

CHAPTER 2

CHAPTER 2

ENGINE FITTINGS

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CHAPTER 2

ENGINE MOUNTING

General

1. The engine mounting is situated at the rear end of the fuselage and comprises two tubular steel frames of welded construction. The tubes are all to Specification T. 45 and repairs are not permissible to any member no matter what the situation of the damage. Replacement of the mounting or bracing members must be carried out if damage necessitating replacement occurs (see Fig. 2/1).

Negligible Damage

2. Smooth isolated dents free from cracks, fractures or abrasions and which do not exceed 1/40th of the tube diameter in depth may be considered negligible provided they do not occur in the middle third of the affected member. The limit of negligible bowing in members is defined in Chapter 1, Para. 18.

Wear Limits

3. Wear limits for all male and female parts of the engine mounting are given in Table No. 5, to be read in conjunction with Fig. 2/1. Reference should be made to Chapter 1, Para. 21, for the method of application.

ENGINE COWLING

General

4. The engine cowling (see Fig. 2/2) is in three sections, top and bottom cowl and rear cone; each comprises an aluminium alloy alclad skin reinforced with bulkheads and stringers of the same material. The rear cone includes three downward identification lights, and the top cowl includes auxiliary air intakes.

Repairs

5. The definition of negligible damage and the repairs shown in Figs. 2/3, 2/4 and 2/5 may be applied in the positions tabulated in Table No. 4.

TABLE 4
ENGINE COWLING

DEFINITIONS OF NEGLIGIBLE AND REPAIRABLE DAMAGE

Component	Definition of Damage		Detail Repair Fig. No.
	Negligible	Repairable	
Skins	Dents or Bruises 3.0" dia. x .15" deep At least 12.0" apart	Holes: .50" dia.—12.0" apart 1.0" dia.—12.0" apart 2.0" dia.—18.0" apart 3.0" dia.—18.0" apart	2/3
Bulkheads	Dents or Bruises 1.0" dia. x .10" deep At least 12.0" apart	Holes: .50" dia.—18.0" apart 1.0" dia.—18.0" apart	2/4
Stiffeners	Dents or Bruises 1.0" dia. x .5" x .10" deep At least 12.0" apart	One repair per Stiffener only	2/5

TABLE 5
ENGINE MOUNTING
WEAR LIMITS

Key No.	Part No.	Description.	Nominal Dia.	Female High or Male Low Limit.	Maximum Wear Limit.	Plug Gauge.
1.	L001933	Bolts, engine mounting pick-up	0.5000	-0.0006	-0.0025	Micrometer
2.	A003089	Eyebolt, top	0.5000	+0.0004	+0.0020	UB
3.	L001597-8	Frame, side L.H. & R.H.	0.5000	+0.0004	+0.0020	UB
4.	L001581A	Bracket, top tie rod	0.3125	+0.0035	+0.0055	XA
5.	L001571	Rod, tie top	0.3125	+0.0035	+0.0055	XA
6.	2A15Y/7G	Bolts, standard	0.3125	-0.003	-0.0045	Micrometer
7.	L001579	Eyepiece, top tie rod	0.3125	+0.0035	+0.0055	XA
8.	2A15Y/6G	Bolt, standard	0.3125	-0.003	-0.0045	Micrometer
9.	L001537	Rod, tie attachment lug, top	0.3125	+0.0035	+0.0055	XA
10.	L001985ND	Rod, tie attachment lug, bottom	0.3750	+0.0035	+0.0055	UA
11.	2A15Y/8J	Bolts, standard	0.3750	-0.003	-0.0045	Micrometer
12.	L001565	Eyepiece, bottom tie rod	0.3750	+0.0035	+0.0055	UA
13.	2A15Y/8J	Bolts, standard	0.3750	-0.003	-0.0045	Micrometer
14.	L001555	Rod, tie bottom	0.3750	+0.0035	+0.0055	UA
15.	A003021-2A	Bracket, bottom tie rod	0.3750	+0.0035	+0.0055	UA
16.	A003035	Eyebolt, bottom	0.5000	+0.0004	+0.0020	UB
17.	L001935	Bolts, engine pick-up	0.5000	-0.0006	-0.0025	Micrometer

TABLE 6
ENGINE MOUNTING
MATERIAL DETAILS

See Fig. No. 2/1, Ref. DH. Dwg. L001521.

