

FIGURE 1 - WING



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KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1	1000	143-14001-1	*	Wing	Asy-Complete	LH		1	2351 4 SUB
	1001	143-14001-2	*	Wing	Asy-Complete	RH		1	
		ATTACHING PARTS -		LH and RH	Wing Panels			19	
2		AN3-5A	Bolt-	Aircraft	10-32			12	
3		AN4-7A	Bolt-	Aircraft	1/4-28			16	
4		AN4-10A	Bolt-	Aircraft	1/4-28			1	
5		AN5-6A	Bolt-	Aircraft	5/16-24			16	
6		AN5-11A	Bolt-	Aircraft	5/16-24			42	
7		AN960-10	Washer-	Plain				28	
8		AN960-416	Washer-	Plain				32	
9		AN960-516	Washer-	Plain				2	
10	8486	2W1-21-21-62	Washer-	Plain				19	
11		AN365-1032	Nut-Self	Locking				28	
12		AN365-428	Nut-Self	Locking				17	
13		AN365-524	Nut-Self	Locking				1	
14	1002	145-14020-1	Spoiler-	Left Wing	Leading Edge			1	
	1003	145-14020-2	Spoiler-	Right Wing	Leading Edge			1	
	1004	143-14001-109	Dcor-	Aileron	Mechanism Access	LH		1	
	1005	143-14001-110	Dcor-	Aileron	Mechanism Access	RH		12	
16		AN520-10-R7	Screw-	Round Head	Machine (Fine Thread)			1	
17	1006	145-14222	Dcor-	Landing	Gear Access			24	
18		NAS221-9	Screw-	Attaching				1	
19	1007	145-14121	Dcor-	Left Wing	Access Hole	Upper Surface		4	
20		AN509	Screw-	Round Head	Machine (Fine Thread)			1	
21	1008	143-14076-1	Fitting-	Flap	Inboard Support	LH		1	
	1009	143-14076-2	Fitting-	Flap	Inboard Support	RH		3	
22		AN4-5A	Bolt-	Aircraft	1/4-28			1	
23		AN4-6A	Bolt-	Aircraft	1/4-28			4	
24		AN960-416	Washer-	Plain				4	
25		AN365-428	Nut-Self	Locking				1	
26	1010	143-14075-1	Fitting-	Wing	Flap Center Support	LH		1	
	1011	143-14075-2	Fitting-	Wing	Flap Center Support	RH		3	
27		AN4-5A	Bolt-	Aircraft	1/4-28			1	
28		AN4-6A	Bolt-	Aircraft	1/4-28			4	
29		AN960-416	Washer-	Plain				4	
30		AN365-428	Nut-Self	Locking				1	
31	1012	143-16106-1	Bracket-	Aileron	and Flap Hinge	LH		1	
	1013	143-16106-2	Bracket-	Aileron	and Flap Hinge	RH		3	
32		AN4-6A	Bolt-	Aircraft	1/4-28			3	
33		AN960-416	Washer-	Plain				3	
34		AN365-428	Nut-Self	Locking				1	
35	1014	145-16115-1	Bracket-	Aileron	Center Hinge	LH		1	
	1015	145-16115-2	Bracket-	Aileron	Center Hinge	RH		4	
36		AN4-5A	Bolt-	Aircraft	1/4-28			4	
37		AN960-416	Washer-	Plain				4	
45	1030	143-16001-1	Aileron-	Complete	LH			1	
	1031	143-16001-2	Aileron-	Complete	RH			1	
46		AN3-6	Bolt-	Aircraft	10-32			2	
47		AN3-7	Bolt-	Aircraft	10-32			3	
48		AN310-3	Nut-	Aircraft	Castle			4	
49		AN960-10	Washer-	Plain				4	
50		AN970-3	Washer-	Flat				2	
51		AL380-2-3	Cotter					3	
52		145-16122-7	Hinge		Asy-Outboard	LH		1	
		145-16122-8	Hinge		Asy-Outboard	RH		1	
53	9030	UK3L	Bearing	(Kilian)				1	
54	1034	145-16114-1	Hinge	Asy-Aileron	Control Inboard			1	
	1035	145-16114-2	Hinge	Asy-Aileron	Control Inboard			1	
55	9030	U 3L	Bearing	(Kilian)	Alternate AN200K3L			1	
56	1040	143-18001-1	Flap	Asy-Complete	LH			1	
	1041	143-18001-2	Flap	Asy-Complete	RH			1	
57		AN4-7	Bolt-	Aircraft	1/4-28			2	
58		AN4-10	Bolt-	Aircraft	1/4-28			1	
59		143-18051-4	Bushing					2	
60	4213	143-18051-4	Bushing					1	
61	8481	2W1-16-20-63	Washer-	Plain				1	

\*Includes electrical wiring but less aileron, flap, tip, pitot tube, cables, fuel, instrument and hydraulic lines, fuel tank and landing gear.



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KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
62		AN960-D416					Washer - Plain	3	
63		AN310-4					Nut - Aircraft Castle	3	
64		AN380-2-2					Cotter	3	
65	1042	143-18001-71					Bracket Assy - Flap Center Hinge	1	
		ATTACHING PARTS							
66		AN4-5A					Bolt - Aircraft 1/4-28	4	
67	8037	AN960-D416					Washer - Plain	4	
		4B18-7-102					Bushing - Shoulder	1	
68	1043	143-18001-72					Bracket Assy - Flap Outboard Hinge	1	
69	8037	4B18-7-102					Bushing - Shoulder	1	
70	1044	143-18001-73					Bracket Assy - Flap Inboard Hinge	1	
71	8038	4B18-7-125					Bushing - Shoulder	1	
72	8061	5B2-12					Bolt - Adjustment	1	
73		AN315-4R					Nut - Aircraft Plain	1	
74		AN365-428					Nut - Self Locking	1	
75		161-10005-3					Fairing - Rear LH (Less Attaching Holes)	1	
		161-10005-4					Fairing - Rear RH (Less Attaching Holes)	1	
		ATTACHING PARTS							
76		145-10025					Washer - Wing Fillet to Fuselage Attaching	42	
77		ES507-10					Screw	42	
80		ASK-75					RIVNUT	42	
81								1	
81-1	1060-10	143-14010-22					Center Rib - Wing	1	
	1061	143-14010-11					Angle - Wing Root Rear Lower Joining LH	1	
	1062	143-14010-12					Angle - Wing Root Rear Lower Joining RH	1	
82		147-10003-51					Walkway (Includes 1 Pint Cement)	1	
83	1070	NOTE: The Following					Bulk Stock is Required to Join Wing to Fuselage		
84		143-14071					Spacer - Wing Rear Spar to Fuselage Attaching	4	
85		161-31019-SLH/6RH					Wing Rear Spar to Fuselage Attaching, BRACKET	2	
86		AN5-67					Bolt - Aircraft 5/16-24	2	
87		AN5-10A					Bolt - Aircraft 5/16-24	2	
88		AN6-10A					Bolt - Aircraft 3/8-24	2	
89		AN365-524					Nut - Self Locking	4	
90		AN365-624					Nut - Self Locking	2	
91		AN960-516					Washer - Plain	6	
		AN960-616					Washer - Plain	4	
92		145-54076-SA1					Light Assy - Flap Midway Position (	Ref	
20A		AN 367-F1032					NUT PLATE	4	
59A		143-18051-2					BUSHING	4	
93		161-10005-3					FAIRING FRONT L.H.	1	
		161-10005-4					FAIRING FRONT R.H.	1	
		ATTACHING HARDWARE, KEY 76, 77, 80						25	
94		147-10003-57					FLAP STEP, LOWER 1/SIDE	1	
95		147-10003-55					FLAP STEP, UPPER, 1/SIDE	1	

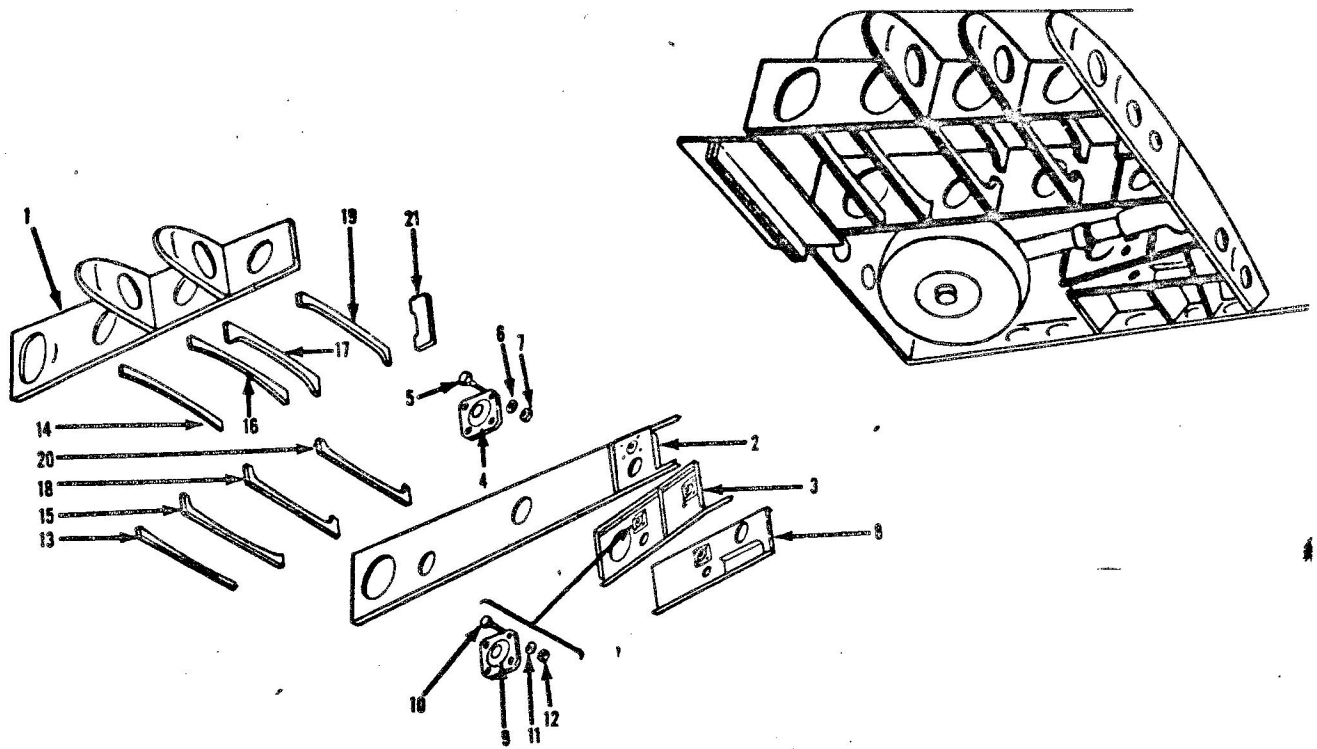


FIGURE 2 - WING PANEL STRUCTURE

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1	1100	143-14003-1					Spar Assy-Station 0 to 50 Front LH	1	2351 + Sub
	1101	143-14003-2					Spar Assy-Station 0 to 50 Front RH	1	
2	1102	143-14004-1					Spar Assy-Station 0 to 50 Center LH	1	
	1103	143-14004-2					Spar Assy-Station 0 to 50 Center RH	1	
3	1104	143-14006-11					Beam Assy-Station 0 to 50 Front LH	1	
	1105	143-14006-12					Beam Assy-Station 0 to 50 Front RH	1	
4	1108	143-33152					Fitting Assy-Main Ldg. Gear Trunnion Bearing	2	
5		AN5-6A					Bolt-Aircraft 5/16-24	7	
6		AN960-516					Washer-Plain	11	
7		AN365-524					Nut-Self Locking	7	
8	1106	143-14006-21					Beam Assy-Landing Gear Support Aft LH	1	
	1107	143-14006-22					Beam Assy-Landing Gear Support Aft RH	1	
9	1108	143-33152					Fitting Assy-Main Ldg. Gear Trunnion Bearing	1	
10		AN5-5A					Bolt-Aircraft 5/16-24	4	
11		AN960-516					Washer-Plain	4	
12		AN365-524					Nut-Self Locking	4	
13	1110	143-14060-3					Former-Station 6 Lower LH	1	
	1111	143-14060-4					Former-Station 6 Lower RH	1	
14	1112	143-14065-3					Former-Station 6.594 Upper LH	1	
	1113	143-14065-4					Former-Station 6.594 Upper RH	1	
15	1118	145-14112-3					Former-Station 12.250 Lower LH	1	
	1119	145-14112-4					Former-Station 12.250 Lower RH	1	
16	1122	143-14015-3					Former-Station 15.406 Upper LH	1	
	1123	143-14015-4					Former-Station 15.406 Upper RH	1	
17	1128	145-14124-3					Former-Station 24.5 Upper LH	1	
	1129	145-14124-4					Former-Station 24.5 Upper RH	1	
18	1132	145-14125-3					Former-Station 24.5 Lower LH	1	
	1133	145-14125-4					Former-Station 24.5 Lower RH	1	
19	1138-10	145-14137-3					Former-Station 37.25 Upper LH	1	
	1139-10	145-14137-4					Former-Station 37.25 Upper RH	1	
20	1140-10	145-14138-3					Former-Station 37.25 Lower LH	1	
	1141-10	145-14138-4					Former-Station 37.25 Lower RH	1	
21	1154	143-14052-3					Former-Tank End Support LH	1	
	1155	143-14052-4					Former-Tank End Support RH	1	

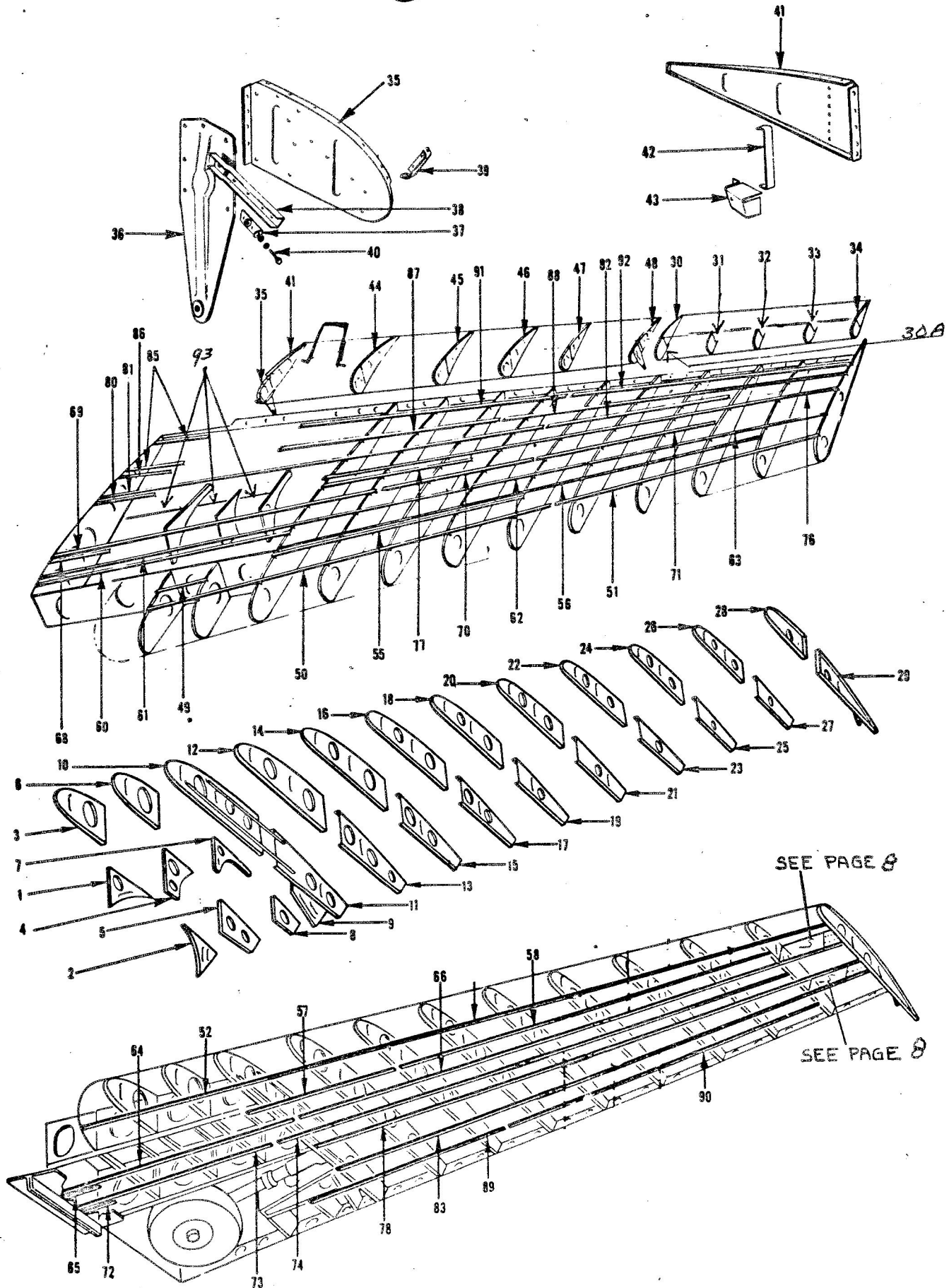


FIGURE 3 - WING PANEL STRUCTURE



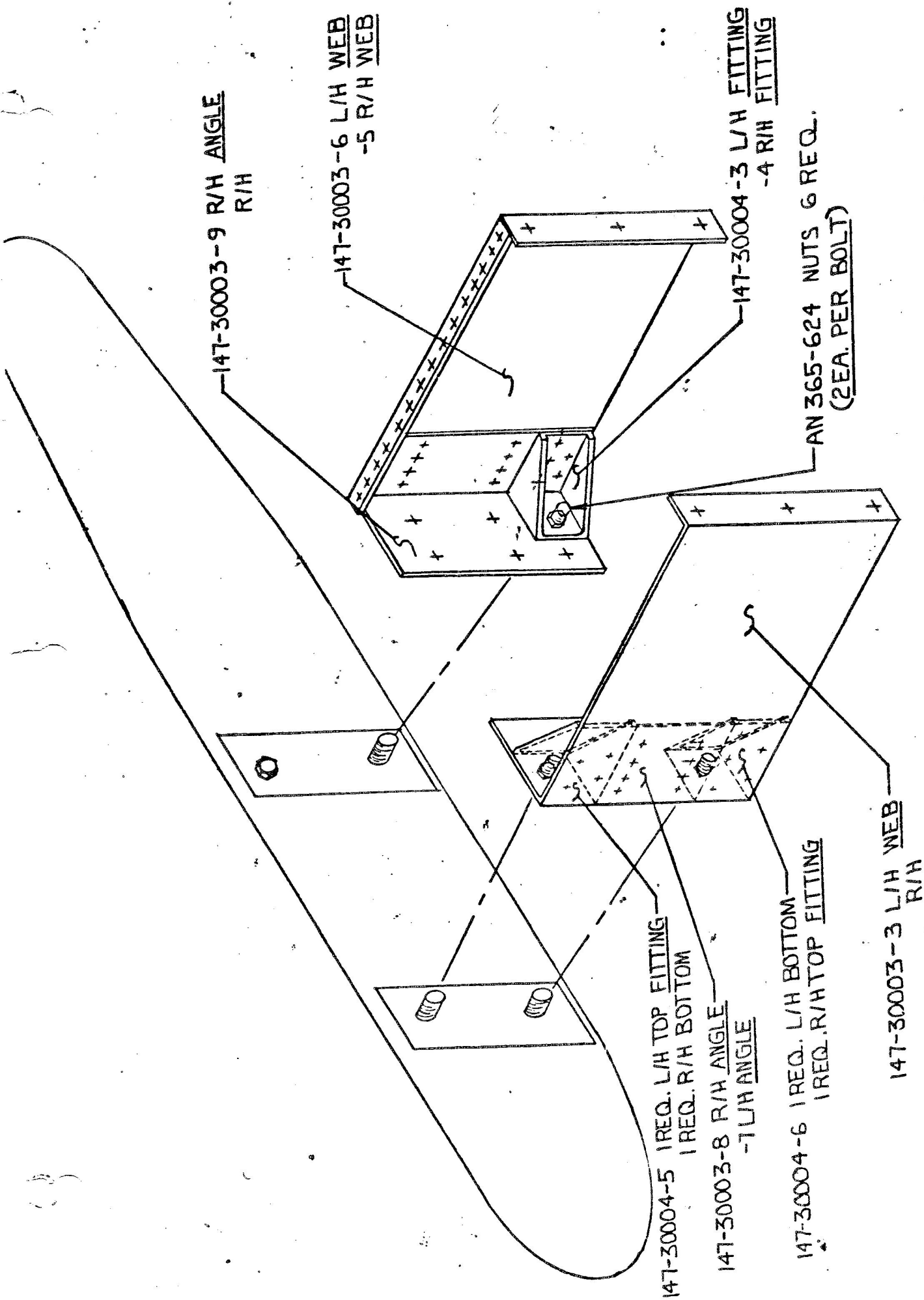
FIGURE 3 - WING PANEL STRUCTURE

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE	
1	1114	145-14213-1	Rib-Station	12.250	Center	LH	- - - - -	1	2357 4 Sub	
	1115	145-14213-2	Rib-Station	12.250	Center	RH	- - - - -	1		
2	1116	145-14212-1	Rib-Station	12.250	Aft	LH	- - - - -	1		
	1117	145-14212-2	Rib-Station	12.250	Aft	RH	- - - - -	1		
3	1124	145-14024-1	Rib-Station	24.5	Nose	LH	- - - - -	1		
	1125	145-14024-2	Rib-Station	24.5	Nose	RH	- - - - -	1		
4	1272	145-14224-1	Rib-Station	24.5	Center	LH	- - - - -	1		
	1273	145-14224-2	Rib-Station	24.5	Center	RH	- - - - -	1		
5	1134	145-14225-1	Rib-Station	24.5	Trailing	LH	- - - - -	1		
	1135	145-14225-2	Rib-Station	24.5	Trailing	RH	- - - - -	1		
6	1136	145-14037-1	Rib-Station	37.25	Nose	LH	- - - - -	1		
	1137	145-14037-2	Rib-Station	37.25	Nose	RH	- - - - -	1		
7	1142	145-14237-1	Rib-Station	37.25	Center	LH	- - - - -	1		
	1143	145-14237-2	Rib-Station	37.25	Center	RH	- - - - -	1		
8	1144	145-14238-1	Rib-Station	37.25	Trailing	LH	- - - - -	1		
	1145	145-14238-2	Rib-Station	37.25	Trailing	RH	- - - - -	1		
9	1146	143 14006-17	Rib-Station	46	Canted Trailing	LH	- - - - -	1		
	1147	143 14006-18	Rib-Station	46	Canted Trailing	RH	- - - - -	1		
10	1148	143-14050-21	Rib Assy-Station	50	Nose	LH	- - - - -	1		
	1149	143-14050-22	Rib Assy-Station	50	Nose	RH	- - - - -	1		
11	1150	143-14050-23	Rib Assy-Station	50	Trailing	LH	- - - - -	1		
	1151	143-14050-24	Rib Assy-Station	50	Trailing	RH	- - - - -	1		
12	1156	145-14066-1	Rib-Station	66	Nose	LH	- - - - -	1		
	1157	145-14066-2	Rib-Station	66	Nose	RH	- - - - -	1		
13	1158	145-14266-1	Rib Assy-Station	66	Trailing	LH	- - - - -	1		
	1159	145-14266-2	Rib Assy-Station	66	Trailing	RH	- - - - -	1		
14	1160	145-14082-1	Rib-Station	82	Nose	LH	- - - - -	1		
	1161	145-14082-2	Rib-Station	82	Nose	RH	- - - - -	1		
15	1162	145-14282-1	Rib-Station	82	Trailing	LH	- - - - -	1		
	1163	145-14282-2	Rib-Station	82	Trailing	RH	- - - - -	1		
16	1164	145-14098-3	Rib-Station	98	Nose	LH	- - - - -	1		
	1165	145-14098-4	Rib-Station	98	Nose	RH	- - - - -	1		
17	1168	145-14298-3	Rib-Station	98	Trailing	LH	- - - - -	1		
	1169	145-14298-4	Rib-Station	98	Trailing	RH	- - - - -	1		
18	1170	145-14114-3	Rib-Station	114	Nose	LH	- - - - -	1		
	1171	145-14114-4	Rib-Station	114	Nose	RH	- - - - -	1		
19	1172	145-14215-3	Rib-Station	114	Trailing	LH	- - - - -	1		
	1173	145-14215-4	Rib-Station	114	Trailing	RH	- - - - -	1		
20	1174	143-14130-3	Rib-Station	130	Nose	LH	- - - - -	1		
	1175	143-14130-4	Rib-Station	130	Nose	RH	- - - - -	1		
21	1176	145-14130-21	Rib Assy-Station	130	Trailing	LH	- - - - -	1		
	1177	145-14130-22	Rib Assy-Station	130	Trailing	RH	- - - - -	1		
22	1178	145-14146-3	Rib-Station	146.25	Nose	LH	- - - - -	1		
	1179	145-14146-4	Rib-Station	146.25	Nose	RH	- - - - -	1		
23	1180	145-14246-3	Rib-Station	146.25	Trailing	LH	- - - - -	1		
	1181	145-14246-4	Rib-Station	146.25	Trailing	RH	- - - - -	1		
24	1182	145-14162-3	Rib-Station	162.5	Nose	LH	- - - - -	1		
	1183	145-14162-4	Rib-Station	162.5	Nose	RH	- - - - -	1		
25	1184	145-14262-1	Rib Assy-Station	162.5	Trailing	LH	- - - - -	1		
	1185	145-14262-2	Rib Assy-Station	162.5	Trailing	RH	- - - - -	1		
26	1186	145-14278-3	Rib-Station	178.75	Nose	LH	- - - - -	1		
	1187	145-14278-4	Rib-Station	178.75	Nose	RH	- - - - -	1		
27	1188	145-14178-3	Rib-Station	178.75	Trailing	LH	- - - - -	1		
	1189	145-14178-4	Rib-Station	178.75	Trailing	RH	- - - - -	1		
28	1190	143-14194-3	Rib-Station	194.25	Nose	LH	- - - - -	1		
	1191	143-14194-4	Rib-Station	194.25	Nose	RH	- - - - -	1		
29	1192	143-14194-23	Rib Assy-Station	194.25	Trailing	LH	- - - - -	1		
	1193	143-14194-24	Rib Assy-Station	194.25	Trailing	RH	- - - - -	1		
30		143-16001-17 -18	AILERON STRUCTURE						1	
30A	1030-105	143-16001-7	Rib-Aileron Station	2.375	LH			1		
	1031-105	143-16001-8	Rib-Aileron Station	2.375	RH			1		
31	1030-110	143-16001-9	Rib-Aileron Station	17.545	LH			1		
	1031-110	143-16001-10	Rib-Aileron Station	17.545	RH			1		
32		143-16001-1SA2	Rib-Aileron Station	32.716	LH			1		
		143-16001-2SA2	Rib-Aileron Station	32.716	RH			1		
33	1030-120	143-16001-13	Rib-Aileron Station	48.495	LH			1		
	1031-120	143-16001-14	Rib-Aileron Station	48.495	RH			1		
34		14-16001-1SA3	Rib-Aileron Station	63.409	LH			1		
		143-16001-2SA3	Rib-Aileron Station	63.409	RH			1		
			FLAP STRUCTURE							
35	1040-100	143-18001-7	Rib Assy-Flap Station	503	Nose	LH	- - - - -	1		
	1041-100	143-18001-8	Rib Assy-Flap Station	503	Nose	RH	- - - - -	1		
	1040-101	143-18001-7	Rib-Flap Station	503	Nose	LH	- - - - -	1		
	1041-101	143-18001-8	Rib-Flap Station	503	Nose	RH	- - - - -	1		
36	1044	143-18001-73	Bracket Assy					1		
37	1040-110	143-18001-53	Angle					1		
38	1040-115	143-18001-49	Channel LH					1		
	1041-115	143-18001-50	Channel RH					1		



FIGURE 3 - WING PANEL STRUCTURE

KEY	ITEM NO.	PART NUMBER	1 2 3 4				NOMENCLATURE	UNITS PER ASSY	USAGE
39	1040-120	143-18001-51					Reinforcement LH	1	2351 + Sub.
40	1041-120	143-18001-52					Reinforcement RH	1	
41	1040-200	143-18001-21					Bolt-Adjusting	1	
	1041-200	143-18001-22					Rib Assy-Flap Station 503 Trailing LH (Including Stiffener & Bracket)	1	
42	1040-205	143-18001-47					Rib Assy-Flap Station 503 Trailing RH (Including Stiffener & Bracket)	1	
	1041-205	143-18001-48					Stiffener LH	1	
43	1040-210	143-18001-45					Stiffener RH	1	
	1041-210	143-18001-46					Bracket LH	1	
44	1040-215	143-18001-15					Bracket RH	1	
	1041-215	143-18001-16					Rib Assy-Flap Station 26 LH	1	
45	1040-220	143-18001-13					Rib Assy-Flap Station 26 RH	1	
	1041-220	143-18001-14					Rib Assy-Flap Station 42.113 LH	1	
46	1040-225	143-18001-17					Rib Assy-Flap Station 42.113 RH	1	
	1041-225	143-18001-18					Rib Assy-Flap Station 64 LH	1	
47	1040-230	143-18001-19					Rib Assy-Flap Station 64 RH	1	
	1041-230	143-18001-20					Rib Assy-Flap Station 86 LH	1	
48	1040-235	143-18001-11					Rib Assy-Flap Station 86 RH	1	
	1041-235	143-18001-12					Rib Assy-Flap Station 106.442 LH	1	
49	1194	143-14001-105					Rib Assy-Flap Station 106.442 RH	1	
50	1195	143-14001-44					Stiffener-Station 24.5 to 37.25	1	
51	1196	143-14001-45					Stringer #1 Upper Inner	1	
52		143-14001-123					Stringer #1 Upper Outer	1	
		143-14001-124					Stringer #1 Lower Inner LH	1	
		143-14001-124					Stringer #1 Lower Inner RH	1	
55	1202	143-14001-81					Stringer #2 Upper Forward LH	1	
	1203	143-14001-82					Stringer #2 Upper Forward RH	1	
56	1204	143-14001-83					Stringer #2 Upper Aft LH	1	
	1205	143-14001-84					Stringer #2 Upper Aft RH	1	
57	1206	143-14001-85					Stringer #2 Lower Inner LH	1	
	1207	143-14001-86					Stringer #2 Lower Inner RH	1	
58		143-14001-173					Stringer #2 Lower Center	1	
60	1210	143-14001-40					Stringer #3 Upper Inner Forward	1	
61	1211	143-14001-27					Stringer #3 Upper Inner Aft	1	
62	1212	143-14001-28					Stringer #3 Upper Center	1	
63	1213	143-14001-29					Stringer #3 Upper Outer	1	
64	1214	143-14001-49					Stringer #3 Lower Inner Forward	1	
65	1215	143-14001-56					Stringer #3 Lower Inner Aft	1	
66		143-14001-175					Stringer #3 Lower Center	1	
68	1218	143-14001-57					Stringer #4 Upper Inner Forward	1	
69	1219	143-14001-30					Stringer #4 Upper Inner Aft	1	
70	1220	143-14001-31					Stringer #4 Upper Center	1	
71	1221	143-14001-32					Stringer #4 Upper Outer	1	
72	1222	143-14001-55					Stringer #4 Lower Inner Aft	1	
73	1223	143-14001-62					Stringer #4 Lower Inner Forward	1	
74		143-14001-177					Stringer #4 Lower Center	1	
76	1226	143-14001-34					Stringer #5 Upper	1	
77	1228	143-14001-117					Stringer #5 Upper Forward LH	1	
	1229	143-14001-118					Stringer #5 Upper Forward RH	1	
78		143-14001-175					Stringer #5 Lower Inner	1	
80	1227	143-14001-58					Stringer #6 Upper Inner Forward	1	
81	1232	143-14001-35					Stringer #6 Upper Inner	1	
82	1233	143-14001-36					Stringer #6 Upper Outer	1	
83		143-14005-41					Stringer #6 Lower Inner	1	
85	1236	143-14001-79					Stringer #7 & #8 Upper Inner LH	2	
	1237	143-14001-80					Stringer #7 & #8 Upper Inner RH	2	
86	1274	143-14001-60					Stringer #7 & #8 Upper Inner	2	
87	1238	143-14001-89					Stringer #7 Upper Center LH	1	
	1239	143-14001-90					Stringer #7 Upper Center RH	1	
88	1240	143-14001-38					Stringer #7 Upper Outer	1	
89	1242	143-14005-27					Stringer #7 Lower Inner LH	1	
	1243	143-14005-28					Stringer #7 Lower Inner RH	1	
90		143-14005-33					Stringer #7 Lower Outer	1	
91	1245	143-14001-39					Stringer #8 Upper Center L/H	1	
92	1241	143-14001-41					Stringer #8 Upper Outer	1	
93		143-14001-201					STIFFENER L/H ONLY	3	
91		143-14001-178					STRINGER #8, UPPER CENTER R. H. ONLY	1	



147-30003-9 R/H ANGLE  
R/H

147-30003-6 L/H WEB  
-5 R/H WEB

147-30004-3 L/H FITTING  
-4 R/H FITTING

AN 365-624 NUTS 6 REQ.  
(2EA. PER BOLT)

147-30003-3 L/H WEB  
R/H

147-30004-5 1 REQ. L/H TOP FITTING  
1 REQ. R/H BOTTOM

147-30003-8 R/H ANGLE  
-7 L/H ANGLE

147-30004-6 1 REQ. L/H BOTTOM  
1 REQ. R/H TOP FITTING



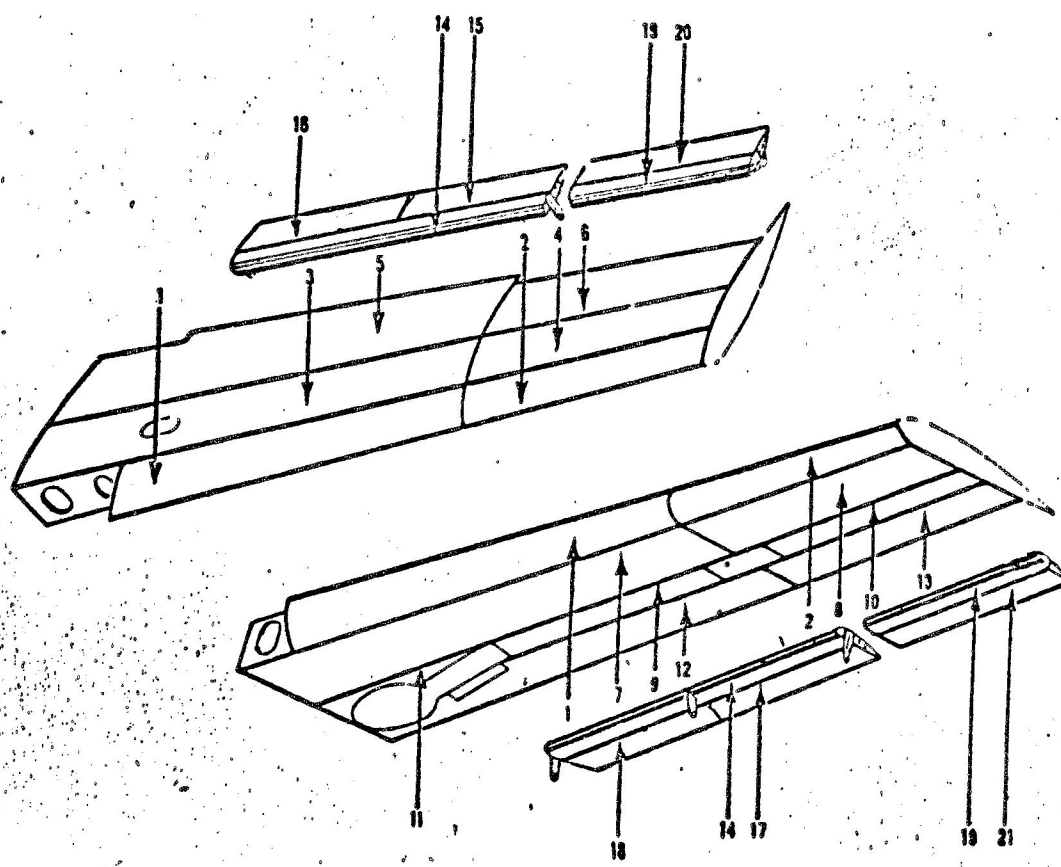


FIGURE 4 - WING PANEL SKINS

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		143-14001-87	SKin-Nose	Inner	LH	-	-	1	2351 + SUB
2		143-14001-88	SKin-Nose	Inner	RH	-	-	1	
		143-14001-13	SKin-Nose	Outer	LH	-	-	1	
		143-14001-14	SKin-Nose	Outer	RH	-	-	1	
3		143-14001-9	SKin-Upppr	Inner	Center	LH	-	1	
		143-14001-10	SKin-Upppr	Inner	Center	RH	-	1	
4		143-14001-15	SKin-Upppr	Outer	Center	LH	-	1	
		143-14001-16	SKin-Upppr	Outer	Center	RH	-	1	
5		143-14001-11	SKin-Upppr	Inner	Aft	LH	-	1	
		143-14001-12	SKin-Upppr	Inner	Aft	RH	-	1	
6		143-14001-17	SKin-Upppr	Outer	Aft	LH	-	1	
		143-14001-18	SKin-Upppr	Outer	Aft	RH	-	1	
7		143-14001-19	SKin-Lower	Inner	Center	Forward	LH	1	
		143-14001-20	SKin-Lower	Inner	Center	Forward	RH	1	
8		143-14001-21	SKin-Lower	Outer	Center	Forward	LH	1	
		143-14001-22	SKin-Lower	Outer	Center	Forward	RH	1	
9		143-14001-93	SKin-Lowpr	Inner	Center	Aft	LH	1	
		143-14001-94	SKin-Lowpr	Inner	Center	Aft	RH	1	
10		143-14001-95	SKin-Lower	Outer	Center	Aft	LH	1	
		143-14001-96	SKin-Lower	Outer	Center	Aft	RH	1	
11		143-14001-75	SKin-Lower	Inner	Center	LH	-	1	
		143-14001-76	SKin-Lower	Inner	Center	RH	-	1	
12		143-14005-3	SKin-Lower	Inner	Aft	LH	-	1	
		143-14005-4	SKin-Lower	Inner	Aft	RH	-	1	
13		143-14005-5	SKin-Lower	Outer	Aft	LH	-	1	
		143-14005-6	SKin-Lower	Outer	Aft	RH	-	1	

KEY	PART NO	1 2 3 4				NAME	UNIT PPR ASSY	USAGE
14	143-18001-3					Skin Flap Leading Edge L.H.	2351 4 sub	
	143-18001-4					Skin Flap Leading Edge R.H.		
15	143-18001-69					Skin Flap Upper Outboard L.H.		
	143-18001-70					Skin Flap Upper Outboard R.H.		
16	143-18001-67					Skin Flap Upper Inboard L.H.		
	143-18001-68					Skin Flap Upper Inboard R.H.		
17	143-18001-65					Skin Flap Bottom Outboard L.H.		
	143-18001-66					Skin Flap Bottom Outboard R.H.		
18	143-18001-63					Skin Flap Bottom Inboard L.H.		
	143-18001-64					Skin Flap Bottom Inboard R.H.		
19	143-16001-3					Skin Aileron Front Wrap Around L.H.		
20	143-16001-4					Skin Aileron Front Wrap Around R.H.		
	143-16001-31					Skin Aileron Upper L.H.		
21	143-16001-32					Skin Aileron Upper R.H.		
	143-16001-33					Skin Aileron Lower L.H.		
	143-16001-34					Skin Aileron Lower R.H.		

FIGURE 4, Wing PANEL SKINS

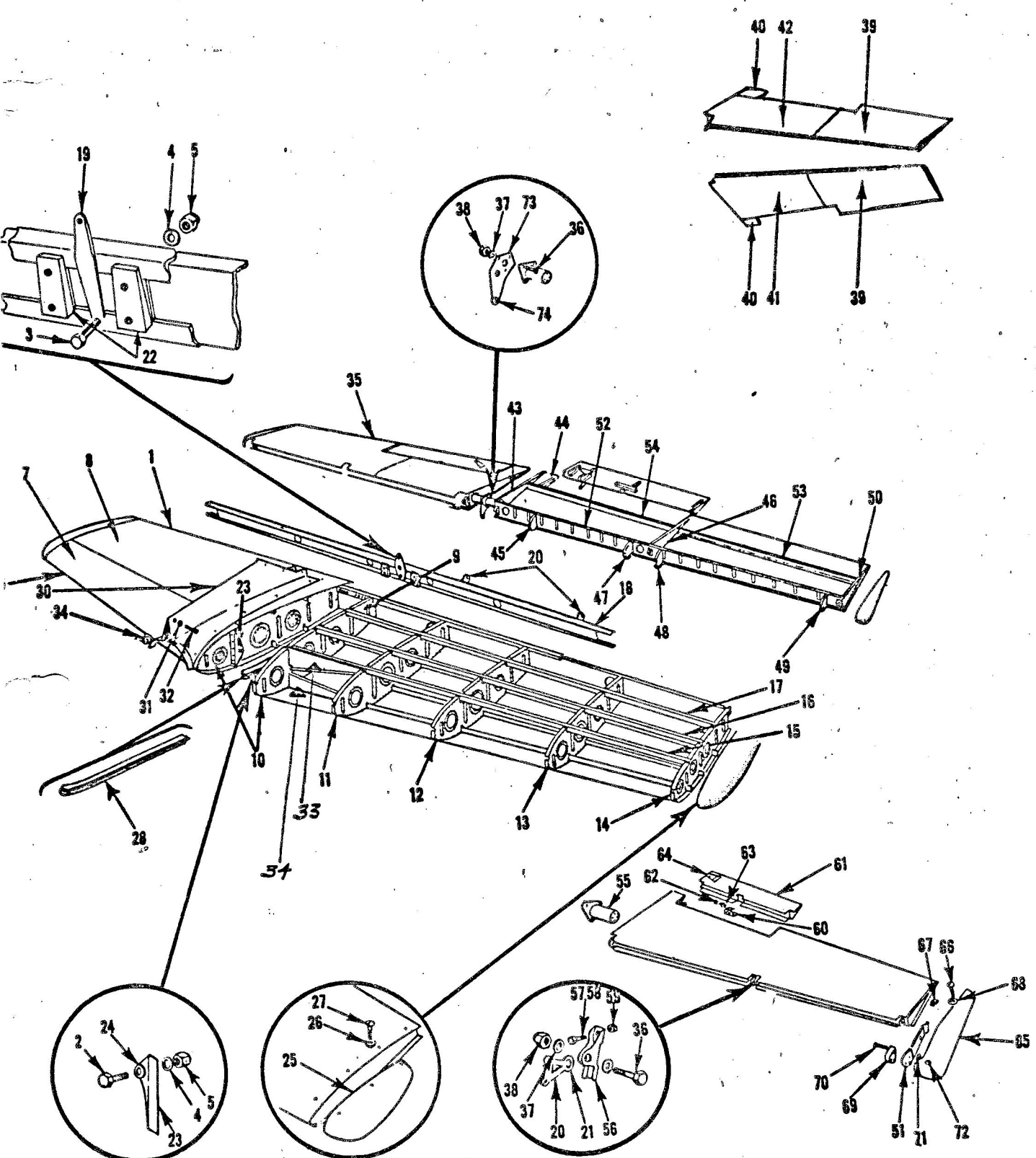


FIGURE 5 - EMPENNAGE

FIGURE 5 - EMPENNAGE

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		143-21001-50					Stabilizer Assy - Horizontal Complete	1	2351 Sub
2		AN4-6A					Bolt - Aircraft 1/4-28	2	
3		AN4-13A					Bolt - Aircraft 1/4-28	4	
4		AN960-416					Washer - Plain	14	
5		AN365-428					Nut - Self Locking	6	
6		143-21001-51					Stabilizer Panel LH (Less Tip)	1	
7		143-21001-52					Stabilizer Panel RH (Less Tip)	1	
8		143-21001-1					Skin - Horizontal Stabilizer Front Wrap Around	1	
		143-21001-2					Skin - Horizontal Stabilizer Top	2	
		143-21001-2					Skin - Horizontal Stab. Top - Right	1	
		143-21001-2					Skin - Horizontal Stab. Bottom - Left	1	
		143-21001-2					Skin - Horizontal Stab. Bottom - Right	1	
9		143-21001-51SA#1					Rib - Horizontal Stabilizer Station 8.578 LH	1	
		143-21001-52SA#1					Rib - Horizontal Stabilizer Station 8.578 RH	1	
10		143-21001-6					Rib Section - Leading Edge	2	
11		143-21001-8					Rib - Horizontal Stabilizer Station 23.0	1	
12		143-21001-9SA#1					Rib - Horizontal Stabilizer Station 40.5	1	
13		143-21001-10					Rib - Horizontal Stabilizer Station 58.0	1	
14		143-21001-11SA#1					Rib - Horizontal Stabilizer Station 75.157	1	
15		143-21001-3					Stringer - Horizontal Stabilizer Forward	2	
16		143-21001-4					Stringer - Horizontal Stabilizer Center	2	
17		143-21001-5					Stringer - Horizontal Stabilizer Aft	2	
18		143-21001-33					Beam Assy - Horizontal Stabilizer	1	
19		145-21051					Link - Horizontal Stabilizer Attaching	1	
20		145-23401					Hinge Fitting - (Includes Bearing)	2	
21		UK3L					Bearing	2	
22		145-21302-1					Spacer - Horizontal Stabilizer Attaching	1	
23		145-21404-7					Plate - Horizontal Stabilizer Attaching LH	1	
		145-21404-8					Plate - Horizontal Stabilizer Attaching RH	1	
24		4B18-4-90					Bushing - Shoulder	1	
25		145-21007					Tip Assy - Horizontal Stabilizer	1	
26		2W4					Washer - Plain	6	
27		AN507-832R6					Screw - 100° Flat Head Machine	6	
28		145-25001-7					Fillet LH	1	
		145-25001-8					Fillet RH	1	
30		146-25001-7					Dorsal Fin - Aft (Less Attaching Holes)	2	
31		2W4					Washer - Plain	24	
32		21803-8-7					Screw	24	
33		143-21001-12SA					Stringer Assy.	1	
34		143-21001-13SA					Stringer Assy.	1	
35		145-22001-100					Elevator Assy (Includes Tab, Tip & Torque Tube)	2	2351 Sub
36		AN3-7A					Bolt - Aircraft 10-32	6	
37		AN960-10					Washer - Plain	12	
38		AN365-1032					Nut - Self Locking	6	
39		145-22001-100SA#3					Skin - Elevator Outer Wrap Around (Incl. Stiffeners)	2	
40		145-22001-16					Skin - Elevator Trailing	2	
41		145-22001-52					Skin - Elevator Bottom	2	
42		145-22001-53					Skin - Elevator Top	2	
43		145-22004					Rib - Elevator Inner	1	
44		145-22008					Rib - Elevator Inner	1	
45		145-22001-34					Rib - Elevator Inner	1	
46		145-22040					Rib Assy - Elevator Station 40.75	1	
47		145-22001-35					Rib Assy - Elevator Station 37.5	1	
48		145-22001-36					Rib Assy - Elevator Station 42.25	1	
49		145-22001-37					Rib Assy - Elevator Station 73	1	
50		145-22009					Rib Assy - Elevator Station 75.5	1	
51		145-22006					Channel - Elevator Tip Weight Support	1	
52		145-22301					Beam Assy - Elevator Station 4.969 to 75.5	1	
53		145-22302					Beam - Elevator Station 40.75 to 75.5 Rear	1	
54		145-22303					Beam - Elevator Station 5.063 to 40.75 Rear	1	
55		145-922401					Torque Tube	1	
56		145-21402-3					Bracket - Hinge	3	
57		AN3-4A					Bolt - Aircraft 10-32	2	
58		AN3-3A					Bolt - Aircraft 10-32	4	
59		AN365-1032					Nut - Self Locking	2	
60		145-22003					Tab Hinge	3	
61		145-22002					Tab Assy - Elevator Trim	1	
62		AN3-7A					Bolt - Aircraft 10-32	3	
63		NAS75-3-003					Bushing	3	
64		145-22005-1					Horn - LH Trim Tab Upper (Lower on RH Tab)	1	
		145-22005-2					Horn - LH Trim Tab Lower (Upper on RH Tab)	1	
65		145-22010					Tip - Elevator	1	
66		21803-8-7					Screw	12	
67		A1803-82-3					Speednut	12	
68		2W4					Washer - Plain	12	
69		145-22007					Weight	1	
70		NAS221-27					Screw	1	
71		AN960-10					Washer - Plain	3	
72		AN365-1032					Nut - Self Locking	3	
73		145-22502					Horn - Elevator (Includes Bushing)	1	
74		NAS75-6-006					Bushing	1	

