CHAP. 2 AIRFRAME S.P. 146 A.L. 4 SHEET 1 OF 6	SERVICING PROCEDURE F53 T55	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition

Air System - Leak And Function Check	AFSC 42251 43151 42350	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.		

ASSOCIATED PROCEDURES

SPECIAL TOOLS AND EQUIPMENT

Air supply trailer - Hampson 490D (4F/NIV).
Jury rig (ST11/8924).
Resetting tool (ST11/20546).

NOTE 1 : This servicing procedure must be carried out prior to installation of No.1 and No.2 engines and jet pipes.

NOTE 2 : Upon no account must the de-ice/rain dispersal switch be set to de-ice when the aircraft is on the ground with an external a.c. power supply connected and the engines not running. Failure to observe this warning could result in the spraymat heaters being quickly burnt out.

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1. PREPARATION

1.1	No.1 Engine main air connexion.	Fit jury rig (ST11/8924).
1.2	No.2 Engine main air connexion.	Blank.
1.3	No.1 Jet pipe nozzle air motor supply pipe.	Fit blank at Frame 62 (left).
1.4	No.1 Jet pipe AMCU supply pipe.	Fit blank (Access panel 76P (left)).
1.5	No.2 Jet pipe nozzle air motor supply pipe.	Fit blank at Frame 62 (right).
1.6	No.2 Jet pipe nozzle AMCU supply pipe.	Fit blank (Access panel 76S (right)).
1.7	Ground test connexion (Access panel 149S (right)).	(i) Remove spring locking pin. (ii) Remove blanking cap.
1.8	Air supply trailer (4F/NIV).	(i) Connect. (ii) Ensure locked in position.

Continued Overleaf

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1.	PREPARATION (Contd)	
1.9	External d.c. power supply.	(i) Connect. (ii) Set to ON.
1.10	Battery isolating switch.	Set to ON.
1.11	Main generator light (AWP).	Ensure on.
1.12	Alternator turbine warning light.	Ensure on.
1.13	Alternator failure warning light.	Ensure on.
1.14	Cabin conditioning.	Ensure off.
1.15	Rain dispersal intake anti-icing.	Ensure off.
1.16	Cabin demist lever.	Ensure off.
2.	TESTING	
2.1	Air supply trailer.	(i) Start. (ii) Set to idle.
2.2	Air supply trailer main air switch.	Set to ON.
2.3	Main generator light (AWP).	Ensure extinguished.
2.4	Alternator turbine warning light.	Ensure extinguished.
2.5	Alternator failure warning light.	Ensure extinguished.
2.6	Air system (No.1 and No.2 engine bays).	Check all pipe joints and welds for leaks.
2.7	Air system (No.1 and No.2 jet pipe compartments).	Check all pipe joints and welds for leaks.
2.8	Canopy seal storage bottle gauge.	Check reading (Approximately 40 lbf/in2.).

Continued

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2. TESTING (Contd)

NOTE: Time taken to complete sub-items 2.9 to 2.11 inclusive must be kept to an absolute minimum because of the detrimental effect of hot air impinging on the windscreen under static conditions.

2.9	Windscreen rain dispersal.	Set to ON.
2.10	Rain dispersal fishtail outlet.	Ensure air issues freely.
2.11	Windscreen rain dispersal.	Set to OFF.
2.12	Air intake anti-icing.	Set to ON.
2.13	Air intake slots.	Ensure air issues freely.
2.14	Air intake anti-icing.	Set to OFF.

NOTE: During sub-items 2.15 to 2.21 canopy must remain in the open or partially open position.

2.15	Cabin demist lever.	Set to TOP ON.
2.16	Canopy breakaway bellows.	Ensure air issues freely.
2.17	Windscreen side panels.	Check for restricted flow of air.
2.18	Cabin demist lever.	Set to ALL ON.
2.19	Canopy breakaway bellows.	Ensure air issues freely and no change from sub-item 2.16.
2.20	Windscreen side panels.	Ensure full unrestricted flow.
2.21	Cabin demist lever.	Set to OFF.

