

CHAPTER 7

CHAPTER 7

TAIL UNIT

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CHAPTER 7

TAIL UNIT

General

1. The tail unit is of all metal construction, comprising twin tail booms, fins and rudders with a single tailplane and elevator situated span-wise across the end of the booms.

The details of the tail unit are of orthodox construction.

Negligible Damage

2. The definitions of negligible damage are set out in Table 82.

Repairs

3. The relevant repairs for every component of the tail unit will be found in Table 82.

Elevator and Rudder Mass Balance

4. As the mass balance weights of the rudder and elevator are not adjustable, the size of the patch repairs must be limited. Neither component should have more than one repair on one surface of more than 3.0" dia. or one repair on each surface of 1.0" dia. Any repair greater than this will be covered by reskinning schemes which will be added to the appendix of this book.

Wear Limits

5. Wear limits for all male and female parts of the principal fittings in the tail unit are given in Tables 94, 95 and 96, and should be read in conjunction with Figs. 7/25, 7/26 and 7/27, reference being made to Chapter 1, Para. 21, for the method of application.

TABLE 82
TAIL BOOM AND TAIL UNIT
DEFINITIONS OF NEGLIGIBLE AND REPAIRABLE DAMAGE

Component.	Definition of Damage.	Repair Fig. No.	Repair Material Item Nos.	Key Diagram Fig. No.
TAIL BOOM SKIN, TOP AND BOTTOM PANELS:	Negligible. Dents or Bruises, .03" deep, .25" dia., 12.0" apart.	Holes: 4.0" dia., 18.0" apart	7/3 13, 16, 40, 41	7/2
SIDE PANEL:	Dents or Bruises, .05" deep, 2.0" dia., 12.0" apart.	Holes: .5" dia., 12.0" apart 1.0" dia., 12.0" apart 2.0" dia., 12.0" apart 4.0" x 2.5", 18.0" apart 8.0" x 4.0", 24.0" apart 8.0" insertion, 24.0" apart 16.0" insertion, 24.0" apart	7/17 16, 38, 39, 56, 65 7/17 16, 38, 39, 56, 65 7/17 16, 38, 39, 56, 65 7/7 13, 16, 38, 39, 41 7/4 16, 35, 39 7/6 13, 38, 39 7/5 13, 38, 39	7/2 7/2 7/2 7/2 7/2 7/2 7/2
DIAPHRAGMS:	Dents or Bruises, .03" deep, 1.5" dia., 12.0" apart.	Holes: .5" dia., 12.0" apart Renewal of flange between stringers (2 only per diaphragm, 12.0" apart)	7/17 16, 39, 56, 65 7/6 13, 16, 38, 39, 41	7/2 7/2
STRINGERS:	Dents or Bruises, .02" deep, 1.0" dia., 12.0" apart.	Insertions up to 12.0", 24.0" apart	7/23 16, 28, 29, 38, 39	7/2
TAIL UNIT SKINS:	Dents or Bruises, .03" deep, 1.0" dia., 12.0" apart.	Holes: .5" dia., 12.0" apart 1.0" dia., 12.0" apart 2.0" dia., 12.0" apart 3.0" dia., 18.0" apart 5.0" dia., 18.0" apart 8.0" x 5.0", 18.0" apart 8.0" insert. at nose, 18.0" apart	7/17 16, 38, 39, 56, 65 7/17 16, 38, 39, 56, 65 7/17 16, 38, 39, 56, 65 7/18 19, 20, 35, 36, 45, 55, 64 7/19 19, 20, 35, 36, 45, 55, 64 7/19 18, 19, 20, 37, 38, 42, 43 7/20 18, 19, 45, 46, 56, 65	7/9, 7/10 7/15, 7/16 7/11, 7/12 7/14 7/17
SPAR WEBS:	Dents or Bruises, .03" deep, 1.0" dia., 12.0" apart.	Holes: .5" dia., 18.0" apart 1.0" dia., 18.0" apart 2.0" dia., 18.0" apart	7/17 16, 38, 39, 56, 65 7/17 16, 38, 39, 56, 65 7/17 16, 38, 39, 56, 65	7/11, 7/12 7/14 7/17
FLANGES:	Dents or Bruises, .03" deep, 1.0" dia., 12.0" apart.	Holes: 1.0" wide, involving 1.0" depth of web, 18.0" apart	7/22 19, 20, 28, 29, 52, 53, 61	7/11, 7/12 7/14 7/17
RIB WEBS:	Dents or Bruises, .03" deep, 1.0" dia., 12.0" apart.	Holes: 1.0" dia.	7/21 19, 20, 28, 29, 52, 53, 61	7/9, 7/10 7/13, 7/15 7/16
FLANGES:	Dents or Bruises, .03" deep, 1.0" dia., 12.0" apart.	Holes: 1.0" wide, involving 1.0" depth of web, 18.0" apart	7/22 19, 20, 28, 29, 52	7/11, 7/12 7/14 7/17
STRINGERS:	Dents or Bruises, .02" deep, 1.0" dia., 12.0" apart.	Insertion up to 12.0", 24.0" apart	7/23 16, 28, 29, 38, 39	7/10, 7/15

TABLE 83
TAIL BOOM
MATERIAL DETAILS

See Fig. No. 7/2, Ref. DH. Dwg. J00551-2A.

Key No.	Port.	Part No. Starboard.	Material.	Specification.	S.W.G.	Description.
1.	J00657ND	J00657ND	Alclad	DTD. 390	10	Top Plate
2.	J00658ND	J00658ND	Alclad	DTD. 390	10	Bottom Plate
3.	J00659ND	J00660ND	Alclad	DTD. 390	16	Side Plates
	J001215ND	J001216ND	Alclad	DTD. 390	16	Side Plates
4.	J001202	J001202	Dural	L. 40	Forging	Jointing Angle
5.	J00931ND	J00932ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00691-2A)
6.	J00933ND	J00933ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00693-4A)
7.	J00935ND	J00935ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00695-6A)
8.	J00937ND	J00938ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00697-8A)
9.	J00939ND	J00939ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00699-700A)
10.	J00941ND	J00942ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00701-2A)
11.	J00943ND	J00944ND	Alclad	DTD. 390	20	Diaphragm
				or L. 38		(Ass'd on J00703-4A)
12.	J00763	J00763	Alclad	DTD. 390	20	Diaphragm
13.	J00621ND LH.	J00621ND LH.	Alclad	DTD. 390	18	Packing Plate
	J00622ND RH.	J00622ND RH.	Alclad	DTD. 390	18	Packing Plate
14.	J00623ND LH.	J00623ND LH.	Alclad	DTD. 390	14	Reinforcing Plate
	J00624ND RH.	J00624ND RH.	Alclad	DTD. 390	14	Reinforcing Plate
15.	J001232ND	J001232ND	Standard Sect. A.1154,		—	Stringer
			Ident. No. I2-11218-10		—	
	J00619ND	J00619ND	Standard Sect. A.1154,		—	Stringer
			Ident. No. I2-11218-10		—	
16.	J001233ND	J001233ND	Standard Sect. A.1154,		—	Stringer
			Ident. No. I2-11218-10		—	
	J00620ND	J00620ND	Standard Sect. A.1154,		—	Stringer
			Ident. No. I2-11218-10		—	
17.	J00618ND	J00618ND	Alclad	DTD. 390	16	Door
18.	J00957ND	J00957ND	Alclad	DTD. 390	18	Nut Plate
				or L. 38		(Ass'd on J0066A)
19.	J0063	J0063	Alclad	DTD. 390	16	Cover Plate
				or L. 38		
20.	J00958ND	J00958ND	Alclad	DTD. 390	18	Nut Plate
				or L. 38		(Ass'd on J0067A)
21.	J0064	J0064	Alclad	DTD. 390	16	Cover Plate
				or L. 38		
22.	J00959ND	J00959ND	Alclad	DTD. 390	18	Nut Plate
				or L. 38		(Ass'd on J0068A)
23.	J0065	J0065	Alclad	DTD. 390	16	Cover Plate
				or L. 38		
24.	J00766	J00766	Alclad	DTD. 390	20	Bracket
25.	J001589ND	J001589ND	Alclad	DTD. 390	18	Reinforcing Plate
				or L. 38		
26.	J00133	J00133	Alclad	DTD. 390	16	Cover Plate
				or L. 38		
27.	J00484A	J00484A	Stores Ref. No. A79/500311		—	Assembly of Shock Pad
28.	K00355A	K00355A	Stores Ref. No. A79/500478		—	Bottom Control Bracket

TABLE 84
TAIL BOOM REAR FAIRING
MATERIAL DETAILS

See Fig. No. 7/8, Ref. DH. Dwg. J00905-6A.

Key No.	Port.	Part No. Starboard.	Material.	Specification.	S.W.G.	Description.
1.	J00961 LH.	J00963 LH.	Alclad	DTD. 390	24	Rear Fairing Plates
	J00962 RH.	J00964 RH.	Alclad	DTD. 390	24	Rear Fairing Plates
2.	J00909	J00909	Alclad	DTD. 390	24	Diaphragm
3.	J00908	J00908	Alclad	DTD. 390	24	Top Former
4.	J00913	J00913	Alclad	DTD. 390	24	Bottom Former
5.	J00960ND	—	Alclad	DTD. 390	20	Diaphragm
						(Ass'd on J00911A)
6.	—	J00912	Alclad	DTD. 390	24	Diaphragm
7.	J00907	J00907	Alclad	DTD. 390	24	Top Rib

TABLE 84 (Continued)

Key No.	Port.	Part No. Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
8.	J00974ND	J00974ND	Alclad	DTD. 390	16	Reinforcing Plate
9.	J00971ND	J00971ND	Alclad	DTD. 390	24	Butt Strap
10.	J00972ND	J00972ND	Alclad	DTD. 390	24	Butt Strap
11.	—	J00973ND	Alclad	DTD. 390	24	Butt Strap
12.	J00970	J00970	Light Alloy	L. 1 or DTD. 423A	Extrusion	Trailing Edge Member
13.	J00969	—	Mang. Alum.	DTD. 213	18	Tail Lamp Fairing
14.	J00947ND	J00948ND	Alclad	DTD. 390	24	Top Plate
15.	J00949ND	J00950ND	Alclad	DTD. 390	24	Bottom Plate
16.	J001565ND	J001566ND	Alclad	DTD. 390	20	Reinforcing Strips
17.	J00951ND	J00951ND	Alclad	DTD. 390	24	Front Former
18.	J00952ND	J00952ND	Alclad	DTD. 390	24	Centre Former
19.	J00955	J00955	Alclad	DTD. 390	24	Rib
20.	J001563ND	J001564ND	Alclad	DTD. 390	24	Stiffener
21.	J00956	J00956	Light Alloy	L. 1 or DTD. 423A	Extrusion	Trailing Edge Member

TABLE 85

FIN BOTTOM PORTION
MATERIAL DETAILS

See Fig. No. 7/9, Ref. DH. Dwg. J00581-2A.

Key No.	Port.	Part No. Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
1.	J00578A	J00578A	Alclad	DTD. 390	20	Fin Bottom Skin
2.	J00763	J00763	Alclad	DTD. 390	20	Diaphragm
3.	J00680	—	Alclad	DTD. 390	20	Stiffener
4.	J00671A	J00671A	M.S.P.	S. 3	20	Bracket
5.	J00672A	J00672A	M.S.P.	S. 3	20	Bracket
6.	J00665A	J00665A	M.S.P.	S. 3	20	Bracket
7.	J00666A	J00666A	M.S.P.	S. 3	20	Bracket
8.	J00662ND	—	Alclad	DTD. 390	20	Centre Rib Plate
9.	J00664ND	—	Alclad	DTD. 390	22	Nose Rib Plate
10.	J00675A	J00675A	M.S.P.	S. 3	20	Bracket
11.	J00676A	J00676A	M.S.P.	S. 3	20	Bracket
12.	J00577ND	—	Alclad	DTD. 390	20	Butt Strap
13.	J00764ND	J00764ND	Alclad	DTD. 390	20	Patch Plate
14.	J001635A	J001636A	Alclad	DTD. 390	18	Nut Plate
15.	J00786	J00786	Alclad	DTD. 390	16	Cover Plate
16.	J00648A	J00648A	M.S.P.	S. 3	20	Bracket
17.	J00647A	J00647A	M.S.P.	S. 3	20	Bracket
18.	J001555ND	J001556ND	Alclad	DTD. 390	20	Centre Rib Plate
19.	J00651A	—	Alclad	DTD. 390	16	Stiffener
20.	J00690	J00690	Alclad	DTD. 390	20	Rear Former
21.	J00689	J00689	Alclad	DTD. 390	20	Front Former

TABLE 86

FIN TOP PORTION
MATERIAL DETAILS

See Fig. No. 7/10, DH. Ref. Dwg. J00813-4A.

Key No.	Port.	Part No. Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
1.	J00815ND	J00816ND	Alclad	DTD. 390	22	Skin
2.	J00817ND LH.	J00817ND LH.	—	—	—	Stringer
3.	J00818ND RH.	J00818ND RH.	—	—	—	Stringer
4.	J00820	J00820	Alclad	DTD. 390	22	Rib No. 3
5.	J00821	J00821	Alclad	DTD. 390	22	Rib No. 4
6.	J00832ND	J00832ND	Alclad	DTD. 390	20	Rib No. 5
7.	J00833ND	J00833ND	Alclad	DTD. 390	20	Top Plate
8.	J00844ND	J00824	Alclad	DTD. 390	20	Rib No. 6
9.	J001677ND	—	Alclad	DTD. 390	18	Access Door
10.	J001049A	J001049A	Alclad	DTD. 390	22	Fin Shroud Plate
11.	J001050A	J001050A	Alclad	DTD. 390	22	Fin Shroud Plate
12.	J00830ND	J00830ND	Alclad	DTD. 390	22	Trailing Edge Stiffener
13.	J00825	J00825	Alum. Mag.	DTD. 300	Casting	Hinge Bracket
14.	J00862ND	—	Alclad	DTD. 390	20	Reinforcing Plate
15.	J001761A	—	M.S.P.	S. 84	20	Pressure Head Bracket

TABLE 87
FIN SPAR REAR
MATERIAL DETAILS

See Fig. No. 7/11, Ref. DH. Dwg. J00553-4.

Key No.	Port.	Part No. Starboard.	Material.	Specification.	S.W.G.	Description.	
1.	J00558ND	J00558ND	Alclad	DTD. 390	18	Spar Plate	} Ass'd on J00560A
2.	J00559ND	J00559ND	Alclad	DTD. 390	20	Reinforcing Plate	
3.	J00555ND	J00555ND	Alclad	DTD. 390	20	Spar Plate	} Ass'd on J00557A
4.	J00556ND	J00556ND	Alclad	DTD. 390	18	Reinforcing Plate	
5.	J00561	J00562	Alum. Copper Alloy	DTD. 298	Casting	Fin Spar Casting	

TABLE 88
FIN FRONT SPAR AND REAR FRAME
MATERIAL DETAILS

See Fig. No. 7/12, Ref. DH. Dwg. J00565-6.

Key No.	Port.	Part No. Starboard.	Material.	Specification.	S.W.G.	Description.	
1.	J00573A	J00574A	Alum. Copper Alloy	DTD. 298	Casting	—	
2.	J00568ND	J00568ND	Alclad	DTD. 390	20	Reinforcing Plate	} Ass'd on J00569A
3.	J00567ND	J00567ND	Alclad	DTD. 390	18	Frame	

TABLE 89
RUDDER
MATERIAL DETAILS

See Fig. No. 7/13, Ref. DH. Dwg. J00583/1.

Key No.	Port.	Part No. Starboard.	Material.	Specification.	S.W.G.	Description.	
1.	J00795ND	J00795ND	Alclad	DTD. 390 or DTD. 610	24	Skin	
2.	J00716A	J00716A	—	—	—	Assembly of Rudder Post	
3.	J00781ND	J00781ND	Alclad	DTD. 390	22	Rib	} Ass'd on J00741A
4.	J00782ND	J00782ND	Alclad	DTD. 390	20	Nut Plate	
5.	J00739 LH.	J00739 LH.	Alclad	DTD. 390	20	Gusset Plate	
	J00740 RH.	J00740 RH.	Alclad	DTD. 390	20	Gusset Plate	
6.	J001044	J001044	Alclad	DTD. 390 or DTD. 610	22	Gusset Plate	
7.	J001474A	J001474A	Stores Ref. No. A79/500356	—	—	Assembly of Rudder Tab	
8.	J001476	J001476	Mag. Alloy	DTD. 59A	Casting	Hinge Block	
9.	J00733	J00733	Alclad	DTD. 390	22	Rib	} Ass'd on J00732A
10.	J00734ND	J00734ND	M.S.P.	S. 3	22	Stiffener	
11.	J00754	J00754	Alclad	DTD. 390	22	Rib	
12.	J00750ND	J00750ND	Alclad	DTD. 390	22	Rib, Top	} Ass'd on J00749A
13.	J00751ND	J00751ND	Alclad	DTD. 390	22	Rib, Bottom	
14.	J00891ND	J00891ND	M.S.P.	S. 3	22	Corner Bracket, Top	} Ass'd on J00749A
15.	J00892ND	J00892ND	M.S.P.	S. 3	22	Corner Bracket, Bottom	
16.	J001473	J001473	Dural	L. 1	Bar	Trailing Edge	
17.	J001205ND	J001206ND	Mang. Alum.	DTD. 213	22	Top Skin	} Ass'd on J00770A
18.	J00773	J00773	Alclad	DTD. 390	22	Rib	
19.	J00772	J00772	Alclad	DTD. 390	22	Rib	} Ass'd on J00776A
20.	J00777ND	J00777ND	Alclad	DTD. 390	22	Rib, Nose	
21.	J00779ND	J00779ND	Alclad	DTD. 390	16	Base Plate	} Ass'd on J00776A
22.	J00778ND	J00778ND	Alclad	DTD. 390	22	Rib, Rear	
23.	J00737 LH.	J00737 LH.	Alclad	DTD. 390	20	Gusset Plate	
	J00738 RH.	J00738 RH.	Alclad	DTD. 390	20	Gusset Plate	
24.	J00755	J00755	Alum. Mag.	DTD. 300	Casting	Hinge Bracket	} Ass'd on J001043A
25.	J00756	J00756	Dural	L. 1 or DTD. 423A	Bar	Link	
26.	J001795	J001795	Alum. Mag.	DTD. 300	Casting	Rudder Pedestal	} Ass'd on J00770A
27.	J001027	J001027	M.S.P. and M.S.B.	S. 3 and S. 21	20 and Bar	Rudder Mass Balance	

TABLE 90
RUDDER POST
MATERIAL DETAILS

See Fig. No. 7/14, Ref. DH. Dwg. J00716A.

