

PREPARED	NAME J. H. Ray	DATE 5 Sep 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE VOL. I	TEMP. 6.165
CHECKED	J. Halliday	5 Sep 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A	
APPROVED	L. G. Darby	5 Sep 68		LFIUS46-2-2 REPORT NO.	

REV. (B) EJB 1-8-71

6.4.2 Door Longerons

The five cutouts in this area, described previously in this report on page 6.1, are bounded horizontally by longerons which carry the redistributed loads around the openings. In general, they are sections built up from the basic stringer configuration. The upper and lower longerons for both the service door and emergency exit are further reinforced with external straps.

The internal loads for the service door and emergency exit longerons are shown in this section. The internal loads for the remaining longerons are presented in Section 6.3 of this report. The loads in Section 6.3 are lumped loads and each lumped load contains loads for one or more individual elements. A detailed breakdown of these loads is presented in Section 6.3 of Reference 15.

The following tabulations give the axial element and shear element numbers as they are presented in Section 6.3 of this report. An axial load will be presented and the shear flows in the panel above and below the longeron.

Prepared	NAME J.H. Ray	DATE 5 Sep 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		Page	TEMP. No. 1	PERM. 6, 11, 66
Checked	J. Halliday	5 Sep 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE			Model	C-5A
Approved	L.G. Darby	5 Sep 68				LGIUS 46-2-2 Report No.	

REV. (B) 1-8-71

6.4.2 Door Longerons (Continued)

LONGERON	F.S.	AXIAL ELEMENT	UPPER SHEAR ELEMENT	LOWER SHEAR ELEMENT	MOD. NO.
△ UPPER EMERGENCY EXIT	1804-1844	46	48	46	1
	1844-1884	184	190	—	2
	1884-1924	134	140	138	2
△ LOWER EMERGENCY EXIT	1804-1844	44	46	44	1
	1844-1884	182	—	186	2
	1884-1924	132	138	136	2
△ UPPER SERVICE DOOR	1804-1844	47	49	47	1
	1844-1884	185	191	—	2
	1884-1924	135	141	139	2
△ LOWER SERVICE DOOR	1804-1844	41	43	35	1
	1844-1884	179	—	177	2
	1884-1924	129	135	127	2
PERSONNEL DOOR RIGHT SIDE	1764-1804	76	82	80	1
	1804-1844	26	28	26	1
	1844-1884	164	170	—	2
	1884-1924	114	120	116	2
	1924-1944	264	266	264	2
PERSONNEL DOOR LEFT SIDE	1764-1804	75	81	79	1
	1804-1844	25	27	25	1
	1844-1884	163	169	—	2
	1884-1924	113	119	115	2
	1924-1944	263	265	263	2
OUTFLOW VALVE LOWER	1884-1924	118	124	122	2
	1924-1944	268	—	268	2
	1944-1964	54	—	52	2
	1964-1984	324	322	318	3
OUTFLOW VALVE UPPER	1884-1924	120	126	124	2
	1924-1944	270	272	—	2
	1944-1964	58	60	—	2
	1964-1984	328	326	322	3

△ FAMAS LUMPED LOADS DO NOT INCLUDE EFFECT OF UPPER & LOWER EXTERIOR STRAPS.

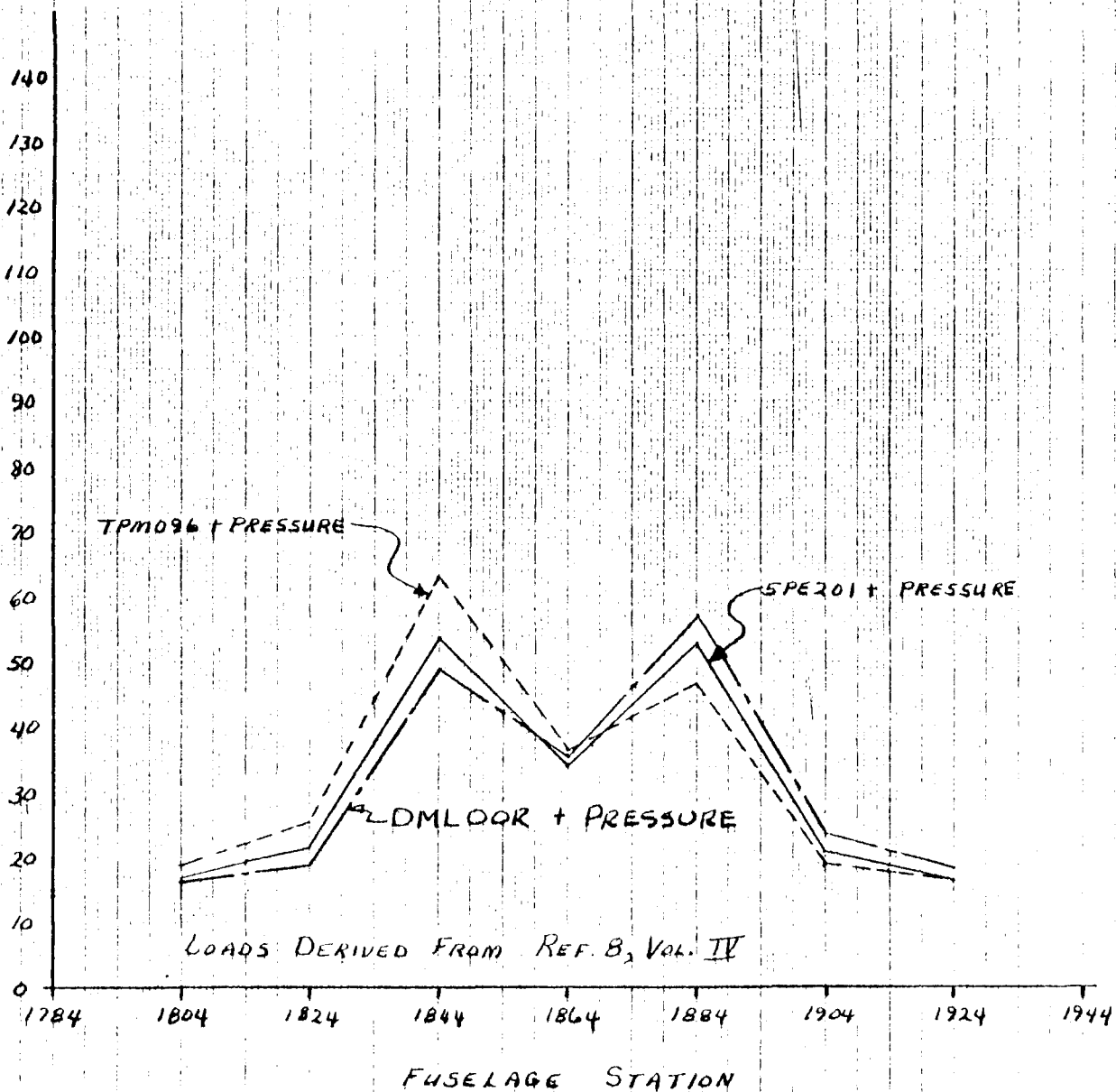
W. HINTON
4 JAN 71
E. J. BROCK

REV. ③ WOH 1-8-71

LG/US 46-2-2
C-54
VOL I 6.176

6.4.2.4 LOWER LONGERON - EMERGENCY EXIT DOOR

TOTAL LOWER LONGERON TENSION LOAD ~ KIPS



PREPARED	E. J. BROCK	DATE	30 DEC 70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL II 6.177
CHECKED	A. D. PINCHOT	DATE	30 DEC 70		MODEL	C.5A
APPROVED	H. H. WADE	DATE	30 DEC 70		REPORT NO.	LGUS46-2-2

REV. (3) EJB 1-8-71

6.4.2.4 LOWER LONGERON - EMERGENCY EXIT

LOWER LONGERON						
			EMERGENCY EXIT CUT-OUT			
120	155	190		295	330	365
121	156	191	226	261	296	331
F.S. 1804	F.S. 1824	F.S. 1844	F.S. 1864	F.S. 1884	F.S. 1904	F.S. 1924

FAMAS MODEL SHEAR PANELS
(REF. 8, VOL. IV)

PREPARED	E. J. BROCK	30 DEC 70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL I 6, 178
CHECKED	A. D. PINCHOT	30 DEC 70	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	H. H. WADE	30 DEC 70		REPORT NO.	LGIUS46-2-2

REV. (B) EJB 1-8-71

6.4.2.4 LOWER LONGERON-EMERGENCY EXIT

SUMMARY OF 'FAMAS' PANEL SHEAR FLOWS			
COND. ELE *	SHEAR FLOWS ** (LBS/IN)		
	TPM096 + PRESS.	SPE201 + PRESS.	DML00R + PRESS.
120	565	290	-176
121	386	153	-274
155	733	431	-56
156	400	194	-173
190	1907	1442	933
191	35	-134	-555
226	1341	937	675
261	-510	-939	-1075
295	-889	-1308	-1566
296	505	300	117
330	52	-290	-565
331	191	-66	-295
365	257	-117	-439
366	327	6	-298

* SEE PAGE 6.177

** REF. 8, VOL. IV

PREPARED	NAME A. D. Pinchot	DATE 1 Aug. 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	PERM. 1
CHECKED	R. F. Wilkinson	1 Aug. 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	L. G. Darby	1 Aug. 69		LG1US46-2-2 REPORT NO.		

Rev. (A) ADP 1 Aug. 69

Rev. (B) ADP 1-8-71



PAGES 6.179 - 6.186

PAGES NOT USED

PREPARED	M. J. Burton	30 June 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	YOLI	G.187
CHECKED	P. T. Fletcher	30 June 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-3A	
APPROVED	L. G. Darby	30 June 69		LG1US 46-2-2 REPORT NO.		

REV. (A) M.B. 1 AUG 69

6.4.3. CHINE LONGERON.

DRAWING NO. 4F31144

6.4.3.1. Discussion

THE CHINE LONGERON IS A BEAM, WHICH FOR THIS SECTION OF THE REPORT, EXTENDS FROM F.S. 1744 TO F.S. 1964. IT IS LOCATED BETWEEN THE TWO POINTS ESTABLISHED BY (1) THE INTERSECTION OF THE FUSELAGE BELLY SKIN AND THE FUSELAGE SIDE SKIN (B.L. 126, W/L 131), AND (2) THE INTERSECTION OF THE CARGO FLOOR AND THE RESTRAINT RAIL SUPPORT STRUCTURE (B.L. 115, W/L 140.).

IN THIS AREA, THE CHINE SERVES THE FOLLOWING PRIMARY STRUCTURAL PURPOSES:

- (1) IT STABILIZES THE UNBALANCE IN THE HOOP TENSION LOAD, IN THE FUSELAGE SKIN, RESULTING FROM THE CHANGE OF CURVATURE IN THE FUSELAGE OUTER SKIN.
- (2) IT SERVES AS STRINGER AND SHEAR WEB OF THE BASIC THREE-CELL, FUSELAGE SHELL.
- (3) IT SERVES AS SUPPORT STRUCTURE FOR CARGO LOADS IMPOSED ON THE RESTRAINT RAIL AND TIE-DOWN FITTINGS.
- (4) IT DISTRIBUTES TO THE FUSELAGE SHELL THE SLOPING LONGERON LOAD AT FUS STA. 1964 AS DETERMINED IN SECTION 6.4.4.
- (5) IT SERVES AS SUPPORT STRUCTURE FOR THE PARATROOP JUMP PLATFORM. LOAD AS STATED IN REFERENCE 10 PAGE 9.7.14)

THE CARGO TIE DOWN LOAD AND DETENT LOADS DO NOT ACT TOGETHER BECAUSE THEY APPLY TO DIFFERENT LOADING CONDITIONS.

PREPARED	NAME M. Burton	DATE 30 Jun 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol I	FORM G.188
CHECKED	P. Fletcher	30 Jun 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-54	
APPROVED	L. G. Darby	30 Jun 69		LGIUS 46-2-2 REPORT NO.		

REV (A) M.S. 1 AUG. 69.

6.4.3.2. Chine Longerons overall Flight and Pressure loads

THE INTERNAL LOADS FOR THE CHINE BEAM CAPS AND WES FOR FLIGHT AND PRESSURE LOADS ARE CALCULATED USING THE AFT FUSELAGE 'FAMAS' MODEL AS DESCRIBED IN REFERENCE 8, VOL. V. EXTERNAL LOADS FROM REFERENCE 10 ARE APPLIED TO THE FAMAS MODEL AS DISCRETE GRID POINT LOADS ALONG THE ENTIRE LENGTH OF THE MODEL USING A COMPUTERIZED LOADING PROGRAM AS DESCRIBED IN REFERENCE 8, VOL. I, SECTION 5.

THE AFT FUSELAGE 'FAMAS' MODEL IS SUBDIVIDED INTO MODULES OR (MODS) TO SIMPLIFY CALCULATIONS. THIS SECTION GIVES LOADS IN THE CHINE LONGERONS FROM FUSELAGE STATION 1764. TO F.S. 1964. WHICH IS REPRESENTED BY MODS 1 AND 2. THE STRUCTURE PERTAINING TO THE CHINE BEAM IS ILLUSTRATED ON PAGE 6.190, TO ACCOUNT FOR FUSELAGE INTERNAL PRESSURIZATION, A 'FAMAS' MODEL IS USED TO DETERMINE SKIN AND STRINGER LOADS REFERENCE 8 VOL. IV. ALL FLIGHT LOADS ARE ANALYZED WITH AND WITHOUT 13.05 P.S.I. ULTIMATE PRESSURE LOADS, REFERENCE 10, PAGE 9.7-116.

INTERNAL LOADS PRESENTED HERE ARE FOR THOSE CONDITIONS WHICH GIVE MAXIMUM MEMBER LOADS, IN THE CHINE STRUCTURE, THAT APPEAR IN THE SCAN OF MAXIMUM LOADS. REFERENCE (8).

ALL LOADS ARE IN POUNDS AND SHEARS ARE IN POUNDS PER INCH.

	NAME	DATE		TEMP.	PCNO.
PREPARED	M. Burton	30 Jun 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol I 3139
CHECKED	P. Fletcher	30 Jun 69	TITLE		
			INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L. G. Darby	30 Jun 69		LG1US 46-2-2 REPORT NO.	

REV. (A) M.E. 1 AUG 69

6.4.3.2. Chine Longerons overall Flight and Pressure loads (cont'd)

CHINE LONGERON DESIGN CONDITIONS ARE:

CASE N° *

11	ILG030	CARGO WEIGHT	265000 lbs
17	IPC242	"	220000 lbs
24	ISS078	"	230596 lbs
38	5AR154T2	"	220000 lbs
40	5AR134T2	"	265000 lbs
48	5PE201	"	265000 lbs
51	5PM203	"	220000 lbs
69	TPM096	"	265000 lbs
61	1004001.25	"	-
70	ALS11K	"	152695 lbs
74	DML001	"	110,000 lbs
81	JCKING	"	-
116	1ELOC7 + 13.05 PSI	"	230596 lbs
119	1PM290 + 13.05 PSI	"	220000 lbs
126	1PC242 + 13.05 PSI	"	220000 lbs
127	1PC253 + 13.05 PSI	"	220000 lbs
130	1PM316 + 13.05 PSI	"	220000 lbs
133	1SS078 + 13.05 PSI	"	230596 lbs
141	5AR124T3 + 13.05 PSI	"	220000 lbs
142	5AR125T2 + 13.05 PSI	"	220000 lbs
149	5AD134T2 + 13.05 PSI	"	265000 lbs
153	5NM064 + 13.05 PSI	"	220000 lb
159	5PM027 + 13.05 PSI	"	220000 lb

FLIGHT LOADS
WITH
PRESSURE

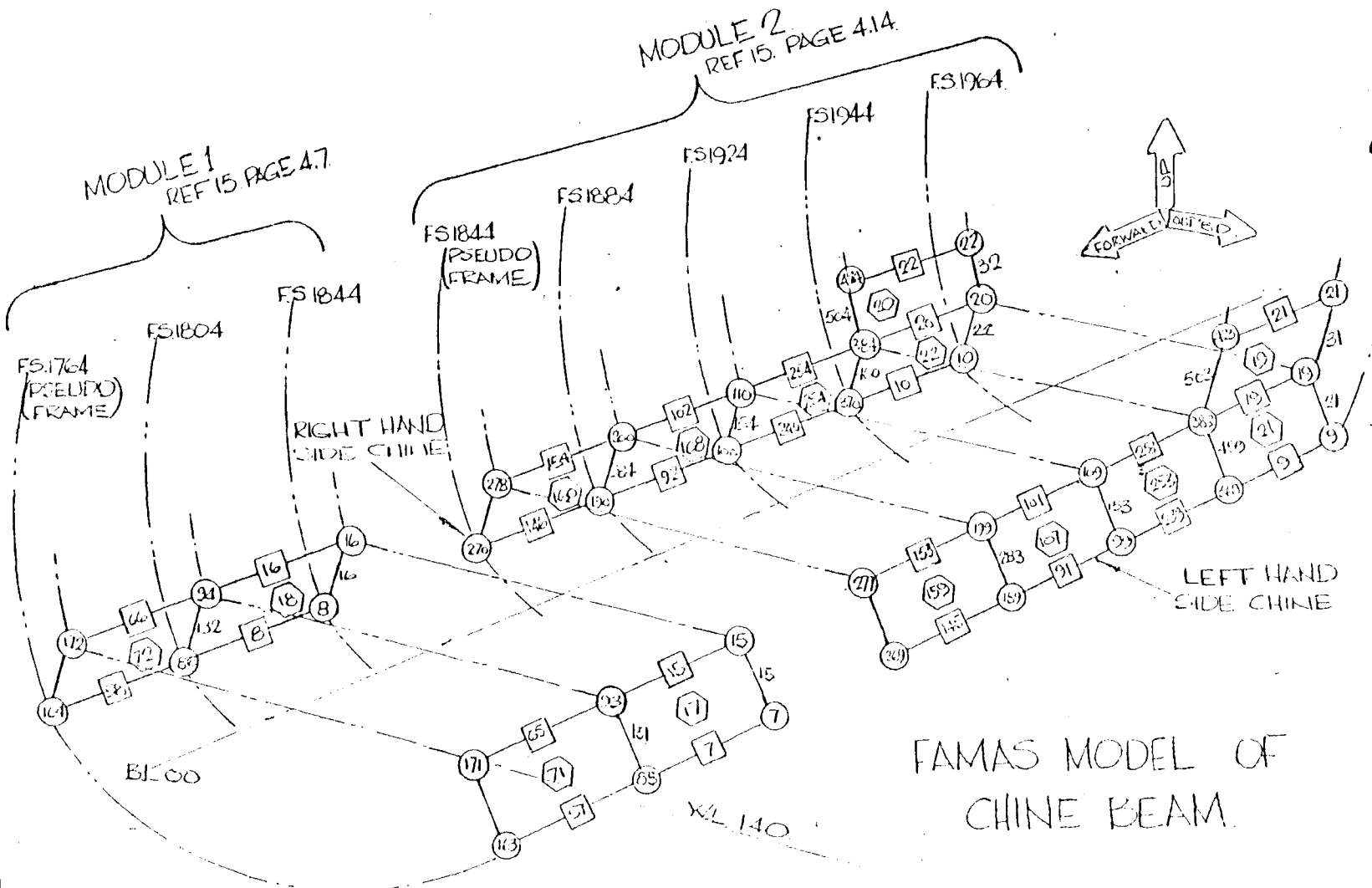
* CASE N° AS DESIGNATED IN REFERENCE 8, REV. "A".

PREPARED	M. Burton	30 Jun 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL I	6190
CHECKED	P. Fletcher	30 Jun 69	INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-2A	
APPROVED	L. G. Darby	30 Jun 69		LGJUS 46-2-2	REPORT NO.	

6.4.3.2 Chine Longeron Geometry

REV. A MD AUG 69.
REV. B MB 1-8-71

- FAMAS GROUP NO
- GRID POINTS.
 - STRINGERS.
 - ⬡ COVERS.
 - FRAME BARS.
- 4
7
3



FAMAS MODEL OF CHINE BEAM.

PREPARED	M. Burton	25 Jul 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL I	TEMP. G.191
CHECKED	P. Fletcher	25 Jul 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	L. G. Darby	25 Jul 69		LG1US 46-2-2 REPORT NO.		

REV. (A) M.B. 1 AUG 69

64.3.2 Chine Longerons overall Flight and Pressure loads

MOD. 1 MAXIMUM END LOAD IN STRINGERS
MATRIX IDENTIFICATION 7134

ELEMENT No	TENSION LOAD lbs	CASE No *	COMPRESSION LOAD lbs	CASE No *
7	76607	126	-98850	48
8	84802	116	-105662	74
15	30250	126	-37995	48
16	33455	116	-40338	74
57	62197	126	-73891	48
58	73886	116	-88224	74
65	27880	127	-33494	59
66	34138	116	-43659	74

MOD 1 MAXIMUM END LOAD IN FRAME BARS
MATRIX IDENTIFICATION 7183

ELEMENT No	TENSION LOAD lbs	CASE No *	COMPRESSION LOAD lbs	CASE No *
15	14692	153	-16197	51
16	14582	153	-15363	51
132	5431	81	-9914	130
131	5457	81	-10153	130

MOD 1 MAXIMUM SHEAR FLOWS IN COVERS
MATRIX IDENTIFICATION 7187

PANEL No	SHEAR lb/in.	CASE No *	SHEAR lb/in.	CASE No *
18	313	81	-1235	159
17	297	81	-1226	159
72	459	127	-772	70
71	459	127	-725	70

* REF PG. 6.189

PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
M. Burton	25 Jul 69			Vol I	6.42	
CHECKED	NAME	DATE	TITLE	MODEL	REPORT NO.	
P. Fletcher	25 Jul 69		INTERNAL LOADS ANALYSIS AFT FUSELAGE	C-5A	LGIUS 46-2-2	
L. G. Darby	25 Jul 69					

REV. (A) M.D. 1 AUG 69

6.4.3.2. Chine Longerons overall Flight and Pressure Loads.

MOD. 2. MAXIMUM END LOAD IN STRINGERS MATRIX IDENTIFICATION 7284.

ELEMENT Nº	TENSION LOAD lbs	CASE Nº	COMPRESSION LOAD lbs	CASE Nº	ELEMENT Nº	TENSION LOAD lbs	CASE Nº	COMPRESSION LOAD lbs	CASE Nº
22	56523	116	-75172	59	239	61069	126	-94237	48
21	61555	126	-36657	48	101	45592	127	-31509	59
19	43458	126	-58576	48	102	47057	116	-21634	59
20	39236	116	-53431	59	91	87571	126	-120634	48
9	21399	126	-35946	48	92	91327	116	-11330	59
10	18650	127	-33782	59	134	45634	116	-57920	59
253	65611	126	-98655	48	153	42382	127	-53159	48
254	61300	116	-92794	59	146	89733	116	-122946	74
240	54539	127	-89414	59	145	87000	126	-123310	48

MOD. 2. MAXIMUM END LOAD IN FRAME BARS. MATRIX IDENTIFICATION 7283.

ELEMENT Nº	TENSION LOAD lbs	CASE Nº	COMPRESSION LOAD lbs	CASE Nº	ELEMENT Nº	TENSION LOAD lbs	CASE Nº	COMPRESSION LOAD lbs	CASE Nº
22	71693	133	-39306	74	154	16051	119	-11311	71
21	58349	126	-39413	14	153	13263	141	-11102	36
160	65900	116	-7708	59	284	18366	119	-12704	51
459	5035	127	-7777	48	283	17360	133	-13159	51

MOD. 2. MAXIMUM SHEAR FLOW IN COVERS MATRIX IDENTIFICATION 7287

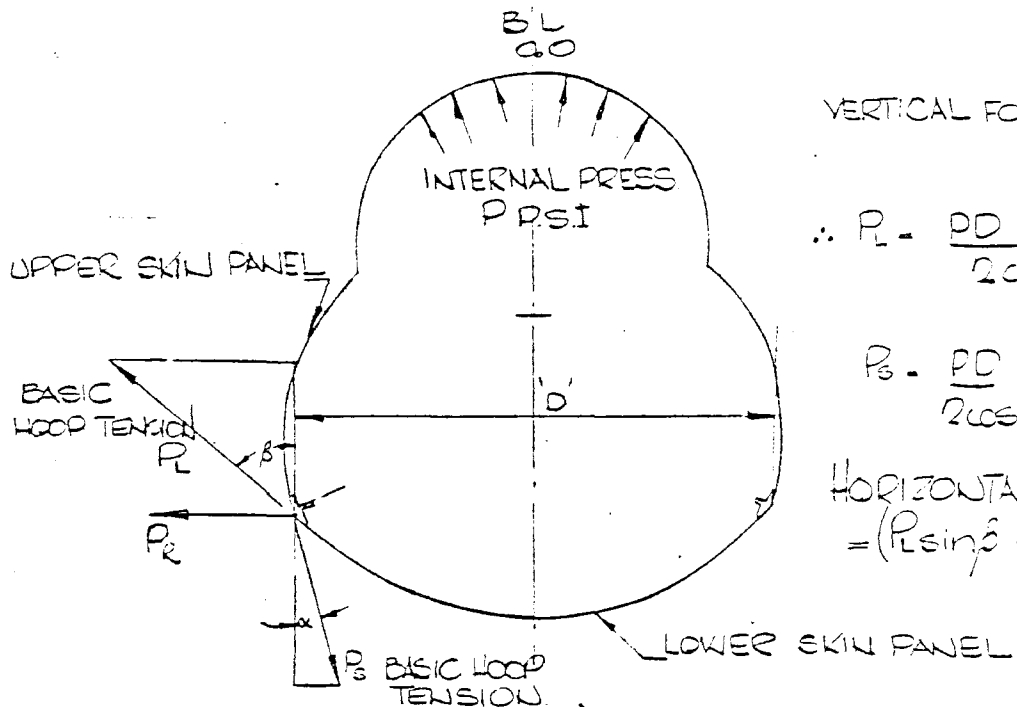
PANEL Nº	SHEAR lb/in	CASE Nº	SHEAR lb/in	CASE Nº	PANEL Nº	SHEAR lb/in	CASE Nº	SHEAR lb/in	CASE Nº
20	7330	59	-5512	116	253	1297	126	-771	40
19	8450	48	-6002	126	108	489	127	-1238	70
21	1418	149	-1309	17	107	503	127	-1138	59
22	1016	142	-1657	24	160	904	70	-360	61
254	1402	133	-600	31	159	916	70	-3315	61

PREPARED	M. Burton	30 Jun 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE Vol I	FIG 193
CHECKED	P. Fletcher	30 Jun 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-51	LGIUS 46-2-2
APPROVED	L. G. Darby	30 Jun 69		REPORT NO.	

REV A MB. 1 AUG 69

6.4 3.3. Chine Longerons Hoop Tension Kick Loads

THE BASIC HOOP TENSION LOADING IN THE SIDE PANELS (P_s) AND LOWER SKIN (P_L) PRODUCE A RESULTANT HORIZONTAL LOADING ON THE OUTBD. CHINE CAP (P_R) AS SHOWN BELOW:



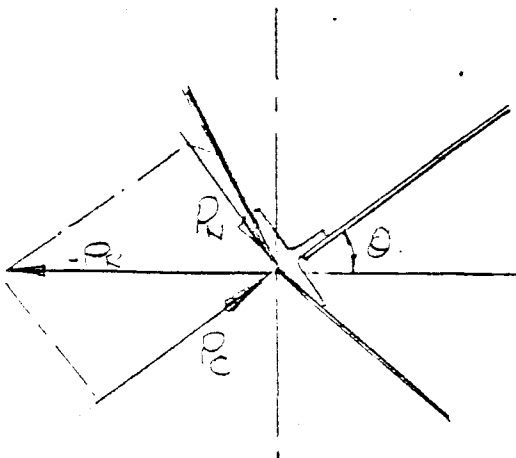
$$\text{VERTICAL FORCE} = \frac{PD}{2}$$

$$\therefore P_L = \frac{PD}{2 \cos \phi}$$

$$P_s = \frac{PD}{2 \cos \alpha}$$

$$\text{HORIZONTAL FORCE} = P_R \\ = (P_L \sin \phi - P_s \sin \alpha)$$

THE HORIZONTAL LOADING AT THE CHINE CAP (P_R) IS RESOLVED INTO COMPONENTS P_L AND P_C , RESPECTIVELY NORMAL TO AND PARALLEL WITH THE CHINE WEB.



$$P_C = P_R \cos \theta$$

$$P_L = P_R \sin \theta$$

θ IS CONSTANT ALONG COMPLETE LENGTH OF CHINE BEAM.
 θ EQUALS $39^\circ 40'$

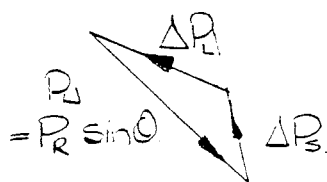
	NAME	DATE		TEMP.	FORM.
PREPARED	M. Burton	30 Jun 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol I 2194
CHECKED	P. Fletcher	30 Jun 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-3A
APPROVED	L. G. Darby	30 Jun 69		LGIUS 46-2-2 REPORT NO.	

REV. (A) M.D. 1 AUG 69

6.4.3.3. Chine Longerons Hoop Tension Kick Loads.

THE NORMAL COMPONENT (P_N) IS DISSIPATED BY LOCAL SHEAR LAG IN THE SIDE AND LOWER SKIN PANELS THEREBY MODIFYING THE VALUES OF HOOP TENSION AT THE CHINE.

ΔP_S AND ΔP_L ARE THE COMPONENTS OF P_N IN THE SIDE SKIN AND LOWER SKIN.

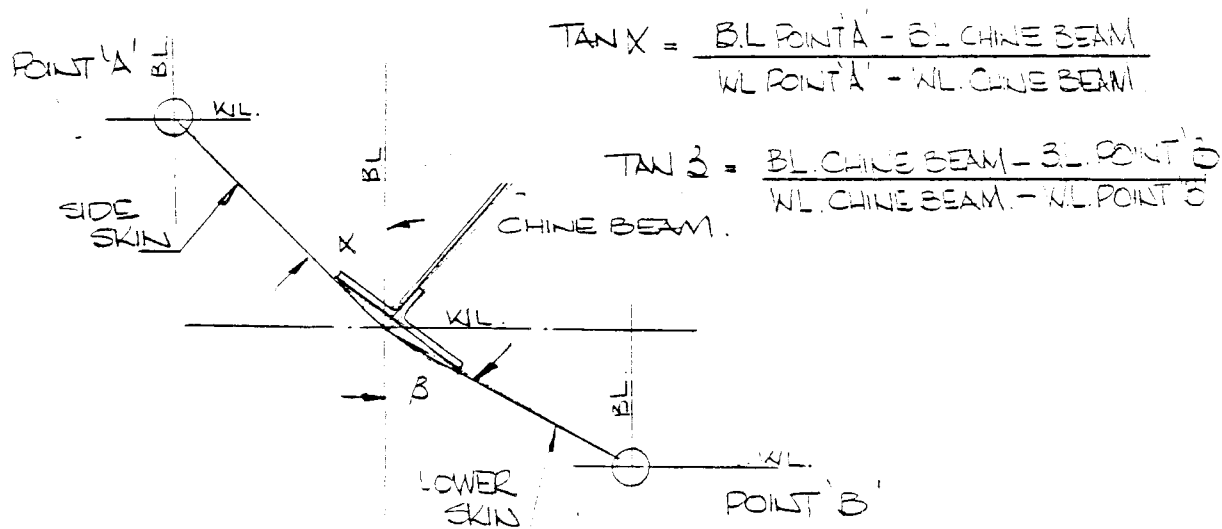


$$\Delta P_S = \frac{(P_N \sin \theta) \cdot \sin(\delta + \alpha)}{\sin(180 - \delta + \alpha)}$$

$$\Delta P_L = \frac{(P_N \sin \theta) \cdot \sin(\delta - \alpha)}{\sin(180 - \delta + \alpha)}$$

SIDE SKIN HOOP TENSION LOADING AT THE CHINE $P'_S = P_S + \Delta P_S$
 LOWER SKIN HOOP TENSION LOADING AT THE CHINE $P'_L = P_L + \Delta P_L$

DUE TO THE CONSTANTLY CHANGING SECTION OF THE AFT FUSELAGE BETWEEN FS. 1764 AND FS 1964, THE SLOPE OF THE SKIN EACH SIDE OF THE CHINE BEAM WILL BE DETERMINED USING THE MASTER DIMENSIONS DATA



PREPARED	M. Burton	25 Jul 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL I	REV. 2.195
CHECKED	P. Fletcher	25 Jul 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C 3A	
APPROVED	L. G. Darby	25 Jul 69		LGUS 46-2-2 REPORT NO.		

6.4.3.3. Chine Longerons Hoop Tension Kick Loads. REV. (A) M.D. 140429

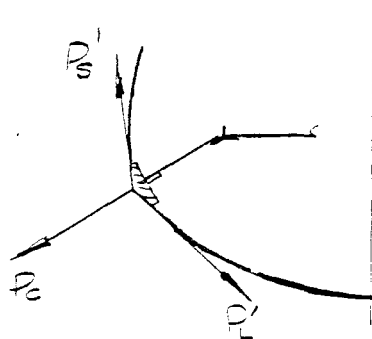
UPPER AND LOWER SKIN SLOPE RELATIVE TO THE CHINE BEAM.

FRAME FS.	G.P.	B.L. POINT A	W.L. POINT A	B.L. POINT B	W.L. POINT B	B.L. CHINE BEAM	W.L. CHINE BEAM	α°	β°
1964	99	122.30	138.0	117.92	134.0	120.2	135.93	45°-24'	49°-45'
1924	99	123.59	136.0	119.36	132.0	122.09	134.57	42°-31'	47°-54'
1884	189	125.79	136.0	122.14	132.0	123.45	133.24	40°-17'	46°-34'
1844	269	125.72	134.0	121.95	130.0	124.42	132.43	39°-38'	45°-23'
1804	85	126.68	134.0	123.32	130.0	125.10	131.86	36°-26'	43°-44'
1764	163	127.19	134.0	124.15	130.0	125.53	131.51	33°-40'	42°-25'

LOADING AT CHINE FOR 13.05ULT. INTERNAL PRESSURE.

FRAME FS.	θ	$\frac{D}{2} = B.L.$	$P_L = \frac{13.05D}{2 \cos \beta}$	$P_S = \frac{13.05D}{2 \cos \alpha}$	P_R b/w	P_L b/w	P_C c/w	ΔP_L b/w	ΔP_R b/w
1964	39°-40'	120.2	2425	2240	253	162	200	23	-16
1924	↓	122.09	2380 b/w	2160 b/w	302	194	239	26	-10
1884		123.45	2340 b/w	2118 b/w	336	215	265	26	-2.5
1844		124.42	2315 b/w	2110 b/w	306	195	241	20	0
1804	↓	125.10	2260 b/w	2038 b/w	357	228	282	16	13
1764	39°-40'	125.53	2220 b/w	1970 b/w	405	258	320	13	30

FRAME FS.	P_S b/w	P_L b/w	P_C b/w
1964	2268	2409	200
1924	2186	2370	239
1884	2144	2337	265
1844	2130	2315	241
1804	2054	2273	282
1764	1983	2250	320



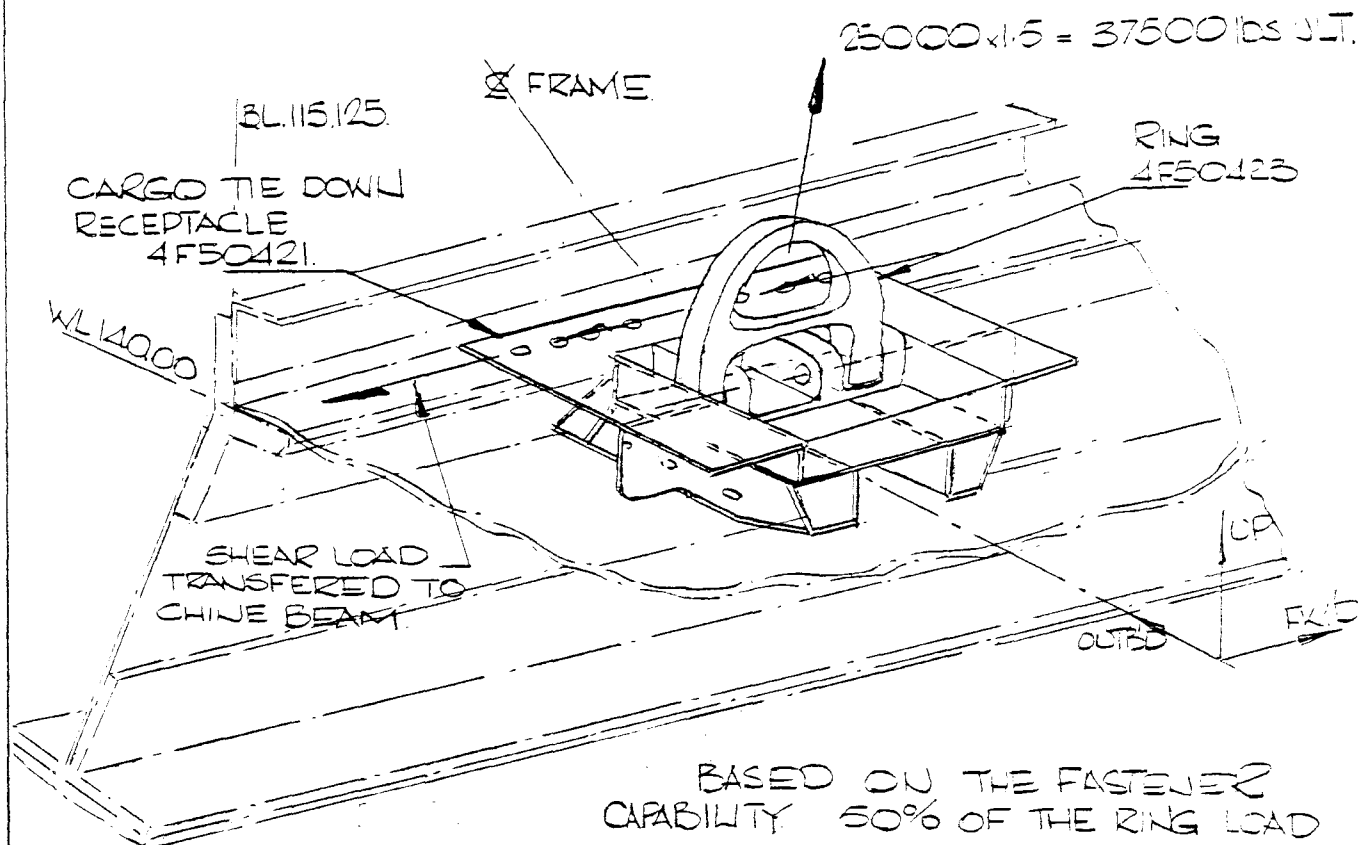
PREPARED	NAME M. Burton	DATE 25 Jul 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol I	PERM. 2196
CHECKED	P. Fletcher	25 Jul 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	L. G. Darby	25 Jul 69		LGUS 46-2-2 REPORT NO.		

REV. (A) M.B. 1 AUG 69.

64.3.4. Chine Longeron Cargo Loads

CARGO TIE DOWN FITTING. VEHICLE LOADING.
THE CARGO TIE DOWN FITTING DESIGN LOAD IS 25000lb IN ANY DIRECTION WITHIN THE HEMISPHERE OF ACTION. REFERENCE TO PAGE 9.7-148.

THE FITTINGS ARE LOCATED AT FRAMES FS. 1964, FS. 1984, FS. 1884, FS. 1804, FS. 1764, FS. 1724. ALONG THE LOGISTIC RESTRAINT RAIL B.L. ± 115.125 . W.L. 140.00.



BASED ON THE FASTENER CAPABILITY 50% OF THE RING LOAD IS REACTED BY THE CARGO FLOOR.

$$\therefore \text{SHEAR LOAD ON CHINE CAP} = \frac{37500}{2} = 18750 \text{ lbs}$$

$$\text{SHEAR FLOW ON THE CHINE WEB} = \frac{18750}{40} = 468.7 \text{ lb/in}$$

VERTICAL COMPONENT OF RING LOAD IS REACTED BY THE END FITTING OF THE FRAME.

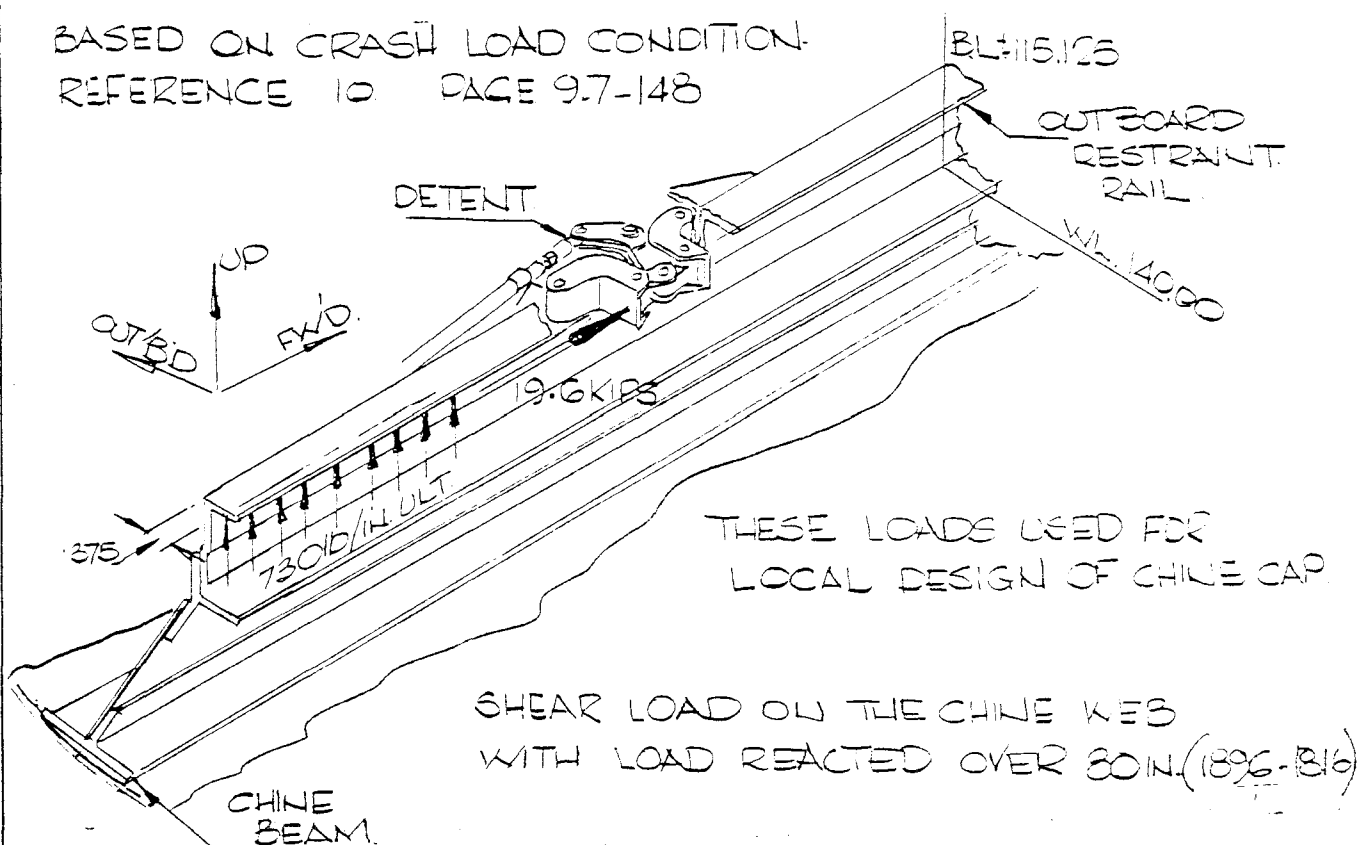
	NAME	DATE		TEMP.	PERM.
PREPARED	M. Burton	25 Jul 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol I 6.197
CHECKED	P. Fletcher	25 Jul 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-3A
APPROVED	L. G. Darby	25 Jul 69		LGLUS 46-2-2 REPORT NO.	

REV. (A) ME 140669

6.4.3.4 Chine Longerons Cargo loads. (continued) DETENT AND RESTRAINT RAIL PALLET LOADS ON THE CHINE BEAM AT FS 1816 AND FS 1896

LOAD ON THE CHINE BEAM DUE TO THE DETENT AND RESTRAINT RAIL PALLET LOADS ARE DETERMINED IN REFERENCE 14 SECTION 10.4. THESE LOADS ARE PRODUCED BY A STANDARD PALLET 463 L. SIZE 88 INCH. BY 108 INCH. TOTAL WEIGHT 10,375 LBS.

SUMMARY OF MAXIMUM LOAD
BASED ON CRASH LOAD CONDITION.
REFERENCE 10 PAGE 9.7-148



SHEAR LOAD ON THE CHINE WEB
WITH LOAD REACTED OVER 80 IN. (1896-1816)

$$\therefore \text{SHEAR ON WEB} = \frac{19600}{80} = 245 \text{ lb/in.}$$

$$\text{SIDE LOAD} = \frac{10375 \times 1.5g}{*88.0} = 177 \text{ lbs/inch LIMIT}$$

OR 265 lb/inch ULT.

*LENGTH OF PALLET

	NAME	DATE		TEMP.	PCOM.
PREPARED	P.T.Fletcher	7-25-69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol.I 6.198
CHECKED	R.F.Wilkinson	7-25-69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L. G. Darby	7-25-69		LG1US46-2-2	REPORT NO.

Rev. (A) PTF, 8-1-69

6.4.4 External Longerons Splice Plate @ F.S. 1964 (Dwg. 4F42325)

6.4.4.1 DISCUSSION

The external longeron splice plate @ F.S. 1964, commonly called "The Banana Fitting", provides structural continuity between the outer cap of the sloping longeron, stringer number 1, and the outer cap of the chine longeron, as shown on page 6.199. It also has the function of distributing the jacking loads applied at F.S. 1964 into the fuselage and shell.

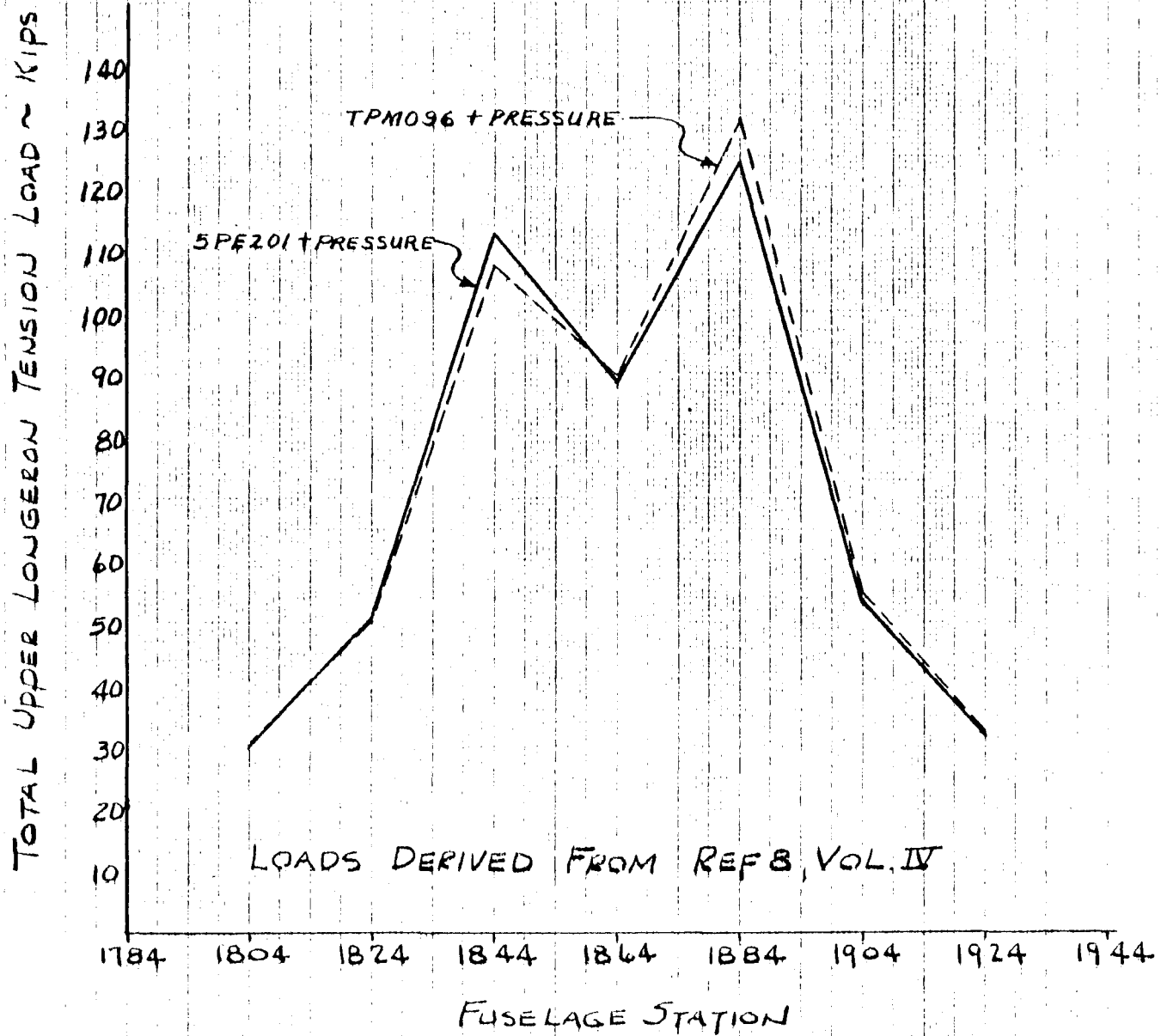
The three members for which the banana fitting provides continuity, namely stringer number 1 and the outer caps of chine longeron and the sloping longeron, are each represented in an idealized FAMAS model of the aft fuselage, Ref. 8, Vol. IV. A reproduction of this area of the FAMAS model is shown on page 6.200. The internal loads in these idealized elements, determined by a redundant analysis of the FAMAS model (Ref. 8, Vol. IV), are the basis for the stress analysis of the banana splice fitting. The internal loads for the two critical conditions are given on page 6.201. The jacking loads that the fitting has to redistribute into the skin and frame 1964 are taken directly from Ref. 10 page 9.7-137 and are shown in figure 3 page 6.201.

W.O. HINTON
30 DEC 70
E.J. BROCK

REV. (B) WOH 1-8-71 VOL. I

LG 10546-2-2
C-5A
6.167

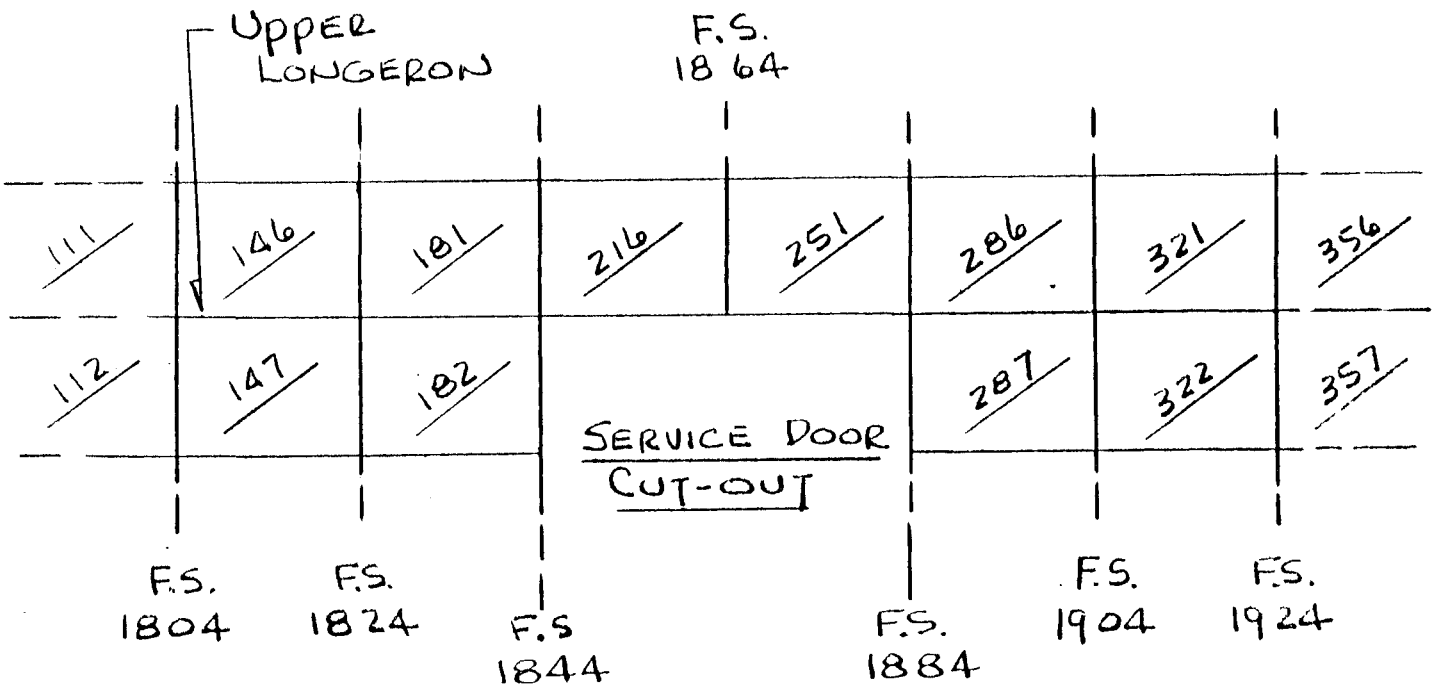
6.4.2.1 UPPER LONGERON - SERVICE DOOR



PREPARED	E. J. BROCK	DATE	30 DEC 70	TITLE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	1
CHECKED	A. D. PITCHOT	DATE	30 DEC 70	TITLE	INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	H. H. WADE	DATE	30 DEC 70	TITLE		REPORT NO.	LG 105 46-2-2

REV. (3) EJB 1-8-71

6.4.2.1 UPPER LONGERON - SERVICE DOOR



FAMAS' MODEL SHEAR PANELS
(REF. 8, VOL. IV)

PREPARED	E. J. BROCK	30 DEC 70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6.169
CHECKED	A. D. PINCHOT	30 DEC 70	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	H. H. WADE	30 DEC 70		REPORT NO.	LG10546-2-2

REV. (B) EJS 1-8-71

6.4.2.1 Upper LONGERON - SERVICE DOOR

SUMMARY OF 'FAMAS' PANEL SHEAR FLOWS		
COND. ELE. *	SHEAR FLOW** (LBS/IN)	
	TPM 096 + PRESS.	SPE 201 + PRESS.
111	274	217
112	-180	-271
146	266	217
147	-737	-810
181	856	933
182	-1974	-2145
216	-894	-1206
251	2074	1783
286	-1016	-1034
287	2813	2522
321	14	-93
322	1156	934
356	57	-61
357	671	494

* SEE PAGE 6.168

** REF. 8, VOL. IV

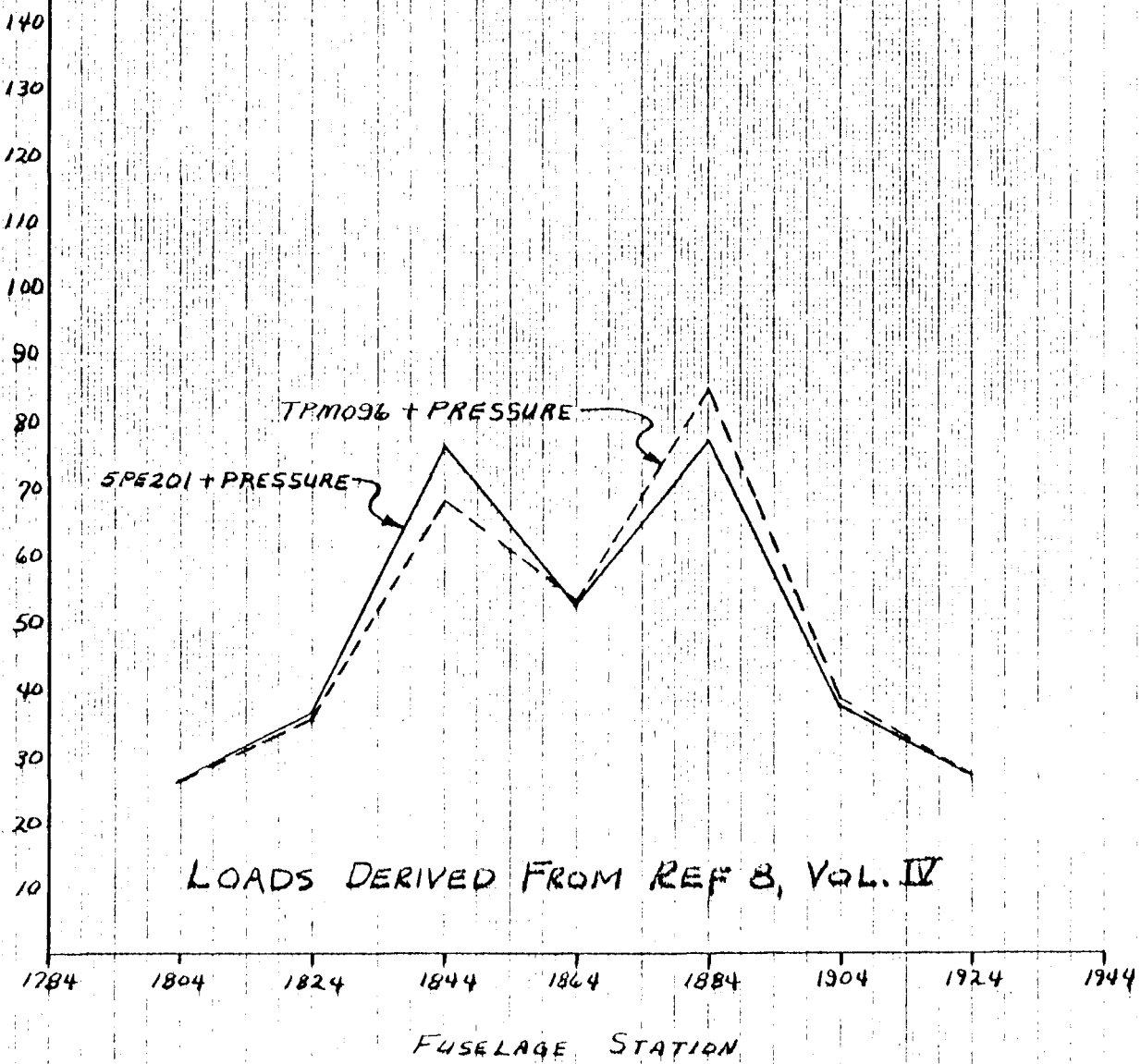
W.O. HUTTON
30 DEC 70
E.J. BRACK

REV. (B) WOH 1-8-71 VOL. I

LG10546.2.2
C-5A
6.170

6.4.2.2 UPPER LONGERON - EMERGENCY EXIT DOOR

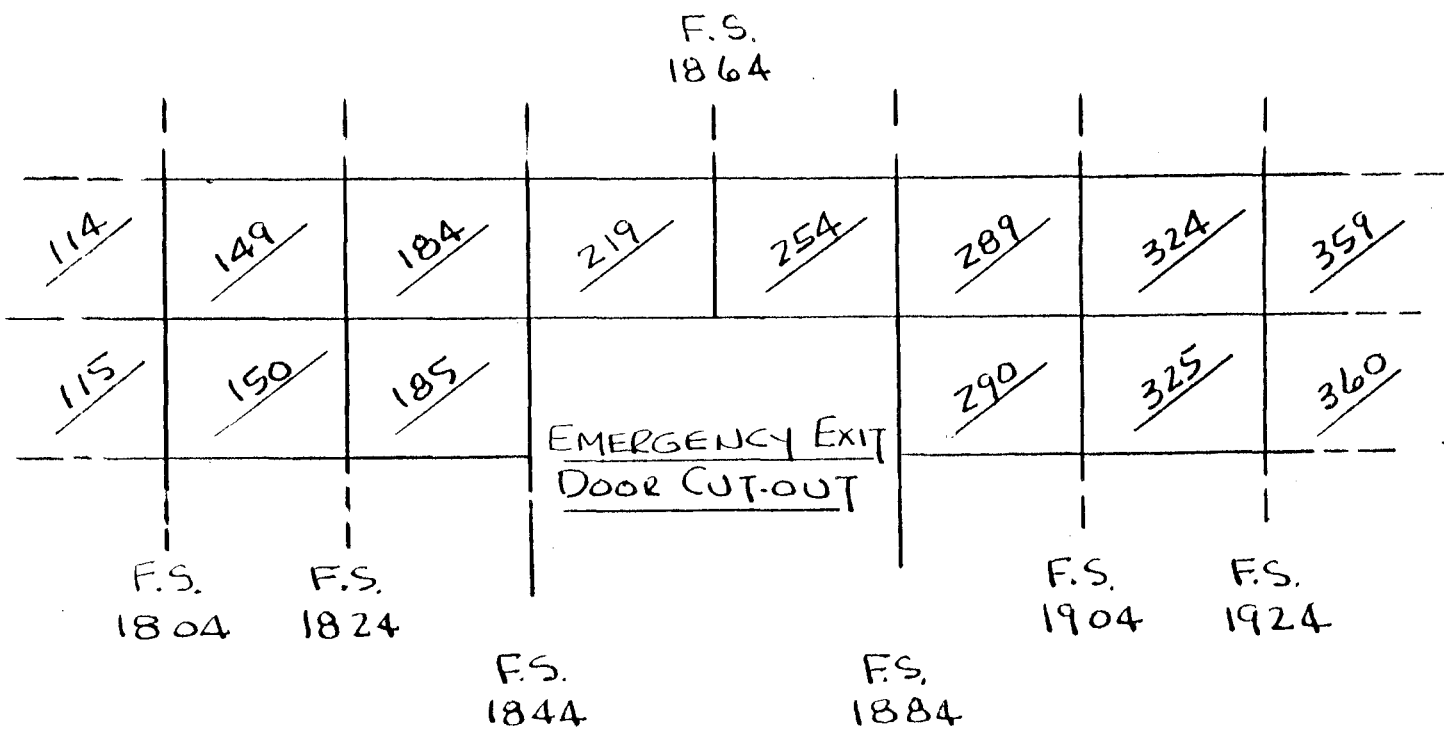
TOTAL UPPER LONGERON TENSION LOAD ~ KIPS



PREPARED	E. J. BROCK	DATE	30 DEC 70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	NO. 1	6.171
CHECKED	A. D. PINCHOT	30 DEC 70	TITLE		MODEL	C-5A	
APPROVED	H. H. MADE	30 DEC 70	INTERNAL LOADS ANALYSIS AFT FUSELAGE		REPORT NO.	LG10546-2-2	

REV. (3) EJD 1-8-71

6.4.2.2 UPPER LONGERON - EMERGENCY EXIT DOOR



'FAMAS' MODEL SHEAR PANELS
(REF. 8, VOL. IV)

PREPARED	E. J. BROCK	30 DEC 70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. 16.172
CHECKED	A. D. PINCHOT	30 DEC 70	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	H. H. WADE	30 DEC 70		REPORT NO.	LG10S 46-2.2

REV. (B) EJB 1-8-71

6.4.2.2 UPPER LONGERON - EMERGENCY EXIT DOOR

SUMMARY OF 'FAMAS' PANEL SHEAR FLOWS		
COND. ELE *	SHEAR FLOW * (LBS/IN)	
	TPM 096 + PRESS	3PE 201 + PRESS
114	431	264
115	153	- 74
149	325	151
150	- 132	- 352
184	450	450
185	- 1167	- 1520
219	- 753	- 1190
254	1580	1224
289	- 272	- 397
290	2049	1599
324	187	- 63
325	751	439
359	83	- 152
360	511	205

* SEE PAGE 6.171

** REF 8, VOL. IV

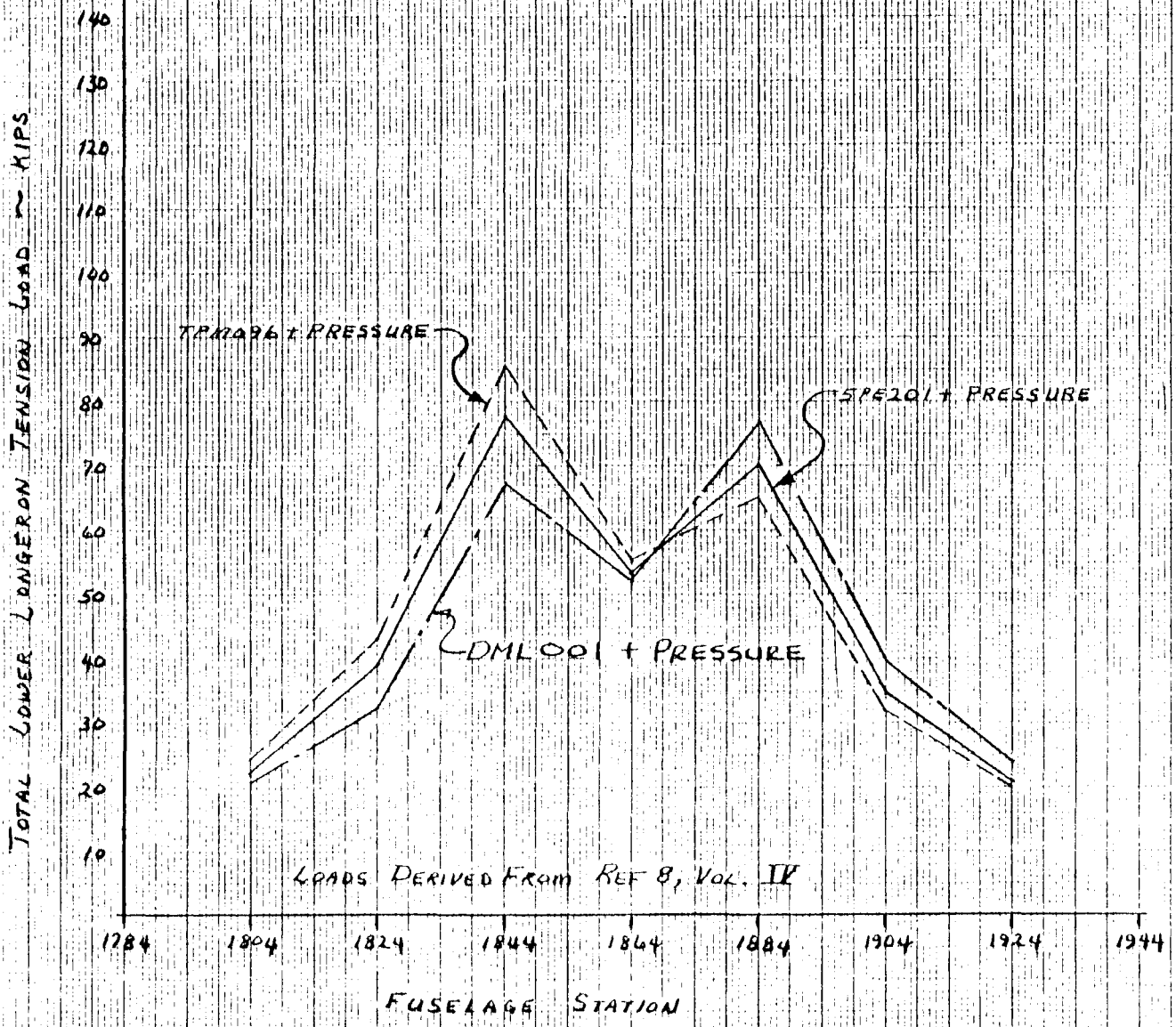
PREPARED BY W. H. Hinton
 DATE 4 JAN 71
 CHECKED BY E. J. Brock

LOCKHEED-GEORGIA COMPANY
 A DIVISION OF LOCKHEED AEROSPACE CORPORATION

REPORT NO. LG145 46-2-2
 ISSUE C-5A
 PAGE VOL I 6173

REV. (B) WOH 1-8-71

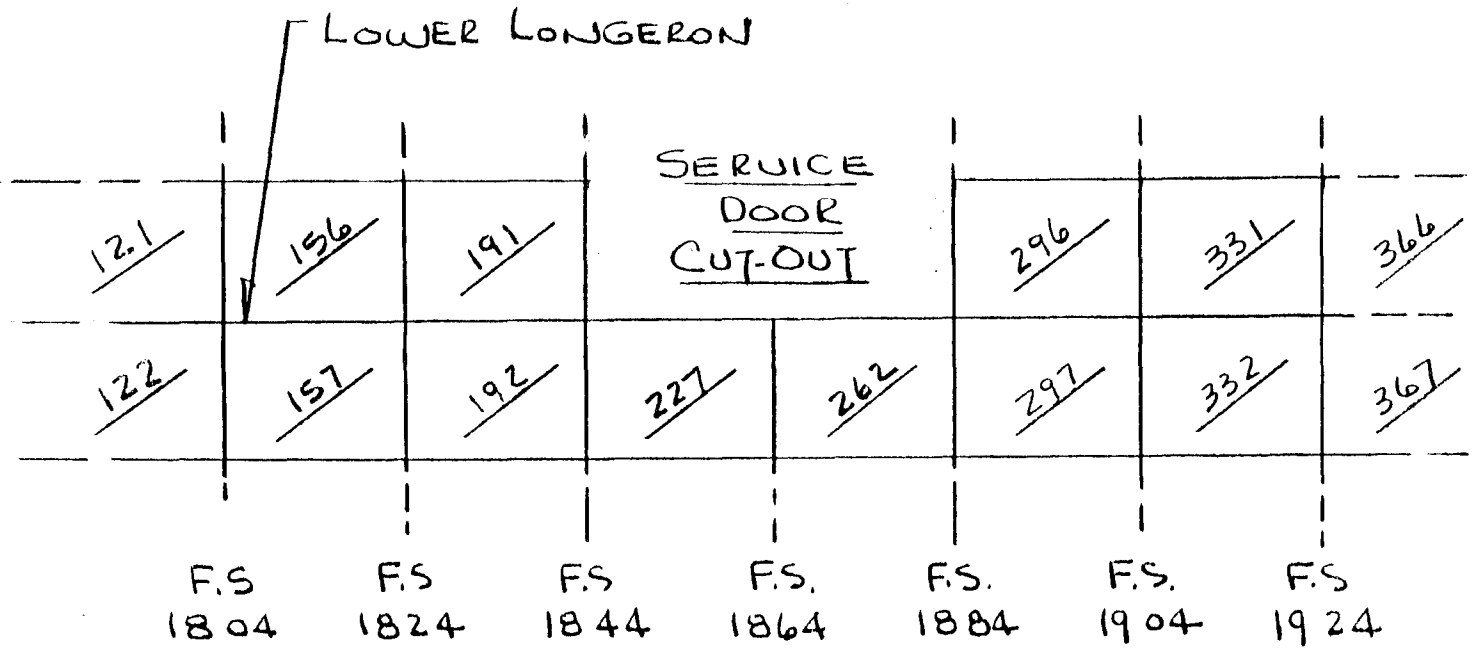
6.4.2.3 LOWER LONGERON - SERVICE DOOR



PREPARED	E. J. BROCK	DATE	30 DEC 78	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL II 6.174	
CHECKED	A. D. PINCHOT	30 DEC 78	TITLE		INTERNAL LOADS ANALYSIS	MODEL	C-5A
APPROVED	H. H. WADE	30 DEC 78	AFT FUSELAGE		REPORT NO.	LG10546-2.2	

REV (B) EJB 1-8-71

6.4.2.3 LOWER LONGERON - SERVICE DOOR



'FAMAS' MODEL SHEAR PANELS
(REF. 8, VOL IV)

PREPARED	E. J. BROCK	30 DEC 70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL I 6.175
CHECKED	A. D. PINCHOT	30 DEC 70	TITLE	MODEL	C-5A
APPROVED	H. H. WADE	30 DEC 70	INTERNAL LOADS ANALYSIS AFT FUSELAGE	LG10546-2.2	REPORT NO.

