

CHAP 1 AIRFRAME	SERVICING PROCEDURE	BAC F53 & T55 (SA)	
SP 23 AL 4	F53 T55	5A3A Section 1	
SHEET 1 OF 12		2nd Edition	
Trailing Edge Flap - Removal And Fitting		AFSC	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.		43151 43171 42450 42470	
SPECIAL TOOLS AND EQUIPMENT			ASSOCIATED PROCEDURES
Multi-purpose servicing hoist (4GC/4232366). Jib No.3 (4GC/4232396). Sling (26DK/95263). Stand (26DK/95290).			
<u>43151/42450</u>			
1. PREPARATION			
1.1 Trailing edge flap.	Ensure de-fuelled.		
1.2 Hydraulic hand pump handle.	Fit (Access panel 79P (LEFT)).		
1.3 Access panels 122,124, 127,129,130 and 138 (left or right).	Remove.		
1.4 External a.c. power supply.	(i) Connect. (ii) Switch to ON.		
2. REMOVAL			
2.1 Flaps.	(i) Select to DOWN. (ii) Lower fully, using aircraft hand pump.		
2.2 Flap jack attachment bolts (Inboard and outboard) (See Fig.1).	(i) Remove circlip and washer. (ii) Remove attachment bolts.		
2.3 Flap selector.	Select to UP.		
2.4 Flap jacks.	Retract, using aircraft hand pump.		
NOTE: During sub-item 2.4 ensure that inboard flap jack swivel coupling does not damage fuel pipeline between trailing edge ribs 3 and 4.			
3. GENERAL			
3.1 External d.c. power supply.	(i) Set to OFF. (ii) Disconnect.		
			Continued Overleaf
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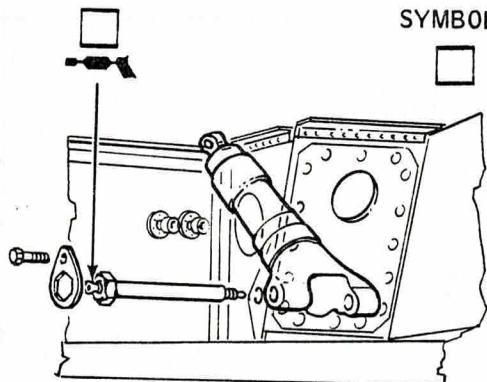
KEY TO LUBRICANTS