Key No.	Port.	Part No. Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
1.	J00717ND	J00717ND	Alclad	DTD. 390	20	Spar
2.	J00718ND	J00718ND	Alclad	DTD. 390	22	Spar Reinforcing
3.	J00719ND LH.	J00719ND LH.	Alclad	DTD. 390	20	Nose Stiffening
	J00720ND RH.	J00720ND RH.	Alclad	DTD. 390	20	Nose Stiffening
4.	J001048ND	J001048ND	Alclad	DTD. 390	20	Nose Stiffening
5.	J00723ND	J00723ND	Alclad	DTD. 390	22	Former
6.	J00724ND	J00724ND	Alclad	DTD. 390	22	Former
7.	J00725ND	J00725ND	Alclad	DTD. 390	22	Former
8.	J00726ND	J00726ND	Alclad	DTD. 390	22	Former
9.	J00728	J00728	Alum. Mag.	DTD. 300	Casting	Strap
10.	J00729	J00729	Dural Tube	T. 4	1½" o/d. x 17 g.	Rudder Post Tube
11.	J00727	J00727	Alum. Mag.	DTD. 300	Casting	Mounting Bracket

TABLE 91
TAILPLANE
MATERIAL DETAILS

See Fig. No. 7/15, Ref. DH. Dwg. J00600.

Key No.	Port.	Part No. Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
1.		J00887ND	Dural, Alclad	L. 3 DTD. 390	22	Nose Skin
2.		J00888ND	Dural, Alclad	L. 3 DTD. 390	22	Main Skin, Top
3.		J00889ND	Dural, Alclad	L. 3 DTD. 390	22	Main Skin, Bottom
4.		J00590A	—	—	—	Assembly of Front Spar
5.		J00595A	—	—	—	Assembly of Rear Spar
6.	J00599	J00599	Alclad	DTD. 390 or L. 38	22	Nose Ribs
7.	J00605	J00605	Alclad	DTD. 390 or L. 38	18	End Rib
8.	J00615	J00615	Alclad	DTD. 390 or L. 38	22	Stiffener, Top, Port Side Bottom, Starboard Side
9.	J00616	J00616	Alclad	DTD. 390 or L. 38	22	Stiffener, Bottom, Port Side Top, Starboard Side
10.	J00613	J00613	Alclad	DTD. 390 or L. 38	22	Rib
11.	J00637ND	—	Alclad	DTD. 390 or L. 38	22	Half Rib (Ass'd on J00636A)
12.	J00632ND	—	Alclad	DTD. 390 or L. 38	22	Rib
13.	J00633ND	—	Alclad	DTD. 390 or L. 38	22	Half Rib } Ass'd on J00631A
14.	—	J00641ND	Alclad	DTD. 390 or L. 38	22	Rib
15.	—	J00633ND	Alclad	DTD. 390 or L. 38	22	Half Rib } Ass'd on J00640A
16.	J001643ND	J00608ND	Alclad	DTD. 390 or L. 38	20	End Rib (Ass'd on J001621-2)
17.	J00799ND	J00799ND	Alclad	L. 38 or DTD. 390	20	Reinforcing Plate, Top, Port Bottom, Stbd.
18.	J00800ND	J00800ND	Alclad	L. 38 or DTD. 390	20	Reinforcing Plate, Bottom, Port Top, Stbd.
19.	J00796ND	J00796ND	Alclad	DTD. 390 or L. 38	20	Reinforcing Plate
20.	J00847	J00847	Alclad	DTD. 390 or L. 38	22	Shroud, Top
21.	J00848	J00848	Alclad	DTD. 390 or L. 38	22	Shroud, Bottom
22.	J00849	J00849	Alclad	DTD. 390 or L. 38	22	Shroud, Top
23.	J00850	J00850	Alclad	DTD. 390 or L. 38	22	Shroud, Bottom
24.	J00201B	—	Alclad	DTD. 390 or L. 38	18	Stiffener Plate (Ass'd on J00201A)
25.	J00263	—	Alclad	DTD. 390 or L. 38	18	Access Door

TABLE 91 (Continued)

Key No.	Port.	Part No.	Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
26.	J00654	—	—	Alclad	DTD. 390 or L. 38	18	Stiffener Plate (Ass'd on J00653A)
27.	J00264	—	—	Alclad	DTD. 390 or L. 38	18	Tab Jack Access Door
28.	J00261	—	—	Mang. Tube Alum. Sheet	DTD. 310 DTD. 213A	22 x 1 $\frac{3}{4}$ " o/d.	Guide Tube
29.	J00588	J00588	—	Alum. Tube Mag. Alloy	T. 9 DTD. 289	20 Casting	Hinge Bracket
30.	J001229ND	—	—	—	—	—	Stringer (Reynolds Section A.1154)

TABLE 92
ELEVATOR
MATERIAL DETAILS

See Fig. No. 7/16, Ref. DH. Dwg. J00601A/4.

Key No.	L.H.	Part No.	R.H.	Material.	Specifica- tion.	S.W.G.	Description.
1.	—	J001631ND	—	Alclad	DTD. 390 or L. 38	22	Top Skin
2.	—	J001633ND	—	Alclad	DTD. 390 or L. 38	22	Bottom Skin
3.	—	J00758A	—	—	—	—	Assembly of Elevator Spar
4.	J00902	—	—	Alclad	DTD. 390 or L. 38	20	Edge Member
5.	—	J00903	—	Alclad	DTD. 390 or L. 38	20	Edge Member
6.	—	J00904	—	Alclad	DTD. 390 or L. 38	20	Edge Member
7.	J00685	J00685	—	Alclad	DTD. 390 or L. 38	22	Nose Rib
8.	J00748	J00748	—	Alclad	DTD. 390 or L. 38	20	Rear Rib
9.	J00746ND	J00746ND	—	M.S.P.	S. 3	22	Rib } Ass'd on J00744A
10.	J00747ND	J00747ND	—	M.S.P.	S. 3	22	Plate } Ass'd on J00745A
11.	J00681	J00681	—	Alclad	DTD. 390 or L. 38	22	Stiffener, Top, Port
12.	J00682	J00682	—	Alclad	DTD. 390 or L. 38	22	Stiffener, Bottom, Starboard
13.	J00687	—	—	Alclad	DTD. 390 or L. 38	22	Stiffener
14.	J001721ND	—	—	Alclad	DTD. 390 or L. 38	20	Tab Support Spar
15.	J00792ND	—	—	Alclad	DTD. 390 or L. 38	12	Stiffening Channel } Ass'd on J001720A
16.	J00714ND	—	—	Alclad	DTD. 390 or L. 38	20	Rib
17.	J001619ND	—	—	Alclad	DTD. 390 or L. 38	20	Half Rib } Ass'd on J00713A
18.	J001578ND	—	—	M.S.P.	S. 3	22	Bracket } Ass'd on J00705A
19.	—	J00706ND	—	Alclad	DTD. 390 or L. 38	20	Rib
20.	J001620ND	—	—	Alclad	DTD. 390 or L. 38	20	Half Rib } Ass'd on J00705A
21.	—	J001574ND	—	M.S.P.	S. 3	22	Bracket
22.	J00788	—	—	Alclad	DTD. 390 or L. 38	22	Stiffening Rib
23.	J00688	—	—	Alclad	DTD. 390 or L. 38	22	Stiffener
24.	J00789	—	—	Alclad	DTD. 390 or L. 38	22	Diaphragm at Tab
25.	J001645	—	—	Dural	DTD. 428A or L. 1	Bar	Trailing Edge
26.	—	J001647	—	Dural	DTD. 428A or L. 1	Bar	Trailing Edge
27.	J00398	J00398	—	Dural	L. 1	—	Block
28.	J00793	—	—	Alclad	DTD. 390 or L. 38	22	Fairing

TABLE 92 (Continued)

Key No.	Port.	Part No. Starboard.	Material.	Specifica- tion.	S.W.G.	Description.
29.	J001499A/2	—	Stores Ref. No. A79/501727	—	—	Elevator Tab Assembly
30.	J00895A	J00895A	—	—	—	Hinge Assembly
31.	J00914ND	—	Alclad	DTD. 390 or L. 38	20	Door
32.	J00915ND	—	Alclad	DTD. 390 or L. 38	20	Locating Plate
33.	J00901	J00901	Mang. Steel	T. 45 or DTD. 545	17 x 1½" o/d.	Torque Tube
34.	J00686	J00686	Alclad	DTD. 390 or L. 38	20	Nose Rib
35.	J00768ND	J00768ND	Mang. Steel	T. 45	17 x 1½" o/d.	Sleeve
36.	J00769ND	J00769ND	M.S.P.	S. 3	20	Plate
37.	J00783	J00783	Alum. Alloy	L. 1, L. 40 or DTD. 423A	Bar	Torque Tube Fitting
38.	J00785A	J00785A	Alum. Mag. Alloy	DTD. 300	Casting	Lever (Ass'd on J00784A)
39.	J00302	J00302	H.T.S.	S. 80 or S. 11	Bar	Spigot
40.		J001641	Alclad	DTD. 390 or L. 38	22	Stiffener
41.		J00688	Alclad	DTD. 390 or L. 38	22	Rib

TABLE 93

TAILPLANE AND ELEVATOR SPARS

TAILPLANE FRONT SPAR

MATERIAL DETAILS

See Fig. No. 7/17, Ref. DH. Dwg. J00590A.

Key No.	L.H.	Part No. R.H.	Material.	Specifica- tion.	S.W.G.	Description.
1.		J00591ND	Alclad	DTD. 390 or L. 38	20	Channel
2.		J00592ND	Alclad	DTD. 390 or L. 38	18	Angle
3.	J00585ND	J00585ND	Alum. Alloy	DTD. 298	—	Casting (Ass'd on J00584A)

TAILPLANE REAR SPAR

MATERIAL DETAILS

See Fig. No. 7/17, Ref. DH. Dwg. J00595A.

Key No.	L.H.	Part No. R.H.	Material.	Specifica- tion.	S.W.G.	Description.
1.		J00596ND	Alclad	DTD. 390 or L. 38	20	Channel
2.		J00597ND	Alclad	DTD. 390 or L. 38	16	Top Angle
3.		J00598ND	Alclad	DTD. 390 or L. 38	16	Bottom Angle
4.	J00587ND	J00587ND	Alum. Alloy	DTD. 298	—	Casting (Ass'd on J00586A)
5.	J00593ND	—	Alclad	DTD. 390 or L. 38	16	Packing
6.	—	J00594ND	Alclad	DTD. 390 or L. 38	16	Packing

ELEVATOR SPAR

MATERIAL DETAILS

See Fig. No. 7/17, Ref. DH. Dwg. J00758A.

Key No.	L.H.	Part No. R.H.	Material.	Specifica- tion.	S.W.G.	Description.
1.		J00759ND	Alclad	DTD. 390 or L. 38	20	Spar
2.	J00760ND	J00760ND	Alclad	DTD. 390	16	Angle

TABLE 94
FIN AND RUDDER FITTINGS
WEAR LIMITS

See Fig. No. 7/25.

Key No.	Part No.	Description.	Nominal Dia.	Female High or Male Low Limit.	Maximum Wear Limit.	Plug Gauge.
1.	J001480	Shear Bolt	0.5625	-0.004	-0.0045	Micrometer
2.	J00570	Bush	0.5625	+0.0016	+0.0035	ZA
3.	AS2504/18G.	Standard Bolt	0.3125	-0.00075	-0.0015	Micrometer
4.	J00825	Top Hinge Bracket	0.3125	+0.0004	+0.002	VC
5.	J00756A	Rudder Hinge Link	0.3125	+0.0004	+0.002	VC
6.	J00755	Rudder Hinge Bracket	0.3125	+0.0004	+0.002	VC
7.	J00561	Fin Rear Casting	1.0	-0.0078	-0.01	Micrometer
8.	J00875	Spigot Bolt	0.3125	-0.002	-0.0025	Micrometer

TABLE 95
TAIL CONTROL FITTINGS
WEAR LIMITS

See Fig. No. 7/26.

Key No.	Part No.	Description.	Nominal Dia.	Female High or Male Low Limit.	Maximum Wear Limit.	Plug Gauge.
1.	AS2504/7G.	Standard Bolt	0.3125	-0.00075	-0.0015	Micrometer
2.	J00267	Rudder Connecting Rod Fork	0.3125	+0.0004	+0.002	VC
3.	K00361	Spindle	0.5	-0.0012	-0.002	Micrometer
4.	J00604	Lever Brackets	0.5	+0.0004	+0.003	WE
5.	J00563	Rudder Mass Balance Lower Fulcrum	0.25	+0.0004	+0.002	VC
6.	J00563	Rudder Mass Balance Upper Fulcrum	0.25	+0.0004	+0.002	VC
7.	K00363	Special Bolt	0.25	-0.0012	-0.0025	Micrometer
8.	AS2504/6G.	Special Bolt	0.3125	-0.00075	-0.0015	Micrometer
9.	K00362	Link Plates, Rudder	0.25	+0.0003	+0.002	VC

TABLE 96
TAILPLANE AND ELEVATOR FITTINGS
WEAR LIMITS

See Fig. No. 7/27.

Key No.	Part No.	Description.	Nominal Dia.	Female High or Male Low Limit.	Maximum Wear Limit.	Plug Gauge.
1.	J00586A	Rear Spar End Fittings	1.0	+0.0024	+0.005	Feelers and Standard Gauge
2.	A1/11G.	Standard Bolt	0.3125	-0.0035	-0.0045	Micrometer
3.	J00589	Hinge Bracket	0.3125	+0.0004	+0.002	VC
4.	AS2504/20G.	Standard Bolts	0.3125	-0.00075	-0.0015	Micrometer
5.	J00171A	Hinge Link	0.3125	+0.0004	+0.002	VC
6.	J00588	Hinge Bracket	0.3125	+0.0004	+0.002	VC
7.	J00302	Spigot Bolt	0.3125	-0.0001	-0.0025	Micrometer
8.	AS2504/10G.	Bolt	0.3125	-0.00075	-0.0015	Micrometer
9.	K00379	Connecting Rod, Top End	0.3125	+0.0003	+0.002	VC
10.	J00359	Pivot Pin	0.25	-0.0015	-0.0035	Micrometer
11.	J00362	Bush	0.25	+0.0003	+0.0025	VB
12.	J00893	Special Bolt	0.1875	-0.0015	-0.001	Micrometer
13.	J00872	Jack Barrel	0.1875	+0.0025	+0.0035	VA
14.	J00873	Jack Fork End	0.1875	+0.0025	+0.0035	VA
15.	00J19	Special Bolt	0.1875	-0.0015	-0.001	Micrometer
16.	J00873	Jack Fork End	0.1875	+0.0025	+0.0025	VA
17.	00J17	Special Bolt	0.1875	-0.0009	-0.0015	Micrometer
18.	J001829	Tab Lever	0.1875	+0.0004	+0.0035	VA

