

Appendix 1 BRAKE CONTROL CABLE

(Completely revised)

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DESCRIPTION

General information

1. The control cable (fig.1) is a Teleflex control incorporating a wire cable housed in a flexible conduit. One end of the wire terminates in a swaged fork end which is connected to the short length of Bowden cable from the brake lever on the control column; the opposite end terminates in a swaged and pegged, barrel-type nipple which is connected to the brake-control unit fitted on the starboard side of the main equipment bay.

2. The flexible conduit is in two lengths separated by a pressure seal assembly. This seal assembly consists of a pressure seal retained within the shouldered bore of a flanged, cylindrical adapter by a seal cap screwed on to one end of the adapter. An O sealing ring, abutment washer and cable abutments are interposed between the pressure seal and the seal cap. Cable abutments, inserted into the opposite end of the adapter bore, are retained against the bore shoulder by an internal retaining ring.

3. Ferrules are fitted to the conduit ends. An adjusting screw and lock nut is fitted to the conduit end adjacent to the swaged fork end; a cable abutment fitting and an adjuster assembly are fitted to the conduit end adjacent to the swaged nipple. The fork end and pressure-seal cap are enclosed in Neoprene covers.

Cable run (fig.2)

4. From the connection at the control column, the cable is routed downwards through the cockpit floor, between fuselage frames 10 and 11, and thence rearwards on the port side of the fuselage. Between frames 16 and 17 the cable is routed upwards

and across to the starboard side of the fuselage and then through frame 17 to connect to the brake-control unit.

5. At three positions, between frames 10 and 13, the cable is secured to the cockpit air pipe with stud fastened strappings (Hellermann), the cable being sheathed with Thermofit tubing at these positions. Aft of the pressure bulkhead (frame 14), the cable is protected at six positions with Thermofit tubing (2.5 in. long). Two bolts (upper and two screws (lower), together with double spring washers, secure the pressure seal assembly to a mounting block on the forward face of the bulkhead.

REMOVAL AND ASSEMBLY

Cable removal

6. Ensure that the aircraft is electrically safe and that the live cartridges have been removed from the canopy firing unit and the ejection seat. To remove the cable:-

(1) Refer to Sect.3, Chap.1A. Remove the canopy.

(2) Remove the ejection seat.

(3) Open the hatch which gives access to the starboard side of the main equipment bay.

(4) Remove the stocking from the base of the control column.

(5) Refer to Sect.2, Chap.4, fig.9 and remove floor panels 30, 31 and 33.

(6) Remove covers from cable conduit to gain access to cable and air pipes.

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(7) Remove the locating bolts from cable conduit assembly at frame 14 and move conduit towards the rear of the cockpit to give access to air pipe connections.

(8) Remove air pipes to gain access to the brake cable pressure seal assembly.

Note...

Extreme care is to be taken whilst removing these pipes to avoid damage to the flanges.

(9) Untape the ends to free the Neoprene cover at the control column; undo the locknut and slacken the adjusting screw of the cable. Remove the split pin, washer and shackle pin to separate the brake lever Bowden cable from the Teleflex cable. Detach the latter from the control column.

(10) Slacken the adjuster at the nipple end of the cable. Refer to AP105B-0560-1. Free the nipple from the brake control unit. Push the cable end forward through frame 17.

(11) Remove the two bolts (upper) and the two screws (lower), together with the associated double spring washers, securing the pressure seal assembly to the mounting block on the pressure bulkhead, and separate the contact faces.

(12) Unstrap the cable from the cockpit air pipe, between frames 10 and 13, and feed the cable forwards into the cockpit.

Cable assembly

7. Prior to reassembly, untape the ends of the Neoprene cover over the forward end of the pressure seal assembly, unscrew the seal cap and withdraw the cable abutments and O sealing ring; if neces-

sary, renew the ring Ref. No. 27QA/9439918 and refit the remaining items. Position the Neoprene cover and retape the ends with Tygaflor T.120 or Permaglass 021/050 lacing tape, the tape to finish with a clove hitch then a reef knot. Ensure cable has freedom of movement and then seal the knots with silicone rubber adhesive, Silastoseal A.

