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**SB-GA8-2005-16**
**Issue 1**
**OPTIONAL**

# Service Bulletin

## Subject:

Conversion from FAR 36 noise compliance (2700 RPM, full throttle take off power) to ICAO Annex 16 noise compliance (2500 RPM, full throttle take off power).

## Applicability:

All GA8 serial numbers that are approved with a 2700 rpm/300 bhp take-off power rating and are CASA certificated to FAR Part 23 at Amendment 48 or Amendment 54.

Applicable aircraft are identified by having no pitch gate in the propeller control quadrant. These aircraft are also issued with a Flight Manual with document number C01-01-06 or C01-01-07 in the footer of each page, and have a maximum take-off power rating of 300 bhp stated in Section 2.4.2 *Engine Limitations* of the Flight Manual.

This Service Bulletin **IS NOT** applicable to aircraft that are FAA certificated to FAR Part 23 at Amendment 54 and are issued with Flight Manual document number C01-01-04.

## Amendments:

Nil – Initial Issue.

## Background:

The Lycoming IO-540-K1A5 engine fitted to the GA8 is rated at 300 bhp at 2700 rpm. The FAR Part 36 noise test method results in no limits on propeller speed below the maximum allowable engine speed of 2700 rpm.

To meet noise requirements under the ICAO Annex 16 test method, the GA8 requires a pitch stop to limit propeller speeds to 2500 rpm for normal operations, with a bypass to allow use of 2700 rpm in an emergency only.

This Service Bulletin documents the modifications required to limit maximum take-off power of the GA8 to 275bhp and 2500 rpm.

## Compliance:

Compliance with this Service Bulletin is optional where the noise performance standard is FAR Part 36 Appendix G except for aircraft operating in the United States and other countries recognising FAA certification – see Applicability above.

Compliance with this Service Bulletin is mandatory where the noise performance standard is ICAO Annex 16 Volume 1 Chapter 10 (eg an aircraft certified for operations at 2700 rpm being exported to a country requiring ICAO noise certification).

## Weight and Balance:

Negligible effect on weight and balance.

## Approval:

This Service Bulletin has been approved pursuant to Regulation 21.095 of CASR1998.

## Parts:

| Item | P/N | Description | Qty |
|---|---|---|---|
| 1 | C01-01-01[1] | Flight Manual dated 31 May 2005 or later CASA approved issue | 1 |
| 2 | C01-01-03[2] | Flight Manual dated 31 May 2005 or later CASA approved issue | 1 |
| 3 | GA8-112011-163 | Left throttle quadrant placard | 1 |
| 4 | GA8-112011-165 | Right throttle quadrant placard | 1 |
| 5 | GA8-761021-63 | Propeller gate | 1 |
| 6 | GA8-761011-17 | Nutplate assembly | 1 |
| 7 | Piper S1022Z6-8 | Screw | 2 |
| 8 | GA8-771013-11[3] | Tachometer | 1 |

[1] For aircraft currently issued with Flight Manual C01-01-06

[2] For aircraft currently issued with Flight Manual C01-01-07

[3] Existing tachometer may be reworked – refer to text for details

## Parts Availability:

New parts can be obtained directly from Gippsland Aeronautics.

Tel.: +61 03 5172 1200

Fax.: +61 03 5172 1201

Email: spares@gippsaero.com

## Instructions:

### Propeller Gate Installation

1. Remove existing throttle quadrant placards.
2. Install new throttle quadrant placards (P/N GA8-112011-163 and GA8-112011-165).
3. Install propeller gate (P/N GA8-761021-63) and nutplate assembly (P/N GA8-761011-17). Refer to Figure 1.
4. To set take-off rpm:
   - (i) loosen propeller gate attaching screws.
   - (ii) start engine and warm up.
   - (iii) cycle propeller control several times to ensure that warm oil has circulated through the propeller.
   - (iv) advance the throttle until the propeller is governing.
   - (v) retard propeller control until 2500 rpm is set on the tachometer.
   - (vi) set propeller gate abutting the propeller control and tighten attach screws
   - (vii) check that the propeller control may be advanced past the gate to obtain 2700 rpm.

