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SB-GA8-2014-114

Issue 1

MANDATORY

Service Bulletin

Subject:

Inspection for Correct Engine Mount Orientation

Applicability:

GA8 Normally Aspirated Aircraft Only

Amendments:

Issue 1: Initial issue. GippsAero Reference GAE11-1367

Background:

Engine mounts on Naturally Aspirated Aircraft may have been installed with an incorrect orientation, due to the physical similarity of the sandwich mount components. The correct installation procedure is to install the stiffer mount on the compression side of the joint. This is predominantly to prevent premature mount deformation and subsequent engine sagging. Provided that correct bolt torque is maintained on the attachment bolt, the vibration properties of the engine installation will be unaffected.

This Service Bulletin requires operators to inspect their engine mounts to verify that they have been installed with the correct orientation.

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.

Weight and Balance:

There is no effect to the weight and balance of the GA8 aircraft as a result of this Service Bulletin.

Approval:

This Service Bulletin has been approved pursuant to Regulation 21.095 of CASR (1998).

Parts:

The following optional parts may be required to accomplish the requirement of this Service Bulletin.

PART No.	DESCRIPTION	QTY	Remarks
J-3804-31	Lord Engine Mount Kit	4	Comprising of one J-3049-35 Sandwich Mount, one J-3049-38 Sandwich Mount & one J-12333-2 LM Damper Figure 2

Parts Availability:

New parts can be obtained directly from GippsAero.

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: spares@gippsaero.com

Labour:

5 man hours should be allocated for completing the work 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: warranty@gippsaero.com

Accomplishment Instructions:

NOTE:

Ensure the aircraft is prepared for maintenance and that appropriate safety precautions are taken when performing work outlined in this Service Bulletin.

Unless otherwise specified, reference to the GA8 Service manual as well as FAA AC43.13-1B & FAA AC43.13-2B should be made when carrying out the procedure prescribed in this Service Bulletin. In case of discrepancy between the Service Manual and the AC, the Service Manual takes precedence.

1. Carry out the following procedure to inspect the rubber shock mounts on the GA8 aircraft.
 - 1.1. Remove the engine cowls.
 - 1.2. Inspect the mount components to ensure that they have been oriented as per Figure 1 below. Specifically, mount part no. J-3049-38 must be positioned on the compression side of the engine lug. For the upper mounts, this would be on the forward side of the engine lug and on the aft side for the lower mounts. The part number of the engine mount can be found moulded into the elastomer on the periphery of the mount. A depiction of the mounts is also shown in Figure 2. If any of the engine mounts are found to be not in accordance with Figure 1, proceed to step 2 otherwise skip to step 3

NOTE:

If required, relieve the weight of the engine from the mount using an appropriate hoist. Remove and re-install the mounts one at a time to gain access to the part number of the sandwich mounts. Ensure the engine mount retention bolts are torqued to 450-500 in-lb per Chapter 20-10-00 of the Service Manual.

2. Carry out the following procedure if any of the engine mounts are found to be not installed in accordance with Figure 1.
 - 2.1. If not already done so at step 1.2, relieve the weight of the engine from the mounts using an appropriate hoist.
 - 2.2. Remove and inspect the rubber shock mounts for Eccentricity and Thickness in accordance with Lord Quick Reference Guide No. PB6304A (see appendix A).

WARNING

**ENSURE TO ONLY INSPECT AND RE-INSTALL ONE MOUNT AT A TIME.
REMOVAL OF MORE THAN ONE MOUNT AT A TIME MAY CAUSE INJURY
AND/OR DAMAGE THE ENGINE.**

- 2.3. If the mounts are found to be unserviceable, replace the mounts with new parts.
 - 2.4. Re-install the mounts ensuring that the mounts are oriented in accordance with Figure 1. Ensure the engine mount retention bolts are torqued to 450-500 in-lb per Chapter 20-10-00 of the Service Manual.
 - 2.5. Inspect the cowls and engine installation for evidence of damage caused by excessive drooping of the engine. If damage is found, contact GippsAero for further assistance.
3. Re-install the engine cowls and proceed to the documentation section of this Service Bulletin.