SYMBOL

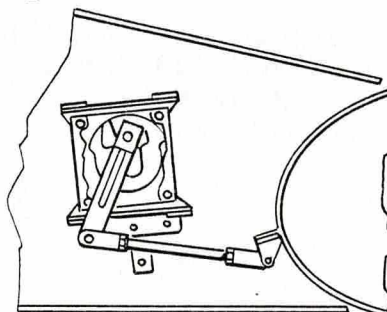
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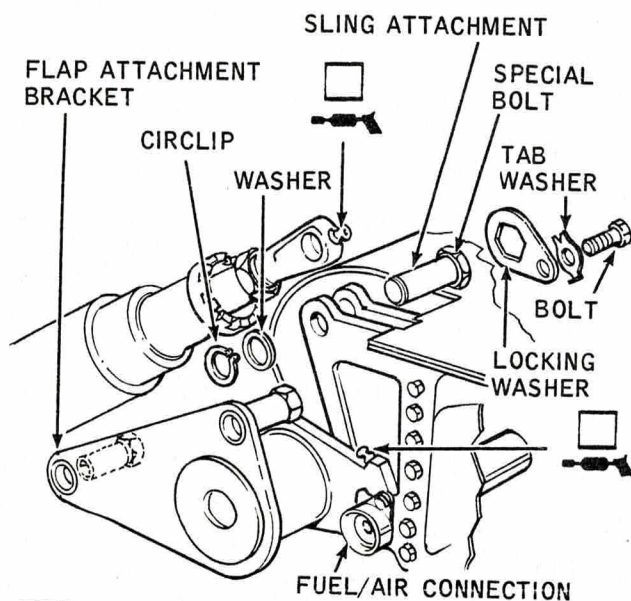
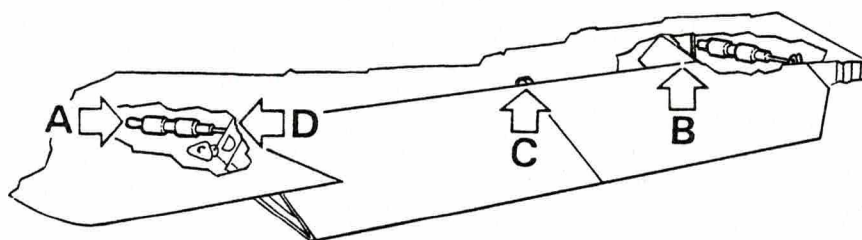
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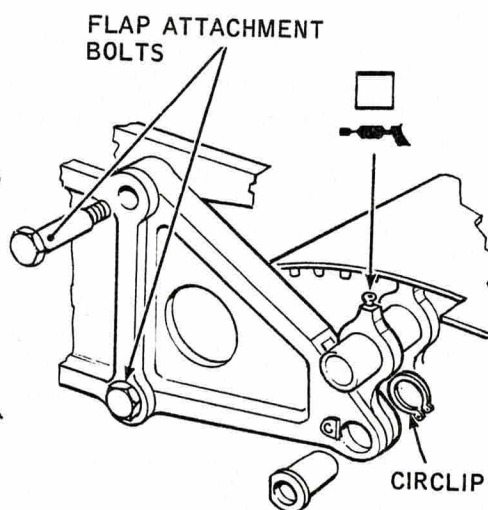
A OUTBOARD JACK
FORWARD MOUNTING



B FLAP POSITION TRANSMITTER



C TYPICAL JACK AFT
ATTACHMENT



D ARRANGEMENT OF CENTRE HINGE

FLAPS - REMOVAL AND ASSEMBLY

FIGURE 1

Continued

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4. REMOVAL

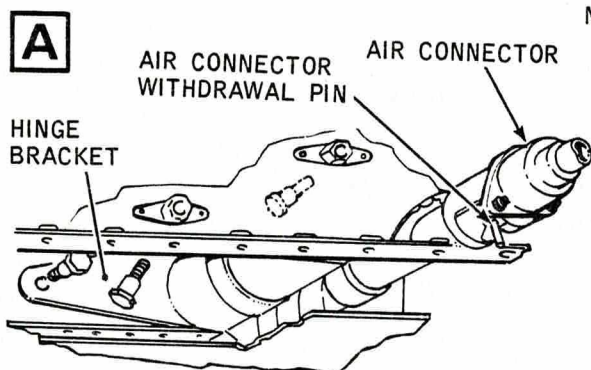
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|------|---|---|
| 4.1 | Flap position desynn transmitter link. | Disconnect. |
| 4.2 | Co-axial cables (quantity 4) (Access panels 124 and 129). | Disconnect. |
| 4.3 | Float switch cable (Access panels 122 and 138). | Disconnect. |
| 4.4 | Fuel air telescopic adapters (Inboard and outboard). | (i) Remove locking wire.
(ii) Withdraw. |
| 4.5 | Outboard fuel/air connector (Trailing edge rib 17) (See Fig.2). | (i) Remove attachment bolts (quantity 3).
(ii) Disconnect bonding lead.
(iii) Disconnect FRS coupling.
(iv) Remove fuel/air connector and ferrule.
(v) Fit blank. |
| 4.6 | Inboard fuel/air connector (Rib 3) (See Fig.2) | (i) Remove attachment bolts (quantity 3).
(ii) Remove ferrule. |
| 4.7 | Handling equipment:
a) Multi-purpose servicing hoist & jib No.3 (4GC/4232366 and 4GC/4232396).
b) Sling (26DK/95266). | Position servicing hoist.

