   13 -    *                    414                12456
   14 -    QSET1   0       700101  THRU    700163
   15 -    SPOINT  700101  THRU    700163
   16 -    ENDDATA

           TOTAL ENTRY COUNT = 16
```

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 5

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	700001	0	1.05720E+03	0.00000E+00	3.05000E+02
2	700002	0	1.05720E+03	-9.40000E+01	4.14000E+02
3	700003	0	1.05720E+03	9.40000E+01	4.14000E+02
4	700004	0	1.01000E+03	-9.40000E+01	4.14000E+02
5	700005	0	1.01000E+03	9.40000E+01	4.14000E+02
6	700101	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
68	700163	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 6

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	700001-1	700001-3	700001-4	700001-5	700001-6	700002-2	700002-4	700002-5	700002-6	700003-2	= 10
11 =	700003-4	700003-5	700003-6	700004-1	700004-2	700004-4	700004-5	700004-6	700005-1	700005-2	= 20
21 =	700005-4	700005-5	700005-6								

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	700001-2	700002-1	700002-3	700003-1	700003-3	700004-3	700005-3			

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	700101-0	700102-0	700103-0	700104-0	700105-0	700106-0	700107-0	700108-0	700109-0	700110-0	= 10
11 =	700111-0	700112-0	700113-0	700114-0	700115-0	700116-0	700117-0	700118-0	700119-0	700120-0	= 20
21 =	700121-0	700122-0	700123-0	700124-0	700125-0	700126-0	700127-0	700128-0	700129-0	700130-0	= 30
31 =	700131-0	700132-0	700133-0	700134-0	700135-0	700136-0	700137-0	700138-0	700139-0	700140-0	= 40
41 =	700141-0	700142-0	700143-0	700144-0	700145-0	700146-0	700147-0	700148-0	700149-0	700150-0	= 50
51 =	700151-0	700152-0	700153-0	700154-0	700155-0	700156-0	700157-0	700158-0	700159-0	700160-0	= 60
61 =	700161-0	700162-0	700163-0								

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	700001-2	700002-1	700002-3	700003-1	700003-3	700004-3	700005-3	700101-0	700102-0	700103-0 =	10
11 =	700104-0	700105-0	700106-0	700107-0	700108-0	700109-0	700110-0	700111-0	700112-0	700113-0 =	20
21 =	700114-0	700115-0	700116-0	700117-0	700118-0	700119-0	700120-0	700121-0	700122-0	700123-0 =	30
31 =	700124-0	700125-0	700126-0	700127-0	700128-0	700129-0	700130-0	700131-0	700132-0	700133-0 =	40
41 =	700134-0	700135-0	700136-0	700137-0	700138-0	700139-0	700140-0	700141-0	700142-0	700143-0 =	50
51 =	700144-0	700145-0	700146-0	700147-0	700148-0	700149-0	700150-0	700151-0	700152-0	700153-0 =	60
61 =	700154-0	700155-0	700156-0	700157-0	700158-0	700159-0	700160-0	700161-0	700162-0	700163-0 =	70

Figure G-4. ELM-ES Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:02:09 CDT                    Page   10

                                Z E R O   S T I F F N E S S   D O F S

                          The following DOFs have stiffness less than 1.0E-09:

        ---  1 --- ---  2 --- ---  3 --- ---  4 --- ---  5 --- ---  6 --- ---  7 --- ---  8 --- ---  9 --- --- 10 ---
    1 =   700002-1   700003-1
```

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 11

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  1.480276E+01 -9.400141E-08 -1.895930E-08 -1.035310E-04  5.936209E+03  9.770223E+01 *
* -9.400141E-08  1.401175E+01 -4.428454E-08 -5.631788E+03  5.794563E-06  1.453556E+04 *
* -1.895930E-08 -4.428453E-08  1.401175E+01 -9.770242E+01 -1.453567E+04 -4.802842E-05 *
* -1.035310E-04 -5.631788E+03 -9.770242E+01  2.306845E+06  9.844473E+04 -5.842554E+06 *
*  5.936209E+03  5.794552E-06 -1.453567E+04  9.844473E+04  1.747835E+07  3.958266E+04 *
*  9.770223E+01  1.453556E+04 -4.802843E-05 -5.842554E+06  3.958266E+04  1.512022E+07 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.480276E+01	-6.994034E-06	-6.600270E+00	4.010203E+02
Y	1.401175E+01	1.037384E+03	4.135502E-07	4.019332E+02
Z	1.401175E+01	1.037391E+03	-6.972891E+00	-3.427724E-06

I(S)

```
*  4.256161E+04  2.910885E+03  2.287600E+02 *
*  2.910885E+03  1.864260E+04 -4.020813E+02 *
*  2.287600E+02 -4.020813E+02  4.061542E+04 *
```

I(Q)

```
*  1.828725E+04                             *
*                4.058905E+04               *
*                             4.294333E+04 *
```

Q

```
* -1.188918E-01 -1.187516E-01  9.857803E-01 *
* -9.927675E-01 -2.440608E-03 -1.200285E-01 *
*  1.665948E-02 -9.929210E-01 -1.176026E-01 *
```

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 12

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
1.037387E+03	-6.786580E+00	4.014768E+02

Figure G-4. ELM-ES Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:02:09 CDT                    Page   13

          O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                REFERENCE POINT = C.G.

                                        M O
*  1.480276E+01 -9.400141E-08 -1.895930E-08 -1.413991E-04 -6.756321E+00 -2.757814E+00 *
* -9.400141E-08  1.401175E+01 -4.428454E-08 -6.395268E+00 -2.406282E-06 -5.140913E-02 *
* -1.895930E-08 -4.428453E-08  1.401175E+01 -2.610556E+00 -5.140216E-02 -1.959538E-06 *
* -1.413991E-04 -6.395268E+00 -2.610556E+00  4.256501E+04 -2.910835E+03 -2.287356E+02 *
* -6.756321E+00 -2.406282E-06 -5.140216E-02 -2.910835E+03  1.864570E+04  4.032929E+02 *
* -2.757814E+00 -5.140913E-02 -1.959539E-06 -2.287356E+02  4.032929E+02  4.061593E+04 *

                                        S
                              *  1.000000E+00  0.000000E+00  0.000000E+00 *
                              *  0.000000E+00  1.000000E+00  0.000000E+00 *
                              *  0.000000E+00  0.000000E+00  1.000000E+00 *

        DIRECTION
    MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
            X             1.480276E+01     -9.552208E-06  1.863040E-01 -4.564230E-01
            Y             1.401175E+01     -3.669001E-03 -1.717331E-07  4.564217E-01
            Z             1.401175E+01      3.668503E-03 -1.863119E-01 -1.398496E-07

                                        I(S)
                              *  4.256161E+04  2.910844E+03  2.287590E+02 *
                              *  2.910844E+03  1.864262E+04 -4.020342E+02 *
                              *  2.287590E+02 -4.020342E+02  4.061542E+04 *

                                        I(Q)
                              *  1.828728E+04                             *
                              *                4.058905E+04               *
                              *                             4.294332E+04 *

                                        Q
                              * -1.188903E-01 -1.187488E-01  9.857808E-01 *
                              * -9.927677E-01 -2.439075E-03 -1.200267E-01 *
                              *  1.665743E-02 -9.929213E-01 -1.176000E-01 *
```

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 14

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.48028E+01	-9.40014E-08	-1.89593E-08	-1.41399E-04	-6.75632E+00	-2.75781E+00
T2:	-9.40014E-08	1.40118E+01	-4.42845E-08	-6.39527E+00	-2.40628E-06	-5.14091E-02
T3:	-1.89593E-08	-4.42845E-08	1.40118E+01	-2.61056E+00	-5.14022E-02	-1.95954E-06
R1:	-1.41399E-04	-6.39527E+00	-2.61056E+00	4.25650E+04	-2.91083E+03	-2.28736E+02
R2:	-6.75632E+00	-2.40628E-06	-5.14022E-02	-2.91083E+03	1.86457E+04	4.03293E+02
R3:	-2.75781E+00	-5.14091E-02	-1.95954E-06	-2.28736E+02	4.03293E+02	4.06159E+04

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-5.32447E-04	1.77508E-04	1.14912E-04	-8.23437E-03	-1.81170E-02	1.98369E-02
T2:	1.77509E-04	4.82650E-04	9.58738E-05	9.05160E-03	5.16060E-03	1.49706E-03
T3:	1.14912E-04	9.58720E-05	1.28434E-04	9.39556E-03	2.01337E-03	6.14620E-03
R1:	-8.23429E-03	9.05144E-03	9.39561E-03	1.64450E+00	5.54792E-02	2.14403E-01
R2:	-1.81170E-02	5.16064E-03	2.01335E-03	5.54834E-02	6.63964E-01	6.52895E-01
R3:	1.98370E-02	1.49707E-03	6.14626E-03	2.14400E-01	6.52894E-01	-3.94464E-02

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 15

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	700001-2	1.77509E-04	4.82650E-04	9.58738E-05	9.05160E-03	5.16060E-03	1.49706E-03
2	700002-1	-1.98636E-04	5.22602E-05	8.41930E-05	-4.22793E-03	-6.78353E-03	1.02670E-02
3	700002-3	2.55723E-04	1.91883E-04	5.64893E-05	6.53517E-01	-7.15864E-03	-1.18249E-04
4	700003-1	-3.33812E-04	1.25248E-04	3.07185E-05	-4.00645E-03	-1.13335E-02	9.56996E-03
5	700003-3	5.35186E-05	-1.98493E-04	5.86610E-06	-6.51426E-01	-1.05470E-02	-4.88481E-03
6	700004-3	-5.92265E-05	5.90512E-05	1.15872E-05	-6.52582E-01	1.05912E-02	3.04103E-03
7	700005-3	-1.35103E-04	4.34305E-05	5.44913E-05	6.59886E-01	9.12783E-03	8.10823E-03
	Total:	-5.32447E-04	4.82650E-04	1.28434E-04	1.64450E+00	6.63964E-01	-3.94464E-02

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 16

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	4	700003-1	-3.33812E-04
T2 -	1	700001-2	4.82650E-04
T3 -	1	700001-2	9.58738E-05
R1 -	7	700005-3	6.59886E-01
R2 -	4	700003-1	-1.13335E-02
R3 -	2	700002-1	1.02670E-02

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 17

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	700001-2	-3.62929E-05	5.40978E+03	-1.70978E-05	-6.39527E+00	-2.40628E-06	-5.14091E-02
2	700002-1	3.05824E+03	-5.70223E+02	-6.14659E-06	-5.42780E-01	-1.47688E+00	2.14569E+02
3	700002-3	7.69045E+02	2.58797E+03	1.61192E+03	-1.58600E+02	-1.88831E+02	7.31559E+00
4	700003-1	2.65694E+03	5.70223E+02	-1.17338E-06	5.42639E-01	-5.27944E+00	-2.17327E+02
5	700003-3	8.02589E+02	-2.58797E+03	1.52747E+03	2.18755E+02	-2.08028E+02	-1.65916E+01
6	700004-3	-7.69045E+02	2.01324E+02	1.29362E+03	-7.24910E+01	2.04286E+02	-6.12530E+00
7	700005-3	-8.02589E+02	-2.01324E+02	9.76768E+02	9.72503E+00	1.92521E+02	1.54013E+01
	Total:	5.71518E+03	5.40978E+03	5.40978E+03	4.25650E+04	1.86457E+04	4.06159E+04

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 18

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-7.090689E-05	8.420623E-03	1.340184E-03
2	-2.254408E-06	1.501469E-03	2.389662E-04
3	1.618410E-05	4.022947E-03	6.402719E-04
4	2.904782E-05	5.389603E-03	8.577820E-04
5	4.147136E-05	6.439826E-03	1.024930E-03
6	6.751916E-05	8.217004E-03	1.307777E-03
7	7.768226E+03	8.813754E+01	1.402752E+01
8	9.718277E+03	9.858132E+01	1.568970E+01
9	1.193655E+04	1.092545E+02	1.738840E+01
10	1.821285E+04	1.349550E+02	2.147875E+01
11	2.103851E+04	1.450466E+02	2.308488E+01
12	2.397492E+04	1.548384E+02	2.464329E+01
13	2.542166E+04	1.594417E+02	2.537594E+01
14	2.863785E+04	1.692272E+02	2.693335E+01
15	3.432137E+04	1.852603E+02	2.948509E+01
16	3.682676E+04	1.919030E+02	3.054231E+01
17	3.928081E+04	1.981939E+02	3.154353E+01
18	4.222421E+04	2.054853E+02	3.270400E+01
19	4.724335E+04	2.173553E+02	3.459318E+01
20	5.148505E+04	2.269032E+02	3.611276E+01
21	5.411737E+04	2.326314E+02	3.702444E+01
22	5.517763E+04	2.348992E+02	3.738537E+01
23	5.986610E+04	2.446755E+02	3.894131E+01
24	6.561833E+04	2.561607E+02	4.076925E+01
25	6.618106E+04	2.572568E+02	4.094369E+01
26	7.006966E+04	2.647067E+02	4.212939E+01
27	7.092439E+04	2.663163E+02	4.238556E+01
28	7.096456E+04	2.663917E+02	4.239756E+01
29	7.107111E+04	2.665917E+02	4.242938E+01
30	7.116221E+04	2.667625E+02	4.245656E+01
31	7.119471E+04	2.668234E+02	4.246626E+01
32	7.135814E+04	2.671294E+02	4.251497E+01
33	7.194240E+04	2.682208E+02	4.268867E+01
34	8.130439E+04	2.851392E+02	4.538132E+01
35	8.390959E+04	2.896715E+02	4.610265E+01
36	8.645025E+04	2.940242E+02	4.679541E+01
37	8.648461E+04	2.940827E+02	4.680471E+01
38	8.650007E+04	2.941089E+02	4.680889E+01
39	8.688716E+04	2.947663E+02	4.691351E+01
40	8.711384E+04	2.951505E+02	4.697467E+01
41	8.728689E+04	2.954435E+02	4.702130E+01
42	8.751478E+04	2.958290E+02	4.708264E+01
43	8.754720E+04	2.958838E+02	4.709136E+01
44	8.758053E+04	2.959401E+02	4.710033E+01
45	8.764549E+04	2.960498E+02	4.711779E+01
46	8.774071E+04	2.962106E+02	4.714338E+01
47	8.794825E+04	2.965607E+02	4.719910E+01
48	9.487024E+04	3.080101E+02	4.902133E+01
49	1.031123E+05	3.211111E+02	5.110641E+01
50	1.095950E+05	3.310513E+02	5.268846E+01
51	1.151275E+05	3.393044E+02	5.400197E+01
52	1.179220E+05	3.433977E+02	5.465344E+01
53	1.211997E+05	3.481375E+02	5.540780E+01
54	1.226509E+05	3.502156E+02	5.573854E+01
55	1.252461E+05	3.539013E+02	5.632514E+01
56	1.269354E+05	3.562799E+02	5.670371E+01
57	1.301525E+05	3.607666E+02	5.741779E+01
58	1.325722E+05	3.641046E+02	5.794905E+01
59	1.383971E+05	3.720176E+02	5.920845E+01
60	1.409166E+05	3.753886E+02	5.974495E+01
61	1.532909E+05	3.915238E+02	6.231294E+01
62	1.569256E+05	3.961383E+02	6.304737E+01
63	1.658514E+05	4.072485E+02	6.481562E+01
64	1.816185E+05	4.261672E+02	6.782662E+01
65	1.970562E+05	4.439102E+02	7.065050E+01
66	2.166699E+05	4.654782E+02	7.408315E+01
67	3.267026E+05	5.715791E+02	9.096964E+01
68	4.071525E+05	6.380851E+02	1.015544E+02
69	1.110985E+06	1.054033E+03	1.677545E+02
70	2.573695E+06	1.604274E+03	2.553281E+02

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 19

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	2.555032E+03	5.054732E+01	8.044856E+00
2	4.050283E+03	6.364183E+01	1.012891E+01
3	5.010027E+03	7.078154E+01	1.126523E+01
4	8.731636E+03	9.344322E+01	1.487195E+01
5	1.187309E+04	1.089637E+02	1.734211E+01
6	1.472491E+04	1.213462E+02	1.931285E+01
7	1.841770E+04	1.357118E+02	2.159921E+01
8	2.067155E+04	1.437760E+02	2.288267E+01
9	2.363183E+04	1.537265E+02	2.446633E+01
10	2.421941E+04	1.556259E+02	2.476862E+01
11	2.909490E+04	1.705723E+02	2.714742E+01
12	3.060084E+04	1.749310E+02	2.784113E+01
13	3.665484E+04	1.914545E+02	3.047093E+01
14	3.988275E+04	1.997067E+02	3.178430E+01
15	4.106853E+04	2.026537E+02	3.225334E+01
16	4.630356E+04	2.151826E+02	3.424738E+01
17	5.019836E+04	2.240499E+02	3.565865E+01
18	5.410818E+04	2.326117E+02	3.702130E+01
19	5.590451E+04	2.364413E+02	3.763081E+01
20	5.978494E+04	2.445096E+02	3.891491E+01
21	6.079739E+04	2.465713E+02	3.924304E+01
22	6.506806E+04	2.550844E+02	4.059795E+01
23	6.656796E+04	2.580077E+02	4.106320E+01
24	7.094141E+04	2.663483E+02	4.239065E+01
25	7.101587E+04	2.664880E+02	4.241289E+01
26	7.106836E+04	2.665865E+02	4.242856E+01
27	7.116255E+04	2.667631E+02	4.245667E+01
28	7.116545E+04	2.667685E+02	4.245753E+01
29	7.126773E+04	2.669602E+02	4.248803E+01
30	7.482793E+04	2.735469E+02	4.353635E+01
31	7.926890E+04	2.815473E+02	4.480965E+01
32	8.628555E+04	2.937440E+02	4.675081E+01
33	8.642384E+04	2.939793E+02	4.678826E+01
34	8.646073E+04	2.940420E+02	4.679825E+01
35	8.655994E+04	2.942107E+02	4.682509E+01
36	8.694370E+04	2.948622E+02	4.692877E+01
37	8.709355E+04	2.951162E+02	4.696920E+01
38	8.744459E+04	2.957103E+02	4.706376E+01
39	8.753328E+04	2.958602E+02	4.708762E+01
40	8.756677E+04	2.959168E+02	4.709662E+01
41	8.758676E+04	2.959506E+02	4.710200E+01
42	8.760992E+04	2.959897E+02	4.710823E+01
43	8.773123E+04	2.961946E+02	4.714083E+01
44	9.165566E+04	3.027469E+02	4.818366E+01
45	9.637407E+04	3.104417E+02	4.940834E+01
46	1.084505E+05	3.293182E+02	5.241262E+01
47	1.107968E+05	3.328615E+02	5.297656E+01
48	1.144547E+05	3.383116E+02	5.384396E+01
49	1.167725E+05	3.417199E+02	5.438641E+01
50	1.192571E+05	3.453362E+02	5.496196E+01
51	1.219722E+05	3.492452E+02	5.558411E+01
52	1.246025E+05	3.529908E+02	5.618024E+01
53	1.257674E+05	3.546369E+02	5.644222E+01
54	1.264304E+05	3.555706E+02	5.659082E+01
55	1.288516E+05	3.589590E+02	5.713010E+01
56	1.321078E+05	3.634663E+02	5.784746E+01
57	1.457652E+05	3.817920E+02	6.076409E+01
58	1.510565E+05	3.886599E+02	6.185714E+01
59	1.583368E+05	3.979155E+02	6.333022E+01
60	1.636633E+05	4.045532E+02	6.438664E+01
61	1.694634E+05	4.116593E+02	6.551761E+01
62	1.806963E+05	4.250839E+02	6.765421E+01
63	1.865070E+05	4.318645E+02	6.873337E+01

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 20

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	8.044856E+00	59.29%	2.41%	4.44%	0.01%	21.34%	0.08%
2	1.012891E+01	1.17%	54.10%	9.48%	1.43%	22.82%	0.78%
3	1.126523E+01	15.96%	34.75%	11.45%	0.30%	25.02%	0.88%
4	1.487195E+01	1.92%	0.18%	0.53%	0.21%	0.13%	1.67%
5	1.734211E+01	5.09%	0.79%	0.83%	0.28%	0.01%	0.12%
6	1.931285E+01	0.32%	0.47%	3.59%	14.97%	1.44%	0.48%
7	2.159921E+01	1.11%	5.41%	0.01%	2.49%	0.47%	29.64%
8	2.288267E+01	0.05%	0.05%	5.76%	0.70%	1.81%	0.56%
9	2.446633E+01	0.23%	0.02%	13.11%	0.00%	8.17%	0.78%
10	2.476862E+01	0.13%	0.21%	10.72%	0.09%	2.71%	10.18%
11	2.714742E+01	0.04%	0.37%	2.38%	0.71%	0.67%	0.16%
12	2.784113E+01	0.02%	0.28%	3.78%	1.04%	1.13%	4.26%
13	3.047093E+01	0.43%	0.01%	0.11%	0.00%	0.03%	0.02%
14	3.178430E+01	0.19%	0.08%	2.34%	0.85%	1.67%	0.04%
15	3.225334E+01	0.07%	0.06%	5.91%	0.00%	3.51%	0.02%
16	3.424738E+01	0.00%	0.07%	1.47%	11.38%	1.02%	0.04%
17	3.565865E+01	0.01%	0.02%	1.25%	0.07%	0.16%	0.90%
18	3.702130E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
19	3.763081E+01	0.04%	0.01%	0.11%	0.22%	0.02%	0.73%
20	3.891491E+01	0.02%	0.02%	0.05%	0.24%	0.00%	0.17%
21	3.924304E+01	1.13%	0.08%	0.49%	1.58%	0.98%	5.95%
22	4.059795E+01	0.26%	0.00%	0.34%	2.21%	0.00%	0.22%
23	4.106320E+01	0.01%	0.00%	0.08%	0.84%	0.00%	0.02%
24	4.239065E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
25	4.241289E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
26	4.242856E+01	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
27	4.245667E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%
28	4.245753E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	4.248803E+01	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%
30	4.353635E+01	0.36%	0.02%	1.28%	0.21%	0.75%	0.54%
31	4.480965E+01	0.02%	0.01%	0.01%	1.56%	0.09%	0.11%
32	4.675081E+01	0.00%	0.00%	0.19%	0.05%	0.01%	0.01%
33	4.678826E+01	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%
34	4.679825E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
35	4.682509E+01	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%
36	4.692877E+01	0.00%	0.00%	0.09%	0.07%	0.01%	0.00%
37	4.696920E+01	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%
38	4.706376E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
39	4.708762E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
40	4.709662E+01	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%
41	4.710200E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
42	4.710823E+01	0.01%	0.00%	0.00%	0.02%	0.00%	0.01%
43	4.714083E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
44	4.818366E+01	0.03%	0.00%	1.35%	1.25%	0.02%	0.12%
45	4.940834E+01	0.38%	0.01%	0.57%	1.42%	0.14%	0.10%
46	5.241262E+01	0.08%	0.01%	0.25%	0.12%	0.01%	1.22%
47	5.297656E+01	0.50%	0.00%	1.02%	0.16%	0.02%	1.02%
48	5.384396E+01	0.23%	0.00%	3.66%	1.86%	0.67%	0.54%
49	5.438641E+01	0.15%	0.02%	0.03%	1.07%	0.07%	0.00%
50	5.496196E+01	0.00%	0.00%	1.28%	0.38%	0.20%	0.00%

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 21

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
51	5.558411E+01	0.01%	0.01%	0.29%	0.19%	0.02%	0.03%
52	5.618024E+01	0.17%	0.00%	0.05%	0.67%	0.05%	0.01%
53	5.644222E+01	0.06%	0.02%	0.00%	0.10%	0.00%	0.33%
54	5.659082E+01	0.01%	0.01%	0.06%	0.16%	0.00%	1.41%
55	5.713010E+01	0.06%	0.02%	0.01%	0.48%	0.00%	0.02%
56	5.784746E+01	0.01%	0.00%	0.06%	0.08%	0.00%	0.04%
57	6.076409E+01	0.06%	0.00%	2.74%	0.00%	1.09%	1.30%
58	6.185714E+01	0.05%	0.00%	0.03%	0.03%	0.00%	0.06%
59	6.333022E+01	0.04%	0.00%	0.81%	0.34%	0.35%	0.26%
60	6.438664E+01	0.12%	0.00%	1.16%	1.22%	0.14%	0.08%
61	6.551761E+01	0.39%	0.01%	0.06%	1.86%	0.02%	0.09%
62	6.765421E+01	0.04%	0.00%	0.93%	0.10%	0.27%	0.86%
63	6.873337E+01	0.02%	0.00%	0.31%	0.01%	0.06%	0.86%
Total:		90.28%	99.54%	94.49%	53.19%	97.10%	66.72%

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 22

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-9.41497E-08	3.14522E-08	2.03498E-08	-1.42778E-06	-3.12053E-06	3.51375E-06
2	Net Load Factor - T2 (g)	3.25108E-08	8.95025E-08	1.79992E-08	1.71983E-06	9.58671E-07	2.85687E-07
3	Net Load Factor - T3 (g)	2.11065E-08	1.78409E-08	2.38549E-08	1.75587E-06	3.74379E-07	1.14014E-06
4	Net Load Factor - R1 (rad/sec^2)	-2.59253E-07	2.40198E-07	2.33004E-07	3.94080E-05	3.87560E-06	7.58523E-06
5	Net Load Factor - R2 (rad/sec^2)	-1.03597E-06	3.17914E-07	1.43944E-07	8.81360E-06	3.54396E-05	3.67188E-05
6	Net Load Factor - R3 (rad/sec^2)	4.94778E-07	3.59235E-08	1.51751E-07	5.37655E-06	1.56634E-05	-1.20083E-06
7	ID 700001 - T2 (lbf)	1.77509E-04	4.82650E-04	9.58738E-05	9.05160E-03	5.16060E-03	1.49706E-03
8	ID 700002 - T1 (lbf)	-1.98636E-04	5.22602E-05	8.41930E-05	-4.22793E-03	-6.78353E-03	1.02670E-02
9	ID 700002 - T3 (lbf)	2.55723E-04	1.91883E-04	5.64893E-05	6.53517E-01	-7.15864E-03	-1.18249E-04
10	ID 700003 - T1 (lbf)	-3.33812E-04	1.25248E-04	3.07185E-05	-4.00645E-03	-1.13335E-02	9.56996E-03
11	ID 700003 - T3 (lbf)	5.35186E-05	-1.98493E-04	5.86610E-06	-6.51426E-01	-1.05470E-02	-4.88481E-03
12	ID 700004 - T3 (lbf)	-5.92265E-05	5.90512E-05	1.15872E-05	-6.52582E-01	1.05912E-02	3.04103E-03
13	ID 700005 - T3 (lbf)	-1.35103E-04	4.34305E-05	5.44913E-05	6.59886E-01	9.12783E-03	8.10823E-03
14	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
15	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
16	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-4. ELM-ES Launch Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:02:09 CDT Page 23

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-1.21819E-17	2.77556E-17	-2.08167E-17	-1.73472E-18	1.38778E-17
2	Net Load Factor - T2 (g)	-1.38778E-17	1.00000E+00	4.16334E-17	6.76542E-17	-4.77049E-18	6.93889E-18
3	Net Load Factor - T3 (g)	4.18598E-17	1.04650E-16	1.00000E+00	2.77556E-17	-2.25514E-17	9.73018E-18
4	Net Load Factor - R1 (rad/sec^2)	3.34878E-16	-1.25579E-15	2.99760E-15	1.00000E+00	-2.77556E-17	-7.03292E-17
5	Net Load Factor - R2 (rad/sec^2)	-3.34878E-16	4.18598E-17	8.88178E-16	0.00000E+00	1.00000E+00	-7.34975E-17
6	Net Load Factor - R3 (rad/sec^2)	-1.77636E-15	-2.36279E-16	5.55112E-17	-1.31839E-16	-2.77556E-17	1.00000E+00
7	ID 700001 - T2 (lbf)	-3.62929E-05	5.40978E+03	-1.70978E-05	-6.39527E+00	-2.40628E-06	-5.14091E-02
8	ID 700002 - T1 (lbf)	3.05824E+03	-5.70223E+02	-6.14659E-06	-5.42780E-01	-1.47688E+00	2.14569E+02
9	ID 700002 - T3 (lbf)	7.69045E+02	2.58797E+03	1.61192E+03	-1.58600E+02	-1.88831E+02	7.31559E+00
10	ID 700003 - T1 (lbf)	2.65694E+03	5.70223E+02	-1.17338E-06	5.42639E-01	-5.27944E+00	-2.17327E+02
11	ID 700003 - T3 (lbf)	8.02589E+02	-2.58797E+03	1.52747E+03	2.18755E+02	-2.08028E+02	-1.65916E+01
12	ID 700004 - T3 (lbf)	-7.69045E+02	2.01324E+02	1.29362E+03	-7.24910E+01	2.04286E+02	-6.12530E+00
13	ID 700005 - T3 (lbf)	-8.02589E+02	-2.01324E+02	9.76768E+02	9.72503E+00	1.92521E+02	1.54013E+01
14	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-1.73718E-15	-2.13163E-14	-5.32907E-15	-1.77636E-15	0.00000E+00
15	Net Inertial Acc - T2 (in/sec^2)	2.13163E-14	3.86089E+02	2.13163E-14	1.59872E-14	-2.44249E-15	1.77636E-15
16	Net Inertial Acc - T3 (in/sec^2)	1.07161E-14	2.67903E-15	3.86089E+02	-1.42109E-14	-7.99361E-15	2.55814E-15
17	Net Inertial Acc - R1 (rad/sec^2)	3.34878E-16	-1.25579E-15	2.99760E-15	1.00000E+00	-2.77556E-17	-7.03292E-17
18	Net Inertial Acc - R2 (rad/sec^2)	-3.34878E-16	4.18598E-17	8.88178E-16	0.00000E+00	1.00000E+00	-7.34975E-17
19	Net Inertial Acc - R3 (rad/sec^2)	-1.77636E-15	-2.36279E-16	5.55112E-17	-1.31839E-16	-2.77556E-17	1.00000E+00

Figure G-4. ELM-ES Launch Model/OTMs

```
ASD/DMMP v1.11.0                Sun Jul 13 2008 13:02:09 CDT                Page   24


                                Execution Time: 00:00:00


                                 * * * END OF JOB * * *
```

Figure G-4. ELM-ES Launch Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:03:18 CDT                    Page    1


                        ************************************************
                        *                                              *
                        *                ASD/DMMP v1.11.0              *
                        *                                              *
                        *       Applied Structural Dynamics, Inc.      *
                        *    http://www.AppliedStructuralDynamics.com  *
                        *                                              *
                        *   Execution Time: Sun Jul 13 2008 13:03:18 CDT *
                        *                                              *
                        ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-06-0004A
     Name       : ELM-ES-LD
     Description: ELM-ES Landing Model
```

Figure G-5. ELM-ES Landing Model/OTMs

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 13:03:18 CDT                    Page    2

                              C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-06-0004A
     Name        : ELM-ES-LD
     Description : ELM-ES Landing Model
     Type        : Single

     DMM Type    : Craig-Bampton
     DMM Size    : 42 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : ES_empty_r70.op4
        Geometry : ES_empty_grids.bdf
        Label    : <not specified>

     OTM-01:
        Description : ELM-ES Landing NLFs & IFFs
        No. of Items: 19
        Ignore      : No
        Matrix File : DMM-2008-06-0004A.OTM.op4
        Label File  : DMM-2008-06-0004A.OTM.txt
```

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
700001	ID 700001	0	1057.20000	0.00000	305.00000	0		1					
700002	ID 700002	0	1057.20000	-94.00000	414.00000	0	2		3				
700003	ID 700003	0	1057.20000	94.00000	414.00000	0	4		5				
700004	ID 700004	0	1010.00000	-94.00000	414.00000	0			6				
700005	ID 700005	0	1010.00000	94.00000	414.00000	0			7				
700101	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							8
:													:
700135	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							42

Figure G-5. ELM-ES Landing Model/OTMs

```
ASD/DMMP v1.11.0                        Sun Jul 13 2008 13:03:18 CDT                        Page    4

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   2       700001
    2 -    BSET1   3       700004  700005
    3 -    BSET1   13      700002  700003
    4 -    GRID   *700001                                    1057.2              0*
    5 -    *                    305                13456
    6 -    GRID   *700002                                    1057.2             -94*
    7 -    *                    414                2456
    8 -    GRID   *700003                                    1057.2              94*
    9 -    *                    414                2456
   10 -    GRID   *700004                                      1010             -94*
   11 -    *                    414                12456
   12 -    GRID   *700005                                      1010              94*
   13 -    *                    414                12456
   14 -    QSET1   0       700101  THRU    700135
   15 -    SPOINT  700101  THRU    700135
   16 -    ENDDATA

           TOTAL ENTRY COUNT = 16
```

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 5

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	700001	0	1.05720E+03	0.00000E+00	3.05000E+02
2	700002	0	1.05720E+03	-9.40000E+01	4.14000E+02
3	700003	0	1.05720E+03	9.40000E+01	4.14000E+02
4	700004	0	1.01000E+03	-9.40000E+01	4.14000E+02
5	700005	0	1.01000E+03	9.40000E+01	4.14000E+02
6	700101	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
40	700135	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 6

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	700001-1	700001-3	700001-4	700001-5	700001-6	700002-2	700002-4	700002-5	700002-6	700003-2 =	10
11 =	700003-4	700003-5	700003-6	700004-1	700004-2	700004-4	700004-5	700004-6	700005-1	700005-2 =	20
21 =	700005-4	700005-5	700005-6								

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	700001-2	700002-1	700002-3	700003-1	700003-3	700004-3	700005-3			

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	700101-0	700102-0	700103-0	700104-0	700105-0	700106-0	700107-0	700108-0	700109-0	700110-0	= 10
11 =	700111-0	700112-0	700113-0	700114-0	700115-0	700116-0	700117-0	700118-0	700119-0	700120-0	= 20
21 =	700121-0	700122-0	700123-0	700124-0	700125-0	700126-0	700127-0	700128-0	700129-0	700130-0	= 30
31 =	700131-0	700132-0	700133-0	700134-0	700135-0						

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	700001-2	700002-1	700002-3	700003-1	700003-3	700004-3	700005-3	700101-0	700102-0	700103-0 =	10
11 =	700104-0	700105-0	700106-0	700107-0	700108-0	700109-0	700110-0	700111-0	700112-0	700113-0 =	20
21 =	700114-0	700115-0	700116-0	700117-0	700118-0	700119-0	700120-0	700121-0	700122-0	700123-0 =	30
31 =	700124-0	700125-0	700126-0	700127-0	700128-0	700129-0	700130-0	700131-0	700132-0	700133-0 =	40
41 =	700134-0	700135-0									

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 10

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  7.342267E+00  5.438096E-10 -2.591664E-10 -2.577793E-07  2.945369E+03 -3.954160E+01 *
*  5.438081E-10  6.551257E+00 -2.306741E-10 -2.640611E+03  4.585846E-07  6.890185E+03 *
* -2.591700E-10 -2.306649E-10  6.551257E+00  3.954160E+01 -6.890198E+03 -2.578930E-07 *
* -2.577798E-07 -2.640611E+03  3.954160E+01  1.091450E+06 -4.196904E+04 -2.777273E+06 *
*  2.945369E+03  4.585752E-07 -6.890198E+03 -4.196904E+04  8.438928E+06 -1.723779E+04 *
* -3.954160E+01  6.890185E+03 -2.579036E-07 -2.777273E+06 -1.723779E+04  7.272520E+06 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	7.342267E+00	-3.510895E-08	5.385475E+00	4.011526E+02
Y	6.551257E+00	1.051735E+03	6.999949E-08	4.030694E+02
Z	6.551257E+00	1.051737E+03	6.035727E+00	-3.936543E-08

I(S)

```
*  2.686209E+04  3.816829E+02  5.022547E+01 *
*  3.816829E+02  1.070995E+04  1.375577E+03 *
*  5.022547E+01  1.375577E+03  2.565923E+04 *
```

I(Q)

```
*  1.057534E+04                              *
*                2.578454E+04                *
*                              2.687140E+04 *
```

Q

```
*  2.361189E-02  1.410078E-02 -9.996218E-01 *
*  9.955827E-01 -9.121887E-02  2.222974E-02 *
*  9.087091E-02  9.957310E-01  1.619234E-02 *
```

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 11

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
1.051736E+03	5.710601E+00	4.021110E+02

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 12

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = C.G.

M O

```
*  7.342267E+00  5.438096E-10 -2.591664E-10 -3.762752E-08 -7.036861E+00  2.387160E+00 *
*  5.438081E-10  6.551257E+00 -2.306741E-10 -6.278754E+00 -2.694552E-09 -6.445309E-03 *
* -2.591700E-10 -2.306649E-10  6.551257E+00  2.129983E+00 -6.445208E-03 -1.677451E-08 *
* -3.762855E-08 -6.278754E+00  2.129983E+00  2.686880E+04 -3.816849E+02 -5.021930E+01 *
* -7.036861E+00 -2.694566E-09 -6.445208E-03 -3.816849E+02  1.071670E+04 -1.377865E+03 *
*  2.387160E+00 -6.445309E-03 -1.677524E-08 -5.021930E+01 -1.377865E+03  2.566001E+04 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	7.342267E+00	-5.124782E-09	-3.251258E-01	-9.584045E-01
Y	6.551257E+00	-9.838278E-04	-4.113031E-10	9.584045E-01
Z	6.551257E+00	9.838124E-04	3.251258E-01	-2.560503E-09

I(S)

```
*  2.686209E+04  3.816828E+02  5.022547E+01 *
*  3.816828E+02  1.070995E+04  1.375577E+03 *
*  5.022547E+01  1.375577E+03  2.565923E+04 *
```

I(Q)

```
*  1.057534E+04                              *
*                2.578454E+04                *
*                              2.687140E+04 *
```

Q

```
*  2.361188E-02  1.410078E-02 -9.996218E-01 *
*  9.955827E-01 -9.121889E-02  2.222973E-02 *
*  9.087093E-02  9.957310E-01  1.619234E-02 *
```

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 13

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	7.34227E+00	5.43810E-10	-2.59166E-10	-3.76275E-08	-7.03686E+00	2.38716E+00
T2:	5.43808E-10	6.55126E+00	-2.30674E-10	-6.27875E+00	-2.69455E-09	-6.44531E-03
T3:	-2.59170E-10	-2.30665E-10	6.55126E+00	2.12998E+00	-6.44521E-03	-1.67745E-08
R1:	-3.76286E-08	-6.27875E+00	2.12998E+00	2.68688E+04	-3.81685E+02	-5.02193E+01
R2:	-7.03686E+00	-2.69457E-09	-6.44521E-03	-3.81685E+02	1.07167E+04	-1.37787E+03
R3:	2.38716E+00	-6.44531E-03	-1.67752E-08	-5.02193E+01	-1.37787E+03	2.56600E+04

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	5.52621E-05	1.83463E-07	-1.08314E-07	-8.14909E-06	2.80725E-03	-2.03521E-03
T2:	1.83933E-07	5.12339E-05	-3.73929E-08	-2.53061E-03	-5.50370E-06	-4.02268E-04
T3:	-1.08348E-07	-3.76222E-08	-3.18233E-05	-1.39763E-03	-7.96842E-04	1.33834E-05
R1:	-8.15320E-06	-2.53059E-03	-1.39767E-03	6.72592E-02	-2.66676E-02	2.25167E-02
R2:	2.80726E-03	-5.49750E-06	-7.96837E-04	-2.66651E-02	1.57797E-01	-1.09782E-01
R3:	-2.03520E-03	-4.02298E-04	1.33740E-05	2.25125E-02	-1.09783E-01	9.87634E-02

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 14

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	700001-2	1.83933E-07	5.12339E-05	-3.73929E-08	-2.53061E-03	-5.50370E-06	-4.02268E-04
2	700002-1	1.51215E-05	-3.54282E-06	2.13581E-08	1.89472E-04	7.34561E-04	-4.18756E-04
3	700002-3	-1.34700E-05	3.98662E-05	-9.84168E-07	-2.07770E-03	-9.59218E-04	2.08638E-04
4	700003-1	4.01406E-05	3.72628E-06	-1.29672E-07	-1.97621E-04	2.07269E-03	-1.61646E-03
5	700003-3	-3.21818E-05	-3.97368E-05	-1.03002E-05	1.40475E-03	-2.38143E-03	1.61645E-03
6	700004-3	1.35575E-05	4.14411E-08	-6.54574E-06	-2.43606E-04	7.24007E-04	-5.29913E-04
7	700005-3	3.19860E-05	-2.08481E-07	-1.39932E-05	-4.81079E-04	1.81980E-03	-1.28179E-03
	Total:	5.52621E-05	5.12339E-05	-3.18233E-05	6.72592E-02	1.57797E-01	9.87634E-02

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 15

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	4	700003-1	4.01406E-05
T2 -	1	700001-2	5.12339E-05
T3 -	7	700005-3	-1.39932E-05
R1 -	1	700001-2	-2.53061E-03
R2 -	5	700003-3	-2.38143E-03
R3 -	4	700003-1	-1.61646E-03

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 16

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	700001-2	2.09958E-07	2.52937E+03	-8.90608E-08	-6.27875E+00	-2.69455E-09	-6.44531E-03
2	700002-1	1.33618E+03	-7.35282E+01	-7.88533E-08	-8.46346E-02	-1.06338E+01	1.37611E+02
3	700002-3	4.07756E+02	1.26789E+03	1.03391E+03	-1.23550E+02	-1.05310E+02	1.86344E+01
4	700003-1	1.49859E+03	7.35282E+01	-2.12078E-08	8.46346E-02	3.59689E+00	-1.35224E+02
5	700003-3	3.63841E+02	-1.26789E+03	1.20269E+03	1.33520E+02	-1.23517E+02	1.11590E+01
6	700004-3	-4.07756E+02	5.15386E+01	1.49566E+02	-2.16119E+01	1.07337E+02	-1.83706E+01
7	700005-3	-3.63841E+02	-5.15386E+01	1.43195E+02	1.37719E+01	1.21483E+02	-1.14228E+01
	Total:	2.83477E+03	2.52937E+03	2.52937E+03	2.68688E+04	1.07167E+04	2.56600E+04

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 17

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-7.345508E-06	2.710260E-03	4.313512E-04
2	2.510647E-08	1.584502E-04	2.521814E-05
3	5.507236E-07	7.421076E-04	1.181101E-04
4	1.170350E-06	1.081827E-03	1.721782E-04
5	1.187889E-05	3.446576E-03	5.485396E-04
6	2.465036E-05	4.964913E-03	7.901905E-04
7	2.368535E+04	1.539005E+02	2.449402E+01
8	3.011355E+04	1.735326E+02	2.761857E+01
9	4.443812E+04	2.108035E+02	3.355042E+01
10	5.405254E+04	2.324920E+02	3.700226E+01
11	5.440246E+04	2.332434E+02	3.712183E+01
12	5.806831E+04	2.409737E+02	3.835215E+01
13	6.086339E+04	2.467051E+02	3.926433E+01
14	6.654498E+04	2.579631E+02	4.105611E+01
15	7.096229E+04	2.663875E+02	4.239688E+01
16	7.103034E+04	2.665152E+02	4.241721E+01
17	7.111171E+04	2.666678E+02	4.244150E+01
18	7.114467E+04	2.667296E+02	4.245133E+01
19	7.117632E+04	2.667889E+02	4.246077E+01
20	7.138707E+04	2.671836E+02	4.252359E+01
21	8.645105E+04	2.940256E+02	4.679563E+01
22	8.646562E+04	2.940504E+02	4.679957E+01
23	8.648658E+04	2.940860E+02	4.680524E+01
24	8.667648E+04	2.944087E+02	4.685660E+01
25	8.710736E+04	2.951396E+02	4.697292E+01
26	8.711845E+04	2.951583E+02	4.697591E+01
27	8.752063E+04	2.958389E+02	4.708422E+01
28	8.752449E+04	2.958454E+02	4.708526E+01
29	8.755178E+04	2.958915E+02	4.709260E+01
30	8.761052E+04	2.959907E+02	4.710839E+01
31	8.769911E+04	2.961404E+02	4.713220E+01
32	8.782742E+04	2.963569E+02	4.716667E+01
33	1.080572E+05	3.287205E+02	5.231749E+01
34	1.197940E+05	3.461127E+02	5.508555E+01
35	1.212535E+05	3.482147E+02	5.542010E+01
36	1.256302E+05	3.544435E+02	5.641143E+01
37	1.420042E+05	3.768345E+02	5.997507E+01
38	2.476565E+05	4.976510E+02	7.920361E+01
39	3.451717E+05	5.875132E+02	9.350563E+01
40	4.438134E+05	6.661932E+02	1.060279E+02
41	1.410824E+06	1.187781E+03	1.890412E+02
42	2.741691E+06	1.655805E+03	2.635296E+02

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 18

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	5.494466E+03	7.412466E+01	1.179731E+01
2	1.191093E+04	1.091372E+02	1.736973E+01
3	1.209838E+04	1.099926E+02	1.750587E+01
4	4.707664E+04	2.169715E+02	3.453209E+01
5	4.751726E+04	2.179845E+02	3.469332E+01
6	5.403834E+04	2.324615E+02	3.699740E+01
7	5.659977E+04	2.379071E+02	3.786408E+01
8	6.029721E+04	2.455549E+02	3.908128E+01
9	6.605871E+04	2.570189E+02	4.090583E+01
10	7.058669E+04	2.656816E+02	4.228453E+01
11	7.092408E+04	2.663157E+02	4.238547E+01
12	7.102166E+04	2.664989E+02	4.241462E+01
13	7.113444E+04	2.667104E+02	4.244828E+01
14	7.116395E+04	2.667657E+02	4.245708E+01
15	7.130020E+04	2.670210E+02	4.249771E+01
16	7.196851E+04	2.682695E+02	4.269641E+01
17	8.173441E+04	2.858923E+02	4.550117E+01
18	8.444327E+04	2.905912E+02	4.624903E+01
19	8.645466E+04	2.940317E+02	4.679660E+01
20	8.646966E+04	2.940572E+02	4.680066E+01
21	8.667933E+04	2.944135E+02	4.685737E+01
22	8.684901E+04	2.947016E+02	4.690321E+01
23	8.717163E+04	2.952484E+02	4.699025E+01
24	8.752043E+04	2.958385E+02	4.708416E+01
25	8.755020E+04	2.958888E+02	4.709217E+01
26	8.758124E+04	2.959413E+02	4.710052E+01
27	8.765653E+04	2.960685E+02	4.712076E+01
28	8.768178E+04	2.961111E+02	4.712754E+01
29	8.789041E+04	2.964632E+02	4.718358E+01
30	9.208959E+04	3.034627E+02	4.829758E+01
31	1.211548E+05	3.480730E+02	5.539754E+01
32	1.218597E+05	3.490841E+02	5.555846E+01
33	1.268949E+05	3.562231E+02	5.669467E+01
34	1.326424E+05	3.642011E+02	5.796440E+01
35	1.458870E+05	3.819516E+02	6.078948E+01

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 19

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	1.179731E+01	45.47%	0.00%	0.06%	0.01%	43.84%	0.39%
2	1.736973E+01	16.32%	31.32%	0.07%	0.18%	30.82%	0.23%
3	1.750587E+01	8.10%	67.04%	0.02%	0.76%	15.00%	0.09%
4	3.453209E+01	2.31%	0.18%	0.08%	0.07%	0.02%	8.08%
5	3.469332E+01	0.00%	0.06%	0.09%	0.06%	1.69%	0.76%
6	3.699740E+01	0.00%	0.00%	0.07%	0.11%	0.00%	0.00%
7	3.786408E+01	0.26%	0.04%	0.20%	0.07%	1.46%	0.22%
8	3.908128E+01	0.06%	0.19%	1.28%	0.20%	0.09%	0.20%
9	4.090583E+01	0.00%	0.00%	0.77%	0.48%	0.01%	0.01%
10	4.228453E+01	0.16%	0.00%	0.25%	0.05%	0.25%	3.22%
11	4.238547E+01	0.01%	0.00%	0.02%	0.00%	0.00%	0.01%
12	4.241462E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
13	4.244828E+01	0.01%	0.00%	0.00%	0.00%	0.00%	0.05%
14	4.245708E+01	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
15	4.249771E+01	0.06%	0.02%	0.00%	0.01%	0.04%	0.43%
16	4.269641E+01	0.16%	0.00%	0.54%	0.35%	0.25%	4.58%
17	4.550117E+01	2.92%	0.01%	4.62%	0.00%	0.00%	10.36%
18	4.624903E+01	0.32%	0.00%	25.42%	0.13%	0.17%	0.39%
19	4.679660E+01	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
20	4.680066E+01	0.00%	0.00%	0.00%	0.02%	0.00%	0.01%
21	4.685737E+01	0.06%	0.00%	0.43%	0.01%	0.01%	0.09%
22	4.690321E+01	0.01%	0.00%	0.31%	0.03%	0.00%	0.04%
23	4.699025E+01	0.04%	0.00%	0.01%	0.03%	0.00%	0.06%
24	4.708416E+01	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
25	4.709217E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
26	4.710052E+01	0.03%	0.00%	0.00%	0.00%	0.00%	0.06%
27	4.712076E+01	0.02%	0.00%	0.02%	0.05%	0.00%	0.00%
28	4.712754E+01	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%
29	4.718358E+01	0.01%	0.01%	0.04%	0.00%	0.00%	0.11%
30	4.829758E+01	0.02%	0.00%	51.31%	0.51%	0.12%	0.05%
31	5.539754E+01	0.04%	0.00%	0.36%	0.00%	0.02%	0.01%
32	5.555846E+01	0.00%	0.00%	1.07%	0.21%	0.00%	0.00%
33	5.669467E+01	0.05%	0.00%	1.94%	0.05%	0.05%	0.76%
34	5.796440E+01	0.64%	0.04%	0.95%	0.46%	0.37%	18.36%
35	6.078948E+01	0.00%	0.01%	0.53%	4.04%	0.40%	9.98%
Total:		77.10%	98.93%	90.46%	7.90%	94.61%	58.58%

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 20

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	2.01923E-08	6.37668E-11	-2.25663E-10	-9.24183E-09	1.02927E-06	-7.45532E-07
2	Net Load Factor - T2 (g)	8.06336E-11	2.00260E-08	-1.45725E-10	-9.94536E-07	-4.13075E-09	-1.57322E-07
3	Net Load Factor - T3 (g)	-4.49191E-11	6.29985E-11	-1.25373E-08	-5.54589E-07	-3.14339E-07	4.68625E-09
4	Net Load Factor - R1 (rad/sec^2)	3.25630E-09	-9.24920E-08	-5.27452E-08	2.39913E-06	-7.83862E-07	6.88175E-07
5	Net Load Factor - R2 (rad/sec^2)	2.58683E-07	-5.87059E-09	-7.67686E-08	-2.30771E-06	1.45025E-05	-9.97895E-06
6	Net Load Factor - R3 (rad/sec^2)	-6.61426E-08	-1.61746E-08	-3.69618E-09	7.58353E-07	-3.53814E-06	3.34119E-06
7	ID 700001 - T2 (lbf)	1.83933E-07	5.12339E-05	-3.73929E-08	-2.53061E-03	-5.50370E-06	-4.02268E-04
8	ID 700002 - T1 (lbf)	1.51215E-05	-3.54282E-06	2.13581E-08	1.89472E-04	7.34561E-04	-4.18756E-04
9	ID 700002 - T3 (lbf)	-1.34700E-05	3.98662E-05	-9.84168E-07	-2.07770E-03	-9.59218E-04	2.08638E-04
10	ID 700003 - T1 (lbf)	4.01406E-05	3.72628E-06	-1.29672E-07	-1.97621E-04	2.07269E-03	-1.61646E-03
11	ID 700003 - T3 (lbf)	-3.21818E-05	-3.97368E-05	-1.03002E-05	1.40475E-03	-2.38143E-03	1.61645E-03
12	ID 700004 - T3 (lbf)	1.35575E-05	4.14411E-08	-6.54574E-06	-2.43606E-04	7.24007E-04	-5.29913E-04
13	ID 700005 - T3 (lbf)	3.19860E-05	-2.08481E-07	-1.39932E-05	-4.81079E-04	1.81980E-03	-1.28179E-03
14	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
15	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
16	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-5. ELM-ES Landing Model/OTMs

ASD/DMMP v1.11.0 Sun Jul 13 2008 13:03:18 CDT Page 21

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-6.86762E-18	4.16334E-17	-6.93889E-18	-3.46945E-18	1.38778E-17
2	Net Load Factor - T2 (g)	3.46945E-18	1.00000E+00	1.21431E-16	-7.80626E-18	8.67362E-19	-3.46945E-18
3	Net Load Factor - T3 (g)	1.04650E-17	-5.75572E-17	1.00000E+00	-3.12250E-17	5.20417E-18	6.98383E-18
4	Net Load Factor - R1 (rad/sec^2)	-2.51159E-16	-1.88369E-16	1.88738E-15	1.00000E+00	1.70003E-16	-6.75298E-17
5	Net Load Factor - R2 (rad/sec^2)	-8.37196E-17	-8.37196E-17	-8.88178E-16	0.00000E+00	1.00000E+00	-6.35721E-17
6	Net Load Factor - R3 (rad/sec^2)	4.44089E-16	5.88654E-17	1.66533E-16	-1.90820E-17	6.15827E-17	1.00000E+00
7	ID 700001 - T2 (lbf)	2.09958E-07	2.52937E+03	-8.90608E-08	-6.27875E+00	-2.69455E-09	-6.44531E-03
8	ID 700002 - T1 (lbf)	1.33618E+03	-7.35282E+01	-7.88533E-08	-8.46346E-02	-1.06338E+01	1.37611E+02
9	ID 700002 - T3 (lbf)	4.07756E+02	1.26789E+03	1.03391E+03	-1.23550E+02	-1.05310E+02	1.86344E+01
10	ID 700003 - T1 (lbf)	1.49859E+03	7.35282E+01	-2.12078E-08	8.46346E-02	3.59689E+00	-1.35224E+02
11	ID 700003 - T3 (lbf)	3.63841E+02	-1.26789E+03	1.20269E+03	1.33520E+02	-1.23517E+02	1.11590E+01
12	ID 700004 - T3 (lbf)	-4.07756E+02	5.15386E+01	1.49566E+02	-2.16119E+01	1.07337E+02	-1.83706E+01
13	ID 700005 - T3 (lbf)	-3.63841E+02	-5.15386E+01	1.43195E+02	1.37719E+01	1.21483E+02	-1.14228E+01
14	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-4.60458E-16	1.42109E-14	-3.55271E-15	0.00000E+00	7.10543E-15
15	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	3.86089E+02	8.88178E-16	5.77316E-15	1.11022E-16	4.44089E-16
16	Net Inertial Acc - T3 (in/sec^2)	-1.07161E-14	2.67903E-15	3.86089E+02	-7.99361E-15	3.55271E-15	-2.72961E-15
17	Net Inertial Acc - R1 (rad/sec^2)	-2.51159E-16	-1.88369E-16	1.88738E-15	1.00000E+00	1.70003E-16	-6.75298E-17
18	Net Inertial Acc - R2 (rad/sec^2)	-8.37196E-17	-8.37196E-17	-8.88178E-16	0.00000E+00	1.00000E+00	-6.35721E-17
19	Net Inertial Acc - R3 (rad/sec^2)	4.44089E-16	5.88654E-17	1.66533E-16	-1.90820E-17	6.15827E-17	1.00000E+00

Figure G-5. ELM-ES Landing Model/OTMs

```
ASD/DMMP v1.11.0                Sun Jul 13 2008 13:03:18 CDT                Page   22


                                Execution Time: 00:00:00


                                * * * END OF JOB * * *
```

Figure G-5. ELM-ES Landing Model/OTMs

```
ASD/DMMP v1.12.0                        Mon Sep 01 2008 10:10:28 CDT                        Page    1


                                  ************************************************
                                  *                                              *
                                  *                ASD/DMMP v1.12.0              *
                                  *                                              *
                                  *       Applied Structural Dynamics, Inc.      *
                                  *    http://www.AppliedStructuralDynamics.com  *
                                  *                                              *
                                  *   Execution Time: Mon Sep 01 2008 10:10:28 CDT *
                                  *                                              *
                                  ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-06-0030A
     Name       : CAPE-ANDE2-Lift-Off
     Description: CAPE ANDE2 Lift-Off
```

Figure G-6. CAPE ANDE2 Liftoff Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 10:10:28 CDT                    Page    2

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-06-0030A
     Name        : CAPE-ANDE2-Lift-Off
     Description : CAPE ANDE2 Lift-Off
     Type        : Single

     DMM Size    : 38 DOFs
     DMM Type    : Hybrid
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : lo_ande2_fse_km.op4
        Geometry : CAPE-ANDE2.blk
        Label    : Label-CAPE-ANDE2.blk

     OTM-01:
        Description : ANDE2 Liftoff NLF and IFF OTM
        No. of Items: 32
        Ignore      : No
        Matrix File : DMM-2008-06-0030A.OTM.op4
        Label File  : DMM-2008-06-0030A.OTM.txt
```

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
13	GRID 13	4	27.00000	0.00000	0.00000	0	1	2	3				
18	GRID 18	4	27.00000	0.00000	-4.99998	0		4					
22	GRID 22	4	15.00000	0.00000	-4.99998	0		5					
26	GRID 26	4	0.00000	0.00000	0.00000	0	6	7	8				
28	GRID 28	4	15.00000	0.00000	0.00000	0		9					
44	GRID 44	4	15.00000	0.00000	-15.62500	0		10					
46	GRID 46	4	27.00000	0.00000	-15.62500	0		11					
58	GRID 58	4	15.00000	0.00000	-20.62500	0		12					
59	GRID 59	4	27.00000	0.00000	-20.62500	0	13	14	15				
60	GRID 60	4	0.00000	0.00000	-15.62500	0		16					
75	GRID 75	4	0.00000	0.00000	-20.62500	0	17	18	19				
79	GRID 79	4	0.00000	0.00000	-4.99998	0		20					
100021	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							21
:													:
100038	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							38

Figure G-6. CAPE ANDE2 Liftoff Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 10:10:28 CDT                    Page    4

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   2       18      22      28      44      46      58      60
    2 -            79
    3 -    BSET1   123     13      26      59      75
    4 -    CORD2C *1               0                               0               0*
    5 -    *                      0               0               0               1*
    6 -    *                      1               0               1
    7 -    CORD2R *4               0                           1255.5             88*
    8 -    *                  411.925           1255.5             88          1736.2*
    9 -    *                  2579.78              88          411.925
   10 -    CORD2R *5               4                             12.5           -17.5*
   11 -    *                   12.725           643.736        -1198.46          12.725*
   12 -    *                  1193.46           613.736          12.725
   13 -    CORD2S *2               0                               0               0*
   14 -    *                      0               0               0               1*
   15 -    *                      1               0               1
   16 -    GRID   *13              4                              27               0*
   17 -    *                      00              456
   18 -    GRID   *18              4                              27               0*
   19 -    *                 -4.999980            13456
   20 -    GRID   *22              4                              15               0*
   21 -    *                 -4.999980            13456
   22 -    GRID   *26              4                               0               0*
   23 -    *                      00              456
   24 -    GRID   *28              4                              15               0*
   25 -    *                      00              13456
   26 -    GRID   *44              4                              15               0*
   27 -    *                  -15.6250            13456
   28 -    GRID   *46              4                              27               0*
   29 -    *                  -15.6250            13456
   30 -    GRID   *58              4                              15               0*
   31 -    *                  -20.6250            13456
   32 -    GRID   *59              4                              27               0*
   33 -    *                  -20.6250            456
   34 -    GRID   *60              4                               0               0*
   35 -    *                  -15.6250            13456
   36 -    GRID   *75              4                               0               0*
   37 -    *                  -20.6250            456
   38 -    GRID   *79              4                               0               0*
   39 -    *                 -4.999980            13456
   40 -    QSET1   0       100021  THRU    100038
   41 -    SPOINT  100021  THRU    100038
   42 -    ENDDATA

           TOTAL ENTRY COUNT = 42
```

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 5

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
1	1	2	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
2	2	3	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
3	4	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	1.25550000E+03
			0.00000000E+00	1.00000000E+00	0.00000000E+00	8.80000000E+01
			0.00000000E+00	0.00000000E+00	1.00000000E+00	4.11925000E+02
4	5	1	8.81921349E-01	0.00000000E+00	4.71396579E-01	1.26800000E+03
			4.71396579E-01	0.00000000E+00	-8.81921349E-01	7.05000000E+01
			0.00000000E+00	1.00000000E+00	0.00000000E+00	4.24650000E+02

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 6

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	13	0	1.28250E+03	8.80000E+01	4.11925E+02
2	18	0	1.28250E+03	8.80000E+01	4.06925E+02
3	22	0	1.27050E+03	8.80000E+01	4.06925E+02
4	26	0	1.25550E+03	8.80000E+01	4.11925E+02
5	28	0	1.27050E+03	8.80000E+01	4.11925E+02
6	44	0	1.27050E+03	8.80000E+01	3.96300E+02
7	46	0	1.28250E+03	8.80000E+01	3.96300E+02
8	58	0	1.27050E+03	8.80000E+01	3.91300E+02
9	59	0	1.28250E+03	8.80000E+01	3.91300E+02
10	60	0	1.25550E+03	8.80000E+01	3.96300E+02
11	75	0	1.25550E+03	8.80000E+01	3.91300E+02
12	79	0	1.25550E+03	8.80000E+01	4.06925E+02
13	100021	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
30	100038	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	13-4	13-5	13-6	18-1	18-3	18-4	18-5	18-6	22-1	22-3 =	10
11 =	22-4	22-5	22-6	26-4	26-5	26-6	28-1	28-3	28-4	28-5 =	20
21 =	28-6	44-1	44-3	44-4	44-5	44-6	46-1	46-3	46-4	46-5 =	30
31 =	46-6	58-1	58-3	58-4	58-5	58-6	59-4	59-5	59-6	60-1 =	40
41 =	60-3	60-4	60-5	60-6	75-4	75-5	75-6	79-1	79-3	79-4 =	50
51 =	79-5	79-6									

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	13-1	13-2	13-3	18-2	22-2	26-1	26-2	26-3	28-2	44-2	= 10
11 =	46-2	58-2	59-1	59-2	59-3	60-2	75-1	75-2	75-3	79-2	= 20

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0	= 10
11 =	100031-0	100032-0	100033-0	100034-0	100035-0	100036-0	100037-0	100038-0			

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 10

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	13-1	13-2	13-3	18-2	22-2	26-1	26-2	26-3	28-2	44-2	= 10
11 =	46-2	58-2	59-1	59-2	59-3	60-2	75-1	75-2	75-3	79-2	= 20
21 =	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0	= 30
31 =	100031-0	100032-0	100033-0	100034-0	100035-0	100036-0	100037-0	100038-0			

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 11

Z E R O D A M P I N G D O F S

The following DOFs have damping less than 1.0E-09:

	1	2	3	4	5	6	7	8	9	10	
1 =	13-1	13-2	13-3	18-2	22-2	26-1	26-2	26-3	28-2	44-2	= 10
11 =	46-2	58-2	59-1	59-2	59-3	60-2	75-1	75-2	75-3	79-2	= 20

Figure G-6. CAPE ANDE2 Liftoff Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 10:10:28 CDT                    Page   12

                O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                    REFERENCE POINT = ORIGIN

                                              M O
*  1.550554E+00 -1.310618E-13  7.053941E-13  1.477218E-10  6.216795E+02 -1.132330E+02 *
* -1.310826E-13  1.550554E+00  8.243545E-13 -6.216795E+02 -1.134595E-09  1.965814E+03 *
*  7.054010E-13  8.244516E-13  1.550554E+00  1.132330E+02 -1.965814E+03  1.004366E-09 *
*  1.477414E-10 -6.216795E+02  1.132330E+02  2.579508E+05 -1.435584E+05 -7.881763E+05 *
*  6.216795E+02 -1.134651E-09 -1.965814E+03 -1.435584E+05  2.741963E+06 -4.540084E+04 *
* -1.132330E+02  1.965814E+03  1.004295E-09 -7.881763E+05 -4.540084E+04  2.500735E+06 *

                                               S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
             X             1.550554E+00      9.527037E-11  7.302746E+01  4.009403E+02
             Y             1.550554E+00      1.267814E+03 -7.317351E-10  4.009403E+02
             Z             1.550554E+00      1.267814E+03  7.302746E+01  6.477469E-10

                                             I(S)
                                *  4.253356E+02  6.230388E-02  2.349985E+00 *
                                *  6.230388E-02  4.206760E+02  1.163957E+00 *
                                *  2.349985E+00  1.163957E+00  1.804376E+02 *

                                             I(Q)
                                *  1.804095E+02                             *
                                *                4.206811E+02               *
                                *                              4.253587E+02 *

                                               Q
                                *  9.595347E-03  1.088503E-02 -9.998947E-01 *
                                *  4.846651E-03  9.999285E-01  1.093191E-02 *
                                *  9.999422E-01 -4.951036E-03  9.541905E-03 *
```

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 13

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
1.267814E+03	7.302746E+01	4.009403E+02

Figure G-6. CAPE ANDE2 Liftoff Model

```
ASD/DMMP v1.12.0                    Mon Sep 01 2008 10:10:28 CDT                    Page   14

          O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                REFERENCE POINT = C.G.

