



A Mahindra Aerospace Company

PO Box 881, Morwell, Victoria 3840, Australia
Ph + 61 (0) 3 5172 1200
Fax + 61 (0) 3 5172 1201
www.mahindraaerospace.com

SB-GA8-2008-41

Issue 2

OPTIONAL

Service Bulletin

Subject:

Alternate Airbox Upgrade.

Applicability:

Table 1: Applicability

AIRCRAFT	SERIAL NUMBER(s)
GA8	Serial numbers GA8-00-004 through GA8-07-114 with throttle cable not mounted on existing airbox.

As a prerequisite, this Service Bulletin requires prior completion of Service Bulletin SB-GA8-2004-15 Issue 3 or later approved issue.

Amendments:

Issue 1: Initial Issue. Ref GAE11#2433

Issue 2: Loom Connector relocated to improve durability of associated loom Ref GAE11#2596

Background:

This Service Bulletin documents the installation procedure for an improved alternate airbox and associated connections to aircraft induction system and alternate airbox controls.

Compliance:

For applicable aircraft, this optional Service Bulletin may be incorporated at the owner's discretion.

The installer shall verify the suitability of this option in conjunction with existing modifications/repairs to the aircraft. Contact GippsAero if clarification is required.

Weight and Balance:

The replacement of the existing airbox with the new airbox results in a weight reduction of 0.5 kg (1.1 lbs) at an arm of 96 mm (3.8 inches) forward of the firewall.

Approval:

This Service Bulletin has been approved in accordance with the requirements of Australian Civil Aviation Safety Regulation 21.095 (1998). GippsAero Reference GAE11#2596.

Parts and Materials:

Order Part Kit number SB-GA8-2008-41-2 for the materials required to complete this Service Bulletin. Parts and materials that make up Part Kit number SB-GA8-2008-41-2 are detailed in Table 2.

Table 2: Materials Required

ITEM	PART NUMBER	DESCRIPTION	QTY
1	GA8-716013-13	ALT AIR CABLE	1
2	GA8-716041-11	ALTERNATE AIRBOX ASSEMBLY	1
3	GA8-716051-101	AIRBOX TRUNK	1
4	AN3-3A	BOLT	2
5	AN3-6A	BOLT	3
6	AN525-10R6	SCREW	1
7	AN960-10L	WASHER	6
8	AN970-3	PENNY WASHER	3
9	MS21919WDG3	CABLE CLAMP	1
10	MS21042-3	NUT	4
11	HAS-048P	HOSE CLAMP	2
12	HAS-064P	HOSE CLAMP	4
13	LW15569	HOSE – FUEL INJECTOR INLET	1
14	MIL-H-6000 1/4	HOSE ¼”	18.5”
15	SCAT-12	HOSE 3”	18”
16	SCAT-16	HOSE 4”	4”
17	TY125-40X ¹	CABLE TIE	5

Table 3: Compound

ITE	COMPOUND	DESCRIPTION
C1	Silicone	Sealant, Silicone, General Purpose, Neutral Cure

Parts Availability:

The parts required for this modification is available as a kit from GippsAero using the following contact details.

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: aircraft.parts@mahindraaerospace.com

Labour:

Approximately 5 hours should be allocated for completing the upgrade procedure detailed in this Service Bulletin.

Warranty:

This is an optional modification. Warranty is not applicable.

¹ Acceptable alternative part numbers are MS3367-6-0, 111-00947 (HellermanTyton), TY200-40X (Thomas & Betts), PLT21-C0 (Panduit).

Accomplishment Instructions:

WARNING:

IT IS THE RESPONSIBILITY OF ALL PERSONNEL TO ENSURE WORK HEALTH AND SAFETY REQUIREMENTS ARE MET AT ALL TIMES. ALL PERSONNEL MUST COMPLY WITH ALL WORK HEALTH AND SAFETY REQUIREMENTS AS DEFINED OR RECOMMENDED BY:

- AIRCRAFT MAINTENANCE AND OPERATION MANUALS;
- RELEVANT NAA REGULATIONS AND ADVISORY DOCUMENTATION;
- ORGANISATION MANUALS, INCLUDING NAA ENDORSED OPERATIONAL AND MAINTENANCE MANUALS; AND
- RELEVANT LOCAL, STATE AND FEDERAL GOVERNMENT REQUIREMENTS.

