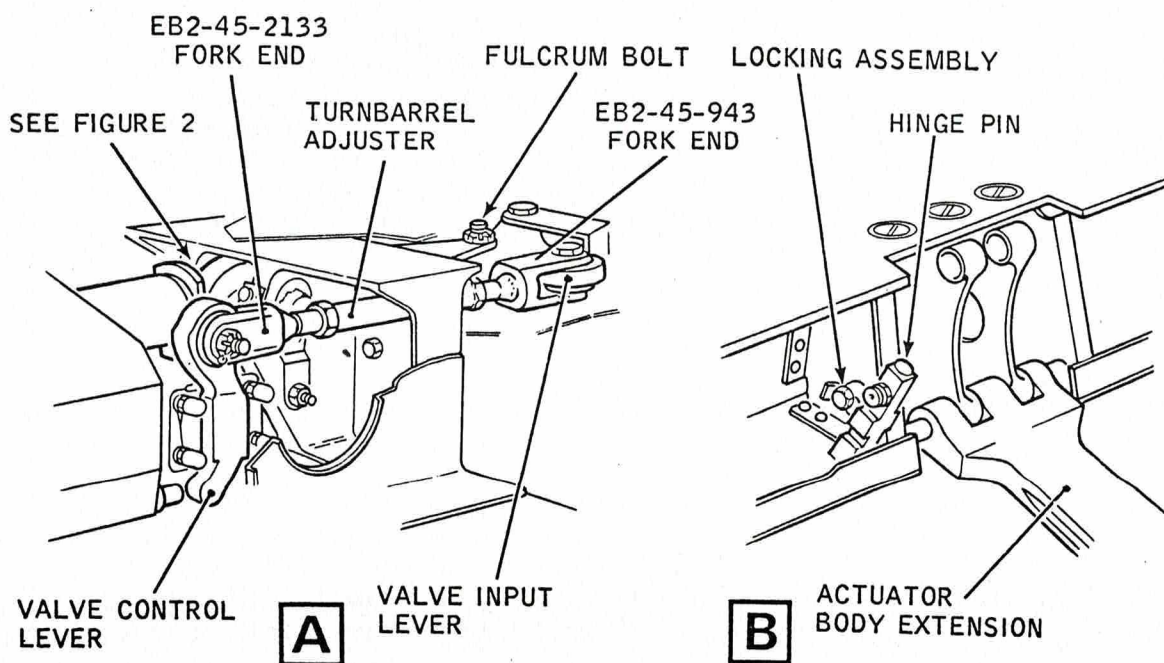
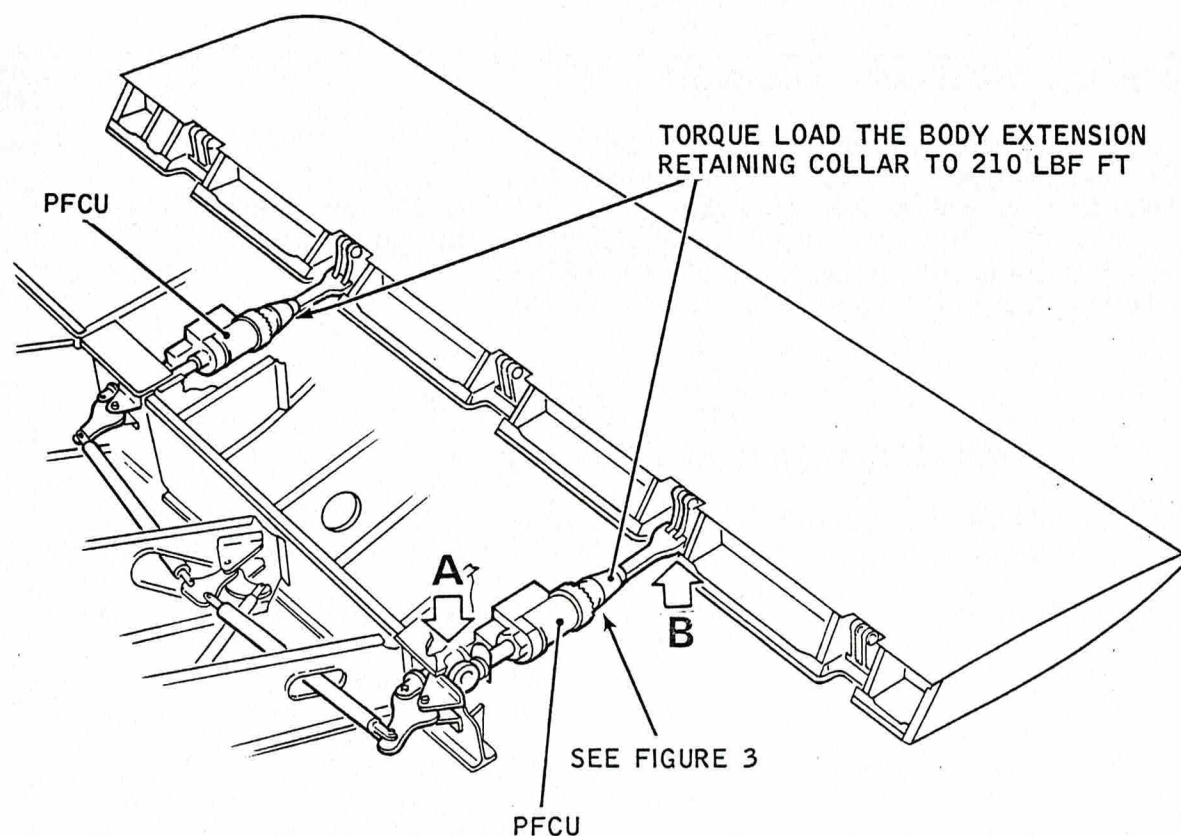