                                        M O
*  1.550554E+00 -1.310618E-13  7.053941E-13  4.365686E-11  4.123009E-10 -7.195089E-11 *
* -1.310826E-13  1.550554E+00  8.243545E-13 -5.421728E-10 -3.692902E-11  1.255085E-10 *
*  7.054010E-13  8.244516E-13  1.550554E+00  9.251910E-11 -1.478053E-10  1.064082E-11 *
*  4.365663E-11 -5.421725E-10  9.251860E-11  4.253356E+02 -6.230393E-02 -2.349985E+00 *
*  4.123013E-10 -3.692979E-11 -1.478080E-10 -6.230393E-02  4.206760E+02 -1.163956E+00 *
* -7.195133E-11  1.255085E-10  1.064082E-11 -2.349985E+00 -1.163956E+00  1.804376E+02 *

                                        S
                        *  1.000000E+00  0.000000E+00  0.000000E+00 *
                        *  0.000000E+00  1.000000E+00  0.000000E+00 *
                        *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
             X             1.550554E+00      2.815565E-11  4.640335E-11  2.659055E-10
             Y             1.550554E+00      8.094430E-11 -2.381666E-11  3.496639E-10
             Z             1.550554E+00      9.532421E-11  5.966842E-11  6.862594E-12

                                      I(S)
                        *  4.253356E+02  6.230393E-02  2.349985E+00 *
                        *  6.230393E-02  4.206760E+02  1.163956E+00 *
                        *  2.349985E+00  1.163956E+00  1.804376E+02 *

                                      I(Q)
                        *  1.804095E+02                             *
                        *                4.206811E+02               *
                        *                             4.253587E+02 *

                                        Q
                        *  9.595347E-03  1.088505E-02 -9.998947E-01 *
                        *  4.846645E-03  9.999285E-01  1.093192E-02 *
                        *  9.999422E-01 -4.951030E-03  9.541904E-03 *
```

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 15

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.55055E+00	-1.31062E-13	7.05394E-13	4.36569E-11	4.12301E-10	-7.19509E-11
T2:	-1.31083E-13	1.55055E+00	8.24354E-13	-5.42173E-10	-3.69290E-11	1.25508E-10
T3:	7.05401E-13	8.24452E-13	1.55055E+00	9.25191E-11	-1.47805E-10	1.06408E-11
R1:	4.36566E-11	-5.42173E-10	9.25186E-11	4.25336E+02	-6.23039E-02	-2.34998E+00
R2:	4.12301E-10	-3.69298E-11	-1.47808E-10	-6.23039E-02	4.20676E+02	-1.16396E+00
R3:	-7.19513E-11	1.25508E-10	1.06408E-11	-2.34998E+00	-1.16396E+00	1.80438E+02

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-2.72266E-07	4.68253E-08	-1.13941E-08	-5.37814E-06	-1.27216E-06	-1.37444E-06
T2:	4.68372E-08	4.95177E-07	3.60613E-07	7.84384E-06	5.00630E-06	1.81081E-06
T3:	-1.14087E-08	3.60582E-07	9.29489E-07	7.01178E-06	-3.36367E-06	4.88336E-07
R1:	-5.37902E-06	7.84336E-06	7.01308E-06	-1.60005E-04	-8.39304E-05	-2.77020E-05
R2:	-1.27184E-06	5.00539E-06	-3.36289E-06	-8.39367E-05	5.86923E-05	-5.38518E-05
R3:	-1.37536E-06	1.81160E-06	4.89264E-07	-2.76945E-05	-5.38696E-05	6.99989E-05

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	6.57196E-23	1.27202E-23	1.62179E-23	9.30373E-23	2.35300E-22	-1.10474E-22
T2:	1.27202E-23	6.88297E-23	-8.63459E-24	1.45383E-23	-1.33851E-22	1.36402E-22
T3:	1.62179E-23	-8.63459E-24	1.18796E-23	-8.62897E-23	5.90044E-23	-1.91990E-23
R1:	9.30373E-23	1.45383E-23	-8.62897E-23	5.54251E-21	1.84641E-21	-1.30074E-21
R2:	2.35300E-22	-1.33851E-22	5.90044E-23	1.84641E-21	8.09952E-21	6.84539E-22
R3:	-1.10474E-22	1.36402E-22	-1.91990E-23	-1.30074E-21	6.84539E-22	1.85410E-21

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 16

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	13-1	-1.13083E-07	7.38692E-08	2.66300E-09	-1.61927E-06	-1.55531E-06	-1.04870E-06
2	13-2	-1.35042E-08	-1.29394E-08	2.19385E-07	1.56406E-06	-7.66362E-07	8.76920E-07
3	13-3	-7.56700E-10	4.32683E-08	3.13841E-07	3.03649E-06	-1.93145E-06	1.39212E-06
4	18-2	2.46891E-08	2.16933E-08	2.41289E-09	3.31942E-06	9.31672E-07	1.23995E-06
5	22-2	7.41584E-08	1.18453E-08	-9.22228E-10	2.46702E-06	7.00151E-07	1.92435E-07
6	26-1	-6.36064E-08	3.42625E-08	-1.18453E-08	-1.85118E-06	3.70783E-07	2.68628E-07
7	26-2	8.55434E-08	4.79049E-08	1.35216E-07	4.17302E-06	1.35507E-06	4.61005E-08
8	26-3	3.01225E-08	1.34169E-07	1.95694E-07	1.07940E-06	6.72415E-07	-9.27132E-07
9	28-2	5.06243E-08	-3.54557E-08	6.69861E-08	3.07686E-06	5.84667E-07	1.19617E-06
10	44-2	-7.78855E-08	8.00883E-08	-4.64206E-09	-2.93815E-06	-2.68628E-07	1.37952E-08
11	46-2	-1.09419E-07	1.83834E-07	5.41750E-08	-2.29321E-06	-1.43927E-06	4.88362E-08
12	58-2	-3.71656E-08	7.95280E-08	-3.49692E-08	-1.78660E-06	-4.77157E-07	4.89817E-08
13	59-1	-5.18048E-08	-3.32439E-08	-8.00355E-09	-1.20852E-06	-1.68104E-07	-4.42262E-07
14	59-2	-8.77035E-08	5.07280E-08	-1.14458E-07	-3.47709E-06	5.57513E-07	-3.15951E-07
15	59-3	4.91855E-09	1.65528E-09	2.31710E-07	2.54003E-06	-2.22679E-06	7.21368E-07
16	60-2	-2.16896E-08	8.71078E-08	2.21480E-08	-1.63470E-06	9.63453E-07	-9.35514E-07
17	75-1	-4.37722E-08	-2.80506E-08	5.77711E-09	-7.00049E-07	8.07922E-08	-1.53028E-07
18	75-2	-9.10950E-09	-2.29993E-08	-6.82194E-08	-1.20333E-06	5.69038E-07	-8.73115E-09
19	75-3	-4.56785E-08	1.81521E-07	1.88244E-07	3.57162E-07	1.22935E-07	-6.97095E-07
20	79-2	1.68287E-07	3.84171E-09	8.34698E-08	6.57607E-06	2.29524E-06	-5.91390E-07
	Total:	-2.72266E-07	4.95177E-07	9.29489E-07	-1.60005E-04	5.86923E-05	6.99989E-05

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 17

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	20	79-2	1.68287E-07
T2 -	11	46-2	1.83834E-07
T3 -	3	13-3	3.13841E-07
R1 -	20	79-2	6.57607E-06
R2 -	20	79-2	2.29524E-06
R3 -	3	13-3	1.39212E-06

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 18

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	13-1	1.09364E-23	4.35101E-25	3.47129E-24	1.10354E-23	3.18286E-23	-2.43448E-23
2	13-2	1.40769E-23	1.66076E-23	3.34285E-24	-3.61303E-23	-2.45230E-23	2.69737E-23
3	13-3	5.58124E-24	2.94380E-24	2.53631E-24	-4.12314E-23	-3.53856E-23	3.67168E-24
4	18-2	9.62635E-24	2.94549E-24	4.52245E-24	-1.01729E-22	3.16022E-23	1.91031E-23
5	22-2	8.40971E-25	1.01444E-23	5.49000E-25	-8.69531E-23	-5.45090E-23	4.11634E-23
6	26-1	2.27190E-23	1.35396E-24	5.10662E-24	6.69174E-23	2.09860E-22	-1.52335E-23
7	26-2	-1.24035E-23	-9.12720E-24	-1.61286E-26	-7.73872E-23	-1.71246E-23	2.45507E-23
8	26-3	2.90740E-24	-4.69379E-24	3.38682E-24	-8.91390E-24	8.44854E-23	9.45862E-24
9	28-2	1.11626E-24	1.93692E-24	1.16598E-24	-4.31751E-23	-1.79210E-23	1.46680E-23
10	44-2	2.53263E-25	2.88676E-24	-1.91716E-24	8.66253E-23	2.27640E-23	-4.93817E-24
11	46-2	2.55902E-24	6.74946E-24	-1.90870E-24	5.26677E-23	1.78700E-24	-2.09385E-24
12	58-2	-1.57584E-24	2.68200E-24	-2.05509E-24	5.19347E-23	8.74107E-24	4.97009E-24
13	59-1	2.29253E-23	7.43239E-24	5.36075E-24	3.84788E-23	1.98288E-23	-5.40771E-23
14	59-2	1.15388E-23	7.38873E-24	-3.58173E-25	9.05554E-23	1.08661E-22	-5.40122E-24
15	59-3	-4.65565E-24	-5.09940E-24	1.45828E-24	-4.01796E-23	-1.37077E-22	-2.85698E-23
16	60-2	-3.04702E-24	1.00475E-23	-4.09590E-24	3.62016E-23	-4.99446E-23	2.26030E-25
17	75-1	9.13887E-24	3.49873E-24	2.27924E-24	-2.33944E-23	-2.62176E-23	-1.68188E-23
18	75-2	-1.36248E-23	1.51255E-23	-1.09756E-23	1.31007E-22	-1.08834E-22	1.36355E-23
19	75-3	1.23849E-23	-1.78520E-24	4.49822E-24	4.03515E-24	1.46981E-22	-3.75947E-24
20	79-2	3.35972E-24	1.44248E-24	3.11188E-24	-8.90787E-23	-3.45494E-23	3.54434E-24
	Total:	6.57196E-23	6.88297E-23	1.18796E-23	5.54251E-21	8.09952E-21	1.85410E-21

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 19

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

Dir	DOF	GRID-C	Max. Force
T1 -	13	59-1	2.29253E-23
T2 -	2	13-2	1.66076E-23
T3 -	18	75-2	-1.09756E-23
R1 -	18	75-2	1.31007E-22
R2 -	6	26-1	2.09860E-22
R3 -	13	59-1	-5.40771E-23

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 20

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	13-1	1.54092E+02	6.12341E+00	2.28876E+01	-5.57593E-01	3.01360E+00	1.43268E-02
2	13-2	1.03937E+02	3.93060E+01	1.46269E+02	-4.24450E+00	-2.73890E+00	1.57376E+00
3	13-3	5.10307E+01	2.32448E+01	1.38729E+02	9.41593E-03	-5.52432E+00	8.16188E-01
4	18-2	8.70139E+01	4.49112E+01	6.16684E+01	-5.43814E+00	2.49672E-01	1.93477E+00
5	22-2	1.92743E-01	3.62942E+01	1.87806E+01	-5.01479E+00	-9.48360E-02	1.44987E-01
6	26-1	1.47866E+02	-6.39313E+00	-1.57824E+01	6.03882E-01	2.87013E+00	3.18991E-04
7	26-2	-8.83538E+01	4.58686E+01	1.37880E+02	-3.83762E+00	2.63779E+00	-1.31047E+00
8	26-3	-4.80987E+01	2.83502E+01	1.59643E+02	7.19269E-03	5.53445E+00	-7.73006E-01
9	28-2	-5.71752E+00	3.30489E+01	7.06794E+01	-3.85998E+00	-3.05727E-01	7.58288E-02
10	44-2	2.72028E+00	4.41338E+01	-1.72650E+01	4.82653E+00	8.50024E-02	9.61496E-02
11	46-2	6.74869E+01	5.74159E+01	-6.29201E+01	5.38959E+00	-2.57823E-01	1.64611E+00
12	58-2	-4.42634E+00	3.53412E+01	-6.86267E+01	3.94461E+00	2.86049E-01	3.19219E-02
13	59-1	1.51643E+02	5.61849E+00	-2.23503E+01	5.73447E-01	-3.01769E+00	-2.92127E-03
14	59-2	7.75546E+01	4.87166E+01	-1.47000E+02	4.26359E+00	2.72034E+00	1.33442E+00
15	59-3	-3.41162E+01	-2.34508E+01	1.39725E+02	2.82510E-02	-5.56176E+00	-7.61891E-01
16	60-2	-7.49732E+01	8.75434E+01	-7.50354E+01	6.29168E+00	-6.11427E-01	-2.06609E+00
17	75-1	1.45050E+02	-5.34877E+00	1.52450E+01	-6.19736E-01	-2.86603E+00	-1.17246E-02
18	75-2	-6.67304E+01	5.44863E+01	-1.38931E+02	3.96649E+00	-2.60727E+00	-1.18802E+00
19	75-3	3.11842E+01	-2.81442E+01	1.60554E+02	-4.48596E-02	5.55163E+00	7.18709E-01
20	79-2	-9.87038E+01	7.15850E+01	7.45009E+01	-6.28745E+00	6.37141E-01	-2.27336E+00
	Total:	5.98651E+02	5.98651E+02	5.98651E+02	4.25336E+02	4.20676E+02	1.80438E+02

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 21

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-7.218168E-07	8.495980E-04	1.352177E-04
2	-9.647511E-08	3.106044E-04	4.943423E-05
3	-1.881062E-08	1.371518E-04	2.182839E-05
4	3.608875E-07	6.007391E-04	9.561060E-05
5	4.915078E-07	7.010761E-04	1.115797E-04
6	8.764282E-07	9.361774E-04	1.489973E-04
7	1.702789E+05	4.126487E+02	6.567508E+01
8	1.936164E+05	4.400186E+02	7.003114E+01
9	1.050772E+06	1.025072E+03	1.631453E+02
10	1.100847E+06	1.049213E+03	1.669874E+02
11	1.125843E+06	1.061058E+03	1.688726E+02
12	1.130790E+06	1.063386E+03	1.692431E+02
13	1.630442E+06	1.276888E+03	2.032230E+02
14	1.656332E+06	1.286986E+03	2.048301E+02
15	1.928450E+06	1.388686E+03	2.210163E+02
16	2.024055E+06	1.422693E+03	2.264286E+02
17	2.300669E+06	1.516796E+03	2.414055E+02
18	2.446777E+06	1.564218E+03	2.489530E+02
19	2.550829E+06	1.597132E+03	2.541914E+02
20	2.678687E+06	1.636669E+03	2.604840E+02
21	2.741178E+06	1.655650E+03	2.635049E+02
22	3.293876E+06	1.814904E+03	2.888509E+02
23	4.830968E+06	2.197946E+03	3.498140E+02
24	1.229098E+07	3.505849E+03	5.579732E+02
25	1.421797E+07	3.770673E+03	6.001212E+02
26	1.496731E+07	3.868761E+03	6.157324E+02
27	2.802413E+07	5.293782E+03	8.425316E+02
28	2.845253E+07	5.334092E+03	8.489470E+02
29	5.971424E+07	7.727499E+03	1.229870E+03
30	8.318413E+07	9.120533E+03	1.451578E+03
31	8.423174E+07	9.177785E+03	1.460690E+03
32	1.646103E+08	1.283005E+04	2.041966E+03
33	1.735736E+08	1.317473E+04	2.096824E+03
34	2.332076E+08	1.527113E+04	2.430477E+03
35	4.605041E+08	2.145936E+04	3.415363E+03
36	6.130779E+08	2.476041E+04	3.940742E+03
37	8.185253E+08	2.860988E+04	4.553404E+03
38	1.027709E+09	3.205790E+04	5.102173E+03

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 22

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	7.462391E+04	2.731738E+02	4.347695E+01
2	7.964248E+04	2.822100E+02	4.491512E+01
3	2.693655E+05	5.190043E+02	8.260210E+01
4	3.101973E+05	5.569536E+02	8.864191E+01
5	6.096309E+05	7.807886E+02	1.242664E+02
6	7.131048E+05	8.444553E+02	1.343992E+02
7	1.051353E+06	1.025355E+03	1.631903E+02
8	1.113729E+06	1.055333E+03	1.679615E+02
9	1.147647E+06	1.071283E+03	1.705000E+02
10	1.166998E+06	1.080277E+03	1.719314E+02
11	1.461291E+06	1.208839E+03	1.923927E+02
12	1.742972E+06	1.320217E+03	2.101190E+02
13	1.917373E+06	1.384692E+03	2.203806E+02
14	2.057345E+06	1.434345E+03	2.282831E+02
15	2.441791E+06	1.562623E+03	2.486992E+02
16	2.668376E+06	1.633516E+03	2.599822E+02
17	2.721708E+06	1.649760E+03	2.625675E+02
18	2.882032E+06	1.697655E+03	2.701902E+02

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 23

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	4.347695E+01	50.18%	1.09%	0.01%	0.43%	10.40%	5.13%
2	4.491512E+01	1.39%	35.68%	0.39%	18.07%	0.33%	0.22%
3	8.260210E+01	0.13%	3.60%	64.57%	21.46%	0.36%	0.07%
4	8.864191E+01	17.86%	0.05%	0.42%	0.10%	42.76%	12.07%
5	1.242664E+02	0.00%	12.80%	16.01%	42.26%	0.37%	0.09%
6	1.343992E+02	0.16%	0.10%	0.07%	0.72%	34.38%	9.70%
7	1.631903E+02	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%
8	1.679615E+02	0.06%	0.00%	0.01%	0.03%	0.00%	0.01%
9	1.705000E+02	0.04%	0.29%	0.07%	0.55%	0.02%	0.04%
10	1.719314E+02	4.75%	0.13%	0.02%	0.07%	0.01%	3.50%
11	1.923927E+02	5.57%	0.04%	0.00%	0.00%	0.71%	12.86%
12	2.101190E+02	0.00%	1.28%	0.16%	0.12%	0.00%	0.00%
13	2.203806E+02	0.05%	11.98%	0.64%	3.97%	0.00%	0.03%
14	2.282831E+02	0.43%	0.36%	0.01%	0.07%	0.01%	0.10%
15	2.486992E+02	0.03%	0.11%	0.00%	0.00%	0.56%	0.04%
16	2.599822E+02	0.04%	0.01%	0.01%	0.01%	0.25%	0.07%
17	2.625675E+02	0.06%	0.01%	0.00%	0.03%	0.27%	0.15%
18	2.701902E+02	0.00%	2.20%	0.01%	0.13%	0.01%	0.00%
Total:		80.76%	69.75%	82.41%	88.04%	90.44%	44.07%

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 24

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-4.54975E-10	7.82818E-11	-1.90141E-11	-8.98316E-09	-2.12665E-09	-2.29304E-09
2	Net Load Factor - T2 (g)	7.82201E-11	8.26549E-10	6.02309E-10	1.31023E-08	8.36342E-09	3.02197E-09
3	Net Load Factor - T3 (g)	-1.90994E-11	6.02155E-10	1.55191E-09	1.17017E-08	-5.60407E-09	8.13422E-10
4	Net Load Factor - R1 (rad/sec^2)	-1.26884E-08	1.85009E-08	1.64885E-08	-3.77375E-07	-1.98942E-07	-6.30147E-08
5	Net Load Factor - R2 (rad/sec^2)	-3.04902E-09	1.19299E-08	-7.96543E-09	-1.99727E-07	1.38472E-07	-1.26844E-07
6	Net Load Factor - R3 (rad/sec^2)	-7.80420E-09	1.03513E-08	2.86929E-09	-1.59634E-07	-3.00078E-07	3.86535E-07
7	GRID 13 - T1 (lbf)	-1.13083E-07	7.38692E-08	2.66300E-09	-1.61927E-06	-1.55531E-06	-1.04870E-06
8	GRID 13 - T2 (lbf)	-1.35042E-08	-1.29394E-08	2.19385E-07	1.56406E-06	-7.66362E-07	8.76920E-07
9	GRID 13 - T3 (lbf)	-7.56700E-10	4.32683E-08	3.13841E-07	3.03649E-06	-1.93145E-06	1.39212E-06
10	GRID 18 - T2 (lbf)	2.46891E-08	2.16933E-08	2.41289E-09	3.31942E-06	9.31672E-07	1.23995E-06
11	GRID 22 - T2 (lbf)	7.41584E-08	1.18453E-08	-9.22228E-10	2.46702E-06	7.00151E-07	1.92435E-07
12	GRID 26 - T1 (lbf)	-6.36064E-08	3.42625E-08	-1.18453E-08	-1.85118E-06	3.70783E-07	2.68628E-07
13	GRID 26 - T2 (lbf)	8.55434E-08	4.79049E-08	1.35216E-07	4.17302E-06	1.35507E-06	4.61005E-08
14	GRID 26 - T3 (lbf)	3.01225E-08	1.34169E-07	1.95694E-07	1.07940E-06	6.72415E-07	-9.27132E-07
15	GRID 28 - T2 (lbf)	5.06243E-08	-3.54557E-08	6.69861E-08	3.07686E-06	5.84667E-07	1.19617E-06
16	GRID 44 - T2 (lbf)	-7.78855E-08	8.00883E-08	-4.64206E-09	-2.93815E-06	-2.68628E-07	1.37952E-08
17	GRID 46 - T2 (lbf)	-1.09419E-07	1.83834E-07	5.41750E-08	-2.29321E-06	-1.43927E-06	4.88362E-08
18	GRID 58 - T2 (lbf)	-3.71656E-08	7.95280E-08	-3.49692E-08	-1.78660E-06	-4.77157E-07	4.89817E-08
19	GRID 59 - T1 (lbf)	-5.18048E-08	-3.32439E-08	-8.00355E-09	-1.20852E-06	-1.68104E-07	-4.42262E-07
20	GRID 59 - T2 (lbf)	-8.77035E-08	5.07280E-08	-1.14458E-07	-3.47709E-06	5.57513E-07	-3.15951E-07
21	GRID 59 - T3 (lbf)	4.91855E-09	1.65528E-09	2.31710E-07	2.54003E-06	-2.22679E-06	7.21368E-07
22	GRID 60 - T2 (lbf)	-2.16896E-08	8.71078E-08	2.21480E-08	-1.63470E-06	9.63453E-07	-9.35514E-07
23	GRID 75 - T1 (lbf)	-4.37722E-08	-2.80506E-08	5.77711E-09	-7.00049E-07	8.07922E-08	-1.53028E-07
24	GRID 75 - T2 (lbf)	-9.10950E-09	-2.29993E-08	-6.82194E-08	-1.20333E-06	5.69038E-07	-8.73115E-09
25	GRID 75 - T3 (lbf)	-4.56785E-08	1.81521E-07	1.88244E-07	3.57162E-07	1.22935E-07	-6.97095E-07
26	GRID 79 - T2 (lbf)	1.68287E-07	3.84171E-09	8.34698E-08	6.57607E-06	2.29524E-06	-5.91390E-07
27	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
28	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
29	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
30	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
31	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
32	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-6. CAPE ANDE2 Liftoff Model

ASD/DMMP v1.12.0 Mon Sep 01 2008 10:10:28 CDT Page 25

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	1.87711E-13	-2.57433E-14	-1.40729E-15	1.95059E-14	-1.88651E-14
2	Net Load Factor - T2 (g)	-5.11617E-13	1.00000E+00	-9.59323E-13	7.31156E-14	1.08615E-14	-8.03524E-15
3	Net Load Factor - T3 (g)	-5.64125E-13	-2.13232E-13	1.00000E+00	-1.30601E-14	7.88779E-15	-5.43662E-15
4	Net Load Factor - R1 (rad/sec^2)	-1.38201E-12	2.14939E-11	-4.05517E-12	1.00000E+00	-1.68657E-13	1.02807E-13
5	Net Load Factor - R2 (rad/sec^2)	-1.17479E-11	2.59048E-12	2.33413E-12	-1.79596E-13	1.00000E+00	-1.30260E-13
6	Net Load Factor - R3 (rad/sec^2)	7.90045E-12	-9.52838E-12	3.16902E-12	6.63497E-13	-7.12312E-13	1.00000E+00
7	GRID 13 - T1 (lbf)	1.54092E+02	6.12341E+00	2.28876E+01	-5.57593E-01	3.01360E+00	1.43268E-02
8	GRID 13 - T2 (lbf)	1.03937E+02	3.93060E+01	1.46269E+02	-4.24450E+00	-2.73890E+00	1.57376E+00
9	GRID 13 - T3 (lbf)	5.10307E+01	2.32448E+01	1.38729E+02	9.41593E-03	-5.52432E+00	8.16188E-01
10	GRID 18 - T2 (lbf)	8.70139E+01	4.49112E+01	6.16684E+01	-5.43814E+00	2.49672E-01	1.93477E+00
11	GRID 22 - T2 (lbf)	1.92743E-01	3.62942E+01	1.87806E+01	-5.01479E+00	-9.48360E-02	1.44987E-01
12	GRID 26 - T1 (lbf)	1.47866E+02	-6.39313E+00	-1.57824E+01	6.03882E-01	2.87013E+00	3.18991E-04
13	GRID 26 - T2 (lbf)	-8.83538E+01	4.58686E+01	1.37880E+02	-3.83762E+00	2.63779E+00	-1.31047E+00
14	GRID 26 - T3 (lbf)	-4.80987E+01	2.83502E+01	1.59643E+02	7.19269E-03	5.53445E+00	-7.73006E-01
15	GRID 28 - T2 (lbf)	-5.71752E+00	3.30489E+01	7.06794E+01	-3.85998E+00	-3.05727E-01	7.58288E-02
16	GRID 44 - T2 (lbf)	2.72028E+00	4.41338E+01	-1.72650E+01	4.82653E+00	8.50024E-02	9.61496E-02
17	GRID 46 - T2 (lbf)	6.74869E+01	5.74159E+01	-6.29201E+01	5.38959E+00	-2.57823E-01	1.64611E+00
18	GRID 58 - T2 (lbf)	-4.42634E+00	3.53412E+01	-6.86267E+01	3.94461E+00	2.86049E-01	3.19219E-02
19	GRID 59 - T1 (lbf)	1.51643E+02	5.61849E+00	-2.23503E+01	5.73447E-01	-3.01769E+00	-2.92127E-03
20	GRID 59 - T2 (lbf)	7.75546E+01	4.87166E+01	-1.47000E+02	4.26359E+00	2.72034E+00	1.33442E+00
21	GRID 59 - T3 (lbf)	-3.41162E+01	-2.34508E+01	1.39725E+02	2.82510E-02	-5.56176E+00	-7.61891E-01
22	GRID 60 - T2 (lbf)	-7.49732E+01	8.75434E+01	-7.50354E+01	6.29168E+00	-6.11427E-01	-2.06609E+00
23	GRID 75 - T1 (lbf)	1.45050E+02	-5.34877E+00	1.52450E+01	-6.19736E-01	-2.86603E+00	-1.17246E-02
24	GRID 75 - T2 (lbf)	-6.67304E+01	5.44863E+01	-1.38931E+02	3.96649E+00	-2.60727E+00	-1.18802E+00
25	GRID 75 - T3 (lbf)	3.11842E+01	-2.81442E+01	1.60554E+02	-4.48596E-02	5.55163E+00	7.18709E-01
26	GRID 79 - T2 (lbf)	-9.87038E+01	7.15850E+01	7.45009E+01	-6.28745E+00	6.37141E-01	-2.27336E+00
27	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-2.84217E-14	1.06581E-14	5.55112E-16	-2.22045E-16	-2.22045E-15
28	Net Inertial Acc - T2 (in/sec^2)	-1.50990E-14	3.86089E+02	-1.42109E-14	-2.10942E-15	9.99201E-16	2.22045E-16
29	Net Inertial Acc - T3 (in/sec^2)	-3.55271E-15	2.84217E-14	3.86089E+02	-3.33067E-16	2.22045E-15	6.66134E-16
30	Net Inertial Acc - R1 (rad/sec^2)	-6.66134E-16	2.66454E-15	-7.00828E-16	1.00000E+00	5.20417E-18	8.32667E-17
31	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	8.88178E-16	1.77636E-15	-8.67362E-18	1.00000E+00	-1.52656E-16
32	Net Inertial Acc - R3 (rad/sec^2)	-3.18495E-15	-3.55271E-15	2.22045E-16	-6.93889E-17	2.08167E-17	1.00000E+00

Figure G-6. CAPE ANDE2 Liftoff Model

```
ASD/DMMP v1.12.0                Mon Sep 01 2008 10:10:28 CDT                Page   26


                                Execution Time: 00:00:00


                                 * * * END OF JOB * * *
```

Figure G-6. CAPE ANDE2 Liftoff Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:26:58 CDT                    Page    1


                    **************************************************
                    *                                                *
                    *                 ASD/DMMP v1.11.0               *
                    *                                                *
                    *        Applied Structural Dynamics, Inc.       *
                    *     http://www.AppliedStructuralDynamics.com   *
                    *                                                *
                    *   Execution Time: Sun Jul 13 2008 15:26:58 CDT *
                    *                                                *
                    **************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-06-0031A
     Name       : CAPE-ANDE2-Landing
     Description: CAPE ANDE2 Landing
```

Figure G-7. CAPE ANDE2 Landing Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:26:58 CDT                    Page    2

                          C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-06-0031A
     Name        : CAPE-ANDE2-Landing
     Description : CAPE ANDE2 Landing
     Type        : Single

     DMM Type    : Hybrid
     DMM Size    : 32 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : land_ande2_fse_km.op4
        Geometry : CAPE-ANDE2.blk
        Label    : Label-CAPE-ANDE2.blk

     OTM-01:
        Description : ANDE2 Landing NLF and IFF OTM
        No. of Items: 32
        Ignore      : No
        Matrix File : DMM-2008-06-0031A.OTM.op4
        Label File  : DMM-2008-06-0031A.OTM.txt
```

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
13	GRID 13	4	27.00000	0.00000	0.00000	0	1	2	3				
18	GRID 18	4	27.00000	0.00000	-4.99998	0		4					
22	GRID 22	4	15.00000	0.00000	-4.99998	0		5					
26	GRID 26	4	0.00000	0.00000	0.00000	0	6	7	8				
28	GRID 28	4	15.00000	0.00000	0.00000	0		9					
44	GRID 44	4	15.00000	0.00000	-15.62500	0		10					
46	GRID 46	4	27.00000	0.00000	-15.62500	0		11					
58	GRID 58	4	15.00000	0.00000	-20.62500	0		12					
59	GRID 59	4	27.00000	0.00000	-20.62500	0	13	14	15				
60	GRID 60	4	0.00000	0.00000	-15.62500	0		16					
75	GRID 75	4	0.00000	0.00000	-20.62500	0	17	18	19				
79	GRID 79	4	0.00000	0.00000	-4.99998	0		20					
100021	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							21
:													:
100032	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							32

Figure G-7. CAPE ANDE2 Landing Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:26:58 CDT                    Page     4

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   2       18      22      28      44      46      58      60
    2 -            79
    3 -    BSET1   123     13      26      59      75
    4 -    CORD2C *1               0                               0               0*
    5 -    *                      0               0               0               1*
    6 -    *                      1               0               1
    7 -    CORD2R *4               0                           1255.5             88*
    8 -    *                  411.925           1255.5             88          1736.2*
    9 -    *                  2579.78              88          411.925
   10 -    CORD2R *5               4                             12.5           -17.5*
   11 -    *                   12.725           643.736        -1198.46          12.725*
   12 -    *                  1193.46           613.736          12.725
   13 -    CORD2S *2               0                               0               0*
   14 -    *                      0               0               0               1*
   15 -    *                      1               0               1
   16 -    GRID   *13              4                              27               0*
   17 -    *                      00              456
   18 -    GRID   *18              4                              27               0*
   19 -    *                 -4.999980            13456
   20 -    GRID   *22              4                              15               0*
   21 -    *                 -4.999980            13456
   22 -    GRID   *26              4                               0               0*
   23 -    *                      00              456
   24 -    GRID   *28              4                              15               0*
   25 -    *                      00              13456
   26 -    GRID   *44              4                              15               0*
   27 -    *                  -15.6250            13456
   28 -    GRID   *46              4                              27               0*
   29 -    *                  -15.6250            13456
   30 -    GRID   *58              4                              15               0*
   31 -    *                  -20.6250            13456
   32 -    GRID   *59              4                              27               0*
   33 -    *                  -20.6250            456
   34 -    GRID   *60              4                               0               0*
   35 -    *                  -15.6250            13456
   36 -    GRID   *75              4                               0               0*
   37 -    *                  -20.6250            456
   38 -    GRID   *79              4                               0               0*
   39 -    *                 -4.999980            13456
   40 -    QSET1   0       100021  THRU    100032
   41 -    SPOINT  100021  THRU    100032
   42 -    ENDDATA

           TOTAL ENTRY COUNT = 42
```

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 5

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
1	1	2	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
2	2	3	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
3	4	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	1.25550000E+03
			0.00000000E+00	1.00000000E+00	0.00000000E+00	8.80000000E+01
			0.00000000E+00	0.00000000E+00	1.00000000E+00	4.11925000E+02
4	5	1	8.81921349E-01	0.00000000E+00	4.71396579E-01	1.26800000E+03
			4.71396579E-01	0.00000000E+00	-8.81921349E-01	7.05000000E+01
			0.00000000E+00	1.00000000E+00	0.00000000E+00	4.24650000E+02

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 6

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	13	0	1.28250E+03	8.80000E+01	4.11925E+02
2	18	0	1.28250E+03	8.80000E+01	4.06925E+02
3	22	0	1.27050E+03	8.80000E+01	4.06925E+02
4	26	0	1.25550E+03	8.80000E+01	4.11925E+02
5	28	0	1.27050E+03	8.80000E+01	4.11925E+02
6	44	0	1.27050E+03	8.80000E+01	3.96300E+02
7	46	0	1.28250E+03	8.80000E+01	3.96300E+02
8	58	0	1.27050E+03	8.80000E+01	3.91300E+02
9	59	0	1.28250E+03	8.80000E+01	3.91300E+02
10	60	0	1.25550E+03	8.80000E+01	3.96300E+02
11	75	0	1.25550E+03	8.80000E+01	3.91300E+02
12	79	0	1.25550E+03	8.80000E+01	4.06925E+02
13	100021	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
24	100032	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	13-4	13-5	13-6	18-1	18-3	18-4	18-5	18-6	22-1	22-3 =	10
11 =	22-4	22-5	22-6	26-4	26-5	26-6	28-1	28-3	28-4	28-5 =	20
21 =	28-6	44-1	44-3	44-4	44-5	44-6	46-1	46-3	46-4	46-5 =	30
31 =	46-6	58-1	58-3	58-4	58-5	58-6	59-4	59-5	59-6	60-1 =	40
41 =	60-3	60-4	60-5	60-6	75-4	75-5	75-6	79-1	79-3	79-4 =	50
51 =	79-5	79-6									

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	13-1	13-2	13-3	18-2	22-2	26-1	26-2	26-3	28-2	44-2	= 10
11 =	46-2	58-2	59-1	59-2	59-3	60-2	75-1	75-2	75-3	79-2	= 20

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0	= 10
11 =	100031-0	100032-0									

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 10

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	13-1	13-2	13-3	18-2	22-2	26-1	26-2	26-3	28-2	44-2	= 10
11 =	46-2	58-2	59-1	59-2	59-3	60-2	75-1	75-2	75-3	79-2	= 20
21 =	100021-0	100022-0	100023-0	100024-0	100025-0	100026-0	100027-0	100028-0	100029-0	100030-0	= 30
31 =	100031-0	100032-0									

Figure G-7. CAPE ANDE2 Landing Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:26:58 CDT                    Page   11

                O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                    REFERENCE POINT = ORIGIN

                                              M O
*  6.667942E-01  1.055545E-13  4.071396E-15 -3.754863E-11  2.660423E+02 -5.091087E+01 *
*  1.055510E-13  6.667942E-01 -1.458000E-13 -2.660423E+02  2.227125E-10  8.452054E+02 *
*  4.064457E-15 -1.458278E-13  6.667942E-01  5.091087E+01 -8.452054E+02 -1.840448E-10 *
* -3.755574E-11 -2.660423E+02  5.091087E+01  1.102240E+05 -6.453379E+04 -3.372279E+05 *
*  2.660423E+02  2.227836E-10 -8.452054E+02 -6.453379E+04  1.177698E+06 -2.032158E+04 *
* -5.091087E+01  8.452054E+02 -1.840235E-10 -3.372279E+05 -2.032158E+04  1.075357E+06 *

                                               S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
             X             6.667942E-01     -5.631218E-11  7.635170E+01  3.989871E+02
             Y             6.667942E-01      1.267566E+03  3.340049E-10  3.989871E+02
             Z             6.667942E-01      1.267566E+03  7.635170E+01 -2.760144E-10

                                             I(S)
                                *  1.894583E+02  9.137952E-01  1.772080E+00 *
                                *  9.137952E-01  1.974171E+02  8.798400E+00 *
                                *  1.772080E+00  8.798400E+00  1.166653E+02 *

                                             I(Q)
                                *  1.156709E+02                             *
                                *                1.894473E+02               *
                                *                             1.984225E+02 *

                                               Q
                                *  2.519810E-02 -9.964521E-01  8.030110E-02 *
                                *  1.072571E-01 -7.716813E-02 -9.912321E-01 *
                                *  9.939120E-01  3.359002E-02  1.049321E-01 *
```

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 12

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
1.267566E+03	7.635170E+01	3.989871E+02

Figure G-7. CAPE ANDE2 Landing Model

```
ASD/DMMP v1.11.0                    Sun Jul 13 2008 15:26:58 CDT                    Page   13

                O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                    REFERENCE POINT = C.G.

                                              M O
*  6.667942E-01  1.055545E-13  4.071396E-15  4.253597E-12  7.543383E-12 -3.940259E-11 *
*  1.055510E-13  6.667942E-01 -1.458000E-13  1.357681E-11 -4.198308E-12  6.715739E-12 *
*  4.064457E-15 -1.458278E-13  6.667942E-01  3.622352E-11 -2.992717E-12  1.055156E-12 *
*  4.253098E-12  1.357670E-11  3.622277E-11  1.894583E+02 -9.137952E-01 -1.772080E+00 *
*  7.542411E-12 -4.197642E-12 -2.991829E-12 -9.137952E-01  1.974171E+02 -8.798400E+00 *
* -3.940193E-11  6.714185E-12  1.054545E-12 -1.772080E+00 -8.798400E+00  1.166653E+02 *

                                               S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
             X             6.667942E-01      6.379176E-12  5.909259E-11  1.131291E-11
             Y             6.667942E-01      1.007168E-11 -6.296258E-12 -2.036132E-11
             Z             6.667942E-01      4.488217E-12  5.432490E-11  1.582431E-12

                                             I(S)
                                *  1.894583E+02  9.137952E-01  1.772080E+00 *
                                *  9.137952E-01  1.974171E+02  8.798400E+00 *
                                *  1.772080E+00  8.798400E+00  1.166653E+02 *

                                             I(Q)
                                *  1.156709E+02                             *
                                *                1.894473E+02               *
                                *                              1.984225E+02 *

                                               Q
                                *  2.519810E-02 -9.964521E-01  8.030109E-02 *
                                *  1.072571E-01 -7.716813E-02 -9.912321E-01 *
                                *  9.939120E-01  3.359002E-02  1.049321E-01 *
```

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 14

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	6.66794E-01	1.05554E-13	4.07140E-15	4.25360E-12	7.54338E-12	-3.94026E-11
T2:	1.05551E-13	6.66794E-01	-1.45800E-13	1.35768E-11	-4.19831E-12	6.71574E-12
T3:	4.06446E-15	-1.45828E-13	6.66794E-01	3.62235E-11	-2.99272E-12	1.05516E-12
R1:	4.25310E-12	1.35767E-11	3.62228E-11	1.89458E+02	-9.13795E-01	-1.77208E+00
R2:	7.54241E-12	-4.19764E-12	-2.99183E-12	-9.13795E-01	1.97417E+02	-8.79840E+00
R3:	-3.94019E-11	6.71418E-12	1.05455E-12	-1.77208E+00	-8.79840E+00	1.16665E+02

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-2.57860E-07	-6.66407E-08	-7.37200E-08	-1.78584E-06	-9.61288E-07	9.33555E-07
T2:	-6.66487E-08	1.06419E-06	4.19313E-07	-4.80087E-07	1.01800E-06	6.65680E-07
T3:	-7.37055E-08	4.19279E-07	6.27741E-07	1.85569E-06	-4.69951E-06	1.22908E-06
R1:	-1.78577E-06	-4.80281E-07	1.85915E-06	2.51592E-05	2.50200E-05	1.12559E-05
R2:	-9.61125E-07	1.01827E-06	-4.70330E-06	2.49761E-05	5.33605E-05	-7.24007E-05
R3:	9.32749E-07	6.63906E-07	1.23022E-06	1.13279E-05	-7.23732E-05	7.47066E-05

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 15

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	13-1	-7.62084E-08	2.10048E-08	-1.43336E-08	-1.34081E-07	-2.38419E-07	-5.06407E-08
2	13-2	-3.27782E-08	1.07745E-07	2.31375E-07	-6.00953E-07	-2.94601E-06	1.05569E-06
3	13-3	-2.93658E-08	1.40768E-07	2.32612E-07	1.08528E-07	-2.10328E-06	2.17982E-06
4	18-2	2.98296E-08	1.12446E-07	-2.05000E-08	-3.25548E-07	-4.32890E-07	1.14409E-06
5	22-2	3.06022E-09	1.47920E-07	1.18598E-08	2.54775E-07	-3.28495E-07	1.69035E-07
6	26-1	-5.66215E-08	-1.51922E-08	-3.94357E-08	-2.28931E-07	-4.55417E-07	-3.81406E-07
7	26-2	1.04046E-09	1.64029E-07	1.10944E-07	6.42147E-07	3.10130E-07	-4.53088E-07
8	26-3	-3.39496E-08	1.95287E-07	1.02795E-07	8.42614E-07	3.61353E-07	-5.78351E-07
9	28-2	9.37689E-09	3.48300E-08	1.51576E-08	1.84344E-07	-4.79602E-07	-7.90460E-08
10	44-2	-2.97296E-08	7.00093E-08	9.75160E-09	-6.01533E-07	4.53991E-07	2.09227E-07
11	46-2	-2.54913E-08	3.84171E-08	7.30270E-08	-2.77068E-08	-9.58884E-07	1.02085E-06
12	58-2	-1.23255E-08	5.28889E-08	-7.60338E-10	2.03363E-07	4.84506E-07	-2.23867E-07
13	59-1	-6.40284E-08	-2.14186E-08	-2.51894E-08	-6.76853E-07	7.72998E-08	7.47445E-07
14	59-2	-6.15555E-08	4.30518E-08	-1.02817E-07	3.63303E-07	1.62423E-06	2.03523E-07
15	59-3	3.97267E-09	3.23262E-08	2.01879E-07	2.67391E-08	-2.23122E-06	4.54835E-07
16	60-2	-4.64934E-09	1.10711E-07	6.09143E-08	-4.05125E-08	2.00653E-06	-6.30505E-07
17	75-1	-6.10016E-08	-5.10427E-08	5.25324E-09	-7.45902E-07	-3.44589E-07	6.17350E-07
18	75-2	1.42463E-08	5.04733E-08	-1.59489E-08	-5.88479E-08	1.49524E-06	-7.46804E-08
19	75-3	-1.43773E-08	5.09317E-08	9.04547E-08	8.81264E-07	-7.30157E-07	-8.26083E-07
20	79-2	4.23352E-08	1.31666E-07	4.62751E-08	-4.73112E-07	-2.10479E-07	-1.67731E-06
	Total:	-2.57860E-07	1.06419E-06	6.27741E-07	2.51592E-05	5.33605E-05	7.47066E-05

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 16

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	1	13-1	-7.62084E-08
T2 -	8	26-3	1.95287E-07
T3 -	3	13-3	2.32612E-07
R1 -	19	75-3	8.81264E-07
R2 -	2	13-2	-2.94601E-06
R3 -	3	13-3	2.17982E-06

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 17

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	13-1	6.00310E+01	1.52247E+00	8.39285E+00	-2.41265E-01	1.37749E+00	-7.62006E-02
2	13-2	3.03539E+01	1.17487E+01	5.31386E+01	-1.99593E+00	-1.36871E+00	8.02334E-01
3	13-3	2.23494E+01	9.28584E+00	5.92270E+01	-1.20982E-02	-2.65662E+00	5.91547E-01
4	18-2	1.68754E+01	1.42222E+01	1.74933E+01	-2.48198E+00	-2.08800E-02	9.23255E-01
5	22-2	3.68867E-02	1.01262E+01	1.67134E+00	-1.80001E+00	-6.32563E-02	7.59420E-02
6	26-1	5.68474E+01	-1.35548E+00	-4.66410E+00	2.56906E-01	1.31722E+00	-1.08290E-01
7	26-2	-2.63083E+01	1.45662E+01	5.18022E+01	-1.83498E+00	1.32762E+00	-6.47761E-01
8	26-3	-2.19100E+01	1.19540E+01	6.99007E+01	-2.99191E-02	2.65607E+00	-5.76316E-01
9	28-2	-1.51456E+00	7.95630E+00	1.84857E+01	-1.66751E+00	-1.24089E-01	5.84296E-02
10	44-2	1.67701E+00	2.58673E+01	-4.35180E+00	1.99649E+00	3.55714E-02	9.64782E-02
11	46-2	3.14801E+01	2.97844E+01	-1.59886E+01	2.32843E+00	-1.63839E-01	1.39176E+00
12	58-2	-1.69513E+00	1.98744E+01	-2.04280E+01	1.81190E+00	1.18294E-01	2.94616E-02
13	59-1	7.17489E+01	3.22318E+00	-8.78710E+00	2.76653E-01	-1.37778E+00	9.62857E-02
14	59-2	3.31867E+01	2.38321E+01	-5.20752E+01	1.89449E+00	1.24616E+00	1.05897E+00
15	59-3	-6.36307E+00	-9.15828E+00	5.86667E+01	5.78905E-02	-2.59666E+00	-4.06610E-01
16	60-2	-3.48106E+01	4.66670E+01	-2.14682E+01	2.77980E+00	-2.55552E-01	-1.72675E+00
17	75-1	6.88143E+01	-3.39017E+00	5.05834E+00	-2.92294E-01	-1.31693E+00	8.82044E-02
18	75-2	-2.95573E+01	2.84701E+01	-5.14909E+01	1.82823E+00	-1.21479E+00	-9.71498E-01
19	75-3	5.92369E+00	-1.20816E+01	6.96472E+01	-1.58732E-02	2.59722E+00	3.91379E-01
20	79-2	-1.97242E+01	2.43266E+01	2.32114E+01	-2.85891E+00	4.83468E-01	-1.09062E+00
	Total:	2.57442E+02	2.57442E+02	2.57442E+02	1.89458E+02	1.97417E+02	1.16665E+02

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 18

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-4.371077E-07	6.611412E-04	1.052239E-04
2	-2.624522E-07	5.123009E-04	8.153522E-05
3	2.562991E-07	5.062599E-04	8.057376E-05
4	5.653770E-07	7.519155E-04	1.196711E-04
5	1.074898E-06	1.036773E-03	1.650075E-04
6	2.024214E-06	1.422749E-03	2.264375E-04
7	7.651338E+05	8.747193E+02	1.392159E+02
8	9.189196E+05	9.586030E+02	1.525664E+02
9	9.484122E+05	9.738646E+02	1.549954E+02
10	1.095872E+06	1.046839E+03	1.666096E+02
11	1.366077E+06	1.168793E+03	1.860192E+02
12	1.790377E+06	1.338050E+03	2.129572E+02
13	2.194957E+06	1.481539E+03	2.357942E+02
14	2.642771E+06	1.625660E+03	2.587319E+02
15	2.701534E+06	1.643634E+03	2.615925E+02
16	3.734458E+06	1.932474E+03	3.075629E+02
17	4.842832E+06	2.200644E+03	3.502433E+02
18	1.173261E+07	3.425290E+03	5.451518E+02
19	1.445447E+07	3.801904E+03	6.050918E+02
20	1.492712E+07	3.863563E+03	6.149052E+02
21	2.838434E+07	5.327696E+03	8.479291E+02
22	3.011494E+07	5.487708E+03	8.733959E+02
23	5.969220E+07	7.726073E+03	1.229643E+03
24	8.396806E+07	9.163409E+03	1.458402E+03
25	8.882335E+07	9.424614E+03	1.499974E+03
26	1.559783E+08	1.248913E+04	1.987706E+03
27	1.740642E+08	1.319334E+04	2.099785E+03
28	2.310194E+08	1.519932E+04	2.419047E+03
29	4.594467E+08	2.143471E+04	3.411440E+03
30	6.128459E+08	2.475572E+04	3.939996E+03
31	8.175524E+08	2.859287E+04	4.550697E+03
32	1.026447E+09	3.203821E+04	5.099040E+03

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 19

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	4.258014E+05	6.525346E+02	1.038541E+02
2	6.206025E+05	7.877833E+02	1.253796E+02
3	8.627008E+05	9.288169E+02	1.478258E+02
4	9.451897E+05	9.722087E+02	1.547318E+02
5	1.021655E+06	1.010769E+03	1.608690E+02
6	1.179076E+06	1.085853E+03	1.728188E+02
7	1.233286E+06	1.110534E+03	1.767470E+02
8	1.909517E+06	1.381853E+03	2.199287E+02
9	2.058261E+06	1.434664E+03	2.283339E+02
10	2.309914E+06	1.519840E+03	2.418901E+02
11	2.673791E+06	1.635173E+03	2.602459E+02
12	2.726255E+06	1.651137E+03	2.627867E+02

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 20

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	1.038541E+02	35.16%	0.04%	0.11%	0.34%	0.08%	23.24%
2	1.253796E+02	0.87%	0.16%	17.65%	41.06%	1.47%	0.34%
3	1.478258E+02	0.04%	0.23%	2.08%	4.03%	0.92%	0.02%
4	1.547318E+02	1.20%	1.19%	8.53%	3.72%	10.75%	0.05%
5	1.608690E+02	3.11%	0.08%	0.67%	0.39%	52.59%	0.00%
6	1.728188E+02	4.53%	1.12%	0.08%	0.60%	3.66%	0.17%
7	1.767470E+02	0.32%	3.84%	1.32%	18.15%	0.00%	0.04%
8	2.199287E+02	0.33%	3.72%	2.96%	0.01%	0.07%	0.10%
9	2.283339E+02	1.98%	0.31%	0.89%	0.03%	0.27%	0.06%
10	2.418901E+02	0.01%	7.50%	34.51%	6.37%	0.00%	0.01%
11	2.602459E+02	0.07%	0.00%	0.09%	0.12%	0.46%	0.22%
12	2.627867E+02	0.12%	0.00%	0.03%	0.13%	0.61%	0.33%
Total:		47.72%	18.19%	68.92%	74.96%	70.87%	24.58%

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 21

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-1.00192E-09	-2.58762E-10	-2.86434E-10	-6.93834E-09	-3.73201E-09	3.63259E-09
2	Net Load Factor - T2 (g)	-2.58979E-10	4.13498E-09	1.62948E-09	-1.85659E-09	3.94495E-09	2.59209E-09
3	Net Load Factor - T3 (g)	-2.86377E-10	1.62861E-09	2.43921E-09	7.21292E-09	-1.82603E-08	4.77336E-09
4	Net Load Factor - R1 (rad/sec^2)	-9.37479E-09	-2.44547E-09	9.77252E-09	1.34214E-07	1.27277E-07	6.38647E-08
5	Net Load Factor - R2 (rad/sec^2)	-4.58195E-09	5.41501E-09	-2.33039E-08	1.32969E-07	2.43518E-07	-3.38974E-07
6	Net Load Factor - R3 (rad/sec^2)	7.50777E-09	6.12150E-09	8.92521E-09	1.08841E-07	-6.00102E-07	6.15665E-07
7	GRID 13 - T1 (lbf)	-7.62084E-08	2.10048E-08	-1.43336E-08	-1.34081E-07	-2.38419E-07	-5.06407E-08
8	GRID 13 - T2 (lbf)	-3.27782E-08	1.07745E-07	2.31375E-07	-6.00953E-07	-2.94601E-06	1.05569E-06
9	GRID 13 - T3 (lbf)	-2.93658E-08	1.40768E-07	2.32612E-07	1.08528E-07	-2.10328E-06	2.17982E-06
10	GRID 18 - T2 (lbf)	2.98296E-08	1.12446E-07	-2.05000E-08	-3.25548E-07	-4.32890E-07	1.14409E-06
11	GRID 22 - T2 (lbf)	3.06022E-09	1.47920E-07	1.18598E-08	2.54775E-07	-3.28495E-07	1.69035E-07
12	GRID 26 - T1 (lbf)	-5.66215E-08	-1.51922E-08	-3.94357E-08	-2.28931E-07	-4.55417E-07	-3.81406E-07
13	GRID 26 - T2 (lbf)	1.04046E-09	1.64029E-07	1.10944E-07	6.42147E-07	3.10130E-07	-4.53088E-07
14	GRID 26 - T3 (lbf)	-3.39496E-08	1.95287E-07	1.02795E-07	8.42614E-07	3.61353E-07	-5.78351E-07
15	GRID 28 - T2 (lbf)	9.37689E-09	3.48300E-08	1.51576E-08	1.84344E-07	-4.79602E-07	-7.90460E-08
16	GRID 44 - T2 (lbf)	-2.97296E-08	7.00093E-08	9.75160E-09	-6.01533E-07	4.53991E-07	2.09227E-07
17	GRID 46 - T2 (lbf)	-2.54913E-08	3.84171E-08	7.30270E-08	-2.77068E-08	-9.58884E-07	1.02085E-06
18	GRID 58 - T2 (lbf)	-1.23255E-08	5.28889E-08	-7.60338E-10	2.03363E-07	4.84506E-07	-2.23867E-07
19	GRID 59 - T1 (lbf)	-6.40284E-08	-2.14186E-08	-2.51894E-08	-6.76853E-07	7.72998E-08	7.47445E-07
20	GRID 59 - T2 (lbf)	-6.15555E-08	4.30518E-08	-1.02817E-07	3.63303E-07	1.62423E-06	2.03523E-07
21	GRID 59 - T3 (lbf)	3.97267E-09	3.23262E-08	2.01879E-07	2.67391E-08	-2.23122E-06	4.54835E-07
22	GRID 60 - T2 (lbf)	-4.64934E-09	1.10711E-07	6.09143E-08	-4.05125E-08	2.00653E-06	-6.30505E-07
23	GRID 75 - T1 (lbf)	-6.10016E-08	-5.10427E-08	5.25324E-09	-7.45902E-07	-3.44589E-07	6.17350E-07
24	GRID 75 - T2 (lbf)	1.42463E-08	5.04733E-08	-1.59489E-08	-5.88479E-08	1.49524E-06	-7.46804E-08
25	GRID 75 - T3 (lbf)	-1.43773E-08	5.09317E-08	9.04547E-08	8.81264E-07	-7.30157E-07	-8.26083E-07
26	GRID 79 - T2 (lbf)	4.23352E-08	1.31666E-07	4.62751E-08	-4.73112E-07	-2.10479E-07	-1.67731E-06
27	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
28	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
29	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
30	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
31	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
32	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-7. CAPE ANDE2 Landing Model

ASD/DMMP v1.11.0 Sun Jul 13 2008 15:26:58 CDT Page 22

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-1.89987E-14	9.47541E-14	-6.00041E-15	-1.95024E-14	1.65007E-14
2	Net Load Factor - T2 (g)	2.10356E-13	1.00000E+00	1.01447E-13	-1.78314E-14	4.46735E-15	6.27276E-15
3	Net Load Factor - T3 (g)	-8.47065E-14	-1.19765E-14	1.00000E+00	-5.57280E-17	-3.67067E-15	-2.68926E-15
4	Net Load Factor - R1 (rad/sec^2)	2.32703E-13	-2.20712E-12	5.58286E-12	1.00000E+00	2.23850E-14	1.89848E-14
5	Net Load Factor - R2 (rad/sec^2)	-1.41465E-11	9.28368E-13	1.06049E-12	-1.85772E-14	1.00000E+00	-3.15480E-13
6	Net Load Factor - R3 (rad/sec^2)	-1.19277E-12	-7.50067E-13	4.30100E-12	-2.37851E-13	1.50067E-13	1.00000E+00
7	GRID 13 - T1 (lbf)	6.00310E+01	1.52247E+00	8.39285E+00	-2.41265E-01	1.37749E+00	-7.62006E-02
8	GRID 13 - T2 (lbf)	3.03539E+01	1.17487E+01	5.31386E+01	-1.99593E+00	-1.36871E+00	8.02334E-01
9	GRID 13 - T3 (lbf)	2.23494E+01	9.28584E+00	5.92270E+01	-1.20982E-02	-2.65662E+00	5.91547E-01
10	GRID 18 - T2 (lbf)	1.68754E+01	1.42222E+01	1.74933E+01	-2.48198E+00	-2.08800E-02	9.23255E-01
11	GRID 22 - T2 (lbf)	3.68867E-02	1.01262E+01	1.67134E+00	-1.80001E+00	-6.32563E-02	7.59420E-02
12	GRID 26 - T1 (lbf)	5.68474E+01	-1.35548E+00	-4.66410E+00	2.56906E-01	1.31722E+00	-1.08290E-01
13	GRID 26 - T2 (lbf)	-2.63083E+01	1.45662E+01	5.18022E+01	-1.83498E+00	1.32762E+00	-6.47761E-01
14	GRID 26 - T3 (lbf)	-2.19100E+01	1.19540E+01	6.99007E+01	-2.99191E-02	2.65607E+00	-5.76316E-01
15	GRID 28 - T2 (lbf)	-1.51456E+00	7.95630E+00	1.84857E+01	-1.66751E+00	-1.24089E-01	5.84296E-02
16	GRID 44 - T2 (lbf)	1.67701E+00	2.58673E+01	-4.35180E+00	1.99649E+00	3.55714E-02	9.64782E-02
17	GRID 46 - T2 (lbf)	3.14801E+01	2.97844E+01	-1.59886E+01	2.32843E+00	-1.63839E-01	1.39176E+00
18	GRID 58 - T2 (lbf)	-1.69513E+00	1.98744E+01	-2.04280E+01	1.81190E+00	1.18294E-01	2.94616E-02
19	GRID 59 - T1 (lbf)	7.17489E+01	3.22318E+00	-8.78710E+00	2.76653E-01	-1.37778E+00	9.62857E-02
20	GRID 59 - T2 (lbf)	3.31867E+01	2.38321E+01	-5.20752E+01	1.89449E+00	1.24616E+00	1.05897E+00
21	GRID 59 - T3 (lbf)	-6.36307E+00	-9.15828E+00	5.86667E+01	5.78905E-02	-2.59666E+00	-4.06610E-01
22	GRID 60 - T2 (lbf)	-3.48106E+01	4.66670E+01	-2.14682E+01	2.77980E+00	-2.55552E-01	-1.72675E+00
23	GRID 75 - T1 (lbf)	6.88143E+01	-3.39017E+00	5.05834E+00	-2.92294E-01	-1.31693E+00	8.82044E-02
24	GRID 75 - T2 (lbf)	-2.95573E+01	2.84701E+01	-5.14909E+01	1.82823E+00	-1.21479E+00	-9.71498E-01
25	GRID 75 - T3 (lbf)	5.92369E+00	-1.20816E+01	6.96472E+01	-1.58732E-02	2.59722E+00	3.91379E-01
26	GRID 79 - T2 (lbf)	-1.97242E+01	2.43266E+01	2.32114E+01	-2.85891E+00	4.83468E-01	-1.09062E+00
27	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-2.13163E-14	1.77636E-15	-6.66134E-16	0.00000E+00	2.10942E-15
28	Net Inertial Acc - T2 (in/sec^2)	-8.88178E-16	3.86089E+02	2.84217E-14	-1.55431E-15	1.11022E-16	2.22045E-16
29	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	7.10543E-15	3.86089E+02	9.99201E-16	1.77636E-15	-2.66454E-15
30	Net Inertial Acc - R1 (rad/sec^2)	2.22045E-16	-8.88178E-16	1.21778E-15	1.00000E+00	-1.00831E-17	0.00000E+00
31	Net Inertial Acc - R2 (rad/sec^2)	-8.88178E-16	1.11022E-16	0.00000E+00	-4.16334E-17	1.00000E+00	0.00000E+00
32	Net Inertial Acc - R3 (rad/sec^2)	-2.77556E-16	3.55271E-15	2.22045E-16	6.93889E-17	-1.38778E-17	1.00000E+00

Figure G-7. CAPE ANDE2 Landing Model

```
ASD/DMMP v1.11.0                Sun Jul 13 2008 15:26:58 CDT                Page   23


                                Execution Time: 00:00:00


                                 * * * END OF JOB * * *
```

Figure G-7. CAPE ANDE2 Landing Model

```
ASD/DMMP v1.11.0                        Wed Jul 23 2008 22:40:02 CDT                        Page    1



                                  ************************************************
                                  *                                              *
                                  *                ASD/DMMP v1.11.0              *
                                  *                                              *
                                  *       Applied Structural Dynamics, Inc.      *
                                  *    http://www.AppliedStructuralDynamics.com  *
                                  *                                              *
                                  *   Execution Time: Wed Jul 23 2008 22:40:02 CDT *
                                  *                                              *
                                  ************************************************



     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-07-0018A
     Name       : ICC-V-Staged-Updated
     Description: Updated ICC-V Staged Model (Corrected Keel Pin Location)
```

Figure G-8. Staged ICC-V Model/OTMs

```
ASD/DMMP v1.11.0                          Wed Jul 23 2008 22:40:02 CDT                          Page    2

                                C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-07-0018A
     Name        : ICC-V-Staged-Updated
     Description : Updated ICC-V Staged Model (Corrected Keel Pin Location)
     Type        : Single

     DMM Type    : Hybrid
     DMM Size    : 135 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : dmm-vcc_NL-mxb.op4
        Geometry : dmm-grids-old.blk
        Label    : <not specified>

     OTM-01:
        Description : ICC-V Staged NLFs & IFFs OTM
        No. of Items: 97
        Ignore      : No
        Matrix File : DMM-2008-07-0018A.OTM.op4
        Label File  : DMM-2008-07-0018A.OTM.txt

     OTM-02:
        Description : ICC-V Staged OTM
        No. of Items: 282
        Ignore      : No
        Matrix File : OTM-vcc_NL-mxb.op4
        Label File  : OTM_Labels.txt
```

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
1271	ID 1271	300	0.00000	0.00000	-109.00000	1000		1					
6299	ID 6299	200	4.90120	-52.50000	-66.50000	1000	2						
13067	ID 13067	200	4.90120	-52.50000	-51.50000	1000	3						
13083	ID 13083	200	4.90120	-37.50000	-51.50000	1000	4						
13115	ID 13115	200	4.90120	-7.50000	-51.50000	1000	5						
13545	ID 13545	200	4.90120	-37.50000	-66.50000	1000	6	7					
13576	ID 13576	200	4.90120	-7.50000	-66.50000	1000	8						
16250	ID 16250	200	4.90120	52.50000	-66.50000	1000	9	10					
23028	ID 23028	200	4.90120	52.50000	-51.50000	1000	11						
23044	ID 23044	200	4.90120	37.50000	-51.50000	1000	12						
23076	ID 23076	200	4.90120	7.50000	-51.50000	1000	13						
23506	ID 23506	200	4.90120	37.50000	-66.50000	1000	14						
23537	ID 23537	200	4.90120	7.50000	-66.50000	1000	15	16					
37940	ID 37940	100	4.90160	-52.50000	8.50000	1000	17	18					
38067	ID 38067	100	4.90160	-37.50000	8.50000	1000	19						
38323	ID 38323	100	4.90160	-7.50000	8.50000	1000	20	21					
45767	ID 45767	100	4.90160	52.50000	8.50000	1000	22						
45890	ID 45890	100	4.90160	37.50000	8.50000	1000	23	24					
46151	ID 46151	100	4.90160	7.50000	8.50000	1000	25						
53578	ID 53578	100	4.90160	-52.50000	-36.50000	1000	26		27				
53701	ID 53701	100	4.90160	-37.50000	-36.50000	1000	28		29				
53956	ID 53956	100	4.90160	-7.50000	-36.50000	1000	30		31				
61404	ID 61404	100	4.90160	52.50000	-36.50000	1000	32		33				
61527	ID 61527	100	4.90160	37.50000	-36.50000	1000	34		35				
61788	ID 61788	100	4.90160	7.50000	-36.50000	1000	36		37				
62589	ID 62589	100	4.90160	52.50000	-6.50000	1000	38						
62774	ID 62774	100	4.90160	37.50000	-6.50000	1000	39						
63043	ID 63043	100	4.90160	52.50000	-21.50000	1000	40		41				
63343	ID 63343	100	4.90160	37.50000	-21.50000	1000	42		43				
63345	ID 63345	100	4.90160	7.50000	-6.50000	1000	44						
63645	ID 63645	100	4.90160	-7.50000	-6.50000	1000	45						
63942	ID 63942	100	4.90160	7.50000	-21.50000	1000	46		47				
64244	ID 64244	100	4.90160	-7.50000	-21.50000	1000	48		49				
64246	ID 64246	100	4.90160	-37.50000	-6.50000	1000	50						
64540	ID 64540	100	4.90160	-52.50000	-6.50000	1000	51						
64814	ID 64814	100	4.90160	-37.50000	-21.50000	1000	52		53				
65003	ID 65003	100	4.90160	-52.50000	-21.50000	1000	54		55				
111869	ID 111869	400	43.27000	-94.00000	0.00000	1000			56				
111885	ID 111885	400	0.00000	-94.00000	0.00000	1000	57		58				
113369	ID 113369	400	43.27000	94.00000	0.00000	1000			59				
113385	ID 113385	400	0.00000	94.00000	0.00000	1000	60		61				
150301	ID 150301	151000	40.12300	-21.36700	-4.80000	151000	62	63					
150302	ID 150302	151000	40.12300	21.36700	-4.80000	151000	64						
150303	ID 150303	151000	9.73800	-21.36700	-4.80000	151000		65					
150311	ID 150311	151000	40.12300	-18.37500	-4.00000	151000			66				
150312	ID 150312	151000	40.12300	18.37500	-4.00000	151000			67				
150313	ID 150313	151000	9.73800	-14.00000	-4.00000	151000			68				
150314	ID 150314	151000	9.73800	14.00000	-4.00000	151000			69				
160301	ID 160301	161000	40.12300	-21.36700	-4.80000	161000	70	71					
160302	ID 160302	161000	40.12300	21.36700	-4.80000	161000	72						

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 4

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
160303	ID 160303	161000	9.73800	-21.36700	-4.80000	161000		73					
160311	ID 160311	161000	40.12300	-18.37500	-4.00000	161000			74				
160312	ID 160312	161000	40.12300	18.37500	-4.00000	161000			75				
160313	ID 160313	161000	9.73800	-14.00000	-4.00000	161000			76				
160314	ID 160314	161000	9.73800	14.00000	-4.00000	161000			77				
170301	ID 170301	171000	40.12300	-21.36700	-4.80000	171000	78	79					
170302	ID 170302	171000	40.12300	21.36700	-4.80000	171000	80						
170303	ID 170303	171000	9.73800	-21.36700	-4.80000	171000		81					
170311	ID 170311	171000	40.12300	-18.37500	-4.00000	171000			82				
170312	ID 170312	171000	40.12300	18.37500	-4.00000	171000			83				
170313	ID 170313	171000	9.73800	-14.00000	-4.00000	171000			84				
170314	ID 170314	171000	9.73800	14.00000	-4.00000	171000			85				
90001001	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							86
:													:
90001050	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							135

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 5

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   2       1271
    2 -    BSET1   3       111869  113369
    3 -    BSET1   13      111885  113385
    4 -    CORD2C *10              1000                            0               0*
    5 -    *                      0               0               1               0*
    6 -    *                      1               0               0
    7 -    CORD2C *20              1000                        43.307              0*
    8 -    *                      0           43.307              1               0*
    9 -    *                   44.307             0               0
   10 -    CORD2R *100             1000                            0               0*
   11 -    *                      0               0               0               1*
   12 -    *                      1               0               0
   13 -    CORD2R *200             1000                            0               0*
   14 -    *                      0               0               0               1*
   15 -    *                      1               0               0
   16 -    CORD2R *300             1000                            0               0*
   17 -    *                      0               0               0               1*
   18 -    *                      1               0               0
   19 -    CORD2R *400             1000                            0               0*
   20 -    *                      0               0               0               1*
   21 -    *                      1               0               0
   22 -    CORD2R *1000             0                              0               0*
   23 -    *                      0               0               0               1*
   24 -    *                      1               0               0
   25 -    CORD2R *151000          151003                      -45.883            22.5*
   26 -    *                  8.33743         -45.883            22.5         9.33743*
   27 -    *                  -44.883            22.5         8.33743
   28 -    CORD2R *151003           0                             -5            37.5*
   29 -    *                    -81.5             -10            37.5           -81.5*
   30 -    *                       -5            37.5            -100
   31 -    CORD2R *161000          161003                      -45.883            22.5*
   32 -    *                  8.33743         -45.883            22.5         9.33743*
   33 -    *                  -44.883            22.5         8.33743
   34 -    CORD2R *161003           0                             -5            -67.5*
   35 -    *                    -36.5               -6          -67.5           -36.5*
   36 -    *                       -5            -90.5           -36.5
   37 -    CORD2R *171000          171003                      -45.883            22.5*
   38 -    *                  8.33743         -45.883            22.5         9.33743*
   39 -    *                  -44.883            22.5         8.33743
   40 -    CORD2R *171003           0                             -5            52.5*
   41 -    *                      8.5               -6            52.5             8.5*
   42 -    *                       -5            100.5             8.5
   43 -    CORD2R *210003          210004                      3.70783           -7.5*
   44 -    *                  12.9835         3.70783            -7.5         28.4292*
   45 -    *                  19.1535            -7.5         12.9835
   46 -    CORD2R *210004           200                          3.622           -52.5*
   47 -    *                  10.7047           3.622           -52.5              20*
   48 -    *                      -10            -52.5         10.7047
   49 -    CORD2R *210005          210004                      3.62205           -7.5*
   50 -    *                   12.003         -10.9321            -7.5         13.2755*
```

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 6

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT     .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
   51 -    *              3.62205         7.10963          12.003
   52 -    CORD2R *504001          200                        5           -82.5*
   53 -    *                  -6.5             10          -82.5            -6.5*
   54 -    *                    10          -82.5            -10
   55 -    CORD2R *508001          200                       -5            67.5*
   56 -    *                 -36.5             -10          67.5           -36.5*
   57 -    *                   -10            67.5          -100
   58 -    CORD2R *514001          200                       -5           -22.5*
   59 -    *                 -51.5             -10          -22.5           -51.5*
   60 -    *                   -10          -22.5           -100
   61 -    CORD2R *600003          600004                 11.8939            -7.5*
   62 -    *              9.55929         11.8939          9.50279         9.55929*
   63 -    *             0.964305            -7.5          22.5838
   64 -    CORD2R *600004          200                        5             7.5*
   65 -    *                 -96.5               5            7.5               1*
   66 -    *                    10             7.5           -96.5
   67 -    GRID   *1271            300                        0               0*
   68 -    *               -1091000           13456
   69 -    GRID   *6299            200                   4.9012           -52.5*
   70 -    *                 -66.51000           23456
   71 -    GRID   *13067           200                   4.9012           -52.5*
   72 -    *                 -51.51000           23456
   73 -    GRID   *13083           200                   4.9012           -37.5*
   74 -    *                 -51.51000           23456
   75 -    GRID   *13115           200                   4.9012            -7.5*
   76 -    *                 -51.51000           23456
   77 -    GRID   *13545           200                   4.9012           -37.5*
   78 -    *                 -66.51000            3456
   79 -    GRID   *13576           200                   4.9012            -7.5*
   80 -    *                 -66.51000           23456
   81 -    GRID   *16250           200                   4.9012            52.5*
   82 -    *                 -66.51000            3456
   83 -    GRID   *23028           200                   4.9012            52.5*
   84 -    *                 -51.51000           23456
   85 -    GRID   *23044           200                   4.9012            37.5*
   86 -    *                 -51.51000           23456
   87 -    GRID   *23076           200                   4.9012             7.5*
   88 -    *                 -51.51000           23456
   89 -    GRID   *23506           200                   4.9012            37.5*
   90 -    *                 -66.51000           23456
   91 -    GRID   *23537           200                   4.9012             7.5*
   92 -    *                 -66.51000            3456
   93 -    GRID   *37940           100                   4.9016           -52.5*
   94 -    *                  8.51000            3456
   95 -    GRID   *38067           100                   4.9016           -37.5*
   96 -    *                  8.51000           23456
   97 -    GRID   *38323           100                   4.9016            -7.5*
   98 -    *                  8.51000            3456
   99 -    GRID   *45767           100                   4.9016            52.5*
  100 -    *                  8.51000           23456
```

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 7

S O R T E D B U L K D A T A E C H O

```
ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  101 -    GRID   *45890          100                          4.9016           37.5*
  102 -    *                   8.51000            3456
  103 -    GRID   *46151          100                          4.9016            7.5*
  104 -    *                   8.51000           23456
  105 -    GRID   *53578          100                          4.9016          -52.5*
  106 -    *                  -36.51000            2456
  107 -    GRID   *53701          100                          4.9016          -37.5*
  108 -    *                  -36.51000            2456
  109 -    GRID   *53956          100                          4.9016           -7.5*
  110 -    *                  -36.51000            2456
  111 -    GRID   *61404          100                          4.9016           52.5*
  112 -    *                  -36.51000            2456
  113 -    GRID   *61527          100                          4.9016           37.5*
  114 -    *                  -36.51000            2456
  115 -    GRID   *61788          100                          4.9016            7.5*
  116 -    *                  -36.51000            2456
  117 -    GRID   *62589          100                          4.9016           52.5*
  118 -    *                   -6.51000           23456
  119 -    GRID   *62774          100                          4.9016           37.5*
  120 -    *                   -6.51000           23456
  121 -    GRID   *63043          100                          4.9016           52.5*
  122 -    *                  -21.51000            2456
  123 -    GRID   *63343          100                          4.9016           37.5*
  124 -    *                  -21.51000            2456
  125 -    GRID   *63345          100                          4.9016            7.5*
  126 -    *                   -6.51000           23456
  127 -    GRID   *63645          100                          4.9016           -7.5*
  128 -    *                   -6.51000           23456
  129 -    GRID   *63942          100                          4.9016            7.5*
  130 -    *                  -21.51000            2456
  131 -    GRID   *64244          100                          4.9016           -7.5*
  132 -    *                  -21.51000            2456
  133 -    GRID   *64246          100                          4.9016          -37.5*
  134 -    *                   -6.51000           23456
  135 -    GRID   *64540          100                          4.9016          -52.5*
  136 -    *                   -6.51000           23456
  137 -    GRID   *64814          100                          4.9016          -37.5*
  138 -    *                  -21.51000            2456
  139 -    GRID   *65003          100                          4.9016          -52.5*
  140 -    *                  -21.51000            2456
  141 -    GRID   *111869         400                          43.27            -94*
  142 -    *                     01000           12456
  143 -    GRID   *111885         400                              0            -94*
  144 -    *                     01000            2456
  145 -    GRID   *113369         400                          43.27             94*
  146 -    *                     01000           12456
  147 -    GRID   *113385         400                              0             94*
  148 -    *                     01000            2456
  149 -    GRID   *150301         151000                       40.123         -21.367*
  150 -    *                  -4.8151000           3456
```

Figure G-8. Staged ICC-V Model/OTMs

```
ASD/DMMP v1.11.0                    Wed Jul 23 2008 22:40:02 CDT                    Page    8

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
  151 -    GRID   *150302          151000                        40.123          21.367*
  152 -    *                    -4.8151000          23456
  153 -    GRID   *150303          151000                         9.738         -21.367*
  154 -    *                    -4.8151000          13456
  155 -    GRID   *150311          151000                        40.123         -18.375*
  156 -    *                      -4151000          12456
  157 -    GRID   *150312          151000                        40.123          18.375*
  158 -    *                      -4151000          12456
  159 -    GRID   *150313          151000                         9.738             -14*
  160 -    *                      -4151000          12456
  161 -    GRID   *150314          151000                         9.738              14*
  162 -    *                      -4151000          12456
  163 -    GRID   *160301          161000                        40.123         -21.367*
  164 -    *                    -4.8161000          3456
  165 -    GRID   *160302          161000                        40.123          21.367*
  166 -    *                    -4.8161000          23456
  167 -    GRID   *160303          161000                         9.738         -21.367*
  168 -    *                    -4.8161000          13456
  169 -    GRID   *160311          161000                        40.123         -18.375*
  170 -    *                      -4161000          12456
  171 -    GRID   *160312          161000                        40.123          18.375*
  172 -    *                      -4161000          12456
  173 -    GRID   *160313          161000                         9.738             -14*
  174 -    *                      -4161000          12456
  175 -    GRID   *160314          161000                         9.738              14*
  176 -    *                      -4161000          12456
  177 -    GRID   *170301          171000                        40.123         -21.367*
  178 -    *                    -4.8171000          3456
  179 -    GRID   *170302          171000                        40.123          21.367*
  180 -    *                    -4.8171000          23456
  181 -    GRID   *170303          171000                         9.738         -21.367*
  182 -    *                    -4.8171000          13456
  183 -    GRID   *170311          171000                        40.123         -18.375*
  184 -    *                      -4171000          12456
  185 -    GRID   *170312          171000                        40.123          18.375*
  186 -    *                      -4171000          12456
  187 -    GRID   *170313          171000                         9.738             -14*
  188 -    *                      -4171000          12456
  189 -    GRID   *170314          171000                         9.738              14*
  190 -    *                      -4171000          12456
  191 -    QSET1   0       90001001THRU    90001050
  192 -    SPOINT  90001001THRU    90001050
  193 -    ENDDATA

           TOTAL ENTRY COUNT = 193
```

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 9

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
1	10	2	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	0.00000000E+00
2	20	2	1.00000000E+00	0.00000000E+00	0.00000000E+00	4.33070000E+01
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	0.00000000E+00
3	100	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
4	200	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
5	300	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
6	400	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
7	1000	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
8	151000	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-1.33374300E+01
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	1.50000000E+01
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-3.56170000E+01
9	151003	1	0.00000000E+00	-0.00000000E+00	-1.00000000E+00	-5.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	3.75000000E+01
			-1.00000000E+00	-0.00000000E+00	0.00000000E+00	-8.15000000E+01
10	161000	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-1.33374300E+01
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-2.16170000E+01
			0.00000000E+00	1.00000000E+00	0.00000000E+00	-1.40000000E+01
11	161003	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-5.00000000E+00
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-6.75000000E+01
			0.00000000E+00	1.00000000E+00	0.00000000E+00	-3.65000000E+01
12	171000	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-1.33374300E+01
			1.00000000E+00	0.00000000E+00	0.00000000E+00	6.61700000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	-1.40000000E+01
13	171003	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-5.00000000E+00
			1.00000000E+00	0.00000000E+00	0.00000000E+00	5.25000000E+01
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	8.50000000E+00
14	210003	1	-1.00000000E+00	0.00000000E+00	0.00000000E+00	-8.58300000E-02
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	-4.50000000E+01
			0.00000000E+00	0.00000000E+00	1.00000000E+00	2.36882000E+01
15	210004	1	-1.00000000E+00	0.00000000E+00	0.00000000E+00	3.62200000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	-5.25000000E+01
			0.00000000E+00	0.00000000E+00	1.00000000E+00	1.07047000E+01

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 10

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
16	210005	1	0.00000000E+00	8.70998290E-02	9.96199588E-01	-5.00000000E-05
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-4.50000000E+01
			0.00000000E+00	-9.96199588E-01	8.70998290E-02	2.27077000E+01
17	504001	1	0.00000000E+00	0.00000000E+00	1.00000000E+00	5.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	-8.25000000E+01
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-6.50000000E+00
18	508001	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-5.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	6.75000000E+01
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-3.65000000E+01
19	514001	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	-5.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	-2.25000000E+01
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	-5.15000000E+01
20	600003	1	-6.42812924E-01	7.66023201E-01	0.00000000E+00	1.68939000E+01
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
			7.66023201E-01	6.42812924E-01	0.00000000E+00	-8.69407100E+01
21	600004	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	5.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	7.50000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	-9.65000000E+01

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 11

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	1271	1000	0.00000E+00	0.00000E+00	-1.09000E+02
2	6299	1000	4.90120E+00	-5.25000E+01	-6.65000E+01
3	13067	1000	4.90120E+00	-5.25000E+01	-5.15000E+01
4	13083	1000	4.90120E+00	-3.75000E+01	-5.15000E+01
5	13115	1000	4.90120E+00	-7.50000E+00	-5.15000E+01
6	13545	1000	4.90120E+00	-3.75000E+01	-6.65000E+01
7	13576	1000	4.90120E+00	-7.50000E+00	-6.65000E+01
8	16250	1000	4.90120E+00	5.25000E+01	-6.65000E+01
9	23028	1000	4.90120E+00	5.25000E+01	-5.15000E+01
10	23044	1000	4.90120E+00	3.75000E+01	-5.15000E+01
11	23076	1000	4.90120E+00	7.50000E+00	-5.15000E+01
12	23506	1000	4.90120E+00	3.75000E+01	-6.65000E+01
13	23537	1000	4.90120E+00	7.50000E+00	-6.65000E+01
14	37940	1000	4.90160E+00	-5.25000E+01	8.50000E+00
15	38067	1000	4.90160E+00	-3.75000E+01	8.50000E+00
16	38323	1000	4.90160E+00	-7.50000E+00	8.50000E+00
17	45767	1000	4.90160E+00	5.25000E+01	8.50000E+00
18	45890	1000	4.90160E+00	3.75000E+01	8.50000E+00
19	46151	1000	4.90160E+00	7.50000E+00	8.50000E+00
20	53578	1000	4.90160E+00	-5.25000E+01	-3.65000E+01
21	53701	1000	4.90160E+00	-3.75000E+01	-3.65000E+01
22	53956	1000	4.90160E+00	-7.50000E+00	-3.65000E+01
23	61404	1000	4.90160E+00	5.25000E+01	-3.65000E+01
24	61527	1000	4.90160E+00	3.75000E+01	-3.65000E+01
25	61788	1000	4.90160E+00	7.50000E+00	-3.65000E+01
26	62589	1000	4.90160E+00	5.25000E+01	-6.50000E+00
27	62774	1000	4.90160E+00	3.75000E+01	-6.50000E+00
28	63043	1000	4.90160E+00	5.25000E+01	-2.15000E+01
29	63343	1000	4.90160E+00	3.75000E+01	-2.15000E+01
30	63345	1000	4.90160E+00	7.50000E+00	-6.50000E+00
31	63645	1000	4.90160E+00	-7.50000E+00	-6.50000E+00
32	63942	1000	4.90160E+00	7.50000E+00	-2.15000E+01
33	64244	1000	4.90160E+00	-7.50000E+00	-2.15000E+01
34	64246	1000	4.90160E+00	-3.75000E+01	-6.50000E+00
35	64540	1000	4.90160E+00	-5.25000E+01	-6.50000E+00
36	64814	1000	4.90160E+00	-3.75000E+01	-2.15000E+01
37	65003	1000	4.90160E+00	-5.25000E+01	-2.15000E+01
38	111869	1000	4.32700E+01	-9.40000E+01	0.00000E+00
39	111885	1000	0.00000E+00	-9.40000E+01	0.00000E+00
40	113369	1000	4.32700E+01	9.40000E+01	0.00000E+00
41	113385	1000	0.00000E+00	9.40000E+01	0.00000E+00
42	150301	151000	-8.53743E+00	3.63670E+01	-7.57400E+01
43	150302	151000	-8.53743E+00	-6.36700E+00	-7.57400E+01
44	150303	151000	-8.53743E+00	3.63670E+01	-4.53550E+01
45	150311	151000	-9.33743E+00	3.33750E+01	-7.57400E+01
46	150312	151000	-9.33743E+00	-3.37500E+00	-7.57400E+01
47	150313	151000	-9.33743E+00	2.90000E+01	-4.53550E+01
48	150314	151000	-9.33743E+00	1.00000E+00	-4.53550E+01
49	160301	161000	-8.53743E+00	-6.17400E+01	-3.53670E+01
50	160302	161000	-8.53743E+00	-6.17400E+01	7.36700E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 12

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
51	160303	161000	-8.53743E+00	-3.13550E+01	-3.53670E+01
52	160311	161000	-9.33743E+00	-6.17400E+01	-3.23750E+01
53	160312	161000	-9.33743E+00	-6.17400E+01	4.37500E+00
54	160313	161000	-9.33743E+00	-3.13550E+01	-2.80000E+01
55	160314	161000	-9.33743E+00	-3.13550E+01	0.00000E+00
56	170301	171000	-8.53743E+00	4.67400E+01	7.36700E+00
57	170302	171000	-8.53743E+00	4.67400E+01	-3.53670E+01
58	170303	171000	-8.53743E+00	1.63550E+01	7.36700E+00
59	170311	171000	-9.33743E+00	4.67400E+01	4.37500E+00
60	170312	171000	-9.33743E+00	4.67400E+01	-3.23750E+01
61	170313	171000	-9.33743E+00	1.63550E+01	0.00000E+00
62	170314	171000	-9.33743E+00	1.63550E+01	-2.80000E+01
63	90001001	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
112	90001050	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 13

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	1271-1	1271-3	1271-4	1271-5	1271-6	6299-2	6299-3	6299-4	6299-5	6299-6	= 10
11 =	13067-2	13067-3	13067-4	13067-5	13067-6	13083-2	13083-3	13083-4	13083-5	13083-6	= 20
21 =	13115-2	13115-3	13115-4	13115-5	13115-6	13545-3	13545-4	13545-5	13545-6	13576-2	= 30
31 =	13576-3	13576-4	13576-5	13576-6	16250-3	16250-4	16250-5	16250-6	23028-2	23028-3	= 40
41 =	23028-4	23028-5	23028-6	23044-2	23044-3	23044-4	23044-5	23044-6	23076-2	23076-3	= 50
51 =	23076-4	23076-5	23076-6	23506-2	23506-3	23506-4	23506-5	23506-6	23537-3	23537-4	= 60
61 =	23537-5	23537-6	37940-3	37940-4	37940-5	37940-6	38067-2	38067-3	38067-4	38067-5	= 70
71 =	38067-6	38323-3	38323-4	38323-5	38323-6	45767-2	45767-3	45767-4	45767-5	45767-6	= 80
81 =	45890-3	45890-4	45890-5	45890-6	46151-2	46151-3	46151-4	46151-5	46151-6	53578-2	= 90
91 =	53578-4	53578-5	53578-6	53701-2	53701-4	53701-5	53701-6	53956-2	53956-4	53956-5	= 100
101 =	53956-6	61404-2	61404-4	61404-5	61404-6	61527-2	61527-4	61527-5	61527-6	61788-2	= 110
111 =	61788-4	61788-5	61788-6	62589-2	62589-3	62589-4	62589-5	62589-6	62774-2	62774-3	= 120
121 =	62774-4	62774-5	62774-6	63043-2	63043-4	63043-5	63043-6	63343-2	63343-4	63343-5	= 130
131 =	63343-6	63345-2	63345-3	63345-4	63345-5	63345-6	63645-2	63645-3	63645-4	63645-5	= 140
141 =	63645-6	63942-2	63942-4	63942-5	63942-6	64244-2	64244-4	64244-5	64244-6	64246-2	= 150
151 =	64246-3	64246-4	64246-5	64246-6	64540-2	64540-3	64540-4	64540-5	64540-6	64814-2	= 160
161 =	64814-4	64814-5	64814-6	65003-2	65003-4	65003-5	65003-6	111869-1	111869-2	111869-4	= 170
171 =	111869-5	111869-6	111885-2	111885-4	111885-5	111885-6	113369-1	113369-2	113369-4	113369-5	= 180
181 =	113369-6	113385-2	113385-4	113385-5	113385-6	150301-3	150301-4	150301-5	150301-6	150302-2	= 190
191 =	150302-3	150302-4	150302-5	150302-6	150303-1	150303-3	150303-4	150303-5	150303-6	150311-1	= 200
201 =	150311-2	150311-4	150311-5	150311-6	150312-1	150312-2	150312-4	150312-5	150312-6	150313-1	= 210
211 =	150313-2	150313-4	150313-5	150313-6	150314-1	150314-2	150314-4	150314-5	150314-6	160301-3	= 220
221 =	160301-4	160301-5	160301-6	160302-2	160302-3	160302-4	160302-5	160302-6	160303-1	160303-3	= 230
231 =	160303-4	160303-5	160303-6	160311-1	160311-2	160311-4	160311-5	160311-6	160312-1	160312-2	= 240
241 =	160312-4	160312-5	160312-6	160313-1	160313-2	160313-4	160313-5	160313-6	160314-1	160314-2	= 250
251 =	160314-4	160314-5	160314-6	170301-3	170301-4	170301-5	170301-6	170302-2	170302-3	170302-4	= 260
261 =	170302-5	170302-6	170303-1	170303-3	170303-4	170303-5	170303-6	170311-1	170311-2	170311-4	= 270
271 =	170311-5	170311-6	170312-1	170312-2	170312-4	170312-5	170312-6	170313-1	170313-2	170313-4	= 280
281 =	170313-5	170313-6	170314-1	170314-2	170314-4	170314-5	170314-6				

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 14

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	1271-2	111869-3	111885-1	111885-3	113369-3	113385-1	113385-3			

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 15

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

C DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	6299-1	13067-1	13083-1	13115-1	13545-1	13545-2	13576-1	16250-1	16250-2	23028-1	= 10
11 =	23044-1	23076-1	23506-1	23537-1	23537-2	37940-1	37940-2	38067-1	38323-1	38323-2	= 20
21 =	45767-1	45890-1	45890-2	46151-1	53578-1	53578-3	53701-1	53701-3	53956-1	53956-3	= 30
31 =	61404-1	61404-3	61527-1	61527-3	61788-1	61788-3	62589-1	62774-1	63043-1	63043-3	= 40
41 =	63343-1	63343-3	63345-1	63645-1	63942-1	63942-3	64244-1	64244-3	64246-1	64540-1	= 50
51 =	64814-1	64814-3	65003-1	65003-3	150301-1	150301-2	150302-1	150303-2	150311-3	150312-3	= 60
61 =	150313-3	150314-3	160301-1	160301-2	160302-1	160303-2	160311-3	160312-3	160313-3	160314-3	= 70
71 =	170301-1	170301-2	170302-1	170303-2	170311-3	170312-3	170313-3	170314-3			

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 16

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	90001001-0	90001002-0	90001003-0	90001004-0	90001005-0	90001006-0	90001007-0	90001008-0	90001009-0	90001010-0	= 10
11 =	90001011-0	90001012-0	90001013-0	90001014-0	90001015-0	90001016-0	90001017-0	90001018-0	90001019-0	90001020-0	= 20
21 =	90001021-0	90001022-0	90001023-0	90001024-0	90001025-0	90001026-0	90001027-0	90001028-0	90001029-0	90001030-0	= 30
31 =	90001031-0	90001032-0	90001033-0	90001034-0	90001035-0	90001036-0	90001037-0	90001038-0	90001039-0	90001040-0	= 40
41 =	90001041-0	90001042-0	90001043-0	90001044-0	90001045-0	90001046-0	90001047-0	90001048-0	90001049-0	90001050-0	= 50

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 17

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	1271-2	6299-1	13067-1	13083-1	13115-1	13545-1	13545-2	13576-1	16250-1	16250-2 =	10
11 =	23028-1	23044-1	23076-1	23506-1	23537-1	23537-2	37940-1	37940-2	38067-1	38323-1 =	20
21 =	38323-2	45767-1	45890-1	45890-2	46151-1	53578-1	53578-3	53701-1	53701-3	53956-1 =	30
31 =	53956-3	61404-1	61404-3	61527-1	61527-3	61788-1	61788-3	62589-1	62774-1	63043-1 =	40
41 =	63043-3	63343-1	63343-3	63345-1	63645-1	63942-1	63942-3	64244-1	64244-3	64246-1 =	50
51 =	64540-1	64814-1	64814-3	65003-1	65003-3	111869-3	111885-1	111885-3	113369-3	113385-1 =	60
61 =	113385-3	150301-1	150301-2	150302-1	150303-2	150311-3	150312-3	150313-3	150314-3	160301-1 =	70
71 =	160301-2	160302-1	160303-2	160311-3	160312-3	160313-3	160314-3	170301-1	170301-2	170302-1 =	80
81 =	170303-2	170311-3	170312-3	170313-3	170314-3	90001001-0	90001002-0	90001003-0	90001004-0	90001005-0 =	90
91 =	90001006-0	90001007-0	90001008-0	90001009-0	90001010-0	90001011-0	90001012-0	90001013-0	90001014-0	90001015-0 =	100
101 =	90001016-0	90001017-0	90001018-0	90001019-0	90001020-0	90001021-0	90001022-0	90001023-0	90001024-0	90001025-0 =	110
111 =	90001026-0	90001027-0	90001028-0	90001029-0	90001030-0	90001031-0	90001032-0	90001033-0	90001034-0	90001035-0 =	120
121 =	90001036-0	90001037-0	90001038-0	90001039-0	90001040-0	90001041-0	90001042-0	90001043-0	90001044-0	90001045-0 =	130
131 =	90001046-0	90001047-0	90001048-0	90001049-0	90001050-0						

Figure G-8. Staged ICC-V Model/OTMs

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ASD/DMMP v1.11.0                    Wed Jul 23 2008 22:40:02 CDT                    Page   18

          O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                REFERENCE POINT = ORIGIN

                                          M O
*  7.861573E+00  8.877656E-13  1.254449E-11  9.331980E-13 -2.288571E+02  2.190002E+01 *
*  8.878323E-13  7.070565E+00 -7.701687E-13  2.064411E+02  2.558281E-11  1.824117E+01 *
*  1.254426E-11 -7.703213E-13  7.070565E+00 -2.190002E+01 -1.824117E+01 -1.554606E-11 *
*  9.405254E-13  2.064411E+02 -2.190002E+01  3.588525E+04  5.381898E+01  1.859420E+02 *
* -2.288571E+02  2.558775E-11 -1.824117E+01  5.381898E+01  1.750814E+04  1.489311E+02 *
*  2.190002E+01  1.824117E+01 -1.554015E-11  1.859420E+02  1.489311E+02  2.798156E+04 *

                                           S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
            X              7.861573E+00      1.187037E-13 -2.785705E+00 -2.911086E+01
            Y              7.070565E+00      2.579874E+00  3.618214E-12 -2.919725E+01
            Z              7.070565E+00      2.579874E+00 -3.097351E+00 -2.198702E-12

                                          I(S)
                                *  2.978991E+04  2.680315E+00  3.466499E+02 *
                                *  2.680315E+00  1.079885E+04 -7.864595E+02 *
                                *  3.466499E+02 -7.864595E+02  2.787350E+04 *

                                          I(Q)
                                *  1.076269E+04                             *
                                *                2.784786E+04               *
                                *                             2.985171E+04 *

                                           Q
                                *  6.960328E-04 -1.755992E-01  9.844615E-01 *
                                * -9.989445E-01 -4.533679E-02 -7.380488E-03 *
                                *  4.592833E-02 -9.834173E-01 -1.754454E-01 *
```

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 19

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
2.579874E+00	-2.941528E+00	-2.915406E+01

Figure G-8. Staged ICC-V Model/OTMs

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ASD/DMMP v1.11.0                        Wed Jul 23 2008 22:40:02 CDT                        Page   20

          O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                  REFERENCE POINT = C.G.