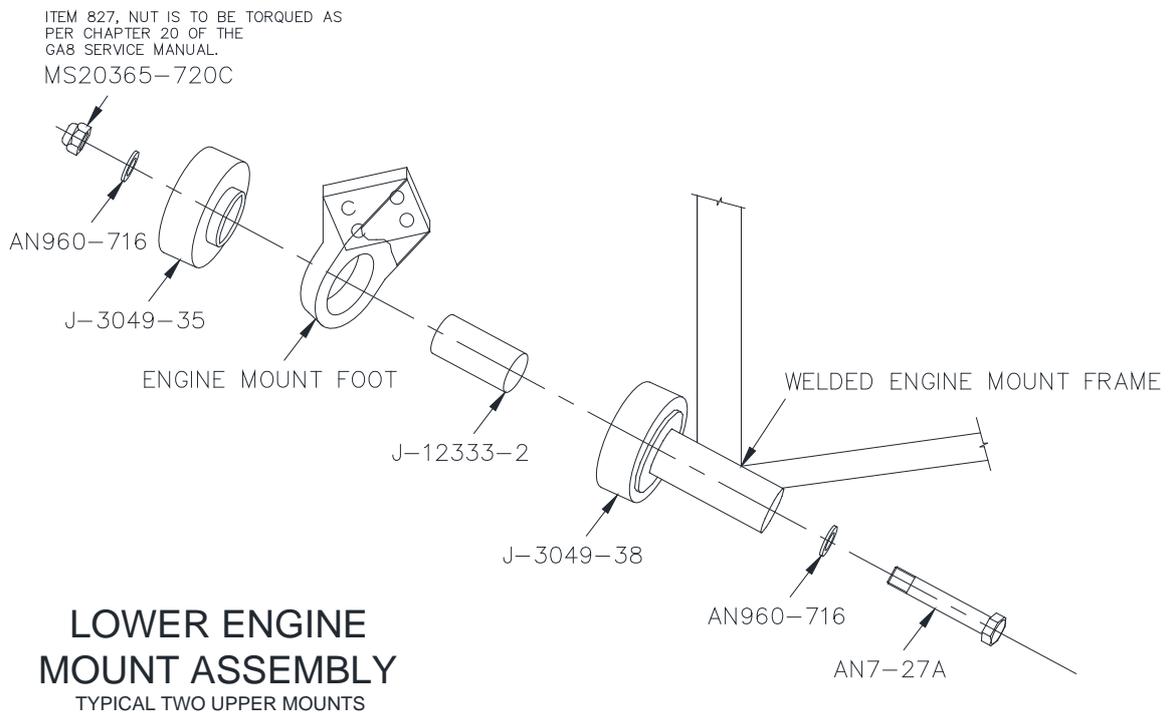
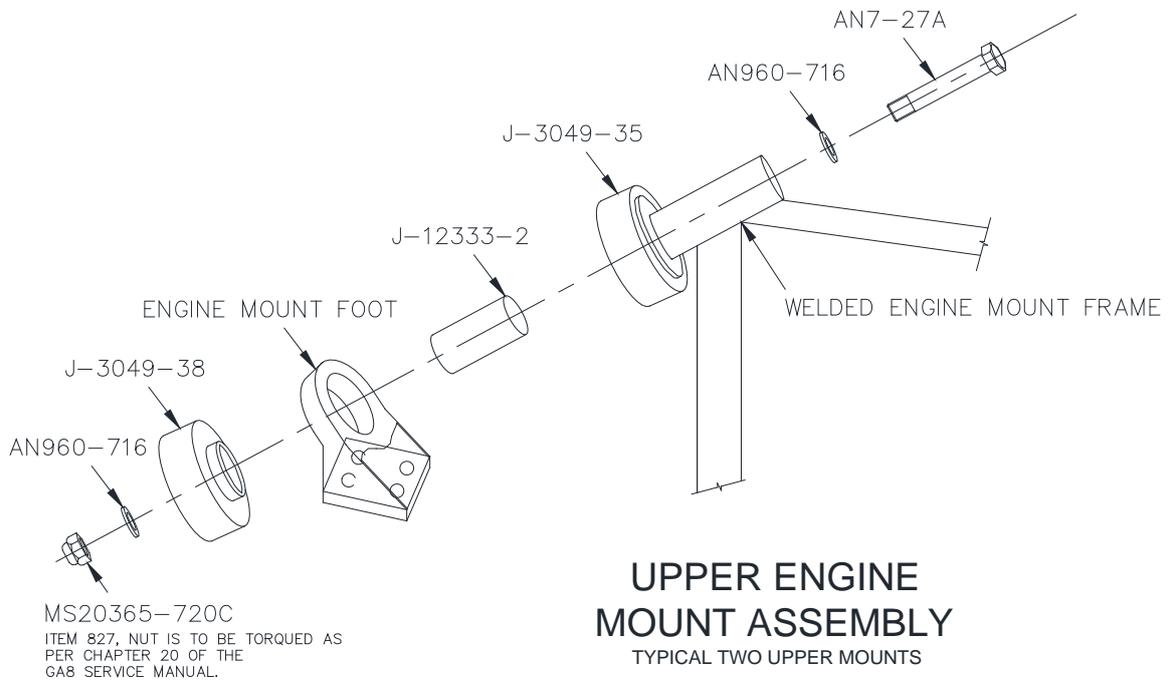


Figure 1: Engine Mount Assembly & Installation



Figure 2: Engine Mount Depiction

Documentation:

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

Continuing Airworthiness:

During subsequent engine installation, verify the orientation of engine mounts is in accordance with the instructions contained in this Service Bulletin. All other instructions already specified in the aircraft Service Manual continue to be applicable.

