

CHAP 2 AIRFRAME SP 104 AL 4 SHEET 1 OF 11	SERVICING PROCEDURE F53 T55	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition
Undercarriage Functional Check	AFSC	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.	43151 43171 42152 42172	
<b>SPECIAL TOOLS AND EQUIPMENT</b>		
Pitot/Static test set Nk3 (6C/1042139). Tyre inflation rig (4G/1050542). Canopy seal guards F53 (26DK/95129 - Left). Canopy seal guards F53 (26DK/95130 - Right). Canopy seal guards T55 (26DK/95252 - Left). Canopy seal guards T55 (26DK/95253 - Right).		ASSOCIATED PROCEDURES SP603 (AF)
NOTE: During this servicing procedure No.2 engine hatch or jury strut must be fitted.		
<u>43151</u>		
1. PREPARATION		
1.1 Aircraft.	(i) Raise on jacks until all wheels are clear of ground. (ii) Trestle at Frame 59.	
<u>43151 / 42152</u>		
2. PREPARATION		
2.1 Ground air charging/ release connexion (Access panel 63P(left)).	Remove blank.	
2.2 Services system hydraulic pressure.	Release pressure by operating brake lever.	
2.3 Hydraulic test trolley.	(i) Prime. (ii) Bleed.	
2.4 No.1 services ground test connexions (Access panel 45P(left)).	Connect hydraulic test trolley.	
2.5 Hydraulic reservoir.	Replenish (SP 603 (AF)).	
2.6 Tyre inflation rig (4G/1050542).	(i) Connect to ground air charging/release connexion (Access panel 63P(left)). (ii) Set to deliver a pressure of between 16 and 18 lbf/in <sup>2</sup> .	
2.7 Canopy seal guards.	Ensure fitted.	
Continued Overleaf		

CHAP 2 AIRFRAME SP 104 AL 4 SHEET 2 OF 11	SERVICING PROCEDURE F53 T55	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition
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Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

43151/42152

2. PREPARATION (Contd)

2.8 Slave battery leads. Fit.

2.9 Battery isolating switch. Set to ON.

2.10 Pitot/Static test set. Connect.

2.11 Armament safety break. (i) Remove from lanyard.  
(ii) Stow lanyard and flag in stowage pocket.

2.12 Undercarriage toggle switch. Ensure set to DOWN.

2.13 Undercarriage ground locks. Remove.

2.14 Nose undercarriage. Ensure aligned fore and aft.

2.15 Hydraulic pipe part no. EF3-73-2435. Ensure routed correctly and shows no sign of fouling (See Fig.1).

3. TESTING (LEFT UNDERCARRIAGE)

3.1 Services system. Pressurize to 3000 lbf/in<sup>2</sup>.  
NOTE: Sub-items 3.2 and 3.3 must be carried out simultaneously.

3.2 Undercarriage D door. Apply hand pressure in direction to close.

3.3 Door operated sequence valve. Check clearance (See Fig.2, Detail C).

3.4 Undercarriage D door. (i) Disconnect from door jack.  
(ii) Ensure jack can function without fouling during retraction.

3.5 Door operated sequence valve. Fit clamp.

3.6 Main undercarriage. (i) Ensure fully extended.  
(ii) Ensure system pressurized to 3000 lbf/in<sup>2</sup>.

3.7 Leg operated sequence valve. Check dimension does not exceed 1.65in (See Fig.2, Detail B).

3.8 Pitot/Static system. Pressurize to 165 Kt.

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CHAP. 2 AIRFRAME  
S.P. 104 A.L. 4  
SHEET 3 OF 11