(i) Attach sling to flap (using flap jack attachment bolts).
(ii) Attach sling to servicing hoist. |
| 4.8 | Flap. | (i) Support weight on sling.
(ii) Steady trailing edge. |
| 4.9 | Centre hinge bracket attachment bolts (quantity 2) (See Fig.2). | (i) Remove locking wire.
(ii) Remove bolts.
(iii) Note quantity & position of shims (if any). |
| 4.10 | Inner and outer hinge bracket attachment bolts (quantity 8). | (i) Remove locking wire.
(ii) Remove bolts.
(iii) Note quantity & position of shims (if any). |

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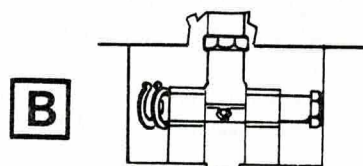
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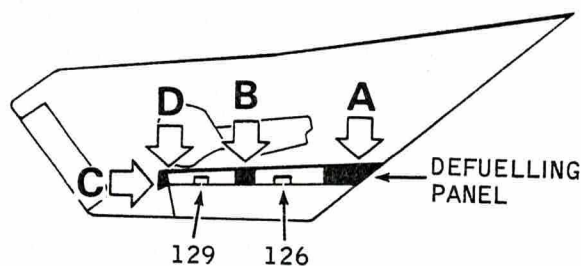


INNER HINGE BRACKET AND AIR CONNECTOR

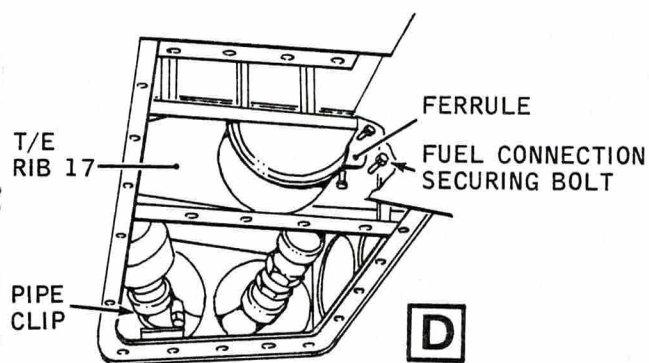
NOTE: OUTBOARD BOLT, HEAD INBOARD
INBOARD BOLT, HEAD OUTBOARD



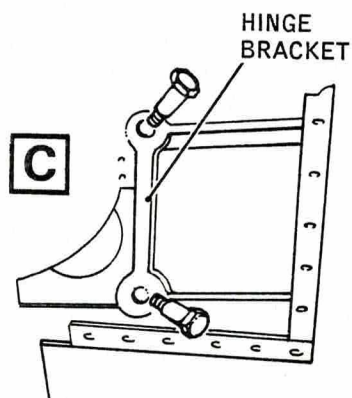
OUTBOARD JACK ATTACHMENT



RIGHT MAINPLANE LOWER SURFACE



CENTRE HINGE BRACKET



OUTBOARD FUEL CONNECTIONS

FLAPS - REMOVAL AND ASSEMBLY

FIGURE 2

Continued

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4 3 1 5 1 / 4 2 4 5 0

4. REMOVAL (Contd)

4.11 Flap.

- (i) Manoeuvre aft to clear flap shrouds.
- (ii) Lower vertically.
- (iii) Stow in stand (26DK/95290).

5. GENERAL

5.1 Spar 5 trailing-edge structure, fittings and pipelines.

Examine for signs of the following:

- a) Insecure (unsafe) attachment.
- b) Cracks and fractures.
- c) Corrosion, contamination and deterioration.
- d) Distortion.
- e) Loose or missing rivets.
- f) Chafing, fraying, scoring and wear.
- g) Faulty and broken locking devices.
- h) Loose clips, loose packing, obstruction of pipelines, leaks from pipelines.
- i) External damage.
- j) Overheating and leaking of fluids. There may be discolouration.

