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CH-54B BORON/EPOXY REINFORCED TAIL CONE  
DETAILED STRUCTURAL SUBSTANTIATION

Final Report

by

D. W. Lowry and S. Ciardullo

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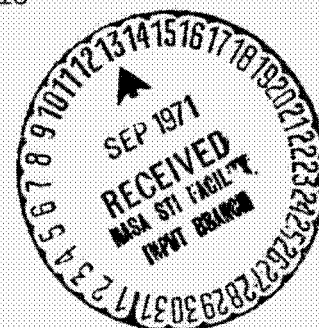
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Prepared under Contract No. NAS1-10459

for

Langley Research Center  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

by

Sikorsky Aircraft  
Division of United Aircraft Corporation

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## FOREWORD

This technical report was prepared by Sikorsky Aircraft, Division of United Aircraft Corporation, under NASA Contract NAS1-10459 and contains the detailed structural analysis required to substantiate the structural integrity of a boron/epoxy reinforced CH-54B airframe tail cone.

This report is the detailed structural substantiation of boron/epoxy bonded to aluminum stringers. The boron/epoxy replaces heavy aircraft skins required for bending stiffness of the CH-54B helicopter tail cone.

Technical monitor for this program was Richard A. Pride of the Structural Materials Division, NASA Langley Research Center.

The program manager for Sikorsky Aircraft was Robert T. Welge.

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## LIST OF SYMBOLS

A	Area, Inches <sup>2</sup>
a	Panel Width, Inches
b	Panel Length, Inches
(CK)	Check
COND	Condition
D	Drag Load, Pounds
E	Percent of Area
E <sub>A</sub>	Young's Modulus of Aluminum, Pounds/Inches <sup>2</sup>
E <sub>B</sub>	Young's Modulus of Unidirectional Boron/Epoxy, Pound/Inches <sup>2</sup>
ESK	Young's Modulus of Skin Material, Pounds/Inches <sup>2</sup>
EST	Young's Modulus of Stringer Material Pounds/Inches <sup>2</sup>
F <sub>CC</sub>	Stringer Stress, Pounds/Inches <sup>2</sup>
F <sub>CI</sub>	Crippling Stress Pounds/Inches <sup>2</sup>
F <sub>CY</sub>	Compressive Yield Stress, Pounds/Inches <sup>2</sup>
F <sub>ir</sub>	Interrivet Buckling Stress, Pounds/Inches <sup>2</sup>
F <sub>SU</sub>	Ultimate Allowable Shear Stress, Pounds/Inches <sup>2</sup>
F <sub>TU</sub>	Ultimate Allowable Tension Stress, Pounds/Inches <sup>2</sup>
I <sub>N.A.</sub>	Area Moment of Inertia about the Neutral Axis, Inches <sup>4</sup>
IST	Area Moment of Inertia of a Stringer, Inches <sup>4</sup>
IY	Area Moment of Inertia About the Y-Axis, Inches <sup>4</sup>
IYZ	Product of Inertia about Centroidal Axes, Inches <sup>4</sup>
IX	Area Moment of Inertia About the X-Axis, Inches <sup>4</sup>
IZ	Area Moment of Inertia About the Z-Axis, Inches <sup>4</sup>
K	Taper Ratio of Panel
L.S.	Stringer Length, Inches

List of Symbols (continued)

M.S.	Margin of Safety
MX	Moment About the X-Axis (Torque), Pound/Inches
MY	Moment About the Y-Axis, Pound/Inches
MZ	Moment About the Z-Axis, Pound/Inches
P	Stringer Load, Pounds
PA	Allowable Compressive Stiffener Load FCI (AST + 30t), Pounds
PALL	Allowable Axial Load Due to the Interaction of Shear Flow and Axial Loads, Pounds
PIN	Applied Axial Load, Pounds
PY	Axial Load Along Y-Axis, Pounds
PZ	Axial Load Along Z-Axis, Pounds
Q	Shear Flow at Forward Station, Pounds/Inch
QALL	Allowable Shear Flow, Pounds/Inch
Q(BAL)	Balanced Shear Flow, Pounds/Inch
QCUT	Maximum Allowable Shear Flow to Prevent Excessive Skin Buckling, Pounds/Inch
QIN	Applied Shear Flow, Pounds/Inches
Q/K	Average Shear Flow, Pounds/Inch
Q/KK	Shear Flow At Aft Station, Pounds/Inch
R	Radius, Inches
S	Applied Lateral Shear Force, Pounds
STA.	Station, inches
STR	Stringer
TSK	Skin Thickness, Inches
TST	Stringer Thickness, Inches
T(UNBAL)	Torque Unbalance, Shear Flow, Pounds/Inch

List of Symbols (continued)

t	Thickness, Inches
V	Applied Vertical Shear Force, Pounds
X, Y, Z	Reference Axes (See Figure 3-1)
$\sigma$	Axial Stress, Pounds/Inches <sup>2</sup>
$\tau$	Shear Stress, Pounds/Inches <sup>2</sup>

### SUMMARY

A detailed structural analysis and study was made on the tail cone and transition section of the CH-54B helicopter reinforced with boron/epoxy stringers. A conservative analytical approach was used in that the analysis for the critical flight conditions included the assumptions of no stringer reinforcement, and partial stringer reinforcement. Positive margins of safety were shown in all conditions.

The boron/epoxy reinforced stringers necessitated minor tail cone modifications and the structural stiffness of the current CH-54B tail cone was maintained.

## 1.0 INTRODUCTION

The original CH-54A helicopter airframe structure was designed for the applied static loads due to flight and ground conditions. During the flight development of the CH-54A it became necessary to provide additional structure to increase the vertical bending stiffness of the transition section and tail cone of the airframe. Thin, 0.040 2024-T3, skins on the top and bottom of the transition/tail cone section were replaced with 0.080 inch to 0.140 inch aluminum plates. The weight increase due to stiffening plates was approximately 160 pounds. Preliminary analysis and tests showed that boron/epoxy could be used to provide the same stiffness as the heavy plating for approximately 30 pounds.

Results of additional tests and analysis, conducted during Phase I of this contract and report in "Application of Boron/Epoxy Reinforced Aluminum Stringers for the CH-54B Helicopter Tail Cone" by P. T. Welge, substantiated the preliminary work. The report also recommended that boron/epoxy be applied to the CH-54B stringers in the tail cone section to maintain the required stiffness for less weight.

This report contains the detailed loads and stress analysis of a CH-54B transition and tail cone section with the heavy plating removed and boron/epoxy bonded to the top and bottom stringers of the tail cone section. The boron/epoxy, bonded on the stringers of the tail cone section and not the transition section, is used to maintain the vertical bending stiffness. Boron/epoxy is not bonded to the stringers of the transition section, due to complications caused by fuel bulkheads, fittings, and curved stringer/skin panels.

A bending and shear analysis is done on a UNIVAC 1108 computer. Input for this program involves the geometry and stringer areas for each input section. The output yields stringer loads and skin shears for each section. These results are then analyzed to obtain the margins of safety for critical airframe stringers and skins. The margins of safety for the stringer skin panels reinforced with boron epoxy are obtained from a computer program. All computer data is shown for the loads analysis and margin of safety. Margins of safety for the reinforced panels are based upon the work reported by R. T. Welge.

Five flight conditions are critical for the transition section and the tail cone. The tail cone is analyzed for these critical flight conditions assuming three structural configurations. These configurations are: no boron reinforcement; boron reinforcement, and partial boron reinforcement. A detailed analysis is also shown for the critical condition at the manufacturing joint (Station 549.0).

All loads are ultimate unless otherwise specified and include a safety factor of 1.5. Where applicable, a fitting factor of 1.15 is also included.

## 2.0 Transition and Tail Cone Section Modifications

The transition section of the CH-54B airframe, from station 471.0 to station 549.0, is modified by replacing the heavy 0.080 inch thick skins top and bottom with the original 0.040 inch skins of the CH-54A. (See Figure 2-1). This modification gives the transition section the structural properties and geometry of the CH-54A. Other, minor modifications of the transition section are required to meet the static strength requirements of the CH-54B. These minor modifications are shown in Figures 2-2 through 2-6.

The tail cone, from station 549.0 to station 772.0 is modified by replacing the heavy 0.080 to 0.140 inch thick skins with the original 0.040 inch thick skins of the CH-54A (see Figure 2-1). Boron/epoxy is bonded to twelve aluminum stringers, as shown in Figure 2-7, to meet the stiffness requirements of the CH-54B. Other, minor modifications were added to meet the static strength requirements of the CH-54B assuming a condition of "no bonding" develops between the boron/epoxy and the aluminum stringers. The minor modifications to the tail cone are shown in Figures 2-2, 2-6, and 2-7.

A manufacturing break at station 549 is modified by incorporating .063 2024-T3 straps on all four sides of the structure. (See Figure 2-1).



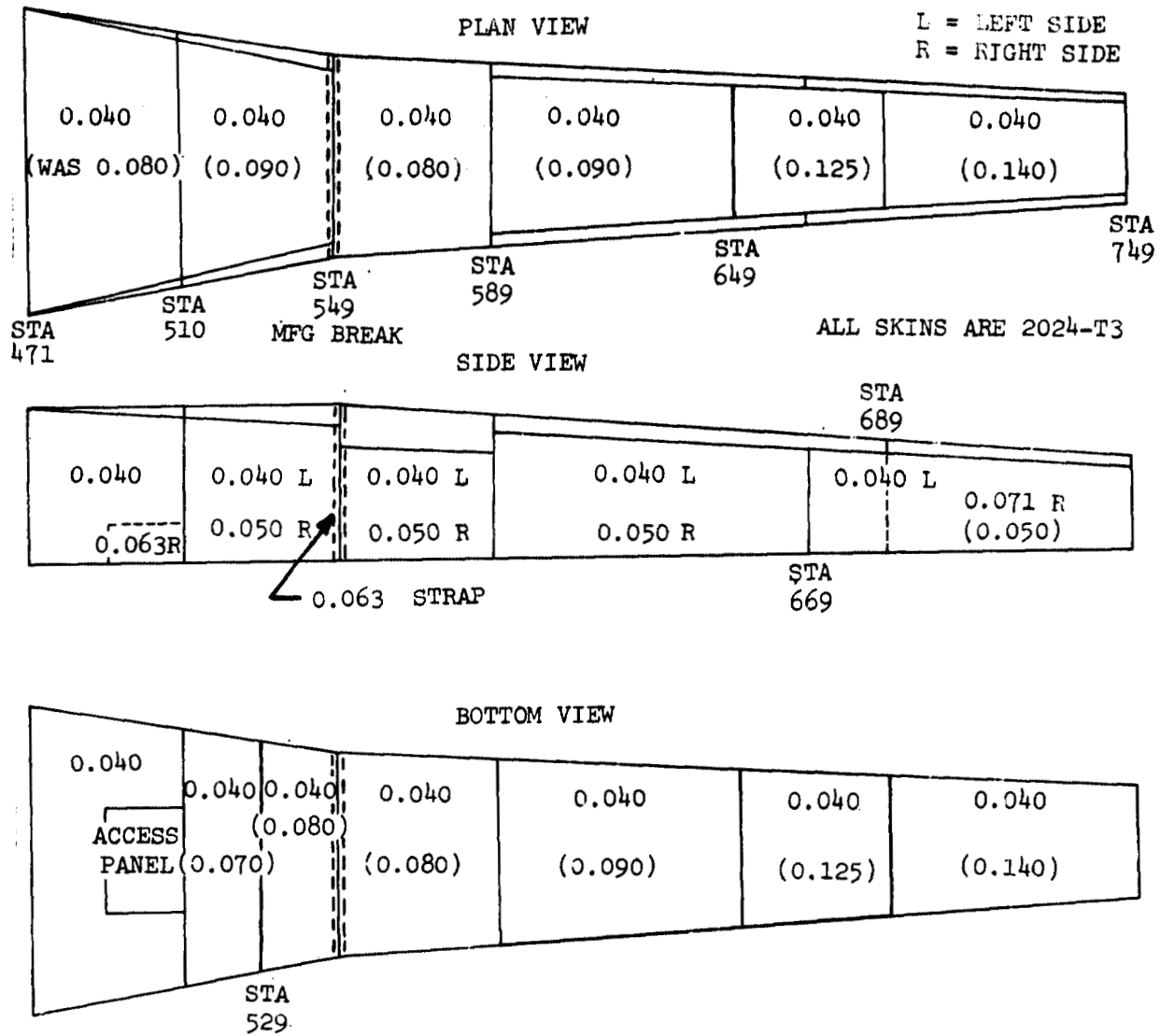


FIGURE 2-1. CH-54B MODIFIED PLATING DIAGRAM.

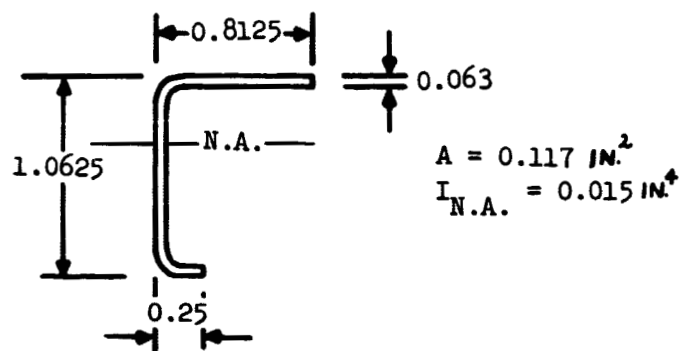


FIGURE 2-2. SECTION PROPERTIES OF STRINGERS 11, 12, 16, and 17 (STA. 490.5 - STA. 549.0).

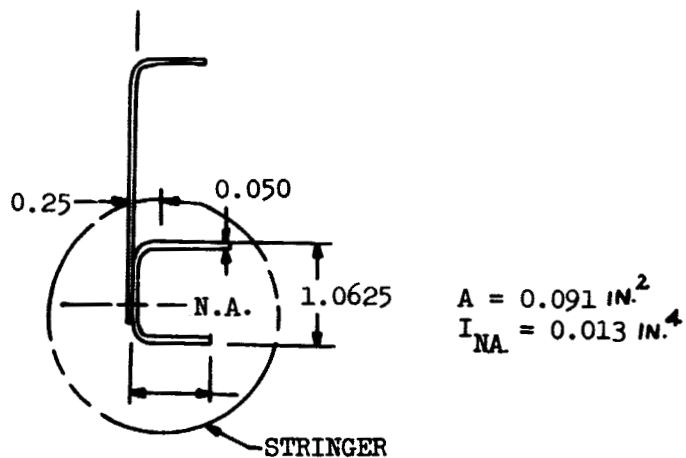


FIGURE 2-3. SECTION PROPERTIES OF STRINGER 21 (STA 490.5 - STA 549.0).

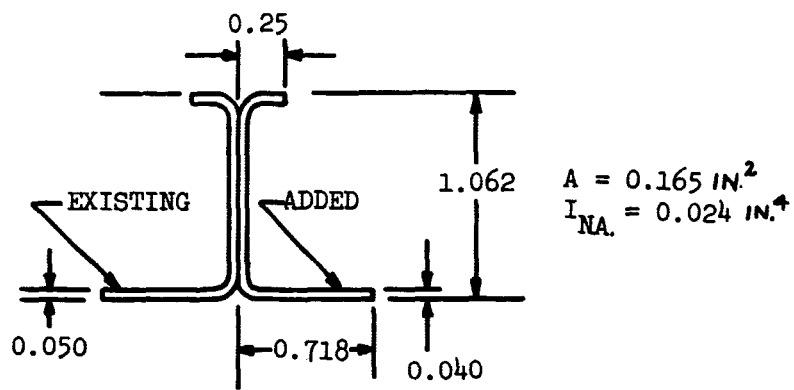


FIGURE 2-4. SECTION PROPERTIES OF STRINGER 12 and 15  
(STR. 12 STA. 471.0 - 490.5, STR. 15 STA 490.5 - STA 510.0).

$$A_{\text{EXTRUSION + STRAPS}} = 0.822 \text{ IN.}^2$$

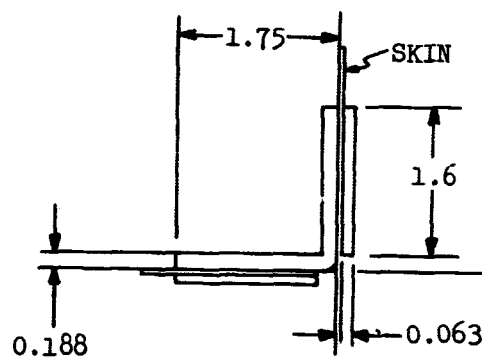


FIGURE 2-5. LONGERON MODIFICATION.

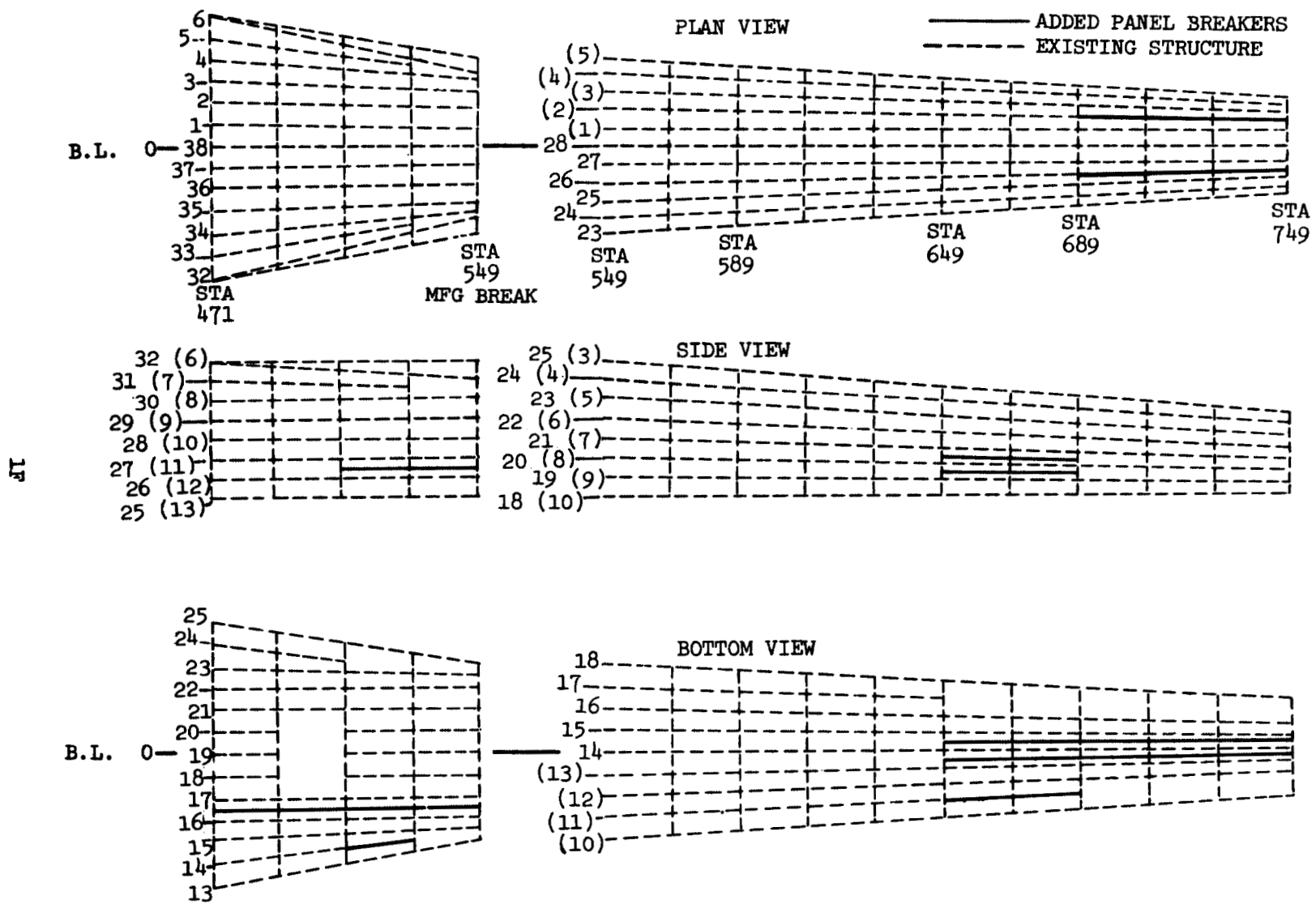
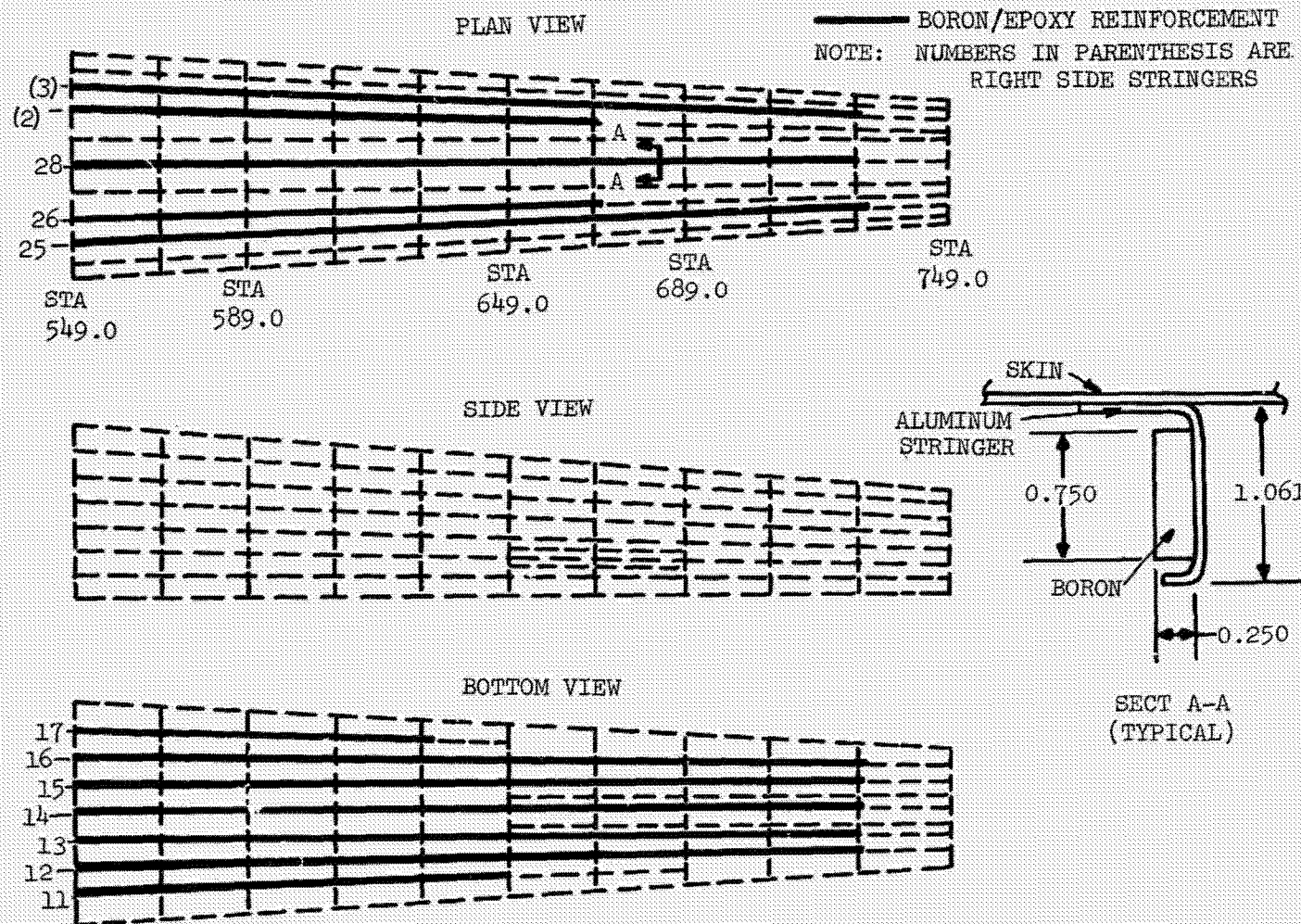


FIGURE 2-6. CH-54B PANEL BREAKERS AND STRINGER NUMBERS.



DT

FIGURE 2-7. BORON/EPOXY REINFORCED STRINGERS.

### 3.0 Transition Section Loads Analysis

This section of the report contains the computer input data for the transition section geometry, effective stringer areas with modifications, and the applied loads of the CH-54B. The input data is analyzed by the computer which then prints the resultant stringer axial loads and skin shear flows due to the applied loads. The geometry is obtained from Reference 2. Stringer areas are obtained from Reference 2 and Figures 2-2 through 2-6. The applied loads (fuselage shears and moments) are obtained from Reference 3. The critical applied loading conditions for the transition section are CH2F5, CH7F5, and CH10F5. (See References 3 and 4.) Conditions CH2F5 and CH7F5 are yaw left conditions for a design gross weight of 47,000 pounds. Condition CH10F5 is a yaw kick left condition for a design gross weight of 30,000 pounds. The sign conventions for all loads analyzed in this report are shown in Figure 3-1.

A stringer numbering system for the computer loads analysis is shown in Figure 3-2 for the transition section.

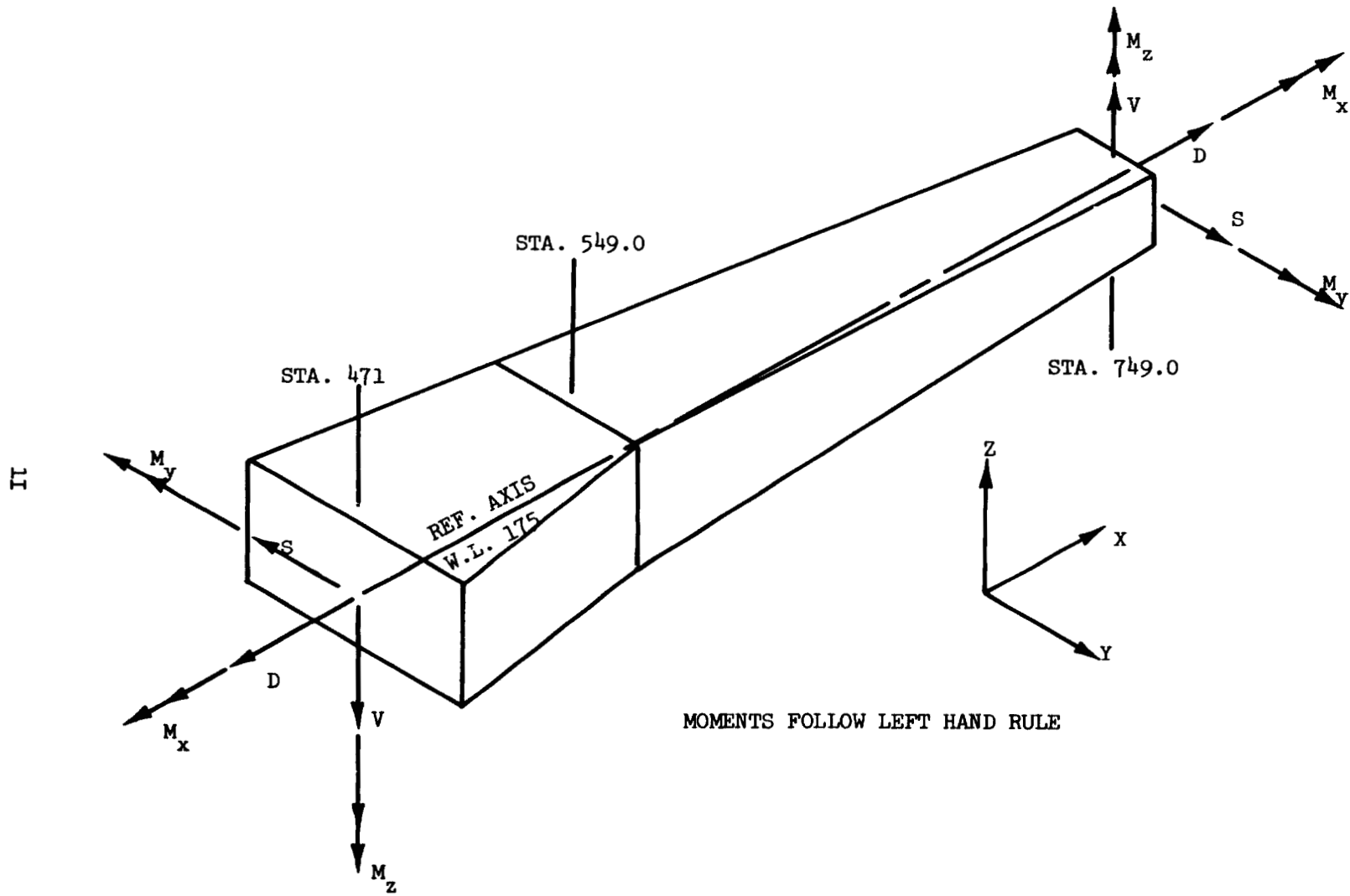


FIGURE 3-1. SIGN CONVENTION FOR APPLIED LOADS AND COMPUTER BENDING AND SHEAR ANALYSIS.

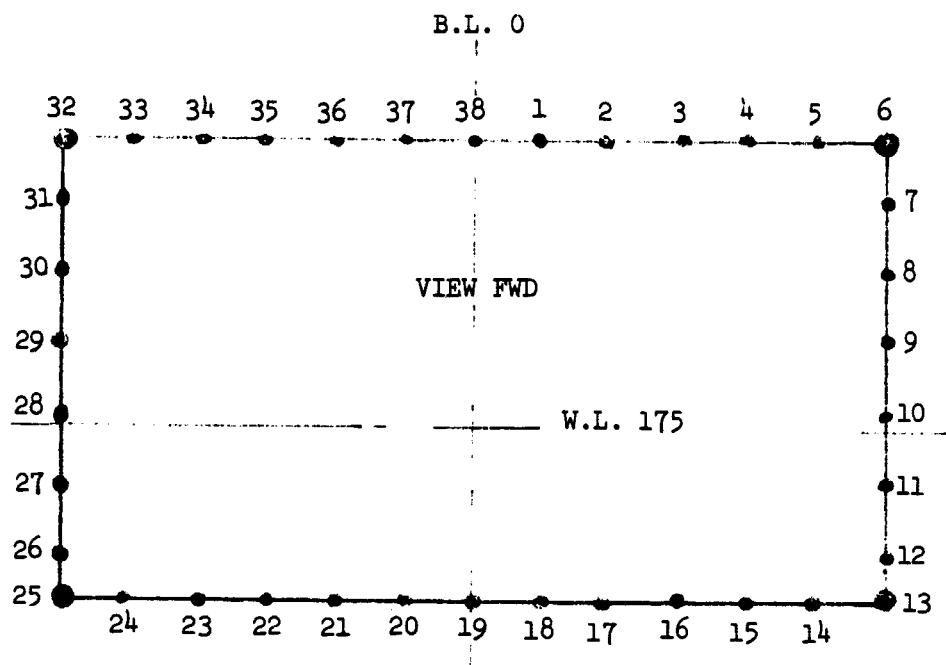


FIGURE 3-2. STRINGER NUMBERING SYSTEM (STA 471.0 - STA 549.0).



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 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

000001

CONDITION COND.CH10F5

STATION I = 510.00 STATION II = 471.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	21.375	-6.375	24.000
2	1.000	.2970	-.000	-12.750	21.375	-12.750	24.000
3	1.000	.2970	-.000	-19.062	21.375	-20.000	24.000
4	1.000	.2970	-.000	-23.600	21.375	-26.500	24.000
5	.000	1.0000	-.000	-27.250	21.375	-33.000	24.000
6	1.000	.8070	-.000	-31.250	21.375	-40.000	24.000
7	.000	1.0000	-.000	-31.250	17.250	-40.000	18.750
8	1.000	.1450	-.000	-31.250	12.500	-40.000	12.500
9	1.000	.1450	-.000	-31.250	6.800	-40.000	6.800
10	1.000	.1450	-.000	-31.250	1.100	-40.000	1.100
11	1.000	.1720	-.000	-31.250	-4.600	-40.000	-4.600
12	1.000	.1720	-.000	-31.250	-10.300	-40.000	-10.300
13	1.000	.8070	-.000	-31.250	-16.000	-40.000	-16.000
14	.000	1.0000	-.000	-27.250	-16.000	-33.000	-16.000
15	1.000	.1450	-.000	-23.600	-16.000	-26.500	-16.000
16	1.000	.1720	-.000	-19.062	-16.000	-20.000	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	1.0000	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	19.062	-16.000	20.000	-16.000
23	1.000	.1450	-.000	23.600	-16.000	26.500	-16.000
24	.000	1.0000	-.000	27.250	-16.000	33.000	-16.000
25	1.000	.8070	-.000	31.250	-16.000	40.000	-16.000
26	1.000	.2970	-.000	31.250	-10.300	40.000	-10.300
27	1.000	.2970	-.000	31.250	-4.600	40.000	-4.600
28	1.000	.2970	-.000	31.250	1.100	40.000	1.100
29	1.000	.2970	-.000	31.250	6.800	40.000	6.800
30	1.000	.2970	-.000	31.250	12.500	40.000	12.500
31	.000	1.0000	-.000	31.250	17.250	40.000	18.750
32	1.000	.8070	-.000	31.250	21.375	40.000	24.000
33	.000	1.0000	-.000	27.250	21.375	33.000	24.000
34	1.000	.2970	-.000	23.600	21.375	26.500	24.000
35	1.000	.2970	-.000	19.062	21.375	20.000	24.000
36	1.000	.2970	-.000	12.750	21.375	12.750	24.000
37	1.000	.2970	-.000	6.375	21.375	6.375	24.000
38	1.000	.2970	-.000	.000	21.375	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978806.0 MY = 2455028.0 MZ = -3201630.0 S = -7917.0 V = -9806.0 D = -782.0

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000002

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

MY(CK) = 2455027.9      MZ(CK) = -3201629.9      D(CK) = -782.0  
 Y-BAR = 2.859      Z-BAR = 5.743      IY = 2544.34      IZ = 6582.11      IYZ = -87.09      CS = 499.77      C6 = 983.77

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2977	3179.	10729.	0.	-214.
2	.2977	2231.	7528.	0.	-150.
3	.2978	1292.	4362.	31.	-87.
4	.2985	518.	2092.	46.	-42.
5	.0000	0.	0.	0.	0.
6	.9288	-1452.	-1848.	-326.	98.
7	.0000	0.	0.	0.	0.
8	.1486	-1558.	-11010.	-349.	0.
9	.1486	-2391.	-16900.	-536.	0.
10	.1486	-3224.	-22790.	-723.	0.
11	.1763	-4913.	-28679.	-1080.	0.
12	.1763	-5802.	-34569.	-1302.	0.
13	.8271	-31958.	-40459.	-7148.	0.
14	.0000	0.	0.	0.	0.
15	.1454	-5045.	-34889.	-375.	0.
16	.1720	-5579.	-32448.	-134.	0.
17	.1720	-5035.	-29274.	0.	0.
18	.0000	0.	0.	0.	0.
19	.0000	0.	0.	0.	0.
20	.0000	0.	0.	0.	0.
21	.1450	-2397.	-16530.	0.	0.
22	.1450	-1940.	-13383.	47.	0.
23	.1454	-1615.	-11169.	120.	0.
24	.0000	0.	0.	0.	0.
25	.9091	-6622.	-7651.	1466.	0.
26	.3044	-510.	-1761.	115.	0.
27	.3044	1196.	4128.	-268.	0.
28	.3044	2903.	10018.	-651.	0.
29	.3044	4610.	15908.	-1034.	0.
30	.3044	6317.	21798.	-1417.	0.
31	.0000	0.	0.	0.	0.
32	.9110	26860.	31102.	-6026.	-1808.
33	.0000	0.	0.	0.	0.
34	.2985	7659.	25919.	-570.	-516.
35	.2978	6965.	23512.	-168.	-469.
36	.2977	6024.	20330.	0.	-405.
37	.2977	5076.	17129.	0.	-342.
38	.2977	4128.	13929.	0.	-278.

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 DATE 3/10/71

PAGE NO.  
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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

000003

CONDITION COND.CH10F5

STATION I = 471.00

STATION II = 510.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	24.000	-6.375	21.375
2	1.000	.2970	-.000	-12.750	24.000	-12.750	21.375
3	1.000	.2970	-.000	-20.000	24.000	-19.062	21.375
4	1.000	.3840	-.000	-26.500	24.000	-23.600	21.375
5	1.000	.3840	-.000	-33.000	24.000	-27.250	21.375
6	1.000	.9500	-.000	-40.000	24.000	-31.250	21.375
7	1.000	.1450	-.000	-40.000	18.750	-31.250	17.250
8	1.000	.1450	-.000	-40.000	12.500	-31.250	12.500
9	1.000	.1450	-.000	-40.000	6.800	-31.250	6.800
10	1.000	.1450	-.000	-40.000	1.100	-31.250	1.100
11	1.000	.1450	-.000	-40.000	-4.600	-31.250	-4.600
12	1.000	.1450	-.000	-40.000	-10.300	-31.250	-10.300
13	1.000	.8800	-.000	-40.000	-16.000	-31.250	-16.000
14	1.000	.1450	-.000	-33.000	-16.000	-27.250	-16.000
15	1.000	.1450	-.000	-26.500	-16.000	-23.600	-16.000
16	1.000	.1450	-.000	-20.000	-16.000	-19.062	-16.000
17	1.000	.1450	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	.1450	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	20.000	-16.000	19.062	-16.000
23	1.000	.1450	-.000	26.500	-16.000	23.600	-16.000
24	1.000	.1450	-.000	33.000	-16.000	27.250	-16.000
25	1.000	.9500	-.000	40.000	-16.000	31.250	-16.000
26	1.000	.2970	-.000	40.000	-10.300	31.250	-10.300
27	1.000	.2970	-.000	40.000	-4.600	31.250	-4.600
28	1.000	.2970	-.000	40.000	1.100	31.250	1.100
29	1.000	.2970	-.000	40.000	6.800	31.250	6.800
30	1.000	.2970	-.000	40.000	12.500	31.250	12.500
31	1.000	.2970	-.000	40.000	18.750	31.250	17.250
32	1.000	.9500	-.000	40.000	24.000	31.250	21.375
33	1.000	.3840	-.000	33.000	24.000	27.250	21.375
34	1.000	.3840	-.000	26.500	24.000	23.600	21.375
35	1.000	.2970	-.000	20.000	24.000	19.062	21.375
36	1.000	.2970	-.000	12.750	24.000	12.750	21.375
37	1.000	.2970	-.000	6.375	24.000	6.375	21.375
38	1.000	.2970	-.000	.000	24.000	.000	21.375

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978800.0

MY = 2837424.0

MZ = -3510419.0

S = -7917.0

V = -9806.0

D = -782.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000004

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	COND.CH10F5										
MX(CK) = 978806. MY(CK) = 2837424. MZ(CK) = -3510419. S(CK) = -7918. V(CK) = -9805. D(CK) = -762. T(UNBAL.) = 580639. Q(BAL.) = 105.8 2A(NET) = 6400.0 Y-BAR = 3.549 Z-BAR = 8.499 IY = 3485.14 IZ = 12764.46 IYZ = -236.90 C5 = 290.74 C6 = 835.82											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	39.088	.2977	153.00	1.0000	2977.	10047.	100.6	100.6	100.6	0.	200.
2	39.088	.2977	174.00	.8706	2425.	8185.	91.9	105.6	121.3	0.	163.
3	39.099	.2978	156.00	.6982	1799.	6071.	82.8	118.6	169.8	-43.	121.
4	39.196	.3859	155.00	.5615	1602.	4192.	80.7	143.8	256.0	-119.	108.
5	39.509	.3890	163.00	.5714	879.	2320.	95.0	166.3	291.1	-130.	59.
6	40.056	.9757	210.00	.7857	220.	238.	164.4	209.2	266.2	-49.	15.
7	39.998	.1487	250.00	.7600	-619.	-4378.	146.9	193.3	254.4	139.	-24.
8	39.970	.1486	228.00	1.0000	-1395.	-9859.	197.5	197.5	197.5	315.	0.
9	39.970	.1486	228.00	1.0000	-2103.	-14863.	204.9	204.9	204.9	472.	0.
10	39.970	.1486	228.00	1.0000	-2811.	-19867.	215.5	215.5	215.5	631.	0.
11	39.970	.1486	228.00	1.0000	-3519.	-24871.	248.7	248.7	248.7	789.	0.
12	39.970	.1486	228.00	1.0000	-4227.	-29875.	289.1	289.1	289.1	948.	0.
13	39.970	.9019	112.00	.5714	-29949.	-34879.	193.2	338.0	591.5	6719.	0.
14	39.422	.1466	104.00	.5615	-4569.	-31850.	124.0	220.9	393.3	674.	0.
15	39.108	.1454	104.00	.6982	-4258.	-29444.	168.3	241.1	345.3	317.	0.
16	39.011	.1450	116.00	.8706	-3973.	-27408.	245.7	282.2	324.2	96.	0.
17	39.000	.1450	102.00	1.0000	-3666.	-25285.	317.3	317.3	317.3	0.	0.

PREPARED BY S. CIARDULLO  
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 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000005

TABLE (CONT.)

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
18	39.000	.0000	102.00	1.0000	0.	0.	317.3	317.3	317.3	0.	0.
19	39.000	.0000	102.00	1.0000	0.	0.	317.3	317.3	317.3	0.	0.
20	39.000	.0000	102.00	1.0000	0.	0.	317.3	317.3	317.3	0.	0.
21	39.000	.1450	116.00	.8706	-2591.	-17671.	271.9	312.4	358.8	0.	0.
22	39.011	.1450	104.00	.6982	-2286.	-15772.	211.9	303.5	434.7	-55.	0.
23	39.108	.1454	104.00	.5615	-2017.	-13950.	164.6	293.2	522.1	-150.	0.
24	39.422	.1466	112.00	.5714	-1756.	-12244.	141.9	248.1	434.2	-259.	0.
25	39.970	.9736	228.00	1.0000	-9685.	-10449.	169.6	169.6	169.6	-2173.	0.
26	39.970	.3044	228.00	1.0000	-1578.	-5448.	142.2	142.2	142.2	-354.	0.
27	39.970	.3044	228.00	1.0000	-128.	-441.	108.3	108.3	108.3	-29.	0.
28	39.970	.3044	228.00	1.0000	1322.	4563.	67.7	67.7	67.7	297.	0.
29	39.970	.3044	228.00	1.0000	2773.	9567.	20.6	20.6	20.6	622.	0.
30	39.970	.3044	250.00	.7600	4223.	14571.	-25.1	-33.1	-43.5	947.	0.
31	39.998	.3046	210.00	.7857	5817.	20086.	91.2	116.1	147.7	1305.	224.
32	40.056	.9737	168.00	.5714	22913.	24774.	8.5	14.9	26.1	5141.	1542.
33	39.509	.3890	156.00	.5615	8344.	22013.	128.5	228.9	407.6	1230.	562.
34	39.196	.3859	156.00	.6982	7549.	19757.	157.8	226.0	323.7	561.	508.
35	39.099	.2976	174.00	.8706	5261.	17760.	158.7	192.3	209.4	127.	354.
36	39.088	.2977	153.00	1.0000	4632.	15633.	146.6	146.6	146.6	0.	312.
37	39.088	.2977	153.00	1.0000	4081.	13771.	121.1	121.1	121.1	0.	275.
38	39.088	.2977	153.00	1.0000	3529.	11909.	105.8	105.8	105.8	0.	238.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000006

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 510.00 STATION II = 471.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	21.375	-6.375	24.000
2	1.000	.2970	-.000	-12.750	21.375	-12.750	24.000
3	1.000	.2970	-.000	-19.062	21.375	-20.000	24.000
4	1.000	.2970	-.000	-23.600	21.375	-26.500	24.000
5	.000	1.0000	-.000	-27.250	21.375	-33.000	24.000
6	1.000	.8070	-.000	-31.250	21.375	-40.000	24.000
7	.000	1.0000	-.000	-31.250	17.250	-40.000	18.750
8	1.000	.1450	-.000	-31.250	12.500	-40.000	12.500
9	1.000	.1450	-.000	-31.250	6.800	-40.000	6.800
10	1.000	.1450	-.000	-31.250	1.100	-40.000	1.100
11	1.000	.1720	-.000	-31.250	-4.600	-40.000	-4.600
12	1.000	.1720	-.000	-31.250	-10.300	-40.000	-10.300
13	1.000	.8070	-.000	-31.250	-16.000	-40.000	-16.000
14	.000	1.0000	-.000	-27.250	-16.000	-33.000	-16.000
15	1.000	.1450	-.000	-23.600	-16.000	-26.500	-16.000
16	1.000	.1720	-.000	-19.062	-16.000	-20.000	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	1.0000	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	19.062	-16.000	20.000	-16.000
23	1.000	.1450	-.000	23.600	-16.000	26.500	-16.000
24	.000	1.0000	-.000	27.250	-16.000	33.000	-16.000
25	1.000	.8870	-.000	31.250	-16.000	40.000	-16.000
26	1.000	.2970	-.000	31.250	-10.300	40.000	-10.300
27	1.000	.2970	-.000	31.250	-4.600	40.000	-4.600
28	1.000	.2970	-.000	31.250	1.100	40.000	1.100
29	1.000	.2970	-.000	31.250	6.800	40.000	6.800
30	1.000	.2970	-.000	31.250	12.500	40.000	12.500
31	.000	1.0000	-.000	31.250	17.250	40.000	18.750
32	1.000	.8870	-.000	31.250	21.375	40.000	24.000
33	.000	1.0000	-.000	27.250	21.375	33.000	24.000
34	1.000	.2970	-.000	23.600	21.375	26.500	24.000
35	1.000	.2970	-.000	19.062	21.375	20.000	24.000
36	1.000	.2970	-.000	12.750	21.375	12.750	24.000
37	1.000	.2970	-.000	6.375	21.375	6.375	24.000
38	1.000	.2970	-.000	.000	21.375	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 1015596.0 MY = 2512169.0 MZ = -3392336.0 S = -7602.0 V = -17352.0 D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

000007

CONDITION

CH7F5

MY(CK) = 2512169.0

MZ(CK) = -3392335.8

D(CK) = -922.0

Y-BAR = 2.859 Z-BAR = 5.743 IY = 2544.34 IZ = 6587.11 IYZ = -87.09 C5 = 529.07 C6 = 1007.32

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2977	3207.	10822.	0.	-216.
2	.2977	2203.	7434.	0.	-148.
3	.2978	1209.	4082.	29.	-81.
4	.2985	496.	1677.	37.	-33.
5	.0000	0.	0.	0.	0.
6	.8288	-1979.	-2518.	-444.	133.
7	.0000	0.	0.	0.	0.
8	.1486	-1493.	-11897.	-374.	0.
9	.1486	-2537.	-17928.	-569.	0.
10	.1486	-3390.	-23959.	-761.	0.
11	.1763	-5033.	-29990.	-1129.	0.
12	.1763	-6045.	-36020.	-1356.	0.
13	.8271	-33112.	-42051.	-7429.	0.
14	.0000	0.	0.	0.	0.
15	.1454	-5233.	-36187.	-389.	0.
16	.1720	-5779.	-33607.	-139.	0.
17	.1720	-5203.	-30248.	0.	0.
18	.0000	0.	0.	0.	0.
19	.0000	0.	0.	0.	0.
20	.0000	0.	0.	0.	0.
21	.1450	-2430.	-16757.	0.	0.
22	.1450	-1946.	-13425.	47.	0.
23	.1454	-1602.	-11077.	119.	0.
24	.0000	0.	0.	0.	0.
25	.9091	-6335.	-7320.	1421.	0.
26	.3044	-374.	-1289.	84.	0.
27	.3044	1374.	4742.	-308.	0.
28	.3044	3122.	10773.	-700.	0.
29	.3044	4870.	16803.	-1093.	0.
30	.3044	6617.	22834.	-1485.	0.
31	.0000	0.	0.	0.	0.
32	.9110	27950.	32363.	-6271.	-1881.
33	.0000	0.	0.	0.	0.
34	.2985	7950.	26900.	-591.	-535.
35	.2978	7215.	24355.	-174.	-486.
36	.2977	6219.	20987.	0.	-419.
37	.2977	5215.	17599.	0.	-351.
38	.2977	4211.	14210.	0.	-283.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000008

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 471.00 STATION II = 510.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	24.000	-6.375	21.375
2	1.000	.2970	-.000	-12.750	24.000	-12.750	21.375
3	1.000	.2970	-.000	-20.000	24.000	-19.062	21.375
4	1.000	.3840	-.000	-26.500	24.000	-23.600	21.375
5	1.000	.3840	-.000	-33.000	24.000	-27.250	21.375
6	1.000	.9500	-.000	-40.000	24.000	-31.250	21.375
7	1.000	.1450	-.000	-40.000	18.750	-31.250	17.250
8	1.000	.1450	-.000	-40.000	12.500	-31.250	12.500
9	1.000	.1450	-.000	-40.000	6.800	-31.250	6.800
10	1.000	.1450	-.000	-40.000	1.100	-31.250	1.100
11	1.000	.1450	-.000	-40.000	-4.600	-31.250	-4.600
12	1.000	.1450	-.000	-40.000	-10.300	-31.250	-10.300
13	1.000	.8800	-.000	-40.000	-16.000	-31.250	-16.000
14	1.000	.1450	-.000	-33.000	-16.000	-27.250	-16.000
15	1.000	.1450	-.000	-26.500	-16.000	-23.600	-16.000
16	1.000	.1450	-.000	-20.000	-16.000	-19.062	-16.000
17	1.000	.1450	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	.1450	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	20.000	-16.000	19.062	-16.000
23	1.000	.1450	-.000	26.500	-16.000	23.600	-16.000
24	1.000	.1450	-.000	33.000	-16.000	27.250	-16.000
25	1.000	.9500	-.000	40.000	-16.000	31.250	-16.000
26	1.000	.2970	-.000	40.000	-10.300	31.250	-10.300
27	1.000	.2970	-.000	40.000	-4.600	31.250	-4.600
28	1.000	.2970	-.000	40.000	1.100	31.250	1.100
29	1.000	.2970	-.000	40.000	6.800	31.250	6.800
30	1.000	.2970	-.000	40.000	12.500	31.250	12.500
31	1.000	.2970	-.000	40.000	18.750	31.250	17.250
32	1.000	.9500	-.000	40.000	24.000	31.250	21.375
33	1.000	.3840	-.000	33.000	24.000	27.250	21.375
34	1.000	.3840	-.000	26.500	24.000	23.600	21.375
35	1.000	.2970	-.000	20.000	24.000	19.062	21.375
36	1.000	.2970	-.000	12.750	24.000	12.750	21.375
37	1.000	.2970	-.000	6.375	24.000	6.375	21.375
38	1.000	.2970	-.000	.000	24.000	.000	21.375

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 1015590.0 MY = 3188916.0 MZ = -3688790.9 S = -7602.0 V = -17352.0 D = -822.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000009

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

MX(CK) = 1015596. MY(CK) = 3188916. MZ(CK) = -3688791. S(CK) = -7601. V(CK) = -17352. D(CK) = -822.

T(UNBAL.) = 603241. Q(BAL.) = 109.9 2A(NET) = 6400.0

Y-BAR = 3.549 Z-BAR = 8.499 IY = 3485.14 IZ = 12764.46 IYZ = -236.90 C5 = 306.62 C6 = 937.85

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	39.088	.2977	153.00	1.0000	3400.	11474.	114.8	114.8	114.8	0.	229.
2	39.088	.2977	174.00	.8706	2818.	9510.	113.7	130.6	150.0	0.	190.
3	39.099	.2978	156.00	.6982	2157.	7281.	108.2	154.9	221.9	-52.	145.
4	39.196	.3859	156.00	.5615	2027.	5304.	109.0	194.2	345.8	-151.	136.
5	39.509	.3890	168.00	.5714	1268.	3344.	129.5	226.7	396.7	-187.	85.
6	40.056	.9757	210.00	.7857	1085.	1173.	239.8	305.2	388.5	-243.	73.
7	39.998	.1487	250.00	.7600	-567.	-4009.	220.9	290.7	382.5	127.	-22.
8	39.970	.1486	228.00	1.0000	-1438.	-10160.	297.0	297.0	297.0	323.	0.
9	39.970	.1486	223.00	1.0000	-2232.	-15775.	304.8	304.8	304.8	501.	0.
10	39.970	.1486	228.00	1.0000	-3026.	-21390.	314.1	314.1	314.1	679.	0.
11	39.970	.1486	228.00	1.0000	-3821.	-27005.	345.2	345.2	345.2	857.	0.
12	39.970	.1486	223.00	1.0000	-4615.	-32620.	381.9	381.9	381.9	1035.	0.
13	39.970	.9019	112.00	.5714	-32830.	-38235.	222.3	389.1	680.9	7366.	0.
14	39.422	.1466	104.00	.5615	-5021.	-35000.	146.2	260.4	463.7	740.	0.
15	39.108	.1454	104.00	.6982	-4691.	-32441.	191.5	274.3	392.8	349.	0.
16	39.011	.1450	116.00	.8706	-4390.	-30287.	269.8	309.9	355.9	106.	0.
17	39.000	.1450	102.00	1.0000	-4067.	-28047.	339.0	339.0	339.0	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-548

000010

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	39.000	.0000	102.00	1.0000	0.	0.	339.0	339.0	339.0	0.	0.
19	39.000	.0000	102.00	1.0000	0.	0.	339.0	339.0	339.0	0.	0.
20	39.000	.0000	102.00	1.0000	0.	0.	339.0	339.0	339.0	0.	0.
21	39.000	.1450	116.00	.8706	-2933.	-20228.	283.9	326.1	374.5	0.	0.
22	39.011	.1450	104.00	.6982	-2611.	-18015.	215.7	309.0	442.6	-63.	0.
23	39.108	.1454	104.00	.5615	-2328.	-16100.	163.1	290.4	517.1	-173.	0.
24	39.422	.1466	112.00	.5714	-2055.	-14323.	135.8	237.7	416.0	-303.	0.
25	39.970	.9736	228.00	1.0000	-11559.	-12470.	103.8	103.8	103.8	-2593.	0.
26	39.970	.3044	228.00	1.0000	-1987.	-6855.	62.4	62.4	62.4	-446.	0.
27	39.970	.3044	228.00	1.0000	-359.	-1240.	17.9	17.9	17.9	-81.	0.
28	39.970	.3044	228.00	1.0000	1268.	4375.	-29.6	-29.6	-29.6	284.	0.
29	39.970	.3044	228.00	1.0000	2895.	9990.	-80.2	-80.2	-80.2	650.	0.
30	39.970	.3044	250.00	.7600	4522.	15604.	-101.8	-134.0	-176.3	1015.	0.
31	39.998	.3046	210.00	.7857	6311.	21792.	21.9	27.9	35.5	1416.	243.
32	40.056	.9757	168.00	.5714	25019.	27049.	-27.0	-47.3	-82.7	5613.	1684.
33	39.509	.3890	156.00	.5615	9140.	24113.	105.1	187.1	333.2	1348.	615.
34	39.196	.3659	156.00	.6982	8298.	21719.	136.9	196.0	280.8	617.	559.
35	39.099	.2978	174.00	.8706	5809.	19609.	139.3	160.0	183.7	140.	391.
36	39.088	.2977	153.00	1.0000	5146.	17365.	132.4	132.4	132.4	0.	346.
37	39.088	.2977	153.00	1.0000	4564.	15401.	115.8	115.8	115.8	0.	307.
38	39.088	.2977	153.00	1.0000	3982.	13437.	109.9	109.9	109.9	0.	268.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000011

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH2F5

STATION I = 510.00

STATION II = 471.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	21.375	-6.375	24.000
2	1.000	.2970	-.000	-12.750	21.375	-12.750	24.000
3	1.000	.2970	-.000	-19.062	21.375	-20.000	24.000
4	1.000	.2970	-.000	-23.600	21.375	-26.500	24.000
5	.000	1.0000	-.000	-27.250	21.375	-33.000	24.000
6	1.000	.8070	-.000	-31.250	21.375	-40.000	24.000
7	.000	1.0000	-.000	-31.250	17.250	-40.000	18.750
8	1.000	.1450	-.000	-31.250	12.500	-40.000	12.500
9	1.000	.1450	-.000	-31.250	6.800	-40.000	6.800
10	1.000	.1450	-.000	-31.250	1.100	-40.000	1.100
11	1.000	.1720	-.000	-31.250	-4.600	-40.000	-4.600
12	1.000	.1720	-.000	-31.250	-10.300	-40.000	-10.300
13	1.000	.8070	-.000	-31.250	-16.000	-40.000	-16.000
14	.000	1.0000	-.000	-27.250	-16.000	-33.000	-16.000
15	1.000	.1450	-.000	-23.600	-16.000	-26.500	-16.000
16	1.000	.1720	-.000	-19.062	-16.000	-20.000	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	1.0000	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	19.062	-16.000	20.000	-16.000
23	1.000	.1450	-.000	23.600	-16.000	26.500	-16.000
24	.000	1.0000	-.000	27.250	-16.000	33.000	-16.000
25	1.000	.8870	-.000	31.250	-16.000	40.000	-16.000
26	1.000	.2970	-.000	31.250	-10.300	40.000	-10.300
27	1.000	.2970	-.000	31.250	-4.600	40.000	-4.600
28	1.000	.2970	-.000	31.250	1.100	40.000	1.100
29	1.000	.2970	-.000	31.250	6.800	40.000	6.800
30	1.000	.2970	-.000	31.250	12.500	40.000	12.500
31	.000	1.0000	-.000	31.250	17.250	40.000	18.750
32	1.000	.8870	-.000	31.250	21.375	40.000	24.000
33	.000	1.0000	-.000	27.250	21.375	33.000	24.000
34	1.000	.2970	-.000	23.600	21.375	26.500	24.000
35	1.000	.2970	-.000	19.062	21.375	20.000	24.000
36	1.000	.2970	-.000	12.750	21.375	12.750	24.000
37	1.000	.2970	-.000	6.375	21.375	6.375	24.000
38	1.000	.2970	-.000	.000	21.375	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969822.0      MY = 1877687.9      MZ = -3506984.0      S = -9062.0      V = -7092.0      D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-548

000012

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH2F5					
	MY(CK) = 1877688.0	MZ(CK) = -3506983.8	D(CK) = -428.0			
Y-BAR = 2.859	Z-BAR = 5.743	IY = 2544.34	IZ = 6582.11	IYZ = -87.09	C5 = 543.01	C6 = 757.54
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2977	2019.	6813.	0.	-136.	
2	.2977	988.	3335.	0.	-67.	
3	.2978	-32.	-108.	-1.	2.	
4	.2985	-768.	-2597.	-57.	52.	
5	.0000	0.	0.	0.	0.	
6	.8288	-5574.	-7094.	-1251.	375.	
7	.0000	0.	0.	0.	0.	
8	.1486	-1999.	-14126.	-448.	0.	
9	.1486	-2640.	-18661.	-592.	0.	
10	.1486	-3282.	-23196.	-736.	0.	
11	.1763	-4654.	-27732.	-1044.	0.	
12	.1763	-5415.	-32267.	-1215.	0.	
13	.8271	-28979.	-36802.	-6502.	0.	
14	.0000	0.	0.	0.	0.	
15	.1454	-4491.	-31055.	-334.	0.	
16	.1720	-4890.	-28437.	-118.	0.	
17	.1720	-4299.	-24993.	0.	0.	
18	.0000	0.	0.	0.	0.	
19	.0000	0.	0.	0.	0.	
20	.0000	0.	0.	0.	0.	
21	.1450	-1616.	-11146.	0.	0.	
22	.1450	-1119.	-7723.	27.	0.	
23	.1454	-764.	-5283.	57.	0.	
24	.0000	0.	0.	0.	0.	
25	.9091	-1000.	-1155.	224.	0.	
26	.3044	979.	3380.	-220.	0.	
27	.3044	2294.	7915.	-515.	0.	
28	.3044	3608.	12451.	-810.	0.	
29	.3044	4922.	16986.	-1104.	0.	
30	.3044	6237.	21521.	-1399.	0.	
31	.0000	0.	0.	0.	0.	
32	.9110	24791.	28706.	-5562.	-1669.	
33	.0000	0.	0.	0.	0.	
34	.2985	6883.	23291.	-512.	-463.	
35	.2978	6132.	20700.	-147.	-413.	
36	.2977	5110.	17245.	0.	-344.	
37	.2977	4080.	13768.	0.	-275.	
38	.2977	3049.	10290.	0.	-205.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000613

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 471.00 STATION II = 510.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	24.000	-6.375	21.375
2	1.000	.2970	-.000	-12.750	24.000	-12.750	21.375
3	1.000	.2970	-.000	-20.000	24.000	-19.062	21.375
4	1.000	.3840	-.000	-26.500	24.000	-23.600	21.375
5	1.000	.3840	-.000	-33.000	24.000	-27.250	21.375
6	1.000	.9500	-.000	-40.000	24.000	-31.250	21.375
7	1.000	.1450	-.000	-40.000	18.750	-31.250	17.250
8	1.000	.1450	-.000	-40.000	12.500	-31.250	12.500
9	1.000	.1450	-.000	-40.000	6.800	-31.250	6.800
10	1.000	.1450	-.000	-40.000	1.100	-31.250	1.100
11	1.000	.1450	-.000	-40.000	-4.600	-31.250	-4.600
12	1.000	.1450	-.000	-40.000	-10.300	-31.250	-10.300
13	1.000	.8800	-.000	-40.000	-16.000	-31.250	-16.000
14	1.000	.1450	-.000	-33.000	-16.000	-27.250	-16.000
15	1.000	.1450	-.000	-26.500	-16.000	-23.600	-16.000
16	1.000	.1450	-.000	-20.000	-16.000	-19.062	-16.000
17	1.000	.1450	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	.1450	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	20.000	-16.000	19.062	-16.000
23	1.000	.1450	-.000	26.500	-16.000	23.600	-16.000
24	1.000	.1450	-.000	33.000	-16.000	27.250	-16.000
25	1.000	.9500	-.000	40.000	-16.000	31.250	-16.000
26	1.000	.2970	-.000	40.000	-10.300	31.250	-10.300
27	.000	.2970	-.000	40.000	-4.600	31.250	-4.600
28	1.000	.2970	-.000	40.000	1.100	31.250	1.100
29	1.000	.2970	-.000	40.000	6.800	31.250	6.800
30	1.000	.2970	-.000	40.000	12.500	31.250	12.500
31	1.000	.2970	-.000	40.000	18.750	31.250	17.250
32	1.000	.9500	-.000	40.000	24.000	31.250	21.375
33	1.000	.3840	-.000	33.000	24.000	27.250	21.375
34	1.000	.3840	-.000	26.500	24.000	23.600	21.375
35	1.000	.2970	-.000	20.000	24.000	19.062	21.375
36	1.000	.2970	-.000	12.750	24.000	12.750	21.375
37	1.000	.2970	-.000	6.375	24.000	6.375	21.375
38	1.000	.2970	-.000	.000	24.000	.000	21.375

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968822.0 MY = 2153850.0 MZ = -3860396.0 S = -9062.0 V = -7082.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000014

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH2F5									
MX(CK) = 968622.		MY(CK) = 2153850.		MZ(CK) = -3860396.		S(CK) = -9062.		V(CK) = -7081.		B(CK) = -428.	
T(UNBAL.) = 559466.		Q(BAL.) = 101.9		2A(NET) = 6400.0							
Y-BAR = 3.549		Z-BAR = 8.499		IY = 3485.14		IZ = 12764.46		IYZ = -236.90		C5 = 314.44 C6 = 640.43	
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	39.088	.2977	153.00	1.0000	2015.	6800.	101.8	101.8	101.8	0.	136.
2	39.088	.2977	174.00	.8706	1418.	4786.	98.2	112.8	129.6	0.	95.
3	39.099	.2978	156.00	.6982	740.	2497.	92.6	132.6	190.0	-18.	50.
4	39.196	.3859	156.00	.5615	170.	445.	88.0	156.7	279.0	-13.	11.
5	39.509	.3890	168.00	.5714	-624.	-1645.	80.4	140.7	246.2	92.	-42.
6	40.056	.9757	210.00	.7857	-3712.	-4013.	148.1	188.4	239.8	833.	-250.
7	39.998	.1487	250.00	.7600	-1066.	-7538.	122.4	161.1	212.0	239.	-41.
8	39.970	.1486	223.00	1.0000	-1660.	-11731.	169.8	169.8	169.8	372.	0.
9	39.970	.1486	228.00	1.0000	-2202.	-15565.	181.0	181.0	181.0	494.	0.
10	39.970	.1486	228.00	1.0000	-2745.	-19400.	194.8	194.8	194.8	616.	0.
11	39.970	.1486	228.00	1.0000	-3287.	-23234.	229.8	229.8	229.8	738.	0.
12	39.970	.1486	228.00	1.0000	-3830.	-27068.	270.5	270.5	270.5	859.	0.
13	39.970	.9019	112.00	.5714	-26534.	-30902.	190.4	333.2	583.1	5953.	0.
14	39.422	.1466	104.00	.5615	-3990.	-27812.	129.7	230.9	411.2	588.	0.
15	39.108	.1454	104.00	.6982	-3661.	-25315.	176.1	252.2	361.2	272.	0.
16	39.011	.1450	116.00	.8706	-3355.	-23146.	253.8	291.5	334.8	81.	0.
17	39.000	.1450	102.00	1.0000	-3024.	-20853.	324.2	324.2	324.2	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000015

TABLE (CONT.)

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
18	39.000	.0000	102.00	1.0000	0.	0.	324.2	324.2	324.2	0.	0.
19	39.000	.0000	102.00	1.0000	0.	0.	324.2	324.2	324.2	0.	0.
20	39.000	.0000	102.00	1.0000	0.	0.	324.2	324.2	324.2	0.	0.
21	39.000	.1450	116.00	.8706	-1861.	-12835.	276.8	317.9	305.2	0.	0.
22	39.011	.1450	104.00	.6982	-1531.	-10561.	214.6	307.4	440.3	-37.	0.
23	39.108	.1454	104.00	.5615	-1238.	-8558.	165.8	295.2	525.8	-92.	0.
24	39.422	.1466	112.00	.5714	-948.	-6608.	154.8	270.9	474.1	-140.	0.
25	39.970	.9736	223.00	1.0000	-4154.	-4481.	190.1	190.1	190.1	-932.	0.
26	39.970	.3044	228.00	1.0000	-187.	-547.	160.2	160.2	160.2	-42.	0.
27	39.970	.3044	228.00	1.0000	924.	3188.	125.0	125.0	125.0	207.	0.
28	39.970	.3044	223.00	1.0000	2035.	7022.	84.7	84.7	84.7	457.	0.
29	39.970	.3044	223.00	1.0000	3146.	10856.	39.1	39.1	39.1	706.	0.
30	39.970	.3044	250.00	.7600	4257.	14690.	-8.8	-11.6	-15.3	955.	0.
31	39.998	.3046	210.00	.7857	5479.	18921.	101.3	128.9	164.0	1229.	211.
32	40.056	.9757	158.00	.5714	20832.	22523.	15.6	27.4	47.9	4674.	1402.
33	39.509	.3890	156.00	.5615	7450.	19653.	122.6	218.4	388.9	1098.	501.
34	39.196	.3859	156.00	.6982	6602.	17278.	147.4	211.2	302.5	491.	444.
35	39.099	.2978	174.00	.8706	4485.	15139.	147.1	168.9	194.0	108.	302.
36	39.088	.2977	153.00	1.0000	3805.	12840.	135.5	135.5	135.5	0.	256.
37	39.088	.2977	153.00	1.0000	3208.	10827.	113.1	113.1	113.1	0.	216.
38	39.088	.2977	153.00	1.0000	2612.	8813.	101.9	101.9	101.9	0.	176.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000016

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 549.00

STATION II = 510.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.375	23.919	-6.375	21.375
2	1.000	.1460	-.000	-12.750	23.514	-12.750	21.375
3	1.000	.1460	-.000	-18.125	22.526	-19.062	21.375
4	.000	1.0000	-.000	-20.700	21.250	-23.600	21.375
5	.000	1.0000	-.000	-21.500	20.000	-27.250	21.375
6	1.000	.6690	-.000	-22.500	18.750	-31.250	21.375
7	.000	1.0000	-.000	-22.500	15.750	-31.250	17.250
8	1.000	.1730	-.000	-24.250	12.500	-31.250	12.500
9	1.000	.1730	-.000	-25.125	6.800	-31.250	6.800
10	1.000	.1730	-.000	-26.000	1.100	-31.250	1.100
11	1.000	.1990	-.000	-26.000	-4.600	-31.250	-4.600
12	1.000	.1990	-.000	-26.000	-10.300	-31.250	-10.300
13	1.000	.9806	-.000	-26.000	-16.000	-31.250	-16.000
14	.000	1.0000	-.000	-21.500	-16.000	-27.250	-16.000
15	.000	1.0000	-.000	-20.700	-16.000	-23.600	-16.000
16	1.000	.1720	-.000	-19.125	-16.000	-19.062	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
19	.873	.1460	-.000	.000	-16.000	.000	-16.000
20	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1460	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1460	-.000	19.125	-16.000	19.062	-16.000
23	.000	1.0000	-.000	20.700	-16.000	23.600	-16.000
24	.000	1.0000	-.000	21.500	-16.000	27.250	-16.000
25	1.000	.8610	-.000	26.000	-16.000	31.250	-16.000
26	1.000	.3190	-.000	26.000	-10.300	31.250	-10.300
27	1.000	.3190	-.000	26.000	-4.600	31.250	-4.600
28	1.000	.3190	-.000	26.000	1.100	31.250	1.100
29	1.000	.3190	-.000	25.125	6.800	31.250	6.800
30	1.000	.3190	-.000	24.250	12.500	31.250	12.500
31	.000	1.0000	-.000	22.500	15.750	31.250	17.250
32	1.000	.8610	-.000	22.500	18.750	31.250	21.375
33	.000	1.0000	-.000	21.500	20.000	27.250	21.375
34	.000	1.0000	-.000	20.700	21.250	23.600	21.375
35	1.000	.1460	-.000	18.125	22.526	19.062	21.375
36	1.000	.1460	-.000	12.750	23.514	12.750	21.375
37	1.000	.2250	-.000	6.375	23.919	6.375	21.375
38	1.000	.1460	-.000	.000	24.000	.000	21.375

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 979463.0

MY = 2080830.0

MZ = -2886574.9

S = -8082.0

V = -9599.0

D = -746.0



PREPARED BY S. CIARDULLO  
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 DATE 3/10/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

000017

CONDITION COND.CH10F5

MY(CK) = 2080830.0

MZ(CK) = -2886574.9

D(CK) = -746.0

Y-BAR = 2.182 Z-BAR = 1.584 IY = 2098.27 IZ = 4004.93 IYZ = .145.82 C5 = 686.77 C6 = 944.53

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2255	3411.	15193.	0.	223.
2	.1462	1516.	10399.	0.	83.
3	.1461	839.	5752.	20.	25.
4	.0000	0.	0.	0.	0.
5	.0000	0.	0.	0.	0.
6	.6871	-569.	-873.	-128.	38.
7	.0000	0.	0.	0.	0.
8	.1758	-1394.	-8188.	-250.	0.
9	.1751	-2437.	-14261.	-383.	0.
10	.1746	-3474.	-20263.	-468.	0.
11	.2008	-5077.	-23744.	-683.	0.
12	.2008	-6158.	-31226.	-829.	0.
13	.9894	-35673.	-36707.	-4802.	0.
14	.0000	0.	0.	0.	0.
15	.0000	0.	0.	0.	0.
16	.1720	-5389.	-31332.	9.	0.
17	.1720	-4636.	-26954.	0.	0.
18	.1460	-3296.	-22576.	0.	0.
19	.1275	-2319.	-15886.	0.	0.
20	.1460	-2018.	-13819.	0.	0.
21	.1460	-1378.	-9441.	0.	0.
22	.1460	-739.	-5063.	-1.	0.
23	.0000	0.	0.	0.	0.
24	.0000	0.	0.	0.	0.
25	.8688	-297.	-348.	40.	0.
26	.3219	1623.	5134.	-218.	0.
27	.3219	3356.	10615.	-452.	0.
28	.3219	5089.	16096.	-685.	0.
29	.3229	6650.	21101.	-1044.	0.
30	.3241	8224.	26193.	-1476.	0.
31	.0000	0.	0.	0.	0.
32	.8843	26597.	31727.	-5967.	-1790.
33	.0000	0.	0.	0.	0.
34	.0000	0.	0.	0.	0.
35	.1461	4477.	30683.	-108.	132.
36	.1462	4077.	27965.	0.	224.
37	.2255	5386.	23987.	0.	351.
38	.1463	2966.	19672.	0.	193.

