

## GROUP D TAIL UNIT

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*Repair  
 Leaflet No.*

#### FIN

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## FIN

### Repair to fin main skin

1. Where the fin main skin has cracked in the area of the bottom interspar rib, it may be repaired as shown in this leaflet. Reference should be made to the following repair drawing:-

### RD.399 REPAIR TO FIN MAIN SKIN

2. The recommended sequence of operations is as follows:-

- (1) Remove the fin as laid down in the appropriate Vol.1, Sect.1, Chap.3.
- (2) Remove cover plate Part No. A.183897 by removing the pop rivets attaching it to the bottom interspar rib.
- (3) Remove the appropriate fixings, cut and remove the affected portion of skin as shown on RD.399.
- (4) Cut and remove the necessary portion of intersparrib B as shown on R.D.399.
- (5) Cut and remove the necessary portion of flange of rib aft of rear spar as shown on RD.399.

- (6) From 20 s.w.g. light alloy to specification L.72, make false flange item 4 (port), item 9 (stbd.).
- (7) From 18 s.w.g. light alloy to specification L.72 make false flange item 5 (port), item 10 (stbd.).
- (8) Offer up false flange, item 4 (port) item 9 (stbd.), to interspar rib B. Drill and insert the appropriate fixings.
- (9) Offer up false flange, item 5 (port), item 10 (stbd.) to rib aft of rear spar. Drill and insert the appropriate fixings.
- (10) From 22 s.w.g. stainless steel sheet to specification S.520 make butt strap item 2 (port), item 7 (stbd.).
- (11) From 22 s.w.g. stainless steel sheet to specification S.520 make butt strap item 3 (port), item 8 (stbd.).
- (12) Offer up butt strap item 2 (port), item 7 (stbd.). Drill and insert the appropriate fixings.

- (13) Offer up butt strap, item 3 (port), item 8 (stbd.). Drill and insert the appropriate fixings.
- (14) If the fin undergoing repair has had Mod.621 incorporated retrospectively to Sketch No.B.26316, the existing joggled skin extension angles must be removed and discarded. In their place fit reinforcing angles Part No. D.222456, item 4 (port), item 5 (stbd.).
- (15) From 18 s.w.g. stainless steel sheet to specification S.520, make the replacement portion of skin, item 1 (port), item 6 (stbd.).
- (16) Offer up items 1 and 6. Drill and insert appropriate fixings.
- (17) Replace cover plate Part No.A.183897. The top face of the bottom interspar rib in way of the pop rivets should be coated with Bostik 1790 before assembly to retain the mandrel heads.
- (18) Replace the fin as laid down in the appropriate Vol.1, Sect.3, Chap.3.

### 3. The following repair material will be required:-

Ref.No.	Part No.	Description	Size	Specification	Remarks
26FX/NIV	D.222456/4	Reinforcing angle (port)	-	-	} To replace retrospective Mod.621 angles For item 1 and 6 For item 2, 3, 7 and 8
26FX/NIV	D.222456/5	Reinforcing angle (stbd.)	-	-	
30A/2515	-	Sheet, stainless steel	18 s.w.g.	S.520	
30A/2510	-	Sheet, stainless steel	20 s.w.g.	S.520	

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Part No.	Description	Size	Specification	Remarks
104-7310	Steel, stainless steel	1/2 in. dia.	2.230	For item 2, 3, 4 and 5
104-7312	Steel, stainless steel	1/2 in. dia.	2.230	For item 1 and 2
104-7314	Retaining ring (part)			To replace
104-7315	Retaining ring (part)			retaining ring

Ref.No.	Part No.	Description	Size	Specification	Remarks
30B/1732	-	Sheet, aluminium alloy	20 s.w.g.	L.72	For item 4 and 9
30B/1730	-	Sheet, aluminium alloy	18 s.w.g.	L.72	For item 5 and 10
28Q/7943	A.S.164/304	Rivets, csk/hd.	3/32 in. dia.	L.37	
28Q/7655	A.S.164/404	Rivets, csk/hd.	1/8 in. dia.	L.37	
28Q/7656	A.S.164/405	Rivets, csk/hd.	1/8 in. dia.	L.37	
28Q/8147	A.S.164/406	Rivets, csk/hd.	1/8 in. dia.	L.37	
28Q/8149	A.S.164/506	Rivets, csk/hd.	5/32 in. dia.	L.37	
28Q/9040	A.S.164/507	Rivets, csk/hd.	5/32 in. dia.	L.37	
28Q/9534	A.S.164/508	Rivets, csk/hd.	5/32 in. dia.	L.37	
28Q/1650	A.S.156/404	Rivets, sn/hd.	1/8 in. dia.	L.37	
28Q/1660	A.S.156/405	Rivets, sn/hd.	1/8 in. dia.	L.37	
28Q/9417230	AGS.2050/524	Rivets, pop, dm/hd.	5/32 in. dia.	D.T.D.10	
28D/12528	A.25/1/B	Bolts, H.T.S.	4B.A		
28M/13086	A.27/B/P	Nuts, M.T.S.	4B.A		
28W/9419474	SP.15/B	Washers, aluminium alloy	4B.A.		
26FX/NIV	100/FH/190/3	Jo-bolt, csk/hd.	3/16 in. dia.		
26FX/NIV	100/FH/190/4	Jo-bolt, csk/hd.	3/16 in. dia.		

