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MODEL NO. SM-80C CONTRACT NO. AF 04(694)-266

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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED

TABLE OF CONTENTS

Volume II; 23 May 1963 Status

1.0 SUMMARY

This is the second in a series of monthly reports covering the status of mass data on Boeing Wing VI hardware.

It is intended that both Operational and R & D hardware shall be functionally described in the report series. This report covers the details of the Operational hardware only. The R & D configuration and weight criteria still remains to be resolved. The R & D hardware currently under consideration is mass data summarized for reference purposes only.

Current Boeing Wing VI Operational and R&D hardware weights are summarized:

	OPERATIONAL			R & D
	Current	Last	Change	Current
Stage III (Section 43)	151.47	153.67	- 2.20	657.6 (423.3)
Stage II	435.89	441.83	- 5.94	781.0
Stage I	471.62	493.30	-21.68	669.3
TOTAL	1,058.98	1,088.80	-29.82	2,107.9

Heat protection gages account for most of the weight changes recorded in this release. Though the heat protection and ablation gages still are subject to confirmation, this release reflects the latest Boeing practical heat protection evaluations.

2.0 INTRODUCTION

This series of mass data status reports describe the Boeing Wing VI hardware configurations. This report covers data applicable to the Operational and R&D hardware. The Operational hardware is described in detail and compared to the previous status report. The R & D configuration has still not been resolved; however R & D hardware currently under consideration is summarized for reference purposes only.

3.0 DESIGN CONCEPT

3.1 First Stage Skirt

The skirt design conditions, as referenced in D2-30147-1, remain essentially unchanged except as follows;

The flared skirt has a nominal aluminum skin gage of .124" on the cylindrical section and .135" on the flared section. Cork gages used for this report are external .20" on the cylindrical section and .17" on the conical section; internal .33". PR 1910 remains estimated upon a Wing II base at this time.

3.2 Interstage 1-2

The 1-2 interstage design is referenced in D2-30147-1 with changes below.

The forward section aluminum skin is .230"; the aft .140". Cork heat protection gages used in this report include .21" on first 4 inches and .14" on remaining forward section; .11" on the aft section.

Skirt jettison currently occurs at approximately 16 seconds following the stage separation event.

3.3 Interstage 2-3

The 2-3 interstage has not changed essentially and is referenced to D2-30147-1.

3.4 Heat Deflectors

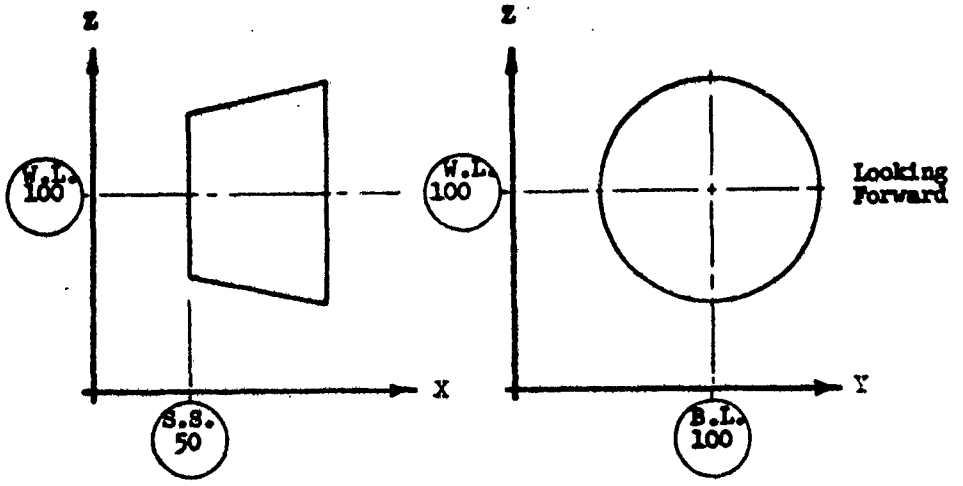
The first and third stage heat deflectors are the same as used on Wing II. Cork gages used in this report for the heat deflector support assemblies are; first stage .36" and third stage .25".

3.5 Raceways

The raceways remain essentially unchanged from D2-30147-1. However, cork gages used in this report vary from .13" to .27" depending upon location. The edge seal concept uses application of liquid PR 1910.

4.0 STATION REFERENCE DATA

Reference stations for all Boeing hardware are based upon component Section Stations. The forward interface of each production section is assumed to be Section Station 50.0.



5.0 DISCUSSION

5.1 Heat Protection

Heat Protection gages reported are those recommended by Boeing for Wing VI approval. The ablation gages incorporated in this report are Boeing's estimate of the probable ablation for the recommended gages. These values are subject to change pending review by Boeing, BSD, STL. Criteria are referenced to D2-14137, Volumes I-VI, "Design Heating Data" and D2-30047, "External Insulation Materials, Properties and Requirements."

5.2 CTLI

Neither complete drawings nor layouts are available at this time, to derive Wing VI CTLI installation weights. It is suggested that, until such time, when substantiated data can appear in these reports, Wing II CTLI increments be used. (Ref. D2-3940-21).

5.3 R & D Configuration

Upon the data record closure date of this release, an R & D configuration and related weight criteria had not been confirmed. It is impractical to report detail weight status until such time when a firm configuration base has been established. Maintaining a complete change history during a configuration study period requires an excessive expenditure of manpower for the benefit derived.

The current weight <u>increments</u> for the Boeing R&D subsystem hardware now under evaluation are summarized as follows:

Stage III	+506.1
(Section 43)	(+423.3)
Stage II	+345.1
Stage I	+197.7
TOTAL...	+1048.9

The above increments can be considered as additive to the Boeing Operational hardware stage weights given herein. The R&D weights <u>do not</u> include R & D increments of other Associate Contractor responsibility.

Page 12 presents an R&D sectional data summary for the complete Boeing FTM hardware responsibility as reflected from current AFBSD Exhibit 62-74 configuration and criteria evaluations.

6.0 SECTIONAL DATA SUMMARY (Operational - Page 11; R&D - Page 12)

The total weight, balance and inertia data are presented for Boeing responsibility hardware on each production section. Data on various expended portions of the sections are shown for sequential data integration.