WARNING:

READ THE APPLICABLE MATERIAL SAFETY DATA SHEET (MSDS) FOR ANY CONSUMABLE USED DURING THE ACCOMPLISHMENT OF THIS SERVICE BULLETIN AND EMPLOY ANY RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE) CONTAINED THEREIN.

NOTE:

Unless otherwise specified, reference to the GA8 or GA8-TC 320 Service Manual and FAA Advisory Circular (AC) 43.13-1B & -2B should be made when carrying out the procedures prescribed in this Service Bulletin. In case of a discrepancy between the Service Manual and the AC, the Service Manual takes precedence.

Removal of Existing Intake

1. Remove cowls to gain access to the aircraft's engine bay in accordance with the GA8 Service Manual.
2. Remove existing air intake plenum assembly.
3. Remove the injector adapter clamps.
4. Clean sealant from injector body.
5. Remove alternate air cable from the control console.
6. Remove upper mounting of muffler cable hanging assembly from the exhaust hanger bracket.
7. Remove the exhaust hanger bracket and packer attached to the cabin heat valve assembly, and retain.

Installation of New Intake

8. Drill out the 5/32" (3.97mm) rivet, directly above where the exhaust hanger bracket was (see Figure 1) and open out to suit AN3 bolt.
9. Place the new alternate airbox assembly over cabin heat valve assembly flange. Centrally align the 3 slotted holes. Refer to Figure 1.
10. While in place, mark out 2 holes in the side of the firewall channel and drill to suit AN3 bolt. Refer to Figure 2.
11. Remove the air intake plenum drain hose (3 sections and Tee piece), and replace with item 14 (one length of MIL-H-6000 ¼ hose 18.5 inches long).
12. Attach the new alternate airbox assembly with retained exhaust hanger bracket, and spacer, using AN hardware supplied in kit (see Figure 1). Fit three AN970-3 washers and three MS21042-3 10-32 reduced hex nuts on the inside of the firewall.