# REPAIR TO THE MAIN SKIN

Remove the rivets from the main skin in the area of the damaged structure. It may be required as shown in this sketch. Repairs should be made to the following extent:-

- From 12 s.w.g. light alloy to specification L.72, make false flange item 5 (part), item 10 (part).
- From 20 s.w.g. light alloy to specification L.72, make false flange item 4 (part), item 9 (part).

- If the fit of the replacement rivets is not satisfactory, the rivets should be replaced with the rivets shown in this sketch No. B.25210, the rivets should be replaced with the rivets shown in this sketch No. B.25210, the rivets should be replaced with the rivets shown in this sketch No. B.25210.
- Other up false flange item 4 (part).

# FIN

## Repair to fin attachments at frame 52

1. Front fin attachment fittings at the top of frame 52 have become loose. Also the rivets holding the top skin to the attachment angles have become loose and in some cases, the attachment angles, which pick up the uppermost bolts in the fin fittings have been found broken, (SI/Hunter/133 refers).

2. Repairs may be carried out in accordance with the following paragraphs and with reference to the repair figures 1 and 2 in this leaflet.

3. The recommended sequence of operations is as follows:

(1) Remove fin in accordance with the Aircraft servicing Manual Sect. 3 Chap 3.

(2) Carry out repairs to port and starboard fittings as necessary as detailed in repair figures 1, 2 and using tables 1 and 2 for replacement items.

Note...

Second oversize items where required are to be manufactured in accordance with Sketch Nos. A44739, A44841 and A44842 available on demand from RTO BAe PLC, Weybridge Division, Kingston.

(3) Refit fin in accordance with the Aircraft Servicing Manual Sect. 3 Chap 3.

TABLE 1






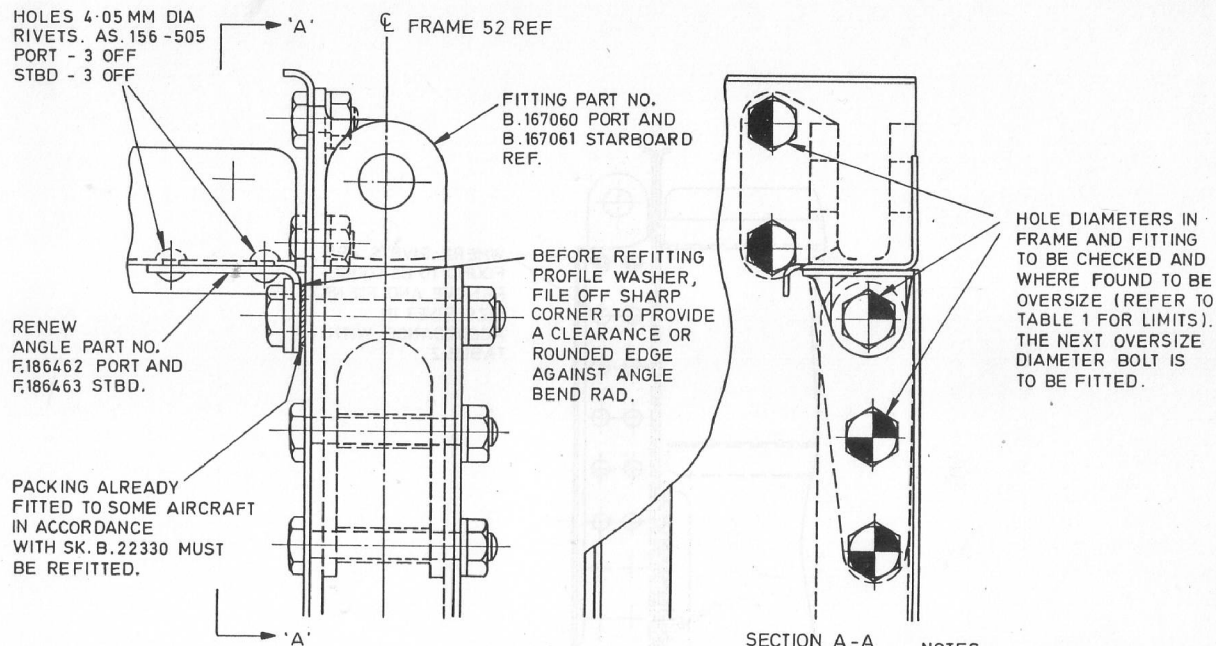
Bolt Code	Initial Production Bolt	1st Oversize Bolt Assy.	2nd Oversize Bolt Assy.
	Bolt A25/17/G Washer SP16 G Nut A27 G P Holes 5/16 in dia Hawker Fit 'C'	Bolt HPD50156/17 Washer SP16 G Nut A27 G P Holes 21/64 in dia Newall Fit 'B'	Bolt SK A44841 Washer SK A44842/1 Nut A27 G P Holes 11/32 in dia Newall Fit 'B'
	Bolt A25/15/E Washer SP15 E Nut A27 E P D Tube Std 1507/24/092 Holes 1/4 in dia Hawker Fit 'C'	Bolt HPD50133/15 Washer SP15 E Nut A27 E P D Tube HPD50157 Holes 17/64 in dia Newall Fit 'B'	Bolt SK A44739/2 Washer SK A44842/2 Nut A27 E P D Tube SK A44842/3 Holes 9/32 in dia Newall Fit 'B'
	Bolt A25/2/E Washer SP15 E Nut A27 E P Holes 1/4 in dia Hawker Fit 'C'	Bolt HPD50133/17 Washer SP15 E Nut A27 E P Holes 17/64 in dia Newall Fit 'B'	Bolt SKA44739/1 Washer SK A44842/2 Nut A27 E P Holes 9/32 in dia Newall Fit 'B'



