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SB-GA8-2022-213
Issue 1

OPTIONAL

Service Bulletin

Subject:

Nose Leg Spring Packer

Applicability:

This Service Bulletin is applicable to the aircraft serial numbers identified in Table 1.

Table 1: Applicability

PART	APPLICABILITY
GA8	All aircraft
GA8-TC 320	All aircraft

Amendments:

Issue 1: Initial Issue. Refer to GAE11#2781.

Background:

The main spring used in the nose leg assembly of the GA8 – P/No. GA8-322021-095 – is maintained on condition. Over time the un-loaded length of the spring may reduce as the spring sags, resulting in reduced propeller tip ground clearance. Aircraft which often operate from un-prepared runways are most likely to have nose leg spring sag.

This Service Bulletin allows the installation of a packer under the spring base which will correct the issue in many cases, avoiding the need to replace the entire spring.

Compliance

This modification may be installed 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.

Periodic inspections are required for aircraft which have a spring packer installed in accordance with this Service Bulletin – refer to the Continuing Airworthiness section below.

Weight and Balance

For the weight and balance requirements refer to Table 2.

Table 2: Weight and Balance Data

	WEIGHT		ARM		MOMENT	
Description	**(kg)**	**(lb)**	**(mm)**	**(in)**	**(kg.mm)**	**(in.lb)**
Installation of Packer	0.14	0.32	-254.0	-10.00	-36.3	-3.2

Approval

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

Parts and Materials:

The parts required to incorporate this Service Bulletin are detailed in Table 3.

Table 3: Parts required.

ITEM	PART NUMBER	DESCRIPTION	QTY
1	GA8-322021-161	SPRING PACKER 0.375”	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 8 hours should be allocated to completing the requirements of this Service Bulletin.

This estimate does not include time required to do normal maintenance preparation or set up equipment.

Warranty:

This is an optional modification. The cost of installation is not eligible for warranty claims, however, component warranties are provided by the respective manufacturers.

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 or GA8-TC 320 Service Manual and FAA Advisory Circular (AC) 43.13-1B 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.

NOTE:

Read all the applicable instructions prior to initiating any work.

NOTE:

Unless stated otherwise, hardware removed during the procedure below is be inspected and re-used if serviceable.

Part A: Spring Inspection & Installation of Packer

1. Remove the nose landing gear from the aircraft in accordance with the applicable Aircraft Service Manual.

2. Remove one of the tapered filler plugs from the upper nose leg cap. Drain and discard the hydraulic fluid.

3. Remove the 4 bolts holding the top cap of the leg into the nose leg assembly (Figure 1; for aircraft up to S/No. 50, QTY 3 AN4 bolts are used at this location).

4. Remove the upper shaft and plunger assembly from the leg.

5. Remove the main spring from the leg assembly and measure its length.

6. Remove any existing packers (Item 1 of Table 3) from the leg, beneath the main spring. Note that the leg includes a 0.100” thick steel Lower Shim (P/No. GA8-322021-087) below the spring – this must not be confused with the packer (Item 1 of Table 3).

7. Using a long ruler, straight edge or similar which is at least 30.188” (767mm) long and at least 1.250” wide at the lower end. Insert the ruler down the inside of the nose leg until it touches the bottom of the spring socket. Place a straight edge across the top of the nose leg and measure the depth of the spring socket. The correct length is 30.188” (767mm), ±0.063” (±1.6mm). Values shorter than this length typically indicate that a packer (Item 1 of Table 3) remains inside the leg. Contact GippsAero for guidance if the socket varies from this value.

8. Clean the spring and, using a bright light, do a visual inspection the spring. The spring must be replaced if corrosion, cracking or other damage is found.

9. Visually inspect the O-Ring seal in the piston plunger and replace if needed. Clean and visually inspect the rest of the leg assembly and supporting structure for wear, damage or corrosion and address any items identified.

10. If the spring is in good condition and within the limits given in Table 4 it may be re-installed to the leg assembly. Otherwise, the spring must be replaced with a serviceable part.

Table 4: Spring and Leg Measurements

Main Spring Length	TOTAL Number of Packers
26.970" to 26.595" (685.00mm to 675.48mm)	0
26.658" to 26.219" (677.10mm to 665.95mm)	1
Less than 26.219" (665.95mm)	Replace Spring

11. Fit the packer and the spring to the leg. The packer must be fitted BEFORE the spring so that it is at the bottom of the leg assembly when installed to the aircraft.

CAUTION:

INSTALLING THE PACKER ABOVE THE SPRING WILL AFFECT THE HYDRAULIC DAMPING OF THE NOSE LEG AND MAY RESULT IN STRUCTURAL DAMAGE TO THE AIRCRAFT.

12. Re-assemble the remainder of the nose landing gear strut in accordance with the applicable Aircraft Service Manual, using new MIL-H-5606 hydraulic fluid.