REV (B) EJB 1-8-71

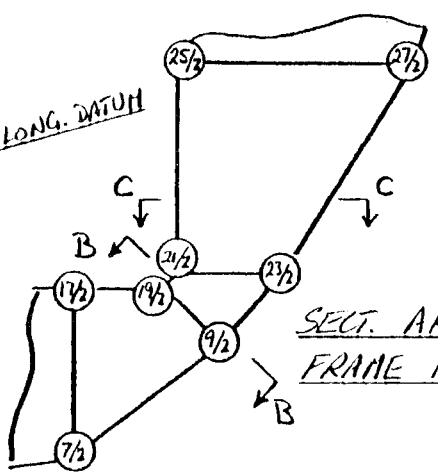
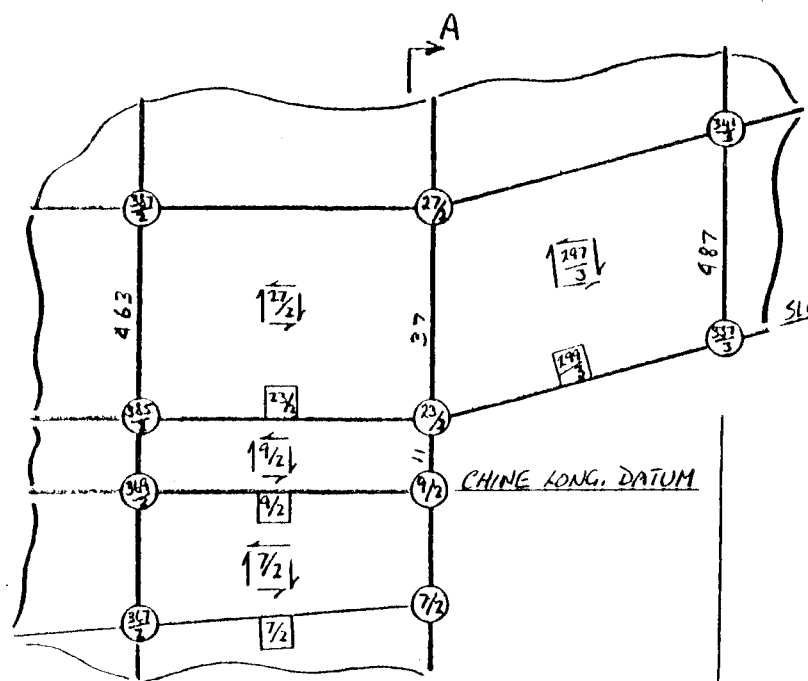
6.4.2.3 LOWER LONGERON - SERVICE DOOR

SUMMARY OF 'FAMAS' PANEL SHEAR FLOWS			
COND ELE*	SHEAR FLOWS** (LBS/IN)		
	TPM096 + PRESS	SPE201 + PRESS	DM1001 + PRESS
121	982	772	183
122	434	283	-132
156	1285	1049	386
157	347	219	-137
191	2162	1855	1131
192	61	- 58	- 351
227	1521	1223	764
262	- 485	- 829	-1235
296	-1165	-1452	-1764
297	497	326	114
331	-394	- 670	-1033
332	219	37	- 234
366	- 93	-373	- 314
367	239	17	- 353

* SEE PAGE 6.174

** REF 8, VOL IV

6.4.4.2 GEOMETRY - CONT'D.



SECT. AA
FRAME 1964

NODE	X	Y	Z
7 1/2	1964	115.12	132.754
9 1/2	1964	120.2	135.93
17 1/2	1964	112.0	139.0
19 1/2	1964	116.5	139.0
21 1/2	1964	117.1	140.0
23 1/2	1964	124.09	140.0
25 1/2	1964	117.1	154.525
27 1/2	1964	132.742	154.525
36 1/2	1944	115.12	131.251
36 9/2	1964	121.143	135.148
38 3/2	1944	116.5	139.0
38 5/2	1944	125.421	140.0
38 7/2	1944	138.401	154.495
33 5/3	1954	117.63	145.531
33 7/3	1954	126.67	145.531
34 1/3	1954	134.314	160.056

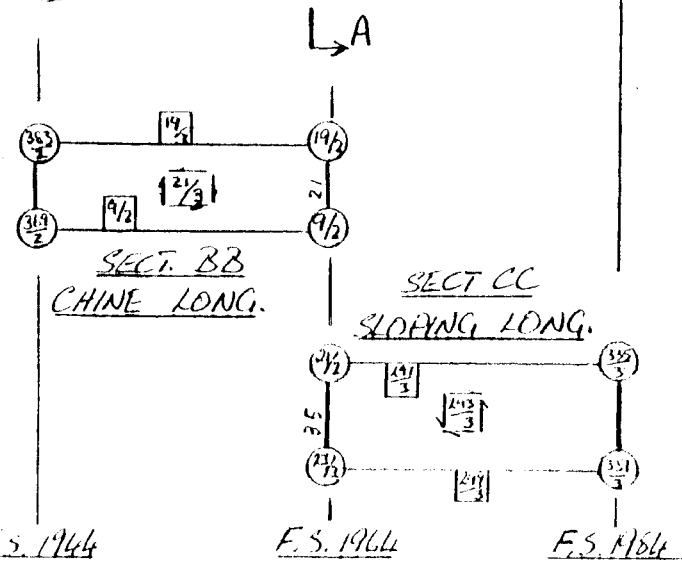
(14) NODE POINT X
MODULE Y (REF 8 VOL IV)

(14) STRINGER X
MODULE Y (REF 8 VOL IV)

(14) COVER X
MODULE Y (REF 8 VOL IV)
POSITIVE SHEAR ON PANEL

37 FRAME BAR (MOD. 2)

REV. (A) PT. E. 1 AUG. 69



F.S. 1944

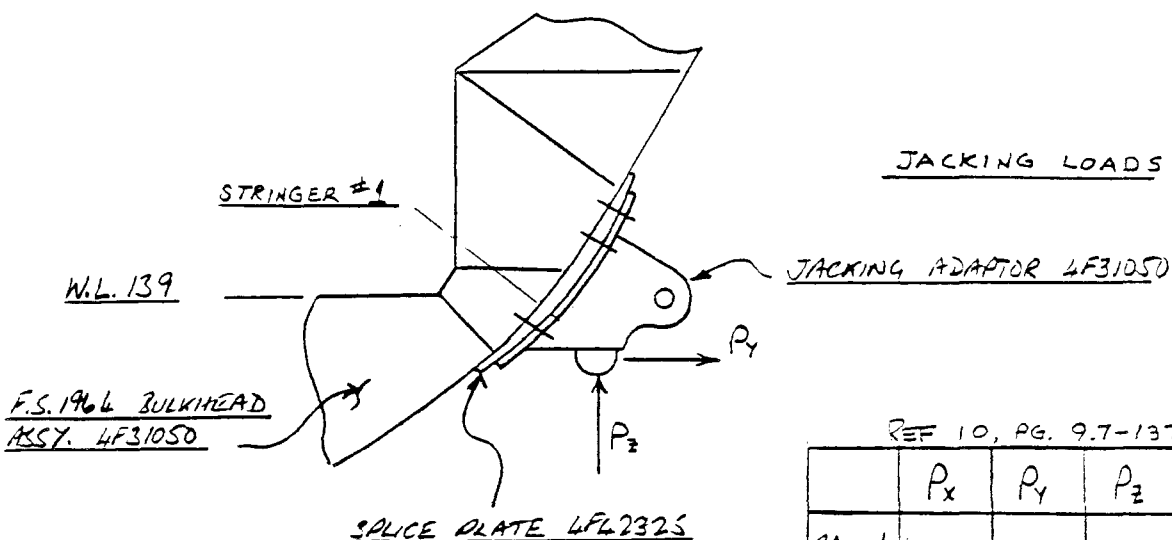
F.S. 1964

F.S. 1964

PREPARED	P. T. Fletcher	25 JUL. 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL. I	6.201
CHECKED	R. F. Wilkinson	25 JUL. 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L. G. Darby	25 JUL. 69		LG1US46-2-2	REPORT NO.	

REV. (A) P.T.F. 1 AUG. 69

6.4.4.3 LOADS



REF 10, PG. 9.7-137

	P_x	P_y	P_z	
CASE 1	+51796	+51796	208,758	} ULTIMATE LOADS
CASE 2	+52432	+52432	217,217	

CASE 5 PE 201

STRG. No.	M O D.	LOAD (lbs)
23	2	-117,313
299	3	-150,114
9	2	-35,946
7	2	-4297
19	2	-58576
297	3	-190182

COVER No.	M O D.	LOAD (lb/in)
27	2	547
297	3	-94
9	2	4258
7	2	1495
21	3	-414
293	3	-1428

BAR No.	M O D.	LOAD (lbs)
37	2	33651
11	2	19557
21	2	-32597
35	2	-16990
487	3	2901
463	2	4820

CASE 1DC242 + PRESS. (ULT.)

23	2*	76498
299	3	95835
9	2	21015
7	2	4119
19	2	43457
297	3	131987

27	2*	-29
297	3	-352
9	2	-2644
7	2	-1640
21	3	81.6
293	3	714

37	2*	572
11	2	5459
21	2	58345
35	2	30448
487	3	9262
463	2	19633

FLIGHT LOADS (ULT.)

* REF. 8, VOLUME IV

PREPARED	NAME A. D. Pinchot	DATE 1 Aug. 69	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	PERM. ①
CHECKED	R. F. Wilkinson	1 Aug. 69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	L. G. Darby	1 Aug. 69		LG1US46-2-2 REPORT NO.		

Rev. ① ADP 1 Aug. 69

① Pages 6.202 - 6.221

PAGES NOT USED

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	W.L. Propes	9 Sep 68			Nov. 1	6.222
CHECKED	F.E. Schreiber	9 Sep 68	TITLE			
			INTERNAL LOADS ANALYSIS	MODEL C-5A		
APPROVED	L.G. Darby	9 Sep 68	AFT FUSELAGE	LGIUS 46-2-2		
				REPORT NO.		

6.5 FRAMES

6.5.1 General

Frames are spaced at 20 inch intervals in this section of the fuselage. The door frames at F.S. 1844 and F.S. 1884 distribute the shear around the cutouts. F.S. 1964 frame is a shear redistribution frame and also reacts the sloping longeron kick load. This frame also contains the fuselage jacking points. Alternate frames beginning with F.S. 1764 are major cargo frames and react the pressure and cargo loads. The intermediate frames between F.S. 1744 and F.S. 2101 are stability frames. F.S. 2004, 2044, and 2084 are major frames and react the pressure loads and redistribute the skin and inner panel shears. The lower portions of F.S. 2004, 2024, 2044, 2064, and 2084. Frames are canted and contain the cargo ramp latch points. These frames react the ramp latch loads and pressure loads on the skin and cargo ramp.

Presented herein this report are critical frames in the aft fuselage between F.S. 1764 and F.S. 2101; F.S. 1844, 1964, 2084 and canted latch frame at F.S. 2084.

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	FORM.
PREPARED	J. Grabinski	18 July 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	6	Vol. 1	6.223
CHECKED	F. Schreiber	18 July 68		MODEL	C-5A	
APPROVED	L.G. Darby	18 Jul 68		GLUS 46-2-2	REPORT NO.	

6.5.2 Frame - Fuselage Station 1844

6.5.2.1 Discussion

The frame at Fuselage Station 1844 consists of three basic sections, the upper lobe, lower lobe, and underfloor bulkhead. A troop floor separates the upper and lower lobes and is joined to the frame by the W.L. 314 splice fitting. The underfloor bulkhead end fitting connects the bulkhead to the lower lobe side frame. A schematic illustration of the frame and its components is shown in Figure 6.5.2.1.

F.S. 1844 Frame has the function of distributing airframe loads, troop deck and cargo loads, and internal pressurization. Various combinations of these basic loads determine the critical conditions for each of the frame components, and are described on the following pages.

The basic applied loads are illustrated by Figures 6.5.2.3 - 6.5.2.6, and the critical load case combinations are defined in Table 6.5.2.4. Internal load distributions for the frame are obtained from FAMAS and CASD (refs. 12, 17). The maximum internal loads for each frame element are listed in Tables 6.5.2.5 and 6.5.2.6.

PREPARED	J. Grabinski	10 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.224
CHECKED	F.E. Schreiber	10 May 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	10 May 68		LG1US 46-2-2 REPORT NO.		

6.5.2.2 Frame Geometry - F.S. 1844

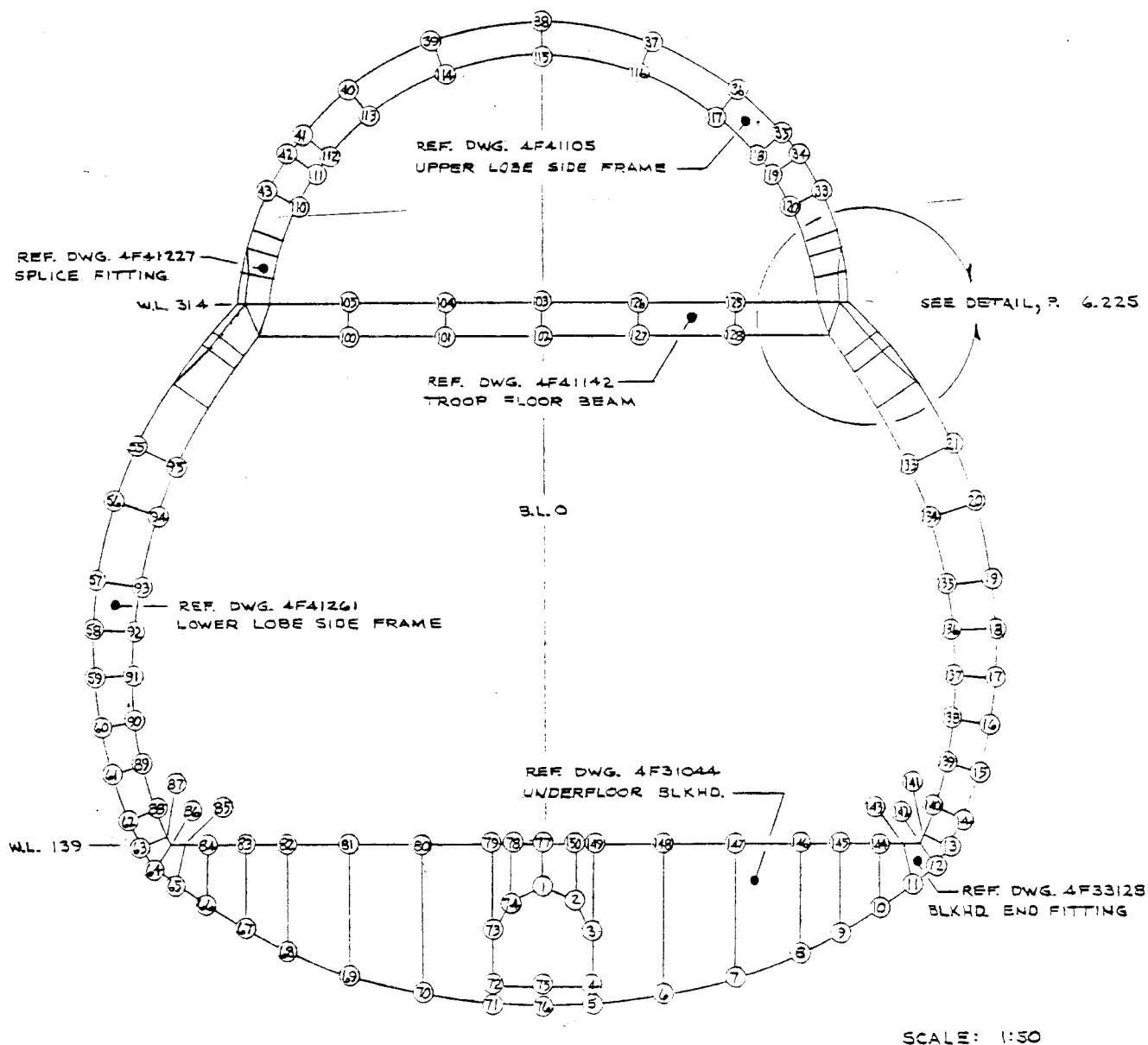


FIGURE 6.5.2.1 F.S. 1844 Frame Model

PREPARED	J. Grabinski	10 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6,225
CHECKED	F.E. Schreiber	10 May 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	LGIUS 46-2-2 REPORT NO.
APPROVED	L.G. Darby	10 May 68				

6.5.2.2 Frame Geometry - F.S. 1844 (Continued)

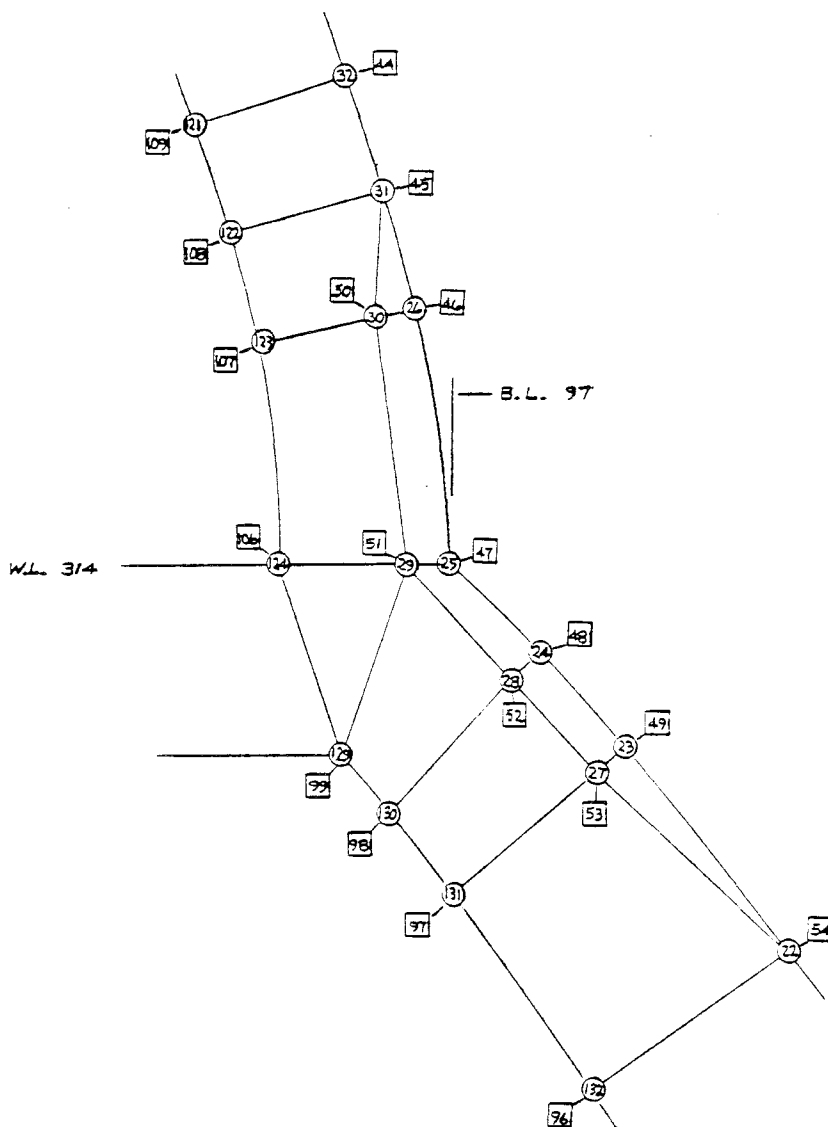


FIGURE 6.5.2.2 Detail of W.L. 314 Fitting Model

○ R.H. GRID PTS.
 □ L.H. GRID PTS.
 SCALE: 1:10

PREPARED	J.F. Grabinski	22 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6-226
CHECKED	F.E. Schreiber	22 May 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	22 May 68		LG1US 46-2-2	REPORT NO.	

6.5.2.2 Frame Geometry - F.S. 1844 (continued)

TABLE 6.5.2.1 Frame Model Grid Point Locations (See Pg. 6.224)

G.P.	B.L.	W.L.	G.P.	B.L.	W.L.	G.P.	B.L.	W.L.
1	0.00	125.00	2	11.50	120.00	3	15.80	110.00
4	15.80	90.90	5	15.80	88.00	6	37.50	90.37
7	40.00	95.53	8	80.00	102.90	9	92.50	109.21
10	105.00	116.90	11	115.12	124.30	12	124.42	132.43
13	129.38	140.00	14	135.20	154.50	15	139.20	163.52
16	141.73	184.88	17	142.87	200.00	18	142.68	215.93
19	140.88	231.25	20	135.33	253.45	21	127.26	273.00
22	115.21	293.00	23	106.50	304.10	24	101.80	309.20
25	97.10	314.00	26	95.30	327.80	27	105.00	302.90
28	100.30	307.80	29	94.80	314.00	30	93.30	327.50
31	93.70	334.30	32	91.70	340.71	33	87.00	351.76
34	79.54	364.34	35	74.83	370.50	36	61.70	383.56
37	33.95	399.53	38	0.00	405.65	39	-33.95	399.53
40	-61.70	383.56	41	-74.83	370.50	42	-79.54	364.34
43	-87.00	351.76	44	-91.70	340.71	45	-93.70	334.30
46	-95.30	327.80	47	-97.10	314.00	48	-101.80	309.20
49	-106.50	304.10	50	-93.30	327.50	51	-94.80	314.00
52	-100.30	307.80	53	-105.00	302.90	54	-115.21	293.00
55	-127.26	273.00	56	-135.33	253.45	57	-140.88	231.25
58	-142.68	215.93	59	-142.87	200.00	60	-141.73	184.88
61	-139.20	163.52	62	-135.20	154.50	63	-129.38	140.00
64	-124.42	132.43	65	-115.12	124.30	66	-105.00	116.90
67	-92.50	109.21	68	-80.00	102.90	69	-60.00	95.53
70	-37.50	90.37	71	-15.80	88.00	72	-15.80	90.90
73	-15.80	110.00	74	-11.50	120.00	75	0.00	110.00
76	0.00	87.40	77	0.00	139.00	78	-11.50	139.00
79	-15.80	139.00	80	-37.50	139.00	81	-60.00	139.00
82	-80.00	139.00	83	-92.50	139.00	84	-105.00	139.00
85	-112.00	139.00	86	-116.50	139.00	87	-122.17	143.60
88	-127.62	157.02	89	-130.82	171.30	90	-131.60	184.12
91	-131.25	200.00	92	-129.60	215.20	93	-127.40	229.00
94	-122.20	249.14	95	-115.20	267.17	96	-104.78	285.77
97	-97.20	296.10	98	-93.90	300.80	99	-92.00	303.70
100	-58.38	303.70	101	-29.40	303.70	102	0.00	303.70
103	0.00	314.00	104	-29.40	314.00	105	-58.38	314.00
106	-87.62	314.00	107	-87.20	326.10	108	-85.50	332.00
109	-83.63	337.87	110	-79.25	347.62	111	-72.04	359.09
112	-67.74	364.70	113	-55.62	376.12	114	-30.50	390.23
115	0.00	395.41	116	30.50	390.23	117	55.62	376.12
118	67.74	364.70	119	72.04	359.09	120	79.25	347.62
121	83.63	337.87	122	85.50	332.00	123	87.20	326.10
124	87.62	314.00	125	58.38	314.00	126	29.40	314.00
127	29.40	303.70	128	58.38	303.70	129	92.00	303.70
130	93.90	300.80	131	97.20	296.10	132	104.78	285.77
133	115.20	267.17	134	122.20	249.14	135	127.40	229.00
136	123.60	215.20	137	131.25	200.00	138	131.60	184.12
139	130.82	171.30	140	127.62	157.02	141	122.17	143.60
142	116.50	139.00	143	112.00	139.00	144	105.00	139.00
145	92.50	139.00	146	80.00	139.00	147	60.00	139.00
148	37.50	139.00	149	15.80	139.00	150	11.50	139.00

	NAME	DATE			TEMP.	PERM.
PREPARED	J. Grabinski	20 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE	Vol. I 6.227
CHECKED	F.E. Schreiber	20 May 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE		MODEL	C-5A
APPROVED	L.G. Darby	20 May 68			LG1US	46-2-2
					REPORT NO.	

6.5.2.2 FRAME GEOMETRY - F.S. 1844 (Continued)

Table 6.5.2.2 Axial Element Specifications (See Pg. 6.224)

ELE- MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.
1	1-2	2	2-3	3	3-4	4	4-5	5	4-75
6	5-76	7	75-76	8	4-6	9	5-6	10	6-7
11	7-8	12	8-9	13	9-10	14	10-11	15	11-12
16	12-13	17	13-14	18	14-15	19	15-16	20	16-17
21	17-18	22	18-19	23	19-20	24	20-21	25	21-22
26	22-23	27	23-24	28	24-25	29	25-26	30	22-27
31	27-28	32	28-29	33	29-30	34	30-31	35	26-31
36	31-32	37	32-33	38	33-34	39	34-35	40	35-36
41	36-37	42	37-38	43	115-116	44	116-117	45	117-11
46	118-119	47	119-120	48	120-121	49	121-122	50	122-123
51	123-124	52	124-125	53	125-126	54	103-126	55	102-127
56	127-128	57	128-129	58	129-130	59	130-131	60	131-132
61	132-133	62	133-134	63	134-135	64	135-136	65	136-137
66	137-138	67	138-139	68	139-140	69	140-141	70	141-142
71	142-143	72	143-144	73	144-145	74	145-146	75	146-147
76	147-148	77	148-149	78	149-150	79	77-150	80	3-6
81	1-77	82	2-150	83	3-149	84	6-148	85	7-147
86	8-146	87	9-145	88	10-144	89	11-143	90	12-142
91	13-141	92	14-140	93	15-139	94	16-138	95	17-137
96	18-136	97	19-135	98	20-134	99	21-133	100	22-132
101	23-27	102	27-131	103	24-28	104	28-130	105	29-129
106	124-129	107	25-29	108	29-124	109	26-30	110	30-123
111	31-122	112	32-121	113	33-120	114	34-119	115	35-118
116	36-117	117	37-116	118	38-115	119	102-103	120	126-127
121	125-128	122	38-39	123	39-40	124	40-41	125	41-42
126	42-43	127	43-44	128	44-45	129	45-46	130	46-47
131	47-48	132	48-49	133	49-54	134	45-50	135	50-51
136	51-52	137	52-53	138	53-54	139	54-55	140	55-56
141	56-57	142	57-58	143	58-59	144	59-60	145	60-61
146	61-62	147	62-63	148	63-64	149	64-65	150	65-66
151	66-67	152	67-68	153	68-69	154	69-70	155	70-71
156	71-76	157	70-72	158	72-75	159	71-72	160	72-73
161	70-73	162	73-74	163	1-74	164	77-78	165	78-79
166	79-80	167	80-81	168	81-82	169	82-83	170	83-84
171	84-85	172	85-86	173	86-87	174	87-88	175	88-89
176	89-90	177	90-91	178	91-92	179	92-93	180	93-94
181	94-95	182	95-96	183	96-97	184	97-98	185	98-99
186	99-100	187	100-101	188	101-102	189	103-104	190	104-105
191	105-106	192	106-107	193	107-108	194	108-109	195	109-110
196	110-111	197	111-112	198	112-113	199	113-114	200	114-115
201	39-114	202	40-113	203	41-112	204	42-111	205	43-110
206	44-109	207	45-108	208	46-50	209	50-107	210	47-51
211	51-106	212	99-106	213	51-99	214	48-52	215	52-99
216	49-53	217	53-97	218	54-96	219	55-95	220	56-94
221	57-93	222	58-92	223	59-91	224	60-90	225	61-89
226	62-88	227	63-87	228	64-86	229	65-85	230	66-84
231	67-83	232	68-82	233	69-81	234	70-80	235	73-79
236	74-78	237	101-104	238	100-105				

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE	TEMP.	PERM.
PREPARED	J. Grabinski	20 May 68	TITLE <u>INTERNAL LOADS ANALYSIS</u> AFT FUSELAGE		Vol. I	6.223	
CHECKED	F.E. Schreiber	20 May 68			MODEL C-5A		
APPROVED	L.G. Darby	20 May 68			LG1US 46-2-2 REPORT NO.		

6.5.2.2 FRAME GEOMETRY - F.S. 1844 (Continued)

TABLE 6.5.2.3 SHEAR PANEL SPECIFICATIONS (See Pg. 6.224)

PANEL	CONNECTING GRID PTS.	PANEL	CONNECTING GRID PTS.
1	77-150-2-1	2	150-149-3-2
3	75-4-3-76	4	149-148-6-5
5	148-147-7-6	6	147-146-8-7
7	146-145-9-8	8	145-144-10-9
9	144-143-11-10	10	143-142-12-11
11	142-141-13-12	12	141-140-14-13
13	140-139-15-14	14	139-138-16-15
15	138-137-17-16	16	137-136-18-17
17	136-135-19-18	18	135-134-20-19
19	134-133-21-20	20	133-132-22-21
21	132-131-23-22	22	131-130-28-27
23	28-24-23-27	24	130-129-29-28
25	29-25-24-28	26	124-123-30-29
27	29-30-26-25	28	123-122-31-24
29	122-121-32-31	30	121-120-33-32
31	120-119-34-33	32	119-118-35-34
33	118-117-36-35	34	117-116-37-36
35	116-115-38-37	36	115-114-39-38
37	114-113-40-39	38	113-112-41-40
39	112-111-42-41	40	111-110-43-42
41	110-109-44-43	42	109-108-45-44
43	108-107-46-45	44	107-106-51-50
45	50-51-47-46	46	99-98-52-51
47	51-52-48-47	48	98-97-53-52
49	52-53-49-48	50	97-96-54-49
51	96-95-55-54	52	95-94-56-55
53	94-93-57-56	54	93-92-58-57
55	92-91-59-58	56	91-90-60-59
57	90-89-61-60	58	89-88-62-61
59	88-87-63-62	60	87-86-64-63
61	86-85-65-64	62	85-84-66-65
63	84-83-67-66	64	83-82-68-67
65	82-81-69-68	66	81-80-70-69
67	80-79-71-70	68	72-75-76-71
69	79-78-74-73	70	78-77-1-74
71	106-105-100-99	72	105-104-101-100
73	104-103-102-101	74	103-126-127-102
75	126-125-128-127	76	125-124-129-128

NAME		DATE		LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE		TEMP.	PERM.
PREPARED	J. Grabinski	4 Jun 68				Vol. I	6.229		
CHECKED	F.E. Schreiber	4 Jun 68		TITLE		MODEL	C-5A		
APPROVED	L.G. Darby	4 Jun 68		INTERNAL LOADS ANALYSIS AFT FUSELAGE		LG1US 46-2-2			
						REPORT NO.			

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

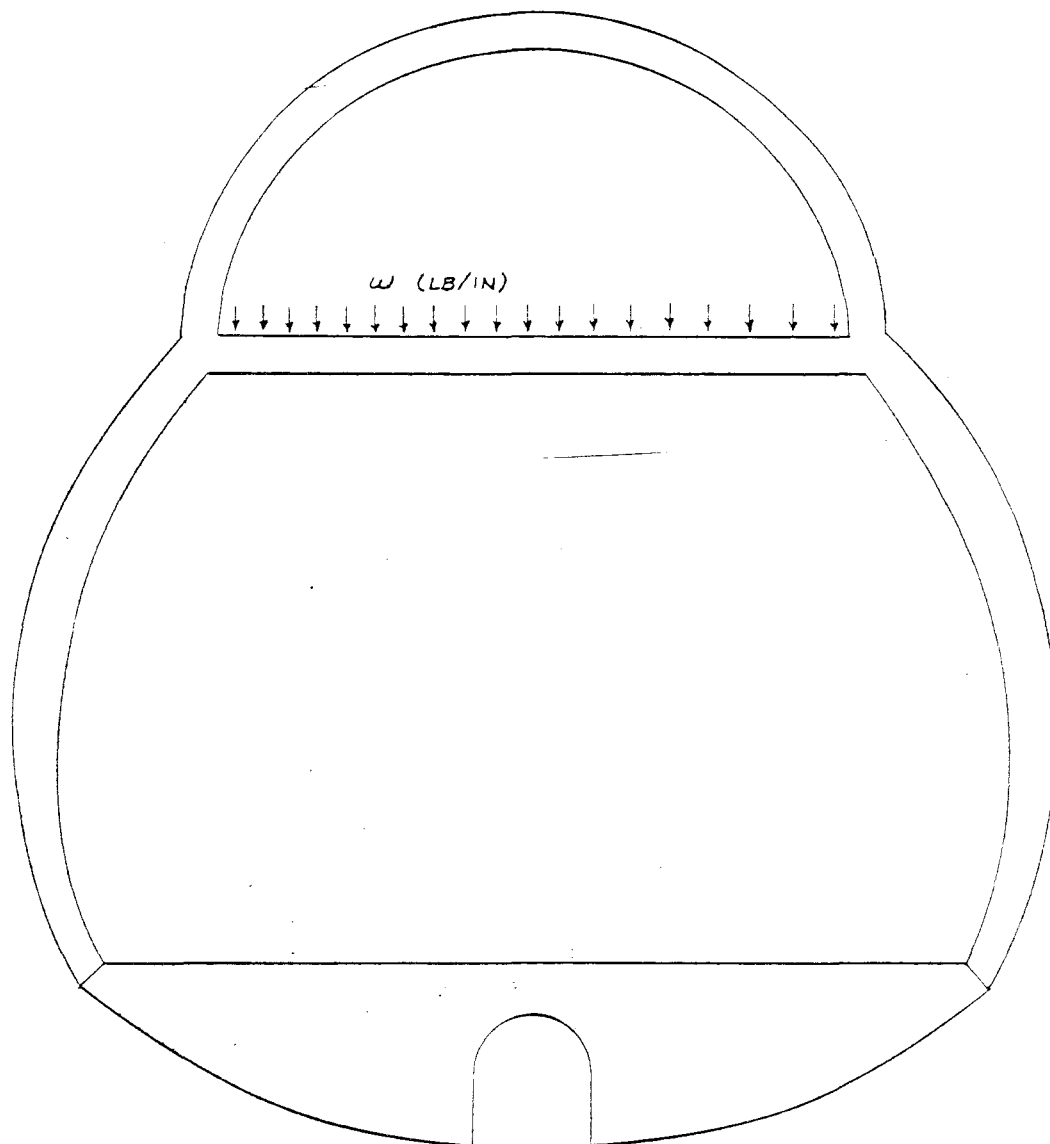


FIGURE 6.5.2.3 Troop Deck Loads

LOAD CASE	DESCRIPTION	w (LB/IN)
1	AVERAGE	39.1
2	MAXIMUM	78.3 ⁽¹⁾

NOTE: 1. $w = 188 \text{ lb/ft}^2 \times 1/144 \times 40 \text{ in. (span width)} \times 1.5 = 78.3 \text{ lb/in (ULT.)}$
(Ref. 10 p. 9.7-076)

PREPARED	J. Grabinski	4 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL. I	6.230
CHECKED	F.E. Schreiber	4 Jun 68	TITLE	MODEL	C-5A	
APPROVED	L.G. Darby	4 Jun 68	INTERNAL LOADS ANALYSIS AFT FUSELAGE	LGUS	46-2-2	
				REPORT NO.		

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

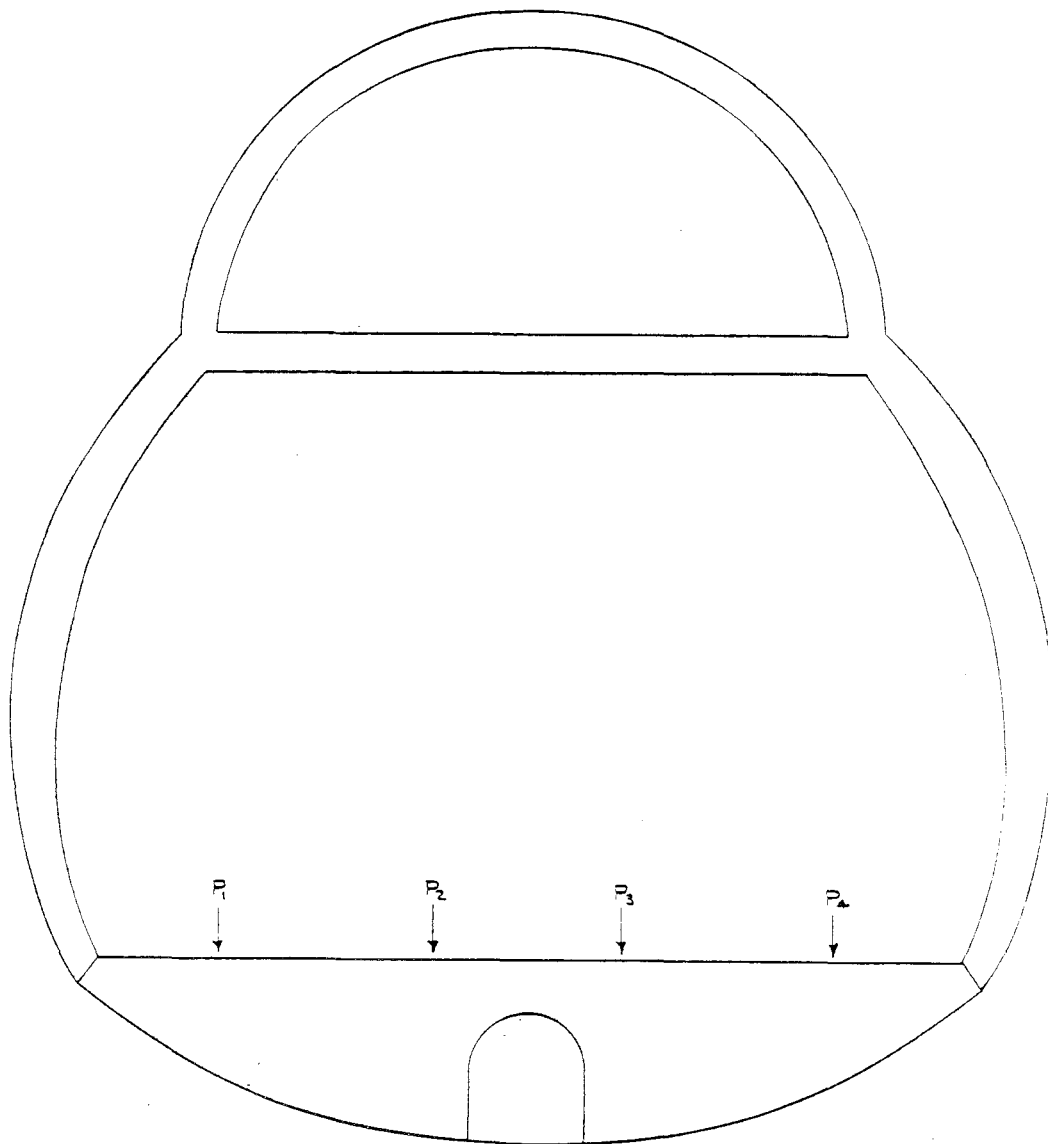


FIGURE 6.5.2.4 1.0 g Cargo Loads

CASE	CARGO DESCRIPTION	P ₁ (LB)	B.L.	P ₂ (LB)	B.L.	P ₃ (LB)	B.L.	P ₄ (LB)	B.L.
3	25,000 LB. AXLE - SYM.			12,500	-41	12,500	41		
4	25,000 LB. AXLE - L.H. UNSYM.	12,500	-94	12,500	-14				
5	25,000 LB. AXLE - R.H. UNSYM.					12,500	14	12,500	94
6	(2) 18,000 LB. AXLES - SYM.	9,000	-76	9,000	-15	9,000	15	9,000	76
7	(2) 18,000 LB. AXLES - L.H. UNSYM.	9,000	-101	9,000	-25	9,000	-10	9,000	66
8	(2) 18,000 LB. AXLES - R.H. UNSYM.	9,000	-66	9,000	10	9,000	25	9,000	101

NOTE: 1. Cargo loads Reference No. 10 pp 6.4 - 002, 006, 007.

PREPARED	J. Grabinski	4 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. 1	6.231
CHECKED	F.E. Schreiber	4 Jun 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	4 Jun 68		LG1US 46-2-2 REPORT NO.		

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

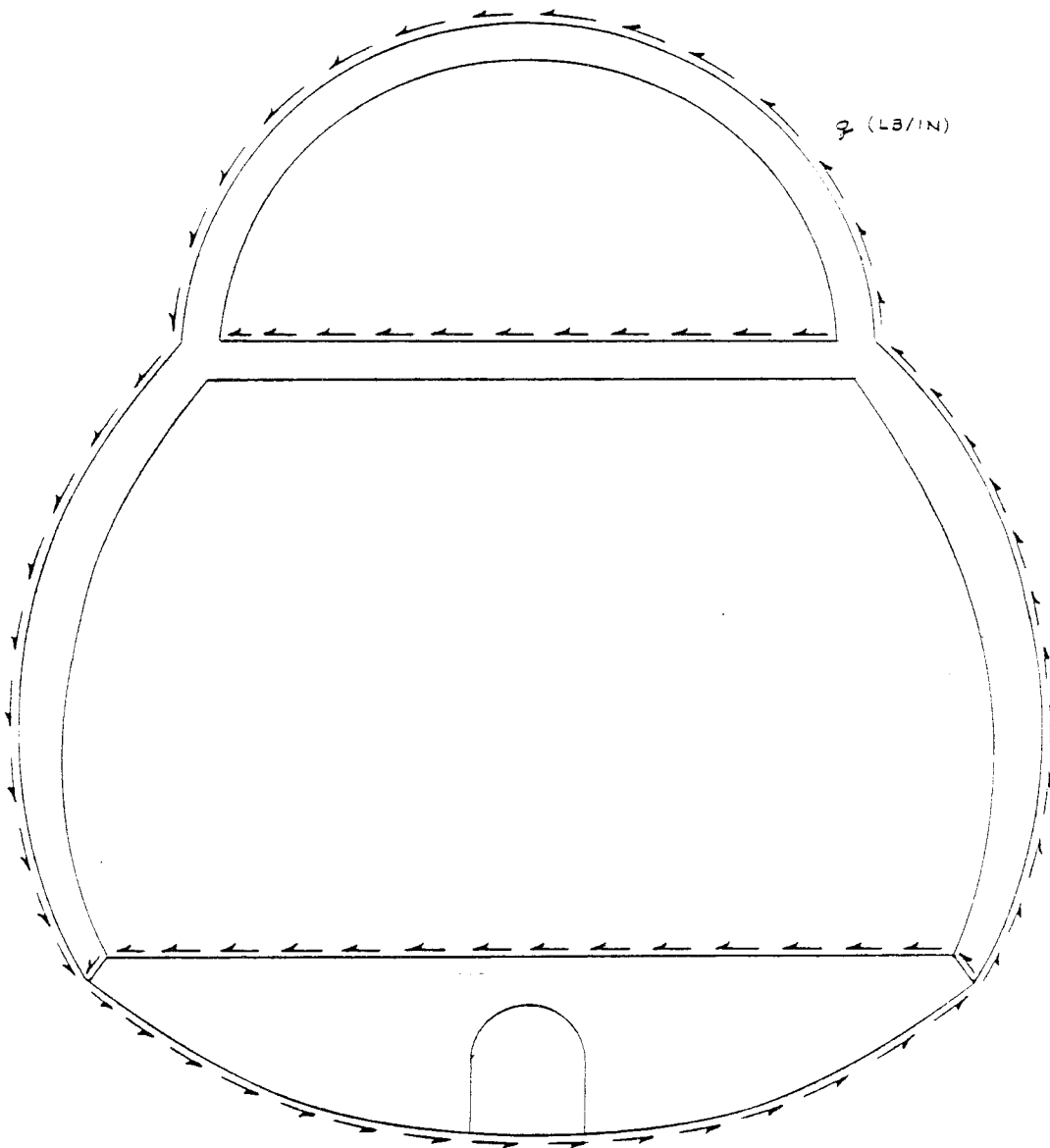


Figure 6.5.2.5 Fuselage Shear Redistribution Loads

Frame shear flows (q) for all critical flight cases listed on p. 6.233 are obtained from Ref. 12.

PREPARED	J. Grabinski	4 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. 1	6.232
CHECKED	F.E. Schreiber	4 Jun 68	TITLE	MODEL	C-5A	
APPROVED	L.G. Darby	4 Jun 68	INTERNAL LOADS ANALYSIS AFT FUSELAGE	LG1US 46-2-2	REPORT NO.	

6.5.2.3 Frame Loads - F.S. 1844 (Cont)

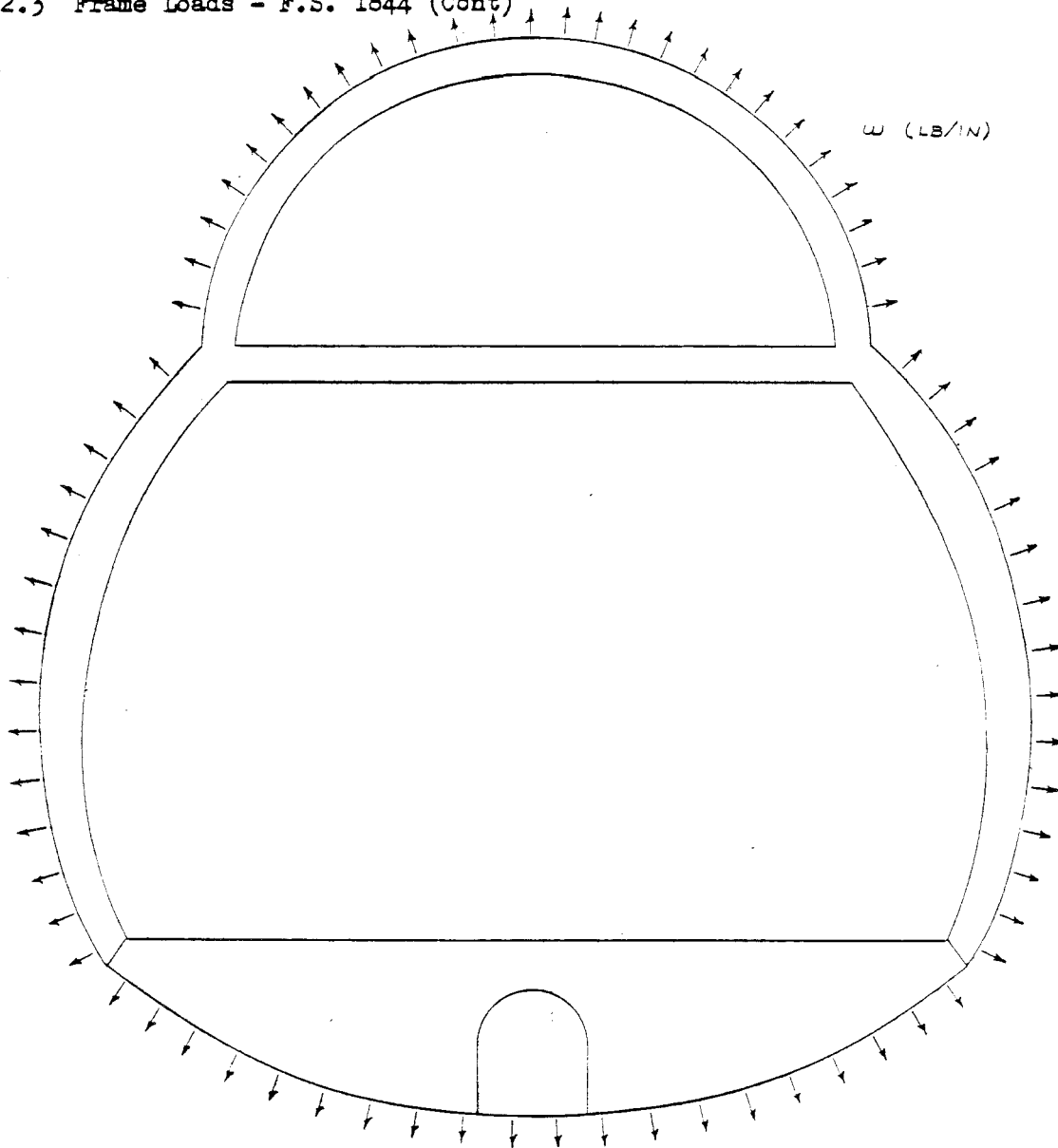


FIGURE 6.5.2.6 Pressure Loads

LOAD CASE	DESCRIPTION	p (LB/IN ²)	w (LB/IN)
307	BURST	17.40	69.6
26	ULTIMATE	8.70	52.2

Notes: 1. $w = 17.40 \text{ psi} \times 20 \text{ in (span width)} \times .20 = 69.6 \text{ lb/in (Ref. 18)}$
 2. $w = 8.70 \text{ psi} \times 20 \text{ in} \times .20 \times 1.5 = 52.2 \text{ lb/in.}$

PREPARED	J.F. Grabinski	12 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.233
CHECKED	F.E. Schreiber	12 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	12 Jul 68		LGIUS 46-2-2 REPORT NO.		

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

BASED LOADS

TABLE 6.5.2.4 Critical Applied Load Cases

BASIC LOAD CASES

CASE NO.	LOAD DESCRIPTION
1	Average Troop Deck Load (p. 6.229)
2	Maximum Troop Deck Load
3	(1.0 g) Cargo Load - 25,000 lb. axle - Symmetrical (p. 6.230)
4	(1.0 g) Cargo Load - 25,000 lb. axle - L.H. Unsymmetrical
5	(1.0 g) Cargo Load - 25,000 lb. axle - R.H. Unsymmetrical
6	(1.0 g) Cargo Load - (2) 18,000 lb. axles - Symmetrical
7	(1.0 g) Cargo Load - (2) 18,000 lb. axles - Unsymmetrical L.H.
8	(1.0 g) Cargo Load - (2) 18,000 lb. axles - R.H. Unsymmetrical
9	Fuselage Shear Redistribution - Flight Case DML001 (Ref 10, p 9.3-501)
10	Fuselage Shear Redistribution - Flight Case 1004001.18 (Ref 10, 9.6-657)
11	Fuselage Shear Redistribution - Flight Case 101500.132 (Ref 10, 9.6-291)
12	Fuselage Shear Redistribution - Flight Case 101500.174 (Ref 10, 9.6-293)
13	Fuselage Shear Redistribution - Flight Case 103400.084 (Ref 10, 9.6-315)
14	Fuselage Shear Redistribution - Flight Case 101500.180 (Ref. 10, 9.6-295)
15	Fuselage Shear Redistribution - Flight Case 1EY107 (Ref. 10, p. 9.3-165)
16	Fuselage Shear Redistribution - Flight Case 1PC242 (Ref. 10, p. 9.2-685)
17	Fuselage Shear Redistribution - Flight Case 5PE201 (Ref. 10, p. 9.2-725)
18	Fuselage Shear Redistribution - Flight Case 1PM337 (Ref. 10, p. 9.1-629)
19	Fuselage Shear Redistribution - Flight Case 5PM354 (Ref. 10, p. 9.2-589)
20	Fuselage Shear Redistribution - Flight Case 3PM082 (Ref. 10, p. 9.1-741)
21	Fuselage Shear Redistribution - Flight Case 5AR154 T1 (Ref. 10, 9.4-661)
22	Fuselage Shear Redistribution - Flight Case 5AR154 T2 (Ref. 10, 9.4-669)
23	Fuselage Shear Redistribution - Flight Case 5AR154 T3 (Ref. 10, 9.4-677)
24	Fuselage Shear Redistribution - Flight Case 5PM029 (Ref. 10, 9.2-349)
25	Fuselage Shear Redistribution - Flight Case 5AR157 T1 (Ref. 10, 9.4-701)
26	Ultimate Pressure (p. 6.232)

COMBINED LOAD CASES

CASE NO.	COMBINED BASIC LOAD CASES
101	① + 1.50 ③ + ⑨ + ②⑥
103	① + 2.82 ③ + ⑪ + ②⑥
105	① + 1.67 ③ + ⑬ + ②⑥
107	① + 1.50 ③ + ⑮ + ②⑥
109	① + 1.50 ③ + ⑰ + ②⑥
111	① + 3.75 ③ + ⑲ + ②⑥
113	① + ②① + ②⑥
115	① + ②③ + ②⑥
117	① + ②⑤ + ②⑥
119	① + 2.55 ④ + ⑩ + ②⑥
121	① + 2.76 ④ + ⑫ + ②⑥
123	① + 2.76 ④ + ⑭ + ②⑥

CASE NO.	COMBINED BASIC LOAD CASES
102	① + 2.55 ③ + ⑩ + ②⑥
104	① + 2.76 ③ + ⑫ + ②⑥
106	① + 2.76 ③ + ⑭ + ②⑥
108	① + 3.75 ③ + ⑯ + ②⑥
110	① + 3.75 ③ + ⑰ + ②⑥
112	① + 3.00 ③ + ⑲ + ②⑥
114	① + ②② + ②⑥
116	① + 3.75 ③ + ②④ + ②⑥
118	① + 1.50 ④ + ⑨ + ②⑤
120	① + 2.82 ④ + ⑪ + ②⑤
122	① + 1.67 ④ + ⑬ + ②⑤
124	① + 1.50 ④ + ⑮ + ②⑤

PREPARED	J.F. Grabinski	16 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.234
CHECKED	F.E. Schreiber	16 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	16 Jul 68		LGUS 46-2-2 REPORT NO.		

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

TABLE 6.5.2.4 CRITICAL APPLIED LOAD CASES (Continued)

COMBINED LOAD CASES (Continued)

CASE NO.	COMBINED BASIC LOAD CASES
125	① + 3.75 ④ + ①⑥ + ②⑥
127	① + 3.75 ④ + ①⑧ + ②⑥
129	① + 3.00 ④ + ②⑩ + ②⑥
131	① + 1.50 ⑤ + ⑨ + ②⑥
133	① + 2.82 ⑤ + ①① + ②⑥
135	① + 1.67 ⑤ + ①③ + ②⑥
137	① + 1.50 ⑤ + ①⑤ + ②⑥
139	① + 1.50 ⑤ + ①⑦ + ②⑥
141	① + 3.75 ⑤ + ①⑨ + ②⑥
143	① + 3.75 ⑤ + ②① + ②⑥
145	① + 2.55 ⑥ + ①⑩ + ②⑥
147	① + 2.76 ⑥ + ①② + ②⑥
149	① + 2.76 ⑥ + ①④ + ②⑥
151	① + 3.75 ⑥ + ①⑥ + ②⑥
153	① + 3.75 ⑥ + ①⑧ + ②⑥
155	① + 3.00 ⑥ + ②⑩ + ②⑥
157	① + 1.50 ⑦ + ⑨ + ②⑥
159	① + 2.82 ⑦ + ①① + ②⑥
161	① + 1.67 ⑦ + ①③ + ②⑥
163	① + 1.50 ⑦ + ①⑤ + ②⑥
165	① + 1.50 ⑦ + ①⑦ + ②⑥
167	① + 3.75 ⑦ + ①⑨ + ②⑥
169	① + 3.75 ⑦ + ②④ + ②⑥
171	① + 2.55 ⑧ + ①⑩ + ②⑥
173	① + 2.76 ⑧ + ①② + ②⑥
175	① + 2.76 ⑧ + ①④ + ②⑥
177	① + 3.75 ⑧ + ①⑥ + ②⑥
179	① + 3.75 ⑧ + ①⑧ + ②⑥
181	① + 3.00 ⑧ + ②⑩ + ②⑥

CASE NO.	COMBINED BASIC LOAD CASES
126	① + 1.50 ④ + ①⑦ + ②⑥
128	① + 3.75 ④ + ①⑨ + ②⑥
130	① + 3.75 ④ + ②④ + ②⑥
132	① + 2.55 ⑤ + ①⑩ + ②⑥
134	① + 2.76 ⑤ + ①② + ②⑥
136	① + 2.76 ⑤ + ①④ + ②⑥
138	① + 3.75 ⑤ + ①⑥ + ②⑥
140	① + 3.75 ⑤ + ①⑧ + ②⑥
142	① + 3.00 ⑤ + ②⑩ + ②⑥
144	① + 1.50 ⑥ + ⑨ + ②⑥
146	① + 2.82 ⑥ + ①① + ②⑥
148	① + 1.67 ⑥ + ①③ + ②⑥
150	① + 1.50 ⑥ + ①⑤ + ②⑥
152	① + 1.50 ⑥ + ①⑦ + ②⑥
154	① + 3.75 ⑥ + ①⑨ + ②⑥
156	① + 3.75 ⑥ + ②④ + ②⑥
158	① + 2.55 ⑦ + ①⑩ + ②⑥
160	① + 2.76 ⑦ + ①② + ②⑥
162	① + 2.76 ⑦ + ①④ + ②⑥
164	① + 3.75 ⑦ + ①⑥ + ②⑥
166	① + 3.75 ⑦ + ①⑧ + ②⑥
168	① + 3.00 ⑦ + ②⑩ + ②⑥
170	① + 1.50 ⑧ + ⑨ + ②⑥
172	① + 2.82 ⑧ + ①① + ②⑥
174	① + 1.67 ⑧ + ①③ + ②⑥
176	① + 1.50 ⑧ + ①⑤ + ②⑥
178	① + 1.50 ⑧ + ①⑦ + ②⑥
180	① + 3.75 ⑧ + ①⑨ + ②⑥
182	① + 3.75 ⑧ + ②④ + ②⑥

COMBINED LOAD CASES 201 - 282 are similar to Cases 101 - 182 except Basic Case ① is replaced by ②.

BASIC LOAD CASES ⁽²⁾ (With maximum load factors)

CASE NO.	LOAD DESCRIPTION
301	Cargo Case 3 - (5.04 g)
303	Cargo Case 5 - (5.04 g)
305	Cargo Case 7 - (4.83 g)
307	Burst Pressure (p. 4.232)

CASE NO.	LOAD DESCRIPTION
302	Cargo Case 4 - (5.04 g)
304	Cargo Case 6 - (4.83 g)
306	Cargo Case 8 - (4.83 g)

- NOTES: (1) 1.0 g cargo loads are multiplied by the corresponding flight case ultimate "g" load factor.
(2) Maximum load factors obtained from ref. 10, P. 9.7 - 0.74.

NAME		DATE	LOCKHEED - GEORGIA COMPANY		PAGE	TEMP.	PERM.
PREPARED	J. Grabinski	18 July 68	A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		Vol. I	6.234	
CHECKED	F. Schreiber	18 July 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE		MODEL	C-5A	
APPROVED	L.G. Darby	18 July 68			REPORT NO.	LGLUS 46-2-2	

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

TABLE 6.5.2.5 AXIAL ELEMENT LOADS

ELEM NO.	P _t (max) lb	CASE NO.	P _c (max) lb	CASE NO.	ELEM NO.	P _t (max) lb	CASE NO.	P _c (max) lb.	CASE NO.
1	21603	303	-22114	302	2	50152	303	-51337	302
3	744	307	-29441	306	4	692	307	-30540	306
5	83507	305	-1816	20	6	97585	306	-1347	13
7	718	307	-5614	305	8	81614	305	-1636	20
9	98905	306	-2238	20	10	150548	306	-4574	20
11	132377	306	-5397	20	12	115094	306	-4451	20
13	106269	306	-1456	22	14	92969	306	-2200	22
15	86827	282	-2669	22	16	76538	282	-2658	22
17	42879	180	-2121	15	18	31015	129	-7190	306
19	30457	218	-7624	306	20	25296	307	-9616	24
21	26695	307	-24907	24	22	21021	307	-19867	9
23	19925	307	-6921	306	24	21343	218	-6922	306
25	16647	218	-4699	306	26	8479	218	-1390	306
27	7917	231	-1552	20	28	9014	215	-10315	229
29	1853	306	-5838	218	30	3532	218	-522	306
31	3500	218	-1084	20	32	15250	231	-1118	20
33	4419	307	-1862	306	34	3479	131	-583	15
35	9221	307	-2846	15	36	17696	170	-3985	15
37	15194	307	-2263	15	38	15677	307	-2263	15
39	15423	307	-7403	9	40	16183	307	-3311	10
41	8499	307	-2646	10	42	910	16	-2159	157
43	13549	164	-388	23	44	10445	182	-2248	9
45	4214	307	-5863	170	46	320	22	-5872	179
47	2255	215	-5874	179	48	7766	218	-4017	306
49	10669	218	-4417	306	50	14580	218	-4849	306
51	19603	222	-4926	306	52	22476	241	-699	302
53	5194	307	-7744	218	54	4452	307	-9433	215
55	16493	205	-3332	8	56	13171	222	-1914	303
57	3509	230	-14926	238	58	13635	307	-6286	306
59	13530	307	-6416	306	60	14009	307	-6893	306
61	14068	307	-6922	306	62	4957	127	-5664	306
63	9988	307	-8086	20	64	8410	303	-8730	122
65	14626	306	-8696	122	66	22404	280	-4406	13
67	42772	280	-1864	16	68	58221	282	-1207	15
69	58060	282	-927	25	70	59957	282	-927	25
71	44155	282	-21674	303	72	19179	307	-33954	303
73	11746	307	-36169	303	74	6862	307	-36169	303
75	4228	16	-24313	303	76	3611	16	-30591	301
77	3142	16	-39550	306	78	2860	16	-47145	306
79	2885	16	-47145	306	80	18531	303	-24539	302

Notes: (1) Axial elements defined on Pg. 6.227 .