6. FITTING

6.1 Handling equipment:

- a) Multipurpose servicing hoist and jib No.3 (4GC/4232366 and 4GC/4232396).
- b) Sling (26DK/95266).

Position servicing hoist.

- (i) Attach sling to flap (using flap jack attachment bolts).
- (ii) Attach sling to servicing hoist.

6.2 Flap.

- (i) Raise.
- (ii) Position.

NOTE: During Sub-Item 6.2 ensure centre hinge bracket line assembly is in correct position.

Continued Overleaf

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6. FITTING (Contd)

NOTE: Sub-Item 6.3 is applicable only if same flap is being fitted.

6.3 Flap:

- | | | |
|---|---|--|
| a) Centre Hinge Bracket Attachment Bolts (quantity 3). | } | (i) Apply pigmented varnish to bolt shanks (33C/1264). |
| b) Inner and Outer Hinge Bracket Attachment bolts (quantity 8). | | (ii) Fit shims previously removed. |
| | | (iii) Fit bolts and wirelock. |

NOTE: Sub-items 6.4 to 6.7 inclusive are only applicable if a replacement flap in being fitted.

6.4 Flaps:-

- | | |
|--|------|
| a) Outer hinge bracket attachment bolts. | Fit. |
| b) Central hinge bracket attachment bolts. | Fit. |
| c) Inner hinge bracket attachment bolts. | Fit. |

6.5 Outer hinge bracket.

- | | |
|-------|---|
| (i) | Remove. |
| (ii) | Check clearance between hinge bracket and mainplane attachment point. Add shims (Part No.EB2-20-7365) as necessary until maximum clearance is 0.002 in. |
| (iii) | Refit bolts. |
| (iv) | Tighten and lock with wire. |

6.6 Centre hinge bracket.

- | | |
|-------|---|
| (i) | Remove top bolt. |
| (ii) | Check clearance between hinge bracket and mainplane attachment point. Add shims (Part No.EB2-20-7367) as necessary until maximum clearance is 0.002 in. |
| (iii) | Refit bolt. |
| (iv) | Tighten and lock with wire. |

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6. FITTING (Contd)

- 6.7 Inner hinge bracket forward attachment bolts.
- (i) Remove.
 - (ii) Check clearance between hinge bracket and mainplane attachment point. Add shims (Part No.EB2-20-7365) as necessary until maximum clearance is 0.002 in.
 - (iii) Refit bolts.
 - (iv) Tighten and lock with wire.

- 6.8 Handling equipment.
- (i) Detach sling from servicing hoist.
 - (ii) Disconnect sling from flap.
 - (iii) Remove servicing hoist from vicinity of aircraft.

NOTE: The gap between seal housing and ferrule on outboard fuel/air connector must be between 0.02 in and 0.08 in. (See Fig.3).

- 6.9 Outboard fuel air connector.
- (i) Remove blank.
 - (ii) Fit fuel air connector and ferrule.
 - (iii) Connect FRS coupling.
 - (iv) Connect bonding lead.
 - (v) Fit attachment bolts (quantity 3) (BUT DO NOT TIGHTEN).
- 6.10 Inboard fuel/air connector.
- (i) Fit ferrule.
 - (ii) Fit attachment bolts (quantity 3) (BUT DO NOT TIGHTEN).

NOTE: Inboard and outboard fuel/air connectors attachment bolts are to be tightened only after initial flap UP and DOWN operation to ensure alignment of gitz seals and reduce the risk of fuel leaks.

- 6.11 Fuel/air telescopic adaptors (Inboard and outboard).
- (i) Engage with hinge pins.
 - (ii) Lock adapter pins with locking wire.
- 6.12 Float switch cable (Access panel 121).
- (i) Connect.
 - (ii) Ensure sufficient slack to permit full flap movement.