PREPARED BY S. CIARDULLO  
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 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000018

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10F5

STATION I = 510.00 STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2970	-.000	-6.375	21.375	-6.375	23.919
2	1.000	.2970	-.000	-12.750	21.375	-12.750	23.514
3	1.000	.2970	-.000	-19.062	21.375	-18.125	22.526
4	1.000	.2970	-.000	-23.600	21.375	-20.700	21.250
5	.000	1.0000	-.000	-27.250	21.375	-21.500	20.000
6	1.000	.8070	-.000	-31.250	21.375	-22.500	18.750
7	.000	1.0000	-.000	-31.250	17.250	-22.500	15.750
8	1.000	.1450	-.000	-31.250	12.500	-24.250	12.500
9	1.000	.1450	-.000	-31.250	6.800	-25.125	6.800
10	1.000	.1450	-.000	-31.250	1.100	-26.000	1.100
11	1.000	.1720	-.000	-31.250	-4.600	-26.000	-4.600
12	1.000	.1720	-.000	-31.250	-10.300	-26.000	-10.300
13	1.000	.8070	-.000	-31.250	-16.000	-26.000	-16.000
14	.000	1.0000	-.000	-27.250	-16.000	-21.500	-16.000
15	1.000	.1450	-.000	-23.600	-16.000	-20.700	-16.000
16	1.000	.1720	-.000	-19.062	-16.000	-19.125	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	1.0000	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	19.062	-16.000	19.125	-16.000
23	1.000	.1450	-.000	23.600	-16.000	20.700	-16.000
24	.000	1.0000	-.000	27.250	-16.000	21.500	-16.000
25	1.000	.8670	-.000	31.250	-16.000	26.000	-16.000
26	1.000	.2970	-.000	31.250	-10.300	26.000	-10.300
27	1.000	.2970	-.000	31.250	-4.600	26.000	-4.600
28	1.000	.2970	-.000	31.250	1.100	26.000	1.100
29	1.000	.2970	-.000	31.250	6.800	25.125	6.800
30	1.000	.2970	-.000	31.250	12.500	24.250	12.500
31	.000	1.0000	-.000	31.250	17.250	22.500	15.750
32	1.000	.8670	-.000	31.250	21.375	22.500	18.750
33	.000	1.0000	-.000	27.250	21.375	21.500	20.000
34	1.000	.2970	-.000	23.600	21.375	20.700	21.250
35	1.000	.2970	-.000	19.062	21.375	18.125	22.526
36	1.000	.2970	-.000	12.750	21.375	12.750	23.514
37	1.000	.2970	-.000	6.375	21.375	6.375	23.919
38	1.000	.2970	-.000	.000	21.375	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 979463.0 MY = 2455171.9 MZ = -3201771.0 S = -R082.C V = -9599.0 D = -746.0

PREPARED BY S. CIARDULLO  
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 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000019

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

MX(CK) = 979463. MY(CK) = 2455172. MZ(CK) = -3201771. S(CK) = -8700. V(CK) = -8553. D(CK) = -746.

T(UNBAL.) = 1112112. Q(BAL.) = 273.5 2A(NET) = 4671.9

Y-BAR = 2.841 Z-BAR = 5.822 IY = 2527.79 IZ = 6525.48 IYZ = -86.69 C5 = 504.14 C6 = 990.28

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	39.083	.2976			3177.	10721.				0.	-207.
2	39.059	.2974	136.27	1.0020	2220.	7484.	267.5	267.0	266.5	0.	-122.
3	39.028	.2972	134.92	.8658	1272.	4286.	246.8	285.0	329.2	-31.	-38.
4	39.108	.2978	97.00	.6333	593.	2003.	187.5	296.1	467.6	-44.	2.
5	39.446	.0000	78.02	.4066	0.	0.	126.6	311.4	765.7	0.	0.
6	40.056	.8288	85.50	.4002	-1545.	-1967.	124.6	311.4	778.0	347.	-104.
7	39.998	.0000	128.91	.7273	0.	0.	208.2	286.3	393.7	0.	0.
8	39.623	.1473	148.44	.7771	-1569.	-10996.	222.5	286.3	368.4	282.	0.
9	39.478	.1468	178.13	1.0117	-2392.	-16700.	285.1	281.8	278.6	376.	0.
10	39.352	.1463	178.12	1.0117	-3210.	-22340.	286.3	283.0	279.7	432.	0.
11	39.352	.1736	178.12	1.0000	-4788.	-28087.	289.7	289.7	289.7	645.	0.
12	39.352	.1736	178.12	1.0000	-5767.	-33834.	297.2	297.2	297.2	776.	0.
13	39.352	.8143	178.13	1.0000	-31656.	-39581.	307.2	307.2	307.2	4261.	0.
14	39.422	.0000	64.00	1.1250	0.	0.	461.5	410.2	364.6	0.	0.
15	39.108	.1454	58.40	.2192	-5092.	-35213.	89.9	410.2	1871.5	0.	0.
16	39.000	.1720	72.61	.3471	-5630.	-32732.	97.0	279.6	805.7	379.	0.
17	39.000	.1720	100.99	1.0100	-5083.	-29550.	276.2	273.5	270.8	-9.	0.
			102.00	1.0000			262.0	262.0	262.0	0.	0.

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	39.000	.0000			0.	0.				0.	0.
19	39.000	.0000	102.00	1.0000	0.	0.	346.5	346.5	346.5	0.	0.
20	39.000	.0000	102.00	1.0000	0.	0.	406.0	406.0	406.0	0.	0.
21	39.000	.1450	102.00	1.0000	0.	0.	457.7	457.7	457.7	0.	0.
22	39.000	.1450	100.99	1.0100	-2421.	-16694.	435.3	431.0	426.7	0.	0.
23	39.108	.1454	72.61	.3471	-1959.	-13512.	138.7	399.7	1151.7	3.	0.
24	39.422	.0000	58.40	.2192	-1632.	-11286.	78.4	357.9	1632.8	-121.	0.
25	39.352	.8950	64.00	1.1250	0.	0.	402.6	357.9	318.1	0.	0.
26	39.352	.2997	178.13	1.0000	-6594.	-7501.	196.4	196.4	196.4	-889.	0.
27	39.352	.997	178.12	1.0000	-516.	-1754.	196.4	196.4	196.4	-70.	0.
28	39.352	.2997	178.12	1.0000	1175.	3993.	141.5	141.5	141.5	158.	0.
29	39.478	.3006	178.12	1.0117	2867.	9739.	85.6	85.6	85.6	386.	0.
30	39.623	.3017	173.13	1.0117	4573.	15586.	29.0	28.7	28.3	718.	0.
31	39.998	.0000	143.44	.7771	6293.	21527.	-24.9	-24.6	-24.3	1130.	0.
32	40.056	.9110	128.91	.7273	0.	0.	-57.6	-74.1	-95.4	0.	0.
33	39.446	.0000	85.50	.4002	27006.	31271.	-53.9	-74.1	-101.9	6059.	1818.
34	39.108	.2978	78.02	.4066	0.	0.	-25.5	-63.6	-159.0	0.	0.
35	39.028	.2972	97.00	.6333	7680.	25930.	-25.9	-63.6	-156.5	571.	25.
36	39.059	.2974	134.92	.8658	6984.	23534.	84.4	133.3	210.5	168.	-206.
37	39.083	.2976	136.27	1.0020	6043.	20379.	171.1	197.6	228.2	0.	-331.
38	39.088	.2977	136.27	1.0001	5091.	17176.	248.5	248.0	247.5	0.	-332.
			136.27	1.0001	4135.	13953.	240.5	240.5	240.4	0.	-278.
			136.27	1.0001			273.0	273.0	273.0		

PREPARED BY S. CIARDULLO  
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 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000021

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION

CH7F5

STATION I = 549.00

STATION II = 510.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.375	23.919	-6.375	21.375
2	1.000	.1460	-.000	-12.750	23.514	-12.750	21.375
3	1.000	.1460	-.000	-18.125	22.526	-19.062	21.375
4	.000	1.0000	-.000	-20.700	21.250	-23.600	21.375
5	.000	1.0000	-.000	-21.500	20.000	-27.250	21.375
6	1.000	.6690	-.000	-22.500	18.750	-31.250	21.375
7	.000	1.0000	-.000	-22.500	15.750	-31.250	17.250
8	1.000	.1730	-.000	-24.250	12.500	-31.250	12.500
9	1.000	.1730	-.000	-25.125	6.800	-31.250	6.800
10	1.000	.1730	-.000	-26.000	1.100	-31.250	1.100
11	1.000	.1990	-.000	-26.000	-4.600	-31.250	-4.600
12	1.000	.1990	-.000	-26.000	-10.300	-31.250	-10.300
13	1.000	.9806	-.000	-26.000	-16.000	-31.250	-16.000
14	.000	1.0000	-.000	-21.500	-16.000	-27.250	-16.000
15	.000	1.0000	-.000	-20.700	-16.000	-23.600	-16.000
16	1.000	.1720	-.000	-19.125	-16.000	-19.062	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
19	.873	.1460	-.000	.000	-16.000	.000	-16.000
20	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1460	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1460	-.000	19.125	-16.000	19.062	-16.000
23	.000	1.0000	-.000	20.700	-16.000	23.600	-16.000
24	.000	1.0000	-.000	21.500	-16.000	27.250	-16.000
25	1.000	.8610	-.000	26.000	-16.000	31.250	-16.000
26	1.000	.3190	-.000	26.000	-10.300	31.250	-10.300
27	1.000	.3190	-.000	26.000	-4.600	31.250	-4.600
28	1.000	.3190	-.000	26.000	1.100	31.250	1.100
29	1.000	.3190	-.000	25.125	6.800	31.250	6.800
30	1.000	.3190	-.000	24.250	12.500	31.250	12.500
31	.000	1.0000	-.000	22.500	15.750	31.250	17.250
32	1.000	.8610	-.000	22.500	18.750	31.250	21.375
33	.000	1.0000	-.000	21.500	20.000	27.250	21.375
34	.000	1.0000	-.000	20.700	21.250	23.600	21.375
35	1.000	.1460	-.000	18.125	22.526	19.062	21.375
36	1.000	.1460	-.000	12.750	23.514	12.750	21.375
37	1.000	.2250	-.000	6.375	23.919	6.375	21.375
38	1.000	.1460	-.000	.000	24.000	.000	21.375

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 1016067.0

MY = 1843476.0

MZ = -3091409.0

S = -7719.0

V = -17147.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000022

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION	CH7F5	MY(CK) = 1843476.0	MZ(CK) = -3091408.9	D(CK) = -822.0				
		Y-BAR = 2.182	Z-BAR = 1.584	IY = 2098.27	IZ = 4004.93	IYZ = 145.82	CS = 742.22	C6 = 827.61
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ			
1	.2255	2713.	12085.	0.	177.			
2	.1462	1019.	6988.	0.	56.			
3	.1461	316.	2163.	8.	9.			
4	.0000	0.	0.	0.	0.			
5	.0000	0.	0.	0.	0.			
6	.6871	-2894.	-4444.	-649.	195.			
7	.0000	0.	0.	0.	0.			
8	.1758	-1878.	-11028.	-337.	0.			
9	.1751	-2811.	-16447.	-441.	0.			
10	.1746	-3739.	-21806.	-503.	0.			
11	.2008	-5248.	-26608.	-706.	0.			
12	.2008	-6195.	-31411.	-834.	0.			
13	.9994	-35194.	-36214.	-4738.	0.			
14	.0000	0.	0.	0.	0.			
15	.0000	0.	0.	0.	0.			
16	.1720	-5240.	-30467.	8.	0.			
17	.1720	-4426.	-25735.	0.	0.			
18	.1460	-3067.	-21004.	0.	0.			
19	.1275	-2074.	-14205.	0.	0.			
20	.1460	-1585.	-11540.	0.	0.			
21	.1460	-994.	-6809.	0.	0.			
22	.1460	-303.	-2077.	-0.	0.			
23	.0000	0.	0.	0.	0.			
24	.0000	0.	0.	0.	0.			
25	.8688	2629.	3080.	-354.	0.			
26	.3219	2492.	7883.	-336.	0.			
27	.3219	4011.	12686.	-540.	0.			
28	.3219	5529.	17489.	-744.	0.			
29	.3229	6960.	21770.	-1077.	0.			
30	.3241	8204.	26129.	-1473.	0.			
31	.0000	0.	0.	0.	0.			
32	.8943	25311.	30789.	-5791.	-1737.			
33	.0000	0.	0.	0.	0.			
34	.0000	0.	0.	0.	0.			
35	.1461	4247.	29107.	-102.	125.			
36	.1462	3786.	25971.	0.	208.			
37	.2255	4847.	21588.	0.	316.			
38	.1463	2463.	16909.	0.	166.			

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000023

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH7F5

STATION I = 510.00

STATION II = 549.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2970	-.000	-6.375	21.375	-6.375	23.919
2	1.000	.2970	-.000	-12.750	21.375	-12.750	23.514
3	1.000	.2970	-.000	-19.062	21.375	-18.125	22.526
4	1.000	.2970	-.000	-23.600	21.375	-20.700	21.250
5	.000	1.0000	-.000	-27.250	21.375	-21.500	20.000
6	1.000	.8070	-.000	-31.250	21.375	-22.500	18.750
7	.000	1.0000	-.000	-31.250	17.250	-22.500	15.750
8	1.000	.1450	-.000	-31.250	12.500	-24.250	12.500
9	1.000	.1450	-.000	-31.250	6.800	-25.125	6.800
10	1.000	.1450	-.000	-31.250	1.100	-26.000	1.100
11	1.000	.1720	-.000	-31.250	-4.600	-26.000	-4.600
12	1.000	.1720	-.000	-31.250	-10.300	-26.000	-10.300
13	1.000	.8070	-.000	-31.250	-16.000	-26.000	-16.000
14	.000	1.0000	-.000	-27.250	-16.000	-21.500	-16.000
15	1.000	.1450	-.000	-23.600	-16.000	-20.700	-16.000
16	1.000	.1720	-.000	-19.062	-16.000	-19.125	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000
20	.000	1.0000	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1450	-.000	19.062	-16.000	19.125	-16.000
23	1.000	.1450	-.000	23.600	-16.000	20.700	-16.000
24	.000	1.0000	-.000	27.250	-16.000	21.500	-16.000
25	1.000	.8870	-.000	31.250	-16.000	26.000	-16.000
26	1.000	.2970	-.000	31.250	-10.300	26.000	-10.300
27	1.000	.2970	-.000	31.250	-4.600	26.000	-4.600
28	1.000	.2970	-.000	31.250	1.100	26.000	1.100
29	1.000	.2970	-.000	31.250	6.800	25.125	6.800
30	1.000	.2970	-.000	31.250	12.500	24.250	12.500
31	.000	1.0000	-.000	31.250	17.250	22.500	15.750
32	1.000	.8870	-.000	31.250	21.375	22.500	18.750
33	.000	1.0000	-.000	27.250	21.375	21.500	20.000
34	1.000	.2970	-.000	23.600	21.375	20.700	21.250
35	1.000	.2970	-.000	19.062	21.375	18.125	22.526
36	1.000	.2970	-.000	12.750	21.375	12.750	23.514
37	1.000	.2970	-.000	6.375	21.375	6.375	23.919
38	1.000	.2970	-.000	.000	21.375	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 1016067.0

MY = 2512169.0

MZ = -3392459.0

S = -7719.0

V = -17147.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-548

000024

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH7F5									
MX(CK) = 1016067. MY(CK) = 2512169. MZ(CK) = -3392459. S(CK) = -8386. V(CK) = -15748. D(CK) = -822.											
T(OVERBAL.) = 1151779. Q(BAL.) = 283.3 2A(NET) = 4671.9											
Y-BAR = 2.841 Z-BAR = 5.822 IY = 2527.79 IZ = 6525.48 IYZ = -86.69 C5 = 533.71 C6 = 1014.02											
ITEM	L.S.	AE(PR)J.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	39.083	.2976	136.27	1.0020	3204.	10810.	295.9	295.3	294.7	0.	-209.
2	39.059	.2974	134.92	.8658	2190.	7384.	281.7	325.3	375.8	0.	-120.
3	39.028	.2972	97.00	.6333	1187.	3999.	220.2	347.7	549.0	-29.	-35.
4	39.108	.2978	78.02	.4066	468.	1580.	146.2	359.7	884.6	-35.	1.
5	39.446	.0000	85.50	.4002	0.	0.	143.9	359.7	898.7	0.	0.
6	40.056	.8288	128.91	.7273	-2082.	-2649.	276.7	380.5	523.2	467.	-140.
7	39.998	.0000	148.44	.7771	0.	0.	295.7	380.5	489.7	0.	0.
8	39.623	.1473	179.13	1.0117	-1696.	-11882.	389.7	385.2	380.7	304.	0.
9	39.478	.1463	178.12	1.0117	-2538.	-17717.	396.8	392.2	387.6	399.	0.
10	39.352	.1463	178.12	1.0000	-3375.	-23489.	401.5	401.5	401.5	454.	0.
11	39.352	.1736	178.12	1.0000	-5007.	-29373.	407.7	407.7	407.7	674.	0.
12	39.352	.1736	178.13	1.0000	-6010.	-35258.	412.4	412.4	412.4	809.	0.
13	39.352	.8143	64.00	1.1250	-32905.	-41143.	530.0	471.1	418.7	4430.	0.
14	39.422	.0000	53.40	.2192	0.	0.	103.3	471.1	2149.3	0.	0.
15	39.108	.1454	72.61	.3471	-5282.	-36528.	116.5	335.7	967.1	393.	0.
16	39.000	.1720	100.99	1.0100	-5832.	-33906.	323.7	320.5	317.3	-9.	0.
17	39.000	.1720	102.00	1.0000	-5252.	-30537.	299.3	299.3	299.3	0.	0.



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TABLE (CONL.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	39.000	.0000			0.	0.				0.	0.
			102.00	1.0000			377.9	377.9	377.9		
19	39.000	.0000			0.	0.				0.	0.
			102.00	1.0000			431.1	431.1	431.1		
20	39.000	.0000			0.	0.				0.	0.
			102.00	1.0000			474.3	474.3	474.3		
21	39.000	.1450			-2454.	-16927.				0.	0.
			100.99	1.0100			441.2	436.9	432.6		
22	39.000	.1450			-1966.	-13559.				3.	0.
			72.61	.3471			136.8	394.2	1135.9		
23	39.108	.1454			-1619.	-11198.				-120.	0.
			58.40	.2192			77.3	352.7	1609.3		
24	39.422	.0000			0.	0.				0.	0.
			64.00	1.1250			396.8	352.7	313.5		
25	39.352	.8950			-6313.	-7182.				-850.	0.
			178.13	1.0000			123.4	123.4	123.4		
26	39.352	.2997			-382.	-1297.				-51.	0.
			178.12	1.0000			49.8	49.8	49.8		
27	39.352	.2997			1350.	4588.				182.	0.
			178.12	1.0000			-18.5	-18.5	-18.5		
28	39.352	.2997			3082.	10472.				415.	0.
			179.12	1.0117			-82.1	-81.2	-80.3		
29	39.478	.3006			4830.	16462.				759.	0.
			178.13	1.0117			-134.8	-133.3	-131.7		
30	39.623	.3017			6592.	22550.				1183.	0.
			148.44	.7771			-135.7	-174.6	-224.7		
31	39.998	.0000			0.	0.				0.	0.
			128.91	.7273			-127.0	-174.6	-240.1		
32	40.056	.9110			28100.	32538.				6305.	1891.
			85.50	.4002			-46.4	-115.9	-289.6		
33	39.446	.0000			0.	0.				0.	0.
			78.02	.4066			-47.1	-115.9	-285.0		
34	39.108	.2978			7970.	26911.				593.	26.
			97.00	.6333			56.0	88.5	139.7		
35	39.028	.2972			7234.	24376.				174.	-214.
			134.92	.8658			142.9	165.1	190.7		
36	39.059	.2974			6238.	21035.				0.	-342.
			136.27	1.0020			228.4	228.0	227.5		
37	39.083	.2976			5229.	17644.				0.	-341.
			136.27	1.0001			237.8	237.8	237.7		
38	39.088	.2977			4217.	14231.				0.	-284.
			136.27	1.0001			282.8	282.7	282.7		

PREPARED BY S. CIARDULLO  
 CHECKED BY J.C. JLLC  
 DATE 3/10/71

PAGE NO. 1  
 REPORT  
 MODEL CH-54B

000026

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH2F5

STATION I = 549.00

STATION II = 510.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.375	23.919	-6.375	21.375
2	1.000	.1460	-.000	-12.750	23.514	-12.750	21.375
3	1.000	.1460	-.000	-18.125	22.526	-19.062	21.375
4	.000	1.0000	-.000	-20.700	21.250	-23.600	21.375
5	.000	1.0000	-.000	-21.500	20.000	-27.250	21.375
6	1.000	.6690	-.000	-22.500	18.750	-31.250	21.375
7	.000	1.0000	-.000	-22.500	15.750	-31.250	17.250
8	1.000	.1730	-.000	-24.250	12.500	-31.250	12.500
9	1.000	.1730	-.000	-25.125	6.800	-31.250	6.800
10	1.000	.1730	-.000	-26.000	1.100	-31.250	1.100
11	1.000	.1990	-.000	-26.000	-4.600	-31.250	-4.600
12	1.000	.1990	-.000	-26.000	-10.300	-31.250	-10.300
13	1.000	.9806	-.000	-26.000	-16.000	-31.250	-16.000
14	.000	1.0000	-.000	-21.500	-16.000	-27.250	-16.000
15	.000	1.0000	-.000	-20.700	-16.000	-23.600	-16.000
16	1.000	.1720	-.000	-19.125	-16.000	-19.062	-16.000
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000
18	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
19	.673	.1460	-.000	.000	-16.000	.000	-16.000
20	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
21	1.000	.1460	-.000	12.750	-16.000	12.750	-16.000
22	1.000	.1460	-.000	19.125	-16.000	19.062	-16.000
23	.000	1.0000	-.000	20.700	-16.000	23.600	-16.000
24	.000	1.0000	-.000	21.500	-16.000	27.250	-16.000
25	1.000	.8610	-.000	26.000	-16.000	31.250	-16.000
26	1.000	.3190	-.000	26.000	-10.300	31.250	-10.300
27	1.000	.3190	-.000	26.000	-4.600	31.250	-4.600
28	1.000	.3190	-.000	26.000	1.100	31.250	1.100
29	1.000	.3190	-.000	25.125	6.800	31.250	6.800
30	1.000	.3190	-.000	24.250	12.500	31.250	12.500
31	.000	1.0000	-.000	22.500	15.750	31.250	17.250
32	1.000	.8610	-.000	22.500	18.750	31.250	21.375
33	.000	1.0000	-.000	21.500	20.000	27.250	21.375
34	.000	1.0000	-.000	20.700	21.250	23.600	21.375
35	1.000	.1460	-.000	18.125	22.526	19.062	21.375
36	1.000	.1460	-.000	12.750	23.514	12.750	21.375
37	1.000	.2250	-.000	6.375	23.919	6.375	21.375
38	1.000	.1460	-.000	.000	24.000	.000	21.375

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969231.0

MY = 1609583.0

MZ = -3149692.9

S = -9165.0

V = -6875.0

D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
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000027

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH2F5						
	MY(CK) = 1609583.0	MZ(CK) = -3149692.9	D(CK) = -428.0				
Y-BAR =	2.182	Z-BAR = 1.584	IY = 2098.27	IZ = 4004.93	IYZ = 145.82	C5 = 760.67	C6 = 714.56
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ		
1	.2255	2119.	9439.	0.	138.		
2	.1462	623.	4273.	0.	34.		
3	.1461	-78.	-535.	-2.	-2.		
4	.0000	0.	0.	0.	0.		
5	.0000	0.	0.	0.	0.		
6	.6871	-4508.	-6921.	-1011.	303.		
7	.0000	0.	0.	0.	0.		
8	.1758	-2172.	-12756.	-390.	0.		
9	.1751	-2994.	-17518.	-470.	0.		
10	.1746	-3912.	-22231.	-513.	0.		
11	.2008	-5202.	-26377.	-700.	0.		
12	.2008	-6020.	-30524.	-810.	0.		
13	.9894	-33694.	-34671.	-4536.	0.		
14	.0000	0.	0.	0.	0.		
15	.0000	0.	0.	0.	0.		
16	.1720	-4958.	-28824.	9.	0.		
17	.1720	-4124.	-23975.	0.	0.		
18	.1460	-2792.	-19126.	0.	0.		
19	.1275	-1820.	-12463.	0.	0.		
20	.1460	-1376.	-9427.	0.	0.		
21	.1460	-668.	-4578.	0.	0.		
22	.1460	40.	271.	0.	0.		
23	.1000	0.	0.	0.	0.		
24	.0000	0.	0.	0.	0.		
25	.8688	4779.	5601.	-643.	0.		
26	.3219	3082.	9747.	-415.	0.		
27	.3219	4393.	13894.	-591.	0.		
28	.3219	5704.	18041.	-768.	0.		
29	.3229	6822.	21648.	-1071.	0.		
30	.3241	7952.	25325.	-1427.	0.		
31	.0000	0.	0.	0.	0.		
32	.8843	24468.	29188.	-5490.	-1647.		
33	.0000	0.	0.	0.	0.		
34	.0000	0.	0.	0.	0.		
35	.1461	3951.	27079.	-95.	117.		
36	.1462	3459.	23728.	0.	190.		
37	.2255	4306.	19179.	0.	281.		
38	.1463	2093.	14371.	0.	141.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

000028

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH2F5							
STATION I = 510.00		STATION II = 549.00						
ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)	
1	1.000	.2970	-.000	-6.375	21.375	-6.375	23.919	
2	1.000	.2970	-.000	-12.750	21.375	-12.750	23.514	
3	1.000	.2970	-.000	-19.062	21.375	-18.125	22.526	
4	1.000	.2970	-.000	-23.600	21.375	-20.700	21.250	
5	.000	1.0000	-.000	-27.250	21.375	-21.500	20.000	
6	1.000	.8070	-.000	-31.250	21.375	-22.500	18.750	
7	.000	1.0000	-.000	-31.250	17.250	-22.500	15.750	
8	1.000	.1450	-.000	-31.250	12.500	-24.250	12.500	
9	1.000	.1450	-.000	-31.250	6.800	-25.125	6.800	
10	1.000	.1450	-.000	-31.250	1.100	-26.000	1.100	
11	1.000	.1720	-.000	-31.250	-4.600	-26.000	-4.600	
12	1.000	.1720	-.000	-31.250	-10.300	-26.000	-10.300	
13	1.000	.8070	-.000	-31.250	-16.000	-26.000	-16.000	
14	.000	1.0000	-.000	-27.250	-16.000	-21.500	-16.000	
15	1.000	.1450	-.000	-23.600	-16.000	-20.700	-16.000	
16	1.000	.1720	-.000	-19.062	-16.000	-19.125	-16.000	
17	1.000	.1720	-.000	-12.750	-16.000	-12.750	-16.000	
18	.000	1.0000	-.000	-6.375	-16.000	-6.375	-16.000	
19	.000	1.0000	-.000	.000	-16.000	.000	-16.000	
20	.000	1.0000	-.000	6.375	-16.000	6.375	-16.000	
21	1.000	.1450	-.000	12.750	-16.000	12.750	-16.000	
22	1.000	.1450	-.000	19.062	-16.000	19.125	-16.000	
23	1.000	.1450	-.000	23.600	-16.000	20.700	-16.000	
24	.000	1.0000	-.000	27.250	-16.000	21.500	-16.000	
25	1.000	.8870	-.000	31.250	-16.000	26.000	-16.000	
26	1.000	.2970	-.000	31.250	-10.300	26.000	-10.300	
27	1.000	.2970	-.000	31.250	-4.600	26.000	-4.600	
28	1.000	.2970	-.000	31.250	1.100	26.000	1.100	
29	1.000	.2970	-.000	31.250	6.800	25.125	6.800	
30	1.000	.2970	-.000	31.250	12.500	24.250	12.500	
31	.000	1.0000	-.000	31.250	17.250	22.500	15.750	
32	1.000	.8870	-.000	31.250	21.375	22.500	18.750	
33	.000	1.0000	-.000	27.250	21.375	21.500	20.000	
34	1.000	.2970	-.000	23.600	21.375	20.700	21.250	
35	1.000	.2970	-.000	19.062	21.375	18.125	22.526	
36	1.000	.2970	-.000	12.750	21.375	12.750	23.514	
37	1.000	.2970	-.000	6.375	21.375	6.375	23.919	
38	1.000	.2970	-.000	.000	21.375	.000	24.000	

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969231.0    MY = 1877687.9    MZ = -3507099.0    S = -9165.0    V = -6875.0    D = -42A.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54B

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

000029

CONDITION		CH2F5										
MX(CK) = 969231.		MY(CK) = 1877688.		MZ(CK) = -3507099.		S(CK) = -9821.		V(CK) = -6077.		D(CK) = -428.		
T(UNBAL.) = 1098443.		Q(BAL.) = 270.2		2A(NET) = 4671.9								
Y-BAR = 2.841		Z-BAR = 5.822		IY = 2527.79		IZ = 6525.48		IYZ = -86.69		C5 = 547.76		C6 = 762.59
IVEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ	
1	39.023	.2976			2014.	6795.				0.	-131.	
2	39.059	.2974	136.27	1.0020	974.	3284.	267.5	266.9	266.4	0.	-53.	
3	39.028	.2972	134.92	.8658	-54.	-183.	238.9	275.9	318.7	1.	2.	
4	39.108	.2978	97.00	.6333	-795.	-2683.	175.1	276.5	436.7	59.	-3.	
5	39.446	.0000	78.02	.4066	0.	0.	104.2	256.2	630.0	0.	0.	
6	40.056	.8288	85.50	.4002	-5685.	-7235.	102.5	256.2	640.1	0.	0.	
7	39.998	.0000	128.91	.7273	0.	0.	164.3	226.0	310.7	1276.	-383.	
8	39.623	.1473	143.44	.7771	-2008.	-14066.	175.6	226.0	290.8	0.	0.	
9	39.478	.1468	178.13	1.0117	-2638.	-18417.	232.9	230.2	227.5	360.	0.	
10	39.352	.1463	178.12	1.0117	-3266.	-22725.	242.1	239.3	236.5	414.	0.	
11	39.352	.1736	178.12	1.0000	-4628.	-27151.	253.3	253.3	253.3	440.	0.	
12	39.352	.1736	178.12	1.0000	-5383.	-31576.	268.0	268.0	268.0	623.	0.	
13	39.352	.8143	178.13	1.0000	-5383.	-31576.	284.4	284.4	284.4	725.	0.	
14	39.422	.0000	64.00	1.1250	-28794.	-36002.	461.3	410.0	364.5	3876.	0.	
15	39.108	.1454	58.40	.2192	0.	0.	89.9	410.0	1870.8	0.	0.	
16	39.000	.1720	72.61	.3471	-4532.	-31343.	102.0	293.8	846.6	337.	0.	
17	39.000	.1720	100.99	1.0100	-4934.	-28685.	297.4	294.4	291.5	-8.	0.	
			102.00	1.0000	-4339.	-25227.	288.9	288.9	288.9	0.	0.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 3/10/71

PAGE NO.  
 REPORT NO.  
 MODEL CH-54R

000030

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	39.000	.0000	102.00	1.0000	0.	0.	360.5	360.5	360.5	0.	0.
19	39.000	.0000	102.00	1.0000	0.	0.	407.2	407.2	407.2	0.	0.
20	39.000	.0000	102.00	1.0000	0.	0.	442.5	442.5	442.5	0.	0.
21	39.000	.1450	100.99	1.0100	-1633.	-11259.	421.9	417.8	413.6	0.	0.
22	39.000	.1450	72.61	.3471	-1131.	-7802.	134.6	387.7	1117.1	2.	0.
23	39.108	.1454	58.40	.2192	-773.	-5345.	80.6	367.9	1678.6	-57.	0.
24	39.422	.0000	64.00	1.1250	0.	0.	413.9	367.9	327.0	0.	0.
25	39.352	.8950	178.13	1.0000	-1007.	-1146.	219.5	219.5	219.5	-136.	0.
26	39.352	.2997	178.12	1.0000	965.	3279.	165.3	165.3	165.3	130.	0.
27	39.352	.2997	178.12	1.0000	2268.	7705.	110.8	110.8	110.8	305.	0.
28	39.352	.2997	173.12	1.0117	3571.	12131.	56.8	56.1	55.4	481.	0.
29	39.478	.3006	173.13	1.0117	4889.	16662.	6.6	6.5	6.4	768.	0.
30	39.623	.3017	148.44	.7771	6218.	21272.	-29.5	-37.9	-48.8	1116.	0.
31	39.998	.0000	128.91	.7273	0.	0.	-27.6	-37.9	-52.1	0.	0.
32	40.056	.9110	85.50	.4002	24940.	20878.	-10.3	-25.8	-64.5	5595.	1679.
33	39.446	.0000	78.02	.4066	0.	0.	-10.5	-25.8	-63.5	0.	0.
34	39.108	.2978	97.00	.6333	6905.	23314.	95.8	151.2	238.8	513.	22.
35	39.028	.2972	134.92	.8658	6152.	20730.	179.8	207.7	239.9	148.	-182.
36	39.059	.2974	136.27	1.0020	5129.	17294.	251.0	250.5	250.0	0.	-281.
37	39.083	.2976	136.27	1.0001	4093.	13809.	245.0	245.0	245.0	0.	-267.
38	39.088	.2977	136.27	1.0001	3054.	10305.	269.7	269.6	269.6	0.	-206.

#### 4.0 Nonreinforced Tail Cone Section Loads Analysis

This section of the report contains the computer input data of a non-reinforced tail cone assuming no bond exists between the aluminum stringers and the boron/epoxy reinforcement. The stringer areas are those of the original CH-54A (see Reference 5) with minor modification shown in Section 2.0. The geometry is obtained from Reference 5. The applied loads are obtained from Reference 3.

The critical applied loading conditions for the tail cone are CH1F5, CH2F5, CH7F5, CH1G13, and CH1OF5. Condition CH1F5 is a yaw left condition at a design gross weight of 47,000 pounds. Condition CH1G13 is a tail down landing condition, with maximum vertical reaction at a design gross weight of 47,000 pounds.

The stringer axial loads and skin shear flows shown in this section are the printed results of a computer shear and bending analysis program.

A stringer numbering system for the computer loads analysis is shown in Figure 4-1.

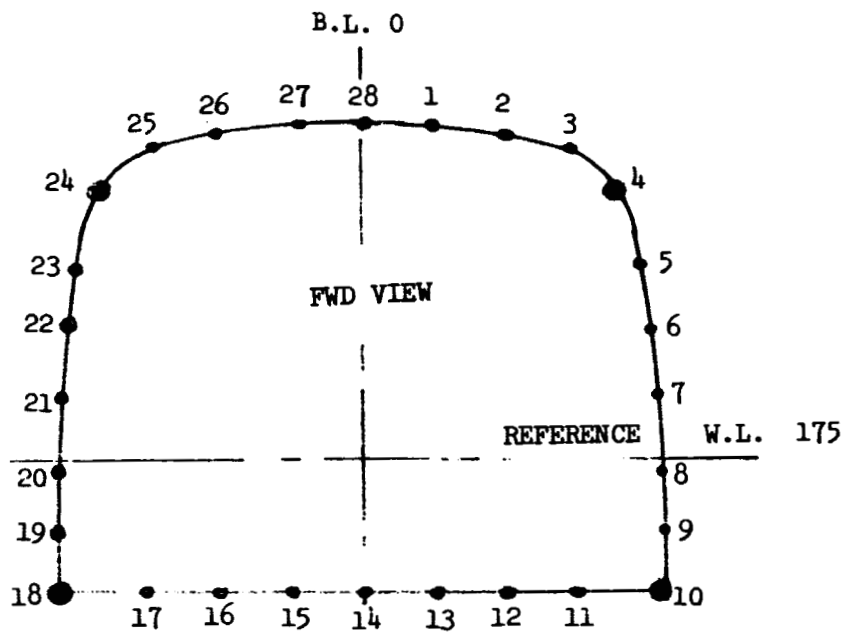


FIGURE 4-1. STRINGER NUMBERING SYSTEM (STA 549.0 - STA 749.0).



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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 589.00

STATION II = 549.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-6.220	20.615	-6.375	23.919
2	1.000	.1460	-.000	-11.750	20.215	-12.750	23.514
3	1.000	.1460	-.000	-16.438	19.215	-18.125	22.526
4	1.000	.7730	-.000	-20.415	15.867	-22.500	18.750
5	1.000	.1730	-.000	-21.990	10.192	-24.250	12.500
6	1.000	.1730	-.000	-22.760	4.972	-25.125	6.800
7	1.000	.1730	-.000	-23.500	-.275	-26.000	1.100
8	1.000	.1990	-.000	-23.500	-5.523	-26.000	-4.600
9	1.000	.1790	-.000	-23.500	-10.764	-26.000	-10.300
10	1.000	.9806	-.000	-23.500	-16.000	-26.000	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-19.125	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.750	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.750	-16.000
17	1.000	.1460	-.000	17.553	-16.000	19.125	-16.000
18	1.000	.8410	-.000	23.500	-16.000	26.000	-16.000
19	1.000	.2990	-.000	23.500	-10.764	26.000	-10.300
20	1.000	.2990	-.000	23.500	-5.230	26.000	-4.600
21	1.000	.2990	-.000	23.500	-.275	26.000	1.100
22	1.000	.2990	-.000	22.760	4.972	25.125	6.800
23	1.000	.2990	-.000	21.990	10.192	24.250	12.500
24	1.000	.8910	-.000	20.415	15.867	22.500	18.750
25	1.000	.1460	-.000	16.438	19.215	18.125	22.526
26	1.000	.1460	-.000	11.750	20.215	12.750	23.514
27	1.000	.2050	-.000	6.220	20.615	6.375	23.919
28	1.000	.1460	-.000	.000	20.715	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1729363.9

MZ = -2537271.9

S = -8234.0

V = -5793.0

D = -717.0

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

MY(CK) = 1729353.9 MZ(CK) = -2557271.9 D(CK) = -717.0

Y-BAR = 1.438 Z-BAR = .271 IY = 1761.01 IZ = 3266.44 IYZ = 105.69 C5 = 752.89 C6 = 936.96

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	2717.	13299.	11.	-224.
2	.1465	1271.	6734.	32.	-105.
3	.1466	615.	4240.	26.	-51.
4	.7761	-1496.	-1943.	-78.	108.
5	.1736	-1463.	-8486.	-83.	84.
6	.1735	-2412.	-13979.	-43.	110.
7	.1734	-3360.	-19473.	-210.	116.
8	.1994	-4845.	-24400.	-303.	112.
9	.1994	-5823.	-29321.	-364.	68.
10	.9025	-33512.	-34242.	-2095.	0.
11	.1721	-5100.	-29677.	-200.	0.
12	.1721	-4396.	-25559.	-67.	0.
13	.1460	-3097.	-21215.	0.	0.
14	.1460	-2397.	-16415.	0.	0.
15	.1460	-1696.	-11616.	0.	0.
16	.1460	-1063.	-7279.	16.	0.
17	.1461	-468.	-3205.	18.	0.
18	.8426	1776.	1282.	-67.	0.
19	.2496	1853.	6208.	-116.	-21.
20	.2496	3406.	11416.	-213.	-54.
21	.2998	4799.	16093.	-300.	-165.
22	.2998	6108.	20484.	-361.	-279.
23	.3000	7404.	24842.	-418.	-427.
24	.9945	25774.	29041.	-1343.	-1858.
25	.1466	4246.	29205.	-179.	-351.
26	.1465	3863.	26559.	-97.	-319.
27	.2057	4643.	22729.	-18.	-384.
28	.1465	2635.	18106.	0.	-216.

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10F5

STATION I = 549.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.375	23.919	-6.220	20.615
2	1.000	.1460	-.000	-12.750	23.514	-11.750	20.215
3	1.000	.1460	-.000	-18.125	22.526	-16.438	19.215
4	1.000	.6690	-.000	-22.500	18.750	-20.415	15.867
5	1.000	.2060	-.000	-24.250	12.500	-21.990	10.192
6	1.000	.1730	-.000	-25.125	6.800	-22.760	4.972
7	1.000	.1730	-.000	-26.000	1.100	-23.500	-.275
8	1.000	.1990	-.000	-26.000	-4.600	-23.500	-5.523
9	1.000	.1990	-.000	-26.000	-10.300	-23.500	-10.764
10	1.000	.9806	-.000	-26.000	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.137	-16.000
17	1.000	.1460	-.000	19.125	-16.000	17.553	-16.000
18	1.000	.8610	-.000	26.000	-16.000	23.500	-16.000
19	1.000	.3190	-.000	26.000	-10.300	23.500	-10.764
20	1.000	.3190	-.000	26.000	-4.600	23.500	-5.230
21	1.000	.3190	-.000	26.000	1.100	23.500	-.275
22	1.000	.3190	-.000	25.125	6.800	22.760	4.972
23	1.000	.3190	-.000	24.250	12.500	21.990	10.192
24	1.000	.8610	-.000	22.500	18.750	20.415	15.867
25	1.000	.1460	-.000	18.125	22.526	16.438	19.215
26	1.000	.1460	-.000	12.750	23.514	11.750	20.215
27	1.000	.2250	-.000	6.375	23.919	6.220	20.615
28	1.000	.1460	-.000	.000	24.000	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0 MY = 2081090.0 MZ = -2886631.9 S = -8234.0 V = -8793.0 D = -717.0

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION COND.CH10F5  
 MX(CK) = 980840. MY(CK) = 2081090. MZ(CK) = -2886032. S(CK) = -8231. V(CK) = -8734. D(CK) = -717.

T(UNBAL.) = 1136174. Q(BAL.) = 278.3 2A(NET) = 3892.8

Y-BAR = 2.060 Z-BAR = 1.544 IY = 2093.19 IZ = 3988.91 IYZ = 135.36 C5 = 691.80 C6 = 950.01

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.137	.2258	155.07	.8680	3462.	15438.	294.5	339.3	390.9	-13.	286.
2	40.148	.1465	138.98	.8771	1544.	10616.	303.6	346.1	394.6	-39.	127.
3	40.172	.1466	165.99	.8995	862.	5932.	316.9	352.2	391.6	-36.	71.
4	40.158	.6716	173.44	.9074	-492.	-738.	342.4	377.3	415.8	26.	-35.
5	40.130	.2067	149.16	.9150	-1629.	-7932.	341.5	373.2	407.9	92.	-94.
6	40.112	.1735	149.16	.9189	-2412.	-13979.	342.9	373.2	406.2	143.	-110.
7	40.102	.1734	148.20	.9207	-3455.	-20023.	341.4	370.8	402.8	216.	-119.
8	40.089	.1994	148.20	.9195	-5053.	-25449.	336.2	365.6	397.6	316.	-117.
9	40.081	.1994	148.20	.9166	-6132.	-30876.	328.8	357.9	389.6	363.	-71.
10	40.073	.9825	110.00	.8650	-35535.	-36308.	265.9	307.3	355.3	2221.	0.
11	40.031	.1721	102.00	.8496	-5407.	-31459.	254.6	299.7	352.7	212.	0.
12	40.005	.1720	102.00	.9038	-4645.	-27007.	265.2	293.5	324.7	71.	0.
13	40.000	.1460	102.00	1.0000	-3298.	-22590.	288.4	288.4	288.4	0.	0.
14	40.000	.1460	102.00	1.0000	-2654.	-18180.	282.0	282.0	282.0	0.	0.
15	40.000	.1460	102.00	.9038	-2010.	-13770.	247.8	274.1	303.3	0.	0.
16	40.005	.1460	102.00	.8496	-1367.	-9362.	226.4	266.5	313.7	-21.	0.
17	40.031	.1461	110.00	.8650	-723.	-4957.	225.0	260.1	300.7	-28.	0.

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
16	40-079	.6627			-167.	-194.				-10.	0.
			143.20	.9186			210.4	229.1	249.4		
<del>19</del>	<del>40-081</del>	<del>.3196</del>			<del>1669.</del>	<del>5243.</del>				104.	19.
20	40-083	.3197	148.20	.9709	3400.	10681.	217.9	224.5	231.2	213.	54.
			148.20	.8693			195.0	224.3	258.0		
21	40-102	.3198			5134.	16133.				321.	176.
			149.16	.9189			213.8	232.7	253.2		
<del>22</del>	<del>40-112</del>	<del>.3199</del>			<del>6673.</del>	<del>20978.</del>				395.	305.
23	40-130	.3200	149.16	.9150	8216.	25839.	225.8	246.8	269.7	464.	474.
			173.44	.9074			242.4	267.1	294.4		
24	40-158	.8644			26276.	30639.				1370.	1894.
			165.99	.8995			251.6	279.7	310.9		
<del>25</del>	<del>40-172</del>	<del>.1466</del>			<del>4539.</del>	<del>31226.</del>				191.	376.
26	40-148	.1465	133.98	.8771	4129.	28388.	251.7	287.0	327.2	103.	341.
			155.07	.8680			254.9	293.7	338.3		
27	40-137	.2258			5453.	24319.				21.	450.
			153.00	.9757			306.3	313.9	321.7		
<del>28</del>	<del>40-135</del>	<del>.1465</del>			<del>2904.</del>	<del>19954.</del>				0.	238.
			153.00	.9757			312.9	320.6	328.6		

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 589.00 STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.375	23.919
2	1.000	.1460	-.000	-11.750	20.215	-12.750	23.514
3	1.000	.1460	-.000	-16.438	19.215	-18.125	22.526
4	1.000	.7730	-.000	-20.415	15.867	-22.500	18.750
5	1.000	.1730	-.000	-21.990	10.192	-24.250	12.500
6	1.000	.1730	-.000	-22.760	4.972	-25.125	6.800
7	1.000	.1730	-.000	-23.500	-.275	-26.000	1.100
8	1.000	.1990	-.000	-23.500	-5.523	-26.000	-4.600
9	1.000	.1990	-.000	-23.500	-10.764	-26.000	-10.300
10	1.000	.9806	-.000	-23.500	-16.000	-26.000	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-19.125	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.750	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.750	-16.000
17	1.000	.1460	-.000	17.553	-16.000	19.125	-16.000
18	1.000	.8410	-.000	23.500	-16.000	26.000	-16.000
19	1.000	.2990	-.000	23.500	-10.764	26.000	-10.300
20	1.000	.2990	-.000	23.500	-5.230	26.000	-4.600
21	1.000	.2990	-.000	23.500	-.275	26.000	1.100
22	1.000	.2990	-.000	22.760	4.972	25.125	6.800
23	1.000	.2990	-.000	21.990	10.192	24.250	12.500
24	1.000	.8910	-.000	20.415	15.867	22.500	18.750
25	1.000	.1460	-.000	16.438	19.215	18.125	22.526
26	1.000	.1460	-.000	11.750	20.215	12.750	23.514
27	1.000	.2050	-.000	6.220	20.615	6.375	23.919
28	1.000	.1460	-.000	.000	20.715	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0 MY = 1430337.0 MZ = -2713166.0 S = -8907.0 V = -6999.0 D = -896.0

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1F5  
 NY(CK) = 1430337.0      MZ(CK) = -2713165.9      D(CK) = -896.0  
 Y-BAR = 1.436      Z-BAR = .271      IY = 1761.01      IZ = 3266.44      IYZ = 105.69      C5 = 806.29      C6 = 763.97

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	1904.	9321.	7.	-157.
2	.1465	559.	4527.	16.	-54.
3	.1466	-7.	-51.	-0.	1.
4	.7761	-4512.	-5861.	-235.	325.
5	.1736	-1982.	-11495.	-112.	114.
6	.1735	-2781.	-16118.	-164.	127.
7	.1734	-3579.	-23739.	-224.	123.
8	.1994	-4915.	-24753.	-307.	113.
9	.1994	-5712.	-28763.	-357.	66.
10	.9825	-32777.	-32775.	-2005.	0.
11	.1721	-4794.	-27896.	-188.	0.
12	.1720	-4040.	-23491.	-62.	0.
13	.1460	-2751.	-18840.	0.	0.
14	.1460	-2000.	-13700.	0.	0.
15	.1460	-1250.	-8560.	0.	0.
16	.1460	-571.	-3915.	9.	0.
17	.1461	66.	454.	-3.	0.
18	.9426	4422.	5269.	-275.	0.
19	.2996	2771.	9286.	-173.	-32.
20	.2996	4138.	13532.	-252.	-64.
21	.2998	5174.	17349.	-323.	-175.
22	.2998	6199.	20789.	-366.	-285.
23	.3000	7212.	24197.	-407.	-416.
24	.9945	24247.	27321.	-1264.	-1748.
25	.1466	3479.	26686.	-164.	-321.
26	.1465	3435.	23616.	-86.	-283.
27	.2057	3968.	19420.	-15.	-328.
28	.1465	2102.	14446.	0.	-173.

PREPARED BY S. CIARDULLO  
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 DATE 8/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000028

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CHIF5

STATION I = 549.00

STATION II = 589.00

ITEM	L	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.375	23.919	-6.220	20.615
2	1.000	.1460	-.000	-12.750	23.514	-11.750	20.215
3	1.000	.1460	-.000	-18.125	22.526	-16.438	19.215
4	1.000	.6690	-.000	-22.500	18.750	-20.415	15.867
5	1.000	.2060	-.000	-24.250	12.500	-21.990	10.192
6	1.000	.1730	-.000	-25.125	6.800	-22.760	4.972
7	1.000	.1730	-.000	-26.000	1.100	-23.500	-.275
8	1.700	.1990	-.000	-26.000	-4.600	-23.500	-5.523
9	1.300	.1990	-.000	-26.000	-10.300	-23.500	-10.764
10	1.000	.9806	-.000	-26.000	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.700	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.137	-16.000
17	1.000	.1460	-.000	19.125	-16.000	17.553	-16.000
18	1.000	.8610	-.000	26.000	-16.000	23.500	-16.000
19	1.000	.3190	-.000	26.000	-10.300	23.500	-10.764
20	1.000	.3190	-.000	26.000	-4.600	23.500	-5.230
21	1.000	.3190	-.000	26.000	1.100	23.500	-.275
22	1.000	.3190	-.000	25.125	6.800	22.760	4.972
23	1.000	.3190	-.000	24.250	12.500	21.990	10.192
24	1.000	.8610	-.000	22.500	18.750	20.415	15.867
25	1.000	.1460	-.000	18.125	22.526	16.438	19.215
26	1.000	.1460	-.000	12.750	23.514	11.750	20.215
27	1.000	.2250	-.000	6.375	23.919	6.220	20.615
28	1.000	.1460	-.000	.000	24.000	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0

MY = 1710284.9

MZ = -3069466.9

S = -8907.0

V = -6999.0

O = -896.0

2  
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PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000039

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5												
MAX(CK) =	967355.	MY(CK) =	1710285.	MZ(CK) =	-3069467.	S(CK) =	-8905.	V(CK) =	-6992.	D(CK) =	-896.		
T(UNBAL.) =	-1127666.	Q(BAL.) =	-276.2	2A(NET) =	3892.8								
Y-BAR =	2.060	Z-BAR =	1.544	IY =	2093.19	IZ =	3988.91	IYZ =	135.36	C5 =	743.85	C6 =	769.63
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	40.137	.2258	155.07	.8680	2446.	10910.	288.0	331.8	382.3	-9.	202.		
2	40.148	.1465	138.98	.8771	847.	5825.	295.2	336.5	383.7	-21.	70.		
3	40.172	.1466	166.99	.8995	150.	1033.	306.2	340.4	378.5	-6.	12.		
4	40.158	.6716	173.44	.9074	-3450.	-5177.	333.0	367.0	404.5	180.	-249.		
5	40.130	.2007	149.16	.9150	-2325.	-11322.	328.0	358.4	391.7	131.	-134.		
6	40.112	.1735	149.16	.9189	-2825.	-16377.	328.3	357.3	388.9	167.	-129.		
7	40.102	.1734	143.20	.9207	-3698.	-21432.	326.2	354.3	384.9	231.	-127.		
8	40.089	.1994	143.20	.9195	-5128.	-25825.	320.9	349.0	379.6	320.	-118.		
9	40.081	.1994	143.20	.9186	-6002.	-30219.	314.0	341.8	372.1	375.	-70.		
10	40.078	.9825	110.00	.8650	-33882.	-34619.	256.6	296.7	343.0	2118.	0.		
11	40.031	.1721	102.00	.8496	-5056.	-29416.	246.5	290.1	341.5	199.	0.		
12	40.005	.1720	102.00	.9038	-4237.	-24634.	257.8	285.2	315.6	65.	0.		
13	40.000	.1460	102.00	1.0000	-2903.	-19887.	281.4	281.4	281.4	0.	0.		
14	40.000	.1460	102.00	1.0000	-2211.	-15145.	276.1	276.1	276.1	0.	0.		
15	40.000	.1460	102.00	.9038	-1519.	-10403.	243.5	269.4	298.1	0.	0.		
16	40.005	.1460	102.00	.8496	-827.	-5662.	223.4	263.0	309.6	-13.	0.		
17	40.031	.1461	110.00	.8650	-134.	-920.	223.2	258.0	298.3	-5.	0.		

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 REPORT NO. SER 64430  
 MODEL CH-548

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	40.078	.8627			3619.	4212.				226.	0.
19	40.081	.3196	143.20	.9186	2743.	8617.	218.6	237.9	259.0	171.	32.
20	40.083	.3197	148.20	.9709	4146.	13023.	230.3	237.2	244.4	259.	65.
21	40.102	.3198	148.20	.8693	5551.	17444.	208.6	239.9	276.0	347.	191.
22	40.112	.3199	149.16	.9189	6747.	21210.	229.1	249.3	271.4	399.	308.
23	40.130	.3200	149.16	.9150	7946.	24990.	240.7	263.1	287.5	449.	458.
24	40.158	.8644	173.44	.9074	24494.	28561.	255.4	281.4	310.1	1277.	1765.
25	40.172	.1466	156.99	.8995	4104.	28230.	258.7	287.6	319.7	173.	340.
26	40.148	.1465	136.98	.8771	3627.	24934.	257.2	293.2	334.3	91.	299.
27	40.137	.2253	155.07	.8680	4588.	20459.	258.7	298.0	343.3	18.	379.
28	40.133	.1465	153.00	.9757	2291.	15746.	305.9	313.5	321.3	0.	188.
			153.00	.9757			310.5	318.2	326.1		

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000041

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 549.00

STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.375	23.919
2	1.000	.1460	-.000	-11.750	20.215	-12.750	23.514
3	1.000	.1460	-.000	-16.438	19.215	-18.125	22.526
4	1.000	.7730	-.000	-20.415	15.867	-22.500	18.750
5	1.000	.1730	-.000	-21.990	10.192	-24.250	12.500
6	1.000	.1730	-.000	-22.760	4.972	-25.125	6.800
7	1.000	.1730	-.000	-23.500	-.275	-26.000	1.100
8	1.000	.1990	-.000	-23.500	-5.523	-26.000	-4.600
9	1.000	.1990	-.000	-23.500	-10.764	-26.000	-10.300
10	1.000	.9806	-.000	-23.500	-16.000	-26.000	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-19.125	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.750	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.750	-16.000
17	1.000	.1460	-.000	17.553	-16.000	19.125	-16.000
18	1.000	.8410	-.000	23.500	-16.000	26.000	-16.000
19	1.000	.2990	-.000	23.500	-10.764	26.000	-10.300
20	1.000	.2990	-.000	23.500	-5.230	26.000	-4.600
21	1.000	.2990	-.000	23.500	-.275	26.000	1.100
22	1.000	.2990	-.000	22.760	4.972	25.125	6.800
23	1.000	.2990	-.000	21.990	10.192	24.250	12.500
24	1.000	.8910	-.000	20.415	15.867	22.500	18.750
25	1.000	.1460	-.000	16.438	19.215	18.125	22.526
26	1.000	.1460	-.000	11.750	20.215	12.750	23.514
27	1.000	.2050	-.000	6.220	20.615	6.375	23.919
28	1.000	.1460	-.000	.000	20.715	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1351283.0

MZ = -2779205.0

S = -9264.0

V = -6458.0

D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2F5  
 MY(CK) = 1351283.0 MZ(CK) = -2779205.0 D(CK) = -428.0  
 Y-BAR = 1.438 Z-BAR = .271 IY = 1761.01 IZ = 3266.44 IYZ = 105.69 C5 = 827.80 C6 = 717.72

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	1689.	8266.	7.	-139.
2	.1465	490.	3370.	12.	-40.
3	.1466	-184.	-1264.	-8.	15.
4	.7761	-5392.	-7003.	-281.	389.
5	.1736	-2139.	-12406.	-121.	123.
6	.1735	-2899.	-16803.	-171.	132.
7	.1734	-3657.	-21195.	-229.	126.
8	.1994	-4957.	-24965.	-310.	114.
9	.1994	-5706.	-28732.	-357.	66.
10	.9525	-31808.	-32500.	-1988.	0.
11	.1721	-4725.	-27493.	-186.	0.
12	.1720	-3951.	-22973.	-61.	0.
13	.1460	-2657.	-18198.	0.	0.
14	.1460	-1986.	-12921.	0.	0.
15	.1460	-1116.	-7643.	0.	0.
16	.1460	-420.	-2874.	6.	0.
17	.1461	235.	1612.	-9.	0.
18	.9426	5505.	5558.	-344.	0.
19	.2996	3083.	10332.	-193.	-36.
20	.2996	4273.	14322.	-267.	-67.
21	.2998	5341.	17910.	-334.	-184.
22	.2998	6288.	21089.	-372.	-287.
23	.3000	7224.	24238.	-408.	-417.
24	.8945	24018.	27063.	-1252.	-1731.
25	.1466	3907.	26185.	-161.	-315.
26	.1465	3341.	22968.	-84.	-276.
27	.2057	3907.	18634.	-15.	-314.
28	.1465	1967.	13521.	0.	-162.

Handwritten scribbles and stamps at the bottom of the page, including a circular stamp with illegible text.

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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000043

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 549.00 STATION II = 589.00

ITEM	E	A	ZAC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.375	23.919	-6.220	20.615
2	1.000	.1460	-.000	-12.750	23.514	-11.750	20.215
3	1.000	.1460	-.000	-18.125	22.526	-16.438	19.215
4	1.000	.6690	-.000	-22.500	18.750	-20.415	15.867
5	1.000	.2060	-.000	-24.250	12.500	-21.990	10.192
6	1.000	.1730	-.000	-25.125	6.800	-22.760	4.972
7	1.000	.1730	-.000	-26.000	1.100	-23.500	-.275
8	1.000	.1990	-.000	-26.000	-4.600	-23.500	-5.523
9	1.000	.1990	-.000	-26.000	-10.300	-23.500	-10.764
10	1.000	.9806	-.000	-26.000	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.137	-16.000
17	1.000	.1460	-.000	19.125	-16.000	17.553	-16.000
18	1.000	.8610	-.000	26.000	-16.000	23.500	-16.000
19	1.000	.3190	-.000	26.000	-10.300	23.500	-10.764
20	1.000	.3190	-.000	26.000	-4.600	23.500	-5.230
21	1.000	.3190	-.000	26.000	1.100	23.500	-.275
22	1.000	.3190	-.000	25.125	6.800	22.760	4.972
23	1.000	.3190	-.000	24.250	12.500	21.990	10.192
24	1.000	.8510	-.000	22.500	18.750	20.415	15.867
25	1.000	.1460	-.000	18.125	22.526	16.438	19.215
26	1.000	.1460	-.000	12.750	23.514	11.750	20.215
27	1.000	.2250	-.000	6.375	23.919	6.220	20.615
28	1.000	.1460	-.000	.000	24.000	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0 MY = 1609583.0 MZ = -3149739.0 S = -9264.0 V = -6458.0 D = -428.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000044

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2F5  
 MX(CK) = 970130. MY(CK) = 1609583. MZ(CK) = -3149739. S(CK) = -9261. V(CK) = -6452. D(CK) = -428.

T(UNBAL.) = 1135890. Q(BAL.) = 278.2 2A(NET) = 3892.8

Y-BAR = 2.060 Z-BAR = 1.544 IY = 2093.19 IZ = 3988.91 IYZ = 135.36 C5 = 765.42 C6 = 719.78

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.137	.2258	155.07	.8680	2166.	9662.	288.6	332.5	383.1	-8.	179.
2	40.148	.1465	138.98	.8771	648.	4458.	295.1	336.5	383.6	-16.	53.
3	40.172	.1466	166.99	.8995	-59.	-404.	305.5	339.6	377.5	2.	-5.
4	40.158	.6716	173.44	.9074	-4343.	-6518.	331.9	365.8	403.1	226.	-313.
5	40.130	.2007	149.16	.9150	-2543.	-12385.	325.5	355.7	388.8	144.	-147.
6	40.112	.1735	149.16	.9189	-2963.	-17173.	325.4	354.1	385.4	175.	-135.
7	40.102	.1734	149.20	.9207	-3790.	-21961.	323.0	350.8	381.0	237.	-130.
8	40.039	.1994	149.20	.9195	-5176.	-26068.	317.5	345.3	375.6	324.	-119.
9	40.081	.1994	149.20	.9186	-5993.	-30177.	310.6	338.1	368.1	375.	-70.
10	40.078	.9825	110.00	.8650	-33561.	-34292.	254.6	294.3	340.2	2098.	0.
11	40.031	.1721	102.00	.8496	-4974.	-28941.	244.8	288.1	339.1	195.	0.
12	40.005	.1720	102.00	.9038	-4131.	-24022.	256.3	283.6	313.8	63.	0.
13	40.000	.1460	102.00	1.0000	-2794.	-19137.	280.2	280.2	280.2	0.	0.
14	40.000	.1460	102.00	1.0000	-2082.	-14257.	275.3	275.3	275.3	0.	0.
15	40.000	.1460	102.00	.9038	-1369.	-9378.	243.1	268.9	297.6	0.	0.
16	40.005	.1460	102.00	.8496	-657.	-4499.	223.5	263.0	309.6	-10.	0.
17	40.031	.1461	110.00	.8650	56.	382.	223.6	258.5	298.9	2.	0.

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 DATE 2/12/71

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 MODEL CH-54B

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TABLE (CONT.)

ITE	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	40.078	.6627	148.20	.9166	4869.	5666.	222.9	242.6	264.1	304.	0.
19	40.081	.3196	148.20	.9709	3115.	9786.	236.3	243.4	250.7	195.	36.
20	40.083	.3197	148.20	.8693	4427.	13907.	215.0	247.3	284.4	277.	70.
21	40.102	.3198	149.16	.9189	5741.	18043.	236.4	257.3	280.0	359.	197.
22	40.112	.3199	149.16	.9150	6841.	21504.	248.0	271.1	296.3	404.	313.
23	40.130	.3200	173.44	.9074	7943.	24980.	262.3	289.1	318.5	449.	458.
24	40.158	.8644	166.99	.6995	24183.	28198.	263.7	293.2	325.9	1261.	1743.
25	40.172	.1466	138.98	.8771	4010.	27582.	261.6	298.2	340.0	169.	332.
26	40.148	.1465	155.07	.8680	3509.	24121.	262.5	302.4	348.4	88.	289.
27	40.137	.2258	153.00	.9757	4370.	19487.	308.8	316.5	324.4	17.	361.
28	40.135	.1465	153.00	.9757	2129.	14632.	312.8	320.6	328.5	0.	175.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000046

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 589.00 STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.375	23.919
2	1.000	.1460	-.000	-11.750	20.215	-12.750	23.514
3	1.000	.1460	-.000	-16.438	19.215	-18.125	22.526
4	1.000	.7730	-.000	-20.415	15.867	-22.500	18.750
5	1.000	.1730	-.000	-21.990	10.192	-24.250	12.500
6	1.000	.1730	-.000	-22.760	4.972	-25.125	6.800
7	1.000	.1730	-.000	-23.500	-.275	-26.000	1.100
8	1.000	.1990	-.000	-23.500	-5.523	-26.000	-4.600
9	1.000	.1990	-.000	-23.500	-10.764	-26.000	-10.300
10	1.000	.9806	-.000	-23.500	-16.000	-26.000	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-19.125	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.750	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.750	-16.000
17	1.000	.1460	-.000	17.553	-16.000	19.125	-16.000
18	1.000	.8410	-.000	23.500	-16.000	26.000	-16.000
19	1.000	.2990	-.000	23.500	-10.764	26.000	-10.300
20	1.000	.2990	-.000	23.500	-5.230	26.000	-4.600
21	1.000	.2990	-.000	23.500	-.275	26.000	1.100
22	1.000	.2990	-.000	22.760	4.972	25.125	6.800
23	1.000	.2990	-.000	21.990	10.192	24.250	12.500
24	1.000	.8910	-.000	20.415	15.867	22.500	18.750
25	1.000	.1460	-.000	16.438	19.215	18.125	22.526
26	1.000	.1460	-.000	11.750	20.215	12.750	23.514
27	1.000	.2050	-.000	6.220	20.615	6.375	23.919
28	1.000	.1460	-.000	.000	20.715	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0 MY = 1538519.9 MZ = -2732588.0 S = -8972.0 V = -7625.0 D = -822.0



PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

000647

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION

CH7F5

MY(CK) = 1538519.9

MZ(CK) = -2732588.0

D(CK) = -822.0

Y-BAR = -1.438 Z-BAR = .271 IY = 1761.01 IZ = 3206.44 IYZ = 105.69 CS = 810.23 C6 = 825.16

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	2156.	10553.	8.	-178.
2	.1465	931.	5713.	21.	-69.
3	.1466	154.	1057.	6.	-13.
4	.7761	-3832.	-4976.	-200.	276.
5	.1736	-1891.	-10967.	-107.	109.
6	.1735	-2746.	-15916.	-162.	125.
7	.1734	-3600.	-20862.	-225.	124.
8	.1994	-5003.	-25198.	-313.	115.
9	.1994	-5865.	-29530.	-367.	68.
10	.9825	-33142.	-33864.	-2071.	0.
11	.1721	-4977.	-28958.	-196.	0.
12	.1720	-4219.	-24531.	-65.	0.
13	.1460	-2899.	-19857.	0.	0.
14	.1460	-2145.	-14692.	0.	0.
15	.1460	-1391.	-9527.	0.	0.
16	.1460	-709.	-4859.	11.	0.
17	.1461	-69.	-471.	3.	0.
18	.8426	3654.	4365.	-229.	0.
19	.2996	2597.	8704.	-162.	-30.
20	.2996	3966.	13290.	-248.	-62.
21	.2998	5193.	17412.	-325.	-179.
22	.2998	6313.	21172.	-373.	-288.
23	.3000	7421.	24899.	-419.	-428.
24	.8945	25176.	28367.	-1312.	-1815.
25	.1466	4059.	27924.	-171.	-336.
26	.1465	3621.	24895.	-91.	-299.
27	.2057	4229.	20702.	-16.	-349.
28	.1465	2286.	15709.	0.	-188.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000648

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH7F5

STATION I = 549.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.375	23.919	-6.220	20.615
2	1.000	.1460	-.000	-12.750	23.514	-11.750	20.215
3	1.000	.1460	-.000	-18.125	22.526	-16.438	19.215
4	1.000	.6690	-.000	-22.500	18.750	-20.415	15.867
5	1.000	.2060	-.000	-24.250	12.500	-21.990	10.192
6	1.000	.1730	-.000	-25.125	6.800	-22.760	4.972
7	1.000	.1730	-.000	-26.000	1.100	-23.500	-.275
8	1.000	.1990	-.000	-26.000	-4.600	-23.500	-5.523
9	1.000	.1990	-.000	-26.000	-10.300	-23.500	-10.764
10	1.000	.9806	-.000	-26.000	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.137	-16.000
17	1.000	.1460	-.000	19.125	-16.000	17.553	-16.000
18	1.000	.8610	-.000	26.000	-16.000	23.500	-16.000
19	1.000	.3190	-.000	26.000	-10.300	23.500	-10.764
20	1.000	.3190	-.000	26.000	-4.600	23.500	-5.230
21	1.000	.3190	-.000	26.000	1.100	23.500	-.275
22	1.000	.3190	-.000	25.125	6.800	22.760	4.972
23	1.000	.3190	-.000	24.250	12.500	21.990	10.192
24	1.000	.8610	-.000	22.500	18.750	20.415	15.867
25	1.000	.1460	-.000	18.125	22.526	16.438	19.215
26	1.000	.1460	-.000	12.750	23.514	11.750	20.215
27	1.000	.2250	-.000	6.375	23.919	6.220	20.615
28	1.000	.1460	-.000	.000	24.000	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1843476.0

MZ = -3091458.0

S = -8972.0

V = -7625.0

D = -822.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000049

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH7F5										
MX(CK) = 976986. MY(CK) = 1843476. MZ(CK) = -3091458. S(CK) = -8969. V(CK) = -7616. D(CK) = -822. T(UNBAL.) = 1140976. Q(BAL.) = 279.5 2A(NET) = 3892.8 Y-BAR = 2.060 Z-BAR = 1.544 IY = 2093.19 IZ = 3988.91 IYZ = 135.36 C5 = 747.17 C6 = 832.99											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.137	.2250	155.07	.8680	2762.	12319.	292.6	337.1	388.4	-11.	228.
2	40.148	.1465	138.98	.8771	1045.	7187.	300.4	342.5	390.5	-26.	86.
3	40.172	.1466	156.99	.8995	337.	2315.	312.2	347.1	385.8	-14.	28.
4	40.158	.6716	173.44	.9074	-2766.	-4152.	339.1	373.7	411.8	144.	-199.
5	40.130	.2067	149.16	.9150	-2197.	-10702.	334.9	366.0	400.1	124.	-127.
6	40.112	.1735	149.16	.9189	-2782.	-16124.	335.5	365.1	397.4	164.	-127.
7	40.102	.1734	149.20	.9207	-3718.	-21546.	333.5	362.2	393.4	232.	-128.
8	40.089	.1994	148.20	.9195	-5222.	-26301.	328.0	356.7	388.0	326.	-121.
9	40.081	.1994	148.20	.9186	-6168.	-31057.	320.7	349.1	380.1	385.	-72.
10	40.078	.9825	113.00	.8650	-35057.	-35820.	260.6	301.3	348.3	2191.	0.
11	40.031	.1721	102.00	.8496	-5258.	-30591.	250.0	294.3	346.4	207.	0.
12	40.005	.1720	102.00	.9039	-4435.	-25787.	261.1	288.9	319.6	68.	0.
13	40.000	.1460	102.00	1.0000	-3060.	-21017.	284.6	284.6	284.6	0.	0.
14	40.000	.1460	102.00	1.0000	-2373.	-16254.	278.9	278.9	278.9	0.	0.
15	40.000	.1460	102.00	.9038	-1678.	-11491.	245.6	271.8	300.7	0.	0.
16	40.005	.1460	102.00	.8496	-982.	-6729.	225.1	264.9	311.9	-15.	0.
17	40.031	.1461	110.00	.8650	-287.	-1968.	224.5	259.5	300.0	-11.	0.

