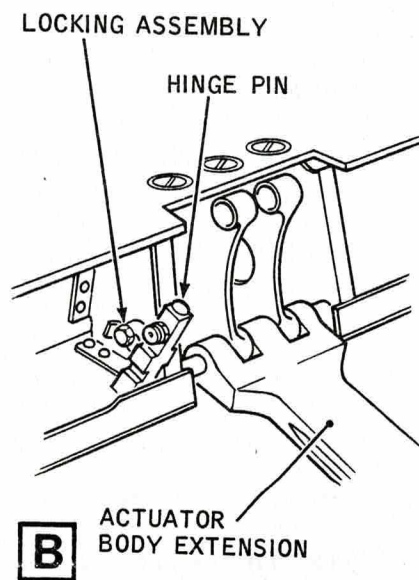
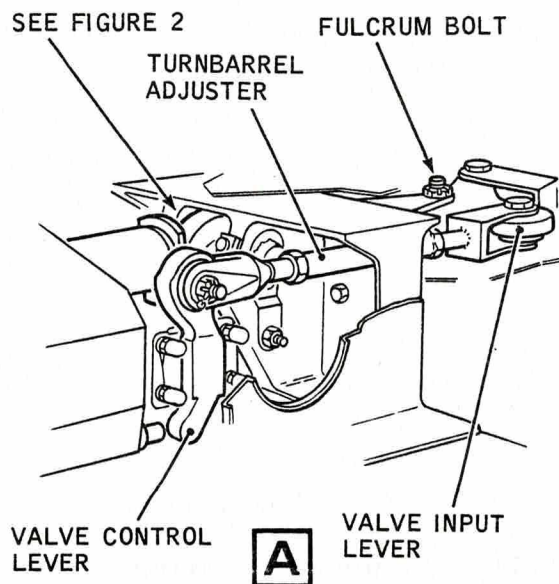
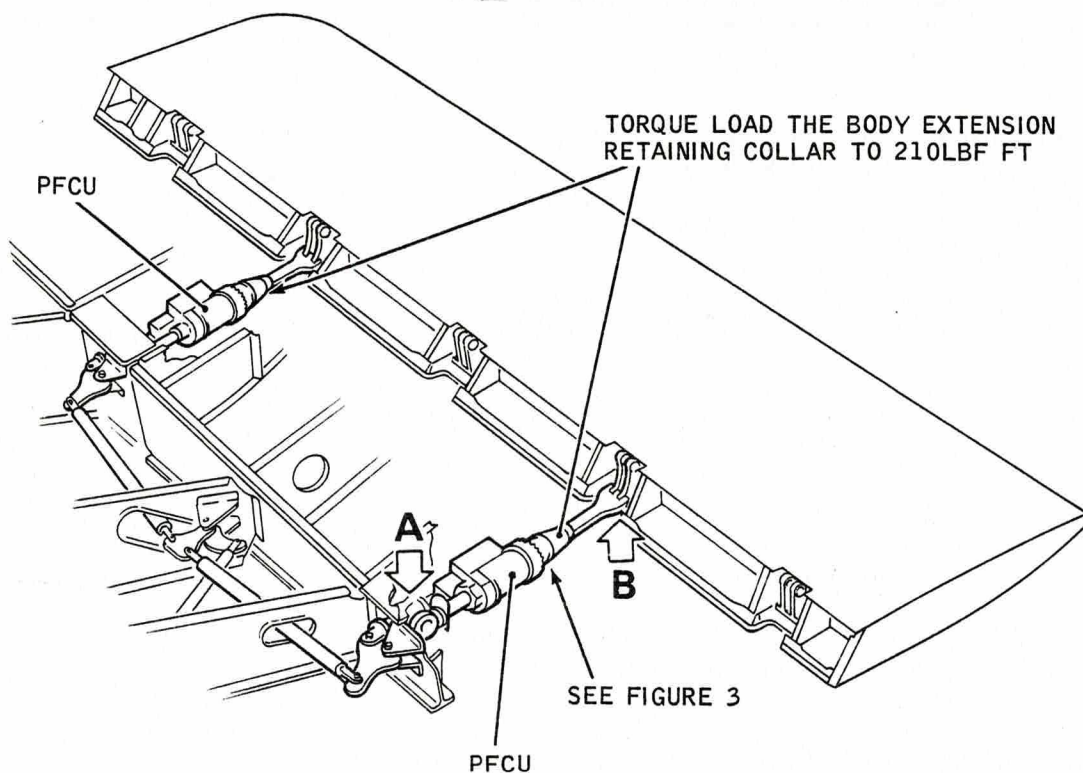