SERVICING PROCEDURE

F53 T55

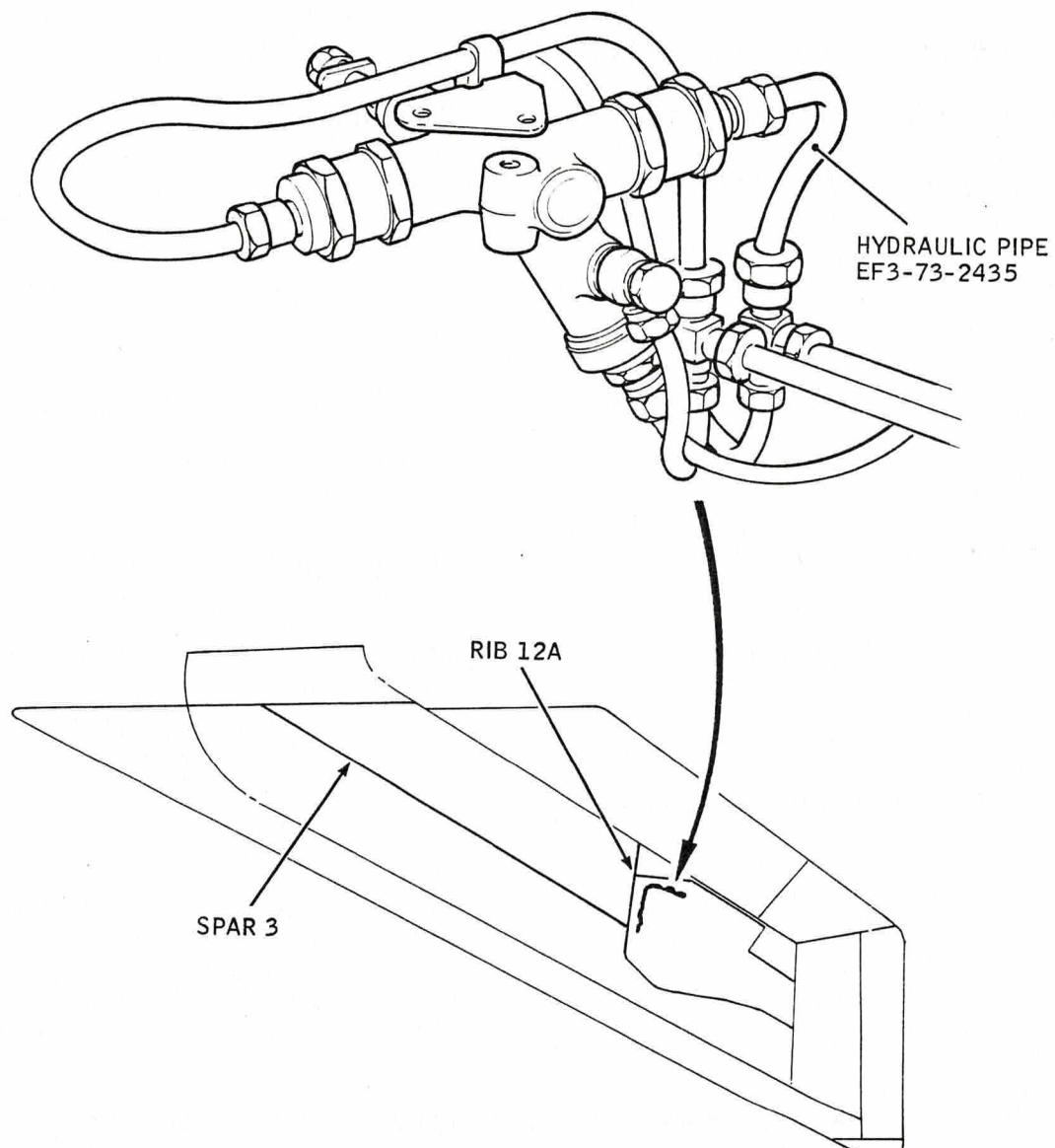
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5A3A Section 1  
2nd Edition

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NOTE 1: Ensure hydraulic pipe Part No. EF3-73-2435 fitted between T-piece and the sequence valve filter connexion on the left undercarriage has a red identification band adjacent to union connected to T-piece.

NOTE 2: Failure to route this pipe correctly may result in fouling between the torque link hinge pin and hydraulic pipe during retraction.