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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	G	Q/K	Q/KK	PY	PZ
18	40.079	.8627			2737.	3185.				171.	0.
			148.20	.9186			217.1	236.3	257.2		
19	40.081	.3196			2532.	7952.				158.	29.
			148.20	.9709			227.8	234.7	241.7		
20	40.083	.3197			4050.	12721.				253.	64.
			148.20	.8693			205.8	236.8	272.4		
21	40.102	.3198			5570.	17505.				348.	191.
			149.16	.9189			226.2	246.2	267.9		
22	40.112	.3199			6881.	21631.				407.	314.
			149.16	.9150			238.2	260.4	284.6		
23	40.130	.3200			8195.	25772.				463.	473.
			173.44	.9074			253.8	279.7	308.3		
24	40.158	.8644			25503.	29737.				1329.	1838.
			166.99	.8995			259.0	287.9	320.1		
25	40.172	.1466			4308.	29634.				182.	357.
			138.98	.8771			258.0	294.1	335.3		
26	40.148	.1465			3838.	26382.				96.	316.
			155.07	.8680			260.0	299.5	345.1		
27	40.137	.2258			4913.	21910.				19.	406.
			153.00	.9757			309.0	316.6	324.5		
28	40.135	.1465			2500.	17181.				0.	205.
			153.00	.9757			314.2	322.0	330.0		

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000051

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1613

STATION I = 589.00 STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.375	23.919
2	1.000	.1460	-.000	-11.750	20.215	-12.750	23.514
3	1.000	.1460	-.000	-16.438	19.215	-18.125	22.526
4	1.000	.7730	-.000	-20.415	15.867	-22.500	18.750
5	1.000	.1730	-.000	-21.990	10.192	-24.250	12.500
6	1.000	.1730	-.000	-22.760	4.972	-25.125	6.800
7	1.000	.1730	-.000	-23.500	-.275	-26.000	1.100
8	1.000	.1990	-.000	-23.500	-5.523	-26.000	-4.600
9	1.000	.1990	-.000	-23.500	-10.764	-26.000	-10.300
10	1.000	.9806	-.000	-23.500	-16.000	-26.000	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-19.125	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.750	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.750	-16.000
17	1.000	.1460	-.000	17.553	-16.000	19.125	-16.000
18	1.000	.8410	-.000	23.500	-16.000	26.000	-16.000
19	1.000	.2990	-.000	23.500	-10.764	26.000	-10.300
20	1.000	.2990	-.000	23.500	-5.230	26.000	-4.600
21	1.000	.2990	-.000	23.500	-.275	26.000	1.100
22	1.000	.2990	-.000	22.760	4.972	25.125	6.800
23	1.000	.2990	-.000	21.990	10.192	24.250	12.500
24	1.000	.8910	-.000	20.415	15.867	22.500	18.750
25	1.000	.1460	-.000	16.438	19.215	18.125	22.526
26	1.000	.1460	-.000	11.750	20.215	12.750	23.514
27	1.000	.2050	-.000	6.220	20.615	6.375	23.919
28	1.000	.1460	-.000	.000	20.715	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1943360.9 MZ = .0 S = .0 V = -9742.0 D = 966.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1613

MY(CK) = 1943360.9 MZ(CK) = -.0 D(CK) = 966.0

Y-BAR = 1.438 Z-BAR = .271 IY = 1761.01 IZ = 3266.44 IYZ = 105.69 CS = -36.20 C6 = 1105.58

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	4708.	23045.	18.	-389.
2	.1465	3319.	22814.	83.	-274.
3	.1466	3183.	21898.	134.	-264.
4	.7761	14087.	18296.	734.	-1015.
5	.1736	2072.	12013.	117.	-120.
6	.1735	1074.	6227.	64.	-49.
7	.1734	73.	420.	5.	-2.
8	.1994	-1074.	-5408.	-67.	25.
9	.1994	-2229.	-11223.	-139.	26.
10	.9825	-16570.	-17033.	-1042.	0.
11	.1721	-2958.	-17209.	-116.	0.
12	.1720	-2989.	-17382.	-46.	0.
13	.1460	-2568.	-17587.	0.	0.
14	.1460	-2601.	-17818.	0.	0.
15	.1460	-2535.	-18048.	0.	0.
16	.1460	-2566.	-18261.	41.	0.
17	.1461	-2596.	-18481.	106.	0.
18	.8426	-15731.	-18741.	983.	0.
19	.2996	-3859.	-12931.	241.	45.
20	.2996	-2026.	-6789.	127.	32.
21	.2998	-385.	-1290.	24.	13.
22	.2998	1363.	4570.	-81.	-62.
23	.3000	3103.	10411.	-175.	-179.
24	.8945	14916.	16807.	-777.	-1075.
25	.1466	3009.	20697.	-127.	-249.
26	.1465	3194.	21957.	-80.	-263.
27	.2057	4615.	22591.	-18.	-381.
28	.1465	3336.	22927.	0.	-274.

*[Handwritten notes and stamps at the bottom of the page, including dates like 2/12/71 and various initials/signatures.]*

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 DATE 2/12/71

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1013

STATION I = 549.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.375	23.919	-6.220	20.615
2	1.000	.1460	-.000	-12.750	23.514	-11.750	20.215
3	1.000	.1460	-.000	-18.125	22.526	-16.438	19.215
4	1.000	.6690	-.000	-22.500	18.750	-20.415	15.867
5	1.000	.2060	-.000	-24.250	12.500	-21.990	10.192
6	1.000	.1730	-.000	-25.125	6.800	-22.760	4.972
7	1.000	.1730	-.000	-26.000	1.100	-23.500	-.275
8	1.000	.1990	-.000	-26.000	-4.600	-23.500	-5.523
9	1.000	.1990	-.000	-26.000	-10.300	-23.500	-10.764
10	1.000	.9806	-.000	-26.000	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.137	-16.000
17	1.000	.1460	-.000	19.125	-16.000	17.553	-16.000
18	1.000	.8610	-.000	26.000	-16.000	23.500	-16.000
19	1.000	.3190	-.000	26.000	-10.300	23.500	-10.764
20	1.000	.3190	-.000	26.000	-4.600	23.500	-5.230
21	1.000	.3190	-.000	26.000	1.100	23.500	-.275
22	1.000	.3190	-.000	25.125	6.800	22.760	4.972
23	1.000	.3190	-.000	24.250	12.500	21.990	10.192
24	1.000	.8610	-.000	22.500	18.750	20.415	15.867
25	1.000	.1460	-.000	18.125	22.526	16.438	19.215
26	1.000	.1460	-.000	12.750	23.514	11.750	20.215
27	1.000	.2250	-.000	6.375	23.919	6.220	20.615
28	1.000	.1460	-.000	.000	24.000	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2293014.0 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000054

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2613

MX(CK) = -0. MY(CK) = 2293014. MZ(CK) = -0. S(CK) = 5. V(CK) = -8731. D(CK) = 966.

T(UBAL.) = 40708. Q(BAL.) = 10.0 2A(NET) = 3892.8

Y-BAR = 2.060 Z-BAR = 1.544 IY = 2093.19 IZ = 3958.91 IYZ = 135.36 C5 = -37.73 C6 = 1097.19

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.137	.2258	155.07	.8680	5641.	25156.	30.2	34.8	40.1	-22.	466.
2	40.148	.1465	138.98	.8771	3632.	24966.	37.4	42.6	48.6	-91.	300.
3	40.172	.1466	166.99	.8995	3504.	24107.	45.6	50.7	56.3	-148.	290.
4	40.158	.6716	173.44	.9074	13381.	20080.	29.9	33.0	36.4	-697.	964.
5	40.130	.2067	149.16	.9150	2714.	13217.	44.9	49.1	53.6	-153.	157.
6	40.112	.1735	149.16	.9189	1199.	6949.	47.9	52.2	56.8	-71.	55.
7	40.102	.1734	148.20	.9207	120.	693.	49.1	53.3	57.9	-7.	4.
8	40.089	.1994	148.20	.9195	-1110.	-5590.	48.2	52.4	57.0	69.	-26.
9	40.081	.1994	148.20	.9186	-2357.	-11867.	45.2	49.2	53.6	147.	-27.
10	40.078	.9825	110.00	.8650	-17757.	-18143.	19.1	22.1	25.5	1110.	0.
11	40.031	.1721	102.00	.8496	-3156.	-18361.	14.6	17.1	20.2	124.	0.
12	40.005	.1720	102.00	.9038	-3195.	-18577.	10.8	12.0	13.3	49.	0.
13	40.000	.1460	102.00	1.0000	-2747.	-18813.	7.5	7.5	7.5	0.	0.
14	40.000	.1460	102.00	1.0000	-2782.	-19054.	3.0	3.0	3.0	0.	0.
15	40.000	.1460	102.00	.9038	-2817.	-19294.	-1.4	-1.5	-1.7	0.	0.
16	40.005	.1460	102.00	.8496	-2852.	-19539.	-5.3	-6.2	-7.3	-44.	0.
17	40.031	.1461	110.00	.8650	-2889.	-19806.	-9.5	-11.0	-12.8	-114.	0.



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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	40-078	.8627	143.20	.9186	-17284.	-20113.	-45.8	-49.9	-54.3	-1080.	0.
19	40-081	.3196	148.20	.9709	-4405.	-13837.	-61.7	-63.5	-65.4	-275.	-51.
20	40-083	.3197	143.20	.8693	-2406.	-7558.	-63.5	-73.0	-84.0	-150.	-38.
21	40-102	.3198	149.15	.9189	-407.	-1279.	-67.6	-73.6	-80.1	-25.	-14.
22	40-112	.3199	149.16	.9150	1604.	5042.	-61.8	-67.6	-73.8	95.	73.
23	40-130	.3200	173.44	.9074	3617.	11375.	-49.6	-54.7	-60.3	204.	209.
24	40-158	.8644	166.99	.8995	15753.	18369.	-30.4	-33.8	-37.5	821.	1135.
25	40-172	.1466	133.98	.8771	3304.	22727.	-23.2	-26.4	-30.1	139.	273.
26	40-148	.1465	155.07	.8680	3491.	23997.	-16.5	-19.0	-21.9	87.	288.
27	40-137	.2258	153.00	.9757	5532.	24672.	3.8	3.9	4.0	21.	457.
28	40-135	.1465	153.00	.9757	3638.	25001.	11.2	11.5	11.8	0.	299.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MCJEL CH-548

000056

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10FS

STATION I = 649.00 STATION II = 599.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.1460	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.1460	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.025	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.1460	-.000	13.908	14.540	16.438	19.215
26	1.000	.1460	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.1460	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 981840.0 NY = 1232217.0 MZ = -2052077.0 S = -8421.0 V = -8289.0 D = -702.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION COND.CH10F5

MY(CK) = 1232217.0 MZ(CK) = -2052077.0 D(CK) = -702.0

Y-BAR = .982 Z-BAR = -.741 IY = 1360.35 IZ = 2217.85 IYZ = 68.39 C5 = 899.04 C6 = 860.23

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	1595.	7807.	6.	-132.
2	.1465	524.	3605.	13.	-43.
3	.1466	-49.	-336.	-2.	4.
4	.7743	-2795.	-3621.	-146.	75.
5	.1736	-1955.	-11339.	-110.	113.
6	.1735	-2754.	-15969.	-163.	135.
7	.1734	-3488.	-20213.	-218.	120.
8	.1994	-4704.	-23685.	-294.	68.
9	.1994	-5572.	-28057.	-348.	64.
10	.9825	-31300.	-31982.	-1956.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-4161.	-24196.	-63.	0.
13	.1460	-2896.	-19833.	0.	0.
14	.1460	-2059.	-14101.	0.	0.
15	.1460	-1222.	-8370.	0.	0.
16	.1460	-586.	-4013.	9.	0.
17	.0000	0.	0.	0.	0.
18	.8226	3006.	3669.	-188.	0.
19	.2796	2116.	7598.	-132.	-24.
20	.2796	3334.	11975.	-208.	-64.
21	.2797	4308.	15480.	-269.	-149.
22	.2798	5271.	18944.	-311.	-243.
23	.2800	6123.	22027.	-346.	-390.
24	.8725	23973.	27570.	-1249.	-640.
25	.1466	3617.	24868.	-152.	-282.
26	.1465	3225.	22172.	-81.	-266.
27	.2057	3810.	18648.	-15.	-314.
28	.1465	1937.	13314.	0.	-160.

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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
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00058

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10F5

STATION I = 569.00 STATION II = 649.00

ITEM	E	A	ZAC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-5.988	15.665
2	1.000	.1460	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.1460	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.1460	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.025
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.1460	-.000	16.438	19.215	13.908	14.540
26	1.000	.1460	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	6.220	20.615	5.988	15.665
28	1.000	.1460	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 981640.0 MY = 1729527.0 MZ = -2557297.9 S = -8421.0 V = -8289.0 D = -702.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION COND.CH10F5

MX(CK) = 981840. MY(CK) = 1729527. MZ(CK) = -2557298. S(CK) = -8408. V(CK) = -8431. D(CK) = -702.

T(UWBAL) = 1107578. Q(GAL) = 302.2 2A(NET) = 3230.9

Y-BAR = 1.438 Z-BAR = .263 IY = 1760.07 IZ = 3264.92 IYZ = 105.70 C5 = 753.22 C6 = 937.52

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	116.49	.7721	2720.	13316.	316.6	410.1	531.2	-11.	224.
2	60.223	.1465	106.52	.7780	1273.	8750.	328.8	422.6	543.2	-32.	105.
3	60.235	.1466	131.45	.6523	618.	4250.	282.9	433.7	664.9	-26.	48.
4	60.103	.7743	140.85	1.2978	-1485.	-1925.	591.2	455.5	351.0	77.	-40.
5	60.195	.1736	122.64	.9003	-1462.	-8480.	417.5	463.7	515.1	83.	-84.
6	60.177	.1735	123.10	.8307	-2412.	-13980.	390.0	469.5	565.1	142.	-118.
7	60.153	.1734	123.33	.7702	-3360.	-19474.	363.2	471.6	612.3	210.	-116.
8	60.123	.1994	123.16	.9562	-4845.	-24395.	453.4	469.2	485.6	303.	-70.
9	60.121	.1994	123.05	.8588	-5824.	-29327.	404.0	465.0	535.3	364.	-67.
10	60.117	.9825	95.15	.7663	-33521.	-34251.	328.0	428.0	558.6	2095.	0.
11	60.046	.1721	86.66	.7332	-5102.	-29684.	251.5	343.0	467.8	201.	0.
12	60.007	.1720	92.19	.8412	-4397.	-25565.	285.2	339.1	403.1	67.	0.
13	60.000	.1460	102.00	1.0000	-3098.	-21219.	335.7	335.7	335.7	0.	0.
14	60.000	.1460	102.00	1.0000	-2397.	-16417.	330.1	330.1	330.1	0.	0.
15	60.000	.1460	92.19	.8412	-1696.	-11615.	271.0	322.2	383.0	0.	0.
16	60.007	.1460	86.66	.7332	-1062.	-7277.	230.4	314.2	428.6	-16.	0.
17	60.046	.1461	95.15	.7663	-467.	-3200.	234.8	306.4	399.9	-18.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60.117	.2420	123.05	.8688	1082.	1269.	238.4	274.4	315.8	68.	0.
19	60.121	.2996	130.05	.9151	1855.	6218.	247.1	270.0	295.1	116.	21.
20	60.128	.2996	116.44	.6157	3410.	11430.	221.3	271.3	332.6	213.	66.
21	60.153	.2998	123.10	.8645	4804.	16108.	241.7	279.6	323.4	300.	166.
22	60.168	.2998	122.64	.7990	6113.	20502.	234.6	293.6	367.5	361.	282.
23	60.217	.3001	140.85	1.3581	7413.	24881.	427.9	315.1	232.0	419.	472.
24	60.103	.6925	131.45	.6523	25737.	28935.	224.7	344.5	528.1	1341.	687.
25	60.235	.1466	106.52	.7780	4248.	29207.	276.2	355.0	456.3	179.	331.
26	60.223	.1455	116.49	.7721	3867.	26582.	282.4	365.7	473.7	97.	319.
27	60.204	.2057	128.85	.9627	4648.	22750.	365.5	379.7	394.4	18.	383.
28	60.204	.1465	124.85	.9627	2638.	18127.	376.8	391.4	406.5	0.	218.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE -- INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CHIFS

STATION I = 649.00 STATION II = 589.00

ITEM	E	A	ZAC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.1460	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.1460	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.298	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-17.593	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.1460	-.000	13.908	14.540	16.438	19.215
26	1.000	.1460	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.1460	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968148.0 MY = 1028479.0 MZ = -2171585.0 S = -9027.0 V = -6699.0 D = -887.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000062

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH1F5

MY(CK) = 1020476.0

MZ(CK) = -2171585.0

D(CK) = -887.0

Y-BAR = .982 Z-BAR = -.741 IY = 1360.35 IZ = 2217.85 IYZ = 68.39 C5 = 957.72 C6 = 707.41

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	990.	4847.	4.	-82.
2	.1465	66.	453.	2.	-5.
3	.1466	-523.	-3595.	-22.	41.
4	.7743	-5419.	-7022.	-282.	145.
5	.1736	-2357.	-13670.	-133.	136.
6	.1735	-3038.	-17611.	-179.	149.
7	.1734	-3661.	-21214.	-229.	126.
8	.1994	-4779.	-24064.	-299.	69.
9	.1994	-5493.	-27659.	-343.	63.
10	.9825	-30229.	-30886.	-1889.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-3887.	-22604.	-59.	0.
13	.1460	-2622.	-17957.	0.	0.
14	.1460	-1730.	-11851.	0.	0.
15	.1460	-939.	-5746.	0.	0.
16	.1460	-161.	-1104.	2.	0.
17	.0000	0.	0.	0.	0.
18	.8226	5311.	7091.	-363.	0.
19	.2796	2874.	10323.	-180.	-33.
20	.2796	3376.	13923.	-242.	-75.
21	.2797	4678.	16809.	-292.	-161.
22	.2798	5437.	19544.	-321.	-251.
23	.2800	6102.	21948.	-345.	-388.
24	.8725	22786.	26205.	-1188.	-608.
25	.1466	3382.	23254.	-143.	-264.
26	.1465	2943.	20232.	-74.	-243.
27	.2057	3350.	16395.	-13.	-276.
28	.1465	1556.	10692.	0.	-128.



PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CHIPS

STATION I = 559.00

STATION II = 649.00

ITEM	E	A	ZAC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-6.220	20.615	-5.988	15.665
2	1.000	.1460	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.1460	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.1460	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.025
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.1460	-.000	16.438	19.215	13.908	14.540
26	1.000	.1460	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	6.220	20.615	5.988	15.665
28	1.000	.1460	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968148.0

MY = 1430430.0

MZ = -2713189.0

S = -9027.0

V = -6699.0

D = -887.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.1)

000064

CONDITION CH1F5

MX(CK) = 958148. MY(CK) = 1430430. MZ(CK) = -2713168. S(CK) = -9014. V(CK) = -6811. D(CK) = -887.

T(JWBAL.) = 1099182. Q(BAL.) = 299.9 2A(NET) = 3230.9

Y-BAR = 1.438 Z-BAR = .263 IY = 1760.07 IZ = 3264.92 IYZ = 105.70 C5 = 806.65 C6 = 764.40

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057			1907.	9333.				-7.	157.
2	60.223	.1465	116.49	.7721	660.	4537.	311.7	403.7	522.8	-16.	54.
3	60.235	.1466	106.52	.7780	-6.	-43.	321.7	413.6	531.6	0.	-0.
4	60.103	.7743	131.45	.6523	-4499.	-5830.	275.4	422.2	647.2	234.	-120.
5	60.195	.1736	140.85	1.2978	-1982.	-11492.	567.8	437.5	337.1	112.	-114.
6	60.177	.1735	122.64	.9003	-2781.	-16124.	399.5	443.8	492.9	164.	-137.
7	60.153	.1734	123.10	.8307	-3579.	-20742.	372.2	448.0	539.3	224.	-123.
8	60.123	.1994	123.33	.7702	-4915.	-24750.	346.1	449.4	583.5	307.	-71.
9	60.121	.1994	123.16	.9662	-5714.	-28771.	432.0	447.1	462.8	357.	-65.
10	60.117	.9825	123.05	.8688	-32086.	-32785.	385.3	443.5	510.4	2005.	0.
11	60.046	.1721	95.15	.7663	-4796.	-27903.	316.1	412.5	538.3	189.	0.
12	60.007	.1720	80.66	.7332	-4041.	-23497.	243.8	332.6	453.6	62.	0.
13	60.000	.1460	92.19	.8412	-2751.	-18843.	277.6	330.0	392.3	0.	0.
14	60.000	.1460	102.00	1.0000	-2000.	-13701.	327.8	327.8	327.8	0.	0.
15	60.000	.1460	102.00	1.0000	-1250.	-8558.	323.3	323.3	323.3	0.	0.
16	60.007	.1460	92.19	.8412	-571.	-3911.	266.2	316.5	376.2	-9.	0.
17	60.046	.1461	80.66	.7332	67.	459.	227.0	309.7	422.4	3.	0.
			95.15	.7663			238.1	310.8	405.6		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60.117	.8426	123.05	.8688	4428.	5276.	250.0	287.7	331.2	277.	0.
19	60.121	.2996	130.05	.9151	2774.	9295.	261.8	286.1	312.6	173.	32.
20	60.128	.2996	116.44	.8157	4042.	13546.	235.6	288.8	354.1	253.	78.
21	60.153	.2998	123.10	.8645	5179.	17364.	256.9	297.2	343.8	324.	179.
22	60.168	.2998	122.64	.7990	6203.	20806.	247.6	309.9	387.9	366.	286.
23	60.217	.3001	140.85	1.3581	7220.	24233.	446.2	328.6	241.9	408.	459.
24	60.103	.8925	131.45	.6523	24211.	27219.	229.8	352.3	540.1	1262.	646.
25	60.235	.1466	106.52	.7780	3881.	26685.	280.6	360.6	463.6	164.	302.
26	60.223	.1465	116.49	.7721	3438.	23634.	284.8	368.9	477.8	86.	284.
27	60.204	.2057	125.85	.9627	3971.	19437.	365.1	379.2	393.9	15.	328.
28	60.204	.1465	125.85	.9627	2104.	14462.	373.9	388.4	403.4	0.	174.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000066

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH2F5

STATION I = 649.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.1460	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.1460	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.1460	-.000	13.908	14.540	16.438	19.215
26	1.000	.1460	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.1460	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970803.0      MY = 980186.0      MZ = -2217320.9      S = -9365.0      V = -6185.0      D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH2F5

MY(CK) = 980186.0 MZ(CK) = -2217320.9 D(CK) = -428.0

Y-BAR = .982 Z-BAR = -.741 IY = 1360.35 IZ = 2217.85 IYZ = 68.39 C5 = 979.26 C6 = 671.08

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	849.	4156.	3.	-70.
2	.1465	-46.	-317.	-1.	4.
3	.1466	-642.	-4417.	-27.	50.
4	.7743	-6100.	-7904.	-318.	163.
5	.1736	-2467.	-14308.	-139.	142.
6	.1735	-3120.	-18089.	-184.	153.
7	.1734	-3718.	-21544.	-232.	128.
8	.1994	-4915.	-24247.	-301.	69.
9	.1994	-5493.	-27657.	-343.	63.
10	.9825	-30063.	-30718.	-1879.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-3827.	-22252.	-58.	0.
13	.1460	-2555.	-17501.	0.	0.
14	.1460	-1644.	-11258.	0.	0.
15	.1460	-732.	-5015.	0.	0.
16	.1460	-39.	-269.	1.	0.
17	.0000	0.	0.	0.	0.
18	.8226	6649.	9114.	-416.	0.
19	.2796	3113.	11180.	-195.	-36.
20	.2796	4063.	14596.	-254.	-78.
21	.2797	4824.	17334.	-301.	-166.
22	.2798	5534.	19891.	-327.	-255.
23	.2800	6152.	22131.	-348.	-391.
24	.8725	22569.	26071.	-1181.	-605.
25	.1466	3350.	23036.	-141.	-261.
26	.1465	2396.	19907.	-72.	-239.
27	.2057	3261.	15964.	-13.	-269.
28	.1465	1474.	10127.	0.	-122.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

00068

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 589.00

STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-5.988	15.665
2	1.000	.1460	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.1460	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.205
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.1460	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.205
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.1460	-.000	16.438	19.215	13.908	14.540
26	1.000	.1460	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	6.220	20.615	5.988	15.665
28	1.000	.1460	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970803.0

MY = 1351283.0

MZ = -2779226.0

S = -9365.0

V = -6185.0

D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2F5											
MX(CK) = 970805. MY(CK) = 1351283. MZ(CK) = -2779226. S(CK) = -9352. V(CK) = -6286. D(CK) = -428.											
<del>T(BAL.) = 1107463. Q(BAL.) = 302.1 2A(NET) = 3230.9</del>											
Y-BAR = 1.438 Z-BAR = .263 IY = 1760.07 IZ = 3264.92 IYZ = 105.70 C5 = 828.18 C6 = 718.07											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	116.49	.7721	1691.	8275.	313.0	405.3	525.0	-7.	139.
2	60.223	.1465	106.52	.7780	491.	3377.	322.3	414.3	532.5	-12.	41.
3	60.235	.1466	131.45	.6523	-183.	-1258.	275.2	421.9	646.8	8.	-14.
4	60.103	.7743	140.85	1.2978	-5379.	-6970.	563.2	434.0	334.4	280.	-144.
5	60.195	.1736	122.64	.9003	-2139.	-12406.	395.6	439.4	488.1	121.	-123.
6	60.177	.1735	123.10	.8307	-2900.	-16810.	368.1	443.1	533.4	171.	-142.
7	60.153	.1734	123.33	.7702	-3658.	-21200.	342.0	444.1	576.6	229.	-126.
8	60.123	.1994	123.16	.9662	-4957.	-24963.	426.8	441.7	457.2	310.	-71.
9	60.121	.1994	123.05	.8688	-5708.	-28740.	380.7	438.1	504.3	357.	-65.
10	60.117	.9825	95.15	.7663	-31818.	-32511.	313.3	408.9	533.6	1989.	0.
11	60.046	.1721	86.66	.7332	-4727.	-27501.	242.0	330.1	450.2	186.	0.
12	60.007	.1720	92.19	.8412	-3952.	-22979.	275.9	328.0	390.0	60.	0.
13	60.000	.1460	102.00	1.0000	-2657.	-18202.	326.3	326.3	326.3	0.	0.
14	60.000	.1460	102.00	1.0000	-1887.	-12922.	322.3	322.3	322.3	0.	0.
15	60.000	.1460	92.19	.8412	-1116.	-7642.	265.7	315.9	375.5	0.	0.
16	60.007	.1460	96.66	.7332	-419.	-2871.	227.0	309.6	422.2	-6.	0.
17	60.046	.1461	95.15	.7663	236.	1818.	377.2	318.0	199.1	9.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60.117	.8420			5511.	6566.				344.	0.
			123.05	.8689			255.9	294.5	339.0		
19	60.121	.2996			3086.	10342.				193.	35.
			130.05	.9151			269.1	294.1	321.4		
20	60.128	.2996			4277.	14335.				267.	82.
			110.44	.8157			242.8	297.6	364.9		
21	60.153	.2998			5345.	17923.				334.	184.
			123.10	.8645			264.8	306.3	354.4		
22	60.168	.2998			6293.	21105.				371.	290.
			122.64	.7990			254.9	319.0	399.2		
23	60.217	.3001			7231.	24272.				409.	460.
			140.85	1.3581			457.6	337.0	248.1		
24	60.103	.8925			23980.	26960.				1250.	640.
			131.45	.6523			234.1	358.8	550.1		
25	60.235	.1466			3308.	26182.				161.	297.
			106.52	.7780			285.1	366.5	471.0		
26	60.223	.1465			3343.	22984.				84.	276.
			110.49	.7721			288.7	373.9	484.3		
27	60.204	.2057			3810.	18648.				15.	314.
			120.85	.9627			368.8	383.1	397.9		
28	60.204	.1465			1969.	13534.				0.	162.
			123.85	.9627			376.7	391.3	406.5		



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-548

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

000671

CONDITION CH7F5

STATION I = 649.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.1460	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.1460	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	8.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.5710	-.000	17.288	14.265	20.415	15.867
25	1.000	.1460	-.000	13.908	14.540	16.438	19.215
26	1.000	.1460	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.1460	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 977655.0

MY = 1102554.0

MZ = -2187290.0

S = -9089.0

V = -7266.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000072

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH7F5

Y(CK) = 1102554.0 WZ(CK) = -2187290.0 D(CK) = -822.0

Y-BAR = .982 Z-BAR = -.741 IY = 1360.35 IZ = 2217.85 IYZ = 68.39 C5 = 963.10 C6 = 761.63

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	1157.	5713.	5.	-96.
2	.1465	185.	1275.	5.	-15.
3	.1466	-412.	-2832.	-17.	32.
4	.7743	-4959.	-6296.	-253.	130.
5	.1736	-2304.	-13360.	-130.	133.
6	.1735	-3029.	-17561.	-179.	149.
7	.1734	-3694.	-21405.	-231.	127.
8	.1394	-4861.	-24475.	-304.	70.
9	.1994	-5629.	-28346.	-352.	64.
10	.9825	-31142.	-31820.	-1946.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-4040.	-23489.	-62.	0.
13	.1460	-2747.	-18815.	0.	0.
14	.1460	-1851.	-12675.	0.	0.
15	.1460	-954.	-6536.	0.	0.
16	.1460	-273.	-1868.	4.	0.
17	.0000	0.	0.	0.	0.
18	.8226	5220.	6371.	-326.	0.
19	.2796	2743.	9850.	-171.	-31.
20	.2796	3921.	13726.	-239.	-74.
21	.2797	4684.	16831.	-293.	-162.
22	.2798	5512.	19811.	-325.	-254.
23	.2800	6239.	22441.	-352.	-397.
24	.8725	23579.	27118.	-1229.	-630.
25	.1466	3515.	24168.	-148.	-274.
26	.1465	3079.	21165.	-77.	-254.
27	.2057	3540.	17326.	-14.	-292.
28	.1465	1687.	11596.	0.	-139.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000073

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 559.00 STATION II = 642.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.616	-5.988	15.665
2	1.000	.1460	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.1460	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.205
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.1460	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.9410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.205
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.1460	-.000	16.438	19.215	13.908	14.540
26	1.000	.1460	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	6.220	20.616	5.988	15.665
28	1.000	.1460	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 977655.0 MY = 1538519.9 MZ = -2732610.0 S = -9089.0 V = -7266.0 D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000074

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH7F5

MX(CK) = 977055. MY(CK) = 1538920. MZ(CK) = -2732610. S(CK) = -9076. V(CK) = -7388. D(CK) = -822.

T(UNBAL.) = -1110949. Q(BAL.) = 303.1 2A(NET) = 3230.9

Y-BAR = 1.438 Z-BAR = .263 IY = 1760.07 IZ = 3264.92 IYZ = 105.70 C5 = 810.59 C6 = 825.57

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057			2158.	10564.				-8.	178.
			116.49	.7721			315.8	409.1	529.8		
2	60.223	.1465			832.	5722.				-21.	69.
			106.52	.7780			326.6	419.8	539.7		
3	60.235	.1466			155.	1063.				-7.	12.
			131.45	.6523			280.0	429.3	658.1		
4	60.103	.7743			-3820.	-4950.				199.	-102.
			140.85	1.2978			579.6	446.6	344.1		
5	60.195	.1736			-1891.	-10966.				107.	-109.
			122.64	.9003			408.3	453.5	503.7		
6	60.177	.1735			-2746.	-15922.				162.	-135.
			123.10	.8307			380.6	458.2	551.5		
7	60.153	.1734			-3601.	-20866.				225.	-124.
			123.33	.7702			354.1	459.7	596.9		
8	60.123	.1994			-5004.	-25196.				313.	-72.
			123.16	.9662			441.9	457.4	473.3		
9	60.121	.1994			-5866.	-29538.				367.	-67.
			124.05	.8688			393.9	453.4	521.9		
10	60.117	.98.5			-33152.	-33874.				2072.	0.
			95.15	.7663			321.8	419.9	548.0		
11	60.046	.1721			-4978.	-28966.				196.	0.
			86.66	.7332			247.0	336.9	459.5		
12	60.007	.1720			-4220.	-24537.				64.	0.
			92.19	.8412			280.9	333.9	397.0		
13	60.000	.1460			-2900.	-19861.				0.	0.
			102.00	1.0000			331.4	331.4	331.4		
14	60.000	.1460			-2145.	-14693.				0.	0.
			102.00	1.0000			326.5	326.5	326.5		
15	60.000	.1460			-1391.	-9526.				0.	0.
			92.19	.8412			268.5	319.2	379.4		
16	60.007	.1460			-709.	-4456.				-11.	0.
			86.66	.7332			228.7	311.9	425.4		
17	60.046	.1461			-68.	-466.				-3.	0.
			95.15	.7663			238.1	310.8	405.6		

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 DATE 2/12/71

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 MODEL CH-54R

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	ZA	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60-117	.8420	123.05	.8608	3670.	4373.	247.6	285.0	328.0	229.	0.
19	60-121	.2996	130.05	.9151	2600.	8713.	256.6	282.6	308.8	163.	30.
20	60-128	.2996	116.44	.3157	3969.	13304.	232.5	285.0	349.4	248.	77.
21	60-153	.2998	123.10	.8645	5197.	17426.	253.8	293.6	339.6	325.	179.
22	60-168	.2998	122.64	.7990	6317.	21188.	245.3	307.0	384.3	373.	291.
23	60-217	.3001	140.05	1.3561	7428.	24934.	443.9	326.9	240.7	420.	473.
24	60-103	.6923	131.45	.6523	25136.	28260.	230.1	352.8	540.8	1310.	671.
25	60-235	.1466	125.52	.7780	4061.	27921.	281.5	361.9	465.2	171.	316.
26	60-223	.1465	116.49	.7721	3624.	24913.	286.4	371.0	480.5	91.	299.
27	60-204	.2057	125.85	.9627	4233.	20717.	368.3	362.5	397.4	16.	349.
28	60-204	.1465	125.85	.9627	2288.	15724.	377.9	392.5	407.7	0.	189.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000076

TABLE 1 - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1G13

STATION I = 649.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.1460	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.1460	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9206	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.268	14.265	20.415	15.867
25	1.000	.1460	-.000	13.908	14.540	16.438	19.215
26	1.000	.1460	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.1460	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1443451.9 MZ = .0 S = .0 V = -8325.0 D = 941.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000077

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1613

MY(CK) = 1443451.9 MZ(CK) = -.0 D(CK) = 941.0

Y-BAR = .982 Z-BAR = -.741 IY = 1360.35 IZ = 2217.85 IYZ = 68.39 C5 = -33.20 C6 = 1063.27

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	3661.	17919.	14.	-302.
2	.1465	2567.	17644.	64.	-212.
3	.1466	2472.	16997.	104.	-193.
4	.7743	12919.	16742.	673.	-345.
5	.1736	1514.	8778.	86.	-87.
6	.1735	648.	3756.	38.	-32.
7	.1734	-155.	-899.	-10.	5.
8	.1994	-1035.	-5214.	-65.	15.
9	.1994	-2109.	-10620.	-132.	24.
10	.9525	-15144.	-15474.	-947.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-2700.	-15701.	-41.	0.
13	.1460	-2315.	-15858.	0.	0.
14	.1460	-2346.	-16070.	0.	0.
15	.1460	-2377.	-16281.	0.	0.
16	.1460	-2401.	-16446.	37.	0.
17	.0000	0.	0.	0.	0.
18	.8226	-13758.	-16791.	860.	0.
19	.2796	-3324.	-11936.	208.	38.
20	.2796	-1919.	-6532.	114.	35.
21	.2797	-617.	-2218.	39.	21.
22	.2798	741.	2664.	-44.	-34.
23	.2800	1989.	7155.	-112.	-127.
24	.8725	13555.	15590.	-706.	-362.
25	.1466	2336.	16066.	-99.	-182.
26	.1465	2467.	16958.	-62.	-204.
27	.2057	3579.	17519.	-14.	-295.
28	.1465	2594.	17826.	0.	-214.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-548

000078

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CHIG13

STATION I = 589.00

STATION II = 649.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-6.220	20.615	-5.988	15.665
2	1.000	.1460	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.1460	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.298	14.265
5	1.000	.1730	-.000	-21.990	10.192	-19.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.205
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.1460	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.205
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.298	14.265
25	1.000	.1460	-.000	16.438	19.215	13.908	14.540
26	1.000	.1460	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	6.220	20.615	5.988	15.665
28	1.000	.1460	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1942956.0 MZ = .0 S = .0 V = -8325.0 D = 941.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000679

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH1G13									
MX(CK) =		0.	MY(CK) = 1942956.		MZ(CK) = 0.		S(CK) = 8.		V(CK) = -8479.		D(CK) = 941.
<del>T(UBAL) = 23232.</del>		<del>Q(BAL) = 6.3</del>		<del>2A(NET) = 3230.9</del>							
Y-BAR = 1.435		Z-BAR = .263	IY = 1760.07		IZ = 3264.92		IYZ = 105.70		C5 = -36.22		C6 = 1105.94
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60-204	.2057			4711.	23057.				-18.	389.
2	60-223	.1465	116.49	.7721	3320.	22827.	19.8	25.7	33.3	-83.	274.
3	60-235	.1466	106.52	.7780	3184.	21893.	29.8	38.3	49.2	-134.	248.
4	60-103	.7743	131.45	.6523	14065.	18226.	32.7	50.1	76.9	-733.	376.
5	60-195	.1736	140.85	1.2978	2073.	12023.	89.8	69.2	53.3	-117.	119.
6	60-177	.1735	122.64	.9003	1076.	6236.	70.7	78.6	87.3	-63.	53.
7	60-153	.1734	123.10	.8307	73.	426.	71.2	85.7	103.1	-5.	3.
8	60-123	.1994	123.33	.7702	-1073.	-5403.	68.9	89.5	116.2	67.	-15.
9	60-121	.1994	123.16	.9662	-2229.	-11222.	85.9	88.9	92.0	139.	-26.
10	60-117	.9825	123.05	.8668	-16671.	-17034.	75.5	86.9	100.0	1042.	0.
11	60-046	.1721	95.15	.7663	-2958.	-17209.	47.1	61.4	80.2	116.	0.
12	60-007	.1720	86.66	.7332	-2990.	-17383.	8.9	12.1	16.6	46.	0.
13	60-000	.1460	92.19	.8412	-2568.	-17588.	6.2	7.3	8.7	0.	0.
14	60-000	.1460	102.00	1.0000	-2602.	-17818.	3.1	3.1	3.1	0.	0.
15	60-000	.1460	102.00	1.0000	-2635.	-18049.	-1.1	-1.1	-1.1	0.	0.
16	60-007	.1460	92.19	.8412	-2666.	-18262.	-4.6	-5.4	-6.5	0.	0.
17	60-046	.1461	86.66	.7332	-2696.	-18483.	-7.2	-9.9	-13.5	-41.	0.
			95.15	.7663			-42.0	-54.8	-71.5	-106.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 4/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000C80

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60-117	.8425	123.05	.8688	-15732.	-18743.	-75.2	-87.7	-100.9	-983.	0.
19	60-121	.2996	130.05	.9151	-3859.	-12931.	-88.4	-96.6	-105.6	-241.	-44.
20	60-128	.2996	116.44	.8157	-2025.	-6788.	-81.6	-100.1	-122.7	-127.	-39.
21	60-153	.2998	123.10	.8645	-383.	-1265.	-83.1	-96.2	-111.2	-24.	-13.
22	60-168	.2998	122.64	.7990	1365.	4576.	-68.5	-85.8	-107.4	81.	63.
23	60-217	.3001	140.85	1.3581	3106.	10427.	-91.2	-67.2	-49.4	176.	198.
24	60-103	.8925	131.45	.6523	14892.	16742.	-29.3	-44.9	-68.8	776.	398.
25	60-235	.1466	106.52	.7780	3009.	20693.	-26.2	-33.7	-43.3	127.	234.
26	60-223	.1465	116.49	.7721	3196.	21970.	-16.6	-21.5	-27.9	80.	264.
27	60-204	.2057	128.85	.9627	4618.	22603.	-4.0	-4.2	-4.4	18.	381.
28	60-204	.1465	128.85	.9627	3338.	22941.	7.9	8.2	8.5	0.	275.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000081

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10F5

STATION I = 659.00 STATION II = 649.00

ITEM	E	A	2AG	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.1460	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.205
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.205
23	1.000	.2390	-.000	16.340	4.430	18.600	6.375
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.1460	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.1460	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 952239.0 MY = 934173.0 MZ = -1707259.0 S = -8621.0 V = -7451.0 D = -675.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000082

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH1UF5

RY(CK) = 954173.0      MZ(CA) = -1707258.9      DICK) = -675.0  
 Y-BAR = .265      Z-BAR = -3.431      IY = 906.95      IZ = 1616.97      IYZ = 61.05      C5 = 1019.75      C6 = 958.82

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	1817.	8892.	7.	-150.
2	.0000	0.	0.	0.	0.
3	.1467	143.	985.	6.	-13.
4	.7816	-3345.	-4376.	-174.	469.
5	.1736	-1647.	-9552.	-93.	95.
6	.1735	-2423.	-14045.	-143.	104.
7	.1734	-3163.	-18331.	-198.	109.
8	.1995	-4419.	-22262.	-276.	156.
9	.1994	-5201.	-26190.	-325.	60.
10	.9825	-29492.	-30124.	-1843.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-3996.	-23237.	-62.	0.
13	.1460	-2762.	-18917.	0.	0.
14	.1460	-1913.	-12417.	0.	0.
15	.1460	-864.	-5916.	0.	0.
16	.1460	-234.	-1601.	4.	0.
17	.0000	0.	0.	0.	0.
18	.7525	4049.	5194.	-253.	0.
19	.2395	2178.	9133.	-136.	-25.
20	.2396	3123.	13101.	-195.	-111.
21	.2396	4060.	17030.	-254.	-140.
22	.2397	4393.	20532.	-289.	-232.
23	.2397	5712.	23967.	-323.	-278.
24	.8403	22457.	27325.	-1171.	-3150.
25	.1467	3800.	26153.	-160.	-340.
26	.0000	0.	0.	0.	0.
27	.2057	4264.	20870.	-17.	-352.
28	.1465	2179.	14977.	0.	-180.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000083

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10F5

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.1460	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.1460	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.205	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.205	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.1460	-.000	13.908	14.540	12.221	10.965
26	1.000	.1460	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.1460	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 982239.0 MY = 1232217.0 MZ = -2052077.0 S = -8621.0 V = -7451.0 D = -675.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000084

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

UX(CK) = 982239. UY(CK) = 1232217. UZ(CK) = -2052077. S(CK) = -8587. V(CK) = -7291. D(CK) = -675.

T(UNBAL.) = 1208797. Q(BAL.) = 475.4 2A(NET) = 2382.0

Y-BAR = .644 Z-BAR = -.689 IY = 1350.48 IZ = 2175.14 IYZ = 72.46 C5 = 914.87 C6 = 863.00

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.136	.2057	69.16	.8037	1627.	8011.	471.8	587.0	730.4	-6.	135.
2	40.148	.1465	63.27	.8406	344.	3740.	504.9	600.6	714.5	-14.	45.
3	40.195	.1467	52.97	1.1123	-38.	-263.	663.0	596.1	535.9	2.	-3.
4	40.445	.7816	149.89	.5724	-2806.	-3670.	348.9	609.6	1064.9	146.	-394.
5	40.130	.1736	91.78	.8741	-1959.	-11362.	526.0	601.8	688.4	111.	-113.
6	40.106	.1735	95.06	.9209	-2762.	-16005.	546.4	593.3	644.3	163.	-118.
7	40.102	.1734	79.83	1.0089	-3499.	-20280.	590.1	584.9	579.7	219.	-121.
8	40.103	.1995	109.01	.8108	-4721.	-23787.	468.1	577.3	712.0	295.	-167.
9	40.081	.1994	99.84	.8993	-5590.	-28148.	510.5	567.6	631.2	349.	-64.
10	40.078	.9825	72.91	.7959	-31402.	-32086.	413.6	519.6	652.9	1963.	0.
11	40.031	.0000	63.54	.7598	0.	0.	394.8	519.6	683.9	0.	0.
12	40.005	.1728	77.55	.8729	-4155.	-24165.	450.1	515.6	590.7	64.	0.
13	40.000	.1460	102.00	1.0000	-2880.	-19725.	512.7	512.7	512.7	0.	0.
14	40.000	.1460	102.00	1.0000	-2028.	-13892.	507.3	507.3	507.3	0.	0.
15	40.000	.1460	77.55	.8729	-1177.	-8060.	436.0	499.5	572.2	0.	0.
16	40.005	.1460	63.54	.7598	-529.	-3626.	373.9	492.1	647.7	-8.	0.
17	40.031	.0000	72.91	.7959	0.	0.	391.7	492.1	618.3	0.	0.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
16	40-075	.8026			3352.	4193.				209.	0.
			89.84	.8993			426.9	474.7	527.8		
19	40-081	.2595			2103.	8135.				131.	24.
			100.01	.8108			383.3	472.8	583.1		
20	40-103	.2597			3239.	12537.				202.	115.
			79.83	1.0089			479.9	475.7	471.5		
21	40-102	.2597			4144.	16042.				259.	143.
			88.62	.8950			422.8	477.8	539.9		
22	40-114	.2597			5040.	19514.				297.	239.
			81.51	.9850			474.2	481.4	488.8		
23	40-111	.2597			5827.	22559.				329.	283.
			155.12	.5470			264.9	494.3	885.3		
24	40-445	.8605			24130.	28671.				1258.	3064.
			52.97	1.1123			585.2	526.1	473.0		
25	40-195	.1467			3695.	25434.				156.	330.
			63.27	.8406			440.1	523.5	622.8		
26	40-145	.1465			3292.	22634.				82.	272.
			69.16	.8037			486.9	605.8	753.8		
27	40-136	.2057			3890.	19042.				15.	321.
			94.40	.9741			581.1	596.5	612.3		
28	40-136	.1465			1981.	13613.				0.	163.
			94.40	.9741			576.2	591.5	607.2		

PREPARED BY: CIARDULLO  
 CHECKED BY: CIARDULLO  
 DATE: 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODFL CH-54B

000086

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 689.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.1460	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.1730	-.000	-17.250	-3.723	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.723	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.735
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.1460	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.1460	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968925.0 MY = 781719.0 MZ = -1802256.0 S = -9233.0 V = -6165.0 D = -861.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
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000087

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION: CH155

Y(CK) = 731719.0      Z(CK) = -1802256.0      D(CK) = -861.0  
 Y-BAR = .265      Z-BAR = -3.431      IY = 906.95      IZ = 1616.97      IYZ = 61.05      C5 = 1085.07      C6 = 785.62

ITEM	AE(ROU.)	P(NET)	F(NET)	PY	PZ
1	.2057	1167.	5710.	5.	-96.
2	.0300	0.	0.	0.	0.
3	.1467	-346.	-2383.	-15.	31.
4	.7816	-5792.	-7576.	-302.	812.
5	.1736	-2076.	-12041.	-117.	120.
6	.1735	-2734.	-15878.	-161.	117.
7	.1734	-3357.	-19456.	-210.	116.
8	.1995	-4501.	-22677.	-281.	159.
9	.1994	-5142.	-25891.	-321.	59.
10	.9025	-28493.	-29114.	-1761.	0.
11	.0600	0.	0.	0.	0.
12	.1720	-3749.	-21797.	-58.	0.
13	.1460	-2511.	-17200.	0.	0.
14	.1460	-1501.	-10283.	0.	0.
15	.1460	-491.	-3366.	0.	0.
16	.1460	179.	1225.	-3.	0.
17	.0600	0.	0.	0.	0.
18	.7325	6600.	8467.	-412.	0.
19	.2395	2790.	11695.	-174.	-32.
20	.2396	3564.	14951.	-223.	-126.
21	.2396	4332.	18170.	-271.	-149.
22	.2397	4991.	20944.	-294.	-236.
23	.2397	5431.	23628.	-318.	-274.
24	.9403	21496.	26155.	-1120.	-3015.
25	.1467	3545.	24398.	-150.	-317.
26	.0300	0.	0.	0.	0.
27	.2057	3770.	18455.	-15.	-311.
28	.1465	1770.	12162.	0.	-146.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000088

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION: CH1F5

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.1460	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.1460	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.025	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.1460	-.000	13.908	14.540	12.221	10.965
26	1.000	.1460	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.1460	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 958925.0 MY = 1026478.0 MZ = -2171585.0 S = -9233.0 V = -6165.0 D = -861.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000089

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1F5										
VX(CK) = 968925. NY(CK) = 1028478. VZ(CK) = -2171585. S(CK) = -9196. V(CK) = -6043. D(CK) = -861. T(UHBAL.) = 1212546. Q(bAL.) = 476.9 2A(NET) = 2382.0 Y-BAR = .644 Z-BAR = -.088 IY = 1350.4 IZ = 2175.14 IYZ = 72.46 C5 = 975.01 C6 = 708.81											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.136	.2057	69.16	.8037	1031.	5046.	474.1	590.0	734.1	-4.	85.
2	40.148	.1465	63.27	.8406	84.	577.	497.7	592.1	704.3	-2.	7.
3	40.195	.1467	52.97	1.1123	-515.	-3542.	653.9	587.8	528.5	22.	-46.
4	40.445	.7816	143.89	.5724	-5470.	-7155.	341.1	595.9	1041.0	285.	-767.
5	40.130	.1736	91.78	.8741	-2363.	-13704.	514.6	588.7	673.5	134.	-136.
6	40.106	.1735	85.06	.9209	-3046.	-17651.	535.0	580.9	630.8	180.	-131.
7	40.102	.1734	79.83	1.0089	-3672.	-21280.	578.2	573.1	568.0	230.	-127.
8	40.103	.1995	100.01	.8108	-4796.	-24161.	458.7	565.7	697.7	300.	-170.
9	40.081	.1994	89.84	.8993	-5509.	-27738.	500.5	556.5	618.8	344.	-63.
10	40.078	.9825	72.91	.7959	-30312.	-30972.	406.8	511.1	642.1	1894.	0.
11	40.031	.0000	63.54	.7598	0.	0.	388.3	511.1	672.7	0.	0.
12	40.005	.1720	77.55	.8729	-3877.	-22542.	443.3	507.9	581.8	60.	0.
13	40.000	.1460	102.00	1.0000	-2600.	-17810.	505.6	505.6	505.6	0.	0.
14	40.000	.1460	102.00	1.0000	-1693.	-11595.	500.9	500.9	500.9	0.	0.
15	40.000	.1460	77.55	.8729	-785.	-5379.	430.8	493.5	565.4	0.	0.
16	40.005	.1460	63.54	.7598	-95.	-653.	369.7	486.7	640.5	-1.	0.
17	40.031	.0000	72.91	.7959	0.	0.	387.3	486.7	611.4	0.	0.

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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	ZA	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
16	40.078	.2025	89.84	.8993	6149.	7692.	427.5	475.4	523.6	384.	0.
19	40.081	.2595	100.01	.8108	2825.	10930.	386.2	476.3	587.4	177.	32.
20	40.103	.2597	79.83	1.0089	3759.	14550.	485.4	481.1	476.9	235.	133.
21	40.102	.2597	83.62	.8850	4503.	17429.	429.6	485.4	548.5	281.	155.
22	40.114	.2537	81.51	.9850	5207.	20164.	483.5	490.8	498.3	307.	247.
23	40.111	.2597	155.12	.5470	5818.	22525.	271.0	495.5	905.8	329.	283.
24	40.445	.8605	52.97	1.1123	22986.	27311.	592.6	532.7	478.9	1199.	3224.
25	40.195	.1467	63.27	.8406	3464.	23843.	446.1	530.7	631.4	146.	310.
26	40.148	.1465	69.16	.8037	3013.	20713.	487.1	606.0	754.1	75.	249.
27	40.136	.2057	94.40	.9741	3433.	16802.	582.1	597.6	613.5	13.	283.
28	40.136	.1465	94.40	.9741	1600.	10995.	578.0	593.4	609.1	0.	132.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000091

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 689.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.1460	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.375
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.1460	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.1460	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971476.0 MY = 751223.0 MZ = -1835576.0 S = -9544.0 V = -5709.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH2F5					
	MY(CK) = 751325.0	MZ(CK) = -1335575.9	D(CK) = -428.0			
Y-BAR =	.265	Z-BAR = -3.431	IY = 906.95	IZ = 1616.97	IYZ = 51.05	C5 = 1106.84 C6 = 752.83
ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ	
1	.2357	1045.	5117.	4.	-86.	
2	.0000	0.	0.	0.	0.	
3	.1467	-446.	-3072.	-19.	40.	
4	.7816	-6317.	-8263.	-329.	886.	
5	.1736	-2173.	-12603.	-123.	125.	
6	.1735	-2810.	-16285.	-166.	120.	
7	.1734	-3411.	-19768.	-213.	118.	
8	.1995	-4537.	-22855.	-284.	161.	
9	.1994	-5150.	-25933.	-322.	59.	
10	.9825	-28403.	-29022.	-1775.	0.	
11	.0000	0.	0.	0.	0.	
12	.1720	-3708.	-21560.	-57.	0.	
13	.1460	-2463.	-16872.	0.	0.	
14	.1460	-1433.	-9816.	0.	0.	
15	.1460	-403.	-2760.	0.	0.	
16	.1460	281.	1924.	-4.	0.	
17	.0000	0.	0.	0.	0.	
18	.7825	7260.	9313.	-454.	0.	
19	.2395	2959.	12407.	-185.	-34.	
20	.2396	3702.	15528.	-231.	-131.	
21	.2396	4437.	18612.	-277.	-153.	
22	.2397	5063.	21245.	-299.	-240.	
23	.2397	5668.	23782.	-320.	-276.	
24	.8403	21487.	26145.	-1120.	-3014.	
25	.1467	3523.	24245.	-149.	-315.	
26	.0000	0.	0.	0.	0.	
27	.2057	3701.	18117.	-14.	-305.	
28	.1465	1701.	11692.	0.	-140.	

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000093

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.1460	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.1460	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.205	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.205	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.1460	-.000	13.908	14.540	12.221	10.965
26	1.000	.1460	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.1460	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971476.0 MY = 980186.0 MZ = -2217320.9 S = -9544.0 V = -5709.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000031

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	LM2F5												
WX(CK) =	971478.	WY(CK) =	980186.	WZ(CK) =	-2217321.	S(CK) =	-9506.	V(CK) =	-5596.	D(CK) =	-428.		
T(UNBAL.) =	1223545.	Q(BAL.) =	481.2	2A(NET) =	2382.0								
Y-BAR =	.644	Z-BAR =	-.688	IY =	1350.48	IZ =	2175.14	IYZ =	72.46	C5 =	997.13	C6 =	672.09
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	40.136	.2057	69.16	.8037	889.	4351.	478.1	594.8	740.1	-3.	73.		
2	40.148	.1465	63.27	.8406	-29.	-199.	499.4	594.1	706.8	1.	-2.		
3	40.195	.1467	52.97	1.1123	-636.	-4374.	655.6	589.4	529.9	27.	-57.		
4	40.445	.7816	148.89	.5724	-6164.	-8064.	339.6	593.2	1036.3	321.	-865.		
5	40.130	.1736	91.78	.8741	-2474.	-14349.	512.0	585.7	670.0	140.	-143.		
6	40.106	.1735	35.06	.9209	-3129.	-18136.	532.0	577.7	627.3	185.	-134.		
7	40.102	.1734	79.83	1.0089	-3730.	-21615.	574.8	569.7	564.7	233.	-129.		
8	40.103	.1995	100.01	.8108	-4833.	-24347.	455.9	562.3	693.5	302.	-171.		
9	40.061	.1994	89.84	.8993	-5509.	-27737.	497.7	553.4	615.3	344.	-53.		
10	40.078	.9825	72.91	.7959	-30146.	-30802.	405.8	509.8	640.5	1884.	0.		
11	40.031	.0000	63.54	.7598	0.	0.	387.3	509.8	671.0	0.	0.		
12	40.005	.1720	77.55	.8729	-3815.	-22184.	442.7	507.1	580.9	59.	0.		
13	40.000	.1460	102.00	1.0000	-2533.	-17346.	505.4	505.4	505.4	0.	0.		
14	40.060	.1460	102.00	1.0000	-1604.	-10989.	501.1	501.1	501.1	0.	0.		
15	40.000	.1460	77.55	.8729	-676.	-4633.	431.5	494.3	566.2	0.	0.		
16	40.005	.1460	63.54	.7598	29.	201.	370.7	488.0	642.3	0.	0.		
17	40.031	.0000	72.91	.7959	0.	0.	388.4	488.0	613.1	0.	0.		



PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
16	40.078	.0026	89.84	.8993	6986.	8738.	432.7	481.1	535.0	437.	0.
19	40.081	.2595	100.01	.8109	3052.	11809.	392.0	483.5	596.3	191.	35.
20	40.103	.2597	79.83	1.0089	3938.	15243.	493.7	489.4	485.0	246.	139.
21	40.107	.2597	89.62	.8850	4643.	17973.	437.6	494.5	558.8	290.	160.
22	40.114	.2597	81.51	.9850	5302.	20528.	493.0	500.5	508.1	313.	251.
23	40.111	.2597	155.12	.5470	5868.	22721.	276.5	505.5	924.0	332.	285.
24	40.445	.6605	52.97	1.1123	22880.	27185.	601.0	540.3	485.7	1193.	3209.
25	40.195	.1467	63.27	.8406	3434.	23633.	452.3	538.1	640.1	145.	307.
26	40.148	.1455	69.16	.8037	2967.	20395.	492.0	612.2	761.8	74.	245.
27	40.136	.2057	94.40	.9741	3345.	16374.	587.7	603.3	619.4	13.	276.
28	40.136	.1465	94.40	.9741	1518.	10430.	583.2	598.7	614.6	0.	125.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000096

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 609.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.1460	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.205
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.360	.310	19.220	2.205
23	1.000	.2390	-.000	16.340	4.430	18.600	6.735
24	1.000	.8510	-.000	15.203	8.655	17.288	14.265
25	1.000	.1460	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.1460	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978407.0 MY = 836145.0 MZ = -1815763.9 S = -9288.0 V = -6060.0 D = -822.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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 MODEL CH-54B

000097

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH7F5

MY(CK) = 836145.0 MZ(CK) = -1815763.9 D(CK) = -922.0  
 Y-BAR = .265 Z-BAR = -3.431 IY = 906.95 IZ = 1616.97 IYZ = 61.05 C5 = 1091.16 C6 = 845.37

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	1354.	6629.	5.	-112.
2	.0000	0.	0.	0.	0.
3	.1467	-230.	-1585.	-10.	21.
4	.7816	-5297.	-6928.	-276.	743.
5	.1736	-2011.	-11664.	-114.	116.
6	.1735	-2713.	-15722.	-160.	116.
7	.1734	-3578.	-19575.	-211.	117.
8	.1995	-4573.	-23042.	-286.	162.
9	.1994	-5263.	-26501.	-329.	60.
10	.9225	-29331.	-29969.	-1833.	0.
11	.0000	0.	0.	0.	0.
12	.1720	-3988.	-22608.	-60.	0.
13	.1460	-2626.	-17986.	0.	0.
14	.1460	-1610.	-11030.	0.	0.
15	.1460	-595.	-4074.	0.	0.
16	.1460	79.	543.	-1.	0.
17	.0000	0.	0.	0.	0.
18	.7925	5098.	7823.	-381.	0.
19	.2395	2594.	11296.	-168.	-31.
20	.2396	3528.	14798.	-220.	-125.
21	.2396	437.	18262.	-272.	-150.
22	.2397	5070.	21276.	-299.	-240.
23	.2397	5769.	24204.	-326.	-281.
24	.8403	22184.	26992.	-1156.	-3111.
25	.1467	3682.	25345.	-155.	-329.
26	.0000	0.	0.	0.	0.
27	.2057	3773.	19445.	-15.	-328.
28	.1465	1909.	13122.	0.	-158.

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 REPORT NO. SER 64430  
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000098

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION

CH7F5

STATION I = 649.00

STATION II = 682.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.1460	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.1460	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.205	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.1460	-.000	13.908	14.540	12.221	10.965
26	1.000	.1460	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.1460	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978407.0

MY = 1102554.0

MZ = -2187290.0

S = -9288.0

V = -6660.0

O = -822.0

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 DATE 2/12/71

PAGE NO.  
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000099

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

MX(CK) = 978407. MY(CK) = 1102554. MZ(CK) = -2187290. S(CK) = -9251. V(CK) = -6522. D(CK) = -822.

T(UNBAL.) = 1223396. Q(BAL.) = 481.1 2A(NET) = 2382.0

Y-BAR = .644 Z-BAR = -.686 IY = 1350.48 IZ = 2175.14 IYZ = 72.46 C5 = 980.40 C6 = 763.40

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.136	.2057			1208.	5914.				-5.	100.
2	40.148	.1465	69.16	.8037	204.	1400.	478.2	595.0	740.4	-5.	17.
3	40.195	.1467	63.27	.8406	-403.	-2777.	504.5	600.1	713.9	17.	-36.
4	40.445	.7816	52.97	1.1123	-4904.	-6414.	662.7	595.8	535.6	256.	-688.
5	40.130	.1736	148.89	.5724	-2310.	-13395.	346.7	605.6	1058.0	131.	-133.
6	40.106	.1735	91.78	.8741	-3038.	-17605.	522.9	598.1	684.3	179.	-130.
7	40.102	.1734	85.06	.9209	-3706.	-21476.	543.3	590.0	640.7	232.	-128.
8	40.103	.1995	79.83	1.0089	-4879.	-24579.	587.0	581.8	576.7	305.	-173.
9	40.081	.1994	100.01	.8108	-5647.	-28433.	465.6	574.2	708.2	353.	-65.
10	40.078	.9825	99.84	.8993	-31236.	-31916.	507.8	564.6	627.8	1952.	0.
11	40.031	.0000	72.91	.7959	0.	0.	411.5	517.0	649.5	0.	0.
12	40.005	.1720	63.54	.7598	-4031.	-23436.	392.8	517.0	680.4	62.	0.
13	40.000	.1460	77.55	.8729	-2727.	-18679.	448.2	513.4	588.2	0.	0.
14	40.000	.1460	102.00	1.0000	-1815.	-12429.	510.9	510.9	510.9	0.	0.
15	40.000	.1460	102.00	1.0000	-902.	-6179.	505.8	505.8	505.8	0.	0.
16	40.005	.1460	77.55	.8729	-208.	-1427.	434.8	498.1	570.6	-3.	0.
17	40.031	.0000	63.54	.7598	0.	0.	373.0	490.9	646.1	0.	0.
			72.91	.7959			390.7	490.9	616.8		

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 DATE 2/12/71

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000100

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
16	40.079	.2026			5565.	6961.				348.	0.
			99.84	.8993			429.5	477.6	531.1		
19	40.081	.2595	100.01	.8108	2701.	10449.	387.4	477.8	589.2	169.	31.
20	40.103	.2597	79.83	1.0089	3706.	14346.	486.5	492.2	478.0	232.	131.
21	40.102	.2597	88.62	.8850	4507.	17447.	430.1	486.1	549.2	282.	155.
22	40.114	.2597	81.51	.9850	5276.	20428.	483.8	491.2	498.7	311.	250.
23	40.111	.2597	155.12	.5470	5944.	23015.	271.1	495.6	906.0	336.	289.
24	40.445	.8605	52.97	1.1123	23770.	28243.	595.4	535.3	481.2	1239.	3334.
25	40.195	.1467	63.27	.8406	3597.	24760.	448.2	533.1	634.2	152.	322.
26	40.148	.1465	69.16	.8037	3149.	21648.	491.7	611.8	761.3	79.	260.
27	40.136	.2057	94.40	.9741	3623.	17735.	587.5	603.1	619.1	14.	299.
28	40.136	.1465	94.40	.9741	1732.	11901.	583.2	598.7	614.6	0.	143.

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 DATE 2/12/71

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000101

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1913

STATION I = 689.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.1460	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.735
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.1460	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.1460	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1137151.9 MZ = .0 S = .0 V = -7658.0 D = 873.0

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 DATE 2/12/71

PAGE NO.  
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000102

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.1)

CONDITION	CH1613					
	MY(CK) = 1137151.9	MZ(CK) = -.0	D(CK) = 873.0			
Y-BAR = .265	Z-BAR = -3.431	IY = 906.95	IZ = 1616.97	IYZ = 61.05	C5 = -47.73	C6 = 1260.33
ITEM	AE( PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	4180.	20461.	16.	-345.	
2	.0000	0.	0.	0.	0.	
3	.1467	2767.	19047.	117.	-247.	
4	.7816	12579.	16454.	656.	-1764.	
5	.1736	1979.	10894.	106.	-108.	
6	.1735	981.	5686.	58.	-42.	
7	.1734	102.	592.	6.	-4.	
8	.1995	-908.	-4574.	-57.	32.	
9	.1994	-1939.	-9765.	-121.	22.	
10	.9825	-14622.	-14940.	-914.	0.	
11	.0000	0.	0.	0.	0.	
12	.1720	-2615.	-15203.	-40.	0.	
13	.1460	-2249.	-15401.	0.	0.	
14	.1460	-2293.	-15705.	0.	0.	
15	.1460	-2337.	-16009.	0.	0.	
16	.1460	-2367.	-16215.	36.	0.	
17	.0000	0.	0.	0.	0.	
18	.7825	-12934.	-16593.	808.	0.	
19	.2395	-2724.	-11418.	170.	31.	
20	.2396	-1485.	-6230.	93.	53.	
21	.2396	-253.	-1063.	16.	9.	
22	.2397	970.	4069.	-57.	-46.	
23	.2397	2220.	9315.	-125.	-108.	
24	.8403	12303.	14970.	-641.	-1726.	
25	.1467	2596.	17869.	-109.	-232.	
26	.0000	0.	0.	0.	0.	
27	.2057	4066.	19901.	-16.	-335.	
28	.1465	2955.	20307.	0.	-244.	