CHAP 1 AIRFRAME	SERVICING PROCEDURE	BAC F53 & T55 (SA)	
SP 21 AL 4	F53 T55	5A3A Section 1	
SHEET 1 OF 9		2nd Edition	
Aileron Powered Flying Control Unit - Removal		AFSC 42152 43151 42172 43171	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			
SPECIAL TOOLS AND EQUIPMENT			ASSOCIATED PROCEDURES
'C'Spanner, aileron PFCU tailpiece retaining nut (26DK/95828). Auto-stabilizer neutral setting pin (26DK/95134). Locating pin (26DK/95127). Inflation rig (4G/1050542). Travel gauge (26DK/96772) (Left). Travel gauge (26DK/96773) (Right).			SP45 (AF) 46 (AF)
<u>42152 / 43151</u>			
1. PREPARATION			
1.1	Outboard leading edge.	Remove (SP 45 (AF) and SP 46 (AF)).	
1.2	Access panels 101A and C, 102A and B, 132A and B.	Remove.	
1.3	Ground air charging/release connexion (Access panel 63P (left)).	Remove blank.	
1.4	Services No.1 and No.2 controls hydraulic systems.	Ensure hydraulic pressure is released.	
1.5	Hydraulic test trolleys.	(i) Prime. (ii) Bleed.	
1.6	No.1 Services ground test connexions (Access panel 45P (left)).	Connect hydraulic test trolley.	
1.7	No.1 controls ground test connexions (Access panel 45P (left)).	Connect hydraulic test trolley.	
1.8	Hydraulic reservoirs.	Replenish (SP 603 (AF)).	
1.9	Tyre inflation rig. (4G/1050542).	(i) Connect to ground air charging/release connexions. (ii) Set rig to deliver a pressure between 16 and 18 lbf/in2.	
Continued Overleaf			
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CHAP. 1	AIRFRAME	SERVICING PROCEDURE		BAC F53 & T55 (SA)
S.P. 21	A.L. 4	F53	T55	5A3A Section 1
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Safety and Servicing Notes are to be complied with throughout the work detailed on this card.



(AILERON) PFCU INSTALLATION
FIGURE 1

Continued

CHAP 1 AIRFRAME	SERVICING PROCEDURE	BAC F 53 & T 55 (SA)
SP 21 AL 4	F53 T55	5A3A Section 1
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Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

42152/43151

1. PREPARATION (Contd)

- | | |
|--|---|
| 1.10 External d.c. power supply. | (i) Connect.
(ii) Switch to ON. |
| 1.11 External a.c. power supply. | (i) Connect.
(ii) Switch to ON. |
| 1.12 Trim switch. | Ensure indicating neutral on cockpit gauge. |
| 1.13 MRG switch. | Set to OFF. |
| 1.14 Stab switch (On controller). | Set to OFF. |
| 1.15 Autopilot engage switch (On control column). | Set to OFF. |
| 1.16 Instrument master switch | Set to ON. |
| 1.17 Auto pilot master switch | Set to ON. |
| 1.18 Aileron auto-stabilizer actuator. | (i) Set to neutral using aircraft handpump.
(ii) Check neutral using setting pin (26DK/95134). |
| 1.19 Aileron auto-stabilizer actuator. | Remove setting pin. |
| 1.20 Aileron travel gauges. | Fit (26DK/96772) (left).
(26DK/96773) (right). |
| 1.21 Services system. | Pressurize to 3000 lbf/in2. |
| 1.22 Controls system. | Pressurize to 3000 lbf/in2. |
| 1.23 Aileron system vertical torque shaft. (Access panel 26S (right) (F53)). (Access panel 20S (right) (T55)). | Insert locating pin (26DK/95127). |
| 1.24 Aileron system. | Check neutral on SPAR 1 at cradle lever and actuator lever using locating pins (26DK/95127). |