Item No.	Sub-Assy. No.	Part No. of Tube.	Outside Dia.	S.W.G.	Specn.
18.	L001597A	L001503	1 $\frac{1}{4}$ "	17	T.45
19.	L001597A	L001507	1 $\frac{1}{4}$ "	17	T.45
20.	L001597A	L001505	1 $\frac{1}{2}$ "	14	T.45
21.	L001569A	L001571	1 $\frac{3}{4}$ "	17	T.45
22.	L001553A	L001555	1 $\frac{3}{8}$ "	12 or 14	T.45
23.	L001598A	L001504	1 $\frac{1}{4}$ "	17	T.45
24.	L001598A	L001508	1 $\frac{1}{4}$ "	17	T.45
25.	L001598A	L001506	1 $\frac{1}{2}$ "	14	T.45

TABLE 7
ENGINE COWLING
MATERIAL DETAILS

See Fig. No. 2/2, Ref. DH. Dwg. L001739.

Key No.	L.H.	Part No. R.H.	Material.	Specifica- tion.	S.W.G.	Description.	
1.		L001759ND	Alclad	DTD. 390	18	Former, Front Edge ...	Assembled on L002399A Top Cowl
2.	L001765ND	L001765ND	Alclad	DTD. 390	20	Stringer ...	
3.	L001763ND	L001764ND	Alclad	DTD. 390	18	Stiffener, Edge ...	
4.		L001851A	Alclad	DTD. 390	18	Plate, Stiffener Assy.	Assembled on L001743A Bottom Cowl
5.		L001867A	Alclad	DTD. 390	18	Door, Access ...	
6.		L001843ND	Alclad	DTD. 390	18	Stiffener, Front End ...	
7.		L001831ND	Alclad	DTD. 390	18	Former No. 1 ...	
8.		L001853A	Alclad	DTD. 390	18	Plate Stiffener Assy...	
9.		L001769ND	Alclad	DTD. 390	20	Stringer ...	Assembled on L002399A
10.		L001821	Alclad	DTD. 390	18	Door, Access ...	
11.		L001819	Alclad	DTD. 390	18	Stiffener ...	
12.	L001767ND	L001767ND	Alclad	DTD. 390	20	Stringer ...	
13.	00L11ND	00L11ND	Alclad	DTD. 390	18	Stringer ...	
14.	00L9ND	00L9ND	Alclad	DTD. 390	18	Stringer ...	
15.	L001781ND	L001781ND	Alclad	DTD. 390	20	Stringer ...	
16.	L001779ND	L001779ND	Alclad	DTD. 390	20	Stringer ...	
17.	00L7ND	00L7ND	Alclad	DTD. 390	20	Stringer ...	
18.	00L5ND	00L5ND	Alclad	DTD. 390	20	Stringer ...	
19.	L001793ND	L001793ND	Alclad	DTD. 390	20	Stringer ...	
20.	L001791ND	L001791ND	Alclad	DTD. 390	20	Stringer ...	
21.	L001799ND	L001799ND	Alclad	DTD. 390	20	Stringer ...	
22.	L001797ND	L001797ND	Alclad	DTD. 390	20	Stringer ...	
23.	L001805ND	L001805ND	Alclad	DTD. 390	20	Stringer ...	
24.	L001803ND	L001803ND	Alclad	DTD. 390	20	Stringer ...	
25.		L001645ND	Section X.124	—	—	Stiffener ...	L001601
26.	L002323AND	L002324ND	Alumn.	L. 16	18	Duct ...	
27.	L002413A	L002414A	Alclad	DTD. 610	18	Support Assy. Duct ...	
