CHAPTER 2 FUSELAGE

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LIST OF ILLUSTRATIONS

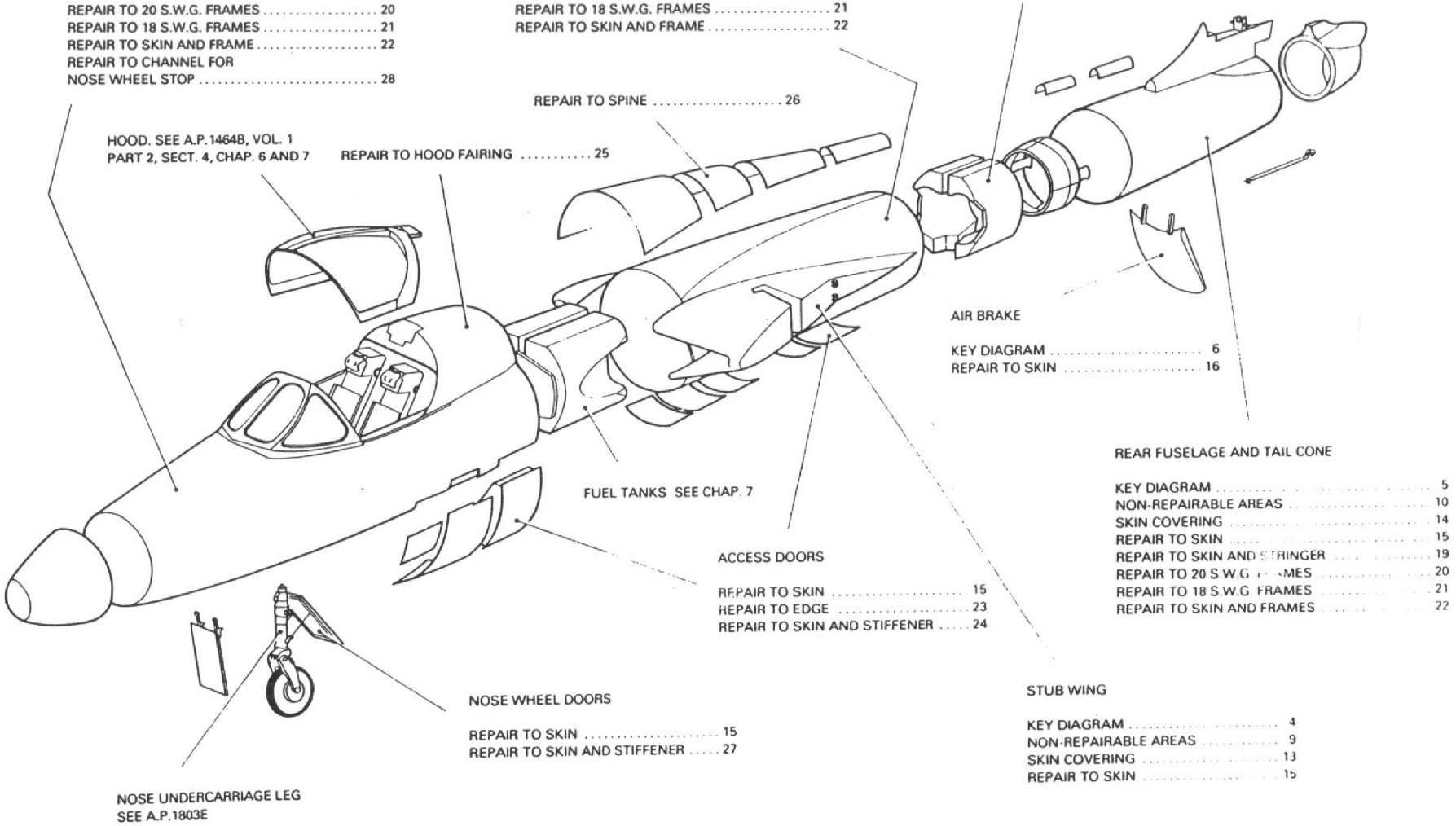


FIG. 1 LOCATION DIAGRAM FOR FUSELAGE

General

1. The fuselage, which is an all-metal monocoque structure, is built in three main portions:-

(a) Front fuselage, and detachable nosing, extends from the radome to frame 18A.

(b) Centre fuselage, which includes the short stub wings, extends from frame 18B to frame 40B.

(c) Rear fuselage, of which the lower portion of the fin forms an integral part, extends from frame 40B to frame 63.

Repairs to thick skins

2. Skin patches and patch plates of 16 s.w.g. and over must be rolled to the same contour as the surrounding skin, or cut from preformed sheet.

FRONT FUSELAGE AND NOSING *(fig.2)*

General

3. The front fuselage consists of all the structure aft of the nosing, which is detachable, to frame 18A. The structure consists of a number of transverse frames, top and bottom longerons, and a box section keel member extending between frames 6 and 11. ▶ ◀ The nose wheel pivot is attached to frame 8 and the nose wheel retracts forward into the nose portion. The cockpit is housed between frames 6 and 14. Part of the front fuselage is sealed from the main structure to form a pressure cabin.

SKIN *(fig.11)*

4. Basically the nose cap skin is 20 s.w.g., the forward portion of the front fuselage is 18 s.w.g., while the remainder is 16 s.w.g. With the exception of the three 18 s.w.g. panels in way of the blast tube which are stainless steel to specification S.521 all skin covering on the front fuselage is light alloy to specification L./2.

Negligible damage

5. Smooth isolated dents, free from cracks and sharp corners, may be neglected provided they are not deeper than 0·020 in. and the adjacent rivets have not been strained. Where the skin plating has been dented beyond this limit, it may be possible to restore the panels to shape by removing a portion of any transverse or longitudinal member which is damaged and carefully dressing out the dent. In a free area of the skin, small deep nicks or perforations should if possible be cleaned out by drilling a hole not larger than 3/16 in. dia., a countersunk-head rivet should then be fitted. Short scores on the free skin surface, limited to one per panel, may be blended out and neglected provided they do not exceed the following depths:-

20 s.w.g. skin - 0·005 in.
18 s.w.g. skin - 0·006 in.
16 s.w.g. skin - 0·006 in.
14 s.w.g. skin - 0·010 in.

6. Repairs are not permitted in the areas shown shaded in fig.7.

Repairs

7. If the skin is cracked or perforated in a repairable area or otherwise damaged to a greater extent than that defined in para.5, it should be repaired by patching as shown in fig.15. Skin patches and patch plates cut from preformed sheets will probably be found necessary between frames 1 and 9. Repairs in the pressurised area between frame 6 and frame 14 must be sealed.

Sealing for pressure cabin

8. When carrying out repairs in a pressurised area the cabin should be sealed and tested in accordance with the instructions given in Vol.1, Sect.3, Chap.8. These instructions should be read before repair work is commenced to ensure that the correct sealants are used for the joints of all mating parts.

FRAMES

9. For classification purposes the frames are divided into the following groups:-

(1) Light– 1A, 1B, 1C, (front), 1D, 2, 4, 5, 16, 17A, 17B.

(2) Heavy– 1C, (rear), 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 14A, 15.

(3) Transport joint– 18A.

Negligible damage

10. Smooth isolated dents, free from cracks, abrasions and sharp corners may be neglected provided they are not deeper than 0·10 in. and adjacent fixings have not been strained. Nicks in the free flanges may be blended out and neglected provided they do not exceed 0·10 in. deep after blending.

Repair prohibitions

11. User Unit repairs are not permitted to the heavy frames and transport joint listed above.

Repairs to light frames

12. Damage greater than negligible, up to and including a complete fracture, may be repaired by patching. Consideration should also be given however, as to whether it would be more practicable or convenient to renew the affected frame quadrant than to repair it. Types of repair vary according to the extent of damage as follows:-

(1) Complete fracture – This necessitates cutting away the damage to leave a clean break, inserting a packing piece to replace the portion removed and securing with two lipped angle patches, as shown in fig.20 and 21.

(2) Frame and skin – When damage to the frame also involves the skin the latter must be repaired with a flush patch as shown in fig.22.

NOSE STRUCTURE

13. The structural members in the nosing between frames 1 and 1C should be treated as described in para.10 and 12 for light frames. Flush skin patches are permissible, but due to the curvature of the skin in this particular area it may be necessary to cut them from preformed sheets.

COCKPIT FLOOR AND SHELF

Negligible damage

14. Negligible damage is as described in Para.5.

Repairs

15. Cracks, perforations or other damage greater than negligible may be repaired by cleaning out the damage to leave a smooth-edged, regular-shaped hole, and covering it with a L.72 patch of the same gauge as the component to be repaired. The patch should have a minimum overlap of 1·0 in. all round and be secured with two rows of 1/8 in. or 5/32 in. dia. solid rivets at 0·70 in. min. or 1·0 in. max.pitch. Pop rivets must not be used for repair in areas affected by pressurisation.

LONGERONS

16. User Unit repairs are not permitted to these components.

CENTRE FUSELAGE *(fig.3)*

General

17. The centre fuselage, which houses the main portion of the engine extends from frame 18B to frame 40A both of these frames forming transport joints The construction consists basically of frames and heavy extruded light alloy stringers, covered with a light alloy inner and outer skin. Frames 25 and 32 are of heavier construction and carry the high tensile steel fittings to which the outer wings are attached Frame 19 continues outboard to form the nose spar. The small stub wings are an integral part of the centre fuselage structure, and house the air-intakes to the engine. There are two fuel tank bays in the centre fuselage which house the front and centre flexible bag type fuel tanks. Each bay has its own inner tank supporting skin. The under portion of the centre fuselage carries several doors which permit access to tanks and engine. A spine member, covering the flying controls runs the whole length of the top surface.

SKIN *(fig.12)*

18. The external skin plating on the centre fuselage is divided basically into three sections; the forward section from the transport joint to the front spar which is 16 s.w.g. L.73; the centre portion between the spars which is 14 s.w.g. L.73, and the rear portion aft of the rear spar, which is 16 s.w.g. L.72.

Negligible damage

19. Smooth isolated dents, free from cracks and sharp corners, may be neglected provided they do not exceed 0·010 in. deep and occur in free areas of the skin.

Repair prohibitions

20. User Unit repairs are not permitted in areas shown shaded in fig.8.

Flush repairs to skin and stringers,

21. Flush repairs to skin and stringers are shown in fig.17 and 18.

FRAMES

22. The main spar frames (front, rear and nose) constitute the heavy frames in the centre section; the other frames vary in depth of section and gauge.

Negligible damage

23 For negligible damage to frames other than front, rear and nose spar frames, see para.10.

Repair prohibitions

24. User Unit repairs are not permitted to the front, rear and nose spar frames, engine mounting frames and transport joints. A few of the remaining frames can be repaired but due to inaccessibility will usually be found beyond the scope of User Units.

STRINGERS

25. All stringers in the centre fuselage are heavy light-alloy extrusions and the majority are non-repairable. Repairs are only permissible to the stringers shown in fig.17 and 18.

STUB WING *(fig.4)*

General

26. The stub wings, which are built out from the centre fuselage, house the air-intakes for the engine. The main member (frame 19) is extended to form nose spars, and spigots which mate with the outer wings are located at the outboard extremities.

NEGLIGIBLE DAMAGE

27. Smooth isolated dents, free from cracks, abrasions and sharp corners may be neglected provided they are clear of the spar frames and fittings and are not deeper than 0·050 in. Short scores in the skin may be blended out and neglected provided they are limited to one per panel and do not exceed 0·006 in. deep for 18 s.w.g. skin and 0 008 in. for 16 s.w.g. kin. Negligible damage to plate members is as defined in para.10.

REPAIR PROHIBITIONS

28. Repairs are not permitted to the stub wing in areas shown shaded in fig.9.

REPAIRS

29. If the skin is cracked or perforated, or otherwise damaged to a greater extent than that defined in para.27, it should be repaired by patching as shown in fig.15. Damaged diaphragm should be renewed.

NOSE STRUCTURE

13. The structural members in the nosing between frames 1 and 1C should be treated as described in para.10 and 12 for light frames. Flush skin patches are permissible, but due to the curvature of the skin in this particular area it may be necessary to cut them from preformed sheets.

COCKPIT FLOOR AND SHELF

Negligible damage

14. Negligible damage is as described in Para.5.

Repairs

15. Cracks, perforations or other damage greater than negligible may be repaired by cleaning out the damage to leave a smooth-edged, regular-shaped hole, and covering it with a L.72 patch of the same gauge as the component to be repaired. The patch should have a minimum overlap of 1·0 in. all round and be secured with two rows of 1/8 in. or 5/32 in. dia. solid rivets at 0·70 in. min. or 1·0 in. max.pitch. Pop rivets must not be used for repair in areas affected by pressurisation.

LONGERONS

16. User Unit repairs are not permitted to these components.

CENTRE FUSELAGE *(fig.3)*

General

17. The centre fuselage, which houses the main portion of the engine extends from frame 18B to frame 40A both of these frames forming transport joints The construction consists basically of frames and heavy extruded light alloy stringers, covered with a light alloy inner and outer skin. Frames 25 and 32 are of heavier construction and carry the high tensile steel fittings to which the outer wings are attached Frame 19 continues outboard to form the nose spar. The small stub wings are an integral part of the centre fuselage structure, and house the air-intakes to the engine. There are two fuel tank bays in the centre fuselage which house the front and centre flexible bag type fuel tanks. Each bay has its own inner tank supporting skin. The under portion of the centre fuselage carries several doors which permit access to tanks and engine. A spine member, covering the flying controls runs the whole length of the top surface.

SKIN *(fig.12)*

18. The external skin plating on the centre fuselage is divided basically into three sections; the forward section from the transport joint to the front spar which is 16 s.w.g. L.73; the centre portion between the spars which is 14 s.w.g. L.73, and the rear portion aft of the rear spar, which is 16 s.w.g. L.72.

Negligible damage

19. Smooth isolated dents, free from cracks and sharp corners, may be neglected provided they do not exceed 0·010 in. deep and occur in free areas of the skin.

Repair prohibitions

20. User Unit repairs are not permitted in areas shown shaded in fig.8.

Flush repairs to skin and stringers,

21. Flush repairs to skin and stringers are shown in fig.17 and 18.

FRAMES

22. The main spar frames (front, rear and nose) constitute the heavy frames in the centre section; the other frames vary in depth of section and gauge.

Negligible damage

23 For negligible damage to frames other than front, rear and nose spar frames, see para.10.

Repair prohibitions

24. User Unit repairs are not permitted to the front, rear and nose spar frames, engine mounting frames and transport joints. A few of the remaining frames can be repaired but due to inaccessibility, will usually be found beyond the scope of User Unit.

STRINGERS

25. All stringers in the centre fuselage are heavy light-alloy extrusions and the majority are non-repairable. Repairs are only permissible to the stringers shown in fig.17 and 18.

STUB WING *(fig.4)*

General

26. The stub wings, which are built out from the centre fuselage, house the air-intakes for the engine. The main member (frame 19) is extended to form nose spars, and spigots which mate with the outer wings are located at the outboard extremities.

NEGLIGIBLE DAMAGE

27. Smooth isolated dents, free from cracks, abrasions and sharp corners may be neglected provided they are clear of the spar frames and fittings and are not deeper than 0·050 in. Short scores in the skin may be blended out and neglected provided they are limited to one per panel and do not exceed 0·006 in. deep for 18 s.w.g. skin and 0 008 in. for 16 s.w.g. kin. Negligible damage to plate members is as defined in para.10.

REPAIR PROHIBITIONS

28. Repairs are not permitted to the stub wing in areas shown shaded in fig.9.

REPAIRS

29. If the skin is cracked or perforated, or otherwise damaged to a greater extent than that defined in para.27, it should be repaired by patching as shown in fig.15. Damaged diaphragm should be renewed.

REAR FUSELAGE *(fig. 5)*

General

30. The rear fuselage, which extends aft from frame 40B, is of pure monocoque construction and incorporates the lower portion of the fin. The detachable tail cone, which is part of the rear fuselage, extends from frame 58 to frame 63. The fin attachments pick up at frames 52 and 55; frame 55 also provides the hinge for the variable-incidence tail plane and consequently takes the major portion of the tail plane loads. These two frames consist of extruded angles and channel sections with heavy gauge webs. The remainder of the frames are plate members, including the transport joint at frame 40B. Extruded angle section stringers run the whole length of the component.

SKIN *(fig. 14)*

31. Basically the skin consists of three longitudinal panels of 16 s.w.g. light alloy to specification L.72, lap jointed at the top. The tail cone consists of a number of 20 s.w.g. L.72, panels with the exception of the extremity, which is 22 s.w.g. stainless steel.

Negligible damage

32. Between frame 42 and frame 51, smooth isolated dents free from cracks and sharp corners may be neglected provided they are not deeper than 0.020 in. and adjacent rivets have not been strained. In the free areas of the skin small perforations should be treated as in para. 5.

Repair prohibitions

33. Repairs are not permitted in the areas shown shaded in fig. 10.

Repairs to skin

34. If the skin is cracked or perforated, or otherwise damaged to a greater extent than negligible, it should be repaired by patching as shown in fig. 15.

Repairs to skin and stringer

35. Where damage to the skin also involves a stringer in a repairable area, the repair should be carried out as shown in fig. 19.

FRAMES

36. The frames in the rear fuselage may be classified as follows:—

Light — Frames	41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 53, 54, 56, 57, 58, 59, 60, 61, 62 and 63.
Heavy — Frames	45, 52 and 55.

Transport joint — Frame 40B.

Negligible damage

37. Negligible damage is as defined in para. 10.

Repair prohibitions

38. User Unit repairs are not permitted to frames 40B, 41, 42, 52, 55, 62 and 63, nor to portions of frames 43 and 44, as shown in fig. 10.

Light frame repairs

39. Damage greater than negligible, up to and including a complete fracture, should be repaired by patching as shown in fig. 20 and 21. When the damage to the frame also involves the skin it should be repaired as shown in fig. 22.

Riveting below tailplane

40. Should the riveting below the tailplane in the vicinity of frame 55 show signs of lifting, the existing 1/8 in. dia. rivets should be replaced by 5/32 in. dia. A.G.S.2051 pop rivets countersunk flush in skin.

MISCELLANEOUS

ACCESS DOORS

41. The majority of access doors are on the underside of the aircraft; they are all repairable.

Negligible damage

42. Smooth isolated dents, free from cracks may be neglected provided they do not exceed 0.10 in. deep and do not occur in way of fixings.

Repairs

43. For flush repair to access door refer to fig. 23, should the stiffener be involved refer to fig. 24.

NOSE WHEEL DOOR

44. Where damage is in excess of that given in para. 42 repairs should be carried out as shown in fig. 15 and 27.

HOOD FAIRING AND FORMER

45. Where damage is in excess of that given in para. 42, repairs should be carried out as shown in fig. 15 and 25.

SPINE SKIN

46. Where damage is in excess of that given in para. 42, repairs should be carried out as shown in fig. 26.

AIR BRAKE *(fig. 6)*

General

47. The hydraulically operated air brake which is situated on the underside of the rear fuselage between frames 45 and 49 consists basically of 10 s.w.g. light alloy inner and outer skins separated by heavy gauge structure.

Repairs

48. Where damage is in excess of the limits

given in para. 42, free areas of skin may be repaired as shown in fig. 16.

RADOME

General

49. The radome is of double sandwich construction consisting of three glass cloth laminates separated by two cores of expanded hard rubber. The external surface has a protective coating of neoprene. Because of the small size of the radome, insertion repairs in the glass cloth laminates or partial renewal of the neoprene covering should not be attempted. Insertion repairs in the outer core are permitted, but damage found to be deeper than this first core should not be repaired. In the region of the attachment holes repairable damage is confined to the three outer cloths. As the electrical properties of the radome can only be maintained by close control during repair it is recommended that radomes should be returned to the factory or a repair unit where facilities for spraying the neoprene and laying the cloths with a vacuum bag are available. *Attention is drawn to A.P.2662B, Chap. 7 for general precautions and practices for fibre glass repairs.*

Renewal of neoprene covering

50. The old neoprene covering should be removed completely by revolving the radome slowly in a shallow tray of thinners 1803.C. The surface must be examined to ensure that it is free from cloth weave and pin holes, and if found to be defective should be coated with resin and rubbed down to a smooth finish with garnet paper. The new neoprene covering may than be applied as shown in A.P.2662B, Scheme 9.4.1. After the four initial finishing coats have been brushed on remaining coats may be sprayed if desired.