8. If renewing the Thermofit sleeving, use Thermofit S.C.L. tubing, 5/8 in. dia. 2.5 in. long; the tubing to be shrunk in position in an approved manner. To refit the cable:-

(1) Feed the cable through fuselage frames 12 to 16, using the same route as that before removal. At the pressure bulkhead, coat the mating surfaces (refer to note) with sealing compound, PR1301 Ref No. 33H/2204264, prior to refitting the pressure seal assembly to the mounting block on the bulkhead; use new double spring washers with the two bolts and two screws.

Note...

The mating surfaces must be cleaned and degreased before applying the sealing compound.

(2) Preset the adjuster at the nipple end of the cable to give 0.75 in. of exposed thread (fig.2, detail C) and tighten the locknut. Pass the nipple end of the cable through frame 17 and refit the nipple in the brake control unit as shown in fig.2.

(3) Examine the cable run between the brake-control unit and the pressure bulkhead and ensure that the positions of the rubber protection sleeves are as shown in fig.2.

(4) At the control column, reconnect the fork end of the cable with the eye end on the Bowden cable using the shackle pin, washer and a new

split pin.

(5) Tension the cable at the adjusting screw and tighten the locknut.

(6) Refit pipes removed in para.6, sub-para. (8).

(7) Refit cable conduit assembly removed in para.6, sub-para. (7).

(8) Re-strap the cable to the cockpit air pipe between frames 10 and 13 as shown in fig.2. Check the cable for free travel. Move the control column through its full range fore and aft and side to side, while ensuring that the cable loop is not strained and that the cable does not foul the balance weights or their attachment brackets and bolts. Ensure also, that the balance weight attachment bolts are fitted with their heads on the out-board side.

(9) Position the Neoprene cover over the cable pin

joint on the control column and retape the ends as detailed in para.7. Check cable for free movement before sealing the tape knots.

(10) Make a functional test of the brake system (Chap.6).

(11) Refit cockpit floor panels and covers removed in para.6, sub-para.(5) and (6).

(12) Refit the stocking at the control column base. Wire-lock the fasteners.

(13) Close the main equipment bay starboard hatch.

(14) Install the ejection seat.

(15) Refit the canopy and make a cockpit pressure check to test the canopy seal.

(16) Re-arm the ejection seat and canopy. Restore the electrical services.