Continued Overleaf

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SERVICING PROCEDURE

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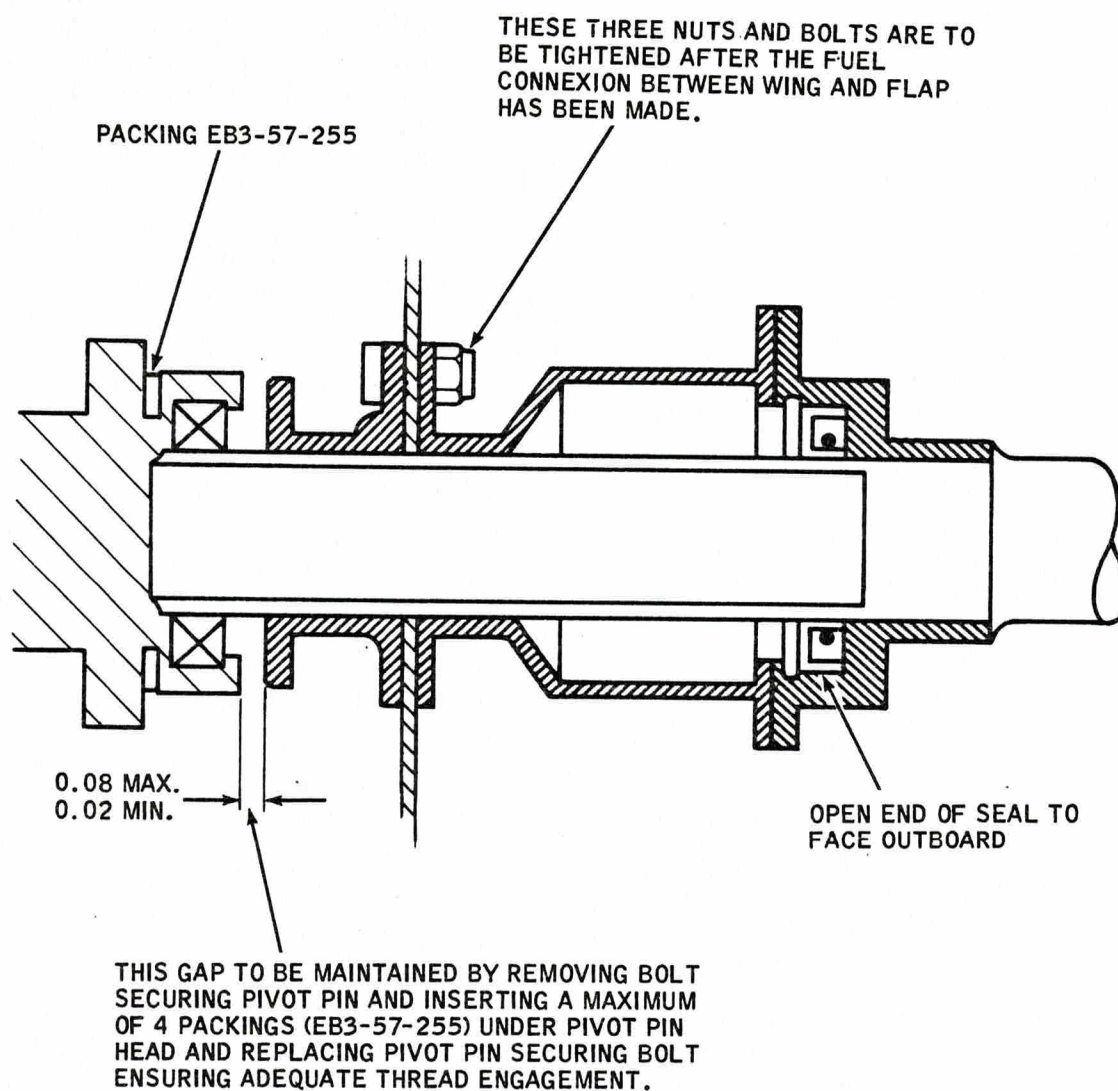
T55

BAC F53 & T55 (SA)

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INBOARD AND OUTBOARD FUEL/AIR ADAPTER
AND SEAL HOUSING - CLEARANCE
FIGURE 3

Continued

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6. FITTING (Contd)

- 6.13 Co-axial cables (Access panels 126 and 129). (i) Connect.
(ii) Ensure sufficient slack to permit full flap movement.

