



Airworthiness Directive

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▼ Header Information

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [61 FR 63704 NO. 232 12/02/96]

Docket No. 96-ANE-31; Amendment 39-9826; AD **96-23-03**

Airworthiness Directives; Textron Lycoming Reciprocating Engines

PDF Copy (If Available):

▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule, request for comments.

SUMMARY: This document publishes in the Federal Register an amendment adopting Airworthiness Directive (AD) **96-23-03** that was sent previously to all known U.S. owners and operators of Textron Lycoming IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, O-540-L, LIO-540, and AEIO-540 series reciprocating engines by individual letters. This AD requires a maintenance records check to determine if suspect high pressure fuel pumps are installed, and inspection to determine if the high pressure fuel pump has one of the suspect date codes. If the high pressure fuel pump has a suspect date code, this AD requires disassembly and inspection of the high pressure fuel pump, and, if necessary, removal from service and replacement with a serviceable part. In addition, this AD requires reporting findings of unserviceable high pressure fuel pumps. This amendment is prompted by reports of inflight failures of high pressure fuel pumps. The actions specified by this AD are intended to prevent an inflight engine failure due to fuel starvation, which could result in a forced landing.

DATES: Effective December 17, 1996, to all persons except those persons to whom it was made immediately effective by priority letter AD **96-23-03**, issued on October 28, 1996, which contained the

requirements of this amendment.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of December 17, 1996.

Comments for inclusion in the Rules Docket must be received on or before January 31, 1997.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 96-ANE-31, 12 New England Executive Park, Burlington, MA 01803-5299.

The applicable service information may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022. This information may be examined 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.

FOR FURTHER INFORMATION CONTACT: Ray O'Neill, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7505, fax (516) 568-2716.

SUPPLEMENTARY INFORMATION:

On October 28, 1996, the Federal Aviation Administration (FAA) issued priority letter airworthiness directive (AD) **96-23-03**, applicable to Textron Lycoming IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, O-540-L, LIO-540, and AEIO-540 series reciprocating engines, which requires within 5 hours time in service (TIS) after the effective date of the priority letter AD, a maintenance records check to determine if suspect high pressure fuel pumps are installed, and if the records check indicates a suspect high pressure fuel pump may be installed, inspection, which can be performed by the owner/operator holding at least a private pilot's certificate, to determine if the high pressure fuel pump has one of the suspect date codes. If the high pressure fuel pump has one of the suspect date codes, the priority letter AD requires disassembly and inspection of the high pressure fuel pump, and, if necessary, removal from service and replacement with a serviceable part. In addition, the priority letter AD requires reporting findings of unserviceable high pressure fuel pumps. That action was prompted by reports of inflight failures of high pressure fuel pumps. Investigations into those incidents revealed that the fuel pump gasket, Part Number (P/N) 5621005, became lodged in the pump outlet port after separating from the pump diaphragm assembly on high pressure fuel pumps, P/N LW-15473. Further investigation revealed that the high pressure fuel pumps developed defects during manufacturing. The engines involved in those incidents had high pressure fuel pumps with manufacturing date codes: 154739506, 154739507, or 154739510. The first five digits of the manufacturing date codes refer to the Textron Lycoming P/N and the last four digits refer to the year and month of pump manufacture. This condition, if not corrected, could result in an inflight engine failure due to fuel starvation, which could result in a forced landing.

The FAA has reviewed and approved the technical contents of Textron Lycoming Service Bulletin (SB)

No. 525A, dated October 7, 1996, that describes procedures for identifying the manufacturing date code. This SB also includes procedures for inspection of internal parts of high pressure fuel pumps, replacement of specific parts or the complete high pressure fuel pump, if necessary, and reassembly of the high pressure fuel pump.