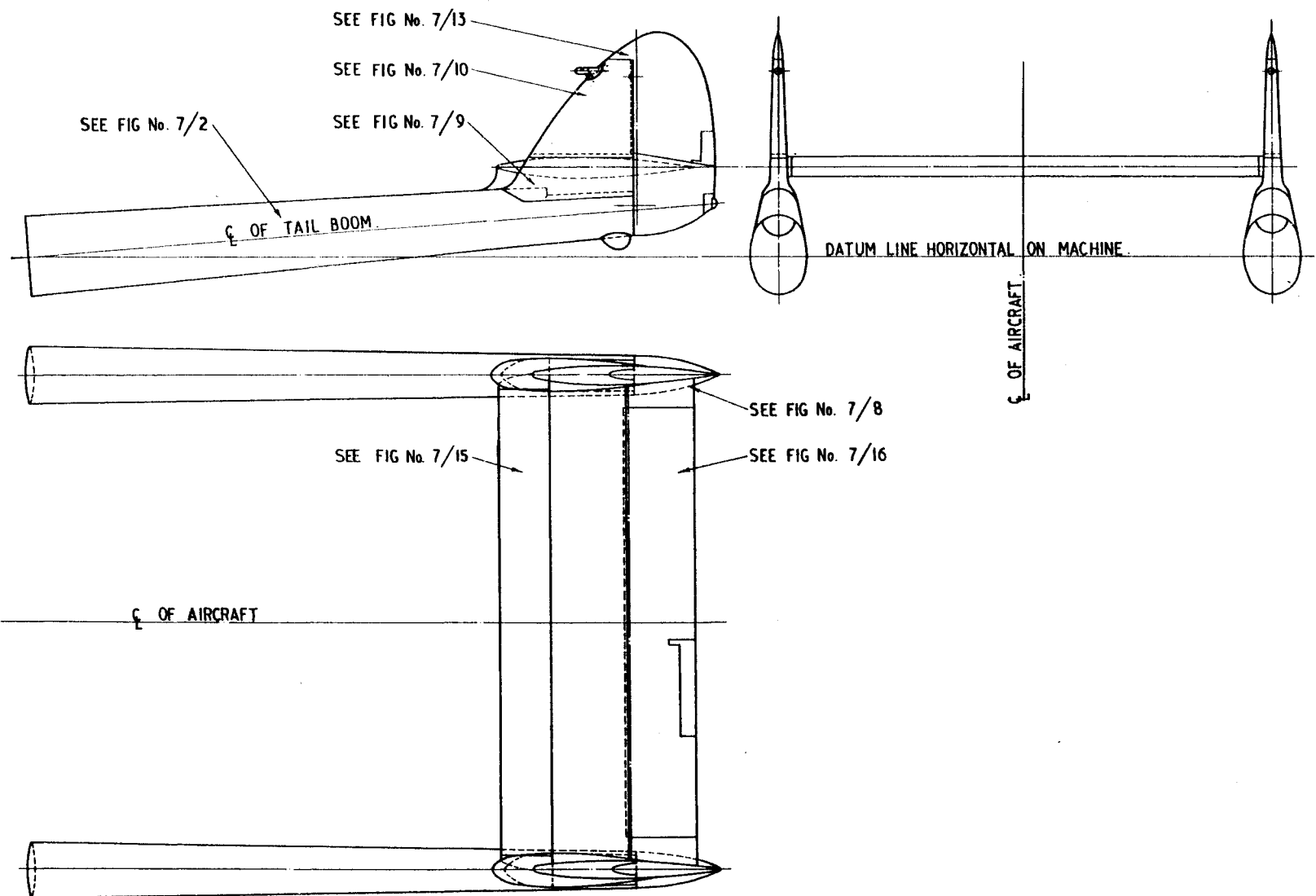
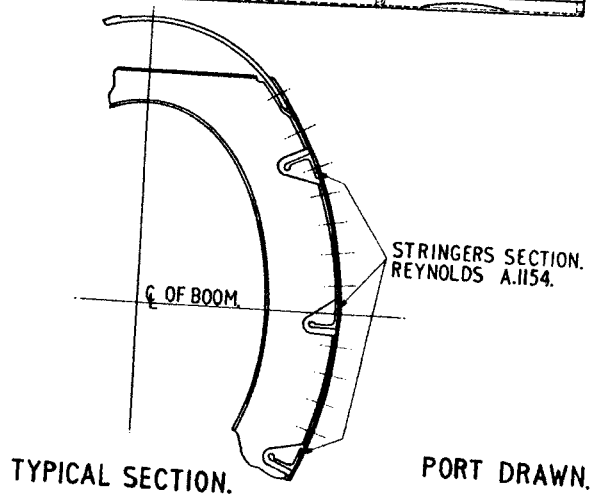
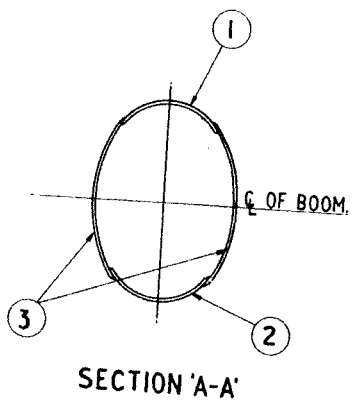
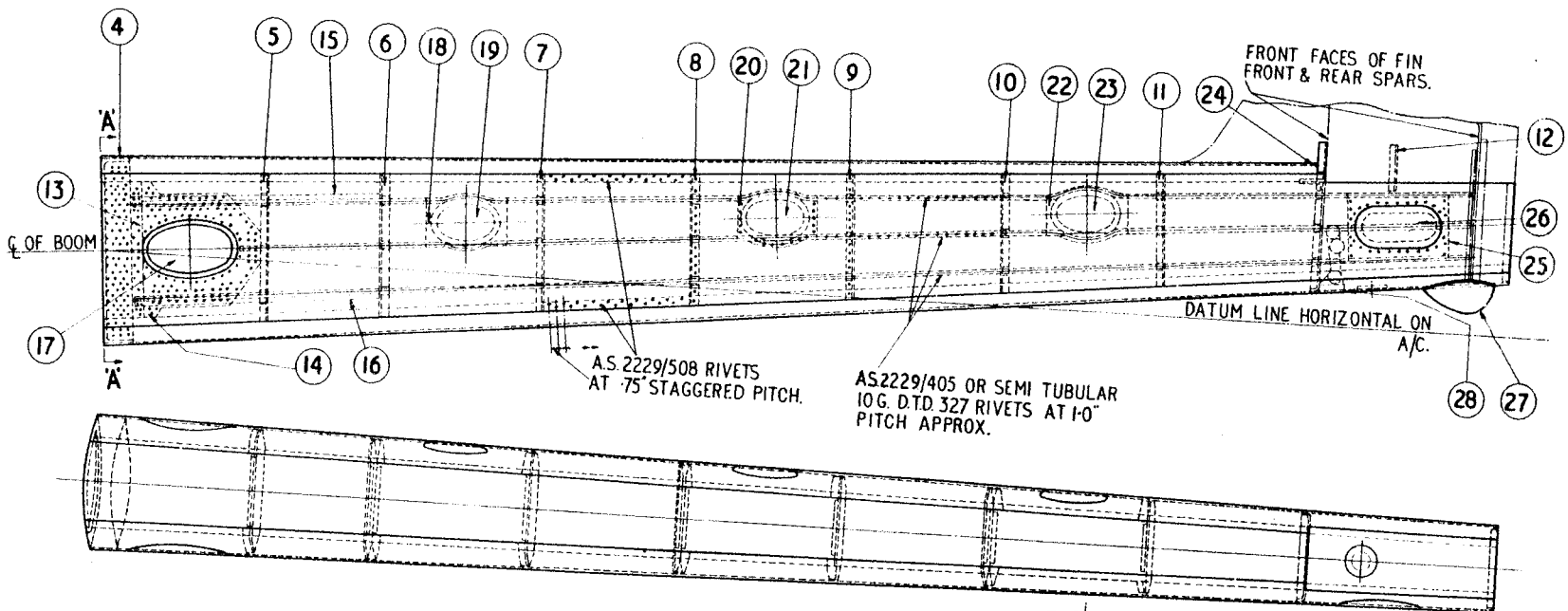


FIG. 7/1

TAIL UNIT REFERENCE DIAGRAM

FIG. 7/1



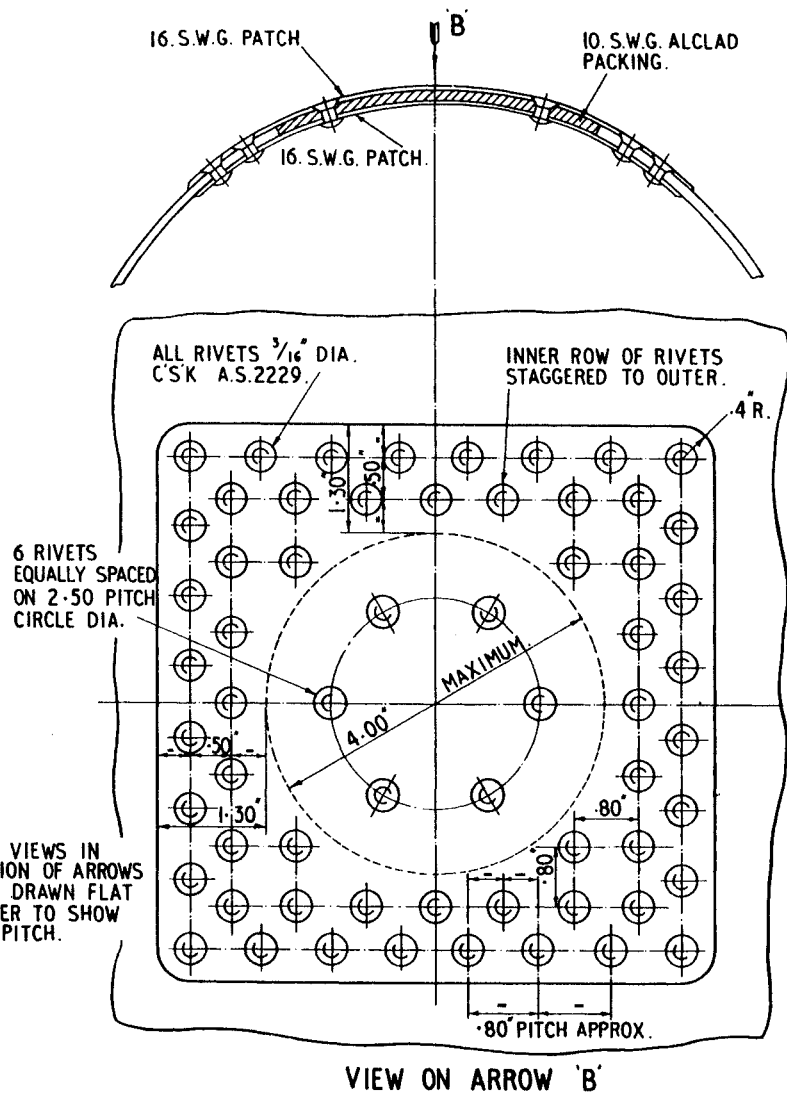
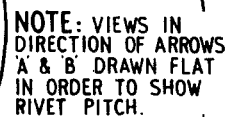
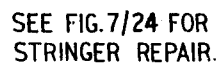


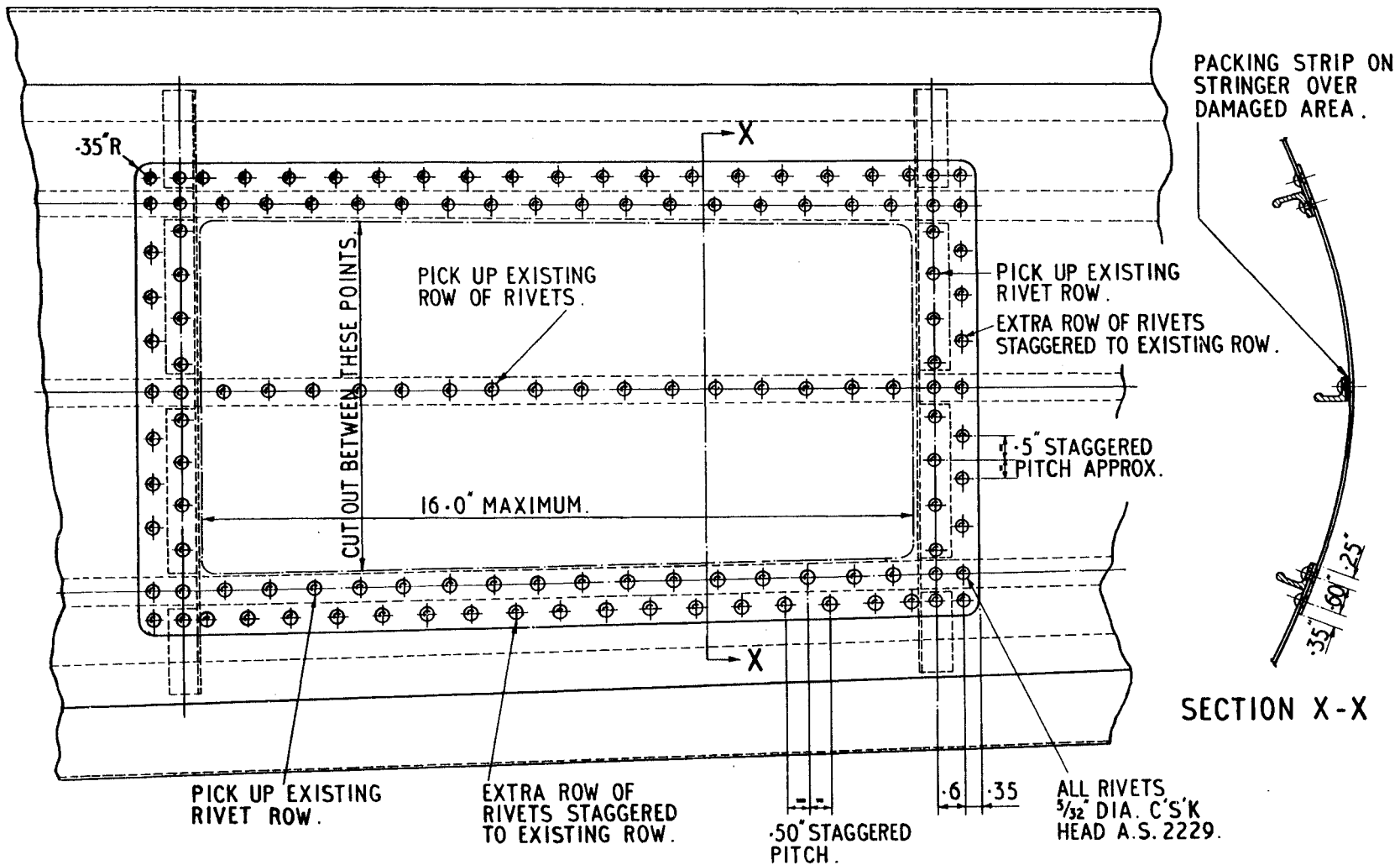
FIG. 7/4



PACKING 16 S.W.G.

ALL EDGES OF PATCH
TO BE CHAMFERED
AT 45°

SECTION 'A-A'

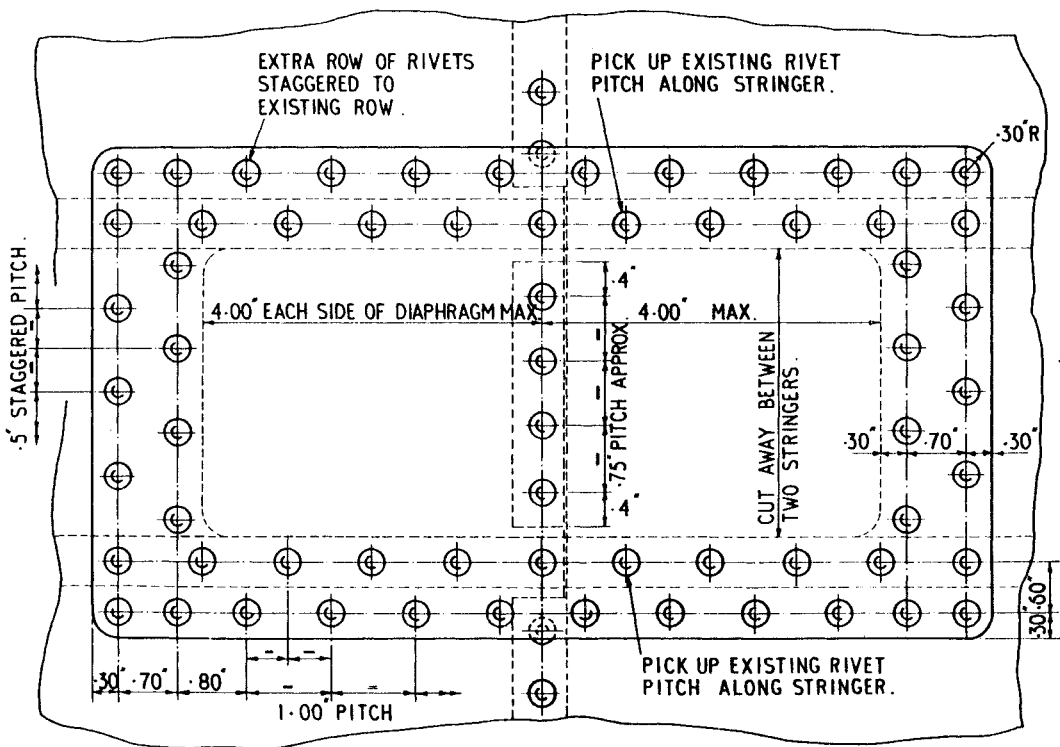


PATCH TO BE SAME GAUGE & MATERIAL AS EXISTING SKIN.

