

Service Bulletin

MANADATORY WITH TCM (BENDIX) RETARD BREAKER MAGNETO INSTALLATION

Subject:

TCM Starting Vibrators

Applicability:

All GA8 serial numbers GA8-00-004 and up fitted with Lycoming IO 540 K1A5 Engines which are to be fitted with TCM (Bendix) retard breaker magnetos, part numbers as specified below. Installation of the TCM (Bendix) retard breaker magnetos is at the owner's discretion.

Amendments:

Nil (initial issue).

Background:

Owners and operators of GA8 Aircraft have reported unreliability with the Unison magnetos and Slick Start units. They have requested the availability of a Service Document that will facilitate the use of TCM Magnetos by installing TCM Starting Vibrators.

This Service Bulletin relates to the installation of TCM Starting vibrators and associated wiring changes to accommodate the use of TCM (Bendix) S-1200 Series Magnetos Part No 10-349290-1 (left) and 10-349310-1 (right) as approved by Textron Lycoming and Teledyne Continental Motors.

The listed TCM Magneto models and part numbers are eligible for installation on the Lycoming IO 540 K1A5 at the time of approval of this Service Bulletin. This should be verified by the installer prior to installation.

Compliance:

For applicable aircraft this Service Bulletin must be incorporated concurrently with the installation of TCM (Bendix) retard breaker magnetos.

Weight and Balance:

Negligible effect on weight and balance.

Approval:

This modification has been approved pursuant to Regulation 35 of CAR 1988.

This Service Bulletin does not approve the installation of TCM Magnetos on a Lycoming IO 540 K1A5 installed on the GA8 Airvan.

Parts:

Item	Part Number	Description	Qty
1	FIQC1.25-4.8/.5DG	Spade connector	3
2	M22759/16-18-9	Wire 18 AWG ETFE 600V White marked "JS1E18"	53"±0.5" [1350mm]
3	RT1.25-5	Ring connector	1

Parts Availability:

Parts as listed can be obtained directly from Gippsland Aeronautics.

Tel.: +61 03 5172 1200

Fax.: +61 03 5172 1201

Email: spares@gippsaero.com

Applicable magnetos, ignition harnesses and starting vibrators may be obtained from TCM or your local parts agents.

Labour:

Allow 1 hour for Option 1 and 2.5 hours for Option 2.

Warranty:

Not Applicable

Instructions:

WARNING:

THE MAGNETOS ARE NOT INTERNALLY GROUNDED. REMOVING THE MAGNETO SWITCH LEADS FROM THE MAGNETOS WILL CAUSE THE MAGNETOS TO BE "LIVE".

REMOVE THE HIGH TENSION LEADS FROM ALL SPARK PLUGS PRIOR TO COMMENCING ANY WORK ON THE MAGNETOS OR IGNITION WIRING.

Option 1

Option 1 is for the installation of TCM Starting vibrator with an internal relay to facilitate the use of the TCM retard breaker magneto.

- 1.1 Remove the Slick Start unit (part number SS1001).
- 1.2 Using the existing hardware install the TCM Starting vibrator (part number 10-400608-122).
- 1.3 Remove the spade type connectors from wires JS1A18/1, JS1B18/1, JS1C18/1 and install spade type connectors (part number FIQC1.25-4.8/.5DG) on these wires.

- 1.4 Attach the wires removed from the Slick Start to the following terminals on the TCM Starting vibrator: JS1A18/1 (removed from the Vin terminal) attached to the IN terminal on TCM vibrator, JS1B18/1 (removed from No 1 terminal) to be attached to the L terminal on TCM vibrator, JS1C18/1 (removed from No 3 terminal) to be attached to the LR terminal on TCM vibrator.
- 1.5 Remove circuit JS1F22N from the GND terminal and tie back into the wiring loom. Terminal R on the TCM vibrator is not used in this installation.
- 1.6 Carry out post installation ground runs to ensure correct magneto operation including magneto dead cut checks.

Option 2

Option 2 is for the installation of TCM Starting vibrator without an internal relay to facilitate the use of a TCM retard breaker magneto. This option requires minor changes to the magneto wiring including the installation of an additional wire.

