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SB-GA8-2011-64

Issue 2

MANDATORY

Service Bulletin

Subject:

Checking Spring Tension on Servo Regulator.

Applicability:

GA8 aircraft with serial numbers from 004 to 165

Amendments:

Issue 1: Initial issue

Issue 2: Incorporation of thicker springs with increased tension and applicability increased.

Background:

The engine utilised in the GA8 and GA8TC are equipped with a Precision RSA fuel injection system that is composed of two primary components, a servo regulator and a flow divider.

To give redundancy and for compliance with FAR 23, the servo regulator has had the addition of two springs, one at the idler valve lever arm and the other at the mixture control lever. These springs will move the throttle or mixture control arms to a position that would ensure safe continuation of flight in the event of the disconnection of the respective control linkage.

This SB requires that the spring tension is sufficient to ensure that the throttle or mixture levers move to a position that will allow the engine to operate safely should a disconnection of a control cable occur.

If due to internal friction in the servo, the existing springs do not move the throttle or mixture arms to the positions required then new springs (p/no. GA8-710021-151 and GA8-710021-153) should be installed. If following the installation of the new springs the required position cannot be achieved then the servo should be rectified by an approved service centre.

Compliance:

For applicable aircraft, this Service Bulletin must be incorporated at the next scheduled maintenance.

Weight and Balance:

Nil

Approval:

This modification has been approved pursuant to Regulation CASR 21.095.

Parts:

Item	Part Number	Description	Qty
1	GA8-710021-011	Mixture Spring Thin	1
2	GA8-710021-013	Throttle Spring Thin	1
3	GA8-710021-151	Mixture Spring Thick	1
4	GA8-710021-153	Throttle Spring Thick	1

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 hours should be allocated for the incorporation of this Service Bulletin.

Warranty:

Not applicable.

Instructions:

1. **Spring Check**
    a. Disconnect the throttle and mixture cables from the servo regulator levers (Figure 1).
    b. Observe the position of the fuel control unit lever on throttle and mixture side.
    c. Ensure there is enough tension on the springs to move the throttle or mixture control to the "Open" or "Rich" position when released.
    d. If the controls positions to the "Open" or "Rich" position, then reconnect the throttle and mixture control levers to the regulator.
    e. If not, then remove the unit, and follow the procedure below.

2. Throttle Side (Refer figure 6)
    a. Remove the split pin and the roll pin from the connecting arm and loosen the screw.
    b. Replace the spring with item 2 and increase the tension of the spring, as required.
    c. Reposition the lever to full throttle from the centre line of the injector body, as shown in Figure 2 for the Turbocharged GA8-TC 320 (TC) and Figure 3 for the Normally Aspirated GA8 (NA), and place the lever back on the link.
    d. Reconnect the link to the lever using the nut.
    e. Conduct the Spring Check again to ensure that the spring will move the throttle arm to its open position.