Since the unsafe condition described is likely to exist or develop on other engines of the same type design, the FAA issued priority letter AD **96-23-03** to prevent inflight engine failure due to fuel starvation, which could result in a forced landing. The AD requires within 5 hours TIS after the effective date of this AD, a maintenance records check to determine if suspect high pressure fuel pumps are installed, and if the records check indicates a suspect high pressure fuel pump may be installed, inspection, which can be performed by the owner/operator holding at least a private pilot's certificate, to determine if the high pressure fuel pump has one of the suspect date codes. If the high pressure fuel pump has one of the suspect date codes, this AD requires disassembly and inspection of the high pressure fuel pump, and, if necessary, removal from service and replacement with a serviceable part. In addition, this AD requires reporting findings of unserviceable high pressure fuel pumps. The actions are required to be accomplished in accordance with the SB described previously.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on October 28, 1996, to all known U.S. owners and operators of Textron Lycoming IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, O-540-L, LIO-540, and AEIO-540 series reciprocating engines. These conditions still exist, and the AD is hereby published in the Federal Register as an amendment to Section 39.13 of part 39 of the Federal Aviation Regulations (14 CFR part 39) to make it effective to all persons. Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made:

"Comments to Docket Number 96-ANE-31." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

§39.13 - [AMENDED]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Regulatory Information

96-23-03 Textron Lycoming: Amendment 39-9826. Docket 96-ANE-31.

Applicability: Textron Lycoming IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, O-540-L, LIO-540, and AEIO-540 series reciprocating engines, with high pressure fuel pumps, Part Number (P/N) LW-15473 that have manufacturing date codes: 154739506, 154739507, or 154739510; and that were either installed on engines shipped from Textron Lycoming between July 18, 1995, and August 14, 1996, inclusive; or were purchased as replacement high pressure fuel pumps on or after July 18, 1995. These engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Aerospatiale, American Champion, Bellanca, Cessna, The New Piper Company, Beech, Maule, Mooney, and Schweizer 269 series helicopters.

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 (c) 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: Required as indicated, unless accomplished previously.

To prevent an inflight engine failure due to fuel starvation, which could result in a forced landing, accomplish the following:

(a) Within 5 hours time in service (TIS) after the effective date of this AD, accomplish the following:

(1) Perform a maintenance records check to determine if the engine was shipped from Textron Lycoming between July 18, 1995, and August 14, 1996, inclusive, or had a high pressure fuel pump, P/N LW-15473, installed as a replacement high pressure fuel pump on or after July 18, 1995. This records check may be performed by the owner/operator holding at least a private pilot's certificate issued under Part 61 of the Federal Aviation Regulations (14 CFR part 61). If the engine does not meet that criteria, the owner/operator may sign the maintenance record to indicate that the AD is not applicable, and no further action is required.

(2) If the engine does meet the criteria stated in paragraph (a)(1) of this AD, or if the shipping date of the engine or the installation date of the high pressure fuel pump is unknown, visually inspect the flange of the high pressure fuel pump to determine the manufacturing date code in accordance with Textron Lycoming Service Bulletin (SB) No. 525A, dated October 7, 1996. This inspection may be performed by the owner/operator holding at least a private pilot's certificate. However, any disassembly of the engine other than opening the cowling must be accomplished by a certificated mechanic. If the manufacturing date code is not one of the following three codes: 154739506, 154739507, or 154739510, no further action is required, and the owner/operator may sign the maintenance record to indicate that the AD is not applicable.

(3) For engines with high pressure fuel pumps that have one of the following manufacturing date codes: 154739506, 154739507, or 154739510, disassemble the high pressure fuel pump, inspect, and, if necessary, repair or replace with a serviceable high pressure fuel pump, in accordance with Textron Lycoming SB No. 525A, dated October 7, 1996. Only certificated mechanics may perform these requirements.

(b) Within 48 hours after inspection, report the finding of unserviceable high pressure fuel pumps, the TIS on the pump, and a contact telephone number to the Manager, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7505, fax (516) 568-2716. Reporting requirements have been approved by the Office of

Management and Budget and assigned OMB control number 2120-0056.

(c) 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 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.

(d) 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.

(e) The requirements of this AD shall be accomplished in accordance with the following Textron Lycoming SB:

Document No	Pages	Date
525A	1-4	October 7, 1996
Total pages: 4.		

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, 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.

(f) This amendment becomes effective December 17, 1996, to all persons except those persons to whom it was made immediately effective by priority letter AD **96-23-03**, issued October 28, 1996, which contained the requirements of this amendment.

▼ Footer Information

▼ Comments