

# Service Bulletin

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**Subject:**

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

**Applicability:**

All GA8 serial numbers that are limited to a take-off power rating of 2500 rpm/275 bhp and are CASA certificated to FAR Part 23 at Amendment 48 or Amendment 54.

Applicable aircraft are identified by the fitting of a pitch gate in the propeller control quadrant and the propeller position placard featuring the word "emergency". These aircraft are also issued with a Flight Manual with document number C01-01-01 or C01-01-03 in the footer of each page, and have a maximum take-off power rating of 275 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. To meet noise requirements under the ICAO Annex 16 test method the GA8 currently features a pitch gate to limit propeller speeds to 2500 rpm for normal operations with an emergency bypass to 2700 rpm.

The FAR 36 noise test method results in no limits on propeller speed below the maximum allowable engine speed of 2700 rpm.

This Service Bulletin documents the modifications required to restore 300 bhp maximum take-off power to GA8 aircraft that were previously restricted to 275bhp and 2500 rpm.

The only performance advantage of operating at 2700 rpm versus 2500 rpm is reduced takeoff distances – 487m versus 554m in the International Standard Atmosphere (ISA) at sea level.

**Compliance:**

Compliance with this Service Bulletin is optional. Operators who wish to maintain the current 2500 rpm limit may ignore this document.

**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	C01-01-06 <sup>1</sup>	Flight Manual dated 8 August 2005 or later CASA approved issue	1
2	C01-00-07 <sup>2</sup>	Flight Manual dated 8 August 2005 or later CASA approved issue	1
3	GA8-112011-329	Left throttle quadrant placard	1
4	GA8-112011-331	Right throttle quadrant placard	1
5	GA8-771013-9 <sup>3</sup>	Tachometer	1

<sup>1</sup> For aircraft currently issued with Flight Manual C01-01-01

<sup>2</sup> For aircraft currently issued with Flight Manual C01-01-03

<sup>3</sup> 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:

### Throttle Quadrant Modification

1. Gain access to the throttle quadrant by removing the access panel on the left hand side of the centre console.
2. Unfasten the two screws attaching the pitch stop and backing plate to the throttle quadrant cover. Discard these parts.
3. Replace access panel.
4. Remove throttle quadrant placards and replace with new placards (P/N GA8-112011-329 and GA8-112011-331) per Figure 2.