An R&D summary is presented as representing data typical of current study configurations.

7.0 WEIGHT STATUS BY STAGE SUMMARY (Operational - Page 13)

A functional weight breakdown per stage is listed in summary form.

8.0 SECTIONAL BREAKDOWN BY FUNCTION (Operational - Pages 14-22)

A functional weight and balance breakdown per section is presented. These data are listed in the launch condition. Flight expended weight and balance data are broken out as required to support TDAT sequential mass data outputs.

9.0 WEIGHT STATUS BY FUNCTION (Operational - Pages 23-38)

Changes in weight over the reporting period are listed by function breakdown for each section.

10.0 WEIGHT CHANGE SUBSTANTIATION (Operational - Pages 39-41)

Substantiations are provided for changes recorded in Paragraph 9.

SECTIONAL DATA SUMMARY
BOEING RESPONSIBILITY

REPORT NO. WING VI OPERATIONAL
DATE 23 MAY 1963

LN	SC	DESCRIPTION	DATA	EXPENDED WEIGHT LB	TOTAL WEIGHT LB	CENTER OF GRAVITY LONG	CENTER OF GRAVITY LAT	CENTER OF GRAVITY VERT	INERTIA SLUG FT^2 X 10^{-3} ROLL	INERTIA SLUG FT^2 X 10^{-3} PITCH
01	41	RV SPACER								
02			SILO							
03			AERO							
04	42	G+C SECTION			3.54	81.04	100.00	100.00	0	0
05			SILO							
06			AERO							
07	43	R+D SECTION								
08			SILO							
09			AERO							
10	44	3RD STAGE ENGINE			23.54	98.67	107.65	112.03	.001	.003
11			SILO	.29		92.57	110.57	118.15	0	0
12			AERO	.78		78.40	110.56	118.14	0	0
13			BASE	.40		124.84	109.80	110.16	0	0
14	45	INTERSTAGE 2-3			124.39	60.56	101.11	100.63	.012	.007
15		FWD	SILO							
16			AERO							
17			BASE	.91		50.85	99.48	98.78	0	0
18			SILO	1.48		63.00	100.00	100.00	0	0
19		JETTISONED	AERO	3.87		63.00	100.00	100.00	0	0
20		PORTION	BASE							
21			JETT	101.13		62.25	101.42	100.88	.009	.006
22	45	INTERSTAGE 2-3			101.23	79.37	101.42	104.55	.013	.007
23		AFT	SILO	1.43		79.78	102.19	103.79	0	0
24			AERO	4.16		79.71	102.22	103.86	.001	0
25	46	2ND STAGE ENGINE			23.25	113.44	113.63	123.05	.001	.008
26			SILO	.50		105.15	113.98	124.14	0	0
27			AERO	.62		118.39	114.10	124.36	0	0
28			BASE	.90		182.63	116.21	116.21	0	0
29	47	INTERSTAGE 1-2			311.41	71.65	101.06	100.67	.055	.037
30		FWD	SILO							
31			AERO							
32			BASE	.30		50.60	100.00	100.00	0	0
33			SILO	4.38		72.10	100.00	100.00	.001	.001
34		JETTISONED	AERO	4.80		70.39	100.00	100.00	.001	.001
35		PORTION	BASE	2.32		84.75	100.35	100.86	0	0
36			JETT	282.12		72.85	101.16	100.71	.050	.034
37	47	INTERSTAGE 1-2			119.36	96.18	102.28	104.83	.026	.014
38		AFT	SILO	2.15		96.16	103.17	105.49	0	0
39			AERO	1.40		91.16	106.96	112.05	0	0
40	48	1ST STAGE ENGINE			56.99	220.04	110.65	118.42	.004	.071
41			SILO	2.44		133.47	114.48	125.04	0	.003
42			AERO	.45		158.80	117.40	130.10	0	.001
43			BASE	1.55		314.10	100.00	100.00	0	.002
44	49	SKIRT			295.27	63.58	100.66	101.04	.073	.044
45			SILO	14.13		68.45	100.06	100.14	.004	.002
46			AERO	3.99		71.92	100.05	100.09	.001	.001
47			BASE	16.47		68.62	101.90	103.10	.004	.002
48		MISSILE			1058.98		102.06	103.32		
49			SILO	26.80			102.10	103.64		
50			AERO	20.07			102.19	103.79		
51			BASE	23.35			102.16	103.04		
52			JETT	383.25			101.23	100.76		

