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CHAPTER 3

MAIN PLANES

CHAP.
3

RESTRICTED

Chapter 3 MAIN PLANES

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General

301. The main plane assembly consists of a centre section and two outer wings and to assist the user in locating small details these components are in turn broken down into sub-assemblies each with its own relevant illustrations and description. Wherever possible the sequence of annotation is from front to rear. The breakdown is as follows:-

CENTRE SECTION

302. Situated between the main plane hinge points and the forward No.1 tank bay to the rear transport former, the assembly consists of the nosewheel bay, No.1 and 2 tank bays, bomb bay, rear portion centre section, air intake, air brake structure, and engine bay.

No.1 and 2 tank bays

303. Where repairs are carried out to the inner tank skins, all rivet heads must be covered with a doped fabric strip, to Spec. D.T.D.540, 4 oz. linen, 1 in. in width (Ref.No.32B/759) for each single row of rivets, and 2.25 in. strip (Ref. No.32B/751) where double riveting occurs. Repairs involving the replacement of tank button hole plates must be carried out with a tolerance of ± 0.013 in. on eccentricity between button hole centres.

Bomb bay structure

304. The bomb bay is situated between the front and rear spars, and is of arch design construction. Repairs to heavy and medium bomb arch extrusions are given in the special repairs. Enclosing the bomb bay are power operated bomb doors. When closed, these doors are sealed at the fore and aft positions with inflatable seals. These seals if damaged or punctured are not repairable and must be renewed. Seals running longitudinally and around the hinged access doors may be repaired as shown in illustration (fig.341),

using the following sequence:-

- (1) Mark off the portion of damaged seal with the cut lines central between the screw pitching (see illustration). Remove the retaining screws and fixing strip as necessary.
- (2) Cut out the portion of seal marked off and prepare a new insertion of the same length and section (D.T.D.552).
- (3) Cut two strips of rubber sheeting (D.T.D.552) 1/32 in. thick (Ref. No.32C/624) to a width with an overlap of 0.5 in. beyond the first retaining screw hole each side of the joint.
- (4) Apply one coat of adhesive (Ref. No.33C/1302) to the strips. Position the new insert and bind the joints ensuring that the 0.5 in. overlap is maintained.
- (5) Replace the metal fixing strip and drill holes through to the new insert taking care not to damage the existing nut threads. Replace retaining screws.

This repair can be used on all fixed rubber seals on the aircraft.

Air intake

305. Positioned at each side of the nose wheel bays, the structure is mainly constructed of diaphragm build-up with double skinned leading edges. The inner skin, which is corrugated and fitted with magnesium alloy sealing blocks at various corrugation joints prevents outer skin repairs from being carried out in the normal manner. Requests for repair schemes for damage in this area should be submitted in accordance with the instructions on the Part 1 Marker Card.

306. Whenever possible solid rivets should be used in the intake area, but in

exceptional cases 'pop' rivets may be used provided the rivets are dipped in cold setting Araldite 121N. (Ref.No. 33C/1451) and finally filled with Rylands 'pop' rivet filler No.2313.

307. In common with centre section outer skins, the intake is weather-proofed and all skin butt joints and straps are sealed internally. Repairs in this area must incorporate the correct method of weather-proofing.

Air brake structure

308. Situated aft of the front spar, and above and below the engine air intakes, the air brake structure has access panels in the air brake wells and air intake tunnels, enabling minor repairs to be carried out. Repairs requiring the breakdown of the mechanism setting should be done in conjunction with A.P.4505A, Vol.1, Book 1, Sect.3, Chap.1 and 4.

Jet pipe tunnels

309. The tunnels commencing at the rear engine bulkheads and terminating at the trailing edge of the rear fuselage structure, are made from 28 s.w.g. nickel chrome stainless steel Spec. D.T.D.571 or D.T.D.171 or D.T.D.166. Repairs are illustrated on fig.342. Rippling or similar distortion of the tunnel skins is acceptable up to 1 in. in depth from crest to trough provided there are no cracks.

OUTER MAIN PLANE

310. Leading edge, centre structure, undercarriage bay, trailing edge, wing tip, ailerons and elevators.

Outer wing leading edge

311. The rib and web construction is covered by double skins and requests for repairs for damage occurring in the anti-icing area should be submitted in accordance with the instructions on the Part 1 Marker Card.

Outer wing tanks and skins

312. Forming the greater portion of the wing between the front and rear wing spars, the structure is of rib build-up and braced with skin stringers. Repairs will generally be covered in the repair materials table. Where tank compartment skins are damaged, reference should be made to para.303.

Repairs to ailerons and elevators

313. Repairs to these components may be made in the normal manner but reference should be made to the aircraft log book for previous repairs affecting the mass balance. Full instructions for mass balancing, re-painting, etc., are contained in para.320.

Control surface - balance seals

314. Repairs to the seals will mainly depend upon the extent and disposition of the damaged area. If deterioration due to ageing of the fabric is apparent, the seals should be renewed but minor repairs using the materials and procedure as follows are acceptable.

Materials required

- (1) Indiana/Cashmere fabric (Ref.No. 8099), 1/32 in. thick. Dunlop adhesive L.107 (Ref.No.33C/1361). 2 in. circular sewing needle (Ref. No.1B/1604). Single linen waxed thread, No.40, B.S.3F.34.

Method of attachment

- (2) Damaged seals may be repaired by patching, the patch being attached by solution and stitching. Using a 2 in. circular sewing needle and incorporating an overhand stitch with eight stitches to 1 in., the stitching should be locked at every 1 in. round the edge of the patch. It is recommended that the stitching is carried out while the solution is still "tacky".

Repair limits

- (3) The extent of the damage will govern the size of patch required, but an overlap of 1 in. is necessary to give the required results, therefore a rent 1 in. long should have a patch 3 x 2 inches applied. No patch may overlap an adjoining patch.

Procedure

- (4) It is important to ensure that the seal is absolutely dry and free from oil, grease and dust before proceeding as follows:-
 - (a) Stitch the rent using a herring-bone stitch.
 - (b) Measure the damage for length and width and cut out the patch to include overlap limit.
 - (c) Place the patch over the damage and mark an outline on the seal - remove and check for central positioning.
 - (d) Apply one coat of solution to both patch and fabric seal and allow to dry completely.
 - (e) Apply a second coat to both surfaces. When a "tacky" state becomes obvious, place the patch over the damaged area, using the outline as a guide. Press firmly and check that the patch is well adhered before commencing the next operation.
 - (f) Using needle, thread, and type of stitch as described, stitch the edges of the patch to the seal. Care must be taken to avoid pulling the thread too

tight. Smooth out wrinkles and puckers progressively.

- (5) Damage occurring near or up to the fixing strips may be repaired by the same method, except that the patch must extend under the fixing strip by one thickness. See rudder repair illustration (fig.406). This also applies to aileron and elevator seals secured by 1 in. folded seal strip at attachment positions.

NOTE...

Rudder seals removed for repair should be checked to ensure that the form strip is still glued to the seal before replacing.

HONEYCOMB PANELS

315. Where damage is slight, i.e., dents and small holes, the following negligible damage scheme can be used:-

- (1) Smooth dents up to 2 in. dia. and not more than 1/25th of dia. in depth, or dents with a small hole not larger than 0.5 in. Fill with cold-setting ARALDITE 121 N. (Ref.No.33C/1451) and smooth off to panel contour. For mixing the filler see Chap.2 para.233.
- (2) Alternatively, holes up to 0.5 in. after cleaning out (through one skin only) may be completely filled with ARALDITE. Very small holes may be filled by injected ARALDITE D. In each case a cellophane strip, or masking tape, should be taped over the hole during setting of the ARALDITE. Damage beyond these limits is covered in Chap.1, para.133 and fig.102.

WEATHERPROOFING

316. The main plane skin surfaces are weatherproofed and sealed. All outer

skin repairs must incorporate the correct method, and to ensure maximum efficiency reference must be made to Chap.1, para.136 to 138. The surface should be prepared before weatherproofing is carried out. The area affected should be rubbed with steel wool, then thoroughly wiped clean with a cloth soaked in carbon tetrachloride.

REPLACEMENT OF VORTEX GENERATORS

317. When a generator becomes dislodged, replacement by bonding, and then riveting in conjunction with illustrations fig.346 and 346A should be carried out. It may be necessary to remove the protective treatment from the skin in order to provide a better bonding surface. For information of the preparation and complete bonding operation refer to Chap.2, para.222 to 231. After completion of the bonding, surplus resin should be spread over the remaining unprotected area in a thin film to prevent corrosion. It is not necessary to apply pressure to ensure adhesion and to do so may result in an abortive joint. Care must be taken when drilling the generator and the wing skin to prevent damage to existing rivets and stringers. The tolerances shown on the illustrations are very important. In some cases to facilitate riveting, it may be necessary to move the generator either forward or aft to give the necessary clearance for drilling. Provided 20 deg. angle from line of flight is maintained the generator may be moved forward or aft from its original position by 0.25 in. The new drilling must provide a minimum of 0.31 in. landing in the skin stringer, or 0.31 in.

clearance between the stringer edge and the hole in the skin.

NOTE...

If etching has already been carried out for a previous replacement, the use of ALOCLENE No.2 is not required. A light etching and cleansing operation using DE-OXIDINE 202 (Ref.No.33C/748) will be sufficient, also ARDROX 20 may be used for paint removing in lieu of STRIPALINE 397 or paint remover (Ref.No.33B/1125).

EXTERNAL FINISH FOR NEGLIGIBLE DAMAGE

318. Dents and abrasions to external skins which are within the tolerance of negligible damage should have the paint removed and the affected area filled with cold setting ARALDITE 121 N. (Ref.No.33C/1451). For application see Chap.2, para.223.

CONTROL SURFACE MASS BALANCE

319. Contained in the following paragraphs are limits and instructions which must be strictly adhered to when carrying out repairs etc. on the rudder, elevators and ailerons.

General

320. Prior to carrying out any repairs, check the aircraft log books for reference to any previous repairs, modifications, and re-painting which have affected the mass

balance since the control surface was originally manufactured. A weight allowance equivalent to 12 per cent of mass balance (refer to Table 1) is allowed for all accumulated repairs etc. which are required to be satisfied. If the tolerances quoted in Table 1 are exceeded the control surface must be re-mass balanced to the original design requirements (refer to Table 2). In order to assist all personnel concerned, a true and complete history of all work, including modifications, and repainting carried out on each control surface, together with its effect on the mass balance, should be entered in the log books to ensure that the repair allowances are not exceeded.

Information

321. For information a complete repainting of a control surface, i.e., one coat of primer and two final coats applied without removing the original paint, has the equivalent effect to the loss of 2.5 per cent of the mass balance which would automatically reduce the weight allowance for repairs etc., from 12 per cent to 9.5 per cent.

Repair allowances

322. Figures appended in Table 1 are arrived at on assumption that the repairs are required at the inboard trailing edges of the elevators and ailerons, and the bottom trailing edge of the rudder, in effect these are maximum positive 'arm' stations, and consequently repairs to the limits quoted in Table 1 can be carried out in safety in any other position.

TABLE 1

Repair allowances

Component	Drwg. No.	Arm from Control Surface Hinge c/l.	Weight equivalent to 12 per cent of mass balance
Rudder	H.2229	+ 60.25 in.	3 lb. 10 oz.
I/B. Elevator	F.7851	+ 89.774 in.	5 lb. 5 oz.
O/B. Elevator	F.7852	+ 75.97 in.	4 lb. 13 oz.
I/B. Aileron	F.7849	+ 59.0 in.	3 lb. 4 oz.
O/B. Aileron	F.7850	+ 48.038 in.	2 lb. 15 oz.

NOTE . . .

The arm of the weight is measured normal to the control surface hinge centre-line, negative being forward of the hinge line, positive aft of the hinge line.

TABLE 2

Static mass balance of control surfaces

Component	Drwg. No.	Arm from Control Surface Hinge c/l.	Arm position	Balance Weights
Rudder	H.2229	- 10 in.	3.75 in. forward of the rudder L/E. at nose Rib 8A	0 to 19.5 lb.
I/B. Elevator	F.7851	+ 83 in.	Trailing edge Rib 10	0 to 2 lb.
O/B. Elevator	F.7852	+ 65 in.	Trailing edge Rib 31	0 to 2.5 lb.
I/B. Aileron	F.7849	+ 59 in.	Trailing edge Rib 3	2.75 to 4.25 lb.
O/B. Aileron	F.7850	+ 44.5 in.	Trailing edge Rib 26	6.75 to 7 lb.

NOTE . . .

Elevators and Ailerons are to be statically balanced with the horizontal datum set 3 deg. tail up.

POST MOD. 627 REPAIR ALLOWANCES

323. Where Mod.627 has been embodied, the allowance for repairs and mass balancing are given in tables 3 and 4.

NOTE...

Tables 1 and 2 must not be used for aircraft embodied with this modification.

TABLE 3

Post Mod. 627 repair allowances

Component	Drwg. No.	Arm from Control Surface Hinge c/l.	Weight equivalent to 12 per cent of mass balance
Rudder	H.2229	+ 60.25 in.	3 lb. 10 oz.
I/B. Elevator	F.7851	+ 89.774 in.	5 lb. 5 oz.
O/B. Elevator	F.7852	+ 75.97 in.	4 lb. 13 oz.
I/B. Aileron	F.7849	+ 59.0 in.	2 lb. 8 oz.
O/B. Aileron	F.7850	+ 48.038 in.	2 lb. 0 oz.

NOTE...

The arm of the weight is measured normal to the control surface hinge centre line, negative being forward of the hinge line, positive aft of the hinge line.

TABLE 4

Post Mod. 627 static mass balance control surfaces

Component	Drwg. No.	Arm from Control Surface Hinge c/l.	Arm position	Balance Weights
Rudder	H.2229	- 10.0 in.	3.75 in. forward of the rudder L/E. at nose Rib 8A.	0 to 19.5 lb.
I/B. Elevator	F.7851	+ 83.0 in.	Trailing edge Rib 10	0 to 2.0 lb.
O/B. Elevator	F.7852	+ 65.0 in.	Trailing edge Rib 31	0 to 2.5 lb.
I/B. Aileron	F.7849	+ 59.0 in.	Trailing edge Rib 3	2.0 lb. to 4.25 lb.
O/B. Aileron	F.7850	+ 44.5 in.	Trailing edge Rib 26	6.0 lb. to 7.0 lb.

NOTE...

Elevators and Ailerons are to be statically balanced with the horizontal datum set 3 deg. tail up.

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REPLACEMENT OF WING TOP SURFACE
SKINS ABOVE ENGINE BAYS

324. When embodying Mod.831, in order to prevent the new skins from buckling after fitting, proceed as follows:-

- (1) Drain the fuel from all tanks.
- (2) Remove all engines.
- (3) Remove the fireproof skins from engine bays where required for accessibility to wing skins.
- (4) Close all engine doors.
- (5) Jack up the aircraft using the main jacking points. Refer to A.P. 4505A, Vol.1, Book 1, Sect.2, Chap.4.
- (6) Check by inclinometer at each transport rib 162.5 in. (refer to

A.P.4505A, Vol.1, Book 1, Sect.4, Chap.1, para.36 and fig.4), until the incidence setting of the port and starboard wings are identical. Rig the centre section rear spar to give a horizontal reading.

- (7) Adjust the nose steady jack at the fuselage front pressure bulkhead, until the jacking pads are touching the skin, measure the jack extension, and then apply pressure on the jack until the dimension at the jack extension is increased by 7/16 in.
- (8) Position the wing trestles (U.1058) below each wing and ensure that the outer portion of the wing trestle (U.1132) is located at rib 618. With the trestle positioned at this point it will ensure that the load is taken on the front and rear

spars, and so prevent damage occurring. Raise the wing tips without twist by 2.0 in. ▶

The aircraft is now ready for work to proceed on the removal and renewal of the skins. It is important that the aircraft should not be disturbed until the work is completed. It is, however, permissible to open any one engine access door in each bay for access to the underside of the wing top skins.

325. The above instructions will also apply if only one wing skin panel has to be removed, excepting that the engine, or engines, on the side where the repair is taking place need only be removed. When carrying out flush insertion skin repairs, up to approximately 12 in. x 12 in., it is not necessary to follow the procedure as laid down in para.324.

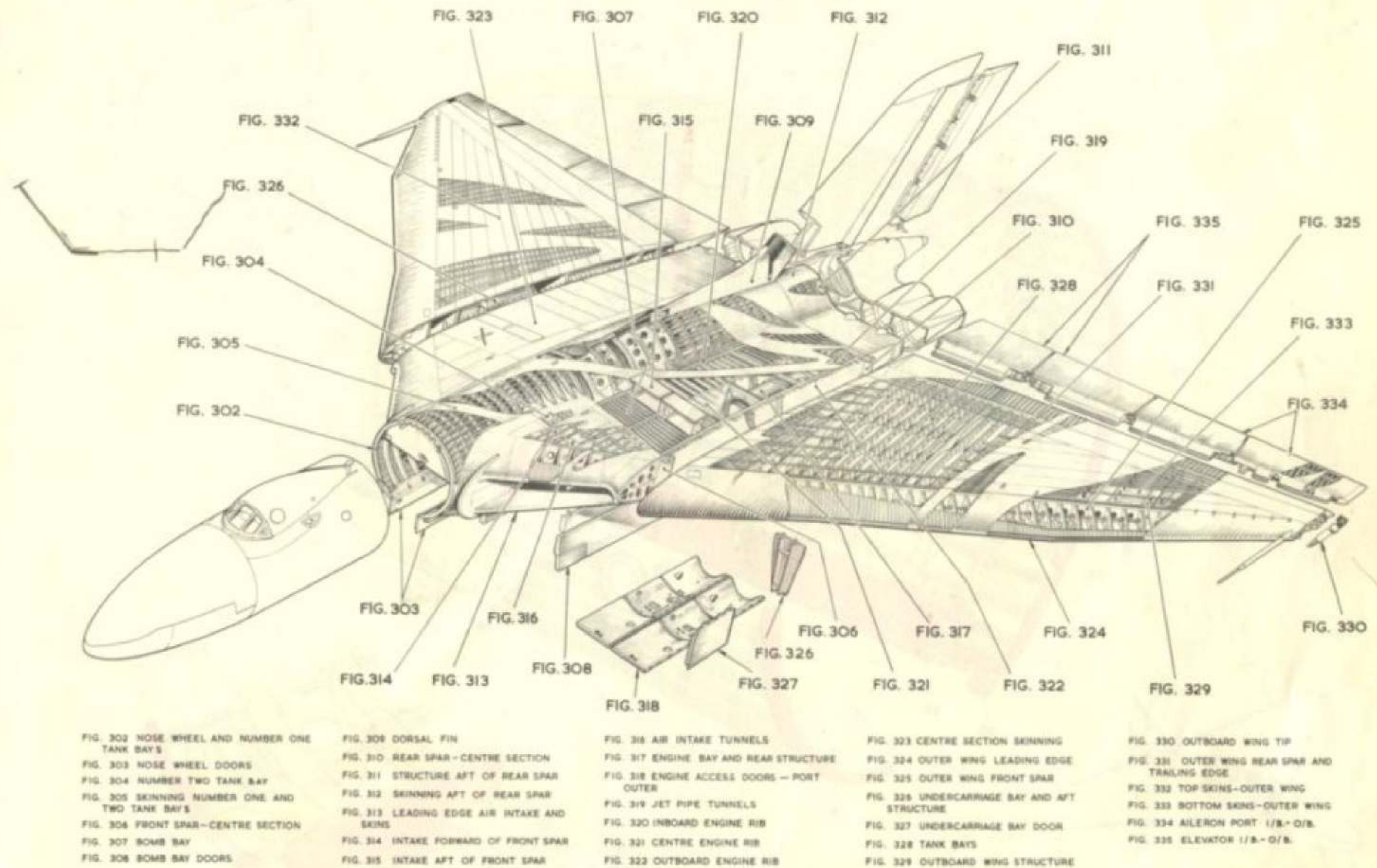


Fig. 301 Main plane key diagram

RESTRICTED

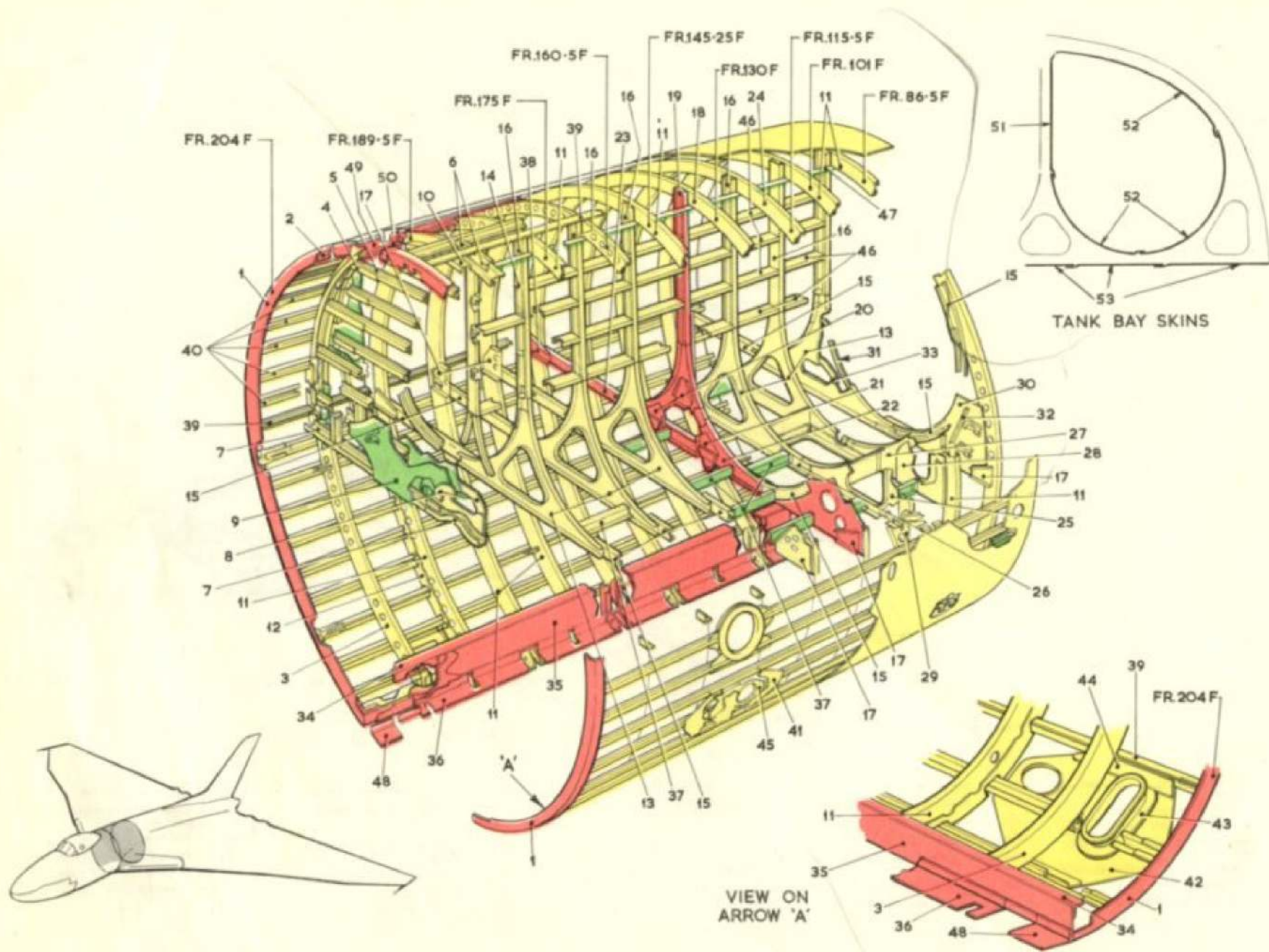


Fig 302. Structure - No.1 Tank bays
RESTRICTED

KEY TO FIG.302

Item	Material		Description	Dents Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig.
	Spec.	S.W.G. or Section			Dist. Apart	Dia.		
1	L.65	300/SS.3075	Half ring	-	-	-	-	-
2	L.65	300/SS.3075	Joint angle	* -	-	-	-	-
3	L.72	420/SS.1793	Former	-	-	-	-	-
4	D.T.D.687	769/SS.1793	Capping strip	0.1	2.5	0.25	4:1	-
5	L.72	211/SS.1793	Stiffener	0.1	2.5	0.25	4:1	112
6	L.72	393/SS.1793	Blanking plate	0.1	2.5	0.25	6:1	108
7	L.72	20	Channel	0.15	2.5	0.25	4:1	108
8	L.72	20	Stiffening plate	0.1	2.5	0.25	4:1	-
9	L.72	26	Fireproofing skin	0.2	2.0	-	-	103
10	L.72	24	Channel	0.2	2.5	0.25	6:1	108
11	L.72	16	Former	0.1	2.5	0.25	4:1	108
12	L.72	420/SS.1793	Skin support angle	0.1	2.5	0.25	4:1	-
13	L.72	20	Centre pressing	0.15	2.5	0.25	4:1	108
14	L.72	20	Angle bracket	x 0.1	2.5	-	-	-
15	L.72	486/SS.1793	Cross member	0.1	2.5	0.25	4:1	108
16	L.72	600/SS.1793	Support channel	0.1	2.5	0.25	4:1	108
17	L.72	18	Joint bracket	0.1	2.5	0.25	4:1	115
18	L.72	224/SS.1793	Former	0.1	2.5	0.25	4:1	108
19	L.72	16	Tank channel support	0.05	3.0	0.25	6:1	108
20	L.72	16	Gusset plate	0.05	3.0	-	-	115
21	L.72	18	Gusset plate	0.05	3.0	-	-	115
22	L.72	20	Centre pressing	0.1	2.5	0.25	6:1	108
23	L.72	486/SS.1793	Cross member	0.05	3.0	0.25	6:1	108
24	L.72	18	Former	0.1	2.5	0.25	4:1	108
25	L.72	20	Pressing	0.15	2.5	0.25	4:1	108
26	L.72	18	Joint channel	0.1	2.5	0.25	4:1	108
27	L.72	20	Pressing	0.15	2.5	0.25	4:1	108
28	L.72	16	Mounting plate	0.1	2.5	0.25	6:1	-
29	L.72	20	Joint plate	0.1	2.5	0.25	4:1	115
30	L.72	16	Stiffener plate	0.05	3.0	0.25	4:1	-
31	L.72	620/SS.1793	Angle	0.1	2.5	-	-	113
32	L.72	20	Angle	x 0.1	2.5	-	-	-
33	L.72	20	Stiffening ring	0.1	2.5	0.25	4:1	-
34	L.65	324/SS.3075	Angle	-	-	-	-	-
35	D.T.D.687	16	Web	-	-	-	-	-
36	L.72	16	Angle	-	-	-	-	-
37	L.72	16	Stiffeners	0.05	3.0	-	-	108
38	L.72	18	Joint bracket	0.05	3.0	-	-	108
39	L.65	325/SS.3075	'T' stringer	0.05	3.0	-	-	110
40	L.72	211/SS.1793	Top hat stringer	0.1	2.5	-	-	112
41	L.72	18	Doubling plate	0.1	2.5	0.25	6:1	-
42	L.72	18	Stiffening plate	0.1	2.5	0.25	6:1	-
43	L.59	16	Stiffening ring	0.1	2.5	0.25	6:1	-
44	L.72	18	Attachment angle	0.1	2.5	-	-	-
45	L.72	18	Reinforcing ring	0.1	2.5	0.25	6:1	-
46	L.72	24	Intercostal	0.2	2.0	0.25	3:1	108,115
47	L.72	12d/SS.1793	Angle	0.1	2.5	-	-	113
48	L.72	16	Angle	-	-	-	-	-
49	D.T.D.687	14	Web	-	-	-	-	-
50	L.65	-	Angle	-	-	-	-	-
51	L.72	22	Tank bay skins (yellow)	0.1	3.0	-	-	-
52	L.72	24	Tank bay skins (yellow)	0.1	3.0	-	-	-
53	L.72	28	Tank bay skins (green)	0.2	2.0	-	-	-

* No repairs permitted.

x More expedient to renew than repair.

All dimensions are quoted in inches.

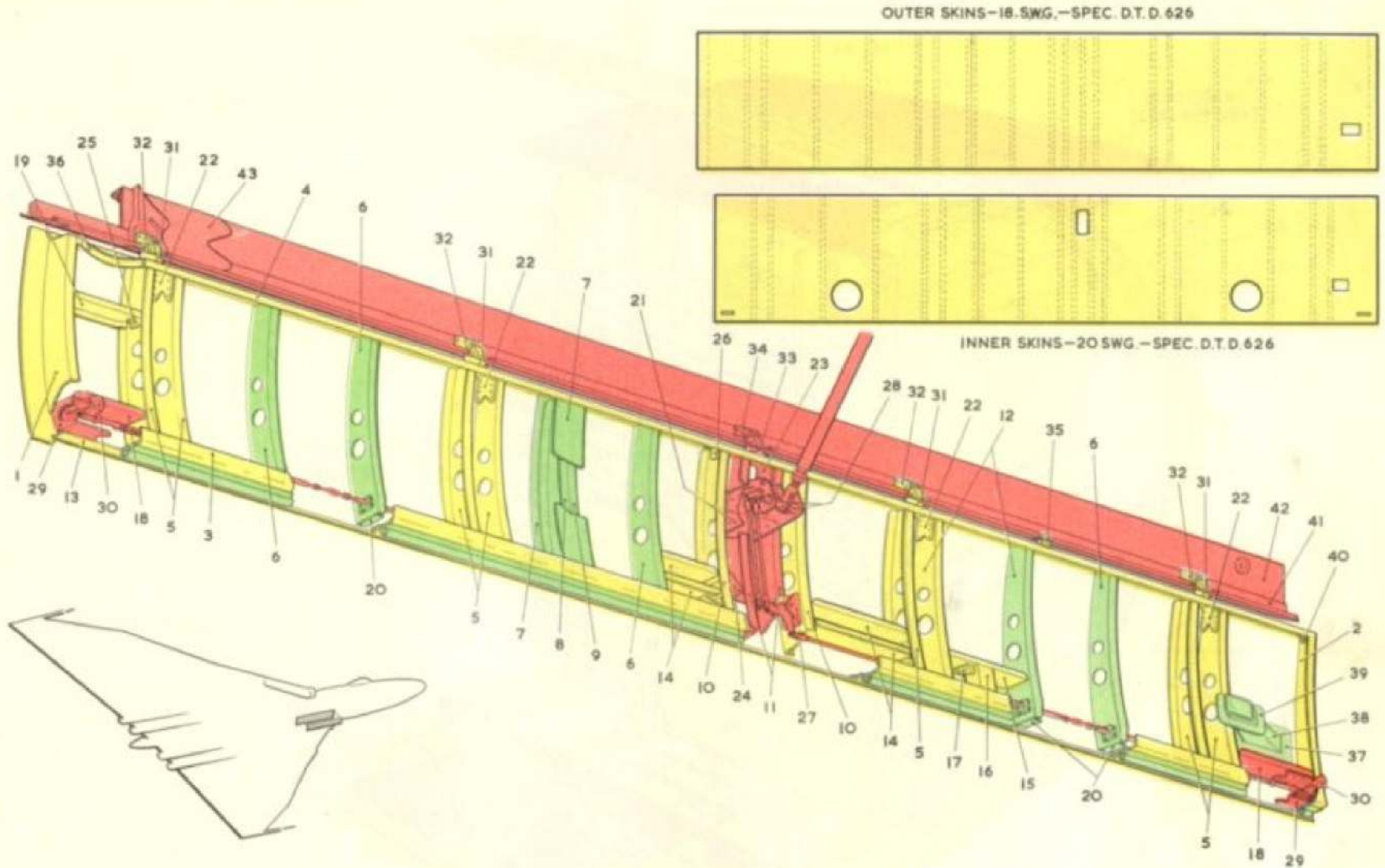
RESTRICTED

KEY TO FIG.303

Item	Material		Description	Negligible Damage				
	Spec.	S.W.G. or Section		Dents Depth	Dist. Apart	Holes Dia.	Pitch Ratio	Repair Fig.
1	L. 72	16	Front edge member	0.1	2.5	0.25	6:1	108
2	L. 72	16	Rear edge member	0.1	2.5	0.25	6:1	108
3	L. 72	18	Channel	0.1	2.5	0.25	6:1	107, 108
4	L. 72	16	'Z' member	0.1	2.5	0.25	8:1	108
5	L. 72	20	Former	0.1	2.5	0.5	4:1	105, 107, 108
6	L. 72	22	Former	0.2	2.0	0.5	4:1	105, 107, 108
7	L. 72	18	Strap plate	0.2	2.0	0.5	4:1	-
8	L. 72	22	Former	0.2	2.0	0.5	4:1	105, 107, 108
9	L. 72	22	Inner skin angle	0.2	2.0	-	-	113
10	L. 72	20	Jack side former	0.1	2.5	0.25	6:1	105, 107, 108
11	L. 72	14	Jack former	0.05	3.0	-	-	105, 107, 108
12	L. 72	18	Former	0.1	2.5	0.5	4:1	105, 107, 108
13	L. 72	925/SS. 1793	Angle	0.1	2.5	-	-	-
14	L. 72	20	Intercostal	0.1	2.5	0.25	6:1	108, 115
15	L. 72	18	Intercostal	0.1	2.5	0.25	6:1	108, 115
16	L. 65	225/SS. 3075	Channel piece	x 0.1	2.5	0.25	6:1	-
17	L. 72	18	Bracket	x 0.1	2.0	-	-	-
18	L. 72	20	Intercostal	0.05	3.0	-	-	108, 115
19	L. 72	20	Intercostal	0.1	2.5	0.25	6:1	108, 115
20	L. 72	16	Bracket	x 0.05	3.0	-	-	-
21	L. 72	8	Side plates	x -	-	-	-	-
22	L. 72	12	Backing strap	* 0.05	3.0	-	-	-
23	L. 72	12	Backing strap	* -	-	-	-	-
24	L. 72	16	Bracket	* -	-	-	-	-
25	L. 72	20	Bracket	x 0.1	2.5	-	-	-
26	L. 72	16	Bracket	* -	-	-	-	-
27	D. T. D. 721	-	Lever housing	* -	-	-	-	-
28	L. 65	-	Distance piece	* -	-	-	-	-
29	D. T. D. 721	-	Housing	x -	-	-	-	-
30	D. T. D. 683	-	Latch (hook)	* -	-	-	-	-
31	D. T. D. 683	-	Half hinge	* -	-	-	-	-
32	D. T. D. 683	-	Half hinge	* -	-	-	-	-
33	D. T. D. 683	-	Half hinge	* -	-	-	-	-
34	D. T. D. 683	-	Half hinge	* -	-	-	-	-
35	L. 33	-	Lever	* -	-	-	-	-
36	L. 72	18	Flanged reinforcing piece	0.1	2.5	0.25	6:1	108
37	L. 72	18	Stiffening plate	0.15	2.5	0.5	4:1	-
38	L. 59	20	Outlet duct	0.15	2.5	-	-	-
39	L. 59	18	Attachment plate	0.15	2.5	0.5	4:1	-
40	L. 72	16	Bracket	x 0.05	3.0	-	-	-
41	L. 72	16	Angle	-	-	-	-	-
42	D. T. D. 687A	16	Web	x -	-	-	-	-
43	D. T. D. 687A	16	Doubling plate	x -	-	-	-	-

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED



SKINNING

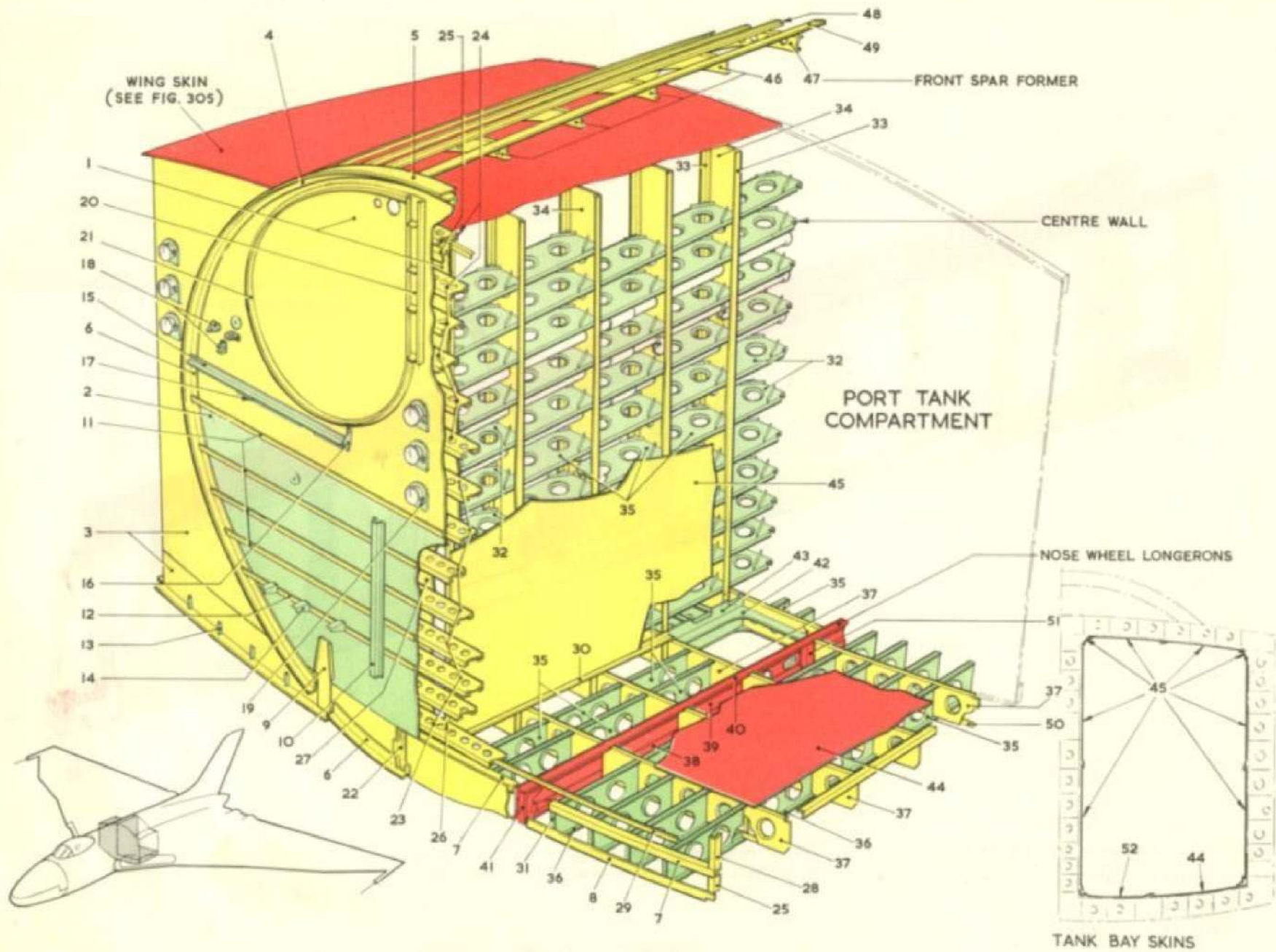
NEGLECTIBLE DAMAGE ALLOWED ON SKINS

DENTS	DEPTH	DIST. APART
YELLOW	0-10 IN.	3-0 IN.

SKIN REPAIRS SEE FIG. 103-104

DAMAGE IN AREAS OF CONCENTRATED RIVETING MUST BE REPAIRED WITH JOINTS ARRANGED OUTSIDE THE AREA.

**Fig. 303. Nose-wheel doors
RESTRICTED**



KEY TO FIG.304

Item	Material		Description	Depth	Negligible Damage			Repair Fig.
	Spec.	S.W.G. or Section			Dents	Holes	Repair	
					Dist. Apart	Dia.	Pitch Ratio	
1	D.T.D.687	20	Bulkhead web	0.05	3.0	-	-	-
2	L.72	24	Bulkhead web	0.1	2.5	0.25	3:1	-
3	D.T.D.687	18	Bulkhead web	0.05	3.0	0.25	6:1	-
4	L.72	18	Angle	0.05	3.0	-	-	113
5	L.72	18	Joint strap	0.05	3.0	-	-	-
6	L.72	14	Angle	0.05	3.0	-	-	114
7	D.T.D.687	12	Angle	0.05	3.0	0.25	6:1	114
8	D.T.D.687	10	Angle	0.05	3.0	-	-	114
9	L.72	16	Reinforcing plate	x 0.05	3.0	-	-	-
10	L.72	211/SS.1793	De-icing panel support	0.1	2.5	0.25	3:1	112
11	D.T.D.687	14	Stiffening piece	0.025	3.0	-	-	114
12	D.T.D.687	16	Stiffening piece	0.025	3.0	-	-	114
13	L.72	20	Angle	x 0.05	2.5	-	-	-
14	L.72	20	Bracket	x 0.05	2.5	-	-	-
15	L.72	22	Angle	0.05	2.5	0.25	3:1	113
16	L.72	20	Bracket	x 0.025	3.0	-	-	-
17	L.72	20	Angle	x 0.025	3.0	-	-	-
18	L.72	18	Flame switch bracket	x -	-	-	-	-
19	L.72	20	Reinforcing plate	x 0.05	2.5	-	-	-
20	L.72	486/SS.1793	Channel	0.05	3.0	0.25	6:1	108
21	L.72	446/SS.1793	Angle	0.05	3.0	-	-	114
22	L.72	18	Bracket	x 0.025	3.0	-	-	-
23	D.T.D.687	595/SS.1793	Channel	-	-	0.25	6:1	108
24	D.T.D.687	594/SS.1793	Channel	-	-	0.25	6:1	108
25	L.72	16	Angle	0.05	3.0	-	-	113
26	L.72	13b/SS.1793	Angle	0.1	2.5	-	-	113
27	D.T.D.687	18	Bulkhead web	0.05	3.0	-	-	-
28	D.T.D.687	16	Angle	x 0.05	3.0	0.25	6:1	-
29	L.72	183/SS.1793	Angle	0.05	3.0	0.25	6:1	113
30	L.72	446/SS.1793	Angle	0.05	3.0	0.25	6:1	114
31	L.72	22	Angle	x 0.1	2.5	-	-	-
32	L.72	22	Intercostal	0.1	2.5	0.25	4:1	106,115
33	L.65	294/SS.3075	Stiffening angles	0.05	3.0	-	-	-
34	L.72	18	Web vertical formers	0.05	3.0	0.25	6:1	-
35	L.72	24	Intercostal	0.15	2.5	0.25	4:1	106,115
36	L.72	747/SS.1793	Angle	0.05	3.0	-	-	-
37	L.72	20	Floor members	0.05	3.0	0.25	6:1	106,115
38	L.65	326/SS.3075	'T' section	*	-	-	-	-
39	D.T.D.687	14	Former web	0.025	3.0	-	-	-
40	L.65	299/SS.3075	Former angle	*	-	-	-	-
41	L.65	-	Bracket	*	-	-	-	-
42	L.72	16	Support pressing	0.05	3.0	0.25	4:1	-
43	L.72	20	Diaphragm	0.1	2.5	0.25	4:1	-
44	L.72	12	Tank bay floor skin	0.025	3.0	-	-	-
45	D.T.D.687	20	Inner skin	0.05	3.0	-	-	103,104
46	L.72	20	Former channel	0.05	3.0	0.25	6:1	107,108
47	L.72	18	Front spar former	0.1	2.5	-	-	107
48	L.72	211/SS.1793	Stringer	0.05	3.0	-	-	112
49	L.65	325/SS.3075	'T' stringer	0.05	3.0	-	-	-
50	L.72	18	Angle	0.05	3.0	-	-	113,114
51	L.72	18	Attachment angle	x 0.025	3.0	-	-	-
52	D.T.D.687	18	Tank bay skins (yellow)	0.05	3.0	-	-	-

* No repairs permitted

x More expedient to renew than repair

All dimensions are quoted in inches.

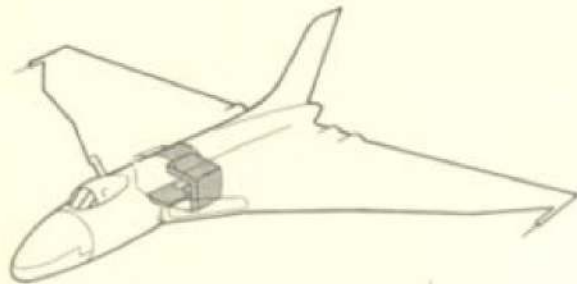
RESTRICTED

KEY TO FIG.304A

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents Depth	Dist. Apart	Holes Dia.	Pitch Ratio	
1	L. 72	24	Intercostal	0.05	3.0	0.25	6:1	105, 115
2	L. 72	24	Intercostal	0.1	2.5	0.25	4:1	105, 115
3	L. 72	20	Former web	0.05	3.0	0.25	4:1	105, 115
4	D. T. D. 687	735/SS. 1793	Angle	0.05	3.0	-	-	-
5	L. 72	18	Angle	0.5	3.0	-	-	113
6	L. 72	20	Side member	0.05	3.0	0.25	6:1	107, 108
7	L. 72	20	Channel	x 0.05	3.0	0.25	6:1	-
8	D. T. D. 721	-	Attachment bracket	x 0.025	3.0	-	-	-
9	L. 65	249/SS. 3075	Attachment angle	x 0.05	3.0	-	-	-
10	D. T. D. 687	595/SS. 1793	Channel member	x 0.05	3.0	0.25	6:1	-
11	L. 72	18	Gusset	x 0.05	3.0	-	-	-
12	D. T. D. 363	17B. 1635	Booms	* 0.025	3.0	-	-	-
13	D. T. D. 683	Forging	Attachment bracket	*	-	-	-	-
14	D. T. D. 687	17	Rear side web	0.025	3.0	-	-	103, 104
15	D. T. D. 687	17	Strap plate	0.025	3.0	-	-	-
16	L. 72	16	Bracket	x 0.025	3.0	-	-	-
17	L. 72	27/SS. 1793	Angle	0.05	3.0	-	-	-
18	D. T. D. 687	14	Joint strap	0.025	3.0	-	-	-
19	L. 72	20	Intercostal	x 0.05	3.0	0.25	6:1	-
20	L. 72	22	Intercostal	0.1	2.5	0.25	6:1	105, 108
21	L. 72	20	Door frame member	0.1	2.5	0.25	6:1	-
22	L. 72	24	Intercostal	x 0.1	2.5	0.25	4:1	-
23	L. 72	24	Intercostal	x 0.1	2.5	0.25	6:1	-
24	L. 72	20	Intercostal web	0.05	3.0	0.25	6:1	105, 108
25	L. 72	20	Door frame extension	x 0.1	2.5	0.25	4:1	-
26	L. 72	20	Intercostal	x 0.1	2.5	0.25	4:1	-
27	L. 72	20	Corner plate	x 0.1	2.5	0.25	4:1	-
28	L. 72	20	Door angle	x 0.1	2.5	-	-	-
29	L. 72	20	Angle bracket	x 0.05	2.5	-	-	-
30	L. 72	18	Marker aerial frame	* 0.1	2.5	0.25	4:1	-
31	D. T. D. 118A	20	Fairing skin	0.1	2.5	-	-	103, 104
32	D. T. D. 118A	20	Butt strap	x 0.1	2.5	-	-	-
33	D. T. D. 687	14	Bottom wing skin	0.05	3.0	-	-	103, 104
34	L. 72	18	Channel	x 0.05	3.0	-	-	-
35	L. 72	20	Intercostal	x 0.1	2.5	0.25	6:1	-
36	L. 72	20	Angle	x 0.05	3.0	-	-	-
37	L. 72	20	Door frame member	0.1	2.5	0.25	6:1	-

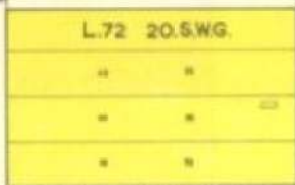
* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED



N#2 TANK
FORWARD
BULKHEAD

FRONT SPAR
DATUM

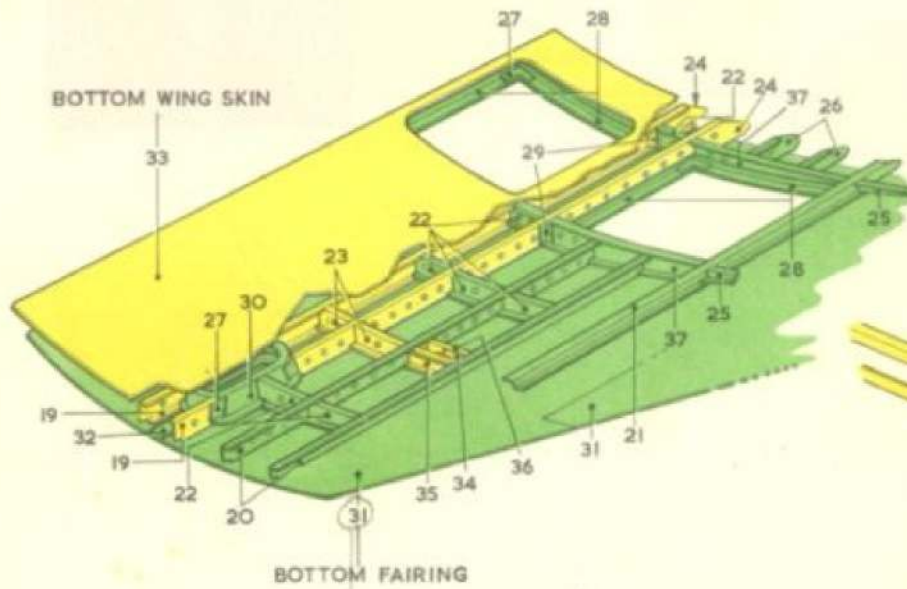


PLAN VIEW OF
TOP FAIRING SKINS
(FOR REPAIRS SEE FIG. 103 & 104.)

SKIN LIMITS

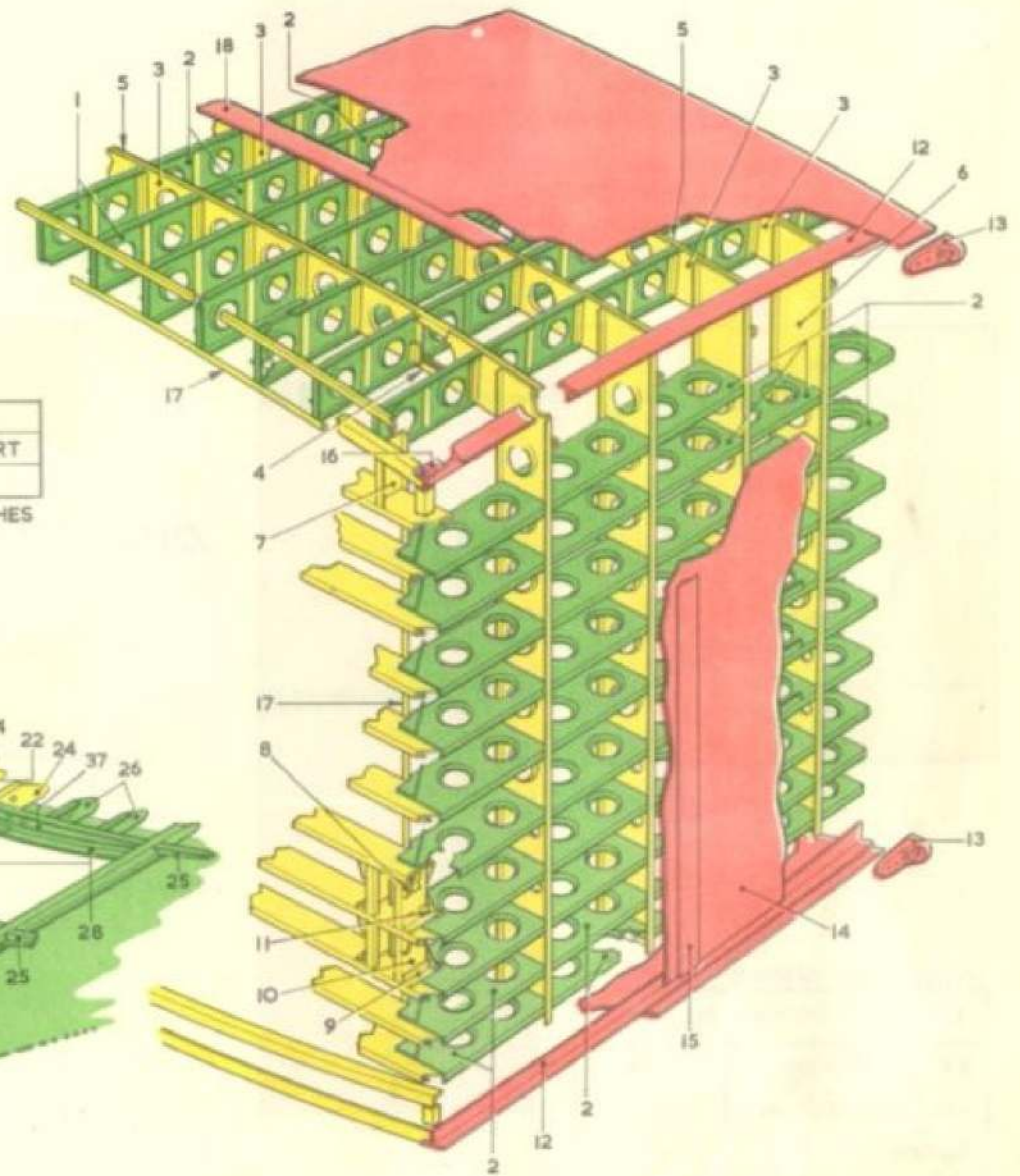
DENTS	
DEPTH.	DIST. APART
0-10	3-0

DIMENSIONS IN INCHES



BOTTOM WING SKIN

BOTTOM FAIRING

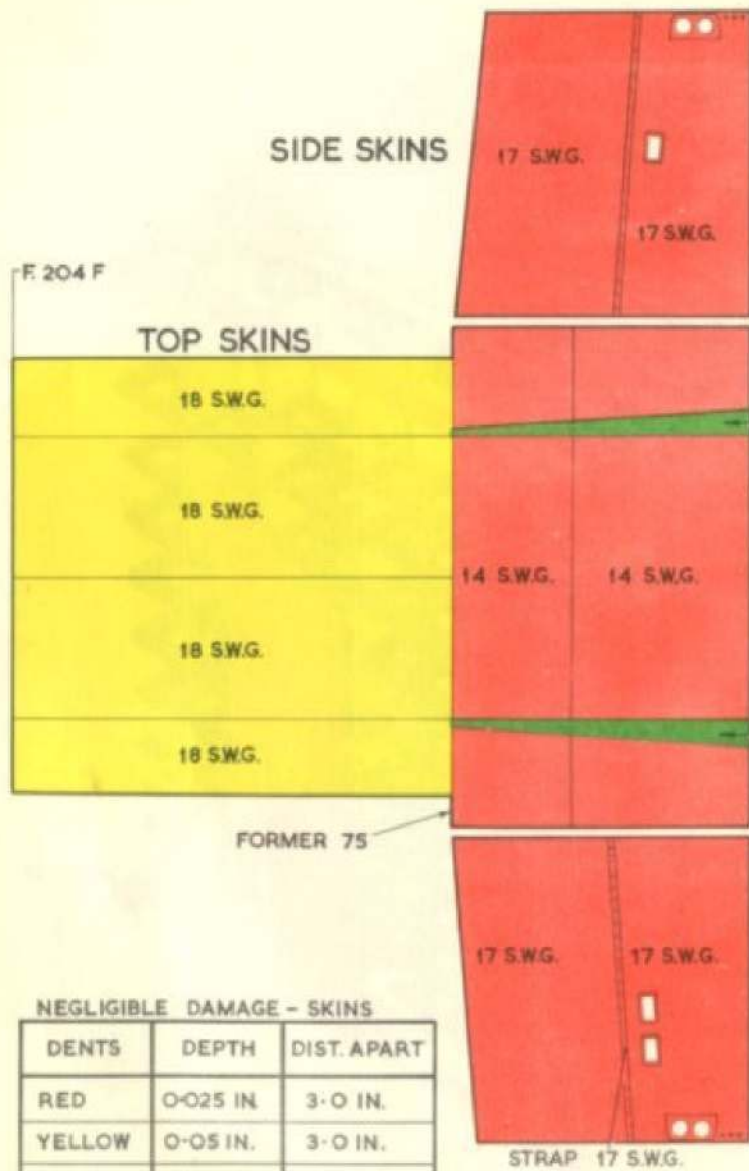


*Revision
24506 aft of Pump 5th
24 477 forward end*

8/27/61
14/20/61

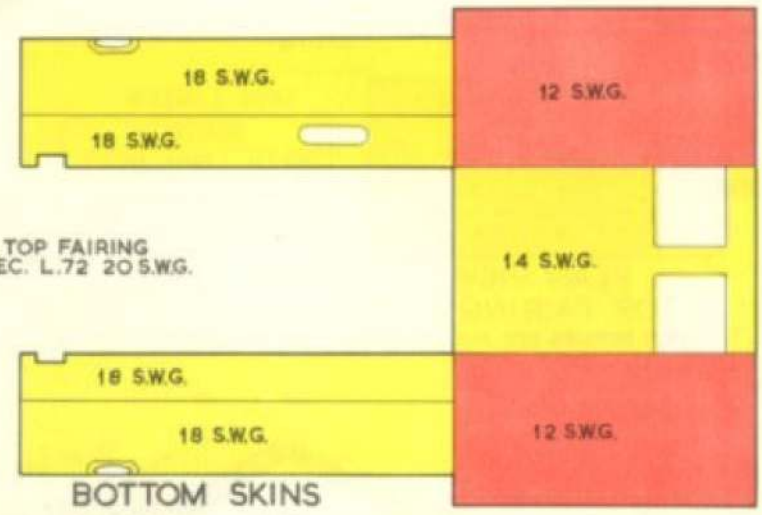
Fig. 304A. Outer tank wall and fairings

RESTRICTED



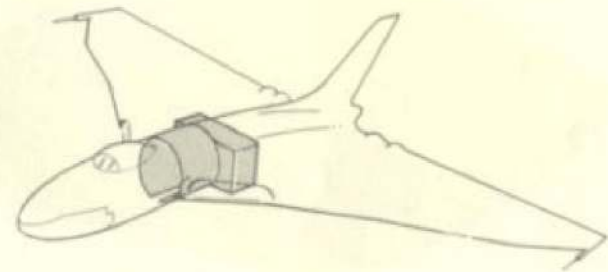
ALL SKINS ARE MADE FROM D.T.D. 687 EXCEPT WHERE OTHERWISE STATED.

DAMAGE IN AREAS OF CONCENTRATED RIVETING MUST BE REPAIRED WITH JOINTS ARRANGED OUTSIDE THE AREA.



NEGLECTIBLE DAMAGE - SKINS

DENTS	DEPTH	DIST. APART
RED	0-025 IN.	3-0 IN.
YELLOW	0-05 IN.	3-0 IN.
GREEN	0-10 IN.	3-0 IN.



FOR SKIN REPAIRS SEE FIG. 103-104-116-117

Fig. 305. No. 1 & 2 Tank bays-Skinning
RESTRICTED

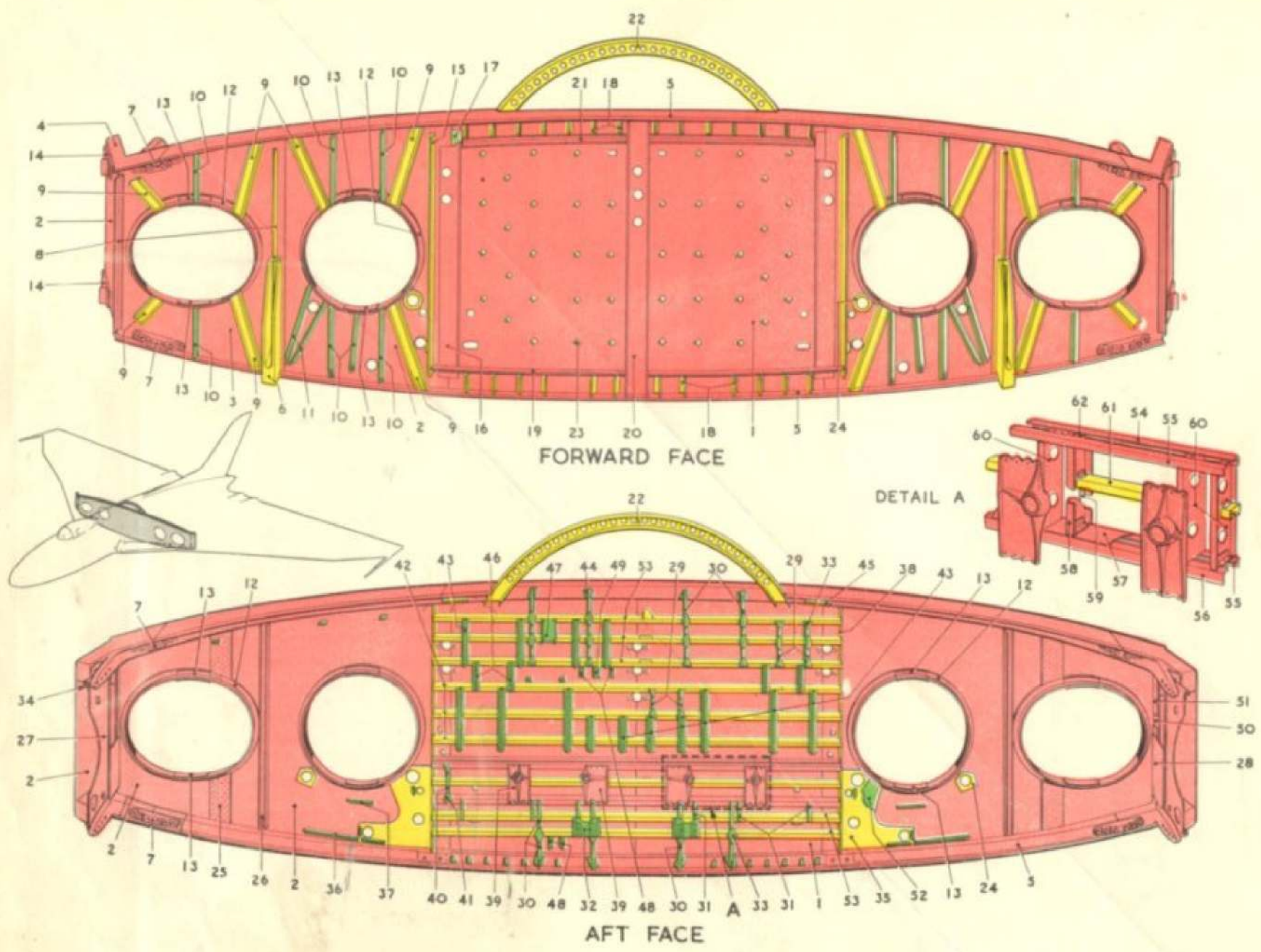


Fig 306. Front spar centre section
RESTRICTED

Fig. 306. Front spar — centre section

Item	Spec.	Material S.W.G. or Section	Description	Depth	Dents Dist. Apart	Negligible Damage Dia.	Holes Pitch Ratio	Repair Fig. No.
1	DTD.687	14	Spar web	0.05	3.0	1.0	8:1	103-104
2	DTD.687	8	Spar web	0.05	3.0	1.0	8:1	103-104
3	DTD.687	16	Reinforcing plate	0.05	3.0	1.0	8:1	103-104
X 4	DTD.683	Lt. alloy forging	Joint forging	*0.05	3.0	—	—	—
5	DTD.363	1-2/B.1635	Spar booms	*0.05	3.0	—	—	—
6	L.65	Lt. alloy bar	Jack support beams	*0.10	2.5	—	—	—
7	S.99	Hts. forging	Spar joint shackle	*0.05	3.0	—	—	—
8	L.72	18	Attachment angle	0.05	3.0	—	—	113
9	L.72	14	Reinforcing channel	0.10	2.5	0.5	4:1	108
10	L.72	486/SS.1793	Web stiffeners	†0.10	2.5	—	—	108
11	L.72	14	Web angle	†0.10	2.5	—	—	113-114
12	L.65	394, 395/SS.3075	Reinforcing angle	0.05	3.0	—	—	—
13	DTD.687	6	Angle joint plate	0.05	3.0	—	—	—
14	S.99	Forging	Reinforcing plate	0.05	3.0	—	—	—
15	DTD.687	17	Attachment angle	†0.10	2.5	—	—	—
16	DTD.687	13	Web joint plate	0.05	3.0	—	—	—
17	L.72	14	Joint packing	0.10	2.5	—	—	—
18	L.72	22	Attachment angle	†0.10	2.5	—	—	—
19	L.72	536/SS.1793	Attachment angle	0.05	3.0	—	—	—
20	DTD.687	13	Web joint channel	0.05	3.0	0.25	8:1	108
21	L.72	12a/SS.1793	Attachment angle	0.05	3.0	—	—	113
22	L.72	18	Former section	0.10	2.5	—	—	107
23	L.72	20	Tank button plates	† —	—	—	—	—
24	L.72	12	Reinforcing	†0.10	2.5	—	—	—
25	DTD.687	8	Web joint plate	0.05	3.0	—	—	—
26	DTD.687	10	Channel	0.10	2.5	—	—	108
27	L.73	14	Joint plate	0.05	3.0	0.25	4:1	103-104
28	DTD.687	12	Strap plate	0.05	3.0	—	—	—
29	L.72	20	Intercostal	†0.10	2.5	—	—	—
30	L.72	18	Intercostal	†0.10	2.5	—	—	—
31	L.72	18	Channel	†0.10	2.5	—	—	—
32	L.72	18	Bracket	†0.10	2.5	—	—	—
33	L.72	18	Gusset	†0.10	2.5	—	—	—
34	L.73	14	Attachment angle	0.05	3.0	—	—	—
35	DTD.687	12	Reinforcing plate	†0.10	2.5	1.0	8:1	—
36	L.72	20	Attachment angle	†0.10	2.5	—	—	—
37	L.72	155/SS.1793	Stiffener	†0.10	2.5	—	—	—
38	DTD.687	17	Attachment angle	†0.10	2.5	—	—	—
X 39	DTD.683	Alloy forging	Bracket	*0.05	3.0	—	—	—
40	L.72	14	Intercostal	†0.10	2.5	—	—	—
41	L.72	14	Gusset	†0.10	2.5	—	—	—
42	DTD.687	595/SS.1793	Stiffening member	0.10	2.5	0.5	4:1	108
43	L.72	511/SS.1793	Top hat stiffener	†0.10	2.5	—	—	—
44	L.65	Alloy bar	Attachment bracket	†0.10	2.5	—	—	—
45	L.72	24	Attachment angle	†0.10	2.5	—	—	—
46	L.72	451/SS.1793	Stiffener	†0.10	2.5	—	—	—
47	L.72	18	Mounting bracket	†0.10	2.5	0.5	4:1	—
48	DTD.687	582/SS.1793	Attachment angle	†0.10	2.5	—	—	—
49	L.72	20	Channel	†0.10	2.5	—	—	—
50	L.65	Alloy bar	Stiffener	0.05	3.0	0.5	6:1	—
51	DTD.687	6	Channel	0.05	3.0	0.5	6:1	—
52	DTD.687	17	Packing plate	†0.10	2.5	1.0	8:1	—
53	DTD.687	18	Stiffener web	0.10	2.5	0.5	4:1	—
54	DTD.363A	399/SS.3075	Stiffener angle	0.05	3.0	—	—	—
55	DTD.363A	396/SS.3075	Stiffener angle	0.05	3.0	—	—	—
56	DTD.363A	398/SS.3075	Stiffener angle	0.05	3.0	—	—	—
57	DTD.687	18	Stiffener web	0.05	3.0	0.25	6:1	—
58	L.65	357/SS.3075	Intercostal	0.05	3.0	0.5	6:1	—
59	L.72	12c/SS.1793	Intercostal angle	†0.10	2.5	—	—	—
60	L.72	16	Intercostal	0.05	3.0	0.5	6:1	—
61	L.72	16	Stiffener	0.10	2.5	0.25	4:1	108
62	L.73	10	Attachment angle	†0.05	3.0	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

Key to Fig. 307. Bomb arches — port — fwd. face

Item	Spec.	Material S.W.G. or Section	Description	Dents		Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
				Depth	Dist. Apart	Dia.			
1	L.72	18	Gusset plate	†0-10	2-5	—	—	—	
2	L.72	18	Attachment angle	†0-10	2-5	—	—	—	
3	L.72	16	Stiffening angle	†0-10	2-5	—	—	—	
4	L.72	10	Gusset plate	†0-10	2-5	—	—	—	
5	L.72	385/SS.1795	Stiffener	0-10	2-5	—	—	—	
6	L.72	18	Reinforcing plate	†0-05	3-0	0-3	8 : 1	—	
7	L.72	18	Hinge channel	†0-10	2-5	0-3	8 : 1	—	
8	DTD.683	Al. alloy	Attachment bracket	*0-10	2-5	—	—	—	
9	L.72	85/SS.1793	Top hat stiffener	0-10	2-5	—	—	as 112	
10	L.73	692/SS.1793	Joint stiffener	0-10	2-5	—	—	—	
11	L.72	406/SS.1793	Attachment angle	0-10	2-5	—	—	—	
12	L.65	294/SS.3075	Attachment angle	†0-05	3-0	—	—	—	
13	L.72	20	Intercostal	†0-2	2-0	—	—	—	
14	L.65	23/SS.3075	T-stiffener	†0-10	2-5	—	—	—	
15	L.73	18	Joint strap	†0-20	2-0	—	—	—	
16	L.65	362/SS.3075	Angle	†0-10	2-5	—	—	—	
17	L.72	16	Reinforcing angle	†0-05	3-0	—	—	—	
18	L.72	108/SS.1793	Channel	0-05	3-0	—	—	—	
19	L.72	470/SS.1793	Angle	†0-05	3-0	—	—	—	
20	L.73	793/SS.1793	Stiffener	0-10	2-5	—	—	as 112	
21	DTD.683	Al. alloy	Crutching bracket	*0-10	2-5	—	—	—	
22	L.72	16	Support channel	0-10	2-5	0-3	8 : 1	108	
23	L.65	340/SS.3075	Stiffener	†0-05	2-5	—	—	—	
24	L.73	16	Joint strap	†0-10	2-5	—	—	—	
25	L.72	446/SS.1793	Angle	†0-10	2-5	—	—	—	
26	L.72	619/SS.1793	Angle	†0-05	3-0	—	—	—	
27	DTD.683	Al. alloy	Attachment bracket	*0-10	2-5	—	—	—	
28	L.72	20	Reinforcing plate	0-05	3-0	—	—	103	
29	L.72	937/SS.1793	Contour angle	0-05	3-0	—	—	—	
30	L.72	18	Angle	†0-20	2-0	—	—	—	
31	L.72	16	Angle	†0-20	2-0	—	—	—	
32	L.72	12	Joint angle	†0-50	3-0	—	—	—	
33	L.72	211/SS.1793	Top hat section	0-10	2-5	—	—	112	
34	L.72	224/SS.1793	Stiffener	†0-10	2-5	—	—	—	
35	L.73	314/SS.1793	Stiffener	†0-10	2-5	—	—	—	
36	L.72	16	Side member	0-10	2-5	0-3	8 : 1	103	
37	L.72	16	Joint member	†0-05	3-0	—	—	—	
38	L.72	12	Doubler	†0-10	3-0	—	—	—	
39	L.72	525/SS.1793	Stiffener	0-2	2-0	—	—	—	
40	L.65	406/SS.3075	Edge member	0-05	3-0	—	—	—	
41	L.72	16	Joint angle	†0-05	3-0	—	—	—	
42	L.65	325/SS.3075	T-stringer	0-10	2-5	—	—	—	
43	L.72	16	Attachment bracket	†0-10	2-5	—	—	—	
44	DTD.683	Al. alloy	Attachment bracket	*0-05	3-0	—	—	—	

* No repairs permitted
† More expedient to renew
All dimensions in inches

RESTRICTED

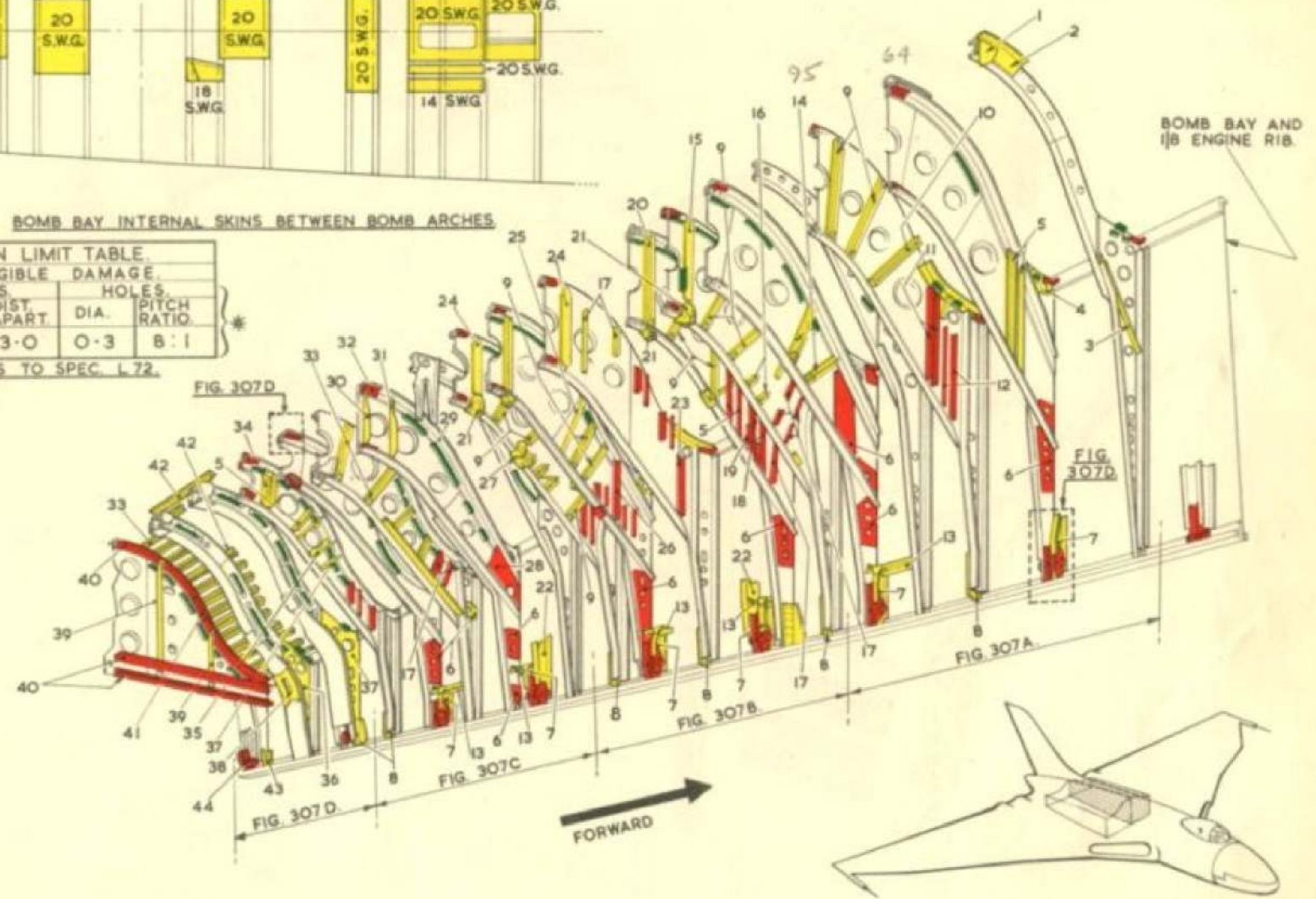
NOTE: FIG. NOS. 307A, 307B, 307C, AND 307D. SHOW STBD. VIEW OF BOMB ARCHES LOOKING FORWARD. ANNOTATION COVERS PORT AND STARBOARD.