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 DATE 2/12/71

PAGE NO.  
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000103

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1613

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.1460	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.1460	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.738	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.1720	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.025	16.860	.310
23	1.000	.2590	-.000	18.600	6.738	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.1450	-.000	13.908	14.540	12.221	10.965
26	1.000	.1460	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.1460	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1443451.9 MZ = .0 S = .0 V = -7658.0 D = 873.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

000104

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION		CH1613											
MX(CK) =		-0.		MY(CK) = 1443452.		MZ(CK) = -0.		S(CK) = -9.		V(CK) = -7474.		D(CK) = 873.	
T(UNBAL.) =		-4833.		Q(BAL.) = -1.9		2A(NET) = 2382.0							
Y-BAR = .644		Z-BAR = -.688		IY = 1350.48		IZ = 2175.14		IYZ = 72.46		C5 = -35.94		C6 = 1071.22	
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	40.136	.2057			3676.	17994.							
			69.16	.8037			-12.0	-15.0	-18.6	-14.	303.		
2	40.148	.1465			2579.	17728.							
			63.27	.8406			41.6	49.5	58.9	-64.	213.		
3	40.195	.1467			2487.	17117.							
			52.97	1.1123			47.3	42.5	38.2	-105.	222.		
4	40.445	.7816			13114.	17154.							
			143.89	.5724			32.0	55.9	97.6	-684.	1839.		
5	40.130	.1736			1520.	8817.							
			91.78	.8741			41.0	46.9	53.7	-86.	88.		
6	40.106	.1735			648.	3756.							
			85.06	.9209			35.5	38.6	41.9	-38.	28.		
7	40.102	.1734			-161.	-931.							
			79.83	1.0089			32.3	32.0	31.7	10.	-6.		
8	40.103	.1995			-1049.	-5283.							
			100.01	.8108			23.1	28.5	35.2	66.	-37.		
9	40.081	.1994			-2130.	-10723.							
			89.84	.8993			21.4	23.8	26.4	133.	-24.		
10	40.078	.9825			-15281.	-15614.							
			72.91	.7959			5.8	7.3	9.1	955.	0.		
11	40.031	.0000			0.	0.							
			63.54	.7598			5.5	7.3	9.6	0.	0.		
12	40.005	.1720			-2728.	-15864.							
			77.55	.8729			3.9	4.4	5.1	42.	0.		
13	40.000	.1460			-2341.	-16034.							
			102.00	1.0000			2.1	2.1	2.1	0.	0.		
14	40.000	.1460			-2374.	-16263.							
			102.00	1.0000			.1	.1	.1	0.	0.		
15	40.000	.1460			-2408.	-16492.							
			77.55	.8729			-1.5	-1.7	-1.9	0.	0.		
16	40.005	.1460			-2434.	-16671.							
			63.54	.7598			-2.5	-3.4	-4.4	-37.	0.		
17	40.031	.0000			0.	0.							
			72.91	.7959			-2.7	-3.4	-4.2	0.	0.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-548

000105

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	40.078	.8026	89.84	.8993	-13622.	-17039.	-18.5	-20.6	-22.9	-851.	0.
19	40.081	.2595	100.01	.8108	-3140.	-12149.	-25.1	-31.0	-38.2	-196.	-36.
20	40.103	.2597	79.83	1.0089	-1733.	-6710.	-37.5	-37.2	-36.9	-108.	-61.
21	40.102	.2597	88.62	.8850	-609.	-2358.	-40.8	-46.1	-52.1	-38.	-21.
22	40.114	.2597	81.51	.9850	662.	2562.	-53.0	-53.8	-54.6	39.	31.
23	40.111	.2597	155.12	.5470	1828.	7076.	-34.8	-63.6	-116.2	103.	89.
24	40.445	.8605	52.97	1.1123	13368.	15884.	-41.1	-37.0	-33.2	697.	1875.
25	40.195	.1467	63.27	.8406	2340.	16108.	-36.5	-43.4	-51.6	99.	209.
26	40.148	.1465	67.16	.8037	2471.	16985.	14.8	18.4	22.9	62.	204.
27	40.136	.2057	94.40	.9741	3588.	17561.	6.3	6.4	6.6	14.	296.
28	40.136	.1465	94.40	.9741	2602.	17885.	-2.3	-2.4	-2.4	0.	215.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000106

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION COND.CH10F5

STATION I = 749.00 STATION II = 689.00

ITEM	L	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.1460	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.1720	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	.000	.1460	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.1460	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.1460	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 983213.0 MY = 496785.0 MZ = -1176338.0 S = -8849.0 V = -7290.0 D = -524.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54R

000107

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

MY(CK) = 496725.0      MZ(CK) = -1176338.0      D(CK) = -624.0  
 Y-BAR = -.951    Z-BAR = -5.499    IY = 517.89    IZ = 764.00    IYZ = 38.95    C5 = 1496.11    C6 = 840.12

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2258	853.	3805.	3.	-70.
2	.0000	0.	0.	0.	0.
3	.0000	0.	0.	0.	0.
4	.8343	-7043.	-8569.	-370.	512.
5	.0000	0.	0.	0.	0.
6	.2497	-4901.	-16111.	-236.	181.
7	.0000	0.	0.	0.	0.
8	.2756	-6060.	-22085.	-379.	140.
9	.0000	0.	0.	0.	0.
10	1.0430	-28903.	-27819.	-1806.	0.
11	.0000	0.	0.	0.	0.
12	.0000	0.	0.	0.	0.
13	.1460	-2489.	-17051.	0.	0.
14	.1460	-1097.	-7514.	0.	0.
15	.1460	296.	2024.	0.	0.
16	.0000	0.	0.	0.	0.
17	.0000	0.	0.	0.	0.
18	.7625	9571.	12733.	-604.	0.
19	.0000	0.	0.	0.	0.
20	.2195	4040.	18489.	-253.	-93.
21	.0000	0.	0.	0.	0.
22	.2196	5234.	23965.	-309.	-237.
23	.0000	0.	0.	0.	0.
24	.9142	22496.	27848.	-1173.	-1623.
25	.0000	0.	0.	0.	0.
26	.0000	0.	0.	0.	0.
27	.2256	4636.	20676.	-18.	-382.
28	.1455	1793.	12325.	0.	-148.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54D

000108

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 689.00

STATION II = 749.00

ITEM	E	A	ZAG	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.1460	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.9806	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.1460	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.1460	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 983213.0

MY = 934173.0

MZ = -1707259.0

S = -8849.0

V = -7290.0

D = -624.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000109

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10FS

MX(CK) = 983213. MY(CK) = 934173. MZ(CK) = -1707259. S(CK) = -5839. V(CK) = -7286. D(CK) = -624.

T(UNBAL.) = 1163060. Q(BAL.) = 499.7 2A(NET) = 1845.2

Y-BAR = .265 Z-BAR = -3.451 IY = .0524 IZ = 1614.27 IYZ = 61.02 CS = 1021.39 C6 = 960.73

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	44.58	.6357	1826.	8939.	509.0	800.7	1259.6	-7.	151.
2	60.223	.0000	44.80	.6962	0.	0.	557.5	800.7	1150.0	0.	0.
3	60.257	.1460	60.93	.7746	148.	1018.	622.1	803.2	1036.8	-6.	12.
4	60.237	.7761	74.07	.7925	-3303.	-4290.	686.5	866.3	1093.2	172.	-238.
5	60.195	.1736	69.62	.8188	-1645.	-9538.	686.9	838.9	1024.6	93.	-95.
6	60.166	.1735	68.15	.8367	-2423.	-14043.	723.9	865.2	1034.1	143.	-110.
7	60.153	.1734	70.35	.8318	-3164.	-18334.	675.8	812.5	976.8	198.	-109.
8	60.133	.1994	70.83	.8302	-4419.	-22257.	697.3	839.8	1011.5	276.	-102.
9	60.121	.1994	70.57	.8321	-5205.	-26209.	626.6	753.1	905.1	325.	-60.
10	60.117	.9025	58.03	.3990	-29509.	-30151.	296.4	743.0	1862.4	1844.	0.
11	60.021	.0000	48.27	.7842	0.	0.	582.7	743.0	947.4	0.	0.
12	60.007	.1720	67.70	.7829	-3999.	-23253.	529.4	676.3	864.0	61.	0.
13	60.000	.1460	102.00	1.0000	-2763.	-18926.	671.8	671.8	671.8	0.	0.
14	60.000	.1460	102.00	1.0000	-1813.	-12415.	659.9	659.9	659.9	0.	0.
15	60.000	.1460	67.70	.7829	-862.	-5903.	501.4	640.6	318.3	0.	0.
16	60.007	.1460	48.27	.7842	-231.	-1582.	499.3	636.7	811.9	-4.	0.
17	60.021	.0000	58.03	.3990	0.	0.	254.0	636.7	1596.0	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

000110

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60.117	.7825	70.57	.6321	4072.	5225.	452.1	543.4	653.1	255.	0.
19	60.121	.2395	70.83	.8302	2188.	9171.	481.4	579.9	698.4	137.	25.
20	60.133	.2395	70.35	.8318	3133.	13137.	469.7	564.7	679.0	196.	72.
21	60.153	.2396	68.15	.8367	4073.	17084.	529.3	632.6	756.1	255.	141.
22	60.166	.2397	69.62	.8189	4907.	20589.	513.5	627.2	766.0	290.	222.
23	60.195	.2398	74.07	.7925	5731.	24058.	572.7	722.7	912.0	324.	330.
24	60.237	.8343	60.93	.7746	22359.	27013.	558.0	720.4	930.0	1166.	1613.
25	60.257	.1466	44.80	.6962	3808.	26197.	545.8	738.9	1125.9	161.	314.
26	60.223	.0000	44.58	.6357	0.	0.	498.3	763.9	1233.2	0.	0.
27	60.204	.2057	72.71	.9601	4277.	20936.	746.8	777.9	810.3	17.	353.
28	60.204	.1465	72.71	.9601	2188.	15034.	753.1	784.5	817.1	0.	180.



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000111

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CHIEF

STATION I = 749.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.1460	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.1720	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	.000	.1460	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0600	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.1460	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.1460	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969254.0 MY = 421145.0 MZ = -1236998.0 S = -9422.0 V = -6009.0 D = -842.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000112

TABLE = OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH1F5

MY(CK) = 421145.0      MZ(CK) = -1236998.0      D(CK) = -842.0  
 Y-BAR = -0.951    Z-BAR = -5.499    IY = 517.89    IZ = 764.00    IYZ = 38.95    C5 = 1583.13    C6 = 685.20

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2258	301.	1344.	1.	-25.
2	.0000	0.	0.	0.	0.
3	.0000	0.	0.	0.	0.
4	.8343	-9204.	-11120.	-480.	664.
5	.0000	0.	0.	0.	0.
6	.2497	-4399.	-17715.	-260.	199.
7	.0000	0.	0.	0.	0.
8	.2756	-6214.	-22648.	-389.	143.
9	.0000	0.	0.	0.	0.
10	1.0430	-28387.	-27323.	-1774.	0.
11	.0000	0.	0.	0.	0.
12	.0000	0.	0.	0.	0.
13	.1460	-2327.	-15936.	0.	0.
14	.1460	-953.	-5844.	0.	0.
15	.1460	620.	4248.	0.	0.
16	.0000	0.	0.	0.	0.
17	.0000	0.	0.	0.	0.
18	.7525	11940.	15589.	-740.	0.
19	.0000	0.	0.	0.	0.
20	.2195	4433.	20296.	-277.	-102.
21	.0000	0.	0.	0.	0.
22	.2196	5393.	24692.	-318.	-244.
23	.0000	0.	0.	0.	0.
24	.8142	22147.	27416.	-1155.	-1598.
25	.0000	0.	0.	0.	0.
26	.0000	0.	0.	0.	0.
27	.2258	4304.	19196.	-17.	-355.
28	.1465	1504.	10338.	0.	-124.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54R

000113

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CHIF5

STATION I = 689.00 STATION II = 749.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.1460	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.9806	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-9.697	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7310	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.6310	-.000	15.203	8.655	12.075	4.327
25	1.000	.1460	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.1460	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969254.0 MY = 781719.0 MZ = -1802256.0 S = -9422.0 V = -6009.0 D = -842.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000114

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1F5

MX(CK) = 969254. MY(CK) = 781719. MZ(CK) = -1802256. S(CK) = -9412. V(CK) = -6007. D(CK) = -842.

T(UNDAL.) = 1158569. Q(BAL.) = 496.7 - 2A(NET) = 1845.2

Y-BAR = .265 Z-BAR = -3.451 IY = 905.24 IZ = 1614.27 IYZ = 61.02 C5 = 1086.84 C6 = 787.08

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057			1173.	5741.				-5.	97.
2	60.223	.0000	44.58	.6357	0.	0.	506.0	796.0	1252.2	0.	0.
3	60.257	.1466	44.80	.6962	-343.	-2362.	554.2	796.0	1143.3	14.	-28.
4	60.237	.7761	60.93	.7746	-5744.	-7460.	612.2	790.3	1020.2	299.	-414.
5	60.195	.1736	74.07	.7925	-2076.	-12040.	571.9	847.9	1070.0	117.	-120.
6	60.166	.1735	69.62	.8188	-2736.	-15858.	665.9	813.3	993.3	161.	-124.
7	60.153	.1734	68.15	.8367	-3360.	-19469.	703.7	841.0	1005.2	210.	-116.
8	60.133	.1994	70.35	.8318	-4503.	-22680.	653.0	785.1	943.8	281.	-104.
9	60.121	.1994	70.83	.8302	-5147.	-25916.	575.5	813.6	979.9	322.	-59.
10	60.117	.9825	70.57	.8321	-28524.	-29145.	605.6	727.8	874.7	1783.	0.
11	60.021	.0000	58.03	.3990	0.	0.	289.4	725.5	1818.6	0.	0.
12	60.007	.1720	45.27	.7842	-3752.	-21816.	569.0	725.5	925.1	57.	0.
13	60.000	.1460	67.70	.7828	-2513.	-17212.	519.0	663.0	846.9	0.	0.
14	60.000	.1460	102.00	1.0000	-1501.	-10284.	659.9	659.9	659.9	0.	0.
15	60.000	.1450	102.00	1.0000	-490.	-3355.	649.1	649.1	649.1	0.	0.
16	60.007	.1450	67.70	.7828	182.	1244.	493.6	630.6	805.5	3.	0.
17	60.021	.0000	45.27	.7842	0.	0.	496.9	633.6	807.9	0.	0.
			58.03	.3990			252.8	633.6	1588.2		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SEP 64430  
 MODEL CH-54B

000115

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60.117	.7625	70.57	.8321	6624.	8497.	454.9	546.7	657.0	414.	0.
19	60.121	.2396	70.83	.8302	2798.	11731.	492.6	593.3	714.6	175.	32.
20	60.133	.2395	70.35	.8319	3573.	14982.	481.6	579.0	696.1	223.	82.
21	60.153	.2396	68.15	.8367	4343.	18218.	545.0	651.3	778.5	271.	150.
22	60.166	.2397	69.62	.8188	5004.	20993.	528.0	644.9	787.6	295.	227.
23	60.195	.2398	74.07	.7925	5648.	23709.	585.6	739.0	932.5	319.	326.
24	60.237	.8343	60.93	.7746	21395.	25848.	562.7	726.5	937.8	1115.	1543.
25	60.257	.1466	44.80	.6962	3552.	24430.	547.0	785.7	1128.4	150.	293.
26	60.223	.0000	44.58	.6357	0.	0.	499.4	795.7	1236.0	0.	0.
27	60.204	.2057	72.71	.9601	3781.	18507.	745.9	776.9	809.3	15.	312.
28	60.204	.1465	72.71	.9601	1776.	12203.	750.3	781.5	914.0	0.	146.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000116

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 749.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.1460	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.6310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.1720	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	.000	.1460	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7510	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.6110	-.000	12.075	4.327	15.203	8.655
25	.000	.1460	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.1460	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971762.0 MY = 418979.0 MZ = -1253107.9 S = -9708.0 V = -5547.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-548

000117

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH2F5

RY(CK) = 418979.0

RZ(CK) = -1253107.9

DX(CK) = -428.0

Y-BAR = -.951 Z-BAR = -5.499 IY = 517.89 IZ = 764.00 IYZ = 33.95 C5 = 1604.80 C6 = 683.79

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2258	292.	1300.	1.	-24.
2	.0000	0.	0.	0.	0.
3	.0000	0.	0.	0.	0.
4	.8343	-9353.	-11300.	-480.	675.
5	.0000	0.	0.	0.	0.
6	.2497	4448.	-17913.	-262.	201.
7	.0000	0.	0.	0.	0.
8	.2756	-6267.	-22840.	-392.	145.
9	.0000	0.	0.	0.	0.
10	1.0430	-28576.	-27504.	-1786.	0.
11	.0000	0.	0.	0.	0.
12	.0000	0.	0.	0.	0.
13	.1460	-2331.	-15963.	0.	0.
14	.1460	-937.	-5733.	0.	0.
15	.1460	657.	4498.	0.	0.
16	.0000	0.	0.	0.	0.
17	.0000	0.	0.	0.	0.
18	.7525	12148.	15994.	-759.	0.
19	.0000	0.	0.	0.	0.
20	.2195	4519.	20682.	-282.	-104.
21	.0000	0.	0.	0.	0.
22	.2196	5476.	25075.	-323.	-248.
23	.0000	0.	0.	0.	0.
24	.8142	22427.	27763.	-1169.	-1618.
25	.0000	0.	0.	0.	0.
26	.0000	0.	0.	0.	0.
27	.2258	4349.	19397.	-17.	-359.
28	.1465	1516.	10417.	0.	-125.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000118

TABLE = INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 689.00 STATION II = 749.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.1460	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.9806	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7510	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.1460	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.1460	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971762.0 MY = 751823.0 MZ = -1835576.0 S = -9708.0 V = -5547.0 D = -428.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000119

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH2F5

MX(CK) = 971762. MY(CK) = 751823. MZ(CK) = -1835576. S(CK) = -9696. V(CK) = -5547. D(CK) = -428.

T(BAL.) = 1167015. G(BAL.) = 500.4 2A(NET) = 1845.2

Y-BAR = .265 Z-BAR = -3.451 IY = 905.24 IZ = 1614.27 IYZ = 61.02 C5 = 1108.65 C6 = 754.16

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057			1050.	5142.				-4.	87.
2	60.223	.0000	44.58	.6357	0.	0.	508.4	799.8	1258.2	0.	0.
3	60.257	.1466	44.80	.6962	-444.	-3057.	556.8	799.8	1148.7	19.	-37.
4	60.237	.7761	60.93	.7746	-6270.	-8143.	613.8	792.4	1022.9	327.	-452.
5	60.195	.1736	74.07	.7925	-2174.	-12608.	668.7	843.8	1064.8	123.	-125.
6	60.166	.1735	59.62	.8188	-2812.	-16299.	661.2	807.5	986.3	166.	-127.
7	60.153	.1734	68.15	.8367	-3414.	-19715.	696.5	834.8	997.8	213.	-118.
8	60.133	.1994	70.35	.8319	-4539.	-22661.	647.0	777.9	935.2	284.	-105.
9	60.121	.1994	70.63	.8302	-5156.	-25961.	669.8	806.7	971.6	322.	-59.
10	60.117	.9825	70.57	.8321	-28436.	-29055.	599.7	720.8	866.2	1777.	0.
11	60.021	.0000	58.03	.3990	0.	0.	288.5	723.1	1512.5	0.	0.
12	60.007	.1720	48.27	.7842	-3712.	-21581.	567.1	723.1	922.1	57.	0.
13	60.000	.1460	67.70	.7828	-2465.	-16886.	517.6	661.2	844.7	0.	0.
14	60.000	.1460	102.00	1.0000	-1433.	-9818.	659.0	659.0	659.0	0.	0.
15	60.000	.1460	102.00	1.0000	-402.	-2750.	649.1	649.1	649.1	0.	0.
16	60.007	.1460	57.70	.7828	283.	1941.	494.3	631.4	806.6	4.	0.
17	60.021	.0000	48.27	.7842	0.	0.	498.9	636.1	811.2	0.	0.
			55.03	.3990			253.8	636.1	1594.5		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-548

000120

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	60.117	.7325	70.57	.8321	7282.	9343.	461.8	535.1	667.1	455.	0.
19	60.121	.2395	70.83	.8302	2968.	12442.	501.9	604.5	726.1	185.	34.
20	60.133	.2395	70.35	.8318	3710.	15557.	491.6	591.0	710.5	232.	86.
21	60.153	.2396	69.15	.8367	4448.	18058.	556.5	665.2	795.0	278.	153.
22	60.166	.2397	69.62	.8188	5075.	21291.	539.1	658.5	804.2	299.	230.
23	60.195	.2398	74.07	.7925	5684.	23859.	596.9	753.2	950.5	321.	328.
24	60.237	.8343	60.93	.7746	21383.	25834.	570.0	735.8	949.9	1115.	1542.
25	60.257	.1466	44.80	.6962	3529.	24273.	553.2	794.6	1141.3	149.	291.
26	60.223	.0000	44.58	.6357	0.	0.	505.1	794.6	1250.0	0.	0.
27	60.204	.2057	72.71	.9601	3711.	18164.	752.7	784.0	816.6	14.	306.
28	60.204	.1465	72.71	.9601	1707.	11728.	755.7	787.1	819.9	0.	141.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000121

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH7F5

STATION I = 749.00

STATION II = 689.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.1460	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.1720	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	.000	.1460	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.1460	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.1460	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978725.0

MY = 446232.0

MZ = -1247532.0

S = -9471.0

V = -6499.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO. 1  
 REPORT NO. SER 64430  
 MODEL CH-54B

000122

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5  
 MY(CK) = 446232.0 MZ(CK) = -1247531.9 D(CK) = -822.0  
 Y-BAR = -.951 Z-BAR = -5.499 IY = 517.89 IZ = 764.00 IYZ = 38.95 C5 = 1594.50 C6 = 733.00

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2258	430.	1916.	2.	-35.
2	.0000	0.	0.	0.	0.
3	.0000	0.	0.	0.	0.
4	.6343	-8915.	-10770.	-465.	643.
5	.0000	0.	0.	0.	0.
6	.2497	-4396.	-17705.	-259.	199.
7	.0000	0.	0.	0.	0.
8	.2756	-6301.	-22965.	-394.	145.
9	.0000	0.	0.	0.	0.
10	1.0430	-29056.	-27966.	-1816.	0.
11	.0000	0.	0.	0.	0.
12	.0000	0.	0.	0.	0.
13	.1460	-2408.	-16496.	0.	0.
14	.1460	-924.	-6331.	0.	0.
15	.1460	560.	3834.	0.	0.
16	.0000	0.	0.	0.	0.
17	.0000	0.	0.	0.	0.
18	.7025	11585.	15254.	-724.	0.
19	.0000	0.	0.	0.	0.
20	.2195	4431.	20278.	-277.	-102.
21	.0000	0.	0.	0.	0.
22	.2196	5462.	25008.	-322.	-247.
23	.0000	0.	0.	0.	0.
24	.8142	22653.	28042.	-1181.	-1634.
25	.0000	0.	0.	0.	0.
26	.0000	0.	0.	0.	0.
27	.2258	4461.	19896.	-17.	-368.
28	.1465	1598.	10979.	0.	-132.

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 659.00 STATION II = 749.00

ITEM	E	A	ZAC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.1460	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.9806	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.1460	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.1460	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978725.0 MY = 836145.0 MZ = -1815763.9 S = -9471.0 V = -6499.0 D = -822.0

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5  
 X(CK) = 978725. Y(CK) = 836145. Z(CK) = -1815764. S(CK) = -9461. V(CK) = -6496. D(CK) = -822.

T(UNBAL.) = 1169608. Q(BAL.) = 501.5 2A(NET) = 1845.2

Y-BAR = .265 Z-BAR = -3.451 IY = 905.24 IZ = 1614.27 IYZ = 61.02 C5 = 1092.94 C6 = 846.86

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057			1360.	6659.				-5.	112.
2	60.223	.0000	44.58	.6357	0.	0.	511.3	804.4	1265.5	0.	0.
3	60.257	.1466	44.80	.6962	-228.	-1567.	560.1	804.4	1155.4	10.	-19.
4	60.237	.7761	60.93	.7746	-5253.	-6823.	620.2	800.6	1033.6	274.	-379.
5	60.195	.1736	74.07	.7925	-2012.	-11665.	682.8	861.6	1087.3	114.	-116.
6	60.166	.1735	69.62	.8188	-2714.	-15734.	678.0	828.1	1011.4	160.	-123.
7	60.153	.1734	68.15	.8367	-3380.	-19590.	716.3	856.1	1023.2	211.	-117.
8	60.133	.1994	70.35	.8318	-4576.	-23046.	665.3	799.8	961.5	286.	-106.
9	60.121	.1994	70.83	.8302	-5268.	-26528.	687.9	828.6	998.0	329.	-60.
10	60.117	.9625	70.57	.8321	-29363.	-30003.	616.4	740.7	890.2	1835.	0.
11	60.021	.0000	58.03	.3990	0.	0.	293.5	735.6	1843.9	0.	0.
12	60.007	.1720	48.27	.7842	-3892.	-22630.	576.9	735.6	938.0	60.	0.
13	60.000	.1460	67.70	.7828	-2628.	-18000.	525.1	670.8	856.9	0.	0.
14	60.000	.1460	102.00	1.0000	-1611.	-11033.	667.1	667.1	667.1	0.	0.
15	60.000	.1460	102.00	1.0000	-594.	-4065.	655.7	655.7	655.7	0.	0.
16	60.007	.1460	57.70	.7828	82.	559.	498.2	636.4	813.0	1.	0.
17	60.021	.0000	43.27	.7842	0.	0.	500.2	637.8	813.3	0.	0.
			53.03	.3990			254.5	637.8	1598.7		

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TABLE (CONT.)

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
16	60-117	.7625	70.57	.8321	6120.	7651.	454.9	546.7	657.0	382.	0.
19	60-121	.2395	70.83	.8302	2703.	11331.	491.3	591.7	712.7	169.	31.
20	60-133	.2395	70.35	.8318	3536.	14828.	479.8	576.8	693.5	221.	82.
21	60-153	.2396	68.15	.8367	4365.	18309.	543.5	649.6	776.4	273.	151.
22	60-166	.2397	69.62	.8189	5082.	21324.	526.7	643.3	785.6	300.	230.
23	60-195	.2398	74.07	.7925	5785.	24285.	586.2	739.7	933.4	327.	333.
24	60-237	.8343	60.93	.7746	22077.	26672.	565.5	730.1	942.5	1151.	1593.
25	60-257	.1466	44.80	.6962	3689.	25376.	551.1	791.6	1136.9	156.	304.
26	60-223	.0000	44.58	.6357	0.	0.	503.2	791.6	1245.3	0.	0.
27	60-204	.2057	72.71	.9601	3983.	19496.	752.3	783.6	816.2	15.	329.
28	60-204	.1465	72.71	.9601	1915.	13162.	757.4	788.9	821.7	0.	158.

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1G13

STATION I = 749.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.1460	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.1720	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.1720	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	.000	.1460	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.1460	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.1460	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 712124.0 MZ = .0 S = .0 V = -7084.0 D = 824.0



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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1613					
	AY(CK) = 712124.0		AP(CK) = .0		DI(CK) = 324.0	
Y-BAR =	-.951	Z-BAR = -5.499	IY = 517.89	IZ = 764.00	IYZ = 38.95	C5 = -69.78 C6 = 1389.05
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2258	4157.	18539.	16.	-343.	
2	.0000	0.	0.	0.	0.	
3	.0000	0.	0.	0.	0.	
4	.8343	12160.	14691.	634.	-877.	
5	.0000	0.	0.	0.	0.	
6	.2497	1325.	5337.	78.	-60.	
7	.0000	0.	0.	0.	0.	
8	.2756	-1129.	-4115.	-71.	26.	
9	.0000	0.	0.	0.	0.	
10	1.0430	-14143.	-13613.	-884.	0.	
11	.0000	0.	0.	0.	0.	
12	.0000	0.	0.	0.	0.	
13	.1460	-2052.	-14057.	0.	0.	
14	.1460	-2117.	-14502.	0.	0.	
15	.1460	-2182.	-14947.	0.	0.	
16	.0000	0.	0.	0.	0.	
17	.0000	0.	0.	0.	0.	
18	.7525	-11776.	-15504.	736.	0.	
19	.0000	0.	0.	0.	0.	
20	.2195	-1313.	-6007.	82.	30.	
21	.0000	0.	0.	0.	0.	
22	.2196	757.	3468.	-45.	-34.	
23	.0000	0.	0.	0.	0.	
24	.8142	10496.	12993.	-547.	-757.	
25	.0000	0.	0.	0.	0.	
26	.0000	0.	0.	0.	0.	
27	.2258	3381.	17752.	-15.	-328.	
28	.1465	2561.	18285.	0.	-219.	

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000128

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1613

STATION I = 839.00 STATION II = 749.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.1460	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.9806	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.1720	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.1720	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.1460	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.1460	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1137151.9 MZ = .0 S = .0 V = -7084.0 D = 824.0

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH1613

VX(CK) = -0. MY(CK) = 1137152. VZ(CK) = -0. S(CK) = 9. V(CK) = -7086. D(CK) = 924.

T(UNBAL.) = 13091. Q(BAL.) = 5.6 2A(NET) = 1845.2

Y-BAR = .255 Z-BAR = -3.451 IY = 905.24 IZ = 1614.27 IYZ = 61.02 C5 = -47.86 C6 = 1262.56

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	44.58	.6357	4191.	20516.	6.0	9.4	14.8	-16.	346.
2	60.223	.0000	44.80	.6962	0.	0.	6.5	9.4	13.5	0.	0.
3	60.257	.1466	60.93	.7746	2773.	19077.	43.1	55.6	71.8	-117.	229.
4	60.237	.7761	74.07	.7925	12526.	16269.	48.9	61.7	77.9	-653.	904.
5	60.195	.1736	69.62	.6183	1885.	10932.	76.3	93.1	113.8	-107.	109.
6	60.166	.1735	63.15	.8367	986.	5716.	73.2	87.5	104.6	-58.	45.
7	60.153	.1734	70.35	.8318	106.	612.	74.2	89.3	107.3	-7.	4.
8	60.133	.1994	70.83	.8302	-905.	-4560.	77.2	93.0	112.0	57.	-21.
9	60.121	.1994	70.57	.8321	-1939.	-9763.	50.5	60.7	72.9	121.	-22.
10	60.117	.9825	58.03	.3990	-14629.	-14948.	21.0	52.6	131.8	914.	0.
11	60.021	.0000	43.27	.7842	0.	0.	41.2	52.6	67.0	0.	0.
12	60.007	.1720	57.70	.7828	-2616.	-15211.	7.0	9.0	11.5	40.	0.
13	60.000	.1460	102.00	1.0000	-2250.	-15410.	5.7	5.7	5.7	0.	0.
14	60.000	.1460	102.00	1.0000	-2294.	-15715.	2.7	2.7	2.7	0.	0.
15	60.000	.1460	67.70	.7828	-2339.	-16020.	.1	.1	.1	0.	0.
16	60.007	.1460	43.27	.7842	-2369.	-16226.	-30.9	-39.4	-50.2	-36.	0.
17	60.021	.0000	53.03	.3990	0.	0.	-15.7	-39.4	-98.7	0.	0.

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TABLE (CONT.)

ITEM	L.S.	WE(PHOD.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	FZ
18	60.117	.7825	70.57	.8321	-12943.	-16005.	-48.9	-38.8	-70.7	-809.	0.
19	60.121	.2395	70.83	.8302	-2724.	-11421.	-86.5	-104.2	-125.5	-170.	-31.
20	60.133	.2395	70.35	.8318	-1483.	-6219.	-89.1	-107.1	-128.7	-93.	-34.
21	60.153	.2396	68.15	.8367	-250.	-1048.	-93.1	-111.2	-132.9	-16.	-9.
22	60.156	.2397	69.62	.8188	976.	4093.	-88.1	-107.6	-131.4	58.	44.
23	60.195	.2398	74.07	.7925	2229.	9358.	-55.8	-70.4	-88.9	126.	128.
24	60.237	.8343	60.93	.7746	12252.	14802.	-31.9	-41.2	-53.1	639.	884.
25	60.257	.1466	44.80	.8062	2602.	17897.	1.5	2.2	3.2	110.	215.
26	60.223	.0000	44.58	.6357	0.	0.	1.4	2.2	3.5	0.	0.
27	60.204	.2057	72.71	.9601	4077.	19954.	3.6	3.8	4.0	16.	336.
28	60.204	.1405	72.71	.9601	2963.	20361.	8.5	8.8	9.2	0.	244.

## 5.0 Reinforced Tail Cone Section Loads

This section of the report contains the computer input data for a boron/epoxy reinforced tail cone. The geometry, applied loading conditions and stringer numbers are the same as those of Section 4.0.

Boron/epoxy is bonded to stringers number 2, 3, 11, 12, 13, 14, 15, 16, 17, 25, 26, and 28. (See Figure 2-7). The area of these stringers is increased by an equivalent area, based upon the modulus of boron/epoxy and aluminum. The equivalent area required to perform the computer loads analysis, is as follows:

$$A_{\text{Equiv.}} = \frac{E_B}{E_A} \times (\text{area of boron/epoxy})$$

Where:  $E_B = 33.1 \times 10^6 \text{ lb/in}^2$  (See Reference 8)

$E_A = 10.5 \times 10^6 \text{ lb/in}^2$  (See Reference 7)

Area of boron/epoxy =  $0.187 \text{ in}^2$  (See Figure 2-7)

Therefore,

$$A_{\text{Equiv.}} = \frac{33.1 \times 10^6}{10.5 \times 10^6} \times 0.187 = 0.592 \text{ in}^2$$

This equivalent area added to the areas of an 0.050 inch thick stringer with 6 inches of 0.040 inch thick skins results in a total reinforced area of

$$A_{\text{Rein.}} = (0.091 + 6 \times 0.040) + 0.592 = 0.923 \text{ in}^2$$

The area modulus product ( $AE_A$ ) is;

$$AE_A = 0.923 \times 10.5 \times 10^6 = 9.75 \times 10^6 \text{ lb}$$

which agrees with the tests and analysis of Reference 1

The printed results of the computer loads analysis shows the stringer axial loads, skin shear flows and the area moment of inertia about the y-axis ( $I_y$ ). The  $I_y$  obtained from this analysis is used to obtain the vertical deflections of the transition section and reinforced tail cone section due to a unit vertical load applied at Station 749. The vertical deflection is shown in Reference 1 and is comparable to the present heavy skinned CH-54B.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000131

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND. CH10F5

STATION I = 569.00

STATION II = 549.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-0.297	22.267	-6.375	23.919
2	1.000	.7380	-.000	-12.250	21.864	-12.750	23.514
3	1.000	.7380	-.000	-17.281	20.870	-18.125	22.526
4	1.000	.6690	-.000	-21.457	17.308	-22.500	18.750
5	1.000	.2060	-.000	-23.120	11.346	-24.250	12.500
6	1.000	.1730	-.000	-23.942	5.886	-25.125	6.800
7	1.000	.1730	-.000	-24.750	.407	-26.000	1.100
8	1.000	.1990	-.000	-24.750	-5.061	-26.000	-4.600
9	1.000	.1990	-.000	-24.750	-10.532	-26.000	-10.300
10	1.000	.9806	-.000	-24.750	-16.000	-26.000	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-19.125	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.750	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.750	-16.000
17	1.000	.7380	-.000	18.339	-16.000	19.125	-16.000
18	1.000	.8610	-.000	24.750	-16.000	26.000	-16.000
19	1.000	.3190	-.000	24.750	-10.532	26.000	-10.300
20	1.000	.3190	-.000	24.750	-5.061	26.000	-4.600
21	1.000	.3190	-.000	24.750	.407	26.000	1.100
22	1.000	.3190	-.000	23.942	5.886	25.125	6.800
23	1.000	.3190	-.000	23.120	11.346	24.250	12.500
24	1.000	.6610	-.000	21.457	17.308	22.500	18.750
25	1.000	.7380	-.000	17.281	20.870	18.125	22.526
26	1.000	.7380	-.000	12.250	21.864	12.750	23.514
27	1.000	.2250	-.000	0.297	22.267	6.375	23.919
28	1.000	.7380	-.000	.000	22.367	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1905226.0

MZ = -2721952.0

S = -8234.0

V = -8793.0

Q = -717.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND. CH10F5

MY(CK) = 1905226.0

MZ(CK) = -2721951.9

D(CK) = -717.0

Y-BAR = 1.050 Z-BAR = .293 IY = 4371.37 IZ = 4804.09 IYZ = 132.58 C5 = 555.18 C6 = 419.05

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2258	1147.	5117.	4.	-95.
2	.7407	1192.	1621.	30.	-98.
3	.7412	-1187.	-1615.	-50.	98.
4	.6716	-3635.	-5455.	-190.	262.
5	.2067	-1826.	-8891.	-103.	105.
6	.1735	-2009.	-11643.	-119.	92.
7	.1734	-2484.	-14396.	-155.	86.
8	.1994	-3314.	-16688.	-207.	76.
9	.1994	-3770.	-18983.	-236.	44.
10	.9825	-20827.	-21281.	-1302.	0.
11	.7646	-13486.	-17666.	-530.	0.
12	.7641	-10976.	-14369.	-168.	0.
13	.7380	-8115.	-10997.	0.	0.
14	.7380	-5503.	-7457.	0.	0.
15	.7380	-2891.	-3918.	0.	0.
16	.7381	-405.	-549.	6.	0.
17	.7386	2012.	2728.	-79.	0.
18	.8627	5421.	6308.	-339.	0.
19	.3196	2741.	8610.	-171.	-32.
20	.3197	3474.	10916.	-217.	-80.
21	.3198	4208.	13226.	-263.	-146.
22	.3199	4800.	15090.	-284.	-219.
23	.3200	5389.	16948.	-304.	-311.
24	.8644	15916.	18559.	-830.	-1148.
25	.7412	13035.	17739.	-550.	-1079.
26	.7407	11267.	15324.	-282.	-930.
27	.2258	2726.	12157.	-11.	-225.
28	.7405	6383.	8678.	0.	-521.

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000133

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH110F5

STATION I = 549.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	.000	-6.375	23.919	-6.297	22.267
2	1.000	.1460	-.000	-12.750	23.514	-12.250	21.864
3	1.000	.1460	-.000	-18.125	22.526	-17.281	20.870
4	1.000	.6690	-.000	-22.500	18.750	-21.457	17.308
5	1.000	.2060	-.000	-24.250	12.500	-23.120	11.346
6	1.000	.1730	-.000	-25.125	6.800	-23.942	5.886
7	1.000	.1730	-.000	-26.000	1.100	-24.750	.407
8	1.000	.1990	-.000	-26.000	-4.600	-24.750	-5.061
9	1.000	.1990	-.000	-26.000	-10.300	-24.750	-10.532
10	1.000	.9806	-.000	-26.000	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.443	-16.000
17	1.000	.1460	-.000	19.125	-16.000	18.339	-16.000
18	1.000	.8610	-.000	26.000	-16.000	24.750	-16.000
19	1.000	.3190	-.000	26.000	-10.300	24.750	-10.532
20	1.000	.3190	-.000	26.000	-4.600	24.750	-5.061
21	1.000	.3190	-.000	26.000	1.100	24.750	.407
22	1.000	.3190	-.000	25.125	6.800	23.942	5.886
23	1.000	.3190	-.000	24.250	12.500	23.120	11.346
24	1.000	.8610	-.000	22.500	18.750	21.457	17.308
25	1.000	.1460	-.000	-18.125	22.526	17.281	20.870
26	1.000	.1460	-.000	12.750	23.514	12.250	21.864
27	1.000	.2250	-.000	6.375	23.919	6.297	22.267
28	1.000	.1460	-.000	.000	24.000	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 2081090.0

MZ = -2886631.9

S = -8234.0

V = -8793.0

D = -717.0



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 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND. CH10F5

MX(CK) = 980840. MY(CK) = 2081090. MZ(CK) = -2886632. S(CK) = -8247. V(CK) = -8796. L(CK) = -717.

T(UNBAL.) = 261999. O(BAL.) = 65.6 2A(NET) = 3892.8

Y-BAR = 2.061 Z-BAR = 1.544 IY = 2093.19 IZ = 3988.95 IYZ = 135.35 C5 = 691.79 C6 = 950.02

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	20.068	.2258			3462.	15438.				-14.	286.
2	20.074	.1465	155.07	.9341	1544.	10617.	173.9	186.2	199.3	-39.	127.
3	20.086	.1466	138.98	.9384	862.	5932.	191.3	203.8	217.2	-36.	71.
4	20.079	.6716	166.99	.9498	-492.	-738.	290.9	306.3	322.5	26.	-35.
5	20.065	.2067	173.44	.9537	-1629.	-7932.	441.9	463.4	485.9	92.	-94.
6	20.056	.1735	149.16	.9575	-2412.	-13979.	453.1	473.3	494.3	143.	-110.
7	20.051	.1734	149.16	.9604	-3455.	-20023.	435.1	453.1	471.8	216.	-120.
8	20.044	.1994	148.20	.9593	-5053.	-25449.	388.1	404.5	421.7	316.	-116.
9	20.040	.1994	146.20	.9598	-6132.	-30870.	304.8	317.6	330.9	383.	-71.
10	20.039	.9925	148.20	.9593	-35535.	-36308.	191.3	199.5	207.9	2221.	0.
11	20.015	.1721	110.00	.9325	-5407.	-31459.	-499.7	-535.9	-574.7	212.	0.
12	20.002	.1720	102.00	.9249	-4645.	-27007.	-122.0	-131.9	-142.6	71.	0.
13	20.000	.1460	102.00	.9518	-3298.	-22591.	175.8	184.7	194.0	0.	0.
14	20.000	.1460	102.00	1.0000	-2654.	-18180.	425.5	425.5	425.5	0.	0.
15	20.000	.1460	102.00	1.0000	-2010.	-13770.	568.0	568.0	568.0	0.	0.
16	20.002	.1460	102.00	.9518	-1367.	-9362.	582.6	612.0	643.0	0.	0.
17	20.015	.1461	102.00	.9249	-723.	-4957.	521.6	564.0	609.8	-21.	0.
			110.00	.9325			398.4	427.2	458.1	-28.	0.

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			-167.	-194.				-10.	0.
19	20.040	.3196	148.20	.9593	1669.	5242.	141.8	117.8	154.1	104.	19.
20	20.044	.3197	148.20	.9598	3401.	10684.	90.4	94.2	98.2	213.	78.
21	20.051	.3198	148.20	.9593	5133.	16134.	86.8	90.5	94.4	321.	178.
22	20.056	.3199	149.16	.9604	6673.	20978.	131.4	136.8	142.4	395.	305.
23	20.065	.3200	149.16	.9575	8216.	25838.	220.6	230.4	240.7	464.	474.
24	20.079	.8644	173.44	.9537	26276.	30639.	354.6	371.8	389.9	1370.	1895.
25	20.086	.1466	166.99	.9498	4539.	31226.	845.1	889.8	936.9	192.	376.
26	20.074	.1465	138.98	.9384	4129.	28388.	436.3	465.0	495.5	103.	341.
27	20.068	.2258	155.07	.9341	5453.	24319.	101.0	108.1	115.7	21.	450.
28	20.067	.1465	153.00	.9878	2903.	19952.	241.5	244.5	247.5	0.	237.
			153.00	.9878			69.6	70.5	71.3		

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000136

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CHIFS

STATION I = 569.00

STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.375	23.919
2	1.000	.7380	-.000	-12.250	21.864	-12.750	23.514
3	1.000	.7380	-.000	-17.281	20.870	-18.125	22.526
4	1.000	.6690	-.000	-21.457	17.308	-22.500	18.750
5	1.000	.2060	-.000	-23.120	11.346	-24.250	12.500
6	1.000	.1730	-.000	-23.942	5.886	-25.125	6.800
7	1.000	.1730	-.000	-24.750	.407	-26.000	1.100
8	1.000	.1990	-.000	-24.750	-5.061	-26.000	-4.600
9	1.000	.1990	-.000	-24.750	-10.532	-26.000	-10.300
10	1.000	.9806	-.000	-24.750	-16.000	-26.000	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-19.125	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.750	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.750	-16.000
17	1.000	.7380	-.000	18.339	-16.000	19.125	-16.000
18	1.000	.8610	-.000	24.750	-16.000	26.000	-16.000
19	1.000	.3190	-.000	24.750	-10.532	26.000	-10.300
20	1.000	.3190	-.000	24.750	-5.061	26.000	-4.600
21	1.000	.3190	-.000	24.750	.407	26.000	1.100
22	1.000	.3190	-.000	23.942	5.886	25.125	6.800
23	1.000	.3190	-.000	23.120	11.346	24.250	12.500
24	1.000	.8610	-.000	21.457	17.308	22.500	18.750
25	1.000	.7380	-.000	17.281	20.870	18.125	22.526
26	1.000	.7380	-.000	12.250	21.864	12.750	23.514
27	1.000	.2250	-.000	6.297	22.267	6.375	23.919
28	1.000	.7380	-.000	.000	22.367	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0

MY = 1571311.0

MZ = -2891816.0

S = -8907.0

V = -6999.0

D = -896.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000137

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5					
	MY(CK) = 1571310.9		MZ(CK) = -2891816.0		D(CK) = -896.0	
Y-BAR = 1.050	Z-BAR = .293	IY = 4371.37	IZ = 4804.09	IYZ = 132.58	C5 = 592.72	C6 = 341.54
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2258	698.	3113.	3.	-58.	
2	.7407	-425.	-579.	-11.	35.	
3	.7412	-2887.	-3929.	-122.	239.	
4	.6716	-5096.	-7648.	-260.	367.	
5	.2067	-2193.	-10679.	-124.	127.	
6	.1735	-2249.	-13034.	-133.	103.	
7	.1734	-2656.	-15390.	-166.	92.	
8	.1994	-3426.	-17255.	-214.	79.	
9	.1994	-3798.	-19125.	-237.	44.	
10	.9825	-20550.	-20997.	-1284.	0.	
11	.7646	-13086.	-17142.	-514.	0.	
12	.7641	-10407.	-13624.	-160.	0.	
13	.7380	-7398.	-10024.	0.	0.	
14	.7380	-4609.	-6245.	0.	0.	
15	.7380	-1821.	-2467.	0.	0.	
16	.7381	834.	1130.	-13.	0.	
17	.7386	3415.	4632.	-134.	0.	
18	.8627	7268.	8457.	-454.	0.	
19	.3196	3290.	10333.	-206.	-38.	
20	.3197	3888.	12214.	-243.	-90.	
21	.3198	4486.	14100.	-280.	-155.	
22	.3199	4933.	15506.	-292.	-225.	
23	.3200	5376.	16907.	-304.	-310.	
24	.8644	15428.	17990.	-805.	-1112.	
25	.7412	12296.	16733.	-519.	-1010.	
26	.7407	10331.	14051.	-258.	-852.	
27	.2258	2383.	10629.	-9.	-197.	
28	.7405	5078.	6904.	0.	-415.	

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1F5

STATION I = 549.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	0.375	23.919	-6.297	22.267
2	1.000	.1460	-.000	-12.750	23.514	-12.250	21.864
3	1.000	.1460	-.000	-18.125	22.526	-17.281	20.870
4	1.000	.6690	-.000	-22.500	18.750	-21.457	17.308
5	1.000	.2060	-.000	-24.250	12.500	-23.120	11.346
6	1.000	.1730	-.000	-25.125	6.800	-23.942	5.886
7	1.000	.1730	-.000	-26.000	1.100	-24.750	.407
8	1.000	.1990	-.000	-26.000	-4.600	-24.750	-5.061
9	1.000	.1990	-.000	-26.000	-10.300	-24.750	-10.532
10	1.000	.9806	-.000	-26.000	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	0.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.443	-16.000
17	1.000	.1460	-.000	19.125	-16.000	18.339	-16.000
18	1.000	.8610	-.000	26.000	-16.000	24.750	-16.000
19	1.000	.3190	-.000	26.000	-10.300	24.750	-10.532
20	1.000	.3190	-.000	26.000	-4.600	24.750	-5.061
21	1.000	.3190	-.000	26.000	1.100	24.750	.407
22	1.000	.3190	-.000	1.000	6.800	23.942	5.886
23	1.000	.3190	-.000	24.250	12.500	23.120	11.346
24	1.000	.8610	-.000	22.500	18.750	21.457	17.308
25	1.000	.1460	-.000	18.125	22.526	17.281	20.870
26	1.000	.1460	-.000	12.750	23.514	12.250	21.864
27	1.000	.2250	-.000	0.375	23.919	6.297	22.267
28	1.000	.1460	-.000	.000	24.000	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0

MY = 1710284.9

NZ = -3069466.9

S = -8907.0

V = -6999.0

D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000139

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5												
MX(CK) =	967355.	MY(CK) =	1710285.	MZ(CK) =	-3069467.	S(CK) =	-8895.	V(CK) =	-6951.	L(CK) =	-896.		
T(UNBAL.) =	279959.	O(BAL.) =	70.3	2A(NET) =	3892.8								
Y-BAR =	2.061	Z-BAR =	1.544	IY =	2093.19	IZ =	3988.95	IYZ =	135.35	C5 =	743.84	C6 =	769.63
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	20.068	.2258	155.07	.9341	2446.	10910.	152.0	162.7	174.2	-10.	202.		
2	20.074	.1465	138.98	.9384	847.	5826.	212.4	226.4	241.2	-21.	70.		
3	20.086	.1466	166.99	.9498	150.	1033.	359.2	378.2	398.2	-6.	12.		
4	20.079	.6716	173.44	.9537	-3450.	-5177.	439.2	460.5	482.9	180.	-249.		
5	20.065	.2067	149.16	.9575	-2325.	-11322.	434.6	453.9	474.1	131.	-134.		
6	20.056	.1735	149.16	.9604	-2825.	-16377.	408.3	425.1	442.6	167.	-129.		
7	20.051	.1734	148.20	.9593	-3698.	-21433.	357.8	373.0	388.8	231.	-128.		
8	20.044	.1994	148.20	.9598	-5128.	-25825.	276.3	287.9	299.9	320.	-118.		
9	20.040	.1994	148.20	.9593	-6002.	-30219.	170.5	177.7	185.3	375.	-70.		
10	20.039	.9825	110.00	.9325	-33882.	-34619.	-455.9	-488.9	-524.3	2118.	0.		
11	20.015	.1721	102.00	.9249	-5056.	-29416.	-80.8	-87.4	-94.5	199.	0.		
12	20.002	.1720	102.00	.9518	-4237.	-24635.	210.5	221.2	232.4	65.	0.		
13	20.000	.1460	102.00	1.0000	-2903.	-19887.	445.9	445.9	445.9	0.	0.		
14	20.000	.1460	102.00	1.0000	-2211.	-15145.	565.8	565.8	565.8	0.	0.		
15	20.000	.1460	102.00	.9518	-1519.	-10403.	552.9	580.9	610.3	0.	0.		
16	20.002	.1460	102.00	.9249	-827.	-5662.	460.5	497.9	538.3	-13.	0.		
17	20.015	.1461	110.00	.9325	-134.	-920.	298.8	320.4	343.6	-5.	0.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	V	P (NET)	F (NET)	Q	Q/K	Q/YK	FY	PZ
18	20.039	.8627			3619.	4211.				226.	0.
19	20.040	.3196	148.20	.9593	2743.	8017.	132.3	138.0	143.8	171.	32.
20	20.044	.3197	148.20	.9598	4146.	13020.	106.2	110.6	115.3	259.	96.
21	20.051	.3198	148.20	.9593	5551.	17444.	118.5	123.5	128.8	347.	192.
22	20.056	.3199	149.16	.9604	6747.	21210.	169.8	176.8	184.1	399.	308.
23	20.065	.3200	149.16	.9575	7946.	24990.	256.1	267.5	279.4	449.	458.
24	20.079	.8644	173.44	.9537	24494.	28501.	377.6	396.0	415.2	1277.	1766.
25	20.086	.1466	166.99	.9498	4104.	28230.	806.6	849.3	894.2	173.	340.
26	20.074	.1465	138.98	.9384	3627.	24934.	412.6	439.7	468.5	91.	299.
27	20.068	.2258	155.07	.9341	4588.	20459.	97.6	104.4	111.8	18.	379.
28	20.067	.1465	153.00	.9878	2291.	15745.	212.0	214.7	217.3	0.	187.
			153.00	.9878			74.4	75.3	76.2		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000141

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH2F5

STATION I = 569.00

STATION II = 549.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-0.297	22.267	-6.375	23.919
2	1.000	.7380	-.000	-12.250	21.864	-12.750	23.514
3	1.000	.7380	-.000	-17.281	20.870	-18.125	22.526
4	1.000	.6690	-.000	-21.457	17.308	-22.500	18.750
5	1.000	.2060	-.000	-23.120	11.346	-24.250	12.500
6	1.000	.1730	-.000	-23.942	5.886	-25.125	6.800
7	1.000	.1730	-.000	-24.750	.407	-26.000	1.100
8	1.000	.1990	-.000	-24.750	-5.061	-26.000	-4.600
9	1.000	.1990	-.000	-24.750	-10.532	-26.000	-10.300
10	1.000	.9806	-.000	-24.750	-16.000	-26.000	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-19.125	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.750	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.750	-16.000
17	1.000	.7380	-.000	18.339	-16.000	19.125	-16.000
18	1.000	.8610	-.000	24.750	-16.000	26.000	-16.000
19	1.000	.3190	-.000	24.750	-10.532	26.000	-10.300
20	1.000	.3190	-.000	24.750	-5.061	26.000	-4.600
21	1.000	.3190	-.000	24.750	.407	26.000	1.100
22	1.000	.3190	-.000	23.942	5.886	25.125	6.800
23	1.000	.3190	-.000	23.120	11.346	24.250	12.500
24	1.000	.8610	-.000	21.457	17.308	22.500	18.750
25	1.000	.7380	-.000	17.281	20.870	18.125	22.526
26	1.000	.7380	-.000	12.250	21.864	12.750	23.514
27	1.000	.2250	-.000	0.297	22.267	6.375	23.919
28	1.000	.7380	-.000	.000	22.367	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1480433.0

NZ = -2964472.0

S = -9264.0

V = -6458.0

D = -428.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH2F5

MY(CK) = 1480432.9

MZ(CK) = -2964471.0

D(CK) = -428.0

Y-BAR = 1.050 Z-BAR = .293 IY = 4371.37 IZ = 4804.09 IYZ = 132.58 C5 = 608.33 C6 = 320.24

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2258	573.	2557.	2.	-47.
2	.7407	-897.	-1220.	-22.	74.
3	.7412	-3402.	-4629.	-144.	282.
4	.6716	-5555.	-8336.	-290.	401.
5	.2067	-2313.	-11264.	-131.	133.
6	.1735	-2332.	-13515.	-138.	107.
7	.1734	-2721.	-15766.	-170.	94.
8	.1994	-3478.	-17515.	-217.	80.
9	.1994	-3826.	-19267.	-239.	44.
10	.9825	-20574.	-21022.	-1286.	0.
11	.7646	-13029.	-17067.	-512.	0.
12	.7641	-10280.	-13457.	-158.	0.
13	.7380	-7205.	-9762.	0.	0.
14	.7380	-4343.	-5884.	0.	0.
15	.7380	-1481.	-2006.	0.	0.
16	.7381	1244.	1685.	-19.	0.
17	.7386	3894.	5280.	-153.	0.
18	.8627	7912.	9208.	-495.	0.
19	.3196	3491.	10967.	-218.	-41.
20	.3197	4052.	12731.	-253.	-93.
21	.3198	4614.	14500.	-288.	-160.
22	.3199	5019.	15777.	-297.	-229.
23	.3200	5421.	17048.	-306.	-313.
24	.8644	15417.	17976.	-804.	-1112.
25	.7412	12182.	16578.	-514.	-1009.
26	.7407	10143.	13795.	-254.	-837.
27	.2258	2303.	10271.	-9.	-190.
28	.7405	4741.	6445.	0.	-387.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000143

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 549.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.375	23.919	-6.297	22.267
2	1.000	.1460	-.000	-12.750	23.514	-12.250	21.864
3	1.000	.1460	-.000	-18.125	22.526	-17.281	20.870
4	1.000	.6690	-.000	-22.500	18.750	-21.457	17.308
5	1.000	.2060	-.000	-24.250	12.500	-23.120	11.346
6	1.000	.1730	-.000	-25.125	6.800	-23.942	5.886
7	1.000	.1730	-.000	-26.000	1.100	-24.750	.407
8	1.000	.1990	-.000	-26.000	-4.600	-24.750	-5.061
9	1.000	.1990	-.000	-26.000	-10.300	-24.750	-10.532
10	1.000	.9806	-.000	-26.000	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.443	-16.000
17	1.000	.1460	-.000	19.125	-16.000	18.339	-16.000
18	1.000	.8610	-.000	26.000	-16.000	24.750	-16.000
19	1.000	.3190	-.000	26.000	-10.300	24.750	-10.532
20	1.000	.3190	-.000	26.000	-4.600	24.750	-5.061
21	1.000	.3190	-.000	26.000	1.100	24.750	.407
22	1.000	.3190	-.000	25.125	6.800	23.942	5.886
23	1.000	.3190	-.000	24.250	12.500	23.120	11.346
24	1.000	.8610	-.000	22.500	18.750	21.457	17.308
25	1.000	.1460	-.000	18.125	22.526	17.281	20.870
26	1.000	.1460	-.000	12.750	23.514	12.250	21.864
27	1.000	.2250	-.000	6.375	23.919	6.297	22.267
28	1.000	.1460	-.000	.000	24.000	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0 MY = 1609583.0 MZ = -3149739.0 S = -9264.0 V = -6458.0 D = -428.0

PREPARED BY CIARDULLO  
 CHECKED BY CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
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000144

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2F5											
MX(CK) = 970130. MY(CK) = 1609583. MZ(CK) = -3149739. S(CK) = -9275. V(CK) = -6460. C(CK) = -428.											
T(INBAL.) = 290352. Q(BAL.) = 72.9 2A(HET) = 3892.8											
Y-BAR = 2.061 Z-BAR = 1.544 IY = 2093.19 IZ = 3988.95 IYZ = 135.35 C5 = 765.41 C6 = 719.78											
ITEM	L.S.	AE(PROJ.)	2A	K	P(HET)	F(HET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258			2166.	9662.				-8.	179.
2	20.074	.1465	155.07	.9341	648.	4458.	147.3	157.7	168.9	-16.	53.
3	20.086	.1466	138.98	.9384	-59.	-404.	220.5	235.0	250.4	2.	-5.
4	20.079	.6716	166.99	.9498	-4343.	-6518.	381.9	402.2	423.4	227.	-313.
5	20.065	.2067	173.44	.9537	-2543.	-12385.	441.3	462.7	485.2	144.	-147.
6	20.056	.1735	149.16	.9575	-2963.	-17173.	432.0	451.2	471.3	175.	-135.
7	20.051	.1734	149.16	.9604	-3790.	-21962.	403.0	419.7	437.0	237.	-131.
8	20.044	.1994	148.20	.9593	-5176.	-26068.	351.3	366.2	381.8	324.	-119.
9	20.040	.1994	148.20	.9598	-5993.	-30177.	270.0	281.3	293.1	375.	-70.
10	20.039	.9825	148.20	.9593	-33551.	-34292.	165.9	173.0	180.3	2098.	0.
11	20.015	.1721	110.00	.9325	-4974.	-28941.	-444.2	-476.4	-510.9	195.	0.
12	20.002	.1720	102.00	.9249	-4131.	-24022.	-68.1	-73.6	-79.6	63.	0.
13	20.000	.1460	102.00	.9518	-2794.	-19137.	222.5	233.8	245.6	0.	0.
14	20.000	.1460	102.00	1.0000	-2082.	-14258.	454.3	454.3	454.3	0.	0.
15	20.003	.1460	102.00	1.0000	-1369.	-9378.	567.4	567.4	567.4	0.	0.
16	20.002	.1460	102.00	.9518	-657.	-4500.	545.4	573.0	601.9	-10.	0.
17	20.015	.1461	102.00	.9249	56.	382.	442.0	477.9	516.8	2.	0.
			110.00	.9325			266.7	286.0	306.7		

PREPARED BY C. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AC (PROJ.)	2A	Y	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			4868.	5665.				304.	0.
19	20.040	.3196	148.20	.9593	3115.	9785.	128.4	133.8	139.5	195.	36.
20	20.044	.3197	148.20	.9598	4428.	13910.	110.4	115.0	119.8	277.	102.
21	20.051	.3198	148.20	.9593	5741.	18043.	128.3	133.8	139.5	359.	199.
22	20.056	.3199	149.16	.9604	6841.	21504.	182.6	190.2	198.0	405.	313.
23	20.065	.3200	149.16	.9575	7943.	24979.	269.3	281.3	293.8	449.	458.
24	20.079	.8644	173.44	.9537	24183.	28198.	388.5	407.4	427.1	449.	458.
25	20.086	.1466	166.99	.9498	4010.	27582.	803.2	845.7	890.4	1261.	1744.
26	20.074	.1465	138.98	.9384	3509.	24121.	410.1	437.1	465.0	169.	332.
27	20.068	.2258	155.07	.9341	4370.	19487.	98.4	105.3	112.8	88.	289.
28	20.067	.1465	153.00	.9878	2129.	14631.	206.1	208.7	211.3	17.	361.
			153.00	.9878			77.1	78.1	79.1	0.	174.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

000146

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 569.00

STATION II = 549.00

ITEM	E	A	ZAC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.375	23.919
2	1.000	.7380	-.000	-12.250	21.864	-12.750	23.514
3	1.000	.7380	-.000	-17.281	20.870	-18.125	22.526
4	1.000	.6690	-.000	-21.457	17.308	-22.500	18.750
5	1.000	.2060	-.000	-23.120	11.346	-24.250	12.500
6	1.000	.1730	-.000	-23.942	5.886	-25.125	6.800
7	1.000	.1730	-.000	-24.750	.407	-26.000	1.100
8	1.000	.1090	-.000	-24.750	-5.061	-26.000	-4.600
9	1.000	.1990	-.000	-24.750	-10.532	-26.000	-10.300
10	1.000	.9806	-.000	-24.750	-16.000	-26.000	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-19.125	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.750	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.750	-16.000
17	1.000	.7380	-.000	18.339	-16.000	19.125	-16.000
18	1.000	.8610	-.000	24.750	-16.000	26.000	-16.000
19	1.000	.3190	-.000	24.750	-10.532	26.000	-10.300
20	1.000	.3190	-.000	24.750	-5.061	26.000	-4.600
21	1.000	.3190	-.000	24.750	.407	26.000	1.100
22	1.000	.3190	-.000	23.942	5.886	25.125	6.800
23	1.000	.3190	-.000	23.120	11.346	24.250	12.500
24	1.000	.8610	-.000	21.457	17.308	22.500	18.750
25	1.000	.7380	-.000	17.281	20.870	18.125	22.526
26	1.000	.7380	-.000	12.250	21.864	12.750	23.514
27	1.000	.2250	-.000	6.297	22.267	6.375	23.919
28	1.000	.7380	-.000	.000	22.367	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0    MY = 1690998.0    MZ = -2911923.0    S = -8972.0    V = -7625.0    D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000147

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH7F5					
	MY(CK) = 1690997.9		MZ(CK) = -2911922.9		D(CK) = -822.0	
Y-BAR = 1.050	Z-BAR = .293	IY = 4371.37	IZ = 4804.09	IYZ = 132.58	C5 = 596.14	C6 = 368.81
ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ	
1	.2258	829.	3696.	3.	-68.	
2	.7407	-20.	-27.	-0.	2.	
3	.7412	-2514.	-3422.	-106.	208.	
4	.6716	-4833.	-7252.	-252.	348.	
5	.2067	-2146.	-10453.	-121.	124.	
6	.1735	-2236.	-12961.	-132.	102.	
7	.1734	-2670.	-15470.	-167.	93.	
8	.1994	-3472.	-17486.	-217.	80.	
9	.1994	-3874.	-19505.	-242.	45.	
10	.9825	-21068.	-21527.	-1317.	0.	
11	.7646	-13473.	-17648.	-529.	0.	
12	.7641	-10778.	-14110.	-165.	0.	
13	.7380	-7741.	-10489.	0.	0.	
14	.7380	-4936.	-6689.	0.	0.	
15	.7380	-2131.	-2888.	0.	0.	
16	.7381	538.	729.	-8.	0.	
17	.7386	3134.	4251.	-123.	0.	
18	.8627	6958.	8097.	-435.	0.	
19	.3196	3223.	10123.	-201.	-37.	
20	.3197	3809.	12154.	-242.	-89.	
21	.3198	4515.	14189.	-282.	-156.	
22	.3199	5008.	15743.	-296.	-229.	
23	.3200	5498.	17292.	-311.	-317.	
24	.8644	15894.	18533.	-829.	-1146.	
25	.7412	12757.	17360.	-538.	-1056.	
26	.7407	10799.	14687.	-270.	-891.	
27	.2258	2524.	11255.	-10.	-208.	
28	.7405	5525.	7511.	0.	-451.	

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000148

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

STATION I = 549.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.375	23.919	-6.297	22.267
2	1.000	.1460	-.000	-12.750	23.514	-12.250	21.864
3	1.000	.1460	-.000	-18.125	22.526	-17.281	20.870
4	1.000	.6690	-.000	-22.750	18.750	-21.457	17.308
5	1.000	.2060	-.000	-24.250	12.500	-23.120	11.346
6	1.000	.1730	-.000	-25.125	6.800	-23.942	5.886
7	1.000	.1730	-.000	-26.000	1.100	-24.750	.407
8	1.000	.1990	-.000	-26.000	-4.600	-24.750	-5.061
9	1.000	.1990	-.000	-26.000	-10.300	-24.750	-10.532
10	1.000	.9806	-.000	-26.000	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.443	-16.000
17	1.000	.1460	-.000	19.125	-16.000	18.339	-16.000
18	1.000	.8310	-.000	26.000	-16.000	24.750	-16.000
19	1.000	.3190	-.000	26.000	-10.300	24.750	-10.532
20	1.000	.3190	-.000	26.000	-4.600	24.750	-5.061
21	1.000	.3190	-.000	26.000	1.100	24.750	.407
22	1.000	.3190	-.000	25.125	6.800	23.942	5.886
23	1.000	.3190	-.000	24.250	12.500	23.120	11.346
24	1.000	.8610	-.000	22.500	18.750	21.457	17.308
25	1.000	.1460	-.000	18.125	22.526	17.281	20.870
26	1.000	.1460	-.000	12.750	23.514	12.250	21.864
27	1.000	.2250	-.000	6.375	23.919	6.297	22.267
28	1.000	.1460	-.000	.000	24.000	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1843476.0

MZ = -3091458.0

S = -8972.0

V = -7625.0

D = -822.0

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 DATE 2/12/71

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000149

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

MX(CK) = 976986. MY(CK) = 1843476. MZ(CK) = -3091458. S(CK) = -8989. V(CK) = -7626. L(CK) = -822.