Renewal of outer glass cloth laminate

51. The outer laminate consists of three cloths of 0.006 in. thickness except for radomes to Part No. B.172056 where 0.009 in. thick cloths are used. Damaged layers of cloth must be completely removed. Relay the cloths one at a time using Bakelite Polyester Resin S.R.17449 details of which may be found in A.P.2662B, Scheme 7.1.5. For best results the laminate should be held on to the radome during the curing period using a vacuum bag. To obtain a good surface a gel coat of resin mix should be applied and allowed to cure on the inside of the vacuum bag. If a vacuum bag is not available it is possible, with care, to lay the cloths by hand and in this case the resin impregnation of each cloth must be cured before laying the next cloth. Before the neoprene covering is renewed (para. 50) the final surface should be rubbed down with garnet paper, the fixing holes drilled from the holes in the remaining laminates and the holes countersunk on the outer surface.

Insertion repairs in first core

52. The damaged area of core should be cut out and the laminate below checked to ensure that the damage does not go deeper. The corresponding piece should be cut from a preformed core, unless forming facilities are available. A quantity of Bakelite Polyester Resin S.R.17449 should be mixed (see A.P.2662B, Scheme 7.1.5.) and the affected area of the radome and the mating faces of the replacement piece coated. The replacement piece should then be inserted and pressure applied until cured, which will be a minimum of 4 hours at room temperature. The whole surface of the core should then be coated with resin and when dry the cloths may be re-layed as shown in para. 51. The repair should be recorded inside the radome as shown in A.P.2662B, Scheme 1.5.2.

Flying controls

53. Repair to flying controls is restricted to replacement of moving parts worn beyond the limits laid down in the Schedules in Part 3, Chapter 2 of this volume. Where excessive free play is attributed to loose bolts and oversize holes, in the Aileron and Elevator/Rudder Lever and Torque shaft assemblies, and Torque/Bearing shaft assemblies at the control columns, it is permissible to carry out a repair by fitting oversize attachment bolts.

Fitting of oversize bolts (Aileron)

54. Open up holes in Lever Part No. B178903 and Torque shaft A.166024 to 5/16 in. diameter Newall 'B' fit and assemble new bolts AS2504-15G, or any 55 ton or greater close tolerance bolts, which when inserted will result in an assembled fit of size or 0.0015 in. slack

Fitting of oversize bolts (Elevator/Rudder)

55. Open up holes in Lever Part No. B.207267 and Torque tube B.207338 to 5/16 in. diameter Newall 'B' fit and assemble new bolts STD.1553/G/length to suit, or any 70 tons Hexagon head bolts, providing the shank limits result in an assembled fit of size or 0.0015 in. slack. It may be necessary to spot face the spool of the lever, this may be done only providing the material thickness is not reduced.

Fitting of oversize bolts (Control Column)

56. Open up holes in Crank Part No. A178531, Bearing shaft F.178750 and Torque shaft A.208242 to 5/16 in. diameter Newall 'B' fit and assemble new bolts STD.1553/G length to suit, or any 70 tons Hexagon head bolts, providing the shank limits result in an assembled fit of size or 0.0015 in. slack.

(Continued overleaf)

KEY TO FIG.2

(Key diagram of front fuselage)

Key No.	Part No. Port	Part No. Starboard	Description
Nose Cap (Mk.8M only)			
1A	-	A.324947	Nose cap
Frames (Mk.8M only)			
2A	-	B.324946	Frame D
3A	-	B.324945	Frame C
4A	-	C.324944	Frame B
5A	-	C.324943	Frame A
6A	-	C.317906	Radome frame
7A	-	D.317905	Fwd. hinge frame
8A	-	D.320126	Aft hinge frame
9A	-	D.320127	Frame 2
10A	-	D.320128	Frame 3
11A	-	D.320129	Frame 4
12A	-	D.320130	Frame 5
13A	-	D.320610	Frame 6
1		C.207619	Frame 1A
2		C.207620	Frame 1B
3		D.207618	Frame 1C - forward portion
4		D.232174	Frame 1C - aft portion, Mk.7 only
-		D.207537	Frame 1C - aft portion, Mk.8 only
5		D.207541	Frame 1D
6		D.207012	Frame 2
7		E.232186	Frame 3, Mk.7 only
-		E.207394	Frame 3, Mk.8 only
8		D.207011	Frame 4
9		E.207377	Frame 5
10		E.234728	Frame 6, Mk.7 only
-		E.207327	Frame 6, Mk.8 only
11	E.207171	E.207172	Frame 7
12	E.207144	B.232659	Frame 8, Mk.7 only
-	E.207144	E.207145	Frame 8, Mk.8 only
-	E.207144	E.207145	Frame 8, Mk.8M only, to drg. E.321500 standard
13	E.207191	E.207192	Frame 9 - upper portion
-	E.207193	E.207194	Frame 9 - lower portion
14	E.219050	E.219052	Frame 10 - upper portion
-	E.219051	E.219053	Frame 10 - lower portion
15	E.219027	E.219028	Frame 11 - upper portion
-	E.219029	E.219030	Frame 11 - lower portion
16	E.218954	B.235660	Frame 12, Mk.7 only
-	E.218954	E.218955	Frame 12, Mk.8 only
17	E.219109	E.219110	Frame 13
18	E.219111	E.219112	Frame 14 - side portion
-	E.219111	E.219112	Frame 14, Mk.8M only, to drg. E.321097 standard
-		B.235661	Frame 14 - centre portion, Mk.7 only
-		E.219113	Frame 14 - centre portion, Mk.8 only
-		E.219113	Frame 14, Mk.8M only, to drg. E.321007 standard
19	D.211978	D.211979	Frame 14A
20	E.218995	E.218996	Frame 15 - side portion, Mk.7 only
-	D.240312/2	E.218996	Frame 15 - side portion, Mk.8 only
-	E.218995	E.218996	Frame 15, Mk.8M only, to drg. E.320974 standard
-		E.218997	Frame 15 - centre portion
-		E.218997	Frame 15, Mk.8M only, to drg. E.320974 standard
21	D.207236	D.207237	Frame 16 - side portion
		'38	Frame 16 - top portion
-	D.321302	D.321303	Frame 16, Mk.8M only
-		D.320993	Frame 16, Mk.8M only
22	D.207088	D.207089	Frame 17A - side portion
-		D.207087	Frame 17A - top portion
23		D.207783	Frame 17B
24	D.207471	D.207472	Frame 18A - side portion
-		D.207470	Frame 18A - top portion
Structure aft of hood			
25		D.218030	Diaphragm aft of hood
26	D.218591	D.218592	Former aft of hood pivot
27	D.218528	D.218529	Former at frame 16
28	D.218526	D.218527	Former at frame 17A
29		D.218485	Former at frame 17B
30		D.217979	Former at frame 18A
-		D.217979	Former at frame 18A Mk.8M only to drg. E.321774 standard
Longerons			
31	G.214586	G.214587	Top longeron
32	G.207645	G.207646	Bottom longeron
Cockpit structure			
33		E.208002	Pilots floor
-		E.208002	Pilots floor, Mk.8M only, to drg. E.321507 standard
-	B.207251	B.207252	Pilots floor - front side portion
-	D.207249	D.207250	Pilots floor - rear side portion
34	C.222217	C.212960	Cockpit shelf
-	D.321386	C.314879	Cockpit shelf, Mk.8M only

Items that are not "handed" are shown in the centre column.

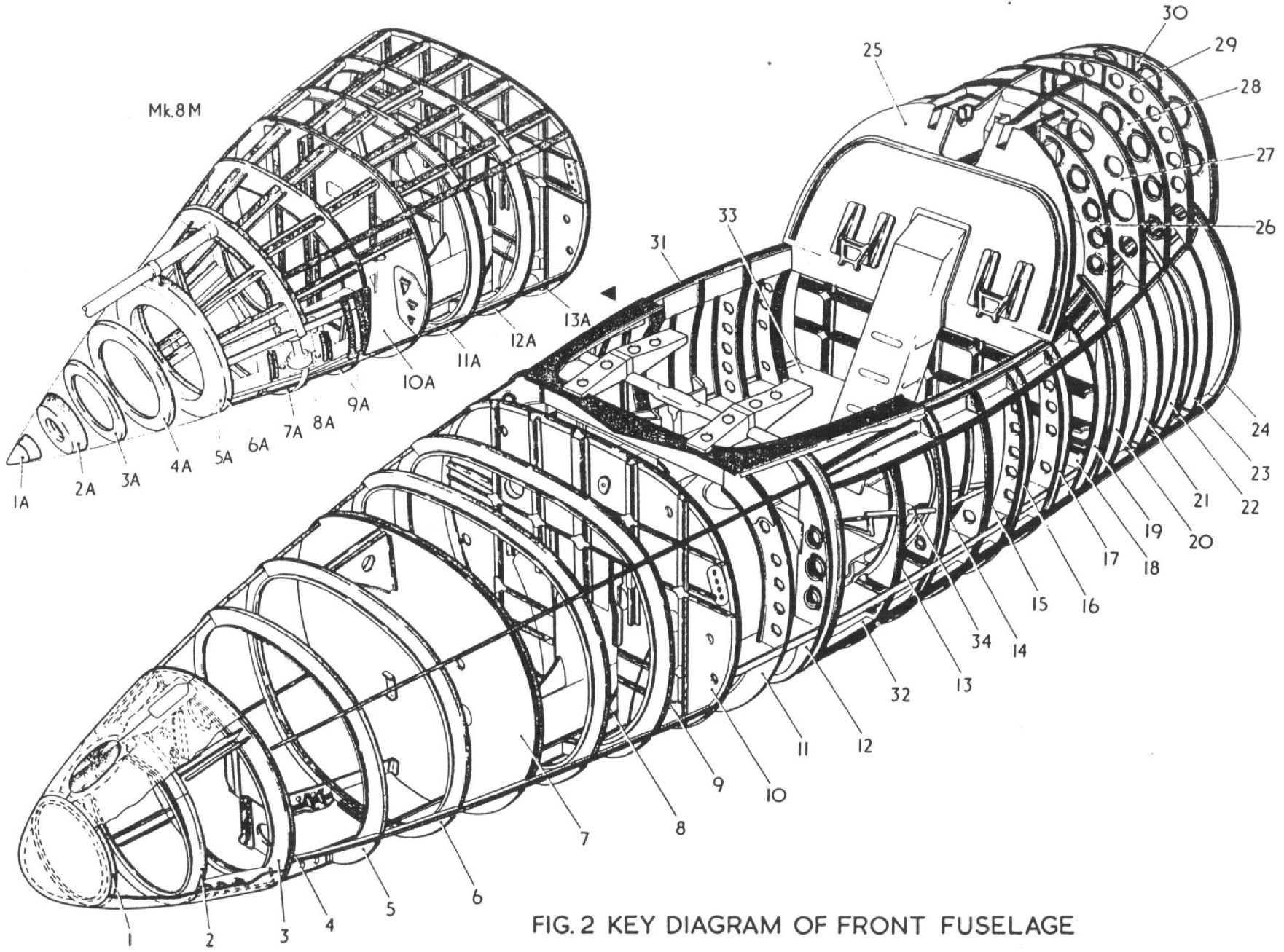


FIG. 2 KEY DIAGRAM OF FRONT FUSELAGE

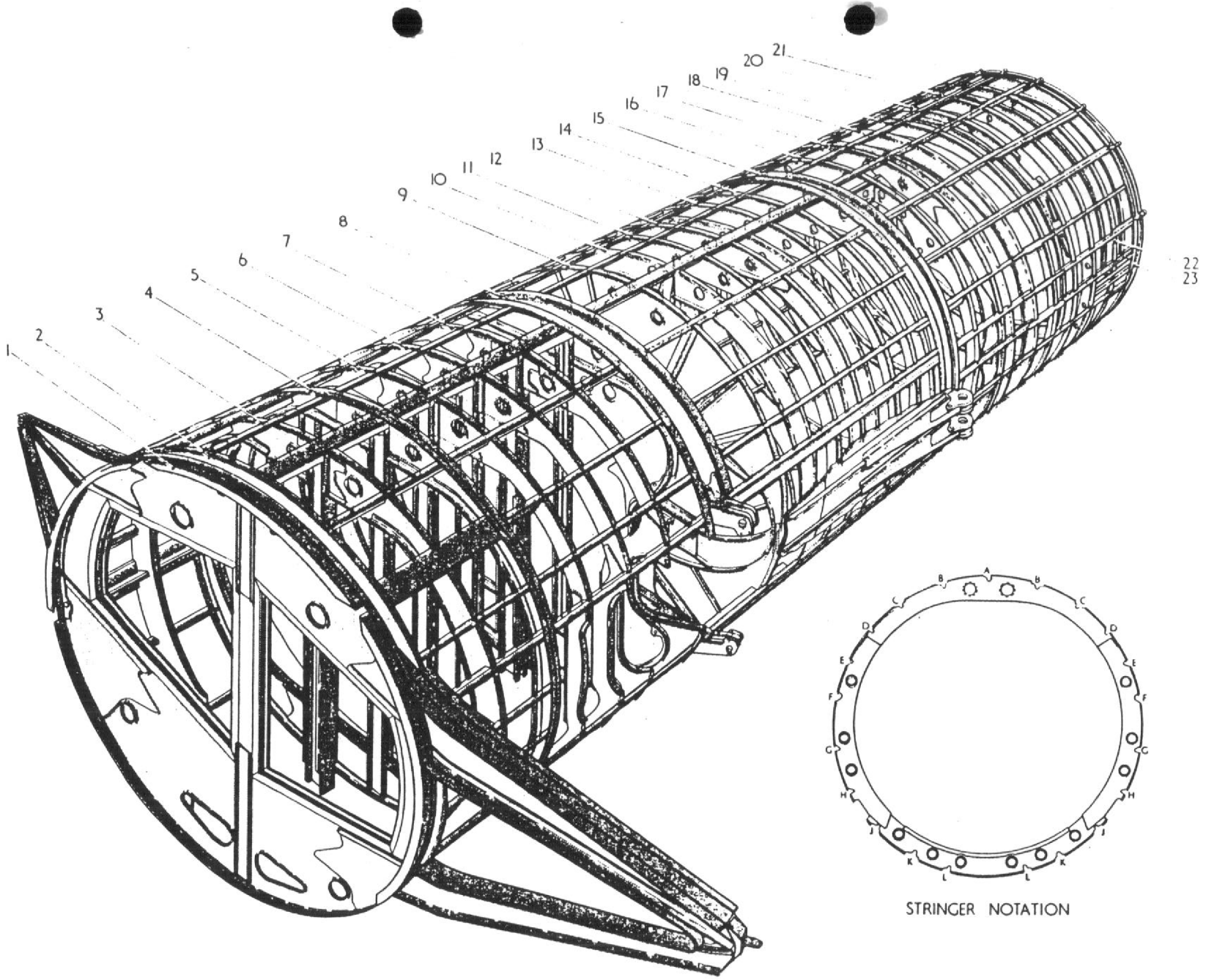


FIG. 3 KEY DIAGRAM OF CENTRE FUSELAGE

KEY TO FIG.3

(Key diagram of centre fuselage)

Key No.	Part No.	Description
1	D.176274-6	Frame 18B
2	D 219332	Frame 19 - nose spar
3	D.178147	Frame 20
4	D.215747	Frame 21
5	E.177458	Frame 22
6	E.177459	Frame 23
7	E.177460	Frame 24
8	E.177175	Frame 25 - main spar
9	E.178765	Frame 26
10	E.179520	Frame 27
11	D.200960	Frame 28
12	D.200961	Frame 29, front face
13	D.177533	Frame 29, rear face
-	D.177531	Frame 30
14	D.177547	Frame 31
15	E.178937	Frame 32 - rear spar
16	B.205513	Frame 33
17	D.177095	Frame 34
18	B.205512	Frame 35
19	D.178029	Frame 36
20	D.175981	Frame 37
21	D.176012	Frame 38
22	D.176255-6	Frame 39
23	E.175941	Frame 40A

KEY TO FIG.4

(Key diagram of Stub Wing)

Key No.	Part No. Port	Part No. Starboard	Description
Diaphragms			
1	C. 182916	C. 182917	Diaphragm A. 1
2	D. 180054	D. 180055	Diaphragm A
3	C. 182918	C. 182919	Diaphragm B. 1
4	D. 180056	D. 180057	Diaphragm B
5	D. 180058	D. 180059	Diaphragm C
6	D. 180060	D. 180061	Diaphragm D
-	A. 192803	A. 192804	Diaphragm D, bottom inboard
7	D. 200975	D. 200976	Diaphragm E
8	D. 200977	D. 200978	Diaphragm F
9	C. 200985	C. 200986	Forward diaphragm at main spar
10	C. 179400	C. 179401	Rear diaphragm at main spar
11	B. 184150	B. 184151	Diaphragm G. 1
12	C. 202555	B. 202556	Diaphragm G
13	C. 178555/1	C. 178556/1	Diaphragm H, inboard
-	C. 178555/2	C. 178556/2	Diaphragm H, outboard
14	C. 178557/1	C. 178558/1	Diaphragm J, inboard
-	C. 178557/2	C. 178558/2	Diaphragm J, outboard
15	C. 177762/1	C. 177763/1	Diaphragm K inboard
-	C. 177762/2	C. 177763/2	Diaphragm K outboard
16	B. 177669	B. 177670	Diaphragm L
17	B. 178751	B. 178752	Diaphragm M, top at rear spar
18	C. 178634	C. 178635	Diaphragm M, bottom at rear spar
Nose Ribs			
19	C. 180008	C. 180009	Nose rib 1, top
20	B. 222750	B. 222751	Nose rib 2, top
21	B. 180012	B. 180013	Nose rib 3, top
22	B. 180014	B. 180015	Nose rib 1, bottom
23	B. 180016	B. 180017	Nose rib 2, bottom
24	B. 180018	B. 180019	Nose rib 3, bottom
25	B. 180020	B. 180021	Outboard nose rib
Inboard Diaphragms			
26	D. 178695	D. 178696	Diaphragm
27	D. 178697	D. 178698	Diaphragm
28	D. 178699	D. 178700	Diaphragm
29	D. 178701	D. 178702	Diaphragm
30	D. 178703	D. 178704	Diaphragm
31	D. 178705	D. 178706	Diaphragm
32	D. 178707	D. 178708	Diaphragm
33	D. 178709	D. 178710	Diaphragm
34	D. 178711	D. 178712	Diaphragm
35	D. 178713	D. 178714	Diaphragm
36	D. 178715	D. 178716	Diaphragm
37	D. 178717	D. 178718	Diaphragm
38	D. 178719	D. 178720	Diaphragm
39	A. 200969	A. 200970	Diaphragm
Outboard Diaphragms			
40	D. 178992	D. 178993	Diaphragm
41	D. 178994	D. 178995	Diaphragm
42	D. 178996	D. 179997	Diaphragm
43	D. 178998	D. 178999	Diaphragm
44	D. 179000	D. 179001	Diaphragm
45	D. 179002	D. 179003	Diaphragm
46	D. 179004	D. 179005	Diaphragm
47	D. 179006	D. 179007	Diaphragm
48	D. 179008	D. 179009	Diaphragm
49	D. 179010	D. 179011	Diaphragm
50	D. 179012	D. 179013	Diaphragm
Miscellaneous			
51	C. 180004	C. 180005	Leading edge members, top
52	C. 180006	C. 180007	Leading edge members, bottom
53	C. 180939	C. 180940	Top inner diaphragm
-	C. 180941	C. 180942	Bottom inner diaphragm
54	C. 180943	C. 180944	Top outer diaphragm
-	C. 180945	C. 180946	Bottom outer diaphragm
55	D. 201133	D. 201134	Outer end rib
56	C. 178820	C. 178821	Hinge mounting angle for u/c wheel
57	E. 177628	E. 177629	Inter spar rib
58	B. 179890	B. 179891	Outboard, skin finisher
59	A. 181999	A. 182000	Diaphragm, top
60	A. 182001	A. 182002	Diaphragm, top
-	B. 192634	B. 192635	Diaphragm, bottom
61	A. 182003	A. 182004	Diaphragm, top
-	A. 182005	A. 182006	Diaphragm, bottom
Structure Aft of Rear Spar			
62	C. 188210	C. 188211	Former at frame 33
63	C. 179030	C. 179031	Former at frame 34
64	B. 179032	B. 179033	Former at frame 35
65	B. 179034	B. 179035	Former at frame 36
66	B. 179036	B. 179037	Former at frame 37
67	B. 179038	B. 179039	Former at frame 38
68	C. 181319	C. 181320	Edge member, top
69	C. 181321	C. 181322	Edge member, bottom
70	C. 179042	C. 179043	Edge member, aft