CHAP. 1 AIRFRAME			SERVICING PROCEDURE		BAC F53 & T55 (SA)			
S.P.	22	A.L. 10	F53	T55	5A3A Section 1			
SHEET	1	OF 9			2nd Edition			
Aileron Powered Flying Control Unit - Fitting					AFSC		TIME	EST
					42152 43151			
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					42172 43171			
SPECIAL TOOLS AND EQUIPMENT								ASSOCIATED PROCEDURES
Travel gauge (26DK/96772) (left).								SP21 (AF)
Travel gauge (26DK/96773) (right).								113 (AF)
Setting gauge (Local manufacture (LM) 0.21 ins gauging face with 0.5 x 2.5 in stock. Split ring and pennant)								303 (AF)
Torque adapter assembly (27KH/2779).								603 (AF)
Torque adapter assembly (27KH/2780).								45 (AF)
								46 (AF)
42152/43151								
1. PREPARATION (SEE FIGS. 1, 2 AND 3)								
1.1		Turnbarrel adjuster assembly.		Connect to PFCU valve control lever with fork end EB2-45-2133.				
1.2		PFCU.		(i) Prime and fully extend ram.				
				(ii) Fit blanks.				
				(iii) Temporarily fit body extension.				
				(iv) Adjust until pin centre length recorded in SP 21 (AF) is obtained.				
				(v) Remove body extension.				
				(vi) Torque tighten locknut to 50lbf ft using torque adapter assembly (27KH/2780).				
				(vii) Ensure dimension between locknut outer face and attachment pin centre does not exceed 1.55in (See Fig.2).				
2. FITTING								
2.1		PFCU body extension.		(i) With aileron fully up fit to aileron.				
				(ii) Lock pin by fitting clips and securing with 2BA bolt, distance piece and slotted nut.				
				(iii) Lock nut with split pin.				
								Continued Overleaf
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(AILERON) PFCU INSTALLATION
FIGURE 1

Continued

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2. FITTING (cont'd)

2.2 PFCU ram end-fitting attachment to diaphragm (See Fig.2)

- (i) Position tube through bushes at eye-end.
- (ii) Locate the two bush retaining plates.
- (iii) Position in mainplane box.
- (iv) Fit, hinge pin, locking tab, bolt, serrated washer and nuts
- (v) Fit, bolt SRO/20/452/A and washer SRO/20/452/B. Torque load to finger tight plus one flat.
- (vi) Lock items (iv) and (v) with wire.
- (vii) Secure bush retaining plates with 4BA special bolts and tab washers.

