

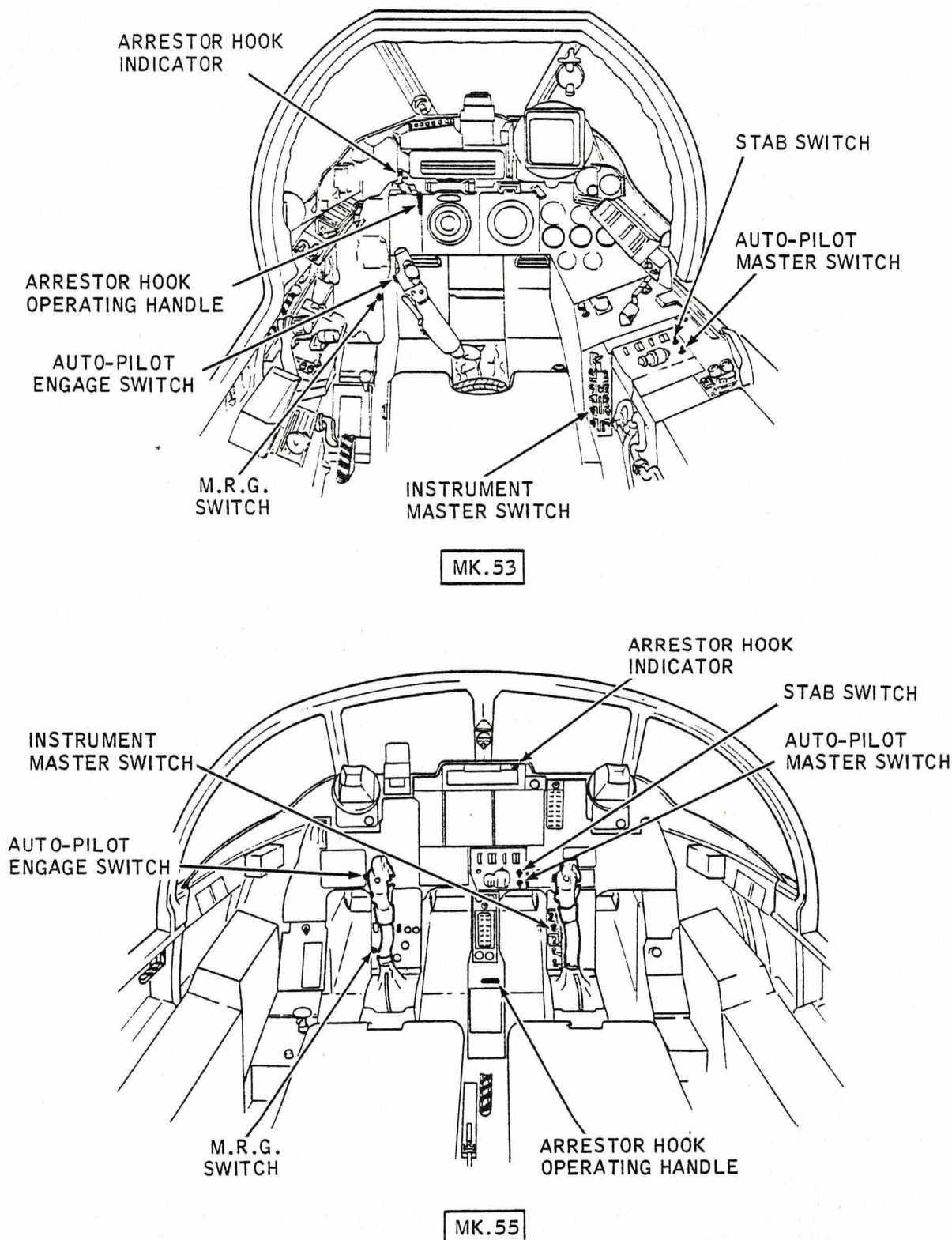
CHAP 1 AIRFRAME	SERVICING PROCEDURE	BAC F53 & T55 (SA)	
SP 57 AL 4	F53 T55	5A3A Section 1	
SHEET 1 OF 10		2nd Edition	
Rudder Spring Feel Unit - Removal and Fitting		AFSC	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.		43250 43151	
		42152 43171	
		42172	
SPECIAL TOOLS AND EQUIPMENT			ASSOCIATED PROCEDURES
Torque wrench (1C/1202795).			SP 5 (P)
Setting pin (26DK/95134).			6 (P)
Locating pin (26DK/95127).			9 (P)
Inflation rig (4G/1050542).			10 (P)
Travel gauge (26DK/95286).			603 (AF)
<u>4 3 2 5 0</u>			402 (AF)
1. PREPARATION			115A (AF)
1.1 No.1 Reheat jet pipe. Remove (SP 5 (P)).			115B (AF)
1.2 No.2 Reheat jet pipe. Remove (SP 9 (P)).			151 (AF)
<u>4 3 1 5 1</u>			100 (AF)
2. PREPARATION			
2.1 Aircraft. (i) Raise on jacks until all wheels are clear of the ground.			
(ii) Trestle at FR 59.			
<u>4 2 1 5 2 / 4 3 1 5 1</u>			
3. PREPARATION			
3.1 Ground air charging/ release connexion (Access panel 63P (left)).			Remove blank.
3.2 Services system hydraulic pressure.			Release pressure by operating hand pump.
3.3 Hydraulic test trolleys.			(i) Prime. (ii) Bleed.
3.4 No.1 Services ground test connexions (Access panel 45P (left)).			Connect hydraulic test trolley.
3.5 No.1 Controls ground test connexions (Access panel 45P (left)).			Connect hydraulic test trolley.
			Continued Overleaf
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CHAP 1 AIRFRAME
 SP 57 AL 4
 SHEET 2 OF 10

