A Mahindra Aerospace Company

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SB-GA8-2021-198
Issue 1

MANDATORY

Service Bulletin

Subject:

GA8 Fuel Return Line Inspection

Applicability:

Table 1: Applicability

AIRCRAFT	SERIAL NUMBER(s)
GA8	All GA8 model Serial Numbers up to and including S/N GA8-20-262 with SB-GA8-2013-100 at Issue 1 or Issue 2 incorporated

Amendments:

Issue 1: Initial Issue. Ref GAE11#2607

Background:

An operator has reported a loss of clearance between the Nose Leg Steering Arm and the 3 way fuel system fitting located under the fuel servo. This Service Bulletin gives inspection and modification procedures which allow continued operations with 100 hour inspections. The terminating action is by achieving a 0.312" clearance between the fitting and the Steering Arm.

Compliance

The requirements of this Service Bulletin must be accomplished at or before the next periodic inspection – 100 hours or 12 months whichever occurs earlier from the date of issue of this Service Bulletin.

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

Weight and Balance

The effect to the weight and balance of the aircraft is negligible.

Approval

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

Parts:

Refer to Table 3 for inspection and rework options and where required the materials necessary to complete the Terminating Action of this Service Bulletin are detailed in Table 2.

Table 2: Materials Required

ITEM	PART NUMBER	DESCRIPTION	QTY
1	GA8-282063-131	Servo Recirculation - Compact	1

Parts Availability:

Parts can be obtained directly from GippsAero using the following contact details.

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: PARTS@gippsaero.com.au

Labour:

Approximately 1 hour should be allocated for the inspection detailed in this Service Bulletin.

Approximately 1 hour should be allocated for the terminating action detailed in this Service Bulletin.

Warranty:

Aircraft under warranty may claim the direct cost of carrying out the requirements of this Service Bulletin via GippsAero Customer Service.

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: SUPPORT@gippsaero.com.au

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 Service Manual and FAA Advisory Circular (AC) 43.13-1B, particularly Paragraph 9-30(d)(1), 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.

Inspection:

1. Confirm engine Dynafocal mounts are still within wear limits (Refer to GA8 Service Manual Section 71-20-00).
2. Inspect the nose leg steering arm and the Servo Recirculation fitting on the bottom of the fuel injection servo for evidence of contact. If contact is found modify the fitting as below or replace with a GA8-282063-131 fitting. Restore the paint finish on the nose leg steering arm in accordance with the GA8 Service Manual.
3. With the nose wheel turned to the right at full lock, measure the clearance between the Servo Recirculation fitting and nose leg steering arm as shown in Figure 2. Carry out the appropriate action listed in Table 3;

Table 3 Summary of clearances and actions

<table>
<tr><th>Initial Clearance Measured</th><th>Initial Action</th><th>Clearance Measured After Initial Action</th><th>Additional Action</th><th>Terminate SB</th></tr>
<tr><td rowspan="2">Any</td><td rowspan="2">Replace with -131</td><td>>0.312”</td><td>Nil</td><td>Yes</td></tr>
<tr><td>> 0.125”
< 0.312”</td><td>Inspect each 100 hrs</td><td>No</td></tr>
<tr><td>< 0.060”
or
Visible contact</td><td>Modify existing -031 fitting and Check Engine mount wear.</td><td>< 0.125”</td><td>Replace with -131</td><td>Yes*</td></tr>
<tr><td>0.060” to 0.125”</td><td>Modify existing -031 fitting within 100hrs</td><td rowspan="2">> 0.125”
< 0.312”</td><td rowspan="2">Inspect each 100 hrs</td><td rowspan="2">No</td></tr>
<tr><td rowspan="2">0.125” to 0.312”</td><td>Nil</td></tr>
<tr><td>Modify existing -031 fitting.</td><td rowspan="2">> 0.312”</td><td rowspan="2">Nil</td><td rowspan="2">Yes</td></tr>
<tr><td>> 0.312”</td><td>Nil</td></tr>
</table>

** Yes; if clearance is greater than 0.312” after GA8-282063-131 installation.*

GA8-282063-031 Fitting Modification:

