

EMERGENCY AIRWORTHINESS DIRECTIVE



REGULATORY SUPPORT DIVISION
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U.S. Department
of Transportation
**Federal Aviation
Administration**

AD's are posted on the internet at <http://av-info.faa.gov>

DATE: September 5, 2000
2000-18-53

Send to all U.S. owners and operators of Textron Lycoming **O-320**-H1AD, -H1BD, -H2AD, -H2BD, -H3AD, -H3BD; **(L)O-360**-A1AD, -A1F6D, -A1G6D, -A1LD, -A3AD, -A4AD, -A5AD, -E1A6D; **IO-360**-A1B6D, -A1D6D, -A3B6D, -A3D6D, -C1E6D, -J1AD, -J1A6D; **(L)TO-360**-A1A6D, -C1A6D, -E1A6D, -F1A6D; **TIO-360**-C1A6D; **(L)HIO-360**-E1AD, -E1BD, -F1AD; **0-540**-H1A5D, -H1B5D, -H2A5D, -H2B5D, -J1A5D, -J1B5D, -J1C5D, -J1D5D, -J2A5D, -J2B5D, -J2C5D, -J2D5D, -J3A5D, -J3C5D, -L3C5D; **IO-540**-C4D5D, -K1A5D, -K1B5D, -K1E5D, -K1F5D, -K1G5D, -K1J5D, -L1A5D, -L1B5D, -M1A5D, -M1B5D, -M2A5D, -T4A5D, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5D, -W1A5D, -W3A5D; **(L)TIO-540**-K1AD, -S1AD, -AA1AD, -AB1AD, -AB1BD, -F2BD, -J2BD, -N2BD, -R2AD, -T2AD, -V2AD; **AEIO-540**-L1B5D; **TIO-541**-E Series; **TIGO-541**-D1A, -D1B, -E1A; **IO-720**-A1BD, -B1BD, -C1BD, -D1BD, and -D1CD reciprocating engines.

The Federal Aviation Administration (FAA) has received reports of certain oil filter converter plate gaskets, part number (P/N) LW-13388, extruding from the seat of the oil filter converter plate, P/N LW-13904. The protruding or swelling of the gasket allows oil to leak from between the plate and the accessory housing. This condition, if not corrected, could result in complete loss of engine oil and subsequent seizing of the engine and possible fire.

Manufacturer's Service Information

The FAA has reviewed and approved the technical contents of Textron Lycoming Mandatory service bulletin (MSB) number 543A, dated August 30, 2000, and service instruction (SI) 1453, dated May 9, 1991. Those documents provide procedures for removing the existing gasket, P/N LW-13388, and installing a new gasket.

Differences Between this AD and the Manufacturer's Service Information

MSB 543A, dated August 30, 2000, requires the gasket to be replaced before further flight. The FAA has determined that only engines with more than 50 hours time-since-new (TSN), time-since-overhaul (TSO), or time since the last replacement of the oil filter converter plate or gasket must have the gasket replaced before further flight.

Requirements of This AD

Since an unsafe condition has been identified that is likely to exist or develop on other engines of this same type design, this AD requires the replacement of the oil filter converter plate gasket before further flight on engines with more than 50 hours TSN, TSO, or time since the last replacement of the gasket or the converter plate. This AD also requires inspections of the gasket on engines with fewer than 50 hours TSN, TSO, or time since the last replacement of the gasket or the converter plate for leaks and for damage to, or displacement, deterioration, or extrusion of the gasket. This AD also requires replacement of the gasket every 50 hours time-in-service (TIS) thereafter. The actions are required to be accomplished in accordance with the mandatory service bulletin described previously.