Missile Section Stations

SECTIONAL DATA SUMMARY
BOEING RESPONSIBILITY

REPORT NO. WING VI R & D
DATE 23 May 1963

LINE	SEC.	DESCRIPTION	DATA	EXPENDED WEIGHT (LB)	TOTAL WEIGHT (LB)	CENTER OF GRAVITY LONG.**	CENTER OF GRAVITY LAT.	CENTER OF GRAVITY VERT.	INERTIA SLUG FT^{2}x10-3 ROLL	INERTIA SLUG FT^{2}x10-3 PITCH
1	41	RV Spacer			1.8	148.9	100.0	100.0	0	0
2			Silo							
3			Aero							
4	42	G&C Section			3.5	81.0	100.0	100.0	0	0
5			Silo							
6			Aero							
7	43	R&D Section			423.3	59.0	100.0	100.3	.016	.010
8			Silo	1.5		60.0	99.4	100.1	0	0
9			Aero	1.4		61.7	93.7	112.6	0	0
10	44	3rd Stage Engine			91.3	98.2	96.9	113.0	.002	.012
11			Silo	.6		83.3	100.3	118.5	0	0
12			Aero	1.6		84.0	101.5	118.6	0	0
13			Base	2.9		120.0	98.4	109.1	0	0
14	45	Interstage 2-3			137.7	60.3	99.6	100.3	.013	.008
15		(Fwd)	Silo							
16			Aero							
17			Base	.9		50.9	99.5	98.8	0	0
18			Silo	1.7		63.0	100.0	98.1	0	0
19		Jettisoned	Aero	4.6		63.0	100.0	98.1	0	0
20		Portion	Base							
21			Jett	111.3		62.0	99.8	100.7	.010	.006
22	45	Interstage 2-3			320.4	78.3	103.4	102.3	.041	.022
23		(Aft)	Silo	1.9		77.7	100.3	105.8	0	0
24			Aero	5.7		77.6	100.3	105.9	.001	0
25	46	2nd Stage Engine			131.6	95.6	95.4	119.6	.005	.046
26			Silo	1.4		101.7	100.9	125.4	0	.001
27			Aero	1.9		121.8	99.6	125.2	0	.001
28			Base	2.7		131.9	98.2	114.1	0	0
29	47	Interstage 1-2			329.0	71.0	100.7	100.5	.058	.040
30		(Fwd)	Silo							
31			Aero							
32			Base	.3		50.5	98.9	99.5	0	0
33			Silo	4.4		72.1	100.0	100.0	.001	.001
34		Jettisoned	Aero	4.8		70.4	100.0	100.0	.001	.001
35		Portion	Base	3.5		79.4	99.6	99.8	.001	0
36			Jett	296.5		72.3	100.8	100.5	.052	.036
37	47	Interstage 1-2			177.8	93.4	98.2	110.4	.039	.020
38		(Aft)	Silo	2.7		92.1	100.9	110.5	.001	0
39			Aero	2.2		86.0	100.9	118.9	0	0
40	48	1st Stage Engine			128.1	182.8	97.2	124.2	.010	.161
41			Silo	3.7		176.7	101.0	126.9	0	.005
42			Aero	.9		156.9	100.5	130.0	0	.001
43			Base	1.6		314.1	100.0	100.0	0	0
44	49	Skirt			363.4	68.3	100.9	103.2	.090	.054
45			Silo	15.3		68.3	99.7	101.6	.004	.002
46			Aero	4.0		71.9	99.8	100.3	.001	.001
47			Base	19.8		68.2	100.0	104.4	.005	.003
48		MISSILE			2107.9	**	100.0	105.2		
49			Silo	33.3			100.1	106.3		
50			Aero	27.0			99.9	107.1		
51			Base	31.7			99.6	104.7		
52			Jett	407.8			100.5	100.6		

** Missile Section Stations.

7.0 WEIGHT STATUS BY STAGE SUMMARY

STAGE AND ITEM	OPER. WT.
STAGE III	(151.47)
Raceways	13.84
G & C Provisions	4.77
Interstage 2-3 Fwd.	123.09
Heat Deflector	6.23
Attach. Provisions (G&C to HPC)	3.54
STAGE II	(435.89)
Raceways	38.74
G & C Provisions	3.30
Interstage 2-3 Aft	70.18
Interstage 1-2 Fwd	309.78
Heat Deflector	0.00
Accelerometer Support	13.89
STAGE I	(471.62)
Raceways	58.17
G & C Provisions	12.44
Interstage 1-2 Aft	95.41
Skirt	283.98
Heat Deflector	21.62
Total Missile - Boeing Hardware	(1,058.98)

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23MAY 1963

LN	FUNCTIONAL LISTING		C UNEXPENDED WT	C UNEXPENDED H CG	C UNEXPENDED L CG	C UNEXPENDED V CG	D EXPENDED WT	D EXPENDED H CG	D EXPENDED L CG	D EXPENDED V CG	C + D TOTAL WT	C + D TOTAL H CG	C + D TOTAL L CG	C + D TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	0												
07	HEAT PROTECTION	0												
08	SILO	0												
09	AERO	0												
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO													
21	BASE HEAT PROTECTION													
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED		2.04	81.00	100.00	100.00					2.04	81.00	100.00	100.00
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL													
28	AERO		1.50	81.10	100.00	100.00					1.50	81.10	100.00	100.00
29	BASE													
30	SILO INTERNAL													
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 42		3.54	81.04	100.00	100.00					3.54	81.04	100.00	100.00
52														
53	SECTION TOTAL													

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		G UNEXPENDED WT	G UNEXPENDED H CG	G UNEXPENDED L CG	G UNEXPENDED V CG	H EXPENDED WT	H EXPENDED H CG	H EXPENDED L CG	H EXPENDED V CG	G + H TOTAL WT	G + H TOTAL H CG	G + H TOTAL L CG	G + H TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	O	8.64	86.18	110.29	117.82					8.64	86.18	110.29	117.82
07	HEAT PROTECTION	O												
08	SILO	O					.29	82.57	110.57	118.15	.29	82.57	110.57	118.15
09	AERO	O	2.83	83.61	110.10	117.43	.78	78.40	110.56	118.14	3.61	82.46	110.20	117.58
10		O												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO		3.14	72.55	109.46	111.95					3.14	72.55	109.46	111.95
21	BASE HEAT PROTECTION		1.33	121.93	113.25	114.11	.30	122.74	113.05	113.57	1.63	122.08	113.21	114.01
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED													
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL													
28	AERO													
29	BASE													
30	SILO INTERNAL													
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.		5.84	133.29	100.00	100.00					5.84	133.29	100.00	100.00
43	BASE HEAT PROTECTION		.29	131.00	100.00	100.00	.10	131.14	100.06	100.00	.39	131.05	100.02	100.00
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 44		22.07	99.12	107.47	111.76	1.47	91.86	110.36	115.98	23.54	98.67	107.65	112.03
52														
53	SECTION TOTAL													

