LUFTFARTSVERKET
Luftfartsinspektionen

LUFTVÄRDIGHETSDIREKTIV (LVD)

D. Motor
Textron Lycoming
LVD Nr 2713
Upphäver LVD 1759A

Sektion 2. Utlandstillverkad flygmateriel

TITEL: **Byte av delar i oljepump**

GÄLLER: Modeller enligt bifogad kopia av FAA AD 96-09-10

ÅTGÄRD: Utför åtgärder enligt bifogad kopia av FAA AD 96-09-10

TID FÖR ÅTGÄRD: Inom tider och intervall angivna i bifogad kopia av FAA AD 96-09-10

UNDERLAG: FAA AD 96-09-10

REFERENS: FAA AD 96-09-10

BESLUTS DATUM: 1996-07-15

LFS: 1996:49

Åtgärd enligt LVD utgör nödvändig förutsättning för ifrågavarende flygmateriels luftvärdighet. Referens BCL M 1.11. Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senaste gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.

L 1563-1

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AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation
Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

96-09-10 Textron Lycoming: Amendment 39-9586. Docket 93-ANE-48. Supersedes AD 81-18-04 R2, Amendment 39-4395.

Applicability: Textron Lycoming O-235, O-290, O-320, IO-320, AIO-320, AEIO-320, LIO-320, O-340, O-360, IO-360, LIO-360, AIO-360, HO-360, HIO-360, LO-360, LIO-360, TIO-360, TO-360, LTO-360, VO-360, IVO-360, O-540, and IO-540 series reciprocating engines, except for the following models: O-320-H2AD, O-360-E1A6D, LO-360-E1A6D, TO-360-E1A6D, LTO-360-E1A6D, IO-540-P1A5, IO-540-R1A5, IO-540-S1A5, and O-540 and IO-540 series engines built with large capacity oil pumps and dual magnetos designated with "5D" in the model suffix; for example, IO-540-K1A5D. These engines are installed on but not limited to the following aircraft: various models of single and twin engine powered Cessna, Piper, Mooney, Beech, Gulfstream American, Maule, and Socata.

NOTE 1: This AD may not contain an exhaustive list of aircraft that utilize the affected engines because other aircraft may have an affected engine installed through, for example, approvals made by Supplemental Type Certificate, or FAA Form 337, "Major Repair and Alteration." It is the responsibility of each aircraft owner, operator, and person returning that aircraft to service to determine if that aircraft has an affected engine.

NOTE 2: This 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 use the authority provided in paragraph (f) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent oil pump failure due to impeller failure, which could result in an engine failure, accomplish the following:

(a) For Textron Lycoming Model HIO-360-D1A, -E1AD, -E1BD, and -F1AD engines with serial numbers (S/N) of L-22579-51A or prior, except for the following: S/N L-22311-51A through L-22313-51A, L-22396-51A, L-22397-51A, L-22416-51A, L-22546-51A through L-22549-51A, L-22563-51A, L-22568-51A through L-22571-51A; for Textron Lycoming Model HIO-360-D1A, -E1AD, -E1BD, and -F1AD engines that were overhauled in the field or remanufactured prior to April 1, 1981, regardless of S/N; and for engines listed by S/N in Textron Lycoming Service Bulletin (SB) No. 455D, dated January 2, 1987; accomplish the following:

(1) Replace the sintered iron oil pump impeller and shaft with a hardened steel impeller and shaft in accordance with Avco Lycoming Textron SB No. 454B, dated January 2, 1987, or Avco Lycoming Textron SB No. 455D, dated January 2, 1987, as applicable, or Textron Lycoming SB No. 524, dated September 1, 1995, within 25 hours time in service (TIS) after the effective date of this AD.

(2) No action is required if engines have complied with AD 81-18-04, 81-18-04 R1, or 81-18-04 R2, and have incorporated oil pumps with a hardened steel impeller and shaft. Engines that incorporate oil pumps fitted with an aluminum impeller and shaft must comply with paragraph (c) of this AD.