SERVICING PROCEDURE
 F53 T55

BAC F53 & T55 (SA)
 5A3A Section 1
 2nd Edition

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



INSTRUMENT AND AUTO-PILOT SWITCHES
 FIGURE 1

Continued

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CHAP	1	AIRFRAME	SERVICING PROCEDURE	B A C F 53 & T 55 (SA)
SP	57	A L 4	F53	T55
SHEET	3	OF 10		5A3A Section 1
				2nd Edition

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

4 2 1 5 2 / 4 3 1 5 1

3. PREPARATION (Contd)

- | | | |
|------|---|---|
| 3.6 | Hydraulic reservoirs (Services and No.1 controls system). | Replenish (SP 603(AF)). |
| 3.7 | Tyre inflation rig (4G/1050542). | (i) Connect to ground air charging/release connexion (Access panel 63P (left)).
(ii) Set rig to deliver a pressure of between 16 and 18 lbf/in2. |
| 3.8 | Access panels 82S (right) and 84S (right). | Remove. |
| 3.9 | Heat shield (between frames 56 and 57 (right)). | Remove. |
| 3.10 | External d.c. power supply. | (i) Connect.
(ii) Switch to ON. |
| 3.11 | External a.c. power supply. | (i) Connect.
(ii) Switch to ON. |
| 3.12 | MRG switch. | Set to OFF (See Fig.1). |
| 3.13 | Stab switch (on controller). | Set to OFF (See Fig.1). |
| 3.14 | Autopilot master switch (On control column). | Set to OFF (See Fig.1). |
| 3.15 | Instrument master switch. | Set to ON (See Fig.1). |
| 3.16 | Autopilot master switch (On controller). | Set to ON (See Fig.1). |
| 3.17 | Rudder auto-stabilizer actuator. | (i) Set to neutral using aircraft hand pump.
(ii) Check neutral using setting pin (26DK/95134). |
| 3.18 | Rudder auto-stabilizer actuator. | Remove setting pin. |
| 3.19 | Rudder travel gauge (26DK/95286). | Fit. |
| 3.20 | Main undercarriage. | Ensure ground locks fitted. |
| 3.21 | Nose undercarriage. | Remove ground lock. |