(2) Critical load cases described on Pg.6.233 .

PREPARED	J. Grabinski	18 July 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.236
CHECKED	F. Schreiber	18 July 68	TITLE	INTERNAL LOADS ANALYSIS		
APPROVED	L.G. Darby	18 July 68	AFT FUSELAGE		MODEL C-5A	
				LGIUS 46-2-2		
				REPORT NO.		

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

TABLE 6.5.2.5 AXIAL ELEMENT LOADS (Continued)

ELEM NO.	P _t (max) lb.	CASE NO.	P _c (max) lb.	CASE NO.	ELEM NO.	P _t (max) lb.	CASE NO.	P _c (max) lb.	CASE NO.
81	5526	7	- 5796	305	82	37460	303	- 38344	302
83	17107	302	-45534	303	84	2081	230	- 53172	301
85	902	307	-30429	308	86	587	20	- 14005	306
87	429	307	-45360	303	88	358	114	- 29463	306
89	245	114	- 6735	282	90	23702	307	- 11646	306
91	29002	282	- 6525	20	92	9602	282	- 2106	20
93	7145	280	- 1026	9	94	2520	177	- 484	9
95	1840	182	- 367	13	96	7583	182	- 437	122
97	1391	9	- 1592	224	98	1174	307	- 1855	222
99	1808	307	- 1120	9	100	1718	307	- 980	218
101	639	20	- 1372	215	102	1363	215	- 438	20
103	409	307	- 3715	235	104	207	306	- 3693	242
105	620	302	-19044	238	106	19739	222	- 4239	306
107	1719	215	- 5779	229	108	17069	233	- 1456	20
109	3806	224	- 485	306	110	3488	222	- 1075	176
111	2403	307	- 686	9	112	1078	224	- 903	9
113	1671	226	- 505	179	114	1940	218	- 545	179
115	2944	218	- 941	170	116	1033	183	- 939	170
117	3581	182	- 153	23	118	4537	164	- 130	23
119	0	—	- 2302	229	120	0	—	- 2286	202
121	0	—	- 2279	201	122	8137	224	- 4771	144
123	24748	157	- 6776	16	124	27923	257	- 8479	15
125	17520	307	- 6019	20	126	18059	164	- 7963	20
127	16970	164	- 7293	9	128	15295	163	- 8915	9
129	12421	163	- 8644	9	130	22733	169	- 13526	231
131	17482	169	-12348	9	132	27774	230	-10356	9
133	18188	230	- 4541	9	134	5126	163	- 2030	9
135	17610	143	- 8054	9	136	30432	230	- 6665	9
137	15237	130	- 6887	9	138	9015	243	- 2778	9
139	17508	235	- 4545	305	140	18481	235	- 6938	305
141	17208	231	- 7187	24	142	26228	231	- 23904	24
143	26932	231	- 27234	24	144	23981	307	- 10889	24
145	28076	235	- 7733	305	146	30866	135	- 7243	305
147	42505	169	- 6308	9	148	75002	169	- 5707	9
149	85907	269	- 2340	9	150	93001	305	- 1612	23
151	106286	305	- 934	23	152	115105	305	- 4051	14
153	132386	305	- 4977	20	154	150555	305	- 4263	20
155	78357	305	- 2088	20	156	74002	305	- 1363	13
157	81607	306	- 1570	20	158	83507	305	- 1816	20
159	719	307	- 30538	305	160	770	307	-29442	305

Notes: (1) Axial elements defined on Pg. 6.227 .

(2) Critical load cases described on Pg. 6.233 .

PREPARED	J. Grabinski	18 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.237
CHECKED	F. Schreiber	18 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	18 Jul 68		REPORT NO.	LGJUS 46-2-2	

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

TABLE 6.5.2.5 AXIAL ELEMENT LOADS (Continued)

ELEM NO.	Pt (max) lb	CASE NO.	Pc (max) lb	CASE NO.	ELEM NO.	Pt (max) lb	CASE NO.	Pc (max) lb	CASE NO.
161	18537	302	-24533	303	162	50163	302	-51326	303
163	21608	302	-22108	303	164	2833	16	-47152	305
165	2928	16	-47152	305	166	3326	16	-39556	305
167	3979	16	-30597	301	168	4783	16	-24343	302
169	6925	307	-36211	302	170	11750	307	-36211	302
171	19005	307	-21764	302	172	43705	264	-21764	302
173	57658	267	-3124	9	174	55074	267	-4822	9
175	55237	267	-4836	9	176	39727	267	-4038	9
177	19979	267	-5823	13	178	14762	305	-9306	13
179	8571	302	-9342	13	180	12310	307	-7787	13
181	16709	307	-5383	305	182	19032	307	-6756	305
183	18952	307	-6728	305	184	17675	307	-6447	305
185	16886	307	-6485	305	186	4095	235	-15324	218
187	13472	235	-1452	302	188	16493	205	-1591	305
189	5409	307	-8627	217	190	8666	307	-274	303
191	35183	230	-1526	23	192	23976	235	-9235	9
193	21324	237	-11944	9	194	19251	237	-13608	9
195	15563	237	-13649	9	196	7371	237	-13276	9
197	1641	23	-9705	157	198	3344	9	-8245	276
199	12907	157	-8353	276	200	13549	164	-556	24
201	4425	157	-1613	15	202	4963	237	-3023	9
203	506	19	-1275	166	204	2436	242	-900	157
205	2540	239	-1843	9	206	1755	231	-1551	9
207	1132	9	-1879	163	208	8651	231	-1275	15
209	6835	231	-4096	9	210	17945	230	-8353	9
211	36200	230	-9067	9	212	24491	235	-4704	305
213	2860	24	-20444	218	214	501	24	-4072	201
215	903	24	-4171	201	216	1793	9	-4012	230
217	1687	9	-3675	230	218	2324	307	-2314	243
219	2733	307	-1241	24	220	1447	307	-1098	235
221	1786	24	-2275	231	222	3106	169	-1220	9
223	2124	169	-485	13	224	2596	164	-254	16
225	6639	267	-890	20	226	9109	267	-2041	20
227	27901	267	-6425	24	228	24560	264	-11665	305
229	224	115	-6673	269	230	320	115	-29463	305
231	443	307	-45360	302	232	632	307	-14006	305
233	939	307	-30429	306	234	1949	241	-53172	301
235	17101	303	-45541	302	236	37469	302	-38336	303
237	0	—	-2286	201	238	0	—	-2279	201

Notes: (1) Axial elements defined on Pg. 6.227.
(2) Critical load cases described on Pg. 6.233.

PREPARED	J. Grabinski	18 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.238
CHECKED	F. Schreiber	18 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	18 Jul 68		LGJUS 46-2-2	REPORT NO.	

6.5.2.3 Frame Loads - F.S. 1844 (Continued)

TABLE 6.5.2.6 SHEAR PANEL LOADS

PANEL NO.	q (ave) lb/in	q (max) lb/in ⁽¹⁾	CASE NO.	PANEL NO.	q (ave) lb/in.	q (max) lb/in ⁽¹⁾	CASE NO.	PANEL NO.	q (ave) lb/in	q (max) lb/in ⁽¹⁾	CASE NO.
1	1736	1736	302	2	1407	1407	177	3	1019	1019	177
4	618	618	177	5	550	550	301	6	613	613	301
7	689	689	269	8	980	980	256	9	1579	2491	282
10	2938	5186	282	11	3296	4295	282	12	614	662	183
13	1043	1109	169	14	1322	1399	282	15	931	1021	232
16	637	664	282	17	391	432	307	18	299	329	122
19	173	189	122	20	82	90	13	21	206	227	215
22	114	137	20	23	395	404	242	24	636	1631	215
25	1859	2348	205	26	530	597	276	27	456	467	307
28	670	732	224	29	472	511	222	30	553	620	218
31	377	409	218	32	62	68	182	33	408	454	182
34	272	302	177	35	108	121	125	36	128	143	182
37	524	582	163	38	513	570	157	39	454	498	157
40	572	615	237	41	717	804	235	42	754	820	242
43	733	801	231	44	1254	1412	257	45	1187	1215	142
46	919	1013	230	47	2130	2688	205	48	553	664	230
49	673	687	182	50	257	283	230	51	172	188	13
52	326	356	135	53	425	467	135	54	438	484	307
55	567	591	267	56	871	952	267	57	1271	1341	267
58	1037	1103	180	59	635	685	307	60	3129	4077	267
61	2865	5058	267	62	1560	2435	267	63	957	957	254
64	674	674	280	65	613	613	301	66	550	550	301
67	614	614	167	68	1022	1022	169	69	1412	1412	164
70	1751	1751	302	71	571	658	218	72	351	351	218
73	127	127	218	74	127	127	240	75	352	352	240
76	571	655	240								

- NOTE: (1) q (max) is given for the highest loaded edge of the panel.
(2) Shear panels defined on Pg. 6.228.
(3) Critical load cases described on Pg. 6.233.

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	G.B. Meadley	15 July 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS		Vol. 1	6,239
CHECKED	F.E. Schreiber	15 Jul 68		MODEL	C-5A	
APPROVED	L.G. Darby	15 Jul 68		LG1US 46-2-2	REPORT NO.	

6.5.3 Frame-Fuselage Station 1964

6.5.3.1 Discussion

The 1964 frame consists of an underfloor bulkhead, side panel frames, and an upper lobe which forms the troop compartment.

The loading applied to the frame is obtained from several sources. The flight cases are taken from output produced by the FAMAS group (ref. 8). These critical flight cases are combined with the allowable cargo loading obtained from the Loads Report (ref. 10). The appropriate inertia factor is used for the flight cases under consideration. The flight cases give shears in the shell of the aircraft and a redistribution of shear occurs across the 1964 frame.

Internal pressure loading and applied loading to the frame from the aft ramp, via the aft ramp hinges at BL's 28 and 84 left and right, is added to the cargo and redistribution loading.

Separate ground handling cases are analyzed. The aircraft jacking case and the aircraft stabilizing combined with the ramp loading are the two main types of cases used to analyze ground handling.

The internal loading is obtained by use of the computer aided structural design system (ref. 17) and the output is summarized within the internal loading report.

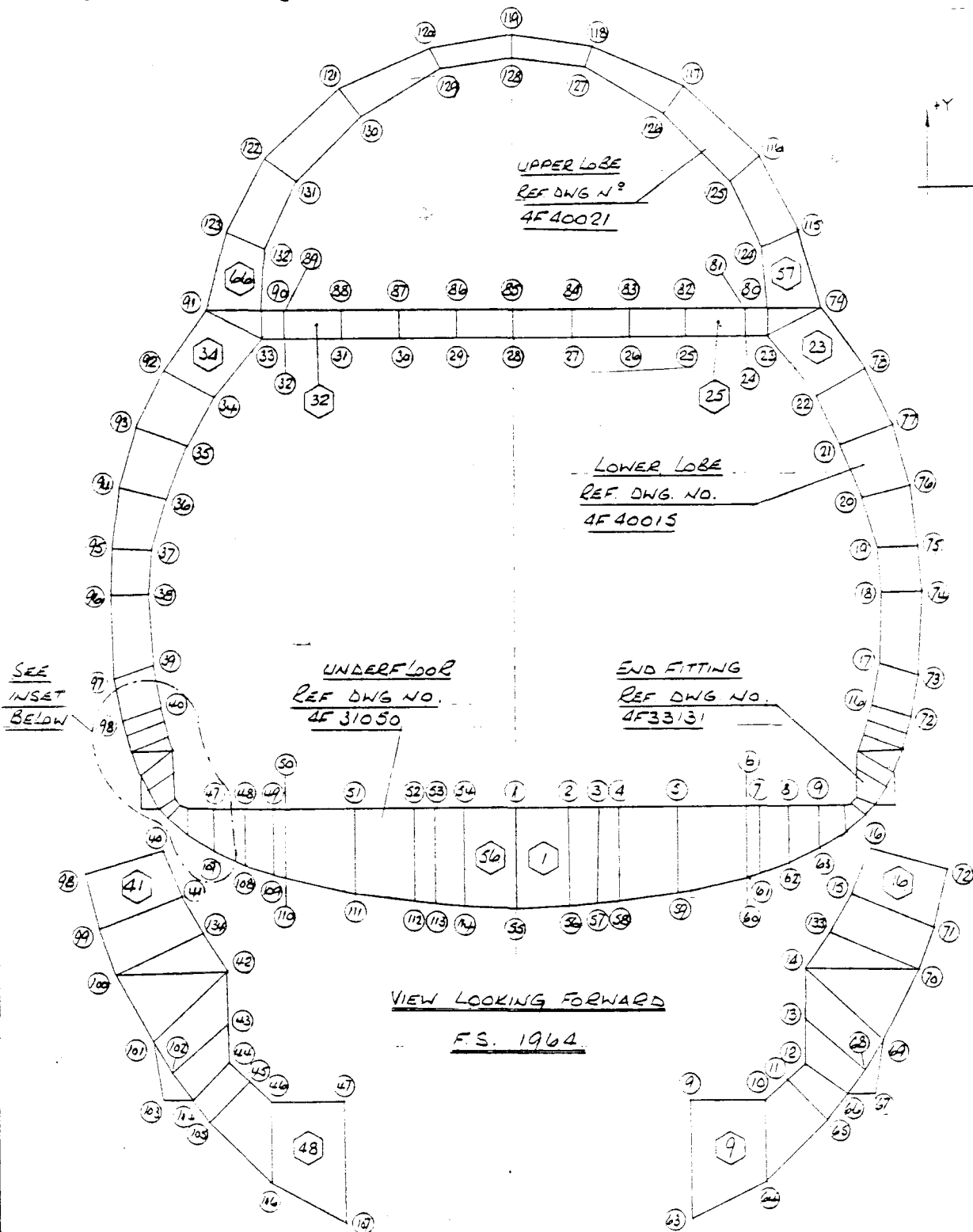
The BATCH Program used to obtain the frame internal loading is part of the CASD Program (Ref. 17). The program has the ability to combine loading cases and analyze up to 200 such cases. A scan is included at the end of the output to enable the critical loading cases and the internal loads and stresses to be determined.

	NAME	DATE		TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6.240
CHECKED	F. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68		LGLUS 46-2-2 REPORT NO.	

6.5.3 Frame - F. S. 1964.00

6.5.3.2 Geometry

6.5.3.2.1 Frame Diagram



PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	FORM.
G. B. Meadley		24 Jul 68		Vol. I	6.241	
CHECKED	NAME	DATE	TITLE	MODEL		
F. Schreiber		24 Jul 68		C-5A		
APPROVED	NAME	DATE	INTERNAL LOADS ANALYSIS AFT FUSELAGE			REPORT NO.
L.G. Darby		24 Jul 68				LGUS 46-2-2

6.5.3 Frame - F.S. 1964.00

6.5.3.2.2 Grid Point Locations

F.S. 1964 GRID POINTS.

NODE	X"	Y"	NODE	X"	Y"	NODE	X"	Y"	NODE	X"	Y"
1	0.00	-82.00	35	-108.20	43.20	69	129.70	-71.60	103	-126.21	-83.10
2	19.00	-82.00	36	-117.80	28.30	70	133.10	-64.90	104	-121.20	-83.10
3	28.00	-82.00	37	-124.40	9.50	71	135.00	-60.47	105	-120.20	-84.07
4	37.50	-82.00	38	-126.90	-3.90	72	138.21	-50.49	106	-115.12	-83.10
5	56.00	-82.00	39	-127.30	-33.10	73	141.28	-35.12	107	-105.00	-94.80
6	80.00	-82.00	40	-124.50	-46.75	74	143.00	-4.07	108	-92.50	-101.39
7	84.00	-82.00	41	-121.55	-55.30	75	142.33	11.25	109	-84.00	-104.87
8	92.50	-82.00	42	-117.10	-64.90	76	138.53	33.45	110	-80.00	-106.50
9	105.00	-82.00	43	-117.10	-73.82	77	132.21	53.00	111	-56.00	-112.90
10	115.12	-82.00	44	-117.10	-80.30	78	122.41	73.00	112	-37.50	-115.54
11	116.10	-80.97	45	-116.10	-80.47	79	107.58	94.00	113	-28.00	-116.25
12	117.10	-80.30	46	-115.12	-82.00	80	83.30	94.00	114	-19.00	-116.89
13	117.10	-73.82	47	-105.00	-82.00	81	80.00	94.00	115	101.36	122.62
14	117.10	-64.90	48	-92.50	-82.00	82	60.00	94.00	116	87.87	148.22
15	121.55	-55.30	49	-84.00	-82.00	83	40.00	94.00	117	68.25	169.17
16	124.50	-46.75	50	-80.00	-82.00	84	20.00	94.00	118	37.66	186.71
17	127.30	-33.10	51	-56.00	-82.00	85	0.00	94.00	119	0.00	193.44
18	126.90	-3.90	52	-37.50	-82.00	86	-20.00	94.00	120	-37.66	186.71
19	124.40	9.50	53	-28.00	-82.00	87	-40.00	94.00	121	-68.25	169.17
20	117.80	28.30	54	-19.00	-82.00	88	-60.00	94.00	122	-87.87	148.22
21	108.20	43.20	55	0.00	-117.30	89	-80.00	94.00	123	-101.35	122.62
22	98.80	59.25	56	19.00	-116.89	90	-83.30	94.00	124	83.20	166.20
23	83.30	83.00	57	28.00	-116.25	91	-107.58	94.00	125	76.90	140.40
24	80.00	83.00	58	37.50	-115.54	92	-122.41	73.00	126	61.80	161.30
25	60.00	83.00	59	56.00	-112.90	93	-132.21	53.00	127	34.20	177.30
26	40.00	83.00	60	80.00	-106.50	94	-138.53	33.45	128	0.00	183.50
27	20.00	83.00	61	84.00	-104.87	95	-142.33	11.25	129	-34.20	177.30
28	0.00	83.00	62	92.50	-101.39	96	-143.00	-4.06	130	-61.80	161.30
29	-20.00	83.00	63	105.00	-94.80	97	-141.28	-35.12	131	-76.90	140.40
30	-40.00	83.00	64	115.12	-88.10	98	-138.21	-50.49	132	-83.20	116.20
31	-60.00	83.00	65	120.12	-84.07	99	-135.00	-60.47	133	119.90	-58.90
32	-80.00	83.00	66	121.20	-83.10	100	-133.10	-64.90	134	-119.90	-58.90
33	-83.30	83.00	67	126.21	-83.10	101	-129.70	-71.60			
34	-98.80	83.00	68	126.21	-78.20	102	-126.21	-78.20			

PREPARED	G.B.Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.242
CHECKED	F.E.Schreiber	24 Jul 68	TITLE	INTERNAL LOADS ANALYSIS AFT FUSELAGE		
APPROVED	L.G. Darby	24 Jul 68	MODEL		C-5A	
				LG1US46-2-2 REPORT NO.		

6.5.3 Frame - F.S. 1964.00

6.5.3.2.3 Axial Member Locations and Areas

AXIAL MEMBERS.

AXIAL	NODE1	NODE2	AREA1	AREA2	AXIAL	NODE1	NODE2	AREA1	AREA2
1	1	2	2.780	2.780	37	37	38	1.770	1.770
2	2	3	2.824	2.824	38	38	39	2.020	2.020
3	3	4	2.735	2.735	39	39	40	2.140	2.140
4	4	5	2.525	2.525	40	40	41	2.120	2.120
5	5	6	2.430	2.430	41	41	42	2.120	2.120
6	6	7	2.420	2.420	42	42	43	3.600	3.600
7	7	8	2.195	2.195	43	43	44	3.600	3.600
8	8	9	1.919	1.919	44	44	45	3.880	3.880
9	9	10	1.895	1.895	45	45	46	3.880	3.880
10	10	11	3.880	3.880	46	46	47	1.895	1.895
11	11	12	3.880	3.880	47	47	48	1.919	1.919
12	12	13	3.600	3.600	48	48	49	2.195	2.195
13	13	14	3.600	3.600	49	49	50	2.420	2.420
14	14	133	3.590	3.590	50	50	51	2.430	2.430
15	15	16	2.120	2.120	51	51	52	2.525	2.525
16	16	17	2.140	2.140	52	52	53	2.735	2.735
17	17	18	2.020	2.020	53	53	54	2.824	2.824
18	18	19	1.770	1.770	54	54	55	2.775	2.775
19	19	20	1.390	1.390	55	55	56	2.562	2.562
20	20	21	0.982	0.982	56	56	57	2.562	2.562
21	21	22	0.982	0.982	57	57	58	2.545	2.545
22	22	23	0.979	0.979	58	58	59	2.515	2.515
23	23	24	0.790	0.790	59	59	60	2.505	2.505
24	24	25	0.700	0.700	60	60	61	2.505	2.505
25	25	26	0.600	0.600	61	61	62	2.500	2.500
26	26	27	0.500	0.500	62	62	63	2.495	2.495
27	27	28	0.500	0.500	63	63	64	2.160	2.160
28	28	29	0.500	0.500	64	64	65	2.910	2.910
29	29	30	0.500	0.500	65	65	66	2.910	2.910
30	30	31	0.600	0.600	66	66	68	3.700	3.700
31	31	32	0.700	0.700	67	66	67	3.700	3.700
32	32	33	0.790	0.790	68	68	69	2.500	2.500
33	33	34	0.978	0.978	69	69	70	1.865	1.307
34	34	35	0.982	0.982	70	70	71	2.050	2.050
35	35	36	0.982	0.982	71	71	72	1.440	1.440
36	36	37	1.390	1.390	72	72	73	1.050	1.050

PREPARED	G.B.Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.243
CHECKED	F.E.Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68		REPORT NO.	LG1US46-2-2	

6.5.3 Frame - F.S. 1964.00

6.5.3.2.3 Axial Member Locations and Areas (cont'd.)

AXIAL	NODE 1	NODE 2	AREA 1	AREA 2	AXIAL	NODE 1	NODE 2	AREA 1	AREA 2
73	73	74	1.050	1.050	109	109	110	2.505	2.505
74	74	75	1.050	1.050	110	110	111	2.505	2.505
75	75	76	1.050	1.050	111	111	112	2.515	2.515
76	76	77	1.050	1.050	112	112	113	2.545	2.545
77	77	78	1.050	1.050	113	113	114	2.562	2.562
78	78	79	1.050	1.050	114	55	114	2.562	2.562
79	79	80	1.140	1.140	115	79	115	1.420	1.420
80	80	81	1.140	1.140	116	115	116	1.420	1.420
81	81	82	0.900	0.900	117	116	117	1.420	1.420
82	82	83	0.670	0.670	118	117	118	1.420	1.420
83	83	84	0.540	0.540	119	118	119	1.420	1.420
84	84	85	0.410	0.410	120	119	120	1.420	1.420
85	85	86	0.410	0.410	121	120	121	1.420	1.420
86	86	87	0.540	0.540	122	121	122	1.420	1.420
87	87	88	0.670	0.670	123	122	123	1.420	1.420
88	88	89	0.900	0.900	124	91	123	1.420	1.420
89	89	90	1.140	1.140	125	80	124	0.462	0.462
90	90	91	1.140	1.140	126	124	125	0.308	0.308
91	91	92	1.050	1.050	127	125	126	0.308	0.308
92	92	93	1.050	1.050	128	126	127	0.308	0.308
93	93	94	1.050	1.050	129	127	128	0.308	0.308
94	94	95	1.050	1.050	130	128	129	0.308	0.308
95	95	96	1.050	1.050	131	129	130	0.308	0.308
96	96	97	1.050	1.050	132	130	131	0.308	0.308
97	97	98	1.050	1.050	133	131	132	0.308	0.308
98	98	99	1.307	1.865	134	90	132	0.462	0.462
99	99	100	2.050	2.050	135	67	69	4.000	4.000
100	100	101	2.120	2.530	136	103	101	4.000	4.000
101	101	102	3.700	3.700	137	1	55	1.370	1.370
102	102	104	3.700	3.700	138	2	56	0.670	0.670
103	103	104	2.500	2.500	139	3	57	1.000	1.000
104	104	105	2.910	2.910	140	4	58	1.010	1.010
105	105	106	2.910	2.910	141	5	59	1.530	1.530
106	106	107	2.160	2.160	142	6	60	1.010	1.010
107	107	108	2.495	2.495	143	7	61	1.000	1.000
108	108	109	2.500	2.500	144	8	62	1.030	1.030

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.
PREPARED	G.B.Meadley	24 Jul 68		PAGE	6.244
CHECKED	F.E.Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68		LG1US46-2-2 REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.2.3 Axial Member Locations and Areas (cont'd.)

AXIAL	NODE 1	NODE 2	AREA 1	AREA 2	AXIAL	NODE 1	NODE 2	AREA 1	AREA 2
145	9	63	1.100	1.100	178	39	97	1.000	1.000
146	10	64	1.500	1.500	179	40	98	1.000	1.000
147	11	65	0.400	0.400	180	41	99	1.000	1.000
148	12	66	1.500	1.500	181	42	100	1.200	1.200
149	13	68	1.000	1.000	182	42	101	1.200	1.200
150	14	69	1.200	1.200	183	43	102	1.000	1.000
151	14	70	1.200	1.200	184	44	104	1.500	1.500
152	15	71	1.000	1.000	185	45	105	0.400	0.400
153	16	72	1.000	1.000	186	46	106	1.500	1.500
154	17	73	1.000	1.000	187	47	107	1.100	1.100
155	18	74	1.000	1.000	188	48	108	1.030	1.030
156	19	75	1.000	1.000	189	49	109	1.000	1.000
157	20	76	1.000	1.000	190	50	110	1.010	1.010
158	21	77	1.000	1.000	191	51	111	1.530	1.530
159	22	78	1.000	1.000	192	52	112	1.010	1.010
160	23	79	1.040	1.040	193	53	113	0.670	0.670
161	23	80	0.480	0.480	194	54	114	1.370	1.370
162	24	81	0.400	0.400	195	115	124	0.400	0.400
163	25	82	0.400	0.400	196	116	125	0.400	0.400
164	26	83	0.400	0.400	197	117	126	0.400	0.400
165	27	84	0.400	0.400	198	118	127	0.400	0.400
166	28	85	0.400	0.400	199	119	128	0.400	0.400
167	29	86	0.400	0.400	200	120	129	0.400	0.400
168	30	87	0.400	0.400	201	121	130	0.400	0.400
169	31	88	0.400	0.400	202	122	131	0.400	0.400
170	32	89	0.400	0.400	203	123	132	0.400	0.400
171	33	90	0.480	0.480	204	70	133	1.000	1.000
172	33	91	1.040	1.040	205	100	134	1.000	1.000
173	34	92	1.000	1.000	206	15	133	2.120	2.120
174	35	93	1.000	1.000	207	42	134	3.590	3.590
175	36	94	1.000	1.000	208	12	68	0.400	0.400
176	37	95	1.000	1.000	209	44	102	0.400	0.400
177	38	96	1.000	1.000					

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68			Vol. I	6745
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68			LG1US 46-2-2	
				REPORT NO.		

6.5.3 Frame - P.S. 1964.00

6.5.3.2.4 Shear Panel Locations and Thicknesses

SHEAR PANELS

PANEL	NODE 1	NODE 2	NODE 3	NODE 4	t"	PANEL	NODE 1	NODE 2	NODE 3	NODE 4	t"
1	1	2	56	55	.055	34	33	34	92	91	.064
2	2	3	57	56	.055	35	34	35	93	92	.064
3	3	4	58	57	.055	36	35	36	94	93	.064
4	4	5	59	58	.055	37	36	37	95	94	.064
5	5	6	60	59	.055	38	37	38	96	95	.064
6	6	7	61	60	.055	39	38	39	97	96	.064
7	7	8	62	61	.075	40	39	40	98	97	.064
8	8	9	63	62	.075	41	40	41	99	98	.160
9	9	10	64	63	.200	42	41	134	100	99	.200
10	10	11	65	64	.400	43	42	101	100	134	.200
11	11	12	66	65	.400	44	42	43	102	101	.300
12	12	13	68	66	.400	45	43	44	104	102	.400
13	13	14	69	68	.300	46	44	45	105	104	.400
14	14	133	70	69	.200	47	45	46	106	105	.400
15	15	71	70	133	.200	48	46	47	107	106	.200
16	15	16	72	71	.160	49	47	48	108	107	.075
17	16	17	73	72	.064	50	48	49	109	108	.075
18	17	18	74	73	.064	51	49	50	110	109	.055
19	18	19	75	74	.064	52	50	51	111	110	.055
20	19	20	76	75	.064	53	51	52	112	111	.055
21	20	21	77	76	.064	54	52	53	113	112	.055
22	21	22	78	77	.064	55	53	54	114	113	.055
23	22	23	79	78	.064	56	1	55	114	54	.055
24	23	24	81	80	.060	57	79	80	124	115	.038
25	24	25	82	81	.060	58	115	124	125	116	.038
26	25	26	83	82	.060	59	116	125	126	117	.038
27	26	27	84	83	.060	60	117	126	127	118	.038
28	27	28	85	84	.043	61	118	127	128	119	.038
29	28	29	86	85	.043	62	119	128	129	120	.038
30	29	30	87	86	.060	63	120	129	130	121	.038
31	30	31	88	87	.060	64	121	130	131	122	.038
32	31	32	89	88	.060	65	122	131	132	123	.038
33	32	33	90	89	.060	66	90	91	133	132	.038

PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
G.B. Meadley		24 Jul 68		Vol. 1	6,246	
CHECKED	NAME	DATE	TITLE	MODEL	LGLUS	REPORT NO.
F.E. Schreiber		24 Jul 68	INTERNAL LOADS ANALYSIS AFT FUSELAGE	C-5A	46-2-2	
L.G. Darby		24 Jul 68				

6.5.3 Frame - F.S. 1964.00

6.5.3.2.5 Shell Support Locations and Thicknesses -

SHELL SUPPORT

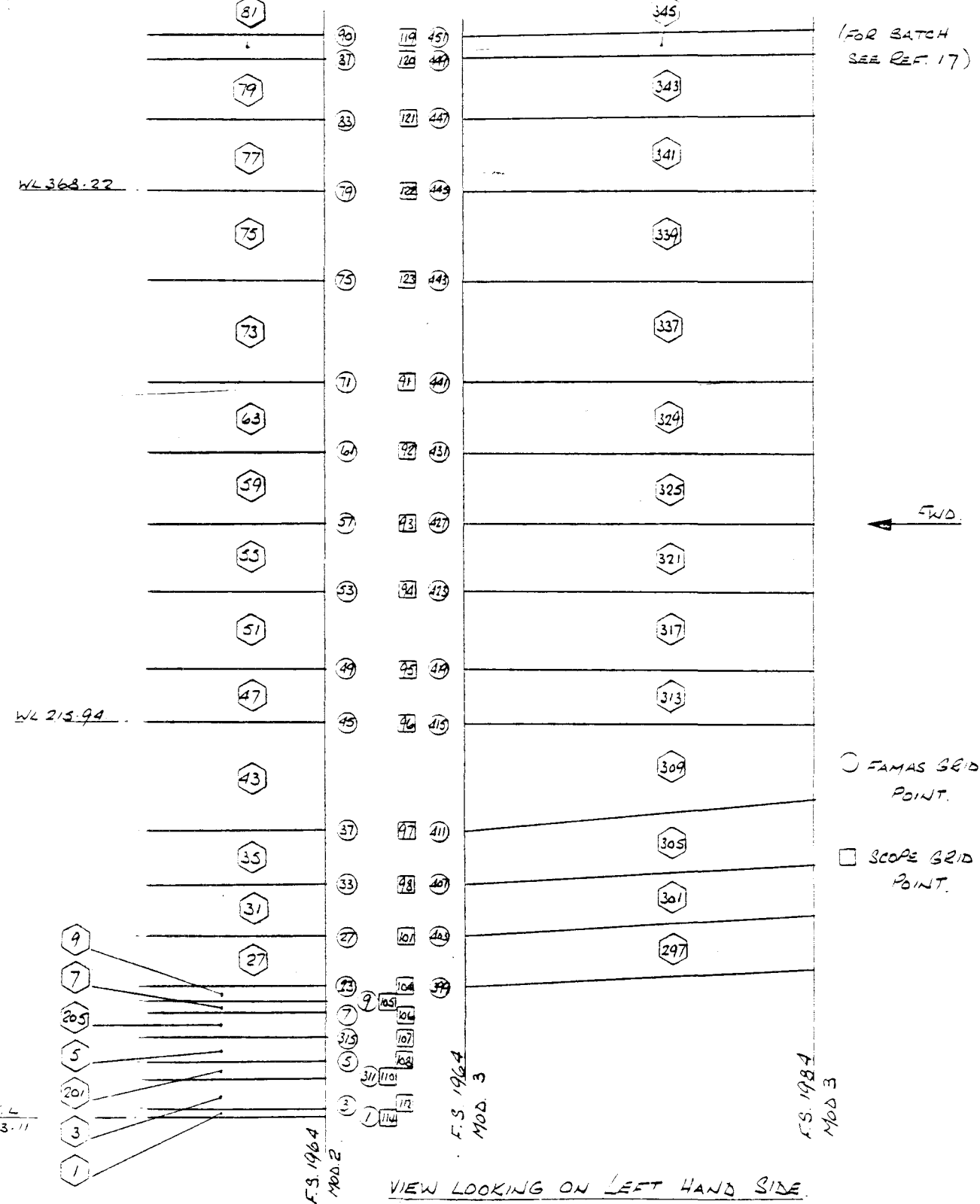
SHELL SUPPORT LENGTH = 80.00"

SHELL NODE 1	NODE 2	t"	SHELL NODE 1	NODE 2	t"	SHELL NODE 1	NODE 2	t"			
1	55	56	.119	31	121	122	.061	61	5	6	.073
2	56	57	.119	32	122	123	.061	62	6	7	.073
3	57	58	.119	33	91	123	.061	63	7	8	.073
4	58	59	.119	34	91	92	.073	64	8	9	.073
5	59	60	.119	35	92	93	.073	65	9	10	.073
6	60	61	.119	36	93	94	.073	66	11	65	.160
7	61	62	.119	37	94	95	.073	67	45	105	.160
8	62	63	.119	38	95	96	.073	68	46	47	.061
9	63	64	.119	39	96	97	.073	69	47	48	.061
10	64	65	.119	40	97	98	.073	70	48	49	.061
11	65	66	.073	41	98	99	.073	71	49	50	.061
12	66	68	.073	42	99	100	.073	72	50	51	.061
13	68	69	.073	43	100	101	.073	73	51	52	.061
14	69	70	.073	44	101	102	.073	74	52	53	.061
15	70	71	.073	45	102	104	.073	75	53	54	.061
16	71	72	.073	46	104	105	.073	76	1	54	.061
17	72	73	.073	47	105	106	.119	77	79	80	.061
18	73	74	.073	48	106	107	.119	78	80	81	.061
19	74	75	.073	49	107	108	.119	79	81	82	.073
20	75	76	.073	50	108	109	.119	80	82	83	.073
21	76	77	.073	51	109	110	.119	81	83	84	.073
22	77	78	.073	52	110	111	.119	82	84	85	.073
23	78	79	.073	53	111	112	.119	83	85	86	.073
24	79	115	.061	54	112	113	.119	84	86	87	.073
25	115	116	.061	55	113	114	.119	85	87	88	.073
26	116	117	.061	56	55	114	.119	86	88	89	.073
27	117	118	.061	57	1	2	.073	87	89	90	.073
28	118	119	.061	58	2	3	.073	88	90	91	.073
29	119	120	.061	59	3	4	.073	89	12	68	.400
30	120	121	.061	60	4	5	.073	90	44	102	.400

PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.247
CHECKED	F.E. Schreiber	24 Jul 68		TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68			LG1US 46-2-2 REPORT NO.	

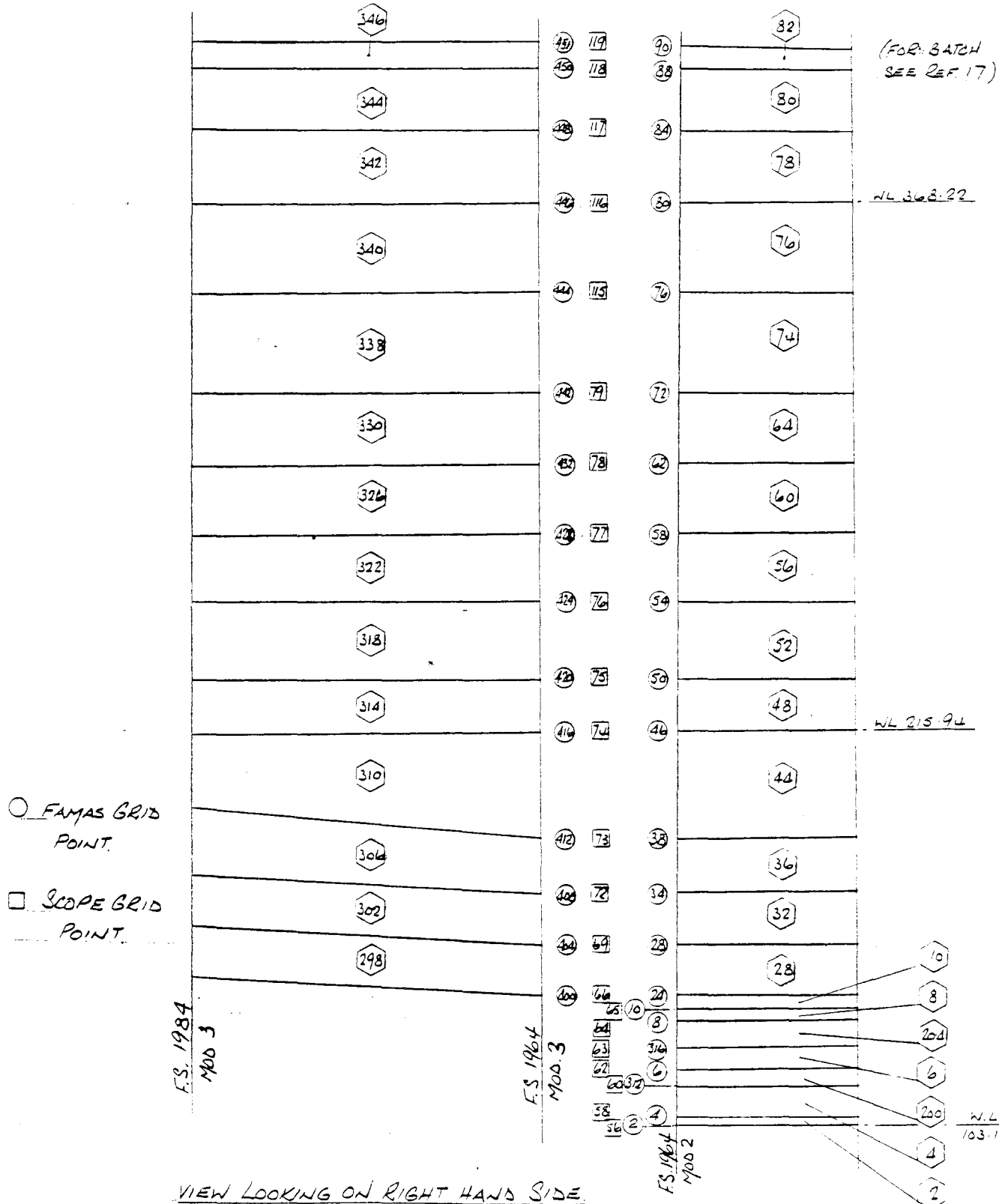
6.5.3 Frame - F.S. 1964.00

6.5.3.2.6 Location of Shell Panels for FAMAS and Batch Grid Points



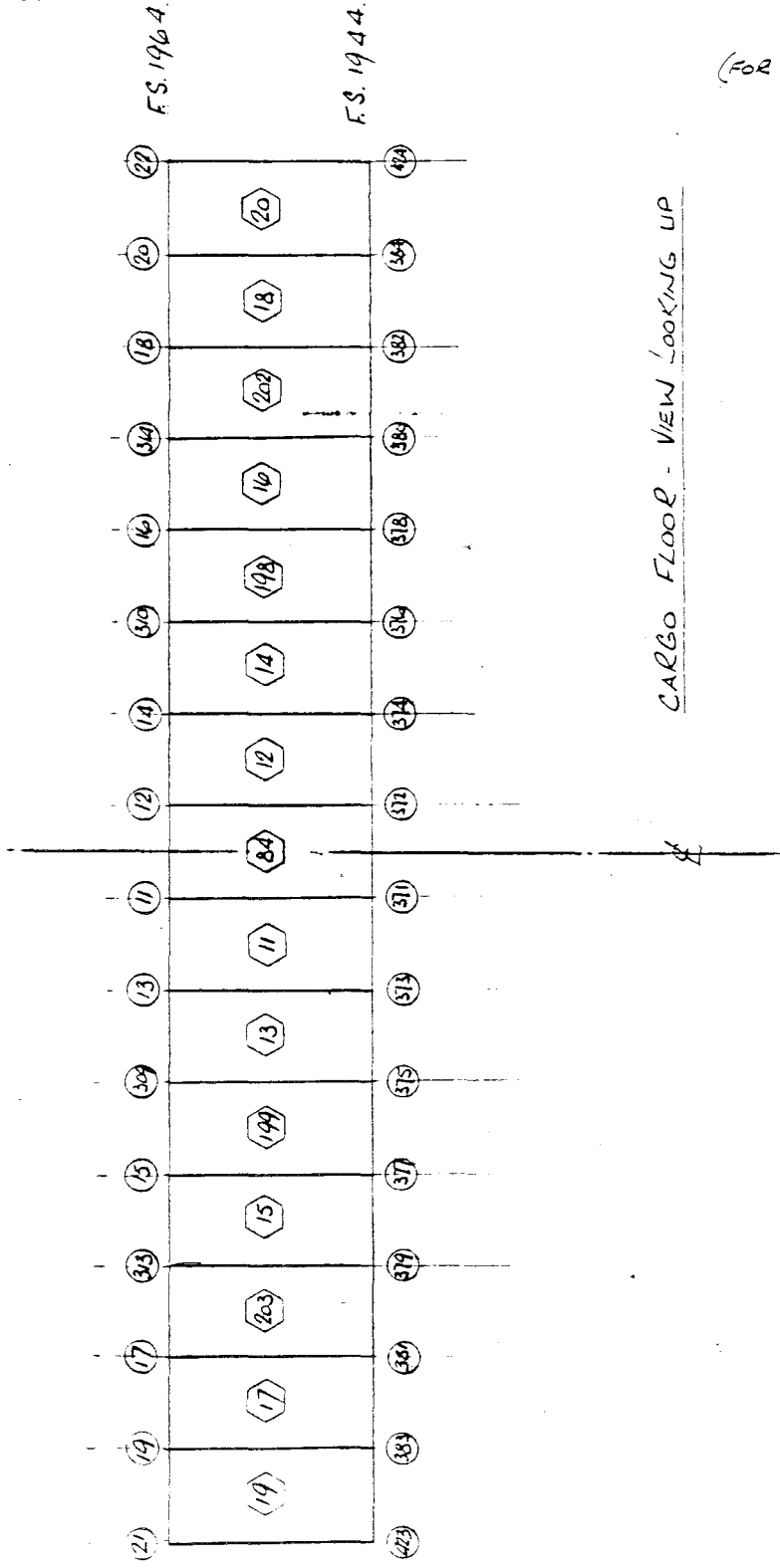
PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6,248
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	0-51
APPROVED	L.G. Darby	24 Jul 68		LG1US 46-2-2 REPORT NO.	

6.5.3.2.6 Location of Shell Panels for FAMAS and Batch Grid Points (Continued)



PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol I	6.249	
CHECKED	F.E. Schreiber	24 Jul 68		TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68			REPORT NO.	LG1US 46-2-2	

6.5.3.2.6 Location of Shell Panels for FAMAS and Batch Grid Points (Continued)



(FOR BATCH SEE REF. 17)

CARGO FLOOR - VIEW LOOKING UP

PREPARED	NAME G.B. Meadley	DATE 24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE Vol. I 6,250	TEMP.	PERM.
CHECKED	F.B. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	L.G. Darby	24 Jul 68		LGUS 46-2-2	REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.2.6 Location of Shell Panels for FAMAS and Batch Grid Points (Continued)

(FOR BATCH SEE REF. 17)

	71	69	67	65	83	66	68	70	72	
FS 1964	71	69	67	65	63	64	66	68	70	72
	44	43	45	43	43	43	43	43	44	44
	33	33	33	27		27	33	33	33	33
FS. 1984										

TROOP DECK - VIEW LOOKING DOWN.

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68		PAGE	Vol. I	6.251
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68		LGUS 46-2-2 REPORT NO.		

6.5.3 Frame - F.S. 1964.00
6.5.3.3 Description of Loading Cases

CASE N°	DESCRIPTION OF CASE			
1	2 x 10000 lb AXLES	SYMMETRICAL	$n_3 = 1.00$	
2	2 x 10000 lb AXLES	24.5' OFF CENTRE	$n_3 = 1.00$	
3	2 x 10000 lb AXLES	42.0' OFF CENTRE	$n_3 = 1.00$	
4	1 x 14000 lb AXLE	SYMMETRICAL	$n_3 = 1.00$	
5	1 x 14000 lb AXLE	29.5' OFF CENTRE	$n_3 = 1.00$	
6	1 x 14000 lb AXLE	45.0" OFF CENTRE	$n_3 = 1.00$	
7	1 x 14000 lb AXLE	70.0" OFF CENTRE	$n_3 = 1.00$	
8	RAMP HINGE LOADS : 13.05 p.s.i. RAMP PRESSURE LOADING			
9	RAMP HINGE LOADS : 13.05 p.s.i. + 15000* PALLET + STRUCTURE			
10	RAMP HINGE LOADS : 17.40 p.s.i. RAMP BURST PRESSURE LOADING.			
11	RAMP HINGE LOADS : AIRCRAFT LOADING.			
12	AIRCRAFT JACKING LOADS : VERTICAL ALONE			
13	AIRCRAFT JACKING LOADS : VERTICAL + SIDE LOADS ACTING INBOARD			
14	AIRCRAFT JACKING LOADS : VERTICAL + SIDE LOADS ACTING OUTBOARD			
15	AIRCRAFT JACKING LOADS : VERTICAL + SIDE LOADS BOTH IN SAME DIRECTION			
16	INTERNAL PRESSURE LOADING : 1.00 p.s.i.			
17	STABILIZING STRUT LOADS.			
18	SHEAR REDISTRIBUTION :	DML 001	$n_3 = 1.5$	ULT.
19	SHEAR REDISTRIBUTION :	104018	$n_3 = 2.76$	ULT.
20	SHEAR REDISTRIBUTION :	101513	$n_3 = 2.43$	ULT.
21	SHEAR REDISTRIBUTION :	101384	$n_3 = 2.01$	ULT.
22	SHEAR REDISTRIBUTION :	102184	$n_3 = 3.62$	ULT.
23	SHEAR REDISTRIBUTION :	1EY107	$n_3 = 1.50$	ULT.
24	SHEAR REDISTRIBUTION :	1PC242	$n_3 = 3.23$	ULT.
25	SHEAR REDISTRIBUTION :	5PE201	$n_3 = 2.37$	ULT.
26	SHEAR REDISTRIBUTION :	1PM337	$n_3 = 3.75$	ULT.
27	SHEAR REDISTRIBUTION :	3PM082	$n_3 = 3.00$	ULT.
28	SHEAR REDISTRIBUTION :	5AR154T2	$n_3 = 0.00$	ULT.
29	SHEAR REDISTRIBUTION :	5AR154T3	$n_3 = 0.00$	ULT.
30	SHEAR REDISTRIBUTION :	5PM029	$n_3 = 1.50$	ULT.
31	TROOP DECK LOADING : 39.2 lb. per inch. (188 lb per sq. ft. DECK LOADING)			

CASE N°'S 1 THROUGH 7 : REF 10. p. 6.4-002.

CASE N°'S 8 THROUGH 11 : REF 8.

CASE N°'S 12 THROUGH 15 & 17 : REF 10 p 9.7-137

CASE N°'S 18 THROUGH 30 : REF 10, CRITICAL CASES FROM FAMAS REF 8

CASE N° 31 : REF 10 p 9.7-076.

CASE N° 16 REF 18

		NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP.	PERM.
PREPARED	G. B. Meadley	24 Jul 68	TITLE		PAGE	Vol. I	6,252
CHECKED	F.E. Schreiber	24 Jul 68	INTERNAL LOADS ANALYSIS		MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68	AFT FUSELAGE		LG1US 46-2-2	REPORT NO.	

6.5.3 Frame - F.S.1964.00

6.5.3.3 Description of Loading Cases (Continued)

CASE N°	DESCRIPTION OF CASE.
32	LOAD CASE 1 x 1.5 + LOAD CASE 9 + LOAD CASE 16 x 13.05 + LOAD CASE 18 + LOAD CASE 31
33	1 (2.76) + 9 + 16 (13.05) + 19 + 31
34	1 (2.43) + 9 + 16 (13.05) + 20 + 31
35	1 (2.01) + 9 + 16 (13.05) + 21 + 31
36	1 (3.62) + 9 + 16 (13.05) + 22 + 31
37	1 (1.50) + 9 + 16 (13.05) + 23 + 31
38	1 (3.23) + 9 + 16 (13.05) + 24 + 31
39	1 (2.37) + 9 + 16 (13.05) + 25 + 31
40	1 (3.75) + 9 + 16 (13.05) + 26 + 31
41	1 (3.00) + 9 + 16 (13.05) + 27 + 31
42	1 (0.00) + 9 + 16 (13.05) + 28 + 31
43	1 (0.00) + 9 + 16 (13.05) + 29 + 31
44	1 (1.50) + 9 + 16 (13.05) + 30 + 31
45	2 (1.50) + 9 + 16 (13.05) + 18 + 31
46	2 (2.76) + 9 + 16 (13.05) + 19 + 31
47	2 (2.43) + 9 + 16 (13.05) + 20 + 31
48	2 (2.01) + 9 + 16 (13.05) + 21 + 31
49	2 (3.62) + 9 + 16 (13.05) + 22 + 31
50	2 (1.50) + 9 + 16 (13.05) + 23 + 31
51	2 (3.23) + 9 + 16 (13.05) + 24 + 31
52	2 (2.37) + 9 + 16 (13.05) + 25 + 31
53	2 (3.75) + 9 + 16 (13.05) + 26 + 31
54	2 (3.00) + 9 + 16 (13.05) + 27 + 31
55	2 (0.00) + 9 + 16 (13.05) + 28 + 31
56	2 (0.00) + 9 + 16 (13.05) + 29 + 31
57	2 (1.50) + 9 + 16 (13.05) + 30 + 31
58	3 (1.50) + 9 + 16 (13.05) + 18 + 31
59	3 (2.76) + 9 + 16 (13.05) + 19 + 31
60	3 (2.43) + 9 + 16 (13.05) + 20 + 31
61	3 (2.01) + 9 + 16 (13.05) + 21 + 31
62	3 (3.62) + 9 + 16 (13.05) + 22 + 31
63	3 (1.50) + 9 + 16 (13.05) + 23 + 31
64	3 (3.23) + 9 + 16 (13.05) + 24 + 31
65	3 (2.37) + 9 + 16 (13.05) + 25 + 31
66	3 (3.75) + 9 + 16 (13.05) + 26 + 31
67	3 (3.00) + 9 + 16 (13.05) + 27 + 31
68	3 (0.00) + 9 + 16 (13.05) + 28 + 31
69	3 (0.00) + 9 + 16 (13.05) + 29 + 31
70	3 (1.50) + 9 + 16 (13.05) + 30 + 31

PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
	G.B. Meadley	24 Jul 68			Vol. I	6.253
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
					LG1US 46-2-2	
APPROVED	L.G. Darby	24 Jul 68		REPORT NO.		

6.5.3 Frame - P.S. 1964.00

6.5.3.3 Description of Loading Cases (Continued)

CASE №	DESCRIPTION OF CASE
71	4 (1.5) + 9 + 16 (13.05) + 18 + 31
72	4 (2.76) + 9 + 16 (13.05) + 19 + 31
73	4 (2.43) + 9 + 16 (13.05) + 20 + 31
74	4 (2.01) + 9 + 16 (13.05) + 21 + 31
75	4 (3.62) + 9 + 16 (13.05) + 22 + 31
76	4 (1.50) + 9 + 16 (13.05) + 23 + 31
77	4 (3.23) + 9 + 16 (13.05) + 24 + 31
78	4 (2.37) + 9 + 16 (13.05) + 25 + 31
79	4 (3.75) + 9 + 16 (13.05) + 26 + 31
80	4 (3.00) + 9 + 16 (13.05) + 27 + 31
81	4 (0.00) + 9 + 16 (13.05) + 28 + 31
82	4 (0.00) + 9 + 16 (13.05) + 29 + 31
83	4 (1.50) + 9 + 16 (13.05) + 30 + 31
84	5 (1.50) + 9 + 16 (13.05) + 18 + 31
85	5 (2.76) + 9 + 16 (13.05) + 19 + 31
86	5 (2.43) + 9 + 16 (13.05) + 20 + 31
87	5 (2.01) + 9 + 16 (13.05) + 21 + 31
88	5 (3.62) + 9 + 16 (13.05) + 22 + 31
89	5 (1.50) + 9 + 16 (13.05) + 23 + 31
90	5 (3.23) + 9 + 16 (13.05) + 24 + 31
91	5 (2.37) + 9 + 16 (13.05) + 25 + 31
92	5 (3.75) + 9 + 16 (13.05) + 26 + 31
93	5 (3.00) + 9 + 16 (13.05) + 27 + 31
94	5 (0.00) + 9 + 16 (13.05) + 28 + 31
95	5 (0.00) + 9 + 16 (13.05) + 29 + 31
96	5 (1.50) + 9 + 16 (13.05) + 30 + 31
97	6 (1.50) + 9 + 16 (13.05) + 18 + 31
98	6 (2.76) + 9 + 16 (13.05) + 19 + 31
99	6 (2.43) + 9 + 16 (13.05) + 20 + 31
100	6 (2.01) + 9 + 16 (13.05) + 21 + 31
101	6 (3.62) + 9 + 16 (13.05) + 22 + 31
102	6 (1.50) + 9 + 16 (13.05) + 23 + 31
103	6 (3.23) + 9 + 16 (13.05) + 24 + 31
104	6 (2.37) + 9 + 16 (13.05) + 25 + 31
105	6 (3.75) + 9 + 16 (13.05) + 26 + 31
106	6 (3.00) + 9 + 16 (13.05) + 27 + 31
107	6 (0.00) + 9 + 16 (13.05) + 28 + 31
108	6 (0.00) + 9 + 16 (13.05) + 29 + 31
109	6 (1.50) + 9 + 16 (13.05) + 30 + 31

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Vol. I	6254	
CHECKED	F.E. Schreiber	24 Jul 68		MODEL	C-31	
APPROVED	L.G. Darby	24 Jul 68		LGLUS 46-2-2 REPORT NO.		

6.5.3 Frame - P.S. 1964.00

6.5.3.3 Description of Loading Cases (Continued)

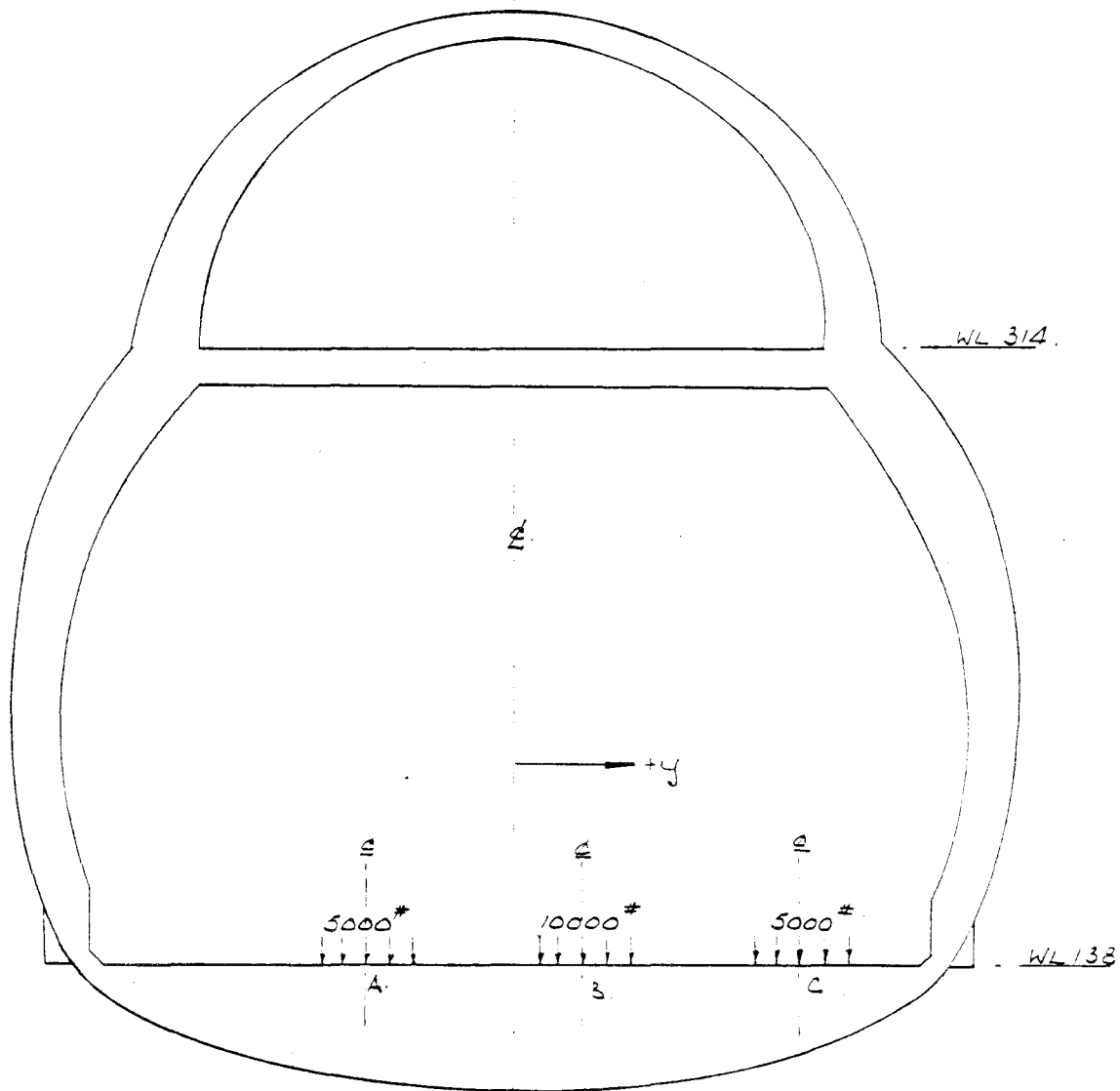
CASE No	DESCRIPTION OF CASE.
110	7(1.50) + 9 + 16 (13.05) + 18 + 31
111	7(2.76) + 9 + 16 (13.05) + 19 + 31
112	7(2.43) + 9 + 16 (13.05) + 20 + 31
113	7(2.01) + 9 + 16 (13.05) + 21 + 31
114	7(3.62) + 9 + 16 (13.05) + 22 + 31
115	7(1.50) + 9 + 16 (13.05) + 23 + 31
116	7(3.23) + 9 + 16 (13.05) + 24 + 31
117	7(2.37) + 9 + 16 (13.05) + 25 + 31
118	7(3.75) + 9 + 16 (13.05) + 26 + 31
119	7(3.00) + 9 + 16 (13.05) + 27 + 31
120	7(0.00) + 9 + 16 (13.05) + 28 + 31
121	7(0.00) + 9 + 16 (13.05) + 29 + 31
122	7(1.50) + 9 + 16 (13.05) + 30 + 31
123	1(5.22) + 8 + 16 (13.05)
124	2(5.22) + 8 + 16 (13.05)
125	3(5.22) + 8 + 16 (13.05)
126	4(5.33) + 8 + 16 (13.05)
127	5(5.33) + 8 + 16 (13.05)
128	6(5.33) + 8 + 16 (13.05)
129	7(5.33) + 8 + 16 (13.05)
130	11 + 17

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	PAGE	Vol. I 6-258
CHECKED	F.E. Schreiber	24 Jul 68		MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68		LGUS 46-2-2 REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagramatic Representation of Real Load Cases

LOAD CASES: 1, 2 & 3 CARGO LOADS: 2x10000# AXLES. (REF p 6-251)



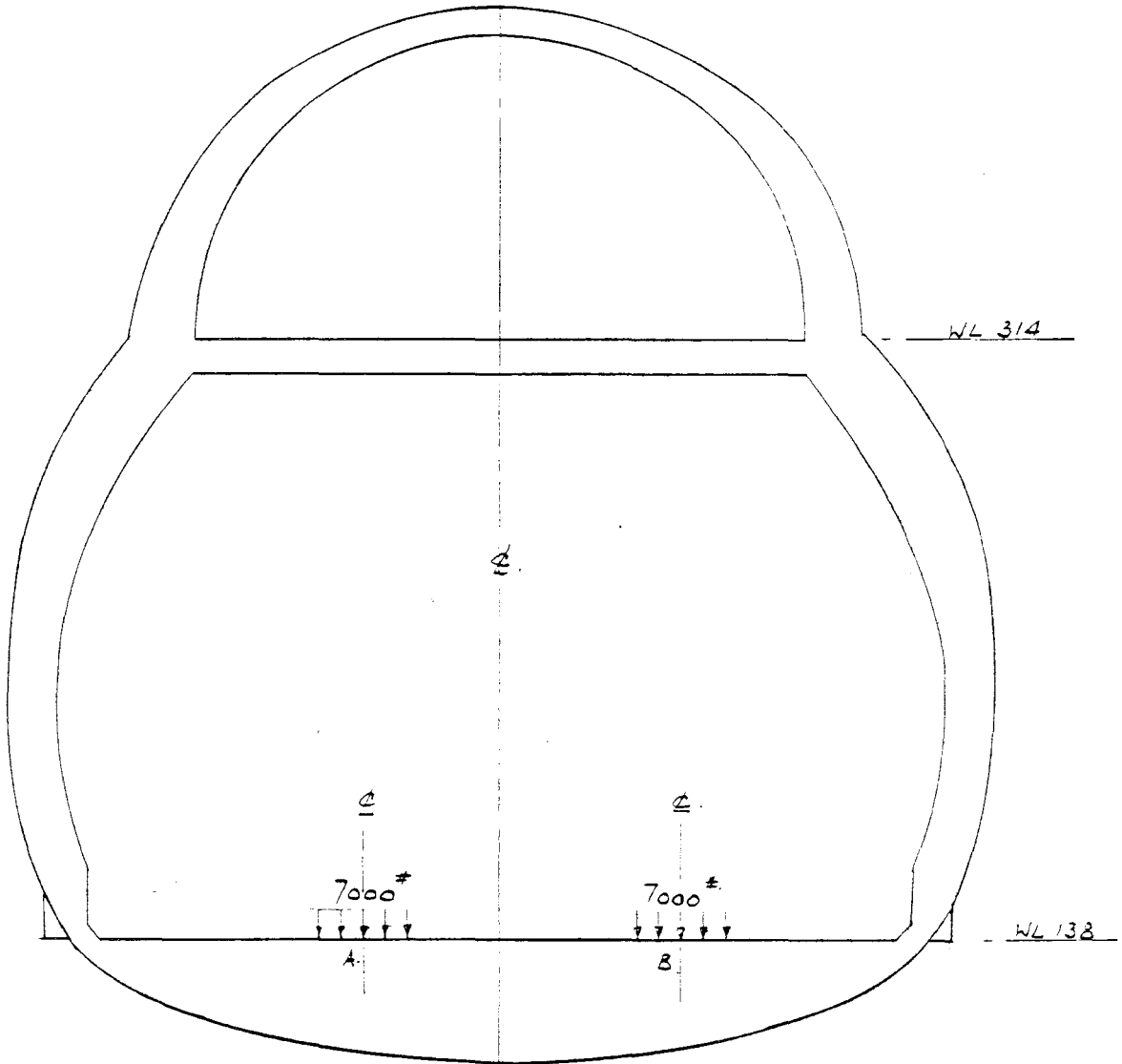
LOAD CASE	Z AXLE (Y dimension)		
	A"	B"	C"
1	-70.5	0	+70.5
2	-46.0	+24.5	+95.0
3	-28.5	+42.0	+112.5

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	FORM.
PREPARED	G.B. Meadley	24 Jul 68		PAGE	Vol. I 6.256
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68		LGIUS 46-2-2	REPORT NO.