                                            M O
*  7.861573E+00  8.877656E-13  1.254449E-11  1.194952E-11  3.395963E-01 -1.225015E+00 *
*  8.878323E-13  7.070565E+00 -7.701687E-13  3.054271E-01  4.948139E-11 -4.268454E-10 *
*  1.254426E-11 -7.703213E-13  7.070565E+00 -1.101757E+00 -5.852759E-11 -5.045565E-11 *
*  1.195524E-11  3.054271E-01 -1.101757E+00  2.979009E+04 -2.680315E+00 -3.466499E+02 *
*  3.395963E-01  4.947831E-11 -5.851408E-11 -2.680315E+00  1.079887E+04  7.864066E+02 *
* -1.225015E+00 -4.268519E-10 -5.045110E-11 -3.466499E+02  7.864066E+02  2.787369E+04 *

                                             S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
             X             7.861573E+00      1.519992E-12  1.558231E-01  4.319699E-02
             Y             7.070565E+00     -6.036935E-11  6.998224E-12 -4.319699E-02
             Z             7.070565E+00      8.277640E-12 -1.558231E-01 -7.136015E-12

                                           I(S)
                                *  2.978991E+04  2.680315E+00  3.466499E+02 *
                                *  2.680315E+00  1.079885E+04 -7.864595E+02 *
                                *  3.466499E+02 -7.864595E+02  2.787350E+04 *

                                           I(Q)
                                *  1.076269E+04                             *
                                *                2.784786E+04               *
                                *                              2.985171E+04 *