BOMB BAY INTERNAL SKINS BETWEEN BOMB ARCHES

SKIN LIMIT TABLE.			
NEGLECTIBLE DAMAGE.			
DENTS		HOLES	
DEPTH.	DIST. APART.	DIA.	PITCH RATIO.
0-10	3-0	0-3	8:1

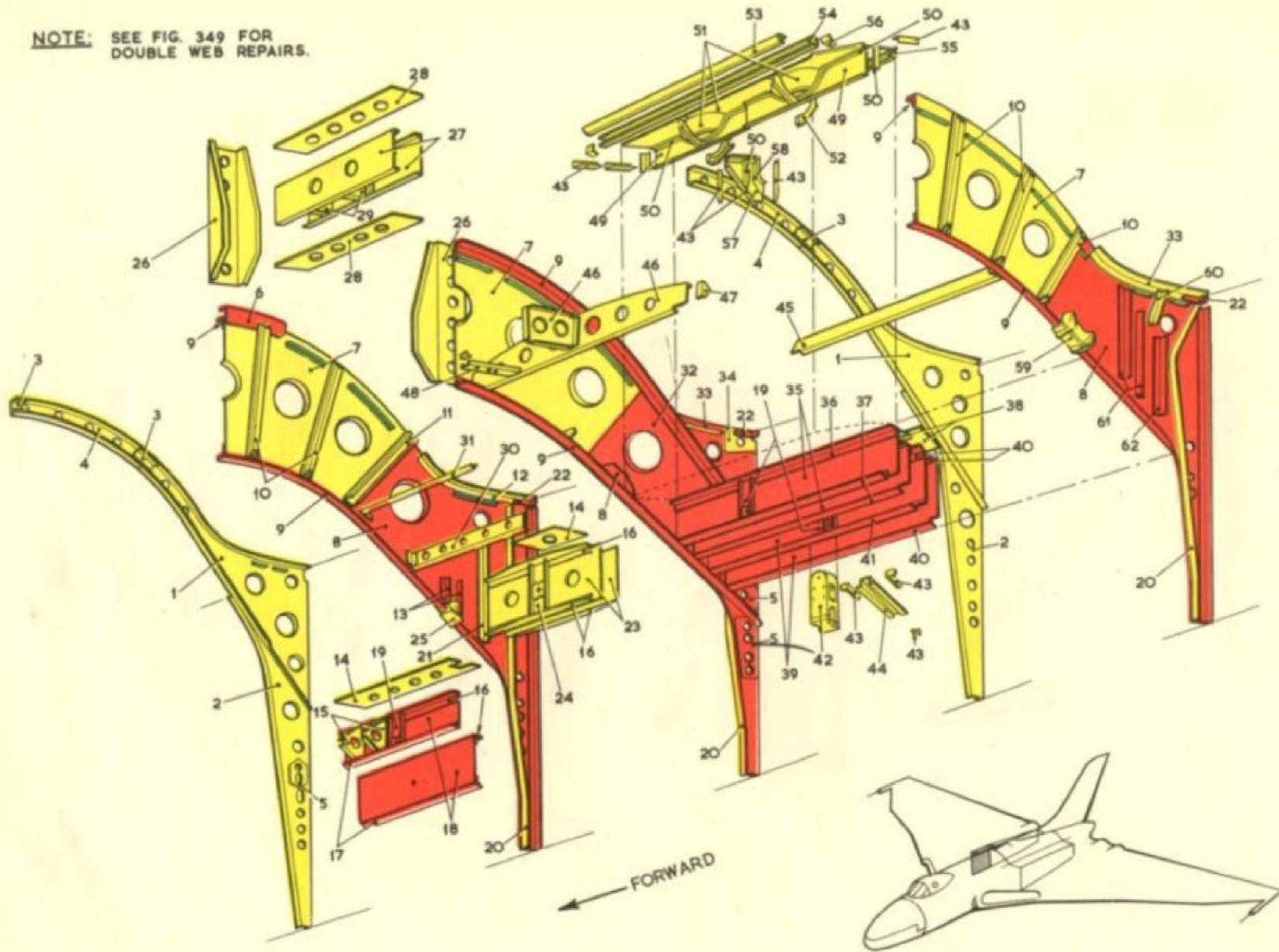
* ALL SKINS TO SPEC. L.72.



* FOR REPAIRS SEE FIG. 103, 104, AND TEXT IN CHAPTER 1.

Fig.307 Bomb arches - port
RESTRICTED

NOTE: SEE FIG. 349 FOR
DOUBLE WEB REPAIRS.



**Fig.307A Bomb arches - starboard
RESTRICTED**

Key to fig. 307A. Bomb Arches — Sbd.

A.P.4505, Vol. 6, Part 1, Chap. 3 (A.L.12)

Item	Spec.	Material		Description	Depth	Dents	Negligible Damage	Holes	Repair Fig. No.
		S.W.G.	or Section			Dist. Apart	Dia.	Pitch Ratio	
1	L.72		16	Former channel	0-10	2-5	0-3	8 : 1	103, 106
2	L.72		16	Vertical member	0-10	2-5	0-3	8 : 1	104, 106
3	L.72		16	Joint channel	10-10	2-5	—	—	—
4	L.72		16	Channel centre	0-10	2-5	—	—	—
5	L.72		18	Stiffener plate	10-10	2-5	—	—	—
6	L.72		18	Attachment plate	† —	—	—	—	—
7	L.73		18	Centre web	0-10	2-5	0-3	8 : 1	103
8	L.73		18	Outer web	0-05	3-0	0-25	8 : 1	103
9	L.65	404/SS/3075		Extruded angle	0-05	3-0	—	—	—
10	L.72	85/SS/1793		Web stiffener	0-10	2-5	—	—	As 112
11	L.73		14	Joint stiffener	10-10	2-5	—	—	—
12	L.72		14	Contour angle	0-10	2-5	—	—	As 114
13	DTD.687		14	Attachment angle	10-05	3-0	—	—	—
14	L.72		20	Intercostal plate	10-2	2-0	—	—	—
15	L.72		18	Diaphragm	10-2	2-0	—	—	—
16	L.65	356/SS/3075		Intercostal angle	10-05	3-0	—	—	—
17	L.72		12	Intercostal angle	10-05	3-0	—	—	—
18	DTD.687		14	Intercostal web	0-05	3-0	—	—	103
19	L.72		14	Stiffening channel	10-05	3-0	—	—	—
20	L.65	304/SS/3075		Vertical angle	0-10	2-5	—	—	343
21	L.65	294/SS/3075		Attachment angle	10-10	2-5	—	—	—
22	DTD.683	Forging		Attachment bracket	—	—	—	—	—
	364								
23	DTD.687		16	Intercostal web	0-10	2-5	0-3	8 : 1	103
24	L.72		14	Stiffening channel	10-10	2-5	—	—	—
25	L.65	Al. Alloy		Crutching bracket	10-10	2-5	—	—	—
26	L.72		18	Actuator channel	0-10	2-5	—	—	—
27	L.72		18	Side member	0-10	2-5	—	—	103
28	L.72		18	Top and bottom plate	0-20	2-0	—	—	—
29	L.72		18	Diaphragm	10-10	2-5	—	—	—
30	L.72		20	Intercostal	0-10	2-5	—	—	—
31	L.72		20	Skin angle	10-10	2-5	—	—	—
32	L.73		20	Web reinforcing	0-05	3-0	0-3	8 : 1	103
33	L.65	273/SS/3075		Web angle	10-05	3-0	—	—	—
34	L.72		10	Gusset plate	10-05	3-0	—	—	—
35	DTD.687		18	Intercostal web	0-05	3-0	—	—	103
36	L.65	307/SS/3075		Stiffening angle	0-05	3-0	—	—	—
37	L.72		10	Stiffening angle	0-05	3-0	—	—	—
38	L.72		18	Top skins	10-10	2-5	—	—	—
39	L.72		12	Intercostal webs	0-05	3-0	—	—	103
40	L.65	486/SS/3075		Intercostal angle	0-05	3-0	—	—	—
41	L.65	348/SS/3075		Intercostal angle	0-05	3-0	—	—	—
42	L.65	Al. Alloy		Crutching block	10-10	2-5	—	—	—
43	L.72		18	Attachment angle	—	—	—	—	—
44	L.72		12	Stiffener	10-10	2-5	—	—	—
45	L.72	596/SS/1793		Channel	0-20	2-0	—	—	—
46	L.72		20	Intercostal	0-20	2-0	0-3	8 : 1	—
47	L.72		18	Intercostal bracket	10-10	2-5	—	—	—
48	L.72	264/SS/1793		Channel	10-20	2-0	—	—	—
49	L.72		20	Web	0-20	2-0	0-3	8 : 1	—
50	L.72	126/SS/1793		Web angle	10-20	2-0	—	—	—
51	L.72		16	Support tray	10-20	2-0	—	—	—
52	L.72		20	Tray stiffeners	10-20	2-0	—	—	—
53	L.73		16	Channel	10-20	2-0	—	—	—
54	L.73		18	Channel	10-20	2-0	—	—	—
55	L.72		16	Tray angle	0-20	2-0	—	—	114
56	L.72		16	Attachment angle	10-20	2-0	—	—	—
57	L.72		24	Stiffener web	10-20	2-0	—	—	—
58	L.72		18	Web stiffener	10-20	2-0	—	—	—
59	L.65	Al. Alloy		Attachment bracket	10-10	2-5	—	—	—
60	L.72	528/SS/1793		Lipped angle	10-10	2-5	—	—	—
61	L.72	406/SS/1793		Support angle	10-05	3-0	—	—	—
62	L.65	191/SS/3075		Attachment angle	10-05	3-0	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

(A.L.12, June 58)

Key to Fig. 307B Bomb Arches — Sthd.

Item	Spec.	Material S.W.G. or Section	Description	Depth	Dents Dist. Apart	Negligible Damage Dia.	Holes Pitch Ratio	Repair Fig. No.
1	L.73	18	Centre web	0-10	2-5	0-3	8 : 1	103
2	L.73	18	Lower web	0-05	3-0	0-25	8 : 1	103
3	L.65	305/SS/3075	Profile angle	0-05	3-0	—	—	—
4	L.72	85/SS/1793	Stiffener	0-10	2-5	—	—	as 112
5	DTD.683	Al. Alloy	Crutching bracket	*0-10	2-5	—	—	—
6	L.72	18	Angle	0-10	2-5	—	—	—
7	L.65	273/SS/3075	Contour angle	0-10	2-5	—	—	—
8	L.72	10	Gusset plate	†0-10	2-5	0-3	8 : 1	—
9	L.72	16	Attachment angle	0-05	3-0	—	—	—
10	L.72	18	Reinforcing plate	†0-05	3-0	—	—	—
11	L.72	16	Web	0-05	3-0	—	—	103
12	L.72	525/SS/1793	Intercostal angle	†0-05	3-0	—	—	—
13	L.65	Al. Alloy	Pivot bracket	*0-10	2-5	—	—	—
14	L.65	304/SS/3075	Stiffening angle	0-10	2-5	—	—	343
15	L.65	405/SS/3075	Profile member	0-05	3-0	—	—	—
16	L.72	14	Stiffening angle	0-10	2-5	—	—	—
17	L.72	16	Reinforcing angle	†0-10	2-5	—	—	114
18	L.73	10	Reinforcing	†0-10	2-5	—	—	—
19	L.65	333/SS/3075	Angle	0-05	3-0	—	—	—
20	L.72	20	Bracket	†0-05	3-0	—	—	—
21	L.72	20	Side member	0-2	2-0	—	—	103
22	L.72	18	Plate	†0-2	2-0	—	—	—
23	L.72	20	Channel	0-2	2-0	—	—	—
24	L.65	222/SS/3075	Booms	0-05	3-0	—	—	344
25	DTD.687	14	Web	0-05	3-0	0-3	8 : 1	103
26	L.72	16	Bracket	†0-2	2-0	—	—	—
27	L.72	14	Channel	†0-05	3-0	—	—	—
28	S.96	H.T. Steel	Bearing plate	†0-05	3-0	—	—	—
29	L.72	22	Angle	†0-2	2-0	—	—	—
30	DTD.626	6	Packing	†0-2	2-0	—	—	—
31	L.72	20	Diaphragm	†0-2	2-0	—	—	—
32	L.72	20	Mounting plate	†0-2	2-0	—	—	—
33	L.72	60/SS/1793	Attachment angle	†0-2	2-0	—	—	—
34	L.72	602/SS/1793	Stiffener	0-10	3-0	—	—	—
35	L.72	446/SS/1793	Angle	†0-10	3-0	—	—	—
36	L.72	20	Plate	†0-2	2-0	—	—	—
37	DTD.687	16	Web	0-10	2-5	0-3	8 : 1	103
38	L.65	356/SS/3075	Angle	0-10	2-5	—	—	—
39	L.65	340/SS/3075	Angle	†0-10	2-5	—	—	—
40	L.72	14	Stiffening channel	†0-10	2-5	—	—	—
41	L.72	16	Doubling plate	†0-05	3-0	—	—	—
42	L.65	356/SS/3075	Angle	†0-05	3-0	—	—	—
43	L.72	12	Angle	†0-05	3-0	—	—	—
44	L.72	18	Diaphragm	†0-2	2-0	—	—	—
45	L.65	404/SS/3075	Contour angle	0-05	3-0	—	—	—
46	L.65	192/SS/3075	T-stiffener	†0-10	2-5	—	—	—
47	L.72	247/SS/1793	Angle	†0-2	2-0	—	—	—
48	L.72	385/SS/1793	Stiffening channel	0-10	2-5	—	—	—
49	L.65	Al. Alloy	Crutching bracket	*0-10	2-5	—	—	—
50	L.72	12	Intercostal web	0-05	3-0	0-3	8 : 1	103
51	L.65	486/SS/3075	Intercostal booms	†0-05	3-0	—	—	—
52	L.65	Al. Alloy	Crutching block	*0-10	3-0	—	—	—
53	S.96	H.T.S. Bar	Crutching pad	*0-10	3-0	—	—	—
54	L.65	326/SS/3075	Attachment angle	†0-05	3-0	—	—	—
55	L.65	384/SS/3075	Bottom boom	†0-05	3-0	—	—	—
56	L.73	18	Reinforcing ring	†0-2	2-0	—	—	—
57	L.72	16	Plate	†0-2	2-5	—	—	—
58	L.65	23/SS/3075	Stiffener	†0-05	3-0	—	—	—
59	L.65	307/SS/3075	Angle	†0-05	3-0	—	—	—
60	L.72	619/SS/1793	Angle	†0-10	2-5	—	—	—
61	L.72	18	Channel	†0-10	2-5	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

NOTE: SEE FIG. 349 FOR
DOUBLE WEB REPAIRS.

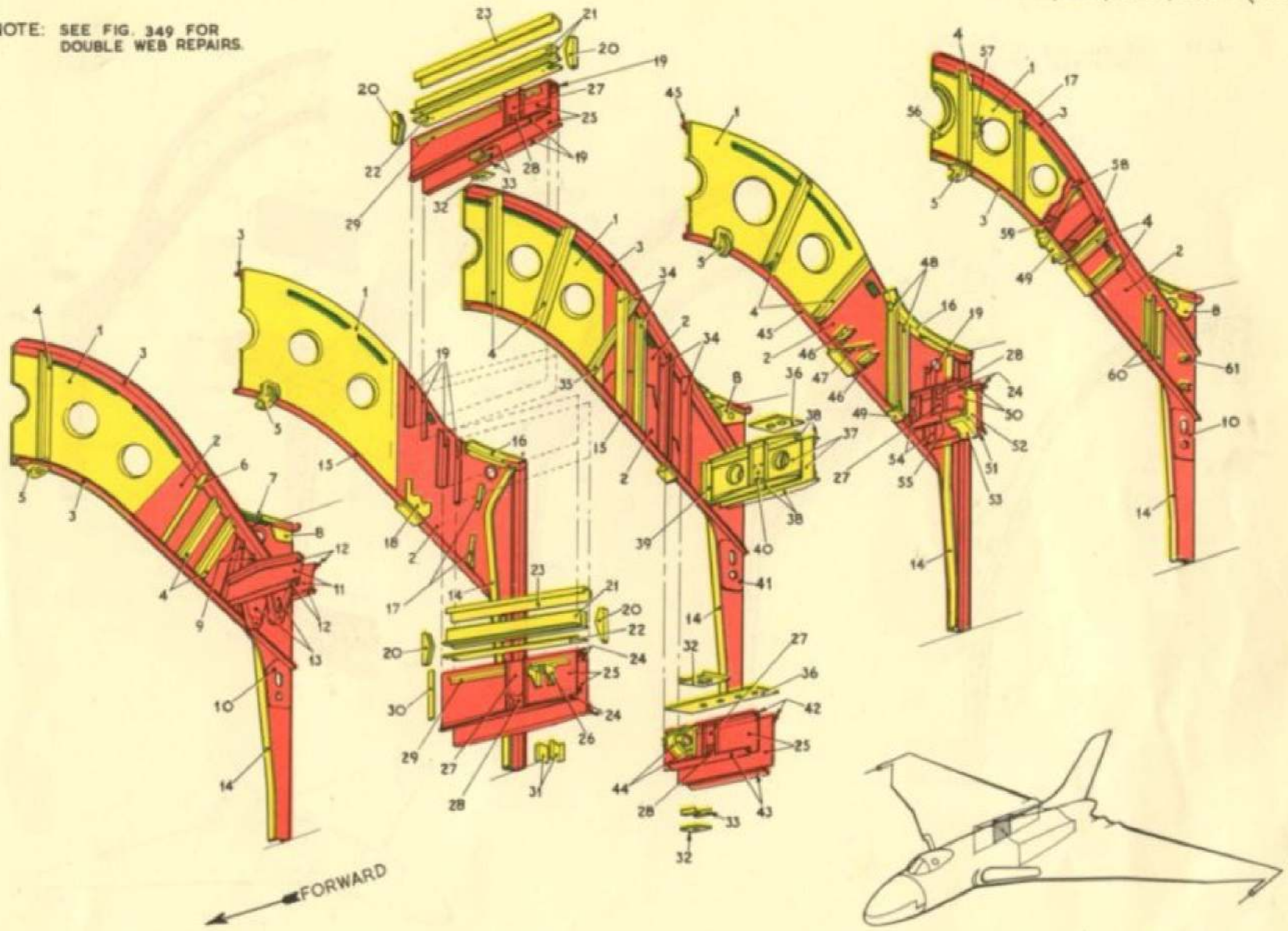


Fig.307B Bomb arches - starboard
RESTRICTED

(A.L.12, June 58)

NOTE: SEE FIG. 349 FOR
DOUBLE WEB REPAIRS.

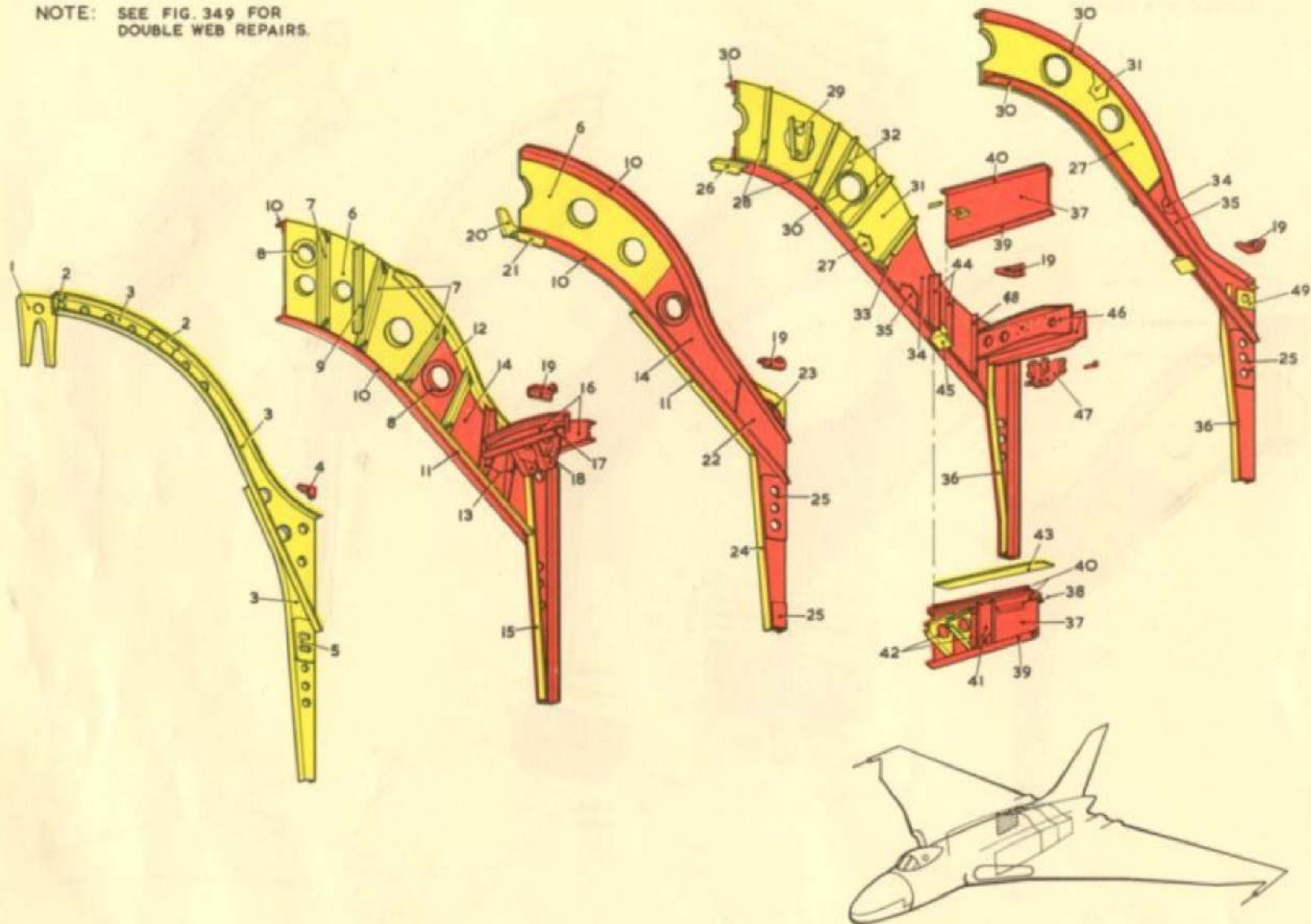


Fig.307C Bomb arches - starboard
RESTRICTED

Key to Fig. 307C — Bomb arches — stbd.

Item	Spec.	Material S.W.G. or Section	Description	Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dents	Dist. Apart		
1	L.72	18	Hanger bracket	10.2	2.0	0.3	8 : 1	—
2	L.72	16	Insert channel	10.05	3.0	—	—	103
3	L.72	16	Former member	0.05	3.0	—	—	—
4	DTD.683	Al alloy	Attachment bracket	† —	—	—	—	—
5	L.72	18	Reinforcing plate	10.10	2.5	—	—	—
6	L.72	18	Centre web	0.10	2.5	0.3	8 : 1	103
7	L.72	211/SS/1793	Stiffeners	0.10	2.5	—	—	112
8	L.72	18	Stiffening ring	10.10	2.5	—	—	—
9	L.72	13b/SS/1793	Angle	10.10	2.5	—	—	—
10	L.72	937/SS/1793	Angle	0.05	3.0	—	—	—
11	L.72	525/SS/1793	Angle	0.10	2.5	—	—	—
12	L.72	937/SS/1793	Angle	0.10	2.5	—	—	—
13	L.72	16	Angle	10.05	3.0	—	—	—
14	L.72	18	Web	0.05	3.0	0.25	8 : 1	103
15	L.72	524/SS/1793	Vertical angle	0.10	2.5	—	—	—
16	L.72	16	Intercostal web	0.05	3.0	—	—	103
17	L.72	525/SS/1793	Intercostal angles	10.05	3.0	—	—	—
18	L.65	Al alloy	Pivot bracket	*0.05	3.0	—	—	—
19	DTD.683	Al alloy	Attachment bracket	† —	—	—	—	—
20	L.72	18	Bracket	10.10	2.5	—	—	—
21	L.65	356/SS/3075	Attachment angle	10.10	2.5	—	—	—
22	L.72	20	Reinforcing plate	0.05	3.0	—	—	103
23	L.72	18	Gusset plate	10.10	2.5	—	—	—
24	L.72	524/SS/1793	Vertical angle	0.10	2.5	—	—	—
25	L.72	18	Stiffening plate	10.10	2.5	—	—	—
26	L.72	14	Attachment angle	10.10	2.5	—	—	—
27	L.73	16	Centre web	0.10	2.5	0.3	8 : 1	103
28	L.72	385/SS/1793	Angle	0.05	3.0	—	—	—
29	L.72	22	Channel	10.10	2.5	0.3	8 : 1	—
30	L.65	305/SS/3075	Contour angle	0.05	3.0	—	—	—
31	L.73	16	Centre reinforcing plate	0.05	3.0	0.3	8 : 1	103
32	L.65	314/SS/3075	Stiffeners	10.10	2.5	—	—	—
33	L.72	16	Joint angle	10.10	2.5	—	—	103
34	DTD.687	14	Reinforcing web	0.05	3.0	—	—	103
35	DTD.687	18	Lower web	0.05	3.0	0.3	8 : 1	343
36	L.65	304/SS/3075	Vertical angle	0.05	3.0	—	—	103
37	DTD.687	14	Intercostal web	0.05	3.0	—	—	—
38	L.72	12b/SS/1793	Angle	10.05	3.0	—	—	—
39	L.72	12	Angle	10.05	3.0	—	—	—
40	L.65	356/SS/3075	Angle	10.05	3.0	—	—	—
41	L.72	16	Channel	10.05	3.0	—	—	—
42	L.72	18	Diaphragm	10.10	2.5	0.3	8 : 1	—
43	L.72	18	Plate	10.20	2.0	0.3	8 : 1	—
44	DTD.687	14	Attachment angle	10.05	3.0	—	—	—
45	L.65	Al alloy	Crutching bracket	*0.10	2.5	—	—	—
46	L.65	Al alloy	Forged beams	*0.05	3.0	—	—	—
47	L.65	Al alloy	Hoist fitting	*0.05	3.0	—	—	—
48	L.65	294/SS/3075	Angle	10.05	3.0	—	—	—
49	DTD.687	12	Reinforcing plate	10.10	2.5	—	—	—

* No repairs permitted
† More expedient to renew
All dimensions in inches

RESTRICTED

(A.L.12, June 58)

Key to Fig. 307D — Bomb arches — stbd.

Item	Spec.	Material S.W.G. or Section	Description	Depth	Dents		Negligible Damage		Repair Fig. No.
					Dist. Apart	Dia.	Holes Pitch Ratio		
1	L.72	14	Joint angle	†0-10	2-5	—	—	—	
2	L.72	16	Former channel	0-10	2-5	—	—	105, 107	
3	L.72	16	Top and bottom skins	0-10	2-5	0-25	5 : 1	—	
4	L.72	16	Joint plate	†0-05	3-0	—	—	—	
5	L.72	16	Side members	0-2	2-0	0-25	5 : 1	103	
6	L.72	18	Joint angle	†0-10	2-5	—	—	—	
7	L.72	18	Gusset plate	†0-10	2-5	—	—	—	
8	L.72	20	Intercostal	0-2	2-0	0-25	5 : 1	106, 115	
9	L.72	410/SS/1793	Stiffener	0-10	2-5	—	—	—	
10	L.72	18	Contour angle	†0-10	2-5	—	—	—	
11	DTD.683	Al. alloy	Bearing	* —	—	—	—	—	
12	DTD.687	12	Reinforcing ring	†0-2	2-0	—	—	—	
13	L.72	20	Skin panel	0-05	3-0	0-25	8 : 1	103	
14	L.72	18	Skin panel	0-05	3-0	0-25	8 : 1	103	
15	L.72	18	Doubling plate	0-05	3-0	—	—	—	
16	L.72	14	Attachment bracket	0-05	3-0	—	—	—	
17	S.96	H.T.S.	Joint plate	—	—	—	—	—	
18	L.72	16	Stringer bracket	†0-05	3-0	—	—	—	
19	L.72	10	Packing	†0-10	2-5	—	—	—	
20	DTD.683	Al. alloy	Bearing bracket	* —	—	—	—	—	
21	DTD.683	Al. alloy	Attachment bracket	*0-05	3-0	—	—	—	

* No repairs permitted
 † More expedient to renew
 All dimensions in inches

RESTRICTED

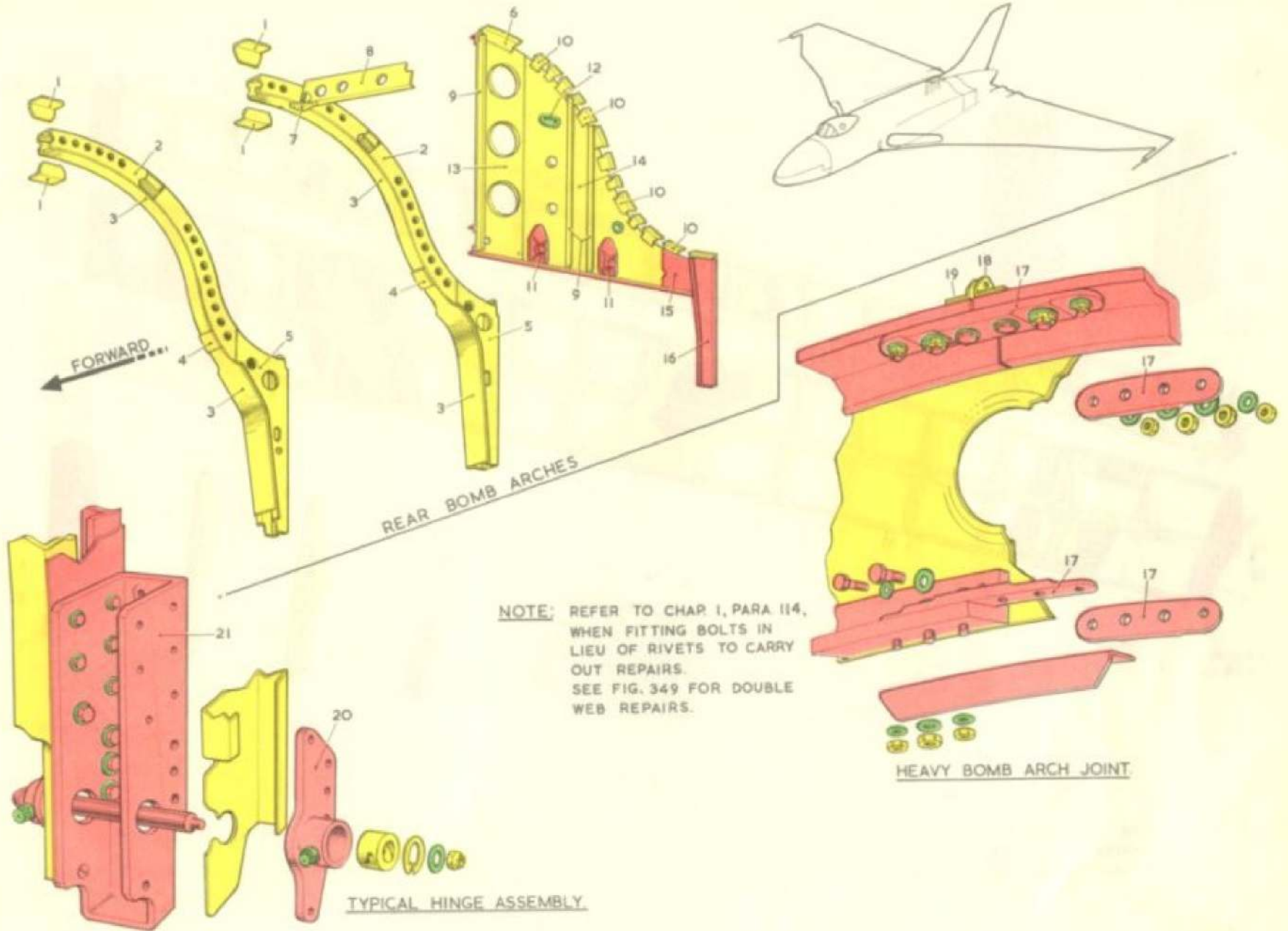
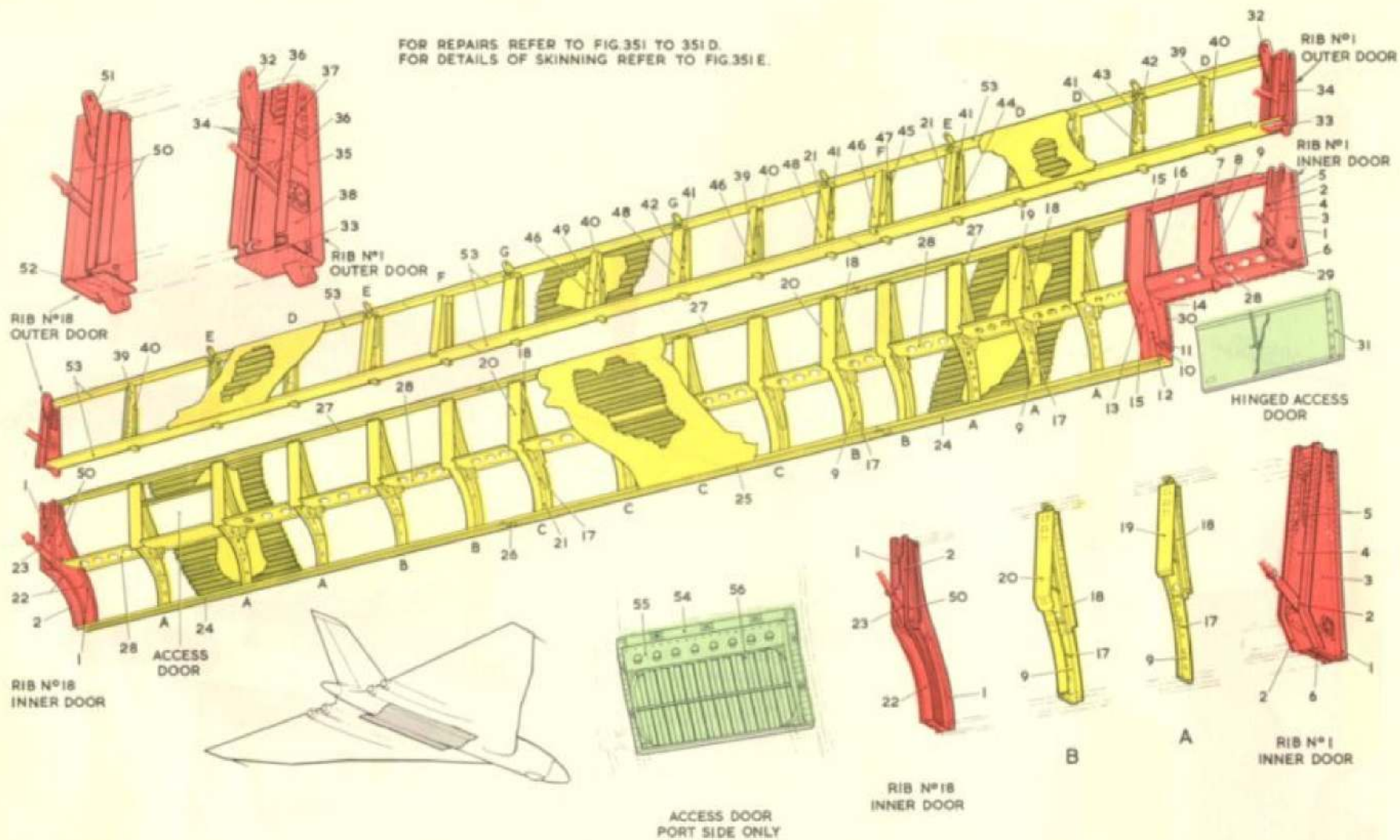


Fig.307D. Bomb arches-Starboard
RESTRICTED

FOR REPAIRS REFER TO FIG.35I TO 35ID.
FOR DETAILS OF SKINNING REFER TO FIG.35IE.



NOTE. PREFIX "IDENTICAL" LETTERS AT THE RIBS INDICATES THAT SIMILAR MATERIALS AND SECTIONS ARE USED ON ASSEMBLY.

PORT DOORS ILLUSTRATED
STBD. " OPPOSITE HAND

Fig.30B. Bomb door structure
RESTRICTED

Fig. 308. Bomb door structure

Item	Spec.	Material S.W.G. or Section	Description	Dents Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dist. Apart	Dia.		
1	L.72	18	Angle	—	—	—	—	—
2	L.72	14	Angle	—	—	—	—	—
3	DTD.687	14	Web	0.05	3.0	0.25	8:1	—
4	L.72	14	Top plate	0.05	3.0	0.25	8:1	—
5	L.72	18	Angle	†	—	—	—	—
6	L.72	20	Angle	†	—	—	—	—
7	L.72	754/SS.1793	Strap	†0.05	3.0	0.25	8:1	—
8	L.72	752/SS.1793	Angle	0.05	3.0	—	—	—
9	L.72	20	Web	0.10	2.5	0.25	6:1	—
10	L.72	16	Side member	†0.05	3.0	0.25	8:1	—
11	L.65	—	Catch bracket	*0.05	3.0	—	—	—
12	L.73	14	Reinforcing plate	†0.05	3.0	0.25	8:1	—
13	L.73	18	Strap plate	†0.10	2.5	0.25	6:1	—
14	L.73	16	Side member	0.05	3.0	0.25	8:1	—
15	L.72	943/SS.1793	'Z' section	†0.05	3.0	—	—	—
16	L.72	12b/SS.1793	Attachment angle	0.05	3.0	—	—	—
17	L.72	753/SS.1793	Angle	†0.10	2.5	—	—	—
18	L.72	752/SS.1793	Angle	0.10	2.5	—	—	—
19	L.72	754/SS.1793	Strap plate	†0.15	2.0	0.30	5:1	—
20	L.72	18	Strap plate	†0.15	2.0	0.30	5:1	—
21	L.72	18	Web	0.10	2.5	0.25	6:1	—
22	L.72	18	Web	0.05	3.0	0.25	8:1	—
23	L.65	—	Eye-end	—	—	—	—	—
24	L.72	16	Channel	0.10	2.5	0.25	8:1	108
25	L.72	20	Channel	0.10	2.5	0.25	8:1	108
26	L.72	16	Joint channel	†0.10	2.5	—	—	—
27	L.72	14	Channel	0.10	2.5	0.25	8:1	108
28	L.72	20	Intercostals	0.15	2.0	0.25	4:1	105
29	L.72	18	Hinge-channel	0.05	3.0	0.25	4:1	108
30	L.72	20	Angle	†0.05	3.0	—	—	—
31	L.72	20	Support member	*0.20	2.0	0.30	4:1	—
32	S.11	—	Hinge block	—	—	—	—	—
33	L.72	16	Stiffening plate	†0.05	3.0	0.25	4:1	—
34	L.72	14	Channel	0.05	3.0	0.25	6:1	—
35	DTD.687	10	Web plate	0.05	3.0	—	—	—
36	L.72	14	Channel	0.05	3.0	—	—	108
37	L.72	14	Angle	†0.05	3.0	—	—	—
38	L.72	14	Reinforcing plate	0.05	3.0	0.25	6:1	—
39	L.72	22	Web	0.20	2.0	0.50	4:1	108
40	L.72	761/SS.1793	Angle	0.15	2.5	—	—	113
41	L.72	16	Channel	0.05	3.0	0.25	6:1	108
42	L.72	16	Web	0.10	2.5	0.25	6:1	108
43	L.72	16	Angle	0.05	3.0	—	—	113
44	L.72	763/SS.1793	Angle	†0.05	3.0	—	—	—
45	L.72	18	Web	0.20	2.0	0.50	4:1	108
46	L.72	20	Plate	†0.20	2.0	0.50	4:1	—
47	L.72	523/SS.1793	Angle	0.15	2.5	—	—	113
48	L.72	20	Plate	†0.15	2.5	0.25	6:1	—
49	L.72	20	Web	0.20	2.0	0.50	4:1	108
50	L.72	14	Web plate	0.05	3.0	0.25	8:1	108
51	S.96	—	Hinge block	—	—	—	—	—
52	L.72	18	Plate	†0.05	3.0	0.25	4:1	—
53	L.72	14	Channel	0.10	2.5	0.25	8:1	108
54	L.72	20	Door frame member	0.20	2.0	—	—	—
55	L.72	22	Skin panel	0.20	2.0	0.50	4:1	—
56	L.59	18	Louvre	0.20	2.0	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

(A.L.12, June 58)

Fig. 309. Dorsal fin — structure — skins

Item	Spec.	Material S.W.G. or Section	Description	Dents Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dist. Apart	Dia.		
1	L.72	12a/SS.1793	Angle	0-10	2-5	—	—	113
2	L.72	22	Web	0-15	2-5	0-25	4 : 1	—
3	L.72	20	Attachment angle	†0-10	2-5	—	—	—
4	L.72	20	Gusset plate	†0-15	2-5	0-25	4 : 1	—
5	L.72	18	Panel	0-15	2-5	0-25	4 : 1	—
6	L.72	65/SS.1793	Panel angles	0-10	2-5	—	—	113
7	L.72	18	Attachment channel	0-10	2-5	—	—	—
8	L.72	112/SS.1793	Angle	0-10	2-5	—	—	113
9	L.72	133/SS.1793	Side angle	0-10	2-5	—	—	113
10	L.72	13b/SS.1793	Angle	0-10	3-0	—	—	113
11	L.72	12b/SS.1793	Angle	0-10	2-5	—	—	113
12	L.72	446/SS.1793	Angle	0-10	2-5	—	—	113
13	L.72	24	Web	0-20	2-0	0-25	4 : 1	—
14	L.72	13b/SS.1793	Angle	0-10	2-5	—	—	113
15	L.72	20	Angle	0-10	2-5	—	—	113
16	L.72	12d/SS.1793	Attachment angle	0-10	2-5	—	—	113
17	L.72	22	Angle	0-10	2-5	—	—	113
18	L.72	22	Angle	0-10	2-5	—	—	113
19	L.72	24	Web	0-15	3-0	0-25	6 : 1	—
20	L.72	20	Angle	0-10	2-5	—	—	113
21	L.72	22	Angle	0-10	2-5	—	—	113
22	L.72	22	Angle	†0-10	2-5	—	—	113
23	L.72	22	Angle	†0-10	2-5	—	—	113
24	L.72	22	Angle	†0-10	2-5	—	—	113
25	L.72	22	Angle	†0-10	2-5	—	—	—
26	L.72	22	Angle	†0-10	2-5	—	—	113
27	L.72	22	Angle	†0-10	2-5	—	—	113
28	L.72	22	Angle	†0-10	2-5	—	—	113

All dimensions in inches
 † More expedient to renew

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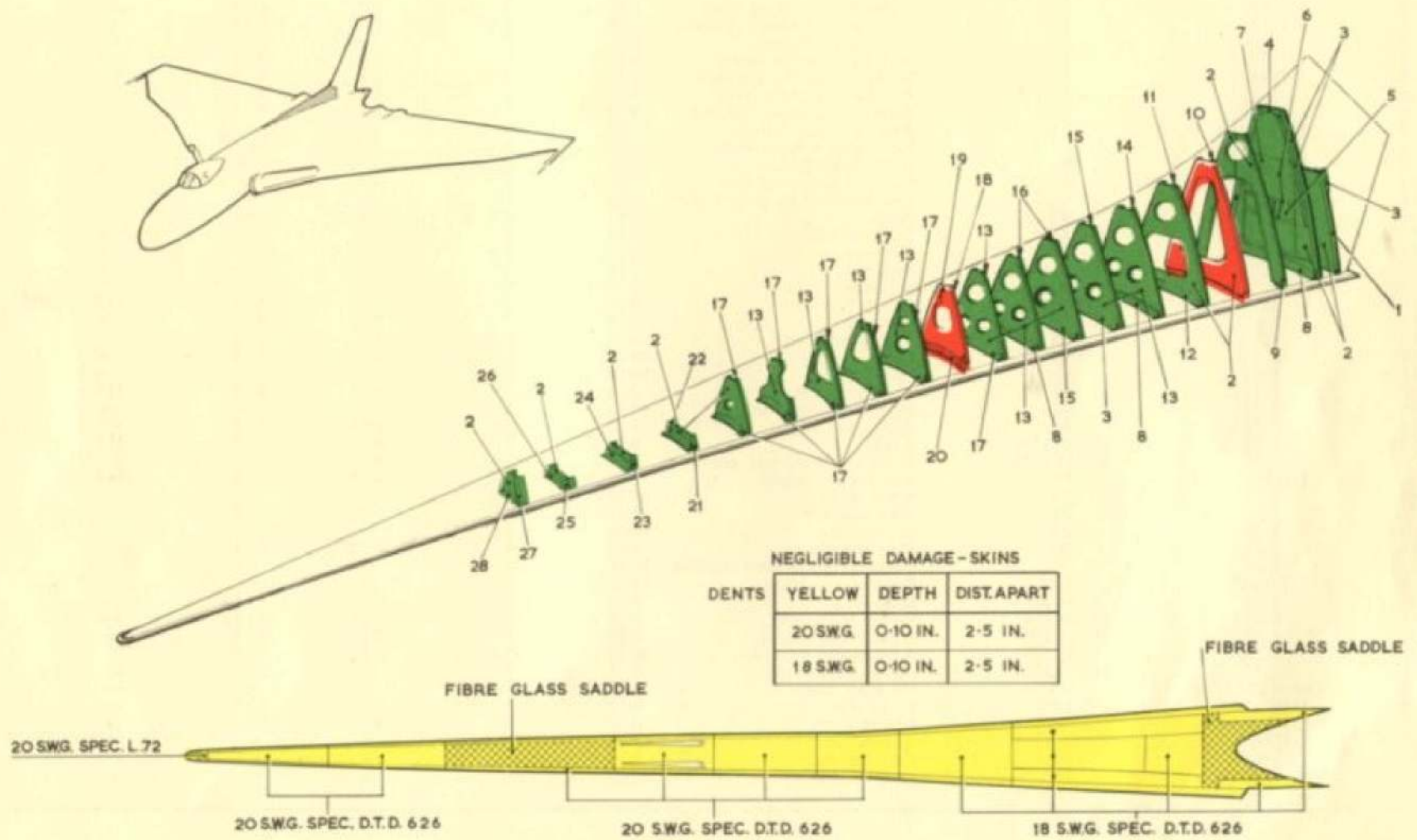


FIG. 309. DORSAL FIN - STRUCTURE - SKINS RESTRICTED

(A.L.12, June 58)

Fig. 310. Rear spar structure

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	DTD.687	10	Web	0.05	3	1.0	8:1	—
2	DTD.687	10	Web joint plate	0.05	3	—	—	—
3	DTD.687	12	Web-centre portion (red)	0.05	3	1.0	8:1	—
3	DTD.687	12	Web-centre portion (yellow)	0.10	2.5	1.0	8:1	—
4	DTD.687	12	Web joint channel	0.05	3	—	—	—
5	DTD.687	12	Web-top portion (red)	0.15	3	1.0	8:1	—
5	DTD.687	12	Web-top portion (yellow)	0.10	2.5	1.0	8:1	—
6	L.73	10	Reinforcing plate (red)	0.05	3	1.0	8:1	—
6	L.73	10	Reinforcing plate (yellow)	0.10	2.5	1.0	8:1	—
7	DTD.363A	—	Rear spar top boom	*0.05	3	—	—	—
8	DTD.363A	—	Rear spar bottom boom	*0.05	3	—	—	—
9	DTD.683	—	Joint forging—top	*0.05	3	—	—	—
10	DTD.683	—	Joint forging—bottom	*0.05	3	—	—	—
11	S.96	—	Spar boom—ring joint section	*0.05	3	—	—	—
12	L.72	24	Angle	†0.1	2.5	—	—	—
13	L.72	14	Stiffener web	0.05	3	—	—	—
14	L.72	16	Stiffener	0.05	3	—	—	—
15	L.72	108/SS.1793	Stiffener	0.10	2.5	—	—	—
16	L.72	20	Stiffener	0.10	2.5	—	—	—
17	L.72	20	Angles	0.10	2.5	0.25	4:1	113
18	L.72	16	Channel	0.10	2.5	0.25	4:1	—
19	L.72	20	Centre pressing	0.10	2.5	1.0	6:1	—
20	L.72	10	Beam	†0.10	2.5	0.25	4:1	—
21	L.65	—	Catch plate	†0.10	2.5	—	—	—
22	L.72	18	Reinforcing angle	0.10	2.5	0.25	4:1	113
23	L.72	18	Skin attachment angles	†0.10	2.5	—	—	—
24	L.72	16	Angle and strap	0.10	2.5	0.25	4:1	—
25	L.72	12a/SS.1793	Angle	0.10	2.5	0.25	4:1	113
26	L.72	386/SS.1793	Stringer attachment angle	0.10	2.5	0.25	4:1	—
27	DTD.687	17	Attachment angle	0.10	2.5	0.25	4:1	113
28	L.72	20	Strap plate	†0.10	2.5	—	—	—
29	L.72	20	Side member	0.05	3	0.50	6:1	—
30	L.72	20	Diaphragm	†0.10	2.5	—	—	—
31	L.72	20	Skin panel	0.05	3	0.50	6:1	—
32	L.65	—	Fwd. fin post support member	*0.05	3	—	—	—
33	DTD.687	14	Reinforcing plate	†0.05	3	—	—	—
34	L.72	83/SS.1793	Stiffener	0.10	2.5	0.25	4:1	—
35	L.72	677/SS.1793	Platform channel	0.10	2.5	0.25	4:1	—
36	L.65	338/SS.1793	Attachment angles	0.05	3	0.25	6:1	—
37	L.72	85/SS.1793	Attachment member	†0.10	2.5	0.25	4:1	—
38	L.72	249/SS.1793	Attachment angle	0.05	3	—	—	—
39	S.99 or EN.267	—	Jet pipe rings	0.05	3	—	—	—
40	DTD.124A	14	Inner skin	0.10	3	0.50	4:1	—
41	DTD.687	939/SS.1793	Channel	0.05	3	0.25	6:1	—
42	DTD.687	715/SS.1793	Angle	0.05	3	—	—	113
43	DTD.687	16	Capping strip	0.05	3	—	—	—
44	DTD.687	18	Gusset plate	†0.05	3	—	—	—

* No repairs permitted
 † More expedient to renew
 All dimensions in inches

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F.S./19

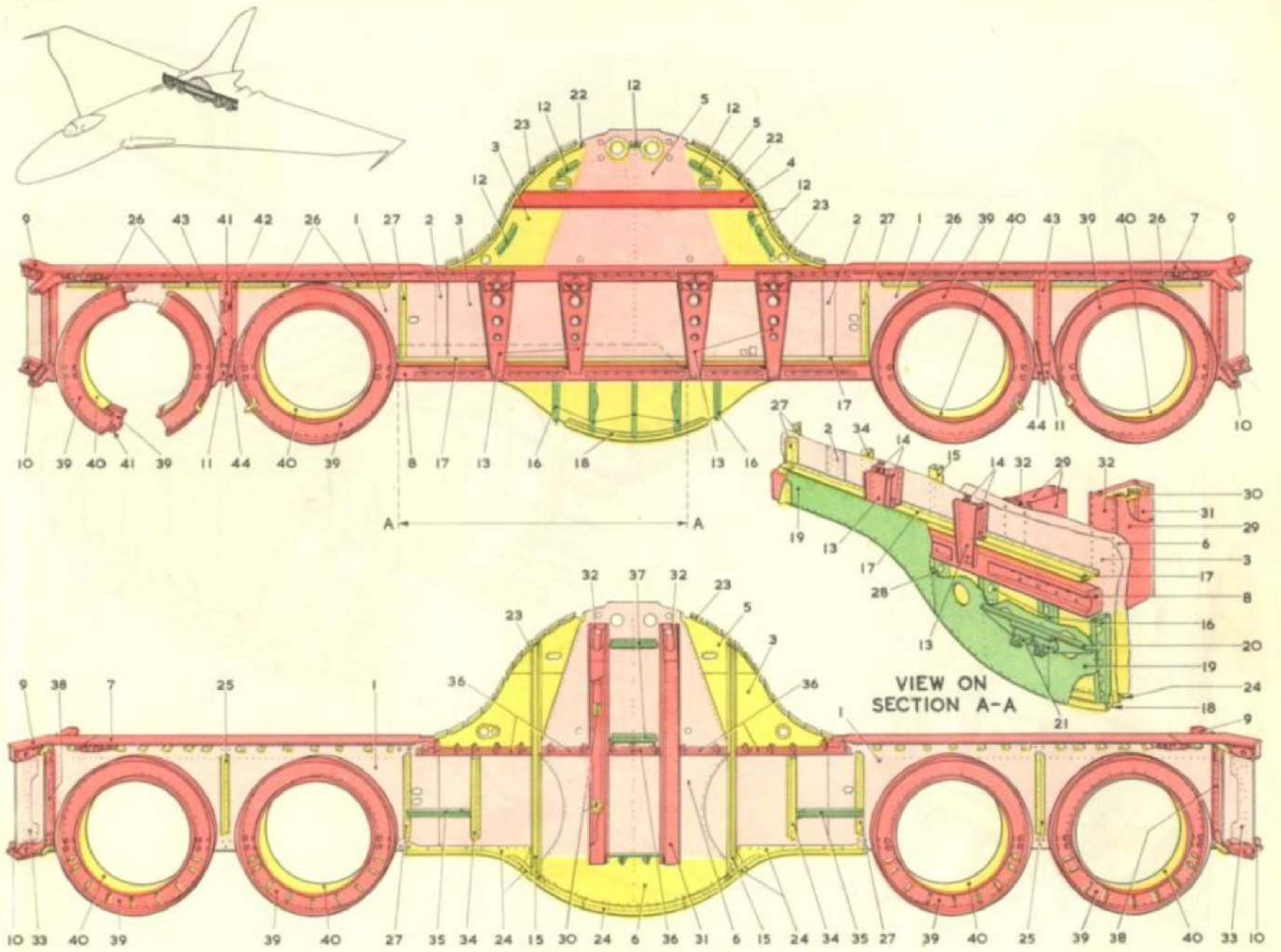


Fig. 310. Rear spar - Centre section

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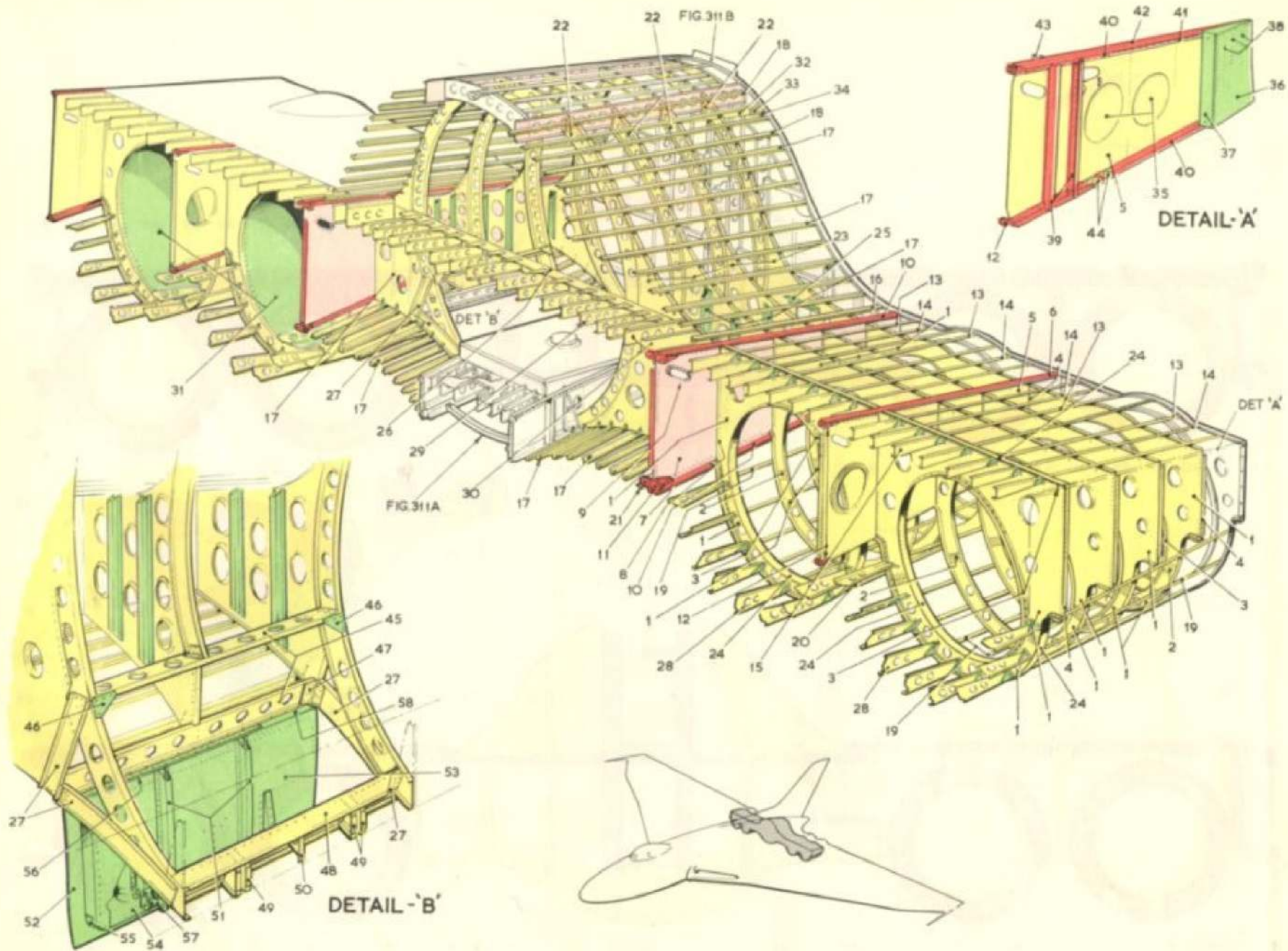


Fig 311. Structure aft of rear spar
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KEY TO FIG.311

Item	Material		Description	Negligible Damage					Repair Fig.
	Spec.	S.W.G. or Section		Dents		Holes			
				Depth	Dist. Apart	Dia.	Pitch Ratio		
1	L.72	22	Formers	0.1	3.0	0.25	8:1	103	
2	L.72	20	Joint channel	x 0.1	3.0	0.25	6:1	-	
3	L.72	12d/SS.1793	Angle	0.1	3.0	0.25	6:1	-	
4	L.72	386/SS.1793	Stiffener	0.05	3.0	0.25	6:1	-	
5	L.73	24	Web	0.1	3.0	0.25	8:1	103	
6	L.65	361/SS.3075	Boom	0.025	3.0	-	-	-	
7	D.T.D.687	17	Web	0.025	3.0	0.25	8:1	103,104	
8	L.72	12a/SS.1793	Attachment angle	0.05	3.0	0.25	8:1	113	
9	D.T.D.687	16	Stiffening ring	x 0.025	3.0	-	-	-	
10	D.T.D.363	411/SS.3075	Boom	0.025	3.0	-	-	-	
11	S.96	-	Attachment bracket	* 0.025	3.0	-	-	-	
12	L.65	-	Attachment bracket	* 0.025	3.0	-	-	-	
13	D.T.D.687	582/SS.1793	'Z' stringer	0.05	3.0	0.25	6:1	221	
14	L.65	375/SS.3075	'T' stringer	0.05	3.0	0.25	6:1	109	
15	L.72	20	Intercostals	x 0.1	3.0	0.25	6:1	-	
16	L.72	525/SS.1793	Special stringer	0.05	3.0	0.25	6:1	-	
17	L.72	211/SS.1793	Top hat stringer	0.1	3.0	0.25	6:1	112	
18	L.65	325/SS.3075	'T' stringer	0.05	3.0	0.25	6:1	-	
19	D.T.D.687	582/SS.1793	'Z' stringer	0.1	3.0	0.25	6:1	221	
20	L.65	337/SS.3075	'T' stringer	0.1	3.0	0.25	6:1	-	
21	L.65	292/SS.3075	'T' stringer	0.05	3.0	0.25	6:1	110	
22	L.72	455/SS.1793	Formers	0.05	3.0	0.25	6:1	105,107	
23	L.72	22	Pressing	0.1	2.5	0.25	6:1	103	
24	L.72	20	Butt strap	x 0.1	3.0	0.25	6:1	-	
25	L.72	20	Reinforcing angle	x 0.1	2.5	0.25	4:1	-	
26	L.65	357/SS.3075	Channel	0.05	3.0	0.25	6:1	-	
27	L.72	18	Channel	0.05	4.0	0.25	8:1	107	
28	L.72	24	Intercostals	x 0.1	3.0	0.25	6:1	-	
29	L.72	20	Intercostals	x 0.1	3.0	0.25	6:1	-	
30	L.72	18	Intercostals	x 0.1	3.0	0.25	6:1	-	
31	A.V.R.50	28	Jet pipe tunnels	xx 1.0	-	-	-	342	
	D.T.D.571 or D.T.D.166	28	(Prior to Mod.51)	xx 1.0	-	-	-	342	
32	L.72	14	Beam	x 0.05	3.0	-	-	-	
33	L.72	10	Gusset	x 0.05	3.0	-	-	-	
34	L.65	-	Bracket	x 0.05	3.0	-	-	-	
35	L.72	22	Reinforcing plate	x 0.1	3.0	0.25	6:1	-	
36	L.72	20	Fairing skin	0.15	2.5	-	-	103,104	
37	L.72	18	Diaphragm	x 0.1	2.5	-	-	-	
38	L.72	18	Channel stiffeners	0.05	2.5	0.25	6:1	-	
39	L.72	666/SS.1793	Stiffener	0.05	3.0	0.25	8:1	-	
40	L.72	430/SS.1793	Angle	0.05	3.0	-	-	113,114	
41	L.72	112/SS.1793	Angle	0.05	3.0	-	-	113,114	
42	L.65	306/SS.3075	Boom	0.05	3.0	-	-	-	
43	L.72	18	Angle	x 0.05	3.0	-	-	-	
44	L.65	-	Bracket	* 0.05	3.0	-	-	-	
45	L.72	18	Channel	0.05	4.1	0.25	8:1	105,107	
46	L.72	18	Gusset	x 0.05	2.0	-	-	-	
47	L.72	18	Bracket	x -	-	-	-	-	

* No repairs permitted
x More expedient to renew than repair
xx See text in Chap.3
All dimensions are quoted in inches

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KEY TO FIG.311 (contd.)

