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SERVICE INSTRUCTION

DATE: February 4, 2011 Service Instruction No. 1539
Engineering Aspects are
FAA (DER) Approved

SUBJECT: Fuel Manifold Spring Change

MODELS AFFECTED: AEIO-540-D4B5 Model Engine Installed in H.A.L. HPT-32 Aircraft

TIME OF COMPLIANCE: At owner's discretion.

NOTE

Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

This Service Instruction identifies a new 4 psi flow divider spring Precision P/N 2577011 that is available as a replacement for the 2 psi flow divider spring for improved idle characteristics, especially in hot weather, for Lycoming engine model AEIO-540-D4B5. This Service Instruction is NOT a substitute to adjusting the fuel system and idle RPM. A check of the fuel adjustment must be done after the spring is installed.

NOTE

Fuel manifold P/N 79007 has the 2 psi spring and fuel manifold P/N 63B22001 already has the 4 psi spring.

To replace the flow divider spring:

1. Remove the top cowling.
2. Open the flow divider cover by removing the safety wire and the four screws that attach the top of the flow divider.
3. Carefully remove the cover of the flow divider. Use care not to damage the diaphragm. Do not remove the diaphragm from the body. Do not let the diaphragm rotate in the body.
4. Remove the spring above the diaphragm. Discard the spring.
5. Install the new 4 psi Precision flow divider spring P/N 2577011 on top of the diaphragm. Make sure the spring is installed in the metal cup on top of the diaphragm.
6. Install the cover in the same position it was removed using the four screws. Torque the four screws 20 to 30 in.-lb. (2.6 to 3.4 Nm). After 20 minutes, re-torque the screws 20 to 30 in.-lb. (2.6 to 3.4 Nm).



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7. Use a vibropeen tool and make a “4 psi” etch mark next to the Precision part number on the cover of the flow divider.
8. Safety the four cover screws with a single strand of 0.025 in. (0.64 mm) lockwire. The lockwire must pull screws clockwise, twisted only at the ends.
9. Start the engine and operate it to specified operating temperatures. Do a visual leak check.
10. Do a check of the idle speed and mixture; set to the aircraft manufacturer’s specified idle speed and mixture values if necessary.
11. Enter compliance with this Service Instruction in the airframe and/or maintenance logbook.

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