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagramatic Representation of Real Load Cases (Continued)

LOAD CASES 4, 5, 6 & 7 CARGO LOADS: 1 x 14000# AXLE (REF p 6.251)



LOAD CASE	AXLE (Y dimension)	
	A"	B"
4	- 40.0	+ 40.0
5	- 10.5	+ 69.5
6	+ 5.0	+ 85.0
7	+ 30.0	+ 110.0

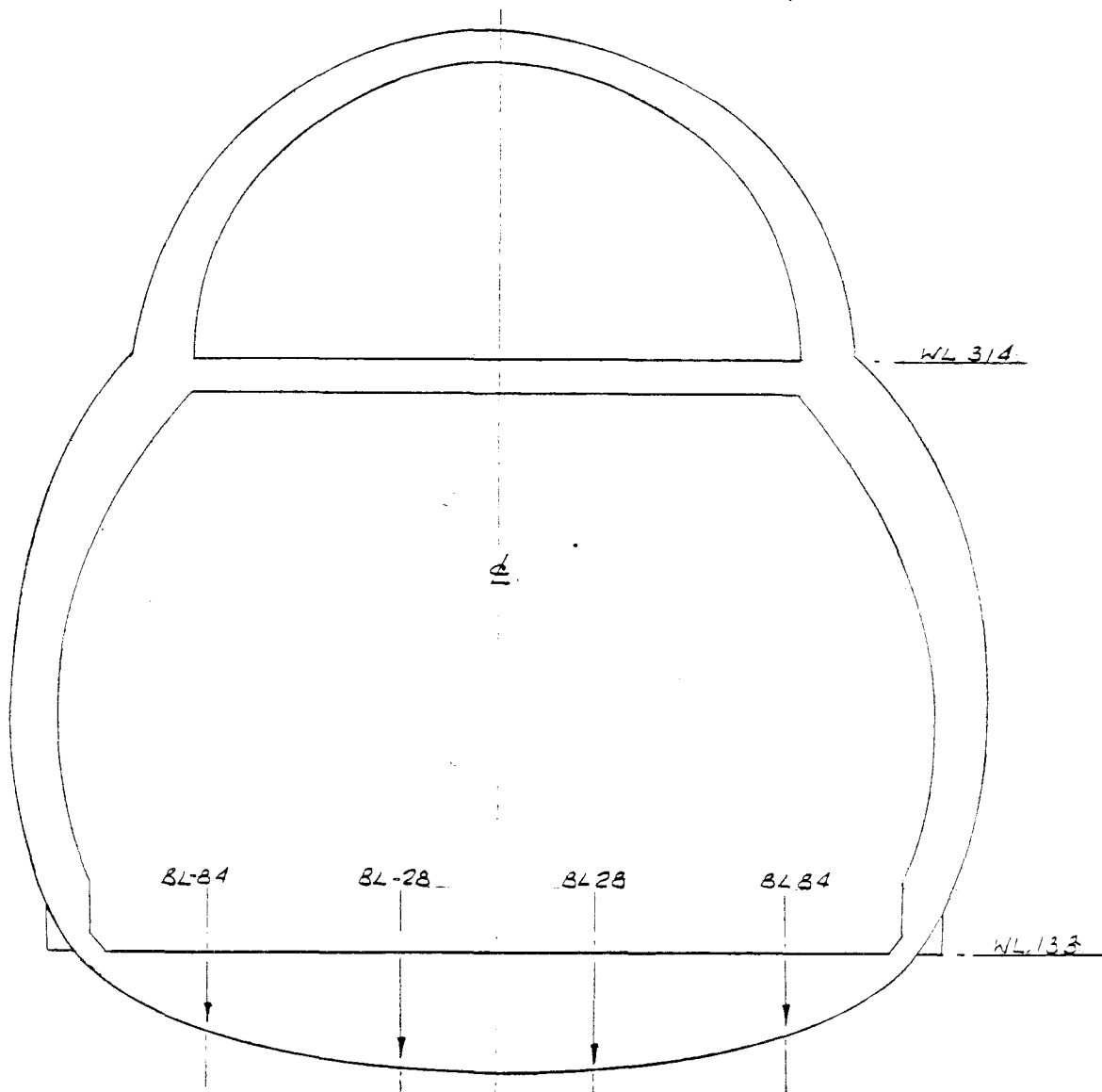
	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68		PAGE	Vol. I 6257
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68		LGUS	46-2-2
				REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagrammatic Representation of Real Load Cases (Continued)

LOAD CASE 8, 9, 10 & 11

AFT RAMP HINGE LOADS (REF p 2.251)



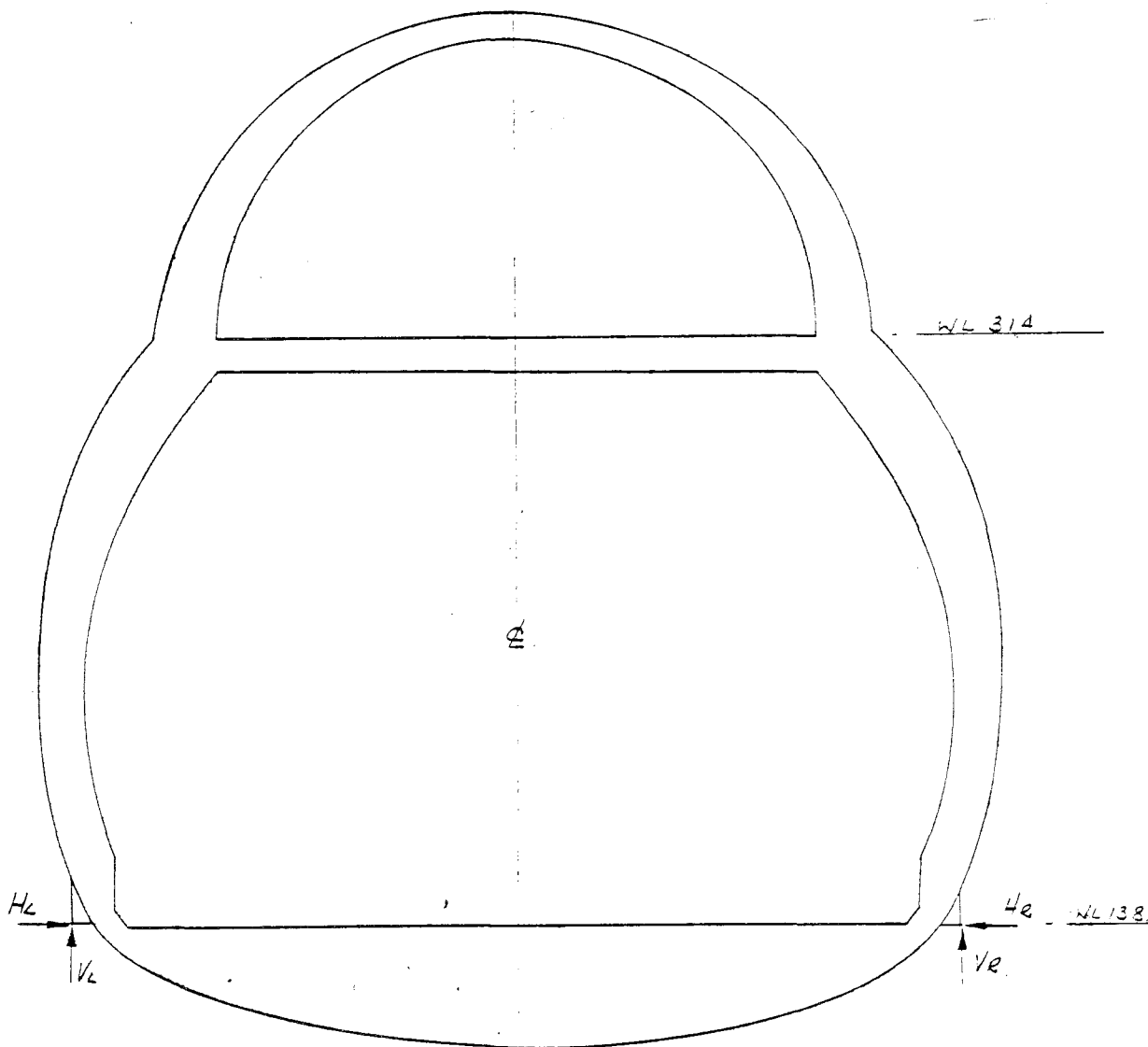
LOAD CASE	HINGE LOADS (lb)			
	BL-84	BL-28	BL 28	BL 84
8	9090	2050	2050	9090
9	8060	3830	3830	8060
10	7120	342	342	7120
11	47000	25300	25300	47000

NAME		DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68			Vol. I	6.258
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68		LGJUS 46-2-2	REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagramatic Representation of Real Load Cases (Continued)

LOAD CASES 12, 13, 14 & 15 ... AIRCRAFT JACKING LOADS. (REF. p 6.251)



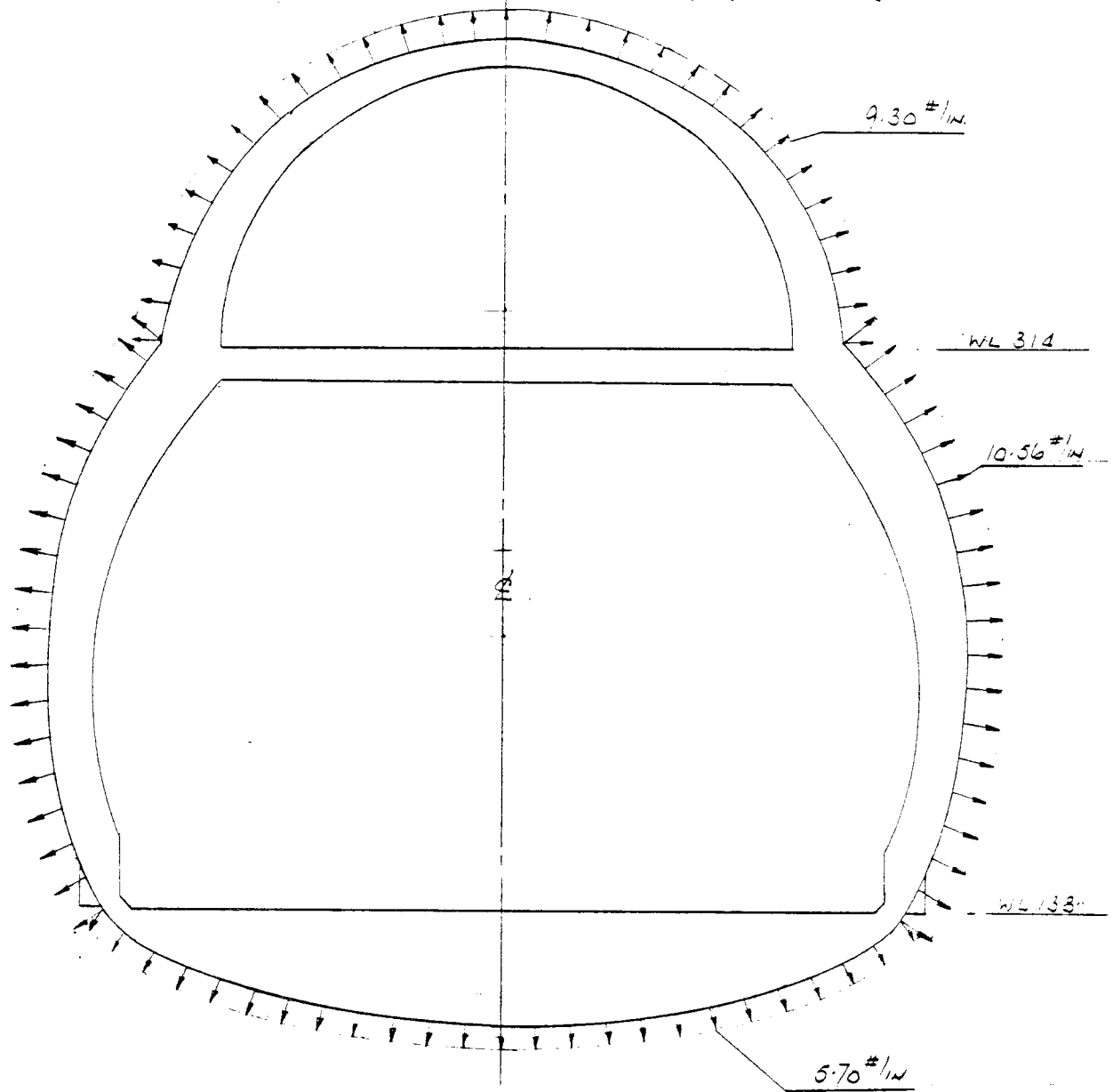
LOAD CASE.	JACK PAD LOADS. (lb)			
	VL	HL	Ve	He
12	+211300	0	+211300	0
13	+211300	+52500	+211300	+52500
14	+211300	-52500	+211300	-52500
15	+211300	+52500	+211300	-52500

PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.259
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68		LGUS 46-2-2	REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagrammatic Representation of Real Load Cases (Continued)

LOAD CASE 16 INTERNAL PRESSURE LOADING: 1.0 p.s.i. (REF. p.6.251)

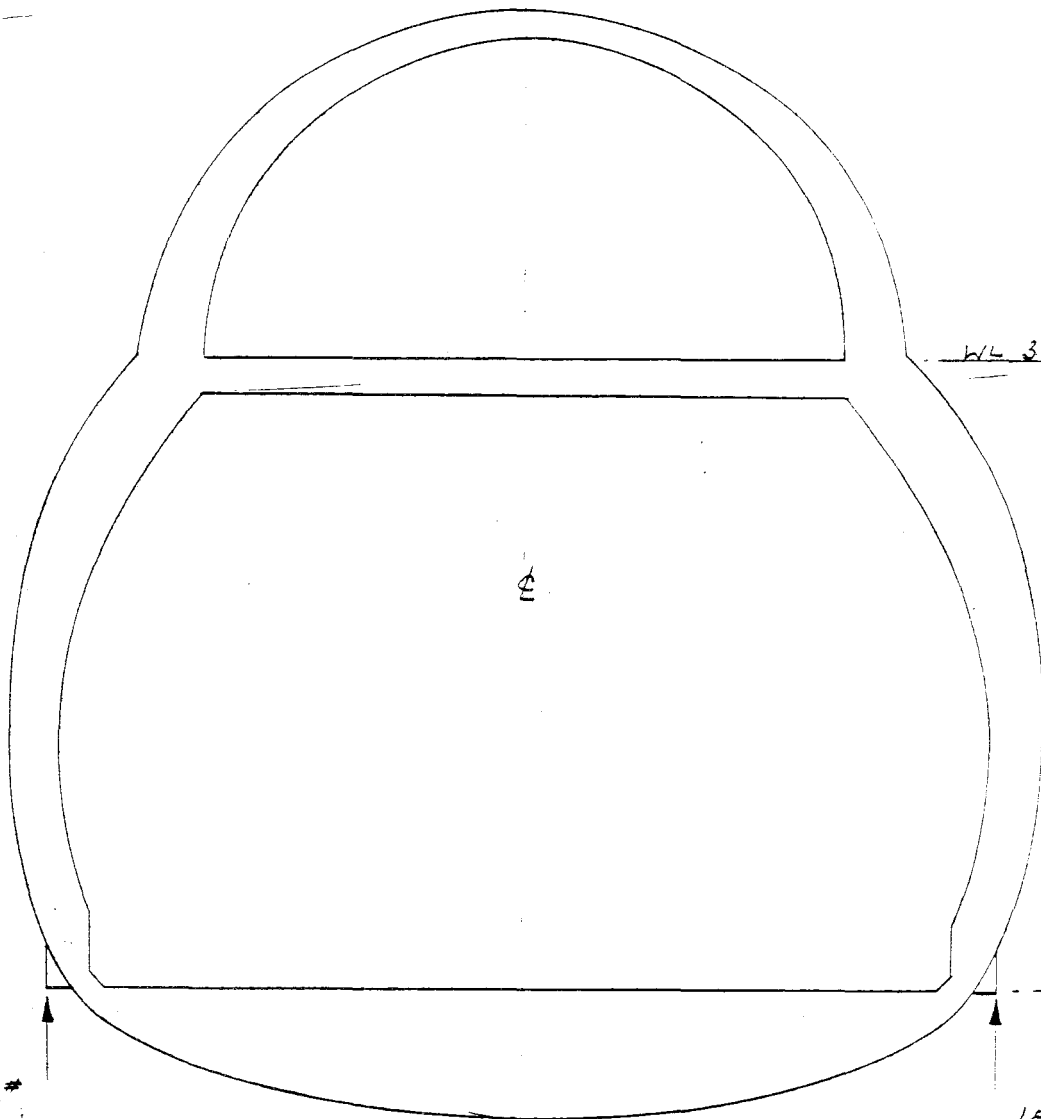


	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	16,260		
CHECKED	F.E. Schreiber	24 Jul 68		MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68		LGUS	46-2-2	REPORT NO.

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagrammatic Representation of Real Load Cases (Continued)

LOAD CASE 17: AIRCRAFT STABILIZING LOADS. (REF-p 6-251)

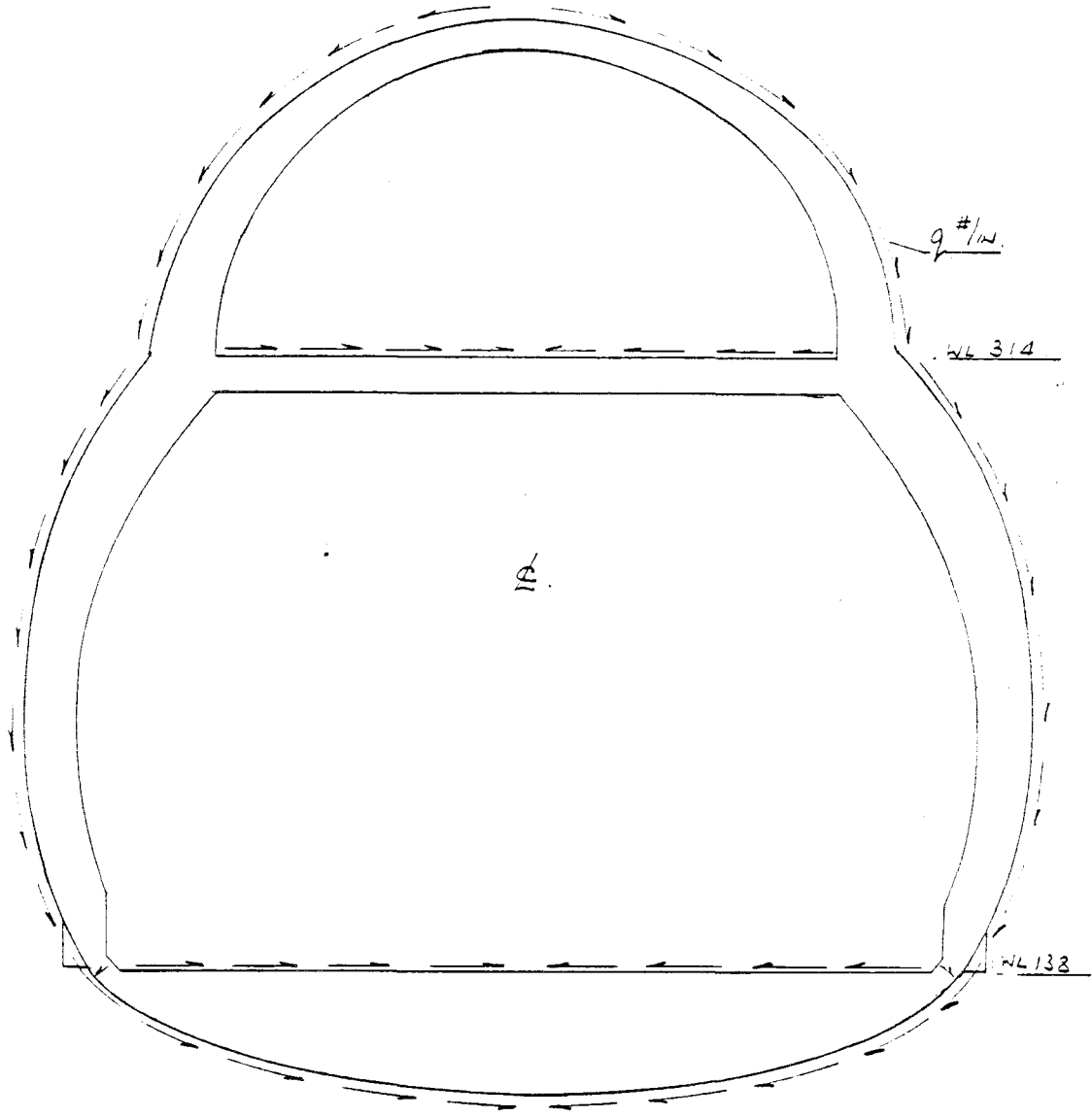


	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68		PAGE	Vol. I 6.261
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68			LG1US 46-2-2 REPORT NO.

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagramatic Representation of Real Load Cases (Continued)

LOAD CASES 18 THRU 30 : SHELL REDISTRIBUTION LOADING. (REF p 6.251)

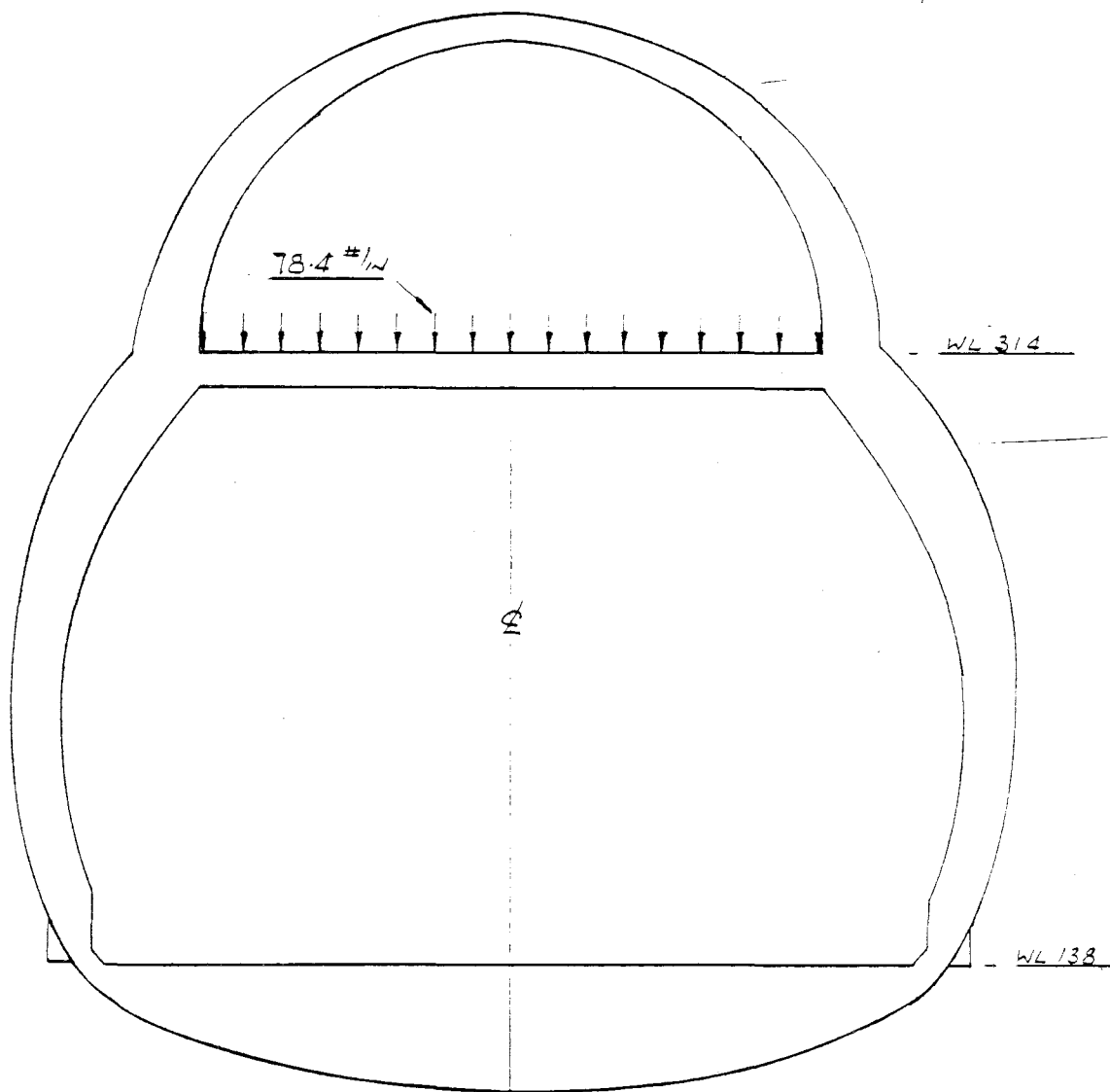


PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.262
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	24 Jul 68		LGUS 46-2-2 REPORT NO.		

6.5.3 Frame - F.S. 1964.00

6.5.3.4 Diagrammatic Representation of Real Load Cases (Continued)

LOAD CASE 31. TROOP DECK LOADING 188 #/FT² LIMIT (REF p 6.251)



$$\text{TROOP DECK LOADING} = \frac{188}{144} \times 40 \times 1.5 = 78.4 \text{ lb/in.}$$

NAME		DATE	LOCKHEED - GEORGIA COMPANY		TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68	A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE	No. I 6.263
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE		MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68			LGUS 46-2-2 REPORT NO.	

6.5.3 Frame -F.S. 1964.00

6.5.3.5 Internal Loads in Axial Members

(SEE p. 6.266 FOR REFERENCES)

CRITICAL TENSION			CRITICAL COMPRESSION		CRITICAL TENSION			CRITICAL COMPRESSION	
ELEMENT	LOAD	CASE	LOAD	CASE	ELEMENT	LOAD	CASE	LOAD	CASE
1	21417	25	62158	130	42	86456	130	18361	24
2	21612	25	67752	130	43	105452	130	12117	24
3	22193	25	67752	130	44	104454	130	37041	27
4	23311	25	70566	13	45	78556	130	67460	15
5	22391	25	79555	13	46	37531	123	78567	13
6	22946	18	84376	130	47	15709	25	82399	13
7	23761	18	84376	130	48	14076	25	84101	130
8	23700	18	83046	13	49	14012	25	84101	130
9	36891	123	79762	13	50	16891	25	79543	13
10	78316	130	68456	13	51	18123	25	71411	13
11	104434	130	56772	25	52	18545	25	68600	130
12	105576	130	12012	25	53	19091	25	68600	130
13	86983	130	14572	24	54	20150	25	65000	130
14	59672	67	22142	24	55	147609	123	17273	14
15	73929	67	61128	13	56	144169	124	16946	14
16	75692	67	83209	13	57	143898	124	16502	14
17	76502	67	84099	13	58	140700	124	16550	13
18	77448	65	82098	13	59	131066	125	13009	13
19	71062	65	71274	13	60	114919	124	18956	13
20	54705	117	50108	13	61	113189	11	19438	13
21	33594	117	26961	13	62	106273	124	25335	13
22	22014	38	11965	130	63	76714	124	58373	13
23	27889	77	9356	25	64	48795	117	71824	13
24	25530	77	9345	25	65	40923	25	37772	13
25	12890	77	11900	65	66	47831	25	42970	38
26	8659	13	18663	65	67	75140	119	40546	24
27	8676	13	22575	65	68	10831	14	97155	13
28	8692	13	22575	65	69	68465	119	175727	13
29	8783	15	18140	39	70	42858	112	128365	13
30	15075	116	10889	39	71	35298	112	107141	13
31	27054	116	8781	25	72	20431	71	68862	13
32	30010	116	8781	25	73	30838	78	26915	13
33	26331	116	11996	130	74	33610	78	15327	67
34	19642	116	27185	15	75	19947	78	10974	11
35	30377	41	51071	15	76	10952	13	12757	21
36	43448	41	73231	15	77	8478	126	10670	26
37	53404	41	84810	15	78	17543	65	15021	13
38	71278	39	88119	15	79	10959	13	17021	65
39	70524	39	37186	15	80	9450	13	17410	39
40	69080	39	65134	15	81	3886	13	17974	39
41	61679	39	38866	15	82	12027	97	9641	34

NAME		DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.	
PREPARED	G.B. Meadley	24 Jul 68		PAGE	Vol. I	6.263
CHECKED	F.E. Schreiber	24 Jul 68		TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE		
APPROVED	L.G. Darby	24 Jul 68				
			LG1US 46-2-2 REPORT NO.			

6.5.3 Frame -F.S. 1964.00

6.5.3.5 Internal Loads in Axial Members (SEE p. 6.266 FOR REFERENCES)

ELEMENT	CRITICAL TENSION		CRITICAL COMPRESSION		ELEMENT	CRITICAL TENSION		CRITICAL COMPRESSION	
	LOAD	CASE	LOAD	CASE		LOAD	CASE	LOAD	CASE
1	21417	25	62158	130	42	86456	130	13361	24
2	21612	25	67752	130	43	105452	130	12117	24
3	22193	25	67752	130	44	104454	130	37041	27
4	23311	25	70566	13	45	78556	130	67460	15
5	22391	25	79555	13	46	37531	123	78567	13
6	22946	18	84376	130	47	15709	25	82399	13
7	23761	18	84376	130	48	14076	25	84101	130
8	23700	18	83046	13	49	14012	25	84101	130
9	36891	123	79762	13	50	16891	25	79543	13
10	78316	130	68456	13	51	18123	25	71411	13
11	104434	130	56772	25	52	18545	25	68600	130
12	105576	130	12012	25	53	19091	25	68600	130
13	86983	130	14572	24	54	20150	25	65000	130
14	59672	67	22142	24	55	147609	123	17273	14
15	73929	67	61128	13	56	144169	124	16946	14
16	75692	67	83209	13	57	143898	124	16502	14
17	76502	67	84099	13	58	140700	124	16550	13
18	77448	65	82098	13	59	131066	125	18009	13
19	71062	65	71274	13	60	114919	124	18956	13
20	54705	117	50108	13	61	113189	11	19438	13
21	33594	117	26961	13	62	106273	124	25335	13
22	22014	38	11965	130	63	76714	124	58373	13
23	27889	77	9356	25	64	48795	117	71824	13
24	25530	77	9345	25	65	40923	25	87772	13
25	12890	77	11900	65	66	47831	25	42970	38
26	8659	13	18663	65	67	75140	119	40546	24
27	8676	13	22575	65	68	10831	14	97155	13
28	8692	13	22575	65	69	68465	119	175727	13
29	8783	15	18140	39	70	42858	112	128365	13
30	15075	116	10889	39	71	35298	112	107141	13
31	27054	116	8781	25	72	20431	71	68362	13
32	30010	116	8781	25	73	30838	78	26915	13
33	26331	116	11996	130	74	33610	78	15327	67
34	19642	116	27185	15	75	19947	78	10974	11
35	30377	41	51071	15	76	10952	13	12757	21
36	43448	41	73231	15	77	8478	126	10670	26
37	53404	41	84810	15	78	17543	65	15021	13
38	71278	39	88119	15	79	10959	13	17021	65
39	70524	39	37186	15	80	9450	13	17410	39
40	69080	39	65134	15	81	8886	13	17974	39
41	61679	39	38866	15	82	12027	27	9641	34

	NAME	DATE		TEMP.	PERM.
PREPARED	G.B. Meadley	24 Jul 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6.264
CHECKED	F.E. Schreiber	24 Jul 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	L.G. Darby	24 Jul 68		LGUS 46-2-2	
				REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.5 Internal Loads in Axial Members (Continued)

(SEE P 6.266 FOR REFERENCES)

CRITICAL TENSION			CRITICAL COMPRESSION			CRITICAL TENSION			CRITICAL COMPRESSION		
ELEMENT	LOAD	CASE	LOAD	CASE	ELEMENT	LOAD	CASE	LOAD	CASE		
83	14690	97	7859	20	123	15068	38	4652	15		
84	14279	84	5765	27	124	14759	41	20200	15		
85	13479	90	6649	18	125	6096	13	11888	60		
86	12262	77	10627	18	126	4449	24	11267	60		
87	8932	64	10692	65	127	8353	112	5451	66		
88	8162	13	14192	65	128	8182	112	2500	24		
89	8708	13	15422	31	129	7207	66	5179	25		
90	10985	13	15450	31	130	8790	36	5179	25		
91	14639	14	15533	15	131	8789	36	3510	24		
92	10955	116	6161	31	132	8714	78	5178	36		
93	11780	15	10090	25	133	5387	24	9317	41		
94	13483	15	13457	25	134	6430	15	10358	41		
95	13467	15	15096	27	135	0		226237	13		
96	10283	116	37481	130	136	0		226237	13		
97	20263	117	68906	13	137	13224	127	28814	123		
98	35526	117	107711	13	138	835	14	21955	124		
99	42957	117	128956	15	139	12160	130	26019	129		
100	69030	39	177267	15	140	1064	14	29891	126		
101	76784	39	48824	24	141	2031	13	18479	125		
102	48034	25	51743	51	142	2451	13	20939	127		
103	10831	14	97155	13	143	23294	130	24927	128		
104	41699	25	89069	13	144	2119	13	18620	124		
105	37190	39	73814	15	145	3022	13	18655	129		
106	67711	11	61049	15	146	38774	123	49595	13		
107	98299	11	30864	15	147	9925	25	18083	130		
108	112640	11	25907	15	148	85261	130	62736	13		
109	112564	11	25688	15	149	23968	125	20169	64		
110	128091	123	24620	15	150	2903	124	68257	13		
111	133605	123	22682	15	151	3795	13	6477	67		
112	137837	123	20636	15	152	10110	13	3425	13		
113	142106	123	19557	15	153	9597	67	7935	13		
114	147609	123	18387	15	154	16426	67	18057	13		
115	24418	65	19713	13	155	13164	65	13954	13		
116	19322	65	10239	13	156	10884	65	10916	13		
117	29655	60	6851	24	157	12780	117	11786	13		
118	22464	66	4013	24	158	5283	61	1453	117		
119	11837	86	5481	20	159	3534	60	1597	21		
120	13659	77	6252	20	160	25119	65	16945	13		
121	10471	38	4516	24	161	12274	77	3201	60		
122	26633	90	8216	24	162	913	31	0			

NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.
PREPARED	G.B. Meadley 24 Jul 68		PAGE	VOL. I 6.265
CHECKED	F.E. Schreiber 24 Jul 68	TITLE	MODEL	C-5A
APPROVED	L.G. Darby 24 Jul 68	INTERNAL LOADS ANALYSIS AFT FUSELAGE	LG1US	46-2-2
			REPORT NO.	

6.5.3 Frame - F.S. 1964.00

6.5.3.5 Internal Loads in Axial Members (Continued)

(SEE P. 6.266 FOR REFERENCES)

CRITICAL TENSION			CRITICAL COMPRESSION		CRITICAL TENSION			CRITICAL COMPRESSION	
ELEMENT	LOAD	CASE	LOAD	CASE	ELEMENT	LOAD	CASE	LOAD	CASE
163	1568	31	0		187	3682	15	7614	11
164	1568	31	0		188	2824	15	10242	11
165	1568	31	0		189	23296	130	23476	11
166	4704	31	0		190	3350	15	14552	11
167	1568	31	0		191	2784	15	13714	123
168	1568	31	0		192	1396	15	29891	126
169	784	31	0		193	12162	130	19510	125
170	3265	31	0		194	909	15	20627	127
171	14973	116	7752	39	195	3346	73	2954	60
172	17148	116	17084	15	196	1216	14	2115	66
173	4122	37	718	24	197	3449	112	3164	20
174	3561	39	859	24	198	2431	68	1131	26
175	7096	41	11937	15	199	2524	38	1347	25
176	6654	41	11216	15	200	3026	36	1266	22
177	9077	41	14415	15	201	3593	78	3915	20
178	15304	39	18920	15	202	1443	110	2827	36
179	8969	39	8456	15	203	3211	110	2574	41
180	10138	13	3786	15	204	7535	130	1889	24
181	4123	15	6060	39	205	7466	130	1623	24
182	4497	24	68212	13	206	65939	67	35162	13
183	21878	27	18550	38	207	55728	39	25321	24
184	85035	130	62366	13	208	16590	124	1803	28
185	7421	15	18138	130	209	16568	130	1331	31
186	39450	123	48874	15					

PREPARED	G.B. Meadley	24 Jul 68	NAME DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
CHECKED	F.E. Schreiber	24 Jul 68	TITLE	INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	Vol. I	6.266
APPROVED	L.G. Darby	24 Jul 68			LG1US 46-2-2		
					REPORT NO.		

6.5.3 Frame - F.S. 1964.00

6.5.3.6 Internal Loading in Shear Panels

ELEMENT	SHEAR FLOW	CASE	ELEMENT	SHEAR FLOW	CASE	ELEMENT	SHEAR FLOW	CASE
1	482.3	129	23	-754.6	13	45	-3531.9	123
2	530.6	129	24	738.4	76	46	1714.6	13
3	-609.8	123	25	655.4	76	47	1477.5	13
4	-726.7	124	26	512.8	76	48	6022.4	130
5	-713.2	125	27	370.3	76	49	2233.4	130
6	865.6	11	28	227.8	76	50	1653.9	130
7	-1671.7	130	29	-243.2	110	51	-871.4	11
8	-2253.1	130	30	-385.7	110	52	744.7	124
9	-6033.0	130	31	-528.3	110	53	761.9	125
10	-10980.4	13	32	-599.6	110	54	750.0	125
11	-17305.8	13	33	-896.4	110	55	646.3	127
12	3494.5	123	34	775.6	15	56	-626.5	128
13	2459.3	51	35	778.5	15	57	-125.6	73
14	3907.3	13	36	1115.1	15	58	237.9	60
15	-3358.0	13	37	1080.3	15	59	421.7	60
16	2478.6	13	38	866.2	15	60	-199.6	25
17	1409.8	13	39	-653.1	39	61	-114.2	26
18	689.3	60	40	-1415.4	13	62	160.8	25
19	-814.3	13	41	-2508.0	15	63	-220.9	36
20	-1034.7	13	42	-3412.6	15	64	-466.9	41
21	-1080.4	13	43	3947.4	15	65	-148.0	39
22	-755.2	13	44	-2316.7	38	66	159.3	110

REFERENCES:

ELEMENTS : SEE p's 6.241 THROUGH 6.245

LOADING : OBTAINED FROM BATCH OUTPUT (REF 17)

CASES : SEE p's 6.251 THROUGH 6.254

PREPARED	NAME J. Grabinski	DATE 22 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE Vol. I 6267	TEMP.	PERM.
	CHECKED L.G. Darby	22 Apr 68			MODEL C-5A	
	APPROVED P.W. Horton	22 Apr 68			LGIUS 46-2-2 REPORT NO.	
			TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE			

6.5.4 Frame-Fuselage Station 2084

6.5.4.1 Discussion

The frame at Fuselage Station 2084 is composed of two basic sections, the upper lobe, which encloses the troop compartment, and the lower lobe, which contains the cargo area. The upper and lower lobes are separated by a troop floor. The lower lobe includes side panels, canted latch frames, and the aft cargo ramp, which is connected to the canted latch frames by ~~latches~~ located at B.L. 124.

F.S. 2084 has the primary function of distributing cargo loads, troop floor loads, internal pressurization, and external air loads. These basic loads are applied and balanced as shown in Figures 6.5.4.2-4. Critical load conditions for this frame consist of various combinations of the basic loads as defined in this section.

Internal load distributions for the frame are obtained from Computer Aided Structural Design (Ref. 17). The computer model for F.S. 2084 frame is shown in Figure 6.5.4.1. Cap loads, web shear loads, and restraint loads are given for each of the frame elements defined in Sections 6.5.4.2. Typical area calculations for the computer model elements can be found in Ref. 15, Section 6.5.4.

PREPARED	NAME J.F. Grabinski	DATE 22 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE Vol. I 6.268	TEMP.	FORM.
CHECKED	L. G. Darby	22 Apr 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	P.W. Horton	22 Apr 68		LG1US 46-2-2 REPORT NO.		

6.5.4.2 Frame Geometry - F.S. 2084

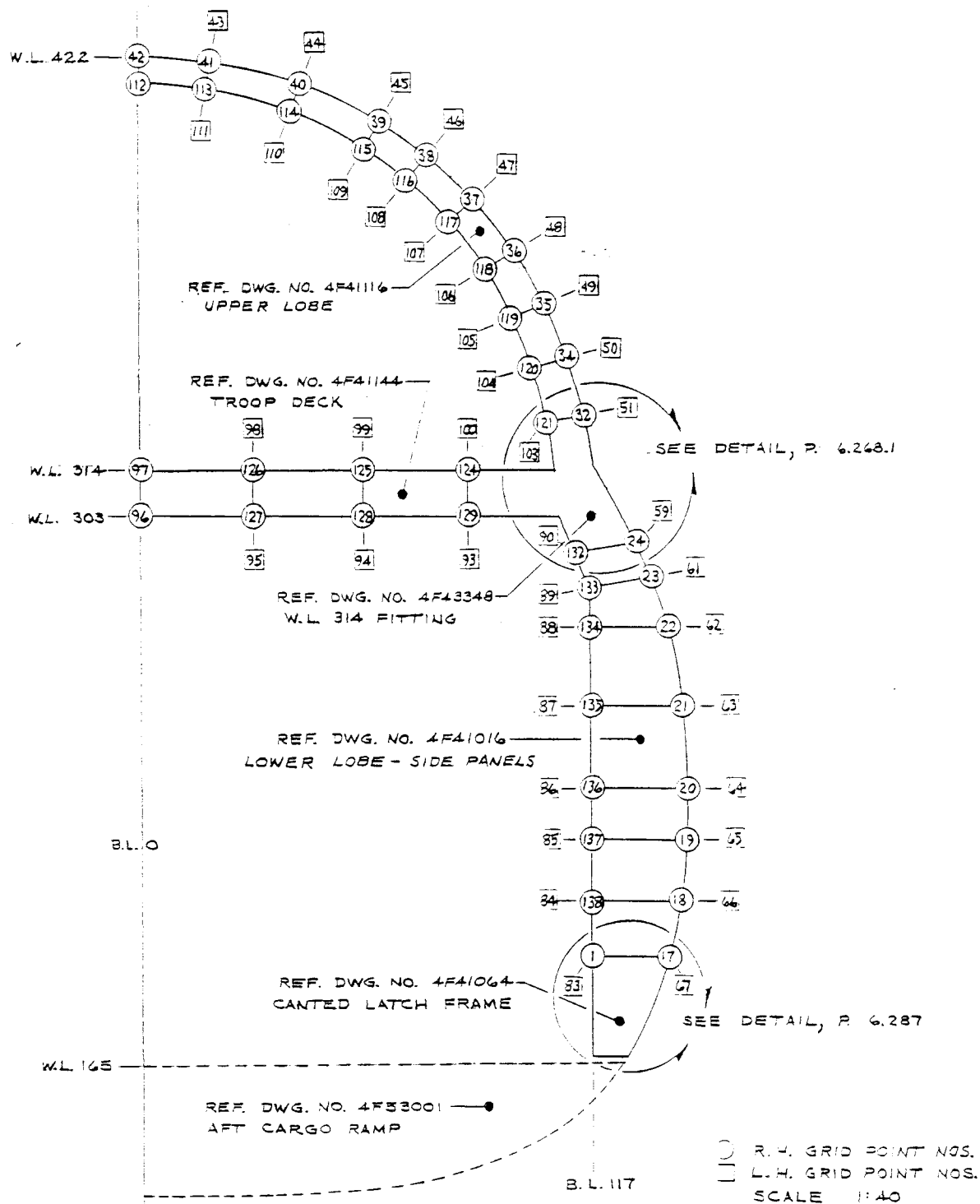


FIGURE 6.5.4.1 F.S. 2084 FRAME MODEL

PREPARED	J. Grabinski	28 Aug 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	PAGE	Vol. I	6.268.1
CHECKED	F. Schreiber	28 Aug 68		MODEL	C-5A	
APPROVED	L.G. Darby	28 Aug 68		LG1US 46-2-2	REPORT NO.	

6.5.4.2 Frame Geometry - F.S. 2084

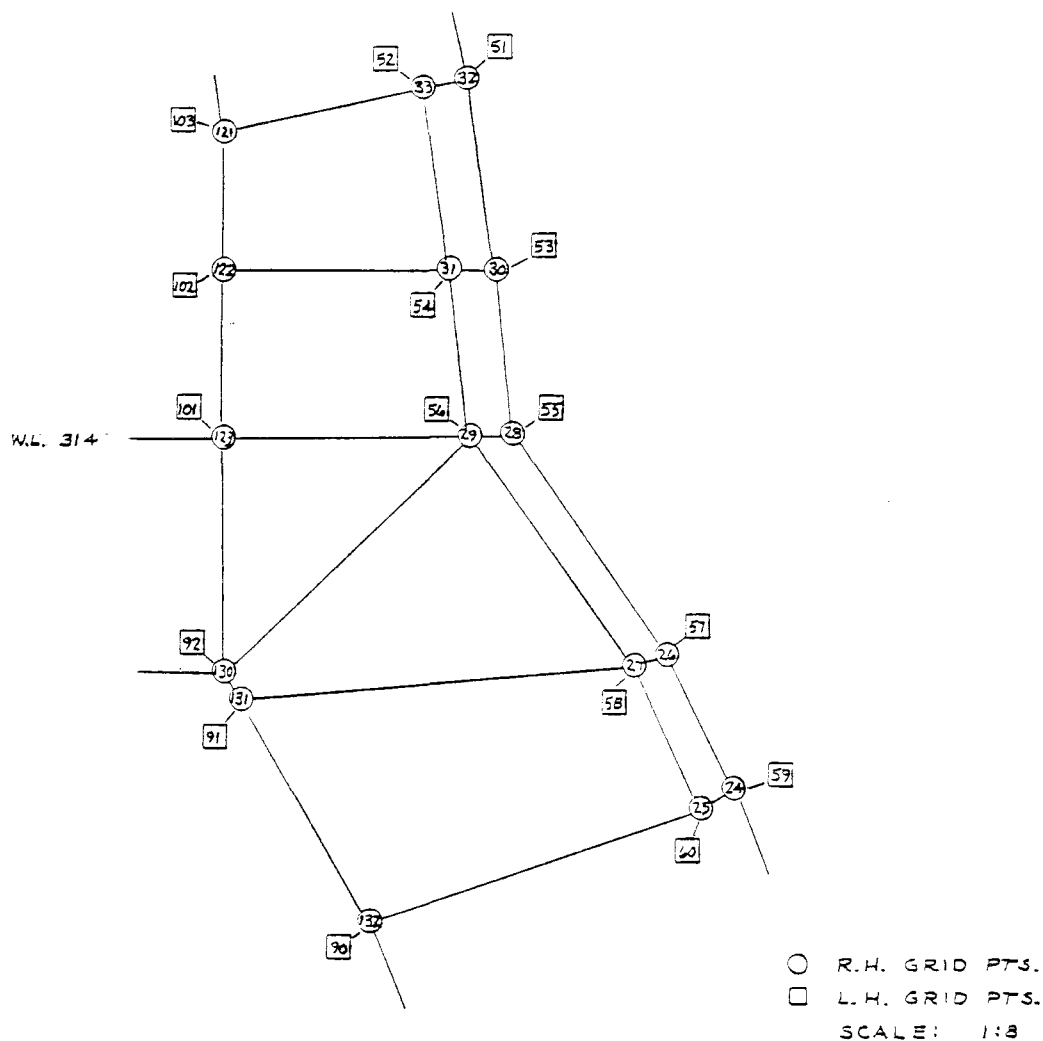


Figure 6.5.4.1.1 Detail of W.L. 314 Fitting Model

PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
J. Grabinski	30 Apr 68			Vol. I	6.269	
CHECKED	NAME	DATE	TITLE	MODEL		
L.G. Darby	30 Apr 68		INTERNAL LOADS ANALYSIS AFT FUSELAGE	C-5A		
APPROVED	NAME	DATE		REPORT NO.		
P.W. Horton	30 Apr 68					

6.5.4.2 Frame Geometry - F.S. 2084 (Continued)

TABLE 6.5.4.1 FRAME MODEL GRID POINT LOCATIONS (SEE P. 6.268)

G.P.	B.L.	W.L.	G.P.	B.L.	W.L.	G.P.	B.L.	W.L.
1	117.63	187.71	2	117.63	181.30	3	117.63	174.30
4	117.63	164.70	5	119.40	163.30	6	120.60	164.70
7	124.00	174.30	8	126.70	181.30	9	128.80	187.71
10	132.60	187.71	11	130.30	181.30	12	127.80	174.30
13	124.70	164.70	14	129.30	164.70	15	134.00	174.30
16	136.60	181.30	17	138.30	187.71	18	140.92	202.70
19	142.20	218.07	20	142.55	231.25	21	141.10	253.45
22	136.82	273.00	23	131.88	286.96	24	126.40	298.60
25	125.00	297.80	26	123.50	304.00	27	122.20	304.00
28	117.00	314.00	29	115.20	314.00	30	116.30	321.20
31	114.20	321.20	32	115.00	329.50	33	113.20	329.20
34	110.55	344.44	35	104.37	358.76	36	96.32	372.15
37	86.55	384.36	38	75.24	395.18	39	62.64	404.36
40	41.80	414.78	41	19.32	420.88	42	0.00	422.42
43	-19.32	420.88	44	-41.80	414.78	45	-62.64	404.36
46	-75.24	395.18	47	-86.55	384.36	48	-96.32	372.15
49	-104.37	358.76	50	-110.55	344.44	51	-115.00	329.50
52	-113.20	329.20	53	-115.30	321.20	54	-114.20	321.20
55	-117.00	314.00	56	-115.20	314.00	57	-123.50	304.00
58	-122.20	304.00	59	-126.40	298.60	60	-125.00	297.80
61	-131.88	286.96	62	-136.82	273.00	63	-141.10	253.45
64	-142.55	231.25	65	-142.20	218.07	66	-142.92	202.70
67	-138.30	187.71	68	-136.60	181.30	69	-134.00	174.30
70	-129.30	164.70	71	-124.70	164.70	72	-127.80	174.30
73	-130.30	181.30	74	-132.60	187.71	75	-128.80	187.71
76	-126.70	181.30	77	-124.00	174.30	78	-120.60	164.70
79	-119.40	163.30	80	-117.63	164.70	81	-117.63	174.30
82	-117.63	181.30	83	-117.63	187.71	84	-117.63	202.70
85	-117.63	218.07	86	-117.63	231.25	87	-117.63	253.45
88	-117.63	273.00	89	-117.63	282.87	90	-110.60	293.00
91	-105.40	302.20	92	-104.50	303.70	93	-86.10	303.70
94	-58.38	303.70	95	-29.40	303.70	96	0.00	303.70
97	0.00	314.00	98	-29.40	314.00	99	-58.38	314.00
100	-86.10	314.00	101	-104.50	314.00	102	-104.50	321.20
103	-104.50	327.20	104	-101.57	341.33	105	-96.77	354.80
106	-89.76	367.69	107	-80.93	379.20	108	-70.50	389.57
109	-58.88	398.45	110	-39.58	409.12	111	-18.44	415.56
112	0.00	417.30	113	18.44	415.56	114	39.58	409.12
115	58.88	398.45	116	70.50	389.57	117	80.93	379.20
118	89.76	367.69	119	96.77	354.80	120	101.57	341.33
121	104.50	327.20	122	104.50	321.20	123	104.50	314.00
124	86.10	314.00	125	58.38	314.00	126	29.40	314.00
127	29.40	303.70	128	58.38	303.70	129	86.10	303.70
130	104.50	303.70	131	105.40	302.20	132	110.60	293.00
133	117.63	282.87	134	117.63	273.00	135	117.63	253.45
136	117.63	231.25	137	117.63	218.07	138	117.63	202.70

PREPARED	J. Grabinski	29 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6-270
CHECKED	F.E. Schreiber	29 Apr 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	29 Apr 68		REPORT NO.	LGLUS 46-2-2	

6.5.4.2 Frame Geometry - F.S. 2084 (Continued)

TABLE 6.5.4.2 AXIAL ELEMENT SPECIFICATIONS

ELE- MENT	CONNECT. GRID PTS.	ELE. MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.	ELE- MENT	CONNECT. GRID PTS.
1	1-2	2	2-3	3	3-4	4	4-6	5	4-5
6	5-6	7	6-7	8	7-8	9	8-9	10	10-11
11	11-12	12	12-13	13	14-15	14	15-16	15	16-17
16	10-17	17	9-10	18	1-9	19	2-8	20	8-11
21	11-16	22	12-15	23	7-12	24	3-7	25	6-13
26	13-14	27	17-18	28	18-19	29	19-20	30	20-21
31	21-22	32	22-23	33	23-24	34	24-26	35	25-27
36	26-28	37	27-29	38	28-30	39	29-31	40	30-32
41	31-33	42	32-34	43	34-35	44	35-36	45	36-37
46	37-38	47	38-39	48	39-40	49	40-41	50	41-42
51	42-43	52	43-44	53	44-45	54	45-46	55	46-47
56	47-48	57	48-49	58	49-50	59	50-51	60	51-53
61	52-54	62	53-55	63	54-56	64	55-57	65	56-58
66	57-59	67	58-60	68	59-61	69	61-62	70	62-63
71	63-64	72	64-65	73	65-66	74	66-67	75	70-71
76	71-78	77	77-81	78	72-77	79	69-72	80	68-73
81	73-76	82	76-82	83	75-83	84	74-75	85	67-74
86	67-68	87	68-69	88	69-70	89	71-72	90	72-73
91	73-74	92	75-76	93	76-77	94	77-78	95	78-79
96	79-80	97	78-80	98	80-81	99	81-82	100	82-83
101	83-84	102	84-85	103	85-86	104	86-87	105	87-88
106	88-89	107	89-90	108	90-91	109	91-92	110	92-93
111	93-94	112	94-95	113	95-96	114	96-97	115	97-98
116	98-99	117	99-100	118	100-101	119	101-102	120	102-103
121	103-104	122	104-105	123	105-106	124	106-107	125	107-108
126	108-109	127	109-110	128	110-111	129	111-112	130	112-113
131	113-114	132	114-115	133	115-116	134	116-117	135	117-118
136	118-119	137	119-120	138	120-121	139	121-122	140	122-123
141	123-124	142	124-125	143	125-126	144	127-128	145	128-129
146	129-130	147	130-131	148	131-132	149	132-133	150	133-134
151	134-135	152	135-136	153	136-137	154	137-138	155	1-138
156	18-138	157	19-137	158	20-136	159	21-135	160	22-134
161	23-133	162	25-132	163	24-25	164	27-131	165	26-27
166	29-130	167	29-123	168	28-29	169	31-122	170	30-31
171	33-121	172	32-33	173	34-120	174	35-119	175	36-118
176	37-117	177	38-116	178	39-115	179	40-114	180	41-113
181	42-112	182	43-111	183	44-110	184	45-109	185	46-108
186	47-107	187	48-106	188	49-105	189	50-104	190	52-103
191	51-52	192	54-102	193	53-54	194	56-101	195	55-56
196	56-92	197	58-91	198	57-58	199	60-90	200	59-60
201	61-89	202	62-88	203	63-87	204	64-86	205	65-85
206	66-84	207	92-101	208	93-100	209	94-99	210	95-98
211	126-127	212	125-128	213	124-129	214	123-130	215	97-126
216	96-127								

PREPARED	NAME J. Grabinski	DATE 29 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
					Vol. I	6.271
CHECKED	L.G. Darby	29 Apr 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	P.W. Horton	29 Apr 68		LGIUS 46-2-2 REPORT NO.		

6.5.4.2 Frame Geometry - F.S. 2084 (Continued)

TABLE 6.5.4.3 SHEAR PANEL SPECIFICATIONS

PANEL NO.	GRID POINTS				PANEL NO.	GRID POINTS			
1	1	2	8	9	2	2	3	7	8
3	3	4	6	7	4	9	8	11	10
5	12	13	14	15	6	11	12	15	16
7	10	11	16	17	8	138	1	17	18
9	137	138	18	19	10	136	137	19	20
11	135	136	20	21	12	134	135	21	22
13	133	134	22	23	14	132	133	23	24
15	131	132	25	27	16	27	25	24	26
17	130	131	27	29	18	29	27	26	28
19	122	123	29	31	20	31	29	28	30
21	121	122	31	33	22	33	31	30	32
23	120	121	32	34	24	119	120	34	35
25	118	119	35	37	26	117	118	36	37
27	116	117	37	38	28	115	116	38	39
29	114	115	39	40	30	113	114	40	41
31	112	113	41	42	32	111	112	42	43
33	110	111	43	44	34	109	110	44	45
35	108	109	45	46	36	107	108	46	47
37	106	107	47	48	38	105	106	48	49
39	104	105	49	50	40	103	104	50	51
41	102	103	52	54	42	54	52	51	53
43	101	102	54	56	44	56	54	53	55
45	91	92	56	58	46	58	56	55	57
47	90	91	58	60	48	60	58	57	59
49	89	90	59	61	50	88	89	61	62
51	87	88	62	63	52	86	87	63	64
53	85	86	64	65	54	84	85	65	66
55	83	84	66	67	56	74	73	68	67
57	73	72	69	68	58	72	71	70	69
59	75	76	73	74	60	81	80	78	77
61	82	81	77	76	62	83	82	76	75
63	100	101	92	93	64	99	100	93	94
65	98	99	94	95	66	97	98	95	96
67	97	126	127	96	68	126	125	128	127
69	125	124	129	128	70	124	123	130	129

PREPARED	J. Grabinski	22 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. 1	6.272
CHECKED	L. G. Darby	22 Apr 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	P. W. Horton	22 Apr 68		LGJUS 46-2-2	REPORT NO.	

6.5.4.3 Frame Loads - F. S. 2084

TABLE 6.5.4.4 CRITICAL APPLIED LOAD CASES

LOAD CONDITION	BASIC LOAD CASES	BASIC LOAD DESCRIPTION
101	101	BURST PRESSURE (17.40 psi)
102	1	ULTIMATE PRESSURE (13.05 PSI) p. 6.273
	3	RAMP INERTIA LOADS p. 6.274
	2	CARGO INERTIA LOADS p. 6.274
	6	TROOP DECK LOADS (DOWN) p. 6.275
	8	EXTERNAL AIR LOADS (POSITIVE ∞) p. 6.276
103	1	ULTIMATE PRESSURE (13.05 PSI)
	3	RAMP INERTIA LOADS
	2	CARGO INERTIA LOADS
	6	TROOP DECK LOADS (DOWN)
	9	EXTERNAL AIR LOADS (NEGATIVE ∞)
104	1	ULTIMATE PRESSURE (13.05 PSI)
	3	RAMP INERTIA LOADS
	2	CARGO INERTIA LOADS
	6	TROOP DECK LOADS (DOWN)
	10	EXTERNAL AIR LOADS (YAW)
105	1	ULTIMATE PRESSURE (13.05 PSI)
	5	RAMP INERTIA LOADS
	4	CARGO INERTIA LOADS
	7	TROOP DECK LOADS (UP)
	8	EXTERNAL AIR LOADS (POSITIVE ∞)
106	1	ULTIMATE PRESSURE (13.05 PSI)
	5	RAMP INERTIA LOADS
	4	CARGO INERTIA LOADS
	7	TROOP DECK LOADS (UP)
	9	EXTERNAL AIR LOADS (NEGATIVE ∞)
107	1	ULTIMATE PRESSURE (13.05 PSI)
	5	RAMP INERTIA LOADS
	4	CARGO INERTIA LOADS
	7	TROOP DECK LOADS (UP)
	10	EXTERNAL AIR LOADS (YAW)

PREPARED	J. Grabinski	9 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.273
CHECKED	L. G. Darby	9 Apr 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	P. W. Horton	9 Apr 68		REPORT NO.	LGIUS 46-2-2	

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

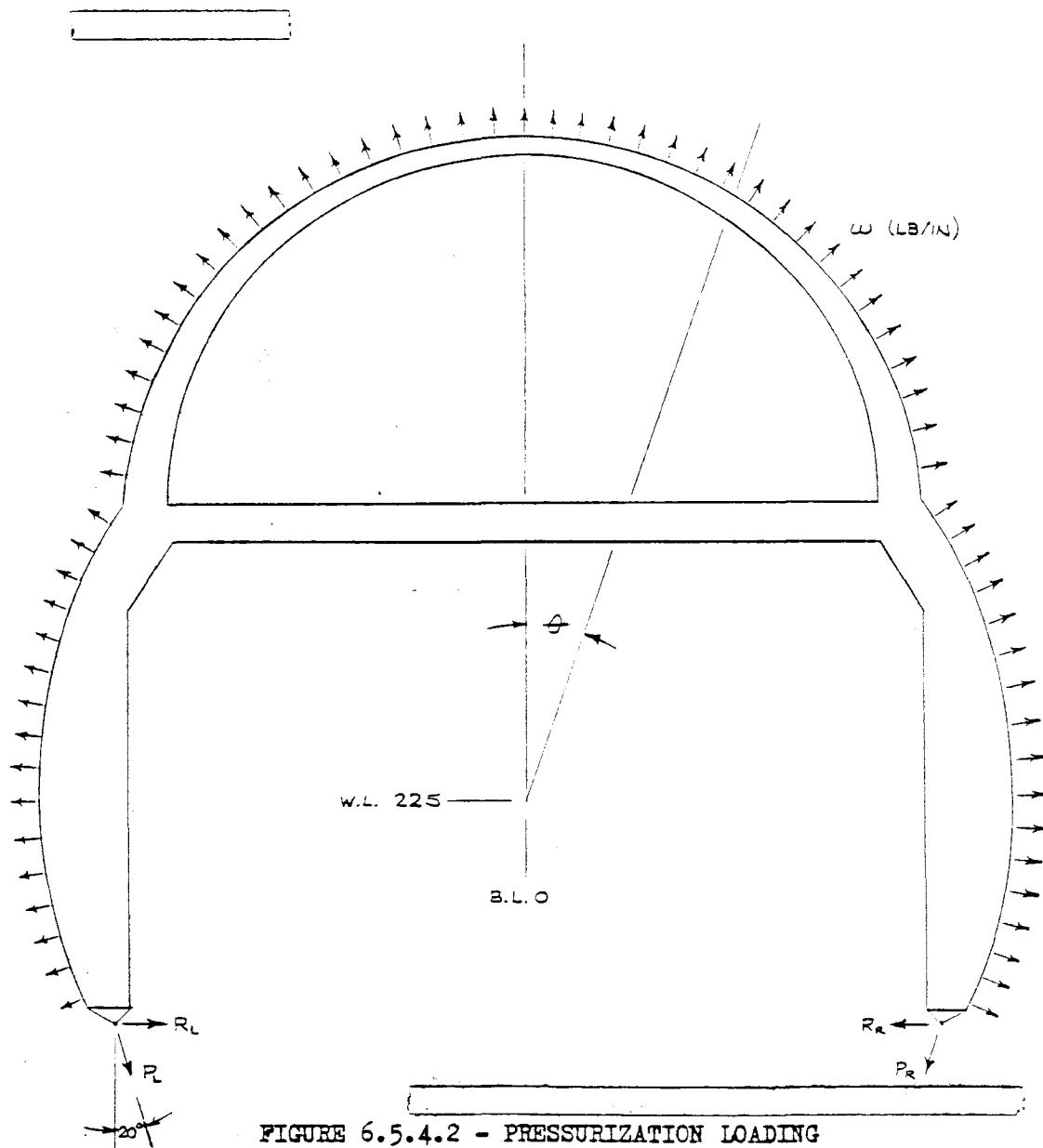


FIGURE 6.5.4.2 - PRESSURIZATION LOADING

LOAD CASE	DESCRIPTION	P (PSI)	w (LB/IN)	P _L (LB)	P _R (LB)	P _L (LB)	P _R (LB)
101	BURST	17.40	69.6	43,780	3233	43,744	3059
1	ULTIMATE	8.70	52.2	32,939	6,174	32,363	6,053
	AIR LOADS		(SEE P. 6.276)				

1. $w = 17.40 \text{ psi} \times 20 \text{ in (span width)} \times .20 = 69.6 \text{ lb/in (ref. 18)}$
2. $w = 8.7 \text{ psi} \times 20 \text{ in} \times .20 \times 1.5 = 52.2 \text{ lb/in.}$
3. Pressure Loads ref. 10, p. 9.7 - 116.

NAME		DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE	TEMP.	PERM.
PREPARED	J.F. Grabinski	22 Apr 68	TITLE <u>INTERNAL LOADS ANALYSIS</u> <u>AFT FUSELAGE</u>			Vol. 1	6.274
CHECKED	L.G. Darby	22 Apr 68			MODEL	C-5A	
APPROVED	P.W. Horton	22 Apr 68			LGIUS	46-2-2	
					REPORT NO.		

