Rudder Powered Flying Control Unit - Fitting

	AFSC	TIME EST
	42152 43151 42172 43171	

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

SPECIAL TOOLS AND EQUIPMENT

Rudder travel gauge (26DK/95286).
Locating pin (26DK/95127).
Hobson spanner (27KH/2753).

ASSOCIATED PROCEDURES

SP 16(AF)
  115A(AF)
    or
  115B(AF)
  152(AF)

42152/43151

1.   PREPARATION

1.1   Replacement PFCU.   (i)   Prime.
                                 (ii) Set to mid-stroke
                                       position.

1.2   Replacement PFCU   Adjust until pin centre length
      jack eye end.   recorded in SP 16(AF) is obtained.

1.3   Replacement PFCU   (i)   Tighten.
      jack eye end locknut.   (ii) Check that distance
                                       between forward face or
                                       locknut and pin centre
                                       does not exceed 1.50 in.
                                       (See Fig.1).

2.   FITTING

2.1   Rudder PFCU.   Position in aircraft and support.

2.2   Rudder PFCU jack   (i)   Ensure smaller bush is
      eye end.   towards the outer skin
                                       (See Fig.1).
                                 (ii) Fit to fuselage anchorage.
                                 (iii) Tighten pin.

2.3   Rudder PFCU hydraulic   (i)   Remove blanks.
      connexions.   (ii) Fit to rudder PFCU (See
                                       Fig.1).

2.4   Rudder PFCU body   Fit to rudder pintle lever
      end-fitting.   (See Fig.1).

2.5   Rudder PFCU input   Fit to rudder PFCU (See Fig.1).
      control rod.

3.   BLEEDING

3.1   Rudder control system. Bleed (SP 152 (AF)).

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42152/43151

4.   TESTING

4.1   Rudder PFCU input control rod.

Disconnect at PFCU.

4.2   Rudder.

(i)   Move fully to the left using PFCU input lever and trolley hand pump.
(ii) Check that travel is between 22 and 23 degrees.
(iii) Move fully to the right using PFCU input lever and trolley hand pump.
(iv) Check that travel is between 22 and 23 degrees.

5.   FITTING

5.1   Nos 1 and 2 control hydraulic systems.

Pressurize to 3000 lbf/in2.

5.2   PFCU input lever.

Operate to centralize rudder.

5.3   Hydraulic test trolleys.

STOP.

5.4   PFCU eye end attachment bolt.

(i)   Torque tighten to 35 lbf ft. using spanner (27KH/2753).
(ii) Lock special pin by fitting cover plate.

5.5   Locating pin (26DK/95127).

Fit (Panel 26s(right)F53;panel 20s (right)T55).

5.6   Rudder PFCU input.

(i)   Adjust to correct length.
(ii) Tighten locknuts.
(iii) Lock with wire.
(iv) Reconnect to PFCU.

5.7   Locating pin (26DK/95127).

Remove.