- 6.14 Flap position desynn transmitter link. Connect.

7. PREPARATION

- 7.1 External d.c. power supply. (i) Connect.
(ii) Switch to ON.

8. FITTING

- 8.1 Flaps. Raise manually until outboard trailing edge is aligned with mainplane trailing edge.
- 8.2 Fuel pipe, Part No. EF3-57-543 (left); fuel pipe, Part No. EF3-57-544 (right). Ensure that there is a clearance of at least 0.10 in. between the fuel pipe and flap in the vicinity of the centre hinge (Introduced by CSTI/LTG/79).
- 8.3 Fuselage fillet. Ensure aligned correctly. Slight misalignment may be corrected by adjusting.
- 8.4 Flaps. Lower manually.
- 8.5 Flap selector. Set to DOWN.
- 8.6 Hand-pump. Pressurize to fully extend hydraulic jacks.

NOTE: In Sub-Item 8.7 adjust eye-ends as required to align holes.

- 8.7 Flaps. Raise manually to engage with jack eye-ends.
- 8.8 a) Flap jack attachment bolts. Fit (Optimum flap position for inboard bolts, fully down. Outboard bolts one third down).
- b) Spacing washers. Fit.
- c) Circlips. Fit, ensure not overstressed.

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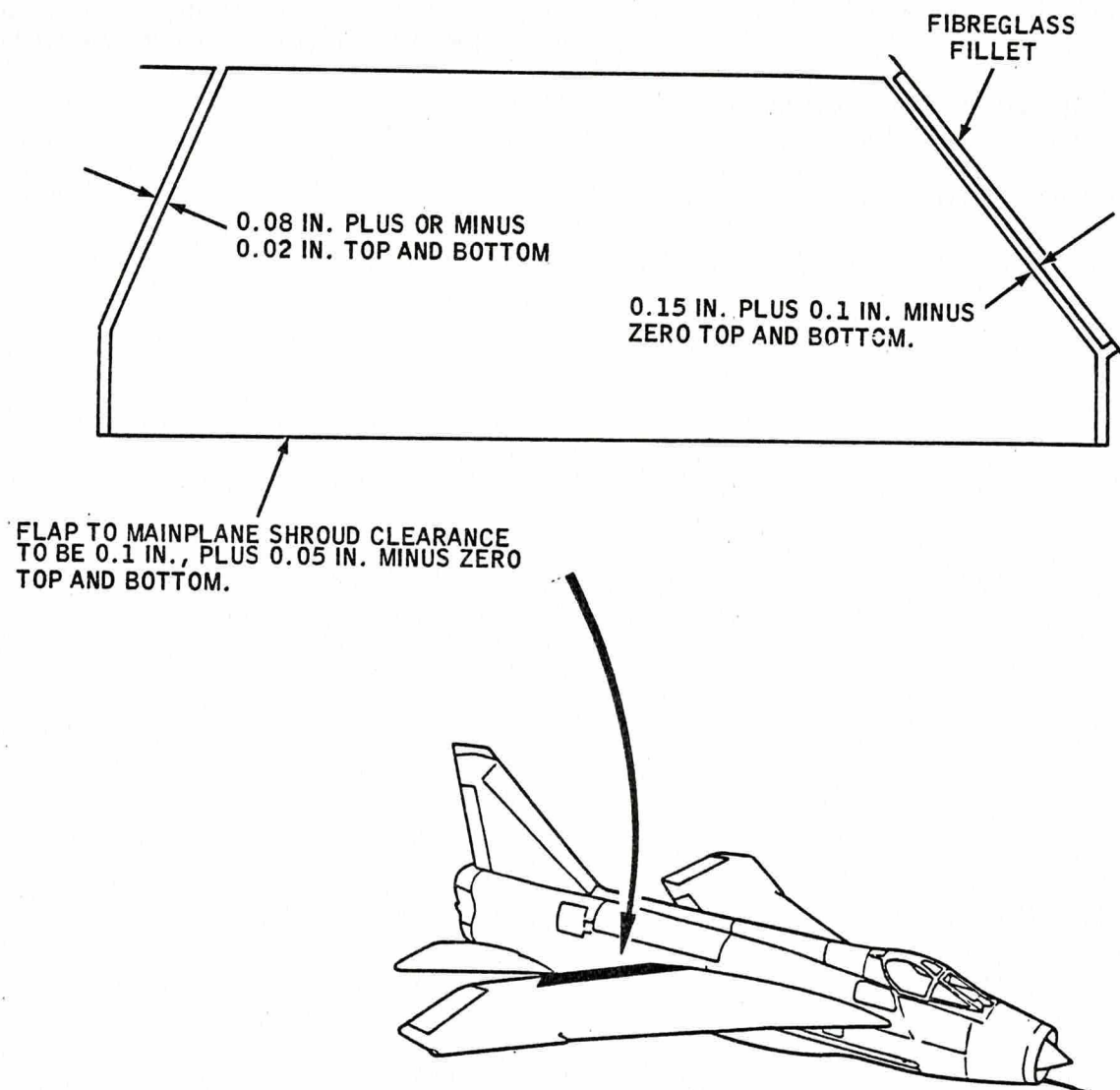
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FLAP/MAINPLANE SHROUD CLEARANCES

