

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation

**Federal Aviation
Administration**

NE-05-89
September 30, 2005

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

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) **updates information we issued in SAIB NE-01-22, May 11, 2001.**

This SAIB alerts you, owners, operators, and certified repair stations of **Textron Lycoming Engines O-235; O-290; O-340; (L)O and IO-320, -360, -540; AIO-320, -360; AEIO-320, -360, -540; HIO-360; and TO-360 series reciprocating engines**, with fuel pumps, part number (P/N) LW-15399, LW-15472, P/N LW-15473, or P/N LW-16335 installed, **and** that has one of the manufacturing date codes shown in Figure 1 scribed on the edge of the pump mounting flange.

These reciprocating engines are installed on, but not limited to **Aerospatiale, American Champion, Bellanca, Cessna, The New Piper Aircraft Company, Beech, Maule, Mooney, and Schweizer 269, series aircraft.**

Background

Initially, Lycoming Engines reported three events of high pressure fuel pump failures in their Production Test Cell and issued Service Bulletin (SB) No. 548. **Now that there has been one reported failure in the field, Lycoming has issued SB No. 548A (see attached) to expand the affected population of fuel pumps** because there is no way to predict when a failure may occur. We are still investigating and if the situation changes, we may issue an Airworthiness Directive. These fuel pumps were either purchased as

replacements or shipped from Lycoming and installed on new, repaired, rebuilt, and overhauled engines between February 22, 2000 and September 15, 2005.

When an internal failure occurs, the check valve seat separates from its shaft due to an inadequate or improper assembly crimp. This allows the liberated parts to move within the housing and might cause a blockage of fuel flow. This failure may not be evident on the exterior of the pump, but might result in a decrease or loss of fuel flow and a corresponding decrease or loss of engine power.

Recommendations

To prevent a failure of Lycoming Engine fuel pump with P/N LW-15399, LW-15472, LW-15473, or LW-16335, we highly recommend you inspect your engines for the applicable fuel pumps, as shown in Figure 1, and replace the pumps as described in Textron Lycoming Service Bulletin (SB) No. 548A. We also recommend that you check your maintenance records for affected replacement fuel pumps **received after September 15, 2005** in the event that Lycoming's September 1, 2005 fuel pump recall didn't retrieve all affected pumps. Prior compliance with Lycoming SB No. 548 requires re-inspection of the fuel pump to ensure that a fuel pump from one of the date codes added by Revision "A" was not installed when originally complying with Lycoming SB No. 548.

- Textron Lycoming engine that has a diaphragm-type fuel pump, P/N LW-15399, LW-15472, LW-15473, or LW-16335 installed, with one of the following date codes in the 6th through 9th digit locations scribed on the pump:

0101	0201	0301	0700	0800	1100	1200
1300	1400	1500	1600	1800	2000	2100
2200	2300	2400	2800	2900	3000	3100
3200	3300	3400	3500	3600	3700	3800
3900	4000	4100	4200	4300	4400	4500
4600	4700	4800	4900	5000	5100	5200
0401						

Example: 163354800 needs to be replaced as specified in Textron Lycoming Service Bulletin No. 548A.

- If the letter “A” is marked as a suffix to the date code, the *pump manufacturer has repaired the pump and replacement is not necessary.*

Example: 163354800A

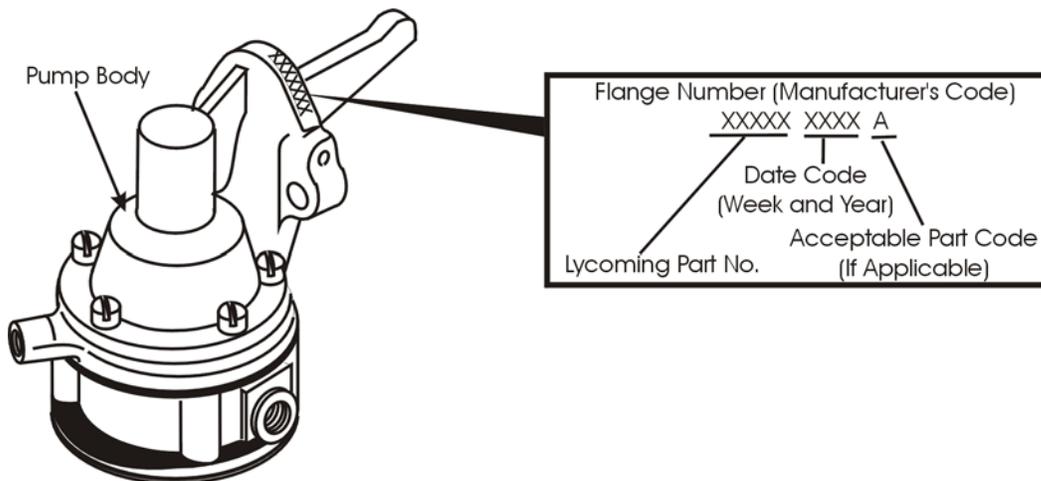


Figure 1

For Further Information Contact

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For Service Bulletin Information