TABLE 2

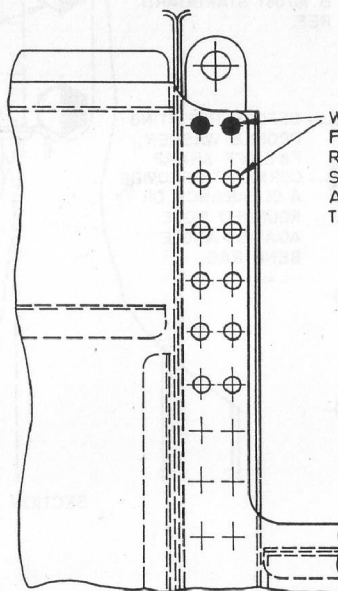
<i>Rivet Code</i>	<i>Initial Production Rivet</i>	<i>1st Oversize Rivet</i>	<i>2nd Oversize Rivet</i>
	AS164/405  Holes 3.25mm dia Csk 120° x 0.04 in deep	AS164/506  Holes 4.05mm dia Csk 120° x 0.045 in deep Finish off flush in skin	AS164/606  Holes 4.85mm dia Csk 120° x 0.045 in deep Finish off flush in skin
	AS164/403  Holes 3.25mm dia Csk 120° x 0.04 in deep both sides	AS164/504  Holes 4.05mm dia Csk 120° x 0.045 in deep both sides Finish off flush both sides	AS164/604  Holes 4.85mm dia Csk 120° x 0.045 in deep both sides Finish off flush both sides



# NOTES.

1. PORT VIEW SHOWN, STARBOARD SIMILAR.
2. SKIN COVERING OMITTED FOR CLARITY.
3. NUTS TO BE BEEN LOCKED.
4. BOLT HOLES TO BE C,SK. 90° X 0.03 IN. DEEP TO ACCOMODATE BOLT UNDERHEAD RADIUS.
5. ASSEMBLE WITH JOINTING COMPOUND TO DTD 369.
6. PAINT WITH EPOXY PRIMER TO DTD 5567 SCHEME 1.

FIG. 1. VIEW ON FRONT ATTACHMENT FITTING FOR FIN



WHERE RIVETS ARE  
FOUND TO BE LOOSE  
REMOVE AND FIT NEXT  
SIZE RIVET IN  
ACCORDANCE WITH  
TABLE 2.

NOTE.  
PORT VIEW SHOWN  
STARBOARD SIDE SIMILAR

FIG. 2. SKIN RIVETING AT FRAME 52

## TAILPLANE

**Replacement of worn hinge blocks in tailplane**

1. Where tailplane movement exceeds the dimensions shown on RD.441 due to wear the tailplane attachments in the fuselage are to be rectified in accordance with leaflet B.3/10 and the tailplane hinge blocks and caps renewed as shown in this leaflet. The following repair drawing is included with this leaflet:-

**RD.441 - REPLACEMENT OF WORN HINGE BLOCKS IN TAIL PLANE**

2. The recommended sequence of operations is as follows:-

- (1) Remove the tailplane from the fuselage as shown in A.P.4347, Vol.1.
- (2) Remove the access panels from the top surface of the tailplane in the