Item	Material Spec.	S.W.G. or Section	Description	Negligible Damage				Repair Fig.
				Dents Depth	Dist. Apart	Holes Dia.	Pitch Ratio	
48	L. 72	20	Skin angle	0.05	4.0	0.25	8:1	-
49	L. 72	16	Diaphragm	x 0.05	4.0	-	-	-
50	L. 72	20	Diaphragm	x 0.05	4.0	-	-	-
51	L. 72	507/SS. 1793	Stiffener	0.05	4.0	-	-	-
52	L. 72	20	Outer skin	0.1	4.0	-	-	102
53	L. 72	20	Inner skin	0.1	4.0	0.5	8:1	102
54	L. 72	22	Pressing	0.1	4.0	0.5	8:1	-
55	S. 3	18	Reinforcing strip	x 0.05	4.0	-	-	-
56	L. 72	A. S. 1880	Hinge	x -	-	-	-	-
57	D. T. D. 721		Door catch	x -	-	-	-	-
58	L. 72	20	Channel	0.05	4.1	0.25	8:1	-

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

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KEY TO FIG.311A

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
			Dept	Dist. Apart	Dia.	Pitch Ratio		
1	L. 72	20	Stiffening angle	0.05	3.0	0.25	4:1	-
2	L. 72	20	Intercostal	0.1	2.5	0.25	4:1	108
3	L. 72	13b/SS. 1793	Attachment angle	0.05	3.0	0.25	6:1	113
4	L. 65	-	Bracket	*	-	-	-	-
5	L. 72	16	Support angle	0.05	3.0	0.25	6:1	-
6	L. 72	16	Attachment bracket	*	-	-	-	-
7	L. 72	20	Skin	0.05	3.0	0.25	6:1	103, 104
8	L. 72	20	Cross member	0.05	3.0	0.25	6:1	108
9	L. 72	20	Floor support member	0.05	3.0	0.25	6:1	103
10	L. 72	18	Side member	0.05	3.0	0.25	6:1	108
11	L. 65	293/SS. 3075	Angle	0.025	3.0	-	-	-
12	L. 72	20	Stiffening channel	0.05	3.0	0.25	6:1	107
13	L. 72	18	Skin attachment angle	0.05	3.0	-	-	-
14	L. 72	20	Side web	0.1	2.5	0.25	6:1	103, 104
15	L. 72	20	Diaphragm	0.1	2.5	0.25	6:1	115
16	L. 72	20	Angle	x 0.1	2.5	-	-	-
17	L. 72	20	Stiffening ring	0.05	3.0	-	-	-
18	L. 72	18	Support angle	0.5	3.0	0.25	6:1	113
19	D. T. D. 622	450/SS. 3075	Edge member	0.05	3.0	0.25	6:1	-
20	Alum. foil	SS. 4275	Honeycomb	0.05	3.0	-	-	102
21	D. T. D. 88C	-	Support block	* 0.025	3.0	-	-	-
22	L. 72	20	Corner plate	x 0.1	2.5	-	-	-
23	L. 72	24	Top and bottom skins	0.1	2.5	-	-	103
24	L. 72	16	Bracket	* 0.05	3.0	-	-	-
25	L. 72	20	Angle	x 0.05	3.0	-	-	-
26	D. T. D. 410	-	Packing	x 0.05	3.0	-	-	-
27	D. T. D. 423	-	Support channel	0.05	3.0	0.25	6:1	108
28	L. 72	308/SS. 1793	Cross member	0.05	3.0	0.25	6:1	105, 107
29	L. 72	596/SS. 1793	Support channel	0.05	3.0	0.25	6:1	105, 108
30	L. 72	18	Bracket	x 0.05	3.0	-	-	-
31	L. 72	158/SS. 1793	Channel	0.05	3.0	0.25	6:1	105, 108
32	L. 72	486/SS. 1793	Intercostal	x 0.05	3.0	0.25	4:1	-
33	L. 72	18	Angle	x 0.05	3.0	-	-	-
34	L. 72	158/SS. 1793	Intercostal	x 0.05	3.0	0.25	4:1	105, 108
35	L. 72	18	Support angle	0.05	3.0	0.25	6:1	-
36	D. T. D. 423	-	Attachment bracket	* 0.05	3.0	-	-	-
37	L. 72	20	Skin	0.1	2.5	0.25	4:1	103, 104
38	L. 72	20	Angle	x 0.05	3.0	0.25	4:1	-

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

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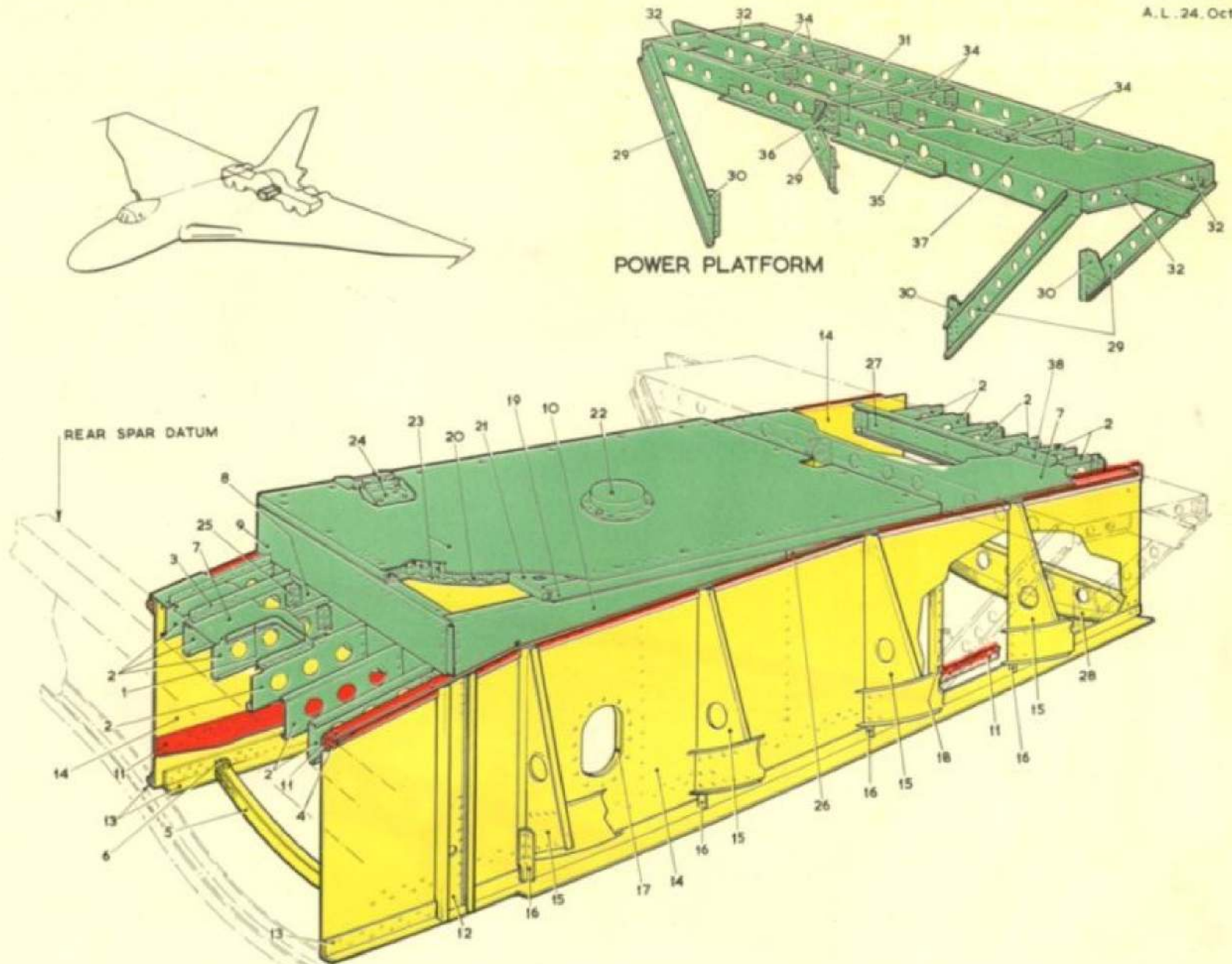


FIG. 311A. LAUNCHING COMPARTMENT (MOD. 10)
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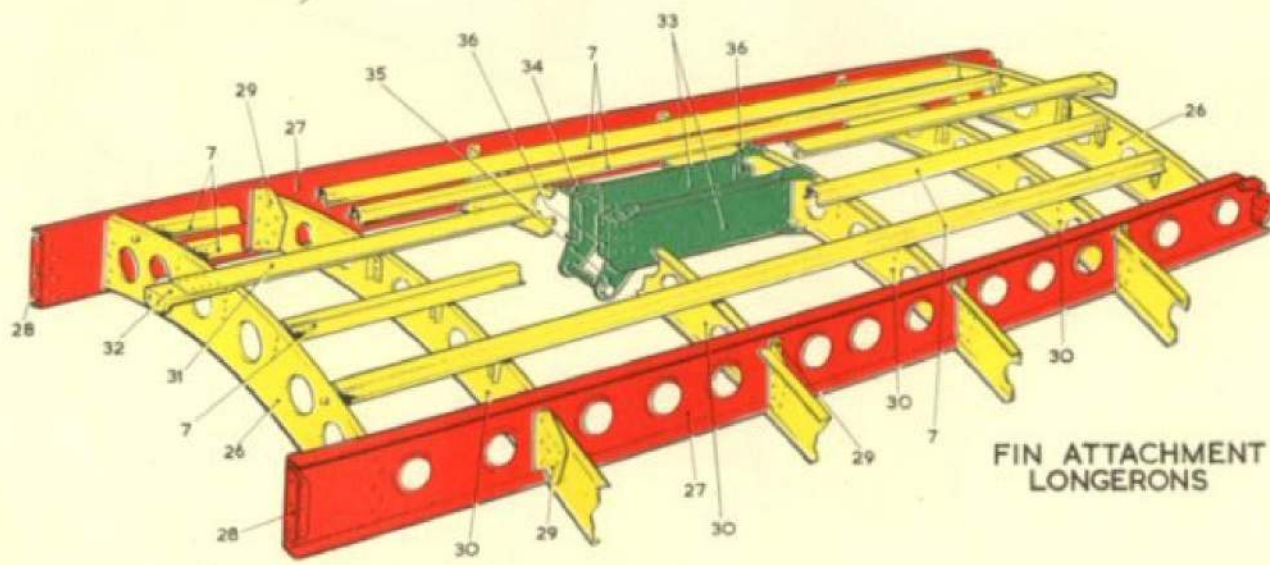
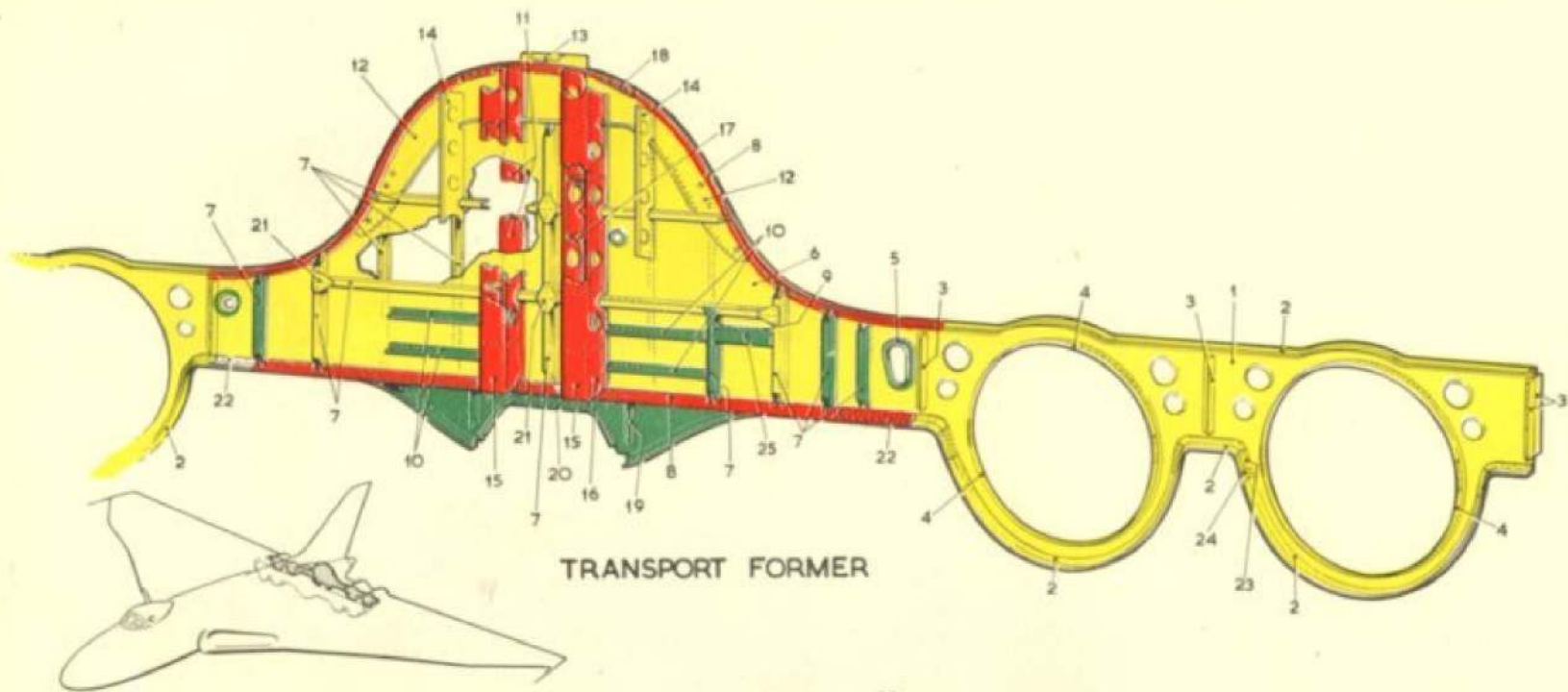
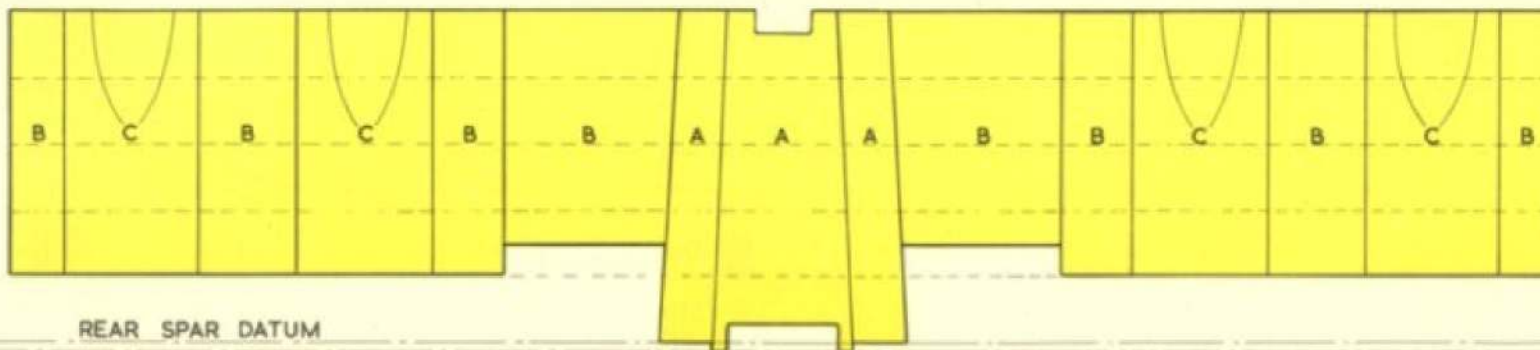


FIG. 311B. STRUCTURE AFT OF REAR SPAR
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Fig. 311B. Structure aft of rear spar

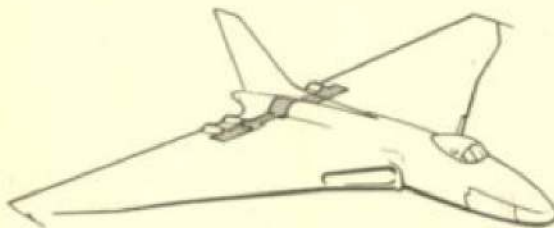
Item	Spec.	Material S.W.G. or Section	Description	Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dents	Dist. Apart		
1	L.73	20	Web	0.10	2.5	0.25	6 : 1	103-104
2	L.65	355/SS.3075	Angle	0.025	3.0	—	—	—
3	L.72	20	Angle	†0.05	3.0	—	—	—
4	L.72	13b/SS.1793	Angle	0.05	3.0	0.25	6 : 1	113
5	L.73	18	Tube support	†0.05	3.0	—	—	—
6	L.73	18	Web	0.05	3.0	0.25	8 : 1	—
7	L.72	211/SS.1793	Stiffener	0.05	3.0	0.25	6 : 1	112
8	L.65	329/SS.3075	Angle	0.025	3.0	—	—	—
9	D.T.D.687	583/SS.1793	Z Section	†0.05	3.0	0.25	6 : 1	—
10	L.72	625/SS.1793	Stiffening angle	0.05	3.0	0.25	6 : 1	113
11	L.65	Light-Alloy	Fin, post support member	*—	—	—	—	—
12	L.73	14	Reinforcing plate	0.05	3.0	0.25	8 : 1	103-104
13	L.73	18	Reinforcing skin	0.05	3.0	0.25	6 : 1	103-104
14	L.72	18	Channel	0.05	3.0	0.25	6 : 1	107-108
15	L.72	20	Back plate	0.05	3.0	0.25	6 : 1	103-104
16	L.72	20	Side member	0.05	3.0	0.25	6 : 1	107-108
17	L.72	20	Diaphragm	†0.05	3.0	0.25	4 : 1	—
18	L.65	Light-alloy	Reinforcing member	†0.025	3.0	—	—	—
19	L.72	13b/SS.1793	Angle	†0.05	3.0	0.25	4 : 1	—
20	L.72	20	Angle	0.05	3.0	0.25	4 : 1	113
21	L.72	18	Gusset	†0.05	3.0	0.25	4 : 1	—
22	D.T.D.124A	12	Joint angle	*—	—	—	—	—
23	L.72	8	Side plate	†—	—	—	—	—
24	L.72	14	Top plate	†—	—	—	—	—
25	L.72	20	Cover plate	†0.05	3.0	0.25	6 : 1	—
26	L.72	18	Intercostal	0.05	3.0	0.25	6 : 1	—
27	L.72	16	Longeron	0.025	3.0	0.25	8 : 1	105
28	L.72	16	Bracket	†0.025	3.0	—	—	—
29	L.72	16	Bracket	†0.025	3.0	—	—	—
30	L.72	455/SS.1793	Former channel	0.05	3.0	0.25	6 : 1	105
31	L.65	325/SS.3075	Tee stringer	0.05	3.0	0.25	6 : 1	—
32	D.T.D.88c	Mag.-al. forging	Attachment bracket	*0.025	3.0	—	—	—
33	L.72	18	Intercostal	0.05	3.0	0.25	6 : 1	107-108
34	L.72	18	Gusset	†0.05	2.0	—	—	—
35	L.72	10	Reinforcing plate	*0.025	3.0	—	—	—
36	L.72	18	Attachment angle	†0.05	3.0	—	—	—

* No repairs permitted
† More expedient to renew
All dimensions in inches



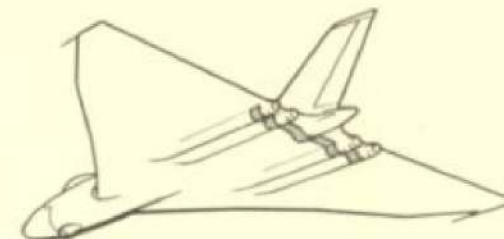
REAR SPAR DATUM

TOP SURFACE SKINS



NOTE: DAMAGE IN AREAS OF CONCENTRATED RIVETING MUST BE REPAIRED WITH JOINTS ARRANGED OUTSIDE THE AREA

SEE TEXT IN CHAP I FOR SKIN REPAIRS AND WEATHERPROOFING. FOR METHOD OF REPAIR SEE FIG. 103, 116, 117.

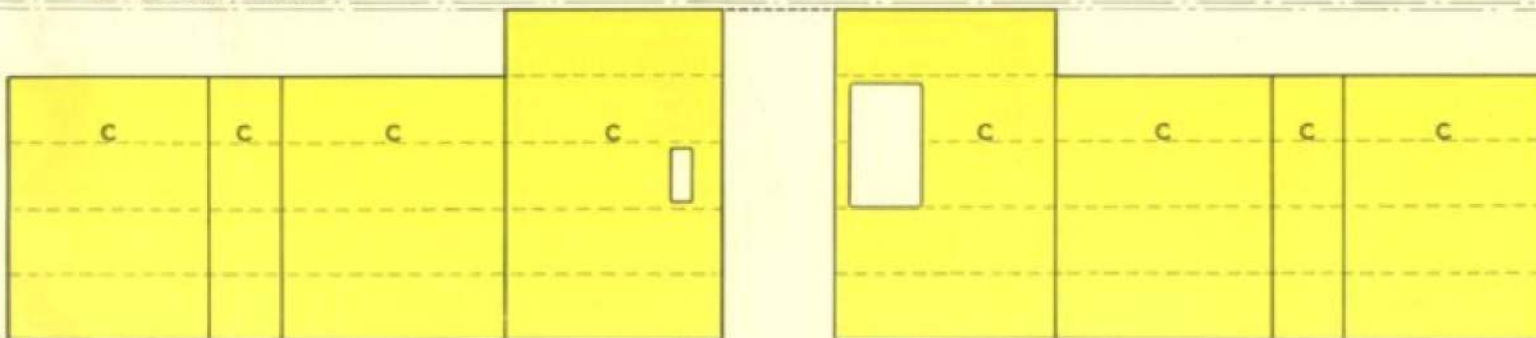


SKIN REFERENCE		
LETTER	S.W.G.	MAT. SPEC.
A	18	D.T.D. 687
B	20	D.T.D. 687
C	20	L72

SKIN LIMITS		
NEGLIGIBLE	DAMAGE	
COLOUR.	DENTS.	DIST. APART.
RED.	—	—
YELLOW.	0-10	2-5
GREEN.	—	—

ALL DIMENSIONS IN INCHES.

REAR SPAR DATUM



BOTTOM SURFACE SKINS

Fig.312 Skinning aft of rear spar
RESTRICTED

Fig. 313. Leading edge intake and skins

Item	Spec.	Material S.W.G. or Section	Description	Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dents Dist. Apart	Dia.		
1	L.72	24	Separator web	0.15	2.5	—	—	—
2	L.72	22	Separator web	0.15	2.5	—	—	103-104
3	L.72	663/SS.1793	Separator angle	0.15	2.5	—	—	—
4	L.72	13b/SS.1793	Separator angle	0.15	2.5	—	—	113
5	L.73	22	Web	0.15	3.0	2.5	6:1	103-104
6	L.72	759/SS.1793	Skin angle	0.05	3.0	—	—	—
7	L.73	605/SS.1793	Skin angle	0.10	3.0	—	—	—
8	L.73	16	Centre web	0.05	3.0	0.25	6:1	103-104
9	L.72	13b/SS.1793	Attachment angle	0.10	3.0	—	—	113
10	L.72	85/SS.1793	Stiffener	0.10	3.0	—	—	—
11	L.72	18	Reinforcing angle	0.10	3.0	—	—	—
12	L.72	20	Web	0.10	3.0	0.25	8:1	103-104
*13	L.72	811/SS.1793	Spar boom	0.10	3.0	—	—	—
14	L.73	18	Web reinforcing	†0.10	3.0	0.25	6:1	—
15	L.72	22	Rib web	0.15	3.0	0.25	4:1	103-106
16	L.72	620/SS.1793	Rib angle	†0.10	3.0	—	—	—
17	L.72	24	Rib web	0.15	3.0	0.25	4:1	103-106
18	L.72	20	Rib angle	†0.10	3.0	—	—	—
19	L.72	18	Rib web	0.10	3.0	—	4:1	103-106
20	L.73	12	Rib angle	†0.10	3.0	—	—	—
21	L.72	211/SS.1793	Top hat stiffener	0.10	3.0	0.25	6:1	112
22	L.72	20	Intercostal web	†0.10	3.0	0.25	4:1	—
23	L.72	14	Joint straps	†0.05	3.0	—	—	—
24	L.65	58/SS.3075	T-stringer	0.10	3.0	—	—	—
25	L.72	664/SS.1793	Rib angle	†0.10	3.0	—	—	—
26	L.53	Al-alloy	Nose rib casting	*0.05	3.0	—	—	—
27	L.72	1/SS.4127	Corrugated skin	*0.10	2.5	—	—	—
28	L.72	14	Leading edge skins	*0.05	3.0	—	—	—
29	L.72	14	Fairings	0.05	3.0	—	—	—
30	L.72	14	Nose skins	0.05	3.0	—	—	—
31	L.72	14	Fairing	0.05	3.0	—	—	—
32	L.59	16	Ducting	†0.10	3.0	—	—	—
33	L.59	18	Ducting	†0.10	3.0	—	—	—
34	L.72	18	Inner skins	0.05	3.0	—	—	—

* No repairs permitted
† More expedient to renew
All dimensions in inches

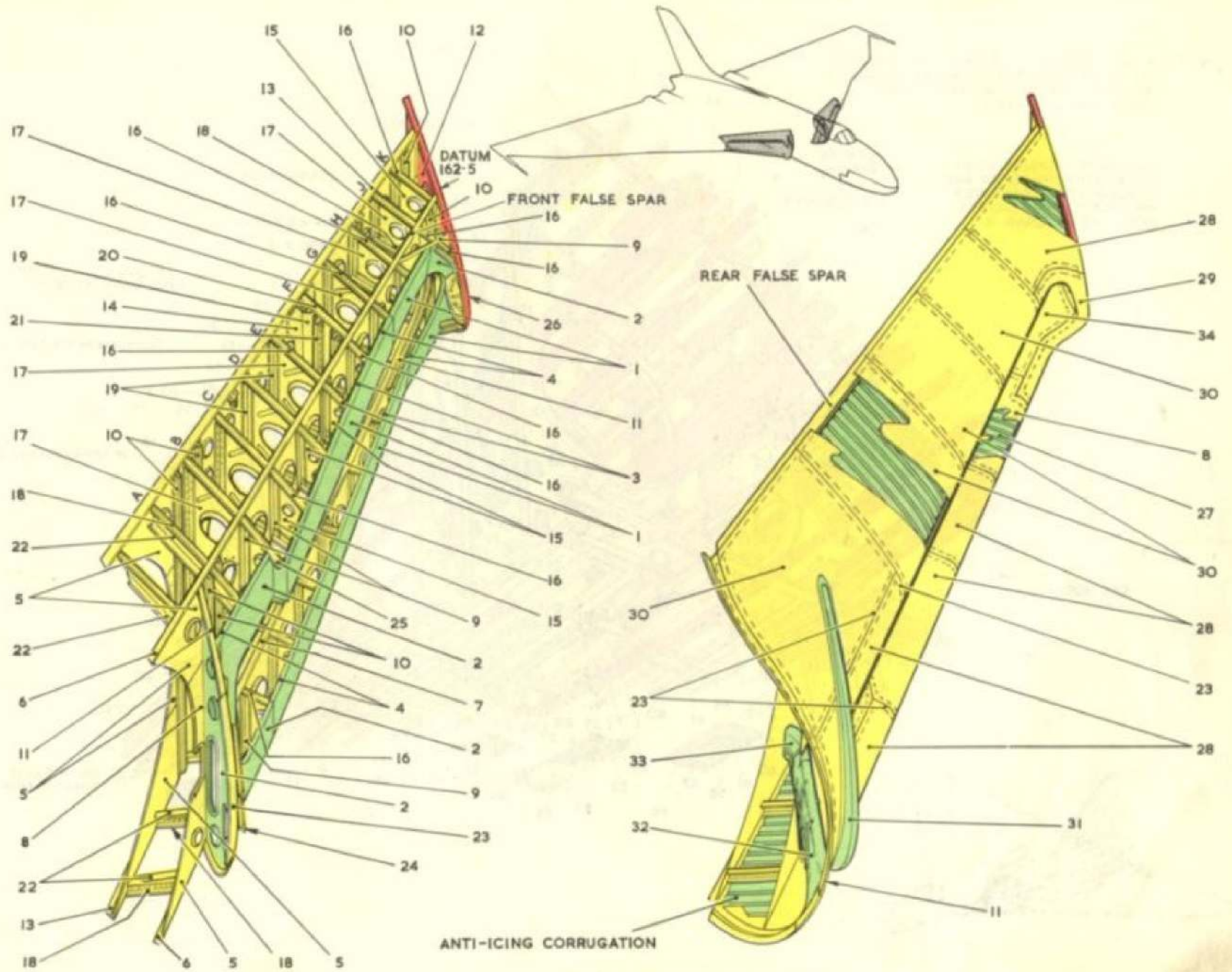


Fig. 313. Leading edge intake and skins
RESTRICTED

NOTE: WHEN REPLACING OR MANUFACTURING ITEMS 47 AND 48 THE MATERIAL GAUGE REQUIRED SHOULD BE ASCERTAINED FROM THE OLD ITEM.

ALL SKIN REPAIRS MUST BE WEATHERPROOFED AND SEALED AT 'T' STRINGER AND BUTT STRAP JOINTS. SEE TEXT IN CHAP. 3.

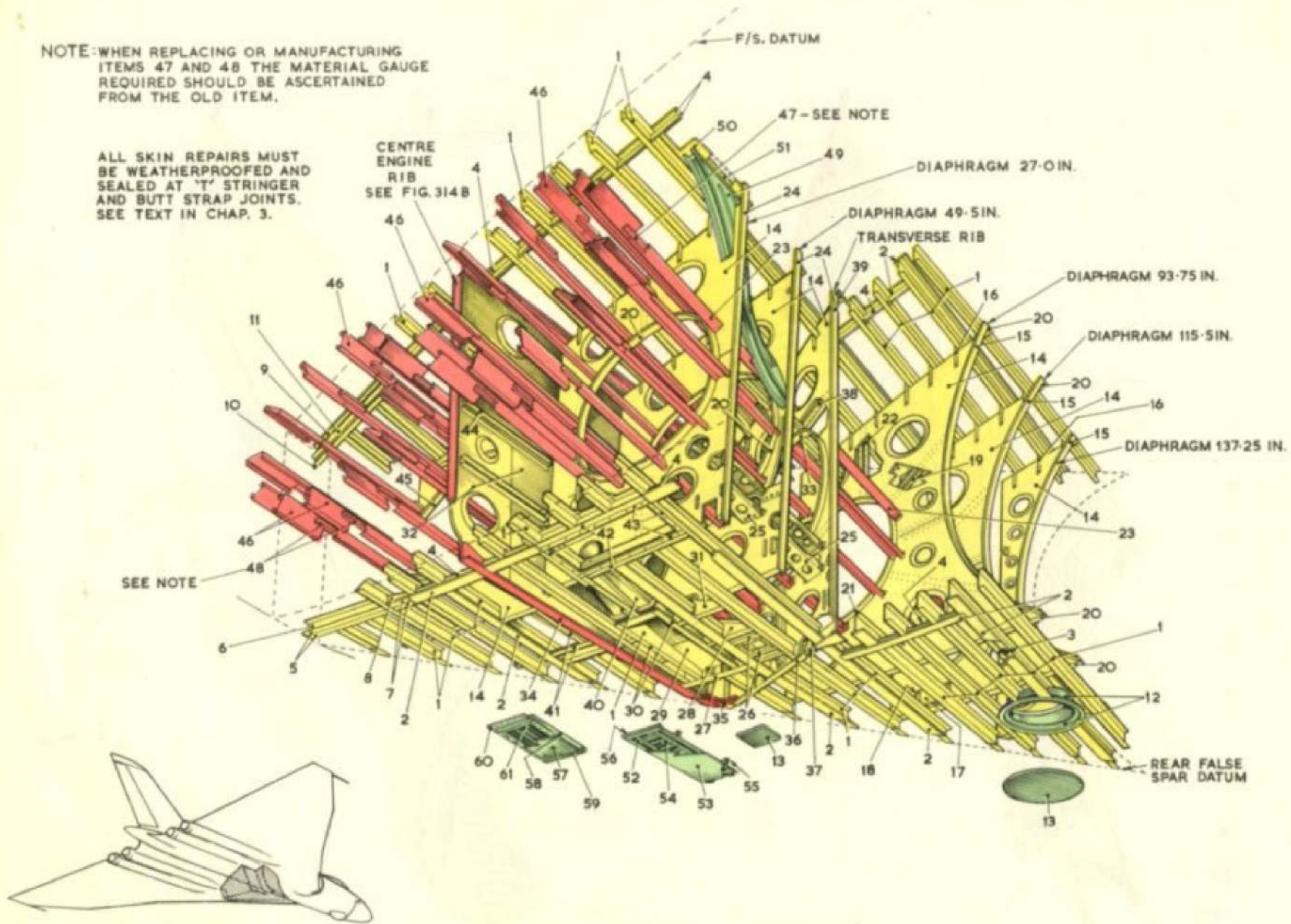


Fig. 314. Air intake forward of front spar
RESTRICTED

Key to Fig. 314. Air intake forward of front spar

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	L.72	20	Stringers	0.05	6.0	0.25	8:1	108
2	DTD.626	18	Joint straps	0.05	6.0	0.25	8:1	—
3	L.72	874/SS/1793	Angle	0.05	6.0	0.25	8:1	as 113
4	L.72	67/SS/1793	Intercostal angles	0.05	6.0	0.25	8:1	as 113
5	L.72	410/SS/1793	Angles	0.05	6.0	0.25	8:1	as 113
6	L.72	20	Web	0.05	6.0	0.25	8:1	as 108
7	L.72	386/SS/1793	Angle	10.05	6.0	0.25	8:1	—
8	L.72	22	Web	10.05	6.0	0.25	8:1	—
9	L.72	18	Angles	0.05	6.0	0.25	8:1	as 113
10	L.72	18	Intercostal	10.05	6.0	0.25	8:1	—
11	L.72	20	Angle	0.05	6.0	0.25	8:1	as 113
12	L.72	18	Aerial mounting assembly	0.10	6.0	0.50	8:1	—
13	Y.227	Fibre Glass	Window	—	—	—	—	—
14	L.72	22	Diaphragm web	0.10	6.0	0.5	8:1	103, 104, 106
15	L.72	912/SS/1793	Attachment angles	0.05	6.0	0.25	8:1	as 113, 114
16	L.72	18	Attachment angles	10.05	6.0	0.25	8:1	—
17	L.72	16	Gusset	10.05	6.0	0.25	8:1	—
18	L.72	20	Stiffening plate	10.05	6.0	0.25	8:1	—
19	L.72	186/SS/1793	Web stiffener	0.05	6.0	0.25	8:1	—
20	L.72	20	Angle	0.05	6.0	0.25	8:1	as 113
21	L.72	20	Angle	—	—	—	—	as 113
22	L.72	211/SS/1793	Top hat stiffener	0.05	6.0	0.25	8:1	112
23	L.72	20	Intercostals	† —	—	—	—	—
24	L.72	136/SS/1793	Attachment angles	0.05	6.0	0.25	8:1	113
25	L.72	18	Channels	10.05	6.0	0.25	8:1	—
26	L.72	20	Intercostals	10.05	6.0	0.25	8:1	—
27	L.72	20	Stiffener	0.10	6.0	0.5	8:1	—
28	L.72	20	Intercostal	0.10	6.0	0.5	8:1	103, 108
29	L.59	18	Cover plate	0.10	6.0	0.5	8:1	103
30	L.59	18	Flange angle	0.05	6.0	0.25	8:1	—
31	L.72	20	Stiffening plate	0.05	6.0	0.25	8:1	103, 108
32	L.72	20	Rib web	0.10	6.0	0.5	8:1	103, 104, 106
33	L.73	20	Tunnel angle	0.05	6.0	0.25	8:1	as 113
34	L.73	10	Rib angles (See Fig. 314B)	—	—	—	—	—
35	DTD.130	Al. alloy	Bracket	* —	—	—	—	—
36	L.73	20	Outer angle	0.05	6.0	0.25	8:1	—
37	L.73	16	Inner angle	0.05	6.0	0.25	8:1	—
38	L.73	14	Tunnel angle	—	—	—	—	—
39	L.72	16	Gusset plate	10.05	6.0	—	—	—
40	L.59	20	Diffuser	0.05	6.0	0.25	8:1	103
41	L.72	20	Support members for air extractors	10.05	6.0	0.25	8:1	—
42	L.72	20	Angle	0.05	6.0	0.25	8:1	113
43	L.72	18	Angle	0.05	6.0	0.25	8:1	113
44	L.72	379/SS/1793	Stiffener	0.05	6.0	0.25	8:1	as 112
45	L.72	60/SS/1793	Tunnel angle	0.05	6.0	0.25	8:1	113
46	L.72	667/SS/1793	Intercostal	—	—	—	—	—
47	L.72	18	Channels	10.025	6.0	0.25	8:1	—
48	L.72	16	Channels (See Note on Fig. 314)	10.025	6.0	0.25	8:1	—
49	L.72	20	Air bleed ducting	0.10	6.0	—	—	—
50	DTD.626	17	Reinforcing plate	10.05	6.0	0.25	8:1	—
51	L.59	17	Attachment plate	10.05	6.0	0.25	8:1	—
52	L.72	500/SS/1793	Door stiffener	0.05	6.0	0.25	8:1	—
53	L.72	20	Bottom skin	0.10	6.0	—	—	103

RESTRICTED

Key to Fig. 314. Air intake forward of front spar (contd.)

Item	Spec.	Material S.W.G. or Section	Description	Dents Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dist Apart	Dia.		
54	L.72	24	Top skin	0.10	6.0	0.5	8 : 1	103
55	L.65	Al. alloy	Hinge arm	*0.05	6.0	—	—	—
56	KO.118	Tubular	Lintex seal	† —	—	—	—	—
57	L.72	18	Skin panel	0.10	6.0	—	—	103
58	L.72	20	Door member	0.05	6.0	—	—	—
59	L.72	20	Door member	0.05	6.0	—	—	—
60	DTD.390	AS.1880	Door hinge	10.05	6.0	—	—	—
61	L.72	20	Centre member	0.05	6.0	—	—	—

* No repairs permitted
 † More expedient to renew
 All dimensions in inches

NOTE:- DAMAGE IN AREAS OF CONCENTRATED RIVETING MUST BE REPAIRED WITH JOINTS ARRANGED OUTSIDE THE AREA.

ALL SKIN REPAIRS MUST BE WEATHERPROOFED (SEE CHAR 1, PARAS. 134 TO 137).

FOR REPAIRS SEE FIG. 103 AND 104.

SKIN REFERENCE

LETTER	S.W.G.	MAT. SPEC.
A	17	D.T.D. 626
B	17	L.72
C	18	D.T.D. 626
D	14	L.72

LIMIT TABLE

NEGLECTIBLE DAMAGE		
COLOUR	DENTS	DIST. APART
RED	—	—
YELLOW	0.025	3.0
GREEN	—	—

ALL DIMENSIONS IN INCHES

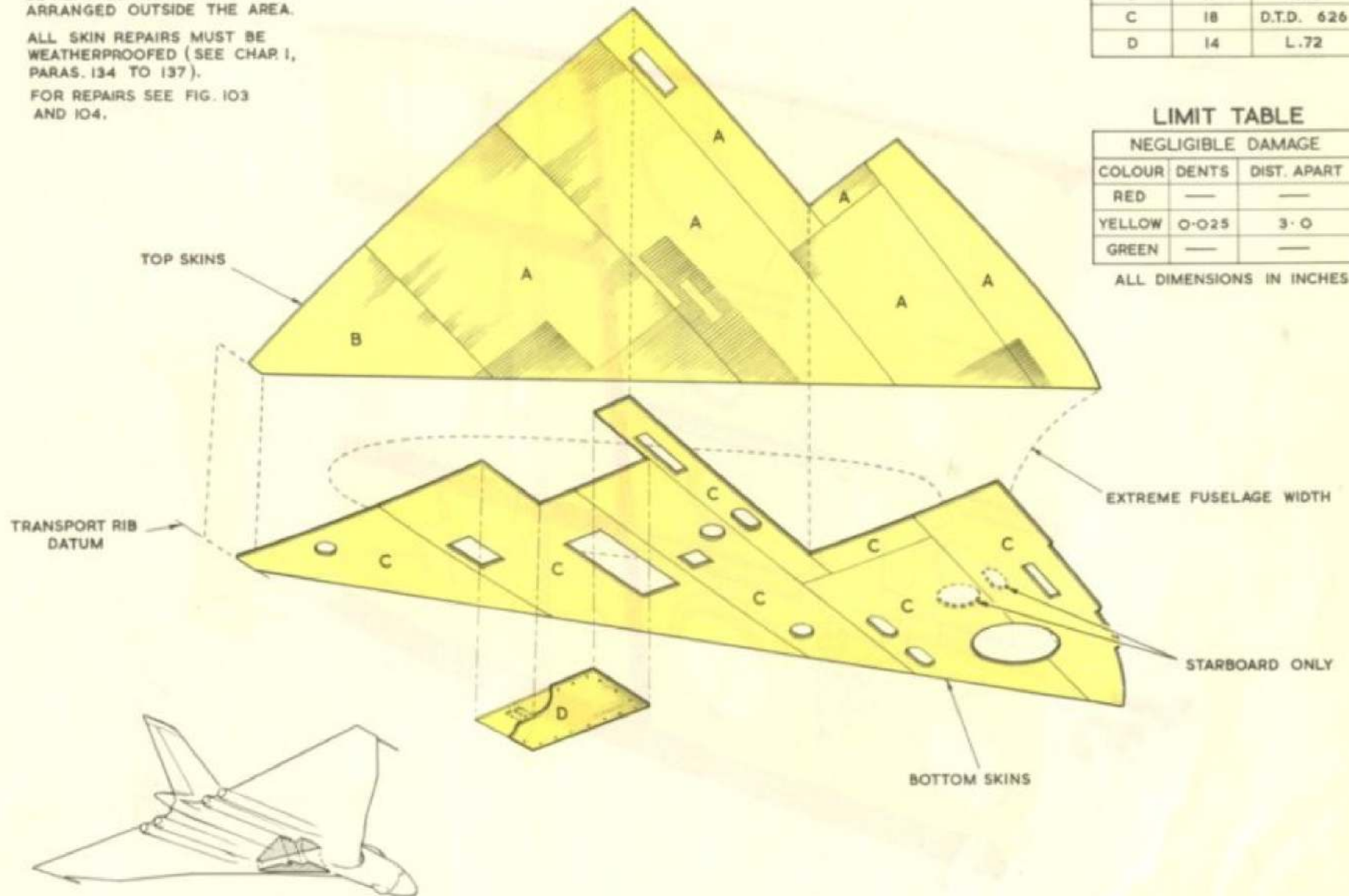


Fig. 314A. Intake structure outer skins

RESTRICTED

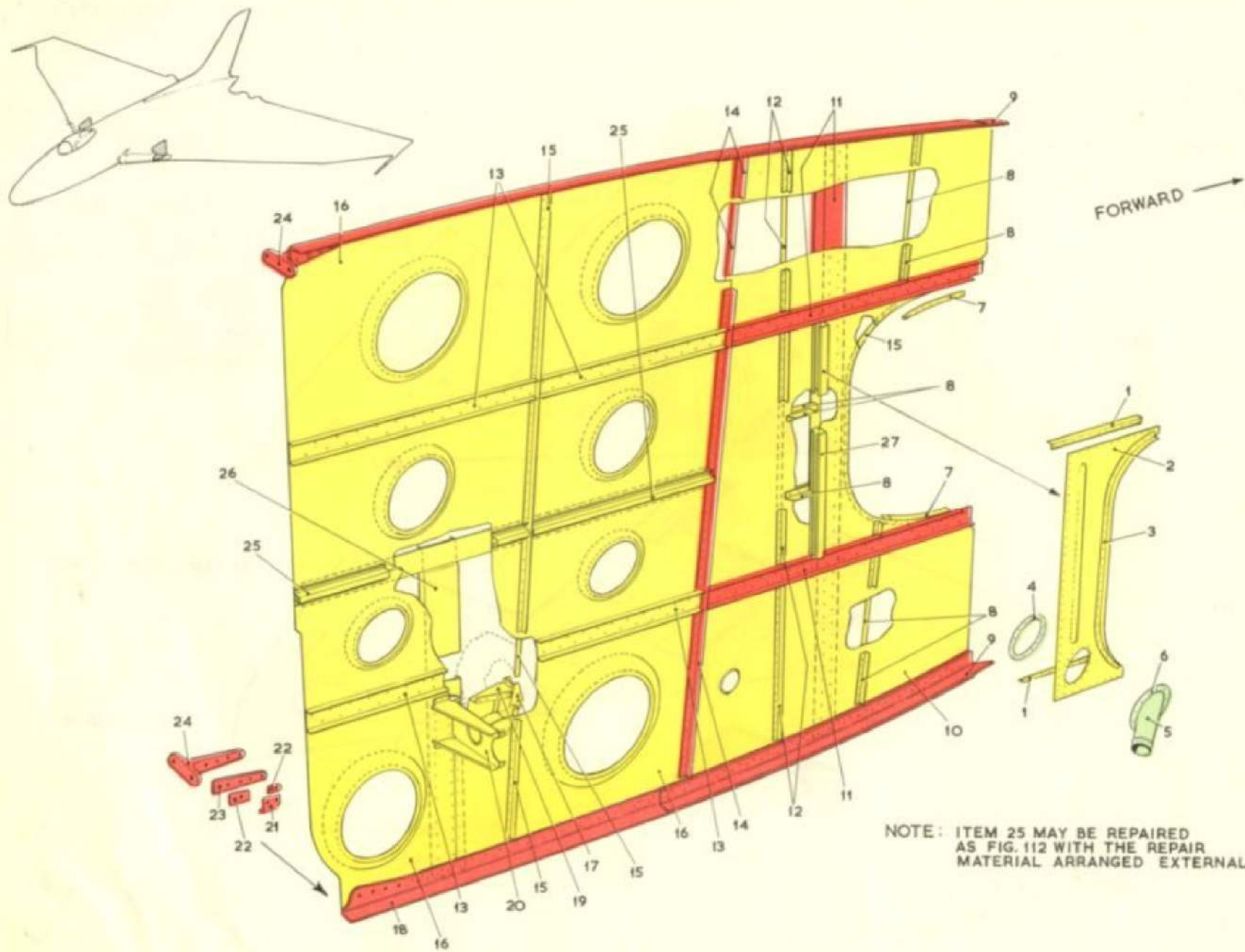


Fig 314B. Forward portion-Centre engine rib
RESTRICTED

KEY TO FIG.314B

Item	Material		Description	Depth	Negligible Damage			Repair Fig.
	Spec.	S.W.G. or Section			Dents	Holes		
					Dist. Apart	Dia.	Pitch Ratio	
1	L. 72	22	Angle	x 0.05	6.0	0.125	10:1	113
2	L. 72	24	Plate	0.05	4.0	0.25	8:1	103
3	L. 72	133/SS. 1793	Angle	0.05	6.0	0.125	10:1	113
4	L. 72	20	Reinforcing plate	x 0.05	6.0	0.125	10:1	
5	L. 54	Tubing	Stub pipe	x 0.05	6.0	-	-	
6	L. 59	18	Plate	x 0.05	6.0	0.125	10:1	
7	L. 72	18	Angle	x 0.05	6.0	0.125	10:1	113
8	L. 72	20	Angle	0.05	6.0	0.125	10:1	113
9	L. 73	12	Beam reinforcing angles	0.025	8.0	-	-	
10	L. 73	16	Web	0.05	8.0	0.125	10:1	103, 104, 106
11	L. 73	10	Channel member	0.025	8.0	-	-	107, 108
12	L. 72	13b/SS. 1793	Angle	0.05	6.0	0.125	10:1	113
13	L. 72	100/SS. 1793	Channel member	0.05	8.0	0.125	10:1	107, 108
14	L. 73	10	Angle	0.025	8.0	-	-	113
15	L. 72	13b/SS. 1793	Angle	0.05	6.0	0.125	10:1	113
16	L. 72	20	Web	0.05	8.0	0.25	10:1	103, 104, 106
17	L. 72	14	Bracket	x 0.025	8.0	0.125	10:1	
18	L. 73	10	Boom angles	0.025	8.0	-	-	
19	L. 72	18	Bracket	x 0.05	8.0	0.125	10:1	
20	L. 72	18	Support bracket	x 0.05	6.0	0.125	8:1	
21	L. 72	18	Angle	x 0.025	6.0	-	-	
22	L. 72	18	Packing piece	x 0.025	6.0	-	-	
23	L. 72	14	Packing piece	x 0.025	6.0	-	-	
24	L. 65 or D. T. D. 683	Forging	Bracket	* -	-	-	-	
25	L. 72	379/SS. 1793	Top hat section stiffeners	0.05	8.0	0.125	10:1	See Note on Fig. 314B
26	L. 72	20	Stiffener	0.05	8.0	0.125	10:1	107, 108
27	L. 72	129/SS. 1793	Channel member	x 0.05	6.0	0.125	8:1	

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.315

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Dist. Apart	Holes	Pitch Ratio	
1	L. 72	24	Intercostal web	0.05	2.5	0.25	4:1	103, 115
2	L. 72	525/SS. 1793	Skin angle	-	-	0.125	4:1	-
3	L. 72	18	Stiffening bracket	x 0.05	2.5	0.25	4:1	-
4	L. 72	386/SS. 1793	Bottom angles	-	-	0.125	4:1	-
5	D. T. D. 364B D. T. D. 683	-	Attachment bracket	* 0.02	-	-	-	-
6	L. 72	22	Reinforcing skins	0.1	2.5	1.0	8:1	103, 104
7	L. 72	16	Stiffeners	x 0.1	2.5	0.25	4:1	-
8	L. 72	18	Diaphragm	0.1	2.5	0.25	4:1	-
9	L. 72	20	Intercostal web	0.1	2.5	0.25	4:1	103, 115
10	L. 72	16	Skin angle	-	-	0.125	4:1	-
11	L. 72	18	Bracket	x 0.05	2.5	0.25	4:1	-
12	L. 72	66/SS. 1793	Angle	-	-	0.125	4:1	-
13	D. T. D. 687	22	Bulkhead web (green) (yellow)	0.3 0.1	2.5 2.5	- 0.25	- 4:1	103, 104 103, 104
14	L. 72	112/SS. 1793	Stiffening ring	0.1	2.5	-	-	-
15	L. 72	530/SS. 1793	Skin angle	0.1	2.5	0.125	4:1	-
16	D. T. D. 687	20	Reinforcing ring	0.1	2.5	-	-	-
17	L. 72	20	Support bracket	0.1	2.5	0.25	4:1	-
18	L. 72	20	Formers	0.1	2.5	0.25	4:1	-
19	L. 72	18	Intake skin	0.1	2.5	-	-	103, 104
20	L. 72	18	Stiffener	0.1	2.5	0.25	4:1	112
21	L. 33	-	Half ring	0.1	2.5	0.25	4:1	-
22	L. 72	18	Retaining ring	0.1	2.5	0.25	4:1	-
23	L. 72	20	Side support bracket	x 0.1	2.5	0.25	4:1	-
24	L. 72	12c/SS. 1793	Angle	0.1	2.5	0.125	4:1	113
25	L. 72	18	Angle	0.1	2.5	0.125	4:1	-
26	L. 72	976/SS. 1793	Angle	0.1	2.5	0.125	4:1	-
27	L. 72	667/SS. 1793	Stringer	x 0.1	2.5	0.125	4:1	-
28	L. 72	816/SS. 1793	Channel	x 0.1	2.5	0.125	4:1	-
29	L. 72	12b/SS. 1793	Angle stiffener	0.1	2.5	0.125	4:1	113
30	L. 72	18	Joint angle	x 0.1	2.5	-	-	-
31	L. 73	18	Web	0.05	2.5	0.25	4:1	103, 115
32	L. 73	689/SS. 1793	Angle	0.05	2.5	0.25	4:1	-
33	L. 73	688/SS. 1793	Angle	0.05	2.5	0.25	4:1	-
34	D. T. D. 364B D. T. D. 683	-	Side load bracket	* 0.2	-	-	-	-
35	L. 72	16	Bracket	x 0.1	2.5	0.25	4:1	-
36	L. 72	304/SS. 1793	Angle	0.05	2.5	0.25	4:1	-
37	L. 72	22	Web	0.05	2.5	0.25	4:1	103, 115
38	L. 72	20	Bracket	x 0.1	2.5	0.25	4:1	-
39	L. 72	379/SS. 1793	Top hat stringers	0.1	2.5	0.125	4:1	112
40	L. 72	249/SS. 1793	Angle	0.05	2.5	0.125	4:1	-
41	L. 72	20	Diaphragm	x 0.1	2.5	0.5	4:1	-
42	L. 72	20	Angle	x 0.05	2.5	0.25	4:1	-

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

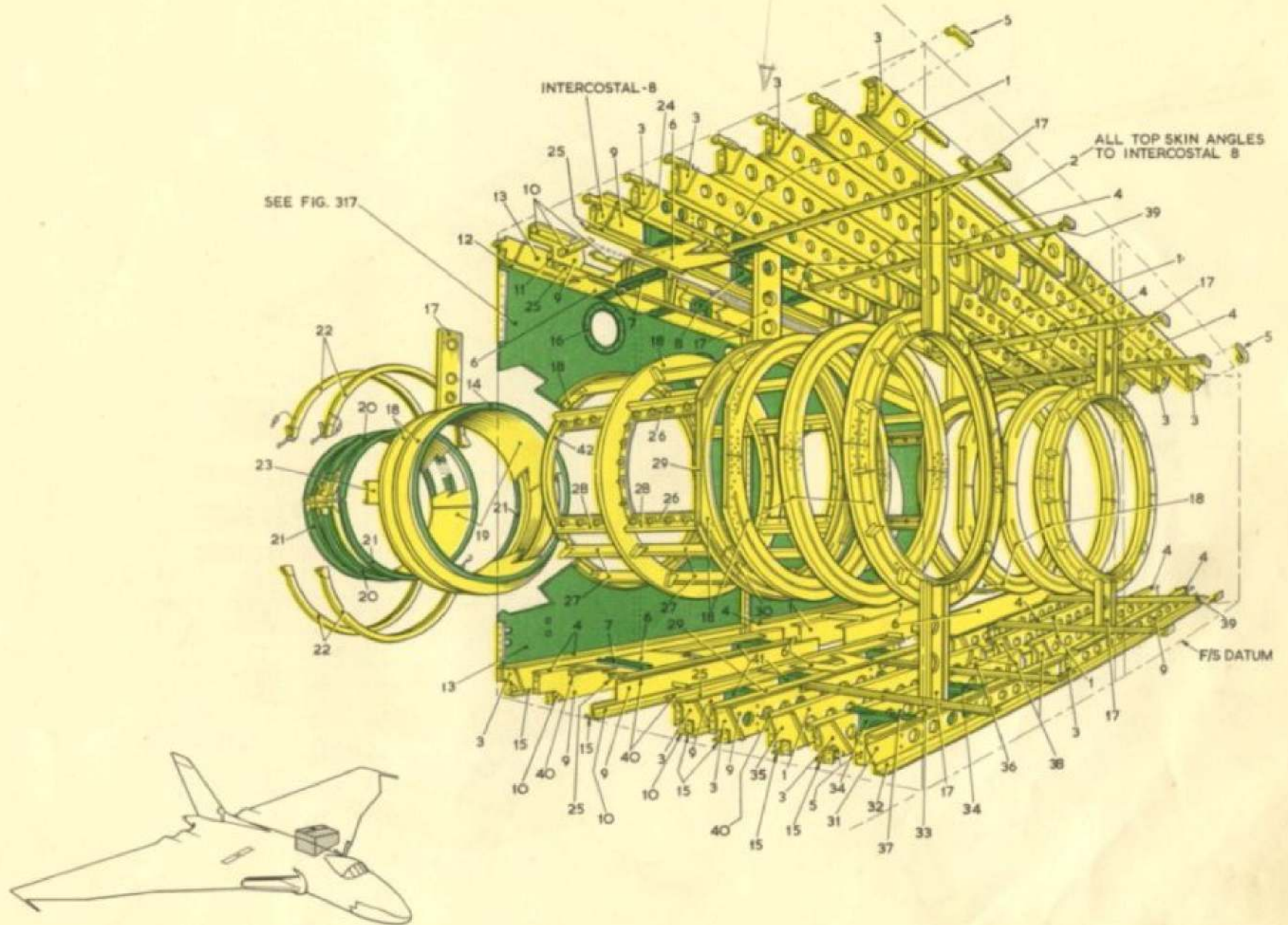
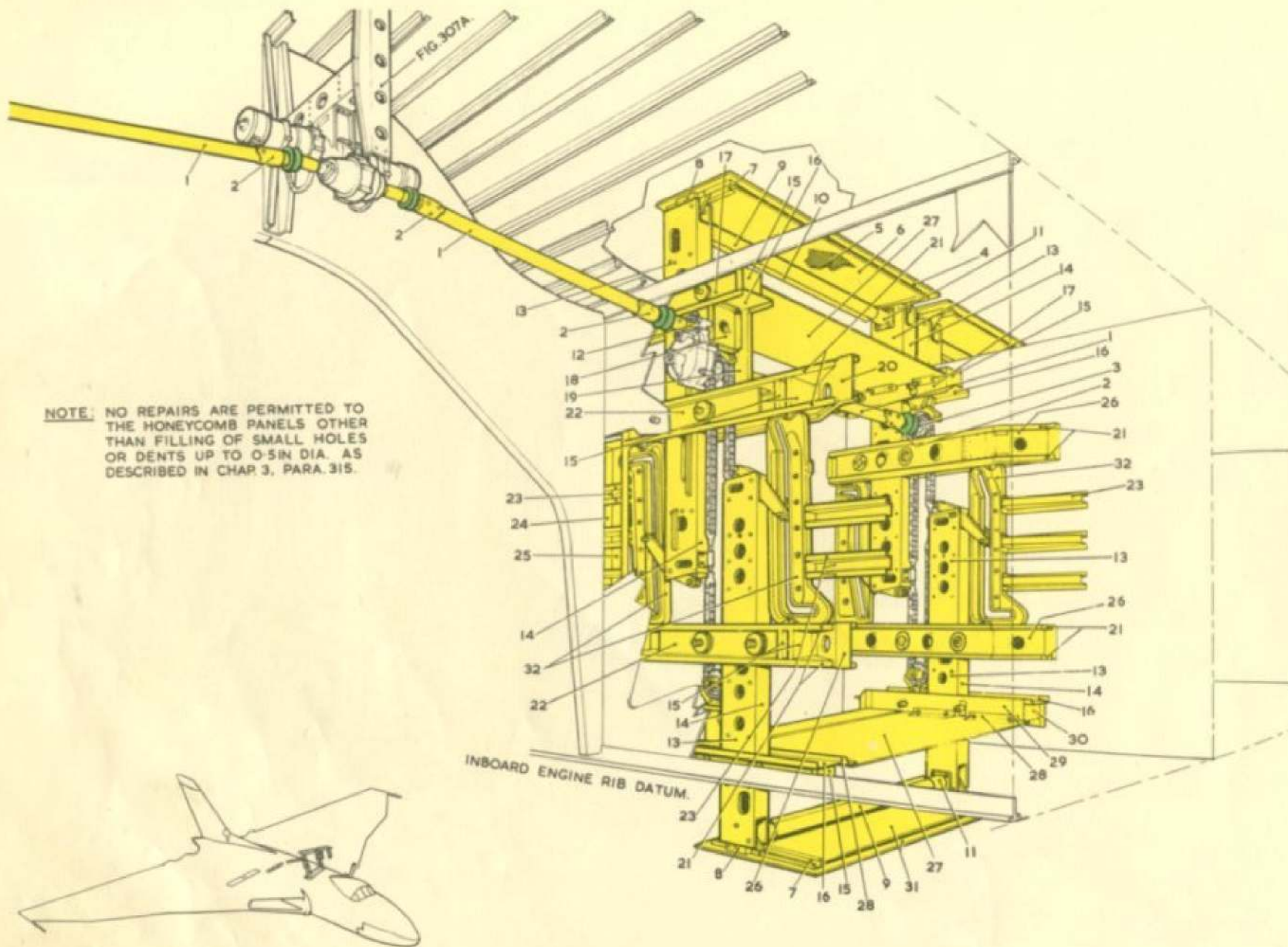


Fig.315 - Intake aft of front spar
RESTRICTED

(A.L./2, June 58)



Key to fig. 315A. Airbrake structure

Item	Spec.	Material S.W.G or Section	Description	Depth	Dents		Negligible Damage		Repair Fig. No.
					Dist. Apart	Dia.	Holes Pitch Ratio		
1	T.45	20	Torque shaft	+0.025	3.0	—	—	—	—
2	T.45	17	Sleeve	+0.025	3.0	—	—	—	—
3	S.1	M.S. bar	Adapter	+0.025	3.0	—	—	—	—
4	L.73	17	Top skin	+0.025	3.0	—	—	—	—
5	—	11/SS/4282 11/SS/4275	Honeycomb	† —	—	—	—	—	—
6	L.73	17	Inner skin	+0.025	3.0	—	—	—	—
7	L.73	16	Side member	+0.025	3.0	—	—	—	—
8	BSS.668	—	Stops	+0.025	3.0	—	—	—	—
9	L.63	20	Bracing tube	0.025	3.0	—	—	—	—
10	L.72	929/SS/1793	Angle	0.025	3.0	—	—	—	—
11	L.65	Al. alloy	Spigot	+0.025	3.0	—	—	—	—
12	S.96	Bar	Adapter	+0.025	3.0	—	—	—	—
13	L.73	8	Side plato	0.025	3.0	0.25	8:1	—	—
14	DTD.683	408/SS/3075	Channel	0.025	3.0	0.25	8:1	—	—
15	L.72	18	Diaphragm	+0.05	3.0	0.25	8:1	—	—
16	L.72	18	Box members	0.05	3.0	0.25	8:1	—	—
17	L.72	18	Side channel	0.05	3.0	0.25	8:1	—	—
18	L.73	16	Diaphragm	+0.05	3.0	0.25	8:1	—	—
19	L.73	16	Mounting channel	0.05	3.0	0.25	8:1	—	—
20	L.72	16	Side channel	0.05	3.0	0.25	8:1	—	103
21	L.72	18	Upper and lower channels	0.05	3.0	0.25	8:1	—	—
22	L.72	18	Channel	0.05	3.0	0.25	8:1	—	—
23	L.72	18	Buttress	+0.05	3.0	0.25	6:1	—	—
24	L.72	20	Sealing intercostal	0.05	3.0	0.25	6:1	—	—
25	L.72	20	Skin	0.05	3.0	—	—	—	—
26	L.72	441/SS/1793	Channel	0.05	3.0	0.25	8:1	—	—
27	L.72	20	Skin panel	0.10	3.0	—	—	—	103
28	L.72	18	Attachment angle	+0.05	3.0	0.25	8:1	—	—
29	DTD.687	12	Side plate	0.05	3.0	0.25	8:1	—	103
30	L.72	22	Reinforcing	+0.10	3.0	0.25	6:1	—	—
31	L.73	18	Skins	+0.05	3.0	—	—	—	—
32	DTD.304 or L.53	Al. alloy	Cam track	* 0.05	3.0	—	—	—	—

* No repairs permitted
† More expedient to renew
‡ See note on fig. 315A
All dimensions in inches

RESTRICTED

Key to Fig. 316. Air intake tunnels

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	L.72	20	Tunnel skin	—	—	—	—	116
2	L.72	20	Joint strap	—	—	—	—	—
3	L.72	22	Tunnel skins	—	—	—	—	—
4	L.72	20	Anti-icing fairing	—	—	—	—	116
5	L.72	20	Nose skins	—	—	—	—	—
6	L.59	20	Intake bleed duct	0.05	—	—	—	—
7	BS.668	—	Fairing block	† —	6.0	—	—	—
8	L.72	20	Duct angles	—	—	—	—	—
9	L.72	17/SS/1793	Stiffener	† 0.030	6.0	—	—	—
10	L.72	22	Stiffening angle	† 0.030	6.0	0.125	16 : 1	—
11	L.72	22	Panel	† 0.050	6.0	—	—	—
12	L.72	18	Access panel	—	—	—	—	—
13	L.72	14	Packer	—	—	—	—	—
14	L.72	24	Duct, web	† 0.050	6.0	—	—	—
15	L.72	129/SS/1793	Duct, channel	0.050	6.0	—	—	—
16	L.72	112/SS/1793	Angle	0.030	6.0	0.125	16 : 1	—
17	L.72	22	Web	0.050	6.0	0.25	8 : 1	103
18	L.73	10	Channel	0.025	6.0	0.125	16 : 1	—
19	L.72	20	Intercostals	† 0.050	6.0	0.25	8 : 1	—
20	L.59	20	Stub pipe	† 0.025	6.0	—	—	—
21	L.72	60/SS/1793	Angle	0.025	6.0	—	—	—
22	DTD.626	17	Tunnel skins	—	—	—	—	—
23	L.72	10	Channel	† 0.025	6.0	—	—	116
24	L.72	26	Packing	—	—	—	—	—
25	L.72	22	Butt straps	* —	—	—	—	—
26	L.72	20	Angle	† 0.025	6.0	—	—	—
27	L.72	133/SS/1793	Angle	0.025	6.0	—	—	—
28	L.72	13b/SS/1793	Angle	0.025	6.0	—	—	—
29	L.72	18	Angle	0.025	6.0	—	—	113
30	L.72	601/SS/1793	Angle	0.025	6.0	—	—	—

* No repairs permitted
† More expedient to renew
All dimensions in inches

RESTRICTED

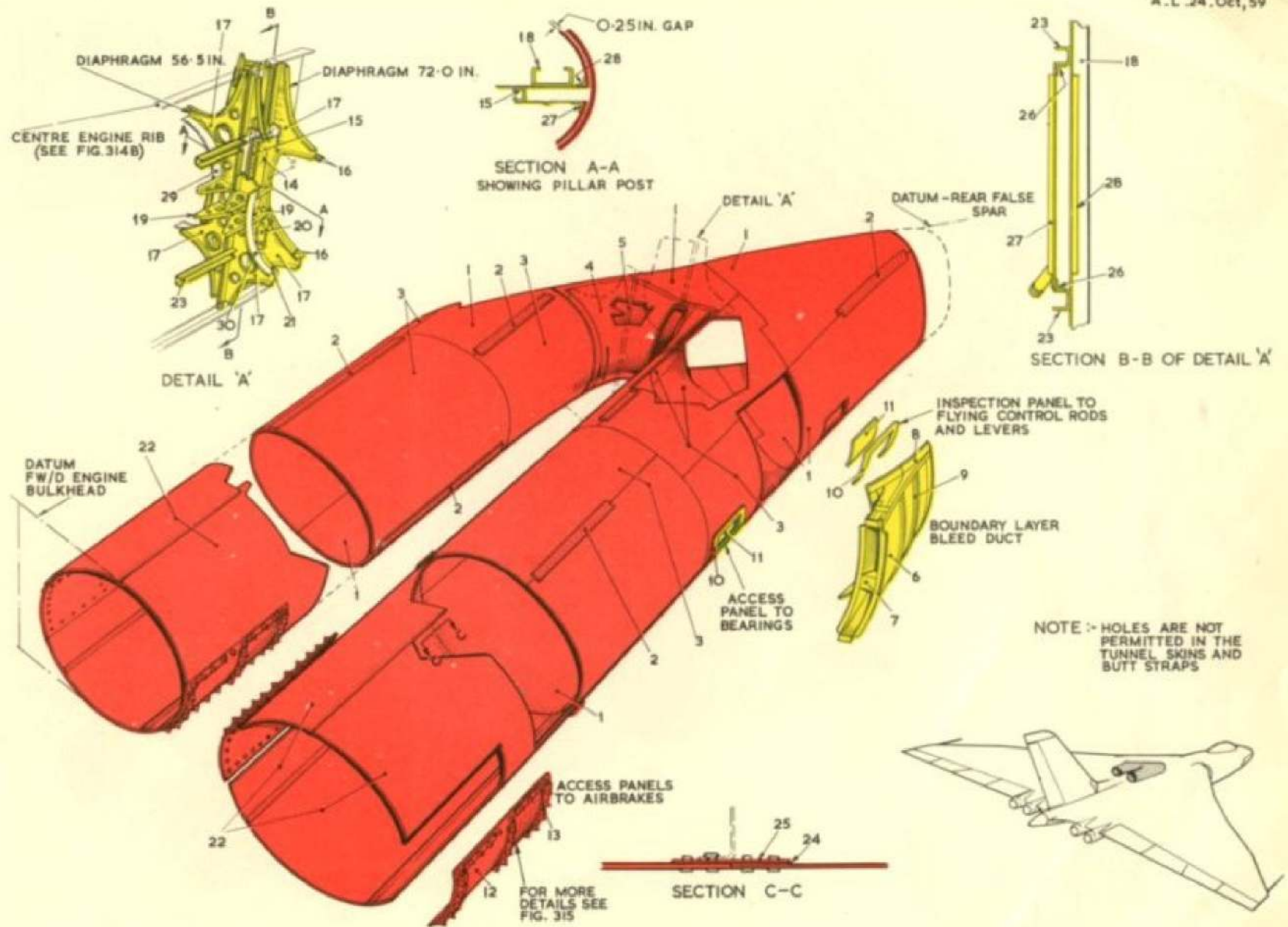
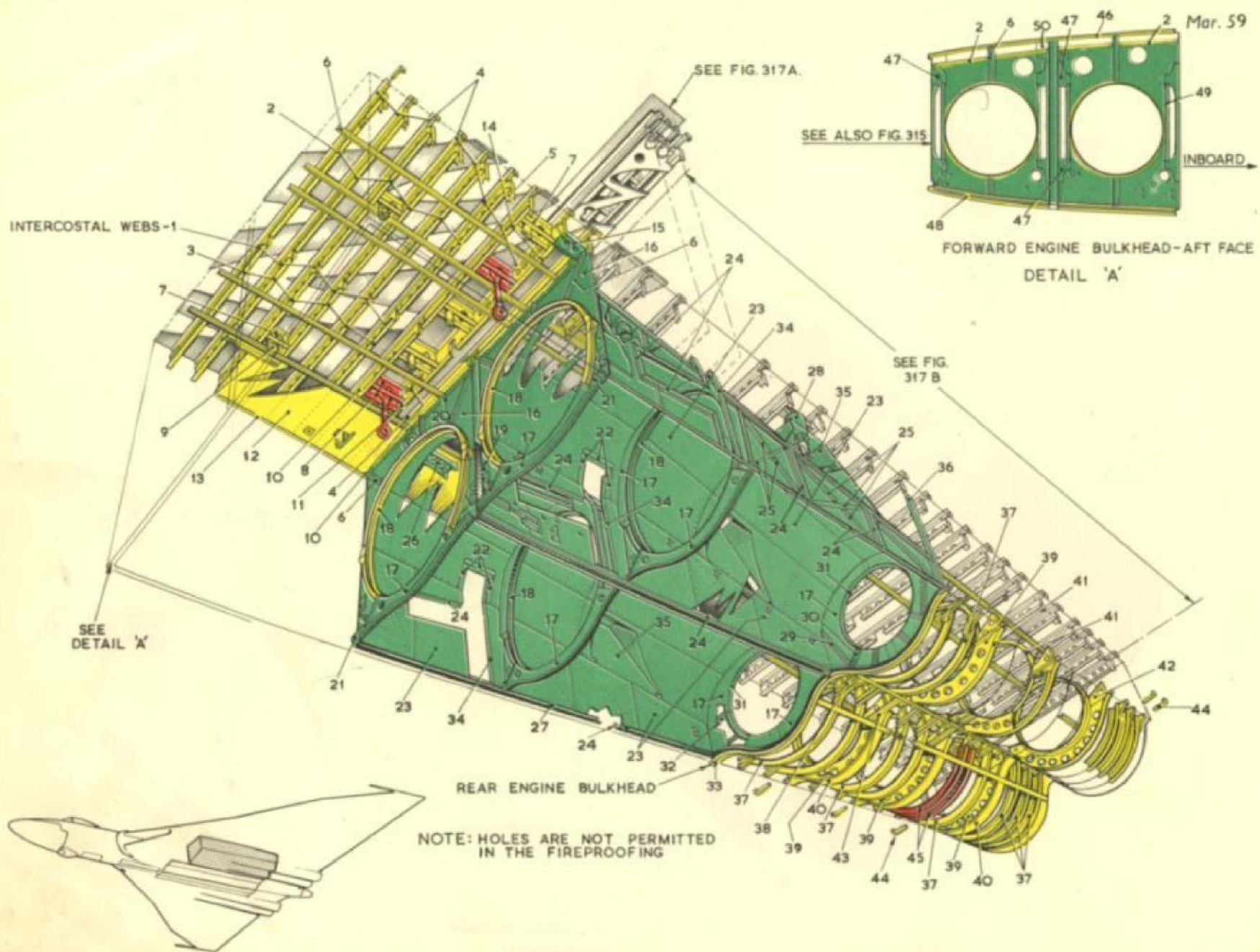


Fig.316 **Air intake tunnels**
RESTRICTED



**Fig.317 - Engine bay and rear structure
RESTRICTED**

Key to fig. 317. Engine bay and aft structure

Item	Spec.	Material S.W.G or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	L.72	24	Intercostal web	0-05	2-5	0-25	4:1	103, 115
2	L.72	386/SS/1793	Intercostal angle (O/B)	—	—	0-125	4:1	—
3	L.72	971/SS/1793	Intercostal angle (I/B)	—	—	0-125	4:1	—
4	L.72	16	Top skin angles	—	—	0-125	4:1	—
5	L.72	18	Web bracket	†0-05	2-5	0-25	4:1	—
6	L.72	379/SS/1793	Top hat section	—	—	0-125	4:1	—
7	L.72	18	Plate bracket (yellow)	†0-05	2-5	0-25	4:1	—
8	L.72	18	Plate, bracket (red)	†—	—	0-25	4:1	—
9	L.72	12	Bracket	—	—	—	—	—
10	L.72	20	Web	0-05	2-5	0-25	4:1	103, 115
11	L.65	340/SS/3075	Bottom angle	—	—	0-125	4:1	—
12	L.72	20	Stiffening skin	0-10	2-5	1-0	8:1	103
13	L.72	529/SS/1793	Attachment angle	0-10	2-5	0-25	4:1	—
14	L.72	16	Bottom angle	—	—	0-125	4:1	—
15	L.72	18	Diaphragm	†0-15	2-0	0-25	4:1	—
16	DTD.166B	26	Web plate	0-3	2-0	—	—	103, 104
17	DTD.166B	26	Skins	†—	—	0-25	4:1	—
18	DTD.166B	755/SS/1793	Sealing ring	—	—	0-25	4:1	—
19	DTD.166B	22	Sealing plate	†—	—	—	—	—
20	L.72	18	Angle	†0-10	2-5	0-25	4:1	—
21	DTD.166B	813/SS/1793	Channel stiffener	—	—	—	—	—
22	DTD.166B	22	Sealing plates	†—	—	—	—	—
23	DTD.166B	28	Fireproofing skins	0-30	2-0	—	—	as 342
24	DTD.166B	743/SS/1793	"Z" angle	†0-10	2-5	—	—	—
25	DTD.166B	744/SS/1793	Channel stiffeners	†0-10	2-5	—	—	—
26	L.72	18	Bracket	†—	—	—	—	—
27	DTD.166B	26	Channel stiffener	0-10	2-5	—	—	—
28	DTD.166B	22	Shroud tube	0-10	2-5	—	—	—
29	DTD.166B	20	Stiffener	†0-10	2-5	—	—	—
30	DTD.166B	22	Stiffener	†0-10	2-5	—	—	—
31	DTD.166B	22	Half ring	0-10	2-5	—	—	—
32	DTD.166B	26	Shroud angle	†0-10	2-5	—	—	—
33	L.72	729/SS/1793	Bottom angle	—	—	0-125	4:1	—
34	DTD.166B	26	Attachment angle	†0-10	2-5	—	—	—
35	DTD.166B	22	Hoisting canopy	0-2	2-0	—	—	—
36	L.72	12a/SS/1793	Bulkhead angle	0-10	2-0	—	—	—
37	L.72	940/SS/1793	Former channel	—	—	0-25	4:1	—
38	L.72	93/SS/1793	Cross member	†—	—	—	—	—
39	L.72	22	Web	0-10	2-5	0-25	4:1	103
40	L.72	18	Capping strip	*—	—	—	—	—
41	L.72	725/SS/1793	Skin angle	—	—	0-125	4:1	—
42	L.72	18	Gusset plate	†—	—	0-25	4:1	—
43	L.72	410/SS/1793	Angle	—	—	—	—	—
44	DTD.683	Al. alloy	Stringer bracket	†0-02	2-5	—	—	—
45	L.72	18	Former channel	—	—	—	—	—
46	L.65	376/SS/3075	Skin angle	—	—	0-125	4:1	—
47	L.72	16	Web stiffeners	†0-10	2-5	0-25	4:1	—
48	L.72	20	Seal angle	†0-10	2-5	0-25	4:1	—
49	L.72	314/SS/1793	Angle	†0-05	2-5	0-25	4:1	—
50	L.72	16	Bracket	†0-05	2-5	0-25	4:1	—