T(UNBAL.) = 268791. Q(BAL.) = 67.5 2A(NET) = 3892.8

Y-BAR = 2.061 Z-BAR = 1.544 IY = 2093.19 IZ = 3988.95 IYZ = 135.35 C5 = 747.17 C6 = 833.00

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	20.068	.2258			2762.	12319.				-11.	228.
2	20.074	.1465	155.07	.9341	1045.	7187.	157.8	169.0	180.9	-26.	86.
3	20.086	-1466	138.98	.9384	337.	2315.	208.5	222.2	236.8	-14.	28.
4	20.079	.0716	166.99	.9498	-2766.	-4151.	346.4	364.8	384.1	144.	-199.
5	20.065	.2067	173.44	.9537	-2197.	-10702.	446.4	468.1	490.8	124.	-127.
6	20.056	.1735	149.16	.9575	-2782.	-16124.	445.7	465.5	486.2	165.	-127.
7	20.051	.1734	149.16	.9604	-3718.	-21540.	420.9	438.3	456.3	232.	-129.
8	20.044	.1994	148.20	.9593	-5222.	-26301.	370.1	385.8	402.2	326.	-120.
9	20.040	.1994	148.20	.9598	-6168.	-31057.	286.3	298.3	310.8	385.	-72.
10	20.039	.9825	148.20	.9593	-35057.	-35820.	176.1	183.6	191.4	2191.	0.
11	20.015	.1721	110.00	.9325	-5258.	-30591.	-481.0	-515.8	-553.2	207.	0.
12	20.002	.1720	102.00	.9249	-4435.	-25787.	-97.2	-105.1	-113.6	68.	0.
13	20.000	.1460	102.00	.9518	-3069.	-21017.	201.9	212.1	222.9	0.	0.
14	20.000	.1460	102.00	1.0000	-2373.	-16254.	445.7	445.7	445.7	0.	0.
15	20.000	.1460	102.00	1.0000	-1678.	-11491.	573.9	573.9	573.9	0.	0.
16	20.002	.1460	102.00	.9518	-982.	-6729.	567.8	596.6	626.8	-15.	0.
17	20.015	.1461	102.00	.9249	-287.	-1968.	481.4	520.6	562.8	-11.	0.
			110.00	.9325			325.9	349.5	374.8		



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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			2737.	3184.				171.	0.
19	20.040	.3196	148.20	.9593	2532.	7952.	132.8	138.4	144.3	158.	29.
20	20.044	.3197	148.20	.9598	4050.	12724.	99.7	103.8	108.2	253.	93.
21	20.051	.3198	148.20	.9593	5570.	17505.	108.3	112.9	117.7	348.	193.
22	20.056	.3199	149.16	.9604	6881.	21631.	159.1	165.7	172.5	407.	314.
23	20.065	.3200	149.16	.9575	8195.	25772.	248.3	259.3	270.8	463.	473.
24	20.079	.8644	173.44	.9537	25503.	29737.	375.9	394.1	413.3	623.	1839.
25	20.086	.1466	166.99	.9428	4308.	29634.	830.6	874.6	920.9	182.	357.
26	20.074	.1465	138.98	.9384	3837.	26382.	424.3	452.2	481.9	96.	317.
27	20.068	.2258	155.07	.9341	4913.	21910.	97.2	104.1	111.4	19.	406.
28	20.067	.1465	153.00	.9878	2500.	17179.	220.8	223.5	226.3	0.	204.
			153.00	.9878			71.4	72.3	73.2		

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000151

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1G13

STATION I = 569.00 STATION II = 549.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.375	23.919
2	1.000	.7380	-.000	-12.250	21.864	-12.750	23.514
3	1.000	.7380	-.000	-17.281	20.870	-18.125	22.526
4	1.000	.6690	-.000	-21.457	17.308	-22.500	18.750
5	1.000	.2060	-.000	-23.120	11.346	-24.250	12.500
6	1.000	.1730	-.000	-23.942	5.886	-25.125	6.800
7	1.000	.1730	-.000	-24.750	.407	-26.000	1.100
8	1.000	.1990	-.000	-24.750	-5.061	-26.000	-4.600
9	1.000	.1990	-.000	-24.750	-10.532	-26.000	-10.300
10	1.000	.9806	-.000	-24.750	-16.000	-26.000	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-19.125	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.750	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.750	-16.000
17	1.000	.7380	-.000	18.339	-16.000	19.125	-16.000
18	1.000	.8610	-.000	24.750	-16.000	26.000	-16.000
19	1.000	.3190	-.000	24.750	-10.532	26.000	-10.300
20	1.000	.3190	-.000	24.750	-5.061	26.000	-4.600
21	1.000	.3190	-.000	24.750	.407	26.000	1.100
22	1.000	.3190	-.000	23.942	5.886	25.125	6.800
23	1.000	.3190	-.000	23.120	11.346	24.250	12.500
24	1.000	.8610	-.000	21.457	17.308	22.500	18.750
25	1.000	.7380	-.000	17.281	20.870	18.125	22.526
26	1.000	.7380	-.000	12.250	21.864	12.750	23.514
27	1.000	.2250	-.000	6.297	22.267	6.375	23.919
28	1.000	.7380	-.000	.000	22.367	.000	24.000

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2118187.0 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1613					
	MY(CK) = 2118186.9	MZ(CK) = -.0	D(CK) = 966.0			
Y-BAR = 1.050	Z-BAR = .293	IY = 4371.37	IZ = 4804.09	IYZ = 132.58	C5 = -13.59	C6 = 484.91
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2258	2442.	10892.	10.	-202.	
2	.7407	7929.	10783.	198.	-654.	
3	.7412	7627.	10379.	322.	-632.	
4	.6716	5789.	8688.	302.	-417.	
5	.2067	1189.	5789.	67.	-69.	
6	.1735	540.	3132.	32.	-25.	
7	.1734	81.	472.	5.	-3.	
8	.1994	-435.	-2192.	-27.	10.	
9	.1994	-964.	-4855.	-60.	11.	
10	.9825	-7356.	-7516.	-460.	0.	
11	.7646	-5791.	-7586.	-228.	0.	
12	.7641	-5848.	-7656.	-90.	0.	
13	.7380	-5710.	-7737.	0.	0.	
14	.7380	-5774.	-7823.	0.	0.	
15	.7380	-5837.	-7910.	0.	0.	
16	.7381	-5899.	-7994.	91.	0.	
17	.7386	-5962.	-8085.	234.	0.	
18	.8627	-7039.	-8191.	440.	0.	
19	.3196	-1761.	-5530.	110.	20.	
20	.3197	-913.	-2868.	57.	21.	
21	.3198	-65.	-205.	4.	2.	
22	.3199	788.	2478.	-47.	-36.	
23	.3200	1639.	5156.	-93.	-95.	
24	.8644	6947.	8100.	-362.	-501.	
25	.7412	7279.	9905.	-307.	-603.	
26	.7407	7682.	10448.	-192.	-634.	
27	.2258	2404.	10720.	-9.	-193.	
28	.7405	7983.	10853.	0.	-652.	

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 DATE 2/12/71

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000153

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1G13

STATION I = 549.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.375	23.919	-6.297	22.267
2	1.000	.1460	-.000	-12.750	23.514	-12.250	21.864
3	1.000	.1460	-.000	-18.125	22.526	-17.281	20.870
4	1.000	.6690	-.000	-22.500	18.750	-21.457	17.308
5	1.000	.2060	-.000	-24.250	12.500	-23.120	11.346
6	1.000	.1730	-.000	-25.125	6.800	-23.942	5.886
7	1.000	.1730	-.000	-26.000	1.100	-24.750	.407
8	1.000	.1990	-.000	-26.000	-4.600	-24.750	-5.061
9	1.000	.1990	-.000	-26.000	-10.300	-24.750	-10.532
10	1.000	.9806	-.000	-26.000	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-19.125	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.750	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.750	-16.000	12.443	-16.000
17	1.000	.1460	-.000	19.125	-16.000	18.339	-16.000
18	1.000	.8610	-.000	26.000	-16.000	24.750	-16.000
19	1.000	.3190	-.000	26.000	-10.300	24.750	-10.532
20	1.000	.3190	-.000	26.000	-4.600	24.750	-5.061
21	1.000	.3190	-.000	26.000	1.100	24.750	.407
22	1.000	.3190	-.000	25.125	6.800	23.942	5.886
23	1.000	.3190	-.000	24.250	12.500	23.120	11.346
24	1.000	.8610	-.000	22.500	18.750	21.457	17.308
25	1.000	.1460	-.000	18.125	22.526	17.281	20.870
26	1.000	.1460	-.000	12.750	23.514	12.250	21.864
27	1.000	.2250	-.000	6.375	23.919	6.297	22.267
28	1.000	.1460	-.000	.000	24.000	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2293014.0 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH1G13											
MX(CK) =		-0.		MY(CK) = 2293014.		MZ(CK) = -0.		S(CK) = -5.		V(CK) = -8745.		L(CK) = 966.	
T(UNEAL.) = -344957.		Q(BAL.) = -86.7		2A(NET) = 3892.8									
Y-BAR = 2.061		Z-BAR = 1.544		IY = 2093.19		IZ = 3988.95		IYZ = .135.35		C5 = -37.73		C6 = 1097.19	
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	20.068	.2258			5641.	25156.						-22.	466.
2	20.074	.1465	155.07	.9341	3632.	24966.	62.7	67.1	71.9	-91.	300.		
3	20.086	.1465	138.98	.9384	3505.	24107.	-138.6	-147.7	-157.4	-148.	290.		
4	20.079	.6716	166.99	.9498	13381.	20080.	-336.1	-353.8	-372.6	-698.	965.		
5	20.065	.2067	173.44	.9537	2714.	13217.	24.5	25.7	27.0	-153.	157.		
6	20.056	.1735	149.16	.9575	1199.	6949.	97.7	102.0	106.5	-71.	55.		
7	20.051	.1734	149.16	.9604	120.	693.	129.6	134.9	140.5	-7.	4.		
8	20.044	.1994	148.20	.9593	-1110.	-5590.	131.3	136.8	142.6	69.	-26.		
9	20.040	.1994	148.20	.9598	-2357.	-11867.	99.0	103.1	107.4	147.	-27.		
10	20.039	.9825	148.20	.9593	-17757.	-18143.	32.1	33.5	34.9	1110.	0.		
11	20.015	.1721	110.00	.9325	-3156.	-18361.	-453.7	-486.6	-521.8	124.	0.		
12	20.002	.1720	102.00	.9249	-3195.	-18577.	-328.2	-354.8	-383.6	49.	0.		
13	20.000	.1460	102.00	.9518	-2747.	-18813.	-211.4	-222.1	-233.4	0.	0.		
14	20.000	.1460	102.00	1.0000	-2782.	-19054.	-74.0	-74.0	-74.0	0.	0.		
15	20.000	.1460	102.00	1.0000	-2817.	-19294.	75.6	75.6	75.6	0.	0.		
16	20.002	.1460	102.00	.9518	-2852.	-19539.	215.7	226.6	238.1	0.	0.		
17	20.015	.1461	102.00	.9249	-2889.	-19800.	350.5	378.9	409.7	-44.	0.		
			110.00	.9325			496.6	532.6	571.1	-114.	0.		

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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			-17284.	-20113.				-1080.	0.
19	20.040	.3196	148.20	.9593	-4405.	-13836.	19.5	20.4	21.2	-275.	-51.
20	20.044	.3197	148.20	.9598	-2406.	-7560.	-107.4	-111.9	-116.5	-150.	-55.
21	20.051	.3198	148.20	.9593	-407.	-1279.	-178.9	-186.5	-194.5	-25.	-14.
22	20.056	.3199	149.16	.9604	1604.	5042.	-195.6	-203.6	-212.0	95.	73.
23	20.065	.3200	149.16	.9575	3617.	11375.	-155.9	-162.8	-170.1	204.	209.
24	20.079	.8644	173.44	.9537	15754.	18369.	-61.0	-64.0	-67.1	822.	1136.
25	20.086	.1466	166.99	.9498	3304.	22727.	357.5	376.4	396.3	139.	274.
26	20.074	.1465	138.98	.9384	3491.	23997.	166.7	177.6	189.3	87.	288.
27	20.068	.2258	155.07	.9341	5532.	24672.	-29.8	-31.9	-34.2	22.	457.
28	20.067	.1465	153.00	.9878	3638.	24999.	123.0	124.5	126.0	0.	297.
			153.00	.9878			-91.6	-92.8	-93.9		

4

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 DATE 2/12/71

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000156

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0    MY = 1729363.9    MZ = -2557271.9    S = -8234.0    V = -8793.0    D = -717.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

MY(CK) = 1729364.0

MZ(CK) = -2557271.9

D(CK) = -717.0

Y-BAR = .767 Z-BAR = -.324 IY = 4000.69 IZ = 4347.28 IYZ = 112.64 C5 = 577.60 C6 = 415.95

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	952.	4659.	4.	-79.
2	.7407	938.	1276.	23.	-77.
3	.7412	-1376.	-1873.	-58.	114.
4	.7760	-4305.	-5591.	-224.	310.
5	.1736	-1530.	-8875.	-86.	88.
6	.1735	-1983.	-11497.	-117.	91.
7	.1734	-2436.	-14114.	-152.	83.
8	.1994	-3236.	-16298.	-202.	75.
9	.1994	-3670.	-18480.	-229.	43.
10	.9825	-20224.	-20664.	-1264.	0.
11	.7646	-13112.	-17175.	-515.	0.
12	.7641	-10713.	-14024.	-164.	0.
13	.7380	-7891.	-10692.	0.	0.
14	.7380	-5173.	-7010.	0.	0.
15	.7380	-2456.	-3328.	0.	0.
16	.7381	0.	0.	-0.	0.
17	.7386	2311.	3133.	-91.	0.
18	.8426	5531.	6589.	-346.	0.
19	.2996	2619.	6777.	-164.	-30.
20	.2996	3308.	11087.	-207.	-28.
21	.2998	3928.	13171.	-246.	-134.
22	.2998	4455.	14942.	-263.	-204.
23	.3000	4975.	16694.	-281.	-287.
24	.8945	16134.	18179.	-841.	-1162.
25	.7412	12698.	17280.	-535.	-1051.
26	.7407	10993.	14950.	-275.	-906.
27	.2057	2430.	11893.	-9.	-201.
28	.7405	6118.	8318.	0.	-505.



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000158

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-0.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-8.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	0.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1905226.0

MZ = -2721952.0

S = -8234.0

V = -8793.0

D = -717.0

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 DATE 2/12/71

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000159

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

MX(CK) = 980840. MY(CK) = 1905226. MZ(CK) = -2721952. S(CK) = -8233. V(CK) = -8789. L(CK) = -717.

T(UNBAL.) = 1147950. Q(BAL.) = 314.9 2A(NET) = 3554.2

Y-BAR = 1.050 Z-BAR = .293 IY = 4371.39 IZ = 4804.04 IYZ = 132.59 C5 = 555.19 C6 = 419.05

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258			1147.	5117.				-4.	95.
2	20.074	.7407	135.09	.9292	1192.	1621.	324.0	348.7	375.2	-30.	96.
3	20.086	.7412	122.17	.9347	-1187.	-1615.	337.8	361.4	386.6	50.	-98.
4	20.079	.6716	148.71	.9471	-3635.	-5455.	351.2	370.8	391.5	189.	-262.
5	20.065	.2067	156.71	.9515	-1826.	-8891.	384.7	404.3	424.9	103.	-105.
6	20.056	.1735	135.56	.9556	-2009.	-11643.	372.3	389.6	407.7	119.	-92.
7	20.051	.1734	135.93	.9568	-2484.	-14395.	371.5	388.3	405.8	155.	-85.
8	20.044	.1994	135.33	.9598	-3314.	-16688.	370.3	385.9	402.0	207.	-77.
9	20.040	.1994	135.41	.9580	-3770.	-18983.	365.9	382.0	398.8	236.	-44.
10	20.039	.9825	135.33	.9576	-20827.	-21281.	361.0	377.0	393.7	1302.	0.
11	20.015	.7646	102.58	.9276	-13486.	-17666.	321.7	346.8	373.9	530.	0.
12	20.002	.7641	94.34	.9186	-10976.	-14369.	301.4	328.1	357.2	168.	0.
13	20.000	.7380	97.09	.9496	-8115.	-10997.	299.0	314.9	331.6	0.	0.
14	20.000	.7380	102.00	1.0000	-5503.	-7457.	303.7	303.7	303.7	0.	0.
15	20.000	.7380	102.00	1.0000	-2891.	-3918.	287.2	287.2	287.2	0.	0.
16	20.002	.7381	97.09	.9496	-405.	-549.	252.0	265.4	279.5	0.	0.
17	20.015	.7386	94.34	.9186	2012.	2729.	225.2	245.2	266.9	-6.	0.
			102.58	.9276			213.6	230.2	248.2	79.	0.

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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627	135.33	.9576	5421.	6308.	215.2	224.7	234.7	339.	0.
19	20.040	.3196	135.41	1.0115	2741.	8610.	233.5	230.9	228.2	171.	32.
20	20.040	.3196	135.33	.9062	3474.	10911.	216.7	239.1	263.9	217.	29.
21	20.051	.3198	135.93	.9568	4208.	13226.	242.2	253.1	264.6	263.	144.
22	20.056	.3199	135.56	.9556	4800.	15090.	258.4	270.4	282.9	284.	219.
23	20.065	.3200	156.71	.9515	5389.	16948.	277.0	291.1	305.9	304.	311.
24	20.079	.8644	148.71	.9471	15916.	18559.	265.4	280.2	295.8	829.	1147.
25	20.086	.7412	122.17	.9347	13035.	17739.	277.7	297.1	317.8	549.	1079.
26	20.074	.7407	135.09	.9292	11267.	15324.	288.8	310.8	334.5	282.	929.
27	20.068	.2258	140.84	.9878	2726.	12157.	321.6	325.6	329.6	10.	225.
28	20.068	.7405	140.84	.9878	6384.	8679.	334.8	338.9	343.1	0.	527.

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 DATE 2/12/71

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000161

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0

MY = 1430337.0

MZ = -2713166.0

S = -8907.0

V = -6999.0

D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000162

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH15					
	MY(CK) = 1430337.0	MZ(CK) = -2713165.9	D(CK) = -896.0			
Y-BAR =	.767	Z-BAR = -.324	IY = 4000.69	IZ = 4347.28	IYZ = 112.64	C5 = 615.45 C6 = 340.12
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	568.	2782.	2.	-47.	
2	.7407	-575.	-782.	-14.	47.	
3	.7412	-2966.	-4036.	-125.	245.	
4	.7760	-5889.	-7648.	-307.	424.	
5	.1736	-1820.	-10556.	-103.	105.	
6	.1735	-2210.	-12808.	-131.	101.	
7	.1734	-2598.	-15053.	-162.	89.	
8	.1994	-3343.	-16836.	-209.	77.	
9	.1994	-3698.	-18619.	-231.	43.	
10	.9825	-19970.	-20405.	-1248.	0.	
11	.7640	-12742.	-16691.	-501.	0.	
12	.7641	-10187.	-13335.	-156.	0.	
13	.7380	-7222.	-9786.	0.	0.	
14	.7380	-4326.	-5862.	0.	0.	
15	.7380	-1431.	-1939.	0.	0.	
16	.7381	1186.	1608.	-18.	0.	
17	.7386	3649.	4948.	-143.	0.	
18	.8426	7247.	8634.	-453.	0.	
19	.2996	3110.	10424.	-194.	-36.	
20	.2996	3674.	12313.	-230.	-31.	
21	.2998	4181.	14020.	-261.	-143.	
22	.2998	4581.	15364.	-271.	-209.	
23	.3000	4974.	16688.	-281.	-287.	
24	.8945	15690.	17679.	-817.	-1130.	
25	.7412	12031.	16372.	-507.	-996.	
26	.7407	10138.	13788.	-253.	-836.	
27	.2057	2143.	10491.	-8.	-177.	
28	.7405	4906.	6670.	0.	-405.	

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000163

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0

MY = 1571311.0

MZ = -2891816.0

S = -8907.0

V = -6999.0

D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000164

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1F5												
MX(CK) =	967355.	MY(CK) =	1571311.	MZ(CK) =	-2891816.	S(CK) =	-8932.	V(CK) =	-7046.	L(CK) =	-896.		
T(UNBAL.) =	1138604.	O(BAL.) =	312.4	2A(NET) =	3554.2								
Y-BAR =	1.050	Z-BAR =	.293	IY =	4371.39	IZ =	4804.04	IYZ =	132.59	C5 =	592.73	C6 =	341.54
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	20.068	.2258			698.	3113.							
			135.09	.9292			318.4	342.6	368.7	-3.	58.		
2	20.074	.7407			-425.	-579.							
			122.17	.9347			327.3	350.1	374.6	11.	-35.		
3	20.086	.7412			-2887.	-3929.							
			148.71	.9471			335.3	354.0	373.8	122.	-239.		
4	20.079	.6716			-5096.	-7648.							
			156.71	.9515			374.6	393.7	413.7	266.	-367.		
5	20.065	.2067			-2193.	-10679.							
			135.56	.9556			358.4	375.0	392.5	124.	-127.		
6	20.056	.1735			-2249.	-13034.							
			135.93	.9568			357.0	373.1	390.0	133.	-103.		
7	20.051	.1734			-2656.	-15389.							
			135.33	.9598			355.3	370.2	385.7	166.	-91.		
8	20.044	.1994			-3426.	-17256.							
			135.41	.9580			350.6	366.0	382.1	214.	-79.		
9	20.040	.1994			-3798.	-19125.							
			135.33	.9576			345.7	361.0	377.0	237.	-44.		
10	20.039	.9825			-20550.	-20997.							
			102.58	.9276			309.0	332.0	357.9	1284.	0.		
11	20.015	.7646			-13086.	-17142.							
			94.34	.9186			289.2	314.8	342.7	514.	0.		
12	20.002	.7641			-10407.	-13624.							
			97.09	.9496			288.5	303.8	319.9	159.	0.		
13	20.000	.7380			-7398.	-10024.							
			102.00	1.0000			295.0	295.0	295.0	0.	0.		
14	20.000	.7380			-4609.	-6245.							
			102.00	1.0000			280.9	280.9	280.9	0.	0.		
15	20.000	.7380			-1820.	-2467.							
			97.09	.9496			248.2	261.4	275.3	0.	0.		
16	20.002	.7381			834.	1130.							
			94.34	.9186			223.9	243.8	265.4	13.	0.		
17	20.015	.7386			3416.	4632.							
			102.58	.9276			215.3	232.1	250.2	134.	0.		

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 CHECKED BY S. CIARDULLO  
 DATE 12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/YK	FY	PZ
18	20.039	.8627			7268.	8457.				454.	0.
			135.33	.9576			223.2	233.1	243.5		
19	20.040	.3196			3290.	10334.				206.	38.
			135.41	1.0115			244.9	242.1	239.3		
20	20.040	.3196			3087.	12209.				243.	33.
			135.33	.9062			229.0	252.7	278.9		
21	20.051	.3198			4486.	14099.				280.	153.
			135.93	.9568			256.4	268.0	280.1		
22	20.056	.3199			4933.	15507.				292.	225.
			135.56	.9556			272.9	285.6	298.8		
23	20.065	.3200			5376.	16908.				304.	310.
			156.71	.9515			290.9	305.7	321.3		
24	20.079	.8644			15428.	17990.				804.	1112.
			148.71	.9471			277.1	292.6	308.9		
25	20.086	.7412			12296.	16733.				518.	1017.
			122.17	.9347			285.9	305.9	327.2		
26	20.074	.7407			10331.	14051.				258.	852.
			135.09	.9292			293.2	315.5	339.5		
27	20.068	.2258			2383.	10629.				9.	197.
			140.84	.9878			323.5	327.5	331.6		
28	20.068	.7405			5079.	6905.				0.	419.
			140.84	.9878			332.0	336.1	340.3		



000166

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH2F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-10.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	10.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1351283.0

MZ = -2779205.0

S = -9264.0

V = -6458.0

D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH2F5					
	MY(CK) = 1351283.0	MZ(CK) = -2779204.9	O(CK) = -428.0			
Y-BAR = .767	Z-BAR = -.324	IY = 4000.69	IZ = 4347.28	IYZ = 112.64	C5 = 631.08	C6 = 319.96
ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ	
1	.2057	465.	2278.	2.	-38.	
2	.7407	-1004.	-1366.	-25.	83.	
3	.7412	-3435.	-4674.	-145.	284.	
4	.7760	-6375.	-8280.	-332.	459.	
5	.1736	-1913.	-11097.	-108.	110.	
6	.1735	-2287.	-13254.	-135.	104.	
7	.1734	-2658.	-15404.	-166.	91.	
8	.1994	-3392.	-17081.	-212.	78.	
9	.1994	-3725.	-18758.	-233.	43.	
10	.9825	-20002.	-20438.	-1250.	0.	
11	.7646	-12696.	-16631.	-499.	0.	
12	.7641	-10076.	-13190.	-154.	0.	
13	.7380	-7048.	-9551.	0.	0.	
14	.7380	-4079.	-5528.	0.	0.	
15	.7380	-1110.	-1504.	0.	0.	
16	.7381	1574.	2132.	-24.	0.	
17	.7386	4099.	5558.	-161.	0.	
18	.8426	7839.	9339.	-490.	0.	
19	.2996	3289.	11023.	-206.	-38.	
20	.2996	3819.	12800.	-239.	-32.	
21	.2998	4297.	14407.	-269.	-147.	
22	.2998	4661.	15633.	-275.	-213.	
23	.3000	5019.	16839.	-284.	-290.	
24	.8945	15701.	17691.	-818.	-1131.	
25	.7412	11943.	16253.	-503.	-988.	
26	.7407	9981.	13575.	-250.	-823.	
27	.2057	2080.	10182.	-8.	-172.	
28	.7405	4606.	6262.	0.	-380.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000168

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (ST4.I)

CONDITION CM2F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-0.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	0.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1480433.0

MZ = -2964472.0

S = -9264.0

V = -6458.0

D = -420.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 110.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000169

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH2F5												
MX(CK) =	970130.	MY(CK) =	1480433.	MZ(CK) =	-2964472.	S(CK) =	-9263.	V(CK) =	-6455.	L(CK) =	-428.		
T(UNBAL.) =	1145111.	G(BAL.) =	314.1	2A(NET) =	3554.2								
Y-BAR =	1.050	Z-BAR =	.293	IY =	4371.39	IZ =	4804.04	IYZ =	132.59	C5 =	608.33	C6 =	320.24
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	P	PZ		
1	20.068	.2258			573.	2557.							
2	20.074	.7407	135.09	.9292	-897.	-1220.	319.2	343.5	369.6	-2.	47.		
3	20.086	.7412	122.17	.9347	-3402.	-4629.	326.1	348.8	373.2	22.	-74.		
4	20.079	.6716	148.71	.9471	-5555.	-8330.	331.9	350.5	370.0	143.	-281.		
5	20.065	.2067	156.71	.9515	-2313.	-11265.	372.5	391.5	411.4	289.	-400.		
6	20.056	.1735	135.56	.9556	-2332.	-13515.	355.0	371.5	388.8	131.	-133.		
7	20.051	.1734	135.93	.9568	-2332.	-13515.	353.3	369.3	385.9	138.	-107.		
8	20.044	.1994	135.33	.9598	-2721.	-15760.	351.4	366.1	381.5	170.	-93.		
9	20.040	.1994	135.41	.9580	-3478.	-17515.	346.6	361.8	377.7	217.	-80.		
10	20.039	.9825	135.33	.9576	-3826.	-19267.	341.7	356.8	372.6	239.	-44.		
11	20.015	.7646	102.58	.9276	-20574.	-21022.	304.4	328.2	353.8	1286.	0.		
12	20.002	.7641	94.34	.9186	-13029.	-17067.	286.2	311.5	339.1	512.	0.		
13	20.000	.7380	97.09	.9496	-10280.	-13457.	286.1	301.3	317.3	157.	0.		
14	20.000	.7380	102.00	1.0000	-7205.	-9762.	293.5	293.5	293.5	0.	0.		
15	20.000	.7380	102.00	1.0000	-4343.	-5884.	280.4	280.4	280.4	0.	0.		
16	20.002	.7381	97.09	.9496	-1481.	-2000.	248.6	261.8	275.0	0.	0.		
17	20.015	.7386	94.34	.9186	1244.	1080.	225.4	245.4	267.1	19.	0.		
			102.58	.9276	3894.	5280.	218.1	235.1	253.4	153.	0.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	0	0/K	0/KK	FY	PZ
18	20-039	.8627	135.33	.9576	7913.	9208.	228.6	238.8	249.4	495.	0.
19	20-040	.3196	135.41	1.0115	3492.	10967.	251.8	248.9	246.1	218.	41.
20	20-040	.3196	135.33	.9062	4051.	12726.	236.1	260.5	287.5	253.	34.
21	20-051	.3198	135.93	.9568	4614.	14499.	264.4	276.3	288.8	288.	157.
22	20-056	.3199	135.56	.9556	5019.	15777.	281.2	294.2	307.9	297.	229.
23	20-065	.3200	156.71	.9515	5421.	17048.	299.1	314.3	330.3	306.	313.
24	20-079	.8644	148.71	.9471	15417.	17976.	284.3	300.1	316.9	803.	1111.
25	20-086	.7412	122.17	.9347	12182.	16577.	291.7	312.1	333.9	513.	1008.
26	20-074	.7407	135.09	.9292	10143.	13795.	297.5	320.2	344.5	254.	836.
27	20-068	.2258	140.84	.9878	2303.	10271.	327.3	331.3	335.4	9.	190.
28	20-068	.7405	140.84	.9878	4741.	6446.	333.9	338.1	342.3	0.	392.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000171

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 589.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0 MY = 1538519.9 MZ = -2732588.0 S = -8972.0 V = -7625.0 D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000172

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH7F5					
	MY(CK) = 1538520.0	MZ(CK) = -2732587.9	D(CK) = -822.0			
Y-BAR =	.767	Z-BAR = -.324	IY = 4000.69	IZ = 4347.28	IYZ = 112.64	C5 = 619.21 C6 = 367.06
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	680.	3328.	3.	-56.	
2	.7407	-196.	-267.	-5.	16.	
3	.7412	-2620.	-3566.	-110.	217.	
4	.7760	-5608.	-7284.	-292.	404.	
5	.1736	-1785.	-10352.	-101.	103.	
6	.1735	-2199.	-12749.	-130.	101.	
7	.1734	-2612.	-15138.	-163.	89.	
8	.1994	-3388.	-17064.	-212.	76.	
9	.1994	-3771.	-18989.	-236.	44.	
10	.9825	-20470.	-20915.	-1279.	0.	
11	.7646	-13114.	-17178.	-515.	0.	
12	.7641	-10543.	-13801.	-161.	0.	
13	.7380	-7550.	-10230.	0.	0.	
14	.7380	-4637.	-6283.	0.	0.	
15	.7380	-1723.	-2335.	0.	0.	
16	.7381	910.	1233.	-14.	0.	
17	.7386	3387.	4593.	-133.	0.	
18	.8426	6968.	8301.	-435.	0.	
19	.2996	3053.	10232.	-191.	-35.	
20	.2996	3662.	12271.	-229.	-31.	
21	.2998	4209.	14112.	-263.	-144.	
22	.2998	4650.	15595.	-275.	-213.	
23	.3000	5084.	17058.	-287.	-293.	
24	.8945	16151.	18198.	-841.	-1164.	
25	.7412	12468.	16967.	-526.	-1032.	
26	.7407	10582.	14392.	-265.	-873.	
27	.2057	2265.	11084.	-9.	-187.	
28	.7405	5327.	7243.	0.	-440.	

PREPARED BY S. CIARDULLO  
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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1690998.0

MZ = -2911923.0

S = -8972.0

V = -7625.0

D = -822.0



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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH7F5											
MX(CK) = 976986. MY(CK) = 1690998. MZ(CK) = -2911923. S(CK) = -8966. V(CK) = -7620. L(CK) = -822.											
T(UNDAL.) = 1151405. Q(BAL.) = 315.9 2A(NET) = 3554.2											
Y-BAR = 1.050 Z-BAR = .293 IY = 4371.39 IZ = 4804.04 IYZ = 132.59 C5 = 596.14 C6 = 368.81											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258			829.	3696.				-3.	68.
2	20.074	.7407	135.09	.9292	-20.	-27.	322.8	347.4	373.8	0.	-2.
3	20.086	.7412	122.17	.9347	-2514.	-3422.	332.9	356.2	381.1	106.	-208.
4	20.079	.6716	148.71	.9471	-4833.	-7253.	342.4	361.5	381.7	252.	-348.
5	20.065	.2067	156.71	.9515	-2146.	-10454.	380.8	400.2	420.6	121.	-124.
6	20.056	.1735	135.56	.9556	-2236.	-12962.	365.2	382.2	399.9	132.	-102.
7	20.051	.1734	135.93	.9568	-2670.	-15470.	363.9	380.3	397.5	167.	-91.
8	20.044	.1994	135.33	.9598	-3472.	-17480.	362.3	377.5	393.3	217.	-80.
9	20.040	.1994	135.41	.9580	-3874.	-19505.	357.6	373.3	389.7	242.	-45.
10	20.039	.9825	135.33	.9576	-21068.	-21527.	352.5	368.2	384.5	1317.	0.
11	20.015	.7646	102.58	.9276	-13473.	-17648.	313.8	338.3	364.6	529.	0.
12	20.002	.7641	94.34	.9186	-10778.	-14110.	294.2	320.3	348.7	165.	0.
13	20.000	.7380	97.09	.9496	-7741.	-10489.	293.0	308.5	324.9	0.	0.
14	20.000	.7380	102.00	1.0000	-4936.	-6088.	299.0	299.0	299.0	0.	0.
15	20.000	.7380	102.00	1.0000	-2131.	-2888.	284.0	284.0	284.0	0.	0.
16	20.002	.7381	97.09	.9496	538.	730.	250.3	263.6	277.6	8.	0.
17	20.015	.7386	94.34	.9186	3135.	4251.	225.1	245.0	266.8	123.	0.
			102.58	.9276			215.6	232.4	250.5		

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TABLE (CONT.)

ITEM	L.S.	AE( PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			6958.	8098.				435.	0.
19	20.040	.3196	135.33	.9576	3223.	10123.	222.1	231.9	242.2	201.	37.
20	20.040	.3196	135.41	1.0115	3868.	12149.	243.2	240.4	237.7	242.	33.
21	20.051	.3198	135.33	.9062	4515.	14189.	227.2	250.7	276.7	282.	154.
22	20.056	.3199	135.93	.9568	5008.	15743.	254.5	266.0	278.0	296.	229.
23	20.065	.3200	135.56	.9556	5498.	17292.	271.3	283.9	297.1	311.	317.
24	20.079	.8644	156.71	.9515	15894.	18533.	289.9	304.7	320.2	828.	1145.
25	20.086	.7412	148.71	.9471	12757.	17360.	276.4	291.8	308.1	538.	1056.
26	20.074	.7407	122.17	.9347	10799.	14687.	286.2	306.2	327.6	270.	890.
27	20.068	.2258	135.09	.9292	2524.	11255.	294.6	317.1	341.2	10.	208.
28	20.068	.7405	140.84	.9878	5525.	7512.	326.0	330.0	334.1	0.	456.
			140.84	.9878			335.8	339.9	344.1		

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 DATE 2/12/71

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000176

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1G13

STATION I = 589.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-10.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	10.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1943360.9 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000177

TABLE - OUTPUT DATA FOR REMOING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CHIG13					
	MY(CK) = 1943360.9		MZ(CK) = -0		D(CK) = 966.0	
Y-BAR =	.767	Z-BAR = -.324	IY = 4000.69	IZ = 4347.28	IYZ = 112.64	C5 = -12.77 C6 = 486.19
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	2126.	10404.	8.	-176.	
2	.7407	7562.	10285.	189.	-624.	
3	.7412	7251.	9967.	306.	-600.	
4	.7760	6368.	8271.	332.	-459.	
5	.1736	949.	5502.	54.	-55.	
6	.1735	510.	2955.	30.	-23.	
7	.1734	89.	399.	4.	-2.	
8	.1994	-430.	-2164.	-27.	10.	
9	.1994	-938.	-4722.	-59.	11.	
10	.9825	-7122.	-7277.	-445.	0.	
11	.7046	-5600.	-7336.	-220.	0.	
12	.7641	-5649.	-7395.	-86.	0.	
13	.7380	-5511.	-7467.	0.	0.	
14	.7380	-5571.	-7548.	0.	0.	
15	.7380	-5631.	-7630.	0.	0.	
16	.7381	-5686.	-7705.	37.	0.	
17	.7386	-5741.	-7784.	226.	0.	
18	.8426	-6613.	-7879.	413.	0.	
19	.2996	-1589.	-5324.	99.	18.	
20	.2996	-783.	-2022.	49.	7.	
21	.2998	-81.	-204.	4.	2.	
22	.2998	707.	2371.	-42.	-32.	
23	.3000	1471.	4937.	-83.	-85.	
24	.8945	6874.	7745.	-358.	-495.	
25	.7412	6940.	9444.	-293.	-574.	
26	.7407	7340.	9983.	-184.	-605.	
27	.2057	2093.	10244.	-8.	-173.	
28	.7405	7629.	10373.	0.	-630.	

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 DATE 2/12/71

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000178

TABLE - INPUT DATA FOR BEHINDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1G13

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-8.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.7640	-.000	-18.339	-16.000	-17.353	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.353	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	8.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2118187.0 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000179

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1613												
MX(CK) =	0.	M	CH) = 2118187.	MZ(CK) =	-0.	S(CK) =	2.	V(CK) =	-8736.	E(CK) =	966.		
T(UNBAL.) =	49832.	O(BAL.) =	13.7	2A(NET) =	3554.2								
Y-BAR =	1.050	Z-BAR =	.293	IY =	4371.39	IZ =	4804.04	IYZ =	132.59	C5 =	-13.59	C6 =	484.90
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/MK	PY	PZ		
1	20.068	.2258			2442.	10892.				-9.	202.		
2	20.074	.7407	135.09	.9292	7929.	10783.	28.4	30.6	32.9	-198.	654.		
3	20.086	.7412	122.17	.9347	7627.	10379.	45.7	48.9	52.3	-321.	631.		
4	20.079	.6716	148.71	.9471	5729.	8688.	64.1	67.7	71.5	-302.	417.		
5	20.065	.2067	156.71	.9515	1189.	5789.	36.9	38.7	40.7	-67.	69.		
6	20.056	.1735	135.56	.9556	540.	3132.	48.5	50.7	53.1	-32.	25.		
7	20.051	.1734	135.93	.9568	81.	471.	50.0	52.3	54.6	-5.	3.		
8	20.044	.1994	135.33	.9598	-435.	-2192.	50.8	52.9	55.1	27.	-10.		
9	20.040	.1994	135.41	.9580	-964.	-4855.	50.4	52.6	54.9	60.	-11.		
10	20.039	.9825	135.33	.9576	-7356.	-7516.	49.1	51.3	53.6	460.	0.		
11	20.015	.7646	102.58	.9276	-5791.	-7586.	36.7	39.6	42.7	228.	0.		
12	20.002	.7641	94.34	.9186	-5848.	-7656.	27.6	30.0	32.7	89.	0.		
13	20.000	.7380	97.09	.9496	-5710.	-7737.	19.1	20.1	21.1	0.	0.		
14	20.000	.7380	102.00	1.0000	-5774.	-7823.	10.1	10.1	10.1	0.	0.		
15	20.000	.7380	102.00	1.0000	-5837.	-7910.	-0.	-0.	-0.	0.	0.		
16	20.002	.7381	97.09	.9496	-5899.	-7994.	-9.8	-10.4	-10.9	-90.	0.		
17	20.015	.7386	94.34	.9186	-5962.	-8085.	-19.3	-21.0	-22.9	-234.	0.		
			102.58	.9276			-29.8	-32.1	-34.6				

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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ITEM	L.S.	AE (PROJ.)	TABLE		(CONT.)									
			2A	K	P (NET)	F (NET)	Q	Q/K	Q/YK	FY	PZ			
18	20.039	.8627			-7039.	-6192.								
			135.33	.9576			-51.1	-53.4	-55.8	-440.	0.			
19	20.040	.3196			-1761.	-5530.								
			135.41	1.0115			-62.7	-62.0	-61.3	-110.	-20.			
20	20.040	.3196			-913.	-2867.								
			135.33	.9062			-62.1	-68.5	-75.6	-57.	-8.			
21	20.051	.3198			-65.	-205.								
			135.93	.9568			-65.7	-68.7	-71.8	-4.	-2.			
22	20.056	.3199			788.	2478.								
			135.56	.9556			-61.8	-64.6	-67.6	47.	36.			
23	20.065	.3200			1639.	5156.								
			156.71	.9515			-53.5	-56.2	-59.1	93.	95.			
24	20.079	.8644			6947.	8100.								
			148.71	.9471			-49.8	-52.6	-55.5	362.	501.			
25	20.086	.7412			7279.	9905.								
			122.17	.9347			-33.3	-35.7	-38.2	307.	602.			
26	20.074	.7407			7682.	10448.								
			135.09	.9292			-17.3	-18.6	-20.0	192.	633.			
27	20.068	.2258			2404.	10720.								
			140.84	.9878			-3.0	-3.0	-3.1	9.	199.			
28	20.068	.7405			7984.	10855.								
			140.84	.9878			14.5	14.7	14.9	0.	659.			

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CONE.CH10F5

STATION I = 649.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.7380	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.7380	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.7380	-.000	13.908	14.540	16.438	19.215
26	1.000	.7380	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.7380	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 981843.0

MY = 1232217.0

MZ = -2052077.0

S = -8421.0

V = -8289.0

D = -702.0



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 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION COND.CH10F5

MY(CK) = 1232217.0

NZ(CK) = -2052076.9

D(CK) = -702.0

Y-BAR = .554 Z-BAR = -.607 IY = 2793.19 IZ = 2773.10 IYZ = 67.38 C5 = 729.85 C6 = 423.39

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	424.	2077.	2.	-35.
2	.7407	-901.	-1226.	-23.	74.
3	.7409	-3107.	-4226.	-131.	242.
4	.7743	-5248.	-6800.	-273.	140.
5	.1736	-1896.	-10994.	-107.	109.
6	.1735	-2320.	-13448.	-137.	114.
7	.1734	-2707.	-15686.	-169.	93.
8	.1994	-3453.	-17389.	-216.	50.
9	.1994	-3881.	-19540.	-243.	44.
10	.9825	-21014.	-21471.	-1313.	0.
11	.0000	0.	0.	0.	0.
12	.7641	-11586.	-15167.	-177.	0.
13	.7380	-8580.	-11626.	0.	0.
14	.7330	-5146.	-6973.	0.	0.
15	.7380	-1713.	-2320.	0.	0.
16	.7381	898.	1217.	-14.	0.
17	.0000	0.	0.	0.	0.
18	.8226	6121.	7470.	-383.	0.
19	.2796	2619.	9405.	-164.	-30.
20	.2736	3219.	11561.	-201.	-62.
21	.2797	3699.	13290.	-231.	-128.
22	.2798	4130.	14845.	-244.	-190.
23	.2800	4501.	16192.	-254.	-286.
24	.8725	16105.	18522.	-839.	-430.
25	.7409	11934.	16234.	-503.	-930.
26	.7407	10181.	13847.	-255.	-840.
27	.2057	2222.	10877.	-9.	-183.
28	.7405	4795.	6520.	0.	-396.

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 589.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-0.220	20.615	-5.988	15.665
2	1.000	.7380	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.7380	-.000	-10.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.7380	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.025
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.7380	-.000	10.438	19.215	13.908	14.540
26	1.000	.7380	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	0.220	20.615	5.988	15.665
28	1.000	.7380	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 981840.0

MY = 1729527.0

MZ = -2557297.9

S = -8421.0

V = -8289.0

D = -702.0

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.C1110F5

MX(CK) = 981840. MY(CK) = 1729527. MZ(CK) = -2557298. S(CK) = -8434. V(CK) = -8493. L(CK) = -702.  
 T(UNBAL.) = 1067811. Q(BAL.) = 291.3 2A(NET) = 3230.9

Y-BAR = .767 Z-BAR = -.329 IY = 3999.51 IZ = 4345.65 IYZ = 112.62 C5 = 577.81 C6 = 416.11

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057			953.	4663.				-4.	79.
2	60.223	.7407	116.49	.7721	941.	1279.	298.1	386.1	500.1	-24.	78.
3	60.235	.7409	106.52	.7780	-1374.	-1869.	324.3	416.8	535.8	58.	-107.
4	60.103	.7743	131.45	.6523	-4294.	-5565.	290.7	445.7	683.2	224.	-115.
5	60.195	.1736	140.85	1.2978	-1530.	-8875.	599.0	461.6	355.7	86.	-88.
6	60.177	.1735	122.64	.9003	-1984.	-11502.	421.1	467.7	519.4	117.	-97.
7	60.153	.1734	123.10	.8307	-2436.	-14117.	393.2	473.3	569.7	152.	-84.
8	60.123	.1994	123.33	.7702	-3236.	-16290.	368.0	477.8	620.3	202.	-47.
9	60.121	.1994	123.16	.9662	-3671.	-18484.	465.1	481.4	498.2	229.	-42.
10	60.117	.9825	123.05	.8688	-20229.	-20669.	421.3	484.9	558.1	1264.	0.
11	60.046	.7646	95.15	.7663	-13115.	-17179.	381.6	498.0	649.9	516.	0.
12	60.007	.7641	86.66	.7332	-10715.	-14026.	204.9	279.4	381.1	163.	0.
13	60.000	.7380	92.19	.8412	-7892.	-10094.	247.2	293.9	349.4	0.	0.
14	60.000	.7380	102.00	1.0000	-5173.	-7010.	305.4	305.4	305.4	0.	0.
15	60.000	.7380	102.00	1.0000	-2455.	-3320.	304.9	304.9	304.9	0.	0.
16	60.007	.7381	92.19	.6412	2.	3.	246.1	292.6	347.8	0.	0.
17	60.046	.7386	86.66	.7332	2313.	3137.	203.6	277.6	378.7	91.	0.
			95.15	.7663			242.3	316.2	412.6		

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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	60.117	.8426			5535.	6594.				346.	0.
19	60.121	.2996	123.05	.8688	2621.	8783.	266.2	306.4	352.7	164.	30.
20	60.128	.2996	130.05	.9151	3311.	11097.	280.4	306.4	334.9	207.	64.
21	60.153	.2998	116.44	.8157	3930.	13179.	251.2	308.0	377.6	246.	136.
22	60.168	.2998	123.10	.8645	4458.	14951.	269.6	311.9	360.7	263.	206.
23	60.217	.3001	122.64	.7990	4980.	16715.	253.5	317.3	397.1	281.	317.
24	60.103	.8925	140.85	1.3581	16107.	18108.	441.8	325.3	239.5	839.	430.
25	60.235	.7409	131.45	.6523	12700.	17276.	212.2	325.3	498.7	536.	990.
26	60.223	.7407	106.52	.7780	10999.	14959.	263.0	338.1	434.6	275.	907.
27	60.204	.2057	116.49	.7721	2431.	11900.	271.5	351.7	455.5	9.	201.
28	60.204	.7405	128.85	.9627	6122.	8324.	341.9	355.2	368.9	0.	505.
			128.85	.9627			363.2	377.3	391.9		

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000186

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 649.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.7380	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.7380	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.025	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.7380	-.000	13.908	14.540	16.438	19.215
26	1.000	.7380	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.7380	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968148.0 MY = 1028478.0 MZ = -2171585.0 S = -9027.0 V = -6699.0 D = -887.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

000187

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1F5					
	MY(CK) = 1026478.0		MZ(CK) = -2171584.9		D(CK) = -887.0	
Y-BAR =	.554	Z-BAR = -.607	IY = 2793.19	IZ = 2773.10	IYZ = 67.38	C5 = 774.78 C6 = 349.33
ITEM	AE(PROJ.)	P(NET)	F(IIFT)	PY	PZ	
1	.2057	113.	554.	0.	-9.	
2	.7407	-2142.	-2913.	-54.	177.	
3	.7409	-4430.	-6026.	-187.	345.	
4	.7743	-6732.	-8723.	-351.	180.	
5	.1736	-2142.	-12421.	-121.	123.	
6	.1735	-2510.	-14552.	-148.	123.	
7	.1734	-2845.	-16487.	-178.	98.	
8	.1994	-3553.	-17889.	-222.	51.	
9	.1994	-3905.	-19664.	-244.	45.	
10	.9825	-20803.	-21256.	-1300.	0.	
11	.0000	0.	0.	0.	0.	
12	.7641	-11130.	-14570.	-170.	0.	
13	.7380	-7978.	-10811.	0.	0.	
14	.7380	-4333.	-5872.	0.	0.	
15	.7380	-688.	-932.	0.	0.	
16	.7381	2084.	2824.	-32.	0.	
17	.0000	0.	0.	0.	0.	
18	.8226	7757.	9467.	-485.	0.	
19	.2796	3081.	11064.	-193.	-35.	
20	.2796	3576.	12843.	-223.	-69.	
21	.2797	3972.	14273.	-248.	-137.	
22	.2798	4303.	15465.	-254.	-198.	
23	.2800	4580.	16474.	-259.	-291.	
24	.8725	15788.	18157.	-823.	-422.	
25	.7409	11537.	15095.	-486.	-899.	
26	.7407	9623.	13088.	-241.	-794.	
27	.2057	2022.	9896.	-8.	-167.	
28	.7405	3869.	5260.	0.	-319.	

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH1F5

STATION I = 589.00

STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-0.220	20.615	-5.988	15.665
2	1.000	.7380	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.7380	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.7380	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.025
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.7380	-.000	16.438	19.215	13.908	14.540
26	1.000	.7380	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	0.220	20.615	5.988	15.665
28	1.000	.7380	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968148.0

MY = 1430430.0

MZ = -2713188.0

S = -9027.0

V = -6690.0

D = -887.0

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 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000189

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5										
MX(CK) = 968148. MY(CK) = 1430439. MZ(CK) = -2713188. S(CK) = -9042. V(CK) = -6960. L(CK) = -887. T(UNBAL.) = 1054007. O(BAL.) = 287.5 2A(NET) = 3230.9 Y-BAR = .767 Z-BAR = -.329 IY = 3999.51 IZ = 4345.65 IYZ = 112.62 C5 = 615.68 C6 = 340.24											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	116.49	.7721	569.	2785.	293.4	380.0	492.2	-2.	47.
2	60.223	.7407	106.52	.7780	-574.	-781.	316.0	406.2	522.1	14.	-47.
3	60.235	.7409	131.45	.6523	-2965.	-4033.	280.9	430.6	660.1	125.	-231.
4	60.103	.7743	140.85	1.2978	-5876.	-7615.	577.3	444.8	342.8	306.	-157.
5	60.195	.1736	122.64	.9003	-1821.	-10558.	405.3	450.2	500.0	103.	-105.
6	60.177	.1735	123.10	.8307	-2210.	-12815.	378.1	455.2	547.9	130.	-109.
7	60.153	.1734	123.33	.7702	-2598.	-15057.	353.7	459.3	596.3	162.	-90.
8	60.123	.1994	123.16	.9662	-3343.	-16835.	447.1	462.8	478.9	209.	-48.
9	60.121	.1994	123.05	.8688	-3699.	-18624.	405.0	466.2	536.6	231.	-42.
10	60.117	.9825	95.15	.7663	-19975.	-20410.	367.8	480.0	626.4	1248.	0.
11	60.046	.7646	86.66	.7332	-12745.	-16695.	196.2	267.6	365.0	501.	0.
12	60.007	.7641	92.19	.8412	-10189.	-13338.	238.3	283.3	336.7	155.	0.
13	60.000	.7380	102.00	1.0000	-7223.	-9787.	295.9	295.9	295.9	0.	0.
14	60.000	.7380	102.00	1.0000	-4326.	-5862.	296.0	296.0	296.0	0.	0.
15	60.000	.7380	92.19	.8412	-1430.	-1937.	238.6	283.6	337.2	0.	0.
16	60.007	.7381	86.66	.7332	1189.	1611.	197.0	268.7	366.5	18.	0.
17	60.046	.7386	95.15	.7663	3652.	4952.	252.5	329.6	430.1	144.	0.



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TABLE (CONT.)

ITE	L.S.	AE (PROJ.)	2A	Y	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	60-117	.8426			7252.	8640.				453.	0.
19	60-121	.2996	123.05	.8688	3112.	10430.	279.0	321.1	369.7	195.	36.
20	60-128	.2996	130.05	.9151	3677.	12323.	294.4	321.7	351.5	230.	71.
21	60-153	.2998	116.44	.8157	4184.	14028.	263.8	323.4	396.4	261.	144.
22	60-168	.2998	123.10	.8645	4563.	15372.	282.6	326.9	378.1	270.	211.
23	60-217	.3001	122.64	.7990	4978.	16708.	264.9	331.6	415.0	281.	317.
24	60-103	.8925	140.85	1.3581	15663.	17610.	459.3	338.2	249.0	816.	418.
25	60-235	.7409	131.45	.6523	12032.	16367.	219.3	336.1	515.3	507.	937.
26	60-223	.7407	106.52	.7780	10144.	13796.	267.9	344.4	442.7	254.	837.
27	60-204	.2057	116.49	.7721	2144.	10496.	272.6	353.0	457.3	8.	177.
28	60-204	.7405	128.85	.9627	4909.	6675.	341.8	355.1	368.8	0.	405.
			126.85	.9627			358.5	372.4	386.8		

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 DATE 2/12/71

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 MODEL CH-54B

000191

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 649.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.7380	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.7380	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.300	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.7380	-.000	13.908	14.540	16.438	19.215
26	1.000	.7380	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.7380	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970803.0 MY = 980186.0 MZ = -2217320.9 S = -9365.0 V = -6185.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH2F5												
	MY(CK) = 960166.0		HZ(CK) = -2217320.9		D(CK) = -428.0								
Y-BAR =	.554	Z-BAR =	-.607	IY =	2793.19	IZ =	2773.10	IYZ =	67.38	C5 =	791.61	C6 =	331.73
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ								
1	.2057	39.	189.	0.	-3.								
2	.7407	-2458.	-3343.	-61.	203.								
3	.7409	-4782.	-6506.	-202.	373.								
4	.7743	-7141.	-9253.	-372.	191.								
5	.1736	-2214.	-12841.	-125.	128.								
6	.1735	-2570.	-14899.	-152.	126.								
7	.1734	-2893.	-16766.	-181.	100.								
8	.1994	-3594.	-18096.	-225.	52.								
9	.1994	-3929.	-19781.	-246.	45.								
10	.9825	-20840.	-21293.	-1302.	0.								
11	.0000	0.	0.	0.	0.								
12	.7641	-11049.	-14463.	-168.	0.								
13	.7380	-7840.	-10623.	0.	0.								
14	.7380	-4115.	-5576.	0.	0.								
15	.7380	-391.	-530.	0.	0.								
16	.7381	2441.	3308.	-37.	0.								
17	.0000	0.	0.	0.	0.								
18	.8226	8274.	10097.	-517.	0.								
19	.2796	3234.	11614.	-202.	-37.								
20	.2796	3704.	13303.	-231.	-71.								
21	.2797	4080.	14662.	-255.	-141.								
22	.2798	4386.	15765.	-259.	-202.								
23	.2800	4640.	16690.	-262.	-295.								
24	.8725	15835.	18211.	-825.	-423.								
25	.7409	11531.	15687.	-486.	-898.								
26	.7407	9562.	13005.	-239.	-789.								
27	.2057	1989.	9734.	-8.	-164.								
28	.7405	3674.	4995.	0.	-303.								

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 DATE 2/12/71

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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2F5

STATION I = 589.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-5.988	15.665
2	1.000	.7380	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.7380	-.000	-16.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.7380	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.205
23	1.000	.2990	-.000	21.990	10.192	18.600	6.375
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.7380	-.000	16.438	19.215	13.908	14.540
26	1.000	.7380	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	6.220	20.615	5.988	15.665
28	1.000	.7380	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970803.0 MY = 1351283.0 MZ = -2779226.0 S = -9365.0 V = -6185.0 D = -420.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000194

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH2F5

PX(CK) = 970803. MY(CK) = 1351283. MZ(CK) = -2779226. S(CK) = -9380. V(CK) = -6329. L(CK) = -428.

T(UNBAL.) = 1060514. Q(DAL.) = 289.3 2A(NET) = 3230.9

Y-BAR = .767 Z-BAR = -.329 IY = 3999.81 IZ = 4345.65 IYZ = 112.62 C5 = 631.32 C6 = 320.05

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	116.49	.7721	466.	2279.	294.8	381.8	494.6	-2.	38.
2	60.223	.7407	106.52	.7780	-1004.	-1365.	315.9	406.1	522.0	25.	-83.
3	60.235	.7409	131.45	.6523	-3434.	-4671.	279.6	428.6	657.0	145.	-268.
4	60.103	.7743	140.85	1.2978	-6363.	-8245.	573.0	441.5	340.2	332.	-170.
5	60.195	.1736	122.64	.9003	-1914.	-11100.	402.0	446.5	496.0	108.	-110.
6	60.177	.1735	123.10	.8307	-2288.	-13262.	374.9	451.2	543.2	135.	-112.
7	60.153	.1734	123.33	.7702	-2659.	-15409.	350.5	455.1	590.9	166.	-92.
8	60.123	.1994	123.16	.9662	-3392.	-17081.	443.0	458.5	474.5	212.	-49.
9	60.121	.1994	123.05	.8688	-3726.	-18763.	401.3	461.9	531.6	233.	-43.
10	60.117	.9825	95.15	.7663	-20008.	-20443.	364.5	475.7	620.8	1250.	0.
11	60.046	.7646	86.66	.7332	-12699.	-16635.	193.6	264.1	360.2	500.	0.
12	60.007	.7641	92.19	.8412	-10078.	-13193.	235.7	280.2	333.1	154.	0.
13	60.000	.7380	102.00	1.0000	-7050.	-9552.	293.4	293.4	293.4	0.	0.
14	60.000	.7380	102.00	1.0000	-4079.	-5528.	294.0	294.0	294.0	0.	0.
15	60.000	.7380	92.19	.8412	-1109.	-1503.	237.3	282.0	335.3	0.	0.
16	60.007	.7381	86.66	.7332	1576.	2135.	196.2	267.6	365.0	24.	0.
17	60.046	.7386	95.15	.7663	4102.	5562.	257.5	336.0	438.5	161.	0.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	0	0/K	0/KK	FY	PZ
18	60.117	.8426			7844.	9345.				490.	0.
			123.05	.8688			285.7	328.8	378.5		
19	60.121	.2996			3291.	11028.				206.	38.
			130.05	.9151			301.8	329.8	360.4		
20	60.128	.2996			3822.	12810.				239.	74.
			116.44	.8157			270.6	331.7	406.7		
21	60.153	.2998			4299.	14414.				269.	148.
			123.10	.8645			289.9	335.4	388.0		
22	60.168	.2998			4663.	15040.				275.	215.
			122.64	.7990			271.7	340.0	425.5		
23	60.217	.3001			5023.	16859.				284.	320.
			140.85	1.3581			470.4	346.4	255.1		
24	60.103	.8925			15673.	17020.				817.	418.
			131.45	.6523			224.2	343.7	526.9		
25	60.235	.7409			11944.	16247.				504.	931.
			106.52	.7780			272.7	350.6	450.6		
26	60.223	.7407			9986.	13581.				250.	824.
			116.49	.7721			276.1	357.6	463.2		
27	60.204	.2057			2081.	10187.				8.	172.
			128.85	.9627			345.8	359.2	373.1		
28	60.204	.7405			4608.	6265.				0.	380.
			128.85	.9627			360.7	374.7	389.2		

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 DATE 2/12/71

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 MODEL CH-54B

000196

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH7F5

STATION I = 649.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-6.220	20.615
2	1.000	.7380	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.7380	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.025	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.7380	-.000	13.908	14.540	16.438	19.215
26	1.000	.7380	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.7380	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 977655.0

MY = 1102554.0

MZ = -2187290.0

S = -9089.0

V = -7266.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000197

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH7F5					
	MY(CK) = 1102554.0	MZ(CK) = -2187289.9	D(CK) = -822.0			
Y-BAR = .554	Z-BAR = -.607	IY = 2793.19	IZ = 2773.10	IYZ = 67.38	C5 = 779.79	C6 = 375.74
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	196.	959.	1.	-16.	
2	.7407	-1868.	-2540.	-47.	154.	
3	.7409	-4183.	-5691.	-176.	326.	
4	.7743	-6493.	-8414.	-338.	173.	
5	.1736	-2124.	-12318.	-120.	122.	
6	.1735	-2514.	-14576.	-148.	123.	
7	.1734	-2870.	-16631.	-179.	99.	
8	.1994	-3602.	-18139.	-225.	52.	
9	.1994	-3982.	-20048.	-249.	46.	
10	.9825	-21298.	-21762.	-1331.	0.	
11	.0000	0.	0.	0.	0.	
12	.7641	-11482.	-15031.	-175.	0.	
13	.7380	-8301.	-11247.	0.	0.	
14	.7380	-4632.	-6276.	0.	0.	
15	.7380	-963.	-1305.	0.	0.	
16	.7381	1826.	2475.	-28.	0.	
17	.0000	0.	0.	0.	0.	
18	.8226	7506.	9160.	-469.	0.	
19	.2796	3029.	10878.	-189.	-35.	
20	.2796	3561.	12791.	-223.	-69.	
21	.2797	3987.	14328.	-249.	-138.	
22	.2798	4351.	15639.	-257.	-201.	
23	.2800	4658.	16755.	-263.	-296.	
24	.8725	16208.	18640.	-845.	-433.	
25	.7409	11887.	16170.	-501.	-926.	
26	.7407	9973.	13564.	-249.	-823.	
27	.2057	2117.	10361.	-8.	-175.	
28	.7405	4191.	5698.	0.	-346.	



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 MODEL CH-54B

000198

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 589.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-0.220	20.615	-5.988	15.665
2	1.000	.7380	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.7380	-.000	-10.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	3.500	-16.000	-19.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.7380	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.205
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.7380	-.000	10.438	19.215	13.908	14.540
26	1.000	.7380	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	0.220	20.615	5.988	15.665
28	1.000	.7380	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 977655.0

MY = 1538519.9

MZ = -2732610.0

S = -9089.0

V = -7266.0

D = -822.0

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000199

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

MX(CK) = 977655. MY(CK) = 1538520. MZ(CK) = -2732610. S(CK) = -9104. V(CK) = -7442. L(CK) = -822.

T(UNBAL.) = 1066324. Q(BAL.) = 290.9 2A(NET) = 3230.9

Y-BAR = .767 Z-BAR = -.329 IY = 3999.51 IZ = 4345.65 IYZ = 112.62 C5 = 619.44 C6 = 367.17

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	60.204	.2057			680.	3331.				-3.	56.
2	60.223	.7407	116.49	.7721	-196.	-266.	297.1	384.9	498.5	5.	-16.
3	60.235	.7409	106.52	.7780	-2619.	-3563.	321.1	412.7	530.5	110.	-204.
4	60.103	.7743	131.45	.6523	-5597.	-7253.	286.2	438.8	672.7	292.	-149.
5	60.195	.1736	140.85	1.2978	-1786.	-10355.	588.8	453.7	349.6	101.	-103.
6	60.177	.1735	122.64	.9003	-2200.	-12756.	413.6	459.4	510.2	130.	-108.
7	60.153	.1734	123.10	.8307	-2613.	-15143.	386.0	464.6	559.3	162.	-90.
8	60.123	.1994	123.33	.7702	-3389.	-17063.	361.1	468.9	608.8	212.	-49.
9	60.121	.1994	123.16	.9662	-3772.	-18994.	456.5	472.4	488.9	236.	-43.
10	60.117	.9825	123.05	.8688	-20475.	-20921.	413.5	475.9	547.8	1280.	0.
11	60.046	.7646	95.15	.7663	-13117.	-17182.	375.2	489.6	639.0	516.	0.
12	60.007	.7641	86.66	.7332	-10545.	-13804.	198.7	271.0	369.6	161.	0.
13	60.000	.7380	92.19	.8412	-7551.	-10232.	241.1	286.6	340.7	0.	0.
14	60.000	.7380	102.00	1.0000	-4637.	-6283.	299.1	299.1	299.1	0.	0.
15	60.000	.7380	102.00	1.0000	-1722.	-2334.	299.0	299.0	299.0	0.	0.
16	60.007	.7381	92.19	.8412	912.	1236.	240.9	286.4	340.4	14.	0.
17	60.046	.7386	86.66	.7332	3390.	4597.	198.9	271.1	369.6	133.	0.
			95.15	.7663			251.1	327.6	427.6		

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	O	O/K	O/KK	FY	PZ
18	60-117	.8426			6972.	8300.					
			123.05	.8688			276.9	318.7	366.9	436.	0.
19	60-121	.2996			3055.	10238.					
			130.05	.9151			292.1	319.2	348.8	191.	35.
20	60-128	.2996			3664.	12281.					
			116.44	.8157			261.8	320.9	393.4	229.	71.
21	60-153	.2998			4211.	14119.					
			123.10	.8645			280.6	324.6	375.5	263.	145.
22	60-168	.2998			4652.	15003.					
			122.64	.7990			263.4	329.6	412.6	274.	215.
23	60-217	.3001			5088.	17078.					
			140.85	1.3581			457.4	336.8	248.0	287.	324.
24	60-103	.8925			16122.	18126.					
			131.45	.6523			218.8	335.4	514.1	840.	430.
25	60-235	.7409			12469.	16961.					
			106.52	.7780			268.5	345.1	443.6	526.	972.
26	60-223	.7407			10587.	14399.					
			116.49	.7721			274.3	355.3	460.2	265.	873.
27	60-204	.2057			2266.	11089.					
			128.85	.9627			344.4	357.8	371.6	9.	187.
28	60-204	.7405			5330.	7247.					
			128.85	.9627			362.7	376.8	391.4	0.	440.

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000201

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1G13

STATION I = 649.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.988	15.665	-5.220	20.615
2	1.000	.7380	-.000	-10.250	15.265	-11.750	20.215
3	1.000	.7380	-.000	-13.908	14.540	-16.438	19.215
4	1.000	.7730	-.000	-17.288	14.265	-20.415	15.867
5	1.000	.1730	-.000	-18.600	6.735	-21.990	10.192
6	1.000	.1730	-.000	-19.220	2.205	-22.760	4.972
7	1.000	.1730	-.000	-19.750	-2.345	-23.500	-.275
8	1.000	.1990	-.000	-19.750	-6.387	-23.500	-5.523
9	1.000	.1990	-.000	-19.750	-11.451	-23.500	-10.764
10	1.000	.9806	-.000	-19.750	-16.000	-23.500	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	12.137	-16.000
17	.000	1.0000	-.000	15.193	-16.000	17.553	-16.000
18	1.000	.8210	-.000	19.750	-16.000	23.500	-16.000
19	1.000	.2790	-.000	19.750	-11.451	23.500	-10.764
20	1.000	.2790	-.000	19.750	-6.387	23.500	-5.230
21	1.000	.2790	-.000	19.750	-2.345	23.500	-.275
22	1.000	.2790	-.000	19.220	2.205	22.760	4.972
23	1.000	.2790	-.000	18.600	6.375	21.990	10.192
24	1.000	.8710	-.000	17.288	14.265	20.415	15.867
25	1.000	.7380	-.000	13.908	14.540	16.438	19.215
26	1.000	.7380	-.000	10.250	15.265	11.750	20.215
27	1.000	.2050	-.000	5.988	15.665	6.220	20.615
28	1.000	.7380	-.000	.000	15.765	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1443451.9 MZ = .0 S = .0 V = -8325.0 D = 941.0

000202

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1013		MY(CK) = 1443451.9		MZ(CK) = -0		DX(CK) = 941.0						
Y-BAR =	.554	Z-BAR =	-.607	IY =	2793.19	IZ =	2773.10	IYZ =	67.38	C5 =	-12.76	C6 =	517.29
	ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ							
	1	.2057	1763.	0028.	7.	-145.							
	2	.7407	1235.	8480.	156.	-514.							
	3	.7409	5993.	8152.	253.	-467.							
	4	.7743	6187.	8017.	322.	-165.							
	5	.1736	714.	4138.	40.	-41.							
	6	.1735	292.	1693.	17.	-14.							
	7	.1734	-99.	-574.	-6.	3.							
	8	.1994	-531.	-2673.	-33.	8.							
	9	.1994	-1653.	-5303.	-66.	12.							
	10	.9825	-7601.	-7664.	-469.	0.							
	11	.0000	0.	0.	0.	0.							
	12	.7641	-5917.	-7745.	-90.	0.							
	13	.7380	-5760.	-7805.	0.	0.							
	14	.7380	-5820.	-7886.	0.	0.							
	15	.7380	-5880.	-7968.	0.	0.							
	16	.7381	-5927.	-8031.	90.	0.							
	17	.0000	0.	0.	0.	0.							
	18	.3226	-6695.	-8170.	418.	0.							
	19	.2796	-1617.	-5909.	101.	19.							
	20	.2796	-885.	-3174.	55.	17.							
	21	.2797	-301.	-1080.	19.	10.							
	22	.2798	360.	1293.	-21.	-17.							
	23	.2800	966.	3476.	-55.	-61.							
	24	.8725	6586.	7575.	-343.	-176.							
	25	.7409	5730.	7795.	-242.	-446.							
	26	.7407	6041.	8216.	-151.	-498.							
	27	.2057	1731.	8475.	-7.	-143.							
	28	.7405	6528.	8603.	0.	-522.							

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 DATE 2/12/71

PAGE NO.  
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000203

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CON: 10N CH1013

STATION I = 589.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-0.220	20.615	-5.988	15.665
2	1.000	.7380	-.000	-11.750	20.215	-10.250	15.265
3	1.000	.7380	-.000	-10.438	19.215	-13.908	14.540
4	1.000	.7730	-.000	-20.415	15.867	-17.288	14.265
5	1.000	.1730	-.000	-21.990	10.192	-18.600	6.735
6	1.000	.1730	-.000	-22.760	4.972	-19.220	2.025
7	1.000	.1730	-.000	-23.500	-.275	-19.750	-2.345
8	1.000	.1990	-.000	-23.500	-5.523	-19.750	-6.387
9	1.000	.1990	-.000	-23.500	-10.764	-19.750	-11.451
10	1.000	.9806	-.000	-23.500	-16.000	-19.750	-16.000
11	1.000	.7640	-.000	-17.553	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	11.222	-16.000
17	1.000	.7380	-.000	17.553	-16.000	15.193	-16.000
18	1.000	.8410	-.000	23.500	-16.000	19.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	19.750	-11.451
20	1.000	.2990	-.000	23.500	-5.230	19.750	-6.387
21	1.000	.2990	-.000	23.500	-.275	19.750	-2.345
22	1.000	.2990	-.000	22.760	4.972	19.220	2.025
23	1.000	.2990	-.000	21.990	10.192	18.600	6.735
24	1.000	.8910	-.000	20.415	15.867	17.288	14.265
25	1.000	.7380	-.000	10.438	19.215	13.908	14.540
26	1.000	.7380	-.000	11.750	20.215	10.250	15.265
27	1.000	.2050	-.000	0.220	20.615	5.988	15.665
28	1.000	.7380	-.000	.000	20.715	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1942956.0 MZ = .0 S = .0 V = -8325.0 D = 941.0

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 REPORT NO. SER 64430  
 MODEL CH-54B

000204

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION CH1613

MX(CK) = -0. MY(CK) = 1942956. MZ(CK) = -0. S(CK) = 7. V(CK) = -8528. L(CK) = 941.