FIG. 7/5

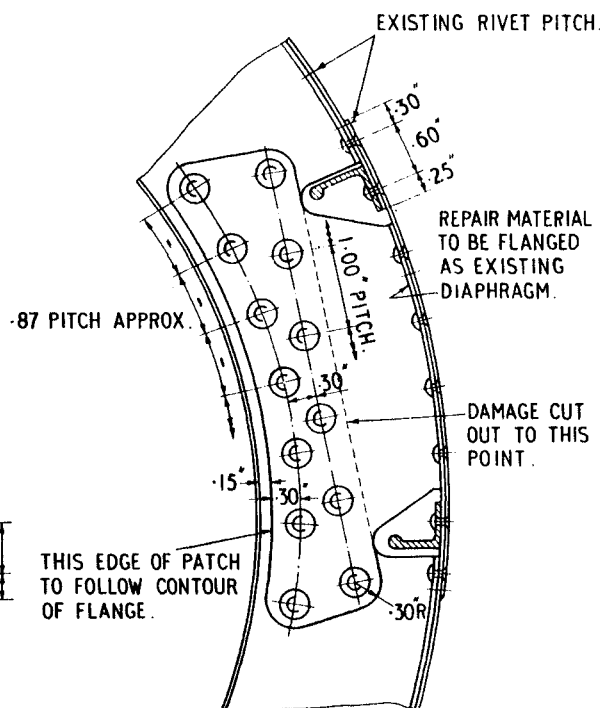
PATCH REPAIR TO SIDE PLATES
TAIL BOOM

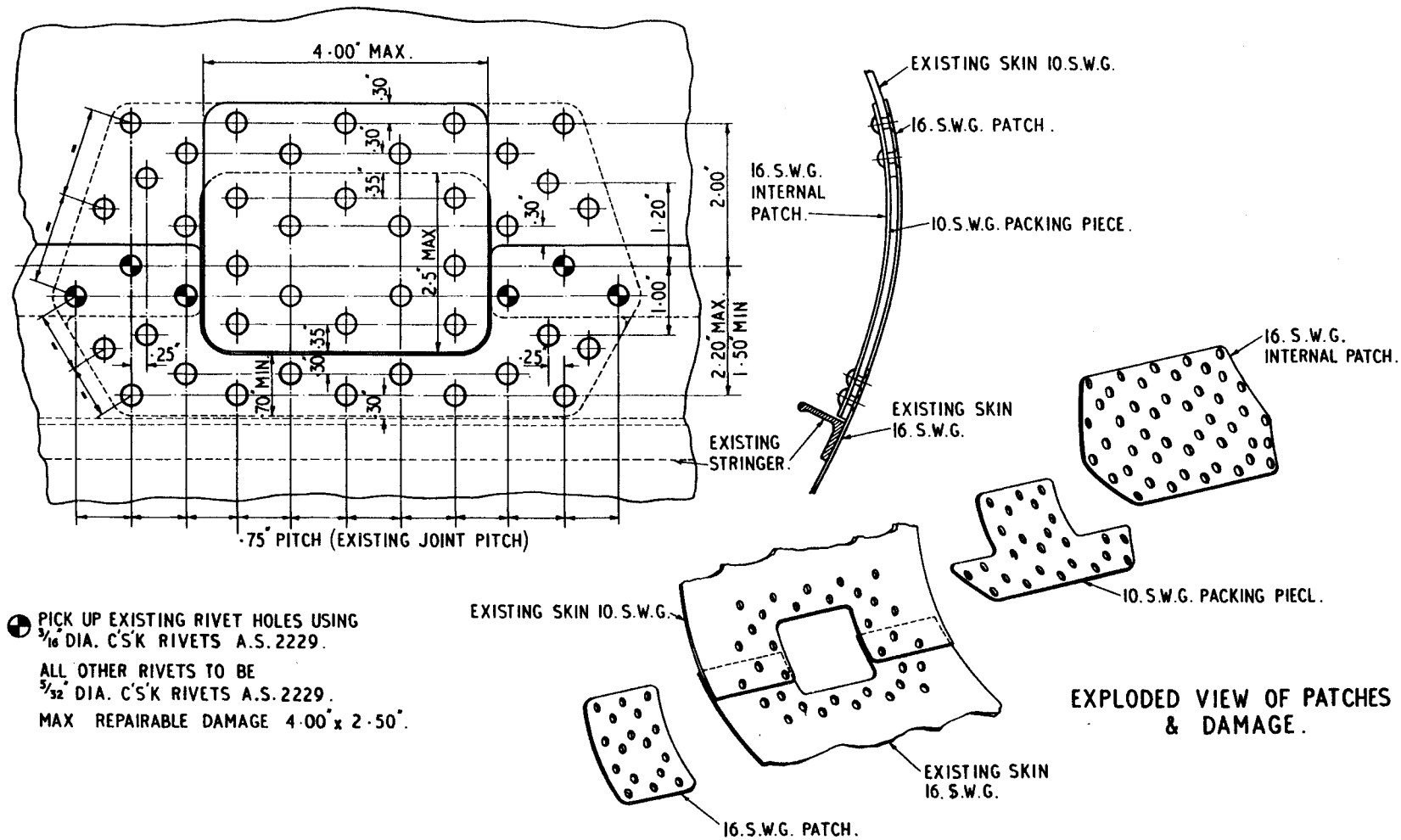
FIG. 7/5

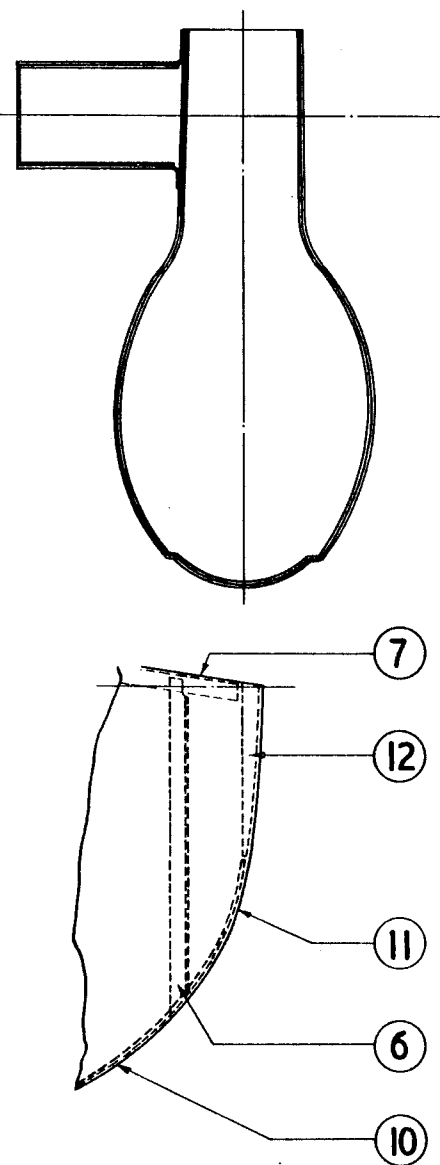


PATCH MATERIAL & GAUGE
TO BE SAME AS EXISTING
SKIN.

ALL RIVETS $\frac{5}{32}$ " DIA. A.S. 2229.







STARBOARD FAIRING

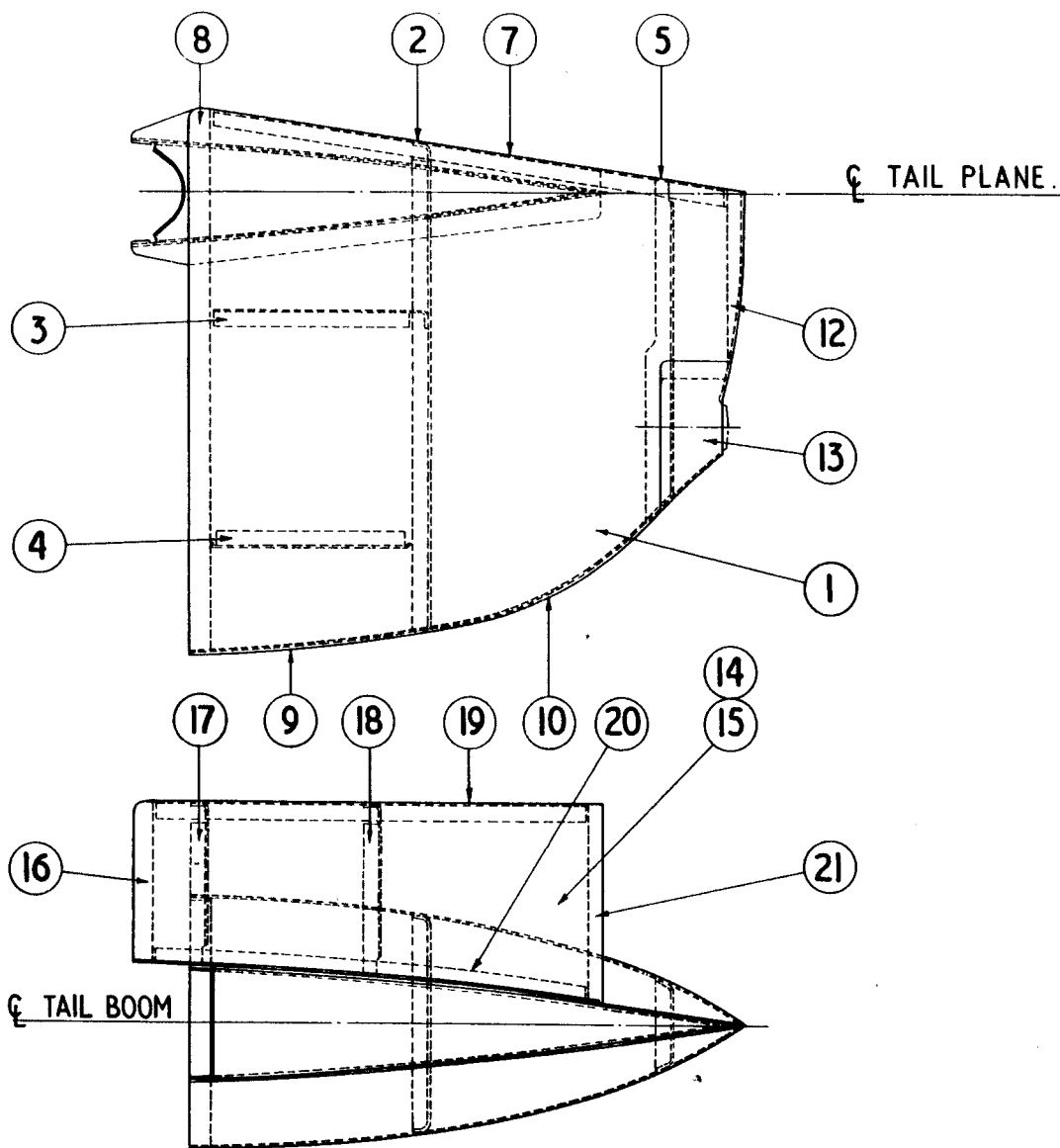


FIG. 7/8

TAIL BOOM REAR FAIRING (PORT)

FIG. 7/8

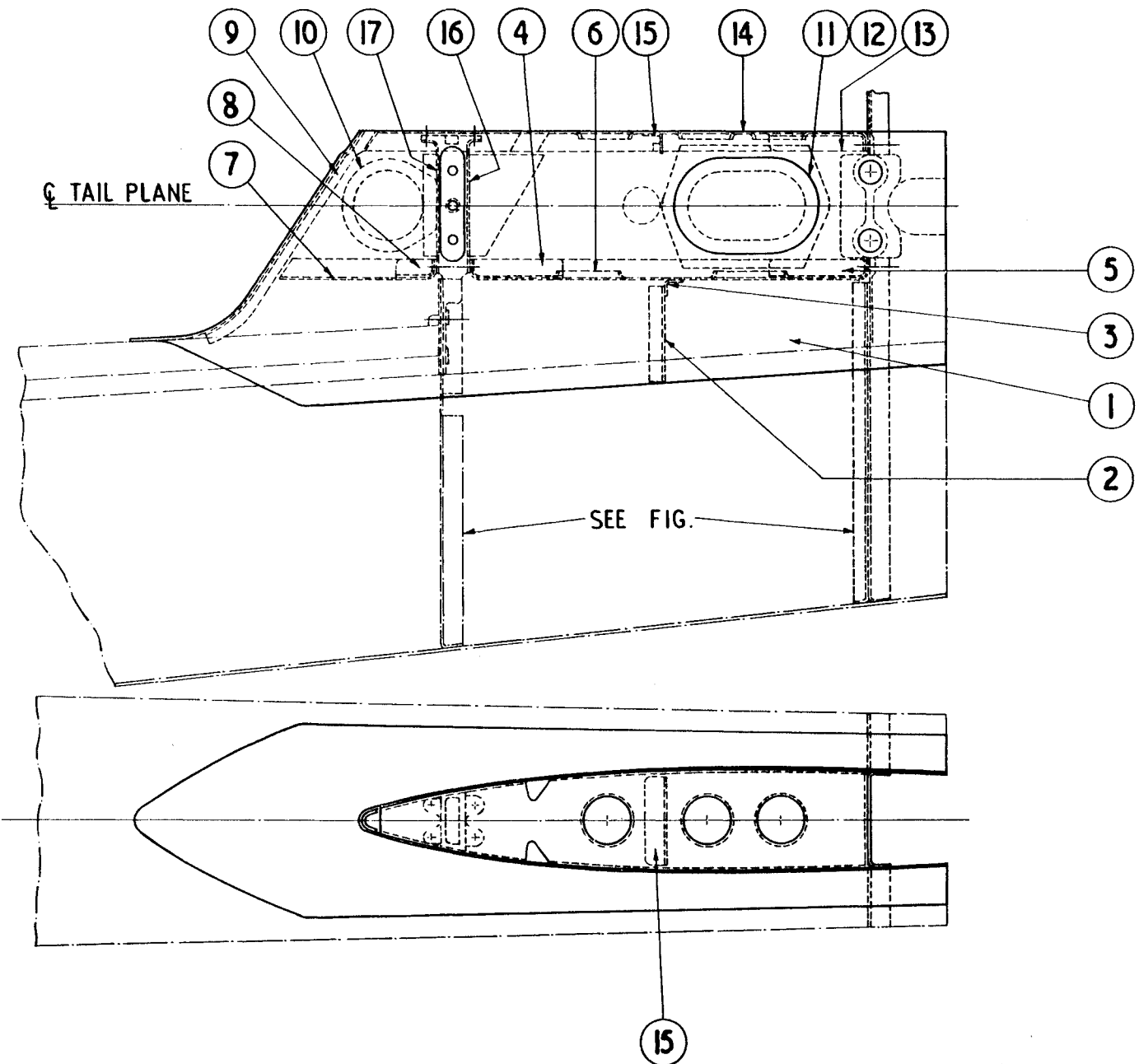


FIG. 7/9

FIN - BOTTOM PORTION - (PORT)

FIG. 7/9

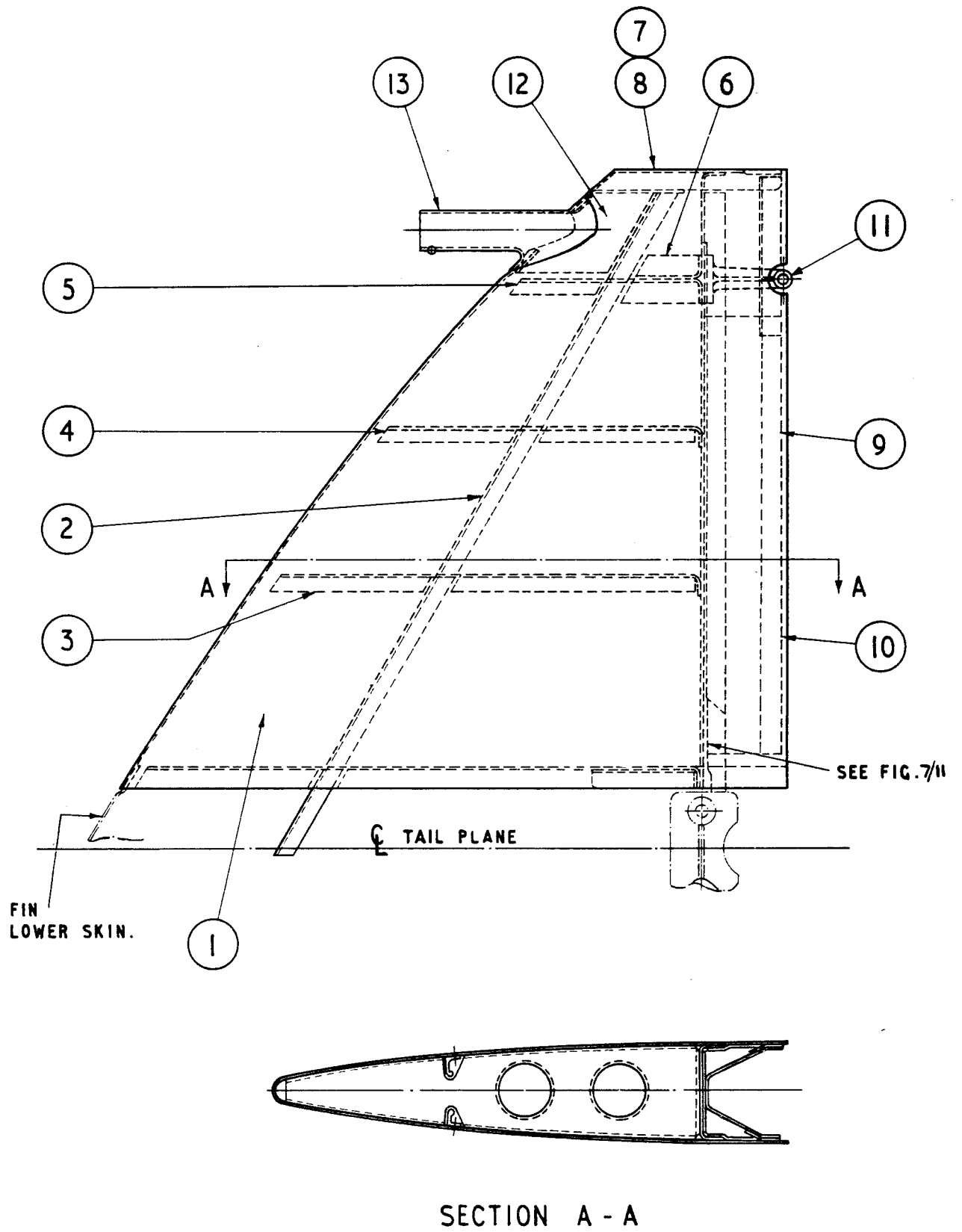


FIG. 7/10

FIN - TOP PORTION - (PORT)

FIG. 7/10

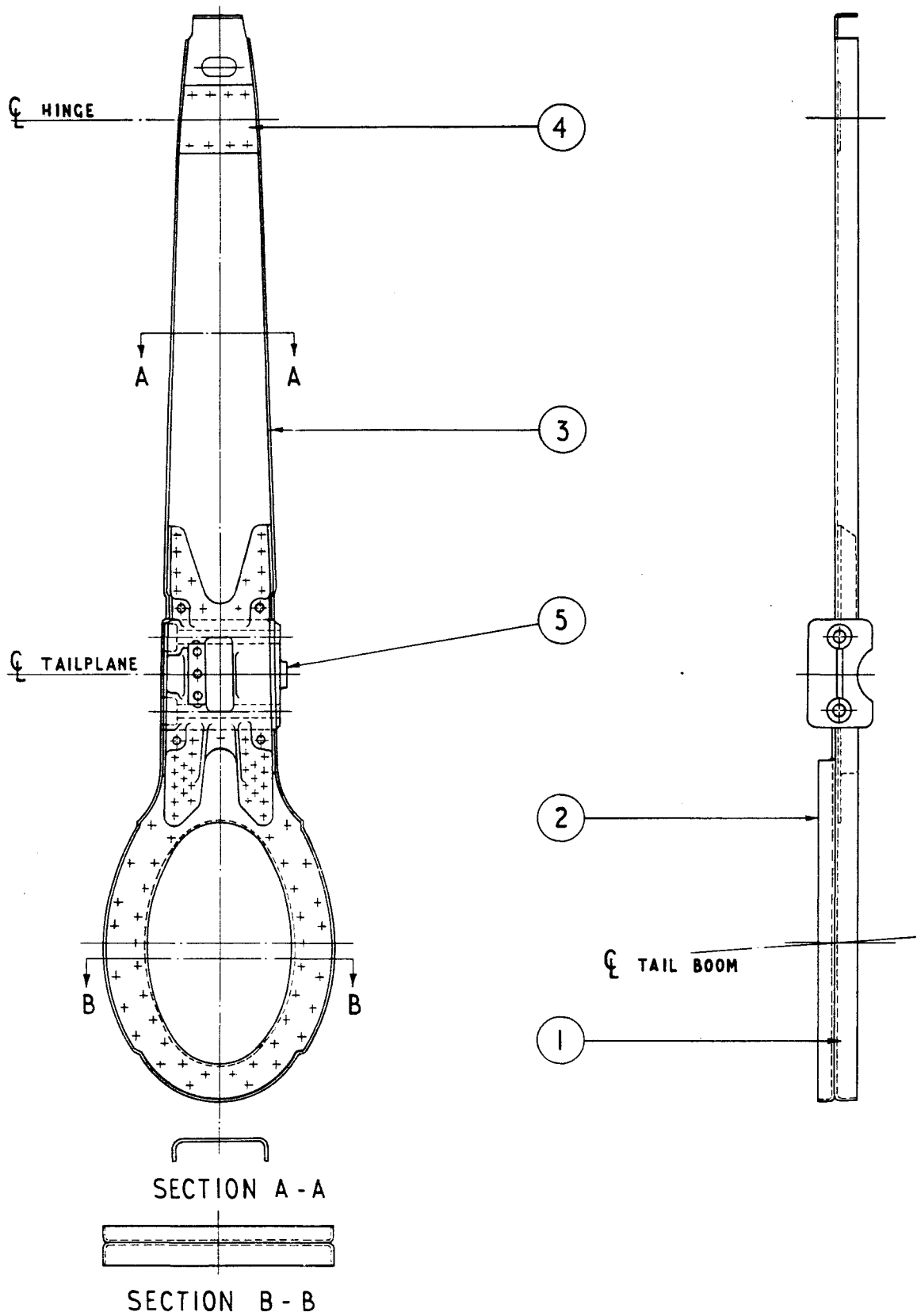


FIG. 7/11

FIN SPAR (REAR)