                                             Q
                                *  6.960328E-04 -1.755992E-01  9.844615E-01 *
                                * -9.989445E-01 -4.533679E-02 -7.380488E-03 *
                                *  4.592833E-02 -9.834173E-01 -1.754454E-01 *
```

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 21

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	7.86157E+00	8.87766E-13	1.25445E-11	1.19495E-11	3.39596E-01	-1.22501E+00
T2:	8.87832E-13	7.07056E+00	-7.70169E-13	3.05427E-01	4.94814E-11	-4.26845E-10
T3:	1.25443E-11	-7.70321E-13	7.07056E+00	-1.10176E+00	-5.85276E-11	-5.04557E-11
R1:	1.19552E-11	3.05427E-01	-1.10176E+00	2.97901E+04	-2.68032E+00	-3.46650E+02
R2:	3.39596E-01	4.94783E-11	-5.85141E-11	-2.68032E+00	1.07989E+04	7.86407E+02
R3:	-1.22501E+00	-4.26852E-10	-5.04511E-11	-3.46650E+02	7.86407E+02	2.78737E+04

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	3.90483E-06	-1.71004E-07	-3.52857E-07	-5.16696E-06	-1.49406E-05	-2.58974E-05
T2:	-1.78455E-07	-2.07400E-06	9.56568E-08	5.37224E-05	-2.07162E-06	-9.11466E-06
T3:	-3.52913E-07	1.02120E-07	-4.71032E-06	-9.58173E-06	5.79197E-05	7.31005E-06
R1:	-5.12930E-06	5.34455E-05	-9.45038E-06	-7.37350E-03	2.60003E-04	1.91852E-03
R2:	-1.49192E-05	-1.95347E-06	5.79281E-05	2.55999E-04	2.38199E-03	5.66558E-04
R3:	-2.59110E-05	-8.94940E-06	7.12178E-06	1.90479E-03	5.73340E-04	1.83402E-03

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-8.07698E-15	1.04913E-15	-6.11275E-15	-1.20168E-13	-8.03058E-14	-2.12606E-13
T2:	9.30693E-16	-6.73073E-16	3.04270E-15	7.74639E-14	3.83285E-14	-4.90397E-14
T3:	-3.10472E-15	3.90378E-15	-1.22445E-14	2.80445E-12	-5.32813E-14	-1.56874E-13
R1:	9.90130E-14	-6.88304E-14	2.59768E-12	-1.37111E-10	5.70666E-12	-2.18364E-11
R2:	-2.11460E-13	6.25012E-14	-1.88807E-13	4.81276E-12	1.67474E-12	8.14691E-12
R3:	-9.62381E-14	-6.99250E-14	-2.11861E-13	-2.08655E-11	1.31916E-11	-2.71948E-11

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 22

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	1271-2	-1.24745E-08	-8.71387E-09	1.32050E-08	-7.49030E-07	3.18401E-07	1.03058E-06
2	6299-1	-7.07869E-08	1.45195E-07	-2.68878E-07	5.82021E-06	9.68003E-06	2.40423E-06
3	13067-1	-1.97518E-08	2.19857E-08	6.33125E-08	-4.70302E-07	-2.33808E-06	-2.48049E-06
4	13083-1	3.98887E-08	-1.71382E-08	6.04595E-08	-5.50779E-07	-2.18781E-06	1.12736E-06
5	13115-1	9.51699E-08	-1.67713E-09	1.00495E-07	-6.55709E-08	-5.29457E-06	8.84484E-11
6	13545-1	5.13375E-08	6.38892E-08	-2.61152E-07	3.86911E-06	5.96441E-06	6.18025E-06
7	13545-2	-6.34130E-08	-2.89263E-07	1.74639E-07	1.69159E-06	-1.74159E-06	1.63003E-06
8	13576-1	3.46517E-07	3.33494E-08	7.51436E-09	2.52872E-06	-1.57600E-05	4.11700E-06
9	16250-1	-7.76072E-08	-6.85204E-08	-1.14423E-07	-2.43075E-06	3.92621E-06	8.34920E-07
10	16250-2	1.48825E-08	-2.16192E-07	-1.91901E-07	-3.68338E-06	4.83306E-06	9.58094E-07
11	23028-1	-3.65638E-08	-2.06842E-09	5.30607E-08	-3.03127E-07	-1.40208E-06	2.78396E-06
12	23044-1	1.02079E-07	2.69442E-08	7.92270E-08	1.46883E-06	-4.55279E-06	-2.82857E-06
13	23076-1	1.17668E-07	-4.93151E-09	1.07850E-07	4.51200E-07	-6.32319E-06	-2.11468E-06
14	23506-1	1.03730E-07	-3.63623E-08	-1.20138E-07	-3.45180E-06	-4.25496E-07	-5.50345E-06
15	23537-1	3.50551E-07	-1.08625E-07	-1.40187E-09	-6.57051E-06	-1.60477E-05	-5.76636E-06
16	23537-2	-1.46485E-08	-1.61021E-07	2.00432E-08	3.60717E-06	-1.33252E-07	7.82150E-06
17	37940-1	3.38050E-07	1.26561E-07	6.26314E-08	-6.46177E-06	1.61182E-05	2.01677E-05
18	37940-2	-1.50373E-07	-6.64022E-07	5.99207E-08	2.07373E-05	-6.58120E-06	-1.03263E-05
19	38067-1	2.58749E-07	-1.35442E-07	2.14190E-08	4.04479E-06	1.18331E-05	1.08700E-05
20	38323-1	-3.39585E-08	1.67104E-08	-3.01291E-08	-4.43367E-07	-1.09695E-06	7.10774E-07
21	38323-2	-1.14561E-08	-4.73587E-07	4.34011E-09	1.45902E-05	-3.07660E-07	-2.98350E-06
22	45767-1	1.29625E-08	-1.83491E-07	1.45519E-10	6.10179E-06	-3.57004E-07	-5.78654E-06
23	45890-1	1.47272E-07	3.86545E-08	-2.25191E-09	-1.21893E-06	4.86684E-06	-4.99986E-06
24	45890-2	-8.26054E-09	-4.09716E-07	-4.86652E-08	5.37478E-06	7.80440E-07	-3.90720E-06
25	46151-1	-5.70960E-08	-7.26743E-09	-1.22091E-08	8.12928E-07	-2.46528E-06	-8.75170E-07
26	53578-1	2.19118E-08	3.05959E-08	9.28923E-08	-2.30204E-06	-3.15329E-06	-7.32421E-07
27	53578-3	5.70602E-09	-5.05578E-08	-2.75977E-07	9.02356E-06	1.92492E-06	-1.01418E-06
28	53701-1	1.33982E-07	-4.51149E-08	1.52963E-07	-1.99844E-06	-4.50518E-06	4.29738E-06
29	53701-3	-2.67476E-09	5.48765E-08	-3.28661E-07	6.08216E-06	4.42850E-06	2.15963E-06
30	53956-1	-1.09185E-09	-3.43753E-08	2.10763E-07	-1.17222E-06	-4.95507E-06	-4.25815E-07
31	53956-3	-6.50334E-08	4.45314E-08	-5.70738E-07	3.01020E-06	1.28695E-05	2.75525E-06
32	61404-1	-7.38776E-08	-1.53195E-08	7.54408E-08	-7.06495E-08	-4.36740E-07	4.21124E-06
33	61404-3	-4.64794E-08	8.88394E-09	-3.04222E-07	-1.21815E-05	3.90680E-06	2.24736E-06
34	61527-1	7.54881E-08	1.95632E-08	1.64577E-07	4.44884E-06	-3.63917E-06	-7.53440E-07
35	61527-3	-3.50515E-08	-2.83574E-08	-3.82066E-07	-9.57691E-06	4.64724E-06	-1.54453E-06
36	61788-1	5.67306E-08	3.76895E-09	1.98801E-07	1.61387E-06	-5.35508E-06	-1.12382E-06
37	61788-3	-9.12380E-08	1.12232E-09	-5.52409E-07	-3.10567E-06	1.27475E-05	3.11731E-07
38	62589-1	7.00234E-08	-5.45078E-08	-4.06674E-08	-3.85745E-07	1.41370E-06	-5.87537E-06
39	62774-1	1.27525E-07	5.51813E-09	-3.01197E-08	-8.35062E-07	2.72450E-06	-4.87169E-06
40	63043-1	7.06384E-08	-1.73932E-08	-4.15703E-08	-1.68826E-06	1.52431E-06	-4.82183E-06
41	63043-3	-1.26057E-08	5.72636E-08	-3.31787E-07	-1.65505E-05	2.46329E-06	7.04460E-07
42	63343-1	1.33852E-07	-4.60932E-09	-2.92589E-08	-4.96791E-07	1.41732E-06	-5.02454E-06
43	63343-3	2.01658E-09	-1.07143E-08	-3.44615E-07	-1.03114E-05	2.54189E-06	-1.91929E-06
44	63345-1	9.55806E-08	1.19462E-09	-3.01097E-08	-1.41852E-07	2.36509E-06	-2.05661E-06
45	63645-1	8.40957E-08	9.82766E-10	-2.48220E-08	9.89621E-08	1.86070E-06	1.08706E-06
46	63942-1	1.02198E-07	2.40379E-09	-3.74380E-08	3.88900E-08	1.83049E-06	-2.02830E-06
47	63942-3	-2.28904E-08	1.38243E-08	-3.79863E-07	-3.56865E-06	6.76786E-06	-3.35102E-07
48	64244-1	8.94799E-08	-2.81511E-09	-2.88616E-08	7.17723E-08	1.48578E-06	1.25639E-06
49	64244-3	-1.10564E-08	3.65219E-08	-4.16081E-07	2.67826E-06	6.93462E-06	1.75865E-06
50	64246-1	1.27698E-07	9.46739E-09	-3.30780E-08	8.41489E-07	9.89487E-07	4.58146E-06

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 23

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
51	64540-1	2.23856E-10	1.09047E-07	-3.23207E-08	-1.62428E-06	-1.34073E-06	1.42236E-06
52	64814-1	1.59647E-07	-2.73866E-09	-4.86315E-09	1.74961E-07	7.21133E-07	6.02349E-06
53	64814-3	1.04889E-08	1.12532E-07	-3.62508E-07	5.66514E-06	2.06442E-06	1.24580E-06
54	65003-1	2.72328E-08	5.88179E-08	-1.59221E-08	-6.81327E-07	-5.29272E-07	1.36589E-06
55	65003-3	-2.00621E-08	-1.27538E-07	-3.50021E-07	1.85185E-05	-1.19618E-06	-2.05722E-06
56	111869-3	-7.89666E-08	-7.14914E-08	-7.62476E-08	9.79576E-06	2.41132E-06	-9.07117E-06
57	111885-1	-2.21136E-07	-4.73421E-07	-3.57018E-09	1.52060E-05	-3.95502E-06	-3.40074E-05
58	111885-3	4.52442E-08	3.75580E-08	-8.28334E-08	-1.36090E-06	1.72615E-06	3.19171E-06
59	113369-3	-1.26782E-08	5.35474E-08	-6.54074E-08	-8.14966E-06	2.03662E-06	3.12691E-06
60	113385-1	1.57793E-08	2.12317E-07	-1.18582E-08	-8.79045E-06	9.98796E-07	6.74742E-06
61	113385-3	-3.98022E-08	-2.16153E-08	-1.59328E-07	-3.58979E-06	1.61643E-06	1.97125E-06
62	150301-1	-9.62177E-08	-9.85588E-08	-3.35741E-07	-5.33003E-06	1.26270E-05	-1.53192E-06
63	150301-2	8.06250E-09	-9.74414E-08	2.89335E-08	-8.04615E-06	-3.80988E-07	2.82026E-06
64	150302-1	1.08786E-07	4.51334E-08	-2.86046E-07	3.67283E-07	4.87299E-07	1.75150E-06
65	150303-2	-4.49169E-08	3.89655E-08	-4.46715E-08	-3.38841E-06	1.28432E-06	1.54108E-06
66	150311-3	-1.26061E-07	7.07468E-08	3.93781E-07	6.25928E-06	-7.04837E-06	9.55437E-06
67	150312-3	-4.32386E-07	-8.55965E-09	3.09038E-07	-2.83718E-07	1.03666E-05	-2.27039E-06
68	150313-3	-9.30677E-08	2.88063E-08	-2.93965E-08	-4.72794E-07	1.28896E-06	2.63323E-06
69	150314-3	-3.78734E-08	-1.35842E-08	-1.12388E-08	-2.78244E-07	6.17541E-07	1.21493E-07
70	160301-1	-4.95852E-08	-2.81368E-07	-1.76819E-08	-1.26097E-06	-2.84563E-07	2.18556E-06
71	160301-2	5.69236E-08	-8.66976E-08	-9.14511E-08	2.10553E-06	1.21454E-06	4.10560E-06
72	160302-1	-7.41248E-08	2.18110E-07	4.71232E-09	-7.83186E-06	-2.48402E-06	-3.06473E-06
73	160303-2	-6.84241E-09	3.47062E-08	-7.54217E-08	2.08246E-06	3.13333E-07	-5.07502E-07
74	160311-3	-3.81689E-08	-6.57551E-08	-4.57121E-09	-5.92845E-07	5.76672E-07	-1.23404E-06
75	160312-3	-1.27578E-07	-2.07805E-07	-1.62574E-08	7.43212E-06	-4.25869E-06	-9.73107E-06
76	160313-3	2.77566E-08	4.41531E-09	-1.08287E-08	-3.59770E-07	1.66768E-07	1.52559E-06
77	160314-3	1.59300E-09	2.26322E-10	7.54597E-09	-9.67172E-08	3.38988E-07	1.10332E-07
78	170301-1	-3.38546E-08	2.43119E-07	2.11585E-08	-8.44058E-06	-9.16173E-07	-3.21360E-06
79	170301-2	2.21430E-08	5.52827E-08	9.77743E-08	2.01329E-06	-7.64233E-07	-9.57472E-07
80	170302-1	-5.93893E-08	-2.16154E-07	1.41881E-08	6.30971E-08	-1.91189E-07	3.35926E-06
81	170303-2	-6.80029E-09	-4.55766E-08	8.42556E-08	3.08733E-06	-8.48751E-07	5.62199E-07
82	170311-3	-1.42753E-07	6.86214E-09	-3.78168E-09	-5.77304E-07	-3.96215E-06	6.62401E-06
83	170312-3	-1.65605E-07	7.69214E-08	-3.54112E-09	1.38389E-08	1.56901E-07	6.91747E-06
84	170313-3	9.55970E-09	-6.05451E-09	1.15015E-08	-2.77301E-07	3.36586E-07	-5.93020E-07
85	170314-3	-1.58907E-08	-4.08409E-09	-1.29335E-08	-1.56011E-07	-4.98403E-08	3.44589E-07
	Total:	3.90467E-06	-2.07382E-06	-4.70988E-06	-7.37359E-03	2.38237E-03	1.83359E-03

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 24

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	67	150312-3	-4.32386E-07
T2 -	18	37940-2	-6.64022E-07
T3 -	31	53956-3	-5.70738E-07
R1 -	18	37940-2	2.07373E-05
R2 -	17	37940-1	1.61182E-05
R3 -	57	111885-1	-3.40074E-05

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 25

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	1271-2	3.14911E-11	3.95931E-10	-2.23124E-11	-1.13115E-08	5.38079E-10	2.60822E-09
2	6299-1	6.23044E-11	1.06756E-11	-4.15458E-11	-6.02611E-11	-1.08684E-09	1.72672E-12
3	13067-1	4.71889E-12	3.77655E-12	3.32637E-12	3.73413E-11	7.21541E-11	1.78381E-10
4	13083-1	9.33458E-12	-8.13154E-13	4.46074E-13	3.91115E-11	-1.82711E-10	2.04207E-11
5	13115-1	1.10548E-11	-2.39516E-13	4.13742E-12	1.18616E-11	-2.28995E-10	1.14835E-11
6	13545-1	6.44244E-11	-3.31978E-13	-4.22306E-11	-6.32788E-11	-1.34227E-09	-2.34718E-10
7	13545-2	-2.63404E-11	-4.47779E-11	2.13298E-11	1.34891E-09	4.70235E-10	5.58230E-11
8	13576-1	6.39737E-11	-2.55976E-12	-3.20709E-11	-1.20971E-10	-1.42015E-09	-2.78047E-10
9	16250-1	3.37762E-11	-9.98365E-12	-1.96791E-11	-2.71089E-10	-4.57645E-10	-5.33372E-10
10	16250-2	1.60841E-11	-3.52304E-11	-2.02823E-11	7.99438E-10	-4.54046E-10	-1.50503E-10
11	23028-1	7.96495E-12	-2.02213E-12	4.22934E-12	-2.76109E-11	9.76843E-12	-1.83834E-10
12	23044-1	8.78004E-12	1.04844E-12	1.69123E-12	-7.53039E-11	-1.56861E-10	-9.36202E-11
13	23076-1	1.06572E-11	-1.71513E-12	4.59104E-12	3.92816E-12	-2.02332E-10	-7.41807E-11
14	23506-1	4.04060E-11	-8.16906E-13	-2.45535E-11	-3.81236E-10	-7.96455E-10	-3.91945E-10
15	23537-1	5.98423E-11	-2.99890E-12	-3.08813E-11	-3.29257E-10	-1.29362E-09	-4.29201E-10
16	23537-2	-2.05647E-12	-3.39200E-11	2.63145E-12	1.03631E-09	-1.84254E-11	1.08626E-12
17	37940-1	6.51792E-11	1.82816E-11	1.42251E-11	-6.22382E-10	1.27882E-09	1.61317E-09
18	37940-2	-7.70603E-12	-6.98354E-11	1.05178E-11	1.92260E-09	-3.11136E-10	-5.75387E-10
19	38067-1	4.51143E-11	-2.39626E-12	1.42951E-11	-6.14370E-12	1.04875E-09	1.02111E-09
20	38323-1	1.57257E-11	1.60518E-12	1.68648E-12	-4.07201E-11	2.12155E-10	1.66069E-10
21	38323-2	-1.64574E-12	-4.91779E-11	4.05995E-12	1.36261E-09	-5.81978E-11	-4.16029E-10
22	45767-1	4.12768E-11	-1.79454E-11	7.90587E-12	5.14368E-10	1.91139E-10	-7.60228E-10
23	45890-1	1.20192E-11	1.71915E-12	3.51539E-12	3.37574E-12	1.62604E-10	-1.43057E-10
24	45890-2	5.01676E-12	-6.11926E-11	-8.98115E-13	1.56250E-09	-6.67380E-11	-5.69418E-10
25	46151-1	1.35733E-11	-1.05770E-13	2.87961E-12	3.38044E-11	1.35824E-10	-5.65345E-11
26	53578-1	1.63132E-11	5.78694E-12	6.60004E-12	-3.96591E-11	-1.08555E-11	3.26774E-10
27	53578-3	4.55243E-12	-6.36075E-13	-2.06759E-11	2.91524E-10	1.75008E-10	4.38438E-11
28	53701-1	8.25828E-12	-8.82760E-13	1.35322E-11	-3.97404E-13	-9.90497E-11	1.08954E-10
29	53701-3	7.69089E-12	3.81357E-12	-2.64483E-11	1.06030E-10	1.55509E-10	6.64834E-11
30	53956-1	8.78236E-12	-2.61218E-13	1.83088E-11	3.15910E-11	-6.24368E-11	8.34517E-11
31	53956-3	2.30137E-11	1.89816E-12	-4.17373E-11	-1.13010E-10	-1.85498E-10	-8.92074E-11
32	61404-1	2.16833E-11	-2.04692E-12	7.44541E-12	-5.93492E-11	-3.62685E-11	-3.90933E-10
33	61404-3	7.87012E-12	-3.59897E-12	-2.45256E-11	-3.02401E-10	-4.12115E-11	-3.05276E-11
34	61527-1	8.96010E-12	-1.65694E-12	1.18881E-11	1.35048E-10	-1.01768E-10	-7.59870E-11
35	61527-3	1.58043E-11	5.70301E-13	-2.87660E-11	-3.82106E-10	-1.87908E-10	-1.40855E-10
36	61788-1	8.71171E-12	-1.38642E-12	1.76549E-11	1.08065E-10	-4.12195E-11	-3.13736E-11
37	61788-3	1.57116E-11	2.80139E-12	-3.63818E-11	-3.08332E-10	-6.79916E-11	-1.15945E-10
38	62589-1	2.36961E-11	-5.96956E-12	1.00850E-12	8.72967E-11	6.24677E-11	-4.10691E-10
39	62774-1	1.10512E-11	-1.69389E-13	-1.93311E-13	-1.31428E-11	2.90233E-11	-1.30427E-10
40	63043-1	2.04339E-11	-2.65618E-12	-5.86409E-13	-4.00392E-11	1.38565E-11	-3.37671E-10
41	63043-3	2.90323E-12	1.44017E-12	-2.15647E-11	-4.37893E-10	8.91399E-11	2.68516E-11
42	63343-1	1.13028E-11	-1.23984E-12	-6.57616E-13	5.98038E-12	-1.68461E-11	-1.30799E-10
43	63343-3	6.57023E-12	1.72969E-13	-2.28361E-11	-3.29534E-10	5.50997E-11	-7.71439E-11
44	63345-1	1.25394E-11	1.35237E-13	1.92603E-13	-9.16289E-12	3.01130E-11	-5.61250E-11
45	63645-1	1.10323E-11	4.84433E-13	1.17028E-13	-1.63787E-11	2.85335E-11	3.98303E-11
46	63942-1	1.26660E-11	-2.10706E-13	-4.29715E-13	-5.03875E-12	-7.76149E-12	-6.32736E-11
47	63942-3	4.85315E-12	2.86912E-12	-2.76945E-11	-2.33991E-10	2.04591E-10	-3.24227E-11
48	64244-1	1.16105E-11	3.28060E-13	-3.84253E-13	-1.74455E-11	-1.52015E-11	2.72415E-11
49	64244-3	7.50350E-12	3.04416E-12	-3.07573E-11	-4.86455E-11	1.92985E-10	1.68359E-11
50	64246-1	7.51336E-12	1.39670E-12	-1.19416E-12	-1.51106E-11	-7.30677E-11	5.02550E-11

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 26

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
51	64540-1	1.51556E-11	7.32920E-12	-8.17102E-13	-1.57572E-10	5.44284E-12	2.77581E-10
52	64814-1	1.09083E-11	1.06675E-12	3.86474E-13	-1.22329E-11	-5.07855E-11	9.97144E-11
53	64814-3	-2.14400E-12	9.38604E-12	-2.88092E-11	7.02310E-11	2.22631E-10	2.97733E-11
54	65003-1	1.64132E-11	5.30375E-12	-3.32127E-13	-7.56418E-11	3.09101E-11	2.83190E-10
55	65003-3	-4.03710E-12	-1.05394E-11	-2.24763E-11	6.82985E-10	1.18605E-10	-9.52464E-11
56	111869-3	-5.38780E-10	2.96320E-12	2.50117E-10	1.55240E-09	1.04065E-08	2.59602E-09
57	111885-1	-5.86073E-10	-3.54184E-11	8.20528E-11	1.77607E-09	3.71553E-09	-1.81304E-09
58	111885-3	5.64145E-10	1.71975E-10	-9.93044E-11	-7.16489E-09	-1.24086E-08	-1.60115E-09
59	113369-3	-5.43369E-10	2.50782E-11	2.36481E-10	2.31636E-09	9.76438E-09	3.92143E-09
60	113385-1	-5.55071E-10	3.18031E-11	9.15105E-11	1.14260E-09	4.81041E-09	3.35266E-09
61	113385-3	5.47384E-10	-2.23070E-10	-7.43239E-11	3.98738E-09	-1.22372E-08	-5.70877E-09
62	150301-1	4.62828E-11	-6.98504E-12	-2.72097E-11	-1.74581E-10	-1.05377E-09	-4.20395E-10
63	150301-2	1.40300E-12	1.41728E-11	-3.86137E-13	-5.78557E-10	6.87585E-11	1.55908E-10
64	150302-1	7.48946E-11	-1.83683E-12	-3.89336E-11	-2.83289E-10	-1.81105E-09	-4.99752E-10
65	150303-2	1.66268E-12	1.18900E-11	-1.13826E-12	-4.14002E-10	-3.23164E-11	8.46826E-11
66	150311-3	-8.60258E-11	5.99915E-12	5.95773E-11	6.29008E-10	1.69726E-09	8.26595E-10
67	150312-3	-1.20758E-10	4.51244E-12	7.38074E-11	4.51212E-10	2.61288E-09	7.00223E-10
68	150313-3	-9.80086E-12	2.00211E-12	-4.05548E-13	-9.45445E-12	1.42769E-10	1.14403E-10
69	150314-3	-6.07068E-12	5.32777E-16	-8.03796E-13	9.36251E-13	9.51528E-11	1.94811E-11
70	160301-1	8.78266E-13	1.02320E-11	3.59932E-13	-5.40469E-10	-4.14814E-11	1.80395E-10
71	160301-2	3.28809E-12	-6.23955E-12	-1.41571E-11	2.71346E-10	2.72312E-10	1.41793E-10
72	160302-1	5.02829E-12	2.67201E-11	-9.62222E-13	-7.79952E-10	6.90610E-11	2.02724E-10
73	160303-2	3.38543E-13	4.37393E-12	-7.83379E-12	4.68339E-11	2.06319E-10	8.02999E-11
74	160311-3	-2.10123E-11	-8.74434E-12	-3.71210E-12	1.25607E-10	-1.44739E-11	-3.89059E-10
75	160312-3	-3.16800E-11	-1.45458E-11	-3.84091E-12	4.26087E-10	-3.56464E-10	-7.30381E-10
76	160313-3	-6.96880E-12	3.77302E-14	-9.54789E-13	-8.29704E-13	6.92588E-11	-1.85934E-11
77	160314-3	-5.09019E-12	3.78057E-14	-7.23014E-13	-2.53599E-13	-3.92853E-11	-6.56626E-11
78	170301-1	-4.09202E-12	-1.28597E-11	-6.84369E-13	3.41762E-10	2.01196E-11	-2.10200E-10
79	170301-2	2.48850E-12	1.27069E-12	1.50623E-11	1.98843E-10	-2.29356E-10	-5.38656E-11
80	170302-1	-1.77870E-12	-2.59217E-11	3.51461E-12	6.24444E-10	-5.58618E-11	-1.19937E-10
81	170303-2	-3.64474E-13	-6.15014E-12	9.40248E-12	2.60567E-10	-1.71085E-10	6.20293E-12
82	170311-3	-1.52804E-11	3.34877E-12	-7.01781E-13	-7.77812E-11	-1.24004E-10	2.71344E-10
83	170312-3	-1.46071E-11	5.18581E-12	-1.62577E-12	-9.02908E-11	7.40918E-11	2.41994E-10
84	170313-3	-9.38103E-12	-8.38045E-13	-1.26460E-12	1.17670E-11	-4.88531E-11	3.15571E-11
85	170314-3	-7.29794E-12	-8.30724E-14	-1.27817E-12	4.92963E-12	4.62148E-11	4.11013E-11
	Total:	-1.34315E-14	8.25728E-16	-1.55041E-14	-1.27169E-10	-4.26387E-13	-3.19801E-11

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 27

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

	Dir	DOF	GRID-C	Max. Force
T1	-	57	111885-1	-5.86073E-10
T2	-	1	1271-2	3.95931E-10
T3	-	56	111869-3	2.50117E-10
R1	-	1	1271-2	-1.13115E-08
R2	-	58	111885-3	-1.24086E-08
R3	-	61	113385-3	-5.70877E-09

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 28

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	1271-2	3.22804E-09	2.72986E+03	-3.21017E-09	3.05427E-01	-7.46545E-10	-1.31287E-09
56	111869-3	1.02324E+03	1.86120E+01	8.47172E+01	-1.91843E+01	-1.29220E+02	2.23796E+01
57	111885-1	1.56261E+03	3.74612E+01	4.24926E-09	-1.83969E+00	4.35813E+00	1.47633E+02
58	111885-3	-1.02324E+03	1.14017E+03	1.32519E+03	-1.39712E+02	1.29235E+02	-2.05357E+01
59	113369-3	1.01880E+03	-1.86120E+01	7.80447E+01	1.91806E+01	-1.20120E+02	-4.13794E+01
60	113385-1	1.47266E+03	-3.74612E+01	5.21651E-09	1.83969E+00	-4.01853E+00	-1.48858E+02
61	113385-3	-1.01880E+03	-1.14017E+03	1.24191E+03	1.38614E+02	1.20106E+02	3.95355E+01
	Total:	3.03526E+03	2.72986E+03	2.72986E+03	2.97901E+04	1.07989E+04	2.78737E+04

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 29

UNCONSTRAINED REAL EIGENVALUES

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-7.139930E-07	8.449811E-04	1.344829E-04	51	1.977656E+06	1.406292E+03	2.238183E+02
2	-3.916405E-07	6.258119E-04	9.960106E-05	52	2.073031E+06	1.439803E+03	2.291517E+02
3	-1.527961E-07	3.908915E-04	6.221231E-05	53	2.169686E+06	1.472985E+03	2.344329E+02
4	6.913419E-08	2.629338E-04	4.184722E-05	54	2.356799E+06	1.535187E+03	2.443326E+02
5	2.549907E-07	5.049660E-04	8.036784E-05	55	2.515061E+06	1.585894E+03	2.524029E+02
6	5.219237E-07	7.224429E-04	1.149804E-04	56	2.682463E+06	1.637823E+03	2.606676E+02
7	1.610445E+04	1.269033E+02	2.019729E+01	57	2.848508E+06	1.687752E+03	2.686141E+02
8	1.978910E+04	1.406737E+02	2.238892E+01	58	2.977974E+06	1.725681E+03	2.746506E+02
9	4.098809E+04	2.024552E+02	3.222174E+01	59	3.242736E+06	1.800760E+03	2.865998E+02
10	4.795580E+04	2.189881E+02	3.485304E+01	60	3.318321E+06	1.821626E+03	2.899207E+02
11	7.917609E+04	2.813825E+02	4.478341E+01	61	3.649740E+06	1.910429E+03	3.040542E+02
12	9.995165E+04	3.161513E+02	5.031704E+01	62	3.758654E+06	1.938725E+03	3.085576E+02
13	1.685946E+05	4.106027E+02	6.534945E+01	63	4.099951E+06	2.024833E+03	3.222623E+02
14	1.957894E+05	4.424809E+02	7.042303E+01	64	4.274287E+06	2.067435E+03	3.290425E+02
15	2.246740E+05	4.739979E+02	7.543911E+01	65	4.778184E+06	2.185906E+03	3.478977E+02
16	2.707462E+05	5.203328E+02	8.281353E+01	66	4.875939E+06	2.208153E+03	3.514384E+02
17	3.027150E+05	5.501954E+02	8.756631E+01	67	5.208435E+06	2.282200E+03	3.632234E+02
18	3.617292E+05	6.014393E+02	9.572204E+01	68	5.680425E+06	2.383364E+03	3.793242E+02
19	4.129947E+05	6.426467E+02	1.022804E+02	69	6.106935E+06	2.471221E+03	3.933071E+02
20	4.962071E+05	7.044197E+02	1.121119E+02	70	6.311218E+06	2.512214E+03	3.998312E+02
21	5.077993E+05	7.126004E+02	1.134139E+02	71	6.576284E+06	2.564427E+03	4.081412E+02
22	5.135723E+05	7.166396E+02	1.140567E+02	72	6.736240E+06	2.595427E+03	4.130750E+02
23	5.227514E+05	7.230155E+02	1.150715E+02	73	7.240726E+06	2.690860E+03	4.282636E+02
24	6.708772E+05	8.190709E+02	1.303592E+02	74	7.581014E+06	2.753364E+03	4.382115E+02
25	7.151863E+05	8.456869E+02	1.345953E+02	75	8.026943E+06	2.833186E+03	4.509156E+02
26	7.237263E+05	8.507210E+02	1.353965E+02	76	8.707498E+06	2.950847E+03	4.696419E+02
27	7.656797E+05	8.750313E+02	1.392655E+02	77	9.153741E+06	3.025515E+03	4.815257E+02
28	8.025390E+05	8.958454E+02	1.425782E+02	78	9.656843E+06	3.107546E+03	4.945813E+02
29	8.346189E+05	9.135748E+02	1.453999E+02	79	9.817432E+06	3.133278E+03	4.986767E+02
30	8.732068E+05	9.344554E+02	1.487232E+02	80	1.010784E+07	3.179282E+03	5.059985E+02
31	8.909641E+05	9.439089E+02	1.502278E+02	81	1.033285E+07	3.214476E+03	5.115997E+02
32	8.967459E+05	9.469667E+02	1.507144E+02	82	1.100657E+07	3.317616E+03	5.280149E+02
33	9.543614E+05	9.769142E+02	1.554807E+02	83	1.127061E+07	3.357174E+03	5.343108E+02
34	1.000024E+06	1.000012E+03	1.591569E+02	84	1.199035E+07	3.462708E+03	5.511071E+02
35	1.041274E+06	1.020428E+03	1.624062E+02	85	1.239597E+07	3.520790E+03	5.603512E+02
36	1.077608E+06	1.038079E+03	1.652154E+02	86	1.267906E+07	3.560766E+03	5.667136E+02
37	1.127035E+06	1.061619E+03	1.689619E+02	87	1.310096E+07	3.619525E+03	5.760654E+02
38	1.138316E+06	1.066919E+03	1.698054E+02	88	1.382932E+07	3.718780E+03	5.918622E+02
39	1.173909E+06	1.083471E+03	1.724397E+02	89	1.397992E+07	3.738973E+03	5.950761E+02
40	1.214781E+06	1.102171E+03	1.754159E+02	90	1.458264E+07	3.818722E+03	6.077685E+02
41	1.226466E+06	1.107459E+03	1.762576E+02	91	1.484366E+07	3.852747E+03	6.131837E+02
42	1.316237E+06	1.147274E+03	1.825943E+02	92	1.581368E+07	3.976642E+03	6.329022E+02
43	1.363741E+06	1.167793E+03	1.858601E+02	93	1.695092E+07	4.117149E+03	6.552646E+02
44	1.432507E+06	1.196874E+03	1.904884E+02	94	1.729338E+07	4.158531E+03	6.618508E+02
45	1.462660E+06	1.209405E+03	1.924827E+02	95	1.840324E+07	4.289899E+03	6.827587E+02
46	1.539596E+06	1.240805E+03	1.974802E+02	96	1.914319E+07	4.375293E+03	6.963496E+02
47	1.642429E+06	1.281573E+03	2.039687E+02	97	1.958716E+07	4.425739E+03	7.043782E+02
48	1.663513E+06	1.289772E+03	2.052737E+02	98	2.131245E+07	4.616540E+03	7.347452E+02
49	1.766274E+06	1.329012E+03	2.115189E+02	99	2.194232E+07	4.684263E+03	7.455237E+02
50	1.798713E+06	1.341161E+03	2.134524E+02	100	2.300530E+07	4.796385E+03	7.633683E+02

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 30

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
101	2.354704E+07	4.852529E+03	7.723040E+02
102	2.495388E+07	4.995386E+03	7.950404E+02
103	2.543263E+07	5.043077E+03	8.026306E+02
104	2.599595E+07	5.098622E+03	8.114709E+02
105	2.818895E+07	5.309327E+03	8.450056E+02
106	2.937139E+07	5.419538E+03	8.625463E+02
107	3.052797E+07	5.525212E+03	8.793649E+02
108	3.138921E+07	5.602608E+03	8.916827E+02
109	3.234638E+07	5.687388E+03	9.051759E+02
110	3.429157E+07	5.855901E+03	9.319955E+02
111	3.556234E+07	5.963417E+03	9.491073E+02
112	3.774442E+07	6.143648E+03	9.777920E+02
113	3.921202E+07	6.261950E+03	9.966204E+02
114	4.132230E+07	6.428242E+03	1.023087E+03
115	4.462912E+07	6.680503E+03	1.063235E+03
116	4.563814E+07	6.755600E+03	1.075187E+03
117	4.701283E+07	6.856590E+03	1.091260E+03
118	4.863872E+07	6.974146E+03	1.109970E+03
119	5.108116E+07	7.147108E+03	1.137498E+03
120	5.288291E+07	7.272063E+03	1.157385E+03
121	5.767354E+07	7.594309E+03	1.208672E+03
122	6.214736E+07	7.883360E+03	1.254676E+03
123	6.598046E+07	8.122835E+03	1.292789E+03
124	7.413579E+07	8.610214E+03	1.370358E+03
125	7.524020E+07	8.674111E+03	1.380528E+03
126	8.113717E+07	9.007617E+03	1.433607E+03
127	8.607152E+07	9.277474E+03	1.476556E+03
128	9.122838E+07	9.551355E+03	1.520145E+03
129	9.283876E+07	9.635287E+03	1.533504E+03
130	9.583961E+07	9.789771E+03	1.558090E+03
131	1.017508E+08	1.008716E+04	1.605421E+03
132	1.116652E+08	1.056718E+04	1.681819E+03
133	1.452514E+08	1.205203E+04	1.918140E+03
134	1.767600E+08	1.329511E+04	2.115983E+03
135	1.863830E+08	1.365221E+04	2.172817E+03

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 31

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1	3.831388E+03	6.189820E+01	9.851405E+00	51	2.549447E+06	1.596699E+03	2.541225E+02
2	1.049796E+04	1.024596E+02	1.630695E+01	52	2.791065E+06	1.670648E+03	2.658919E+02
3	1.064281E+04	1.031640E+02	1.641906E+01	53	2.861594E+06	1.691625E+03	2.692304E+02
4	3.946589E+04	1.986602E+02	3.161776E+01	54	3.000871E+06	1.732302E+03	2.757044E+02
5	5.732615E+04	2.394288E+02	3.810628E+01	55	3.199907E+06	1.788828E+03	2.847009E+02
6	6.304159E+04	2.510808E+02	3.996076E+01	56	3.321200E+06	1.822416E+03	2.900465E+02
7	7.112293E+04	2.666888E+02	4.244484E+01	57	3.725430E+06	1.930137E+03	3.071909E+02
8	7.648980E+04	2.765679E+02	4.401715E+01	58	4.262825E+06	2.064661E+03	3.286010E+02
9	1.234124E+05	3.513010E+02	5.591129E+01	59	4.546372E+06	2.132222E+03	3.393537E+02
10	1.836668E+05	4.285637E+02	6.820803E+01	60	4.754574E+06	2.180499E+03	3.470371E+02
11	1.939840E+05	4.404361E+02	7.009759E+01	61	5.188052E+06	2.277730E+03	3.625119E+02
12	2.319020E+05	4.815620E+02	7.664297E+01	62	5.528928E+06	2.351367E+03	3.742317E+02
13	2.473247E+05	4.973175E+02	7.915054E+01	63	5.707045E+06	2.388942E+03	3.802120E+02
14	3.160593E+05	5.621915E+02	8.947556E+01	64	6.199946E+06	2.489969E+03	3.962909E+02
15	3.620567E+05	6.017115E+02	9.576536E+01	65	6.287602E+06	2.507509E+03	3.990825E+02
16	3.711333E+05	6.092071E+02	9.695832E+01	66	6.721028E+06	2.592494E+03	4.126083E+02
17	3.850306E+05	6.205083E+02	9.875697E+01	67	6.993023E+06	2.644433E+03	4.208745E+02
18	4.328073E+05	6.578809E+02	1.047050E+02	68	7.370182E+06	2.714808E+03	4.320751E+02
19	4.787776E+05	6.919376E+02	1.101253E+02	69	7.743988E+06	2.782802E+03	4.428967E+02
20	5.149663E+05	7.176115E+02	1.142114E+02	70	8.698936E+06	2.949396E+03	4.694109E+02
21	5.185630E+05	7.201132E+02	1.146096E+02	71	9.131246E+06	3.021795E+03	4.809336E+02
22	5.414071E+05	7.358037E+02	1.171068E+02	72	9.252291E+06	3.041758E+03	4.841108E+02
23	5.760889E+05	7.590052E+02	1.207994E+02	73	9.753690E+06	3.123090E+03	4.970552E+02
24	7.307694E+05	8.548505E+02	1.360537E+02	74	1.006560E+07	3.172634E+03	5.049403E+02
25	7.573555E+05	8.702617E+02	1.385065E+02	75	1.063414E+07	3.261003E+03	5.190047E+02
26	8.040413E+05	8.966835E+02	1.427116E+02	76	1.097344E+07	3.312618E+03	5.272196E+02
27	8.280208E+05	9.099565E+02	1.448241E+02	77	1.109175E+07	3.330428E+03	5.300541E+02
28	8.754508E+05	9.356553E+02	1.489142E+02	78	1.171776E+07	3.423121E+03	5.448066E+02
29	8.920489E+05	9.444834E+02	1.503192E+02	79	1.211968E+07	3.481332E+03	5.540713E+02
30	9.036316E+05	9.505954E+02	1.512920E+02	80	1.274803E+07	3.570438E+03	5.682529E+02
31	9.404610E+05	9.697737E+02	1.543443E+02	81	1.344183E+07	3.666310E+03	5.835114E+02
32	1.019622E+06	1.009764E+03	1.607089E+02	82	1.364593E+07	3.694040E+03	5.879247E+02
33	1.062825E+06	1.030934E+03	1.640783E+02	83	1.401865E+07	3.744149E+03	5.958998E+02
34	1.096420E+06	1.047101E+03	1.666512E+02	84	1.433522E+07	3.786188E+03	6.025906E+02
35	1.129768E+06	1.062906E+03	1.691667E+02	85	1.544980E+07	3.930624E+03	6.255782E+02
36	1.174149E+06	1.083582E+03	1.724574E+02	86	1.660111E+07	4.074446E+03	6.484682E+02
37	1.225788E+06	1.107153E+03	1.762089E+02	87	1.667500E+07	4.083503E+03	6.499097E+02
38	1.299603E+06	1.140001E+03	1.814368E+02	88	1.810677E+07	4.255205E+03	6.772369E+02
39	1.360981E+06	1.166611E+03	1.856719E+02	89	1.834347E+07	4.282927E+03	6.816491E+02
40	1.379259E+06	1.174419E+03	1.869145E+02	90	1.934080E+07	4.397818E+03	6.999344E+02
41	1.404367E+06	1.185060E+03	1.886081E+02	91	2.065403E+07	4.544671E+03	7.233068E+02
42	1.472783E+06	1.213583E+03	1.931477E+02	92	2.191039E+07	4.680854E+03	7.449811E+02
43	1.582210E+06	1.257859E+03	2.001946E+02	93	2.296019E+07	4.791679E+03	7.626195E+02
44	1.621901E+06	1.273539E+03	2.026900E+02	94	2.339622E+07	4.836964E+03	7.698267E+02
45	1.687219E+06	1.298930E+03	2.067311E+02	95	2.460267E+07	4.960108E+03	7.894257E+02
46	1.700575E+06	1.304061E+03	2.075477E+02	96	2.535640E+07	5.035514E+03	8.014269E+02
47	1.756966E+06	1.325506E+03	2.109608E+02	97	2.590337E+07	5.089535E+03	8.100246E+02
48	1.788110E+06	1.337202E+03	2.128224E+02	98	2.812367E+07	5.303175E+03	8.440266E+02
49	1.834774E+06	1.354538E+03	2.155814E+02	99	2.927695E+07	5.410818E+03	8.611585E+02
50	1.859436E+06	1.363611E+03	2.170255E+02	100	3.008132E+07	5.484644E+03	8.729083E+02

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 32

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
101	3.096726E+07	5.564824E+03	8.856692E+02
102	3.227152E+07	5.680803E+03	9.041279E+02
103	3.383245E+07	5.816567E+03	9.257354E+02
104	3.503025E+07	5.918636E+03	9.419801E+02
105	3.725200E+07	6.103441E+03	9.713928E+02
106	3.880274E+07	6.229184E+03	9.914055E+02
107	4.114641E+07	6.414547E+03	1.020907E+03
108	4.447335E+07	6.668834E+03	1.061378E+03
109	4.546793E+07	6.742991E+03	1.073180E+03
110	4.652201E+07	6.820704E+03	1.085549E+03
111	4.830186E+07	6.949954E+03	1.106120E+03
112	5.090095E+07	7.134490E+03	1.135489E+03
113	5.276593E+07	7.264016E+03	1.156104E+03
114	5.764004E+07	7.592104E+03	1.208321E+03
115	6.118782E+07	7.822265E+03	1.244952E+03
116	6.555947E+07	8.096880E+03	1.288659E+03
117	7.404137E+07	8.604729E+03	1.369485E+03
118	7.450385E+07	8.631561E+03	1.373756E+03
119	8.098496E+07	8.999164E+03	1.432261E+03
120	8.599015E+07	9.273087E+03	1.475858E+03
121	9.117705E+07	9.548668E+03	1.519718E+03
122	9.281459E+07	9.634033E+03	1.533304E+03
123	9.578366E+07	9.786913E+03	1.557636E+03
124	1.016866E+08	1.008398E+04	1.604915E+03
125	1.115076E+08	1.055972E+04	1.680631E+03
126	1.451776E+08	1.204897E+04	1.917653E+03
127	1.765607E+08	1.328761E+04	2.114790E+03
128	1.863084E+08	1.364948E+04	2.172383E+03

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 33

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	9.851405E+00	46.93%	0.01%	0.02%	0.00%	46.78%	0.10%
2	1.630695E+01	8.93%	57.95%	0.00%	0.56%	11.95%	0.04%
3	1.641906E+01	12.68%	39.23%	0.03%	0.36%	18.53%	0.19%
4	3.161776E+01	0.06%	1.32%	0.08%	0.79%	0.07%	4.63%
5	3.810628E+01	7.25%	0.00%	5.52%	0.01%	1.94%	0.02%
6	3.996076E+01	0.78%	0.00%	61.95%	0.00%	1.82%	0.09%
7	4.244484E+01	0.00%	0.01%	16.17%	0.08%	0.59%	3.93%
8	4.401715E+01	0.27%	0.01%	2.72%	0.00%	0.82%	19.71%
9	5.591129E+01	0.18%	0.06%	0.04%	1.28%	0.01%	30.05%
10	6.820803E+01	0.50%	0.07%	0.83%	6.17%	0.31%	8.74%
11	7.009759E+01	0.00%	0.02%	0.07%	16.60%	0.02%	0.06%
12	7.664297E+01	1.29%	0.54%	0.05%	47.28%	0.04%	0.45%
13	7.915054E+01	9.57%	0.07%	0.14%	4.33%	1.52%	1.65%
14	8.947556E+01	0.11%	0.05%	0.40%	1.38%	0.49%	4.18%
15	9.576536E+01	1.32%	0.01%	0.18%	0.12%	1.45%	0.00%
16	9.695832E+01	4.64%	0.00%	0.59%	0.25%	7.10%	0.05%
17	9.875697E+01	0.06%	0.00%	2.21%	2.58%	0.05%	0.12%
18	1.047050E+02	0.06%	0.01%	0.31%	0.65%	0.02%	10.87%
19	1.101253E+02	0.03%	0.00%	0.46%	0.14%	0.01%	0.61%
20	1.142114E+02	0.05%	0.00%	0.01%	0.21%	0.12%	0.10%
21	1.146096E+02	0.00%	0.02%	0.14%	0.32%	0.01%	0.07%
22	1.171068E+02	0.01%	0.00%	0.06%	1.00%	0.01%	0.85%
23	1.207994E+02	0.00%	0.02%	0.63%	0.56%	0.08%	0.14%
24	1.360537E+02	0.00%	0.00%	0.14%	0.00%	0.02%	0.02%
25	1.385065E+02	0.00%	0.00%	0.09%	0.02%	0.01%	0.07%
26	1.427116E+02	0.02%	0.00%	0.02%	0.42%	0.07%	0.04%
27	1.448241E+02	0.04%	0.00%	0.12%	0.22%	0.06%	0.01%
28	1.489142E+02	0.03%	0.00%	0.01%	0.03%	0.03%	0.20%
29	1.503192E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	1.512920E+02	0.06%	0.00%	0.17%	0.26%	0.08%	0.20%
31	1.543443E+02	0.03%	0.00%	0.72%	0.41%	0.06%	0.15%
32	1.607089E+02	0.00%	0.00%	0.18%	0.03%	0.03%	0.04%
33	1.640783E+02	0.00%	0.00%	0.01%	0.10%	0.00%	0.31%
34	1.666512E+02	0.11%	0.00%	0.00%	1.00%	0.21%	0.29%
35	1.691667E+02	0.01%	0.00%	0.00%	0.04%	0.00%	0.02%
36	1.724574E+02	0.07%	0.00%	0.06%	0.08%	0.02%	0.01%
37	1.762089E+02	0.10%	0.00%	0.22%	0.00%	0.05%	0.03%
38	1.814368E+02	0.01%	0.00%	0.22%	0.65%	0.00%	0.41%
39	1.856719E+02	0.01%	0.00%	0.00%	0.07%	0.01%	0.14%
40	1.869145E+02	0.05%	0.00%	0.02%	0.01%	0.03%	0.66%
41	1.886081E+02	0.30%	0.00%	0.00%	0.07%	0.20%	0.09%
42	1.931477E+02	0.02%	0.00%	0.01%	0.05%	0.03%	0.38%
43	2.001946E+02	0.46%	0.00%	0.02%	0.03%	0.50%	0.03%
44	2.026900E+02	0.12%	0.00%	0.01%	0.10%	0.05%	0.04%
45	2.067311E+02	0.64%	0.00%	0.15%	0.03%	0.77%	0.10%
46	2.075477E+02	0.01%	0.00%	0.00%	0.43%	0.00%	0.81%
47	2.109608E+02	0.28%	0.00%	0.02%	0.00%	0.01%	0.28%
48	2.128224E+02	0.00%	0.00%	0.01%	0.02%	0.00%	0.04%
49	2.155814E+02	0.11%	0.00%	0.04%	0.00%	0.04%	0.74%
50	2.170255E+02	0.01%	0.00%	0.15%	0.00%	0.01%	0.00%

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 34

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
51	2.541225E+02	0.00%	0.00%	0.00%	0.00%	0.01%	0.35%
52	2.658919E+02	0.06%	0.00%	0.03%	0.01%	0.06%	0.02%
53	2.692304E+02	0.03%	0.00%	0.02%	0.01%	0.03%	0.02%
54	2.757044E+02	0.01%	0.00%	0.00%	0.15%	0.00%	0.59%
55	2.847009E+02	0.01%	0.00%	0.07%	0.01%	0.03%	0.18%
56	2.900465E+02	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
57	3.071909E+02	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%
58	3.286010E+02	0.01%	0.00%	0.01%	0.01%	0.02%	0.05%
59	3.393537E+02	0.11%	0.00%	0.03%	0.01%	0.14%	0.13%
60	3.470371E+02	0.00%	0.00%	0.02%	0.03%	0.00%	0.00%
61	3.625119E+02	0.01%	0.00%	0.20%	0.01%	0.01%	0.25%
62	3.742317E+02	0.02%	0.00%	0.00%	0.00%	0.01%	0.03%
63	3.802120E+02	0.07%	0.00%	0.01%	0.00%	0.04%	0.20%
64	3.962909E+02	0.01%	0.00%	0.04%	0.07%	0.02%	0.05%
65	3.990825E+02	0.00%	0.00%	0.01%	0.06%	0.00%	0.02%
66	4.126083E+02	0.01%	0.00%	0.04%	0.13%	0.01%	0.03%
67	4.208745E+02	0.06%	0.00%	0.00%	0.00%	0.06%	0.00%
68	4.320751E+02	0.03%	0.00%	0.00%	0.01%	0.00%	0.00%
69	4.428967E+02	0.03%	0.00%	0.05%	0.26%	0.01%	0.02%
70	4.694109E+02	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
71	4.809336E+02	0.07%	0.00%	0.00%	0.04%	0.05%	0.05%
72	4.841108E+02	0.00%	0.00%	0.00%	0.09%	0.00%	0.02%
73	4.970552E+02	0.00%	0.00%	0.00%	0.05%	0.00%	0.02%
74	5.049403E+02	0.01%	0.00%	0.03%	0.01%	0.01%	0.07%
75	5.190047E+02	0.01%	0.00%	0.04%	0.04%	0.00%	0.03%
76	5.272196E+02	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%
77	5.300541E+02	0.02%	0.00%	0.02%	0.01%	0.01%	0.12%
78	5.448066E+02	0.02%	0.00%	0.03%	0.17%	0.02%	0.01%
79	5.540713E+02	0.00%	0.00%	0.00%	0.08%	0.01%	0.00%
80	5.682529E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
81	5.835114E+02	0.02%	0.00%	0.00%	0.06%	0.01%	0.00%
82	5.879247E+02	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
83	5.958998E+02	0.00%	0.00%	0.05%	0.01%	0.00%	0.02%
84	6.025906E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
85	6.255782E+02	0.01%	0.00%	0.01%	0.00%	0.00%	0.01%
86	6.484682E+02	0.01%	0.00%	0.01%	0.01%	0.02%	0.06%
87	6.499097E+02	0.01%	0.00%	0.01%	0.05%	0.01%	0.00%
88	6.772369E+02	0.00%	0.00%	0.01%	0.14%	0.00%	0.08%
89	6.816491E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
90	6.999344E+02	0.00%	0.00%	0.00%	0.02%	0.02%	0.00%
91	7.233068E+02	0.01%	0.00%	0.00%	0.00%	0.02%	0.06%
92	7.449811E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
93	7.626195E+02	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
94	7.698267E+02	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%
95	7.894257E+02	0.00%	0.00%	0.00%	0.02%	0.00%	0.01%
96	8.014269E+02	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
97	8.100246E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
98	8.440266E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
99	8.611585E+02	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%
100	8.729083E+02	0.01%	0.00%	0.00%	0.00%	0.01%	0.05%

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 35

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
101	8.856692E+02	0.01%	0.00%	0.00%	0.00%	0.01%	0.01%
102	9.041279E+02	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
103	9.257354E+02	0.00%	0.00%	0.04%	0.02%	0.00%	0.00%
104	9.419801E+02	0.01%	0.00%	0.02%	0.01%	0.00%	0.00%
105	9.713928E+02	0.00%	0.00%	0.00%	0.03%	0.00%	0.02%
106	9.914055E+02	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
107	1.020907E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
108	1.061378E+03	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
109	1.073180E+03	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
110	1.085549E+03	0.00%	0.00%	0.01%	0.02%	0.00%	0.01%
111	1.106120E+03	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%
112	1.135489E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
113	1.156104E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
114	1.208321E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
115	1.244952E+03	0.00%	0.00%	0.01%	0.05%	0.00%	0.02%
116	1.288659E+03	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%
117	1.369485E+03	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
118	1.373756E+03	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%
119	1.432261E+03	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
120	1.475858E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
121	1.519718E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
122	1.533304E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
123	1.557636E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
124	1.604915E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
125	1.680631E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
126	1.917653E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
127	2.114790E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
128	2.172383E+03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total:		97.94%	99.44%	95.97%	90.71%	96.78%	94.49%

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 36

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.28631E-09	-5.64441E-11	-1.16760E-10	-1.68227E-09	-4.93860E-09	-8.51213E-09
2	Net Load Factor - T2 (g)	-6.53615E-11	-7.59884E-10	3.50799E-11	1.97084E-08	-7.59886E-10	-3.34576E-09
3	Net Load Factor - T3 (g)	-1.29343E-10	3.81415E-11	-1.72535E-09	-3.60597E-09	2.12212E-08	2.70371E-09
4	Net Load Factor - R1 (rad/sec^2)	-1.83976E-10	1.79465E-09	-3.43301E-10	-2.46885E-07	9.22400E-09	6.52195E-08
5	Net Load Factor - R2 (rad/sec^2)	-1.33516E-09	-1.58294E-10	5.35842E-09	1.89629E-08	2.19602E-07	4.78423E-08
6	Net Load Factor - R3 (rad/sec^2)	-8.72224E-10	-2.95218E-10	9.80372E-11	6.46982E-08	1.44090E-08	6.50387E-08
7	ID 1271 - T2 (lbf)	-1.24745E-08	-8.71387E-09	1.32050E-08	-7.49030E-07	3.18401E-07	1.03058E-06
8	ID 6299 - T1 (lbf)	-7.07869E-08	1.45195E-07	-2.68878E-07	5.82021E-06	9.68003E-06	2.40423E-06
9	ID 13067 - T1 (lbf)	-1.97518E-08	2.19857E-08	6.33125E-08	-4.70302E-07	-2.33808E-06	-2.48049E-06
10	ID 13083 - T1 (lbf)	3.98887E-08	-1.71382E-08	6.04595E-08	-5.50779E-07	-2.18781E-06	1.12736E-06
11	ID 13115 - T1 (lbf)	9.51699E-08	-1.67713E-09	1.00495E-07	-6.55709E-08	-5.29457E-06	8.84484E-11
12	ID 13545 - T1 (lbf)	5.13375E-08	6.38892E-08	-2.61152E-07	3.86911E-06	5.96441E-06	6.18025E-06
13	ID 13545 - T2 (lbf)	-6.34130E-08	-2.89263E-07	1.74639E-07	1.69159E-06	-1.74159E-06	1.63003E-06
14	ID 13576 - T1 (lbf)	3.46517E-07	3.33494E-08	7.51436E-09	2.52872E-06	-1.57600E-05	4.11700E-06
15	ID 16250 - T1 (lbf)	-7.76072E-08	-6.85204E-08	-1.14423E-07	-2.43075E-06	3.92621E-06	8.34920E-07
16	ID 16250 - T2 (lbf)	1.48825E-08	-2.16192E-07	-1.91901E-07	-3.68338E-06	4.83306E-06	9.58094E-07
17	ID 23028 - T1 (lbf)	-3.65638E-08	-2.06842E-09	5.30607E-08	-3.03127E-07	-1.40208E-06	2.78396E-06
18	ID 23044 - T1 (lbf)	1.02079E-07	2.69442E-08	7.92270E-08	1.46883E-06	-4.55279E-06	-2.82857E-06
19	ID 23076 - T1 (lbf)	1.17668E-07	-4.93151E-09	1.07850E-07	4.51200E-07	-6.32319E-06	-2.11468E-06
20	ID 23506 - T1 (lbf)	1.03730E-07	-3.63623E-08	-1.20138E-07	-3.45180E-06	-4.25496E-07	-5.50345E-06
21	ID 23537 - T1 (lbf)	3.50551E-07	-1.08625E-07	-1.40187E-09	-6.57051E-06	-1.60477E-05	-5.76636E-06
22	ID 23537 - T2 (lbf)	-1.46485E-08	-1.61021E-07	2.00432E-08	3.60717E-06	-1.33252E-07	7.82150E-06
23	ID 37940 - T1 (lbf)	3.38050E-07	1.26561E-07	6.26314E-08	-6.46177E-06	1.61182E-05	2.01677E-05
24	ID 37940 - T2 (lbf)	-1.50373E-07	-6.64022E-07	5.99207E-08	2.07373E-05	-6.58120E-06	-1.03263E-05
25	ID 38067 - T1 (lbf)	2.58749E-07	-1.35442E-07	2.14190E-08	4.04479E-06	1.18331E-05	1.08700E-05
26	ID 38323 - T1 (lbf)	-3.39585E-08	1.67104E-08	-3.01291E-08	-4.43367E-07	-1.09695E-06	7.10774E-07
27	ID 38323 - T2 (lbf)	-1.14561E-08	-4.73587E-07	4.34011E-09	1.45902E-05	-3.07660E-07	-2.98350E-06
28	ID 45767 - T1 (lbf)	1.29625E-08	-1.83491E-07	1.45519E-10	6.10179E-06	-3.57004E-07	-5.78654E-06
29	ID 45890 - T1 (lbf)	1.47272E-07	3.86545E-08	-2.25191E-09	-1.21893E-06	4.86684E-06	-4.99986E-06
30	ID 45890 - T2 (lbf)	-8.26054E-09	-4.09716E-07	-4.86652E-08	5.37478E-06	7.80440E-07	-3.90720E-06
31	ID 46151 - T1 (lbf)	-5.70960E-08	-7.26743E-09	-1.22091E-08	8.12928E-07	-2.46528E-06	-8.75170E-07
32	ID 53578 - T1 (lbf)	2.19118E-08	3.05959E-08	9.28923E-08	-2.30204E-06	-3.15329E-06	-7.32421E-07
33	ID 53578 - T3 (lbf)	5.70602E-09	-5.05578E-08	-2.75977E-07	9.02356E-06	1.92492E-06	-1.01418E-06
34	ID 53701 - T1 (lbf)	1.33982E-07	-4.51149E-08	1.52963E-07	-1.99844E-06	-4.50518E-06	4.29738E-06
35	ID 53701 - T3 (lbf)	-2.67476E-09	5.48765E-08	-3.28661E-07	6.08216E-06	4.42850E-06	2.15963E-06
36	ID 53956 - T1 (lbf)	-1.09185E-09	-3.43753E-08	2.10763E-07	-1.17222E-06	-4.95507E-06	-4.25815E-07
37	ID 53956 - T3 (lbf)	-6.50334E-08	4.45314E-08	-5.70738E-07	3.01020E-06	1.28695E-05	2.75525E-06
38	ID 61404 - T1 (lbf)	-7.38776E-08	-1.53195E-08	7.54408E-08	-7.06495E-08	-4.36740E-07	4.21124E-06
39	ID 61404 - T3 (lbf)	-4.64794E-08	8.88394E-09	-3.04222E-07	-1.21815E-05	3.90680E-06	2.24736E-06
40	ID 61527 - T1 (lbf)	7.54881E-08	1.95632E-08	1.64577E-07	4.44884E-06	-3.63917E-06	-7.53440E-07
41	ID 61527 - T3 (lbf)	-3.50515E-08	-2.83574E-08	-3.82066E-07	-9.57691E-06	4.64724E-06	-1.54453E-06
42	ID 61788 - T1 (lbf)	5.67306E-08	3.76895E-09	1.98801E-07	1.61387E-06	-5.35508E-06	-1.12382E-06
43	ID 61788 - T3 (lbf)	-9.12380E-08	1.12232E-09	-5.52409E-07	-3.10567E-06	1.27475E-05	3.11731E-07
44	ID 62589 - T1 (lbf)	7.00234E-08	-5.45078E-08	-4.06674E-08	-3.85745E-07	1.41370E-06	-5.87537E-06
45	ID 62774 - T1 (lbf)	1.27525E-07	5.51813E-09	-3.01197E-08	-8.35062E-07	2.72450E-06	-4.87169E-06
46	ID 63043 - T1 (lbf)	7.06384E-08	-1.73932E-08	-4.15703E-08	-1.68826E-06	1.52431E-06	-4.82183E-06
47	ID 63043 - T3 (lbf)	-1.26057E-08	5.72636E-08	-3.31787E-07	-1.65505E-05	2.46329E-06	7.04460E-07
48	ID 63343 - T1 (lbf)	1.33852E-07	-4.60932E-09	-2.92589E-08	-4.96791E-07	1.41732E-06	-5.02454E-06
49	ID 63343 - T3 (lbf)	2.01658E-09	-1.07143E-08	-3.44615E-07	-1.03114E-05	2.54189E-06	-1.91929E-06
50	ID 63345 - T1 (lbf)	9.55806E-08	1.19462E-09	-3.01097E-08	-1.41852E-07	2.36509E-06	-2.05661E-06

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 37

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	ID 63645 - T1 (lbf)	8.40957E-08	9.82766E-10	-2.48220E-08	9.89621E-08	1.86070E-06	1.08706E-06
52	ID 63942 - T1 (lbf)	1.02198E-07	2.40379E-09	-3.74380E-08	3.88900E-08	1.83049E-06	-2.02830E-06
53	ID 63942 - T3 (lbf)	-2.28904E-08	1.38243E-08	-3.79863E-07	-3.56865E-06	6.76786E-06	-3.35102E-07
54	ID 64244 - T1 (lbf)	8.94799E-08	-2.81511E-09	-2.88616E-08	7.17723E-08	1.48578E-06	1.25639E-06
55	ID 64244 - T3 (lbf)	-1.10564E-08	3.65219E-08	-4.16081E-07	2.67826E-06	6.93462E-06	1.75865E-06
56	ID 64246 - T1 (lbf)	1.27698E-07	9.46739E-09	-3.30780E-08	8.41489E-07	9.89487E-07	4.58146E-06
57	ID 64540 - T1 (lbf)	2.23856E-10	1.09047E-07	-3.23207E-08	-1.62428E-06	-1.34073E-06	1.42236E-06
58	ID 64814 - T1 (lbf)	1.59647E-07	-2.73866E-09	-4.86315E-09	1.74961E-07	7.21133E-07	6.02349E-06
59	ID 64814 - T3 (lbf)	1.04889E-08	1.12532E-07	-3.62508E-07	5.66514E-06	2.06442E-06	1.24580E-06
60	ID 65003 - T1 (lbf)	2.72328E-08	5.88179E-08	-1.59221E-08	-6.81327E-07	-5.29272E-07	1.36589E-06
61	ID 65003 - T3 (lbf)	-2.00621E-08	-1.27538E-07	-3.50021E-07	1.85185E-05	-1.19618E-06	-2.05722E-06
62	ID 111869 - T3 (lbf)	-7.89666E-08	-7.14914E-08	-7.62476E-08	9.79576E-06	2.41132E-06	-9.07117E-06
63	ID 111885 - T1 (lbf)	-2.21136E-07	-4.73421E-07	-3.57018E-09	1.52060E-05	-3.95502E-06	-3.40074E-05
64	ID 111885 - T3 (lbf)	4.52442E-08	3.75580E-08	-8.28334E-08	-1.36090E-06	1.72615E-06	3.19171E-06
65	ID 113369 - T3 (lbf)	-1.26782E-08	5.35474E-08	-6.54074E-08	-8.14966E-06	2.03662E-06	3.12691E-06
66	ID 113385 - T1 (lbf)	1.57793E-08	2.12317E-07	-1.18582E-08	-8.79045E-06	9.98796E-07	6.74742E-06
67	ID 113385 - T3 (lbf)	-3.98022E-08	-2.16153E-08	-1.59328E-07	-3.58979E-06	1.61643E-06	1.97125E-06
68	ID 150301 - T1 (lbf)	-9.62177E-08	-9.85588E-08	-3.35741E-07	-5.33003E-06	1.26270E-05	-1.53192E-06
69	ID 150301 - T2 (lbf)	8.06250E-09	-9.74414E-08	2.89335E-08	-8.04615E-06	-3.80988E-07	2.82026E-06
70	ID 150302 - T1 (lbf)	1.08786E-07	4.51334E-08	-2.86046E-07	3.67283E-07	4.87299E-07	1.75150E-06
71	ID 150303 - T2 (lbf)	-4.49169E-08	3.89655E-08	-4.46715E-08	-3.38841E-06	1.28432E-06	1.54108E-06
72	ID 150311 - T3 (lbf)	-1.26061E-07	7.07468E-08	3.93781E-07	6.25928E-06	-7.04837E-06	9.55437E-06
73	ID 150312 - T3 (lbf)	-4.32386E-07	-8.55965E-09	3.09038E-07	-2.83718E-07	1.03666E-05	-2.27039E-06
74	ID 150313 - T3 (lbf)	-9.30677E-08	2.88063E-08	-2.93965E-08	-4.72794E-07	1.28896E-06	2.63323E-06
75	ID 150314 - T3 (lbf)	-3.78734E-08	-1.35842E-08	-1.12388E-08	-2.78244E-07	6.17541E-07	1.21493E-07
76	ID 160301 - T1 (lbf)	-4.95852E-08	-2.81368E-07	-1.76819E-08	-1.26097E-06	-2.84563E-07	2.18556E-06
77	ID 160301 - T2 (lbf)	5.69236E-08	-8.66976E-08	-9.14511E-08	2.10553E-06	1.21454E-06	4.10560E-06
78	ID 160302 - T1 (lbf)	-7.41248E-08	2.18110E-07	4.71232E-09	-7.83186E-06	-2.48402E-06	-3.06473E-06
79	ID 160303 - T2 (lbf)	-6.84241E-09	3.47062E-08	-7.54217E-08	2.08246E-06	3.13333E-07	-5.07502E-07
80	ID 160311 - T3 (lbf)	-3.81689E-08	-6.57551E-08	-4.57121E-09	-5.92845E-07	5.76672E-07	-1.23404E-06
81	ID 160312 - T3 (lbf)	-1.27578E-07	-2.07805E-07	-1.62574E-08	7.43212E-06	-4.25869E-06	-9.73107E-06
82	ID 160313 - T3 (lbf)	2.77566E-08	4.41531E-09	-1.08287E-08	-3.59770E-07	1.66768E-07	1.52559E-06
83	ID 160314 - T3 (lbf)	1.59300E-09	2.26322E-10	7.54597E-09	-9.67172E-08	3.38988E-07	1.10332E-07
84	ID 170301 - T1 (lbf)	-3.38546E-08	2.43119E-07	2.11585E-08	-8.44058E-06	-9.16173E-07	-3.21360E-06
85	ID 170301 - T2 (lbf)	2.21430E-08	5.52827E-08	9.77743E-08	2.01329E-06	-7.64233E-07	-9.57472E-07
86	ID 170302 - T1 (lbf)	-5.93893E-08	-2.16154E-07	1.41881E-08	6.30971E-08	-1.91189E-07	3.35926E-06
87	ID 170303 - T2 (lbf)	-6.80029E-09	-4.55766E-08	8.42556E-08	3.08733E-06	-8.48751E-07	5.62199E-07
88	ID 170311 - T3 (lbf)	-1.42753E-07	6.86214E-09	-3.78168E-09	-5.77304E-07	-3.96215E-06	6.62401E-06
89	ID 170312 - T3 (lbf)	-1.65605E-07	7.69214E-08	-3.54112E-09	1.38389E-08	1.56901E-07	6.91747E-06
90	ID 170313 - T3 (lbf)	9.55970E-09	-6.05451E-09	1.15015E-08	-2.77301E-07	3.36586E-07	-5.93020E-07
91	ID 170314 - T3 (lbf)	-1.58907E-08	-4.08409E-09	-1.29335E-08	-1.56011E-07	-4.98403E-08	3.44589E-07
92	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
93	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
94	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
95	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
96	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
97	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 38

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	2.12790E-12	1.52663E-12	2.89508E-14	5.41233E-12	3.26101E-13
2	Net Load Factor - T2 (g)	1.05482E-12	1.00000E+00	-1.06734E-12	-4.66737E-13	-2.91503E-13	-3.24563E-13
3	Net Load Factor - T3 (g)	2.52749E-11	-1.99128E-12	1.00000E+00	3.93635E-14	-4.02471E-12	-3.58788E-13
4	Net Load Factor - R1 (rad/sec^2)	2.81870E-11	-7.23921E-11	2.48677E-12	1.00000E+00	-2.60908E-12	-3.46728E-13
5	Net Load Factor - R2 (rad/sec^2)	2.96413E-10	6.54073E-12	-4.11951E-11	-3.79785E-13	1.00000E+00	-4.35119E-12
6	Net Load Factor - R3 (rad/sec^2)	1.91227E-11	1.85258E-11	-2.04635E-12	-6.39060E-13	-4.33392E-12	1.00000E+00
7	ID 1271 - T2 (lbf)	3.22804E-09	2.72986E+03	-3.21017E-09	3.05427E-01	-7.46545E-10	-1.31287E-09
8	ID 6299 - T1 (lbf)	2.10036E-11	2.06768E-12	5.50671E-13	-8.74856E-14	-2.23466E-12	-1.93623E-13
9	ID 13067 - T1 (lbf)	-4.60076E-12	-7.14984E-13	-9.58789E-13	-2.39808E-14	-9.40803E-13	3.01981E-13
10	ID 13083 - T1 (lbf)	-1.36655E-11	3.16192E-13	-2.96652E-13	-2.97540E-14	5.93414E-13	-1.97842E-13
11	ID 13115 - T1 (lbf)	1.33547E-11	-5.62994E-13	-6.07514E-13	3.45279E-14	-8.06022E-14	1.92790E-13
12	ID 13545 - T1 (lbf)	-2.32063E-11	-1.25233E-12	4.44089E-13	7.06102E-14	3.26139E-12	1.27898E-13
13	ID 13545 - T2 (lbf)	-3.42126E-12	-5.96856E-12	-6.82121E-13	2.41585E-13	1.12799E-12	-7.12763E-14
14	ID 13576 - T1 (lbf)	1.68967E-11	-5.87974E-13	6.25278E-13	-7.99361E-15	-2.15294E-12	9.84768E-14
15	ID 16250 - T1 (lbf)	-1.14113E-11	1.35003E-12	-2.80664E-13	-6.39488E-14	-1.77103E-12	-2.71783E-13
16	ID 16250 - T2 (lbf)	1.73728E-12	7.61702E-12	-5.68434E-14	-6.07514E-13	-8.73079E-13	-2.41140E-13
17	ID 23028 - T1 (lbf)	-1.76499E-11	-4.09006E-13	1.65201E-13	-3.37508E-14	1.11777E-12	4.01457E-13
18	ID 23044 - T1 (lbf)	1.91491E-12	7.97584E-13	-1.11910E-13	1.19682E-13	8.13575E-13	1.06581E-14
19	ID 23076 - T1 (lbf)	-1.61116E-12	-9.59233E-14	8.08242E-13	6.55032E-15	-8.97726E-13	6.76126E-14
20	ID 23506 - T1 (lbf)	1.58877E-11	-1.55609E-12	-7.17870E-13	-3.41949E-14	3.52429E-12	5.56888E-13
21	ID 23537 - T1 (lbf)	-3.22444E-11	-4.61853E-14	1.14131E-13	-1.46549E-14	1.28964E-12	-1.41887E-13
22	ID 23537 - T2 (lbf)	5.53602E-12	1.07434E-11	6.48814E-13	3.73035E-13	-2.05946E-13	1.95843E-13
23	ID 37940 - T1 (lbf)	3.49587E-12	-2.70006E-13	-2.36255E-13	-1.42109E-14	-4.54747E-13	-7.10543E-14
24	ID 37940 - T2 (lbf)	-6.62226E-12	1.82467E-11	3.05533E-13	-6.39488E-14	1.82965E-13	1.24345E-13
25	ID 38067 - T1 (lbf)	-3.70903E-12	1.44240E-12	1.11910E-13	-1.15463E-14	3.80140E-13	2.68230E-13
26	ID 38323 - T1 (lbf)	-8.10019E-12	4.37916E-12	5.24025E-13	-1.07622E-13	-1.13687E-13	-1.61982E-13
27	ID 38323 - T2 (lbf)	3.38840E-12	-2.25100E-11	-2.12275E-13	2.30926E-13	-2.70894E-14	-8.93730E-14
28	ID 45767 - T1 (lbf)	2.91323E-12	3.97904E-13	-8.02025E-13	-1.06581E-14	-3.55271E-15	-5.86198E-14
29	ID 45890 - T1 (lbf)	-1.23990E-12	1.32161E-12	1.26454E-12	-4.47420E-14	-2.37588E-14	1.58762E-14
30	ID 45890 - T2 (lbf)	1.68399E-12	7.38964E-12	-2.91323E-13	-2.62901E-13	-1.43441E-13	3.28626E-14
31	ID 46151 - T1 (lbf)	7.96163E-12	-4.84945E-12	-3.40172E-13	1.45606E-13	7.79821E-13	-6.15064E-14
32	ID 53578 - T1 (lbf)	-1.29319E-11	6.73239E-13	-1.61648E-13	4.15223E-14	1.88494E-12	1.40332E-13
33	ID 53578 - T3 (lbf)	-4.40181E-12	2.33946E-12	-3.89377E-12	-2.06057E-13	7.71050E-13	-2.98928E-14
34	ID 53701 - T1 (lbf)	4.13545E-11	-6.26166E-13	7.17648E-13	6.66134E-15	-2.29816E-12	7.58213E-14
35	ID 53701 - T3 (lbf)	4.18865E-12	-5.32907E-15	-2.58638E-12	1.31450E-13	-1.98508E-13	6.05349E-14
36	ID 53956 - T1 (lbf)	-1.32214E-11	1.55431E-13	5.25802E-13	-4.22162E-14	1.17417E-12	-6.90087E-13
37	ID 53956 - T3 (lbf)	3.86535E-12	7.46236E-13	-7.70228E-12	6.42819E-14	3.60600E-13	-1.68698E-13
38	ID 61404 - T1 (lbf)	-3.32534E-12	-1.06093E-12	3.64153E-14	-7.99517E-14	-1.79856E-13	-3.55271E-13
39	ID 61404 - T3 (lbf)	4.97380E-12	5.47118E-13	-9.37916E-13	1.74083E-13	-8.97060E-14	-2.21767E-14
40	ID 61527 - T1 (lbf)	-2.93188E-12	8.67750E-13	-8.24230E-13	3.01981E-14	-1.99041E-12	4.38538E-15
41	ID 61527 - T3 (lbf)	-1.38911E-12	2.74514E-12	-3.09797E-12	-4.52971E-14	4.23661E-13	1.75415E-14
42	ID 61788 - T1 (lbf)	-1.07718E-11	7.01661E-14	4.36984E-13	1.33227E-15	9.27258E-13	5.02820E-13
43	ID 61788 - T3 (lbf)	3.18323E-12	-1.35181E-12	-7.10543E-13	-1.53211E-13	-2.02505E-13	-7.96030E-14
44	ID 62589 - T1 (lbf)	5.91172E-12	7.17648E-13	-2.04281E-13	4.54636E-14	-1.73195E-14	7.99361E-14
45	ID 62774 - T1 (lbf)	-2.30926E-13	-1.88893E-12	8.56204E-13	9.62563E-14	-3.36398E-14	3.96350E-14
46	ID 63043 - T1 (lbf)	2.26663E-12	5.04485E-13	3.58824E-13	1.28786E-14	-1.15019E-13	1.36779E-13
47	ID 63043 - T3 (lbf)	-3.68594E-12	5.24913E-13	5.11591E-13	-1.77636E-13	5.12923E-14	1.11189E-13
48	ID 63343 - T1 (lbf)	2.64322E-12	-1.44773E-13	-5.64881E-13	-1.23235E-13	2.72338E-13	-1.54654E-13
49	ID 63343 - T3 (lbf)	-8.41993E-13	-1.75415E-12	2.84217E-12	-4.70735E-14	1.84519E-13	-4.35207E-14
50	ID 63345 - T1 (lbf)	1.30669E-11	9.67226E-13	-2.65565E-13	6.05072E-15	-8.10019E-13	7.87148E-14

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 39

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	ID 63645 - T1 (lbf)	5.17986E-12	-1.48459E-12	3.71259E-13	-2.62290E-14	-2.67564E-14	1.44287E-13
52	ID 63942 - T1 (lbf)	-2.31317E-11	-9.57012E-14	-7.69163E-13	8.17402E-15	5.87086E-13	1.54987E-13
53	ID 63942 - T3 (lbf)	-1.70530E-12	4.27214E-13	2.77112E-12	2.07390E-13	-1.58540E-13	2.80331E-14
54	ID 64244 - T1 (lbf)	9.83036E-12	1.06026E-13	-3.73035E-13	8.97893E-15	-1.76525E-14	-1.77726E-13
55	ID 64244 - T3 (lbf)	-1.60227E-12	-6.47482E-13	5.40012E-12	-5.33462E-14	-5.14255E-13	1.59817E-13
56	ID 64246 - T1 (lbf)	8.68638E-13	2.16360E-12	3.19744E-14	-1.78885E-14	-1.21347E-13	-1.99979E-13
57	ID 64540 - T1 (lbf)	2.66454E-12	-6.67910E-13	3.52607E-13	-7.99361E-15	-3.81917E-14	-4.17444E-14
58	ID 64814 - T1 (lbf)	-1.57279E-11	-5.79536E-14	-8.25118E-13	4.21885E-14	3.13749E-13	3.16192E-13
59	ID 64814 - T3 (lbf)	-1.01146E-11	1.42109E-14	-1.16529E-12	-4.35207E-14	4.10005E-13	-6.10623E-15
60	ID 65003 - T1 (lbf)	-5.75540E-12	4.58300E-13	-5.71987E-13	-7.99361E-15	6.69909E-13	-9.76996E-14
61	ID 65003 - T3 (lbf)	1.87050E-12	-6.25278E-13	2.38742E-12	2.13163E-14	-3.99236E-13	3.33067E-15
62	ID 111869 - T3 (lbf)	1.02324E+03	1.86120E+01	8.47172E+01	-1.91843E+01	-1.29220E+02	2.23796E+01
63	ID 111885 - T1 (lbf)	1.56261E+03	3.74612E+01	4.24926E-09	-1.83969E+00	4.35813E+00	1.47633E+02
64	ID 111885 - T3 (lbf)	-1.02324E+03	1.14017E+03	1.32519E+03	-1.39712E+02	1.29235E+02	-2.05357E+01
65	ID 113369 - T3 (lbf)	1.01880E+03	-1.86120E+01	7.80447E+01	1.91806E+01	-1.20120E+02	-4.13794E+01
66	ID 113385 - T1 (lbf)	1.47266E+03	-3.74612E+01	5.21651E-09	1.83969E+00	-4.01853E+00	-1.48858E+02
67	ID 113385 - T3 (lbf)	-1.01880E+03	-1.14017E+03	1.24191E+03	1.38614E+02	1.20106E+02	3.95355E+01
68	ID 150301 - T1 (lbf)	4.07852E-12	-9.14824E-13	-5.11591E-13	-7.46070E-14	-1.74083E-13	4.06342E-14
69	ID 150301 - T2 (lbf)	-1.67510E-12	3.12639E-12	-2.70006E-13	9.23706E-14	1.68865E-13	3.19744E-14
70	ID 150302 - T1 (lbf)	3.12639E-13	1.57296E-12	-8.52651E-14	3.82611E-14	-3.19744E-14	-5.99520E-15
71	ID 150303 - T2 (lbf)	8.32667E-13	-1.05160E-12	-1.38112E-13	-1.01030E-13	-9.58678E-14	-5.32907E-15
72	ID 150311 - T3 (lbf)	2.95586E-12	9.59233E-14	-1.11555E-12	-1.68754E-14	1.60938E-12	7.63833E-14
73	ID 150312 - T3 (lbf)	-6.39488E-12	1.17240E-13	2.02505E-13	-5.08482E-14	-1.98952E-13	5.76206E-14
74	ID 150313 - T3 (lbf)	-5.91349E-12	1.29674E-13	-1.59872E-13	-1.21014E-14	1.29896E-13	3.24185E-14
75	ID 150314 - T3 (lbf)	2.67164E-12	-1.30007E-13	1.05804E-13	-1.37876E-14	2.41335E-13	-1.10467E-14
76	ID 160301 - T1 (lbf)	4.47642E-13	-1.00897E-12	3.02869E-13	4.49640E-14	6.37823E-14	1.55431E-14
77	ID 160301 - T2 (lbf)	2.40696E-13	1.63425E-13	5.68434E-14	-8.17124E-14	-2.45581E-13	1.28786E-14
78	ID 160302 - T1 (lbf)	-4.83169E-13	1.27898E-12	-2.34479E-13	-4.44089E-14	-3.86358E-14	2.44249E-14
79	ID 160303 - T2 (lbf)	3.00293E-12	-5.82645E-13	7.10543E-13	7.10543E-14	-1.70974E-14	-5.32907E-15
80	ID 160311 - T3 (lbf)	6.28120E-12	7.03437E-13	-3.48610E-13	5.32907E-15	4.14557E-13	8.34888E-14
81	ID 160312 - T3 (lbf)	-2.60059E-12	5.96856E-13	-2.79776E-13	8.88178E-16	1.26121E-13	-3.73035E-14
82	ID 160313 - T3 (lbf)	6.35048E-12	1.85851E-13	-4.48530E-14	1.79301E-14	-2.19910E-13	8.27116E-14
83	ID 160314 - T3 (lbf)	1.38556E-12	1.39222E-13	-1.86517E-14	-7.85483E-15	4.27436E-14	-1.96509E-14
84	ID 170301 - T1 (lbf)	9.94760E-13	7.67386E-13	1.01030E-13	-8.17124E-14	-9.42302E-14	-2.22045E-15
85	ID 170301 - T2 (lbf)	-1.28308E-12	-1.42109E-13	5.25802E-13	1.36779E-13	4.43645E-13	-3.27516E-15
86	ID 170302 - T1 (lbf)	-4.05009E-13	-2.27374E-13	1.03029E-13	1.18128E-13	8.83738E-14	1.68754E-14
87	ID 170303 - T2 (lbf)	6.73683E-13	-7.10543E-14	-2.13163E-14	-9.68114E-14	5.19584E-14	-3.59018E-14
88	ID 170311 - T3 (lbf)	7.26885E-12	4.12115E-13	1.42109E-13	3.97460E-14	1.42997E-13	-4.08562E-14
89	ID 170312 - T3 (lbf)	-1.03668E-11	-4.61853E-13	-1.24345E-13	-1.11022E-14	-1.70641E-13	6.21725E-14
90	ID 170313 - T3 (lbf)	-1.93978E-12	4.04121E-13	2.23821E-13	-1.31561E-14	1.32117E-13	-7.77156E-16
91	ID 170314 - T3 (lbf)	-4.90807E-12	1.84741E-13	-2.42473E-13	4.69416E-15	2.04892E-13	1.88738E-15
92	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	4.44089E-16	4.27436E-15	9.71445E-16	2.95770E-16	-3.56659E-15
93	Net Inertial Acc - T2 (in/sec^2)	-3.05311E-15	3.86089E+02	-7.99361E-15	-4.71845E-16	-1.06458E-15	-1.10155E-15
94	Net Inertial Acc - T3 (in/sec^2)	2.65066E-15	5.32907E-15	3.86089E+02	1.66533E-15	9.34528E-16	2.60209E-17
95	Net Inertial Acc - R1 (rad/sec^2)	-4.36120E-17	-5.27356E-16	-5.82867E-16	1.00000E+00	1.10733E-17	-1.36914E-17
96	Net Inertial Acc - R2 (rad/sec^2)	8.23994E-16	1.78677E-16	-9.71445E-16	-2.10335E-17	1.00000E+00	1.24683E-16
97	Net Inertial Acc - R3 (rad/sec^2)	-4.18936E-16	-1.04083E-16	2.38524E-17	2.41032E-17	4.85926E-17	1.00000E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 40

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	NLF TX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	NLF TY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3	NLF TZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4	NLF RX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5	NLF RY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6	NLF RZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7	Keel Grid 1271 DOF 2 I/F force	-1.24745E-08	-8.71387E-09	1.32045E-08	-7.49001E-07	3.18393E-07	1.03058E-06
8	GRID 6299 TX NHP FORCE	-7.07869E-08	1.45195E-07	-2.68878E-07	5.82021E-06	9.68003E-06	2.40400E-06
9	GRID 13067 TX NHP FORCE	-1.97518E-08	2.19857E-08	6.33125E-08	-4.70534E-07	-2.33814E-06	-2.48049E-06
10	GRID 13083 TX NHP FORCE	3.98878E-08	-1.71382E-08	6.04613E-08	-5.50779E-07	-2.18784E-06	1.12736E-06
11	GRID 13115 TX NHP FORCE	9.51699E-08	-1.67713E-09	1.00495E-07	-6.55564E-08	-5.29457E-06	8.84484E-11
12	GRID 13545 TX NHP FORCE	5.13375E-08	6.38892E-08	-2.61152E-07	3.86911E-06	5.96441E-06	6.18025E-06
13	GRID 13545 TY NHP FORCE	-6.34125E-08	-2.89263E-07	1.74639E-07	1.69159E-06	-1.74158E-06	1.63025E-06
14	GRID 13576 TX NHP FORCE	3.46517E-07	3.33494E-08	7.51436E-09	2.52872E-06	-1.57600E-05	4.11700E-06
15	GRID 16250 TX NHP FORCE	-7.76072E-08	-6.85204E-08	-1.14423E-07	-2.43075E-06	3.92621E-06	8.34920E-07
16	GRID 16250 TY NHP FORCE	1.48825E-08	-2.16192E-07	-1.91899E-07	-3.68338E-06	4.83306E-06	9.58094E-07
17	GRID 23028 TX NHP FORCE	-3.65638E-08	-2.06819E-09	5.30607E-08	-3.03127E-07	-1.40208E-06	2.78396E-06
18	GRID 23044 TX NHP FORCE	1.02079E-07	2.69442E-08	7.92265E-08	1.46883E-06	-4.55279E-06	-2.82857E-06
19	GRID 23076 TX NHP FORCE	1.17668E-07	-4.93151E-09	1.07850E-07	4.51142E-07	-6.32319E-06	-2.11468E-06
20	GRID 23506 TX NHP FORCE	1.03730E-07	-3.63623E-08	-1.20138E-07	-3.45180E-06	-4.25496E-07	-5.50345E-06
21	GRID 23537 TX NHP FORCE	3.50551E-07	-1.08625E-07	-1.40187E-09	-6.57051E-06	-1.60477E-05	-5.76636E-06
22	GRID 23537 TY NHP FORCE	-1.46485E-08	-1.61021E-07	2.00432E-08	3.60717E-06	-1.33252E-07	7.82150E-06
23	GRID 37940 TX NHP FORCE	3.38050E-07	1.26561E-07	6.26314E-08	-6.46177E-06	1.61182E-05	2.01677E-05
24	GRID 37940 TY NHP FORCE	-1.50373E-07	-6.64022E-07	5.99207E-08	2.07373E-05	-6.58120E-06	-1.03263E-05
25	GRID 38067 TX NHP FORCE	2.58764E-07	-1.35442E-07	2.14190E-08	4.04479E-06	1.18336E-05	1.08704E-05

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 41

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
26	GRID 38323 TX NHP FORCE	-3.39567E-08	1.67104E-08	-3.01255E-08	-4.43338E-07	-1.09689E-06	7.10890E-07
27	GRID 38323 TY NHP FORCE	-1.14579E-08	-4.73587E-07	4.33647E-09	1.45902E-05	-3.07719E-07	-2.98347E-06
28	GRID 45767 TX NHP FORCE	1.29623E-08	-1.83491E-07	1.45519E-10	6.10179E-06	-3.57011E-07	-5.78653E-06
29	GRID 45890 TX NHP FORCE	1.47272E-07	3.86545E-08	-2.25191E-09	-1.21893E-06	4.86684E-06	-4.99986E-06
30	GRID 45890 TY NHP FORCE	-8.26236E-09	-4.09716E-07	-4.86652E-08	5.37478E-06	7.80440E-07	-3.90676E-06
31	GRID 46151 TX NHP FORCE	-5.70960E-08	-7.26743E-09	-1.22091E-08	8.12928E-07	-2.46528E-06	-8.75170E-07
32	GRID 53578 TX NHP FORCE	2.19116E-08	3.05959E-08	9.28923E-08	-2.30204E-06	-3.15330E-06	-7.32428E-07
33	GRID 53578 TZ NHP FORCE	5.70602E-09	-5.05651E-08	-2.75977E-07	9.02356E-06	1.92492E-06	-1.01418E-06
34	GRID 53701 TX NHP FORCE	1.33982E-07	-4.51139E-08	1.52963E-07	-1.99844E-06	-4.50518E-06	4.29738E-06
35	GRID 53701 TZ NHP FORCE	-2.67476E-09	5.48765E-08	-3.28661E-07	6.08216E-06	4.42850E-06	2.15963E-06
36	GRID 53956 TX NHP FORCE	-1.09185E-09	-3.43753E-08	2.10763E-07	-1.17222E-06	-4.95507E-06	-4.25815E-07
37	GRID 53956 TZ NHP FORCE	-6.50261E-08	4.45314E-08	-5.70738E-07	3.01114E-06	1.28695E-05	2.75525E-06
38	GRID 61404 TX NHP FORCE	-7.38921E-08	-1.53195E-08	7.54408E-08	-7.06495E-08	-4.36566E-07	4.21217E-06
39	GRID 61404 TZ NHP FORCE	-4.64794E-08	8.88394E-09	-3.04455E-07	-1.21964E-05	3.90774E-06	2.24736E-06
40	GRID 61527 TX NHP FORCE	7.54881E-08	1.95632E-08	1.64577E-07	4.44861E-06	-3.63917E-06	-7.53440E-07
41	GRID 61527 TZ NHP FORCE	-3.50515E-08	-2.83574E-08	-3.82066E-07	-9.57691E-06	4.64724E-06	-1.54453E-06
42	GRID 61788 TX NHP FORCE	5.67306E-08	3.76895E-09	1.98801E-07	1.61387E-06	-5.35508E-06	-1.12382E-06
43	GRID 61788 TZ NHP FORCE	-9.12380E-08	1.12414E-09	-5.52642E-07	-3.10753E-06	1.27480E-05	3.11717E-07
44	GRID 62589 TX NHP FORCE	7.00234E-08	-5.45087E-08	-4.06674E-08	-3.85745E-07	1.41370E-06	-5.87537E-06
45	GRID 62774 TX NHP FORCE	1.27527E-07	5.51813E-09	-3.01179E-08	-8.35003E-07	2.72479E-06	-4.87169E-06
46	GRID 63043 TX NHP FORCE	7.06384E-08	-1.73932E-08	-4.15703E-08	-1.68826E-06	1.52431E-06	-4.82183E-06
47	GRID 63043 TZ NHP FORCE	-1.26038E-08	5.72618E-08	-3.31787E-07	-1.65505E-05	2.46335E-06	7.04460E-07
48	GRID 63343 TX NHP FORCE	1.33852E-07	-4.60932E-09	-2.92591E-08	-4.96806E-07	1.41685E-06	-5.02454E-06
49	GRID 63343 TZ NHP FORCE	2.02749E-09	-1.07107E-08	-3.44615E-07	-1.03114E-05	2.54189E-06	-1.91929E-06
50	GRID 63345 TX NHP FORCE	9.55806E-08	1.19439E-09	-3.01097E-08	-1.41852E-07	2.36509E-06	-2.05661E-06

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 42

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	GRID 63645 TX NHP FORCE	8.40666E-08	9.82766E-10	-2.48220E-08	9.89621E-08	1.86069E-06	1.08706E-06
52	GRID 63942 TX NHP FORCE	1.02198E-07	2.40334E-09	-3.74375E-08	3.89191E-08	1.83049E-06	-2.02830E-06
53	GRID 63942 TZ NHP FORCE	-2.28904E-08	1.38243E-08	-3.79863E-07	-3.56865E-06	6.76786E-06	-3.35102E-07
54	GRID 64244 TX NHP FORCE	8.94799E-08	-2.81511E-09	-2.88614E-08	7.17650E-08	1.48578E-06	1.25639E-06
55	GRID 64244 TZ NHP FORCE	-1.10560E-08	3.65210E-08	-4.16081E-07	2.67826E-06	6.93462E-06	1.75873E-06
56	GRID 64246 TX NHP FORCE	1.27698E-07	9.46648E-09	-3.30780E-08	8.41489E-07	9.89487E-07	4.58146E-06
57	GRID 64540 TX NHP FORCE	2.31132E-10	1.09047E-07	-3.23207E-08	-1.62428E-06	-1.34073E-06	1.42236E-06
58	GRID 64814 TX NHP FORCE	1.59647E-07	-2.73820E-09	-4.85952E-09	1.74728E-07	7.21133E-07	6.02349E-06
59	GRID 64814 TZ NHP FORCE	1.04889E-08	1.12534E-07	-3.62508E-07	5.66514E-06	2.06442E-06	1.24574E-06
60	GRID 65003 TX NHP FORCE	2.72328E-08	5.88179E-08	-1.59221E-08	-6.81327E-07	-5.29272E-07	1.36589E-06
61	GRID 65003 TZ NHP FORCE	-2.00585E-08	-1.27538E-07	-3.50021E-07	1.85185E-05	-1.19618E-06	-2.05699E-06
62	Secondary -Y: 111869 DOF 3 IF FORCE	-7.89702E-08	-7.14914E-08	-7.62512E-08	9.79623E-06	2.41132E-06	-9.07140E-06
63	Primary -Y: 111885 DOF 1 IF FORCE	-2.21136E-07	-4.73421E-07	-3.57018E-09	1.52060E-05	-3.95502E-06	-3.40074E-05
64	Primary -Y: 111885 DOF 3 IF FORCE	4.52442E-08	3.75544E-08	-8.28334E-08	-1.36090E-06	1.72615E-06	3.19171E-06
65	Secondary +Y: 113369 DOF 3 IF FORCE	-1.26782E-08	5.35479E-08	-6.54074E-08	-8.14966E-06	2.03662E-06	3.12691E-06
66	Primary +Y: 113385 DOF 1 IF FORCE	1.57793E-08	2.12317E-07	-1.18582E-08	-8.79045E-06	9.98796E-07	6.74742E-06
67	Primary +Y: 113385 DOF 3 IF FORCE	-3.98022E-08	-2.16153E-08	-1.59327E-07	-3.58973E-06	1.61646E-06	1.97125E-06
68	GRID 150301 TX FRAM IF FORCE	-9.62191E-08	-9.85588E-08	-3.35741E-07	-5.33003E-06	1.26270E-05	-1.53192E-06
69	GRID 150301 TY FRAM IF FORCE	8.06250E-09	-9.74414E-08	2.89335E-08	-8.04615E-06	-3.80988E-07	2.82026E-06
70	GRID 150302 TX FRAM IF FORCE	1.08786E-07	4.51334E-08	-2.86046E-07	3.67276E-07	4.87299E-07	1.75150E-06
71	GRID 150303 TY FRAM IF FORCE	-4.49169E-08	3.89655E-08	-4.46720E-08	-3.38841E-06	1.28432E-06	1.54108E-06
72	GRID 150311 TZ FRAM IF FORCE	-1.26060E-07	7.07468E-08	3.93781E-07	6.25928E-06	-7.04838E-06	9.55437E-06
73	GRID 150312 TZ FRAM IF FORCE	-4.32386E-07	-8.55965E-09	3.09040E-07	-2.83659E-07	1.03666E-05	-2.27039E-06
74	GRID 150313 TZ FRAM IF FORCE	-9.30677E-08	2.88063E-08	-2.93965E-08	-4.72794E-07	1.28896E-06	2.63323E-06
75	GRID 150314 TZ FRAM IF FORCE	-3.78734E-08	-1.35842E-08	-1.12388E-08	-2.78244E-07	6.17541E-07	1.21493E-07

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 43

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
76	GRID 160301 TX FRAM IF FORCE	-4.95852E-08	-2.81353E-07	-1.76819E-08	-1.26097E-06	-2.84563E-07	2.18533E-06
77	GRID 160301 TY FRAM IF FORCE	5.69236E-08	-8.66976E-08	-9.14511E-08	2.10553E-06	1.21454E-06	4.10560E-06
78	GRID 160302 TX FRAM IF FORCE	-7.41248E-08	2.18110E-07	4.71232E-09	-7.83186E-06	-2.48402E-06	-3.06473E-06
79	GRID 160303 TY FRAM IF FORCE	-6.84241E-09	3.47062E-08	-7.54217E-08	2.08246E-06	3.13333E-07	-5.07502E-07
80	GRID 160311 TZ FRAM IF FORCE	-3.81689E-08	-6.57560E-08	-4.57121E-09	-5.92845E-07	5.76439E-07	-1.23404E-06
81	GRID 160312 TZ FRAM IF FORCE	-1.27578E-07	-2.07805E-07	-1.62574E-08	7.43200E-06	-4.25869E-06	-9.73107E-06
82	GRID 160313 TZ FRAM IF FORCE	2.77566E-08	4.41531E-09	-1.08251E-08	-3.59770E-07	1.66768E-07	1.52559E-06
83	GRID 160314 TZ FRAM IF FORCE	1.59300E-09	2.26322E-10	7.54597E-09	-9.67172E-08	3.38988E-07	1.10332E-07
84	GRID 170301 TX FRAM IF FORCE	-3.38550E-08	2.43119E-07	2.11585E-08	-8.44104E-06	-9.16165E-07	-3.21357E-06
85	GRID 170301 TY FRAM IF FORCE	2.21430E-08	5.52827E-08	9.77743E-08	2.01329E-06	-7.64233E-07	-9.57472E-07
86	GRID 170302 TX FRAM IF FORCE	-5.93893E-08	-2.16154E-07	1.41881E-08	6.30971E-08	-1.91174E-07	3.35915E-06
87	GRID 170303 TY FRAM IF FORCE	-6.80393E-09	-4.55766E-08	8.42556E-08	3.08733E-06	-8.48810E-07	5.62315E-07
88	GRID 170311 TZ FRAM IF FORCE	-1.42753E-07	6.86214E-09	-3.78350E-09	-5.77333E-07	-3.96215E-06	6.62401E-06
89	GRID 170312 TZ FRAM IF FORCE	-1.65605E-07	7.69214E-08	-3.54112E-09	1.38389E-08	1.56901E-07	6.91747E-06
90	GRID 170313 TZ FRAM IF FORCE	9.55970E-09	-6.05451E-09	1.15015E-08	-2.77272E-07	3.36586E-07	-5.93020E-07
91	GRID 170314 TZ FRAM IF FORCE	-1.58907E-08	-4.08409E-09	-1.29335E-08	-1.56011E-07	-4.98403E-08	3.44589E-07
92	GRID 200201 Fuse-1 Acceleration TX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
93	GRID 200201 Fuse-1 Acceleration TY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
94	GRID 200201 Fuse-1 Acceleration TZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
95	GRID 200201 Fuse-1 Acceleration RX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
96	GRID 200201 Fuse-1 Acceleration RY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
97	GRID 200201 Fuse-1 Acceleration RZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
98	GRID 200202 Fuse-2 Acceleration TX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
99	GRID 200202 Fuse-2 Acceleration TY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
100	GRID 200202 Fuse-2 Acceleration TZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 44

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
101	GRID 200202 Fuse-2 Acceleration RX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
102	GRID 200202 Fuse-2 Acceleration RY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
103	GRID 200202 Fuse-2 Acceleration RZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
104	GRID 200301 PVGF-1 Acceleration TX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
105	GRID 200301 PVGF-1 Acceleration TY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
106	GRID 200301 PVGF-1 Acceleration TZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
107	GRID 200301 PVGF-1 Acceleration RX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
108	GRID 200301 PVGF-1 Acceleration RY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
109	GRID 200301 PVGF-1 Acceleration RZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
110	GRID 200302 PVGF-2 Acceleration TX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
111	GRID 200302 PVGF-2 Acceleration TY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
112	GRID 200302 PVGF-2 Acceleration TZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
113	GRID 200302 PVGF-2 Acceleration RX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
114	GRID 200302 PVGF-2 Acceleration RY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
115	GRID 200302 PVGF-2 Acceleration RZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
116	Grid 504878 PDU Acceleration TX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
117	Grid 504878 PDU Acceleration TY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
118	Grid 504878 PDU Acceleration TZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
119	Grid 504878 PDU Acceleration RX	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
120	Grid 504878 PDU Acceleration RY	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
121	Grid 504878 PDU Acceleration RZ	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
122	GRID 1271 TX Keel DISPLACEMENT	1.00000E+00	-6.68935E-14	1.64352E-11	1.80377E-11	-7.98459E+01	-2.94153E+00
123	GRID 1271 TY Keel DISPLACEMENT	0.00000E+00	1.00000E+00	0.00000E+00	7.98459E+01	0.00000E+00	-2.57987E+00
124	GRID 1271 TZ Keel DISPLACEMENT	1.52376E-13	-7.13709E-14	1.00000E+00	2.94153E+00	2.57987E+00	-4.43852E-12
125	GRID 1271 RX Keel DISPLACEMENT	-9.99749E-15	1.50448E-14	2.12920E-14	1.00000E+00	3.90575E-13	1.78078E-12

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 45

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
126	GRID 1271 RY Keel DISPLACEMENT	-5.78413E-14	4.71812E-15	-5.74588E-13	-6.87343E-13	1.00000E+00	3.27982E-13
127	Grid 2279 X = 1170.3 Y=-23.82 Z= 315.8 5 TX	1.00000E+00	-1.09561E-12	8.65833E-12	-6.33632E-11	-6.89404E+01	2.05250E+01
128	Grid 2279 X = 1170.3 Y=-23.82 Z= 315.8 5 TY	1.66034E-13	1.00000E+00	3.19960E-13	6.89404E+01	-2.12715E-11	-7.48223E+00
129	Grid 2279 X = 1170.3 Y=-23.82 Z= 315.8 5 TZ	-3.13226E-13	2.39045E-15	1.00000E+00	-2.05250E+01	7.48223E+00	5.12266E-12
130	Grid 2789 X = 1180.1 Y=-23.82 Z= 315.8 5 TX	1.00000E+00	-1.09173E-12	8.66903E-12	-6.30055E-11	-6.89404E+01	2.05250E+01
131	Grid 2789 X = 1180.1 Y=-23.82 Z= 315.8 5 TY	9.76134E-14	1.00000E+00	-2.78347E-13	6.89404E+01	-1.49337E-12	2.32097E+00
132	Grid 2789 X = 1180.1 Y=-23.82 Z= 315.8 5 TZ	4.16165E-13	-3.81828E-13	1.00000E+00	-2.05250E+01	-2.32097E+00	-2.51403E-11
133	Grid 3299 X = 1170.3 Y=23.82 Z= 315.85 TX	1.00000E+00	1.03199E-12	7.74326E-12	7.99953E-11	-6.89404E+01	-2.64080E+01
134	Grid 3299 X = 1170.3 Y=23.82 Z= 315.85 TY	-3.39471E-14	1.00000E+00	-8.68042E-13	6.89404E+01	2.21474E-11	-7.48223E+00
135	Grid 3299 X = 1170.3 Y=23.82 Z= 315.85 TZ	-2.41201E-13	-5.52397E-14	1.00000E+00	2.64080E+01	7.48223E+00	1.03652E-12
136	Grid 3812 X = 1180.1 Y=23.82 Z= 315.85 TX	1.00000E+00	1.01667E-12	7.73573E-12	7.92354E-11	-6.89405E+01	-2.64080E+01
137	Grid 3812 X = 1180.1 Y=23.82 Z= 315.85 TY	7.19625E-14	1.00000E+00	9.61488E-14	6.89405E+01	-1.35291E-11	2.32097E+00
138	Grid 3812 X = 1180.1 Y=23.82 Z= 315.85 TZ	4.60040E-13	2.98182E-13	1.00000E+00	2.64080E+01	-2.32097E+00	1.72373E-11
139	Grid 7589 X = 1180.1 Y=-83.76 Z= 375.2 9 TX	1.00000E+00	-8.57017E-13	-1.47021E-14	-1.10430E-11	-9.87964E+00	8.04210E+01
140	Grid 7589 X = 1180.1 Y=-83.76 Z= 375.2 9 TY	2.10526E-13	1.00000E+00	-1.74137E-13	9.87964E+00	2.41657E-12	2.32147E+00
141	Grid 7589 X = 1180.1 Y=-83.76 Z= 375.2 9 TZ	7.15801E-15	4.26596E-13	1.00000E+00	-8.04210E+01	-2.32147E+00	6.35673E-12
142	Grid 7804 X = 1170.3 Y=-83.76 Z= 375.2 9 TX	1.00000E+00	-8.46939E-13	-2.52436E-14	-1.10856E-11	-9.87964E+00	8.04210E+01
143	Grid 7804 X = 1170.3 Y=-83.76 Z= 375.2 9 TY	-2.28355E-13	1.00000E+00	-2.35721E-13	9.87964E+00	2.98394E-12	-7.48170E+00
144	Grid 7804 X = 1170.3 Y=-83.76 Z= 375.2 9 TZ	-5.18043E-15	4.42427E-13	1.00000E+00	-8.04210E+01	7.48170E+00	3.01307E-12
145	Grid 17543 X = 1180.1 Y=83.76 Z= 375.2 9 TX	1.00000E+00	6.98282E-13	3.46358E-13	4.25292E-11	-9.87974E+00	-8.63040E+01
146	Grid 17543 X = 1180.1 Y=83.76 Z= 375.2 9 TY	-6.79114E-14	1.00000E+00	-2.47939E-13	9.87974E+00	1.82153E-12	2.32147E+00
147	Grid 17543 X = 1180.1 Y=83.76 Z= 375.2 9 TZ	1.09954E-13	-6.14571E-13	1.00000E+00	8.63040E+01	-2.32147E+00	-7.08837E-12
148	Grid 17761 X = 1170.3 Y=83.76 Z= 375.2 9 TX	1.00000E+00	6.90378E-13	3.58535E-13	4.33970E-11	-9.87964E+00	-8.63040E+01
149	Grid 17761 X = 1170.3 Y=83.76 Z= 375.2 9 TY	1.32604E-14	1.00000E+00	-8.56815E-14	9.87964E+00	-1.23587E-12	-7.48170E+00
150	Grid 17761 X = 1170.3 Y=83.76 Z= 375.2 9 TZ	1.17113E-13	-5.84532E-13	1.00000E+00	8.63040E+01	7.48170E+00	-6.76906E-12

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 46

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
151	Grid 31033 X = 1170.3 Y=-83.76 Z= 424.71 TX	1.00000E+00	-1.41042E-12	-1.87469E-13	6.00693E-11	3.92486E+01	8.05231E+01
152	Grid 31033 X = 1170.3 Y=-83.76 Z= 424.71 TY	-3.54664E-14	1.00000E+00	-4.77350E-14	-3.92486E+01	-1.50903E-12	-7.48147E+00
153	Grid 31033 X = 1170.3 Y=-83.76 Z= 424.71 TZ	-1.59669E-13	2.63192E-13	1.00000E+00	-8.05231E+01	7.48147E+00	-8.09411E-12
154	Grid 34955 X = 1180.1 Y=-83.76 Z= 424.71 TX	1.00000E+00	-1.40243E-12	-1.91315E-13	6.00083E-11	3.92486E+01	8.05231E+01
155	Grid 34955 X = 1180.1 Y=-83.76 Z= 424.71 TY	7.31426E-14	1.00000E+00	-7.70393E-14	-3.92486E+01	3.39572E-12	2.32173E+00
156	Grid 34955 X = 1180.1 Y=-83.76 Z= 424.71 TZ	1.71578E-13	2.57528E-13	1.00000E+00	-8.05231E+01	-2.32173E+00	1.72542E-11
157	Grid 38875 X = 1170.3 Y=83.76 Z= 424.71 TX	1.00000E+00	8.48099E-13	-1.77846E-13	-4.51604E-11	3.92486E+01	-8.64061E+01
158	Grid 38875 X = 1170.3 Y=83.76 Z= 424.71 TY	4.18917E-14	1.00000E+00	1.24574E-13	-3.92486E+01	2.90035E-13	-7.48147E+00
159	Grid 38875 X = 1170.3 Y=83.76 Z= 424.71 TZ	8.83241E-14	-4.78131E-13	1.00000E+00	8.64061E+01	7.48147E+00	-6.09926E-12
160	Grid 42798 X = 1180.1 Y=83.76 Z= 424.71 TX	1.00000E+00	8.43981E-13	-1.81866E-13	-4.51195E-11	3.92486E+01	-8.64061E+01
161	Grid 42798 X = 1180.1 Y=83.76 Z= 424.71 TY	5.67728E-14	1.00000E+00	1.57677E-13	-3.92486E+01	-4.91666E-13	2.32173E+00
162	Grid 42798 X = 1180.1 Y=83.76 Z= 424.71 TZ	1.27546E-13	-4.02609E-13	1.00000E+00	8.64061E+01	-2.32173E+00	-8.14390E-12
163	GRID 111869 TX Trunnion DISPLACEMENT	1.00000E+00	4.66947E-12	2.32860E-13	-1.52519E-10	2.91541E+01	9.10585E+01
164	GRID 111869 TY Trunnion DISPLACEMENT	-1.78698E-12	1.00000E+00	1.25029E-12	-2.91541E+01	-7.12237E-11	4.06901E+01
165	GRID 111869 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	1.00000E+00	-9.10585E+01	-4.06901E+01	0.00000E+00
166	GRID 111869 RX Trunnion DISPLACEMENT	1.07802E-13	1.43269E-13	9.86275E-14	1.00000E+00	-2.96927E-12	1.37037E-11
167	GRID 111869 RZ Trunnion DISPLACEMENT	-4.34146E-14	7.19914E-13	4.07860E-14	-2.35571E-11	-2.01652E-12	1.00000E+00
168	GRID 111885 TX Trunnion DISPLACEMENT	1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.91541E+01	9.10585E+01
169	GRID 111885 TY Trunnion DISPLACEMENT	7.04876E-14	1.00000E+00	-2.79611E-14	-2.91541E+01	7.00250E-13	-2.57987E+00
170	GRID 111885 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	1.00000E+00	-9.10585E+01	2.57987E+00	0.00000E+00
171	GRID 111885 RX Trunnion DISPLACEMENT	-1.17205E-15	2.18627E-14	3.09864E-14	1.00000E+00	-6.07885E-13	2.80948E-13
172	GRID 111885 RZ Trunnion DISPLACEMENT	-8.01758E-14	9.60063E-14	1.06444E-14	-3.22263E-12	-1.78446E-12	1.00000E+00
173	GRID 113369 TX Trunnion DISPLACEMENT	1.00000E+00	-2.86607E-12	3.16696E-13	1.13764E-10	2.91541E+01	-9.69415E+01
174	GRID 113369 TY Trunnion DISPLACEMENT	3.09086E-12	1.00000E+00	-1.12937E-12	-2.91541E+01	1.53514E-10	4.06901E+01
175	GRID 113369 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	1.00000E+00	9.69415E+01	-4.06901E+01	0.00000E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 47

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
176	GRID 113369 RX Trunnion DISPLACEMENT	-1.75356E-14	8.98186E-14	-1.57872E-13	1.00000E+00	4.39804E-12	3.79384E-12
177	GRID 113369 RZ Trunnion DISPLACEMENT	9.32120E-14	4.48137E-13	-4.22459E-14	-1.68267E-11	4.77439E-12	1.00000E+00
178	GRID 113385 TX Trunnion DISPLACEMENT	1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.91541E+01	-9.69415E+01
179	GRID 113385 TY Trunnion DISPLACEMENT	4.02975E-14	1.00000E+00	-8.87311E-15	-2.91541E+01	1.83581E-12	-2.57987E+00
180	GRID 113385 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	1.00000E+00	9.69415E+01	2.57987E+00	0.00000E+00
181	GRID 113385 RX Trunnion DISPLACEMENT	-1.33961E-14	4.07452E-14	-6.80588E-14	1.00000E+00	9.12223E-13	7.89907E-13
182	GRID 113385 RZ Trunnion DISPLACEMENT	2.46491E-14	6.91348E-14	-7.18826E-16	-1.76015E-12	1.08810E-12	1.00000E+00
183	Element Force CBAR 27000 Shear 1	-9.88007E-04	-9.72748E-05	8.77380E-04	-7.13150E-02	4.78088E-02	-3.51484E-02
184	Element Force CBAR 27000 Shear 2	5.85556E-04	3.66211E-04	-6.10352E-05	1.53804E-02	-1.55409E-03	3.28167E-02
185	Element Force CBAR 27001 Shear 1	5.89848E-04	1.09673E-05	4.29153E-05	-7.87836E-03	-1.51619E-02	2.27142E-02
186	Element Force CBAR 27001 Shear 2	1.65224E-04	9.91821E-05	2.67029E-05	1.33893E-02	-5.77984E-03	5.30281E-03
187	Element Force CBAR 27002 Shear 1	4.23193E-04	-1.60217E-04	-1.40953E-03	6.36581E-02	-2.83253E-02	1.90306E-02
188	Element Force CBAR 27002 Shear 2	-2.67774E-04	9.91821E-05	-2.23160E-04	1.53027E-02	6.35270E-03	-7.51487E-03
189	Element Force CBAR 27003 Shear 1	8.96931E-04	-1.83105E-04	-8.02040E-04	3.10386E-02	-1.86722E-02	3.84700E-02
190	Element Force CBAR 27003 Shear 2	-2.65598E-04	2.28882E-05	4.57764E-04	-1.40156E-02	1.24738E-03	-9.96265E-03
191	Element Force CBAR 27004 Shear 1	-3.78609E-04	-3.05176E-05	1.43051E-05	5.56734E-03	7.15679E-03	1.19148E-02
192	Element Force CBAR 27004 Shear 2	2.99215E-04	-1.09196E-04	-4.46320E-04	-1.08488E-03	-1.20805E-05	4.84143E-03
193	Element Force CBAR 27005 Shear 1	1.79291E-03	-6.19888E-05	8.64029E-04	-7.49621E-03	-4.83887E-02	1.04420E-02
194	Element Force CBAR 27005 Shear 2	-3.58582E-04	-1.94550E-04	-4.95911E-04	-1.51568E-02	7.25560E-03	-4.68912E-03
195	Element Force CBAR 27006 Tension	-2.98977E-04	-4.42505E-04	-3.66211E-04	-2.20771E-02	2.79513E-02	-3.95034E-03
196	Element Force CBAR 27007 Tension	-1.17409E-03	-7.93457E-04	-5.18799E-04	2.87472E-02	2.79299E-02	-5.90130E-02
197	Element Force CBAR 27008 Tension	-6.33240E-04	1.22070E-04	-8.01086E-05	-3.04134E-03	-1.18969E-02	-3.66364E-02
198	Element Force CBAR 27009 Tension	-1.71185E-04	-1.37329E-04	5.79834E-04	-1.18608E-02	-1.23923E-02	-1.03704E-02
199	Element Force CBAR 27010 Tension	-1.91021E-03	-2.13623E-04	-4.08173E-03	2.22732E-01	2.94558E-02	-8.81041E-02
200	Element Force CBAR 27011 Tension	-3.31879E-04	0.00000E+00	1.20544E-03	-2.08695E-02	2.62002E-02	-5.51379E-03

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 48

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
201	Element Force CBAR 27012 Tension	4.61102E-04	-1.22070E-04	-4.10557E-03	1.34269E-01	9.54703E-03	2.78790E-02
202	Element Force CBAR 27013 Tension	-2.11668E-03	-3.05176E-04	7.06196E-04	-1.91869E-02	2.11749E-02	-7.41981E-02
203	Element Force CBAR 27014 Tension	-2.80857E-04	-3.05176E-04	9.68933E-04	-1.34452E-02	8.13357E-03	-3.84694E-03
204	Element Force CBAR 27015 Tension	-5.31435E-04	-1.06812E-04	-5.14984E-04	-3.71749E-02	4.56419E-03	-3.81865E-02
205	Element Force CBAR 27016 Tension	1.60217E-03	-1.83105E-04	3.35693E-04	2.09040E-02	-2.90749E-03	6.97617E-03
206	Element Force CBAR 27017 Tension	-4.80652E-04	-4.57764E-04	-4.48418E-03	1.36220E-02	2.02036E-03	5.31287E-03
207	Element Force CBAR 27018 Shear 1	9.40323E-04	3.05176E-04	3.62396E-04	-2.35911E-02	-2.67322E-02	5.60144E-02
208	Element Force CBAR 27018 Shear 2	-1.56984E-04	-4.27246E-04	-1.15967E-03	4.23180E-02	2.05374E-02	8.15425E-03
209	Element Force CBAR 27019 Shear 1	1.73748E-04	-1.06812E-04	-5.72205E-06	3.18258E-03	-4.05284E-04	9.97603E-03
210	Element Force CBAR 27019 Shear 2	-9.63211E-05	1.22070E-04	1.75476E-04	-1.36806E-02	-1.23886E-03	-8.15978E-03
211	Element Force CBAR 27020 Shear 1	-2.21735E-03	1.33514E-04	4.31061E-04	-2.06289E-02	2.76581E-02	-1.09302E-01
212	Element Force CBAR 27020 Shear 2	-1.81198E-05	-6.10352E-05	-5.14984E-05	3.22920E-03	-1.24163E-04	-3.16558E-03
213	Element Force CBAR 27021 Shear 1	4.58673E-04	7.05719E-05	1.24550E-03	-4.84552E-02	5.75026E-03	1.41915E-02
214	Element Force CBAR 27021 Shear 2	1.25408E-04	-4.13895E-04	3.81470E-05	-3.95337E-03	-3.41063E-03	2.99361E-03
215	Element Force CBAR 27022 Shear 1	-1.64866E-04	-1.14441E-04	-2.45571E-04	1.75922E-03	6.34489E-03	-9.75443E-03
216	Element Force CBAR 27022 Shear 2	7.31349E-05	-7.53403E-05	2.36511E-04	-1.10589E-02	1.81216E-03	9.47779E-04
217	Element Force CBAR 27023 Shear 1	-2.24495E-03	2.19345E-05	-1.01471E-03	-1.79656E-03	3.88513E-02	-6.29072E-03
218	Element Force CBAR 27023 Shear 2	5.72205E-05	1.52588E-05	1.48773E-04	5.17766E-04	-2.87225E-03	1.53675E-03
219	Element Force CBAR 27024 Tension	-5.50747E-04	-3.35693E-04	-8.23975E-04	6.05962E-02	8.09303E-03	-3.19426E-02
220	Element Force CBAR 27025 Tension	-3.25680E-04	9.15527E-05	6.71387E-04	-4.94408E-02	7.72325E-03	-1.63982E-02
221	Element Force CBAR 27026 Tension	1.73092E-04	9.15527E-05	-1.02997E-03	5.76772E-02	1.02782E-02	1.62814E-02
222	Element Force CBAR 27027 Tension	6.10828E-04	-2.17438E-04	1.90735E-03	-1.26730E-01	-1.16284E-02	2.66189E-02
223	Element Force CBAR 27028 Tension	-2.79689E-03	2.44141E-04	1.40953E-03	-4.71081E-02	1.69054E-02	-1.33438E-01
224	Element Force CBAR 27029 Tension	-8.85010E-04	-7.62939E-04	5.98907E-04	-6.10061E-02	4.41027E-03	-5.16903E-02
225	Element Force CBAR 27030 Tension	7.51972E-04	-3.05176E-05	-1.72424E-03	3.32240E-02	-1.62052E-02	3.01458E-02

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 49

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
226	Element Force CBAR 27031 Tension	-1.54591E-03	-4.88281E-04	2.15912E-03	-9.57651E-02	6.46085E-03	-4.53291E-02
227	Element Force CBAR 27032 Tension	-4.48227E-05	2.09808E-05	2.63214E-04	-2.50450E-02	-1.09506E-04	-2.30031E-02
228	Element Force CBAR 27033 Tension	-9.20296E-04	2.13623E-04	1.38855E-03	-7.35330E-03	2.39378E-02	-3.87609E-02
229	Element Force CBAR 27034 Tension	-4.42624E-04	9.15527E-05	-8.16345E-04	5.40684E-03	1.03376E-02	-1.58888E-03
230	Element Force CBAR 27035 Tension	-1.01328E-04	1.98364E-04	-7.82967E-04	9.53850E-03	1.23277E-02	-7.32831E-03
231	Element Force CBAR 27036 Tension	1.12057E-05	-7.24792E-05	-2.86102E-04	1.96331E-02	-1.93144E-04	1.67313E-05
232	Element Force CBAR 27037 Tension	-1.59740E-05	3.05176E-05	1.37329E-04	-1.03610E-02	-1.43741E-03	7.92007E-04
233	Element Force CBAR 27038 Shear 1	-3.11136E-05	3.96729E-04	-5.77927E-04	-3.67313E-02	5.76007E-03	2.24753E-03
234	Element Force CBAR 27038 Shear 2	7.95841E-04	2.59399E-04	1.33514E-03	1.58896E-01	-4.32159E-03	-3.63094E-02
235	Element Force CBAR 27039 Shear 1	5.86420E-04	1.10626E-04	1.78814E-06	6.22675E-04	-8.62045E-03	-3.34151E-02
236	Element Force CBAR 27039 Shear 2	1.36852E-04	6.48499E-05	-3.08752E-05	-1.47348E-03	-3.86921E-03	-8.91969E-03
237	Element Force CBAR 27040 Shear 1	-1.70064E-03	6.10352E-05	5.49316E-04	2.81925E-02	2.50733E-02	1.00913E-01
238	Element Force CBAR 27040 Shear 2	7.62939E-06	3.05176E-05	-4.84467E-04	-2.48381E-02	3.63927E-03	2.44736E-03
239	Element Force CBAR 27041 Shear 1	3.34090E-03	5.00679E-05	5.91993E-04	2.25455E-02	-4.12096E-02	-1.37928E-01
240	Element Force CBAR 27041 Shear 2	1.35422E-04	1.52588E-05	5.84126E-05	4.60006E-03	-1.14766E-03	-3.50161E-03
241	Element Force CBAR 27042 Shear 1	3.64423E-04	-3.24249E-05	2.65121E-04	1.10993E-02	-3.17118E-03	-5.37497E-03
242	Element Force CBAR 27042 Shear 2	-1.43051E-06	-3.05176E-05	-5.96046E-05	1.10354E-02	-8.79126E-04	4.30749E-03
243	Element Force CBAR 27043 Shear 1	-5.64337E-04	3.20673E-05	-2.63214E-04	1.85479E-03	1.17544E-02	-1.58987E-03
244	Element Force CBAR 27043 Shear 2	1.08719E-04	-5.76973E-05	4.42505E-04	6.58081E-03	-1.47128E-03	6.77744E-03
245	Element Force CBAR 27044 Tension	-5.75066E-04	-3.05176E-04	-2.21252E-04	-6.49317E-02	-1.58011E-02	3.41174E-02
246	Element Force CBAR 27045 Tension	6.62804E-04	-1.83105E-04	-6.21796E-04	-2.69720E-02	-6.97024E-03	-3.60386E-02
247	Element Force CBAR 27046 Tension	-8.31366E-04	-2.84217E-14	-1.22070E-04	4.83517E-03	-3.60700E-03	4.64825E-02
248	Element Force CBAR 27047 Tension	1.15490E-03	-3.05176E-05	-6.29425E-05	-3.48555E-03	-2.68305E-02	-6.14691E-02
249	Element Force CBAR 27048 Tension	2.87056E-04	-4.27246E-04	-1.63078E-03	-1.09191E-01	2.25402E-02	-3.56829E-02
250	Element Force CBAR 27049 Tension	-1.29223E-03	1.58691E-03	4.36974E-03	3.17636E-01	3.33429E-02	6.86775E-02

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 50

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
251	Element Force CBAR 27050 Tension	-5.51224E-04	2.13623E-04	8.41141E-04	3.18936E-02	1.20721E-02	2.28597E-02
252	Element Force CBAR 27051 Tension	2.12955E-03	3.05176E-04	-8.86917E-04	-1.22261E-02	-1.98883E-02	-9.46350E-02
253	Element Force CBAR 27052 Tension	-1.08385E-03	2.44141E-04	2.17438E-04	2.10567E-02	-1.25938E-02	3.53945E-02
254	Element Force CBAR 27053 Tension	6.92844E-04	-7.62939E-05	1.04523E-03	-4.69654E-03	-3.46131E-02	-1.90433E-02
255	Element Force CBAR 27054 Tension	2.24495E-03	-9.15527E-05	-1.11389E-03	-2.44693E-02	-2.84469E-02	-2.29694E-02
256	Element Force CBAR 27055 Tension	1.32060E-03	-4.73022E-04	-2.63596E-03	-3.91446E-02	-1.04799E-02	-1.31322E-02
257	Element Force CBAR 27056 Shear 1	-7.21931E-04	-6.10352E-05	4.15802E-04	4.25863E-02	1.69757E-02	4.11936E-02
258	Element Force CBAR 27056 Shear 2	6.99997E-04	9.15527E-04	2.36511E-03	1.84956E-01	6.70170E-03	-4.56613E-02
259	Element Force CBAR 27057 Shear 1	2.73377E-04	4.95911E-05	-1.58787E-04	-1.84116E-03	-6.24565E-03	-1.38034E-02
260	Element Force CBAR 27057 Shear 2	-9.84669E-05	1.86920E-04	2.81334E-05	6.88930E-03	-1.25484E-03	5.34613E-03
261	Element Force CBAR 27058 Shear 1	2.34127E-03	5.34058E-05	-1.16444E-03	-6.09097E-02	-4.78000E-02	-1.23302E-01
262	Element Force CBAR 27058 Shear 2	1.34468E-04	-4.57764E-05	-3.11852E-04	-2.32060E-02	-3.54733E-03	-6.08031E-03
263	Element Force CBAR 27059 Shear 1	-2.07031E-03	-2.33650E-05	1.15585E-03	4.73348E-02	4.16876E-02	8.20406E-02
264	Element Force CBAR 27059 Shear 2	1.45555E-04	3.05176E-05	-4.86374E-05	-3.39316E-03	-3.65903E-03	-1.10515E-02
265	Element Force CBAR 27060 Shear 1	-5.70416E-04	3.81470E-05	-4.57764E-05	-4.38977E-03	1.33291E-02	7.65752E-03
266	Element Force CBAR 27060 Shear 2	-1.65701E-04	7.62939E-05	-9.05991E-06	-8.89811E-03	3.96924E-03	4.19713E-04
267	Element Force CBAR 27061 Shear 1	-1.71208E-03	-7.24792E-05	7.28607E-04	-6.39859E-04	3.04451E-02	2.35234E-02
268	Element Force CBAR 27061 Shear 2	1.20401E-04	-6.86646E-05	1.56403E-04	1.06770E-02	-1.61160E-03	3.09206E-03
269	Element Force CBAR 27062 Tension	8.85487E-04	-6.10352E-05	-8.01086E-05	-2.31624E-02	-1.35942E-04	-5.18229E-02
270	Element Force CBAR 27063 Tension	3.03745E-04	-3.35693E-04	4.84467E-04	4.89597E-02	4.87213E-03	-1.67374E-02
271	Element Force CBAR 27064 Tension	-8.30054E-04	-6.10352E-05	4.84467E-04	1.26108E-02	2.13436E-03	4.74391E-02
272	Element Force CBAR 27065 Tension	-2.03967E-04	4.57764E-05	1.52588E-05	1.15114E-02	-2.68251E-03	1.33835E-02
273	Element Force CBAR 27066 Tension	8.60810E-04	3.81470E-04	-1.79482E-03	-9.50533E-02	-1.21859E-02	-4.06333E-02
274	Element Force CBAR 27067 Tension	-2.74062E-04	3.35693E-04	-6.10352E-05	8.92046E-03	-1.33757E-02	1.81683E-02
275	Element Force CBAR 27068 Tension	-6.22272E-04	1.85013E-04	-9.19342E-04	-5.50477E-02	3.08479E-02	1.80792E-02

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 51

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
276	Element Force CBAR 27069 Tension	-9.46045E-04	7.62939E-05	2.70605E-03	1.20402E-01	1.55903E-02	4.26277E-02
277	Element Force CBAR 27070 Tension	-6.06775E-04	2.44141E-04	1.19209E-04	1.08797E-02	-1.27845E-03	2.93421E-02
278	Element Force CBAR 27071 Tension	1.25718E-03	2.51770E-04	3.37124E-04	1.00115E-02	-1.68931E-02	-3.36769E-02
279	Element Force CBAR 27072 Tension	1.47262E-03	-1.37329E-04	-1.52016E-03	4.81480E-04	-1.29234E-02	-1.10944E-02
280	Element Force CBAR 27073 Tension	-5.80221E-04	2.28882E-05	-7.01904E-04	-8.97447E-03	1.52326E-02	6.06400E-03
281	Element Force CBAR 27074 Tension	-3.36170E-05	3.81470E-05	-1.69754E-04	-1.46450E-02	5.35829E-04	8.39695E-04
282	Element Force CBAR 27075 Tension	-2.14577E-06	1.14441E-05	-3.07083E-04	-3.25658E-02	-2.13974E-03	-6.44633E-04

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 52

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	NLF TX	3.86089E+02	-1.99840E-15	-1.14353E-14	9.71445E-17	4.31969E-02	-1.55823E-01
2	NLF TY	-2.80331E-15	3.86089E+02	2.66454E-15	-4.31969E-02	1.43657E-16	-8.86452E-08
3	NLF TZ	-1.56819E-15	1.33227E-15	3.86089E+02	1.55823E-01	8.86452E-08	1.52656E-16
4	NLF RX	-2.75929E-17	-2.77556E-17	5.06539E-16	1.00000E+00	7.22297E-18	-8.84387E-18
5	NLF RY	-7.28584E-16	5.55112E-17	1.45717E-16	-4.33681E-18	1.00000E+00	-2.87314E-17
6	NLF RZ	2.46331E-16	-3.46945E-17	1.55041E-17	7.79270E-18	4.02510E-18	1.00000E+00
7	Keel Grid 1271 DOF 2 I/F force	3.22804E-09	2.72986E+03	-3.21016E-09	3.05427E-01	-7.46544E-10	-1.31287E-09
8	GRID 6299 TX NHP FORCE	2.19131E-11	2.06768E-12	5.50671E-13	-8.74856E-14	-2.23821E-12	-1.93623E-13
9	GRID 13067 TX NHP FORCE	-4.60076E-12	-7.14984E-13	-9.59233E-13	-2.39808E-14	-9.40803E-13	3.01092E-13
10	GRID 13083 TX NHP FORCE	-1.36655E-11	2.87770E-13	-2.96652E-13	-3.15303E-14	5.93414E-13	-1.98286E-13
11	GRID 13115 TX NHP FORCE	1.33547E-11	-5.62994E-13	-6.07514E-13	3.44169E-14	-8.06022E-14	1.92790E-13
12	GRID 13545 TX NHP FORCE	-2.31637E-11	-1.25233E-12	4.44089E-13	7.14984E-14	3.26139E-12	1.27898E-13
13	GRID 13545 TY NHP FORCE	-3.41416E-12	-5.96856E-12	-6.82121E-13	2.41585E-13	1.12887E-12	-7.14984E-14
14	GRID 13576 TX NHP FORCE	1.68967E-11	-5.87974E-13	6.25278E-13	-7.99361E-15	-2.15294E-12	9.83658E-14
15	GRID 16250 TX NHP FORCE	-1.14113E-11	1.35003E-12	-2.80664E-13	-6.39488E-14	-1.76925E-12	-2.71783E-13
16	GRID 16250 TY NHP FORCE	1.73728E-12	7.56017E-12	-5.68434E-14	-6.07514E-13	-9.29923E-13	-2.41140E-13
17	GRID 23028 TX NHP FORCE	-1.76428E-11	-4.08562E-13	1.65645E-13	-3.39728E-14	1.11766E-12	3.99680E-13
18	GRID 23044 TX NHP FORCE	1.91136E-12	7.95808E-13	-8.34888E-14	1.19682E-13	8.13644E-13	1.06581E-14
19	GRID 23076 TX NHP FORCE	-1.61116E-12	-9.59233E-14	8.04690E-13	6.55032E-15	-8.97726E-13	6.76126E-14
20	GRID 23506 TX NHP FORCE	1.58877E-11	-1.49925E-12	-7.17870E-13	-3.37508E-14	3.52429E-12	5.57332E-13
21	GRID 23537 TX NHP FORCE	-3.22444E-11	-4.26326E-14	1.14131E-13	-1.44329E-14	1.28964E-12	-1.42109E-13
22	GRID 23537 TY NHP FORCE	5.53602E-12	1.07434E-11	6.50591E-13	3.73035E-13	-2.06168E-13	1.96287E-13
23	GRID 37940 TX NHP FORCE	3.46745E-12	-2.70006E-13	-2.36255E-13	-1.42109E-14	-4.54747E-13	-7.10543E-14
24	GRID 37940 TY NHP FORCE	-6.62936E-12	1.82467E-11	3.05533E-13	-6.75016E-14	1.82077E-13	1.24345E-13
25	GRID 38067 TX NHP FORCE	-3.70903E-12	1.44240E-12	1.10134E-13	-1.33227E-14	3.23297E-13	2.68230E-13

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 53

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
26	GRID 38323 TX NHP FORCE	-8.21387E-12	4.37828E-12	4.95604E-13	-1.07539E-13	-1.10134E-13	-1.64646E-13
27	GRID 38323 TY NHP FORCE	2.60680E-12	-2.25100E-11	-2.09610E-13	2.87770E-13	-1.86517E-14	-1.03695E-13
28	GRID 45767 TX NHP FORCE	2.92744E-12	3.83693E-13	-8.02913E-13	-1.06581E-14	-3.55271E-15	-5.86198E-14
29	GRID 45890 TX NHP FORCE	-1.23990E-12	1.32161E-12	1.26321E-12	-4.47420E-14	-2.33147E-14	1.54321E-14
30	GRID 45890 TY NHP FORCE	1.56319E-12	7.38964E-12	-2.91323E-13	-2.62901E-13	-1.47438E-13	3.73035E-14
31	GRID 46151 TX NHP FORCE	7.96163E-12	-4.84901E-12	-3.40172E-13	1.45606E-13	7.79821E-13	-6.15064E-14
32	GRID 53578 TX NHP FORCE	-1.29319E-11	6.73239E-13	-1.61648E-13	4.19664E-14	1.88516E-12	1.40332E-13
33	GRID 53578 TZ NHP FORCE	-4.85656E-12	2.33946E-12	-3.89377E-12	-2.13163E-13	7.70828E-13	-3.00038E-14
34	GRID 53701 TX NHP FORCE	4.13563E-11	-6.26166E-13	7.17648E-13	6.66134E-15	-2.29816E-12	7.57103E-14
35	GRID 53701 TZ NHP FORCE	3.27915E-12	-3.55271E-15	-2.58638E-12	1.31450E-13	-1.41664E-13	6.03684E-14
36	GRID 53956 TX NHP FORCE	-1.32214E-11	1.56319E-13	5.25802E-13	-4.19942E-14	1.17417E-12	-6.90087E-13
37	GRID 53956 TZ NHP FORCE	3.61666E-12	7.48235E-13	-7.70228E-12	6.45040E-14	4.17444E-13	-1.61648E-13
38	GRID 61404 TX NHP FORCE	-4.26326E-12	-1.30429E-12	5.15143E-14	-7.78960E-14	-1.22569E-13	-3.41061E-13
39	GRID 61404 TZ NHP FORCE	5.40012E-12	-3.62377E-13	-5.68434E-14	2.30926E-13	-2.04281E-13	-2.93932E-14
40	GRID 61527 TX NHP FORCE	-2.92832E-12	8.67750E-13	-8.24230E-13	3.01981E-14	-1.99041E-12	1.77636E-14
41	GRID 61527 TZ NHP FORCE	-1.39622E-12	2.74514E-12	-3.09797E-12	-4.52971E-14	4.23661E-13	1.77636E-14
42	GRID 61788 TX NHP FORCE	-1.07718E-11	7.10543E-14	4.36984E-13	1.33227E-15	9.27258E-13	5.02820E-13
43	GRID 61788 TZ NHP FORCE	3.63798E-12	-1.57563E-12	1.98952E-13	-1.52101E-13	-2.02505E-13	-7.91589E-14
44	GRID 62589 TX NHP FORCE	6.13909E-12	7.17648E-13	-2.04281E-13	4.51861E-14	-1.73195E-14	7.99361E-14
45	GRID 62774 TX NHP FORCE	-8.02913E-13	-1.89071E-12	8.52651E-13	9.61453E-14	-4.07452E-14	3.96350E-14
46	GRID 63043 TX NHP FORCE	2.26663E-12	5.02709E-13	3.58824E-13	1.33227E-14	-1.15019E-13	1.35003E-13
47	GRID 63043 TZ NHP FORCE	-3.74278E-12	5.26690E-13	5.11591E-13	-1.77636E-13	4.77396E-14	1.12022E-13
48	GRID 63343 TX NHP FORCE	2.64322E-12	-1.44773E-13	-5.64881E-13	-1.22791E-13	2.72338E-13	-1.54654E-13
49	GRID 63343 TZ NHP FORCE	-8.41993E-13	-1.75415E-12	2.84217E-12	-4.70735E-14	1.84519E-13	-4.35207E-14
50	GRID 63345 TX NHP FORCE	1.30669E-11	9.74332E-13	-2.65565E-13	6.05072E-15	-8.10019E-13	7.86038E-14

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 54

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	GRID 63645 TX NHP FORCE	3.36087E-12	-1.48459E-12	3.71259E-13	-2.62290E-14	-2.64233E-14	1.44287E-13
52	GRID 63942 TX NHP FORCE	-2.31317E-11	-8.17124E-14	-7.69163E-13	7.72993E-15	5.87197E-13	1.54876E-13
53	GRID 63942 TZ NHP FORCE	-1.70175E-12	4.27214E-13	2.77112E-12	2.06946E-13	-1.58540E-13	2.79499E-14
54	GRID 64244 TX NHP FORCE	9.83036E-12	1.06026E-13	-3.73035E-13	9.20097E-15	-1.76525E-14	-1.77768E-13
55	GRID 64244 TZ NHP FORCE	-1.26121E-12	-6.19060E-13	5.40012E-12	-5.30131E-14	-5.14255E-13	1.58706E-13
56	GRID 64246 TX NHP FORCE	8.68638E-13	2.16271E-12	3.19744E-14	-1.96648E-14	-1.21791E-13	-2.00423E-13
57	GRID 64540 TX NHP FORCE	2.65743E-12	-6.60805E-13	3.52607E-13	-8.43769E-15	-3.79696E-14	-4.26326E-14
58	GRID 64814 TX NHP FORCE	-1.57279E-11	-8.63754E-14	-8.53539E-13	4.35207E-14	3.13749E-13	3.15969E-13
59	GRID 64814 TZ NHP FORCE	-1.01146E-11	1.42109E-14	-1.16529E-12	-4.35207E-14	4.10449E-13	-5.66214E-15
60	GRID 65003 TX NHP FORCE	-5.74829E-12	4.61853E-13	-5.71987E-13	-7.99361E-15	6.69909E-13	-9.76996E-14
61	GRID 65003 TZ NHP FORCE	1.41576E-12	-6.25278E-13	2.38742E-12	1.42109E-14	-3.99014E-13	3.33067E-15
62	Secondary -Y: 111869 DOF 3 IF FORCE	1.02324E+03	1.86120E+01	8.47172E+01	-1.91843E+01	-1.29220E+02	2.23796E+01
63	Primary -Y: 111885 DOF 1 IF FORCE	1.56261E+03	3.74612E+01	4.24926E-09	-1.83969E+00	4.35813E+00	1.47633E+02
64	Primary -Y: 111885 DOF 3 IF FORCE	-1.02324E+03	1.14017E+03	1.32519E+03	-1.39712E+02	1.29235E+02	-2.05357E+01
65	Secondary +Y: 113369 DOF 3 IF FORCE	1.01880E+03	-1.86120E+01	7.80447E+01	1.91806E+01	-1.20120E+02	-4.13794E+01
66	Primary +Y: 113385 DOF 1 IF FORCE	1.47266E+03	-3.74612E+01	5.21651E-09	1.83969E+00	-4.01853E+00	-1.48858E+02
67	Primary +Y: 113385 DOF 3 IF FORCE	-1.01880E+03	-1.14017E+03	1.24191E+03	1.38614E+02	1.20106E+02	3.95355E+01
68	GRID 150301 TX FRAM IF FORCE	4.06430E-12	-9.13047E-13	-5.11591E-13	-7.46070E-14	-1.74083E-13	4.06342E-14
69	GRID 150301 TY FRAM IF FORCE	-1.67510E-12	3.12639E-12	-2.68230E-13	9.23706E-14	1.68865E-13	3.19744E-14
70	GRID 150302 TX FRAM IF FORCE	2.98428E-13	1.57296E-12	-8.52651E-14	3.86913E-14	-3.19744E-14	-5.93969E-15
71	GRID 150303 TY FRAM IF FORCE	8.33555E-13	-1.06581E-12	-1.34559E-13	-1.01030E-13	-9.49796E-14	-5.32907E-15
72	GRID 150311 TZ FRAM IF FORCE	2.92744E-12	9.50351E-14	-1.11555E-12	-1.59872E-14	1.61293E-12	7.72715E-14
73	GRID 150312 TZ FRAM IF FORCE	-6.39488E-12	1.42109E-13	2.09610E-13	-5.21805E-14	-1.98952E-13	5.76206E-14
74	GRID 150313 TZ FRAM IF FORCE	-5.91349E-12	1.29674E-13	-1.59872E-13	-1.21569E-14	1.29896E-13	3.24185E-14
75	GRID 150314 TZ FRAM IF FORCE	2.67164E-12	-1.30007E-13	1.05804E-13	-1.38084E-14	2.41335E-13	-1.10675E-14

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 55

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
76	GRID 160301 TX FRAM IF FORCE	3.33955E-13	-1.00897E-12	1.90958E-13	5.93969E-14	6.37823E-14	1.55431E-14
77	GRID 160301 TY FRAM IF FORCE	2.39808E-13	1.63425E-13	5.68434E-14	-8.17124E-14	-2.46470E-13	1.28786E-14
78	GRID 160302 TX FRAM IF FORCE	-4.83169E-13	1.27898E-12	-2.30926E-13	-4.44089E-14	-3.86358E-14	2.44249E-14
79	GRID 160303 TY FRAM IF FORCE	3.00204E-12	-5.82645E-13	7.03437E-13	7.19425E-14	-1.73195E-14	-5.32907E-15
80	GRID 160311 TZ FRAM IF FORCE	6.28120E-12	7.03437E-13	-3.46834E-13	5.32907E-15	4.14557E-13	8.52651E-14
81	GRID 160312 TZ FRAM IF FORCE	-2.60059E-12	5.40012E-13	-2.78888E-13	0.00000E+00	1.27010E-13	-3.73035E-14
82	GRID 160313 TZ FRAM IF FORCE	6.35048E-12	1.85851E-13	-4.52971E-14	1.79301E-14	-2.19896E-13	8.26006E-14
83	GRID 160314 TZ FRAM IF FORCE	1.38733E-12	1.39000E-13	-1.86517E-14	-7.85483E-15	4.28546E-14	-1.95399E-14
84	GRID 170301 TX FRAM IF FORCE	1.02229E-12	7.67386E-13	1.01030E-13	-8.34888E-14	-9.60482E-14	-2.22045E-15
85	GRID 170301 TY FRAM IF FORCE	-1.28308E-12	-1.42109E-13	5.40012E-13	1.40332E-13	4.43867E-13	-3.27516E-15
86	GRID 170302 TX FRAM IF FORCE	-4.06786E-13	-2.27374E-13	1.03029E-13	1.19016E-13	8.85958E-14	1.59872E-14
87	GRID 170303 TY FRAM IF FORCE	6.73683E-13	-6.39488E-14	-2.13163E-14	-9.76996E-14	5.56222E-14	-3.67900E-14
88	GRID 170311 TZ FRAM IF FORCE	7.26885E-12	4.12115E-13	1.70530E-13	3.96350E-14	1.42997E-13	-4.08562E-14
89	GRID 170312 TZ FRAM IF FORCE	-1.03668E-11	-4.61853E-13	-1.25233E-13	-1.11022E-14	-1.70641E-13	6.21725E-14
90	GRID 170313 TZ FRAM IF FORCE	-1.93978E-12	4.60965E-13	2.23821E-13	-1.40443E-14	1.32117E-13	-7.77156E-16
91	GRID 170314 TZ FRAM IF FORCE	-4.90985E-12	1.84741E-13	-2.42473E-13	4.69416E-15	2.04892E-13	1.94289E-15
92	GRID 200201 Fuse-1 Acceleration TX	3.86089E+02	-4.34926E-10	-3.36629E-11	3.88546E-11	3.06541E+01	7.30585E+01
93	GRID 200201 Fuse-1 Acceleration TY	6.48185E-11	3.86089E+02	-2.17113E-11	-3.06541E+01	3.12261E-12	-2.57987E+00
94	GRID 200201 Fuse-1 Acceleration TZ	1.09542E-11	1.26872E-10	3.86089E+02	-7.30585E+01	2.57987E+00	5.38156E-12
95	GRID 200201 Fuse-1 Acceleration RX	1.36813E-12	5.48972E-12	8.04412E-13	1.00000E+00	7.81569E-14	1.11459E-13
96	GRID 200201 Fuse-1 Acceleration RY	-9.99028E-12	-6.57499E-12	-3.70393E-12	1.82944E-12	1.00000E+00	-2.61420E-12
97	GRID 200201 Fuse-1 Acceleration RZ	1.32118E-11	-1.89385E-11	-2.28677E-12	1.72193E-12	7.57159E-13	1.00000E+00
98	GRID 200202 Fuse-2 Acceleration TX	3.86089E+02	-2.57637E-10	2.32128E-12	3.85959E-13	6.54056E-01	7.30585E+01
99	GRID 200202 Fuse-2 Acceleration TY	3.35434E-11	3.86089E+02	-5.06764E-11	-6.54056E-01	2.35768E-12	-2.57987E+00
100	GRID 200202 Fuse-2 Acceleration TZ	-7.79297E-12	1.02697E-10	3.86089E+02	-7.30585E+01	2.57987E+00	2.09486E-12

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 56

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
101	GRID 200202 Fuse-2 Acceleration RX	-1.17557E-12	-2.84377E-12	-1.41198E-12	1.00000E+00	1.37444E-13	-3.46341E-13
102	GRID 200202 Fuse-2 Acceleration RY	-3.29630E-12	-2.03869E-12	1.15347E-12	7.36710E-13	1.00000E+00	-1.05882E-12
103	GRID 200202 Fuse-2 Acceleration RZ	2.27467E-11	-1.39571E-11	3.01865E-12	-4.81061E-13	1.30674E-13	1.00000E+00
104	GRID 200301 PVGF-1 Acceleration TX	3.86089E+02	3.05504E-10	-4.05055E-10	1.01632E-11	5.72523E+01	4.20585E+01
105	GRID 200301 PVGF-1 Acceleration TY	6.69436E-11	3.86089E+02	3.08805E-11	-5.72523E+01	1.08021E-11	-3.05570E+00
106	GRID 200301 PVGF-1 Acceleration TZ	-6.62005E-11	9.41158E-12	3.86089E+02	-4.20585E+01	3.05570E+00	-7.74813E-12
107	GRID 200301 PVGF-1 Acceleration RX	-2.79530E-12	-1.17077E-11	-2.34201E-12	1.00000E+00	-4.72430E-13	-3.47425E-13
108	GRID 200301 PVGF-1 Acceleration RY	-4.78029E-11	1.22269E-11	-1.93892E-11	7.81152E-13	1.00000E+00	-5.55651E-12
109	GRID 200301 PVGF-1 Acceleration RZ	-8.80921E-12	1.12650E-11	-3.29082E-12	-1.19907E-12	-1.15230E-12	1.00000E+00
110	GRID 200302 PVGF-2 Acceleration TX	3.86089E+02	3.03041E-10	5.16239E-09	7.16796E-11	-6.12902E+01	-3.27928E+00
111	GRID 200302 PVGF-2 Acceleration TY	-3.38922E-10	3.86089E+02	-2.24767E-10	6.12902E+01	5.52600E-11	1.69995E+01
112	GRID 200302 PVGF-2 Acceleration TZ	3.67475E-09	-3.37091E-10	3.86089E+02	3.27928E+00	-1.69995E+01	-5.98966E-11
113	GRID 200302 PVGF-2 Acceleration RX	-8.24406E-12	-1.00638E-10	-2.77426E-11	1.00000E+00	2.84846E-12	-1.70929E-11
114	GRID 200302 PVGF-2 Acceleration RY	-9.73253E-10	-9.61983E-12	-6.96527E-10	-4.70332E-12	1.00000E+00	1.05326E-11
115	GRID 200302 PVGF-2 Acceleration RZ	-3.40601E-11	-1.79983E-10	-1.28624E-11	-3.21403E-11	5.97882E-12	1.00000E+00
116	Grid 504878 PDU Acceleration TX	-1.04855E-10	-1.17971E-10	-3.86089E+02	7.20585E+01	1.04096E+01	-2.63932E-11
117	Grid 504878 PDU Acceleration TY	1.67581E-10	3.86089E+02	5.58664E-13	-1.51541E+01	2.53350E-12	1.04096E+01
118	Grid 504878 PDU Acceleration TZ	3.86089E+02	-2.77941E-10	1.14700E-12	1.10866E-11	1.51541E+01	7.20585E+01
119	Grid 504878 PDU Acceleration RX	-1.01754E-11	2.51855E-11	-2.56719E-12	-3.80930E-13	-7.34954E-14	-1.00000E+00
120	Grid 504878 PDU Acceleration RY	-9.22513E-12	-1.55923E-12	-1.48625E-11	3.60323E-12	1.00000E+00	-1.97861E-12
121	Grid 504878 PDU Acceleration RZ	-4.66577E-13	1.05738E-12	6.07153E-14	1.00000E+00	1.25287E-13	-4.58886E-13
122	GRID 1271 TX Keel DISPLACEMENT	-1.51068E-01	1.39713E-03	2.85678E-03	3.90106E-05	1.91626E-02	1.40538E-03
123	GRID 1271 TY Keel DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
124	GRID 1271 TZ Keel DISPLACEMENT	1.28624E-03	3.87383E-04	-7.31930E-03	-3.94730E-05	-1.91849E-04	-1.57148E-05
125	GRID 1271 RX Keel DISPLACEMENT	1.87541E-06	2.88745E-03	2.78975E-06	-9.03528E-06	1.52426E-07	-4.37691E-07

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 57

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
126	GRID 1271 RY Keel DISPLACEMENT	1.56699E-03	-1.36442E-05	-1.99994E-05	1.15236E-08	-3.10966E-04	-1.95014E-05
127	Grid 2279 X = 1170.3 Y=-23.82 Z= 315.8 5 TX	-1.31756E-01	1.59592E-03	2.70097E-03	-9.62230E-05	1.55445E-02	5.68260E-04
128	Grid 2279 X = 1170.3 Y=-23.82 Z= 315.8 5 TY	-7.92410E-04	-2.84983E-02	-2.12658E-04	1.25844E-04	7.31096E-05	1.31908E-04
129	Grid 2279 X = 1170.3 Y=-23.82 Z= 315.8 5 TZ	6.47023E-03	-1.19348E-04	-6.38048E-03	1.09461E-04	-1.16724E-03	-5.96174E-05
130	Grid 2789 X = 1180.1 Y=-23.82 Z= 315.8 5 TX	-1.31731E-01	1.45534E-03	2.65964E-03	-9.45437E-05	1.55424E-02	5.68616E-04
131	Grid 2789 X = 1180.1 Y=-23.82 Z= 315.8 5 TY	7.22386E-04	-2.83534E-02	-2.03329E-04	7.63210E-05	-7.20324E-05	-1.20604E-04
132	Grid 2789 X = 1180.1 Y=-23.82 Z= 315.8 5 TZ	-4.00692E-03	-7.87735E-05	-6.15074E-03	8.89450E-05	7.84425E-04	4.88290E-05
133	Grid 3299 X = 1170.3 Y=23.82 Z= 315.85 TX	-1.32062E-01	8.76715E-04	2.80052E-03	1.77873E-04	1.55538E-02	1.78973E-03
134	Grid 3299 X = 1170.3 Y=23.82 Z= 315.85 TY	6.93656E-04	-2.85381E-02	1.65706E-04	1.26677E-04	-7.42974E-05	1.22107E-04
135	Grid 3299 X = 1170.3 Y=23.82 Z= 315.85 TZ	6.59442E-03	6.28664E-04	-6.31763E-03	-1.83697E-04	-1.16034E-03	-1.23361E-04
136	Grid 3812 X = 1180.1 Y=23.82 Z= 315.85 TX	-1.32040E-01	1.02548E-03	2.76110E-03	1.76191E-04	1.55515E-02	1.78935E-03
137	Grid 3812 X = 1180.1 Y=23.82 Z= 315.85 TY	-6.99773E-04	-2.83710E-02	1.14853E-04	7.61563E-05	6.67197E-05	-1.12244E-04
138	Grid 3812 X = 1180.1 Y=23.82 Z= 315.85 TZ	-3.94916E-03	8.99629E-04	-6.06897E-03	-1.58585E-04	7.88722E-04	7.11358E-05
139	Grid 7589 X = 1180.1 Y=-83.76 Z= 375.2 9 TX	-3.25053E-02	2.15962E-03	7.94934E-04	-9.08570E-05	2.11177E-03	-7.66465E-04
140	Grid 7589 X = 1180.1 Y=-83.76 Z= 375.2 9 TY	5.19249E-03	-3.41631E-02	2.23185E-04	4.47023E-04	-3.70684E-04	-7.65252E-06
141	Grid 7589 X = 1180.1 Y=-83.76 Z= 375.2 9 TZ	-1.93776E-03	-2.96589E-03	-3.93063E-03	3.44323E-04	3.21516E-04	5.65650E-06
142	Grid 7804 X = 1170.3 Y=-83.76 Z= 375.2 9 TX	-3.25110E-02	2.15356E-03	7.90665E-04	-9.06355E-05	2.11224E-03	-7.66534E-04
143	Grid 7804 X = 1170.3 Y=-83.76 Z= 375.2 9 TY	-5.19944E-03	-3.43426E-02	2.76116E-04	4.49109E-04	3.33064E-04	5.39672E-05
144	Grid 7804 X = 1170.3 Y=-83.76 Z= 375.2 9 TZ	4.47022E-03	-3.19787E-03	-4.24201E-03	3.59175E-04	-7.44160E-04	1.15119E-05
145	Grid 17543 X = 1180.1 Y=83.76 Z= 375.2 9 TX	-3.22891E-02	-2.33230E-03	8.40437E-04	1.13126E-04	2.03897E-03	1.06123E-03
146	Grid 17543 X = 1180.1 Y=83.76 Z= 375.2 9 TY	-5.30324E-03	-3.38908E-02	-3.54142E-04	4.25343E-04	3.72222E-04	4.64408E-05
147	Grid 17543 X = 1180.1 Y=83.76 Z= 375.2 9 TZ	-1.91631E-03	3.27065E-03	-3.70395E-03	-3.66654E-04	3.51934E-04	4.11663E-05
148	Grid 17761 X = 1170.3 Y=83.76 Z= 375.2 9 TX	-3.22885E-02	-2.32974E-03	8.39240E-04	1.12953E-04	2.03951E-03	1.06113E-03
149	Grid 17761 X = 1170.3 Y=83.76 Z= 375.2 9 TY	5.09999E-03	-3.42667E-02	-4.26510E-04	4.18426E-04	-3.79829E-04	1.42146E-05
150	Grid 17761 X = 1170.3 Y=83.76 Z= 375.2 9 TZ	4.67351E-03	3.33649E-03	-3.99567E-03	-3.79446E-04	-6.98425E-04	-1.40389E-04

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 58

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
151	Grid 31033 X = 1170.3 Y=-83.76 Z= 424.71 TX	-1.04677E-02	6.18847E-04	-4.62741E-04	-5.47381E-05	-7.77342E-04	-4.16134E-04
152	Grid 31033 X = 1170.3 Y=-83.76 Z= 424.71 TY	-4.40876E-03	-3.72854E-02	1.47096E-03	6.05956E-04	-1.84075E-04	-6.22534E-05
153	Grid 31033 X = 1170.3 Y=-83.76 Z= 424.71 TZ	3.38775E-03	-2.60520E-03	-3.70515E-03	3.16446E-04	-4.87317E-04	4.41621E-05
154	Grid 34955 X = 1180.1 Y=-83.76 Z= 424.71 TX	-1.04766E-02	6.31736E-04	-4.45110E-04	-5.58882E-05	-7.74337E-04	-4.15757E-04
155	Grid 34955 X = 1180.1 Y=-83.76 Z= 424.71 TY	4.22329E-03	-3.74234E-02	1.65444E-03	6.06799E-04	1.75966E-04	1.15316E-04
156	Grid 34955 X = 1180.1 Y=-83.76 Z= 424.71 TZ	-7.95520E-04	-2.27710E-03	-3.49070E-03	3.11970E-04	6.20864E-05	-3.04027E-05
157	Grid 38875 X = 1170.3 Y=83.76 Z= 424.71 TX	-9.93082E-03	-9.03534E-04	-3.84346E-04	7.49098E-05	-7.17192E-04	2.60020E-04
158	Grid 38875 X = 1170.3 Y=83.76 Z= 424.71 TY	4.03258E-03	-3.68722E-02	-8.76033E-04	5.72224E-04	1.57971E-04	-1.89254E-05
159	Grid 38875 X = 1170.3 Y=83.76 Z= 424.71 TZ	3.39104E-03	2.85465E-03	-3.52030E-03	-3.40512E-04	-4.24071E-04	-1.24307E-04
160	Grid 42798 X = 1180.1 Y=83.76 Z= 424.71 TX	-9.93634E-03	-9.20866E-04	-3.67899E-04	7.63670E-05	-7.16439E-04	2.60284E-04
161	Grid 42798 X = 1180.1 Y=83.76 Z= 424.71 TY	-4.11636E-03	-3.72793E-02	-1.01706E-03	5.90129E-04	-2.25693E-04	5.88720E-05
162	Grid 42798 X = 1180.1 Y=83.76 Z= 424.71 TZ	-7.90026E-04	2.50507E-03	-3.28540E-03	-3.30352E-04	8.65716E-05	3.42102E-05
163	GRID 111869 TX Trunnion DISPLACEMENT	-1.63054E-03	-1.37588E-03	-3.79539E-05	9.88194E-05	-2.13060E-04	-5.05501E-04
164	GRID 111869 TY Trunnion DISPLACEMENT	5.42471E-02	-4.65363E-02	1.41679E-03	1.26283E-03	1.35460E-04	4.16067E-04
165	GRID 111869 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
166	GRID 111869 RX Trunnion DISPLACEMENT	-1.45248E-03	-1.21562E-04	-2.62410E-04	3.36192E-05	1.69919E-04	-3.67913E-05
167	GRID 111869 RZ Trunnion DISPLACEMENT	1.24588E-03	-2.64164E-04	1.59773E-05	1.82566E-05	-1.12925E-05	-1.47952E-05
168	GRID 111885 TX Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
169	GRID 111885 TY Trunnion DISPLACEMENT	4.40128E-05	-3.75655E-02	6.62066E-04	6.49057E-04	-4.66106E-05	1.66631E-05
170	GRID 111885 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
171	GRID 111885 RX Trunnion DISPLACEMENT	2.14740E-04	-3.28343E-04	-4.52142E-04	4.17324E-05	-3.12229E-05	2.69083E-06
172	GRID 111885 RZ Trunnion DISPLACEMENT	1.51324E-03	-8.66399E-05	2.05746E-05	5.58635E-06	2.04676E-05	5.81595E-05
173	GRID 113369 TX Trunnion DISPLACEMENT	-1.63344E-03	1.37550E-03	-5.09423E-05	-1.01777E-04	-1.84707E-04	5.06851E-04
174	GRID 113369 TY Trunnion DISPLACEMENT	-5.25548E-02	-4.76294E-02	-4.15162E-04	1.35956E-03	-2.06825E-04	1.82613E-04
175	GRID 113369 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 59

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
176	GRID 113369 RX Trunnion DISPLACEMENT	1.45995E-03	-1.41939E-04	2.47601E-04	3.57762E-05	-1.60930E-04	-6.25637E-05
177	GRID 113369 RZ Trunnion DISPLACEMENT	-1.19017E-03	-2.91080E-04	-6.32305E-06	2.09026E-05	8.87153E-06	-2.09219E-05
178	GRID 113385 TX Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
179	GRID 113385 TY Trunnion DISPLACEMENT	-6.68762E-05	-3.75207E-02	-7.06619E-06	6.46769E-04	-2.01329E-05	1.55789E-05
180	GRID 113385 TZ Trunnion DISPLACEMENT	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
181	GRID 113385 RX Trunnion DISPLACEMENT	-2.16280E-04	-3.52211E-04	4.28580E-04	4.38517E-05	2.67386E-05	7.95252E-06
182	GRID 113385 RZ Trunnion DISPLACEMENT	-1.45596E-03	-1.13579E-04	-1.29928E-05	7.76413E-06	-1.80902E-05	5.18139E-05
183	Element Force CBAR 27000 Shear 1	2.95018E+02	-1.07655E+02	-8.35018E+01	7.39215E+00	-1.95307E+01	8.44046E+00
184	Element Force CBAR 27000 Shear 2	-4.06067E+02	-3.40975E+02	-2.39178E+02	1.77827E+01	9.37917E+01	1.26409E+01
185	Element Force CBAR 27001 Shear 1	2.68004E+00	-2.37064E+01	-1.54169E+01	2.80747E-01	-6.57659E+00	-1.51794E+00
186	Element Force CBAR 27001 Shear 2	2.89639E+01	-3.33155E+01	-2.54521E+01	1.86235E+00	4.01187E+00	2.73494E+00
187	Element Force CBAR 27002 Shear 1	-2.12157E+01	-4.57109E+00	4.97007E+00	-1.11006E+00	-3.88003E-02	-7.50571E-01
188	Element Force CBAR 27002 Shear 2	1.52393E+01	-2.47931E+01	-2.00151E+01	1.01689E+00	2.77421E+00	1.54960E+00
189	Element Force CBAR 27003 Shear 1	-2.18975E+01	5.33480E+00	1.49887E+01	-1.00720E+00	9.30424E-01	-3.46694E-01
190	Element Force CBAR 27003 Shear 2	9.19719E+00	-1.84741E+01	-1.38770E+01	3.98688E-01	2.26916E+00	1.10321E+00
191	Element Force CBAR 27004 Shear 1	-1.91252E+01	1.97849E+00	8.08653E+00	-5.94367E-01	2.65085E-01	-2.74066E-01
192	Element Force CBAR 27004 Shear 2	4.29632E+00	-2.07882E+01	-1.06533E+01	2.05739E-01	1.33371E+00	7.84287E-01
193	Element Force CBAR 27005 Shear 1	-6.86880E+00	-9.75198E+00	1.46865E+00	-1.33875E-01	-4.98022E-01	-4.88224E-02
194	Element Force CBAR 27005 Shear 2	-5.24233E-01	-1.81003E+01	-6.55985E+00	7.30095E-02	1.91480E-01	5.51023E-01
195	Element Force CBAR 27006 Tension	1.91807E+02	2.12305E+02	1.49737E+02	-1.16190E+01	-5.86723E+01	-1.08840E+01
196	Element Force CBAR 27007 Tension	3.20195E+02	1.67898E+02	1.14767E+02	-8.45453E+00	-5.98847E+01	-4.84234E+00
197	Element Force CBAR 27008 Tension	3.51968E+02	8.87202E+01	5.55066E+01	-1.53636E+00	-5.52261E+01	-2.51195E+00
198	Element Force CBAR 27009 Tension	3.88466E+02	2.95576E+01	1.17576E+01	1.31101E+00	-5.33020E+01	4.23225E-02
199	Element Force CBAR 27010 Tension	2.78396E+02	5.83002E+01	2.03675E+01	2.15354E+00	-3.81004E+01	-8.98064E-01
200	Element Force CBAR 27011 Tension	2.98165E+02	-4.87833E+00	-2.69677E+01	3.89600E+00	-3.53549E+01	9.22571E-01

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 60

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
201	Element Force CBAR 27012 Tension	2.12325E+02	3.69889E+01	1.08706E+00	1.96502E+00	-2.72329E+01	-4.00181E-01
202	Element Force CBAR 27013 Tension	2.25000E+02	-1.31459E+01	-3.15968E+01	2.14756E+00	-2.49340E+01	8.64787E-01
203	Element Force CBAR 27014 Tension	1.56169E+02	2.23334E+01	-2.24412E+00	1.39221E+00	-1.91694E+01	-3.78812E-01
204	Element Force CBAR 27015 Tension	1.62306E+02	-3.41929E+01	-2.72762E+01	1.04362E+00	-1.78237E+01	5.03144E-01
205	Element Force CBAR 27016 Tension	1.26431E+02	5.85494E+01	1.58806E+01	5.46391E-01	-1.39844E+01	-2.99628E-01
206	Element Force CBAR 27017 Tension	1.25335E+02	7.83120E+00	-6.34927E-02	-1.02972E-01	-1.41327E+01	2.87152E-01
207	Element Force CBAR 27018 Shear 1	3.26752E+02	1.07097E+02	7.92916E+01	-5.07254E+00	-2.40350E+01	7.97043E+00
208	Element Force CBAR 27018 Shear 2	-3.83661E+02	2.99527E+02	2.47833E+02	-1.84587E+01	9.18883E+01	1.16590E+01
209	Element Force CBAR 27019 Shear 1	1.37041E+00	2.11792E+01	1.16875E+01	-5.36631E-01	-6.15503E+00	-1.51218E+00
210	Element Force CBAR 27019 Shear 2	2.29633E+01	3.86142E+01	3.50797E+01	-2.23071E+00	8.16820E+00	3.58373E+00
211	Element Force CBAR 27020 Shear 1	-1.78191E+01	9.72793E+00	-2.33480E+00	6.74956E-01	-2.94538E-01	-6.56693E-01
212	Element Force CBAR 27020 Shear 2	2.07355E+01	2.54390E+01	2.19694E+01	-7.59703E-01	4.45628E+00	2.13773E+00
213	Element Force CBAR 27021 Shear 1	-1.78598E+01	9.76767E+00	-5.35568E+00	4.17254E-01	5.02260E-01	-2.37138E-01
214	Element Force CBAR 27021 Shear 2	6.32718E+00	2.08207E+01	1.45643E+01	-4.57998E-02	3.74781E+00	1.37864E+00
215	Element Force CBAR 27022 Shear 1	-2.11815E+01	-1.06050E+01	-1.17884E+01	-7.57592E-02	-1.32863E-01	-4.77930E-01
216	Element Force CBAR 27022 Shear 2	1.21056E+01	2.44994E+01	1.25095E+01	2.06261E-01	1.56601E+00	1.02512E+00
217	Element Force CBAR 27023 Shear 1	-6.42860E+00	6.83707E+00	-1.71193E+00	-1.49102E-01	-6.92621E-01	-1.04982E-01
218	Element Force CBAR 27023 Shear 2	1.73475E+00	2.13924E+01	6.91139E+00	3.64211E-01	9.13517E-01	7.38226E-01
219	Element Force CBAR 27024 Tension	-1.41530E+02	1.69534E+02	1.41569E+02	-1.04091E+01	5.25894E+01	1.02442E+01
220	Element Force CBAR 27025 Tension	-3.75081E+02	1.66527E+02	1.40699E+02	-1.12197E+01	6.75978E+01	4.11792E+00
221	Element Force CBAR 27026 Tension	-3.79008E+02	1.11143E+02	7.94238E+01	-4.76098E+00	6.61891E+01	4.36586E+00
222	Element Force CBAR 27027 Tension	-3.86056E+02	3.02132E+01	8.04890E+00	9.88109E-03	4.95032E+01	-8.43726E-01
223	Element Force CBAR 27028 Tension	-2.71403E+02	5.05561E+01	1.22014E+01	7.64575E-01	4.05445E+01	1.88432E+00
224	Element Force CBAR 27029 Tension	-2.98018E+02	-1.53139E+01	-3.91319E+01	2.23228E+00	3.21909E+01	-1.36112E+00
225	Element Force CBAR 27030 Tension	-1.99427E+02	2.45013E+01	-2.63334E+01	2.35802E+00	2.84285E+01	1.49037E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 61

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
226	Element Force CBAR 27031 Tension	-2.12218E+02	-2.80768E+01	-6.03191E+01	2.14205E+00	2.26705E+01	-4.21003E-01
227	Element Force CBAR 27032 Tension	-1.62275E+02	-2.58212E+00	-2.73344E+01	6.63140E-01	1.89982E+01	-1.15836E-01
228	Element Force CBAR 27033 Tension	-1.71297E+02	-6.25519E+01	-5.27867E+01	-2.77274E-01	1.57959E+01	-1.28063E+00
229	Element Force CBAR 27034 Tension	-1.23937E+02	4.43109E+01	-3.91091E+00	3.06116E-01	1.44029E+01	2.22608E-01
230	Element Force CBAR 27035 Tension	-1.26154E+02	-1.06405E+01	-2.05203E+01	-8.74540E-01	1.27030E+01	-5.56732E-01
231	Element Force CBAR 27036 Tension	1.36744E+00	-3.91607E+01	-2.84244E+01	2.01039E+00	-1.03584E-01	1.34773E-01
232	Element Force CBAR 27037 Tension	7.51882E+00	5.78177E+01	4.30460E+01	-3.31008E+00	-1.75208E+00	-2.75653E-01
233	Element Force CBAR 27038 Shear 1	-3.10333E+02	-1.33669E+02	1.03169E+02	9.54456E+00	2.60905E+01	1.09772E+01
234	Element Force CBAR 27038 Shear 2	3.69804E+02	-3.87318E+02	2.43517E+02	2.04992E+01	-9.14583E+01	-2.12623E+00
235	Element Force CBAR 27039 Shear 1	-1.91144E+00	-1.21049E+01	6.56112E+00	-1.86826E-01	3.44851E+00	1.08162E-01
236	Element Force CBAR 27039 Shear 2	-2.93923E+01	-2.58362E+01	1.68651E+01	1.64799E+00	-4.97483E+00	1.98960E+00
237	Element Force CBAR 27040 Shear 1	1.92250E+01	-5.93545E+00	-5.25879E+00	-1.14338E+00	-7.47334E-01	-2.34117E-01
238	Element Force CBAR 27040 Shear 2	-2.05308E+01	-1.02332E+01	7.48226E+00	7.03962E-01	-3.95346E+00	1.22445E+00
239	Element Force CBAR 27041 Shear 1	1.70472E+01	2.57542E+00	-1.08902E+01	-9.98531E-01	-1.52078E+00	-1.85170E-02
240	Element Force CBAR 27041 Shear 2	-1.50485E+01	-1.11499E+01	5.25214E+00	7.93797E-02	-3.21649E+00	8.80571E-01
241	Element Force CBAR 27042 Shear 1	1.98013E+01	6.72336E+00	-1.20673E+01	-5.07142E-01	-6.95205E-01	-1.34041E-01
242	Element Force CBAR 27042 Shear 2	-1.12297E+01	-1.80216E+01	4.86680E+00	1.34256E-02	-2.08732E+00	6.81088E-01
243	Element Force CBAR 27043 Shear 1	1.30649E+01	-8.78994E+00	-3.01197E+00	-1.38826E-01	9.36411E-02	3.42831E-02
244	Element Force CBAR 27043 Shear 2	-5.01002E+00	-1.65758E+01	1.35789E+00	3.78633E-02	-9.80645E-01	5.36146E-01
245	Element Force CBAR 27044 Tension	1.63965E+02	-2.42552E+02	1.51014E+02	1.32314E+01	-5.68253E+01	1.66022E+00
246	Element Force CBAR 27045 Tension	2.98748E+02	-2.00916E+02	1.23629E+02	9.98588E+00	-5.66875E+01	-4.51397E+00
247	Element Force CBAR 27046 Tension	3.49785E+02	-7.56721E+01	2.86311E+01	-3.88405E-01	-5.54502E+01	-6.01699E+00
248	Element Force CBAR 27047 Tension	3.98582E+02	-4.46733E+01	1.44189E+01	-1.76130E+00	-5.01879E+01	-8.87051E+00
249	Element Force CBAR 27048 Tension	2.60508E+02	-3.34210E+01	1.08608E-01	-2.63412E+00	-3.99023E+01	-3.94391E+00
250	Element Force CBAR 27049 Tension	2.87995E+02	-1.14665E+01	-9.29048E+00	-2.98843E+00	-3.25483E+01	-5.78178E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 62

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
251	Element Force CBAR 27050 Tension	1.85689E+02	-1.16135E+01	-8.23174E+00	-2.38038E+00	-2.70624E+01	-2.15484E+00
252	Element Force CBAR 27051 Tension	2.07661E+02	1.49829E+01	-1.61822E+01	-1.82276E+00	-2.19581E+01	-3.34477E+00
253	Element Force CBAR 27052 Tension	1.37774E+02	-9.89858E+00	-1.38771E+01	-2.18658E+00	-1.91715E+01	-7.59933E-01
254	Element Force CBAR 27053 Tension	1.53887E+02	3.60086E+01	-2.17935E+01	-1.33448E+00	-1.57946E+01	-1.64008E+00
255	Element Force CBAR 27054 Tension	1.15250E+02	-4.87570E+01	4.45093E+00	-9.71175E-01	-1.45957E+01	8.55810E-02
256	Element Force CBAR 27055 Tension	1.22850E+02	-1.95025E+00	4.06887E+00	-1.62288E-01	-1.28388E+01	-5.34659E-01
257	Element Force CBAR 27056 Shear 1	-3.06981E+02	1.21027E+02	-8.20081E+01	-6.32099E+00	2.55595E+01	1.06709E+01
258	Element Force CBAR 27056 Shear 2	3.69577E+02	3.04003E+02	-2.59399E+02	-2.20599E+01	-8.85920E+01	-2.94143E+00
259	Element Force CBAR 27057 Shear 1	-3.98924E+01	2.92777E+01	-1.59643E+01	-8.33169E-01	6.90111E+00	1.00617E+00
260	Element Force CBAR 27057 Shear 2	-5.30656E+01	8.92522E+00	-9.31201E+00	-6.62881E-01	6.58414E-01	2.42403E+00
261	Element Force CBAR 27058 Shear 1	3.77316E+00	-2.29030E+00	5.65916E+00	4.57527E-01	2.91569E+00	-2.22745E-01
262	Element Force CBAR 27058 Shear 2	3.17509E+01	6.16561E+00	-6.45138E+00	-3.77158E-01	-5.96692E+00	-4.67802E-01
263	Element Force CBAR 27059 Shear 1	1.21002E+01	-2.27260E+00	4.12400E+00	-6.09260E-02	-7.93415E-01	1.13658E-01
264	Element Force CBAR 27059 Shear 2	-8.39864E+00	4.72643E+00	-4.83512E+00	-1.28643E-01	-2.26818E+00	7.59707E-01
265	Element Force CBAR 27060 Shear 1	1.96753E+01	-1.86929E+00	8.89944E+00	3.74888E-01	-2.67751E-01	-2.34491E-01
266	Element Force CBAR 27060 Shear 2	-5.67441E+00	1.72054E+01	-5.05885E+00	2.30469E-01	-1.37107E+00	5.94643E-01
267	Element Force CBAR 27061 Shear 1	1.31845E+01	1.06049E+01	3.12635E+00	1.59761E-01	2.79294E-01	-6.29675E-02
268	Element Force CBAR 27061 Shear 2	-9.54170E-01	1.88096E+01	-1.63518E+00	3.76120E-01	-3.64512E-01	5.89606E-01
269	Element Force CBAR 27062 Tension	-1.74959E+02	-1.82355E+02	1.57702E+02	1.36368E+01	5.59042E+01	-6.72227E-01
270	Element Force CBAR 27063 Tension	-2.96478E+02	-1.64971E+02	1.42101E+02	1.21344E+01	5.83055E+01	4.54344E+00
271	Element Force CBAR 27064 Tension	-2.61722E+02	-5.35774E+01	4.08473E+01	2.88214E+00	4.50262E+01	4.30525E+00
272	Element Force CBAR 27065 Tension	-2.47749E+02	-4.10141E+01	3.35880E+01	2.52258E+00	3.75778E+01	4.97002E+00
273	Element Force CBAR 27066 Tension	-1.85404E+02	1.67501E+00	-1.59844E+01	-1.07003E+00	2.24703E+01	3.41435E+00
274	Element Force CBAR 27067 Tension	-2.05584E+02	8.90624E+00	-2.01793E+01	-6.54851E-01	2.30599E+01	3.92499E+00
275	Element Force CBAR 27068 Tension	-1.87472E+02	1.26352E+00	-2.25131E+01	-3.48868E-01	2.46569E+01	2.09274E+00

Figure G-8. Staged ICC-V Model/OTMs

ASD/DMMP v1.11.0 Wed Jul 23 2008 22:40:02 CDT Page 63

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
276	Element Force CBAR 27069 Tension	-1.95605E+02	1.98493E+01	-3.01190E+01	2.08225E-01	2.18232E+01	2.78997E+00
277	Element Force CBAR 27070 Tension	-1.40415E+02	-9.15014E+00	-3.36206E+01	-1.06248E+00	1.74756E+01	1.09940E+00
278	Element Force CBAR 27071 Tension	-1.46085E+02	3.54879E+01	-4.17533E+01	9.37135E-02	1.58568E+01	1.56600E+00
279	Element Force CBAR 27072 Tension	-1.19268E+02	-5.80180E+01	-1.68021E+01	-7.98302E-01	1.33077E+01	2.59588E-01
280	Element Force CBAR 27073 Tension	-1.20295E+02	-8.45455E+00	-1.74456E+01	5.07039E-01	1.31870E+01	7.62175E-01
281	Element Force CBAR 27074 Tension	1.74483E+00	4.42589E+01	-3.05193E+01	-2.44554E+00	-2.34587E-01	-1.01842E-01
282	Element Force CBAR 27075 Tension	2.84241E+00	-7.04436E+01	5.24929E+01	4.42580E+00	-1.12133E-01	-9.19384E-02

Figure G-8. Staged ICC-V Model/OTMs

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ASD/DMMP v1.11.0                    Wed Jul 23 2008 22:40:02 CDT                    Page   64


                                  Execution Time: 00:00:01


                                   * * * END OF JOB * * *
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Figure G-8. Staged ICC-V Model/OTMs

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ASD/DMMP v1.11.0                          Wed Jul 23 2008 20:51:50 CDT                          Page    1



                                  ************************************************
                                  *                                              *
                                  *                ASD/DMMP v1.11.0              *
                                  *                                              *
                                  *       Applied Structural Dynamics, Inc.      *
                                  *    http://www.AppliedStructuralDynamics.com  *
                                  *                                              *
                                  *   Execution Time: Wed Jul 23 2008 20:51:50 CDT *
                                  *                                              *
                                  ************************************************



     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-07-0011A
     Name       : PM-IA
     Description: Pump Module Integrated Assembly (IA)
```

