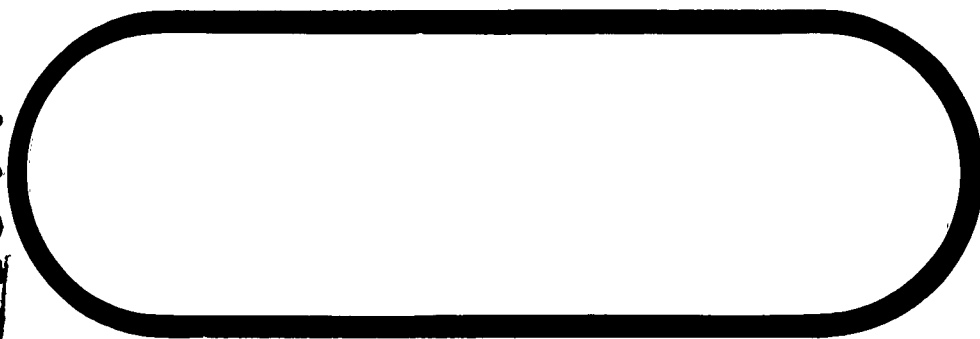


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NUMBER D2-13944-661TITLE FLIGHT ARTICLE MASS PROPERTIES REPORT FOR MINUTEMAN
WING I COMPONENTS, MISSILES 661-705 (U)MODEL NO. WA-133A CONTRACT NO. AF04(694)-16

ISSUE NO. _____ ISSUED TO _____

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ACTIVE PAGE RECORD

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REV SYM _____

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NO. D2-13944-661

SECT.

PAGE 4

TABLE OF CONTENTS

	PAGE
SUMMARY	6
1.0 <u>INTRODUCTION</u>	7
1.1 REFERENCES	7
1.2 COMPONENT SERIAL NUMBERS	7
1.3 DISCUSSION	7
1.4 CTLI PROVISIONS	8
1.5 WEIGHING PROCEDURES	8
1.6 ECP INCORPORATION	8
2.0 <u>MISSILE STATION DIAGRAM</u>	9
3.0 <u>WEIGHT AND BALANCE SUMMARY</u>	
3.1 MISSILE 661	10
3.2 MISSILE 663	11
3.3 MISSILE 664	12
3.4 MISSILE 665	13
3.5 MISSILE 666	14
3.6 MISSILE 668	15
3.7 MISSILE 670	16
3.8 MISSILE 671	17
3.9 MISSILE 672	18
3.10 MISSILE 673	19
3.11 MISSILE 675	20
3.12 MISSILE 677	21
3.13 MISSILE 678	22
3.14 MISSILE 680	23
3.15 MISSILE 682	24
3.16 MISSILE 684	25
3.17 MISSILE 685	26
3.18 MISSILE 689	27
3.19 MISSILE 691	28
3.20 MISSILE 692	29
3.21 MISSILE 694	30
3.22 MISSILE 696	31
3.23 MISSILE 698	32
3.24 MISSILE 699	33
3.25 MISSILE 701	34
3.26 MISSILE 703	35
3.27 MISSILE 705	36
3.28 MISSILE "Spare"	37
3.29 SUMMARY OF MEAN WEIGHT COMPONENTS	38
4.0 <u>SUMMARY CHECK LISTS - MISSILE SECTIONS</u>	39
5.0 <u>ENGINEERING CHANGE PROPOSALS INCORPORATED</u>	40
6.0 <u>ACTUAL WEIGHING RECORDS</u>	
6.1 INTERSTAGE - SECTION 45	41
6.2 INTERSTAGE - SECTION 47	72
6.3 AFT SKIRT - SECTION 49	103
6.4 BASE HEAT DEFLECTORS	133

SUMMARY

This report contains mass property summaries of the Boeing components for a series of Operational Wing I Minuteman missiles. The serialized components included in the data for each missile are those committed to that particular missile during the course of production in Seattle and may not be the ones finally installed during missile assembly at Air Force Plant 77.

1.0 INTRODUCTION

1.1 REFERENCES

- 1.1.1 BSD Exhibit 62-45, "Mass Properties Control Data for WS-133A Dated 3 August 1962.
- 1.1.2 CCN 258 (BSD-63MSN-2597) to AFO4(647)-580 Dated 5 October 1962.
- 1.1.3 Boeing Document D2-13943, "Flight Article Mass Properties Report for CTLI Installations."
- 1.1.4 Boeing Document D2-13944-501, "Flight Article Mass Properties Report for Missile 501 Components."
- 1.1.5 Boeing Document D2-13957-4 "Statistical Means and Dispersions for the Mass Properties of Boeing Components for the Wing I Operational Minuteman Missile - March 1, 1963."
- 1.1.6 Boeing Document D2-13945-xxx "Air Force Plant 77 Flight Article Mass Properties Report for Missile xxx."

1.2 COMPONENT SERIAL NUMBERS

Component serial numbers appear on the data summary sheet for each missile. See pages 10 through 37.

1.3 DISCUSSION

This weight report for the Boeing components of a series of Operational Wing I Minuteman missiles is presented in accordance with section 3.1.1 of BSD Exhibit 62-45 (reference 1.1.1) as authorized by CCN 258 to AFO4(647)-580 (reference 1.1.2). In order to conform more closely to the requirements of the BSD exhibit, some changes have been made to the format used in earlier reports in this series. Since the data is to be reported monthly, this report contains data for a series of missiles instead of a single missile as in the past. The data for each missile reported includes the mass properties of the major components assigned to each missile in the manufacturing records at Seattle. (These may not be the same components finally assembled together at Air Force Plant 77. See Reference 1.1.6 for the final configuration). Mean mass properties are used for components other than the interstages, aft skirt, and base heat deflectors since the weights for these remaining items are small. Mean and dispersion back-up data for these items can be found in the latest quarterly means and dispersions report (reference 1.1.5).

The data presented in this report consist of (1) sectional summaries of the total Boeing weight responsibility for each missile covered by this report, (2) a sectional summary of the components whose mean weights are used in lieu of actual weights, (3) summary check lists by missile section, (4) a list of Engineering Change Proposals incorporated on the hardware included in this report, and (5) actual weighing records for the interstages, the aft skirt, and the base heat deflectors.

The actual weighing records for the major components covered by this report can be found in section 6 (pages 41 through 132). In order to limit the size of this report, weighing diagrams and inventory lists have been omitted for all but the first unit of each interstage and skirt since the components have all been weighed in the "complete" condition. However, these records are on file and can be supplied if necessary. The change records found in section 6 are listed in order by serial number for each major component in order to assist in cross referencing the components in case of substitution at a later date.

Weight and balance data are included for a missile listed as "spare" which incorporates components having serial number 0000169. These components were scheduled for missile 658 when this line position was for a Wing I missile. Since a recent schedule change made the missile a Wing II type, the Wing I components will be reallocated at Air Force Plant 77.

1.4

CCLI PROVISIONS

The only CCLI provisions incorporated into this report are those components which are installed on every operational missile. The mass properties data for CCLI components which will be added at Vandenberg Air Force Base are reported in reference 1.1.3.

1.5

WEIGHING PROCEDURES

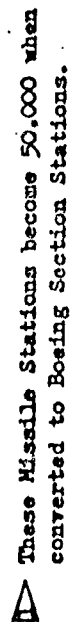
A description of the weighing procedures and an accuracy statement will be found in reference 1.1.4.

1.6

ENGINEERING CHANGE PROPOSAL (ECP) SUMMARY

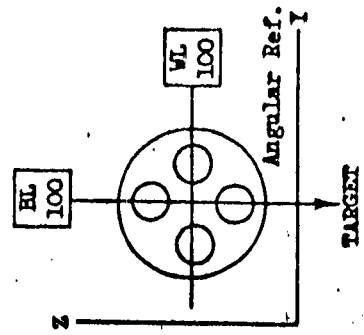
See page 40 for a list of the ECP's incorporated on the Boeing components covered by this report. The ECP's listed are those not covered by the latest revision to "Model Specification for Guided Missile Main Assemblage, S-133-1000", Dated 12 March 1963, and amended by SCN 1 through SCN 8.

2-5550-0-62



SEPARATION PLANES	MISSILE STA	INTERFACE PLANES	MISSILE STA
S-1	504.420	A	787.055
S-2	346.030	B	750.995
S-3	219.135	C	528.355
S-3 C.T.I.	209.135	D	469.273
		E	360.340
SKIRT REMOVAL PLANES		F	321.990
SR-1	469.70	G	260.215
SR-2	322.51	H	228.715
		I	155.775
NOZZLE HINGE PLANES			
N-1	778.788	M	228.715
N-2	480.853	N	218.715
N-3	330.090	L C.T.I.	145.715

Reference
25-19999
DCN-E



3.1 MISSILE NO. 661 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000130					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.07	94.65	106.92	111.26	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.48	60.08	100.25	101.44	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base	101.99		61.08	99.33	100.61		
21			Jett		75.36	79.02	99.39	101.80	.011	.006
22	45	Interstage 2-3							.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.81	149.35	105.47	109.51	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.37	67.33	100.06	101.24	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.70		68.69	99.34	100.66	.032	.020
37	47	Interstage 1-2			137.63	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.95	219.32	110.71	118.43	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			348.04	68.99	100.55	100.89	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1054.73					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.69						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 10

3.2		MISSILE NO. 663 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000142				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² X 10 ⁻³	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Snapper								
2			Silo							
3			Aero							
4	39	OTM Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.09	94.69	106.91	111.25	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.45	59.95	100.43	101.19	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.96		60.92	99.54	100.31	.011	.006
22	45	Interstage 2-3			75.34	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.78	149.32	105.48	109.52	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.49	67.33	99.73	101.15	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.82		68.69	98.95	100.54	.032	.020
37	47	Interstage 1-2			137.11	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.99	219.39	110.70	118.42	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			352.74	68.85	100.62	100.74	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1058.01					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.78						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

ORIGIN

VOL

NO. D2-13944- 66A

SEC

PAGE 11

3.3 MISSILE NO. 664 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000131						REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² ×10 ⁻³	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.24	94.97	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.16	60.37	100.31	101.19	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.67		61.42	99.40	100.31	.011	.006
22	45	Interstage 2-3			75.13	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.78	149.32	105.48	109.52	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.39	67.29	99.69	101.19	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.72		68.64	98.90	100.59	.032	.020
37	47	Interstage 1-2			137.06	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.92	219.27	110.71	118.44	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			350.94	68.97	100.72	100.85	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1055.64					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.39						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944-661

SEC

PAGE 12

3.4		MISSILE NO. 665 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000141				REPORT NO. _____ DATE _____				
LINE	SEC	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG YTS-10-3	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Adapter								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.29	95.07	106.84	111.14	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.19	60.23	100.41	101.14	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.70		61.26	99.52	100.24	.011	.006
22	45	Interstage 2-3			75.15	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.69	149.22	105.49	109.54	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.30	67.30	99.54	101.01	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.63		68.65	98.73	100.38	.032	.020
37	47	Interstage 1-2			137.00	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.87	219.18	110.72	118.45	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.09	68.80	100.72	100.78	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1055.60					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.33						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL.

NO. D2-13944-66A

SEC.

