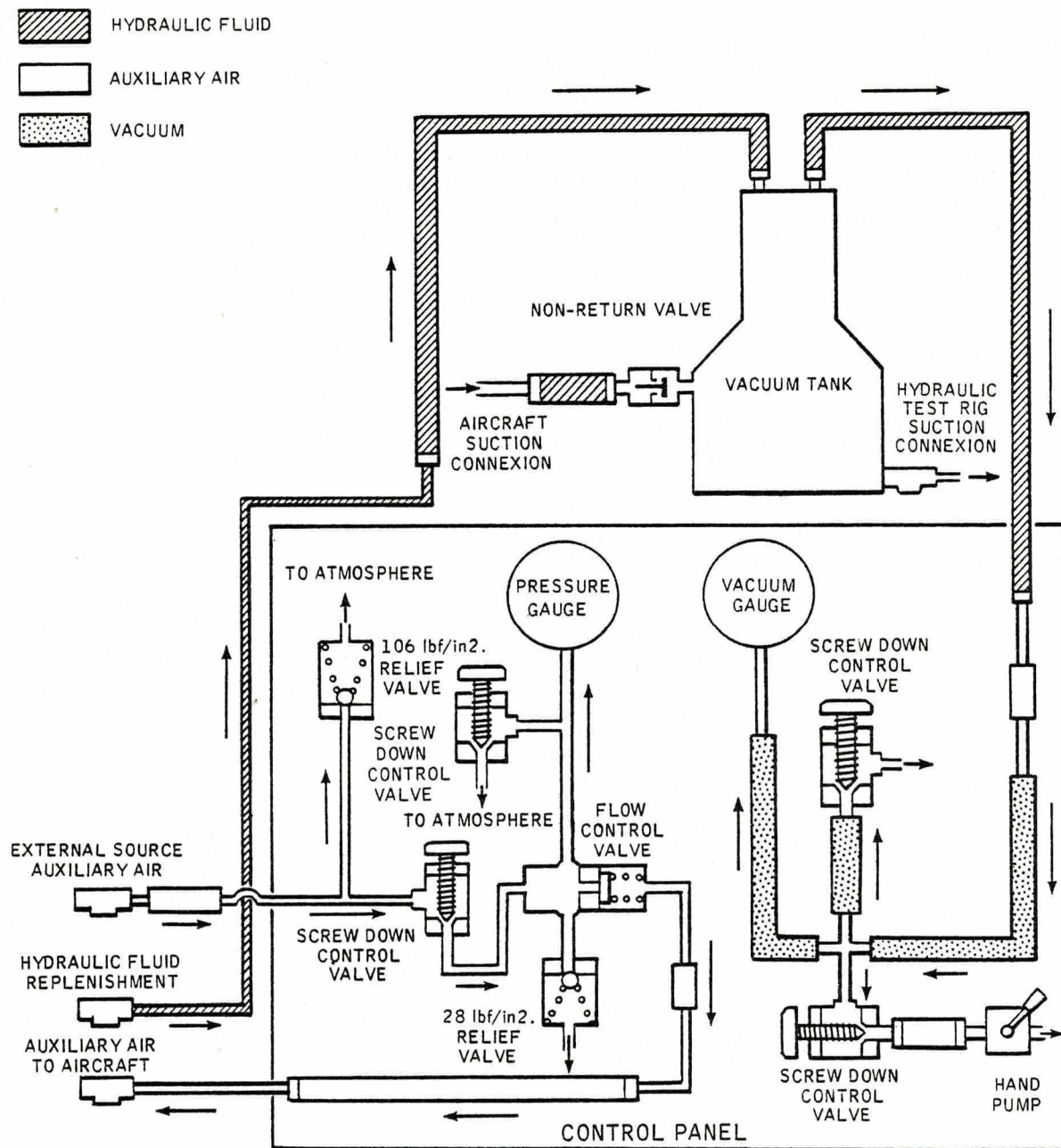


CHAP 2 AIRFRAME SP 151 AL 4 SHEET 1 OF 11	SERVICING PROCEDURE F53 T55	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition
Services (Hydraulic) System - Deaeration Procedure	AFSC 42152 43151 42172 43171	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.		
SPECIAL TOOLS AND EQUIPMENT LSEPT deaeration rig (26DK/NIV). Pitot/Static test set MK5 (6C/4361161). Air supply trolley (4G/4272). NOTE 1 : This servicing procedure must be carried out for the following conditions:- (a) As called up in the MSL Check 2. (b) When the hydraulic system has been disturbed. (c) Slowness of selected system. NOTE 2 : Aircraft must be jacked and trestled before commencement of this servicing procedure. NOTE 3 : During this servicing procedure No.2 engine hatch or jury strut must be fitted at all times. NOTE 4 : For an empty system, fill system reservoir and operate all services using aircraft handpump. While operating services, replenish reservoir until the system has accepted its complete capacity. NOTE 5 : When using the LSEPT deaeration rig, the operator must maintain the fluid level between the markers on the sight glass. Do not make any selection if the fluid level is below the lower mark, as this could cause damage to the reservoir bladder. NOTE 6 : If the hydraulic test trolley accidentally stops during this servicing procedure, the operator must open the auxiliary air release and the vacuum release valves on LSEPT deaeration rig to prevent fluid draining from the reservoir.		ASSOCIATED PROCEDURES SP602 (AF) 603 (AF)
		Continued Overleaf
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HYDRAULIC SYSTEM DEAERATION RIG - SCHEMATIC
FIGURE 1

Continued

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1. PREPARATION

- | | |
|--|---|
| 1.1 LSEPT deaeration rig. | (i) Connect inlet hose to outlet connexion.
(ii) Fill with OM15 to low level mark. |
| 1.2 LSEPT deaeration rig vacuum release valve. | Close. |
| 1.3 LSEPT deaeration rig vacuum on/off valve. | Turn on. |
| 1.4 LSEPT deaeration rig vacuum pump. | Operate until -14in.Hg is indicated on vacuum gauge. |
| 1.5 LSEPT deaeration rig. | When bubbles cease to appear, the fluid is deaerated, ready for use. |

NOTE: Because of the deaeration process, the LSEPT deaeration rigs pressure may rise. Repeat sub-items 1.3 and 1.4 to maintain -14in.Hg. This also serves as a serviceability check for the deaeration rig. If bubbles continue to appear after 15 minutes then the deaeration rig hose must be leaking.

- | | |
|--|---|