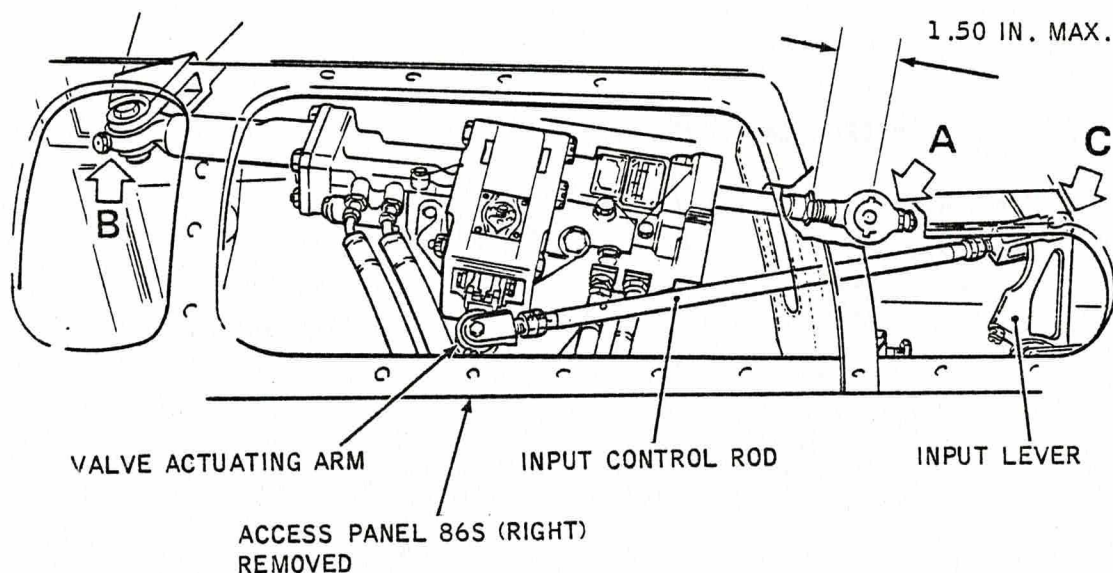6.   TESTING

6.1   Rudder control system.

Test (SP 115A(AF) F53),
(SP 115B(AF) T55).

Continued

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1.50 IN. MAX.

A   C

B

VALVE ACTUATING ARM   INPUT CONTROL ROD   INPUT LEVER

ACCESS PANEL 86S (RIGHT)
REMOVED

CARE MUST BE TAKEN, WHEN FITTING
THE JACK, TO ENSURE THAT THE SMALLER
BUSH IS TOWARDS THE OUTSIDE SKIN.