28.		00L57AND	M.S.P.	S. 3	20	Stiffener, Bottom ...	Assembled on L002379A and L002380A Ducts
29.		00L63AND	M.S.P.	S. 3	18	Angles, Front and Side Assy. ...	
30.	L002381AND	L002382AND	Alumn.	L. 16	18	Fairing, Duct ...	
31.	L002421ND	L002422ND	Section X.147	—	—	Stiffener, Fairing ...	Assembled on L001743A
32.	L002419ND	L002420ND	Section X.147	—	—	Stiffener, Fairing ...	
33.	L002417ND	L002148ND	Section X.147	—	—	Stiffener, Fairing ...	
34.		L002387ND	Alclad	DTD. 610	18	Angle ...	
35.		00L49AND	M.S.P.	S. 3	20	Stiffener, Duct Assy...	
36.		L001863	Mang. Alumn.	DTD. 213	18	Stiffener ...	Assembled on L001743A
37.	L001829ND	—	Alclad	DTD. 390	18	Panel, Cowling ...	
38.	—	L001830ND	Alclad	DTD. 390	18	Panel, Cowling ...	
39.		L001719ND	Section X.143	—	—	Landing, Lower ...	Assembled on L001601A Rear Cone
40.		L001717ND	Section X.143	—	—	Landing, Upper ...	
41.	L001629ND	L001630ND	Alumn.	L. 16	20	Skin, Upper, Rear ...	
42.		L001611	Mang. Alumn.	DTD. 213	18	Ring, Forward ...	
43.		L001609A	Alclad	DTD. 390	18	Bulkhead, Rear, Assy.	
44.		L001607A	Alclad	DTD. 390 or L. 38	20	Bulkhead, Centre, Assy. ...	Assembled on L002399A
45.	L001633ND	L001634ND	Alclad	DTD. 390 or L. 38	20	Skin, Upper, Front ...	
46.		L001605A	Alclad	DTD. 390 or L. 38	20	Bulkhead, Front Assy.	
47.		L001761ND	Alclad	DTD. 390	18	Former, Rear Edge ...	Assembled on L002399A
48.	L001745ND	—	Alclad	DTD. 390	18	Skin, Cowl, L.H. ...	
49.	L002379A	L002380A	—	—	—	Air Intake Assy. ...	
50.		L001747ND	Alclad	DTD. 390	18	Former No. 1 ...	
51.	L001771ND	L001771ND	Alclad	DTD. 390	20	Stringer ...	
52.		L001749ND	Alclad	DTD. 390	18	Former No. 2 ...	
53.	L001777ND	L001777ND	Alclad	DTD. 390	20	Stringer ...	
54.		L001751ND	Alclad	DTD. 390	18	Former No. 3 ...	
55.	L001788ND	L001788ND	Alclad	DTD. 390	20	Stringer ...	
56.		L001753ND	Alclad	DTD. 390	18	Former No. 4 ...	
57.	L001789ND	L001789ND	Alclad	DTD. 390	20	Stringer ...	
58.		L001755ND	Alclad	DTD. 390	18	Former No. 5 ...	
59.	L001795ND	L001795ND	Alclad	DTD. 390	20	Stringer ...	
60.		L001757ND	Alclad	DTD. 390	18	Former No. 6 ...	
61.	L001801ND	L001801ND	Alclad	DTD. 390	20	Stringer ...	

TABLE 7 (Continued)