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 17701, phone
 (570) 323-6181; fax (570) 327-7101; or go to
 their web site at:
<http://www.lycoming.textron.com/support/publications/maintenancePublications/serviceBulletins>

MANDATORY

SERVICE BULLETIN

DATE: August 31, 2005 Service Bulletin No. 548A
(Supersedes Service Bulletin No. 548)

SUBJECT: Diaphragm-Type Fuel Pump Inspection/Replacement

MODELS AFFECTED: New, rebuilt and overhauled engines from Lycoming with fuel pumps P/N LW-15399, LW-15472, LW-15473, and LW-16335 shipped between February 1, 2000 and September 15, 2005. Engine models affected are O-235; O-290; O-340; (L)O and IO-320, -360, -540; AIO-320, -360; AEIO-320, -360, -540; HO-360; HIO-360; and TO-360.

Fuel pumps P/N LW-15399, LW-15472, LW-15473, and LW-16335 purchased through distribution between February 22, 2000 and September 15, 2005.

TIME OF COMPLIANCE: Compliance is required within 180 calendar days from the date of this Service Bulletin, or as specified below, whichever occur first:

1. Inspect within 50 hours of operation:
2. If affected, replace within 100 hours of operation or earlier at owner's discretion.

NOTE

Prior compliance with Service Bulletin No. 548 does not preclude compliance with this Service Bulletin.

Lycoming has determined that a number of lots of diaphragm-type fuel pumps, Lycoming P/N LW-15399, LW-15472, LW-15473, and LW-16335, may not have been manufactured in conformance with acceptable standards. In the event operation of the pump is compromised, restricted fuel flow or loss of fuel pressure could result.

If your Lycoming engine has a diaphragm-type fuel pump with Lycoming P/N LW-15399, LW-15472, LW-15473, or LW-16335 installed, and has a date code of 0700 through 0401, the pump must be replaced within the next 100 hours of operation or 180 calendar days from the date of this Service Bulletin, whichever occurs first.

To identify affected pumps, check the manufacturer's code scribed on the flange of the pump (See Figure 1). If the first five digits are 15399, 15472, 15473, or 16335, and the 6th through 9th digits are 0700, 0800, 1100, 1200, 1300, 1400, 1500, 1600, 1800, 2000, 2100, 2200, 2300, 2400, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 3800, 3900, 4000, 4100, 4200, 4300, 4400, 4500, 4600, 4700, 4800, 4900, 5000, 5100, 5200, 0101, 0201, 0301 or 0401, the pump is affected and must be replaced.

NOTE

If the letter "A" is marked as a suffix to the date code, the pump has been brought into conformity and need not be replaced.

WARRANTY:

If replacement is required, reimbursement is available for a replacement fuel pump and for up to 1.5 hours labor through a Lycoming Distributor. The engine serial number must be furnished when a replacement pump is ordered. Lycoming requires the replaced pump be returned with a valid warranty claim for warranty consideration.

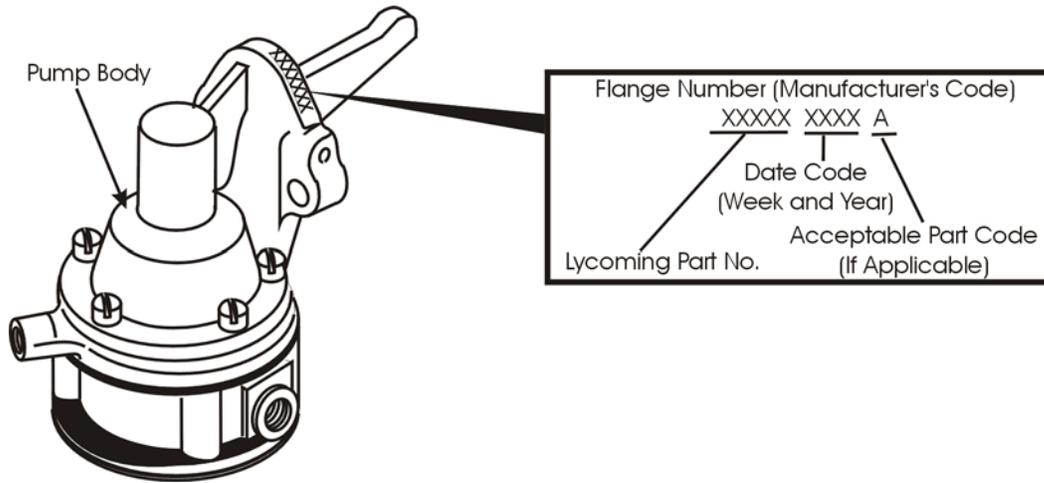


Figure 1

NOTE: Revision "A" adds new date codes and part number LW-15399.