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 29 MAY 1963

LN	FUNCTIONAL LISTING		J UNEXPENDED WT	J UNEXPENDED H CG	J UNEXPENDED L CG	J UNEXPENDED V CG	K EXPENDED WT	K EXPENDED H CG	K EXPENDED L CG	K EXPENDED V CG	J + K TOTAL WT	J + K TOTAL H CG	J + K TOTAL L CG	J + K TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	O												
07	HEAT PROTECTION	O												
08	SILO	O												
09	AERO	O												
10		O	1.30	58.46	110.09	117.54					1.30	58.46	110.09	117.54
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO													
21	BASE HEAT PROTECTION													
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED		10.88	50.08	99.81	99.67					10.88	50.08	99.81	99.67
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL		.53	49.77	100.00	100.00					.53	49.77	100.00	100.00
28	AERO		5.59	50.71	99.56	98.97	.91	50.85	99.48	98.78	6.50	50.75	99.55	98.95
29	BASE													
30	SILO INTERNAL		53.67	61.96	101.07	101.23					53.67	61.96	101.07	101.23
31	JETTISONED		7.28	72.93	100.38	98.75					7.28	72.93	100.38	98.75
32	SEPAR. MECH.- STAGE		27.56	60.01	103.02	100.55					27.56	60.01	103.02	100.55
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION						1.48	63.00	100.00	100.00	1.48	63.00	100.00	100.00
35	SILO		9.42	62.23	100.09	100.08	3.87	63.00	100.00	100.00	13.29	62.45	100.06	100.05
36	AERO		1.90	64.84	92.67	96.32					1.90	64.84	92.67	96.32
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 45 FWD		118.13	60.53	101.18	100.67	6.26	61.23	99.92	99.82	124.39	60.56	101.11	100.63
52														
53	SECTION TOTAL													

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		L UNEXPENDED WT	L UNEXPENDED H CG	L UNEXPENDED L CG	L UNEXPENDED V CG	M EXPENDED WT	M EXPENDED H CG	M EXPENDED L CG	M EXPENDED V CG	L + M TOTAL WT	L + M TOTAL H CG	L + M TOTAL L CG	L + M TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R									12.32	67.89	111.68	120.22
06	COVERS + CAPS	0	12.32	67.89	111.68	120.22								
07	HEAT PROTECTION	0					.25	69.76	112.50	121.70	.25	69.76	112.50	121.70
08	SILO	0					.74	69.60	112.49	121.68	2.89	70.91	112.41	121.57
09	AERO	0	2.15	71.37	112.38	121.53								
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION										1.70	86.55	113.11	117.64
20	CABLE PROV + INSTL PRO		1.70	86.55	113.11	117.64								
21	BASE HEAT PROTECTION													
22	SILO HEAT PROTECTION													
23	STRUCTURE										43.38	83.36	99.64	99.69
24	UNJETTISONED		43.38	83.36	99.64	99.69					14.06	75.41	97.09	98.28
25	SEPARATION MECH.		14.06	75.41	97.09	98.28								
26	HEAT PROTECTION						1.18	81.90	100.00	100.00	1.18	81.90	100.00	100.00
27	SILO EXTERNAL						3.42	81.90	100.00	100.00	11.56	82.15	99.79	99.79
28	AERO		8.14	82.26	99.71	99.70								
29	BASE													
30	SILO INTERNAL													
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38											13.89	79.60	99.80	111.10
39	ACCELEROMETER SUPPORT		13.89	79.60	99.80	111.10								
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 45 AFT		95.64	79.35	101.37	104.60	5.59	79.73	102.21	103.84	101.23	79.37	101.42	104.55
52														
53	SECTION TOTAL SECT 45		213.77	68.95	101.26	102.43	11.85	69.96	101.00	101.72	225.62	69.00	101.25	102.39

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		N UNEXPENDED WT	N UNEXPENDED H CG	N UNEXPENDED L CG	N UNEXPENDED V CG	P EXPENDED WT	P EXPENDED H CG	P EXPENDED L CG	P EXPENDED V CG	N + P TOTAL WT	N + P TOTAL H CG	N + P TOTAL L CG	N + P TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	0	13.66	110.65	113.73	123.83					13.66	110.65	113.78	123.83
07	HEAT PROTECTION	0												
08	SILO	0					.50	105.15	113.98	124.14	.50	105.15	113.98	124.14
09	AERO	0	6.87	104.83	113.13	123.04	.62	118.39	114.10	124.36	7.49	105.96	113.21	123.15
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO		.60	162.30	111.00	114.30					.60	162.30	111.00	114.30
21	BASE HEAT PROTECTION		.10	181.27	115.94	116.92	.90	182.63	116.21	116.21	1.00	182.49	116.18	116.28
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED													
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL													
28	AERO													
29	BASE													
30	SILO INTERNAL													
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 46		21.23	110.56	113.50	123.27	2.02	143.73	115.01	120.67	23.25	113.44	113.65	123.05
52														
53	SECTION TOTAL													

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		Q UNEXPENDED WT	Q UNEXPENDED H CG	Q UNEXPENDED L CG	Q UNEXPENDED V CG	R EXPENDED WT	R EXPENDED H CG	R EXPENDED L CG	R EXPENDED V CG	Q + R TOTAL WT	Q + R TOTAL H CG	Q + R TOTAL L CG	Q + R TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	0	1.63	65.57	114.09	124.35					1.63	65.57	114.09	124.35
07	HEAT PROTECTION	0												
08	SILO	0												
09	AERO	0												
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO													
21	BASE HEAT PROTECTION													
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED		14.09	49.96	100.24	100.41					14.09	49.96	100.24	100.41
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL													
28	AERO													
29	BASE		2.90	50.60	100.00	100.00	.30	50.60	100.00	100.00	3.20	50.60	100.00	100.00
30	SILO INTERNAL													
31	JETTISONED		201.04	72.77	100.03	100.02					201.04	72.77	100.03	100.02
32	SEPAR. MECH.- STAGE		11.19	92.41	98.75	99.47					11.19	92.41	98.75	99.47
33	SEPAR. MECH.- PEEL		39.23	64.24	105.69	102.89					39.23	64.24	105.69	102.89
34	HEAT PROTECTION													
35	SILO						4.38	72.10	100.00	100.00	4.38	72.10	100.00	100.00
36	AERO		15.02	70.92	100.23	100.12	4.80	70.39	100.00	100.00	19.82	70.79	100.17	100.09
37	BASE		14.01	85.46	106.06	103.59	2.82	84.75	100.35	100.66	16.83	85.34	105.11	103.05
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 47 FWD		299.11	71.56	101.10	100.69	12.30	73.81	100.08	100.20	311.41	71.65	101.06	100.67
52														
53	SECTION TOTAL													