Key No.	L.H.	Part No. R.H.	Material.	Specifica- tion.	S.W.G.	Description.	
62.	L001847ND	L001848ND	Alclad	DTD. 390	18	Edge Stiffener	Assembled on L001743A
63.		L001883ND	Alclad	DTD. 390	18	Former No. 2	
64.	L001883ND	L001883ND	Alclad	DTD. 390	20	Stringer	
65.		L001835ND	Alclad	DTD. 390	18	Former No. 3	
66.	L001889ND	L001889ND	Alclad	DTD. 390	20	Stringer	
67.		L001837ND	Alclad	DTD. 390	18	Former No. 4	
68.	L001895ND	L001895ND	Alclad	DTD. 390	20	Stringer	
69.		L001839ND	Alclad	DTD. 390	18	Former No. 5	
70.	L001901ND	L001901ND	Alclad	DTD. 390	20	Stringer	
71.		L001841ND	Alclad	DTD. 390	18	Former No. 6	
72.	L001907ND	L001907ND	Alclad	DTD. 390	20	Stringer	
73.		L001845ND	Alclad	DTD. 390	18	Stiffener, Rear End	
74.	L0085	L0086	Alclad	DTD. 390	18	Rib, End	
75.	L001635ND	L001636ND	Alclad	or L. 38 DTD. 390	20	Skin, Lower End	Assembled on L001601A
76.		L001639	Alclad	or L. 38 DTD. 390	20	Skin, Lower Centre	
77.	L001631ND	L001632ND	Alumn. or Mang. Alumn.	L. 16 or DTD. 213	20	Skin, Lower Rear	
78.		L001613	Mang. Alumn.	DTD. 213	18	Ring, Aft	
79.	L001627ND	L001627ND	Alclad	DTD. 390 or L. 38	20	Stiffener, Trailing Edge	
80.		L00950	—	—	—	Mounting, Down'd Ident. Lamps	
81.	L001641ND	L001640ND	Section X.124	—	—	Stiffener	
82.		L001857A	—	—	—	Duct, Cooling	
83.	L001911ND	L001911ND	Alclad	DTD. 390	20	Stringer	
84.	L001909ND	L001909ND	Alclad	DTD. 390	20	Stringer	
85.	L001905ND	L001905ND	Alclad	DTD. 390	20	Stringer	Assembled on L001743A
86.	L001903ND	L001903ND	Alclad	DTD. 390	20	Stringer	
87.	L001899ND	L001899ND	Alclad	DTD. 390	20	Stringer	
88.	L001897ND	L001897ND	Alclad	DTD. 390	20	Stringer	
89.	L001893ND	L001893ND	Alclad	DTD. 390	20	Stringer	
90.	L001891ND	L001891ND	Alclad	DTD. 390	20	Stringer	
91.	L001887ND	L001887ND	Alclad	DTD. 390	20	Stringer	
92.	L001885ND	L001885ND	Alclad	DTD. 390	20	Stringer	
93.		L001873A	Alclad	DTD. 390 or L. 38	18	Door, Access	
94.	—	L001746ND	Alclad	DTD. 390	18	Skin, Cowl	Ass'd on L002399A
95.		L001637ND	Alclad	DTD. 390 or L. 38	20	Skin, Upper Centre	Ass'd on L001601A
96.	L001643ND	L001642ND	Section X.124	—	—	Stiffener	Ass'd on L001743A
97.		L001881ND	Alclad	DTD. 390	20	Stringer	