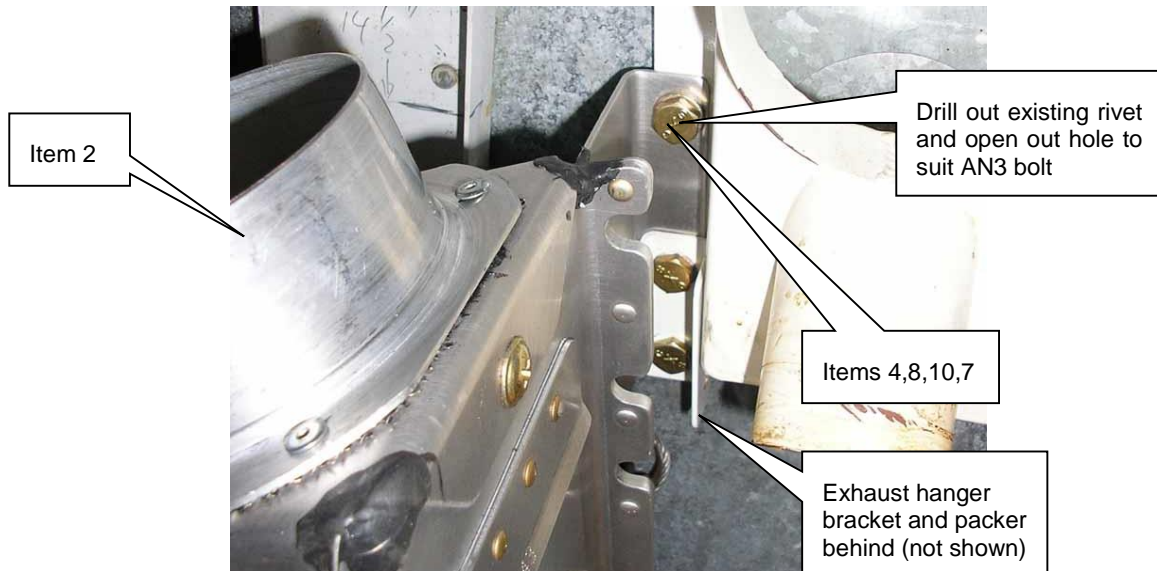


Figure 1

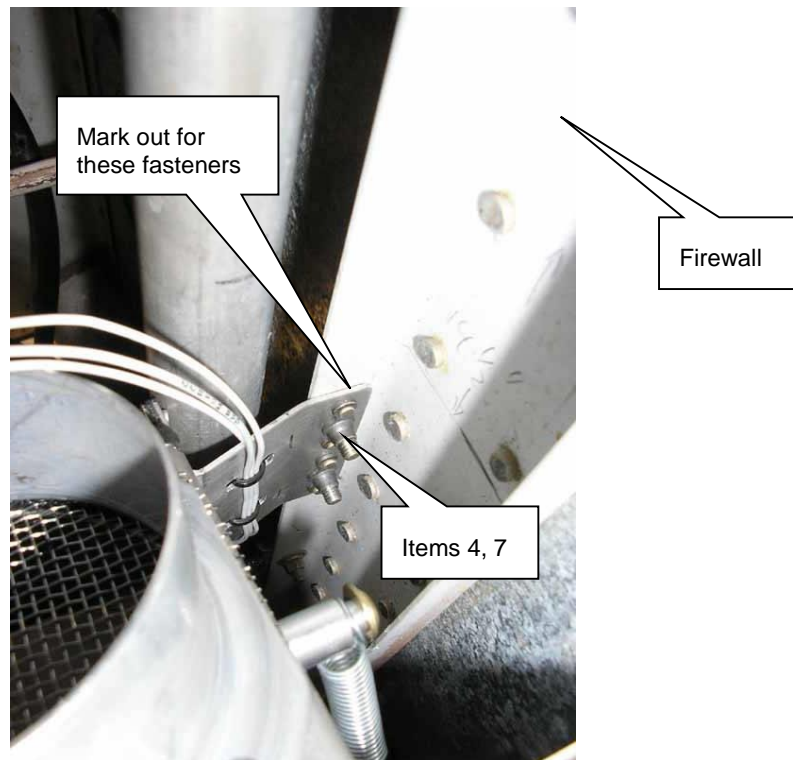


Figure 2

13. Fit the new airbox trunk to the injector with hose, P/N LW-15569 (the cut out in hose LW-15569 goes over the injector inlet). Fit the other end of trunk to the air filter assembly with scat 16 hose and hose clamps. Refer to Figure 3.