NOTE: During sub-items 2.3 and 2.5 inclusive, inboard and outboard, PFCU body extensions must be connected simultaneously.

2.3 PFCU body extension Pre Mod.A.295 only.

- (i) Fit locating key.
- (ii) Connect to control unit.
- (iii) Ensure key is engaged in both keyways.

2.4 PFCU body extension Post Mod.A.295 only.

- (i) Fit locking rods.
- (ii) Connect to control unit.
- (iii) Ensure locking rods engaged in both keyways.

2.5 Inboard and Outboard PFCU retaining nuts.

- (i) Ensure correct engagement of split rings and retaining nuts (See Fig.3) Hand tighten retaining nut and note that only 3 to 4 threads are visible on PFCU body extension.
- (ii) Whilst pulling down on aileron trailing edge tighten.
- (iii) Torque tighten to 210 lbf ft using torque spanner (27KH/2779).
- (iv) Lock with wire.

Continued Overleaf

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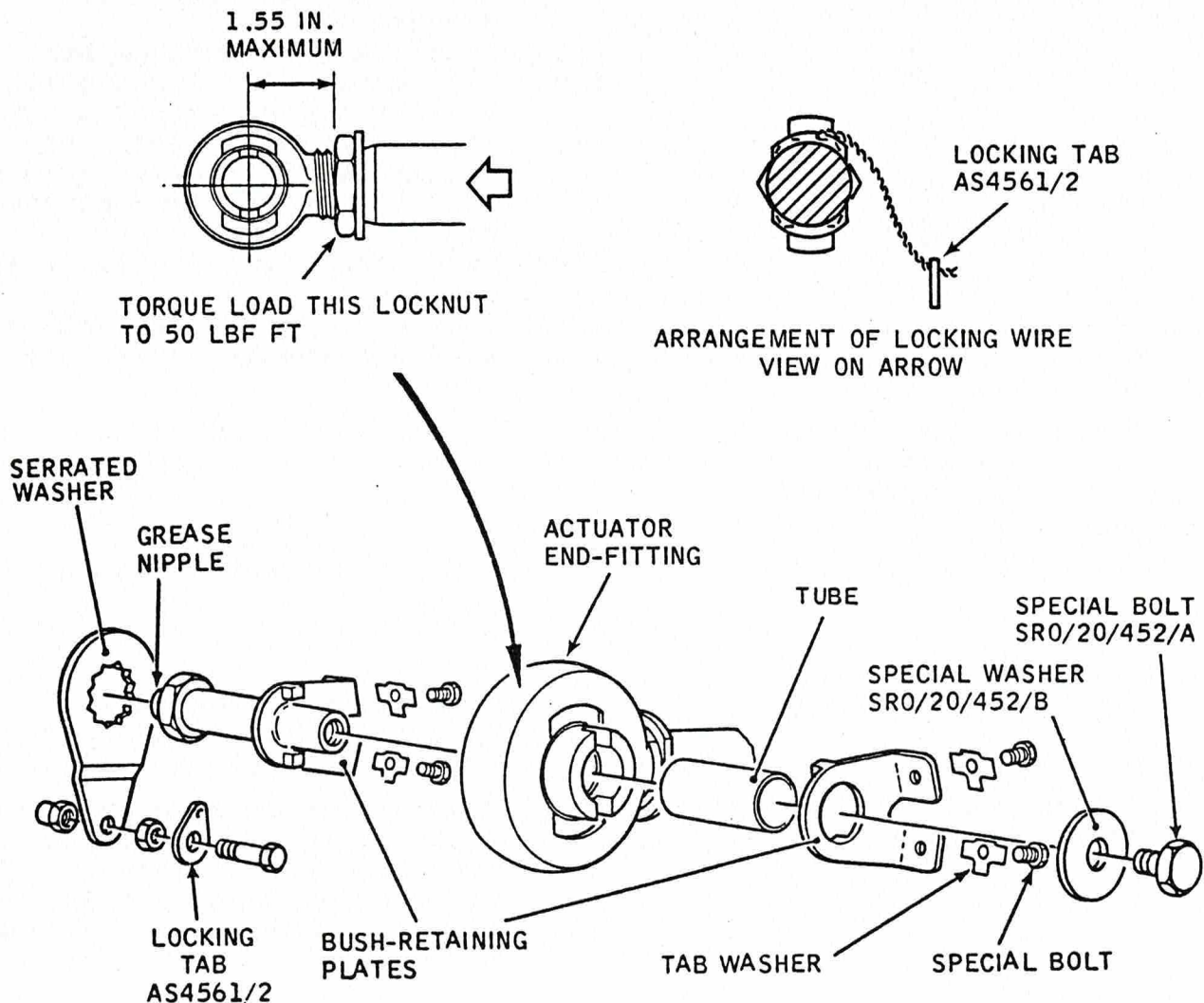
CHAP 1 AIRFRAME
SP 22 AL 10
SHEET 4 OF 9