Continued Overleaf

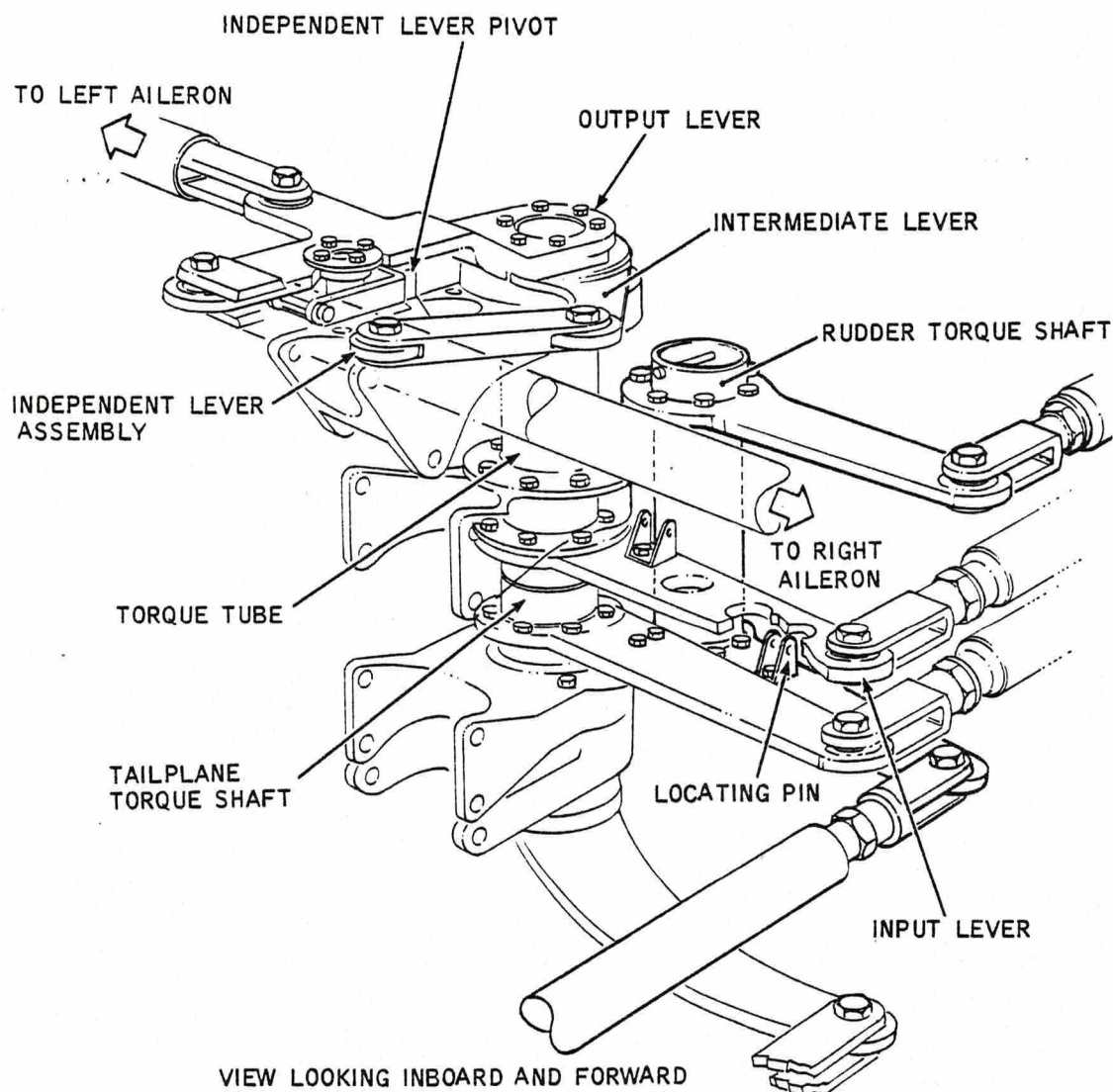
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CHAP 1 AIRFRAME
SP 57 AL 4
SHEET 4 OF 10

SERVICING PROCEDURE
F53 T55

BAC F53 & T55 (SA)
5A3A Section 1
2nd Edition

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



NON-LINEAR GEARING MECHANISM
FIGURE 2

Continued

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INCORPORATED AS NECESSARY IN MAINTENANCE CERTIFICATION DOCUMENTS

CHAP	1	AIRFRAME	SERVICING PROCEDURE	B A C F 53 & T 55 (SA)
SP	57	A L 4	F53 T55	5A3A Section 1
SHEET	5	OF 10		2nd Edition