FUSELAGE
ANCHORAGE

A

RUDDER
PINTLE
LEVER

BODY
END
FITTING

B

C
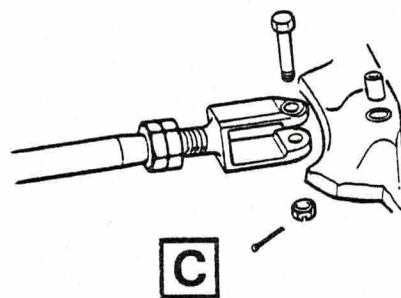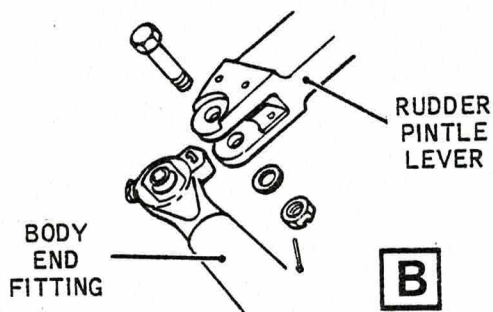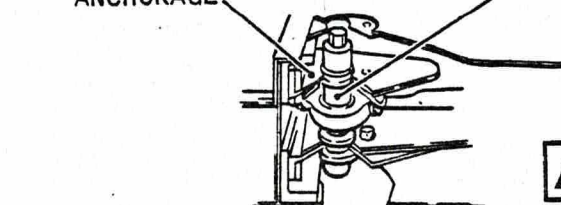
NOTE: WITH THE PFCU IN THE NEUTRAL POSITION, IT IS
ESSENTIAL THAT THE ATTACHMENT OF THE INPUT
CONTROL ROD IS SUCH THAT, VIEWED ALONG THE
CENTRE LINE OF THE ROD, THE FORK-ENDS ARE
VISUALLY SET PARALLEL TO THE INPUT LEVER
AND TO THE VALVE ACTUATING ARM RESPECTIVELY.
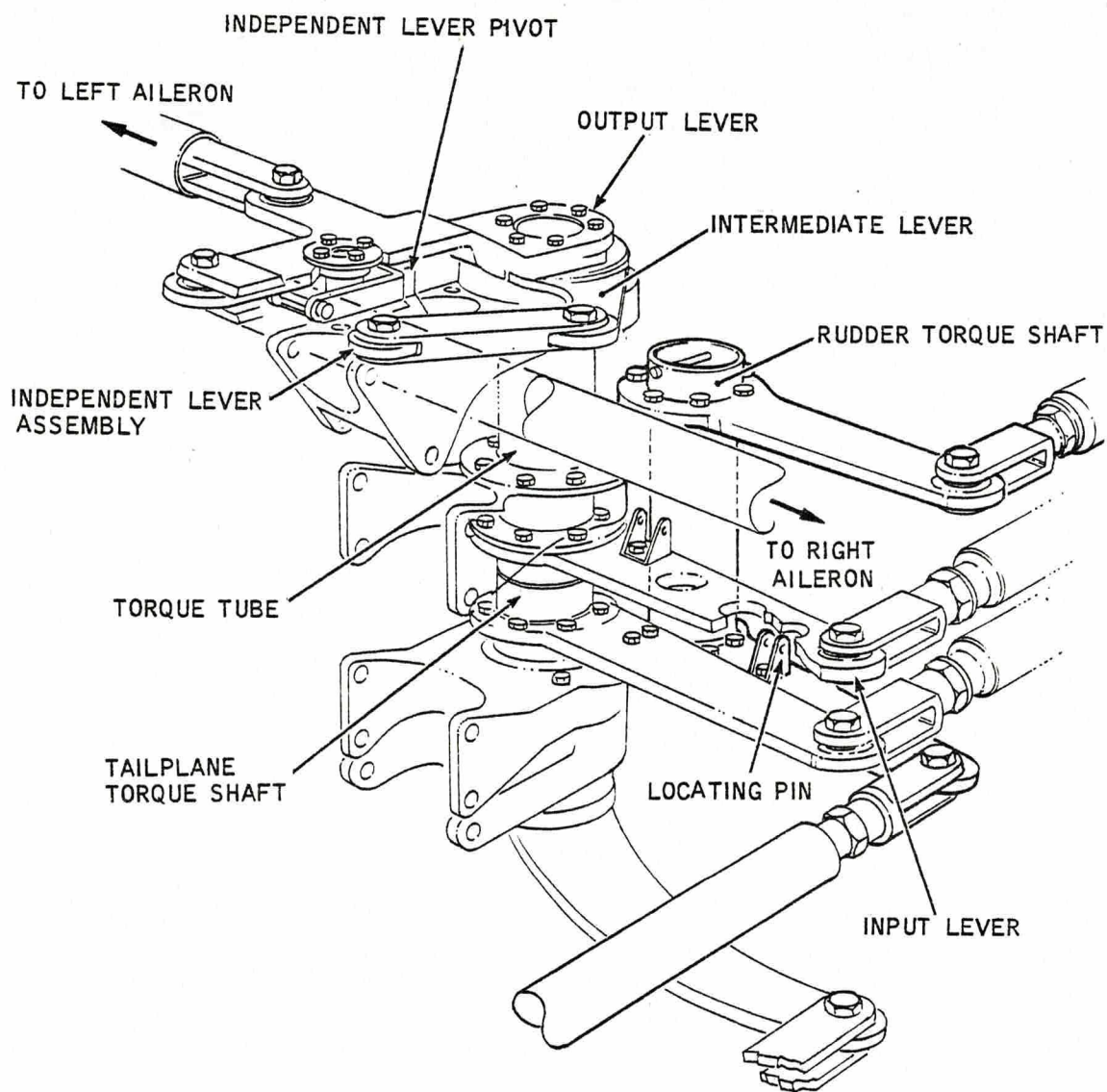
PFCU INSTALLATION
FIGURE 1

Continued Overleaf

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INDEPENDENT LEVER PIVOT

TO LEFT AILERON

OUTPUT LEVER

INTERMEDIATE LEVER

RUDDER TORQUE SHAFT

INDEPENDENT LEVER
ASSEMBLY

TORQUE TUBE

TO RIGHT
AILERON

TAILPLANE
TORQUE SHAFT

LOCATING PIN

INPUT LEVER

LOOKING INBOARD AND FORWARD

NON-LINEAR GEARING MECHANISM
FIGURE 2

Continued

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4 2 1 7 2 / 4 3 1 7 1 (INSPECTOR)

7.   INSPECTION STAGE

7.1 Inspect installation.   Independent check of
                                    (i) Assembly and locking.
                                    (ii) Function.

4 3 1 5 1

8.   COMPLETION

8.1 Access panel (86S)   Refit.
     (Right).

8.2 Rudder travel gauge.   Remove.

     NOTE: All wirelocking to be of 22 SWG stainless steel wire
            unless otherwise stated.