SERVICING PROCEDURE
F53 T55

BAC F53 & T55 (SA)
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NOTE 1 : Ensure that the wirelocking is positioned, in a clockwise direction, around the ram, view on arrow. Also check that, on completion, the ram eye end is perpendicular and not displaced about the bearing by possible tightening of the locking wire.



NOTE 2 : On assembly, for correct engagement of the serrated washer with the PFCU eye end attachment bolt head, ensure that the 2BA stiffnut is within safety and that the wirelocking hole in the locking tab is correctly orientated to the pull of the locking wire as indicated in NOTE 1.

ACTUATOR END-FITTING
FIGURE 2

Continued

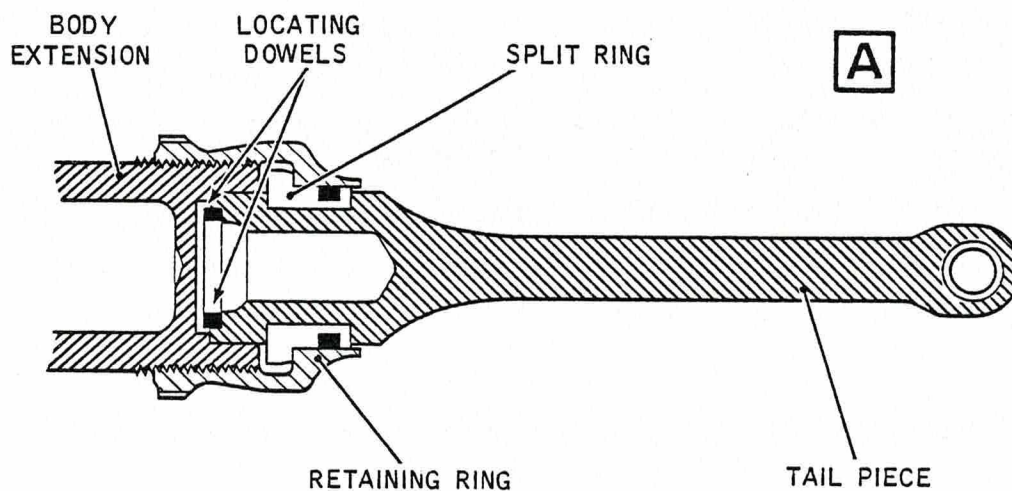
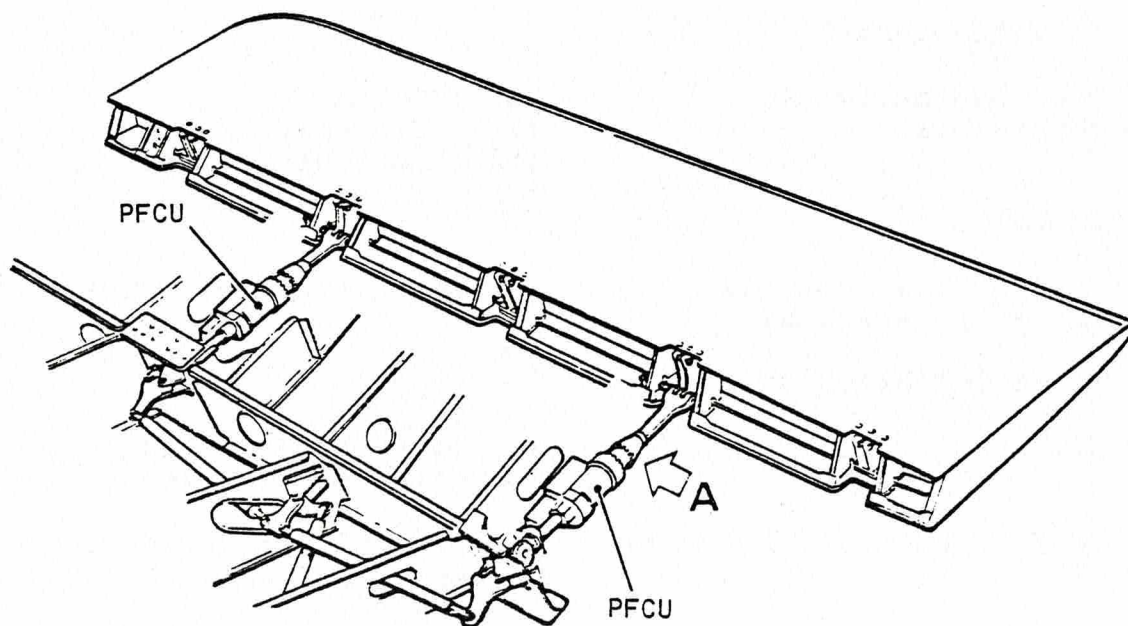
CHAP 1 AIRFRAME SP 22 AL 10 SHEET 5 OF 9	SERVICING PROCEDURE F53 T55	B A C F 53 & T 55 (SA) 5A3A Section 1 2nd Edition
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<div style="border: 1px solid black; display: inline-block; padding: 5px; margin: 0 auto; width: 80%;"> <u>42152/43151</u> </div>		
<div style="margin-bottom: 10px;"> 2. FITTING (contd) </div> <div style="margin-bottom: 10px;"> 2.6 PFCU hydraulic pipe connexions. <div style="float: right; margin-left: 20px;"> (i) Connect. (ii) Tighten. (iii) Lock with wire. </div> </div> <div style="margin-bottom: 10px;"> 3. GENERAL </div> <div style="margin-bottom: 10px;"> 3.1 No.1 & No.2 controls hydraulic systems. <div style="float: right; margin-left: 20px;"> Replenish. (SP 603 (AF)). </div> </div> <div style="margin-bottom: 10px;"> 4. SYNCHRONIZATION CHECK </div> <div style="margin-bottom: 10px;"> 4.1 Aileron. <div style="float: right; margin-left: 20px;"> Set to neutral manually by operating valve control lever. </div> </div> <div style="margin-bottom: 10px;"> 4.2 PFCU