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

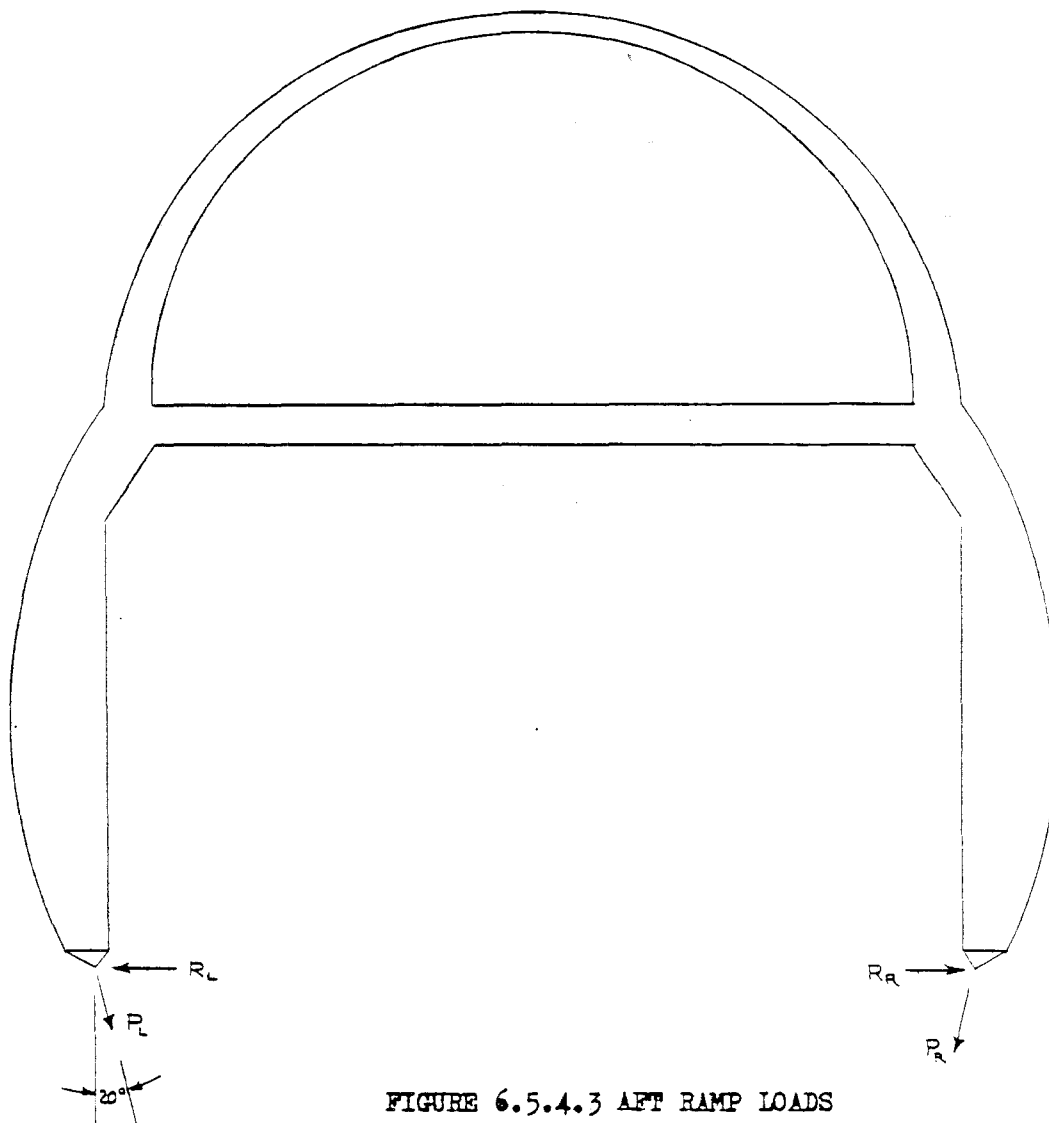


FIGURE 6.5.4.3 AFT RAMP LOADS

LOAD CASE	DESCRIPTION	P _L (LB)	R _L (LB)	P _R (LB)	R _R (LB)
2	5.85 g (ULT) CARGO INERTIA	9327	1106	3402	1134
3	5.85 g (ULT) RAMP INERTIA	4396	538	4433	548
4	-2.85 g (ULT) CARGO INERTIA	-4687	-673	-4712	-685
5	-2.85 g (ULT) RAMP INERTIA	-2142	-263	-2160	-267

NOTE: 1. Aft Ramp Loads obtained from Sect. 11.3.12.
2. "g" Load factors obtained from ref. 10, Fig. 9.7-67.

PREPARED	J. Grabinski	8 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6.275
CHECKED	L. G. Darby	8 Apr 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	P. W. Horton	8 Apr 68		LGJUS	46-2-2	
				REPORT NO.		

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

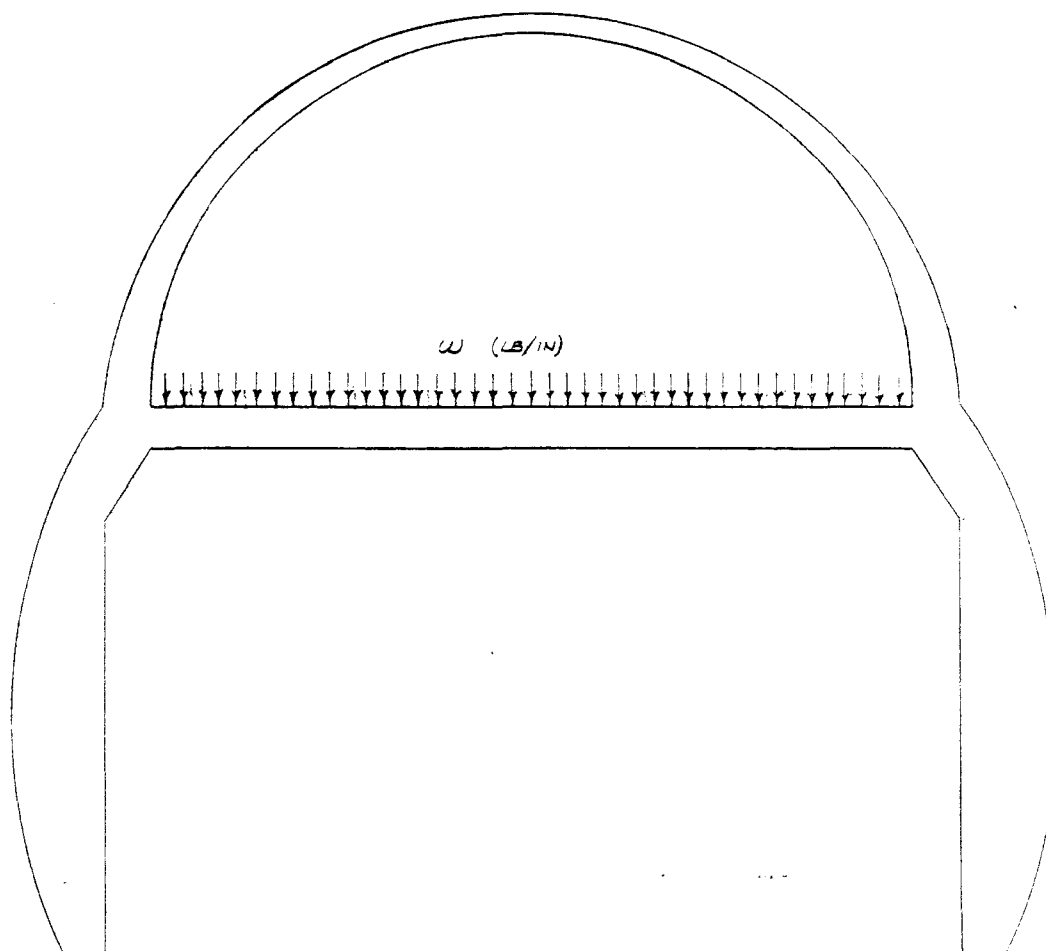


FIGURE 6.5.4.4 - TROOP DECK LOADING

LOAD CASE	DESCRIPTION	w (LB/IN)
6	POS. MANEUVER (+α)	54.7 ⁽¹⁾
7	NEG. MANEUVER (-α)	-21.9 ⁽²⁾

- $w = 188 \text{ lb/ft}^2 \times 1/144 \times 28 \text{ in. (span width)} \times 1.5 = 54.7 \text{ lb/in.}$
(ref. 10, p. 9.7-076)
- $w = -75 \text{ lb/ft}^2 \times 1/144 \times 28 \times 1.5 = -21.9 \text{ lb/in}$ (Ref. 10, p. 9.7-076).

PREPARED	J. Grabinski	22 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6.276
CHECKED	L. G. Darby	22 Apr 68	TITLE [REDACTED] INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A
APPROVED	P. W. Horton	22 Apr 68		LGJUS 46-2-2	REPORT NO.

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

TABLE 6.5.4.5 - External Air Loads (SEE R. 6.273)

CASE NO.	8		9		10			
	POSITIVE α		NEGATIVE α		YAW			
					WINDWARD		LEEWARD	
ϕ (DEG.)	p (PSI)	w (LB/IN)	p (PSI)	w (LB/IN)	p (PSI)	w (LB/IN)	p (PSI)	w (LB/IN)
0	.180	5.40	.080	2.40	-.030	-.18	-.030	-.18
20	.150	4.50	.000	.00	.005	.15	-.100	-.60
40	.075	2.25	-.110	-.66	-.035	-.21	-.185	-1.11
60	-.020	-.12	-.280	-1.68	-.220	-1.32	-.225	-1.35
80	-.075	-.45	-.430	-2.58	-.415	-2.49	-.240	-1.44
100	-.060	-.36	-.440	-2.64	-.510	-3.06	-.190	-1.14
120	.035	1.05	-.310	-1.86	-.475	-2.85	-.085	-.51
140	.085	2.55	-.220	-1.32	-.390	-2.34	-.070	-.42
160	.040	1.20	-.170	-1.02	-.280	-1.68	-.090	-.54
180	-.020	-.12	-.160	-.96	-.175	-1.05	-.175	-1.05

1. $p = .180 \text{ lb/in} \times 20 \text{ in (span width)} \times 1.00 \times 1.50 = 5.40 \text{ lb/in.}$
2. $p = -.430 \text{ lb/in} \times 20 \text{ in} \times .20 \times 1.50 = 2.58 \text{ lb/in.}$
3. Air loads ref. 10, pp 9.7-128, 130.
4. Negative (-) pressure indicates suction. Positive (+) pressure indicates crushing.
5. For crushing pressures, 100% of air load is reacted by the frame. For suction pressures, 20% is assumed reacted by the frame (ref. 18).

PREPARED	J. Grabinski	4 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6.277
CHECKED	F.E. Schreiber	4 Jun 68	TITLE	MODEL	C-5A
APPROVED	L.G. Darby	4 Jun 68	INTERNAL LOADS ANALYSIS AFT FUSELAGE	LGJUS 46-2-2	REPORT NO.

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

TABLE 6.5.4.6 AXIAL ELEMENT LOADS

AXIAL ELEM.	P _t (MAX.) LB.	LOAD CASE	P _c (MAX.) LB.	LOAD CASE	AXIAL ELEM.	P _t (MAX.) LB.	LOAD CASE	P _c (MAX.) LB.	LOAD CASE
1	16849	101	0		2	10704	101	-38	106
3	2070	102	0		4	5532	101	0	
5	0		-5129	106	6	3772	101	-1119	103
7	2720	101	-4077	105	8	0		-10861	101
9	12490	101	0		10	5013	107	0	
11	0		-18385	101	12	322	101	-5743	101
13	1540	101	0		14	7982	101	0	
15	14350	101	0		16	2579	101	-7747	101
17	0		-10981	101	18	0		-10981	101
19	2665	101	0		20	2874	101	-561	103
21	574	101	-437		22	10404	101	0	
23	9262	101	0		24	10165	101	0	
25	3794	101	0		26	2350	101	-695	101
27	14591	101	0		28	9913	101	0	
29	6850	101	0		30	5484	103	0	
31	4399	103	0		32	4488	103	-128	105
33	5651	103	-208	105	34	5684	103	0	
35	1260	103	0		36	5672	103	-108	102
37	6848	103	0		38	2016	101	-279	102
39	4211	101	0		40	4287	101	-63	102
41	2703	101	-22	103	42	4860	101	0	
43	5226	101	0		44	5484	101	0	
45	5654	101	0		46	5635	101	0	
47	5683	101	0		48	5582	101	0	
49	5194	101	0		50	4853	101	0	
51	4853	101	0		52	5194	101	0	
53	5582	101	0		54	5633	101	0	
55	5685	101	0		56	5654	101	0	
57	5484	101	0		58	5226	101	0	
59	4860	101	0		60	4287	101	-357	102
61	2703	101	-29	102	62	2072	107	-416	102
63	4210	101	0		64	6154	103	-271	102
65	7478	103	0		66	6143	103	0	
67	1308	104	0		68	6168	103	-466	105
69	5128	104	-383	105	70	4750	104	0	

- Notes: (1) Axial Elements defined on P. 6.270.
(2) Critical load cases described on p. 6.272.

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	J. GRABINSKI	4 Jun 68	TITLE [REDACTED] INTERNAL LOADS ANALYSIS AFT FUSELAGE	Vol. I	6.273	
CHECKED	F.E. SCHREIBER	4 Jun 68		MODEL	C-5A	
APPROVED	L.G. DARBY	4 Jun 68		LGUS 46-2-2	REPORT NO.	

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

TABLE 6.5.4.6 AXIAL ELEMENT LOADS (Continued)

AXIAL ELEM.	P _t (MAX.) LB.	LOAD CASE	P _c (MAX.) LB.	LOAD CASE	AXIAL ELEM.	P _t (MAX.) LB.	LOAD CASE	P _c (MAX.) LB.	LOAD CASE
71	5792	104	0		72	7014	104	0	
73	9912	101	0		74	14590	101	0	
75	2330	101	0		76	3794	101	-495	101
77	10165	101	0		78	9262	101	0	
79	10404	101	0		80	574	101	-469	104
81	2874	101	-594	104	82	2665	101	0	
83	0		-10981	101	84	0		-10981	101
85	2579	101	-7747	101	86	14550	101	0	
87	7981	101	0		88	1540	101	0	
89	323	101	-5742	101	90	0		-18384	101
91	5045	105	0		92	12489	101	0	
93	0		-10864	101	94	2714	101	-4121	105
95	3770	101	-1141	105	96	0		-5124	107
97	5530	101	0		98	1972	102	-2754	107
99	10704	101	0		100	16849	101	0	
101	16850	101	0		102	13905	101	0	
103	11779	101	0		104	10398	101	0	
105	8681	101	0		106	7724	101	-357	102
107	7715	106	-2679	104	108	5798	106	-3846	102
109	5457	106	-4515	102	110	4823	107	-10088	102
111	4045	103	-3125	102	112	7099	103	-2078	105
113	7099	103	-2078	105	114	0		0	
115	3077	106	-4984	102	116	3077	106	-4984	102
117	3311	103	-2804	102	118	9825	103	-1620	105
119	5460	103	0		120	5606	103	0	
121	5468	103	0		122	4566	103	0	
123	3629	104	0		124	2710	104	0	
125	2582	101	0		126	2678	101	0	
127	2957	101	0		128	3166	101	0	
129	3165	101	0		130	3165	101	0	
131	3166	101	0		132	2957	101	0	
133	2678	101	0		134	2582	101	0	
135	2604	104	0		136	3347	104	0	
137	4131	103	0		138	4918	103	0	
139	5042	103	0		140	4837	103	0	
141	8620	103	-1140	105	142	3032	103	-1712	102
143	2106	106	-2276	102	144	4182	103	-915	105

- Notes: (1) Axial elements defined on p. 6.270 .
(2) Critical load cases described on p. 6.272 .

PREPARED	J. Grabinski	4 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. 1	6.279
CHECKED	F.E. Schreiber	4 Jun 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	4 Jun 68		GIUS 46-2-2	REPORT NO.	

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

TABLE 6.5.4.6 AXIAL ELEMENT LOADS (Continued)

AXIAL ELEM.	P _t (MAX) LB.	LOAD CASE	P _c (MAX) LB.	LOAD CASE	AXIAL ELEM.	P _t (MAX) LB.	LOAD CASE	P _c (MAX) LB.	LOAD CASE
145	2777	103	-2815	102	146	4275	106	-8730	102
147	5124	106	-5576	102	148	5477	106	-3022	102
149	7688	101	-1967	102	150	7724	101	0	
151	8682	101	0		152	10398	101	0	
153	11780	101	0		154	13905	101	0	
155	16350	101	0		156	660	101	0	
157	610	101	0		158	760	101	0	
159	987	101	0		160	996	101	0	
161	4560	101	0		162	1550	102	-1057	101
163	0		-1169	101	164	312	105	-1041	104
165	445	106	-941	104	166	3353	105	-8167	104
167	8620	103	-1140	105	168	1696	101	0	
169	608	104	0		170	584	104	0	
171	797	103	-310	107	172	730	103	-309	107
173	679	104	0		174	597	104	0	
175	508	104	0		176	414	104	0	
177	335	101	0		178	421	101	0	
179	616	101	0		180	635	101	0	
181	595	101	0		182	635	101	0	
183	616	101	0		184	421	101	0	
185	337	104	0		186	435	104	0	
187	545	104	0		188	649	104	0	
189	732	103	0		190	878	103	-351	107
191	822	103	-350	107	192	630	103	0	
193	608	103	0		194	9825	103	-1620	105
195	1696	101	0		196	3784	105	-9370	103
197	363	105	-1159	103	198	463	106	-1063	102
199	1592	102	-1057	101	200	0		-1168	101
201	4576	106	-215	102	202	996	101	0	
203	987	101	0		204	760	101	0	
205	610	101	0		206	660	101	0	
207	4957	103	0		208	503	105	0	
209	618	106	-1551	104	210	636	105	-1597	102
211	11	104	-5	105	212	618	105	-1551	102
213	503	107	-1261	102	214	4333	103	0	
215	2304	106	-3311	102	216	5640	103	-1496	105

- Notes: (1) Axial elements defined on p. 6.270.
(2) Critical load cases described on p. 6.272.

PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY		TEMP.	PERM.
	J. Grabinski	4 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE	Vol. 1 6.279
CHECKED	F.E. Schreiber	4 Jun 68	TITLE		MODEL	
APPROVED	L.G. Darby	4 Jun 68	INTERNAL LOADS ANALYSIS AFT FUSELAGE		GLUS 46-2-2	
					REPORT NO.	

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

TABLE 6.5.4.6 AXIAL ELEMENT LOADS (Continued)

AXIAL ELEM.	P _t (MAX) LB.	LOAD CASE	P _c (MAX) LB.	LOAD CASE	AXIAL ELEM.	P _t (MAX) LB.	LOAD CASE	P _c (MAX) LB.	LOAD CASE
145	2777	103	-2815	102	146	4275	106	-8730	102
147	5124	106	-5576	102	148	5477	106	-3022	102
149	7688	101	-1967	102	150	7724	101	0	
151	8682	101	0		152	10398	101	0	
153	11780	101	0		154	13905	101	0	
155	16350	101	0		156	660	101	0	
157	610	101	0		158	760	101	0	
159	987	101	0		160	996	101	0	
161	4560	101	0		162	1550	102	-1057	101
163	0		-1169	101	164	312	105	-1041	104
165	443	106	-941	104	166	3353	105	-8167	104
167	8620	103	-1140	105	168	1696	101	0	
169	608	104	0		170	584	104	0	
171	797	103	-310	107	172	730	103	-309	107
173	679	104	0		174	597	104	0	
175	508	104	0		176	414	104	0	
177	335	101	0		178	421	101	0	
179	616	101	0		180	635	101	0	
181	595	101	0		182	635	101	0	
183	616	101	0		184	421	101	0	
185	337	104	0		186	435	104	0	
187	545	104	0		188	649	104	0	
189	732	103	0		190	878	103	-351	107
191	822	103	-350	107	192	630	103	0	
193	608	103	0		194	9825	103	-1620	105
195	1696	101	0		196	3784	105	-9370	103
197	363	105	-1159	103	198	463	106	-1063	102
199	1592	102	-1057	101	200	0		-1168	101
201	4576	106	-215	102	202	996	101	0	
203	987	101	0		204	760	101	0	
205	610	101	0		206	660	101	0	
207	4957	103	0		208	503	105	0	
209	618	106	-1551	104	210	636	105	-1597	102
211	11	104	-5	105	212	618	105	-1551	102
213	503	107	-1261	102	214	4333	103	0	
215	2304	106	-3311	102	216	5640	103	-1496	105

- Notes: (1) Axial elements defined on p. 6.270.
(2) Critical load cases described on p. 6.272.

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	J. Grabinski	6 Jun 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Vol. I	6.230	
CHECKED	F.E. Schreiber	6 Jun 68		MODEL	C-5A	
APPROVED	L.G. Darby	6 Jun 68		LG1US 46-2-2	REPORT NO.	

6.5.4.3 Frame Loads - F.S. 2084 (Continued)

TABLE 6.5.4.7 SHEAR PANEL LOADS

PANEL NO.	q (AVE) lb/in	q (MAX) lb/in	LOAD CASE	PANEL NO.	q (AVE) lb/in	q (MAX) lb/in	LOAD CASE	PANEL NO.	q (AVE) lb/in	q (MAX) lb/in	LOAD CASE
1	959	1181	101	2	1263	1798	101	3	338	1094	101
4	893	943	101	5	120	161	103	6	1649	1675	101
7	1625	1795	101	8	201	226	103	9	154	162	102
10	128	130	102	11	115	122	102	12	124	151	102
13	166	247	102	14	229	262	101	15	162	245	104
16	108	148	102	17	211	218	104	18	427	591	103
19	22	24	102	20	206	240	101	21	69	93	101
22	272	310	101	23	48	55	103	24	48	54	103
25	49	53	103	26	42	45	103	27	24	26	103
28	9	9	107	29	12	14	101	30	18	21	103
31	4	4	103	32	10	10	103	33	22	25	103
34	12	14	101	35	11	12	104	36	31	33	103
37	51	55	103	38	60	65	103	39	58	65	103
40	54	61	104	41	69	93	101	42	272	310	101
43	27	30	102	44	206	240	101	45	218	226	102
46	474	657	103	47	164	249	102	48	104	143	102
49	229	262	101	50	186	276	102	51	134	163	102
52	120	128	102	53	132	134	102	54	157	166	102
55	204	230	104	56	1625	1795	101	57	1649	1675	101
58	120	161	103	59	893	943	101	60	338	1094	101
61	1263	1798	101	62	959	1181	101	63	378	378	103
64	256	256	103	65	105	105	103	66	50	50	104
67	50	50	104	68	49	49	104	69	199	199	104
70	322	322	104								

- NOTE: 1. q (max) is given for the highest loaded edge of the panel.
2. Shear panels defined on p. 6.271 .
3. Critical load cases described on p. 6.272 .

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	W. L. Propes	19 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Vol. I	6.231	
CHECKED	L. G. Darby	19 Apr 68		MODEL	C-5A	
APPROVED	P. W. Horton	19 Apr 68		LGUS 46-2-2	REPORT NO.	

6.5.5 CANTED LATCH FRAMES

6.5.5.1 Discussion

The canted latch frames are the stub frames which are bounded by the 4F41059 Intercoastal on the upper side and the 4F2300 close-out beam and 4F40018 sloping longeron on the lower side. There are eight such frames in the group commonly referred to as the ramp latch frames; six of which may be determined typical or similar, the other two have differences significant enough to require further discussion and analysis. The eight frames are located from fuselage station 1984 to 2131 inclusively all of which are in the pressurized area with F.S. 2131 canted forming part of the pressure vessel boundary. Illustrations showing the general location of the canted latch frames in relation to the aft cargo ramp, cargo doors, and the pressure bulkhead; and then the details of a typical ramp frame showing the ramp yoke and saddle loading scheme are found in figures 6.5.4.1, & 6.5.4.2.

The primary function of the ramp latch frames is to distribute ramp cargo and pressure loads into the fuselage frames. These basic loads; their source, and how they are applied and reacted are shown in figures 6.5.4.1.

Internal loads are determined from a computer program for Computer Aided Structural Design (CASD) (Refs. no. 17,). Axial cap loads, web shear loads, and shell support shears are provided by this program and will be used in the detail analysis.

PREPARED	NAME W. L. Probes	DATE 19 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	PERM. 6.282
CHECKED	L. G. Darby	19 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	P. W. Horton	19 Apr 68		REPORT NO.	LGIUS 46-2-2	

6.5.5 CANTED LATCH FRAMES (CONT'D)

6.5.5.2

F.S. → 1964 1984 2004 2024 2044 2064 2084 2104 2124

Canted

2110
Canted

Sloping
Longeron

4F41057
Intercostal

4F42300
Closeout Beam

Aft Cargo Ramp

Aft side
Cargo Door

Aft Center
Cargo Door

** See p.6.283 for typ. latch frame detail

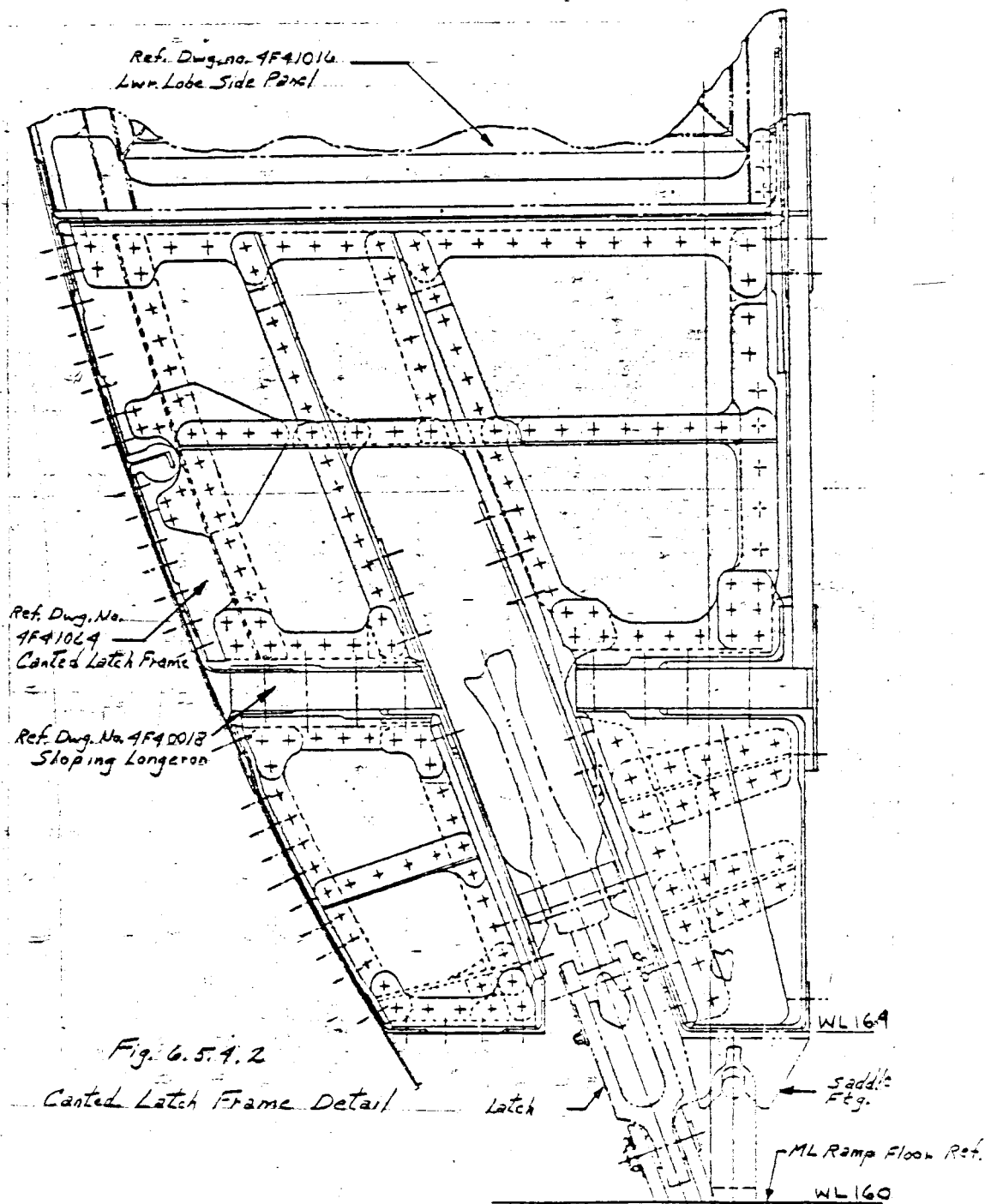
Fig. 6.5.4.1

Sketch Locating Canted Latch Frames with Respect to Adjacent Structure on A/C.

PREPARED	NAME W. L. Propes	DATE 19 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	PERM. 6.293
CHECKED	L. G. Darby	19 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL C-5A		
APPROVED	P. W. Horton	19 Apr 68		LG1US 46-2-2 REPORT NO.		

6.5.5 CANTED LATCH FRAMES (CONT'D)

6.5.5.3 Geometry - F.S. 2084



PREPARED	NAME W.L. Propes	DATE 29 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	PERM. 6.234
CHECKED	F.E. Schreiber	29 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL C-5A		
APPROVED	L.G. Darby	29 Apr 68		LGIUS 46-2-2 REPORT NO.		

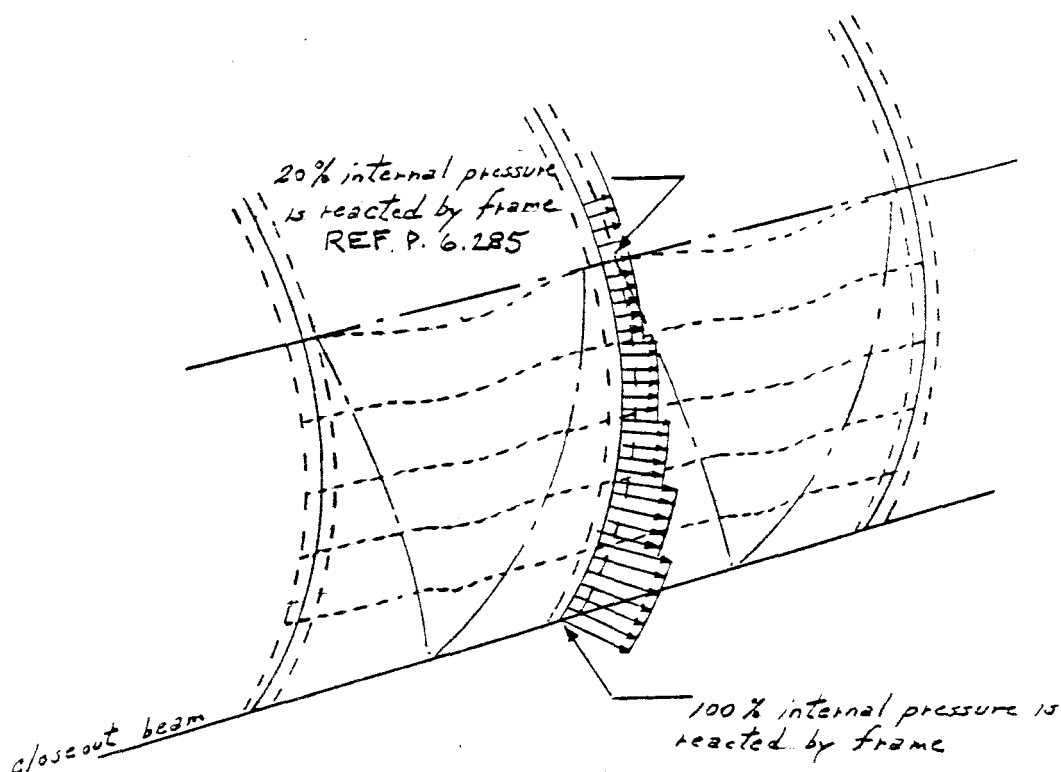
6.5.5 Canted Latch Frames (CONT'D)

6.5.5.4 Pressure Loads - General

The variable pressure load which is assumed to be carried by the frame, commencing at the closeout beam and running up the frame a distance of approx. 35 in. as measured along water lines, is due to the fact that a continuous longitudinal tie exists at the closeout. This comparatively rigid load path enables all of the pressure loading to be reacted by the adjacent frames. Moving up the frame and away from the closeout beam longitudinal tie, fore and aft stiffness decreases and therefore the percentage of load reacted by the frames decreases. The difference being taken in the skin by membrane action or, more commonly, Flugge effect. The following sketch depicts this effect, the percentage of pressure load reacted by the frame and how the percentage was assumed to vary along the periphery of the frame. (REF. 30)

Fig. 6.5.4.3

Sketch Showing Pressure Load Redistribution



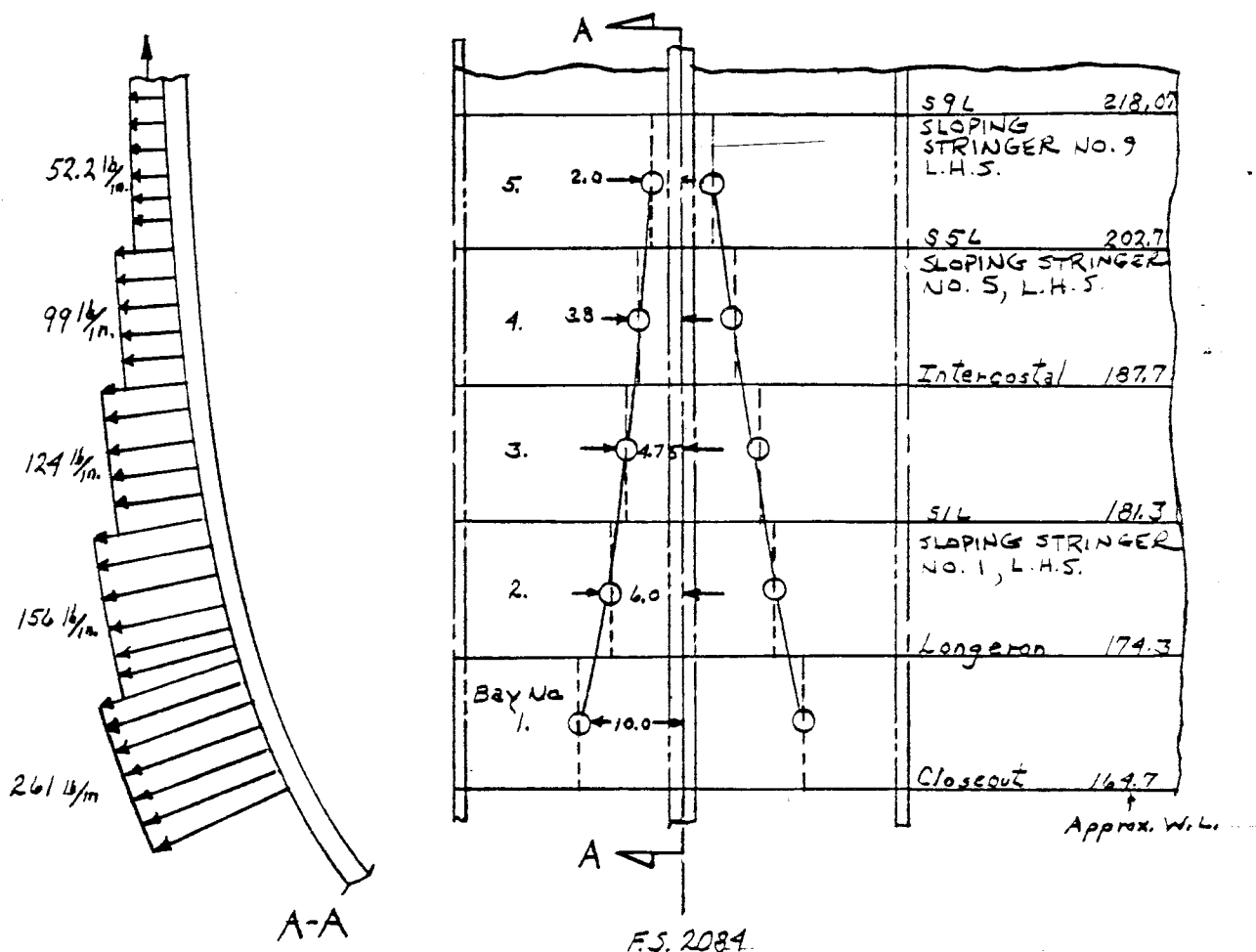
PREPARED	NAME W.L. Propes	DATE 14 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
CHECKED	F.E. Schreiber	14 May 68	TITLE AFT FUSELAGE LOADS ANALYSIS REPORT	MODEL	C-5A	6.285
APPROVED	L.G. Darby	14 May 68		LGUS	REPORT NO.	

6.5.5 CANTED LATCH FRAMES (CONT'D)

6.5.5.4 Pressure Loads - Calculation of Pressure Variation

The approximate 3.5 : 1.0 load decay ratio assumption used to simulate the stiffness of the structure adjacent to the frame has its origin in SMT 34 "Stress Distribution at Cutouts", Ref. No. 1 p. 2

The sketch shown below shows the calculations of the pressure variation for each model bay length for the ultimate pressure load case.



- Bay No. 1: $(13.05)(20.0) = 261 \text{ lb/in.} = 100\% \text{ pressure reacted by frame}$
 2: $(13.05)(12.0) = 156 \text{ lb/in.}$
 3: $(13.05)(9.5) = 125 \text{ lb/in.}$
 4: $(13.05)(7.6) = 99 \text{ lb/in.}$
 5: $(13.05)(4.0) = 52.2 \text{ lb/in.} = 20\% \text{ pressure reacted by frame}$

* REF. 10, P. 9.7.117 ($8.7 \text{ PSI} \times 1.5 = 13.05 \text{ PSI ULT.}$)

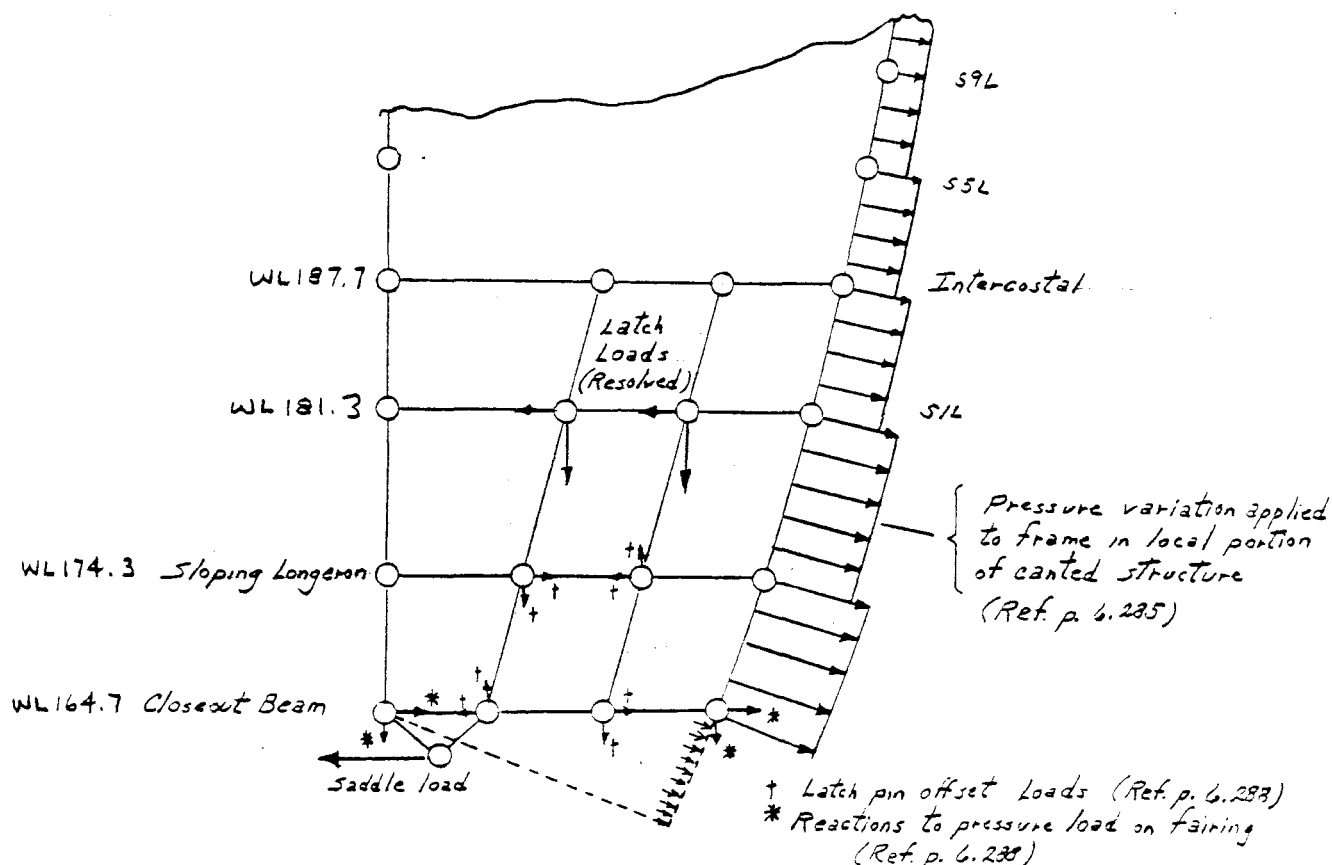
PREPARED	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
	W.L. Propes	29 Apr 68			Vol. I	6.286
CHECKED	F.E. Schreiber	29 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L. G. Darby	29 Apr 68		LG1US 46-2-2 REPORT NO.		

6.5.5 Canted Latch Frames (CONT'D)

6.5.5.5 Analysis Model - General

A model of the entire frame at Fus. Sta. 2084 was constructed for input into a computer program, ref. p. 6.268. Particular attention was given to the canted frame portion and the details of the ramp hook and saddle loading mechanism. The sketch below shows the model of the canted frame, the loads due to pressure, where they are applied, and their source.

Fig. 6.5.4.4 Canted Latch Frame Model



PREPARED	NAME W. L. Probes	DATE 21 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE Vol. I	TEMP. 6.237
CHECKED	F.E. Schreiber	21 May 68	TITLE AFT FUSELAGE LOADS ANALYSIS REPORT	MODEL C-5A	PERM.
APPROVED	L. G. Darby	21 May 68		LGUS 46-2-2	REPORT NO.

6.5.5 CANTED LATCH FRAMES (CONT'D)

6.5.5.5 Analysis Model - General

The following sketch depicts the analysis model with the corresponding axial load carrying bar element numbers, the shear carrying panel numbers, and the grid point numbers.

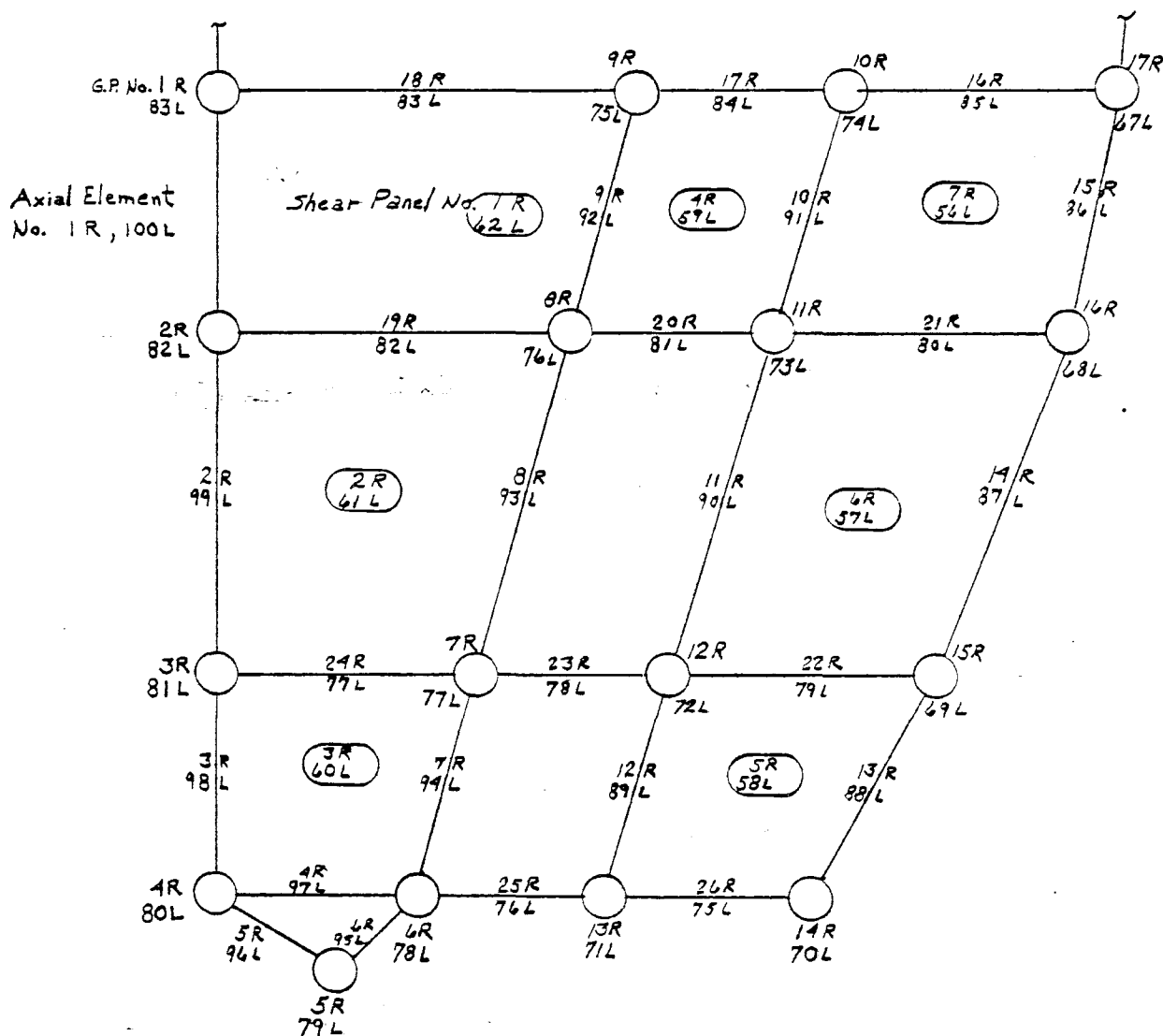


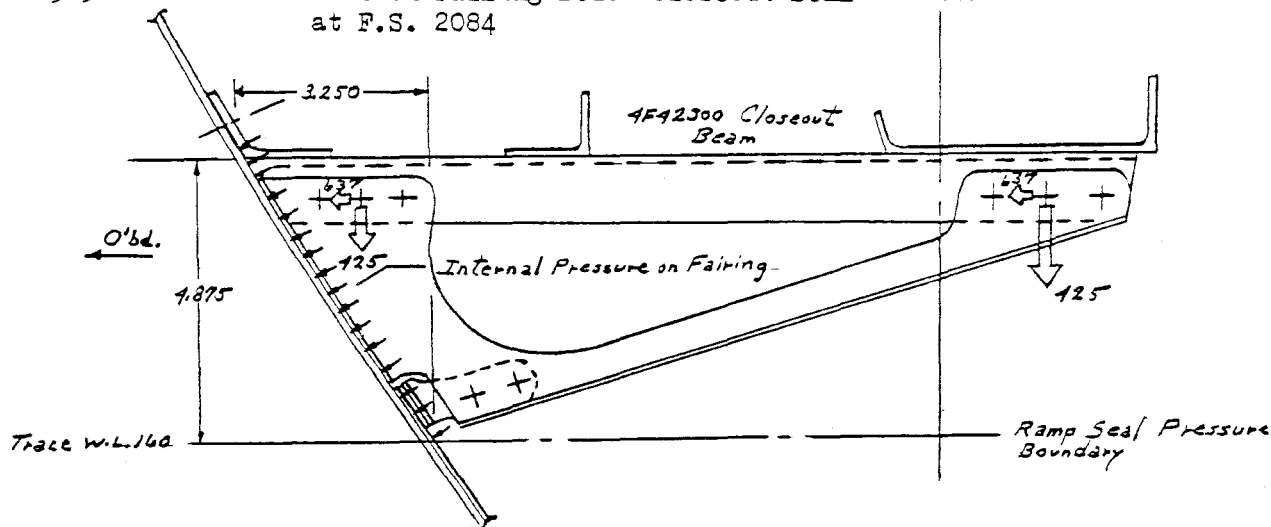
Fig. 6.5.4.5 Canted Frame Model Element nos.

PREPARED	W.L. Propes	13 May 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6.288
CHECKED	F.E. Schreiber	13 May 68	TITLE AFT FUSELAGE LOADS ANALYSIS REPORT	MODEL	C-5A
APPROVED	L.G. Darby	13 May 68		LGJUS 46-2-2	REPORT NO.

Canted Latch Frames

6.5.5.6 Pressure Loads on Fairing Below Closeout Beam at F.S. 2084

B.L. 120

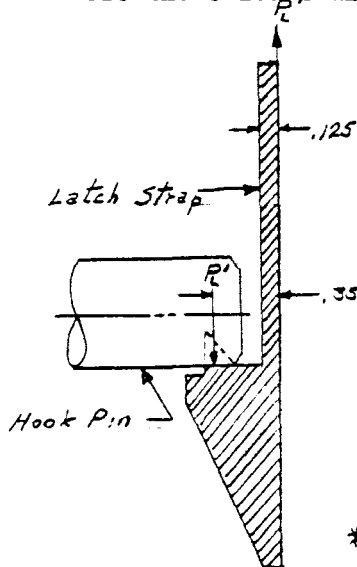


Ultimate Pressure = 13.05 psi $P_H = (13.05)(20.0)(4.875) = 1274 \text{ lb.}$
 (REF. P. 6.285) $P_V = (13.05)(20.0)(3.250) = 848 \text{ lb.}$

Assume reactions to be distributed equally inboard & outboard.

Latch Pin Offset Loads

The source of the loads applied to the analysis model which are called the latch pin or hook pin offset loads is the fit of the hook pin in the latch strap as shown in the sketch below. The moment is resolved into pairs of concentrated loads and applied to the model grid points which represent the location on the structure where these loads are to be reacted.



Fus. Sta. Hook Load Latch Load = $P_L' .352 P_L' = M$ $P_{H \text{ inbd.}} = P_{V \text{ inbd.}}$ $P_{H \text{ outbd.}} = P_{V \text{ outbd.}}$
 2084 32939 lb. 18590 lb. 6650 in-lb. 650 lb. 660 lb.

$P_{H \text{ inbd.}} = P_{V \text{ inbd.}} \cos 20^\circ = 650(.940) = 611 \text{ lb.}$
 $P_{V \text{ inbd.}} = P_{V \text{ inbd.}} \sin 20^\circ = 650(.342) = 222 \text{ lb.}$
 $P_{H \text{ outbd.}} = P_{V \text{ outbd.}} \cos 20^\circ = 660(.940) = 616 \text{ lb.}$
 $P_{V \text{ outbd.}} = P_{V \text{ outbd.}} \sin 20^\circ = 660(.342) = 224 \text{ lb.}$

Note: Ultimate pressure is used for illustration purposes. Burst pressure is the critical load case and is analyzed in LGJUS 46-4-2 (Ref. 15)

* Ultimate pressure load case no. 102 ref. p. 6.272

PREPARED	NAME P.T. Fletcher	DATE 16 Aug 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	PERM. 6,289
CHECKED	L.G. Darby	16 Aug 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	P.W. Horton	16 Aug 68		LGJUS 46-2-2	REPORT NO.	

6.6 AFT TROOP FLOOR

6.6.1 Geometry and Loads Discussion

This portion of the analysis covers the area between the production break at F.S. 1744 and the pressure bulkhead at F.S. 2101. The general design and geometry is shown on Page 6.264 of REF. 15.

The honeycomb portion of the floor is continuous between F.S. 1744 and F.S. 1964. The transverse beams provide support every 40" with intermediate stub beams outboard of B.L. 60. Longitudinal intercostals at approx. B.L. 20 and B.L. 60 support the 3-man and 2-man seats

The honeycomb face sheets are .030" thick 7079-T6 bonded to a .625" deep core, in the fwd area and .032" thick 7075-T6 F/S in the aft section. There is a stairway opening in the floor between F.S. 1964 and F.S. 2004 and R. & L. BL 32, to provide access via retractable ladder to the cargo floor below. The area immediately aft of this is covered by a pressure relief grill, which can be easily removed to allow passageway of the galley unit. As the grill itself is not capable of transmitting tension or shear loads from the surrounding floor and only walkway loads, the whole area between F.S. 1964 - F.S. 2044 x 60" width must be considered non-load carrying. In order to carry loads due to pressurization around this area, the transverse floor beams at F.S. 1964 and F.S. 2004 are heavier and two continuous longitudinal beams have been added from F.S. 2084 and F.S. 1924 to reduce the stress down to a tolerable fatigue level at the edge of the cutout.

Critical Design Loads - Honeycomb Floor Portion (Ref. 10, Page 9.7.077)

Basically there are three major load conditions imposed on the floor.

- (1) The tension load due to pressurization, in this case the stress is limited to 18,000 psi under operating pressure conditions.
- (2) Shear plus tension or comp. loads due to ultimate flight conditions which can be added to the tension loads (ultimate) due to pressurization.
- (3) The normal floor load imposed due to movement of personnel etc is 188 pounds per square foot limit pressure (down) over the entire floor area, or a limit load of 250 pounds applied to an area of one square inch within two square foot area which a man can walk or stand. These loads can be combined with the normal operating pressure.

Critical Design Loads for the Lateral Floor Support Beams

The transverse beams are required to support the honeycomb against the personnel load of 188 pounds per square foot (down), or 75 n_z pounds per square foot where n_z is the airplane vertical load factor at the center of gravity. This floor loading need not exceed 188 pounds per sq. ft. in a downward direction and 75 lbs. per sq. ft. in an upward direction which gives higher compressive loads in the lower cap at the beam. These are imposed together with the bending moments and shear forces from flexure of the fuselage frames due to flight, pressure or cargo load combinations. If the burst pressure condition is applied alone, then the beam cap tensile stress should be restricted by Cond. (1) for reasons of fatigue.

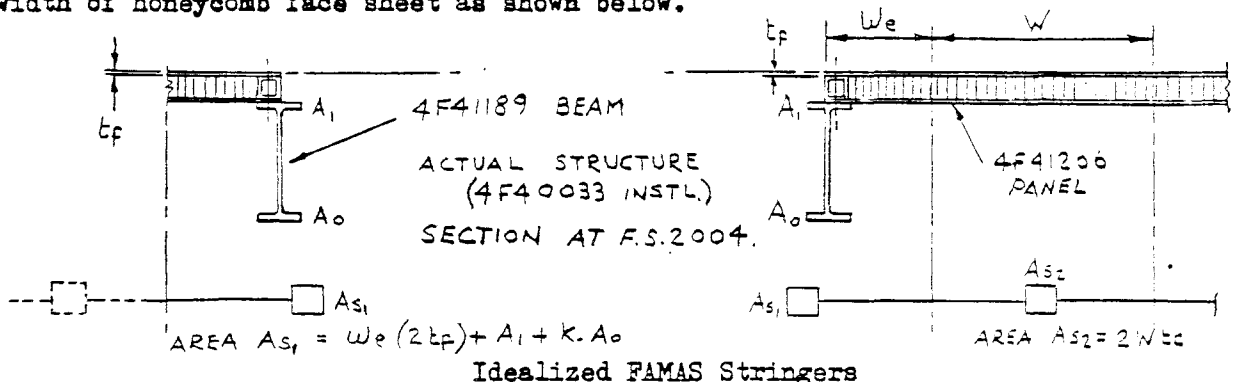
PREPARED	NAME P.T. Fletcher	DATE 5 Sep 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	FORM. 6.290
CHECKED	J. Halliday	5 Sep 68	TITLE INTERNAL LOAD ANALYSIS AFT FUSELAGE	MODEL C-5A		
APPROVED	L.G. Darby	5 Sep 68		LG1US 46-2-2 REPORT NO.		

6.6.1 AFT TROOP FLOOR F.S. 1744 - F.S. 2100 (Continued)

Dwgs. 4F40014 and 4F40033

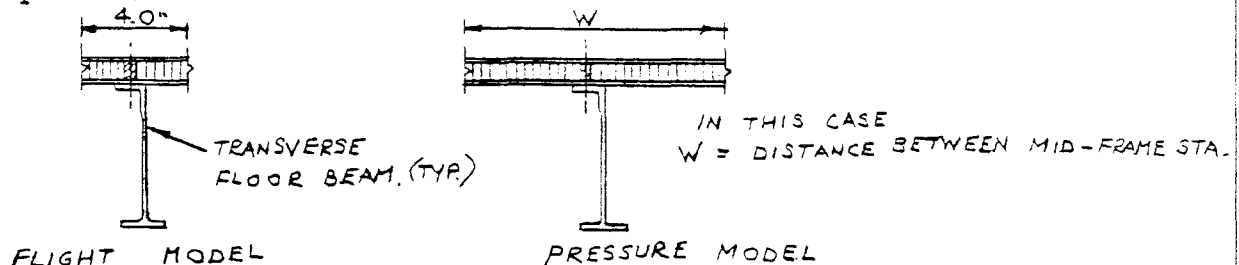
Discussion of the Derivation of Internal Loads

The troop floor is represented by a grid work of stringers, covers and frame bars as shown on Pages 6.315 and 6.317 and is part of FAMAS Models 1 thru 4 given in Vol. 4, Sect. 2 of Ref. 8. The transverse beams supporting the floor are represented by bending & axial elements. The idealized stringers in the FAMAS models are simply the lumped face sheet area between grid points, with the exception of the areas either side of the stairway at right and left B.L. 29.4, in the vicinity of F.S. 1924 thru F.S. 2084 where the effective area of the longitudinal beams 4F41241, 4F41149 and 4F41150 have been added to some effective width of honeycomb face sheet as shown below.



t_f = Face Sheet Thickness W_e = Effective Honeycomb Width $\approx 8.0"$

W = Distance between middle of grid-points (the stringers run between grid points) and K is lower cap effectiveness factor, i.e. at end of beams $k = 0$ and at middle of beam $K = 1.0$. The cover thickness is the combined honeycomb face sht. thickness (nominal). The frame bar areas for the flight model include the upper and lower beam cap area plus four inches width of honeycomb, whereas the pressure model included the full width between bars as shown below.

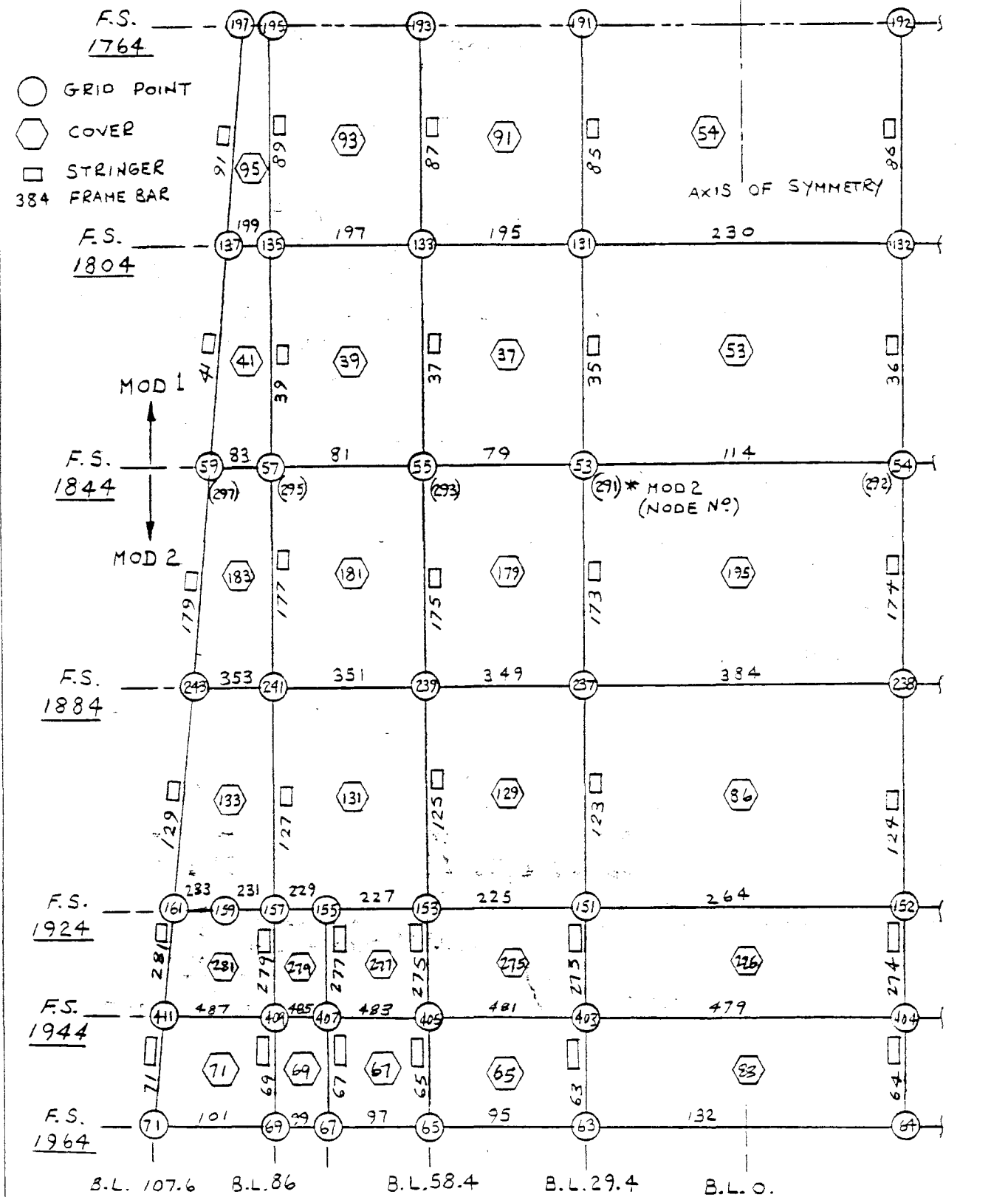


The loads due to ultimate pressure in the troop compartment (8.7 x 1.5 psi) are given on Pages 6.318 through and the flight loads which is a scan of the maximum tension and compression loads with their corresponding shear loads in the adjacent panels, together with the most critical shear loads with the corresponding tension or compression in the adjacent stringers and frame bars.

Only one frame bar station is included (FS 2044) for the flight cases and a reference to loads for F.S. 1964 which were derived from a computer graphics system. The ref. pages are 6.240 and 6.263 thru 6.266.

PREPARED	P.T. Fletcher	30 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I	6/291
CHECKED	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	30 Apr 68		REPORT NO.	LG1US 46-2-2	

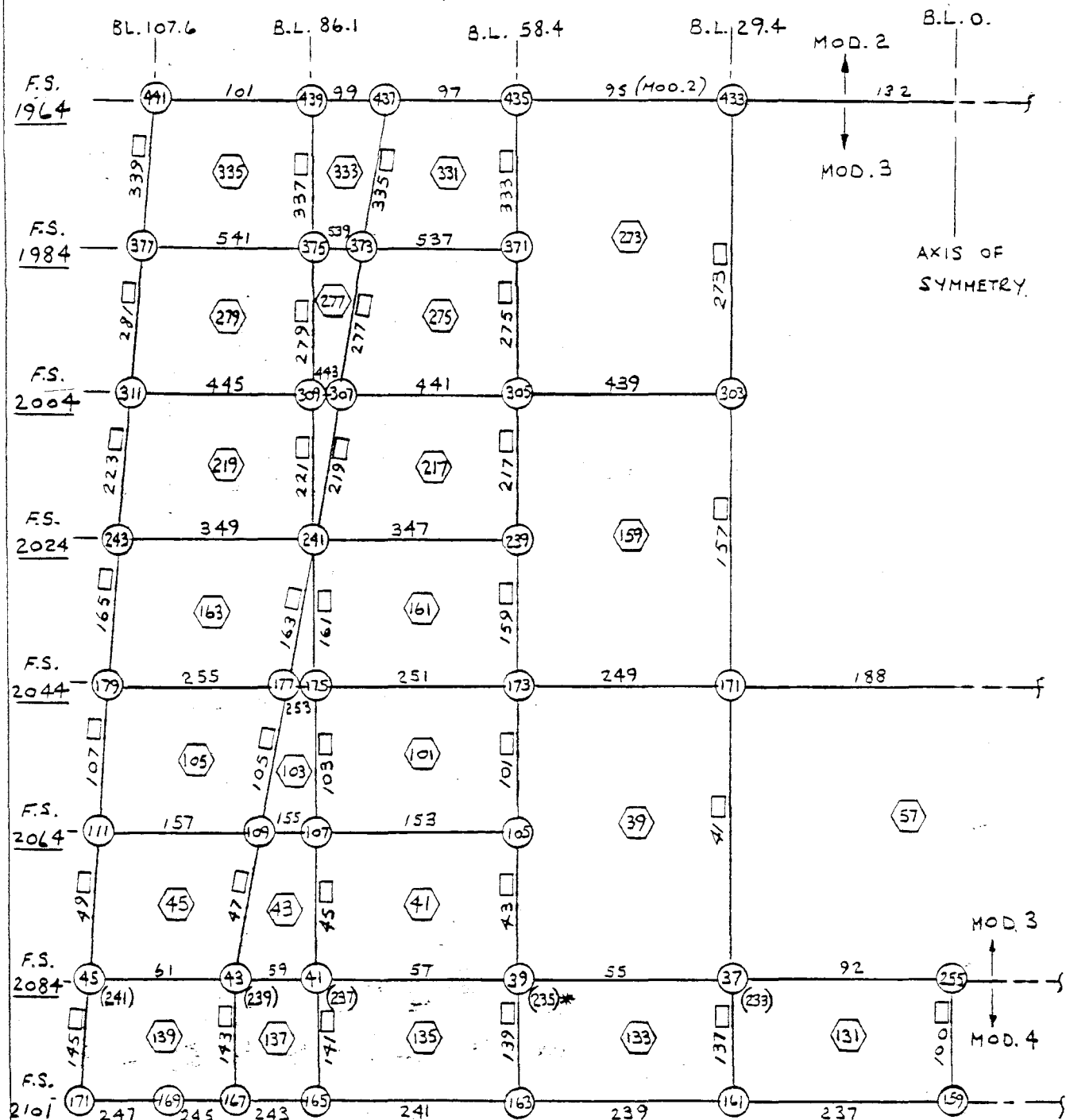
6.6.1. AFT TROOP DECK F.S. 1764-1964.0 B.L.O. (REF. 8 VOL. 4 SECT 2)



NOTE: L/H SHOWN, R/H ARE ONE NUMBER HIGHER.

NAME		DATE		TEMP.	PERM.
PREPARED	P.T. Fletcher	30 Apr 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	Vol. I 6292
CHECKED	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A
APPROVED	L.G. Darby	30 Apr 68		LGIUS 46-2-2 REPORT NO.	