HYDRAULIC PIPE - ROUTING

FIGURE 1

Continued Overleaf

CHAP 2 AIRFRAME SP 104 AL 4 SHEET 4 OF 11	SERVICING PROCEDURE F53	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition
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Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

43151/42152

3. TESTING (contd)

3.9 Undercarriage toggle switch. Set to UP.

3.10 Leg operated sequence valve. Check clearance 0.70in PLUS OR MINUS 0.01in. (See Fig.2, Detail A).

3.11 Undercarriage toggle switch. Set to DOWN.

3.12 Undercarriage D door. Reconnect.

3.13 Door operated sequence valve clamp. Remove.

4. TESTING (RIGHT UNDERCARRIAGE)

4.1 Services system. Pressurize to 3000 lbf/in<sup>2</sup>.

NOTE: Sub-items 4.2 and 4.3 must be carried out simultaneously.

4.2 Undercarriage D door. Apply hand pressure in direction to close.

4.3 Door operated sequence valve. Check clearance (See Fig.2, Detail C).

4.4 Undercarriage D door. (i) Disconnect from door jack. (ii) Ensure jack can function without fouling during retraction.

4.5 Door operated sequence valve. Fit clamp.

4.6 Main undercarriage. (i) Ensure fully extended. (ii) Ensure system pressurized to 3000 lbf/in<sup>2</sup>.

4.7 Leg operated sequence valve. Check dimension does not exceed 1.65in (See Fig.2, Detail B).

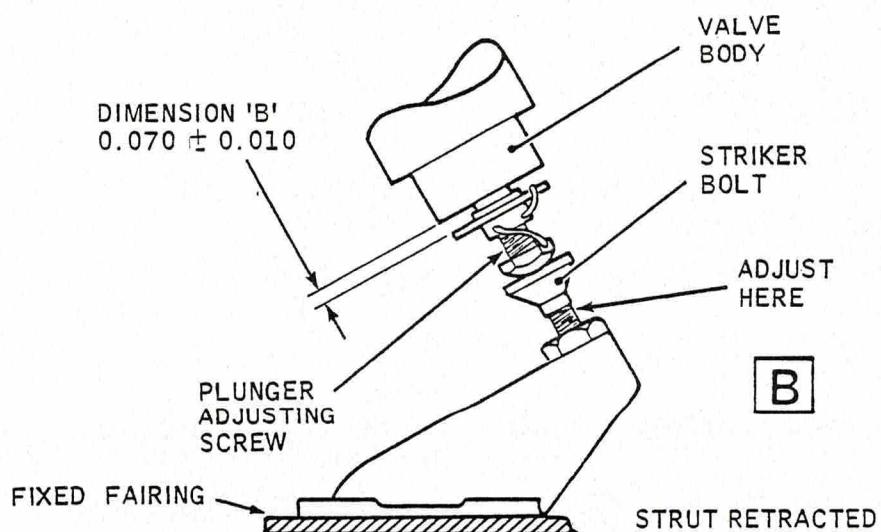
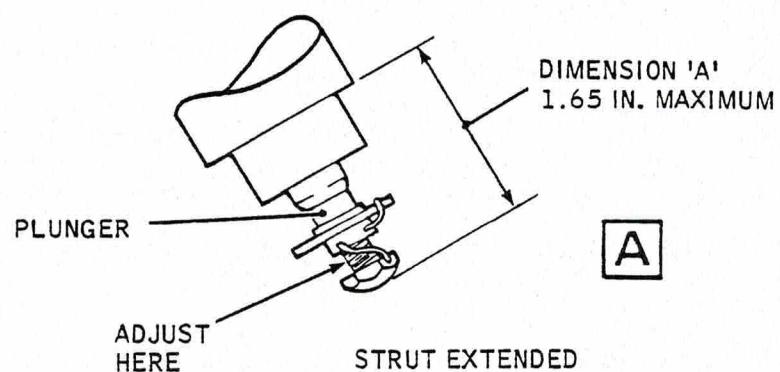
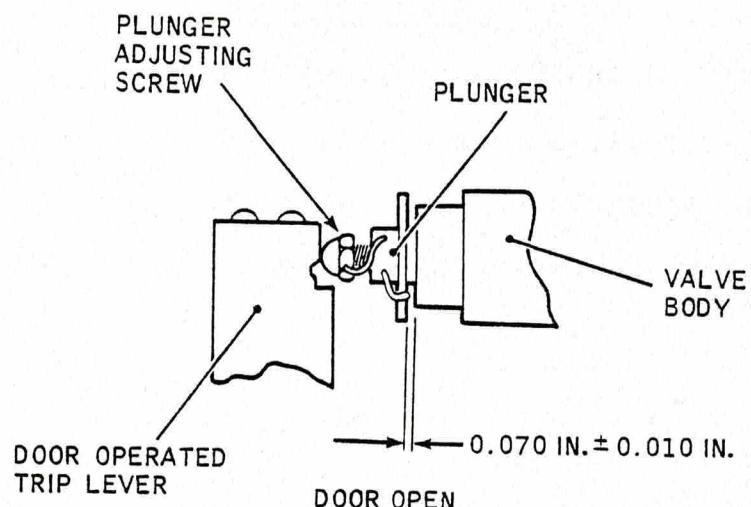
4.8 Pitot/Static system. Pressurize to 165 Kt.