T(U/BAL.) = 34007. Q(BAL.) = 9.3 2A(HET) = 3230.9

Y-BAR = .767 Z-BAR = -.329 IY = 3999.51 IZ = 4345.65 IYZ = 112.62 C5 = -12.77 C6 = 486.23

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	60.204	.2057	116.49	.7721	2126.	10405.	13.9	18.1	23.4	-8.	175.
2	60.223	.7407	106.52	.7780	7563.	10287.	31.3	40.2	51.7	-189.	624.
3	60.235	.7409	131.45	.6523	7249.	9861.	39.9	61.1	93.7	-306.	565.
4	60.103	.7743	140.85	1.2978	6355.	8235.	83.0	63.9	49.3	-331.	170.
5	60.195	.1736	122.64	.9003	949.	5503.	61.1	67.9	75.4	-54.	55.
6	60.177	.1735	123.10	.8307	510.	2957.	59.4	71.5	86.1	-30.	25.
7	60.153	.1734	123.33	.7702	69.	400.	57.2	74.3	96.5	-4.	2.
8	60.123	.1994	123.16	.9662	-430.	-2163.	73.4	76.0	78.6	27.	-6.
9	60.121	.1994	123.05	.8688	-938.	-4721.	67.7	77.9	89.7	59.	-11.
10	60.117	.9825	95.15	.7663	-7122.	-7277.	64.5	84.2	109.9	445.	0.
11	60.046	.7646	86.66	.7332	-5600.	-7336.	-6.7	-9.1	-12.4	220.	0.
12	60.007	.7641	92.19	.8412	-5649.	-7395.	-3.9	-4.6	-5.5	86.	0.
13	60.000	.7380	102.00	1.0000	-5511.	-7467.	-5	-5	-5	0.	0.
14	60.000	.7360	102.00	1.0000	-5571.	-7548.	3.7	3.7	3.7	0.	0.
15	60.000	.7380	92.19	.8412	-5631.	-7030.	6.6	7.8	9.3	0.	0.
16	60.007	.7381	66.66	.7332	-5686.	-7705.	8.7	11.8	16.1	-87.	0.
17	60.046	.7386	95.15	.7663	-5741.	-7785.	-64.2	-83.8	-109.4	-226.	0.

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 MODEL CH-548

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	60.117	.8426			-6613.	-7879.				-413.	0.
			123.05	.8688			-71.7	-82.5	-94.5		
19	60.121	.2996			-1589.	-5324.				-99.	-18.
			130.05	.9151			-75.0	-82.0	-89.6		
20	60.128	.2996			-783.	-2623.				-49.	-15.
			116.44	.8157			-65.5	-80.3	-98.4		
21	60.153	.2998			-61.	-203.				-4.	-2.
			123.10	.8645			-66.0	-76.3	-88.3		
22	60.168	.2998			707.	2372.				42.	33.
			122.64	.7990			-56.3	-70.5	-88.2		
23	60.217	.3001			1472.	4942.				83.	94.
			140.85	1.3581			-84.3	-62.1	-45.7		
24	60.103	.8925			6860.	7712.				358.	183.
			131.45	.6523			-37.5	-57.5	-88.2		
25	60.235	.7409			6938.	9438.				293.	541.
			106.52	.7780			-29.1	-37.4	-48.0		
26	60.223	.7407			7341.	9984.				184.	606.
			116.49	.7721			-12.1	-15.7	-20.4		
27	60.204	.2057			2093.	10245.				8.	173.
			128.85	.9627			-9.3	-9.7	-10.1		
28	60.204	.7405			7630.	10374.				0.	629.
			128.85	.9627			11.6	12.0	12.5		



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/13/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000206

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CONC.CH10F5

STATION I = 689.00 STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.7380	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.735
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.7380	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.7380	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 982239.0 MY = 934173.0 MZ = -1707259.0 S = -8621.0 V = -7451.0 D = -675.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000207

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION: COND.CH10F5

MY(CK) = 934173.0      NZ(CK) = -1707258.9      D(CK) = -675.0  
 Y-BAR = .159      Z-BAR = -4.328      IY = 1761.72      IZ = 1976.19      IYZ = 62.74      C5 = 848.15      C6 = 498.40

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	654.	3202.	3.	-54.
2	.0000	0.	0.	0.	0.
3	.7416	-2177.	-2964.	-92.	195.
4	.7816	-5171.	-6764.	-270.	725.
5	.1736	-1681.	-9749.	-95.	97.
6	.1735	-2113.	-12245.	-125.	91.
7	.1734	-2519.	-14596.	-157.	87.
8	.1995	-3303.	-16640.	-206.	117.
9	.1994	-3709.	-18676.	-232.	42.
10	.9825	-20279.	-20720.	-1267.	0.
11	.0000	0.	0.	0.	0.
12	.7641	-11465.	-15008.	-177.	0.
13	.7380	-8425.	-11416.	0.	0.
14	.7380	-4435.	-6009.	0.	0.
15	.7380	-444.	-602.	0.	0.
16	.7381	2204.	2987.	-34.	0.
17	.0000	0.	0.	0.	0.
18	.7825	6746.	8655.	-422.	0.
19	.2395	2553.	10703.	-160.	-29.
20	.2396	3045.	12772.	-190.	-108.
21	.2396	3532.	14814.	-221.	-122.
22	.2397	3935.	16514.	-232.	-186.
23	.2397	4322.	18132.	-244.	-210.
24	.8403	16110.	19603.	-840.	-2259.
25	.7416	13197.	17969.	-557.	-1179.
26	.0000	0.	0.	0.	0.
27	.2057	2690.	13164.	-10.	-222.
28	.7405	6056.	8233.	0.	-500.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000208

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CONC.CH10F5

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.7380	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.7380	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.025	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.7380	-.000	13.908	14.540	12.221	10.965
26	1.000	.7380	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.7380	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 982239.0 MY = 1232217.0 MZ = -2052077.0 S = -8621.0 V = -7451.0 D = -675.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000209

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10FS

FX(CK) = 982239. MY(CK) = 1232217. MZ(CK) = -2052077. S(CK) = -8467. V(CK) = -7106. C(CK) = -675.

T(UNBAL.) = 1312501. O(BAL.) = 516.2 2A(NET) = 2382.0

Y-BAR = .360 Z-BAR = -.575 IY = 2783.47 IZ = 2728.75 IYZ = 71.91 C5 = 740.95 C6 = 423.41

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	40.136	.2657	69.16	.8037	437.	2137.	511.8	636.8	792.4	-2.	36.
2	40.148	.7407	63.27	.8406	-893.	-1214.	516.6	614.5	731.0	22.	-74.
3	40.195	.7416	52.97	1.1123	-3131.	-4264.	657.0	590.6	531.0	132.	-280.
4	40.445	.7816	148.89	.5724	-5349.	-6990.	335.6	586.2	1024.1	279.	-750.
5	40.130	.1736	91.78	.8741	-1910.	-11075.	507.4	580.5	664.1	108.	-110.
6	40.106	.1735	85.06	.9209	-2334.	-13529.	529.5	574.9	624.3	136.	-100.
7	40.102	.1734	79.83	1.0089	-2723.	-15780.	574.9	569.8	564.8	170.	-94.
8	40.103	.1995	100.01	.8108	-3474.	-17502.	458.6	565.6	697.5	217.	-123.
9	40.081	.1994	89.84	.8993	-3899.	-19035.	504.3	560.8	623.6	244.	-45.
10	40.078	.9825	72.91	.7959	-21106.	-21560.	429.9	540.1	678.6	1319.	0.
11	40.031	.0000	63.54	.7598	0.	0.	410.3	540.1	710.9	0.	0.
12	40.005	.7641	77.55	.8729	-11586.	-15167.	468.8	537.1	615.3	178.	0.
13	40.000	.7380	102.00	1.0000	-8540.	-11572.	534.2	534.2	534.2	0.	0.
14	40.000	.7380	102.00	1.0000	-5054.	-6848.	518.7	518.7	518.7	0.	0.
15	40.000	.7380	77.55	.8729	-1568.	-2125.	428.3	490.6	562.1	0.	0.
16	40.005	.7381	63.54	.7598	1083.	1467.	351.5	462.6	608.9	17.	0.
17	40.031	.0000	72.91	.7959	0.	0.	368.2	462.6	581.2	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

000210

TABLE (COIT.)

ITEM	L.S.	AE(PROJ.)	2A	Y	P(IJET)	F(IJET)	Q	Q/K	Q/KK	FY	PZ
18	40.078	.8026	89.84	.6993	6249.	7816.	404.8	450.1	500.5	391.	0.
19	40.081	.2595	100.01	.8108	2520.	9751.	364.3	449.3	554.2	158.	29.
20	40.103	.2597	79.83	1.0089	3079.	11917.	454.2	450.2	446.2	192.	109.
21	40.102	.2597	89.62	.8850	3523.	13636.	398.2	450.0	508.5	220.	122.
22	40.114	.2597	81.51	.9850	3922.	15188.	442.9	449.6	456.5	231.	186.
23	40.111	.2597	155.12	.5470	4261.	16499.	245.1	448.1	819.2	241.	207.
24	40.445	.8605	52.97	1.1123	16156.	19196.	499.7	449.3	403.9	842.	2266.
25	40.195	.7416	63.27	.8406	12153.	16548.	355.7	423.2	503.4	513.	1086.
26	40.148	.7407	69.16	.8037	10359.	14088.	548.2	682.1	848.8	259.	855.
27	40.136	.2057	94.40	.9741	2262.	11071.	654.1	671.5	689.3	9.	187.
28	40.136	.7405	94.40	.9741	4888.	6646.	625.7	642.3	659.3	0.	403.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
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000211

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1F5

STATION I = 689.00

STATION II = 649.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.7380	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7610	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.735
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.7380	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.7380	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968925.0

MY = 781719.0

MZ = -1802256.0

S = -9233.0

V = -6165.0

D = -861.0

000212

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CHIF5					
	MY(CK) = 781719.0		HZ(CK) = -1802255.9		D(CK) = -861.0	
Y-BAR =	.159	Z-BAR = -4.328	IY = 1761.72	IZ = 1976.19	IYZ = 62.74	C5 = 899.05 C6 = 409.59
ITEM	AE(PRO)	P(NET)	F(NET)	PY	PZ	
1	.2057	283.	1387.	1.	-23.	
2	.0000	0.	0.	0.	0.	
3	.7416	-3663.	-4987.	-154.	327.	
4	.7816	-6695.	-8758.	-349.	939.	
5	.1736	-1965.	-11393.	-111.	113.	
6	.1735	-2337.	-13546.	-138.	100.	
7	.1734	-2684.	-15556.	-168.	93.	
8	.1995	-3421.	-17236.	-214.	121.	
9	.1994	-3755.	-18905.	-235.	43.	
10	.9825	-20146.	-20585.	-1259.	0.	
11	.0000	0.	0.	0.	0.	
12	.7641	-11104.	-14535.	-171.	0.	
13	.7380	-7917.	-10728.	0.	0.	
14	.7380	-3687.	-4996.	0.	0.	
15	.7380	543.	735.	0.	0.	
16	.7381	3350.	4540.	-52.	0.	
17	.0000	0.	0.	0.	0.	
18	.7825	8226.	10553.	-514.	0.	
19	.2395	2919.	12237.	-182.	-33.	
J	.2396	3323.	13941.	-208.	-118.	
21	.2396	3724.	15619.	-233.	-128.	
22	.2397	4037.	16939.	-238.	-191.	
23	.2397	4329.	18162.	-245.	-210.	
24	.8403	15772.	19191.	-822.	-2212.	
25	.7416	12634.	17202.	-533.	-1129.	
26	.0000	0.	0.	0.	0.	
27	.2057	2441.	11947.	-9.	-201.	
28	.7405	4934.	6708.	0.	-407.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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000213

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION	CHIFS	STATION I = 649.00		STATION II = 689.00			
ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.7380	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.7380	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.205	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.7380	-.000	13.908	14.540	12.221	10.965
26	1.000	.7380	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.7380	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 968925.0      MY = 1028478.0      MZ = -2171585.0      S = -9233.0      V = -6165.0      D = -861.0



000214

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION		CH1F5										
MX(CK) = 968925.		MY(CK) = 1028470.		MZ(CK) = -2171585.		S(CK) = -9066.		V(CK) = -5894.		C(CK) = -861.		
T(UNBAL.) = 1329189.		O(BAL.) = 522.7		2A(NET) = 2382.0								
Y-BAR = .360		Z-BAR = -.571		IY = 2783.47		IZ = 2728.75		IYZ = 71.91		C5 = 786.73		C6 = 348.99
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ	
1	40.136	.2057			125.	613.				-0.	10.	
2	40.148	.7407	69.16	.8037	-2136.	-2905.	519.6	646.5	804.4	53.	-176.	
3	40.195	.7416	63.27	.8406	-4460.	-6073.	498.6	593.1	705.5	188.	-399.	
4	40.445	.7816	52.97	1.1123	-6854.	-8960.	637.5	573.2	515.3	357.	-961.	
5	40.130	.1736	148.89	.5724	-2157.	-12510.	325.8	569.2	994.3	122.	-124.	
6	40.106	.1735	91.78	.8741	-2526.	-14038.	493.3	564.4	645.6	149.	-108.	
7	40.102	.1734	85.06	.9209	-2862.	-16587.	515.4	559.7	607.7	179.	-99.	
8	40.103	.1995	79.83	1.0089	-3574.	-18000.	560.2	555.2	550.3	223.	-127.	
9	40.081	.1994	100.01	.8108	-3924.	-19760.	447.1	551.4	680.0	245.	-45.	
10	40.078	.9825	89.84	.8993	-20897.	-21352.	492.1	547.1	608.4	1306.	0.	
11	40.031	.0000	72.91	.7959	0.	0.	420.6	528.4	663.0	0.	0.	
12	40.005	.7641	63.54	.7598	-11125.	-14563.	401.4	528.4	695.5	171.	0.	
13	40.000	.7380	77.55	.8729	-7931.	-10740.	460.8	527.9	604.7	0.	0.	
14	40.000	.7380	102.00	1.0000	-4229.	-5731.	527.5	527.5	527.5	0.	0.	
15	40.000	.7380	102.00	1.0000	-528.	-715.	514.0	514.0	514.0	0.	0.	
16	40.005	.7381	77.55	.8729	2267.	3099.	425.3	487.2	558.2	35.	0.	
17	40.031	.0000	63.54	.7598	0.	0.	350.0	460.6	606.3	0.	0.	
			72.91	.7959			366.6	460.6	578.8			

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	40.078	.8026	89.84	.8993	7871.	9848.	406.3	451.8	502.3	492.	0.
19	40.081	.2595	100.01	.8108	2957.	11441.	367.1	452.7	558.4	185.	34.
20	40.103	.2597	79.83	1.0089	3410.	13230.	459.1	455.1	451.1	214.	121.
21	40.102	.2597	88.62	.8850	3784.	14047.	404.1	456.6	516.0	236.	131.
22	40.114	.2597	81.51	.9850	4089.	15834.	451.1	457.9	464.9	241.	194.
23	40.111	.2597	155.12	.5470	4340.	16804.	250.6	458.2	837.6	245.	211.
24	40.445	.8605	52.97	1.1123	15861.	18845.	512.1	460.4	413.9	827.	2224.
25	40.195	.7416	63.27	.8406	11769.	16025.	368.9	438.8	522.0	496.	1052.
26	40.148	.7407	69.16	.8037	9811.	13343.	549.8	684.1	851.2	245.	809.
27	40.136	.2057	94.40	.9741	2063.	10100.	657.2	674.6	692.6	8.	170.
28	40.136	.7405	94.40	.9741	3966.	5392.	633.6	650.4	667.7	0.	327.

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000216

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION	CH2F5							
STATION I = 689.00		STATION II = 649.00						
ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)	
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665	
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265	
3	1.000	.7380	-.000	-12.221	10.965	-13.908	14.540	
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265	
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735	
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025	
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345	
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387	
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451	
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000	
11	.000	.7640	-.000	-13.623	-16.000	-15.193	-16.000	
12	1.000	.7640	-.000	-10.606	-16.000	-11.222	-16.000	
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000	
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000	
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000	
16	1.000	.7380	-.000	10.606	-16.000	11.222	-16.000	
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000	
18	1.000	.7610	-.000	17.250	-16.000	19.750	-16.000	
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451	
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387	
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345	
22	1.000	.2390	-.000	16.860	.310	19.220	2.025	
23	1.000	.2390	-.000	16.340	4.430	18.600	6.735	
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265	
25	1.000	.7380	-.000	12.221	10.965	13.908	14.540	
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265	
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665	
28	1.000	.7380	-.000	.000	12.465	.000	15.765	

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971478.0    MY = 751823.0    MZ = -1835576.0    S = -9544.0    V = -5709.0    D = -428.0

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000217

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH2F5					
	MY(CK) = 751823.0		NZ(CK) = -1835575.9		D(CK) = -428.0	
Y-BAR = .159	Z-BAR = -4.328	IY = 1761.72	IZ = 1976.19	IYZ = 62.74	C5 = 916.40	C6 = 393.07
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	213.	1041.	1.	-18.	
2	.0000	0.	0.	0.	0.	
3	.7416	-3982.	-5422.	-168.	356.	
4	.7816	-7043.	-9212.	-367.	988.	
5	.1736	-2033.	-11790.	-115.	117.	
6	.1735	-2395.	-13883.	-141.	103.	
7	.1734	-2732.	-15833.	-171.	94.	
8	.1995	-3463.	-17445.	-216.	123.	
9	.194	-3783.	-19046.	-236.	43.	
10	.025	-20218.	-20658.	-1264.	0.	
11	.0000	0.	0.	0.	0.	
12	.7641	-11071.	-14493.	-170.	0.	
13	.7380	-7831.	-10612.	0.	0.	
14	.7380	-3520.	-4770.	0.	0.	
15	.7380	791.	1072.	0.	0.	
16	.7381	3653.	4951.	-56.	0.	
17	.0000	0.	0.	0.	0.	
18	.7825	8638.	11081.	-540.	0.	
19	.2395	3029.	12697.	-189.	-35.	
20	.2396	3417.	14334.	-214.	-121.	
21	.2396	3801.	15944.	-238.	-131.	
22	.2397	4097.	17190.	-242.	-194.	
23	.2397	4370.	18336.	-247.	-212.	
24	.8403	15842.	19275.	-826.	-2222.	
25	.7416	12628.	17195.	-533.	-1129.	
26	.0000	0.	0.	0.	0.	
27	.2057	2412.	11805.	-9.	-199.	
28	.7405	4753.	6463.	0.	-392.	

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000218

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH2F5

STATION I = 649.00

STATION II = 689.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.7380	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.7380	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.025	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.7380	-.000	13.908	14.540	12.221	10.965
26	1.000	.7380	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.7380	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971478.0

MY = 980186.0

MZ = -2217320.9

S = -9544.0

V = -5709.0

D = -428.0

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000219

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH2F5									
MX(CK) = 971478. MY(CK) = 980186. MZ(CK) = -2217321. S(CK) = -9372. V(CK) = -5458. L(CK) = -428.											
T(LINEAL.) = 1343448. O(BAL.) = 528.4 2A(NET) = 2382.0											
Y-BAR = .360 Z-BAR = -.575 IY = 2783.47 IZ = 2728.75 IYZ = 71.91 C5 = 803.90 C6 = 331.29											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	40.136	.2057			50.	247.				-0.	4.
2	40.148	.7407	69.16	.8037	-2455.	-3338.	525.1	653.4	813.0	61.	-203.
3	40.195	.7416	63.27	.8406	-4816.	-6558.	497.6	592.0	704.2	203.	-430.
4	40.445	.7816	52.97	1.1123	-7271.	-9511.	635.3	571.1	513.5	379.	-1020.
5	40.130	.1736	148.89	.5724	-2231.	-12936.	323.7	565.4	987.8	126.	-129.
6	40.106	.1735	91.78	.8741	-2586.	-14990.	489.9	560.5	641.2	153.	-111.
7	40.102	.1734	85.06	.9209	-2911.	-16870.	511.8	555.7	603.4	182.	-100.
8	40.103	.1995	79.83	1.0089	-3616.	-18217.	556.1	551.2	546.4	226.	-128.
9	40.081	.1994	100.01	.8108	-3948.	-19882.	443.8	547.4	675.1	247.	-45.
10	40.078	.9825	89.84	.8993	-20936.	-21392.	488.6	543.3	604.1	1308.	0.
11	40.031	.0000	72.91	.7959	0.	0.	418.1	525.3	660.0	0.	0.
12	40.005	.7641	63.54	.7598	-11043.	-14456.	399.1	525.3	691.4	0.	0.
13	40.000	.7380	77.55	.8729	-7791.	-10556.	459.1	526.0	602.6	170.	0.
14	40.000	.7380	102.00	1.0000	-4008.	-5432.	527.0	527.0	527.0	0.	0.
15	40.000	.7380	102.00	1.0000	-226.	-307.	514.8	514.8	514.8	0.	0.
16	40.005	.7381	77.55	.8729	2650.	3591.	427.2	489.4	560.6	0.	0.
17	40.031	.0000	63.54	.7598	0.	0.	352.7	464.3	611.1	41.	0.
			72.91	.7959			369.5	464.3	583.3	0.	0.

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	0	0/K	0/KK	FY	PZ
18	40.078	.8026	89.84	.8993	8383.	10480.	411.8	457.9	509.2	524.	0.
19	40.081	.2595	100.01	.8108	3102.	12001.	372.8	459.7	567.0	194.	36.
20	40.103	.2597	79.83	1.0089	3539.	13701.	466.9	462.8	458.7	221.	125.
21	40.102	.2597	88.62	.8850	3887.	15040.	411.5	465.0	525.4	243.	134.
22	40.114	.2597	81.51	.9850	4169.	16143.	459.8	466.8	473.9	246.	198.
23	40.111	.2597	155.12	.5470	4398.	17028.	255.7	467.5	854.5	248.	214.
24	40.445	.8605	52.97	1.1123	15913.	18907.	521.9	469.2	421.9	829.	2232.
25	40.195	.7416	63.27	.8406	11767.	16022.	376.3	447.7	532.6	496.	1052.
26	40.148	.7407	69.16	.8037	9753.	13264.	555.8	691.5	860.4	244.	805.
27	40.136	.2057	94.40	.9741	2031.	9940.	664.3	682.0	700.1	8.	168.
28	40.136	.7405	94.40	.9741	3771.	5127.	640.4	657.4	674.9	0.	311.

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000221

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 689.00

STATION II = 649.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.7380	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.1730	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.375
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.7380	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.7380	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978407.0

MY =

836145.0

MZ = -1815763.9

S = -9288.0

V = -6660.0

D = -822.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000222

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH7F5					
	MY(CK) = 836145.0	NZ(CK) = -1815763.9	D(CK) = -822.0			
Y-BAR =	.159	Z-BAR = -4.328	IY = 1761.72	IZ = 1976.19	IYZ = 62.74	C5 = 704.91 C6 = 440.37
ITEM	AE(PROJ.)	P(HET)	F(HET)	PY	PZ	
1	.2057	383.	1872.	1.	-32.	
2	.0000	0.	0.	0.	0.	
3	.7416	-3365.	-4582.	-142.	301.	
4	.7816	-6451.	-8438.	-336.	905.	
5	.1736	-1934.	-11215.	-109.	111.	
6	.1735	-2329.	-13499.	-137.	100.	
7	.1734	-2698.	-15637.	-169.	93.	
8	.1995	-3462.	-17443.	-216.	123.	
9	.1994	-3821.	-19239.	-239.	44.	
10	.9825	-20596.	-21045.	-1287.	0.	
11	.0000	0.	0.	0.	0.	
12	.7641	-11424.	-14954.	-176.	0.	
13	.7380	-8208.	-11122.	0.	0.	
14	.7380	-3951.	-5353.	0.	0.	
15	.7380	307.	416.	0.	0.	
16	.7381	3133.	4245.	-48.	0.	
17	.0000	0.	0.	0.	0.	
18	.7825	8026.	10296.	-502.	0.	
19	.2395	2888.	12107.	-180.	-33.	
20	.2396	3323.	13938.	-208.	-118.	
21	.2396	3753.	15742.	-235.	-129.	
22	.2397	4095.	17184.	-242.	-194.	
23	.2397	4417.	18532.	-250.	-215.	
24	.8403	16184.	19693.	-844.	-2270.	
25	.7416	13037.	17752.	-550.	-1165.	
26	.0000	0.	0.	0.	0.	
27	.2057	2554.	12501.	-10.	-211.	
28	.7405	5318.	7231.	0.	-439.	

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 DATE 2/12/71

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000223

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.7380	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.7380	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.1730	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.205	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.7380	-.000	13.908	14.540	12.221	10.965
26	1.000	.7380	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.7380	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978407.0 MY = 1102554.0 MZ = -2187290.0 S = -9288.0 V = -6660.0 D = -822.0

000224

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH7F5									
FX(CK) = 978407. MY(CK) = 1102554. MZ(CK) = -2187290. S(CK) = -9121. V(CK) = -6360. L(CK) = -822. T(UNBAL.) = 1339380. Q(BAL.) = 526.8 2A(NET) = 2362.0 Y-BAR = .360 Z-BAR = -.575 IY = 2783.47 IZ = 2728.75 IYZ = 71.91 C5 = 791.79 C6 = 375.48											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	40.136	.2957			208.	1017.				-1.	17.
2	40.148	.7407	69.16	.8037	-1863.	-2533.	523.2	651.1	810.1	47.	-154.
3	40.195	.7416	63.27	.8406	-4214.	-5738.	508.1	604.5	719.1	178.	-377.
4	40.445	.7816	52.97	1.1123	-6614.	-8652.	648.8	583.3	524.4	345.	-928.
5	40.130	.1736	148.89	.5724	-2140.	-12409.	331.5	579.2	1011.8	121.	-123.
6	40.106	.1735	91.78	.8741	-2530.	-14666.	501.8	574.0	656.7	149.	-108.
7	40.102	.1734	85.06	.9209	-2888.	-16733.	524.0	569.0	617.9	180.	-100.
8	40.103	.1995	79.83	1.0089	-3624.	-18260.	569.3	564.3	559.3	227.	-128.
9	40.081	.1994	100.01	.8108	-4002.	-20149.	454.2	560.2	690.9	250.	-46.
10	40.078	.9825	89.84	.8993	-21395.	-21861.	499.7	555.7	617.9	1337.	0.
11	40.031	.0000	72.91	.7959	0.	0.	426.4	535.7	673.1	0.	0.
12	40.005	.7641	63.54	.7598	-11479.	-15027.	407.0	535.7	705.1	177.	0.
13	40.000	.7380	77.55	.8729	-8255.	-11186.	466.4	534.3	612.1	0.	0.
14	40.000	.7380	102.00	1.0000	-4530.	-6138.	533.2	533.2	533.2	0.	0.
15	40.000	.7380	102.00	1.0000	-805.	-1090.	518.7	516.7	518.7	0.	0.
16	40.005	.7381	77.55	.8729	2028.	2748.	428.5	490.9	562.4	31.	0.
17	40.031	.0000	63.54	.7598	0.	0.	352.0	463.3	609.8	0.	0.
			72.91	.7959			368.7	463.3	582.1		

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 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	40.078	.8026			7624.	9537.					
			89.84	.8993			407.6	453.2	504.0	477.	0.
19	40.081	.2595			2909.	11253.					
			100.01	.8108			367.9	453.7	559.6	182.	33.
20	40.103	.2597			3404.	13177.					
			79.83	1.0089			459.8	455.8	451.8	213.	121.
21	40.102	.2597			3798.	14701.					
			88.62	.8850			404.4	456.9	516.3	237.	131.
22	40.114	.2597			4134.	16007.					
			81.51	.9850			491.0	457.9	464.8	244.	196.
23	40.111	.2597			4413.	17085.					
			155.12	.5470			250.4	457.8	836.9	249.	215.
24	40.445	.8605			16275.	19338.					
			52.97	1.1123			511.7	460.1	413.6	848.	2283.
25	40.195	.7416			12119.	16501.					
			63.27	.8406			367.4	437.1	520.0	511.	1003.
26	40.148	.7407			10161.	13819.					
			69.16	.8037			555.4	691.1	859.9	254.	838.
27	40.136	.2057			2158.	10564.					
			94.40	.9741			663.6	681.2	699.3	8.	178.
28	40.136	.7405			4297.	5829.					
			94.40	.9741			638.5	655.4	672.8	0.	354.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE 10.  
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000206

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1G13

STATION I = 689.00

STATION II = 649.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.988	15.665
2	.000	1.0000	-.000	-9.250	11.965	-10.250	15.265
3	1.000	.7380	-.000	-12.221	10.965	-13.908	14.540
4	1.000	.7730	-.000	-15.203	8.655	-17.288	14.265
5	1.000	.1730	-.000	-16.340	4.430	-18.600	6.735
6	1.000	.1730	-.000	-16.860	.310	-19.220	2.025
7	1.000	.17	-.000	-17.250	-3.725	-19.750	-2.345
8	1.000	.1990	-.000	-17.250	-7.803	-19.750	-6.387
9	1.000	.1990	-.000	-17.250	-11.909	-19.750	-11.451
10	1.000	.9806	-.000	-17.250	-16.000	-19.750	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-15.193	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-11.222	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	11.222	-16.000
17	.000	1.0000	-.000	13.623	-16.000	15.193	-16.000
18	1.000	.7810	-.000	17.250	-16.000	19.750	-16.000
19	1.000	.2390	-.000	17.250	-11.909	19.750	-11.451
20	1.000	.2390	-.000	17.250	-7.803	19.750	-6.387
21	1.000	.2390	-.000	17.250	-3.725	19.750	-2.345
22	1.000	.2390	-.000	16.860	.310	19.220	2.025
23	1.000	.2390	-.000	16.340	4.430	18.600	6.375
24	1.000	.8310	-.000	15.203	8.655	17.288	14.265
25	1.000	.7380	-.000	12.221	10.965	13.908	14.540
26	.000	1.0000	-.000	9.250	11.965	10.250	15.265
27	1.000	.2050	-.000	5.833	12.365	5.988	15.665
28	1.000	.7380	-.000	.000	12.465	.000	15.765

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1137151.9 MZ = .0 S = .0 V = -7658.0 U = 873.0

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000227

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION	CH1613					
	MY(CK) = 1137151.9		MZ(CK) = -.0		D(CK) = 873.0	
Y-BAR =	.159	Z-BAR = -4.328	IY = 1761.72	IZ = 1976.19	IYZ = 62.74	C5 = -20.66 C6 = 648.36
ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ	
1	.2057	2267.	11096.	9.	-187.	
2	.0000	0.	0.	0.	0.	
3	.7416	7598.	10345.	320.	-679.	
4	.7816	6885.	9006.	359.	-966.	
5	.1736	1058.	6133.	60.	-61.	
6	.1735	595.	3451.	35.	-26.	
7	.1734	143.	829.	9.	-5.	
8	.1995	-363.	-1829.	-23.	13.	
9	.1994	-894.	-4500.	-56.	10.	
10	.9825	-7009.	-7162.	-438.	0.	
11	.0000	0.	0.	0.	0.	
12	.7641	-5556.	-7273.	-86.	0.	
13	.7380	-5431.	-7359.	0.	0.	
14	.7380	-5528.	-7491.	0.	0.	
15	.7380	-5625.	-7622.	0.	0.	
16	.7381	-5690.	-7711.	88.	0.	
17	.0000	0.	0.	0.	0.	
18	.7825	-6140.	-7877.	384.	0.	
19	.2395	-1244.	-5215.	78.	14.	
20	.2396	-607.	-2545.	38.	21.	
21	.2396	27.	112.	-2.	-1.	
22	.2397	656.	2752.	-39.	-31.	
23	.2397	1298.	5448.	-73.	-63.	
24	.8403	6874.	8364.	-358.	-964.	
25	.7416	7223.	9835.	-305.	-646.	
26	.0000	0.	0.	0.	0.	
27	.2057	2217.	10853.	-9.	-183.	
28	.7405	8120.	11040.	0.	-670.	

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
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000228

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1G13

STATION I = 649.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.988	15.665	-5.833	12.365
2	1.000	.7380	-.000	-10.250	15.265	-9.250	11.965
3	1.000	.7380	-.000	-13.908	14.540	-12.221	10.965
4	1.000	.7730	-.000	-17.288	14.265	-15.203	8.655
5	1.000	.1730	-.000	-18.600	6.735	-16.340	4.430
6	1.000	.1730	-.000	-19.220	2.025	-16.860	.310
7	1.000	.1730	-.000	-19.750	-2.345	-17.250	-3.725
8	1.000	.1990	-.000	-19.750	-6.387	-17.250	-7.803
9	1.000	.1990	-.000	-19.750	-11.451	-17.250	-11.909
10	1.000	.9806	-.000	-19.750	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-15.193	-16.000	-13.623	-16.000
12	1.000	.7640	-.000	-11.222	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	11.222	-16.000	10.606	-16.000
17	.000	1.0000	-.000	15.193	-16.000	13.623	-16.000
18	1.000	.8010	-.000	19.750	-16.000	17.250	-16.000
19	1.000	.2590	-.000	19.750	-11.451	17.250	-11.909
20	1.000	.2590	-.000	19.750	-6.387	17.250	-7.803
21	1.000	.2590	-.000	19.750	-2.345	17.250	-3.725
22	1.000	.2590	-.000	19.220	2.205	16.860	.310
23	1.000	.2590	-.000	18.600	6.375	16.340	4.430
24	1.000	.8510	-.000	17.288	14.265	15.203	8.655
25	1.000	.7380	-.000	13.908	14.540	12.221	10.965
26	1.000	.7380	-.000	10.250	15.265	9.250	11.965
27	1.000	.2050	-.000	5.988	15.665	5.833	12.365
28	1.000	.7380	-.000	.000	15.765	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1443451.9 MZ = .0 S = .0 V = -7658.0 D = 873.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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000229

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH1613										
MX(CK) =		-0.	MY(CK) = 1443452.		MZ(CK) = 0.		S(CK) = -31.		V(CK) = -7258.		D(CK) = 873.	
T(UNBAL.) =		-46510.		Q(BAL.) = -18.3		2A(NET) = 2382.0						
Y-BAR =		.360	Z-BAR = -0.575		IY = 2783.47		IZ = 2728.75		IYZ = 71.91		C5 = -13.80 C6 = 519.12	
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ	
1	40.136	.2057	69.16	.8037	1765.	8641.	-28.4	-35.3	-43.9	-7.	146.	
2	40.148	.7407	63.27	.8406	6247.	8497.	101.6	120.9	143.8	-156.	515.	
3	40.195	.7416	52.97	1.1123	6013.	8187.	90.4	81.3	73.1	-254.	537.	
4	40.445	.7816	148.89	.5724	6262.	8191.	37.6	65.7	114.8	-326.	878.	
5	40.130	.1736	91.78	.8741	715.	4148.	50.0	57.1	65.4	-40.	41.	
6	40.106	.1735	85.06	.9209	292.	1694.	45.6	49.6	53.8	-17.	13.	
7	40.102	.1734	79.83	1.0089	-100.	-579.	43.9	43.5	43.1	6.	-3.	
8	40.103	.1995	100.01	.8108	-534.	-2689.	31.8	39.2	48.4	33.	-19.	
9	40.081	.1994	89.84	.8993	-1058.	-5325.	31.6	35.1	39.1	66.	-12.	
10	40.078	.9825	72.91	.7959	-7531.	-7695.	17.6	22.1	27.8	471.	0.	
11	40.031	.0000	63.54	.7598	0.	0.	16.8	22.1	29.1	0.	0.	
12	40.005	.7641	77.55	.8729	-5947.	-7785.	10.8	12.3	14.1	92.	0.	
13	40.000	.7380	102.00	1.0000	-5793.	-7850.	3.3	3.3	3.3	0.	0.	
14	40.000	.7380	102.00	1.0000	-5858.	-7938.	-5.0	-5.0	-5.0	0.	0.	
15	40.000	.7380	77.55	.8729	-5923.	-8025.	-10.8	-12.4	-14.2	0.	0.	
16	40.005	.7381	63.54	.7598	-5973.	-8094.	-14.8	-19.5	-25.6	-92.	0.	
17	40.031	.0000	72.91	.7959	0.	0.	-15.5	-19.5	-24.5	0.	0.	



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	G	G/K	G/KK	FY	PZ
18	40.078	.8026	89.84	.8993	-6589.	-8242.	-27.6	-30.7	-34.1	-412.	0.
19	40.081	.2595	100.01	.8108	-1518.	-5872.	-30.4	-37.5	-46.3	-95.	-17.
20	40.103	.2597	79.83	1.0089	-836.	-3236.	-43.7	-43.3	-42.9	-52.	-30.
21	40.102	.2597	88.62	.8850	-291.	-1127.	-45.3	-51.2	-57.9	-18.	-10.
22	40.114	.2597	81.51	.9850	324.	1255.	-58.6	-59.5	-60.4	19.	15.
23	40.111	.2597	155.12	.5470	889.	3440.	-38.2	-69.8	-127.5	50.	43.
24	40.445	.8605	52.97	1.1123	6484.	7704.	-88.5	-79.5	-71.5	338.	909.
25	40.195	.7416	63.27	.8406	5728.	7800.	-98.3	-116.9	-139.1	242.	512.
26	40.148	.7407	69.16	.8037	6038.	8212.	27.4	34.1	42.4	151.	498.
27	40.136	.2057	94.40	.9741	1731.	8475.	21.3	21.9	22.5	7.	143.
28	40.136	.7405	94.40	.9741	6333.	8610.	-22.2	-22.8	-23.4	0.	522.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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000231

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

STATION I = 749.00

STATION II = 689.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.7380	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.7540	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	.000	.7380	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.7380	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.7380	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 983213.0

MY = 496785.0

MZ = -1176338.0

S = -8849.0

V = -7290.0

D = -624.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000232

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE (STA. I)

CONDITION COND.CH10F5

MY(CK) = 496785.0

NZ(CK) = -1176338.0

D(CK) = -624.0

Y-BAR = -.663 Z-BAR = -6.894 IY = 799.10 IZ = 813.61 IYZ = 31.71 C5 = 1423.49 C6 = 559.82

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2258	204.	909.	1.	-17.
2	.0000	0.	0.	0.	0.
3	.0000	0.	0.	0.	0.
4	.8343	-8378.	-10122.	-437.	604.
5	.0000	0.	0.	0.	0.
6	.2497	-3891.	-15671.	-230.	176.
7	.0000	0.	0.	0.	0.
8	.2756	-5412.	-19724.	-338.	125.
9	.0000	0.	0.	0.	0.
10	1.0430	-24460.	-23542.	-1529.	0.
11	.0000	0.	0.	0.	0.
12	.0000	0.	0.	0.	0.
13	.7380	-9821.	-13308.	0.	0.
14	.7380	-3124.	-4233.	0.	0.
15	.7380	3573.	4841.	0.	0.
16	.0000	0.	0.	0.	0.
17	.0000	0.	0.	0.	0.
18	.7625	11425.	15042.	-714.	0.
19	.0000	0.	0.	0.	0.
20	.2195	4126.	18881.	-258.	-95.
21	.0000	0.	0.	0.	0.
22	.2196	4905.	22460.	-289.	-222.
23	.0000	0.	0.	0.	0.
24	.8142	19814.	24528.	-1033.	-1429.
25	.0000	0.	0.	0.	0.
26	.0000	0.	0.	0.	0.
27	.2258	3803.	16961.	-15.	-314.
28	.7405	6613.	8992.	0.	-546.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000233

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

STATION I = 689.00 STATION II = 749.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.7380	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-10.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-10.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.8750	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	10.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.7380	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.7380	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 983213.0 MY = 934173.0 MZ = -1707259.0 S = -8849.0 V = -7290.0 D = -624.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000234

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION COND.CH10F5

MX(CK) = 983213. MY(CK) = 934173. MZ(CK) = -1707259. S(CK) = -8829. V(CK) = -7310. L(CK) = -624.

T(UNBAL.) = 1211823. O(BAL.) = 519.6 2A(NET) = 1845.2

Y-BAR = .316 Z-BAR = -4.237 IY = 1745.07 IZ = 1941.02 IYZ = 41.03 C5 = 868.82 C6 = 513.38

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	44.58	.6357	643.	3149.	524.2	824.7	1297.4	-2.	53.
2	60.223	.0000	44.80	.6962	0.	0.	574.2	824.7	1184.5	0.	0.
3	60.257	.7412	60.93	.7746	-2328.	-3168.	608.8	785.9	1014.5	98.	-192.
4	60.237	.7761	74.07	.7925	-5369.	-6973.	662.5	836.1	1055.0	280.	-387.
5	60.195	.1736	69.62	.8188	-1749.	-10140.	660.7	806.9	985.5	99.	-101.
6	60.166	.1735	68.15	.8367	-2193.	-12711.	698.8	835.2	998.2	129.	-99.
7	60.153	.1734	70.35	.8318	-2611.	-15129.	658.5	791.7	951.8	163.	-90.
8	60.133	.1994	70.83	.8302	-3419.	-17221.	684.9	824.9	993.6	214.	-79.
9	60.121	.1994	70.57	.8321	-3839.	-19331.	633.1	760.9	914.5	240.	-44.
10	60.117	.8767	58.03	.3990	-18721.	-21437.	341.7	856.6	2147.1	1170.	0.
11	60.021	.0000	48.27	.7842	0.	0.	671.7	856.6	1092.3	0.	0.
12	60.007	.7641	67.70	.7828	-11905.	-15585.	515.2	658.2	840.8	182.	0.
13	60.000	.7380	102.00	1.0000	-8786.	-11905.	675.4	675.4	675.4	0.	0.
14	60.000	.7380	102.00	1.0000	-4698.	-6360.	649.2	649.2	649.2	0.	0.
15	60.000	.7380	67.70	.7828	-611.	-828.	453.6	579.4	740.2	0.	0.
16	60.007	.7381	48.27	.7842	2102.	2849.	481.9	614.5	783.6	32.	0.
17	60.021	.0000	58.03	.3990	0.	0.	245.1	614.5	1540.2	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000235

TABLE (CONT.)

ITEM	L.S.	AE( PROJ.)	2A	K	P(NET)	F(NET)	O	O/K	O/KK	FY	PZ
18	60.117	.7825			6746.	8654.					
			70.57	.8321			446.4	536.5	644.8	422.	0.
19	60.121	.2395			2567.	10764.					
			70.83	.8302			480.9	579.3	697.7	160.	29.
20	60.133	.2395			3073.	12886.					
			70.35	.8318			467.2	561.7	675.3	192.	71.
21	60.153	.2396			3576.	14998.					
			68.15	.8367			519.9	621.3	742.6	223.	123.
22	60.166	.2397			3992.	16747.					
			69.62	.8188			496.3	606.1	740.2	235.	181.
23	60.195	.2398			4392.	18438.					
			74.07	.7925			538.3	679.3	857.2	248.	253.
24	60.237	.8343			16268.	19654.					
			60.93	.7746			480.4	620.2	800.7	848.	1173.
25	60.257	.7412			13411.	18250.					
			44.80	.6962			587.4	843.7	1211.8	566.	1106.
26	60.223	.0000			0.	0.					
			44.58	.6357			536.3	843.7	1327.3	0.	0.
27	60.204	.2057			2728.	13354.					
			72.71	.9601			792.8	825.8	860.2	11.	225.
28	60.204	.7405			6107.	8303.					
			72.71	.9601			784.7	817.4	851.4	0.	504.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000236

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 749.00

STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.7380	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.903
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.7640	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	.000	.7380	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.7380	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.7380	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969254.0

MY = 421145.0

MZ = -1236998.0

S = -9422.0

V = -6009.0

D = -842.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000287

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5		MZ(CK) = -1236998.0		D(CK) = -842.0		
	MY(CK) = 421145.0						
Y-BAR =	-0.663	Z-BAR = -0.894	IY = 799.10	IZ = 813.61	IYZ = 31.71	C5 = 1501.76	C6 = 460.18
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ		
1	.2258	-212.	-943.	-1.	17.		
2	.0000	0.	0.	0.	0.		
3	.0000	0.	0.	0.	0.		
4	.8343	-10080.	-12177.	-525.	727.		
5	.0000	0.	0.	0.	0.		
6	.2497	-4257.	-17145.	-251.	193.		
7	.0000	0.	0.	0.	0.		
8	.2756	-5634.	-20531.	-352.	130.		
9	.0000	0.	0.	0.	0.		
10	1.0430	-24590.	-23.	-1537.	0.		
11	.0000	0.	0.	0.	0.		
12	.0000	0.	0.	0.	0.		
13	.7380	-9502.	-12876.	0.	0.		
14	.7380	-2437.	-3302.	0.	0.		
15	.7380	4628.	6272.	0.	0.		
16	.0000	0.	0.	0.	0.		
17	.0000	0.	0.	0.	0.		
18	.7625	12941.	17038.	-809.	0.		
19	.0000	0.	0.	0.	0.		
20	.2195	4413.	20196.	-276.	-102.		
21	.0000	0.	0.	0.	0.		
22	.2196	5041.	23083.	-297.	-228.		
23	.0000	0.	0.	0.	0.		
24	.8142	19692.	24377.	-1027.	-1420.		
25	.0000	0.	0.	0.	0.		
26	.0000	0.	0.	0.	0.		
27	.2258	3586.	15991.	-14.	-296.		
28	.7405	5568.	7570.	0.	-459.		



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 110.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000238

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION	CH1F5						
STATION I = 689.00		STATION II = 749.00					
ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.7380	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.8750	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.7380	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.7380	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 969254.0

MY = 781719.0

MZ = -1802256.0

S = -9422.0

V = -6009.0

D = -842.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000239

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5										
MX(CK) = 969254. MY(CK) = 781719. MZ(CK) = -1802256. S(CK) = -9401. V(CK) = -6028. L(CK) = -842. T(UNBAL.) = 1211215. Q(BAL.) = 519.3 2A(NET) = 1845.2 Y-BAR = .316 Z-BAR = -4.237 IY = 1745.07 IZ = 1941.02 IYZ = 41.03 C5 = 919.68 C6 = 424.29											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	44.58	.6357	271.	1326.	524.4	825.0	1297.9	-1.	22.
2	60.223	.0000	44.80	.6962	0.	0.	574.4	825.0	1184.9	0.	0.
3	60.257	.7412	60.93	.7746	-3818.	-5190.	589.8	761.4	982.9	161.	-315.
4	60.237	.7761	74.07	.7925	-6867.	-8944.	645.5	814.6	1027.9	359.	-497.
5	60.195	.1736	69.62	.8188	-2033.	-11789.	639.2	780.7	953.5	115.	-117.
6	60.166	.1735	68.15	.8367	-2418.	-14016.	678.8	811.3	969.7	143.	-110.
7	60.153	.1734	70.35	.8318	-2777.	-16091.	636.4	765.1	919.8	174.	-96.
8	60.133	.1994	70.83	.8302	-3538.	-17818.	664.2	800.0	963.6	221.	-82.
9	60.121	.1994	70.57	.8321	-3885.	-19560.	611.8	735.3	883.6	243.	-44.
10	60.117	.8767	58.03	.3990	-18602.	-21300.	333.2	835.1	2093.1	1163.	0.
11	60.021	.0000	48.27	.7842	0.	0.	654.9	835.1	1064.8	0.	0.
12	60.007	.7641	67.70	.7828	-11543.	-15111.	503.1	642.7	821.0	177.	0.
13	60.000	.7380	102.00	1.0000	-8277.	-11216.	663.1	663.1	663.1	0.	0.
14	60.000	.7380	102.00	1.0000	-3951.	-5353.	637.9	637.9	637.9	0.	0.
15	60.000	.7380	67.70	.7828	376.	510.	443.8	567.0	724.3	0.	0.
16	60.007	.7381	48.27	.7842	3248.	4402.	487.1	621.1	792.0	50.	0.
17	60.021	.0000	58.03	.3990	0.	0.	247.8	621.1	1556.9	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	0	Q/K	Q/KK	FY	PZ
18	60.117	.7825			8225.	10552.				514.	0.
			70.57	.8321			451.4	542.5	652.0		
19	60.121	.2395			2933.	12296.				183.	34.
			70.83	.8302			491.0	591.4	712.3		
20	60.133	.2395			3351.	14051.				209.	77.
			70.35	.8318			477.2	573.7	689.7		
21	60.153	.2396			3766.	15799.				235.	130.
			68.15	.8367			532.5	636.5	760.7		
22	60.166	.2397			4092.	17167.				241.	185.
			69.62	.8188			508.2	620.7	758.0		
23	60.195	.2398			4398.	18462.				248.	253.
			74.07	.7925			549.9	694.0	875.7		
24	60.237	.8343			15926.	19241.				830.	1149.
			60.93	.7746			488.9	631.2	814.8		
25	60.257	.7412			12842.	17476.				542.	1059.
			44.80	.6962			588.5	845.2	1214.0		
26	60.223	.0000			0.	0.				0.	0.
			44.58	.6357			537.3	845.2	1329.7		
27	60.204	.2057			2478.	12128.				10.	204.
			72.71	.9601			793.8	826.8	861.2		
28	60.204	.7405			4979.	6770.				0.	411.
			72.71	.9601			784.3	817.0	850.9		

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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0002-11

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 749.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.7380	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.7640	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	.000	.7380	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.7380	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.7380	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971762.0 MY = 418979.0 MZ = -1253107.9 S = -9708.0 V = -5547.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH2F5					
	MYICK) = 418979.0	MZ(CK) = -1253107.9	D(CK) = -428.0			
Y-BAR = -.063	Z-BAR = -6.894	IY = 799.10	IZ = 813.61	IYZ = 31.71	C5 = 1521.89	C6 = 460.24
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2258	-222.	-989.	-1.	18.	
2	.0000	0.	0.	0.	0.	
3	.0000	0.	0.	0.	0.	
4	.8343	-10227.	-12355.	-533.	738.	
5	.0000	0.	0.	0.	0.	
6	.2497	-4308.	-17348.	-254.	195.	
7	.0000	0.	0.	0.	0.	
8	.2756	-5690.	-20738.	-356.	131.	
9	.0000	0.	0.	0.	0.	
10	1.0430	-24805.	-23875.	-1550.	0.	
11	.0000	0.	0.	0.	0.	
12	.0000	0.	0.	0.	0.	
13	.7380	-9549.	-12938.	0.	0.	
14	.7380	-2388.	-3236.	0.	0.	
15	.7380	4772.	6466.	0.	0.	
16	.0000	0.	0.	0.	0.	
17	.0000	0.	0.	0.	0.	
18	.7625	13198.	17377.	-825.	0.	
19	.0000	0.	0.	0.	0.	
20	.2195	4487.	20536.	-280.	-104.	
21	.0000	0.	0.	0.	0.	
22	.2196	5115.	23420.	-302.	-232.	
23	.0000	0.	0.	0.	0.	
24	.8142	19945.	24690.	-1040.	-1439.	
25	.0000	0.	0.	0.	0.	
26	.0000	0.	0.	0.	0.	
27	.2258	3626.	16172.	-14.	-299.	
28	.7405	5618.	7638.	0.	-463.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-548

0002-13

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH2F5

STATION I = 689.00 STATION II = 749.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.7380	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.8750	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.7380	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.7380	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 971762.0 MY = 751823.0 MZ = -1835576.0 S = -9708.0 V = -5547.0 D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

0002-11

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH2F5										
FY(CK) = 971762. MY(CK) = 751823. MZ(CK) = -1835576. S(CK) = -9688. V(CK) = -5568. L(CK) = -428. T(UBAL.) = 1218714. Q(BAL.) = 522.5 2A(NET) = 1845.2 Y-BAR = .316 Z-BAR = -4.237 IY = 1745.07 IZ = 1941.02 IYZ = 41.03 C5 = 937.12 C6 = 407.75											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	60.204	.2057	44.58	.6357	200.	977.	527.0	829.0	1304.2	-1.	16.
2	60.223	.0000	44.80	.6962	0.	0.	577.2	829.0	1190.7	0.	0.
3	60.257	.7412	60.93	.7746	-4140.	-5634.	588.7	760.0	981.2	175.	-342.
4	60.237	.7761	74.07	.7925	-7235.	-9397.	641.8	809.9	1022.0	377.	-522.
5	60.195	.1736	69.62	.8188	-2102.	-12190.	634.4	774.9	946.3	119.	-121.
6	60.166	.1735	68.15	.8367	-2477.	-14357.	673.8	805.4	962.6	146.	-112.
7	60.153	.1734	70.35	.8318	-2825.	-16372.	630.7	758.3	911.6	177.	-97.
8	60.133	.1994	70.83	.8302	-3580.	-18032.	658.8	793.4	955.7	224.	-83.
9	60.121	.1994	70.57	.8321	-3913.	-19705.	605.9	728.2	875.2	245.	-45.
10	60.117	.8767	58.03	.3990	-18669.	-21377.	331.3	830.5	2081.7	1167.	0.
11	60.021	.0000	48.27	.7842	0.	0.	651.3	830.5	1059.0	0.	0.
12	60.007	.7641	67.70	.7828	-11513.	-15072.	499.9	638.6	815.8	176.	0.
13	60.000	.7380	102.00	1.0000	-8194.	-11103.	661.2	661.2	661.2	0.	0.
14	60.000	.7380	102.00	1.0000	-3785.	-5129.	637.9	637.9	637.9	0.	0.
15	60.000	.7380	67.70	.7828	624.	845.	445.2	568.8	726.6	0.	0.
16	60.007	.7381	48.27	.7842	3550.	4811.	492.4	627.9	800.7	54.	0.
17	60.021	.0000	58.03	.3990	0.	0.	250.5	627.9	1574.0	0.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
18	60.117	.7825	70.57	.8321	8636.	11080.	459.2	551.9	663.3	540.	0.
19	60.121	.2395	70.83	.8302	3043.	12750.	500.3	602.6	725.8	190.	35.
20	60.133	.2395	70.35	.8318	3444.	14443.	486.8	585.2	703.6	215.	79.
21	60.153	.2396	68.15	.8367	3844.	16123.	543.3	649.3	776.0	240.	133.
22	60.166	.2397	69.62	.8188	4151.	17417.	518.5	633.2	773.4	245.	188.
23	60.195	.2398	74.07	.7925	4439.	18635.	560.4	707.2	892.5	251.	256.
24	60.237	.8343	60.93	.7746	15994.	19323.	496.8	641.4	828.0	834.	1154.
25	60.257	.7412	44.80	.6962	12836.	17467.	595.5	855.3	1228.5	541.	1059.
26	60.223	.0000	44.58	.6357	0.	0.	543.7	855.3	1345.6	0.	0.
27	60.204	.2057	72.71	.9601	2448.	11984.	802.3	835.7	870.5	10.	202.
28	60.204	.7405	72.71	.9601	4797.	6522.	789.2	822.0	856.2	0.	396.



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000246

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CM7F5

STATION I = 749.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.7380	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.7640	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	.000	.7380	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.7380	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.7380	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978725.0 MY = 446232.0 MZ = -1247532.0 S = -9471.0 V = -6499.0 D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

0002-17

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION		CH7F5		MY(CK) = 446232.0		MZ(CK) = -1247531.9		D(CK) = -822.0	
Y-BAR = -0.663		Z-BAR = -6.894		IY = 799.10		IZ = 813.61		IYZ = 31.71	
C5 = 1513.51		C6 = 491.28							
ITEM	AE(PROJ.)	P(IJET)	F(IJET)	PY	PZ				
1	.2258	-124.	-551.	-0.	10.				
2	.0000	0.	0.	0.	0.				
3	.0000	0.	0.	0.	0.				
4	.8343	-9898.	-11958.	-516.	714.				
5	.0000	0.	0.	0.	0.				
6	.2497	-4259.	-17152.	-251.	193.				
7	.0000	0.	0.	0.	0.				
8	.2756	-5694.	-20752.	-356.	131.				
9	.0000	0.	0.	0.	0.				
10	1.0430	-25040.	-24101.	-1565.	0.				
11	.0000	0.	0.	0.	0.				
12	.0000	0.	0.	0.	0.				
13	.7380	-9759.	-13223.	0.	0.				
14	.7380	-2638.	-3575.	0.	0.				
15	.7380	4482.	6074.	0.	0.				
16	.0000	0.	0.	0.	0.				
17	.0000	0.	0.	0.	0.				
18	.7625	12854.	16923.	-803.	0.				
19	.0000	0.	0.	0.	0.				
20	.2195	4435.	20294.	-277.	-102.				
21	.0000	0.	0.	0.	0.				
22	.2196	5109.	23391.	-301.	-231.				
23	.0000	0.	0.	0.	0.				
24	.8142	20100.	24882.	-1048.	-1450.				
25	.0000	0.	0.	0.	0.				
26	.0000	0.	0.	0.	0.				
27	.2258	3703.	16516.	-14.	-306.				
28	.7405	5907.	8032.	0.	-487.				

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 689.00

STATION II = 749.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.7380	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.8750	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7310	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.7380	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.7380	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 978725.0

MY = 836145.0

MZ = -1815763.9

S = -9471.0

V = -6499.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000249

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH7F5																		
MX(CK) =		978725.	MY(CK) =		836145.	MZ(CK) =		-1815764.	SX(CK) =		-9450.	V(CK) =		-6518.	L(CK) =		-822.			
T(UNBAL.) =		1222709.	Q(BAL.) =		524.2	2A(NET) =		1845.2												
Y-BAR =		.316	Z-BAR =		-4.237	IY =		1745.07	IZ =		1941.02	IYZ =		41.03	C5 =		925.97	C6 =		455.38
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ									
1	60.204	.2057			370.	1809.				-1.	30.									
2	60.223	.0000	44.58	.6357	0.	0.	529.5	832.9	1310.3	0.	0.									
3	60.257	.7412	44.80	.6962	-3525.	-4797.	579.9	832.9	1196.3	149.	-291.									
4	60.237	.7761	60.93	.7746	-6650.	-8637.	599.7	774.2	999.4	347.	-48.									
5	60.195	.1736	74.07	.7925	-2004.	-11621.	656.4	828.3	1045.2	113.	-115.									
6	60.166	.1735	69.62	.8188	-2412.	-13981.	650.9	794.9	970.8	142.	-109.									
7	60.153	.1734	68.15	.8367	-2793.	-16185.	690.8	825.7	986.9	175.	-96.									
8	60.133	.1994	70.35	.8318	-3582.	-18039.	648.1	779.1	936.7	224.	-83.									
9	60.121	.1994	70.83	.8302	-3954.	-19909.	676.1	814.3	980.0	247.	-45.									
10	60.117	.8767	70.57	.8321	-19018.	-21777.	622.8	748.4	899.5	1189.	0.									
11	60.021	.0000	58.03	.3990	0.	0.	338.6	848.8	2127.6	0.	0.									
12	60.007	.7641	48.27	.7842	-11874.	-15544.	665.7	848.8	1082.4	182.	0.									
13	60.000	.7380	67.70	.7828	-8577.	-11622.	509.5	650.9	831.5	0.	0.									
14	60.000	.7380	102.00	1.0000	-4221.	-5719.	670.6	670.6	670.6	0.	0.									
15	60.000	.7380	102.00	1.0000	136.	184.	644.2	644.2	644.2	0.	0.									
16	60.007	.7381	67.70	.7828	3027.	4103.	447.6	571.8	730.5	46.	0.									
17	60.021	.0000	48.27	.7842	0.	0.	488.0	622.3	793.5	0.	0.									
			58.03	.3990			248.3	622.3	1559.7											

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000250

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	F (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	60.117	.7825	70.57	.8321	8024.	10294.	450.8	541.8	651.1	501.	0.
19	60.121	.2395	70.83	.8302	2902.	12166.	489.9	590.1	710.8	181.	33.
20	66.133	.2395	70.35	.8318	3350.	14049.	475.8	572.1	687.7	209.	77.
21	60.153	.2396	68.15	.8367	3796.	15924.	531.6	635.3	759.3	237.	131.
22	60.166	.2397	69.62	.8188	4151.	17416.	507.1	619.4	756.4	245.	188.
23	60.195	.2398	74.07	.7925	4487.	10837.	550.1	694.2	876.0	254.	259.
24	60.237	.8343	60.93	.7746	16340.	19741.	489.2	631.5	815.2	852.	1179.
25	60.257	.7412	44.80	.6962	13249.	18030.	593.4	852.3	1224.1	559.	1093.
26	60.223	.0000	44.58	.6357	0.	0.	541.8	852.3	1340.8	0.	0.
27	60.204	.2057	72.71	.9601	2592.	12685.	800.5	833.8	868.5	10.	214.
28	60.204	.7405	72.71	.9601	5364.	7292.	791.8	824.7	859.0	0.	442.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 140.  
 REPORT NO. SER 64430  
 MODEL C4-54B

000251

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1613

STATION I = 749.00 STATION II = 689.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-5.600	7.415	-5.833	12.365
2	.000	1.0000	-.000	-7.750	7.015	-9.250	11.965
3	.000	.7380	-.000	-9.690	6.015	-12.221	10.965
4	1.000	.8310	-.000	-12.075	4.327	-15.203	8.655
5	.000	.2490	-.000	-12.950	.972	-16.340	4.430
6	1.000	.2490	-.000	-13.320	-2.408	-16.860	.310
7	.000	.2490	-.000	-13.500	-5.795	-17.250	-3.725
8	1.000	.2750	-.000	-13.500	-9.187	-17.250	-7.803
9	.000	.2750	-.000	-13.500	-12.596	-17.250	-11.909
10	1.000	1.0410	-.000	-13.500	-16.000	-17.250	-16.000
11	.000	.7640	-.000	-12.053	-16.000	-13.623	-16.000
12	.000	.7640	-.000	-9.687	-16.000	-10.606	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	.000	.7380	-.000	9.687	-16.000	10.606	-16.000
17	.000	1.0000	-.000	12.053	-16.000	13.623	-16.000
18	1.000	.7610	-.000	13.500	-16.000	17.250	-16.000
19	.000	.2190	-.000	13.500	-12.596	17.250	-11.909
20	1.000	.2190	-.000	13.500	-9.187	17.250	-7.803
21	.000	.2190	-.000	13.500	-5.795	17.250	-3.725
22	1.000	.2190	-.000	13.320	-2.408	16.860	.310
23	.000	.2190	-.000	12.950	.972	16.340	4.430
24	1.000	.8110	-.000	12.075	4.327	15.203	8.655
25	.000	.7380	-.000	9.690	6.015	12.221	10.965
26	.000	1.0000	-.000	7.750	7.015	9.250	11.965
27	1.000	.2250	-.000	5.600	7.415	5.833	12.365
28	1.000	.7380	-.000	.000	7.515	.000	12.465

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 712124.0 MZ = .0 S = .0 V = -7084.0 D = 824.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000252

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1613					
	MY(CK) = 712124.0	MZ(CK) = -.0	D(CK) = 824.0			
Y-BAR = -.663	Z-BAR = -6.894	IY = 799.10	IZ = 813.61	IYZ = 31.71	C5 = -34.39	C6 = 899.63
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2258	2968.	13238.	12.	-245.	
2	.0000	0.	0.	0.	0.	
3	.0000	0.	0.	0.	0.	
4	.8343	8837.	10677.	461.	-637.	
5	.0000	0.	0.	0.	0.	
6	.2497	1143.	4602.	67.	-52.	
7	.0000	0.	0.	0.	0.	
8	.2756	-418.	-1523.	-26.	10.	
9	.0000	0.	0.	0.	0.	
10	1.0430	-7974.	-7675.	-498.	0.	
11	.0000	0.	0.	0.	0.	
12	.0000	0.	0.	0.	0.	
13	.7380	-5823.	-7890.	0.	0.	
14	.7380	-5985.	-8109.	0.	0.	
15	.7380	-6146.	-8328.	0.	0.	
16	.0000	0.	0.	0.	0.	
17	.0000	0.	0.	0.	0.	
18	.7625	-6537.	-8607.	409.	0.	
19	.0000	0.	0.	0.	0.	
20	.2195	-536.	-2455.	34.	12.	
21	.0000	0.	0.	0.	0.	
22	.2196	804.	3681.	-47.	-36.	
23	.0000	0.	0.	0.	0.	
24	.8142	7949.	9840.	-414.	-573.	
25	.0000	0.	0.	0.	0.	
26	.0000	0.	0.	0.	0.	
27	.2258	2881.	12850.	-11.	-238.	
28	.7405	9660.	13134.	0.	-797.	

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000253

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH1G13

STATION I = 689.00

STATION II = 749.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-5.833	12.365	-5.600	7.415
2	.000	1.0000	-.000	-9.250	11.965	-7.750	7.015
3	1.000	.7380	-.000	-12.221	10.965	-9.690	6.015
4	1.000	.7730	-.000	-15.203	8.655	-12.075	4.327
5	1.000	.1730	-.000	-16.340	4.430	-12.950	.972
6	1.000	.1730	-.000	-16.860	.310	-13.320	-2.408
7	1.000	.1730	-.000	-17.250	-3.725	-13.500	-5.795
8	1.000	.1990	-.000	-17.250	-7.803	-13.500	-9.187
9	1.000	.1990	-.000	-17.250	-11.909	-13.500	-12.596
10	1.000	.8750	-.000	-17.250	-16.000	-13.500	-16.000
11	.000	.7640	-.000	-13.623	-16.000	-12.053	-16.000
12	1.000	.7640	-.000	-10.606	-16.000	-9.687	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	10.606	-16.000	9.687	-16.000
17	.000	1.0000	-.000	13.623	-16.000	12.053	-16.000
18	1.000	.7810	-.000	17.250	-16.000	13.500	-16.000
19	1.000	.2390	-.000	17.250	-11.909	13.500	-12.596
20	1.000	.2390	-.000	17.250	-7.803	13.500	-9.187
21	1.000	.2390	-.000	17.250	-3.725	13.500	-5.795
22	1.000	.2390	-.000	16.860	.310	13.320	-2.408
23	1.000	.2390	-.000	16.340	4.430	12.950	.972
24	1.000	.8310	-.000	15.203	8.655	12.075	4.327
25	1.000	.7380	-.000	12.221	10.965	9.690	6.015
26	.000	1.0000	-.000	9.250	11.965	7.750	7.015
27	1.000	.2050	-.000	5.833	12.365	5.600	7.415
28	1.000	.7380	-.000	.000	12.465	.000	7.515

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1137151.9 MZ = .0 S = .0 V = -7084.0 D = 824.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000251

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1613												
NY(CK) =	0.	MY(CK) =	1137152.	MZ(CK) =	-0.	S(CK) =	-2.	V(CK) =	-7121.	U(CK) =	824.		
T(UNBAL.) =	-11226.	O(BAL.) =	-4.8	2A(NET) =	1845.2								
Y-BAR =	.316	Z-BAR =	-4.237	IY =	1745.07	IZ =	1941.02	IYZ =	41.03	C5 =	-13.96	C6 =	653.97
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	60.204	.2057	44.58	.6357	2265.	11088.	-12.3	-19.3	-30.3	-9.	187.		
2	60.223	.0000	44.80	.6962	0.	0.	-13.4	-19.3	-27.7	0.	0.		
3	60.257	.7412	60.93	.7746	7550.	10274.	82.5	106.5	137.5	-318.	623.		
4	60.237	.7761	74.07	.7925	6765.	87.	57.1	72.0	90.9	-353.	488.		
5	60.195	.1736	69.62	.8188	1036.	6009.	73.1	89.3	109.0	-59.	60.		
6	60.166	.1735	68.15	.8367	570.	3302.	66.7	79.7	95.3	-34.	26.		
7	60.153	.1734	70.35	.8318	113.	653.	67.9	81.6	98.1	-7.	4.		
8	60.133	.1994	70.83	.8302	-402.	-2020.	68.0	81.9	98.6	25.	-9.		
9	60.121	.1994	70.57	.8321	-938.	-4721.	55.1	66.2	79.6	59.	-11.		
10	60.117	.8767	58.03	.3990	-6468.	-7406.	36.4	91.3	229.0	404.	0.		
11	60.021	.0000	48.27	.7842	0.	0.	71.6	91.3	116.5	0.	0.		
12	60.007	.7641	67.70	.7828	-5708.	-7472.	-3.0	-3.8	-4.8	87.	0.		
13	60.000	.7380	102.00	1.0000	-5556.	-7529.	.7	.7	.7	0.	0.		
14	60.000	.7380	102.00	1.0000	-5622.	-7618.	6.7	6.7	6.7	0.	0.		
15	60.000	.7380	67.70	.7828	-5688.	-7707.	11.2	14.3	18.3	0.	0.		
16	60.007	.7381	48.27	.7842	-5732.	-7768.	-63.7	-81.2	-103.5	-88.	0.		
17	60.021	.0000	58.03	.3990	0.	0.	-32.4	-81.2	-203.5	0.	0.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

000255

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	60.117	.7825	70.57	.8321	-6150.	-7890.	-62.2	-74.7	-89.8	-384.	0.
19	60.121	.2395	70.83	.8302	-1241.	-5204.	-79.2	-95.4	-114.9	-78.	-14.
20	60.133	.2395	70.35	.8318	-598.	-2509.	-80.2	-96.5	-116.0	-37.	-14.
21	60.153	.2396	68.15	.8367	40.	169.	-80.1	-95.8	-114.5	3.	1.
22	60.166	.2397	69.62	.8188	674.	2828.	-80.2	-98.0	-119.6	40.	31.
23	60.195	.2398	74.07	.7925	1322.	5550.	-60.2	-75.9	-95.8	75.	76.
24	60.237	.8343	60.93	.7746	6919.	8359.	-72.1	-93.1	-120.2	361.	499.
25	60.257	.7412	44.80	.6962	7297.	9930.	19.9	28.5	41.0	308.	602.
26	60.223	.0000	44.58	.6357	0.	0.	18.1	28.5	44.9	0.	0.
27	60.204	.2057	72.71	.9601	2232.	10924.	17.0	17.7	18.4	9.	184.
28	60.204	.7405	72.71	.9601	8143.	11072.	-7.3	-7.6	-7.9	0.	672.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000256

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION COND.CH10F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1729363.9

MZ = -2557271.9

S = -8234.0

V = -8793.0

D = -717.0

USE THIS FOR REPORT.