Figure G-9. Pump Module Integrated Assembly

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ASD/DMMP v1.11.0                        Wed Jul 23 2008 20:51:50 CDT                        Page    2

                                C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-07-0011A
     Name        : PM-IA
     Description : Pump Module Integrated Assembly (IA)
     Type        : Integrated

     DMM Type    : Hybrid
     DMM Size    : 51 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : DMM-2008-07-0011A.dmm.mat
        Geometry : pm_geom.dat
        Label    : <not specified>

     OTM-01:
        Description : PM IA NLFs & IFFs
        No. of Items: 20
        Ignore      : No
        Matrix File : DMM-2008-07-0011A.OTM.op4
        Label File  : DMM-2008-07-0011A.OTM.txt

     OTM-02:
        Description : PM FSE NLFs & IFFs
        No. of Items: 32
        Ignore      : No
        Matrix File : DMM-2008-04-0008C.OTM-01.op4
        Label File  : DMM-2008-04-0008C.OTM-01.txt

     OTM-03:
        Description : PM ORU NLFs & IFFs
        No. of Items: 51
        Ignore      : No
        Matrix File : DMM-2008-04-0009B.OTM-01.op4
        Label File  : DMM-2008-04-0009B.OTM-01.txt
```

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
29047	ID 29047	0	-21.36700	-4.80000	1.47000	15		1					
29048	ID 29048	0	-21.36700	-4.80000	31.85500	15	2	3					
29050	ID 29050	0	21.36700	-4.80000	31.85500	15	4						
40016	ID 40016	0	14.00000	-4.00000	1.47000	15			5				
40030	ID 40030	0	-14.00000	-4.00000	1.47000	15			6				
40515	ID 40515	0	18.37500	-4.00000	31.85500	15			7				
40516	ID 40516	0	-18.37500	-4.00000	31.85500	15			8				
700001	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							9
:													:
700043	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							51

Figure G-9. Pump Module Integrated Assembly

```
ASD/DMMP v1.11.0                        Wed Jul 23 2008 20:51:50 CDT                        Page    4

                                S O R T E D   B U L K   D A T A   E C H O

                ENTRY
                COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
                    1 -    BSET1   1       29050
                    2 -    BSET1   2       29047
                    3 -    BSET1   12      29048
                    4 -    BSET1   3       40016   40030   40515   40516
                    5 -    CORD2R *10              0                               0               0*
                    6 -    *                      0               0               0               1*
                    7 -    *                      1               0               0
                    8 -    CORD2R *15              0                               0          -3E-05*
                    9 -    *                 -8.268               0         0.03934          -8.268*
                   10 -    *                      0          -3E-05        -8.22863
                   11 -    CORD2R *251025          0                       31.21648        5.579767*
                   12 -    *                10.77201        31.17711        5.579767        10.77201*
                   13 -    *                31.21648        5.540397        10.77201
                   14 -    GRID   *29047                                    -21.367           -4.8*
                   15 -    *                   1.4715              13456
                   16 -    GRID   *29048                                    -21.367           -4.8*
                   17 -    *                 31.85515              3456
                   18 -    GRID   *29050                                     21.367           -4.8*
                   19 -    *                 31.85515              23456
                   20 -    GRID   *40016                                         14             -4*
                   21 -    *                   1.4715              12456
                   22 -    GRID   *40030                                        -14             -4*
                   23 -    *                   1.4715              12456
                   24 -    GRID   *40515                                     18.375             -4*
                   25 -    *                 31.85515              12456
                   26 -    GRID   *40516                                    -18.375             -4*
                   27 -    *                 31.85515              12456
                   28 -    QSET1   0       700001  THRU    700043
                   29 -    SPOINT  700001  THRU    700043
                   30 -    ENDDATA

                           TOTAL ENTRY COUNT = 30
```

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 5

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
1	10	1	1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00
2	15	1	0.00000000E+00	1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	-3.00000000E-05
			1.00000000E+00	0.00000000E+00	0.00000000E+00	-8.26800000E+00
3	251025	1	0.00000000E+00	0.00000000E+00	-1.00000000E+00	3.12164800E+01
			-1.00000000E+00	0.00000000E+00	0.00000000E+00	5.57976700E+00
			0.00000000E+00	1.00000000E+00	0.00000000E+00	1.07720100E+01

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 6

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	29047	15	-2.13670E+01	-4.80000E+00	1.47000E+00
2	29048	15	-2.13670E+01	-4.80000E+00	3.18550E+01
3	29050	15	2.13670E+01	-4.80000E+00	3.18550E+01
4	40016	15	1.40000E+01	-4.00000E+00	1.47000E+00
5	40030	15	-1.40000E+01	-4.00000E+00	1.47000E+00
6	40515	15	1.83750E+01	-4.00000E+00	3.18550E+01
7	40516	15	-1.83750E+01	-4.00000E+00	3.18550E+01
8	700001	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
50	700043	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	29047-1	29047-3	29047-4	29047-5	29047-6	29048-3	29048-4	29048-5	29048-6	29050-2 =	10
11 =	29050-3	29050-4	29050-5	29050-6	40016-1	40016-2	40016-4	40016-5	40016-6	40030-1 =	20
21 =	40030-2	40030-4	40030-5	40030-6	40515-1	40515-2	40515-4	40515-5	40515-6	40516-1 =	30
31 =	40516-2	40516-4	40516-5	40516-6							

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	29047-2	29048-1	29048-2	29050-1	40016-3	40030-3	40515-3	40516-3		

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	700001-0	700002-0	700003-0	700004-0	700005-0	700006-0	700007-0	700008-0	700009-0	700010-0	= 10
11 =	700011-0	700012-0	700013-0	700014-0	700015-0	700016-0	700017-0	700018-0	700019-0	700020-0	= 20
21 =	700021-0	700022-0	700023-0	700024-0	700025-0	700026-0	700027-0	700028-0	700029-0	700030-0	= 30
31 =	700031-0	700032-0	700033-0	700034-0	700035-0	700036-0	700037-0	700038-0	700039-0	700040-0	= 40
41 =	700041-0	700042-0	700043-0								

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 10

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	29047-2	29048-1	29048-2	29050-1	40016-3	40030-3	40515-3	40516-3	700001-0	700002-0	= 10
11 =	700003-0	700004-0	700005-0	700006-0	700007-0	700008-0	700009-0	700010-0	700011-0	700012-0	= 20
21 =	700013-0	700014-0	700015-0	700016-0	700017-0	700018-0	700019-0	700020-0	700021-0	700022-0	= 30
31 =	700023-0	700024-0	700025-0	700026-0	700027-0	700028-0	700029-0	700030-0	700031-0	700032-0	= 40
41 =	700033-0	700034-0	700035-0	700036-0	700037-0	700038-0	700039-0	700040-0	700041-0	700042-0	= 50
51 =	700043-0										

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 11

Z E R O D A M P I N G D O F S

The following DOFs have damping less than 1.0E-09:

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	29047-2	29048-1	29048-2	29050-1	40016-3	40030-3	40515-3	40516-3		

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 12

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

3.627286E+00	-4.261357E-10	-2.375776E-09	-1.745965E-05	3.580564E+01	-3.510081E+01
-4.261365E-10	3.627286E+00	-5.652551E-10	-3.580564E+01	1.007499E-06	1.080470E+00
-2.375775E-09	-5.652552E-10	3.627286E+00	3.510101E+01	-1.080465E+00	5.015973E-08
-1.745965E-05	-3.580564E+01	3.510101E+01	1.928257E+03	-4.176321E+01	-4.831566E+01
3.580564E+01	1.007499E-06	-1.080465E+00	-4.176321E+01	2.305494E+03	-2.577591E+02
-3.510081E+01	1.080470E+00	5.015973E-08	-4.831566E+01	-2.577591E+02	1.928247E+03

S

1.000000E+00	0.000000E+00	0.000000E+00
0.000000E+00	1.000000E+00	0.000000E+00
0.000000E+00	0.000000E+00	1.000000E+00

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	3.627286E+00	-4.813420E-06	9.676881E+00	9.871194E+00
Y	3.627286E+00	2.978728E-01	2.777556E-07	9.871193E+00
Z	3.627286E+00	2.978715E-01	9.676935E+00	1.382845E-08

I(S)

1.235143E+03	3.130762E+01	3.765014E+01
3.130762E+01	1.951728E+03	-8.872784E+01
3.765014E+01	-8.872784E+01	1.588258E+03

I(Q)

1.230490E+03		
	1.570346E+03	
		1.974293E+03

Q

9.947996E-01	8.708676E-02	-5.281737E-02
3.125710E-02	2.325122E-01	9.720911E-01
9.693695E-02	-9.686867E-01	2.285810E-01

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 13

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
2.978722E-01	9.676908E+00	9.871194E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 14

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = C.G.

M O

```
*  3.627286E+00 -4.261357E-10 -2.375776E-09 -1.744086E-05  1.848383E-06  9.936927E-05 *
* -4.261365E-10  3.627286E+00 -5.652551E-10  1.854561E-06  1.011537E-06  2.458501E-06 *
* -2.375775E-09 -5.652552E-10  3.627286E+00  9.936356E-05  2.486076E-06  2.733794E-08 *
* -1.744086E-05  1.854561E-06  9.936356E-05  1.235143E+03 -3.130744E+01 -3.765031E+01 *
*  1.848383E-06  1.011537E-06  2.486076E-06 -3.130744E+01  1.951728E+03  8.872784E+01 *
*  9.936927E-05  2.458501E-06  2.733794E-08 -3.765031E+01  8.872784E+01  1.588258E+03 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	3.627286E+00	-4.808241E-06	-2.739494E-05	5.095775E-07
Y	3.627286E+00	6.777799E-07	2.788689E-07	-5.112806E-07
Z	3.627286E+00	-6.853821E-07	2.739337E-05	7.536749E-09

I(S)

```
*  1.235143E+03  3.130744E+01  3.765031E+01 *
*  3.130744E+01  1.951728E+03 -8.872784E+01 *
*  3.765031E+01 -8.872784E+01  1.588258E+03 *
```

I(Q)

```
*  1.230490E+03                             *
*                1.570346E+03               *
*                             1.974293E+03 *
```

Q

```
*  9.947995E-01  8.708736E-02 -5.281718E-02 *
*  3.125678E-02  2.325123E-01  9.720911E-01 *
*  9.693749E-02 -9.686867E-01  2.285810E-01 *
```

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 15

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	3.62729E+00	-4.26136E-10	-2.37578E-09	-1.74409E-05	1.84838E-06	9.93693E-05
T2:	-4.26136E-10	3.62729E+00	-5.65255E-10	1.85456E-06	1.01154E-06	2.45850E-06
T3:	-2.37578E-09	-5.65255E-10	3.62729E+00	9.93636E-05	2.48608E-06	2.73379E-08
R1:	-1.74409E-05	1.85456E-06	9.93636E-05	1.23514E+03	-3.13074E+01	-3.76503E+01
R2:	1.84838E-06	1.01154E-06	2.48608E-06	-3.13074E+01	1.95173E+03	8.87278E+01
R3:	9.93693E-05	2.45850E-06	2.73379E-08	-3.76503E+01	8.87278E+01	1.58826E+03

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-4.25772E-05	2.46309E-05	1.09403E-05	4.84187E-04	5.31410E-03	-2.54101E-03
T2:	2.46310E-05	1.91712E-04	1.23816E-05	-7.42788E-04	-6.98582E-04	5.62158E-03
T3:	1.09403E-05	1.23816E-05	-7.60008E-05	7.34943E-04	2.18851E-04	1.86542E-05
R1:	4.84188E-04	-7.42787E-04	7.34935E-04	4.01964E-02	-9.84188E-02	-1.80904E-02
R2:	5.31410E-03	-6.98581E-04	2.18851E-04	-9.84189E-02	-3.77618E-02	-1.80806E-01
R3:	-2.54101E-03	5.62158E-03	1.86546E-05	-1.80904E-02	-1.80806E-01	1.72985E-01

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	2.00873E-29	-1.29669E-29	-7.95184E-30	-6.20659E-28	-1.86753E-28	3.56168E-28
T2:	-1.29669E-29	3.35061E-29	-5.81799E-30	1.33276E-27	3.61174E-28	3.13244E-28
T3:	-7.95184E-30	-5.81799E-30	2.44036E-29	-1.17483E-27	-5.33442E-28	-5.72320E-28
R1:	-6.20659E-28	1.33276E-27	-1.17483E-27	1.53786E-25	4.66175E-26	2.30452E-26
R2:	-1.86753E-28	3.61174E-28	-5.33442E-28	4.66175E-26	2.23674E-26	7.13231E-27
R3:	3.56168E-28	3.13244E-28	-5.72320E-28	2.30452E-26	7.13231E-27	2.46189E-26

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 16

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	29047-2	-1.03468E-04	4.21096E-05	9.06482E-06	4.69333E-01	-1.02061E-01	1.27988E-03
2	29048-1	7.80813E-05	7.02734E-06	-3.15321E-05	3.31518E-01	-7.60773E-02	-2.00456E-03
3	29048-2	6.08912E-05	-1.74787E-05	1.87548E-06	-4.68849E-01	1.07375E-01	-3.82089E-03
4	29050-1	-6.71409E-05	5.35422E-06	-4.44686E-05	-3.30783E-01	7.62962E-02	2.02321E-03
5	40016-3	-4.93015E-05	1.59135E-04	8.70349E-06	-4.78521E-01	4.47200E-02	6.89524E-03
6	40030-3	8.82699E-05	-3.89756E-05	-1.17683E-05	4.79656E-01	-4.83603E-02	-3.41446E-03
7	40515-3	-6.93163E-06	1.05125E-04	-3.77730E-06	3.63391E-01	-4.10073E-02	2.89651E-03
8	40516-3	-7.40571E-06	-3.35718E-05	1.92238E-05	-3.65270E-01	4.39489E-02	-7.55709E-04
	Total:	-4.25772E-05	1.91712E-04	-7.60008E-05	4.01964E-02	-3.77618E-02	1.72985E-01

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 17

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	1	29047-2	-1.03468E-04
T2 -	5	40016-3	1.59135E-04
T3 -	4	29050-1	-4.44686E-05
R1 -	6	40030-3	4.79656E-01
R2 -	3	29048-2	1.07375E-01
R3 -	5	40016-3	6.89524E-03

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 18

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	29047-2	2.36986E-29	-1.62380E-29	-2.63342E-30	-8.23902E-28	-5.08976E-28	3.69181E-28
2	29048-1	-1.77387E-30	7.08232E-31	1.76711E-30	2.45122E-28	-5.41631E-30	-3.59982E-29
3	29048-2	-3.61132E-30	3.27105E-30	-5.31843E-30	2.03243E-28	3.22222E-28	-1.30129E-29
4	29050-1	-6.17797E-30	-6.52623E-30	2.26365E-29	-1.41995E-27	-5.28025E-28	-5.36322E-28
5	40016-3	-1.47705E-29	4.41655E-29	-3.28198E-29	4.11676E-27	1.19200E-27	9.11410E-28
6	40030-3	-1.88263E-29	2.11667E-29	1.57263E-30	1.34899E-27	3.49377E-28	-1.99018E-28
7	40515-3	1.04434E-29	-1.07713E-29	1.33284E-29	-2.23851E-27	-6.40533E-28	-9.04577E-29
8	40516-3	1.01865E-29	-2.10549E-29	1.21007E-29	-1.89449E-27	-5.39675E-28	-3.08690E-28
	Total:	2.00873E-29	3.35061E-29	2.44036E-29	1.53786E-25	2.23674E-26	2.46189E-26

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 19

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

Dir	DOF	GRID-C	Max. Force
T1 -	1	29047-2	2.36986E-29
T2 -	5	40016-3	4.41655E-29
T3 -	5	40016-3	-3.28198E-29
R1 -	5	40016-3	4.11676E-27
R2 -	5	40016-3	1.19200E-27
R3 -	5	40016-3	9.11410E-28

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 20

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	29047-2	9.58256E+02	2.40975E+01	-1.41557E+02	-1.00867E+01	-2.50692E+01	1.81507E-01
2	29048-1	-3.90950E+01	1.71340E+01	5.89814E+02	-7.90448E+00	2.78467E+01	2.20529E+00
3	29048-2	4.42197E+02	-2.40975E+01	1.41557E+02	1.00867E+01	2.50692E+01	-1.81407E-01
4	29050-1	3.90950E+01	-1.71340E+01	8.10640E+02	7.90458E+00	-2.78467E+01	-2.20529E+00
5	40016-3	-4.19902E+02	5.31761E+02	4.22587E+02	2.32567E+01	-5.10247E+00	3.08172E+01
6	40030-3	4.19902E+02	4.81479E+02	2.44659E+02	1.73931E+01	4.07212E+00	-3.20563E+01
7	40515-3	-2.31754E+02	1.85803E+02	-4.01405E+02	-2.35831E+01	6.42462E+00	1.98856E+01
8	40516-3	2.31754E+02	2.01410E+02	-2.65841E+02	-1.70666E+01	-5.39427E+00	-1.86465E+01
	Total:	1.40045E+03	1.40045E+03	1.40045E+03	1.23514E+03	1.95173E+03	1.58826E+03

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 21

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-1.211026E-04	1.100466E-02	1.751447E-03
2	-3.138366E-05	5.602112E-03	8.916038E-04
3	-2.295970E-05	4.791628E-03	7.626112E-04
4	2.736351E-05	5.231014E-03	8.325417E-04
5	7.843461E-05	8.856332E-03	1.409529E-03
6	2.194599E-04	1.481418E-02	2.357750E-03
7	9.559079E+04	3.091776E+02	4.920714E+01
8	1.276002E+05	3.572118E+02	5.685202E+01
9	1.439934E+05	3.794646E+02	6.039366E+01
10	1.522544E+05	3.901979E+02	6.210193E+01
11	1.798529E+05	4.240907E+02	6.749613E+01
12	1.915560E+05	4.376711E+02	6.965753E+01
13	1.987475E+05	4.458111E+02	7.095303E+01
14	2.092944E+05	4.574871E+02	7.281133E+01
15	2.154488E+05	4.641646E+02	7.387410E+01
16	2.263266E+05	4.757379E+02	7.571604E+01
17	2.311442E+05	4.807746E+02	7.651765E+01
18	2.416008E+05	4.915291E+02	7.822928E+01
19	2.636691E+05	5.134872E+02	8.172403E+01
20	2.985841E+05	5.464285E+02	8.696680E+01
21	3.196492E+05	5.653753E+02	8.998227E+01
22	3.403962E+05	5.834349E+02	9.285654E+01
23	3.647002E+05	6.039041E+02	9.611433E+01
24	3.751944E+05	6.125311E+02	9.748736E+01
25	4.186783E+05	6.470535E+02	1.029818E+02
26	4.380482E+05	6.618521E+02	1.053370E+02
27	4.463768E+05	6.681144E+02	1.063337E+02
28	4.767028E+05	6.904367E+02	1.098864E+02
29	5.451572E+05	7.383476E+02	1.175117E+02
30	5.534858E+05	7.439663E+02	1.184059E+02
31	5.639295E+05	7.509524E+02	1.195178E+02
32	6.098110E+05	7.809040E+02	1.242847E+02
33	6.172141E+05	7.856297E+02	1.250369E+02
34	6.290756E+05	7.931428E+02	1.262326E+02
35	6.390088E+05	7.993803E+02	1.272253E+02
36	6.812721E+05	8.253921E+02	1.313652E+02
37	7.010650E+05	8.372963E+02	1.332598E+02
38	7.235235E+05	8.506018E+02	1.353775E+02
39	7.474486E+05	8.645511E+02	1.375976E+02
40	8.033959E+05	8.963236E+02	1.426543E+02
41	8.109142E+05	9.005077E+02	1.433203E+02
42	8.317555E+05	9.120063E+02	1.451503E+02
43	8.424416E+05	9.178462E+02	1.460798E+02
44	8.824667E+05	9.393970E+02	1.495097E+02
45	9.133527E+05	9.556949E+02	1.521036E+02
46	1.179542E+06	1.086067E+03	1.728530E+02
47	1.427178E+06	1.194646E+03	1.901338E+02
48	2.534255E+06	1.591934E+03	2.533642E+02
49	3.465841E+06	1.861677E+03	2.962951E+02
50	7.156726E+06	2.675206E+03	4.257722E+02
51	1.235164E+07	3.514490E+03	5.593485E+02

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 22

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	3.004529E+04	1.733358E+02	2.758724E+01
2	3.957293E+04	1.989295E+02	3.166061E+01
3	4.990359E+04	2.233911E+02	3.555380E+01
4	1.017859E+05	3.190391E+02	5.077665E+01
5	1.248389E+05	3.533255E+02	5.623350E+01
6	1.481562E+05	3.849107E+02	6.126043E+01
7	1.789841E+05	4.230652E+02	6.733291E+01
8	1.849713E+05	4.300829E+02	6.844982E+01
9	1.957730E+05	4.424625E+02	7.042009E+01
10	2.084676E+05	4.565825E+02	7.266736E+01
11	2.203686E+05	4.694344E+02	7.471280E+01
12	2.286503E+05	4.781740E+02	7.610375E+01
13	2.289694E+05	4.785074E+02	7.615682E+01
14	2.304196E+05	4.800204E+02	7.639762E+01
15	2.438332E+05	4.937947E+02	7.858987E+01
16	3.223418E+05	5.677515E+02	9.036046E+01
17	3.403616E+05	5.834051E+02	9.285181E+01
18	3.544069E+05	5.953208E+02	9.474825E+01
19	3.746678E+05	6.121011E+02	9.741892E+01
20	3.928399E+05	6.267695E+02	9.975346E+01
21	4.138423E+05	6.433057E+02	1.023853E+02
22	4.223793E+05	6.499071E+02	1.034359E+02
23	4.595941E+05	6.779337E+02	1.078965E+02
24	4.922325E+05	7.015928E+02	1.116620E+02
25	5.478957E+05	7.401998E+02	1.178065E+02
26	5.607319E+05	7.488203E+02	1.191785E+02
27	5.785663E+05	7.606354E+02	1.210589E+02
28	6.028841E+05	7.764561E+02	1.235768E+02
29	6.170762E+05	7.855420E+02	1.250229E+02
30	6.282286E+05	7.926087E+02	1.261476E+02
31	6.394414E+05	7.996508E+02	1.272684E+02
32	6.431724E+05	8.019803E+02	1.276391E+02
33	7.089827E+05	8.420111E+02	1.340102E+02
34	7.168129E+05	8.466481E+02	1.347482E+02
35	7.189893E+05	8.479324E+02	1.349526E+02
36	7.496284E+05	8.658108E+02	1.377981E+02
37	7.872989E+05	8.872986E+02	1.412180E+02
38	8.168179E+05	9.037798E+02	1.438410E+02
39	8.289342E+05	9.104582E+02	1.449039E+02
40	8.345289E+05	9.135256E+02	1.453921E+02
41	8.457473E+05	9.196452E+02	1.463661E+02
42	8.648294E+05	9.299621E+02	1.480081E+02
43	8.863163E+05	9.414437E+02	1.498354E+02

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 23

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	2.758724E+01	3.26%	22.06%	28.52%	26.32%	0.65%	2.27%
2	3.166061E+01	49.48%	1.30%	8.26%	2.37%	1.21%	19.47%
3	3.555380E+01	5.14%	34.91%	11.78%	1.86%	0.47%	2.91%
4	5.077665E+01	0.06%	0.10%	0.24%	14.19%	50.54%	0.63%
5	5.623350E+01	4.09%	1.95%	0.06%	0.50%	0.18%	3.58%
6	6.126043E+01	0.13%	0.01%	0.02%	0.05%	0.03%	0.04%
7	6.733291E+01	0.02%	0.03%	3.42%	1.81%	2.88%	0.10%
8	6.844982E+01	0.76%	0.06%	12.75%	7.98%	6.43%	3.31%
9	7.042009E+01	1.37%	0.00%	3.50%	2.87%	0.31%	6.79%
10	7.266736E+01	0.05%	0.08%	0.51%	0.27%	0.46%	0.60%
11	7.471280E+01	0.23%	0.05%	0.42%	0.50%	0.01%	2.40%
12	7.610375E+01	0.10%	0.56%	0.13%	0.07%	0.00%	0.53%
13	7.615682E+01	0.45%	0.21%	2.82%	2.16%	0.12%	1.08%
14	7.639762E+01	0.02%	0.00%	0.08%	0.04%	0.03%	0.60%
15	7.858987E+01	2.05%	0.13%	4.34%	2.05%	4.00%	17.64%
16	9.036046E+01	1.40%	0.05%	0.03%	0.08%	0.36%	3.35%
17	9.285181E+01	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%
18	9.474825E+01	0.12%	0.68%	0.29%	0.05%	0.02%	0.03%
19	9.741892E+01	0.00%	0.01%	0.07%	0.05%	0.01%	0.00%
20	9.975346E+01	0.02%	0.71%	6.11%	4.95%	1.76%	3.23%
21	1.023853E+02	0.01%	0.88%	0.30%	0.17%	2.10%	2.41%
22	1.034359E+02	1.43%	0.39%	0.00%	0.08%	0.45%	0.10%
23	1.078965E+02	0.04%	0.04%	0.58%	0.35%	0.02%	0.73%
24	1.116620E+02	0.00%	0.55%	3.14%	1.08%	0.47%	0.56%
25	1.178065E+02	0.02%	0.02%	0.10%	0.04%	0.00%	0.06%
26	1.191785E+02	0.04%	0.00%	0.06%	0.03%	0.00%	0.06%
27	1.210589E+02	0.04%	0.14%	0.07%	0.22%	0.54%	0.71%
28	1.235768E+02	1.61%	1.05%	0.09%	0.50%	4.11%	0.00%
29	1.250229E+02	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%
30	1.261476E+02	0.00%	0.01%	0.01%	0.03%	0.05%	0.23%
31	1.272684E+02	0.77%	0.54%	0.00%	0.15%	0.41%	0.06%
32	1.276391E+02	1.63%	0.70%	0.01%	0.63%	1.23%	0.65%
33	1.340102E+02	0.55%	0.54%	0.02%	0.21%	0.10%	0.00%
34	1.347482E+02	0.62%	0.12%	0.54%	0.32%	0.30%	0.21%
35	1.349526E+02	0.23%	0.01%	1.29%	0.51%	0.73%	0.01%
36	1.377981E+02	0.60%	0.10%	0.04%	0.16%	0.24%	0.08%
37	1.412180E+02	1.89%	0.41%	0.19%	1.18%	0.23%	0.62%
38	1.438410E+02	0.43%	0.04%	0.00%	0.15%	0.00%	0.18%
39	1.449039E+02	0.16%	0.43%	2.32%	0.17%	1.34%	0.11%
40	1.453921E+02	0.25%	0.07%	0.61%	0.21%	0.08%	0.11%
41	1.463661E+02	0.04%	0.07%	1.58%	0.53%	1.43%	0.05%
42	1.480081E+02	3.01%	0.33%	0.67%	1.38%	4.58%	0.63%
43	1.498354E+02	0.02%	0.03%	0.08%	0.11%	0.05%	0.00%
Total:		82.14%	69.38%	95.07%	76.39%	87.92%	76.13%

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 24

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-3.04023E-08	1.75876E-08	7.81197E-09	3.45737E-07	3.79457E-06	-1.81442E-06
2	Net Load Factor - T2 (g)	1.75879E-08	1.36893E-07	8.84116E-09	-5.30391E-07	-4.98826E-07	4.01411E-06
3	Net Load Factor - T3 (g)	7.81197E-09	8.84115E-09	-5.42687E-08	5.24787E-07	1.56277E-07	1.33212E-08
4	Net Load Factor - R1 (rad/sec^2)	4.09948E-07	-5.06330E-07	5.98670E-07	3.10471E-05	-8.35782E-05	-1.36545E-05
5	Net Load Factor - R2 (rad/sec^2)	2.80877E-06	-5.27754E-07	1.20863E-07	-4.95701E-05	-1.54625E-05	-9.80436E-05
6	Net Load Factor - R3 (rad/sec^2)	-1.74707E-06	3.55694E-06	1.91848E-08	-7.88491E-06	-1.14957E-04	1.14068E-04
7	ID 29047 - T2 (lbf)	-1.03468E-04	4.21096E-05	9.06482E-06	4.69333E-01	-1.02061E-01	1.27988E-03
8	ID 29048 - T1 (lbf)	7.80813E-05	7.02734E-06	-3.15321E-05	3.31518E-01	-7.60773E-02	-2.00456E-03
9	ID 29048 - T2 (lbf)	6.08912E-05	-1.74787E-05	1.87548E-06	-4.68849E-01	1.07375E-01	-3.82089E-03
10	ID 29050 - T1 (lbf)	-6.71409E-05	5.35422E-06	-4.44686E-05	-3.30783E-01	7.62962E-02	2.02321E-03
11	ID 40016 - T3 (lbf)	-4.93015E-05	1.59135E-04	8.70349E-06	-4.78521E-01	4.47200E-02	6.89524E-03
12	ID 40030 - T3 (lbf)	8.82699E-05	-3.89756E-05	-1.17683E-05	4.79656E-01	-4.83603E-02	-3.41446E-03
13	ID 40515 - T3 (lbf)	-6.93163E-06	1.05125E-04	-3.77730E-06	3.63391E-01	-4.10073E-02	2.89651E-03
14	ID 40516 - T3 (lbf)	-7.40571E-06	-3.35718E-05	1.92238E-05	-3.65270E-01	4.39489E-02	-7.55709E-04
15	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
16	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
20	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 25

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	1.11022E-16	-2.28983E-16	-1.38778E-17	-1.01915E-17	-5.20417E-18
2	Net Load Factor - T2 (g)	1.59595E-16	1.00000E+00	-7.96238E-16	-3.98986E-17	-2.14672E-17	6.93889E-18
3	Net Load Factor - T3 (g)	5.68989E-16	5.82867E-16	1.00000E+00	3.46945E-18	6.93889E-18	-1.73472E-17
4	Net Load Factor - R1 (rad/sec^2)	1.64313E-14	-2.13163E-14	-4.13003E-14	1.00000E+00	-2.77556E-17	-3.88578E-16
5	Net Load Factor - R2 (rad/sec^2)	-3.55271E-15	-1.29896E-14	3.55271E-15	2.42861E-16	1.00000E+00	1.31839E-16
6	Net Load Factor - R3 (rad/sec^2)	-1.37945E-14	-2.66454E-15	-1.17406E-14	-4.44089E-16	2.25514E-17	1.00000E+00
7	ID 29047 - T2 (lbf)	9.58256E+02	2.40975E+01	-1.41557E+02	-1.00867E+01	-2.50692E+01	1.81507E-01
8	ID 29048 - T1 (lbf)	-3.90950E+01	1.71340E+01	5.89814E+02	-7.90448E+00	2.78467E+01	2.20529E+00
9	ID 29048 - T2 (lbf)	4.42197E+02	-2.40975E+01	1.41557E+02	1.00867E+01	2.50692E+01	-1.81407E-01
10	ID 29050 - T1 (lbf)	3.90950E+01	-1.71340E+01	8.10640E+02	7.90458E+00	-2.78467E+01	-2.20529E+00
11	ID 40016 - T3 (lbf)	-4.19902E+02	5.31761E+02	4.22587E+02	2.32567E+01	-5.10247E+00	3.08172E+01
12	ID 40030 - T3 (lbf)	4.19902E+02	4.81479E+02	2.44659E+02	1.73931E+01	4.07212E+00	-3.20563E+01
13	ID 40515 - T3 (lbf)	-2.31754E+02	1.85803E+02	-4.01405E+02	-2.35831E+01	6.42462E+00	1.98856E+01
14	ID 40516 - T3 (lbf)	2.31754E+02	2.01410E+02	-2.65841E+02	-1.70666E+01	-5.39427E+00	-1.86465E+01
15	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-2.84217E-14	-3.55271E-15	-4.44089E-16	1.33227E-15	4.44089E-16
16	Net Inertial Acc - T2 (in/sec^2)	-6.21725E-15	3.86089E+02	4.26326E-14	-4.44089E-16	-5.55112E-17	-4.44089E-16
17	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	4.26326E-14	3.86089E+02	8.88178E-16	5.32907E-15	8.88178E-16
18	Net Inertial Acc - R1 (rad/sec^2)	4.44089E-16	2.66454E-15	-2.22045E-15	1.00000E+00	8.32667E-17	0.00000E+00
19	Net Inertial Acc - R2 (rad/sec^2)	-8.88178E-16	6.66134E-16	0.00000E+00	-3.46945E-17	1.00000E+00	2.08167E-17
20	Net Inertial Acc - R3 (rad/sec^2)	4.99600E-16	-8.88178E-16	3.33067E-16	-5.55112E-17	-3.12250E-17	1.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 26

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-9.57549E-10	-1.14420E-10	-9.90283E-11	1.35918E-09	4.24030E-09	-1.20257E-08
2	Net Load Factor - T2 (g)	-1.14440E-10	-2.13586E-09	1.35445E-10	1.61714E-08	5.56244E-09	-2.57739E-09
3	Net Load Factor - T3 (g)	-9.90672E-11	1.35415E-10	-1.79257E-09	5.76388E-09	-2.82642E-08	-6.59213E-09
4	Net Load Factor - R1 (rad/sec^2)	3.15538E-10	1.71777E-08	-1.21290E-08	-6.29562E-07	-4.01580E-07	1.28157E-07
5	Net Load Factor - R2 (rad/sec^2)	4.69116E-09	4.10309E-09	-1.84182E-08	-5.70383E-08	-9.16789E-07	-3.36040E-08
6	Net Load Factor - R3 (rad/sec^2)	-4.65286E-09	-3.92339E-09	-5.71744E-09	1.68677E-07	-1.17851E-07	-6.69243E-07
7	ID 10942 - T1 (lbf)	-1.38065E-05	1.18514E-04	-1.21187E-05	-7.34632E-02	3.91687E-02	3.24128E-03
8	ID 10942 - T3 (lbf)	1.67900E-05	6.61883E-06	-7.57542E-06	-3.26727E+00	6.35783E-01	-3.08557E-03
9	ID 10942 - R1 (lbf-in)	3.95035E-06	-8.16958E-07	1.63935E-07	-2.42645E-01	7.82945E-02	-4.30664E-05
10	ID 10942 - R2 (lbf-in)	2.25180E-09	6.76452E-10	2.53974E-10	1.45087E-04	-5.16432E-05	-1.07596E-05
11	ID 11715 - T1 (lbf)	-1.22923E-05	7.82498E-05	1.78876E-05	7.26992E-02	-4.32124E-02	2.99792E-03
12	ID 11715 - T2 (lbf)	6.51136E-05	-1.57705E-05	5.06307E-05	1.78815E+00	-3.48794E-01	-2.07725E-03
13	ID 11715 - T3 (lbf)	-5.87900E-05	1.80812E-05	1.85754E-05	3.26775E+00	-6.30472E-01	5.51810E-04
14	ID 11715 - R1 (lbf-in)	2.20394E-05	-4.59678E-06	1.29758E-05	2.61671E-01	-2.01054E-02	-6.07626E-04
15	ID 11715 - R2 (lbf-in)	-1.60461E-08	3.77367E-09	-9.56732E-09	-1.59379E-04	7.99876E-06	-1.03105E-05
16	ID 29047 - T2 (lbf)	-1.03469E-04	4.21098E-05	9.06494E-06	4.69333E-01	-1.02061E-01	1.27988E-03
17	ID 29048 - T1 (lbf)	7.80813E-05	7.02738E-06	-3.15322E-05	3.31518E-01	-7.60773E-02	-2.00456E-03
18	ID 29048 - T2 (lbf)	6.08913E-05	-1.74787E-05	1.87541E-06	-4.68849E-01	1.07375E-01	-3.82089E-03
19	ID 29050 - T1 (lbf)	-6.71410E-05	5.35420E-06	-4.44684E-05	-3.30783E-01	7.62962E-02	2.02321E-03
20	ID 40016 - T3 (lbf)	-4.93014E-05	1.59134E-04	8.70352E-06	-4.78521E-01	4.47200E-02	6.89523E-03
21	ID 40030 - T3 (lbf)	8.82698E-05	-3.89756E-05	-1.17683E-05	4.79656E-01	-4.83603E-02	-3.41447E-03
22	ID 40515 - T3 (lbf)	-6.93155E-06	1.05125E-04	-3.77739E-06	3.63391E-01	-4.10073E-02	2.89652E-03
23	ID 40516 - T3 (lbf)	-7.40580E-06	-3.35718E-05	1.92238E-05	-3.65270E-01	4.39489E-02	-7.55709E-04
24	ID 620001 - T1 (lbf)	3.09477E-05	1.54708E-06	1.11660E-06	-2.14479E-01	6.09341E-02	-3.28349E-04
25	ID 620001 - T2 (lbf)	-7.61135E-05	3.47050E-06	2.42893E-05	-1.78888E+00	3.48558E-01	2.05463E-03
26	ID 630001 - T1 (lbf)	1.98512E-05	-5.31102E-06	5.41455E-06	2.14491E-01	-5.75924E-02	-2.87728E-04
27	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
28	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
29	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
30	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
31	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
32	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 27