6.6.1. AFT TROOP DECK F.S. 1964-2101.09 (REF. 8-VOL.4)
L/H SHOWN, R/H ARE ONE NUMBER HIGHER



B.L. 118.1

○ NODE OR GRID POINT

⬡ PANEL COVER

□ STRINGER

249 FRAME BAR

* MOD. 4 (NODE NO.)

	NAME	DATE	LOCKHEED - GEORGIA COMPANY	TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I 6.293
CHECKED	J. Halliday	28 Jun 68	TITLE	C-5A	
			AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	LGIUS 46-2-2
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	

6.6.1 Aft Troop Floor, Ult. Press (8.7 x 1.5) PSI

Stringers and Adj. Covers



F.S. 1804 - 1764 (MOD. 1)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
91	3.53	39094				95	57.1
89	0.10	1889	.055	95	57.1	93	-24.4
87	1.32	21881	.055	93	-24.4	91	-16.5
85	0.47	14739	.055	91	-16.5	54	22.1
86	0.47	14502	.055	92	23.6	54	22.1
88	1.32	20897	.055	94	3.0	92	23.6
90	0.10	1703	.055	96	40.1	94	3.0
92	3.58	34776				96	40.1



F.S. 1844 - 1804 (MOD. 1)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
41	4.11	48765				41	66.1
39	1.10	7323	.057	41	66.1	39	-124.1
37	1.67	18413	.057	39	-124.1	37	41.4
35	2.52	16177	.057	37	41.4	53	24.9
36	2.52	15880	.057	38	92.3	53	24.9
38	1.67	17539	.057	40	-54.9	38	92.3
40	1.10	6266	.057	42	136.2	40	-54.9
42	3.46	30761				42	136.2

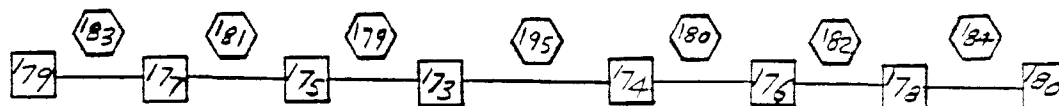
NAME		DATE		LOCKHEED - GEORGIA COMPANY		TEMP.		PERM.	
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.		PAGE	Vol. I 6.294			
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS			C-5A			
APPROVED	L.G. Darby	28 Jun 68				MODEL LG1US 46-2-2			
						REPORT NO.			

REV. (B) KRW

1-8-71

6.6.1 Aft Troop Floor, Ult. Press (8.7 x 1.5) PSI

Stringers and Adj. Covers



F.S. 1884 - 1844 (MOD. 2)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
179	6.9	55680.				183	123.1
177	1.21	12561.	.057	183	123.1	181	67.2
175	1.77	14913.	.057	181	67.2	179	91.8
173	252	19596.	.057	179	91.8	195	-3.4
174	252	19211.	.057	180	81.2	195	-3.4
176	1.77	14225.	.057	182	50.7	182	81.2
178	1.21	11339.	.057	184	101.8	182	50.7
180	3.90	30682.				184	101.8



F.S. 1924 - 1884 (MOD. 2)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
129	3.73	43593.				133	251.5
127	1.31	15668.	.057	133	251.5	131	155.7
125	1.62	12483.	.057	131	155.7	129	252.6
123	252	26160.	.057	129	252.6	86	-12.9
124	252	25677.	.057	130	225.8	86	-12.9
126	1.62	11821.	.057	132	136.1	130	225.8
128	1.31	14346.	.057	134	231.9	132	136.1
130	3.10	30337.				134	231.9

NAME	DATE	LOCKHEED - GEORGIA COMPANY	TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE
CHECKED	J. Halliday	28 Jun 68	TITLE	VOL. I 6.295
APPROVED	L.G. Darby	28 Jun 68	AFT FUSELAGE INTERNAL LOADS ANALYSIS	C-5A MODEL LGIUS 46-2-2 REPORT NO.

REV. (B) KRW 1-8-71

6.6.1 Aft Troop Floor, Ult. Press (8.7 x 1.5) PSI

Stringers and Adj. Covers



F.S. 1944-1924 (MOD. 2)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
281	3.18	33143				281	123
279	1.31	14724	.057	281	123	279	-106
277	.79	28818	.057	279	-106	277	107
275	1.62	13056	.057	277	107	275	-99
273	2.52	39301	.057	275	-99	226	7.5
274	2.52	38801	.057	276	-95	226	7.5
276	1.62	12514	.057	278	91	276	-95
278	.79	2713	.057	280	-110	278	91
280	1.31	13513	.057	282	92	280	-110
282	3.11	28512				282	92



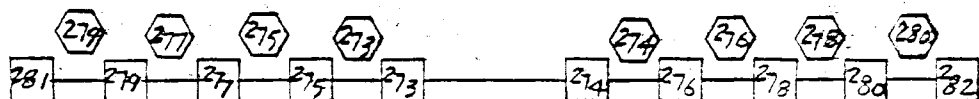
F.S. 1964-1944 (MOD. 2)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
71	3.18	32995				71	444
69	.89	12660	.057	71	444	69	402
67	.79	8246	.057	69	402	67	218
65	1.35	13170	.057	67	218	65	5.3
63	2.52	40532	.057	65	5.3	83	-8.4
64	2.52	40211	.057	66	-9.9	83	-8.4
66	1.35	12990	.057	68	204	66	-9.9
68	.79	7922	.057	70	388	68	204
70	.89	11963	.057	72	450	70	393
72	3.11	30384				72	450

NAME		DATE	LOCKHEED - GEORGIA COMPANY	TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	VOL. I 6,296
CHECKED	J. Halliday	28 Jun 68	TITLE	C-5A	
			AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	LG1US 46-2-2
APPROVED	L.G. Darby	28 Jun 68	REPORT NO.		

6.6.1 Aft Troop Floor, Ult. Press (8.7 x 1.5) PSI

Stringers and Adj. Covers



F.S. 2004 - 1984 (MOD. 3)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
281	2.71	28410				279	341
279	.89	11292	.061	279	341	277	375
277	.85	9515	.061	277	375	275	401
275	1.56	16821	.061	275	401	273	-209
273	1.94	24880	.061	273	-209		
274	1.94	24718	.061	274	-207		
276	1.56	16700	.061	276	404	274	-207
278	.85	9315	.061	278	378	276	404
280	.89	11091	.061	280	351	278	378
282	2.71	27743				280	351



F.S. 2024 - 2004 (MOD. 3)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
223	2.71	26641				219	453
221	.81	12026	.061	219	453		
219	.85	9248				217	346
217	1.66	18846	.061	217	346	159	432
157	1.81	30327	.061	159	482		
158	1.81	30299	.061	160	486		
218	1.66	18675	.061	218	352	160	486
220	.85	9056				218	352
222	.81	11909	.061	220	461		
224	2.71	26323				220	461

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6-97
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A LGIUS 46-2-2	
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.		

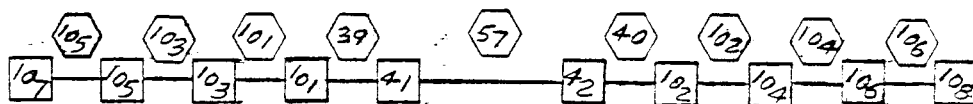
6.6.1 Aft Troop Floor, Ult. Press (8.7 x 1.5) PSI

Stringers and Adj. Covers



F.S. 2044-2024 (MOD. 3)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
165	2.77	23449				163	765
163	.86	7697	.061	163	765		
161	1.06	14859				161	745
159	1.66	29752	.061	161	745	159	482
157	1.81	30327	.061	159	482		
158	1.81	30299	.061	160	486		
160	1.66	29703	.061	162	751	160	486
162	1.06	14778				162	751
164	.86	7498	.061	164	772		
166	2.77	23315				164	772



F.S. 2064-2044 (MOD. 3)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
107	2.78	20188				105	610
105	.99	8760	.059	105	610	103	517
103	1.03	16812	.059	103	517	101	322
101	1.60	23083	.059	101	322	39	38.5
41	2.65	47694	.059	39	38.5	57	1.8
42	2.65	47716	.059	40	387	57	1.8
102	1.60	23008	.059	102	325	40	387
104	1.03	16726	.059	104	520	102	325
106	.99	8639	.059	106	612	104	520
108	2.78	20106				106	612

NAME		DATE	LOCKHEED - GEORGIA COMPANY	TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I 6.298
CHECKED	J. Halliday	28 Jun 68	TITLE	C-5A	
APPROVED	L.G. Darby	28 Jun 68	AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	LGIUS 46-2-2
				REPORT NO.	

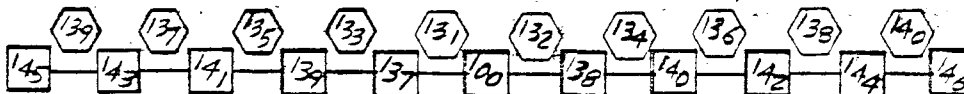
6.6.1 Aft Troop Floor, Ult. Press (8.7 x 1.5) PSI

Stringers and Adj. Covers



F.S. 2084-2064 (MOD.3)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
49	2.75	17211				45	860
47	1.06	10354	.059	45	860	43	796
45	1.14	19475	.059	43	796	41	725
43	1.67	33552	.059	41	725	39	385
41	2.65	47694	.059	39	385	57	1.8
42	2.65	47716	.059	40	387	57	1.8
44	1.67	33534	.059	42	728	40	387
46	1.14	19401	.059	44	800	42	728
48	1.06	10204	.059	46	862	44	800
50	2.75	17116				46	862



F.S. 2101-2084 (MOD.4)

STRG. NO.	AREA (in ²)	TENSION LOAD (lbs.)	COVER THICK	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
145	3.33	12897				139	719
143	1.15	13337	.059	139	719	137	671
141	1.14	22332	.059	137	671	135	419
139	1.67	34131	.059	135	419	133	299
137	1.72	51779	.059	133	299	131	727
100	1.74	12418	.059	131/132	727/727		
138	1.72	51795	.059	134	302	132	727
140	1.67	34095	.059	136	422	134	302
142	1.14	22245	.059	138	670	136	422
144	1.15	13280	.059	140	719	138	670
146	3.33	12758				140	719

NAME		DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68		PAGE	VOL. I
CHECKED	J. Halliday	28 Jun 68	TITLE	MODEL C-5A	
APPROVED	L.G. Darby	28 Jun 68	AFT FUSELAGE INTERNAL LOADS ANALYSIS	LGJUS 46-2-2 REPORT NO.	

6.6.1 Aft Troop Floor, Ult. Press. (8.7 x 1.5) psi

Frame Bars and Adj. Covers

(95) 199	(93) 197	(91) 195	(54) 230	(92) 196	(94) 198	(96) 200
(41)	(39)	(37)	(53)	(38)	(40)	(42)

F.S. 1804 (MOD. 1)

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
199	2.76	41753		41	66.1	95	57.1
197	3.18	53424		39	-124.1	93	-24.4
195	3.22	54061		37	41.4	91	-16.5
230	3.33	53302		53	24.9	54	22.1
196	3.22	54377		38	92.3	92	23.6
198	3.18	54528		40	-54.9	94	3.0
200	2.76	42933		42	136.2	96	40.1

(41) 83	(39) 81	(37) 79	(53) 114	(38) 80	(40) 82	(42) 84
(183)	(181)	(179)	(195)	(180)	(182)	(184)

F.S. 1844 (MOD. 1)

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
83	3.06	61747		183	120.2	41	66.1
81	3.20	77232		181	64.9	39	-124.1
79	3.20	72426		179	89.1	37	41.4
114	3.23	70457		195	-1.87	53	24.9
80	3.20	69201		180	81.4	38	92.3
82	3.20	71201		182	51.1	40	-54.9
84	3.06	54154		184	101.9	42	136.2

(183) 353	(181) 351	(179) 349	(195) 334	(180) 350	(182) 352	(184) 354
(133)	(131)	(129)	(86)	(130)	(132)	(134)

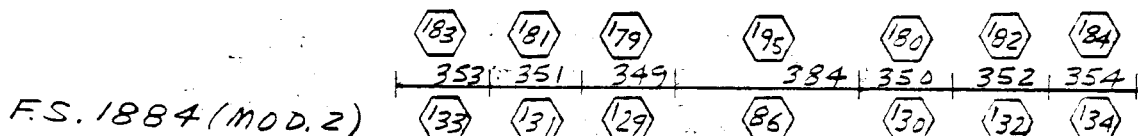
F.S. 1884 (MOD. 2)

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
353	3.06	39151		133	212	183	86
351	3.20	48267		131	136	181	36
349	3.20	44729		129	219	179	69
384	3.23	42199		86	-10.5	195	1.2
350	3.20	43715		130	196	180	68
352	3.20	46727		132	116	182	31
354	3.06	38658		134	191	184	72

PREPARED	NAME P.T. Fletcher	DATE 28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	TEMP. Vol. 1	PERM. 6300
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL C-5A		
APPROVED	L.G. Darby	28 Jun 68		LGIUS 46-2-2 REPORT NO.		

6.6.1 Aft Troop Floor, Ult. Press. (8.7 x 1.5) psi

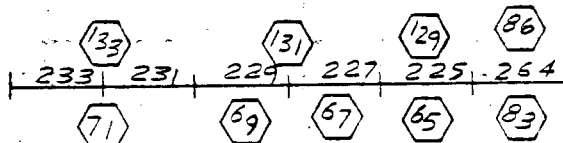
Frame Bars and Adj. Covers



BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
353	3.06	39151		133	212	183	86
351	3.20	48267		131	136	181	36
349	3.20	44729		129	219	179	69
384	3.23	42199		86	-10.5	195	1.2
350	3.20	43715		130	196	180	68
352	3.20	46727		132	116	182	31
354	3.06	38658		134	191	184	72

F.S. 1924 (MOD.2)

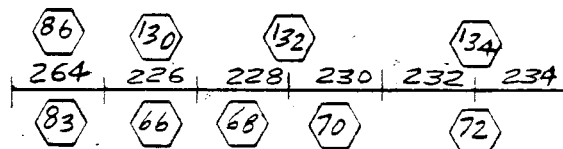
LEFT HAND SIDE



BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
233	2.22	33490		71	444	133	212
231	2.57	37412		71	444	133	212
229	2.53	35956		69	402	131	136
227	2.53	36546		67	218	131	136
225	2.55	28803		65	5.3	129	219
264	2.57	4782		83	-8.4	86	-10.5

F.S. 1924 (MOD.2)

RIGHT HAND SIDE



BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
264	2.57	4782		83	-8.4	86	-10.5
226	2.55	29115		66	-9.9	130	196
228	2.53	36982		68	204	132	116
230	2.53	36654		70	388	132	116
232	2.57	32528		72	450	134	191
234	2.22	33814		72	450	134	191

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6.301
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LG1US 46-2-2	REPORT NO.	

6.6.1 Aft Troop Floor, Ult. Press. (8.7 x 1.5) psi

Frame Bars and Adj. Covers

F.S. 1964 (MOD. 2)

71	69	67	65	83	66	68	70	72
101	99	97	95	132	96	98	100	102
335	333	331	273		274	332	334	336

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
101	4.08	30192		335	26	71	444
99	4.08	34260		333	37	69	402
97	3.88	42219		331	-49	67	218
95	2.88	35065		273	-209	65	5.3
132	2.48	10045				83	-8.4
96	2.88	35212		274	-207	66	-9.9
98	3.88	42626		332	-49	68	204
100	4.08	34248		334	38	70	338
102	4.08	30124		336	36	72	450

F.S. 1984
(MOD. 3)

335	333	331		332	334	336
541	539	537	273	274	538	540
279	277	275		276	278	280

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
541	2.43	13068		279	341	335	26
539	2.20	8680		277	375	333	37
537	1.63	5369		275	401	331	-49
538	1.63	5399		276	404	332	-49
540	2.20	8751		278	378	334	38
542	2.43	13155		280	351	336	36

F.S. 2004
(MOD. 3)

279	277	275	273	274	276	278	280
445	443	441	439	440	442	444	446
219	217	159		160	218		220

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
445	2.46	16434		219	453	279	341
443	2.61	10784				277	375
441	3.16	20535		217	346	275	401
439	3.20	10011		159	482	273	-209
440	3.20	10031		160	436	274	-207
442	3.16	20630		218	352	276	404
444	2.61	10758				278	373
446	2.46	16480		220	461	280	351

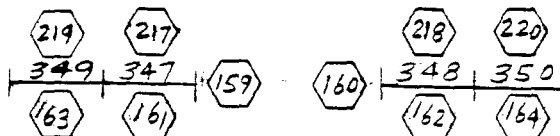
PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	VOL. I	6.302
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	LGIUS 46-2-2	

6.6.1 Aft Troop Floor, Ult. Press. (8.7 x 1.5) psi

Frame Bars and Adj. Covers

F.S. 2024

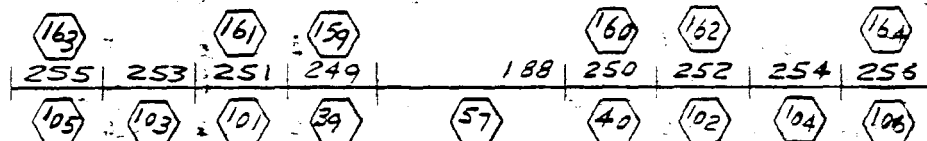
(MOD.3)



BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
349	2.43	14465		163	765	219	453
347	1.59	6878		161	745	217	346
348	1.59	6896		162	751	218	352
350	2.43	14492		164	772	220	461

F.S. 2044

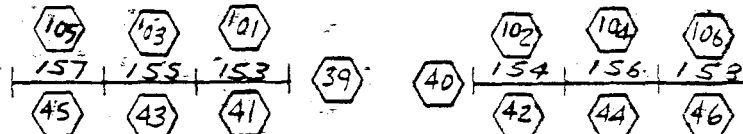
(MOD.3)



BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
255	2.88	20606		105	610	163	765
253	2.81	38270		103	517		
251	3.43	31937		101	322	161	745
249	4.21	39203		39	385	159	
188	3.28	40658		57	1.8		432
250	4.21	39284		40	387	160	436
252	3.43	31953		102	325	162	751
254	2.81	38345		104	520		
256	2.88	20606		106	612	164	772

F.S. 2064

(MOD.3)



BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
157	2.44	16040		45	860	105	610
155	2.39	14594		43	796	103	517
153	1.59	5598		41	725	101	322
154	1.59	5579		42	728	102	325
156	2.39	14573		44	800	104	520
158	2.44	16051		46	862	106	612

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	VOL. I	6.303
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LGIUS 46-2-2	REPORT NO.	

6.6.1 Aft Troop Floor, Ult. Press. (8.7 x 1.5) psi

Frame Bars and Adj. Covers

F.S. 2084 (MOD. 3)

45	43	41	39	57	40	42	44	46
61	59	57	55	92	56	58	60	62
139	137	135	133	131	132	134	136	138
139	137	135	133	131	132	134	136	138

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
61	2.29	19436		139	719	45	860
59	2.26	21131		137	671	43	796
57	2.65	24612		135	419	41	725
55	3.37	30092		133	299	39	385
92	3.76	20597		131/132	727/727	57	1.8
56	3.37	29992		134	302	40	387
58	2.65	24532		136	422	42	728
60	2.26	21048		138	670	44	800
62	2.29	19349		140	719	46	362

F.S. 2101 (MOD. 4)

139	137	135	133	131
247	245	243	241	239
85	83	81	79	77

LEFT HAND SIDE

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
247	.94	2158		85	482	139	719
245	.94	12844		85	482	139	719
243	.94	16426		83	372	137	671
241	.94	9897		81	230	135	419
239	.94	5925		79	150	133	299
237	.94	7401		77	357	131	727

F.S. 2101 (MOD. 4) RIGHT HAND SIDE

132	134	136	138	140
238	240	242	244	246
78	80	82	84	86

BAR NO.	AREA (in ²)	TENSION LOAD (lbs)		AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
238	.94	7420		78	354	132	727
240	.94	5950		80	147	134	302
242	.94	9897		82	227	136	422
244	.94	16362		84	368	138	670
246	.94	12662		86	481	140	719
248	.94	2024		86	481	140	719

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. 1, 2, 3, 4
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	3-54
APPROVED	L.G. Darby	28 Jun 68		IGIUS 46-2-2	REPORT NO.

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 1804 - 1764 (MOD. 1)

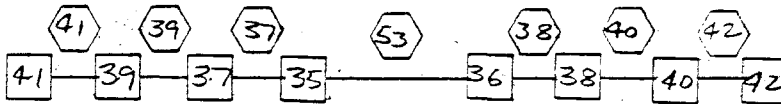
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INTD. COVER	SHEAR LOAD (lb/in)
91	3.53	70120	52			95	-26
89	.62	15524	52	95	-26	93	-160
87	.98	23111	52	93	-160	91	-149
85	2.24	37612	52	91	-149	54	43
86	2.24	35860	52	92	-51	54	43
88	.98	20267	52	94	-69	92	-51
90	.62	12707	52	96	-72	94	-69
92	3.58	59507	52			96	-72

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INTD. COVER	SHEAR LOAD (lb/in)
91	3.53	-14890	18			95	-54
89	.62	-3191	18	95	-54	93	-34
87	.98	-5100	18	93	-34	91	-17
85	2.24	-7477	18	91	-17	54	33
86	2.24	-6248	31	92	56	54	33
88	.98	-6385	1	94	69	92	56
90	.62	-7579	1	96	66	94	69
92	3.58	-35962	1			96	66

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
95	.055	310	1	91	67399	89	14126
93	.055	228	1	89	14126	87	18401
91	.055	184	1	87	18401	85	22043
54	.055	-213	1	85	22043	86	-713
92	.055	-221	1	86	-713	88	-6335
94	.055	-241	1	88	-6335	90	-7579
96	.055	-303	1	90	-7579	92	-35962

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6.305
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LG1US 46-2-2	REPORT NO.	

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 1844 - 1804 (MOD.1)

STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
41	4.11	94373	52			41	-384
39	1.10	17804	1	41	-384	39	-309
37	1.67	20678	52	39	-309	37	-196
35	2.52	32213	52	37	-196	53	29
36	2.52	31335	52	38	-106	53	29
38	1.67	19638	52	40	-122	38	-106
40	1.10	13415	52	42	-86	40	-122
42	3.46	49669	52			42	-86

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
41	4.11	-19594	18			41	-94
39	1.10	-5516	18	41	-94	39	6.0
37	1.67	-5817	18	39	6.0	37	25
35	2.52	-6112	18	37	25	53	27
36	2.52	-5517	31	38	64	53	27
38	1.67	-6635	1	40	63	38	64
40	1.10	-9218	1	42	30	40	63
42	3.46	-37159	1			42	30

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
41	.0574	-398	51	41	85285	39	14446
39	.0574	-309	52	39	14446	37	17925
37	.0574	-196	52	37	17925	35	19242
53	.0574	-255	1	35	19242	36	-713
38	.0574	-246	1	36	-713	38	-6635
40	.0574	-233	1	38	-6635	40	-9218
42	.0574	-253	1	40	-9218	42	-37159

NAME	DATE	LOCKHEED - GEORGIA COMPANY		TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. 1 6.306
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	0-5A
APPROVED	L.G. Darby	28 Jun 68		LG1US 46-2-2	REPORT NO.

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 1884 - 1844 (MOD. 2)

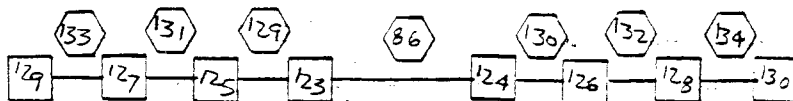
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
179	6.98	104924	1			183	-5.0
177	1.21	20302	1	183	-5.0	181	-62
175	1.77	19546	52	181	-62	179	-117
173	2.52	26598	52	179	-117	195	1.6
174	2.52	26075	52	180	-128	195	1.6
176	1.77	18838	52	182	-154	180	-128
178	1.21	13828	52	184	-173	182	-154
180	3.90	43798	52			184	-173

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
179	6.98	-40603	18			183	113
177	1.21	-7305	18	183	113	181	102
175	1.77	-4204	18	181	102	179	-1.3
173	2.52	-4749	31	179	-1.3	195	31
174	2.52	-4577	31	180	36	195	31
176	1.77	-5584	1	182	45	180	36
178	1.21	-10064	1	184	64	182	45
180	3.90	-32797	1			184	64

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/E SWEET	AXIAL LOAD (lbs.)
183	.0574	215	29	179	10891	177	2035
181	.0574	186	29	177	2035	175	15751
179	.0574	183	1	175	15751	173	14835
195	.0574	-292	1	173	14835	179	-495
180	.0574	-289	1	174	-495	176	-5584
182	.0574	-244	1	176	-5584	178	-10064
184	.0574	-265	1	178	-10064	180	-32797

PREPARED	NAME P.T. Fletcher	DATE 28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	TEMP. Vol. 1	PERM. 6.307
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL C-5A		
APPROVED	L.G. Darby	28 Jun 68	LG1US 46-2-2 REPORT NO.			

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 1924 - 1884 (MOD.2)

STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
129	3.73	102564	1			133	-417
127	1.31	22595	1	133	-417	131	-375
125	1.62	13224	52	131	-375	129	-5.7
123	2.52	23804	52	129	-5.7	86	-17
124	2.52	22765	52	130	-51	86	-17
126	1.62	11426	52	132	-394	130	-51
128	1.31	13391	52	134	-397	132	-394
130	3.10	43194	52			134	-397

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
129	3.73	-43201	18			133	-196
127	1.31	-8492	18	133	-196	131	-131
125	1.62	-2698	18	131	-131	129	-112
123	2.52	-5513	18	129	-112	86	43
124	2.52	-5147	18	130	-16	86	43
126	1.62	-4320	1	132	30	130	-16
128	1.31	-9858	1	134	21	132	30
130	3.10	-29154	1			134	21

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/E STRG.	AXIAL LOAD (lbs.)
133	.0574	-464	51	129	47222	127	13522
131	.0574	-393	51	127	13522	125	210
129	.0574	-139	16	125	210	123	12753
86	.0574	-321	1	123	12753	124	-25
130	.0574	-299	1	124	-25	126	11426
132	.0574	-394	52	126	11426	128	13391
134	.0574	-397	52	128	13391	130	43194

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6308
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LG1US 46-2-2	REPORT NO.	

6.6.1. TROOP FLOOR STRINGERS & COVERS (SCAN) FLIGHT CASES



F.S. 1944 - 1924 (MOD. 2)

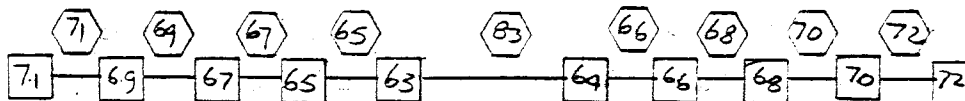
STRG. NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
281	3.18	77827	1			281	205
279	1.31	23775	1	281	205	279	-73
277	.79	3812	26	279	-73	277	609
275	1.62	9424	1	277	609	275	558
273	2.52	24396	26	275	558		
274	2.52	23101	26	276	554		
276	1.62	7778	26	278	557	276	554
278	.79	3427	26	280	292	278	557
280	1.31	13800	26	282	358	280	292
282	3.11	43095	26			282	358

STRG. NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
281	3.18	-26897	16			281	-93
279	1.31	-9529	18	281	-93	279	40
277	.79	-1629	18	279	40	277	-56
275	1.62	-4249	18	277	-56	275	37
273	2.52	-8969	18	275	37		
274	2.52	-9360	18	276	-93		
276	1.62	-2895	18	278	-90	276	-93
278	.79	-1081	18	280	-35	278	-90
280	1.31	-9244	1	282	94	280	-35
282	3.11	-34470	1			282	94

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
281	.057	456	26	281	47032	279	15832
279	.057	317	26	279	15832	277	3812
277	.057	609	26	277	3812	275	9185
275	.057	558	26	275	9185	273	24396
276	.057	554	26	274	23101	276	7778
278	.057	557	26	276	7778	278	3427
280	.057	292	26	278	3427	280	13800
282	.057	358	26	280	13800	282	43095

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	VOL. I	6,308.1
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LGINS 46-2-2	REPORT NO.	

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 1964-1944. (MOD.2)

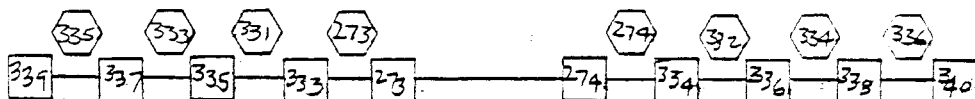
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
71	3.18	70448	1			71	137
69	.89	18804	1	71	137	69	308
67	.79	8200	1	69	308	67	347
65	1.35	8097	7	67	347	65	361
63	2.52	21237	52	65	361	83	-14.5
64	2.52	20624	52	66	346	83	-14.5
66	1.35	7620	52	68	341	66	346
68	.79	6691	52	70	318	68	341
70	.89	11597	52	72	184	70	318
72	3.11	37471	52			72	184

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
71	3.18	-24947	16			71	-23
69	.89	-7023	18	71	-23	69	-112
67	.79	-3715	18	69	-112	67	-53
65	1.35	-3711	18	67	-53	65	8.8
63	2.52	-7452	29	65	8.8	83	109
64	2.52	-10291	18	66	57	83	109
66	1.35	-3358	18	68	34	66	57
68	.79	-2604	1	70	-18	68	34
70	.89	-8294	1	72	26	70	-18
72	3.11	-38342	1			72	26

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
71	.0574	426	1	71	70448	69	18804
69	.0574	597	1	69	18804	67	8200
67	.0574	550	1	67	8200	65	6417
65	.0574	411	1	65	6417	63	5816
83	.0574	-529	1	63	5816	64	18675
66	.0574	350	24	64	18675	66	7620
68	.0574	341	52	66	7620	68	6691
70	.0574	318	52	68	6691	70	11597
72	.0574	-302	1	70	11597	72	37471

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. 16, 309
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	LPLUS 46-2-2

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F. S. 1984-1964 (MOD.3)

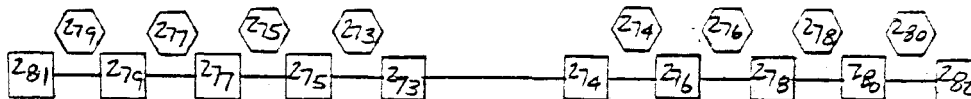
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
339	2.36	60120	1			335	-135
337	.91	14459	1	335	-135	333	-12
335	.85	7372	1	333	-12	331	-56
333	1.47	7305	7	331	-56	273	-155
273	1.94	15864	52	273	-155		
274	1.94	15661	52	274	-165		
334	1.47	7000	7	332	-73	274	-165
336	.85	5503	7	334	-21	332	-73
338	.91	8033	52	336	-116	334	-21
340	2.34	29306	7			336	-116

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
339	2.36	-21873	16			335	75
337	.91	-5092	16	335	75	333	12.7
335	.85	-3542	18	333	12.7	331	27.3
333	1.47	-3336	18	331	27.3	273	44
273	1.94	-3870	29	273	44		
274	1.94	-4259	18	274	183		
334	1.47	-3769	18	332	205	274	183
336	.85	-2969	1	334	171	332	205
338	.91	-7795	1	336	198	334	171
340	2.34	-38302	1			336	198

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
335	.0614	370	1	339	60120	337	14459
333	.0614	450	1	337	14459	335	7372
331	.0614	375	1	335	7372	333	-1776
273	.0614	196	29	333	-1776	273	6558
274	.0614	-271	1	274	5337	334	225
332	.0614	-374	1	334	225	336	-2969
334	.0614	-424	1	336	-2969	338	-7795
336	.0614	-462	1	338	-7795	340	-33302

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6, 310
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	LGIUS 46-2-2	

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 2004 - 1984 (MOD. 3)

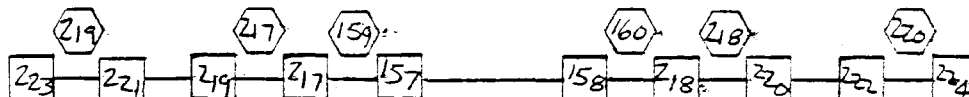
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
281	2.71	54049	1			279	-115
279	.89	12865	1	279	-115	277	-65
277	.85	9116	1	277	-65	275	-99
275	1.56	12209	1	275	-99	273	-144
273	1.94	15864	52	273	-144		
274	1.94	15661	52	274	-139		
276	1.56	5808	52	276	-92	274	-139
278	.85	6241	7	278	-50	276	-92
280	.89	6481	52	280	-95	278	-50
282	2.71	26273	7			280	-95

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
281	2.71	-19712	16			279	342
279	.89	-4699	16	279	342	277	421
277	.85	-3400	18	277	421	275	323
275	1.56	-3853	16	275	323	273	178
273	1.94	-3870	29	273	178		
274	1.94	-4259	18	274	-271		
276	1.56	-7404	1	276	-388	274	-271
278	.85	-4355	1	278	-476	276	-388
280	.89	-7886	1	280	-446	278	-476
282	2.71	-36517	1			280	-446

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
279	.0614	342	1	281	54049	279	12865
277	.0614	421	1	279	12865	277	9116
275	.0614	323	1	277	9116	275	2504
273	.0614	197	29	275	2504	273	6558
274	.0614	-271	1	274	5387	276	-7404
276	.0614	-388	1	276	-7404	278	-4355
278	.0614	-476	1	278	-4355	280	-7886
280	.0614	-446	1	280	-7886	282	-36517

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6,311
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	LGIUS 46-2-2	

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 2024 - 2004 (MOD. 3)

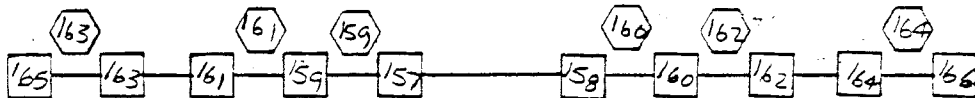
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
223	2.71	50496	1			219	281
221	.81	12402	1	219	281		
219	.85	10108	1			217	249
217	1.66	10231	1	217	249	159	207
159	1.81	14252	1	159	207		
158	1.81	9522	52	160	-329		
218	1.66	9531	52	218	-364	160	-329
220	.85	6651	52			218	-364
222	.81	5950	52	220	-428		
224	2.71	24139	7			220	-428

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
223	2.71	-18425	16			219	-126
221	.81	-4614	16	219	-126		
219	.85	-3623	16			217	-103
217	1.66	-3265	16	217	-103	159	-34
159	1.81	-2732	18	159	-34		
158	1.81	-6630	1	160	14		
218	1.66	-2918	1	218	76	160	14
220	.85	-5241	1			218	76
222	.81	-3232	1	220	108		
224	2.71	-35269	1			220	108

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
219	.0614	281	1	223	50496	221	12402
217	.0614	249	1	219	10108	217	10231
159	.0614	233	29	217	10231	157	14252
160	.0614	-329	1	158	-6630	218	-2918
218	.0614	-364	1	218	-2918	220	-5241
220	.0614	-428	1	222	-3232	224	-35269

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. 1	6.312
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LG1US 46-2-2 REPORT NO.		

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 2044 - 2024 (MOD. 3)

STRG. NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTED. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
165	2.77	48054	1			163	220
163	.86	10397	1	163	220		
161	1.06	12915	1			161	177
159	1.66	14487	1	161	177	159	207
157	1.81	14252	1	159	207		
158	1.81	9522	52	160	-329		
160	1.66	5758	16	162	-346	160	-329
162	1.06	5980	16			162	-346
164	.86	7140	52	164	-369		
166	2.77	22476	16			164	-369

STRG. NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTED. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
165	2.77	-17690	16			163	-85
163	.86	-3868	16	163	-85		
161	1.06	-4815	16			161	-66
159	1.66	-4947	16	161	-66	159	-84
157	1.81	-2732	18	159	-84		
158	1.81	-6630	1	160	14		
160	1.66	-10021	1	162	8	160	14
162	1.06	-8839	1			162	8
164	.86	-5531	1	164	61		
166	2.77	-34564	1			164	61

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
163	.0614	220	1	165	48054	163	10397
161	.0614	261	29	161	653	159	2675
159	.0614	233	29	159	2675	157	14252
160	.0614	-329	1	158	-6630	160	-10021
162	.0614	-346	1	160	-10021	162	-8839
164	.0614	-369	1	164	-5531	166	-34564

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. 1	6,313
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		LGLUS 46-2-2	REPORT NO.	

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 2064 - 2044 (MOD.3)

STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
107	2.78	46586	1			105	127
105	.99	10500	1	105	127	103	12
103	1.03	12323	1	103	12	101	72
101	1.60	11923	1	101	72	39	46
41	2.65	12013	1	39	46	57	-364
42	2.65	4383	24	40	-112	57	-364
102	1.60	6999	52	102	-194	40	-112
104	1.03	5604	16	104	-204	102	-194
106	.99	5598	52	106	-292	104	-204
108	2.78	44282	16			106	-292

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
107	2.79	-17633	16			105	-62
105	.99	-4121	16	105	-62	103	-3.2
103	1.03	-4697	16	103	-3.2	101	-16
101	1.60	-3827	16	101	-16	39	-13
41	2.65	-3551	16	39	-13	57	45
42	2.65	-8187	1	40	-6.8	57	45
102	1.60	-6580	1	102	-5.1	40	-6.8
104	1.03	-8944	1	104	-204	102	-5.1
106	.99	-6656	1	106	-292	104	-204
108	2.78	-34476	1			106	-292

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
105	.0590	-240	7	107	19546	105	5394
103	.0590	-291	7	105	5394	103	4686
101	.0590	-202	7	103	4686	101	6912
39	.0590	-95	7	101	6912	41	12013
57	.0590	-364	1	41	12013	42	-6493
40	.0590	-125	20	42	-6493	102	4318
102	.0590	-248	20	102	4318	104	3116
104	.0590	-347	20	104	3116	106	4636
106	.0590	-309	20	106	4636	108	15758

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	6/31/68
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A	
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	LGIUS 46-2-2	

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 2084-2064 (MOD.3)

STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
49	2.75	45984	1			45	63
47	1.06	12076	1	45	63	43	23
45	1.14	11422	1	43	23	41	54
43	1.67	13169	1	41	54	39	46
41	2.65	12013	1	39	46	57	-364
42	2.65	4383	24	40	-112	57	-364
44	1.67	4929	16	42	-201	40	-112
46	1.14	5125	16	44	-195	42	-201
48	1.06	6636	52	46	-222	44	-195
50	2.75	23105	16			46	-222

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
49	2.75	-18236	16			45	-18.6
47	1.06	-5096	16	45	-18.6	43	13.7
45	1.14	-4266	16	43	13.7	41	-11.6
43	1.67	-4104	16	41	-11.6	39	-13.2
41	2.65	-3551	16	39	-13.2	57	45
42	2.65	-8187	1	40	-6.8	57	45
44	1.67	-10529	1	42	-49	40	-6.8
46	1.14	-8988	1	44	-60	42	-49
48	1.06	-7822	1	46	-10.9	44	-60
50	2.75	-34895	1			46	-10.9

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
45	.0590	-244	7	49	17711	47	5987
43	.0590	-251	7	47	5987	45	3553
41	.0590	-203	52	45	3553	43	2155
39	.0590	-95	7	43	2155	41	12013
57	.0590	-364	1	41	12013	42	350
40	.0590	-125	20	42	350	44	-663
42	.0590	-252	20	44	-663	46	1442
44	.0590	-320	20	46	1442	48	5092
46	.0590	-314	20	48	5092	50	14427

PREPARED	P.T. Fletcher	28 Jun 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORP.	PAGE	Vol. I	PERM.	6,315
CHECKED	J. Halliday	28 Jun 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL	C-5A		
APPROVED	L.G. Darby	28 Jun 68		REPORT NO.	LGIUS 46-2-2		

6.6.1 Troop Floor Stringers and Covers (Scan) Flight Cases



F.S. 2101-2084 (MOD. 4)

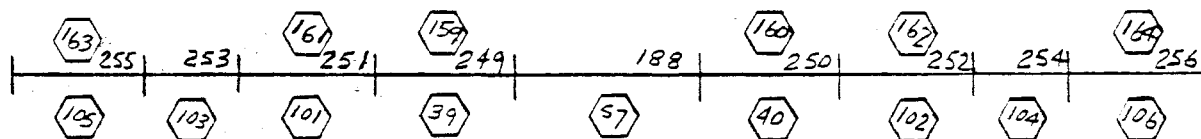
STRG NO.	AREA (in ²)	CRIT. TENS. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
145	3.33	46205	1			139	
143	1.15	10967	1	139		137	
141	1.14	9944	1	137		135	
139	1.67	11022	1	135		133	
137	1.72	8321	1	133		131	
100	1.74	555	4	131/132			
138	1.72	3654	4	134		132	
140	1.67	4223	16	136		134	
142	1.14	3144	16	138		136	
144	1.15	5737	16	140		138	
146	3.33	24214	16			140	

STRG NO.	AREA (in ²)	CRIT. COMP. LOAD (lbs.)	CASE	OUTBD. COVER	SHEAR LOAD (lb/in)	INBD. COVER	SHEAR LOAD (lb/in)
145	3.33	-19724	16			139	
143	1.15	-5302	16	139		137	
141	1.14	-3467	16	137		135	
139	1.67	-3937	16	135		133	
137	1.72	-3120	16	133		131	
100	1.74	-424	20	131/132			
138	1.72	-6412	1	134		132	
140	1.67	-9126	1	136		134	
142	1.14	-8429	1	138		136	
144	1.15	-8782	1	140		138	
146	3.33					140	

COVER NO.	THICK (ins)	CRIT. SHEAR LOAD (lb/in)	CASE	L/H STRG.	AXIAL LOAD (lbs.)	R/H STRG.	AXIAL LOAD (lbs.)
139	.0590	-270	7	145		143	
137	.0590	-305	52	143		141	
135	.0590	250	29	141		139	
133	.0590	417	29	139		137	
131	.0590	32	4	137		100	
132	.0590	32	4	100		138	
134	.0590	-406	29	138		140	
136	.0590	-286	20	140		142	
138	.0590	-399	20	142		144	
140	.0590	-356	20	144		146	

NAME	DATE	LOCKHEED - GEORGIA COMPANY	TEMP.	PERM.
PREPARED	P.T. Fletcher	28 Jun 68	A DIVISION OF LOCKHEED AIRCRAFT CORP.	
CHECKED	J. Halliday	28 Jun 68	PAGE	Vol. I 6.316
APPROVED	L.G. Darby	28 Jun 68	TITLE	
			AFT FUSELAGE	
			INTERNAL LOADS ANALYSIS	
			MODEL	C-5A
			LG1US 46-2-2	
			REPORT NO.	

6.6.1 Aft Troop Floor Frame Bars (Scan)



F.S. 2044 (MOD. 3)

BAR NO.	AREA (in ²)	CRIT. TENS. LOADS (lb)	CASE	AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
255	1.90	2877	1	105	160	163	220
253	1.83	7442	29	103	184		
251	1.83	4495	29	101	159	161	261
249	2.00	7973	29	39	85	159	233
188	2.30	2838	26	57	176		
250	2.00	2622	30	40	83	160	111
252	1.83	2091	30	102	195	162	150
254	1.83	3632	30	104	239		
256	1.90	1720	16	106	221	164	199

BAR NO.	AREA (in ²)	CRIT. COMP. LOADS (lb)	CASE	AFT COVER	SHEAR LOAD (lb/in)	FWD. COVER	SHEAR LOAD (lb/in)
255	1.90	-2715	16	105	-240	163	-329
253	1.83	-7431	34	103	-291		
251	1.83	-6091	18	101	-202	161	-224
249	2.00	-9092	18	39	-95	159	-173
188	2.30	-8005	39	57	-36		
250	2.00	-10183	1	40	-125	160	-329
252	1.83	-5259	29	102	-248	162	-346
254	1.83	-8311	30	104	-347		
256	1.90	-4373	1	106	-309	164	-369

PREPARED	NAME P.T. Fletcher	DATE 9 Sep 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. No. 1	PERM. 6.317
CHECKED	J. Halliday	9 Sep 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	9 Sep 68		REPORT NO.	LG1US 46-2-2	

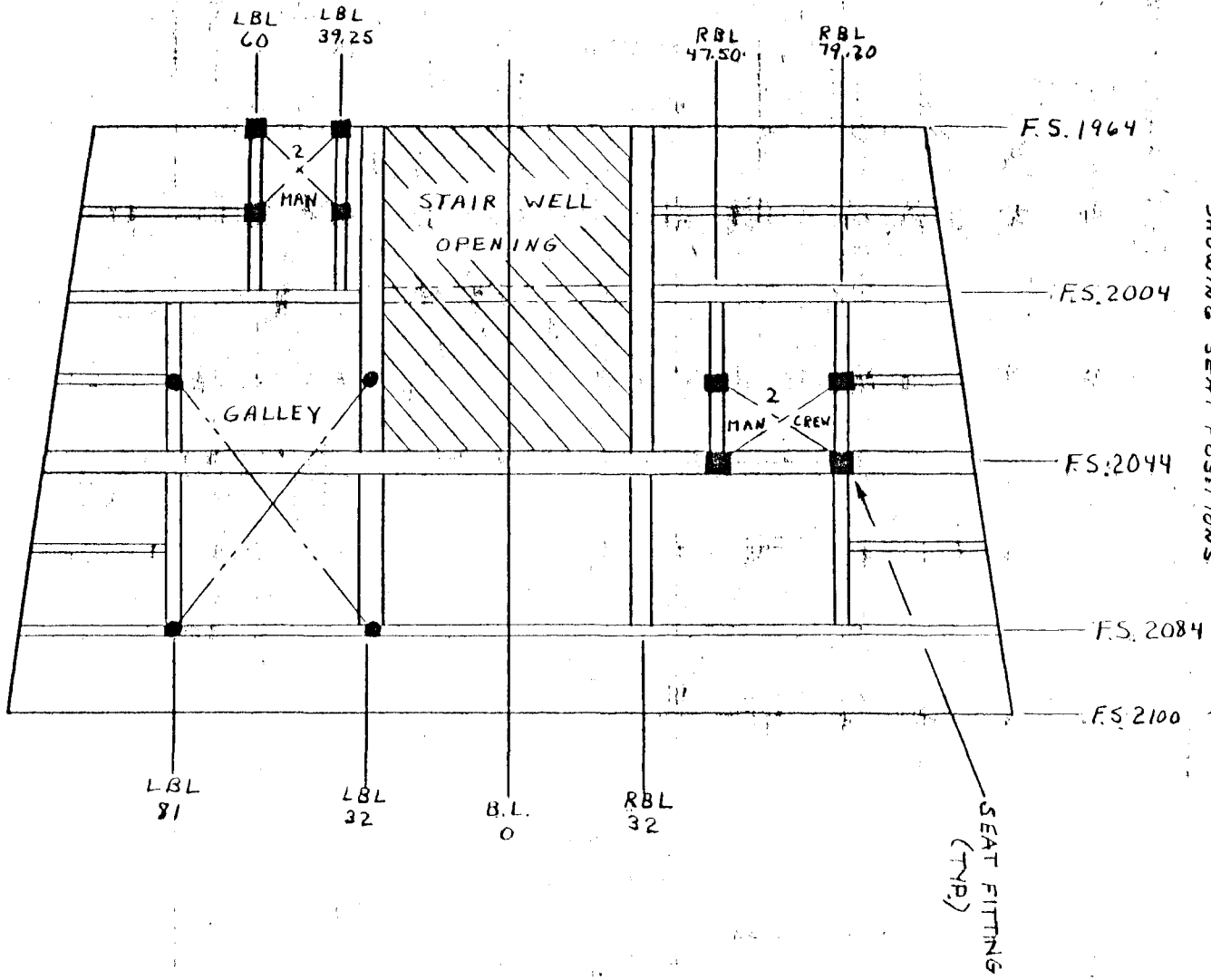
6.6.2 Aft Troop Floor F.S. 1744.0 - F.S. 2100
Dwg. 4FO013 (Inst)

TROOP SEAT LOADING

The location and arrangement of the seat fittings is shown on Pages 6.318 and 6.319. The crash loading (Ref. Pg. 6.325) effects both the short intercostals and the transverse beams. For the loading of the fore-aft intercostals see Page 6.333 and the crash loading on the transverse beams is given on Page 6.323.

6.6.3

TROOP DECK - AFT FUSELAGE FS 1964-2100 (DWG. 454003B REF.)
SHOWING SEAT POSITIONS



PREPARED	P.T. Fletcher	7 Sep 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL 1	6.320
CHECKED	J. Halliday	7 Sep 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	7 Sep 68		REPORT NO.	LGIUS 46-2-2	

6.6.4 Transverse Floor Beam - F.S. 2044 - Troop Deck

Discussion

This particular beam is located at the edge of the stairway area and is critical for 188 PSF Floor Load Ref. pg. 6.289 plus the tension load due to operating pressure (8.7 x 1.5 PSI).

The end fixity for the beam is taken as being similar to the end fixity for F.S. 2084 which was analyzed by the computer graphics system Ref. 17 and the end moments are derived from pg. 6.268 thru 6.272,

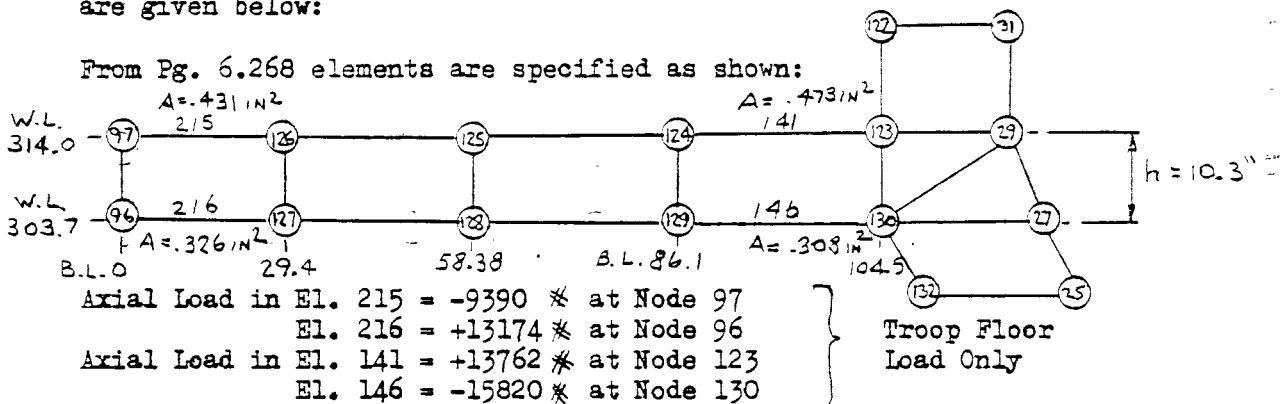
The beam is loaded by four distinct cases as given below from Ref. pg. 6.289

1. 188 PSF (Limit) for floor loading
2. 188 PSF (Limit) + 2.5 g down on galley
3. 75 PSF (Limit) Up Load
4. Crash Loading with Galley (Seats occupied)

Calculation of End Moment Fixity

From Pg. 6.270 axial loads in upper and lower caps at beam center and at ends are given below:

From Pg. 6.268 elements are specified as shown:



Axial Load in El. 215 = -9390 * at Node 97

El. 216 = +13174 * at Node 96

Axial Load in El. 141 = +13762 * at Node 123

El. 146 = -15820 * at Node 130

Troop Floor Load Only

$$\begin{aligned} \text{Moment at Sect. 97-96} &= 9390 \times .326 / .757 (10.3) + 13176 \times .431 / .757 (10.3) \\ &= 41,600 + 77,100 = 118,700 \text{ IN. LB. AT F.S. 2084.} \end{aligned}$$

$$\begin{aligned} \text{Moment at Sect. 123-130} &= 13762 \times .308 / .781 (10.3) + 15820 \times .473 / .781 (10.3) \\ &= 55900 + 98600 = 153,500 \text{ IN. LB.} \end{aligned}$$

The moment fixity at F.S. 2084 is 153,500 in/lb

The moment at B.L. 0 = 118,700 in/lb

$$\begin{aligned} \% \text{ Fixity} &= \frac{153,500}{118,700} \times \frac{2}{3} \times 100 \\ &= 86\% \end{aligned}$$

$$\begin{aligned} \text{FIXED END} &= \text{MOMENT} \\ \text{MOMENT} &= \text{AT CENTER} \\ \frac{2}{3} &= \frac{\frac{wL^2}{12}}{\frac{wL^2}{8}} \end{aligned}$$

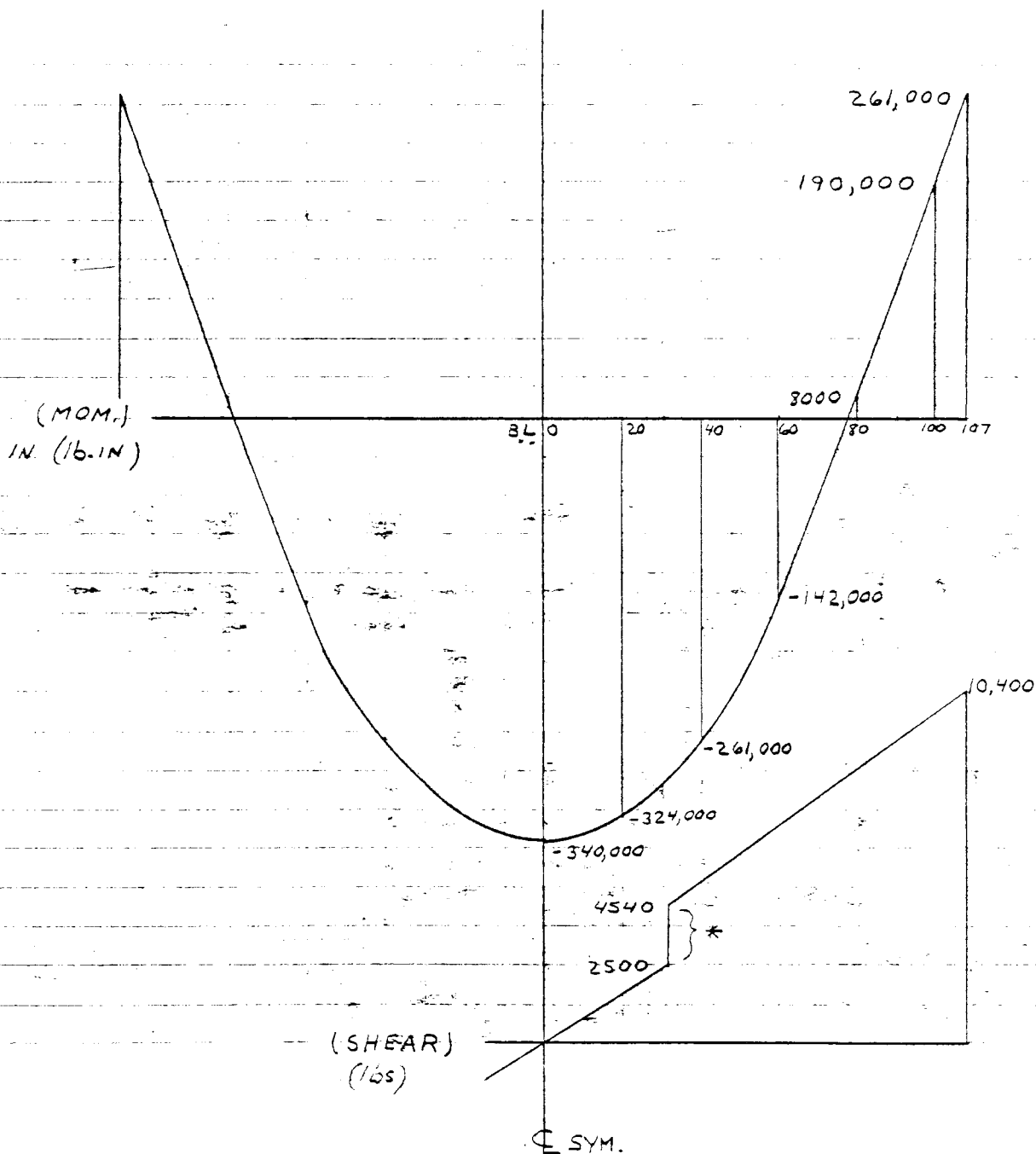
We will assume 65% fixity for F.S. 2044 which is conservative.

Prepared	NAME P.T. Fletcher	DATE 10 May 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. 6.321	PERM.
Checked	J. Halliday	10 May 68	TITLE INTERNAL LOADS ANALYSIS STRESS AFT FUSELAGE	Model	C-5A	
Approved	L. G. Darby	10 May 68		Report No.	LGJUS 46-2-2	

6.6.4. TRANSVERSE FLOOR BEAM-FS 2044-TROOP DECK

CONDITION-188 PSFX(1.5)ULT DOWN-LOAD (Pg. 6.289)

BENDING MOMENT AND SHEAR FORCE DIAGRAMS (ASSUMING ONLY 65% FIXITY SEE PG. 6.320)-40 INCHES OF FLOOR LOAD REACTED BY THE BEAM

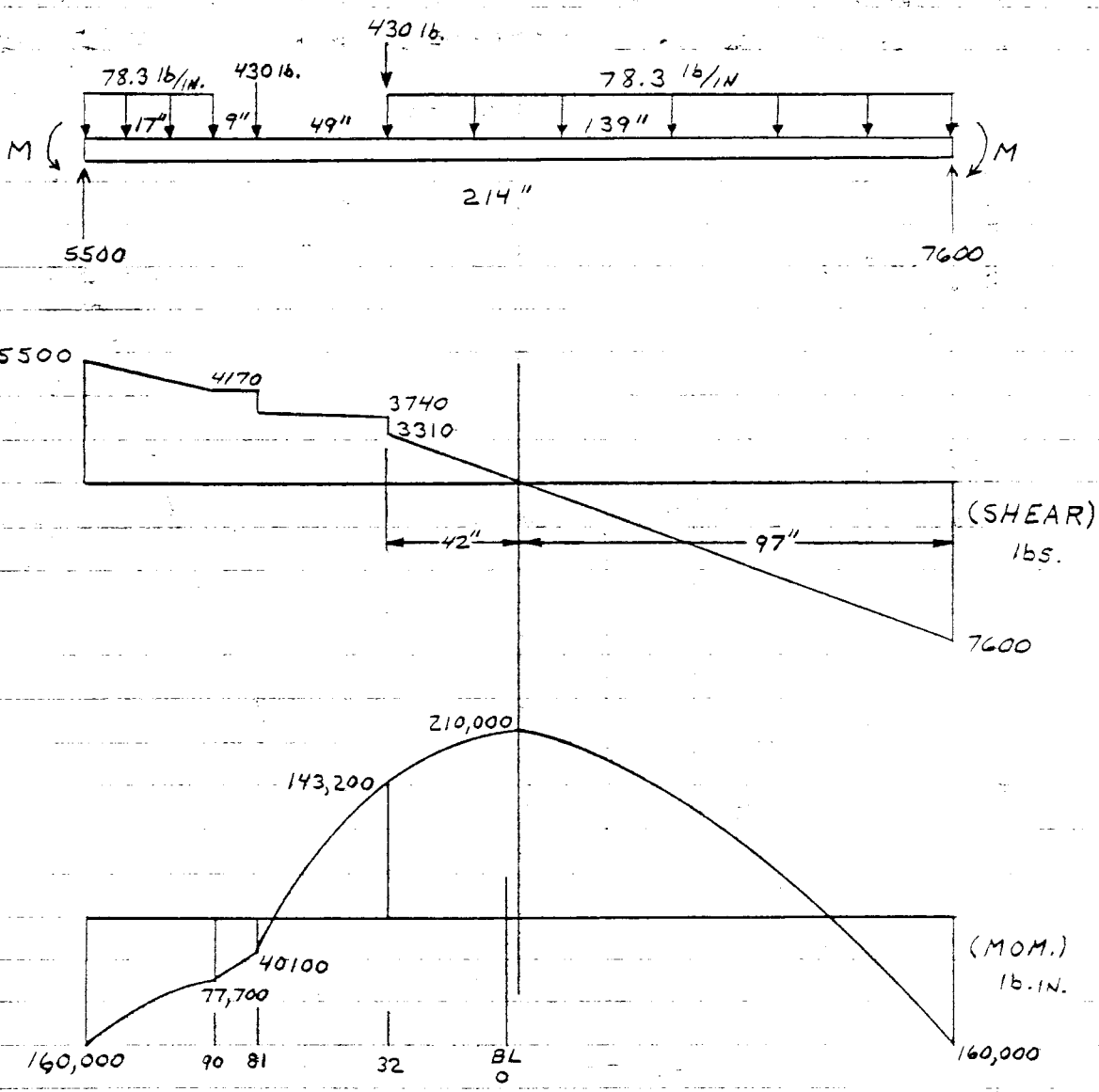


* DUE TO A CONCENTRATED LOAD ON A FORE AND AFT BEAM

Prepared	NAME P.T. Fletcher	DATE 10 May 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. 6322	PERM.
Checked	J. Halliday	10 May 68	TITLE INTERNAL LOADS ANALYSIS STAFF FUSELAGES	Model	C-5A	
Approved	L.G. Darby	10 May 68		Report No.	LG1US 46-2-2	

6.6.4 TRANSVERSE FLOOR BEAM - FS 2044 - TROOP DECK (CONT.)

CONDITION - 188 PSF (1.5) PLUS 2.52 DOWN ON GALLEY (REF. PG. 6.239)



ASSUME: 65% END FIXITY BASED ON REF. 18

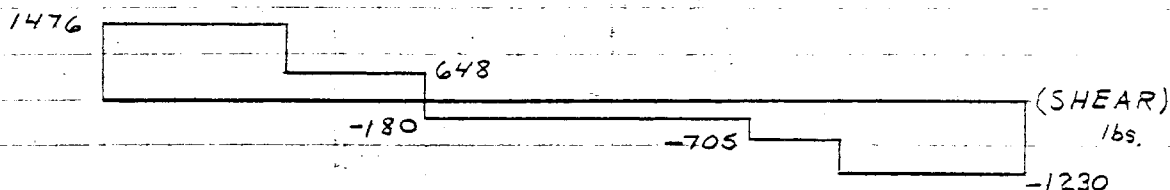
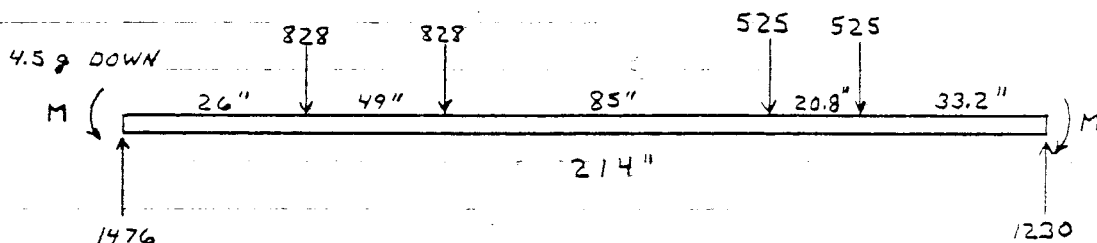
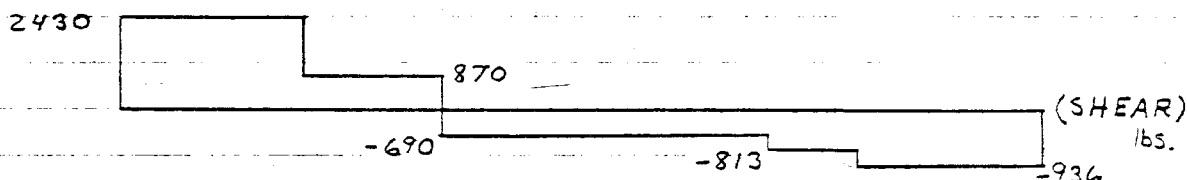
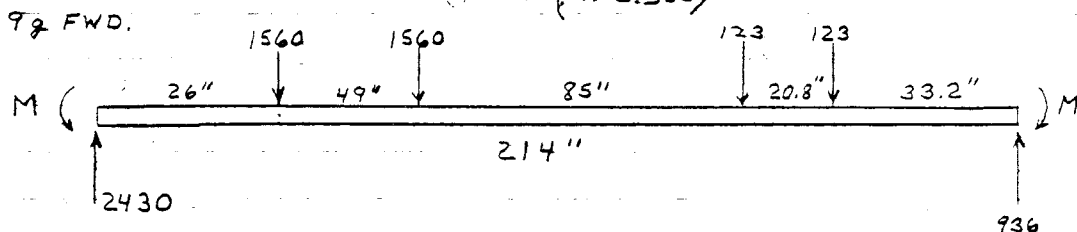
$$M = (.65) \left(\frac{2}{3}\right) (370,000) = 160,000 \text{ IN.-LB.}$$

Prepared	NAME P.T. Fletcher	DATE 10 May 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP.	PERM. 6.323
Checked	J. Halliday	10 May 68	TITLE INTERNAL LOADS ANALYSIS BRIEF POSTAGE	Model	C-5A	
Approved	L.G. Darby	10 May 68		Report No.	IGIUS 46-2-2	

6.6.4 TRANSVERSE FLOOR BEAM - FS 2044 - TROOP DECK (CONT.)

CONDITION - CRASH LOADING WITH GALLEY - (SEATS OCCUPIED)

(REF. (P. 6.322))



NOTE: BENDING MOMENTS ARE NOT SHOWN BECAUSE
THEY ARE NOT CRITICAL

Prepared	NAME J.P. Kimmel	DATE 20 Aug 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP.	PERM. 6.334
Checked	J. Halliday	20 Aug 68	TITLE INTERNAL LOADS ANALYSIS 1AFT FUSELAGE	Model	C-5A	
Approved	L. G. Darby	20 Aug 68		Report No.	LG1US46-2-2	

6.6.4. TRANSVERSE FLOOR BEAM - F.S. 2044 - TROOP DECK (CONT.)

CONDITION - 75 PSF (1.5) ULT. UP-LOAD

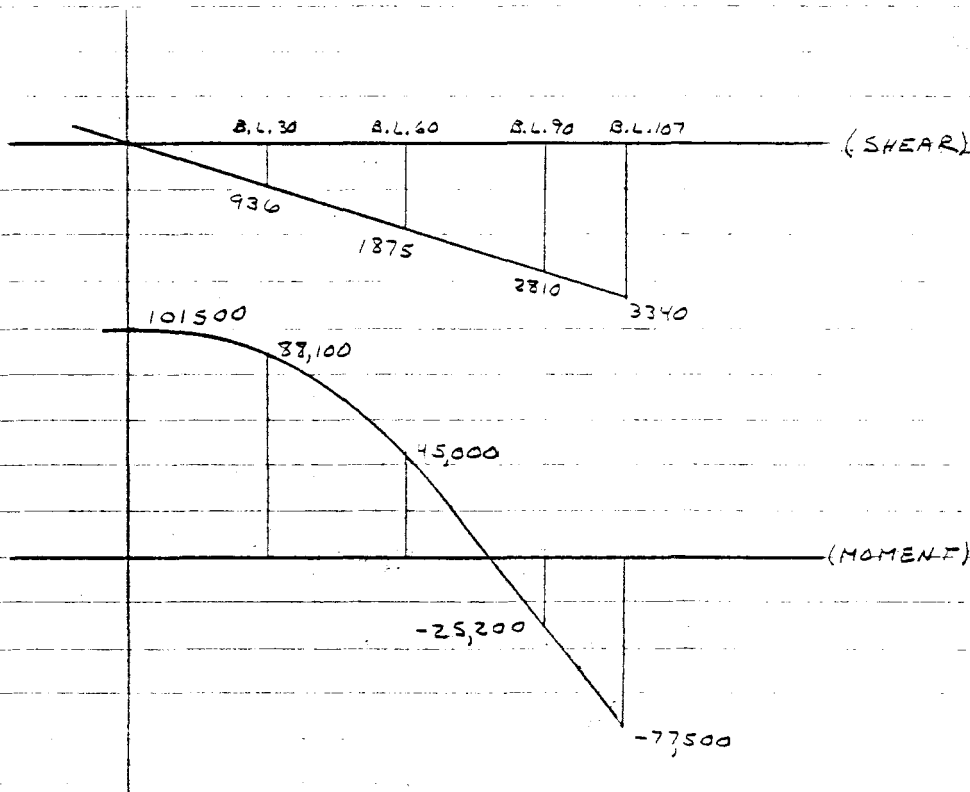
$$w = \frac{75 \text{ lb}}{144 \text{ in}^2} (1.5) (40 \text{ in}) = 31.2 \text{ lb/in}$$

$$V_{\max} = 31.2 (107) = 3340 \text{ lb}$$

AN END FIXITY OF 65% HAS BEEN ESTABLISHED FROM 2-DIMENSIONAL FRAME PROGRAMS (REF. PG. 1)

$$M_{\text{END}} = .65 \frac{2}{3} (179,000) = 77,500 \text{ lb-in}$$

$$M_{\text{MAX}} = 179,000 - 77,500 = 101,500 \text{ AT BEAM CENTER}$$



	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP.	PERM.
PREPARED	A. D. Pinchot	22 May 68		PAGE	Vol. I 6.325
CHECKED	J. Halliday	22 May 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	MODEL C-5A	
APPROVED	L. G. Darby	22 May 68		LG1US 46-2-2 REPORT NO.	