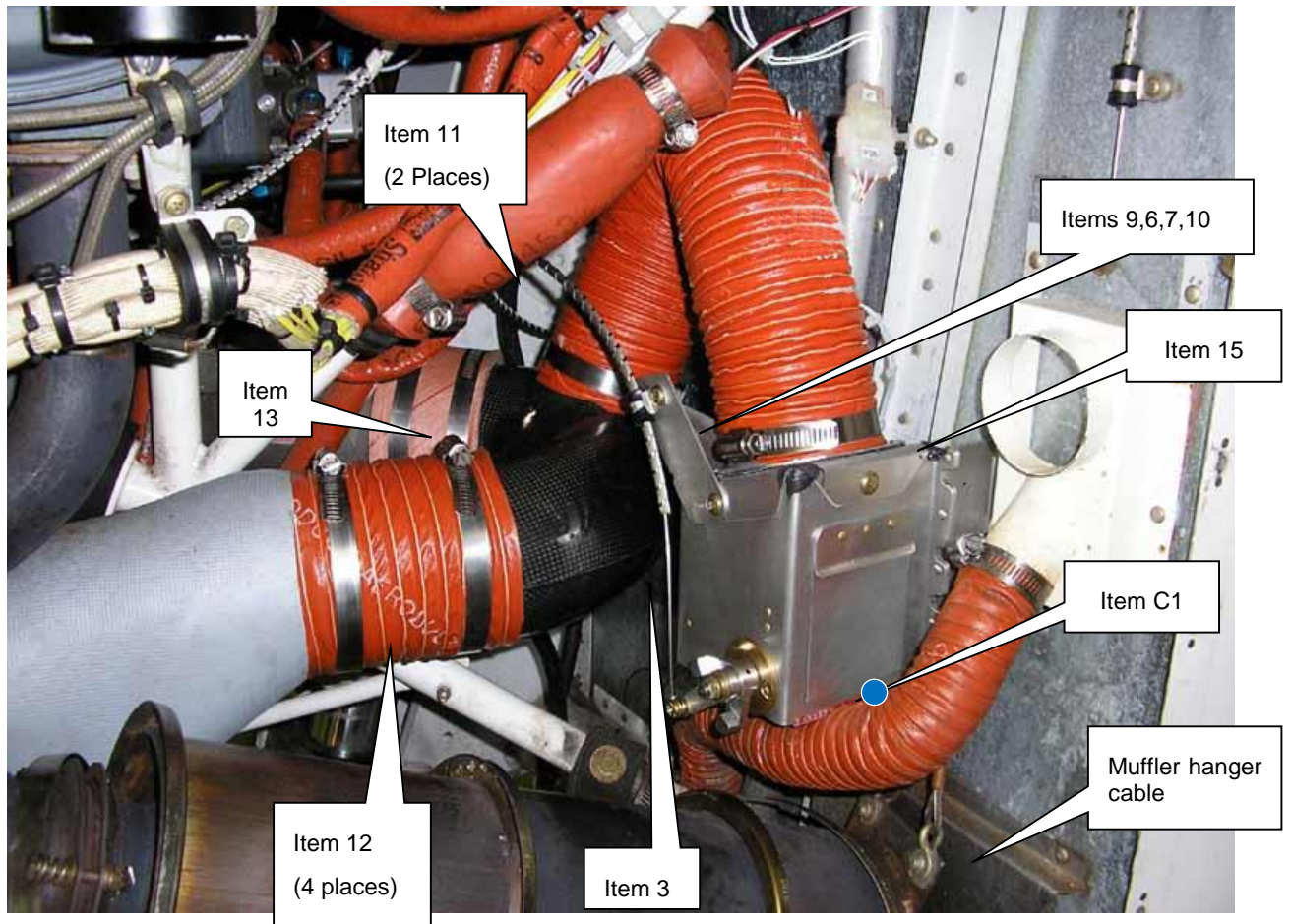


Figure 3

14. Install clamps and tighten.
15. Install scot 12 hose (18 inches long) from the alternate airbox to the airbox trunk and fit clamps and tighten. Ensure that the scot hose does not wear against adjacent components.
16. Apply a small amount of silicone (Item C1) between the alternate airbox and scot hose, at the area identified by the blue circle in Figure 3, to eliminate potential wear due to vibration.
17. Re-attach the muffler hanger cable assembly.
18. Install alternate air cable (Item 1). Push the alternate air knob in fully. Rotate the Flap Rocker Arm fully anti-clockwise when viewed looking at the airbox in the aft direction. The Flap Actuator Arm is to be set $0.040'' \pm 0.005''$ from the upper stop of the Flap Rocker Arm as shown in Figure 4. Adjustments can be made by loosening the Cable Clamp and sliding the cable out through the Clamp. Secure the cable with the Cable Clamp following any adjustment. Cycle the alternate air control from closed to open several times to ensure correct operation.