(b) For engines listed by S/N in Textron Lycoming SB No. 456F, dated February 8, 1993, or Textron Lycoming SB No. 524, dated September 1, 1995, that incorporate a sintered iron impeller, accomplish the following:

(1) Replace any sintered iron oil pump impeller and shaft with a hardened steel impeller and shaft in accordance with Textron Lycoming SB No. 456F, dated February 8, 1993, or Textron Lycoming SB No. 524, dated September 1, 1995, within 100 hours TIS after the effective date of this AD, or one year after the effective date of this AD, whichever occurs first. Total time on the sintered iron impeller must not exceed 2,000 hours TIS since new or overhaul, whichever occurs later

(2) No action is required if engines have complied with AD 81-18-04, 81-18-04 R1, or 81-18-04 R2, and have incorporated oil pumps with a hardened steel impeller and shaft. Engines that incorporate oil pumps fitted with an aluminum impeller and shaft must comply with paragraph (c) of this AD.

(c) For all other affected engines, replace any aluminum oil pump impeller and shaft assembly with a hardened steel impeller and shaft assembly in accordance with Avco Lycoming Textron SB No. 455D, dated January 2, 1987, or Textron Lycoming SB No. 456F, dated February 8, 1993, or Textron Lycoming SB No. 524, dated September 1, 1995, as applicable, as follows:

(1) Replace at next engine overhaul (not to exceed the hours specified, for the particular engine model, in Textron Lycoming Service Instruction 1009AJ, dated July 1, 1992), at next oil pump removal, or 5 years after the effective date of this AD, whichever occurs first.

(2) No action is required if engines have complied with AD 81-18-04, 81-18-04 R1, or 81-18-04 R2, and have incorporated oil pumps with a hardened steel impeller and shaft.

NOTE: Engines originally manufactured prior to 1970 did not incorporate sintered iron impellers. For further information, refer to engine maintenance/overhaul logbook records, Lycoming build records, and the following SB's provide additional guidance: Avco Lycoming Division SB No. 381C, dated November 7, 1975, and Avco Lycoming Textron SB No. 385C, dated October 3, 1975, describe a method for determining if the early design oil pump with aluminum/steel impellers are installed. Avco Lycoming SB No. 455A, dated August 18, 1981, and Textron Lycoming SB No. 455B, dated January 2, 1987, and Avco Lycoming SB No. 456, dated August 21, 1981, introduced steel driving impeller, P/N 60746, and aluminum driven impeller, P/N LW13775. Textron Lycoming SB No. 524 includes information regarding engines which may incorporate aluminum impellers.

(d) Engines that are subject to AD 75-08-09 must have incorporated AD 75-08-09 before this AD can be accomplished.

(e) Sintered iron and aluminum impellers approved under FAA Parts Manufacturer Approval (PMA) are replacements for affected part numbers of Lycoming impellers and must also be replaced in accordance with paragraphs (a), (b), or (c), as applicable, of this AD.

(f) 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. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

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

(g) 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.

(h) The actions required by this AD shall be done in accordance with the following service bulletins:

Document No.	**Pages**	**Date**
Avco Lycoming Division SB No. 381C	1-4	November 7, 1975
Total pages: 4.		
Avco Lycoming Textron SB No. 385C Supplement No. 1	1-4 1	October 3, 1975 March 18, 1977
Total pages: 5.		
Avco Lycoming Textron SB No. 454B	1-3	January 2, 1987
Total pages: 3.		
Avco Lycoming Textron SB No. 455D	1-3	January 2, 1987
Total pages: 3.		
Textron Lycoming SB No. 456F	1-3	February 8, 1993
Total pages: 3.		

Document No.	Pages	Date
Textron Lycoming		
SB No. 524	1-3	September 1, 1995
Attachment	1-4	
Total pages: 9.		
Textron Lycoming		
SI No. 1009AJ	1-3	July 1, 1992
Total pages: 3.		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, Reciprocating Engine Division, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on July 15, 1996.

FOR FURTHER INFORMATION CONTACT:
Richard Fiesel, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, Valley Stream, NY 11581; telephone (516) 256-7504, fax (516) 568-2716.