PAGE 13

3.5 MISSILE NO. 666 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000178					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. "	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2		Silo								
3		Aero								
4	39	CTLI Section								
5		Silo								
6		Aero								
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8		Silo								
9		Aero								
10	44	3rd Stage Engine			20.24	94.97	106.86	111.17	0	.004
11		Silo	0.6			89.2	110.3	117.7	0	0
12		Aero								
13		Base	0.4			131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.66	60.07	100.35	101.11	.012	.007
15		(Fwd)	Silo							
16		Aero								
17		Base	4.6			58.7	108.7	110.0	0	0
18		Silo	1.7			61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21		Jett	102.17			61.06	99.46	100.21	.011	.006
22	45	Interstage 2-3			75.48	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24		Aero								
25	46	2nd Stage Engine			38.90	149.45	105.46	109.49	.001	.021
26		Silo	1.0			103.9	112.3	121.2	0	0
27		Aero								
28		Base	3.3			187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.86	67.44	99.83	101.11	.036	.023
30		(Fwd)	Silo							
31		Aero								
32		Base	5.1			61.0	109.3	111.7	0	0
33		Silo	4.9			67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36		Jett	215.19			68.82	99.06	100.50	.032	.020
37	47	Interstage 1-2			137.34	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39		Aero								
40	48	1st Stage Engine			58.21	219.76	110.66	118.35	.003	.107
41		Silo	2.4			160.5	117.2	129.7	0	.002
42		Aero								
43		Base	3.0			314.6	100.0	100.0	0	0
44	49	Skirt			347.94	68.85	100.78	100.90	.088	.052
45		Silo	32.0			67.9	100.1	100.2	.008	.005
46		Aero								
47		Base	26.8			68.2	100.8	101.2	.007	.004
48		MISSILE			1054.65					
49		Silo	50.8							
50		Aero								
51		Base	50.5							
52		Jett	317.36							

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 14

3.6 MISSILE NO. 668 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000132						REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	GTL Section								
5			Silo							
6			Aero							
7	42	G&G Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.17	94.84	106.88	111.20	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			121.96	59.94	100.32	101.28	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		48.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.47		60.92	99.42	100.42	.011	.006
22	45	Interstage 2-3			74.98	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.97	149.52	105.45	109.47	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.71	67.59	99.76	101.12	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	216.04		68.99	98.98	100.51	.032	.020
37	47	Interstage 1-2			137.84	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.99	219.39	110.70	118.42	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			350.09	68.99	100.65	100.97	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1056.73					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.51						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944- 661

SEC

PAGE 15

3.7 MISSILE NO. 670 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000144					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.24	94.97	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.77	60.03	100.43	101.02	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.28		61.02	99.55	100.10	.011	.006
22	45	Interstage 2-3			75.57	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.42	148.93	105.53	109.61	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.11	67.39	99.88	101.01	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.44		68.76	99.12	100.38	.032	.020
37	47	Interstage 1-2			136.89	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.03	219.46	110.69	118.40	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			353.24	68.76	100.58	100.84	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1058.29					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.72						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 16

3.8 MISSILE NO. 671 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000145					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. "	LAT.	VERT.	ROLL	PITCH
1	41	RV Snapper								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.22	94.94	106.86	111.18	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.39	60.12	100.26	101.37	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.90		61.12	99.35	100.52	.011	.006
22	45	Interstage 2-3			75.30	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.95	149.50	105.45	109.48	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.45	67.47	99.83	100.97	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.78		68.86	99.07	100.35	.032	.020
37	47	Interstage 1-2			137.10	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.03	219.46	110.69	118.40	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.54	69.00	100.63	100.71	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1057.00					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.68						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO 12-13944-661

SEC

PAGE 17

3.9 MISSILE NO. 672 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000133					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.24	94.97	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.15	60.19	100.28	101.29	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.66		61.21	99.38	100.43	.011	.006
22	45	Interstage 2-3			75.84	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			39.82	150.40	105.33	109.27	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			255.26	67.34	99.81	101.42	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	217.59		68.69	99.04	100.86	.032	.020
37	47	Interstage 1-2			138.74	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.04	219.47	110.69	118.40	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			349.39	68.86	100.62	101.03	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1061.50					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	320.25						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944- 661

SEC

PAGE 18

3.10		MISSILE NO. 673 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000146				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. °	LAT. °	VERT. °	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLA Section								
5			Silo							
6			Aero							
7	42	Q&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.16	94.82	106.88	111.21	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.36	60.44	100.04	101.12	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		98.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.87		61.51	99.10	100.22	.011	.006
22	45	Interstage 2-3			75.98	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.97	149.52	105.45	109.47	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.58	67.39	99.73	101.23	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.91		68.76	98.94	100.64	.032	.020
37	47	Interstage 1-2			137.17	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.02	219.44	110.70	118.41	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.29	68.96	100.47	100.71	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1058.55					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.71						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC.

PAGE 19

3.11		MISSILE NO. 675 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000170				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x 10 ⁻³	
						LONG. °	LAT. °	VERT.	ROLL	PITCH
1	41	RV Snapper								
2			Silo							
3			Aero							
4	39	OTLA Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	88.9	108.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.30	95.09	106.84	111.13	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.10	60.01	100.28	101.26	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.61		61.00	99.39	100.36	.011	.006
22	45	Interstage 2-3			75.09	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.94	149.50	105.45	109.48	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			250.41	67.40	100.11	101.05	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	212.74		68.78	99.38	100.42	.032	.020
37	47	Interstage 1-2			135.89	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.03	219.46	110.69	118.40	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			347.89	68.92	100.76	101.00	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1049.67					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	314.35						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

ENGINE

VOL

NO D2-13944-661

SEC

PAGE 20

3.12 MISSILE NO. 677 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000147						REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. °	LAT. °	VERT. °	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	OTLI Section								
5			Silo							
6			Aero							
7	42	Q&O Section			1.02	89.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.24	94.97	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.25	60.16	100.33	101.31	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.76		61.17	99.42	100.45	.011	.006
22	45	Interstage 2-3			75.19	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.82	149.36	105.47	109.51	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.39	67.30	99.75	100.98	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.72		68.66	98.97	100.35	.032	.020
37	47	Interstage 1-2			137.06	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.90	219.23	110.72	118.45	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.34	68.88	100.60	100.89	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1056.21					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.48						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944- 661

SEC

PAGE 21

3.13 MISSILE NO. 678 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000148						REPORT NO. _____ DATE _____				
LINES	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. "	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	OTL Section								
5			Silo							
6			Aero							
7	42	G20 Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.28	95.05	106.84	111.14	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			121.72	60.02	100.19	101.29	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.23		61.02	99.26	100.42	.011	.006
22	45	Interstage 2-3			74.82	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.86	149.40	105.46	109.50	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.02	67.39	99.95	101.15	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.35		68.76	99.20	100.55	.032	.020
37	47	Interstage 1-2			137.43	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.60	218.72	110.77	118.54	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			346.74	69.01	100.62	100.79	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1051.49					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.58						

*Boeing Section Station (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 22

3.14 MISSILE NO. 680 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000179					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. "	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&O Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.23	94.95	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.12	60.20	100.06	101.35	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.63		61.21	99.11	100.50	.011	.006
22	45	Interstage 2-3			75.82	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.78	149.32	105.48	109.52	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			250.85	67.50	100.11	101.36	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	213.18		68.89	99.38	100.79	.032	.020
37	47	Interstage 1-2			136.15	219.32	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.95	219.32	110.71	118.43	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			347.44	68.94	100.51	100.78	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1051.36					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	315.81						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO 12-13944- 661

SEC

PAGE 23

3.15 MISSILE NO. 682 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000149					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² ×10 ⁻³	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.21	94.92	106.87	111.18	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.21	60.08	100.42	101.04	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.72		61.08	99.54	100.14	.011	.006
22	45	Interstage 2-3			75.88	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Sta. Engine			38.88	149.42	105.46	109.50	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			251.92	67.46	100.12	100.73	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.25		68.85	99.39	100.05	.032	.020
37	47	Interstage 1-2			136.78	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.91	219.25	110.72	118.44	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			352.34	68.96	100.71	100.96	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1058.15					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.97						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 24

3.16 MISSILE NO. 684 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000150					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.16	94.82	106.88	111.21	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.27	60.17	100.40	101.14	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.78		61.18	99.52	100.25	.011	.006
22	45	Interstage 2-3			75.92	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			39.40	149.97	105.39	109.37	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.45	67.49	100.15	101.38	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	214.78		68.88	99.44	100.82	.032	.020
37	47	Interstage 1-2			137.10	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.97	219.35	110.71	118.42	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.39	69.08	100.80	100.89	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1058.68					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.56						

*Boeing Station Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 25

3.17 MISSILE NO. 685 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000151					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.24	94.97	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.10	60.02	100.43	101.50	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.61		61.02	99.54	100.67	.011	.006
22	45	Interstage 2-3			75.09	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.30	148.80	105.54	109.64	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.93	67.35	99.95	101.05	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	216.26		68.70	99.20	100.43	.032	.020
37	47	Interstage 1-2			137.97	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.83	219.11	110.73	118.47	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			349.19	68.93	100.76	100.82	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1055.67					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.87						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-1394- 66

SEC.

PAGE 26

3.18		MISSILE NO. 689 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000152				REPORT NO. _____ DATE _____				
LINE	S/N	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA: SLUG FT ² x10 ⁻³	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.26	95.01	106.85	111.16	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.42	60.22	100.23	101.10	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.93		61.25	99.31	100.19	.011	.006
22	45	Interstage 2-3			75.32	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.95	149.50	105.45	109.48	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.24	67.35	100.33	101.33	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.57		68.71	99.65	100.76	.032	.020
37	47	Interstage 1-2			137.56	95.45	101.25	102.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.98	219.37	110.70	118.42	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			352.84	68.98	100.50	100.82	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1059.59					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.50						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL
SEC

NO. D2-13944-661
PAGE 27

3.19		MISSILE NO. 691 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000153				REPORT NO. _____ DATE _____				
LINE	S/N	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLA Section								
5			Silo							
6			Aero							
7	42	GLO Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.21	94.92	106.87	111.18	0	.004
11			Silo	0.6		86.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.22	60.09	100.11	101.16	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.73		61.10	99.16	100.27	.011	.006
22	45	Interstage 2-3			75.17	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.83	149.37	105.47	109.51	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			252.67	67.66	99.88	100.95	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.00		69.08	99.12	100.31	.032	.020
37	47	Interstage 1-2			137.23	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.85	219.15	100.73	118.46	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			348.19	68.94	100.72	101.02	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1053.39					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	316.73						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO. D2-13944-661

SEC.

PAGE 28

3.20 MISSILE NO. 692 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000171					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. "	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLY Section								
5			Silo							
6			Aero							
7	42	Q&Q Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.24	91.97	106.86	111.17	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.95	60.20	100.30	101.26	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.46		61.22	99.40	100.40	.011	.006
22	45	Interstage 2-3			75.69	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.92	149.47	105.46	109.54	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.08	67.13	100.03	101.38	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.41		68.45	99.30	100.82	.032	.020
37	47	Interstage 1-2			137.47	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.02	219.44	110.70	118.41	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.59	68.81	100.45	100.68	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1058.98					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.87						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 29

3.21 MISSILE NO. 694 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000154					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Snapper								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	GEO Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.28	95.05	106.84	111.14	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.13	60.24	100.22	101.21	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.64		61.27	99.30	100.34	.011	.006
22	45	Interstage 2-3			75.11	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.86	149.40	105.46	109.50	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.24	67.36	99.77	101.02	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.57		68.72	98.99	100.40	.032	.020
37	47	Interstage 1-2			137.56	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.06	219.51	110.69	118.39	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			342.54	68.83	100.55	101.00	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1048.80					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.21						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944-661

SEC

PAGE 30

3.22 MISSILE NO. 696 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000155					REPORT NO. _____ DATE _____					
LINE	SZ	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10-3	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Snapper								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G2C Section			1.02	89.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.32	95.12	106.83	111.12	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			121.55	60.07	100.09	101.07	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.06		61.07	99.13	100.16	.011	.006
22	45	Interstage 2-3			74.69	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.82	149.36	105.47	109.51	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			254.06	67.42	99.92	100.90	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	216.39		68.78	99.17	100.26	.032	.020
37	47	Interstage 1-2			138.04	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.92	219.27	110.71	118.44	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			345.99	68.73	100.57	100.94	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1052.41					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.45						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944-661

SEC

PAGE 31

3.23 MISSILE NO. 698 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000180					REPORT NO. _____ DATE _____					
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT2x10-3	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	02C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.08	94.67	106.91	111.26	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.07	60.07	100.35	101.36	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.58		61.06	99.44	100.51	.011	.006
22	45	Interstage 2-3			75.07	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.90	149.45	105.46	109.49	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.96	67.39	99.69	101.12	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	216.29		68.75	98.91	100.51	.032	.020
37	47	Interstage 1-2			137.99	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.00	219.40	110.70	118.41	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			347.99	69.02	100.63	100.85	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1055.08					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.87						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO. D2-13944- 663

SEC

PAGE 32

3.24		MISSILE NO. 699 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000156**				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.30	95.09	106.84	111.13	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.15	60.12	100.36	101.26	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.66		61.12	99.48	100.39	.011	.006
22	45	Interstage 2-3			75.84	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.78	149.32	105.48	109.52	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.62	67.51	99.90	101.18	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.95		68.89	99.16	100.58	.032	.020
37	47	Interstage 1-2			137.78	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.92	219.27	110.71	118.44	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			348.29	68.82	100.62	100.90	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1056.70					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	318.61						

*Boeing Section Stations (See Missile Station Diagram)

2-9550-0-58

** Stage III Heat Deflector
S/N 0000915

ENGINE

VOL.