NOTE:

Modification of the GA8-282063-031 fitting will Increase the clearance by between 0.125" and 0.250"

4. Make the aircraft safe for servicing and shut off fuel and close the servicing tap, refer GA8 Service Manual.
5. Remove the fitted Servo Recirculation fitting P/N: GA8-282063-031. Retain the fuel filter and spring.
6. Using appropriate austenitic stainless steel machining tools carry out the following alterations to the fitting as shown in Figure 1.
   A. Chamfer the corners of the fitting to the dimensions shown as (A). If this step results in sufficient clearance, then steps B through E may be omitted.
   B. Shorten the fitting approx. 0.025" to the dimension shown as (B).
   C. Machine off approx. 0.125" of the thread where the nut is installed so that the plain portion for the O-ring is to the dimension shown as (C).
   D. Using a standard 118° Ø9/16 drill, counterbore the filter hole 0.083" deep as shown as (D). Break the sharp edge.
   E. Ensure the filter "cup" depth is greater than 0.550" as shown as (E). If the depth is insufficient, machine or drill the hole using a 0.504 [12.80mm] drill to a depth of 0.587 [14.91mm].
7. Reinstall the filter, spring O-rings, fitting and reconnect hoses as shown in Figure 3. Torque the locking nut to 25-45 in.lb and lockwire. Carry out an engine ground run to check for leaks.

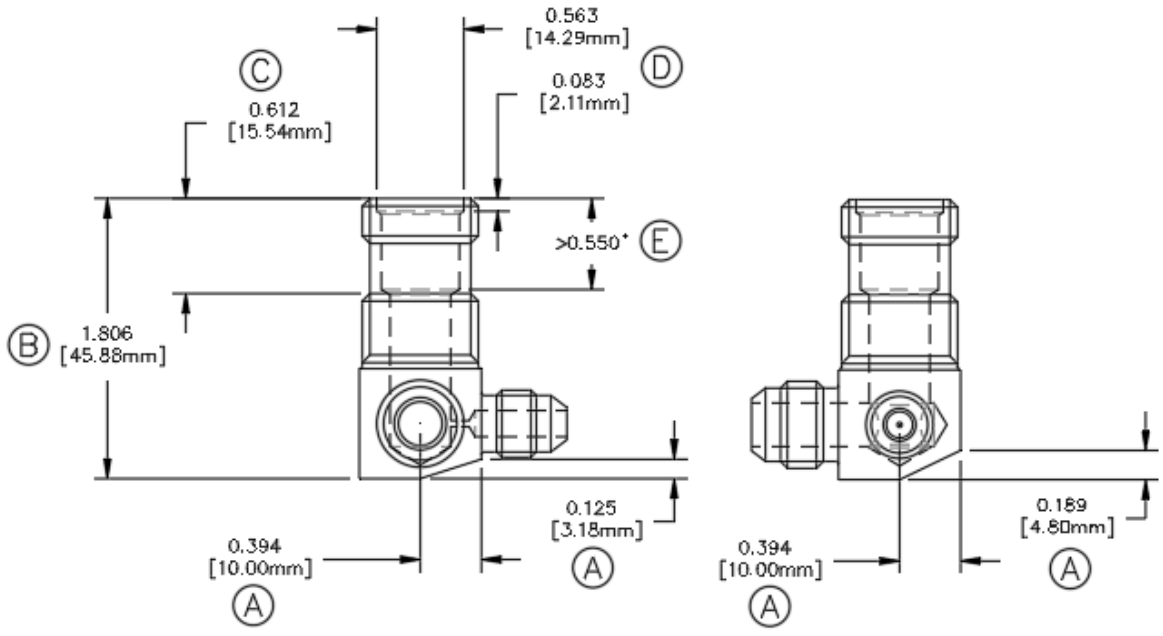

Figure 1: Fitting Modification

Fitting Replacement:

8. Remove the fitted Servo Recirculation fitting P/N: GA8-282063-031 (refer Figure 3) and replace it with the Servo Recirculation – Compact fitting P/N: GA8-282063-131 in accordance with GA8 Service Manual Section 28-00-10.
9. Ensure the clearance between the recirculation fitting and the nose wheel steering arm meets the minimum figures shown in Table 3 through the full range of movement of the steering arm.
10. Ensure there is sufficient support and clearance for the fuel hoses to prevent chaffing.
11. Reconnect hoses as shown in Figure 3. Torque the locking nut to 25-45 in.lb and lockwire.
12. Open the servicing tap, refer GA8 Service Manual.
13. Carry out an engine ground run to check for leaks.