valve control levers. <div style="float: right; margin-left: 20px;"> Ensure centred, using gauge (LM) between lower part of valve control lever and body stop. </div> </div> <div style="margin-bottom: 10px;"> 5. FITTING </div> <div style="margin-bottom: 10px;"> 5.1 Turnbarrel adjuster assembly <div style="float: right; margin-left: 20px;"> (i) Connect to input lever. (ii) Split pin. </div> </div> <div style="margin-bottom: 10px;"> 6. SYNCHRONIZATION CHECK </div> <div style="margin-bottom: 10px;"> 6.1 Inboard PFCU valve control lever. <div style="float: right; margin-left: 20px;"> Check neutral position using gauge (LM). </div> </div> <div style="margin-bottom: 10px;"> 6.2 Outboard PFCU valve control lever. <div style="float: right; margin-left: 20px;"> Check neutral position using gauge (LM). </div> </div> <div style="margin-bottom: 10px;"> 6.3 Last control rod on SPAR 1 (Cradle lever). <div style="float: right; margin-left: 20px;"> Temporarily reconnect. </div> </div> <div style="margin-bottom: 10px;"> 6.4 Locating pins (26DK/95127). <div style="float: right; margin-left: 20px;"> Fit. </div> </div> <div style="margin-bottom: 10px;"> NOTE: During Sub-items 6.5 to 6.7 inclusive, where distortion or movement occurs, correction can be made by adjusting turnbarrel assembly on PFCU that gives deflection from neutral and repeating Sub-items 6.1 and 6.2. </div> <div style="margin-bottom: 10px;"> 6.5 Aileron. <div style="float: right; margin-left: 20px;"> Using hydraulic test trolley hand pump ensure does not move when No.2 control system is pressurized. </div> </div> <div style="margin-bottom: 10px;"> 6.6 No.2 control system. <div style="float: right; margin-left: 20px;"> Release hydraulic pressure. </div> </div>		
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SERVICING PROCEDURE
F53 T55