NO D2-13944-661

PAGE 33

3.25 MISSILE NO. 701 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000157						REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. *	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.16	94.82	106.88	111.21	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.31	60.05	100.40	101.20	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.82		61.04	99.51	100.33	.011	.006
22	45	Interstage 2-3			75.23	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			39.05	149.60	105.44	109.46	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.46	67.21	99.80	101.11	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.79		68.54	99.02	100.50	.032	.020
37	47	Interstage 1-2			137.69	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.99	219.39	110.70	118.42	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			348.09	68.97	100.76	100.94	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1055.00					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.61						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 34

3.26		MISSILE NO. 703 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000158				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG.*	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.21	94.92	106.87	111.18	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			123.39	60.18	100.36	101.20	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	102.90		61.20	99.48	100.33	.011	.006
22	45	Interstage 2-3			76.00	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			39.04	149.59	105.44	109.46	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			255.63	67.32	99.79	101.20	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.004	.001
36			Jett	217.96		68.66	99.02	100.60	.032	.020
37	47	Interstage 1-2			138.97	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			57.91	219.25	110.72	118.44	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			351.99	69.10	100.61	100.88	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1064.16					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	220.86						

2-5550-0-58

*Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944-661

PC

PAGE 35

3.27		MISSILE NO. 705 WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000159				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.30	95.09	106.84	111.13	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.45	60.03	100.14	101.44	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned Portion	Aero							
20			Base							
21			Jett	101.96		61.02	99.21	100.61	.011	.006
22	45	Interstage 2-3			75.34	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.82	149.36	105.47	109.51	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			253.46	67.28	100.09	101.20	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned Portion	Aero							
35			Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	215.79		68.63	99.36	100.61	.032	.020
37	47	Interstage 1-2			137.69	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.13	219.63	110.68	118.37	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			348.54	68.99	100.60	100.93	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1055.75					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	317.75						

2-5550-0-58 *Boeing Section Stations (See Missile Station Diagram)

BOEING

VOL

NO D2-13944-661

SEC

PAGE 36

348		MISSILE NO. Unassigned (Spare) WEIGHT AND BALANCE SUMMARY MAJOR COMPONENTS S/N 0000169				REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG. °	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0	0	0
8			Silo							
9			Aero							
10	44	3rd Stage Engine			20.27	95.03	106.85	111.15	0	.004
11			Silo	0.6		89.2	110.3	117.7	0	0
12			Aero							
13			Base	0.4		131.8	100.0	100.0	0	0
14	45	Interstage 2-3			122.34	60.01	100.50	101.41	.012	.007
15		(Fwd)	Silo							
16			Aero							
17			Base	4.6		58.7	108.7	110.0	0	0
18			Silo	1.7		61.7	100.4	100.6	0	0
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	101.85		61.00	99.63	100.57	.011	.006
22	45	Interstage 2-3			75.25	79.02	99.39	101.80	.008	.004
23		(Aft)	Silo	2.6		81.2	100.6	101.0	0	0
24			Aero							
25	46	2nd Stage Engine			38.81	149.35	105.47	109.51	.001	.021
26			Silo	1.0		103.9	112.3	121.2	0	0
27			Aero							
28			Base	3.3		187.7	100.0	100.0	0	0
29	47	Interstage 1-2			250.69	67.39	100.11	100.99	.036	.023
30		(Fwd)	Silo							
31			Aero							
32			Base	5.1		61.0	109.3	111.7	0	0
33			Silo	4.9		67.2	100.0	100.0	.001	0
34		Jettisoned	Aero							
35		Portion	Base	7.3		67.4	100.3	100.2	.001	.001
36			Jett	213.02		68.77	99.38	100.36	.032	.020
37	47	Interstage 1-2			136.06	96.45	101.25	100.85	.028	.016
38		(Aft)	Silo	5.6		97.6	101.5	102.6	.001	.001
39			Aero							
40	48	1st Stage Engine			58.00	219.40	110.70	118.41	.003	.107
41			Silo	2.4		160.5	117.2	129.7	0	.002
42			Aero							
43			Base	3.0		314.6	100.0	100.0	0	0
44	49	Skirt			349.89	68.92	100.79	100.88	.088	.052
45			Silo	32.0		67.9	100.1	100.2	.008	.005
46			Aero							
47			Base	26.8		68.2	100.8	101.2	.007	.004
48		MISSILE			1052.33					
49			Silo	50.8						
50			Aero							
51			Base	50.5						
52			Jett	314.87						

*Boeing Section Stations (See Missile Station Diagram)

2-5550-0-58

BOEING

VOL

NO D2-13944-661

SEC

PAGE 37

3.29 WEIGHT AND BALANCE SUMMARY MEAN WEIGHT COMPONENTS ** (APPLICABLE TO ALL MISSILES)						REPORT NO. _____ DATE _____				
LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY			INERTIA SLUG FT ² x10 ⁻³	
						LONG.*	LAT.	VERT.	ROLL	PITCH
1	41	RV Spacer								
2			Silo							
3			Aero							
4	39	CTLI Section								
5			Silo							
6			Aero							
7	42	G&C Section			1.02	80.9	100.0	100.0		
8			Silo							
9			Aero							
10	44	3rd Stage Engine			14.02	78.05	109.90	116.12		
11			Silo							
12			Aero							
13			Base							
14	45	Interstage 2-3			20.43	59.50	105.46	107.81		
15		(Fwd)	Silo							
16			Aero							
17			Base							
18			Silo							
19		Jettisoned	Aero							
20		Portion	Base							
21			Jett	9.44		61.56	101.43	104.88		
22	45	Interstage 2-3			8.16	81.65	99.34	98.49		
23		(Aft)	Silo							
24			Aero							
25	46	2nd Stage Engine			18.48	103.86	111.49	119.98		
26			Silo							
27			Aero							
28			Base							
29	47	Interstage 1-2			23.65	64.87	105.68	111.26		
30		(Fwd)	Silo							
31			Aero							
32			Base							
33			Silo							
34		Jettisoned	Aero							
35		Portion	Base							
36			Jett	10.78		68.79	97.93	108.77		
37	47	Interstage 1-2			10.00	97.15	103.19	102.75		
38		(Aft)	Silo							
39			Aero							
40	48	1st Stage Engine			36.70	161.96	116.91	129.10		
41			Silo							
42			Aero							
43			Base							
44	49	Skirt			13.19	62.52	105.50	109.22		
45			Silo							
46			Aero							
47			Base							
48		MISSILE			145.65					
49			Silo							
50			Aero							
51			Base							
52			Jett							

* Boeing Section Stations (See Missile Diagram)

2-5550-0-58

** See Check List on Page 39
for details.

BOEING

VOL

NO D2-13944-661

SEC

PAGE 38

5.0

**ENGINEERING CHANGE PROPOSAL (ECP) INCORPORATION
APPLICABLE TO WING I MISSILES 661 THROUGH 705**

The following ECP's have not been incorporated into "Model Specification Guided Missile Main Assemblage (S-133-1000)" Dated 12 March 1962 and amended by SCN 1 through SCN 8. However, the mass properties of these ECP's have been incorporated into this report unless otherwise noted.

ECP NO. (WS-133A-BO-)	ECP TITLE	STAGE	WEIGHT CHANGE	WEIGHT CHANGE INCORPORATED IN THIS REPORT
116-9	Linear Shaped Charge Destruct System - First Stage Engine	2	-.1	Yes
173	Cancellation of MRCN 6012	3	-.6	Yes
201	First Stage Thermal Insulation Revision-Operational Wing I Missiles	1	-1.4	Yes
232	Interstage Compatibility for CTLI Kit	All	Negl.	Yes
233	Provisioning of Lower Raceway Foam-First Stage Engine	1	-.4	Yes
236	Second Stage CTLI and Operational Raceway Foam Revisions	2	Negl.	Yes
259	Removal of Ramps from Stage I Forward Joint - Operational Wing I	1	-1.8	Yes
265	Lengthen Attach Bolts for Stage I Aft Raceway Cap	1	Negl.	Yes
277	Removal of Ramps from Second Stage Engine - Wing I Operational	2	-2.6	Yes
287	Boeing Support of Hercules Ignitor Basket Change	3	Negl.	Yes
326	Insulation of Autonetics Connector on Stage III Operational Pressure Transducer	3	Negl.	Yes
372	Insulation of Ordnance at R/W Cutout 1-2 and 2-3 Interstages	2&3	Negl.	Yes
540	Potting and Bonding Deletion for Vandenberg Air Force Base Missiles	1,2,3	-	No*

* ECP 540 postpones the potting of certain components on scheduled CTLI missiles until final installation at Vandenberg Air Force Base. Since the potting is considered part of the operational weight, its mass properties are still included in this report even though it will be applied at VAFB.

SERIAL NO. 0000130

6.1.1

ACTUAL WEIGHT RECORD - INTERSTAGE

U/O MISSILE 651

DRAWING NO. 25-27204-64

CHECK LIST NO. 5

REPORT NO. OPR-2012

MISSILE MODEL WS-133

DCN

REPORTED BY BS/TV

PAGE NO.

CONFIGURATION TAH

ADCN

CHECKED BY GVR

DATE 3/11/63

LONGITUDINAL REFERENCE DATUM

LATERAL REFERENCE DATUM

TARGET

VERTICAL REFERENCE DATUM

WEIGHING DATA				DIMENSIONAL DATA						
REACTION	GR. WT.	TARE	CORR.	NET WT.	DIA.	INCHES	DIM.	INCHES	DIM.	INCHES
R1	70.25	32.00		38.25	A1	47.343	E1	80.000	H5	80.000
R2	151.45	103.80		47.65	A2	47.354	E4	80.000	H8	80.000
R3	65.50	31.55		33.95	B3	88.351	F2	120.000	J6	120.000
R4	153.15	103.75		49.40	B4	88.351	F3	119.999	J7	119.999
TOTAL	440.35	271.10		169.25	G	50.000	G	100.000	K	100.000
					D	88.350				

LONGITUDINAL C.G.				LATERAL C.G.				VERTICAL C.G.			
REACTION	NET WT.	ARM	MOMENT	REACTION	NET WT.	ARM	MOMENT	REACTION	NET WT.	ARM	MOMENT
R1	38.25	47.343		R1	38.25	80.000		R5	36.40	80.000	
R2	47.65	47.354		R2	47.65	120.000		R6	49.80	120.000	
R3	33.95	88.351		R3	33.95	119.999		R7	38.95	119.999	
R4	49.40	88.351		R4	49.40	80.000		R8	44.10	80.000	
AS WGD	169.25	67.54	11,431.3	AS WGD	169.25	99.28	16,804.0	AS WGD	169.25	100.97	17,090.0

FIG. 1A NUMBER: 6501 SERIAL NUMBER: 0300130

CHECK LIST NO.		6.1.1 MISSILE WEIGHING CHECK LIST		RECORD OF CHECKING (DATE)																									
DATE		3-11-63		Mo	Day	Yr																							
MODEL		MS-133		FINAL ASSEMBLY DRAWING NO. 21-50150																									
SECTION		L5		MISSILE NO. 661																									
ITEM NUMBER		DESCRIPTION		PART NO.		WEIGHT		X ARM		Y ARM		Z ARM		BASIC WEIGHT		AS WEIGHED		REMOTE SITE SHIPMENT		AS RECEIVED		REMOTE SITE		AS WEIGHED		REMOTE SITE		LAUNCH	
		BODY SECTION ASSY		25-27201-64																									
		Interstage Assy - Structural		25-27203-13																									
		Instr Rack & Accelerometer		25-31659-4																									
		Marking Instl - Section L5		25-30134-																									
		Cover - Insulating		29-25598-1																									
		Cover - Insulating		29-24652-1																									
		Cover - Insulating		29-23365-1		(8)																							
		Cover - Insulating		29-23365-2		(8)																							
		Cover - Insulating		29-23365-3		(7)																							
		Cover - Insulating		29-23365-4		(4)																							
		Cover - Insulating		29-23365-5																									
		Cover - Insulating		29-23365-6		(4)																							
		Seal - Forward		29-23671-1		(2)																							
		Shield - Amplifier		29-23713-1																									
		Shield - Amplifier		29-23713-2																									
		Door - Access, Detonator		26-11878-1																									
		Door - Access, Ignitor Stage III		26-11885-1																									
		Door - Access, Detonator		26-12909-1																									
		Door - Access, Ordnance		29-22673-1		(3)																							
		Closure Panel - Access, Ordnance		29-22672-1																									
		Door - Access, Ignitor Stage II		29-22361-1																									
		Closure Panel - Access, Booster Sirt		29-22081-3																									
		Bolt - 100° Head		(2) BAC30EM-3-3																									
		Bolt - 100° Head		(4) BAC30EM-3-4																									
		Bolt - 100° Head		(14) BAC30EM-4-4																									
		Bolt - 100° Head		(6) BAC30EM-4-7																									
		Bolt - 100° Head		(30) BAC30EM-4-10																									
		Bolt - 100° Head		(4) BAC30EM-3-3																									
		Plug Screw, Insulated		26-15247-3-6																									