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		S UNEXPENDED WT	S UNEXPENDED H CG	S UNEXPENDED L CG	S UNEXPENDED V CG	T EXPENDED WT	T EXPENDED H CG	T EXPENDED L CG	T EXPENDED V CG	S + T TOTAL WT	S + T TOTAL H CG	S + T TOTAL L CG	S + T TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	0	17.08	78.55	115.56	126.97					17.08	78.55	115.56	126.97
07	HEAT PROTECTION	0												
08	SILO	0					.42	78.70	116.24	128.10	.42	78.70	116.24	128.10
09	AERO	0	2.43	77.68	115.72	127.19	.60	73.84	116.25	128.11	3.03	77.91	115.82	127.57
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO		3.42	95.38	112.90	124.53					3.42	95.38	112.90	124.53
21	BASE HEAT PROTECTION													
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED		66.53	102.01	99.71	99.79					66.53	102.01	99.71	99.79
25	SEPARATION MECH.		21.70	93.91	97.03	98.06					21.70	93.91	97.03	98.06
26	HEAT PROTECTION													
27	SILO EXTERNAL						1.73	100.40	100.00	100.00	1.73	100.40	100.00	100.00
28	AERO		4.65	100.06	98.13	98.50	.80	100.40	100.00	100.00	5.45	100.11	98.40	98.72
29	BASE													
30	SILO INTERNAL													
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 47 AFT		115.81	96.24	102.21	104.73	3.55	94.19	104.67	108.08	119.36	96.16	102.28	104.83
52														
53	SECTION TOTAL SECT 47		414.92	78.45	101.41	101.42	15.85	74.37	101.11	101.96	430.77	78.45	101.40	101.82

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		U UNEXPENDED WT	U H CG	U L CG	U V CG	V EXPENDED WT	V H CG	V L CG	V V CG	U + V TOTAL WT	U + V H CG	U + V L CG	U + V V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS	0	25.95	159.52	117.17	129.79					25.95	159.52	117.17	129.79
07	HEAT PROTECTION	0												
08	SILO	0					2.03	157.09	117.40	130.10	2.03	157.09	117.40	130.10
09	AERO	0	6.74	164.01	117.19	129.61	.45	158.80	117.40	130.10	7.19	163.68	117.21	129.64
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO		.20	34.20	112.70	112.70					.20	34.20	112.70	112.70
21	BASE HEAT PROTECTION													
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED													
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL													
28	AERO													
29	BASE													
30	SILO INTERNAL													
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.		16.13	320.74	100.00	100.00					16.13	320.74	100.00	100.00
43	BASE HEAT PROTECTION		3.53	314.10	100.00	100.00	1.55	314.10	100.00	100.00	5.08	314.10	100.00	100.00
44	SILO HEAT PROTECTION						.41	314.10	100.00	100.00	.41	314.10	100.00	100.00
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 48		52.55	219.49	110.73	118.56	4.44	226.57	109.72	116.81	56.99	220.04	110.65	118.42
52														
53	SECTION TOTAL													

BOEING WEIGHT RESPONSIBILITY
MISSILE WING VI OPERATIONAL
DATE 23 MAY 1963

LN	FUNCTIONAL LISTING		W UNEXPENDED WT	W UNEXPENDED H CG	W UNEXPENDED L CG	W UNEXPENDED V CG	X EXPENDED WT	X EXPENDED H CG	X EXPENDED L CG	X EXPENDED V CG	W + X TOTAL WT	W + X TOTAL H CG	W + X TOTAL L CG	W + X TOTAL V CG
01	RACEWAYS													
02	COVERS + CAPS	R												
03	HEAT PROTECTION	R												
04	SILO	R												
05	AERO	R												
06	COVERS + CAPS.	0	1.89	54.97	116.80	129.01					1.89	54.97	116.80	129.01
07	HEAT PROTECTION	0												
08	SILO	0					.17	56.40	117.50	130.10	.17	56.40	117.50	130.10
09	AERO	0	.38	55.70	117.28	129.76	.03	56.40	117.50	130.10	.41	55.75	117.29	129.79
10		0												
11	INSTRUMENTATION													
12	EQUIPMENT + WIRE													
13	BASE HEAT PROTECTION													
14	EQUIP + WIRE - JETT.													
15	BASE HEAT PRO.-JETT.													
16	SILO HEAT PROTECTION													
17	DESTRUCT PROVISION													
18														
19	G+C INSTALLATION													
20	CABLE PROV + INSTL PRO		4.90	76.54	118.67	128.56					4.90	76.54	118.67	128.56
21	BASE HEAT PROTECTION		2.13	69.52	117.63	128.45	1.79	72.69	117.50	128.54	3.92	70.97	117.57	128.49
22	SILO HEAT PROTECTION													
23	STRUCTURE													
24	UNJETTISONED		161.69	68.36	100.00	100.06					161.69	68.36	100.00	100.06
25	SEPARATION MECH.													
26	HEAT PROTECTION													
27	SILO EXTERNAL						8.53	68.60	99.91	99.62	8.53	68.60	99.91	99.62
28	AERO		21.96	66.54	99.75	99.53	3.96	72.03	99.92	99.86	25.92	67.35	99.77	99.58
29	BASE		67.73	69.41	100.00	100.00	14.68	68.12	100.00	100.00	82.41	69.13	100.00	100.00
30	SILO INTERNAL						5.43	68.50	100.00	100.00	5.43	68.50	100.00	100.00
31	JETTISONED													
32	SEPAR. MECH.- STAGE													
33	SEPAR. MECH.- PEEL													
34	HEAT PROTECTION													
35	SILO													
36	AERO													
37	BASE													
38														
39	ACCELEROMETER SUPPORT													
40														
41	HEAT DEFLECTOR INSTL.													
42	DEFLECTOR + STRUC.													
43	BASE HEAT PROTECTION													
44	SILO HEAT PROTECTION													
45	MISCELLANEOUS													
46														
47	CONTINGENCY													
48														
49	UNACCOUNTED													
50														
51	COLUMN TOTAL SECT 49		260.68	68.53	100.62	101.02	34.59	68.93	100.94	101.34	295.27	68.58	100.66	101.08
52														
53	SECTION TOTAL													
	MISSILE TOTAL		984.76	82.44	102.06	103.31	70.22	83.83	102.14	103.49	1053.98	82.53	102.06	103.32