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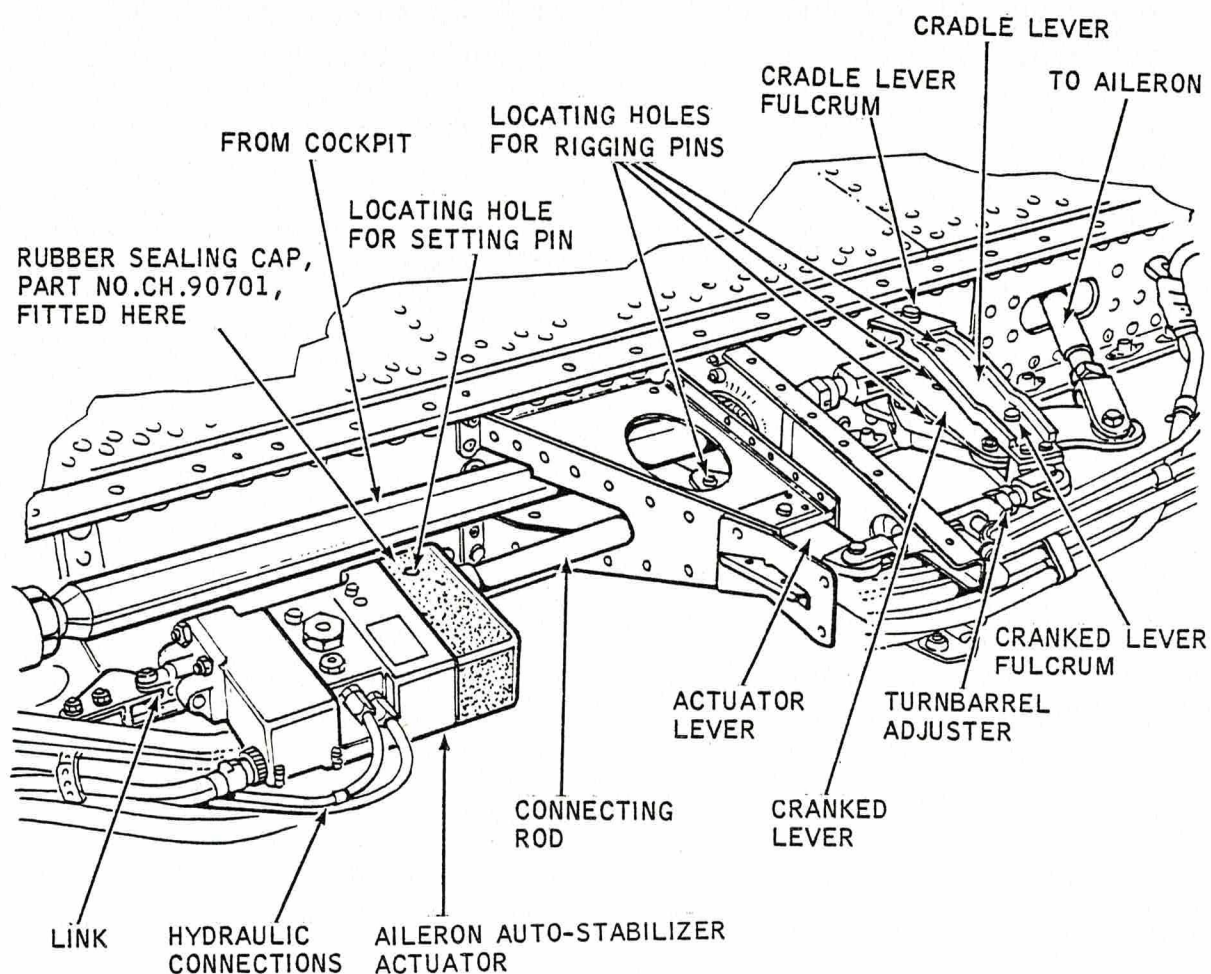