| 1.6 Ground air charging/ release connexion (Access panel 63P(left)). | Remove blank. |
| 1.7 Services system hydraulic pressure. | Release pressure by operating brake lever. |
| 1.8 Hydraulic test trolleys. | (i) Prime.
(ii) Bleed. |
| 1.9 Hydraulic accumulators. | Check pressures (SP 602(AF)). |
| 1.10 Hydraulic reservoirs. | Replenish. (SP 603(AF)). |
| 1.11 No.1 controls ground test connexions (Access panel 45P(left)). | Connect hydraulic test trolley. |
| 1.12 No.1 services ground test connexions (Access panel 45P(left)). | Disconnect. |
| 1.13 Hydraulic test trolley pressure and return hoses. | Connect to services ground test connexions. |

Continued Overleaf

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1. PREPARATION (Contd)

- | | |
|---|--|
| 1.14 LSEPT deaeration rig auxiliary air hose. | Connect to ground air charging/release connexion. |
| 1.15 LSEPT deaeration rig inlet hose. | Disconnect from rig outlet and connect to services ground test connexion. |
| 1.16 Hydraulic test trolley. | Connect suction hose to deaeration rigs outlet connexion. |
| 1.17 Air supply trolley. | (i) Connect to deaeration rig auxiliary air connexion.
(ii) Set to deliver a pressure of 100 lbf/in ² . |
| 1.18 LSEPT deaeration rig. | Open auxiliary air pressure inlet valve. |
| NOTE: Sub-items 1.19 to 1.21 must be carried out in rapid succession. | |
| 1.19 LSEPT deaeration rig auxiliary air control valve. | Turn clockwise until fluid in the sight glass begins to rise (approx 10 to 15 lbf/in ² will cause the fluid to rise). |
| 1.20 LSEPT deaeration rig vacuum release valve. | Close when fluid level is just rising to the upper mark. |
| 1.21 Hydraulic test trolley. | Engage clutch and set to run at 2500 rev/min. when fluid level reaches the upper mark. |
| 1.22 LSEPT deaeration rig auxiliary air control valve. | Adjust to maintain fluid level mid-way between the upper and lower marks on the sight glass. |
| 1.23 LSEPT deaeration rig vacuum on/off valve. | Turn on. |
| 1.24 LSEPT deaeration rig vacuum pump. | Operate until the fluid rises. |
| 1.25 LSEPT deaeration rig auxiliary air control valve. | Turn counter clockwise until the fluid reaches the mid-way position between the markers on the sight glass. |

Continued

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1. PREPARATION (Contd)

- 1.26 LSEPT deaeration rig air control valve and vacuum pump. Decrease auxiliary air pressure and increase vacuum to maintain the fluid level between the two marks until -14in.Hg is achieved and no bubbles are apparent in the sight glass.

