

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2007-28863; Directorate Identifier 2007-NE-33-AD; Amendment 39-15149; AD 2007-16-10]

RIN 2120-AA64

**Airworthiness Directives; Teledyne Continental Motors Reciprocating (TCM) Engine Models IO-550-N, TSIO-520-BE, TSIO-550-A, TSIO-550-B, TSIO-550-C, TSIO-550-E, and TSIO-550-G**

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

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

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for TCM IO-550-N, TSIO-520-BE, TSIO-550-A, TSIO-550-B, TSIO-550-C, TSIO-550-E, and TSIO-550-G reciprocating engines. This AD requires removing before further flight, certain Kelly Aerospace Power Systems turbochargers, part number (P/N) 466304-0003, listed by serial number in this AD. This AD results from four incidents of the turbine rotor separating from the shaft of the turbocharger. We are issuing this AD to prevent the turbine rotor from separating from the shaft of the turbocharger due to a machining defect in the turbocharger compressor. This condition could result in full engine power loss, loss of engine lubricant, or smoke in the airplane cabin.

**DATES:** This AD becomes effective August 23, 2007. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of August 23, 2007.

We must receive any comments on this AD by October 9, 2007.

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

- *DOT Docket Web site:* Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.

- *Government-wide rulemaking Web site:* Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- *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.

- *Fax:* (202) 493-2251.

Contact Kelly Aerospace Power Systems, 2900 Selma Highway, Montgomery, AL 36108; telephone (334) 386-5400; fax (334) 386-5450; <http://www.kellyaerospace.com> for the service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:**

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.

**SUPPLEMENTARY INFORMATION:** On July 16, 2007, Kelly Aerospace Power Systems informed us that there were potential nonconforming turbochargers, P/N 466304-0003 that might have a machining defect in the compressors of the turbochargers. A machining defect in the turbocharger compressor leads to a condition where the center bore of the compressor is not perpendicular to the backface of the compressor. The machining defect leads to abnormal turbocharger rotor vibration which results in abnormal wear characteristics. The wear could result in the turbocharger rotor separating from the shaft. This condition, if not corrected, could result in full engine power loss, loss of engine lubricant, or smoke in the airplane cabin.

**Relevant Service Information**

We have reviewed and approved the technical contents of Kelly Aerospace Power Systems Service Bulletins (SBs) No. 026, Revision B, dated July 27, 2007, and No. 027, dated July 25, 2007. Those SBs list affected turbochargers by SN, and describe procedures for visually inspecting the turbocharger.

**FAA's Determination and Requirements of this AD**

The unsafe condition described previously is likely to exist or develop on other engines of the same type design. For that reason, we are issuing this AD to prevent the turbine rotor from separating from the shaft of the turbocharger due to a machining defect in the turbocharger compressor. This condition could result in full engine power loss, loss of engine lubricant, or smoke in the airplane cabin. This AD requires replacing certain turbochargers before further flight. You must use the service information described previously to perform the actions required by this AD.

**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 exists for making this amendment effective in less than 30 days.

**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-2007-28863; Directorate Identifier 2007-NE-33-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://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the DMS Web site, anyone can find and read the comments in any of our dockets, including 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) or you may visit <http://dms.dot.gov>.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://dms.dot.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 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, Incorporation by reference, 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:

**2007-16-10 Teledyne Continental Motors:**  
Amendment 39-15149. Docket No. FAA-2007-28863; Directorate Identifier 2007-NE-33-AD.

#### Effective Date

(a) This airworthiness directive (AD) becomes effective August 23, 2007.

#### Affected ADs

(b) None.

#### Applicability

(c) This AD applies to:

(1) Teledyne Continental Motors (TCM) models TSIO-520-BE, TSIO-550-A, TSIO-550-B, TSIO-550-C, TSIO-550-E, and TSIO-550-G reciprocating engines with a Kelly Aerospace Power Systems turbocharger, TCM part number (P/N) 646677, with certain serial numbers (SNs), installed on or after March 20, 2007. These engines are installed on, but not limited to, Adam Aircraft A500, Columbia Aircraft Manufacturing LC41-550FG, Mooney Airplane Company M20TN (Acclaim), and Piper Aircraft Incorporated PA-46-310P (Malibu) airplanes.

(2) TCM IO-550-N reciprocating engines modified to Engine Technologies Incorporated supplemental type certificate (STC) SE10589SC to install turbocharger, P/N 466304-0003, with certain SNs, installed on or after March 20, 2007. These engines are installed on, but not limited to, Cirrus Design Corporation Aircraft Model SR22 modified to Engine Technologies Incorporated STC SA10588SC.

#### Unsafe Condition

(d) This AD results from four incidents of the turbine rotor separating from the shaft of the turbocharger. We are issuing this AD to prevent the turbine rotor from separating from the shaft of the turbocharger due to a machining defect in the turbocharger compressor. This condition could result in full engine power loss, loss of engine lubricant, or smoke in the airplane cabin.

#### Compliance

(e) You are responsible for having the actions required by this AD performed before further flight unless the actions have already been done.

(f) If your engine has a turbocharger that was installed before March 20, 2007, no further action is required.

#### Engines Modified to Engine Technologies Incorporated STC SE10589SC

(g) Before further flight, for engines modified to Engine Technologies Incorporated STC SE10589SC on or after March 20, 2007, with a turbocharger that has a SN listed in Kelly Aerospace Service Bulletin (SB) No. 026, Revision B, dated July 27, 2007, replace the turbocharger.

#### TCM Engines with Turbocharger TCM P/N 646677

(h) Before further flight, for engines with a Kelly Aerospace Power Systems turbocharger, TCM P/N 646677 installed on or after March 20, 2007, with a turbocharger SN listed in Kelly Aerospace SB No. 027, dated July 25, 2007, replace the turbocharger.

### Alternative Methods of Compliance

(i) The Manager, Atlanta Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

### Special Flight Permits

(j) We are limiting the special flight permits for this AD by allowing a special flight permit only after visually inspecting the turbocharger using the procedures specified in the Visual Inspection sections of Kelly Aerospace Power Systems SB No. 026, Revision B, dated July 27, 2007, and SB No. 027, dated July 25, 2007.

### Related Information

(k) Teledyne Continental Aircraft Engine Mandatory Service Bulletin (MSB) MSB07-4, dated July 30, 2007, contains additional information on replacing turbochargers on TCM engines and Cirrus Service Advisory SA 07-14 R1, dated July 24, 2007, contains additional information on replacing turbochargers on Cirrus Design Corporation Aircraft Model SR22 modified to Engine Technologies Incorporated STC SA10588SC.

(l) Contact 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 more information about this AD.

### Material Incorporated by Reference

(m) You must use Kelly Aerospace Power Systems Service Bulletins No. 026, Revision B, dated July 27, 2007, and No. 027, dated July 25, 2007, to determine if you have an affected turbocharger installed. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Kelly Aerospace Power Systems, 2900 Selma Highway, Montgomery, AL 36108; telephone (334) 386-5400; fax (334) 386-5450; [www.kellyaerospace.com](http://www.kellyaerospace.com), for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on August 1, 2007.

**Peter A. White,**

*Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.*  
[FR Doc. 07-3840 Filed 8-6-07; 11:44 am]

**BILLING CODE 4910-13-P**