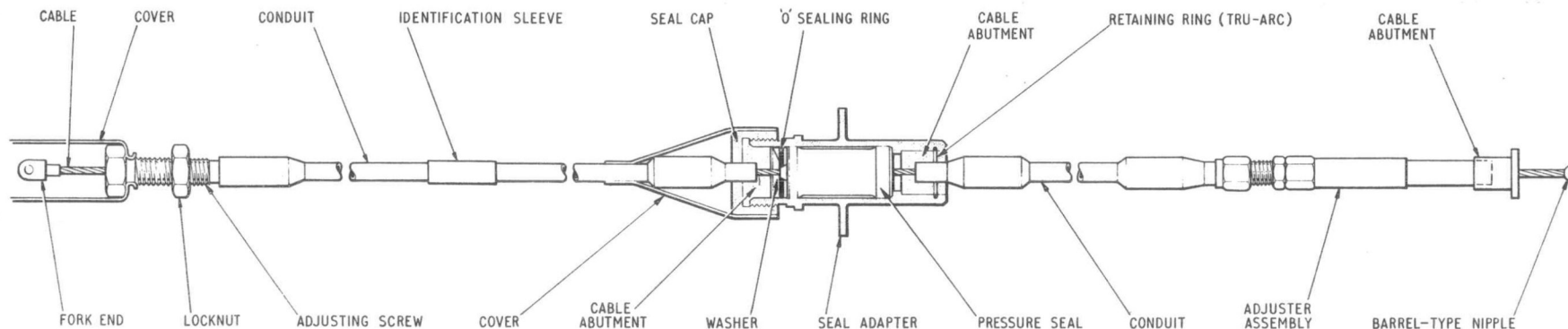


FIG. I. CONTROL CABLE

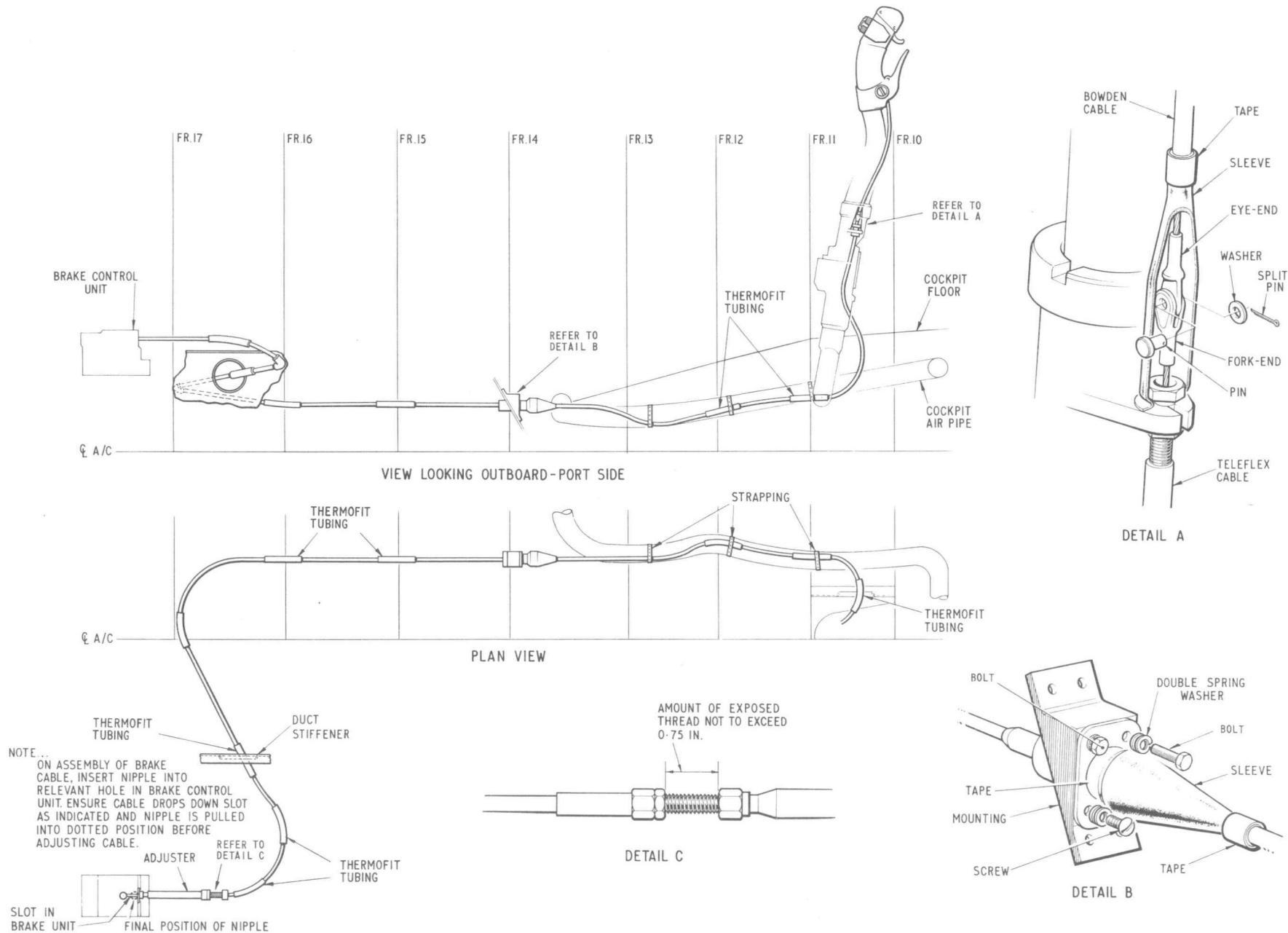


FIG. 2. CONTROL CABLE ROUTEING