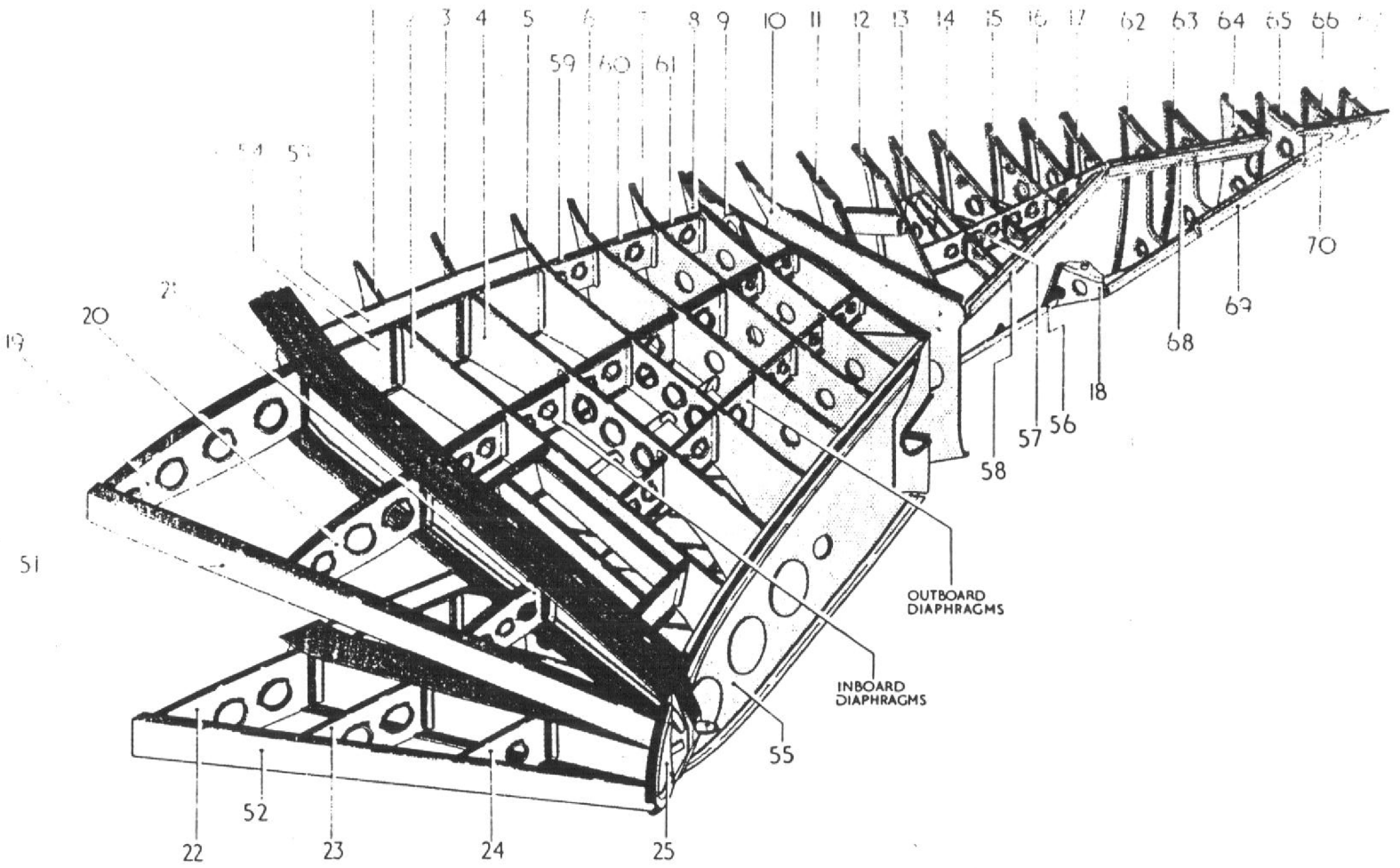


FIG. 4. KEY DIAGRAGM OF STUB WING

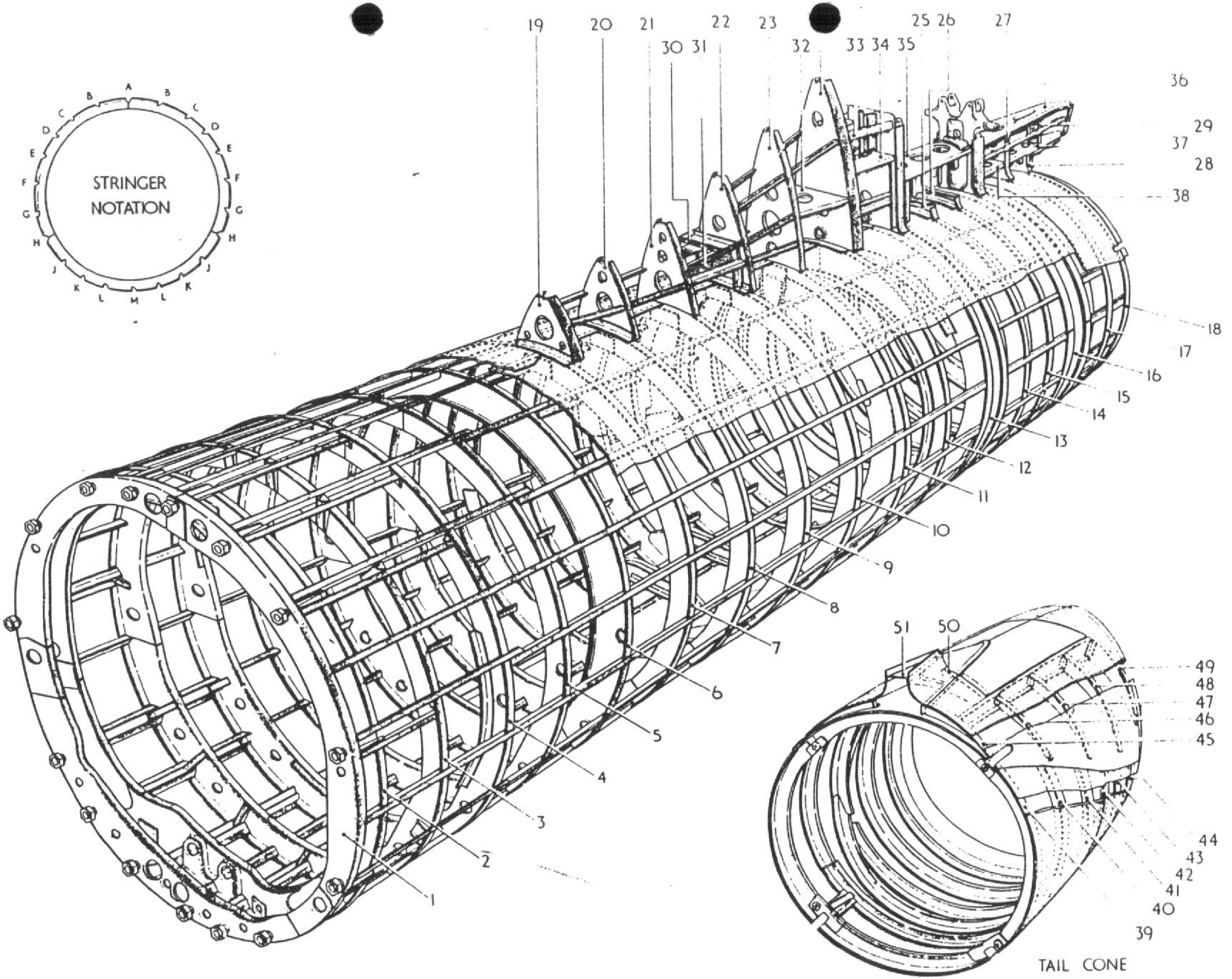


FIG. 5. KEY DIAGRAM OF REAR FUSELAGE

KEY TO FIG. 6

(Key diagram of air brake)

Key No.	Part No.		Description
	Port	Starboard	
1		D.204359	Former 1, centre portion
2	D.204360	D.204361	Former 1, outer portion
3	C.204369	C.204370	Former 1A
4		D.204362	Former, 2 centre portion
5	D.204363	D.204364	Former 2, outer portion
6		B.204357	Centre channel, front
7		B.204358	Centre channel, rear
8	D.204367	D.204368	Outer hinge rib
9	C.204365	C.204366	Inner hinge rib
10		B.204371	Centre nose rib
11	B.204458	B.204459	Outer nose rib
12		B.204309	Jack attachment fitting
13	B.204482	B.204483	Hinge fitting
14		D.204379	Outer skin
15	D.204376	D.204377	Outer nose skin
16	D.204374	D.204375	Inner nose skin
17		D.204378	Inner skin

Items that are not 'handed' are shown in the centre column.

KEY TO FIG. 5

(Key diagram of rear fuselage)

Key No.	Part No.	Description
Frames		
1	D.201639	Frame 40B
2	D.201641	Frame 41, port side portion
	D.201642	Frame 41, stbd. side portion
	D.201643	Frame 41, bottom portion
3	D.181019	Frame 42, port side portion
	D.181020	Frame 42, stbd. side portion
	D.181021	Frame 42, bottom portion
4	D.181022	Frame 43, port side portion
	C.222007	Frame 43, stbd. side portion
	C.222008	Frame 43, bottom portion
5	D.181025	Frame 44, port side portion
	C.222009	Frame 44, stbd. side portion
	C.222010	Frame 44, bottom portion
6	D.204661	Frame 45, port side portion
	D.204662	Frame 45, stbd. side portion
	D.204663	Frame 45, bottom portion
7	D.204664	Frame 46, port side portion
	D.204665	Frame 46, stbd. side portion
	D.204666	Frame 46, bottom portion
8	E.181034	Frame 47, port side portion
	D.222109/2	Frame 47, port side web, Mk.8 only
	E.181035	Frame 47, stbd. side portion
	D.222109/3	Frame 47, stbd. side web, Mk.8 only
	C.204667	Frame 47, bottom portion
	D.222109/1	Frame 47, bottom web, Mk.8 only
9	E.181037	Frame 48, port side portion
	E.181038	Frame 48, stbd. side portion
	C.204668	Frame 48, port bottom portion
	C.204669	Frame 48, stbd. bottom portion
10	E.181040	Frame 49, port side portion
	E.181041	Frame 49, stbd. side portion
	C.204670	Frame 49, port bottom portion
	C.204671	Frame 49, stbd. bottom portion
11	D.204871	Frame 50, port side portion
	D.203888/2	Frame 50, port side web, Mk.8 only
	D.204872	Frame 50, stbd. side portion
	D.203888/2	Frame 50, stbd. side web, Mk.8 only
	D.204873	Frame 50, bottom portion
	D.203888/1	Frame 50, bottom web, Mk.8 only
12	D.181046	Frame 51, port side portion
	D.181047	Frame 51, stbd. side portion
	D.181048	Frame 51, bottom portion, Mk.7 only
	B.222223	Frame 51, bottom portion, Mk.8 only
13	D.177649	Frame 52, Mk.7 only
	B.222311	Frame 52, Mk.8 only
14	D.181049	Frame 53, port side portion
	D.181050	Frame 53, stbd. side portion
	D.181051	Frame 53, bottom portion
15	D.181052	Frame 54, port side portion
	D.181053	Frame 54, stbd. side portion
	D.181054	Frame 54, bottom portion
16	D.177823	Frame 55.
17	D.190473	Frame 56, port side portion
	D.190474	Frame 56, stbd. side portion
	D.190475	Frame 56, bottom portion
18	D.224024	Frame 57, port side portion
	D.224025	Frame 57, stbd. side portion
	D.224026	Frame 57, bottom portion

DORSAL FIN, STRUCTURE BELOW TAILPLANE AND FIN FAIRING

Key No.	Part No.	Description
Vertical members		
19	C.211484	Former at frame 46
20	B.183728	Former at frame 47
21	B.211485	Former at frame 48
22	C.183729	Former at frame 49
23	C.211486	Former at frame 50
24	C.204653	Former at frame 51
25	C.209708	Former at frame 53
26	C.188582	Former at frame 54
27	B.190484	Former at frame 56
28	B.224021	Former at frame 57
29	B.211427	Aft former
Other members		
30	A.204689	Channel
31	B.183604	Bracket port
	B.204690	Bracket stbd.
32	C.183733	Horizontal rib
33	B.204654	Rib above tailplane
34	B.202352	Rib
35	B.186387	Rib below tailplane
36	C.212321	Tail rib
37	C.224022	Tail rib
38	B.190521	Rib

TAIL CONE

39	D.190618	Frame 58
40	D.190619	Frame 59
41	C.192601	Frame 60, top portion
	C.192602	Frame 60, bottom portion
42	D.192608	Frame 61
43	D.192642	Frame 62
44	C.214490	Frame 63
	C.214504	Frame 63, (2 piece)
45	B.219964	Former port
	B.219965	Former stbd.
46	B.219823	Former port
	B.219824	Former stbd.
47	B.219676	Former port
	B.219677	Former stbd.
48	B.219678	Former port
	B.219679	Former stbd.
49	C.219631	Rear diaphragm
50	C.219672	Former
51	B.219987	Rib

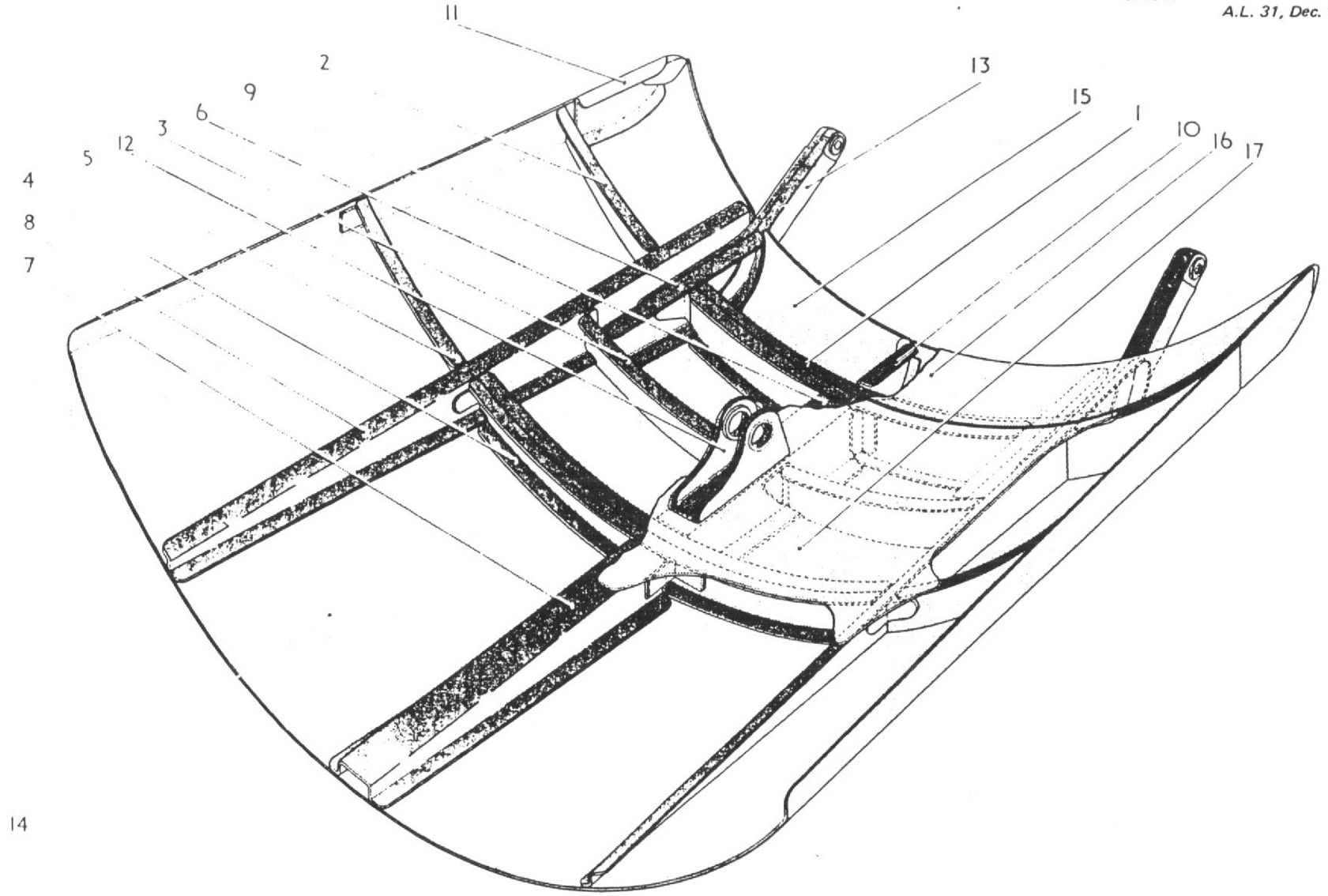
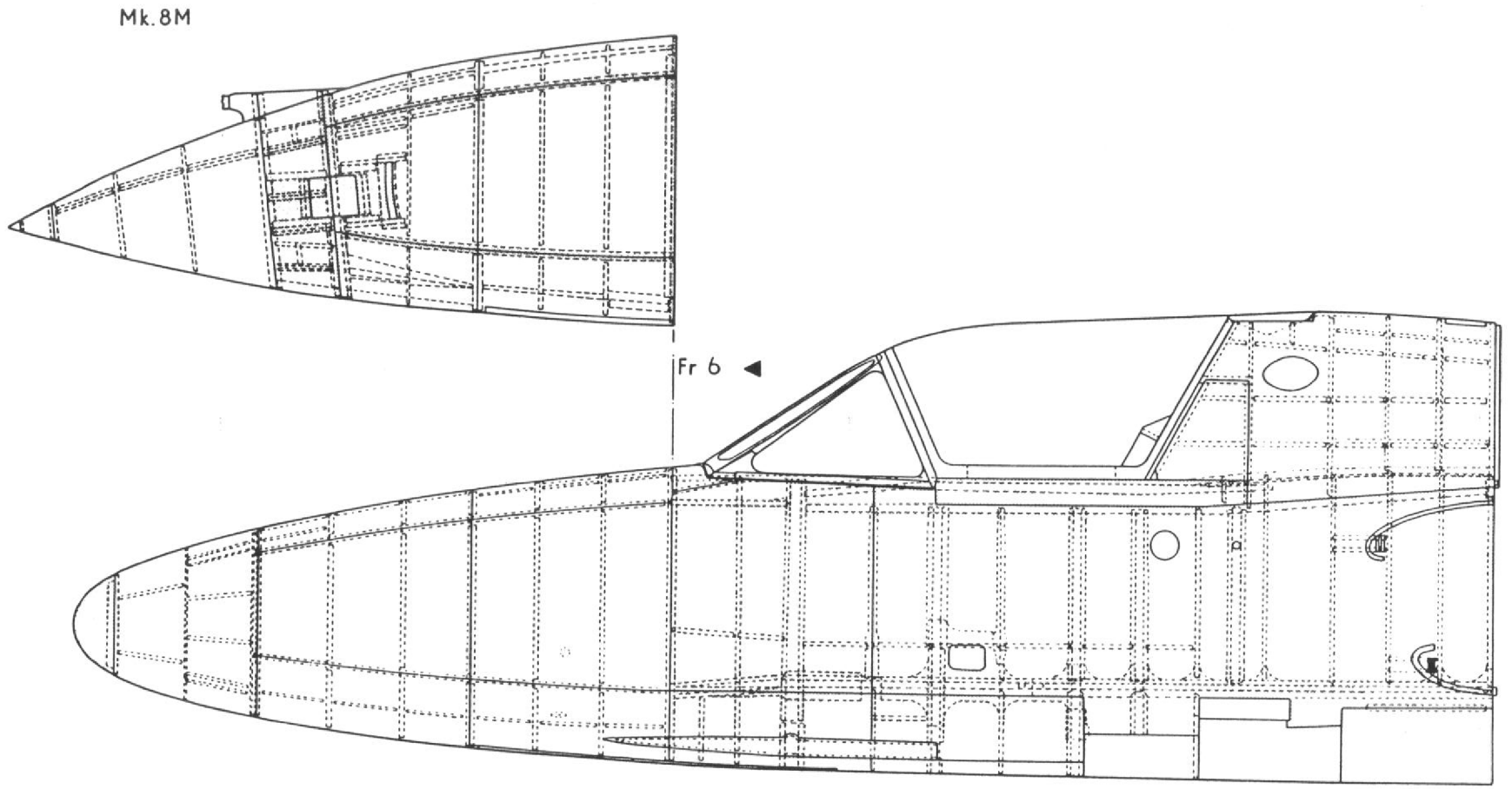
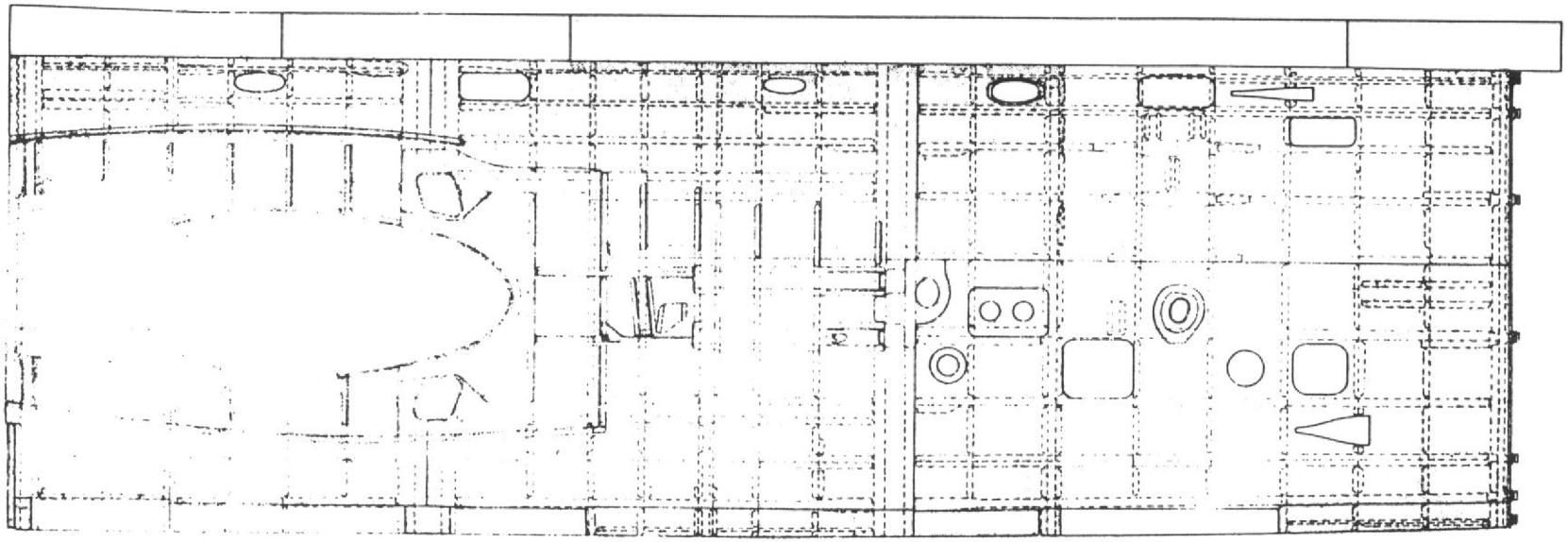