#11 BOLON FAILED

## 6.0 Reinforced Tail Cone Section Loads with Partial "No Bond" of Boron/ Epoxy to Aluminum

This section of the report contains the computer input data for a boron/epoxy reinforced tail cone assuming complete "no bond" has developed in the following stringers.

Condition A: Stringer No. 11

Condition B: Stringers No. 11 and 12

Condition C: Stringers No. 11, 12, 13, 14, 15, 16, and 17

Condition D: A condition of no bonds on the twelve reinforced stringers for the complete tail cone (Stations 549 to 749). This condition is the modified tail cone of Section 4.0

The input data for this loads analysis is at the critical section of the tail cone between Stations 569.0 and 589.0. All loads, geometry, stringer numbers and areas are those of Sections 4.0 and 5.0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000257

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION COND.CH10F5

MY(CK) = 1729364.0

MZ(CK) = -2557271.9

D(CK) = -717.0

Y-BAR = 1.507 Z-BAR = .309 IY = 3849.22 IZ = 4140.40 IYZ = -64.37 C5 = 625.05 C6 = 459.79

ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	917.	4488.	4.	-76.
2	.7407	605.	823.	15.	-50.
3	.7412	-1907.	-2595.	-80.	158.
4	.7760	-5121.	-6650.	-267.	369.
5	.1736	-1769.	-10258.	-100.	102.
6	.1735	-2268.	-13146.	-134.	104.
7	.1734	-2766.	-16029.	-173.	94.
8	.1994	-3602.	-18443.	-229.	85.
9	.1994	-4142.	-20855.	-259.	48.
10	.9825	-22773.	-23269.	-1423.	0.
11	.1721	-3350.	-19491.	-132.	0.
12	.7641	-12284.	-16080.	-188.	0.
13	.7380	-9206.	-12475.	0.	0.
14	.7380	-6206.	-8490.	0.	0.
15	.7380	-3325.	-4505.	0.	0.
16	.7381	-607.	-904.	10.	0.
17	.7386	1833.	2485.	-72.	0.
18	.8426	5223.	6223.	-326.	0.
19	.2996	2578.	8641.	-161.	-30.
20	.2996	3341.	11195.	-209.	-28.
21	.2998	4025.	13497.	-252.	-137.
22	.2998	4611.	15465.	-273.	-211.
23	.3000	5189.	17410.	-293.	-299.
24	.8945	16926.	19072.	-882.	-1220.
25	.7412	13323.	18131.	-562.	-1103.
26	.7407	11486.	15621.	-287.	-947.
27	.2057	2516.	12317.	-10.	-208.
28	.7405	(214.	8448.	0.	-513.

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000258

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 569.00

STATION II = 585.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9306	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1905226.0

MZ = -2721952.0

S = -8234.0

V = -8793.0

D = -717.0

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000259

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (ST. I)

CONDITION: COND.CH10F5

MX(CK) = 980840. MY(CK) = 1905226. MZ(CK) = -2721952. S(CK) = -8233. V(CK) = -8789. L(CK) = -717.

T(UNBAL.) = 1151087. Q(BAL.) = 315.8 2A(NET) = 3554.2

Y-BAR = 1.830 Z-BAR = .949 IY = 4207.78 IZ = 4572.35 IYZ = -62.10 C5 = 601.87 C6 = 461.83

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258	135.09	.9292	1107.	4939.	324.6	349.4	376.0	-4.	91.
2	20.074	.7407	122.17	.9347	841.	1144.	337.6	361.2	386.4	-21.	69.
3	20.086	.7412	148.71	.9471	-1743.	-2371.	349.9	369.4	390.0	73.	-144.
4	20.079	.6716	156.71	.9515	-4372.	-6561.	387.1	406.8	427.6	228.	-315.
5	20.065	.2067	135.56	.9556	-2121.	-10331.	371.9	389.2	407.3	120.	-122.
6	20.056	.1735	135.93	.9568	-2304.	-13354.	370.7	387.4	404.9	136.	-105.
7	20.051	.1734	135.33	.9598	-2826.	-16379.	368.9	384.4	400.5	177.	-96.
8	20.044	.1994	135.41	.9580	-3754.	-18906.	363.8	379.8	396.5	235.	-87.
9	20.040	.1994	135.33	.9576	-4257.	-21435.	358.2	374.0	390.6	266.	-49.
10	20.039	.9825	102.58	.9276	-23457.	-23967.	315.3	339.9	366.4	1466.	0.
11	20.015	.1721	94.34	.9186	-3445.	-20046.	307.8	335.1	364.8	135.	0.
12	20.002	.7641	97.09	.9496	-12582.	-16471.	304.0	320.2	337.2	193.	0.
13	20.000	.7380	102.00	1.0000	-9457.	-12815.	307.6	307.6	307.6	0.	0.
14	20.000	.7380	102.00	1.0000	-6626.	-8978.	289.6	289.6	289.6	0.	0.
15	20.000	.7380	97.09	.9496	-3794.	-5141.	252.7	266.2	280.3	0.	0.
16	20.002	.7381	94.34	.9186	-1099.	-1489.	224.6	244.6	266.2	-17.	0.
17	20.015	.7386	102.58	.9276	1521.	2063.	212.4	229.0	246.8	60.	0.

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	F (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			5106.	5941.				319.	0.
			135.53	.9576			213.6	223.1	233.0		
19	20.040	.3196			2699.	8478.				169.	31.
			135.41	1.0115			231.8	229.1	226.5		
20	20.040	.3196			3506.	11014.				219.	30.
			135.33	.9062			215.1	237.4	262.0		
21	20.051	.3196			4316.	13564.				270.	147.
			135.93	.9568			241.1	251.9	263.3		
22	20.056	.3199			4971.	15026.				294.	227.
			135.56	.9556			258.0	269.9	202.5		
23	20.064	.3200			5622.	17081.				318.	324.
			136.71	.9515			277.5	291.6	306.4		
24	20.079	.8644			16699.	19472.				870.	1203.
			148.71	.9471			265.4	280.2	295.9		
25	20.084	.7412			13675.	18610.				576.	1132.
			122.17	.9347			278.4	297.8	318.6		
26	20.074	.7407			11764.	16000.				294.	970.
			135.09	.9292			289.7	311.8	335.5		
27	20.068	.2258			2819.	12570.				11.	233.
			140.84	.9878			322.9	326.9	330.9		
28	20.068	.7405			6473.	8801.				0.	515.
			140.84	.9878			335.7	339.8	344.0		



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 DATE 2/12/71

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000261

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-10.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	10.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 067355.0

MY = 1430337.0

MZ = -2713166.0

S = -8907.0

V = -6990.0

D = -896.0

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1F5		MZ(CK) = -2713165.9		D(CK) = -896.0	
	MY(CK) = 1430337.0		IZ = 4140.40	IY = 3849.22	IYZ = -64.37	
	Y-BAR = 1.507	Z-BAR = .309				
	ITFM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ
1	.2057	534.	2616.	2.	-44.	
2	.7407	-899.	-1222.	-22.	74.	
3	.7412	-3482.	-4738.	-147.	288.	
4	.7760	-6682.	-8678.	-348.	481.	
5	.1736	-2052.	-11901.	-116.	118.	
6	.1735	-2486.	-14411.	-147.	114.	
7	.1734	-2919.	-16914.	-182.	100.	
8	.1994	-3757.	-18921.	-235.	87.	
9	.1994	-4156.	-20927.	-260.	48.	
10	.9825	-22448.	-22936.	-1403.	0.	
11	.1721	-3256.	-18942.	-128.	0.	
12	.7641	-11713.	-15333.	-179.	0.	
13	.7380	-8500.	-11518.	0.	0.	
14	.7380	-5388.	-7300.	0.	0.	
15	.7380	-2275.	-3083.	0.	0.	
16	.7381	538.	729.	-8.	0.	
17	.7386	3185.	4319.	-125.	0.	
18	.8426	6949.	8279.	-434.	0.	
19	.2996	3071.	10292.	-192.	-36.	
20	.2996	3706.	12418.	-232.	-31.	
21	.2998	4276.	14337.	-267.	-146.	
22	.2998	4732.	15872.	-280.	-216.	
23	.3000	5181.	17385.	-293.	-299.	
24	.8945	16461.	18547.	-858.	-1186.	
25	.7412	12639.	17199.	-533.	-1046.	
26	.7407	10617.	14440.	-265.	-875.	
27	.2057	2227.	10902.	-9.	-184.	
28	.7405	5000.	6798.	0.	-413.	

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000263

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0 MY = 1571311.0 MZ = -2891816.0 S = -8907.0 V = -6999.0 D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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000264

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION		CH1F5											
MX(CK) = 967355.		MY(CK) = 1571311.		MZ(CK) = -2891816.		S(CK) = -8932.		V(CK) = -7046.		L(CK) = -896.			
T(UNCAL.) = 1141289.		O(BAL.) = 313.1		2A(NET) = 3554.2									
Y-BAR = 1.830		Z-BAR = .949		IY = 4207.78		IZ = 4572.35		IYZ = -62.10		C5 = 638.02		C6 = 383.05	
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	20.068	.2258			659.	2940.				-3.	54.		
2	20.074	.7407	135.09	.9292	-765.	-1041.	318.9	343.2	369.3	19.	-63.		
3	20.086	.7412	122.17	.9347	-3427.	-4063.	327.0	349.9	374.3	144.	-284.		
4	20.079	.6716	148.71	.9471	-5811.	-8721.	334.0	352.6	372.3	303.	-419.		
5	20.065	.2067	156.71	.9515	-2479.	-12075.	376.9	396.1	416.3	140.	-143.		
6	20.056	.1735	135.56	.9556	-2535.	-14095.	358.1	374.8	392.2	150.	-116.		
7	20.051	.1734	135.93	.9568	-2988.	-17315.	356.2	372.3	389.1	187.	-102.		
8	20.044	.1994	135.33	.9598	-3854.	-19408.	354.0	368.9	384.3	241.	-89.		
9	20.040	.1994	135.41	.9580	-4271.	-21504.	348.7	364.0	380.0	267.	-50.		
10	20.039	.9825	135.33	.9576	-23101.	-23004.	343.1	358.3	374.2	1444.	0.		
11	20.015	.1721	102.58	.9276	-3343.	-19452.	302.1	325.6	351.0	131.	0.		
12	20.002	.7641	94.34	.9186	-11966.	-15063.	295.1	321.3	349.7	183.	0.		
13	20.000	.7380	97.09	.9496	-8700.	-11788.	293.1	308.7	325.0	0.	0.		
14	20.000	.7380	102.00	1.0000	-5698.	-7721.	298.7	298.7	298.7	0.	0.		
15	20.000	.7380	102.00	1.0000	-2696.	-3054.	283.2	283.2	283.2	0.	0.		
16	20.002	.7381	97.09	.9496	161.	218.	248.9	262.1	276.0	2.	0.		
17	20.015	.7386	94.34	.9186	2939.	3980.	223.4	243.2	264.8	116.	0.		
			102.58	.9276			214.2	231.0	249.0				

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 DATE 2/12/71

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000265

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627	135.33	.9576	6962.	8102.	221.8	231.6	241.9	435.	0.
19	20.040	.3196	135.41	1.0115	3249.	10200.	243.3	240.5	237.8	203.	38.
20	20.040	.3196	135.33	.9062	3919.	12309.	227.6	251.2	277.2	245.	33.
21	20.051	.3198	135.93	.9568	4591.	14427.	255.4	266.9	279.0	287.	157.
22	20.056	.3199	135.56	.9556	5098.	16027.	272.5	285.2	298.4	301.	233.
23	20.065	.3200	156.71	.9515	5602.	17619.	291.4	306.3	321.9	317.	323.
24	20.079	.8644	148.71	.9471	16188.	18870.	277.2	292.6	309.0	843.	1166.
25	20.086	.7412	122.17	.9347	12917.	17578.	286.5	306.5	327.9	544.	1069.
26	20.074	.7407	135.09	.9292	10814.	14707.	294.0	316.4	340.4	270.	892.
27	20.068	.2258	140.84	.9878	2473.	11030.	324.6	328.6	332.7	10.	204.
28	20.068	.7405	140.84	.9878	5165.	7023.	332.8	336.9	341.1	0.	427.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000266

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH2F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2590	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0      MY = 1351283.0      MZ = -2779205.0      S = -9264.0      V = -6458.0      D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000267

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH2F5					
	MY(CK) = 1351263.0		NZ(CK) = -2779204.8		D(CK) = -428.0	
Y-BAR = 1.507	Z-BAR = .309	IY = 3849.22	IZ = 4140.40	IYZ = -64.37	C5 = 677.03	C6 = 362.41
ITEM	AE(PROJ.)	P(NET)	F(NET)	RY	PZ	
1	.2057	432.	2112.	2.	-36.	
2	.7407	-1327.	-1804.	-33.	109.	
3	.7412	-3948.	-5373.	-166.	327.	
4	.7760	-7165.	-9306.	-373.	516.	
5	.1736	-2145.	-12437.	-121.	124.	
6	.1735	-2562.	-14852.	-151.	117.	
7	.1734	-2978.	-17259.	-186.	102.	
8	.1994	-3804.	-19158.	-238.	88.	
9	.1994	-4182.	-21058.	-261.	49.	
10	.9825	-22471.	-22960.	-1404.	0.	
11	.1721	-3244.	-18873.	-127.	0.	
12	.7641	-11597.	-15181.	-177.	0.	
13	.7380	-8322.	-11276.	0.	0.	
14	.7380	-5137.	-6960.	0.	0.	
15	.7380	-1952.	-2644.	0.	0.	
16	.7381	928.	1257.	-14.	0.	
17	.7386	3636.	4931.	-143.	0.	
18	.8426	7541.	8985.	-471.	0.	
19	.2996	3250.	10891.	-203.	-38.	
20	.2996	3851.	12904.	-241.	-33.	
21	.2998	4391.	14723.	-274.	-150.	
22	.2998	4812.	16139.	-284.	-220.	
23	.3000	5225.	17533.	-295.	-302.	
24	.8945	16468.	18556.	-858.	-1187.	
25	.7412	12549.	17077.	-529.	-1038.	
26	.7407	10459.	14224.	-261.	-862.	
27	.2057	2164.	10592.	-8.	-179.	
28	.7405	4699.	6389.	0.	-388.	

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 DATE 2/12/71

PAGE NO.  
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000268

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0 MY = 1480433.0 MZ = -2964472.0 S = -9264.0 V = -6458.0 D = -428.0



PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

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000269

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION		CH2F5											
MX(CK) = 970130.		MY(CK) = 1480433.		MZ(CK) = -2964472.		S(CK) = -9263.		V(CK) = -6455.		L(CK) = -428.			
T(UNBAL.) = 1147608.		O(BAL.) = 314.8		2A(NET) = 3554.2									
Y-BAR = 1.830		Z-BAR = .949		IY = 4207.78		IZ = 4572.35		IYZ = -62.10		C5 = 653.43		C6 = 361.57	
ITEM	L.S.	AE(PROJ.)	2A	K	F(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ		
1	20.068	.2258			535.	2384.				-2.	44.		
2	20.074	.7407	135.09	.9292	-1235.	-1080.	319.6	344.0	370.2	31.	-102.		
3	20.086	.7412	122.17	.9347	-3939.	-5360.	325.8	348.5	372.9	166.	-326.		
4	20.079	.6716	148.71	.9471	-6267.	-9405.	330.6	349.0	368.5	327.	-452.		
5	20.065	.2067	156.71	.9515	-2598.	-12655.	374.8	393.9	414.0	147.	-150.		
6	20.056	.1735	135.56	.9556	-2617.	-15169.	354.8	371.2	388.5	155.	-120.		
7	20.051	.1734	135.93	.9568	-3051.	-17683.	352.6	368.5	385.2	191.	-104.		
8	20.044	.1994	135.33	.9598	-3903.	-19657.	350.2	364.8	380.1	244.	-90.		
9	20.040	.1994	135.41	.9580	-4297.	-21630.	344.8	359.9	375.7	269.	-50.		
10	20.039	.9825	135.33	.9576	-23114.	-23618.	339.1	354.2	369.8	1445.	0.		
11	20.015	.1721	102.58	.9276	-3328.	-19366.	298.7	322.0	347.1	131.	0.		
12	20.002	.7641	94.34	.9186	-11831.	-15488.	291.9	317.7	345.9	181.	0.		
13	20.000	.7380	97.09	.9496	-8501.	-11519.	290.6	306.0	322.3	0.	0.		
14	20.000	.7380	102.00	1.0000	-5427.	-7353.	297.1	297.1	297.1	0.	0.		
15	20.000	.7380	102.00	1.0000	-2353.	-3188.	282.6	282.6	282.6	0.	0.		
16	20.002	.7381	97.09	.9496	574.	777.	249.3	262.5	276.5	9.	0.		
17	20.015	.7386	94.34	.9186	3419.	4037.	224.9	244.8	266.5	134.	0.		
			102.58	.9276			217.0	234.0	252.2				

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	F (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			7608.	8853.				475.	0.
			135.33	.9576			227.2	237.3	247.8		
19	20.040	.3196			3451.	10840.				216.	40.
			135.41	1.0125			250.2	247.4	244.5		
20	20.040	.3196			4083.	12825.				255.	35.
			135.33	.9062			234.7	259.0	285.8		
21	20.051	.3198			4718.	14820.				295.	161.
			135.93	.9568			263.4	275.3	287.7		
22	20.056	.3199			5184.	16295.				306.	237.
			135.56	.9556			280.8	293.9	307.5		
23	20.065	.3200			5646.	17757.				319.	326.
			156.71	.9515			299.6	314.9	330.9		
24	20.079	.8644			16173.	18858.				843.	1165.
			148.71	.9471			284.3	300.2	316.9		
25	20.086	.7412			12800.	17419.				540.	1059.
			122.17	.9347			292.3	312.7	334.6		
26	20.087	.7407			10623.	14448.				266.	876.
			135.09	.9292			298.2	320.9	345.4		
27	20.068	.2258			2393.	10670.				9.	198.
			140.84	.9878			328.3	332.4	336.5		
28	20.068	.7405			4827.	6564.				0.	399.
			140.84	.9878			334.7	338.8	343.0		

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 DATE 2/12/71

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000271

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 589.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-10.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2090	-.000	21.990	10.192	23.120	11.346
24	1.000	.7380	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	10.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0 MY = 1538519.9 MZ = -2732588.0 S = -8972.0 V = -7625.0 D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000272

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH7F5					
	MY(CK) = 1538520.0		HZ(CK) = -2732587.9		D(CK) = -822.0	
Y-BAR #	1.507	Z-BAR = .309	IY = 3849.22	IZ = 4140.40	IYZ = -64.37	C5 = 666.67 C6 = 410.91
ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ	
1	.2057	645.	3158.	2.	-53.	
2	.7407	-530.	-720.	-13.	44.	
3	.7412	-3151.	-4288.	-133.	261.	
4	.7760	-6424.	-8344.	-335.	463.	
5	.1736	-2024.	-11736.	-114.	117.	
6	.1735	-2484.	-14398.	-147.	114.	
7	.1734	-2943.	-17054.	-184.	100.	
8	.1994	-3814.	-19209.	-238.	88.	
9	.1994	-4243.	-21364.	-265.	49.	
10	.9825	-23020.	-23521.	-1439.	0.	
11	.1721	-3351.	-19495.	-132.	0.	
12	.7641	-12114.	-15858.	-185.	0.	
13	.7380	-8865.	-12013.	0.	0.	
14	.7380	-5729.	-7763.	0.	0.	
15	.7380	-2592.	-3513.	0.	0.	
16	.7381	243.	329.	-4.	0.	
17	.7386	2909.	3945.	-114.	0.	
18	.8426	6600.	7935.	-416.	0.	
19	.2996	3013.	10096.	-188.	-35.	
20	.2996	3694.	12379.	-231.	-31.	
21	.2998	4306.	14438.	-269.	-147.	
22	.2998	4806.	16118.	-284.	-220.	
23	.3000	5298.	17775.	-299.	-306.	
24	.8945	15944.	19092.	-883.	-1221.	
25	.7412	13094.	17819.	-552.	-1084.	
26	.7417	11075.	15063.	-277.	-913.	
27	.2057	2351.	11508.	-9.	-194.	
28	.7405	5423.	7374.	0.	-448.	

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PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000273

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-0.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	0.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0 MY = 1690998.0 MZ = -2911923.0 S = -8972.0 V = -7625.0 D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
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000274

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

FX(CK) = 976986. MY(CK) = 1690998. MZ(CK) = -2911923. S(CK) = -8966. V(CK) = -7620. D(CK) = -822.

T(UFBAL.) = 1154255. G(BAL.) = 316.7 2A(NET) = 3554.2

Y-BAR = 1.830 Z-BAR = .949 IY = 4207.78 IZ = 4572.35 IYZ = -62.10 C5 = 642.77 C6 = 411.55

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	20.068	.2258			789.	3517.				-3.	65.
2	20.074	.7407	135.09	.9292	-369.	-503.	323.3	347.9	374.4	9.	-30.
3	20.086	.7412	122.17	.9347	-3070.	-4177.	332.7	355.9	380.8	129.	-254.
4	20.079	.6716	148.71	.9471	-5569.	-8357.	341.0	360.0	380.1	290.	-401.
5	20.065	.2067	156.71	.9515	-2442.	-11891.	383.2	402.8	423.3	138.	-141.
6	20.056	.1735	135.56	.9556	-2531.	-14671.	364.9	381.9	399.6	150.	-116.
7	20.051	.1734	135.93	.9568	-3012.	-17452.	363.1	379.5	396.7	188.	-103.
8	20.044	.1994	135.33	.9598	-3912.	-19701.	360.9	376.1	391.8	244.	-90.
9	20.040	.1994	135.41	.9580	-4360.	-21954.	355.6	371.2	387.5	273.	-51.
10	20.039	.9825	135.33	.9576	-23695.	-24210.	349.8	365.3	381.5	1481.	0.
11	20.015	.1721	102.58	.9276	-3442.	-20026.	307.6	331.6	357.5	135.	0.
12	20.002	.7641	94.34	.9186	-12383.	-16209.	300.4	327.0	356.0	189.	0.
13	20.000	.7380	97.09	.9496	-9081.	-12305.	297.8	313.6	330.2	0.	0.
14	20.000	.7380	102.00	1.0000	-6057.	-8208.	302.8	302.8	302.8	0.	0.
15	20.000	.7380	102.00	1.0000	-3033.	-4110.	286.4	286.4	286.4	0.	0.
16	20.002	.7381	97.09	.9496	-155.	-210.	251.0	264.3	278.4	-2.	0.
17	20.015	.7386	94.34	.9186	2644.	3586.	224.6	244.5	266.1	104.	0.
			102.58	.9276			214.5	231.2	249.2		

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 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			6643.	7731.				415.	0.
19	20.040	.3196	135.33	.9576	3181.	9992.	220.6	230.4	240.6	199.	37.
20	20.040	.3196	135.41	1.0115	3900.	12251.	241.5	238.8	236.0	244.	33.
21	20.051	.3198	135.33	.9062	4622.	14527.	225.7	249.1	274.9	289.	158.
22	20.056	.3199	135.93	.9568	5179.	16279.	253.5	264.9	276.9	306.	237.
23	20.065	.3200	135.56	.9556	5731.	18024.	271.0	283.5	296.7	324.	331.
24	20.079	.8644	156.71	.9515	16676.	19445.	290.4	305.2	320.8	869.	1202.
25	20.086	.7412	148.71	.9471	13396.	18230.	276.4	291.8	308.1	565.	1109.
26	20.074	.7407	122.17	.9347	11296.	15362.	286.9	306.9	328.4	282.	931.
27	20.068	.2258	135.09	.9292	2616.	11668.	295.4	317.9	342.2	10.	216.
28	20.068	.7405	140.84	.9878	5615.	7634.	327.2	331.2	335.3	0.	464.
			140.84	.9878			336.6	340.8	345.0		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000276

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH1G13

STATION I = 589.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.7640	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1943360.9 MZ = .0 S = .0 V = -8742.0 D = 966.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 110.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000277

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION		CH1G13					
MY(CK) = 1943360.9		MZ(CK) = .0		D(CK) = 966.0			
Y-BAR = 1.507	Z-BAR = .309	IY = 3849.22	IZ = 4140.40	YZ = -64.37	C5 = 7.50	C6 = 504.92	
ITEM	AE(PROJ.)	P(IJET)	F(IJET)	PY	PZ		
1	.2057	2111.	10331.	8.	-174.		
2	.7407	7420.	10092.	186.	-612.		
3	.7412	7024.	9559.	296.	-581.		
4	.7760	6020.	7818.	314.	-434.		
5	.1736	847.	4911.	48.	-49.		
6	.1735	388.	2251.	23.	-18.		
7	.1734	-72.	-419.	-5.	2.		
8	.1994	-612.	-3080.	-38.	14.		
9	.1994	-1139.	-5736.	-71.	13.		
10	.9825	-8210.	-8389.	-513.	0.		
11	.1721	-1431.	-8325.	-56.	0.		
12	.7641	-6320.	-8273.	-97.	0.		
13	.7380	-6072.	-8228.	0.	0.		
14	.7380	-6037.	-8180.	0.	0.		
15	.7380	-6002.	-8133.	0.	0.		
16	.7381	-5971.	-8091.	91.	0.		
17	.7386	-5945.	-8061.	234.	0.		
18	.8426	-6745.	-8035.	422.	0.		
19	.2996	-1606.	-5382.	100.	19.		
20	.2996	-769.	-2576.	48.	6.		
21	.2998	-19.	-65.	1.	1.		
22	.2998	773.	2594.	-46.	-35.		
23	.3000	1563.	5243.	-88.	-90.		
24	.8945	7212.	8127.	-376.	-520.		
25	.7412	7207.	9807.	-304.	-596.		
26	.7407	7551.	10269.	-169.	-623.		
27	.2057	2130.	10425.	-8.	-176.		
28	.7405	7670.	10428.	0.	-634.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER 64430  
 MODEL CH-54B

000278

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH1613

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.7640	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2118187.0 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 110.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000279

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION		CH1613													
MX(CK) =		0.		MY(CK) = 2118187.		MZ(CK) = -0.		S(CK) = 3.		V(CK) = -8736.		L(CK) = 966.			
T(UNBAL.) =		51730.		O(BAL.) = 14.2		2A(NET) = 3554.2									
Y-BAR =		1.830		Z-BAR = .949		IY = 4207.78		IZ = 4572.35		IYZ = -62.10		C5 = 6.45		C6 = 503.28	
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ				
1	20.068	.2258	135.09	.9292	2425.	10816.	28.8	31.0	33.4	-9.	200.				
2	20.074	.7407	122.17	.9347	7778.	10579.	45.7	48.9	52.3	-194.	641.				
3	20.086	.7412	148.71	.9471	7388.	10054.	63.6	67.1	70.9	-311.	611.				
4	20.079	.6716	156.71	.9515	5473.	8213.	37.8	39.8	41.8	-285.	394.				
5	20.065	.2067	135.56	.9556	1062.	5171.	48.3	50.5	52.9	-60.	61.				
6	20.056	.1735	135.93	.9568	414.	2397.	49.5	51.8	54.1	-24.	19.				
7	20.051	.1734	135.33	.9598	-66.	-380.	50.0	52.1	54.3	4.	-2.				
8	20.044	.1994	135.41	.9580	-624.	-3144.	49.3	51.5	53.7	39.	-14.				
9	20.040	.1994	135.33	.9576	-1173.	-5908.	47.7	49.8	52.0	73.	-14.				
10	20.039	.9825	102.58	.9276	-8485.	-8670.	33.4	36.1	38.9	530.	0.				
11	20.015	.1721	94.34	.9186	-1479.	-8608.	30.9	33.6	36.6	58.	0.				
12	20.002	.7641	97.09	.9496	-6538.	-8558.	21.6	22.7	23.9	100.	0.				
13	20.000	.7380	102.00	1.0000	-6286.	-8517.	12.1	12.1	12.1	0.	0.				
14	20.000	.7380	102.00	1.0000	-6255.	-8476.	1.2	1.2	1.2	0.	0.				
15	20.000	.7380	97.09	.9496	-6225.	-8435.	-9.5	-10.0	-10.5	0.	0.				
16	20.002	.7381	94.34	.9186	-6197.	-8398.	-19.6	-21.3	-23.2	-95.	0.				
17	20.015	.7386	102.58	.9276	-6173.	-8371.	-30.4	-32.7	-35.3	-243.	0.				

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

000280

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	20.039	.8627			-7175.	-8349.				-448.	0.
			135.33	.9576			-51.9	-54.2	-56.6		
19	20.040	.3196			-1779.	-5587.				-111.	-21.
			135.41	1.0115			-63.6	-62.9	-62.2		
20	20.040	.3196			-899.	-2822.				-56.	-8.
			135.33	.9062			-62.8	-69.4	-76.5		
21	20.051	.3198			-19.	-60.				-1.	-1.
			135.93	.9568			-66.3	-69.3	-72.5		
22	20.056	.3199			861.	2708.				51.	39.
			135.56	.9556			-62.1	-64.9	-68.0		
23	20.065	.3200			1740.	5471.				98.	100.
			156.71	.9515			-53.4	-56.1	-59.0		
24	20.079	.8644			7283.	8492.				379.	525.
			148.71	.9471			-49.8	-52.6	-55.5		
25	20.086	.7412			7553.	10279.				318.	625.
			122.17	.9347			-33.0	-35.3	-37.7		
26	20.074	.7407			7895.	10738.				197.	651.
			135.09	.9292			-16.7	-18.0	-19.4		
27	20.068	.2258			2444.	10897.				9.	202.
			140.84	.9878			-2.3	-2.3	-2.4		
28	20.068	.7405			8022.	10907.				0.	663.
			140.84	.9878			15.1	15.3	15.5		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000281

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1729363.9

MZ = -2557271.9

S = -8234.0

V = -8793.0

D = -717.0

#11 & 12 FAILED

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000282

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	COND.CH10F5					
	MY(CK) = 1729363.9		MZ(CK) = -2557271.9		D(CK) = -717.0	
Y-LOAD	2.082	Z-BAR = .996	IY = 3685.10	IZ = 4025.54	IYZ = -201.67	C5 = 660.96 C6 = 505.65
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	901.	4412.	3.	-74.	
2	.7407	389.	529.	10.	-32.	
3	.7412	-2282.	-3106.	-96.	189.	
4	.7760	-5744.	-7459.	-299.	414.	
5	.1736	-1963.	-11385.	-111.	113.	
6	.1735	-2509.	-14541.	-148.	115.	
7	.1734	-3053.	-17691.	-191.	134.	
8	.1994	-4040.	-20346.	-252.	93.	
9	.1994	-4568.	-22999.	-285.	53.	
10	.9825	-25107.	-25653.	-1569.	0.	
11	.1721	-3722.	-21656.	-146.	0.	
12	.1720	-3104.	-18047.	-47.	0.	
13	.7380	-10505.	-14235.	0.	0.	
14	.7380	-7395.	-10021.	0.	0.	
15	.7380	-4286.	-5807.	0.	0.	
16	.7381	-1475.	-1999.	23.	0.	
17	.7386	1168.	1583.	-46.	0.	
18	.8426	4644.	5533.	-290.	0.	
19	.2996	2445.	8192.	-153.	-28.	
20	.2996	3283.	11001.	-205.	-28.	
21	.2998	4036.	13531.	-252.	-138.	
22	.2998	4686.	15714.	-277.	-214.	
23	.3000	5327.	17873.	-301.	-307.	
24	.8945	17520.	19741.	-913.	-1262.	
25	.7412	13823.	16811.	-583.	-1144.	
26	.7407	11894.	16177.	-297.	-981.	
27	.2057	2593.	12691.	-10.	-214.	
28	.7405	6327.	8602.	0.	-523.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000283

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	ZAC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.8690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1905226.0

MZ = -2721952.0

S = -8234.0

V = -8793.0

D = -717.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000281

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION COND.CH10F5

MX(CK) = 980840. MY(CK) = 1905226. MZ(CK) = -2721952. S(CK) = -8233. V(CK) = -8789. C(CK) = -717.

T(UNBAL.) = 1150160. Q(BAL.) = 315.5 2A(NET) = 3554.2

Y-BAR = 2.429 Z-BAR = 1.660 IY = 4030.57 IZ = 4446.67 IYZ = -211.34 C5 = 636.59 C6 = 506.37

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	20.068	.2258			1090.	4863.				-4.	90.
2	20.074	.7407	135.09	.9292	619.	842.	324.3	349.0	375.6	-15.	51.
3	20.086	.7412	122.17	.9347	-2127.	-2895.	337.0	360.5	385.7	90.	-176.
4	20.079	.6716	148.71	.9471	-4925.	-7390.	348.8	368.3	388.8	257.	-355.
5	20.065	.2067	156.71	.9515	-2358.	-11484.	389.4	409.2	430.1	133.	-136.
6	20.056	.1735	135.56	.9556	-2550.	-14780.	372.2	389.5	407.6	151.	-117.
7	20.051	.1734	135.93	.9568	-3120.	-18078.	370.7	387.4	404.9	195.	-106.
8	20.044	.1994	135.33	.9598	-4140.	-20848.	368.6	384.1	400.2	259.	-96.
9	20.040	.1994	135.41	.9580	-4691.	-23021.	363.2	379.1	395.7	293.	-54.
10	20.039	.9825	135.33	.9576	-25835.	-26397.	357.1	372.9	389.4	1615.	0.
11	20.015	.1721	102.58	.9276	-3824.	-22248.	312.2	336.5	362.8	150.	0.
12	20.002	.1720	94.34	.9186	-3176.	-18464.	304.4	331.4	360.8	49.	0.
13	20.000	.7380	97.09	.9496	-10773.	-14597.	311.3	327.8	345.3	0.	0.
14	20.000	.7380	102.00	1.0000	-7778.	-10539.	314.5	314.5	314.5	0.	0.
15	20.000	.7380	102.00	1.0000	-4783.	-6481.	295.3	295.3	295.3	0.	0.
16	20.002	.7381	97.09	.9496	-1932.	-2619.	256.8	270.5	284.9	-30.	0.
17	20.015	.7386	94.34	.9186	839.	1137.	227.5	247.6	269.6	33.	0.
			102.58	.9276			214.5	231.2	249.2		



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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000285

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			4500.	5237.				281.	0.
19	20.040	.3196	135.33	.9576	2552.	8018.	214.5	224.0	233.9	160.	30.
20	20.040	.3196	135.41	1.0115	3438.	10798.	232.0	229.4	226.8	215.	29.
21	20.051	.3198	135.33	.9062	4325.	13593.	214.9	237.1	261.7	270.	147.
22	20.056	.3199	135.93	.9568	5049.	15873.	240.7	251.6	263.0	298.	231.
23	20.065	.3200	135.56	.9556	5769.	18144.	257.8	269.8	282.3	326.	333.
24	20.079	.8644	156.71	.9515	17276.	20144.	277.8	291.9	306.8	900.	1245.
25	20.086	.7412	148.71	.9471	14180.	19297.	264.9	279.7	295.3	598.	1173.
26	20.074	.7407	122.17	.9347	12172.	16554.	278.1	297.5	318.3	304.	1004.
27	20.068	.2258	135.09	.9292	2900.	12935.	289.4	311.4	335.1	11.	240.
28	20.068	.7405	140.84	.9878	6582.	8949.	322.8	326.8	330.8	0.	544.
			140.84	.9878			335.4	339.6	343.8		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 110.  
 REPORT NO. SER 64430  
 MCDL CH-54B

000286

TABLE - INPUT DATA FOR BEINDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 589.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0 MY = 1430337.0 MZ = -2713166.0 S = -8907.0 V = -6999.0 D = -896.0

#11 & #12 BORON FAILED

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE 110.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000287

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5					
	MY(CK) = 1430337.0	MZ(CK) = -2713165.9	D(CK) = -896.0			
Y-BAR = 2.082	Z-BAR = .996	IY = 3685.10	IZ = 4025.54	IYZ = -201.67	C5 = 695.82	C6 = 426.46
ITEM	AE(PROJ.)	P(IJET)	F(IJET)	PY	PZ	
1	.2057	520.	2544.	2.	-43.	
2	.7407	-1105.	-1503.	-28.	91.	
3	.7412	-3840.	-5225.	-162.	318.	
4	.7760	-7276.	-9449.	-379.	524.	
5	.1736	-2237.	-12976.	-126.	129.	
6	.1735	-2716.	-15741.	-160.	124.	
7	.1734	-3192.	-18499.	-200.	109.	
8	.1994	-4117.	-20736.	-257.	95.	
9	.1994	-4562.	-22972.	-285.	53.	
10	.9825	-24673.	-25210.	-1542.	0.	
11	.1721	-3610.	-21006.	-142.	0.	
12	.1720	-2960.	-17209.	-45.	0.	
13	.7380	-9739.	-13196.	0.	0.	
14	.7380	-6465.	-8760.	0.	0.	
15	.7380	-3191.	-4324.	0.	0.	
16	.7381	-233.	-315.	4.	0.	
17	.7386	2551.	3459.	-100.	0.	
18	.8426	6397.	7621.	-400.	0.	
19	.2996	2943.	9864.	-184.	-34.	
20	.2996	3650.	12233.	-228.	-31.	
21	.2998	4286.	14370.	-268.	-146.	
22	.2998	4803.	16110.	-284.	-220.	
23	.3000	5313.	17826.	-300.	-307.	
24	.8945	17027.	19185.	-887.	-1227.	
25	.7412	13115.	17848.	-553.	-1085.	
26	.7407	11007.	14970.	-275.	-908.	
27	.2057	2300.	11259.	-9.	-190.	
28	.7405	5107.	6944.	0.	-422.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000288

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	0.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	0.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0 MY = 1571311.0 MZ = -2891816.0 S = -8907.0 V = -6999.0 D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000289

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION	CH1F5												
MX(CK) =	967355.	MY(CK) =	1571311.	MZ(CK) =	-2891816.	S(CK) =	-8932.	V(CK) =	-7046.	U(CK) =	-896.		
T(UNBAL.) =	1139930.	O(BAL.) =	312.7	2A(NET) =	3554.2								
Y-BAR =	2.429	Z-BAR =	1.660	IY =	4030.57	IZ =	4446.67	IYZ =	-211.34	C5 =	671.04	C6 =	425.40
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ		
1	20.068	.2258			643.	2867.				-2.	53.		
2	20.074	.7407	135.09	.9292	-977.	-1328.	318.5	342.7	368.8	24.	-81.		
3	20.096	.7412	122.17	.9347	-3793.	-5161.	326.3	349.1	373.5	160.	-314.		
4	20.079	.6716	148.71	.9471	-6337.	-9509.	332.9	351.5	371.1	330.	-457.		
5	20.065	.2067	156.71	.9515	-2705.	-13172.	379.1	398.4	418.7	153.	-156.		
6	20.056	.1735	135.56	.9556	-2769.	-16050.	358.4	375.0	392.5	164.	-127.		
7	20.051	.1734	135.93	.9568	-3267.	-18930.	356.3	372.4	389.2	204.	-111.		
8	20.044	.1994	135.33	.9598	-4220.	-21254.	353.8	368.7	384.1	264.	-97.		
9	20.040	.1994	135.41	.9580	-4683.	-23583.	348.2	363.5	379.5	293.	-54.		
10	20.039	.9825	135.33	.9576	-25362.	-25915.	342.3	357.4	373.3	1585.	0.		
11	20.015	.1721	102.58	.9276	-3703.	-21545.	299.6	323.0	348.2	146.	0.		
12	20.002	.1720	94.34	.9186	-3020.	-17559.	292.4	318.3	346.6	46.	0.		
13	20.000	.7380	97.09	.9496	-9951.	-13483.	299.4	315.3	332.1	0.	0.		
14	20.000	.7380	102.00	1.0000	-6794.	-9206.	304.7	304.7	304.7	0.	0.		
15	20.000	.7380	102.00	1.0000	-3637.	-4928.	288.3	288.3	288.3	0.	0.		
16	20.002	.7381	97.09	.9496	-632.	-856.	252.6	266.0	280.2	-10.	0.		
17	20.015	.7386	94.34	.9186	2290.	3105.	226.0	246.1	267.9	90.	0.		
			102.58	.9276			216.2	233.1	251.2				

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			6386.	7432.				399.	0.
19	20.040	.3196	135.33	.9576	3110.	9768.	222.7	232.5	242.8	194.	36.
20	20.040	.3196	135.41	1.0115	3854.	12104.	243.6	240.8	238.1	241.	33.
21	20.051	.3198	135.33	.9062	4600.	14455.	227.5	251.0	277.0	287.	157.
22	20.056	.3199	135.93	.9568	5173.	16261.	255.2	266.7	278.7	306.	236.
23	20.065	.3200	135.56	.9556	5742.	18059.	272.5	285.2	298.4	324.	331.
24	20.079	.8644	156.71	.9515	16737.	19515.	291.8	306.6	322.3	872.	1206.
25	20.086	.7412	148.71	.9471	13397.	18231.	276.7	292.1	308.4	565.	1109.
26	20.074	.7407	122.17	.9347	11201.	15234.	286.2	306.2	327.6	280.	924.
27	20.068	.2258	135.09	.9292	2551.	11376.	293.6	315.9	340.0	10.	211.
28	20.068	.7405	140.84	.9878	5269.	7164.	324.4	328.4	332.5	0.	435.
			140.84	.9878			332.4	336.5	340.7		

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000291

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH2F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1351283.0

MZ = -2779205.0

S = -9264.0

V = -6458.0

D = -428.0

PREPARED BY S. CIARDULLO  
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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION	CH2F5							
	MY(CK) = 1351283.0		HZ(CK) = -2779204.8		D(CK) = -428.0			
Y-BAR =	2.082	Z-BAR =	.996	IY = 3685.10	IZ = 4025.54	IYZ = -201.67	C5 = 710.94	C6 = 405.71
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ			
1	.2057	417.	2041.	2.	-34.			
2	.7407	-1531.	-2082.	-38.	126.			
3	.7412	-4303.	-5855.	-181.	356.			
4	.7760	-7753.	-10070.	-404.	559.			
5	.1736	-2328.	-13501.	-132.	134.			
6	.1735	-2789.	-16168.	-165.	127.			
7	.1734	-3249.	-18828.	-203.	111.			
8	.1994	-4161.	-20955.	-260.	96.			
9	.1994	-4584.	-23082.	-286.	53.			
10	.9825	-24674.	-25211.	-1542.	0.			
11	.1721	-3595.	-20917.	-141.	0.			
12	.1720	-2930.	-17039.	-45.	0.			
13	.7380	-9548.	-12938.	0.	0.			
14	.7380	-6204.	-8406.	0.	0.			
15	.7380	-2859.	-3874.	0.	0.			
16	.7381	164.	223.	-3.	0.			
17	.7386	708.	4080.	-118.	0.			
18	.8426	6995.	8334.	-437.	0.			
19	.2996	3124.	10468.	-195.	-36.			
20	.2996	3796.	12721.	-237.	-32.			
21	.2998	4401.	14755.	-275.	-150.			
22	.2998	4882.	16375.	-289.	-223.			
23	.3000	5356.	17971.	-303.	-309.			
24	.8945	17029.	19187.	-887.	-1227.			
25	.7412	13021.	17719.	-549.	-1077.			
26	.7407	10845.	14749.	-271.	-894.			
27	.2057	2236.	10946.	-9.	-185.			
28	.7405	4806.	6534.	0.	-397.			



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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH2F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-0.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	0.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1480433.0

MZ = -2964472.0

S = -9264.0

V = -6458.0

D = -420.0

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000294

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH2F5

PX(CK) = 970130. MY(CK) = 1480433. MZ(CK) = -2964472. S(CK) = -9263. V(CK) = -6455. L(CK) = -428.

T(UNBAL.) = 1146038. O(BAL.) = 314.4 2A(NET) = 3554.2

Y-BAR = 2.429 Z-BAR = 1.660 IY = 4030.57 IZ = 4446.67 IYZ = -211.34 C5 = 686.08 C6 = 403.45

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258			319.	2313.				-2.	43.
2	20.074	.7407	135.09	.9292	-1444.	-1964.	319.1	343.4	369.6	36.	-119.
3	20.086	.7412	122.17	.9347	-4300.	-5852.	325.1	347.8	372.0	181.	-356.
4	20.079	.6716	148.71	.9471	-6787.	-10184.	329.5	347.9	367.3	354.	-489.
5	20.065	.2067	156.71	.9515	-2821.	-13740.	377.0	396.2	416.4	159.	-163.
6	20.056	.1735	135.56	.9556	-2848.	-16509.	355.1	371.6	388.8	168.	-130.
7	20.051	.1734	135.93	.9568	-3327.	-19280.	352.7	368.6	385.3	208.	-113.
8	20.044	.1994	135.33	.9598	-4266.	-21483.	350.0	364.7	380.0	267.	-99.
9	20.040	.1994	135.41	.9580	-4705.	-23691.	344.4	359.5	375.2	294.	-55.
10	20.039	.9825	135.33	.9576	-25351.	-25903.	338.4	353.4	363.1	1584.	0.
11	20.015	.1721	102.58	.9276	-3684.	-21430.	296.4	319.6	344.5	145.	0.
12	20.002	.1720	94.34	.9186	-2986.	-17362.	289.5	315.1	343.0	46.	0.
13	20.000	.7380	97.09	.9496	-9738.	-13195.	296.6	312.3	328.0	0.	0.
14	20.000	.7380	102.00	1.0000	-6510.	-8821.	302.8	302.8	302.8	0.	0.
15	20.000	.7380	102.00	1.0000	-3282.	-4448.	287.5	287.5	287.5	0.	0.
16	20.002	.7381	97.09	.9496	-210.	-285.	252.9	266.3	280.5	-3.	0.
17	20.015	.7386	94.34	.9186	2778.	3760.	227.4	247.6	269.6	109.	0.
			102.58	.9276			219.0	236.1	254.5		

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TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			7039.	8191.				449.	0.
19	20.040	.3196	135.33	.9576	3313.	10407.	228.1	238.3	240.0	207.	38.
20	20.040	.3196	135.41	1.0115	4019.	12623.	250.6	247.7	244.9	251.	34.
21	20.051	.3198	135.33	.9062	4726.	14854.	234.6	258.9	285.7	295.	161.
22	20.056	.3199	135.93	.9568	5257.	16526.	263.2	275.1	287.6	311.	240.
23	20.065	.3200	135.56	.9556	5784.	18192.	280.8	293.9	307.5	327.	334.
24	20.079	.8644	156.71	.9515	16716.	19491.	300.0	315.3	331.4	871.	1204.
25	20.086	.7412	148.71	.9471	13275.	18065.	283.8	299.7	316.4	560.	1098.
26	20.074	.7407	122.17	.9347	11007.	14970.	292.0	312.4	334.2	275.	908.
27	20.068	.2258	135.09	.9292	2469.	11013.	297.8	320.5	344.9	10.	204.
28	20.068	.7405	140.84	.9878	4930.	6703.	328.1	332.1	336.2	0.	407.
			140.84	.9878			334.2	338.3	342.5		

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 DATE 2/12/71

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000296

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION CH7F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA. I)	Z(STA. I)	Y(STA. II)	Z(STA. II)
1	1.000	.2050	-.000	-0.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	0.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1538519.9

MZ = -2732588.0

S = -8972.0

V = -7625.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH7F5							
	MY(CK) = 1538519.9		MZ(CK) = -2732587.9		D(CK) = -822.0			
Y-BAR =	2.082	Z-BAR =	.996	IY = 3685.10	IZ = 4025.54	IYZ = -201.67	C5 = 702.09	C6 = 456.14
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ			
1	.2057	630.	3083.	2.	-52.			
2	.7407	-743.	-1010.	-19.	61.			
3	.7412	-3521.	-4791.	-148.	291.			
4	.7760	-7039.	-9142.	-367.	507.			
5	.1736	-2215.	-12847.	-125.	128.			
6	.1735	-2721.	-15773.	-161.	124.			
7	.1734	-3226.	-18693.	-202.	110.			
8	.1994	-4187.	-21086.	-262.	97.			
9	.1994	-4603.	-23478.	-291.	54.			
10	.9825	-25321.	-25872.	-1583.	0.			
11	.1721	-3717.	-21630.	-146.	0.			
12	.1720	-3061.	-17798.	-47.	0.			
13	.7380	-10146.	-13748.	0.	0.			
14	.7380	-6843.	-9273.	0.	0.			
15	.7380	-3540.	-4797.	0.	0.			
16	.7381	-555.	-751.	8.	0.			
17	.7386	2254.	3056.	-89.	0.			
18	.8426	6089.	7255.	-381.	0.			
19	.2996	2881.	9654.	-180.	-33.			
20	.2996	3637.	12187.	-227.	-31.			
21	.2998	4316.	14472.	-270.	-147.			
22	.2998	4879.	16364.	-288.	-223.			
23	.3000	5434.	18232.	-307.	-314.			
24	.8945	17529.	19751.	-913.	-1263.			
25	.7412	13587.	18490.	-573.	-1124.			
26	.7407	11479.	15611.	-287.	-946.			
27	.2057	2426.	11877.	-9.	-200.			
28	.7405	5535.	7526.	0.	-457.			

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 MODEL CH-54B

000298

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	0.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	0.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	0.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	0.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1690998.0

MZ = -2911923.0

S = -8972.0

V = -7625.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000299

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

CONDITION CH7F5

MY(CK) = 976986. MY(CK) = 1690998. MZ(CK) = -2911923. S(CK) = -8966. V(CK) = -7620. L(CK) = -822.

T(UNBAL.) = 1152965. O(BAL.) = 316.3 2A(NET) = 3554.2

Y-BAR = 2.429 Z-BAR = 1.660 IY = 4030.57 IZ = 4446.67 IYZ = -211.34 CS = 676.95 C6 = 455.38

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	FY	PZ
1	20.068	.2258	135.09	.9292	772.	3443.	322.9	347.5	373.9	-3.	64.
2	20.074	.7407	122 17	.9347	-588.	-800.	332.0	355.2	380.0	15.	-49.
3	20.086	.7412	148.71	.9471	-3448.	-4093.	339.9	358.8	378.9	145.	-285.
4	20.079	.6716	156.71	.9515	-6113.	-9174.	385.5	405.1	425.8	318.	-440.
5	20.065	.2067	135.56	.9556	-2675.	-13027.	365.2	382.2	399.9	151.	-154.
6	20.056	.1735	135.93	.9568	-2773.	-16074.	363.2	379.6	396.7	164.	-127.
7	20.051	.1734	135.33	.9598	-3300.	-19124.	360.7	375.9	391.6	206.	-113.
8	20.044	.1994	135.41	.9580	-4291.	-21013.	355.0	370.6	386.9	268.	-99.
9	20.040	.1994	135.33	.9576	-4787.	-24105.	348.9	364.4	380.5	299.	-56.
10	20.039	.9825	102.58	.9276	-26035.	-26002.	304.9	328.7	354.3	1627.	0.
11	20.015	.1721	94.34	.9186	-3814.	-22193.	297.5	323.8	352.6	150.	0.
12	20.002	.1720	97.09	.9496	-3125.	-18172.	304.5	320.6	337.7	48.	0.
13	20.000	.7380	102.00	1.0000	-10376.	-14060.	309.2	309.2	309.2	0.	0.
14	20.000	.7380	102.00	1.0000	-7191.	-9744.	291.8	291.8	291.8	0.	0.
15	20.000	.7380	97.09	.9496	-4006.	-5428.	254.9	268.4	282.7	0.	0.
16	20.002	.7381	94.34	.9186	-975.	-1321.	227.3	247.4	269.4	-15.	0.
17	20.015	.7386	102.58	.9276	1972.	2675.	216.5	233.4	251.6	78.	0.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 MODEL CH-54B

000300

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	Y	P (NET)	F (NET)	Q	Q/K	Q/KK	FY	PZ
18	20.039	.8627			6048.	7038.				378.	0.
19	20.040	.3196	135.33	.9576	3037.	9539.	221.5	231.3	241.5	190.	35.
20	20.040	.3196	135.41	1.0115	3833.	12039.	241.8	239.1	236.4	240.	32.
21	20.051	.3198	135.33	.9062	4631.	14555.	225.5	248.9	274.7	289.	158.
22	20.056	.3199	135.93	.9566	5256.	16521.	253.2	264.7	276.6	311.	240.
23	20.065	.3200	135.56	.9556	5876.	18479.	270.9	283.5	296.6	332.	339.
24	20.079	.8644	156.71	.9515	17244.	20107.	290.8	305.6	321.2	898.	1242.
25	20.086	.7412	148.71	.9471	13893.	18906.	275.9	291.3	307.6	586.	1150.
26	20.074	.7407	122.17	.9347	11697.	15908.	286.6	306.6	328.0	292.	964.
27	20.068	.2258	135.09	.9292	2697.	12026.	295.0	317.5	341.7	10.	223.
28	20.068	.7405	140.84	.9878	5722.	7780.	327.0	331.0	335.1	0.	473.
			140.84	.9878			336.2	340.4	344.6		



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000301

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH1G13

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	ZAC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.7380	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1943360.9 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000302

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1G13					
	MY(CK) = 1943360.9	MZ(CK) = -.0	D(CK) = 966.0			
Y-BAR = 2.082	Z-BAR = .996	IY = 3685.10	IZ = 4025.54	IYZ = -201.67	C5 = 25.98	C6 = 528.52
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	2103.	10292.	8.	-174.	
2	.7407	7309.	9940.	183.	-603.	
3	.7412	6831.	9296.	288.	-565.	
4	.7760	5699.	7402.	297.	-411.	
5	.1736	747.	4332.	42.	-43.	
6	.1735	205.	1533.	16.	-12.	
7	.1734	-220.	-1274.	-14.	7.	
8	.1994	-806.	-4059.	-50.	19.	
9	.1994	-1358.	-6839.	-85.	16.	
10	.9825	-9411.	-9016.	-588.	0.	
11	.1721	-1622.	-9439.	-64.	0.	
12	.1720	-1597.	-9286.	-24.	0.	
13	.7380	-6741.	-9134.	0.	0.	
14	.7380	-6618.	-8968.	0.	0.	
15	.7380	-6496.	-8802.	0.	0.	
16	.7381	-6387.	-8655.	98.	0.	
17	.7386	-6287.	-8525.	247.	0.	
18	.8426	-7042.	-8390.	440.	0.	
19	.2996	-1675.	-5013.	105.	19.	
20	.2996	-799.	-2076.	50.	7.	
21	.2998	-14.	-47.	1.	0.	
22	.2998	812.	2722.	-48.	-37.	
23	.3000	1634.	5482.	-92.	-94.	
24	.8945	7518.	8471.	-392.	-542.	
25	.7412	7404.	10157.	-315.	-618.	
26	.7407	7701.	10555.	-194.	-640.	
27	.2057	2109.	10617.	-8.	-179.	
28	.7405	7728.	10508.	0.	-638.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000303

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1G13

STATION I = 569.00 STATION II = 589.00

ITEM	E	A	ZAC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.7380	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.7380	-.000	.000	-16.000	.000	-16.000
15	1.000	.7380	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.7380	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.7380	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2118187.0 MZ = .0 S = .0 V = -8742.0 D = 966.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000305

ITEM	L.S.	AE(PROJ.)	TABLE		(COIT.)		0	0/K	0/KK	FY	PZ
			2A	K	P(NET)	F(NET)					
18	20.039	.8627			-7489.	-8715.				-468.	0.
19	20.040	.3196	135.33	.9576	-1855.	-5820.	-51.6	-53.9	-56.3	-116.	-22.
20	20.040	.3196	135.41	1.0115	-934.	-2934.	-87.7			-58.	-3.
21	20.051	.3198	135.33	.9062	-14.	-44.	-63.2	-69.7	-76.9	-1.	-0.
22	20.056	.3199	135.93	.9568	902.	2830.	-66.7	-69.7	-72.9	53.	41.
23	20.065	.3200	133.56	.9556	1816.	5711.	-62.3	-65.2	-68.2	103.	105.
24	20.079	.8644	156.71	.9515	7583.	8841.	-53.4	-56.1	-58.9	395.	546.
25	20.086	.7412	148.71	.9471	7816.	10030.	-50.1	-52.9	-55.8	329.	647.
26	20.074	.7407	122.17	.9347	8107.	11020.	-33.0	-35.3	-37.7	203.	668.
27	20.068	.2258	135.09	.9292	2486.	11087.	-16.7	-18.0	-19.3	10.	205.
28	20.068	.7405	140.84	.9878	8079.	10984.	-2.1	-2.1	-2.1	0.	667.
			140.84	.9878			15.2	15.4	15.6		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000306

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION COND.CH10F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.1460	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.3910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1729363.9

MZ = -2557271.9

S = -8234.0

V = -8793.0

D = -717.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

000307

CONDITION COND.CH10F5

M (CK) = 1729364.0

MZ(CK) = -2557271.9

D(CK) = -717.0

Y-BAR = 1.053 Z-BAR = 5.528 IY = 2601.89 IZ = 3756.30 IYZ = 44.23 C5 = 673.29 C6 = 654.73

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	1011.	4951.	4.	-84.
2	.7407	690.	939.	17.	-57.
3	.7412	-2134.	-2904.	-90.	177.
4	.7760	-6014.	-7810.	-313.	433.
5	.1736	-2174.	-12607.	-123.	125.
6	.1735	-2856.	-16553.	-169.	131.
7	.1734	-3537.	-20498.	-221.	121.
8	.1994	-4753.	-23937.	-297.	110.
9	.1994	-5436.	-27373.	-340.	63.
10	.9825	-30154.	-30811.	-1685.	0.
11	.1721	-4594.	-26728.	-181.	0.
12	.1720	-3963.	-23045.	-61.	0.
13	.1460	-2797.	-19161.	0.	0.
14	.1460	-2171.	-14868.	0.	0.
15	.1460	-1544.	-10576.	0.	0.
16	.1460	-978.	-6698.	15.	0.
17	.1461	-446.	-3055.	18.	0.
18	.8426	904.	958.	-50.	0.
19	.2996	1313.	4400.	-82.	-15.
20	.2996	2398.	8037.	-150.	-20.
21	.2998	3372.	11307.	-211.	-115.
22	.2998	4254.	14266.	-251.	-194.
23	.3000	5125.	17197.	-290.	-296.
24	.8945	17659.	19897.	-920.	-1272.
25	.7412	14272.	19422.	-602.	-1181.
26	.7407	12410.	16878.	-310.	-1023.
27	.2057	2734.	13383.	-11.	-226.
28	.7405	6791.	9233.	0.	-561.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000308

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION COND.CH10F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.1460	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 980840.0

MY = 1905226.0

MZ = -2721952.0

S = -8234.0

V = -8793.0

D = -717.0



PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000309

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION COND.CH10F5

MX(CK) = 980840. MY(CK) = 1905226. MZ(CK) = -2721952. S(CK) = -8233. V(CK) = -8788. D(CK) = -717.

T(UNBAL.) = 1145055. Q(BAL.) = 314.1 2A(NET) = 3554.2

Y-BAR = 1.440 Z-BAR = 6.343 IY = 2862.44 IZ = 4167.81 IYZ = 35.37 C5 = 647.74 C6 = 659.18

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258	135.09	.9292	1224.	5458.	324.0	348.7	375.2	-5.	101.
2	20.074	.7407	122.17	.9347	963.	1309.	338.7	362.3	387.6	-24.	79.
3	20.086	.7412	14 71	.9471	-1938.	-2637.	352.4	372.1	392.9	82.	-160.
4	20.079	.6716	156.71	.9515	-5150.	-7728.	395.2	415.3	436.5	268.	-371.
5	20.065	.2067	135.56	.9556	-2619.	-12757.	375.6	393.0	411.3	148.	-151.
6	20.056	.1735	135.93	.9568	-2916.	-16900.	373.2	390.0	407.7	172.	-133.
7	20.051	.1734	135.33	.9598	-3632.	-21047.	369.8	385.3	401.5	227.	-124.
8	20.044	.1994	135.41	.9580	-4895.	-24655.	362.3	378.2	394.8	306.	-113.
9	20.040	.1994	135.33	.9576	-5614.	-28266.	353.6	369.3	385.7	351.	-65.
10	20.039	.9825	102.58	.9276	-31201.	-31880.	294.0	317.0	341.7	1950.	0.
11	20.015	.1721	94.34	.9186	-4752.	-27646.	283.9	309.1	336.5	187.	0.
12	20.002	.1720	97.09	.9496	-4091.	-23790.	287.4	302.7	318.7	63.	0.
13	20.000	.1460	102.00	1.0000	-2899.	-19854.	297.6	297.6	297.6	0.	0.
14	20.000	.1460	102.00	1.0000	-2296.	-15725.	291.3	291.3	291.3	0.	0.
15	20.000	.1460	97.09	.9496	-1693.	-11595.	269.6	283.9	299.0	0.	0.
16	20.002	.1460	94.34	.9186	-1119.	-7667.	254.3	276.8	301.4	-17.	0.
17	20.015	.1461	102.58	.9276	-562.	-3852.	251.4	271.0	292.2	-22.	0.

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 DATE 2/12/71

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000310

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	20.039	.8627			265.	308.				17.	0.
			135.33	.9576			233.7	244.1	254.9		
19	20.040	.3196			1250.	3927.				78.	15.
			135.41	1.0115			243.7	240.9	238.2		
20	20.040	.3196			2403.	7548.				150.	20.
			135.33	.9062			218.5	241.2	266.1		
21	20.051	.3198			3557.	11178.				222.	121.
			135.93	.9568			239.6	250.4	261.7		
22	20.056	.3199			4546.	14290.				269.	208.
			135.56	.9556			253.3	265.0	277.3		
23	20.065	.3200			5529.	17390.				312.	319.
			156.71	.9515			271.4	285.2	299.7		
24	20.079	.8644			17400.	20289.				907.	1254.
			148.71	.9471			257.9	272.3	287.5		
25	20.086	.7412			14655.	19943.				618.	1213.
			122.17	.9347			272.4	291.4	311.8		
26	20.074	.7407			12718.	17297.				318.	1049.
			135.09	.9292			285.1	306.8	330.2		
27	20.068	.2258			3066.	13672.				12.	253.
			140.84	.9878			319.4	323.4	327.4		
28	20.068	.7405			7084.	9631.				0.	585.
			140.84	.9878			333.9	338.1	342.2		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000311

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1F5

STATION I = 569.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.1460	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0 MY = 1430337.0 MZ = -2713166.0 S = -8907.0 V = -6999.0 D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000312

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA. I)

CONDITION : CH1F5

MY(CK) = 1430337.0

MZ(CK) = -2713165.9

D(CK) = -896.0

Y-BAR = 1.053 Z-BAR = 5.528 IY = 2601.89 IZ = 3756.30 IYZ = 44.23 C5 = 716.20 C6 = 539.46

ITEM	AE (PROJ.)	P (NET)	F (NET)	PY	PZ
1	.2057	586.	2869.	2.	-48.
2	.7407	-983.	-1337.	-25.	81.
3	.7412	-3872.	-5269.	-163.	320.
4	.7760	-7666.	-9956.	-399.	552.
5	.1736	-2442.	-14159.	-138.	141.
6	.1735	-3025.	-17532.	-179.	138.
7	.1734	-3607.	-20901.	-225.	123.
8	.1994	-4712.	-23732.	-295.	109.
9	.1994	-5275.	-26561.	-330.	61.
10	.9825	-28767.	-29393.	-1798.	0.
11	.1721	-4307.	-25058.	-169.	0.
12	.1720	-3637.	-21145.	-56.	0.
13	.1460	-2484.	-17014.	0.	0.
14	.1460	-1017.	-12448.	0.	0.
15	.1460	-1151.	-7882.	0.	0.
16	.1460	-548.	3756.	8.	0.
17	.1461	18.	124.	-1.	0.
18	.8426	3693.	4400.	-231.	0.
19	.2996	2159.	7236.	-135.	-25.
20	.2996	3054.	10233.	-191.	-26.
21	.2998	3857.	12931.	-241.	-132.
22	.2998	4547.	15251.	-269.	-208.
23	.3000	5229.	17544.	-295.	-302.
24	.8945	17321.	19517.	-902.	-1248.
25	.7412	13580.	18480.	-572.	-1124.
26	.7407	11484.	15619.	-287.	-947.
27	.2057	2419.	11839.	-9.	-200.
28	.7405	5449.	7408.	0.	-450.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
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TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

000313

CONDITION CH1F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.1460	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 967355.0

MY = 1571311.0

MZ = -2891816.0

S = -8907.0

V = -6999.0

D = -896.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000314

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH1F5										
MX(CK) = 967355. MY(CK) = 1571311. MZ(CK) = -2891816. S(CK) = -8932. V(CK) = -7045. U(CK) = -896. T(UNBAL.) = 1132919. Q(BAL.) = 310.8 2A(NET) = 3554.2 Y-BAR = 1.440 Z-BAR = 6.343 IY = 2862.44 IZ = 4167.81 IYZ = 35.37 C5 = 689.55 C6 = 542.41											
ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258			727.	3244.				-3.	60.
2	20.074	.7407	135.09	.9292	-816.	-1109.	317.4	341.5	367.5	20.	-67.
3	20.086	.7412	122.17	.9347	-3787.	-5154.	327.0	349.9	374.3	160.	-313.
4	20.079	.6716	148.71	.9471	-6663.	-10000.	335.4	354.1	373.9	347.	-480.
5	20.065	.2067	156.71	.9515	-2956.	-14395.	384.7	404.3	424.9	167.	-171.
6	20.056	.1735	135.56	.9556	-3093.	-17930.	361.8	378.6	396.1	183.	-141.
7	20.051	.1734	135.93	.9568	-3704.	-21467.	358.9	375.1	392.1	232.	-126.
8	20.044	.1994	135.33	.9598	-4851.	-24433.	355.3	370.2	385.8	303.	-112.
9	20.040	.1994	135.41	.9580	-5442.	-27403.	348.0	363.3	379.2	340.	-63.
10	20.039	.9825	135.33	.9576	-29729.	-30376.	339.9	354.9	370.6	1858.	0.
11	20.015	.1721	102.58	.9276	-4447.	-25877.	284.6	306.8	330.7	175.	0.
12	20.002	.1720	94.34	.9186	-3745.	-21777.	275.4	299.8	326.3	57.	0.
13	20.000	.1460	97.09	.9496	-2568.	-17588.	279.5	294.3	310.0	0.	0.
14	20.000	.1460	102.00	1.0000	-1926.	-13192.	290.1	290.1	290.1	0.	0.
15	20.000	.1460	102.00	1.0000	-1284.	-8796.	284.7	284.7	284.7	0.	0.
16	20.002	.1460	97.09	.9496	-673.	-4613.	264.0	278.0	292.8	-10.	0.
17	20.015	.1461	94.34	.9186	-80.	-547.	249.7	271.8	295.9	-3.	0.
			102.58	.9276			247.6	266.9	287.7		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

000315

TABLE (CONT.)

ITEM	L.S.	AE(PROJ.)	2A	K	F(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
18	20.039	.8627			3342.	3800.				209.	0.
19	20.040	.3196	135.33	.9576	2186.	6868.	238.8	249.4	260.4	137.	25.
20	20.040	.3196	135.41	1.0115	3135.	9847.	253.6	250.7	247.9	196.	26.
21	20.051	.3198	135.33	.9062	4085.	12839.	230.9	254.8	281.2	255.	139.
22	20.056	.3199	135.93	.9568	4859.	15273.	254.7	266.2	278.3	287.	222.
23	20.065	.3200	135.56	.9556	5627.	17698.	269.3	281.8	294.9	318.	325.
24	20.079	.8644	156.71	.9515	17003.	19826.	287.1	301.7	317.1	886.	1225.
25	20.086	.7412	148.71	.9471	13877.	18884.	270.7	285.8	301.8	585.	1148.
26	20.074	.7407	122.17	.9347	11698.	15910.	281.0	300.7	321.7	292.	965.
27	20.068	.2258	135.09	.9292	2688.	11988.	289.3	311.4	335.1	10.	222.
28	20.068	.7405	140.84	.9878	5642.	7671.	320.9	324.8	328.8	0.	466.
			140.84	.9878			330.4	334.5	338.6		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000316

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH2F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.754	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.1460	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

NX = 970130.0

MY = 1351283.0

MZ = -2779205.0

S = -9264.0

V = -6458.0

D = -428.0





PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000318

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH2F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.1460	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 970130.0

MY = 1480433.0

MZ = -2964472.0

S = -9264.0

V = -6458.0

D = -428.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
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 MODEL CH-54B

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA. I)

000319

CONDITION CH2F5

$VX(CK) = 970130.$   $MY(CK) = 1480433.$   $MZ(CK) = -2964472.$   $S(CK) = -9263.$   $V(CK) = -6455.$   $D(CK) = -428.$   
 $T(UNBAL.) = 1138588.$   $Q(BAL.) = 312.4$   $2A(NET) = 355^{A}.2$   
 $Y-BAR = 1.440$   $Z-BAR = 6.343$   $IY = 2862.44$   $IZ = 4167.81$   $IYZ = 35.37$   $C5 = 707.10$   $C6 = 509.40$

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258	135.09	.9292	588.	2621.	317.8	342.0	368.1	-2.	49.
2	20.07^	.7407	122.17	.9347	-1342.	-1825.	325.5	348.2	372.5	34.	-111.
3	23.086	.7412	148.71	.9471	-4355.	-5926.	331.6	350.1	369.6	184.	-360.
4	20.079	.6716	156.71	.9515	-7148.	-10727.	382.4	401.9	422.4	372.	-515.
5	20.065	.2067	135.56	.9556	-3070.	-14953.	358.3	375.0	392.4	173.	-177.
6	20.056	.1735	135.93	.9568	-3161.	-18320.	355.3	371.3	388.1	187.	-144.
7	20.051	.734	135.33	.9598	-3743.	-21690.	351.6	366.4	381.7	234.	-173.
8	20.044	.1994	135.41	.9580	-4860.	-24474.	344.3	359.4	375.2	304.	-112.
9	20.040	.1994	135.33	.9576	-5414.	-27263.	336.4	351.3	366.8	338.	-63.
10	20.039	.9825	102.58	.9276	-29415.	-30056.	282.7	304.8	328.5	1838.	0.
11	20.015	.1721	94.34	.9186	-4373.	-25445.	273.8	298.1	324.5	172.	0.
12	20.002	.1720	97.09	.9496	-3653.	-21241.	278.3	293.0	308.6	56.	0.
13	20.000	.1460	102.00	1.0000	-2474.	-16946.	289.2	289.2	289.2	0.	0.
14	20.000	.1460	102.00	1.0000	-1816.	-12438.	284.1	284.1	284.1	0.	0.
15	20.000	.1460	97.09	.9496	-1158.	-7930.	263.8	277.8	292.6	0.	0.
16	20.002	.1460	94.34	.9186	-531.	-3640.	249.8	271.9	296.0	-8.	0.
17	20.015	.1461	102.58	.9276	77.	531.	248.1	267.5	288.3	3.	0.