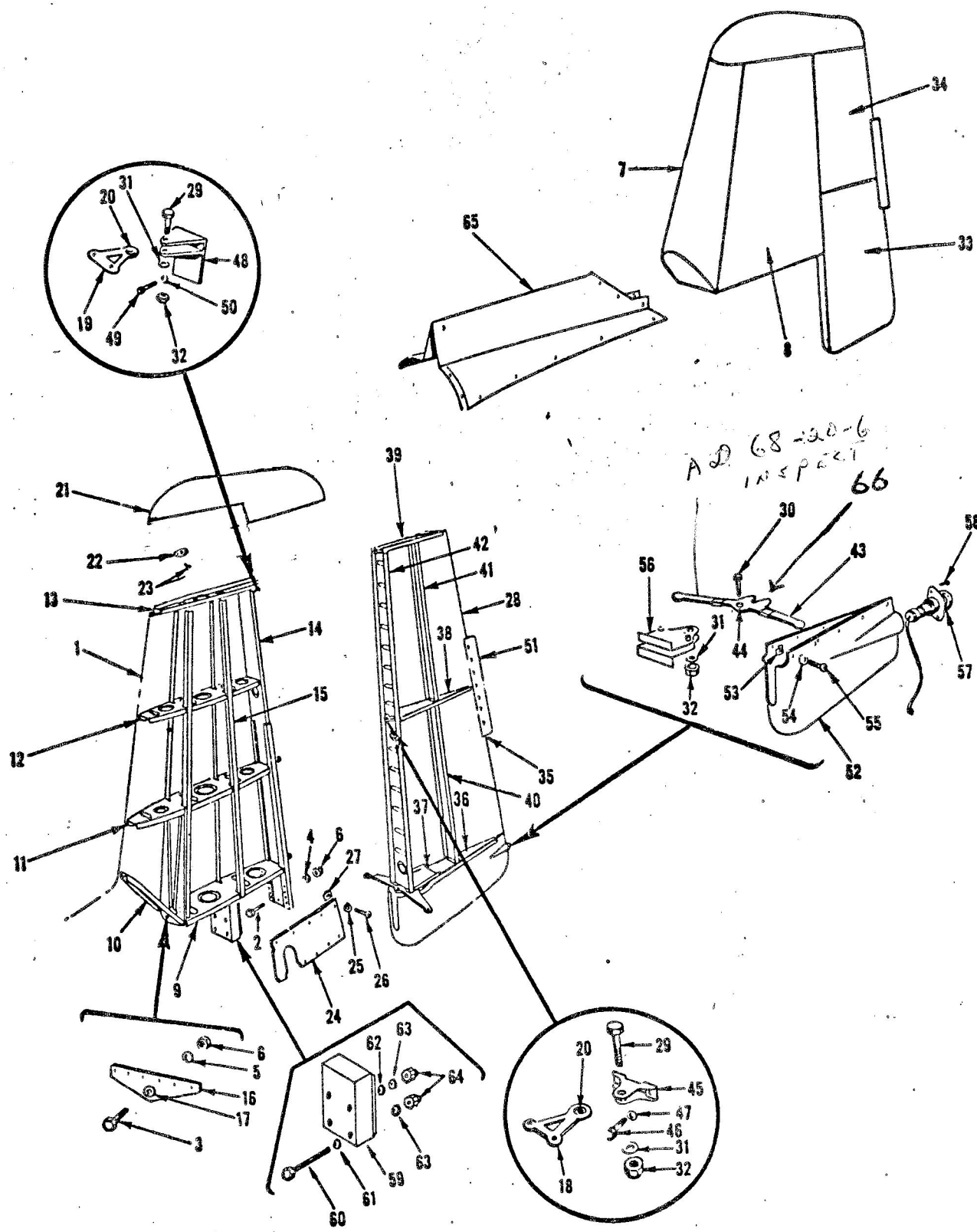
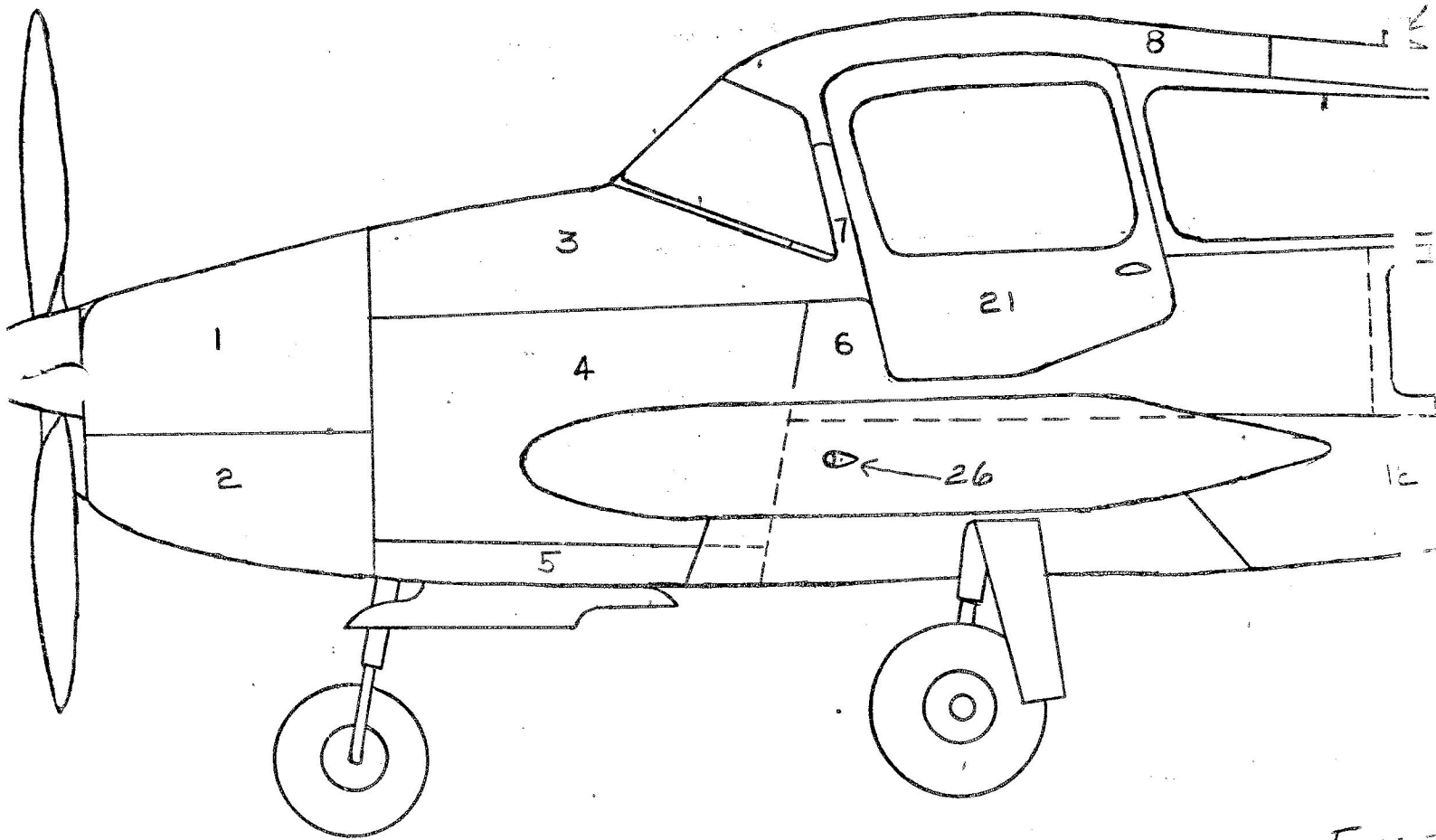


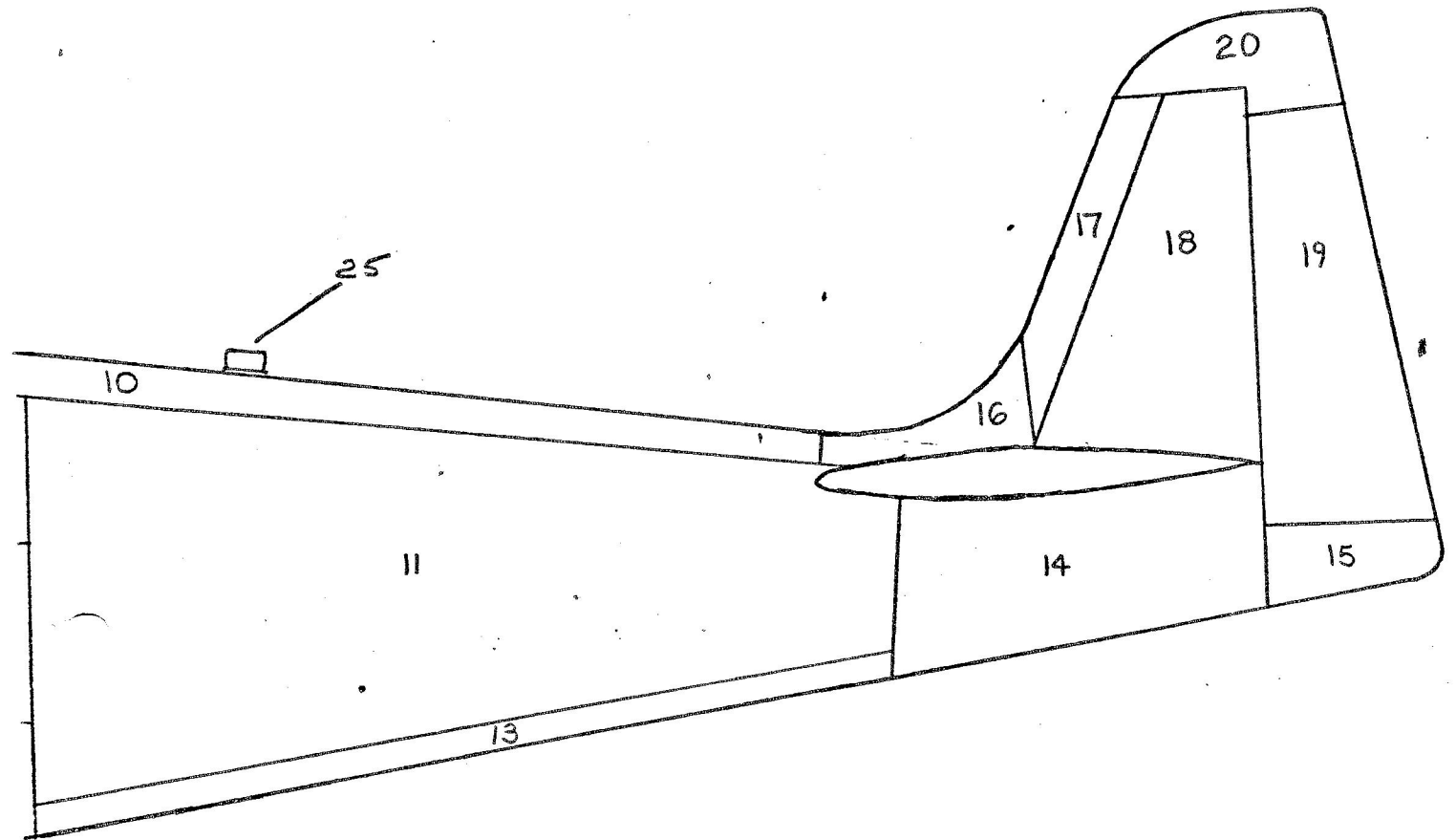
FIGURE 6 - SUPERSTRUCTURE

FIGURE 6 - EMPENNAGE

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		145-23001-3					Stabilizer - Vertical (Includes Tip) - - - - -	1	2351 a 506
2		AN4-6A					Bolt - Aircraft 1/4-28 - - - - -	1	
3		AN4-7A					Bolt - Aircraft 1/4-28 - - - - -	1	
4		AN960-416					Washer - Plain - - - - -	1	
5		AN960-416L					Washer - Plain - - - - -	1	
6		AN365-428					Nut - Self Locking - - - - -	1	
7		145-23001-5					Skin - Vertical Stabilizer Front - - - - -	1	
8		145-23001-4					Skin - Vertical Stabilizer LH - - - - -	1	
9		145-23001-16					Skin - Vertical Stabilizer RH - - - - -	1	
10		145-23004					Rib - Vertical Stabilizer Station 1.437 - - - - -	1	
11		145-23005					Rib - Vertical Stabilizer Canted Station 1.437 - - - - -	1	
12		145-23013					Rib - Vertical Stabilizer Station 13.437 - - - - -	1	
13		145-23025					Rib - Vertical Stabilizer Station 25.437 - - - - -	1	
14		145-23037-7SA1					Rib - Vertical Stabilizer Station 37.789 - - - - -	1	
15		145-23301					Beam Assy - Vertical Stabilizer - - - - -	1	
16		145-23001-13					Stringer - Vertical Stabilizer - - - - -	1	
17		145-23404-1					Plate Assy - Vertical to Horizontal Frame - - - - -	1	
18		4B18-4-81					Bushing - Shoulder - - - - -	1	
19		145-23401					Fitting Assy - Hinge (Includes Bearing) - - - - -	1	
20		145-23402					Fitting Assy - Hinge (Includes Bearing) - - - - -	1	
21		UK3L					Bearing (AN200K3L Alternate) - - - - -	1	
22		161-24405-1SA1					Tip Assy - Vertical Stabilizer - - - - -	1	
23		AN366F832					Nut - Plate - - - - -	1	
24		AN507 832R7					Screw - - - - -	1	
25		145-20010-1					Cover - Fuselage Station 295 to 312 LH - - - - -	1	
26		145-20010-2					Cover - Fuselage Station 295 to 312 RH - - - - -	1	
27		2W4					Washer - Special - - - - -	1	
28		21803-8-7					Screw - - - - -	1	
29		A1932-8Z3					Speednut - - - - -	1	
30		145-24901-3					Rudder Assy (Includes Lower Tip) - - - - -	1	
31		AN3-6A					Bolt - Aircraft 10-32 - - - - -	1	
32		AN3-7A					Bolt - Aircraft 10-32 - - - - -	1	
33		AN960-10					Washer - Plain - - - - -	1	
34		AN365-1032					Nut - Self Locking - - - - -	1	
35		145-24001-4					Skin - Rudder Lower - - - - -	1	
36		145-24001-13					Skin - Rudder Upper - - - - -	1	
37		145-24001-14					Filler - Rudder Tab - - - - -	1	
38		145-24020					Rib - Rudder Station 10.567 Lower - - - - -	1	
39		145-24010					Rib - Rudder Station 10.567 - - - - -	1	
40		145-24013					Rib Assy - Rudder Station 13.687 - - - - -	1	
41		145-24037-1SA1					Rib - Rudder Station 37.690 - - - - -	1	
42		145-24303					Beam - Rear Lower - - - - -	1	
43		145-24302					Beam - Rear Upper - - - - -	1	
44		145-24301					Beam Assy - Main Forward - - - - -	1	
45		145-24401-5					Horn Assy - Rudder - - - - -	1	
46		UK3L					Bearing (AN200K3L Alternate) - - - - -	1	
47		145-24402-3					Bracket - Hinge Center - - - - -	1	
48		AN3-4A					Bolt - Aircraft 10-32 - - - - -	1	
49		AN960-10L					Washer - Plain - - - - -	1	
50		145-24403					Bracket Assy - Rudder Hinge Upper - - - - -	1	
51		AN3-4A					Bolt - Aircraft 10-32 - - - - -	1	
52		AN960-10L					Washer - Plain - - - - -	1	
53		145-24404					Tab Assy - Rudder - - - - -	1	
54		145-24001-6					Tip - Rudder Lower - - - - -	1	
55		A1932-8Z-3					Speednut - - - - -	1	
56		2W4					Washer - Special - - - - -	1	
57		21803-8-7					Screw - - - - -	1	
58		145-23403					Bracket Assy - Rudder Hinge - - - - -	1	
59		A2064					Light - Position Tail - - - - -	1	
60		AN520-6-10					Screw - Round Head Machine (Fine Thread) - - - - -	1	
61		A2103-1					Lens - Clear - - - - -	1	
62		703					Lamp - - - - -	1	
63		2W1SR-14-20-62					Washer - - - - -	1	
64		#31770					Terminal - - - - -	1	
65		146-23006					Weight Assy - Fuselage Balance - - - - -	1	
66		AN4-22A					Bolt - Aircraft 1/4-28 - - - - -	1	
		2W1-17-24-64					Washer - Plain - - - - -	4	
		AN960-416L					Washer - Plain - - - - -	4	
		AN960-416					Washer - Plain - - - - -	4	
		AN365-428					Nut - Self Locking - - - - -	4	
		145-24001-3SA5					Dorsal Fin - Aft (See Page 14 for Details) - - - - -	REF	
							HORN & RIB ASSY	1	



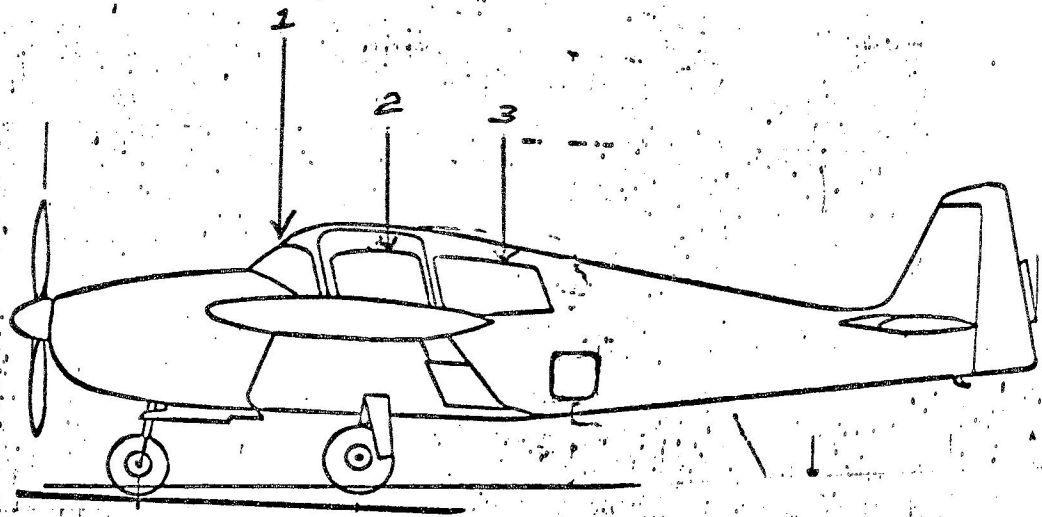
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EXTERIOR  
FIG 7

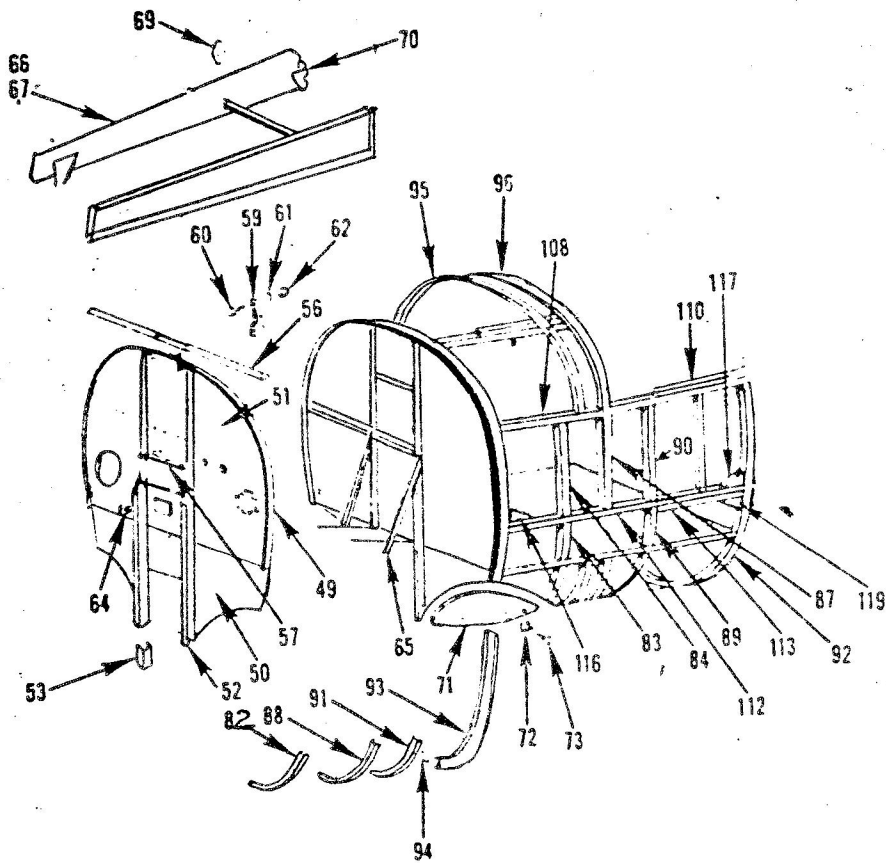
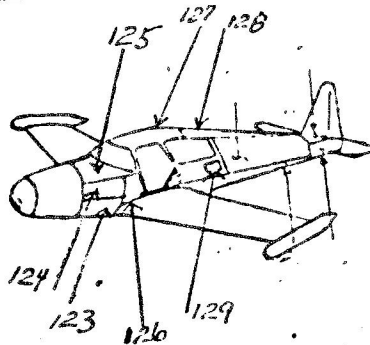


KEY	PART Number	NAME	UNIT PER ASSY.	USAGE
1	See Page 32			
2	See Page 32			
3	145-31801-35	Skin, Stat. 54 50 101 L.H.	1	
	145-31801-36	Skin, Stat. 54 to 101 R.H.	1	
4	143-31002-SA7	Skin, Stat. 54 to 94.438 L.H.	1	
	143-31002-SA8	Skin, Stat. 54 to 94.438 R.H.	1	
5	143-31002-SA51	Skin, Stat. 54 to 93.438 L.H.	1	
	143-31002-SA9	Skin, Stat., 54 to 93.438 R.H.	1	
6	161-31001-19	Skin Assy., Bottom Cabin Door L.H.	1	
	161-31001-115	Skin Assy., Stat. 105.30 to 179.15 R.H.	1	
7	161-31001-15	Skin, Bow L.H.	1	
	161-31001-17	Skin, Bow R.H.	1	
8	161-31001-11	Skin, Top Fwd. Fuselage	1	
9	161-31001-3	Skin, Baggage Door Stat. 123.437	1	
10	161-31001-79	Skin, Top Rear Fuselage Stat. 123.437 to 273.118	1	
11	161-31001-31	Skin, Side Fuselage L.H. Stat. 179.75 to 273.718	1	
	161-31001-32	Skin, Side Fuselage R.H. Stat. 179.75 to 273.718	1	
12	147-10004-39	Skin, Lower Fuselage L.H.	1	
	147-10004-40	Skin, Lower Fuselage R.H.	1	
13	161-31001-30	Skin, Bottom	1	
14	See Page 30			
15	145-24001-SA5	See Page 14	1	
16	161-25001-7	See Page 14	1	
17	145-23001-5	See Page 14	1	
18	145-23001-3	See Page 14		
19	145-24001-3SA6	See Page 14		
20	161-24405-1SA1	See Page 14		
21	161-31016-9	See Page 35		



FUSELAGE WINDOWS  
FIGURE 8

KEY	PART NO	1	2	3	4	NAME	UNIT PPR ASSY	USAGE
1	145-31801-111					Windshield L.H. Tinted	1	2351 thru
	145-31801-112					Windshield R.H. Tinted	1	2525
	147-31801-1					Windshield, One Piece, Tinted	1	2526 and Sub.
2	161-31001-105					Window, Door L.H. Tinted	1	2351 and Sub.
3	161-31001-107					Window, Rear L.H., Tinted	1	
	161-31001-108					Window, Rear R.H., Tinted	1	
	161-31001-106					Window, Front, Side R.H., Tinted	1	



FORDWARD FUSELAGE  
FIGURE 9

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	161-31001-SA141	Frd. Fuselage Sub. Assy. incl. Skins & Nose Wheel Gear Box	1	2351 & Sub.
49	143-31005-100	Firewall Assy. Complete	1	
50	143-31005-3	Panel Firewall Lower	1	
51	143-31005-4	Panel Firewall Upper	1	
52	143-31005-5	Channel Firewall Vertical L.H.	1	
	143-31005-6	Channel Firewall Vertical R.H.	1	
53	143-31005-36	Doubler - Firewall Vert. Channel R.H. Only	1	
56	143-31005-9	Angle Firewall Upper Aft	1	
57	143-31005-12	Angle Firewall	2	
59	143-33159	Bracket - Land. Gear Uplock Cable Release	1	
60	AN 3-4A	Bolt A/C 10-32	2	
61	AN 960-10	Washer Plain	2	
62	AN 365-1032	Nut - Self Locking	2	
64	AN 833-6D	Elbow, Fuel Inlet - Outlet	2	
65	143-31001-71	Angle, Nose Gear Box Firewall L.H.	1	
	143-31001-72	Angle, Nose Gear Box Firewall R.H.	1	
66	143-51007-2	Beam Assy. Instrument Panel to Firewall	1	
67	143-51007-4	Beam, Instrument Panel to Firewall	1	
69	143-51007-12	Fairlead, Instrument Panel to Firewall		
70	143-51007-14	Clip, Instrument Panel to Firewall		
71	143-31001-212	Baffle - Engine Cooling Air Outlet L.H.	1	
	143-31001-210	Baffle - Engine Cooling Air Outlet R.H.	1	
	A5-30	Dzus Fastner R.H.	6	
72	1803-8Z-3	Fastner L.H. side only	10	
	AN 530-8R8	Screw L.H. side only	10	

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
82	143-31002-3	Frame, Fuselage Stat. 65 Lower L.H.	1	
	143-31002-4	Frame, Fuselage Stat. 65 Lower R.H.	1	
83	143-31002-7	Frame, Fuselage Stat. 65 Center L.H.	1	
	143-31002-8	Frame, Fuselage Stat. 65 Center R.H.	1	
84	143-31002-11	Frame, Fuselage Stat. 65 Upper L.H.	1	
	143-31002-12	Frame, Fuselage Stat. 65 Upper R.H.	1	
87	143-31002-47	Frame, Fuselage Stat. 71.5 L.H.	1	
	143-31002-48	Frame, Fuselage Stat. 71.5 R.H.	1	
88	143-31002-5	Frame, Fuselage Stat. 77 Lower L.H.	1	
	143-31002-6	Frame, Fuselage Stat. 77 Lower R.H.	1	
89	143-31002-9	Frame, Fuselage Stat. 77 Center L.H.	1	
	143-31002-10	Frame, Fuselage Stat. 77 Center R.H.	1	
90	143-31002-13	Frame, Fuselage Stat. 77 Upper L.H.	1	
	143-31002-14	Frame, Fuselage Stat. 77 Upper R.H.	1	
	143-31002-43	Frame, Fuselage Stat. 80.356 Lower L.H.	1	
	143-31002-44	Frame, Fuselage Stat. 80.356 Lower R.H.	1	
92	143-31002-SA5	Frame Assy., Fuselage Stat. 93.438 Complete	1	
93	143-31002-15	Frame, Fuselage Stat. 93.438 L.H.	1	
	143-31002-16	Frame, Fuselage Stat. 93.438 R.H.	1	
94	143-31002-30	Plate, Fuselage Stat. 93.438 Joining	1	
95	143-31001-63	Frame, Fuselage Stat. 68.125 Upper	1	
96	143-31001-33	Frame, Fuselage Stat. 72.75 Upper	1	
110	143-31001-69	Doubler, Longeron Stat. 79 to 101 Upper L.H.	1	
	143-31001-70	Doubler, Longeron Stat. 79 to 101 Upper R.H.	1	
112	143-31001-7	Longeron, Fuselage Lower Frd. L.H.	1	
	143-31001-8	Longeron, Fuselage Lower Frd. R.H.	1	
113	143-31002-66	Doubler, Longeron Stat. 77 to 93.438 Lower Left & Right	2	

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
116	145-31102-19	Fitting, Fuselage Stat. 54 Joint L.H.	1	
	145-31102-20	Fitting, Fuselage Stat. 54 Joint R.H.	1	
119	145-31102-25	Fitting, Fuselage Stat. 93.438 Lower Frd. Joint L.H.	1	
	145-31102-26	Fitting, Fuselage Stat. 93.438 Lower Frd. Joint R.H.	1	
123	143-31002-SA9	Skin Assy., Fuselage Stat. 54 to 94.438 Lower L.H.	1	
	143-31001-27	Skin, Fuselage Stat. 54 to 94.438 Lower L.H.	1	
	143-31001-47	Doubler, Fuselage Skin Baffle Cutout L.H.	1	
	143-31001-80	Doubler, Fuselage Skin Aft Joining	1	
	143-31002-SA51	Skin Assy., Fuselage Stat. 54 to 93.438 Lower R.H.	1	
	143-31001-79	Skin, Fuselage Stat. 54 to 93.438 Lower R.H.	1	
	143-31001-SA53	Doubler Assy. Fuselage Skin Baffle Cutout R.H.	1	
	145-48058-2	Bracket Fuel Pump Compartment	1	
124	143-31002-SA7	Skin, Fuselage Stat. 54 to 93.438 Side L.H.	1	
	143-31002-SA8	Skin, Fuselage Stat. 54 to 93.438 Side L.H.	1	
125	145-31801-3SA5	Skin Assy., Fuselage Stat. 54 to 101 Upper L.H.	1	
	145-31801-3SA6	Skin Assy., Fuselage Stat. 54 to 101 Upper L.H.	1	
126	161-31001-19	Skin Assy., Fuselage Stat. 93.438 to 165.00 L.H.	1	
	161-31001-115	Skin Assy., Fuselage Stat. 93.438 to 165.00 R.H.	1	
127	161-31001-11	Skin Assy., Top Forward Fuselage	1	
128	161-31001-79	Skin Assy., Top Aft. Fuselage	1	
129	161-31017-1	Door, Baggage	1	

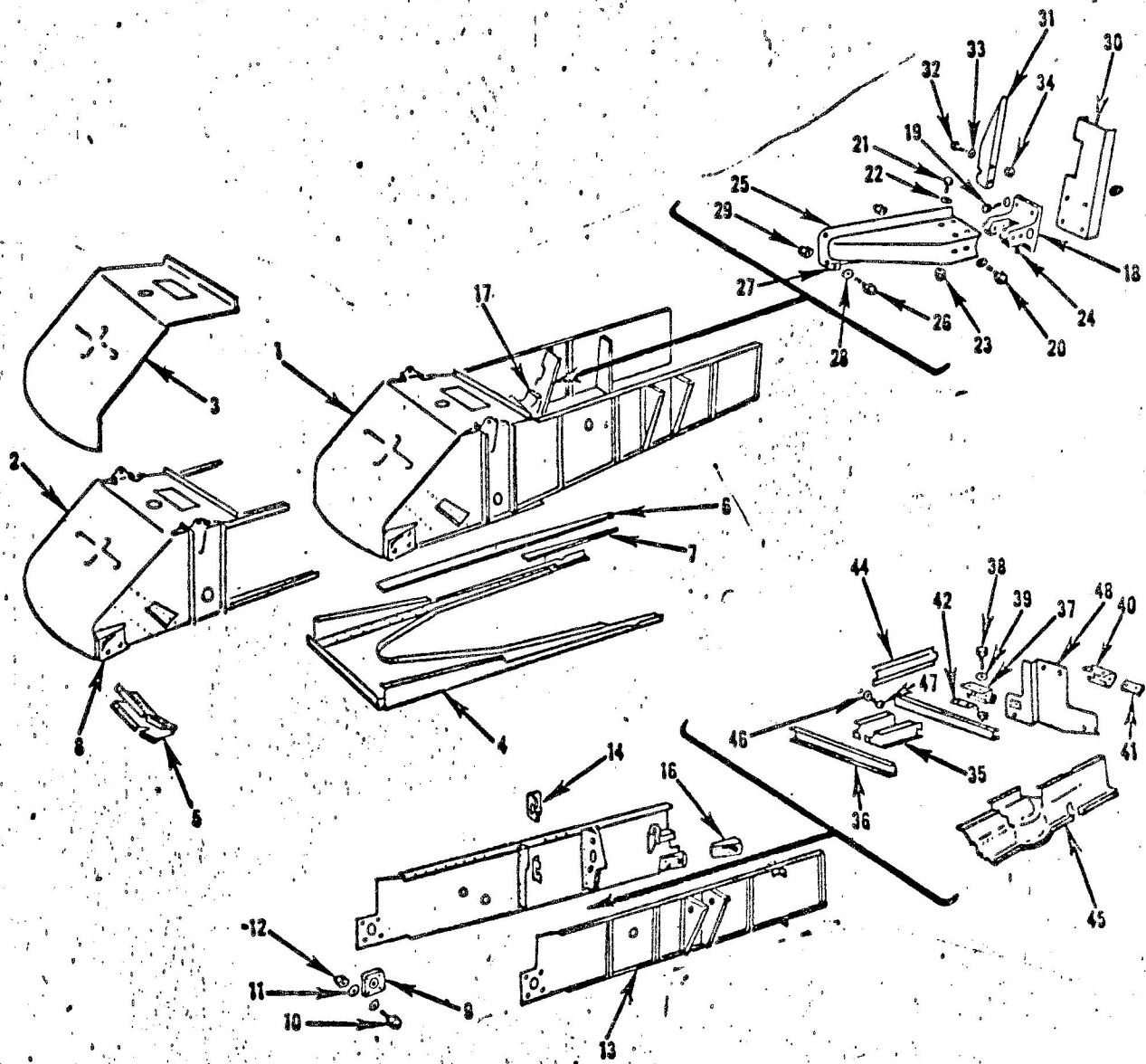


FIGURE 10 - FORWARD FUSELAGE  
NOSE GEAR BOX

FIGURE 10- FORWARD FUSELAGE

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAG
1		1							
2		143-31007-700 SA 1	Box	Assy	-		Nose Gear (Includes Drag brace Support Assy)	1	2357
3		143-31007-700 SA 2	Box	Assy	-		Nose Gear Forward	1	
4		143-31007-18	Plate	-			Nose Gear Box Upper	1	
5		143-31007-27	Plate	-			Nose Gear Box Lower	1	
6		145-34150-1	Cam	Assy	-		Nose Gear Centering LH	1	
7		145-34150-2	Cam	Assy	-		Nose Gear Centering RH	1	
8		143-31007-39	Doubler	-			Nose Gear Box Lower Plate LH	1	
9		143-31007-40	Doubler	-			Nose Gear Box Lower Plate RH	1	
10		143-31007-41	Shim	-			Nose Gear Box Lower Plate Doubler	2	
11		145-31103-5	Fitting	-			Fuselage Station 40.50 Joint	2	
12		143-34152	Fitting	Assy	-		Nose Gear Strut Support	2	
13		AN6-4A	Bolt	-			Aircraft 3/8-24	4	
14		AN960-416	Washer	-			Plain	8	
15		AN365-428	Nut	-			Self Locking	4	
16		143-31007-101 SA 3	Beam	Assy	-		Nose Gear Box Side LH	1	
17		143-31007-102 SA 3	Beam	Assy	-		Nose Gear Box Side RH	1	
18		145-52409-4	Fairlead	-			Elevator & Rudder Cable RH	1	
19		145-52409-3	Fairlead	-			Elevator & Rudder Cable LH	1	
20		145-31103-8	Fitting	-			Fuselage Station 93.438 Joint RH	1	
21		145-31103-7	Fitting	-			Fuselage Station 93.438 Joint LH	1	
22		145-34184	Support	Assy	-		Nose Gear Drag Brace Bearing	1	
23		145-34158	Fitting	-			Nose Gear Drag Brace Support	1	
24		AN4-6A	Bolt	-			Aircraft 1/4-28	4	
25		AN4-11A	Bolt	-			Aircraft 1/4-28	2	
26		AN4-22A	Bolt	-			Aircraft 1/4-28	4	
27		AN960-416L	Washer	-			Plain	10	
28		AN365-428	Nut	-			Self Locking	10	
29		N432-201	Fitting	-			Lubricator	1	
30		145-34161	Hat	-			Nose Gear Drag Brace Support	1	
31		AN4-7A	Bolt	-			Aircraft 1/4-28	2	
32		145-34003-2	Doubler	-			Nose Gear Drag Brace Support Hat	1	
33		145-34003-3	Doubler	-			Nose Gear Drag Brace Support Hat	1	
34		AN960-416	Washer	-			Plain	2	
35		AN365-428	Nut	-			Self Locking	2	
36		145-34204	Channel	-			Nose Gear Drag Brace Support	1	
37		145-31110	Angle	-			Nose Gear Box Beam Stiffening	1	
38		AN4-6A	Bolt	-			Aircraft 1/4-28	2	
39		AN960-416	Washer	-			Plain	2	
40		AN365-428	Nut	-			Self Locking	2	
41		145-34201-3	Frame	-			Nose Gear Actuating Cylinder Support LH	1	
42		145-34201-4	Frame	-			Nose Gear Actuating Cylinder Support RH	1	
43		143-31002-40	Channel	-			Cylinder Support Frame Reinforcement Forward	1	
44		143-31002-32	Channel	-			Cylinder Support Frame Reinforcement Aft	1	
45		145-34181	Bracket	Assy	-		Nose Gear Tire Rub Strip	1	
46		AN3-5A	Bolt	-			Aircraft 10-32	2	
47		AN960-10	Washer	-			Plain	2	
48		145-34181-4	Spring	-			Nose Gear Tire Rub Strip Bracket	1	
49		145-34181-5	Shoe	-			Nose Gear Tire Rub Strip Bracket	1	
50		145-34181-3	Doubler	-			Nose Gear Tire Rub Strip Bracket	1	
51		145-52203-15	Guard	-			Elevator and Rudder Cable Aft RH	1	
52		145-52203-3	Guard	-			Elevator and Rudder Cable LH	1	
53		AN960-8L	Washer	-			Plain	4	
54		AN515-8R7	Screw	-			Round Head Machine (Coarse Thread)	4	
55		145-31019	Cover	Assy	-		Nose Wheel Well	1	

NOSE GEAR BOX  
FIGURE 10



FUSELAGE  
CENTER  
SECTION

52 → 51 ← 53  
55  
54  
53

61  
62  
63  
65



KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	145-31102-27	Fitting	1	
2	161-31001-67	Spacer	1	
3	143-31001-10	Longeron	1	
4	145-31102-22	Fitting	1	
5	161-31001-49	Gusset	1	
6	161-31008-4	Support	1	
7	161-31008-6	Support	1	
8	161-31006-3	Bow	1	
9	161-31009-4	Frame	1	
10	161-31009-4	Frame	1	
11	161-31005-4	Frame	1	
12	161-31001-59	Gusset	1	
13	161-31009-8	Frame	1	
	3L1	Baggage Tie Down Loop	4	
15	161-31007-14	Longeron	1	
16	161-31007-4	Longeron	1	
17	161-31001-57	Gusset	1	
18	161-31005-5	Frame	1	
19	161-31012-4	Frame	1	
20	161-31001-35	Gusset	1	
21	161-31007-10	Longeron	1	
22	161-31001-37	Gusset	1	
23	161-31007-6	Longeron	1	
24	161-31014-3	Frame	1	
25	161-31004-4	Frame	1	
26	161-31004-6	Frame	1	
27	161-31004-7	Frame	3	
28	161-31007-8	Longeron	1	

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
29	161-31007-10	Longeron	1	
30	161-31001-37	Gusset	1	
31	161-31001-35	Gusset	1	
32	161-31001-35	Gusset	1	
33	161-31007-9	Longeron	1	
34	161-31001-37	Gusset	1	
35	161-31007-7	Longeron	1	
36	161-31014-5	Frame	1	
37	161-31010-3	Longeron	1	
38	161-31001-35	Gusset	1	
39	161-31001-35	Gusset	1	
40	161-31004-3	Frame	1	
41	161-31004-5	Frame	1	
42	161-31007-5	Longeron	1	
43	161-31001-35	Gusset	1	
44	161-31012-3	Frame	1	
45	161-31007-3	Longeron	1	
46	161-31009-7	Frame	1	
47	161-31001-43	Gusset	1	
48	161-31001-41	Gusset	1	
49	161-31001-39	Gusset	1	
50	161-31005-3	Frame	1	
51	161-31001-9	Longeron	1	
52	161-31001-49	Gusset	1	
53	145-31102-27	Fitting	1	
54	161-31001-67	Spacer	1	
55	145-31102-22	Fitting	1	
56	161-31009-9	Rear Frame	1	



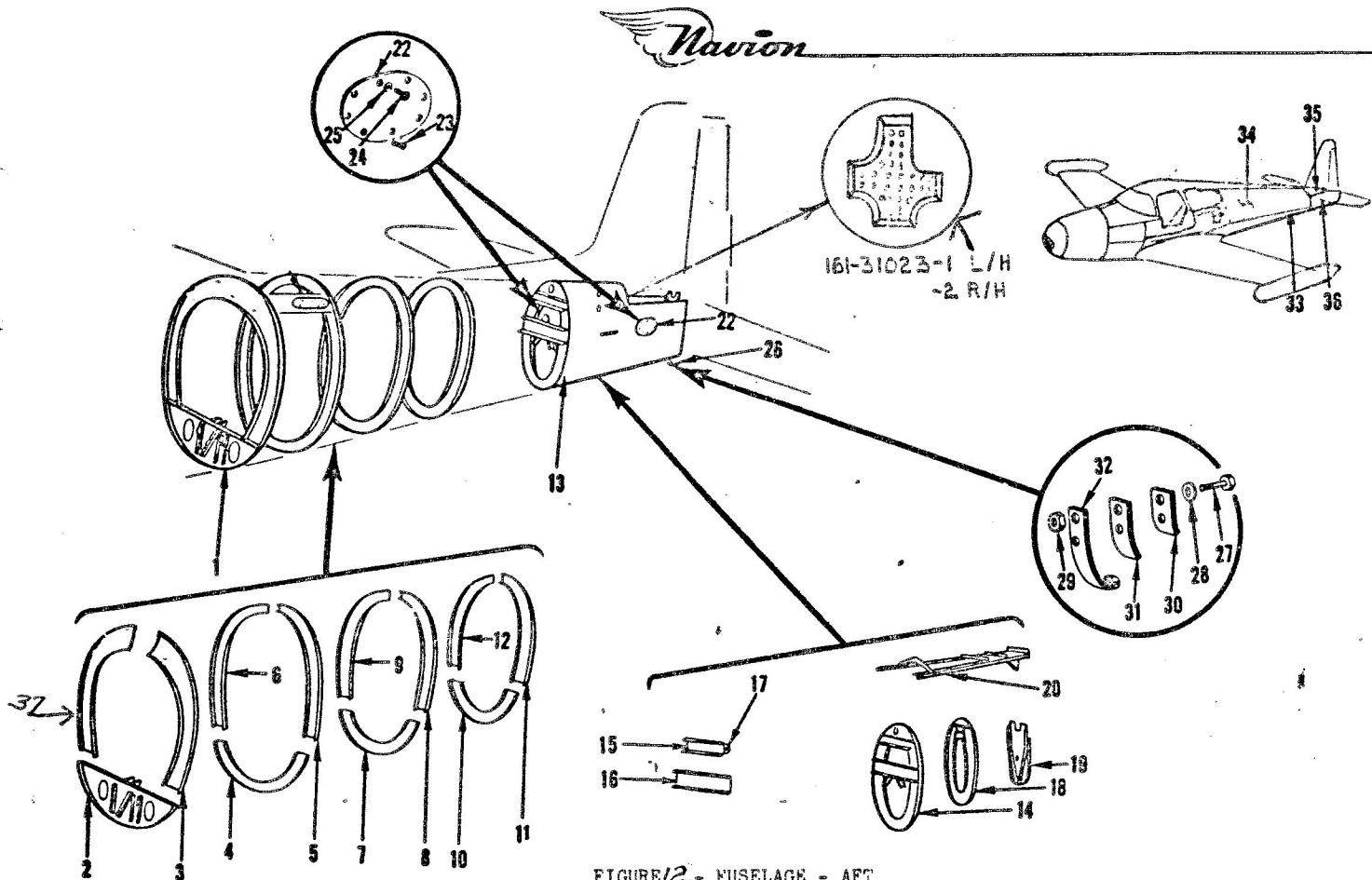


FIGURE 12 - FUSELAGE - AFT

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
	1400-100	161-31001-SA#1					Aft Fuselage - Fuselage Station 179.75 Aft - - - - -	1	2351 + Subs
1	1430	143-31006-10SA2					Frame Assy - Fuselage Station 179.75 Complete - - - - -	1	
2	1431	143-31006-SA#1					Frame Assy - Station 179.75 Lower (With Pulleys) - - - - -	1	
3	1432	161-31003-3					Frame Assy - Station 179.75 Upper - - - - -	1	
4	1433	143-31001-42					Frame - Fuselage Station 198 Lower - - - - -	1	
5	1434	161-31002-3					Frame - Station 198 LH - - - - -	1	
6	1435	161-31002-4					Frame Assy - Station 198 RH - - - - -	1	
7	1436	143-31001-43					Frame - Fuselage Station 224 Lower - - - - -	1	
8	1437	161-31002-5					Frame - Fuselage Station 224 LH - - - - -	1	
9	1438	161-31002-6					Frame Assy - Station 224 RH - - - - -	1	
10	1439	143-31001-44					Frame - Fuselage Station 249.5 Lower - - - - -	1	
11	1440	161-31002-7					Frame - Fuselage Station 249.5 LH - - - - -	1	
12	1441	161-31002-8					Frame Assy - Station 249.5 RH - - - - -	1	
13	1442	143-31004-SA#3					Fuselage Assy - Station 273.718 Aft (Includes Frame, Stringers, Skins and Doors, Less Tail Skids and Rudder Hinge Bracket) - - - - -	1	
14	1443	143-31004-13SA#2					Frame Assy - Fuselage Station 273.718 - - - - -	1	
15	1443-15	143-31004-13SA#1					Channel - Stabilizer Front Spar Connecting - - - - -	1	
16	1481	145-52404					Bracket Assy - Rudder Pulley Station 273.71 - - - - -	1	
17	8033	4B18-4-64					Bushing - - - - -	2	
18	1444	143-31004-16					Frame Assy - Fuselage Station 294.10 - - - - -	1	
19	1445	143-31004-7					Frame Assy - Fuselage Station 311.07 (Less Tailskids & Rudder Hinge Bracket) - - - - -	1	
20	1446	143-31004-3A#2					Web Assy - Upper (Includes Upper Longerons) - - - - -	1	
22	1463	143-31004-19					Door - Access - - - - -	2	
23		A4530-8-6					Screw - Sheet Metal Round Head - - - - -	8	
24		A4530-8-8					Screw - Sheet Metal Round Head - - - - -	1	
25	8504	2W1AL-12-20-40					Washer - Plain - - - - -	1	
26	1482	143-34902					Skid - Fuselage Tail - - - - -	1	
27		AN4-10A					Bolt - Aircraft 1/4-28 - - - - -	2	
28		AN960-416					Washer - Plain - - - - -	2	
29		AN365-428					Nut - Self Locking - - - - -	2	
30	1474	143-34902-3					Leaf - Tailskid (Short Leaf) - - - - -	1	
31	1475	143-34902-4					Leaf - Tailskid (Center Leaf) - - - - -	1	
32	1476	143-34902-5					Leaf - Tailskid (Long Leaf) - - - - -	1	
33	1457	143-31001-30					Skin - Station 179.75 to 273.718 Lower - - - - -	1	
34	1458	161-31001-31					Skin - Station 179.75 to 273.718 LH - - - - -	1	
	1459	161-31001-32					Skin - Station 179.75 to 273.718 RH - - - - -	1	
35	1460	143-31001-31					Skin - Station 273.718 to 294.10 Upper - - - - -	1	
36	1461	143-31004-SA#1					Skin Assy - Station 273.718 to 311.25 Lower (Includes Lower Longerons, and Cable Fairleads but Less Access Door) - - - - -	1	
37		161-31003-4					FRAME STATION 179.75 UPPER	1	

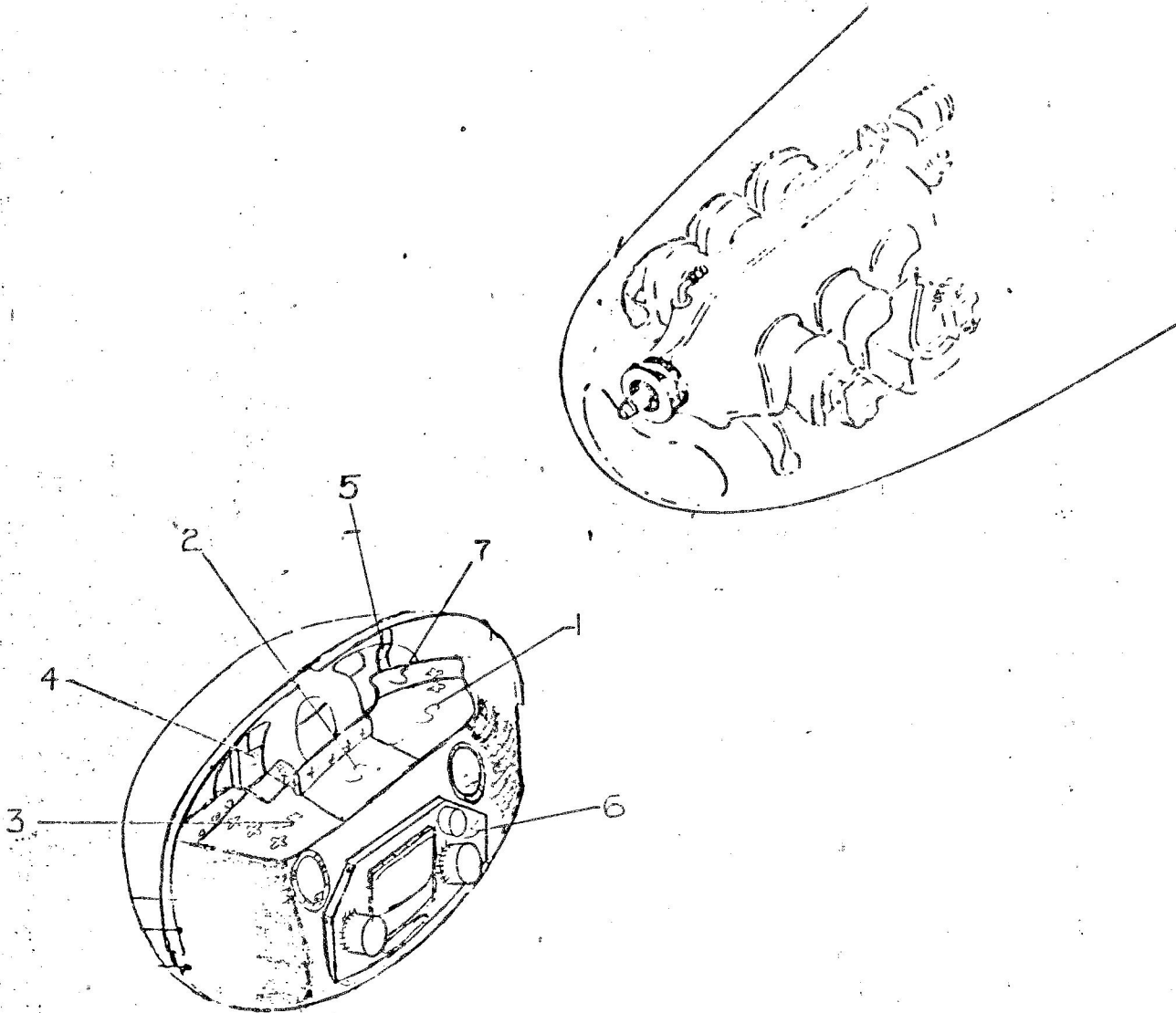


FIGURE 13 - Nose Cowl

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		161-31029-87					Baffle Assy. Nose Cowl	1	
2		161-31029-7					Baffle Assy. Nose Cowl	1	
3		161-31029-9					Baffle Assy. Nose Cowl	1	
4		161-31029-57					Baffle Assy. Nose Cowl	1	
5		161-31029-55					Baffle Assy. Nose Cowl	1	
6		161-31028-1					Box Assy. Nose Cowl	1	
7		161-31029-29					Seal	1	
		161-31029-31					Seal	1	