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

42152/43151

3. PREPARATION (Contd)

- | | | |
|------|---|---|
| 3.22 | Pitot/static test set. | Connect. |
| 3.23 | Pitot/static system. | Pressurize to equivalent of 165 Kt. |
| 3.24 | Undercarriage lever. | Select to UP. |
| 3.25 | Nose undercarriage. | Raise, using test trolley hand pump, until indicator lamp is out. |
| 3.26 | Services system. | Pressurize to 3000 lbf/in ² . |
| 3.27 | Pitot/static system. | Pressurize to equivalent of 650 Kt. |
| 3.28 | No.1 controls system. | Pressurize to 3000 lbf/in ² . |
| 3.29 | Feel selector. | Ensure set to IN. |
| 3.30 | Rudder trim. | Trim to neutral ensuring indication on gauge is correct. |
| 3.31 | Rudder control system vertical torque shaft (Access panel 26S (right) F53; (Access panel 20S (right) T55)). | Fit locating pin (26DK/95127) (See Fig.2). |
| 3.32 | Rudder. | Ensure neutral. |
| 3.33 | Rudder control system vertical torque shaft. | Remove locating pin. |
| 3.34 | Pitot/static system. | Release pressure and remove test set. |
| 3.35 | Undercarriage lever. | Select to 'DOWN'. |
| 3.36 | Nose undercarriage. | Fit ground lock. |
| 3.37 | Autopilot master switch (On controller). | Set to OFF. |
| 3.38 | Instrument master switch. | Set to OFF. |
| 3.39 | External d.c. power supply. | Set to OFF. |
| 3.40 | External a.c. power supply. | Set to OFF. |

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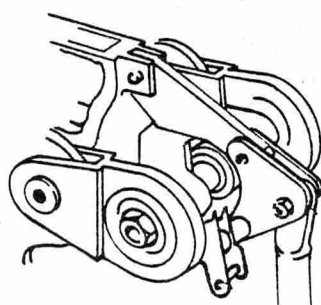
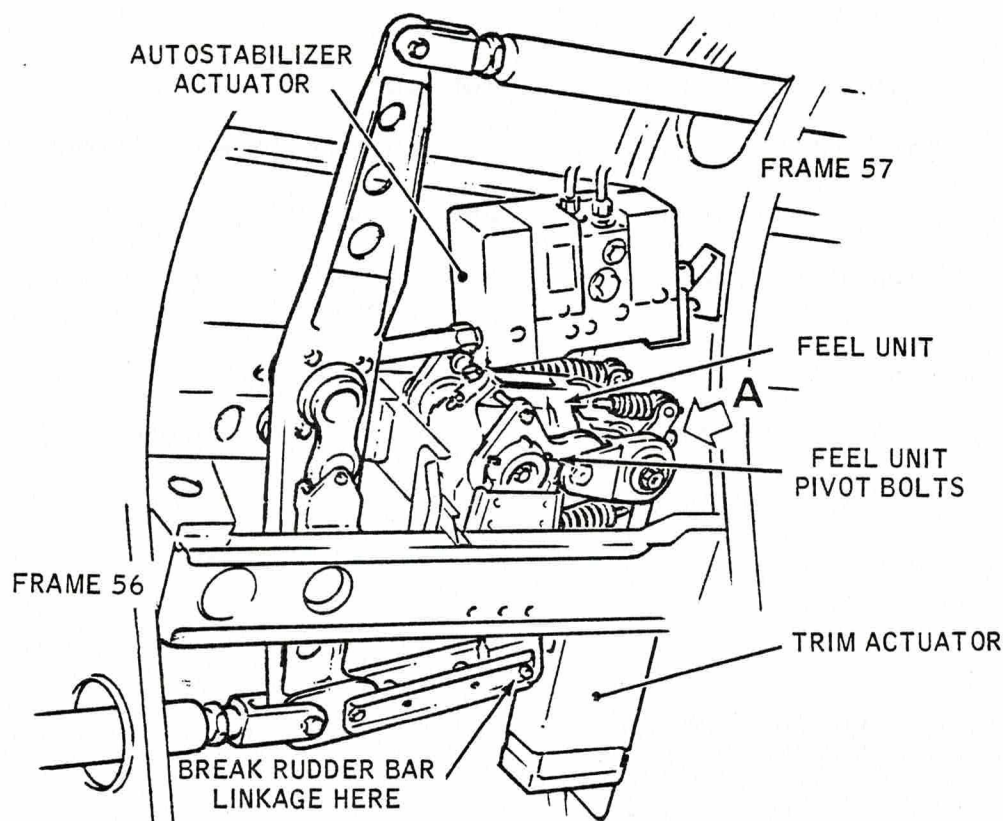
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CHAP 1 AIRFRAME
SP 57 AL 3
SHEET 6 OF 10