All dimensions in inches
* No repairs permitted
† More expedient to renew

RESTRICTED

Key to fig. 317A. U/C side load beam

Item	Spec.	Material S.W.G or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	L.72	24	Web	0.05	2.5	0.25	4:1	103
2	L.72	16	Skin angle	—	—	0.125	4:1	—
3	DTD.364B 683	Al. alloy	Bracket	†0.02	—	—	—	—
4	L.72	386/SS/1793	Angle	—	—	0.125	4:1	—
5	L.72	20	Web bracket	†0.05	2.5	0.25	4:1	—
6	L.72	97/SS/1793	Bottom angle	—	—	0.125	4:1	—
7	L.72	18	Web bracket	†0.05	2.5	0.25	4:1	—
8	DTD.683	Al. alloy	Bracket	†0.02	—	—	—	—
9	L.72	16	Bracket	†0.05	2.5	0.25	4:1	—
10	L.72	20	Reinforcing skins	0.10	2.5	0.25	4:1	103, 104
11	L.72	14	Channel	0.10	2.5	0.5	8:1	—
12	L.72	446/SS/1793	Angle	—	—	0.125	4:1	—
13	L.72	16	Diaphragm	†0.10	2.5	0.25	4:1	—
14	L.72	18	Diaphragm	†0.10	2.5	0.25	4:1	—
15	L.72	10	Angle	—	—	0.125	4:1	—
16	L.72	16	Web	0.10	2.5	0.25	4:1	103
17	L.72	18	Reinforcing plate	†—	—	—	—	—
18	L.72	385/SS/1793	Angle	—	—	0.125	4:1	—
19	L.72	18	Angle	—	—	0.125	4:1	—
20	L.72	67/SS/1793	Angle	—	—	0.125	4:1	—
21	L.72	971/SS/1793	Angle	—	—	0.125	4:1	—
22	L.72	22	Packing	†—	—	—	—	—
23	L.72	14	Bracket	0.05	2.5	0.25	4:1	—

† More expedient to renew
All dimensions in inches

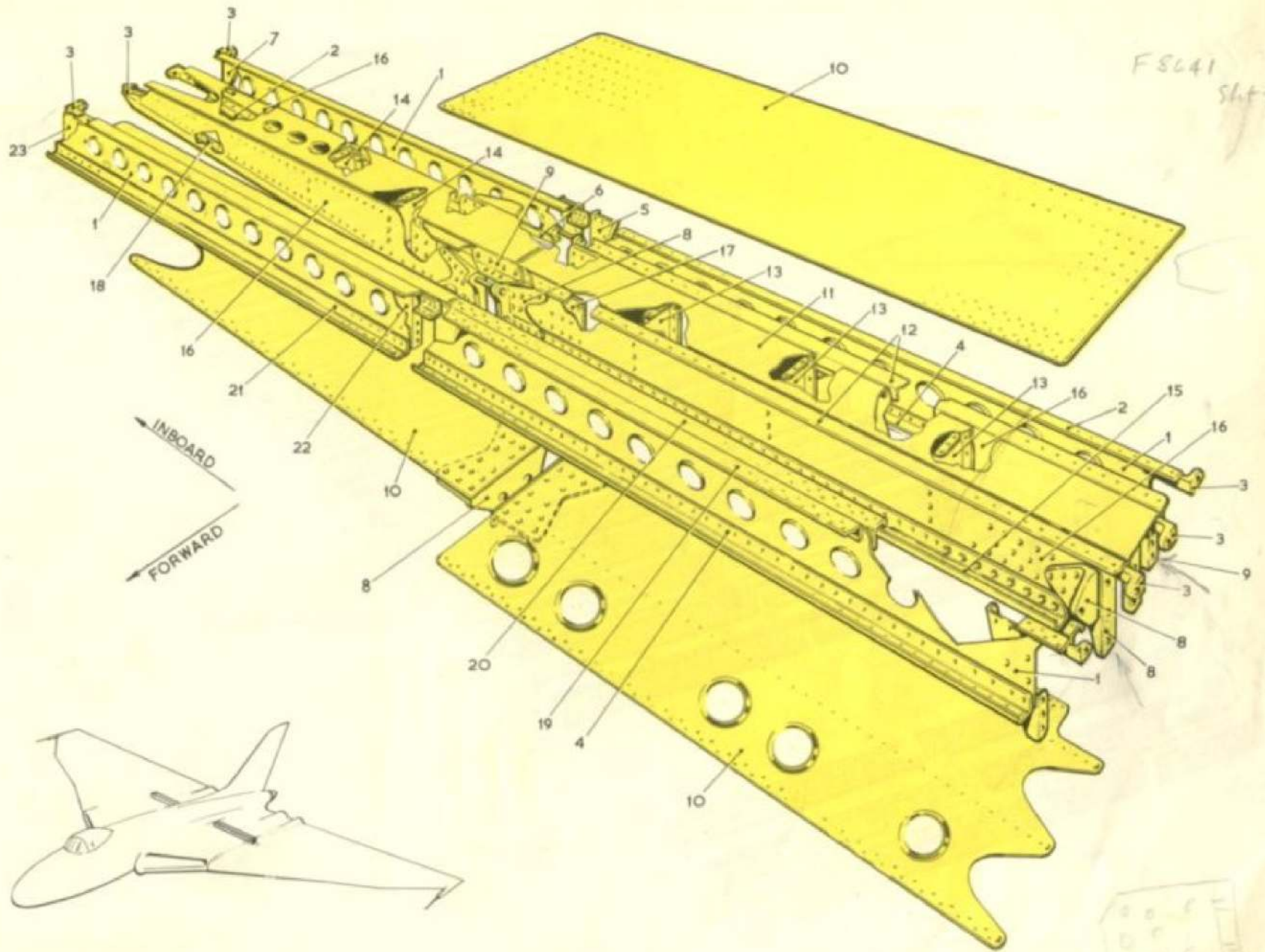
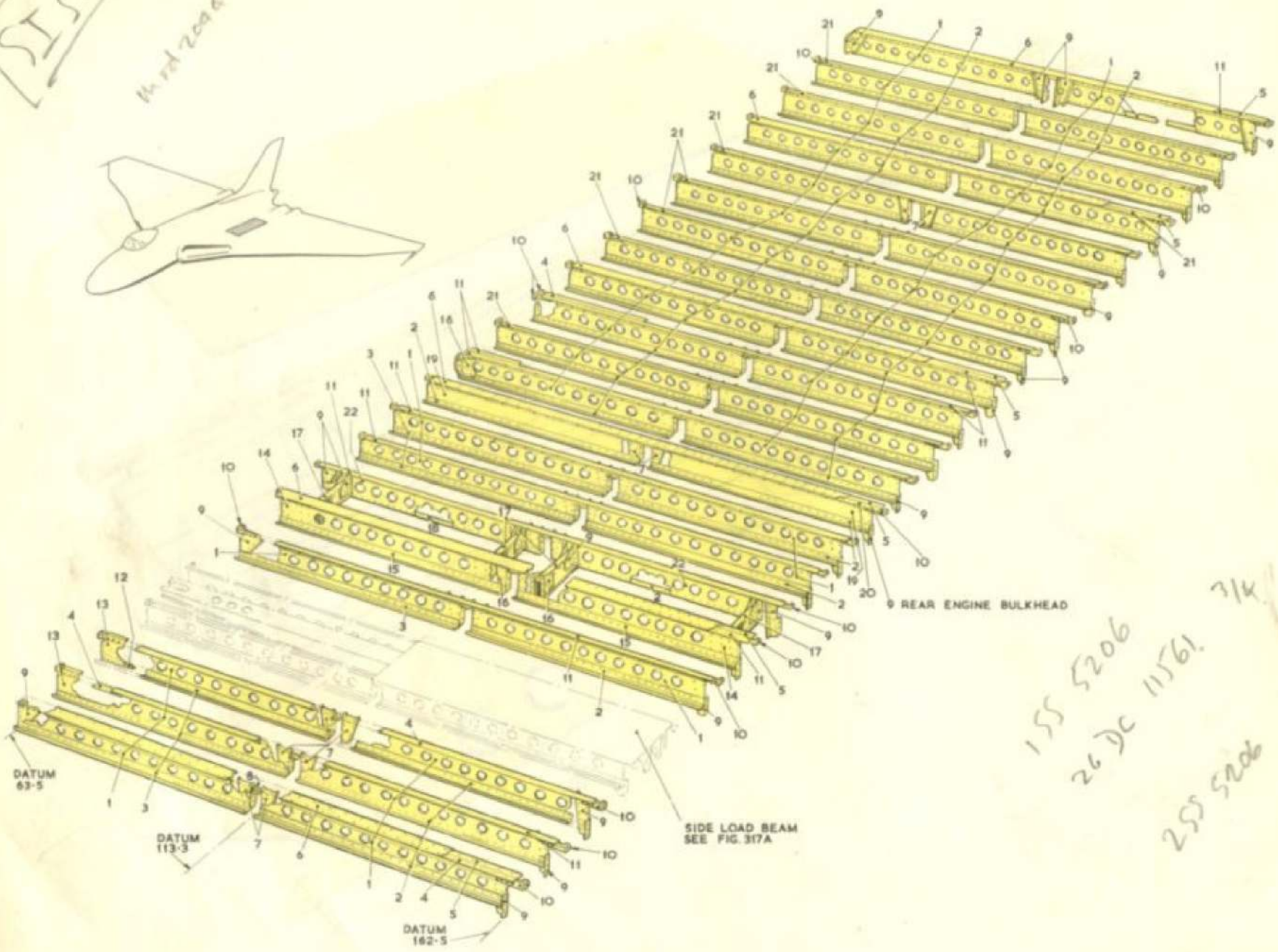


Fig. 317A. - U/c side-load beam
RESTRICTED

SISO

W. ref 2004



155 5206
26 DC 11561 7/4
255 5206 14

Fig. 317B. Centre section roof structure
RESTRICTED

KEY TO FIG.317B

Item	Spec.	Material		Description	Dents		Negligible Damage		Repair Fig.
		S.W.G. or Section			Depth	Dist. Apart	Holes	Pitch Ratio	
1	L. 72	24		Web	0.05	2.5	0.25	4:1	103
2	L. 72	386/SS. 1793		Angle	-	-	0.125	4:1	113
3	L. 72	971/SS. 1793		Angle	-	-	0.125	4:1	113
4	L. 72	88/SS. 1793		Angle	-	-	0.125	4:1	114
5	L. 72	67/SS. 1793		Angle	-	-	0.125	4:1	114
6	L. 72	20		Strap plate	-	-	-	-	-
7	L. 72	20		Bracket	x 0.05	2.5	0.25	4:1	-
8	L. 72	16		Bracket	x 0.05	2.5	0.25	4:1	-
9	L. 72	18		Bracket	x 0.05	2.5	0.25	4:1	-
10	L. 65	-		Stringer bracket	* 0.02	-	-	-	-
11	L. 72	16		Skin angle	-	-	0.125	4:1	113
12	L. 72	529/SS. 1793		Angle	-	-	0.125	4:1	113
13	L. 72	14		Bracket	x 0.05	2.5	0.25	4:1	-
14	L. 72	16		Web	x 0.05	2.5	0.25	4:1	103
15	L. 72	385/SS. 1793		Angle	-	-	0.125	4:1	113
16	L. 72	16		Bracket	x 0.05	2.5	0.25	4:1	-
17	L. 72	16		Channel member	-	-	0.125	4:1	108
18	L. 72	972/SS. 1793		Angle	-	-	0.125	4:1	113
19	L. 72	22		Web	0.05	2.5	0.25	4:1	103
20	L. 72	530/SS. 1793		Angle	-	-	0.125	4:1	114
21	L. 72	770/SS. 1793		Skin angle	-	-	0.125	4:1	114
22	L. 72	20		Web	0.05	2.5	0.25	4:1	103

* No repairs permitted

x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.318

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S. W. G. or Section		Dents	Holes			
				Depth	Dist. Apart	Dia.	Pitch Ratio	
1	L. 72	665/SS.1793	Stringer	x 0.1	2.5	0.25	4:1	-
2	L. 72	20	Former	0.1	2.5	-	-	-
3	L. 72	16	Capping strip	* 0.1	2.5	0.25	4:1	-
4	L. 72	18	Capping strip	* 0.1	2.5	0.25	4:1	-
5	L. 72	20	Capping strip	* 0.1	2.5	0.25	4:1	-
6	D. T. D. 171B	26	Inner skins	0.2	2.5	-	-	103
7	L. 72	24	Inner skins	0.2	2.5	-	-	103
8	D. T. D. 171B	20	Breather labyrinth	* 0.2	2.0	-	-	-
9	D. T. D. 171B	26	Patch plate	* 0.2	2.0	-	-	-
10	L. 72	20	Outer skins	0.1	2.5	-	-	103
11	L. 59	18	Air intake	* -	-	-	-	-
12	D. T. D. 171B	20	Gusset plate	0.1	2.5	0.25	8:1	-
13	L. 72	20	Stiffener plate	x -	-	-	-	-
14	L. 72	20	Outboard edge member	0.1	2.5	-	-	-
15	L. 72	20	Inboard edge section	0.1	2.5	-	-	-
16	L. 72	18	Inboard edge member	0.1	2.5	-	-	-
17	L. 72	20	Seal retaining strip	x 0.2	2.0	-	-	-
18	L. 72	20	Seal angle	0.1	2.5	-	-	-
19	D. T. D. 171B	22	Scoop angle	0.1	2.5	-	-	-
20	D. T. D. 171B	22	Scoop liner	* -	-	-	-	-
21	S. 3	20	Air scoop	* -	-	-	-	-

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

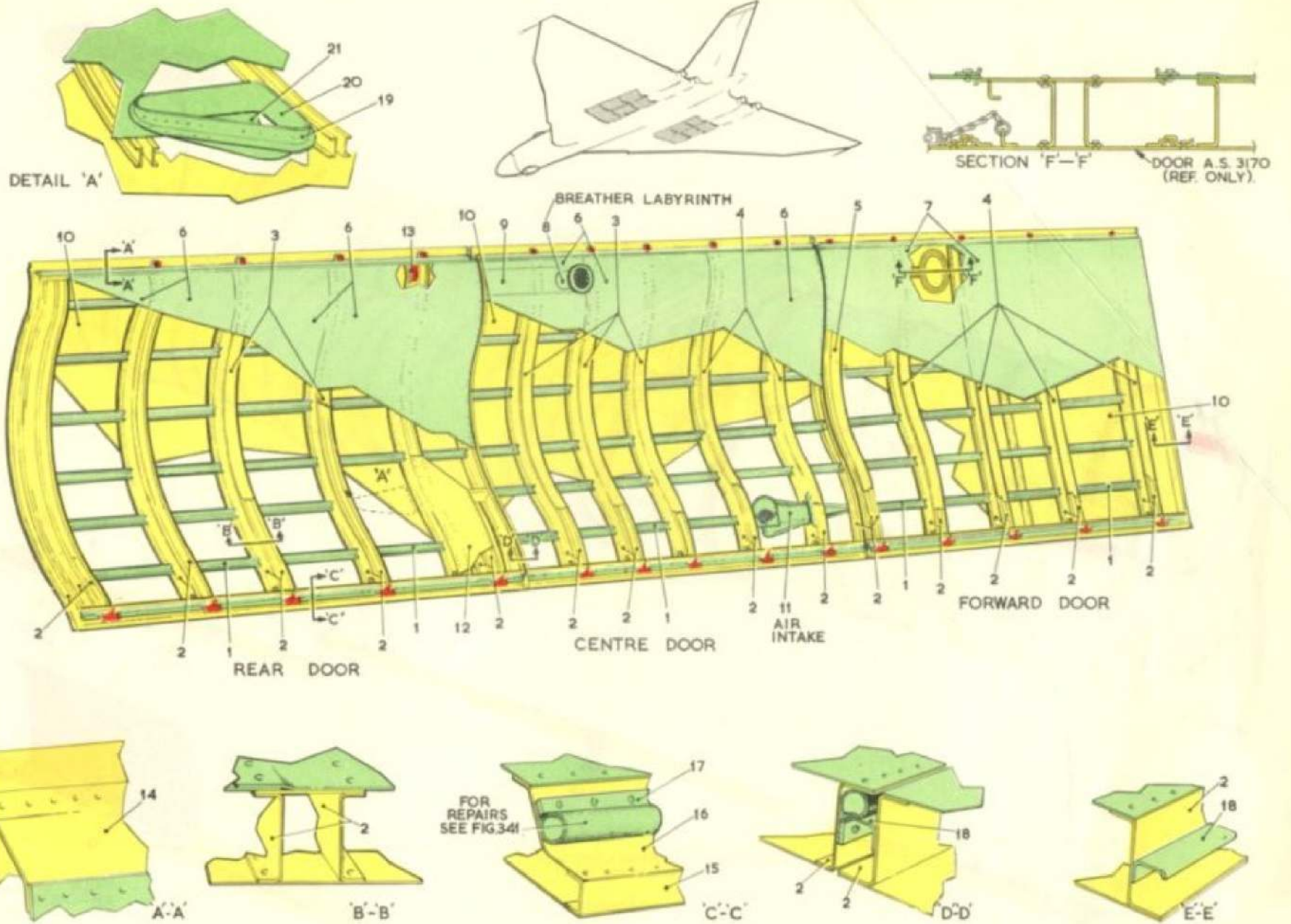
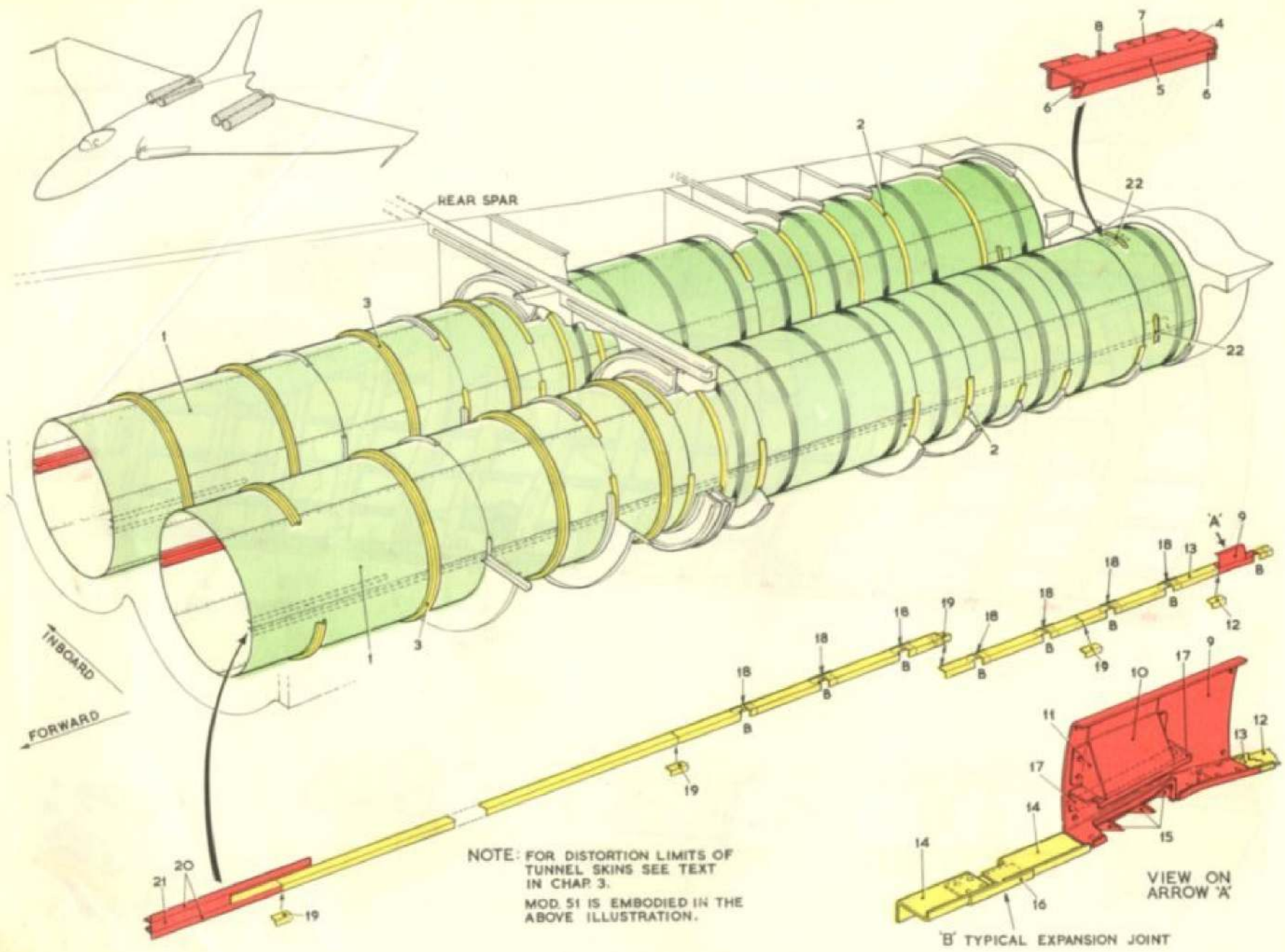


Fig.31B. Engine access doors-Port outer
RESTRICTED



NOTE: FOR DISTORTION LIMITS OF TUNNEL SKINS SEE TEXT IN CHAP 3.
 MOD 51 IS EMBODIED IN THE ABOVE ILLUSTRATION.

VIEW ON ARROW 'A'
 'B' TYPICAL EXPANSION JOINT

Fig. 319. Jet pipe tunnels
 RESTRICTED

KEY TO FIG.319

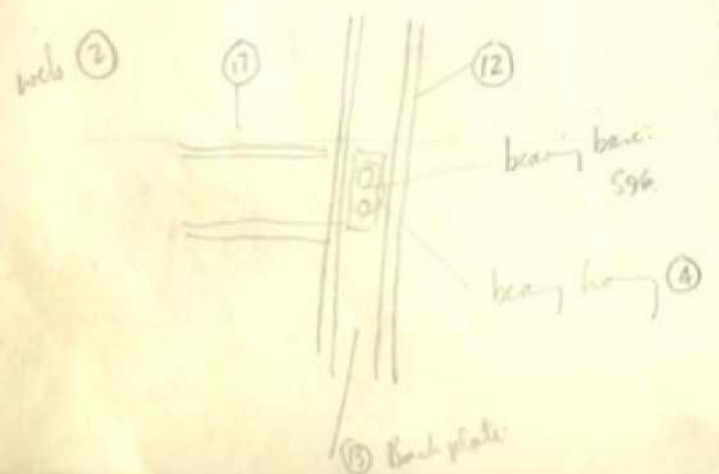
Item	Material		Description	Depth	Negligible Damage			Repair Fig.
	Spec.	S.W.G. or Section			Dents	Holes		
					Dist. Apart	Dia.	Pitch Ratio	
1	A.V.R.50 Titanium	28	Jet pipe tunnel skins	* 1.0	-	-	-	342,342A
	D.T.D.571 or D.T.D.166	28	(Prior to Mod.51)	* 1.0	-	-	-	342, 342A
2	A.V.R.50 Titanium	20	Tunnel skin joint straps	x 0.05	3.0	-	-	-
	D.T.D.571 or D.T.D.166	20	(Prior to Mod.51)	x 0.05	3.0	-	-	-
3	L.72	379/SS.1793	Top hat stiffeners	0.05	3.0	0.125	8:1	342
4	D.T.D.171B	14	Channel	x 0.025	4.0	-	-	-
5	D.T.D.171B	16	Angle	x 0.025	4.0	-	-	-
6	D.T.D.171B	16	End plates	x 0.025	4.0	-	-	-
7	D.T.D.171B	14	Angle	x 0.025	4.0	-	-	-
8	D.T.D.171B	14	Gusset	x 0.025	4.0	-	-	-
9	D.T.D.171B	18	Backplate	0.025	6.0	0.125	8:1	-
10	D.T.D.171B	18	Bracket	x 0.025	4.0	0.125	6:1	-
11	D.T.D.171B	18	Gusset	x 0.025	4.0	0.125	6:1	-
12	L.72	16	Jointing angle	x 0.05	6.0	0.125	8:1	-
13	L.72	690/SS.1793	Guide rail	0.05	6.0	-	-	-
14	D.T.D.171B	18	Guide rail	0.05	6.0	-	-	-
15	D.T.D.166B	18	Gusset	x 0.025	6.0	0.125	10:1	-
16	D.T.D.171B	18	Expansion bracket	x 0.025	6.0	0.125	8:1	-
17	D.T.D.171B	18	Retaining angle (free side)	x 0.025	8.0	-	-	-
	D.T.D.171B	18	Guide channel (fixed side)	x 0.025	8.0	-	-	-
18	L.72	18	Expansion bracket	x 0.05	6.0	0.125	6:1	-
19	L.72	66/SS.1793	Jointing angle	x 0.05	6.0	0.125	8:1	-
20	D.T.D.171B	18	Top and bottom guide rails	x 0.025	6.0	-	-	-
21	D.T.D.171B	18	Channel	x 0.025	6.0	-	-	-
22	L.72	68/SS.1793	Stiffening channel	x 0.025	6.0	-	-	-

x More expedient to renew than repair
 * See text in Chap.3
 All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.320

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage				Repair Fig.
				Dents Depth	Dist. Apart	Holes Dia.	Pitch Ratio	
1	D.T.D.363	6B/1824	Rib boom	* 0.05	3.0	-	-	-
2	D.T.D.687	18	Rib web	0.05	3.0	1.0	8:1	103,104
3	D.T.D.687	16	Rib web	0.05	3.0	1.0	8:1	103,104
4	S.96	-	Bearing housing	*	-	-	-	-
5	D.T.D.687	18	Joint strap	0.05	3.0	-	-	-
6	L.72	20	Stiffening plate	x 0.1	2.5	0.5	8:1	-
7	L.72	18	Attachment angle	0.1	2.5	-	-	113
8	L.65	-	Bobbin	x -	-	-	-	-
9	L.72	16	Stiffening plate	x 0.1	2.5	0.25	4:1	-
10	L.72	18	Stiffening plate	x 0.1	2.5	-	-	-
11	L.72	12b/SS.1793	Attachment angle	0.1	2.5	-	-	113
12	D.T.D.124A	18	Side member	-	-	0.5	8:1	-
13	D.T.D.171B	26	Back plate	0.1	2.5	-	-	-
14	D.T.D.166B	26	Attachment angle	x 0.1	2.5	-	-	-
15	S.1	-	Bearing plate	*	-	-	-	-
16	D.T.D.124A	16	Bracket assembly	x -	-	-	-	-
17	D.T.D.124A	20	Compression member	*	-	0.25	4:1	-
18	S.93	-	Channel bracket	* -	-	-	-	-



* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

Key to Fig. 320A. Inboard engine rib

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Depth	Dist. Apart	Dents Dia.		
1	DTD.363	6B/1824	Top boom	*0.05	3.0	—	—	—
2	L.72	16	Side member	—	—	—	—	105, 115
3	L.72	14	Channel	† —	—	—	—	—
4	L.72	18	Reinforcing plate	†0.05	3.0	—	—	—
5	L.72	406/SS/1793	Angle	0.10	2.5	—	—	—
6	L.72	83/SS/1793	Top hat stiffener	0.10	2.5	—	—	—
7	L.72	16	Channel	†0.10	2.5	—	—	—
8	L.72	18	Stiffening plate	†0.10	2.5	0.3	12 : 1	—
9	L.72	20	Support plate	†0.2	2.0	—	—	—
10	L.72	20	Intercostal	†0.10	2.5	0.3	12 : 1	—
11	L.65	Al alloy	Bearing channel	†0.10	2.5	—	—	—
12	L.65	304/SS/3075	Angle	0.05	3.0	—	—	343
13	L.72	14	Channel	0.10	2.5	—	—	—
14	L.72	16	Bracket	†0.10	2.5	0.3	12 : 1	—
15	L.72	12b/SS/1793	Angle	0.05	3.0	—	—	113
16	L.72	18	Stiffener	†0.10	2.5	—	—	—
17	L.65	343/SS/3075	Angle	0.05	3.0	—	—	114
18	L.72	16	Angle	0.05	3.0	—	—	—
19	L.72	14	Channel	0.05	3.0	—	—	—
20	L.72	84/SS/1793	Support members	†0.10	2.5	—	—	—
21	L.72	16	Gusset plates	†0.10	2.5	—	—	—
22	L.72	18	Doubler plate	†0.05	3.0	—	—	—
23	L.65	Al alloy	Attachment fitting	† —	—	—	—	—
24	S.96	—	Screwed sleeve	†0.05	3.0	—	—	—
25	L.65	Al alloy	Bearing	† —	—	—	—	—
26	L.65	312/SS/3075	Bottom boom	*0.05	3.0	—	—	—

* No repairs permitted
† More expedient to renew
All dimensions in inches

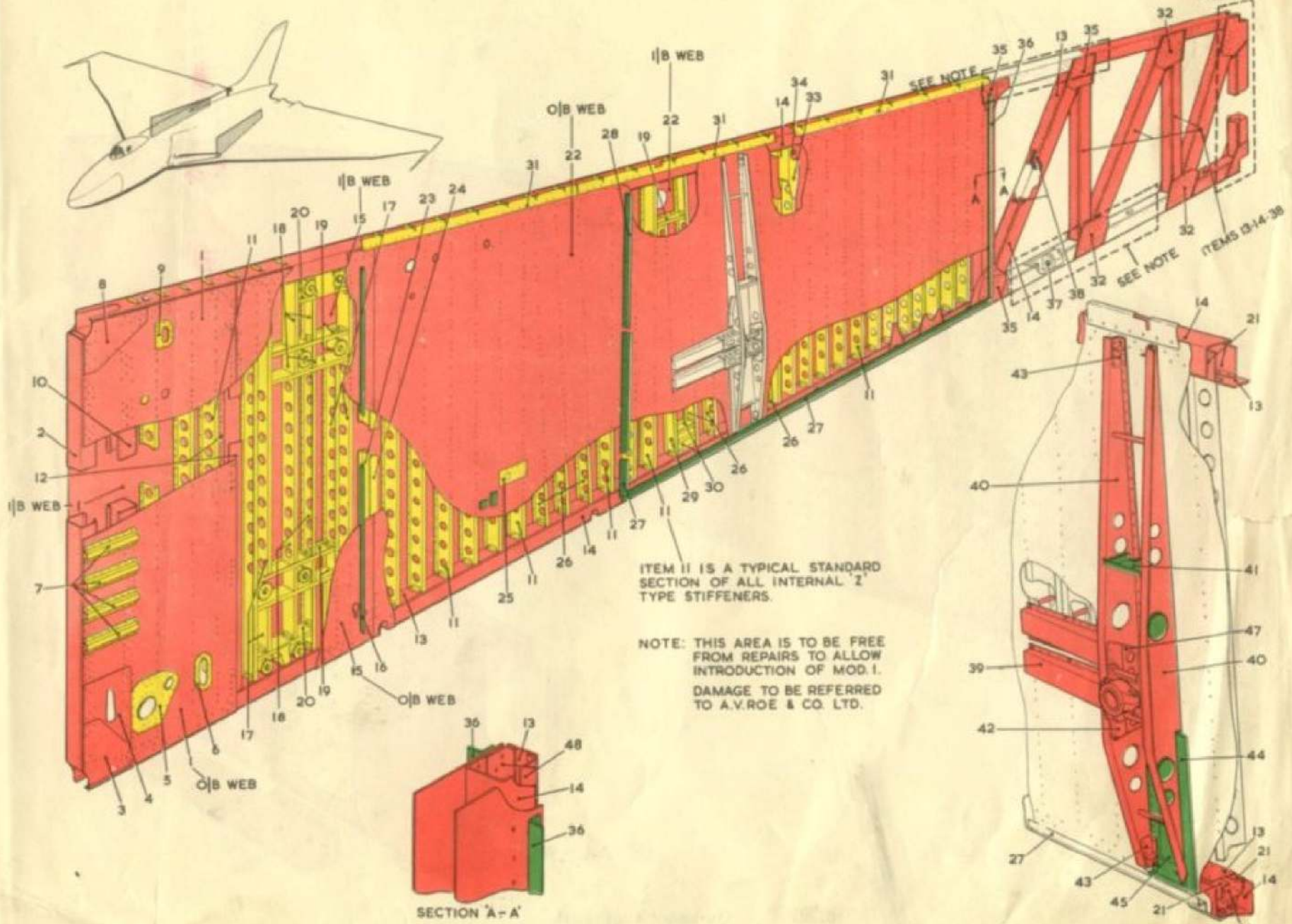
Key to Fig. 321. Centre engine rib

Item	Spec.	Material S.W.G. or Section	Description	Dents Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dist. Apart	Dia.		
1	DTD.687	20	Web	0.05	3.0	1.0	8:1	103, 104
2	DTD.687	10	Channel	0.10	2.5	—	—	—
3	DTD.687	14	Gusset	†0.05	3.0	1.0	8:1	—
4	DTD.687	18	Reinforcing plate	0.05	3.0	1.0	8:1	103
5	DTD.687	18	Reinforcing plate	0.10	2.5	0.50	8:1	—
6	L.72	20	Reinforcing plate	†0.10	2.5	0.25	4:1	—
7	L.72	500/SS/1793	Stiffener	0.10	2.5	0.25	4:1	As 112
8	DTD.687	10	Gusset	†0.05	3.0	1.0	8:1	—
9	L.72	14	Stiffening plate	†0.10	2.5	0.25	4:1	—
10	L.72	721/SS/1793	Channel member	0.10	2.5	—	—	—
11	L.72	586/SS/1793	Stiffener	0.10	2.5	0.25	4:1	—
12	DTD.687	22	Butt strap	†0.05	3.0	—	—	—
13	DTD.687	16	Capping	0.05	3.0	—	—	—
14	DTD.687	939/SS/1793	Boom channel	0.05	3.0	—	—	—
15	DTD.687	16	Web	0.05	3.0	1.0	8:1	103, 104
16	L.72	20	Angle	0.10	2.5	—	—	As 113, 114
17	L.72	749/SS/1793	Channel	0.10	2.5	0.25	4:1	105, 107
18	L.72	750/SS/1793	Channel	0.10	2.5	0.25	4:1	105, 107
19	L.72	20	Channel	0.10	2.5	0.25	4:1	As 108
20	L.72	16	Channel	0.10	2.5	0.25	4:1	As 108
21	DTD.687	716/SS/1793	Angle member	0.05	3.0	—	—	—
22	DTD.687	22	Web	0.05	3.0	1.0	8:1	103, 104
23	L.72	22	Channel	0.10	2.5	0.25	4:1	As 108
24	L.72	24	Butt strap	0.10	2.5	—	—	—
25	L.72	18	Stiffening plate	†0.10	2.5	0.25	4:1	—
26	L.72	703/SS/1793	Channel	0.10	2.5	0.25	4:1	105, 107
27	DTD.171B or 166B	743/SS/1793	'Z' section	†0.15	2.0	—	—	—
28	L.72	13b/SS/1793	Angle	0.15	2.0	—	—	113
29	L.72	18	Channel	0.10	2.5	0.25	4:1	108
30	S.3	20	Channel	†0.10	2.5	0.25	4:1	—
31	L.72	20	Angle	0.10	2.5	0.25	4:1	—
32	DTD.687	18	Gusset	†0.10	2.5	—	—	—
33	L.72	22	Channel	†0.10	2.5	0.25	4:1	—
34	DTD.142A	Mag. alloy	Block	†0.10	2.5	—	—	—
35	DTD.687	16	Gusset	†0.05	3.0	—	—	—
36	L.72	12a/SS/1793	Angle	0.15	2.0	—	—	113
37	L.72	18	Diaphragm	†0.10	2.5	—	—	—
38	DTD.687	715/SS/1793	Angle	0.05	3.0	—	—	—
39	S.514	20	Compression member	* —	—	0.25	4:1	—
40	S.514	16	Mounting member	—	—	0.5	8:1	—
41	DTD.171B or 166B	26	Partition	†0.15	2.0	—	—	—
42	S.1	M. steel	Bearing plate	—	—	—	—	—
43	S.514	16	Bracket	†0.05	3.0	—	—	—
44	DTD.171B or 166B	26	Angle	0.15	2.0	—	—	—
45	DTD.171B or 166B	26	Backing plate	0.15	2.0	—	—	—
46	DTD.687	16	Channel	0.05	3.0	—	—	—
47	S.96	Steel	Bearing base	—	—	—	—	—
48	DTD.687	713/SS/1793	Angle member	0.05	3.0	—	—	—

† More expedient to renew
 * No repairs permitted
 All dimensions in inches

RESTRICTED

FIG. 310



SECTION 'A-A'

Fig.321 - Centre engine rib RESTRICTED

1876

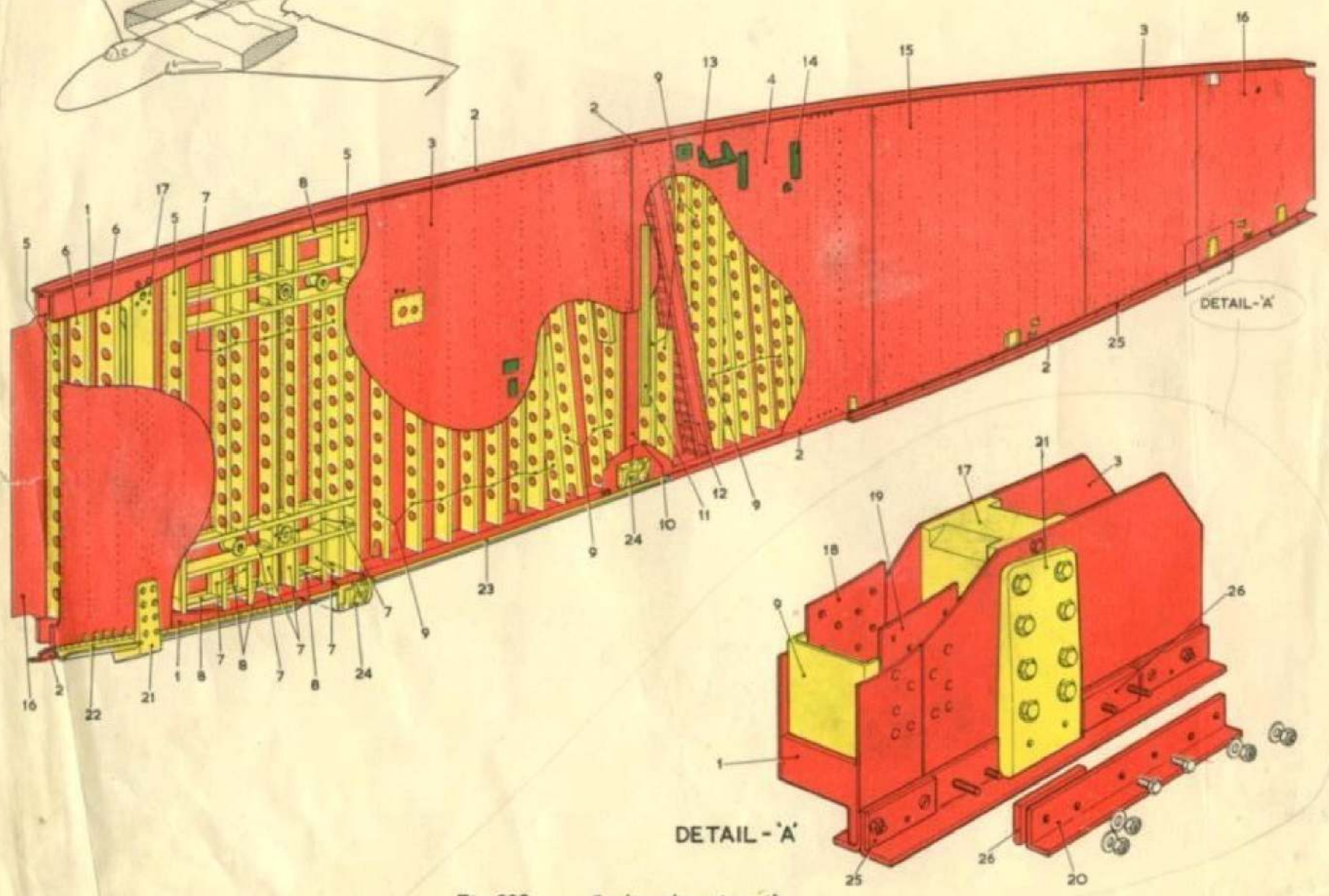


Fig.322 - Outboard engine rib RESTRICTED

OUT

Key to Fig. 322. Outboard Engine Rib

Item	Spec.	Material S.W.G. or Section	Description	Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dents	Dist. Apart		
1	DTD.363A	Al. Alloy	Rib booms	*0-05	3-0	—	—	
2	L.73	10	Skin angle	0-05	3-0	—	—	
3	DTD.687	14	Skin panel	0-05	3-0	1-0	8:1	103 104
4	DTD.687	13	Skin panel	0-05	3-0	1-0	8:1	103 104
5	L.72	429/SS/1793	Channel	0-05	3-0	0-25	4:1	105
6	L.72	122/SS/1793	Channel	0-05	3-0	0-25	4:1	105
7	L.72	20	Channel	†0-05	3-0	0-25	4:1	
8	L.72	16	Channel	†0-05	3-0	0-25	4:1	
9	L.72	579/SS/1793	Channel	0-05	3-0	0-25	4:1	105
10	DTD.687	13	Joint strap	—	—	—	—	
11	L.72	140/SS/1793	Grooved strip	†—	—	—	—	
12	L.73	14	Channel	0-05	3-0	—	—	
13	L.72	16	Bracket	†0-10	2-5	0-25	4:1	
14	L.72	511/SS/1793	Stiffener	0-10	2-5	0-25	4:1	
15	DTD.687	18	Skin panel	0-05	3-0	1-0	8:1	103 104
16	DTD.687	12	Skin panel	0-05	3-0	1-0	8:1	103 104
17	L.65	Al. Alloy	Centre member	*0-10	2-5	0-25	4:1	
18	DTD.687	16	Butt strap	—	—	—	—	
19	DTD.687	12	Butt strap	—	—	—	—	
20	DTD.364B	294/SS/3075	Angle	†0-05	3-0	—	—	
21	DTD.364B	Al. Alloy	Jacking pad mounting	0-02	—	—	—	
22	DTD.372	332/SS/3075	Hinge	†—	—	—	—	
23	L.65	251/SS/3075	Retaining angle	0-10	3-0	0-25	4:1	
24	DTD.88c	Mag. Alloy	Catch bracket	0-10	2-5	—	—	
25	L.73	10	Strips	0-10	2-5	0-25	4:1	
26	DTD.142A	Mag. Alloy	Packing blocks	†0-10	2-5	—	—	

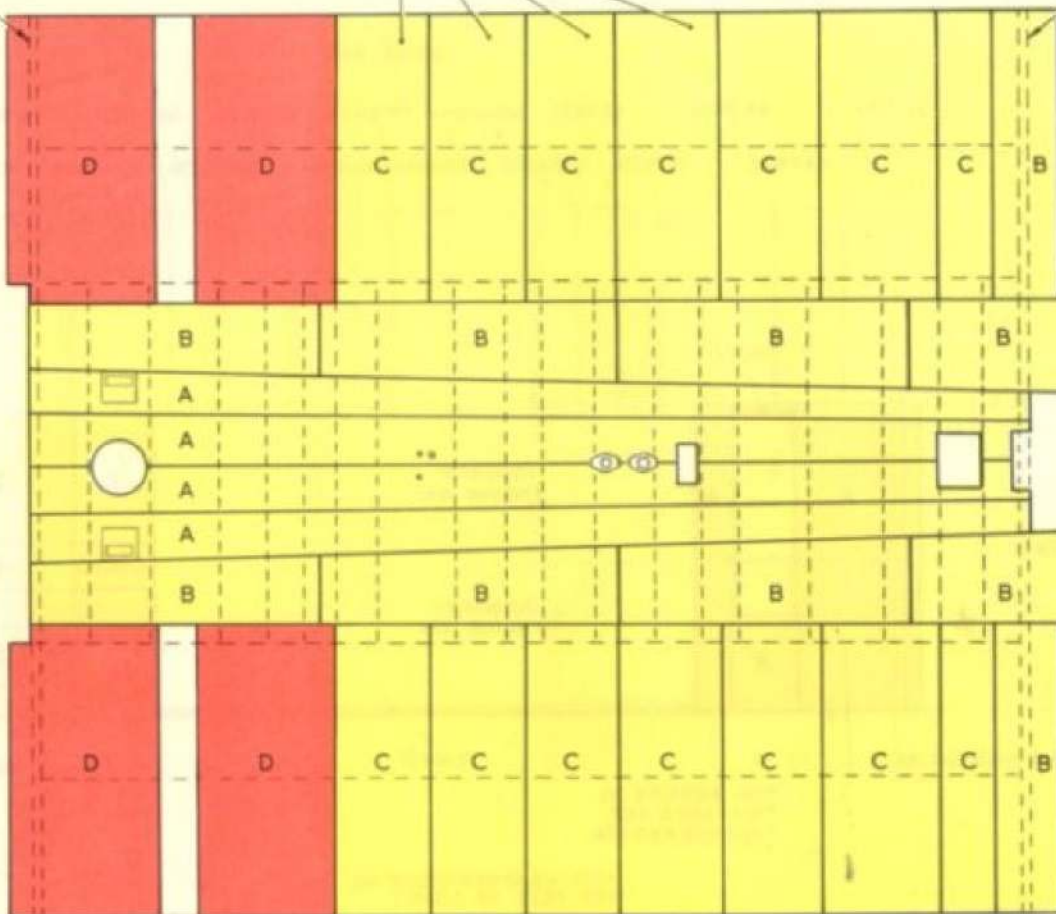
* No repairs permitted
† More expedient to renew
All dimensions in inches

Day Lark Print

WHEN MOD. 831 IS EMBODIED, SKIN PANELS AT (PORT-ST'BD) ARE CHANGED FROM 17 SWG. SPEC. D.T.D. 626 TO 18 S.W.G. SPEC. L72

FRONT SPAR

REAR SPAR



10/6

SKIN REFERENCE

LETTER	S.W.G.	MAT. SPEC.
A	20	L 72
B	20	D.T.D. 687
C	17	D.T.D. 626
D	17	D.T.D. 687

LIMIT TABLE

NEGLECTIBLE DAMAGE		
COLOUR	DENTS	DIST. APART
RED	0.05	3.0
YELLOW	0.10	2.5
GREEN	—	—

ALL DIMENSIONS IN INCHES

NOTE:- DAMAGE IN AREAS OF CONCENTRATED RIVETING MUST BE REPAIRED WITH JOINTS ARRANGED OUTSIDE THE AREA. SEE TEXT IN CHAR. 1 FOR SKIN REPAIRS AND WEATHERPROOFING. FOR METHOD OF REPAIR SEE FIG. 103, 116 & 117.

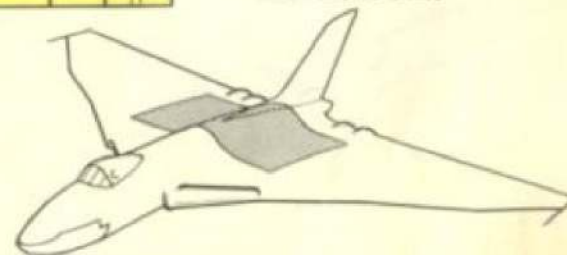


Fig. 323. Centre section skinning - Top surface

RESTRICTED

DAMAGE IN AREAS OF CONCENTRATED RIVETING
MUST BE REPAIRED WITH JOINTS ARRANGED
OUTSIDE THE AREA.

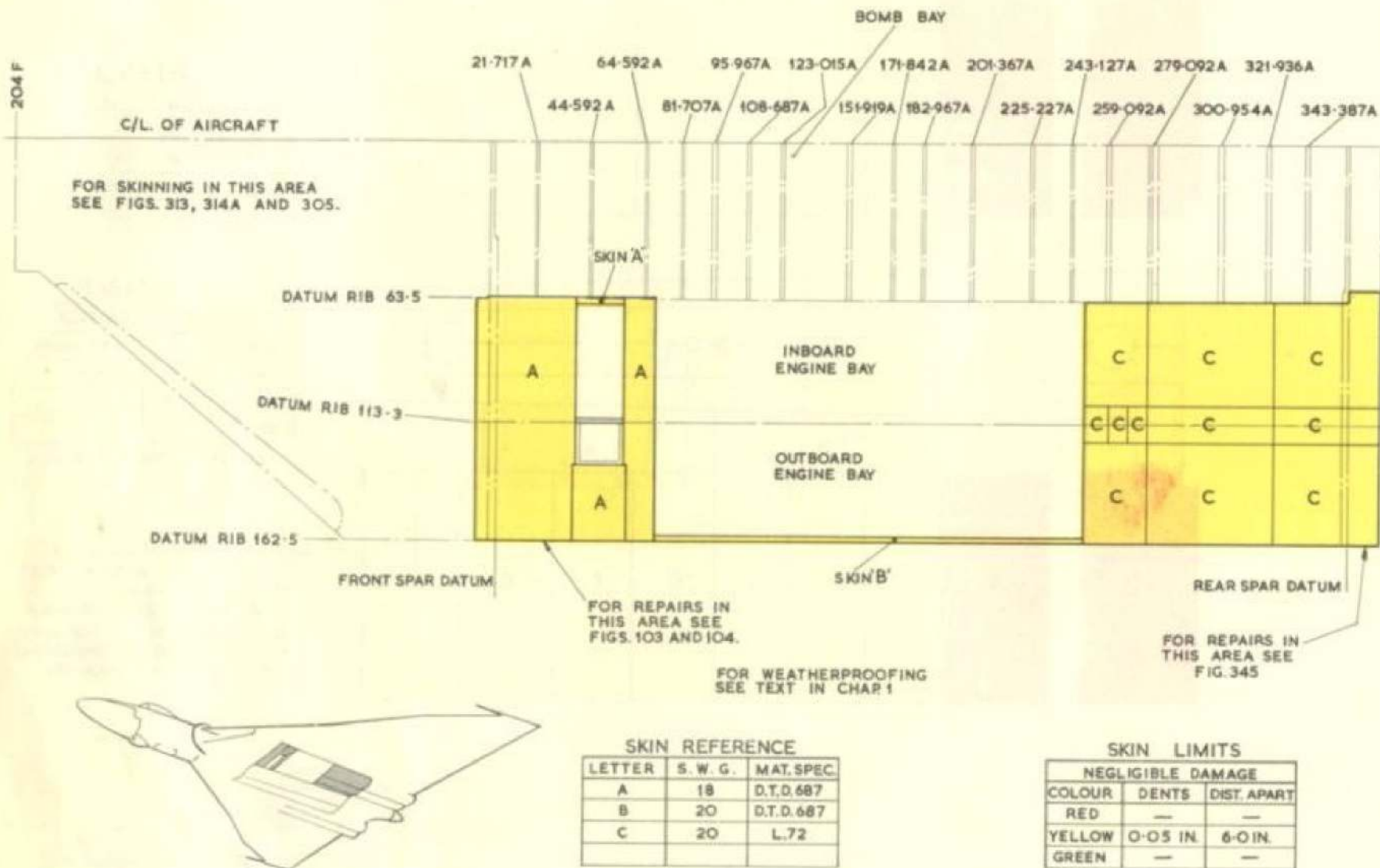
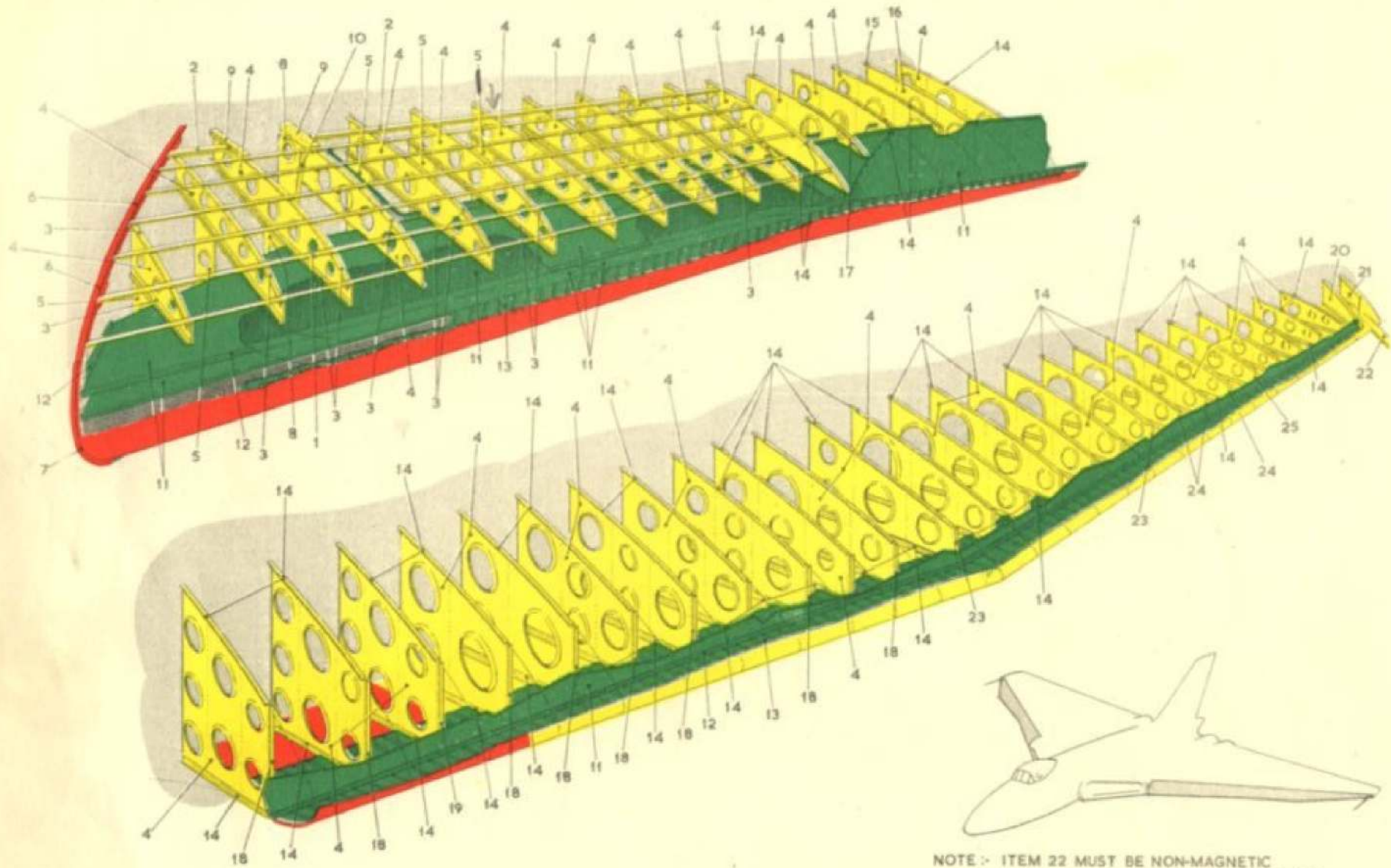


Fig. 323A. Centre section skinning—Bottom surface

RESTRICTED



NOTE - ITEM 22 MUST BE NON-MAGNETIC
ITEM 11 TO BE REPAIRED WITH D.T.D. 742

Fig.324 - Leading edge structure
RESTRICTED

Key to Fig. 324. Leading edge structure

Item	Spec.	Material S.W.G. or Section	Description	Dents		Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
				Depth	Dist. Apart	Dist. Apart	Dia.		
1	DTD.687	582/SS/1793	Stringers	—	—	—	0.125	4 : 1	221
2	DTD.683	301/SS/3075	Stringers	—	—	—	0.125	4 : 1	110
3	L.72	431/SS/1793	Rib boom	—	—	—	0.125	4 : 1	—
4	L.72	24	Rib webs	0.10	2.5	—	0.25	4 : 1	103, 106
5	L.72	22	Intercostal	0.10	2.5	—	0.25	4 : 1	103, 104
6	L.65	352/SS/3075	Nose casting	*	—	—	—	—	—
7	L.53	Al. alloy	Nose casting	*	—	—	—	—	—
8	L.72	20	Intercostal	0.10	2.5	—	0.25	4 : 1	103, 106
9	L.72	14	Attachment angle	†	—	—	0.125	4 : 1	—
10	L.72	12b/SS1793	Angle	—	—	—	0.125	4 : 1	113
11	A.Z.31	24	Duct panels	0.15	2.0	—	—	—	103
12	L.72	22	Nose angle	0.15	2.0	—	—	—	—
13	L.72	SS/4121	Corrugation panels	0.15	2.0	—	—	—	—
14	L.72	13b/SS/1793	Rib booms	—	—	—	0.125	4 : 1	—
15	L.65	293/SS/3075	Rib booms	—	—	—	0.125	4 : 1	—
16	L.72	18	Rib web	0.10	2.5	—	0.25	4 : 1	103, 106
17	L.72	20	Nose rib	0.10	2.5	—	0.25	4 : 1	—
18	L.72	950/SS/1793	Duct angle	—	—	—	0.125	4 : 1	—
19	L.72	999/SS/1793	Duct angle	—	—	—	0.125	4 : 1	—
20	L.72	20	Rib pressing	0.10	2.5	—	0.25	4 : 1	103
21	L.72	18	Rib pressing	0.10	2.5	—	0.25	4 : 1	103
22	DTD.171	18	Pitot fairing	0.10	2.5	—	—	—	—
23	L.72	949/SS/1793	Duct angle	—	—	—	0.125	4 : 1	—
24	L.72	22	Duct angle	—	—	—	0.125	4 : 1	—
25	L.72	950/SS/1793	Duct angle	—	—	—	0.125	4 : 1	—

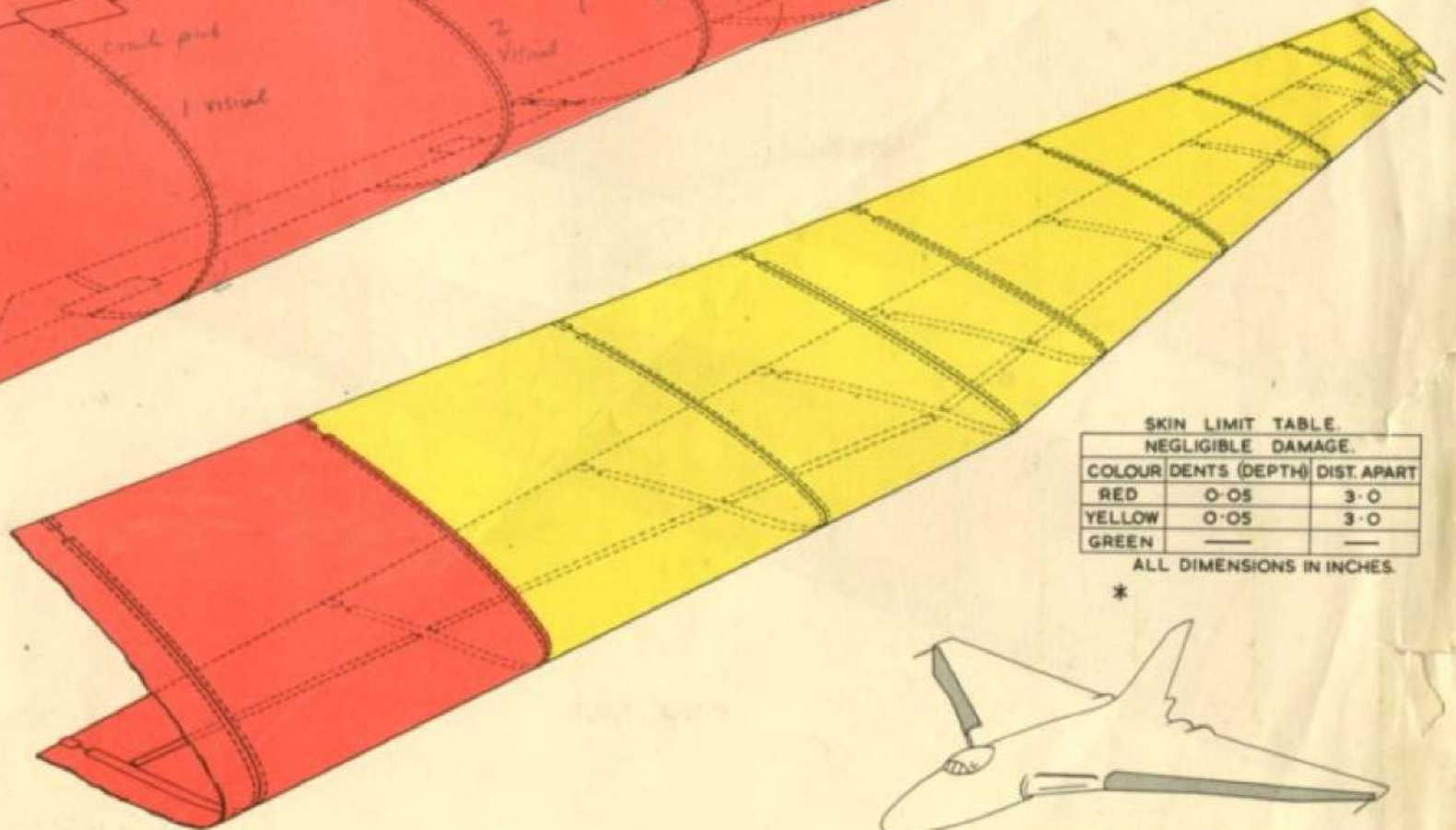
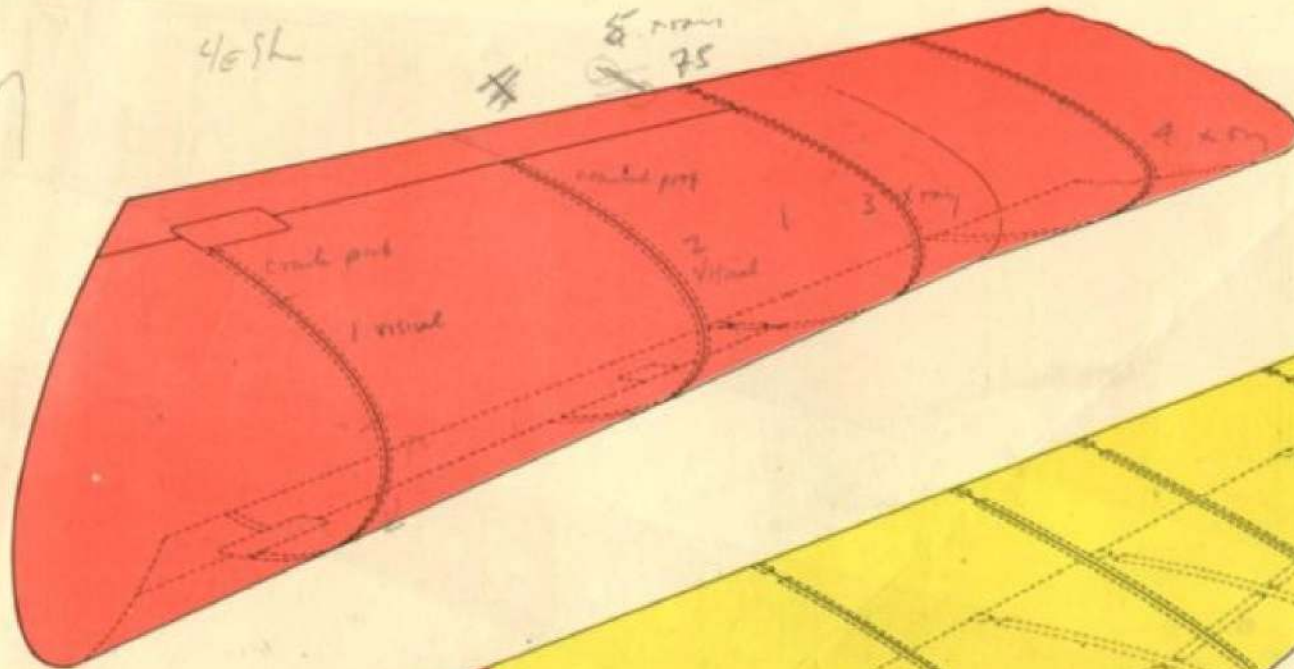
* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

NOTE: REFER TO TEXT IN CHAP 3
 PARA. 318 FOR DENTS AND
 ABRASIONS.
 REFER TO TEXT IN CHAP. 3
 PARA. 311 FOR DAMAGE
 BEYOND THE LIMITS GIVEN
 BELOW.

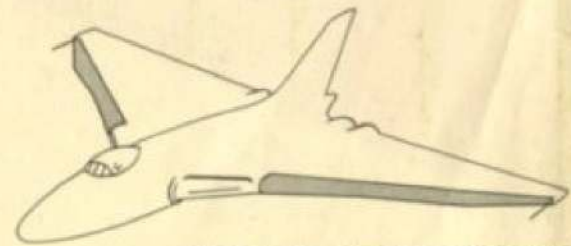


SKIN LIMIT TABLE.
 NEGLIGIBLE DAMAGE.

COLOUR	DENTS (DEPTH)	DIST. APART
RED	0.05	3.0
YELLOW	0.05	3.0
GREEN	—	—

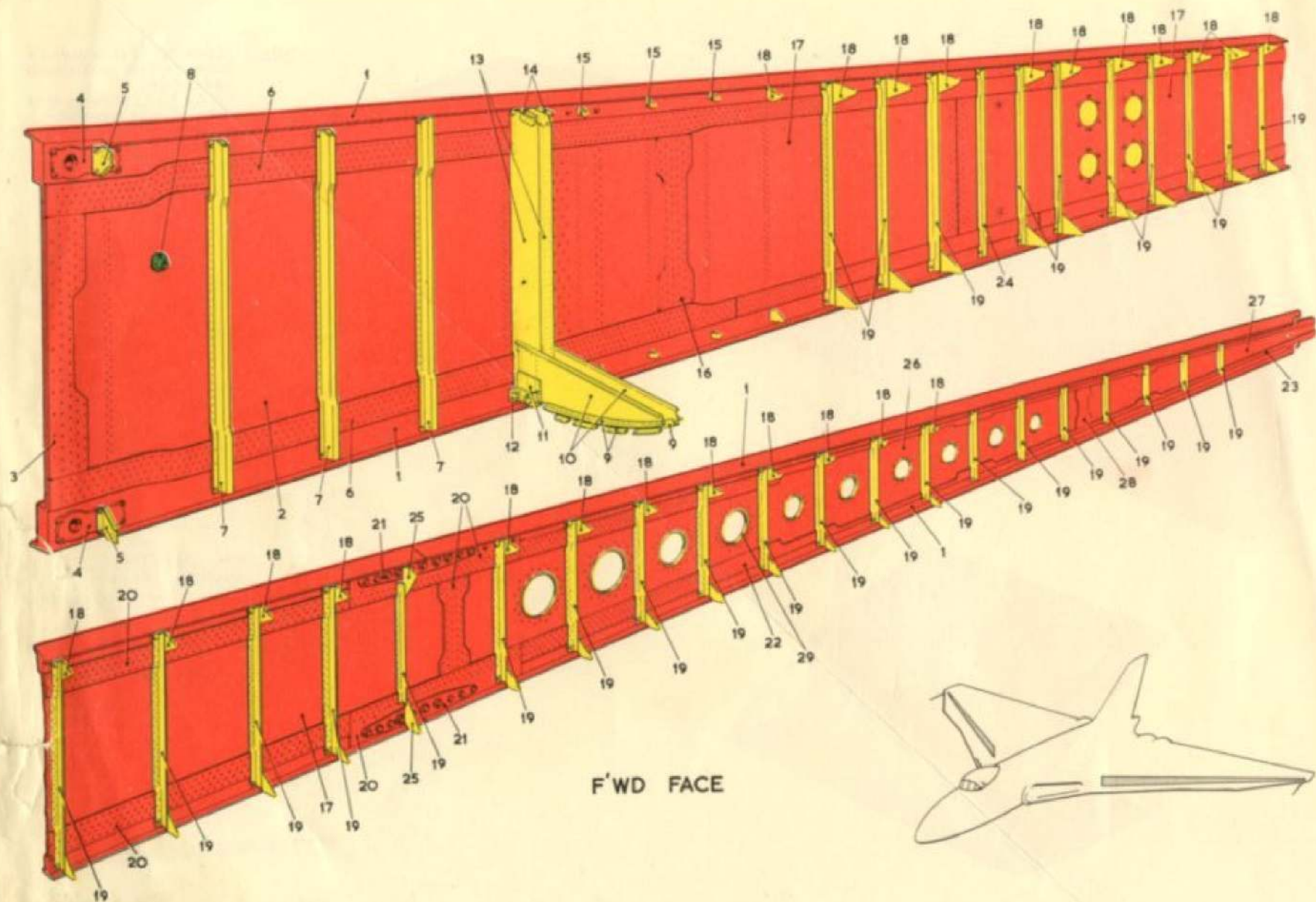
ALL DIMENSIONS IN INCHES.

*



* THESE LIMITS APPLY TO BUTTSTRAPS.
 ALL SKINS AND BUTTSTRAPS ARE D.T.D.
 687, 145.W.G.