2-6550-0-21

BOEING

NO. D2-13944-661

PAGE 42

6.1.1 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(604)-046		REPORT NO.		OPR 2012	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/11/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		T. VOGEL	
SERIAL NO.		0000130		U.O. MISSILE		661		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
				ARM		MOMENT		ARM		MOMENT	
1	25-27204-64	Body Section (As Weighed)	169.25	67.54	11,431.3	99.28	16,804.0	100.97	17,090.0		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	169.25	67.54	11,431.3	99.28	16,804.0	100.97	17,090.0		
12											
13											
14											
15											
16											
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6.1.2 WEIGHT AND BALANCE CHANGE RECORD													
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2014			
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/14/63			
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		R. ST. ROBERTS			
SERIAL NO.		0000131		U.O. MISSILE		664		APPROVED		G. ROBERTS			
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE									
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS			
						ARM		MOMENT		ARM		MOMENT	
1	25-27204-64	Body Section (As Weighed)		168.70		67.75	11,429.8	99.32	16,756.0	100.79	17,003.0		
2													
3													
4													
5		ADD:		0									
6													
7													
8		DEDUCT:		0									
9													
10													
11	25-27204-64	Body Section (Complete)		168.70		67.75	11,429.8	99.32	16,756.0	100.79	17,003.0		
12													
13													
14													
15													
16													
17													
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6.1.3 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(64)-046		REPORT NO.		OPR-2017	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000132		U.O. MISSILE		668		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		ARM		ARM	
1	25-27204-64	Body Section (As Weighed)	168.35	67.44	11,353.8	99.33	16,721.9	100.86	16,979.9		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10	25-27204-64	Body Section (Complete)	168.35	67.44	11,353.8	99.33	16,721.9	100.86	16,979.9		
11											
12											
13											
14											
15											
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6.1.4 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFO4(694)-046		REPORT NO.		OFR-2020	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000133		U.O. MISSILE		672		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1											
2	25-27204-64 Body Section (As Weighed)	170.40	67.62	11,522.7	99.31	16,922.0	100.87	17,187.9			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27204-64 Body Section (Complete)	170.40	67.62	11,522.7	99.31	16,922.0	100.87	17,187.9			
12											
13											
14											
15											
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6.1.5 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2013	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/11/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000142		U.O. MISSILE		663		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT			
1											
2	25-27204-64 Body Section (As Weighed)	169.20	67.45	11,412.5	99.41	16,819.9	100.79	17,053.9			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27204-64 Body Section (Complete)	169.20	67.45	11,412.5	99.41	16,819.9	100.79	17,053.9			
12											
13											
14											
15											
16											
17											
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6.1.6 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2015	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000143		U.O. MISSILE		665		APPROVED		G. ROBERTS	

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1	25-27204-64	Body Section (As Weighed)	168.75	67.65	11,415.7	99.40	16,773.9	100.75	17,001.9
2									
3									
4			0						
5		ADD:							
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27204-64	Body Section (Complete)	168.75	67.65	11,415.7	99.40	16,773.9	100.75	17,001.9
12									
13									
14									
15									
16									
17									
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6.1.7 WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR <u>BOEING</u>		CONTRACT NO. <u>AFO4(694)-046</u>		REPORT NO. <u>OPR-2018</u>					
COMPONENT <u>INTERSTAGE 2-3</u>		LOT NO.		DATE <u>3/18/63</u>					
MODEL NO. <u>WS-133</u>		DRAWING NO. <u>25-27204-64</u>		PREPARED <u>H. CHRISTIANSEN</u>					
SERIAL NO. <u>0000144</u>		U.O. MISSILE <u>670</u>		APPROVED <u>G. ROBERTS</u>					
EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	25-27204-64 Body Section (As Weighed)	169.75	67.51	11,459.0	99.42	16,875.9	100.67	17,087.9	
3									
4									
5	ADD:	0							
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27204-64 Body Section (Complete)	169.75	67.51	11,459.0	99.42	16,875.9	100.67	17,087.9	
12									
13									
14									
15									
16									
17									
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6.1.8 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(604)-046		REPORT NO.		OPR-2019	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		T. VOGEL	
SERIAL NO.		0000145		U.O. MISSILE		671		APPROVED		G. ROBERTS	

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE						
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1								
2	25-27204-64 Body Section (As Weighed)	169.10	67.57	11,426.2	99.29	16,790.0	100.93	17,068.0
3								
4								
5	ADD:	0						
6								
7								
8	DEDUCT:	0						
9								
10								
11	25-27204-64 Body Section (Complete)	169.10	67.57	11,426.2	99.29	16,790.0	100.93	17,068.0
12								
13								
14								
15								
16								
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18								
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2-5550-0-11 R1

6.1.9 WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING		CONTRACT NO.		REPORT NO.	
COMPONENT INTERSTAGE 2-3		AF04(604)-046		3/20/63	
MODEL NO. WS-133		DRAWING NO. 25-27204-64		PREPARED R. ST. ROMAINE	
SERIAL NO. 0000146		U.O. MISSILE 673		APPROVED G. ROBERTS	

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE						
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1	25-27204-64 Body Section (As Weighed)	170.75	67.81	11,578.1	99.14	16,928.0	100.74	17,202.0
2								
3								
4		0						
5	ADD:							
6								
7								
8	DEDUCT:	0						
9								
10								
11	25-27204-64 Body Section (Complete)	170.75	67.81	11,578.1	99.14	16,928.0	100.74	17,202.0
12								
13								
14								
15								
16								
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BOEING

NO. D2-13944-661

PAGE 52

6.1.10 WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR BOEING		CONTRACT NO. AF04(694)-046		REPORT NO. OPR-2023							
COMPONENT INTERSTAGE 2-3		LOT NO.		DATE 3/25/63							
MODEL NO. WS-133		DRAWING NO. 25-27204-64		PREPARED H. CHRISTIANSEN							
SERIAL NO. 0000147		U.O. MISSILE		APPROVED G. ROBERTS							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	WEIGHT AND BALANCE							
				X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT		
1	225-27204-64	Body Section (As Weighed)	168.85	67.60	11,413.9	99.34	16,774.0	100.88	17,033.9		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	168.85	67.60	11,413.9	99.34	16,774.0	100.88	17,033.9		
12											
13											
14											
15											
16											
17											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFM(694)-046		REPORT NO.		OPR-2024	
COMPONENT		INTERFERENCE 2-3		LOT NO.				DATE		3/22/63	
MODEL NO.		MS-133		DRAWING NO.		25-27204-64		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000148		U.O: MISSILE		670		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
ENTR	PART NO.	DESCRIPTION OF EQUIPMENT		WEIGHT	X AXIS		Y AXIS		Z AXIS		
					ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27204-64	Body Section (As Weighed)		167.95	67.50	11,337.0	99.24	16,668.0	100.86	16,939.9	
2											
3											
4				0							
5		ADD:									
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27204-64	Body Section (Complete)		167.95	67.50	11,337.0	99.24	16,668.0	100.86	16,939.9	
12											
13											
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15											
16											
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2026	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/28/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000149		U.O. MISSILE		682		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT	X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT	
1	25-27204-64	Body Section (As Weighed)		170.50	67.55	11,517.1	99.41	16,950.0	100.69	17,168.0	
2											
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27204-64	Body Section (Complete)		170.50	67.55	11,517.1	99.41	16,950.0	100.69	17,168.0	
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 5

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2027	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/28/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000150		U.O. MISSILE		684		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27204-64	Body Section (As Weighed)	170.60	67.61	11,534.2	99.40	16,958.0	100.76	17,190.0		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	170.60	67.61	11,534.2	99.40	16,958.0	100.76	17,190.0		
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 56

2-550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AF04(604)-046	REPORT NO.	OFR-2028
COMPONENT	INTERSTAGE 2-3	LOT NO.		DATE	4/2/63
MODEL NO.	WS-133	DRAWING NO.	25-27204-64	PREPARED	R. ST. ROMAIN
SERIAL NO.	0000151	U.O. MISSILE	685	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE						
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1								
2	25-27204-64 Body Section (As Weighed)	168.60	67.50	11,380.0	99.41	16,760.0	101.01	17,030.0
3								
4								
5	ADD:	0						
6								
7								
8	DEDUCT:	0						
9								
10								
11	25-27204-64 Body Section (Complete)	168.60	67.50	11,380.0	99.41	16,760.0	101.01	17,030.0
12								
13								
14								
15								
16								
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BOEING

NO. D2-13944-661

PAGE 57

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2029	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		4/2/63	
MODEL NO.		MS-133		DRAWING NO.		25-27204-64		PREPARED		W. BAIRD	
SERIAL NO.		0000152		U.O. MISSILE		689		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT			
1											
2	25-27204-64 Body Section (As Weighed)	169.15	67.65	11,442.9	99.27	16,792.0	100.72	17,036.0			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27204-64 Body Section (Complete)	169.15	67.65	11,442.9	99.27	16,792.0	100.72	17,036.0			
12											
13											
14											
15											
16											
17											
18											
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BOEING

NO. D2-13944-661

PAGE 58

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AF04(694)-046	REPORT NO.	OPR-2030
COMPONENT	INTERSTAGE 2-3	LOT NO.		DATE	4/2/63
MODEL NO.	WS-133	DRAWING NO.	25-27204-64	PREPARED	W. FAIRD
SERIAL NO.	0000153	U.O. MISSILE	691	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE						
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1									
2	25-27204-64	Body Section (As Weighed)	168.80	67.55	11,401.8	99.18	16,742.0	100.77	17,010.0
3									
4									
5		ADD:	0						
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27204-64	Body Section (Complete)	168.80	67.55	11,401.8	99.18	16,742.0	100.77	17,010.0
12									
13									
14									
15									
16									
17									
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BOEING

NO. D2-13944-661

PAGE 59

2-5550-O-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFC4(694)-046		REPORT NO.		OPR-2032	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		4/3/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		W. BAIRD	
SERIAL NO.		0000154		U.O. MISSILE		694		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1			168.65	67.66	11,411.0	99.26	16,740.0	100.81	17,002.0		
2	25-27204-64	Body Section (As Weighed)									
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	168.65	67.66	11,411.0	99.26	16,740.0	100.81	17,002.0		
12											
13											
14											
15											
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BOEING

NO D2-13944-661

PAGE 60



WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AFO4(694)-046	REPORT NO.	OPR-2033
COMPONENT	INTERSTAGE 2-3	LOT NO.		DATE	4/2/63
MODEL NO.	MS-133	DRAWING NO.	25-27204-64	PREPARED	W. FAIRD
SERIAL NO.	0000155	U.O. MISSILE	696	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1		167.65	67.53	11,320.7	99.16	16,624.0	100.70	16,882.0	
2	Body Section (As Weighed)								
3									
4									
5	ADD:	0							
6									
7									
8	DEDUCT:	0							
9									
10									
11	Body Section (Complete)	167.65	67.53	11,320.7	99.16	16,624.0	100.70	16,882.0	
12									
13									
14									
15									
16									
17									
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO. AFO4(694)-046		REPORT NO. OPR-2035			
COMPONENT		INTERSTAGE 2-3		LOT NO.		DATE 4/5/63			
MODEL NO.		WS-133		DRAWING NO. 25-27204-64		PREPARED W. BAIRD			
SERIAL NO.		0000156		U.O. MISSILE 699		APPROVED G. ROBERTS			
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
ENT	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1	25-27204-64	Body Section (As Weighed)	170.40	67.57	11,514.5	99.37	16,932.0	100.85	17,184.0
2									
3									
4									
5		ADD:	0						
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27204-64	Body Section (Complete)	170.40	67.57	11,514.5	99.37	16,932.0	100.85	17,184.0
12									
13									
14									
15									
16									
17									
18									
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BOEING