FIG. 6 KEY DIAGRAM OF AIR BRAKE



USER UNIT REPAIRS TO THE FRONT FUSELAGE ARE NOT PERMITTED IN THE AREAS SHOWN SHADED

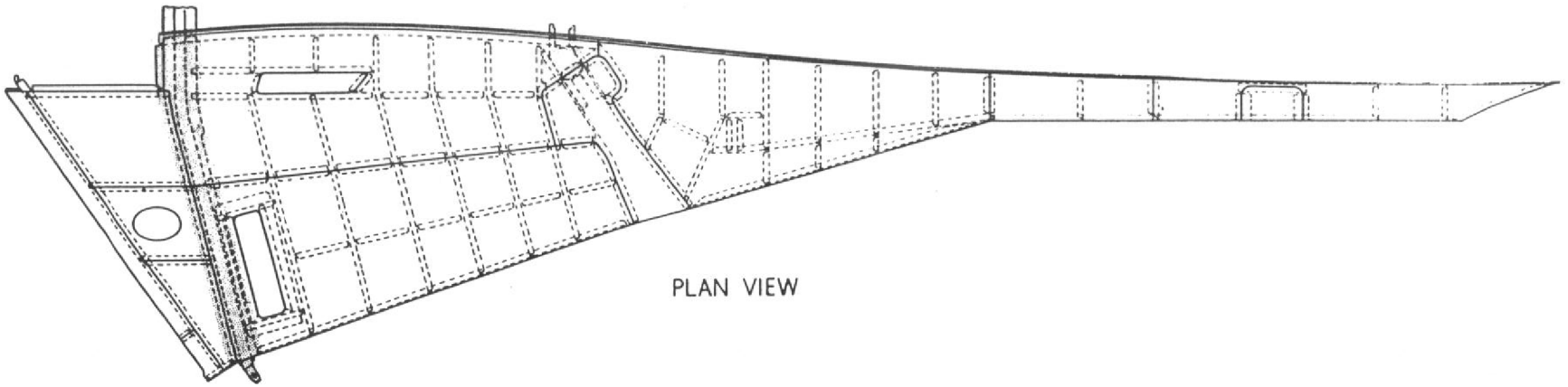
FIG. 7. NON-REPAIRABLE AREAS-FRONT FUSELAGE



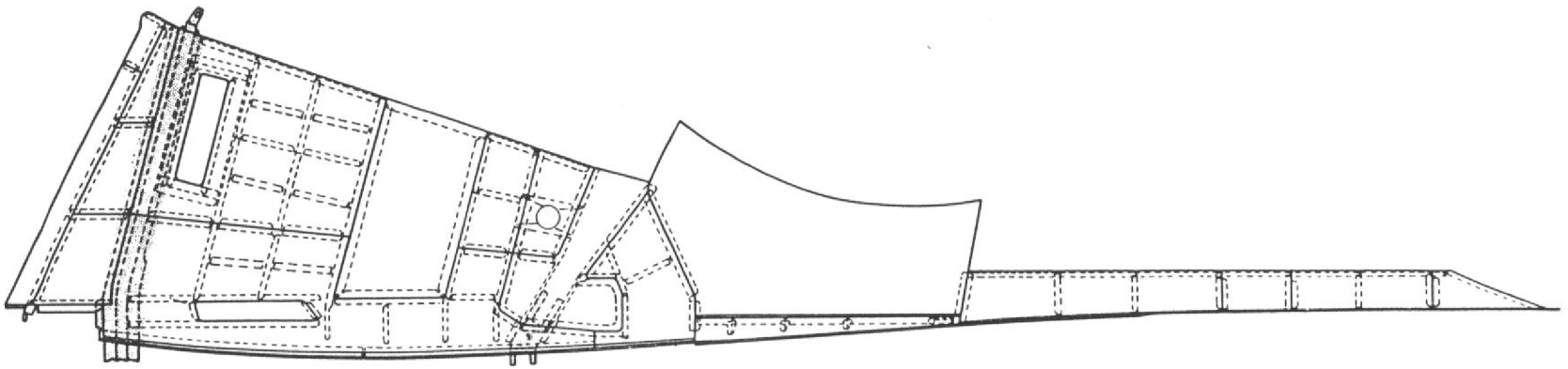
SIDE VIEW

USER UNIT REPAIRS TO THE CENTRE FUSELAGE ARE
NOT PERMITTED IN THE AREAS SHOWN SHADED

FIG. 8. NON-REPAIRABLE AREAS – CENTRE FUSELAGE



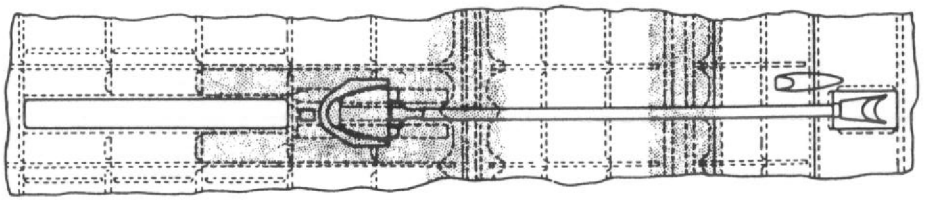
PLAN VIEW



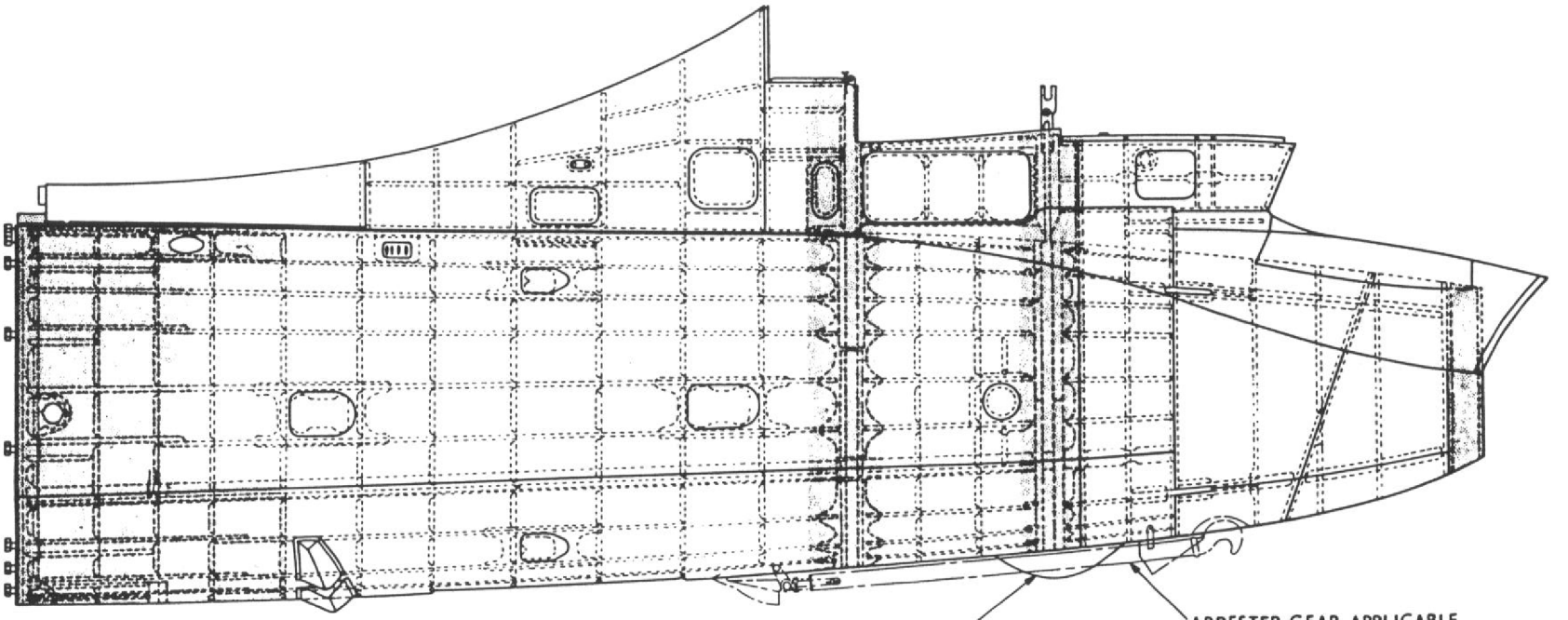
INVERTED PLAN VIEW

USER UNIT REPAIRS TO THE STUB WING ARE NOT PERMITTED IN THE AREAS SHOWN SHADED

FIG. 9. NON-REPAIRABLE AREAS – STUB WING

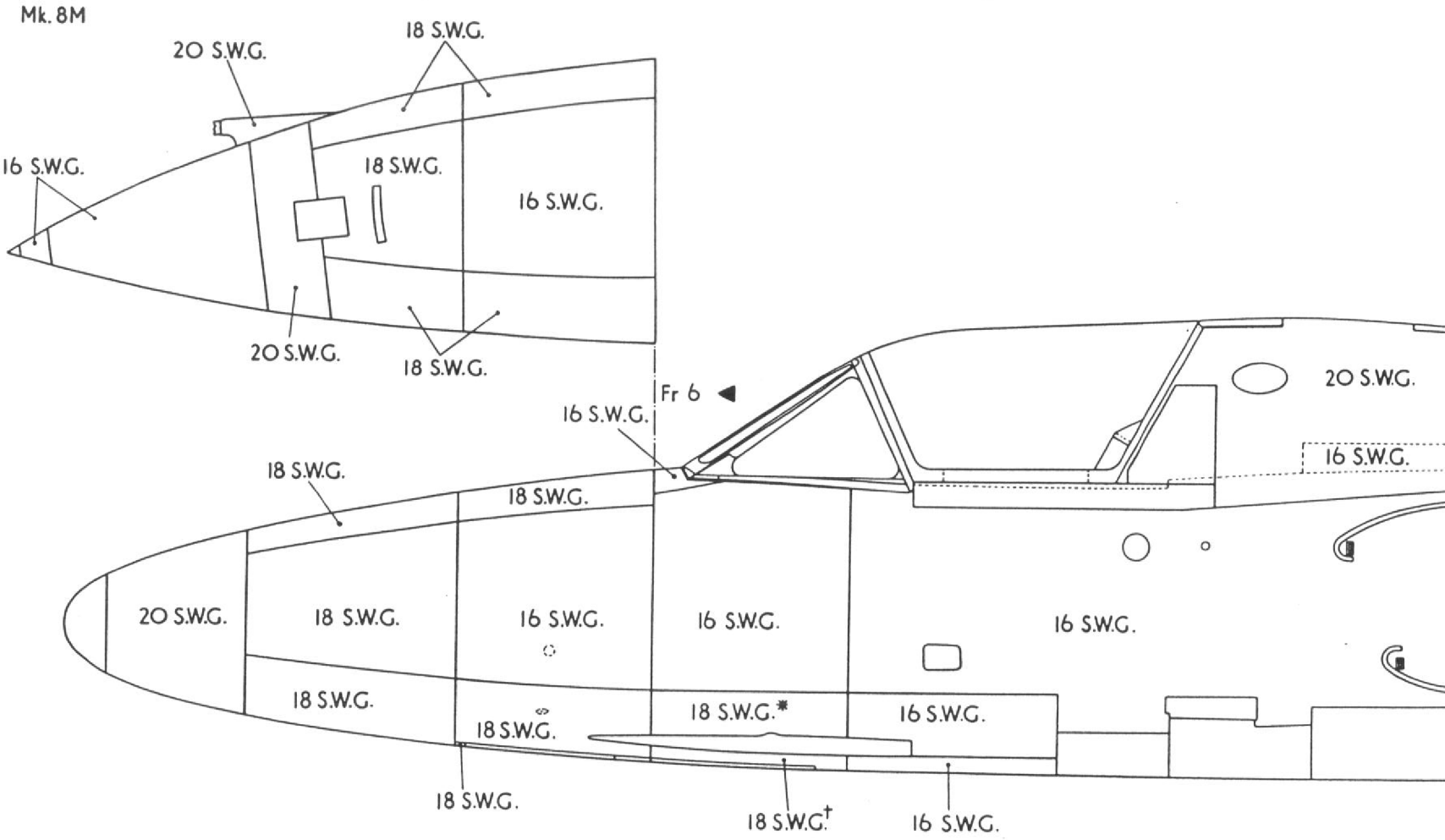


VIEW ON UNDERSIDE - MK. 8 ONLY.



