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SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service
Washington, DC

<http://www.faa.gov/aircraft/safety/alerts/SAIB>

This is information only. Recommendations aren't mandatory.

CORRECTION: Today, November 14, 2005, we corrected 2 typos in Table 1, under make and model.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, owners, operators, and certificated repair facilities of **Lycoming four and six cylinder, dual magneto engines with rear mounted propeller governor drives**, of a potential assembly problem that could result in loss of engine oil leading to engine failure. The oil loss results from the omission of a plate, Lycoming part number (P/N) LW-12347, which is required between the propeller governor drive pad and the propeller governor. This plate is only 0.040 inches thick and could be mistaken for a used gasket and discarded when you removed the propeller governor or shipping cover.

Background

Some aircraft manufacturers order Lycoming engines with a propeller governor drive pad located on the rear accessory case and then install the propeller governor when they install the engine at the aircraft factory. Lycoming ships these engines with two gaskets, a plate, and a shipping cover over the propeller governor drive pad. Table 1 lists known engines delivered to aircraft manufacturers with the two gaskets, plate, and shipping cover installed.

NOTE: There are other Lycoming four and six cylinder, dual magneto, engine and aircraft combinations with a rear mounted propeller governor that are still in service but out of production.

**TABLE 1 –
KNOWN ENGINES IN PRODUCTION**

Lycoming Engine Model	Aircraft Make & Model
IO-360-A1B6D	Cessna 177RG Cardinal
IO-360-A1B6D	Siai-Marchetti (S-205)
IO-360-A3B6D	Mooney M20J-201
LO-360-A1G6D	Beech Aircraft. Duchess.
O-360-A1AD	S.O.C.A.T.A. Tabago TB-10
O-360-A3AD	Robin. Aiglon (R-1180T)
O-360-A3AD	S.O.C.A.T.A. TB-10
O-360-A1F6D	Cessna 177B Cardinal
O-360-A1F6D	Teal III. TSC (1A3)
O-360-A1G6D	Beech Duchess 76
TIO-540- AA2AD	Aerofab Inc. Turbo Renegade (270)
TIO-540- AB1BD	Schweizer SA2-37A, -37B

These engines also require the plate, P/N LW-12347, between the propeller governor drive pad and the propeller governor.

Lycoming's Overhaul Manual, Illustrated Parts Catalog, and Service Instruction (SI) No. 1438A illustrate the proper sequence of the parts installed on the propeller governor drive pad of the engine's rear accessory case when Lycoming ships the engine. They show two gaskets, P/N 72053, separated by a plate, P/N LW-12347, and a shipping cover, P/N 72378. SI No. 1438A also illustrates which of the two gaskets, P/N 72053, is replaced by the aircraft manufacturer's gasket

when the propeller governor replaces the shipping cover.

If the plate, P/N LW-12347, is omitted from the assembly, a massive oil leak might occur resulting in an engine failure and a forced landing. The following website, <http://www.cardinalflyers.com/pub/info/govplate.htm>, documents at least one engine failure occurrence. This web site has photographs showing the edge of the plate with the propeller governor installed.

NOTE: We are referencing this website for information only. With the exception of the photographs showing the location of the plate, we don't endorse any other website content.

The plate is actually a spacer to position the propeller governor away from the propeller governor drive pad. Without this plate, the propeller governor shaft might make contact with the bottom of the gear assembly inside the rear accessory case and prevent the propeller governor drive pad and the propeller governor flange from being drawn together to compress the gaskets. If the gaskets aren't compressed, they will not form a sufficient seal, which could cause an oil leak. The leak could be massive.

Recommendation

Accurate propeller governor installation instructions should be in the aircraft manuals. Lycoming SI No. 1438A shows the proper location of the gaskets and plate, and references the aircraft manufacturer's installation instructions for the proper replacement of one of the two gaskets, P/N 72053.

When installing a propeller governor on a Lycoming four or six cylinder engine with a dual magneto and a rear mounted propeller governor drive, refer to (1) Lycoming SI No. 1438A, (2) the aircraft manufacturers Propeller Governor Installation Instructions, and (3) the aircraft manufacturers Illustrated Parts Catalog.

You may need all three documents because some aircraft manuals don't have complete instructions. Refer to Lycoming SI No. 1438A for the sequencing of the gaskets, plate, and propeller governor, and to this SAIB for the plate inspection instructions.

We recommend the following:

- If you replace the propeller governor, the plate may be cleaned and reused with new gaskets.
- After installation, always verify that the plate has been installed and inspect for an oil leak by running the engine after propeller governor installation.
- If you receive an engine from someone other than Lycoming, none of the required items may be with the engine and it might be necessary to order a new plate and gaskets from Lycoming as well as a new gasket from the aircraft manufacturer.
- Be sure to run an overhauled engine in accordance with the RECOMMENDED RUN-IN SCHEDULE in the Lycoming Overhaul Manual (approximately 2 hours).
- Inspect engine for leaks after the Lycoming "RUN-IN".

For Service Bulletin Copies, Contact

Lycoming at 652 Oliver St, Williamsport, PA 17701; phone: (570) 323-6181; fax: (570) 327-7101; or go to their web site at: <http://www.lycoming.textron.com/support/publications/maintenancePublications/serviceInstructions.html> and open SI-1438A.

For Further Information Contact

Norm Perenson, Aerospace Engineer, FAA NYACO, ANE-171, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228-7337; fax: (516) 794-5531; email: norman.perenson@faa.gov