SERVICING PROCEDURE
F53 T55

BAC F53 & T55 (SA)
5A3A SECTION 1
2nd Edition

Safety and Servicing Notes are to be complied with
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TRIM ACTUATOR
LINKAGE

A

(SPRING ASSEMBLY
OMITTED FOR CLARITY)

FEEL TRIM AND AUTO-STABILIZER ACTUATOR INTERCONNECTION
FIGURE 3

Continued

SERVICING PROCEDURE INSPECTION STAGES DO NOT EXCLUDE ADDITIONAL INSPECTION STAGES
INCORPORATED AS NECESSARY IN MAINTENANCE CERTIFICATION DOCUMENTS

CHAP 1 AIRFRAME	SERVICING PROCEDURE	B A C F 53 & T 55 (SA)
SP 57 AL 4	F53 T55	5A3A Section 1
SHEET 7 OF 10		2nd Edition

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

4 2 1 5 2 / 4 3 1 5 1

3.41 Services and No.1 controls Stop.
hydraulic test trolleys.

3.42 Rear services system Exhaust pressure by selecting feel
accumulator. in and out.

3.43 No.1 controls system. Exhaust pressure by operating
tailplane control.

3.44 Tyre inflation rig (i) Remove.
(4G/1050542). (ii) Ensure all air is released,
fit and tighten blank.

4. REMOVAL

4.1 Auto-stabilizer actuator (i) Remove split pin and collar.
aft attachment pin (ii) Disconnect.
(at FR 57 (right)). (iii) Swivel upwards to a maximum
of 1.10 in.

4.2 Spring feel unit. (i) Disconnect linkage to trim
actuator (See Fig.3 Detail A).
(ii) Disconnect flexible drain
pipe (Access through access
panel 82S (right)).
(iii) Disconnect and remove banjo
bolt connecting walking joint
to feel unit body. Discard
bonded seals (quantity 3)
(Access through panel 82S
(right)).
(iv) Remove nut and bolt on rudder
control linkage (See Fig.3).
(v) Remove the quantity 4 allen
headed bolts from feel unit
pivot and withdraw unit
inboard. Retain upper halves
of support brackets.

5. FITTING

NOTE: It is essential that the new or bay serviced item is
checked for correct assembly of the bleed nipple adapter
body prior to fitting. See Fig.4 for correct assembly
and SP 402(AF) for torque values, when reconnecting
rudder control linkages. Nut and split pin must be inboard
or fouling of the trim actuator body can occur
(See Fig.3).

Continued Overleaf

SERVICING PROCEDURE INSPECTION STAGES DO NOT EXCLUDE ADDITIONAL INSPECTION STAGES
INCORPORATED AS NECESSARY IN MAINTENANCE CERTIFICATION DOCUMENTS

CHAP	1	AIRFRAME	SERVICING PROCEDURE	BAC F53 & T55 (SA)
SP	57	AL 4	F53 T55	5A3A Section 1
SHEET	8	OF 10		2nd Edition

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

42152/43151

- 5.1 Spring feel unit.
- (i) Seat in pivot and assemble upper halves of support brackets to lower halves complete with the quantity 4 allen headed bolts. Wire lock, ensuring support brackets are correctly assembled.
 - (ii) Assemble nut and bolt on rudder control linkage and split pin (See Fig.3).
 - (iii) Assemble banjo bolt connecting walking joint to feel unit body complete with new bonded seals (GD2618/C) and using torque wrench (1C/1202795) torque load to values referenced in SP 402(AF). Wirelock.
 - (iv) Reconnect flexible drain pipe (Access through panel 82S (right)). Wirelock.
 - (v) Reconnect linkage to trim actuator and fit collar and split pin (See Fig.3 , Detail A).
- 5.2 Auto-stabilizer actuator.
- (i) Re-position actuator.
 - (ii) Refit pin and collar. Lock with split pin.