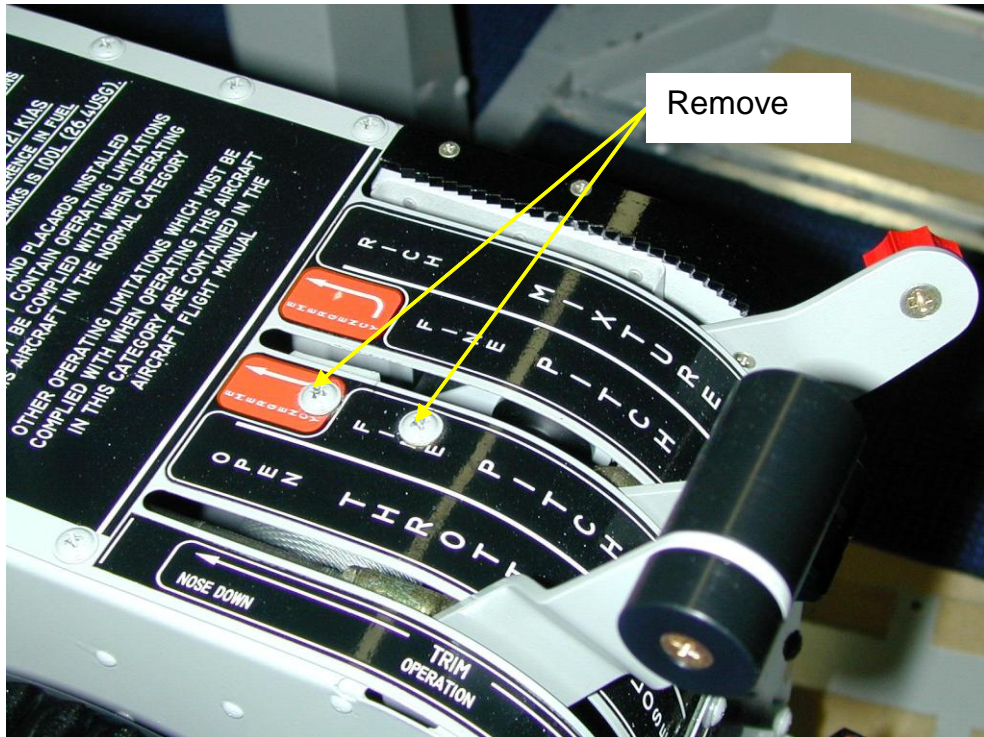


Figure 1 – Pitch gate attachment

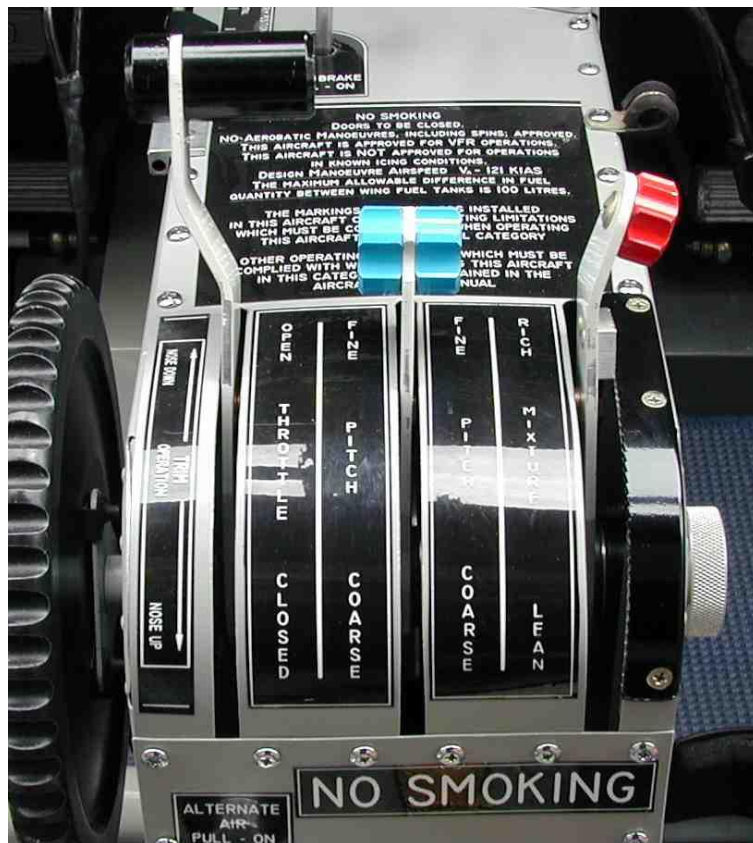


Figure 2 – Throttle quadrant placards

## Tachometer Replacement

1. Remove existing tachometer and replace with new tachometer (P/N GA8-771013-9).

Alternatively, the existing tachometer may be reworked by re-marking the existing red arc between 2500 rpm and 2700 rpm with a yellow arc. Refer to Figure 3. Re-identify the tachometer as GA8-771013-9.

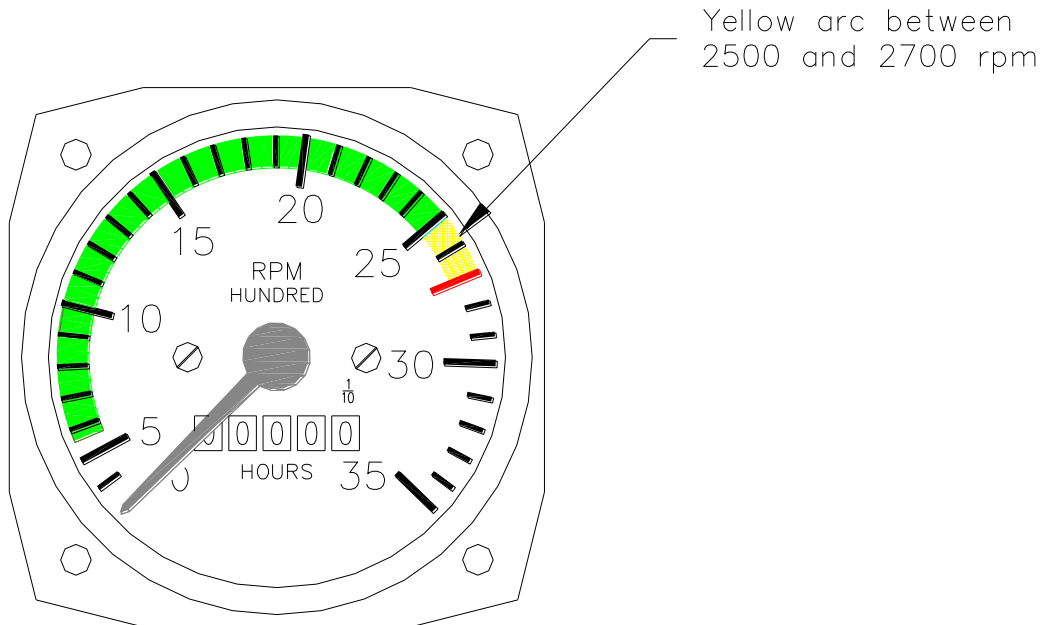


Figure 3 – Tachometer marking

## Documentation:

1. For aircraft using Flight Manual C01-01-01, replace it with Flight Manual C01-01-06 dated 8 August 2005 or later CASA approved revision.

OR

For aircraft using Flight Manual C01-01-03, replace it with Flight Manual C01-01-07 dated 8 August 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



Document: Service Bulletin SB-GA8-2005-10

Aircraft Serial Number: GA8-\_\_\_\_\_

I/we have incorporated Service Bulletin SB-GA8-2005-10 for the above aircraft.

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Signed

\_\_\_\_\_  
Print Name

Please post or fax this compliance notice to:

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