Continued Overleaf

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CHAP. 1 AIRFRAME

S.P. 21 A.L. 4

SHEET 4 OF 9

SERVICING PROCEDURE

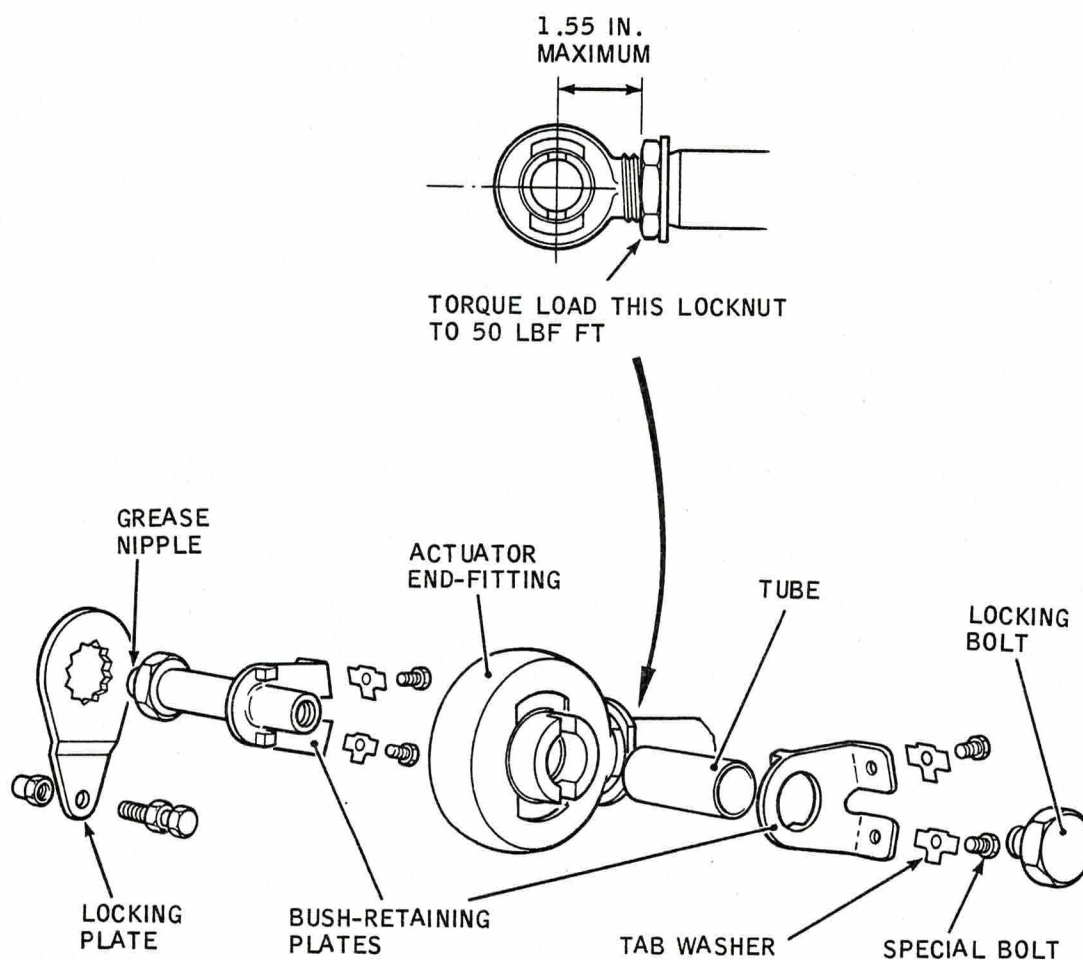
F53 T55

BAC F53 & T55 (SA)