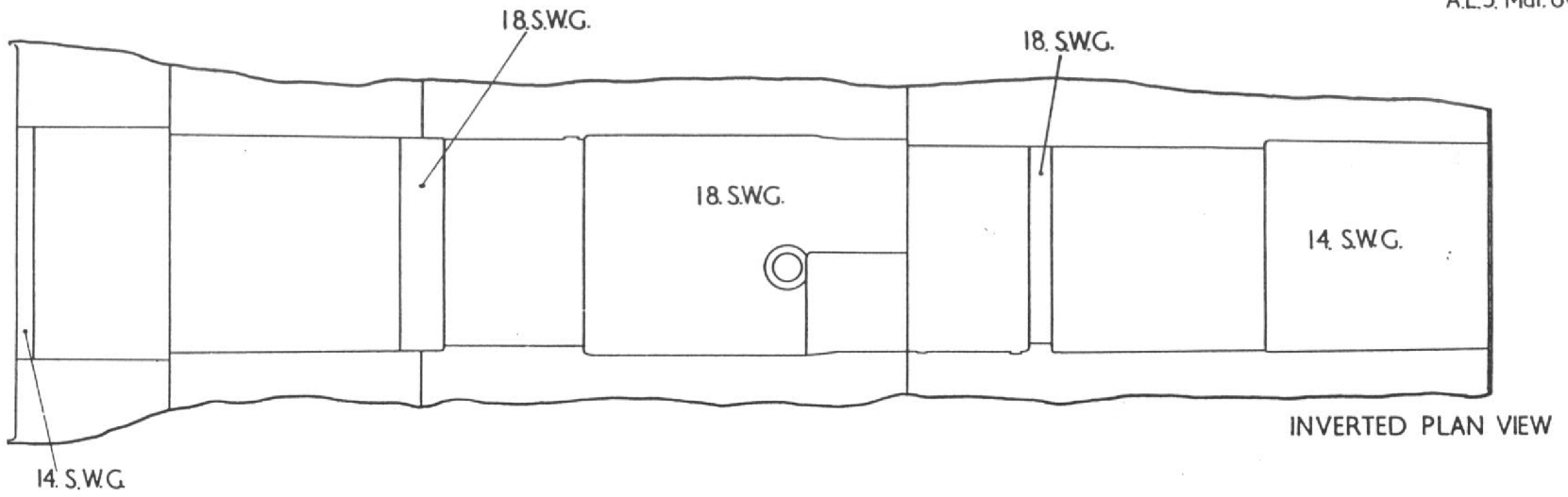
NOTE.
USER UNIT REPAIRS TO THE REAR FUSELAGE ARE NOT PERMITTED IN THE AREAS SHOWN SHADED

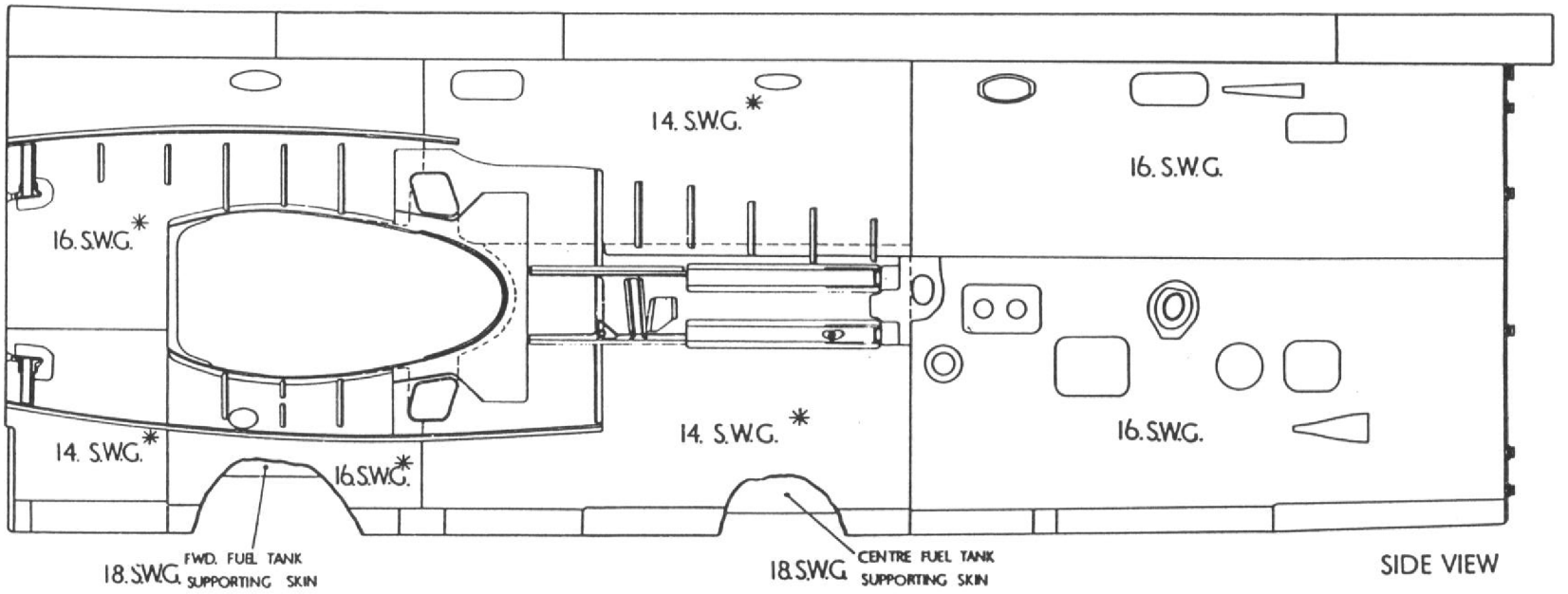
FIG. 10. NON-REPAIRABLE AREAS - REAR FUSELAGE



SKIN COVERING INDICATED THUS † IS STAINLESS STEEL TO SPECN. S.521. SKIN COVERING INDICATED THUS * IS LIGHT ALLOY TO SPECN. L.72 ON PORT SIDE AND STAINLESS STEEL TO SPECN. S.521 ON STBD. SIDE. ALL OTHER SKIN COVERING ON THE FRONT FUSELAGE IS LIGHT ALLOY TO SPECN. L.72.

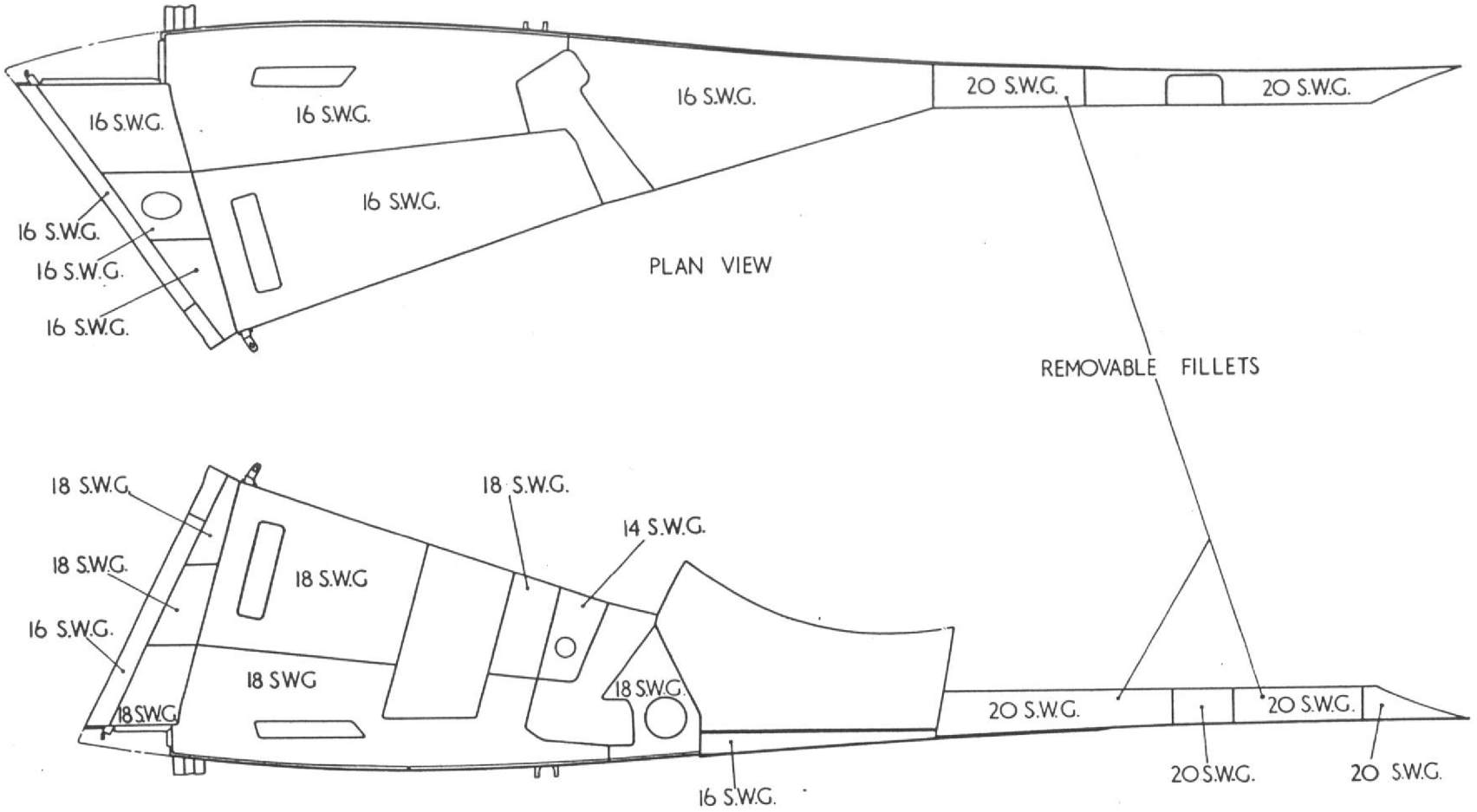
FIG. 11. SKIN COVERING FRONT FUSELAGE





SKIN COVERING INDICATED THUS * IS LIGHT ALLOY TO SPEC^N. L.73. ALL OTHER SKIN COVERING IS LIGHT ALLOY TO SPEC^N. L.72.

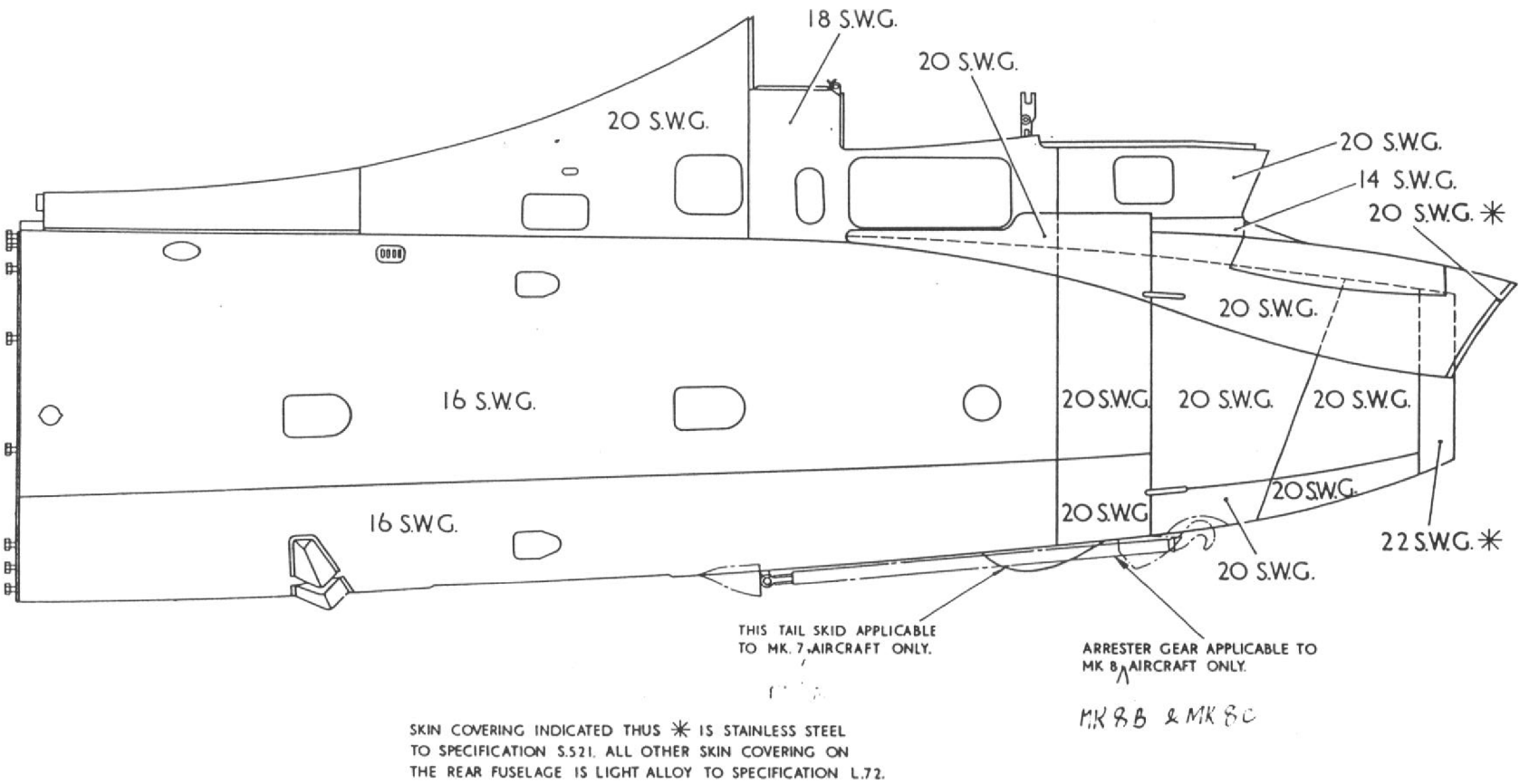
FIG. 12. SKIN COVERING - CENTRE FUSELAGE



ALL SKIN COVERING ON THE STUB WING IS LIGHT ALLOY TO SPECN L.72.

FIG.13. SKIN COVERING – STUB WING

RESTRICTED

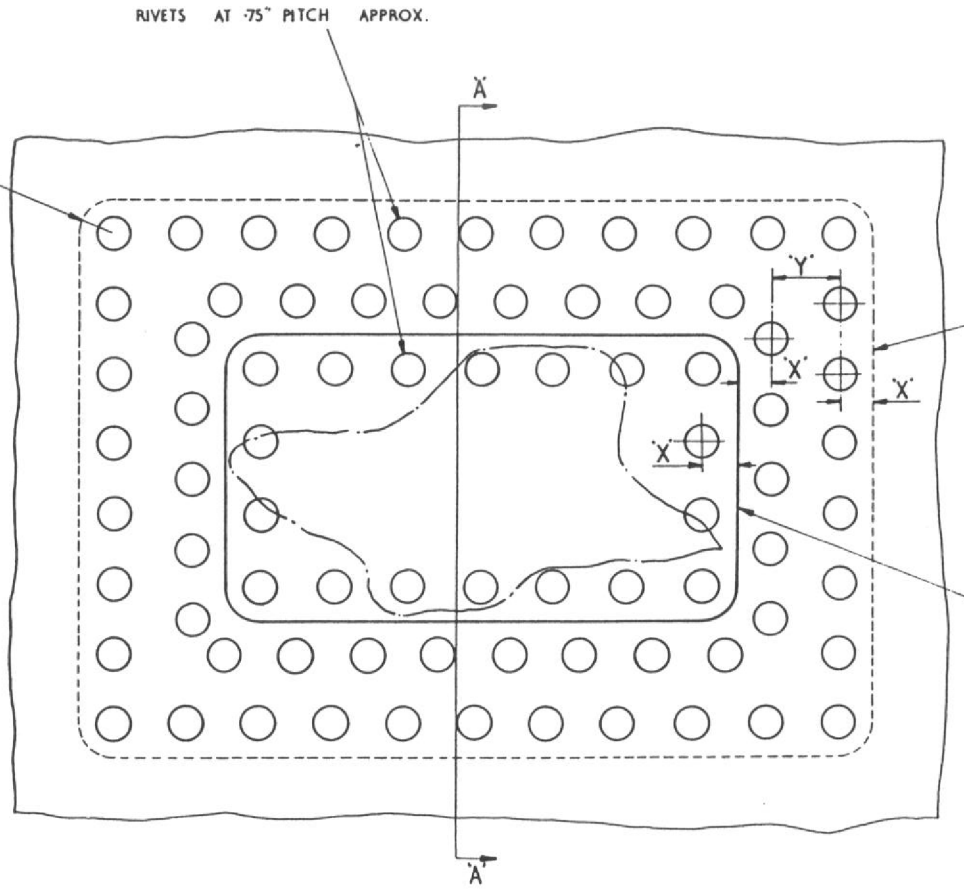


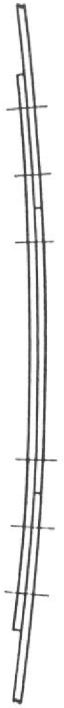
SKIN COVERING INDICATED THUS ✳ IS STAINLESS STEEL TO SPECIFICATION S.521. ALL OTHER SKIN COVERING ON THE REAR FUSELAGE IS LIGHT ALLOY TO SPECIFICATION L.72.

FIG. 14. SKIN COVERING – REAR FUSELAGE

SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE TO SMOOTH CONTOUR
2. MAKE PATCH AND PATCH PLATE FROM MATERIAL OF SAME S.W.G. AND SPECN. AS THAT OF DAMAGED SKIN
3. POSITION PATCH PLATE DRILL AND RIVET IN PLACE
4. POSITION PATCH DRILL AND RIVET IN PLACE





SECTION 'A-A'

TYPE OF SKIN	SKIN GAUGE	RIVETS	DRILL SIZE		DIMN. 'X'	DIMN. 'Y'
			MORSE Nº	DIAMETER.		
OUTER SKINS	14 S.W.G.	A.S. 161 - 607	11	·191"	·35"	·70"
	16 S.W.G.	A.S. 161 - 506	21	·159"	·30"	·60"
	18 S.W.G.	A.S. 164 - 505	21	·159"	·30"	·60"
	20 S.W.G.	A.S. 164 - 404	30	·1285"	·25"	·50"
TANK SUPPORTING SKINS	18 S.W.G.	AGS. 2051-524	21	·159"	·30"	·60"
	20 S.W.G.	AGS. 2051-419	30	·1285"	·25"	·50"

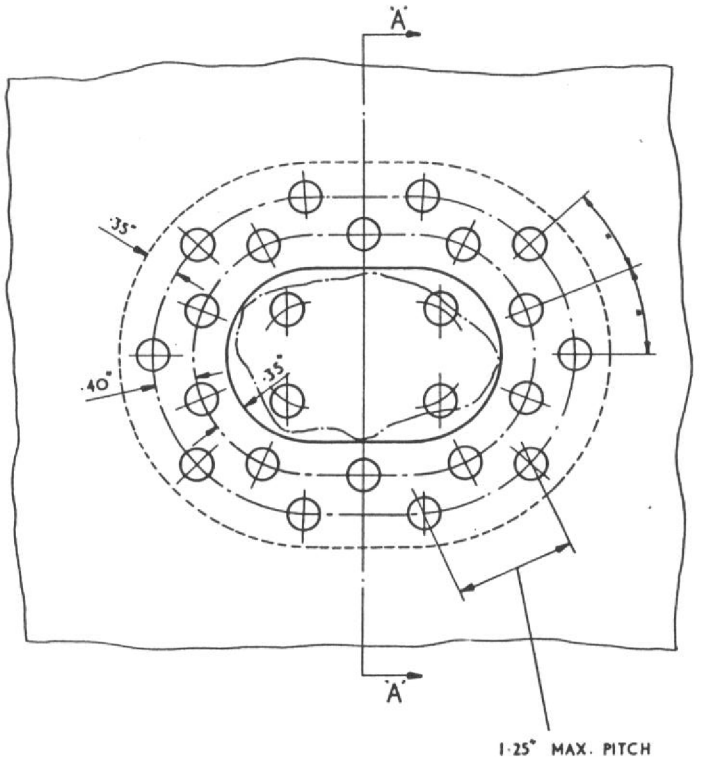
NOTE

FOR DETAILS OF SEALING FOR PRESSURE CABIN SEE CHAP. 2, PARA. 8

FIG. 15. FLUSH REPAIR TO FUSELAGE SKIN

SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE TO SMOOTH CONTOUR
2. MAKE PATCH AND PATCH PLATE FROM 10 S.W.G. L.A. PLATE TO SPEC^D L.72.
3. POSITION PATCH PLATE, DRILL AND RIVET IN PLACE
4. POSITION PATCH, DRILL AND RIVET IN PLACE



