

**DEPARTMENT OF
TRANSPORTATION**

Federal Aviation Administration

14 CFR Part 39

Textron Lycoming

AD 92-12-05

Amendment 39-8265

Effective July 10, 1992

Recurring: No

[Docket No. 91-ANE-48; Amendment 39-8265; AD 92-12-05]

Airworthiness Directives; Textron Lycoming Opposed Piston Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Textron Lycoming opposed piston engines incorporating certain part numbered piston pins. This action requires a record search, a review of maintenance records, and removal and replacement, if necessary, of piston pins that were purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991. This amendment is prompted by a report from Textron Lycoming that certain part numbered piston pins were manufactured with non-aircraft quality material. The actions specified in this AD are intended to prevent piston pin failure, piston release, and engine failure.

DATES: Effective July 10, 1992.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 10, 1992.

Comments for inclusion in the Rules Docket must be received on or before July 20, 1992.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 91-ANE-48,

12 New England Executive Park, Burlington, Massachusetts 01803-5299.

The service information referenced in this AD may be obtained from Textron Lycoming, 652 Oliver Street, Williamsport, Pennsylvania 17701. This information may be examined at the FAA, New England Region, Office of the Assistant Chief Counsel, room 311, 12 New England Executive Park, Burlington, Massachusetts; or at the Office of the Federal Register, 1100 L Street NW., room 8401, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Nick Minniti or Mr. Pat Perrotta,

Propulsion Branch, ANE-174, New York Aircraft Certification Office, Engine & Propeller Directorate, Aircraft Certification Service, FAA, 181 South Franklin Avenue, room 202, Valley Stream, New York 11581, telephone (516) 791-7421.

SUPPLEMENTARY INFORMATION: The Federal Aviation Administration (FAA) has determined that certain Textron Lycoming piston pins, Part Number (P/N) LW-14077, were manufactured with non-aircraft quality material. This material does not meet FAA-approved Textron Lycoming manufacturing specifications. During the time period from June 18, 1991, through August 5, 1991, Textron Lycoming installed these unairworthy piston pins in new, remanufactured, and factory overhauled engines. Textron Lycoming also shipped these parts to distributors and maintenance facilities. Textron Lycoming has identified all engines that were assembled in its facility during the period when the unairworthy pins could have been installed. They have also identified maintenance facilities and distributors that could have received unairworthy piston pins. These piston pins are installed in engines of which the majority are in single engine aircraft.

A field inspection procedure to identify all unairworthy piston pins is impracticable. Unairworthy piston pins manufactured from non-aircraft quality material are not visually identifiable, and only by destructive testing methods can this material defect be detected. Therefore, this AD requires a record search, a review of maintenance records, and removal and replacement, if necessary, of piston pins, P/N LW-14077, that were purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991. This condition, if not corrected, could result in piston pin failure, piston release, and engine failure.

The FAA has reviewed and approved the technical contents of **Textron Lycoming Service Bulletin No. 501, Revision B**, dated November 15, 1991, that describes removal and replacement procedures for engines affected by unairworthy piston pins.

Since an unsafe condition has been identified that is likely to exist or develop on other engines of the same type design, this AD requires removal and replacement of certain piston pins. The identification of engines affected by unairworthy piston pins is to be accomplished in accordance with the service bulletin described previously.

Since a situation exists that requires immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

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 91-ANE-48." 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 and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been further determined 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 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39-AIRWORTHINESS DIRECTIVES

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

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

Sec. 39.13 [Amended]