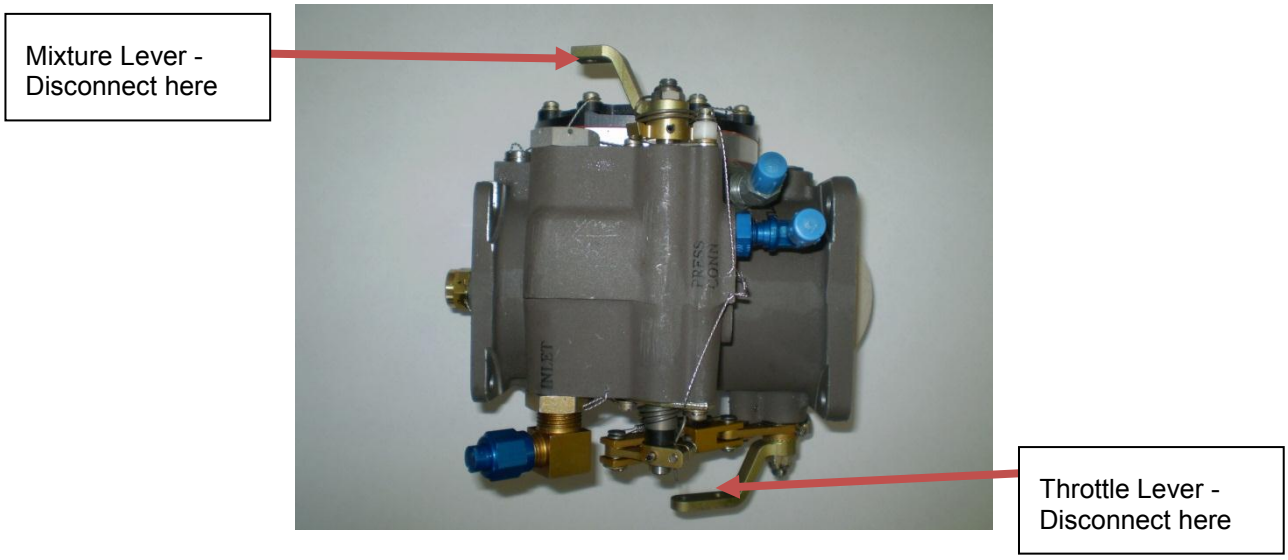

Figure 1: Throttle and Mixture control lever locations

NOTE:

If unsuccessful replace existing spring (item 2) with thicker spring (item 4) (Refer to figure 6 below) and retest.

f. Once successful, lock wire the fitting as shown in figure 1.

CAUTION:

LOCK WIRE REFITTING SHOULD NOT INTERFERE WITH INSTALLED SPRINGS.

CAUTION:

WHEN REMOVING AND INSTALLING THE SPRING PIN FROM THE IDLE VALVE LEVER ARM; THE LEVER AND SHAFT MUST BE SUPPORTED TO AVOID DAMAGE TO THE SHAFT AND ASSOCIATED PARTS.

3. Mixture Side

a. Remove the nut and the washer (ref figure 7).

b. Replace the spring with item 1 and increase its tension, as required.

c. Reposition the mixture lever as shown in Figure 4 (TC) and Figure 5 (NA).

d. Reconnect the lever to the shaft and conduct the Spring Check again to ensure that the springs will move the mixture lever to the required full position.

NOTE:

If unsuccessful replace existing spring (item 1) with thicker spring (item 3) and retest.

e. Once successful, lock wire the fitting.

4. Regulator Refit

a. After adjusting the spring fittings or installing new springs, refit the unit and reattach the throttle and mixture control arms.