NOTE: If excessive frothing occurs auxiliary air pressure must be increased and the vacuum decreased to maintain the fluid level between the two marks. When excessive frothing ceases, decrease auxiliary air pressure and increase the vacuum to maintain the fluid level between the two marks until -14in.Hg is achieved with no bubbles apparent in the sight glass.

- 1.27 Ailerons. Ensure neutral.
- 1.28 Slave battery. Fit.
- 1.29 Battery isolating switch. Set to ON.
- 1.30 Pitot/Static test set. Connect.
- 1.31 Armament safety break. (i) Remove from lanyard.
(ii) Stow lanyard and flag in stowing pocket.

2. UNDERCARRIAGE SYSTEM - DEAERATION

- 2.1 Undercarriage indicator lamps (green) (F53; quantity 3, T55: quantity 6) Ensure lit.
- 2.2 Undercarriage ground locks. Remove.
- 2.3 Pitot/Static system. Pressurize to equivalent of 165 Kt.
- 2.4 LSEPT deaeration rig. Raise fluid level to upper mark on sight glass.
- 2.5 Undercarriage toggle switch. Set to UP.
- 2.6 Undercarriage indicator lamps (F53: quantity 3; T55 quantity 6). Ensure lit (RED) when undercarriage is unlocked and extinguished when undercarriage is locked up.
- 2.7 LSEPT deaeration rig. Allow fluid to stabilize.

Continued Overleaf

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2. UNDERCARRIAGE SYSTEM - DEAERATION (Contd)

2.8 Undercarriage toggle switch. Set to DOWN.

2.9 Undercarriage indicator lamps (F53: quantity 3, T55: quantity 6). Ensure lit (RED) when undercarriage is unlocked and lit (GREEN) when undercarriage is locked down.

2.10 Undercarriage ground locks. Fit.

NOTE: Sub-items 2.11 and 2.12 must be done simultaneously.

2.11 LSEPT deaeration rig auxiliary air control valve. Operate to decrease auxiliary air pressure

2.12 LSEPT deaeration rig vacuum pump. (i) Operate to increase vacuum. (ii) Maintain fluid level between upper and lower marks on sight glass.

NOTE: Repeat sub-items 2.4 to 2.12 until fluid in sight glass remains clear or bubbles at -14in.Hg.

2.13 Pitot/Static system. Release pressure.

3. AIRBRAKE SYSTEM - DEAERATION

3.1 LSEPT deaeration rig. Raise fluid level to upper mark on sight glass.

3.2 Airbrakes. Set to OPEN.

3.3 LSEPT deaeration rig. Allow fluid to stabilize.

3.4 Airbrakes. Set to CLOSE.

NOTE: Sub-items 3.5 and 3.6 must be done simultaneously.

3.5 LSEPT deaeration rig auxiliary air control valve. Operate to decrease auxiliary air pressure

3.6 LSEPT deaeration rig vacuum pump. (i) Operate to increase vacuum. (ii) Maintain fluid level between upper and lower marks on sight glass.

NOTE: Repeat sub-items 3.1 to 3.6 until fluid in sight glass remains clear of bubbles at -14in.Hg.

Continued

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

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4. FLAP SYSTEM-DEAERATION

4.1 LSEPT deaeration rig. Raise fluid level to upper mark on sight glass.

4.2 Flap toggle switch. Set to DOWN.

4.3 LSEPT deaeration rig. Allow fluid to stabilize.

4.4 Flap toggle switch. Set to UP.

NOTE: Sub-items 4.5 and 4.6 must be done simultaneously.

4.5 LSEPT deaeration rig auxiliary air control valve. Operate to decrease auxiliary air pressure.

4.6 LSEPT deaeration rig vacuum pump. (i) Operate to increase vacuum.
(ii) Maintain fluid level between upper and lower marks on sight glass.

NOTE: Repeat sub-items 4.1 to 4.6 until fluid in sight glass remains clear of bubbles at -14in.Hg.

5. WHEELBRAKE SYSTEM - DEAERATION

5.1 Wheelbrake lever. Operate until fluid in sight glass remains clear of bubbles at -14in.Hg.

6. CANOPY SYSTEM - DEAERATION

6.1 Canopy seal guards. Ensure removed.

6.2 Canopy jack safety strut. Ensure removed.

6.3 Canopy open and close switch. Operate until fluid in sight glass remains clear of bubbles at -14in.Hg.

NOTE: Sub-items 6.4 to 6.5 must be carried out simultaneously.

