

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [62 FR 307 No. 2; 01/03/97]

Textron Lycoming

[AD 97-01-03](#)

Amendment 39-9874

Effective Jan. 21, 1997

ATA Code: 85

Recurring: No

{See Correction

Below}

[Docket No. 96-ANE-37; Amendment 39-9874; AD 97-01-03] RIN 2120-AA64

Airworthiness Directives; Textron Lycoming Reciprocating 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 reciprocating engines. This action requires removal from service of defective piston pins, and replacement with serviceable parts. This amendment is prompted by a report of failure of a piston pin. The actions specified in this AD are intended to prevent piston pin failure, which could result in engine failure.

DATES: Effective January 21, 1997.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 21, 1997.

Comments for inclusion in the Rules Docket must be received on or before March 4, 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-37,

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

The service information referenced in this AD 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: Franco Pieri and Pat Perrotta, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7526 and (516) 256-7534,

fax (516) 568-2716.

SUPPLEMENTARY INFORMATION: The Federal Aviation Administration (FAA) received a report of metal detected in an engine oil filter on a Textron Lycoming Model AEIO-540-L1B5 reciprocating engine. The investigation revealed the metal in the oil filter was caused by a failed piston pin, Part Number (P/N) LW-14077. Failure of the piston pin may cause puncturing of the engine crankcase by the piston rod resulting in the loss of oil leading to total power failure and possible fire. Failure of the piston pin may also cause jamming of the engine crankcase by the piston rod resulting in total power failure. The FAA has determined that a quantity of piston pins, marked with code 17328, were produced that did not meet manufacturing specifications. The defects are grooves in the piston pin created during manufacturing that result in the fatigue failure of the pins. Textron Lycoming has notified the FAA of three piston pin failures that were reported at 50, 62.4 and 386 hours total time in service (TIS) with the defective piston pin installed. This condition, if not corrected, could result in piston pin failure, which could result in engine failure.

The FAA has reviewed and approved the technical contents of **Textron Lycoming Mandatory Service Bulletin (SB) No. 527B**, dated October 8, 1996, that lists serial numbers (S/Ns) of engines manufactured, remanufactured, or overhauled by Textron Lycoming during the time period that defective piston pins could have been installed, and describes procedures for removal from service of defective piston pins, and replacement with serviceable parts.

Since an unsafe condition has been identified that is likely to exist or develop on other engines of the same type design, this AD is being issued to prevent piston pin failure, which could result in engine failure. This AD requires removal from service of defective piston pins, and replacement with serviceable parts. The actions are required to be accomplished in accordance with the Mandatory SB described previously.

Since a situation exists that requires the 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 96-ANE-37." 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.

Sec. 39.13 [Amended]

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

97-01-03 **TEXTRON LYCOMING:** Amendment 39-9874. Docket 96-ANE-37.

Applicability: Textron Lycoming O-320, IO-320, AEIO-320, O-360, LO-360,

IO-360,
LIO-360, VO-360, IVO-360, HO-360, HIO-360, AIO-360, AEIO-360, TIO-360, TO-360,
O-540 (except O-540-J1A5D, -J1C5D, -J2A5D, -J3A5D, -J3C5D, -L3C5D), IO-540 (except
IO-540-W1A5D, -W3A5D, -AB1A5), AEIO-540, TIO-540, LTIO-540, TIO-541,
TIGO-541, and
IO-720 series reciprocating engines, that meet any one of the following conditions:

1. Engines with serial numbers (S/Ns) listed in **Textron Lycoming Mandatory Service Bulletin (SB) No. 527B**, dated October 8, 1996; or
2. Engines that had Textron Lycoming cylinder kits installed after December 15, 1995; or
3. Engines that have been overhauled, or had cylinder head maintenance performed, by a repair facility other than Textron Lycoming after December 15, 1995.

These engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Aerospatiale, Bellanca, Cessna, The New Piper Company, Beech, Schweizer, Maule, and Mooney.

Note 1: A maintenance records check may allow an owner or operator to determine if this AD applies.

Note 2: 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: Required as indicated, unless accomplished previously.