FIG. 7/11

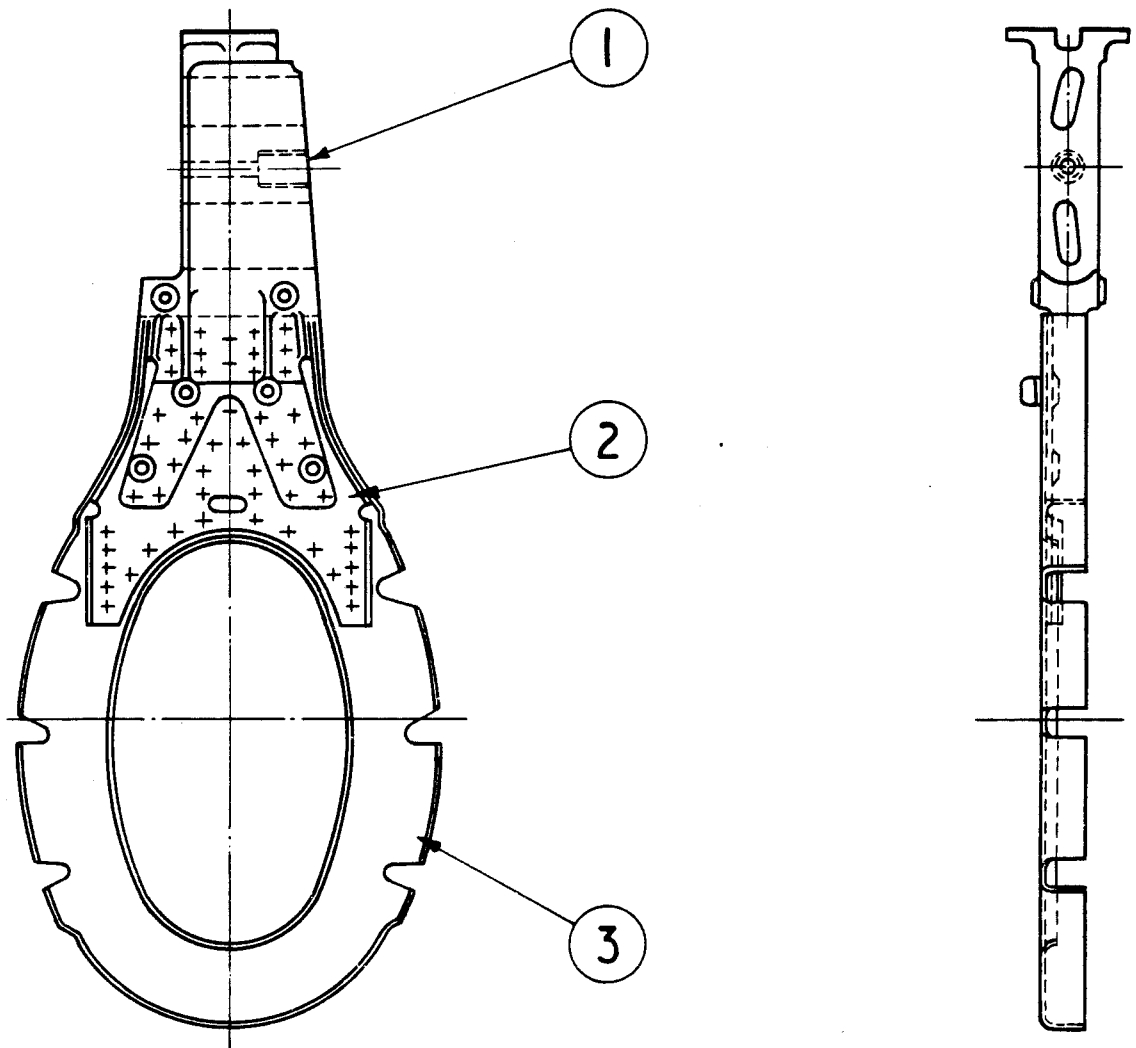


FIG. 7/12 FIN FRONT SPAR & REAR FRAME FIG. 7/12

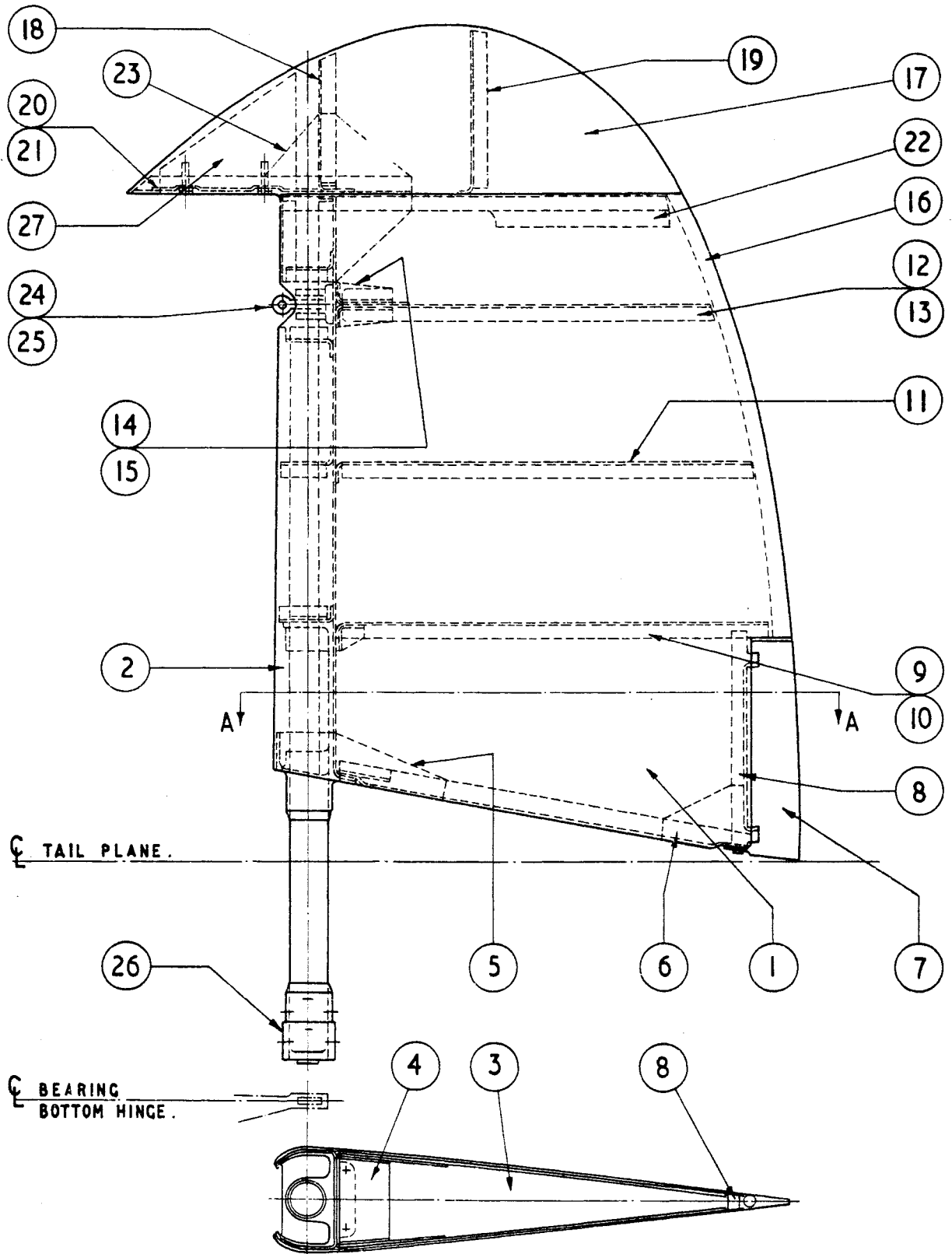


FIG. 7/13

RUDDER (PORT)

FIG. 7/13

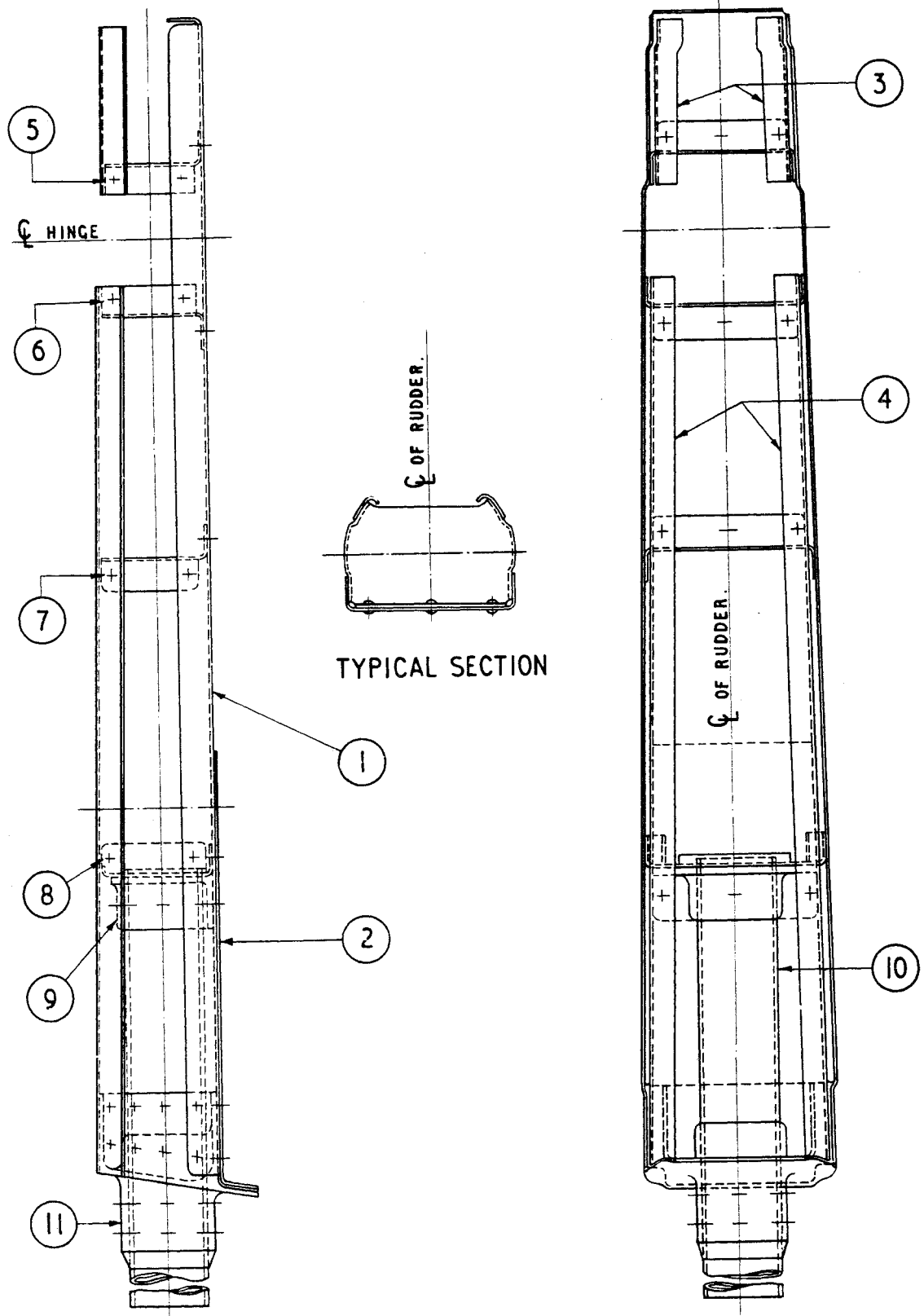


FIG. 7/14

RUDDER POST

FIG. 7/14

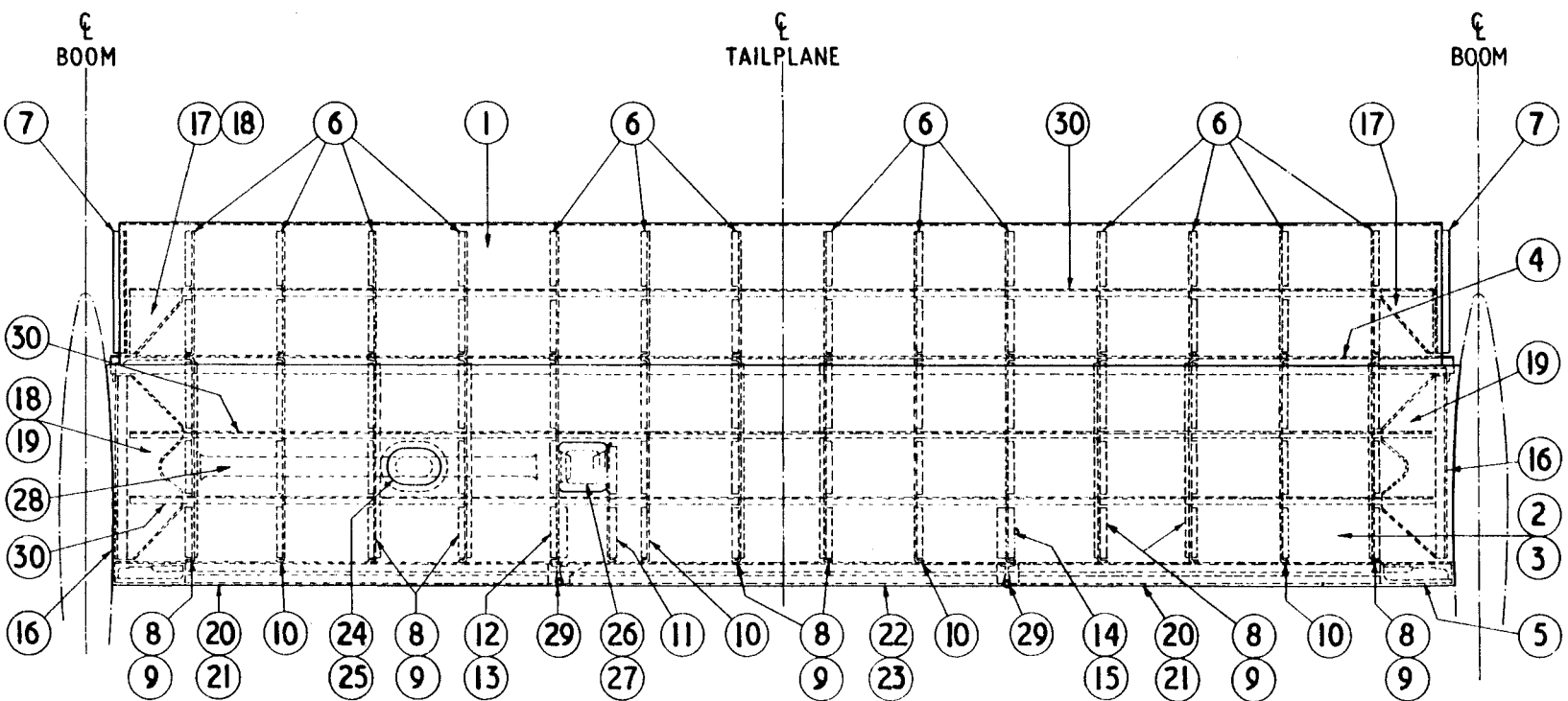


FIG. 7/15

TAILPLANE

FIG. 7/15

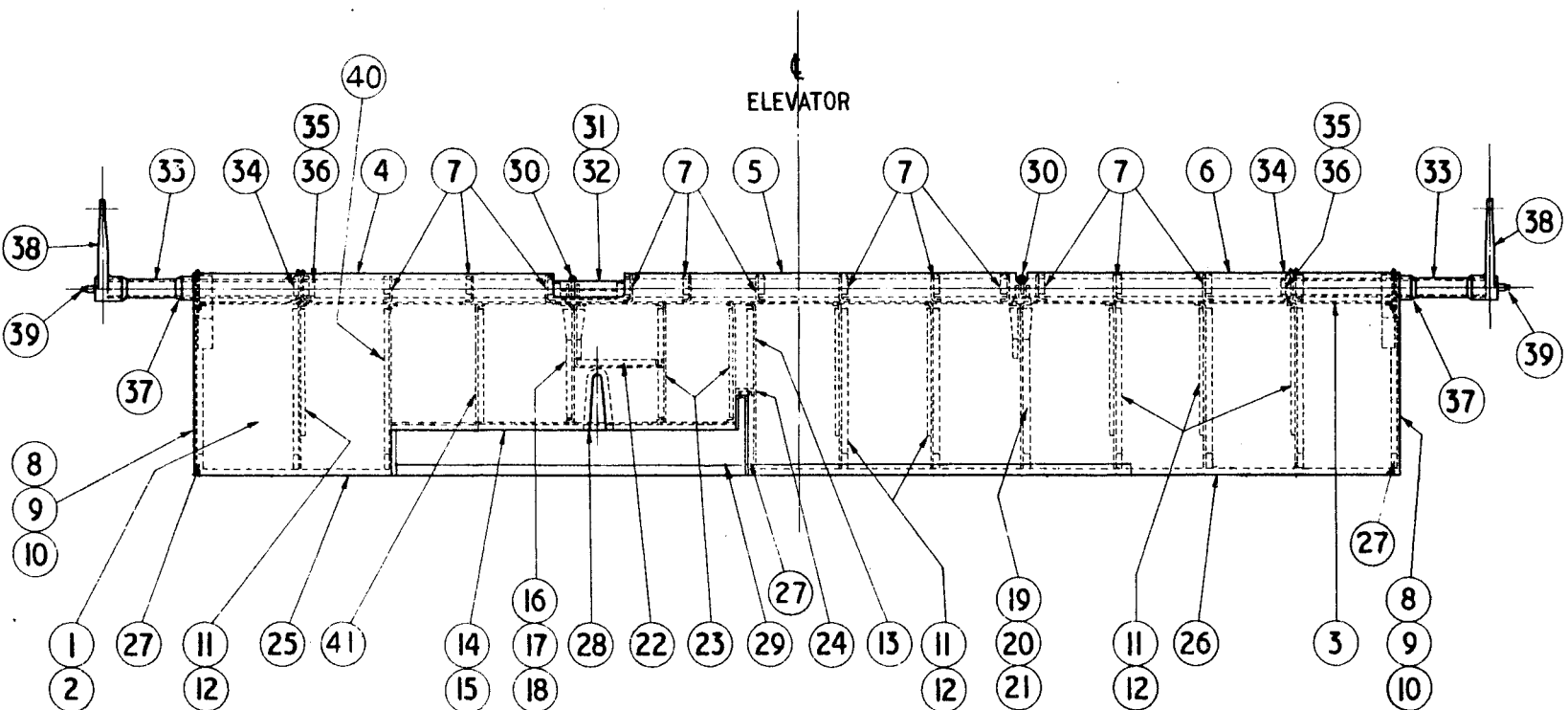


FIG. 7/16

ELEVATOR

FIG. 7/16.