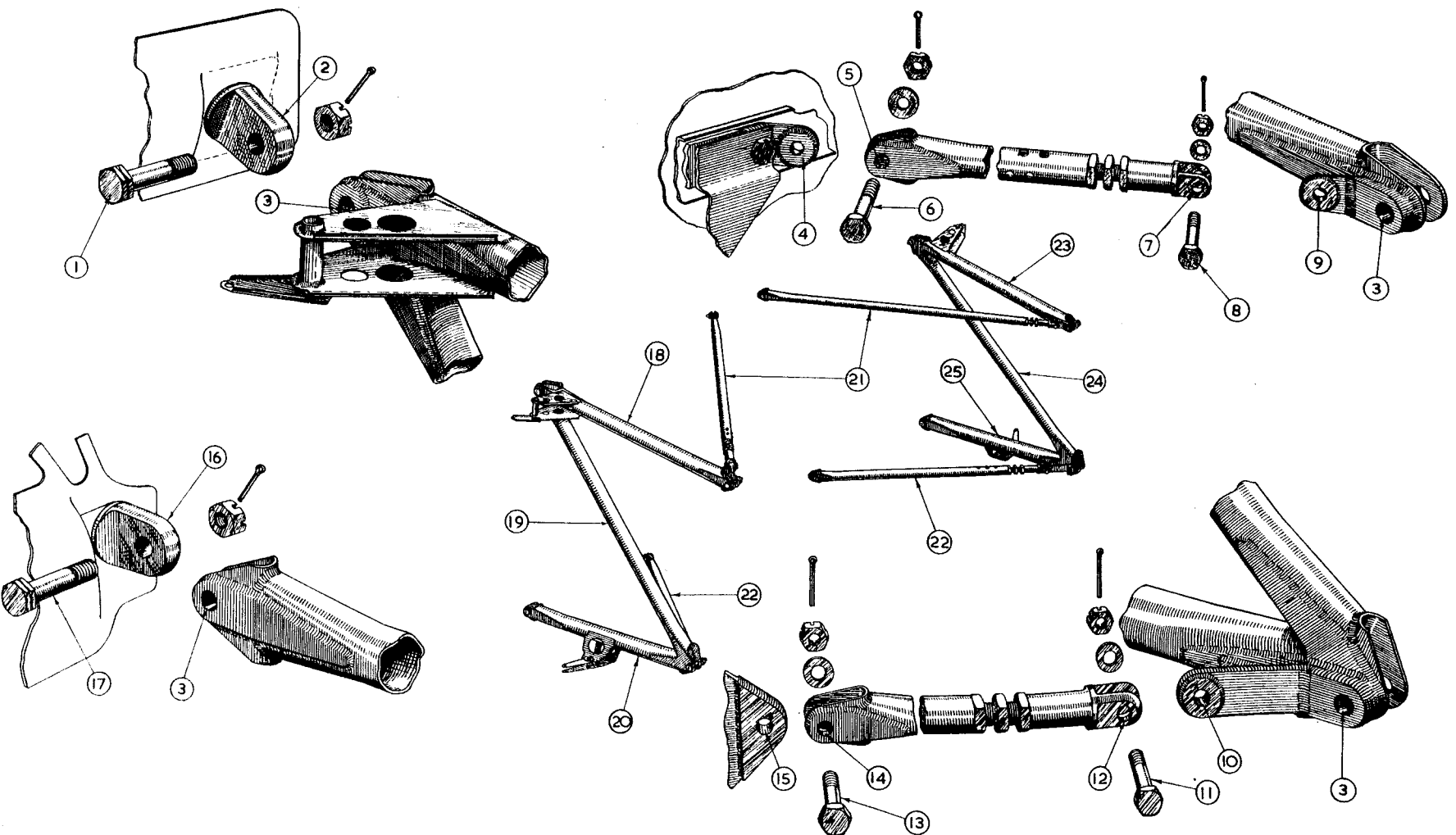