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

92-12-05 TEXTRON LYCOMING: Amendment 39-8265. Docket No. 91-ANE-48

Applicability: Textron Lycoming 0-320 series, IO-320 series, LIO-320 series, AIO-320 series, AEIO-320 series, O-340 series, O-360 series, LO-360 series, HO-360 series, VO-360 series, IVO- 360 series, IO-360 series, AIO-360 series, HIO-360 series, LHIO- 360 series, LIO-360 series, AEIO-360 series, TO-360 series, LTO-360 series, TIO-360 series, O-480 series, GSO-480 series, IGSO-480 series, IGO-480 series, GO-480 series, O-540 series (excluding models O-540-J and O-540-L), VO-540 series, IO-540 series (excluding model IO-540-W), HIO-540 series, AEIO-540 series, IGSO-540 series, IGO-540 series, TVO-540 series, TIVO- 540 series, IVO-540 series, TIO-540 series, LTIO-540 series, TIO-541 series, TIGO-541 series, and IO-720 series opposed piston engines; and those engine models and serial numbers listed in **Textron Lycoming Service Bulletin (SB) No. 501, Revision B**, dated November 15, 1991; installed on but not limited to Cessna 172 and Piper PA-28 aircraft.

Compliance: Required as indicated, unless accomplished previously.

To prevent piston pin failure, piston release, and engine failure, accomplish the following:

- (a) For engines with serial numbers listed in **Textron Lycoming SB No. 501, Revision B**, dated November 15, 1991, with more than 75 hours time in service (TIS) since new, since remanufacture, or since factory overhaul on the effective date of this AD, remove all piston pins, Part Number (P/N) LW-14077, within 25 hours TIS after the effective date of this AD, and replace with serviceable parts.
- (b) For engines with serial numbers listed in **Textron Lycoming SB No. 501, Revision B**, dated November 15, 1991, with 75 hours or less TIS since new, since remanufacture, or since factory overhaul on the effective date of this AD, remove all piston pins, P/N LW-14077, within 100 hours TIS since new, since remanufacture, or since factory overhaul and replace with serviceable parts.
- (c) For engines not listed in **Textron Lycoming SB No. 501, Revision B**, dated November 15, 1991, accomplish the following:
 - (1) Within 15 days after the effective date of this AD, conduct a search and review of maintenance and purchase records to determine if piston pin, P/N LW-14077, had been purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991.
 - (2) For installed piston pins, P/N LW-14077, purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991, accomplish the following:

- (i) For engines with more than 75 hours TIS since piston pin installation on the effective date of this AD, remove all piston pins, P/N LW-14077, purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991, within 25 hours TIS after the effective date of this AD, and replace with serviceable parts.
- (ii) For engines with 75 hours or less TIS since piston pin installation on the effective date of this AD, remove all piston pins, P/N LW-14077, purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991, within 100 hours TIS since piston pin installation and replace with serviceable parts.
- (d) Piston pins, P/N LW-14077, purchased from Textron Lycoming or a Textron Lycoming distributor from June 18, 1991, through August 5, 1991, that are not installed in engines are considered unairworthy and shall not be placed in service.
- (e) 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, Engine and Propeller Directorate. The request should be forwarded through an FAA Principal 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 airworthiness directive, if any, may be obtained from the New York Certification Office.

- (f) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

The identification of certain engines to which this AD is applicable shall be done in accordance with the following Textron Lycoming service document:

DOCUMENT NO.	PAGES	REVISION	DATE
SB No. 501	1-3	Rev. B	Nov. 15, 1991
Total pages: 3			

This incorporation 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 Street, Williamsport, PA 17701. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, room 311, 12 New England Executive Park, Burlington, Massachusetts; or at the Office of the Federal Register, 1100 L Street, NW., room 8401, Washington, DC.

(h) This amendment becomes effective on July 10, 1992.

Issued in Burlington, Massachusetts, on May 12, 1992.

Jack A. Sain, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

FOR FURTHER INFORMATION CONTACT: Mr. Nick Minniti or Mr. Pat Perrotta, Propulsion Branch, ANE-174, New York Aircraft Certification Office, Engine & Propeller Directorate, Aircraft Certification Service, FAA, 181 South Franklin Avenue, room 202, Valley Stream, New York 11581, telephone (516) 791-7421.

Manufacturer's Service Information:

[Textron Lycoming Service Bulletin No. 501, Revision B](#)

Copies of the service information referenced in this directive may be obtained upon request from Textron Lycoming, 652 Oliver Street, Williamsport, Pennsylvania 17701.