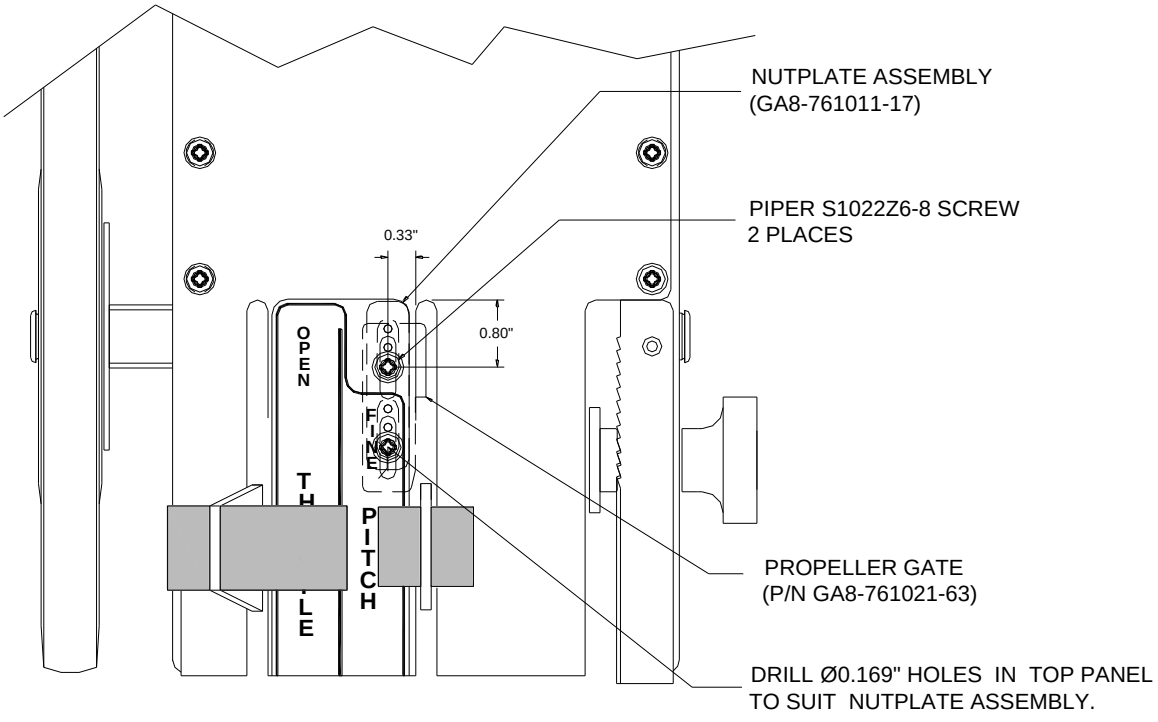


**Figure 1** – Gate installation

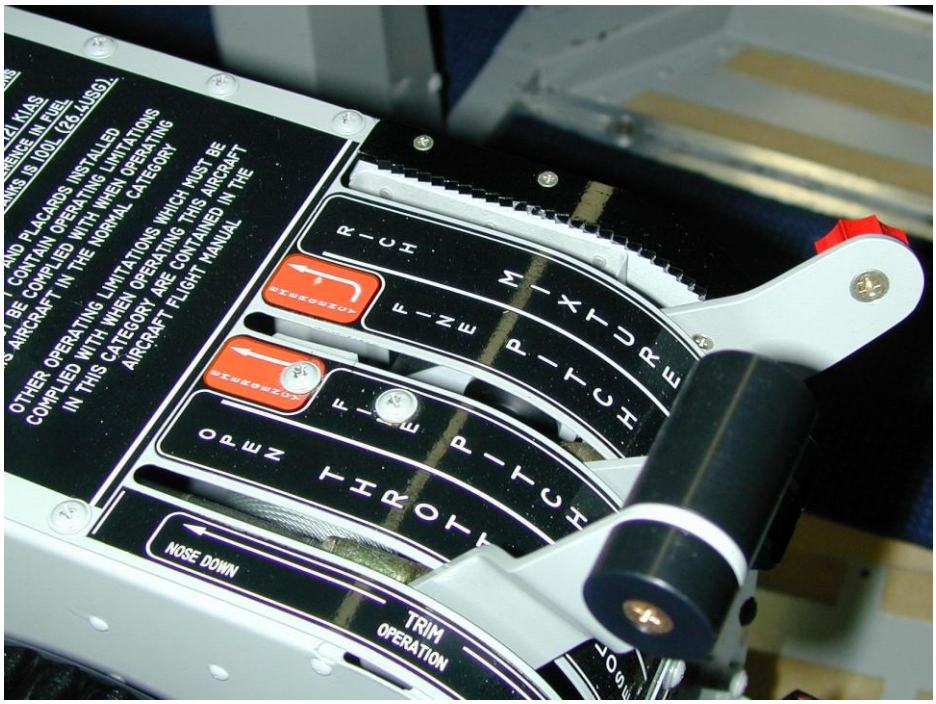


**Figure 2 – Completed installation**

**Tachometer Replacement**

1. Remove existing tachometer and replace with new tachometer (P/N GA8-771013-11).

   Alternatively, the existing tachometer may be reworked by re-marking the existing yellow arc between 2500 rpm and 2700 rpm with a red arc. Refer to Figure 3. Re-identify the tachometer as GA8-771013-11.

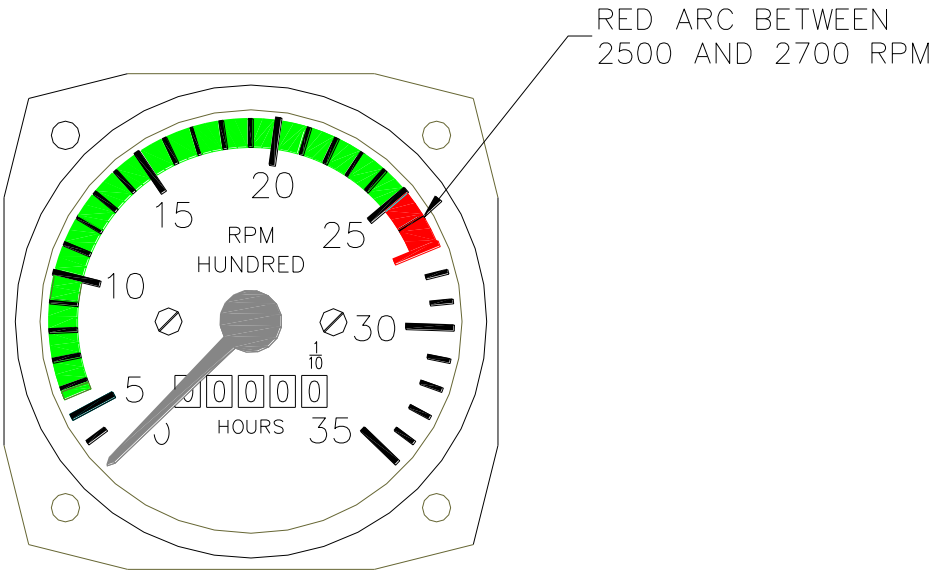


**Figure 3 – Tachometer marking**

## Documentation:

1. For aircraft using Flight Manual C01-01-06, replace with Flight Manual C01-01-01 dated 31 May 2005 or later CASA approved revision.

   OR

   For aircraft using Flight Manual C01-01-07, replace with Flight Manual C01-01-03 dated 31 May 2005 or later CASA approved revision.

   When replacing the flight manual, transfer any weight and balance amendments and supplements to the new manual.

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

## Compliance Notice:

Complete the Document Compliance Notice and return to Gippsland Aeronautics by fax/mail.

# DOCUMENT COMPLIANCE NOTICE

| Gippsland Aeronautics | **Document: Service Bulletin SB-GA8-2005-16** |
|---|---|

Aircraft Serial Number: GA8-_____

I/we have incorporated Service Bulletin SB-GA8-2005-16 for the above aircraft.

_____
Signed

_____
Print Name

Please post or fax this compliance notice to:


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