There are about 31,500 Textron Lycoming engines in the worldwide fleet that may be affected by this AD. There are about 22,050 engines that are used on aircraft that are registered in the U.S. that may be affected by this AD.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

2000-18-53 TEXTRON LYCOMING: Docket No. 2000-NE-36-AD.**Applicability**

This AD is applicable to the following reciprocating engine models that were manufactured new, rebuilt, overhauled, or had the oil filter converter plate P/N LW-13904 or gasket P/N LW-13388 replaced, after April 1, 1999:

O-320	-H1AD, -H1BD, -H2AD, -H2BD, -H3AD, -H3BD
(L)O-360	-A1AD, -A1F6D, -A1G6D, -A1LD, -A3AD, -A4AD, -A5AD, -E1A6D
IO-360	-A1B6D, -A1D6D, -A3B6D, -A3D6D, -C1E6D, -J1AD, -J1A6D
(L)TO-360	-A1A6D, -C1A6D, -E1A6D, -F1A6D
TIO-360	-C1A6D
(L)HIO-360	-E1AD, -E1BD, -F1AD
O-540	-H1A5D, -H1B5D, -H2A5D, -H2B5D, -J1A5D, -J1B5D, -J1C5D, -J1D5D, -J2A5D, -J2B5D, -J2C5D, -J2D5D, -J3A5D, -J3C5D, -L3C5D
IO-540	-C4D5D, -K1A5D, -K1B5D, -K1E5D, -K1F5D, -K1G5D, -K1J5D, -L1A5D, -L1B5D, -M1A5D, -M1B5D, -M2A5D, -T4A5D, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5D, -W1A5D, -W3A5D
(L)TIO-540	-K1AD, -S1AD, -AA1AD, -AB1AD, -AB1BD, -F2BD, -J2BD, -N2BD, -R2AD, -T2AD, -V2AD
AEIO-540	-L1B5D
TIO-541	-E Series;
TIGO-541	-D1A, -D1B, -E1A
IO-720	-A1BD, -B1BD, -C1BD, -D1BD, and -D1CD.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated below, unless already done.

To prevent complete loss of engine oil and subsequent seizing of the engine, and possibility of fire, do the following:

- (a) For engines with more than 50 hours time-since-new (TSN), time-since-overhaul (TSO), or time since the last replacement of the oil filter converter plate gasket, P/N LW-13388, or the converter plate, P/N LW-13904, replace the gasket in accordance with paragraphs 1 and 2 of MSB 543A, dated August 30, 2000, and Textron Lycoming SI No. 1453, dated May 9, 1991, before further flight.
- (b) For engines with fewer than 50 hours, TSN, TSO, or time since the last replacement of the oil filter converter plate gasket, P/N LW-13388, or the converter plate, P/N LW-13904, inspect the gasket within 10 hours time-in-service (TIS) or within 3 days after the effective date of this AD for the following:
 - (1) Inspect the oil filter base for both:
 - (i) Signs of oil leakage between the oil filter base and the accessory housing. AND,
 - (ii) Any evidence of the gasket extruding beyond the perimeter of the base.
 - (2) If there is any oil leakage, or if the seal is damaged, extruded, displaced, or deteriorated, replace the plate gasket in accordance with paragraphs 1 and 2 of MSB 543A, dated August 30, 2000, SI No. 1453, dated May 9, 1991, before further flight.

- (c) Thereafter, replace the converter plate gasket, P/N LW-13388, every 50 hours TIS since the last replacement of the gasket.

Alternative Methods of Compliance

- (d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

Special Flight Permits

- (e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

Availability of Manufacturer Service Information

- (f) Copies of the applicable service information may be obtained from Textron Lycomng, 652 Oliver Street, Williamsport, PA 17701, U.S.A. telephone: 570-323-6181. This information may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

Effective date

- (g) **Emergency AD 2000-18-53, issued September 5, 2000, becomes effective upon receipt.**

FOR FURTHER INFORMATION CONTACT: Rocco Viselli, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, Third Floor, Valley Stream, NY 11581; telephone: 516-256-7531; fax: 516-568-2716; e-mail rocco.viselli@faa.gov.

Issued in Burlington, Massachusetts on September 5, 2000.

David A. Downey, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.