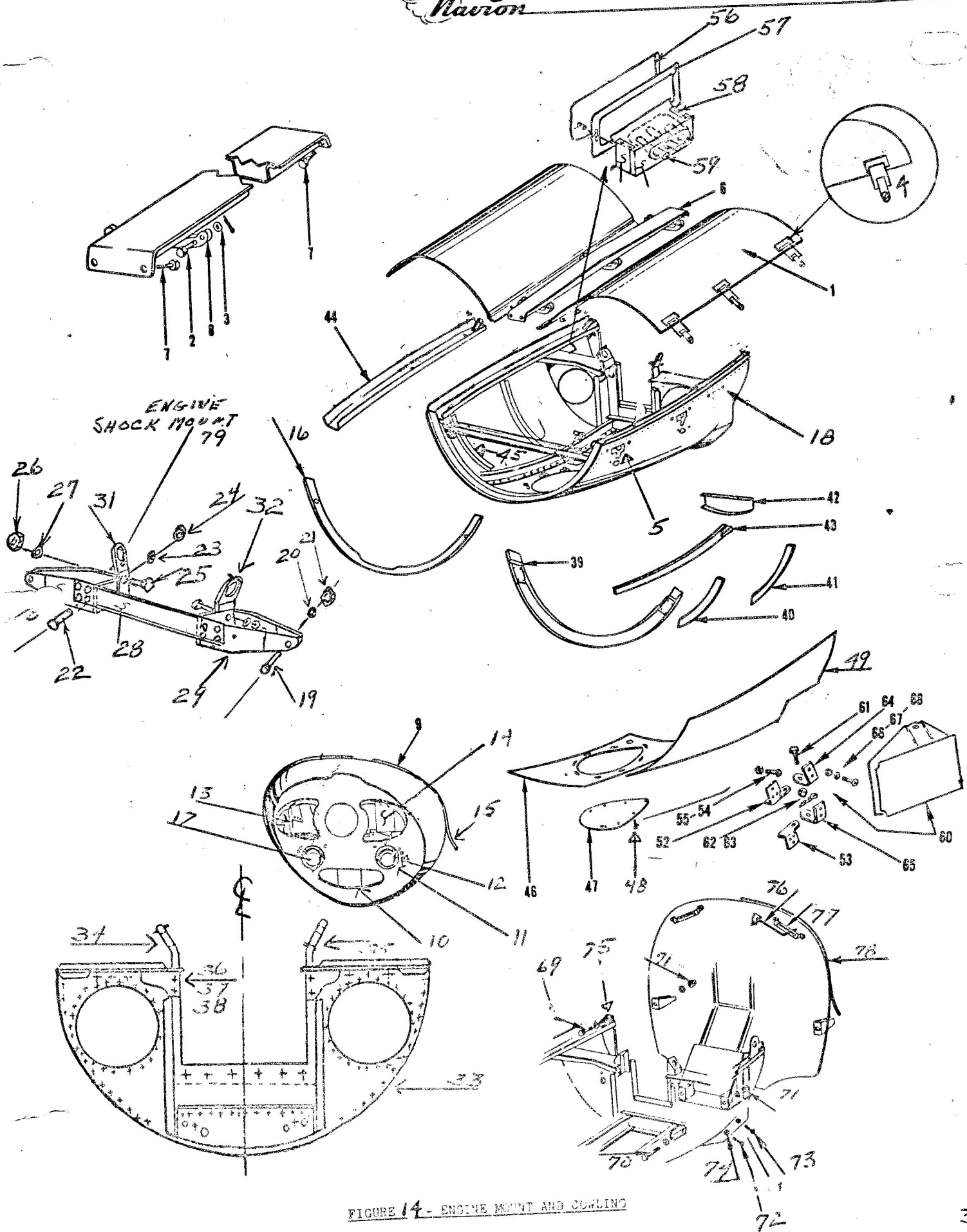


FIGURE 14 - ENGINE MOUNT AND COWLING

# NAVION

Key	Part No.	Name	Unit per Assy.	Usage
1.	145-31501-301	Cowling, Removable Hinged L.H.	1	MODEL G & H A/C 2351 AND SUB
	145-31501-302	Cowling, Removable Hinged R.H.	1	
2.	AN 394-37	Pin - Flat Head 1/4	3	
3.	AN 960-416L	Washer Plain	3	
	AN 380-2-2	Cotter	3	
4.	12723-00	Cowl Fastner Upper Half	6	
5.	12707-00	Cowl Fastner Lower Half	6	
6.	145-31501-4	Beam Assy. - Engine Cowling	1	
7.	AN 3-4A	Bolt Aircraft 10-32	4	
8.	145-31501-63	Bracket - Engine Cowl Beam	3	
9.	161-31031-1	Nose Cowl	1	
10.	123664	Engine Air Filter Assy.	1	
11.	161-31031-23SA2	Landing Light Ring Assy.	2	
12.	AN 520-10R26	Bolt	3	
	C360-045-1500	Spring	3	
13.	161-31029-57	Baffle Nose Cowl L.H.	1	
14.	161-31029-55	Baffle Nose Cowl R.H.	1	
15.	161-31031-17	Hood Lacing	2	
16.	145-31501-42	Angle Nose Cowl Lower	1	
17.	4509	Landing Light Bulb	2	
18.	147-30001-200	Engine Mount Assy.	1	
19.	AN 5-25A	Bolt	2	
20.	AN 960-516	Washer	6	
21.	AN 365-524	Nut	2	
22.	AN 4-7A	Bolt	8	
23.	AN 960-416	Washer	8	
24.	AN 365-428	Nut	8	
25.	AN 5-14A	Bolt	4	
26.	AN 365-524	Nut	4	
27.	AN 960-516	Washer	4	
28.	147-30006-3	Extrusion	1	
29.	147-30010-1	L.H. Casting	1	
30.	147-30010-2	R.H. Casting	1	
31.	147-30007-6	R.H. Frd. Engine Support	1	
32.	147-30007-5	L.H. Frd. Engine Support	1	
33.	147-30001-SA1	Engine Mount Rear Flhd. Assy.	1	
34.	147-30007-3	L.H. Rear Engine Support	1	
35.	147-30007-4	R.H. Rear Engine Support	1	
36.	AN 3-12A	Bolt	5	
37.	AN 960-10	Washer	5	
38.	AN 365-1032A	Nut	5	
39.	143-31901-100SA3	Frame Assy. Stat. 19 Engine Mount	1	
40.	143-31901-100SA1	Frame Assy. Stat. 21 Engine Mount	1	
		L.H.	1	
	143-31901-100SA2	Frame Assy. Stat. 21 Engine Mount	1	
		R.H.	1	
41.	143-31901-7	Frame - Engine Mt. Stat. 30 L.H.	1	
	143-31901-8	Frame - Engine Mt. Stat. 30 R.H.	1	
42.	143-31901-19	Frame - Engine Mt. Lower Stat. 40.5	1	
43.	143-31901-500SA3	Channel - Engine Mt. Lower L.H.	1	
	143-31901-500SA4	Channel - Engine Mt. Lower R.H.	1	
44.	143-31901-SA11	Frame Assy. L.H.	1	
	143-31901-SA12	Frame Assy. R.H.	1	
45.	143-31901-100SA1	Frame Assy. L.H.	1	
	143-31901-100SA2	Frame Assy. R.H.	1	

FIGURE 14 Engine Mount and Cowling



*NAVION*

Key	Part No.	Name	Unit per Assy.	Usage
46.	143-31901-SA17	Skin Assy. Engine Mount Lower	1	
47.	143-31901-28	Door	1	
48.	AN 515-8R7	Screw	8	
49.	143-31901-95SA1	Skin Assy. L.H. Lower	1	
	143-31901-76SA1	Skin Assy. R.H. Lower	1	
50.				
51.				
52.	146-31512-1	Hinge Cowl Flap Outboard L.H.	1	
	146-31512-2	Hinge Cowl Flap Outboard R.H.	1	
53.	146-31513-1	Hinge Cowl Flap Inboard L.H.	1	
	146-31513-2	Hinge Cowl Flap Inboard R.H.	1	
54.	NAS 221-10	Screw Phillips Recess Brazier Head 10-32	3	
55.	AN 365-1032	Nut Self Locking	3	
56.	161-54005-11SA1	External Power Well Door Assy.	1	
57.	161-54005-9SA1	Doubler	1	
58.	161-54005-7SA1	External Power Well	1	
59.	AN 2552-3A	Receptacle - External Power	1	
60.	146-31511-23	Flap Assy. Engine Mount Cowl L.H.	1	
	146-31511-24	Flap Assy. Engine Mount Cowl R.H.	1	
61.	AN 3-6	Bolt Aircraft 1032	2	
62.	AN 310-3	Nut Aircraft Castle	2	
63.	AN 380-7-2	Pin Cotter	2	
64.	146-31511-16	Hinge Assy. Outboard	1	
65.	146-31511-18	Hinge Assy. Inboard	1	
66.	NAS 221-10	Screw Phillips Recess Brazier Head	2	
67.	AN 960-D10	Washer - Plain	2	
68.	AN 365-1032	Nut - Self locking	2	
69.	AN 5-7A	Bolt Aircraft 5/16 - 24	2	
70.	AN 5-10A	Bolt Aircraft 5/16 - 24	2	
71.	AN 365-524	Nut - Self locking	4	
	AN 960-516	Washer Plain	10	
72.	AN 515-10-6	Screw	4	
73.	AN 515-10-7	Screw	2	
74.	AN 365-1032	Nut - Self locking	6	
75.	145-31102-17	Fitting L.H.	1	
	145-31102-18	Fitting R.H.	1	
76.	145-31501-17	Rod - Cowl up support	2	
77.	145-31502	Bracket Cowl up support	2	
78.	145-31005-15	Hood lacing	2	
79.	<i>J 7649-S-1-31M</i>	<i>SHOCK MOUNT (FRONT + REAR)</i>	<i>8</i>	
	<i>J 7519-S-1-4D13</i>	<i>INTERIOR SPACER</i>	<i>4</i>	
	<i>AN 7-37A</i>	<i>BOLT</i>	<i>4</i>	
	<i>AN 960-716</i>	<i>WASHER</i>	<i>4</i>	
	<i>AN 365-720C</i>	<i>NUT</i>	<i>4</i>	
	<i>145-42026</i>	<i>BONDING STRAP (REAR)</i>	<i>2</i>	

FIGURE 14 Engine Mount and Cowling

CABIN DOOR

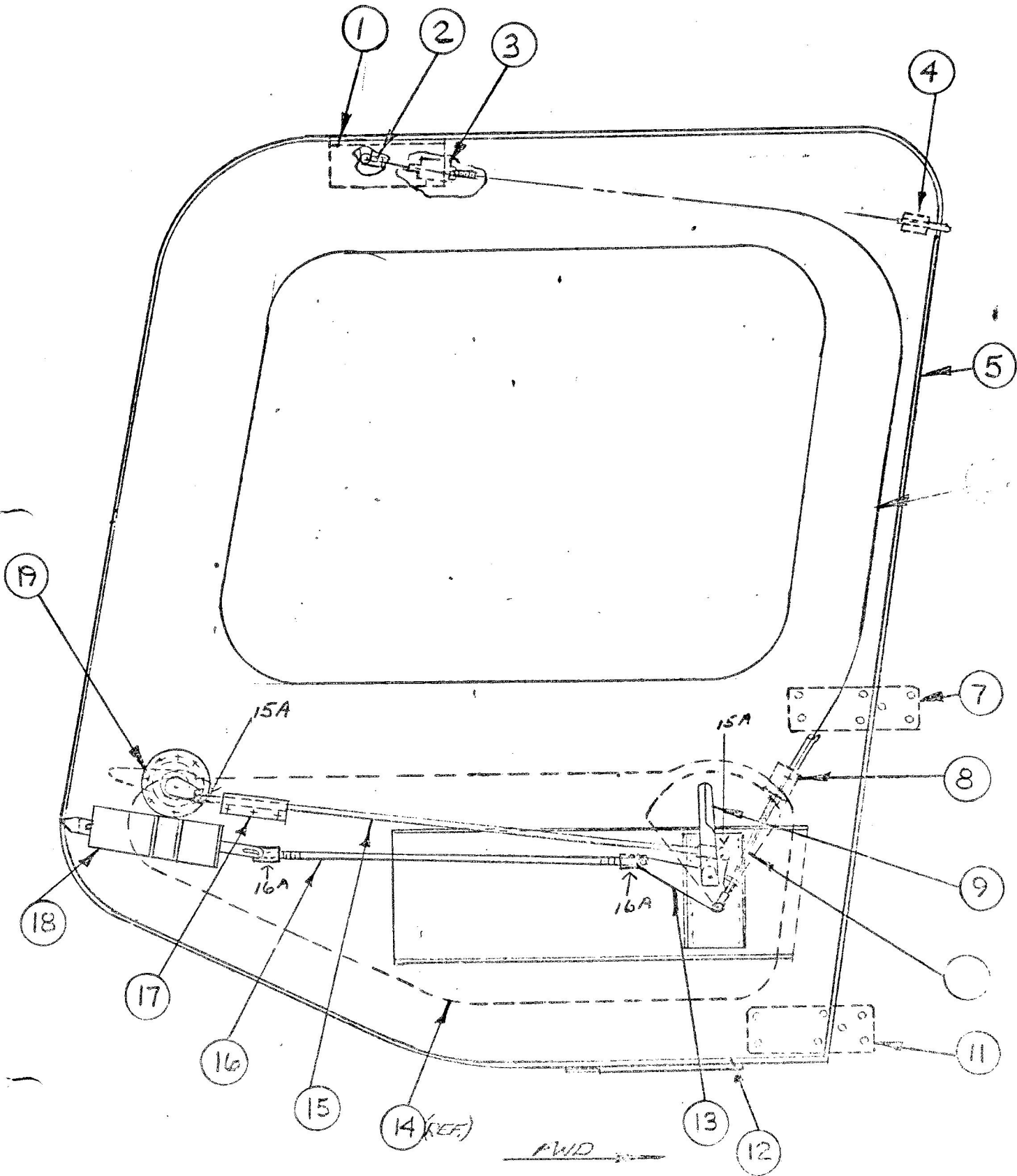
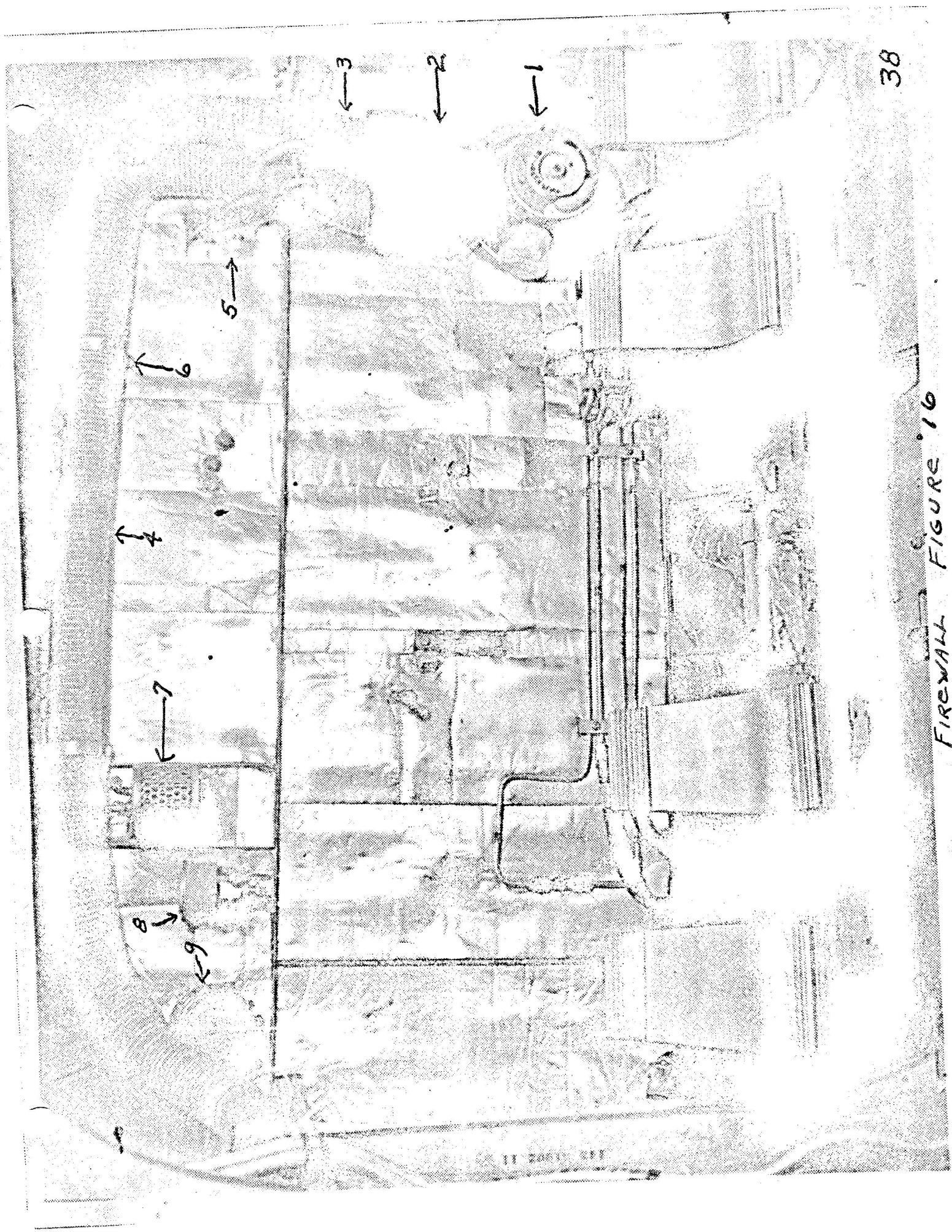


FIGURE 15

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	2323	Latch Assy.	1	2351
2	161-31016-85	Cable Assy.	1	
	AN 486-4	Clevis	2	
	AN 393-13	Pin	2	
	AN 960-10	Washer	2	
	AN 380-2-2	Cotter	2	
	AN 316-4	Nut	2	
3	161-31016-77	Bracket Assy.	1	
	AN 526-1032R6	Screw	4	
	AN 365-1032	Nut	4	
	AN 316-6	Check Nut	4	
4	161-31016-101	Bayonet Assy.	1	
	AN 526-1032R6	Screw	4	
	AN 365-1032	Nut	4	
5	161-31016-47	Door Seal	1	
6				
7	161-31034-2	Upper Hinge Assy.	1	
	AN 509-10-4	Screw	2	
	AN 509-10-10	Screw	5	
	AN 364-1032	Nut	2	
	AN 365-1032	Nut	5	
8	161-31016-77	Bracket Assy.	1	
9	2074-3	Handle, Inside	1	
10				

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
11	161-31034-1	Lower Hinge Assy.	1	
	AN 509-10-4	Screw	3	
	AN 509-10-10	Screw	4	
	AN 364-1032	Nut	3	
	AN 365-1032	Nut	4	
12	161-31016-91	Door Stop Assy.	1	
	AN 509-10R21	Screw	1	
	AN 960-10	Washer	2	
	AN 509-10R23	Screw	1	
	AN 960-10	Washer	1	
13	161-31016-69	Bell Crank Assy.	1	
14	161-31016-7	Lower Door Frame	1	
15	161-31016-23	Rod Assy.	1	
15A	AN 486-4	Clevis	2	
	AN 393-13	Pin	2	
	AN 960-10	Washer	2	
	AN 380-2-2	Cotter	2	
16	161-31016-67	Rod Assy.	1	
16A	AN 393-19	Pin	1	
	AN 393-13	Pin	1	
	AN 960-10	Washer	2	
	AN 380-2-2	Cotter	2	
17	161-31016-75	Bracket	1	
18	161-31016-61	Latch Assy.	1	
19	AR87-8-34	Handle, Outside	1	



FIREWALL FIGURE 16

KEY	PART Number	NAME	UNIT PER ASSY.	USAGE
1	145-53301-7	Heater Valve	1	2351 & Sub.
2	145-53301-14	Adapter	2	
3	145-53301-37	Duct Co-Pilot Defrost	1	
4	145-53301-38	Duct Pilot Defrost	1	
5	145-53321-SA1	Bracket Assy.	1	
	AN 393-85	Pin	1	
	AN 960-10	Washer	5	
	145-53319	Pulley Cable	2	
	4S3-10-9	Spacer	2	
	AN 393-85	Pin	1	
6	AN 742-34	Clamps	2	
7	860014	Filter, Vacuum	1	
8	133B4	Regulator Vacuum	1	
9	319-SA1E	Horn Warning Gear	1	

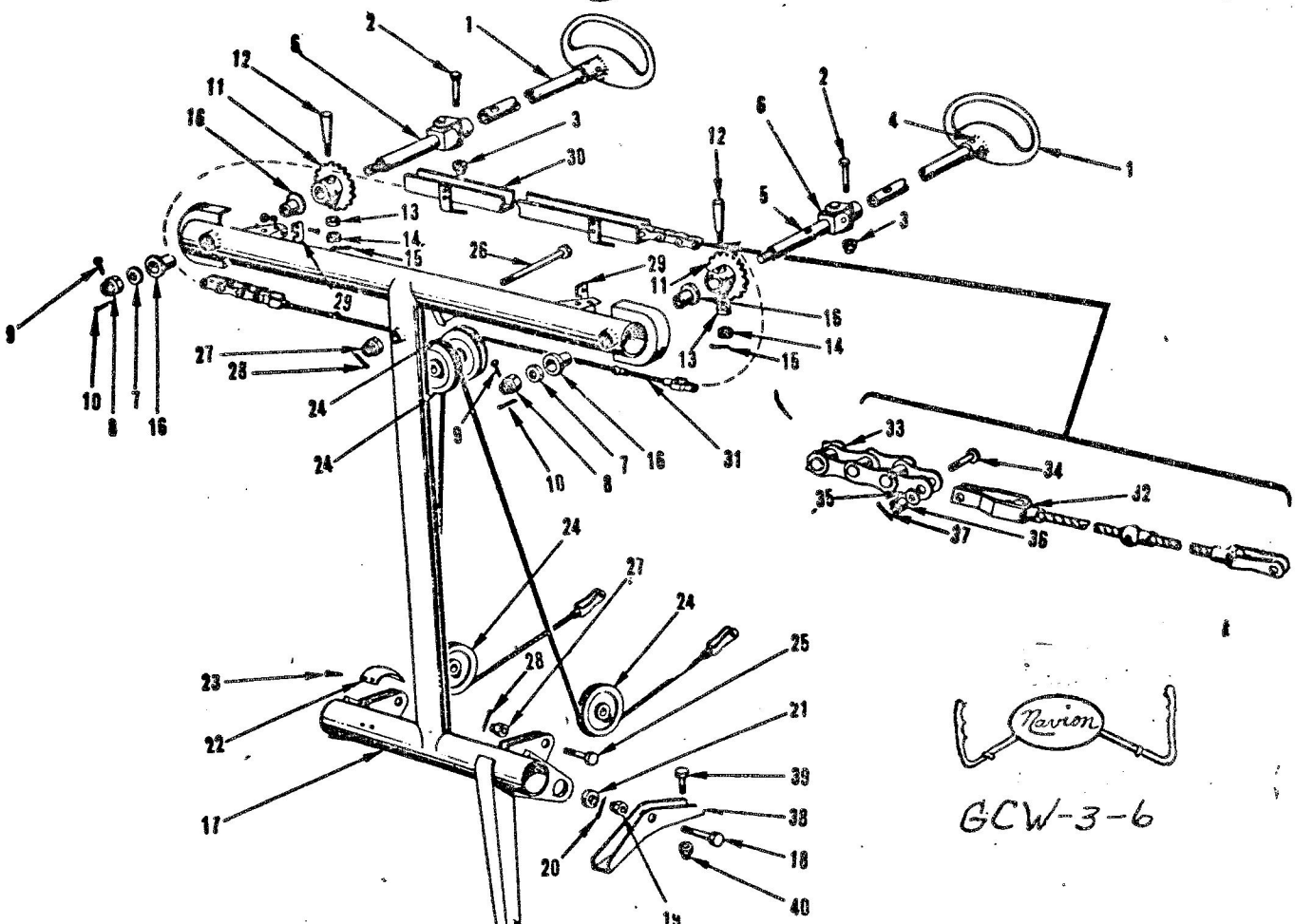


FIGURE 7 - CONTROL COLUMN

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		145-52202-13					Wheel & Tube Assy - Control Column	2	2351
2		AN4-12A					Bolt - Aircraft 1/4-28	1	
3		AN365-428					Nut - Self Locking	1	506
4		145-52012					Control Wheel	1	
4A		2654A2					Control Wheel	1	
5		145-52202-11					Tube - Control Wheel	1	
6		145-52308					Universal Joint - Control Tube	2	
7		2W1-25-28-63					Washer	1	
8		AN310-6					Nut - Aircraft Castle	1	
9		AN392-17					Pin - Flat Head 1/8	1	
10		AN380-2-1					Cotter	1	
11		143-52008-5					Sprocket - Control Column	2	
12		AN386-1-7					Pin - Threaded Taper	1	
13		AN975-3					Washer - Taper Pin	1	
14		AN320-3					Nut - Aircraft Shear	1	
15		AN380-2-2					Cotter	1	
16		4B16CF8-20					Bearing	4	
17		145-52202-33					Column Weld Assy	1	
18		AN3-6					Bolt - Aircraft 10-32	2	
19		AN310-3					Nut - Aircraft Castle	2	
20		AN380-2-3					Cotter	2	
21		AN200K3					Bearing - Heavy Duty	4	
22		145-52202-46					Strip - Rubbing	1	
23		AN530-6R4					Screw - Sheet Metal Round Head	4	
24		AN210-4A4DR7-3/4					Puller - Anti-Friction Bearing Control	4	
25		AN4-10					Bolt - Aircraft 1/4-28	1	
26		AN4-34					Bolt - Aircraft 1/4-28	1	
27		AN310-4					Nut - Aircraft Castle	1	
28		AN380-2-3					Cotter	1	
29		145-52312					Stop - Aileron Control Cable	2	
30		145-52202-45					Trough Assy - Control Column	1	
31		145-52010-7					Cable & Chain Assy	1	
32		145-52010-5					Cable Assy - Aileron Control	2	
33		#35					Chain Assy - Roller (89 Links)	1	
34		AN23-11					Bolt - Clevis 10-32	2	
35		AN960-10L					Washer - Plain	2	
36		AN310-3					Nut - Aircraft Castle	2	
37		AN380-2-2					Cotter	2	
38		145-52202-29					Bracket - Column Mounting	2	
39		AN3-4A					Bolt - Aircraft 10-32	2	
40		AN365-1032					Nut - Self Locking	2	

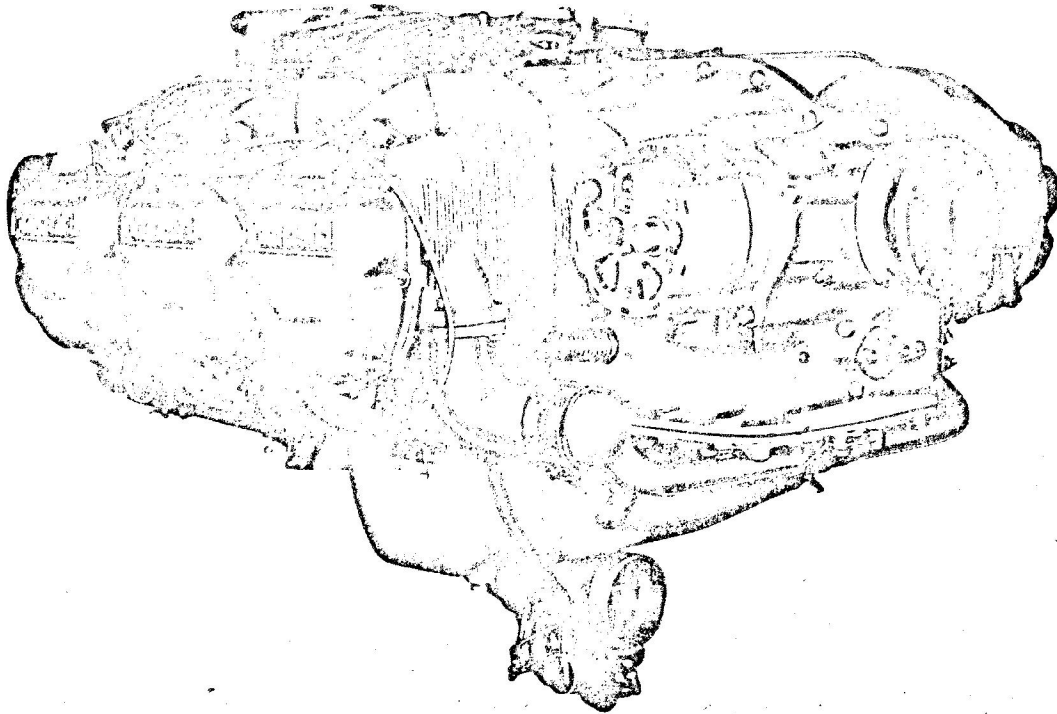
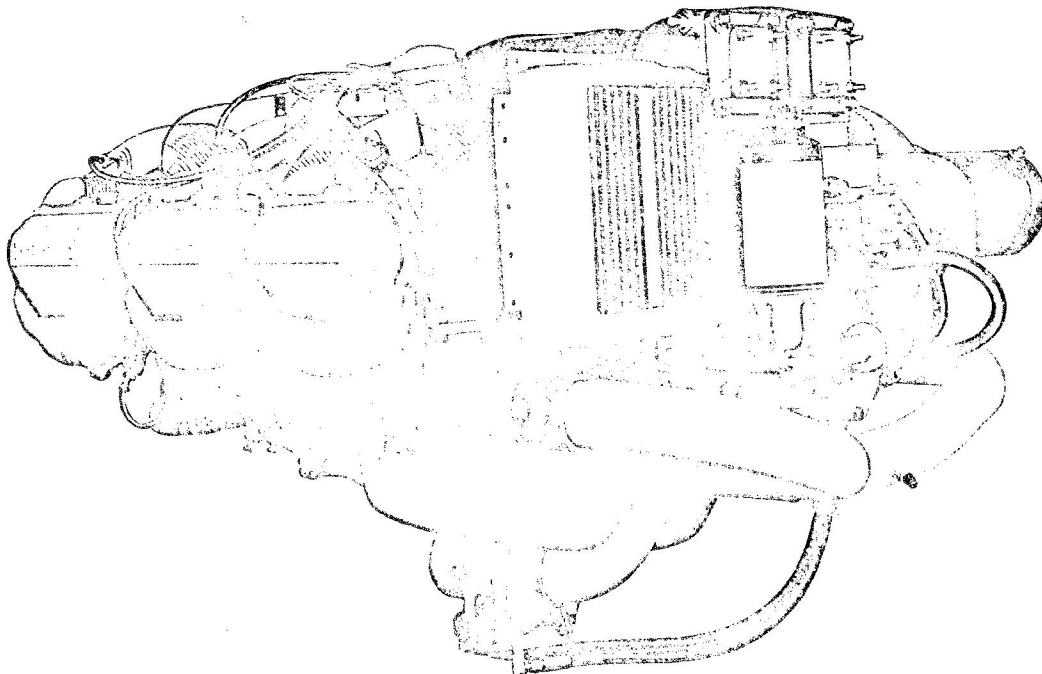


Figure 18 Three-Quarter Right Front View of the IO-520-B.  
(Permold Case)



*FOR PARTS REFER TO CONTINENTAL PARTS BOOK*  
Figure 19 Three-Quarter Left Rear View of the IO-520-B.  
(Permold Case)







FIGURE & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY							USABLE ON CODE	
			1	2	3	4	5	6	7		
1	630849	Gasket, Oil Cooler to-Crankcase, Top . . . . .								2	2500 SUB
2	631059	Gasket, Crankcase-to-Oil Cooler . . . . .								1	
3	MS9021-017 633287 633286	O-Ring, Oil Cooler-to-Engine Mounting Bracket . . . . . Oil Cooler & Baffle Assembly . . . . . Oil Cooler & Baffle Assembly . . . . .								2 1 1	
ATTACHING PARTS											
4	2474	Washer, Plain . . . . .								4	
5	AN936A516	Washer, Lock . . . . .								4	
6	2441	Nut, Plain, Hex . . . . .								4	
7	2473	Washer, Plain . . . . .								1	
8	AN936A516	Washer, Lock . . . . .								1	
9	AN315-5R	Nut, Plain, Hex . . . . .								1	
-10	634063	. Cooler, Oil . . . . .								1	
-11	632224	. Baffle, Oil Cooler . . . . .								1	
-11	632276	. Baffle, Oil Cooler . . . . .								1	
-12	634628	Elbow, 90 Degree, 1/8 NPTF to 1/8 Tube . . . . .								1	
-12	631658	Elbow, 90 Degree, 1/8 NPTF to 1/4 Tube . . . . .								1	
-13	626972-1	Closure, 1/8 Tube . . . . .								1	
-14	2025	Plug, Oil Cooler Oil Outlet . . . . .								1	
-15	634065	Valve Assembly, Vernatherm Control . . . . .								1	
-16	632126	Support Assembly, Baffle . . . . .								1	

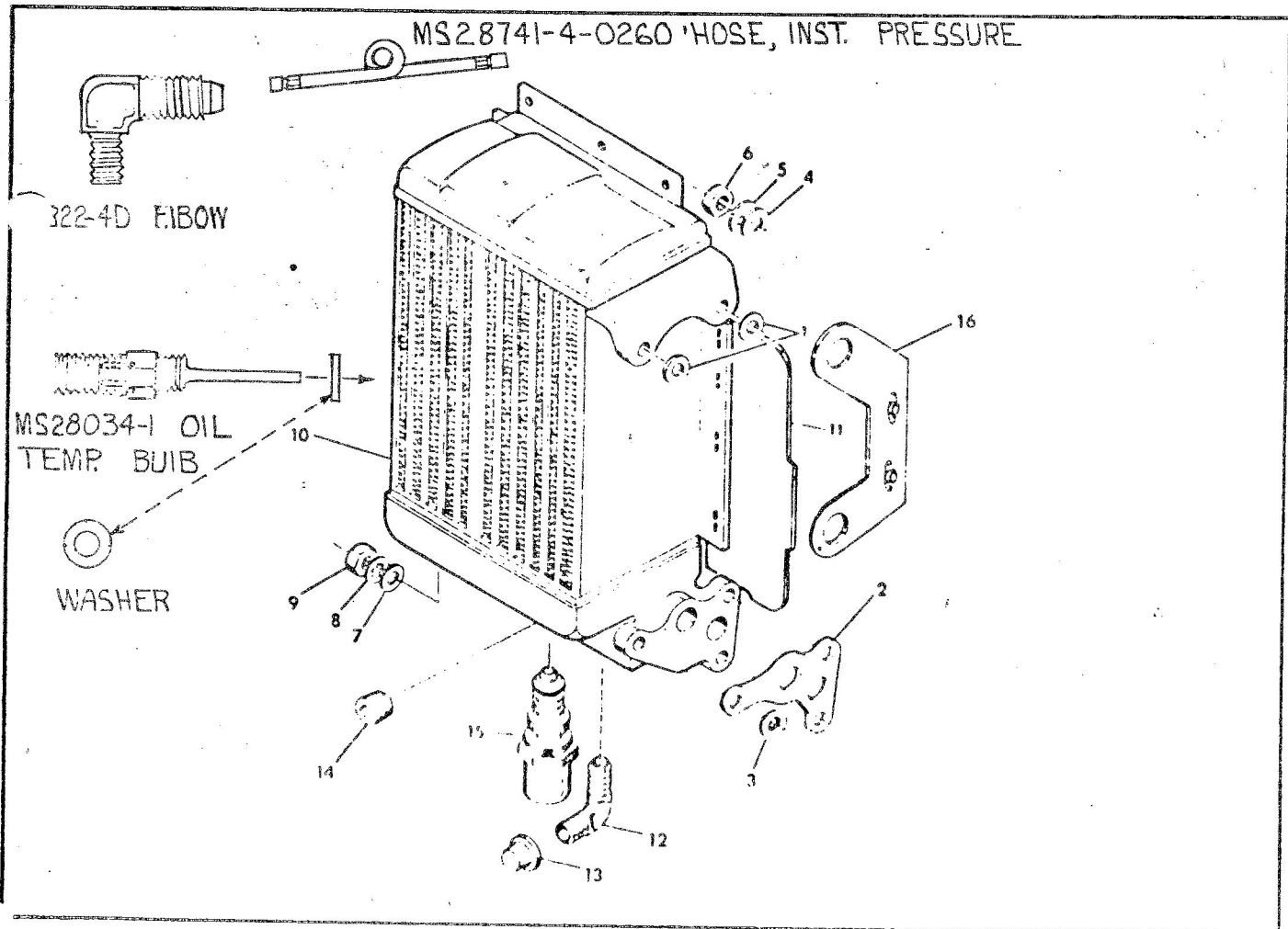
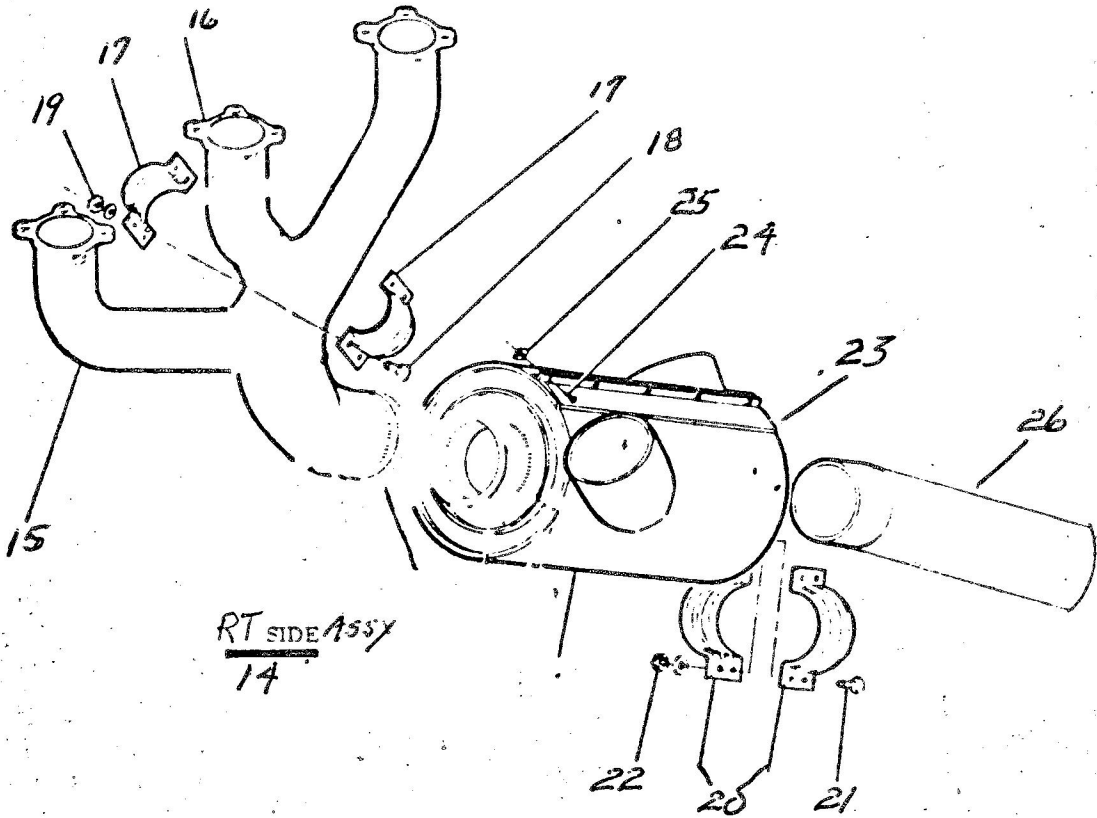
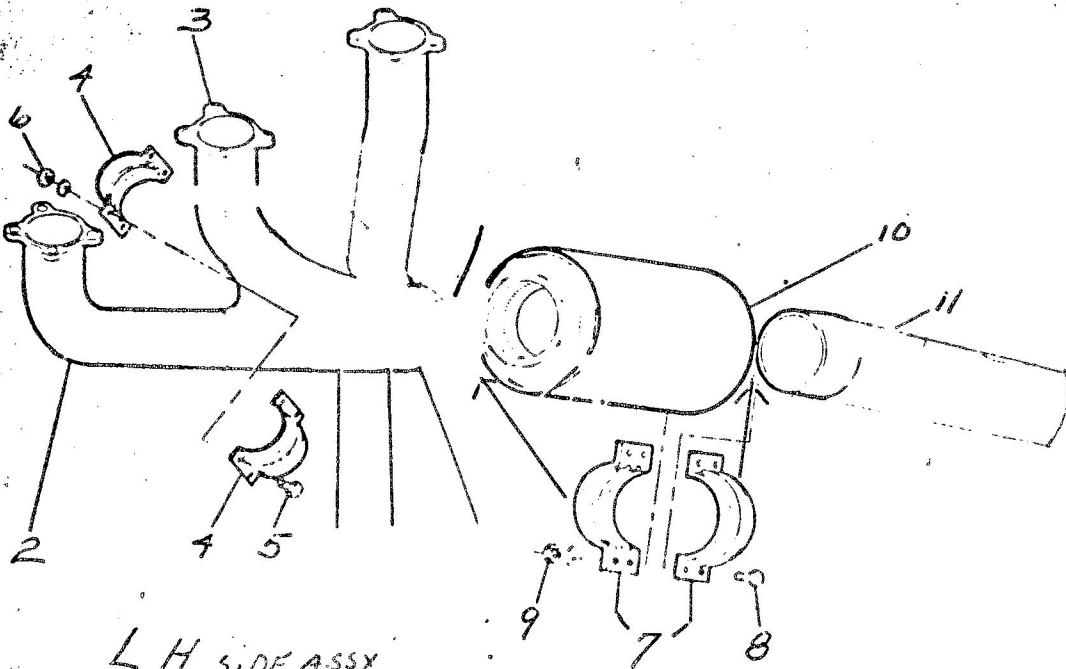


Figure 20 Oil Cooler.  
IO-5208

Engine (Cont)



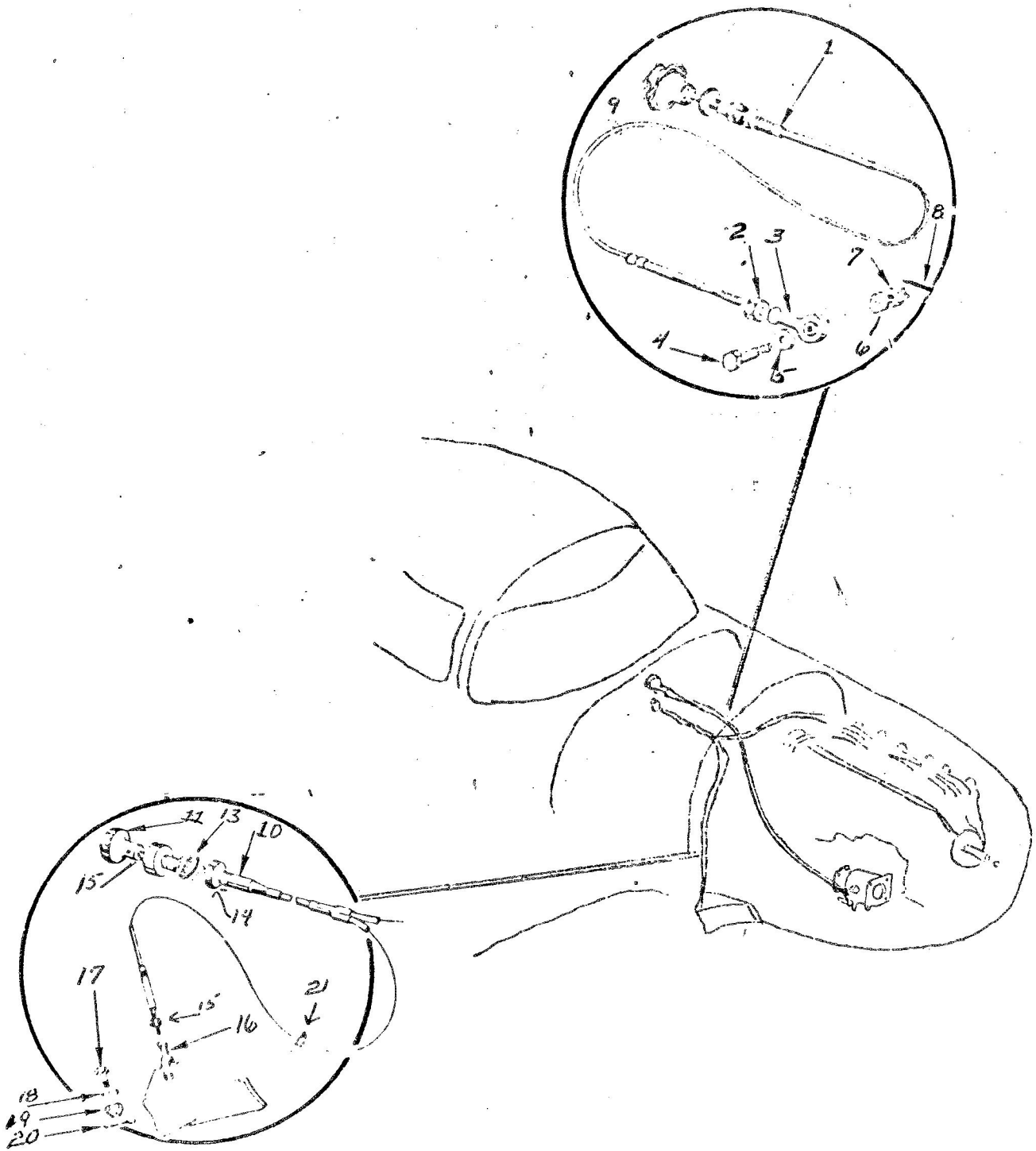
RT SIDE ASSY  
14



LH SIDE ASSY  
1

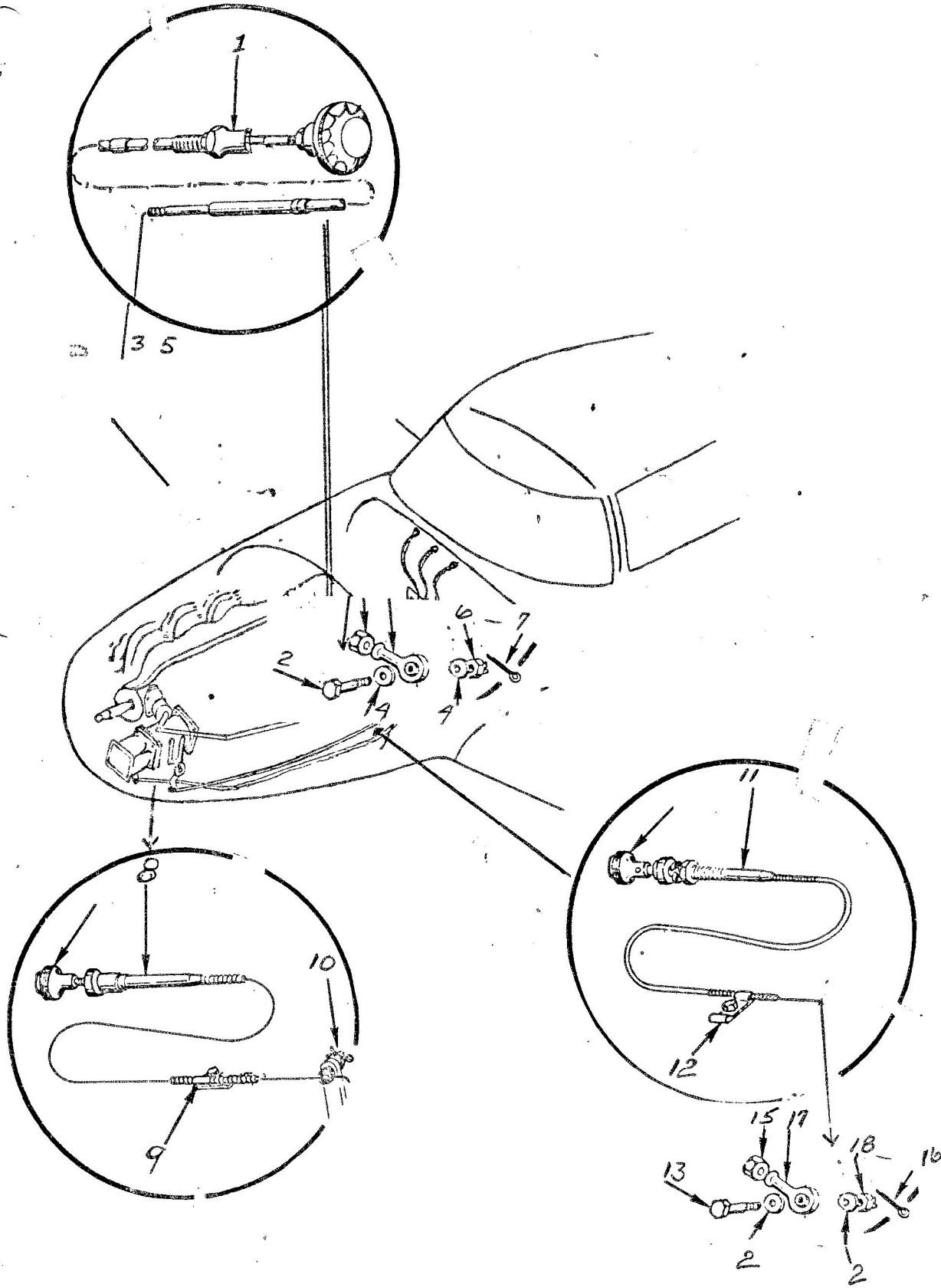
EXHAUST SYSTEM  
FIGURE 21

Key	Part No.	Name	Unit per Assy.	Usage
1	492-1	L.H. Muffler Exhaust Manifold Assy.	1	2401 + 506
2	492-5	Manifold	1	
3	492-24	Tube Flanged	1	
4	229/004	Clamp, Half	1	
5	AN 3-4A	Bolt (Cad Plate)	2	
6	AN 365-1032C	Nut (Cad Plate)	4	
7	492-53	Clamp, Half	4	
8	AN 3-4A	Bolt (Cad Plate)	4	
9	AN 365-1032C	Nut (Cad Plate)	8	
10	492-27	Muffler	8	
11	492-9	Tail Pipe	1	
12	631544	Gasket, Manifold L. & R.	1	
13	21247	Nut, Manifold L. & R.	3	
14	492-23	R.H. Heater, Exhaust Manifold Assy.	1	
15	492-13	Manifold	1	
16	492-30	Tube Flanged	1	
17	229/004	Clamp, Half	1	
18	AN 3-4A	Bolt (Cad Plate)	2	
19	AN 365-1032C	Nut (Cad Plate)	4	
20	492-53	Clamp Half	4	
21	AN 3-4A	Bolt (Cad Plate)	4	
22	AN 365-1032C	Nut (Cad Plate)	8	
23	492-7	Heater Assy.	8	
24	AN 530-8R-8	Screws	1	
25	A-1803-8Z-3	Nut Tinnerman	5	
26	492-17	Tail Pipe	5	
			1	



ENGINE CONTROLS  
FIGURE 22

Key	Part No.	Name	Unit per Assy.	Usage
1	345-001-22	Vernier Throttle Control	1	2351 & Sub.
2	AN 316-4R	Nut	1	
3	F44-14	Rod End	1	
4	AN 4-11	Bolt	1	
5	2W1-16-20-63	Washer	1	
6	AN 960-14	Washer	1	
7	AN 310-4	Nut	1	
8	AN 380-2-3	Cotter	1	
9	AN 742-5	Clamp, Installation	2	
10	146-31514-3	Cowl Flap Control	1	
11	145-51061-6	Knob	1	
12		Locking Type Face Plate		
13	AN 936A-1016	Washer	1	
14	AN 316-10R	Nut	1	
15	AN 316-4R	Nut	2	
16	AN 486-2	Clevis	2	
17	AN 4-7	Bolt	2	
18	AN 960-416	Washer	2	
19	AN 310-4	Nut	2	
20	AN 380-2-3	Cotter	2	
21	AN 742-5	Clamp	6	



ENGINE CONTROLS  
FIGURE 23







FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE		
					1	2
	D-3222	Propeller Assy. Model D2A34C58- (X) /90AT-4	1	Model # 2500 + Sub.		
-1	A-1639-2	NUT.....(AP)	6			
-2	#A-1638-2	WASHER, Plain.....(AP)	6			
-3	A-1633-3	PACKING, O-ring.....(AP)	1			
-4	A-2423	WEIGHT, Balance.....	AR			
-5	#A-1635-16	SCREW (attach one weight).....(AP)	↑			
	#A-1635-17	SCREW (attach two weights).....(AP)				
	#A-1635-18	SCREW (attach three weights).....(AP)				
	#A-1635-19	SCREW (attach four weights).....(AP)				
	#A-1635-21	SCREW (attach five weights).....(AP)	↓			
	#A-1635-22	SCREW (attach six weights).....(AP)	AR			
-6	D-3223/90AT-4	Blade Assembly	2			
-7	A-1957	DECAL.....	1			
	A-1958	DECAL.....	1			
-9	#B-2417	PLATE, Split cover.....	2			
-10	#A-1635-27	SCREW.....(AP)	AR			
-11	#A-1638-5	WASHER, Red fiber.....(AP)	AR			
-12	#B-2422-1	PACKING, Felt.....	1			
-13	A-1636-6	RING, External retaining.....	1			
-14	#B-2420-4	SHIM, 0.004 in.....	AR			
	#B-2420-6	SHIM, 0.006 in.....				
-15	#B-2421-8	SHIM, 0.008 in.....	↑			
	#B-2421-10	SHIM, 0.010 in.....				
	#B-2421-12	SHIM, 0.012 in.....				
	#B-2421-14	SHIM, 0.014 in.....				
	#B-2421-16	SHIM, 0.016 in.....				
	#B-2421-18	SHIM, 0.018 in.....				
	#B-2421-20	SHIM, 0.020 in.....	↓			
-16	A-1633-13	PACKING, O-ring.....	AR			
-17	A-3110	SEPARATOR, Ball.....	1			
-18	A-3100	WASHER, Actuating pin.....	30			
-19	A-3140	PIN, Blade actuating.....	1			
-20	A-1580	PLUG, Ferrule staking.....	1			
-21	C-3054	FERRULE, Blade retention.....	1			

Not required with propeller installations in which spinner attaching lugs serve as washers.  
Two screws required per balance weight or per set of weights.