**Fig.324A - Leading edge skins
 RESTRICTED**



**Fig.325 - Outer wing front spar
RESTRICTED**

Key to Fig. 325. Outer wing — front spar

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Depth	Dents Dist. Apart	Dia.		
1	DTD.363	—	Spar booms	*0.05	3.0	—	—	—
2	DTD.687	9	Spar web	0.025	6.0	—	—	—
3	DTD.687	8	Reinforcing plate	—	—	—	—	—
4	SS.99	H.T.S.	Reinforcing plate	—	—	—	—	—
5	L.72	16	Bracket	†0.10	2.5	0.25	4:1	—
6	DTD.687	9	Boom strap	—	—	—	—	—
7	L.72	14	Web stiffener	—	—	0.25	4:1	—
8	L.65	Al. alloy	Pipe connection	—	—	—	—	—
9	L.73	14	Angles	†0.10	2.5	0.25	4:1	—
10	L.73	14	Channel	0.10	2.5	0.25	4:1	103
11	L.73	14	Bearing plate	† —	—	—	—	—
12	DTD.683	Al. alloy	Bracket	† —	—	—	—	—
13	L.73	12	Channel	—	—	0.25	4:1	103
14	L.73	12	Shear angle	†0.10	2.5	0.25	4:1	—
15	L.72	16	Attachment bracket	—	—	—	—	—
16	DTD.687	12	Joint strap	† —	—	—	—	—
17	DTD.687	13	Spar web	0.025	6.0	—	—	—
18	L.72	18	Bracket	† —	—	—	—	—
19	L.72	20	Attachment angle	0.05	3.0	0.125	4:1	—
20	DTD.687	13	Strap	—	—	—	—	—
21	DTD.363	Al. alloy	Shackle	—	—	—	—	—
22	DTD.687	16	Boom strap	—	—	—	—	—
23	DTD.687	18	Boom strap	—	—	—	—	—
24	L.65	292/SS/3075	'Tee' stiffener	0.05	3.0	—	—	—
25	L.72	16	Bracket	† —	—	0.25	4:1	—
26	DTD.687	16	Web	0.025	6.0	0.25	8:1	103, 104
27	DTD.687	18	Web	0.025	6.0	0.25	8:1	103, 104
28	DTD.687	16	Joint plate	—	—	—	—	—
29	L.72	16	Reinforcing ring	† —	—	—	—	—

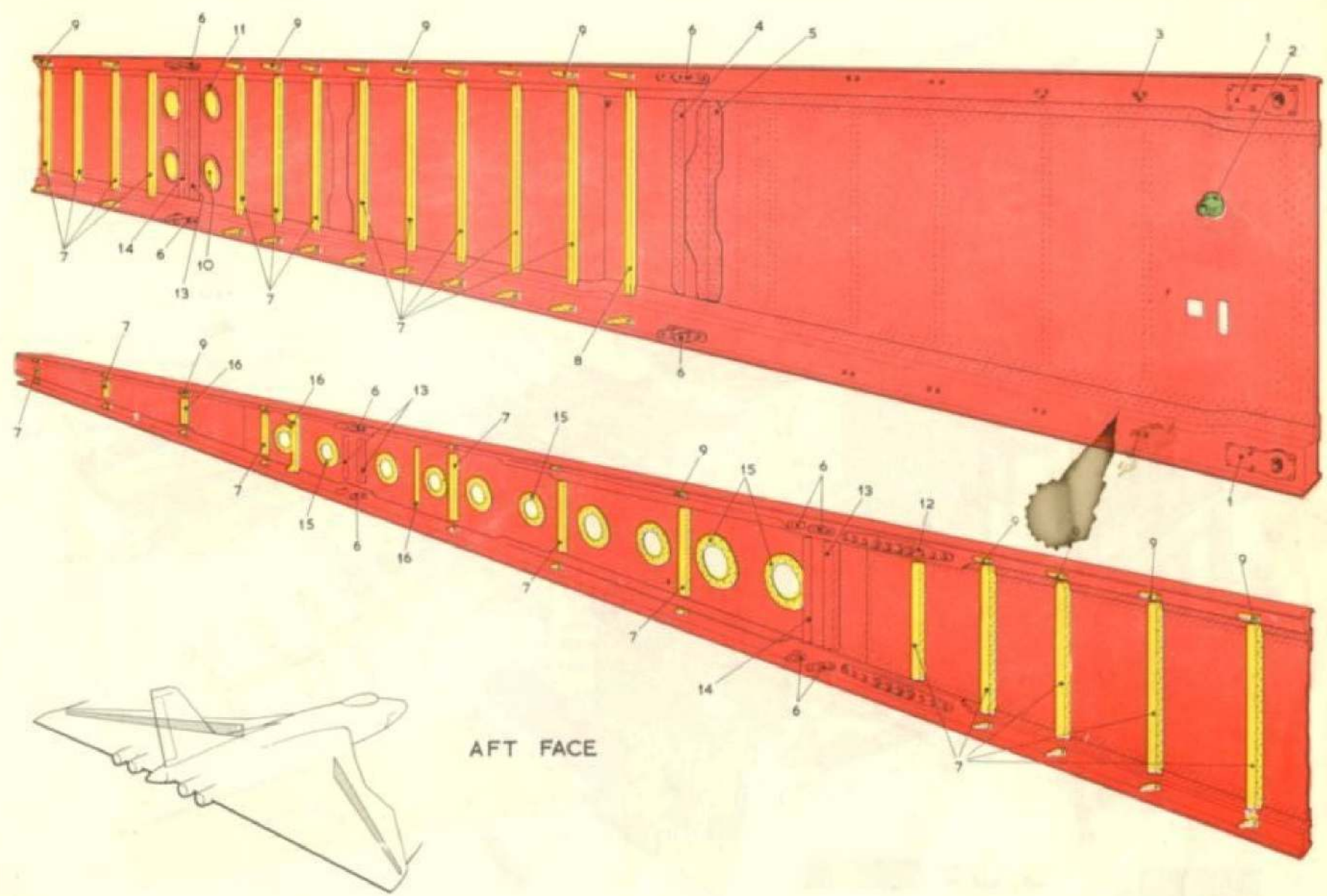
* No repairs permitted
† More expedient to renew
All dimensions in inches

Key to Fig. 325A. Outer wing — front spar

Item	Spec.	Material S.W.G. or Section	Description	Depth	Negligible Damage		Holes Pitch Ratio	Repair Fig. No.
					Dents	Dist. Apart		
1	S.99	H.T.S.	Reinforcing plate	—	—	—	—	—
2	L.65	Al. alloy	Pipe connection	—	—	—	—	—
3	L.72	10	Mounting block	—	—	—	—	—
4	DTD.687	16	Attachment angle	* —	—	0.125	4:1	—
5	DTD.687	11	Attachment angle	—	—	0.125	4:1	—
6	L.65	Al. alloy	Bracket	† —	—	—	—	—
7	L.72	18	Attachment angle	0.05	3.0	0.125	4:1	—
8	DTD.687	18	Attachment angle	0.05	3.0	0.125	4:1	—
9	L.72	16	Attachment bracket	† —	—	—	—	—
10	DTD.687	16	Cover plate	†0.10	2.5	—	—	—
11	DTD.687	13	Cover plate	—	—	—	—	—
12	DTD.363	Al. alloy	Joint shackle	—	—	—	—	—
13	L.72	16	Attachment angle	* —	—	—	—	—
14	L.72	14	Attachment angle	* —	—	—	—	—
15	L.72	16	Reinforcing ring	† —	—	—	—	—
16	DTD.687	16	Attachment angle	†0.05	3.0	0.125	4:1	—

* No repairs permitted
 † More expedient to renew
 All dimensions in inches

RESTRICTED



AFT FACE

Fig. 325A. Outer wing front spar
RESTRICTED

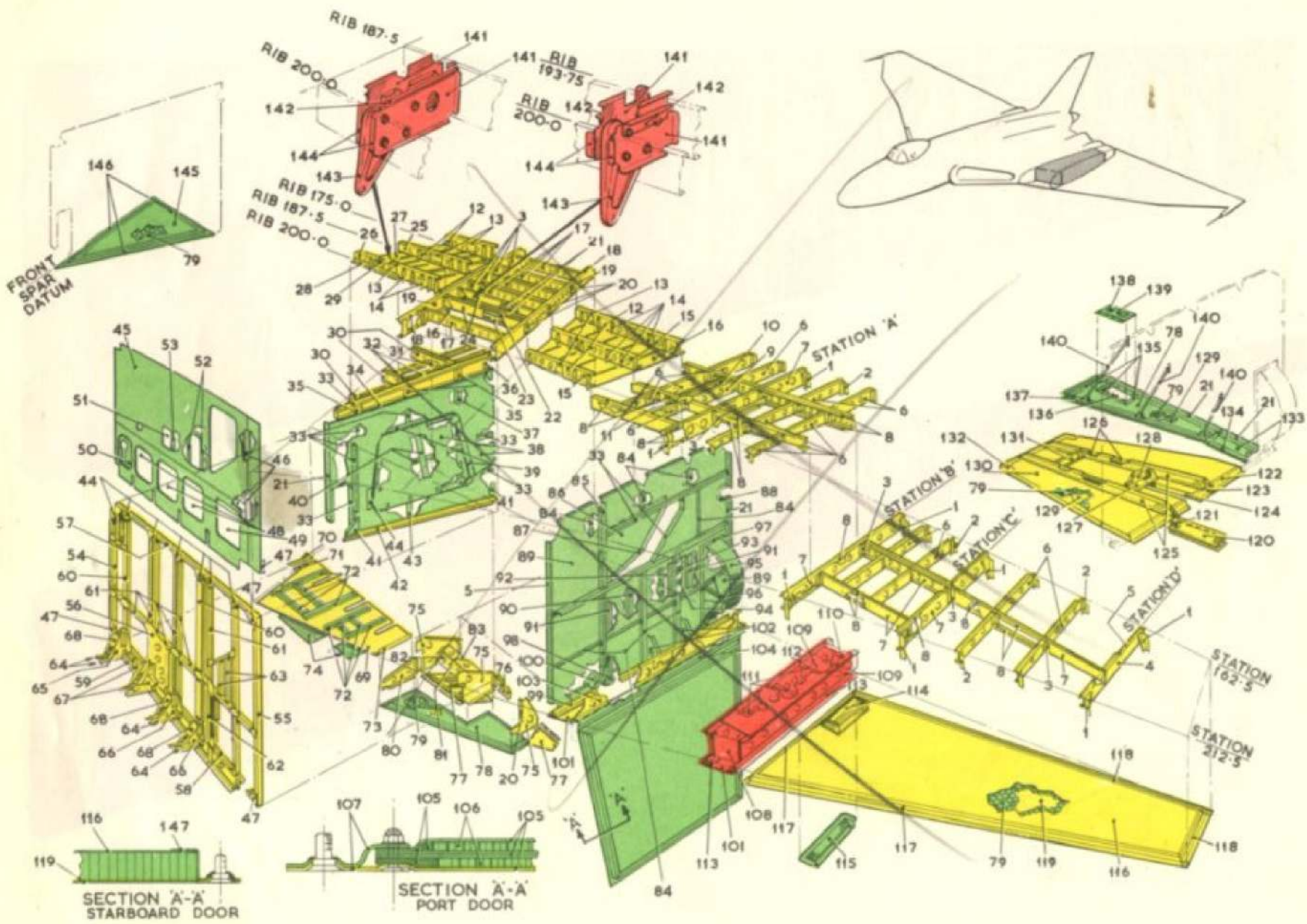


Fig. 326. U/C. bay and aft structure
RESTRICTED

KEY TO FIG.326

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
				Depth	Dist. Apart	Dia.	Pitch Ratio	
1	L. 72	18	Attachment angle	x -	-	-	-	
2	L. 72	67/SS. 1793	Attachment bracket	x -	-	-	-	
3	L. 72	20	Attachment angle	x -	-	-	-	
4	L. 72	18	Support beam	0.1	2.0	0.25	4:1	108
5	L. 72	16	Stiffening angle	-	-	0.125	4:1	113
6	L. 72	24	Intercostal	0.1	2.0	0.25	4:1	105, 108
7	L. 72	22	Web	0.1	2.0	0.25	4:1	103
8	L. 65 or D. T. D. 423	248/SS. 3075	Extruded angle	-	-	0.125	4:1	
9	L. 72	16	Intercostal	0.1	2.0	0.25	4:1	105, 108
10	L. 72	22	Intercostal	0.1	2.0	0.25	4:1	105, 108
11	L. 72	22	Gusset plate	x -	-	0.25	4:1	
12	L. 72	24	Web	0.1	2.0	0.25	4:1	
13	L. 72	834/SS. 1793	Top and bottom booms	-	-	0.125	4:1	114
14	L. 72	183/SS. 1793	Stiffener	x -	-	-	-	
15	L. 72	24	Doubling plate	0.1	2.0	0.25	4:1	
16	L. 72	26	Skin	0.2	2.5	0.125	4:1	
17	L. 72	394/SS. 1793	Rib	0.1	2.0	0.25	4:1	108
18	L. 65	340/SS. 3075	Top and bottom booms	-	-	0.125	4:1	
19	L. 72	20	Web	0.2	2.5	0.25	4:1	
20	L. 72	18	Angle	x -	-	-	-	
21	L. 72	18	Angle	-	-	0.125	4:1	114
22	L. 65	343/SS. 3075	Top boom	-	-	0.125	4:1	
23	L. 65	293/SS. 3075	Bottom boom	-	-	0.125	4:1	
24	L. 72	16	Web	0.2	2.5	0.25	4:1	
25	L. 72	20	Plate	0.2	2.5	0.25	4:1	
26	L. 72	18	Plate	0.2	2.5	0.25	4:1	
27	L. 72	26	Skin	0.2	2.5	0.25	4:1	
28	L. 72	678/SS. 1793	Bottom boom	-	-	0.125	4:1	114
29	L. 72	22	Angle	-	-	0.125	4:1	114
30	L. 72	20	Diaphragm	0.1	2.0	0.25	4:1	105, 108
31	L. 72	386/SS. 1793	Angle	-	-	0.125	4:1	114
32	L. 72	379/SS. 1793	Stringer	-	-	0.125	4:1	
33	L. 72	385/SS. 1793	Angle	-	-	0.125	4:1	114
34	L. 72	16	Angle	-	-	-	-	114
35	L. 72	18	Bracket	x -	-	-	-	
36	L. 72	18	Plate	x -	-	-	-	
37	L. 72	110/SS. 1793	Channel	-	-	0.125	4:1	107, 108
38	L. 72	24	Web	0.2	2.0	0.25	4:1	103
39	L. 72	192/SS. 1793	'Z' section stiffener	-	-	0.125	4:1	
40	L. 72	18/SS. 1793	Stiffener	-	-	0.125	4:1	
41	L. 72	20	Gusset plate	x -	-	-	-	
42	L. 72 or L. 65 or D. T. D. 423	251/SS. 3075	Angle	-	-	0.25	4:1	
43	L. 72	16	Channel	-	-	0.125	4:1	
44	L. 72	18	Gusset plate	x -	-	-	-	
45	D. T. D. 626	20	Skin	0.2	2.0	0.25	4:1	103, 104
46	D. T. D. 626	20	Joint strap	x -	-	0.25	4:1	
47	L. 72	16	Gusset plate	x -	-	-	-	
48	D. T. D. 626	20	Access door	0.1	2.5	0.25	4:1	103

* No repairs permitted

x More expedient to renew than repair

All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.326 (contd.)

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
			Depth	Dist. Apart	Dia.	Pitch Ratio		
49	L. 72	20	Access door	0.1	2.5	0.25	4:1	103
50	L. 72	18	Stiffening plate	-	-	0.25	4:1	
51	D. T. D. 626	18	Access door	0.1	2.5	0.25	4:1	103
52	L. 72	60/SS. 1793	Angle	-	-	0.125	4:1	113
53	L. 72	12b/SS. 1793	Angle	-	-	0.125	4:1	113
54	L. 72	608/SS. 1793	Vertical boom	-	-	0.125	4:1	
55	L. 72	606/SS. 1793	Vertical boom	-	-	0.125	4:1	
56	L. 72	18	Bracket plate	0.1	2.5	0.25	4:1	
57	L. 72	244/SS. 1793	Top boom	-	-	0.125	4:1	
58	L. 72	108/SS. 1793	Bottom boom	-	-	0.125	4:1	
59	L. 72	18	Skin attachment angle	-	-	0.125	4:1	
60	L. 72	102/SS. 1793	Channel	-	-	0.125	4:1	
	L. 72	16	Reinforcing channel	-	-	0.125	4:1	
61	L. 72	16	Strap plate	-	-	0.25	4:1	
	L. 72	102/SS. 1793	Stiffener	-	-	0.125	4:1	107, 108
62	L. 72	16	Bracket	-	-	0.125	4:1	
63	L. 72	120/SS. 1793	Stiffener	-	-	0.125	4:1	
64	L. 72	247/SS. 1793	Attachment angle	x -	-	0.125	4:1	
65	L. 72	12	Hinge bracket	x -	-	-	-	
66	L. 72	14	Hinge bracket	x -	-	-	-	
67	L. 72	18	Box bracket	x -	-	-	-	
68	L. 72	16	Plate	x -	-	-	-	
69	D. T. D. 626	16	Skin	0.2	2.0	0.25	4:1	103
70	L. 72	18	Strap	x 0.1	2.5	0.25	4:1	
71	L. 72	18	Attachment angle	x -	-	-	-	
72	L. 72	348/SS. 1793	Stiffening channel	-	-	0.425	4:1	107, 108
73	L. 72	183/SS. 1793	Angle	-	-	0.125	4:1	113
74	L. 72	16	Access panel	0.1	2.0	0.25	4:1	103
75	L. 72	18	Diaphragm	0.1	2.5	0.25	4:1	
76	L. 72	18	Support member	0.1	2.5	0.25	4:1	
77	D. T. D. 626	16	Access panel	0.1	2.0	0.25	4:1	103
78	L. 72	30	Skin	0.2	2.0	0.25	4:1	
79	Alum. foil	SS. 4275	Honeycomb	-	-	-	-	
80	L. 72	18	Intercostal	0.05	1.5	0.25	4:1	
81	L. 72	14	Support bracket	0.1	2.0	0.25	4:1	
82	L. 72	20	Stiffening member	0.1	2.0	0.25	4:1	
83	L. 72	18	Spray shield	-	-	-	-	
84	L. 72	12a/SS. 1793	Angle	-	-	0.125	4:1	113
85	L. 72	285/SS. 1793	Channel	-	-	0.125	4:1	108
86	L. 72	20	Access door	0.2	2.0	0.25	4:1	103
87	L. 72	200/SS. 1793	Angle	-	-	0.125	4:1	
88	L. 72	16	Stiffening plate	x -	-	0.125	4:1	
89	L. 72	20	Web	0.2	2.0	0.25	4:1	103
90	L. 72	790/SS. 1793	Stiffener	-	-	0.125	4:1	
91	L. 72	790/SS. 1793	Stiffener	-	-	0.125	4:1	
92	L. 72	85/SS. 1793	Stiffener	-	-	0.125	4:1	
93	L. 72	14	Bracket	x -	-	0.125	4:1	
94	L. 72	16	Bracket	x -	-	-	-	
95	L. 72	20	Channel	-	-	0.125	4:1	
96	L. 72	2/SS. 1793	Stiffener	-	-	0.125	4:1	108
97	L. 72	20	Angle	-	-	0.125	4:1	113

* No repairs permitted

x More expedient to renew than repair

All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.326 (contd.)

Item	Material		Description	Dents		Negligible Damage		Repair Fig.
	Spec.	S.W.G. or Section		Depth	Diam. Apart	Dia.	Pitch Ratio	
98	L. 65 or D. T. D. 683	Forging	Hinge arm	* -	-	-	-	
99	L. 65	333/SS. 3075	Angle	-	-	0.125	4:1	
100	L. 72	18	Bracket	x -	-	-	-	
101	L. 72	16	Skin	0.1	2.5	-	-	103,104
102	L. 72	24	Diaphragm	-	-	-	-	
103	L. 72	18	Beam	0.05	2.0	0.125	4:1	
104	L. 72	16	Hinge angle	-	-	0.125	4:1	
105	V93-T5	-	Fibreglass cloth	-	-	-	-	
106	Dufaylite	¼ in. cell	Fibreglass honeycomb	-	-	-	-	
107	L. 72	16	Frame member	-	-	0.125	4:1	
108	L. 72	16	Channel	0.05	2.5	0.125	4:1	
109	L. 72	24	Web	0.05	2.5	0.125	8:1	
110	L. 72	24	Plate	0.1	2.5	0.25	8:1	
111	L. 72	24	Diaphragm	-	-	0.25	8:1	
112	L. 72	.2d/SS. 1793	Angle	-	-	0.125	8:1	113
113	L. 72	20	Angle	-	-	0.125	8:1	114
114	L. 59	20	Chute sleeve	x 0.1	2.0	0.25	4:1	
115	L. 72	18	Extractor ramp	x 0.1	2.0	0.25	4:1	
116	L. 73	22	Inner skin	0.2	2.0	0.125	4:1	
117	L. 72	22/SS. 1793	Edge member	-	-	0.125	4:1	
118	L. 72	35/SS. 1793	Edge member	-	-	0.125	4:1	
119	L. 73	24	Outer skin	0.1	2.5	-	-	
120	L. 72	18	Hinged flap	-	-	-	-	
121	S. 110	-	Bracket	x -	-	-	-	
122	L. 72	20	'Z' member	-	-	0.125	4:1	
123	L. 65 or D. T. D. 683	Forging	Hinge bracket	* -	-	-	-	
124	L. 72	27/SS. 7000	Frame member	-	-	0.125	4:1	
125	L. 73	825/SS. 1793	Stiffener	0.1	2.5	0.25	4:1	
126	L. 73	20	Channel	0.1	2.5	0.25	4:1	
127	L. 72	825/SS. 1793	Stiffener	-	-	-	-	
128	L. 72	20	Spring anchorage	x -	-	-	-	
129	L. 72	26	Outer skin	0.1	2.5	-	-	
130	D. T. D. 118	24	Inner skin	0.2	2.0	0.125	4:1	
131	L. 72	20	Bracket	x -	-	0.125	4:1	
132	L. 72	14	Plate	x 0.1	2.5	0.25	4:1	
133	L. 73	14	Skin	0.1	2.0	-	-	103
134	L. 72	846/SS. 1793	Seal retaining strip	x -	-	0.125	4:1	
135	L. 72	20/SS. 1793	Channel	-	-	0.125	4:1	
136	L. 72	19/SS. 1793	'Z' section	-	-	0.125	4:1	
137	L. 72	20	Channel	-	-	0.125	4:1	
138	L. 72	24	Access door pressing	0.1	2.5	-	-	
139	L. 72	22	Access door skin	0.1	2.5	-	-	
140	T. 45	-	Strut	x -	-	-	-	
141	L. 72	18	Intercostal	-	-	0.125	8:1	
142	L. 72	18	Angle	-	-	-	-	
143	D. T. D. 88C	-	Bracket	x 0.02	-	-	-	
144	L. 72	16	Angle	x -	-	-	-	
145	L. 72	24	Inner skin	0.2	2.0	0.125	4:1	
146	L. 72	895/SS. 1793	Frame member	-	-	0.125	4:1	
147	L. 72	22/SS. 1793	Angle	-	-	0.125	4:1	

* No repairs permitted

x More expedient to renew than repair

All dimensions are quoted in inches

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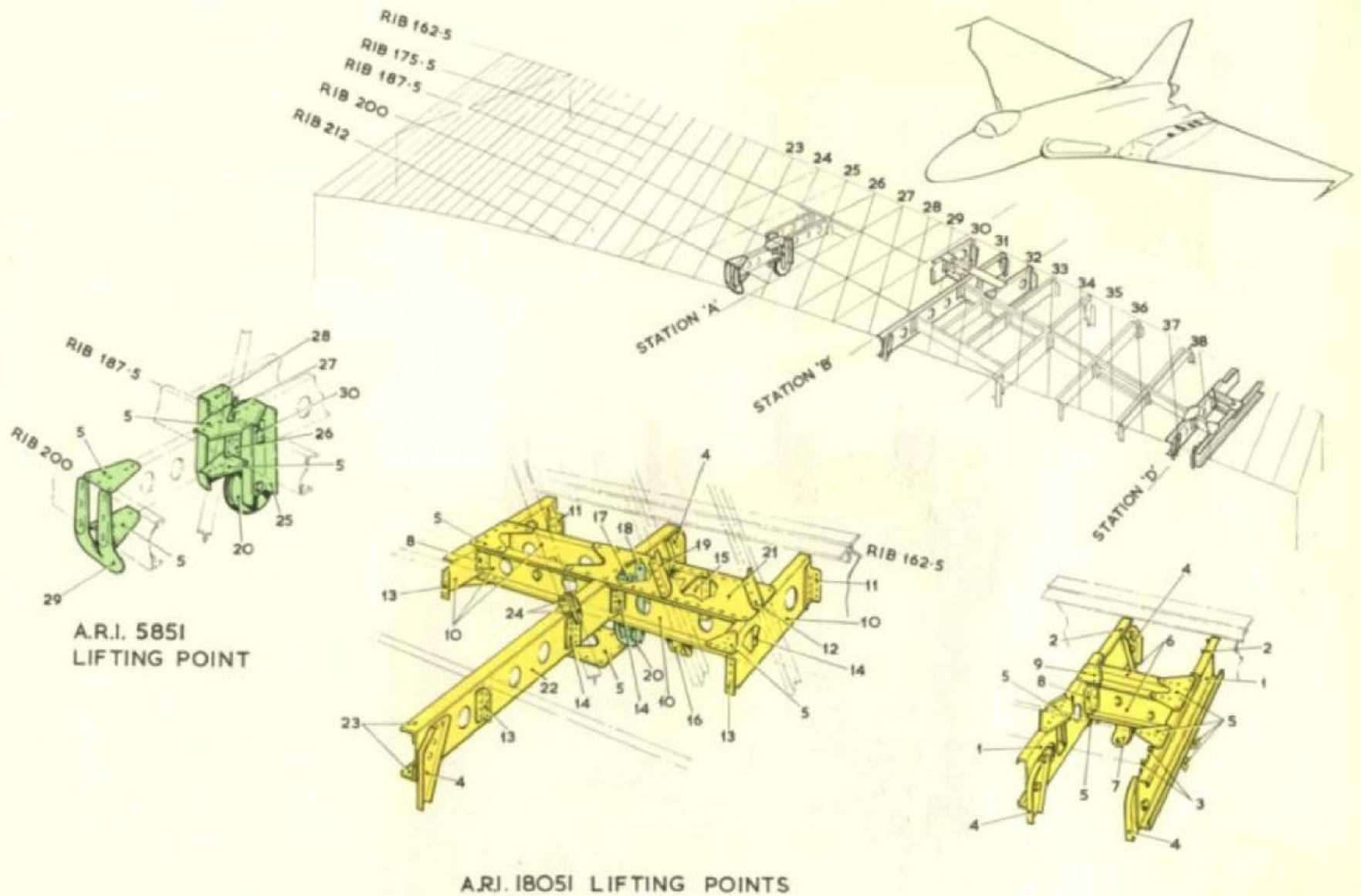


Fig.326A. U/C. bay and aft structure -Details

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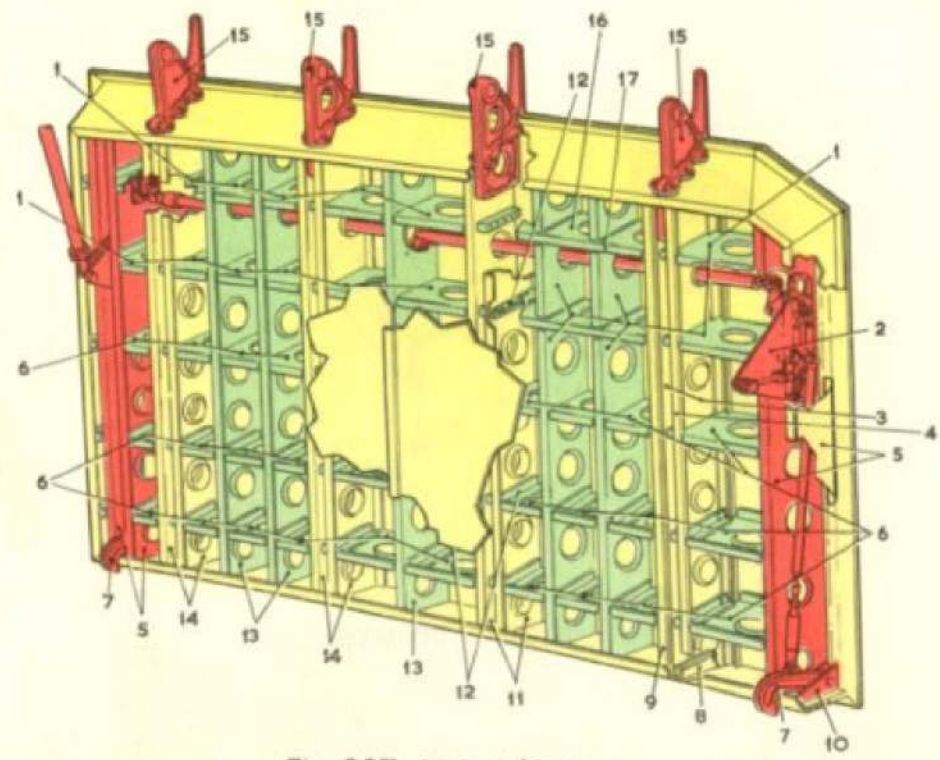
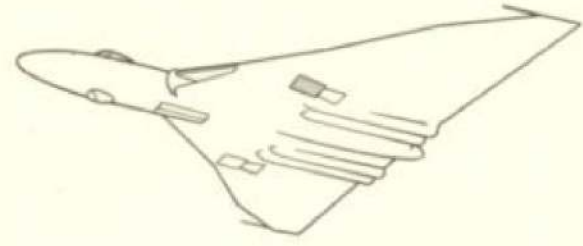
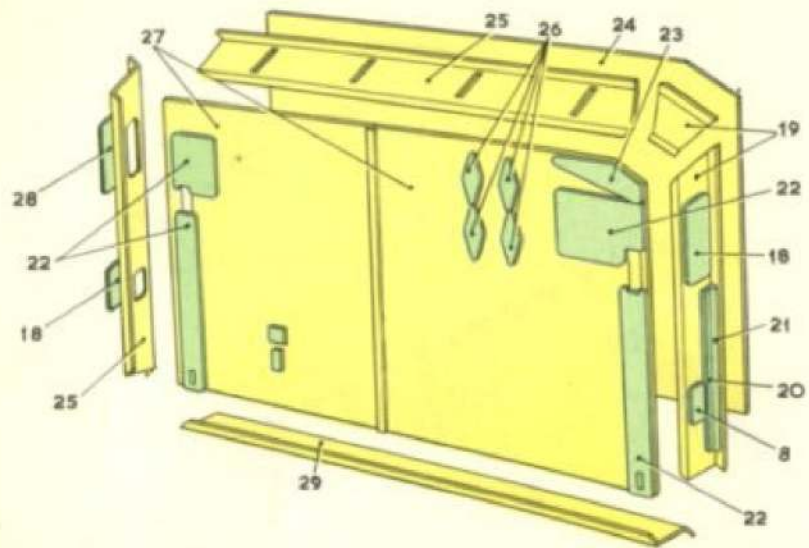


Fig. 327. Main U/C door
RESTRICTED

KEY TO FIG.327

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
			Depth	Dist. Apart	Dia.	Pitch Ratio		
1	L. 72	20	Intercostal	0.1	2.0	0.125	4:1	106, 107
2	D. T. D. 687	10	Plate	x -	-	-	-	-
3	L. 72	18	Web	0.05	2.5	-	-	-
4	L. 72	16	Angle	-	-	-	-	114
5	L. 72	18	Rib	-	-	-	-	105, 106, 107
6	L. 72	22	Intercostal	0.1	2.0	0.125	4:1	106, 107
7	S. 80	-	Door-catch	* 0.02	-	-	-	-
8	L. 72	18	Bracket	x -	-	0.125	8:1	-
9	L. 72	14	Angle	-	-	-	-	114
10	L. 65	-	Bracket	* -	-	-	-	-
11	L. 72	16	Rib	0.05	2.5	-	-	105, 106, 107
12	L. 72	20	Angle	-	-	0.125	4:1	113
13	L. 72	20	Rib	0.1	2.0	0.125	4:1	105, 106, 107
14	L. 72	18	Rib	0.05	2.5	-	-	105, 106, 107
15	D. T. D. 130	-	Hinge arm	* 0.02	-	-	-	-
16	L. 72	16	Intercostal web	0.1	2.0	0.125	4:1	106
17	L. 72	16	Intercostal boom	-	-	-	-	-
18	L. 72	16	Access panel	0.1	2.0	0.25	4:1	-
19	L. 72	18	Frame member	0.2	2.0	0.25	4:1	-
20	L. 72	22	Cover strip	x -	-	0.125	4:1	-
21	1/SS. 4143	-	Seal (Rubber)	-	-	-	-	-
22	L. 72	20	Access panel	0.1	2.0	0.25	4:1	-
23	L. 72	20	Gusset plate	x 0.1	2.0	0.25	4:1	-
24	L. 73	20	Outer skin	0.1	2.5	-	-	103
25	L. 72	18	Frame member	0.1	2.0	0.25	4:1	-
26	L. 72	18	Gusset plate	x -	-	0.25	4:1	-
27	L. 72	20	Inner skin	0.2	2.0	0.25	4:1	-
28	L. 72	18	Access panel	0.1	2.0	0.25	4:1	-
29	L. 72	14	Frame member	0.1	2.0	0.25	4:1	-

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.328

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes		Pitch Ratio	
			Depth	Dist. Apart	Dia.			
1	L.72	17	Stiffening plate	x 0.1	2.5	0.25	4:1	-
2	L.72	20	Reinforcing plate	0.1	2.5	0.25	4:1	-
3	D.T.D.687	13	Web	0.05	3.0	1.0	8:1	103
4	D.T.D.687	18	Web	0.05	3.0	1.0	8:1	103
5	D.T.D.687	17	Butt strap	-	-	-	-	-
6	L.72	579/SS.1793	Stiffeners	0.05	3.0	0.25	4:1	-
7	D.T.D.687	12	Web	0.05	3.0	-	-	-
8	L.73	14	Channel	0.05	3.0	-	-	-
9	D.T.D.683	9/B.1635	Rib booms	* 0.05	3.0	-	-	-
10	D.T.D.687	17	Rib web	0.05	3.0	-	-	-
11	L.72	12c/SS.1793	Tank angle	0.1	2.5	0.125	4:1	103
12	L.65	-	Lifting block	x 0.02	-	-	-	113
13	D.T.D.683	302/SS.3075	'Z' stringer (top)	-	-	-	-	-
14	D.T.D.683	301/SS.3075	'T' stringer	-	-	-	-	347
15	L.72	146/SS.1793	Rib stiffeners	x 0.05	3.0	0.125	4:1	110
16	D.T.D.626	20	Rib web	0.1	2.5	0.5	8:1	-
17	L.72	24	Rib web	0.1	2.5	0.5	8:1	-
18	L.72	186/SS.1793	Web stiffeners	x 0.05	3.0	0.125	4:1	-
19	L.72	12a/SS.1793	Rib angle	-	-	0.125	4:1	113
20	L.72	10	Rib booms	-	-	0.125	4:1	-
21	A.Z.31	24	Tank bay skins	0.1	2.5	-	-	-
22	D.T.D.626	20	Reinforcing strips	0.1	2.5	-	-	-
23	L.72	20	Diaphragms	x 0.1	2.5	0.25	4:1	-
24	L.72	18	Panel	x 0.1	2.5	-	-	-
25	L.72	22	Panel	x 0.1	2.5	-	-	-
26	D.T.D.687	583/SS.1793	'Z' stringer (bottom)	0.05	4.0	-	-	-
27	A.Z.31	22	Tank bay skins	0.1	2.5	-	-	111

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

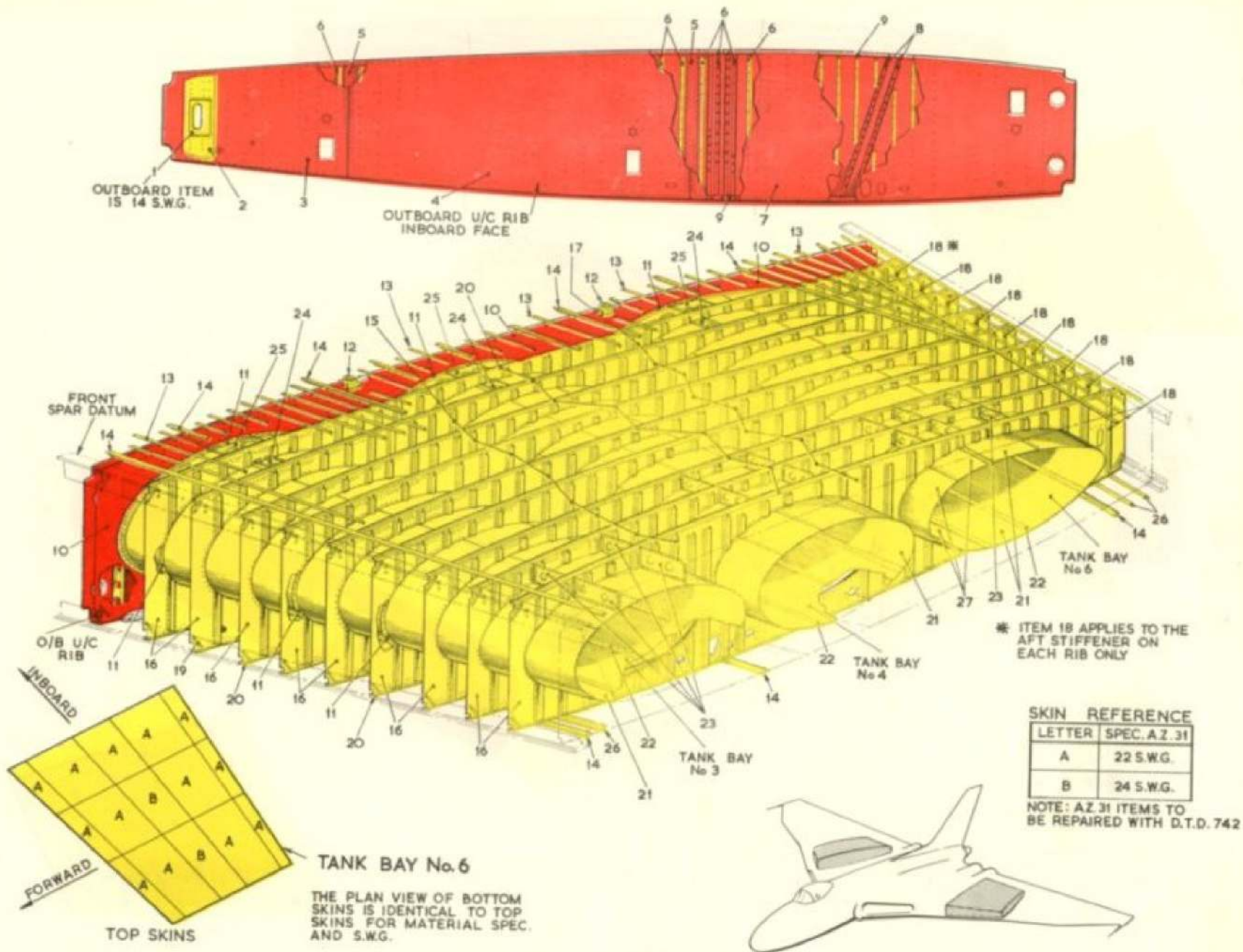


Fig. 32B. Nos. 3, 4 and 6 tank bays
RESTRICTED

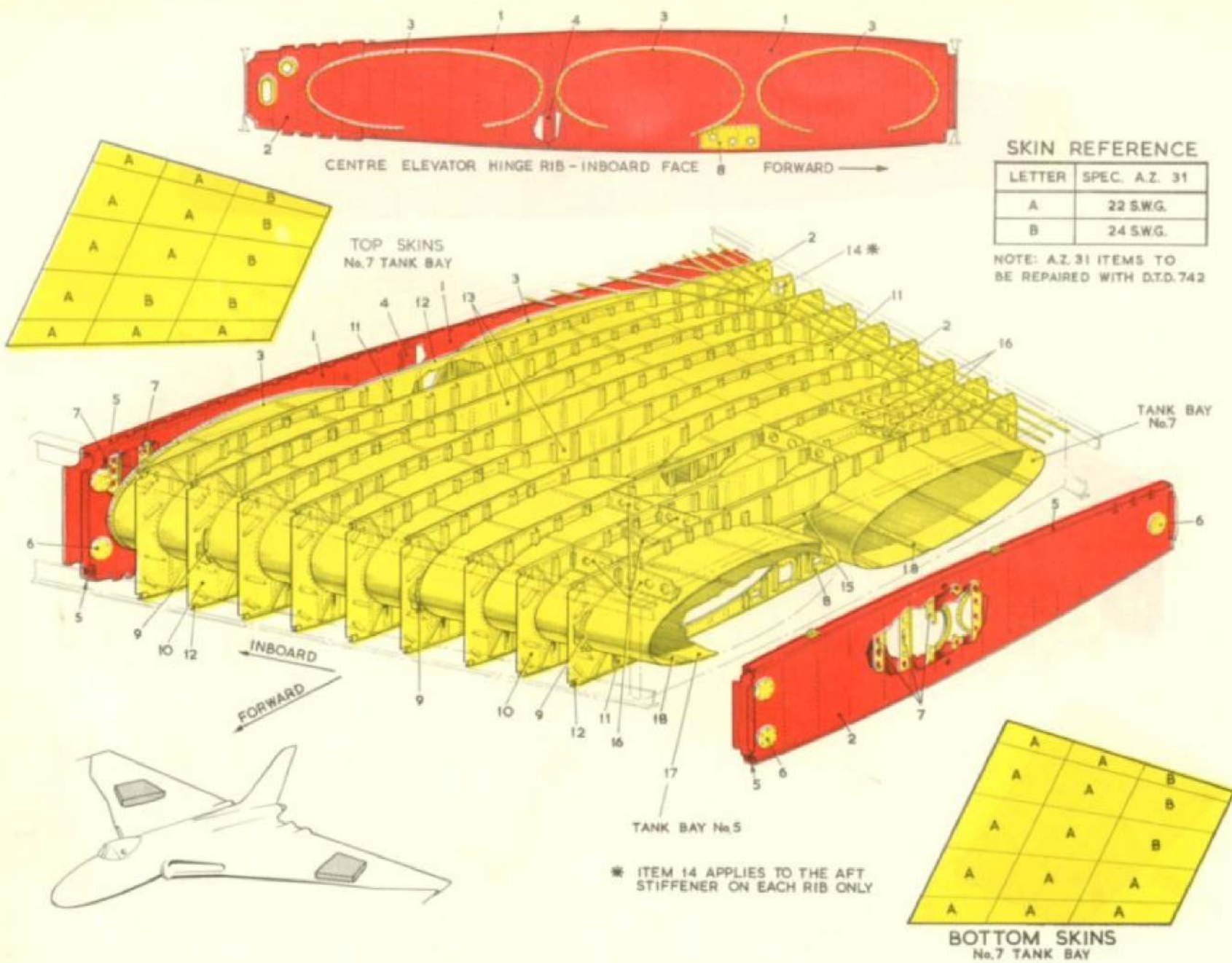


Fig. 328A. Nos. 5 and 7 tank bays

RESTRICTED

KEY TO FIG.328A

Item	Material		Description	Negligible Damage					Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes				
			Depth	Dist. Apart	Dia.	Pitch Ratio			
1	L. 72	20	Web	0.05	3.0	1.0	8:1	103,104	
2	L. 72	20	Reinforcing plate	0.05	3.0	1.0	8:1	-	
3	L. 72	12c/SS. 1793	Tank angle	0.1	2.5	0.125	4:1	113	
4	L. 72	18	Joint strap	-	-	-	-	-	
5	L. 65	311/SS. 3075	Rib booms	* 0.05	3.0	-	-	-	
6	L. 72	20	Cover plate	0.1	2.5	1.0	8:1	-	
7	L. 72	579/SS. 1793	Channel	0.1	2.5	0.25	4:1	-	
8	L. 72	18	Reinforcing plate	0.05	3.0	0.5	8:1	-	
9	L. 72	16	Tank angle	0.1	2.5	0.124	4:1	-	
10	L. 72	22	Stiffening plate	0.1	2.5	0.5	8:1	-	
11	L. 72	146/SS. 1793	Stiffener	x 0.05	3.0	0.125	4:1	-	
12	L. 72	537/SS. 1793	Top and bottom booms	0.05	3.0	0.125	4:1	-	
13	L. 72	24	Rib Web	0.1	2.5	0.5	8:1	-	
14	L. 72	12b/SS. 1793	Stiffener	x 0.05	3.0	0.125	4:1	-	
15	L. 72	100/SS. 1793	Stiffening channel	0.05	3.0	0.125	4:1	-	
16	L. 72	20	Diaphragm	x 0.1	2.5	0.25	4:1	-	
17	A. Z. 31	24	Tank bay skins	0.1	2.5	-	-	-	
18	D. T. D. 626	20	Reinforcing strip	0.1	2.5	-	-	-	

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.329

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes		Pitch Ratio	
				Depth	Dist. Apart	Dia.		
1	L. 72	386/SS. 1793	Boom	-	-	0.125	4:1	
2	L. 72	24	Web	0.1	2.5	0.5	8:1	103, 104
3	L. 72	91/SS. 1793	Stiffener	0.05	3.0	0.125	4:1	
4	L. 72	20	Channel	0.1	2.5	0.25	4:1	
5	L. 72	18	Stiffener	0.05	3.0	0.125	4:1	
6	L. 72	22	Mounting plate	0.1	2.5	0.5	8:1	103
7	L. 72	18	Vertical member	0.05	3.0	0.125	4:1	
8	L. 72	18	Channel	x 0.1	2.5	0.25	4:1	
9	L. 72	20	Gusset plate	x 0.1	2.5	0.25	4:1	
10	L. 72	530/SS. 1793	Stiffener (yellow)	0.05	3.0	0.125	4:1	
10	L. 72	530/SS. 1793	Stiffener (red)	0.05	3.0	-	-	
11	L. 72	410/SS. 1793	Stiffener	0.05	3.0	-	-	
12	L. 72	18	Reinforcing plate	0.05	3.0	-	-	349
13	L. 72	18	Rib web	0.05	3.0	-	-	103, 104, 349
14	L. 72	525/SS. 1793	Top boom	0.05	3.0	-	-	
15	L. 65	304/SS. 3075	Bottom boom	0.05	3.0	-	-	
16	L. 72	731/SS. 1793	Angle	0.05	3.0	-	-	
17	L. 72	16	Angle	0.05	3.0	-	-	
18	L. 72	15/SS. 1793	Channel	0.05	3.0	-	-	
19	S. 96	-	Bearing housing	* -	-	-	-	
20	L. 72	20	Webs	0.05	3.0	-	-	103, 104
21	L. 65	311/SS. 3075	Top and bottom booms	* 0.05	3.0	-	-	
22	L. 72	579/SS. 1793	Stiffeners (yellow)	0.05	3.0	0.125	4:1	
22	L. 72	579/SS. 1793	Stiffeners (red)	0.05	3.0	-	-	
23	L. 72	233/SS. 1793	Stiffeners	0.05	3.0	-	-	
24	D. T. D. 142	-	Packing block	x 0.1	2.5	0.25	-	
25	L. 72	10	Reinforcing plate	0.05	3.0	-	-	
26	L. 72	16	Shear angles	0.05	3.0	-	-	
27	L. 72	20	Reinforcing plate	x 0.15	3.0	-	-	
28	L. 72	18	Reinforcing ring	x 0.1	2.5	-	-	
29	L. 72	27/SS. 1793	Stiffening angle	x 0.05	3.0	-	-	

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

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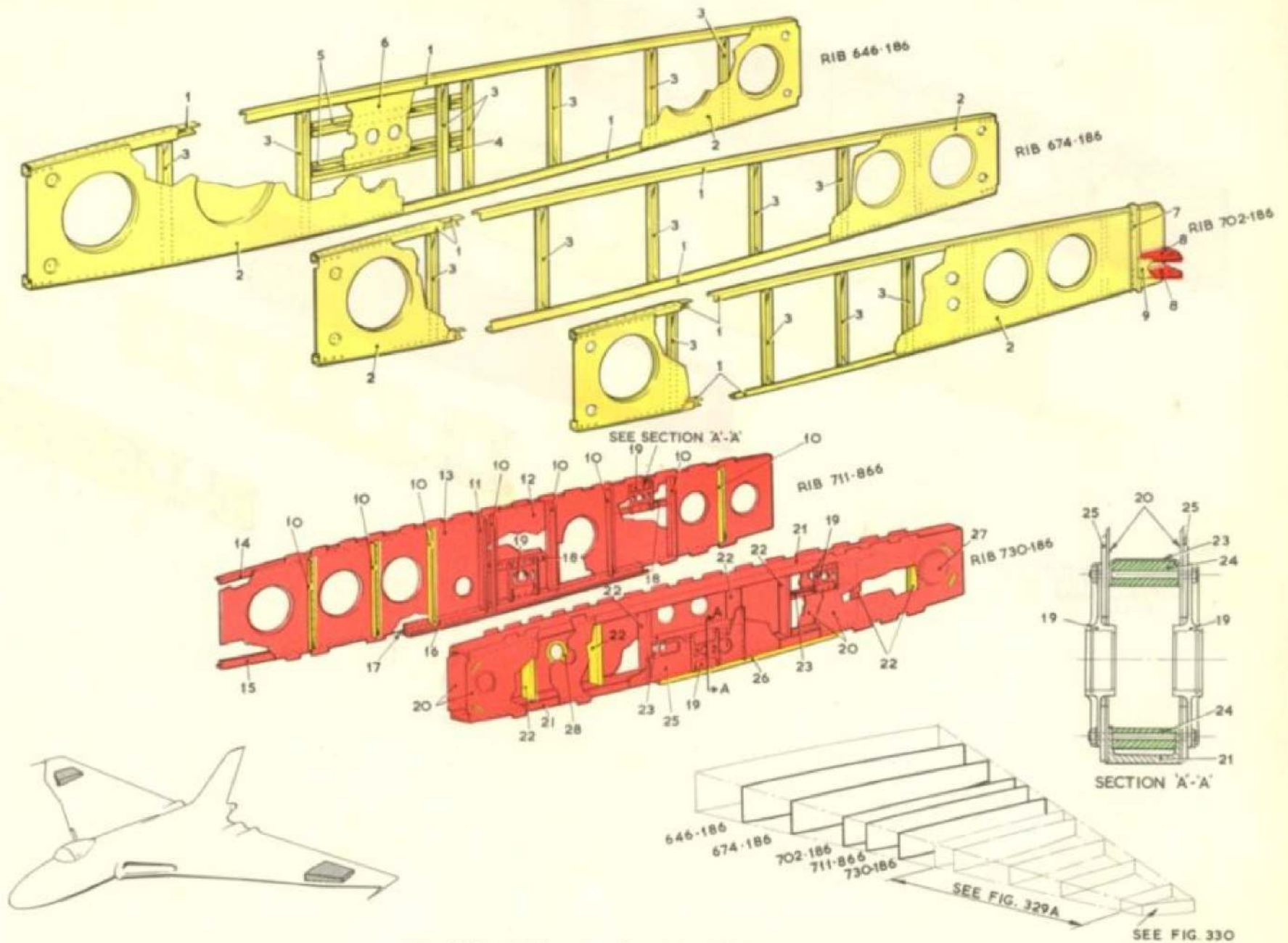
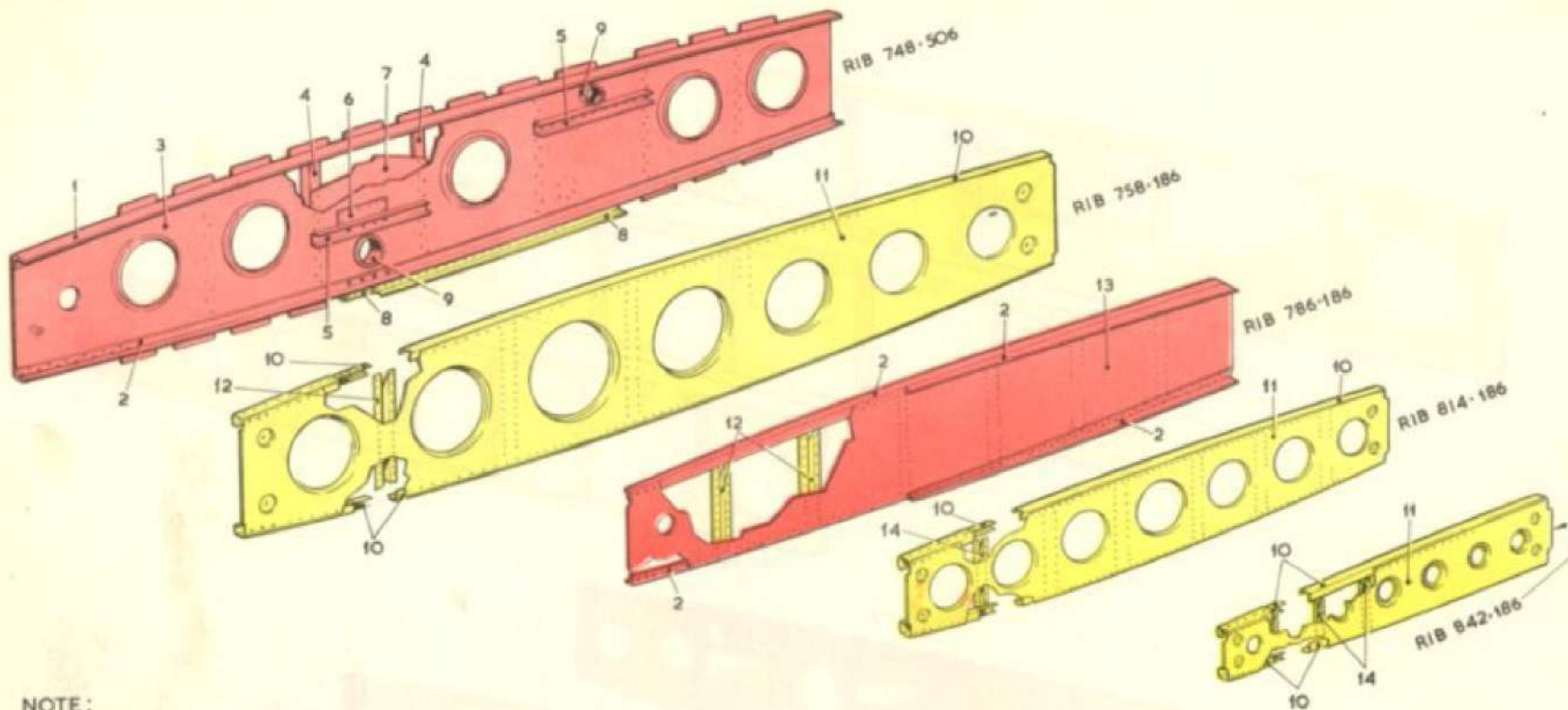


Fig. 329. Outboard wing structure
RESTRICTED



NOTE:
 ITEMS 12 AND 14 REPAIRED
 AS FIG. 112 WITH REPAIR
 MATERIAL ARRANGED
 EXTERNALLY

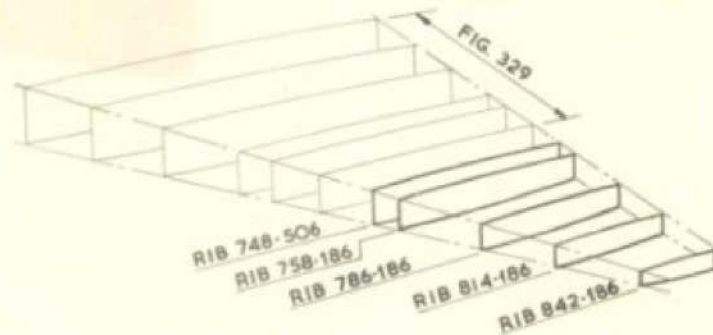


Fig 329A. Outboard wing structure
 RESTRICTED

KEY TO FIG.329A

Item	Material		Description	Negligible Damage				
	Spec.	S.W.G. or Section		Dents	Holes			Repair Fig.
			Depth	Dist. Apart	Dia.	Pitch Ratio		
1	L. 72	525/SS. 1793	Boom	* 0.05	3.0	-	-	-
2	L. 65	304/SS. 3075	Boom	* 0.05	3.0	-	-	-
3	L. 72	18	Rib web	0.05	3.0	-	-	103, 104, 106
4	L. 72	530/SS. 1793	Rib stiffeners	0.05	3.0	-	-	114
5	L. 72	15/SS. 1793	Channel stiffeners	x 0.05	3.0	-	-	108
6	L. 72	16	Reinforcing plate	* 0.05	3.0	-	-	-
7	L. 72	18	Reinforcing plate	x 0.05	3.0	-	-	-
8	L. 72	16	Angle	0.05	3.0	0.125	4:1	-
9	S. 96		Housing	* -	-	-	-	-
10	L. 72	386/SS. 1793	Boom angles	-	-	0.125	4:1	113
11	L. 72	24	Rib web	0.1	2.5	0.5	8:1	103, 104, 106
12	L. 72	91/SS. 1793	Stiffeners	0.05	3.0	0.125	4:1	112
13	L. 72	20	Rib web	0.05	3.0	-	-	103, 104, 106
14	L. 73	379/SS. 1793	Stiffeners	0.05	3.0	0.125	4:1	112

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

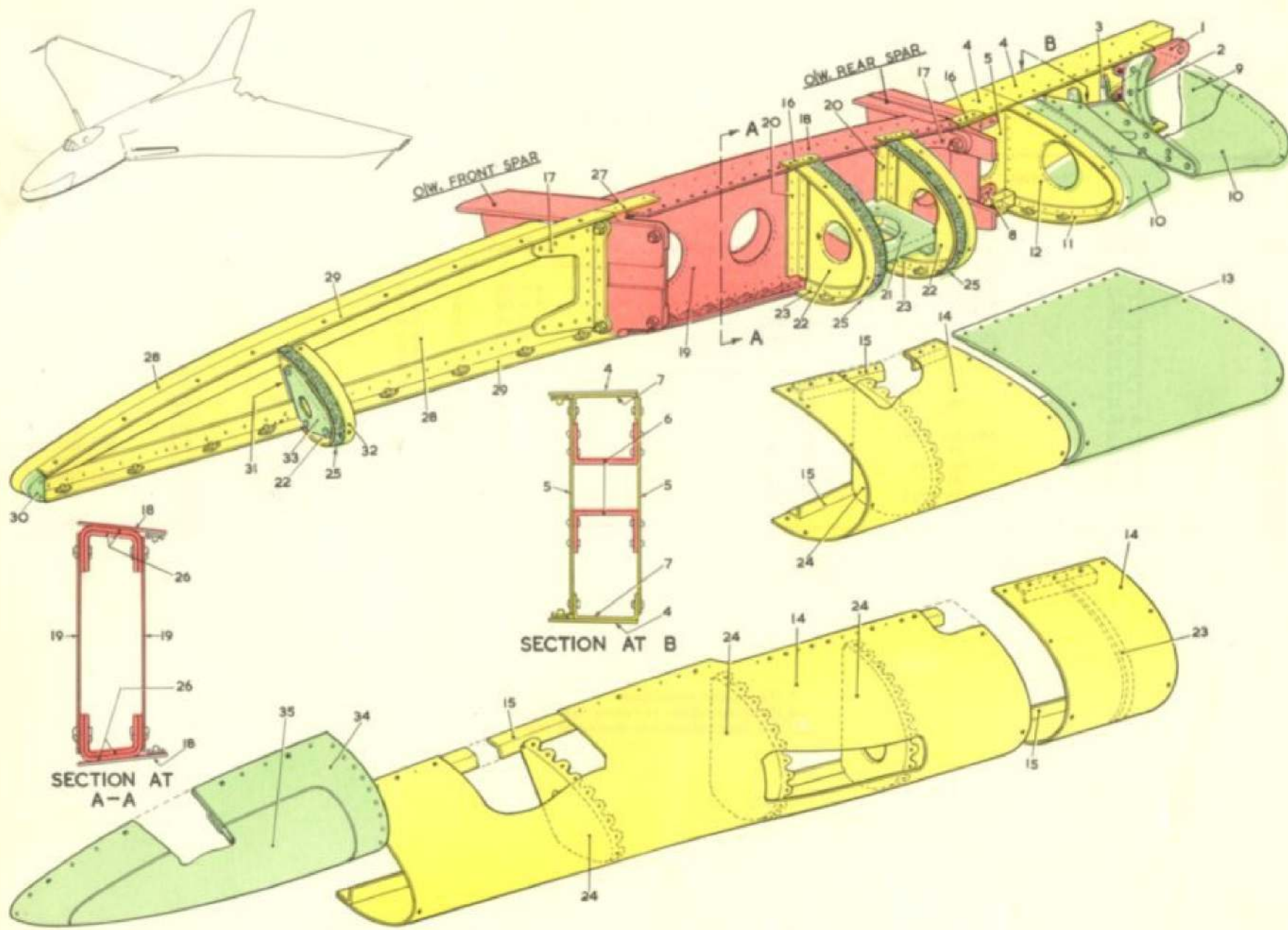


Fig. 330. Outboard wing tip
 RESTRICTED

Key to Fig. 330. Outboard wing tip

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	DTD.638 or 364	Al. alloy	Hinge bracket	* —	—	—	—	—
2	L.72	18	Shroud angle	†0-10	2-5	0-25	8:1	—
3	L.72	18	Bracket	†0-10	2-5	0-25	4:1	—
4	L.72	16	Strap plate	0-10	2-5	0-25	8:1	—
5	L.72	20	Side plate	0-10	2-5	0-25	8:1	103
6	L.65	368/SS/3075	Channel member	* —	—	—	—	—
7	L.72	20	Cover channel	0-10	2-5	0-25	8:1	—
8	L.65	Al. alloy	Attachment bracket	* —	—	—	—	—
9	L.72	18	Shroud	0-10	2-5	—	—	103
10	L.59	20	Mounting bracket	0-10	2-5	—	—	—
11	L.72	20	Former angle	†0-10	2-5	—	—	—
12	L.72	20	Former	0-10	2-5	0-25	4:1	—
13	Y.227/T5	Fibre glass	Panel	0-2	2-5	—	—	219A
14	L.72	22	Fairing piece	0-10	2-5	—	—	103
15	L.72	20	Fairing angle	0-10	2-5	—	—	—
16	L.72	20	Packing	†0-10	2-5	0-25	4:1	—
17	DTD.683 or 364	Al. alloy	Attachment bracket	* —	—	—	—	—
18	L.72	16	Strap plate	0-05	3-0	0-2	5:1	—
19	L.72	20	Web plate	0-05	3-0	0-5	8:1	103, 104
20	L.72	18	Angles	†0-10	2-5	—	—	—
21	L.72	18	Mounting bracket	†0-10	2-5	0-5	4:1	—
22	L.72	18	Former	0-10	2-5	0-5	8:1	—
23	L.72	60/SS/1793	Angles	0-10	2-5	—	—	113
24	L.72	24	Former	0-10	2-5	0-5	8:1	—
25	Silicone Soft rubber	1/8" thick	Weatherstrip	† —	—	—	—	—
26	L.73	14	Rib booms	0-05	3-0	0-2	8:1	—
27	L.72	14	Packing	†0-10	2-5	—	—	—
28	L.72	18	Rib pressing	0-10	2-5	0-25	8:1	103
29	L.72	729/SS/1793	Rib angle	0-10	2-5	—	—	—
30	BSS.668	—	Nose block	0-10	2-5	0-25	4:1	—
31	L.72	18	Packing	†0-10	2-5	0-25	4:1	—
32	L.72	18	Plate	†0-10	2-5	—	—	—
33	L.72	18	Mounting plate	†0-10	2-5	0-25	4:1	—
34	L.72	18	Cover frame	0-10	2-5	—	—	—
35	DTD.838A	Perspex	Window	0-2	2-5	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

Key for Fig. 331. Outer wing rear spar and trailing edge

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	L.72	20	Intercostal	0-10	2-5	0-50	8 : 1	103, 104, 115
2	L.72	20	Angle	—	—	0-125	4 : 1	113
3	L.72	20	Skins	0-10	2-5	—	—	103, 104
4	L.72	20	Skins	0-20	2-0	—	—	103, 104
5	L.72	20	'Z' member	—	—	0-125	4 : 1	as 111
6	L.72	20	Gusset plate	†—	—	0-125	4 : 1	—
7	L.72	244/SS/1793	Channel	†—	—	0-25	4 : 1	—
8	Noral/50/SWP	SS4138	Hinge	—	—	—	—	—
9	L.72	12C/SS/1793	Angle	0-05	3-00	0-25	4 : 1	113
10	L.72	669/SS/1793	Channel	0-05	3-00	0-25	4 : 1	as 108
11	L.72	15/SS/1793	Channel	0-10	2-5	0-25	4 : 1	—
12	L.65	Al. alloy	Hinge bracket	—	—	—	—	—
13	L.72	20	Channel members	0-10	2-5	0-25	4 : 1	—
14	L.72	20	Hinge rib webs <i>Red</i>	0-05	3-0	—	—	—
			Hinge rib webs <i>Yellow</i>	0-10	2-5	0-50	8 : 1	103, 104
15	L.72	18	Angle	0-10	2-5	—	—	—
16	L.65	311/SS/3075	Extruded member	0-05	3-0	—	—	—
17	L.72	20	Vertical members	—	—	0-125	4 : 1	—
18	L.72	16	Gusset plate	†0-10	2-5	0-125	4 : 1	—
19	L.72	20	Web plates	0-10	2-5	0-50	8 : 1	103, 104
20	L.72	247/SS/1793	Angle	0-10	2-5	—	—	113
21	L.72	732/SS/1793	Angle	0-10	2-5	—	—	—
22	L.72	20	Gusset plate	†0-10	2-5	0-125	4 : 1	—
23	L.72	26	Shroud panel	0-20	2-0	—	—	103, 104
24	L.72	133/SS/1793	Stiffening angle	0-10	2-5	—	—	113
25	L.72	746/SS/1793	Angle	0-10	2-5	—	—	—
26	BSS	Tufnol	Rubbing block	—	—	—	—	—
27	L.72	22	Inner and outer skins	0-10	2-5	—	—	as 351C, 351D
28	L.72	18	Edge member	0-10	2-5	—	—	—
29	L.72	739/SS/1793	Bottom angle	0-10	2-5	—	—	—
30	L.72	741/SS/1793	Top angle	0-10	2-5	—	—	—
31	L.72	12a/SS/1793	Angle	0-10	2-5	—	—	—
32	L.72	18	Channel members	0-10	2-5	0-25	4 : 1	—
33	L.72	20	Rib webs	0-10	2-5	0-25	4 : 1	103, 104
34	L.73	60/SS/1793	Shroud attachment angle	0-10	2-5	—	—	113
35	L.72	20	Channel members	—	—	0-25	4 : 1	—
36	DTD.683	Al. alloy	Trunnion bearing	*—	—	—	—	—
37	L.72	16	Gusset plate	†—	—	—	—	—
38	S.96	Steel	Bearing housing	*—	—	—	—	—
39	L.77	Al. alloy	Hinge bracket	*—	—	—	—	—
40	L.65	409/SS/3075	Extruded channel	0-50	3-0	—	—	—
41	L.65	357/SS/3075	Extruded channel	0-50	3-0	—	—	—
42	L.72	16	Door angle	0-10	2-5	—	—	as 114
43	L.72	20	Reinforcing plate	*0-10	2-5	—	—	—
44	L.72	18	Gusset plate	†0-10	2-5	—	—	—
45	L.72	18	Top and bottom channels	—	—	—	—	—
46	L.72	66/SS/1793	Shroud angle	0-10	2-5	—	—	—
47	DTD.259A	Mag. alloy	Tapered packing	†—	—	—	—	—
48	L.72	779/SS/1793	Door angle	0-10	2-5	—	—	as 114
49	L.72	16	Stiffening plate	*—	—	—	—	—
50	L.72	16	Gusset	†—	—	0-125	4 : 1	—
51	L.72	780/SS/1793	Top and bottom channels	—	—	0-125	4 : 1	—
52	L.72	60/SS/1793	Angles	0-10	2-5	—	—	—
53	L.72	20	Cover plate	0-10	2-5	2-25	4 : 1	—
54	L.72	385/SS/1793	Angle	0-10	2-5	2-25	4 : 1	—
55	L.65	410/SS/3075	Extruded member	0-05	3-0	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

RESTRICTED

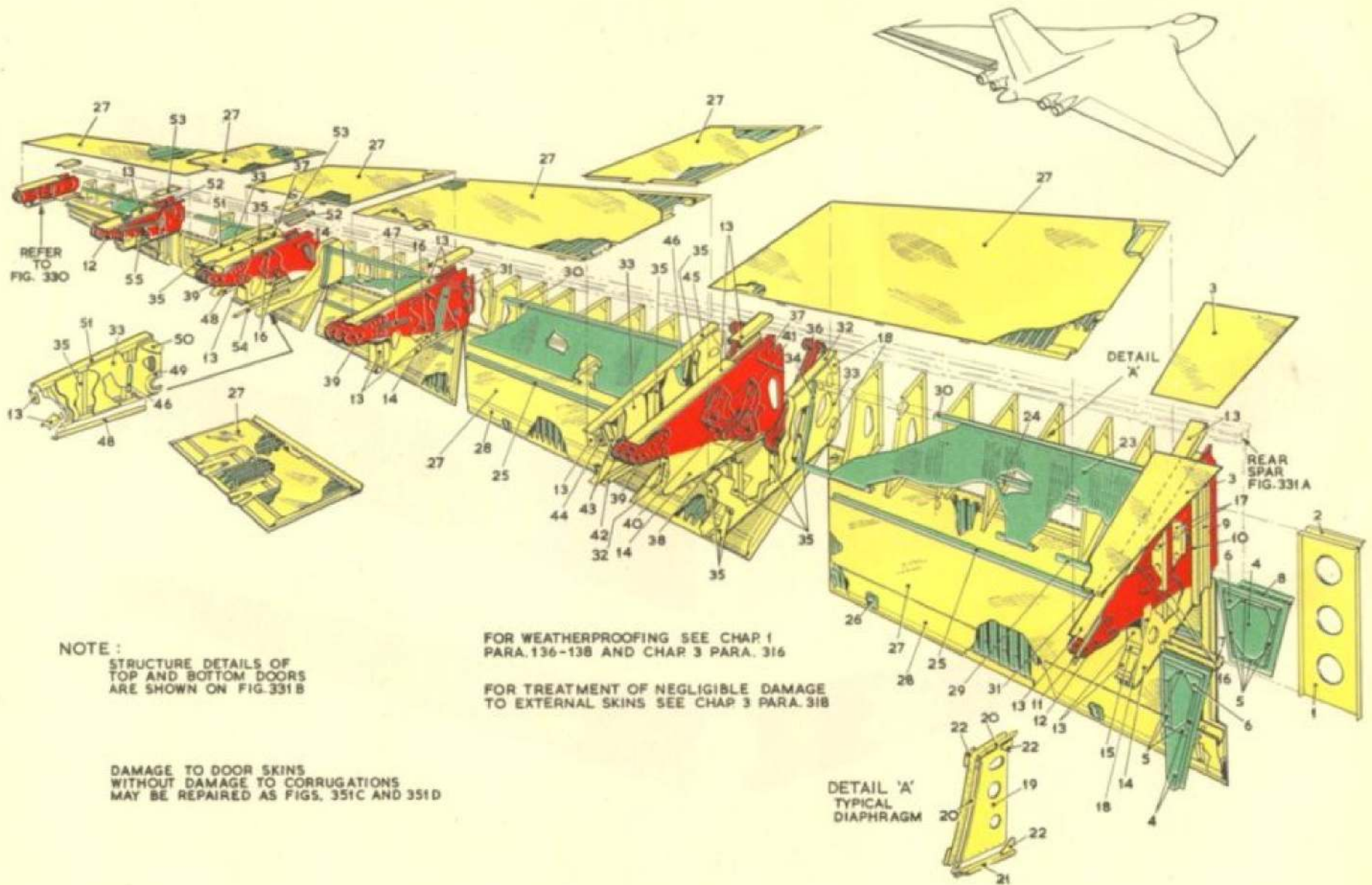


Fig. 331 Outer wing rear spar and trailing edge
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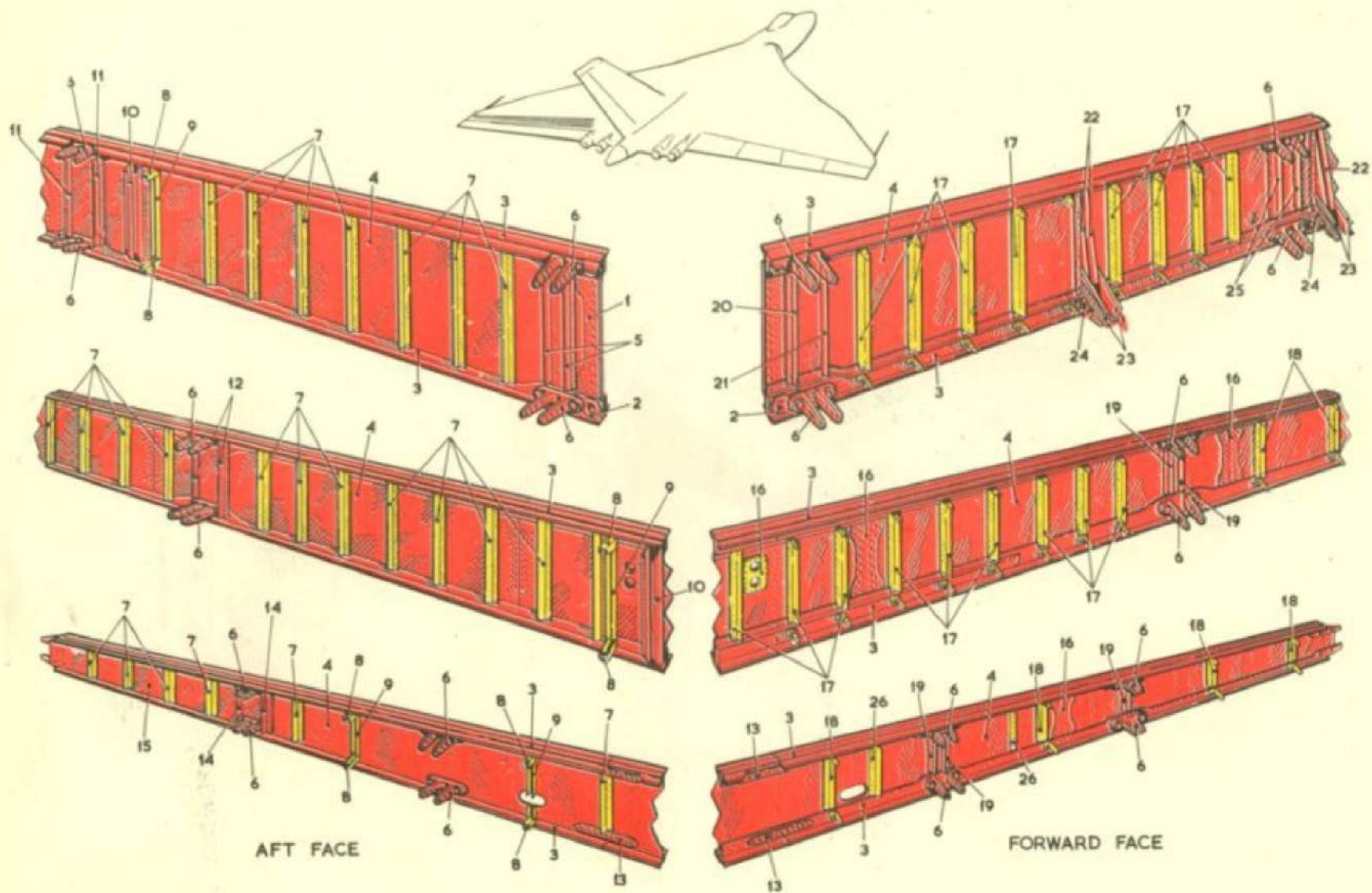