6.4 Hydraulic test trolley. Disengage clutch.

6.5 LSEPT deaeration rig. (i) Open vacuum release valve.
(ii) Auxiliary air release valve OPEN.
(iii) Auxiliary air control valve, screw counter-clockwise fully.

6.6 Hydraulic test trolley. Stop.

Continued Overleaf

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6. CANOPY SYSTEM - DEAERATION (Contd)

6.7 Services hydraulic system. Release pressure by operating brake lever.

7. FEEL SYSTEM - DEAERATION

7.1 Nose undercarriage ground safety lock. Remove.

7.2 External a.c. power supply. (i) Connect.
(ii) Set to ON.

7.3 Main undercarriage ground safety locks. Ensure fitted.

7.4 Pitot/Static system. Pressurize to the equivalent of 165 Kt.

7.5 Undercarriage toggle switch. Set to UP.

7.6 Nose undercarriage. Raise using hydraulic test trolley hand pump.

NOTE: Sub-items 7.7. to 7.8 must be carried out in rapid succession.

7.7 Services hydraulic system. Pressurize to 3000 lbf/in².

7.8 LSEPT deaeration rig. (i) Auxiliary air release valve close.
(ii) Close vacuum release valve.
(iii) Auxiliary air control valve screw clockwise to obtain a pressure of between 10 to 15 lbf/in².

7.9 No.1 Controls hydraulic system. Pressurize to 3000 lbf/in².

7.10 Instrument master switch. Set to ON.

7.11 Master switch on pilots control unit. Set to ON.

7.12 Pitot/Static system. Pressurize to the equivalent of 650 Kt.

7.13 Feel selector. Set to ON.

Continued

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7. FEEL SYSTEM - DEAERATION (Contd)

- | | |
|---|---|
| 7.14 Control column and rudder pedals. | Operate through full range until fluid in sight glass remains clear of bubbles at -14in.Hg. |
| 7.15 Feel selector. | Set to OFF. |
| 7.16 Pitot/Static system. | Release pressure. |
| 7.17 Undercarriage toggle switch. | Set to DOWN. |
| 7.18 Nose undercarriage ground lock. | Refit. |
| 7.19 Master switch on pilots control unit. | Set to OFF. |
| 7.20 Instrument master switch. | Set to OFF. |
| 7.21 External a.c. power supply. | (i) Set to OFF.
(ii) Disconnect. |
| 7.22 Pitot/Static test set. | Remove. |
| 7.23 LSEPT deaeration rig auxiliary air inlet valve. | Close. |
| 7.24 LSEPT deaeration rig auxiliary air release and vacuum release valve. | Open. |
| 7.25 Hydraulic test trolley. | (i) Disengage clutch.
(ii) Stop. |
| 7.26 Air supply trolley. | Turn off and disconnect from deaeration rig. |
| 7.27 Services hydraulic system. | Release pressure by operating brake lever. |
| 7.28 Hydraulic test trolley suction hose. | Disconnect from deaeration rig. |
| 7.29 LSEPT deaeration rig inlet hose. | Disconnect from services ground test connexion. |
| 7.30 Hydraulic test trolley suction hose. | Connect to services ground test connexion. |

Continued Overleaf

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42172 / 43171 (INSPECTOR)

8. 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.

- 8.1 Undercarriage toggle switch. Ensure set to DOWN.
- 8.2 Services hydraulic system. Pressurize to 3000 lbf/in2.
- 8.3 Undercarriage indicator lamps (green), (F53: quantity 3, T55: quantity 6). Ensure lit.
- 8.4 Undercarriage ground locks. Ensure fitted.
- 8.5 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 151(AF)).

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9. COMPLETION

- 9.1 Battery isolating switch. Set to OFF.
- 9.2 Slave battery. Remove.
- 9.3 Ground equipment. (i) Operate to lower aircraft to ground.
(ii) Remove from vicinity of aircraft.
- 9.4 Hydraulic test trolleys. (i) Disconnect.
(ii) Remove.
- 9.5 Hydraulic pump quick release connexions (Services and No.1 controls), (Access panel 45P (left)). (i) Reconnect to aircraft.
(ii) Wirelock.
- 9.6 Armament safety break. (i) Remove lanyard and flag from stowing pocket.
(ii) Reconnect lanyard.

Continued

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9. COMPLETION (Contd)

- 9.7 LSEPT deaeration rig. (i) Disconnect from ground air charging/release connexion.
(ii) Refit blank and wirelock.
- 9.8 Hydraulic reservoirs. Replenish (SP 603 (AF)).
- 9.9 Access panels. Refit.

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

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