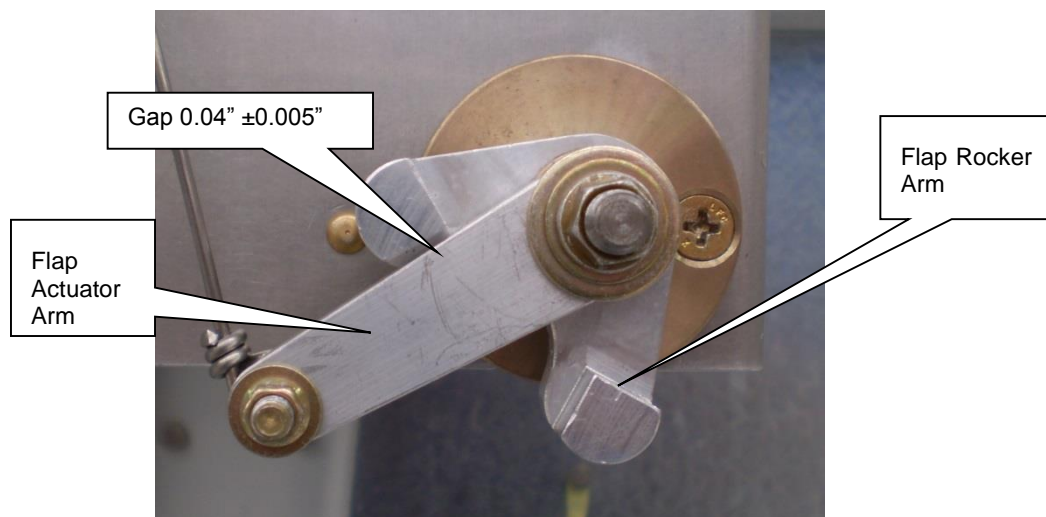


Figure 4

19. Plug in and secure the alternate air warning connectors (P26/J26) per Figure 5 and Figure 6. Confirm that the alternate air indicator illuminates with activation of the by-pass door. This can be achieved by opening and closing (pushing and pulling) the Alternate Air Control Cable to initialise the sensor circuit.
20. Reinstall any panels, cowls, etc, removed to gain access in accordance with the GA8 Service Manual.

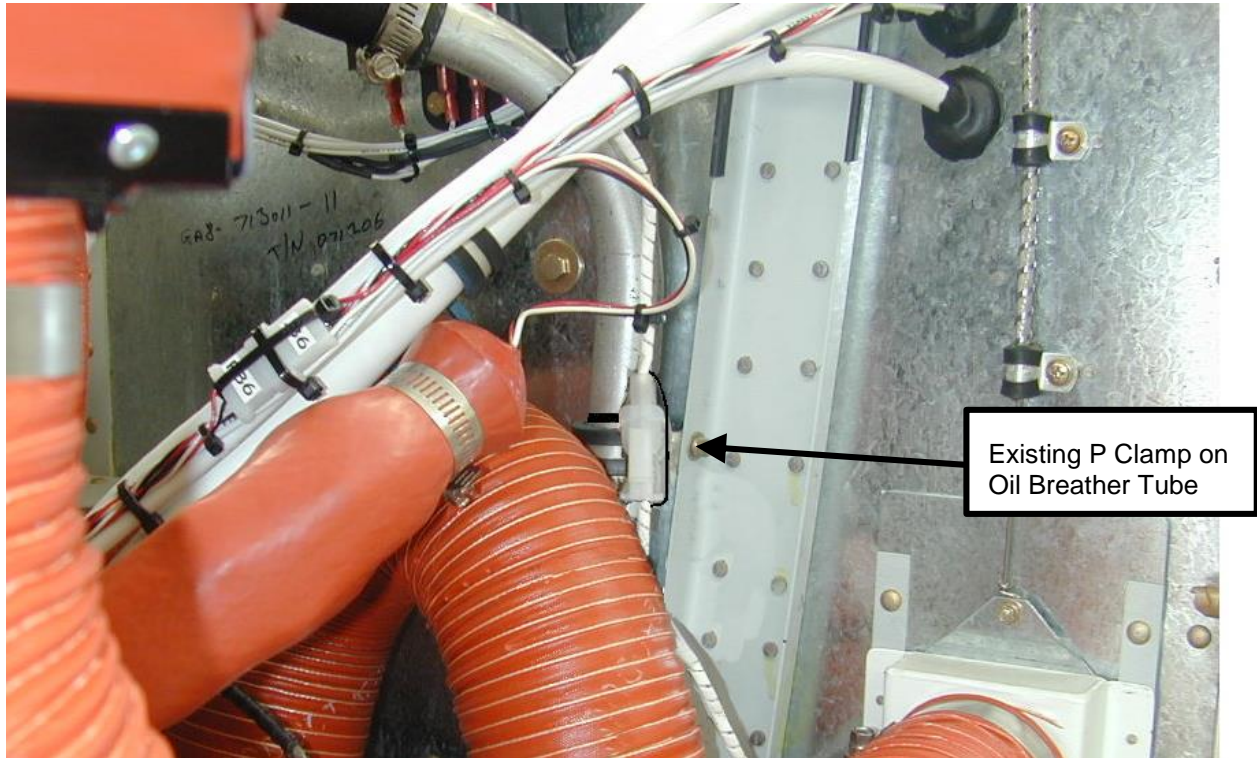


Figure 5: Modified configuration. Additional cable ties are not shown.