Future issue of the Service Manual and the Illustrated Parts Catalogue will contain clarified information as contained in this Service Bulletin.

Compliance Notice:

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

MAINTENANCE OF BONDED SANDWICH MOUNTINGS AND ASSEMBLIES

Where a component maintenance manual is available for a system, its requirements take precedence.

1. General Comments

Bonded sandwich assemblies are natural rubber or specially blended synthetic compounds bonded to two plates. The normal installation requires four assemblies, each consisting of two sandwich mountings and one spacer. Satisfactory performance requires that the spacer be designed to the correct length to precompress each mounting to guarantee proper positioning of the mountings. When properly installed, these mountings provide excellent isolation of engine vibration, resulting in smoother, quieter flight. Always order replacement mountings by the mounting assembly number to ensure the correct spacer.

2. Visual Inspection of Installed Mountings

At each annual inspection and at FAA-required inspections of the aircraft's engines, all mounting assemblies should be visually inspected in their installed state while supporting the engine weight. The correct visual inspection procedure is as follows:

- a. Inspect all bonded sandwich mountings for metal-to-rubber bond separations, flex cracks, rubber deterioration due to exposure to fluids, and mechanical damage such as cuts in the rubber surface.
- b. Visually inspect all bonded steel parts for cracks and excessive nicks, scratches or gouges.
- c. Inspect all nut locking wires for looseness and tighten as necessary.
- d. When applicable, measure all drift indicators in each mounting assembly for excessive deflection.
- e. Whenever any of the conditions detailed above in steps a, b, and d are found, remove the mounting assembly from the engine, disassemble, inspect, and repair it as described in the maintenance manual.

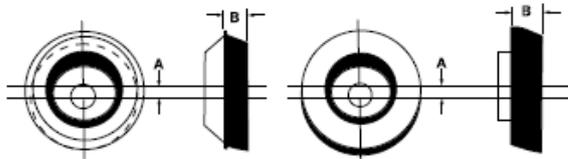
CAUTION: WHENEVER THE AIRCRAFT'S ENGINES ARE CLEANED DURING A NORMAL INSPECTION, COVER EACH MOUNTING ASSEMBLY TO PROTECT IT FROM CONTAMINATION BY CLEANING FLUIDS OR SOLVENTS. THIS ALSO APPLIES TO ENGINE LUBRICANTS. SHOULD ANY SUCH MATERIALS ACCIDENTALLY GET ON A MOUNTING ASSEMBLY, WIPE IT OFF THOROUGHLY AS SOON AS POSSIBLE WITH A CLEAN, DRY RAG.

3. Disassembly

To remove mounting assemblies from the installation, it is necessary to remove the engine weight from the mountings, by the use of a chain hoist or equivalent, and disconnect the nuts and bolts which hold the mountings in place. In general, removal of one mounting at a time can usually be accomplished, if necessary, without removing the engine weight from the mountings.

4. Cleaning and Inspection

- a. Wipe oil and dirt from bonded mountings, but do not dip in cleaning solvents.
- b. Steel bolts and spacers should be inspected for cracks or damaged threads. Examine spacers for crushing of ends, caused by excessive tightening torque on bolt. Replace if either condition is apparent.
- c. Examine bonded rubber mounting for oil swelling, bond or rubber separation, and shear or compression set. Bond separation, oil swelling, or flex cracks in the surface of the rubber are cause for rejection. The effects of shear and compression set are determined by measuring the dimensions shown on the sketch. Reject parts which have an eccentricity greater than dimension "A" or an overall thickness less than dimension "B".



MOUNTING SERIES NUMBER	ECCENTRICITY MAX. "A"	THICKNESS MIN. "B"
J1552	0.05	0.29
J2245	0.06	0.45
J3049	0.07	0.71
J6113	0.05*	0.39
J7401	0.06	0.75
J7530	0.06*	0.75
J7649	0.06*	0.75
J7763	0.08	1.02
J8381	0.06	0.75
J9555	0.06*	0.75
J9612	0.08	1.22
J10533	0.10*	0.80
J10776	0.10*	1.01
J12165	0.20	1.00
J12397	0.20	0.86
J12454	0.20	1.30
J12799	0.20	1.28
J13051	0.23	1.40
J15199	0.40	1.60
J7763-34 (BTR-II)	0.14	1.02
J9612-30 (BTR-II)	0.14	1.20
J9612-32 (BTR-II)	0.12	1.20

* From original position. (See installation drawing.)

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DOCUMENT COMPLIANCE NOTICE



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Document:

SB-GA8-2014-114

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Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2014-114 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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