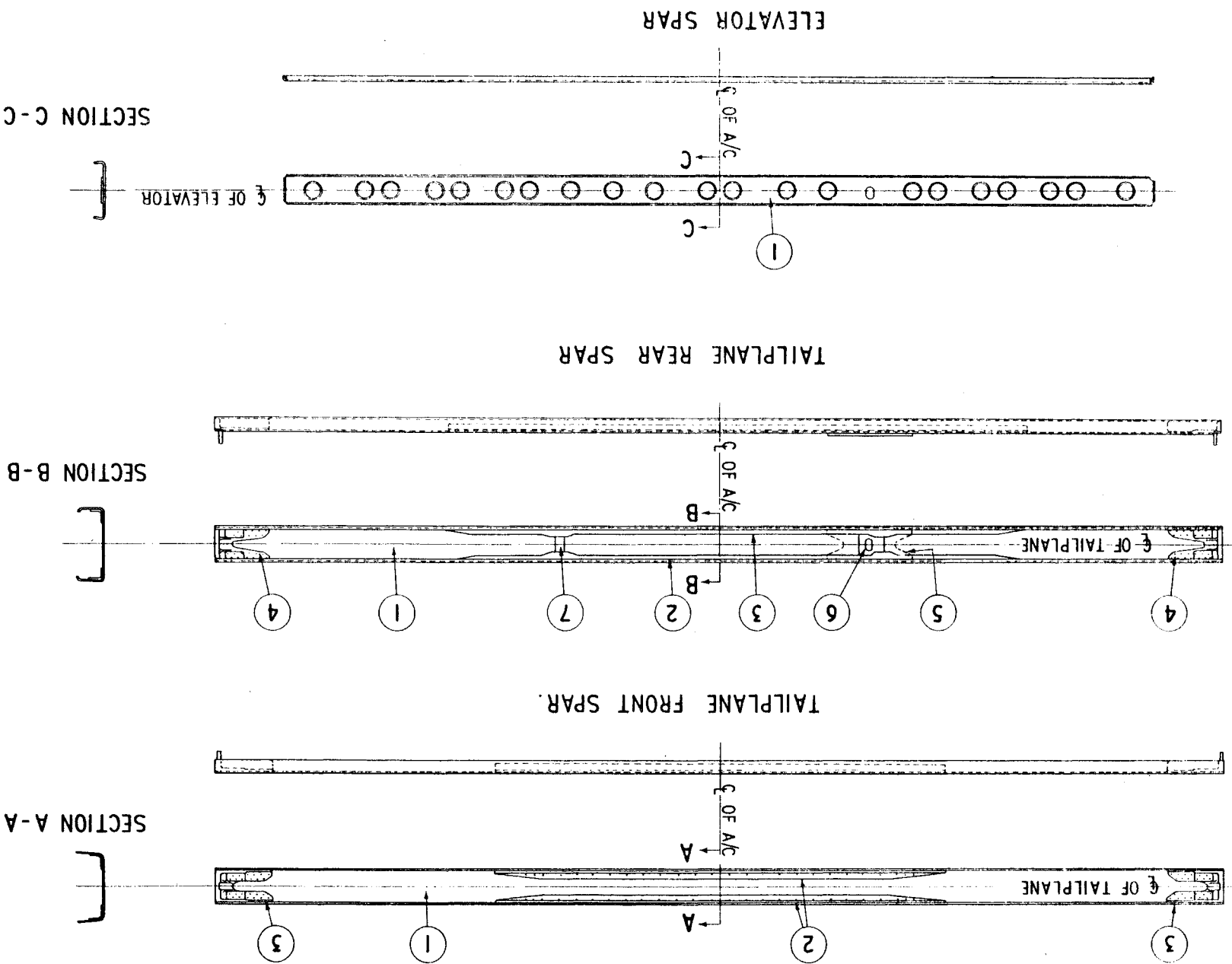


FIG. 7/17

TAILPLANE & ELEVATOR SPARS

FIG. 7/17

NOTES APPLYING TO ALL REPAIRS.

PATCH TO BE SAME GAUGE AND MATERIAL AS EXISTING SKIN. USE $\frac{5}{32}$ DIA. C'SK. RIVETS AS.2229 OR AS.2230 WHERE POSSIBLE. WHERE IMPOSSIBLE, USE $\frac{5}{32}$ DIA. C'SK. STEEL CHOBERT RIVETS PINNED. IN 24 S.W.G. SKIN USE $\frac{1}{8}$ DIA. RIVETS.

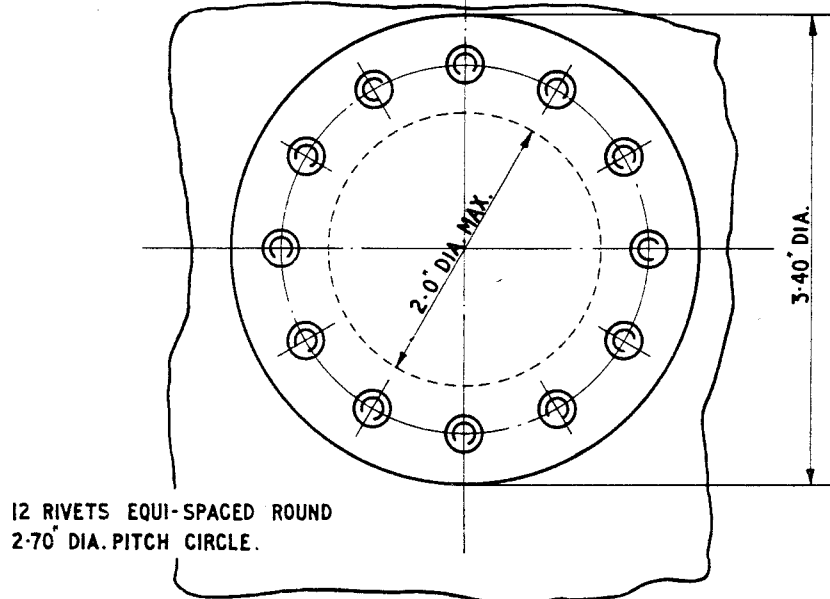
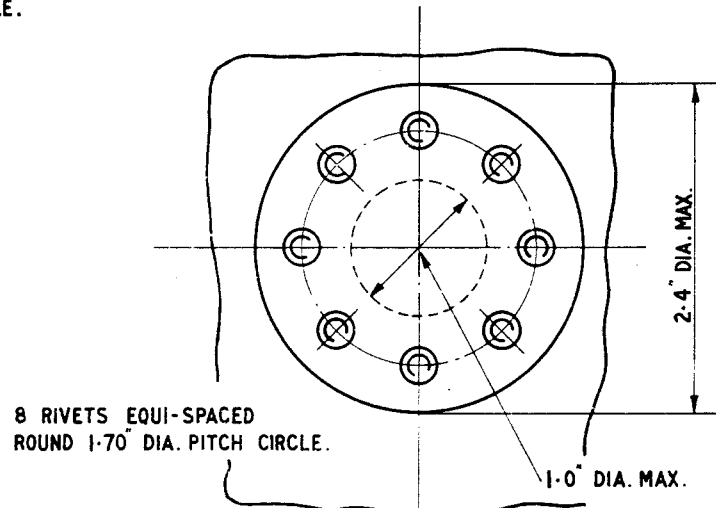
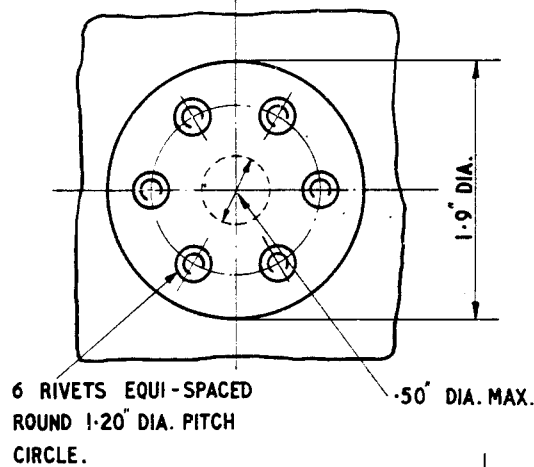


FIG. 7/18

PATCH REPAIR TO SPAR WEBS
& TO SKINS

FIG. 7/18

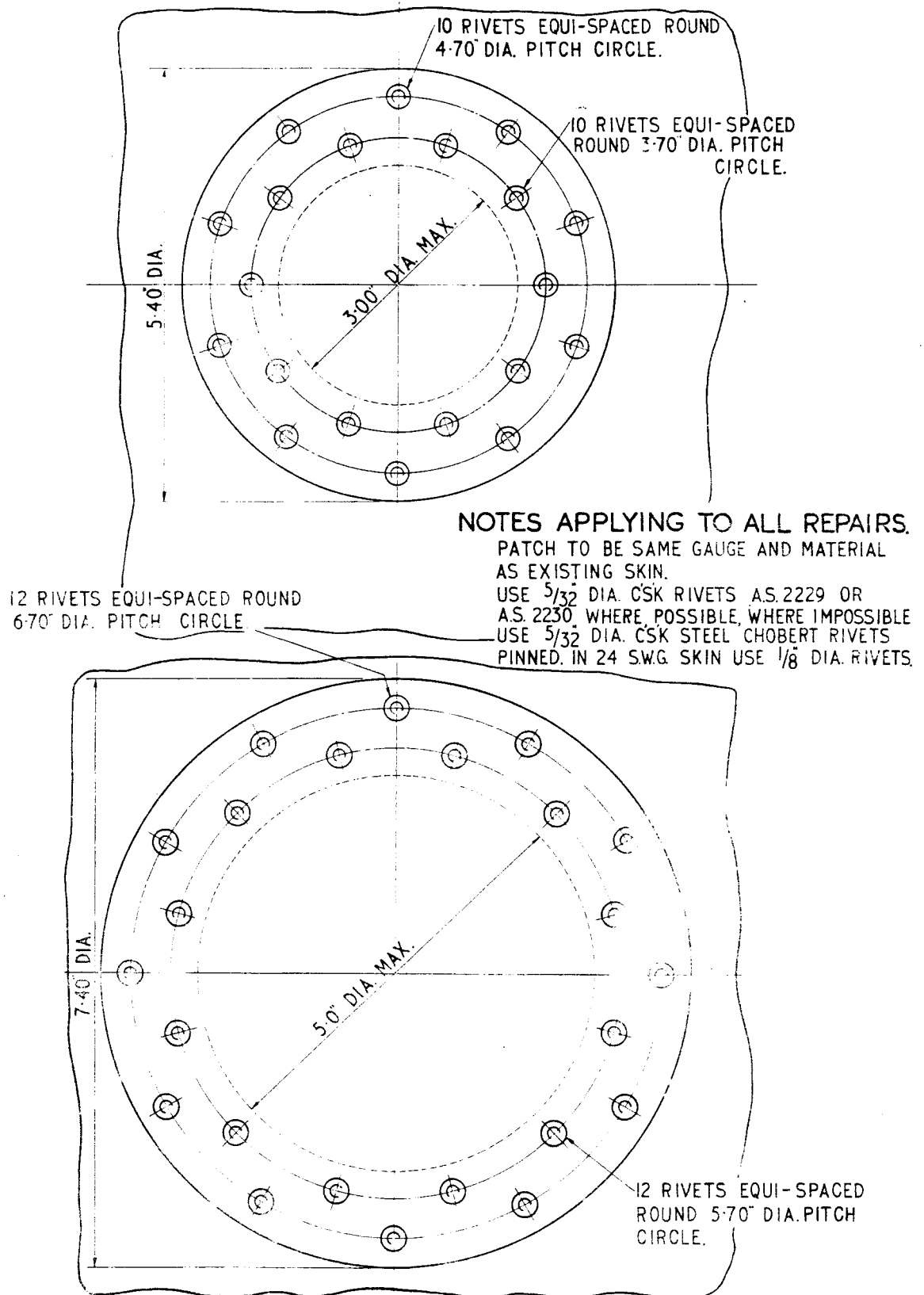


FIG. 7/19

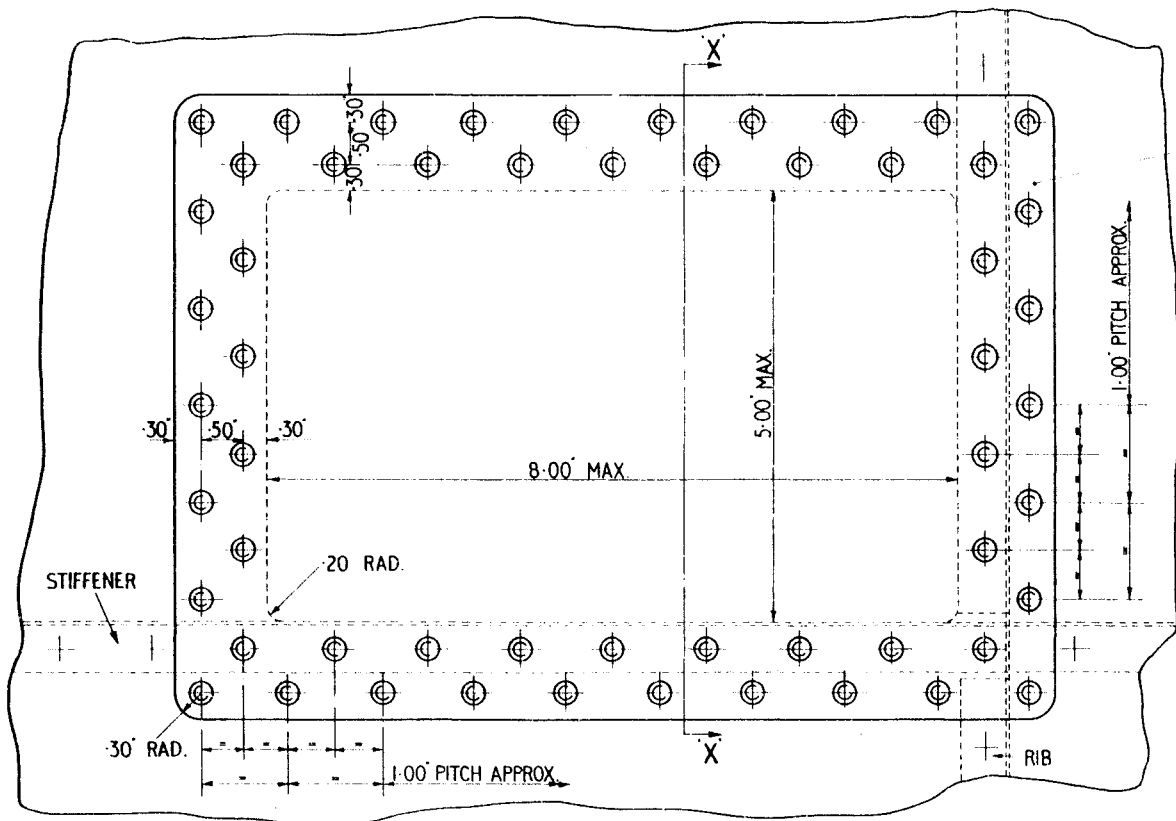
PATCH REPAIR TO SKINS

FIG. 7/19

FIG. 7/20

PATCH REPAIR TAIL UNIT SKINS

FIG. 7/20



PATCH TO BE SAME
GAUGE AND MATERIAL
AS EXISTING SKIN.



SECTION 'X-X'

FIN & RUDDER REPAIRS

NOTE:-

NO REPAIR GREATER THAN
3'-0" DIA. ON ONE SIDE OF
THE COMPONENT OR 1'-0" DIA.
ON BOTH SIDES OF THE
COMPONENT IS PERMISSIBLE.
ANY REPAIR GREATER THAN
THIS MUST BE AFFECTED BY
RESKINNING.

RIVETS:-

AS.2230 SOLID C'SK. RIVETS OR C'SK
STEEL CHOBERT RIVETS PINNED.
IN 20 OR 22 SWG. SKIN $\frac{5}{32}$ DIA. RIVETS
ARE TO BE USED.
IN 24 SWG. SKIN $\frac{1}{8}$ DIA. RIVETS ARE
TO BE USED.
IF SPOT-WELDS ARE DRILLED OUT IN
ANY GAUGE OF SKIN $\frac{5}{32}$ DIA. RIVETS
ARE TO BE USED IN THEIR PLACE.