NOTE: The total time taken to complete sub-items 2.22 to 2.33 must not exceed 1 (one) minute.

2.22	PEC connector blank.	Remove.
2.23	Cabin air.	(i) Set to ON. (ii) Pause for approximately 20 sec.
2.24	Cold air unit.	Check for audible functioning.
2.25	Cabin diffuser pipes.	Ensure air issues freely.

Continued Overleaf

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2.	TESTING (Contd)	
2.26	AVS plunger (PEC connector).	Depress.
2.27	Anti-G plunger (PEC connector).	Depress.
2.28	AVS flow control valve.	Operate fully OPEN.
2.29	Anti-G valve selector.	Set to ON.
2.30	Anti-G valve test button.	Press.
2.31	PEC connector.	Ensure air issues freely.
2.32	Cabin air.	(i) Set to OFF. (ii) Check air flow ceases within 3 sec.
2.33	PEC connector blank.	Refit.
3.	GENERATOR CHECKS	
3.1	Generator warning light (AWP).	Ensure extinguished.
3.2	Generator switch.	Set to standby.
3.3	Generator warning light (AWP).	Ensure lit.
3.4	Standby shut-off cock.	Ensure air issues freely.
3.5	Generator switch.	Set to EMERGENCY.
3.6	Generator warning light (AWP).	Ensure remains lit.
3.7	Standby shut off cock.	Ensure air issues freely.
3.8	Main air isolating valve indicator (Access panel 56S(right)).	Ensure indicates closed.
3.9	Generator switch.	Set to normal.
3.10	Generator warning light (AWP).	Ensure extinguished.

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3.	GENERATOR (Contd)	
3.11	Standby shut-off cock.	Ensure air issues freely.
3.12	Main air isolating valve indicator (Access panel 56S(right)).	Ensure indicates OPEN.

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4.	MAIN AIR TURBINE CHECK	
4.1	Overspeed test socket (Access panel 77P (left)).	(i) Insert shorting plug. (ii) Ensure turbine shuts down. (iii) Ensure AC and TURB warning lamps lit.

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5.	MAIN AIR TURBINE CHECK	
5.1	Air supply trailer.	Shut down.

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6.	MAIN AIR TURBINE CHECK	
6.1	Overspeed test socket.	Remove shorting plug.

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7.	MAIN AIR TURBINE CHECK	
7.1	Overspeed governor reset shaft on turbine (Exhaust duct).	Depress
7.2	Shut down valve (Access panel 47S(right)).	Reset with resetting tool (ST11/20546).
7.3	Air supply trailer.	Run up.

Continued Overleaf

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7. MAIN AIR TURBINE CHECK (Contd)

7.4	Main air turbine.	Ensure turbine builds up and shuts down.
7.5	Air supply trailer.	Shut down.
7.6	Overspeed governor reset shaft.	Pull out.

NOTE: Under no circumstances is the overspeed governor reset shaft to be operated whilst air supply trailer is running.

7.7	Shut-down valve (Access panel 47S(right)).	Reset with resetting tool (ST11/20546).
7.8	Air supply trailer.	Run up.
7.9	Alternator.	(i) Ensure builds up and comes on-line. (ii) AC and TURB warning lamps extinguished.
7.10	Air supply trailer.	(i) Shut down. (ii) Disconnect. (iii) Remove from vicinity of aircraft.

8. COMPLETION

8.1	Ground test connexion.	(i) Fit blanking cap. (ii) Lock cap lever. (iii) Fit spring locking pin. (iv) Fit access panel 149S(right).
8.2	No.1 Engine main air connexion.	Remove jury rig (ST11/8924).
8.3	No.2 Engine main air connexion.	Remove blank.
8.4	No.1 and No.2 Jet pipe compartments.	Remove blanks.
8.5	Battery isolating switch.	Set to OFF.
8.6	External d.c. power supply.	(i) Set to OFF. (ii) Disconnect.
8.7	Access panels.	Refit.