4.9 Undercarriage toggle switch. Set to UP.

4.10 Leg operated sequence valve. Check clearance 0.07in PLUS OR MINUS 0.01in. (See Fig.2, Detail A).

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DOOR AND LEG OPERATED SEQUENCE VALVES  
FIGURE 2

Continued Overleaf

CHAP 2 AIRFRAME SP 104 AL 6 SHEET 6 OF 11	SERVICING PROCEDURE F53 T55	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition
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43151/42152

4. TESTING (RIGHT UNDERCARRIAGE) (Contd)

4.11 Undercarriage toggle switch. Set to DOWN.

4.12 Undercarriage D door. Reconnect.

4.13 Door operated sequence valve clamp. Remove.

5. TESTING

5.1 Undercarriage indicator lamps (green), (F53 quantity 3, T55: quantity 6). Ensure lit.

NOTE: Sub-items 5.3 to 5.5 inclusive must be carried out immediately after sub-item 5.2.

5.2 Undercarriage toggle switch. Set to UP.

5.3 Undercarriage. Check time taken for main undercarriage to retract does not exceed 7.5 secs, and that time for nose undercarriage to retract does not exceed 3.5 secs.

5.4 Undercarriage indicator lamps (F53: quantity 3, T55: quantity 6). Ensure lit (RED) while undercarriage is unlocked, and extinguished when undercarriage is locked up.

5.5 Fairings and doors. (i) Ensure operating correctly. (ii) Ensure flush fitting when retracted.

5.6 Fairings and doors:

(a) Leg fixed fairings. Check that clearance is 0.07in PLUS 0.03in in MINUS zero.

(b) Aft and forward hinge flaps. Check that clearance is 0.07in PLUS 0.03in in MINUS zero.

(c) Nose undercarriage doors. Check that clearance is 0.050in PLUS 0.025in MINUS zero.

(d) Wheel compartment doors. Check that clearance is 0.070 in PLUS 0.060 in MINUS zero.

Continued

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43151/42152

5. TESTING (Contd)

5.6 Fairings and doors (contd).

(e) Flap engaging claws.

Ensure in light contact with the flap by rattling slightly when applying hand pressure.

5.7 Fairings and doors:

(a) Leg fixed fairings.

(i) Check that leading edge is inset a minimum of 0.030 in inside mainplane contour.

(b) Aft and forward hinged flaps.

(ii) Check that trailing edge is flush with mainplane contour (at no point are trailing edges to be inside skin contour).

(c) Wheel compartment doors.

NOTE: Sub-items 5.9 to 5.11 inclusive must be carried out immediately after sub-item 5.8.

5.8 Undercarriage toggle switch. Set to DOWN.

5.9 Undercarriage.

Check that time for main legs to lower does not exceed 6.5 secs and that time for complete undercarriage to lock is not more than 16 secs.

5.10 Undercarriage indicator lamps (F53: quantity 3, T55: quantity 6).

Ensure lit RED when undercarriage is unlocked and GREEN when undercarriage is locked down.

5.11 Door jack mechanism down lock indicators.

Ensure full engagement (tab and scribed arrow on jack body aligned) in time not exceeding 3 secs after undercarriage has locked down.

42152

NOTE 1: Item 6 is applicable only to Post Mod. Dowty 7150 undercarriage legs on initial fitting.