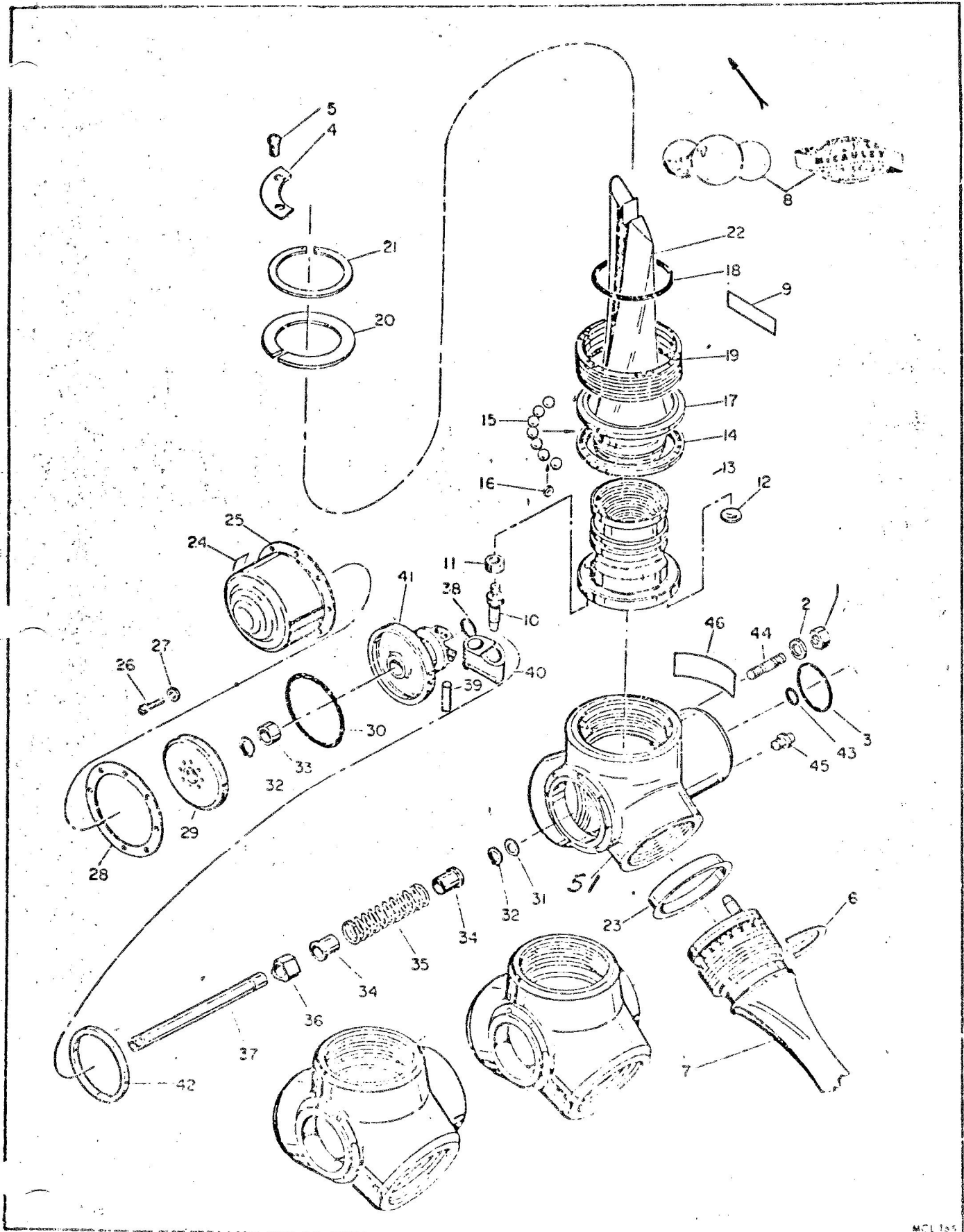
As noted are included in Shim Kit, part No. PL-2468. Sufficient parts are contained in the kit to over-  
haul 50 blade assemblies (one complete propeller assembly) for any of the propeller models listed.

FIGURE 24

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE	
		1	2	3	4	5	6	7			
108-	C-2987	.	.	.	.	.	.	.	.	1	
-22	A-1634-5	.	.	.	.	.	.	.	.	30	
-23	C-2987-1	.	.	.	.	.	.	.	.	1	
-24	C-2987-2	.	.	.	.	.	.	.	.	1	
-25	C-3092	.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.		
-26		.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.	1	
	<u>90AT-4</u>	.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.	1	
-27	B-3216	.	.	.	.	.	.	.	.	2	
-28	A-3217	.	.	.	.	.	.	.	.	2	
-29	A-2356	.	.	.	.	.	.	.	.	1	
-30	C-1904	.	.	.	.	.	.	.	.	1	
-31	A-1635-43	.	.	.	.	.	.	.	.	8	
-32	A-1638-9	.	.	.	.	.	.	.	.	8	
-33	A-1938	.	.	.	.	.	.	.	.	1	
-34	B-1965	.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.		
-35	A-1633-12	.	.	.	.	.	.	.	.	1	
-36	A-2351	.	.	.	.	.	.	.	.	1	
-37	A-1636-7	.	.	.	.	.	.	.	.	2	
-38	<u>A-2108</u>	.	.	.	.	.	.	.	.	AR	
-39	A-3125	.	.	.	.	.	.	.	.	1	
-40	A-3124	.	.	.	.	.	.	.	.	2	
-41	B-2345*	.	.	.	.	.	.	.	.	1	
-42	A-1633-9	.	.	.	.	.	.	.	.	1	
108-	A-1934	.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.		
-43	A-1936	.	.	.	.	.	.	.	.	2	
-44	A-1935	.	.	.	.	.	.	.	.	2	
		.	.	.	.	.	.	.	.		
-45	C-1939	.	.	.	.	.	.	.	.	2	
		.	.	.	.	.	.	.	.		
		.	.	.	.	.	.	.	.	1	
-46	<u>A-1937</u>	.	.	.	.	.	.	.	.	AR	
-47	A-1633-9	.	.	.	.	.	.	.	.	1	
108-	C-3103	.	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.	.		
		.	.	.	.	.	.	.	.		
		.	.	.	.	.	.	.	.		
-48	B-3099	.	.	.	.	.	.	.	.	6	
		.	.	.	.	.	.	.	.		
		.	.	.	.	.	.	.	.	6	
-49	§A-3047	.	.	.	.	.	.	.	.	2	
	§A-3047-30	.	.	.	.	.	.	.	.	AR	
	§A-3047-45	.	.	.	.	.	.	.	.	AR	
	A-1636-17	.	.	.	.	.	.	.	.	1	
	No Number	.	.	.	.	.	.	.	.	NP	

\* Furnished in 3-1/2 inch stock lengths. Proper thickness to be determined and cut at reassembly.  
 § Dowels are press fitted.

FIGURE 27



MCL 135

FIGURE 25 MCLAULEY MODEL D 3A32C40/82NCE

FIG. & EX NO.	PART NUMBER	DESCRIPTION	UNITS	USABLE
			PER ASSY	ON CODE
113-		PROPELLER ASSY, Model . . . . .		
		PROPELLER ASSY, Model . . . . .		
		PROPELLER ASSY, Model . . . . .		
		PROPELLER ASSY, Model . . . . .		
	D-3664	PROPELLER ASSY, Model DSA32C90-XL62NC-2 . . . . .	1	
-1	A-1639-2	NUT . . . . . (AP)	6	
-2	†A-1638-2	WASHER, Plain . . . . . (AP)	6	
-3	A-1633-3	PACKING, O-ring . . . . . (AP)	1	
-4	A-3530	WEIGHT, Balance . . . . .	AR	
-5	†A-1635-36	SCREW (attach one weight) . . . . . (AP)	AR	
	†A-1635-40	SCREW (attach 2 or 3 weights) . . . . . (AP)	AR	
	†A-1635-56	SCREW (attach 4 or 5 weights) . . . . . (AP)	AR	
	†A-1635-57	SCREW (attach 6 weights) . . . . . (AP)	AR	
-6	B-3503	RING, Spacer (half) . . . . .	6	
-7		BLADE ASSY. . . . .		
		BLADE ASSY. . . . .		
	D-3663/82NC-2	BLADE ASSY. . . . .	3	
-8	A-1957	DECAL . . . . .	1	
		DECAL . . . . .		
-9	A-1958	DECAL . . . . .	1	
-10	B-3491	PIN, Blade actuating . . . . .	1	
-11	A-3543	WASHER, Spacer . . . . .	1	
-12	A-1580	PLUG, Ferrule staking . . . . .	1	
-13	C-3111	FERRULE, Blade retention . . . . .	1	
113-	C-2987	BEARING, Blade retention . . . . .	1	
-14	C-2987-1	RACE, Inner . . . . .	1	
-15	A-1634-5	BALL, Bearing . . . . .	30	
16	A-3110	SEPARATOR, Ball . . . . .	30	
-17	C-2967-2	RACE, Outer . . . . .	1	
-18	A-1633-30	PACKING, O-ring . . . . .	1	
-19	C-3493	NUT, Blade retention . . . . .	1	
-20	B-3476-8	SHIM, 0.008 in. . . . .	AR	
	B-3476-10	SHIM, 0.010 in. . . . .	AR	
	B-3476-12	SHIM, 0.012 in. . . . .	AR	
	B-3476-14	SHIM, 0.014 in. . . . .	AR	
	B-3476-16	SHIM, 0.016 in. . . . .	AR	
	B-3476-18	SHIM, 0.018 in. . . . .	AR	
	B-3476-20	SHIM, 0.020 in. . . . .	AR	
	B-3476-22	SHIM, 0.022 in. . . . .	AR	
	B-3476-25	SHIM, 0.025 in. . . . .	AR	
-21	B-3478	RING, Retaining . . . . .	1	
-22		BLADE . . . . .		
		BLADE . . . . .		
	82NC-2	BLADE . . . . .	1	
-23	B-3551	RETAINER, Grease . . . . .	3	
-24	A-2356	DECAL, Spring kit installation . . . . .	1	
-25	C-1904	CYLINDER . . . . .	1	
-26	A-1635-43	SCREW . . . . . (AP)	8	
-27	A-1638-9	WASHER, Brass . . . . . (AP)	8	
-28	A-1938	GASKET, Cylinder . . . . . (AP)	1	
-29	B-3526	SUPPORT, Spacer . . . . .	1	
-30	A-1633-12	PACKING, O-ring . . . . .	1	
-31	A-2351	WASHER, Fiber . . . . .	1	
-32	A-1636-7	RING, External retaining . . . . .	2	
-33	†A-2108	SPACER STOCK, Low pitch stop . . . . .	AR	
-34	A-3124	GUIDE, Spring . . . . .	2	
-35	A-3125	SPRING, Low pitch return boost . . . . .	1	
36	A-3558	SPACER, Spring guide . . . . .	1	

† Not required with propeller installations in which spinner attaching plugs serve as washers.  
† Two screws required per balance weight or per set of weights.  
\* Furnished in 3-1/2 inch stock lengths. Proper thickness to be determined and cut at reassembly.

FIGURE 25

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
113-37	B-2345	.	.	.	.	.	.	.	1	
-38	A-1633-9	.	.	.	.	.	.	.	1	
113-	B-3531	.	.	.	.	.	.	.	1	
-39	B-3557	.	.	.	.	.	.	.	3	
-40	B-3529	.	.	.	.	.	.	.	3	
-41	D-3496	.	.	.	.	.	.	.	1	
-42	A-1937	.	.	.	.	.	.	.	AR	
-43	A-1633-9	.	.	.	.	.	.	.	1	
	D-3561	.	.	.	.	.	.	.	1	
	D-3561	.	.	.	.	.	.	.	1	
-44	B-3099	.	.	.	.	.	.	.	6	
-45	§A-3047	.	.	.	.	.	.	.	2	
	§A-3047-30	.	.	.	.	.	.	.	AR	
	§A-3047-45	.	.	.	.	.	.	.	AR	
	A-1636-17	.	.	.	.	.	.	.	1	
	No Number	.	.	.	.	.	.	.	NP	
-46	A-2230	.	.	.	.	.	.	.	1	
-47		.	.	.	.	.	.	.		
-48		.	.	.	.	.	.	.	(AP)	
-49		.	.	.	.	.	.	.	(AP)	
		.	.	.	.	.	.	.		
-51	E-3562	.	.	.	.	.	.	.	1	
		.	.	.	.	.	.	.		
		.	.	.	.	.	.	.		

/ Furnished in 3-1/2 inch stock lengths. Proper thickness to be determined and cut at reassembly.  
 § Dowels are press fitted.

D3669 SPINNER (NOT SHOWN) 1

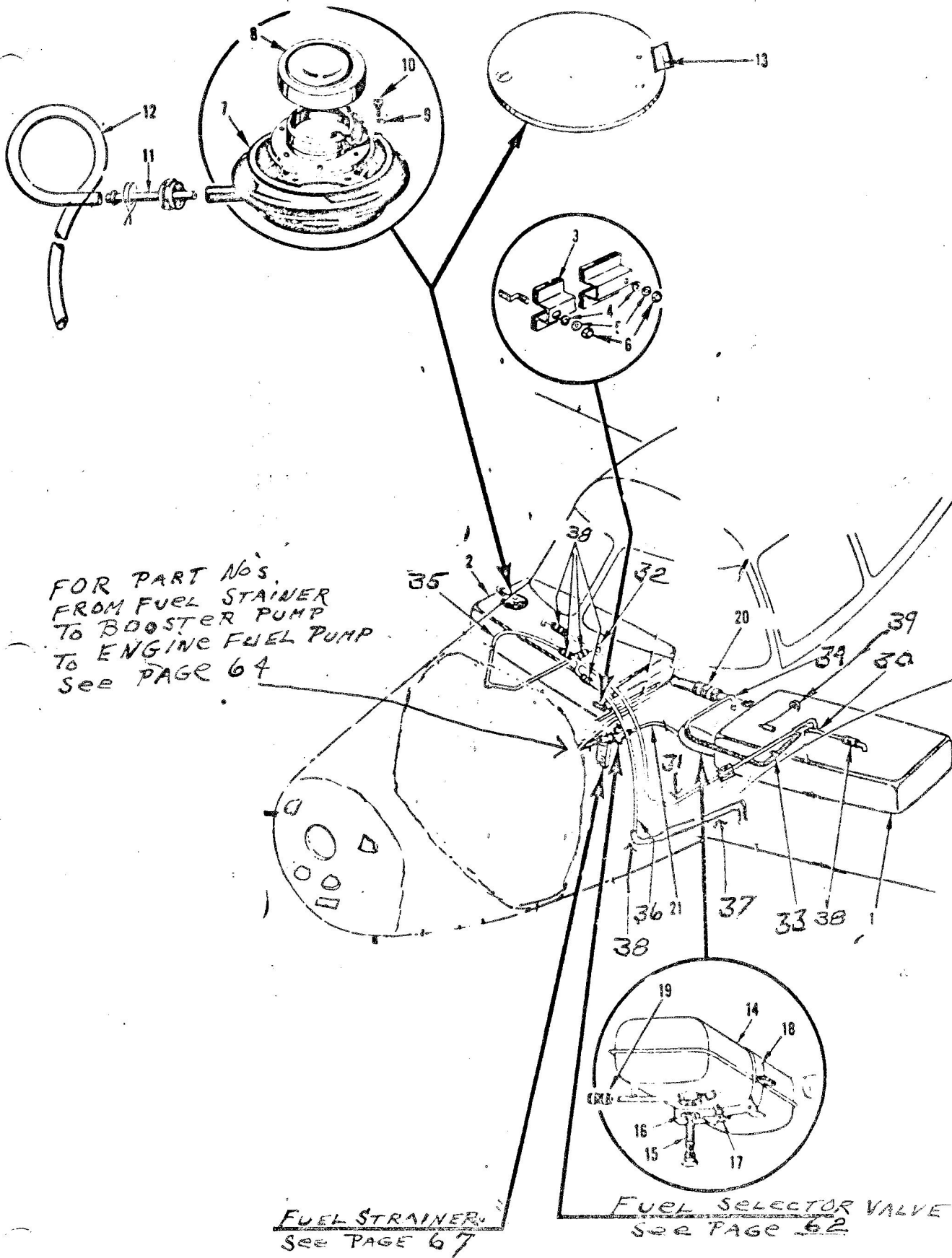


FIGURE 26 - FUEL SYSTEM

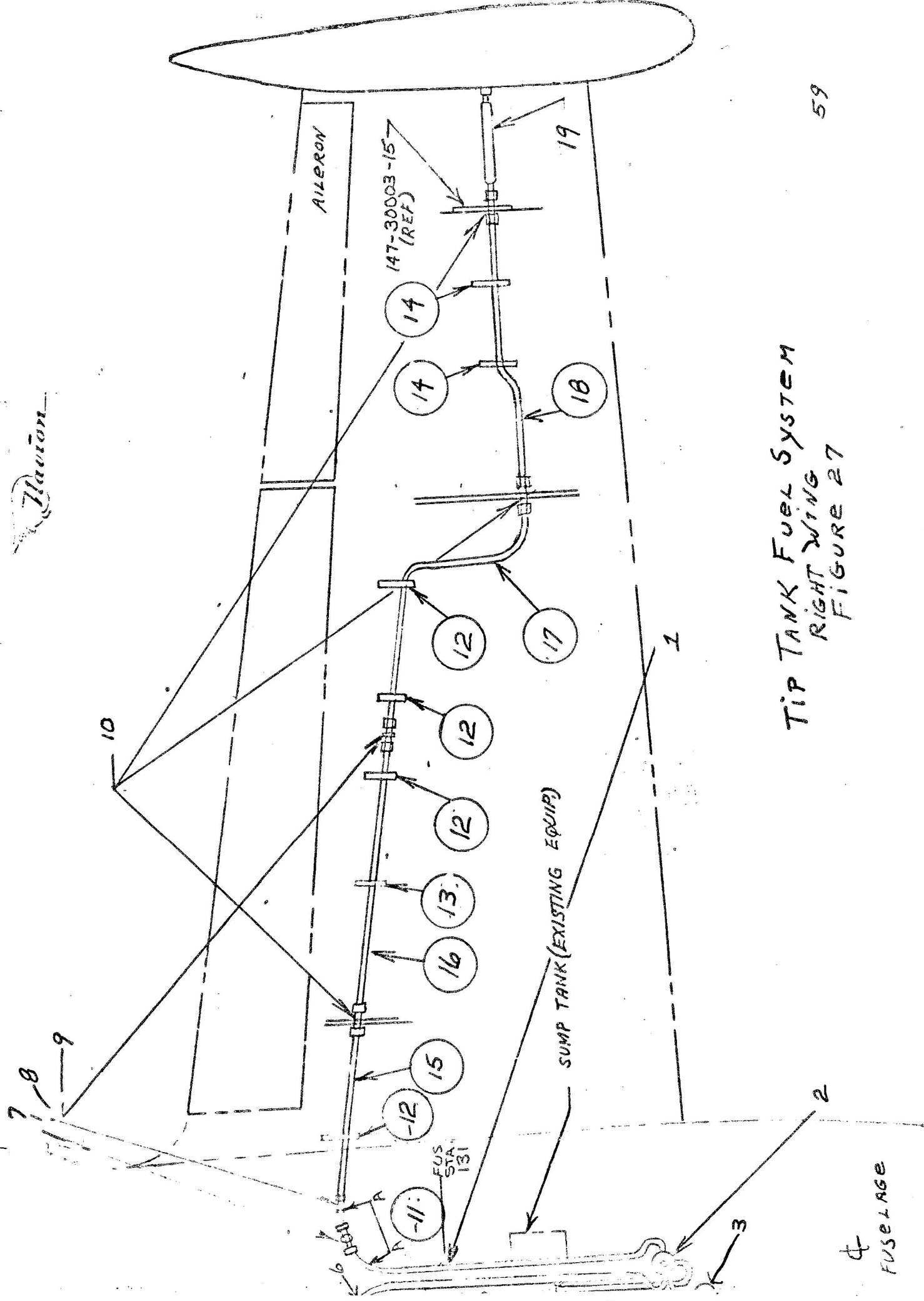


KEY	PART NUMBER	NAME	UNIT PER ASSY.	USAGE
1	145-48002-101	Tank Assy. - Fuel L.H.	1	
2	145-48002-112	Tank Assy. - Fuel R.H.	1	
3	145-48017	Support Assy. - Fuel Tank Inboard	2	
4	4S3-416-20	Spacer - Bolt	2	
5	AN 960-416	Washer - Plain	2	
6	AN 365-428	Nut - Self Locking	2	
7	145-48011	Basin Assy. Fuel Filler Neck Spill	1	
8	145-48001-200SA	Fillerneck Assy. Fuel Tank (includes Cap)	1	
9	2W1F-12-12-47	Washer - Plain	6	
10	AN 502-10-8	Screw - Drilled Fillister Head Machine	6	
11	154-48001-111	Tube - Fuel Filler Neck Spill Basin Drain	6	
12	154-48001-110	Hose - Fuel Filler Neck Spill Basin Drain Plastic	1	
13	145-48081-1	Door Assy. Fuel Tank Filler Neck Hinged	1	
	145-48006-100	Tank Assy. Fuel Accumulator Complete	1	
15	145-48016	Strainer Assy. - Fuel Accumulator Tank Outlet	1	
16	AN 900-16	Gasket - Copper - Asbestos Annular	1	
17	AN 771P-1	Draincock - Screw Type	1	
18	145-48007	Support Assy. - Fuel Accumulator Tank	1	
19	AN H-35-6-20	Hose 3/8 ID x 5 (Main Fuel Line Connecting)	1	
	AN 748-26	Clamp - Hose	2	
20	AN H-35-1 1/2 x 11	Hose 1 1/2 ID x 11 (Fuel Tank Con. R.H. Side)	1	
	AN H-35-1 1/2 x 4	Hose 1 1/2 ID x 4 (Fuel Tank Con. L.H. Side)	1	
	AN 748-66	Clamp - Hose	2	
21	147-30012-17	Line Assy. Accumulator Tank to Valve Main Fuel	1	
22 thru 29	NOT APPLICABLE			
30	145-48804	Line Assy. Fuel Vent Drain Left Tank	1	

FUEL SYSTEM  
FIGURE 26



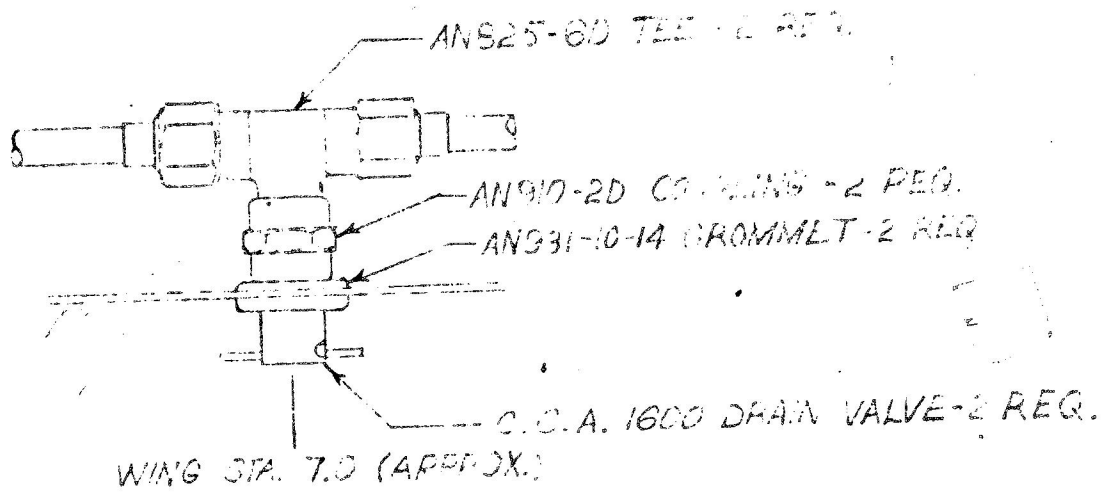
*Aileron*



TIP TANK FUEL SYSTEM  
RIGHT WING  
FIGURE 27

KEY	PART Number	NAME	UNIT PER ASSY.	USAGE
1	MS 21919 DF6	Clamp - Right Fuel Line	1	
	AN 3-10	Bolt - Right Fuel Line	1	
	4S3-D10-26	Spacer - Right Fuel Line	1	
	AN 365-1032	Nut - Right Fuel Line	1	
	AN 960-10	Washer - Right Fuel Line	1	
2	114-HD	Valve Selector - See Page		
3		Fuel Strainer - See Page		
4	147-30012-17	Line Assy. Fuel Supply from Main Tank	1	
4A	147-30012-19	Line Assy. Selector Valve to Fuel Strainer	1	
5	MS 21919-DF6	Clamp - Left Fuel Line	1	
	AN 3-10	Bolt - Left Fuel Line	1	
	4S3-D10-26	Spacer - Left Fuel Line	1	
	AN 365-1032	Nut - Left Fuel Line	1	
	AN 960-10	Washer - Left Fuel Line	1	
6	147-30012-29	Line Assy. Selector Valve to Left Tip Tank	1	
7	Drain Cock	See Page		
8	MS 21919-DF6	Clamp L. & R.	1	
	A 1778-8Z3	Nut Timmerman L. & R.	1	
	AN 530-8R8	Screw L. & R.	1	
9	AN 815-6D	Union L. & R.	1	
10	AN 832-6D	Union L. & R.	3	
	AN 924-6D	Nut L. & R.	3	
	AN 901C	Washer L. & R.	3	
11	147-30012-15	Line Assy. Selector Valve to Right Tip Tank	1	
12	147-30012-21	Angle L. & R.	4	
13	147-30012-23	Angle L. & R.	1	
14	147-30012-25	Angle L. & R.	2	

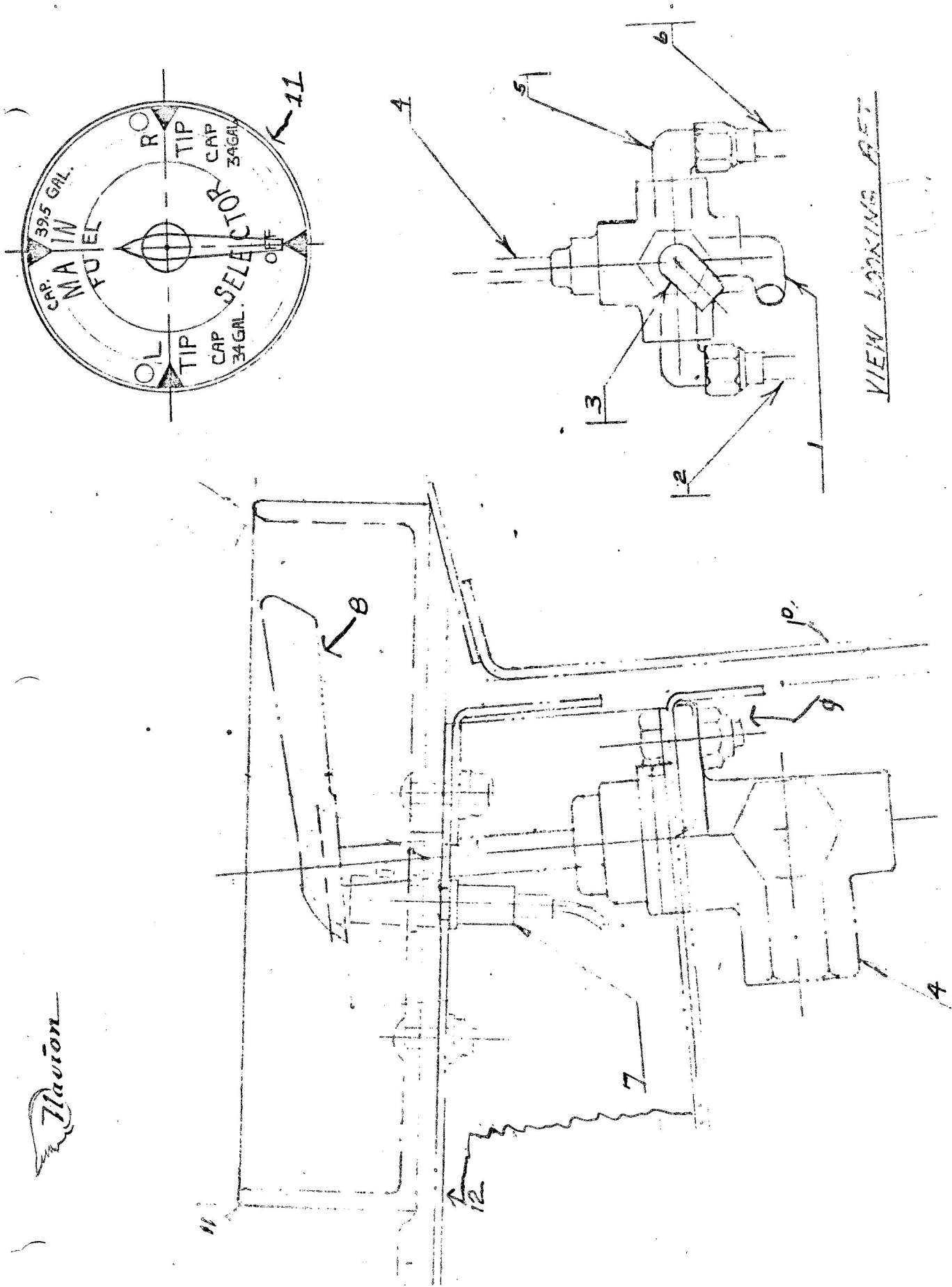




VIEW AA - DRAIN COCK  
FOR TIP TANK FUEL SYSTEM  
LEFT & RIGHT WING

FIGURE 28

*Flavion*



FUEL SELECTOR VALVE  
FIGURE 29

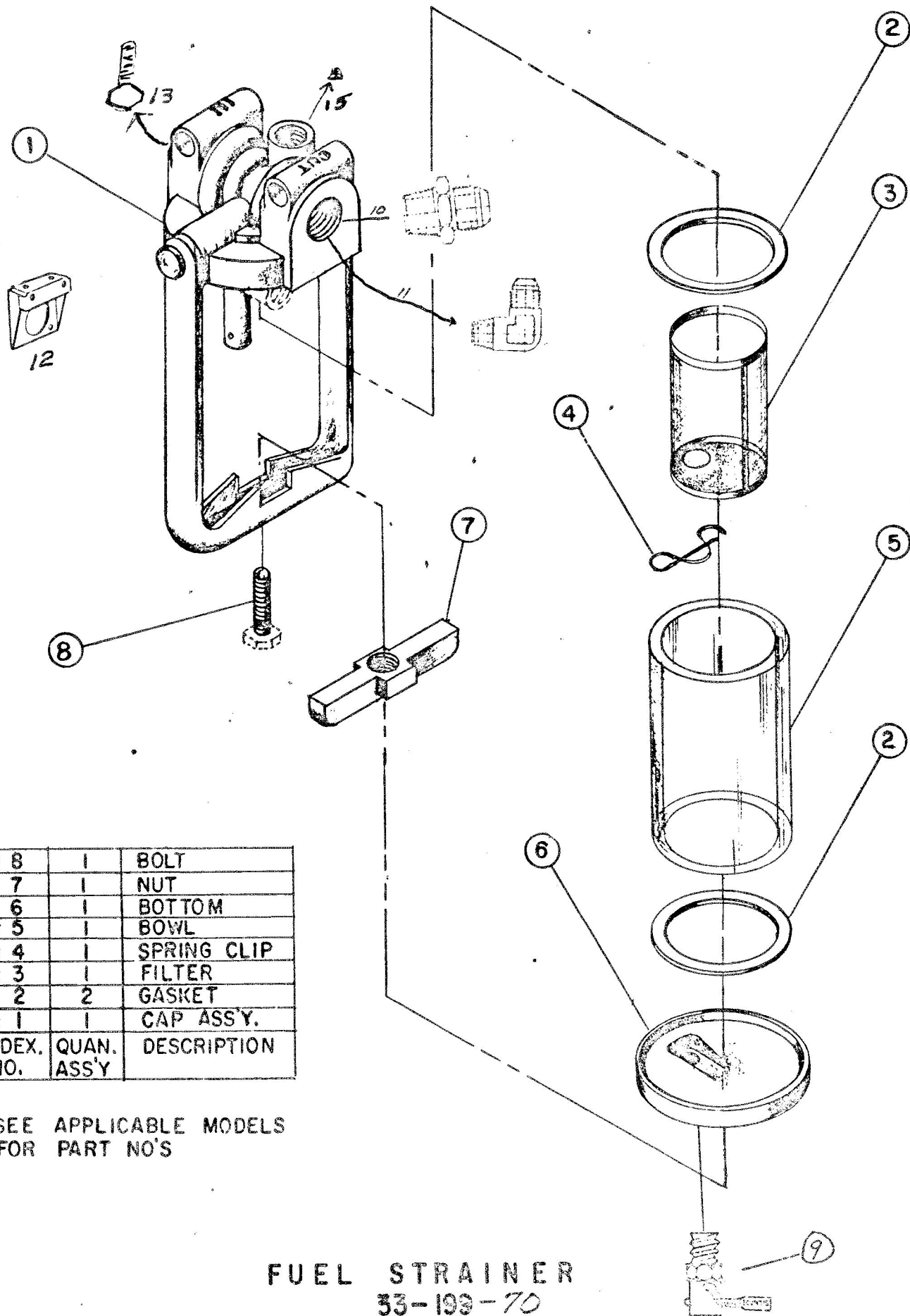






KEY	PART NUMBER	NAME	UNIT PER ASSY.	USAGE
1	AN 931-6-10	Grommet	1	2500 & Sub.
2	147-30001-141	Line Assy. Drain from Booster Pump	1	
3	MS 28741-6-0100	Hose Assy. Fuel Pressure	1	
4	147-30001-131	Hose Assy. Fuel Pressure	1	
5	AN 931-6-16	Grommet	1	
6	AN 833-6D	Elbow	1	
7	MS 28741-6-0100	Hose Assy. Fuel Pressure.	1	
8	AN 919-6D	Reducer		
9	MS 28741-4-0040	Hose Assy. Fuel Pressure	1	
10	2140-52	Fitting, Drain	1	
11	AN 833-6D	Elbow	1	
12	4140-00-17N	Fuel Booster Pump REF. Page 69	1	
13	147-30001-135	Line Assy., Fuel Return	1	
	1111-517702	Check Valve, Fuel Flow	1	
15	147-30001-143	Line Assy., Fuel Return	1	
16	AN 931-6-16	Grommet	1	
17	833-6D	Elbow	1	
18	AN 924-6D	Nut,	1	
19	MS 28741-6-0184	Hose Assy., Fuel Return	1	
20	AN 822-6D	Elbow	1	
21	AN 833-6D	Elbow	1	2500 & Sub.
22	154-48001-104	Fuel Return to Line Assy. Main Tank	1	
23	AN 833-6D	Elbow	1	
24	MS 28741-6-0104	Fuel Strainer to Hose Assy. Booster Pump	1	
25	AN 931-6-16	Elbow	1	
26	147-31001-175	Fuel Strainer to Line Assy. Booster Pump	/	
27	AN 815-6D	Union, Flared	1	

FUEL SYSTEM from FUEL STRAINER TO ENGINE PUMP



* 8	1	BOLT
7	1	NUT
6	1	BOTTOM
* 5	1	BOWL
* 4	1	SPRING CLIP
* 3	1	FILTER
2	2	GASKET
* 1	1	CAP ASS'Y.
INDEX. NO.	QUAN. ASS'Y	DESCRIPTION

\* SEE APPLICABLE MODELS  
FOR PART NO'S

FUEL STRAINER  
33-199-70  
FIGURE 31



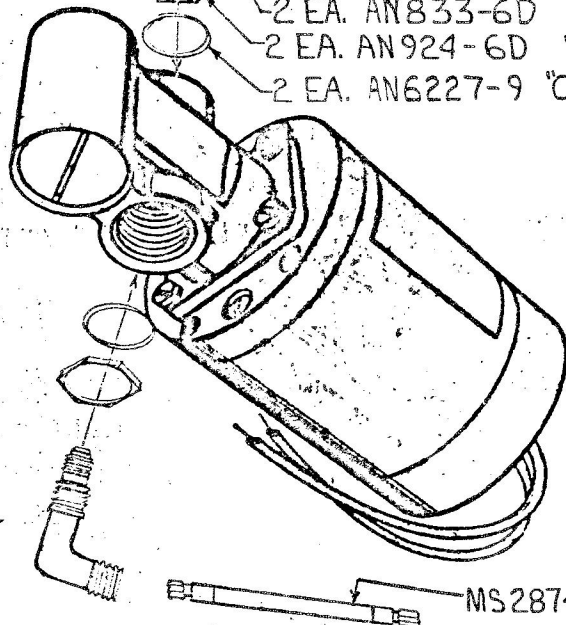
# OVERHAUL with PARTS BREAKDOWN

## PUMPS

ELECTRIC-FUEL AUXILIARY



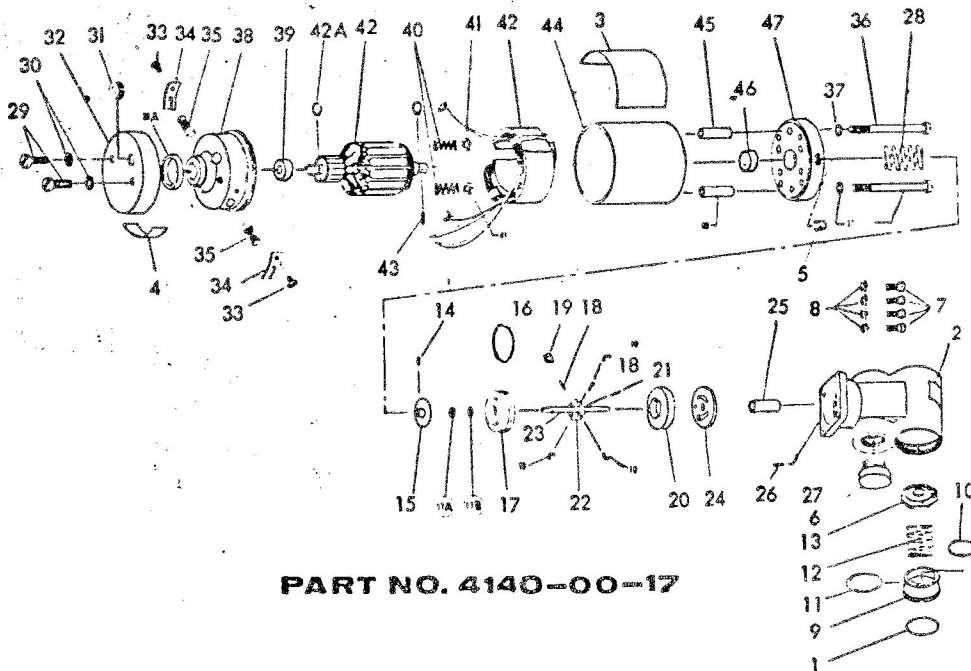
2.8741-6-0084 REAR HOSE



- 2 EA. AN833-6D EL BOW
- 2 EA. AN924-6D NUT
- 2 EA. AN6227-9 "O" RING

4140-00-17N

MS28741-6-0100 FRONT HOSE



PART NO. 4140-00-17

EXPLODED VIEW  
FIGURE 32

# PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	NO. REQUIRED
1	2140-73	PLATE, INSTRUCTION	1
2	2140-74	PLATE, IDENTIFICATION	1
3	2140-76	PLATE, IDENTIFICATION	1
4	Not Used		
5	2140-72	PLUG, DRAIN (AN935-D1)	1
6	SP-6	PLUG, PROTECTIVE	2
7	2140-59	SCREW, MACHINE (AN501-10-9)	4
8	2140-60	WASHER, LOCK (AN935-10L)	4
9	2140-56	PLUG, THREADED	1
10	2140-87	SPACER, SPRING	AR
11	2140-57	PACKING, "O" RING	1
12	2140-38	SPRING, HELICAL	1
13	2140-36	SWING CHECK ASSY	1
14	2172-55	PIN, STRAIGHT, SLINGER	1
15	2140-18	SLINGER, RING	1
16	2140-35	PACKING, "O" RING (P/O ITEM 17)	1
17	2140-12	BEARING ASSY	1
18	2140-16-1	PIN, STRAIGHT, VANE	2
19	2140-21	VANE ASSY	4
20	2140-07	SPACER	1
21	2140-09-1	PIN, STRAIGHT, ROTOR	1
22	2140-09	ROTOR	1
23	2140-08-1	SHAFT	1
24	2140-06-1	PLATE, BEARING	1
25	2140-17	BEARING, SLEEVE	1
26	2172-41	FIN, STRAIGHT, HOUSING	1
27	4140-14	BODY, PUMP	1
28	2140-15	SPRING, HELICAL	1

ITEM NO.	PART NUMBER	DESCRIPTION	NO. REQUIRED
29	2140-64	SCREW, MACHINE (AN500D8-12)	2
30	2140-63	WASHER, LOCK (AN936A8)	2
31	2140-35	GROMMET (AN931-3-5)	1
32	2140-28	COVER	1
33	2140-69	SCREW (AN51504-4)	2
34	2140-68	RETAINER, BRUSH	2
35	2140-51	BRUSH ASSY	2
36	2140-65	SCREW, MACHINE (AN500D8-37)	2
37	2140-63	WASHER, LOCK (AN936A8)	2
38	3140-30	END BELL, MOTOR	1
38A	2140-70	SLEEVE	1
39	2140-62	BEARING, BALL	1
40	2140-71	SPRING, HELICAL	2
41	2140-60	WASHER, LOCK (AN935-10L)	2
42	3140-37-12	ARMATURE AND FIELD ASSY	1
42A	2140-61	RING, RETAINING (P/O ITEM 42)	2
43	2140-50-1	PIN, STRAIGHT	1
44	2140-29	SHELL, MOTOR	1
45	2161-23	SPACER, STANDOFF	2
46	2140-62	BEARING, BALL	1
47	3140-22-5	END BELL, MOTOR	1

FIGURE 32

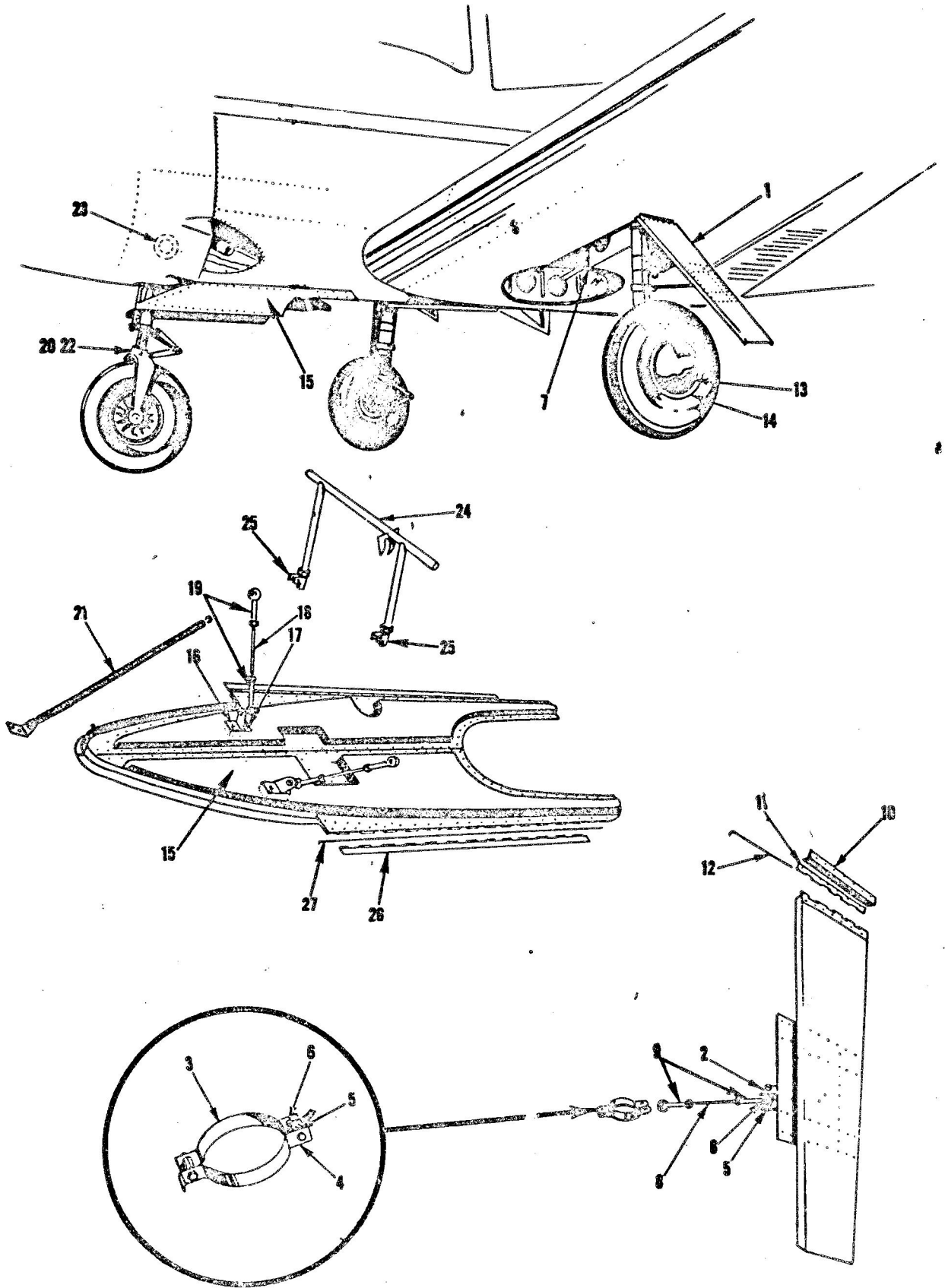


FIGURE 33 - LANDING GEAR FAIRINGS

KEY	PART NAME	DESCRIPTION	UNIT PER ASSY.	USAGE 1890 & Sub.
1	161-33002-1	Door Assy. Main Land. Gear Fair. L.H.	1	
	161-33002-2	Door Assy. Main Land. Gear Fair. R.H.	1	
2	161-33002-3	Bracket Assy.	1	
	AN 526-1032-R9	Screw	2	
	AN 365-1032	Nut - Self Locking	2	
3	161-33002-17	Bracket Assy.	2	
4	AN 5-10A	Bolt - Bracket Attach.	1	
	AN 365-524	Nut - Bracket Attach.	1	
	AN 3-15A	Bolt - A/C 10-32	1	
	AN 365-1032	Nut - Self Locking	1	
5	145-33309	Spacer	1	
6	145-33309-2	Spacer	1	
7	161-33002-23	Stop Assy.	2	
	AN 503-8-8	Screw - Stop Angle Attach.	2	
	AN 935-8	Washer - Stop Angle Attach.	2	
8	145-33303-3	Link - Main Gear Fairing Operating	1	
	145-33303-5	Stud	1	
9	F 34-14	Rod End	2	
	AN 316-4R	Nut - Aircraft Check	2	
	AN 380-2-3	Cotter	1	
10	145-33301-3	Angle	1	
	161-33002-6 & -8	Hinge Half - Main Gear Fairing R.H.	1	
11	161-33002-5 & -7	Hinge Half - Main Gear Fairing L.H.	1	
12	161-33002-9	Hinge Pin - Main Gear Fairing	1	
13	9532978	Wheel Cover	2	
14	9532979	Snap Ring	1	
15	145-33306-1	Door Assy. - Nose Wheel Fair. L.H.	1	1890 & Sub.
	145-33306-2	Door Assy. - Nose Wheel Fair. R.H.	1	THRU 2499

L. G. FAIRINGS  
FIGURE 33

72

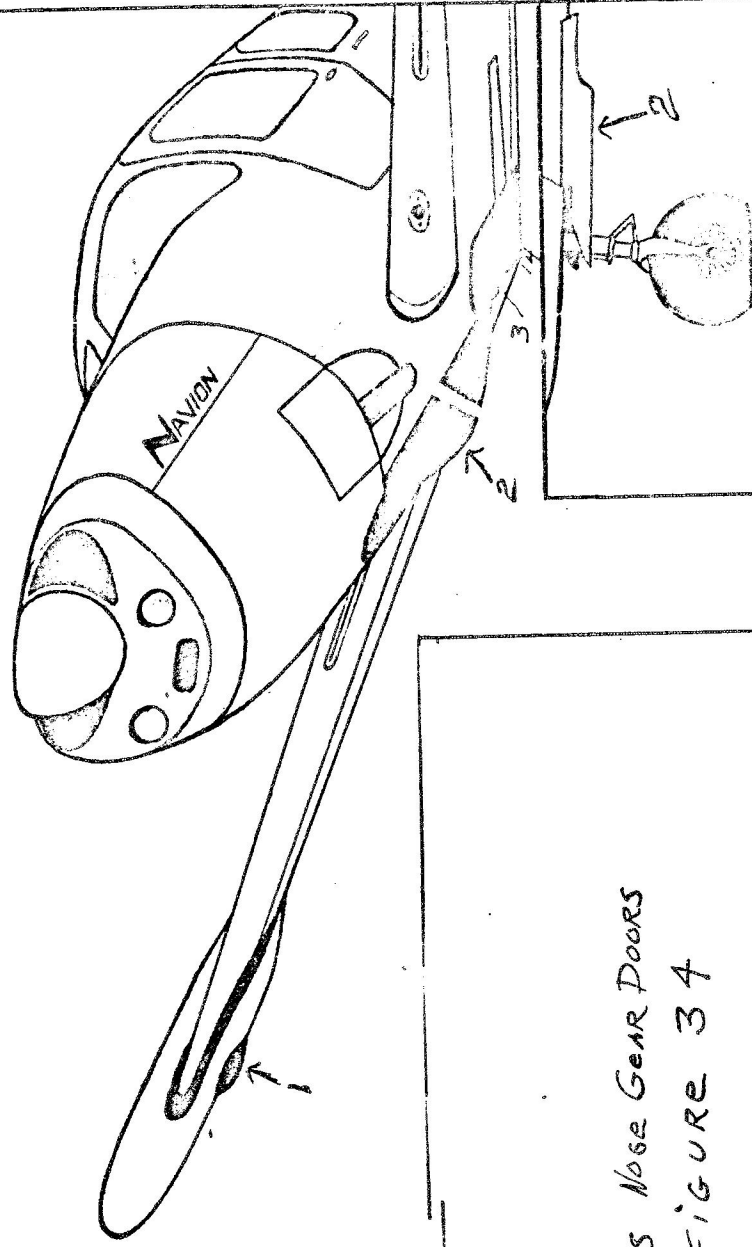


KEY	PART NAME	DESCRIPTION	UNIT PER ASSY.	USAGE
16	145-33306-13	Clip	1	
17	145-33306-14	Clip	1	
	AN 526-1024-14	Screw - Truss Head Course & Fine Thread	2	
	AN 365-1032	Nut - Self Locking	2	
	AN 960-10	Washer - Plain	2	
	145-33303-3	Link Assy. Nose Gear Fair.	2	
18	145-33303-5	Stud	1	
19	F 34-14	Rod End	2	
	AN 316-4R	Nut - Aircraft Check	2	
	AN 380-2-3	Cotter	2	
20	145-34143-3	Collar Assy. - Nose Gear	1	
	4B16CF6-12	Bearing	2	
21	145-33307	Spring Assy. - Nose Wheel Fairing	1	
22	145-33308-7	Stop Assy. - Nose Wheel Fairing	1	
23	145-33305	Bearing Block Assy. - Nose Wheel Fair.	2	
	145-33305-3	Block	1	
	LSS8	Bearing - Press Fit	1	
24	145-33304	Arm Assy. - Nose Wheel Fair. Actuat.	1	
25	145-33304-4	End Assy. - Nose Wheel Fair Act. Arm	2	
	AN 316-6R	Check Nut	2	
26	145-33306-9	Hinge Half	2	
27	145-33306-11	Hinge Pin	2	
	145-33302-16	Spacer Main Gear Fairing	1	
	145-33308-7	Stop Assy. Nose Wheel Fairing	1	

L. G. FAIRINGS  
FIGURE 33

711 yon

MAIN GEAR FAIRING & FULL NOSE GEAR DOOR KIT  
AND  
WING TIP TANK FAIRING KIT  
FOR NAVION MOD. A,B,D,E,F G-H



FAIRING KIT interchangeable with Navion nose gear fairings. Same linkage is used.