42172/43171 (INSPECTOR)

6. INSPECTION STAGE

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

NOTE: Item 6.1 to be carried out concurrently with item 7.

42152/43151

7. TESTING

- 7.1 Rudder control system. Bleed (SP 151(AF)).
- 7.2 Rudder feel unit. Carry out calibrated leak check (SP 100(AF)).

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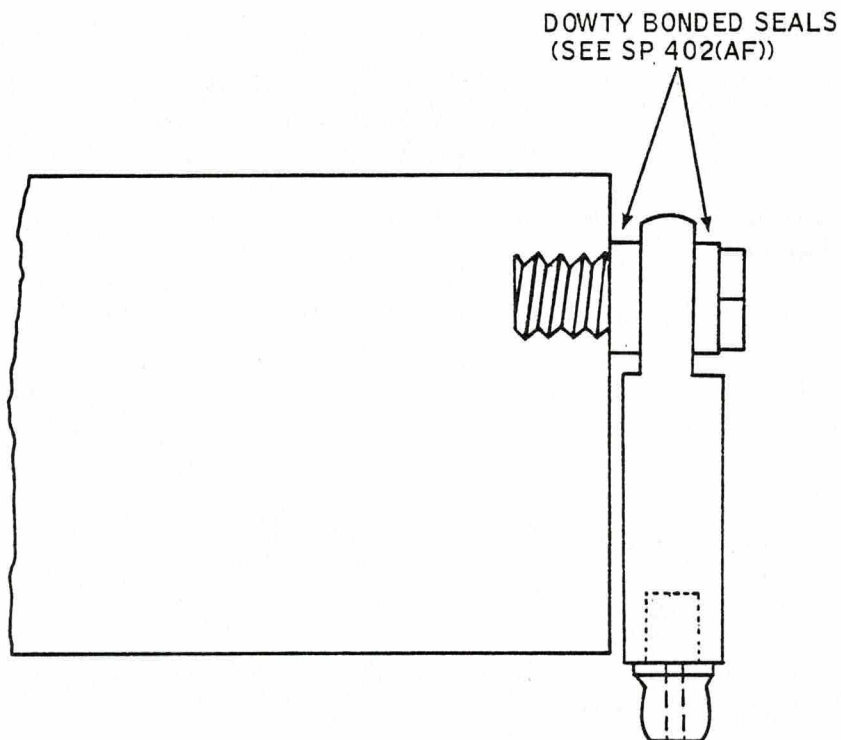
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CHAP 1 AIRFRAME
SP 57 AL 4
SHEET 9 OF 10

SERVICING PROCEDURE
F53 T55

B A C F 53 & T 55 (SA)
5A3A SECTION 1
2nd Edition

Safety and Servicing Notes are to be complied with
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NOTE:

DEEPER MACHINED FACE HOLES,
BONDED SEAL AND BANJO BOLT HEAD

BLEED NIPPLE ADAPTOR ASSEMBLY
FIGURE 4

Continued Overleaf

SERVICING PROCEDURE INSPECTION STAGES DO NOT EXCLUDE ADDITIONAL INSPECTION STAGES
INCORPORATED AS NECESSARY IN MAINTENANCE CERTIFICATION DOCUMENTS

CHAP 1 AIRFRAME	SERVICING PROCEDURE	BAC F53 & T55 (SA)
SP 57 AL 4	F53 T55	5A3A Section 1
SHEET 10 OF 10		2nd Edition

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

4 2 1 5 2 / 4 3 1 5 1

7.3 Rudder control system. Test (SP 115A(AF) (F53)),
(SP 115B(AF) (T55)).

8. COMPLETION

8.1 Rudder feel unit. Wrap hydraulic unions with fluorocarbon tape (EEAS84) in accordance with Mod 4601, Pt C.

8.2 Heat shield (between FR 56 Fit.
and 57 (right)).

8.3 Access panels 82S (Right) Fit.
and 84S (Right).

4 3 2 5 0

9. COMPLETION

9.1 No.1 Reheat Jet Pipe. Fit (SP 6(P)).

9.2 No.2 Reheat Jet Pipe. Fit (SP 10(P)).

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

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