NOTE 2: Fouling may occur between the retraction jack eye-end and the undercarriage leg to eye-end attachment bracket when the undercarriage is fully retracted. The witness marks can be seen with the undercarriage lowered.

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CHAP. 2 AIRFRAME  
S.P. 104 A.L. 4  
SHEET 8 OF 11

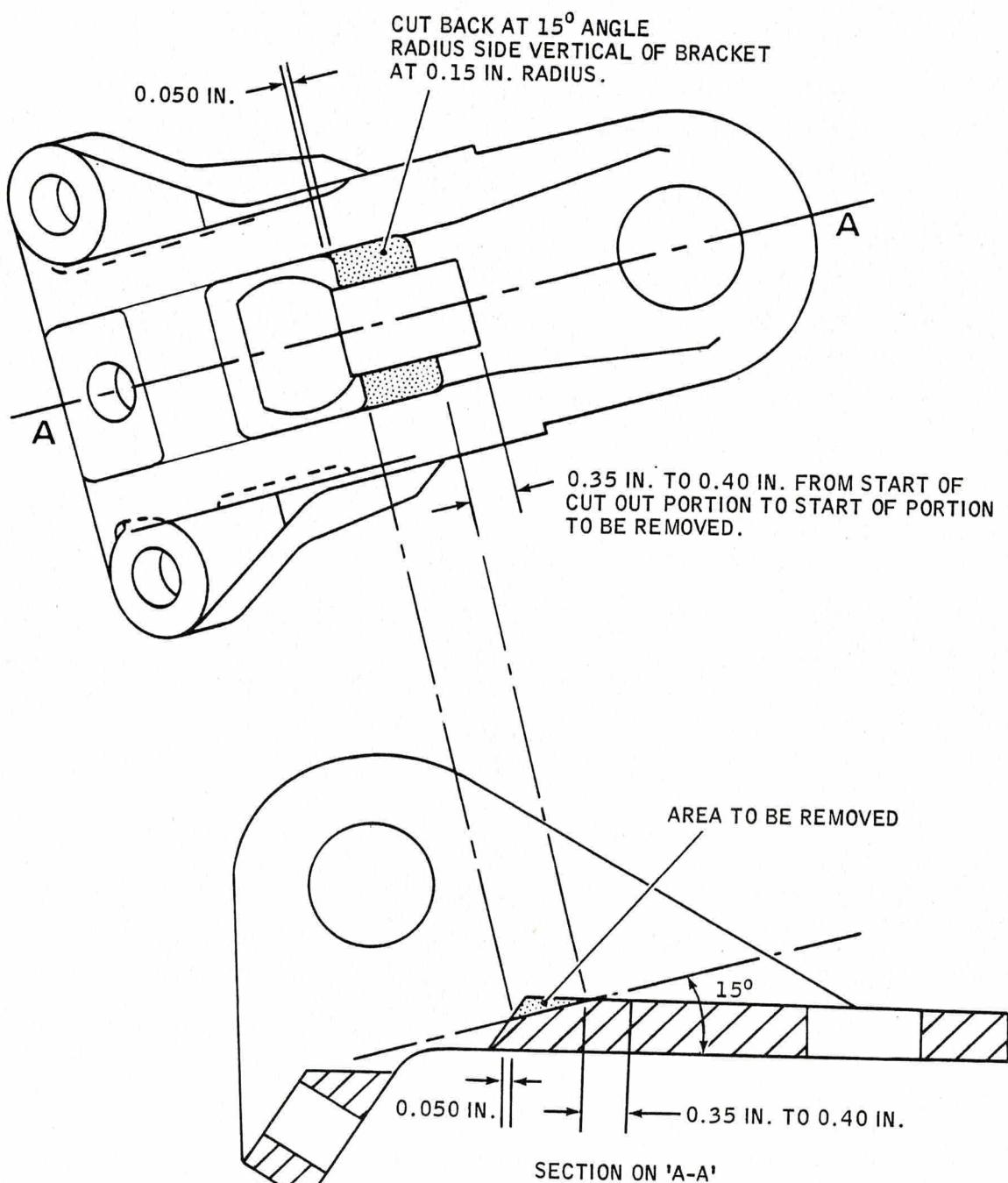
SERVICING PROCEDURE

F53 T55

BAC F53 & T55 (SA)

5A3A Section 1  
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DETAIL OF CUT BACK TO ELIMINATE FOULING ON  
POST DOWTY MOD 7150 BRACKETS.

