

## TAIL PLANE

### Repair of damage affecting the spar flange and bottom skin of the tail plane

As a consequence of a heavy landing or bad handling the failure of the compression member attachment to the tailplane front spar may occur.

1. The damage, totally torn skin and buckled flange of the spar, should be repaired as follows:—

- (1) Cut away skin where shown cross hatched on fig. 1.
- (2) Remove channel reinforcing from spar and unrevet 'V' brace from the ribs.
- (3) Dress out buckled flange of spar and inspect carefully for cracks or other damage; this may consist of a crack along the bend of the flange or tears at the bolt holes. Repairable damage must not exceed 2 in. on either side of the centre line of the tail-plane. All cracks must be drilled at extremities.
- (4) Remove tail-plane attachment brackets and modify the fitting as shown at the bottom left corner of fig. 1. Part number 'R.C1.TP.113' must be stamped upon the attachment fitting after this alteration.
- (5) Fit new channel reinforcement, R.C1

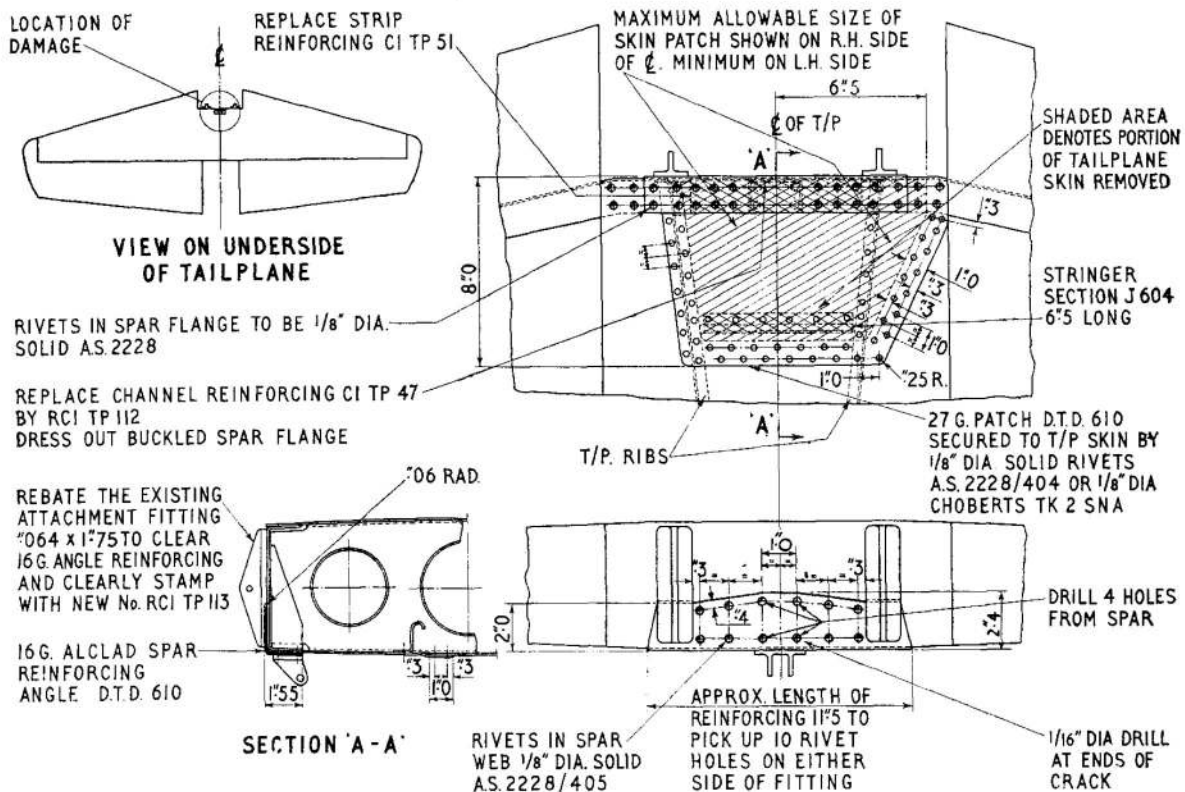
TP.112, and new strip reinforcement, C1.TP.51. This channel reinforcing member should be drilled from existing holes in the spar and is usually supplied blank. The rivets through the four bottom holes should not be fitted before the reinforcing angle is attached.

- (6) The three countersunk holes, through which attachment of 'V' brace and spar flange was attached are no longer used and should be blanked with 120 degree countersunk  $\frac{1}{8}$  in. dia. rivets, AS.2230/406 (fig. 2).

**Note . . .**

*This instruction only applies to tailplanes pre Mod. H.167.*

- (7) Repair skin with patch as illustrated. Locate stringer section J.604 and rivet to skin patch.
- (8) Make up spar reinforcing angle. Mark off rivet holes from spar and drill.



**FIG. 1. METHOD OF REPAIR**

**RESTRICTED**

- (9) Offer up spar reinforcing angle to overlap skin patch and rivet to spar flange. Lift up skin to afford entrance for the dolly. This will not be necessary where there is an inspection hole available in top skin.
- (10) Position plates C1.TP.183 inside reinforcing channel, after drilling them for the two holding rivets as shown, so that they match up to existing 2 B.A. bolt holes. Secure each with two  $\frac{1}{8}$  in. dia. rivets through channel spar and reinforcing angle, countersinking on the

outside. This is a precautionary measure to facilitate easy replacement in the event of the thread stripping on a holding nut.

- (11) Drill and rivet angle to front of spar face.
- (12) Mark off additional holes in skin patch and drill and rivet, using Chobert rivets if necessary.
- (13) Refit tailplane attachment brackets now numbered R.C1.TP113 and also fit tail wheel compression strut fitting C1.TP.107.

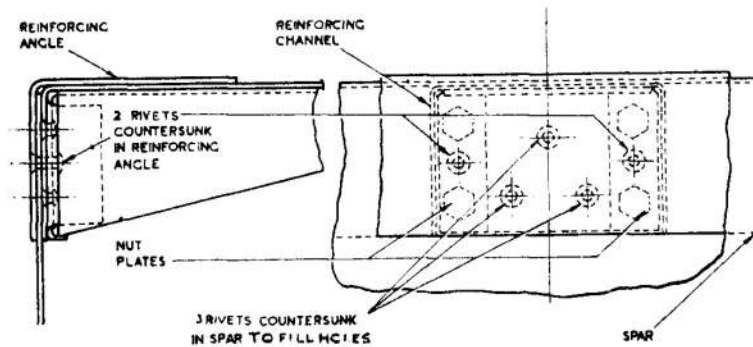


FIG. 2. CHANNEL AND ANGLE REINFORCEMENT

**Estimate of requisite labour**

2. The work itemised above will take approximately 50 bench hours.

**Repair material**

3. The following repair material will be required:—

Repair Item Number	Stores Reference	Description	Size	Specification
		Nut plate RC.1.TP.183		
		Channel RC.1.TP.112		
		Strip RC.1.TP.51		
		Fitting RC.1.TP.107		
1	30B/1432	Alclad	26 s.w.g.	} D.T.D.610
232	30B/1429	Alclad Section J.604	16 s.w.g.	
	28Q/10408	Rivet, msh. hd. AS2228/406	$\frac{1}{8}$ in. dia.	} D.T.D.327
	28Q/10652	Rivet, msh. hd. AS2228/405	$\frac{1}{8}$ in. dia.	
	28Q/10407	Rivet, msh. hd. AS2228/404	$\frac{1}{8}$ in. dia.	
	28Q/1068	Rivet, csk. hd. AS2230/406	$\frac{1}{8}$ in. dia.	

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