5A3A Section 1

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ACTUATOR END-FITTING

FIGURE 2

Continued

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SP 21 AL 4	F53 T55	5A3A Section 1
SHEET 5 OF 9		2nd Edition

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

42152/43151

1. PREPARATION (Contd)

- | | |
|--|---|
| 1.25 Aileron system. | Remove locating pins at item 1.24. |
| 1.26 Aileron system vertical torque shaft. | Remove locating pin. |
| 1.27 Services and No.1 controls hydraulic test trolleys. | Stop. |
| 1.28 Services and No.1 controls hydraulic systems. | Exhaust pressure. |
| 1.29 Tyre inflation rig (4G/1050542). | (i) Remove.
(ii) Ensure all air is released and fit and tighten blank. |

2. REMOVAL

- | | |
|--|---|
| 2.1 Last control rod on SPAR 1. | (i) Disconnect inboard end.
(ii) Push in whilst pulling down aileron trailing edge to its lowest position. |
| 2.2 Inboard and outboard PFCU body extensions. | Slacken retaining nuts. |
| 2.3 Last control rod on SPAR 1. | Pull out whilst pushing up aileron trailing edge approximately 1 in. above neutral. |

NOTE: This facilitates access to ram eye-end removal.

- | | |
|-------------------------------------|---|
| 2.4 PFCU hydraulic pipe connexions. | (i) Disconnect.
(ii) Fit blanks. |
| 2.5 Inboard PFCU body extension. | Unscrew retaining nut using 'C' spanner (26DK/95828). |
| 2.6 Outboard PFCU body extension. | Unscrew retaining nut using 'C' spanner (26DK/95828). |
| 2.7 Aileron. | Move fully up whilst supporting inboard and outboard PFCUs. |

NOTE: During Sub-item 2.8 retain hinge pin locking clips, 2BA bolt, distance piece and slotted nut together to facilitate reassembly.

Continued Overleaf

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

42152/43151

2. REMOVAL (Contd)

- 2.8 PFCU body extensions. (i) Disconnect from aileron hinge bracket.
(ii) Dismantle.
(iii) Remove.
- 2.9 Turnbarrel rod from PFCU input to bellcrank lever. Disconnect at bell crank.
- 2.10 PFCU ram end-fitting attachment to diaphragm (See Fig.2). (i) Remove 2BA stiffnut securing hinge pin locking plate.
(ii) Remove locking plate.
(iii) Remove grease nipple.
(iv) Remove hinge pin locking bolt
(v) Rotate PFCU body clockwise (looking forward) to give sufficient clearance to allow hinge pin removal over turnbarrel adjuster.
(vi) Extract hinge pin.
- 2.11 PFCU. (i) Remove turning slightly to clear hydraulic pipe unions.
(ii) Temporarily refit body extensions.
(iii) With ram fully extended record pin centre to eye end of ram.
(iv) Remove body extension.
- 2.12 Turnbarrel adjuster assembly. (i) Disconnect at PFCU input lever.
(ii) Note relative position, to facilitate fitment.

NOTE: During item 2.12 do not disturb turnbarrel length or locking.

Continued

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4 2 1 5 2 / 4 3 1 5 1

3. EXAMINATION

3.1 Hinge pin.

3.2 Tube.

3.3 Bush retaining plates.

(i) Clean.

(ii) Examine for signs of the following:

(a) Insecure (unsafe) attachment.

(b) Cracks and fractures.

(c) Corrosion.

(d) Distortion.

(e) Chafing, fraying, scoring or wear.

(f) Faulty or broken locking devices.

(g) External damage.