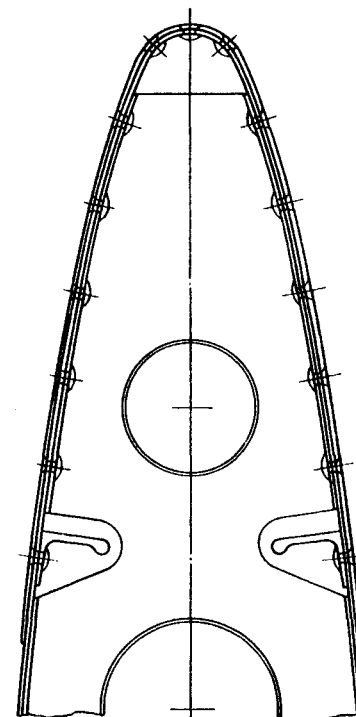
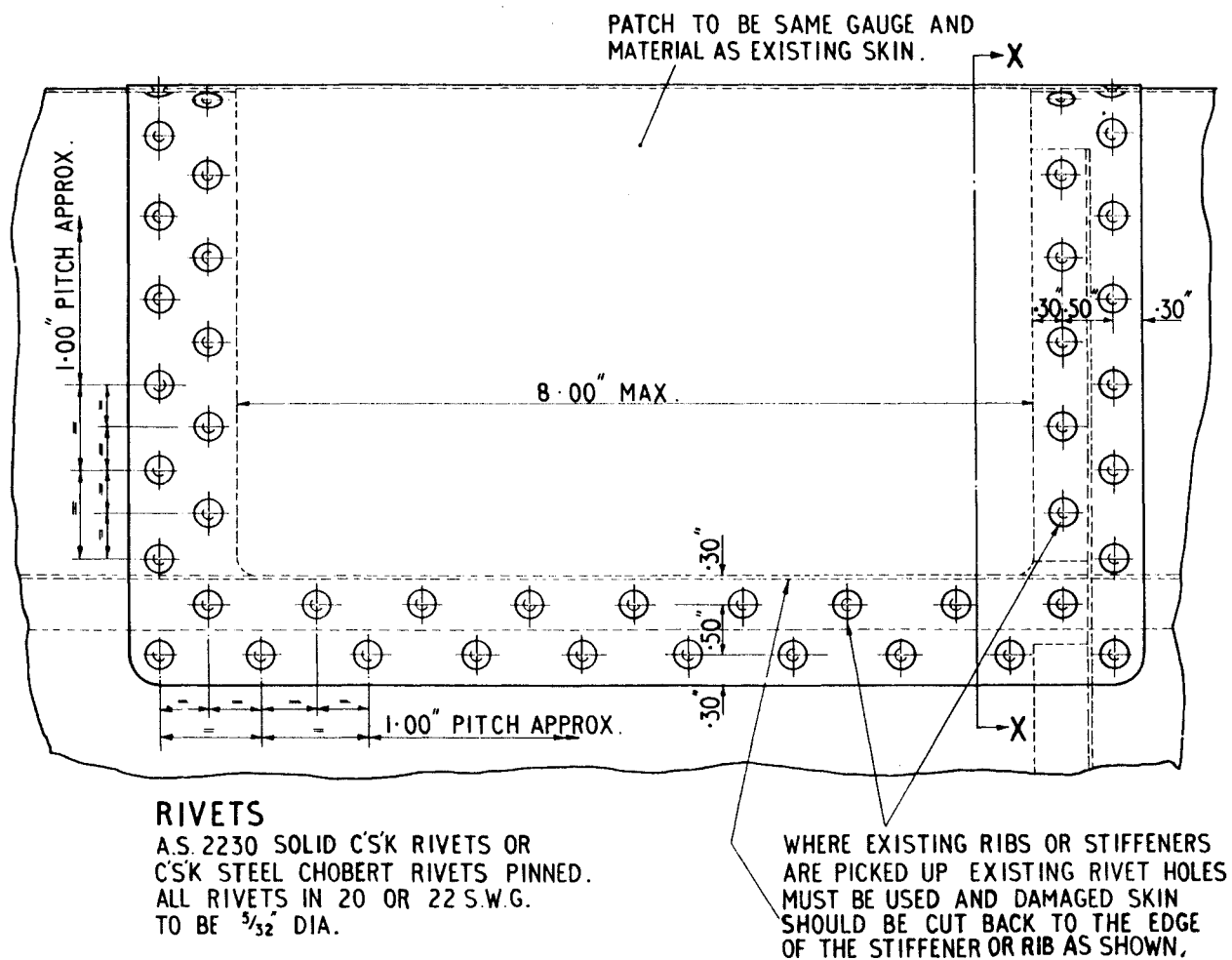
WHERE EXISTING RIBS OR STIFFENERS
ARE PICKED UP, EXISTING RIVET HOLES
MUST BE USED. DAMAGED SKIN SHOULD
BE CUT BACK TO THE EDGE OF ANY
ADJACENT STIFFENER OR RIB, AS SHOWN.

WHEN BOTH SKINS ARE DAMAGED, ONE
MAY BE RIVETED WITH SOLID RIVETS
& THE OTHER WITH CHOBERT RIVETS.
RIVETING TO RIBS, STIFFENERS, OR CLEAR
SKIN, AS SHOWN IN DRAWING, MAY BE
APPLIED TO ANY OR ALL SIDES OF
PATCH AS REQUIRED, DEPENDING ON
THE POSITION OF THE REPAIR.

FIG. 7/21

PATCH REPAIR TO NOSE SKIN

FIG. 7/21



SECTION X-X.

RIVETING TO RIBS, STIFFENERS OR CLEAR SKIN AS SHOWN IN DRAWING MAY BE APPLIED TO ANY OR ALL SIDES OF PATCH, AS REQUIRED, DEPENDING ON THE POSITION OF THE REPAIR.

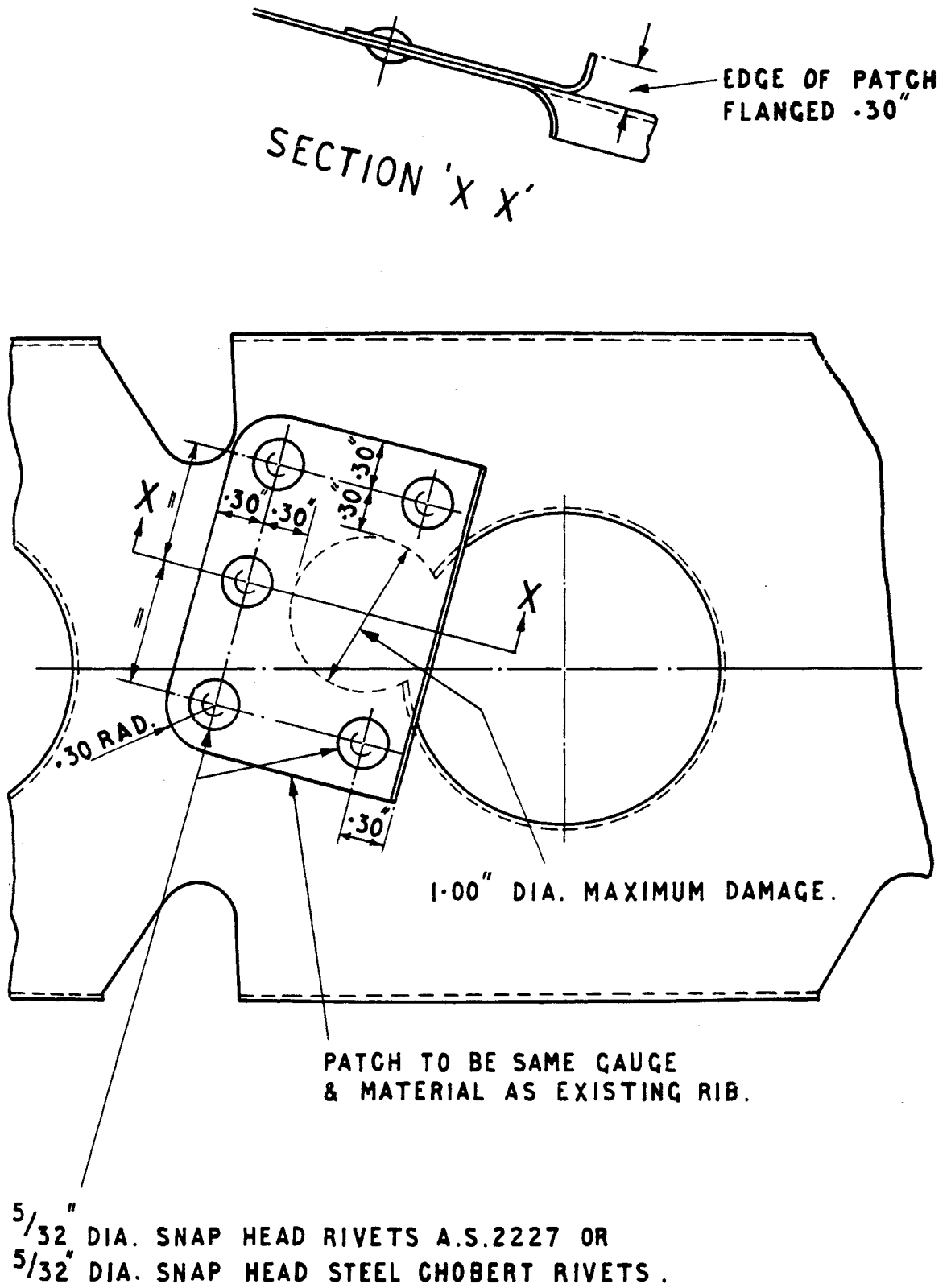


FIG. 7/22

RIB REPAIR

FIG. 7/22

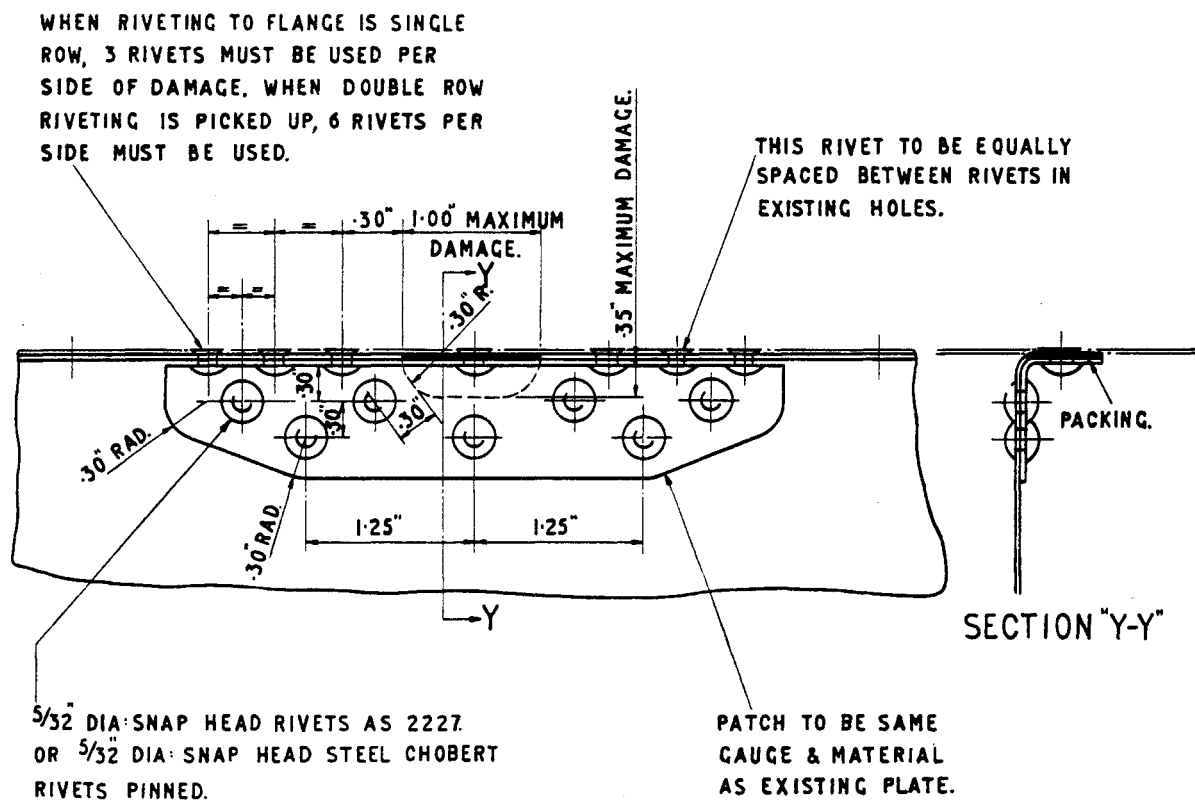
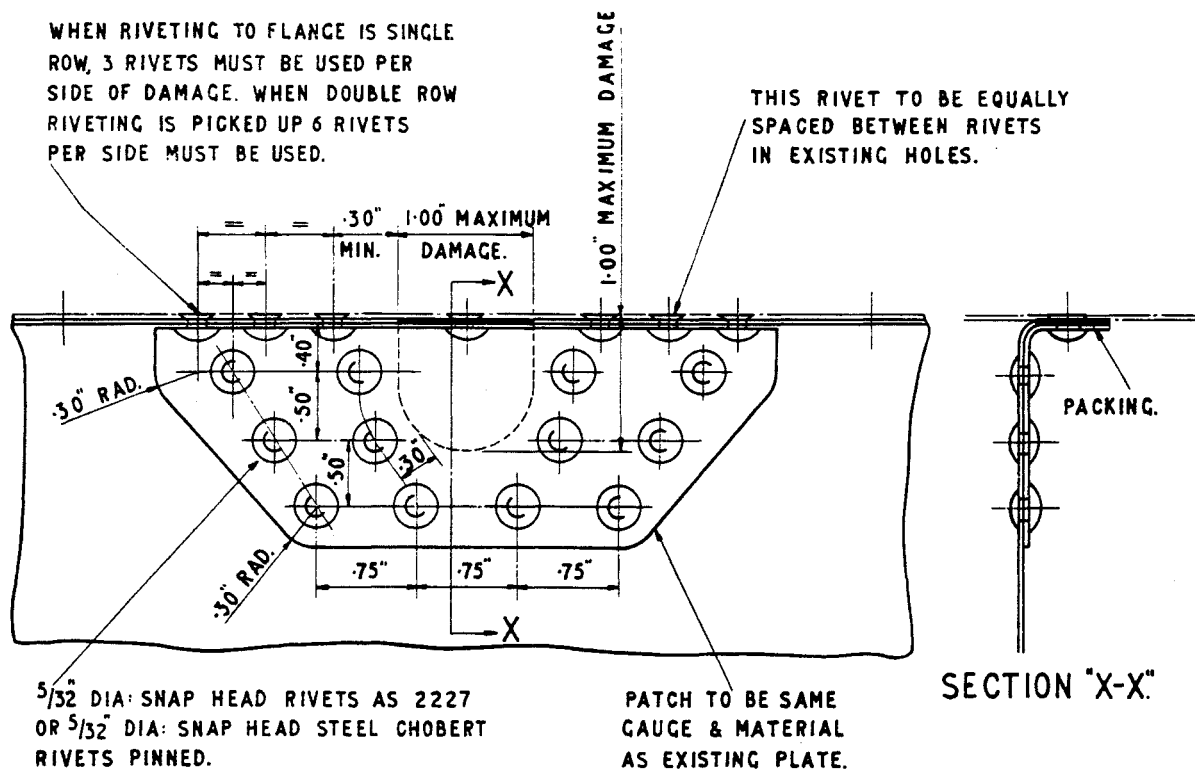
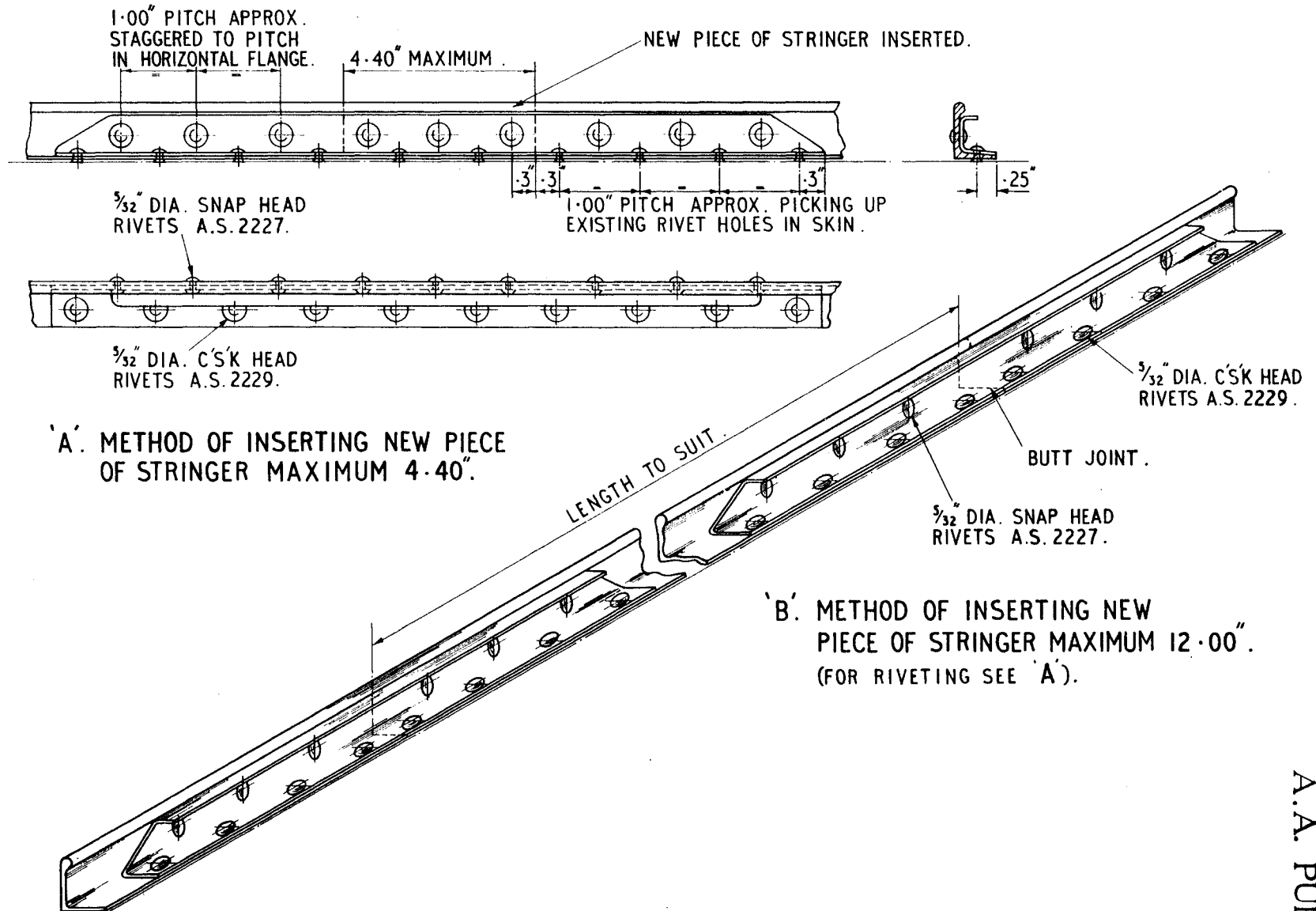


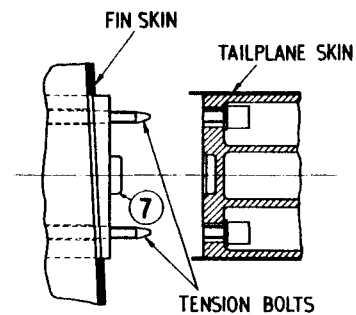
FIG. 7/23

FIG. 7/24

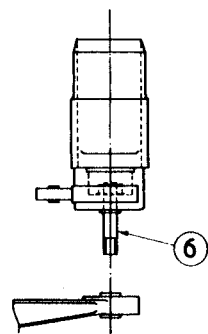
STRINGER REPAIRS TO TAIL UNIT

FIG. 7/24





EXPLODED VIEW OF JOINT 'D' IN DIRECTION OF ARROW.