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23May 1963
Reporting Period 23 March - 23 April

Section 42

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	3	STRUCTURE												
2		Unjettisoned (Section Attach.)					2.04	2.04			100			
3		Separation Mechanism												
4		Heat Protection												
5		Silo - External												
6		Aero					1.50	1.50			100			
7		Base												
8		Silo - Internal												
9		Jettisoned												
10		Separation Mechanism - Stage												
11		Separation Mechanism - Peel												
12		Heat Protection												
13		Silo												
14		Aero												
15		Base												
16														
17		ACCELEROMETER SUPPORT												
18														
19		HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure												
21		Base Heat Protection												
22		Silo Heat Protection												
23														
24														
25	3	SECTION 42 TOTAL					3.54	3.54		0.00				
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Line	Stage	Section 44 ①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	3	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					8.64	9.13		- .49	100			39
7		Heat Protection Operational												
8		Silo Operational					.29	.32		- .03	100			39
9		Aero Operational					3.61	5.57		- 1.96	100			39
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20	3	G&C INSTALLATION												
21		Cable Provisions					3.14	2.97		+ .17	100			39
22		Base Heat Protection					1.63	1.63			100			
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Section 44 (Continued)

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1		STRUCTURE												
2		Unjettisoned												
3		Separation Mechanism												
4		Heat Protection												
5		Silo - External												
6		Aero												
7		Base												
8		Silo - Internal												
9		Jettisoned												
10		Separation Mechanism - Stage												
11		Separation Mechanism - Peel												
12		Heat Protection												
13		Silo												
14		Aero												
15		Base												
16														
17		ACCELEROMETER SUPPORT												
18														
19	3	HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure					5.84	5.74		+ .10	100			39
21		Base Heat Protection					.39	.72		- .33	100			39
22		Silo Heat Protection												
23														
24														
25	3	SECTION 44 TOTAL					23.54	26.08		- 2.54				
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Line	Stage	Section 45 Fwd ①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Basis For Current Data % Calc. ⑪	Basis For Current Data % Actual ⑫	Justification Pg. ⑬
1	3	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					1.30	1.25		+ .05	100			39
7		Heat Protection Operational												
8		Silo Operational												
9		Aero Operational												
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20		G&C INSTALLATION												
21		Cable Provisions												
22		Base Heat Protection												
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Section 45 Fwd (Continued)

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147 - 1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pgs. ⑬
1	3	STRUCTURE												
2		Unjettisoned					10.88	10.88			100			
3		Separation Mechanism												
4		Heat Protection												
5		Silo - External												
6		Aero					.53	.70		- .17	100			39
7		Base					6.50	6.50			100			
8		Silo - Internal												
9		Jettisoned					53.67	53.57		+ .10	100			39
10		Separation Mechanism - Stage					7.28	7.33		- .05	100			39
11		Separation Mechanism - Peel					27.56	27.33		+ .23	100			39
12		Heat Protection												
13		Silo					1.48	2.68		- 1.20	100			39
14		Aero					13.29	11.91		+ 1.38	100			39
15		Base					1.90	1.90			100			
16														
17		ACCELEROMETER SUPPORT												
18														
19		HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure												
21		Base Heat Protection												
22		Silo Heat Protection												
23														
24														
25	3	SECTION 45 F TOTAL					124.39	124.05		+ .34				
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Section 45 Aft

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147 - 1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	2	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					12.32	12.66		- .34	100			39
7		Heat Protection Operational												
8		Silo Operational					.25	.30		- .05	100			39
9		Aero Operational					2.89	3.60		- .71	100			39
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20	2	G&C INSTALLATION												
21		Cable Provisions					1.70	1.70			100			
22		Base Heat Protection												
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

2-7824-19 B

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Line	Stage	Section 45 Aft (Continued) ①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	2	STRUCTURE												
2		Unjettisoned					43.38	44.38		- 1.00	100			39
3		Separation Mechanism					14.06	14.72		- .66	100			39
4		Heat Protection												
5		Silo - External					1.18	1.94		- .76	100			39
6		Aero					11.56	9.32		+ 2.24	100			39
7		Base												
8		Silo - Internal												
9		Jettisoned												
10		Separation Mechanism - Stage												
11		Separation Mechanism - Peel												
12		Heat Protection												
13		Silo												
14		Aero												
15		Base												
16														
17	2	ACCELEROMETER SUPPORT					13.89	13.89			100			
18														
19		HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure												
21		Base Heat Protection												
22		Silo Heat Protection												
23														
24														
25	2	SECTION 45 A TOTAL					101.23	102.51		- 1.28				
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
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Section 46

Line	Stage	(1)	Original Spec. Weight Per (2)	Appr'd Spec. Changes (3)	Rev'd Spec. Weight As Of (2)+(3) (4)	Over or Under Weight (5)	Current Status (4)+(5) or (7)+(8)+(9) (6)	Last Status Report D2-30147-1 Dated 3-23-63 (7)	Changes: Last to Current Status GFE Changes (8)	Changes: Last to Current Status Contractor Changes (9)	Basis For Current Data % Est. (10)	Calc. (11)	Actual (12)	Justification Pg. (13)
1	2	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					13.66	14.04		- .38	100			39
7		Heat Protection Operational												
8		Silo Operational					.50	.46		+ .04	100			39
9		Aero Operational					7.49	7.20		+ .29	100			39
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20	2	G&C INSTALLATION												
21		Cable Provisions					.60	.50		+ .10	100			39
22		Base Heat Protection					1.00	1.00			100			
23		Silo Heat Protection												
24														
25	2	SECTION 46 TOTAL					23.25	23.20		+ .05				
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
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Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Section 47 Fwd

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	2	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					1.63	1.53		+ .10	100			10
7		Heat Protection Operational												
8		Silo Operational												
9		Aero Operational												
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20		G&C INSTALLATION												
21		Cable Provisions												
22		Base Heat Protection												
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
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Submittal Date 23 May 1963
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Section 47 Fwd (Continued)

