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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0820; Directorate Identifier 2010-NE-31-AD; Amendment 39-17308; AD 2012-26-13]

RIN 2120-AA64

Airworthiness Directives; Thielert Aircraft Engines GmbH Reciprocating Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for all Thielert Aircraft Engines GmbH models TAE 125-01, TAE 125-02-99, and TAE 125-02-114 reciprocating engines. That AD currently requires installation of full-authority digital electronic control (FADEC) software version 2.91. This new AD requires removing all software mapping versions prior to 292, 301, or 302, applicable to the TAE engine model. This AD was prompted by reports of possible power loss on airplanes equipped with TAE 125 engines. We are issuing this AD to prevent engine power loss or in-flight shutdown, resulting in reduced control of or damage to the airplane.

DATES: This AD is effective February 13, 2013.

ADDRESSES: For service information identified in this AD, contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, phone: 37204-696-0; fax: 37204-696-55; email: info@centurion-engines.com. 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>; 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: Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: robert.green@faa.gov; phone: 781-238-7754; fax: 781-238-7199.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2011-07-09, Amendment 39-16646 (76 FR 17757, March 31, 2011). That AD applies to the specified products. The NPRM published in the Federal Register on September 17, 2012 (77 FR 57041). That NPRM proposed to require removing all software mapping versions prior to 292, 301, or 302, applicable to the TAE engine model.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

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

Costs of Compliance

We estimate that this AD will affect about 112 engines installed on airplanes of U.S. registry. We also estimate that it will take about 0.5 work hours per product to comply with this proposed AD. The average labor rate is \$85 per work hour. Based on these figures, we estimate the cost of the AD to U.S. operators to be \$4,760.

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 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 removing airworthiness directive (AD) 2011-07-09, Amendment 39-16646 (76 FR 17757, March 31, 2011), and adding the following new AD:



2012-26-13 Thielert Aircraft Engines GmbH: Amendment 39-17308; Docket No. FAA-2010-0820; Directorate Identifier 2010-NE-31-AD.

(a) Effective Date

This airworthiness directive (AD) is effective February 13, 2013.

(b) Affected ADs

This AD supersedes AD 2011-07-09, Amendment 39-16646 (76 FR 17757, March 31, 2011).

(c) Applicability

This AD applies to Thielert Aircraft Engines GmbH models TAE 125-01, TAE 125-02-99, and TAE 125-02-114 reciprocating engines installed in, but not limited to, Cessna 172 and (Reims-built) F172 series (European Aviation Safety Agency (EASA) Supplemental Type Certificate (STC) No. EASA.A.S.01527); Piper PA-28 series (EASA STC No. EASA.A.S. 01632); APEX (Robin) DR 400 series (EASA STC No. A.S.01380); and Diamond Aircraft Industries Models DA 40, DA 42, and DA 42M NG airplanes.

(d) Unsafe Condition

This AD was prompted by reports of possible power loss on airplanes equipped with TAE 125 engines. We are issuing this AD to prevent engine power loss or in-flight shutdown, resulting in reduced control of or damage to the airplane.

(e) Compliance

Unless already done, do the following. Within 55 flight hours or within 3 months of the effective date of the AD, or during the next scheduled maintenance, whichever occurs first, remove all full-authority digital electronic control (FADEC) software prior to versions 292, 301, and 302. Tables 1, 2, and 3 to paragraph (e) provide the software mapping and respective part numbers for software versions 292, 301, and 302, installed on the TAE 125-01, TAE 125-02-99, and TAE-125-02-114 engines, respectively.

Table 1 to Paragraph (e) for TAE 125-01 Engines

Software mapping	Part No.
T14V292CES	20-7610-55104R9.
T28V292CES	20-7610-55105R7.
T14V292PIP	40-7610-55106R9.
T28V292PIP	40-7610-55107R7.
T14V292APEX	60-7610-55106R9.

T14V292DIA	50-7610-55105R9.
R28V292DIA	50-7610-55107R5.

Table 2 to Paragraph (e) for TAE 125-02-99 Engines

Software mapping	Part No.
O14V301CES	20-7610-E000110.
O28V301CES	20-7610-E001110.
O14V301PIP	40-7610-E000110.
O28V301PIP	40-7610-E001110.
O14V301APEX	60-7610-E000110.
O14V301DA40	50-7610-E000110.
O28V301DA42	52-7610-E000505.

Table 3 to Paragraph (e) for TAE 125-02-114 Engines

Software mapping	Part No.
P14V302CES	20-7610-E002007.
P28V302CES	20-7610-E003007.
P28V302PIP	40-7610-E003007.
P14V302APEX	60-7610-E002007.
P14V302DA40	50-7610-E002007.

(f) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for 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 Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: robert.green@faa.gov; phone: 781-238-7754; fax: 781-238 7199.

(2) Refer to MCAI European Aviation Safety Agency Airworthiness Directive No. 2012-0116, dated July 3, 2012, and Thielert Aircraft Engines Service Bulletin TM TAE 000-0007, Revision 19, dated August 31, 2012, for related information.

(3) For service information identified in this AD, contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, phone: 37204-696-0; fax: 37204-696-55; email: info@centurion-engines.com. 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.

(h) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on December 27, 2012.
Colleen M. D'Alessandro,
Assistant Manager, Engine & Propeller Directorate,
Aircraft Certification Service.