PES

Fiberglass Nose Gear Doors  
FIGURE 34



*Navion*

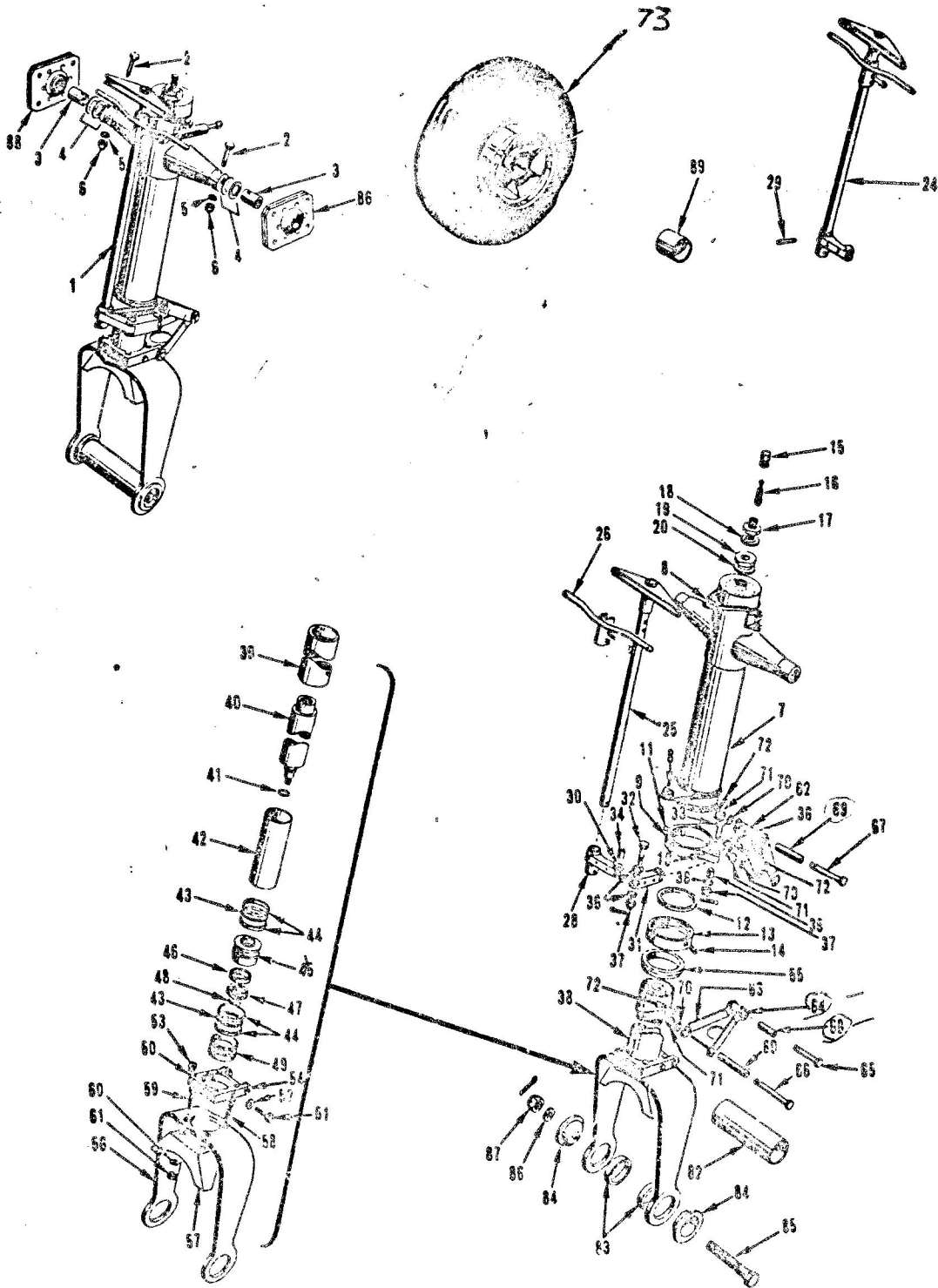


FIGURE 35 - NOSE GEAR SHOCK STRUT

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	145-34102-30	Shock Strut Assy. N.L.G.	1	2351 & Sub.
2	AN 314A	Bolt	2	
3	145-34197	Pin Nose L. G. Trunnion	2	
4	2W1C-49-32-10	Washer	2	
	2W1C-49-32-19	Washer	2	
	2W1C-49-32-31	Washer	2	
	2W1C-29-20-32	Washer	1	
	2W1C-30-40-63	Washer	2	
5	AN 960-10	Washer	2	*
6	AN 365-1032	Nut, Self Locking	2	
7	145-34103-30	Casing Assy. N. L. Gear	1	
8	4B16RF12-32	Bushing	2	
9	145-34166	Collar Assy. Nose Gear Oleo Torque	1	
10	4B16CF6-12	Bearing Oil Impregnated	4	
11	NAS 2-101	Fitting Lubrication	1	
12	AN 6231-21	Wiper Ring N. L. Gear	1	
13	145-34135	Nut Wiper Ring Retainer	1	
14	145-34212-3	Screw Set	1	
15	AN 813-1A	Car High Pressure Air Valve	1	
16	AN 809-1	Core " " " "	1	
17	AN 812-1	Body	1	
18	AN 960-1416L	Washer Plain	1	
19	AN 316-14R	Nut Aircraft Check	1	
20	AN 901-5C	Gasket, Metal Tube Connection Seal	1	
21		Not Applicable		
22		" "		
23		" "		
24	145-34102-SA3	Tube Assy. Nose Wheel Torque	1	

77

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
25	145-34126-1	Tube Assy. Nose Wheel Steer.Torque	1	
26	145-34189	Arm Assy. Nose L. G. Oleo Center	1	
27				
28	145-34196	Link Assy. N.G. Shock Strut Male	1	
29	AN 386-2-9A	Pin	2	
30	4B16-CF6-12	Bearing	2	
31	145-34137-1	Link Assy. N.G. Shock Strut Steer Frame	1	
32	AN 4-13	Bolt	1	
33	AN 4-14	Bolt	1	
34	145-34155-4	Spacer	1	
35	145-34155-5	Spacer	1	
36	AN 960-416	Washer, Plain	2	
37	AN 320-4	Nut A/C Shear	2	
38	145-34116	Cyl. Assy. Nose Gear Fork & Inner	1	
39	145-34104	Cyl. Assy. Nose Gear Inner	1	
40	145-34107	Tube Assy. Nose Gear Orifice	1	
41	AN 6227-11	Packing "O" Ring Hydraulic	1	
42	145-34148	Tube Nose Gear Strut Ext. Stop	1	
43	AN 6227-27	Packing "O" Ring Hyd.	1	
44	AN 6246-27	Ring Hyd. Packing Back Up	4	
45	145-34128	Bearing Nose Gear Orifice Tube	1	
46	MRC202S-T6	Bearing	1	
47	145-34203	Ring, Nose Gear Bearing Retainer	1	
48	AN 316-8R	Nut	1	
49	145-34129	Diaphragm Nose Gear Strut	1	
50	145-34143-3	Collar Assy. N.G. Shock Strut	1	
51	AN 5-31A	Bolt A/C 5/16-24	1	
52	AN 960-516	Washer, Plain	1	

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
53	AN 365-524	Nut Self Locking	1	
54	4B16-CF6-12	Bearing Shock Strut Collar	2	
55	145-34134	Bearing N.G. Strut External	1	
56	145-34117	Fork, Nose Gear Oleo	1	
57	145-34153	Scraper N.G. Tire Mud	1	
58	AN 5-17A	Bolt A/C 5/16 x 24	2	
59	AN 5-20A	Bolt	2	
60	AN 960-516	Washer, Plain	4	
61	AN 365-524	Nut Self Lock	4	
62	145-34139-1	Link Assy. N.G. Torque Female Up	1	
63	145-34138-1	Link Assy. N.G. Torque Male Lower	1	
64	4B16CF6-12	Bearing	2	
65	AN 4-17	Bolt A/C 1/4 - 28	1	
66	AN 4-36	Bolt A/C 1/4 - 28	1	
67	AN 24-56	Bolt Clevis 1/4 - 28	1	
68	145-34155-3	Spacer N.L.G. Link Bolt	1	
69	145-34155-6	Spacer N.L.G. Link Bolt	2	
70	AN 960-416	Washer Plain	3	
71	AN 310-4	Nut Castle	3	
72	AN 380-2-4	Cotter	3	
73		Nose Wheel - Ref. Page <u>89</u>		
74		Not Applicable		
75		" "		
76		" "		
77		" "		
78		" "		
79		" "		
80		" "		





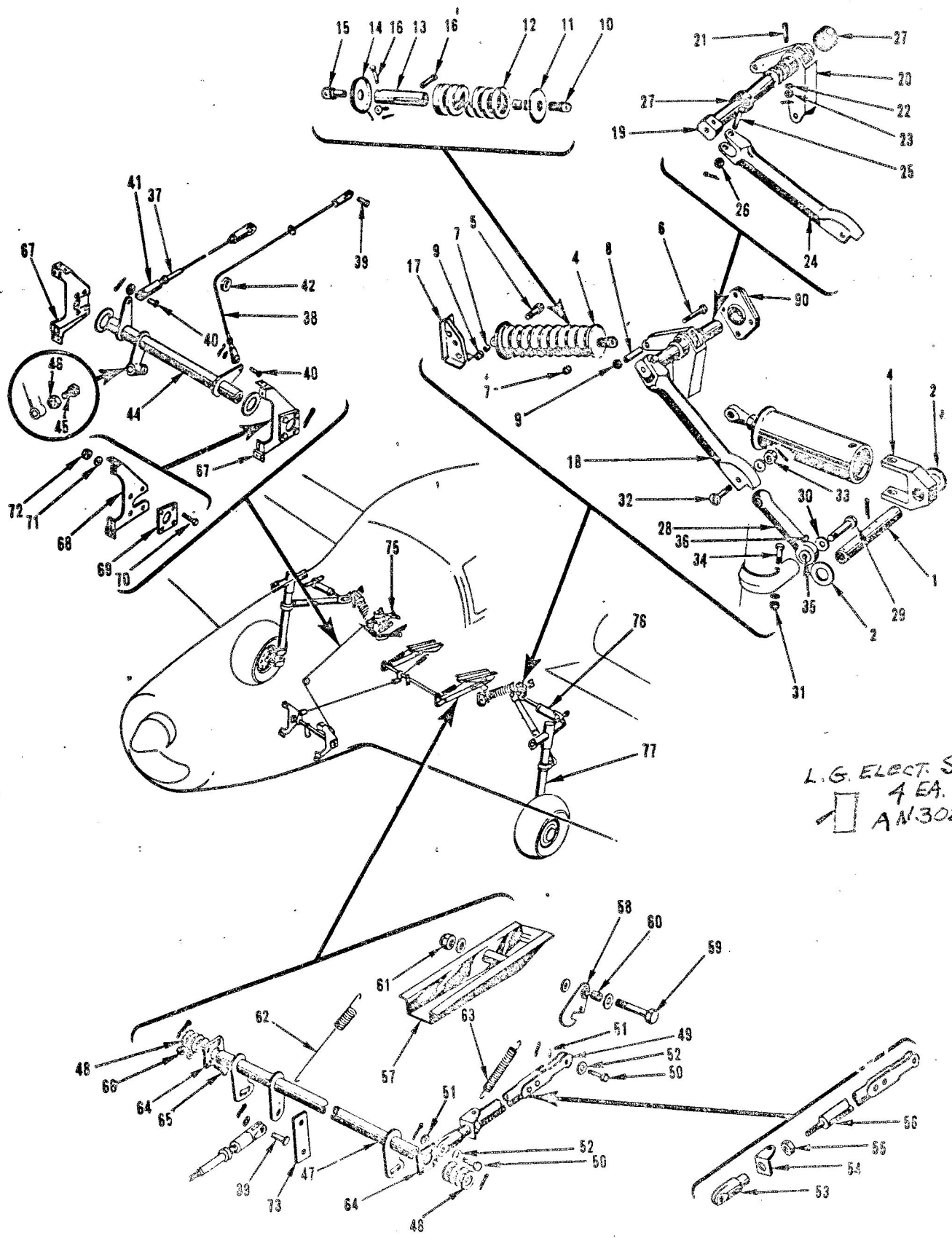
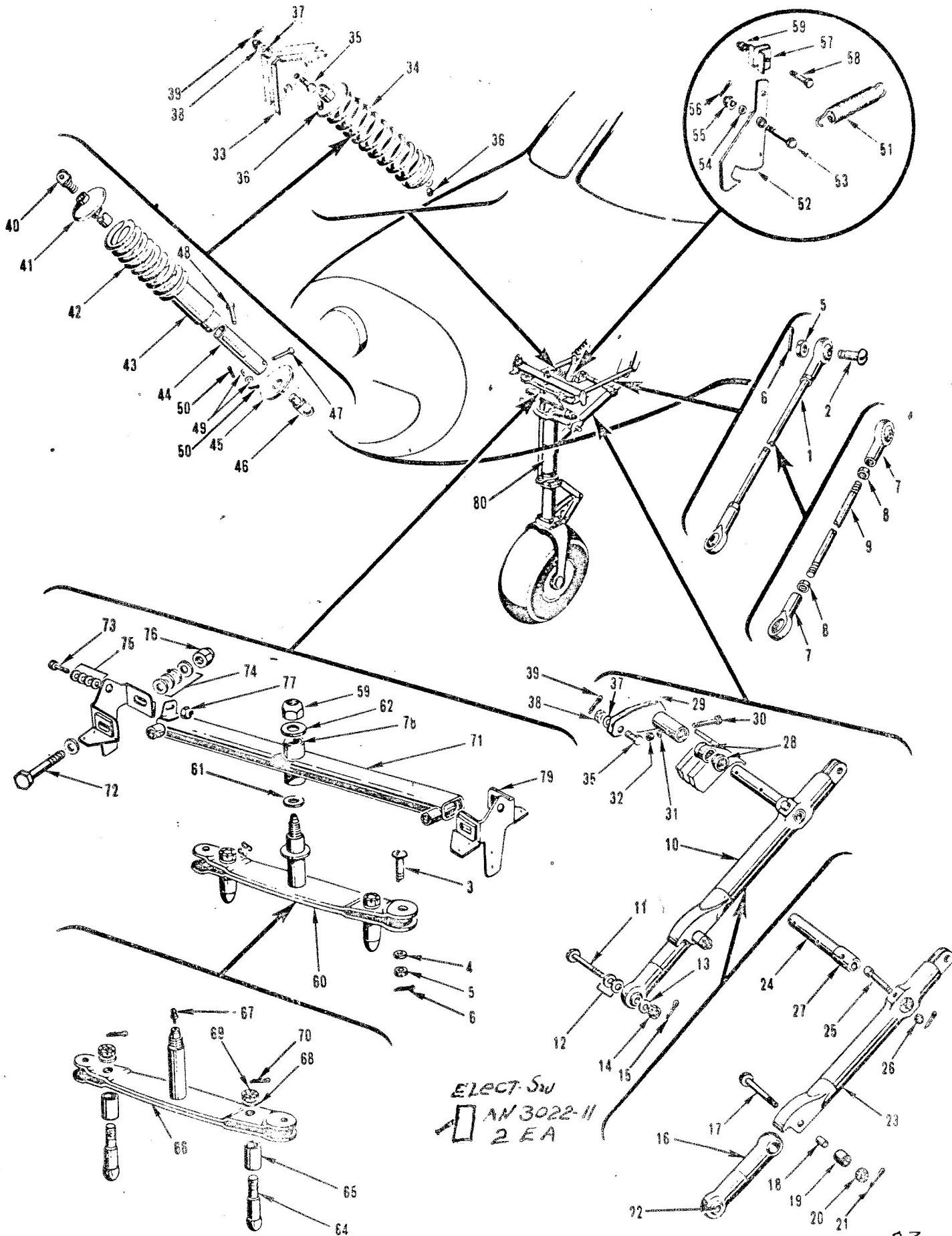


FIGURE 36. MAIN LANDING GEAR MECHANISM



FIGURE 36 - MAIN LANDING GEAR MECHANISM

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		143-33153-3					Shaft - Main Landing Gear Actuating Strut Support	2	2351 + Sub
2		AN960-1216					Washer - Plain	2	
3		143-33154-3					Universal - Main Landing Gear Actuating Strut	2	
4	2503	143-33160-4					Bungee Assy - Landing Gear Down Lock	2	
5		AN4-7A					Bolt - Aircraft 1/4-28	1	
6		AN4-15A					Bolt - Aircraft 1/4-28	1	
7	2504	145-34155-7					Spacer - Landing Gear Link Bolt	1	
8	8368	4S4-8-24					Spacer	1	
9		AN365-428					Nut - Self Locking	2	
10	2505	143-33160-11					Rod End - Landing Gear Down Lock	1	
11	2506	143-33160-13					Tube Assy - Landing Gear Down Lock	1	
12	9164	M97					Spring (Muelhausen)	1	
13	2507	143-33160-10					Tube - Landing Gear Down Lock	1	
14	2508	143-33160-15					Cap - Tube	1	
15	2509	143-33160-6					Rod End	1	
16		AN392-19					Pin - Flat Head 1/8	2	
17	2510	143-33161-1-SA/1					Fitting Assy - Landing Gear Bungee Attach LH	1	
		143-33161-2-SA/1					Fitting Assy - Landing Gear Bungee Attach RH	1	
18	2512-10	145-33171-101					Shaft Assy - Side Brace Torque LH	1	
	2513-10	145-33171-102					Shaft Assy - Side Brace Torque RH	1	
19	2514	143-33156					Shaft - Side Brace Support	1	
20	2515	143-33166					Bellcrank Assy - Main Landing Gear Retracting	1	
21		AN386-3-10					Pin - Threaded Taper	2	
22		AN975-4					Washer - Taper Pin	2	
23		AN320-4					Nut - Aircraft Shear	2	
24		143-33165-20					Brace Assy - Main Landing Gear Upper Side	1	
25	2517	145-33184					Bolt - Side Brace to Torque Shaft Attaching	1	
26		AN320-7					Nut - Aircraft Shear	2	
27	2518	143-33155					Retainer - Side Brace Support Shaft Oil	1	
28	2519	143-33164					Link Assy - (Includes Bearing and Lubricator)	1	
29	2520	145-33160					Pin - Landing Gear Down Link	1	
30	8533	2W1-40-44-62					Washer	1	
31		AN365-428					Nut - Self Locking	1	
32		AN26-28					Bolt - Clevis 3/8-24	1	
33		AN320-6					Nut - Aircraft Shear	1	
34		AN4-15A					Bolt - Aircraft 1/4-28	1	
35	2521	143-33164-6					Bearing - Link	1	
36		NAS2-101-(NAS 2-101)					Lubricator Fitting	1	
37									
		143-33175-8					Cable Assy - (Includes Clevis Terminal)	1	25199 Sub 2351 + Sub
38		143-33175-10					Cable Assy - (Includes Clevis Terminal)	1	
		143-33175-18					Cable Assy - (Includes Clevis Terminal)	1	
39		AN393-7					Pin - Flat Head 3/16	1	
40		AN393-11					Pin - Flat Head 3/16	1	
41		AN665-10R					Terminal - Cable	1	
42							Pulley - Lock Release Cable Idler	1	
	2539	145-33176					Pulley - Lock Release Cable Idler	1	
43		NAS73-3-005					Bushing	1	
44	2524	145-33118					Shaft Assy - Landing Gear Lock Release Torque	1	
45	8050	5B1-7					Bolt - Adjustment	1	
46		AN345-10					Nut - Light Hexagon (Fine Thread)	1	
47	2525	145-33109					Shaft Assy - Main Landing Gear Uplock Torque	1	
48	8491	2W1-34-28-64					Washer	8	
49	2526	145-33167					Rod Assy - Main Landing Gear Uplock	2	
50		AN393-13					Pin - Flat Head 3/16	2	
51		AN960-10L					Washer - Plain	2	
52	8473	2W1-12-12-20					Washer	2	
53		AN486-4					Rod End - Clevis Adjusting	1	
54	2527	145-33168					Clip - Main Landing Gear Uplock Spring	1	
55		AN316-4R					Nut - Aircraft Check	1	
56	2528	145-33167-6					Tube Assy - Main Landing Gear Uplock	1	
57	2530	145-33170-1					Bracket Assy - Main Landing Gear Uplock LH	1	
	2531	145-33170-2					Bracket Assy - Main Landing Gear Uplock RH	1	
58	2529	145-33169					Hook Assy - Main Landing Gear Uplock	2	
59		AN6-27A					Bolt - Aircraft 3/8-24	1	
60		NAS72-6-006					Spacer	1	
61		AN365-624					Nut - Self Locking	1	
62	2532	143-33181					Spring - Lock Release Cable Tension	1	
63	2533	145-33172					Spring - Main Landing Gear Uplock	2	
64	2534	145-33162					Block - Uplock Torque Shaft Bearing	2	
65		AN3-5A					Bolt - Aircraft 10-32	4	
66		AN365-1032					Nut - Self Locking	4	
67	2535	143-33158					Bracket Assy - Lock Release Torque Shaft	2	
68	2536	143-33158-3					Bracket - Lock Release Torque Shaft	2	
69	2537	143-33157					Bearing	1	
70		AN3-5A					Bolt - Aircraft 10-32	4	
71		AN960-10L					Washer - Plain	4	
72		AN365-1032					Nut - Self Locking	4	
73		145-33120-1					Block - Uplock Shaft Support	1	
		AN365-832					Nut - Self Locking	2	
74							Fitting - Trunnion Bearing (See Page 9)	Ref	
75							Valve - Hydraulic Power & Control (See Page 110)	Ref	
76							Actuating Cylinder - Complete Hydraulic (See Page 114)	Ref	
77							Snock Strut - Main Landing Gear (See Page 85)	Ref	



ELECT SW  
AN 3022-11  
2 EA

FIGURE 37 - NOSE GEAR MECHANISM



FIGURE 37 - NOSE GEAR MECHANISM

KEY	ITEM NO.	PART NUMBER	NOMENCLATURE				UNITS PER ASSY	USAGE
			1	2	3	4		
1		145-34149	Rod Assy	-	Aux. Ldg. Gear Steering Mech. Connecting	2		
2		AN24-16	Bolt	-	Clevis 1/4-28	1		
3		AN24-19	Bolt	-	Clevis 1/4-28	1		
4		AN960-416	Washer	-	Plain	2		
5		AN320-4	Nut	-	Aircraft Shear	2		
6		AN380-2-2	Cotter	-		2		
7		REAF5	Bearing	-	Rod End (Fafnir)	1		
8		AN316-5R	Nut	-	Aircraft Check	1		
9		145-34149-3	Rod	-		1		
10		145-34120-10	Link Assy	-	Auxiliary Landing Gear Drag	2		
11		NAS57-21	Bolt	-		1		
12		2W1-30-40-63	Washer	-		1		
13		2W1-29-20-32	Washer	-		1		
14		AN320-7	Nut	-	Aircraft Shear	1		
15		AN380-3-3	Cotter	-		1		
16		145-34164	Link Assy	-	Drag Brace Lower	1		
17		145-34121	Bolt	-	Drag Brace Over Center Joint	1		
18		145-34182	Bushing	-	Auxiliary Landing Gear Uplock Roller	1		
19		145-34183	Bushing	-	Auxiliary Landing Gear Drag Link	2		
20		AN320-7	Nut	-	Aircraft Shear	1		
21		AN380-3-3	Cotter	-		1		
22		145-34164-7	Bearing	-	Drag Brace Lower Link	1		
23		145-34106-10	Link Assy	-	Nose Gear Retracting Torque	1		
24		145-34108	Shaft Assy	-	Drag Brace Torque (Includes Collar)	1		
25		145-34123	Bolt	-	Special	1		
26		AN320-7	Nut	-	Aircraft Shear	1		
27		145-34144	Collar	-		1		
28		4317-14-60	Bushing	-		1		
29				-				
30		145-34314	Crank Assy	-	Drag Link Torque	2		
31		AN4-13A	Bolt	-	Aircraft 1/4-28	2		
32		AN960-416	Washer	-	Plain	2		
33		AN365-428	Nut	-	Self Locking	1		
34		145-34119	Bracket Assy	-	Aux. Landing Gear Bungee Support	1		
35		143-33160-3	Bungee Assy	-	Landing Gear Down Lock	2		
36		AN4-7	Bolt	-	Aircraft 1/4-28	2		
37		145-34155-7	Spacer	-	Landing Gear Link Bolt	2		
38		AN960-416	Washer	-	Plain	2		
39		AN310-4	Nut	-	Aircraft Castle	2		
40		AN380-2-2	Cotter	-		2		
41		143-33160-11	End	-	Tube	1		
42		143-33160-17	Tube Sub Assy	-	Bungee	1		
43		M100	Spring	-	Landing Gear Down Lock	1		
44		143-33160-19	Collar	-	Landing Gear Down Lock	1		
45		143-33160-18	Tube End	-	Landing Gear Down Lock	1		
46		143-33160-15	Cap	-	Tube	1		
47		143-33160-6	End	-	Tube	1		
48		AN392-19	Pin	-	Flat Head 1/8	1		
49		AN392-23	Pin	-	Flat Head 1/8	2		
50		AN960-4L	Washer	-	Plain	2		
51		AN381-2-6	Cotter	-	(Corrosion Resisting Steel)	1		
52		145-34202	Spring	-	Auxiliary Landing Gear Uplock	1		
53		145-34118	Hook Assy	-	Auxiliary Landing Gear Uplock	1		
54		AN3-11	Bolt	-	Aircraft 10-32	1		
55		AN960-10	Washer	-	Plain	1		
56		AN310-3	Nut	-	Aircraft Castle	1		
57		AN380-2-2	Cotter	-		1		
58		145-34188	Fitting	-	Auxiliary Landing Gear Uplock Engaging	1		
59		AN3-4A	Bolt	-	Aircraft 10-32	1		
60		AN365-1032	Nut	-	Self Locking	1		
61		145-34175	Bellcrank Assy	-	Steering Mechanism	1		
62		2W1-341-32-32	Washer	-		1		
63		145-34191	Washer	-	Steering Bellcrank Shaft	1		
64		AN365-720	Nut	-	Self Locking	2		
65		145-34208	Bolt	-	Special	2		
66		145-34179	Tube	-	Auxiliary Landing Gear Steering Mech. Bolt	1		
67		145-34175-5	Bellcrank Sub Assy	-		1		
68		728-J	Fitting	-	Lubrication	2		
69		AN960-616	Washer	-	Plain	2		
70		AN320-6	Nut	-	Aircraft Shear	2		
71		AN380-3-3	Cotter	-		2		
72		145-34180	Support Assy	-	Aux. Landing Gear Steering Bellcrank	1		
73		AN5-25A	Bolt	-	Aircraft 5/16-24	2		
74		AN3-10A	Bolt	-	Aircraft 10-32	1		
75		AN960-516	Washer	-	Plain	10		
76		AN960-10	Washer	-	Plain	10		
77		AN365-524	Nut	-	Self Locking	2		
78		AN365-1032	Nut	-	Self Locking	1		
79		AN-1017A	Bearing	-	Auxiliary Ldg. Gear Steering Bellcrank	2		
80		145-34207-1	Bracket Assy	-	Steering Bellcrank Support	1		
		145-34207-2	Bracket Assy	-	Steering Bellcrank Support	1		
		145-34102-30	Shock Strut	-	Nose Gear	Ref		



QTY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	145-33102-7	Shock Strut Main L.G. L.H.	1	2351 & Sub.
	145-33102-8	Shock Strut Main L.G. R.H.	1	
2	AN 364-1414	Nut	1	
3	AN 365-524	Nut	1	
4	AN 5-16A	Bolt 5/16 - 24	1	
5	4S3D516-21	Spacer Bolt	1	
6	AN 960-516	Washer, Plain	3	
7	143-33151	Shaft Assy. M.L.G. Trunnion	1	
8	2W1-57-48-125	Washer	2	
9	2W1-65-48-25	Washer	2	
	2W1-65-48-31	Washer	4	
	2W1-65-48-62	Washer	2	
	2W1-65-48-125	Washer	2	
10	145-33103-101	Outer Cyl. Assy. L.H.	1	
	145-33103-102	Outer Cyl. Assy. R.H.	1	
11	145-33156	Bushing	2	
12	AN 813-1A	Cap High Pressure Air Valve	1	
13	AN 809-1	Core High Pressure Air Valve	1	
14	AN 812-1	Body High Pressure Air Valve	1	
15	AN 901-5C	Gasket Metal Tube Conn. Seal	1	
16	NAS 2-101	Fitting Lubrication	1	
17	NAS 2-201	Fitting Lubrication	1	
18	AN 6227-34	Packing "O" Ring Hyd.	1	
19	AN 6246-34	Ring Hyd. Packing Back Up	1	
20	145-33205-7	Piston Axle M.G. Shock Strut L.H.	1	
	145-33205-8	Piston Axle M.G. Shock Strut R.H.	1	
21	145-33104-9	Cyl. Assy. Inner Shock Strut	1	

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
22	AN 4-31A	Bolt 1/4 - 28	1	
23	AN 960-416	Washer Plain	2	
24	AN 365-428	Nut Self Lock.	2	
25	143-33113-10	Fitting Assy. Oleo Axle R.H.	1	
	143-33113-9	Fitting Assy. Oleo Axle L.H.	1	
26	145-33119	Roller Main L.G. Uplock	1	
27	AN 960-416L	Washer Plain	1	
28	145-33212	Bolt M.L.G. Jack Fitting	1	
29	145-33161	Axle M.L.G.	1	
30	145-33158	Rod M.L.G. Shock Extension	1	
31	145-33157	Washer Rubber	1	
32	2W1-25-28-63	Washer Plain	1	
33	AN 960-516	Washer Plain	5	
34	AN 365-524	Nut Self Lock.	2	
35	145-33108	Link Assy. Upper	1	
36	145-33107	Link Assy. Lower	1	
37	AN 5-21A	Bolt Center Attach	1	
38	AN 5-31A	Bolt Upper Attach	1	
39	AN 5-32A	Bolt Lower Attach	1	
40	AN 960-516	Washer Plain	3	
41	145-33204-3	Spacer Upper	1	
42	145-33204-4	Spacer	1	
43	145-33204-5	Spacer	1	
44	AN 365-524	Nut	3	
45	4B17-8-50	Bushing Flanged Press Bronze	1	
46	NAS 2-101	Fitting Lubrication	1	
47		Main Gear Wheel See Page 90		
8		Not Applicable		





# NAVION RANGEMASTER

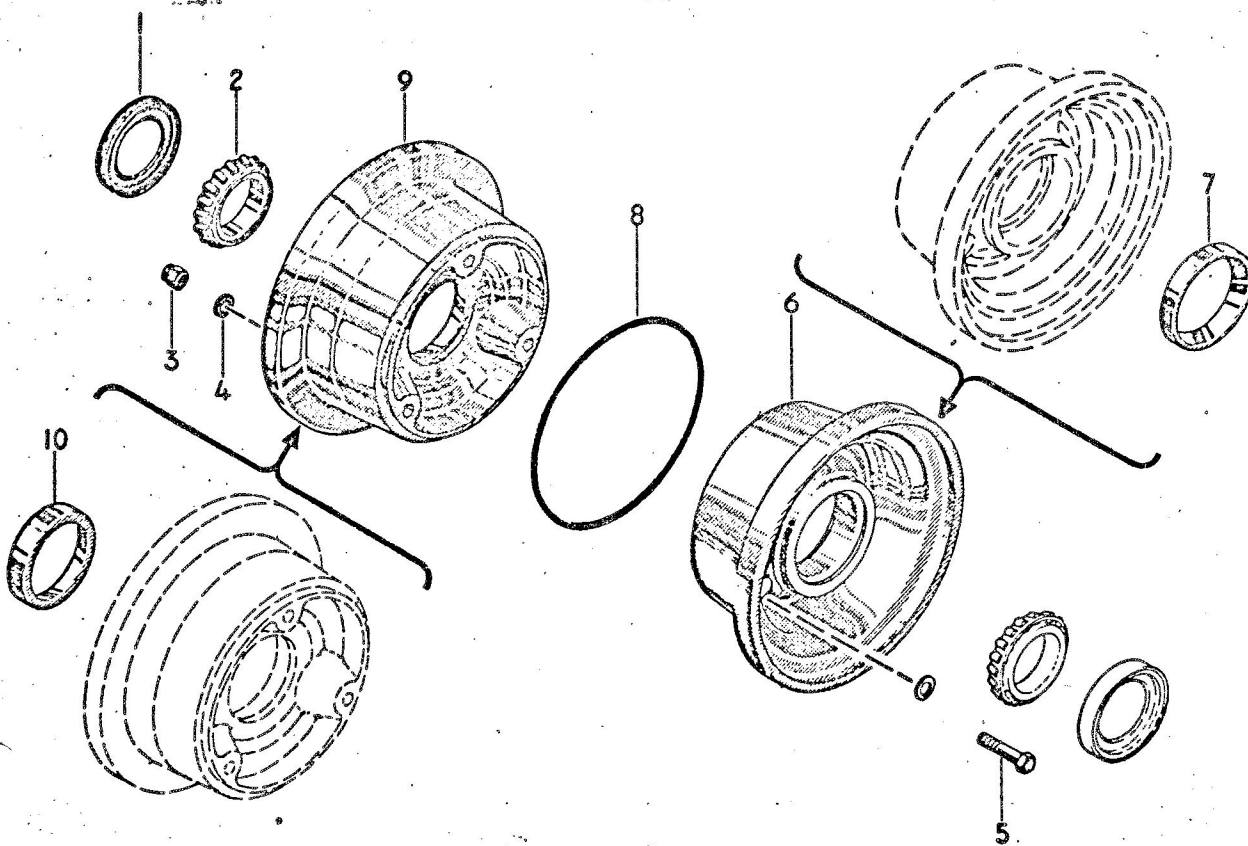


Figure 39 Nosewheel Assembly 9532112

Fig & Index No	Part Number	Description	Goodyear Code Number	Units Per Assy	USAGE
	9532112	Nosewheel Assembly....	9532112	1	2351 4 Sub.
-1	9524218	Seal, Bearing.....	9524218	2	
-2	13889	Cone, Bearing.....	95-0476	2	
-3	32FE-428	Nut, Self locking....	95-7146	3	
-4	AN960-416	Washer.....	95-8897	6	
-5	AN4-13A	Bolt, Wheel.....	95-3139	3	
-6	9524203	Wheel Subassembly, Inboard half.....	9524203	1	
-7	13830	Cup, Bearing.....	95-0477	1	
-8	AN6230B28	Seal, O-ring.....	95-4828	1	
-9	9524202	Wheel Subassembly, Outboard half.....	9524202	1	
-10	13830	Cup, Bearing.....	95-0477	1	

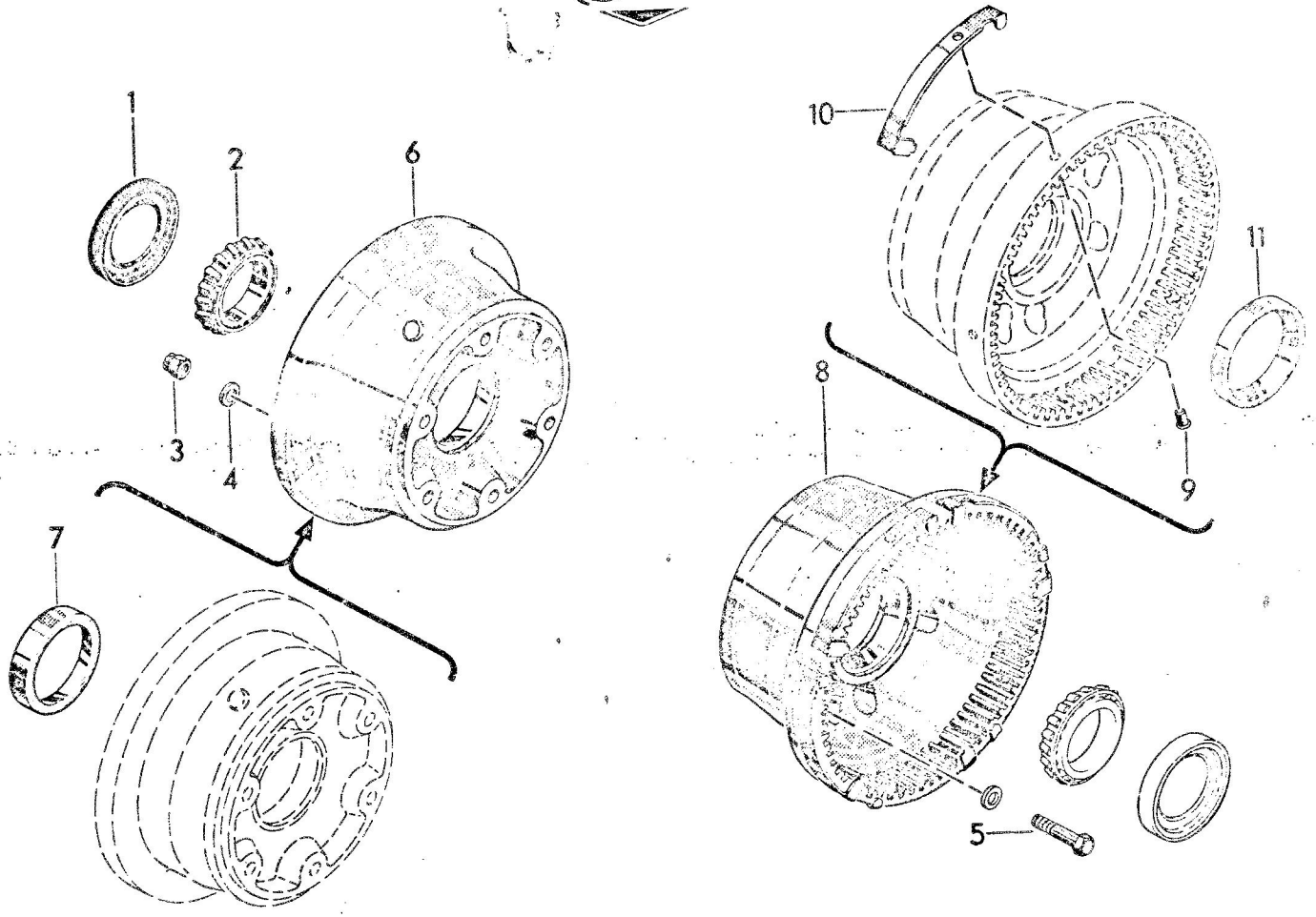


Figure 40 — MAIN WHEEL  
 Assembly No. 9532615

USED ON:

—Navion Rangemaster with 6.50-8 Tire 6PR T.T.

FIGURE 6.50-8MW1		DESCRIPTION							NUMBER
INDEX NO.	PART NO.	1	2	3	4	5	6	7	PER ASSY
	*9532976	WHEEL ASSEMBLY (order 9532615)							1
	9532135	WHEEL ASSEMBLY (order 9532615)							1
	9532615	WHEEL ASSEMBLY							1
-1	9524218	SEAL, Bearing							2
-2	13889	CONE, Bearing							2
-3	32FE-524	NUT, Self locking							12
-4	AN960 516	WASHER							6
-5	AN5-13A	BOLT							1
-6	9525061	WHEEL SUBASSEMBLY, Outboard							1
-7	13830	CUP, Bearing							1
-8	9524231	WHEEL SUBASSEMBLY, Inboard							5
-9	M820496DD3-C	RUFF							1
-10	9532615	CLIP, Disc							1
-11	13830	CUP, Bearing							1

\*Parts for use with 9532976 Wheel only.

\*\*9532979  
 \*\*9532978

RING, Fairly flexible SNAP  
 PARTIAL 1/4" x 1/4"

\*\*Not Illustrated

Articles of this nature are not to be used in the field.

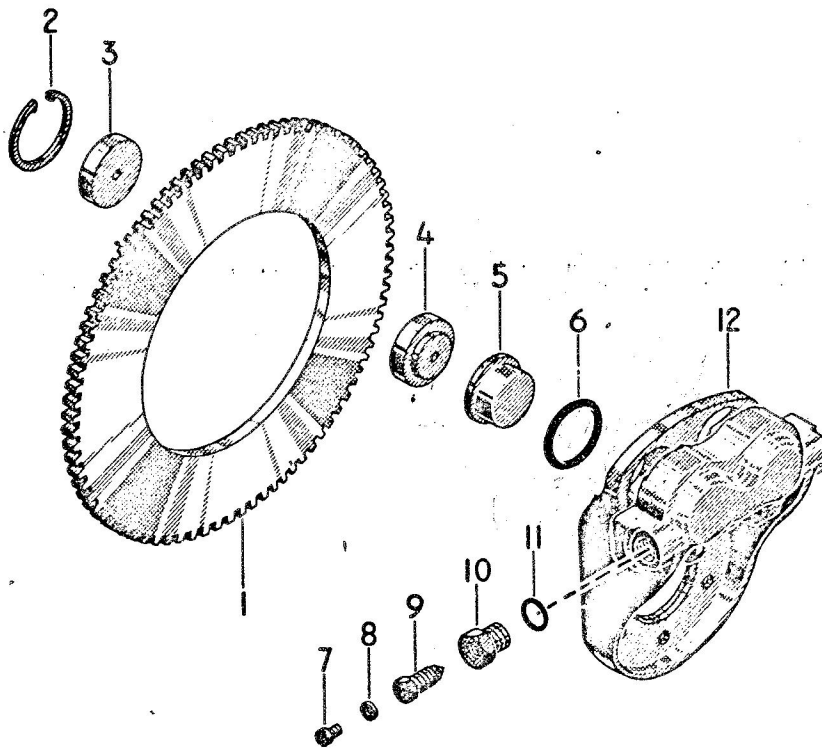
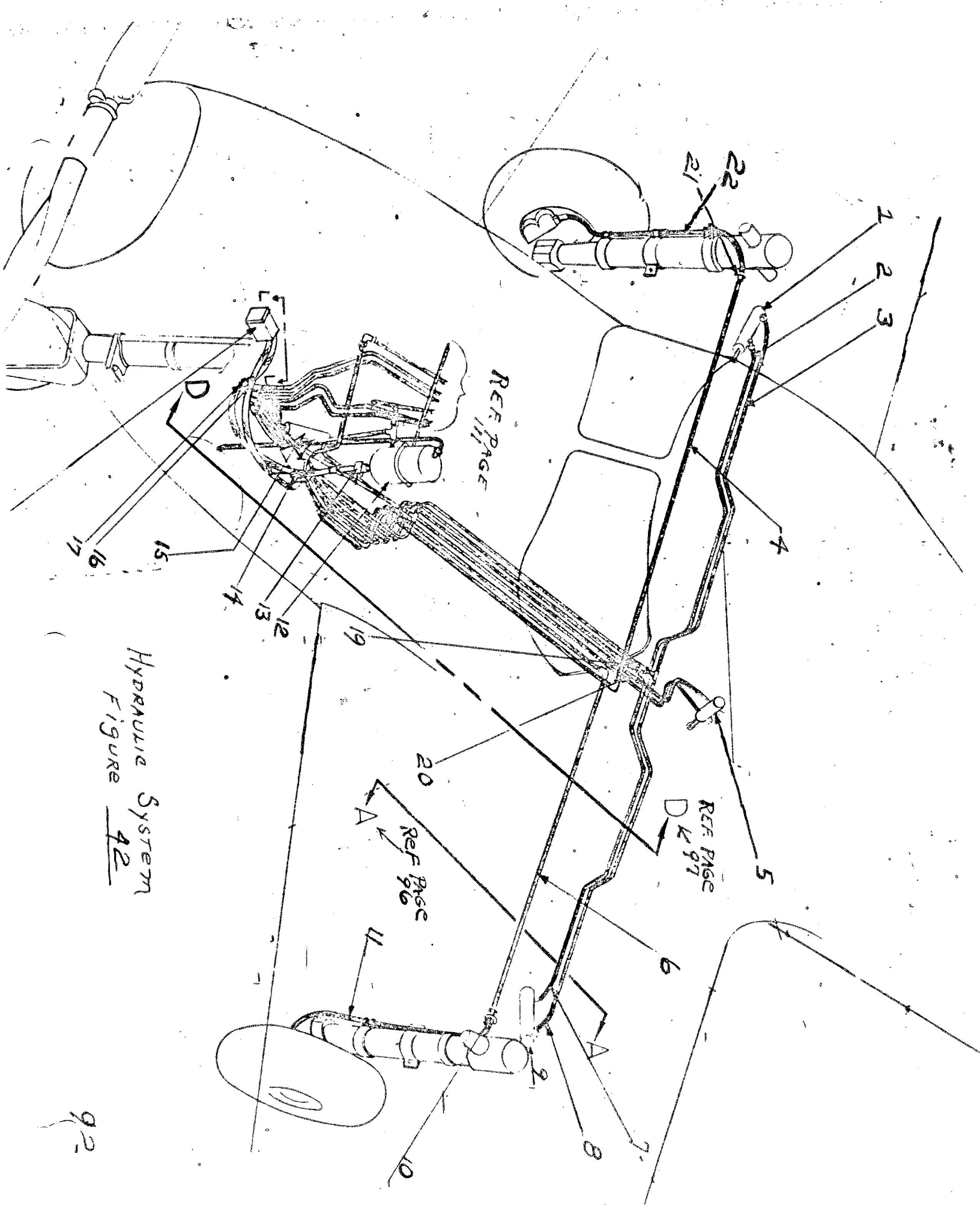


Figure 41 — DUAL CAVITY BRAKE  
Assembly No. 9541868

USED ON: - Navion Rangemaster

FIGURE 6.50-8B7									GOODYEAR	NUMBER	
INDEX	PART NO.	DESCRIPTION							CODE	PER	
NO.		1	2	3	4	5	6	7	NUMBER	ASSY	
	9541868	BRAKE ASSEMBLY . . . . .								39541868	1
-1	9532166	. DISC, Brake . . . . .								39532166	1
-2	NAN150-14	. RING, Retaining . . . . .								395-8072	2
-3	9524805	. LINING, Anvil . . . . .								39524805	2
-4	9524804	. LINING, Brake . . . . .								39524804	2
-5	9524834	. PISTON . . . . .								39524834	2
-6	AN6227B23	. SEAL, O-ring . . . . .								395-4723	2
-7	AN501A10-4	. SCREW . . . . .								395-5054	1
-8	511846-4	. WASHER. . . . .								395-4486	1
-9	AN6204-1	. VALVE, Bleeder . . . . .								395-5204	1
-10	9522134	. ADAPTER, Bleeder . . . . .								39522134	1
-11	MS28778-6	. GASKET. . . . .								395-5588	2
-12	9541869	. HOUSING, Brake . . . . .								39541869	1

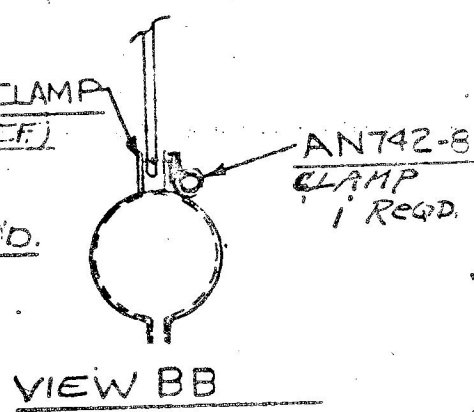
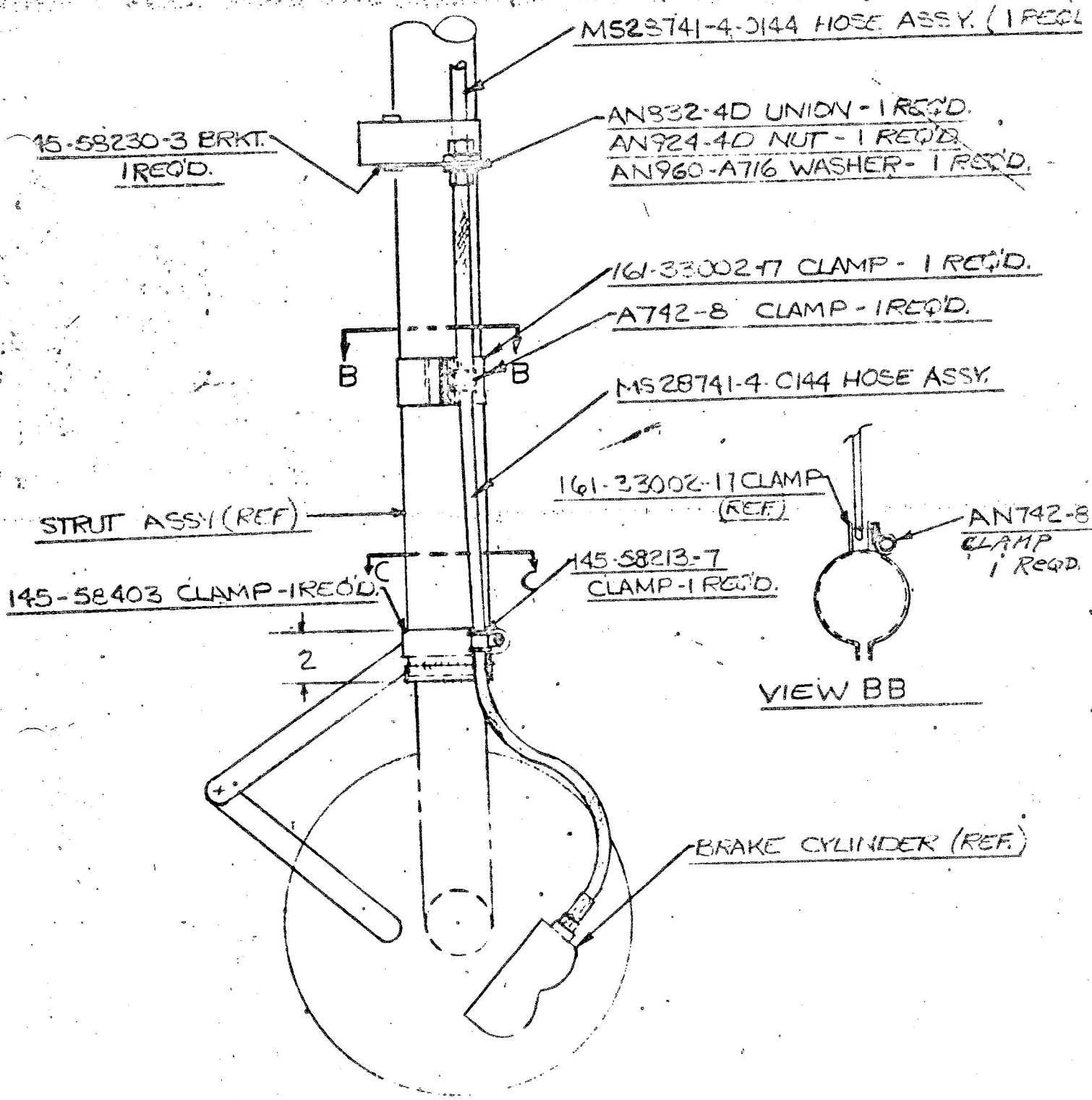


Hydraulic System  
Figure 42

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	145-58013-21	Cyl., Main Gear Actuating R.H. (REF P. 114)	1	
	AN 425-A	Bolt	1	
	AN 960-616	Washer	2	
	AN 365-428	Nut	1	
	NAS 75-4-124	Bushing	1	
	AN 960-416	Washer	1	
2	145-58801-88	Line Assy., Land. Gear Up R.H.	1	
	A 2980A-4-199	Clip	2	
	AN 530-10R8	Screw	2	
	A1779-102-3	Nut	2	
3	145-58801-86	Line Assy., Land. Gear Down R.H.	1	
		Clip )		
		Screw ) - Same as Key 2		
		Nut )		
4	145-58802-114	Line Assy., Brake Park. R.H.	1	
		Clip )		
		Screw ) - Same as Key 2		
		Nut )		
5	145-58013-17	Cyl., Flap Actuating (REF P. 116)	1	
6	145-58802-116	Line Assy., Brake Park. L.H.	1	
		Clip )		
		Screw ) - Same as Key 2		
		Nut )		
7	145-58801-84	Line Assy., Land. Gear Up L.H.	1	
		Clip )		
		Screw ) - Same as Key 2		
		Nut )		

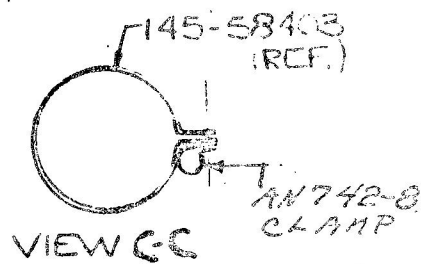
KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
8	145-58801-82	Line Assy., Land. Gear Down L.H.	1	
		Clip )		
		Screw ) - Same as Key 2		
		Nut )		
9	145-58013-19	Cyl., Main Gear Actuating L.H.	1	
	AN 4-25A	Bolt	1	
	AN 960-616	Washer	3	
	AN 365-428	Nut	1	
	NAS 75-4-124	Bushing	1	
	AN 960-416	Washer	1	
10	AN 832-4D	Union	1	
	AN 924-4D	Nut	1	
	AN 960-A716	Washer	1	
11	MS 28741-4-0144	Hose Assy.	1	
12	145-58016-3	Reservoir (REF P 119)	1	
13	See View J-J	Shut Off Valve	1	
14	See View J-J	Relief Valve Assy.	1	
15	145-58014-5	Cyl., Nose Gear Actuating (REF P 117)	1	
	AN 4-23A	Bolt	1	
	AN 365-428	Nut	1	
	NAS 43-4-120	Spacer	1	
	AN 960-416	Washer	1	
16	A755-8-2-8	Clamp	1	
17	A755-10-2-3	Clamp	1	
	AN 3-4A	Bolt	1	
	AN 365-1032	Nut	1	
18	012023-015-01	Pump, Engine Driven Hyd. (REF P 120)	1	
	145-58021-5	Restrictor Assy.	1	





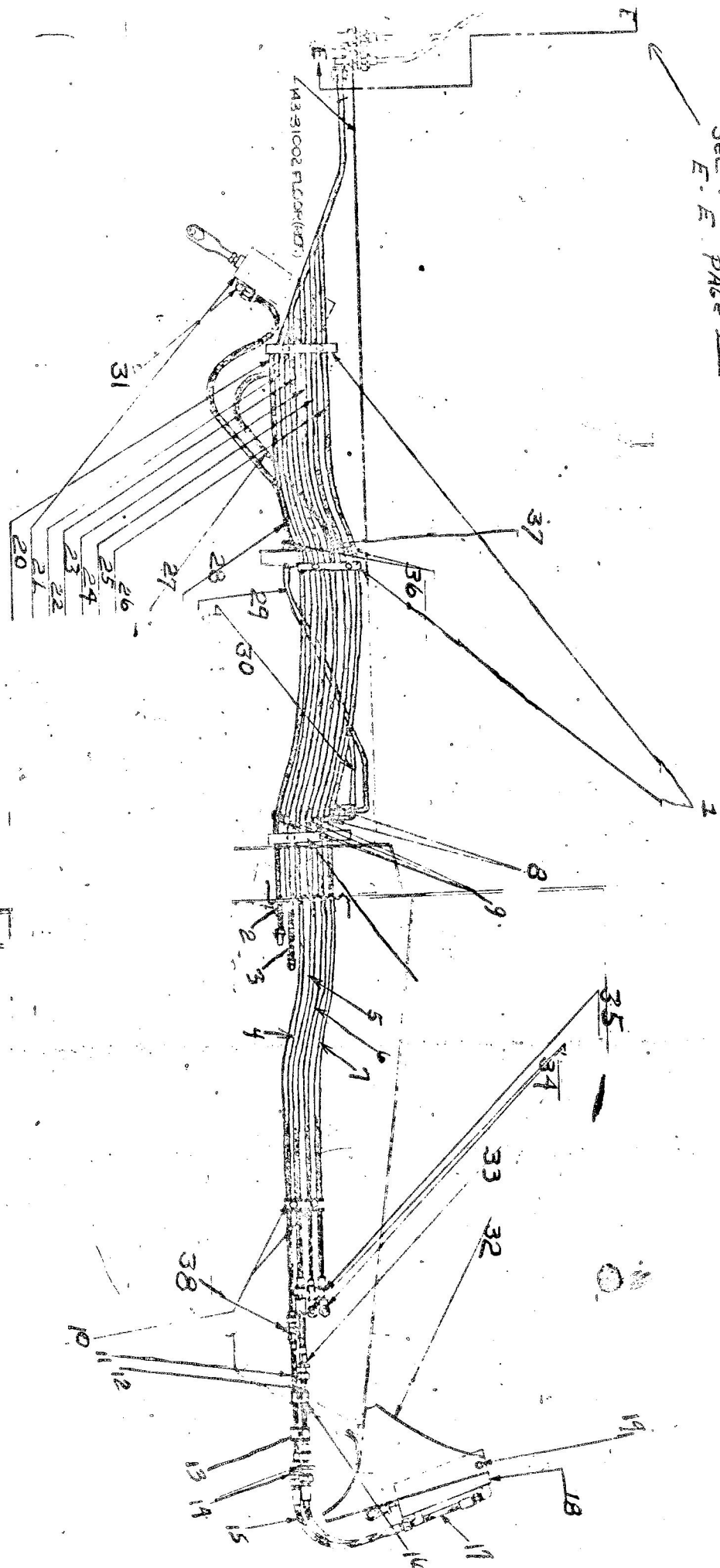
VIEW AA LH SHN.  
RHO PP.  
VIEW LOOKING OUTBOARD

FIGURE 43





See VIEW PAGE 103  
E. E.