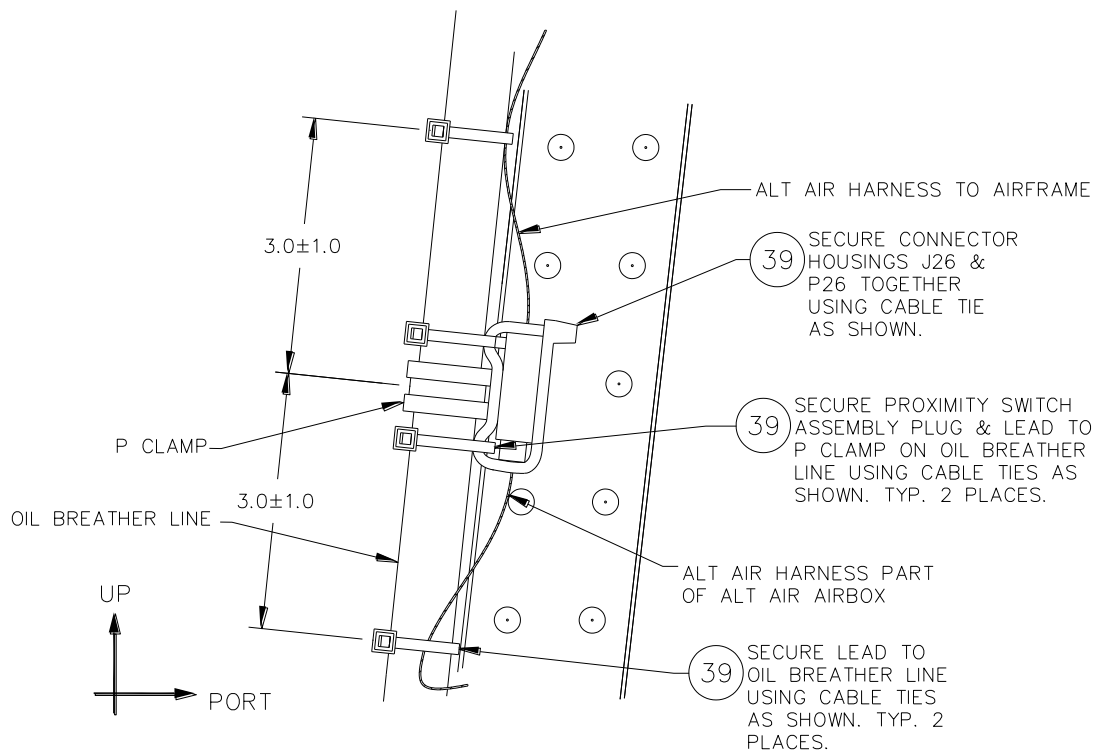


Figure 6: Detailed View of the attachment of the P26/J26 Electrical Connector (Looking Aft onto Firewall).

Documentation:

Update aircraft log book to reflect incorporation of this Service Bulletin.

Continuing Airworthiness:

There are no additional continuing airworthiness requirements introduced by this Service Bulletin.

Compliance Notice:

Complete the Document Compliance Notice and return to GippsAero by mail, fax or email.

DOCUMENT COMPLIANCE NOTICE



A Mahindra Aerospace Company

Document:

SB-GA8-2008-41

Issue 2

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2008-41 Issue 2 has been incorporated in the above aircraft.

Date of Incorporation: _____

Signed

Print Name: _____

Please post, fax or email this compliance notice to:

GippsAero

Attn: Technical Publications

Email: aircraft.techpubs@mahindraaerospace.com

P.O. Box 881

Morwell Victoria 3840

Australia

Fax.: +61 03 5172 1201