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	2	STRUCTURE												
2		Unjettisoned					14.09	14.06		+ .03	100			40
3		Separation Mechanism												
4		Heat Protection												
5		Silo - External												
6		Aero					0.0	.40		- .40	100			40
7		Base					3.20	3.20			100			
8		Silo - Internal												
9		Jettisoned					201.04	201.02		+ .02	100			40
10		Separation Mechanism - Stage					11.19	11.19			100			
11		Separation Mechanism - Peel					39.23	40.37		- 1.14	100			40
12		Heat Protection												
13		Silo					4.38	4.23		+ .15	100			40
14		Aero					19.82	14.45		+ 5.37	100			40
15		Base					16.83	25.67		- 8.84	100			40
16														
17		ACCELEROMETER SUPPORT												
18														
19		HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure												
21		Base Heat Protection												
22		Silo Heat Protection												
23														
24														
25	2	SECTION 47 F TOTAL					311.41	316.12		- 4.71				
26														
27														
28														
29														
30														

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(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
Configuration Operational
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Submittal Date 23 May 1963
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Section 47 Aft

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	1	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					17.08	16.64		+ .44	100			40
7		Heat Protection Operational												
8		Silo Operational					.42	.50		- .08	100			40
9		Aero Operational					3.03	5.25		- 2.22	100			40
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20	1	G&C INSTALLATION												
21		Cable Provisions					3.42	2.50		+ .92	100			40
22		Base Heat Protection												
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

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(DETAIL)(SUMMARY) WEIGHT STATUS

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Configuration Operational
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Section 47 Aft (Continued)

Line	Stage	(1)	Original Spec. Weight Per (2)	Appr'd Spec. Changes (3)	Rev'd Spec. Weight As Of (2)+(3) (4)	Over or Under Weight (5)	Current Status (4)+(5) or (7)+(8)+(9) (6)	Last Status Report D2-30147-1 Dated 3-23-63 (7)	Changes: Last to Current Status GFE Changes (8)	Changes: Last to Current Status Contractor Changes (9)	Basis For Current Data % Est. (10)	Calc. (11)	Actual (12)	Justification Pgs. (13)
1	1	STRUCTURE												
2		Unjettisoned					66.53	65.55		+ .98	100			40
3		Separation Mechanism					21.70	23.20		- 1.50	100			40
4		Heat Protection												
5		Silo - External					1.73	1.73						
6		Aero					5.45	5.69		- .24	100			40
7		Base												
8		Silo - Internal												
9		Jettisoned												
10		Separation Mechanism - Stage												
11		Separation Mechanism - Peal												
12		Heat Protection												
13		Silo												
14		Aero												
15		Base												
16														
17		ACCELEROMETER SUPPORT												
18														
19		HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure												
21		Base Heat Protection												
22		Silo Heat Protection												
23														
24														
25	1	SECTION 47 A TOTAL					119.36	121.06		- 1.70				
26														
27														
28														
29														
30														

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(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
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Section 48

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Basis For Current Data % Calc. ⑪	Basis For Current Data % Actual ⑫	Justification Pgs. ⑬
1	1	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					25.95	25.95			100			
7		Heat Protection Operational												
8		Silo Operational					2.03	1.71		+ .32	100			40
9		Aero Operational					7.19	13.43		- 6.24	100			40
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20	1	G&C INSTALLATION												
21		Cable Provisions					.20	.20			100			
22		Base Heat Protection												
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

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(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
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Line	Stage	Section 48 (Continued) ①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147-1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1		STRUCTURE												
2		Unjettisoned												
3		Separation Mechanism												
4		Heat Protection												
5		Silo - External												
6		Aero												
7		Base												
8		Silo - Internal												
9		Jettisoned												
10		Separation Mechanism - Stage												
11		Separation Mechanism - Peel												
12		Heat Protection												
13		Silo												
14		Aero												
15		Base												
16														
17		ACCELEROMETER SUPPORT												
18														
19	1	HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure					16.13	16.00		+ .13	100			40
21		Base Heat Protection					5.08	9.85		- 4.77	100			40
22		Silo Heat Protection					.41	.97		- .56	100			40
23														
24														
25	1	SECTION 48 TOTAL					56.99	68.11		-11.12				
26														
27														
28														
29														
30														

(DETAIL)(SUMMARY) WEIGHT STATUS

Model SM-80C Wing VI
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Section 49

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147 -1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	1	RACEWAYS												
2		Covers + Caps R&D												
3		Heat Protection R&D												
4		Silo R&D												
5		Aero R&D												
6		Covers + Caps Operational					1.89	1.74		+ .15	100			41
7		Heat Protection Operational												
8		Silo Operational					.17	.19		- .02	100			41
9		Aero Operational					.41	.42		- .01	100			41
10														
11		INSTRUMENTATION												
12		Equipment + Wire												
13		Base Heat Protection												
14		Equipment + Wire - Jettisoned												
15		Base Heat Protection - Jettisoned												
16		Silo Heat Protection												
17														
18		DESTRUCT PROVISION												
19														
20	1	G&C INSTALLATION												
21		Cable Provisions					4.90	4.90			100			41
22		Base Heat Protection					3.92	2.40		+ 1.52	100			41
23		Silo Heat Protection												
24														
25														
26														
27														
28														
29														
30														

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(DETAIL)(SUMMARY) WEIGHT STATUS

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Section 49 (Continued)

Line	Stage	①	Original Spec. Weight Per ②	Appr'd Spec. Changes ③	Rev'd Spec. Weight As Of ②+③ ④	Over or Under Weight ⑤	Current Status ④+⑤ or ⑦+⑧+⑨ ⑥	Last Status Report D2-30147 -1 Dated 3-23-63 ⑦	Changes: Last to Current Status GFE Changes ⑧	Changes: Last to Current Status Contractor Changes ⑨	Basis For Current Data % Est. ⑩	Calc. ⑪	Actual ⑫	Justification Pg. ⑬
1	1	STRUCTURE												
2		Unjettisoned					161.69	170.31		- 8.62	100			41
3		Separation Mechanism												
4		Heat Protection												
5		Silo - External					8.53	17.52		- 8.99	100			41
6		Aero					25.92	20.04		+ 5.88	100			41
7		Base					82.41	86.61		- 4.20	100			41
8		Silo - Internal					5.43	0.0		+ 5.43	100			41
9		Jettisoned												
10		Separation Mechanism - Stage												
11		Separation Mechanism - Peel												
12		Heat Protection												
13		Silo												
14		Aero												
15		Base												
16														
17		ACCELEROMETER SUPPORT												
18														
19		HEAT DEFLECTOR INSTALLATION												
20		Deflector + Structure												
21		Base Heat Protection												
22		Silo Heat Protection												
23														
24														
25	1	SECTION 49 TOTAL					295.27	304.13		- 8.86				
26														
27														
28		MISSILE TOTAL - BOEING					1058.98	1088.80		- 29.82				
29														
30														