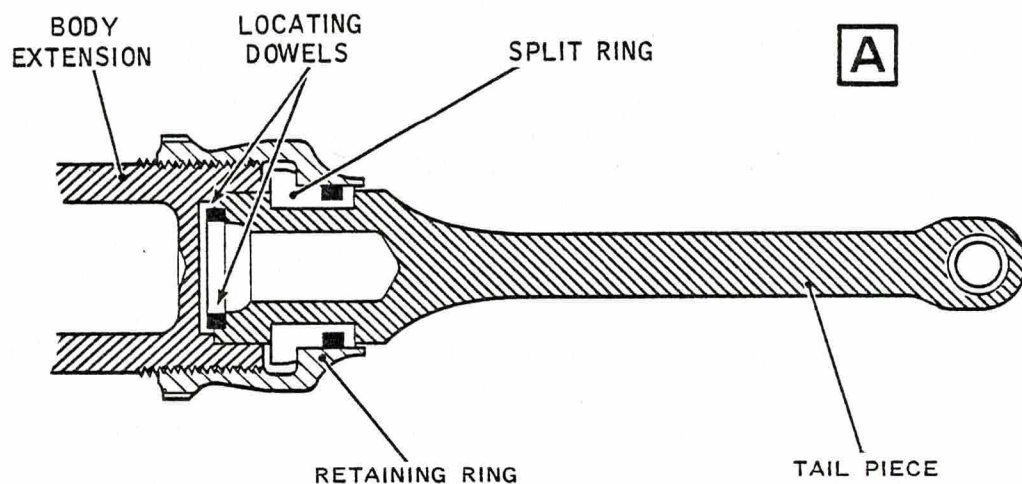
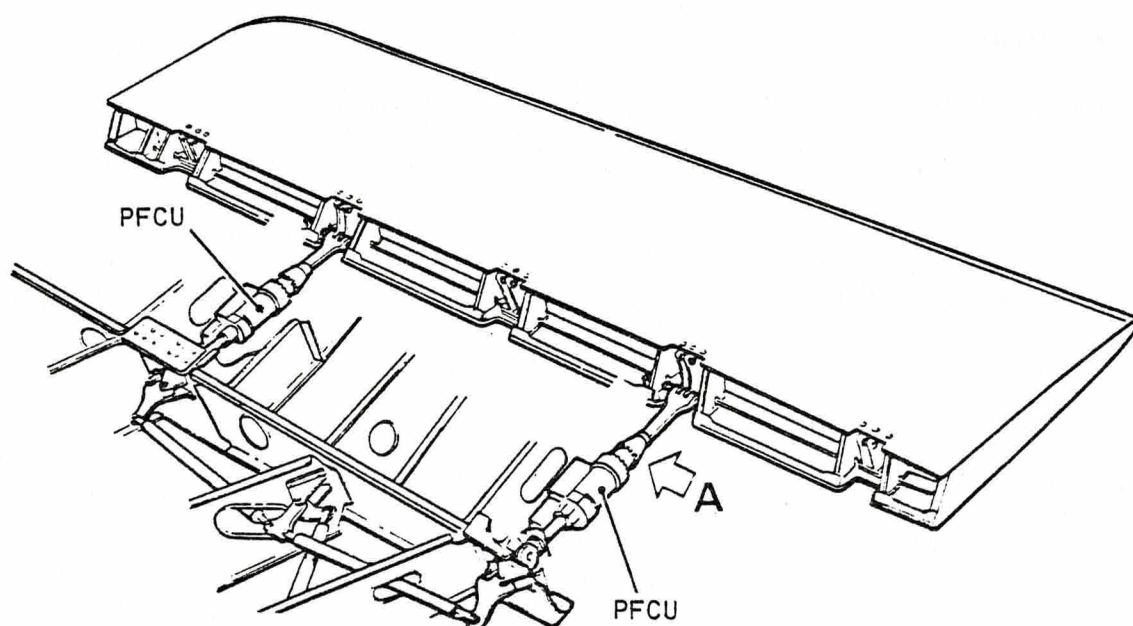
NOTE: If during removal operations, it has been found necessary to disconnect the control run at the bell crank lever, ensure that the upper bearing, together with the spacer, are intact in the housing and that they are not dislodged during subsequent assembly operations.

