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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-1006; Directorate Identifier 2009-CE-057-AD; Amendment 39-16543; AD 2010-26-04]

RIN 2120-AA64

Airworthiness Directives; Piper Aircraft, Inc. Model PA-28-161 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above that are equipped with Thielert Aircraft Engine GmbH (TAE) Engine Model TAE-125-01 installed per Supplemental Type Certificate (STC) No. SA03303AT. This AD requires installing a full authority digital engine control (FADEC) backup battery, replacing the supplement pilot's operating handbook and FAA approved airplane flight manual, and revising the limitations section of the supplement airplane maintenance manual. This AD was prompted by an incident where an airplane experienced an in-flight engine shutdown caused by a momentary loss of electrical power to the FADEC. We are issuing this AD to prevent interruption of electrical power to the FADEC, which could result in an uncommanded engine shutdown. This failure could lead to a loss of engine power.

DATES: This AD is effective February 1, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publication listed in the AD as of February 1, 2011.

ADDRESSES: For service information identified in this AD, contact Thielert Aircraft Engines Service GmbH, Platanenstraβe 14, 09350 Lichtenstein, Deutschland; telephone: +49 (37204) 696-0; fax: +49 (37204) 696-1910; Internet: http://www.thielert.com/. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

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: Don O. Young, Aerospace Engineer, Atlanta Aircraft Certification Office (ACO), FAA, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5585; fax: (404) 474-5606; e-mail: don.o.young@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to the specified products. That NPRM published in the Federal Register on October 6, 2010 (75 FR 61655). That NPRM proposed to require installation of a FADEC backup battery, replacement of the supplement pilot's operating handbook and FAA approved airplane flight manual, and revision of the limitations section of the supplement airplane maintenance manual.

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–except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Costs of Compliance

We estimate that this AD affects zero airplanes of U.S. registry.
We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Installation of a FADEC backup battery.	7 work-hours X $85 per hour = $595	$780	$1,375	Not applicable

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):

2010-26-04 Piper Aircraft, Inc: Amendment 39-16543; Docket No. FAA-2010-1006; Directorate Identifier 2009-CE-057-AD.

Effective Date

(a) This AD is effective February 1, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Model PA-28-161 airplanes, all serial numbers, that are:
(1) Equipped with Thielert Aircraft Engine GmbH (TAE) Engine Model TAE-125-01 installed per Supplemental Type Certificate (STC) No. SA03303AT; and
(2) Certificated in any category.

Subject

(d) Air Transport Association of America (ATA) Code 72: Engine.

Unsafe Condition

(e) This AD results from an incident where an airplane experienced an in-flight engine shutdown caused by a momentary loss of electrical power to the FADEC. We are issuing this AD to prevent interruption of electrical power to the FADEC, which could result in an uncommanded engine shutdown. This failure could lead to a loss of engine power.

Compliance

(f) To address this problem, you must do the following, unless already done:

Actions	Compliance	Procedures
(1) Modify the engine electrical system by installing a backup battery system and associated wiring and circuitry.	Within the next 100 hours time-in-service after February 1, 2011 (the effective date of this AD) or within 30 days after February 1, 2011 (the effective date of this AD), whichever occurs first.	Follow Thielert Aircraft Engines GmbH Service Bulletin TM TAE 651-0007, Revision 7, dated July 30, 2010.

(2) Revise the airworthiness limitations section to require repetitive replacement of the FADEC backup battery every 12 calendar months. Thereafter, except as provided in paragraph (g) of this AD, no alternative replacement times may be approved for this part.	Before further flight after doing the modification required in paragraph (f)(1) of this AD.	Incorporate Chapter 40-AMM-04-01 "Airworthiness Limitations, Revision 1", dated January 25, 2010, of Thielert Aircraft Engines GmbH Supplement Airplane Maintenance Manual Piper PA28-161 TAE 125-01, Doc. No.: AMM-40-01 (US-Version) Version: 1/1, into TAE Airplane Maintenance Manual Supplement, Piper PA28/TAE 125-01, AMM-40-01 (US-Version), Rev. Issue 1, dated February 3, 2006.
(3) Incorporate Thielert Aircraft Engines GmbH Supplement Pilot's Operating Handbook and FAA Approved Airplane Flight Manual, TAE-No.:40-0310-40042, issue 2, revision 0, dated June 1, 2010, into the pilot's operating handbook.	Before further flight after doing the modification required in paragraph (f)(1) of this AD.	Not applicable.

Alternative Methods of Compliance (AMOCs)

(g)(1) The Manager, Atlanta Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

Related Information

(h) For more information about this AD, contact Don O. Young, Aerospace Engineer, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5585; fax: (404) 474-5606; e-mail: don.o.young@faa.gov.

Material Incorporated by Reference

(i) You must use the service information contained in table 1 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

Table 1 – All material incorporated by reference

Document	Revision	Date
Thielert Aircraft Engines GmbH Service Bulletin TM TAE 651-0007	7	July 30, 2010

Chapter 40-AMM-04-01 "Airworthiness Limitations, Revision 1", of Thielert Aircraft Engines GmbH Supplement Airplane Maintenance Manual Piper PA28-161 TAE 125-01, Doc. No.: AMM-40-01 (US-Version) Version: 1/1	1	January 25, 2010
Thielert Aircraft Engines GmbH Supplement Pilot's Operating Handbook and FAA Approved Airplane Flight Manual, TAE-No.:40-0310-40042, issue 2	0	June 1, 2010

(1) The Director of the Federal Register approved the incorporation by reference of the service information contained in table 1 of this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Thielert Aircraft Engines Service GmbH, Platanenstraβe 14, 09350 Lichtenstein, Deutschland; telephone: +49 (37204) 696-0; fax: +49 (37204) 696-1910; Internet: http://www.thielert.com/.

(3) You may review copies of the service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri on December 13, 2010.
William J. Timberlake,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.