NO. D2-13944-661

PAGE 62

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING
 COMPONENT INTERSTAGE 2-3
 MODEL NO. WS-133
 SERIAL NO. 0000157

CONTRACT NO. AF04(604)-046
 LOT NO. 25-27204-64
 DRAWING NO. 701
 U.O. MISSILE

REPORT NO. OPR-2036
 DATE 4/10/63
 PREPARED H. CHRISTIANSEN
 APPROVED G. ROBERTS

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
		WEIGHT	X AXIS		Y AXIS		Z AXIS		
PART NO.	DESCRIPTION OF EQUIPMENT		ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	25-27204-64 Body Section (As Weighed)	168.95	67.52	11,406.8	99.39	16,791.9	100.80	17,029.9	
3									
4									
5	ADD:	0							
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27204-64 Body Section (Complete)	168.95	67.52	11,406.8	99.39	16,791.9	100.80	17,029.9	
12									
13									
14									
15									
16									
17									
18									
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WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFC-1694-046		REPORT NO.	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED	
SERIAL NO.		0000158		U.O. MISSILE		703		APPROVED	
								H. CHRISTIANSEN	
								G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	Body Section (As Weighed)	170.80	67.62	11,549.8	99.37	16,972.0	100.81	17,218.0	
3									
4		0							
5	ADD:								
6									
7									
8	DEDUCT:	0							
9									
10									
11	Body Section (Complete)	170.80	67.62	11,549.8	99.37	16,972.0	100.81	17,218.0	
12									
13									
14									
15									
16									
17									
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2-5550-0-11 RI

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2038	
COMPONENT		INTERPAGE 2-3		LOT NO.				DATE		4/10/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000159		U.O. MISSILE		705		APPROVED		G. ROBERTS	
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27204-64	Body Section (As We	169.20	67.51	11,422.8	99.21	16,786.0	100.97	17,084.0		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	169.20	67.51	11,422.8	99.21	16,786.0	100.97	17,084.0		
12											
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14											
15											
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BOEING

NO.D2-13944-661

PAGE 65

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2010	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/3/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		R. ST. ROEMAN	
SERIAL NO.		0000169		U.O. MISSILE				APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
ENIT	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27204-64	Body Section (As Weighed)	169.00	67.49	11,405.1	99.47	16,810.0	100.95	17,060.0		
2											
3											
4			0								
5		ADD:									
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	169.00	67.49	11,405.1	99.47	16,810.0	100.95	17,060.0		
12											
13											
14											
15											
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2022	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3/21/63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000170		U.O: MISSILE		675		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1			168.60	67.49	11,378.0	99.30	16,742.0	100.84	17,002.0		
2	25-27204-64	Body Section (As Weighed)									
3											
4			0								
5		ADD:									
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27204-64	Body Section (Complete)	168.60	67.49	11,378.0	99.30	16,742.0	100.84	17,002.0		
12											
13											
14											
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BOEING

NO. D2-13944-661

PAGE 67

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING
 COMPONENT INTERSTAGE 2-3
 MODEL NO. WS-133
 SERIAL NO. 0000171

CONTRACT NO. AF04(694)-046
 LOT NO. _____
 DRAWING NO. 25-27204-64
 U.O. MISSILE 692

REPORT NO. OPR-2031
 DATE 4/4/63
 PREPARED W. BAIRD
 APPROVED G. ROBERTS

EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE						
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1									
2	25-27204-64	Body Section (As Weighed)	170.05	67.63	11,500.0	99.32	16,890.0	100.85	17,150.0
3									
4									
5		ADD:	0						
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27204-64	Body Section (Complete)	170.05	67.63	11,500.0	99.32	16,890.0	100.85	17,150.0
12									
13									
14									
15									
16									
17									
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WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING CONTRACT NO. AF01(694)-046 REPORT NO. OPR-2016
 COMPONENT LITERSTAGE 2-3 LOT NO. DATE 3/18/63
 MODEL NO. WS-133 DRAWING NO. 25-27204-64 PREPARED H. CHRISTIANSEN
 SERIAL NO. 0000178 U.O. MISSILE 666 APPROVED G. ROBERTS

EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1										
2	25-27204-64	Body Section (As Weighed)	169.55	67.53	11,449.6	99.36	16,845.9	100.73	17,077.9	
3										
4										
5		ADD:	0							
6										
7										
8		DEDUCT:	0							
9										
10										
11	25-27204-64	Body Section (Complete)	169.55	67.53	11,449.6	99.36	16,845.9	100.73	17,077.9	
12										
13										
14										
15										
16										
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2-5550-0-11 R

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2025	
COMPONENT		INTERSTAGE 2-3		LOT NO.				DATE		3-28-63	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000179		U.O. MISSILE		680		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT			WEIGHT	X AXIS		Y AXIS		Z AXIS		
					ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27204-64	Body Section (As Weighed)			170.35	67.63	11,520.2	99.15	16,889.9	100.91	17,189.9
2											
3											
4											
5		ADD:			0						
6											
7											
8		DEDUCT:			0						
9											
10											
11	25-27204-64	Body Section (Complete)			170.35	67.63	11,520.2	99.15	16,889.9	100.91	17,189.9
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 70

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		REPORT NO.		DATE	
COMPONENT		INTERSTAGE 2-3		LOT NO.		AF04(694)-046		OPR-2034	
MODEL NO.		WS-133		DRAWING NO.		25-27204-64		PREPARED W. FAIRD	
SERIAL NO.		0000180		U.O. MISSILE		698		APPROVED G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	25-27204-64 Body Section (As Weighed)	168.55	67.53	11,381.8	99.35	16,746.0	100.91	17,008.0	
3									
4		0							
5	ADD:								
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27204-64 Body Section (Complete)	168.55	67.53	11,381.8	99.35	16,746.0	100.91	17,008.0	
12									
13									
14									
15									
16									
17									
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BOEING

NO. D2-13944-661

PAGE 71

SERIAL NO. 0000130

6.2.1

ACTUAL WEIGHT RECORD - INTERSTAGE

U/O MISSILE 661

DRAWING NO. 25-27201-11

CHECK LIST NO. 7

REPORT NO. OPR-2012

MISSILE MODEL WS-133

DCN H

REPORTED BY TV-RS

PAGE NO.

CONFIGURATION TAH

ADCN 40

CHECKED BY GVR

DATE 3-13-63

LONGITUDINAL REFERENCE DATUM

FIG. 1A NUMBER: 6701 SERIAL NUMBER: 0000130

CHECK LIST NO.		6.2.1 MISSILE WEIGHING CHECK LIST		RECORD OF CHECKING (DATE)											
DATE		MODEL MS-133		FINAL ASSEMBLY DRAWING NO. 21-50150		<table border="1"> <tr> <td>Mo</td> <td>3</td> </tr> <tr> <td>Day</td> <td>13</td> </tr> <tr> <td>Yr</td> <td>63</td> </tr> </table>		Mo	3	Day	13	Yr	63		
Mo	3														
Day	13														
Yr	63														
3-13-63				COMPONENT											
SECTION 47		MISSILE NO. 661		MISSILE											
MISSILE COMPONENT BODY SECTION GUIDED MISSILE COMPONENT PART NO. Noted															
ITEM NUMBER	DESCRIPTION	PART NO.	WEIGHT	X ARM	Y ARM	Z ARM	<table border="1"> <tr> <td>BASIC WEIGHT</td> <td>AS WEIGHED</td> <td>REMOTE SITE SHIPMENT</td> <td>AS RECEIVED</td> <td>REMOTE SITE</td> <td>AS WEIGHED</td> <td>REMOTE SITE</td> <td>LAUNCH</td> </tr> </table>	BASIC WEIGHT	AS WEIGHED	REMOTE SITE SHIPMENT	AS RECEIVED	REMOTE SITE	AS WEIGHED	REMOTE SITE	LAUNCH
BASIC WEIGHT	AS WEIGHED	REMOTE SITE SHIPMENT	AS RECEIVED	REMOTE SITE	AS WEIGHED	REMOTE SITE	LAUNCH								
	BODY SECTION ASSY	25-27201-11													
	Interstage Assy - Structural	25-27200-21													
	Seal	25-27201-4													
	Seal	25-27201-5													
	Seal	25-27201-6													
	Seal	25-27201-7													
	Shield - Assy of Insulated	25-27201-8													
	Shield - Time Delay Booster	25-29544-1													
	Door - Access, Stage Separation	26-11886-1													
	Door - Access, Booster	26-11888-1													
	Door Assy - Safe & Arm	29-20567-1													
	Door - Ordnance Access	(4) 29-20607-1													
	Door - Ordnance (Chem-timer) Assy of	29-22311-1													
	Cover - Panel Tie	(4) 29-23654-1													
	Cover - Panel Tie	(4) 29-23654-2													
	Plug - Access Hole	29-23663-2													
	Panel - Insulation	29-25565-1													
	Door - CTLI Equipment Access	25-30938-1													
	Panel - Insulation	25-33084-1													
	Marking Instl - Section 17	25-30134-2													
	Cover - Receptacle	29-22725-1													
	Cover - Receptacle	29-22725-2													
	Cover - Receptacle	29-22725-3													
	Bolt - 100° Head	BACB30EH-3-8													
	Bolt - 100° Head	(33) BACB30EH-4-11													
	Bolt - 100° Head	BACB30EH-4-9													
	Bolt - 100° Head	(6) BACB30EH-4-5													
	Bolt - 100° Head	(7) BACB30EH-3-4													
	Bolt - 100° Head	(4) BACB30EH-3-3													

2-5550-0-21

BOEING

NO. D2-13944-661
PAGE 73

FIG. 1A NUMBER: 6701 SERIAL NUMBER: 0000130

CHECK LIST NO.		4.5.2 MISSILE WEIGHING CHECK LIST		RECORD OF CHECKING (DATE)		
DATE		MODEL VS-133		No		
3-13-63		FINAL ASSEMBLY DRAWING NO. 21-50150		Day		
				Yr		
				3		
				13		
				63		
				COMPONENT		
				MISSILE		
				AS WEIGHED		
				AS RECEIVED		
				SHIPMENT		
				REMOTE SITE		
				REMOTE SITE		
				LAUNCH		
				AS WEIGHED		
				AS RECEIVED		
				SHIPMENT		
				REMOTE SITE		
				REMOTE SITE		
				LAUNCH		
SECTION 47	MISSILE NO. 661					
MISSILE COMPONENT BODY SECTION GUIDED MISSILE COMPONENT PART NO. Noted						
ITEM NUMBER	DESCRIPTION	PART NO.	WEIGHT	X ARM	Y ARM	Z ARM
	BODY SECTION ASSY (Continued)					
	Bolt - Pan Head	BACB30EM-11-1	(16)			
	Bolt - 100° Head	BACB30EM-11-10	(4)			
	Bolt - 100° Head	BACB30EM-11-12				
	Bolt - 100° Head	BACB30EM-11-20				
	Bolt - 100° Head	BACB30EM-11-4	(42)			
	Bolt - 100° Head	BACB30EM-11-6	(18)			
	Bolt - 100° Head	BACB30EM-11-3				
	Bolt - 100° Head	BACB30EM-11-9				
	Bolt - 100° Head	BACB30EM-11-15				
	Washer	AN 960-116L	(22)			
	Nut	NAS 679-AM	(6)			
	Plug-Screw, Insulated	26-15217-1	(2)			
	Plug-Access Hole	29-23653-1				
	Insulation	BS 5-62				

2-5550-0-21

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AF04(694)-046	REPORT NO.	OPR-2012
COMPONENT	INTERSTAGE 1-2	LOT NO.		DATE	3/13/63
MODEL NO.	WS-133	DRAWING NO.	25-27201-11	PREPARED	R. ST. ROMAIN
SERIAL NO.	0000130	U.O. MISSILE	661	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1										
2	225-27201-11	Body Section (As Weighed)	357.35	77.87	27,825.3	100.06	35,758.0	100.39	35,875.0	
3										
4										
5		ADD:	0							
6										
7										
8		DEDUCT:	0							
9										
10										
11	25-27201-11	Body Section (Complete)	357.35	77.87	27,825.3	100.06	35,758.0	100.39	35,875.0	
12										
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BOEING

NO. D2-13944-661

PAGE 75

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFO4(694)-046		REPORT NO.		OPR-2014	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		000131		U.O. MISSILE		664		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27201-11 Body Section (As Weighed)	355.80	77.85	27,698.3	99.80	35,508.4	100.35	35,703.4			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	355.80	77.85	27,698.3	99.80	35,508.4	100.35	35,703.4			
12											
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15											
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BOEING

NO. D2-13944-661

PAGE 76

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		REPORT NO.		OPR-2017	
COMPONENT		INTERSTAGE 1-2		LOT NO.		DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		PREPARED		T. VOGEL	
SERIAL NO.		0000132		U.O. MISSILE		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	25-27201-11 Body Section (As Weighed)	357.90	78.07	27,942.3	99.85	35,736.5	100.30	35,898.5	
3									
4		0							
5	ADD:								
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27201-11 Body Section (Complete)	357.90	78.07	27,942.3	99.85	35,736.5	100.30	35,898.5	
12									
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14									
15									
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BOEING