6.6.5 Seat Intercostals REF. 10 PG. 9.7.146

The seat fittings and longitudinal seat support beams are designed by the crash load conditions. The factors that must be considered in order to determine the most critical loading are two types of seat configurations; 2-man seat, and 3-man seat and two seat positions on the seat support beams; forward and aft.

The back-up structure for passenger seats must be capable of supporting the following ultimate loads, acting separately at the center of gravity of the occupant.

- a. 2500 pounds forward or 375 pounds aft.
- b. 375 pounds right or 375 pounds left.
- c. 1250 pounds down or 500 pounds up.

All passengers seats in any row shall be simultaneously subjected to the specified loads, applied separately. The forward load shall be directed in all forward azimuths within 20 degrees of the air vehicle longitudinal axis.

The passenger seat attachment fittings must be capable of supporting the above ultimate loads combined with a fitting factor of 1.33.

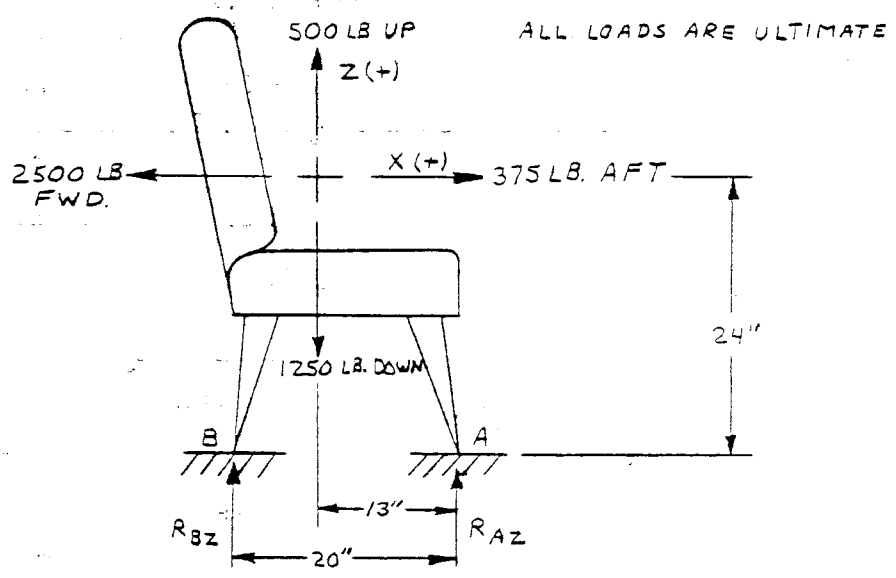
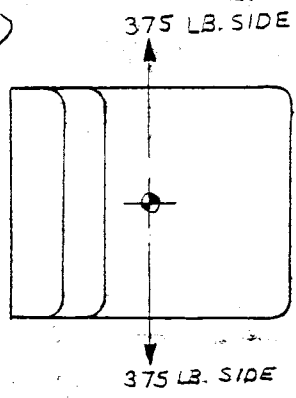
Prepared	P.T. Fletcher	30 Apr 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. 2	PERM. 6.326
Checked	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Model	C-5A	
Approved	L.G. Darby	30 Apr 68		Report No.	LGUS 46-2-2	

6.6.5.

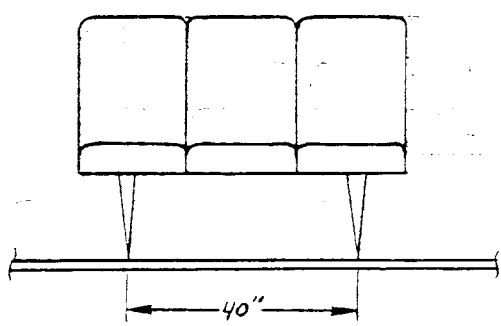
CRASH LOAD ON TROOP SEAT SUPPORT BEAMS

REF. (T.S.F. NO. U.S.-43-21.0)

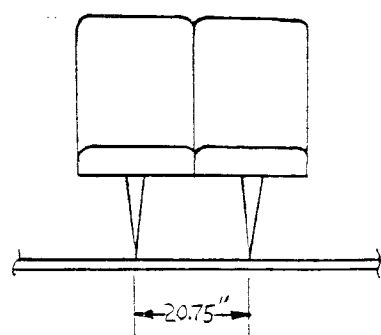
REQUIREMENTS PER
MAN-SEAT-ALL LOADS
ACT SEPARATELY



3-MAN SEAT



2-MAN SEAT



Prepared	NAME P.T. Fletcher	DATE 30 Apr 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. No. 1	PERM. 6.327
Checked	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Model	C-5A	
Approved	L.G. Darby	30 Apr 68		Report No.	LG1US 46-2-2	

6.6.5

CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

SEAT LEG LOADS - 3 MAN SEAT :

FWD. $-(3)(2500)(24) = 2 R_{AZ}(20)$

REF PG. 6.323.

$R_{AZ} = -4500 \text{ LB.}$ $R_{BZ} = 4500 \text{ LB.}$

$R_{AX} = \frac{(3)(2500)}{2} = 3750 \text{ LB. (TOTAL SHEAR LOAD TAKEN ON}$
2 SEAT FITTINGS ONLY)

AFT. $3(375)(24) = 2 R_{BZ}(20)$

$R_{BZ} = -675 \text{ LB.}$ $R_{AZ} = 675 \text{ LB.}$

$R_{AX} = -\frac{3(375)}{2} = -563 \text{ LB. (2 SEAT FITTINGS ONLY - SEE}$
RAX FWD.)

UP $3(500)(13) = -2 R_{BZ}(20)$

$R_{BZ} = -487 \text{ LB.}$ $R_{AZ} = \frac{3(500) - 2(487)}{2} = -263 \text{ LB.}$

DOWN $3(1250)(13) = 2 R_{BZ}(20)$

$R_{BZ} = 1220 \text{ LB.}$ $R_{AZ} = \frac{3(1250) - 2(1220)}{2} = 655 \text{ LB.}$

SIDE $3(375)(24) = 40(R_Z)$

WHERE: $R_Z = R_{AZ} + R_{BZ}$

$R_{BZ} = \frac{13}{20} R_Z$

$R_Z = 675 \text{ LB.}$

$R_{BZ} = \frac{13}{20}(675) = \pm 439 \text{ LB.}$

$R_{AZ} = 675 - 439 = \pm 236 \text{ LB.}$

FOR X & Y REACTIONS DUE TO SIDE LOAD, SEE PAGE 6.327

Prepared	P.T. Fletcher	DATE 30 Apr 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. I	PERM. 6.328
Checked	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Model	C-5A	
Approved	L.G. Darby	30 Apr 68		Report No.	LGJUS 46-2-2	

6.6.5

C RASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

SEAT LEG LOADS - 2 MAN SEAT

FWD. $R_{AZ} = -\frac{2(2500)(24)}{2(20)} = -3000 \text{ LB.}$ $\therefore R_{BZ} = 3000 \text{ LB.}$

$R_{AX} = \frac{2(2500)}{2} = 2500 \text{ LB.}$ (TOTAL SHEAR LOAD TAKEN ON 2 SEAT FITTINGS ONLY)

AFT $R_{BZ} = -\frac{2(375)(24)}{2(20)} = -450 \text{ LB.}$ $\therefore R_{AZ} = 450 \text{ LB.}$

$R_{AX} = -\frac{2(375)}{2} = -375 \text{ LB.}$ (2 SEAT FITTINGS ONLY)

UP $R_{BZ} = \frac{2(500)(13)}{2(20)} = -325 \text{ LB.}$ $\therefore R_{AZ} = \frac{2(500) - 2(325)}{2} = -175 \text{ LB.}$

DOWN $R_{BZ} = \frac{2(1250)(13)}{2(20)} = 812 \text{ LB.}$ $\therefore R_{AZ} = \frac{2(1250) - 2(812)}{2} = 438 \text{ LB.}$

SIDE $R_Z = \frac{2(375)(24)}{20.75} = 868 \text{ LB.}$ WHERE: $R_Z = R_{AZ} + R_{BZ}$

$R_{BZ} = \frac{13}{20} R_Z$

$\therefore R_{BZ} = \frac{13}{20} (868) = \pm 564 \text{ LB.}$ $R_{AZ} = 868 - 564 = \pm 304 \text{ LB.}$

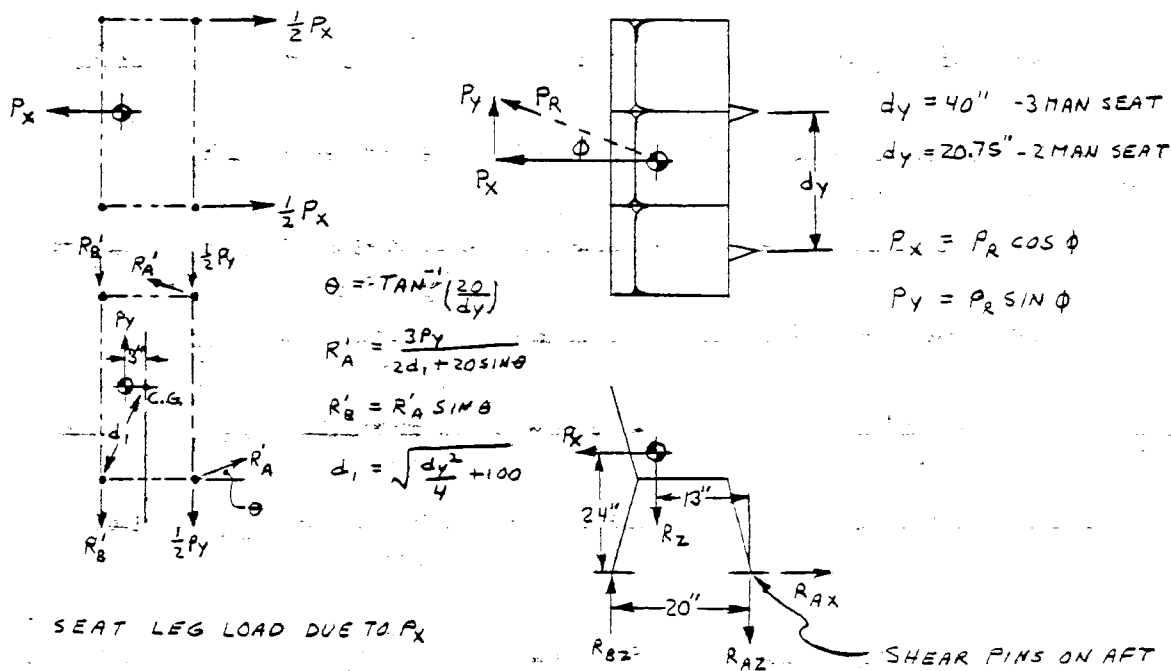
FOR X & Y REACTIONS DUE TO SIDE LOAD, SEE PAGE 3.327

Prepared	NAME P.T. Fletcher	DATE 30 Apr 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. No. 16,329	PERM.
Checked	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Model	C-5A	
Approved	L.G. Darby	30 Apr 68		LGIUS 46-2-2	Report No.	

6.6.5

CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

REACTIVE SEAT LEG LOADS - FWD. CRASH 0° - 20° FWD. AZIMUTHS



$$(R_{B2})_x = \frac{24}{20} \left(\frac{P_x}{2} \right) = \frac{3}{5} P_x = -(R_{AZ})_x$$

SEAT LEG LOAD DUE TO P_y

$$R_z = \frac{24}{40} P_y = \frac{3}{5} P_y \quad (\text{FOR 3-MAN SEAT})$$

$$R_z = \frac{24}{20.75} P_y \quad (\text{FOR 2-MAN SEAT})$$

$$(R_{B2})_y = \frac{13}{20} R_z \quad (R_{AZ})_y = R_z - (R_{B2})_y$$

TOTAL SEAT LEG LOAD

SIDE LOAD RIGHT -

$$(R_{AZ})_T = (R_{AZ})_x + (R_{AZ})_y$$

$$(R_{B2})_T = (R_{B2})_x - (R_{B2})_y$$

SIDE LOAD LEFT -

$$(R_{AZ})_T = (R_{AZ})_x - (R_{AZ})_y$$

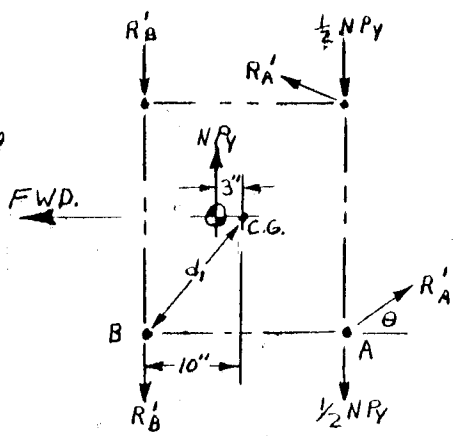
$$(R_{B2})_T = (R_{B2})_x + (R_{B2})_y$$

6.6.5

CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

X & Y REACTIONS DUE TO SIDE LOAD

$N = \text{NO. OF SEATS}$
 $\theta = \tan^{-1} \left(\frac{10}{\frac{1}{2}dy} \right) = \tan^{-1} \left(\frac{20}{dy} \right)$
 $d_1 = \sqrt{\left(\frac{dy}{2} \right)^2 + 10^2} = \sqrt{\frac{dy^2}{4} + 100}$
 $3 \cdot N \cdot P_y = 2d_1 R'_A + 2(10) R'_B$
 $R'_B = R'_A \sin \theta$
 $3 \cdot N \cdot P_y = 2d_1 R'_A + 20 R'_A \sin \theta$
 $R'_A = \frac{3 \cdot N \cdot P_y}{2d_1 + 20 \sin \theta}$



$R_{Ax} = \pm R'_A \cos \theta$
 $R_{Ay} = \frac{1}{2} N P_y - R'_A \sin \theta$
 $R_{By} = R'_B$

IT HAS BEEN ASSUMED IN THIS ANALYSIS THAT THE OUT OF BALANCE TORQUE $N P_y \times 3.0"$ IS REACTED BY THE FWD. FEET STUDS AND THE AFT SHEAR PINS AS SHOWN. THIS IS POSSIBLE DUE TO TOLERANCE BETWEEN THE SHEAR PINS AND THE SUPPORT FITTING. NEEDLESS TO SAY THESE SIDE COMPONENTS ARE OF SMALL MAGNITUDE AS SHOWN BELOW.

N	dy	θ	$\sin \theta$	d_1	P_y	R'_A	R'_B	$\cos \theta$	TOTAL			
									R_{Ax}	R_{Bx}	R_{Ay}	R_{By}
3	40	26.6°	.448	22.4	375	62.8	28.1	.902	±56.6	0	535	28.1
2	20.75	44°	.695	14.4	375	52.6	36.6	.719	37.8	0	338	36.6

6.6.5

CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

SUMMARY - SEAT SUPPORT REACTIONS

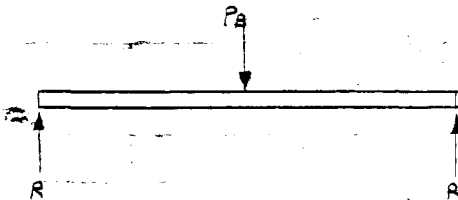
	3-MAN SEAT						2-MAN SEAT					
	RAX	RAY	RAZ	Rbx	RAY	RBZ	RAX	RAY	RAZ	Rbx	RAY	RBZ
FWD. -0° AZ.	-3750	0	4500	0	0	-4500	-2500	0	3000	0	0	-3000
AFT	563	0	-675	0	0	675	375	0	-450	0	0	450
UP	0	0	263	0	0	487	0	0	175	0	0	325
DOWN	0	0	-655	0	0	-1220	0	0	-438	0	0	-812
SIDE	±57	±535	±236	0	±28	±439	±38	±338	±304	0	±37	±564
RIGHT												
FWD.-20° AZ.	-3654	-1219	4768	0	-64	-5229	-2436	-772	3511	0	-83	-1533
LEFT												
FWD.-20° AZ.	-3654	1219	3690	0	64	-5229	-2436	772	2127	0	83	-4105

APPLIED LOAD ON SEAT SUPPORT BEAMS

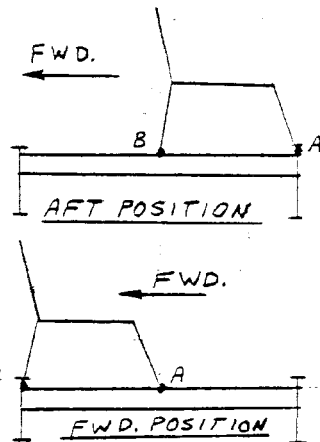
FOR TROOP DECK WITH AND WITHOUT GALLEY

DWG. REF.

4F40033
4F40014
4F40013



* (+) MOMENT - TENSION IN LOWER CAP



LOAD DIR.	SEAT POS.	3-MAN SEAT				2-MAN SEAT			
		P _B	R	V _{MAX}	*M _{MAX}	P _B	R	V _{MAX}	*M _{MAX}
RIGHT FWD.-20°	FWD.	4768	-2384	-2384	-47680	3511	-1756	1756	-35110
LEFT FWD.-20°	FWD.	-5229	2615	-2615	52290	-4105	2053	2053	41050
FWD.-20°	AFT	±675	±338	±338	±6750	±450	±225	225	±4500
UP	AFT	487	-244	-244	-4870	325	-163	163	-3250
UP	FWD.	263	-132	132	-2630	175	-88	88	-1750
DOWN	AFT	-1220	610	610	12200	-812	406	406	8120
DOWN	FWD.	-655	328	328	6550	-438	219	219	4380
SIDE	AFT	±439	±220	220	±4390	±564	±282	282	±5640
SIDE	FWD.	±236	±118	118	±2360	±304	±152	152	±3040
FWD.-0°	FWD. & AFT	±4500	±2250	2250	±45000	±3000	±1500	1500	±30000

REACTIVE SEAT LEG LOADS - FWD. CRASH 0°-20° FWD. AZIMUTHS

3-MAN SEAT

Φ	$\sin \Phi$	$\cos \Phi$	P_R	P_X	P_Y	DUE TO P_X		R_Z	DUE TO P_Y		SIDE LOAD		SIDE LOAD	
						(Raz)x	(Raz)x		(Raz)y	(Raz)y	RIGHT (Raz)t	LEFT (Raz)t	RIGHT (Raz)t	LEFT (Raz)t
20°	.342	.940	7500	7048	2565	-4229	+4229	±1539	±539	±1000	-4768	-3690	+3229	+5229

Φ	DUE TO P_X		DUE TO P_Y						TOTAL					
	P_X	R'_{AX}	P_Y	Θ	$\sin \Theta$	d_1	R'_A	R'_B	$\cos \Theta$	R'_{AX}	R_{AX}	R_{BX}	R_{AY}	R_{BY}
20°	7048	3524	2565	26.6°	.448	22.4	143.5	64.3	.902	129.5	3564	0	1219	64.3

2-MAN SEAT

Φ	$\sin \Phi$	$\cos \Phi$	P_R	P_X	P_Y	DUE TO P_X		R_Z	DUE TO P_Y		SIDE LOAD		SIDE LOAD	
						(Raz)x	(Raz)x		(Raz)y	(Raz)y	RIGHT (Raz)t	LEFT (Raz)t	RIGHT (Raz)t	LEFT (Raz)t
20°	.342	.940	5000	4699	1710	-2819	+2819	1978	±692	±1286	-3511	-2127	+1533	+4105

Φ	DUE TO P_X		DUE TO P_Y						TOTAL					
	P_X	R'_{AX}	P_Y	Θ	$\sin \Theta$	d_1	R'_A	R'_B	$\cos \Theta$	R'_{AX}	R_{AX}	R_{BX}	R_{AY}	R_{BY}
20°	4699	2350	1710	44°	.695	14.4	120	83.4	.719	86.2	2436	0	772	83.4

CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

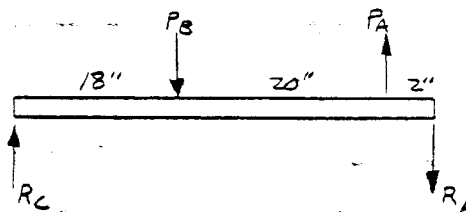
NAME	P.T. Fletcher	DATE	30 Apr 68	LOCKHEED-GEORGIA COMPANY	PAGE	10.332	TEMP.	PERM.
CHECKED	J. Halliday	30 Apr 68	TITLE	A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Model	C-5A		
APPROVED	L.G. Darby	30 Apr 68	INTERNAL LOADS ANALYSIS		IGIUS 46-2-2	Report No.		

Prepared	NAME P.T. Fletcher	DATE 30 Apr 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP. Val. 1	PERM. 6.333
Checked	J. Halliday	30 Apr 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Model C-5A	
Approved	L.G. Darby	30 Apr 68		LGIUS 46-2-2	
				Report No.	

6.6.5

CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

FOR TROOP DECK WITHOUT GALLEY ONLY (FS 2044-2084)



REF. DWG. 4F40014

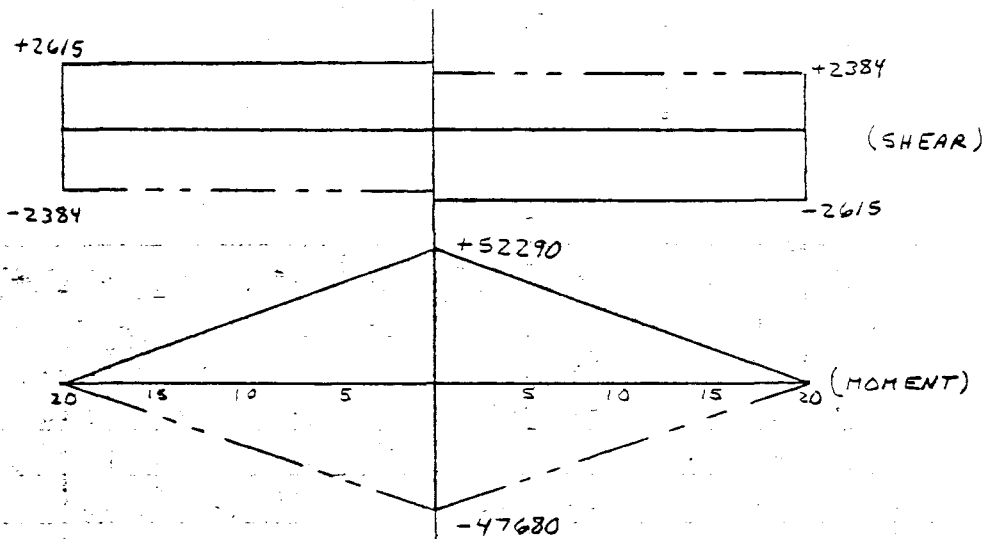
LOAD DIR.	SEAT POS.	P _A	P _B	R _A	R _C	V _{MAX}	M _{MAX} *	P _A	P _B	R _A	R _C	V _{MAX}	M _{MAX} *
RIGHT FWD-20°	AFT	4768	-3229	-3077	1538	3077	27600	3511	-1533	-2646	668	2646	12000
LEFT FWD-20°	AFT	3690	-5229	-1153	2692	2692	48400	2127	-4105	-173	2151	2151	38700
	AFT	-675	675	338	-338	338	-6080	-450	450	225	-225	225	-4050
UP	AFT	263	487	-469	-281	469	-5060	175	325	-312	-188	312	-3380
DOWN	AFT	-655	-1220	1170	705	1170	12700	-438	-812	780	470	780	8460
SIDE	AFT	±236	±439	±421	±254	421	±4570	±304	±564	±542	±326	542	±5870
FWD-0°	AFT	4500	-4500	-2250	2250	2250	40500	3000	-3000	-1500	1500	1500	27000

* (+) MOMENT - TENSION IN LOWER CAP

6.6.5

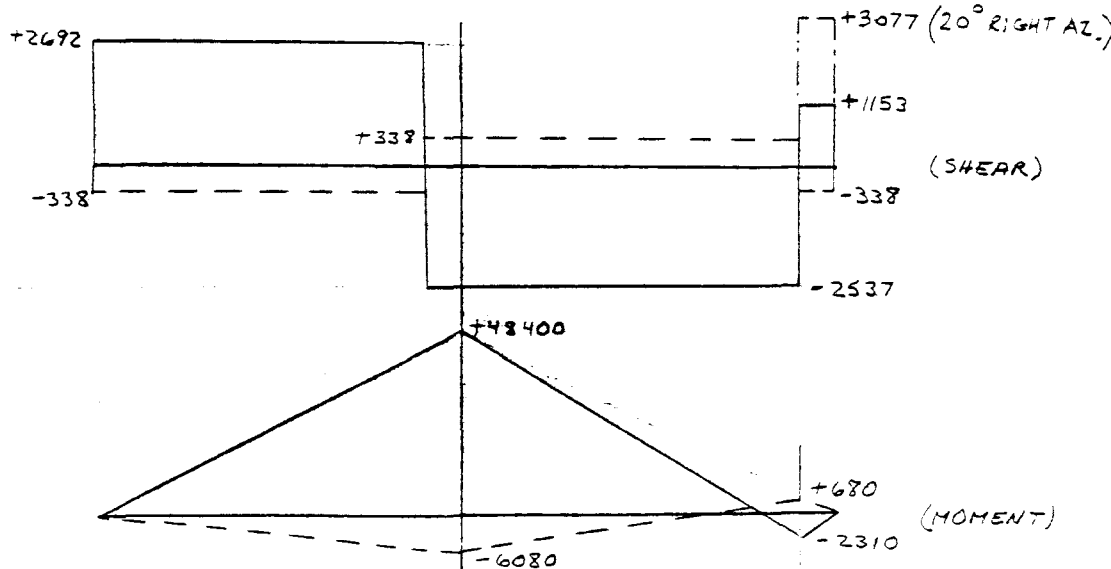
CRASH LOAD ON TROOP SEAT SUPPORT BEAMS (CONT.)

SHEAR & MOMENT DIAGRAMS - WITH GALLEY (FS 1744-2101)
& WITHOUT GALLEY (FS 1744-2044)



———— 3-MAN SEAT CRITICAL COND.: FWD. CRASH -20° LEFT AZ. - SEAT POS. AFT.
----- 3-MAN SEAT CRITICAL COND.: FWD. CRASH -20° RIGHT AZ. - SEAT POS. FWD.

WITHOUT GALLEY ONLY (FS 2044-2101)



———— 3-MAN SEAT CRITICAL COND.: FWD. CRASH -20° LEFT AZ. - SEAT POS. AFT.
----- 3-MAN SEAT CRITICAL COND.: AFT. CRASH - SEAT POS. AFT.

PREPARED	K. Watson	11-16-70	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	VOL. I	6.335
CHECKED	A. D. Pinchot	11-16-70	INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	H. H. Wade	11-16-70		REPORT NO.	LG1US46-2-2	

REV. (B) KRW 1-8-71

6.6.6 Troop Deck Transverse Splices

Discussion

The aft troop floor extends from F.S. 1744 to F.S. 2100. Transverse deck splices exist at F.S. 1744, F.S. 1804, F.S. 1884, F.S. 1964, F.S. 2044 and F.S. 2100. Since the splice at F.S. 1884 typifies the transverse splices, and since it is the most critical, it has been selected for detail analysis in this report.

The loads used in this section are obtained, as a part of the FAMAS Mod. 2, as described in the Section 6.6.1, page 6.290. The relevant portion of the FAMAS Mod. 2 is shown on the following page. The critical splice loads were identified by scanning the splice loads for all load cases and selecting the maximum loads for each of the three following conditions:

1. Max. axial loads, resulting from combined flight and pressure cases, plus their corresponding deck shears fore and aft of the splice.
2. Max. deck shears forward of the splice, plus their corresponding axial loads and aft deck shears.
3. Max. deck shears aft of the splice, plus their corresponding axial loads and forward deck shears.

The final splice loads resulted from the following load cases:

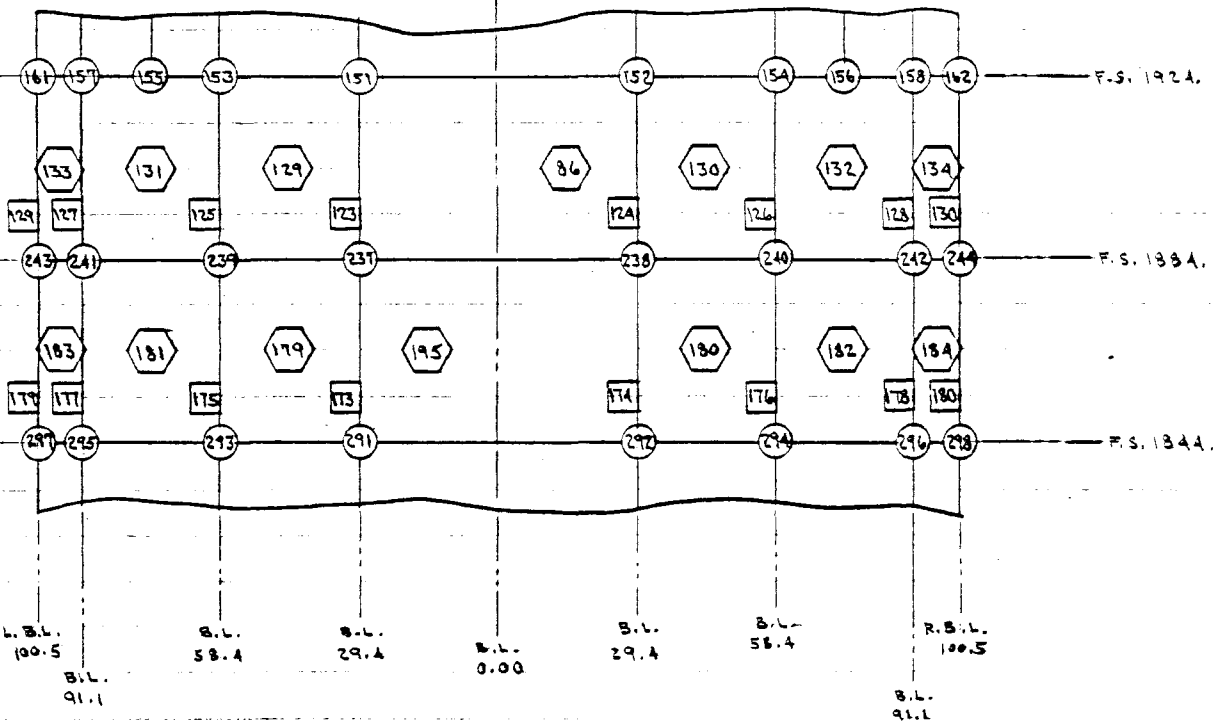
1. Dynamic Lateral Gust Condition DML 001 plus pressure (case 169)
2. Dynamic Lateral Gust Condition DML 00R plus pressure (case 393)
3. Downbending Condition TPM 096 plus pressure (case 168)

REV. (B) KRW 1-8-71

6.6.6 TROOP DECK TRANSVERSE SPLICES

FUS. STA. 1884. SPLICE (TYP.)

(REF 3. VOL. 4-FAMAS)



LOOKING UP AT THE TROOP DECK-FAMAS MOD. 2

NOTES:

- DENOTES FAMAS GRID POINT.
- DENOTES FAMAS STRINGER.
- DENOTES FAMAS COVER.

Prepared	NAME K. Watson	DATE 11-16-70	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. I	PERM. 6.337
Checked	A. D. Pinchot	11-16-70	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Model C-5A		
Approved	H. H. Wade	11-16-70		LGIUS46-2-2 Report No.		

REV. (8) KRW 1-8-71

6.6.6 TROOP DECK TRANSVERSE SPLICES

FUS. STA. 1384. SPLICE (TYP.)

MAX. STRGR LOADS RESULTING FROM COMBINED
FLIGHT AND PRESSURE CASES

FWD;

STRGR NO.	AREA	TENSION LOAD ~ LBS	CASE
179	6.90	156997.	169
177	1.21	33022.	169
175	1.77	37435.	168
173	2.52	52989.	168
174	2.52	51969.	168
176	1.77	35900.	168
178	1.21	29245.	393
130	3.90	86219.	393

AFT;

STRGR NO.	AREA	TENSION LOAD ~ LBS	CASE
129	3.73	141155.	169
127	1.31	40327.	169
125	1.62	34340.	168
123	2.52	55662.	168
124	2.52	54107.	168
126	1.62	31312.	168
128	1.31	33297.	393
130	3.10	80484.	393

THE RESULTING SPLICE LOAD IS $\frac{P_{FWD STRGR} + P_{AFT STRGR}}{2}$ AT THE ADJOINING GRID POINT, THUS:

GRID POINT	AREA	TENSION LOAD ~ LBS	CASE
243	5.32	149076.	169
241	1.26	36675.	169
239	1.70	35888.	168
237	2.52	54326.	168
238	2.52	53038.	168
240	1.70	33606.	168
242	1.26	31271.	393
244	3.50	83352.	393

4 REF. PG. 6.29.1 & PG. 6.294

3 REF. PG. 6.30 & PG 6.294

2 REF. PG. 6.23 & PG 6.294

1 THIS VALUE INCLUDES A PORTION OF THE LOWER LONGERON OF THE SERVICE DOOR.

Prepared	K. Watson	DATE 11-16-70	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. I 6.333	PERM.
Checked	A. D. Pinchot	11-16-70	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Model	C-5A	
Approved	H. H. Wade	11-16-70		Report No.	LGIUS46-2-2	

REV. (B) KRW 1-8-71

U. U. L TROOP DECK TRANSVERSE SPLICES

FUS. STA. 1834. SPLICE (TYP.)

COVER LOADS CORRESPONDING TO MAX. STRGR LOADS

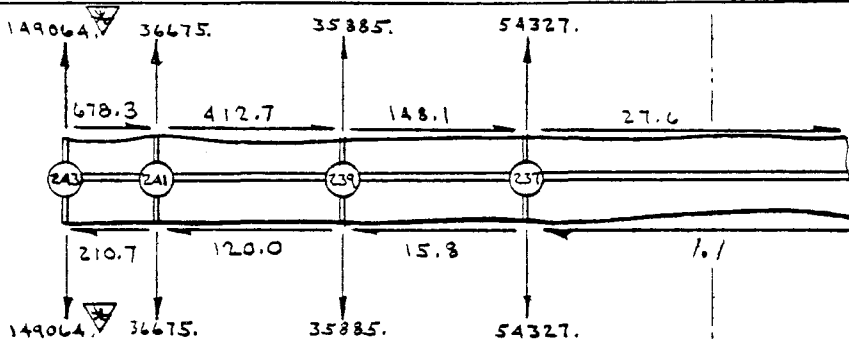
FWD;

COVER NO.	THICK.	SHEAR LOAD (LB/IN.)	CASE
183	.057	+210.7	169
181	.057	+120.0	169
179	.057	+15.8	168
195	.057	-1.1	168
180	.057	-7.3	168
182	.057	+241.2	393
184	.057	+316.8	393

AFT;

COVER NO.	THICK.	SHEAR LOAD (LB/IN.)	CASE
133	.057	+678.3	169
131	.057	+412.7	169
129	.057	+148.1	168
86	.057	-27.6	168
130	.057	+87.2	168
132	.057	+229.4	393
134	.057	+349.4	393

THEREFORE THE NET LOADS AT THE SPLICE ARE:

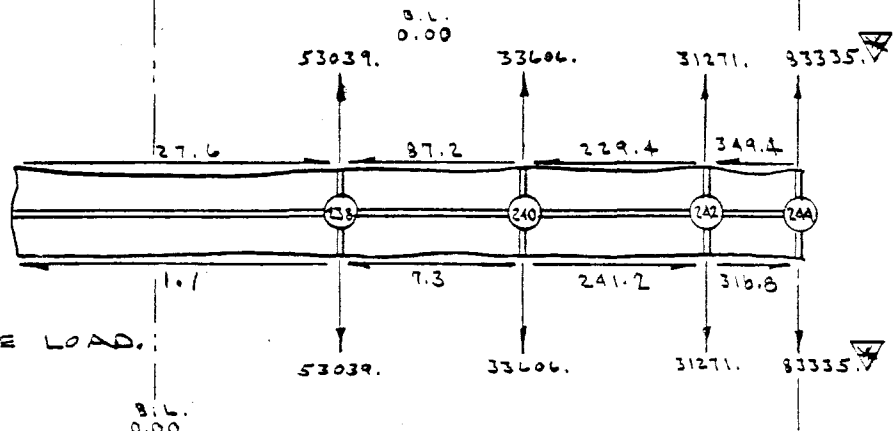


- ▽ REF. PG. 6.83 & 6.294
- ▽ REF. PG. 6.85 & 6.294
- ▽ REF. PG. 6.84.1 & 6.294

R.B.L.
100.5

NOTE:

THIS IS THE W.L. 314. LONGERON LOAD, AND IS THEREFORE NOT A TROOP DECK SPLICE LOAD.



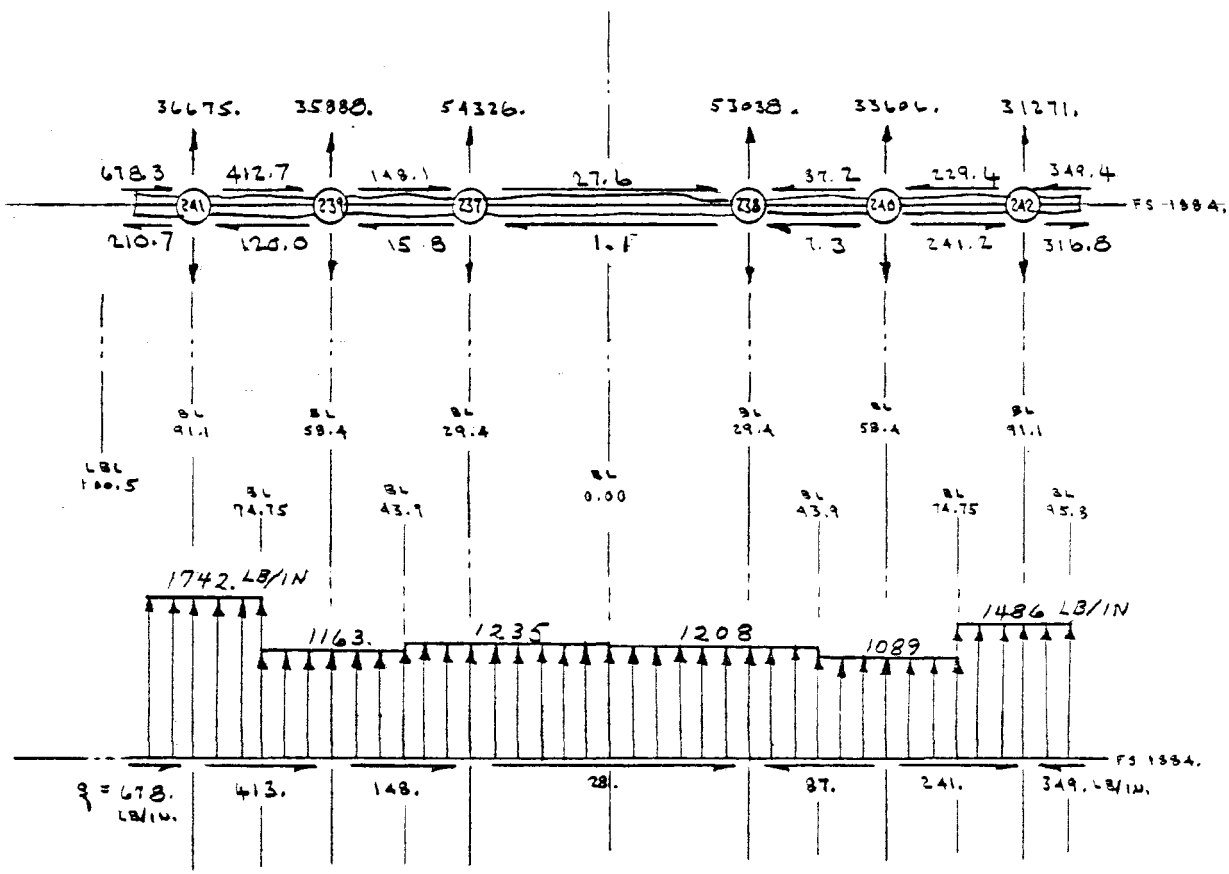
R.B.L.
0.00

REV. (B) KRW 1-8-71

6.6.6 TROOP DECK TRANSVERSE SPLICES

FUS. STA. 1884. SPLICE (TYP.)

RESOLVE STRINGER LOADS TO UNIFORMLY DISTRIBUTED
TENSION LOADS & FIND RESULTANT LOAD/IN. ON SPLICE:



L.B.L. - L.B.L.	WT (LB/IN.)	q (LB/IN.)	R (LB/IN.)
95.8 - 91.1	1742.	678.	1869.
91.1 - 74.75	1742.	413.	1790.
74.75 - 58.4	1163.	413.	1234.
58.4 - 43.9	1163.	148.	1172.
43.9 - 29.4	1235.	148.	1244.
29.4 - 0.0	1235.	28.	1235.

R.B.L. - R.B.L.	WT (LB/IN.)	q (LB/IN.)	R (LB/IN.)
95.8 ~ 91.1	1486.	349.	1526.
91.1 ~ 74.75	1486.	241.	1505.
74.75 ~ 58.4	1089.	241.	1115.
58.4 ~ 43.9	1089.	37.	1093.
43.9 ~ 29.4	1208.	37.	1211.
29.4 ~ 0.0	1208.	23.	1208.

PREPARED	NAME J.H. Ray	DATE 7 Aug 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP. Vol. I	REV. 7.1
CHECKED	J. Halliday	7 Aug 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	MODEL	C-5A	
APPROVED	L.G. Darby	7 Aug 68		LGJUS	46-2-2	
				REPORT NO.		

7.0 SHELL STRUCTURE, F.S. 2101 - F.S. 2538

7.1 DISCUSSION

The fuselage aft of F.S. 2101 is of conventional non-pressurized semi-monocoque construction consisting of a thin aluminum alloy skin supported longitudinally by extruded aluminum alloy stringers spaced at approximately 7.5 inches around the circumference.

The sloping torque deck forms the lower boundary of the fuselage shell between F.S. 2101 and F.S. 2273. It slopes downward from W.L. 314 at F.S. 2101 to W.L. 273 at F.S. 2273. Three bonded aluminum honeycomb panel assemblies comprise the deck which is stiffened by a longitudinal beam at B.L. 0.0 and by transverse beams at each frame station.

The torque deck is at W.L. 273 between F.S. 2273 and F.S. 2538. The deck is of bonded aluminum honeycomb construction with a longitudinal center beam and a transverse beam at each frame station. The torque deck longeron splices the upper panel skin, the side panel skin and the torque deck. It is composed of extruded inner and outer caps with bonded aluminum honeycomb shear panels.

The sloping longeron intersects with the torque deck longeron by means of a box beam which extends over four frames (F.S. 2361, 2383, 2405, and 2427). This box beam transfers load from the torque deck longeron to the sloping longeron.

The skin is supported circumferentially by frames spaced approximately at 22 inch intervals between F.S. 2101 and F.S. 2538. Frames at F.S. 2145, 2273, and 2427 react the aft cargo door loads. Frames at F.S. 2361, 2383, 2405, and 2427 react the sloping longeron kick loads. The frames at F.S. 2101 and F.S. 2273 react the kick loads from the sloping torque deck. Canted frames at F.S. 2110 and F.S. 2131 are ramp latch frames, and react the ramp latch loads. All other frames in this section of the fuselage are minor frames and are stability and skin stiffness designed.

The W.L. 314 longeron in this portion of the fuselage is utilized as a skin splice member in addition to its axial load capability.

	NAME	DATE			TEMP.	PERM.
PREPARED	J. H. Ray	5 Sept 68	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		PAGE	Vol. I 7.2
CHECKED	J. Halliday	5 Sept 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE		MODEL	C-5A
APPROVED	L. G. Darby	5-Sept 68			LG1US46-2-2 REPORT NO.	

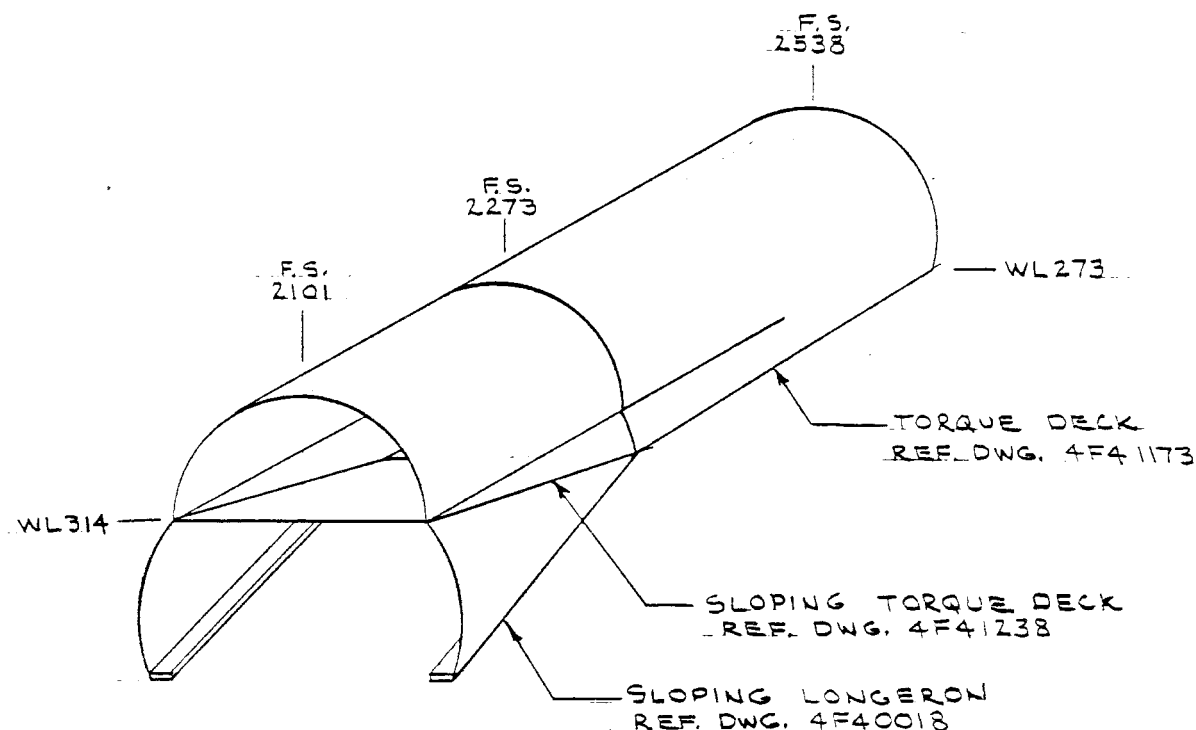
7.2 GEOMETRY AND LOADS

The section of the fuselage from F.S.2101 to F.S.2538 is basically a semi-monoque shell structure composed of 7079-T6 stringers and longerons. Frames are spaced at 22 inch intervals to provide shell stability and react other loads such as shell loads redistribution, ramp support loads and longeron kick loads. This section of the fuselage is not pressurized and its basic function is to transmit the empennage loads forward.

The individual element geometry of the structure is discussed in detail in the respective section dealing with that particular element. The internal loads for these elements will also be presented in the respective sections.

The basic fuselage loads are presented in Ref. 17. Moments and shears are applied to the fuselage using the sign convention of Ref. 17, pg. 3.1-001. The various critical load cases will be discussed in detail in each section.

Figure 7.2.1 describes the basic geometry of this section of the fuselage.



SHELL STRUCTURE ~ F.S. 2101 - F.S. 2538

FIGURE 7.2.1

	NAME	DATE	LOCKHEED - GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	PAGE	TEMP.	PERM.
PREPARED	J. H. Ray	7 Sept 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Vol I	7.3	
CHECKED	V. Boyd	7 Sept 68		MODEL C-5A		
APPROVED	L.G.Darby	7 Sept 68		LG1US46-2-2		
				REPORT NO.		

7.3 SKINS AND STRINGERS

The internal loads for the skins and stringers are calculated using the aft fuselage FAMAS model as described in Reference 8, Vol. IV. External loads from reference 10 are applied to the FAMAS Model as discrete grid point loads along the entire length of the model using a computerized loading program as described in Reference 8, Vol. I, Section 5.

The aft fuselage FAMAS Model is subdivided into modules (or mods) to simplify calculations. This section gives internal loads for skins and stringers from F.S.2101 to F.S.2538, which is represented by Mods 5, 6 and portions of 4 and 7 in the FAMAS Model.

Internal loads presented here are for those conditions which appear in the scan of the margins-of-safety in Reference 15, Section 7.3. These designing conditions are:

DMLO01	Ref. 10	pg. 9.3-501
5PE201	Ref. 10	pg. 9.2-730
1PC242	Ref. 10	pg. 9.2-685
1EY107	Ref. 10	pg. 9.3-165
100400T = 1.18	Ref. 10	pg. 9.6-657

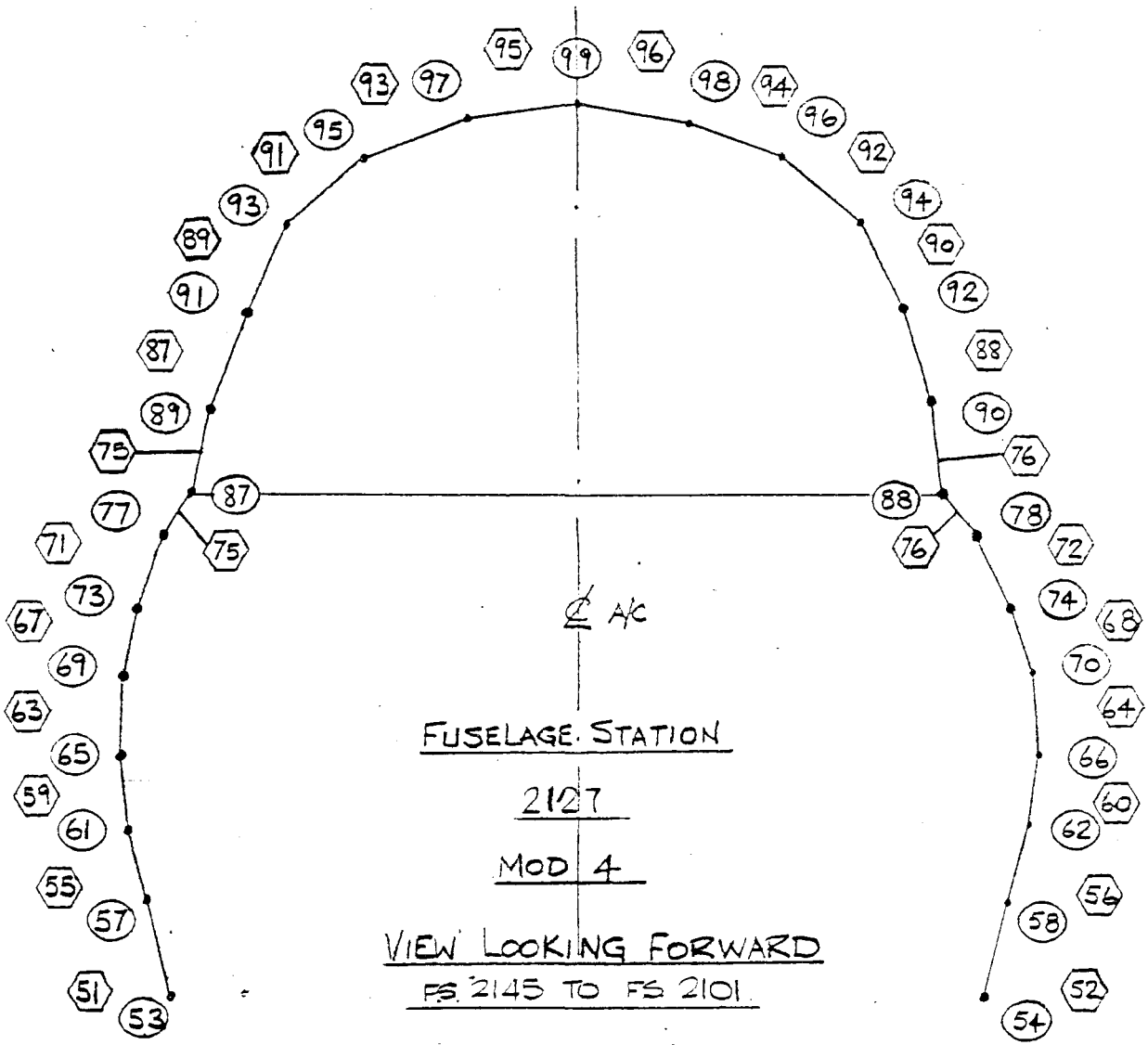
Internal loads shown on succeeding pages have been extracted directly from the FAMAS Analysis and are loads in FAMAS stringers and FAMAS panels. FAMAS stringer loads are in section 7.3.1 and FAMAS panel shears are in Section 7.3.2.

All loads are in pounds and shears are in pounds per inch.

A discussion is presented in Reference 15, section 6.3 explaining the method used to calculate actual stringer loads from FAMAS stringer loads and actual skin shears from FAMAS panel shears.

REV. A MB. 1 AUG 69

7.3.1 Stringer Loads (Continued)



KEY

 GRID POINT

 FAMAS STRINGER

 FAMAS PANEL

FOR AREAS AND THICKNESSES SEE REF 8
VOLUME IV SECTION 5.2

Prepared	V. W. Boyd	NAME V. W. Boyd	DATE 16 Aug 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. I	PERIAL 7.5
Checked	J. Halliday	J. Halliday	16 Aug 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Model	C-5A	
Approved	L.G. Darby	L.G. Darby	16 Aug 68		Report No.	LGIUS 46-2-2	

REV (A) MO. 1 AUG 69.

7.3.1 Stringer Loads (Continued)

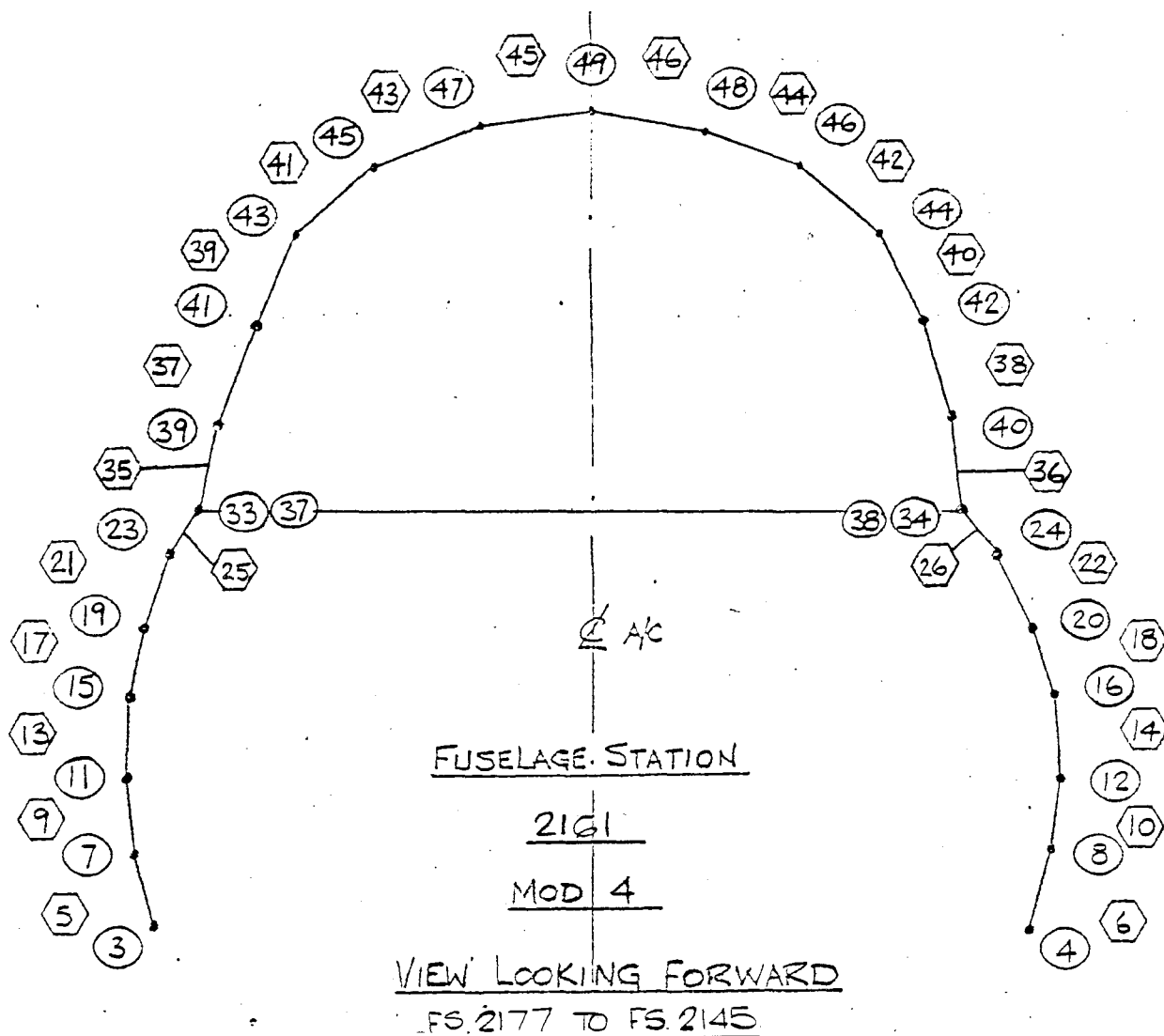


FIGURE No 7.3.1.2

KEY

 GRID POINT

 FAMAS STRINGER

 FAMAS PANEL

FOR AREAS AND THICKNESSES SEE REF. 8.
VOLUME IV SECTION 5.2.

NAME		DATE	LOCKHEED-GEORGIA COMPANY		TEMP.	PERM.
Prepared	RF WILKINSON	1JUN69	A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		Page	Vol. I 7.6
Checked	A L PINCHOT	1JUN69	TITLE		Model	C-5A
Approved	L G DARBY	1JUN69	INTERNAL LOADS ANALYSIS		LG1US46-2-2	
			AFT FUSELAGE		Report No.	

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. I

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS & CONDITION 1PC242 I MOD 4

1	.125710+06	2	.119744+06	3	.738406+05	4	.725073+05
* 7	.199117+05	8	.196486+05	11	.132721+05	12	.131318+05
15	.114202+05	16	.122466+05	19	.110369+05	20	.116703+05
23	.842543+04	24	.101615+05	25	.513511+04	26	.722995+04
27	.375281+04	28	.529908+04	29	.384044+04	30	.504871+04
33	.462938+04	34	.479357+04	35	.400723+04	36	.467680+04
37	-.106080+04	38	-.180219+04	39	-.638033+03	40	.182838+04
41	-.235978+05	42	-.235158+05	43	-.436770+05	44	-.427012+05
45	-.656364+05	46	-.640550+05	47	-.892956+05	48	-.880446+05
49	-.996250+05	50	.471586+03	51	.124177+06	52	.115647+06
53	.783690+05	54	.754560+05	55	.212389+04	56	.200869+04
57	.195365+05	58	.190090+05	59	.109861+04	60	.111214+04
61	.143217+05	62	.141080+05	63	.655213+03	64	.669523+03
65	.165272+05	66	.167307+05	67	.683871+02	68	.588784+02
69	.951862+04	70	.112761+05	71	.114714+03	72	.285264+03
73	.761671+04	74	.910627+04	75	.400785+02	76	.185226+03
77	.432867+03	78	.242988+04	79	.186611+04	80	.533618+04
81	.222284+04	82	.386426+04	83	.201941+04	84	.347716+04
85	.192191+04	86	.246522+04	87	.717007+03	88	.250130+04
89	-.459507+04	90	-.528677+04	91	-.249213+05	92	-.235351+05
93	-.421626+05	94	-.411751+05	95	-.624078+05	96	-.616334+05
97	-.854989+05	98	-.851970+05	99	-.972055+05	100	.434465+03
101	.381572+03	102	.353247+03	103	.342812+04	104	.307518+04
105	.124483+06	106	.114832+06	107	.708477+05	108	.670553+05
109	.400430+04	110	.363816+04	111	.211928+05	112	.202032+05
113	.182832+04	114	.180688+04	115	.168351+05	116	.160590+05
117	.683257+03	118	.889261+03	119	.935991+04	120	.814607+04
121	-.180140+03	122	-.399613+03	123	.859415+04	124	.106253+05
125	-.149258+03	126	-.218037+03	127	.976833+04	128	.117778+05
129	-.217565+03	130	-.141037+02	131	.555834+04	132	.754719+04
133	.935720+02	134	.319753+03	135	.934529+03	136	.322171+04
137	.512672+03	138	.242292+04	139	.127818+03	140	.264212+04
141	.668147+02	142	.196907+04	143	-.544922+03	144	-.274489+03
145	-.667199+04	146	-.571543+04	147	-.251695+05	148	-.231395+05
149	-.406828+05	150	-.396369+05	151	-.598141+05	152	-.596170+05
153	-.824814+05	154	-.829079+05	155	-.950213+05	156	.610493+04
158	.538293+04	159	.806059+04	160	.748355+04	161	.122947+06
162	.111274+06	163	.653192+05	164	.611782+05	165	.219496+05

* STRINGER (7) REF. P. 7.5 ULTIMATE TENSION LOAD = 19,912. LB.

