



Airworthiness Directive

AD No.: 2017-0034

Issued: 20 February 2017

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

TECHNIFY MOTORS GmbH

Type/Model designation(s):

TAE 125-02 engines

Effective Date: 06 March 2017

TCDS Number(s): EASA.E.055

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Gearbox – Modification / Inspection

Manufacturer(s):

Technify Motors GmbH (TMG), formerly Thielert Aircraft Engines GmbH (TAE)

Applicability:

TAE 125-02-99 and TAE 125-02-114, all serial numbers (s/n).

These engines are known to be installed, but not limited to, Diamond DA 40, DA 42, DA 42M, CEAPR DR 400, Cessna 172 and Piper PA-28 aeroplanes. The installation of these engines was either done by the respective aeroplane manufacturer or through modification of the aeroplane by Supplemental Type Certificate.

Reason:

A temporary power loss occurred during flight on a TAE 125-02-powered aeroplane. Following investigation, it was determined that an improper lapping of the gearbox driveshaft led to insufficient sealing of the gearbox radial shaft sealing ring, eventually resulting in oil leakage and oil contamination of the clutch.

This condition, if not detected and corrected, could lead to permanent engine power loss, possibly resulting in reduced control of the aeroplane.



To address this potential unsafe condition, TMG published Service Bulletin (SB) TMG 125-1020 P1, providing instructions to replace the clutch with a dual mass flywheel, and to inspect the gearboxes for oil leakage.

For the reason described above, this AD requires modification of the engine by replacing the clutch with a dual mass flywheel, inspection of the gearbox and, depending on findings, replacement of the gearbox.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, an “affected gearbox” has a s/n as listed in Table 1 of this AD, and did not pass an inspection as required by this AD.

Note 2: For the purpose of this AD, an “affected engine” is equipped with a clutch and has an affected gearbox (see Note 1 of this AD) installed.

Note 3: Engines having a dual mass flywheel installed can be identified checking the mark on the fuel rail (sticker “Dual Mass Flywheel installed”), or reviewing the record in the engine log book (“Dual Mass Flywheel” listed as engine component on page 4 “Main Engine Components”).

Note 4: EASA AD 2015-0055 requires installation of improved software mapping and of the start phase monitoring system on TAE 125-02-99 and TAE 125-02-114 engines equipped with a dual mass flywheel.

Modification:

- (1) For an affected engine (see Notes 1 and 2 of this AD), within 55 flight hours after the effective date of this AD, replace the clutch with dual mass flywheel in accordance with the instructions of SB TMG 125-1020 P1 (see Note 4 of this AD).

Inspection:

- (2) Concurrent with modification of an engine as required by paragraph (1) of this AD, inspect the affected gearbox of that engine for oil leaks in accordance with the instructions of SB TMG 125-1020 P1.

Table 1 – Affected Gearbox s/n

00095	00107	00139	00160	00171	00172	00179	00189	00224
00327	00396	00432	00459	00481	00564	00688	00697	00884
00923	00957	01019	01048	01081	01082	01106	01125	01236
01237	01241	01245	01288	01311	01314	01351	01357	01361
01388	01418	01427	01487	01529	01534	01561	01598	01634
01655	01704	01711	01755	01762	01786	01844	01881	01883
01884	01887	01891	01893	01904	01928	01933	01935	01951
01977	01978	01986	02026	02040	02041	02127	02141	02167
02189	02228	02289	02298	02304	02314	02316	02354	02432



Corrective Action:

- (3) If, during the inspection as required by paragraph (2) of this AD, an oil leak is detected, before next flight, replace the affected gearbox with a serviceable one in accordance with the instructions of SB TMG 125-1020 P1.

Parts Installation:

- (4) From the effective date of this AD, do not install on any engine an affected gearbox (see Note 1 of this AD).
- (5) Do not install a clutch on an engine, as required by paragraph (5.1) or (5.2) of this AD, as applicable.
 - (5.1) For an affected engine (see Note 2 of this AD): After modification of the engine as required by paragraph (1) of this AD.
 - (5.2) For engines as identified in Note 3 of this AD: From the effective date of this AD.
- (6) From the effective date of this AD, do not install on any aeroplane an affected engine (see Note 2 of this AD).

Ref. Publications:

Technify Motors SB TMG 125-1020 P1 dated 27 January 2016.

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 19 January 2017 as PAD 17-009 for consultation until 16 February 2017. The Comment Response Document can be found at <http://ad.easa.europa.eu>.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: Technify Motors GmbH, Platanenstraße 14, D-09356 Sankt Egidien, Germany
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