**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-1383; Directorate Identifier 2015-NE-15-AD]**

**RIN 2120-AA64**

# Airworthiness Directives; Technify Motors GmbH Reciprocating Engines

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all Technify Motors GmbH TAE 125-02 reciprocating engines with a dual mass flywheel installed. This proposed AD was prompted by reports of a gearbox drive shaft breaking during starting or restarting of the engine. This proposed AD would require installation of a start phase monitoring system and associated specified software. We are proposing this AD to prevent overload and failure of the gearbox drive shaft, which could lead to failure of the engine, in-flight shutdown, and loss of control of the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

- 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.

For service information identified in this proposed AD, contact Technify Motors GmbH, Platanenstrasse 14, D-09356 Sankt Egidien, Germany; phone: +49 37204 696 0; fax: +49 37204 696 29125; email: info@centurion-engines.com; and Diamond Aircraft Industries GmbH, N. A. Otto-Strasse 5, 2700 Wiener Neustadt, Austria; phone: +43 2622 26700; fax: +43 2622 26700 1369; email: airworthiness@diamond-air.at. 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. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-1383.

**Examining the AD Docket**

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-1383; 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 proposed AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2015-1383; Directorate Identifier 2015-NE-15-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

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.

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2015-0055, dated March 31, 2015 (referred to hereinafter as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

> Cases of a broken gearbox drive shaft have been reported on aeroplanes equipped with TAE 125-02 engines that have a Dual Mass Flywheel installed.
>
> Investigations results showed a possible overload of the gearbox drive shaft during starting of the engine or during restarting of the engine in-flight.
>
> This condition, if not corrected, could lead to engine power loss during flight, possibly resulting in loss of control of the aeroplane.

You may obtain further information by examining the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-1383.

**Related Service Information under 1 CFR Part 51**

Technify Motors GmbH (type certificate previously held by Thielert Aircraft Engines GmbH) issued Technify Motors Service Bulletin (SB) No. SB TMG 125-1018 P1, Revision 1, dated February 5, 2015. The service information describes procedures for installing a start phase monitoring system and associated specified software mapping on particular airplane models. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

**Other Related Service Information**

Technify Motors GmbH has also issued Technify Motors SB No. TM TAE 000-0007, Revision 28, dated February 5, 2015; Technify Motors Installation Manual No. IM-02-02, Issue 4, Revision 2, dated January 30, 2015, with Chapter 02-IM-13-02, section 13.8.16, Revision 1, dated November 28, 2014; Technify Motors SB No. SB TMG 601-1007 P1, Revision 3, dated February 5, 2015; and Technify Motors SB No. SB TMG 651-1004 P1, Revision 2, dated February 5, 2015.

Diamond Aircraft Industries GmbH (DAI) has issued DAI Mandatory Service Bulletin (MSB) No. 42-109/1, dated February 4, 2015; and DAI MSB No. 42-007/16, dated February 4, 2015.

The service information describes procedures for installing a start phase monitoring system and associated specified software mapping.

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

This product has been approved by the aviation authority of Germany, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This proposed AD would require installation of specified software mapping and a start phase monitoring system.

**Costs of Compliance**

We estimate that this proposed AD affects 97 engines installed on airplanes of U.S. registry. We also estimate that it would take about 3 hours per engine to comply with this proposed AD. The average labor rate is $85 per hour. For 13 of the engines, required parts cost about $285 per engine. For 84 of the engines, required parts cost about $206 per engine. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $45,744.

**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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

(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),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, 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.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Technify Motors GmbH (Type Certificate Previously Held by Thielert Aircraft Engines GmbH):** Docket No. FAA-2015-1383; Directorate Identifier 2015-NE-15-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Technify Motors GmbH TAE 125-02-99 (commercial designation CD-135, formerly Centurion 2.0) and TAE 125-02-114 (commercial designation CD-155, formerly Centurion 2.0S) reciprocating engines, with a dual mass flywheel installed.

**(d) Reason**

This AD was prompted by reports of a gearbox drive shaft breaking during starting or restarting of the engine. We are issuing this AD to prevent overload and failure of the gearbox drive shaft, which could lead to failure of the engine, in-flight shutdown, and loss of control of the airplane.

**(e) Actions and Compliance**

Comply with this AD within the compliance times specified, unless already done.

Within 110 flight hours or at the next scheduled inspection after the effective date of this AD, whichever occurs first, install a start phase monitoring system and software mapping. Use Technify Motors Service Bulletin (SB) No. SB TM 125-1018 P1, Revision 1, dated February 5, 2015, to do the installation.

**(f) Installation Prohibition**

After the effective date of this AD, do not install onto any airplane any Technify Motors TAE 125-02-99 or TAE 125-02-114 reciprocating engine that is not equipped with a start phase monitoring system and software mapping.

**(g) 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. You may email your request to: ANE-AD-AMOC@faa.gov.

**(h) 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; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2015-0055, dated March 31, 2015, for more information. You may examine the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating it in Docket No. FAA-2015-1383.

(3) Technify Motors SB No. SB TMG 125-1018 P1, Revision 1, dated February 5, 2015; Technify Motors SB No. TM TAE 000-0007, Revision 28, dated February 5, 2015; Technify Motors Installation Manual No. IM-02-02, Issue 4, Revision 2, dated January 30, 2015, with Chapter 02-IM-13-02, section 13.8.16, Revision 1, dated November 28, 2014; Technify Motors SB No. SB TMG 601-1007 P1, Revision 3, dated February 5, 2015; and Technify Motors SB No. SB TMG 651-1004 P1, Revision 2, dated February 5, 2015, can be obtained from Technify Motors GmbH, using the contact information in paragraph (h)(5) of this proposed AD.

(4) Diamond Aircraft Industries GmbH MSB No. 42-109/1, dated February 4, 2015; and DAI MSB No. 42-007/16, dated February 4, 2015, can be obtained from

Diamond Aircraft Industries GmbH, using the contact information in paragraph (h)(5) of this proposed AD.

(5) For Technify Motors service information identified in this proposed AD, contact Technify Motors GmbH, Platanenstrasse 14, D-09356 Sankt Egidien, Germany; phone: +49-37204-696-0; fax: +49-37204-696-55; email: info@centurion-engines.com. For DAI service information identified in this proposed AD, contact Diamond Aircraft Industries GmbH, N. A. Otto-Strasse 5, 2700 Wiener Neustadt, Austria; phone: +43 2622 26700; fax: +43 2622 26700 1369; email: airworthiness@diamond-air.at.

(6) 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.

Issued in Burlington, Massachusetts, on June 26, 2015.

Ann C. Mollica,
Acting Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
[FR Doc. 2015-16586 Filed: 7/7/2015 08:45 am; Publication Date: 7/8/2015]