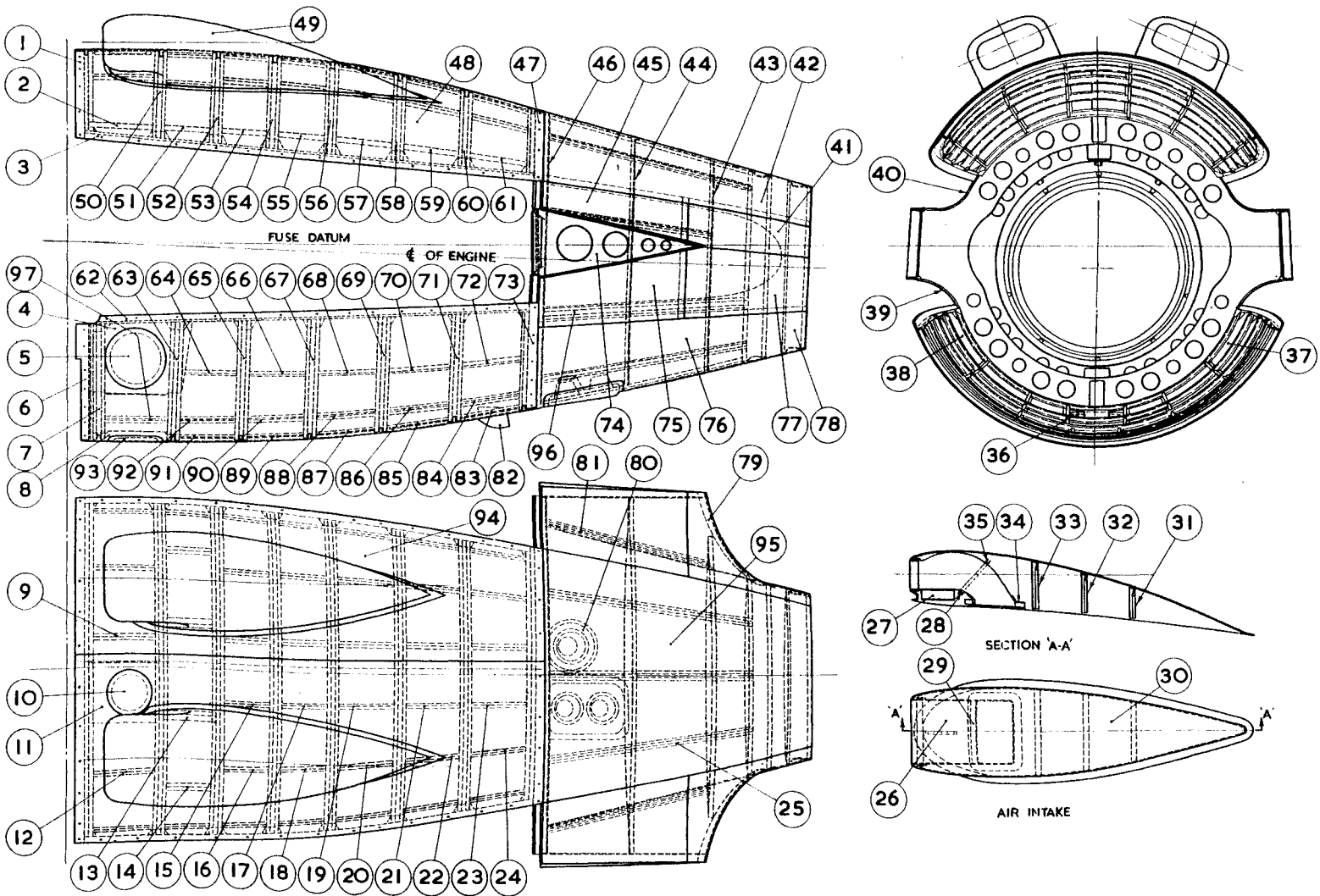