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-1.36422E-10	-3.05696E-11	-4.00643E-10	5.91595E-03	2.11957E-02
2	Net Load Factor - T2 (g)	-8.97276E-11	1.00000E+00	6.72351E-13	-5.91595E-03	7.49550E-11	-2.72386E-03
3	Net Load Factor - T3 (g)	-1.01937E-11	-9.24390E-11	1.00000E+00	-2.11957E-02	2.72386E-03	-6.54127E-12
4	Net Load Factor - R1 (rad/sec^2)	-2.61712E-09	-3.98120E-09	4.58893E-10	1.00000E+00	3.13907E-09	-2.23308E-10
5	Net Load Factor - R2 (rad/sec^2)	-2.95612E-09	7.96037E-10	-2.03337E-10	-2.38463E-08	1.00000E+00	2.85956E-10
6	Net Load Factor - R3 (rad/sec^2)	3.49347E-09	-4.94695E-09	-1.52015E-10	7.85562E-08	-1.15933E-08	1.00000E+00
7	ID 10942 - T1 (lbf)	-1.06959E+02	1.72388E+02	-1.68209E+02	-1.21545E+01	2.77880E+00	1.17667E+01
8	ID 10942 - T3 (lbf)	3.95320E+02	1.61291E+01	8.95193E+01	1.14509E+00	7.64535E+00	-7.36857E+00
9	ID 10942 - R1 (lbf-in)	-1.49095E+00	4.18422E-02	9.21121E+00	1.81264E-01	6.21735E-01	-7.27584E-02
10	ID 10942 - R2 (lbf-in)	7.97918E-03	2.58491E-03	-5.94120E-03	-1.14476E-04	-3.46842E-04	-8.85002E-05
11	ID 11715 - T1 (lbf)	-6.17249E+01	2.62310E+02	1.68211E+02	1.34925E+01	-1.60682E+00	6.13023E+00
12	ID 11715 - T2 (lbf)	-3.39623E+01	-8.84380E+00	-4.81745E+02	-7.67062E+00	1.44292E+01	1.52805E+00
13	ID 11715 - T3 (lbf)	4.02401E+02	-1.61291E+01	-8.95193E+01	-1.14511E+00	-1.12111E+01	-5.40665E+00
14	ID 11715 - R1 (lbf-in)	-8.79290E+00	2.61784E-01	-1.25901E+02	-1.92642E+00	4.61593E+00	3.84016E-01
15	ID 11715 - R2 (lbf-in)	1.29663E-02	1.94345E-03	9.39022E-02	1.46712E-03	-3.58865E-03	-3.77915E-04
16	ID 29047 - T2 (lbf)	9.58256E+02	2.40975E+01	-1.41557E+02	-1.00867E+01	-2.50692E+01	1.81507E-01
17	ID 29048 - T1 (lbf)	-3.90950E+01	1.71340E+01	5.89814E+02	-7.90448E+00	2.78467E+01	2.20529E+00
18	ID 29048 - T2 (lbf)	4.42197E+02	-2.40975E+01	1.41557E+02	1.00867E+01	2.50692E+01	-1.81407E-01
19	ID 29050 - T1 (lbf)	3.90950E+01	-1.71340E+01	8.10640E+02	7.90458E+00	-2.78467E+01	-2.20529E+00
20	ID 40016 - T3 (lbf)	-4.19902E+02	5.31761E+02	4.22587E+02	2.32567E+01	-5.10247E+00	3.08172E+01
21	ID 40030 - T3 (lbf)	4.19902E+02	4.81479E+02	2.44659E+02	1.73931E+01	4.07212E+00	-3.20563E+01
22	ID 40515 - T3 (lbf)	-2.31754E+02	1.85803E+02	-4.01405E+02	-2.35831E+01	6.42462E+00	1.98856E+01
23	ID 40516 - T3 (lbf)	2.31754E+02	2.01410E+02	-2.65841E+02	-1.70666E+01	-5.39427E+00	-1.86465E+01
24	ID 620001 - T1 (lbf)	7.10712E+01	1.97416E+02	7.22528E+01	8.87893E+00	-7.67940E-01	-6.92880E+00
25	ID 620001 - T2 (lbf)	3.39623E+01	8.84380E+00	-3.15976E+02	-5.10480E+00	-1.27875E+01	-1.52805E+00
26	ID 630001 - T1 (lbf)	9.76129E+01	1.65606E+02	-7.22543E+01	-6.65118E+00	-4.04039E-01	-9.32640E+00
27	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-5.31836E-08	-1.19124E-08	-1.54690E-07	2.28408E+00	8.18341E+00
28	Net Inertial Acc - T2 (in/sec^2)	-3.47101E-08	3.86089E+02	4.56719E-11	-2.28408E+00	2.89207E-08	-1.05165E+00
29	Net Inertial Acc - T3 (in/sec^2)	-3.82761E-09	-3.60535E-08	3.86089E+02	-8.18341E+00	1.05165E+00	-2.52802E-09
30	Net Inertial Acc - R1 (rad/sec^2)	-2.62440E-09	-3.98760E-09	3.90592E-10	1.00000E+00	3.13728E-09	-2.22079E-10
31	Net Inertial Acc - R2 (rad/sec^2)	-2.94266E-09	8.00886E-10	-2.67404E-10	-2.38474E-08	1.00000E+00	2.85837E-10
32	Net Inertial Acc - R3 (rad/sec^2)	3.53027E-09	-4.92121E-09	-9.88931E-11	7.85588E-08	-1.15917E-08	1.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 28

O T M - 0 3 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-5.26500E-08	3.09632E-08	1.37893E-08	6.05938E-07	6.65840E-06	-3.17624E-06
2	Net Load Factor - T2 (g)	3.09632E-08	2.41939E-07	1.54190E-08	-9.43362E-07	-8.79930E-07	7.04899E-06
3	Net Load Factor - T3 (g)	1.37892E-08	1.54190E-08	-9.39176E-08	9.16946E-07	2.95698E-07	2.83672E-08
4	Net Load Factor - R1 (rad/sec^2)	4.65728E-07	-1.54025E-06	1.95526E-06	5.94402E-05	-1.74138E-04	-3.73527E-05
5	Net Load Factor - R2 (rad/sec^2)	4.93203E-06	-7.60525E-07	1.88335E-07	-8.89164E-05	-2.24465E-05	-1.75531E-04
6	Net Load Factor - R3 (rad/sec^2)	-3.51163E-06	6.72699E-06	1.74596E-07	-1.24672E-05	-1.84131E-04	1.88126E-04
7	ID 250604 - T1 (lbf)	1.38065E-05	-1.18514E-04	1.21187E-05	7.34632E-02	-3.91687E-02	-3.24129E-03
8	ID 250604 - T2 (lbf)	-2.88310E-10	-1.17780E-10	4.26439E-10	1.58346E-09	-1.79262E-08	-3.82401E-09
9	ID 250604 - T3 (lbf)	-1.67900E-05	-6.61882E-06	7.57543E-06	3.26727E+00	-6.35783E-01	3.08557E-03
10	ID 250604 - R1 (lbf-in)	-3.95035E-06	8.16960E-07	-1.63936E-07	2.42645E-01	-7.82945E-02	4.30665E-05
11	ID 250604 - R2 (lbf-in)	-2.20280E-09	-6.78483E-10	-2.28738E-10	-1.45088E-04	5.16461E-05	1.07606E-05
12	ID 250604 - R3 (lbf-in)	2.24645E-10	1.99179E-10	-5.78893E-10	1.47326E-09	2.41156E-08	-5.88443E-10
13	ID 250605 - T1 (lbf)	1.22923E-05	-7.82498E-05	-1.78875E-05	-7.26992E-02	4.32124E-02	-2.99793E-03
14	ID 250605 - T2 (lbf)	-6.51133E-05	1.57707E-05	-5.06312E-05	-1.78815E+00	3.48794E-01	2.07726E-03
15	ID 250605 - T3 (lbf)	5.87899E-05	-1.80812E-05	-1.85754E-05	-3.26775E+00	6.30472E-01	-5.51812E-04
16	ID 250605 - R1 (lbf-in)	-2.20394E-05	4.59679E-06	-1.29758E-05	-2.61671E-01	2.01054E-02	6.07626E-04
17	ID 250605 - R2 (lbf-in)	1.60107E-08	-3.79441E-09	9.55197E-09	1.59379E-04	-8.00039E-06	1.03105E-05
18	ID 250605 - R3 (lbf-in)	-2.44654E-10	-2.57387E-10	3.88354E-10	3.79454E-09	-1.88847E-08	-6.86565E-09
19	ID 250655 - T1 (lbf)	2.85922E-11	7.87708E-11	1.12301E-10	-5.62871E-09	-3.02415E-09	7.14785E-09
20	ID 250655 - T2 (lbf)	-2.55858E-11	-4.50537E-11	4.63865E-11	1.50697E-09	-1.41483E-09	-5.05103E-09
21	ID 250655 - T3 (lbf)	-8.43556E-11	4.71800E-11	1.13346E-10	6.10471E-10	-4.45591E-09	-6.39103E-10
22	ID 250655 - R1 (lbf-in)	3.24718E-12	6.32383E-13	5.15143E-13	5.04264E-11	6.93628E-11	1.66916E-10
23	ID 250655 - R2 (lbf-in)	2.55795E-12	-1.27898E-12	1.78346E-12	-3.31096E-11	-2.75424E-11	9.72470E-11
24	ID 250655 - R3 (lbf-in)	-8.45546E-13	-5.09814E-13	1.74971E-12	-6.86371E-11	-5.01123E-11	-8.32657E-11
25	ID 250664 - T1 (lbf)	5.34328E-11	1.50351E-11	-1.88528E-10	3.02747E-09	5.29653E-09	-6.28599E-10
26	ID 250664 - T2 (lbf)	5.24096E-11	8.91163E-11	-2.06015E-10	3.84082E-09	4.78822E-09	2.82133E-09
27	ID 250664 - T3 (lbf)	3.18323E-12	-8.13998E-11	-7.68807E-11	4.77501E-10	3.50158E-09	-2.67441E-09
28	ID 250664 - R1 (lbf-in)	1.54188E-12	9.19265E-12	3.60600E-12	-6.07942E-11	-1.26560E-10	-7.53322E-11
29	ID 250664 - R2 (lbf-in)	-2.04636E-12	4.84590E-12	3.19744E-13	2.22650E-11	4.93215E-11	4.96563E-11
30	ID 250664 - R3 (lbf-in)	3.62377E-13	-7.15872E-13	9.18376E-13	-3.83625E-11	3.13401E-11	1.67017E-11
31	ID 250694 - T1 (lbf)	-1.98512E-05	5.31100E-06	-5.41455E-06	-2.14491E-01	5.75924E-02	2.87729E-04
32	ID 250729 - T1 (lbf)	0.00000E+00	1.13687E-11	-7.73070E-12	1.39822E-11	-3.13862E-10	-8.05798E-11
33	ID 250729 - T2 (lbf)	4.36557E-11	3.45608E-11	1.02773E-10	1.28967E-09	-2.46648E-09	-2.01560E-09
34	ID 250729 - T3 (lbf)	3.09228E-11	-3.05818E-11	-2.48690E-11	1.67435E-11	6.29803E-09	2.15254E-09
35	ID 250729 - R1 (lbf-in)	-5.40012E-12	2.35900E-12	2.43290E-11	4.88024E-10	-4.19166E-10	-4.46841E-10
36	ID 250729 - R2 (lbf-in)	-8.86757E-12	1.36424E-12	-1.06297E-11	2.30980E-10	-1.11806E-11	3.86367E-11
37	ID 250729 - R3 (lbf-in)	3.75167E-12	5.85487E-12	1.63425E-12	8.25718E-12	1.13387E-11	-1.38425E-10
38	ID 250752 - T1 (lbf)	-2.91038E-11	-3.77440E-11	3.86535E-11	-6.41781E-10	5.55194E-11	1.97694E-09
39	ID 250752 - T2 (lbf)	-1.36424E-10	-3.72893E-11	-8.32188E-11	1.16783E-09	2.13958E-09	9.75821E-10
40	ID 250752 - T3 (lbf)	-8.86757E-12	1.08116E-10	1.39835E-11	-3.99532E-10	-3.39057E-09	7.68327E-10
41	ID 250752 - R1 (lbf-in)	-1.94404E-11	-7.33280E-12	-2.21974E-11	-1.15055E-10	2.75626E-10	-1.09895E-10
42	ID 250752 - R2 (lbf-in)	-3.63798E-12	-3.29692E-12	4.40536E-12	-2.23866E-11	-7.99506E-11	1.95402E-11
43	ID 250752 - R3 (lbf-in)	-5.68434E-13	-7.84439E-12	-1.01466E-11	9.65331E-11	3.47659E-10	-1.32476E-10
44	ID 250768 - T1 (lbf)	-3.09477E-05	-1.54709E-06	-1.11660E-06	2.14479E-01	-6.09341E-02	3.28348E-04
45	ID 250768 - T2 (lbf)	7.61136E-05	-3.47049E-06	-2.42893E-05	1.78888E+00	-3.48558E-01	-2.05463E-03
46	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
47	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
48	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
49	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
50	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 29

O T M - 0 3 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 30

O T M - 0 3 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-7.77095E-11	-1.12795E-09	-2.15594E-08	-4.46989E-03	-1.60146E-02
2	Net Load Factor - T2 (g)	-1.12991E-10	1.00000E+00	-2.64904E-10	4.46990E-03	1.21013E-09	2.05806E-03
3	Net Load Factor - T3 (g)	-1.14335E-09	-1.94553E-10	1.00000E+00	1.60149E-02	-2.05806E-03	3.89710E-11
4	Net Load Factor - R1 (rad/sec^2)	-1.16835E-08	1.06740E-09	-9.12184E-09	1.00000E+00	-1.49255E-08	1.20487E-10
5	Net Load Factor - R2 (rad/sec^2)	-8.91484E-08	1.95934E-08	1.67319E-08	2.68412E-06	9.99999E-01	4.05572E-09
6	Net Load Factor - R3 (rad/sec^2)	4.12309E-08	-4.02833E-08	5.65190E-09	7.35086E-08	-2.47032E-08	9.99999E-01
7	ID 250604 - T1 (lbf)	1.06959E+02	-1.72388E+02	1.68209E+02	1.21545E+01	-2.77880E+00	-1.17667E+01
8	ID 250604 - T2 (lbf)	1.02875E-12	-7.12621E-13	-1.97176E-12	-1.19925E-14	1.49523E-13	-3.83366E-14
9	ID 250604 - T3 (lbf)	-3.95320E+02	-1.61291E+01	-8.95193E+01	-1.14509E+00	-7.64535E+00	7.36857E+00
10	ID 250604 - R1 (lbf-in)	1.49095E+00	-4.18422E-02	-9.21121E+00	-1.81264E-01	-6.21735E-01	7.27584E-02
11	ID 250604 - R2 (lbf-in)	-7.97918E-03	-2.58491E-03	5.94120E-03	1.14476E-04	3.46842E-04	8.85002E-05
12	ID 250604 - R3 (lbf-in)	-1.30737E-12	-1.28593E-13	2.22895E-12	-1.05773E-13	-2.38463E-13	6.38869E-14
13	ID 250605 - T1 (lbf)	6.17249E+01	-2.62310E+02	-1.68211E+02	-1.34925E+01	1.60682E+00	-6.13023E+00
14	ID 250605 - T2 (lbf)	3.39623E+01	8.84380E+00	4.81745E+02	7.67062E+00	-1.44292E+01	-1.52805E+00
15	ID 250605 - T3 (lbf)	-4.02401E+02	1.61291E+01	8.95193E+01	1.14511E+00	1.12111E+01	5.40665E+00
16	ID 250605 - R1 (lbf-in)	8.79290E+00	-2.61784E-01	1.25901E+02	1.92642E+00	-4.61593E+00	-3.84016E-01
17	ID 250605 - R2 (lbf-in)	-1.29663E-02	-1.94345E-03	-9.39022E-02	-1.46712E-03	3.58865E-03	3.77915E-04
18	ID 250605 - R3 (lbf-in)	1.46141E-12	8.14424E-13	-2.92550E-12	4.28759E-15	1.71677E-13	2.43944E-14
19	ID 250655 - T1 (lbf)	-2.08964E-13	-6.58036E-13	1.16538E-13	4.91224E-14	1.26727E-14	-3.91782E-14
20	ID 250655 - T2 (lbf)	-2.45131E-13	2.65224E-13	7.26686E-14	-2.90010E-14	1.13098E-14	-8.65541E-15
21	ID 250655 - T3 (lbf)	-1.76816E-13	-9.08190E-13	3.48274E-13	-2.67111E-15	-8.04030E-15	1.71183E-14
22	ID 250655 - R1 (lbf-in)	8.45568E-15	3.34878E-16	-3.20646E-14	-5.03469E-16	7.81352E-16	6.34036E-16
23	ID 250655 - R2 (lbf-in)	-1.77486E-14	-4.01854E-15	-2.05950E-14	1.34367E-15	1.35112E-15	7.60610E-16
24	ID 250655 - R3 (lbf-in)	-2.09718E-14	5.94409E-15	1.83765E-14	-2.82983E-16	-1.13541E-15	-4.09582E-16
25	ID 250664 - T1 (lbf)	-1.15198E-13	5.49201E-14	1.02473E-13	-4.20741E-14	-4.70636E-15	1.00694E-16
26	ID 250664 - T2 (lbf)	-9.37660E-14	-7.74909E-13	-3.77743E-13	-2.48359E-14	2.55471E-14	-2.66910E-15
27	ID 250664 - T3 (lbf)	1.68779E-13	1.31071E-12	5.89386E-13	5.34379E-14	-2.25349E-14	6.81395E-14
28	ID 250664 - R1 (lbf-in)	-3.01391E-14	2.84647E-14	1.34789E-14	-3.60410E-16	6.85312E-17	-1.91101E-15
29	ID 250664 - R2 (lbf-in)	1.57393E-14	-1.15533E-14	-1.19719E-14	-3.69122E-16	-5.83680E-16	-9.48023E-16
30	ID 250664 - R3 (lbf-in)	-9.34389E-15	-4.93946E-15	-7.40919E-15	8.22617E-16	3.98340E-16	1.03681E-15
31	ID 250694 - T1 (lbf)	-9.76129E+01	-1.65606E+02	7.22543E+01	6.65118E+00	4.04039E-01	9.32640E+00
32	ID 250729 - T1 (lbf)	-2.38433E-13	1.60742E-14	-1.23235E-13	3.44880E-14	4.34791E-15	-1.33486E-14
33	ID 250729 - T2 (lbf)	-3.00051E-13	-1.24843E-12	-8.14424E-13	-9.44565E-14	-1.72126E-14	1.15699E-14
34	ID 250729 - T3 (lbf)	7.31375E-13	1.58933E-12	-3.73724E-13	-3.36301E-14	-4.61106E-14	2.99499E-14
35	ID 250729 - R1 (lbf-in)	1.30100E-13	-3.27762E-13	-1.73467E-13	-1.07142E-16	-7.26603E-17	1.36850E-14
36	ID 250729 - R2 (lbf-in)	4.68830E-14	-8.37196E-14	2.61205E-14	2.62794E-15	5.56008E-15	-7.63407E-17
37	ID 250729 - R3 (lbf-in)	-9.37660E-15	-4.01854E-15	-2.54508E-14	-1.13610E-15	-2.55002E-15	3.61319E-15
38	ID 250752 - T1 (lbf)	5.62596E-13	4.82225E-14	-1.33951E-14	1.04068E-14	-6.92552E-15	-1.13275E-14
39	ID 250752 - T2 (lbf)	6.10818E-13	1.93962E-12	5.35806E-13	3.64518E-14	-4.69300E-14	-2.85738E-14
40	ID 250752 - T3 (lbf)	-5.73312E-13	-1.20858E-12	-6.63059E-13	-6.36070E-14	8.20614E-14	-4.29785E-14
41	ID 250752 - R1 (lbf-in)	5.02318E-15	1.76314E-13	2.09634E-13	-1.50708E-15	2.85111E-15	-7.29233E-15
42	ID 250752 - R2 (lbf-in)	1.51365E-13	1.07496E-13	3.75064E-14	5.25492E-15	-6.11105E-15	2.34140E-15
43	ID 250752 - R3 (lbf-in)	-6.69757E-15	6.73106E-14	5.02318E-14	2.50654E-15	-4.30527E-15	-7.04545E-16
44	ID 250768 - T1 (lbf)	-7.10712E+01	-1.97416E+02	-7.22528E+01	-8.87893E+00	7.67940E-01	6.92880E+00
45	ID 250768 - T2 (lbf)	-3.39623E+01	-8.84380E+00	3.15976E+02	5.10480E+00	1.27875E+01	1.52805E+00
46	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	1.10794E-07	-4.15237E-08	-8.30948E-06	-1.72577E+00	-6.18307E+00
47	Net Inertial Acc - T2 (in/sec^2)	-1.14183E-07	3.86089E+02	-1.62506E-08	1.72578E+00	4.63191E-07	7.94595E-01
48	Net Inertial Acc - T3 (in/sec^2)	-3.90992E-07	-5.86232E-08	3.86089E+02	6.18317E+00	-7.94592E-01	1.56950E-08
49	Net Inertial Acc - R1 (rad/sec^2)	-8.07676E-09	-1.45547E-09	1.32115E-09	1.00000E+00	-1.65823E-08	1.14994E-10
50	Net Inertial Acc - R2 (rad/sec^2)	-2.17153E-08	3.07210E-09	2.82759E-09	2.68318E-06	9.99999E-01	1.64755E-09

Figure G-9. Pump Module Integrated Assembly

ASD/DMMP v1.11.0 Wed Jul 23 2008 20:51:50 CDT Page 31

O T M - 0 3 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	Net Inertial Acc - R3 (rad/sec^2)	8.81649E-09	-7.57518E-09	-9.94772E-10	7.35736E-08	-2.64990E-08	9.99999E-01

Figure G-9. Pump Module Integrated Assembly

```
ASD/DMMP v1.11.0                    Wed Jul 23 2008 20:51:50 CDT                    Page   32

                                  Execution Time: 00:00:00

                                   * * * END OF JOB * * *
```

Figure G-9. Pump Module Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:07:24 CDT                    Page    1


                                  ************************************************
                                  *                                              *
                                  *                ASD/DMMP v1.11.0              *
                                  *                                              *
                                  *       Applied Structural Dynamics, Inc.      *
                                  *    http://www.AppliedStructuralDynamics.com  *
                                  *                                              *
                                  *   Execution Time: Mon Jul 14 2008 12:07:24 CDT *
                                  *                                              *
                                  ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-07-0013A
     Name       : SGANT-IA
     Description: SGANT Integrated Assembly (IA)
```

Figure G-10. SGANT Integrated Assembly

```
ASD/DMMP v1.11.0                          Mon Jul 14 2008 12:07:24 CDT                          Page    2

                                C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-07-0013A
     Name        : SGANT-IA
     Description : SGANT Integrated Assembly (IA)
     Type        : Integrated

     DMM Type    : Hybrid
     DMM Size    : 44 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : DMM-2008-07-0013A.dmm.op4
        Geometry : geom_sgant.blk
        Label    : <not specified>

     OTM-01:
        Description : SGANT IA NLFs & IFFs
        No. of Items: 20
        Ignore      : No
        Matrix File : DMM-2008-07-0013A.OTM.op4
        Label File  : DMM-2008-07-0013A.OTM.txt

     OTM-02:
        Description : SGANT ORU NLFs & IFFs
        No. of Items: 24
        Ignore      : No
        Matrix File : DMM-2008-04-0006B.OTM-01.op4
        Label File  : DMM-2008-04-0006B.OTM-01.txt

     OTM-03:
        Description : SGANT FSE NLFs & IFFs
        No. of Items: 32
        Ignore      : No
        Matrix File : DMM-2008-04-0007B.OTM-01.op4
        Label File  : DMM-2008-04-0007B.OTM-01.txt
```

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
40301	ID 40301	40000	40.12300	-21.36700	-4.80000	40000	1	2					
40302	ID 40302	40000	40.12300	21.36700	-4.80000	40000	3						
40303	ID 40303	40000	9.73800	-21.36700	-4.80000	40000		4					
40311	ID 40311	40000	40.12300	-18.37500	-4.00000	40000			5				
40312	ID 40312	40000	40.12300	18.37500	-4.00000	40000			6				
40313	ID 40313	40000	9.73800	-14.00000	-4.00000	40000			7				
40314	ID 40314	40000	9.73800	14.00000	-4.00000	40000			8				
200001	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							9
:													:
200036	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							44
999999	ID 999999	0	-29.09030	6.52458	8.30551	0							

Figure G-10. SGANT Integrated Assembly

```
ASD/DMMP v1.11.0                        Mon Jul 14 2008 12:07:24 CDT                        Page    4

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   1       40302
    2 -    BSET1   2       40303
    3 -    BSET1   12      40301
    4 -    BSET1   3       40311   40312   40313   40314
    5 -    CORD2R *3000           0                       -26.784          22.064*
    6 -    *                 19.01         -26.7845          21.064          19.01*
    7 -    *                -26.784          22.064           20.01
    8 -    CORD2R *40000           0                              0              0*
    9 -    *                      0               0              0              1*
   10 -    *                     -1               0              0
   11 -    GRID   *40301           40000                        40.123         -21.367*
   12 -    *                    -4.840000           3456
   13 -    GRID   *40302           40000                        40.123          21.367*
   14 -    *                    -4.840000          23456
   15 -    GRID   *40303           40000                         9.738         -21.367*
   16 -    *                    -4.840000          13456
   17 -    GRID   *40311           40000                        40.123         -18.375*
   18 -    *                   -440000             12456
   19 -    GRID   *40312           40000                        40.123          18.375*
   20 -    *                   -440000             12456
   21 -    GRID   *40313           40000                         9.738             -14*
   22 -    *                   -440000             12456
   23 -    GRID   *40314           40000                         9.738              14*
   24 -    *                   -440000             12456
   25 -    GRID   *999999                                      -29.0903        6.524577*
   26 -    *                 8.305508                 123456
   27 -    QSET1   0       200001  THRU    200036
   28 -    SPOINT  200001  THRU    200036
   29 -    ENDDATA

           TOTAL ENTRY COUNT = 29
```

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 5

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
1	3000	1	0.00000000E+00	-9.99999875E-01	-4.99999938E-04	-2.67840000E+01
			0.00000000E+00	4.99999938E-04	-9.99999875E-01	2.20640000E+01
			1.00000000E+00	0.00000000E+00	0.00000000E+00	1.90100000E+01
2	40000	1	-1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 6

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	40301	40000	-4.01230E+01	2.13670E+01	-4.80000E+00
2	40302	40000	-4.01230E+01	-2.13670E+01	-4.80000E+00
3	40303	40000	-9.73800E+00	2.13670E+01	-4.80000E+00
4	40311	40000	-4.01230E+01	1.83750E+01	-4.00000E+00
5	40312	40000	-4.01230E+01	-1.83750E+01	-4.00000E+00
6	40313	40000	-9.73800E+00	1.40000E+01	-4.00000E+00
7	40314	40000	-9.73800E+00	-1.40000E+01	-4.00000E+00
8	200001	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
43	200036	-1	0.00000E+00	0.00000E+00	0.00000E+00
44	999999	0	-2.90903E+01	6.52458E+00	8.30551E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	40301-3	40301-4	40301-5	40301-6	40302-2	40302-3	40302-4	40302-5	40302-6	40303-1	= 10
11 =	40303-3	40303-4	40303-5	40303-6	40311-1	40311-2	40311-4	40311-5	40311-6	40312-1	= 20
21 =	40312-2	40312-4	40312-5	40312-6	40313-1	40313-2	40313-4	40313-5	40313-6	40314-1	= 30
31 =	40314-2	40314-4	40314-5	40314-6	999999-1	999999-2	999999-3	999999-4	999999-5	999999-6	= 40

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	40301-1	40301-2	40302-1	40303-2	40311-3	40312-3	40313-3	40314-3		

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	200001-0	200002-0	200003-0	200004-0	200005-0	200006-0	200007-0	200008-0	200009-0	200010-0	= 10
11 =	200011-0	200012-0	200013-0	200014-0	200015-0	200016-0	200017-0	200018-0	200019-0	200020-0	= 20
21 =	200021-0	200022-0	200023-0	200024-0	200025-0	200026-0	200027-0	200028-0	200029-0	200030-0	= 30
31 =	200031-0	200032-0	200033-0	200034-0	200035-0	200036-0					

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 10

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	40301-1	40301-2	40302-1	40303-2	40311-3	40312-3	40313-3	40314-3	200001-0	200002-0	= 10
11 =	200003-0	200004-0	200005-0	200006-0	200007-0	200008-0	200009-0	200010-0	200011-0	200012-0	= 20
21 =	200013-0	200014-0	200015-0	200016-0	200017-0	200018-0	200019-0	200020-0	200021-0	200022-0	= 30
31 =	200023-0	200024-0	200025-0	200026-0	200027-0	200028-0	200029-0	200030-0	200031-0	200032-0	= 40
41 =	200033-0	200034-0	200035-0	200036-0							

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 11

Z E R O D A M P I N G D O F S

The following DOFs have damping less than 1.0E-09:

	1	2	3	4	5	6	7	8	9	10
1 =	40301-1	40301-2	40302-1	40303-2	40311-3	40312-3	40313-3	40314-3		

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 12

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  1.883588E+00  1.815954E-08  8.406873E-09 -3.472684E-05  2.073430E+01 -1.651825E+01 *
*  1.815954E-08  1.883587E+00  1.347313E-08 -2.073429E+01  5.555372E-06 -5.364228E+01 *
*  8.406872E-09  1.347313E-08  1.883587E+00  1.651821E+01  5.364223E+01 -7.064460E-06 *
* -3.472684E-05 -2.073429E+01  1.651821E+01  1.142876E+03  4.782299E+02  5.805974E+02 *
*  2.073430E+01  5.555372E-06  5.364223E+01  4.782299E+02  2.355959E+03 -3.138471E+02 *
* -1.651825E+01 -5.364228E+01 -7.064460E-06  5.805974E+02 -3.138471E+02  2.435834E+03 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.883588E+00	-1.843654E-05	8.769568E+00	1.100787E+01
Y	1.883587E+00	-2.847879E+01	2.949357E-06	1.100788E+01
Z	1.883587E+00	-2.847876E+01	8.769551E+00	-3.750535E-06

I(S)

```
*  7.697778E+02 -7.811573E+00  9.890146E+00 *
* -7.811573E+00  6.000537E+02  1.320162E+02 *
*  9.890146E+00  1.320162E+02  7.633092E+02 *
```

I(Q)

```
*  5.264509E+02                             *
*                7.675618E+02               *
*                             8.391280E+02 *
```

Q

```
* -8.268595E-03 -9.842442E-01 -1.766208E-01 *
*  8.736029E-01  7.883396E-02 -4.802116E-01 *
*  4.865692E-01 -1.582671E-01  8.591868E-01 *
```

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 13

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
-2.847877E+01	8.769559E+00	1.100787E+01

Figure G-10. SGANT Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:07:24 CDT                    Page   14

                O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                    REFERENCE POINT = C.G.

                                              M O
*  1.883588E+00  1.815954E-08  8.406873E-09 -3.460067E-05 -7.856315E-07 -1.599000E-05 *
*  1.815954E-08  1.883587E+00  1.347313E-08 -6.643674E-07  4.971776E-06 -2.174824E-05 *
*  8.406872E-09  1.347313E-08  1.883587E+00 -1.635884E-05 -2.200003E-05 -6.607037E-06 *
* -3.460067E-05 -6.643674E-07 -1.635884E-05  7.697778E+02  7.812011E+00 -9.890391E+00 *
* -7.856315E-07  4.971776E-06 -2.200003E-05  7.812011E+00  6.000537E+02 -1.320159E+02 *
* -1.599000E-05 -2.174824E-05 -6.607037E-06 -9.890391E+00 -1.320159E+02  7.633092E+02 *

                                              S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
             X             1.883588E+00     -1.836955E-05  8.489116E-06 -4.170931E-07
             Y             1.883587E+00     -1.154618E-05  2.639525E-06  3.527139E-07
             Z             1.883587E+00      1.167986E-05 -8.684939E-06 -3.507688E-06

                                             I(S)
                                *  7.697778E+02 -7.812011E+00  9.890391E+00 *
                                * -7.812011E+00  6.000537E+02  1.320159E+02 *
                                *  9.890391E+00  1.320159E+02  7.633092E+02 *

                                             I(Q)
                                *  5.264511E+02                             *
                                *                7.675616E+02               *
                                *                             8.391279E+02 *

                                              Q
                                * -8.269720E-03 -9.842431E-01 -1.766269E-01 *
                                *  8.736032E-01  7.883590E-02 -4.802107E-01 *
                                *  4.865687E-01 -1.582731E-01  8.591860E-01 *
```

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 15

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.88359E+00	1.81595E-08	8.40687E-09	-3.46007E-05	-7.85632E-07	-1.59900E-05
T2:	1.81595E-08	1.88359E+00	1.34731E-08	-6.64367E-07	4.97178E-06	-2.17482E-05
T3:	8.40687E-09	1.34731E-08	1.88359E+00	-1.63588E-05	-2.20000E-05	-6.60704E-06
R1:	-3.46007E-05	-6.64367E-07	-1.63588E-05	7.69778E+02	7.81201E+00	-9.89039E+00
R2:	-7.85632E-07	4.97178E-06	-2.20000E-05	7.81201E+00	6.00054E+02	-1.32016E+02
R3:	-1.59900E-05	-2.17482E-05	-6.60704E-06	-9.89039E+00	-1.32016E+02	7.63309E+02

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	-1.18428E-02	-1.12381E-04	-2.56986E-04	-1.71220E-03	-1.01059E-01	-7.25837E-02
T2:	-1.12381E-04	1.29379E-03	-2.03496E-04	-1.26608E-02	1.05278E-03	9.78960E-04
T3:	-2.56985E-04	-2.03496E-04	2.50935E-03	2.76857E-02	-1.64413E-02	8.51096E-04
R1:	-1.71219E-03	-1.26608E-02	2.76857E-02	3.93536E-01	-7.02557E-02	-8.49042E-03
R2:	-1.01059E-01	1.05278E-03	-1.64413E-02	-7.02558E-02	9.51651E+00	-3.77752E-01
R3:	-7.25837E-02	9.78959E-04	8.51100E-04	-8.49039E-03	-3.77752E-01	6.83435E-01

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	4.72343E-30	1.13291E-30	-1.85615E-29	-1.12431E-28	1.60758E-28	2.56731E-29
T2:	1.13291E-30	2.18526E-30	-5.85211E-30	-1.00735E-29	3.27122E-29	2.00038E-30
T3:	-1.85615E-29	-5.85211E-30	7.90085E-29	4.40816E-28	-6.83304E-28	-1.12336E-28
R1:	-1.12431E-28	-1.00735E-29	4.40816E-28	3.02520E-27	-4.06167E-27	-9.20079E-28
R2:	1.60758E-28	3.27122E-29	-6.83304E-28	-4.06167E-27	6.20581E-27	1.04070E-27
R3:	2.56731E-29	2.00038E-30	-1.12336E-28	-9.20079E-28	1.04070E-27	8.24269E-28

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 16

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	40301-1	3.10882E-03	4.37538E-05	-4.86163E-05	-5.94995E-01	4.14048E-01	-7.63695E-02
2	40301-2	5.05418E-03	-7.15838E-04	4.76781E-04	8.46040E-01	-4.95173E-01	2.01286E-01
3	40302-1	8.73398E-03	6.86272E-05	3.05602E-04	5.96708E-01	-3.12989E-01	1.48953E-01
4	40303-2	-4.94180E-03	-5.77956E-04	-2.73286E-04	-8.33379E-01	4.94120E-01	-2.02265E-01
5	40311-3	-9.57670E-03	-6.82943E-04	1.09532E-03	-1.13931E+00	7.98756E-01	-3.78016E-01
6	40312-3	-6.89987E-05	5.33613E-04	-2.22404E-04	1.15318E+00	-5.48275E-01	3.28347E-01
7	40313-3	1.08556E-02	-4.75057E-04	1.84305E-03	1.54123E+00	-1.02570E+00	4.88222E-01
8	40314-3	-1.46688E-03	4.20891E-04	-2.06615E-04	-1.52742E+00	7.58781E-01	-4.37701E-01
	Total:	-1.18428E-02	1.29379E-03	2.50935E-03	3.93536E-01	9.51651E+00	6.83435E-01

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 17

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	7	40313-3	1.08556E-02
T2 -	2	40301-2	-7.15838E-04
T3 -	7	40313-3	1.84305E-03
R1 -	7	40313-3	1.54123E+00
R2 -	7	40313-3	-1.02570E+00
R3 -	7	40313-3	4.88222E-01

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 18

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	40301-1	-7.38867E-31	-4.88122E-31	2.44990E-30	8.83717E-30	-1.54967E-29	7.78298E-30
2	40301-2	-3.49948E-30	-1.71913E-30	1.48765E-29	7.50150E-29	-1.23575E-28	-1.05156E-29
3	40302-1	-3.98456E-30	-6.44791E-31	1.61116E-29	1.03593E-28	-1.45262E-28	-3.34561E-29
4	40303-2	2.36657E-30	-4.66129E-31	-9.02440E-30	-6.49415E-29	9.08627E-29	8.51520E-30
5	40311-3	-4.45100E-30	-1.98255E-30	1.92619E-29	1.00721E-28	-1.59129E-28	-2.70854E-29
6	40312-3	7.50795E-31	3.90936E-32	-2.67615E-30	-2.10010E-29	2.55572E-29	5.40647E-30
7	40313-3	-1.44854E-29	-4.05399E-30	6.06072E-29	3.52462E-28	-5.31203E-28	-9.31781E-29
8	40314-3	-3.75902E-31	1.45333E-31	1.81553E-30	8.63498E-30	-1.85287E-29	2.52153E-30
	Total:	4.72343E-30	2.18526E-30	7.90085E-29	3.02520E-27	6.20581E-27	8.24269E-28

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 19

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

Dir	DOF	GRID-C	Max. Force
T1 -	7	40313-3	-1.44854E-29
T2 -	7	40313-3	-4.05399E-30
T3 -	7	40313-3	6.06072E-29
R1 -	7	40313-3	3.52462E-28
R2 -	7	40313-3	-5.31203E-28
R3 -	7	40313-3	-9.31781E-29

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 20

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	40301-1	-3.73851E+02	-2.03424E+01	-1.41019E+01	-1.60764E-01	2.10102E+00	1.17931E+01
2	40301-2	-1.95495E+02	-4.19930E+02	1.98331E+01	-9.93663E-02	-7.29969E+00	8.53524E+00
3	40302-1	-3.53381E+02	2.03424E+01	1.41019E+01	1.60799E-01	-2.10102E+00	-1.17931E+01
4	40303-2	1.95495E+02	-3.07301E+02	-1.98331E+01	9.93669E-02	7.29969E+00	-8.53522E+00
5	40311-3	3.09187E+02	-1.98905E+02	3.43722E+02	1.32692E+01	1.60823E+01	-2.23130E+00
6	40312-3	6.91572E+01	1.98905E+02	1.04818E+02	-1.30122E+01	3.66605E+00	-2.11349E+00
7	40313-3	-3.46692E+02	-1.49508E+02	2.10333E+02	1.01163E+01	-1.77433E+01	1.89648E+00
8	40314-3	-3.16520E+01	1.49508E+02	6.83588E+01	-1.03734E+01	-2.00502E+00	2.44829E+00
	Total:	7.27232E+02	7.27232E+02	7.27232E+02	7.69778E+02	6.00054E+02	7.63309E+02

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 21

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-7.272956E-03	8.528163E-02	1.357299E-02
2	1.607074E-06	1.267704E-03	2.017614E-04
3	7.044844E-04	2.654212E-02	4.224310E-03
4	1.358579E-03	3.685890E-02	5.866277E-03
5	1.816169E-03	4.261654E-02	6.782633E-03
6	1.682950E-02	1.297286E-01	2.064694E-02
7	3.904552E+04	1.975994E+02	3.144892E+01
8	5.117116E+04	2.262104E+02	3.600251E+01
9	9.475521E+04	3.078233E+02	4.899161E+01
10	1.025569E+05	3.202450E+02	5.096858E+01
11	1.069420E+05	3.270198E+02	5.204682E+01
12	1.159800E+05	3.405583E+02	5.420154E+01
13	1.327799E+05	3.643897E+02	5.799442E+01
14	1.394737E+05	3.734617E+02	5.943828E+01
15	1.422098E+05	3.771072E+02	6.001847E+01
16	2.017855E+05	4.492054E+02	7.149326E+01
17	2.093456E+05	4.575430E+02	7.282023E+01
18	2.137750E+05	4.623581E+02	7.358657E+01
19	2.187868E+05	4.677466E+02	7.444418E+01
20	2.432493E+05	4.932032E+02	7.849572E+01
21	2.556840E+05	5.056521E+02	8.047703E+01
22	2.743468E+05	5.237813E+02	8.336238E+01
23	2.868493E+05	5.355831E+02	8.524070E+01
24	2.996328E+05	5.473873E+02	8.711939E+01
25	3.160912E+05	5.622199E+02	8.948008E+01
26	3.503657E+05	5.919170E+02	9.420652E+01
27	3.932578E+05	6.271027E+02	9.980650E+01
28	3.956827E+05	6.290331E+02	1.001137E+02
29	4.978624E+05	7.055937E+02	1.122987E+02
30	5.933641E+05	7.703013E+02	1.225973E+02
31	6.011640E+05	7.753476E+02	1.234004E+02
32	6.213281E+05	7.882437E+02	1.254529E+02
33	6.295861E+05	7.934646E+02	1.262838E+02
34	6.791222E+05	8.240887E+02	1.311578E+02
35	7.389801E+05	8.596395E+02	1.368159E+02
36	7.590876E+05	8.712563E+02	1.386648E+02
37	7.651625E+05	8.747357E+02	1.392185E+02
38	7.708575E+05	8.779849E+02	1.397356E+02
39	7.977795E+05	8.931850E+02	1.421548E+02
40	7.999194E+05	8.943821E+02	1.423453E+02
41	1.486811E+06	1.219349E+03	1.940654E+02
42	1.947446E+06	1.395509E+03	2.221022E+02
43	3.568674E+06	1.889094E+03	3.006586E+02
44	1.186941E+07	3.445201E+03	5.483208E+02

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 22

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	3.264525E+04	1.806800E+02	2.875611E+01
2	3.781970E+04	1.944729E+02	3.095132E+01
3	7.301479E+04	2.702125E+02	4.300565E+01
4	9.225860E+04	3.037410E+02	4.834188E+01
5	9.484617E+04	3.079710E+02	4.901511E+01
6	1.013203E+05	3.183085E+02	5.066037E+01
7	1.063471E+05	3.261091E+02	5.190187E+01
8	1.151817E+05	3.393843E+02	5.401468E+01
9	1.270029E+05	3.563746E+02	5.671878E+01
10	1.313641E+05	3.624418E+02	5.768441E+01
11	1.722037E+05	4.149743E+02	6.604522E+01
12	2.050564E+05	4.528315E+02	7.207038E+01
13	2.085943E+05	4.567213E+02	7.268945E+01
14	2.205260E+05	4.696019E+02	7.473947E+01
15	2.281211E+05	4.776202E+02	7.601562E+01
16	2.355465E+05	4.853313E+02	7.724287E+01
17	2.512198E+05	5.012183E+02	7.977138E+01
18	2.567091E+05	5.066647E+02	8.063819E+01
19	2.759329E+05	5.252932E+02	8.360300E+01
20	3.139069E+05	5.602739E+02	8.917037E+01
21	3.463076E+05	5.884790E+02	9.365935E+01
22	3.868176E+05	6.219466E+02	9.898587E+01
23	3.891282E+05	6.238014E+02	9.928107E+01
24	4.816113E+05	6.939822E+02	1.104507E+02
25	4.955417E+05	7.039472E+02	1.120367E+02
26	5.719386E+05	7.562662E+02	1.203635E+02
27	6.010855E+05	7.752970E+02	1.233924E+02
28	6.205961E+05	7.877792E+02	1.253790E+02
29	6.398838E+05	7.999274E+02	1.273124E+02
30	7.434582E+05	8.622402E+02	1.372298E+02
31	7.590925E+05	8.712591E+02	1.386652E+02
32	7.706214E+05	8.778504E+02	1.397142E+02
33	7.735877E+05	8.795383E+02	1.399829E+02
34	7.933469E+05	8.907002E+02	1.417593E+02
35	8.047348E+05	8.970701E+02	1.427731E+02
36	8.270530E+05	9.094246E+02	1.447394E+02

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 23

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	2.875611E+01	0.01%	0.29%	6.85%	11.19%	0.05%	0.00%
2	3.095132E+01	19.01%	0.29%	0.01%	0.04%	6.76%	8.87%
3	4.300565E+01	0.96%	53.95%	2.10%	17.08%	1.37%	0.08%
4	4.834188E+01	14.15%	1.35%	0.05%	1.28%	8.15%	1.95%
5	4.901511E+01	5.52%	0.54%	0.00%	0.62%	4.58%	0.27%
6	5.066037E+01	0.08%	0.00%	0.03%	0.00%	0.01%	1.67%
7	5.190187E+01	0.58%	0.23%	0.44%	0.01%	0.04%	0.04%
8	5.401468E+01	0.11%	0.28%	0.18%	0.10%	0.41%	0.07%
9	5.671878E+01	4.15%	0.02%	1.25%	0.11%	0.65%	8.66%
10	5.768441E+01	0.14%	1.58%	3.28%	1.55%	0.12%	0.41%
11	6.604522E+01	9.10%	0.40%	3.23%	0.27%	4.06%	0.52%
12	7.207038E+01	4.34%	0.13%	0.00%	1.46%	2.29%	16.78%
13	7.268945E+01	0.21%	0.05%	0.31%	0.74%	0.10%	0.94%
14	7.473947E+01	1.59%	0.07%	0.01%	0.05%	1.10%	5.12%
15	7.601562E+01	0.12%	0.06%	0.58%	8.37%	0.03%	0.94%
16	7.724287E+01	0.03%	0.53%	1.40%	0.97%	0.04%	0.02%
17	7.977138E+01	0.15%	0.01%	0.31%	0.01%	0.01%	0.34%
18	8.063819E+01	0.07%	0.03%	10.66%	0.38%	0.51%	0.02%
19	8.360300E+01	0.06%	0.00%	0.71%	0.19%	0.23%	0.00%
20	8.917037E+01	0.41%	0.12%	0.02%	0.01%	3.44%	0.67%
21	9.365935E+01	0.07%	4.70%	2.20%	0.71%	0.01%	0.00%
22	9.898587E+01	0.74%	0.00%	0.02%	0.18%	0.89%	0.14%
23	9.928107E+01	0.38%	0.02%	0.05%	0.08%	0.12%	0.38%
24	1.104507E+02	3.98%	0.05%	1.15%	0.08%	5.06%	0.04%
25	1.120367E+02	2.33%	0.19%	0.09%	0.12%	2.89%	1.87%
26	1.203635E+02	0.15%	1.01%	4.34%	1.47%	0.03%	0.01%
27	1.233924E+02	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%
28	1.253790E+02	0.06%	0.40%	2.06%	0.64%	0.00%	0.02%
29	1.273124E+02	0.10%	0.25%	1.77%	0.70%	0.01%	0.03%
30	1.372298E+02	0.28%	0.08%	0.21%	0.00%	0.11%	1.95%
31	1.386652E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
32	1.397142E+02	0.02%	0.01%	0.15%	0.01%	0.01%	0.08%
33	1.399829E+02	0.23%	0.10%	2.17%	0.13%	0.07%	1.38%
34	1.417593E+02	0.02%	0.02%	0.85%	0.23%	0.00%	0.06%
35	1.427731E+02	0.09%	0.04%	0.68%	0.10%	0.09%	0.41%
36	1.447394E+02	0.07%	0.12%	4.53%	2.18%	0.00%	0.93%
Total:		69.31%	66.92%	51.70%	51.07%	43.25%	54.66%

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 24

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-1.62848E-05	-1.54533E-07	-3.53374E-07	-2.35438E-06	-1.38964E-04	-9.98082E-05
2	Net Load Factor - T2 (g)	-1.54535E-07	1.77907E-06	-2.79822E-07	-1.74095E-05	1.44762E-06	1.34617E-06
3	Net Load Factor - T3 (g)	-3.53382E-07	-2.79823E-07	3.45055E-06	3.80701E-05	-2.26076E-05	1.17032E-06
4	Net Load Factor - R1 (rad/sec^2)	-1.88670E-06	-1.64517E-05	3.62131E-05	5.12204E-04	-2.27467E-04	4.03756E-06
5	Net Load Factor - R2 (rad/sec^2)	-1.96807E-04	2.29110E-06	-2.86113E-05	-1.29671E-04	1.63760E-02	-4.49698E-04
6	Net Load Factor - R3 (rad/sec^2)	-1.29154E-04	1.46562E-06	-3.36414E-06	-2.69134E-05	2.33442E-03	8.17634E-04
7	ID 40301 - T1 (lbf)	3.10882E-03	4.37538E-05	-4.86163E-05	-5.94995E-01	4.14048E-01	-7.63695E-02
8	ID 40301 - T2 (lbf)	5.05418E-03	-7.15838E-04	4.76781E-04	8.46040E-01	-4.95173E-01	2.01286E-01
9	ID 40302 - T1 (lbf)	8.73398E-03	6.86272E-05	3.05602E-04	5.96708E-01	-3.12989E-01	1.48953E-01
10	ID 40303 - T2 (lbf)	-4.94180E-03	-5.77956E-04	-2.73286E-04	-8.33379E-01	4.94120E-01	-2.02265E-01
11	ID 40311 - T3 (lbf)	-9.57670E-03	-6.82943E-04	1.09532E-03	-1.13931E+00	7.98756E-01	-3.78016E-01
12	ID 40312 - T3 (lbf)	-6.89987E-05	5.33613E-04	-2.22404E-04	1.15318E+00	-5.48275E-01	3.28347E-01
13	ID 40313 - T3 (lbf)	1.08556E-02	-4.75057E-04	1.84305E-03	1.54123E+00	-1.02570E+00	4.88222E-01
14	ID 40314 - T3 (lbf)	-1.46688E-03	4.20891E-04	-2.06615E-04	-1.52742E+00	7.58781E-01	-4.37701E-01
15	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
16	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
20	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 25

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-6.66134E-16	2.77556E-16	7.37257E-18	-3.77302E-17	-3.12250E-17
2	Net Load Factor - T2 (g)	9.02056E-17	1.00000E+00	0.00000E+00	-2.42861E-17	5.20417E-18	1.04083E-17
3	Net Load Factor - T3 (g)	-1.73472E-16	8.98587E-16	1.00000E+00	-1.64799E-17	-6.93889E-18	1.49620E-17
4	Net Load Factor - R1 (rad/sec^2)	-5.71418E-15	1.03806E-14	-3.55271E-15	1.00000E+00	0.00000E+00	3.13118E-16
5	Net Load Factor - R2 (rad/sec^2)	4.44089E-16	-1.19904E-14	6.88338E-15	4.57967E-16	1.00000E+00	-2.77556E-16
6	Net Load Factor - R3 (rad/sec^2)	3.64153E-14	1.15463E-14	-2.55351E-15	-6.93889E-18	1.25594E-15	1.00000E+00
7	ID 40301 - T1 (lbf)	-3.73851E+02	-2.03424E+01	-1.41019E+01	-1.60764E-01	2.10102E+00	1.17931E+01
8	ID 40301 - T2 (lbf)	-1.95495E+02	-4.19930E+02	1.98331E+01	-9.93663E-02	-7.29969E+00	8.53524E+00
9	ID 40302 - T1 (lbf)	-3.53381E+02	2.03424E+01	1.41019E+01	1.60799E-01	-2.10102E+00	-1.17931E+01
10	ID 40303 - T2 (lbf)	1.95495E+02	-3.07301E+02	-1.98331E+01	9.93669E-02	7.29969E+00	-8.53522E+00
11	ID 40311 - T3 (lbf)	3.09187E+02	-1.98905E+02	3.43722E+02	1.32692E+01	1.60823E+01	-2.23130E+00
12	ID 40312 - T3 (lbf)	6.91572E+01	1.98905E+02	1.04818E+02	-1.30122E+01	3.66605E+00	-2.11349E+00
13	ID 40313 - T3 (lbf)	-3.46692E+02	-1.49508E+02	2.10333E+02	1.01163E+01	-1.77433E+01	1.89648E+00
14	ID 40314 - T3 (lbf)	-3.16520E+01	1.49508E+02	6.83588E+01	-1.03734E+01	-2.00502E+00	2.44829E+00
15	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-1.42109E-14	-1.77636E-14	-1.99840E-15	6.32827E-15	-1.77636E-15
16	Net Inertial Acc - T2 (in/sec^2)	2.13163E-14	3.86089E+02	-4.26326E-14	1.77636E-15	8.88178E-16	-3.55271E-15
17	Net Inertial Acc - T3 (in/sec^2)	8.88178E-15	0.00000E+00	3.86089E+02	2.22045E-15	-4.66294E-15	2.66454E-15
18	Net Inertial Acc - R1 (rad/sec^2)	-4.16334E-16	1.00614E-15	-8.88178E-16	1.00000E+00	-1.11022E-16	-5.20417E-17
19	Net Inertial Acc - R2 (rad/sec^2)	-1.33227E-15	0.00000E+00	2.66454E-15	2.08167E-17	1.00000E+00	0.00000E+00
20	Net Inertial Acc - R3 (rad/sec^2)	2.66454E-15	0.00000E+00	9.99201E-16	-4.16334E-17	-2.08167E-16	1.00000E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 26

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-6.40381E-05	-6.07295E-07	-1.38959E-06	-9.25351E-06	-5.46490E-04	-3.92495E-04
2	Net Load Factor - T2 (g)	-6.07419E-07	6.99742E-06	-1.10068E-06	-6.84497E-05	5.68899E-06	5.27043E-06
3	Net Load Factor - T3 (g)	-1.38964E-06	-1.10069E-06	1.35679E-05	1.49735E-04	-8.88659E-05	4.59774E-06
4	Net Load Factor - R1 (rad/sec^2)	-6.05744E-06	-7.69530E-06	6.89135E-05	7.93649E-04	-2.78270E-04	-5.67989E-05
5	Net Load Factor - R2 (rad/sec^2)	-1.12529E-04	2.33884E-05	-1.46868E-04	-1.10385E-04	1.52021E-01	2.93821E-03
6	Net Load Factor - R3 (rad/sec^2)	-1.00743E-03	-1.39816E-05	-3.13883E-06	2.01902E-05	-7.05898E-03	1.36563E-03
7	ID 3805 - T1 (lbf)	-1.84233E-03	2.84601E-04	3.50486E-04	-3.26055E+00	5.68130E-01	-7.15616E-01
8	ID 3805 - T2 (lbf)	3.97370E-03	-1.66817E-04	-1.58750E-04	4.94500E+00	-1.90097E+00	-1.66306E+00
9	ID 3805 - T3 (lbf)	-5.11867E-03	-4.01158E-04	2.58226E-04	1.20290E+00	-1.33510E+00	3.74169E-01
10	ID 3984 - T1 (lbf)	1.00540E-03	2.13102E-04	7.38017E-04	3.35847E+00	-4.27640E-01	-4.24318E-01
11	ID 3984 - T2 (lbf)	4.08626E-03	2.50299E-04	1.85202E-04	1.73532E+00	8.24724E-01	3.22485E+00
12	ID 3984 - T3 (lbf)	5.12752E-03	-2.74991E-04	3.07031E-04	-1.19167E+00	1.32695E+00	-3.74056E-01
13	ID 4136 - T1 (lbf)	-4.80357E-04	-3.46411E-04	5.90554E-04	-2.73752E+00	8.49652E-01	-6.48722E-01
14	ID 4136 - T2 (lbf)	1.88919E-03	-2.32935E-04	5.96428E-04	-4.25609E+00	6.17563E-01	-3.05227E+00
15	ID 4136 - T3 (lbf)	-4.60758E-03	-3.59928E-04	-2.58078E-04	-1.19705E+00	1.26062E+00	-3.89590E-01
16	ID 4308 - T1 (lbf)	1.06032E-03	-3.54840E-04	8.30028E-04	2.66728E+00	-1.00658E+00	1.78951E+00
17	ID 4308 - T2 (lbf)	1.89320E-03	2.62405E-04	-3.66008E-04	-2.42252E+00	5.59750E-01	1.56307E+00
18	ID 4308 - T3 (lbf)	4.71696E-03	-2.57882E-04	-1.03503E-04	1.19847E+00	-1.25347E+00	3.88539E-01
19	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
20	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
21	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
22	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
23	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
24	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 27

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	3.73826E-08	6.18174E-09	-9.04301E-08	2.05257E-02	-1.70517E-02
2	Net Load Factor - T2 (g)	1.56081E-08	1.00000E+00	1.19371E-08	-2.05257E-02	1.10705E-09	4.64470E-03
3	Net Load Factor - T3 (g)	5.86551E-09	2.20689E-08	1.00000E+00	1.70517E-02	-4.64469E-03	1.11426E-09
4	Net Load Factor - R1 (rad/sec^2)	-1.06293E-04	-6.56399E-07	-2.48753E-06	1.00000E+00	-3.09607E-06	2.89107E-06
5	Net Load Factor - R2 (rad/sec^2)	1.45404E-05	4.51615E-06	-2.13604E-06	5.40720E-07	1.00000E+00	-1.39310E-06
6	Net Load Factor - R3 (rad/sec^2)	-1.99067E-05	7.93248E-06	-2.27407E-07	2.01301E-07	-8.37592E-07	1.00000E+00
7	ID 3805 - T1 (lbf)	5.45376E+01	6.51001E+01	4.45734E+01	-3.24670E-01	2.41448E+00	-2.86815E+00
8	ID 3805 - T2 (lbf)	-9.13204E+01	-6.72081E+01	3.20400E+00	-4.77227E-01	-1.97681E+00	1.50828E+00
9	ID 3805 - T3 (lbf)	3.24272E+01	-4.63055E+01	3.30411E+01	-1.58493E+00	5.25515E-01	2.41883E+00
10	ID 3984 - T1 (lbf)	-4.13282E+01	7.27190E+01	3.67467E+01	-3.93455E-01	-2.66956E+00	3.82460E+00
11	ID 3984 - T2 (lbf)	-1.01977E+02	6.81142E+01	-1.16515E+01	5.97480E-01	-2.38158E+00	2.63682E+00
12	ID 3984 - T3 (lbf)	-3.24731E+01	-4.67941E+01	3.23900E+01	-1.60615E+00	-8.53786E-01	-2.85042E+00
13	ID 4136 - T1 (lbf)	3.56400E+01	-6.58737E+01	5.47394E+01	1.80462E+00	2.06937E+00	5.68713E-01
14	ID 4136 - T2 (lbf)	2.16693E+00	-6.91751E+01	5.06489E-01	3.31426E+00	2.28253E-01	-9.92755E-01
15	ID 4136 - T3 (lbf)	2.64146E+01	-4.54346E+01	-3.30412E+01	3.46792E+00	6.84449E-01	2.12095E+00
16	ID 4308 - T1 (lbf)	-4.88493E+01	-7.19454E+01	4.88680E+01	2.06682E+00	-2.67325E+00	-1.52517E+00
17	ID 4308 - T2 (lbf)	6.20254E+00	6.83615E+01	7.94099E+00	-3.43640E+00	3.34365E-01	1.42984E-03
18	ID 4308 - T3 (lbf)	-2.64611E+01	-4.63932E+01	-3.23899E+01	3.51894E+00	-3.58080E-01	-2.54670E+00
19	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-6.33401E-08	1.79868E-06	-3.47598E-05	7.92475E+00	-6.58346E+00
20	Net Inertial Acc - T2 (in/sec^2)	6.29793E-06	3.86089E+02	2.89153E-06	-7.92475E+00	4.65358E-07	1.79327E+00
21	Net Inertial Acc - T3 (in/sec^2)	-1.79887E-06	9.37226E-07	3.86089E+02	6.58345E+00	-1.79326E+00	3.49707E-07
22	Net Inertial Acc - R1 (rad/sec^2)	-3.44689E-08	7.79767E-08	-7.06159E-09	1.00000E+00	6.92792E-08	-4.47749E-08
23	Net Inertial Acc - R2 (rad/sec^2)	1.14572E-06	-1.78990E-08	7.74852E-08	5.01805E-07	1.00000E+00	1.22435E-07
24	Net Inertial Acc - R3 (rad/sec^2)	2.02730E-06	7.45888E-09	6.74872E-08	3.99007E-07	-2.29149E-07	1.00000E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 28

O T M - 0 3 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-7.22019E-10	-1.39098E-10	-2.29412E-11	-1.78727E-09	4.69339E-09	-8.46630E-10
2	Net Load Factor - T2 (g)	-1.38975E-10	-4.08713E-10	9.51923E-11	-4.66998E-09	-9.04276E-11	7.98646E-09
3	Net Load Factor - T3 (g)	-2.28537E-11	9.51746E-11	4.92467E-10	-7.92265E-09	-7.55226E-09	1.70244E-09
4	Net Load Factor - R1 (rad/sec^2)	-1.49888E-09	-3.25270E-09	-6.61068E-09	-7.80366E-08	-4.10256E-08	-1.32805E-07
5	Net Load Factor - R2 (rad/sec^2)	3.34829E-09	1.05744E-09	-8.50894E-09	-4.77747E-08	5.50949E-08	1.29226E-07
6	Net Load Factor - R3 (rad/sec^2)	1.18913E-09	7.65392E-09	2.36495E-10	-1.14718E-07	1.37043E-07	-1.74400E-07
7	ID 5293 - T1 (lbf)	1.84233E-03	-2.84601E-04	-3.50486E-04	3.26055E+00	-5.68130E-01	7.15616E-01
8	ID 5293 - T2 (lbf)	-3.97370E-03	1.66817E-04	1.58751E-04	-4.94500E+00	1.90097E+00	1.66306E+00
9	ID 5293 - T3 (lbf)	5.11867E-03	4.01158E-04	-2.58226E-04	-1.20290E+00	1.33510E+00	-3.74169E-01
10	ID 5294 - T1 (lbf)	-1.00540E-03	-2.13102E-04	-7.38016E-04	-3.35847E+00	4.27640E-01	4.24318E-01
11	ID 5294 - T2 (lbf)	-4.08626E-03	-2.50299E-04	-1.85202E-04	-1.73532E+00	-8.24724E-01	-3.22485E+00
12	ID 5294 - T3 (lbf)	-5.12752E-03	2.74991E-04	-3.07031E-04	1.19167E+00	-1.32695E+00	3.74056E-01
13	ID 5295 - T1 (lbf)	4.80357E-04	3.46411E-04	-5.90554E-04	2.73752E+00	-8.49652E-01	6.48722E-01
14	ID 5295 - T2 (lbf)	-1.88919E-03	2.32935E-04	-5.96428E-04	4.25609E+00	-6.17563E-01	3.05227E+00
15	ID 5295 - T3 (lbf)	4.60758E-03	3.59928E-04	2.58078E-04	1.19705E+00	-1.26062E+00	3.89590E-01
16	ID 5296 - T1 (lbf)	-1.06032E-03	3.54840E-04	-8.30028E-04	-2.66728E+00	1.00658E+00	-1.78951E+00
17	ID 5296 - T2 (lbf)	-1.89320E-03	-2.62405E-04	3.66008E-04	2.42252E+00	-5.59750E-01	-1.56307E+00
18	ID 5296 - T3 (lbf)	-4.71696E-03	2.57882E-04	1.03503E-04	-1.19847E+00	1.25347E+00	-3.88539E-01
19	ID 40301 - T1 (lbf)	3.10882E-03	4.37538E-05	-4.86165E-05	-5.94995E-01	4.14048E-01	-7.63695E-02
20	ID 40301 - T2 (lbf)	5.05418E-03	-7.15838E-04	4.76781E-04	8.46040E-01	-4.95173E-01	2.01286E-01
21	ID 40302 - T1 (lbf)	8.73398E-03	6.86272E-05	3.05602E-04	5.96708E-01	-3.12989E-01	1.48953E-01
22	ID 40303 - T2 (lbf)	-4.94180E-03	-5.77956E-04	-2.73286E-04	-8.33379E-01	4.94120E-01	-2.02265E-01
23	ID 40311 - T3 (lbf)	-9.57670E-03	-6.82943E-04	1.09532E-03	-1.13931E+00	7.98756E-01	-3.78016E-01
24	ID 40312 - T3 (lbf)	-6.89987E-05	5.33613E-04	-2.22404E-04	1.15318E+00	-5.48275E-01	3.28347E-01
25	ID 40313 - T3 (lbf)	1.08556E-02	-4.75057E-04	1.84305E-03	1.54123E+00	-1.02570E+00	4.88222E-01
26	ID 40314 - T3 (lbf)	-1.46688E-03	4.20891E-04	-2.06615E-04	-1.52742E+00	7.58781E-01	-4.37701E-01
27	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
28	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
29	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
30	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
31	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
32	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-10. SGANT Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:07:24 CDT Page 29

O T M - 0 3 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-1.82022E-10	2.00236E-09	-4.01955E-08	-6.99934E-03	5.81467E-03
2	Net Load Factor - T2 (g)	7.24110E-09	1.00000E+00	4.14288E-09	6.99934E-03	1.28633E-09	-1.58385E-03
3	Net Load Factor - T3 (g)	2.10857E-09	6.88169E-10	1.00000E+00	-5.81468E-03	1.58386E-03	-5.21420E-10
4	Net Load Factor - R1 (rad/sec^2)	-3.53189E-08	8.02042E-08	-6.08326E-08	1.00000E+00	-1.32575E-08	-2.51808E-08
5	Net Load Factor - R2 (rad/sec^2)	1.17144E-06	-1.43654E-08	5.79057E-08	-7.47218E-07	1.00000E+00	-1.68474E-07
6	Net Load Factor - R3 (rad/sec^2)	4.37965E-07	-5.67722E-09	2.15633E-08	3.69426E-07	-8.93475E-08	1.00000E+00
7	ID 5293 - T1 (lbf)	-5.45376E+01	-6.51001E+01	-4.45734E+01	3.24670E-01	-2.41448E+00	2.86815E+00
8	ID 5293 - T2 (lbf)	9.13204E+01	6.72081E+01	-3.20400E+00	4.77227E-01	1.97681E+00	-1.50828E+00
9	ID 5293 - T3 (lbf)	-3.24272E+01	4.63055E+01	-3.30411E+01	1.58493E+00	-5.25515E-01	-2.41883E+00
10	ID 5294 - T1 (lbf)	4.13282E+01	-7.27190E+01	-3.67467E+01	3.93455E-01	2.66956E+00	-3.82460E+00
11	ID 5294 - T2 (lbf)	1.01977E+02	-6.81142E+01	1.16515E+01	-5.97480E-01	2.38158E+00	-2.63682E+00
12	ID 5294 - T3 (lbf)	3.24731E+01	4.67941E+01	-3.23900E+01	1.60615E+00	8.53786E-01	2.85042E+00
13	ID 5295 - T1 (lbf)	-3.56400E+01	6.58737E+01	-5.47394E+01	-1.80462E+00	-2.06937E+00	-5.68713E-01
14	ID 5295 - T2 (lbf)	-2.16693E+00	6.91751E+01	-5.06489E-01	-3.31426E+00	-2.28253E-01	9.92755E-01
15	ID 5295 - T3 (lbf)	-2.64146E+01	4.54346E+01	3.30412E+01	-3.46792E+00	-6.84449E-01	-2.12095E+00
16	ID 5296 - T1 (lbf)	4.88493E+01	7.19454E+01	-4.88680E+01	-2.06682E+00	2.67325E+00	1.52517E+00
17	ID 5296 - T2 (lbf)	-6.20254E+00	-6.83615E+01	-7.94099E+00	3.43640E+00	-3.34365E-01	-1.42984E-03
18	ID 5296 - T3 (lbf)	2.64611E+01	4.63932E+01	3.23899E+01	-3.51894E+00	3.58080E-01	2.54670E+00
19	ID 40301 - T1 (lbf)	-3.73851E+02	-2.03424E+01	-1.41019E+01	-1.60764E-01	2.10102E+00	1.17931E+01
20	ID 40301 - T2 (lbf)	-1.95495E+02	-4.19930E+02	1.98331E+01	-9.93663E-02	-7.29969E+00	8.53524E+00
21	ID 40302 - T1 (lbf)	-3.53381E+02	2.03424E+01	1.41019E+01	1.60799E-01	-2.10102E+00	-1.17931E+01
22	ID 40303 - T2 (lbf)	1.95495E+02	-3.07301E+02	-1.98331E+01	9.93669E-02	7.29969E+00	-8.53522E+00
23	ID 40311 - T3 (lbf)	3.09187E+02	-1.98905E+02	3.43722E+02	1.32692E+01	1.60823E+01	-2.23130E+00
24	ID 40312 - T3 (lbf)	6.91572E+01	1.98905E+02	1.04818E+02	-1.30122E+01	3.66605E+00	-2.11349E+00
25	ID 40313 - T3 (lbf)	-3.46692E+02	-1.49508E+02	2.10333E+02	1.01163E+01	-1.77433E+01	1.89648E+00
26	ID 40314 - T3 (lbf)	-3.16520E+01	1.49508E+02	6.83588E+01	-1.03734E+01	-2.00502E+00	2.44829E+00
27	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-7.04254E-08	7.73067E-07	-1.55190E-05	-2.70237E+00	2.24498E+00
28	Net Inertial Acc - T2 (in/sec^2)	2.79579E-06	3.86089E+02	1.59956E-06	2.70237E+00	4.96640E-07	-6.11508E-01
29	Net Inertial Acc - T3 (in/sec^2)	8.13989E-07	2.65954E-07	3.86089E+02	-2.24498E+00	6.11509E-01	-2.01313E-07
30	Net Inertial Acc - R1 (rad/sec^2)	-3.53312E-08	8.02068E-08	-6.08330E-08	1.00000E+00	-1.32579E-08	-2.51812E-08
31	Net Inertial Acc - R2 (rad/sec^2)	1.17143E-06	-1.43596E-08	5.79008E-08	-7.47219E-07	1.00000E+00	-1.68474E-07
32	Net Inertial Acc - R3 (rad/sec^2)	4.37992E-07	-5.64052E-09	2.15594E-08	3.69425E-07	-8.93466E-08	1.00000E+00

Figure G-10. SGANT Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:07:24 CDT                    Page   30


                                  Execution Time: 00:00:01


                                   * * * END OF JOB * * *
```

Figure G-10. SGANT Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:06:40 CDT                    Page    1



                          ************************************************
                          *                                              *
                          *                ASD/DMMP v1.11.0              *
                          *                                              *
                          *       Applied Structural Dynamics, Inc.      *
                          *    http://www.AppliedStructuralDynamics.com  *
                          *                                              *
                          *   Execution Time: Mon Jul 14 2008 12:06:40 CDT *
                          *                                              *
                          ************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-07-0012A
     Name       : LDU-IA
     Description: LDU Integrated Assembly (IA)
```

Figure G-11. LDU Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:06:40 CDT                    Page    2

                              C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-07-0012A
     Name        : LDU-IA
     Description : LDU Integrated Assembly (IA)
     Type        : Integrated

     DMM Type    : Hybrid
     DMM Size    : 30 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : DMM-2008-07-0012A.dmm.op4
        Geometry : ldu_geom.blk
        Label    : <not specified>

     OTM-01:
        Description : LDU IA NLFs & IFFs
        No. of Items: 20
        Ignore      : No
        Matrix File : DMM-2008-07-0012A.OTM.op4
        Label File  : DMM-2008-07-0012A.OTM.txt

     OTM-02:
        Description : LDU ORU NLFs & IFFs
        No. of Items: 24
        Ignore      : No
        Matrix File : DMM-2008-04-0002B.OTM-01.op4
        Label File  : DMM-2008-04-0002B.OTM-01.txt

     OTM-03:
        Description : LDU FSE NLFs & IFFs
        No. of Items: 32
        Ignore      : No
        Matrix File : DMM-2008-04-0003B.OTM-01.op4
        Label File  : DMM-2008-04-0003B.OTM-01.txt
```

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
40301	ID 40301	40000	40.12300	-21.36700	-4.80000	40000	1	2					
40302	ID 40302	40000	40.12300	21.36700	-4.80000	40000	3						
40303	ID 40303	40000	9.73800	-21.36700	-4.80000	40000		4					
40311	ID 40311	40000	40.12300	-18.37500	-4.00000	40000			5				
40312	ID 40312	40000	40.12300	18.37500	-4.00000	40000			6				
40313	ID 40313	40000	9.73800	-14.00000	-4.00000	40000			7				
40314	ID 40314	40000	9.73800	14.00000	-4.00000	40000			8				
200001	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							9
:													:
200022	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							30

Figure G-11. LDU Integrated Assembly

```
ASD/DMMP v1.11.0                        Mon Jul 14 2008 12:06:40 CDT                        Page    4

                                S O R T E D   B U L K   D A T A   E C H O

ENTRY
COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
    1 -    BSET1   1       40302
    2 -    BSET1   2       40303
    3 -    BSET1   12      40301
    4 -    BSET1   3       40311   40312   40313   40314
    5 -    CORD2R *3               0                       -36.046          17.497*
    6 -    *                 5.4945          -36.046          17.497          4.4945*
    7 -    *                -37.046           17.497          5.4945
    8 -    CORD2R *40000           0                               0               0*
    9 -    *                      0               0               0               1*
   10 -    *                     -1               0               0
   11 -    GRID   *40301           40000                   40.123          -21.367*
   12 -    *                    -4.840000           3456
   13 -    GRID   *40302           40000                   40.123           21.367*
   14 -    *                    -4.840000           23456
   15 -    GRID   *40303           40000                    9.738          -21.367*
   16 -    *                    -4.840000           13456
   17 -    GRID   *40311           40000                   40.123          -18.375*
   18 -    *                   -440000              12456
   19 -    GRID   *40312           40000                   40.123           18.375*
   20 -    *                   -440000              12456
   21 -    GRID   *40313           40000                    9.738              -14*
   22 -    *                   -440000              12456
   23 -    GRID   *40314           40000                    9.738               14*
   24 -    *                   -440000              12456
   25 -    QSET1   0       200001  THRU    200022
   26 -    SPOINT  200001  THRU    200022
   27 -    ENDDATA

           TOTAL ENTRY COUNT = 27
```

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 5

COORDINATE SYSTEM TRANSFORMATION MATRIX TABLE

N	ID	TYPE	R(I,1)	R(I,2)	R(I,3)	T(I)
1	3	1	-1.00000000E+00	0.00000000E+00	0.00000000E+00	-3.60460000E+01
			0.00000000E+00	1.00000000E+00	0.00000000E+00	1.74970000E+01
			0.00000000E+00	0.00000000E+00	-1.00000000E+00	5.49450000E+00
2	40000	1	-1.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	-1.00000000E+00	0.00000000E+00	0.00000000E+00
			0.00000000E+00	0.00000000E+00	1.00000000E+00	0.00000000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 6

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	40301	40000	-4.01230E+01	2.13670E+01	-4.80000E+00
2	40302	40000	-4.01230E+01	-2.13670E+01	-4.80000E+00
3	40303	40000	-9.73800E+00	2.13670E+01	-4.80000E+00
4	40311	40000	-4.01230E+01	1.83750E+01	-4.00000E+00
5	40312	40000	-4.01230E+01	-1.83750E+01	-4.00000E+00
6	40313	40000	-9.73800E+00	1.40000E+01	-4.00000E+00
7	40314	40000	-9.73800E+00	-1.40000E+01	-4.00000E+00
8	200001	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
29	200022	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	40301-3	40301-4	40301-5	40301-6	40302-2	40302-3	40302-4	40302-5	40302-6	40303-1	= 10
11 =	40303-3	40303-4	40303-5	40303-6	40311-1	40311-2	40311-4	40311-5	40311-6	40312-1	= 20
21 =	40312-2	40312-4	40312-5	40312-6	40313-1	40313-2	40313-4	40313-5	40313-6	40314-1	= 30
31 =	40314-2	40314-4	40314-5	40314-6							

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	40301-1	40301-2	40302-1	40303-2	40311-3	40312-3	40313-3	40314-3		

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	200001-0	200002-0	200003-0	200004-0	200005-0	200006-0	200007-0	200008-0	200009-0	200010-0	= 10
11 =	200011-0	200012-0	200013-0	200014-0	200015-0	200016-0	200017-0	200018-0	200019-0	200020-0	= 20
21 =	200021-0	200022-0									

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 10

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	40301-1	40301-2	40302-1	40303-2	40311-3	40312-3	40313-3	40314-3	200001-0	200002-0	= 10
11 =	200003-0	200004-0	200005-0	200006-0	200007-0	200008-0	200009-0	200010-0	200011-0	200012-0	= 20
21 =	200013-0	200014-0	200015-0	200016-0	200017-0	200018-0	200019-0	200020-0	200021-0	200022-0	= 30

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 11

Z E R O D A M P I N G D O F S

The following DOFs have damping less than 1.0E-09:

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	40301-1	40301-2	40302-1	40303-2	40311-3	40312-3	40313-3	40314-3		

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 12

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  1.613603E+00 -3.797760E-10  1.479422E-09  1.114804E-08  8.982757E+00  9.533935E-01 *
* -3.797760E-10  1.613603E+00 -1.362686E-10 -8.982757E+00 -8.314568E-09 -4.481032E+01 *
*  1.479422E-09 -1.362688E-10  1.613603E+00 -9.533934E-01  4.481032E+01 -2.280353E-08 *
*  1.114805E-08 -8.982757E+00 -9.533934E-01  4.309401E+02 -2.774873E+01  2.293997E+02 *
*  8.982757E+00 -8.314568E-09  4.481032E+01 -2.774873E+01  1.544012E+03  1.174877E+01 *
*  9.533935E-01 -4.481032E+01 -2.280354E-08  2.293997E+02  1.174877E+01  1.682768E+03 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.613603E+00	6.908789E-09	-5.908476E-01	5.566894E+00
Y	1.613603E+00	-2.777035E+01	-5.152796E-09	5.566894E+00
Z	1.613603E+00	-2.777035E+01	-5.908475E-01	-1.413206E-08

I(S)