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JUSTIFICATION OF CHANGES SINCE LAST REPORT

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Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Line	Stage	(1)	G.F.E. CHANGES (2)	CONTRACTOR CHANGES (3)	EXPLANATION (4)	WEIGHT STATUS Page	WEIGHT STATUS Line
1	3	Covers & Caps		- .49	Recalculation per new layout.	24	6
2	4	Silo heat protection		- .03	New ablation gage of cork.	24	8
3		Aero heat protection		- 1.96	New cork gage and seal change.	24	9
4		Cable provisions		+ .17	Recalculation per new layout.	24	21
5							
6		Deflector & structure		+ .10	Recalculation	25	20
7		Base heat protection		- .33	Reduction in basic gage of cork.	25	21
8							
9		Covers & Caps		+ .05	Recalculation per new layout.	26	6
10							
11		Aero heat protection		- .17		27	6
12		Jettisoned structure		+ .10	Recalculation per new layout.	27	9
13		Separation mech. - Stage		- .05		27	10
14		Separation mech. - Peal		+ .23		27	11
15	4	Silo heat protection		- 1.20	New ablation rates.	27	13
16	3	Aero heat protection		+ 1.38	New ablation rates and gage correction.	27	14
17							
18	2	Covers & Caps		- .34	Recalculation per new layout.	28	6
19	4	Silo heat protection		- .05	New ablation gage of cork.	28	8
20		Aero heat protection		- .71	New cork gage and seal change.	28	9
21							
22		Unjettisoned structure		- 1.00	Recalculation per new layout.	29	2
23		Separation mechanism		- .66	New Arm, Dis-Arm device & recalculation.	29	3
24		Silo heat protection		- .76	New ablation rates.	29	5
25		Aero heat protection		+ 2.24	New ablation rates & gage correction.	29	6
26							
27		Covers & Caps		- .38	Recalculation per new layout.	30	6
28		Silo heat protection		+ .04	New ablation gage of cork.	30	8
29	4	Aero heat protection		+ .29	New cork gage and seal change.	30	9
30	2	Cable provisions		+ .10	Recalculation per new layout.	30	21

JUSTIFICATION OF CHANGES SINCE LAST REPORT

Model SM-80C Wing VI
Configuration Operational
Report No. D2-30147-2
Submittal Date 23 May 1963
Reporting Period 23 March - 23 April

Line	Stage	①	G.F.E. CHANGES ②	CONTRACTOR CHANGES ③	EXPLANATION ④	WEIGHT STATUS Page	WEIGHT STATUS Line
1	2	Covers & Caps		+ .10	Recalculation per new layout.	31	6
2	↓						
3		Unjettisoned structure		+ .03	Recalculation	32	2
4		Aero heat protection		- .40	Redistribution	32	6
5		Jettisoned structure		+ .02	Recalculation	32	9
6		Separation mech. - Peel		- 1.14	Recalculation	32	11
7		Silo heat protection		+ .15	Gage increase and new ablation rates.	32	13
8	↓	Aero heat protection		+ 5.37	Gage increase and new ablation rates.	32	14
9	2	Base heat protection		- 8.84	Gage, material and area change.	32	15
10							
11	1	Covers & Caps		+ .44	Recalculation per new layout.	33	6
12	↓	Silo heat protection		- .08	New ablation gage of cork.	33	8
13		Aero heat protection		- 2.22	New cork gage and seal change.	33	9
14		Cable provisions		+ .92	Recalculation per new layout.	33	21
15							
16		Unjettisoned structure		+ .98	Recalculation per new layout.	34	2
17		Separation mechanism		- 1.50	New Safe & Arm device supplied by HPC.	34	3
18		Aero heat protection		- .24	Gage decrease and new ablation rates.	34	6
19							
20		Silo heat protection		+ .32	New ablation gage of cork.	35	8
21		Aero heat protection		- 6.24	New cork gage and seal change.	35	9
22							
23		Deflector & structure		+ .13	Recalculation	36	20
24	↓	Base heat protection		- 4.77	Reduction in basic gage of cork.	36	21
25	1	Silo heat protection		- .56	New estimated ablation rate.	36	22
26							
27							
28							
29							
30							

JUSTIFICATION OF CHANGES SINCE LAST REPORT

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Line	Stage	(1)	G.F.E. CHANGES (2)	CONTRACTOR CHANGES (3)	EXPLANATION (4)	WEIGHT STATUS Page	WEIGHT STATUS Line
1	1	Covers & Caps		+ .15	Recalculation per new layout.	37	6
2	1	Silo Heat Protection		- .02	New ablation gage of cork.	37	8
3	1	Aero Heat Protection		- .01	New cork gage and seal change.	37	9
4	1	Base Heat Protection		+ 1.52	Recalculation per new layout.	37	22
5							
6	1	Unjettisoned structure		- 8.62	Reduced skin gage; redistribution to heat protection.	38	2
7	1	Silo Heat Protection - External		- 8.99	Changed gages & ablation rates; redistribution of 5.43 # to silo - internal.	38	5
8							
9	1	Aero Heat Protection		+ 5.88	Increased basic gage; changed ablation rates.	38	6
10	1	Base Heat Protection		- 4.20	Decreased basic gage; changed ablation rates; redistribution from structure.	38	7
11	1						
12	1	Silo Heat Protection - Internal		+ 5.43	Redistribution of 5.43# from silo - external; new ablation rates.	38	8
13							
14							
15							
16		Total Missile Weight Change		-29.82			
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