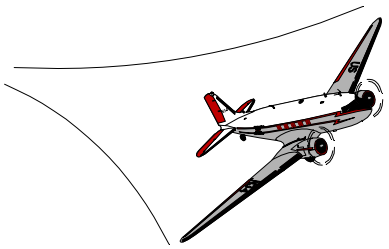
SPECIAL AIRWORTHINESS INFORMATION BULLETIN



U.S. Department of Transportation

Federal Aviation Administration

Aircraft Certification Service
Washington, DC

NE-03-18
January 22, 2003

We post SAIBs on the internet at "av-info.faa.gov"

This is information only. Recommendations are not mandatory.

Introduction

Lycoming issued Mandatory Service Bulletin (MSB) No. 555 on November 25, 2002 and Supplement No. 2 to MSB 555 on January 21, 2003, to inspect and torque the allen type pipe plug, part number (P/N) STD-1339, installed in the engine oil pump body, within 50 hours of operating time after MSB issue date. The 50 hours limit was selected because it coincides with the required engine oil change. Affected engines are:

- Engines with oil pump bodies that were installed by Lycoming, as listed by engine serial numbers in Table 1 of MSB No. 555. Lycoming's MSB calls out the following engine models:

Lycoming Engine Models			
AEIO-540	IO-360	O-320	TIO-540
AEIO-580	IO-540	O-360	
	IO-580	O-540	
	IO-720	O-580	

- Engines with oil pump bodies installed in the field, as listed by part PN and date in Supplement No. 2 to MSB 555 on January 21, 2003.

Background

The P/N STD-1339 allen type pipe plug is used to close the end of a hole drilled in the oil pump housing during manufacture. When this plug is installed, the hole becomes an internal passage in the body of the oil pump that allows oil to flow at oil pump discharge pressure during engine operation. This pressure is higher than the oil system pressure of 55 psi to 90 psi.

MSB No. 555 was issued as a result of one engine (a TIO-540-AK1A) that was returned to Lycoming due to low oil pressure. The engine oil pressure dropped from 65 psi to 30 psi during flight. At engine disassembly, the following was found:

- The P/N STD-1339 allen type pipe plug was missing from the oil pump body. This explained the reason for the drop in oil pressure.
- There was light damage to the accessory gears.
- The allen type pipe plug was found in the engine oil sump. This explained the reason for the damage to the accessory gears.

Since MSB No. 555 was issued, a second engine was returned to Lycoming due to low oil pressure. This engine flew for 20 minutes at 30 psi oil pressure. Upon investigation, the P/N STD-1339 plug was also missing, and no internal damage was observed when the engine was disassembled.

Recommendations

- Perform the inspection and torquing as specified in Lycoming MSB No. 555.
- Investigate and repair a drop in oil pressure as soon as possible, especially a drop to 30 psi.

For Service Bulletin Copies Contact: Lycoming at 652 Oliver St, Williamsport, PA 17701, phone (570) 323-6181; fax (570) 327.7101; website www.lycoming.textron.com

For Further Information Contact:

FAA, Norm Perenson, NYACO, ANE-171, 10 5th Street, Valley Stream, NY 11581-1200;
Tel: (516) 256-7537; Fax: (516) 568-2716; email: norman.perenson@faa.gov