```
*  3.803708E+02  1.272663E+00  2.005460E+01 *
*  1.272663E+00  2.496072E+02 -6.441328E+00 *
*  2.005460E+01 -6.441328E+00  4.378060E+02 *
```

I(Q)

```
*  2.493843E+02                             *
*                3.740655E+02               *
*                             4.443341E+02  *
```

Q

```
*  4.553623E-03 -9.540504E-01 -2.996117E-01 *
*  9.994223E-01 -5.749553E-03  3.349788E-02 *
* -3.368130E-02 -2.995911E-01  9.534730E-01 *
```

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 13

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
-2.777035E+01	-5.908475E-01	5.566894E+00

Figure G-11. LDU Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:06:40 CDT                    Page   14

                O U T P U T   F R O M   G R I D   P O I N T   W E I G H T   G E N E R A T O R

                                    REFERENCE POINT = C.G.

                                              M O
*  1.613603E+00 -3.797760E-10  1.479422E-09  9.907984E-09 -3.175257E-08  3.190102E-08 *
* -3.797760E-10  1.613603E+00 -1.362686E-10  9.250982E-09 -2.416167E-09 -9.210957E-09 *
*  1.479422E-09 -1.362688E-10  1.613603E+00  4.168893E-08 -1.767113E-08 -2.746187E-08 *
*  9.907986E-09  9.250983E-09  4.168893E-08  3.803708E+02 -1.272663E+00 -2.005460E+01 *
* -3.175257E-08 -2.416164E-09 -1.767113E-08 -1.272663E+00  2.496072E+02  6.441329E+00 *
*  3.190102E-08 -9.210963E-09 -2.746188E-08 -2.005460E+01  6.441329E+00  4.378060E+02 *

                                              S
                                *  1.000000E+00  0.000000E+00  0.000000E+00 *
                                *  0.000000E+00  1.000000E+00  0.000000E+00 *
                                *  0.000000E+00  0.000000E+00  1.000000E+00 *

          DIRECTION
     MASS AXIS SYSTEM (S)     MASS             X-C.G.        Y-C.G.        Z-C.G.
            X             1.613603E+00      6.140285E-09 -1.977006E-08 -1.967805E-08
            Y             1.613603E+00     -5.708316E-09 -1.497374E-09 -5.733121E-09
            Z             1.613603E+00      1.095135E-08  2.583593E-08 -1.701898E-08

                                              I(S)
                                *  3.803708E+02  1.272663E+00  2.005460E+01 *
                                *  1.272663E+00  2.496072E+02 -6.441329E+00 *
                                *  2.005460E+01 -6.441329E+00  4.378060E+02 *

                                              I(Q)
                                *  2.493843E+02                             *
                                *                3.740655E+02               *
                                *                             4.443341E+02 *

                                              Q
                                *  4.553623E-03 -9.540504E-01 -2.996117E-01 *
                                *  9.994223E-01 -5.749554E-03  3.349788E-02 *
                                * -3.368130E-02 -2.995911E-01  9.534730E-01 *
```

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 15

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.61360E+00	-3.79776E-10	1.47942E-09	9.90798E-09	-3.17526E-08	3.19010E-08
T2:	-3.79776E-10	1.61360E+00	-1.36269E-10	9.25098E-09	-2.41617E-09	-9.21096E-09
T3:	1.47942E-09	-1.36269E-10	1.61360E+00	4.16889E-08	-1.76711E-08	-2.74619E-08
R1:	9.90799E-09	9.25098E-09	4.16889E-08	3.80371E+02	-1.27266E+00	-2.00546E+01
R2:	-3.17526E-08	-2.41616E-09	-1.76711E-08	-1.27266E+00	2.49607E+02	6.44133E+00
R3:	3.19010E-08	-9.21096E-09	-2.74619E-08	-2.00546E+01	6.44133E+00	4.37806E+02

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	7.03061E-04	-1.49682E-05	4.73359E-07	1.61510E-04	7.92761E-03	-1.01183E-02
T2:	-1.49329E-05	4.33381E-04	-5.20675E-07	-4.84583E-03	-1.44068E-04	5.38406E-03
T3:	4.74687E-07	-5.20078E-07	6.50387E-07	-1.41797E-05	1.13182E-04	-1.37916E-05
R1:	1.61527E-04	-4.84571E-03	-1.41695E-05	5.20274E-02	1.61342E-03	-5.81100E-02
R2:	7.92771E-03	-1.44081E-04	1.13035E-04	1.61306E-03	8.68976E-02	-8.43683E-02
R3:	-1.01187E-02	5.38448E-03	-1.38050E-05	-5.81103E-02	-8.43689E-02	1.96679E-01

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	2.96961E-30	4.85769E-31	7.43206E-32	1.09056E-29	2.06614E-29	3.43075E-29
T2:	4.85769E-31	9.67075E-31	-9.59701E-32	1.89713E-29	-7.40553E-30	-1.14895E-29
T3:	7.43206E-32	-9.59701E-32	1.17099E-31	-2.53754E-31	-1.17869E-30	-4.75827E-31
R1:	1.09056E-29	1.89713E-29	-2.53754E-31	5.78011E-28	-2.62514E-28	-3.37594E-28
R2:	2.06614E-29	-7.40553E-30	-1.17869E-30	-2.62514E-28	4.74197E-28	7.21841E-28
R3:	3.43075E-29	-1.14895E-29	-4.75827E-31	-3.37594E-28	7.21841E-28	1.14129E-27

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 16

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	40301-1	-4.45890E-04	1.12287E-04	-1.35911E-07	-1.20933E-03	-4.67040E-03	7.46186E-03
2	40301-2	-1.77774E-04	-2.27675E-04	-2.77854E-07	2.55374E-03	-1.54324E-03	-2.98313E-04
3	40302-1	-2.57171E-04	-9.73190E-05	-3.37448E-07	1.04782E-03	-3.25721E-03	2.65645E-03
4	40303-2	1.92707E-04	-2.05706E-04	7.98529E-07	2.29209E-03	1.68731E-03	-5.08575E-03
5	40311-3	3.57353E-04	-2.33559E-04	2.01091E-06	2.55592E-03	3.68882E-03	-7.43860E-03
6	40312-3	1.43711E-04	2.23401E-04	2.25665E-06	-2.45614E-03	1.94301E-03	1.20156E-03
7	40313-3	-3.79209E-04	-2.88091E-05	-1.97433E-06	3.06431E-04	-3.79644E-03	4.71323E-03
8	40314-3	-1.21380E-04	3.84464E-05	-1.64285E-06	-4.20387E-04	-1.72221E-03	1.51002E-03
	Total:	7.03061E-04	4.33381E-04	6.50387E-07	5.20275E-02	8.68976E-02	1.96679E-01

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 17

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	1	40301-1	-4.45890E-04
T2 -	5	40311-3	-2.33559E-04
T3 -	6	40312-3	2.25665E-06
R1 -	5	40311-3	2.55592E-03
R2 -	1	40301-1	-4.67040E-03
R3 -	1	40301-1	7.46186E-03

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 18

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	40301-1	-1.05493E-30	-3.66141E-31	-9.56913E-32	-1.13507E-29	1.43003E-30	7.30096E-31
2	40301-2	2.93967E-31	-7.69257E-31	1.25059E-31	-1.38623E-29	1.20127E-29	1.98945E-29
3	40302-1	-1.91468E-30	-1.19628E-31	2.13707E-32	4.45107E-31	-2.20914E-29	-3.50376E-29
4	40303-2	-7.79737E-31	-1.97817E-31	-2.90889E-32	-5.10900E-30	-4.60713E-30	-8.40497E-30
5	40311-3	4.49458E-31	2.47322E-31	4.31326E-32	9.49786E-30	-2.66407E-30	-2.39078E-30
6	40312-3	1.28782E-30	-3.82263E-31	1.29265E-32	-1.45672E-29	2.46202E-29	3.75700E-29
7	40313-3	-7.32400E-32	-7.21647E-32	3.46961E-32	2.39647E-31	-2.70860E-31	6.03809E-31
8	40314-3	-1.58972E-30	1.11136E-31	2.63438E-32	4.57595E-30	-2.28640E-29	-3.62589E-29
	Total:	2.96961E-30	9.67075E-31	1.17099E-31	5.78011E-28	4.74197E-28	1.14129E-27

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 19

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

Dir	DOF	GRID-C	Max. Force
T1 -	3	40302-1	-1.91468E-30
T2 -	2	40301-2	-7.69257E-31
T3 -	2	40301-2	1.25059E-31
R1 -	6	40312-3	-1.45672E-29
R2 -	6	40312-3	2.46202E-29
R3 -	6	40312-3	3.75700E-29

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 20

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	40301-1	-2.93547E+02	1.27063E+01	-1.97750E+01	-2.01501E+00	9.42472E-02	6.18042E+00
2	40301-2	-1.31305E+01	-3.87594E+02	2.78119E+01	2.17393E+00	7.94395E-02	5.71637E+00
3	40302-1	-3.29447E+02	-1.27063E+01	1.97750E+01	2.01501E+00	-9.42471E-02	-6.18042E+00
4	40303-2	1.31305E+01	-2.35400E+02	-2.78119E+01	-2.17393E+00	-7.94395E-02	-5.71637E+00
5	40311-3	1.00386E+02	-1.23452E+02	1.80046E+02	7.16082E+00	4.04769E+00	-1.87698E+00
6	40312-3	1.12169E+02	1.23452E+02	1.89677E+02	-7.20270E+00	4.16713E+00	2.08897E+00
7	40313-3	-9.85453E+01	-6.86306E+01	1.19809E+02	4.17955E+00	-4.07448E+00	1.78043E+00
8	40314-3	-1.14011E+02	6.86306E+01	1.33461E+02	-4.13766E+00	-4.14034E+00	-1.99242E+00
	Total:	6.22994E+02	6.22994E+02	6.22994E+02	3.80371E+02	2.49607E+02	4.37806E+02

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 21

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-4.140768E-05	6.434880E-03	1.024143E-03
2	-3.888446E-06	1.971914E-03	3.138399E-04
3	5.063986E-07	7.116169E-04	1.132573E-04
4	6.191336E-05	7.868505E-03	1.252311E-03
5	4.737605E-04	2.176604E-02	3.464173E-03
6	1.145567E-03	3.384623E-02	5.386795E-03
7	1.423881E+05	3.773435E+02	6.005608E+01
8	1.492731E+05	3.863587E+02	6.149090E+01
9	1.986157E+05	4.456632E+02	7.092950E+01
10	2.510113E+05	5.010103E+02	7.973827E+01
11	2.534607E+05	5.034488E+02	8.012637E+01
12	2.617268E+05	5.115924E+02	8.142247E+01
13	2.783102E+05	5.275512E+02	8.396237E+01
14	2.878124E+05	5.364815E+02	8.538368E+01
15	3.844726E+05	6.200585E+02	9.868538E+01
16	3.895813E+05	6.241645E+02	9.933886E+01
17	4.036337E+05	6.353217E+02	1.011146E+02
18	4.430110E+05	6.655907E+02	1.059320E+02
19	4.575203E+05	6.764024E+02	1.076528E+02
20	4.983086E+05	7.059098E+02	1.123490E+02
21	5.147652E+05	7.174714E+02	1.141891E+02
22	5.592794E+05	7.478499E+02	1.190240E+02
23	6.457088E+05	8.035601E+02	1.278906E+02
24	6.835033E+05	8.267426E+02	1.315802E+02
25	8.011293E+05	8.950583E+02	1.424529E+02
26	8.304100E+05	9.112683E+02	1.450329E+02
27	1.826846E+06	1.351609E+03	2.151152E+02
28	2.090865E+06	1.445982E+03	2.301353E+02
29	2.529117E+06	1.590320E+03	2.531072E+02
30	1.225025E+07	3.500035E+03	5.570479E+02

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 22

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	1.111597E+05	3.334061E+02	5.306324E+01
2	1.388183E+05	3.725833E+02	5.929848E+01
3	1.446451E+05	3.803224E+02	6.053019E+01
4	1.471448E+05	3.835946E+02	6.105098E+01
5	2.068253E+05	4.547805E+02	7.238056E+01
6	2.388602E+05	4.887333E+02	7.778432E+01
7	2.511248E+05	5.011236E+02	7.975629E+01
8	2.638808E+05	5.136933E+02	8.175683E+01
9	2.765294E+05	5.258606E+02	8.369331E+01
10	2.867596E+05	5.354994E+02	8.522738E+01
11	3.864608E+05	6.216597E+02	9.894021E+01
12	4.102891E+05	6.405381E+02	1.019448E+02
13	4.394815E+05	6.629340E+02	1.055092E+02
14	4.779423E+05	6.913337E+02	1.100292E+02
15	4.909551E+05	7.006819E+02	1.115170E+02
16	5.860191E+05	7.655188E+02	1.218361E+02
17	6.122931E+05	7.824916E+02	1.245374E+02
18	6.393016E+05	7.995634E+02	1.272545E+02
19	6.819651E+05	8.258118E+02	1.314320E+02
20	7.024866E+05	8.381447E+02	1.333949E+02
21	8.260050E+05	9.088482E+02	1.446477E+02
22	8.414835E+05	9.173241E+02	1.459967E+02

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 23

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	5.306324E+01	15.79%	0.02%	21.45%	0.35%	12.20%	0.24%
2	5.929848E+01	0.00%	0.70%	0.18%	1.88%	0.00%	0.26%
3	6.053019E+01	0.11%	48.58%	0.01%	16.18%	0.17%	0.00%
4	6.105098E+01	11.06%	1.11%	1.52%	0.42%	16.25%	0.13%
5	7.238056E+01	11.73%	0.00%	4.59%	0.25%	0.00%	0.44%
6	7.778432E+01	4.77%	0.26%	4.43%	0.00%	0.27%	0.18%
7	7.975629E+01	0.12%	0.00%	0.07%	0.04%	0.26%	2.35%
8	8.175683E+01	0.14%	1.75%	0.17%	0.00%	0.00%	0.26%
9	8.369331E+01	0.03%	0.04%	0.85%	0.06%	0.63%	0.00%
10	8.522738E+01	0.23%	1.51%	0.02%	1.83%	0.10%	11.54%
11	9.894021E+01	0.71%	0.16%	0.00%	0.78%	0.48%	0.00%
12	1.019448E+02	0.10%	0.05%	0.03%	0.42%	0.13%	6.60%
13	1.055092E+02	0.00%	1.09%	0.06%	1.63%	0.01%	0.25%
14	1.100292E+02	13.08%	0.01%	2.76%	0.02%	0.62%	0.00%
15	1.115170E+02	4.03%	0.12%	0.05%	0.25%	0.03%	0.17%
16	1.218361E+02	3.62%	0.00%	0.31%	0.96%	0.29%	3.09%
17	1.245374E+02	4.82%	0.08%	0.19%	2.20%	0.05%	5.26%
18	1.272545E+02	0.08%	0.65%	0.13%	0.06%	0.19%	1.03%
19	1.314320E+02	0.07%	0.01%	0.20%	0.04%	0.08%	0.28%
20	1.333949E+02	0.08%	8.62%	1.92%	3.11%	0.88%	0.39%
21	1.446477E+02	0.37%	3.21%	8.68%	2.33%	2.09%	0.01%
22	1.459967E+02	0.18%	2.71%	2.36%	3.51%	2.90%	0.04%
Total:		71.12%	70.67%	49.96%	36.32%	37.63%	32.52%

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 24

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.12852E-06	-2.40262E-08	7.59822E-10	2.59248E-07	1.27250E-05	-1.62414E-05
2	Net Load Factor - T2 (g)	-2.39696E-08	6.95643E-07	-8.35769E-10	-7.77829E-06	-2.31252E-07	8.64224E-06
3	Net Load Factor - T3 (g)	7.61951E-10	-8.34795E-10	1.04397E-09	-2.27608E-08	1.81674E-07	-2.21375E-08
4	Net Load Factor - R1 (rad/sec^2)	-7.12445E-07	-1.21227E-05	-3.78399E-08	1.30124E-04	-5.02290E-06	-1.30301E-04
5	Net Load Factor - R2 (rad/sec^2)	3.23667E-05	-9.42448E-07	4.53688E-07	1.04012E-05	3.53225E-04	-3.50241E-04
6	Net Load Factor - R3 (rad/sec^2)	-2.36211E-05	1.17573E-05	-3.99408E-08	-1.26923E-04	-1.98135E-04	4.48421E-04
7	ID 40301 - T1 (lbf)	-4.45890E-04	1.12287E-04	-1.35911E-07	-1.20933E-03	-4.67040E-03	7.46186E-03
8	ID 40301 - T2 (lbf)	-1.77774E-04	-2.27675E-04	-2.77854E-07	2.55374E-03	-1.54324E-03	-2.98313E-04
9	ID 40302 - T1 (lbf)	-2.57171E-04	-9.73190E-05	-3.37448E-07	1.04782E-03	-3.25721E-03	2.65645E-03
10	ID 40303 - T2 (lbf)	1.92707E-04	-2.05706E-04	7.98529E-07	2.29209E-03	1.68731E-03	-5.08575E-03
11	ID 40311 - T3 (lbf)	3.57353E-04	-2.33559E-04	2.01091E-06	2.55592E-03	3.68882E-03	-7.43860E-03
12	ID 40312 - T3 (lbf)	1.43711E-04	2.23401E-04	2.25665E-06	-2.45614E-03	1.94301E-03	1.20156E-03
13	ID 40313 - T3 (lbf)	-3.79209E-04	-2.88091E-05	-1.97433E-06	3.06431E-04	-3.79644E-03	4.71323E-03
14	ID 40314 - T3 (lbf)	-1.21380E-04	3.84464E-05	-1.64285E-06	-4.20387E-04	-1.72221E-03	1.51002E-03
15	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
16	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
20	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 25

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	9.51496E-14	-5.74540E-15	-1.61329E-15	4.92661E-16	-9.91828E-16
2	Net Load Factor - T2 (g)	-6.17735E-14	1.00000E+00	2.39947E-14	5.52076E-16	-1.11976E-15	4.99600E-16
3	Net Load Factor - T3 (g)	-1.72223E-14	-2.49106E-15	1.00000E+00	4.59702E-17	-3.76435E-16	-3.90313E-17
4	Net Load Factor - R1 (rad/sec^2)	1.03473E-13	-5.56888E-13	-1.28786E-13	1.00000E+00	1.85962E-15	1.23235E-14
5	Net Load Factor - R2 (rad/sec^2)	-8.35857E-13	5.62597E-14	5.11591E-13	-3.94129E-15	1.00000E+00	-5.14072E-15
6	Net Load Factor - R3 (rad/sec^2)	1.10756E-12	-1.40332E-12	-4.37872E-13	2.79221E-14	1.46549E-14	1.00000E+00
7	ID 40301 - T1 (lbf)	-2.93547E+02	1.27063E+01	-1.97750E+01	-2.01501E+00	9.42472E-02	6.18042E+00
8	ID 40301 - T2 (lbf)	-1.31305E+01	-3.87594E+02	2.78119E+01	2.17393E+00	7.94395E-02	5.71637E+00
9	ID 40302 - T1 (lbf)	-3.29447E+02	-1.27063E+01	1.97750E+01	2.01501E+00	-9.42471E-02	-6.18042E+00
10	ID 40303 - T2 (lbf)	1.31305E+01	-2.35400E+02	-2.78119E+01	-2.17393E+00	-7.94395E-02	-5.71637E+00
11	ID 40311 - T3 (lbf)	1.00386E+02	-1.23452E+02	1.80046E+02	7.16082E+00	4.04769E+00	-1.87698E+00
12	ID 40312 - T3 (lbf)	1.12169E+02	1.23452E+02	1.89677E+02	-7.20270E+00	4.16713E+00	2.08897E+00
13	ID 40313 - T3 (lbf)	-9.85453E+01	-6.86306E+01	1.19809E+02	4.17955E+00	-4.07448E+00	1.78043E+00
14	ID 40314 - T3 (lbf)	-1.14011E+02	6.86306E+01	1.33461E+02	-4.13766E+00	-4.14034E+00	-1.99242E+00
15	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-3.55271E-15	2.84217E-14	8.88178E-16	1.77636E-15	-3.60822E-15
16	Net Inertial Acc - T2 (in/sec^2)	-8.88178E-16	3.86089E+02	-2.84217E-14	8.88178E-16	-4.44089E-16	-2.66454E-15
17	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	3.86089E+02	-2.22045E-15	4.44089E-16	6.66134E-16
18	Net Inertial Acc - R1 (rad/sec^2)	2.66454E-15	2.22045E-15	2.66454E-15	1.00000E+00	0.00000E+00	9.71445E-17
19	Net Inertial Acc - R2 (rad/sec^2)	1.33964E-15	1.17181E-15	-7.10543E-15	2.77556E-17	1.00000E+00	6.22332E-17
20	Net Inertial Acc - R3 (rad/sec^2)	-8.88178E-16	2.66454E-15	8.88178E-16	8.32667E-17	-4.16334E-17	1.00000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 26

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-2.80607E-06	5.87118E-08	-1.90781E-09	-6.46153E-07	-3.16224E-05	4.03623E-05
2	Net Load Factor - T2 (g)	-5.85713E-08	1.72954E-06	-2.08061E-09	-1.93311E-05	-5.78085E-07	2.14817E-05
3	Net Load Factor - T3 (g)	-1.91292E-09	2.07797E-09	-9.69322E-11	5.37509E-08	-4.54300E-07	5.39297E-08
4	Net Load Factor - R1 (rad/sec^2)	1.07264E-06	1.20762E-05	1.66609E-07	-1.14686E-04	7.74464E-06	1.09700E-04
5	Net Load Factor - R2 (rad/sec^2)	5.38735E-05	-8.97772E-07	2.64505E-06	8.74778E-06	5.50470E-04	-6.45268E-05
6	Net Load Factor - R3 (rad/sec^2)	8.51031E-05	-3.74099E-05	1.11794E-07	4.01860E-04	7.20094E-04	-1.56479E-03
7	ID 97001 - T1 (lbf)	-3.58589E-04	1.02535E-04	-1.08286E-06	-1.11531E-03	-3.62410E-03	6.00576E-03
8	ID 97001 - T2 (lbf)	2.28401E-06	9.75917E-05	-1.12125E-06	-1.08290E-03	-7.53181E-05	1.07883E-03
9	ID 97001 - T3 (lbf)	-4.46844E-04	1.28871E-04	-4.15358E-06	-1.42252E-03	-4.53837E-03	7.21201E-03
10	ID 97002 - T1 (lbf)	-2.49569E-04	5.93816E-05	4.37924E-07	-6.37420E-04	-2.51562E-03	4.15804E-03
11	ID 97002 - T2 (lbf)	-5.03209E-05	9.52534E-05	-7.99250E-07	-1.07298E-03	-4.81775E-04	1.96405E-03
12	ID 97002 - T3 (lbf)	4.42276E-04	5.66230E-07	4.49651E-06	4.21919E-05	4.43676E-03	-5.65492E-03
13	ID 97003 - T1 (lbf)	-6.38349E-05	-1.08824E-04	-8.29805E-07	1.18806E-03	-1.12234E-03	-6.13157E-04
14	ID 97003 - T2 (lbf)	6.26232E-05	1.09537E-04	8.08173E-07	-1.22865E-03	6.22756E-04	2.32183E-04
15	ID 97003 - T3 (lbf)	-1.26765E-04	-1.18167E-04	-4.03332E-06	1.31309E-03	-1.79108E-03	-1.08787E-03
16	ID 97004 - T1 (lbf)	-3.12644E-05	-3.83791E-05	9.96629E-07	4.02727E-04	-6.63151E-04	5.64943E-04
17	ID 97004 - T2 (lbf)	-2.92655E-05	1.31076E-04	5.90891E-07	-1.46022E-03	-2.10542E-04	2.10867E-03
18	ID 97004 - T3 (lbf)	1.30853E-04	-1.07493E-05	3.66608E-06	8.07091E-05	1.77883E-03	-4.55702E-04
19	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
20	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
21	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
22	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
23	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
24	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 27

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-1.00000E+00	8.85991E-10	-2.25259E-09	-2.86385E-11	-2.10189E-02	-1.61823E-03
2	Net Load Factor - T2 (g)	-4.95441E-10	1.00000E+00	-1.98243E-11	-2.10189E-02	-1.05378E-11	4.39039E-03
3	Net Load Factor - T3 (g)	-1.57273E-09	7.81033E-12	-1.00000E+00	1.61823E-03	4.39039E-03	4.86764E-11
4	Net Load Factor - R1 (rad/sec^2)	-1.66791E-08	-2.45366E-08	7.21465E-10	-1.00000E+00	-3.25333E-10	2.84510E-10
5	Net Load Factor - R2 (rad/sec^2)	-1.58315E-07	-2.91677E-09	4.33128E-08	-2.08999E-10	1.00000E+00	1.58851E-09
6	Net Load Factor - R3 (rad/sec^2)	-1.61300E-07	3.69435E-08	5.73104E-08	-1.67000E-10	-3.26035E-09	-1.00000E+00
7	ID 97001 - T1 (lbf)	-6.33611E+01	2.16951E+01	-1.71430E+01	-9.51568E-01	-1.67338E+00	1.46720E+00
8	ID 97001 - T2 (lbf)	-2.13801E+01	4.94187E+01	-1.89169E+01	-1.89897E+00	-7.42556E-01	1.11288E-01
9	ID 97001 - T3 (lbf)	-7.49313E+01	3.49094E+01	-3.39361E+01	-1.54502E+00	-2.91384E+00	1.31751E+00
10	ID 97002 - T1 (lbf)	-6.25859E+01	1.76819E+00	1.95802E+01	5.90711E-02	-9.89980E-01	1.50298E+00
11	ID 97002 - T2 (lbf)	-6.58645E+00	3.74251E+01	-1.85409E+01	-9.26785E-01	-1.52467E-02	3.88070E-01
12	ID 97002 - T3 (lbf)	7.49313E+01	1.94474E+01	-9.24518E+01	-2.14451E+00	3.47465E+00	-1.02701E+00
13	ID 97003 - T1 (lbf)	-6.12610E+01	-2.62934E+01	-2.69985E+01	1.33266E+00	-1.70116E+00	-1.75468E+00
14	ID 97003 - T2 (lbf)	2.25767E+01	8.52324E+01	2.55312E+01	-1.87425E+00	7.08234E-01	-9.13140E-02
15	ID 97003 - T3 (lbf)	-7.25861E+01	-3.49094E+01	-3.70386E+01	1.67594E+00	-2.86105E+00	-1.57203E+00
16	ID 97004 - T1 (lbf)	-6.34118E+01	2.83014E+00	2.45613E+01	-4.40166E-01	-9.03247E-01	-1.62107E+00
17	ID 97004 - T2 (lbf)	5.38984E+00	7.85437E+01	1.19267E+01	-5.67760E-01	4.95684E-02	6.92276E-01
18	ID 97004 - T3 (lbf)	7.25861E+01	-1.94474E+01	-8.71933E+01	2.41916E+00	3.40056E+00	1.28153E+00
19	Net Inertial Acc - T1 (in/sec^2)	-3.86089E+02	2.41225E-08	8.43734E-09	-6.86502E-10	-8.11517E+00	-6.24780E-01
20	Net Inertial Acc - T2 (in/sec^2)	-1.53209E-07	3.86089E+02	5.80826E-10	-8.11517E+00	-3.39625E-09	1.69508E+00
21	Net Inertial Acc - T3 (in/sec^2)	-6.18028E-07	3.71088E-09	-3.86089E+02	6.24780E-01	1.69508E+00	1.87916E-08
22	Net Inertial Acc - R1 (rad/sec^2)	-1.38321E-08	-6.28396E-09	-1.67653E-11	-1.00000E+00	-2.68203E-10	3.98666E-10
23	Net Inertial Acc - R2 (rad/sec^2)	-6.17131E-08	1.26917E-09	-6.45969E-10	-3.61974E-11	1.00000E+00	1.85403E-09
24	Net Inertial Acc - R3 (rad/sec^2)	-3.19474E-08	8.79330E-09	-3.00959E-11	-2.50107E-10	-6.44027E-10	-1.00000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 28

O T M - 0 3 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	-5.25140E-10	-6.81663E-10	-1.29674E-11	-1.15187E-09	6.48046E-09	-7.30039E-09
2	Net Load Factor - T2 (g)	-6.81666E-10	-2.03960E-10	2.02771E-12	-2.86312E-09	2.17733E-09	8.80036E-10
3	Net Load Factor - T3 (g)	-1.29142E-11	2.07034E-12	1.68187E-09	-1.90191E-09	-1.80438E-09	-7.39343E-10
4	Net Load Factor - R1 (rad/sec^2)	4.64487E-09	-3.22636E-09	-4.90402E-09	6.10763E-08	1.17658E-07	5.24635E-08
5	Net Load Factor - R2 (rad/sec^2)	1.02590E-08	-4.37723E-09	-1.06635E-08	1.89274E-07	6.32499E-07	-2.98958E-08
6	Net Load Factor - R3 (rad/sec^2)	-9.93758E-09	4.21474E-10	-9.14904E-10	4.27764E-08	3.80294E-08	-6.72537E-07
7	ID 30001 - T1 (lbf)	3.58589E-04	-1.02535E-04	1.08283E-06	1.11531E-03	3.62410E-03	-6.00576E-03
8	ID 30001 - T2 (lbf)	-2.28401E-06	-9.75916E-05	1.12118E-06	1.08290E-03	7.53179E-05	-1.07883E-03
9	ID 30001 - T3 (lbf)	4.46844E-04	-1.28871E-04	4.15352E-06	1.42252E-03	4.53837E-03	-7.21201E-03
10	ID 30002 - T1 (lbf)	2.49569E-04	-5.93815E-05	-4.37937E-07	6.37421E-04	2.51562E-03	-4.15804E-03
11	ID 30002 - T2 (lbf)	5.03209E-05	-9.52534E-05	7.99341E-07	1.07298E-03	4.81775E-04	-1.96405E-03
12	ID 30002 - T3 (lbf)	-4.42276E-04	-5.66224E-07	-4.49660E-06	-4.21932E-05	-4.43676E-03	5.65492E-03
13	ID 30003 - T1 (lbf)	6.38350E-05	1.08824E-04	8.29895E-07	-1.18807E-03	1.12233E-03	6.13160E-04
14	ID 30003 - T2 (lbf)	-6.26232E-05	-1.09537E-04	-8.08212E-07	1.22865E-03	-6.22756E-04	-2.32184E-04
15	ID 30003 - T3 (lbf)	1.26765E-04	1.18167E-04	4.03330E-06	-1.31309E-03	1.79108E-03	1.08787E-03
16	ID 30004 - T1 (lbf)	3.12641E-05	3.83791E-05	-9.96681E-07	-4.02726E-04	6.63151E-04	-5.64951E-04
17	ID 30004 - T2 (lbf)	2.92654E-05	-1.31076E-04	-5.90864E-07	1.46022E-03	2.10543E-04	-2.10867E-03
18	ID 30004 - T3 (lbf)	-1.30853E-04	1.07493E-05	-3.66602E-06	-8.07106E-05	-1.77883E-03	4.55702E-04
19	ID 40301 - T1 (lbf)	-4.45890E-04	1.12287E-04	-1.35875E-07	-1.20933E-03	-4.67040E-03	7.46186E-03
20	ID 40301 - T2 (lbf)	-1.77774E-04	-2.27675E-04	-2.77832E-07	2.55374E-03	-1.54324E-03	-2.98312E-04
21	ID 40302 - T1 (lbf)	-2.57171E-04	-9.73190E-05	-3.37455E-07	1.04782E-03	-3.25721E-03	2.65645E-03
22	ID 40303 - T2 (lbf)	1.92707E-04	-2.05706E-04	7.98547E-07	2.29209E-03	1.68731E-03	-5.08575E-03
23	ID 40311 - T3 (lbf)	3.57353E-04	-2.33559E-04	2.01087E-06	2.55592E-03	3.68882E-03	-7.43860E-03
24	ID 40312 - T3 (lbf)	1.43711E-04	2.23402E-04	2.25670E-06	-2.45614E-03	1.94301E-03	1.20156E-03
25	ID 40313 - T3 (lbf)	-3.79209E-04	-2.88091E-05	-1.97435E-06	3.06430E-04	-3.79644E-03	4.71323E-03
26	ID 40314 - T3 (lbf)	-1.21380E-04	3.84464E-05	-1.64285E-06	-4.20388E-04	-1.72221E-03	1.51002E-03
27	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
28	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
29	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
30	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
31	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
32	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-11. LDU Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:06:40 CDT Page 29

O T M - 0 3 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	-2.27344E-11	-3.65902E-12	6.56376E-13	-1.41464E-02	-1.08912E-03
2	Net Load Factor - T2 (g)	-2.85866E-10	1.00000E+00	-2.56392E-13	1.41464E-02	-7.01195E-12	-2.95488E-03
3	Net Load Factor - T3 (g)	4.53901E-10	-8.38465E-12	1.00000E+00	1.08912E-03	2.95488E-03	-1.41690E-11
4	Net Load Factor - R1 (rad/sec^2)	5.57374E-09	5.09694E-09	8.59668E-12	1.00000E+00	1.03238E-10	-8.54164E-11
5	Net Load Factor - R2 (rad/sec^2)	-1.92760E-08	-9.31112E-10	-9.70264E-11	2.70886E-11	1.00000E+00	5.87337E-10
6	Net Load Factor - R3 (rad/sec^2)	6.29015E-09	-1.89242E-09	-6.95166E-12	5.24824E-11	1.14716E-10	1.00000E+00
7	ID 30001 - T1 (lbf)	6.33611E+01	-2.16951E+01	1.71430E+01	9.51568E-01	1.67338E+00	-1.46720E+00
8	ID 30001 - T2 (lbf)	2.13801E+01	-4.94187E+01	1.89169E+01	1.89897E+00	7.42556E-01	-1.11288E-01
9	ID 30001 - T3 (lbf)	7.49313E+01	-3.49094E+01	3.39361E+01	1.54502E+00	2.91384E+00	-1.31751E+00
10	ID 30002 - T1 (lbf)	6.25859E+01	-1.76819E+00	-1.95802E+01	-5.90711E-02	9.89980E-01	-1.50298E+00
11	ID 30002 - T2 (lbf)	6.58645E+00	-3.74251E+01	1.85409E+01	9.26785E-01	1.52467E-02	-3.88070E-01
12	ID 30002 - T3 (lbf)	-7.49313E+01	-1.94474E+01	9.24518E+01	2.14451E+00	-3.47465E+00	1.02701E+00
13	ID 30003 - T1 (lbf)	6.12610E+01	2.62934E+01	2.69985E+01	-1.33266E+00	1.70116E+00	1.75468E+00
14	ID 30003 - T2 (lbf)	-2.25767E+01	-8.52324E+01	-2.55312E+01	1.87425E+00	-7.08234E-01	9.13140E-02
15	ID 30003 - T3 (lbf)	7.25861E+01	3.49094E+01	3.70386E+01	-1.67594E+00	2.86105E+00	1.57203E+00
16	ID 30004 - T1 (lbf)	6.34118E+01	-2.83014E+00	-2.45613E+01	4.40166E-01	9.03247E-01	1.62107E+00
17	ID 30004 - T2 (lbf)	-5.38984E+00	-7.85437E+01	-1.19267E+01	5.67760E-01	-4.95684E-02	-6.92276E-01
18	ID 30004 - T3 (lbf)	-7.25861E+01	1.94474E+01	8.71933E+01	-2.41916E+00	-3.40056E+00	-1.28153E+00
19	ID 40301 - T1 (lbf)	-2.93547E+02	1.27063E+01	-1.97750E+01	-2.01501E+00	9.42472E-02	6.18042E+00
20	ID 40301 - T2 (lbf)	-1.31305E+01	-3.87594E+02	2.78119E+01	2.17393E+00	7.94395E-02	5.71637E+00
21	ID 40302 - T1 (lbf)	-3.29447E+02	-1.27063E+01	1.97750E+01	2.01501E+00	-9.42471E-02	-6.18042E+00
22	ID 40303 - T2 (lbf)	1.31305E+01	-2.35400E+02	-2.78119E+01	-2.17393E+00	-7.94395E-02	-5.71637E+00
23	ID 40311 - T3 (lbf)	1.00386E+02	-1.23452E+02	1.80046E+02	7.16082E+00	4.04769E+00	-1.87698E+00
24	ID 40312 - T3 (lbf)	1.12169E+02	1.23452E+02	1.89677E+02	-7.20270E+00	4.16713E+00	2.08897E+00
25	ID 40313 - T3 (lbf)	-9.85453E+01	-6.86306E+01	1.19809E+02	4.17955E+00	-4.07448E+00	1.78043E+00
26	ID 40314 - T3 (lbf)	-1.14011E+02	6.86306E+01	1.33461E+02	-4.13766E+00	-4.14034E+00	-1.99242E+00
27	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	-9.05948E-09	-1.42461E-09	2.56866E-10	-5.46178E+00	-4.20497E-01
28	Net Inertial Acc - T2 (in/sec^2)	-1.10657E-07	3.86089E+02	1.64491E-12	5.46178E+00	-2.71035E-09	-1.14085E+00
29	Net Inertial Acc - T3 (in/sec^2)	1.75081E-07	-3.15994E-09	3.86089E+02	4.20497E-01	1.14085E+00	-5.47334E-09
30	Net Inertial Acc - R1 (rad/sec^2)	5.58796E-09	5.09689E-09	9.78773E-13	1.00000E+00	1.03674E-10	-8.52207E-11
31	Net Inertial Acc - R2 (rad/sec^2)	-1.92614E-08	-9.37906E-10	-1.10090E-10	2.73009E-11	1.00000E+00	5.87322E-10
32	Net Inertial Acc - R3 (rad/sec^2)	6.27718E-09	-1.89152E-09	-2.09621E-12	5.24245E-11	1.14591E-10	1.00000E+00

Figure G-11. LDU Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:06:40 CDT                    Page   30

                                  Execution Time: 00:00:01

                                   * * * END OF JOB * * *
```

Figure G-11. LDU Integrated Assembly

```
ASD/DMMP v1.11.0                        Mon Jul 14 2008 12:04:52 CDT                        Page    1



                                  **************************************************
                                  *                                                *
                                  *                 ASD/DMMP v1.11.0               *
                                  *                                                *
                                  *        Applied Structural Dynamics, Inc.       *
                                  *     http://www.AppliedStructuralDynamics.com   *
                                  *                                                *
                                  *   Execution Time: Mon Jul 14 2008 12:04:52 CDT *
                                  *                                                *
                                  **************************************************


     User Name  : majed
     Host Name  : majed-laptop



     ID         : DMM-2008-05-0001B
     Name       : Battery
     Description: Generic - Battery
```

Figure G-12. Battery Integrated Assembly

```
ASD/DMMP v1.11.0                        Mon Jul 14 2008 12:04:52 CDT                        Page    2

                                C O M P O N E N T   C O N F I G U R A T I O N   S U M M A R Y

     ID          : DMM-2008-05-0001B
     Name        : Battery
     Description : Generic - Battery
     Type        : Single

     DMM Type    : Hybrid
     DMM Size    : 72 DOFs
     DMM Units   : lbf in sec

     DMM Files:
        Matrix   : battery.vla.km.op4
        Geometry : battery_model_data.blk
        Label    : battery BSET labels.txt

     OTM-01:
        Description : Battery NLFs & IFFs
        No. of Items: 21
        Ignore      : No
        Matrix File : DMM-2008-05-0001B.OTM.op4
        Label File  : DMM-2008-05-0001B.OTM.txt

     OTM-02:
        Description : OTM of Clearance Points, IFF and NLF
        No. of Items: 70
        Ignore      : No
        Matrix File : battery.vla.otm.op4
        Label File  : battery OTM labels.txt
```

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 3

C O M P O N E N T M A T R I X M A P

ID	DESCRIPTION	CP	X	Y	Z	CD	T1	T2	T3	R1	R2	R3	Q
653	GRID 653	0	10.50000	5.93000	-6.24750	0		1	2				
654	GRID 654	0	10.50000	20.93000	-6.24750	0			3				
655	GRID 655	0	10.50000	35.93000	-6.24750	0	4		5				
2183	GRID 2183	0	25.50000	5.93000	-6.24750	0		6	7				
2184	GRID 2184	0	25.50000	20.93000	-6.24750	0			8				
2185	GRID 2185	0	25.50000	35.93000	-6.24750	0			9				
999010	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							10
:													:
999072	Generalized Coordinate	-1	0.00000	0.00000	0.00000	-1							72

Figure G-12. Battery Integrated Assembly

```
ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:04:52 CDT                    Page    4

                              S O R T E D   B U L K   D A T A   E C H O

                ENTRY
                COUNT      .   1  ..   2  ..   3  ..   4  ..   5  ..   6  ..   7  ..   8  ..   9  ..  10  .
                    1 -    BSET1   3       654     2184    2185
                    2 -    BSET1   13      655
                    3 -    BSET1   23      653     2183
                    4 -    GRID   *653             0                              10.5            5.93*
                    5 -    *                -6.24750               1456
                    6 -    GRID   *654             0                              10.5           20.93*
                    7 -    *                -6.24750               12456
                    8 -    GRID   *655             0                              10.5           35.93*
                    9 -    *                -6.24750               2456
                   10 -    GRID   *2183            0                              25.5            5.93*
                   11 -    *                -6.24750               1456
                   12 -    GRID   *2184            0                              25.5           20.93*
                   13 -    *                -6.24750               12456
                   14 -    GRID   *2185            0                              25.5           35.93*
                   15 -    *                -6.24750               12456
                   16 -    QSET1   0       999010  THRU    999072
                   17 -    SPOINT  999010  THRU    999072
                   18 -    ENDDATA

                           TOTAL ENTRY COUNT = 18
```

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 5

BASIC GRID POINT DEFINITION TABLE

INTERNAL ID	EXTERNAL ID	COORDINATE SYSTEM ID	COORDINATES IN BASIC COORDINATE SYSTEM X	Y	Z
1	653	0	1.05000E+01	5.93000E+00	-6.24750E+00
2	654	0	1.05000E+01	2.09300E+01	-6.24750E+00
3	655	0	1.05000E+01	3.59300E+01	-6.24750E+00
4	2183	0	2.55000E+01	5.93000E+00	-6.24750E+00
5	2184	0	2.55000E+01	2.09300E+01	-6.24750E+00
6	2185	0	2.55000E+01	3.59300E+01	-6.24750E+00
7	999010	-1	0.00000E+00	0.00000E+00	0.00000E+00
:	:				
69	999072	-1	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 6

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

S DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	653-1	653-4	653-5	653-6	654-1	654-2	654-4	654-5	654-6	655-2	= 10
11 =	655-4	655-5	655-6	2183-1	2183-4	2183-5	2183-6	2184-1	2184-2	2184-4	= 20
21 =	2184-5	2184-6	2185-1	2185-2	2185-4	2185-5	2185-6				

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 7

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

B DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---
1 =	653-2	653-3	654-3	655-1	655-3	2183-2	2183-3	2184-3	2185-3	

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 8

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

Q DISPLACEMENT SET

	--- 1 ---	--- 2 ---	--- 3 ---	--- 4 ---	--- 5 ---	--- 6 ---	--- 7 ---	--- 8 ---	--- 9 ---	--- 10 ---	
1 =	999010-0	999011-0	999012-0	999013-0	999014-0	999015-0	999016-0	999017-0	999018-0	999019-0	= 10
11 =	999020-0	999021-0	999022-0	999023-0	999024-0	999025-0	999026-0	999027-0	999028-0	999029-0	= 20
21 =	999030-0	999031-0	999032-0	999033-0	999034-0	999035-0	999036-0	999037-0	999038-0	999039-0	= 30
31 =	999040-0	999041-0	999042-0	999043-0	999044-0	999045-0	999046-0	999047-0	999048-0	999049-0	= 40
41 =	999050-0	999051-0	999052-0	999053-0	999054-0	999055-0	999056-0	999057-0	999058-0	999059-0	= 50
51 =	999060-0	999061-0	999062-0	999063-0	999064-0	999065-0	999066-0	999067-0	999068-0	999069-0	= 60
61 =	999070-0	999071-0	999072-0								

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 9

U S E T D E F I N I T I O N T A B L E (I N T E R N A L S E Q U E N C E , R O W S O R T)

A DISPLACEMENT SET

	1	2	3	4	5	6	7	8	9	10	
1 =	653-2	653-3	654-3	655-1	655-3	2183-2	2183-3	2184-3	2185-3	999010-0	= 10
11 =	999011-0	999012-0	999013-0	999014-0	999015-0	999016-0	999017-0	999018-0	999019-0	999020-0	= 20
21 =	999021-0	999022-0	999023-0	999024-0	999025-0	999026-0	999027-0	999028-0	999029-0	999030-0	= 30
31 =	999031-0	999032-0	999033-0	999034-0	999035-0	999036-0	999037-0	999038-0	999039-0	999040-0	= 40
41 =	999041-0	999042-0	999043-0	999044-0	999045-0	999046-0	999047-0	999048-0	999049-0	999050-0	= 50
51 =	999051-0	999052-0	999053-0	999054-0	999055-0	999056-0	999057-0	999058-0	999059-0	999060-0	= 60
61 =	999061-0	999062-0	999063-0	999064-0	999065-0	999066-0	999067-0	999068-0	999069-0	999070-0	= 70
71 =	999071-0	999072-0									

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 10

Z E R O D A M P I N G D O F S

The following DOFs have damping less than 1.0E-09:

	1	2	3	4	5	6	7	8	9	10
1 =	653-2	653-3	654-3	655-1	655-3	2183-2	2183-3	2184-3	2185-3	

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 11

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = ORIGIN

M O

```
*  1.389770E+00 -7.089884E-13  5.297318E-12  1.490825E-10  4.762996E+00 -3.049691E+01 *
* -7.089884E-13  1.389770E+00  7.314704E-13 -4.762996E+00 -2.505951E-11  2.501902E+01 *
*  5.297540E-12  7.318035E-13  1.389770E+00  3.049691E+01 -2.501902E+01 -1.066741E-10 *
*  1.490754E-10 -4.762996E+00  3.049691E+01  9.020368E+02 -5.489488E+02 -8.576890E+01 *
*  4.762996E+00 -2.507150E-11 -2.501902E+01 -5.489488E+02  6.804872E+02 -1.123249E+02 *
* -3.049691E+01  2.501902E+01 -1.066702E-10 -8.576890E+01 -1.123249E+02  1.469324E+03 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.389770E+00	1.072713E-10	2.194385E+01	3.427182E+00
Y	1.389770E+00	1.800227E+01	-1.803141E-11	3.427182E+00
Z	1.389770E+00	1.800227E+01	2.194385E+01	-7.675667E-11

I(S)

```
*  2.164934E+02 -6.478905E-02  2.417723E-02 *
* -6.478905E-02  2.137645E+02  7.806423E+00 *
*  2.417723E-02  7.806423E+00  3.497052E+02 *
```

I(Q)

```
*  2.133164E+02                             *
*                2.164947E+02               *
*                             3.501520E+02 *
```

Q

```
* -1.992102E-02  9.998015E-01 -2.082920E-04 *
*  9.981681E-01  1.987657E-02 -5.714366E-02 *
*  5.712817E-02  1.346270E-03  9.983659E-01 *
```

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 12

C O M P U T E D C E N T E R O F G R A V I T Y

X-C.G.	Y-C.G.	Z-C.G.
1.800227E+01	2.194385E+01	3.427182E+00

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 13

O U T P U T F R O M G R I D P O I N T W E I G H T G E N E R A T O R

REFERENCE POINT = C.G.

M O

```
*  1.389770E+00 -7.089884E-13  5.297318E-12  3.040679E-11 -1.733547E-11 -1.125446E-10 *
* -7.089884E-13  1.389770E+00  7.314704E-13 -1.287457E-10 -9.461765E-12 -6.082246E-11 *
*  5.297540E-12  7.318035E-13  1.389770E+00 -1.228040E-10 -6.341860E-11 -3.599816E-12 *
*  3.040146E-11 -1.287486E-10 -1.228062E-10  2.164934E+02  6.478905E-02 -2.417723E-02 *
* -1.733813E-11 -9.473755E-12 -6.342660E-11  6.478905E-02  2.137645E+02 -7.806423E+00 *
* -1.125446E-10 -6.080825E-11 -3.597123E-12 -2.417723E-02 -7.806423E+00  3.497052E+02 *
```

S

```
*  1.000000E+00  0.000000E+00  0.000000E+00 *
*  0.000000E+00  1.000000E+00  0.000000E+00 *
*  0.000000E+00  0.000000E+00  1.000000E+00 *
```

DIRECTION MASS AXIS SYSTEM (S)	MASS	X-C.G.	Y-C.G.	Z-C.G.
X	1.389770E+00	2.187900E-11	8.098075E-11	-1.247362E-11
Y	1.389770E+00	-4.376440E-11	-6.808150E-12	9.263811E-11
Z	1.389770E+00	4.563244E-11	-8.836280E-11	-2.590224E-12

I(S)

```
*  2.164934E+02 -6.478905E-02  2.417723E-02 *
* -6.478905E-02  2.137645E+02  7.806423E+00 *
*  2.417723E-02  7.806423E+00  3.497052E+02 *
```

I(Q)

```
*  2.133164E+02                             *
*                2.164947E+02               *
*                             3.501520E+02 *
```

Q

```
* -1.992102E-02  9.998015E-01 -2.082919E-04 *
*  9.981681E-01  1.987657E-02 -5.714366E-02 *
*  5.712817E-02  1.346270E-03  9.983659E-01 *
```

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 14

R I G I D - B O D Y M A S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.38977E+00	-7.08988E-13	5.29732E-12	3.04068E-11	-1.73355E-11	-1.12545E-10
T2:	-7.08988E-13	1.38977E+00	7.31470E-13	-1.28746E-10	-9.46176E-12	-6.08225E-11
T3:	5.29754E-12	7.31804E-13	1.38977E+00	-1.22804E-10	-6.34186E-11	-3.59982E-12
R1:	3.04015E-11	-1.28749E-10	-1.22806E-10	2.16493E+02	6.47890E-02	-2.41772E-02
R2:	-1.73381E-11	-9.47376E-12	-6.34266E-11	6.47890E-02	2.13765E+02	-7.80642E+00
R3:	-1.12545E-10	-6.08082E-11	-3.59712E-12	-2.41772E-02	-7.80642E+00	3.49705E+02

R I G I D - B O D Y S T I F F N E S S M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.44404E-06	4.31319E-08	-1.95905E-08	4.69004E-07	-7.80596E-06	-7.66969E-07
T2:	4.30518E-08	-9.02251E-07	2.64304E-07	-9.35971E-07	4.25118E-07	-1.62387E-06
T3:	-2.00193E-08	2.65016E-07	4.61857E-06	1.69893E-05	6.68911E-06	7.92026E-08
R1:	4.71092E-07	-9.37033E-07	1.69897E-05	5.28431E-04	8.03672E-05	-7.22943E-06
R2:	-7.80597E-06	4.26499E-07	6.68409E-06	8.04953E-05	6.79823E-04	-2.69174E-05
R3:	-7.64561E-07	-1.62082E-06	7.91119E-08	-7.21732E-06	-2.68403E-05	2.06336E-04

R I G I D - B O D Y D A M P I N G M A T R I X

	---- T1 ----	---- T2 ----	---- T3 ----	---- R1 ----	---- R2 ----	---- R3 ----
T1:	1.93195E-30	-3.74315E-31	1.16158E-30	1.07522E-30	-3.94695E-30	-3.36517E-29
T2:	-3.74315E-31	2.90942E-30	1.08918E-30	1.37685E-29	6.41698E-30	1.17277E-29
T3:	1.16158E-30	1.08918E-30	2.49668E-30	-9.67077E-30	5.10442E-30	-2.11978E-29
R1:	1.07522E-30	1.37685E-29	-9.67077E-30	3.69551E-28	2.58055E-30	5.71129E-30
R2:	-3.94695E-30	6.41698E-30	5.10442E-30	2.58055E-30	1.04242E-28	3.31110E-29
R3:	-3.36517E-29	1.17277E-29	-2.11978E-29	5.71129E-30	3.31110E-29	6.72949E-28

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 15

F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	653-2	-1.27395E-06	-3.83151E-07	1.45104E-07	-4.23994E-07	9.28020E-06	-1.38523E-05
2	653-3	-2.13915E-07	-1.55324E-07	1.42226E-06	-3.42756E-07	4.18556E-05	-5.16155E-06
3	654-3	2.02005E-07	1.66030E-07	-5.81613E-07	-2.52415E-06	-4.18644E-06	3.06872E-06
4	655-1	1.44404E-06	4.31319E-08	-1.95905E-08	4.69004E-07	-7.80596E-06	-7.66969E-07
5	655-3	4.12884E-07	1.78014E-07	1.90092E-06	1.70277E-05	5.96126E-06	-1.56750E-07
6	2183-2	1.31700E-06	-5.19100E-07	1.19200E-07	-5.11977E-07	-8.85508E-06	1.22284E-05
7	2183-3	2.25812E-07	-1.63070E-07	8.14818E-07	-7.04409E-06	-4.06710E-05	4.66169E-06
8	2184-3	-2.48103E-07	1.98397E-07	-5.48338E-07	-2.69373E-06	2.97040E-06	-2.56054E-06
9	2185-3	-3.98702E-07	4.09686E-08	1.61053E-06	1.25662E-05	7.59319E-07	2.27640E-07
	Total:	1.44404E-06	-9.02251E-07	4.61857E-06	5.28431E-04	6.79823E-04	2.06336E-04

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 16

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y D I S P L A C E M E N T

Dir	DOF	GRID-C	Max. Force
T1 -	4	655-1	1.44404E-06
T2 -	6	2183-2	-5.19100E-07
T3 -	5	655-3	1.90092E-06
R1 -	5	655-3	1.70277E-05
R2 -	2	653-3	4.18556E-05
R3 -	1	653-2	-1.38523E-05

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 17

F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	653-2	2.54977E-31	1.02144E-30	8.74541E-31	5.49887E-30	4.68030E-30	-7.62404E-30
2	653-3	1.65010E-31	4.92000E-31	1.07725E-30	-8.38049E-30	5.31825E-30	-3.26711E-30
3	654-3	2.58751E-31	4.02144E-31	4.54063E-31	2.28575E-30	1.48671E-30	-5.24909E-30
4	655-1	1.93195E-30	-3.74315E-31	1.16158E-30	1.07522E-30	-3.94695E-30	-3.36517E-29
5	655-3	1.13979E-30	-1.63348E-31	8.06139E-31	2.12635E-30	1.50218E-31	-2.15768E-29
6	2183-2	-6.29292E-31	1.88798E-30	2.14635E-31	8.26963E-30	1.73668E-30	1.93517E-29
7	2183-3	-1.64707E-33	4.15381E-31	4.87977E-31	-4.89397E-30	-1.87645E-30	2.36065E-30
8	2184-3	1.84490E-31	-2.42731E-31	9.06208E-32	-5.10287E-31	3.55873E-31	-5.51973E-30
9	2185-3	-5.84812E-31	1.85729E-31	-4.19370E-31	-2.98124E-31	-3.30181E-31	1.20542E-29
	Total:	1.93195E-30	2.90942E-30	2.49668E-30	3.69551E-28	1.04242E-28	6.72949E-28

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 18

M A X I M U M F O R C E S D U E T O R I G I D - B O D Y V E L O C I T Y

Dir	DOF	GRID-C	Max. Force
T1 -	4	655-1	1.93195E-30
T2 -	6	2183-2	1.88798E-30
T3 -	4	655-1	1.16158E-30
R1 -	2	653-3	-8.38049E-30
R2 -	2	653-3	5.31825E-30
R3 -	4	655-1	-3.36517E-29

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 19

R E A C T I O N F O R C E S D U E T O 1 G

DOF	GRID-C	T1	T2	T3	R1	R2	R3
1	653-2	-5.00307E+02	2.68206E+02	-1.67322E-09	1.61182E-03	5.20428E-01	-2.33137E+01
2	653-3	8.53421E+01	1.35227E+02	1.27175E+02	-3.51707E+00	1.07276E+01	-3.71147E+00
3	654-3	7.48788E+01	-9.74312E+01	-4.37558E+00	-1.74626E-01	1.37965E-01	5.08261E+00
4	655-1	5.36574E+02	-2.72811E-10	2.04494E-09	3.03980E-11	-1.73393E-11	-1.12546E-10
5	655-3	1.85858E+02	-3.77959E+01	1.45406E+02	3.69601E+00	3.38536E+00	-1.89156E+00
6	2183-2	5.00307E+02	2.68368E+02	1.95572E-09	-1.61182E-03	-5.20428E-01	2.33137E+01
7	2183-3	-8.29961E+01	1.35260E+02	1.27353E+02	-3.52519E+00	-1.07289E+01	3.71235E+00
8	2184-3	-7.95709E+01	-9.74641E+01	-4.37462E+00	-1.73748E-01	-1.39739E-01	-5.08275E+00
9	2185-3	-1.83512E+02	-3.77960E+01	1.45389E+02	3.69462E+00	-3.38231E+00	1.89083E+00
	Total:	5.36574E+02	5.36574E+02	5.36574E+02	2.16493E+02	2.13765E+02	3.49705E+02

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 20

U N C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY	MODE	EIGENVALUE	RADIANS	FREQUENCY
1	-6.670017E-07	8.167017E-04	1.299821E-04	51	3.114872E+06	1.764900E+03	2.808925E+02
2	5.847509E-07	7.646901E-04	1.217042E-04	52	3.225979E+06	1.796101E+03	2.858584E+02
3	9.475322E-07	9.734127E-04	1.549234E-04	53	3.369806E+06	1.835703E+03	2.921612E+02
4	1.813172E-06	1.346541E-03	2.143086E-04	54	3.413846E+06	1.847660E+03	2.940641E+02
5	3.002362E-06	1.732732E-03	2.757729E-04	55	3.470458E+06	1.862916E+03	2.964924E+02
6	4.240616E-06	2.059276E-03	3.277439E-04	56	4.024703E+06	2.006166E+03	3.192913E+02
7	2.212657E+04	1.487500E+02	2.367430E+01	57	4.337453E+06	2.082655E+03	3.314649E+02
8	2.777993E+04	1.666731E+02	2.652685E+01	58	5.251565E+06	2.291629E+03	3.647241E+02
9	4.058887E+04	2.014668E+02	3.206444E+01	59	5.497649E+06	2.344707E+03	3.731716E+02
10	5.499244E+04	2.345047E+02	3.732258E+01	60	6.197424E+06	2.489463E+03	3.962103E+02
11	8.573518E+04	2.928057E+02	4.660147E+01	61	9.885627E+06	3.144142E+03	5.004057E+02
12	1.161226E+05	3.407676E+02	5.423485E+01	62	1.587939E+07	3.984895E+03	6.342158E+02
13	1.672267E+05	4.089337E+02	6.508382E+01	63	1.861487E+07	4.314495E+03	6.866732E+02
14	1.678011E+05	4.096353E+02	6.519548E+01	64	1.993152E+07	4.464473E+03	7.105429E+02
15	1.987654E+05	4.458311E+02	7.095622E+01	65	3.055768E+07	5.527900E+03	8.797926E+02
16	2.534859E+05	5.034738E+02	8.013035E+01	66	3.595599E+07	5.996331E+03	9.543457E+02
17	2.563721E+05	5.063320E+02	8.058524E+01	67	5.754685E+07	7.585964E+03	1.207344E+03
18	4.151698E+05	6.443367E+02	1.025494E+02	68	7.568470E+07	8.699695E+03	1.384600E+03
19	4.213375E+05	6.491052E+02	1.033083E+02	69	1.141257E+08	1.068296E+04	1.700247E+03
20	4.501998E+05	6.709693E+02	1.067881E+02	70	1.478852E+08	1.216081E+04	1.935453E+03
21	5.181532E+05	7.198286E+02	1.145643E+02	71	4.623833E+08	2.150310E+04	3.422325E+03
22	5.613446E+05	7.492293E+02	1.192436E+02	72	1.128875E+09	3.359873E+04	5.347404E+03
23	5.616329E+05	7.494217E+02	1.192742E+02				
24	6.542728E+05	8.088713E+02	1.287359E+02				
25	6.791831E+05	8.241257E+02	1.311637E+02				
26	7.563449E+05	8.696809E+02	1.384140E+02				
27	8.526132E+05	9.233705E+02	1.469590E+02				
28	8.776873E+05	9.368497E+02	1.491043E+02				
29	9.290156E+05	9.638546E+02	1.534022E+02				
30	1.007839E+06	1.003912E+03	1.597776E+02				
31	1.128571E+06	1.062342E+03	1.690770E+02				
32	1.241352E+06	1.114160E+03	1.773240E+02				
33	1.248863E+06	1.117525E+03	1.778597E+02				
34	1.294496E+06	1.137759E+03	1.810800E+02				
35	1.295127E+06	1.138037E+03	1.811242E+02				
36	1.381287E+06	1.175282E+03	1.870519E+02				
37	1.422122E+06	1.192528E+03	1.897967E+02				
38	1.547691E+06	1.244062E+03	1.979987E+02				
39	1.609653E+06	1.268721E+03	2.019233E+02				
40	1.824210E+06	1.350633E+03	2.149600E+02				
41	1.880777E+06	1.371414E+03	2.182673E+02				
42	1.924814E+06	1.387377E+03	2.208079E+02				
43	2.010408E+06	1.417889E+03	2.256640E+02				
44	2.131615E+06	1.460005E+03	2.323670E+02				
45	2.300732E+06	1.516816E+03	2.414088E+02				
46	2.379562E+06	1.542583E+03	2.455097E+02				
47	2.539965E+06	1.593727E+03	2.536495E+02				
48	2.561631E+06	1.600509E+03	2.547290E+02				
49	2.658095E+06	1.630367E+03	2.594809E+02				
50	2.844835E+06	1.686664E+03	2.684409E+02				

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 21

C O N S T R A I N E D R E A L E I G E N V A L U E S

MODE	EIGENVALUE	RADIANS	FREQUENCY
1	2.254542E+04	1.501513E+02	2.389733E+01
2	2.669279E+04	1.633793E+02	2.600262E+01
3	3.968402E+04	1.992085E+02	3.170501E+01
4	5.752591E+04	2.398456E+02	3.817261E+01
5	6.881836E+04	2.623325E+02	4.175152E+01
6	1.087231E+05	3.297318E+02	5.247844E+01
7	1.126338E+05	3.356096E+02	5.341393E+01
8	1.429260E+05	3.780556E+02	6.016942E+01
9	1.551476E+05	3.938878E+02	6.268919E+01
10	1.688586E+05	4.109241E+02	6.540061E+01
11	1.801480E+05	4.244385E+02	6.755148E+01
12	1.871904E+05	4.326550E+02	6.885919E+01
13	2.520899E+05	5.020856E+02	7.990940E+01
14	2.641694E+05	5.139742E+02	8.180153E+01
15	2.889471E+05	5.375380E+02	8.555182E+01
16	3.745933E+05	6.120403E+02	9.740924E+01
17	4.278486E+05	6.541013E+02	1.041035E+02
18	4.425437E+05	6.652396E+02	1.058762E+02
19	6.328688E+05	7.955305E+02	1.266126E+02
20	6.792418E+05	8.241612E+02	1.311693E+02
21	6.878853E+05	8.293885E+02	1.320013E+02
22	7.245727E+05	8.512184E+02	1.354756E+02
23	7.791440E+05	8.826913E+02	1.404847E+02
24	8.734867E+05	9.346051E+02	1.487470E+02
25	9.954237E+05	9.977092E+02	1.587904E+02
26	1.001445E+06	1.000722E+03	1.592699E+02
27	1.079924E+06	1.039194E+03	1.653928E+02
28	1.191107E+06	1.091379E+03	1.736983E+02
29	1.249547E+06	1.117831E+03	1.779084E+02
30	1.253524E+06	1.119609E+03	1.781913E+02
31	1.304965E+06	1.142351E+03	1.818107E+02
32	1.407137E+06	1.186228E+03	1.887940E+02
33	1.447268E+06	1.203025E+03	1.914673E+02
34	1.547521E+06	1.243994E+03	1.979878E+02
35	1.867582E+06	1.366595E+03	2.175003E+02
36	1.870734E+06	1.367748E+03	2.176838E+02
37	1.894710E+06	1.376485E+03	2.190743E+02
38	1.968048E+06	1.402871E+03	2.232739E+02
39	2.034439E+06	1.426338E+03	2.270087E+02
40	2.187525E+06	1.479028E+03	2.353947E+02
41	2.301544E+06	1.517084E+03	2.414514E+02
42	2.387927E+06	1.545292E+03	2.459408E+02
43	2.544848E+06	1.595258E+03	2.538932E+02
44	2.586123E+06	1.608143E+03	2.559439E+02
45	2.605003E+06	1.614002E+03	2.568764E+02
46	2.791630E+06	1.670817E+03	2.659188E+02
47	3.152436E+06	1.775510E+03	2.825812E+02
48	3.302012E+06	1.817144E+03	2.892074E+02
49	3.360782E+06	1.833244E+03	2.917698E+02
50	3.417916E+06	1.848761E+03	2.942394E+02
51	3.505168E+06	1.872209E+03	2.979714E+02
52	4.090150E+06	2.022412E+03	3.218768E+02
53	4.886941E+06	2.210643E+03	3.518347E+02
54	5.593689E+06	2.365098E+03	3.764171E+02
55	9.772521E+06	3.126103E+03	4.975348E+02
56	1.176410E+07	3.429884E+03	5.458829E+02
57	1.515564E+07	3.893024E+03	6.195940E+02
58	1.948786E+07	4.414505E+03	7.025904E+02
59	2.069701E+07	4.549397E+03	7.240589E+02
60	2.744608E+07	5.238901E+03	8.337969E+02
61	1.132796E+08	1.064329E+04	1.693932E+03
62	4.405807E+08	2.099001E+04	3.340665E+03
63	1.085213E+09	3.294258E+04	5.242974E+03

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 22

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
1	2.389733E+01	2.47%	0.00%	0.00%	0.00%	9.17%	0.01%
2	2.600262E+01	0.00%	0.44%	2.16%	1.92%	0.00%	0.00%
3	3.170501E+01	0.20%	1.92%	0.10%	1.26%	0.01%	0.00%
4	3.817261E+01	0.21%	0.00%	0.00%	0.00%	0.01%	0.59%
5	4.175152E+01	40.90%	0.04%	0.12%	0.04%	35.57%	2.04%
6	5.247844E+01	0.00%	0.00%	0.00%	0.00%	1.43%	1.49%
7	5.341393E+01	0.06%	0.90%	2.04%	2.23%	0.44%	0.03%
8	6.016942E+01	12.95%	8.64%	0.79%	1.57%	24.58%	24.92%
9	6.268919E+01	0.26%	50.36%	0.01%	4.14%	0.96%	5.34%
10	6.540061E+01	0.05%	6.43%	2.10%	2.21%	0.02%	0.02%
11	6.755148E+01	11.00%	3.66%	0.89%	0.03%	3.56%	4.26%
12	6.885919E+01	5.03%	1.16%	0.55%	0.00%	3.43%	3.23%
13	7.990940E+01	0.00%	0.07%	0.01%	0.96%	0.00%	0.00%
14	8.180153E+01	0.14%	0.04%	0.60%	0.02%	0.80%	0.42%
15	8.555182E+01	0.01%	1.33%	56.64%	1.62%	0.00%	6.54%
16	9.740924E+01	5.38%	0.00%	3.63%	0.00%	1.20%	29.89%
17	1.041035E+02	0.00%	0.00%	0.02%	0.31%	0.00%	0.00%
18	1.058762E+02	0.89%	0.00%	0.26%	0.00%	0.06%	1.69%
19	1.266126E+02	0.00%	0.01%	0.18%	1.79%	0.00%	0.00%
20	1.311693E+02	0.05%	0.00%	0.01%	0.11%	0.88%	0.13%
21	1.320013E+02	0.11%	0.03%	0.01%	4.28%	0.14%	0.06%
22	1.354756E+02	0.00%	0.03%	1.44%	0.04%	0.00%	0.00%
23	1.404847E+02	0.62%	0.08%	0.53%	5.05%	0.26%	0.30%
24	1.487470E+02	6.58%	0.29%	0.12%	0.62%	2.15%	2.58%
25	1.587904E+02	0.01%	0.23%	0.56%	3.85%	0.27%	0.03%
26	1.592699E+02	0.07%	0.09%	0.34%	1.69%	0.79%	0.04%
27	1.653928E+02	2.61%	0.11%	0.71%	0.17%	0.91%	0.13%
28	1.736983E+02	0.31%	0.02%	0.89%	0.01%	0.09%	0.01%
29	1.779084E+02	0.00%	0.01%	0.01%	0.20%	0.29%	0.01%
30	1.781913E+02	0.00%	0.02%	0.00%	0.00%	0.02%	0.00%
31	1.818107E+02	1.18%	1.41%	0.31%	18.13%	0.44%	0.00%
32	1.887940E+02	0.01%	0.00%	0.00%	0.02%	0.22%	0.01%
33	1.914673E+02	0.02%	0.21%	1.74%	12.17%	0.01%	0.00%
34	1.979878E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
35	2.175003E+02	0.00%	0.01%	0.39%	0.36%	0.00%	0.00%
36	2.176838E+02	0.05%	0.00%	0.01%	0.00%	0.51%	0.11%
37	2.190743E+02	0.24%	0.00%	0.01%	0.05%	0.09%	0.10%
38	2.232739E+02	0.00%	0.01%	1.01%	3.95%	0.00%	0.00%
39	2.270087E+02	0.00%	0.00%	0.00%	0.00%	1.27%	0.01%
40	2.353947E+02	0.05%	0.00%	0.00%	0.02%	0.68%	0.01%
41	2.414514E+02	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%
42	2.459408E+02	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
43	2.538932E+02	0.02%	0.01%	0.05%	0.07%	0.00%	0.11%
44	2.559439E+02	0.22%	0.00%	0.00%	0.06%	0.00%	0.90%
45	2.568764E+02	0.00%	0.10%	0.26%	0.79%	0.00%	0.00%
46	2.659188E+02	0.64%	0.00%	0.00%	0.08%	0.29%	0.71%
47	2.825812E+02	0.03%	0.01%	0.17%	0.11%	0.01%	0.21%
48	2.892074E+02	0.01%	0.01%	0.28%	0.32%	0.01%	0.03%
49	2.917698E+02	0.02%	0.00%	0.00%	0.00%	0.45%	0.04%
50	2.942394E+02	0.00%	0.00%	0.00%	0.00%	0.03%	0.01%

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 23

E F F E C T I V E M O D A L M A S S

MODE	FREQUENCY	T1	T2	T3	R1	R2	R3
51	2.979714E+02	0.02%	0.00%	0.02%	0.10%	0.00%	0.07%
52	3.218768E+02	4.49%	0.00%	0.07%	0.35%	0.75%	9.82%
53	3.518347E+02	0.47%	0.03%	0.67%	0.61%	0.08%	0.81%
54	3.764171E+02	0.00%	0.00%	0.00%	0.00%	1.31%	0.02%
55	4.975348E+02	0.04%	11.59%	0.01%	5.83%	0.00%	0.04%
56	5.458829E+02	0.00%	0.24%	0.49%	0.29%	1.04%	0.02%
57	6.195940E+02	0.40%	0.07%	5.42%	4.03%	0.32%	0.46%
58	7.025904E+02	0.02%	0.11%	0.00%	0.03%	0.09%	0.01%
59	7.240589E+02	0.52%	3.13%	0.01%	0.02%	0.19%	0.66%
60	8.337969E+02	0.59%	3.00%	0.00%	5.89%	0.21%	0.64%
61	1.693932E+03	0.06%	0.02%	0.38%	0.17%	0.02%	0.06%
62	3.340665E+03	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
63	5.242974E+03	0.01%	0.00%	0.00%	0.00%	0.03%	0.00%
Total:		99.05%	95.86%	86.05%	87.57%	95.09%	98.62%

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 24

O T M - 0 1 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	2.69123E-09	8.03838E-11	-3.65103E-11	8.74071E-10	-1.45478E-08	-1.42938E-09
2	Net Load Factor - T2 (g)	8.02346E-11	-1.68150E-09	4.92576E-10	-1.74434E-09	7.92281E-10	-3.02637E-09
3	Net Load Factor - T3 (g)	-3.73094E-11	4.93903E-10	8.60749E-09	3.16627E-08	1.24664E-08	1.47608E-10
4	Net Load Factor - R1 (rad/sec^2)	2.18664E-09	-4.32929E-09	7.84696E-08	2.44074E-06	3.70282E-07	-3.32964E-08
5	Net Load Factor - R2 (rad/sec^2)	-3.66270E-08	1.82871E-09	3.12784E-08	3.75372E-07	3.17992E-06	-1.04449E-07
6	Net Load Factor - R3 (rad/sec^2)	-3.00377E-09	-4.59429E-09	9.29885E-10	-1.20901E-08	-5.74067E-09	5.87694E-07
7	GRID 653 - T2 (lbf)	-1.27395E-06	-3.83151E-07	1.45104E-07	-4.23994E-07	9.28020E-06	-1.38523E-05
8	GRID 653 - T3 (lbf)	-2.13915E-07	-1.55324E-07	1.42226E-06	-3.42756E-07	4.18556E-05	-5.16155E-06
9	GRID 654 - T3 (lbf)	2.02005E-07	1.66030E-07	-5.81613E-07	-2.52415E-06	-4.18644E-06	3.06872E-06
10	GRID 655 - T1 (lbf)	1.44404E-06	4.31319E-08	-1.95905E-08	4.69004E-07	-7.80596E-06	-7.66969E-07
11	GRID 655 - T3 (lbf)	4.12884E-07	1.78014E-07	1.90092E-06	1.70277E-05	5.96126E-06	-1.56750E-07
12	GRID 2183 - T2 (lbf)	1.31700E-06	-5.19100E-07	1.19200E-07	-5.11977E-07	-8.85508E-06	1.22284E-05
13	GRID 2183 - T3 (lbf)	2.25812E-07	-1.63070E-07	8.14818E-07	-7.04409E-06	-4.06710E-05	4.66169E-06
14	GRID 2184 - T3 (lbf)	-2.48103E-07	1.98397E-07	-5.48338E-07	-2.69373E-06	2.97040E-06	-2.56054E-06
15	GRID 2185 - T3 (lbf)	-3.98702E-07	4.09686E-08	1.61053E-06	1.25662E-05	7.59319E-07	2.27640E-07
16	Net Inertial Acc - T1 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
17	Net Inertial Acc - T2 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
18	Net Inertial Acc - T3 (in/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
19	Net Inertial Acc - R1 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
20	Net Inertial Acc - R2 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
21	Net Inertial Acc - R3 (rad/sec^2)	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 25