FIG. 2/1

ENGINE MOUNTING

FIG. 2/1



NOTES APPLYING TO ALL REPAIRS.

PATCH TO BE SAME GAUGE AND MATERIAL AS EXISTING SKIN.
USE $\frac{5}{32}$ DIA. C'SK RIVETS A.S. 2229 OR A.S. 2230 WHERE POSSIBLE.
WHERE IMPOSSIBLE USE $\frac{5}{32}$ DIA. CHOBERT RIVETS.

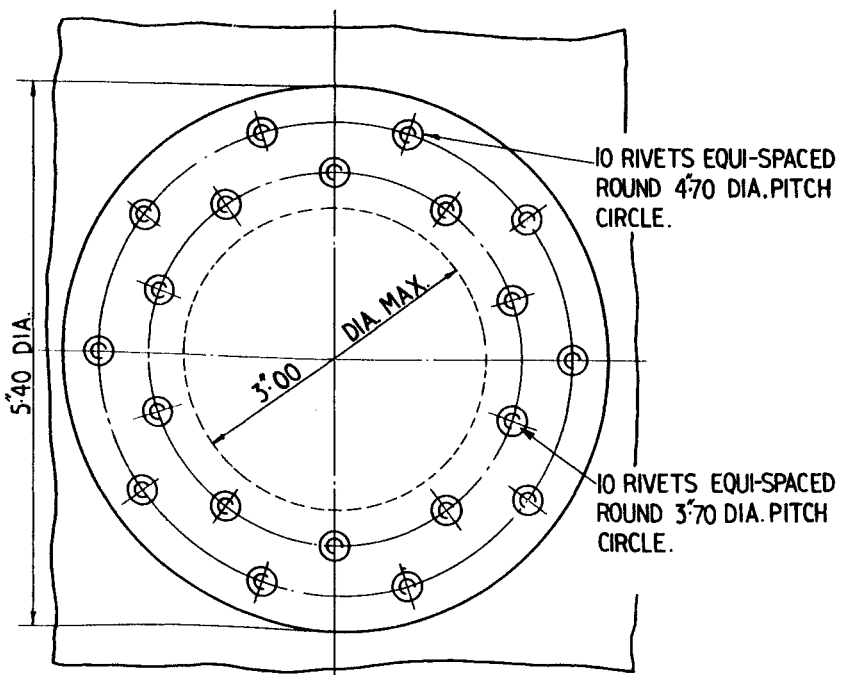
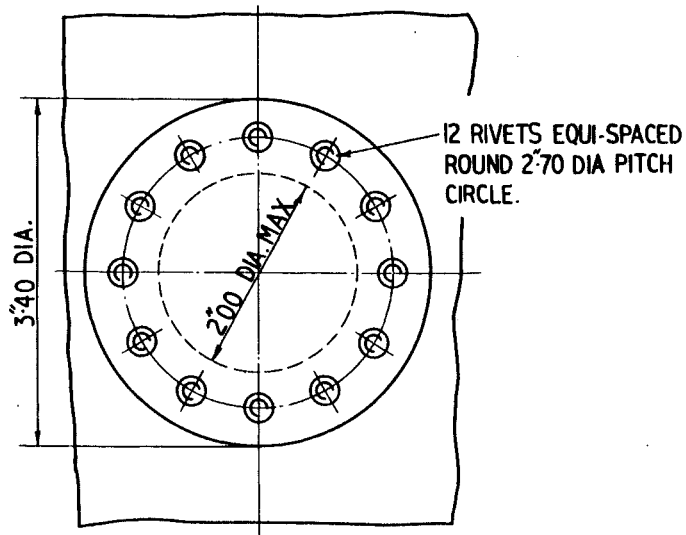
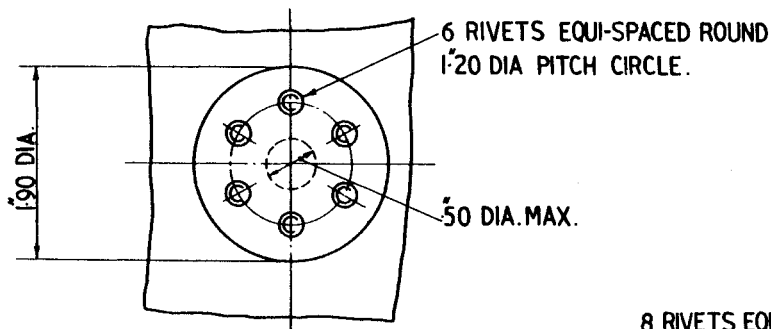
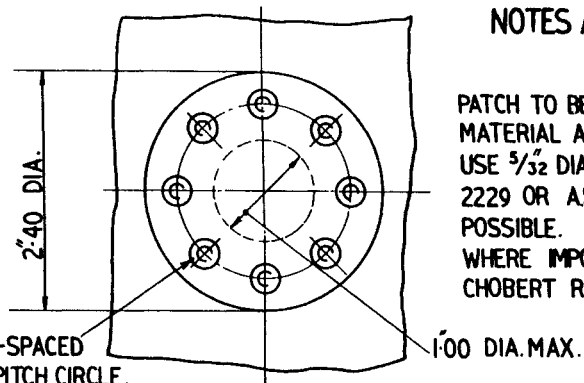
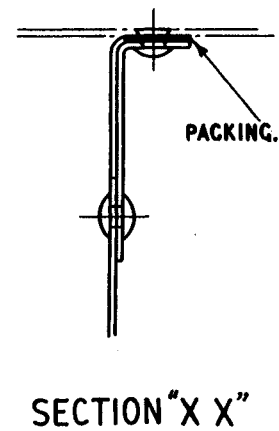