NO. D2-13944-661

PAGE 77

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AF04(694)-046	REPORT NO.	OPR-2020
COMPONENT	INTERSTAGE 1-2	LOT NO.		DATE	3/21/63
MODEL NO.	WS-133	DRAWING NO.	25-27201-11	PREPARED	H. CHRISTIANSEN
SERIAL NO.	0000133	U.O. MISSILE	672	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE						
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1								
2	25-27201-11 Body Section (As Weighed)	360.35	77.88	28,065.6	99.88	35,992.0	100.51	36,219.9
3								
4								
5	ADD:	0						
6								
7								
8	DEDUCT:	0						
9								
10								
11	25-27201-11 Body Section (Complete)	360.35	77.88	28,065.6	99.88	35,992.0	100.51	36,219.9
12								
13								
14								
15								
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2013	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/13/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000142		U.O. MISSILE		663		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27201-11 Body Section (As Weighed)	355.95	77.87	27,717.7	99.83	35,533.9	100.32	35,707.9			
3											
4		0									
5	ADD:										
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	355.95	77.87	27,717.7	99.83	35,533.9	100.32	35,707.9			
12											
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BOEING

NO. D2-13944-661

PAGE 79

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR <u>BOEING</u>				CONTRACT NO. <u>AF04(694)-046</u>		REPORT NO. <u>OPR-2015</u>					
COMPONENT <u>INTERSTAGE 1-2</u>				LOT NO. <u>25-27201-11</u>		DATE <u>3/14/63</u>					
MODEL NO. <u>WS-133</u>				DRAWING NO. <u>25-27201-11</u>		PREPARED <u>T. VOGEL</u>					
SERIAL NO. <u>0000143</u>				U.O: MISSILE <u>665</u>		APPROVED <u>G. ROBERTS</u>					
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27201-11	Body Section (As Weighed)	355.65	77.85	27,687.9	99.69	35,455.9	100.22	35,644.9		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27201-11	Body Section (Complete)	355.65	77.85	27,687.9	99.69	35,455.9	100.22	35,644.9		
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 80

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR BOEING				CONTRACT NO.		REPORT NO.		OPR-2018			
COMPONENT INTERSTAGE 1-2				LOT NO.		DATE		3/18/63			
MODEL NO. WS-133				DRAWING NO.		PREPARED		R. ST. ROMAIN			
SERIAL NO. 0000144				U.O. MISSILE		APPROVED		G. ROBERTS			
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27201-11	Body Section (As Weighed)		355.35		77.91	27,685.2	99.93	35,509.9	100.22	35,614.9
2											
3											
4		ADD:		0							
5											
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27201-11	Body Section (Complete)		355.35		77.91	27,685.2	99.93	35,509.9	100.22	35,614.9
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 81

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING CONTRACT NO. AFO4(694)-046 REPORT NO. OPR-2019
 COMPONENT INTERSTAGE 1-2 LOT NO. 3/21/63 DATE 3/21/63
 MODEL NO. WS-133 DRAWING NO. 25-27201-11 PREPARED H. CHRISTIANSEN
 SERIAL NO. 0000145 U.O. MISSILE 671 APPROVED G. ROBERTS

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1		355.90	77.97	27,748.2	99.90	35,554.5	100.19	35,656.4	
2	Body Section (As Weighed)								
3									
4		0							
5	ADD:								
6									
7									
8	DEDUCT:	0							
9									
10									
11	Body Section (Complete)	355.90	77.97	27,748.2	99.90	35,554.5	100.19	35,656.4	
12									
13									
14									
15									
16									
17									
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WEIGHT AND BALANCE CHANGE RECORD

EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.		DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1	225-27201-11	Body Section (As Weighed)	356.10	77.92	27,749.0	99.82	35,544.4	100.37	35,742.4
2									
3									
4		ADD:	0						
5									
6									
7									
8		DEDUCT:	0						
9									
10									
11	225-27201-11	Body Section (Complete)	356.10	77.92	27,749.0	99.82	35,544.4	100.37	35,742.4
12									
13									
14									
15									
16									
17									
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ASSOCIATE CONTRACTOR BOEING
 COMPONENT INTERSTAGE 1-2
 MODEL NO. WS-133
 SERIAL NO. 0000146

CONTRACT NO. AF04(694)-046
 LOT NO.
 DRAWING NO. 25-27201-11
 U.O. MISSILE 673

REPORT NO. OPR-2021
 DATE 3/25/63
 PREPARED H. CHRISTIANSEN
 APPROVED G. ROBERTS

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(64)-046		REPORT NO.		OPR-2023	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/25/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000147		U.O. MISSILE		677		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT			
1											
2	Body Section (As Weighed)	355.80	77.85	27,698.3	99.84	35,523.5	100.20	35,652.4			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	Body Section (Complete)	355.80	77.85	27,698.3	99.84	35,523.5	100.20	35,652.4			
12											
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BOEING

NO. D2-13944-661

PAGE 84

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2024	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/27/63	
MODEL NO.		NS-133		DRAWING NO.		25-27201-11		PREPARED		RS/WR	
SERIAL NO.		0000148		U.O. MISSILE		678		APPROVED		GVR	

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
ITEM	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1	25-27201-11	Body Section (As Weighed)	356.80	77.92	27,801.4	99.98	35,674.4	100.32	35,794.5
2									
3									
4			0						
5		ADD:							
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27201-11	Body Section (Complete)	356.80	77.92	27,801.4	99.98	35,674.4	100.32	35,794.5
12									
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14									
15									
16									
17									
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BOEING

NO. D2-1394-661

PAGE 85

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2026	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/26/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000149		U.O. MISSILE		682		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27201-11	Body Section (As Weighed)		355.05		77.97	27,682.5	100.10	35,539.9	100.02	35,512.9
2											
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27201-11	Body Section (Complete)		355.05		77.97	27,682.5	100.10	35,539.9	100.02	35,512.9
12											
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14											
15											
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BOEING

NO. D2-13944-661

PAGE 86

2-5550-0-11 RI

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR COMPONENT		BOEING INTERSTAGE 1-2		CONTRACT NO. AF04(694)-046		REPORT NO. OPR-2027			
MODEL NO.		WS-133		DRAWING NO. 25-27201-11		DATE 3/28/63			
SERIAL NO.		0000150		U.O. MISSILE 684		PREPARED R. ST. ROMAIN		APPROVED G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27201-11 Body Section (As Weighed)	355.90	77.99	27,757.2	100.12	35,632.5	100.48	35,761.5	
2									
3									
4									
5	ADD:	0							
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27201-11 Body Section (Complete)	355.90	77.99	27,757.2	100.12	35,632.5	100.48	35,761.5	
12									
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BOEING

NO. D2-13944-661

PAGE 87

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFOL(694)-046		REPORT NO.		OPR-2028	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/29/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		W. BAIRD	
SERIAL NO.		0000151		U.O. MISSILE		685		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT	X AXIS		Y AXIS		Z AXIS		
					ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27201-11	Body Section (As Weighed)		358.25	77.89	27,902.5	99.98	35,818.0	100.25	35,913.9	
2											
3											
4		ADD:		0							
5											
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27201-11	Body Section (Complete)		358.25	77.89	27,902.5	99.98	35,818.0	100.25	35,913.9	
12											
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16											
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BOEING

NO. D2-1394-661

PAGE 88

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2029	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4/1/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000152		U.O. MISSILE		689		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27201-11	Body Section (As Weighed)	357.15	77.89	27,818.4	100.25	35,804.0	100.45	35,876.0		
2											
3											
4			0								
5		ADD:									
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27201-11	Body Section (Complete)	357.15	77.89	27,818.4	100.25	35,804.0	100.45	35,876.0		
12											
13											
14											
15											
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BOEING

NO. D2-13944-661

PAGE 89

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING CONTRACT NO. AF04(694)-046 REPORT NO. OPR-2030

COMPONENT INTERSTAGE 1-2 LOT NO. 4/1/63 DATE 4/1/63

MODEL NO. WS-133 DRAWING NO. 25-27201-11 PREPARED H. CHRISTIANSEN

SERIAL NO. 0000153 U.O. MISSILE 691 APPROVED G. ROBERTS

		EQUIPMENT CHANGE RECORD	WEIGHT AND BALANCE								
			WEIGHT	X AXIS		Y AXIS		Z AXIS		ARM	MOMENT
INT	PART NO.	DESCRIPTION OF EQUIPMENT		ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1											
2	25-27201-11	Body Section (As Weighed)	356.25	78.11	27,825.3	99.93	35,599.9	100.17	35,686.9		
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27201-11	Body Section (Complete)	356.25	78.11	27,825.3	99.93	35,599.9	100.17	35,686.9		
12											
13											
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BOEING

NO D2-I3944-661

PAGE 90

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED	
SERIAL NO.		0000154		U.O. MISSILE		694		APPROVED	
								G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	25-27201-11 Body Section (As Weighed)	357.15	77.90	27,821.5	99.85	35,660.0	100.23	35,797.9	
3									
4		0							
5	ADD:								
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27201-11 Body Section (Complete)	357.15	77.90	27,821.5	99.85	35,660.0	100.23	35,797.9	
12									
13									
14									
15									
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BOEING

NO. D2-13944-661

PAGE 91

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING REPORT NO. OPR-2033
 COMPONENT INTERSTAGE 1-2 DATE 4-8-63
 MODEL NO. WS-133 PREPARED H. CHRISTIANSEN
 SERIAL NO. 0000155 APPROVED G. ROBERTS
 CONTRACT NO. AF 04(694)-046
 LOT NO. 25-27201-11
 DRAWING NO. 696
 U.O. MISSILE

		WEIGHT AND BALANCE					
		WEIGHT		X AXIS		Y AXIS	
EQUIPMENT CHANGE RECORD							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	ARM	MOMENT	ARM	MOMENT	Z AXIS
1							
2	25-27201-11 Body Section (As Weighed)	358.45	77.94	27,936.3	99.96	35,828.9	100.15
3							
4							
5	ADD:	0					
6							
7							
8	DEDUCT:	0					
9							
10							
11	25-27201-11 Body Section (Complete)	358.45	77.94	27,936.3	99.96	35,828.9	100.15
12							
13							
14							
15							
16							
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF 04(604)-046		REPORT NO.		OPR-2035	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4-8-63	
MODEL NO.		MS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000156		U.O. MISSILE		699		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27201-11 Body Section (As Weighed)	357.75	78.00	27,905.2	99.95	35,755.9	100.34	35,896.9			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	357.75	78.00	27,905.2	99.95	35,755.9	100.34	35,896.9			
12											
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BOEING

NO D2-13944-661

PAGE 93

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF 04(694)-046		REPORT NO.		QPR-2036	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4-8-63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000157		U.O. MISSILE		701		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1											
2	25-27201-11 Body Section (As Weighed)	357.50	77.79	27,808.7	99.87	35,702.5	100.29	35,852.4			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	357.50	77.79	27,808.7	99.87	35,702.5	100.29	35,852.4			
12											
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BOEING

NO. D2-13944-661

PAGE 94

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF 04(694)-046		REPORT NO.		OPR-2037	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4-10-63	
MODEL NO.		MS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000158		U.O. MISSILE		703		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	Body Section (As Weighed)	360.95	77.87	28,107.0	99.87	36,049.0	100.36	36,226.0			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	Body Section (Complete)	360.95	77.87	28,107.0	99.87	36,049.0	100.36	36,226.0			
12											
13											
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15											
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF 04(694)-046		REPORT NO.		OPR-2038	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4-10-63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000159		U.O. MISSILE		705		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1											
2	25-27201-11	Body Section (As Weighed)	357.50	77.84	27,826.7	100.08	35,777.5	100.36	35,879.4		
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27201-11	Body Section (Complete)	357.50	77.84	27,826.7	100.08	35,777.5	100.36	35,879.4		
12											
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BOEING

NO. D2-13944-661

PAGE 96

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFOL(694)-046		REPORT NO.		OPR-2010	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/6/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		T. VOGEL	
SERIAL NO.		0000169		U.O. MISSILE				APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27201-11 Body Section (As Weighed)	353.10	77.92	27,511.8	100.09	35,340.5	100.20	35,379.4			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	353.10	77.92	27,511.8	100.09	35,340.5	100.20	35,379.4			
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BOEING