VIEW DD

HYDRAULIC SYSTEM  
FIGURE 44

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	145-58142-11	Block	2	
	AN 515-8R-14	Screw	4	
	AN 960-8L	Washer	8	
	AN 365-832	Nut	4	
2	145-58802-106	Line Assy. Brake Park R.H.	1	
	AN 821-4D	Elbow	1	
3	145-58802-104	Line Assy. Brake Park L.H.	1	
	AN 821-4D	Elbow	1	
4	145-58802-66	Line Assy., Flap Up	1	
5	145-58802-64	Line Assy., Flap Down	1	
6	145-58802-52	Line Assy., Land Gear Up	1	
7	145-58802-84	Line Assy., Land Gear Down	1	
8	AN 824-4D	Tee	2	
	AN 815-4D	Union	4	
10	A755-4-2-8	Clamp	4	
	AN 3-14A	Bolt	2	
	AN 365-1032	Nut	2	
	AN 960-10	Washer	2	
	NAS-3-8-56	Spacer	2	
11	145-58801-108	Line Assy., Flap Up	1	
12	145-58801-106	Line Assy., Flap Down	1	
13	A3046-4-199	Clip	1	
	AN 520-10R6	Screw	1	
	AN 365-1032	Nut	1	
14	AN 815-4D	Union	2	
15	MS28741-4-0114	Hose Assy., Flap Up	1	
16	A3064-4-199	Clip	1	
	AN 520-10-8	Screw	1	

HYDRAULIC SYSTEM View D-D  
 FIGURE 44

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
17	MS28741-4-0144	Hose Assy., Flap Down	1	
18	145-58013-17	Cylinder Assy.	1	
19	AN 4-23A	Bolt	1	
	AN 960-616	Washer	2	
	NAS-75-4-124	Bushing	1	
	AN 365-428	Nut	1	
	AN 960-416	Washer	1	
20	145-58802-102	Line Assy., Elbow to Fus. Stat.		
		93.438 Brake Press.	1	
21	145-58014-5	Nose Gear Cyl. Assy.	1	
22	145-58802-100	Line Assy. Brake Park	1	
23	145-58803-60	Line Assy. Flap Up	1	
24	145-58803-62	Line Assy. Flap Down	1	
25	145-58803-58	Line Assy., Land Gear Up	1	
26	145-58803-56	Line Assy., Land Gear Down	1	
27	MS28741-4-0144	Hose Assy., Nose Gear Up	1	
	AN 815-4D	Union	1	
28	MS28741-4-0114	Hose Assy., Nose Gear Down	1	
	AN 815-4D	Union	1	
29	145-58803-100	Line Assy., Fus. Sta. 93.438 to		
		Nose Gear Down	1	
30	145-58803-90	Line Assy., Fus. Stat. 93.438 to		
		Nose Gear Up	1	
31	AN 822-A	Elbow	1	
32		Flap Hanger Bracket (Ref.)		
33	145-58021-3	Restrictor Assy.	1	
34	AN 824-4D	Tee	2	
	145-58021-5	Restrictor Assy.	1	

HYDRAULIC SYSTEM View D-D

FIGURE 44

99.



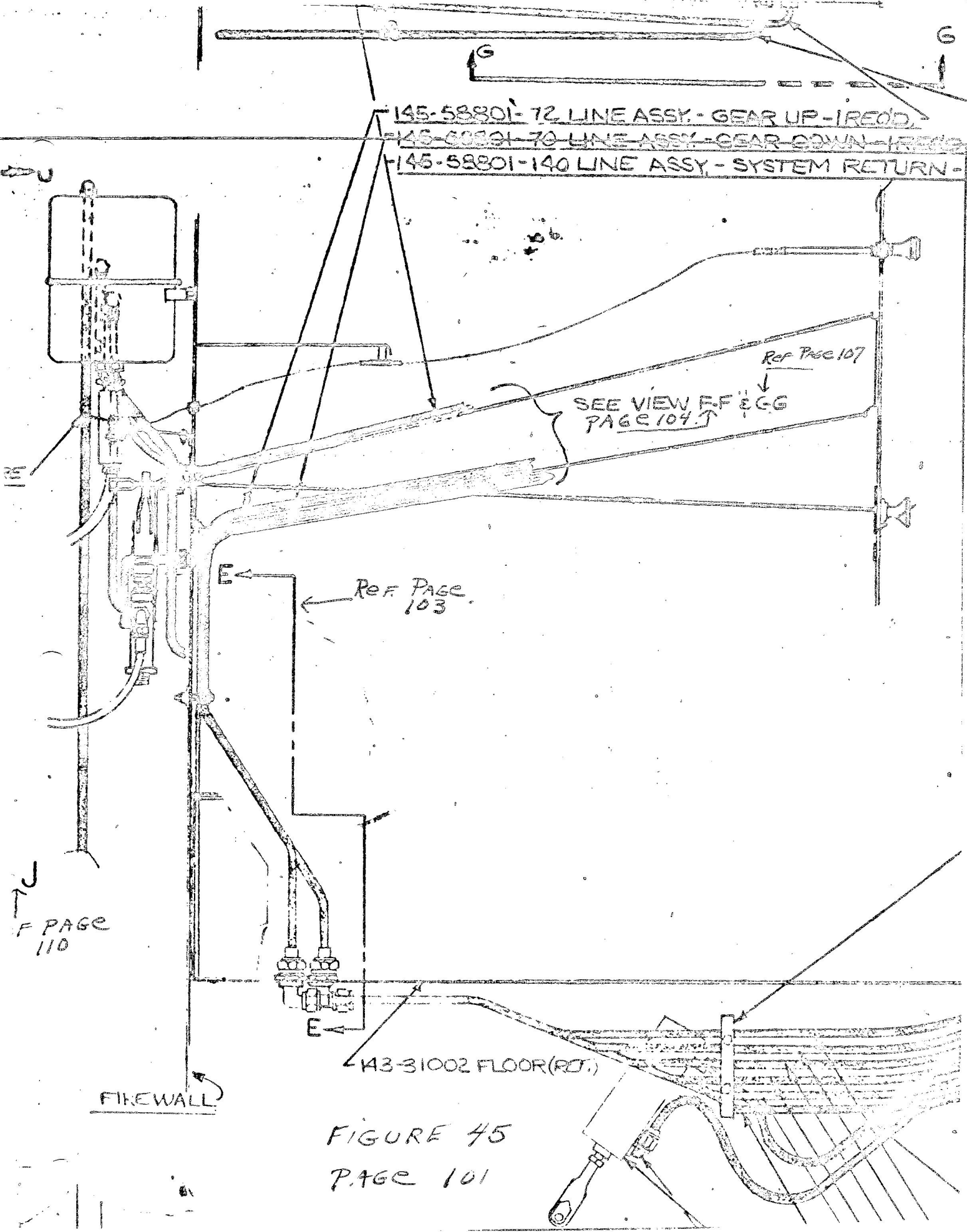
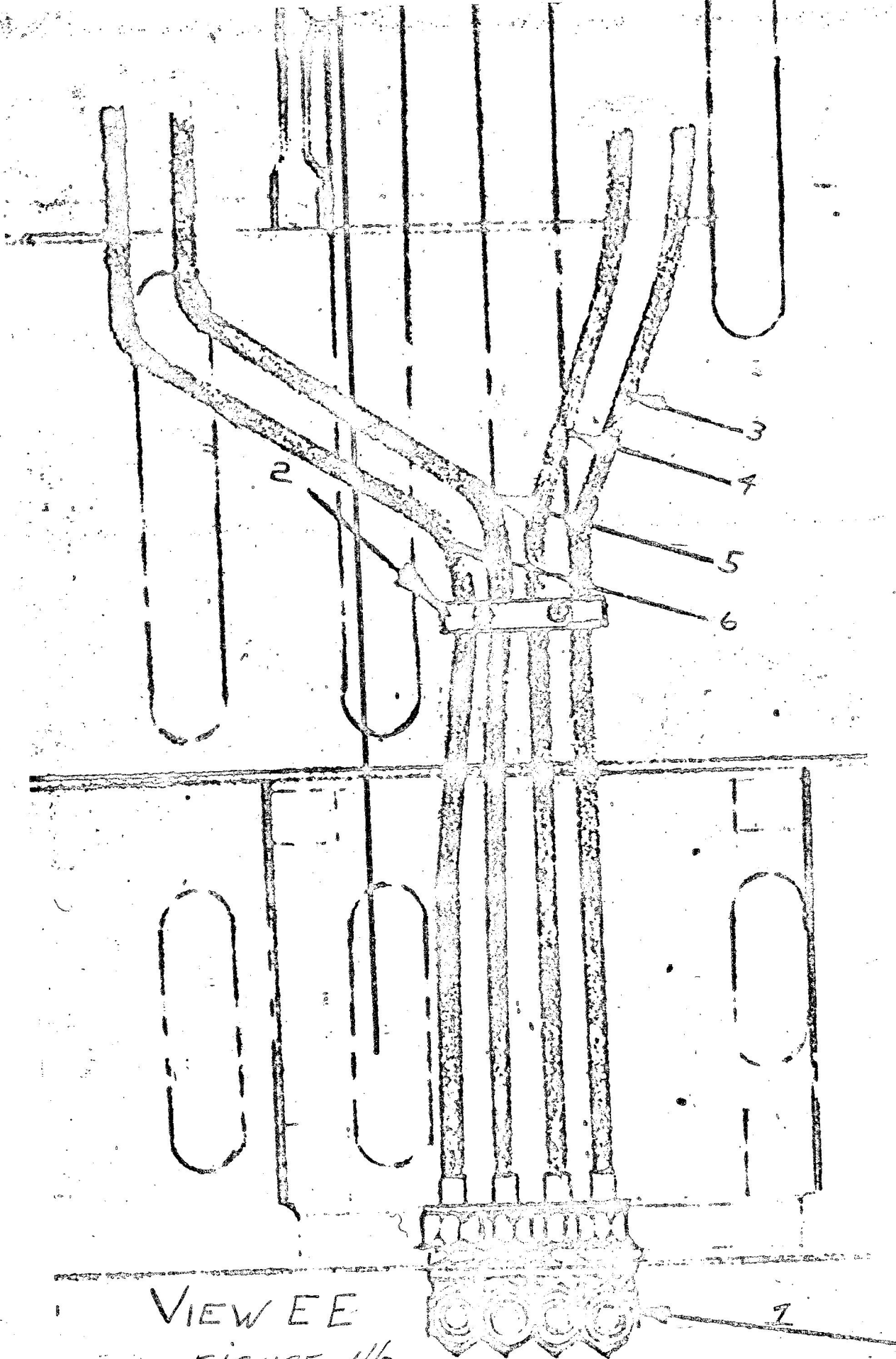


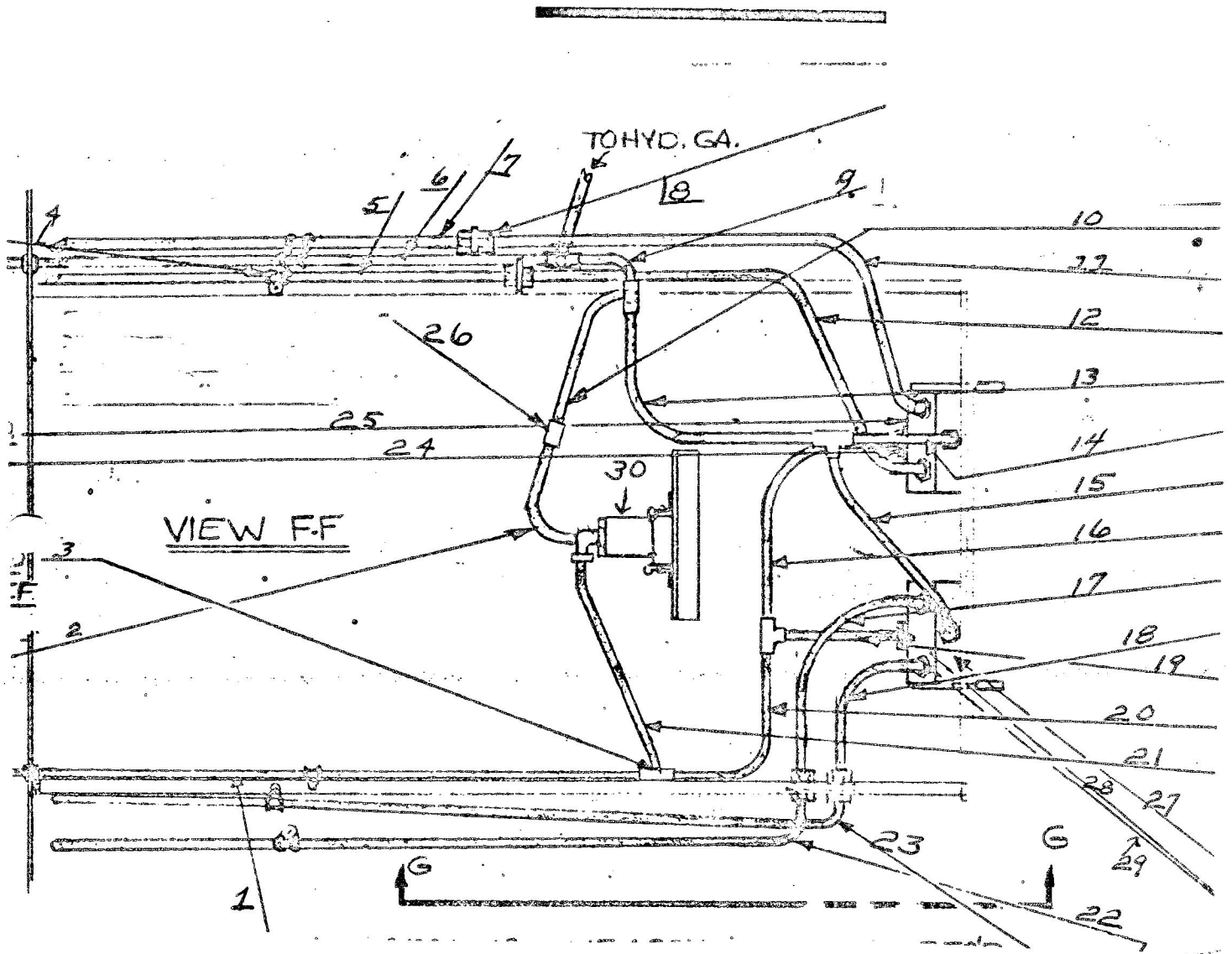
FIGURE 45  
 PAGE 101



VIEW EE

FIGURE 46  
PAGE 102





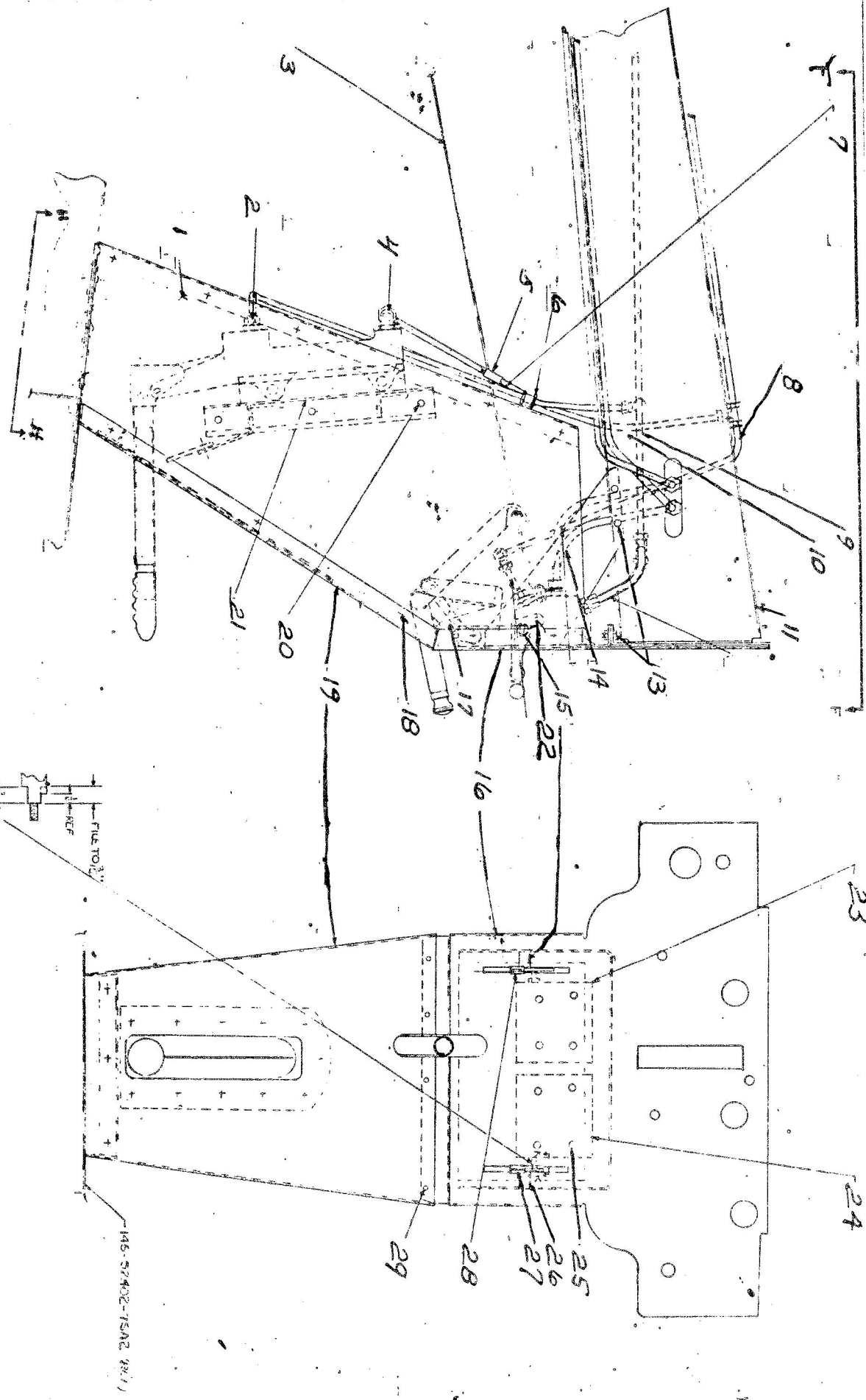
VIEW F-F  
FIGURE 47



KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	145-58801-140	Line Assy., System Return	1	
2	145-58801-144	Line Assy., Hand Pump Inlet	1	
3	AN 824-4D	Tee	5	
4	AN 742-4	Clamp	6	
	AN 530-8R8	Screw	6	
	8Z	Nut, Tinnerman	6	
5	145-58801-138	Line Assy., Flap Up	1	
6	145-58801-104	Line Assy., Inlet E	1	
7	145-58801-134	Line Assy., Flap Down	1	
8	AN 815-4D	Union	4	
9	145-58801-100	Line Assy., Inlet	1	
10	145-58801-142	Line Assy., Hand Pump Inlet	1	
11	145-58801-110	Line Assy., Flap Down	1	
	145-58801-112	Line Assy., Flap Up	1	
13	145-58801-114	Line Assy., Inlet	1	
14	145-58801-116	Line Assy., Inlet	1	
15	145-58801-118	Line Assy., Inlet	1	
16	145-58801-120	Line Assy., Return	1	
17	145-58801-122	Line Assy., Gear Down	1	
18	145-58801-124	Line Assy., Gear Up	1	
19	145-58801-126	Line Assy., Return	1	
20	145-58801-128	Line Assy., Return	1	
21	145-58801-130	Line Assy., Hand Pump Inlet	1	
22	145-58801-70	Line Assy., Gear Down	1	
23	145-58801-72	Line Assy., Gear Up	1	
24	AN 919-6D	Reducer	4	
	AN 6227-9	"O" Ring	4	
25	AN 6210-2	Valve Selector Flap	1	

HYDRAULIC SYSTEM View F-F  
FIGURE 47





AN1426 4-3PIVETS-SK.CD/O  
 10159402-23 SHIM-2873  
 145 59402-7-A-1-1  
 19-5402-43 CURA  
 22 LIMITER PLUNGER SERVO  
 AN1427-1-A-1-1  
 AN1427-1-A-1-2  
 AN1427-1-A-1-3

VIEW GG

FILE SHIRT OF AN 62-O-1-2  
 SELECTOR VALVE AT SHIM  
 VIEW K-K

AN-461022 PLUNGER-SERVO  
 AN-5-2-4 PIVET-12-1-1  
 VIEW HH  
 NO. SHIRT

Hydraulic System View GG, HH, KK  
 Figure 48

10

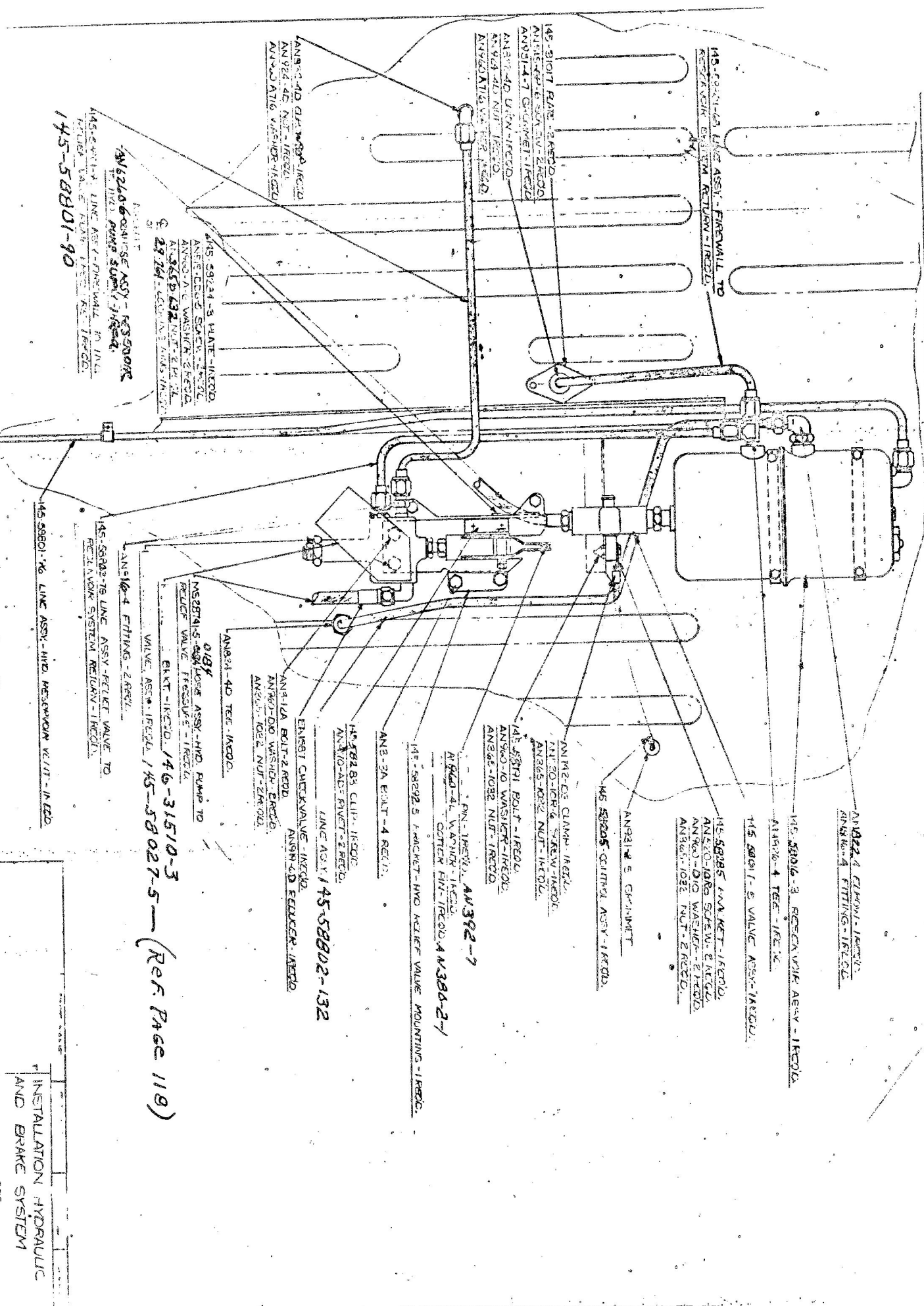
KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	161-58402-55	Panel Assy. L.H.	1	
	161-58402-56	Panel Assy. R.H.	1	
2	AN 919-6D	Reducer	1	
	AN 901-6A	Washer	1	
3	143-33175-18	Cable Assy.	1	
4	AN 822-4D	Elbow	1	
5	12478	Check Valve	1	
6	AN 755-4-2-8	Clamp	2	
	AN 530-8R8	Screw	2	
7	145-58801-132	Line Assy. (Ref.)	1	
8	145-58801-130	Line Assy. (Ref.)	1	
9	145-58801-114	Line Assy. (Ref.)	1	
10	145-58801-128	Line Assy. (Ref.)	1	
	143-51007-2	Beam (Ref.)	1	
12	145-58801-118	Line Assy. (Ref.)	1	
13	AN 3-13	Bolt	2	
	AN 3-14	Bolt	4	
	AN 960-10	Washer	6	
	AN 365-1032	Nut	6	
	4S3-10-28	Spacer	4	
14	145-58801-124	Line Assy. (Ref.)	1	
15	161-58402-54	Spring	1	
16	161-58402-42	Panel Assy.	1	
17	161-53015-15	Spring	1	
18	AN 526-10R8	Screw	10	
19	161-58402-40	Door Assy.	1	
20	AN 3-4A	Bolt	6	
	AN 365-1032	Nut	6	

HYDRAULIC SYSTEM View G-G, H-H, K-K,

FIGURE 48

108





145-5801-16  
 145-5802-76  
 145-5801-16  
 145-5802-76

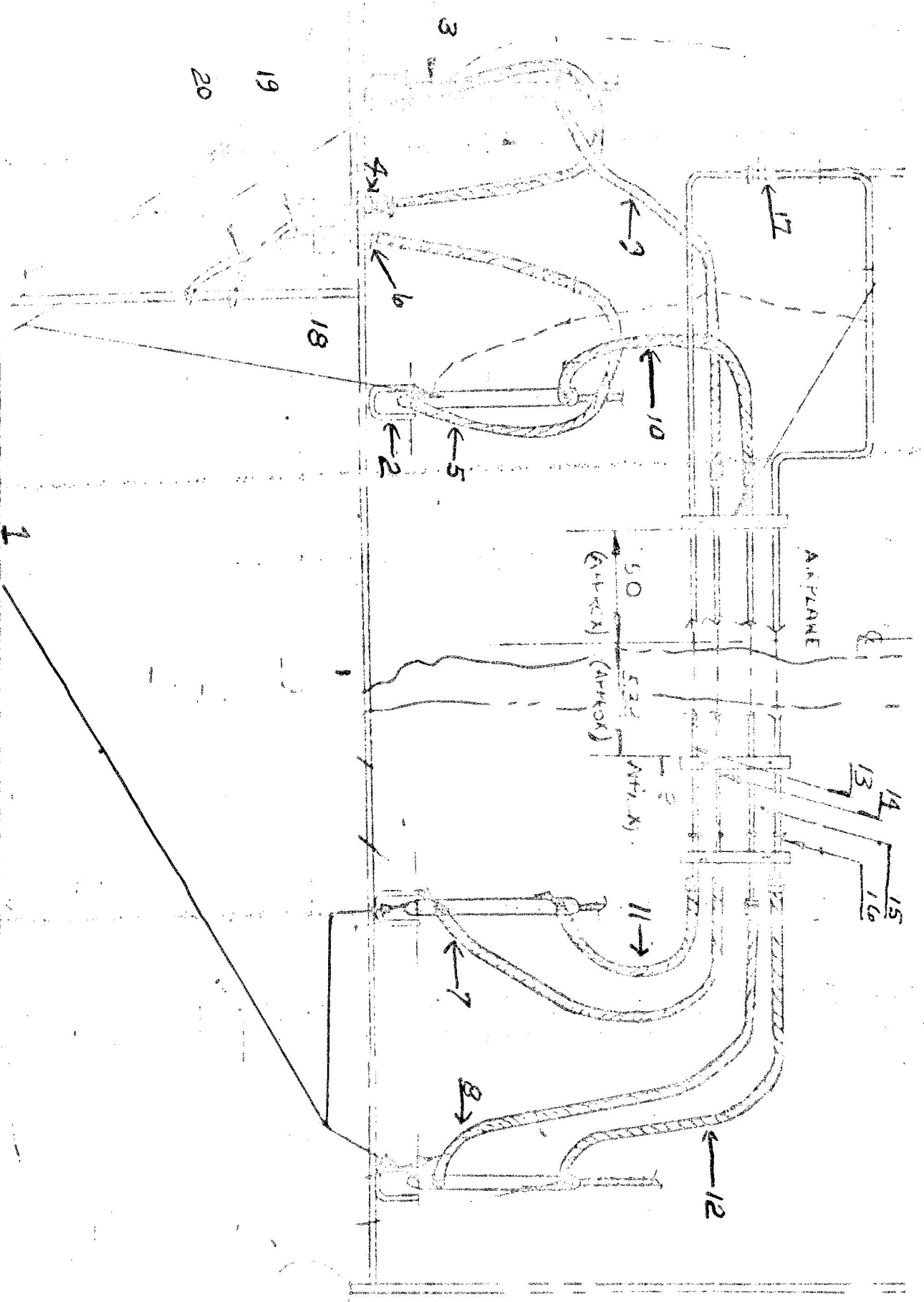
VIEW JJ

Hydraulic Reservoir  
Fig 191

(Ref Page 119)

INSTALLATION HYDRAULIC  
AND BRAKE SYSTEM

NAVAL AIRCRAFT  
TRAIN CORP. 110



RUDDER PEDAL BRAKE HYDRAULIC SYSTEM  
FIGURE 50

QTY	PART NAME	NAME	UNIT PER ASSEMBLY	USAGE
1	VI-15.750-4	Cylinder, Brake	4	
2	145-52401-15	Support, Cyl.	1	
	AN 393-27	Pin, Cyl. to Support	1	
	AN 960-10	Washer, Cyl. to Support	1	
	AN 380-2-1	Cotter Pin, Cyl. to Support	1	
3	MS28741-4-0144	Hose Assy. Left Pilot Brake Cyl. to Parking Brake	1	
	AN 822-4D	Elbow, Hose to Cyl.	1	
4	AN 815-4	Union, Hose to Parking Brake	1	
5	MS28741-4-0144	Hose Assy. Right Pilot Brake Cyl. to Parking Brake	1	
	AN 822-40	Elbow Hose to Cyl.	1	
6	AN 815-4	Union, Hose to Parking Brake	1	
7	MS28741-4-0120	Hose Assy. Left Co-Pilot Brake Cyl.	1	
	AN 822-4D	Elbow, Hose to Cyl.	1	
	AN 815-4D	Union, Hose to Metal Line	1	
8	MS28741-4-0144	Hose Assy. Right Co-Pilot Brake Cyl.	1	
	AN 815-4D	Union, Hose to Metal Line	1	
	AN 822-4D	Elbow, Hose to Cyl.	1	
9	MS28741-4-0144	Hose Assy. Left Pilot Brake Cyl. to Metal Line	1	
	AN 823-4D	Elbow 45 degrees, Hose to Cyl.	1	
	AN 815-4D	Union, Hose to Metal Line	1	
10	MS28741-4-0114	Hose Assy. Right Pilot Brake Cyl. to Metal Line	1	
	AN 823-4D	Elbow 45 degrees, Hose to Cyl.	1	
	AN 815-4D	Union, Hose to Metal Line	1	
11	MS28741-4-0144	Hose Assy. Left Co-Pilot Brake Cyl. to Metal Line	1	
	AN 822-4D	Elbow, Hose to Cyl.	1	
	AN 815-4D	Union, Hose to Metal Line	1	
12	MS28741-4-0114	Hose Assy. Right Co-Pilot Brake Cyl. to Metal Line	1	
	AN 822-4D	Elbow, Hose to Cyl.	1	

RUDDER PEDAL BRAKE HYDRAULIC SYSTEM

FIGURE 50





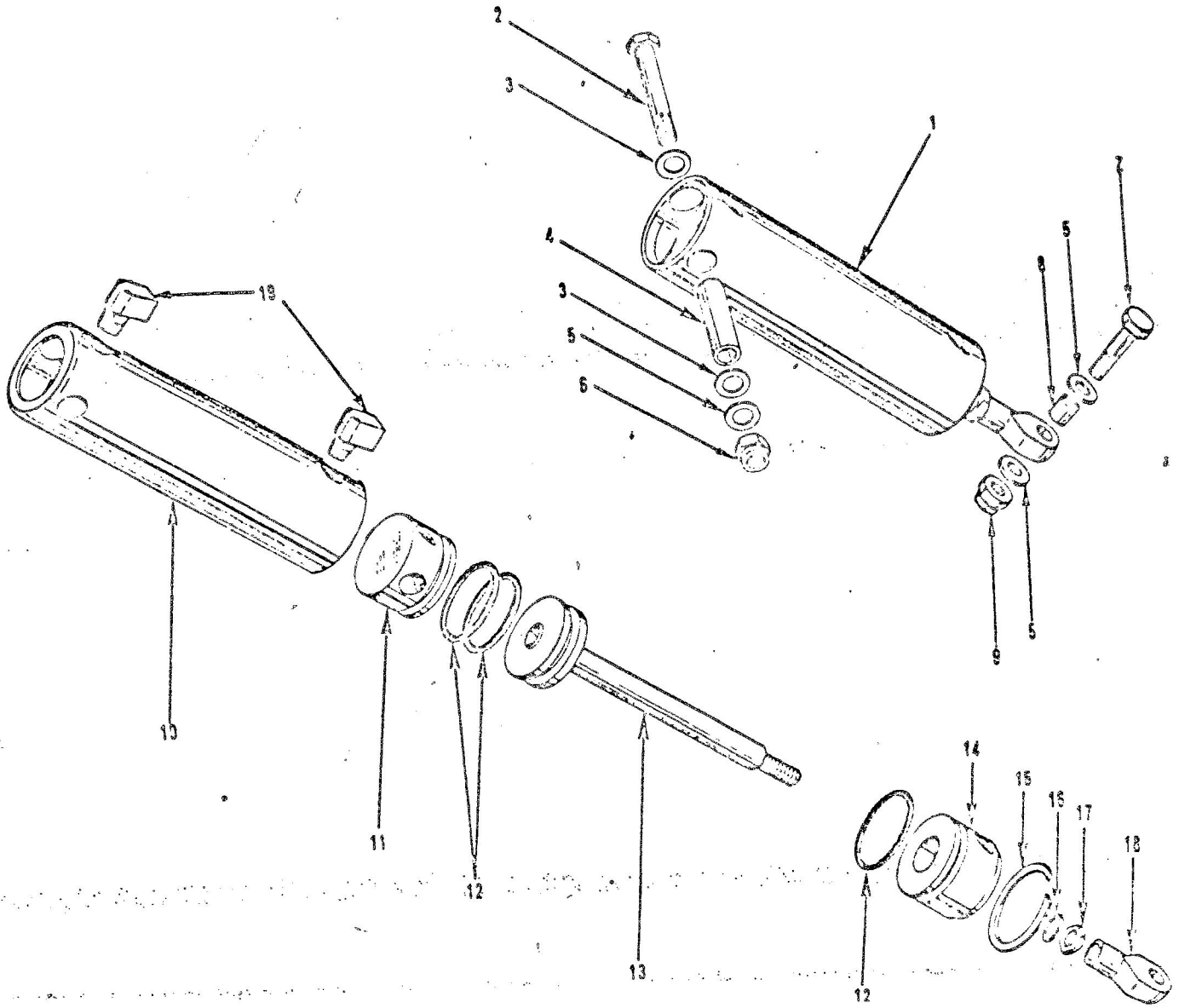


FIGURE 51 - HYDRAULIC MAIN GEAR  
ACTUATING CYLINDER

NAVION  
Figure

KEY	PART NO	DRAWING				UNITS PPR ASSEMBLY	USAGE
		1	2	3	4		
1	145-58013-19 -21	Hydraulic Actuating	Left Main Gear			1	2401 & Sub.
		"	"	Right Main Gear		1	
2	AN4-25A	Bolt				1	
3	AN960-616	Washer				2	
4	NAS 75-4-124	Bushing				1	
5	AN 960-416	Washer, plain				1	
6	AN 365-428	Nut, self locking				1	
7	AN 4-11A	Bolt, Aircraft 1/4-28				1	
8	NAS 72-4008	Bushing - Clamp up steel chrome plated				1	
9	AN 365-428	Nut - self lock, high temperature				1	
10	145-58263-3	Cylinder				1	
11	145-58262-3	Head				1	
12	AN 6227-25	"O" Ring				3	
13	145-58242-5	Piston Assy.				1	
14	145-58105-5	Bearing				1	
15	145-58232-3	Ring				1	
16	AN 6227-9	"O" Ring				1	
17	AN 316-6R	Nut				1	
18	145-58223	End				1	
19	AN 822-4	Elbow 90° Flared				2	

FIGURE 51  
MAIN GEAR ACTUATING CYLINDER

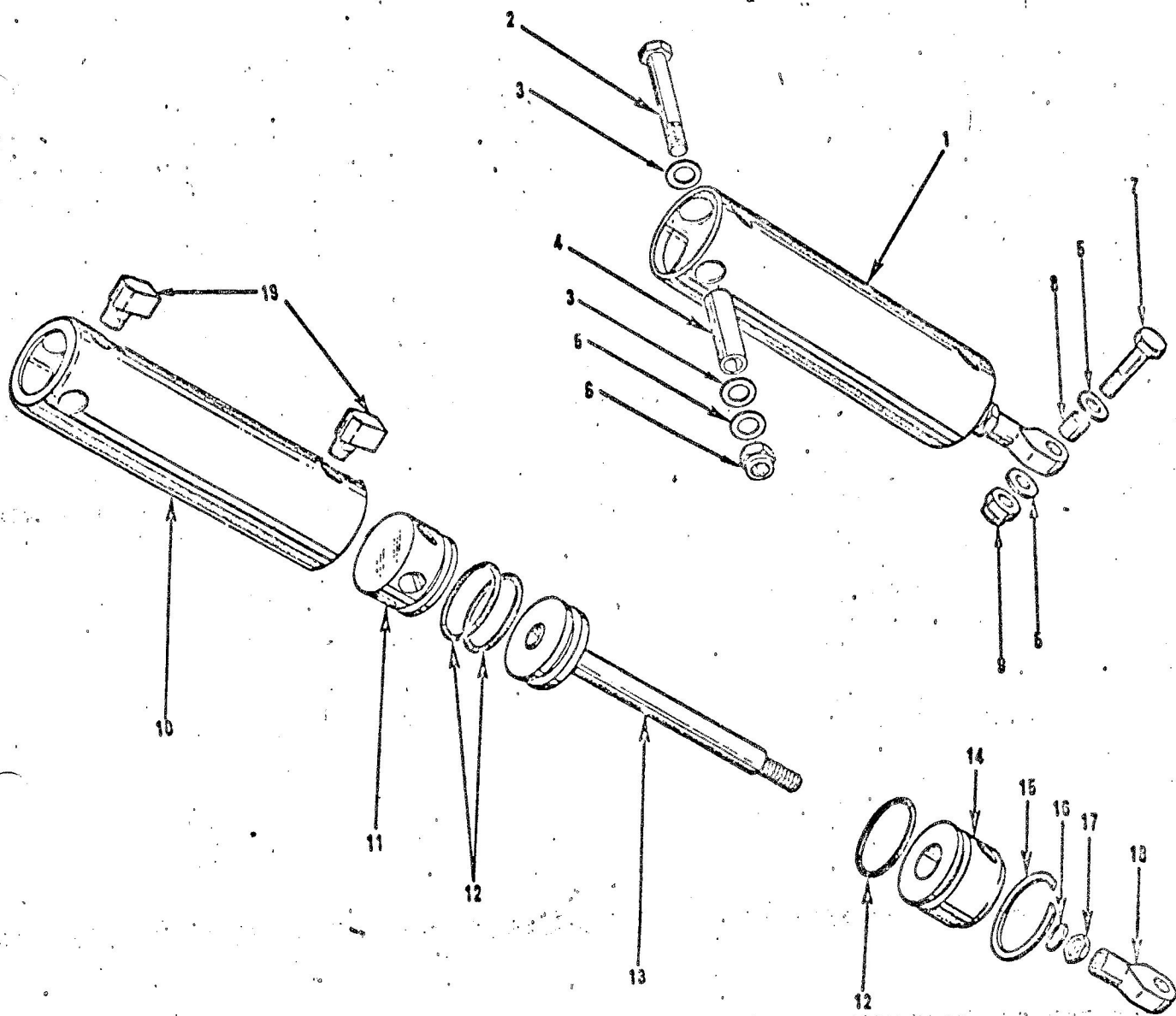


FIGURE 52 HYDRAULIC FLAP ACTUATING CYLINDER

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	QTY PER ASSY	USAGE
1		145-58013-17					Actuating Cylinder - Hydraulic FLAP (Complete Except Port Elbows)	1	2301 of Sub.
2		AN4-23A					Bolt - Aircraft 1/4-28 (Flap)	1	
3		AN960-616					Washer - Plain	1	
4		NAS75-4-124					Bushing - Plain Press Fit Steel Cadmium Plated	1	
5		AN960-416					Washer - Plain	1	
6		AN365-428					Nut - Self Locking	1	
7		AN4-11					Bolt - Aircraft 1/4-28 (Flap)	1	
8		NAS72-4-008					Bushing - Clamp Up Steel Chrome Plated	1	
9								1	
10		AN310-4					Nut - Aircraft Castle (Flap)	1	
11		145-58263					Body - Hydraulic Actuating Cylinder	1	
12		145-58262					Head - Hydraulic Actuating Cylinder	1	
13		AN6227-23					Packing - "O" Ring Hydraulic	1	
14		145-58242					Piston Assy - Hydraulic Actuating Cylinder	1	
15		145-58105-3					Bearing - Hydraulic Actuating Cylinder	1	
16		145-58232					Ring - Actuating Cylinder Bearing Retainer	1	
17		AN6227-9					Packing - "O" Ring Hydraulic	1	
18		AN316-6R					Nut - Aircraft Check	1	
19		145-58223					Elbow - Hydraulic Nose Gear Actuating Cylinder Rod	1	
		AN422-4					Elbow - 90° Flared Tube and Pipe Thread	2	

*Reason*

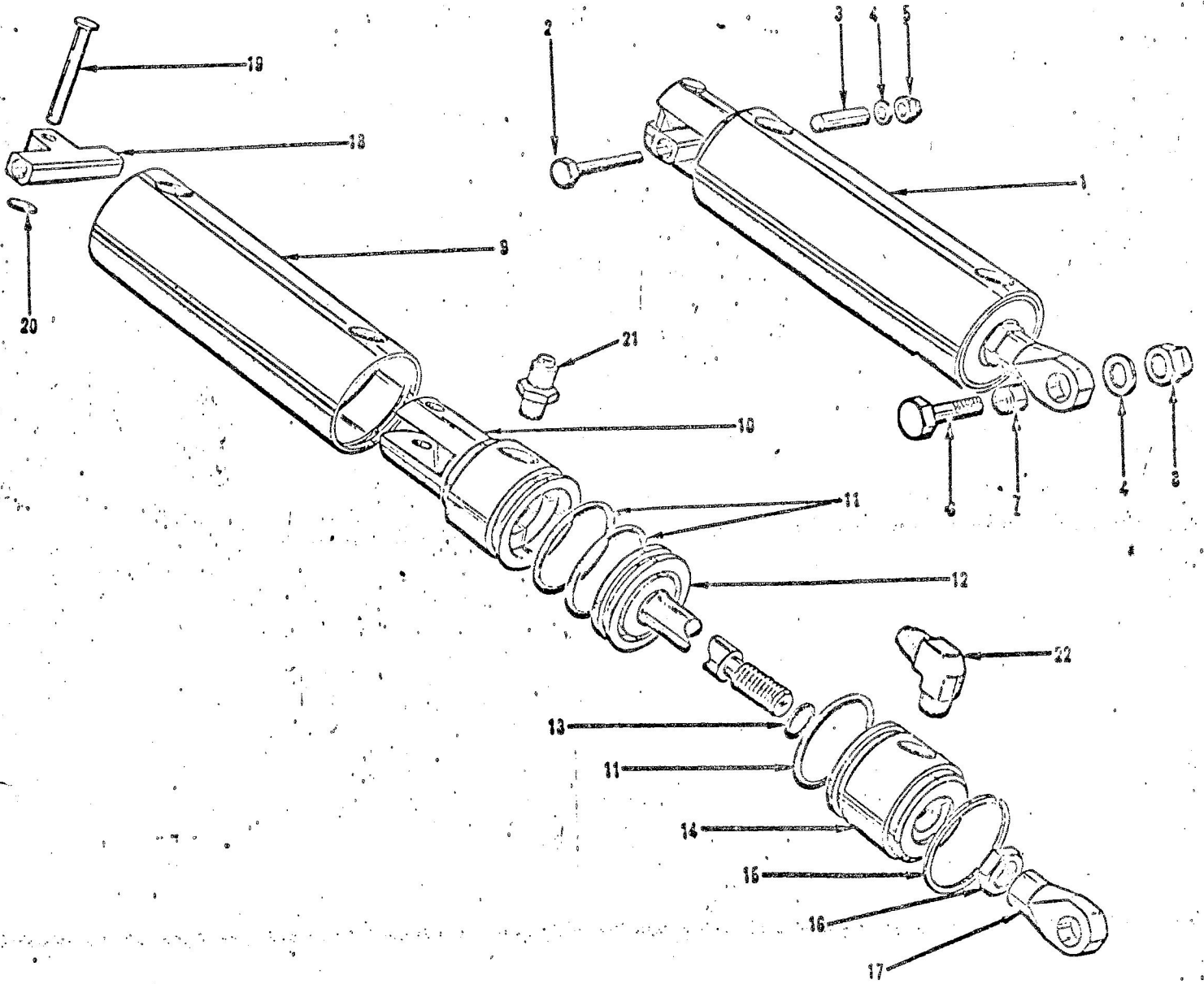


FIGURE 53 - HYDRAULIC NOSE GEAR ACTUATING CYLINDER

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		145-58014-5					Cylinder Assy - Nose Gear - (Complete With AN Fittings)	1	24019 Subs.
2		AN6-23A				Bolt - Aircraft 1/4-28	1		
3		NAS43-4-120				Spacer	1		
4		AN960-416L				Washer - Plain	1		
5		AN365-428				Nut - Self Locking	1		
6		AN4-12				Bolt - Aircraft 1/4-28	1		
7		NAS72-4-008				Bushing - Clamp Up Steel Chrome Plated	1		
8		AN310-4				Nut - Aircraft Castle	1		
9		145-58257-3				Cylinder - Hydraulic Nose Gear Actuating	1		
10		145-58256-3				Head - Hydraulic Actuating Cylinder	1		
11		AN5227-25				Packing - "O" Ring Hydraulic	3		
12		145-58258-3				Piston Assy - Nose Gear Actuating Cylinder	1		
13		AN6227-9				Packing - "O" Ring Hydraulic	1		
14		145-58255-3				Bearing - Nose Gear Actuating Cylinder	1		
15		145-58232-3				Ring - Retainer	1		
16		AN316-6R				Nut - Aircraft Check	1		
17		145-58223				End - Nose Gear Actuating Cylinder Rod	1		
18		145-34213				Universal - Landing Gear Hydraulic Cylinder Support	1		
19		AN394-35				Pin - Flat Head 1/4	1		
20		AN960-416L				Washer - Plain	1		
21		145-58282-10				Restrictor Assy - Hydraulic Cylinder Flow	1		
22		AN-823-4				Elbow - 90°	1		
		AN 380-2-2				COTTER PIN	1		

