Airworthiness Directive

AD No.: 2021-0022

Issued: 18 January 2021

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 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 (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:	Type/Model designation(s):
CONTINENTAL AEROSPACE TECHNOLOGIES GmbH	TAE 125 engines

Effective Date:	01 February 2021
TCDS Number(s):	EASA.E.055
Foreign AD:	Not applicable
Supersedure:	None

ATA 72 – Engine – Main Bearing / Studs – Replacement

Manufacturer(s):

Continental Aerospace Technologies GmbH (CG), formerly Technify Motors GmbH, Thielert Aircraft Engines GmbH (TAE)

Applicability:

TAE 125-02-99 and TAE 125-02-114 engines, all serial numbers (s/n) listed in the SB, as defined in this AD.

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

Definitions:

For the purpose of this AD, the following definitions apply:

The SB: Continental Aerospace Technologies Service Bulletin (SB) CG 125-1027 P1.

Affected part: Main bearing studs, having Part Number 05-7211-K009801, and identified by batch number B180703/1, B184216/1, B184216/2 or B191277/1 (installed on the engine s/n as listed in the SB).

Serviceable part: Any main bearing stud, eligible for installation, which is not an affected part.

Groups: Group 1 are single-engine aeroplanes which have an affected part installed on the engine, and twin-engine aeroplanes which have an affected part installed on both engines. Group 2 are twin-engine aeroplanes which have an affected part installed on only one engine.

Reason:

Cases of broken main bearing studs have been reported. A broken main bearing stud provides improper support to the crankshaft, increases crankshaft clearance, which triggers crankshaft sensor failures, and, in some cases, can lead to crankshaft fracture. Investigation on the root cause for the rupture is still ongoing.

This condition, if not corrected, could lead to engine in-flight shutdown and forced landing, possibly resulting in damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, CG published the SB to provide instructions for stud replacement.

For the reason described above, this AD requires replacement of affected parts and prohibits re-installation.

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

Required as indicated, unless accomplished previously:

Replacement:

(1) Within the compliance time as specified in Table 1 of this AD, replace each affected part in accordance with the instructions of the SB.

Table 1 – Stud Replacement (see Note 1 of this AD)

Group	Flight Hours (FH)	Compliance Time (whichever occurs first)
1	100 FH or less	Before exceeding 115 FH, or during the next scheduled maintenance
	More than 100 FH	Within 15 FH after the effective date of this AD, or during the next scheduled maintenance
2	100 FH or less	Before exceeding 200 FH, or during the next scheduled maintenance
	More than 100 FH	Within 100 FH after the effective date of this AD, or during the next scheduled maintenance

Note 1: Unless specified otherwise, the FH indicated in Table 1 of this AD are those accumulated by the engine, on the effective date of this AD, since first installation on an aeroplane.

Parts Installation:

(2) From the effective date of this AD, do not install an affected part on any engine, or an engine with an affected part on any aeroplane.

Ref. Publications:

Continental Aerospace Technologies SB CG 125-1027 P1 original issue dated 18 December 2020.

The use of later approved revisions of the above-mentioned 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the EU aviation safety reporting system. This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.

5. For any question concerning the technical content of the requirements in this AD, please contact: Continental Aerospace Technologies GmbH, Platanenstrasse 14, 09356 Sankt Egidien, Germany; Telephone: +49 37204 696 0; Fax: +49 37204 696 2912;
E-Mail: support@continentaldiesel.com or airworthiness@continental.aero.