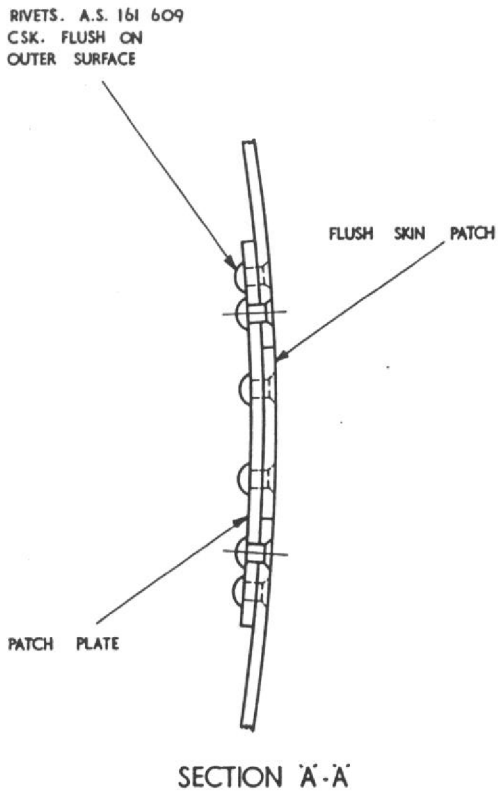
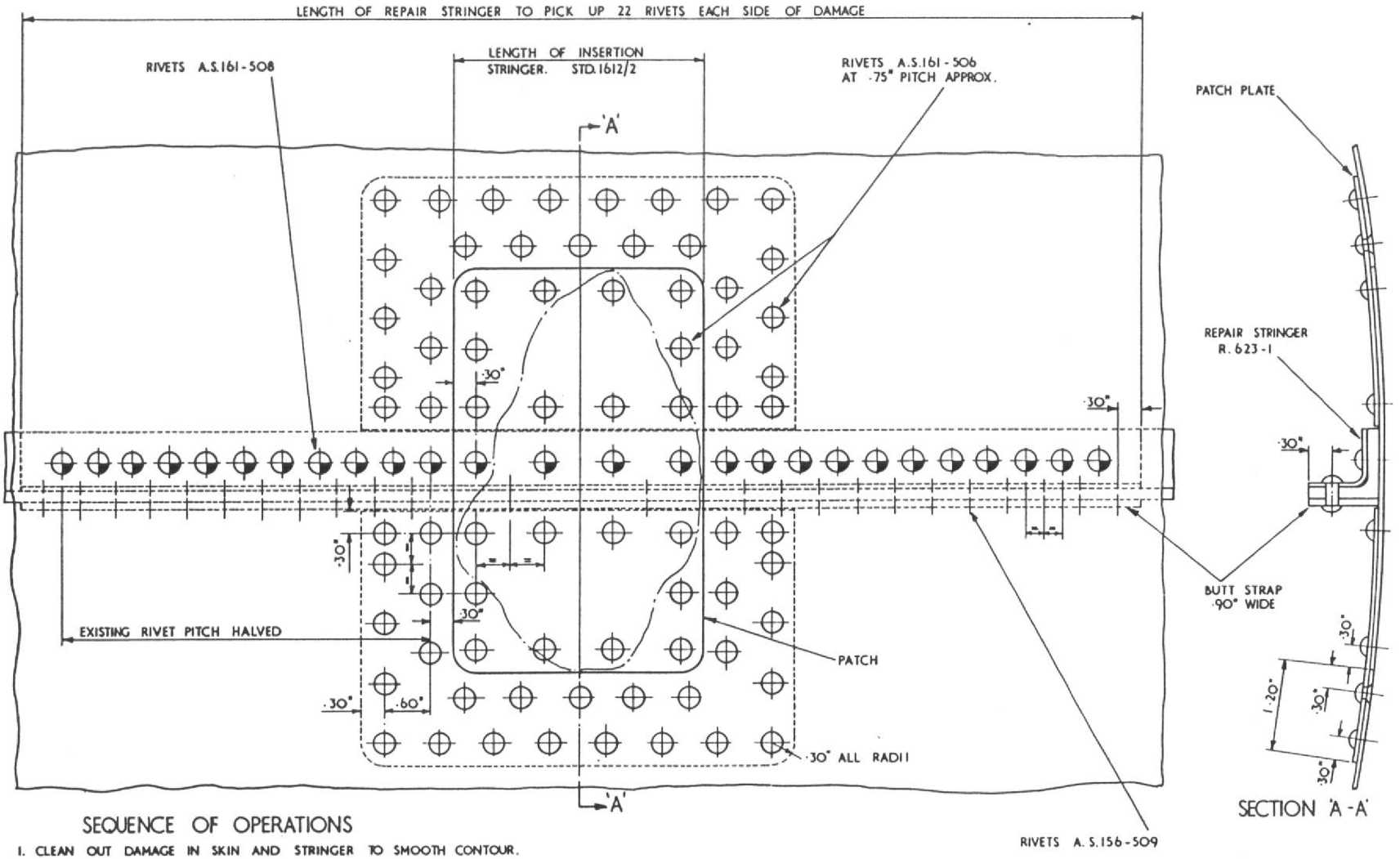


FIG. 16. REPAIR TO 10 S.W.G. AIR BRAKE SKIN.



SEQUENCE OF OPERATIONS

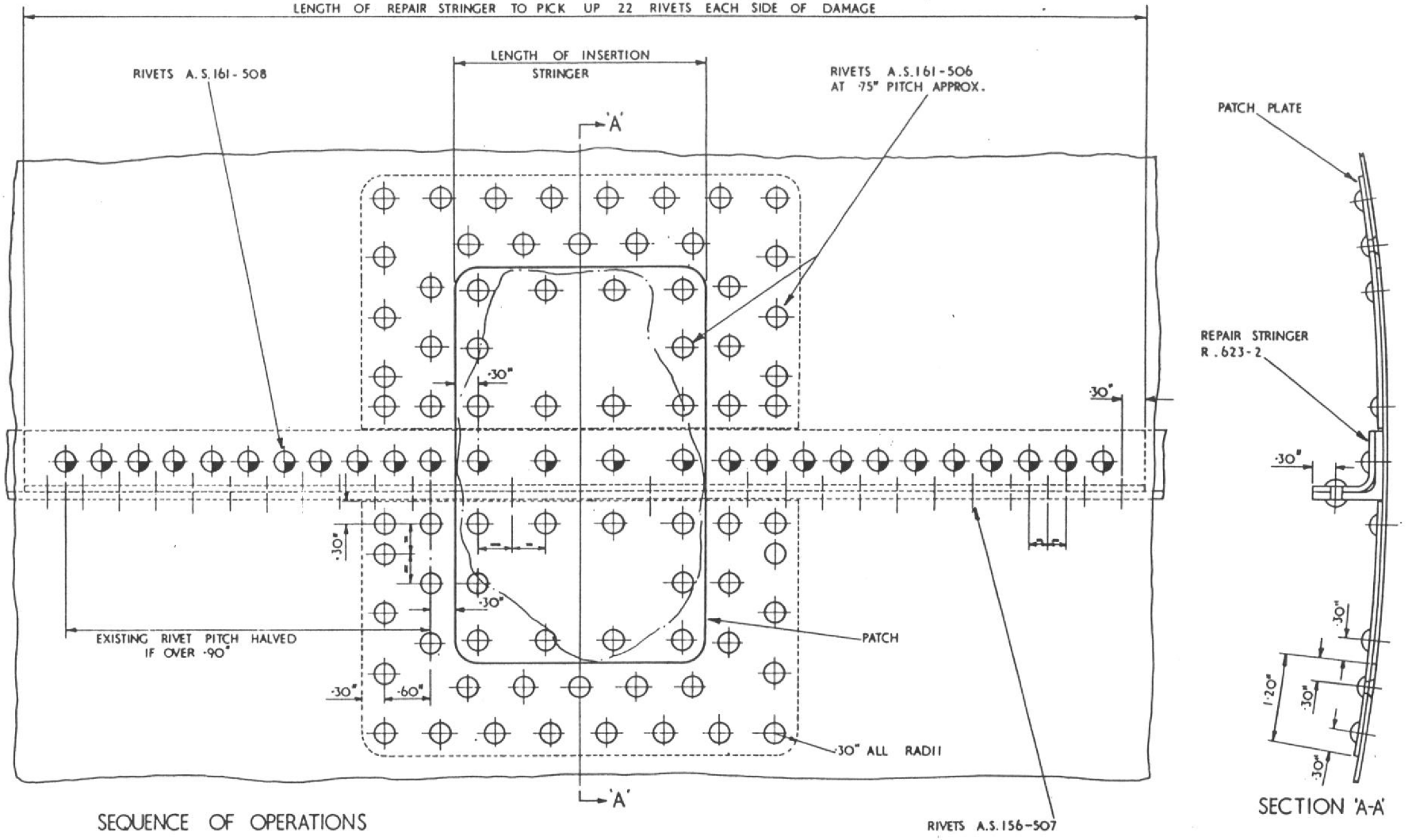
1. CLEAN OUT DAMAGE IN SKIN AND STRINGER TO SMOOTH CONTOUR.
2. FROM SECTION R.623-1 MAKE REPAIR STRINGER.
3. FIT REPAIR STRINGER, DRILL, AND RIVET IN POSITION.
4. FROM STD. 1612/2 MAKE INSERTION STRINGER OF LENGTH SHOWN.
5. FROM 12 S.W.G. S.S. S.520 MAKE BUTT STRAP EQUAL IN LENGTH TO REPAIR STRINGER.
6. FIT INSERTION STRINGER AND BUTT STRAP, DRILL, AND RIVET IN POSITION.
7. FROM 16 S.W.G. L.A. L.72 MAKE PATCH AND PATCH PLATES.
8. FIT PATCH PLATES, DRILL, AND RIVET IN POSITION.
9. FIT PATCH, DRILL, AND RIVET IN POSITION.

NOTE

THIS REPAIR APPLIES TO 16 S.W.G. SKIN AND STD. 1612/2 STRINGERS ON CENTRE FUSELAGE

FIG. 17. FLUSH REPAIR TO SKIN AND STRINGER

RESTRICTED



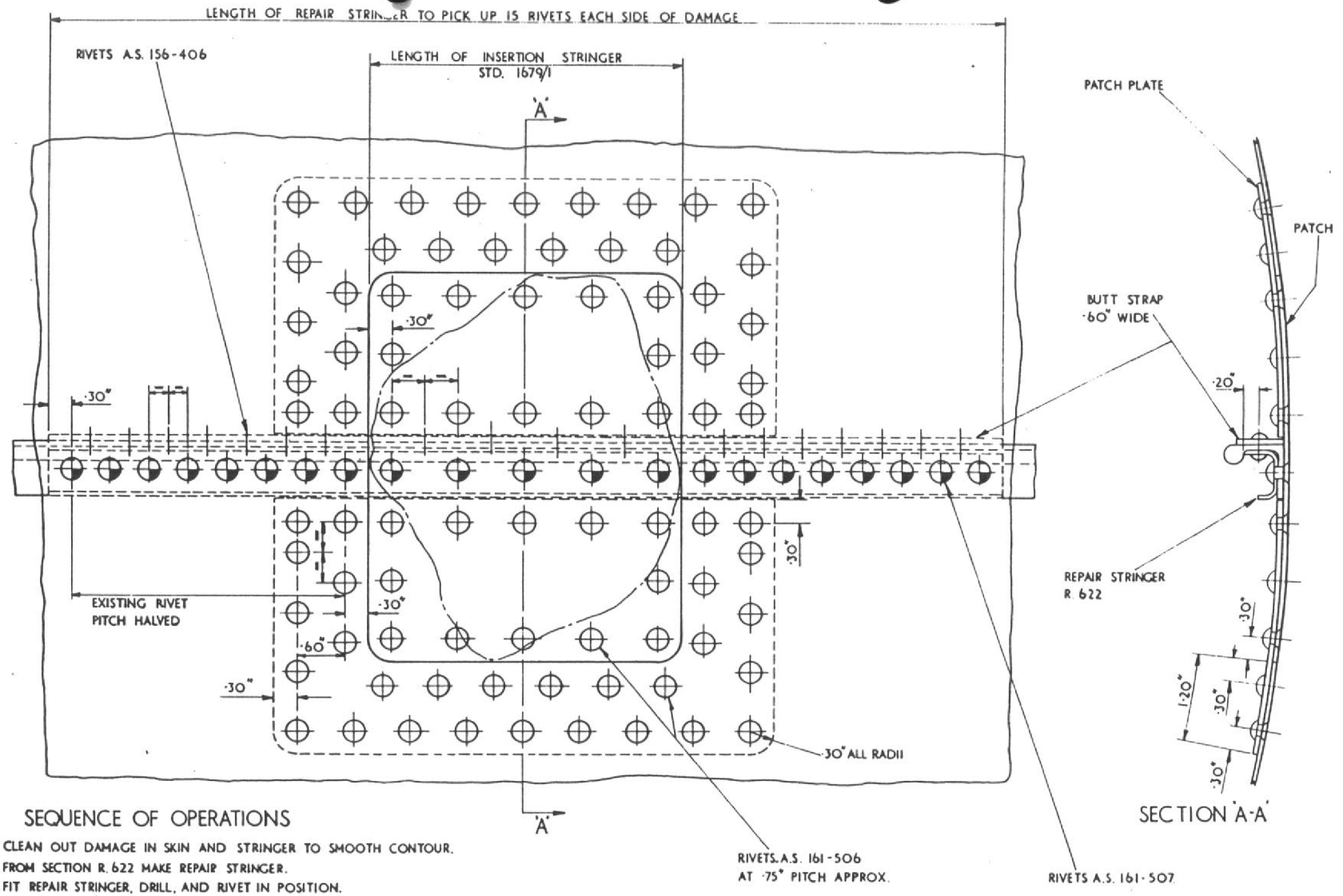
SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE IN SKIN AND STRINGER TO SMOOTH CONTOUR.
2. FROM SECTION R.623-2 MAKE REPAIR STRINGER.
3. FIT REPAIR STRINGER, DRILL, AND RIVET IN POSITION.
4. FROM NEW STRINGER OF APPROPRIATE PART N9 OR FROM STD.1612/15 EXTRUSION MAKE INSERTION STRINGER OF LENGTH SHOWN.
5. FIT INSERTION STRINGER, DRILL, AND RIVET IN POSITION.
6. FROM 16 S.W.G. L.A. L.72 MAKE PATCH AND PATCH PLATES.
7. FIT PATCH PLATES, DRILL, AND RIVET IN POSITION.
8. FIT PATCH, DRILL, AND RIVET IN POSITION.

NOTE

THIS REPAIR APPLIES TO 16 S.W.G. SKIN AND STRINGERS PT Nos D.179955/1, D.179956/1, D.179957/1, D.179958/1, ON CENTRE FUSELAGE

FIG. 18. FLUSH REPAIR TO SKIN AND STRINGER



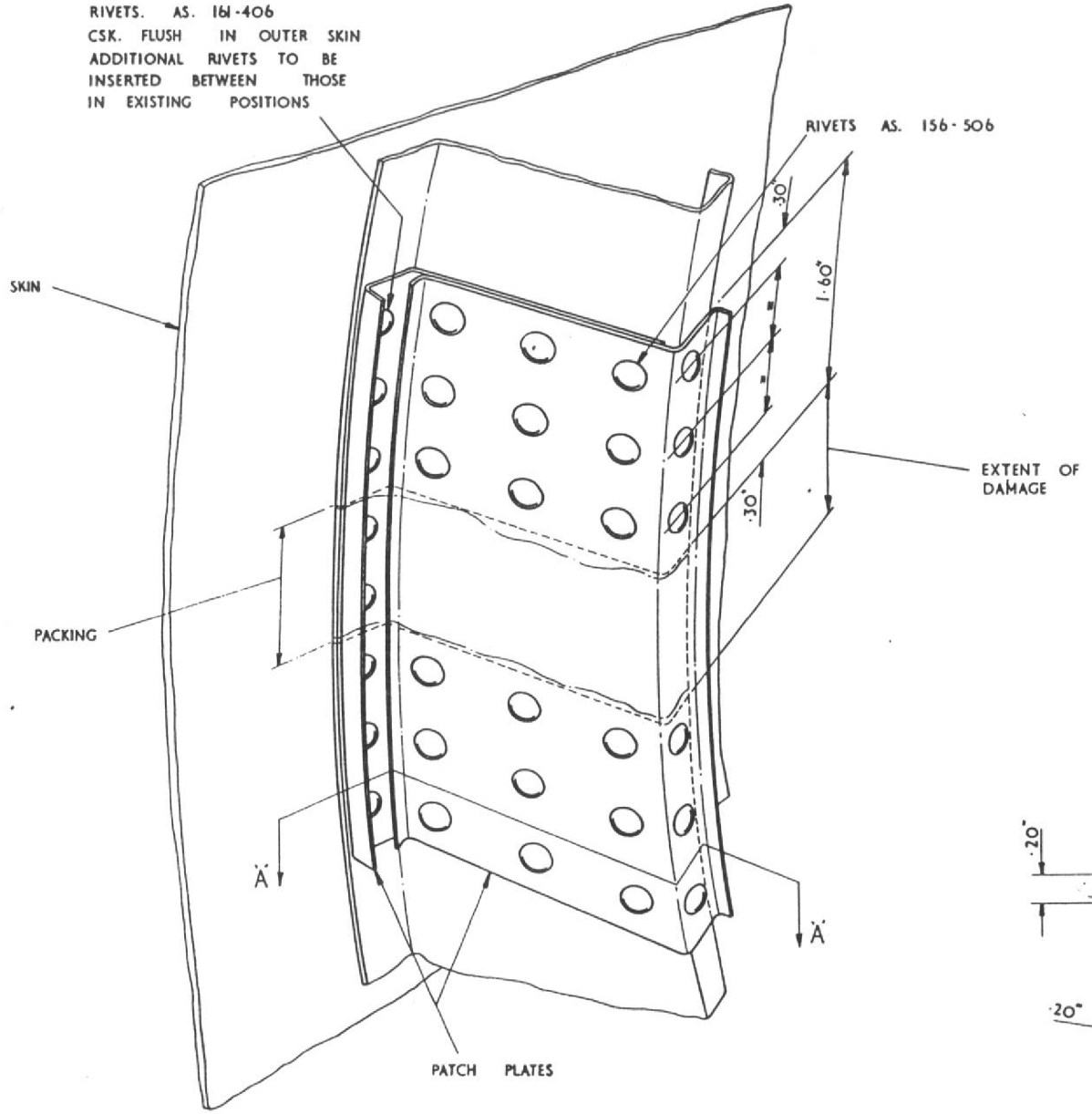
SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE IN SKIN AND STRINGER TO SMOOTH CONTOUR.
2. FROM SECTION R. 622 MAKE REPAIR STRINGER.
3. FIT REPAIR STRINGER, DRILL, AND RIVET IN POSITION.
4. FROM STD.1679/1 MAKE INSERTION STRINGER OF LENGTH SHOWN.
5. PLACE INSERTION STRINGER IN POSITION.
6. FROM 14 S.W.G. S.S. S 520 MAKE BUTT STRAP EQUAL IN LENGTH TO REPAIR STRINGER.
7. FIT BUTT STRAP, DRILL, AND RIVET IN POSITION.
8. FROM 16 S.W.G. L.A. L.72 MAKE PATCH AND PATCH PLATES.
9. FIT PATCH PLATES, DRILL, AND RIVET IN POSITION.
10. FIT PATCH, DRILL, AND RIVET IN POSITION.