FIGURE 4

Continued

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8. FITTING (Contd)

- 8.9 Flap selector. Set to UP.
- 8.10 Hand-pump. Pressurize to raise flaps fully.
- 8.11 Mechanical lock indicator. Ensure engaged and locked.

NOTE: In Sub-Item 8.12 misalignment is to be adjusted out equally at inner and outer jacks.

- 8.12 Flaps. Ensure that alignment of trailing-edge is equal at fuselage fillet and mainplane trailing-edge.

9. GENERAL

- 9.1 Flaps. (i) Operate up and down using hand-pump.
(ii) Look for signs of fouling and straining.
- 9.2 Swivel coupling. Ensure no fouling during movement.
- 9.3 Connectors fuel/air (Inboard and outboard). Tighten 4BA attachment bolts (quantity 6).

43171/42470 (INSPECTORS)

10. INSPECTION STAGE

- 10.1 Inspect Installation. Independent check of:
(i) Assembly and locking.
(ii) Functional

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11. GENERAL

- 11.1 Flap tank. Refuel. Check correct operation of float switch.
- 11.2 Flap fuel lines and connectors. Look for leaks.
- 11.3 Plus-Up button. Operate and ensure that flap tank contents indication is correct.

Continued Overleaf

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12. GENERAL

- 12.1 Access Panels:
138, 122, 124, 126, Refit.
127, 129 and 130.

NOTE: When fitting access panel 138 it is important that a short screw (0.50 in.) is fitted at trailing-edge rib 5.

- 12.2 Flaps.
- (i) Operate up and down using hand-pump.
 - (ii) Look for fuel leaks.
 - (iii) Check clearances from fuselage and mainplane. (See Fig.4).

- 12.3 Hydraulic hand pump handle. Stow (LEFT undercarriage bay).

- 12.4 Access Panel 79P (left). Refit.

13. COMPLETION

- 13.1 External d.c. power supply.
- (i) Set to OFF.
 - (ii) Disconnect.

NOTE: All wirelocking to be of 22 SWG stainless steel locking wire.

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