Fig. 331A Rear spar
RESTRICTED

KEY TO FIG.331A

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes	Pitch Ratio		
				Depth	Dist. Apart	Dia.		
1	D.T.D.687	14	Reinforcing plate	* -	-	-	-	-
2	S.99	-	Reinforcing plate	* -	-	-	-	-
3	D.T.D.363A	11.B.1824	Spar booms	* 0.05	3.0	-	-	-
4	D.T.D.687	12	Spar webs	0.025	6.0	-	-	103,104
5	L.72	8	Stiffening angle	-	-	-	-	-
6	D.T.D.683	-	Bracket	* -	-	-	-	-
7	L.72	16	Attachment angle	0.05	3.0	0.125	4:1	114
8	D.T.D.683	-	Bracket	* -	-	-	-	-
9	L.72	18	Channel	x 0.1	2.5	0.25	4:1	-
10	L.72	18	Channel	x 0.05	3.0	0.125	4:1	-
11	L.65	304/SS.3075	Angle	-	-	-	-	-
12	L.65	251/SS.3075	Angle	-	-	-	-	-
13	D.T.D.363	-	Joint strap	* -	-	-	-	-
14	L.65	176/SS.3075	Attachment angle	0.05	3.0	0.125	4:1	-
15	D.T.D.687	16	Outboard web	0.025	6.0	-	-	103,104
16	D.T.D.687	12	Joint plate	* -	-	-	-	-
17	L.72	18	Angle	0.05	3.0	0.125	4:1	114
18	L.72	20	Angle	0.05	3.0	0.125	4:1	114
19	L.72	16	Angle	-	-	-	-	114
20	D.T.D.687	12	Angle	-	-	-	-	-
21	D.T.D.687	16	Angle	-	-	-	-	-
22	L.73	14	Vertical channel	x -	-	-	-	-
23	L.73	14	Stiffener	x -	-	-	-	-
24	D.T.D.410	-	Bracket	* -	-	-	-	-
25	L.72	16	Attachment angle	-	-	-	-	-
26	L.72	16	Angle	0.05	3.0	0.125	4:1	114

* No repairs permitted

x More expedient to renew than repair

All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.331B

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes		Pitch Ratio	
				Depth	Dist. Apart	Dia.		
1	L. 72	22	Inner skin	0.2	2.0	0.125	4:1	351C, 351D 351C, 352, 353
2	L. 72	22	Outer skin	0.1	2.5	-	-	
3	L. 72	SS. 4133/24G	Corrugation	0.1	2.5	-	-	
3A	L. 72	SS. 4132/24G	Corrugation	0.1	2.5	-	-	
3B	L. 72	24	Corrugation	0.1	2.5	-	-	
3C	L. 72	SS. 4131/24G	Corrugation	0.1	2.5	-	-	
4	D. T. D. 259	383/SS. 3075	Extruded member	* -	-	0.125	4:1	
5	L. 72	18	Rear edge member	-	-	0.125	4:1	
6	Tufnol	-	Rubbing block	x -	-	-	-	
7	L. 72	18	Edge member	-	-	0.25	4:1	
8	L. 72	746/SS. 1793	Stiffening angle	-	-	0.125	4:1	
9	L. 72	20	Channel bracket	x -	-	-	-	
10	L. 72	22/SS. 1793	Angle bracket	x -	-	-	-	
11	T. 35	17	Distance tube	x -	-	-	-	
12	L. 72	18	'Z' section stiffener	-	-	0.125	4:1	
13	L. 72	22	Funnel	x 0.05	2.0	-	-	
14	L. 72	20	Cover	x -	-	0.125	4:1	
15	L. 72	22	Flanged outlet	x -	-	-	-	
16	L. 72	20	Channel	x -	-	0.125	4:1	
17	L. 72	20	End stiffener	x -	-	0.125	4:1	
18	L. 72	20	Packing	x -	-	0.125	4:1	
19	L. 72	20	Fairing	0.05	1.5	-	-	
20	L. 72	746/SS. 1793	Stiffening angle	0.1	2.0	0.25	4:1	
21	L. 72	13b/SS. 1793	Angle bracket	x -	-	-	-	
22	L. 72	22	Stiffener	x -	-	-	-	

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

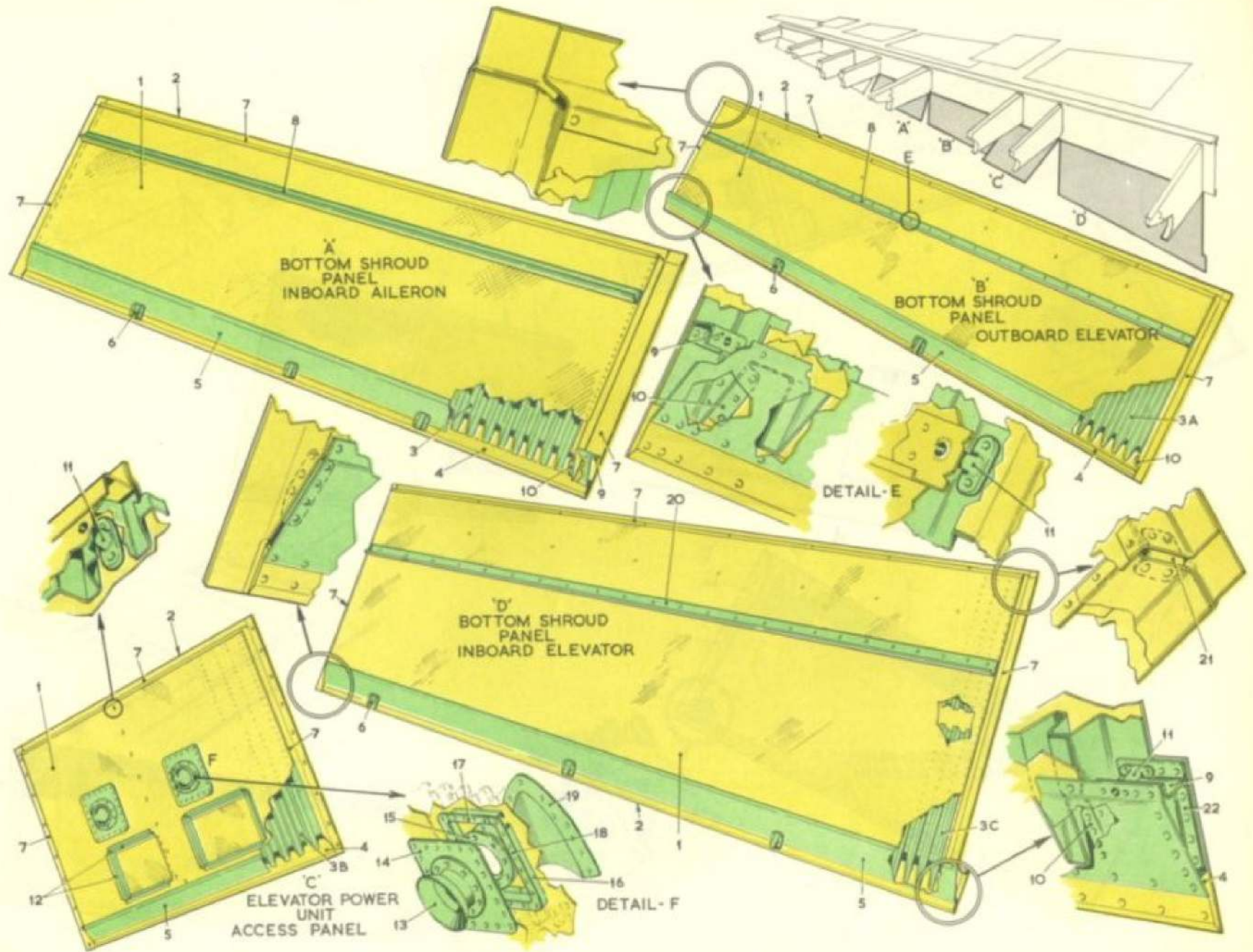


Fig. 331B. Trailing edge structure-Panels

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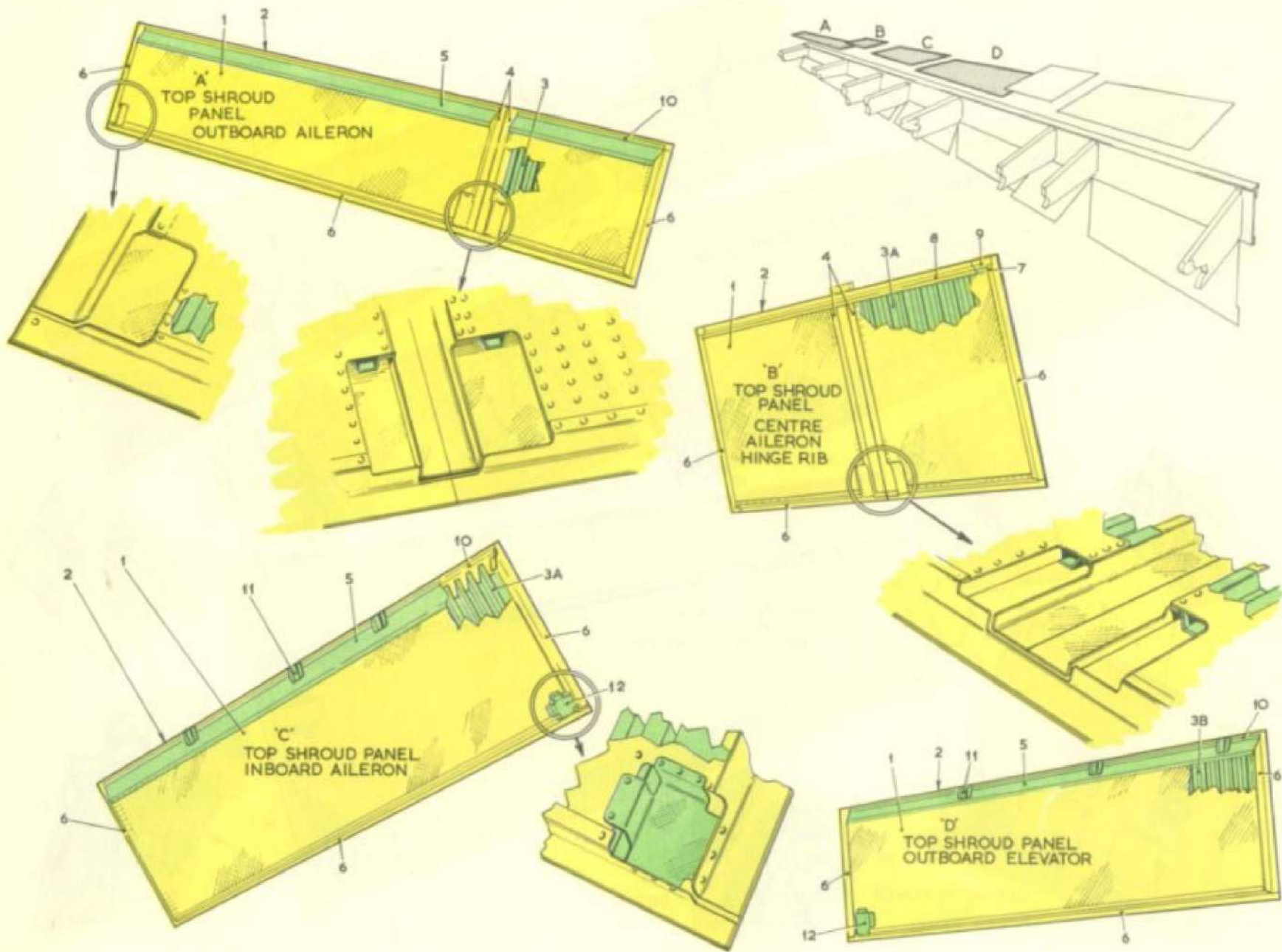


Fig. 331C. Trailing edge structure-Panels
RESTRICTED

KEY TO FIG. 331C

Item	Material		Description	Negligible Damage				Repair Fig.	
	Spec.	S.W.G. or Section		Dents	Holes	Depth	Dist. Apart		Dia.
1	L. 72	22	Inner skin						
2	L. 72	22	Outer skin	0.2	2.0	0.125	4:1	351C, 351D	
3	L. 72	SS. 4134/24G	Corrugation	0.1	2.5	-	-	351C, 352, 353	
3A	L. 72	SS. 4133/24G	Corrugation	0.1	2.5	-	-		
3B	L. 72	SS. 4132/24G	Corrugation	0.1	2.5	-	-		
4	L. 72	18	Channel member	0.1	2.5	0.125	4:1		
5	L. 72	18	Rear member	-	-	0.125	4:1		
6	L. 72	18	Edge member	-	-	0.25	4:1		
7	L. 72	18	Channel stiffener	0.1	2.0	0.125	4:1		
8	L. 72	20	Shroud	0.05	2.0	0.25	4:1		
9	L. 72	12	Trailing edge member	-	-	0.25	4:1		
10	D. T. D. 259	383/SS. 3075	Extruded member	* -	-	0.125	4:1		
11	Tufnol	-	Rubbing block	x -	-	-	-		
12	L. 72	20	Bracket	x 0.1	-	0.25	4:1		

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.331D

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes		Pitch Ratio	
				Depth	Dist. Apart	Dia.		
1	L.72	22	Inner skin	0.2	2.0	0.125	4:1	351C,351D
2	L.72	22	Outer skin	0.1	2.5	-	-	
3	L.72	18	Centre member	0.1	2.5	0.125	4:1	351C,352,353
4	L.72	SS.4132/24G	Corrugation	0.1	2.5	-	-	
4A	L.72	SS.4132/24G	Corrugation	0.1	2.5	-	-	
4B	L.72	SS.4133/24G	Corrugation	0.1	2.5	-	-	
5	L.72	12	Rear member	-	-	0.125	4:1	
6	L.72	20	Shroud	0.05	2.0	0.25	4:1	
7	L.72	18	Channel member	-	-	0.25	4:1	
8	L.72	18	Edge member	-	-	0.25	4:1	
9	L.72	SS.4131/22G	Corrugation	0.1	2.5	-	-	
10	D.T.D.259	383/SS.3075	Extruded member	* -	-	0.125	4:1	
11	L.72	18	Rear member	-	-	0.125	4:1	
12	L.72	20	Corner bracket	x 0.1	-	0.25	4:1	
13	Tufnol	-	Rubbing block	x -	-	-	-	
14	L.72	746/SS.1793	Angle	-	-	0.125	4:1	
15	L.72	20	Bracket	x 0.1	1.5	0.25	4:1	
16	L.72	18	Channel	0.1	2.5	0.125	4:1	
17	L.65	-	Distance piece	x -	-	-	-	

* No repairs permitted
 x More expedient to renew than repair
 All dimensions are quoted in inches

RESTRICTED

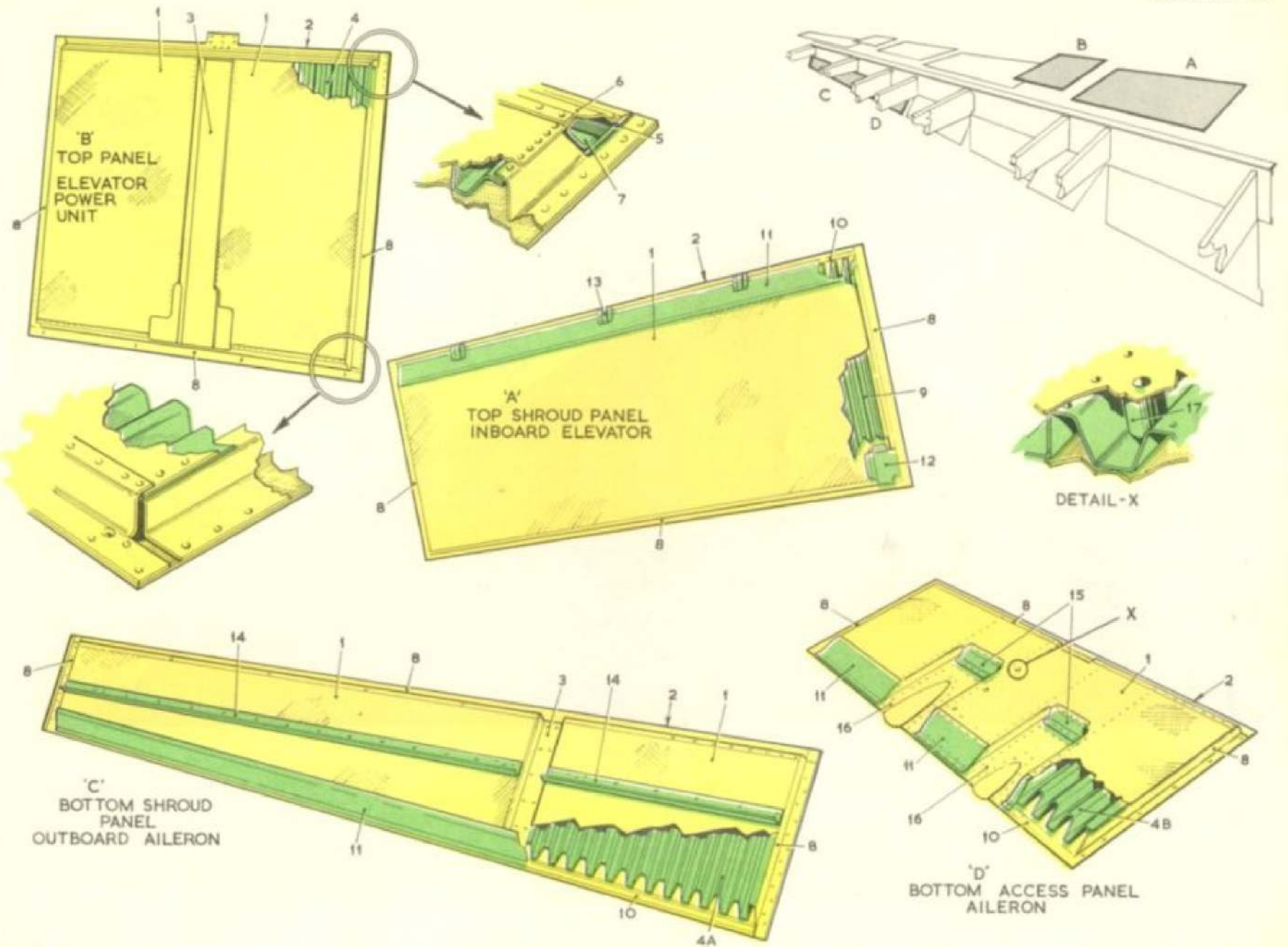
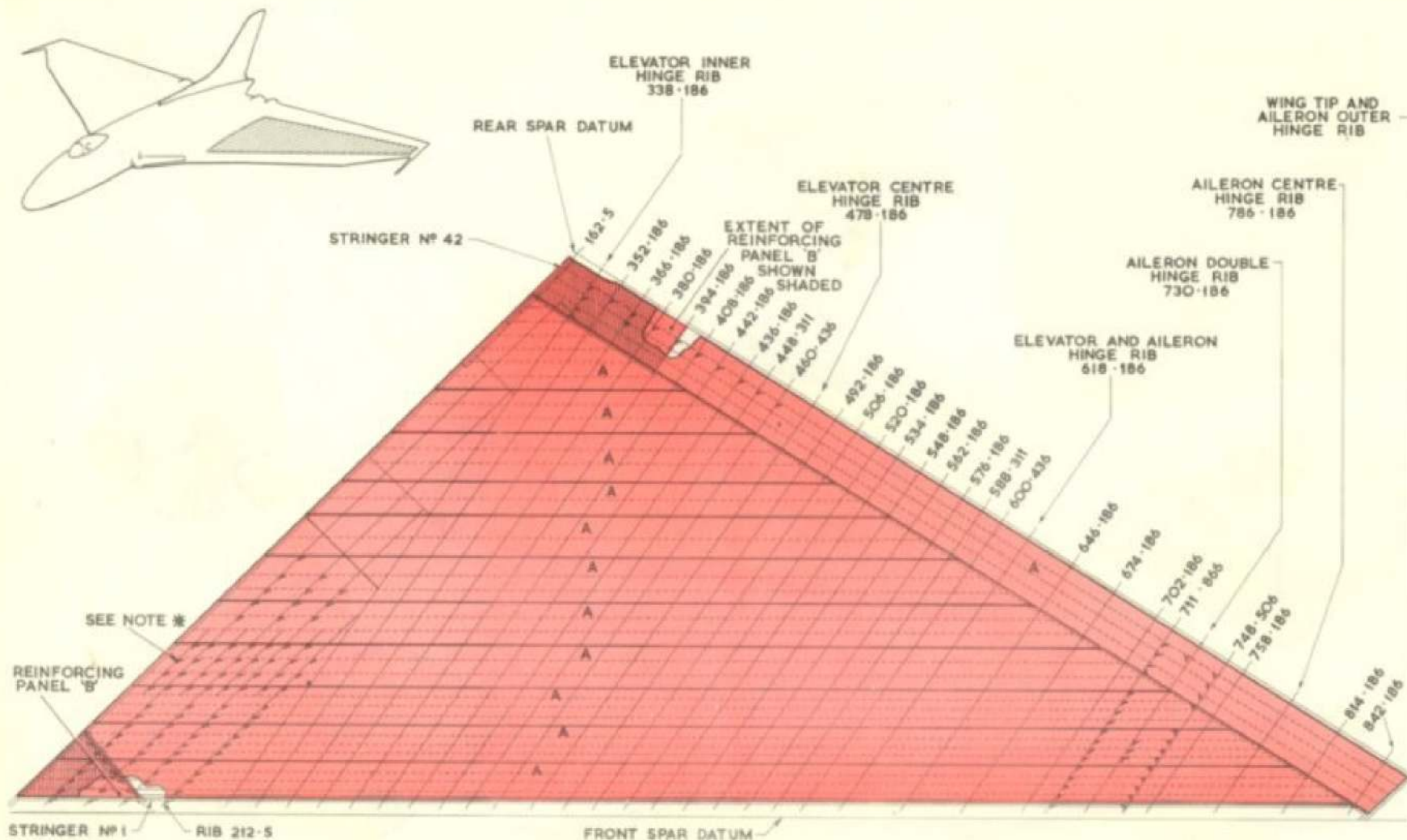


Fig. 33ID. Trailing edge structure-Panels
RESTRICTED



NOTE:- STRINGERS ARE NUMBERED CONSECUTIVELY 1 TO 42.

* NO NEGLIGIBLE DAMAGE IS ALLOWED TO ROLLED SECTION SHEAR ANGLES OR STRINGER BRACKETS. THESE ITEMS ARE TO BE RENEWED TO SPEC. L72. THE S.W.G. IS TO BE THE SAME AS DAMAGED ITEM.

SKIN LIMIT TABLE		
NEGLIGIBLE DAMAGE		
COLOUR	DENTS	DIST. APART
RED	0.05 IN.	3.0 IN.

SKIN REFERENCE		
LETTER	SPEC.	S. W. G.
A	D.T.D. 687	16
B	D.T.D. 687	22

FOR WEATHERPROOFING SEE TEXT IN CHAP 1 AND 3.
 FOR SKIN REPAIRS SEE FIG. 103 AND 104.
 FOR COMBINED SKIN AND STRINGER REPAIRS SEE FIG. 110, 117 AND 347.
 FOR STRINGER NEGLIGIBLE DAMAGE LIMITS SEE KEY TABLE TO FIG. 328.
 POP RIVETS USED FOR REPAIRS SHOULD BE FILLED WITH A SUITABLE FILLER. REFER TO CHAP. 1.

Fig. 332. Top skins - Outer wing

RESTRICTED

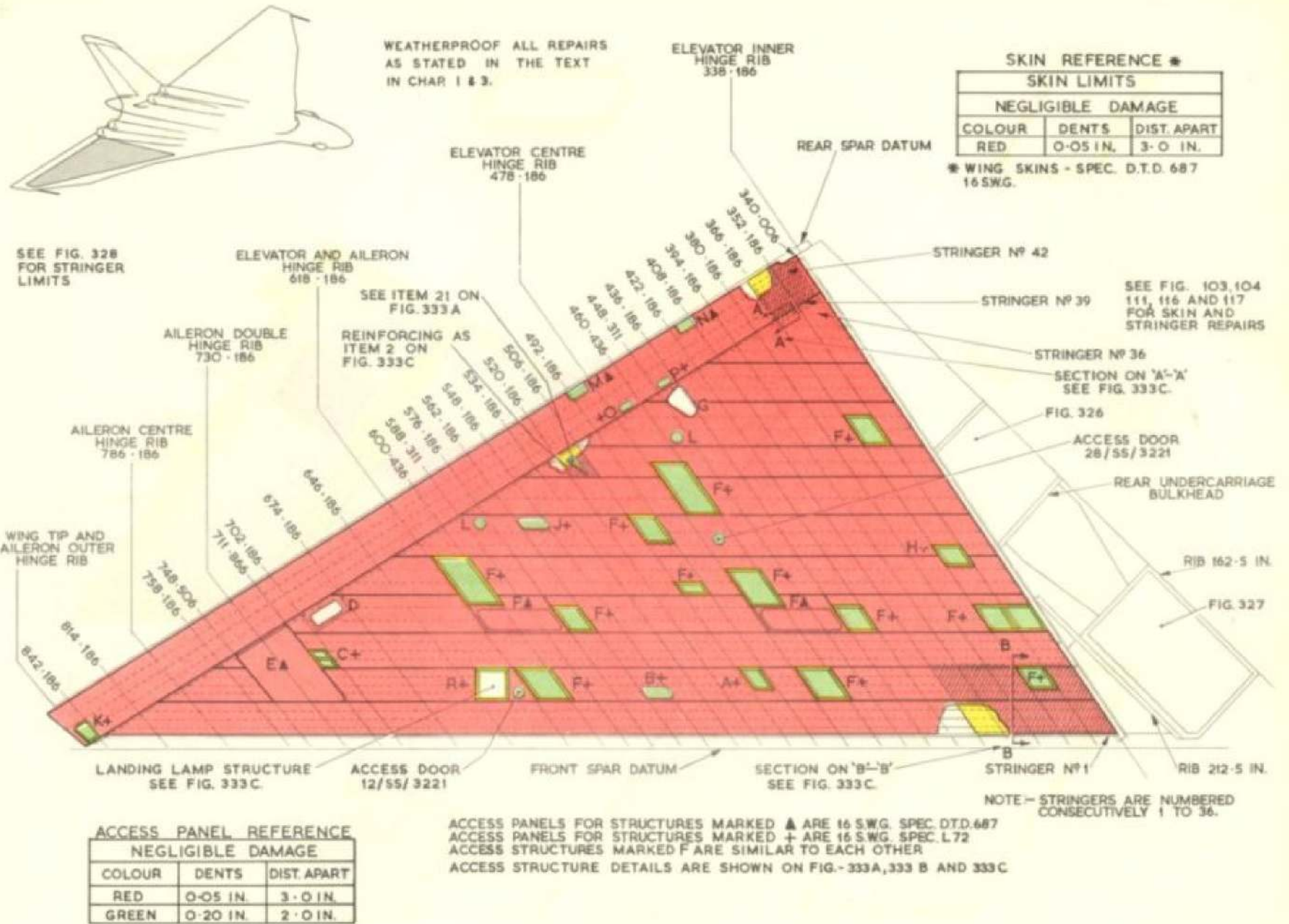


Fig. 333. Bottom skins - Outer wing
RESTRICTED

KEY TO FIG.333A

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
			Depth	Dist. Apart	Dia.	Pitch Ratio		
1	L. 72	16	Angle member	-	-	0.125	4:1	
2	D. T. D. 683	301/SS. 3075	'T' stringers	-	-	0.125	4:1	
3	L. 72	18	Door frame	0.1	2.0	0.25	4:1	
4	L. 72	16	Attachment bracket	x -	-	-	-	-
5	L. 72	20	Stringer bracket	x -	-	-	-	-
6	L. 72	18	Packing	x -	-	-	-	-
7	L. 72	18	Attachment bracket	x -	-	-	-	-
8	L. 72	18	Attachment angle	x -	-	-	-	-
9	L. 72	558/SS. 1793	Channel	-	-	0.125	4:1	
10	L. 72	18	Lipped angle	-	-	0.125	4:1	
11	L. 59	18	Louvre vanes	x -	-	-	-	-
12	L. 34	3/16 in. bar	Bracing rod	x -	-	-	-	-
13	L. 59	18	Louvre frame	0.1	2.0	0.25	4:1	
14	L. 72	18	Skin panel-inner	0.2	2.0	0.25	4:1	103
15	D. T. D. 687	16	Skin panel-outer	0.05	3.0	-	-	103
16	L. 72	16	Door edge member	-	-	0.125	4:1	
17	L. 72	18	'Z' stiffener	-	-	0.125	4:1	
18	L. 72	18	Corner brackets	x -	-	-	-	-
19	L. 72	18	Transverse members	-	-	0.125	4:1	
20	L. 72	18	Gusset	x -	-	-	-	-
21	L. 59	18	Flush intake	0.2	2.0	0.25	4:1	
22	L. 72	18	Channel	-	-	0.125	4:1	
23	L. 72	18	Reinforcing skin	0.2	2.0	0.25	4:1	
24	L. 72	16	Centre channel	-	-	0.125	4:1	103
25	L. 72	16	'T' stringer bracket	x -	-	-	-	-
26	L. 59	20	Funnel	0.05	-	-	-	-
27	L. 54	20	Tube	0.05	-	-	-	-
28	L. 59	20	Base plate	-	-	0.25	4:1	
29	L. 59	20	Flange	-	-	0.25	4:1	
30	L. 72	20	Fairing	0.2	2.0	-	-	
31	L. 59	18	Tank vent scoop	0.2	2.0	-	-	
32	L. 72	16	Stiffening ring	0.05	2.5	0.125	4:1	
33	L. 72	16	Stringer bracket	-	-	-	-	
34	L. 72	16	Stringer bracket	-	-	-	-	
35	L. 72 or AS. 1880/35	20	Door hinge	-	-	-	-	

x More expedient to renew than repair
All dimensions are quoted in inches

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KEY TO FIG.333B

Item	Material Spec.	S.W.G. or Section	Description	Negligible Damage				Repair Fig.
				Dents Depth	Dist. Apart	Holes Dia.	Pitch Ratio	
1	D. T. D. 423	193/SS. 3075	Stringer section	-	-	0.125	4:1	
2	D. T. D. 683	301/SS. 3075	Stringer section	-	-	0.125	4:1	
3	L. 72	16	Bracket	x -	-	-	-	
4	L. 72	18	Panel frame	0.05	2.0	0.25	4:1	
5	L. 72	18	Panel frame	-	-	0.125	4:1	
6	L. 72	18	Bracket	x -	-	-	-	
7	L. 72	18	Vent body	0.1	2.5	-	-	-
8	L. 59	20	Louvre	x 0.02	-	-	-	-
9	L. 59	16	Inner body	0.05	2.0	-	-	-
10	L. 34	3/16" bar	Bracing rod	x -	-	-	-	-
11	L. 72	20	Top angle ring	-	-	-	-	-
12	L. 72	20	Cover plate	x 0.05	2.0	-	-	-
13	L. 72	20	Reinforcing ring	x -	-	-	-	-
14	L. 72	10	Packing plate	x -	-	-	-	-
15	L. 72	A. S. 1877	Hinge	x -	-	-	-	-
15a	M. Steel	14	Hinge pin	x -	-	-	-	-
15b	D. T. D. 215	16	Spring	x -	-	-	-	-
16	L. 72	20	Reinforcing angle	-	-	0.125	4:1	
17	L. 73	16	Reinforcing panel	0.05	2.0	0.25	4:1	
18	L. 65	356/SS. 3075	Stiffening angle	-	-	0.125	4:1	
19	D. T. D. 687	16	Door angle	x -	-	-	-	-
20	L. 72	386/SS. 1793	Stiffening angle	-	-	0.125	4:1	
21	L. 72	18	Inner stiffening plate	0.05	2.0	0.125	4:1	
22	L. 72	12	Packing	x -	-	-	-	-
23	L. 72	199a/SS. 1793	Joint angles	x -	-	0.125	4:1	
24	L. 72	20	Packing	x -	-	-	-	-

x More expedient to renew than repair
All dimensions are quoted in inches

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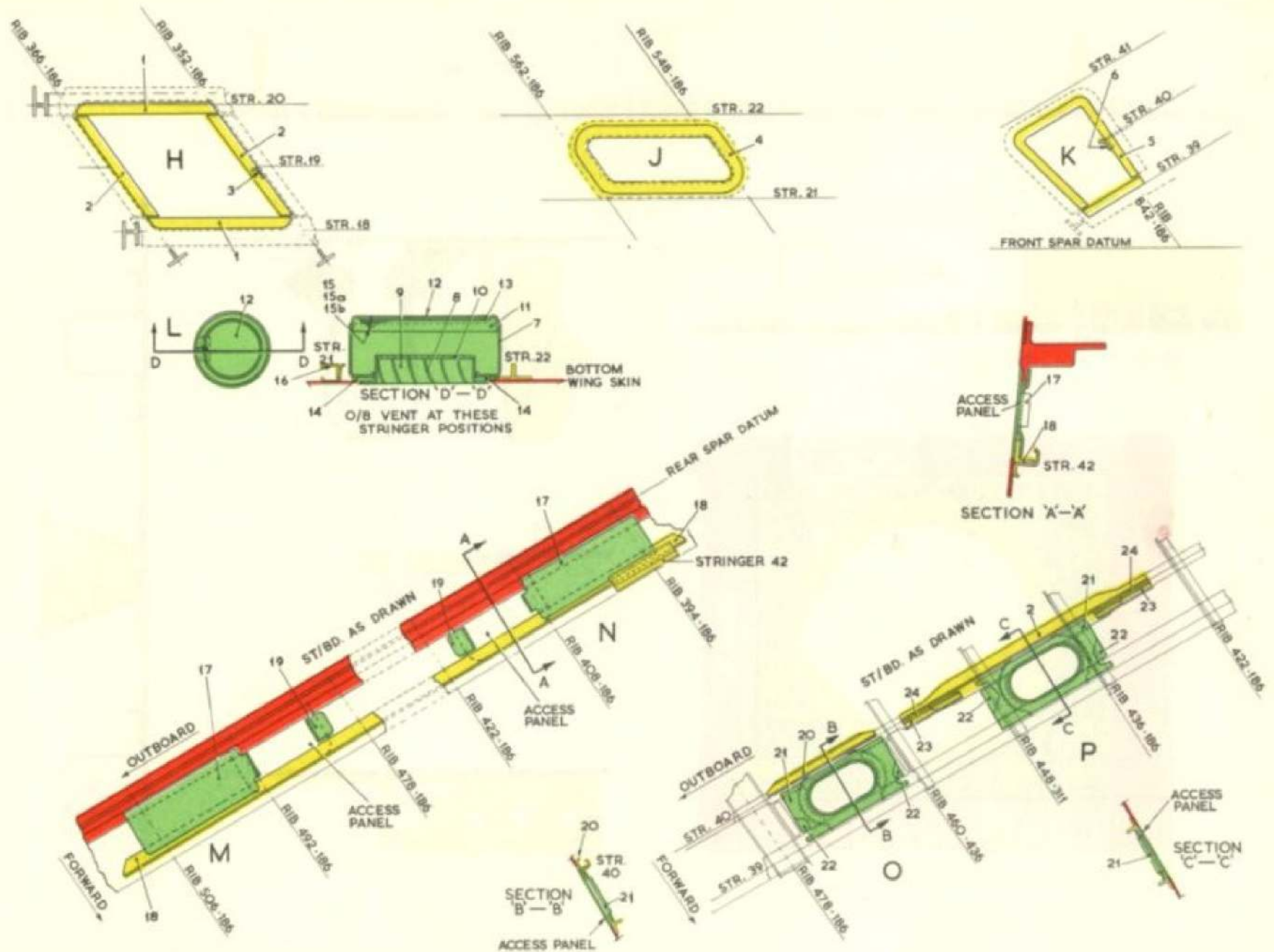


Fig. 333B. Bottom skins-Access structure

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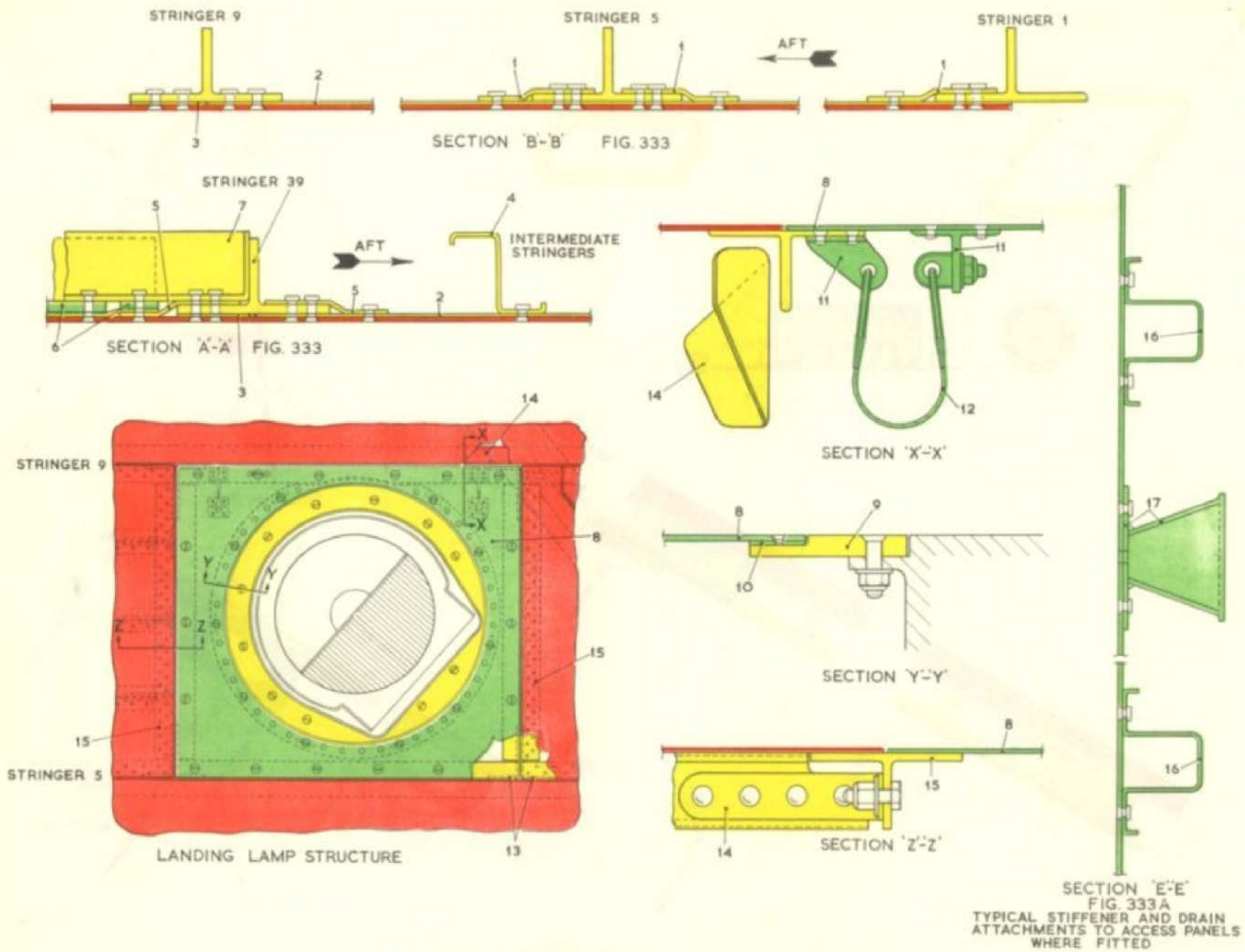


Fig. 333C. Bottom skins - Access structure
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KEY TO FIG.333C

Item	Material Spec.	S.W.G. or Section	Description	Negligible Damage				Repair Fig.
				Dents Depth	Dist. Apart	Holes Dia.	Pitch Ratio	
1	L. 73	14	Reinforcing plates	-	-	0.125	4:1	
2	D. T. D. 687	22	Reinforcing skin	0.1	2.5	0.25	4:1	
3	L. 72	22	Packing	x -	-	-	-	-
4	D. T. D. 687	583/SS. 1793	Stringer section	-	-	0.125	4:1	111
5	L. 73	16	Reinforcing plates	-	-	0.125	4:1	
6	L. 72	-	Packing block	x -	-	-	-	-
7	L. 72	16	Attachment angle	x -	-	-	-	-
8	L. 72	16	Landing lamp panel	x 0.1	2.5	-	-	-
9	L. 72	3	Mounting ring	0.02	-	-	-	-
10	L. 72	16	Packing ring	x -	-	-	-	-
11	L. 65	58/SS. 3075	Bracket	x -	-	0.125	-	-
12	W. 2	3 Cwt.	Cable	x -	-	-	-	-
13	L. 72	14	Corner brackets	x -	-	-	-	-
14	L. 72	20	Stringer brackets	x -	-	-	-	-
15	D. T. D. 683	301/SS. 3075	Stringer intercostal	-	-	0.125	4:1	110
16	L. 72	85/SS. 1793	Panel stiffener	-	-	0.125	4:1	
17	L. 59	18	Drain body and base plate	x 0.05	-	-	-	-

x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.334

Item	Material		Description	Negligible Damage					Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes		Pitch Ratio		
			Depth	Dist. Apart	Dia.				
1	D. T. D. 118	22	Trailing edge member	0.05	6.0	-	-		
2	D. T. D. 118	16	Packing strip	0.05	6.0	-	-		
3	D. T. D. 118	24	Tail rib	0.05	6.0	0.25	8:1	108, 115, 120	
4	L. 72	20	Angle	0.05	8.0	-	-		
5	L. 72	20	Angle	0.05	8.0	-	-		
6	L. 72	22	Attachment angle	x 0.05	6.0	0.125	12:1		
7	L. 72	810/SS. 1793	Angle	0.025	8.0	-	-		
8	L. 72	808/SS. 1793	Angle	0.025	8.0	-	-		
9	L. 72	809/SS. 1793	Angle	0.025	8.0	-	-		
10	D. T. D. 626	20	Web	0.025	8.0	-	-	103	
11	L. 72	807/SS. 1793	Angle	0.025	8.0	-	-		
12	L. 72	22	Angle	0.05	8.0	0.125	12:1		
13	D. T. D. 687	12	Packing	x 0.05	6.0	-	-		
14	D. T. D. 687	16	Packing	x 0.05	6.0	-	-		
15	L. 72	14	Plate	x 0.05	8.0	-	-		
16	D. T. D. 259	-	Packing	x 0.05	6.0	-	-		
17	D. T. D. 259	-	Packing	x 0.05	6.0	-	-		
18	L. 72	16	Plate	x 0.05	6.0	-	-		
19	L. 72	16	Channel	0.025	10.0	-	-		
20	S. 96	-	Bearing housing	*	-	-	-		
21	L. 72	20	Angle	x 0.05	8.0	-	-		
22	L. 65	-	Packing	x 0.05	6.0	-	-		
23	L. 72	183/SS. 1793	Angle	0.05	6.0	0.125	12:1	113	
24	L. 72	789/SS. 1793	Angle	0.05	8.0	0.125	12:1	113	
25	D. T. D. 118	22	Web	0.05	8.0	0.125	12:1		
26	L. 72	18	Plate	x 0.05	8.0	-	-		
27	L. 65	-	Packing	x 0.05	8.0	-	-		
28	L. 72	18	Angle	0.05	8.0	-	-		
29	S. 96	-	Bracket	*	-	-	-		
30	L. 72	18	Angle	x 0.05	8.0	-	-		
31	L. 65	306/SS. 3075	Angle	0.025	10.0	-	-		
32	L. 72	798/SS. 1793	Angle	0.025	10.0	-	-	113	
33	L. 72	799/SS. 1793	Angle	0.025	8.0	-	-	113	
34	L. 65	-	Bracket	*	-	-	-		
35	S. 96	-	Bracket	*	-	-	-		
36	L. 72	20	Riblet	0.05	4.0	0.25	6:1		
37	L. 72	20	Angle	0.05	6.0	-	-		
38	L. 72	18	Skin	0.05	8.0	-	-	103	
39	D. T. D. 118	792/SS. 1793	Angle	0.025	8.0	0.125	12:1	113	
40	D. T. D. 118	801/SS. 1793	Angle	0.025	8.0	0.125	12:1	113	
41	D. T. D. 118	24	Web	0.05	6.0	0.25	6:1		
42	L. 72	24	Angle	x 0.05	6.0	0.125	10:1		
43	L. 72	20	Angle	x 0.05	6.0	0.125	10:1		
44	D. T. D. 118	803/SS. 1793	Angle	0.025	8.0	-	-	113	
45	D. T. D. 118	804/SS. 1793	Angle	0.025	8.0	-	-	113	

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

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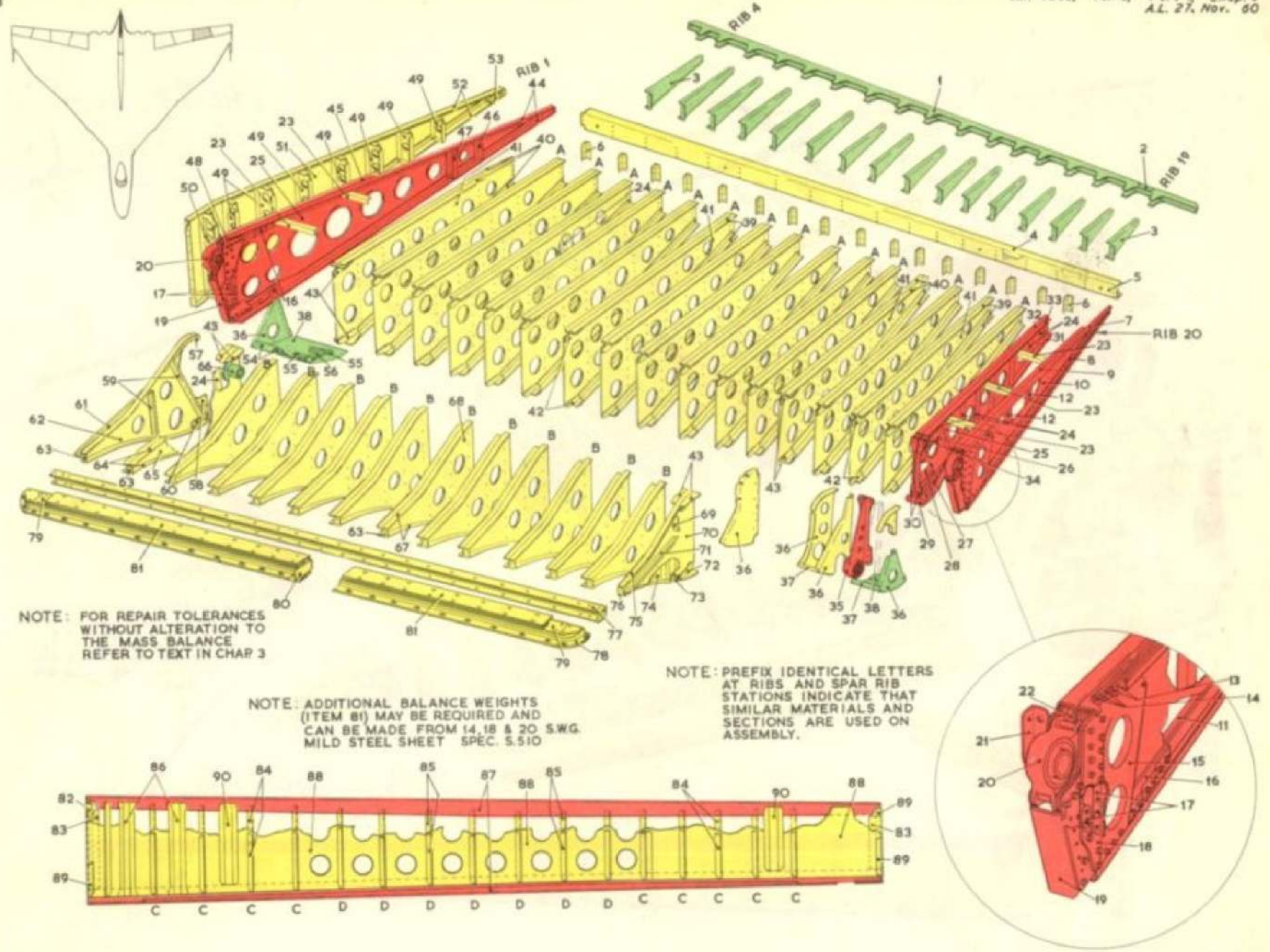
KEY TO FIG.334 (contd.)

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
				Depth	Dist. Apart	Dia.	Pitch Ratio	
46	L. 72	20	Angle	0.05	8.0	0.125	12:1	
47	L. 72	24	Top hat stiffener	0.05	8.0	0.125	12:1	113
48	D. T. D. 687	14	Plate	x 0.05	8.0	-	-	
49	D. T. D. 118	24	Diaphragm	0.05	6.0	0.25	8:1	105
50	D. T. D. 118	24	Angle	0.05	6.0	0.25	8:1	113
51	D. T. D. 118	20	Web	0.025	6.0	-	-	103
52	L. 72	797/SS. 1793	Angle	0.025	6.0	0.125	12:1	113
53	L. 72	24	Packing	x 0.05	6.0	0.25	8:1	
54	L. 72	20	Bracket	0.05	6.0	-	-	
55	L. 72	850/SS. 1793	Angle	x 0.05	6.0	-	-	
56	L. 72	849/SS. 1793	Angle	x 0.05	6.0	-	-	
57	L. 72	20	Angle	x 0.025	8.0	0.125	12:1	
58	L. 72	18	Plate	x 0.05	6.0	0.125	12:1	
59	L. 72	794/SS. 1793	Stiffener	0.05	6.0	0.125	12:1	113
60	L. 72	22	Angle	x 0.05	6.0	0.125	12:1	
61	L. 72	20	Angle	0.05	6.0	0.125	12:1	
62	L. 72	22	Rib	0.05	6.0	0.25	10:1	103
63	L. 72	22	Angle	x 0.05	6.0	0.25	10:1	
64	L. 72	20	Angle	0.025	8.0	0.125	12:1	113
65	L. 72	20	Web	0.05	6.0	0.25	10:1	103
66	T. 45	17	Tube	x 0.05	4.0	-	-	
67	L. 72	819/SS. 1793	Angle	0.025	8.0	0.125	12:1	113
68	L. 72	24	Web	0.05	6.0	0.125	8:1	
69	L. 72	22	Angle	x 0.05	6.0	0.125	10:1	
70	D. T. D. 118	22	Web	0.05	6.0	0.25	10:1	
71	L. 72	20	Angle	0.05	6.0	0.25	12:1	
72	L. 72	20	Angle	x 0.05	6.0	0.125	12:1	
73	L. 72	22	Bracket	x 0.05	6.0	0.125	10:1	
74	L. 72	24	Corrugation	0.05	4.0	0.25	10:1	
75	L. 72	883/SS. 1793	Channel	0.025	8.0	0.125	12:1	
76	L. 72	20	Channel	x 0.05	6.0	0.25	10:1	
77	L. 72	20	Channel	0.05	8.0	-	-	108
78	S. 510	-	End piece	x 0.025	8.0	-	-	
79	S. 510	-	Channel	0.025	8.0	-	-	
80	Lead	-	Balance weight	0.1	4.0	-	-	
81	S. 510	-	Additional balance weight	0.1	4.0	-	-	
82	L. 65	259/SS. 3075	Angle	0.025	6.0	-	-	113
83	L. 72	10	Bearing plates	x 0.025	6.0	-	-	
84	L. 72	802/SS. 1793	Angle	0.05	6.0	0.125	8:1	113
85	L. 72	13b/SS. 1793	Angle	0.05	6.0	0.125	8:1	113
86	L. 72	20	Top hat stiffener	0.05	6.0	0.125	10:1	
87	D. T. D. 363	413/SS. 3075	Boom	0.025	12.0	-	-	
88	L. 72	14	Web	0.025	12.0	0.125	16:1	103
89	L. 65	429/SS. 3075	Angle	0.025	6.0	-	-	
90	L. 72	22	Bracket	0.025	6.0	-	-	

x More expedient to renew than repair
All dimensions are quoted in inches

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FS/66



NOTE: FOR REPAIR TOLERANCES WITHOUT ALTERATION TO THE MASS BALANCE REFER TO TEXT IN CHAP 3

NOTE: ADDITIONAL BALANCE WEIGHTS (ITEM 81) MAY BE REQUIRED AND CAN BE MADE FROM 14, 18 & 20 S.W.G. MILD STEEL SHEET SPEC. S.510

NOTE: PREFIX IDENTICAL LETTERS AT RIBS AND SPAR RIB STATIONS INDICATE THAT SIMILAR MATERIALS AND SECTIONS ARE USED ON ASSEMBLY.

Fig. 334. Inboard aileron
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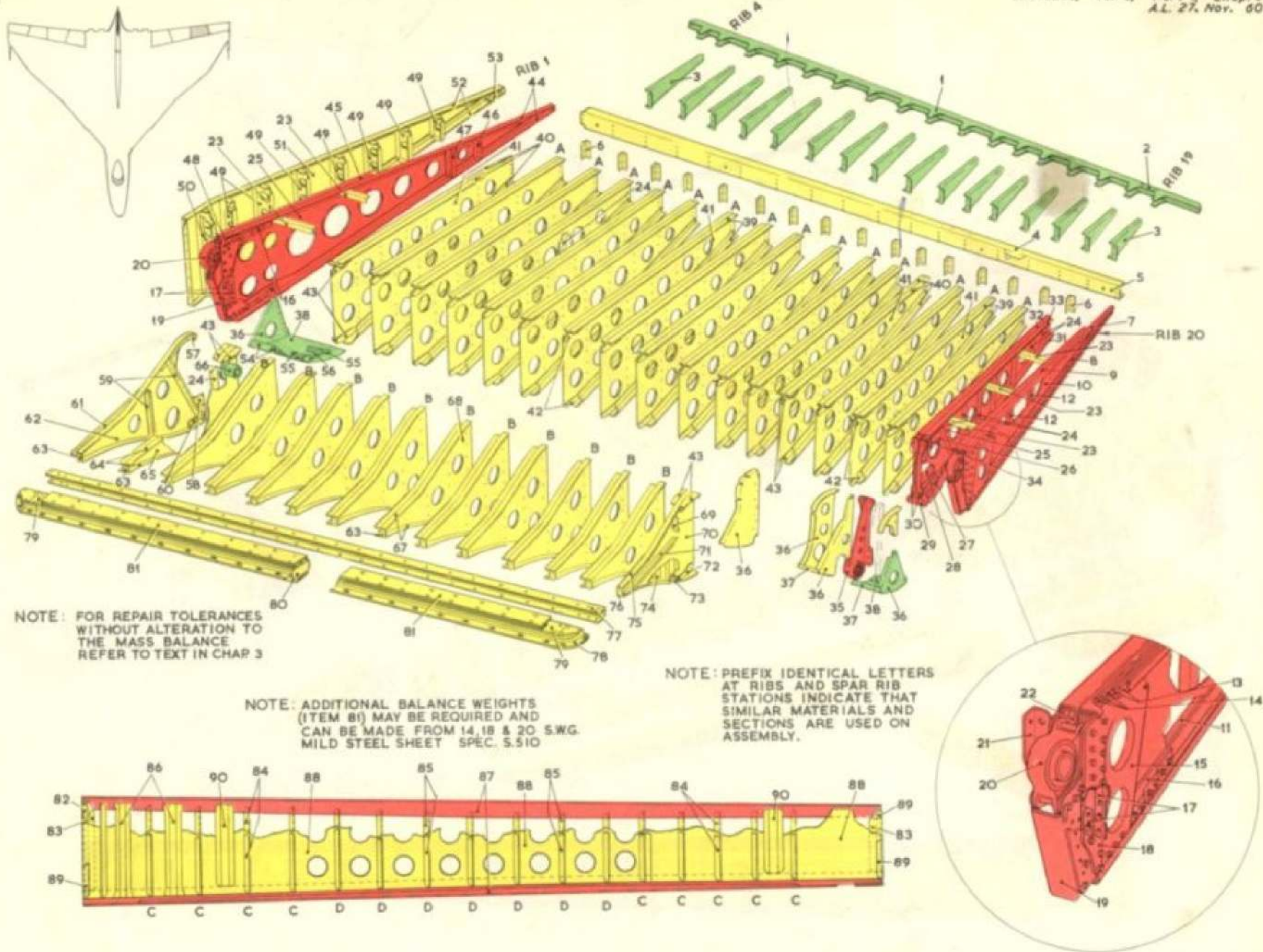


Fig. 334. Inboard aileron
RESTRICTED

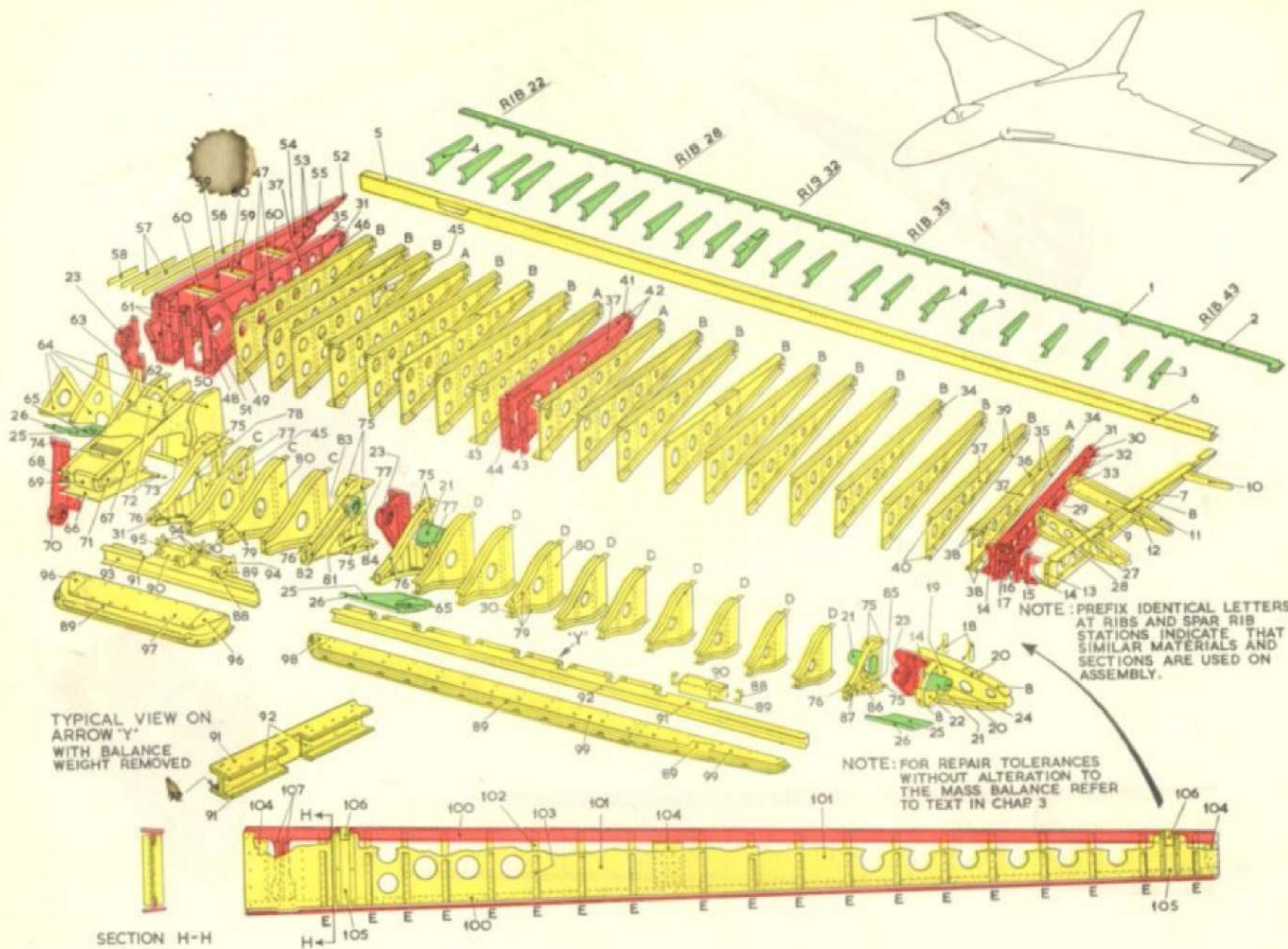


Fig. 334A. Outboard aileron
 RESTRICTED

KEY TO FIG.334A

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes	Depth	Dist. Apart	
1	D.T.D.118	22	Trailing edge member		6.0	-	-	
2	D.T.D.118	16	Packing	x 0.05	6.0	-	-	
3	L.72	24	Tail rib	0.05	6.0	0.25	8:1	108,115,120
4	D.T.D.118	24	Tail rib	0.05	6.0	0.25	8:1	108,115,120
5	L.72	20	Angle	0.05	8.0	-	-	
6	L.72	20	Angle	0.05	6.0	-	-	
7	L.72	22	Web	0.05	3.0	0.25	8:1	103
8	D.T.D.626	20	Joint strap	x 0.05	3.0	0.25	8:1	
9	L.72	24	Angle	0.05	3.0	0.125	8:1	113
10	L.72	24	Stiffener	0.05	3.0	0.25	8:1	
11	L.72	819/SS.1793	Angle	0.05	3.0	0.125	6:1	113
12	L.72	24	Channel member	0.05	3.0	0.25	6:1	103,108
13	L.72	22	Angle	0.05	3.0	0.125	8:1	113
14	L.65	Forging	Angle	*	-	-	-	
15	L.72	16	Plate	x 0.025	6.0	-	-	
16	D.T.D.259	-	Packing	x 0.025	6.0	-	-	
17	D.T.D.259	-	Packing	x 0.025	6.0	-	-	
18	L.72	16	Packing	x 0.025	6.0	-	-	
19	L.72	20	Web	0.05	4.0	0.25	6:1	103
20	L.72	16	Angle	0.05	6.0	0.125	8:1	113
21	S.510	22	Pocket	x 0.1	4.0	-	-	
22	L.72	22	Rib	0.05	6.0	0.25	10:1	103
23	S.96	Forging	Housing	*	-	-	-	
24	S.510	22	Back plate	x 0.1	4.0	-	-	
25	L.72	18	Skin	0.05	8.0	-	-	103
26	L.72	20	Angle	0.05	6.0	-	-	
27	D.T.D.118	24	Angle	0.05	3.0	0.125	6:1	113
28	L.72	22	Angle	0.05	6.0	0.125	6:1	
29	L.72	22	Angle	0.025	8.0	0.125	12:1	
30	L.72	20	Angle	x 0.025	8.0	0.125	12:1	
31	L.72	802/SS.1793	Inboard angle	0.025	10.0	-	-	113
32	L.72	803/SS.1793	Outboard angle	0.025	10.0	-	-	113
33	D.T.D.118	22	Web	0.05	8.0	0.125	10:1	103
34	L.72	22	Angle	x 0.025	6.0	0.125	10:1	
35	L.72	799/SS.1793	Outboard angle	0.025	8.0	0.125	8:1	113
36	L.72	798/SS.1793	Inboard angle	0.025	8.0	0.125	8:1	113
37	D.T.D.118	24	Web	0.05	6.0	0.25	6:1	103
38	L.72	18	Angle	0.05	4.0	0.125	8:1	
39	D.T.D.118	792/SS.1793	Angle	0.025	8.0	0.125	8:1	113
40	L.72	24	Angle	x 0.05	4.0	0.125	8:1	
41	L.72	807/SS.1793	Angle	0.025	10.0	-	-	113
42	L.72	808/SS.1793	Angle	0.025	10.0	-	-	113
43	L.65	Forging	Bracket	*	-	-	-	
44	L.72	-	Packing	x 0.025	6.0	-	-	

* No repairs permitted

x More expedient to renew than repair
All dimensions are quoted in inches

RESTRICTED

KEY TO FIG.334A (contd.)

Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
				Depth	Dist. Apart	Dia.	Pitch Ratio	
45	L. 72	789/SS.1793	Angle	0.05	6.0	0.125	8:1	
46	L. 65	306/SS.3075	Bottom boom	-	-	-	-	
47	L. 72	24	Angle	-	-	-	-	
48	L. 72	18	Plate	0.025	10.0	0.125	8:1	113
49	D. T. D. 687	12	Diffusion strip	0.025	8.0	0.125	8:1	
50	S. 96	-	Bracket	*	-	-	-	
51	L. 65	-	Bracket	*	-	-	-	
52	B. S. S. 668	-	Block	x	-	-	-	
53	L. 72	805/SS.1793	Angle	-	-	-	-	
54	D. T. D. 626	20	Web	0.025	10.0	-	-	103
55	L. 72	20	Angle	-	-	-	-	
56	D. T. D. 687	14	Diffusion strip	x 0.025	8.0	-	-	
57	D. T. D. 687	12	Diffusion strip	x 0.025	8.0	-	-	
58	D. T. D. 687	10	Diffusion strip	x 0.025	8.0	-	-	
59	L. 72	22	Angle	0.025	10.0	-	-	
60	L. 72	183/SS.1793	Angle	0.05	10.0	0.125	8:1	113
61	D. T. D. 363	409/SS.3075	Angle	0.025	10.0	0.125	8:1	113
62	L. 72	18	Plate	0.025	10.0	-	-	
63	L. 72	16	Channel	0.025	10.0	-	-	
64	L. 72	20	Riblet	0.05	4.0	0.25	6:1	103
65	AS.1878/25	-	Hinge	0.05	6.0	-	-	
66	L. 72	20	Skin	0.025	12.0	-	-	103
67	L. 72	20	Channel	0.05	8.0	0.125	8:1	108
68	L. 72	20	Angle	x 0.05	6.0	0.125	8:1	
69	L. 72	20	Channel	0.05	6.0	0.25	8:1	
70	S. 96	-	Bracket	x	-	-	-	
71	Lead	-	Balance weight	0.1	3.0	-	-	
72	L. 72	20	Angle	0.05	6.0	0.125	6:1	
73	L. 72	22	Angle	0.05	6.0	0.125	6:1	113
74	S. 510	12	Additional balance weight	0.1	3.0	-	-	
75	L. 72	18	Angle	x 0.05	4.0	0.125	8:1	
76	L. 72	18	Channel	0.05	4.0	0.25	8:1	
77	L. 72	24	Corrugation	0.05	3.0	0.125	12:1	
78	L. 72	18	Packing	x 0.05	3.0	0.25	8:1	
79	L. 72	819/SS.1793	Angle	0.025	8.0	0.125	12:1	113
80	L. 72	24	Web	0.05	6.0	0.125	8:1	103
81	T. 45	22	Tube	0.1	4.0	-	-	
82	L. 72	20	Angle	0.05	6.0	0.125	12:1	113
83	L. 72	22	Angle	x 0.05	6.0	0.125	10:1	
84	L. 72	20	Plate	x 0.05	4.0	0.25	8:1	
85	L. 72	2/SS.1793	Stiffener	0.05	6.0	0.25	10:1	
86	L. 72	22	Stiffener	0.05	6.0	0.25	10:1	
87	L. 72	20	Angle	x 0.05	6.0	0.25	10:1	
88	S. 511	-	Bracket	x 0.025	6.0	0.125	10:1	

* No repairs permitted
x More expedient to renew than repair
All dimensions are quoted in inches

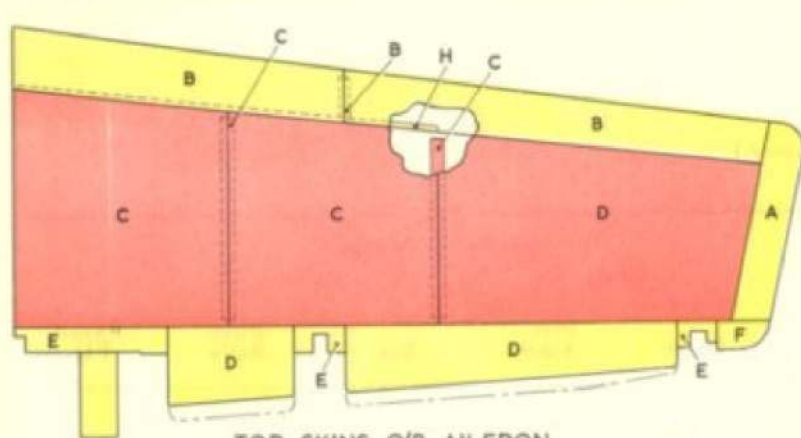
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KEY TO FIG.334A (contd.)

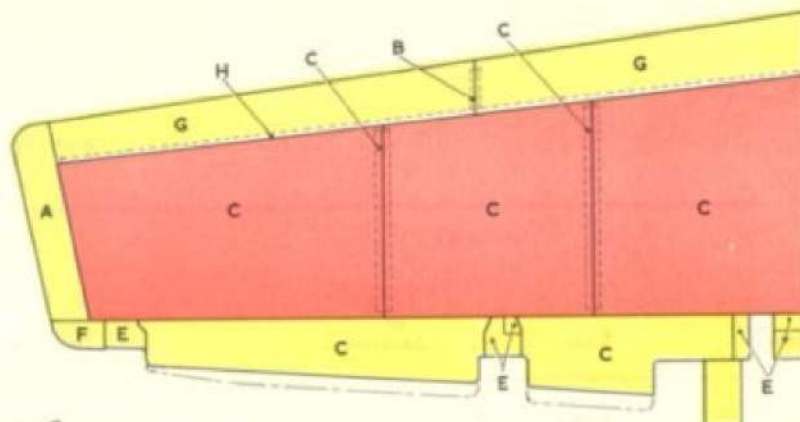
Item	Material		Description	Negligible Damage				Repair Fig.
	Spec.	S.W.G. or Section		Dents	Holes			
			Depth	Dist. Apart	Dia.	Pitch Ratio		
89	Lead	-	Balance weight	0.1	4.0	-	-	
90	S.511	-	Channel	0.025	6.0	0.125	10:1	
91	L.72	20	Strap	x 0.05	8.0	0.25	8:1	
92	L.72	20	Channel	0.05	8.0	-	-	108
93	L.72	18	Channel	0.05	8.0	-	-	108
94	L.72	18	Angle bracket	x 0.05	8.0	0.25	8:1	
95	L.72	24	Packing	x 0.05	4.0	0.25	8:1	
96	S.511	16	End piece	x 0.025	8.0	-	-	
97	S.510	16	Channel	0.025	8.0	-	-	
98	S.510	18	End piece	x 0.025	8.0	-	-	
99	S.510	18	Channel	0.025	8.0	-	-	
100	D.T.D.363	414/SS.3075	Top and bottom booms	-	-	-	-	
101	L.72	16	Web	0.025	6.0	0.125	10:1	103
102	L.72	663/SS.1793	Angle	0.05	8.0	0.125	8:1	113
103	L.72	133/SS.1793	Angle	0.05	8.0	0.125	8:1	113
104	L.72	10	Bearing plate	0.05	3.0	0.125	8:1	
105	L.72	22	Slings bracket	0.05	6.P	0.125	8:1	
106	L.65	-	Block	x 0.1	4.0	-	-	
107	L.72	18	Angle	0.025	10.0	-	-	

x More expedient to renew than repair
All dimensions are quoted in inches

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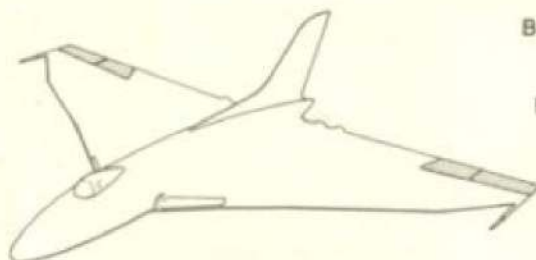
TOP SKINS Q/B AILERON



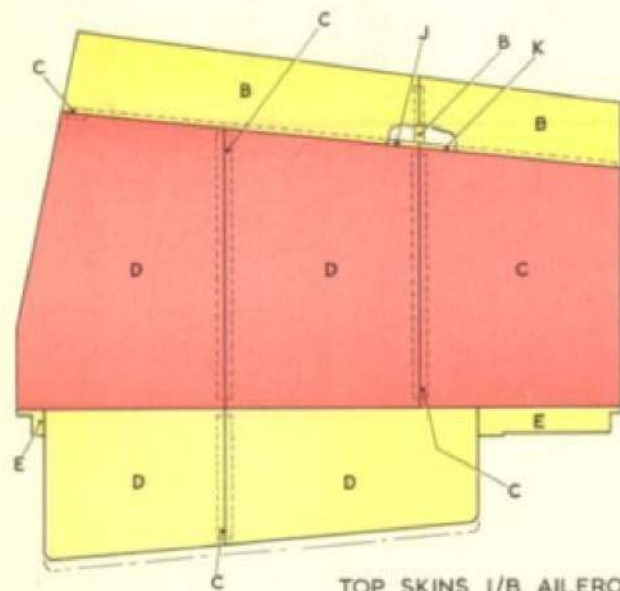
BOTTOM SKINS Q/B AILERON

FOR REPAIRS SEE FIG.103 & FIG.104.
DAMAGE IN AREAS OF CONCENTRATED
RIVETING MUST BE REPAIRED WITH
JOINTS ARRANGED OUTSIDE THE AREA.

