[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0540; Directorate Identifier 2014-NE-10-AD]

RIN 2120-AA64

Airworthiness Directives; Lycoming Engines Reciprocating Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain serial number Lycoming Engines reciprocating engines. This proposed AD was prompted by events of propeller governor shaft set screws coming loose due to improper installation, which could result in engine oil loss, damage to the engine, and damage to the airplane. This proposed AD would require application of Loctite 290, or equivalent, to the threads of the propeller governor shaft set screw at each installation of the set screw in addition to the peening of crankcase hole threads. We are proposing this AD to prevent the propeller governor shaft set screw from coming loose, causing damage to the engine, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701; phone: 800-258-3279; fax: 570-327-7101; Internet: www.lycoming.com/Lycoming/SUPPORT/TechnicalPublications/ServiceBulletins.aspx. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2014-0540; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7337; fax: 516-794-5531; email: norman.perenson@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2014-0540; Directorate Identifier 2014-NE-10-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We issued Special Airworthiness Information Bulletin (SAIB) NE-08-32 on July 3, 2008. The SAIB recommended actions to correct the condition of a propeller governor shaft set screw coming loose. This proposed AD was prompted by additional events of propeller governor shaft set screws coming loose due to improper installation, which could result in the shaft penetrating the plug at the front of the crankcase and causing a loss of engine oil and a loss of engine power. In some reported events, engine oil was deposited on the windshield, restricting pilot visibility. The loose set screw could also enter the rotating system and cause damage to the camshaft and valve lifters. Safety is further diminished if failure occurs during aerobatic maneuvers, especially at low altitudes, due to reduction in pilot reaction time. These conditions, if not corrected, could result in damage to the engine, and damage to the airplane. This proposed AD would require application of Loctite 290, or equivalent, to the threads of the propeller governor

shaft set screw at each installation of the set screw in addition to the peening of crankcase hole threads. We are proposing this AD to prevent the propeller governor shaft set screw from coming loose, causing damage to the engine, and damage to the airplane.

Relevant Service Information

We reviewed Lycoming Engines Service Instruction (SI) No. 1343B, dated June 15, 2007. The SI describes procedures for securing the propeller governor shaft set screw.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements

This proposed AD would require application of Loctite 290, or equivalent, to the threads of the propeller governor shaft set screw at each installation of the set screw in addition to the peening of crankcase hole threads.

Differences Between this Proposed AD and the Service Information

Lycoming Engines SI No. 1343B, dated June 15, 2007, specifies the use of Loctite 290, in addition to peening of the crankcase hole threads, to secure the set screw in place. This AD allows the use of Loctite 290, or equivalent thread-locking, anaerobic, single-component sealing compound that meets military specification Mil-S-46163A, Type III, Grade R. The SI also requires these actions at next overhaul, whereas this AD requires these actions at any installation of the propeller governor shaft set screw.

Costs of Compliance

We estimate that this proposed AD would affect about 2,330 engines installed on airplanes of U.S. registry. We also estimate that it will take about 0.1 hours per engine to comply with this AD. The average labor rate is $85 per hour. Prorated parts life will cost

about $1 per engine. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $22,135.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect 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.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

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

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Amend § 39.13 by adding the following new airworthiness directive (AD):

Lycoming Engines (Type Certificate previously held by Textron Lycoming Division, AVCO Corporation): Docket No. FAA-2014-0540; Directorate Identifier 2014-NE-10-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Lycoming Engines wide deck aerobatic reciprocating engines that have either an “A” or an “E” at the end of the serial number (e.g., L-12345-51A, or L-12345-51E) and are equipped with a front-mounted propeller governor. Affected reciprocating engine models include, but are not limited to Lycoming Engines

AEIO-320-D1B; AEIO-360-A1E, -A1E6, -B1H, -H1B; AEIO-540-D4A5, -D4B5, -D4D5, -L1B5, -L1B5D, -L1D5; AEIO-580-B1A; and IO-540-K1K5 (with aerobatic kit installed).

(d) Unsafe Condition

This AD was prompted by events of propeller governor shaft set screws coming loose due to improper installation, which could result in engine oil loss, damage to the engine, and damage to the airplane. We are issuing this AD to prevent the propeller governor shaft set screw from coming loose, causing damage to the engine, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

After the effective date of this AD, at each installation of the propeller governor shaft set screw, secure the set screw in place in accordance with the instructions of Lycoming Engines Service Instruction (SI) No. 1343B, dated June 15, 2007, by using Loctite 290, or equivalent thread-locking, anaerobic, single-component sealing compound that meets military specification Mil-S-46163A, Type III, Grade R, in addition to peening of the crankcase hole threads.

(f) Alternative Methods of Compliance (AMOCs)

The Manager, New York Aircraft Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(g) Related Information

(1) For more information about this AD, contact Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7337; fax: 516-794-5531; email: norman.perenson@faa.gov.

(2) Lycoming Engines SI No. 1343B, dated June 15, 2007, pertains to the subject of this AD and can be obtained from Lycoming Engines using the contact information in paragraph (g)(3) of this AD.

(3) For service information identified in this AD, contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701; phone: 800-258-3279; fax: 570-327-7101; Internet: www.lycoming.com/Lycoming/SUPPORT/TechnicalPublications/ServiceBulletins.aspx. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on September 2, 2014.

Carlos A. Pestana,
Acting Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

[FR Doc. 2014-21675 Filed 09/10/2014 at 8:45 am; Publication Date: 09/11/2014]