NO. D2-13944-661

PAGE 97

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2022	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/25/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000170		U.O. MISSILE		675		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT			
1	25-27201-11 Body Section (As Weighed)	352.65	77.92	27,477.70	100.09	35,296.9	100.24	35,350.9			
2											
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	352.65	77.92	27,477.0	100.09	35,296.9	100.24	35,350.9			
12											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2031	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4/2/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000171		U.O. MISSILE		692		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27201-11	Body Section (As Weighed)		356.90		77.73	27,740.3	100.04	35,705.5	100.48	35,861.5
2											
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27201-11	Body Section (Complete)		356.90		77.73	27,740.3	100.04	35,705.5	100.48	35,861.5
12											
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		CONTRACT NO.		REPORT NO.					
COMPONENT		LOT NO.		DATE					
MODEL NO.		DRAWING NO.		PREPARED					
SERIAL NO.		U.O. MISSILE		APPROVED					
BOEING		15041-046		078-2016					
15041-046		15041-046		3/15/53					
15-133		25-27201-11		T. VOEL					
052178		556		G. ROBERTS					
EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE						
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	Body Section (As Delivered)	356.55	77.96	35,615.0	99.89	35,615.0	100.89	35,758.9	
3									
4									
5	ALD:	0							
6									
7									
8	DELIC:	0							
9									
10									
11	Body Section (Complete)	356.55	77.96	35,615.0	99.89	35,615.0	100.89	35,758.9	
12									
13									
14									
15									
16									
17									
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BOEING

NO. D2-13944-551

PAGE 100

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2025	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		3/25/63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000179		U.O. MISSILE		680		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27201-11 Body Section (As Weighed)	353.35	77.99	27,557.0	100.09	35,367.0	100.46	35,496.0			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	353.35	77.99	27,557.0	100.09	35,367.0	100.46	35,496.0			
12											
13											
14											
15											
16											
17											
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BOEING

NO. D2-13944-661

PAGE 101

2-5550-0-11 R1

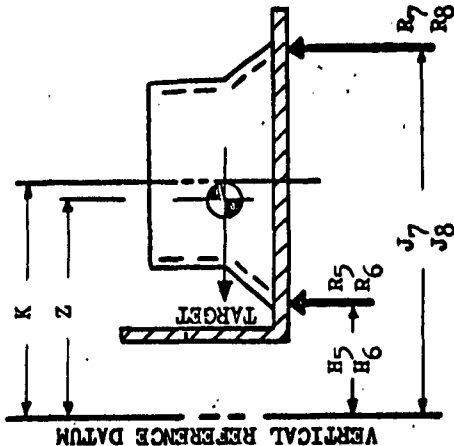
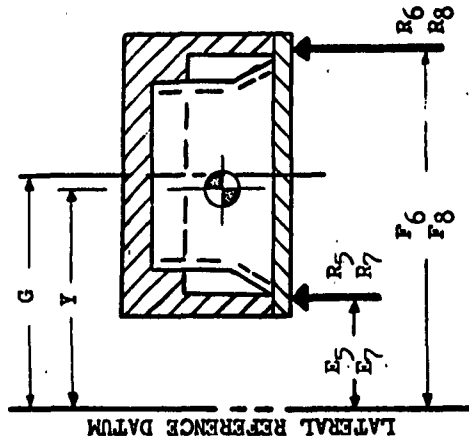
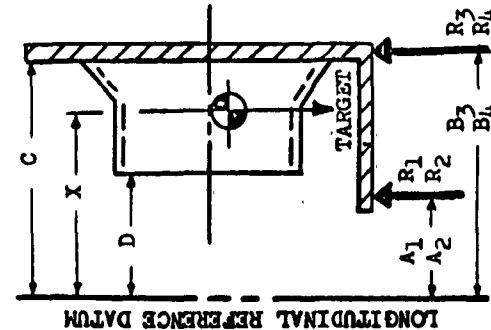
WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF 04(694)-046		REPORT NO.		OPR-2034	
COMPONENT		INTERSTAGE 1-2		LOT NO.				DATE		4-3-63	
MODEL NO.		WS-133		DRAWING NO.		25-27201-11		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000180		U.O. MISSILE		698		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27201-11 Body Section (As Weighed)	358.30	77.92	27,920.0	99.80	35,758.4	100.30	35,938.4			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27201-11 Body Section (Complete)	358.30	77.92	27,920.0	99.80	35,758.4	100.30	35,938.4			
12											
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15											
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BOEING

NO. D2-13944-661

PAGE 102

SERIAL NO. 0000130		6.3.1 ACTUAL WEIGHT RECORD - SKIRT	
U/O MISSILE 661	DRAWING NO. 25-27207-3	CHECK LIST NO. 9	REPORT NO. OPR-2012
MISSILE MODEL WS-133	DCN E	REPORTED BY RS-TV	PAGE NO.
CONFIGURATION TAH	ADCN 25	CHECKED BY GVR	DATE 3/5/63



WEIGHING DATA

REACTION	GR. WT.	TARE	CORR.	NET WT.	REACTION	GR. WT.	TARE	CORR.	NET WT.
R1	190.95	95.55		95.40	R5	205.40	134.00		71.40
R2	80.75	9.30		71.45	R6	263.80	170.15		93.65
R3	226.75	152.90		73.85	R7	211.30	116.75		94.55
R4	335.45	241.30		94.15	R8	153.40	78.15		75.25
TOTAL	833.90	499.05		334.85	TOTAL	833.90	499.05		334.85

DIMENSIONAL DATA

DIM.	INCHES	DIM.	INCHES	DIM.	INCHES
A1	51.175	E5	60.997	H5	61.002
A2	51.172	E7	61.008	H6	61.005
B3	87.173	F6	139.001	J7	139.003
B4	87.173	F8	139.009	J8	139.001
C		G		K	
D					

LONGITUDINAL C.G.

REACTION	NET WT.	ARM	MOMENT
R1	95.40	51.175	
R2	71.45	51.172	
R3	73.85	87.173	
R4	94.15	87.173	
AS WGD	334.85	69.24	23,183.4

LATERAL C.G.

REACTION	NET WT.	ARM	MOMENT
R5	71.40	60.997	
R6	93.65	139.001	
R7	94.55	61.008	
R8	75.25	139.009	
AS WGD	334.85	100.35	33,601.4

VERTICAL C.G.

REACTION	NET WT.	ARM	MOMENT
R5	71.40	61.002	
R6	93.65	61.005	
R7	94.55	139.003	
R8	75.25	139.001	
AS WGD	334.85	100.56	33,671.4

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD													
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFO4(694)-046		REPORT NO.		OPR-2012			
COMPONENT		SKIRT		LOT NO.				DATE		3/5/63			
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		T. VOCEL			
SERIAL NO.		0000130		U.O. MISSILE		661		APPROVED		G. ROBERTS			
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE									
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS					
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT				
1	25-27207-3	Body Section (As Weighed)	334.85	69.24	23,183.4	100.35	33,601.4	100.56	33,671.4				
2													
3													
4													
5		ADD:	0										
6													
7													
8		DEDUCT:	0										
9													
10													
11	25-27207-3	Body Section (Complete)	334.85	69.24	23,183.4	100.35	33,601.4	100.56	33,671.4				
12													
13													
14													
15													
16													
17													
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BOEING

NO. D2-13944-661

PAGE 105

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFOL(694)-046		REPORT NO.		OPR-2014	
COMPONENT		SKIRT		LOT NO.				DATE		3/7/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		T. VOGEL	
SERIAL NO.		0000131		U.O. MISSILE		664		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT	X AXIS		Y AXIS		Z AXIS		
					ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27207-3	Body Section (As Weighed)	337.75	69.22	23,378.5	100.53	33,953.8	100.52	33,949.6		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	337.75	69.22	23,378.5	100.53	33,953.8	100.52	33,949.6		
12											
13											
14											
15											
16											
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WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING				CONTRACT NO. AF04(624)-046		REPORT NO. OPR-2017		
COMPONENT SKIRT				LOT NO.		DATE 3/11/63		
MODEL NO. WS-133				DRAWING NO. 25-27207-3		PREPARED H. CHRISTIANSEN		
SERIAL NO. 0000132				U.O. MISSILE 668		APPROVED G. ROBERTS		
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE				
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS ARM	X AXIS MOMENT	Y AXIS ARM	Y AXIS MOMENT	Z AXIS ARM	Z AXIS MOMENT
1								
2	25-27207-3 Body Section (As Weighed)	336.90	69.24	23,327.6	100.46	33,843.4	100.65	33,909.4
3								
4								
5	ADD:	0						
6								
7								
8	DEDUCT:	0						
9								
10								
11	25-27207-3 Body Section (Complete)	336.90	69.24	23,327.6	100.46	33,843.4	100.65	33,909.4
12								
13								
14								
15								
16								
17								
18								
19								
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AFO4(694)-046		REPORT NO.		OPR-2020	
COMPONENT		SKIRT		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000133		U.O. MISSILE		672		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27207-3	Body Section (As Weighed)		336.20		69.11	23,254.2	100.43	33,765.5	100.71	33,858.6
2											
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27207-3	Body Section (Complete)		336.20		69.11	23,254.2	100.43	33,765.5	100.71	33,858.6
12											
13											
14											
15											
16											
17											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2013	
COMPONENT		SKIRT		LOT NO.				DATE		3/6/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		T. VOGEL	
SERIAL NO.		0000142		U.O. MISSILE		663		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27207-3	Body Section (As Weighed)	339.55	69.10	23,461.7	100.43	34,102.4	100.41	34,094.2		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	339.55	69.10	23,461.7	100.43	34,102.4	100.41	34,094.2		
12											
13											
14											
15											
16											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2015	
COMPONENT		SKIRT		LOT NO.				DATE		3/7/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000143		U.O. MISSILE		665		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27207-3	Body Section (As Weighed)		337.90		69.04	23,328.6	100.53	33,970.6	100.45	33,942.9
2											
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27207-3	Body Section (Complete)		337.90		69.04	23,328.6	100.53	33,970.6	100.45	33,942.9
12											
13											
14											
15											
16											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(594)-046		REPORT NO.		OPR-2018	
COMPONENT		SKIRT		LOT NO.				DATE		3/12/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000144		U.O. MISSILE		670		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27207-3 Body Section (As Weighed)	340.05	69.00	23,462.1	100.39	34,137.0	100.51	34,179.6			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27207-3 Body Section (Complete)	340.05	69.00	23,462.1	100.39	34,137.0	100.51	34,179.6			
12											
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14											
15											
16											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2019	
COMPONENT		SKIRT		LOT NO.				DATE		3/13/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		T. VOGEL	
SERIAL NO.		0000145		U.O. MISSILE		671		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT			WEIGHT	X AXIS		Y AXIS		Z AXIS		
					ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27207-3	Body Section (As Weighed)			338.35	69.25	23,430.9	100.44	33,982.6	100.38	33,962.8
2											
3											
4		ADD:			0						
5											
6											
7											
8		DEDUCT:			0						
9											
10	25-27207-3	Body Section (Complete)			338.35	69.25	23,430.9	100.44	33,982.6	100.38	33,962.8
11											
12											
13											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2021	
COMPONENT		SKIRT		LOT NO.				DATE		4/1/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000146		U.O. MISSILE		673		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1											
2	25-27207-3	Body Section (As Weighed)	338.10	69.21	23,400.1	100.27	33,901.0	100.38	33,939.7		
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	338.10	69.21	23,400.1	100.27	33,901.0	100.38	33,939.7		
12											
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16											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2023	
COMPONENT		SKIRT		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000147		U.O. MISSILE		677		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27207-3	Body Section (As Weighed)	338.15	69.13	23.375.6	100.41	33.954.7	100.57	34,008.9		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	338.15	69.13	23.375.6	100.41	33.954.7	100.57	34,008.9		
12											
13											
14											
15											
16											
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WEIGHT AND BALANCE CHANGE RECORD

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OFR-2024	
COMPONENT		SKIRT		LOT NO.				DATE		3/19/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		T. VOGEL	
SERIAL NO.		0000148		U.O. MISSILE		678		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		MOMENT		ARM	
1	25-27207-3	Body Section (As Weighed)		333.55		69.27	23,104.3	100.43	33,498.6	100.46	33,510.0
2											
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27207-3	Body Section (Complete)		333.55		69.27	23,104.3	100.43	33,498.6	100.46	33,510.0
12											
13											
14											
15											
16											
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OFR-2026	
COMPONENT		SKIRT		LOT NO.				DATE		3/25/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000149		U.O. MISSILE		682		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27207-3 Body Section (As Weighed)	339.15	69.21	23,471.8	100.52	34,089.8	100.64	34,132.2			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27207-3 Body Section (Complete)	339.15	69.21	23,471.8	100.52	34,089.8	100.64	34,132.2			
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 116