NOTE

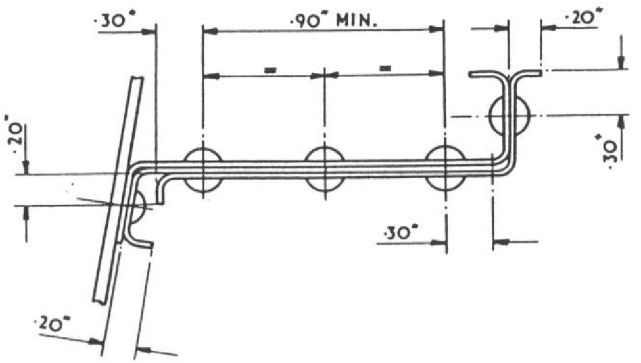
THIS REPAIR, APPLIES TO 16 S.W.G SKIN AND STD.1679/1 STRINGERS ON REAR FUSELAGE

FIG. 19. FLUSH REPAIR TO SKIN AND STRINGER



SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE TO SMOOTH CONTOUR
2. FROM 20 S.W.G. L.A.L.72. MAKE PATCH PLATES AND PACKING TO REPLACE DAMAGED PORTION OF FRAME FLANGE AS SHOWN
3. FIT PACKING AND PATCH PLATE WITH FLANGE ADJACENT TO SKIN, DRILL AND RIVET IN POSITION
4. FIT REMAINING PATCH PLATE, DRILL, AND RIVET IN POSITION



SECTION A·A

FIG. 20. REPAIR TO 20 S.W.G. LIGHT FRAMES

SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE TO SMOOTH CONTOUR
2. MAKE PATCH PLATES AS SHOWN
3. FROM 18, S.W.G. L.A. L.72 MAKE PACKING REPLACE DAMAGED PORTION OF FRAME FLANGE
4. FIT PACKING AND S.S. PATCH PLATE, DRILL AND RIVET IN POSITION
5. FIT L.A. PATCH PLATE, DRILL AND RIVET IN POSITION

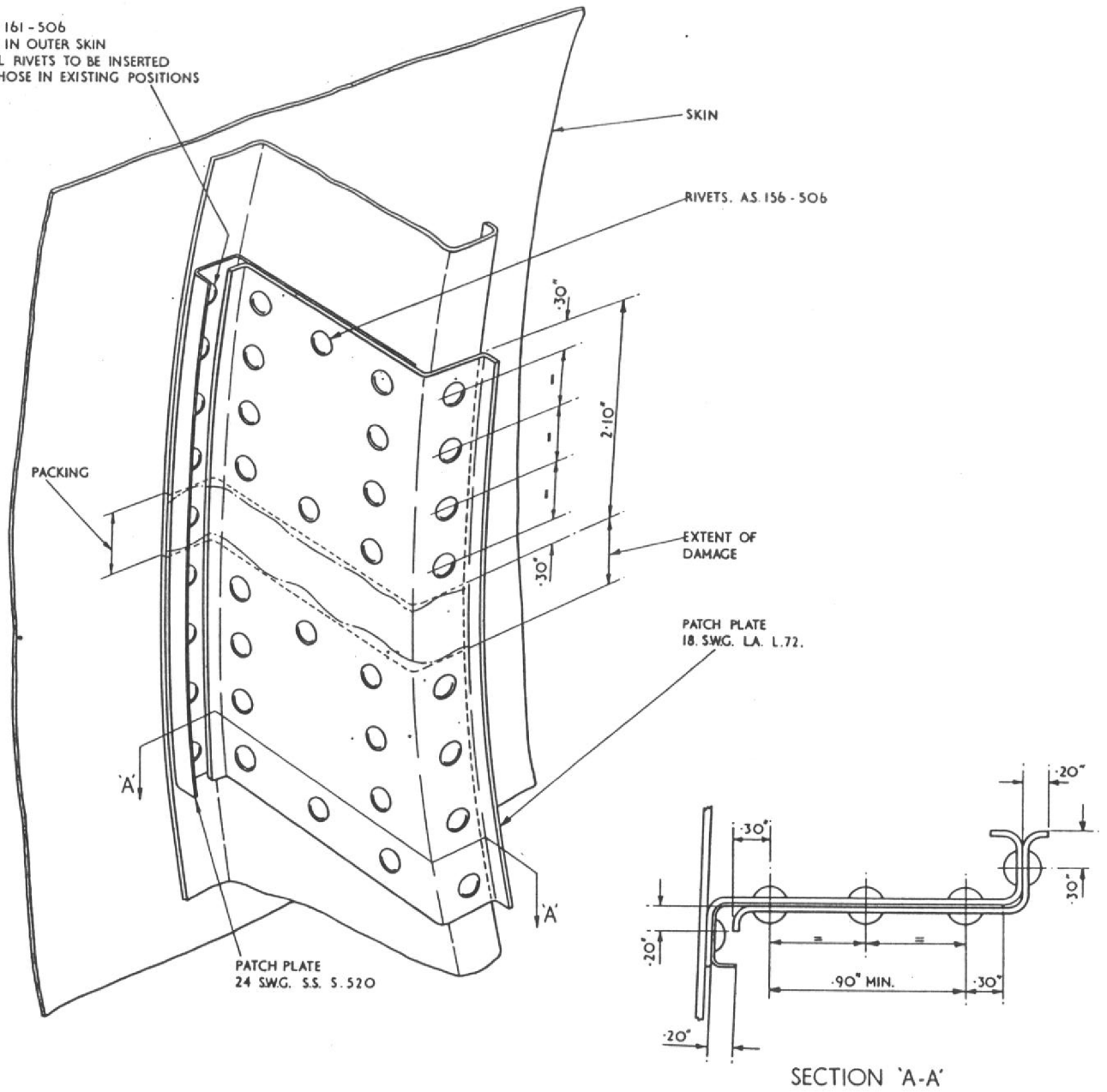
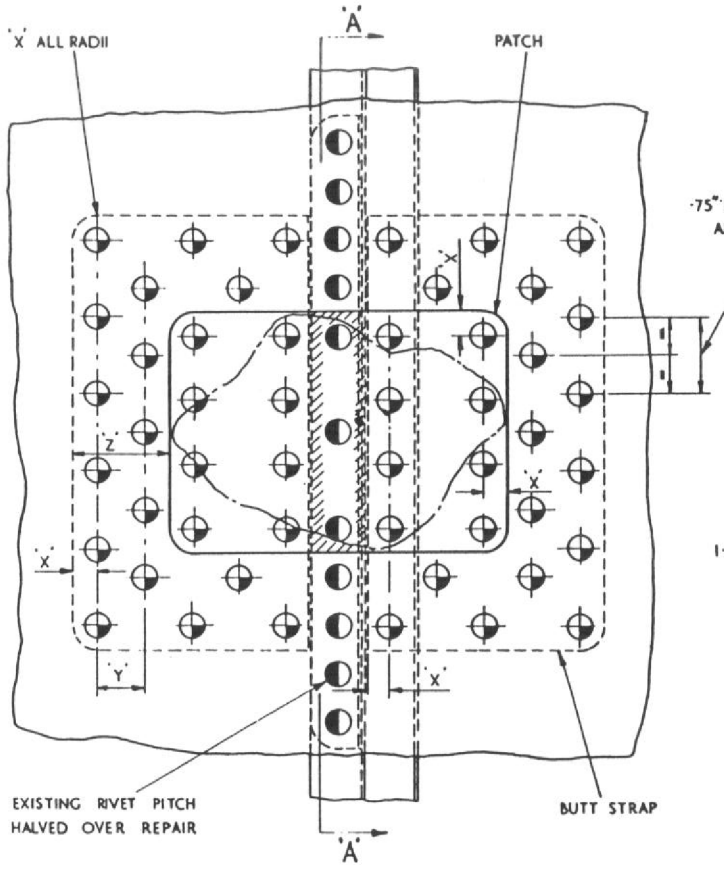
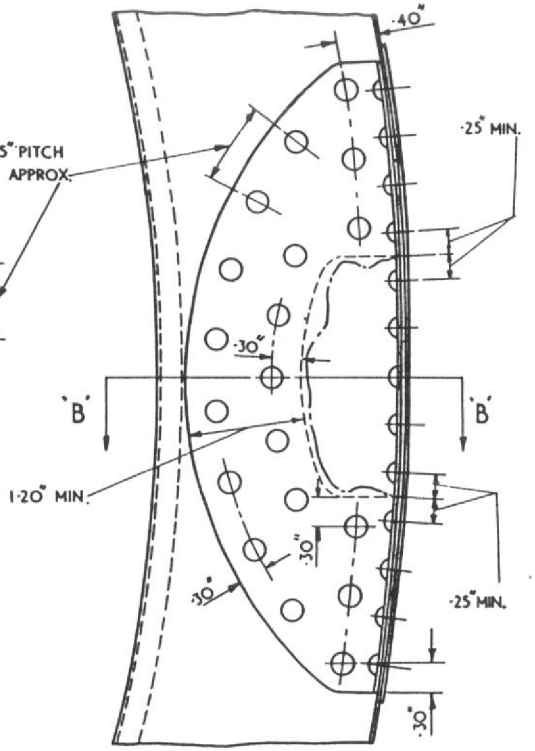


FIG. 21. REPAIR TO 18. S.W.G. LIGHT FRAMES

SEQUENCE OF OPERATIONS

1 CLEAN OUT DAMAGE IN FRAME AND SKIN TO SMOOTH CONTOUR
2 MAKE PATCH AND BUTT STRAPS FROM MATERIAL OF SAME S.W.G. AND SPEC^{N} AS THAT OF DAMAGED SKIN
3 MAKE PATCH PLATE AND PACKING FROM MATERIAL OF SAME S.W.G. AND SPEC^{N} AS THAT OF DAMAGED FRAME
4 INSERT PATCH PLATE, DRILL, AND RIVET IN POSITION
5 POSITION BUTT STRAPS, DRILL AND RIVET IN PLACE
6 POSITION PACKING AND PATCH, DRILL AND RIVET IN PLACE

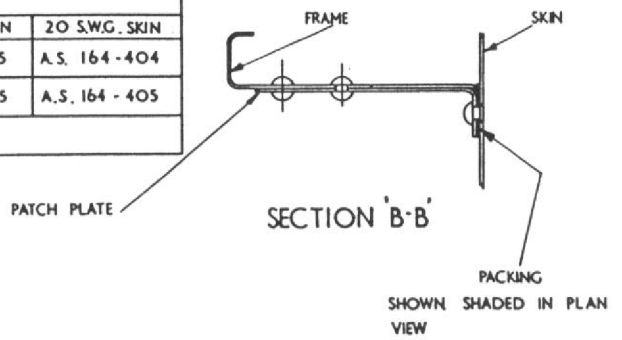




SECTION 'A-A'

KEY	18 S.W.G. FRAMES			20 S.W.G. FRAMES			
	14 S.W.G. SKIN	16 S.W.G. SKIN	20 S.W.G. SKIN	14 S.W.G. SKIN	16 S.W.G. SKIN	18 S.W.G. SKIN	20 S.W.G. SKIN
⊕	A.S. 161-607	A.S. 161-506	A.S. 164-404	A.S. 161-607	A.S. 161-506	A.S. 164-505	A.S. 164-404
◐	A.S. 164-406	A.S. 161-507	A.S. 164-406	A.S. 164-406	A.S. 161-506	A.S. 164-405	A.S. 164-405
○	A.S. 156-505			A.S. 156-404			

SKIN GAUGE	DIM^{N} 'X'	DIM^{N} 'Y'	DIM^{N} 'Z'
14 S.W.G.	·35"	·70"	1·40"
16 S.W.G.	·30"	·60"	1·20"
18 S.W.G.	·30"	·60"	1·20"
20 S.W.G.	·25"	·50"	1·0"



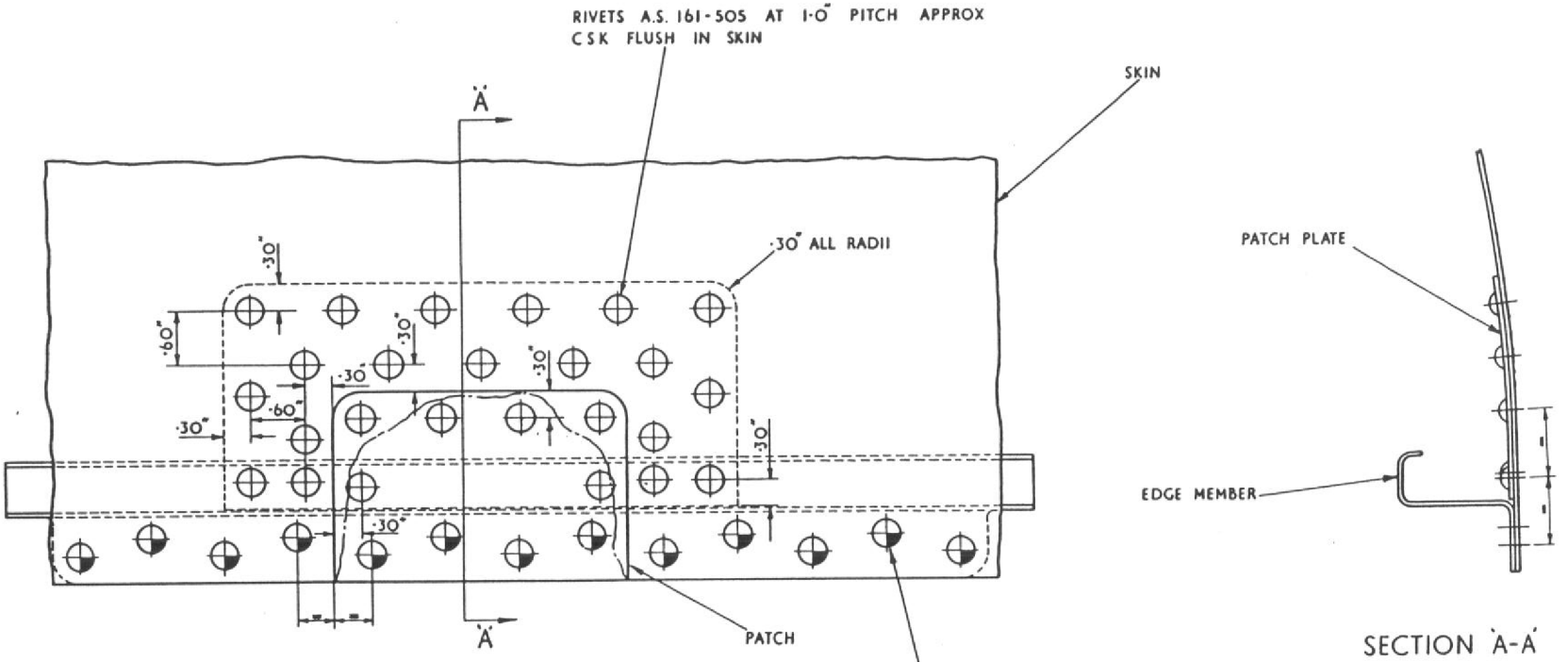
SECTION 'B-B'

SHOWN SHADED IN PLAN VIEW

FIG 22 REPAIR TO SKIN AND LIGHT FRAME

SEQUENCE OF OPERATIONS

1. REMOVE DAMAGED EDGE MEMBER
2. CLEAN OUT DAMAGE IN SKIN TO SMOOTH CONTOUR
3. FROM 18 S.W.G. L.A. L.72 MAKE PATCH AND PATCH PLATE
4. FIT NEW EDGE MEMBER, AND RIVET IN POSITION
5. FIT PATCH PLATE, DRILL, AND RIVET IN POSITION
6. FIT PATCH, DRILL, AND RIVET IN POSITION

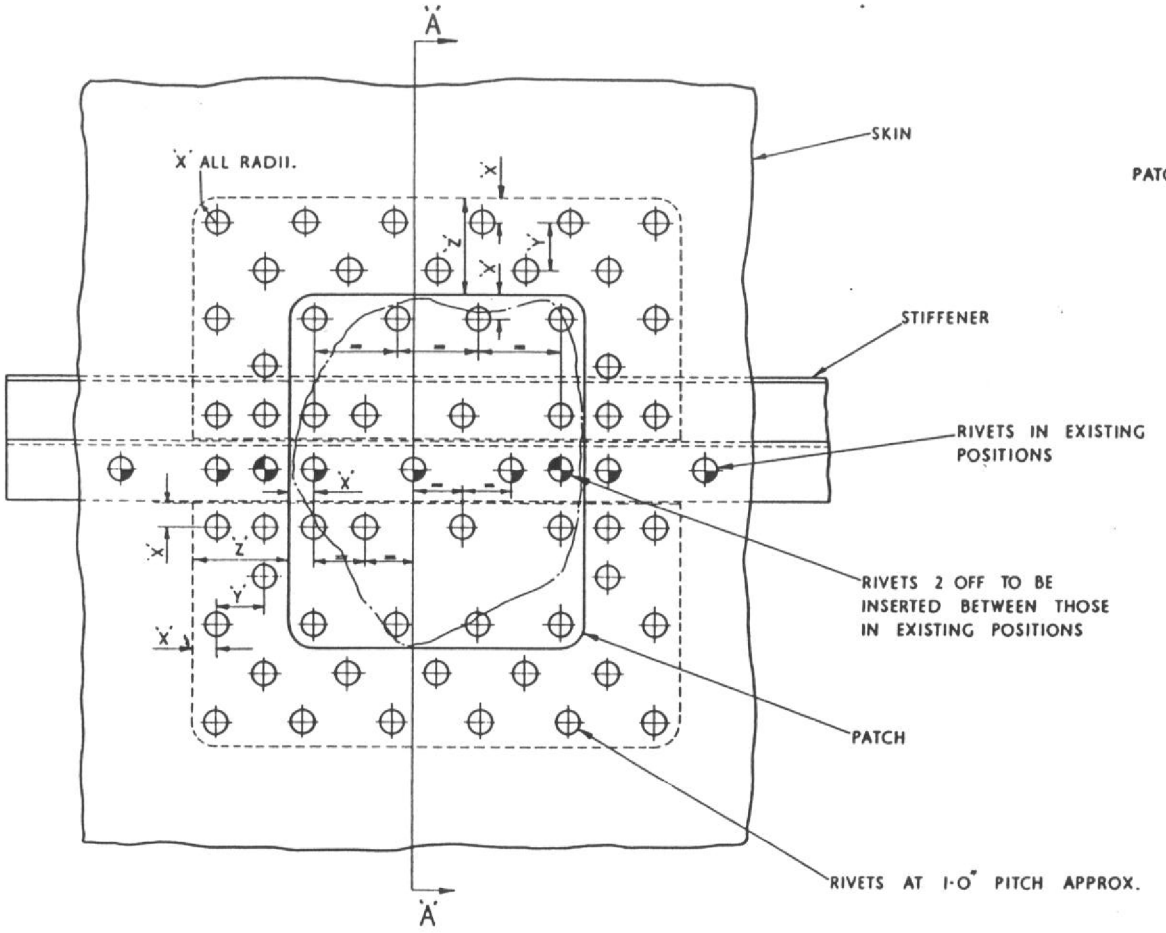


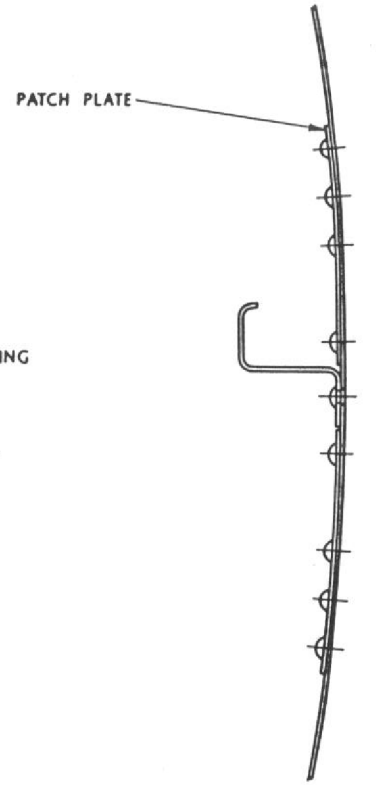
THIS REPAIR IS APPLICABLE TO THE FOLLOWING ACCESS DOORS :—

ENGINE STARTER ACCESS DOOR
GEARBOX ACCESS DOOR
ENGINE ACCESS DOOR

FIG. 23. FLUSH REPAIR TO EDGE OF ACCESS DOOR

SKIN GAUGE	DIMN 'X'	DIMN 'Y'	DIMN 'Z'
18 S.W.G.	·30"	·60"	1·20"
20 S.W.G.	·25"	·50"	1·0"





SECTION 'A-A'

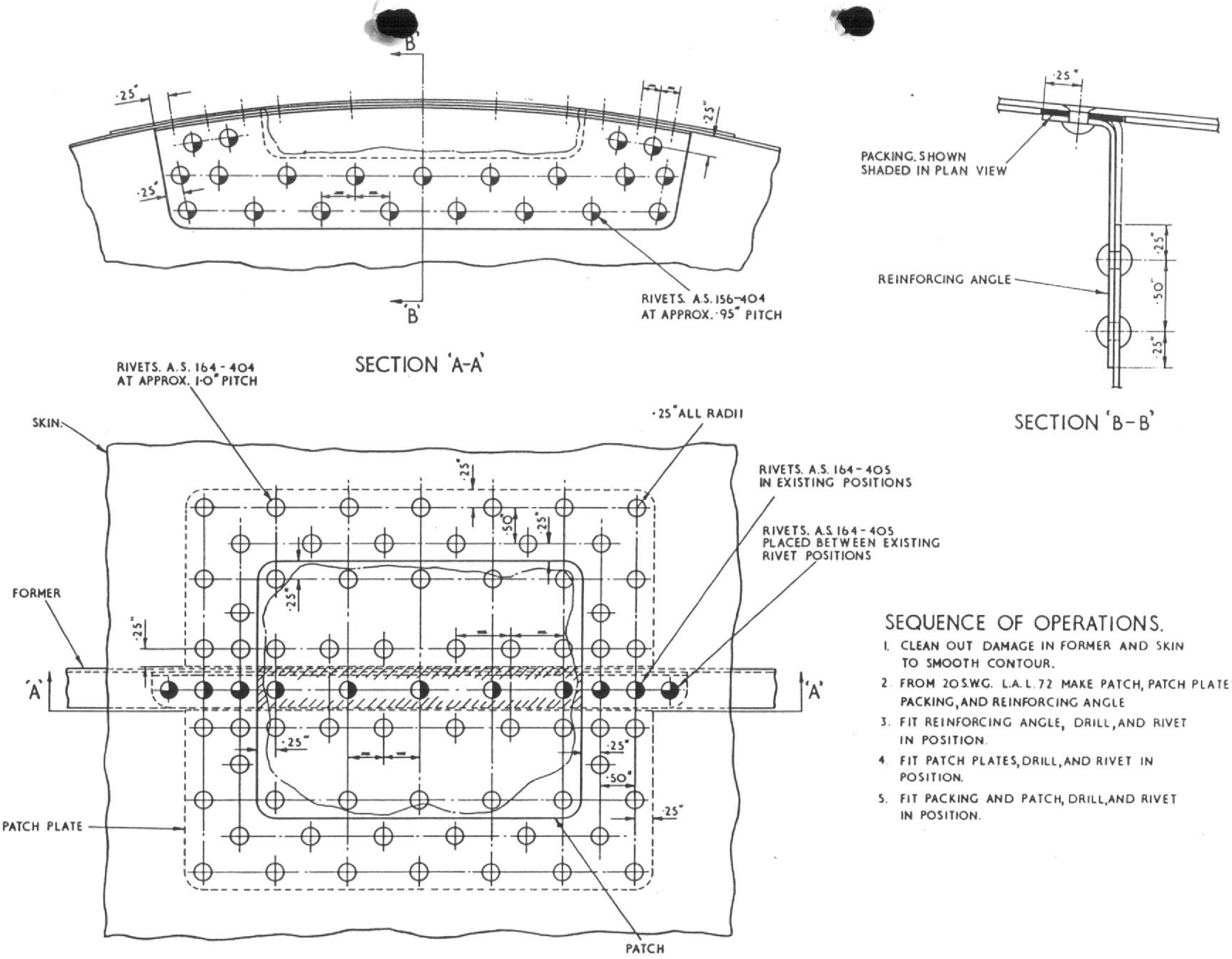
KEY	20 S.W.G. SKIN	18 S.W.G. SKIN	
	18 S.W.G. STIFFENERS	18 S.W.G. STIFFENERS	20 S.W.G. STIFFENERS
⊕	A.S. 164-404	A.S. 164-505	A.S.164-505
⊕ ⊕	A.S. 164-405	A.S. 161-505 OR A.S. 164-505 *	A.S.161-505 OR A.S. 164-505 *

*TYPE OF RIVET HEAD TO SUIT EXISTING HOLES
ALL RIVETS TO BE CSK FLUSH IN OUTER SKIN.