FIG. 2/3 PATCH REPAIR TO ENGINE COWLING SKIN FIG. 2/3



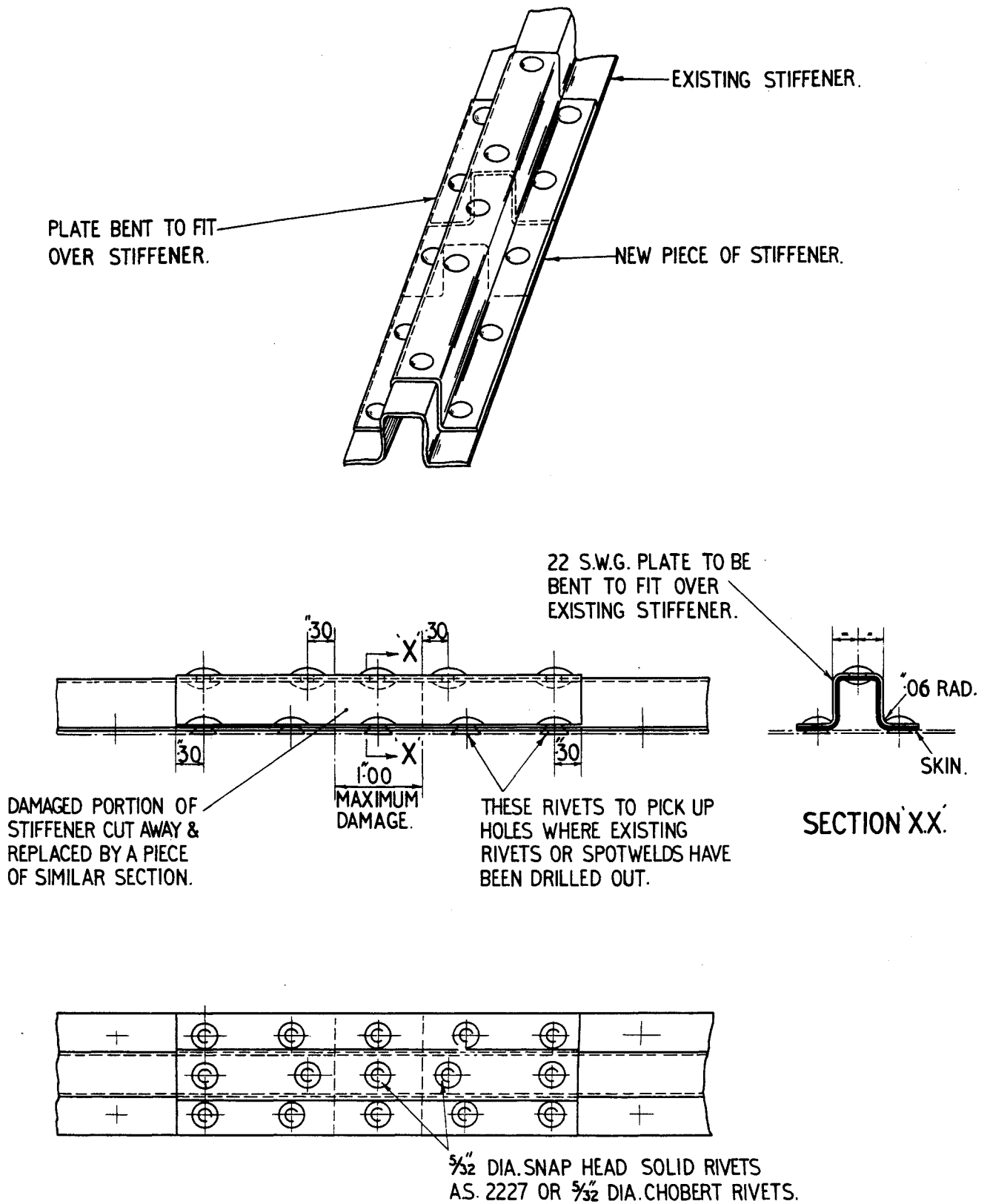


FIG. 2/5

STIFFENER REPAIR-ENGINE COWLING

FIG. 2/5



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