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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2008-0420; Directorate Identifier 2008-NE-10-AD; Amendment 39-15466; AD 2008-08-14]**

**RIN 2120-AA64**

**Airworthiness Directives; Lycoming Engines IO, (L)IO, TIO, (L)TIO, AEIO, AIO, IGO, IVO, and HIO Series Reciprocating Engines, Teledyne Continental Motors (TCM) TSIO-360-RB Reciprocating Engines, and Superior Air Parts, Inc. IO-360 Series Reciprocating Engines With Certain Precision Airmotive LLC RSA-5 and RSA-10 Series Fuel Injection Servos**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule; request for comments.

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**SUMMARY:** This document publishes in the Federal Register an amendment adopting emergency airworthiness directive (AD) 2008-06-51 that was sent previously to all known U.S. owners and operators of Lycoming Engines IO, (L)IO, TIO, (L)TIO, AEIO, AIO, IGO, IVO, and HIO series reciprocating engines, TCM TSIO-360-RB reciprocating engines, and Superior Air Parts, Inc. IO-360 series reciprocating engines with certain Precision Airmotive LLC RSA-5 and RSA-10 series fuel injection servos. This AD results from eighteen reports of fuel injection servo plugs, part number (P/N) 383493, that had loosened or completely backed out of the threaded plug hole on the regulator cover of the fuel injection servo. These servo plugs were installed with servo plug gasket, P/N 365533, under the plug hex-head. We are issuing this AD to prevent a lean running engine, which could result in a substantial loss of engine power and subsequent loss of control of the airplane.

**DATES:** This AD becomes effective April 29, 2008 to all persons except those persons to whom it was made immediately effective by emergency AD 2008-06-51, issued on March 12, 2008, which contained the requirements of this amendment.

We must receive any comments on this AD by June 13, 2008.

**ADDRESSES:** Use one of the following addresses to comment on this AD.

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
  - Fax: (202) 493-2251.
- Contact Precision Airmotive LLC at <http://www.precisionairmotive.com> for the service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** For Precision Airmotive LLC, Richard Simonson, Aerospace Engineer, Propulsion Branch, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055; e-mail: [Richard.simonson@faa.gov](mailto:Richard.simonson@faa.gov); telephone: (425) 917-6507; fax: (425) 917-6590.

For Lycoming Engines, Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; e-mail: [Norman.perenson@faa.gov](mailto:Norman.perenson@faa.gov); telephone: (516) 228-7337; fax: (516) 794-5531.

For Teledyne Continental Motors, Kevin Brane, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, GA 30349; e-mail: [kevin.brane@faa.gov](mailto:kevin.brane@faa.gov); telephone: (770) 703-6063; fax: (770) 703-6097.

For Superior Air Parts, Inc., Tausif Butt, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, Southwest Regional Headquarters, 2601 Meacham Blvd., Fort Worth, Texas 76137; e-mail: [Tausif.butt@faa.gov](mailto:Tausif.butt@faa.gov); telephone: (817) 222-5195; fax: (817) 222-5785.

**SUPPLEMENTARY INFORMATION:** On March 12, 2008, the FAA issued emergency AD 2008-06-51, that applies to Lycoming Engines IO, (L)IO, TIO, (L)TIO, AEIO, AIO, IGO, IVO, and HIO series reciprocating engines, TCM TSIO-360-RB reciprocating engines, and Superior Air Parts, Inc. IO-360 series reciprocating engines with certain Precision Airmotive LLC RSA-5 and RSA-10 series fuel injection servos. That AD requires inspecting servo plugs for looseness and damage on fuel injection servos that have a servo plug gasket, P/N 365533, installed, inspecting the servo regulator cover threads for damage, inspecting the gasket for damage, reinstalling acceptable parts, and torquing the servo plug to a new, higher torque to help maintain the proper clamp-up force against the plug and cover. That AD resulted from eighteen reports of fuel injection servo plugs, P/N 383493, that had loosened or completely backed out of the threaded plug hole on the regulator cover of the fuel injection servo. This condition, if not corrected, could result in a substantial loss of engine power and subsequent loss of control of the airplane.

### **FAA's Determination and Requirements of This AD**

Since the unsafe condition described is likely to exist or develop on other engines of the same type design, we issued emergency AD 2008-06-51 to prevent a lean running engine, which could result in a substantial loss of engine power and subsequent loss of control of the airplane. This AD requires inspecting servo plugs for looseness and damage on fuel injection servos that have a servo plug gasket, P/N 365533, installed, inspecting the servo regulator cover threads for damage, inspecting the gasket for damage, reinstalling acceptable parts, and torquing the servo plug to a new, higher torque to help maintain the proper clamp-up force against the plug and cover.

### **FAA's Determination of the Effective Date**

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause existed to make the AD effective immediately on March 12, 2008, to all known U.S. owners and operators of Lycoming Engines IO, (L)IO, TIO, (L)TIO, AEIO, AIO, IGO, IVO, and HIO series reciprocating engines, TCM TSIO-360-RB reciprocating engines, and Superior Air Parts, Inc. IO-360 series reciprocating engines with certain Precision Airmotive LLC RSA-5 and RSA-10

series fuel injection servos. These conditions still exist, and we are publishing the AD in the Federal Register as an amendment to Section 39.13 of part 39 of the Code Federal Regulations (14 CFR part 39) to make it effective to all persons.

### **Interim Action**

These actions are interim actions and we may take further rulemaking actions in the future.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2008-0420; Directorate Identifier 2008-NE-10-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

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 with FAA personnel concerning this proposed AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

### **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 have determined that this AD will not have federalism implications under Executive Order 13132. This AD will 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 that this AD:

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); and
3. 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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

### **Adoption of the Amendment**

Under 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 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:



**2008-08-14 Precision Airmotive LLC:** Amendment 39-15466. Docket No. FAA-2008-0420; Directorate Identifier 2008-NE-10-AD.