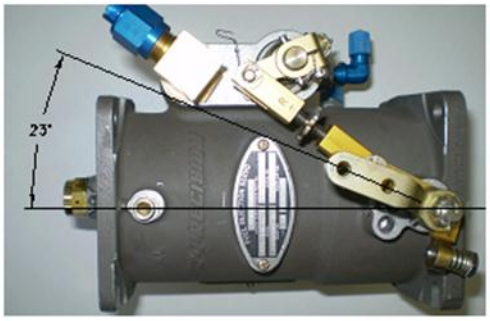

Figure 2: TC - Throttle Side

Figure 3: NA - Throttle Side

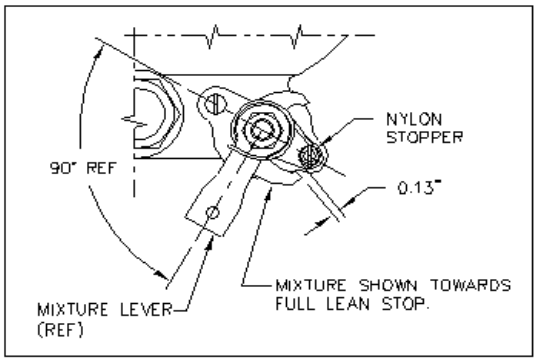

Figure 4: TC - Mixture Side

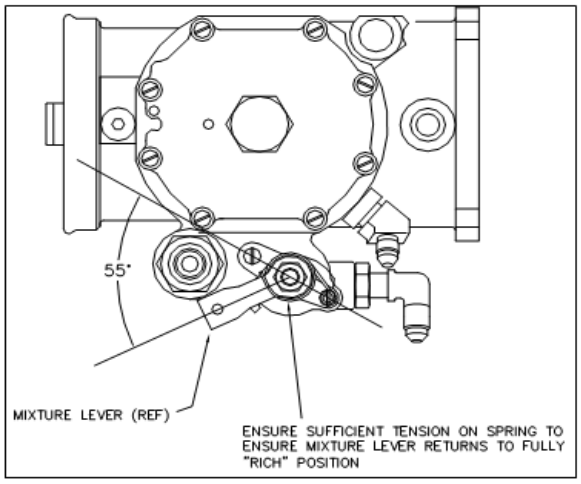

Figure 5: NA - Mixture Side

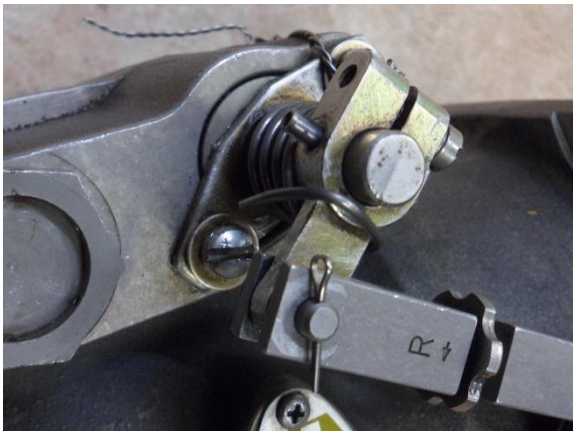

Figure 6: Installation of Throttle Side thicker spring

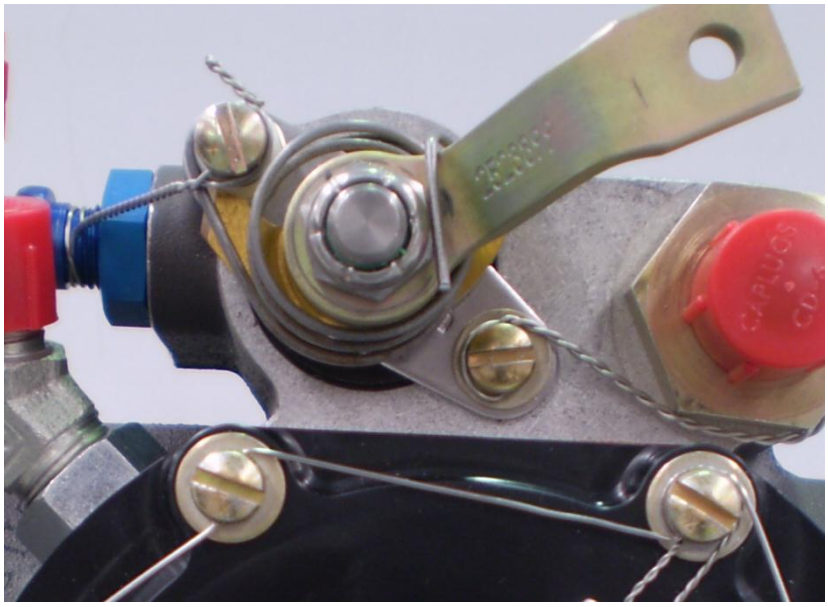

Figure 7: Installation of Mixture Side thicker spring

Documentation:

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

Continuing Airworthiness:

On every 500 hours inspection, conduct a test to ensure that throttle and mixture levers return to open and rich position after the disconnection of cable.

Compliance Notice:

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

DOCUMENT COMPLIANCE NOTICE

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Document:

SB-GA8-2011-64

Issue 2

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2011-64 Issue 2 has been incorporated in the above aircraft.

Date: _____

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Signed

Print Name: _____

Please post or fax this compliance notice to:

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