O T M - 0 1 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	Net Load Factor - T1 (g)	1.00000E+00	1.88738E-15	-3.88578E-16	-1.21431E-17	-4.33681E-18	6.93889E-18
2	Net Load Factor - T2 (g)	2.88523E-16	1.00000E+00	2.77556E-16	-1.30104E-18	1.53957E-17	1.56125E-17
3	Net Load Factor - T3 (g)	1.08836E-15	-2.84647E-15	1.00000E+00	3.46945E-17	-1.82146E-17	4.35323E-17
4	Net Load Factor - R1 (rad/sec^2)	-9.37660E-15	7.50128E-14	7.10543E-15	1.00000E+00	1.69309E-15	-9.09772E-16
5	Net Load Factor - R2 (rad/sec^2)	3.48274E-14	-1.40649E-14	2.66454E-15	2.49800E-16	1.00000E+00	1.56172E-15
6	Net Load Factor - R3 (rad/sec^2)	-4.08552E-14	1.42109E-14	1.22125E-14	1.52656E-16	-7.07767E-16	1.00000E+00
7	GRID 653 - T2 (lbf)	-5.00307E+02	2.68206E+02	-1.67317E-09	1.61182E-03	5.20428E-01	-2.33137E+01
8	GRID 653 - T3 (lbf)	8.53421E+01	1.35227E+02	1.27175E+02	-3.51707E+00	1.07276E+01	-3.71147E+00
9	GRID 654 - T3 (lbf)	7.48788E+01	-9.74312E+01	-4.37558E+00	-1.74626E-01	1.37965E-01	5.08261E+00
10	GRID 655 - T1 (lbf)	5.36574E+02	-2.72792E-10	2.04503E-09	3.03961E-11	-1.73404E-11	-1.12548E-10
11	GRID 655 - T3 (lbf)	1.85858E+02	-3.77959E+01	1.45406E+02	3.69601E+00	3.38536E+00	-1.89156E+00
12	GRID 2183 - T2 (lbf)	5.00307E+02	2.68368E+02	1.95575E-09	-1.61182E-03	-5.20428E-01	2.33137E+01
13	GRID 2183 - T3 (lbf)	-8.29961E+01	1.35260E+02	1.27353E+02	-3.52519E+00	-1.07289E+01	3.71235E+00
14	GRID 2184 - T3 (lbf)	-7.95709E+01	-9.74641E+01	-4.37462E+00	-1.73748E-01	-1.39739E-01	-5.08275E+00
15	GRID 2185 - T3 (lbf)	-1.83512E+02	-3.77960E+01	1.45389E+02	3.69462E+00	-3.38231E+00	1.89083E+00
16	Net Inertial Acc - T1 (in/sec^2)	3.86089E+02	5.68434E-14	2.84217E-14	3.55271E-15	0.00000E+00	8.88178E-16
17	Net Inertial Acc - T2 (in/sec^2)	-1.94990E-14	3.86089E+02	7.10543E-14	-4.99600E-15	0.00000E+00	-5.32907E-15
18	Net Inertial Acc - T3 (in/sec^2)	-2.14322E-14	-4.28644E-14	3.86089E+02	-8.88178E-16	8.88178E-16	7.76639E-16
19	Net Inertial Acc - R1 (rad/sec^2)	5.35806E-15	2.00927E-14	4.44089E-15	1.00000E+00	1.38778E-16	-1.20688E-17
20	Net Inertial Acc - R2 (rad/sec^2)	2.67903E-15	1.00464E-14	-2.66454E-15	-2.77556E-17	1.00000E+00	1.99864E-17
21	Net Inertial Acc - R3 (rad/sec^2)	-1.00464E-15	0.00000E+00	2.22045E-15	4.16334E-17	-1.38778E-17	1.00000E+00

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 26

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	FSE Clearance Point 871 DOF X	1.00000E+00	6.21281E-13	-5.05808E-09	8.29889E-08	-9.67468E+00	1.82139E+01
2	FSE Clearance Point 871 DOF Y	5.35743E-09	1.00000E+00	-1.94628E-09	9.67468E+00	-3.14804E-08	-2.12523E+01
3	FSE Clearance Point 871 DOF Z	-3.72410E-09	3.72562E-09	1.00000E+00	-1.82139E+01	2.12523E+01	-1.48681E-07
4	FSE Clearance Point 871 DOF RX	-2.84636E-13	-9.31337E-09	1.54252E-09	1.00000E+00	1.15982E-08	7.37416E-08
5	FSE Clearance Point 871 DOF RY	-2.32788E-10	-4.65677E-10	2.42263E-09	-3.87448E-08	1.00000E+00	4.47365E-09
6	FSE Clearance Point 871 DOF RZ	4.65497E-10	-3.63790E-11	7.27567E-11	8.20252E-10	-2.73845E-09	1.00000E+00
7	FSE Clearance Point 887 DOF X	1.00000E+00	-1.15840E-10	7.22203E-09	-1.15748E-07	-6.67468E+00	1.82139E+01
8	FSE Clearance Point 887 DOF Y	3.17821E-12	1.00000E+00	1.30943E-10	6.67468E+00	4.52619E-08	-2.12523E+01
9	FSE Clearance Point 887 DOF Z	3.72648E-09	1.11762E-08	1.00000E+00	-1.82139E+01	2.12523E+01	-4.17535E-08
10	FSE Clearance Point 887 DOF RX	-2.88042E-13	-1.86276E-09	3.04139E-09	1.00000E+00	1.70734E-08	-6.50982E-08
11	FSE Clearance Point 887 DOF RY	4.15944E-14	-2.32853E-10	-3.69648E-09	5.61603E-08	1.00000E+00	2.72079E-09
12	FSE Clearance Point 887 DOF RZ	-4.65825E-10	5.82206E-11	-1.16417E-10	-4.71473E-10	8.93223E-10	1.00000E+00
13	FSE Clearance Point 905 DOF X	1.00000E+00	6.48814E-13	-3.88103E-09	7.57562E-08	-6.67468E+00	2.30139E+01
14	FSE Clearance Point 905 DOF Y	-1.11733E-08	1.00000E+00	2.21187E-09	6.67468E+00	1.12657E-07	-1.73023E+01
15	FSE Clearance Point 905 DOF Z	1.49035E-08	1.49023E-08	1.00000E+00	-2.30139E+01	1.73023E+01	-2.24482E-08
16	FSE Clearance Point 905 DOF RX	9.31038E-10	-1.86279E-09	4.65628E-10	1.00000E+00	1.02689E-08	3.35977E-08
17	FSE Clearance Point 905 DOF RY	-3.49185E-10	-4.62180E-14	-6.69417E-09	1.05879E-07	1.00000E+00	-1.06101E-09
18	FSE Clearance Point 905 DOF RZ	2.32668E-10	-2.32816E-10	1.56442E-10	-2.74000E-09	-7.19916E-10	1.00000E+00
19	FSE Clearance Point 2993 DOF X	1.00000E+00	2.33075E-10	8.77256E-10	-1.90217E-08	-6.67468E+00	-2.09861E+01
20	FSE Clearance Point 2993 DOF Y	-5.06676E-09	1.00000E+00	8.15012E-10	6.67468E+00	1.49130E-08	1.72977E+01
21	FSE Clearance Point 2993 DOF Z	-1.48993E-08	2.98017E-08	1.00000E+00	2.09861E+01	-1.72977E+01	5.00710E-07
22	FSE Clearance Point 2993 DOF RX	-9.31039E-10	2.32739E-10	-9.90377E-10	1.00000E+00	6.90742E-09	4.23352E-09
23	FSE Clearance Point 2993 DOF RY	4.65717E-10	1.86262E-09	-2.62007E-09	-1.24022E-09	1.00000E+00	1.25370E-08
24	FSE Clearance Point 2993 DOF RZ	-2.32989E-10	-1.74616E-10	1.30964E-10	-2.72678E-09	3.24972E-09	1.00000E+00
25	FSE Clearance Point 3000 DOF X	1.00000E+00	-4.65389E-10	-5.19740E-10	-1.30362E-09	-6.67468E+00	-1.69861E+01

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 27

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
26	FSE Clearance Point 3000 DOF Y	2.32797E-08	1.00000E+00	-3.49235E-09	6.67468E+00	-7.74751E-08	2.12477E+01
27	FSE Clearance Point 3000 DOF Z	7.45128E-09	2.98021E-08	1.00000E+00	1.69861E+01	-2.12477E+01	-9.37573E-08
28	FSE Clearance Point 3000 DOF RX	-9.31148E-10	-6.06009E-14	1.22190E-09	1.00000E+00	-1.80805E-08	1.25882E-08
29	FSE Clearance Point 3000 DOF RY	4.02049E-14	-1.73793E-14	3.20076E-09	-6.68443E-09	1.00000E+00	2.43923E-09
30	FSE Clearance Point 3000 DOF RZ	2.32670E-10	-1.45512E-10	7.27609E-11	-3.16228E-09	-2.29947E-09	1.00000E+00
31	FSE Net Load Factor, X axis	6.76830E-09	4.53042E-10	-1.48923E-10	4.42472E-09	-3.99020E-08	-4.18822E-09
32	FSE Net Load Factor, Y axis	4.57542E-10	-1.88265E-10	4.47113E-10	8.13004E-09	9.52928E-10	-5.00197E-09
33	FSE Net Load Factor, Z axis	-1.50059E-10	4.42163E-10	-3.26430E-09	-4.46210E-09	3.05105E-09	3.24112E-11
34	FSE Net Load Factor, RX axis	3.64179E-09	1.77852E-08	-1.75672E-08	-6.35982E-07	5.38264E-07	1.86853E-08
35	FSE Net Load Factor, RY axis	-8.27748E-09	6.93519E-09	5.55968E-09	7.01049E-07	2.07132E-07	6.15283E-08
36	FSE Net Load Factor, RZ axis	-1.14574E-08	-5.73957E-09	3.66791E-10	3.48841E-09	1.51877E-08	2.30886E-06
37	ORU I/F Force Grid 990 Z axis	8.33072E-09	-6.74494E-09	2.44298E-06	-3.70358E-05	-9.62213E-06	-6.19382E-07
38	ORU I/F Force Grid 991 Z axis	-3.85977E-09	-1.28247E-08	-6.65395E-06	1.06107E-04	4.52685E-05	2.77899E-07
39	ORU I/F Force Grid 9998 X axis	3.45105E-09	3.68345E-09	6.03700E-09	-1.20390E-07	4.18535E-07	7.01959E-06
40	ORU I/F Force Grid 9998 Z axis	-6.59993E-09	1.54159E-07	2.71613E-06	1.77771E-05	2.86369E-06	1.03953E-07
41	ORU I/F Moment Grid 9998 RX axis	1.12654E-07	-3.12268E-07	-2.74120E-06	-2.02602E-04	1.76621E-06	-1.17878E-06
42	ORU I/F Moment Grid 9998 RY axis	-5.28951E-08	2.55814E-08	-2.84746E-06	5.89327E-05	2.53028E-04	1.72834E-05
43	ORU I/F Moment Grid 9998 RZ axis	1.95898E-08	-2.33413E-08	-5.18467E-07	8.13286E-06	1.68852E-06	3.89693E-04
44	ORU I/F Force Grid 9999 X axis	-3.45105E-09	-3.98377E-08	-1.43655E-09	-1.72538E-07	-4.18529E-07	-7.01951E-06
45	ORU I/F Force Grid 9999 Y axis	-3.61809E-08	-8.68924E-07	1.86668E-07	-2.36281E-06	2.77038E-07	-7.57226E-07
46	ORU I/F Force Grid 9999 Z axis	6.42898E-09	5.26506E-08	-2.10517E-06	5.40297E-05	1.08349E-04	8.45151E-09
47	ORU I/F Moment Grid 9999 RX axis	6.79696E-08	5.51235E-07	-3.37927E-06	4.09038E-04	6.06966E-06	-1.31065E-06
48	ORU I/F Moment Grid 9999 RY axis	-1.48248E-07	-3.60906E-08	-3.61902E-07	2.16321E-05	3.37001E-04	-2.11346E-06
49	ORU I/F Moment Grid 9999 RZ axis	9.17782E-08	-2.85768E-08	4.11570E-07	-6.65238E-06	1.21820E-05	-3.46538E-04
50	ORU Net Load Factor, X axis	7.49107E-10	-9.94698E-11	1.67685E-11	-8.79848E-10	-2.49570E-09	3.57048E-10

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 28

O T M - 0 2 R E S P O N S E S D U E T O R I G I D - B O D Y M O T I O N

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	ORU Net Load Factor, Y axis	-9.95469E-11	-2.39073E-09	5.13593E-10	-6.50096E-09	7.62231E-10	-2.08341E-09
52	ORU Net Load Factor, Z axis	1.57174E-11	5.15164E-10	1.42666E-08	4.90108E-08	1.68382E-08	1.95399E-10
53	ORU Net Load Factor, RX axis	-3.95210E-09	-4.49354E-08	1.59814E-07	5.47374E-06	2.71203E-07	-6.01458E-08
54	ORU Net Load Factor, RY axis	-1.38152E-08	3.24021E-09	5.23965E-08	2.61538E-07	5.40723E-06	-2.00729E-07
55	ORU Net Load Factor, RZ axis	1.16601E-09	-3.91861E-09	2.76523E-10	-2.23118E-08	-1.31584E-07	-7.47897E-07
56	FSE/ORU Assy I/F Force Grid 653 Y axis	-1.27395E-06	-3.83151E-07	1.45104E-07	-4.23994E-07	9.28020E-06	-1.38523E-05
57	FSE/ORU Assy I/F Force Grid 653 Z axis	-2.13915E-07	-1.55324E-07	1.42226E-06	-3.42756E-07	4.18556E-05	-5.16155E-06
58	FSE/ORU Assy I/F Force Grid 654 Z axis	2.02005E-07	1.66030E-07	-5.81613E-07	-2.52415E-06	-4.18644E-06	3.06872E-06
59	FSE/ORU Assy I/F Force Grid 655 X axis	1.44404E-06	4.31319E-08	-1.95905E-08	4.69004E-07	-7.80596E-06	-7.66969E-07
60	FSE/ORU Assy I/F Force Grid 655 Z axis	4.12884E-07	1.78014E-07	1.90092E-06	1.70277E-05	5.96126E-06	-1.56750E-07
61	FSE/ORU Assy I/F Force Grid 2183 Y axis	1.31700E-06	-5.19100E-07	1.19200E-07	-5.11977E-07	-8.85508E-06	1.22284E-05
62	FSE/ORU Assy I/F Force Grid 2183 Z axis	2.25812E-07	-1.63070E-07	8.14818E-07	-7.04409E-06	-4.06710E-05	4.66169E-06
63	FSE/ORU Assy I/F Force Grid 2184 Z axis	-2.48103E-07	1.98397E-07	-5.48338E-07	-2.69373E-06	2.97040E-06	-2.56054E-06
64	FSE/ORU Assy I/F Force Grid 2185 Z axis	-3.98702E-07	4.09686E-08	1.61053E-06	1.25662E-05	7.59319E-07	2.27640E-07
65	FSE/ORU Assy Net Load Factor, X axis	2.69115E-09	8.03813E-11	-3.65092E-11	8.74044E-10	-1.45473E-08	-1.42933E-09
66	FSE/ORU Assy Net Load Factor, Y axis	8.02321E-11	-1.68145E-09	4.92561E-10	-1.74429E-09	7.92257E-10	-3.02627E-09
67	FSE/ORU Assy Net Load Factor, Z axis	-3.73080E-11	4.93888E-10	8.60722E-09	3.16619E-08	1.24658E-08	1.47604E-10
68	FSE/ORU Assy Net Load Factor, RX axis	2.18664E-09	-4.32929E-09	7.84696E-08	2.44074E-06	3.70281E-07	-3.32964E-08
69	FSE/ORU Assy Net Load Factor, RY axis	-3.66270E-08	1.82871E-09	3.12787E-08	3.75375E-07	3.17992E-06	-1.04449E-07
70	FSE/ORU Assy Net Load Factor, RZ axis	-3.00377E-09	-4.59429E-09	9.29858E-10	-1.20900E-08	-5.74074E-09	5.87694E-07

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 29

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
1	FSE Clearance Point 871 DOF X	-2.76402E-03	-9.11875E-05	2.47718E-04	3.03880E-06	1.11712E-05	-9.67650E-05
2	FSE Clearance Point 871 DOF Y	6.61218E-04	-2.87768E-05	-2.95529E-04	-8.45201E-06	-2.17892E-05	3.98471E-05
3	FSE Clearance Point 871 DOF Z	-4.69862E-04	-4.47950E-04	-4.32388E-05	1.59327E-05	-5.55231E-05	2.07681E-05
4	FSE Clearance Point 871 DOF RX	-1.85408E-04	1.05322E-04	-9.74965E-05	-3.12865E-06	-6.75258E-06	-5.46256E-06
5	FSE Clearance Point 871 DOF RY	-5.85216E-05	-1.70284E-05	-5.11341E-06	1.32286E-06	-4.35593E-06	7.33297E-07
6	FSE Clearance Point 871 DOF RZ	-4.65519E-05	5.12758E-06	1.23938E-05	5.11635E-07	1.09016E-06	-2.85276E-06
7	FSE Clearance Point 887 DOF X	-2.93798E-03	-1.41710E-04	2.32835E-04	6.92034E-06	-1.85944E-06	-9.45337E-05
8	FSE Clearance Point 887 DOF Y	1.24684E-03	-3.43348E-04	1.80462E-05	1.58252E-06	3.11447E-07	5.67570E-05
9	FSE Clearance Point 887 DOF Z	-4.68619E-04	-4.50957E-04	-3.89358E-05	1.59936E-05	-5.52845E-05	2.08277E-05
10	FSE Clearance Point 887 DOF RX	-2.14844E-04	1.10213E-04	-1.26576E-04	-3.44190E-06	-8.85291E-06	-6.30087E-06
11	FSE Clearance Point 887 DOF RY	-5.54880E-05	-1.92834E-05	1.38251E-05	8.87703E-07	-3.56982E-06	8.75220E-07
12	FSE Clearance Point 887 DOF RZ	-6.07729E-05	-1.88330E-06	2.15214E-06	6.90085E-08	1.67719E-07	-2.81568E-06
13	FSE Clearance Point 905 DOF X	-3.21998E-03	-1.47706E-04	2.40191E-04	6.89633E-06	-9.35842E-07	-1.07957E-04
14	FSE Clearance Point 905 DOF Y	1.00084E-03	-3.46502E-04	2.22425E-05	1.69358E-06	7.55829E-07	4.53851E-05
15	FSE Clearance Point 905 DOF Z	6.88767E-04	-9.15817E-04	2.70471E-04	3.34890E-05	-9.91762E-06	4.63199E-05
16	FSE Clearance Point 905 DOF RX	-1.99671E-04	1.09194E-04	-6.20361E-05	-5.04294E-06	-6.18113E-06	-5.98638E-06
17	FSE Clearance Point 905 DOF RY	-2.63908E-05	-1.04310E-05	4.16230E-05	7.12927E-07	-1.90899E-06	1.21854E-06
18	FSE Clearance Point 905 DOF RZ	-6.02865E-05	-1.20119E-06	1.19238E-06	5.50853E-09	1.65027E-07	-2.84280E-06
19	FSE Clearance Point 2993 DOF X	-3.94227E-04	-1.27661E-04	2.37057E-04	6.12716E-06	6.48863E-09	1.71262E-05
20	FSE Clearance Point 2993 DOF Y	-1.04162E-03	-3.53680E-04	2.43896E-05	1.83386E-06	-3.27344E-07	-4.70532E-05
21	FSE Clearance Point 2993 DOF Z	6.13133E-03	4.00591E-03	-6.78280E-03	-2.60095E-04	5.07209E-04	3.64511E-06
22	FSE Clearance Point 2993 DOF RX	2.39444E-04	3.74687E-04	-4.94658E-05	-1.15579E-05	6.44542E-06	2.60482E-06
23	FSE Clearance Point 2993 DOF RY	-5.69314E-04	-2.29350E-04	7.41660E-04	2.19395E-05	-5.50031E-05	4.67973E-07
24	FSE Clearance Point 2993 DOF RZ	-6.19803E-05	4.42607E-07	-1.24153E-07	-1.49609E-08	-5.77443E-09	-2.77797E-06
25	FSE Clearance Point 3000 DOF X	-6.43820E-04	-1.25682E-04	2.36531E-04	6.07844E-06	-8.85891E-09	5.98339E-06

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 30

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
26	FSE Clearance Point 3000 DOF Y	-1.28869E-03	-3.52584E-04	2.51411E-05	1.80937E-06	-3.70312E-07	-5.80331E-05
27	FSE Clearance Point 3000 DOF Z	7.90604E-03	3.61067E-03	-9.79804E-03	-3.09494E-04	7.15798E-04	-1.71735E-05
28	FSE Clearance Point 3000 DOF RX	2.22301E-04	2.79681E-04	-7.05314E-05	-9.61776E-06	8.54859E-06	3.23992E-06
29	FSE Clearance Point 3000 DOF RY	-7.86901E-04	-2.13792E-04	8.51464E-04	2.31808E-05	-6.31355E-05	5.13387E-06
30	FSE Clearance Point 3000 DOF RZ	-6.29562E-05	3.29409E-07	1.60748E-07	-4.30352E-09	-8.76000E-09	-2.78942E-06
31	FSE Net Load Factor, X axis	9.99969E-01	-2.21688E-10	-5.78717E-09	2.59714E-10	-1.41341E-02	2.26457E-03
32	FSE Net Load Factor, Y axis	-7.03098E-10	9.99969E-01	-7.01477E-10	1.41341E-02	-9.71302E-12	-5.87265E-06
33	FSE Net Load Factor, Z axis	-2.45536E-09	-1.11403E-12	9.99969E-01	-2.26457E-03	5.87258E-06	8.95000E-11
34	FSE Net Load Factor, RX axis	2.81196E-08	-6.03152E-11	3.37049E-07	1.00000E+00	3.69257E-09	-2.37292E-09
35	FSE Net Load Factor, RY axis	-1.79633E-07	2.23575E-08	-4.71338E-07	9.60255E-09	1.00000E+00	1.09411E-08
36	FSE Net Load Factor, RZ axis	5.39171E-07	-3.93115E-08	-1.82815E-08	-5.82651E-10	-7.18935E-09	1.00000E+00
37	ORU I/F Force Grid 990 Z axis	5.24639E+01	1.20837E+01	1.00370E+01	-2.11009E-01	2.98415E+00	2.47968E-02
38	ORU I/F Force Grid 991 Z axis	-5.33570E+01	1.21090E+01	1.01301E+01	-2.14437E-01	-3.00957E+00	-2.44331E-02
39	ORU I/F Force Grid 9998 X axis	1.87056E+02	-3.65557E-02	4.63339E-03	7.00160E-04	1.19071E+00	-5.99441E+00
40	ORU I/F Force Grid 9998 Z axis	-7.14192E-01	-8.18822E+01	1.86247E+02	3.84099E+00	2.11853E-03	-6.89827E-04
41	ORU I/F Moment Grid 9998 RX axis	4.19959E+01	1.54436E+01	2.99843E-01	8.21490E-01	-2.65795E-03	-6.06449E-04
42	ORU I/F Moment Grid 9998 RY axis	5.65952E+02	7.57692E-02	1.16447E-01	7.76647E-03	1.65561E+01	-1.04261E+01
43	ORU I/F Moment Grid 9998 RZ axis	-3.03631E+01	6.36234E-03	6.20671E-02	-4.25792E-05	-1.26041E+00	3.43923E+00
44	ORU I/F Force Grid 9999 X axis	1.76388E+02	3.65557E-02	-4.63340E-03	-7.00160E-04	1.22683E+00	5.68146E+00
45	ORU I/F Force Grid 9999 Y axis	-1.08226E-11	3.63445E+02	2.32770E-08	-2.41754E+00	-3.89105E-12	1.01678E-03
46	ORU I/F Force Grid 9999 Z axis	1.60736E+00	5.76895E+01	1.57031E+02	-3.10259E+00	2.22761E-02	3.26172E-04
47	ORU I/F Moment Grid 9999 RX axis	-1.89489E+01	-2.06282E+02	3.17943E+00	2.92009E+00	-1.66942E-02	-1.14323E-03
48	ORU I/F Moment Grid 9999 RY axis	5.21180E+02	3.40856E-01	2.03956E-01	4.47343E-04	1.96976E+01	7.59103E+00
49	ORU I/F Moment Grid 9999 RZ axis	5.30082E+01	3.06502E-02	8.74526E-02	-1.54049E-03	1.00037E-01	4.34587E+00
50	ORU Net Load Factor, X axis	9.99969E-01	4.75328E-13	1.67562E-11	-4.54371E-13	6.65154E-03	-8.61042E-04

Figure G-12. Battery Integrated Assembly

ASD/DMMP v1.11.0 Mon Jul 14 2008 12:04:52 CDT Page 31

O T M - 0 2 R E S P O N S E S D U E T O 1 G

ITEM	DESCRIPTION	T1	T2	T3	R1	R2	R3
51	ORU Net Load Factor, Y axis	-2.97769E-14	9.99969E-01	3.07322E-13	-6.65154E-03	7.51063E-14	2.80376E-06
52	ORU Net Load Factor, Z axis	6.80962E-12	7.20513E-13	9.99969E-01	8.61042E-04	-2.80376E-06	1.18819E-15
53	ORU Net Load Factor, RX axis	2.20352E-10	1.85863E-10	-2.55497E-09	1.00000E+00	-3.86151E-13	3.18253E-13
54	ORU Net Load Factor, RY axis	-1.51143E-10	-1.31091E-12	-9.59859E-10	3.63565E-11	1.00000E+00	3.90504E-12
55	ORU Net Load Factor, RZ axis	-1.37360E-11	1.02386E-11	-3.18679E-12	1.20328E-13	2.31820E-12	1.00000E+00
56	FSE/ORU Assy I/F Force Grid 653 Y axis	-5.00307E+02	2.68206E+02	-1.67329E-09	1.61182E-03	5.20428E-01	-2.33137E+01
57	FSE/ORU Assy I/F Force Grid 653 Z axis	8.53421E+01	1.35227E+02	1.27175E+02	-3.51707E+00	1.07276E+01	-3.71147E+00
58	FSE/ORU Assy I/F Force Grid 654 Z axis	7.48788E+01	-9.74312E+01	-4.37558E+00	-1.74626E-01	1.37965E-01	5.08261E+00
59	FSE/ORU Assy I/F Force Grid 655 X axis	5.36574E+02	-2.73758E-10	2.04514E-09	3.04068E-11	-1.73355E-11	-1.12545E-10
60	FSE/ORU Assy I/F Force Grid 655 Z axis	1.85858E+02	-3.77959E+01	1.45406E+02	3.69601E+00	3.38536E+00	-1.89156E+00
61	FSE/ORU Assy I/F Force Grid 2183 Y axis	5.00307E+02	2.68368E+02	1.95564E-09	-1.61182E-03	-5.20428E-01	2.33137E+01
62	FSE/ORU Assy I/F Force Grid 2183 Z axis	-8.29961E+01	1.35260E+02	1.27353E+02	-3.52519E+00	-1.07289E+01	3.71235E+00
63	FSE/ORU Assy I/F Force Grid 2184 Z axis	-7.95709E+01	-9.74641E+01	-4.37462E+00	-1.73748E-01	-1.39739E-01	-5.08275E+00
64	FSE/ORU Assy I/F Force Grid 2185 Z axis	-1.83512E+02	-3.77960E+01	1.45389E+02	3.69462E+00	-3.38231E+00	1.89083E+00
65	FSE/ORU Assy Net Load Factor, X axis	9.99969E-01	0.00000E+00	-5.55112E-17	-5.20417E-18	-1.97342E-10	3.54840E-09
66	FSE/ORU Assy Net Load Factor, Y axis	-5.28233E-17	9.99969E-01	-2.77556E-17	1.97342E-10	1.51788E-18	6.55598E-09
67	FSE/ORU Assy Net Load Factor, Z axis	-1.66528E-16	-2.77547E-17	9.99969E-01	-3.54840E-09	-6.55598E-09	1.02019E-19
68	FSE/ORU Assy Net Load Factor, RX axis	1.33951E-14	6.69757E-15	8.88178E-16	1.00000E+00	-8.32667E-17	-3.03135E-16
69	FSE/ORU Assy Net Load Factor, RY axis	4.01854E-15	6.69757E-16	-4.44089E-15	-8.32667E-17	1.00000E+00	-2.10629E-16
70	FSE/ORU Assy Net Load Factor, RZ axis	3.59994E-15	3.55271E-15	1.77636E-15	1.94289E-16	-1.11022E-16	1.00000E+00

Figure G-12. Battery Integrated Assembly

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ASD/DMMP v1.11.0                    Mon Jul 14 2008 12:04:52 CDT                    Page   32


                                  Execution Time: 00:00:00


                                   * * * END OF JOB * * *
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Figure G-12. Battery Integrated Assembly

STS-127 (2J/A)
Nonlinear Coupled Loads Analysis
-
Supplemental Briefing

September 8, 2008

A. Majed, Ph.D.
Loads & Dynamics
ASD, Inc.

E. E. Henkel
Chief Engineer
ASD, Inc.

APPLIED STRUCTURAL DYNAMICS

Reference

[1] STS-127 (2J/A) Nonlinear Coupled Loads Analysis: Interim Briefing, Applied Structural Dynamics, Inc., August 19, 2008.

- Please refer to [1] for all background information

Summary

- Absolute max comparisons of linear to nonlinear CLA results show significant increases in interface shear forces for kinematic mounted ORUs (Batteries)
  - Some nonlinear interface shear forces for liftoff more than double versus the linear results

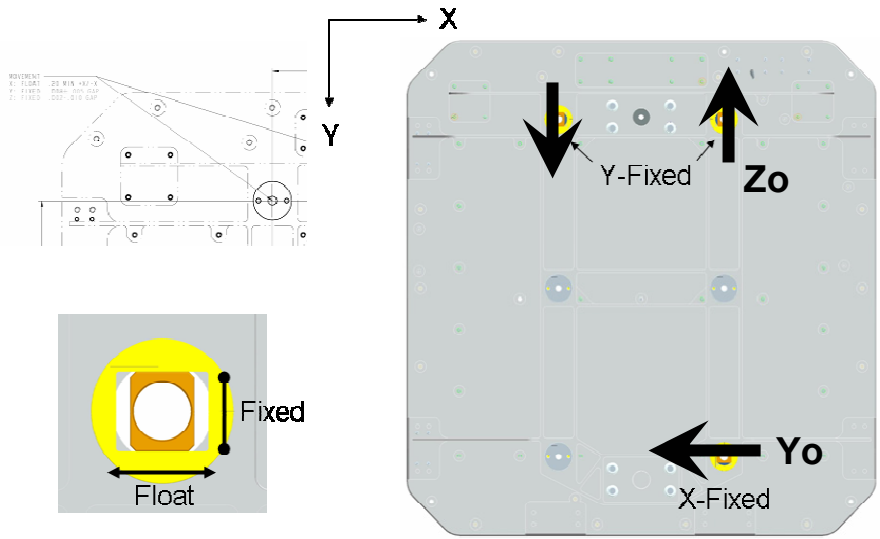
- Subject Battery/FSE nonlinear shear time-histories and associated relative displacements investigated
  - Nonlinear time-histories display all reasonable characteristics (sample time-histories in this briefing)
    - No numerical “chatter/noise” in nonlinear time-histories
    - Zero deadband limit penetration
    - Proper phasing of nonlinear force/relative displacement

Summary – Concluded

- Convergence study: A study of convergence of nonlinear interface shear forces to linear as deadband limits are decreased in steps was conducted
  - Nonlinear interface shear time-histories perfectly converge to linear with decreasing deadband size
    - Sample convergence for nominal landing presented
- Conclusion: Impact of deadbands for kinematic mounted ORUs (Batteries) interface shear forces accurately computed in nonlinear CLA
  - Physical explanation provided

Physical Explanation

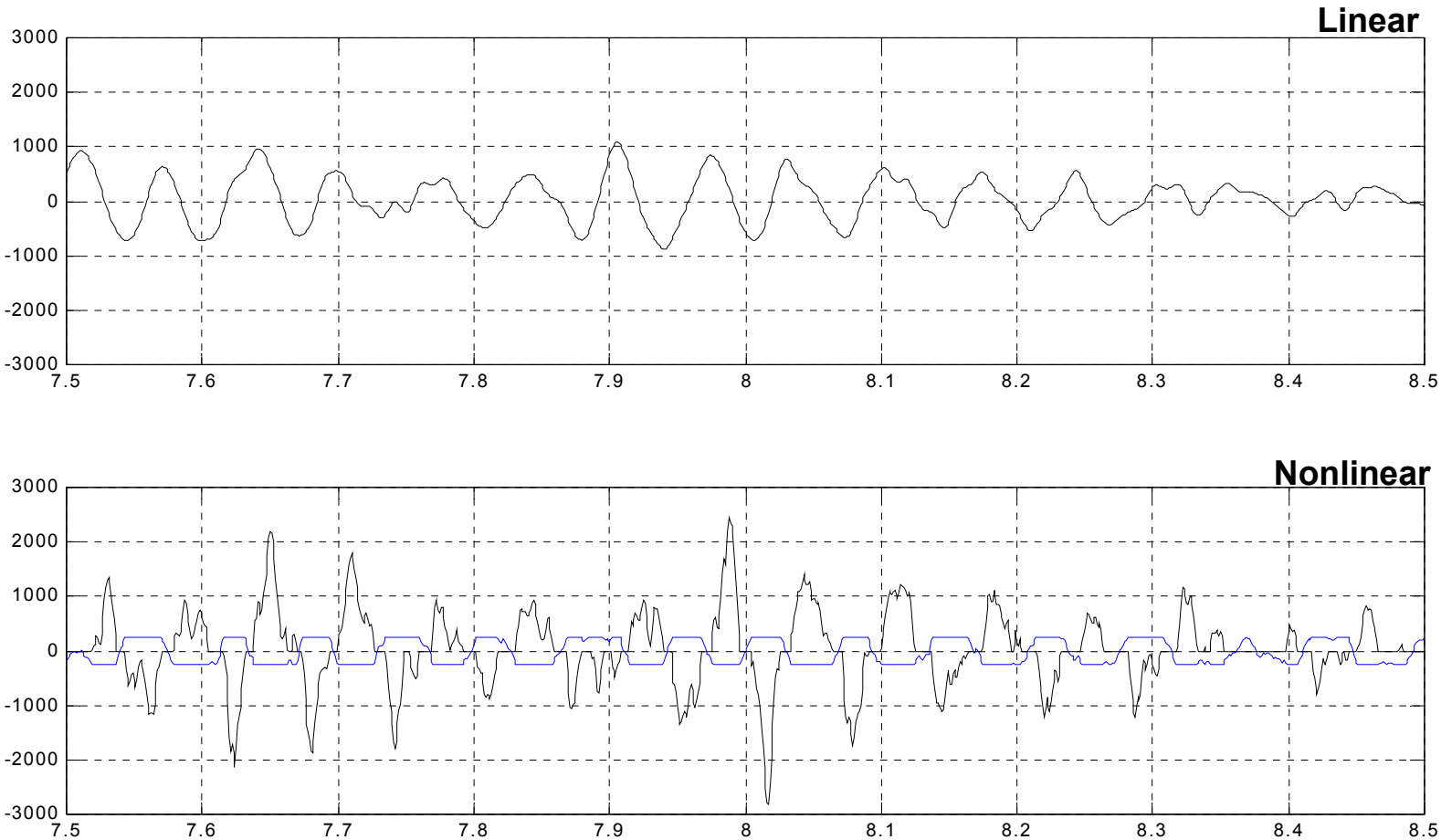
- Battery/FSE interface shear forces are reacted in a statically determinate fashion
  - Three shear forces per battery
    - Two Zo shear forces each with a deadband of +/- 0.0064”
    - One Yo shear force with deadband of +/- 0.0064”
- Yo shear reaction appreciable off-set from C.G.
  - Yo acceleration reacted by Yo shear
  - Resulting moment causes Rxo rotation
  - Rxo rotation coupled with Zo acceleration result in appreciable impact of shear joints against their deadband limits



Fixed Shear directions (3 per Battery): **+/- 0.0064”**
Tension directions (6 per battery): **+/- 0.0025”**

APPLIED STRUCTURAL DYNAMICS

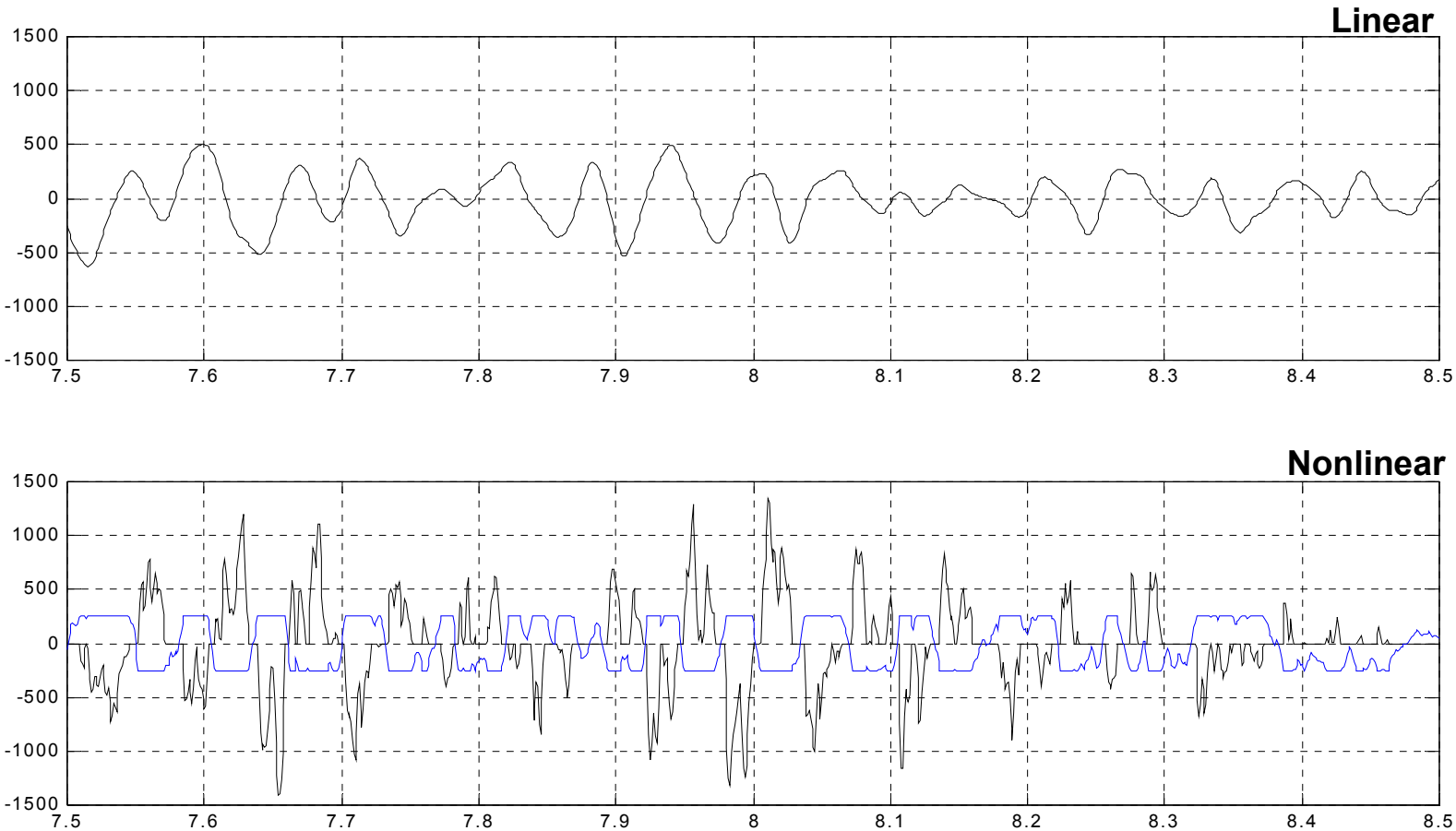
Highly Impacted Zo Shear Force - Liftoff



Battery 5: Shear Force (Node 653, Zorb) and Relative Displacement – (Blue Line x 40000)
Forcing Function: CLO1001; 7.5-8.5 second segment

APPLIED STRUCTURAL DYNAMICS

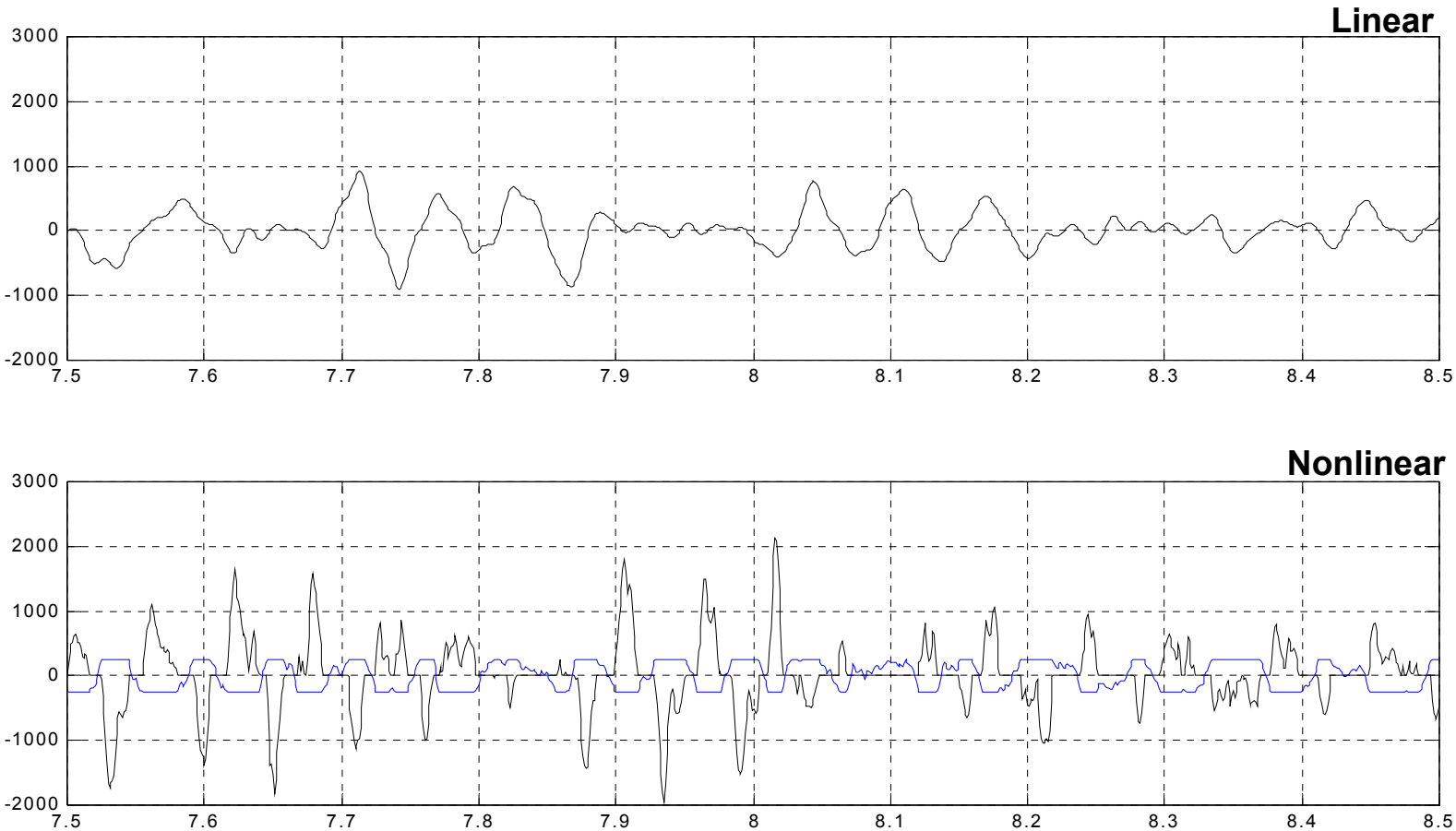
Highly Impacted Yo Shear Force - Liftoff



Battery 5: Shear Force (Node 655, Yorb) and Relative Displacement – (Blue Line x 40000)
Forcing Function: CLO1001; 7.5-8.5 second segment

APPLIED STRUCTURAL DYNAMICS

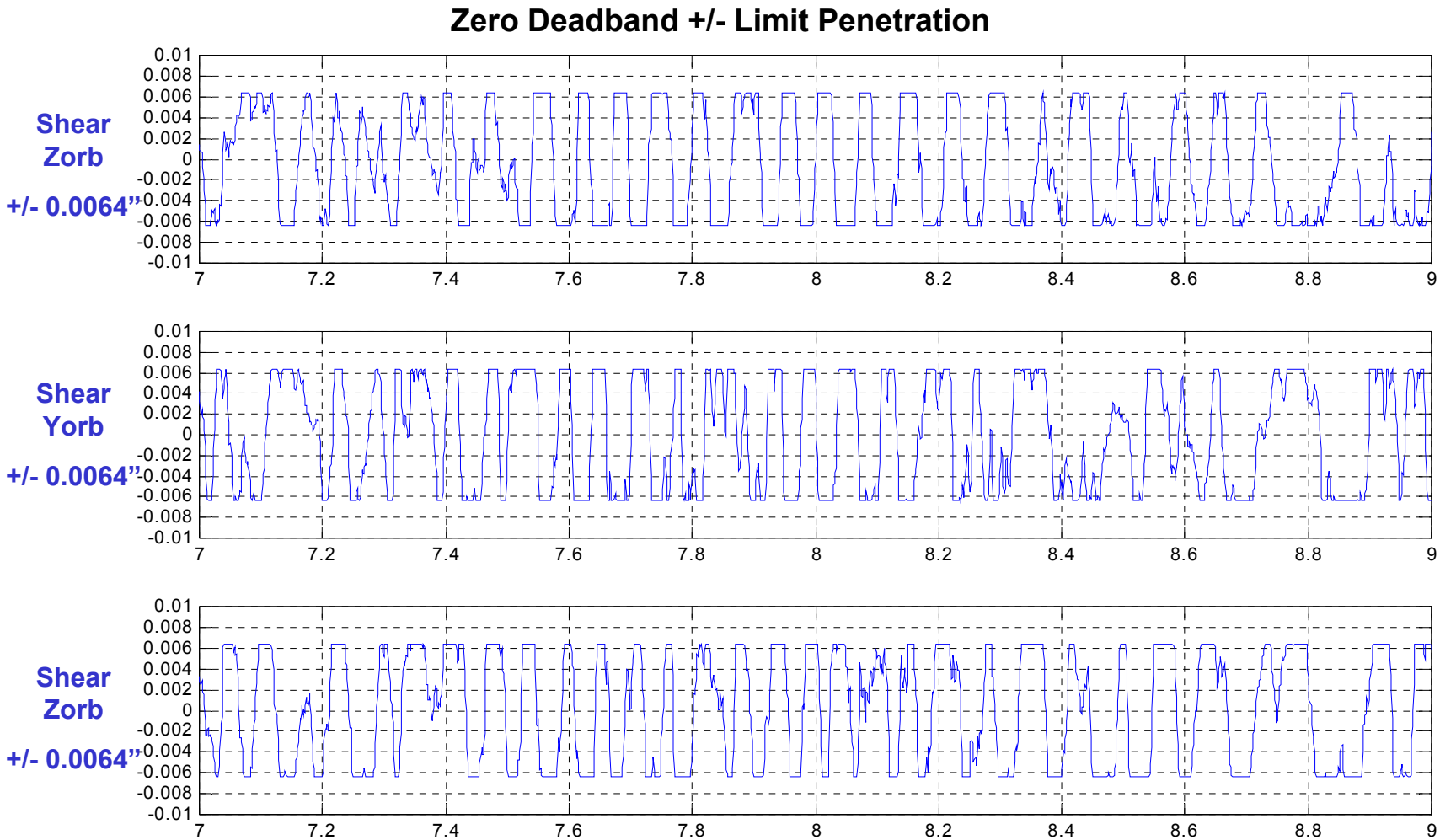
Highly Impacted Zo Shear Force - Liftoff



Battery 5: Shear Force (Node 2183, Zorb) and Relative Displacement – (Blue Line x 40000)
Forcing Function: CLO1001; 7.5-8.5 second segment

APPLIED STRUCTURAL DYNAMICS

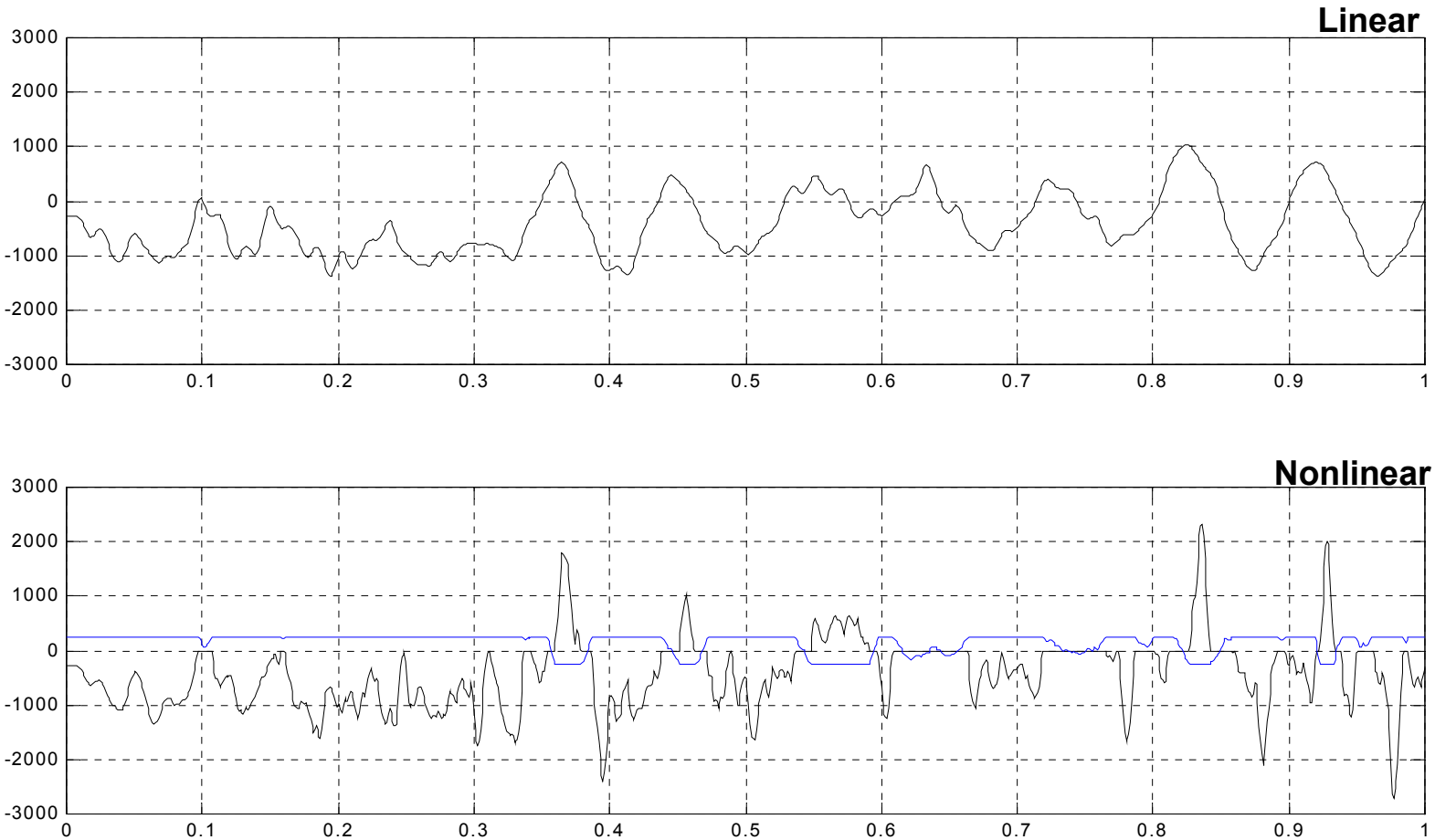
Kinematic Mounts Interface Rel. Disp. : Liftoff



Battery 5: Kinematic Mounts Interface Relative Displacements(in) Nodes 653, 655, and 2183
Forcing Function: CLO1001; 7-9 second segment

APPLIED STRUCTURAL DYNAMICS

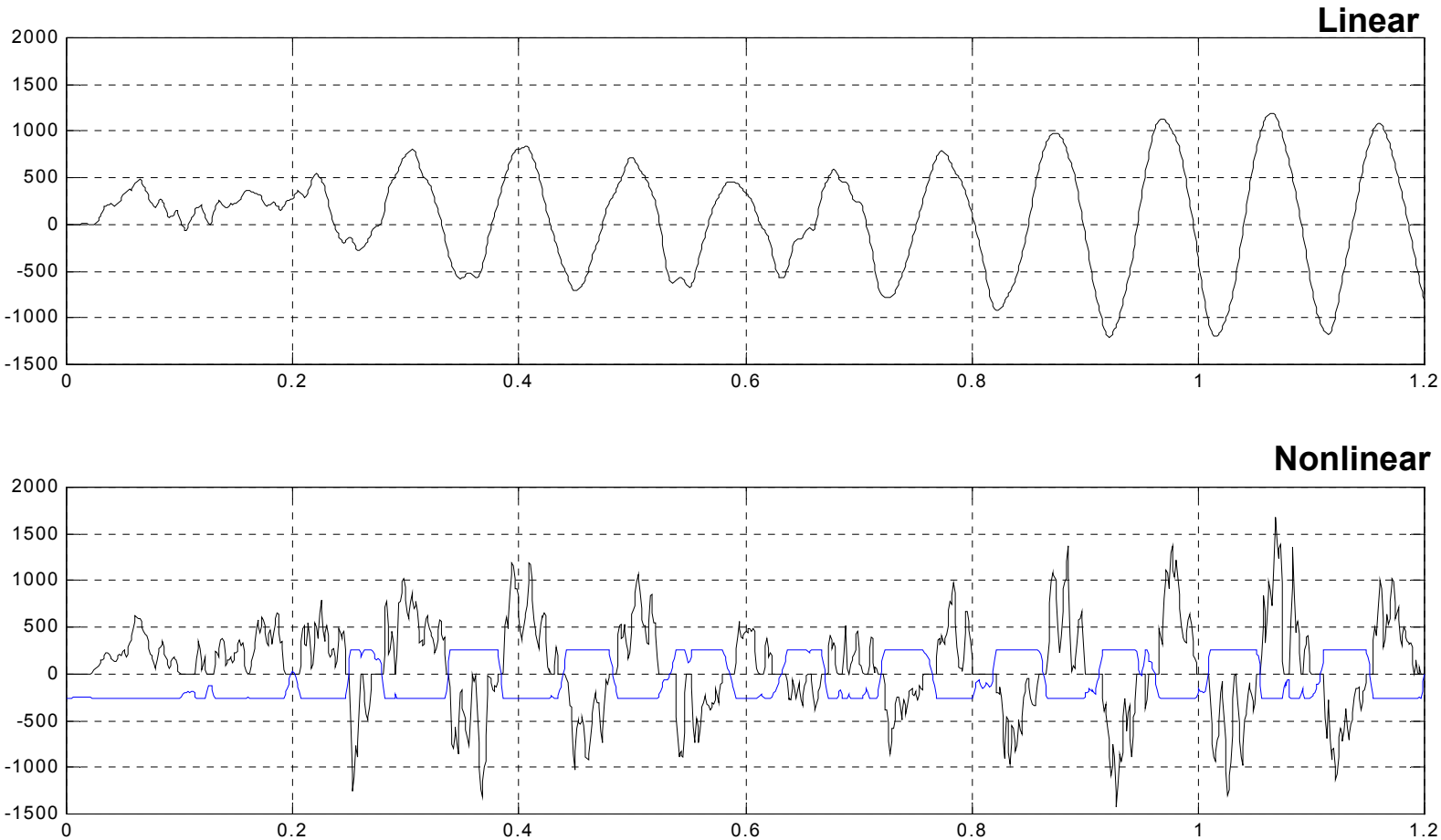
Highly Impacted Zo Shear Force – Nom. Landing



Battery 5: Shear Force (Node 653, Zorb) and Relative Displacement – (Blue Line x 40000)
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

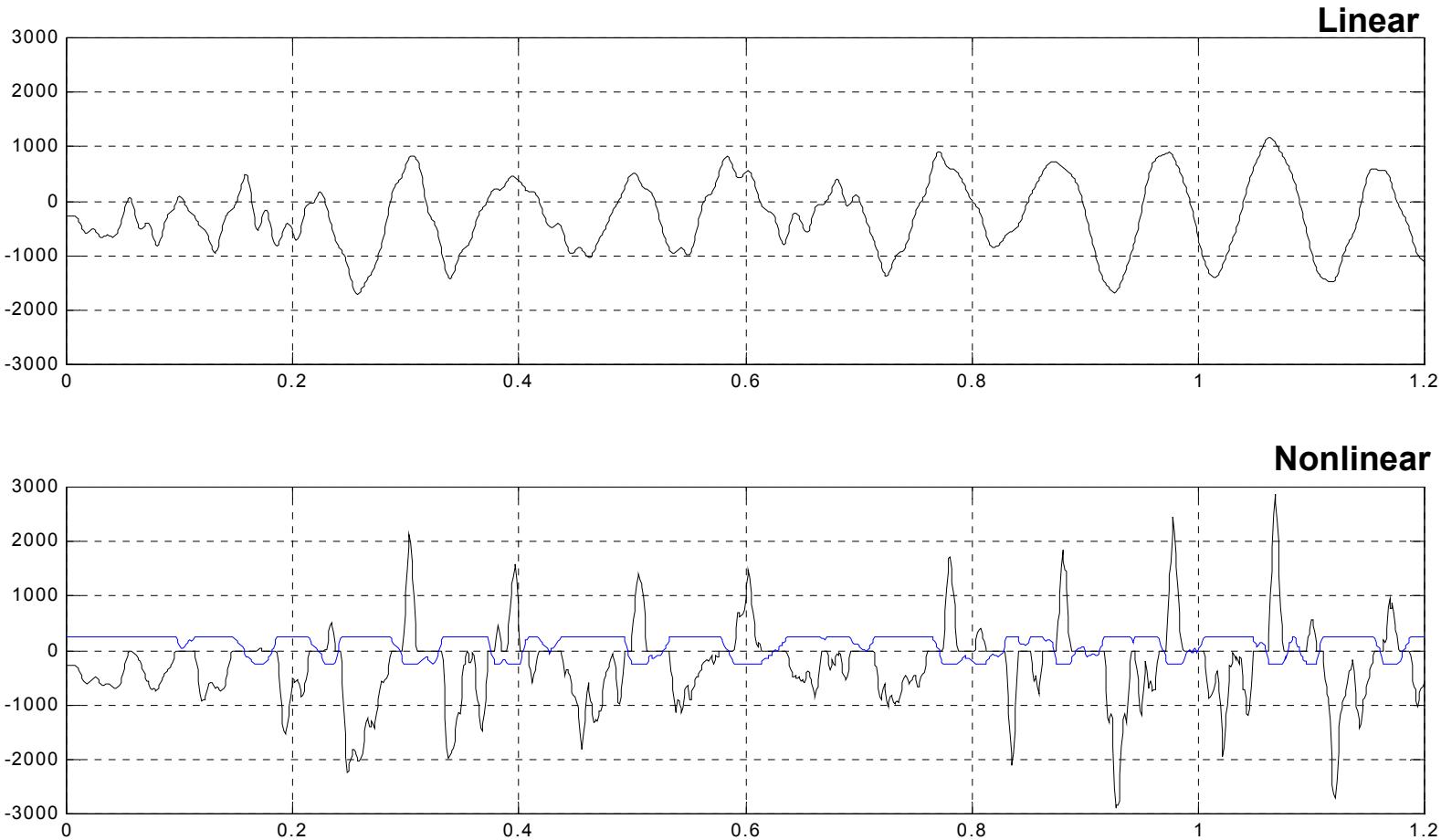
Highly Impacted Yo Shear Force – Nom. Landing



Battery 5: Shear Force (Node 655, Yorb) and Relative Displacement – (Blue Line x 40000)
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

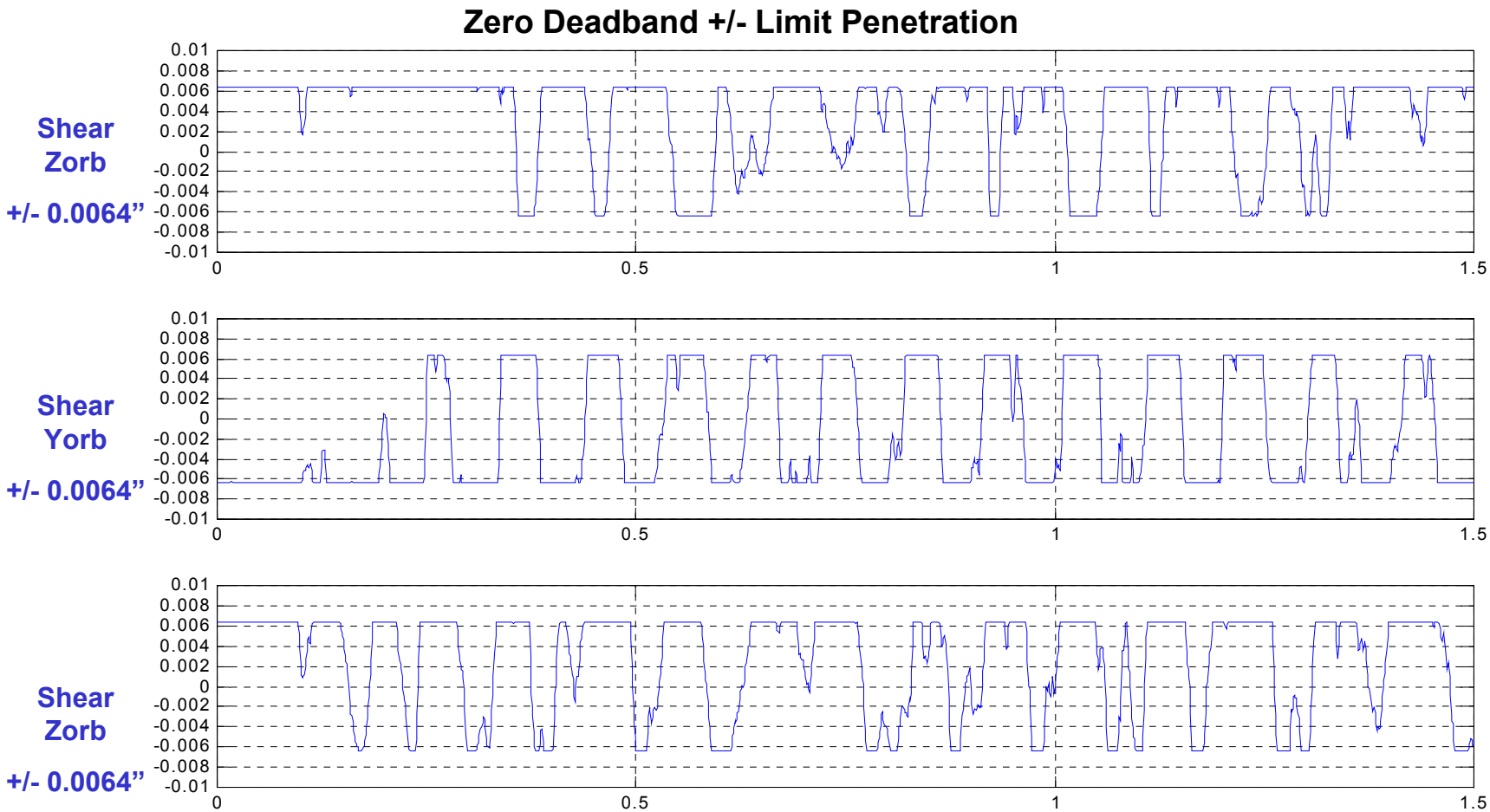
Highly Impacted Zo Shear Force – Nom. Landing



Battery 5: Shear Force (Node 2183, Zorb) and Relative Displacement – (Blue Line x 40000)
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

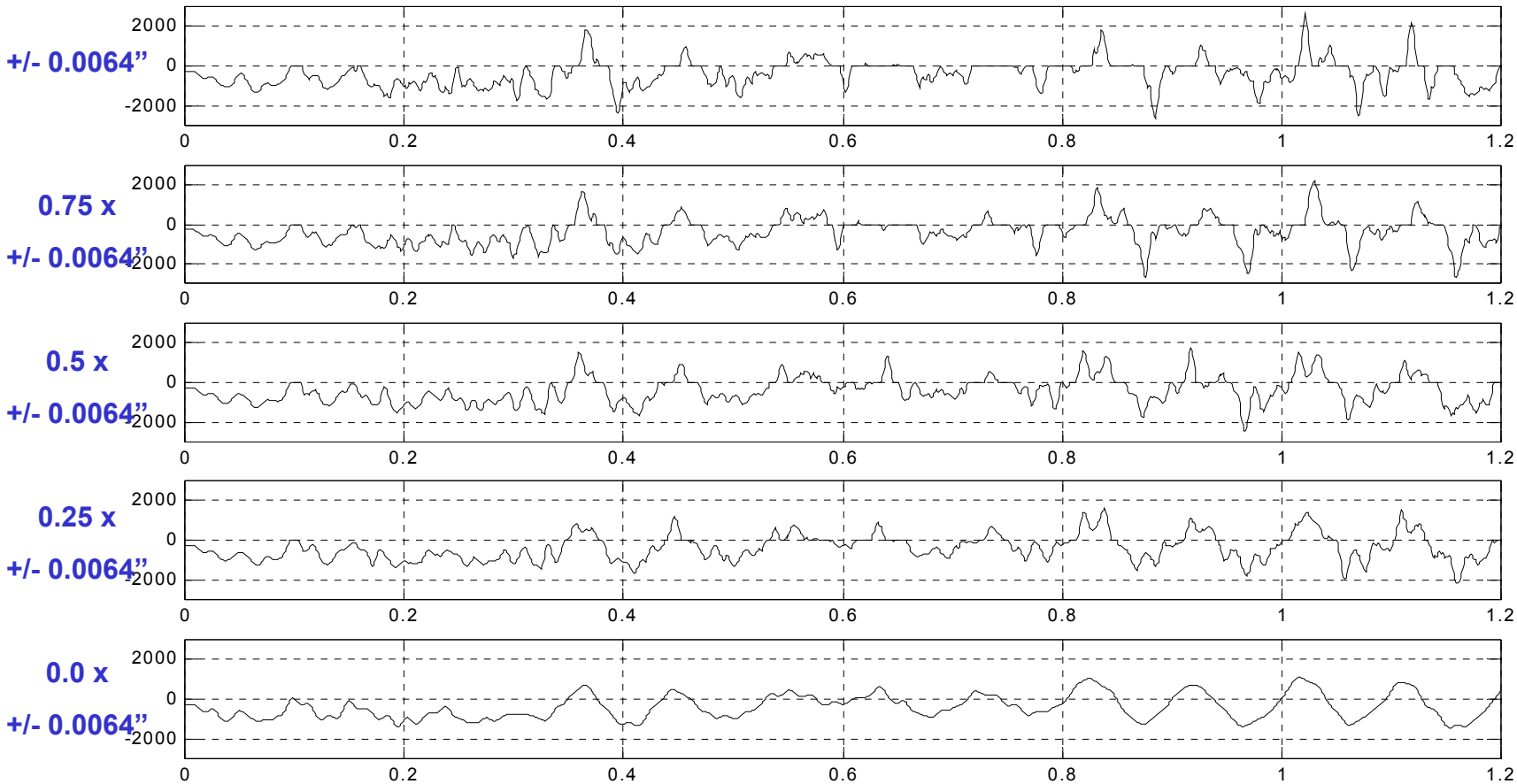
Kinematic Mounts Interface Rel. Disp.: Nom. Ld.



Battery 5: Kinematic Mounts Interface Relative Displacements(in) Nodes 653, 655, and 2183
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

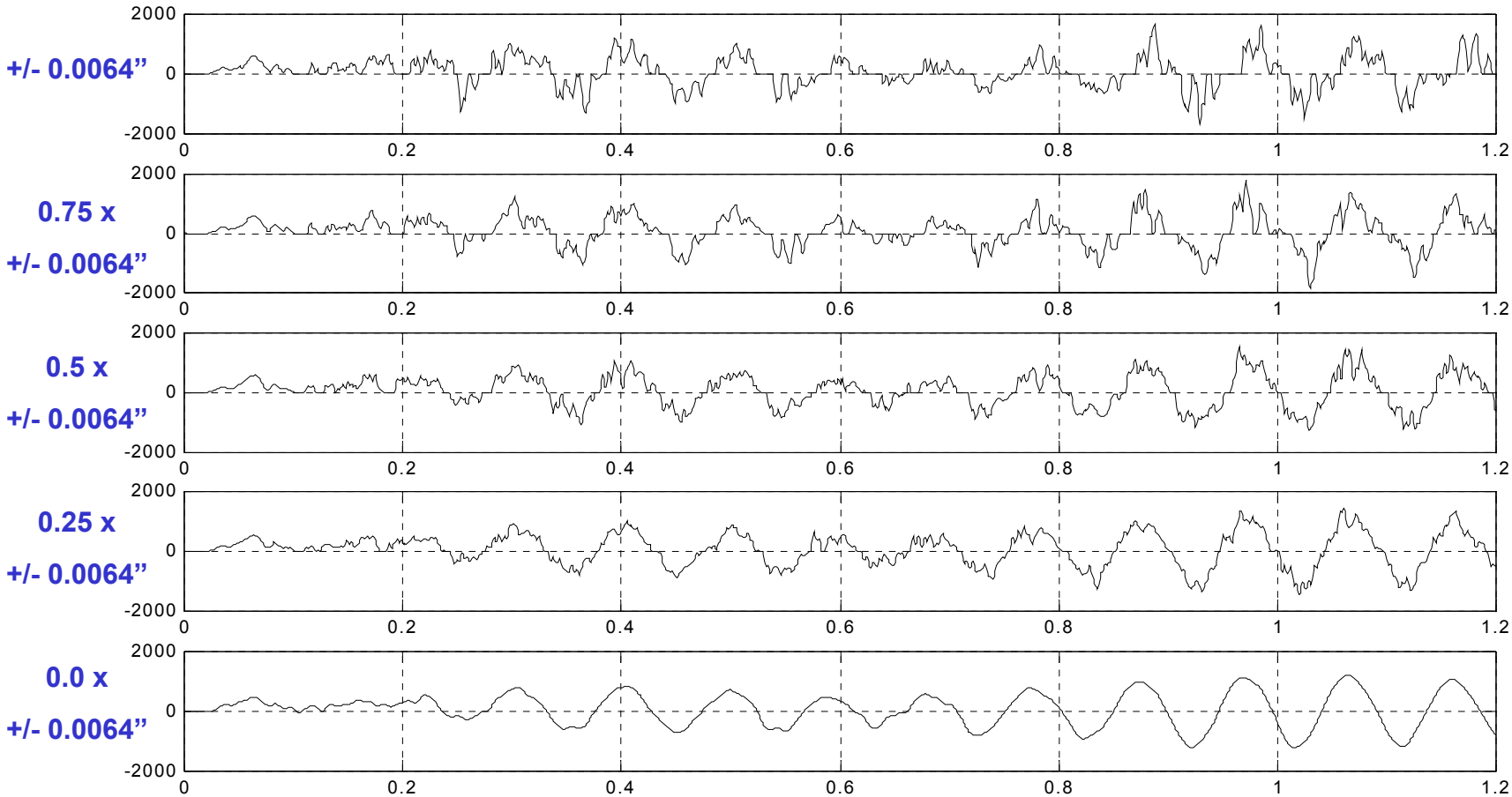
Convergence: Highly Impacted Zo Shear Force: Nom. Ld.



Battery 5: Shear Force Node 653 Zorb
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

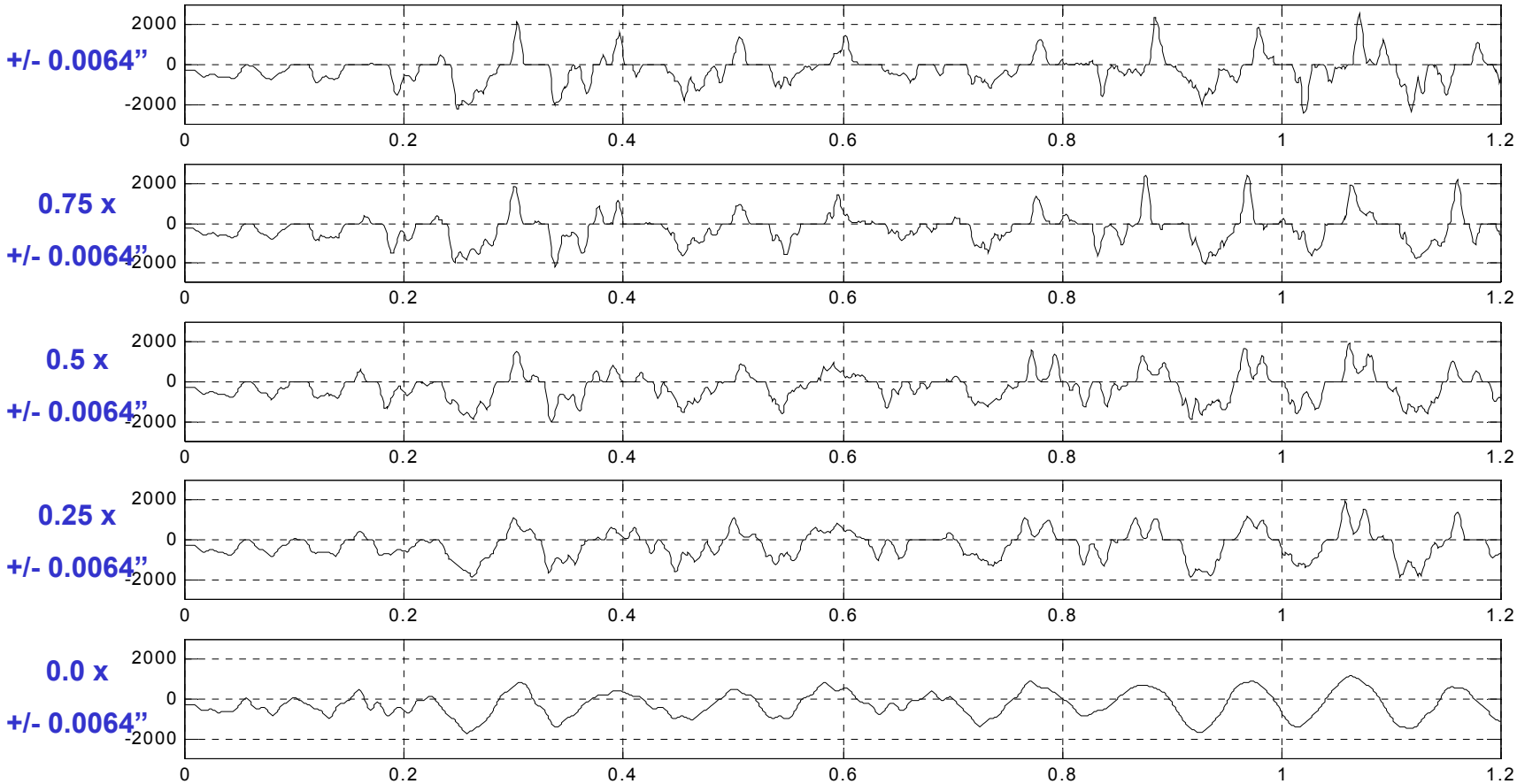
Convergence: Highly Impacted Yo Shear Force: Nom. Ld.



Battery 5: Shear Force Node 655 Yorb
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

Convergence: Highly Impacted Zo Shear Force: Nom. Ld.



Battery 5: Shear Force Node 2183 Zorb
Forcing Function: LG7525

APPLIED STRUCTURAL DYNAMICS

Concluding Remarks

- Absolute max comparisons of linear to nonlinear CLA results show significant increases in interface shear forces for kinematic mounted ORUs (Batteries)
  - Some nonlinear interface shear forces for liftoff more than double versus the linear results

- Subject Battery/FSE nonlinear shear time-histories and associated relative displacements investigated
  - Nonlinear time-histories display all reasonable characteristics (sample time-histories in this briefing)
    - No numerical “chatter/noise” in nonlinear time-histories
    - Zero deadband limit penetration
    - Proper phasing of nonlinear force/relative displacement

Concluding Remarks - Concluded

- Convergence study conducted: A study of convergence of nonlinear interface shear forces to linear as deadband limits are decreased in steps was conducted
  - Nonlinear interface shear time-histories perfectly converge to linear with decreasing deadband size
    - Sample convergence for nominal landing presented
- Conclusion: Impact of deadbands for kinematic mounted ORUs (Batteries) interface shear forces accurately computed in nonlinear CLA
  - Physical explanation provided