EXPLODED VIEW OF HINGE 'B'.

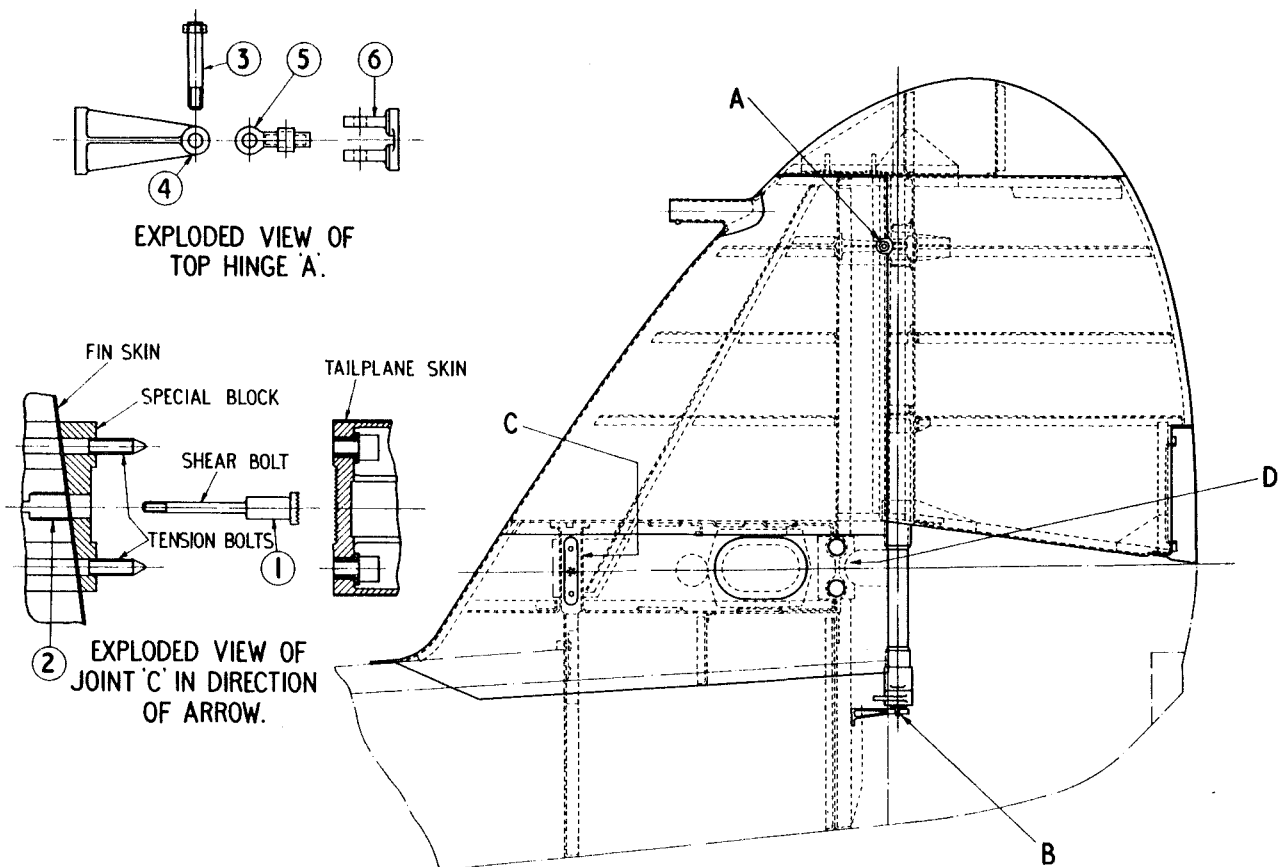


FIG. 7/25

EXPLODED VIEW OF FIN & RUDDER FITTINGS

FIG. 7/25

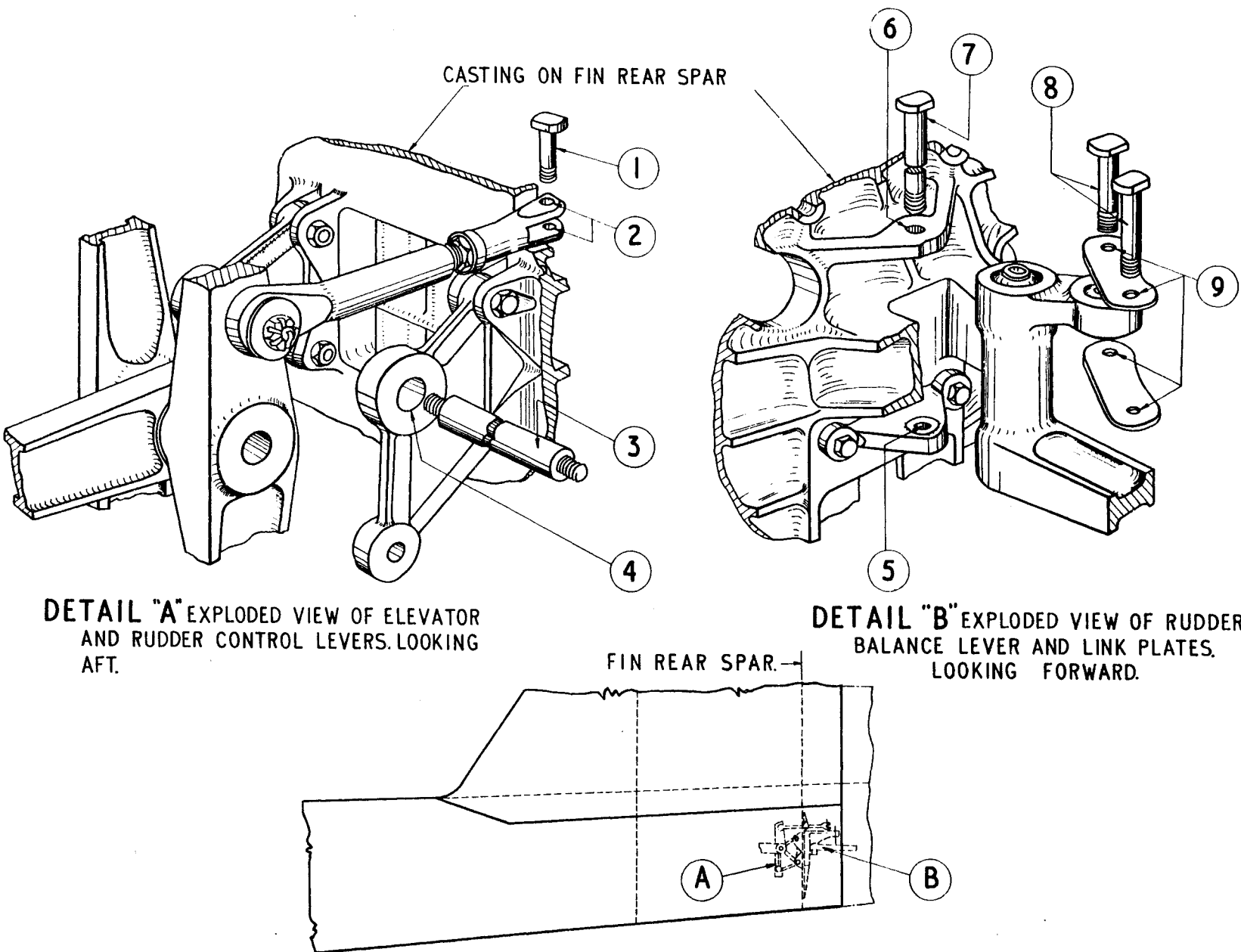


FIG. 7/26

EXPLODED VIEWS OF CONTROL FITTINGS TAIL BOOM REAR END

FIG. 7/26

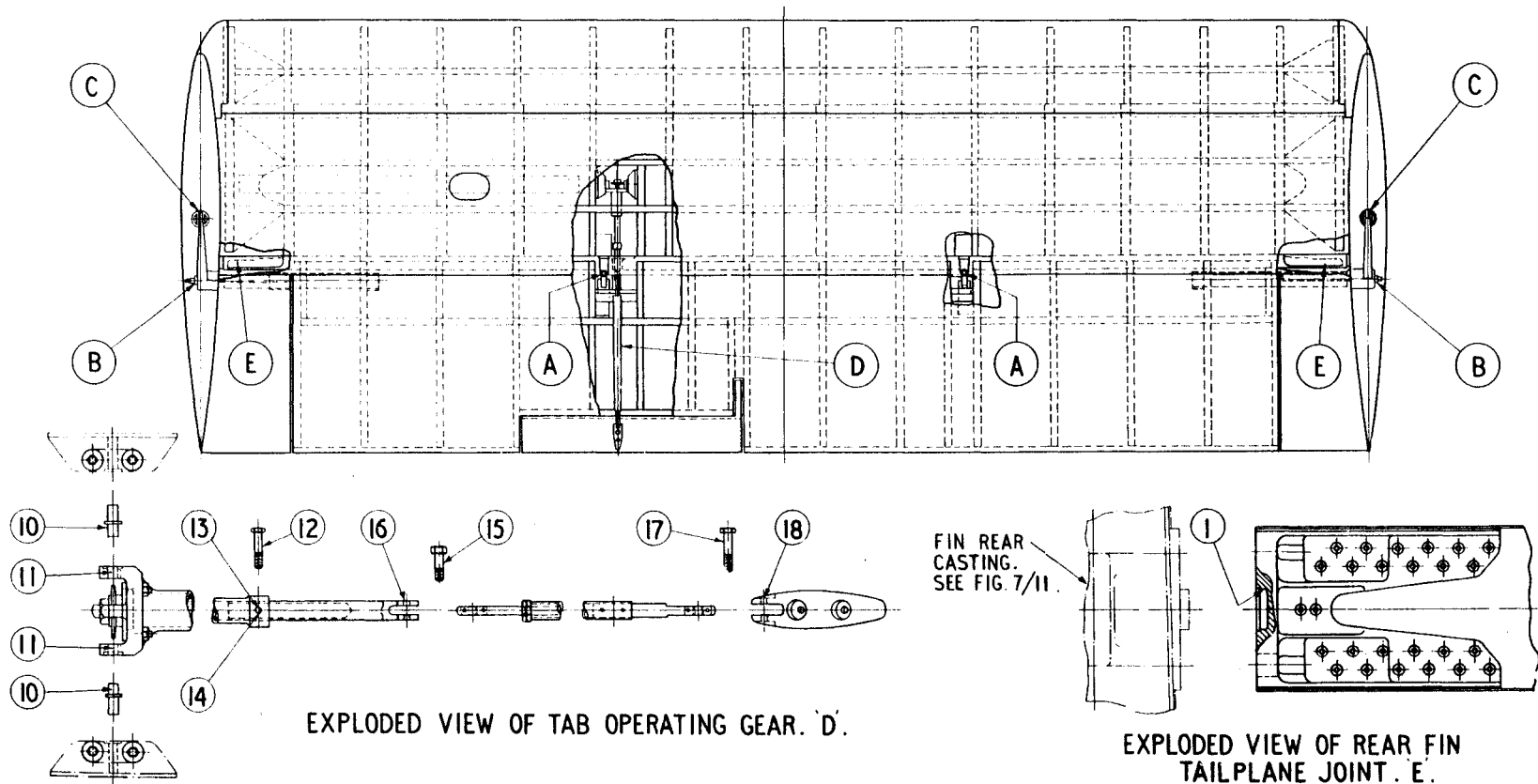
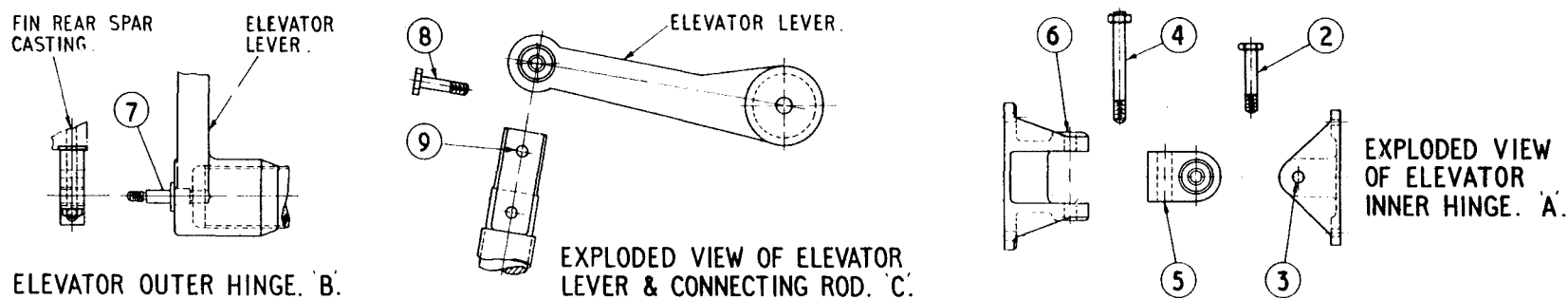
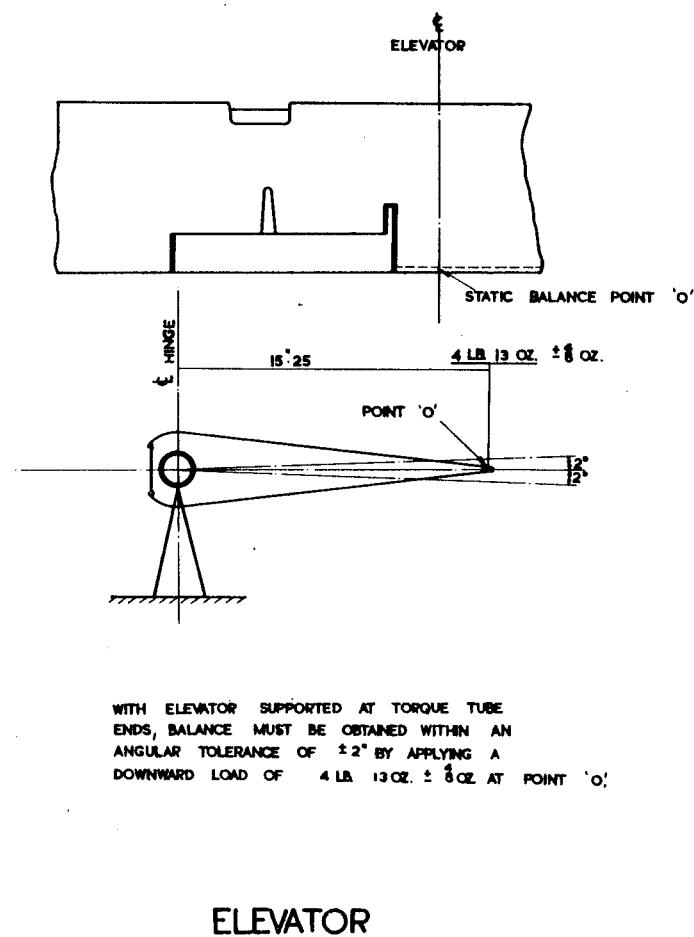
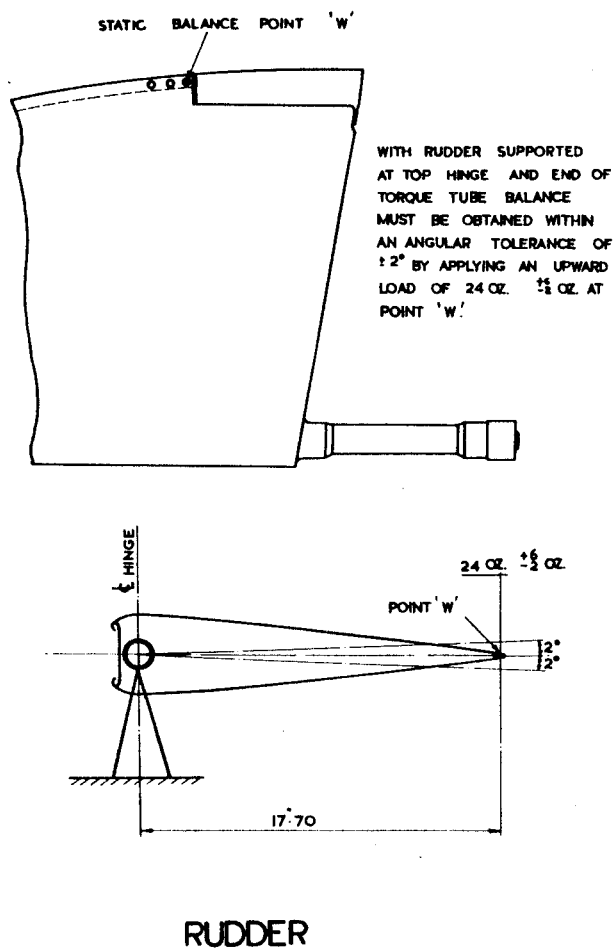


FIG. 7/27 EXPLODED VIEWS OF TAIL PLANE & ELEVATOR FITTINGS FIG. 7/27.

FIG. 7/28 METHOD OF BALANCING RUDDER AND ELEVATOR FIG. 7/28.



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