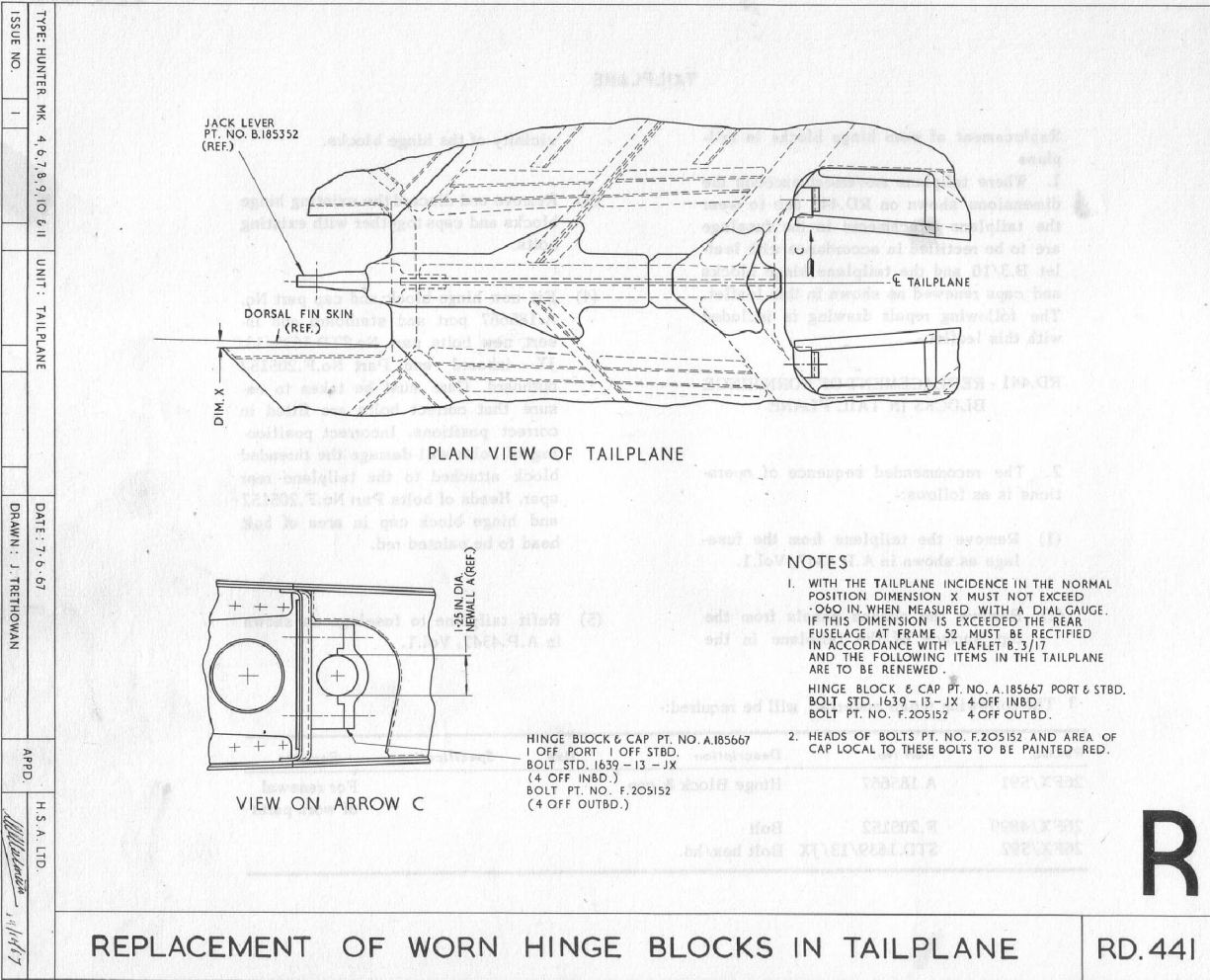
vicinity of the hinge blocks.

- (3) Remove and discard the existing hinge blocks and caps together with existing bolts.
- (4) Fit new hinge block and cap part No. A.185667 port and starboard and insert new bolts part No.STD.1639/13/JX inboard and Part No.F.205152 outboard. Care must be taken to ensure that correct bolts are fitted in correct positions. Incorrect positioning of bolts will damage the threaded block attached to the tailplane rear spar. Heads of bolts Part No.F.205152 and hinge block cap in area of bolt head to be painted red.
- (5) Refit tailplane to fuselage as shown in A.P.4347, Vol.1.

3 The following repair material will be required:-

Ref.No.	Part No.	Description	Size	Specification	Remarks
26FX/591	A.185667	Hinge Block & cap			For renewal of worn parts
26FX/4899	F.205152	Bolt			
26FX/592	STD.1639/13/JX	Bolt hex/hd.			

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