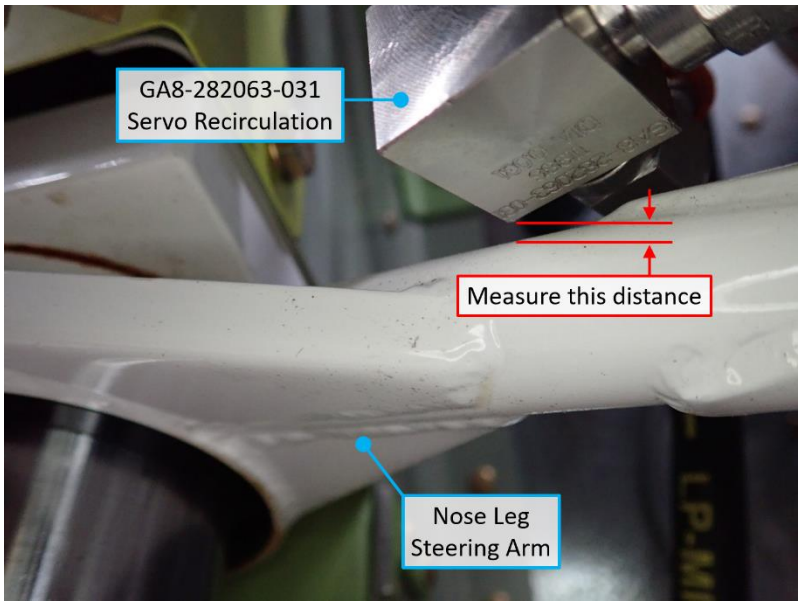

Figure 2: View of area with minimum clearance.

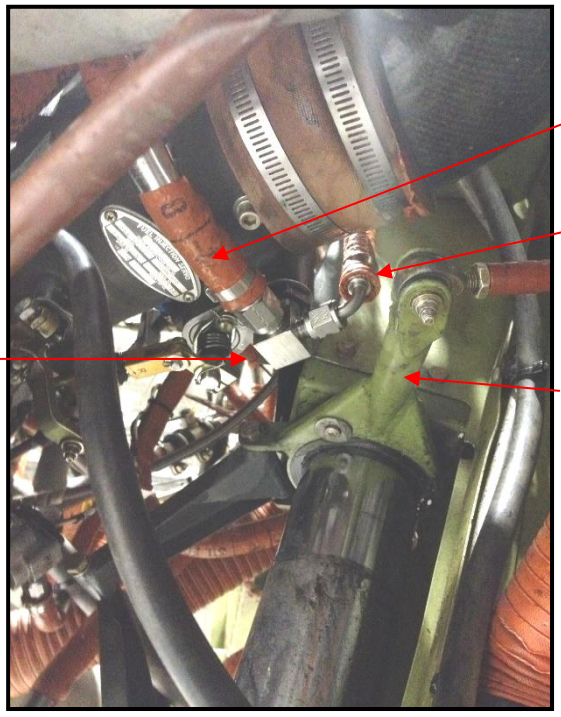

Figure 3: GA8 Servo Recirculation – installation.

Documentation:

Update aircraft log book to reflect incorporation of this Service Bulletin noting clearance found and actions taken.

Continuing Airworthiness:

Refer to the compliance section of this service bulletin and Table 3 for any recurring inspections.

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-GA8-2021-198 **Issue 1**

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2021-198 Issue 1 has been incorporated in the above aircraft.

Date of Incorporation:_____

_____
Signed

Print Name: _____

Please post, fax or email this compliance notice to:

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