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2027	
COMPONENT		SKIRT		LOT NO.				DATE		3/25/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000150		U.O. MISSILE		684		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27207-3	Body Section (As Weighed)	338.20	69.34	23,452.0	100.62	34,028.1	100.56	34,008.3		
2											
3											
4		ADD:	0								
5											
6											
7											
8		DEDUCT:	0								
9											
10	25-27207-3	Body Section (Complete)	338.20	69.34	23,452.0	100.62	34,028.1	100.56	34,008.3		
11											
12											
13											
14											
15											
16											
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BOEING

NO. D2-13944-661

PAGE 117

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR BOEING CONTRACT NO. AFOL(694)-046 REPORT NO. OPR-2028
 COMPONENT SKIRT LOT NO. 25-27207-3 DATE 3/26/63
 MODEL NO. WS-133 DRAWING NO. 25-27207-3 PREPARED H. CHRISTIANSEN
 SERIAL NO. 0000151 U.O. MISSILE 685 APPROVED G. ROBERTS

EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1										
2	Body Section (As Weighed)	336.00	69.18	23,245.8	100.57	33,792.4	100.49	33,764.8		
3										
4										
5	ADD:	0								
6										
7										
8	DEDUCT:	0								
9										
10										
11	Body Section (Complete)	336.00	69.18	23,245.8	100.57	33,792.4	100.49	33,764.8		
12										
13										
14										
15										
16										
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.	
COMPONENT		SKIRT		LOT NO.				DATE	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED	
SERIAL NO.		0000152		U.O: MISSILE		689		APPROVED	
								G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	Body Section (As Weighed)	339.65	69.23	23,513.6	100.31	34,069.6	100.49	34,131.6	
3									
4									
5	ADD:	0							
6									
7									
8	DEDUCT:	0							
9									
10									
11	Body Section (Complete)	339.65	69.23	23,513.6	100.31	34,069.6	100.49	34,131.6	
12									
13									
14									
15									
16									
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BOEING

NO. D2-13944-661

PAGE 119

2-5550-0-11 21

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2030	
COMPONENT		SKIRT		LOT NO.				DATE		3/27/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000153		U.O. MISSILE		691		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27207-3 Body Section (As Weighed)	335.00	69.19	23,180.2	100.53	33,676.6	100.70	33,734.7			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27207-3 Body Section (Complete)	335.00	69.19	23,180.2	100.53	33,676.6	100.70	33,734.7			
12											
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15											
16											
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BOEING

NO. D2-1394-661

PAGE 120

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD

EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
ASSOCIATE CONTRACTOR BOEING		CONTRACT NO.	REPORT NO.	X AXIS		Y AXIS		Z AXIS	
COMPONENT	SKIRT	LOT NO.	DATE	ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
MODEL NO.	MS-133	DRAWING NO.	PREPARED						
SERIAL NO.	0000154	U.O. MISSILE	APPROVED						
1	25-27207-3	Body Section (As Weighed)	329.35	69.08	22,752.6	100.35	33,051.3	100.67	33,156.3
2									
3									
4									
5		ADD:	0						
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27207-3	Body Section (Complete)	329.35	69.08	22,752.6	100.35	33,051.3	100.67	33,156.3
12									
13									
14									
15									
16									
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BOEING

NO. D2-13944-661

PAGE 121

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(604)-046		REPORT NO.		OPR-2033	
COMPONENT		SKIRT		LOT NO.				DATE		4/1/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000155		U.O. MISSILE		696		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS	
						ARM		ARM		ARM	
						MOMENT		MOMENT		MOMENT	
1	25-27207-3	Body Section (As Weighed)	332.	68.98	22,957.9	100.37	33,402.2	100.61	33,483.7		
2											
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	332.80	68.98	22,957.9	100.37	33,402.2	100.61	33,483.7		
12											
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BOEING

NO. D2-13944-661

PAGE 122



WEIGHT AND BALANCE CHANGE RECORD													
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		REPORT NO.		DATE		OPR-2035			
COMPONENT		SKIFT		LOT NO.		AF04(694)-046		DATE		4/3/63			
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN			
SERIAL NO.		0000156		U.O. MISSILE		699		APPROVED		G. ROBERTS			
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE									
PART NO.		DESCRIPTION OF EQUIPMENT		WEIGHT		X AXIS		Y AXIS		Z AXIS			
						ARM		MOMENT		ARM		MOMENT	
1	25-27207-3	Body Section (As Weighed)	335.10	69.07	23,143.9	100.43	33,655.6	100.57	33,701.9				
2													
3													
4													
5		ADD:	0										
6													
7													
8		DEDUCT:	0										
9													
10	25-27207-3	Body Section (Complete)	335.10	69.07	23,143.9	100.43	33,655.6	100.57	33,701.9				
11													
12													
13													
14													
15													
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2036	
COMPONENT		SKIRT		LOT NO.				DATE		4/4/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000157		U.O. MISSILE		701		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT		WEIGHT	X AXIS		Y AXIS		Z AXIS		
					ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1											
2	25-27207-3	Body Section (As Weighed)		334.90	69.22	23,180.5	100.57	33,682.4	100.61	33,693.8	
3											
4											
5		ADD:		0							
6											
7											
8		DEDUCT:		0							
9											
10											
11	25-27207-3	Body Section (Complete)		334.90	69.22	23,180.5	100.57	33,682.4	100.61	33,693.8	
12											
13											
14											
15											
16											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(604)-046		REPORT NO.		OPR-2037	
COMPONENT		SKIRT		LOT NO.				DATE		4/8/63	
MODEL NO.		MS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000158		U.O. MISSILE		703		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1	25-27207-3	Body Section (As Weighed)	338.80	69.36	23,500.7	100.42	34,021.7	100.56	34,068.2		
2											
3											
4			0								
5		ADD:									
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	338.80	69.36	23,500.7	100.42	34,021.7	100.56	34,068.2		
12											
13											
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15											
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WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2038	
COMPONENT		SKIRT		LOT NO.				DATE		4/8/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000159		U.O. MISSILE		705		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS			
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT		
1											
2	25-27207-3	Body Section (As Weighed)	335.35	69.24	23,218.0	100.41	33,670.9	100.60	33,736.9		
3											
4											
5		ADD:	0								
6											
7											
8		DEDUCT:	0								
9											
10											
11	25-27207-3	Body Section (Complete)	335.35	69.24	23,218.0	100.41	33,670.9	100.60	33,736.9		
12											
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2010	
COMPONENT		SKIRT		LOT NO.				DATE		2/28/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000169		U.O. MISSILE				APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	Body Section (As Weighed)	336.70	69.17	23,288.8	100.61	33,874.1	100.55	33,854.2			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	Body Section (Complete)	336.70	69.17	23,288.8	100.61	33,874.1	100.55	33,854.2			
12											
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16											
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BOEING

NO. D2-13944-661

PAGE 127

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD											
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		AF04(694)-046		REPORT NO.		OPR-2022	
COMPONENT		SKIRT		LOT NO.				DATE		3/18/63	
MODEL NO.		WS-133		DRAWING NO.		25-27207-3		PREPARED		H. CHRISTIANSEN	
SERIAL NO.		0000170		U.O. MISSILE		675		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS				
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT			
1											
2	25-27207-3 Body Section (As Weighed)	334.70	69.17	23,152.3	100.57	33,662.3	100.68	33,697.0			
3											
4											
5	ADD:	0									
6											
7											
8	DEDUCT:	0									
9											
10											
11	25-27207-3 Body Section (Complete)	334.70	69.17	23,152.3	100.57	33,662.3	100.68	33,697.0			
12											
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BOEING

NO. D2-13944-661

PAGE 128

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AF04(694)-046	REPORT NO.	OPR-2031
COMPONENT	SKIRT	LOT NO.		DATE	3/29/63
MODEL NO.	WS-133	DRAWING NO.	25-27207-3	PREPARED	R. ST. ROMAIN
SERIAL NO.	0000171	U.O. MISSILE	692	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD		WEIGHT AND BALANCE							
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1									
2	25-27207-3 Body Section (As Weighed)	338.40	69.05	23,366.9	100.25	33,923.2	100.35	33,957.9	
3									
4									
5	ADD:	0							
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27207-3 Body Section (Complete)	338.40	69.05	23,366.9	100.25	33,923.2	100.35	33,957.9	
12									
13									
14									
15									
16									
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2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		REPORT NO.		DATE	
COMPONENT		SKIRT		LOT NO.		DATE		3/11/63	
MODEL NO.		WS-133		DRAWING NO.		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000178		U.O. MISSILE		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
			ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1	25-27207-3 Body Section (As Weighed)	334.75	69.10	23,131.4	100.59	33,673.2	100.57	33,665.0	
2									
3									
4		0							
5	ADD:								
6									
7									
8	DEDUCT:	0							
9									
10									
11	25-27207-3 Body Section (Complete)	334.75	69.10	23,131.4	100.59	33,673.2	100.57	33,665.0	
12									
13									
14									
15									
16									
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BOEING

NO. D2-13944-661

PAGE 130

2-5550-0-11 R1

WEIGHT AND BALANCE CHANGE RECORD									
ASSOCIATE CONTRACTOR		BOEING		CONTRACT NO.		REPORT NO.		OPR-2025	
COMPONENT		SKIRT		LOT NO.		DATE		3/22/63	
MODEL NO.		WS-133		DRAWING NO.		PREPARED		R. ST. ROMAIN	
SERIAL NO.		0000179		U.O. MISSILE		APPROVED		G. ROBERTS	
EQUIPMENT CHANGE RECORD				WEIGHT AND BALANCE					
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS	
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT
1	25-27207-3	Body Section (As Weighed)	334.25	69.19	23,127.5	100.31	33,529.6	100.45	33,576.1
2									
3									
4									
5		ADD:	0						
6									
7									
8		DEDUCT:	0						
9									
10									
11	25-27207-3	Body Section (Complete)	334.25	69.19	23,127.5	100.31	33,529.6	100.45	33,576.1
12									
13									
14									
15									
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BOEING

NO. D2-13944-661

PAGE 131

WEIGHT AND BALANCE CHANGE RECORD

ASSOCIATE CONTRACTOR	BOEING	CONTRACT NO.	AFO4(694)-046	REPORT NO.	OPR-2034
COMPONENT	SKIRT	LOT NO.		DATE	4/3/63
MODEL NO.	MS-133	DRAWING NO.	25-27207-3	PREPARED	W. BAIRD
SERIAL NO.	0000180	U.O. MISSILE	698	APPROVED	G. ROBERTS

EQUIPMENT CHANGE RECORD			WEIGHT AND BALANCE							
LINE	PART NO.	DESCRIPTION OF EQUIPMENT	WEIGHT	X AXIS		Y AXIS		Z AXIS		
				ARM	MOMENT	ARM	MOMENT	ARM	MOMENT	
1										
2	25-27207-3	Body Section (As Weighed)	334.80	69.28	23,195.2	100.44	33,625.7	100.52	33,652.7	
3										
4										
5		ADD:	0							
6										
7										
8		DEDUCT:	0							
9										
10										
11	25-27207-3	Body Section (Complete)	334.80	69.28	23,195.2	100.44	33,625.7	100.52	33,652.7	
12										
13										
14										
15										
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6.4

BASE HEAT DEFLECTORS

Serial No.	25-25878-2	25-25877-2	25-25876-2
0000130	6.05 lb.	20.33 lb.	21.25 lb.
0000131	6.22	20.30	21.22
0000132	6.15	20.49	21.29
0000133	6.22	21.34	21.34
0000142	6.07	20.30	21.29
0000143	6.27	20.21	21.17
0000144	6.22	19.94	21.33
0000145	6.20	20.47	21.33
0000146	6.14	20.49	21.32
0000147	6.22	20.34	21.20
0000148	6.26	20.38	20.90
0000149	6.19	20.40	21.21
0000150	6.14	20.92	21.27
0000151	6.22	19.82	21.13
0000152	6.24	20.47	21.28
0000153	6.19	20.35	21.15
0000154	6.26	20.38	21.36
0000155	6.30	20.34	21.22
0000156	--	20.30	21.22
0000157	6.14	20.57	21.29
0000158	6.19	20.56	21.21
0000159	6.28	20.34	21.43
0000169	6.25	20.33	21.30
0000170	6.28	20.46	21.33
0000171	6.22	20.44	21.32
0000178	6.22	20.42	21.51
0000179	6.21	20.30	21.25
0000180	6.06	20.42	21.30
0000915	6.28	--	--