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 DATE 2/12/71

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000320

TABLE (CONT.)

ITEM	L.S.	AF (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	20.039	.8627	135.33	.9576	4368.	5083.	243.1	253.8	265.1	273.	0.
19	20.040	.3196	135.41	1.0115	2509.	7880.	259.9	256.9	254.0	157.	29.
20	20.040	.3196	135.33	.9062	3399.	10678.	237.9	262.5	289.7	212.	29.
21	20.051	.3198	135.93	.9568	4292.	13489.	263.0	274.9	287.3	268.	146.
22	20.056	.3199	135.56	.9556	5003.	15728.	278.1	291.0	304.5	296.	229.
23	20.065	.3200	156.71	.9515	5710.	17957.	296.0	311.0	326.9	323.	329.
24	20.079	.8644	148.71	.9471	17030.	19857.	278.3	293.8	310.2	887.	1227.
25	20.086	.7412	122.17	.9347	13759.	18723.	287.0	307.1	328.5	580.	1139.
26	20.074	.7407	135.09	.9292	11490.	15627.	293.7	316.0	340.1	287.	947.
27	20.068	.2258	140.84	.9878	2598.	11587.	324.5	328.5	332.6	10.	215.
28	20.068	.7405	140.84	.9878	5262.	7155.	332.0	336.1	340.3	0.	435.

PREPARED BY S. CIARDULLO  
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 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000321

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH7F5

STATION I = 589.00

STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.1460	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1538519.9

MZ = -2732588.0

S = -8972.0

V = -7625.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000322

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.1)

CONDITION	CH7F5	MY(CK) = 1536519.9	MZ(CK) = -2732587.9	D(CK) = -822.0		
Y-BAR = 1.053	Z-BAR = 5.528	IY = 2601.89	IZ = 3756.30	IYZ = 44.23	C5 = 720.86	C6 = 580.80
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ	
1	.2057	709.	3470.	3.	-59.	
2	.7407	-572.	-778.	-14.	47.	
3	.7412	-3508.	-4774.	-148.	290.	
4	.7760	-7407.	-9620.	-386.	534.	
5	.1736	-2426.	-14067.	-137.	140.	
6	.1735	-3047.	-17661.	-180.	139.	
7	.1734	-3667.	-21251.	-229.	125.	
8	.1994	-4825.	-24299.	-302.	111.	
9	.1994	-5431.	-27345.	-339.	63.	
10	.9825	-29747.	-30395.	-1959.	0.	
11	.1721	-4474.	-26030.	-176.	0.	
12	.1720	-3799.	-22091.	-58.	0.	
13	.1460	-2618.	-17932.	0.	0.	
14	.1460	-1947.	-13336.	0.	0.	
15	.1460	-1276.	-8741.	0.	0.	
16	.1460	-670.	-4588.	10.	0.	
17	.1461	-100.	-684.	4.	0.	
18	.8426	3037.	3611.	-190.	0.	
19	.2996	1991.	6672.	-124.	-23.	
20	.2996	2954.	9898.	-185.	-25.	
21	.2998	3818.	12802.	-239.	-130.	
22	.2998	4573.	15336.	-270.	-209.	
23	.3000	5318.	17843.	-300.	-307.	
24	.8945	17791.	20046.	-927.	-1282.	
25	.7412	14057.	19130.	-593.	-1163.	
26	.7407	11976.	16288.	-299.	-987.	
27	.2057	2553.	12498.	-10.	-211.	
28	.7405	5915.	8042.	0.	-489.	

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SFR 64430  
 MODEL CH-548

000323

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

CONDITION CH7F5

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.1460	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = 976986.0

MY = 1690998.0

MZ = -2911923.0

S = -8972.0

V = -7625.0

D = -822.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000301

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH7F5

MX(CK) = 976986. MY(CK) = 1690998. MZ(CK) = -2911923. S(CK) = -8966. V(CK) = -7620. D(CK) = -822.  
 T(UNBAL.) = 1146347. Q(BAL.) = 314.5 2A(NET) = 3554.2

Y-BAR = 1.440 Z-BAR = 6.343 IY = 2862.44 IZ = 4167.81 IYZ = 35.37 C5 = 694.00 C6 = 584.00

ITEM	L.S.	AE(PROJ.)	2A	K	P(NET)	F(NET)	Q	Q/K	Q/KK	PY	PZ
1	20.068	.2258	135.09	.9292	871.	3883.	322.0	346.5	372.9	-3.	72.
2	20.074	.7407	102.17	.9347	-378.	-514.	333.0	356.3	381.1	9.	-31.
3	20.086	.7412	148.71	.9471	-3396.	-4621.	342.7	361.9	382.1	143.	-281.
4	20.079	.6716	156.71	.9515	-6421.	-9636.	391.2	411.1	432.1	335.	-463.
5	20.065	.2067	135.56	.9556	-2934.	-14289.	368.6	385.7	403.6	166.	-169.
6	20.056	.1735	135.93	.9568	-3115.	-18055.	365.8	382.3	399.6	184.	-142.
7	20.051	.1734	135.33	.9598	-3766.	-21826.	362.2	377.4	393.2	235.	-128.
8	20.044	.1994	135.41	.9580	-4968.	-25020.	354.6	370.2	386.5	310.	-115.
9	20.040	.1994	135.33	.9576	-5604.	-28218.	346.2	361.5	377.6	350.	-65.
10	20.039	.9825	102.58	.9276	-30750.	-31420.	288.9	311.4	335.7	1922.	0.
11	20.015	.1721	94.34	.9186	-4621.	-26890.	279.3	304.0	330.9	182.	0.
12	20.002	.1720	97.09	.9496	-3915.	-22762.	283.2	298.2	314.1	60.	0.
13	20.000	.1460	102.00	1.0000	-2708.	-18545.	293.8	293.8	293.8	0.	0.
14	20.000	.1460	102.00	1.0000	-2062.	-14121.	288.0	288.0	288.0	0.	0.
15	20.000	.1460	97.09	.9496	-1416.	-9697.	266.9	281.0	296.0	0.	0.
16	20.002	.1460	94.34	.9186	-801.	-5487.	252.1	274.5	298.8	-12.	0.
17	20.015	.1461	102.58	.9276	-204.	-1396.	249.8	269.3	290.3	-8.	0.



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000305

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	Q	Q/K	Q/KK	PY	PZ
18	20.039	.8627	135.33	.9576	2636.	3067.	238.7	249.3	260.3	165.	0.
19	20.040	.3196	135.41	1.0115	1997.	6274.	252.5	249.6	246.7	125.	23.
20	20.040	.3196	135.33	.9062	3019.	9481.	229.1	252.8	279.0	189.	26.
21	20.051	.3198	135.93	.9568	4041.	12701.	252.6	264.0	275.9	253.	138.
22	20.056	.3199	135.56	.9556	4887.	15361.	267.3	279.7	292.7	289.	223.
23	20.065	.3200	156.71	.9515	5727.	18011.	285.6	300.1	315.4	324.	330.
24	20.079	.8644	148.71	.9471	17480.	20382.	269.6	284.6	300.5	911.	1259.
25	20.086	.7412	122.17	.9347	14382.	19571.	281.2	300.8	321.8	606.	1190.
26	20.074	.7407	135.09	.9292	12217.	16615.	290.7	312.9	336.7	305.	1007.
27	20.068	.2258	140.84	.9878	2844.	12683.	323.4	327.4	331.5	11.	235.
28	20.068	.7405	140.84	.9878	6135.	8342.	334.3	338.4	342.6	0.	507.

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

000326

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

CONDITION CH1G13

STATION I = 589.00 STATION II = 569.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2050	-.000	-6.220	20.615	-6.297	22.267
2	1.000	.7380	-.000	-11.750	20.215	-12.250	21.864
3	1.000	.7380	-.000	-16.438	19.215	-17.281	20.870
4	1.000	.7730	-.000	-20.415	15.867	-21.457	17.308
5	1.000	.1730	-.000	-21.990	10.192	-23.120	11.346
6	1.000	.1730	-.000	-22.760	4.972	-23.942	5.886
7	1.000	.1730	-.000	-23.500	-.275	-24.750	.407
8	1.000	.1990	-.000	-23.500	-5.523	-24.750	-5.061
9	1.000	.1990	-.000	-23.500	-10.764	-24.750	-10.532
10	1.000	.9806	-.000	-23.500	-16.000	-24.750	-16.000
11	1.000	.1720	-.000	-17.553	-16.000	-18.339	-16.000
12	1.000	.1720	-.000	-12.137	-16.000	-12.443	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.137	-16.000	12.443	-16.000
17	1.000	.1460	-.000	17.553	-16.000	18.339	-16.000
18	1.000	.8410	-.000	23.500	-16.000	24.750	-16.000
19	1.000	.2990	-.000	23.500	-10.764	24.750	-10.532
20	1.000	.2990	-.000	23.500	-5.230	24.750	-5.061
21	1.000	.2990	-.000	23.500	-.275	24.750	.407
22	1.000	.2990	-.000	22.760	4.972	23.942	5.886
23	1.000	.2990	-.000	21.990	10.192	23.120	11.346
24	1.000	.8910	-.000	20.415	15.867	21.457	17.308
25	1.000	.7380	-.000	16.438	19.215	17.281	20.870
26	1.000	.7380	-.000	11.750	20.215	12.250	21.864
27	1.000	.2050	-.000	6.220	20.615	6.297	22.267
28	1.000	.7380	-.000	.000	20.715	.000	22.367

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 1943360.9 MZ = .0 S = .0 V = -8742.0 D = 966.0

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

TABLE - OUTPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA. (STA.I)

000307

CONDITION		CH1613					
MY(CK) = 1943360.9		MZ(CK) = -.0		D(CK) = 966.0			
Y-BAR = 1.053	Z-BAR = 5.528	IY = 2601.89	IZ = 3756.30	IYZ = 44.23	C5 = -9.04	C6 = 745.00	
ITEM	AE(PROJ.)	P(NET)	F(NET)	PY	PZ		
1	.2057	2344.	11471.	9.	-194.		
2	.7407	8255.	11228.	206.	-681.		
3	.7412	7740.	10532.	326.	-640.		
4	.7760	6196.	8047.	323.	-446.		
5	.1736	654.	3795.	37.	-38.		
6	.1735	-19.	-112.	-1.	1.		
7	.1734	-696.	-4034.	-44.	24.		
8	.1994	-1580.	-7959.	-99.	37.		
9	.1994	-2359.	-11876.	-147.	27.		
10	.9625	-15454.	-15791.	-966.	0.		
11	.1721	-2717.	-15807.	-107.	0.		
12	.1720	-2723.	-15836.	-42.	0.		
13	.1460	-2319.	-15884.	0.	0.		
14	.1460	-2327.	-15942.	0.	0.		
15	.1460	-2336.	-15999.	0.	0.		
16	.1460	-2344.	-16055.	36.	0.		
17	.1461	-2352.	-16125.	92.	0.		
18	.8426	-13612.	-16217.	851.	0.		
19	.2996	-3671.	-12303.	229.	43.		
20	.2996	-2436.	-8163.	152.	21.		
21	.2998	-1331.	-4461.	83.	45.		
22	.2998	-157.	-526.	9.	7.		
23	.3000	1012.	3395.	-57.	-58.		
24	.8945	6812.	7675.	-355.	-491.		
25	.7412	7519.	10233.	-317.	-622.		
26	.7407	8098.	11014.	-202.	-668.		
27	.2057	2320.	11358.	-9.	-192.		
28	.7405	8450.	11489.	0.	-698.		

PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

PAGE NO.  
 REPORT NO. SER 64430  
 MODEL CH-54B

TABLE - INPUT DATA FOR BENDING ANALYSIS OF FUSELAGE STA.

(STA.I)

000308

CONDITION CH1613

STATION I = 569.00

STATION II = 589.00

ITEM	E	A	2AC	Y(STA.I)	Z(STA.I)	Y(STA.II)	Z(STA.II)
1	1.000	.2250	-.000	-6.297	22.267	-6.220	20.615
2	1.000	.7380	-.000	-12.250	21.864	-11.750	20.215
3	1.000	.7380	-.000	-17.281	20.870	-16.438	19.215
4	1.000	.6690	-.000	-21.457	17.308	-20.415	15.867
5	1.000	.2060	-.000	-23.120	11.346	-21.990	10.192
6	1.000	.1730	-.000	-23.942	5.886	-22.760	4.972
7	1.000	.1730	-.000	-24.750	.407	-23.500	-.275
8	1.000	.1990	-.000	-24.750	-5.061	-23.500	-5.523
9	1.000	.1990	-.000	-24.750	-10.532	-23.500	-10.764
10	1.000	.9806	-.000	-24.750	-16.000	-23.500	-16.000
11	1.000	.1720	-.000	-18.339	-16.000	-17.553	-16.000
12	1.000	.1720	-.000	-12.443	-16.000	-12.137	-16.000
13	1.000	.1460	-.000	-6.375	-16.000	-6.375	-16.000
14	1.000	.1460	-.000	.000	-16.000	.000	-16.000
15	1.000	.1460	-.000	6.375	-16.000	6.375	-16.000
16	1.000	.1460	-.000	12.443	-16.000	12.137	-16.000
17	1.000	.1460	-.000	18.339	-16.000	17.553	-16.000
18	1.000	.8610	-.000	24.750	-16.000	23.500	-16.000
19	1.000	.3190	-.000	24.750	-10.532	23.500	-10.764
20	1.000	.3190	-.000	24.750	-5.061	23.500	-5.230
21	1.000	.3190	-.000	24.750	.407	23.500	-.275
22	1.000	.3190	-.000	23.942	5.886	22.760	4.972
23	1.000	.3190	-.000	23.120	11.346	21.990	10.192
24	1.000	.8610	-.000	21.457	17.308	20.415	15.867
25	1.000	.7380	-.000	17.281	20.870	16.438	19.215
26	1.000	.7380	-.000	12.250	21.864	11.750	20.215
27	1.000	.2250	-.000	6.297	22.267	6.220	20.615
28	1.000	.7380	-.000	.000	22.367	.000	20.715

APPLIED LOADS AT STA.

REFERENCE TABLE

MX = .0 MY = 2118187.0 MZ = .0 S = .0 V = -8742.0 D = 966.0



PREPARED BY S. CIARDULLO  
 CHECKED BY S. CIARDULLO  
 DATE 2/12/71

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 REPORT NO. SER E-430  
 MODEL CH-548

000206

TABLE (CONT.)

ITEM	L.S.	AE (PROJ.)	2A	K	P (NET)	F (NET)	G	G/K	G/KK	PY	PZ
18	20.039	.8627	135.33	.9576	-14282.	-16620.	-37.3	-39.0	-40.7	-893.	0.
19	20.040	.3196	135.41	1.0115	-4002.	-12570.	-56.2	-55.5	-54.9	-250.	-46.
20	20.040	.3196	135.33	.9062	-2711.	-8516.	-62.8	-69.3	-76.5	-169.	-23.
21	20.051	.3198	135.93	.9568	-1422.	-4470.	-70.7	-73.9	-77.2	-89.	-49.
22	20.056	.3199	135.56	.9556	-128.	-401.	-69.2	-72.4	-75.8	-8.	-6.
23	20.065	.3200	156.71	.9515	1163.	3659.	-61.7	-64.9	-68.2	66.	67.
24	20.079	.8644	148.71	.9471	6955.	8110.	-54.6	-57.7	-60.9	362.	501.
25	20.086	.7412	122.17	.9347	7932.	10794.	-34.6	-37.0	-39.6	334.	656.
26	20.074	.7407	135.09	.9292	8495.	11554.	-16.0	-17.2	-18.5	212.	700.
27	20.068	.2258	140.84	.9878	2665.	11886.	.1	.1	.1	10.	220.
28	20.068	.7405	140.84	.9878	8827.	12002.	18.7	18.9	19.2	0.	723.

## 7.0 Detailed Stress Analysis of the Transition Section

This section of the reports contains the input data for a computer program which computes the margins of safety for the skin/stringer components of the transition section.

The input data consists of:

1. The critical stringer axial loads obtained from Section 3.0.
2. The average skin shear flow obtained from Section 3.0.
3. The skin thickness.
4. The stringer thickness, area, area moment of inertia, crippling stress, and the allowable stringer axial load.
5. Panel length and width.

The results of the computer analysis, based upon Reference 6, are shown as:

- (1) Allowable shear flow.
- (2) A shear flow cut off which is based upon excessive skin buckling.
- (3) Allowable axial load.
- (4) The margin of safety.

A summary of stringer properties not shown in Reference 6 is shown in Figures 7-1 through 7-2.

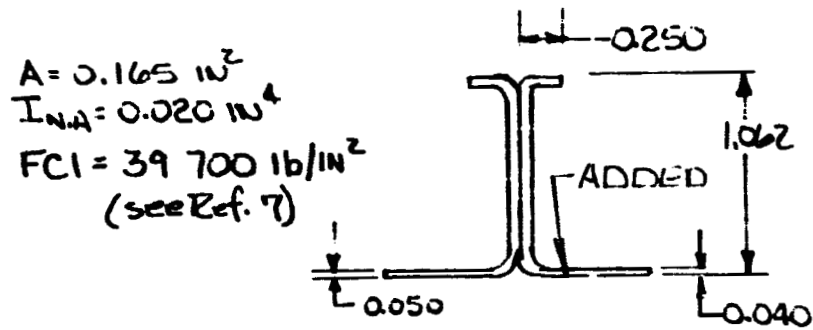


FIGURE 7-1. STRINGER SECTION PROPERTIES AND ALLOWABLE CRIPPLING STRESS (STR 12 and 15).

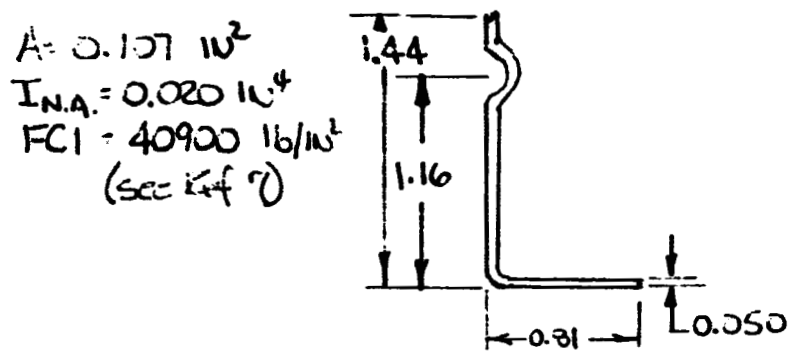


FIGURE 7-2. INTERCOSTAL SECTION PROPERTIES.



STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/31/71

STRINGER MARGINS OF SAFETY STA. 471 TO STA. 549

471.  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
7	CH7F5	1000.	.040	.050	.091	.0131	19.5	5.8	42100.	5431.	425.	256.	614.	655.	1021.	1.40
7	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.8	42100.	5431.	799.	150.	470.	655.	2502.	2.13
7	CH10F5	1000.	.040	.050	.091	.0131	19.5	5.8	42100.	5431.	464.	173.	573.	655.	1538.	2.31
8	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.7	40900.	5985.	1499.	273.	524.	656.	2875.	.92
8	CH2F5	1000.	.040	.050	.108	.0205	19.5	5.7	40900.	5985.	1745.	154.	364.	656.	4122.	1.36
9	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.7	40900.	5985.	2317.	301.	452.	656.	3479.	.50
10	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.7	40900.	5985.	3117.	309.	390.	656.	3930.	.26
11	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.7	40900.	5985.	4124.	330.	342.	656.	4281.	.04
12	CH7F5	1000.	.040	.040	.166	.0240	19.5	5.4	39700.	9479.	4972.	364.	505.	663.	6909.	.39
14	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.7	40900.	5985.	3766.	237.	290.	656.	4604.	.22
15	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.8	40900.	5985.	4826.	207.	216.	654.	5052.	.05
16	CH7F5	1000.	.040	.050	.108	.0205	19.5	4.8	40900.	5985.	4737.	253.	266.	682.	4970.	.05
17	CH7F5	1000.	.040	.050	.108	.0205	19.5	5.0	40900.	5985.	4351.	312.	329.	675.	4592.	.06
21	CH7F5	1000.	.040	.050	.108	.0205	19.5	7.0	40900.	5985.	2807.	300.	373.	653.	3493.	.24
22	CH7F5	1000.	.040	.050	.108	.0205	19.5	6.5	40900.	5985.	2445.	218.	348.	642.	3909.	.60
23	CH7F5	1000.	.040	.050	.108	.0205	19.5	6.5	40900.	5985.	2146.	147.	298.	642.	4336.	1.02
24	CH7F5	1000.	.040	.050	.108	.0205	19.5	4.0	40900.	5985.	1541.	109.	340.	714.	4795.	2.11
26	CH7F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	1584.	83.	229.	656.	4357.	1.75
26	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	104.	176.	665.	656.	396.	2.74

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/31/71

STRINGER MARGINS OF SAFETY STA. 471 TO STA. 549

490.5  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
7	CH7F5	100	.040	.050	.091	.0131	19.5	4.8	42100.	5431.	142.	333.	779.	682.	331.	1.05
7	CH2F5	100	.040	.050	.091	.0131	19.5	4.8	42100.	5431.	266.	195.	725.	682.	989.	2.49
7	CH10F5	100	.040	.050	.091	.0131	19.5	4.8	42100.	5431.	155.	225.	765.	682.	526.	2.03
8	CH7F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	1622.	312.	479.	656.	2485.	.53
8	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	1914.	176.	334.	656.	3635.	.90
9	CH7F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	2488.	301.	389.	656.	3217.	.29
10	CH7F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	3299.	309.	338.	656.	3603.	.09
11	CH7F5	1000.	.040	.063	.117	.0159	19.5	5.7	43500.	6695.	4730.	330.	353.	656.	5059.	.07
12	CH7F5	1000.	.063	.063	.117	.0159	19.5	5.7	43500.	9636.	5687.	364.	441.	1172.	6902.	.21
14	CH7F5	1000.	.040	.050	.091	.0131	19.5	4.6	42100.	5431.	1255.	416.	646.	690.	1951.	.55
15	CH7F5	1000.	.040	.040	.166	.0240	19.5	4.7	39700.	9479.	5097.	329.	479.	685.	7421.	.46
16	CH7F5	1000.	.040	.063	.117	.0159	19.5	4.1	43500.	6695.	5432.	325.	336.	710.	5601.	.03
17	CH7F5	1000.	.040	.063	.117	.0159	19.5	6.5	54200.	7952.	4919.	334.	401.	642.	5897.	.20
21	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	51000.	6245.	2556.	320.	442.	643.	3526.	.38
22	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.8	42100.	5431.	2112.	277.	372.	648.	2835.	.34
23	CH7F5	1000.	.040	.050	.091	.0131	19.5	4.7	42100.	5431.	1783.	232.	437.	685.	3366.	.89
24	CH7F5	1000.	.040	.050	.091	.0131	19.5	4.8	42100.	5431.	514.	192.	644.	680.	1725.	2.36
26	CH7F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	1277.	138.	367.	656.	3387.	1.65
26	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	688.	176.	525.	656.	2055.	1.99

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/31/71

STRINGER MARGINS OF SAFETY STA. 471 TO STA. 549

510  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
8	CH7F5	1000.	.050	.050	.091	.0131	19.5	5.7	42100.	6503.	1742.	360.	533.	865.	2577.	.48
9	CH7F5	1000.	.050	.050	.091	.0131	19.5	5.7	42100.	6503.	2607.	394.	478.	865.	3160.	.21
10	CH7F5	1000.	.050	.050	.091	.0131	19.5	5.4	42100.	6503.	3466.	400.	436.	877.	3777.	.09
11	CH7F5	1000.	.050	.063	.117	.0159	19.5	5.4	43500.	7852.	5068.	405.	442.	877.	5537.	.09
12	CH7F5	1000.	.050	.063	.117	.0159	19.5	3.8	43500.	7852.	6057.	410.	424.	996.	6259.	.03
15	CH7F5	1000.	.040	.050	.091	.0131	19.5	3.8	42100.	5431.	3962.	289.	315.	727.	4319.	.09
16	CH7F5	1000.	.040	.063	.117	.0159	19.5	3.8	43500.	6695.	5684.	312.	315.	727.	5739.	.01
17	CH7F5	1000.	.040	.063	.117	.0159	19.5	6.4	54200.	7952.	4056.	312.	439.	643.	5703.	.41
18	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	767.	339.	542.	643.	1227.	.60
19	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	519.	405.	580.	643.	742.	.43
20	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	422.	453.	589.	643.	549.	.30
21	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	51000.	6245.	2089.	459.	550.	643.	2505.	.20
17	CH10F5	1000.	.040	.063	.117	.0159	19.5	6.4	54200.	7952.	4972.	270.	342.	643.	6314.	.27
18	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	824.	304.	526.	643.	1424.	.73
19	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	580.	376.	570.	643.	879.	.51
20	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	505.	432.	583.	643.	682.	.35
21	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	51000.	6245.	2161.	447.	540.	643.	2609.	.21
22	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	1654.	324.	450.	643.	2296.	.39
23	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.0	42100.	5431.	1224.	252.	475.	650.	2313.	.89
4	CH2F5	1000.	.040	.050	.091	.0131	19.5	4.1	42100.	5431.	597.	184.	674.	710.	2188.	2.67
8	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	2049.	215.	360.	656.	3437.	.68
9	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.7	42100.	5431.	2727.	238.	324.	656.	3709.	.36

STIFFENED PANELS SUBJECT SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/31/71

STRINGER MARGINS OF SAFETY STA. 471 TO STA. 549

529.5  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	a		FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
							A	B								
8	CH7F5	1000.	.050	.050	.091	.0131	19.5	6.0	42100.	6503.	1833.	408.	527.	854.	2367.	.29
9	CH7F5	1000.	.050	.050	.091	.0131	19.5	5.8	42100.	6503.	2743.	388.	462.	861.	3267.	.19
10	CH7F5	1000.	.050	.050	.091	.0131	19.5	5.5	42100.	6503.	3648.	396.	418.	873.	3848.	.05
11	CH7F5	1000.	.050	.063	.117	.0159	19.5	5.4	43500.	7852.	5188.	405.	436.	877.	5586.	.08
12	CH7F5	1000.	.050	.063	.117	.0159	19.5	3.8	43500.	7852.	6149.	410.	419.	996.	6285.	.02
15	CH7F5	1000.	.040	.050	.091	.0131	19.5	3.8	42100.	5431.	1321.	517.	754.	727.	1926.	.41
16	CH7F5	1000.	.040	.063	.117	.0159	19.5	3.8	43500.	6695.	5388.	347.	358.	727.	5568.	.03
17	CH7F5	1000.	.040	.063	.117	.0159	19.5	6.4	54200.	7952.	4633.	310.	398.	643.	5959.	.29
18	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	2301.	339.	403.	643.	2740.	.19
19	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	1556.	405.	487.	643.	1874.	.20
20	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	1264.	453.	523.	643.	1460.	.15
21	CH7F5	1000.	.040	.050	.091	.0131	19.5	6.4	51000.	6245.	1359.	455.	614.	643.	1835.	.35
17	CH10F5	1000.	.040	.063	.117	.0159	19.5	6.4	54200.	7952.	4748.	267.	352.	643.	6252.	.32
18	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	2472.	304.	372.	643.	3026.	.22
19	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	1740.	376.	463.	643.	2143.	.23
20	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	42100.	5431.	1514.	432.	498.	643.	1746.	.15
21	CH10F5	1000.	.040	.050	.091	.0131	19.5	6.4	51000.	6245.	1639.	444.	584.	643.	2155.	.31
22	CH10F5	1000.	.040	.050	.091	.0131	19.5	5.0	42100.	5431.	1044.	512.	666.	675.	1358.	.30
23	CH10F5	1000.	.040	.050	.091	.0131	19.5	4.9	42100.	5431.	408.	509.	747.	678.	599.	.33
4	CH2F5	1000.	.040	.050	.091	.0131	19.5	3.3	42100.	5431.	199.	354.	1026.	769.	577.	1.17
8	CH2F5	1000.	.040	.050	.091	.0131	19.5	6.0	42100.	5431.	2131.	243.	369.	650.	3239.	.52
9	CH2F5	1000.	.040	.050	.091	.0131	19.5	5.8	42100.	5431.	2905.	234.	307.	654.	3811.	.31

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## 8.0 Detailed Stress Analysis of the Manufacturing Break at Station 529.0

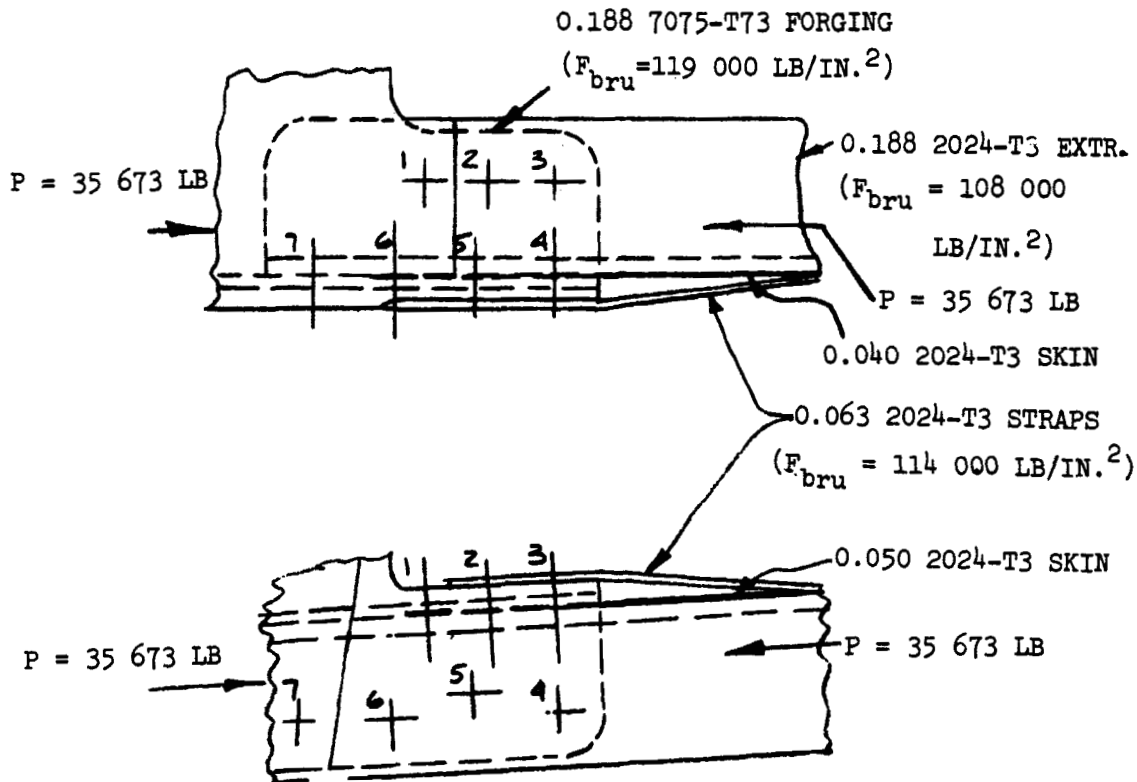
This section of the report contains a detailed stress analysis of the critical stringer and longeron splice fittings that are used to attach the forward part of tail cone to the aft part of the transition section at Station 549.0.

The fitting loads are stringer axial loads which are obtained from Sections 3.0, 4.0, and 5.0.

A fitting factor of 1.15 (see Reference 7) is used to compute margins of safety.

Stringer (Longeron) Number 10 (Splice Station 549.0)

This stringer (Lower right longeron) splice is critical for condition CH10F5. The splice load is 35673 lb in compression. Details of this splice ~~is~~ <sup>are</sup> shown in Figure 8-1.



ATTACHMENTS 1,4-6 ARE PH-10'S (5/16 STEEL HI-LOKS)  
ATTACHMENTS 2,3,7 ARE PH-8'S (1/4 STEEL HI-LOKS)

FIGURE 8-1. LONGERON SPLICE STA 549.0 (LOWER RIGHT).

Stringer (Longeron) Number 10 (Splice)

Attachments 2 and 3 are in double shear, but are critical in bearing in the .188 7075 -T73 forging.

$$P_{ALL2,3} = 2(.25) (.188) (119000) = 11186 \text{ lb}$$

Attachment 1 is in single shear with the extrusion in combination with the .050 skin and the forging. It is critical in bearing in the forging.

$$P_{ALL1} = (.3125) (.188) (119000) = 6991 \text{ lb}$$

Attachment 7 is critical in single shear

$$P_{ALL7} = 4660 \text{ lb}$$

Attachments 4, 5, 6 are in double shear, but is critical in bearing in the .188 7075-T73 forging.

$$P_{ALL4,5,6} = 3(.3125) (.188) (119000) = 20973$$

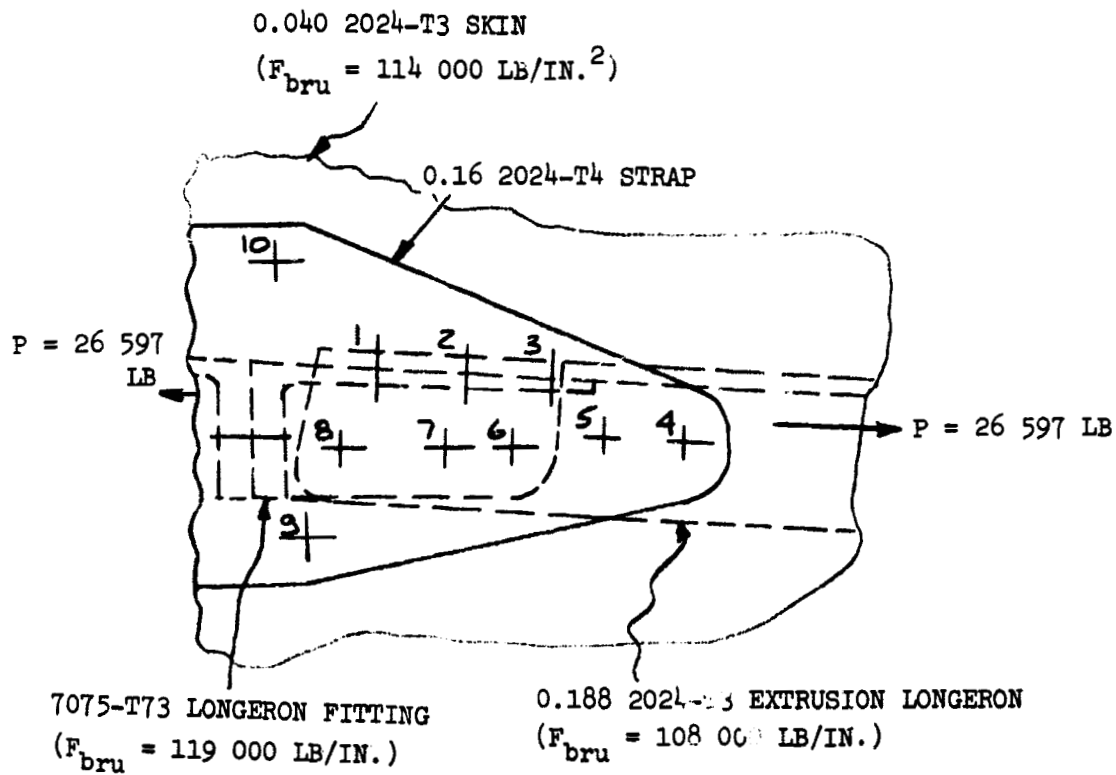
$$P_{ALL \text{ splice}} = 11186 + 6991 + 4660 + 20973 = \underline{43810}$$

$$M.S. = \frac{43810}{1.15*(35673)} \quad .-1 = \underline{+0.068}$$

\* Fitting Factor

Stringer Number 24 (Longeron Splice)

This stringer (upper left longeron) splice is critical for condition CH10F5. The splice load is 26597 lbs. in tension. Splice details are shown below in Figure 8-2.



ATTACHMENTS 4-10 ARE MY-8'S (1/4 STEEL HI-LOKS)  
ATTACHMENTS 1-3 ARE DT-8'S (1/4 STEEL LOCK-BOLTS)

FIGURE 8-2. LONGERON SPLICE STA. 549.0 (UPPER LEFT).



Stringer (Longeron) Number 24

Attachments 1-3 are in single shear. The longeron fitting is tapered in thickness. Thicknesses at Attachments 1, 2 and 3 are .113, .151 and .190, respectively. Attachments number 1 and 2 are critical in bearing in the forging and number 3 in single shear.

$$P_{ALL_1} = .25(.113)(119000) = 3350 \text{ lb}$$

$$P_{ALL_2} = .25(.151)(119000) = 4490 \text{ lb}$$

$$P_{ALL_3} = 4650 \text{ lb}$$

Attachments 6-8 are in double shear and are critical in bearing in the longeron and skin.

$$P_{ALL_{6,7,8}} = 3(.25)(.228)(108000) = 18300 \text{ lb}$$

Attachments 4 and 5 are in single shear and are critical in bearing in the .16 strap.

$$P_{4,5} = 2(.25)(.16)(114000) = 9140 \text{ lb}$$

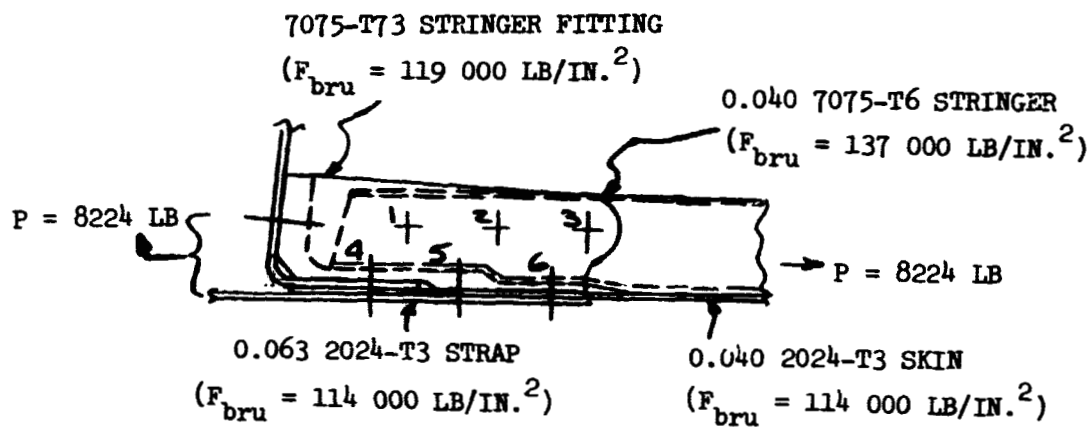
$$P_{ALL_{splice}} = 3350 + 4490 + 4650 + 18300 + 9140 = 39930 \text{ lb}$$

$$M.S. = \frac{39930}{1.15*(26597)} - 1 = + 0.31$$

\*Fitting Factor

Stringer Number 23

This stringer splice is critical for condition CH10F5. Its load is 8224 lbs. in tension. Details of this splice is shown in Figure 8-3.



ATTACHMENTS 1-6 ARE CS-6'S (3/16 ALUMINUM LOCKBOLTS)

FIGURE 8-3. STRINGER 23 SPLICE STA 549.0.

Stringer Number 23

In the attachment of the stringer to the fitting, the stringer is critical in tension.

$$ASTR_{NET} = .059 \text{ in}^2$$

$$F_{TU} = 72000 \text{ lb/in}^2$$

$$P_{ALL} = 72000 (.059) = 4248 \text{ lb}$$

Attachments 4-6 are in double shear in the .040 skin and are critical in bearing in the skin.

$$P_{ALL,4,5,6} = 3(912)* = 2736 \text{ lb}*(\text{see ref. 7})$$

There are 10 BJ-5's attaching the .040 skin to the .063 strap, between stringers. Conservatively assume 5 to be working. These rivets are critical in bearing in the .040 skin.

$$P_{ALL} = 5(575)* + 2875 \text{ lb}$$

$$P_{ALL,TDF} = 4248 + 2736 + 2875 + 9859 \text{ lb}$$

$$M.S. = \frac{9859}{1.15*(8224)} = + \underline{0.04}$$

\*Fitting Factor

## 9.0 DETAILED STRESS ANALYSIS OF THE NONREINFORCED TAIL CONE

This section of the report is similar to Section 7.0. The critical stringer axial loads are obtained from Section 4.0. The average skin shear flow is also obtained from Section 4.0. The same computer program, based upon Reference 6, is used.

Stringer Number 10 (Longeron) is critical at Sta. 549 for condition CH10F5.

$$P_{10} = -35535 \text{ lb}$$

$$A_{\text{EXTRU.}} = 0.621 \text{ in}^2$$

$$A_{\text{STRAPS}} = 0.201 \text{ in}^2$$

$$A_{\text{SKINS}} = 0.156 \text{ in}^2$$

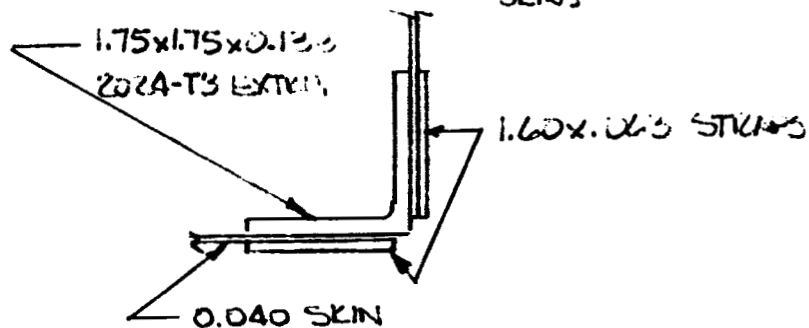


FIGURE 9-1. LONGERON SECTION STATION 549.0 (LOWER RIGHT).

$$\text{Rivet Pitch} = 1.125; F_{ir_{\text{STRAP}}} = 36200 \text{ (see ref. 7)}$$

Crippling allowable of extrusion

$$F_{cc} = 41000 \text{ (see ref. 7)}$$

$$F_{cy}(\text{skins}) = 37000 \text{ lb/in}^2 \text{ (see Ref. 7)}$$

$$A_{\text{EFF SKINS}} = .157 \left( \frac{37000}{41000} \right) = .1416 \text{ in}^2$$

$$A_{\text{EFF STRAP}} = .201 \left( \frac{36200}{41000} \right) = .1774 \text{ in}^2$$

$$\text{PALL} = 41000(.621 + .1416 + .1774) = 38540 \text{ lb}$$

$$\text{M.S.} = \frac{38540}{35535} - 1 = +0.083$$

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/9/71

STRINGER MARGINS OF SAFETY STA. 549 TO STA.749

549  
SKIN MATERIAL 24  
ESK = 1050000C.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
4	CH2F5	1000.	.040	.188	.621	.1793	20.0	5,5	40000.	26328.	4868.	353.	1506.	660.	20779.	.87
5	CH2F5	1000.	.040	.050	.091	.0131	20.0	5,6	42100.	5528.	2341.	361.	443.	658.	2872.	.23
6	CH2F5	1000.	.050	.050	.091	.0131	20.0	5,6	42100.	6623.	2931.	355.	441.	869.	3639.	.24
7	CH10F5	1000.	.050	.050	.091	.0131	20.0	5,6	42100.	6623.	3408.	372.	420.	869.	3845.	.13
7	CH2F5	1000.	.050	.050	.091	.0131	20.0	5,6	42100.	6623.	3724.	352.	389.	869.	4116.	.11
7	CH7F5	1000.	.050	.050	.091	.0131	20.0	5,6	42100.	6623.	3659.	364.	400.	869.	4020.	.10
8	CH10F5	1000.	.050	.063	.117	.0159	20.0	5,5	43500.	7886.	4949.	368.	420.	873.	5649.	.14
8	CH7F5	1000.	.050	.063	.117	.0159	20.0	5,5	43500.	7886.	5113.	360.	405.	873.	5753.	.13
9	CH10F5	1000.	.050	.063	.117	.0159	20.0	5,5	43500.	7886.	5978.	362.	365.	873.	6023.	.01
9	CH7F5	1000.	.050	.063	.117	.0159	20.0	5,5	43500.	7886.	6017.	353.	357.	873.	6078.	.01
11	CH10F5	1000.	.040	.063	.117	.0159	20.0	5,9	43500.	6791.	5254.	303.	308.	652.	5333.	.01
12	CH10F5	1000.	.040	.063	.117	.0159	20.0	6,1	43500.	6791.	4521.	297.	335.	648.	5101.	.13
13	CH10F5	1000.	.040	.050	.091	.0131	20.0	6,4	42100.	5528.	3198.	291.	321.	643.	3524.	.10
19	CH1613	1000.	.040	.040	.074	.0109	20.0	5,5	36700.	4396.	4132.	57.	57.	660.	4185.	.01

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/9/71

STRINGER MARGINS OF SAFETY STA. 549 TO STA.749

589  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	GIN	GALL	GCUT	PALL	M.S.
3	CH2F5	1000.	.040	.050	.091	.0131	20.0	4.3	42100.	5528.	413.	418.	816.	701.	806.	.68
4	CH2F5	1000.	.040	.188	.621	.1793	20.0	6.8	40000.	32920.	3740.	428.	1677.	642.	22495.	.50
4	CH7F5	1000.	.040	.188	.621	.1793	20.0	6.8	40000.	32920.	4340.	438.	1995.	642.	19771.	.47
5	CH2F5	1000.	.050	.050	.091	.0131	20.0	6.8	42100.	6623.	2303.	437.	466.	834.	2456.	.07
5	CH7F5	1000.	.050	.050	.091	.0131	20.0	6.8	42100.	6623.	2098.	450.	481.	834.	2243.	.07
6	CH10F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	2583.	467.	545.	895.	3013.	.17
6	CH2F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	3010.	441.	501.	895.	3419.	.14
6	CH7F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	2888.	456.	517.	895.	3272.	.13
7	CH10F5	1000.	.050	.050	.091	.0131	20.0	4.9	42100.	6623.	3424.	470.	493.	900.	3591.	.05
7	CH2F5	1000.	.050	.050	.091	.0131	20.0	4.9	42100.	6623.	3688.	444.	464.	900.	3850.	.04
7	CH7F5	1000.	.050	.050	.091	.0131	20.0	4.9	42100.	6623.	3648.	459.	474.	900.	3766.	.03
8	CH10F5	1000.	.050	.063	.117	.0159	20.0	5.2	43500.	7886.	4775.	470.	506.	886.	5138.	.08
8	CH2F5	1000.	.050	.063	.117	.0159	20.0	5.2	43500.	7886.	4886.	443.	482.	886.	5318.	.09
8	CH7F5	1000.	.050	.063	.117	.0159	20.0	5.2	43500.	7886.	4933.	456.	488.	886.	5276.	.07
9	CH10F5	1000.	.050	.063	.117	.0159	20.0	4.6	43500.	7886.	5698.	467.	468.	922.	5710.	.00
9	CH7F5	1000.	.050	.063	.117	.0159	20.0	4.6	43500.	7886.	5748.	455.	457.	922.	5772.	.00
11	CH10F5	1000.	.040	.063	.117	.0159	20.0	5.3	43500.	6791.	2551.	386.	575.	665.	3801.	.49
12	CH10F5	1000.	.040	.063	.117	.0159	20.0	5.3	43500.	6791.	4279.	341.	398.	665.	4989.	.17
13	CH10F5	1000.	.040	.050	.091	.0131	20.0	6.4	42100.	5528.	2997.	337.	359.	643.	3195.	.07
14	CH10F5	1000.	.040	.050	.091	.0131	20.0	6.4	42100.	5528.	2228.	333.	408.	643.	2732.	.23
15	CH10F5	1000.	.040	.050	.091	.0131	20.0	6.4	42100.	5528.	1459.	326.	469.	643.	2101.	.44
16	CH10F5	1000.	.040	.050	.091	.0131	20.0	5.3	42100.	5528.	824.	318.	612.	665.	1586.	.92
17	CH10F5	1000.	.040	.050	.091	.0131	20.0	5.3	42100.	5528.	234.	310.	699.	665.	527.	1.14
19	CH1613	1000.	.040	.040	.074	.0109	20.0	5.2	36700.	4396.	3592.	92.	101.	668.	3944.	.10
20	CH1613	1000.	.040	.040	.074	.0109	20.0	5.2	36700.	4396.	1922.	98.	179.	668.	3515.	.83
21	CH1613	1000.	.040	.040	.074	.0109	20.0	4.9	36700.	4396.	500.	98.	391.	678.	1993.	2.99

34E

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/9/71

STRINGER MARGINS OF SAFETY STA, 549 TO STA.749

649  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 103000000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
3	CH1F5	1000.	.040	.050	.091	.0131	20.0	3.6	42100.	5528.	431.	590.	949.	743.	693.	.26
4	CH2F5	1000.	.040	.188	.621	.1793	20.0	5.0	40000.	26328.	6241.	591.	1874.	675.	19784.	.14
4	CH7F5	1000.	.040	.188	.621	.1793	20.0	5.0	40000.	26328.	5101.	601.	2172.	675.	18446.	.12
5	CH2F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	2324.	589.	607.	895.	2393.	.03
5	CH7F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	2161.	602.	622.	895.	2234.	.03
6	CH10F5	1000.	.050	.050	.091	.0131	20.0	4.5	42100.	6623.	2593.	598.	624.	930.	2707.	.04
6	CH2F5	1000.	.050	.050	.091	.0131	20.0	4.5	42100.	6623.	2970.	582.	590.	930.	3010.	.01
6	CH7F5	1000.	.050	.050	.091	.0131	20.0	4.5	42100.	6623.	2876.	594.	602.	930.	2912.	.01
7	CH10F5	1000.	.050	.050	.091	.0131	20.0	3.1	42100.	6623.	3331.	589.	626.	1120.	3539.	.06
7	CH2F5	1000.	.050	.050	.091	.0131	20.0	3.1	42100.	6623.	3571.	574.	602.	1120.	3749.	.05
7	CH7F5	1000.	.050	.050	.091	.0131	20.0	3.1	42100.	6623.	3542.	586.	609.	1120.	3685.	.04
8	CH10F5	1000.	.050	.063	.117	.0159	20.0	4.3	43500.	7886.	4570.	581.	619.	947.	4866.	.06
8	CH7F5	1000.	.050	.063	.117	.0159	20.0	4.3	43500.	7886.	4726.	578.	605.	947.	4950.	.05
9	CH10F5	1000.	.050	.063	.117	.0159	20.0	3.3	43500.	7886.	5396.	572.	580.	1079.	5464.	.01
9	CH7F5	1000.	.050	.063	.117	.0159	20.0	3.3	43500.	7886.	5455.	569.	574.	1079.	5495.	.01
12	CH10F5	1000.	.040	.063	.117	.0159	20.0	4.5	43500.	6791.	4076.	518.	559.	693.	4403.	.08
13	CH10F5	1000.	.040	.050	.091	.0131	20.0	4.5	42100.	5528.	2821.	514.	528.	693.	2899.	.03
14	CH10F5	1000.	.040	.050	.091	.0131	20.0	3.2	42100.	5528.	1921.	510.	709.	779.	2670.	.39
15	CH10F5	1000.	.040	.050	.091	.0131	20.0	4.5	42100.	5528.	1021.	503.	717.	693.	1454.	.38
16	CH10F5	1000.	.040	.050	.091	.0131	20.0	6.2	42100.	5528.	382.	496.	609.	646.	470.	.23
19	CH1613	1000.	.040	.040	.074	.0109	20.0	4.6	36700.	4396.	2932.	22.	32.	689.	4303.	.47



STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITHOUT BORON

3/9/71

STRINGER MARGINS OF SAFETY STA. 549 TO STA.749

689  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
3	CH2F5	1000.	.040	.050	.091	.0131	20.0	2.7	42100.	5528.	222.	796.	1168.	851.	326.	.07
3	CH7F5	1000.	.040	.050	.091	.0131	20.0	2.7	42100.	5528.	114.	803.	1187.	851.	169.	.06
4	CH2F5	1000.	.055	.188	.621	.1793	20.0	3.9	40000.	32920.	7812.	818.	2514.	1139.	24003.	.39
4	CH7F5	1000.	.055	.188	.621	.1793	20.0	3.9	40000.	32920.	7084.	831.	2711.	1139.	23109.	.37
5	CH2F5	1000.	.071	.050	.091	.0131	20.0	3.9	42100.	9595.	1087.	826.	897.	1717.	1181.	.09
5	CH7F5	1000.	.071	.050	.091	.0131	20.0	3.9	42100.	9595.	1006.	845.	895.	1717.	1065.	.06
6	CH10F5	1000.	.071	.050	.091	.0131	20.0	3.5	42100.	9595.	3212.	852.	859.	1844.	3236.	.01
6	CH2F5	1000.	.071	.050	.091	.0131	20.0	3.5	42100.	9595.	3630.	821.	872.	1844.	3677.	.01
7	CH10F5	1000.	.071	.050	.091	.0131	20.0	3.7	42100.	9595.	1582.	839.	906.	1777.	1709.	.08
7	CH7F5	1000.	.071	.050	.091	.0131	20.0	3.7	42100.	9595.	1690.	828.	902.	1777.	1840.	.09
8	CH10F5	1000.	.071	.063	.117	.0159	20.0	3.8	43500.	10853.	5240.	826.	906.	1746.	5749.	.10
8	CH7F5	1000.	.071	.063	.117	.0159	20.0	3.8	43500.	10853.	5439.	814.	889.	1746.	5938.	.09
9	CH10F5	1000.	.071	.063	.117	.0159	20.0	3.8	43500.	10853.	2603.	796.	1084.	1746.	3542.	.36
12	CH10F5	1000.	.040	.063	.117	.0159	20.0	4.0	43500.	6791.	2000.	710.	929.	715.	2619.	.01
13	CH10F5	1000.	.040	.050	.091	.0131	20.0	3.2	42100.	5528.	2626.	674.	699.	779.	2722.	.04
14	CH10F5	1000.	.040	.050	.091	.0131	20.0	3.2	42100.	5528.	1455.	666.	854.	779.	1866.	.17
15	CH10F5	1000.	.040	.050	.091	.0131	20.0	3.8	42100.	5528.	283.	650.	934.	727.	407.	.12
16	CH10F5	1000.	.040	.050	.091	.0131	20.0	5.2	42100.	5528.	116.	639.	736.	668.	134.	.05

689

## 10.0 DETAILED STRESS ANALYSIS OF THE REINFORCED TAIL CONE

This section of the report contains the computer input data and margins of safety for the critical stringers in the reinforced tail cone that are not reinforced with boron/epoxy. Margins of safety for reinforced stringers are calculated from the results of the analysis of Section 2, Reference 1. Stringer axial loads and skin shear flows are obtained from Section 5.0.

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITH BORON

4/14/71

STRINGER MARGINS OF SAFETY STA. 54 TO STA.749

549  
SKIN MATERIAL 2\*  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
4	CH2F5	1000.	.040	.188	.621	.1793	20.0	5.5	40000.	26328.	4949.	433.	1726.	660.	19728.	.52
5	CH2F5	1000.	.040	.050	.091	.0131	20.0	5.6	42100.	5528.	2428.	457.	481.	658.	2554.	.05
6	CH2F5	1000.	.050	.050	.091	.0131	20.0	5.6	42100.	6623.	2648.	435.	499.	869.	3037.	.15
7	CH7F5	1000.	.050	.050	.091	.0131	20.0	5.6	42100.	6623.	3194.	412.	453.	869.	3512.	.10
8	CH10F5	1000.	.050	.063	.117	.0159	20.0	5.5	43500.	7886.	4184.	361.	460.	873.	5331.	.27
8	CH7F5	1000.	.050	.063	.117	.0159	20.0	5.5	43500.	7886.	4347.	342.	435.	873.	5530.	.27
9	CH10F5	1000.	.050	.063	.117	.0159	20.0	5.5	43500.	7886.	4951.	259.	328.	873.	6274.	.27
9	CH7F5	1000.	.050	.063	.117	.0159	20.0	5.5	43500.	7886.	5021.	241.	308.	873.	6409.	.28
19	CH1613	1000.	.040	.040	.074	.0109	20.0	5.5	36700.	4396.	3083.	66.	87.	660.	4039.	.31

STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITH BORON

4/14/71

STRINGER MARGINS OF SAFETY STA. 549 TO STA.749

649  
SKIN MATERIAL 24  
ESK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FCI	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
4	CH2F5	1000.	.040	.188	.621	.1793	20.0	5.0	40000.	26328.	7157.	568.	1649.	675.	20764.	.19
5	CH2F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	2132.	563.	614.	895.	2324.	.09
5	CH7F5	1000.	.050	.050	.091	.0131	20.0	5.0	42100.	6623.	2037.	577.	625.	895.	2208.	.08
6	CH2F5	1000.	.050	.050	.091	.0131	20.0	4.5	42100.	6623.	2491.	558.	618.	930.	2761.	.11
6	CH7F5	1000.	.050	.050	.091	.0131	20.0	4.5	42100.	6623.	2430.	571.	628.	930.	2670.	.10
7	CH10F5	1000.	.050	.050	.091	.0131	20.0	3.1	42100.	6623.	2621.	572.	677.	1120.	3100.	.18
7	CH2F5	1000.	.050	.050	.091	.0131	20.0	3.1	42100.	6623.	2822.	553.	651.	1120.	3318.	.18
7	CH7F5	1000.	.050	.050	.091	.0131	20.0	3.1	42100.	6623.	2793.	567.	659.	1120.	3248.	.16
8	CH10F5	1000.	.050	.063	.117	.0159	20.0	4.3	43500.	7886.	3392.	568.	711.	947.	4248.	.25
8	CH7F5	1000.	.050	.063	.117	.0159	20.0	4.3	43500.	7886.	3543.	562.	694.	947.	4371.	.23
9	CH7F5	1000.	.050	.063	.117	.0159	20.0	3.3	43500.	7886.	3912.	558.	696.	1079.	4877.	.25

Stringer No. 25 Station 569 to Station 589 is critical for condition CH10F4.

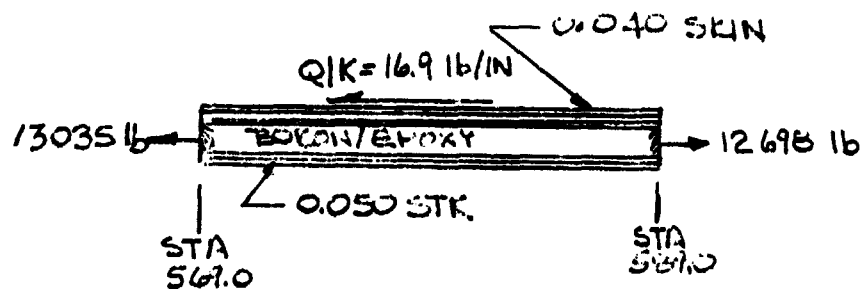


FIGURE 10-1. LOADS APPLIED TO THE BORON/EPOXY REINFORCED STRINGER 25.

$$M.S. = \frac{23800^*}{13035} - 1 = + .81^* \text{ (Ref. 1)}$$

Stringer No. 11 Station 569 to Station 589 is critical for condition CH10F5.

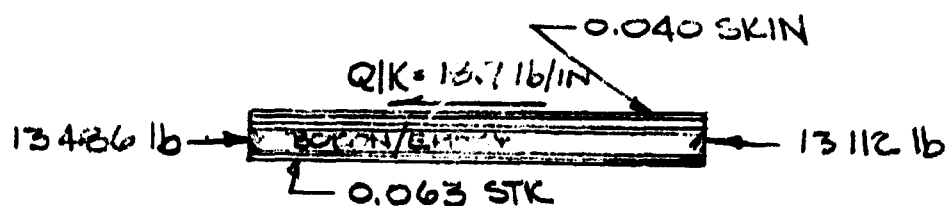


FIGURE 10-2. LOADS APPLIED TO THE BORON/EPOXY REINFORCED STRINGER 11.

$$M.S. = \frac{24200^*}{13486} - 1 = + .80^* \text{ (Ref. 1)}$$

Margins of safety for stringers 25 and 11 include the thermal stresses caused by the difference in the thermal coefficient of expansion of boron and aluminum.

Maximum thermal stresses are obtained at  $-65^{\circ}\text{F}$ , the minimum environmental temperature specified for the CH-54B in Reference 9.

The ultimate load capability of the boron/epoxy reinforced stringers is based upon the ultimate capability of the components of the member and the thermal stresses due to differences in the thermal coefficient of expansion of the materials making up the member. The component loads caused by total applied loads and thermal stresses are shown in Ref. 1.

The critical skin panel is between stations 549 and station 569 and the longeron (NO. 24) and stringer No. 25. Condition CH10F5 is critical.

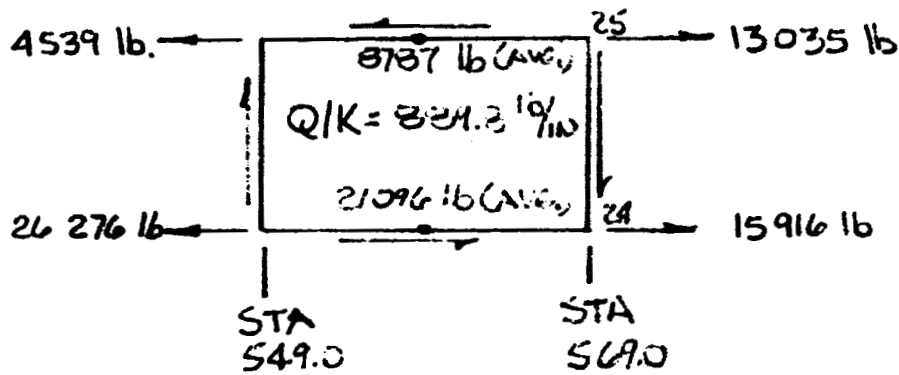


FIGURE 10-3. CRITICAL SKIN PANEL APPLIED LOADS.

STR. 25

$$P_{SK} = \frac{A_{SK}}{A_{TDT}} (8787) = \frac{.04(5.28)}{.04(5.28) + 387} (8787)$$

$$P_{SK} = 3102 \text{ lb}$$

STR. 24

$$P_{SK} = \frac{.04(5.28)}{.861} (21096)$$

$$P_{SK} = 5175 \text{ lb}$$

$$\tau_{SK} = \frac{3102 + 5175}{2(5.28)(.04)} = 19595 \text{ lb/in}^2$$

$$q = \frac{889.8}{.04} = 22245 \text{ lb/in}^2$$

$$\sigma_{\text{MAX}} = 24304 \text{ lb/in}^2$$

$$\sigma_{\text{MAX}} = 34094 \text{ lb/in}^2 \text{ Principal Stresses}$$

$$\sigma_{\text{MIN}} = -14514 \text{ lb/in}^2$$

$$F_{\text{TU}} = 60000 \text{ lb/in}^2 \quad F_{\text{SU}} = 38000 \text{ lb/in}^2 \text{ (see Ref. 7)}$$

$$\text{M.S.} = \left( \frac{\tau_{\text{MAX}}}{F_{\text{SU}}} + \frac{\sigma_{\text{MAX}} + \sigma_{\text{MIN}}/2}{F_{\text{TU}}} \right) - i = + 0.32$$

11.0 DETAILED STRESS ANALYSIS OF THE  
REINFORCED TAIL CONE WITH PARTIAL  
"NO BOND".

This section of the report contains the computer input data for the critical skin/stringer margin of safety calculations for the reinforced tail cone. These assume the "NO BOND" conditions listed in Section 6.0. The skin/stringer loads are obtained from Section 6.0.

The critical section of the tail cone, due to no bonds, is between stations 569 and 589. The critical stringers and critical conditions are as follows:

TABLE 11-1

CRITICAL STRINGERS AND LOAD CONDITIONS

STRINGER NO.	CONDITION	BOND FAILED IN STRINGER NOS.
5 (nonreinf.)	CH2F5	11
6 "	CH2F5	11, 12, 13, 14, 15, 16 and 17
7 "	CH7F5	11, 12, 13, 14, 15, 16 and 17
8 "	CF7F5	11, 12, 13, 14, 15, 16 and 17
9 "	CH75F	11, 12, 13, 14, 15, 16 and 17
11 (NO Bond)	CH10F5	11, 12, 13, 14, 15, 16 and 17

Margins of safety for stringers 5, 6, 7, 8, 9 and 11 are shown on page 357.



STIFFENED PANELS SUBJECT TO SHEAR AND COMPRESSION

S. CIARDULLO

CH-54B WITH BORON

4/13/71

STRINGER MARGINS OF SAFETY STA. 569 TO STA.589

569  
SKIN MATERIAL 24  
ZSK = 10500000.  
EST = 10300000.

STR	COND	R	TSK	TST	AST	IST	A	B	FC1	PA	PIN	QIN	QALL	QCUT	PALL	M.S.
5	CH2F5	1000.	.040	.050	.091	.0131	20.0	5.6	42100.	5528.	2689.	414.	442.	658.	2874.	.07
6	CH2F5	1000.	.050	.050	.091	.0131	20.0	5.6	42100.	6623.	3088.	399.	453.	869.	3509.	.14
7	CH7F5	1000.	.050	.050	.091	.0131	20.0	5.6	42100.	6623.	3680.	396.	417.	869.	3872.	.05
8	CH7F5	1000.	.050	.063	.117	.0159	20.0	5.5	43500.	7886.	4837.	389.	441.	873.	5483.	.13
9	CH7F5	1000.	.050	.063	.117	.0159	20.0	5.5	43500.	7886.	5439.	382.	404.	873.	5756.	.06
11	CH10F5	1000.	.040	.063	.117	.0159	20.0	5.9	43500.	6791.	4590.	360.	382.	652.	4871.	.06

## 12.0 Summary of Minimum Margins of Safety

Minimum margins of safety, (less than .05) are summarized in Table 12-1 for the transition section. Table 12-2 summarizes the minimum margins of safety for the modified, nonreinforced tail cone section.

The minimum margin of safety for the reinforced tail cone was calculated for a critical nonreinforced stringer and is shown in Table 12-3. Table 12-3 also shows a minimum margin of safety for a critical non-reinforced stringer of the reinforced tail cone due to partial "no bond".

Tables 12-2 and 12-3 show that the critical condition occurs when no boron/epoxy reinforcement is added to any of the stringers.

TABLE 12-1

MINIMUM MARGINS OF SAFETY  
 TRANSITION SECTION STATION 471.0 TO 549.0  
 (NONREINFORCED)

STATION 471.0

STRINGER NUMBER	CONDITION	MARGIN OF SAFETY
11	CH7F5	.04
15	CH7F5	.05
16	CH7F5	.05

STATION 490.5

16	CH7F5	.03
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STATION 510.0

12	CH7F5	.03
16	CH7F5	.01

STATION 529.5

10	CH7F5	.05
12	CH7F5	.02
16	CH7F5	.03

TABLE 12-2  
 MINIMUM MARGINS OF SAFETY  
 TAIL CONE STATIONS 549.0 to 749.0  
 (NONREINFORCED)

STATION 549.0

STRINGER NUMBER	CONDITION	MARGIN OF SAFETY
9	CH10F5	.01
9	CH7F5	.01
11	CH10F5	.01
19	CH1613	.01
23	STRINGER TO FITTING CH10F5	.04

STATION 589.0

7	CH10F5	.05
7	CH2F5	.04
7	CH7F5	.03
9	CH10F5	.00
9	CH7F5	.00

STATION 649.0

5	CH2F5	.03
5	CH7F5	.03
6	CH10F5	.04
6	CH2F5	.01
6	CH7F5	.01
7	CH2F5	.05
7	CH7F5	.04
8	CH7F5	.05
9	CH10F5	.01
9	CH7F5	.01
13	CH10F5	.03

STATION 689

6	CH10F5	.01
6	CH2F5	.01
12	CH10F5	.01
13	CH10F	.04
16	CH10F5	.05

TABLE 12-3

MINIMUM MARGINS OF SAFETY  
 TAIL CONE STATION 549.0 TO 749.0  
 REINFORCED WITH BORON/EPOXY

STATION 549.0

STRINGER NUMBER	CONDITION	MARGIN OF SAFETY
5	CH2F5	.05

STATION 549.0

7	CH7F5 Partial No Bond	.05
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### 13.0 REFERENCES

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