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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2011-0956; Directorate Identifier 2011-NE-23-AD; Amendment 39-16928; AD 2012-02-05]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Thielert Aircraft Engines GmbH Reciprocating Engines**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Thielert Aircraft Engines GmbH (TAE) TAE 125-02-99 and TAE 125-02-114 reciprocating engines. This AD was prompted by in-flight engine shutdown incidents reported on airplanes equipped with TAE 125 engines. We are issuing this AD to prevent in-flight engine shutdown, which could result in loss of control of the airplane.

**DATES:** This AD is effective March 2, 2012.

**ADDRESSES:** For service information identified in this AD, contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, telephone: 37204-696-0; fax: 37204-696-55; email: info@centurion-engines.com. You may review copies of the referenced 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>; 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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: (800) 647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA; phone: (781) 238-7143; fax: (781) 238-7199; email: alan.strom@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, issued EASA AD 2011-0087-E, dated May 12, 2011 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

In-flight engine shutdown incidents have been reported on aeroplanes equipped with TAE 125 engines.

Preliminary investigations showed that it was mainly the result of the sensitivity of friction disk Part Number (P/N) 05-7211-K010201 against possible misalignment of gearbox and core engine during assembly.

This condition, if not corrected, could result in further cases of engine in-flight shutdown and consequent loss of control of the aeroplane.

To address this unsafe condition, Thielert Aircraft Engines GmbH has developed a new friction disk.

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on October 18, 2011 (76 FR 64289). That NPRM was proposed to require on all TAE 125-02-99 and TAE 125-02-114 reciprocating engines, replacing the friction disk, P/N 05-7211-K010201.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (76 FR 64289, October 18, 2011).

### **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed.

### **Costs of Compliance**

Based on the service information, we estimate that this AD will affect about 206 TAE 125-02-99 and TAE 125-02-114 reciprocating engines installed on airplanes of U.S. registry. We also estimate that it will take about 3 work-hours per engine to comply with this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$1,500 per engine. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$361,530. Our cost estimate is exclusive of possible warranty coverage.

## **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**

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 DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, 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.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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 (AD):



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**2012-02-05 Thielert Aircraft Engines GmbH:** Amendment 39-16928; Docket No. FAA-2011-0956; Directorate Identifier 2011-NE-23-AD.

**(a) Effective Date**

This AD is effective March 2, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Thielert Aircraft Engines GmbH TAE 125-02-99 and TAE-125-02-114 reciprocating engines with friction disk, part number (P/N) 05-7211-K010201, installed.

**(d) Reason**

This AD was prompted by in-flight engine shutdown incidents reported on airplanes equipped with TAE 125 engines. Preliminary investigations showed that it was mainly the result of the sensitivity of friction disk P/N 05-7211-K010201 against possible misalignment of gearbox and core engine during assembly. We are issuing this AD to prevent in-flight engine shutdown, which could result in loss of control of the airplane.

**(e) Actions and Compliance**

Unless already done, do the following actions.

(1) TAE 125-02-99 Engines, P/Ns 05-7200-K000201; 05-7200-K000701; 05-7200-K000101; 05-7200-K000901; 05-7200-K001101; and 05-7200-K001301; and TAE 125-02-114 Engines, P/Ns 05-7200-K000501; 05-7200-K000801; and 05-7200-K001401

For TAE 125-02-99 engines, P/Ns 05-7200-K000201; 05-7200-K000701; 05-7200-K000101; 05-7200-K000901; 05-7200-K001101; and 05-7200-K001301; and TAE 125-02-114 engines, P/Ns 05-7200-K000501; 05-7200-K000801; and 05-7200-K001401, remove friction disk, P/N 05-7211-K010201, within 100 flight hours (FH) time-since-new (TSN) on the clutch or within 10 FH time-in-service (TIS) after the effective date of this AD, whichever is later.

(2) TAE 125-02-99 Engines, P/Ns 05-7200-K000301

For TAE 125-02-99 engines, P/N 05-7200-K000301, installed on multiengine aircraft, remove friction disk, P/N 05-7211-K010201, on one engine within 100 FH TSN on the clutch or within 10 FH TIS after the effective date of this AD, whichever is later. Remove friction disk, P/N 05-7211-K010201, from the other engine within 300 FH TSN on the clutch or within 10 FH TIS after the effective date of this AD, whichever is later.

**(f) Installation Prohibition**

After the effective date of this AD:

- (1) Do not install any friction disk, P/N 05-7211-K010201, into any engine.
- (2) Do not install any TAE 125-02-99 engine, P/N 05-7200-K000201, 05-7200-K000301, or 05-7200-K000701, or TAE 125-02-114 engine, P/N 05-7200-K00801 or 05-7200-K00501, that has a friction disk, P/N 05-7211-K010201 installed, onto any airplane.

**(g) Operating Prohibition**

Do not operate any multi-engine aircraft after 300 FH TSN on the clutch or 10 FH TIS after the effective date of this AD, whichever is later, which has installed a friction disk, P/N 05-7211-K010201.

**(h) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

**(i) Related Information**

(1) For more information about this AD, contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA; phone: (781) 238-7143; fax: (781) 238-7199; email: alan.strom@faa.gov.

(2) Refer to EASA Airworthiness Directive 2011-0087-E, dated May 12, 2011, and Thielert Service Bulletin No. TM TAE 125-1013 P1, for related information.

(3) Contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, telephone: 37204-696-0; fax: 37204-696-55; email: info@centurion-engines.com, for a copy of this service information.

(4) You may review copies of the 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.

**(j) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on January 19, 2012.  
Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.