Prepared	NAME RF WILKINSON	DATE 1JUN69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. VOL. I	PERM. 7.7
Checked	A L PINCHOT	1JUN69	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Model	C-5A	
Approved	L G DARBY	1JUN69		Report No.	LG1US46-2-2	

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. 1

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS & CONDITION 1PC242 1 MOD 4

1	168	.209790+05	171	.161919+05	172	.158703+05	175	.922879+04
	176	.101447+05	179	.938057+04	180	.107705+05	183	.768452+04
	184	.104734+05	187	.421410+04	188	.719663+04	191	.122156+02
	192	.260738+04	193	.426813-01	194	.388683-01	195	-.316779-00
	196	-.221366-00	197	.119733+01	198	.356309-00	199	.145084+04
	200	.134343+04	201	-.373467+03	202	-.345771+03	203	.221481+04
	204	.205050+04	205	.124479+06	206	.114328+06		

LOADS ARE IN POUNDS

Prepared	NAME RF WILKINSON	DATE 1 JUN 69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP. 7.3	PERM. 7.3
Checked	A L PINCHOT	1 JUN 69	TITLE INTERNAL LOADS ANALYSIS	Page Vol. I	Model C-5A
Approved	L G DARRY	1 JUN 69	AFT FUSELAGE	Report No.	LG1US46-2-2

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. 1

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS & CONDITION SPECI

1 MOD 4

1	1	-.198126+06	2	-.185115+06	3	-.106000+06	4	-.107001+06
	7	-.278059+05	8	-.281554+05	11	-.180011+05	12	-.182683+05
	15	-.148933+05	16	-.159631+05	19	-.139419+05	20	-.148095+05
	23	-.958334+04	24	-.113428+05	25	-.611087+04	26	-.783134+04
	27	-.449568+04	28	-.574678+04	29	-.479779+04	30	-.577839+04
	33	-.441150+04	34	-.460596+04	35	-.449099+04	36	-.497831+04
	37	-.235970+04	38	-.313551+04	39	-.395419+04	40	-.186538+04
	41	-.352819+05	42	-.357158+05	43	-.621543+05	44	-.617136+05
	45	-.934647+05	46	-.922790+05	47	-.129229+06	48	-.128179+06
	49	-.145851+06	50	-.272441+03	51	-.187014+06	52	-.181449+06
	53	-.114800+06	54	-.114534+06	55	-.306760+04	56	-.299431+04
	57	-.275876+05	58	-.277359+05	59	-.173781+04	60	-.177090+04
	61	-.196402+05	62	-.199336+05	63	-.364967+03	64	-.835051+03
	65	-.219122+05	66	-.226972+05	67	-.398669+03	68	-.374199+03
	69	-.112071+05	70	-.131700+05	71	-.534384+03	72	-.675397+03
	73	-.803347+04	74	-.963645+04	75	-.257751+03	76	-.362727+03
	77	-.105207+04	78	-.712948+03	79	-.147826+04	80	-.429450+04
	81	-.170872+04	82	-.297906+04	83	-.185961+04	84	-.302100+04
	85	-.136523+04	86	-.163905+04	87	-.462571+03	88	-.197368+04
	89	-.107969+05	90	-.116689+05	91	-.381382+05	92	-.375273+05
	93	-.607493+05	94	-.603695+05	95	-.895566+05	96	-.899931+05
	97	-.122954+06	98	-.122703+06	99	-.139999+06	100	-.258222+03
	101	-.526716+03	102	-.609474+03	103	-.471336+04	104	-.448134+04
	105	-.187757+06	106	-.181046+06	107	-.103873+06	108	-.102614+06
	109	-.674074+04	110	-.651702+04	111	-.301029+05	112	-.299156+05
	113	-.327841+04	114	-.329028+04	115	-.231200+05	116	-.230282+05
	117	-.136084+04	118	-.156444+04	119	-.122440+05	120	-.114830+05
	121	-.594471+03	122	-.818564+03	123	-.112705+05	124	-.135526+05
	125	-.482840+02	126	-.323525+02	127	-.113657+05	128	-.136940+05
	129	-.653835+03	130	-.817045+03	131	-.532120+04	132	-.741110+04
	133	-.219826+03	134	-.693411+02	135	-.987525+03	136	-.122126+04
	137	-.131142+04	138	-.124112+03	139	-.157864+04	140	-.378280+03
	141	-.154997+04	142	-.425111+02	143	-.229109+04	144	-.229666+04
	145	-.154140+05	146	-.150894+05	147	-.383023+05	148	-.373940+05
	149	-.589332+05	150	-.595952+05	151	-.351466+05	152	-.359104+05
	153	-.118339+06	154	-.118565+06	155	-.135918+06	156	-.929206+04
	158	-.873365+04	159	-.102908+05	160	-.397063+04	161	-.188240+06
	162	-.179477+06	163	-.930455+05	164	-.913242+05	165	-.313151+05

LOADS ARE IN POUNDS

Prepared	NAME RF WILKINSON	DATE 1JUN69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. I	PERM. 7.9
Checked	A L PINCHOT	1JUN69	TITLE INTERNAL LOADS ANALYSIS	Model C-5A		
Approved	L G DABBY	1JUN69	AFT FUSELAGE	LG1US46-2-2 Report No.		

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. 1

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS & CONDITION SPE201 1 MOD 4

1	168	-	.312181	+05	171	-	.226744	+05	172	-	.230432	+05	175	-	.124701	+05
	176	-	.137884	+05	179	-	.120155	+05	180	-	.137702	+05	183	-	.901682	+04
	184	-	.120522	+05	187	-	.368032	+04	189	-	.566144	+04	191		.233435	+04
	192		.228888	+02	193	-	.950777	-01	194	-	.933791	-01	195		.412764	-00
	196		.326829	-00	197	-	.167918	+01	198	-	.137694	+01	199	-	.238739	+04
	200	-	.232228	+04	201		.614495	+03	202		.597690	+03	203	-	.354198	+04
	204	-	.354217	+04	205	-	.187751	+06	206	-	.181040	+06				

LOADS ARE IN POUNDS

NAME	DATE	LOCKHEED-GEORGIA COMPANY		TEMP.	PERM.
Prepared	RF WILKINSON	1 JUN 69	A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	Vol. I 7.10
Checked	A L PINCHOT	1 JUN 69	TITLE	Model C-5A	
Approved	L G DARRY	1 JUN 69	INTERNAL LOADS ANALYSIS	LG1US46-2-2	
			AFT FUSELAGE	Report No.	

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON.1
 7.3 SKINS AND STRINGERS
 7.3.1 STRINGER LOADS & CONDITION DML001 1 MOD 4

1	1	.491756+05	2	-.140263+06	3	.391139+05	4	-.903112+05
	7	.132963+05	8	-.264514+05	11	.112310+05	12	-.195510+05
	15	.131475+05	16	-.196296+05	19	.155012+05	20	-.214793+05
	23	.201424+05	24	-.235543+05	25	.698280+04	26	-.794035+04
	27	.811067+04	28	-.902693+04	29	.339655+04	30	-.980550+04
	33	.210807+05	34	-.220372+05	35	.115325+05	36	-.124144+05
	37	.100477+05	38	-.772636+04	39	.285215+05	40	-.246870+05
	41	.422954+05	42	-.238977+05	43	.362522+05	44	-.652526+04
	45	.345135+05	46	.937892+04	47	.357559+05	48	.252574+05
	49	.347365+05	50	.148205+03	51	.496291+05	52	-.139933+06
	53	.414365+05	54	-.976748+05	55	.750970+03	56	-.222539+04
	57	.134233+05	58	-.264774+05	59	.257686+03	60	-.116531+04
	61	.128248+05	62	-.218253+05	63	.525942+02	64	-.472799+03
	65	.194019+05	66	-.292191+05	67	-.142841+03	68	-.128792+03
	69	.187965+05	70	-.231554+05	71	-.221964+03	72	-.142479+03
	73	.234286+05	74	-.260133+05	75	.665983+03	76	-.778067+03
	77	.187285+05	78	-.169625+05	79	.106002+05	80	-.941075+04
	81	.985541+04	82	-.899712+04	83	.904868+04	84	-.894841+04
	85	.122090+05	86	-.115453+05	87	.500667+04	88	-.492094+04
	89	.392478+05	90	-.311387+05	91	.439118+05	92	-.240188+05
	93	.391680+05	94	-.101543+05	95	.392223+05	96	.280750+04
	97	.379803+05	98	.199023+05	99	.330430+05	100	.132090+03
	101	.140935+03	102	-.465253+03	103	.158016+04	104	-.381212+04
	105	.494569+05	106	-.140480+06	107	.388303+05	108	-.894588+05
	109	.157596+04	110	-.501447+04	111	.146548+05	112	-.289631+05
	113	.511390+03	114	-.227324+04	115	.153326+05	116	-.250328+05
	117	-.938651+02	118	-.745323+03	119	.111033+05	120	-.165197+05
	121	.886957+02	122	.378401+03	123	.114851+05	124	-.166326+05
	125	-.193147+03	126	.122742+03	127	.223623+05	128	-.269144+05
	129	-.244951+03	130	-.311095+03	131	.241935+05	132	-.256157+05
	133	.154032+04	134	-.121287+04	135	.252892+05	136	-.236407+05
	137	.100999+05	138	-.685191+04	139	.122931+05	140	-.965567+04
	141	.105071+05	142	-.851035+04	143	.113633+05	144	-.891575+04
	145	.453941+05	146	-.344278+05	147	.444751+05	148	-.247915+05
	149	.402330+05	150	-.124053+05	151	.412637+05	152	-.106867+04
	153	.393176+05	154	.165521+05	155	.322516+05	157	.219206+04
	158	-.680761+04	159	.374906+04	160	-.958770+04	161	.506413+05
	162	-.142536+06	163	.363569+05	164	-.805528+05	167	.150430+05

LOADS ARE IN POUNDS

NAME RF WILKINSON		DATE 1JUN69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP. Vol. I	PERM. 7.11
Prepared					Page	
Checked	A L PINCHOT	1JUN69	TITLE INTERNAL LOADS ANALYSIS		Model	C-5A
Approved	L G DARBY	1JUN69			Report No.	LG1US46-2-2
			AFT FUSELAGE			

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. I

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS & CONDITION DML001 I MOD 4

1	168	-.299656+05	171	.146308+05	172	-.253504+05	175	.112635+05
	176	-.170980+05	179	.134963+05	180	-.189069+05	183	.208605+05
	184	-.245428+05	187	.234751+05	188	-.242536+05	191	.245506+05
	192	-.221674+05	193	.240800-01	194	-.766601-01	195	.709369-01
	196	.113912+00	197	-.182592-00	198	-.598039-00	199	.535428+03
	200	-.177250+04	201	-.137713+03	202	.456109+03	203	.817160+03
	204	-.270340+04	205	.494554+05	206	-.140476+05		

LOADS ARE IN POUNDS

NAME RF WILKINSON		DATE 1JUN69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP. No. I	PERM. 7.12
Prepared					Page	
Checked	A L PINCHOT	1JUN69	TITLE INTERNAL LOADS ANALYSIS		Model C-5A	
Approved	L G DABBY	1JUN69	AFT FUSELAGE		LG1US46-2-2	
					Report No.	

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. I
 7.3 SKINS AND STRINGERS
 7.3.1 STRINGER LOADS & CONDITION 1004001.18 1 MOD 4

1	1	.639102+04	2	.570532+04	3	.343646+04	4	.808352+04
	7	.271939+04	8	.267291+04	11	.189578+04	12	.190863+04
	15	.391319+04	16	.401286+04	19	.273530+04	20	.290419+04
	23	.449094+04	24	.479759+04	25	.603756+04	26	.634077+04
	27	.405332+04	28	.434571+04	29	.351271+04	30	.376113+04
	33	-.781752+02	34	.268156+03	35	.357479+04	36	.386059+04
	37	.473972+03	38	.700639+03	39	.333831+04	40	.371618+04
	41	-.114905+05	42	-.112993+05	43	-.197877+05	44	-.202754+05
	45	-.294086+05	46	-.304033+05	47	-.415633+05	48	-.425129+05
	49	-.483156+05	50	.650413+03	51	.207081+04	52	.151887+04
	53	.333337+04	54	.284881+04	55	-.333103+02	56	-.100725+03
	57	.185523+04	58	.177511+04	59	-.347260+03	60	-.371371+03
	61	.180633+04	62	.179501+04	63	-.123589+03	64	-.136029+03
	65	.212125+04	66	.219397+04	67	-.235676+03	68	-.227881+03
	69	.374039+04	70	.396466+04	71	-.176456+03	72	-.157519+03
	73	.221981+04	74	.258801+04	75	-.579441+02	76	-.203703+02
	77	.258657+04	78	.296284+04	79	.443547+04	80	.495633+04
	81	.347417+04	82	.385926+04	83	.262221+04	84	.289728+04
	85	.237902+04	86	.277165+04	87	.353153+04	88	.363910+04
	89	-.583299+04	90	-.508630+04	91	-.104776+05	92	-.103719+05
	93	-.176423+05	94	-.133361+05	95	-.258923+05	96	-.271997+05
	97	-.348867+05	98	-.360413+05	99	-.396701+05	100	.602977+03
	101	-.527885+02	102	-.554646+02	103	.965164+02	104	.746092+02
	105	-.327190+04	106	-.382738+04	107	.205946+04	108	.159835+04
	109	-.660892+03	110	-.683706+03	111	.121483+04	112	.110003+04
	113	-.650160+03	114	-.680726+03	115	.348568+03	116	.800334+03
	117	-.760805+03	118	-.806156+03	119	-.357571+03	120	-.843973+03
	121	.735332+03	122	.786647+03	123	.328315+04	124	.330409+04
	125	.513569+02	126	.865957+02	127	.215866+04	128	.237850+04
	129	-.294514+03	130	-.252989+03	131	.104154+04	132	.142214+04
	133	.305121+03	134	.386060+03	135	-.264136+03	136	.224775+03
	137	.362418+04	138	.417648+04	139	.302051+04	140	.354950+04
	141	.218711+04	142	.247175+04	143	.141003+04	144	.139235+04
	145	-.401665+04	146	-.302159+04	147	-.959449+04	148	-.946375+04
	149	-.154925+05	150	-.163713+05	151	-.224423+05	152	-.240873+05
	153	-.295256+05	154	-.309178+05	155	-.331291+05	156	-.702524+03
	158	-.731593+03	159	.493024+03	160	.441548+03	161	-.846831+04
	162	-.879440+04	163	.385563+04	164	.337263+04	165	.136977+04

LOADS ARE IN POUNDS

Prepared	NAME RF WILKINSON	DATE 1JUN69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP. Vol. I	PERM. 7.13
Checked	A L PINCHOT	1JUN69	TITLE INTERNAL LOADS ANALYSIS		Page	
Approved	L G DARBY	1JUN69			Model C-5A LG1US46-2-2 Report No.	
			AFT FUSELAGE			

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 & CON. 1

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS & CONDITION 1004001.18 1 MOD 4

1	168	.119636+04	171	.996632+03	172	.891626+03	175	.148089+04
	176	.142629+04	179	.208371+04	180	.210146+04	183	.236249+04
	184	.257233+04	187	.168525+04	188	.206856+04	191	.289070+03
	192	.835715+03	193	-.120910-01	194	-.128851-01	195	.448753-03
	196	-.344047-02	197	-.358303-01	198	-.247026-01	199	-.204349+03
	200	-.214620+03	201	.525731+02	202	.552185+02	203	-.309950+03
	204	-.325566+03	205	-.327180+04	206	-.382727+04		

LOADS ARE IN POUNDS

Prepared	NAME V. W. Boyd	DATE 16 Aug 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. I	PERIAL 7.14
Checked	J. Halliday	16 Aug 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Model	C-5A	
Approved	L.G. Darby	16 Aug 68		Report No.	IGIUS 46-2-2	

REV A MB. 1 AUG 69

7.3.1 Stringer Loads (Continued)

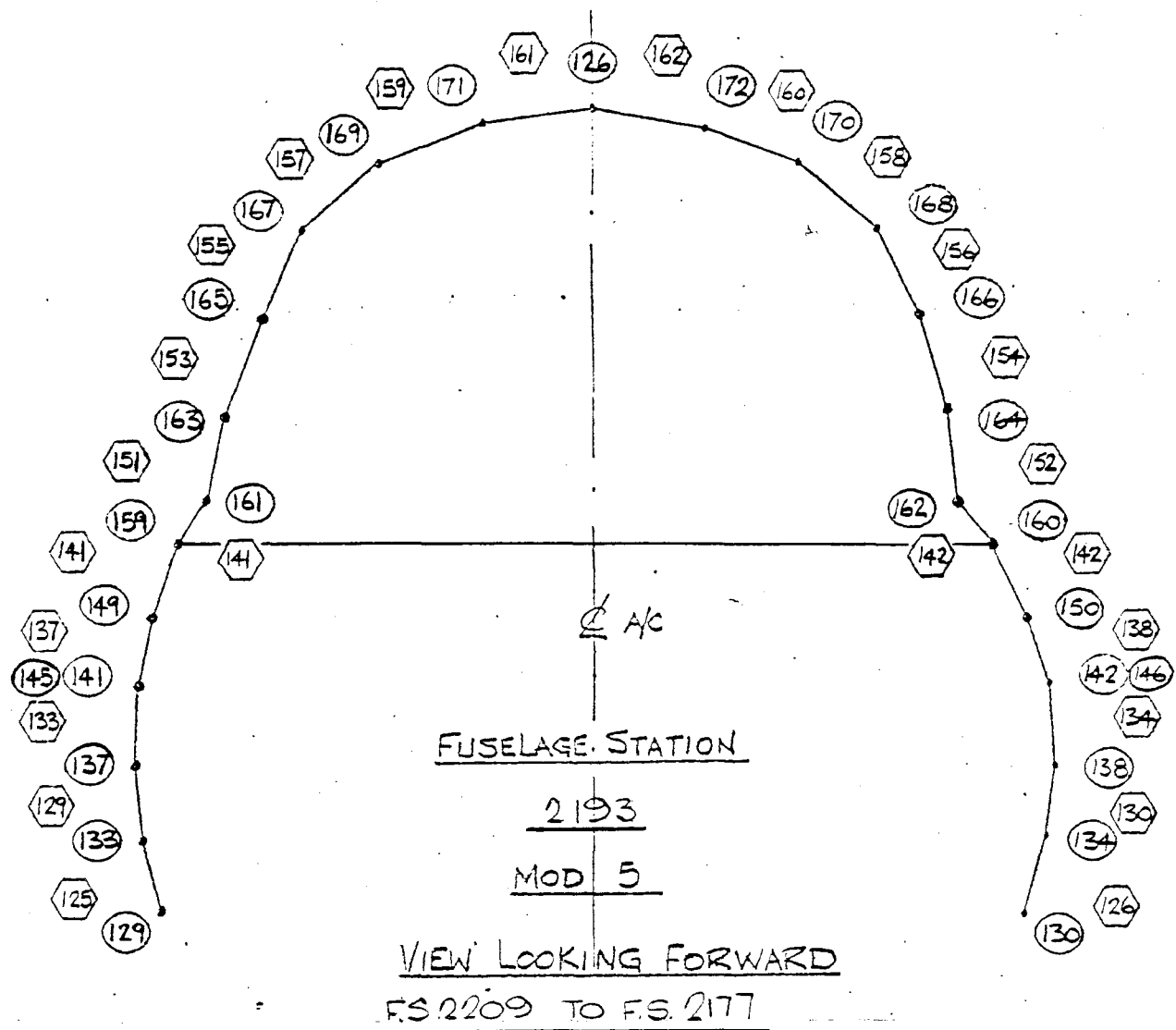


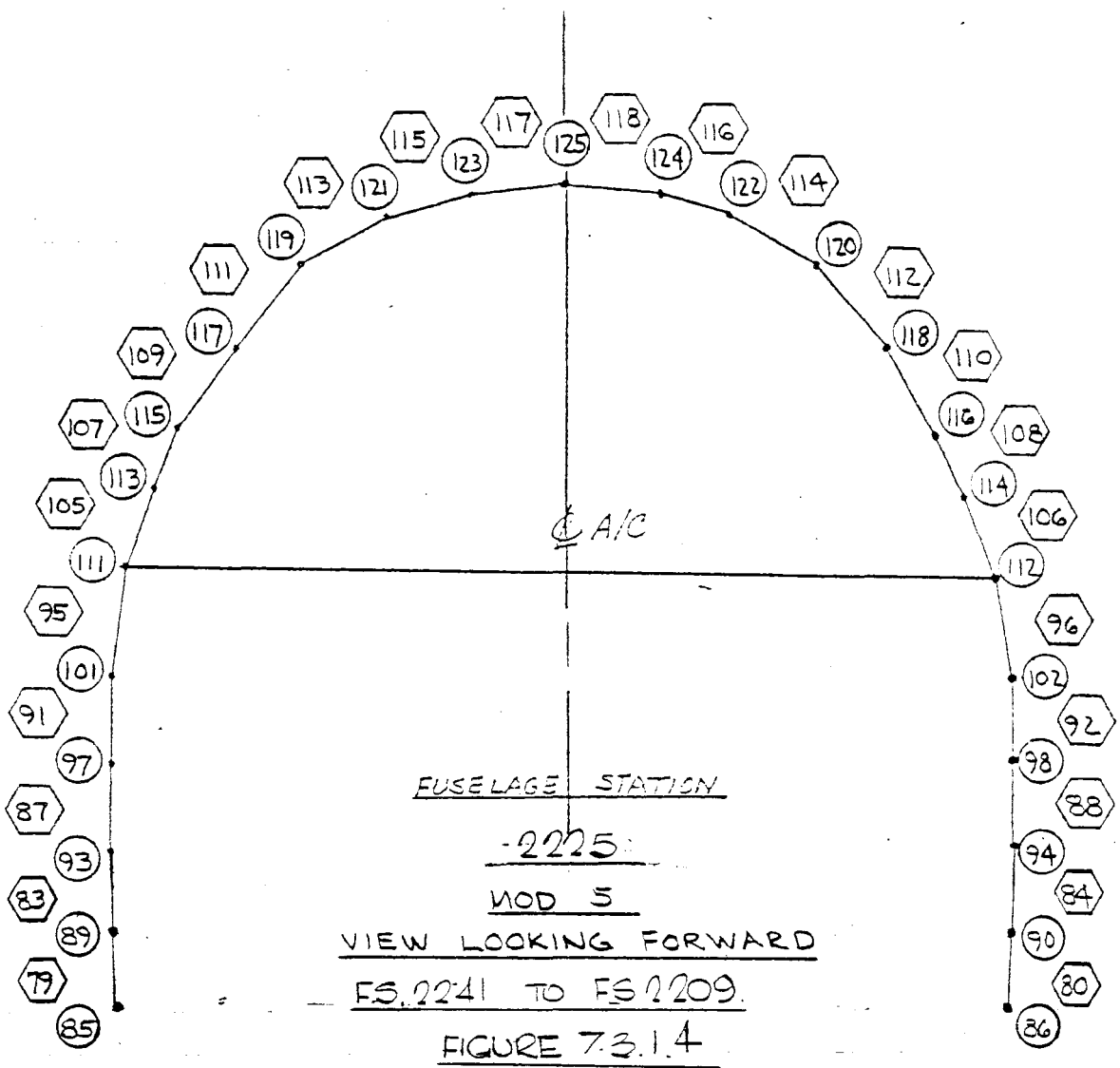
FIGURE No 7.3.1.3

KEY	
	GRID POINT
	FAMAS STRINGER
	FAMAS PANEL

FOR AREAS AND THICKNESSES SEE REF 8
VOLUME IV SECTION 5.2.

REV. A M.D. 1 AUG 69.

7.3.1 STRINGER LOADS (CONTINUED)



KEY

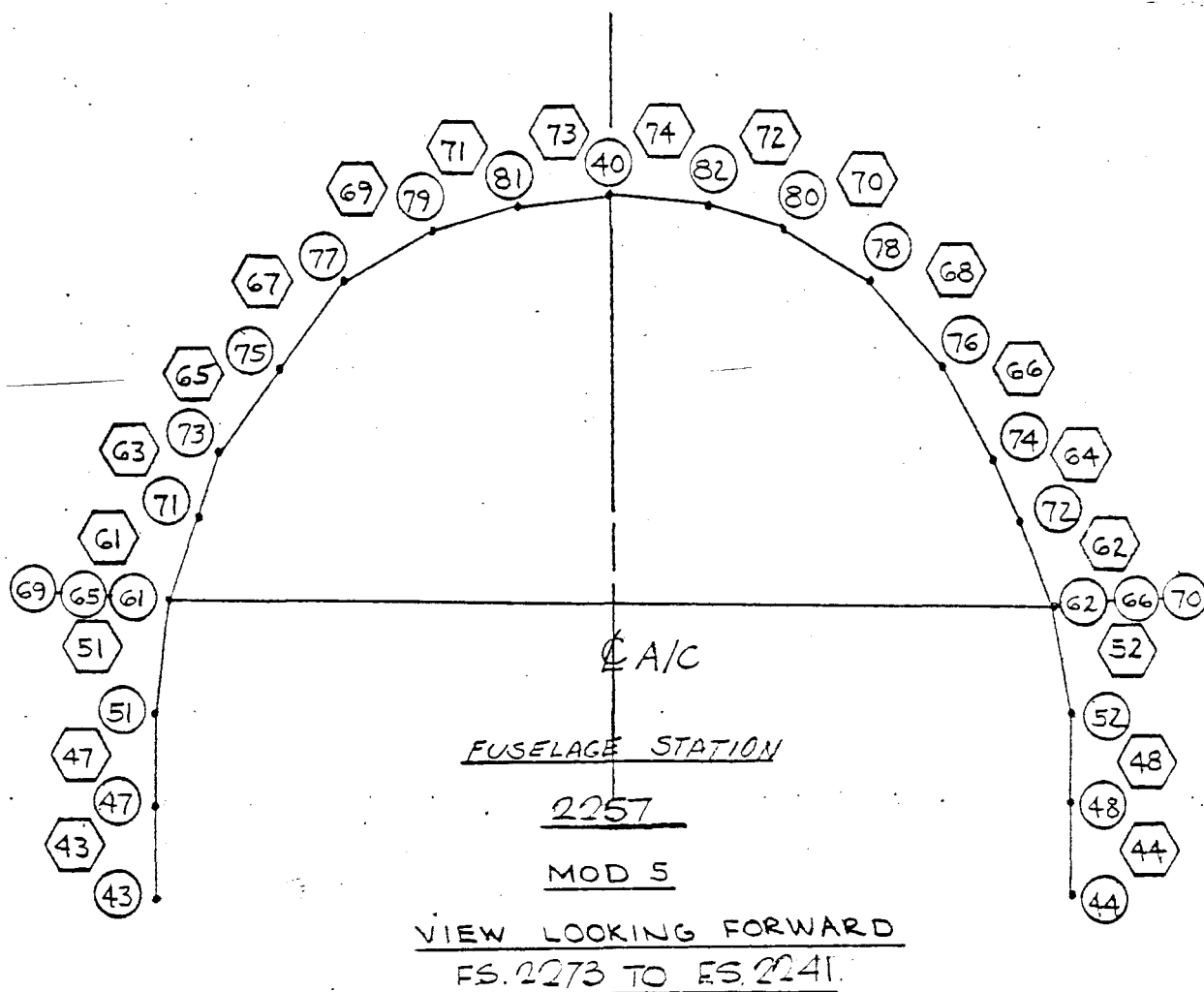
 GRID POINT
  FAMAS STRINGER
  FAMAS PANEL

FOR AREAS AND THICKNESSES
SEE REF. 8. VOLUME IV SECTION 5.2.

Prepared	NAME J. H. RAY	DATE 10 SEP 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. VOL. I	PERM. 7.16
Checked	V. BOYD	10 SEP 68	TITLE INTERNAL LOADS ANALYSIS	Model C-5A		
Approved	L. G. DARBY	10 SEP 68	AFT FUSELAGE	LGIUS 46-2-2 Report No.		

REV (A) MB. 1 AUG. 69

7.3.1 STRINGER LOADS (CONTINUED)



KEY

-  GRID POINT
-  FAMAS STRINGER
-  FAMAS PANEL

FOR AREAS AND THICKNESS SEE
REF 8. VOLUME IV SECTION 5.2

REV (A) M.O. 1 AUG 1969

7.3.1.1 STRINGER LOADS (CONTINUED)

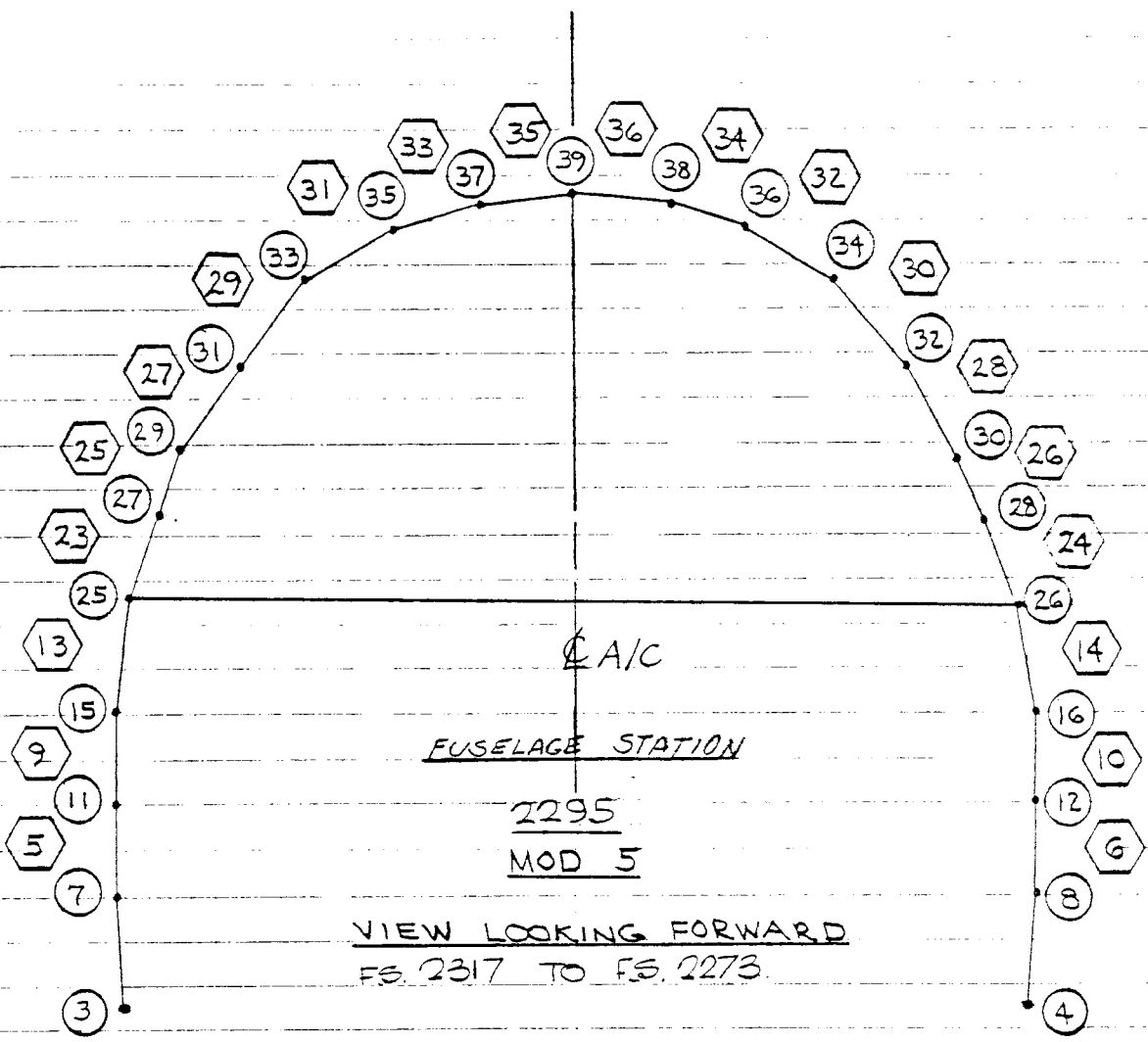


FIGURE 7.3.1.6

<u>KEY</u> GRID POINT FAMAS STRINGER FAMAS PANEL		FOR AREAS AND THICKNESSES SEE REF 8. VOLUME IV SECTION 5.2
---	--	---

NAME RF WILKINSON		DATE 1 JUN 69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP.	PERM.
Prepared					Page	No. I 7.13
Checked	A L PINCHOT	1 JUN 69	TITLE INTERNAL LOADS ANALYSIS		Model C-5A	
Approved	L G DARBY	1 JUN 69	AFT FUSELAGE		LG10546-2-2 Report No.	

REV ① RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 CON. 2

7.3 SKINS AND STRINGERS

7.3.1 STRINGER LOADS CONDITION 1PC242 & MOD 5

1	1	.945112+05	2	.105738+06	3	.501056+05	4	.477104+05
	* 7	.106842+05	8	.101215+05	11	.136822+05	12	.129459+05
	13	.921626+01	14	.105458+00	15	.110668+05	16	.105048+05
	17	.129408+05	18	.132573+05	19	.866552+04	20	.381369+04
	21	.982815+04	22	.953451+04	23	.131693+05	24	.114087+05
	25	.337286+05	26	.308681+05	27	.170303+05	28	.160407+05
	29	.121172+05	30	.109932+05	31	-.103654+05	32	-.861387+04
	33	-.387816+05	34	-.370670+05	35	-.689024+05	36	-.678827+05
	37	-.103382+06	38	-.103397+06	39	-.111891+06	40	-.107764+06
	41	.104814+06	42	.112976+06	43	.630681+05	44	.610906+05
	47	.185606+05	48	.176490+05	51	.161384+05	52	.150329+05
	53	.100887+05	54	.106361+05	55	.677142+04	56	.718641+04
	57	.787970+04	58	.811487+04	61	.136880+05	62	.120594+05
	65	.802321+04	66	.734539+04	67	.100414+05	68	.868088+04
	69	.841417+04	70	.873990+04	71	.126746+05	72	.100643+05
	73	.759282+04	74	.717943+04	75	-.137842+05	76	-.124205+05
	77	-.404686+05	78	-.382061+05	79	-.687617+05	80	-.669385+05
	81	-.992246+05	82	-.985316+05	83	.113501+06	84	.116413+06
	85	.651900+05	86	.648692+05	89	.210782+05	90	.203170+05
	93	.163445+05	94	.153228+05	97	.995963+04	98	.965919+04
	101	.858776+04	102	.849821+04	103	.873367+04	104	.960606+04
	105	.583253+04	106	.659065+04	107	.647143+04	108	.705636+04
	109	.756258+04	110	.662428+04	111	.119832+05	112	.110647+05
	113	.855656+04	114	.793422+04	115	.480806+04	116	.507997+04
	117	-.181774+05	118	-.174291+05	119	-.423853+05	120	-.405744+05
	121	-.683621+05	122	-.662372+05	123	-.955276+05	124	-.942634+05
	125	-.104839+06	126	-.102005+06	127	.121316+06	128	.120081+06
	129	.672600+05	130	.669223+05	133	.211652+05	134	.206438+05
	137	.141467+05	138	.135463+05	141	.117479+05	142	.105820+05
	145	.658932+04	146	.767340+04	149	.842212+04	150	.965808+04
	151	.712407+04	152	.847893+04	153	.485276+04	154	.596672+04
	155	.500197+04	156	.593798+04	157	.549574+04	158	.543243+04
	159	.224300+04	160	.337531+04	161	.861602+04	162	.583905+04
	163	.224429+04	164	.313377+04	165	-.214400+05	166	-.211573+05
	167	-.434369+05	168	-.421823+05	169	-.673611+05	170	-.652121+05
	171	-.922047+05	172	-.907549+05				

* STRINGER ⑦ REF. P. 7.17 ULTIMATE TENSION LOAD = 10,684. LB.

NAME RF WILKINSON		DATE 1 JUN 69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP. No. I	PERM. 7.20
Prepared					Page	
Checked	A L PINCHOT	1 JUN 69	TITLE INTERNAL LOADS ANALYSIS		Model C-54	
Approved	L G DARBY	1 JUN 69	AFT FUSELAGE		Report No. LG1JS46-2-2	

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 CON. 2
 7.3 SKINS AND STRINGERS
 7.3.1 STRINGER LOADS CONDITION DML001 & MOD 5

1	1	.283978+05	2	-.972482+05	3	.277726+05	4	-.611061+05
	7	.586083+04	8	-.131317+05	11	.861911+04	12	-.175120+05
13	.832313-02	14	-.899956-01	15	.788740+04	16	-.150241+05	
17	.771248+03	18	-.871293+04	19	.325992+04	20	-.859723+04	
21	.648253+04	22	-.124461+05	23	.119499+05	24	-.197412+05	
25	.278000+05	26	-.488701+05	27	.193939+05	28	-.293600+05	
29	.241852+05	30	-.311351+05	31	.328843+05	32	-.245706+05	
33	.282915+05	34	-.743197+03	35	.314053+05	36	.177703+05	
37	.397335+05	38	.353566+05	39	.403729+05	40	.391212+05	
41	.328671+05	42	-.109973+06	43	.357793+05	44	-.775906+05	
47	.127423+05	48	-.248514+05	51	.126930+05	52	-.229504+05	
53	.224283+04	54	-.782217+04	55	.416540+04	56	-.801459+04	
57	.711177+04	58	-.116722+05	61	.121400+05	62	-.207237+05	
65	.817590+04	66	-.129811+05	67	.124909+05	68	-.174859+05	
69	.998373+04	70	-.147039+05	71	.215996+05	72	-.281759+05	
73	.269587+05	74	-.298629+05	75	.347482+05	76	-.242749+05	
77	.285885+05	78	-.620942+03	79	.304935+05	80	.175401+05	
81	.368650+05	82	.342585+05	83	.383111+05	84	-.121921+05	
85	.365651+05	86	-.796614+05	89	.144135+05	90	-.281754+05	
93	.134409+05	94	-.237514+05	97	.111591+05	98	-.169144+05	
101	.110787+05	102	-.159559+05	103	.351364+04	104	-.763646+04	
105	.519663+04	106	-.815228+04	107	.757245+04	108	-.109822+05	
109	.126112+05	110	-.157277+05	111	.174029+05	112	-.233614+05	
113	.185666+05	114	-.224837+05	115	.305725+05	116	-.306970+05	
117	.359783+05	118	-.224440+05	119	.303912+05	120	-.153562+04	
121	.307648+05	122	.160927+05	123	.357135+05	124	.315236+05	
125	.376637+05	126	.361609+05	127	.445984+05	128	-.133728+05	
129	.370163+05	130	-.822505+05	133	.142423+05	134	-.281175+05	
137	.118041+05	138	-.207335+05	141	.118421+05	142	-.191366+05	
145	.903147+04	146	-.123877+05	149	.157940+05	150	-.199386+05	
151	.506947+04	152	-.772854+04	153	.646239+04	154	-.845306+04	
155	.794916+04	156	-.102351+05	157	.116406+05	158	-.135576+05	
159	.729628+04	160	-.814942+04	161	.240887+05	162	-.258182+05	
163	.319268+05	164	-.299388+05	165	.388242+05	166	-.224949+05	
167	.332023+05	168	-.390059+04	169	.318379+05	170	.136455+05	
171	.353718+05	172	.286778+05					

LOADS ARE IN POUNDS

NAME RF WILKINSON		DATE 1 JUN 69	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION		TEMP. No. 1	PERM. 7.21
Prepared					Page	
Checked	A L PINCHOT	1 JUN 69	TITLE INTERNAL LOADS ANALYSIS		Model C-5A	
Approved	L G DARBY	1 JUN 69	AFT FUSELAGE		Report No. LG10545-3-2	

REV (A) RFW 8-1-69

7.0 SHELL STRUCTURE F.S. 2101 TO 2538 CON.8
 7.3 SKINS AND STRINGERS
 7.3.1 STRINGER LOADS CONDITION 1004001.13 & MOD 5

1	1	.295463+05	2	.284304+05	3	.168305+05	4	.170093+05
	7	.157327+04	8	.137376+04	11	.327247+04	12	.332693+04
	13	-.112600-01	14	-.120759-01	15	.324463+04	16	.331456+04
	17	.974387+04	18	.980333+04	19	.514356+04	20	.620989+04
	21	.624291+04	22	.634961+04	23	.685792+04	24	.707012+04
	25	.127174+05	26	.130968+05	27	.649991+04	28	.671337+04
	29	.345305+04	30	.358197+04	31	-.741838+04	32	-.740081+04
	33	-.229131+05	34	-.231051+05	35	-.425311+05	36	-.423796+05
	37	-.703346+05	38	-.706522+05	39	-.802585+05	40	-.705085+05
	41	.231472+05	42	.219589+05	43	.179765+05	44	.191016+05
	47	.426600+04	48	.435464+04	51	.246030+04	52	.254750+04
	53	.842253+04	54	.851912+04	55	.539458+04	56	.549706+04
	57	.567841+04	58	.532447+04	61	-.205591+03	62	-.103058+03
	65	.175989+04	66	.135635+04	67	.594835+04	68	.618179+04
	69	.941995+04	70	.965701+04	71	.357671+04	72	.387567+04
	73	.277463+04	74	.301449+04	75	-.957319+04	76	-.949779+04
	77	-.216850+05	78	-.219430+05	79	-.383862+05	80	-.388779+05
	81	-.612965+05	82	-.617678+05	83	.154580+05	84	.143769+05
	85	.179485+05	86	.179455+05	89	.439267+04	90	.445921+04
	93	.243830+04	94	.253159+04	97	.341627+04	98	.355561+04
	101	.302252+04	102	.317262+04	103	.775079+04	104	.790643+04
	105	.505926+04	106	.520891+04	107	.515517+04	108	.533747+04
	109	.500620+04	110	.526592+04	111	.237825+04	112	.259968+04
	113	.389280+04	114	.417053+04	115	.186456+04	116	.215553+04
	117	-.110539+05	118	-.109447+05	119	-.213125+05	120	-.215094+05
	121	-.350702+05	122	-.357084+05	123	-.539857+05	124	-.546083+05
	125	-.632449+05	126	-.558087+05	127	.103277+05	128	.940504+04
	129	.142175+05	130	.140785+05	133	.369739+04	134	.371180+04
	137	.198088+04	138	.203361+04	141	-.900867+03	142	-.825976+03
	145	.509597+04	146	.522394+04	149	.488649+04	150	.512309+04
	151	.696778+04	152	.718068+04	153	.461711+04	154	.482430+04
	155	.441508+04	156	.462995+04	157	.443294+04	158	.470087+04
	159	.504626+04	160	.521631+04	161	-.127120+04	162	-.964804+03
	163	.912460+03	164	.125012+04	165	-.112033+05	166	-.110292+05
	167	-.210028+05	168	-.213655+05	169	-.320345+05	170	-.323467+05
	171	-.474576+05	172	-.482398+05				

LOADS ARE IN POUNDS

REV. (A) M.B. 1 AUG 69.

7.3.1 Stringer Loads (Continued)

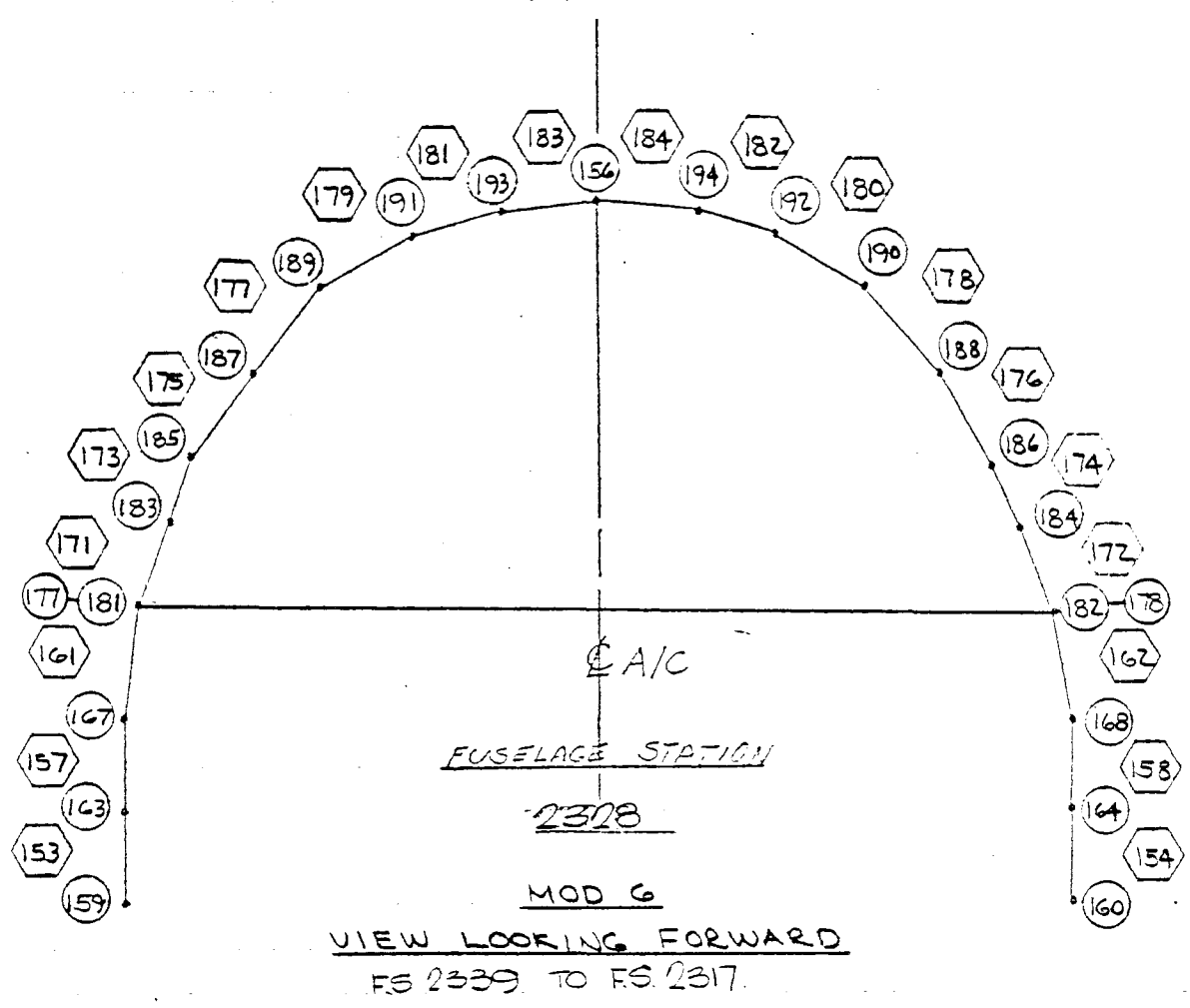


FIGURE 7.3.1.7

KEY

GRID POINT
 FAMAS STRINGER
 FAMAS PANEL

FOR AREAS AND THICKNESSES
SEE REF 8. VOLUME IV SECTION 5.2

Prepared	NAME L.H. HYDE	DATE 9 Sept 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	TEMP. VAL. I	PERM. 7.23
Checked	J. HALLIDAY	9 Sept 68	TITLE AFT FUSELAGE INTERNAL LOADS ANALYSIS	Model C-SA	
Approved	L.G. DARBY	9 Sept 68		LG105-46-2-2 Report No.	

REV. (A) MB. 1 AUG 69

7.3.1 Stringer Loads (Continued)

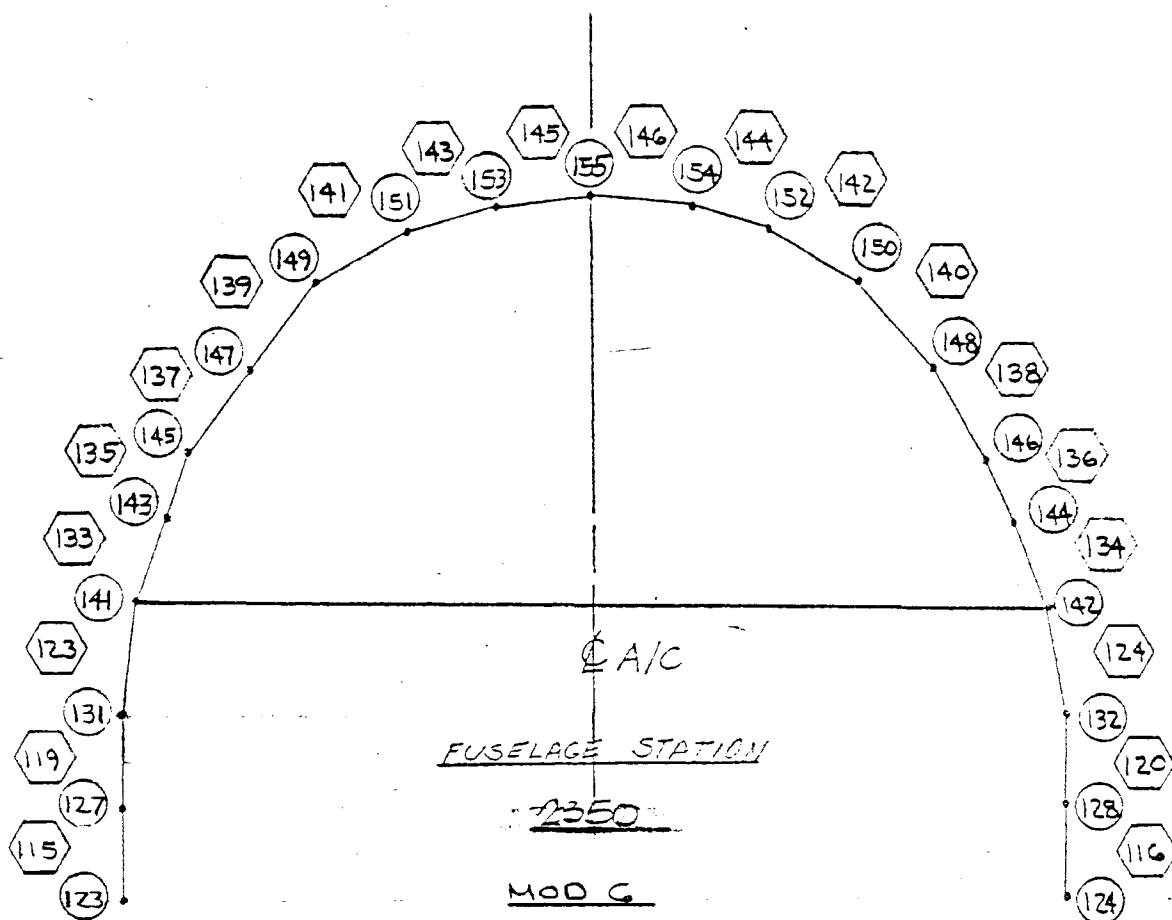


FIGURE 7.3.1-8

KEY



GRID POINT



FAMAS STRINGER

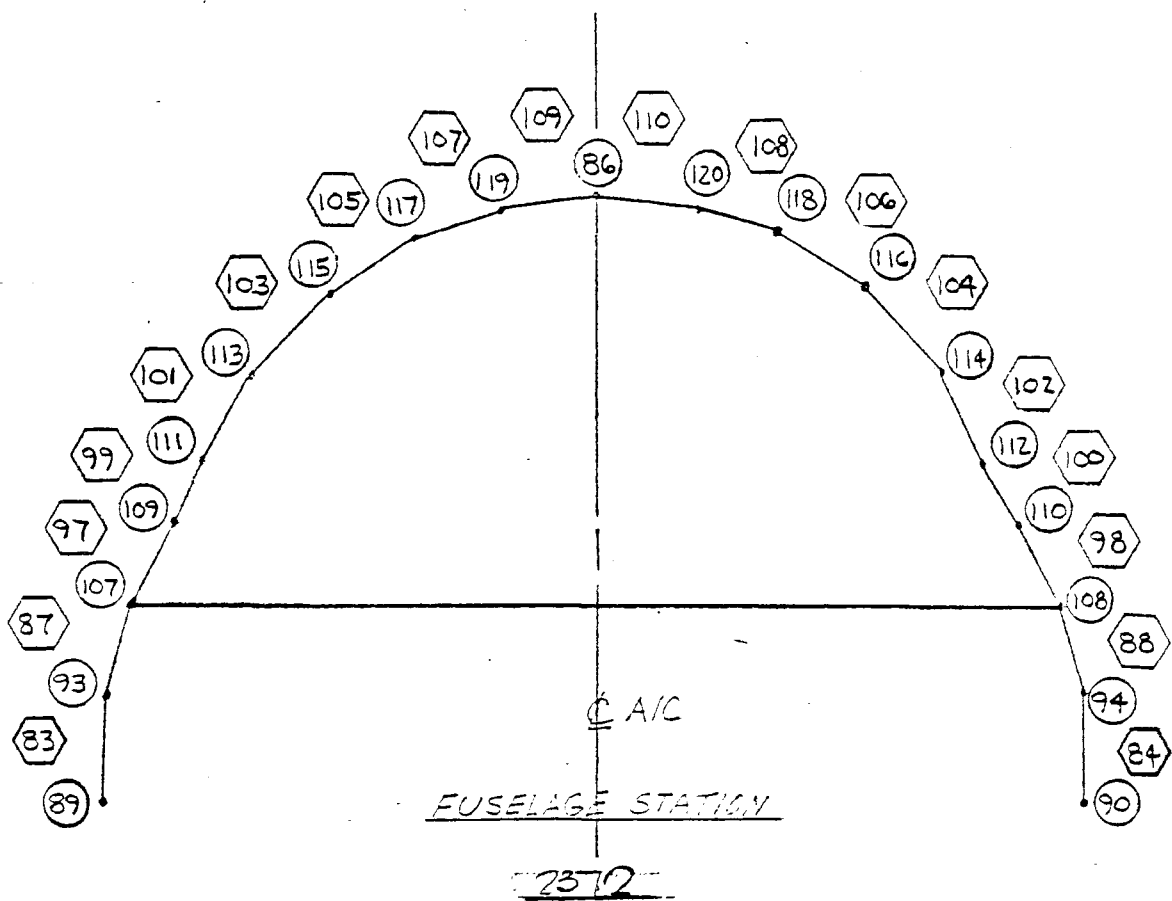


FAMAS PANEL

FOR AREAS AND THICKNESSES
SEE REF 8, VOLUME IV SECTION 5.2

REV. A MB 1 AUG 69.

7.3.1 Stringer Loads (Continued)



MOD 6
VIEW LOOKING FORWARD
FS. 2383 TO FS. 2361.
FIGURE 7.3.1.9

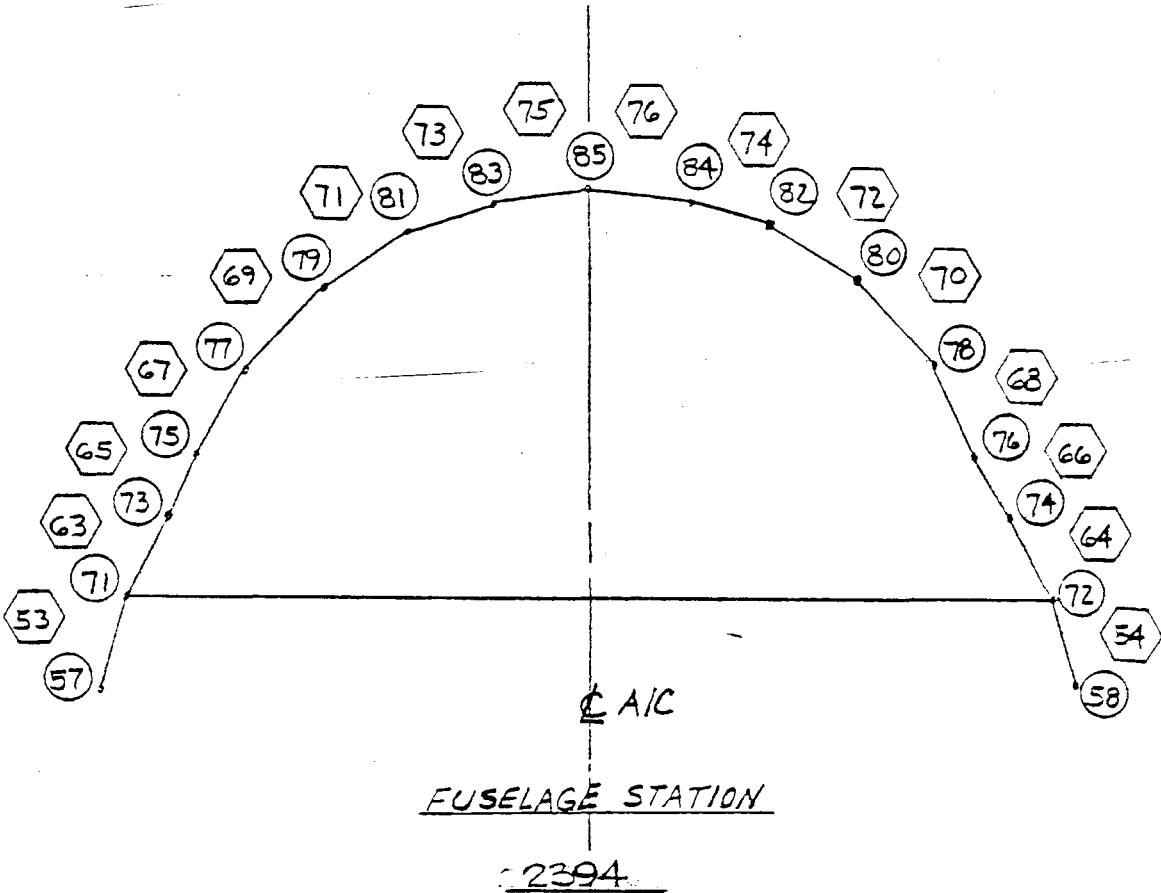
KEY

 GRID POINT
  FAMAS STRINGER
  FAMAS PANEL

FOR AREAS AND THICKNESSES
 SEE REF 8. VOLUME IV SECTION 5.2

REV (A) MB. 1 AUG 69.

7.3.1 Stringer Loads (Continued)



MOD 6
VIEW LOOKING FORWARD
FS. 2405 TO FS. 2383
FIGURE 7.3.1.10

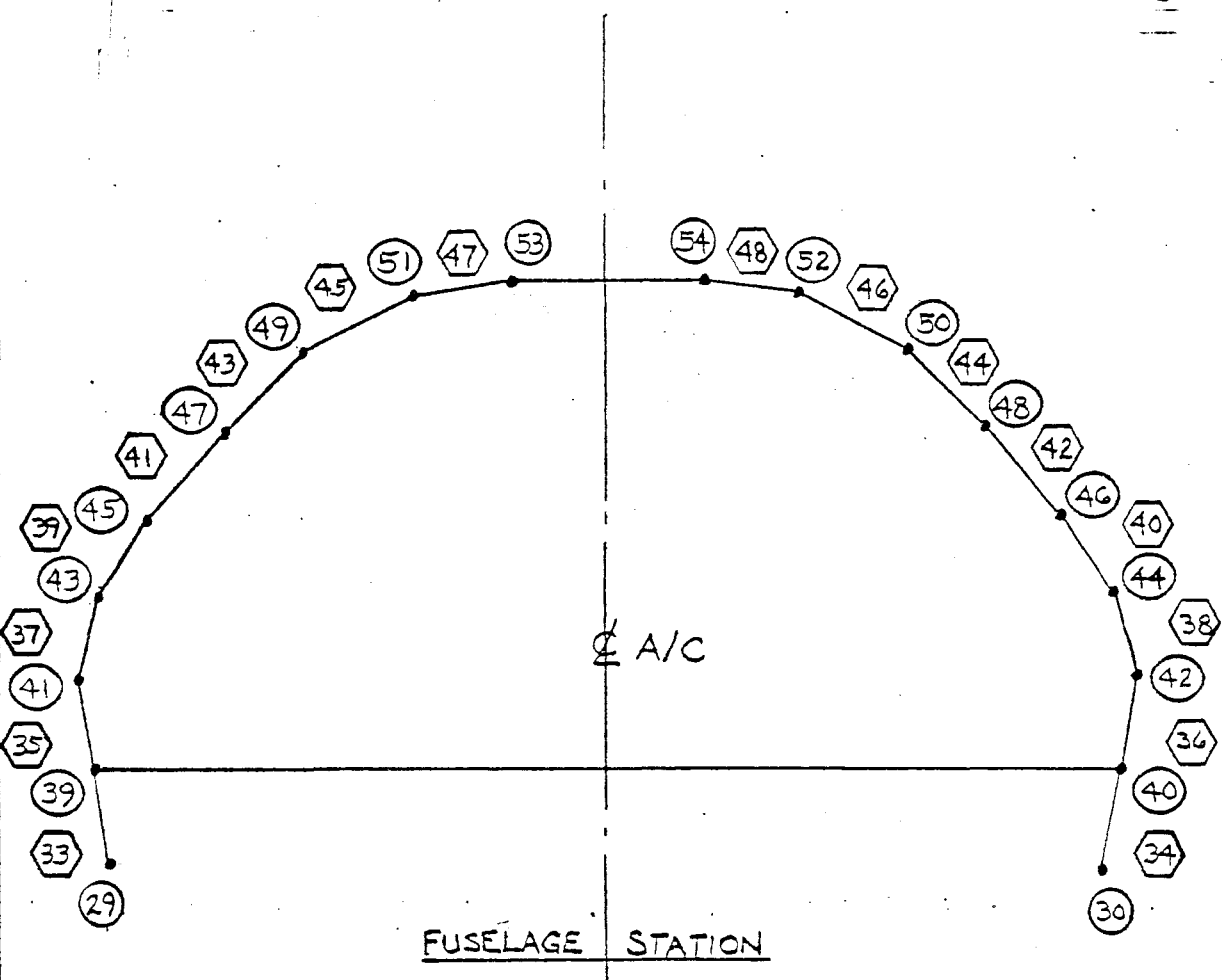
KEY

 GRID POINT
  FAMAS STRINGER
  FAMAS PANEL

FOR AREAS AND THICKNESSES SEE
REF 8. VOLUME IV SECTION 5.2

REV (A) M.B. 1 AUG 69

7.3.1 Stringer Loads (Continued)



FUSELAGE STATION

2416

VIEW LOOKING FORWARD FS 2427 TO FS 2405

MOD 6

FIGURE No 7.3.1.11

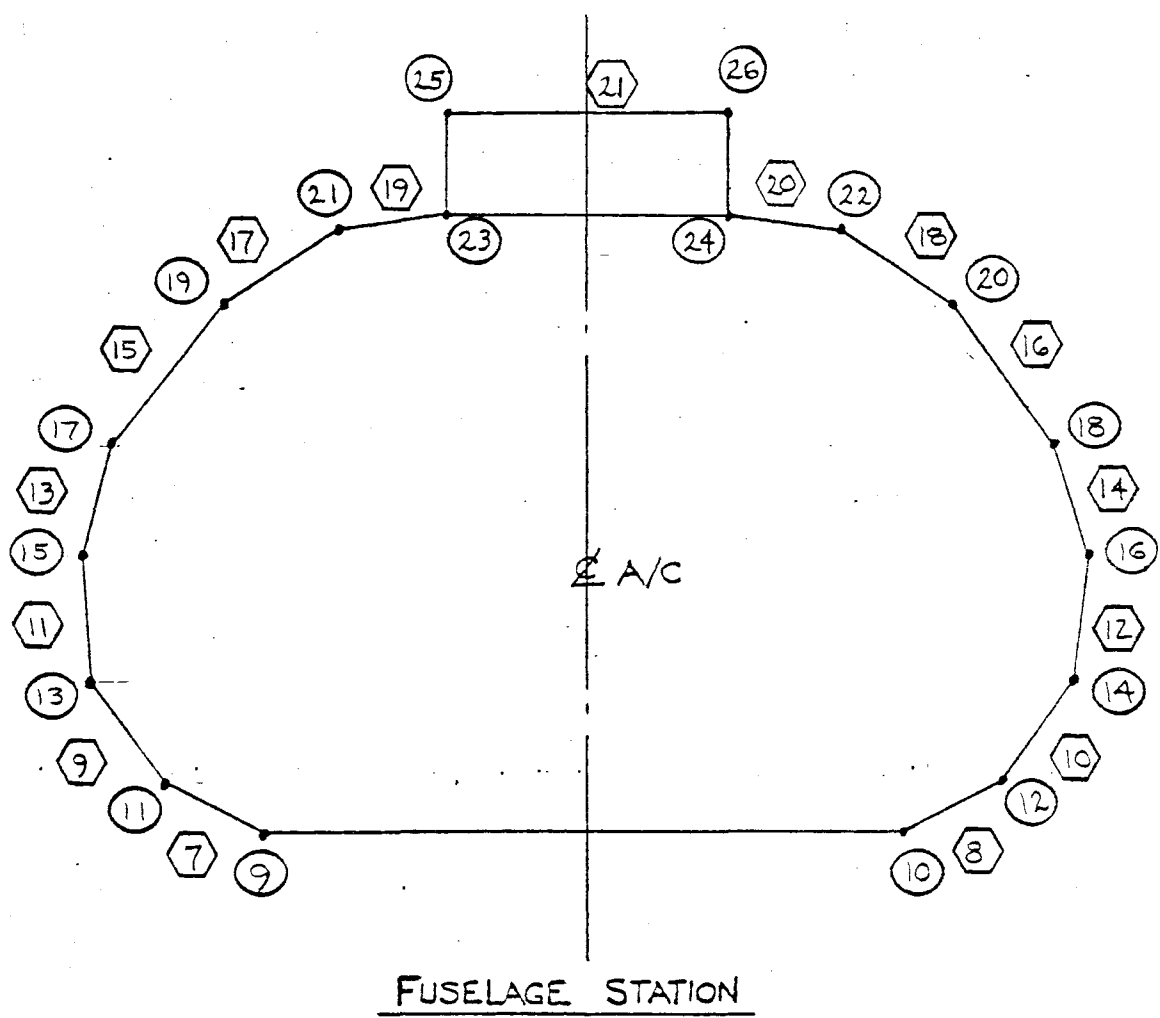
- KEY
- GRID POINT
 - FAMAS PANEL
 - FAMAS STRINGER

FOR AREAS AND THICKNESSES
SEE REF 8. VOLUME IV SECTION 5.2

Prepared	NAME V. W. Boyd	DATE 9 Sep 68	LOCKHEED-GEORGIA COMPANY A DIVISION OF LOCKHEED AIRCRAFT CORPORATION	Page	TEMP. Vol. 1	PERM. 7.27
Checked	J. Halliday	9 Sep 68	TITLE INTERNAL LOADS ANALYSIS AFT FUSELAGE	Model	C-5A	
Approved	L.G. Darby	9 Sep 68		Report No.	LGIUS 46-2-2	

REV. (A) M.B. 1 AUG 69

7.3.1 Stringer Loads (Continued)



FUSELAGE STATION

2439

VIEW LOOKING FORWARD FS. 2450 TO FS. 2427

MOD G^W

FIGURE 7.3.1.12

KEY

- GRID POINT
- FAMAS STRINGER
- FAMAS PANEL

FOR AREAS AND THICKNESSES
SEE REF 8, VOLUME IV SECTION 5.2.