PFCU BODY EXTENSION TAIL PIECE
FIGURE 3

Continued

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LEFT WING SHOWN:
RIGHT WING SIMILAR

AUTO-STABILIZER - ACTUATOR INSTALLATION
FIGURE 4

Continued Overleaf

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6. SYNCHRONIZATION CHECK (contd)
 - 6.6 No.2 control system. Release hydraulic pressure.
 - 6.7 Aileron. Using hydraulic test trolley hand pump ensure does not move when No.1 control system is pressurised.
 - 6.8 Locating pins. Remove.
7. GENERAL
 - 7.1 No.1 & No.2 control system accumulators. Ensure hydraulic pressure released.
 - 7.2 Gauge (LM). Remove.
 - 7.3 Last control rod on SPAR 1 (Cradle lever). Disconnect.
8. RANGE OF MOVEMENT CHECK
 - 8.1 No.1 control system. Pressurize to 3000 psi using hydraulic servicing trolley.
 - 8.2 Last control rod on SPAR 1 (Cradle lever).
 - (i) Operate slowly.
 - (ii) Ensure aileron moves fully up and down.
 - (iii) Ensure no straining or fouling.
 - 8.3 Aileron. Set to neutral.
 - 8.4 No.2 control system. Pressurize to 3000 psi using hydraulic servicing trolley.
 - 8.5 Last control rod on SPAR 1 (Cradle lever).
 - (i) Operate slowly.
 - (ii) Ensure aileron moves fully up and down.
 - (iii) Ensure no straining or fouling.
 - 8.6 Aileron. Set to neutral.
9. GENERAL
 - 9.1 Last control rod on SPAR 1 (Cradle lever).
 - (i) Reconnect.
 - (ii) Lock nut with split pin.
 - 9.2 Aileron attachments. Lubricate. (SP 303(AF)).
 - 9.3 Eye-ends. Lubricate. (SP 303(AF)).

Continued

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10. SMOOTHNESS AND CORRECTNESS - SENSE CHECK

- 10.1 Control column. Operate through full range.
- 10.2 Ailerons.
 - (i) Ensure consistent smooth movement.
 - (ii) Ensure correct sense of movement.

11. TESTING

- 11.1 Ailerons. Test (SP 113(AF)), (See Fig.4).

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12. INSPECTION STAGE

- 12.1 Inspect installation. Independent check of:
 - (i) Assembly and locking.
 - (ii) Function.

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13. COMPLETION

- 13.1 Access panels 101A and C, Refit.
102A and B, 132A and B.
- 13.2 Outboard leading edges. Refit (SP 45 and 46 (AF)).
- 13.3 Travel gauges. Remove.
- 13.4 Hydraulic test trolleys. Remove.

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