DETAIL OF CUT BACK TO ELIMINATE FOULING ON  
POST MOD. DOWTY 7150 BRACKETS

FIGURE 3

Continued

CHAP 2 AIRFRAME  
SP 104 AL 6  
SHEET 9 OF 11

SERVICING PROCEDURE

F53

T55

BAC F53 & T55 (SA)

5A3A Section 1  
2nd Edition

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42152

6. EXAMINATION

6.1 Attachment bracket, undercarriage main legs to retraction jack. (i) Examine for evidence of fouling. (ii) If fouling has occurred carry out item 7.

7. RECTIFICATION

7.1 Undercarriage selector. Set to UP.

7.2 Hand pump. Operate until radius rod locks are disengaged.

7.3 Main jack. (i) Support. (ii) Disconnect at undercarriage leg.

7.4 Attachment bracket (See Fig.3). Chamfer to eliminate fouling.

7.5 Main jack. (i) Refit to undercarriage leg. (ii) Fit and lock attachment bolt.

7.6 Undercarriage. Carry out full sequence of retraction and lowering.

NOTE: Item 8 is applicable only if Item 7 has been carried out.

8. EXAMINATION

8.1 Attachment bracket undercarriage main leg to retraction jack. (i) Examine for evidence of fouling. (ii) If fouling has occurred carry out item 7.

42172 (INSPECTOR)

9. INSPECTION STAGE

9.1 Inspect. After component replacement or if system has been disassembled.

43151 / 42152

10. GENERAL

10.1 Pitot/Static test set. (i) Release pressure. (ii) Remove.

Continued Overleaf

CHAP 2 AIRFRAME	SERVICING PROCEDURE	BAC F53 & T55 (SA)
SP 104 AL 4	F53	T55
SHEET 10 OF 11		5A3A Section 1 2nd Edition

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

## 43171 / 42172 (INSPECTOR)

### 11. INDEPENDENT CHECKS

NOTE:- The independent checks detailed in this item are to ensure that the undercarriage Hydel selector slide valve is correctly positioned and must be carried out personally by specialist inspectors who have not been directly concerned with the operations detailed in this servicing procedure.

- 11.1 Undercarriage toggle switch. Ensure set to DOWN.
- 11.2 Undercarriage indicator lamps (green), (F53: quantity 3; T55 quantity 6). Ensure lit and locks engaged.
- 11.3 Undercarriage ground safety locks. Fit.
- 11.4 Aircraft job card. Endorse as follows:  
Certified I have personally carried out the independent checks detailed in Servicing Procedure BAC F53 and T55 (SA) 5A3A Section 1 SP 104(AF).

## 43151

### 12. COMPLETION

- 12.1 Hydraulic test trolley. (i) Stop.  
(ii) Remove.
- 12.2 Services hydraulic system. Release pressure by operating brake lever.
- 12.3 Battery isolating switch. Set to OFF.
- 12.4 Slave battery leads. Remove.
- 12.5 Ground equipment. (i) Operate to lower aircraft to ground.  
(ii) Remove from vicinity of aircraft.
- 12.6 Tyre inflation rig (4G/1050542). (i) Disconnect at ground air charging/release connexion.  
(ii) Fit blank and wirelock.
- 12.7 Hydraulic test trolley. (i) Disconnect  
(ii) Remove.

Continued

CHAP 2 AIRFRAME  
SP 104 AL 4  
SHEET 11 OF 11

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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43151

12. COMPLETION (Contd)

12.8 Hydraulic pump quick release connexions (Access panel 45P(left)). (i) Reconnect to aircraft. (ii) Wirelock.

12.9 Hydraulic services reservoir. Replenish (SP 603(AF)).

12.10 Access panels. Refit.

12.11 Canopy seal guards. Remove.

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



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