13. Re-install the nose landing gear to the aircraft in accordance with the applicable Aircraft Service Manual.

14. Check for smooth operation of the nose landing gear strut and rudder system.

15. Perform a duplicate inspection of the affected parts of the rudder control circuit and NLG steering system.

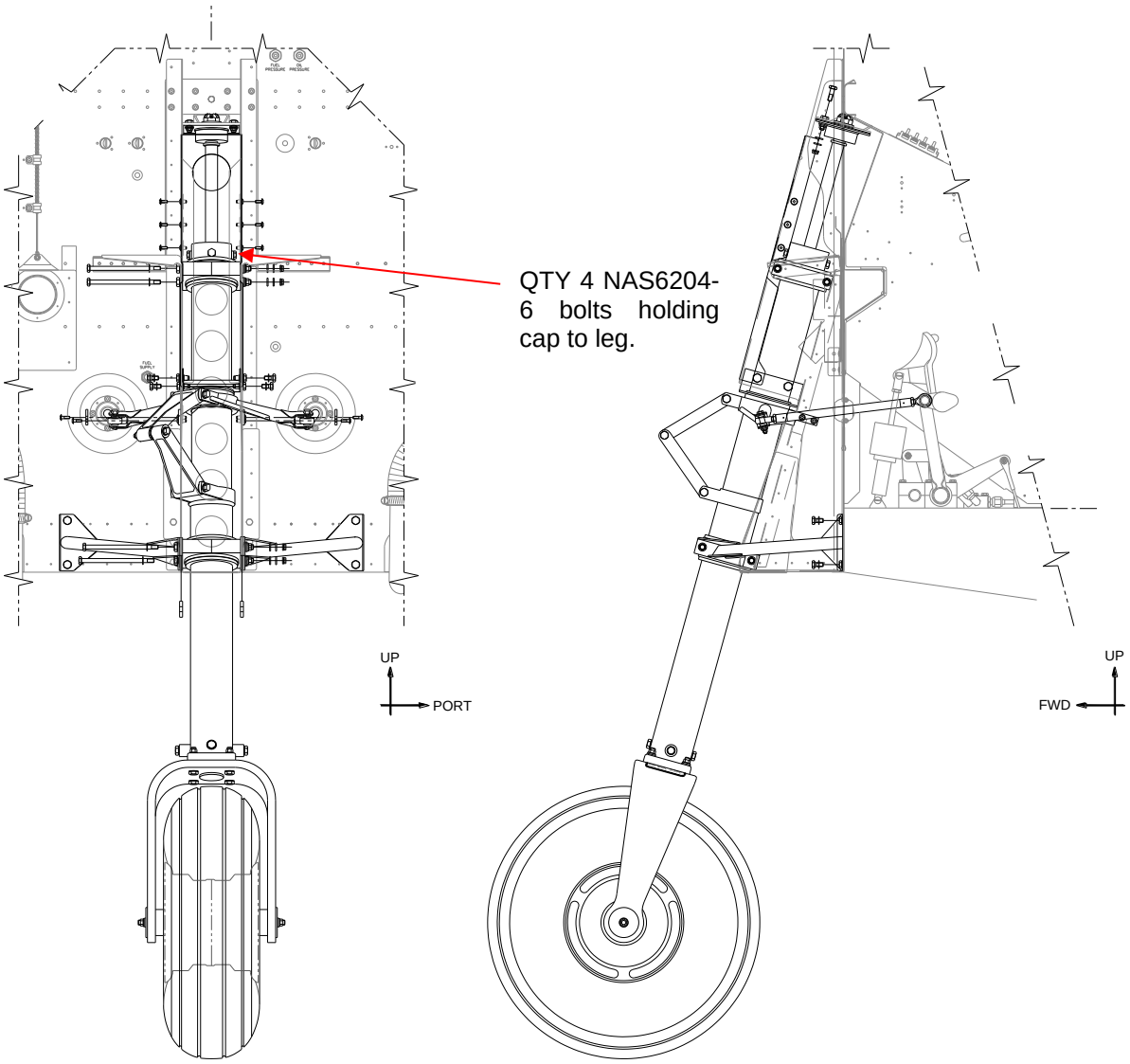

Figure 1: Nose Leg Installation

Documentation:

Update aircraft logbook to reflect incorporation of this Service Bulletin.

Continuing Airworthiness:

This Service Bulletin requires recurring visual inspections in accordance with Table 5 for aircraft fitted with a spring packer.

Table 5: Continuing Airworthiness Inspections

Inspection	Interval
Part A: Spring Inspection & Installation of Packer	1,000 ± 100 hours

Compliance Notice:

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

DOCUMENT COMPLIANCE NOTICE

	Document: SB-GA8-2022-213 **Issue 1**

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2021-213 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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