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## SERVICE INSTRUCTION

DATE: March 10, 2016

Service Instruction No. 1560 Engineering Aspects are FAA Approved

SUBJECT: Propeller Governor Drive Set Screw Inspection

MODELS AFFECTED: The following Wide Cylinder Flange Engines that are equipped with a front

crankcase mounted propeller governor:

• O, IO, LIO, AIO, AEIO-320 Series

• O, LO, IO, LIO, AIO, AEIO, TO, TIO-360 Series

• O, IO, AEIO, TIO, LTIO-540 Series

• IO-580 Series

• IO-720

**NOTICE:** Wide cylinder flange engines are identified by the suffix "A" or

"E" in the serial number.

TIME OF COMPLIANCE: At owner's discretion

**NOTICE:** 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 includes inspection instructions for the propeller governor drive idler gear shaft set screw (with the engine assembled) to ensure that the set screw is installed securely.

## **Recommended Inspection**

- 1. Remove the propeller and cowlings per the airframe manufacturer's instructions.
- 2. Remove the starter ring gear per the applicable Lycoming Maintenance Manual.
- 3. Remove the safety lockwire, plug, and gasket (Figure 1) from the front of the crankcase. Discard the gasket and safety lockwire.
- 4. Insert a magnet into the open hole and try to move the idler gear shaft in both directions parallel to the crankshaft



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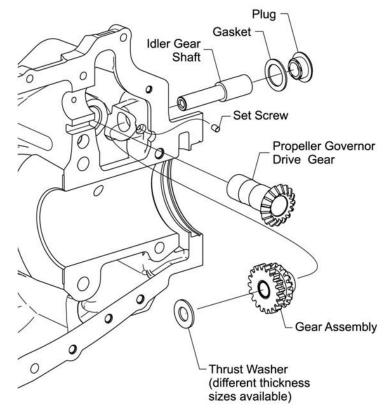


Figure 1 Propeller Governor Drive

If there was no idler gear shaft movement, the set screw is installed correctly. In this case:

- 1. Apply Loctite<sup>®</sup> Food Grade Anti-seize to the threads of the plug.
- 2. Re-install the plug with a new gasket.
- 3. Torque the plug to 150 to 180 in.-lb. (17 to 20 Nm) and **SAFETY LOCKWIRE** the plug.
- 4. Install the starter ring gear per the applicable Lycoming Maintenance Manual.
- 5. Install the cowlings and propeller per the airframe manufacturer's instructions.

If the idler gear shaft can be moved, the set screw has backed-out, is not correctly installed, or is missing from the threaded hole in the crankcase. The engine must be disassembled and a new propeller governor idler gear shaft set screw installed.

- 1. Refer to the applicable Lycoming Engines' overhaul or maintenance manual for disassembly instructions and disassemble the engine.
- 2. Examine for any damage in the engine to ensure a complete inspection.
- 3. Install a new set screw per instructions in the latest revision of Service Instruction No. SI-1343.
- 4. Assemble the engine per instructions in the applicable Lycoming Engines' overhaul or maintenance manual.
- 5. Install the engine in the airframe per the airframe manufacturer's instructions.

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