- 2.1 Remove the Slick Start unit (part number SS1001) from the aircraft firewall.
- 2.2 Using the existing hardware, install the TCM Starting vibrator (part number 10-176487-122).
- 2.3 Remove the spade type connectors from wires JS1A18/1 and JS1C18/1 at the Slick Start end. Tie both ends of wire JS1B18/1 into the wiring loom.
- 2.4 Do not reconnect JS1B18/1 to the switch terminal on the Left magneto. Tie the earth wire JS1F22N into the wiring loom. Install wire JS1E18 as shown in Figure 1 and Figure 2.
- 2.5 Starting at the Ignition switch end feed the wire along the electrical loom through the firewall to the Left magneto. Attach the end of the wire at the ignition switch to terminal **LR**. Trim wire JS1E18 to length as required at the left magneto.
- 2.6 Install a ring crimp terminal part number RT1.25-5 and attach the wire to the retard breaker terminal
- 2.7 Install spade connectors part number FIQC1.25-4.8/.5DG on wires JS1A18/1 and JS1C18/1.
- 2.8 Attach circuit JS1A18/1 to the starting vibrator terminal marked **IN** and circuit JS1C18/1 to the starting vibrator terminal marked **BO**.
- 2.9 Carry out post installation ground runs to ensure correct magneto operation including magneto dead cut checks.

Reference Material:

The following documentation should be used for reference:

- FAA TCDS No 1E4 Latest revision.
- Teledyne Continental Motors Ignition Application data. Form X44001-2
- Teledyne Continental Motors. Service Information Letter SIL648

On Going Maintenance Requirements:

Refer to TCM Service Bulletin SB643 and TCM S-1200 Service Support Manual.

Documentation:

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

Compliance Notice:

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

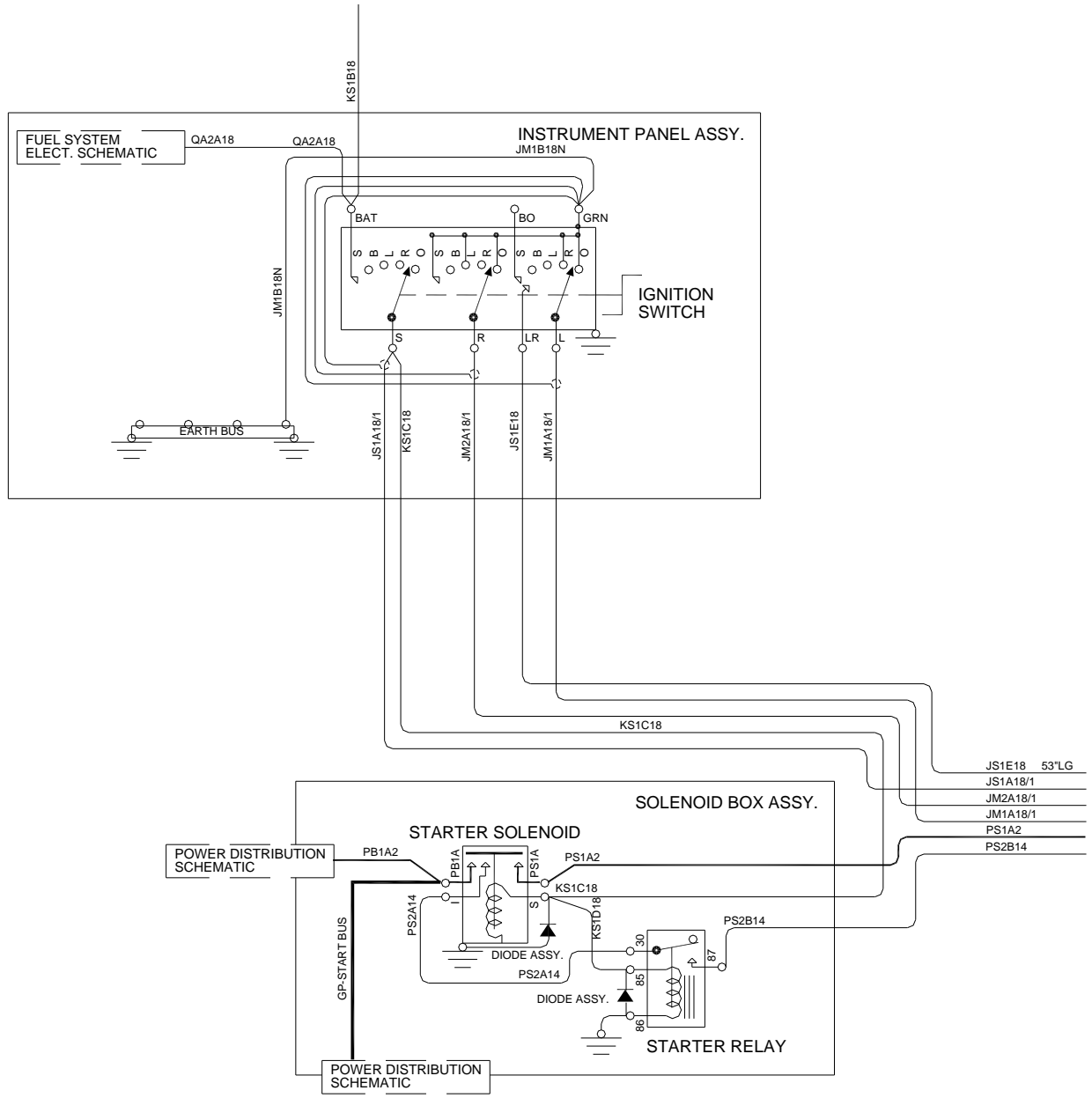


Figure 1

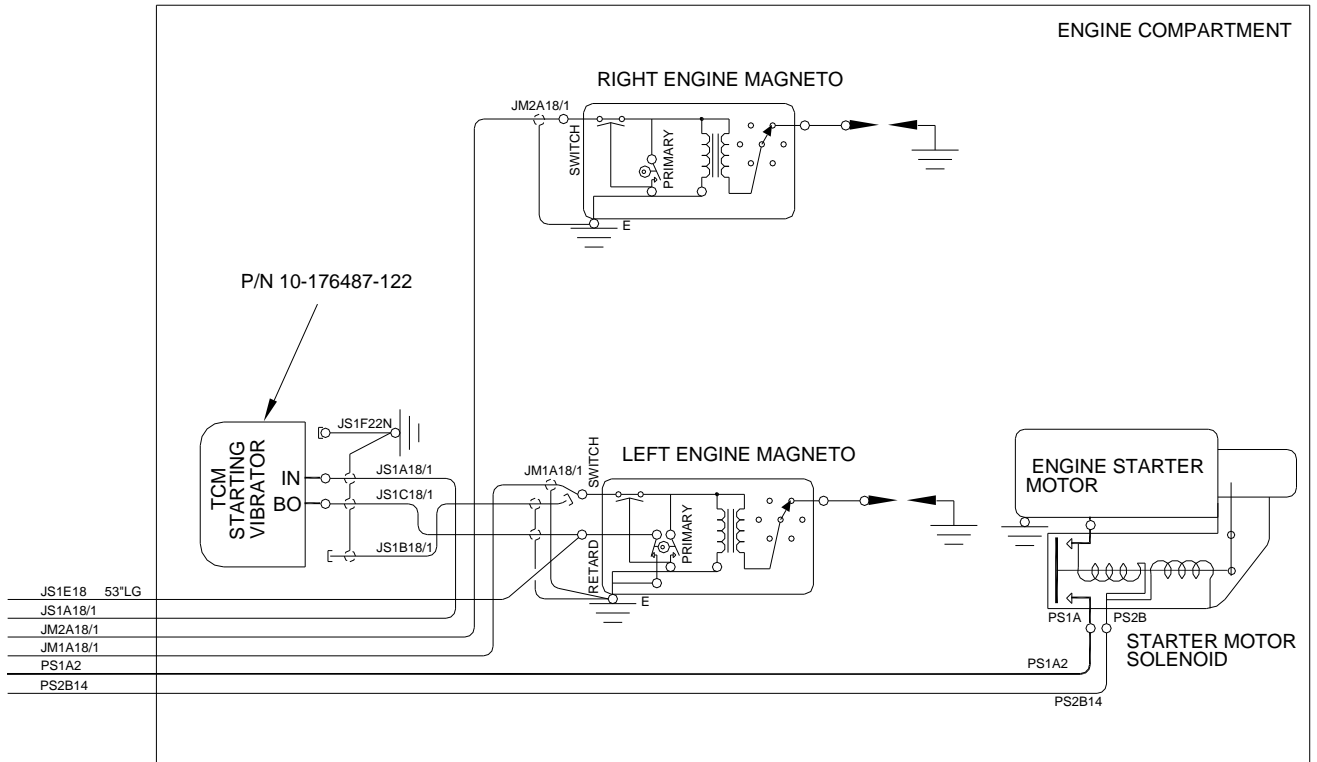


Figure 2

DOCUMENT COMPLIANCE NOTICE



Document: Service Bulletin SB-GA8-2008-49

Issue 1

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2008-49 Issue 1 has been incorporated in the above aircraft.

Date: _____

Signed

On behalf of (*company name*): _____

Please post fax or email this compliance notice to:

Gippsland Aeronautics
Attn: Technical Services
P.O. Box 881
Morwell Victoria 3840
Australia
Fax.: +61 03 5172 1201
Email: techrec@gippsaero.com