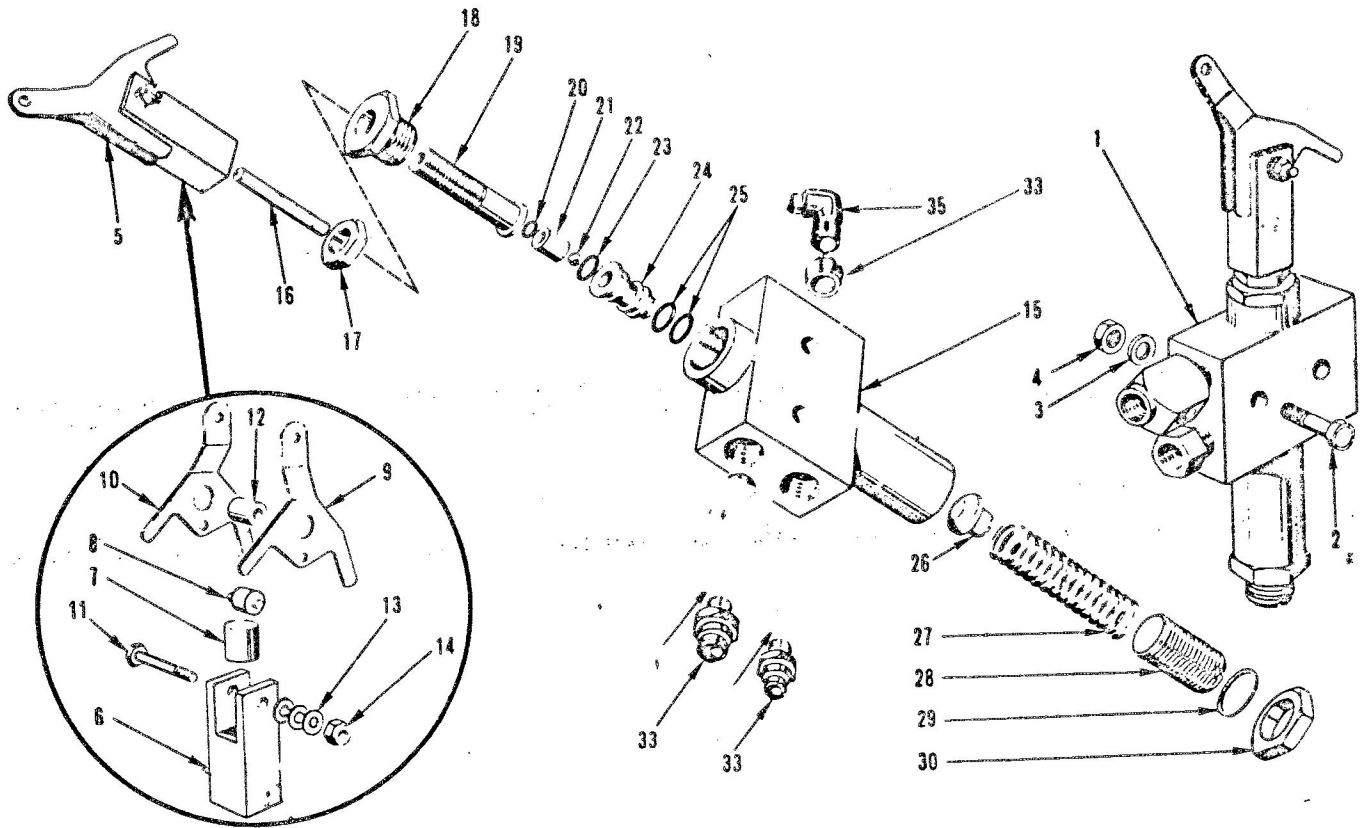
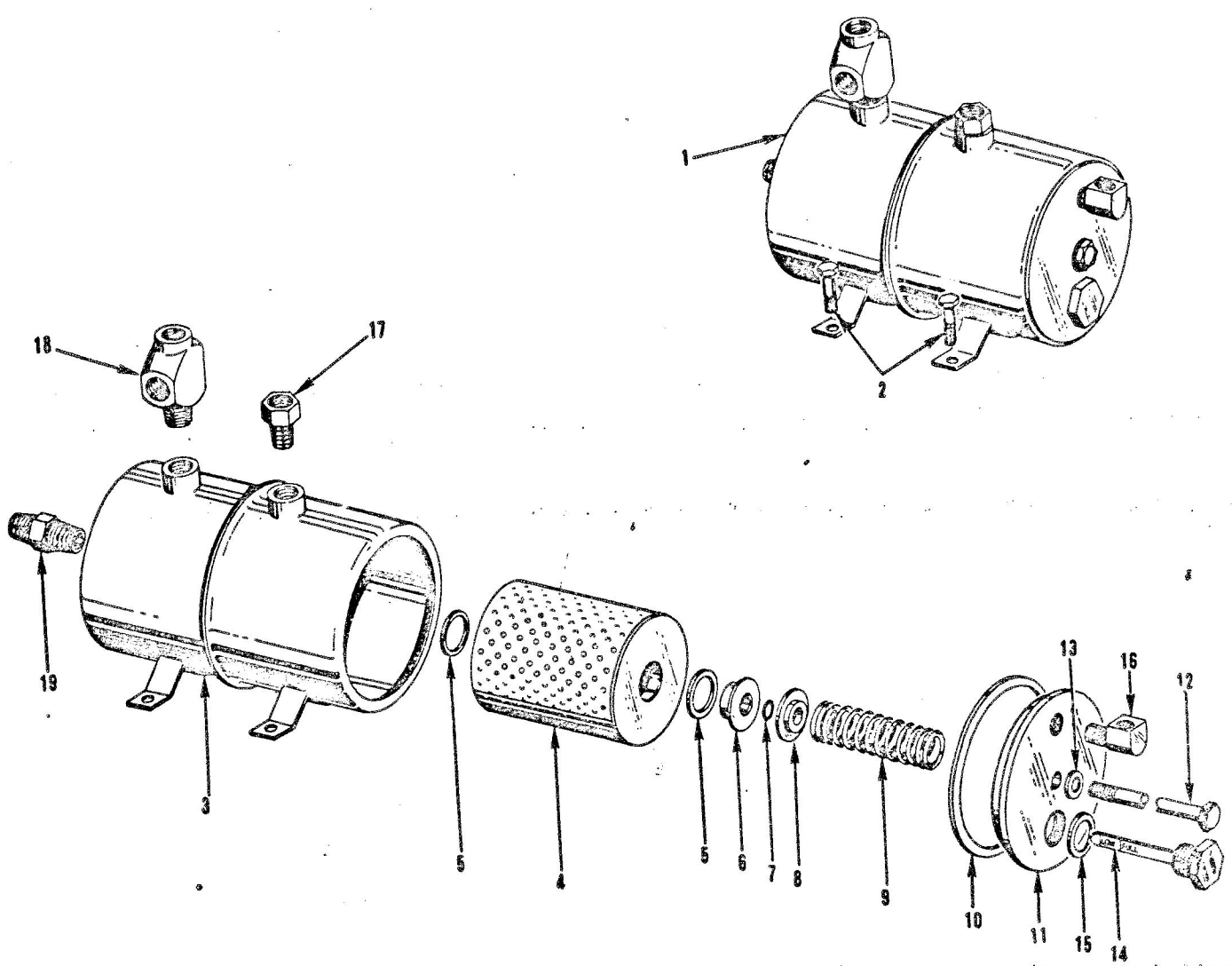


FIGURE 54- HYDRAULIC RELIEF MECHANISM LIFT VALVE

KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
							Relief Mechanism Lift Valve - Complete	1	2351 AND SUBS.
1		145-58027-5					Relief Mechanism Lift Valve - Complete	2	
2		AN3-12A					Bolt - Aircraft 10-32	6	
3		AN960D10					Washer - Plain	2	
4		AN365-1032					Nut - Self Locking		
5		145-58271-3					Lift Assy - Relief Valve Mechanism	1	
6		145-58289					Body - Relief Valve Mechanism Lift	1	
7		145-58275					Plunger - Relief Valve Mechanism Lift	1	
8		145-58287					Roller - Relief Valve Adapter	1	
9		145-58288-3					Lever - Relief Valve Mechanism Lift	1	
10		145-58288-2					Lever - Relief Valve Mechanism Lift	1	
11		AN3-12A					Bolt - Aircraft 10-32	1	
12		145-58300					Bearing	3	
13		AN960A10L					Washer - Plain	1	
14		AN365-1032					Nut - Self Locking	1	
15		145-58247					Body - Relief Valve	1	
16		145-58279					Pistole - Relief Valve Mechanism Lift	1	
17		AN924-3D					Nut - Flared Tube - Bulkhead & Universal Fitting	1	
18		145-58278					Retainer - Relief Valve Mechanism Lift	1	
19		145-58277					Adapter - Relief Valve Mechanism Lift	1	
20		AN6227-1					Packing - "O" Ring Hydraulic	1	
21		145-58280					Spacer - Relief Valve Mechanism Lift	1	
22		No Number					Ball - 5/32 Stainless Steel	1	
23		AN6227-6					Packing - "O" Ring Hydraulic	1	
24		145-58270					Cage Assy	2	
25		AN6227-7					Packing - "O" Ring Hydraulic	1	
26		145-58245					Button - Relief Valve Spring Bearing	1	
27		145-58146					Spring - Relief Valve	1	
28		145-58170					Screw - Relief Valve Adjusting	1	
29		AN902-6					Gasket - Flared Tube - Universal Fitting	1	
30		AN924-6D					Nut - Flared Tube - Bulkhead & Universal Fitting	1	
		AN826-4					Tee - Flared Tube With Pipe Thread On Run	1	
33		AN816-4					Nipple - Flared Tube & Pipe Thread	2	
35		AN822-5					Elbow - 90° Flared Tube & Pipe Thread	1	



**FIGURE 55 - HYDRAULIC RESERVOIR**

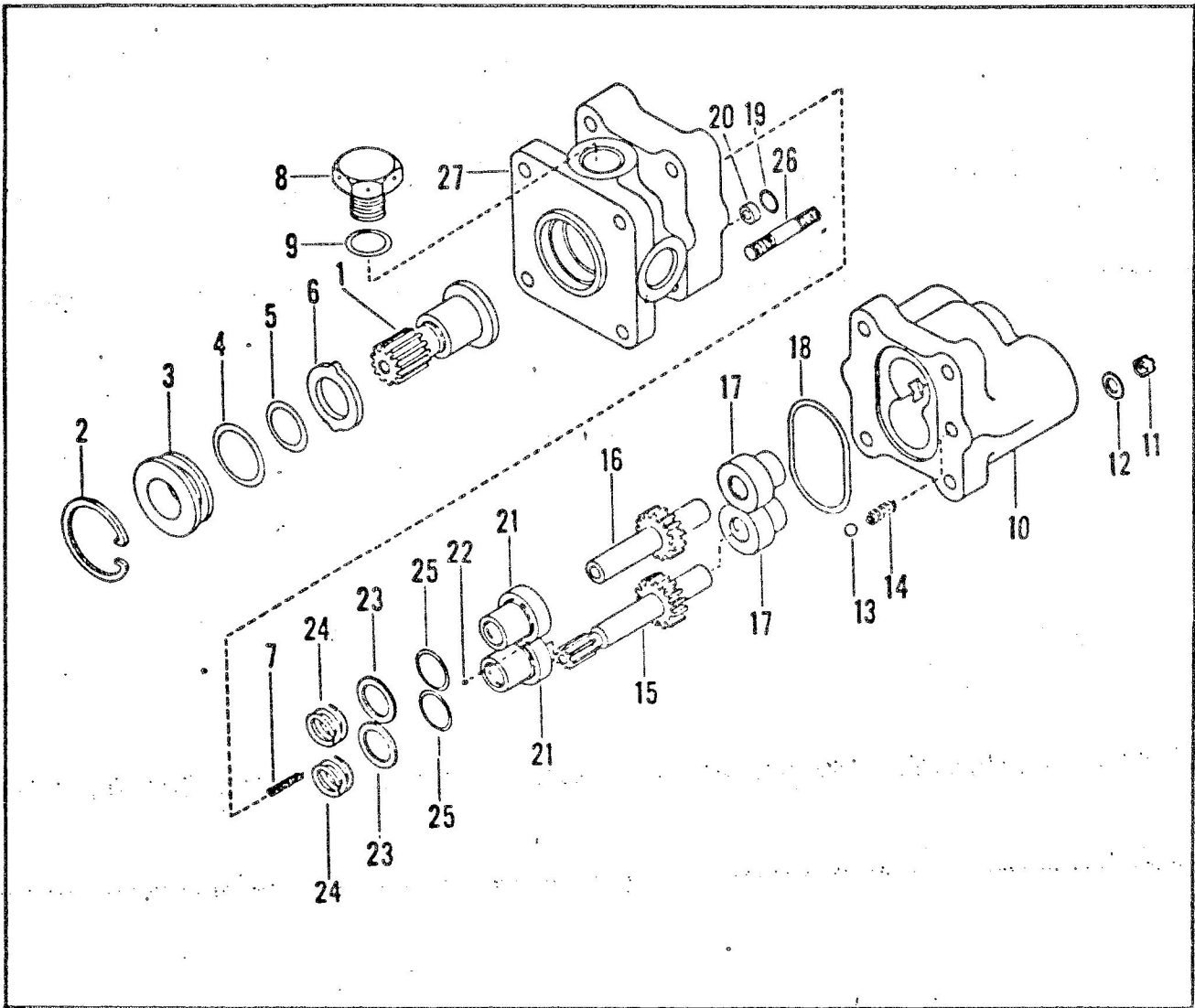
KEY	ITEM NO.	PART NUMBER	1	2	3	4	NOMENCLATURE	UNITS PER ASSY	USAGE
1		145-58016-3					Reservoir Assy - Hydraulic Complete	1	
2		AN3-4A					Bolt - Aircraft 10-32	4	
3		145-58152					Shell Assy - Hydraulic Reservoir	1	
4		<i>SK 18765</i>					Filter - (Hydraulic Reservoir)	1	
5		AN902-8					Gasket - Universal Fitting Flared Tube	2	
6		145-58161					Guide - Hydraulic Reservoir Filter	1	
7		AN6227-3					Packing - "O" Ring Hydraulic	1	
8		145-58162					Retainer - Hydraulic Reservoir Spring	1	
9		145-58158					Spring - Hydraulic Reservoir	1	
10		145-58236					Gasket - Hydraulic Reservoir Cover	1	
11		145-58159					Cover - Hydraulic Reservoir	1	
12		AN3-61A					Bolt - Aircraft 10-32	1	
13		2W1F-13-14-33					Washer - Plain	1	
14		145-58155					Plug - Reservoir Dipstick and Filler (Wrench Type)	1	
15		AN902-8					Gasket - Universal Fitting Flared Tube	1	
16		400X4					Elbow - 90° Inverted Male	1	
17		AN822-4					Elbow - 90° Flared Tube and Pipe Thread	1	
		200X4					Connector - Inverted Male	1	
		AN816-4					Nipple - Flared Tube and Pipe Thread	1	
		AN823-4					Elbow - 45° Flared Tube and Pipe Thread	1	
18		752X4					Tee - Inverted	1	
		AN826-4					Tee - Flared Tube With Pipe Thread On Run	1	
19		AN911-2					Nipple - Pipe Thread	1	



HYDRAULIC GEAR PUMP

Models No.

012023-015-01



Exploded View of Hydraulic Gear Pump

Figure 56

FIGURE & INDEX NO.	PART NUMBER	NOMENCLATURE	UNITS PER ASSY.
		1 2 3 4 5 6 7	
		PUMP, Hydraulic gear . . . . .	
	012023-015-01	PUMP, Hydraulic gear . . . . . (Model 012023-015-01)	1







HYDRAULIC GEAR PUMP

Models No. 012023-015-01

FIGURE & INDEX NO.	PART NUMBER	NOMENCLATURE							UNITS PER ASSY.
		1	2	3	4	5	6	7	
	01-10593	.							1
	AN535-00-2	.							2
	MS20995C32	.							AR
	323-54	.							1
	323-54A	.							1

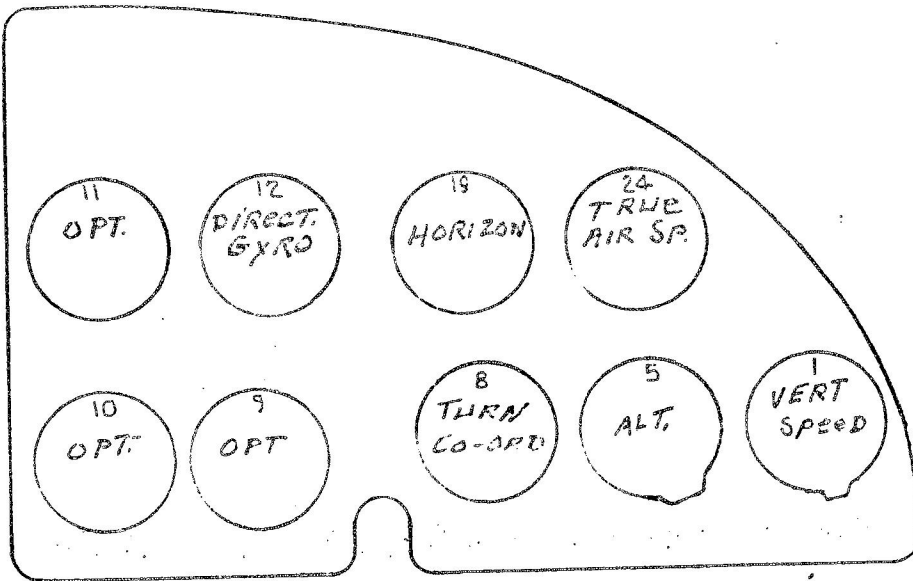


QTY	PART NUMBER	DESCRIPTION	UNIT	REMARKS
1	AN 5812-12V	Tube, Airspeed Pitot Electric	1	
2	300 x 4	Connector	1	
6	145-51001-5	Line Assy. - Pitot Pressure Wing	1	
9	145-51031-75	Line Assy. - Pitot Pressure Fuselage	1	
10	145-51031-3	Line Assy. - Pitot Pressure Panel	1	
11	300 x 4	Union (Pitot & Static Lines)	2	
12	AN 824-4	Tee (Pitot Pressure Line Sump)	1	
13	145-51031-74	Sump Assy.-Pitot Pressure Line	1	
14	145-51031-32	Line Assy. - Static Pressure Panel	1	
15	145-51031-22	Line Assy. - Static Pressure Fuselage Frd.	1	
16	652 x 4	Tee (Static Line Sump)	1	
17	2152 x 3 - 1/8 B	Plug (Static Line Sump)	1	
18	145-51031-24	Line Assy. - Static Pressure Fuselage Aft	1	
19	145-51031-26	Line Assy. - Static Pressure Fuselage Balance	1	
20	200 x 4	Connector - Static Pressure L.H.	1	
21	752 x 4	Tee - Static Pressure R.H.	1	
22	145-51050	Tube Static Pressure	2	
23	145-51051	Plate Static Pressure Reinforce	2	
24	2716	Thermometer - Outside Air	1	
25	151-70010-1	Transmitter - Main Tank Fuel Level	1	
26	145-43277	Gas Jet	1	
27	AN 502-10-8	Screw Fillister Head	6	

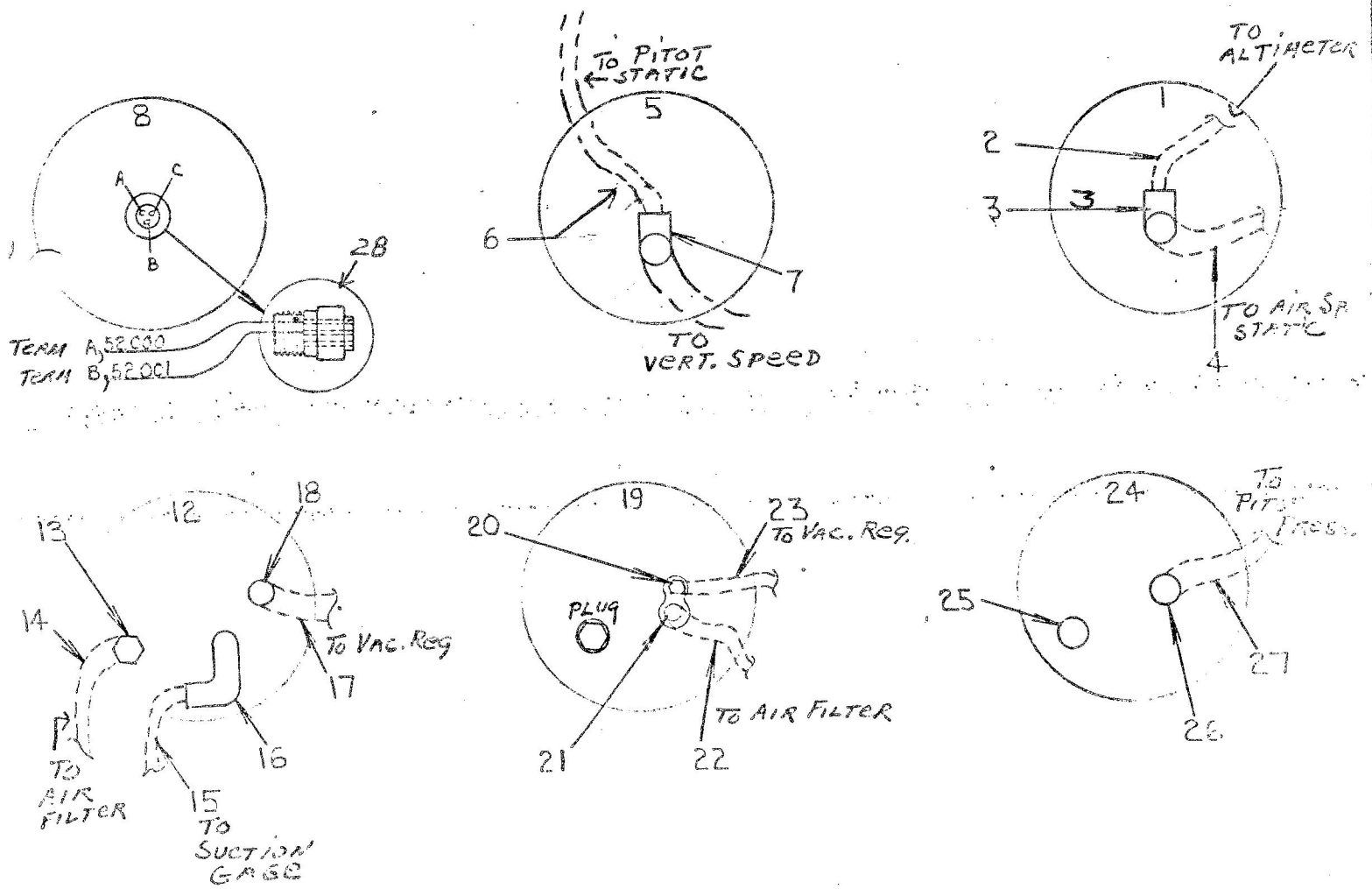
126

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
47	MS28741-4-0300	Hose Assy., Instrument to Fuel Pump	1	
	AN 832-4D	Union, Firewall	1	
	AN 924-4D	Nut	1	
	AN 901-4A	Washer	1	
48	MS28741-4-0174	Hose Assy., Instrument Manifold	1	
	AN 833-4D	Elbow Firewall	1	
	AN 924-4D	Nut	1	
	AN 901-4A	Washer	1	
	AN 822-4D	Elbow, Intake Manifold	1	
49	MS28741-4-0260	Hose Assy., Instrument Oil Pressure to Oil Cooler	1	
	AN 833-4D	Elbow	1	
	AN 924-4D	Nut	1	
	AN 901-4A	Washer	1	
	AN 822-4D	Elbow, Oil Cooler	1	
50	143-51026-1	Tach Drive Fairlead	1	
	143-51026-2	Tach Drive Fairlead	1	
51	1536403	Tach Drive Cable	1	
52	A-1111	Tach Drive Adapter	1	
53	MS28034-1	Oil Temp Bulb	1	
	MS3106A-12S-3S	Oil Temp Connector (cannon Plug)	1	
54	01-005-1A36	EGT Probe, Exhaust Stack	1	
55	AN 5546-1	Cyl. Head Temp Probe	1	
	503 18 gage	Probe Ground Wire	1	
	504 18 gage	Probe Indicator Wire	1	
	AN 4076-1	Cyl. Head Temp. Probe Adapter	1	
56	161-54004-15	Hose, Vacuum Firewall to Pump	1	
	134-A2	Fitting, Vac. Pump	1	
	QS100-M12	Clamps	2	

FIGURE 57  
INSTRUMENT SYSTEM



REAR VIEW L/H INSTRUMENT PANEL 147-40002-161

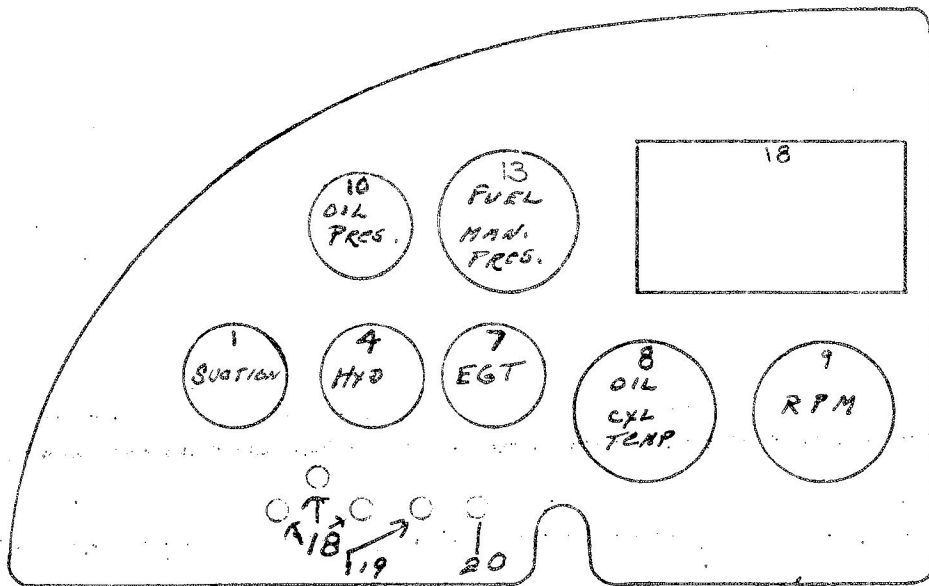


REAR VIEW L/H INSTRUMENT PANEL 147-40002-161  
FIGURE 58

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	G22-993-01	Vertical Speed Indicator	1	2351 & Sub.
2	147-40002-174	Hose Assy. to Alt.	1	
3	AN 826-4D	Tee	1	
4	147-40002-173	Hose Assy. to Airspeed Static	1	
5	22-375-A-01	Altimeter Indicator	1	
6	147-40002-172	Hose Assy. to Pitot Static Line	1	
7	AN 826-4D	Tee	1	
8	1677	Turn Co-Ordinator	1	
9		Radio Indicators as required		
10		Radio Indicators as required		
11		Radio Indicators as required		
12	23-401-02	Directional Gyro	1	
13	AN 840-6D	Adapter	1	
14	147-40002-200	Hose Assy. to Air Filter	1	
15	147-40002-171	Hose Assy. to Suction Gage	1	
16	AN 822-4D	Elbow	1	
17	161-54004-23	Hose Assy. to Vacuum Regulator	1	
18	AN 840-6D	Adapter	1	
19	23-501-03	Horizon, Gyro	1	
20	AN 840-6D	Adapter	1	
21	AN 840-6D	Adapter	1	
22	147-40002-201	Hose Assy. to Air Filter	1	
23	161-54004-21	Hose Assy. to Vacuum Regulator	1	
24	TS-27M	Airspeed, True	1	
25	AN 816-4D	Nipple	1	
26	AN 816-4D	Nipple	1	
27	147-40002-170	Hose Assy. Pitot Pressure	1	
	AN 3106B-105L-3S	Connector, Electrical	1	

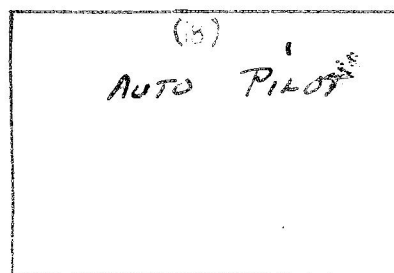
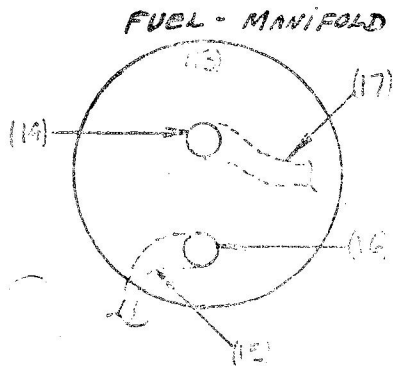
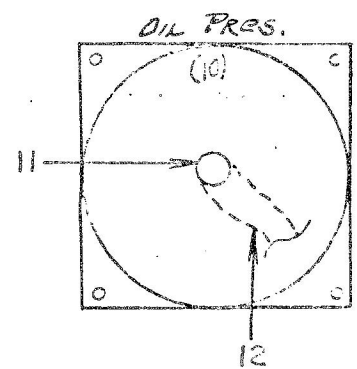
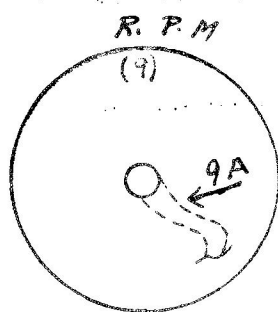
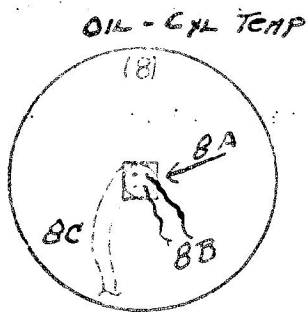
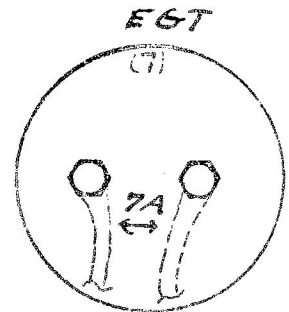
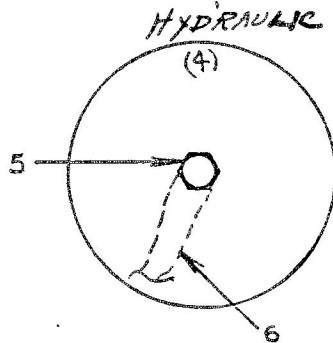
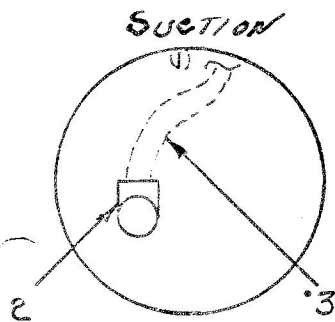






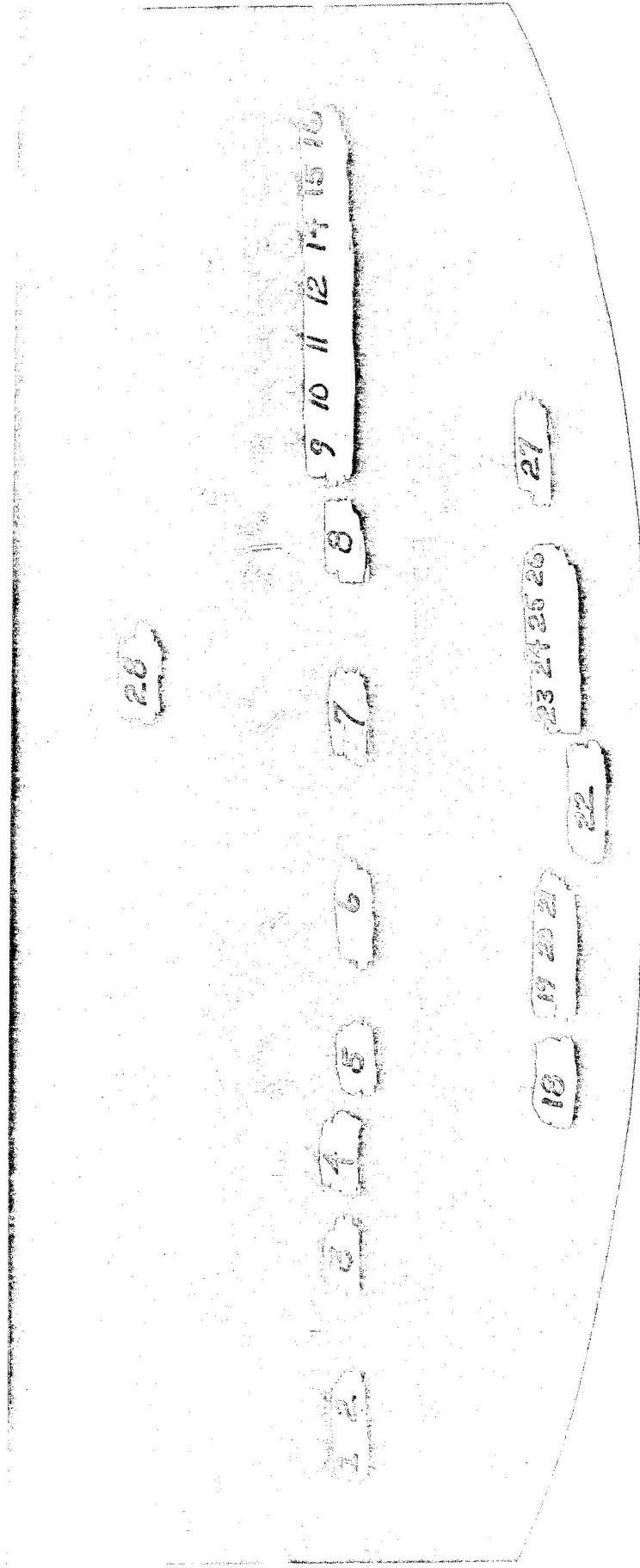
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REAR VIEW R/H INSTRUMENT PANEL 147-40002-189



INSTRUMENT SYSTEM R.H. PANEL 129  
FIGURE 59

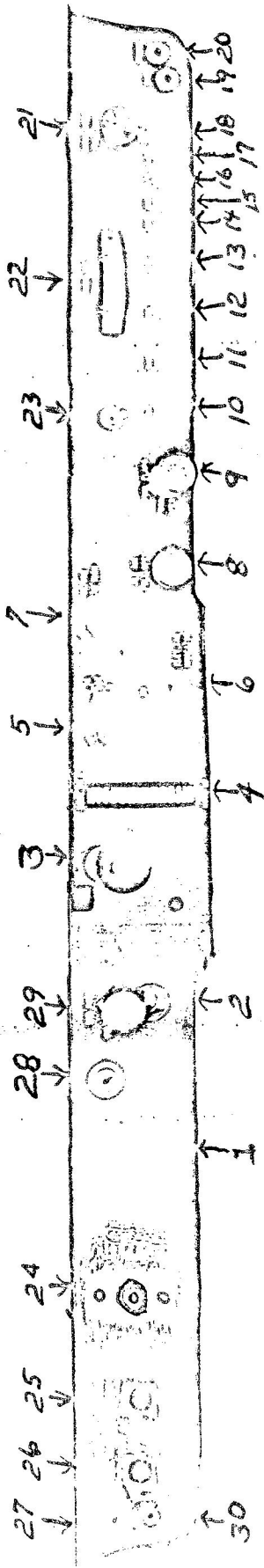
KEY	PART NUMBER	NOTE	QTY PER ASSEMBLY	USAGE
1	161-40003-2	Suction Gage	1	2351
2	AN 822-4D	Elbow	1	
3	147-40007-1	Hose Assy.	1	
4	161-40003-9	Hydraulic Gage	1	2351
5	147-40002-120	Fitting	1	
6	MS28741-4-0174	Hose Assy.	1	
7	35-90A	Exhaust Gas Temperature	1	
7A	01-005-90	Wire Lead EGT to Probe	2	
8	161-40003-13	Oil & Cyl. Temp Gage	1	2500
8A	MS3106A-14S-5S	Connector Electric	1	
8B	501 & 502	18 Gage Wire Oil Temp	2	
8C	504 & 5500	18 Gage Wire Cyl. Temp	2	
9	161-40003-1	R.P.M. Indicator	1	2500 Sub
	1536403	Tack Shaft Cable	1	
10	161-40003-1	Oil Pressure Gage	1	
11	AN 816-4D	Connector	1	
12	MS28741-4-0300	Hose Assy.	1	
13	161-40003-5	Fuel & Manifold Gage	1	
14	AN 816-4D	Connector	1	
15	MS28741-10-0160	Hose Assy.	1	
16	AN 816-4D	Connector	1	
17	MS28741-4-0244	Hose Assy.	1	
18	L 3101 G	(GREEN) LIGHT - LAND GEAR WARNING	3	
19	L 3101 R	LIGHT - (RED)	1	
20	8373 KB	SWITCH, DIMMER	1	



OVERHEAD  
PANEL

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	D7270-1-5	Battery Switch	1	2351 & Sub.
2	D7270-1-5	Alternator Switch	1	2500 & Sub.
3	D7270-1-5	Boost Pump Switch	1	2351 & Sub.
4	D7270-1-3	Turn & Bank Switch	1	
5	161-30015-69	L. Tip Tank Gauge	1	2539 & Sub.
6	161-70010-2	Main Tank Gauge	1	
7	161-30015-69	R. Tip Tank Gauge	1	
8	D-369-C	Ammeter	1	2351 & Sub.
9	D7270-1-10	Pitot Heat Switch	1	
10	D7270-1-5	Cabin Light Switch	1	
11	D7270-1-5	Panel Light Switch	1	
12	D7270-1-10	Beacon Light Switch	1	
13		Not Applicable		
14	D7270-1-5	Position Light Switch	1	
15	D7270-1-10	L.H. Landing Light Switch	1	
16	D7270-1-10	R.H. Landing Light Switch	1	
17		Not Applicable		
18	0148-10 Watt .35 V.	Rheostat - Inst. Panel Light	1	
19	D7271-1-5	Starter Breaker	1	
20	D7271-1-5	Oil Temperature Breaker	1	
21	D7271-1-5	Boost Pump Breaker	1	
22	811542	Resistor, Main Tank Zero Adj.	1	2539 & Sub.
23	D7271-1-5	Fuel Gauge Breaker	1	2351 & Sub.
24	D7271-1-5	Gear Warn Light Breaker	1	
25	D7271-1-3	Gear Warn Horn Breaker	1	
26	D7271-1-20	Cigarette Lighter Breaker	1	
27	0148-10 Watt .35 V.	Overhead Panel Light Dim.	1	
28	A5299B-12 (clear) A5299-12 (red)	Lights - Instrument	10	

OVERHEAD INSTRUMENT PANEL Figure 60



LOWER INSTRUMENT PANEL  
 FIGURE 61

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	147-40002-187	Panel, Lower Instrument Engraved	1	
2	L 140 B	Lighter, Cigarette	1	
3	345-001-22	Throttle Control	1	
4	145-52501-29	Elevator Trim Tab Control	1	
5	345-001-44	Prop Control	1	
6	145-52503	Elevator Tab Indicator	1	
7	345-001-21	Mixture Control	1	
8	145-43010-5	Alt. Air Control	1	
9	146-31514-3	Cowl Flap Control	1	
10		Radio Circuit Breakers as required		
11		" " " " "		
12		" " " " "		
13		" " " " "		
14		" " " " "		
15		" " " " "		
16		" " " " "		
17		" " " " "		
18		" " " " "		
19	47-D-4971	Microphone Recpt.	1	
20	47-D-4963	Phone Jack	1	
21	145-53316	Cabin Heat Control	1	
22	21-006-65	Cabin Air Control	1	
23	57-D-3343	Radio Switch	1	
24	PDLM-70A	Circuit Breaker 70 amp.	1	
25	145-58205	Hydraulic Emergency Control	1	
26	161-58003-SA2	Parking Brake Control	1	
27	47-D-4963	Phone Jack	1	
28	10-357200-1	Switch, Ignition	1	



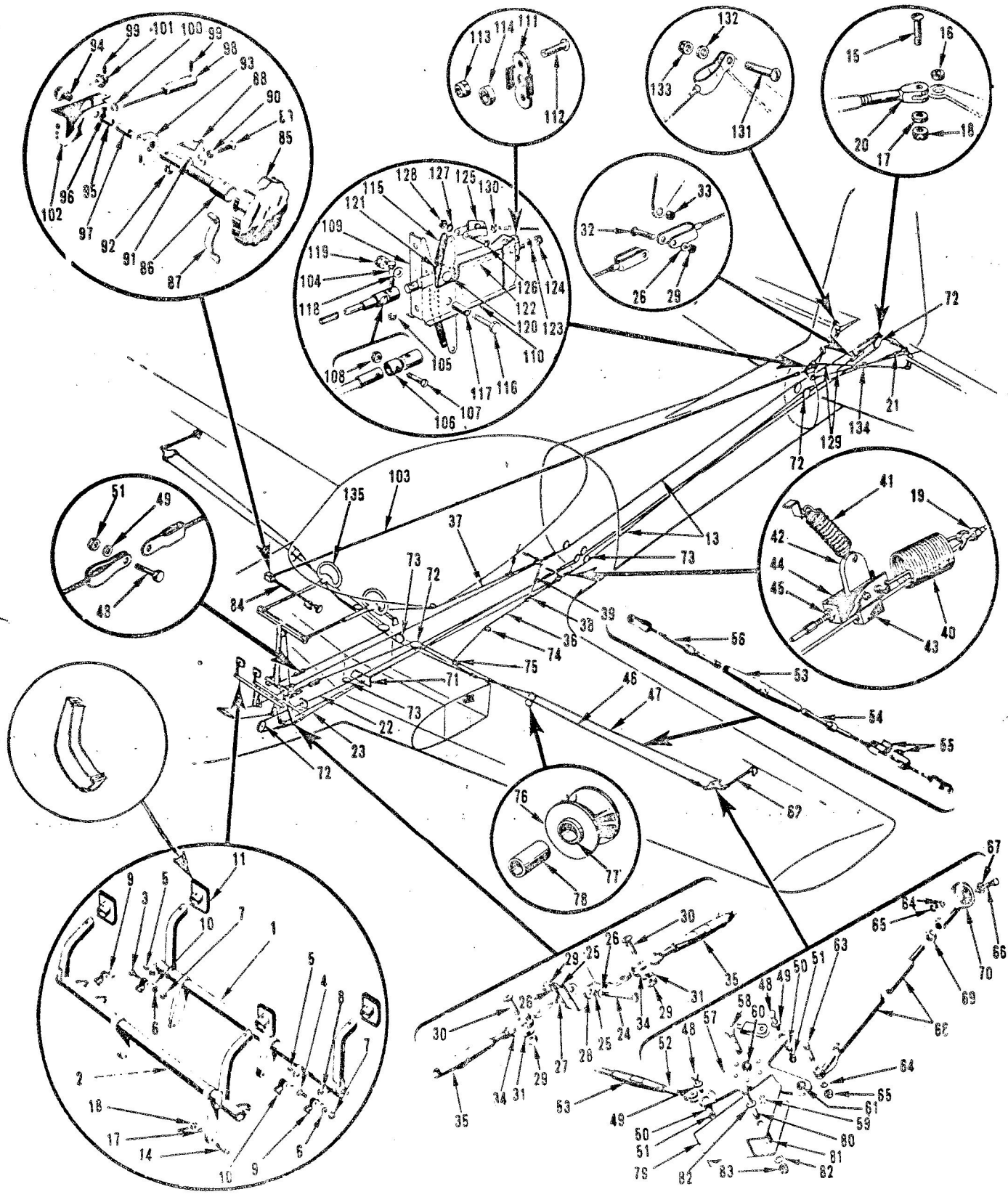


FIGURE 62 SURFACE CONTROL SYSTEM





FIGURE 62 SURFACE CONTROL SYSTEM

KEY	ITEM NO.	PART NUMBER	1 2 3 4				NOMENCLATURE	UNITS PER ASSY	USAGE
1		145-52401-63				Rudder Pedal Weld Assy - Aft	1		
2		145-52401-65				Rudder Pedal Weld Assy - Forward	1		
3		AN3-11				Bolt - Aircraft 10-32	1		
4		AN3-6				Bolt - Aircraft 10-32	1		
5		4B14-3-4				Bushing	2		
6		AN960-10				Washer - Plain	2		
7		AN310-3				Nut - Aircraft Castle	2		
8						Bearing	3		
9		145-24402-4				Bracket - Hinge	2		
10		145-52401-15				Bracket - Rudder Pedal	2		
11		161-58002-2				Pad Assy - Rudder Pedal	2		
13		145-52010-25				Cable Assy - Rudder (Includes Barrel, Fork & Terminal)	2		
14		AN23-10				Bolt - Clevis 10-32	1		
15		AN23-11				Bolt - Clevis 10-32	1		
16		145-52323				Spacer	1		
17		AN960-10L				Washer - Plain	2		
18		AN320-3				Nut - Aircraft Shear	2		
19		145-52317				Terminal - Quick Disconnect	1		
20		AN161-22Lg				Fork - Turnbuckle	1		
21		AN155-32S				Barrel - Turnbuckle	1		
22		145-52010-29				Cable Assy - Elevator Down (Includes Fork & Barrel)	1		
23		145-52010-33				Cable Assy - Elevator Up (Includes Fork & Barrel)	1		
24		AN23-23				Bolt - Clevis 10-32	1		
25		145-52221				Spacer	3		
26		AN960-10L				Washer - Plain	1		
27		145-52218-3				Link - Control Cable	1		
28		145-52218-5				Link - Control Cable	4		
29		AN320-3				Nut - Aircraft Shear	2		
30		AN23-12				Bolt - Clevis 10-32	2		
31		AN960-10				Washer - Plain	1		
32		AN23-15				Bolt - Clevis 10-32	1		
33		145-52214				Spacer	1		
34		AN161-22RS				Fork - Turnbuckle	1		
35		AN155-32S				Barrel - Turnbuckle	1		
36		145-52010-41				Cable Assy - Rudder and Aileron LH	1		
37		145-52010-37				Cable Assy - Rudder and Aileron RH	1		
38		145-52317				Terminal - Quick Disconnect	1		
39		145-52320				Spring - Retraction Rudder & Aileron Interconnect	1		
40		145-52319				Spring - Extension Rudder & Aileron Interconnect	1		
41		145-52324				Spring - Support Fairlead	1		
42		145-52318-3				Fairlead - Rudder & Aileron Interconnect	1		
43		145-52318-5				Fairlead - Rudder & Aileron Interconnect	1		
44		145-52316				Connector	2		
45		AN315-6LOR				Nut - Aircraft Plain	2		
46		145-52010-11				Cable Assy - Aileron Actuating (Includes Fork & Barrel)	2		
47		145-52010-21				Cable Assy - Aileron Bus Complete	2		
48		AN23-12				Bolt - Clevis 10-32	2		
49		AN960-10L				Washer - Plain	1		
50		145-52323				Spacer	2		
51		AN320-3				Nut - Aircraft Shear	1		
52		AN161-22LS				Fork - Turnbuckle	1		
53		AN155-32S				Barrel - Turnbuckle	1		
54		145-52010-15				Cable Sub Assy - Aileron Bus (Includes Terminals)	2		
55		145-52317				Terminal - Quick Disconnect	1		
56		145-52010-19				Cable Sub Assy - Aileron Bus	1		
57		145-52300-1				Bellcrank Assy - LH (Includes Bearing & Bushing)	1		
		145-52300-2				Bellcrank Assy - RH (Includes Bearing & Bushing)	1		
58		AN4-11				Bolt - Aircraft 1/4-28	1		
59		AN310-4				Nut - Aircraft Castle	1		
60		BC 7-4-10				Bearing	1		
61		NAS75-4-006				Bushing - Press Fit Steel	2		
62		145-52303				Rod Assy - Aileron Control	1		
63		AN4-7				Bolt - Aircraft 1/4-28	2		
64		AN960-416				Washer - Plain	2		
65		AN310-4				Nut - Aircraft Castle	1		
66		AN4-12				Bolt - Aircraft 1/4-28	1		
67		2W1-17-24-64				Washer	1		
68		145-52303-4				Rod Sub Assy - Aileron Control	1		
69		AN316-5R				Nut - Aircraft Check	1		
70		RELF5				Bearing - Rod End	1		
71		145-52219-3				Fairlead - Elevator & Rudder Cable	6		
72		AN210-4				Pulley - Anti-Friction Bearing Control	3		
73		AN210-3				Pulley - Anti-Friction Bearing Control	6		
74		AN210-1				Pulley - Anti-Friction Bearing Control	2		
75		AN210-2				Pulley - Anti-Friction Bearing Control	2		
76		145-52301				Roller Assy - Cable (Includes Bushing)	1		
77		A313				Bushing - Roller Assy	1		

FIGURE 62 - SURFACE CONTROL SYSTEM (CONT)