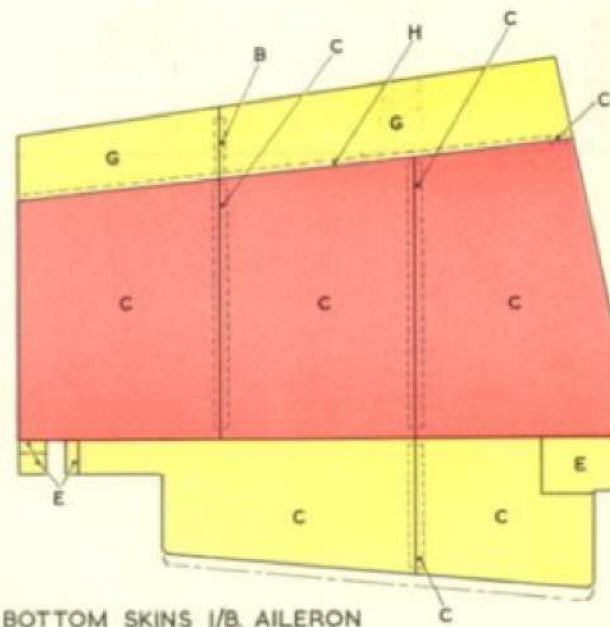
NOTE:-ITEMS H,J&K, ARE PACKING PIECES
FITTED BETWEEN SKIN AND CHANNEL.
REPAIRS ARE NOT PERMITTED TO
BUTT STRAPS.



FOR REPAIR TOLERANCES WITHOUT
ALTERATIONS TO MASS BALANCE
REFER TO TEXT IN CHAP 3



TOP SKINS I/B AILERON



BOTTOM SKINS I/B AILERON

SKIN REFERENCE		
LETTER	S.W.G.	MAT. SPEC.
A	20	D.T.D. 118A
B	22	D.T.D. 118A
C	18	D.T.D. 626
D	20	D.T.D. 626
E	18	L 72
F	20	L 59
G	22	L 72
H	26	L 72
J	30	L 72
K	28	D.T.D. 118A

NEGLIGIBLE DAMAGE		
COLOUR	DENTS	DIST. APART
RED	0.025	6.0
YELLOW	0.05	6.0
GREEN		

ALL DIMENSIONS IN INCHES

Fig. 334 B. Aileron skins

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Key to Fig. 335. Inboard elevator

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	DTD.118A	22	Stiffening plates	0-05	4-0	—	—	—
2	DTD.259	10	Stiffening strip	0-025	4-0	—	—	—
3	DTD.118A	22	Tail ribs	0-05	4-0	0-25	6 : 1	103
4	L.72	853/SS/1793	Stiffeners	† 0-05	4-0	0-25	6 : 1	—
5	DTD.118A	18	Auxiliary spar	0-05	6-0	0-25	8 : 1	—
6	DTD.118A	18	Butt straps	† 0-05	6-0	0-25	8 : 1	—
7	L.73	22	Rib web	0-05	8-0	—	—	103
8	DTD.363	416/SS/3075	*T Section booms	0-025	8-0	—	—	—
9	L.72	66/SS/1793	Bottom booms (Rib 18)	0-025	6-0	—	—	—
9a	L.72	66/SS/1793	Stiffeners	0-05	6-0	0-25	8 : 1	—
10	L.72	763/SS/1793	Stiffeners	0-05	6-0	0-25	8 : 1	113
11	L.72	762/SS/1793	Stiffeners	0-05	6-0	0-25	8 : 1	113
12	L.72	761/SS/1793	Stiffener	0-05	6-0	0-25	8 : 1	113
13	DTD.687	10	Housing plate	* 0-025	8-0	0-125	12 : 1	—
14	L.72	16	Channel	0-025	8-0	—	—	—
15	S.96	H.T.S.	Bearing housing	—	—	—	—	113
16	L.72	12b/SS/1793	Rib booms	0-025	8-0	—	—	—
17	L.72	785/SS/1793	Rib stiffeners	† 0-05	6-0	0-25	8 : 1	—
18	L.72	12c/SS/1793	Rib stiffener	0-05	6-0	0-25	8 : 1	113
19	L.72	207/SS/1793	Rib angle	0-05	8-0	0-25	8 : 1	—
20	DTD.626	20	Doubling plate	0-05	6-0	0-25	8 : 1	—
21	L.72	18	Doubling plate	† 0-05	6-0	0-25	6 : 1	—
22	DTD.118A	20	Angle	0-05	6-0	0-25	6 : 1	—
23	L.65	Al. alloy	Attachment bracket	* —	—	—	—	103
24	L.72	20	Former	0-05	4-0	0-25	6 : 1	—
25	L.72	788/SS/1793	Angle	† 0-05	6-0	0-25	6 : 1	—
26	L.72	18	Angle	† 0-05	6-0	0-25	6 : 1	—
27	L.72	112/SS/1793	Angle	† 0-05	6-0	0-25	6 : 1	—
28	L.72	852/SS/1793	Angle	† 0-05	6-0	0-25	6 : 1	—
29	L.72	18	Skin panel	0-05	8-0	—	—	103
30	L.72	851/SS/1793	Channel	† 0-05	6-0	0-25	6 : 1	—
31	DTD.118A	24	Corrugated rib webs	0-10	6-0	0-25	6 : 1	—
32	DTD.118A	865/SS/1793	Top and bottom booms	0-05	6-0	0-25	8 : 1	—
33	L.72	20	Channel	† 0-05	6-0	0-25	8 : 1	—
34	DTD.118A	24	Reinforcing strip	0-05	6-0	0-25	8 : 1	—
35	L.72	884/SS/1793	Top and bottom booms (Rib 14 only)	0-05	6-0	0-25	8 : 1	—
36	L.72	18	Channels (Rib 14 only)	† 0-05	6-0	0-25	8 : 1	—
37	L.72	18	Stiffening plate (Rib 14 only)	† 0-05	6-0	0-25	8 : 1	—
38	L.72	18	Gusset (Rib 14 only)	† 0-05	6-0	0-25	8 : 1	—
39	L.72	882/SS/1793	Top and bottom rib booms	0-025	8-0	—	—	—
40	L.72	20	Doubling channel	† 0-025	8-0	0-25	10 : 1	—
41	H.T.S.	S.11	Bearing housing	* —	—	—	—	—
42	DTD.259A	Mag. alloy	Packing block	* 0-05	6-0	0-25	8 : 1	—
43	DTD.626	20	End web	0-025	8-0	—	—	103
44	L.72	761/SS/1793	Top and bottom booms	0-025	8-0	—	—	103
45	L.72	20	Diaphragms	0-05	6-0	0-25	6 : 1	—
46	L.72	22	Diaphragms	0-05	6-0	0-25	6 : 1	—
47	DTD.118A	22	Angles	† 0-05	6-0	0-25	8 : 1	—
48	DTD.259	Mag alloy	Packing block	† 0-05	6-0	0-25	8 : 1	103
49	L.72	18	Former	0-05	6-0	0-25	6 : 1	—
50	L.72	20	Angle	0-05	6-0	0-25	6 : 1	—
51	L.72	850/SS/1793	Angle	† 0-05	6-0	0-25	6 : 1	—
52	L.72	849/SS/1793	Formers	† 0-05	6-0	0-25	8 : 1	—

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Key to Fig. 335. Inboard elevator (contd.)

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
53	L.72	20	Gusset	0.05	6.0	0.25	6:1	—
54	L.72	877/SS/1793	Top and bottom channels	0.05	8.0	0.25	8:1	—
55	L.72	664/SS/1793	Sealing angle	0.05	8.0	—	—	—
56	DTD.118A	24	Corrugated web	0.05	6.0	0.25	10:1	—
57	L.72	20	Channel	0.05	6.0	0.25	6:1	—
58	L.72	12a/SS/1793	Angle (nose rib No. 2 only)	† 0.05	6.0	0.25	6:1	—
59	L.72	878/SS/1793	Top and bottom channels	0.05	8.0	0.25	8:1	—
60	DTD.118A	22	Rib web plate	0.05	8.0	0.25	8:1	—
61	DTD.118A	22	Forward corrugation (Nose rib 3 only)	0.05	6.0	0.25	8:1	—
62	DTD.118A	20	Corrugated web	0.05	6.0	0.25	8:1	—
63	L.72	20	Attachment bracket	† 0.05	6.0	0.25	6:1	—
64	L.72	864/SS/1793	Top and bottom channels (Nose ribs 4 to 13)	0.05	8.0	0.25	8:1	—
65	DTD.118A	24	Rib web plate	0.10	6.0	0.25	6:1	—
66	L.72	767/SS/1793	Drainage channel	0.05	6.0	—	—	—
67	DTD.118A	22	Rib side web	0.05	8.0	—	—	—
68	L.72	18	Stiffening plate	† 0.05	6.0	0.25	6:1	—
69	S.3	Mild steel	Balance strips	† 0.10	6.0	—	—	—
70	L.72	18	Channel	0.05	6.0	0.25	8:1	—
71	—	Lead	Balance weight	0.15	5.0	—	—	—
72	S.3	Mild steel	Balance weight shrouds	0.10	6.0	—	—	—
73	L.72	702/SS/1793	Retaining strip	0.10	6.0	0.25	6:1	—
74	Indiana/ Cashmere Fabric	1/32" thk.	Shroud seals	—	—	—	—	406
75	L.65	Al. alloy	Top and bottom booms	—	—	—	—	—
76	L.65	249/SS/3075	Attachment angles	—	—	—	—	—
77	L.72	425/SS/1793	Attachment angle	0.05	6.0	0.25	8:1	as 113, 114
78	DTD.118A	18	Bracket	† 0.025	8.0	0.25	10:1	—
79	L.72	20	Angle	0.05	6.0	0.25	8:1	—
80	L.72	314/SS/1793	Angle	0.05	6.0	0.25	8:1	113
81	L.72	13b/SS/1793	Angle	0.05	6.0	0.25	8:1	113
82	L.72	20	Channel	0.05	6.0	0.25	8:1	—
83	L.72	14	Strap plate	* 0.025	8.0	0.25	10:1	—
84	L.72	18	Strap plate	* 0.05	6.0	0.25	8:1	—
85	DTD.363	428/SS/3075	Rear angle	—	—	—	—	—
86	L.72	12	Spar web	0.025	8.0	—	—	—
87	L.72	14	Spar web	0.025	6.0	0.125	16:1	—
88	L.72	18	Spar web	0.025	6.0	0.125	12:1	—
89	L.65	277/SS/3075	Bracket	† 0.025	6.0	—	—	—

* No repairs permitted

† More expedient to renew

All dimensions in inches

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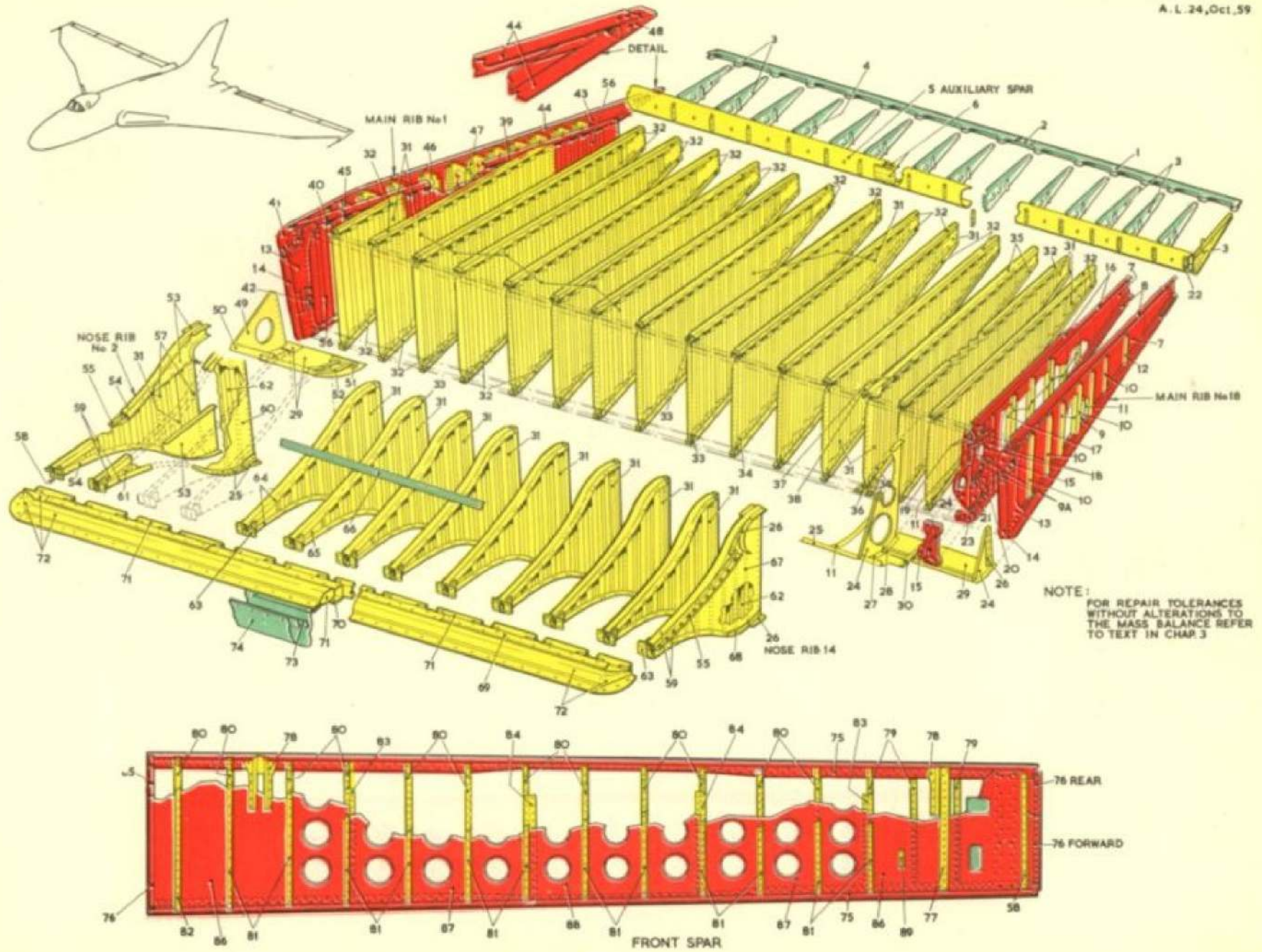


Fig. 335 Inboard elevator
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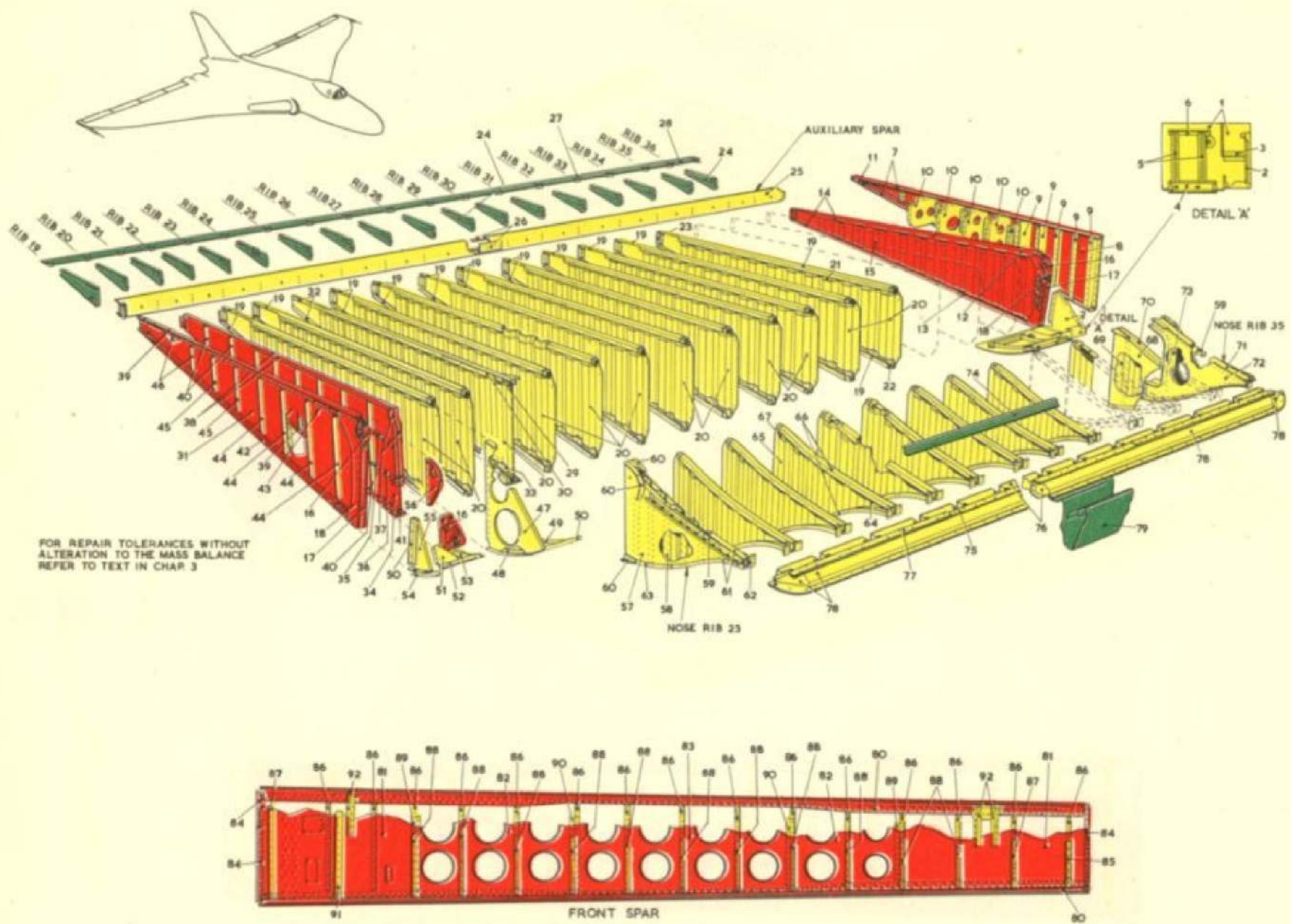


Fig.335A Outboard elevator
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Key Fig. 335A. Outboard elevator

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Dents Depth	Dist. Apart	Dia.		
1	L.72	18G	Access panel skins	0-05	8-0	—	—	103
2	L.72	20G	Formers	0-05	6-0	—	—	103
3	—	AS/1878/30	Hinge	0-025	6-0	—	—	—
4	L.72	20G	Angle former	0-05	6-0	0-25	8 : 1	—
5	L.72	849/SS/1793	Former	0-05	6-0	0-25	8 : 1	—
6	L.72	850/SS/1793	Angle	0-05	6-0	0-25	8 : 1	—
7	L.72	22	Top and bottom booms	0-025	8-0	—	—	113
8	DTD.626	20	Web plate	0-05	8-0	0-25	10 : 1	103
9	L.72	20	Support angles	0-05	6-0	0-25	6 : 1	—
10	DTD.118A	22	Diaphragms	0-05	6-0	0-25	6 : 1	103
10A	DTD.118A	22	Angle	0-05	6-0	—	—	—
11	DTD.259	Mag. alloy	Block	0-05	6-0	0-25	8 : 1	—
12	L.72	18	Doubling channel	0-025	8-0	0-25	10 : 1	—
13	L.72	20	Doubling channel	0-025	8-0	0-25	10 : 1	—
14	L.72	883/SS/1793	Top and bottom booms	0-025	6-0	—	—	—
15	DTD.118A	24G. Ref. F9203	Corrugation	0-05	6-0	0-25	10 : 1	—
16	S.96	H.T.S.	Bearing housing	—	—	—	—	—
17	L.72	16	Channel	0-025	8-0	—	—	—
18	DTD.687	10	Stiffening plate	*0-025	8-0	0-125	12 : 1	—
19	DTD.118A	865/SS/1793	Top and bottom booms (Rib 21-35 less rib 23)	0-05	6-0	0-25	8 : 1	—
20	DTD.118A	24G. Ref. F9203	Corrugated web (Ribs 21-35)	0-10	6-0	0-25	6 : 1	—
21	DTD.118A	24	Reinforcing strips (Rib 21-35)	0-05	6-0	0-25	8 : 1	—
22	L.72	20	Reinforcing channel (Rib 21-35 less rib 23)	0-05	6-0	0-25	8 : 1	—
23	DTD.118A	22	Attachment angles (Rib 20-36)	0-05	6-0	0-25	6 : 1	—
24	DTD.118A	22	Tail ribs (19-36)	0-05	4-0	0-25	6 : 1	103
25	DTD.118A	18	Auxiliary spar	0-05	6-0	0-25	8 : 1	—
26	DTD.118A	18	Spar butt-straps	†0-05	6-0	0-25	8 : 1	—
27	DTD.118A	22	Stiffening plates	0-05	4-0	—	—	—
28	DTD.259	10	Packing strip	0-025	4-0	—	—	—
29	L.72	18	Angle (rib 23 only)	†0-05	6-0	0-25	8 : 1	—
30	L.72	18	Stiffener (rib 23 only)	†0-05	6-0	0-25	8 : 1	—
31	L.73	22	Rib web (rib 19 only)	0-05	8-0	—	—	103
32	L.72	884/SS/1793	Top and bottom booms (rib 23 only)	0-05	6-0	0-25	8 : 1	—
33	DTD.118A	AS.404/24	Reinforcing strips (Rib 21 to 35)	0-05	6-0	0-25	8 : 1	—
34	DTD.118A	22	Rib web (rib 20 only)	0-05	8-0	—	—	103
35	L.72	762/SS/1793	Angle	†0-05	8-0	0-25	6 : 1	—
36	L.72	66/SS/1793	Angle	†0-05	8-0	0-25	6 : 1	—
37	L.72	207b/SS/1793	Attachment angles	0-05	8-0	0-25	8 : 1	—
38	L.72	12b/SS/1793	Top booms (rib 20 only)	0-025	8-0	—	—	113
39	DTD.363	416/SS/3075	'T' Section booms	0-025	8-0	—	—	—
40	L.72	785/SS/1793	Stiffener	†0-05	6-0	0-25	8 : 1	113
41	L.65	Al. alloy	Attachment bracket	—	—	—	—	—
42	L.72	66/SS/1793	Bottom booms	0-025	6-0	—	—	—
43	DTD.259	Mag. alloy	Packing block	0-025	6-0	0-125	8 : 1	—
44	L.72	763/SS/1793	Stiffeners	†0-05	6-0	0-25	8 : 1	113
45	L.72	762/SS/1793	Stiffeners	†0-05	6-0	0-25	8 : 1	113
46	L.72	761/SS/1793	Stiffener	†0-05	6-0	0-25	8 : 1	113
47	L.72	20	Former	0-05	6-0	0-25	6 : 1	103

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Key to Fig. 335A. Outboard elevator (contd.)

Item	Spec.	Material S.W.G. or Section	Description	Negligible Damage			Holes Pitch Ratio	Repair Fig. No.
				Depth	Dist. Apart	Dia.		
48	L.72	787/SS/1793	Angle	† 0.05	6.0	0.25	6 : 1	—
49	L.72	762/SS/1793	Angle	† 0.05	6.0	0.25	6 : 1	113
50	L.72	788/SS/1793	Angle	† 0.05	6.0	0.25	6 : 1	—
51	L.72	20	Gusset	0.05	6.0	0.25	6 : 1	103
52	L.72	515/SS/1793	Angle	0.05	6.0	0.25	6 : 1	—
53	L.72	206/SS/1793	Channel	0.05	6.0	0.25	6 : 1	—
54	L.72	112/SS/1793	Angle	† 0.05	6.0	0.25	6 : 1	—
55	L.72	20	Former	0.05	6.0	0.25	6 : 1	103
56	L.72	20	Former	0.05	4.0	0.25	6 : 1	103
57	DTD.118A	22	Rib web (Nose rib 23 only)	0.05	8.0	0.25	8 : 1	—
58	DTD.118A	20	Corrugated web (nose rib 23 only)	0.10	6.0	0.25	6 : 1	—
59	L.72	664/SS/1793	Sealing angle (nose ribs 23 and 35)	0.25	8.0	—	—	—
60	L.72	18	Angle	† 0.05	6.0	0.25	6 : 1	—
61	L.72	878/SS/1793	Top and bottom channels (nose rib 23 only)	0.05	8.0	0.25	8 : 1	—
62	L.72	20	Attachment bracket (nose ribs 23-35)	† 0.05	6.0	0.25	6 : 1	—
63	L.72	18	Stiffening plate	0.05	6.0	0.25	6 : 1	—
64	DTD.118A	24	Forward web plates (nose ribs 24-33)	0.10	6.0	0.25	6 : 1	—
65	DTD.118A	24	Corrugated web (nose ribs 24-33)	0.10	6.0	0.25	6 : 1	—
66	L.72	864/SS/1793	Top and bottom booms (nose ribs 24-33)	0.05	8.0	0.25	8 : 1	—
67	L.72	22	Reinforcing strips (nose ribs 24-33)	0.05	6.0	0.25	6 : 1	—
68	DTD.118A	24	Sealing plate (nose rib 34 only)	0.05	8.0	—	—	—
69	DTD.118A	24	Corrugated web (nose rib 34 only)	0.05	6.0	0.25	8 : 1	—
70	L.72	876/SS/1793	Top and bottom booms (nose rib 34 only)	0.05	8.0	0.25	8 : 1	—
71	L.72	877/SS/1793	Top and bottom booms (nose rib 35 only)	0.05	8.0	0.25	8 : 1	—
72	L.72	20	Side webs (nose rib 35 only)	0.05	8.0	—	—	—
73	DTD.118A	20	Channel (nose rib 35 only)	0.05	6.0	0.25	6 : 1	—
74	L.72	767/SS/1793	'Z' Section	0.05	6.0	—	—	—
75	L.72	18	Channel	0.05	6.0	0.25	8 : 1	—
76	—	—	Lead	0.15	5.0	—	—	—
77	S.3	M.S.	Balance strips	† 0.10	6.0	—	—	—
78	S.3	20	Mass balance cover	0.10	6.0	—	—	—
79	Indian	1/32"	Sealing cloth	—	—	—	—	406
80	DTD.363	431/SS/3075	Top and bottom booms	—	—	—	—	—
81	L.72	12	Spar web	0.025	8.0	—	—	—
82	L.72	14	Spar web	0.025	6.0	0.125	16 : 1	—
83	L.72	18	Spar web	0.025	6.0	0.125	12 : 1	—
84	DTD.130	249/SS/3075	Attachment angle (rib 36)	—	—	—	—	—
85	L.72	20	Channel	0.05	6.0	0.25	8 : 1	—
86	L.72	314/SS/1793	Angle	0.05	6.0	0.25	8 : 1	113
87	L.72	12a/SS/1793	Angle	0.05	6.0	0.25	8 : 1	113
88	L.72	13b/SS/1793	Angle	0.05	6.0	0.25	8 : 1	113
89	L.72	14	Strap plate	* 0.025	8.0	0.25	10 : 1	—
90	L.72	18	Strap plate	* 0.05	6.0	0.25	8 : 1	—
91	L.72	425/SS/1793	Angle	0.05	6.0	0.25	8 : 1	as 113, 114
92	DTD.118	18	Slings brackets	† 0.025	8.0	0.25	10 : 1	—

† More expedient to renew

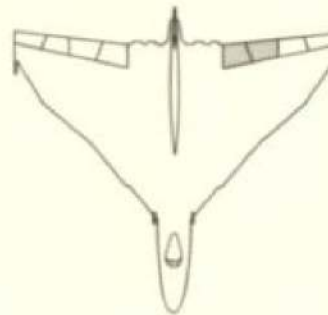
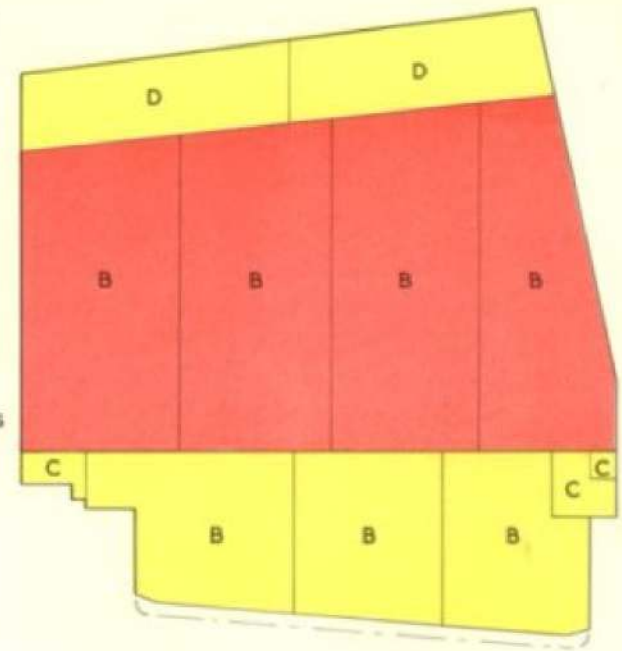
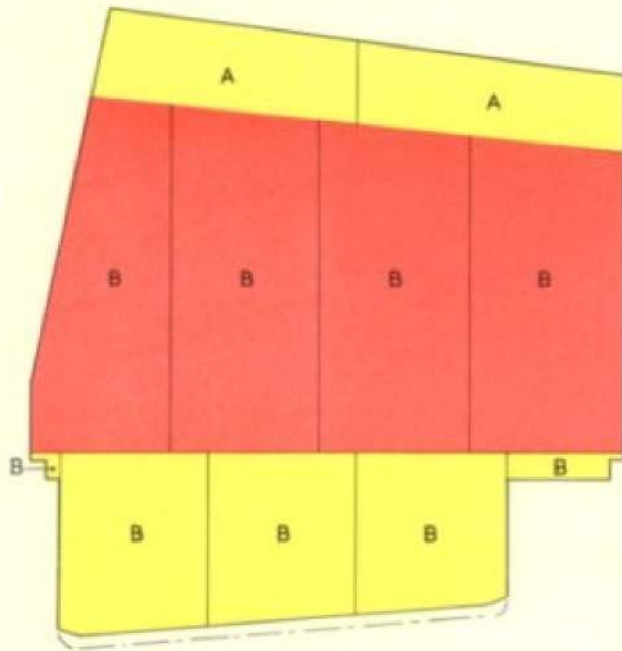
* No repairs permitted

All dimensions in inches

RESTRICTED

FOR REPAIRS SEE FIG. 103 AND FIG. 104.
DAMAGE IN AREAS OF CONCENTRATED
RIVETING MUST BE REPAIRED WITH
JOINTS ARRANGED OUTSIDE THE AREA.

SKIN REFERENCE		
LETTER	S. W. G.	MATSPEC.
A	22	DT.D.118 A
B	18	DT.D.626
C	18	L72
D	22	L72



NEGLECTIBLE DAMAGE		
COLOUR	DENTS	DIST. APART
RED	0.025 IN.	6.0 IN.
YELLOW	0.05 IN.	6.0 IN.
GREEN	—	—

FOR REPAIR TOLERANCES WITHOUT
ALTERATION TO THE MASS BALANCE
REFER TO TEXT IN CHAP. 3.

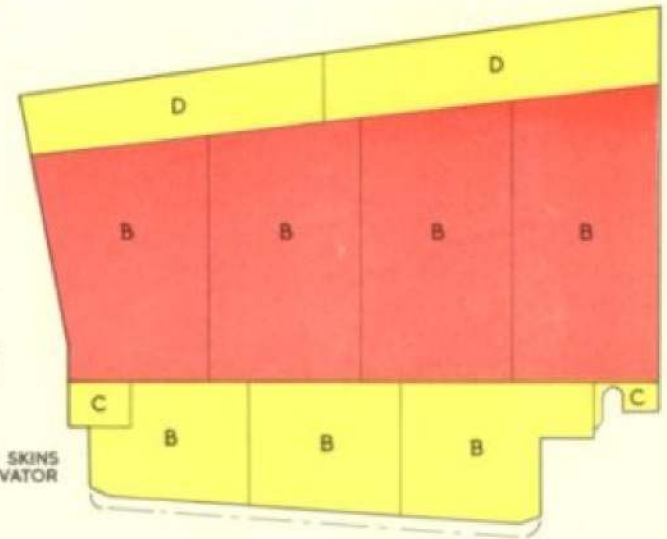
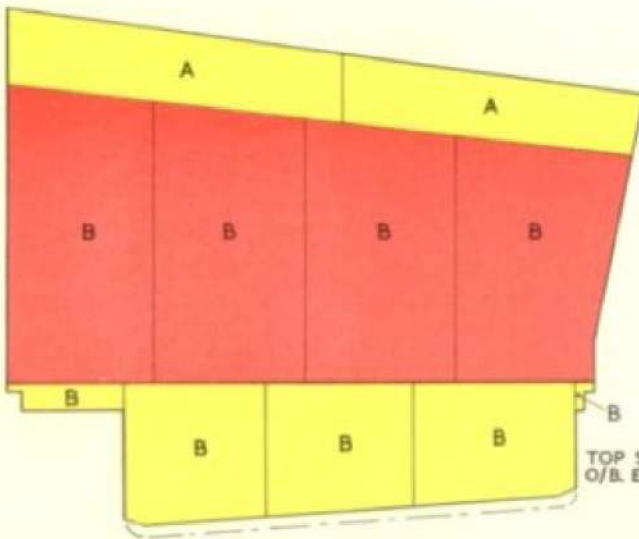


Fig. 335B. Elevator skins

RESTRICTED

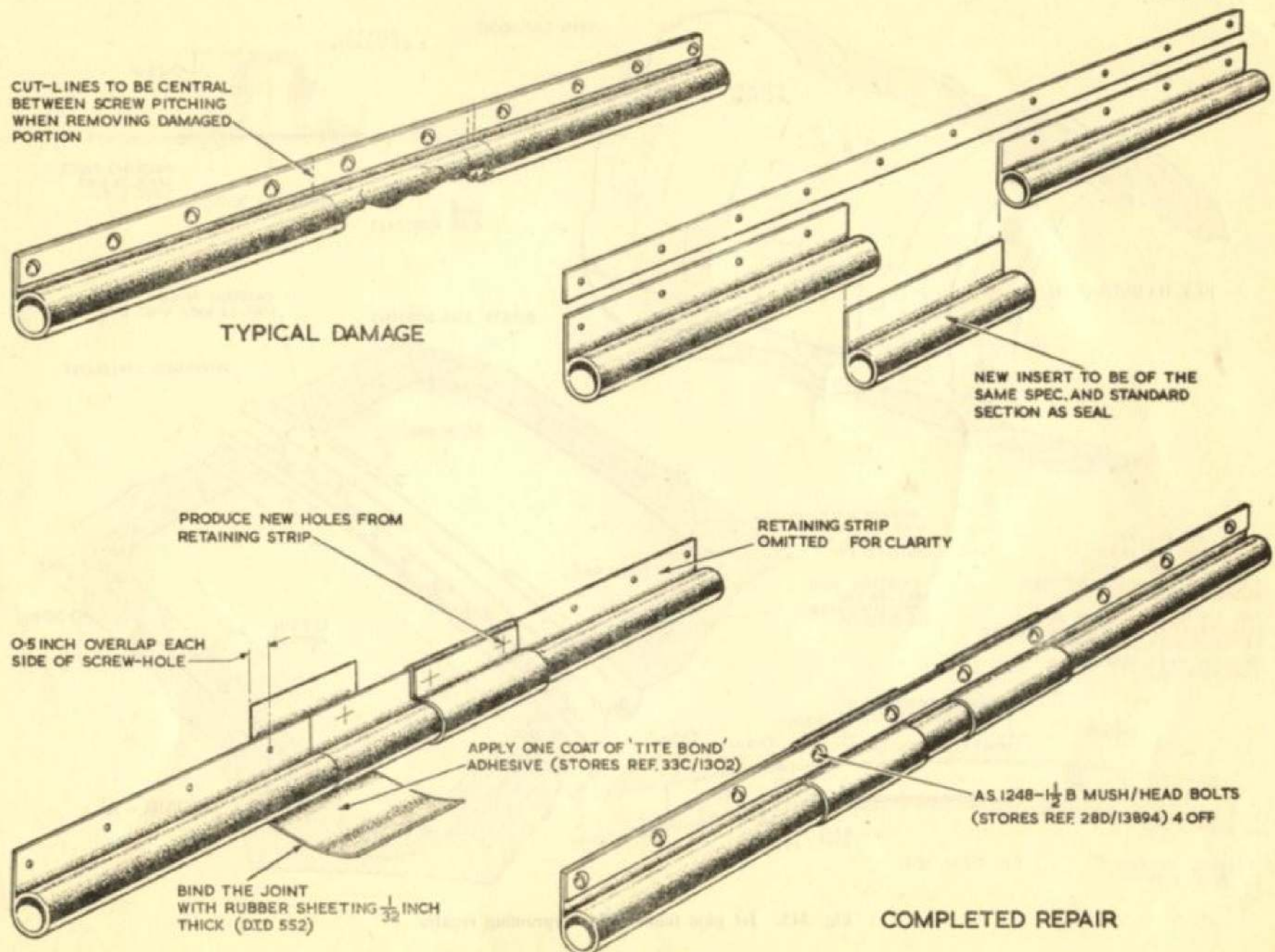


Fig. 341. Typical repair for 'P' type rubber seals

RESTRICTED

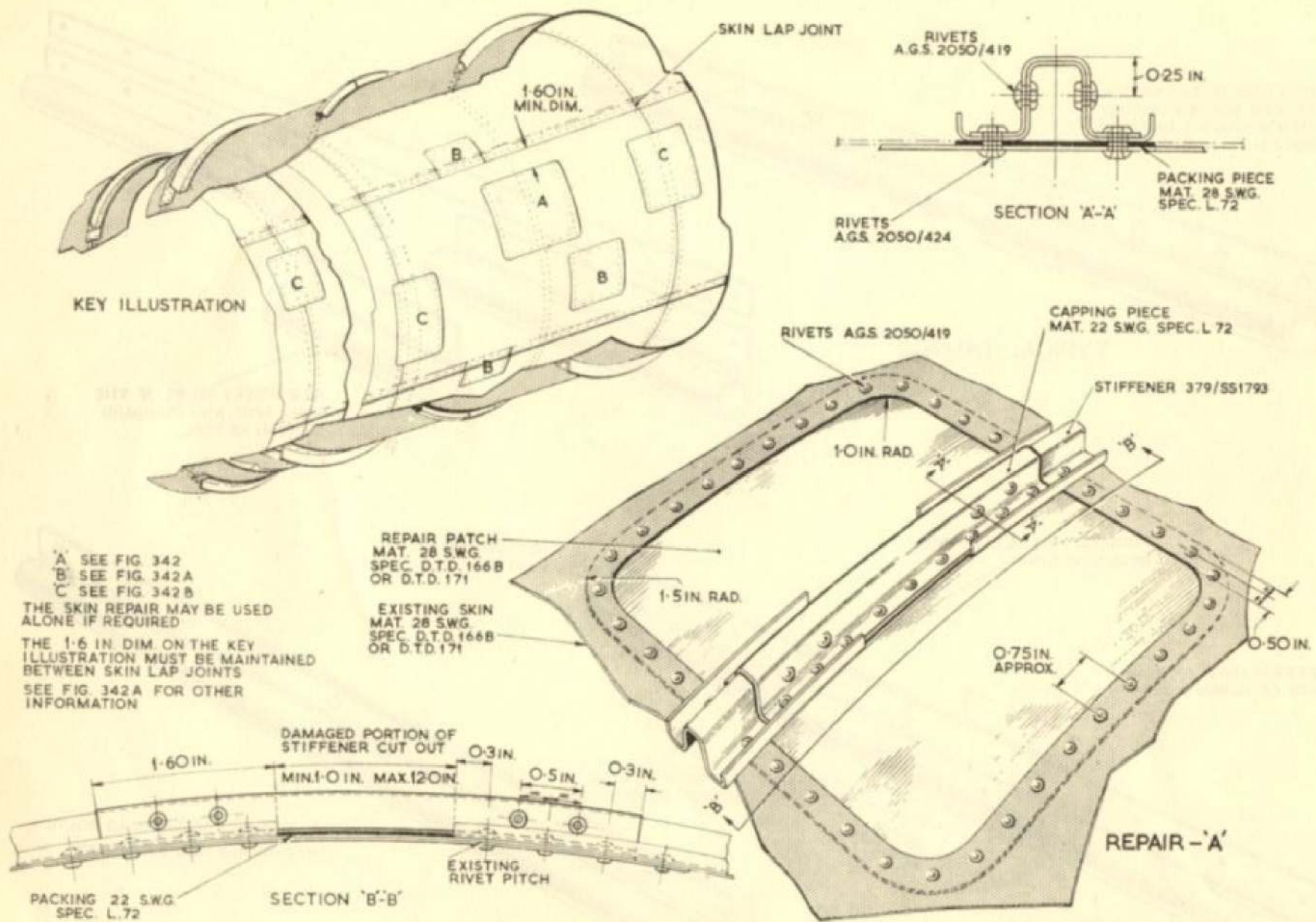
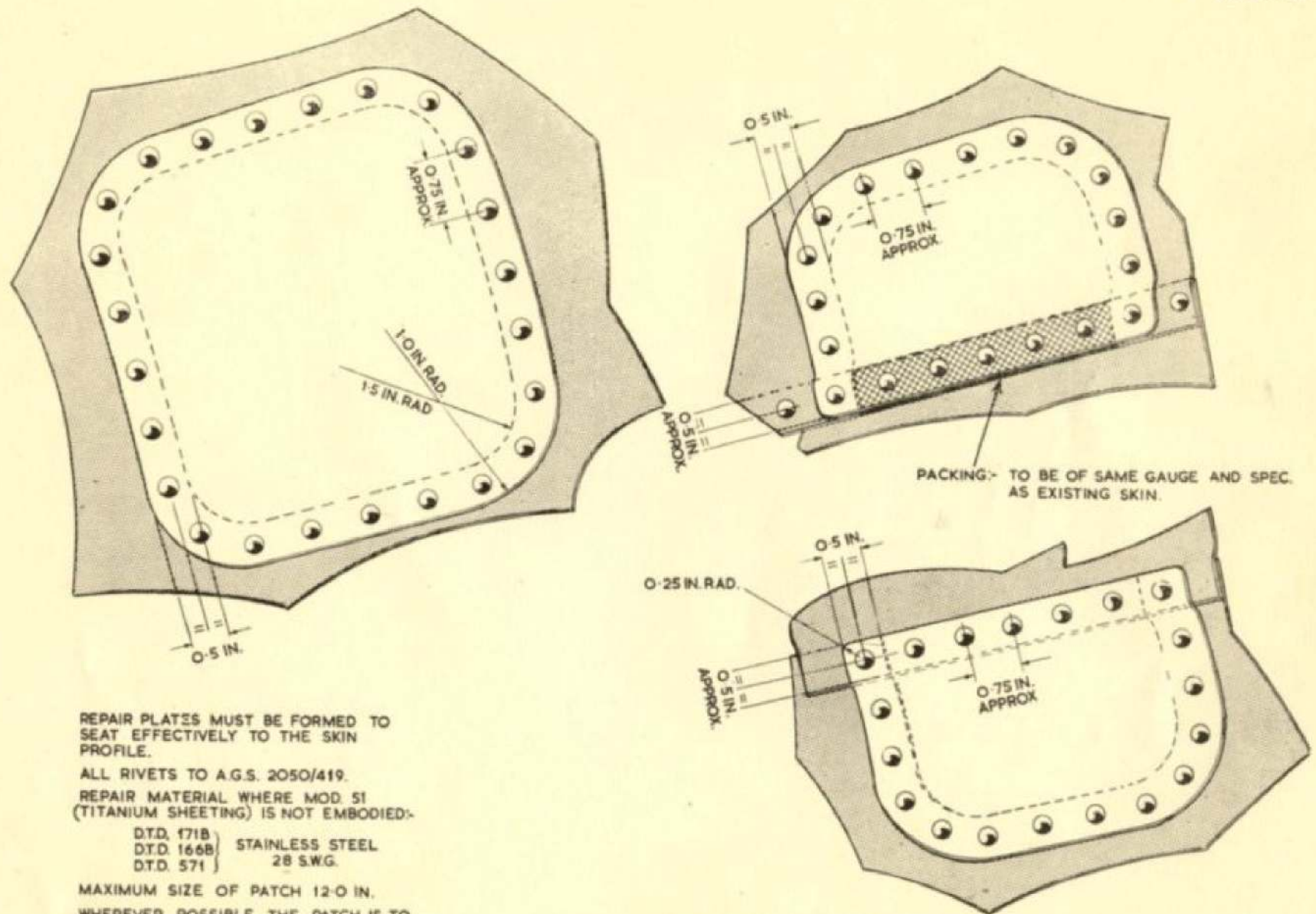


Fig. 342. Jet pipe tunnel and fireproofing repairs

RESTRICTED



PACKING - TO BE OF SAME GAUGE AND SPEC. AS EXISTING SKIN.

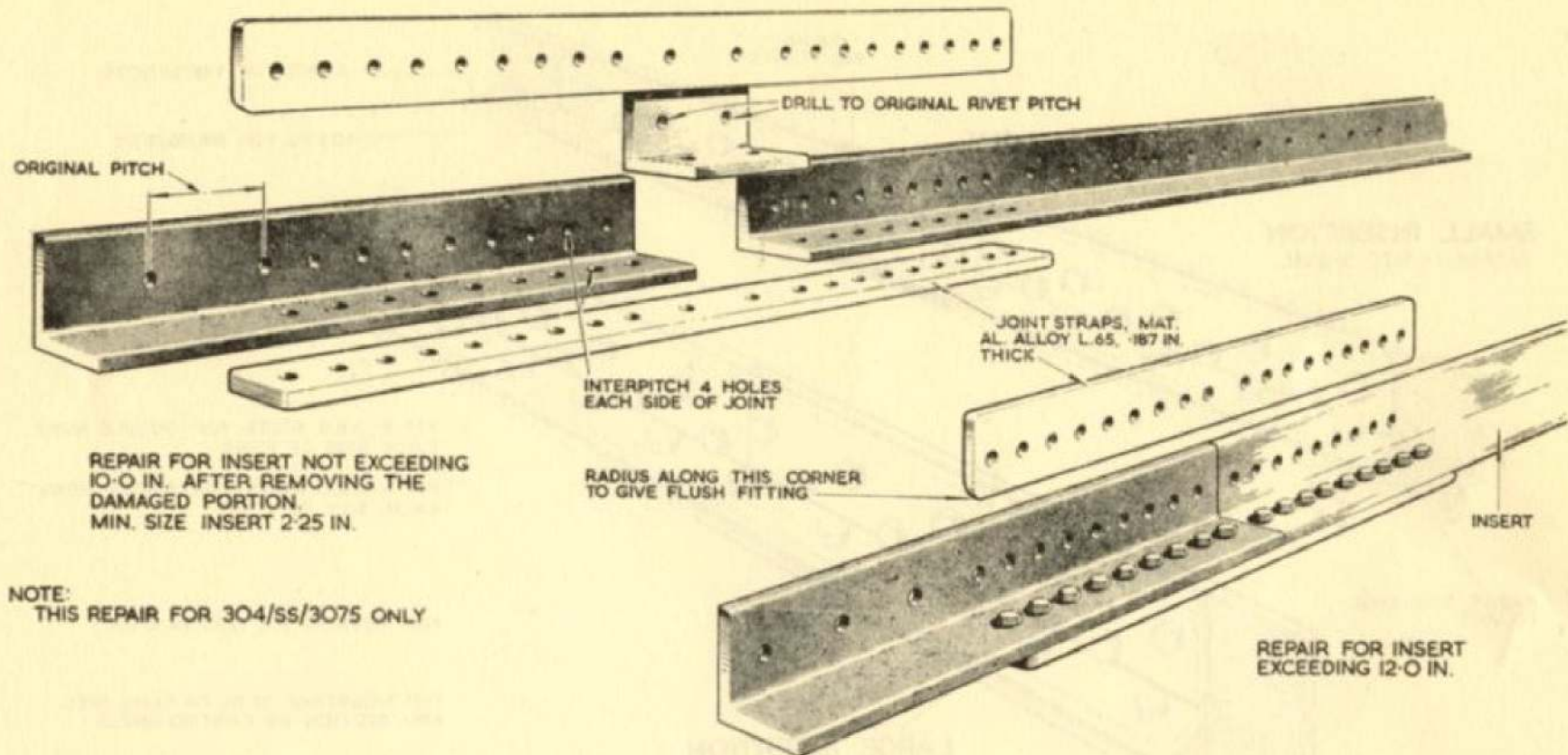
REPAIR PLATES MUST BE FORMED TO SEAT EFFECTIVELY TO THE SKIN PROFILE.
 ALL RIVETS TO A.G.S. 2050/419.
 REPAIR MATERIAL WHERE MOD. 51 (TITANIUM SHEETING) IS NOT EMBODIED:-
 D.T.D. 171B } STAINLESS STEEL
 D.T.D. 166B } 28 S.W.G.
 D.T.D. 571 }

MAXIMUM SIZE OF PATCH 12-0 IN.
 WHEREVER POSSIBLE THE PATCH IS TO PICK-UP WITH ANGLES OR STIFFENERS.

NOTE: FOR REPAIRS SEE TEXT IN CHAP. 1. FOR DISTORTION LIMITS TO JET PIPE TUNNELS SEE TEXT IN CHAP. 3.

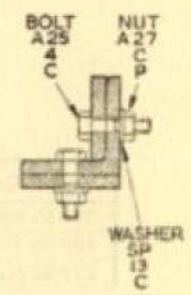
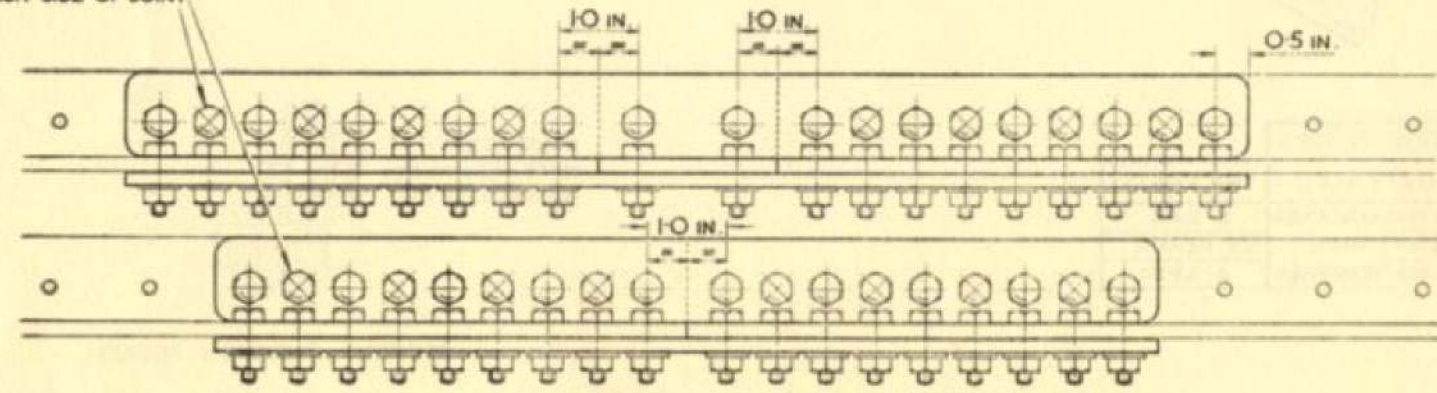
Fig. 342A. Skin repairs to fireproofing and jet pipe tunnels

RESTRICTED



NOTE:
THIS REPAIR FOR 304/55/3075 ONLY

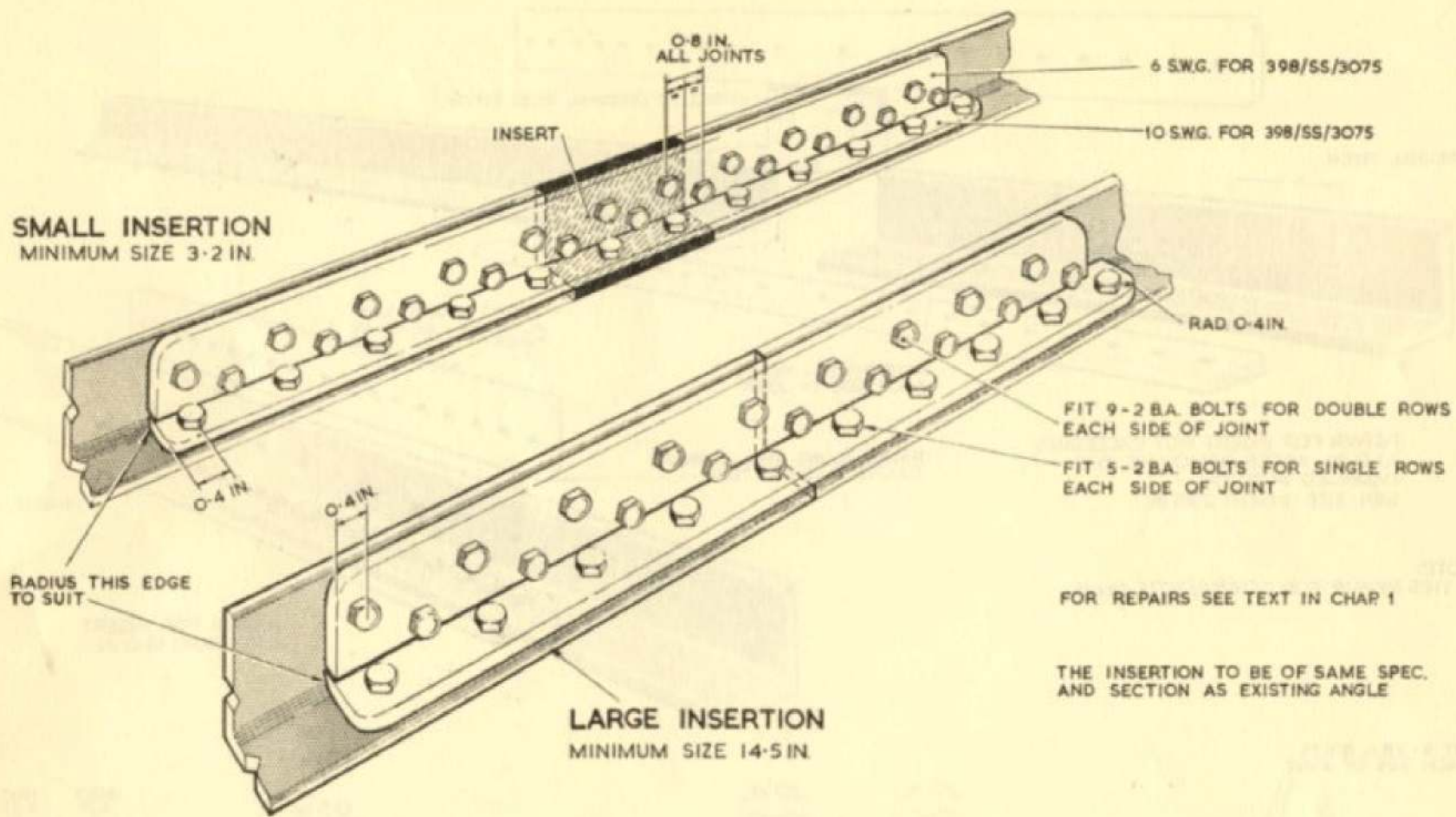
FIT 9-28.A BOLTS
EACH SIDE OF JOINT



SECTION THROUGH REPAIR

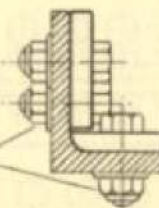
Fig. 343. Medium extruded angle — insertion repair

RESTRICTED



JOINT PLATES		
SECTION	MATERIAL	THICKNESS
394 SS 3075	S514 HARDENED	8 S.W.G.
398 SS 3075	S514 AND	SEE REPAIR
222 SS 3075	S514 TEMPERED	6 S.W.G.

BOLTS A25/2C
NUTS AGS.2001/C/1
WASHERS SP10/C



SECTION THROUGH REPAIR

Fig. 344. Insertion repairs to medium extruded angle

RESTRICTED

NOTE:- SEE TEXT IN CHAP 1 PARA. 134 AND 135
FOR REPAIRS
REMOVE ALL SHARP EDGES

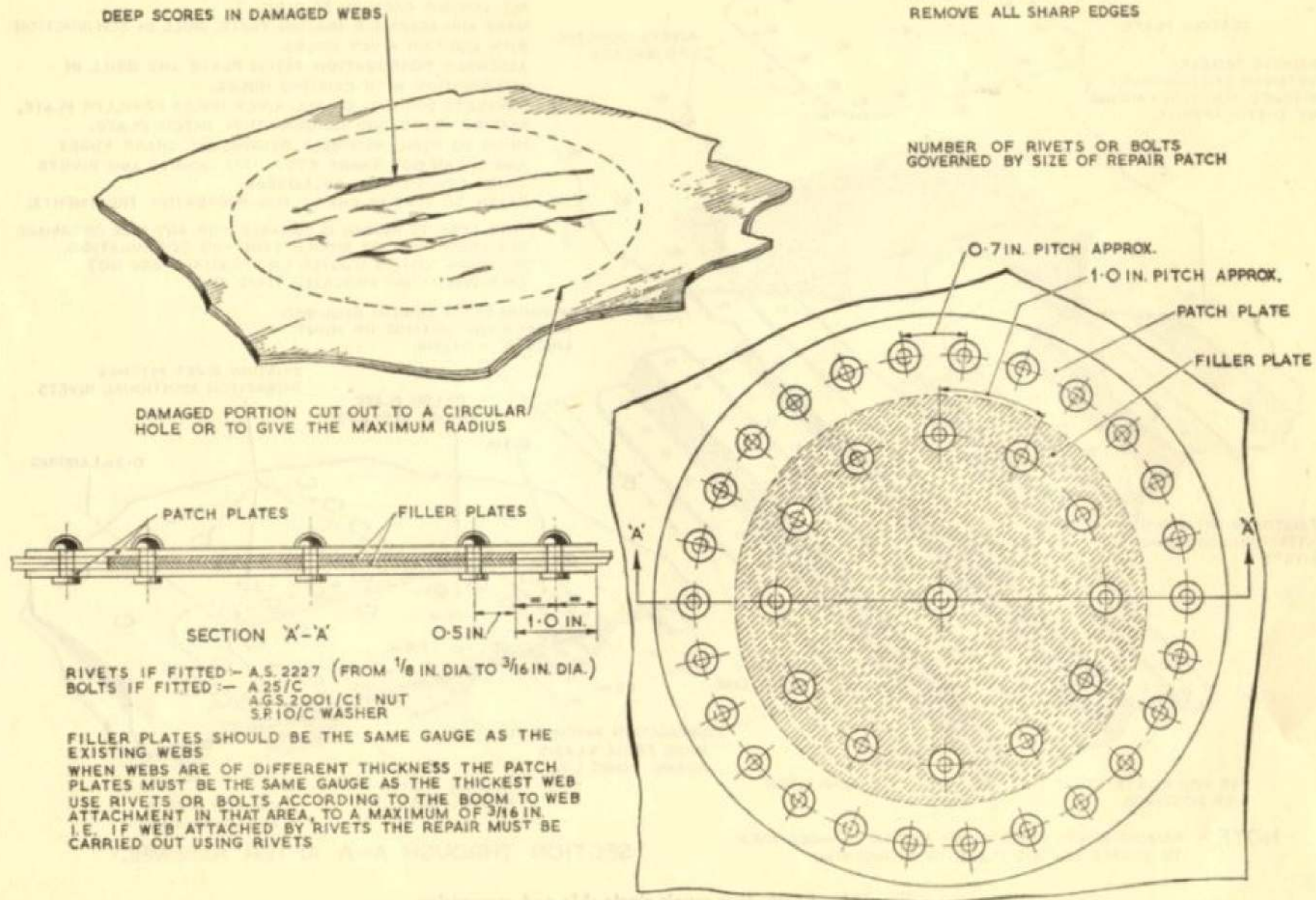


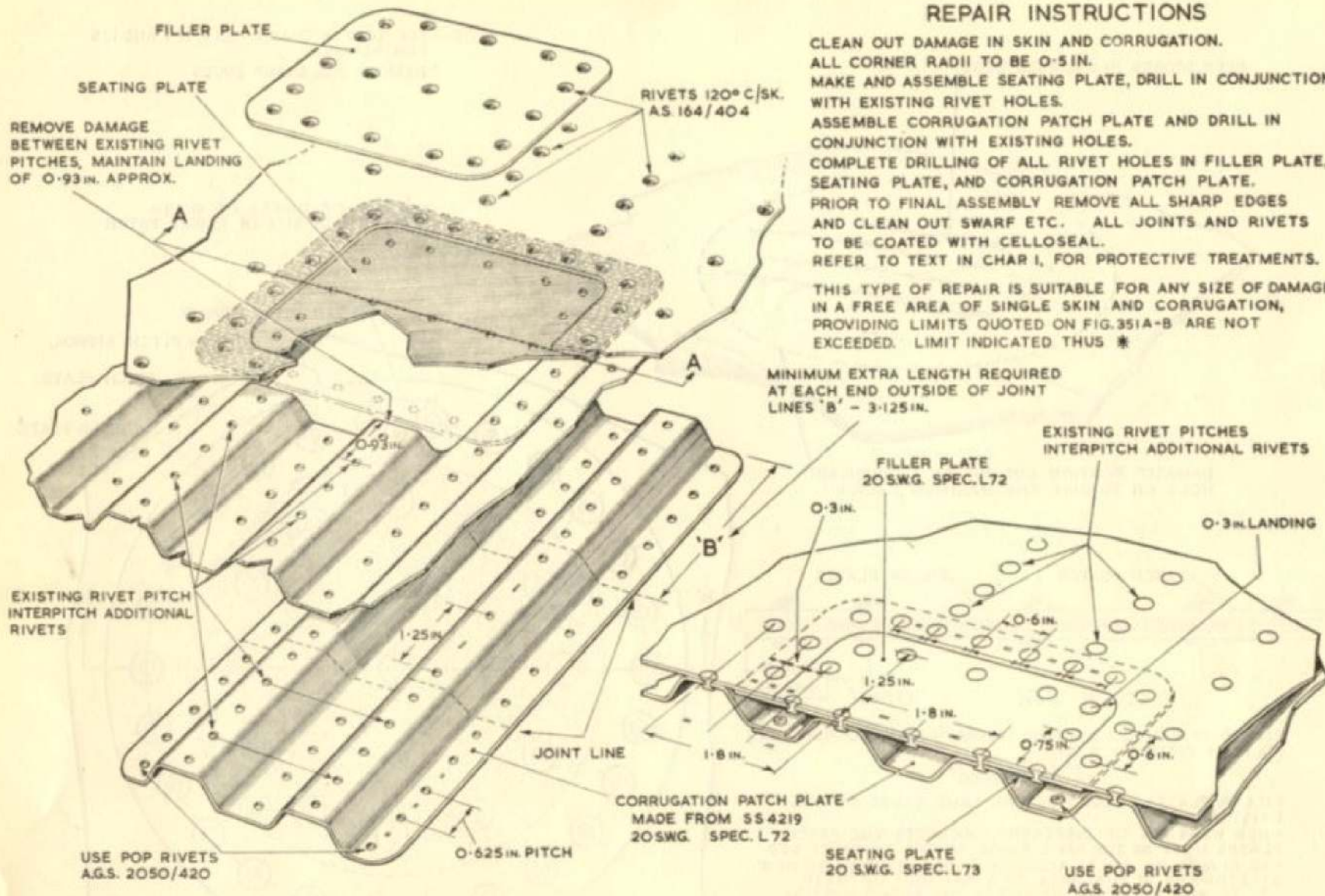
Fig. 349. Double web repairs in free areas

RESTRICTED

REPAIR INSTRUCTIONS

CLEAN OUT DAMAGE IN SKIN AND CORRUGATION.
 ALL CORNER RADII TO BE 0.5 IN.
 MAKE AND ASSEMBLE SEATING PLATE, DRILL IN CONJUNCTION WITH EXISTING RIVET HOLES.
 ASSEMBLE CORRUGATION PATCH PLATE AND DRILL IN CONJUNCTION WITH EXISTING HOLES.
 COMPLETE DRILLING OF ALL RIVET HOLES IN FILLER PLATE, SEATING PLATE, AND CORRUGATION PATCH PLATE.
 PRIOR TO FINAL ASSEMBLY REMOVE ALL SHARP EDGES AND CLEAN OUT SWarf ETC. ALL JOINTS AND RIVETS TO BE COATED WITH CELLOSEAL.
 REFER TO TEXT IN CHAR I, FOR PROTECTIVE TREATMENTS.

THIS TYPE OF REPAIR IS SUITABLE FOR ANY SIZE OF DAMAGE IN A FREE AREA OF SINGLE SKIN AND CORRUGATION, PROVIDING LIMITS QUOTED ON FIG. 351A-B ARE NOT EXCEEDED. LIMIT INDICATED THUS *

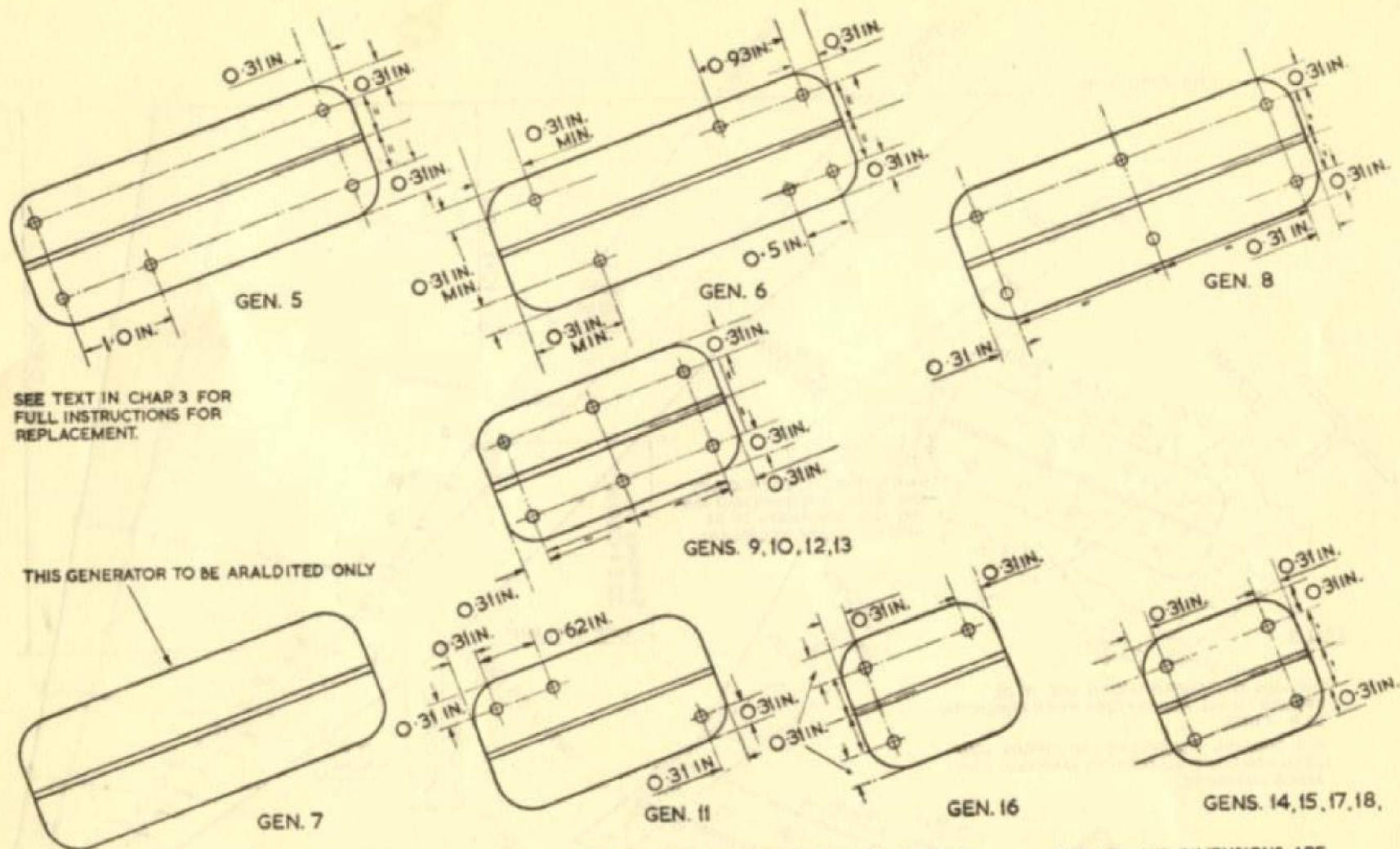


NOTE - REMOVE RIVETS IF NECESSARY AROUND DAMAGED AREA TO ENABLE SEATING PLATE TO BE INSERTED

SECTION THROUGH A-A AFTER ASSEMBLY

Fig. 351. Bomb door repair single skin and corrugation

RESTRICTED



SEE TEXT IN CHAR 3 FOR FULL INSTRUCTIONS FOR REPLACEMENT.

THIS GENERATOR TO BE ARLDITED ONLY

NOTE: SEE FIG. 346B TO OBTAIN OVERALL DIMENSIONS OF THE GENERATORS. DRILLING MUST NOT BE CARRIED OUT UNTIL THE NECESSARY MIN. DIMENSIONS HAVE BEEN ASCERTAINED

RIVETS THROUGH 'T' STRINGER 8/55/3791
 RIVETS THROUGH 'Z' STRINGER 6/55/3791
 RIVETS THROUGH SKIN ONLY 5/55/3791

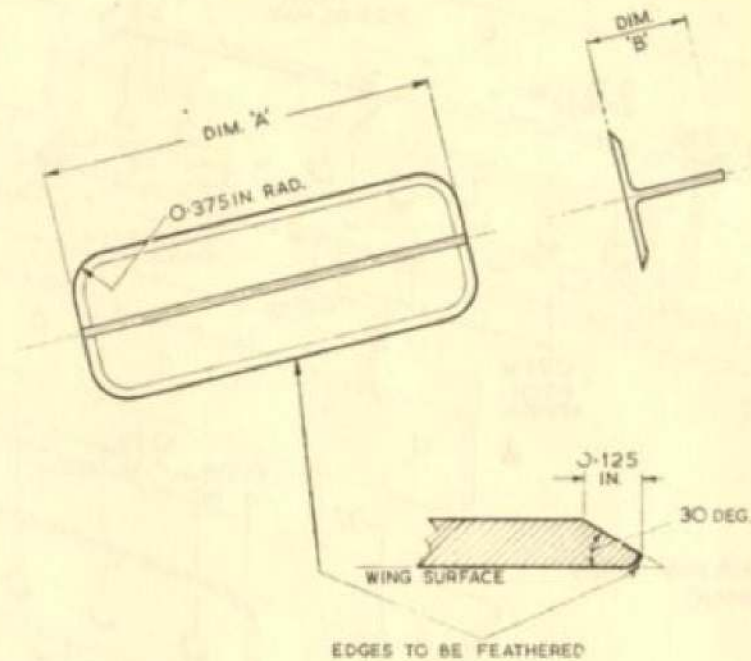
THE DRILLING DIMENSIONS ARE APPROX. AND DEVIATIONS ARE ALLOWED TO MAINTAIN THE MIN. DIMENSIONS SHOWN

Fig. 346A. Replacement of vortex generators

RESTRICTED

GENERATOR	DIM. 'A'	DIM. 'B'
3	4.0 IN.	1.0 IN.
4	4.0 IN.	1.0 IN.
5	4.0 IN.	1.0 IN.
6	4.0 IN.	1.0 IN.
7	4.0 IN.	1.0 IN.
8	4.0 IN.	1.0 IN.
9	2.7 IN.	0.66 IN.
10	2.7 IN.	0.66 IN.
11	2.7 IN.	0.66 IN.
12	2.7 IN.	0.66 IN.
13	2.7 IN.	0.66 IN.
14	1.8 IN.	0.45 IN.
15	1.8 IN.	0.45 IN.
16	1.8 IN.	0.45 IN.
17	1.8 IN.	0.45 IN.
18	1.8 IN.	0.45 IN.