To prevent piston pin failure, which could result in engine failure, accomplish the following:

- (a) For engines with S/Ns listed in **Textron Lycoming Mandatory SB No. 527B**, dated October 8, 1996, accomplish the following:
 - (1) Check the piston pin code in accordance with **Textron Lycoming SB No. 527B**, dated October 8, 1996 in accordance with the following schedule:
 - (i) For engines with 45 hours or more time in service (TIS) since the engine was shipped from Textron Lycoming, since overhaul, since installation of a cylinder kit, or since installation of a replacement piston pin, as applicable, accomplish within 5 hours TIS after the effective date of this AD.
 - (ii) For engines with less than 45 hours TIS since the engine was shipped

from Textron Lycoming, since overhaul, since installation of a cylinder kit, or since installation of a replacement piston pin, as applicable, accomplish prior to accumulating 50 hours TIS since the applicable date.

- (2) Remove from service piston pins, Part Number (P/N) LW-14077, code 17328, and replace with serviceable piston pins.
- (b) For all other affected engines, determine if a suspect piston pin, P/N LW-14077, code 17328 could have been installed, in accordance with **Textron Lycoming Mandatory SB No. 527B**, dated October 8, 1996, and accomplish the following:
 - (1) If it is determined that suspect piston pins, P/N LW-14077, code 17328 could have been installed, accomplish paragraphs (a)(1) and (a)(2) of this AD.
 - (2) If it is determined that suspect piston pins, P/N LW-14077, code 17328 could not have been installed, no further action is required.
 - (3) If it cannot be determined if the suspect piston pins, P/N LW-14077, code 17328 were installed, accomplish paragraphs (a)(1) and (a)(2) of this AD.
- (c) For purposes of this AD a serviceable piston pin is a piston pin, P/N LW-14077, with a piston pin code of “BN” or “71238.” Installation of a piston pin, P/N LW-14077, with a piston pin code of “17328” is prohibited after the effective date of this AD.
- (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. 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 3: 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.

- (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.

The actions required by this AD shall be done in accordance with the following **Textron Lycoming Mandatory SB**:

Document No.	Pages	Date
527B	1-3	October 8, 1996.
Attachment	1-6	October 8, 1996.
Total pages: 9		

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 on January 21, 1997. **{See Correction below.}**

Issued in Burlington, Massachusetts, on December 26, 1996.

Jay J. Pardee, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

FOR FURTHER INFORMATION CONTACT: Franco Pieri and Pat Perrotta, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7526 and (516) 256-7534, fax (516) 568-2716.

Manufacturer's Service Information:

[Textron Lycoming Mandatory Service Bulletin No. 527B](#) **[527C]**

The service information referenced in this AD may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022.

DEPARTMENT OF TRANSPORTATION	Textron Lycoming
Federal Aviation Administration	<u>AD 97-01-03</u>
14 CFR Part 39 [62 FR 7671 No. 34; 02/20/97]	Correction
	Amendment 39-9874
	Effective Feb. 20, 1997
	<u>Corrects AD 97-01-03</u>
	ATA Code: 85
	Recurring: No

[Docket No. 96-ANE-37; Amendment 39-9874; AD 97-01-03] RIN 2120-AA64

Airworthiness Directives; Textron Lycoming Reciprocating Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; **correction**

SUMMARY: **This document makes a correction to Airworthiness Directive (AD) 97-01-03** applicable to certain Textron Lycoming reciprocating engines that was published in the Federal Register on January 3, 1997 (62 FR 307). Paragraph (g) in the compliance section was misdesignated as paragraph(f). This document redesignates that paragraph. In all other

respects, the original document remains the same.

EFFECTIVE DATE: February 20, 1997.

FOR FURTHER INFORMATION CONTACT: Franco Pieri and Pat Perrotta,
Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller
Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7526 and (516)
256-7534,
fax (516) 568-2716.

SUPPLEMENTARY INFORMATION: A final rule airworthiness directive applicable to
certain Textron Lycoming reciprocating engines, was published in the Federal Register on
January 3, 1997 (62 FR 307). The following correction is needed:

Section 39.13 [**Corrected**]

On page 309, in the first column, in the Compliance Section, the second paragraph
“(f)” is redesignated to read paragraph “(g)”.

Issued in Burlington, MA, on February 5, 1997.

James C. Jones, Acting Manager, Engine and Propeller Directorate, Aircraft Certification
Service.

FOR FURTHER INFORMATION CONTACT: Franco Pieri and Pat Perrotta,
Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller
Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7526 and (516)
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