SEQUENCE OF OPERATIONS

1. REMOVE STIFFENER
2. CLEAN OUT DAMAGE IN SKIN TO SMOOTH CONTOUR
3. DRESS OUT ANY DAMAGE IN STIFFENER OR OBTAIN A NEW STIFFENER IF NECESSARY
4. FROM L.A. L.72. MAKE PATCH AND PATCH PLATE OF SAME S.W.G. AS THAT OF DAMAGED SKIN
5. FIT NEW OR REPAIRED STIFFENER AND RIVET IN POSITION
6. FIT PATCH PLATES, DRILL AND RIVET IN POSITION
7. FIT PATCH, DRILL AND RIVET IN POSITION

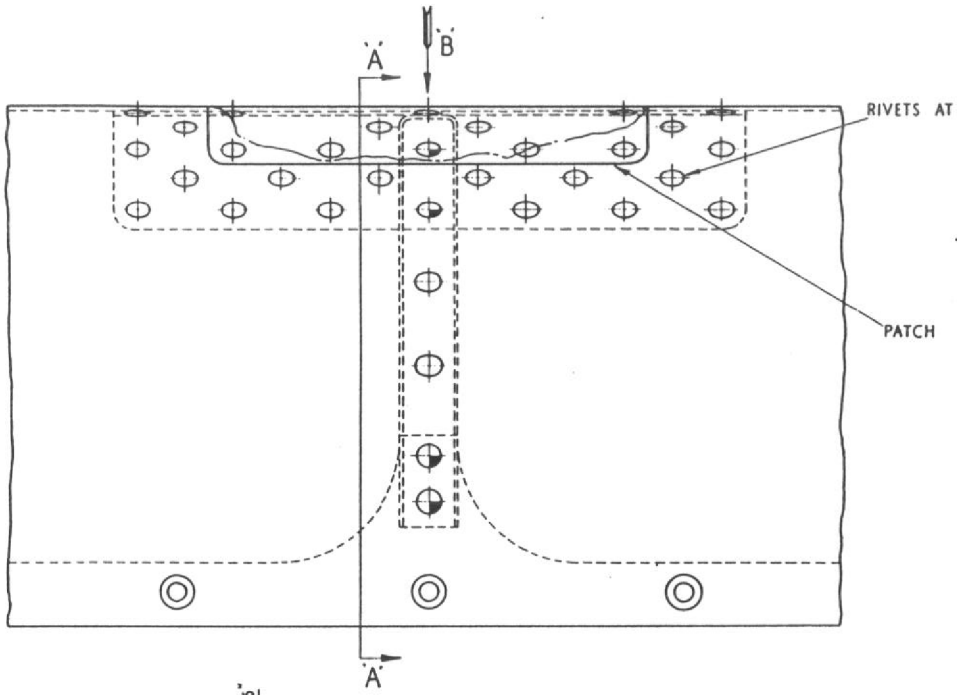
FIG. 24 FLUSH REPAIR TO ACCESS DOOR SKIN AND STIFFENER

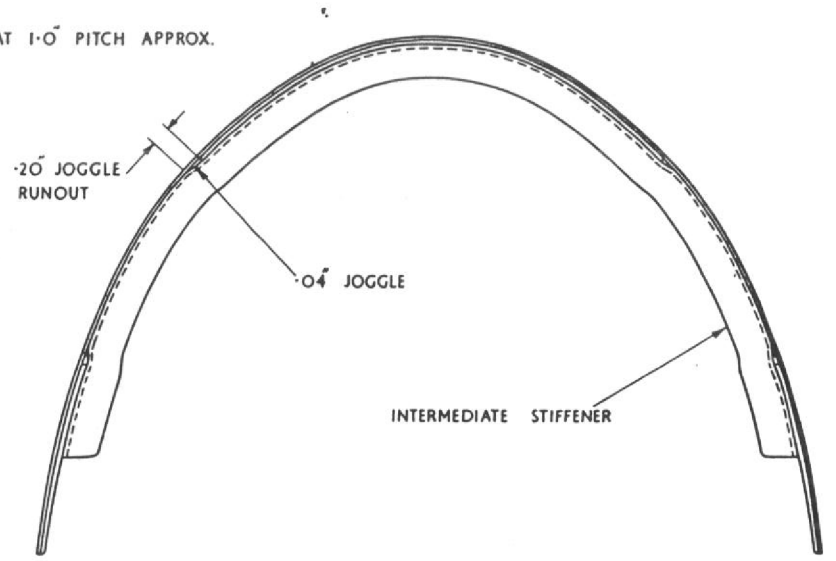


SEQUENCE OF OPERATIONS.

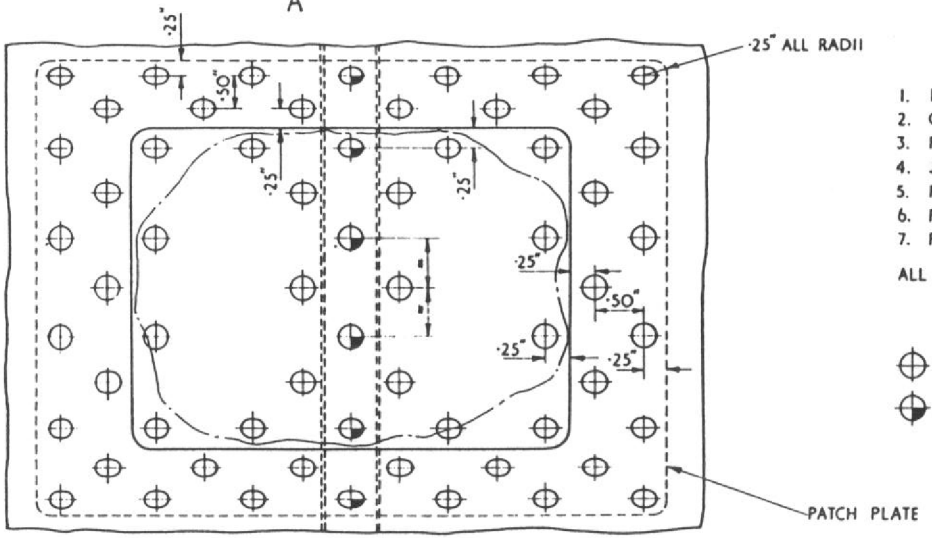
1. CLEAN OUT DAMAGE IN FORMER AND SKIN TO SMOOTH CONTOUR.
2. FROM 20 S.W.G. L.A.L. 72 MAKE PATCH, PATCH PLATES, PACKING, AND REINFORCING ANGLE
3. FIT REINFORCING ANGLE, DRILL, AND RIVET IN POSITION.
4. FIT PATCH PLATES, DRILL, AND RIVET IN POSITION.
5. FIT PACKING AND PATCH, DRILL, AND RIVET IN POSITION.

FIG. 25. FLUSH REPAIR TO HOOD FAIRING AND FORMER





SECTION 'A-A'



VIEW ON ARROW 'B'

SEQUENCE OF OPERATIONS

1. REMOVE STIFFENER
2. CLEAN OUT DAMAGE IN SKIN TO SMOOTH CONTOUR
3. FROM 20 S.W.G. L.A. L72. MAKE PATCH AND PATCH PLATE.
4. JOGGLE NEW STIFFENER AS SHOWN
5. FIT PATCH PLATE, DRILL, AND RIVET IN POSITION
6. FIT STIFFENER, DRILL AND RIVET IN POSITION
7. FIT PATCH, DRILL, AND RIVET IN POSITION

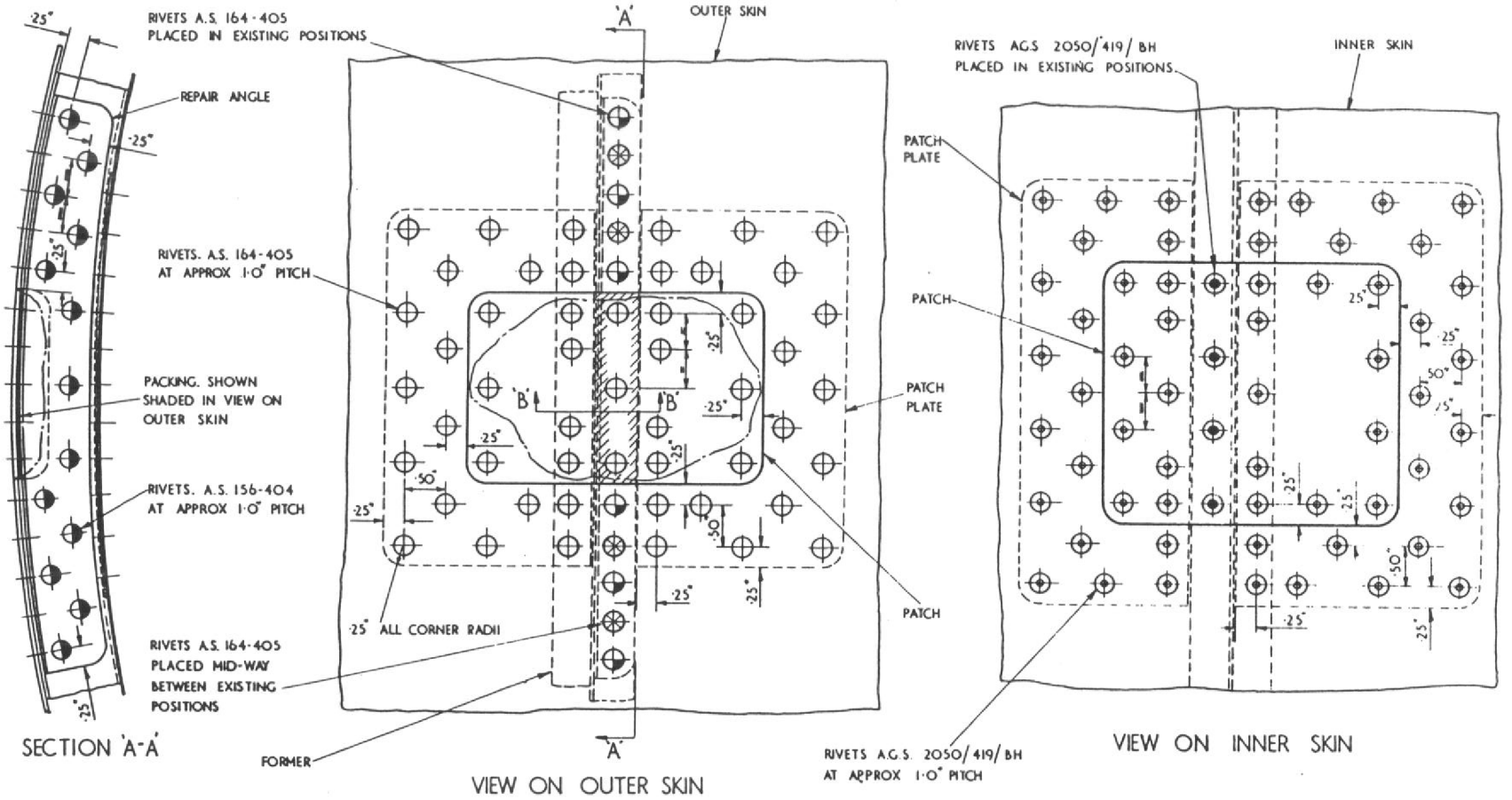
ALL DIMENSIONS MEASURED ALONG SKIN SURFACE

RIVETS

A.S. 164 - 404
A.S. 164 - 405
} CSK. FLUSH ON OUTSIDE

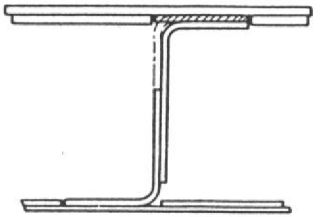
NEW STIFFENER TO PICK UP EXISTING HOLES IN SKIN

FIG. 26. FLUSH REPAIR TO SPINE SKIN



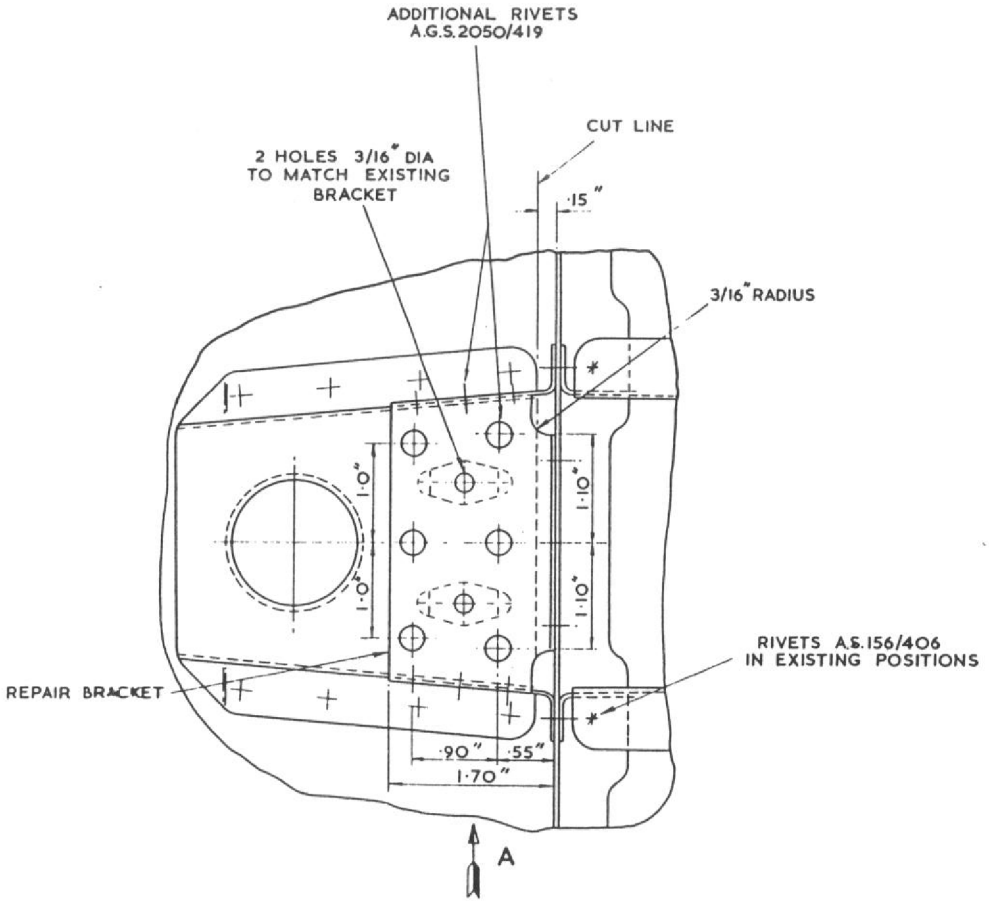
SEQUENCE OF OPERATIONS

1. CLEAN OUT DAMAGE IN SKIN AND FORMER TO SMOOTH CONTOUR
2. MARK OUT AND REMOVE PORTION OF INNER SKIN, IN ORDER TO FACILITATE ATTACHMENT OF REPAIR ANGLE TO FORMER AND TO PROVIDE ACCESS FOR SOLID RIVETING ON OUTER SURFACE. HOLE SHOULD THEREFORE BE OF SUCH A SHAPE AND SIZE AS TO ENABLE THIS WORK TO BE COMPLETED AND TO ALLOW INSERTION OF PATCH PLATES
3. FROM 22 S.W.G. L.A. TO SPEC.ª L.72 MAKE PATCH AND PATCH PLATES FOR INNER SKIN
4. FIT INNER SKIN PATCH, AND DRILL RIVET HOLES IN PATCH THROUGH HOLES IN FORMER, REMOVE PATCH
5. FROM 20 S.W.G. L.A. TO SPEC.ª L.72 MAKE REPAIR ANGLE.
6. INSERT AND FIT REPAIR ANGLE AND RIVET IN POSITION
7. FROM 18 S.W.G. L.A. TO SPEC.ª L.72 MAKE PACKING PATCH, AND PATCH PLATES FOR OUTER SKIN
8. FIT PATCH PLATES TO OUTER SKIN, DRILL AND RIVET IN POSITION
9. FIT OUTER SKIN PACKING AND PATCH, DRILL AND RIVET IN POSITION
10. FIT INNER SKIN PATCH PLATES, DRILL, AND RIVET IN POSITION
11. FIT INNER SKIN PATCH, DRILL, AND RIVET IN POSITION

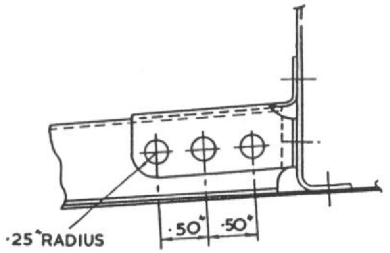


SECTION 'B-B'

FIG. 27. FLUSH REPAIR TO SKIN AND FORMER OF NOSE WHEEL REAR DOOR



INVERTED PLAN VIEW OF NOSE WHEEL CHANNEL



VIEW ON ARROW A

SEQUENCE OF OPERATIONS

1. CUT AWAY DAMAGED FLANGES AS SHOWN.
2. FROM 20 S.W.G. STAINLESS STEEL S.520 MAKE A REPAIR BRACKET FLANGED ON THREE SIDES WITH 0·07 IN. BEND RADII.
3. DRILL AND RIVET REPAIR BRACKET IN POSITION.

FIG.28 REPAIR TO CHANNEL FOR NOSE WHEEL STOP