SEE FIG. 346A FOR DRILLING AND RIVETING



MAKE FROM 58/SS/3075

Fig. 346B. Replacement of vortex generators

FOR WEATHERPROOFING OF
REPAIR, REFER TO TEXT IN CHAR. I
L = 0.38 IN. MINIMUM.
FOR SKIN REPAIRS REFER TO FIG. 116.

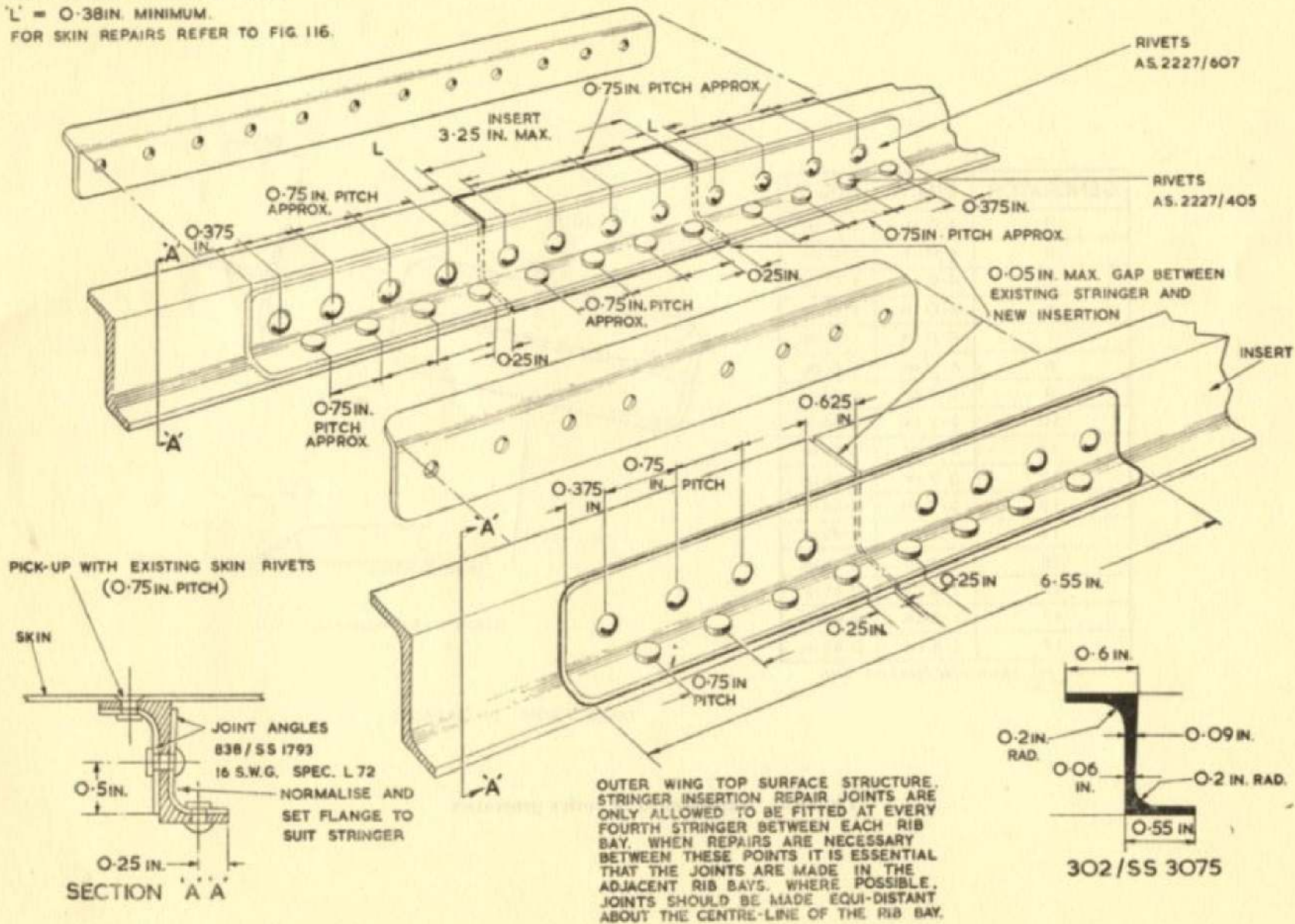


Fig. 347. Extruded section stringer—insertion repair 302/SS 3075

RESTRICTED

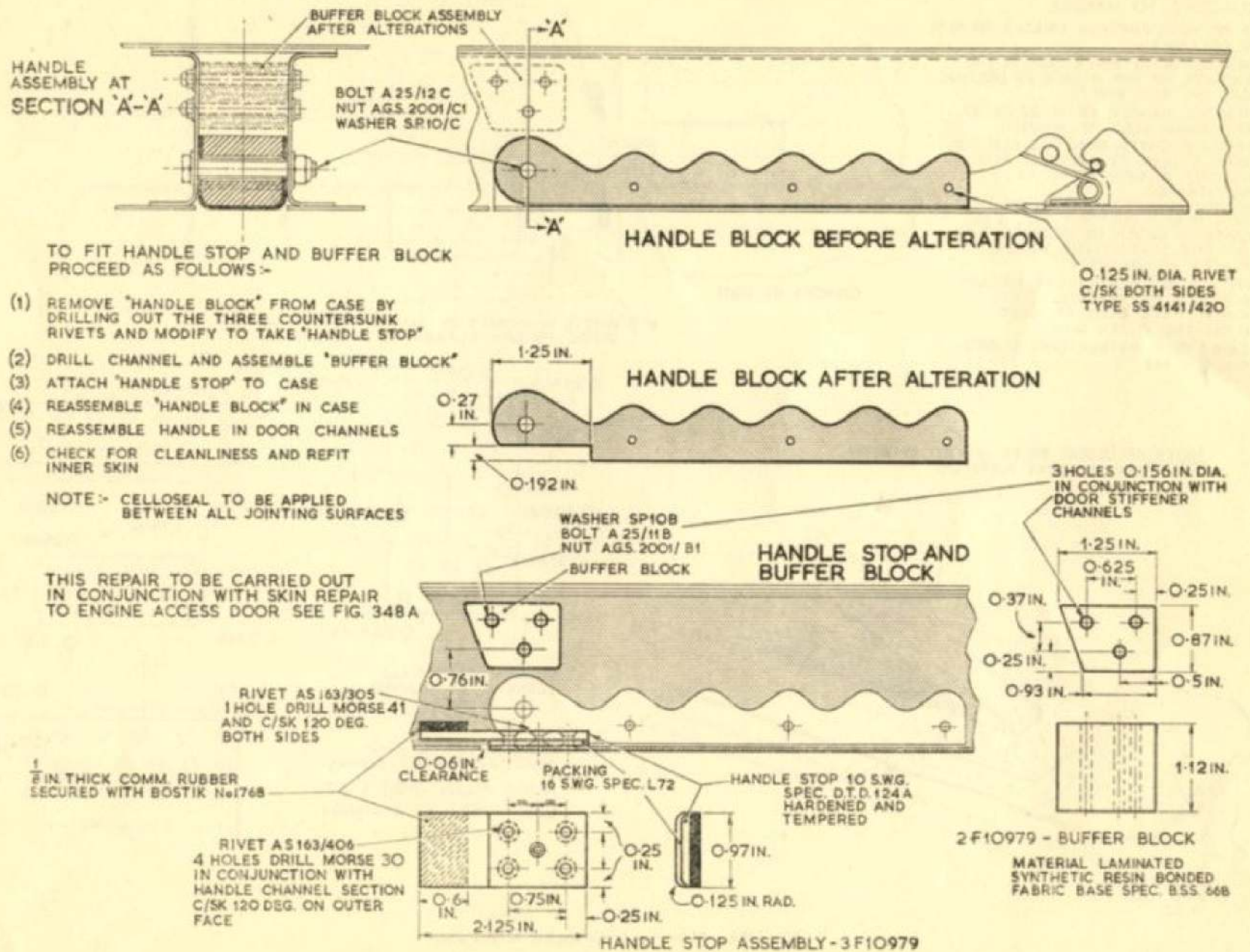
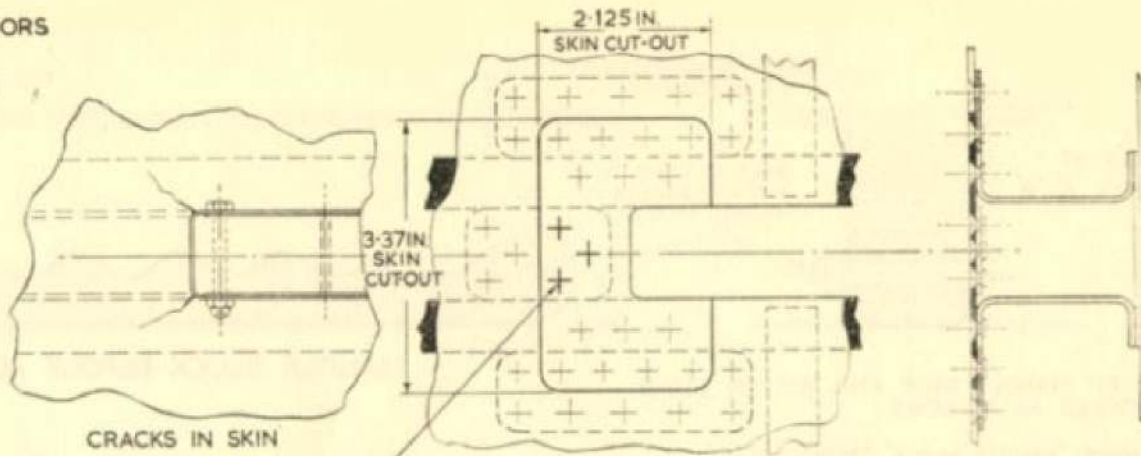


Fig. 348. Repair to prevent further cracks in engine access doors

**SKIN CRACKS IN ENGINE ACCESS DOORS
ADJACENT TO HANDLE.**

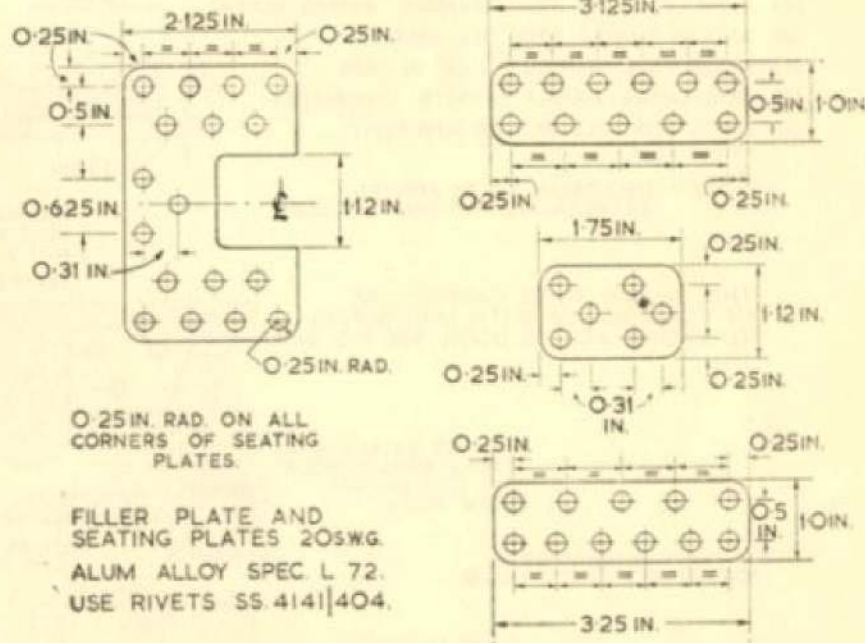
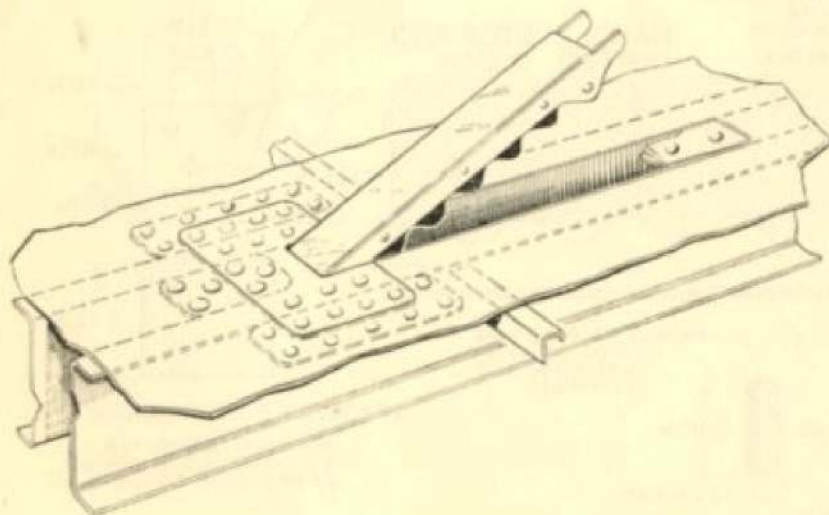
TO PREVENT FURTHER CRACKS REPAIR
AS FOLLOWS:-

- 1 REMOVE DOOR INNER SKIN IN THE VICINITY OF THE HANDLE BY DRILLING OUT THE POP RIVETS.
- 2 REMOVE HANDLE FROM DOOR BY RELEASING BOLT IN CHANNEL.
- 3 RELEASE OUTER SKIN LOCALLY TO GIVE ACCESS TO DAMAGED SKIN. CUT-OUT IN SKIN TO BE AS ILLUSTRATED.
- IF THE DAMAGED PORTION OF THE SKIN IS NOT CLEANED OUT, IT IS QUITE IN ORDER TO INCREASE THE CUT-OUT SEATING AND FILLER PLATES ACCORDINGLY.
- 4 FIT SEATING PLATES AND FILLER PLATE, ALSO REPLACE RIVETS WHICH HAVE BEEN REMOVED FROM THE OUTER SKIN.
- 5 CARRY OUT INSTRUCTIONS STATED ON FIG. 348.



* 3 RIVETS IN VICINITY OF HANDLE STOP TO BE C/SK ON INSIDE TO GIVE CLEARANCE IF REQUIRED.

NOTE: CELLOSEAL TO BE APPLIED BETWEEN ALL JOINTING SURFACES.

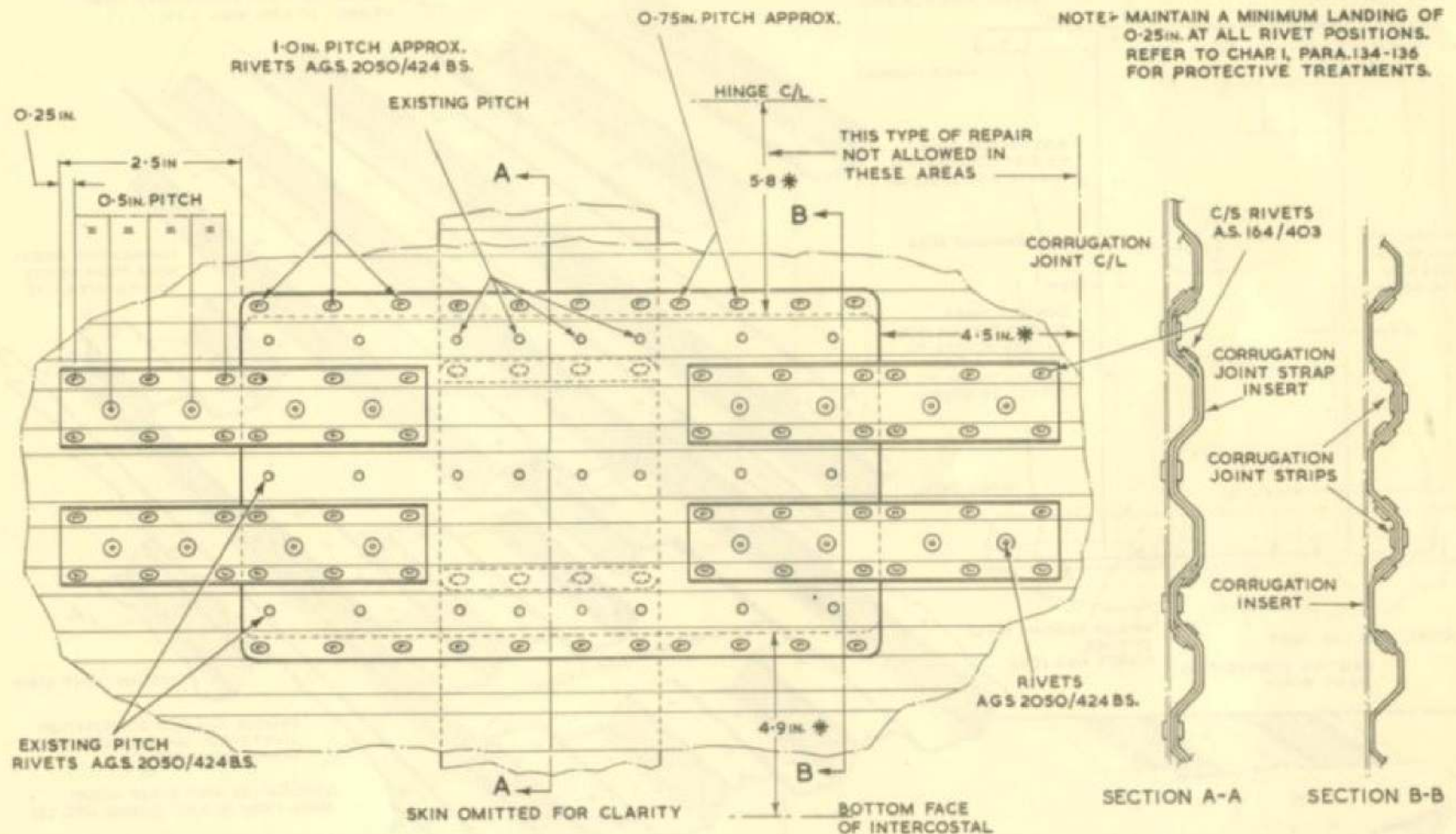


0-25 IN. RAD. ON ALL CORNERS OF SEATING PLATES.

FILLER PLATE AND SEATING PLATES 20sWG. ALUM ALLOY SPEC L 72. USE RIVETS SS.414|404.

Fig. 348A. Skin repair to engine access door

RESTRICTED



REPAIR INSTRUCTIONS

CUT AND REMOVE INNER SKIN PANEL AS SHOWN ON FIG. 351B. CLEAN OUT DAMAGED CORRUGATION, MAINTAIN A MINIMUM RADIUS OF 0.25 IN. MAKE CORRUGATION INSERT AND JOINT STRIPS. ASSEMBLE JOINT STRIPS TO INSERT. MAKE REPAIR JOINT STRAP FOR EXISTING CORRUGATION JOINT STRIP PRIOR TO FINAL ASSEMBLY REMOVE ALL SHARP EDGES, COAT ALL JOINTS AND RIVETS WITH CELLOSEAL.

ASSEMBLE INSERT AND CORRUGATION JOINT STRAP RIVET UP LESS SKIN ATTACHMENT RIVETS. FIT NEW SKIN PANEL WITH DOUBLE LAP JOINT AND COMPLETE RIVETING.

REFER TO FIG. 351B
FOR FURTHER DETAILS

REPAIR LIMITS

THIS TYPE OF REPAIR IS SUITABLE FOR DAMAGE TO CORRUGATION SECTIONS UP TO APPROX. 4.5 IN. FROM ADJACENT JOINTS. MAXIMUM REPAIRABLE DEPTH 9.625 IN. APPROX. DAMAGE ABOVE THESE LIMITS MUST BE REPLACED BY FULL LENGTH CORRUGATION AND SKIN PANELS WITH JOINT STRIPS FITTED

FIG. 351A BOMB DOOR REPAIR CORRUGATION JOINT AND SINGLE SKIN

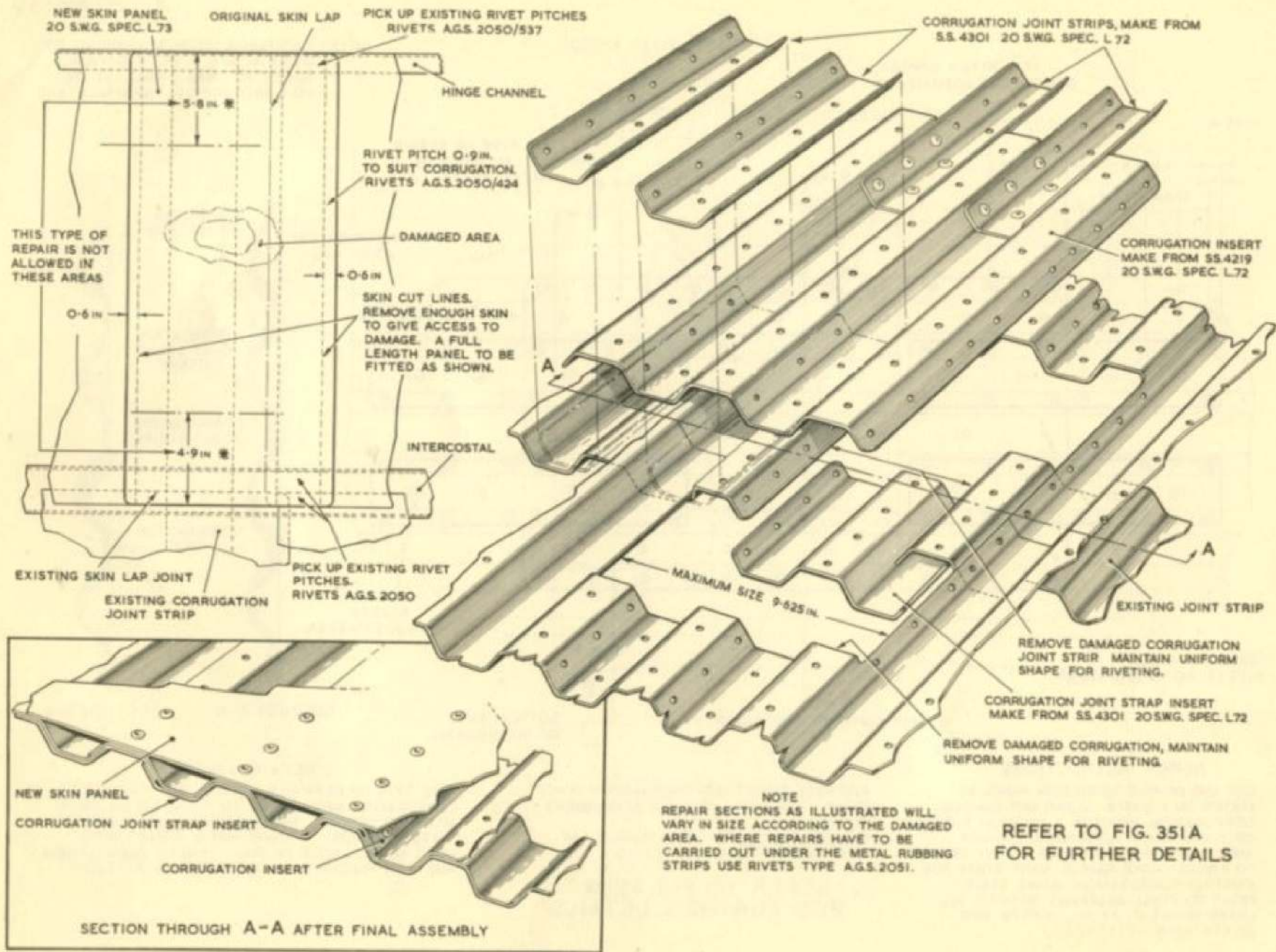


FIG. 351 B BOMB DOOR REPAIR CORRUGATION JOINT AND SINGLE SKIN

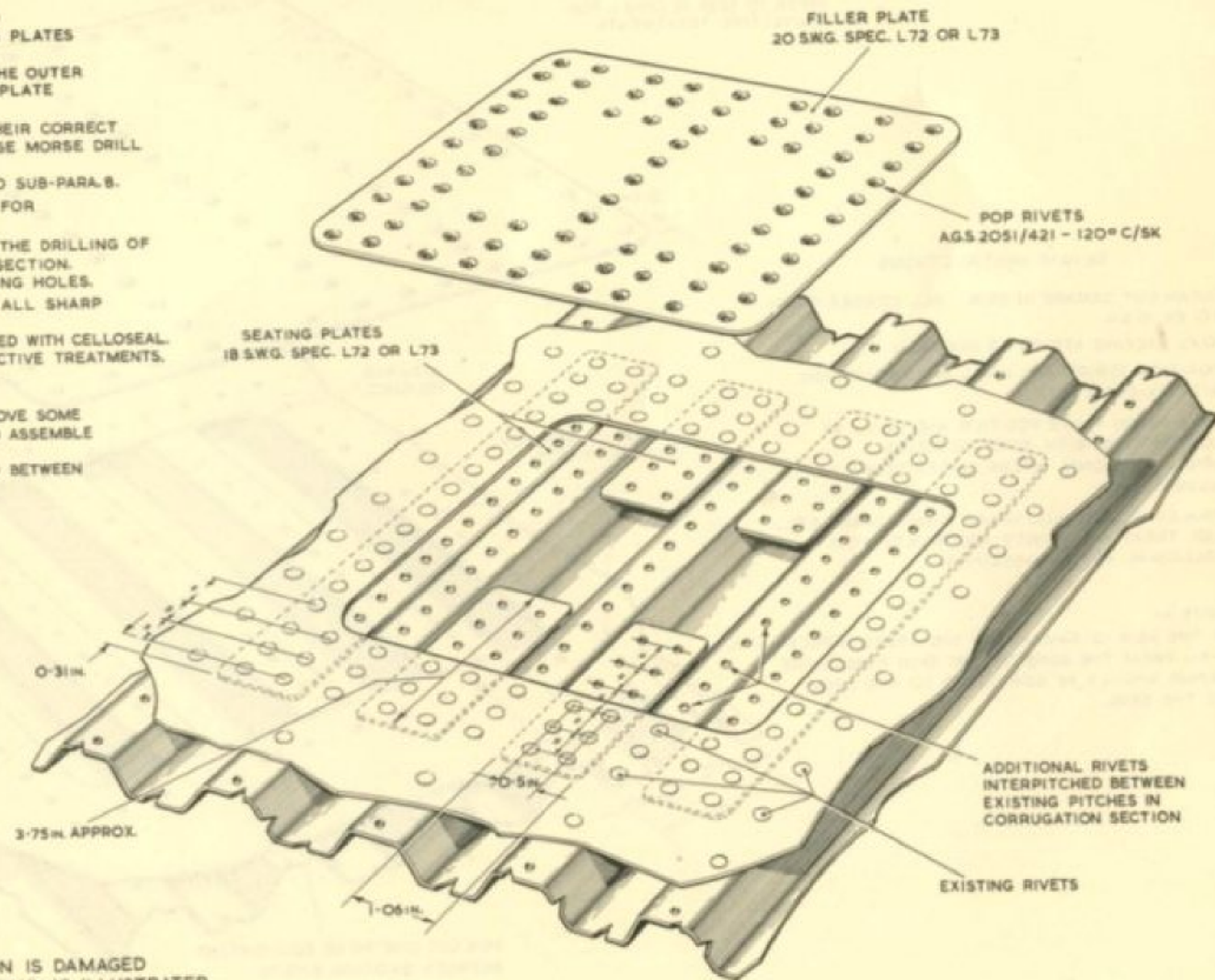
RESTRICTED

REPAIR INSTRUCTIONS

- 1 CLEAN OUT DAMAGE IN SKIN. ALL CORNER RADI TO BE 0-5 IN.
- 2 MAKE SEATING PLATES AS REQUIRED
- 3 DRILL $\frac{3}{32}$ IN. PILOT HOLES IN SEATING PLATES FOR ATTACHMENT TO SKIN.
- 4 POSITION THE SEATING PLATES ON THE OUTER FACE OF THE SKIN AND USE AS TEMPLATE FOR DRILLING.
- 5 ASSEMBLE THE SEATING PLATES IN THEIR CORRECT POSITIONS. OPEN OUT THE HOLES USE MORSE DRILL No. 30 AND COUNTERSINK 120° PRIOR TO RIVETING PLATE, REFER TO SUB-PARA. B.
- 6 MARK OUT AND DRILL FILLER PLATE FOR ATTACHMENT TO SEATING PLATES.
- 7 POSITION FILLER PLATE, COMPLETE THE DRILLING OF SEATING PLATES AND CORRUGATION SECTION. DRILL IN CONJUNCTION WITH EXISTING HOLES.
- 8 PRIOR TO FINAL ASSEMBLY REMOVE ALL SHARP EDGES AND CLEAN OUT SWarf ETC., ALL JOINTS AND RIVETS TO BE COATED WITH CELLOSEAL. REFER TO TEXT IN CHARI FOR PROTECTIVE TREATMENTS.

NOTE - IT MAY BE NECESSARY TO REMOVE SOME EXISTING RIVETS IN ORDER TO ASSEMBLE THE LONG SEATING PLATES. SEATING PLATES TO BE FITTED BETWEEN EVERY CORRUGATION.

THIS TYPE OF REPAIR IS SUITABLE FOR ANY DAMAGE TO THE SKIN WITHIN THE LIMITS QUOTED ON FIG. 351A-B LIMITS INDICATED THUS *



IF CORRUGATION IS DAMAGED
CARRY OUT REPAIR AS ILLUSTRATED
ON FIG. 351

FIG. 351C BOMB DOOR REPAIRS EXTERNAL SINGLE SKIN

SKIN PATCH PLATE
 MATERIAL 20 SNG. SPEC. L72 OR L73.
 USE POP RIVETS AGS.2051/424
 120° C/SK. HEAD FOR ATTACHMENTS.
 REFER TO TEXT IN CHAR I, FOR
 PROTECTIVE TREATMENTS

REPAIR INSTRUCTIONS

CLEAN OUT DAMAGE IN SKIN. ALL CORNER RADII
 TO BE 0.5 IN.
 MAKE PACKING STRIPS AS REQUIRED.
 POSITION STRIPS AND DRILL IN CONJUNCTION
 WITH EXISTING HOLES.
 MAKE PATCH PLATE, POSITION AND DRILL IN
 CONJUNCTION WITH EXISTING HOLES.
 DRILL ADDITIONAL HOLES INTERPITCHED AS
 ILLUSTRATED.
 FINALLY REMOVE ALL SHARP EDGES, SWARP ETC.,
 AND TREAT ALL JOINTS AND RIVETS WITH
 CELLOSEAL BEFORE ASSEMBLY.

NOTE —
 IF THE SKIN IS DAMAGED IN THE AREAS APPROXIMATELY
 4-5 IN. FROM THE EDGE OF THE SKIN PANELS, THE
 REPAIR SHOULD BE CONTINUED TO THE EDGE
 OF THE SKIN.

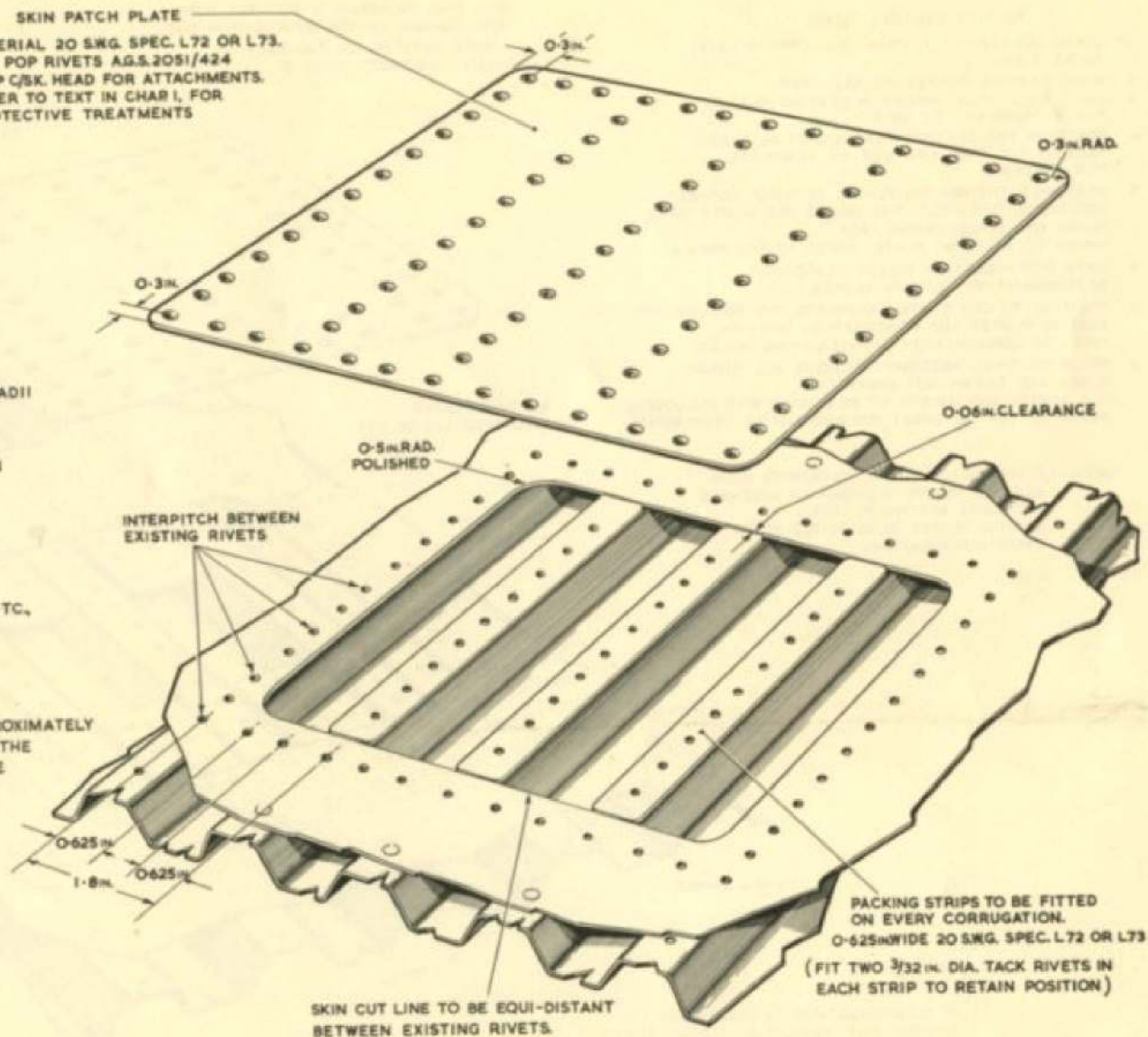


FIG. 351D BOMB DOOR REPAIR - INTERNAL SKIN - FREE AREAS

RESTRICTED

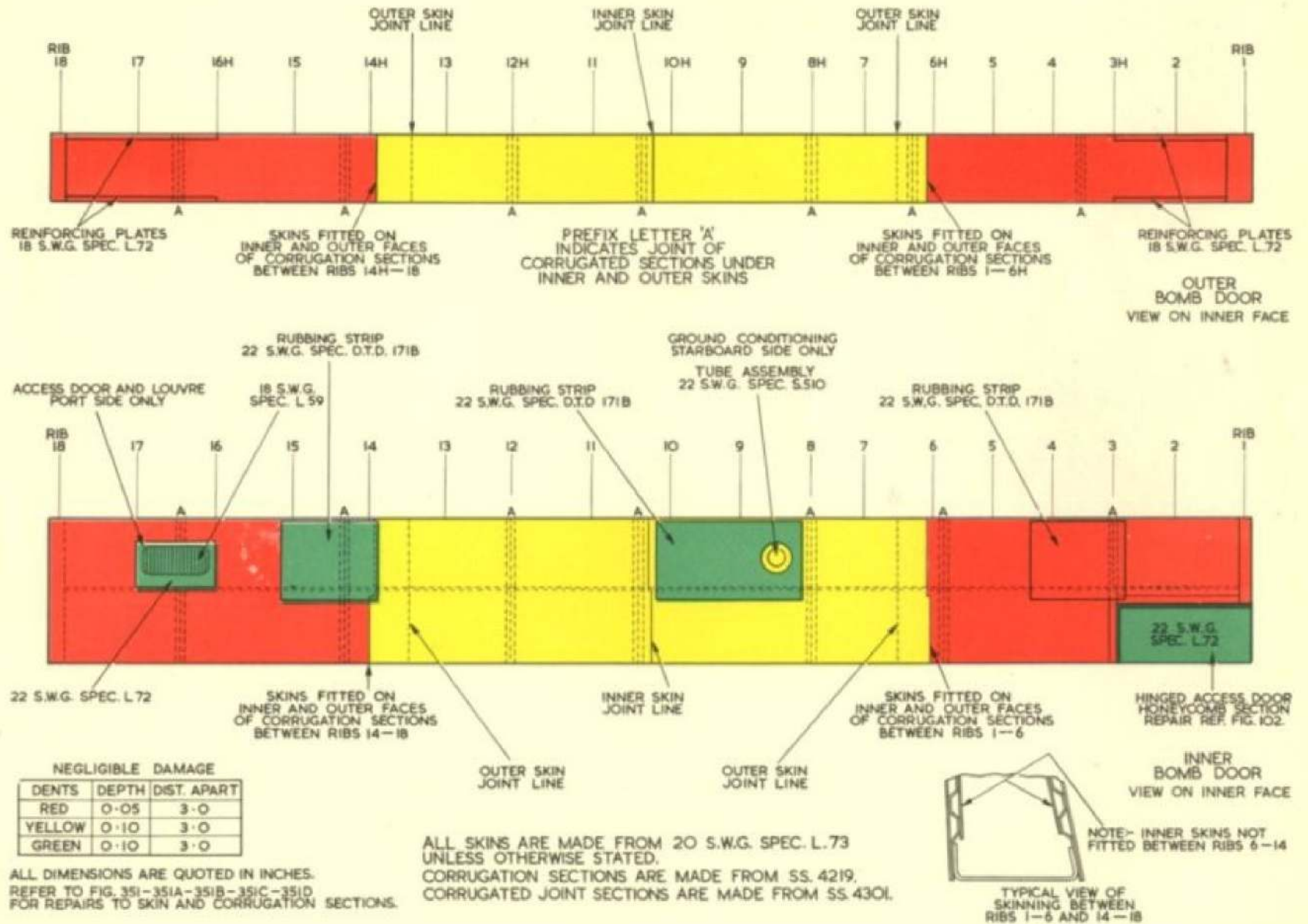
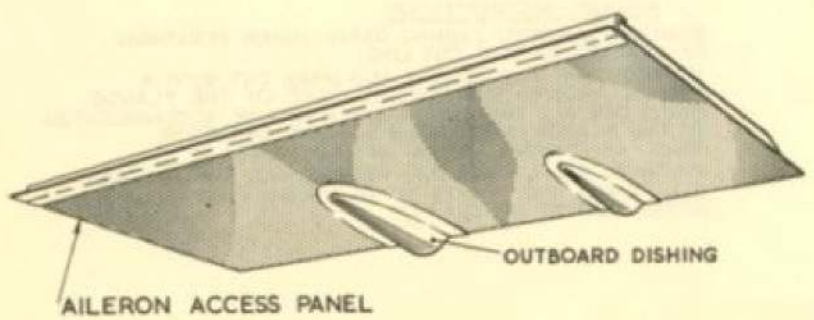
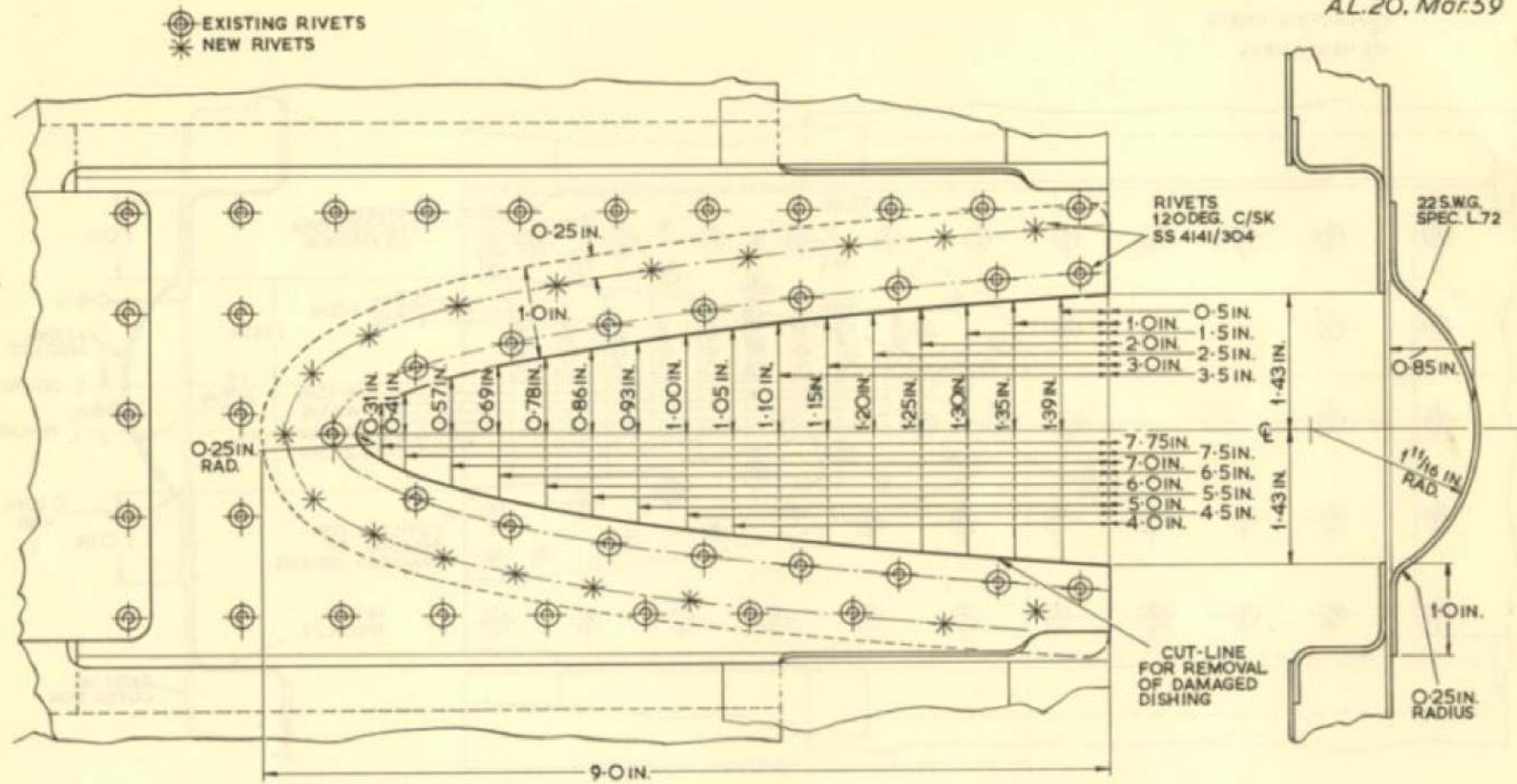


Fig. 351E Bomb door - skinning

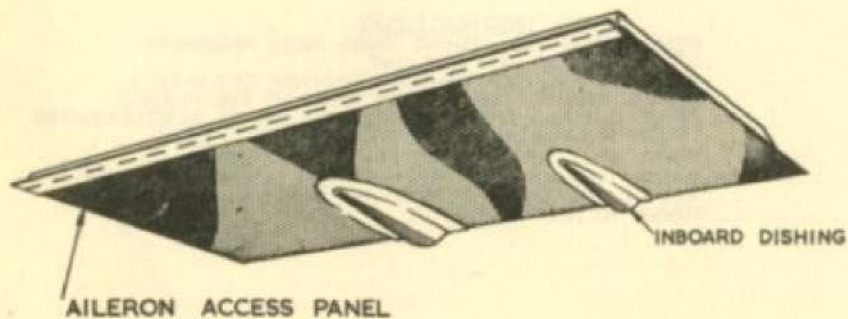
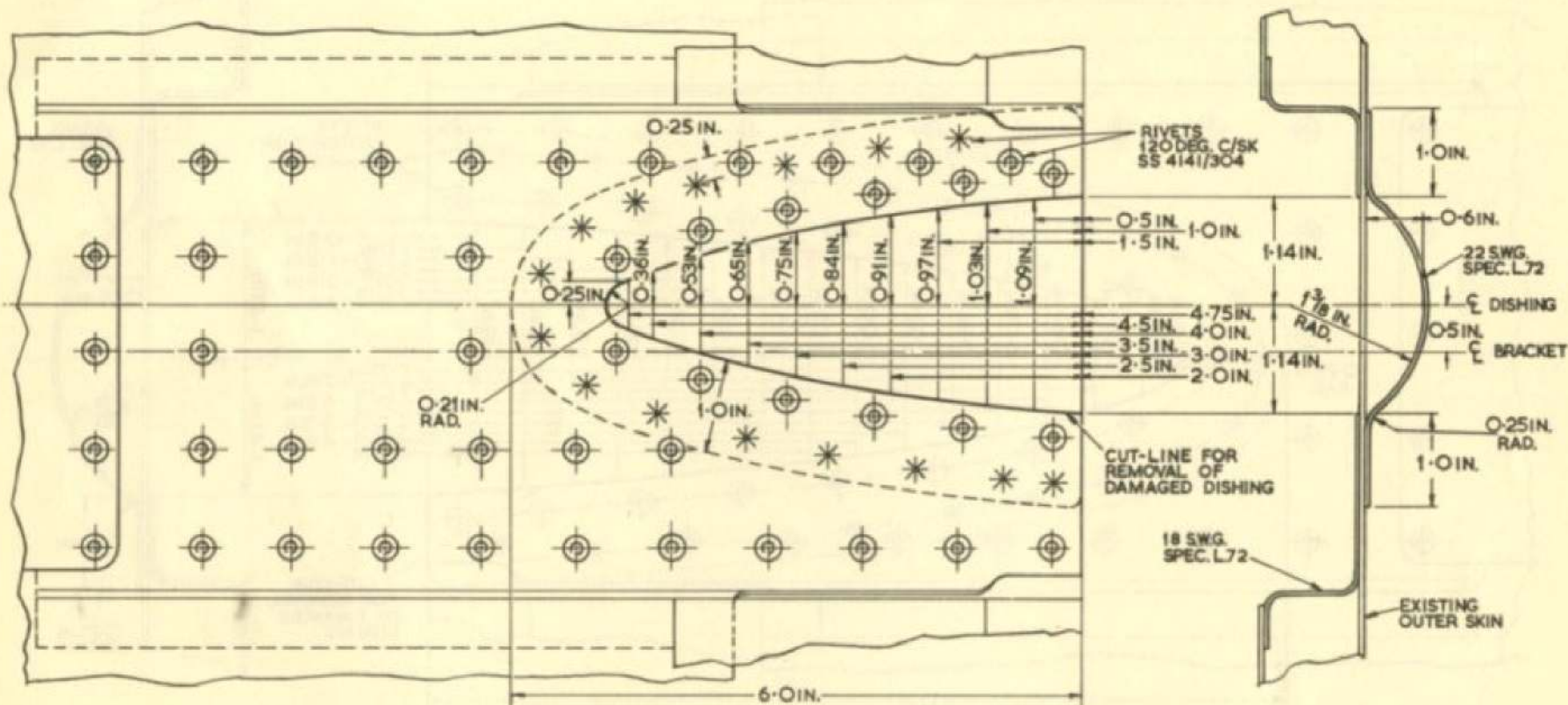
RESTRICTED



REPAIR INSTRUCTIONS
 REMOVE DAMAGED DISHING USING INNER PERIPHERY OF BRACKET AS SKIN CUT LINE.
 POSITION THE NEW DISHING AND MARK OUT WITH A PENCIL AROUND THE OUTSIDE EDGE OF THE FLANGE.
 DRILL OUT ALL THE RIVETS WHICH CAN BE ACCOMMODATED IN THE FLANGE: MAINTAIN A LANDING OF 0.25 IN.
 DRILL ADDITIONAL HOLES AS ILLUSTRATED *
 PRIOR TO FINAL ASSEMBLY, REMOVE ALL SHARP EDGES.
 ALL RIVETS AND JOINTS TO BE COATED WITH CELLOSEAL (REFER TO TEXT IN CHAP 1).

FIG. 352 AILERON BOTTOM ACCESS PANEL - REPAIR TO OUTBOARD DISHING
RESTRICTED

⊕ EXISTING RIVETS
 * NEW RIVETS



REPAIR INSTRUCTIONS

REMOVE DAMAGED DISHING USING INNER PERIPHERY OF BRACKET AS SKIN CUT LINE.
 POSITION THE NEW DISHING AND MARK OUT WITH A PENCIL AROUND THE OUTSIDE EDGE OF THE FLANGE.
 DRILL OUT ALL THE RIVETS WHICH CAN BE ACCOMMODATED IN THE FLANGE: MAINTAIN A LANDING OF O-25 IN.
 DRILL ADDITIONAL HOLES AS ILLUSTRATED *
 PRIOR TO FINAL ASSEMBLY, REMOVE ALL SHARP EDGES.
 ALL RIVETS AND JOINTS TO BE COATED WITH CELLOSEAL (REFER TO TEXT IN CHAP 1).

FIG. 353 AILERON BOTTOM ACCESS PANEL - REPAIR TO INBOARD DISHING
 RESTRICTED

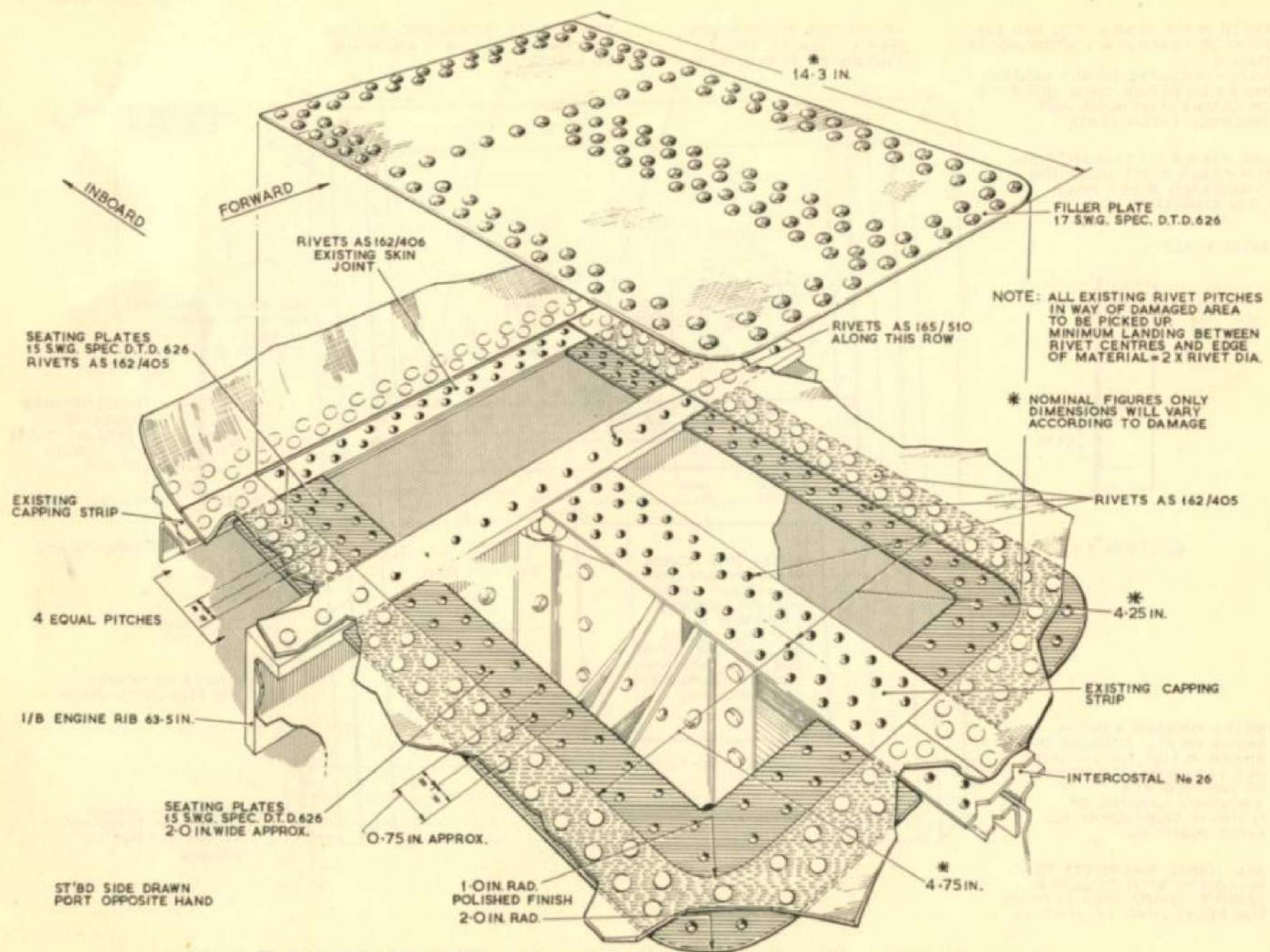
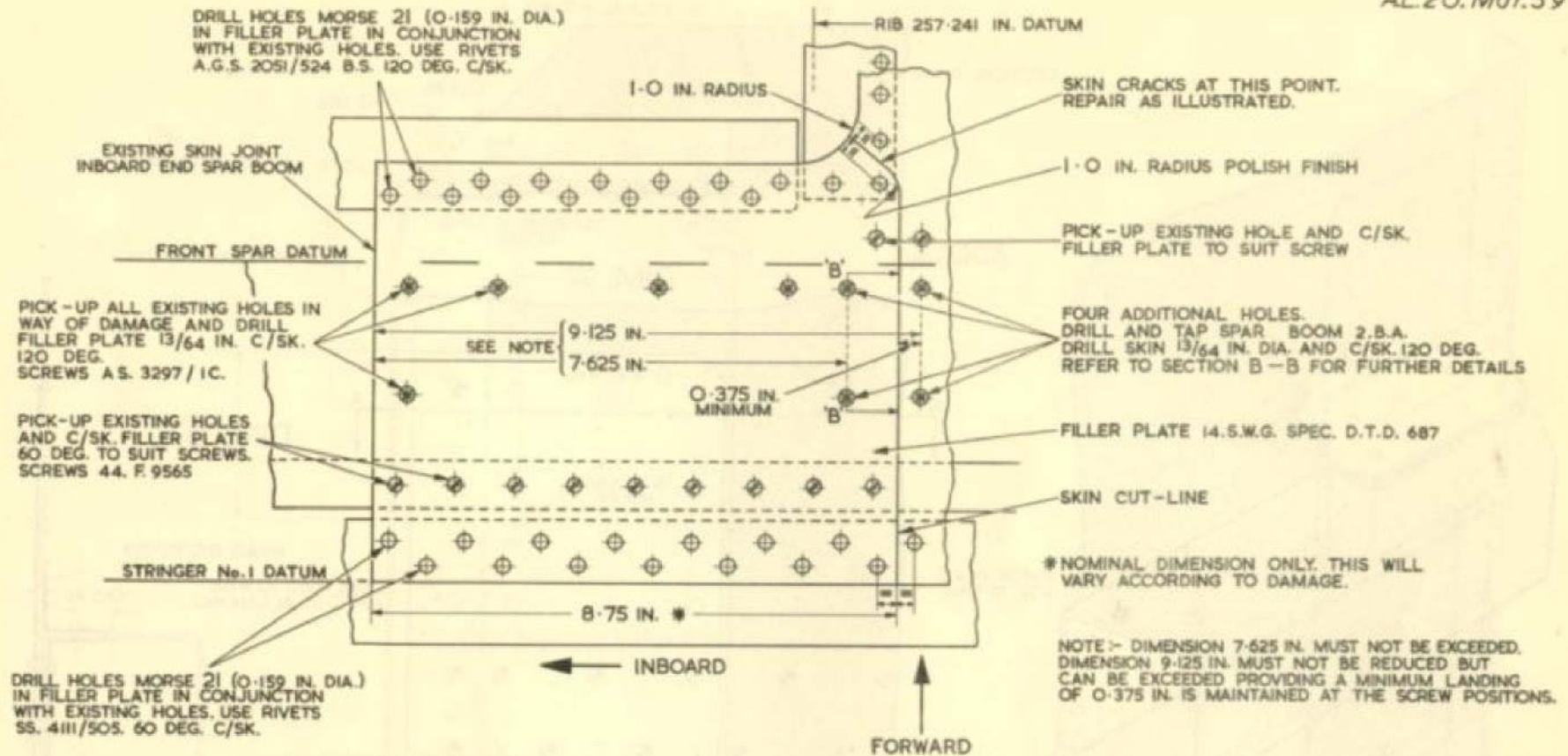
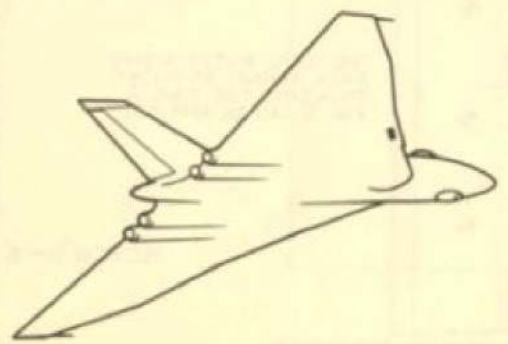


FIG. 355 REPAIR TO TOP SKIN - AT REAR 1/8 ENGINE LIFTING POINT RESTRICTED



DRILL HOLES MORSE 21 (0.159 IN. DIA.) IN FILLER PLATE IN CONJUNCTION WITH EXISTING HOLES. USE RIVETS SS. 4111/505. 60 DEG. C/SK.

VIEW ON UNDERSIDE OF WING LOOKING UP PORT SIDE AS DRAWN



THIS REPAIR IS SUITABLE FOR SKIN DAMAGE AT THE REAR OUTBOARD CORNER OF THE WING TRANSPORT JOINT ACCESS DOOR. PORT OR ST'BD. SIDE.

REFER TO CHAP. I. FOR PROTECTIVE TREATMENT INSTRUCTIONS.

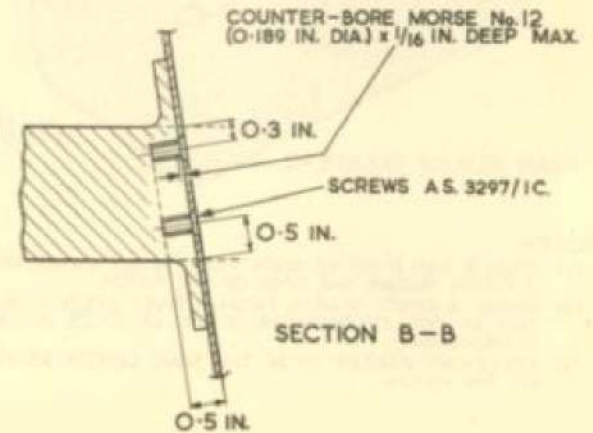
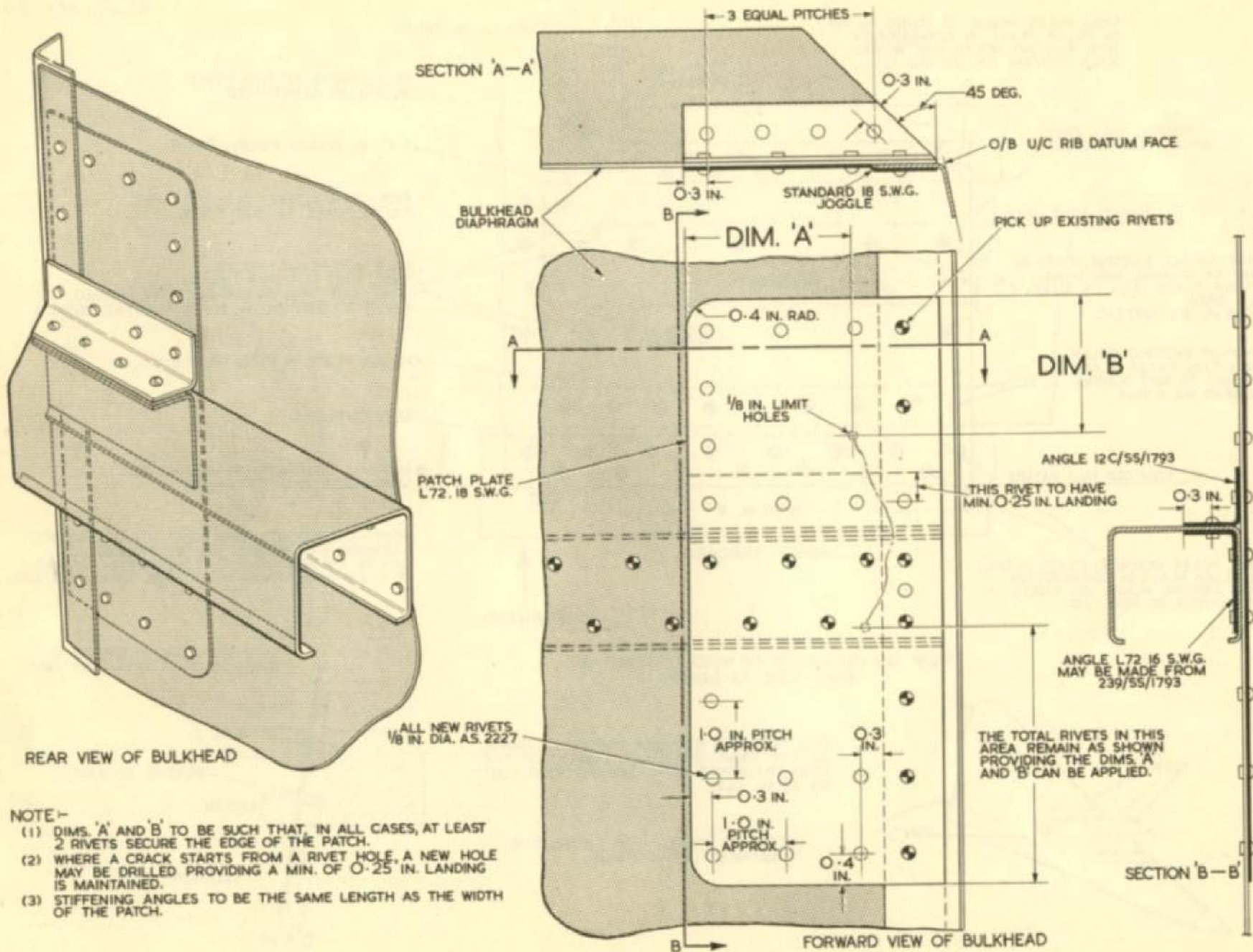


FIG. 356. SKIN REPAIR TO WING L/EDGE BOTTOM SKIN



NOTE:-

- (1) DIMS. 'A' AND 'B' TO BE SUCH THAT, IN ALL CASES, AT LEAST 2 RIVETS SECURE THE EDGE OF THE PATCH.
- (2) WHERE A CRACK STARTS FROM A RIVET HOLE, A NEW HOLE MAY BE DRILLED PROVIDING A MIN. OF 0.25 IN. LANDING IS MAINTAINED.
- (3) STIFFENING ANGLES TO BE THE SAME LENGTH AS THE WIDTH OF THE PATCH.

FIG. 357. STIFFENING REPAIR TO CRACKED REAR BULKHEAD — M/W BAY

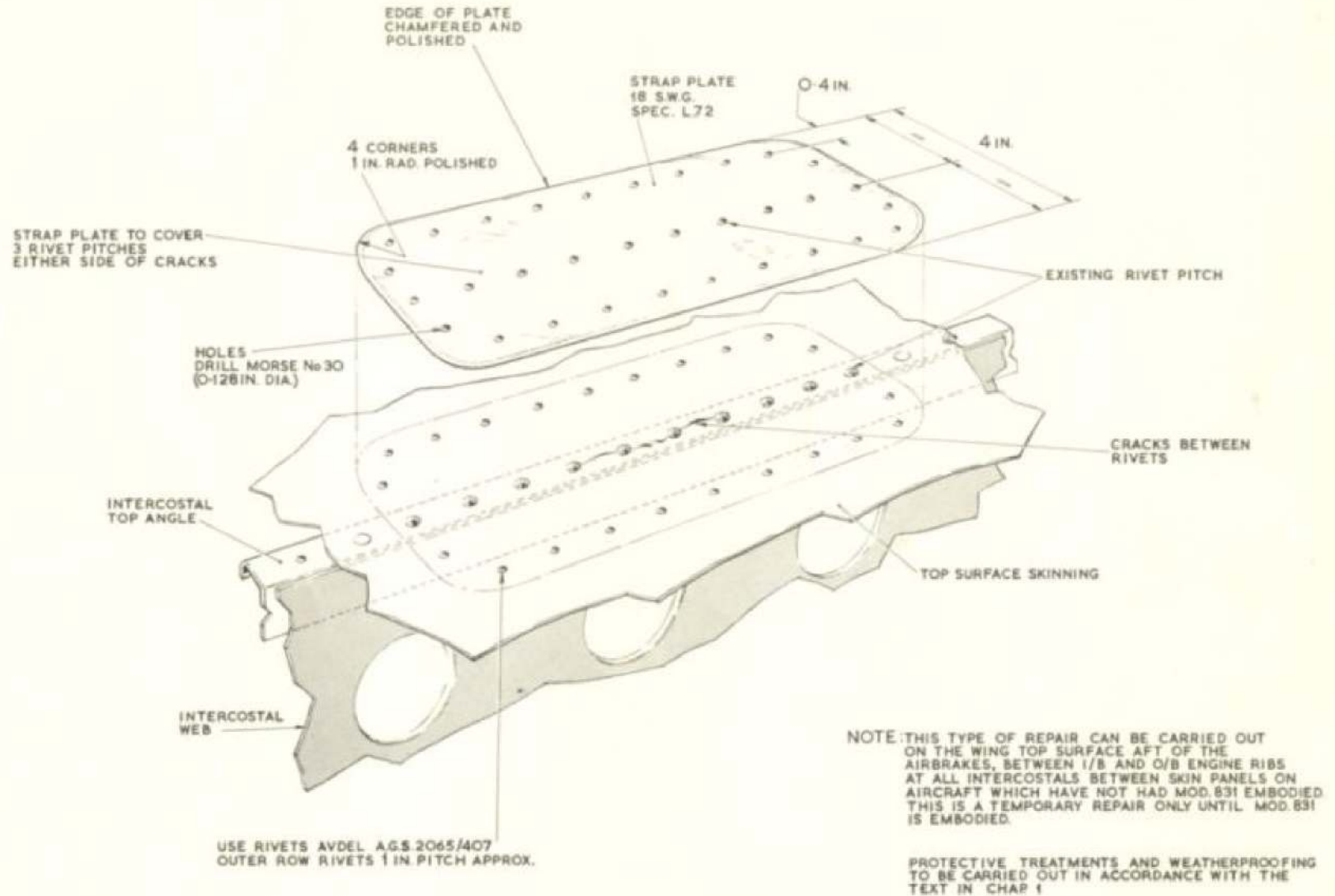


Fig.358. Wing top skin repairs to aircraft (Pre Mod. 831)

RESTRICTED

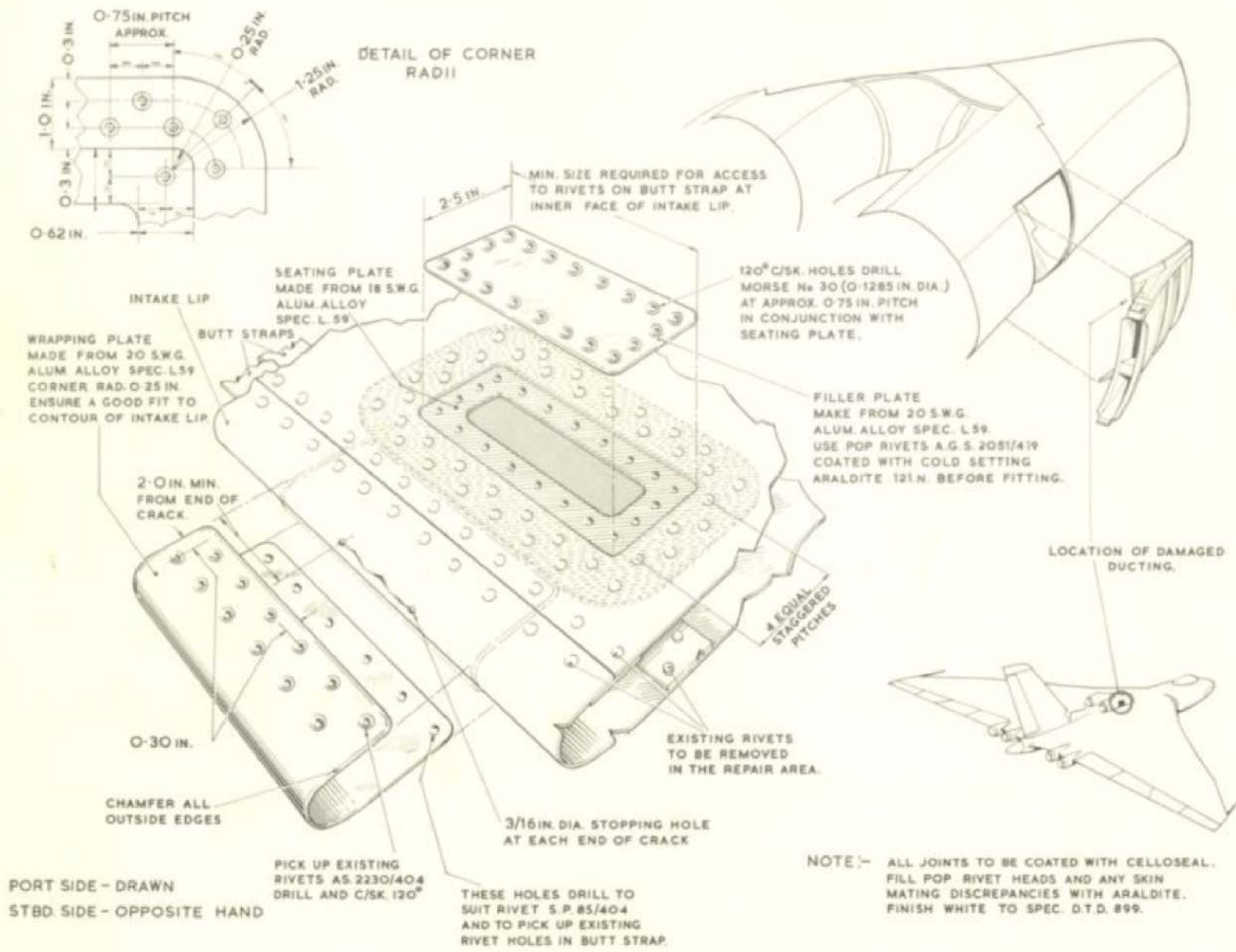


Fig. 359. Repair to crack in lip of air intake boundary layer bleed duct.



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