Continued Overleaf

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PFCU BODY EXTENSION TAIL PIECE

FIGURE 3

Continued

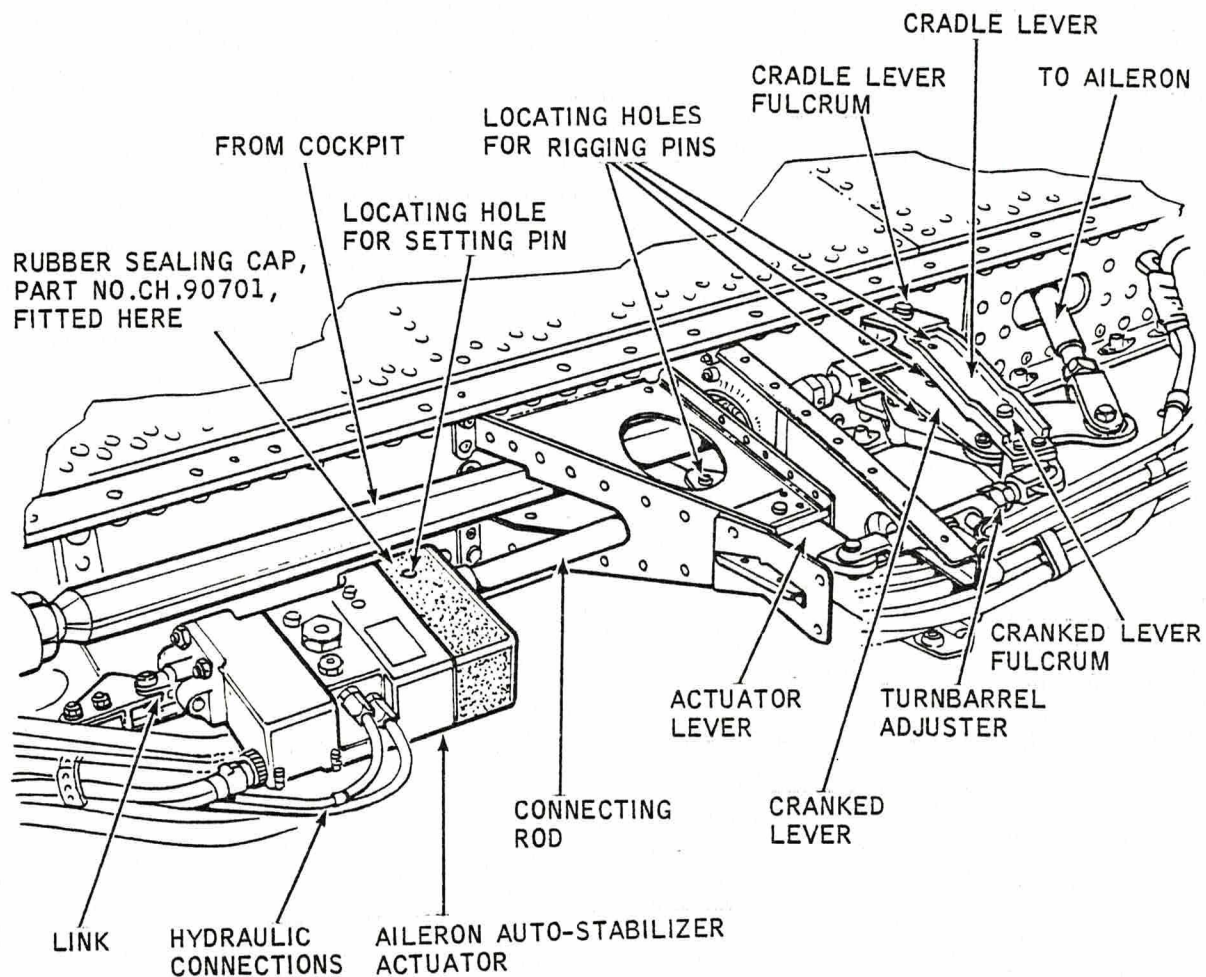
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CHAP 1 AIRFRAME
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SERVICING PROCEDURE
 F53 T55

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LEFT WING SHOWN:
 RIGHT WING SIMILAR

AUTO-STABILIZER - ACTUATOR INSTALLATION

FIGURE 4

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