KEY	ITEM NO.	PART NUMBER	1 2 3 4				NOMENCLATURE	UNITS PER ASSY	USAGE
78		4S3-10-19				Spacer	1		
79		145-52310-5				Stop - Aileron Control Bracket	1		
80		AN4-20A				Bolt - Aircraft 1/4-28	1		
81		4S3-416-46				Spacer	1		
82		AN960A416				Washer - Plain	2		
83		AN365-428				Nut - Self Locking	1		
84		145-52501-13				Knob & Shaft Assy - Elevator Trim Tab	1		
85		145-52529				Knob - Trim Tab Control	1		
86		145-52502				Shaft - Elevator Trim Tab	1		
87		145-52548				Spring - Trim Tab Control Knob	1		
88		145-52503				Indicator - Trim Tab Position	1		
89		AN515B8-10				Screw - Round Head Machine (Coarse Thread)	1		
90		4S3B8-6				Spacer	1		
91		AN960-516				Washer - Plain	2		
92		AN365B832				Nut Self Locking	1		
93		145-52504				Nut - Trim Tab Indicator	1		
94		145-52501-11				Gear and Tube Assy - Elevator Trim Tab	1		
95		145-52501-21				Coupling - Tube	1		
96		R88C200				Set Screw - 10-32 x 3/8 Headless	1		
97		145-52501-24				Tube	1		
98		145-52549-24				Shaft Assy - Elevator Trim Tab Operating Pinion	1		
99		No Number				Screw - 10-32 x 3/8	2		
100		2WB17-18-005				Shim	AR		
101		145-52513-5				Gear - Elevator Trim Tab Operating	1		
102		145-52549				Box - Gear Elevator Trim Tab	1		
103		145-52547				Shaft Assy - Trim Tab Torque (With Universal)	1		
104		AN23-13A				Bolt - Clevis 10-32	1		
105		AN365-1032				Nut - Self Locking	1		
106		145-52546				Universal - Trim Tab Torque	1		
107		AN23-13A				Bolt - Clevis 10-32	1		
108		AN365-1032				Nut - Self Locking	1		
109		145-52505				Trim Tab Control Assy (Complete Less Cables)	1		
110		145-52528				Bracket Assy (Includes Bearing & Retainer)	1		
111		145-52527				Retainer - Elevator Trim Tab Bearing	1		
112		NAS221-11				Screw - Phillips Recess	2		
113		AN365-1032				Nut - Self Locking	1		
114		AN200K3				Bearing - Heavy Duty (Metal Shield)	1		
115		145-52505-5				Bellcrank - Elevator Trim Tab	1		
116		AN4-14				Bolt - Aircraft 1/4-28	1		
117		145-52505-14				Spacer - Elevator Trim Tab	1		
118		AN960-416				Washer - Plain	2		
119		AN310-4				Nut - Aircraft Castle	1		
120		145-52511				Nut - Elevator Trim Tab Swivel	1		
121		AN960-1216L				Washer - Plain	2		
122		145-52507				Shaft - Elevator Trim Tab Jack	1		
123		AN960-10				Washer - Plain	1		
124		AN310-3				Nut - Aircraft Castle	1		
125		145-52505-13				Strap Assy - Elevator Trim Tab	1		
126		AN23-19				Bolt - Clevis 10-32	2		
127		AN960-10				Washer - Plain	1		
128		AN310-3				Nut - Aircraft Castle	1		
129		145-52510				Cable Assy - Elevator Trim Tab	4		
130		AN316-5R				Nut - Aircraft Check	1		
131		AN23-9				Bolt - Clevis 10-32	1		
132		AN960-10				Washer - Plain	1		
133		AN320-3				Nut - Aircraft Shear	1		
134		145-52509				Fairlead - Elevator Trim Tab (Sta. 297.4)	2		
135						Control Column (See Page 40 For Details)		Ref	

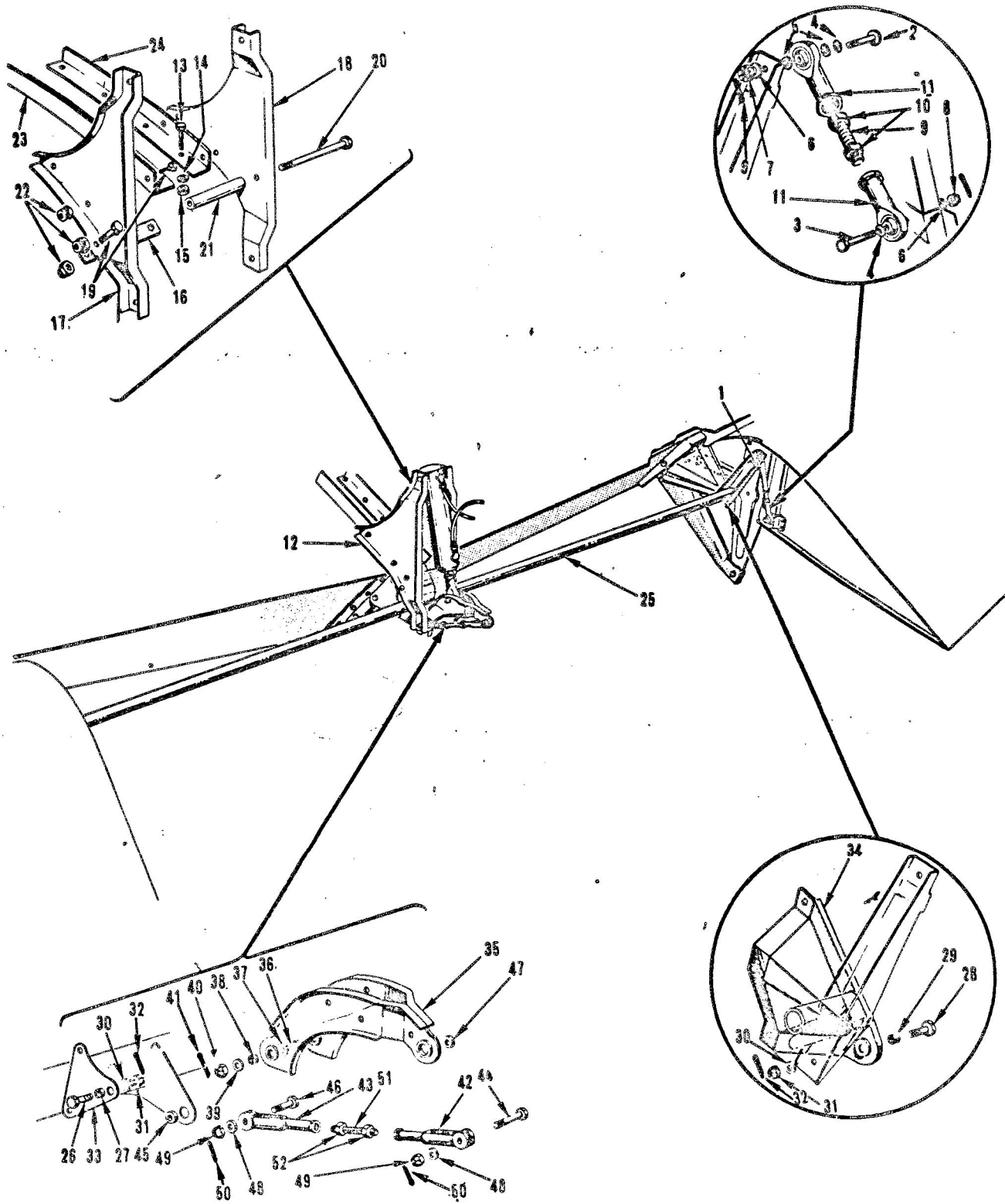


FIGURE 63. WING FLAP OPERATING MECHANISM



FIGURE 63 - WING FLAP OPERATING MECHANISM

KEY	ITEM NO.	PART NUMBER	1 2 3 4				NOMENCLATURE	UNITS PER ASSY	USAGE
1		145-52019-10	Rod	Assy	-	Wing Flap Actuating	2		
2		AN24-20	Bolt	-	-	Clevis 1/4-28	1		
3		AN4-12	Bolt	-	-	Aircraft 1/4-28	1		
4		2W1-17-24-64	Washer	-	-	Plain	2		
5		2W1-17-12-64	Washer	-	-	Plain	4		
6		AN960-416	Washer	-	-	Plain	4		
7		AN320-4	Nut	-	-	Aircraft Shear	1		
8		AN310-4	Nut	-	-	Aircraft Castle	1		
9		145-52019-2	Stud	-	-	-	1		
10		AN316-5R	Check Nut	-	-	-	2		
11		P45-19	Bedring	-	-	Rod End	2		
12		145-52022-10001	Support	Assy	-	Flap Cylinder	1		
13		AN4-6A	Bolt	-	-	Aircraft 1/4-28	8		
14		AN960-416	Washer	-	-	Plain	8		
15		AN365-428	Nut	-	-	Self Locking	8		
16		145-52022-3	Strap	-	-	Wing Flap Cylinder Support	1		
17		145-52022-9	Bracket	-	-	Wing Flap Cylinder Support LH	1		
18		145-52022-10	Bracket	-	-	Wing Flap Cylinder Support RH	1		
19		AN4-5A	Bolt	-	-	Aircraft 1/4-28	6		
20		AN4-30A	Bolt	-	-	Aircraft 1/4-28	1		
21		4S4D8-74	Spacer	-	-	-	1		
22		AN365-428	Nut	-	-	Self Locking	7		
23		145-52022-5	Angle	-	-	Wing Flap Cylinder Support LH	1		
24		145-52022-6	Angle	-	-	Wing Flap Cylinder Support RH	1		
25		145-52026	Tube	Assy	-	Flap Torque	1		
26		AN4-6	Bolt	-	-	Aircraft 1/4-28	1		
27		143-18051-2	Bushing	-	-	Flap Hinge Spacer	1		
28		AN4-7	Bolt	-	-	Aircraft 1/4-28	2		
29		143-18051-4	Bushing	-	-	Flap Hinge Spacer	3		
30		AN960-416	Washer	-	-	Plain	3		
31		AN310-4	Nut	-	-	Aircraft Castle	3		
32		AN380-2-2	Cotter	-	-	-	1		
33		145-52027	Support	-	-	Wing Flap Torque Tube Center	1		
34		145-52024-2	Support	-	-	Torque Tube Outboard RH	1		
		145-52024-1	Support	-	-	Torque Tube Outboard LH	1		
35		145-52021	Bellcrank	Assy	-	Wing Flap Strut	1		
36		AN4-6	Bolt	-	-	Aircraft 1/4-28	2		
37		2W1-17-18-32	Washer	-	-	-	2		
38		143-18051-1	Bushing	-	-	Flap Hinge Spacer	2		
39		AN960-416	Washer	-	-	Plain	2		
40		AN310-4	Nut	-	-	Aircraft Castle	2		
41		AN380-2-2	Cotter	-	-	-	2		
42		NAS170-5	Clevis	-	-	Engine Control Rod Adjustable	1		
43		NAS170-6	Clevis	-	-	Engine Control Rod Adjustable	1		
44		AN4-7	Bolt	-	-	Aircraft 1/4-28	1		
45		143-18051-2	Bushing	-	-	Flap Hinge Spacer	1		
46		AN4-6	Bolt	-	-	Aircraft 1/4-28	1		
47		143-18051-4	Bushing	-	-	Flap Hinge Spacer	2		
48		AN960-416	Washer	-	-	Plain	2		
49		AN310-4	Nut	-	-	Aircraft Castle	2		
50		AN380-2-2	Cotter	-	-	-	1		
51		145-52028	Rod	-	-	Wing Flap Torque Tube Push	1		
52		AN316-6R	Check Nut	-	-	-	2		
53			Actuating	Cylinder	(See Page 116 For Details)		Ref		

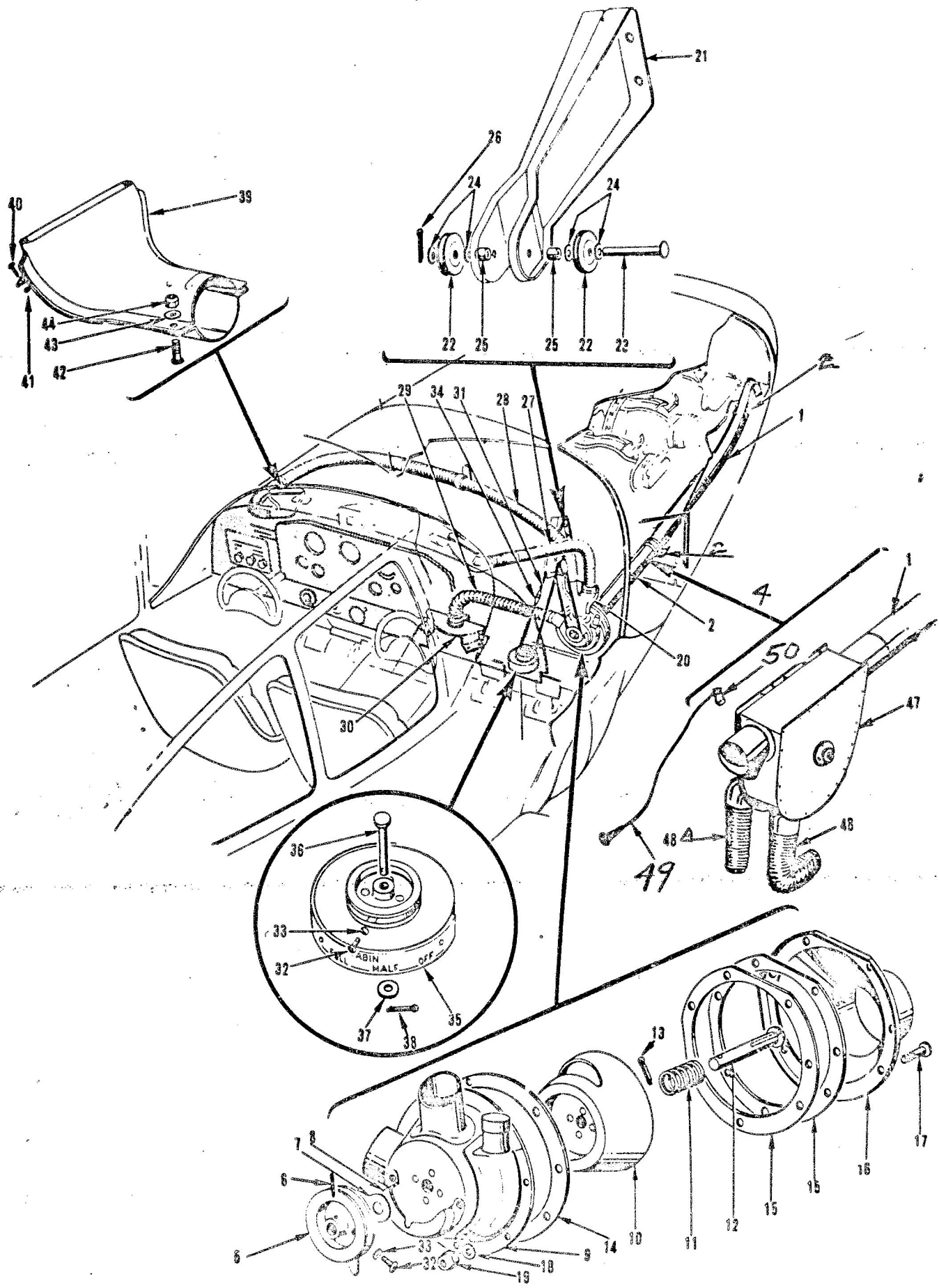


FIGURE 64- VENTILATING SYSTEM

KEY	PART NAME	NAME	UNIT PER ASSY.	USAGE
1	147-30001-79	Duct Assy.	1	2351 & Sub.
2	QS-100-M-40	Clamp	2	
3		Not Used		
4	145-53301-7	Valve Assy. Complete	1	
5	145-53301-10	Pulley Assy.	1	
6	AN 380-3-5	Pin Cotter	1	
7	AN 960-616	Washer Plain	2	
8	145-53301-39	Guard	1	
9	145-53301-6	Valve Assy. - Outer	1	
10	145-53301-5	Valve Assy. - Inner	1	
11	145-53313	Spring - Cabin Air System	1	
12	145-53310	Shaft - Air Valve	1	
13	AN 380-4-5	Pin Cotter	1	
14	145-53301-26	Ring	1	
15	145-53301-27	Gasket	2	
16	145-53301-14	Adapter Assy. Air Inlet	1	
17	NAS 220-9	Screw	8	
18	AN 960-8	Washer Plain	8	
19	AN 365-832	Nut - Self Locking	8	
20	145-53301-89	Adapter Assy. - Air Outlet	1	
21	145-53321 SA 1	Bracket Assy. - Idler Pulley	1	
22	145-53319	Pulley	2	
23	AN 393-85	Pin - Flat Head 3-16	1	
24	AN 960-10	Washer - Plain	4	
25	4S3-10-9	Spacer - Bolt	2	
26	AN 380-2-2	Pin - Cotter	1	
27	145-53301-37	Hose	1	
28	145-53301-38	Hose	1	

VENTILATING SYSTEM  
FIGURE 64

142

KEY	PART NAME	DESCRIPTION	UNIT PER ASSY.	USAGE
28 cont.	AN 742D36	Clamp	1	
29	145-53301-57	Hose	1	
	AN 735D32	Clamp	2	
30	145-53324	Diffuser Assy.	1	
31	145-53318	Cable Assy. Ventilat. System (less barrel)	1	
32	7S4-6-8	Screw - Round Head	2	
33	AN 953-6	Washer - Medium Spring Lock	2	
34	AN 155-8S	Barrel - Turnbuckle	1	
35	145-53316	Control Assy.	1	
36	AN 393-47	Pin Flat Head 3-16	1	
37	AN 960-10	Washer - Plain	1	
38	AN 380-2-2	Pin Cotter	1	
39	145-53301-9	Diffuser Assy. L/R	2	2351 thru 2519
	145-53501-83	Diffuser Assy. Left	1	2519 & sub.
	145-53301-90	Diffuser Assy. Right	1	
40	AN 507B632R7	Screw 100 degrees Flat Head	4	
41	AN 365B632	Nut - Self Lock	4	
42	7S4-10-6	Screw - Round Head	4	
43	AN 960-10	Washer Plain	4	
44	AN 365-1032	Nut Self Locking	4	
45		Not Used		
46		Not Used		
47	145-42122 SA 11	Valve Assy. Cabin Air Mixture	1	
	145-42122-28	Shaft Assy. Cabin Air Mixture Valve	1	
	145-42201-23	Pin - Cabin Air Mixture Valve	2	
48	147-30001-83	Duct Assy.	1	
	QS-100-M-28	Clamp	2	
SA	147-30001-85	Duct Assy.	1	

VENTILATING SYSTEM  
FIGURE 64

143





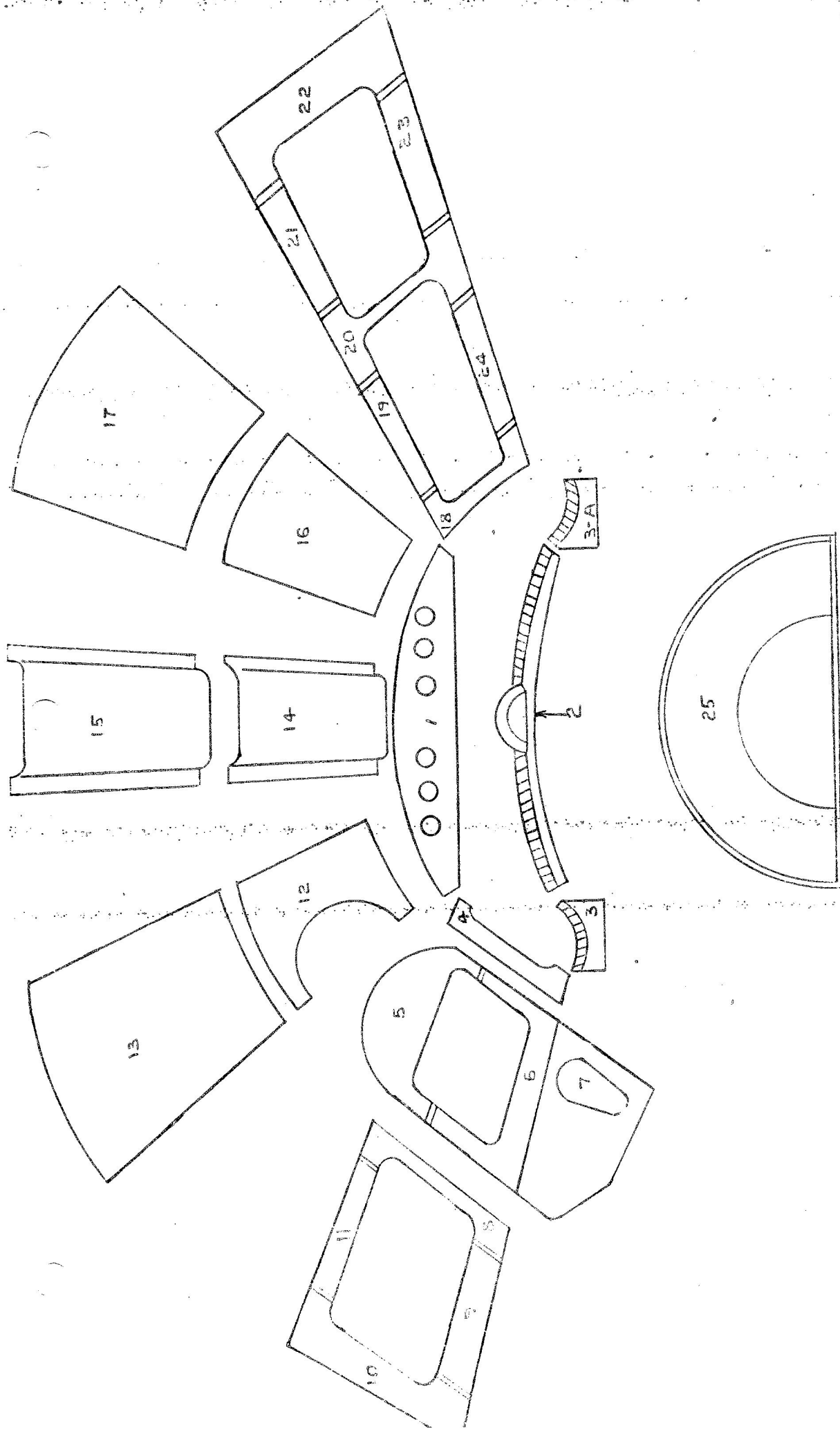
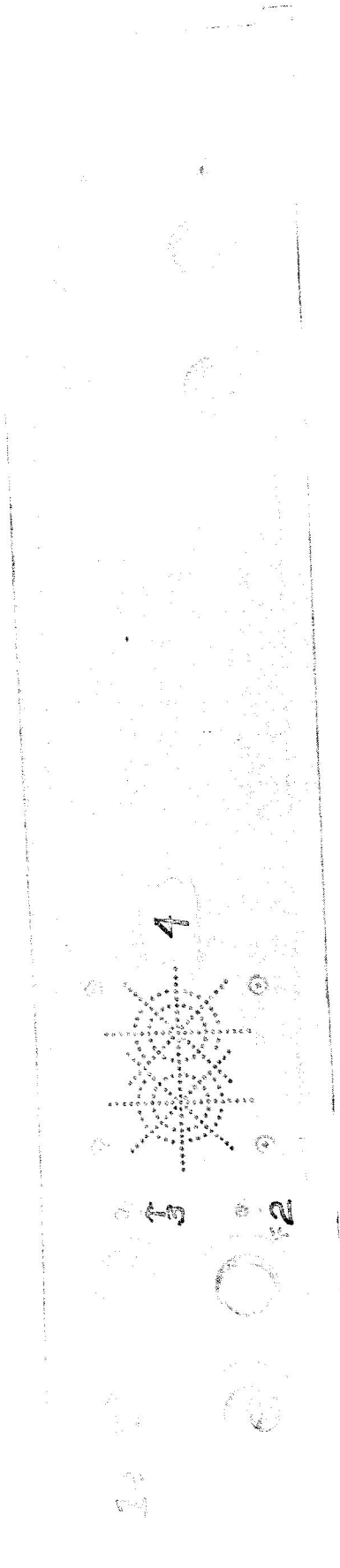


FIGURE 65 INTERIOR PARTS

NAVION

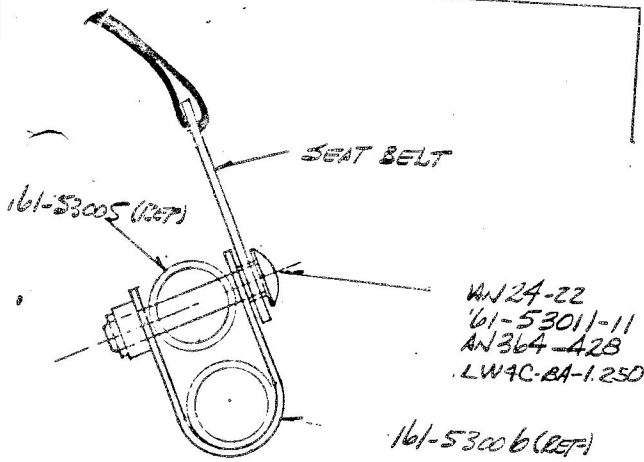
KEY	PART NO	NAME				UNIT PPR ASSY	USAGE
		1	2	3	4		
1	147-40002-13	Overhead Instrument Panel (Engraved)					2351 Sub
2	T-10201	Compass Shroud					
3	T-10034-L	Extreme Forward Side Panels					
3A	T-10034-R	Extreme Forward Panels (Side)					
4	T-10133	Left Forward Window Post					
5	T-10131	Door Window Upper Frame					
6	T-10132	Door Window Lower Frame					
7	T-10042-E	Cabin Door Handle Recess					
8	T-10130	Left Center Window Post					
9	T-10136	Left Rear Lower Window Frame					
10	T-10129	Left Rear Window Post					
11	T-10135	Left Rear Upper Window Frame					
12	T-10047	Left Forward Headliner Section					
13	T-10044	Left Rear Headliner Section					
14	T-10049	Forward Air Duct Section					
15	T-10048	Rear Air Duct Section					
16	T-10046	Right Forward Headliner Section					
17	T-10045	Right Rear Headliner Section					
18	T-10123	Right Forward Window Post					
19	T-10126	Right Forward Upper Window Frame					
20	T-10122	Right Center Window Post					
21	T-10125	Right Rear Upper Window Frame					
22	T-10121	Right Rear Window Post					
23	T-10127	Right Rear Lower Window Frame					
24	T-10128	Right Forward Lower Window Frame					
25	T-10043	Hat Shelf Compartment					

FIGURE 65



OVER HEAD  
VENT  
PANEL





161-53011-17 2 REQ'D  
SOCKET MAY BE REAMED  
OR END OF SOCKET AND  
OR SLEEVE MAY BE  
UPSET IF NECESSARY  
FOR LIGHT DRESS FIT

SECTION A-A (FULL  
SIZE)  
(TYP 2 PLACES)

RT. PASSENGER  
CO PILOT  
- 1 LH ASSY SHW, - 2 RH OPP  
PILOT  
LEFT PASSENGER

161-53006-1 LH  
161-53006-2 RH

③ BOTTOM WEB

⑤ BACK WEB

ALLOW SUFFICIENT MATL.  
SO THAT WEBS OVERLAP  
FRAMES BY 1 INCH. GLUE  
WEB TO METAL FRAME &  
TO ITSELF ON 1 INCH  
OVERLAP USING 3M, EC1368  
CEMENT

161-53005-1 LH  
161-53005-2 RH

161-53007-1 LH  
161-53007-2 RH

NAS 221-25  
161-53011-13  
AN 460-10 (2) (ONE WASHER AT EACH END OF 161-53011-13  
BUSHING - 2 PLACES)  
AN 365-1032  
(2 PLACES)

161-53009

161-53015-11

RPA-52-012-062-0500

161-53015-9

161-53015-11

NAS 221-27  
161-53011-9  
AN 365-1032  
(4 PLACES)

161-53015-7

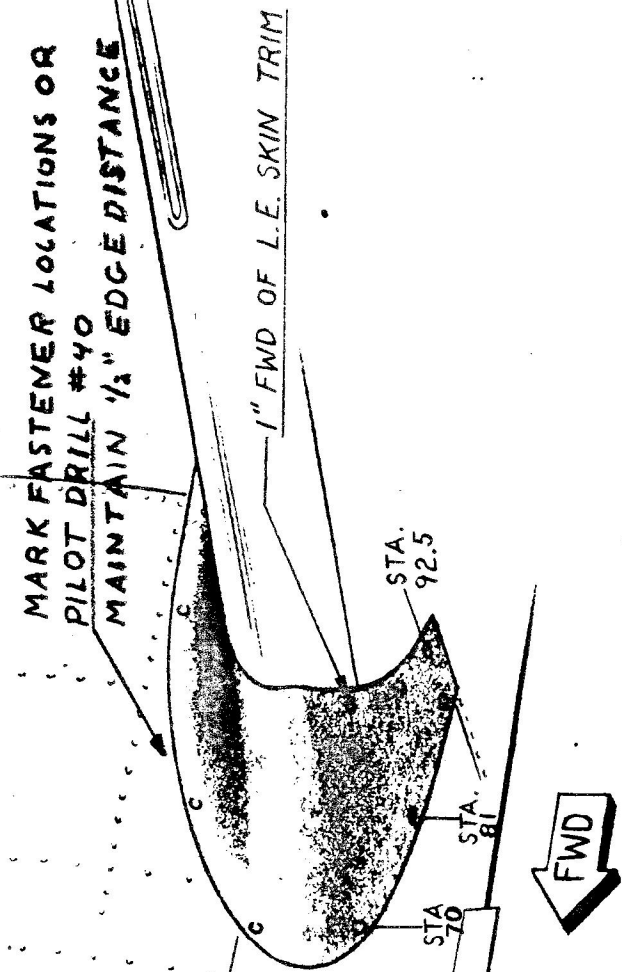
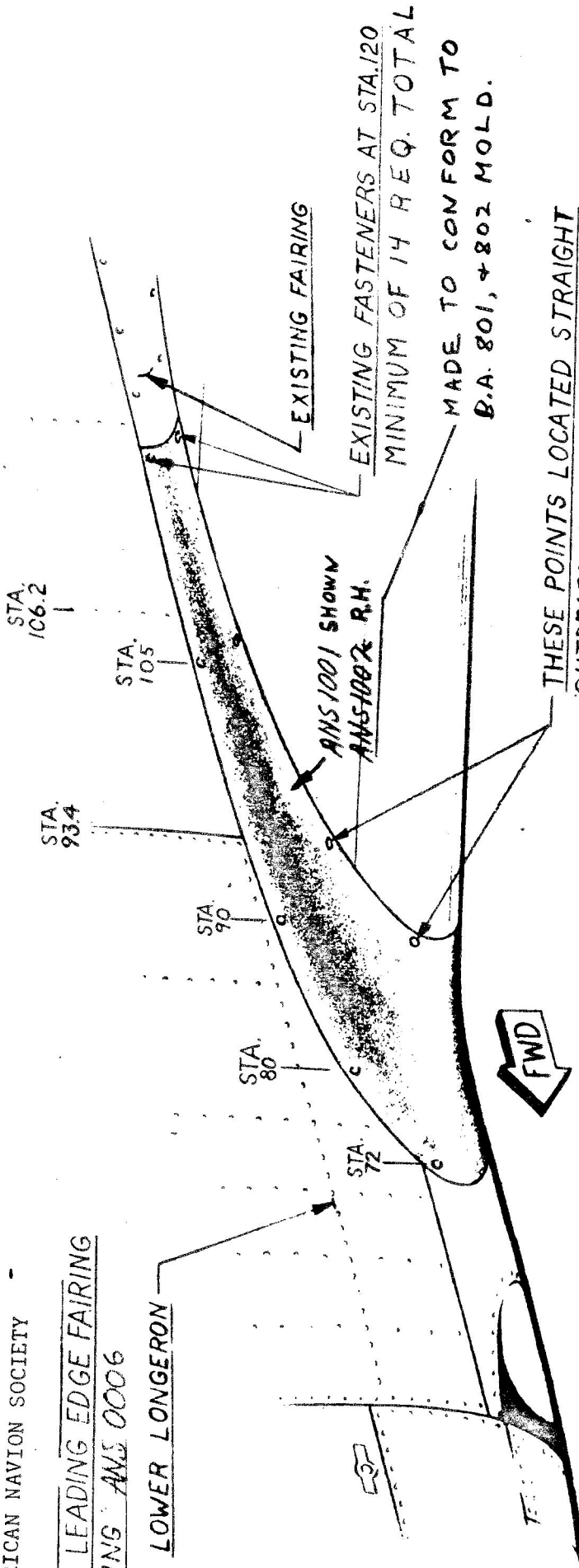
161-53011-7

AN 940-4  
AN 360-2-1

SEAT  
FIGURE 67

NAVION LEADING EDGE FAIRING  
DRAWING ANS 0006

LOWER LONGERON



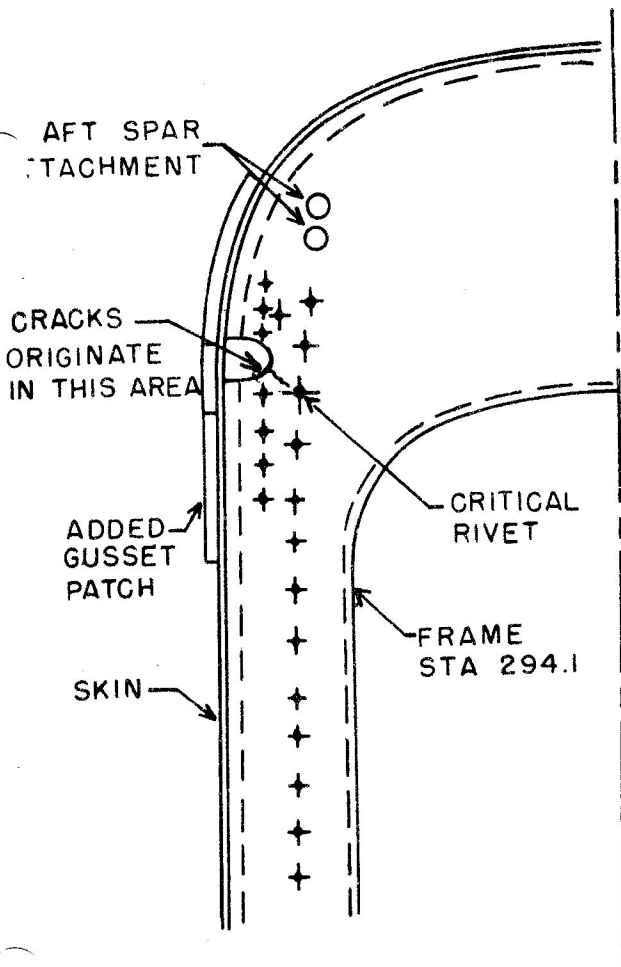


FIG. 1  
LOOKING FWD

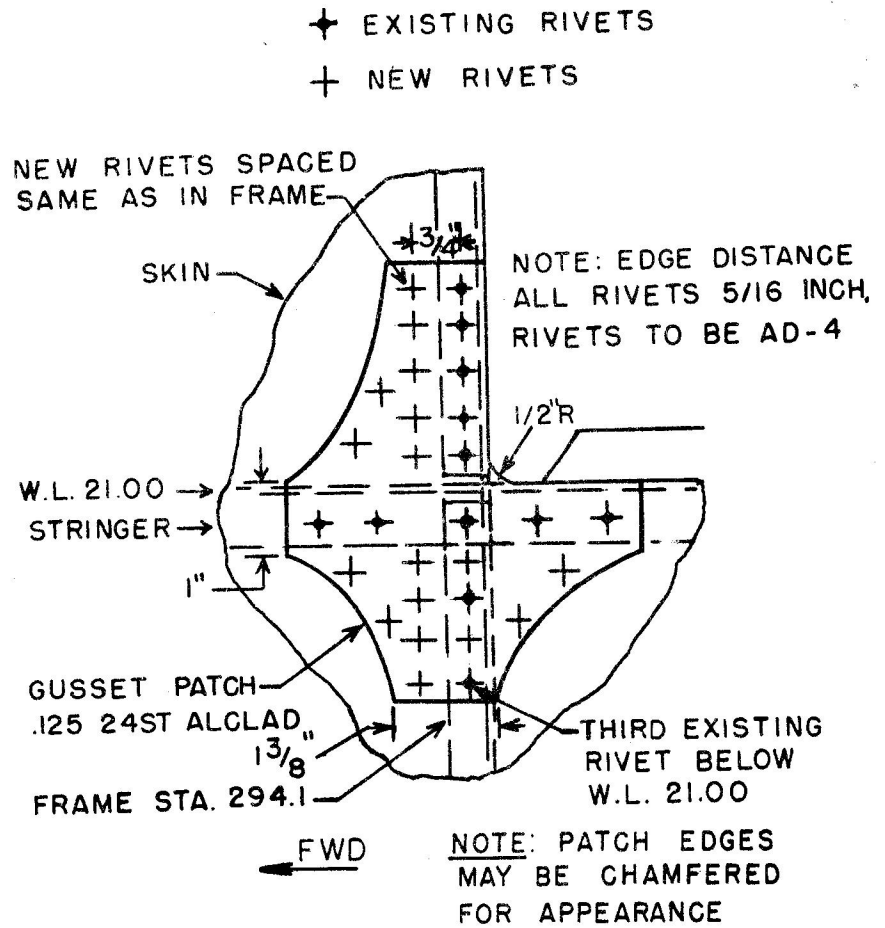


FIG. 2  
LOOKING INBOARD

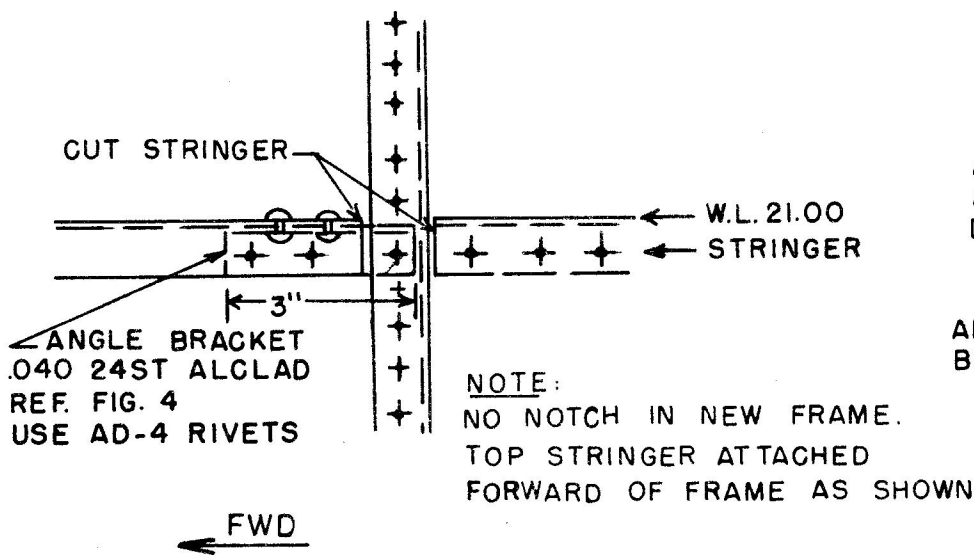


FIG. 3  
LOOKING INBOARD  
(SKIN REMOVED)

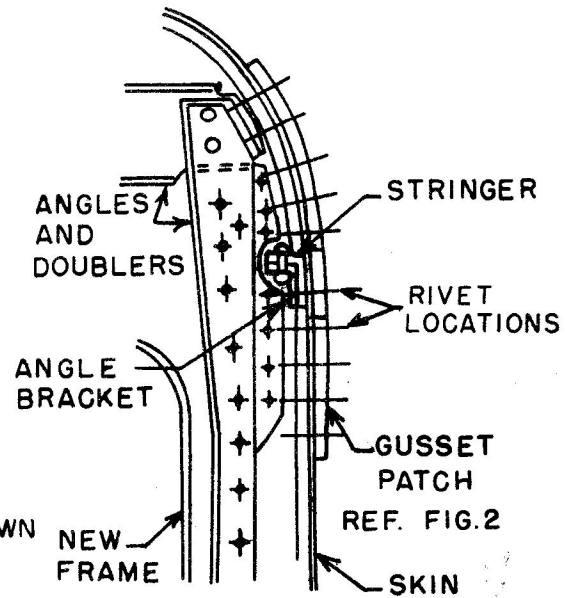


FIG. 4  
LOOKING AFT

SHEET 1

THE FOLLOWING "O" RINGS ARE USED IN "A" & "B" MODEL NAVION

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
AN6227-7	2	"O" RINGS/FUEL PRIMER
AN6227-22	1	REAR SEAL/ROMEC FUEL PUMP
AN6227-34	2	"O" RING/MAIN GEAR/1 EA STRUT
AN6247-34	4	BACKUP RINGS/MAIN GEAR/2 EA STRUT (THIS PART IS OBSOLETE FOR NEW DESIGN. SHOULD BE REPLACED WITH MS28782-34. THIS MAKES REPLACEMENT JOB MUCH EASIER)
AN6227-11	1	NOSE GEAR LOWER SEAL
AN6227-27	2	NOSE GEAR OLEO SEAL
AN6246-27	4	BACKUP RING/REPLACE WITH MS28782-27
AN6227-7	4	MASTER HYDRAULICS CONTROL
AN6247-7	4	BACKUP RINGS/MASTER HYDRAULIC CONTROL
AN6227-14	1	MASTER HYDRAULIC HAND PUMP
AN6227-19	1	MASTER HYDRAULIC HAND PUMP
AN6227-16	1	MASTER HYDRAULIC HAND PUMP
AN6227-7	1	MASTER HYDRAULIC CONTROL
AN6227-1	1	MASTER HYDRAULIC CONTROL
AN6227-20	1	HAND BRAKE
AN6227-7	1	HAND BRAKE
AN6227-17	1	TOP SEAL NA HYDRAULIC PUMP
AN6227-23	1	REAR SEAL NA HYDRAULIC PUMP
AN6227-23	3	MAIN GEAR HYDRAULIC CYLINDER ("A" & "B" MODELS)
AN6227-9	1	MAIN GEAR HYDRAULIC CYLINDER ("A" & "B" MODELS) (NOSE GEAR & FLAP CYLINDER SAME AS MAIN GEAR)
AN6227-3	1	HYDRAULIC RESERVOIR SEAL

File - EdNavion



SHEET 1

THE FOLLOWING "O" RINGS ARE USED IN "A" & "B" MODEL NAVION

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
AN6227-7	2	"O" RINGS/FUEL PRIMER
AN6227-22	1	REAR SEAL/ROMEC FUEL PUMP
AN6227-34	2	"O" RING/MAIN GEAR/1 EA STRUT
AN6247-34	4	BACKUP RINGS/MAIN GEAR/2 EA STRUT (THIS PART IS OBSOLETE FOR NEW DESIGN. SHOULD BE REPLACED WITH MS28782-34. THIS MAKES REPLACEMENT JOB MUCH EASIER)
AN6227-11	1	NOSE GEAR LOWER SEAL
AN6227-27	2	NOSE GEAR OLEO SEAL
AN6246-27	4	BACKUP RING/REPLACE WITH MS28782-27
AN6227-7	4	MASTER HYDRAULICS CONTROL
AN6247-7	4	BACKUP RINGS/MASTER HYDRAULIC CONTROL
AN6227-14	1	MASTER HYDRAULIC HAND PUMP
AN6227-19	1	MASTER HYDRAULIC HAND PUMP
AN6227-16	1	MASTER HYDRAULIC HAND PUMP
AN6227-7	1	MASTER HYDRAULIC CONTROL
AN6227-1	1	MASTER HYDRAULIC CONTROL
AN6227-20	1	HAND BRAKE
AN6227-7	1	HAND BRAKE
AN6227-17	1	TOP SEAL NA HYDRAULIC PUMP
AN6227-23	1	REAR SEAL NA HYDRAULIC PUMP
AN6227-23	3	MAIN GEAR HYDRAULIC CYLINDER ("A" & "B" MODELS)
AN6227-9	1	MAIN GEAR HYDRAULIC CYLINDER ("A" & "B" MODELS) (NOSE GEAR & FLAP CYLINDER SAME AS MAIN GEAR)
AN6227-3	1	HYDRAULIC RESERVOIR SEAL

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MAKE FROM BOSTON GEAR -- FB 810-5

MAIN GEAR BUSHING

HEAD DIAMETER .750

ID .500

HEAD THICKNESS .063

OD .625

LG .600

NOSE GEAR BUSHING

NOSE GEAR STEERING BUSHING

MAKE FROM BOSTON GEAR

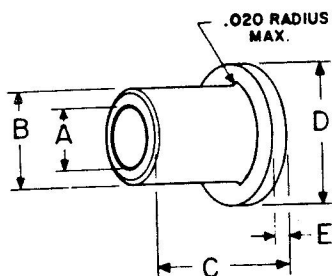
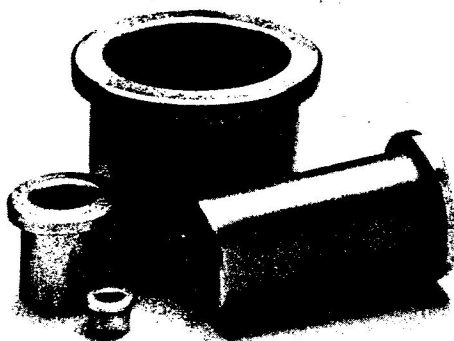
FB 1215-8

OR

FB 1215-12

### FLANGED TYPE

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE



#### STANDARD TOLERANCES

DIMENSIONS		TOLERANCE
A	.127 - 1.003	+ .0000 to - .0010
	1.0655 - 1.503	+ .0000 to - .0015
	1.628 - 2.003	+ .0000 to - .0020
B	2.1905 - 2.504	+ .0000 to - .0025
	2.755 - 3.505	+ .0000 to - .0030
C	1/8 - 1/2	± .005
	1 5/8 - 3	± .008
	4	± .010
D	All	± .0025
E	All	± .0025

#### STANDARD CONCENTRICITY

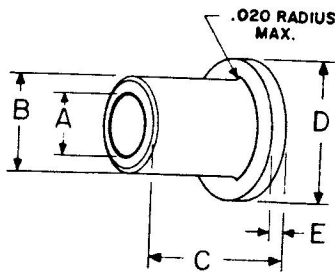
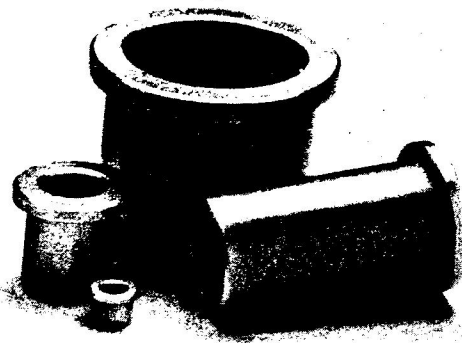
DIMENSIONS		T.I.R.
A	.127 - 1.003	.003
	1.0655 - 1.503	.004
	1.628 - 3.004	.005

Prices on unlisted sizes and other Boston Gear powder metal parts on request.

A	B	C	D	E	Catalog No.	Item Code				
1/8 .127	5/16 .315	1/4	.375	3/64	FB25-2	35516				
		3/8			FB25-3	35518				
3/16 .189	5/16 .3145	1/8	.375	3/64	FB35-1	35520				
		1/4			FB35-2	35522				
		3/8			FB35-3	35524				
1/4 .252	3/8 .377	1/4	.500	3/64	FB46-2	35526				
		3/8			FB46-3	35528				
		1/2			FB46-4	35530				
		5/8			FB46-5	35532				
		3/4			FB46-6	35534				
5/16 .314	3/8 .377	3/8	.500	3/64	FB56-3	35536				
		1/2			FB57-3	35538				
		3/8			FB57-4	69191				
3/8 .377	1/2 .502	1/2	.6875	3/32	FB57-5	69192				
		5/8			FB57-6	35540				
		3/4			FB57-7	69193				
		7/8			FB57-8	69194				
		1			FB58-3	35542				
					FB58-4	35544				
					FB58-5	35546				
					FB68-3	35548				
					FB68-3 1/4	35550				
					FB68-4	35552				
	FB68-5	35554								
	FB68-6	35556								
	FB68-7	69195								
	FB68-8	35558								
	FB68-10	35560								
	9/16 .5645	1/2	.750	1/8	FB69-4	69196				
	3/4	FB69-6			35562					
	1-1/4	FB69-10			35564					
	5/8 .627	3/8	.875	1/8	FB610-3	69197				
	1/2	FB610-4			35566					
	5/8	FB610-5			69198					
	3/4	FB610-6			35568					
	1	FB610-8			69199					
		1-1/4	FB610-10	35570						
	3/4 .753	1/2	1.00	1/8	FB612-4	35572				
7/16 .439	5/8 .628	5/8	.875	1/8	FB710-5	35574				
		3/4			FB710-6	69200				
		1-1/4			FB710-10	35576				
1/2 .502	5/8 .628	1/2	.875	1/8	FB810-4	35578				
		5/8			FB810-5	35580				
		3/4			FB810-6	35582				
		7/8			FB810-7	69201				
		1			FB810-8	35584				
		1-1/4			FB810-10	35586				
		1-1/2			FB810-12	35588				
		1-3/4			FB810-14	35590				
		11/16 .690			1/2	.938	1/8	FB811-4	35592	
					5/8			FB811-5	69202	
					3/4			FB811-6	35594	
					3/4 .753	1/2	1.00	1/8	FB812-4	35596
						5/8			FB812-5	69203
						3/4			FB812-6	35598
		7/8	FB812-7	35600						
		1	FB812-8	35602						
		1-1/4	FB812-10	35604						
		1-1/2	FB812-12	35606						
9/16 .565	3/4 .753	1/2	1.00	1/8	FB912-4	69204				
		3/4			FB912-6	69205				
		1			FB912-8	35608				

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

**FLANGED TYPE**



ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

A	B	C	D	E	Catalog No.	Item Code	
5/8 .626	3/4 .753	1/2	1.00	1/8	FB1012-4	35610	
		5/8			FB1012-5	35612	
		3/4			FB1012-6	35614	
		1			FB1012-8	35616	
5/8 .627	13/16 .815	1-1/4	1.063	5/32	FB1012-10	35618	
		5/8			FB1013-5	69206	
		3/4			FB1013-6	35620	
		1			FB1013-8	35622	
		1-1/4			FB1013-10	35624	
		1-7/16			FB1013-11 1/2	35626	
	1-1/2	FB1013-12	35628				
	2	FB1013-16	35630				
	7/8 .878	1 1.003	5/8	1.125	5/32	FB1014-5	69207
			3/4			FB1014-6	35632
1			FB1014-8			35634	
1-3/4			FB1014-14			35636	
11/16 .690	7/8 .878	3/4	1.125	5/32	FB1016-6	69208	
		1			FB1016-8	35638	
3/4 .752	7/8 .878	1-3/4	1.125	5/32	FB1114-14	35640	
		2			FB1114-16	35642	
		3/4			FB1214-6	35644	
		1			FB1214-8	35646	
	15/16 .940	1 1.003	1-1/4	1.188	5/32	FB1214-10	69209
			1-1/2			FB1215-8	35648
			5/8			FB1215-10	69213
			3/4			FB1215-12	35650
			1			FB1216-5	69214
			1			FB1216-6	35652
7/8 .877	1 1.003	3/4	1.250	5/32	FB1216-8	35654	
		1			FB1216-10	35656	
		1-1/4			FB1216-12	35658	
		1-1/2			FB1216-16	35660	
1 1.002	1 1.003	1-1/4	1.250	5/32	FB1416-6	35662	
		1			FB1416-8	69210	
		1-1/4			FB1416-10	35664	
		1			FB1418-8	35666	
1 1.002	1 1.003	1-1/2	1.375	5/32	FB1418-10	69211	
		1-3/4			FB1418-12	35668	
		2-1/2			FB1418-14	69212	
		3/4			FB1418-20	35670	
		1			FB1620-6	35672	
		1-1/4			FB1620-8	35674	
1-1/4 1.252	1-1/2 1.503	1-1/2	1.500	3/16	FB1620-10	35676	
		1-1/4			FB1620-12	35678	
		1-1/2			FB1620-16	35680	
		1			FB1622-8	35682	
1-1/2 1.503	1-3/4 1.754	1-1/2	1.625	3/16	FB1622-12	69215	
		1-3/4			FB1622-14	35684	
		1			FB2024-8	69216	
		1-1/4			FB2024-10	35686	
1-5/8 1.628	2 2.004	1-1/2	1.750	3/16	FB2024-12	69217	
		1-1/2			FB2428-12	35688	
1-5/8 1.628	2 2.004	2	2.313	3/16	FB2632-16	35690	

**STANDARD TOLERANCES**

DIMENSIONS		TOLERANCE
A	.127 - 1.003	+ .0000 to - .0010
	1.0655 - 1.503	+ .0000 to - .0015
B	1.628 - 2.003	+ .0000 to - .0020
	2.1905 - 2.504	+ .0000 to - .0025
	2.755 - 3.505	+ .0000 to - .0030
C	1/8 - 1 1/2	± .005
	1 5/8 - 3	± .008
	4	± .010
D	All	± .0025
E	All	± .0025

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

**STANDARD CONCENTRICITY**

DIMENSIONS		T.I.R. (A to B)
A	.127 - 1.003	.003
	1.0655 - 1.503	.004
	1.628 - 3.004	.005

Prices on unlisted sizes and other Boston Gear powder metal parts on request.