### **Effective Date**

(a) This airworthiness directive (AD) becomes effective April 29, 2008, to all persons except those persons to whom it was made immediately effective by emergency AD 2008-06-51, issued March 12, 2008, which contained the requirements of this amendment.

### **Affected ADs**

(b) This AD supersedes AD 2008-06-51.

### **Applicability**

(c) This AD applies to the following reciprocating engines with an installed Precision Airmotive LLC, RSA-5 or RSA-10 series fuel injection servo, having a servo plug gasket, part number (P/N) 365533, installed under the fuel injection servo plug, P/N 383493:

(1) Lycoming Engines IO, (L)IO, TIO, (L)TIO, AEIO, AIO, IGO, IVO, and HIO series reciprocating engines, regardless of displacement, either new, rebuilt, overhauled, or repaired since August 22, 2006, and/or with an affected fuel injection servo installed either new, rebuilt, overhauled, or repaired since August 22, 2006.

(2) Teledyne Continental Motors TSIO-360-RB reciprocating engines, either new, rebuilt, overhauled, or repaired since August 22, 2006, and/or with an affected fuel injection servo installed either new, rebuilt, overhauled, or repaired since August 22, 2006.

(3) Superior Air Parts, Inc. IO-360 series reciprocating engines, either new, rebuilt, overhauled, or repaired since August 22, 2006, and/or with an affected fuel injection servo installed either new, rebuilt, overhauled, or repaired since August 22, 2006.

(4) This AD also applies to any other Precision Airmotive LLC fuel injection servos received since August 22, 2006, or any fuel injection servos that have had the fuel injection servo plug, P/N 383493, removed during maintenance since August 22, 2006.

### **Unsafe Condition**

(d) This AD results from eighteen reports of fuel injection servo plugs, P/N 383493, that had loosened or completely backed out of the threaded plug hole on the regulator cover of the fuel injection servo. We are issuing this AD to prevent a lean running engine, which could result in a substantial loss of engine power and subsequent loss of control of the airplane.

### **Compliance**

(e) You are responsible for having the actions required by this AD performed before further flight, unless the actions have already been done. The actions required by this AD must be done by an FAA-licensed mechanic.

## **Initial Inspection**

(f) Inspect the fuel injection servo plug, P/N 383493, for looseness, by attempting to turn it by hand, while being careful not to damage the safety wire or seal. If the plug moves, it is loose.

(g) If the plug is not loose, go to paragraph (i) of this AD.

(h) If the plug is loose, do the following:

(1) Carefully cut and remove the safety wire that spans between the servo plug and regulator cover only.

(2) Remove the servo plug while ensuring that the gasket, P/N 365533, that is behind the plug, is not lost. The gasket may be slightly stuck to the regulator cover.

(3) Examine the threads on the servo plug and regulator cover for damage. Threads should be smooth and consistent, with no burrs or chips. The servo plug outer diameter threads should also measure within 0.7419-0.7500-inch.

(4) If the threads on either the servo plug or the regulator cover are damaged, or do not measure within the limits in paragraph (h)(3) of this AD, the servo is not eligible for any installation and must be replaced before further flight.

(5) Inspect the gasket, P/N 365533, for tears and other damage. We are allowing the re-use of undamaged gaskets. Replace damaged gaskets with a new gasket, P/N 365533.

(6) When reassembling, do not install any servo plug or regulator cover that is not eligible for installation. Install the gasket onto the servo plug and reassemble the servo plug to the regulator cover.

(7) Torque the servo plug to a new, higher torque of 90-100 in-lbs, to help maintain the proper clamp-up force against the plug and cover.

(8) Safety wire the servo plug with 0.025-inch diameter wire to the regulator cover. Information on properly safety wiring the plug can be found in Precision Airmotive LLC Mandatory Service Bulletin No. PRS-107, Revision 1, dated March 6, 2008.

(9) Inspect all other safety wire on the servo. Replace any that are damaged.

## **Repetitive Inspections**

(i) At every engine oil change or within every 50 hours of engine run time, whichever occurs first, repeat the inspection and remedial steps specified in paragraphs (f) through (h)(9) of this AD.

## **Special Flight Permits Prohibited**

(j) Under 14 CFR part 39.23, we are prohibiting special flight permits.

## **Alternative Methods of Compliance**

(k) The Manager, Seattle Aircraft Certification Office, may approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

## **Related Information**

(l) Precision Airmotive LLC Mandatory Service Bulletin No. PRS-107, Revision 1, dated March 6, 2008, pertains to the subject of this AD. You can get the service information identified in this AD from <http://www.precisionairmotive.com>.

(m) For Precision Airmotive LLC, Richard Simonson, Aerospace Engineer, Propulsion Branch, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055; e-mail: Richard.simonson@faa.gov; telephone: (425) 917-6507; fax: (425) 917-6590.

(n) For Lycoming Engines, Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; e-mail: Norman.perenson@faa.gov; telephone: (516) 228-7337; fax: (516) 794-5531.

(o) For Teledyne Continental Motors, Kevin Brane, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, GA 30349; e-mail: kevin.brane@faa.gov; telephone: (770) 703-6063; fax: (770) 703-6097.

(p) For Superior Air Parts, Inc., Tausif Butt, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, Southwest Regional Headquarters, 2601 Meacham Blvd., Fort Worth, Texas 76137; e-mail: Tausif.butt@faa.gov; telephone: (817) 222-5195; fax: (817) 222-5785.

Issued in Burlington, Massachusetts, on April 4, 2008.

Francis A. Favara,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

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