

SERVICE INFORMATION

NO. SI 42NG-140

I TECHNICAL DETAILS

I.1 Airplanes affected

Type: DA 42 NG, DA 42 M-NG

I.2 Subject

EASA Airworthiness Directive No. 2024-0037R1
ATA-Code: 72-30

I.3 Reason

EASA has issued Airworthiness Directive No. 2024-0037R1 mandating crankshaft-bearing cap screws replacement on Austro Engine E4 engines.

I.4 Information

For detailed technical information refer to EASA Airworthiness Directive No. 2024-0037R1, which is applicable without any further additions or restrictions.

II REMARKS

1. EASA Airworthiness Directive No. 2024-0037R1 is attached to this Service Information.
2. In case of doubt contact Austro Engine GmbH.
3. For detailed information of the Service Information System refer to SI 42NG-001 latest issue.



Airworthiness Directive

AD No.: 2024-0037R1

Issued: 06 February 2024

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AUSTRO ENGINE GmbH

Type/Model designation(s):

E4 and E4P engines

Effective Date: 06 February 2024 (same as original issue)

TCDS Number(s): EASA.E.200

Foreign AD: Not applicable

Revision: This AD revises EASA Emergency AD 2024-0037-E dated 02 February 2024.

ATA 72 – Engine – Main Bearing / Studs – Replacement

Manufacturer(s):

Austro Engine GmbH; Wuhu Diamond Aeroengine Co. Ltd

Applicability:

E4 and E4P engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Diamond Aircraft Industries DA 40 NG, DA 42 NG, DA 42 M-NG and DA 62 aeroplanes.

Definitions:

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

The MSB: Austro Engine Mandatory Service Bulletin (MSB) MSB-E4-042.

Affected part: Main bearing screws, class 8.8, having Part Number (P/N) E4A-10-100-201.

Serviceable part: Main bearing screws, class 12.9, having P/N E4A-10-100-202.

Groups: Group 1 are engines having a s/n listed in Table 1 of the MSB, or engines equipped with an engine core having a s/n listed in Table 1 of the MSB.



Group 2 are engines having a s/n listed in Table 2 of the MSB or engines equipped with an engine core having a s/n listed in Table 2 of the MSB.

Group 3 are engines which are not Group 1 and are not Group 2.

Reason:

Occurrences of engines failures have been reported, where, during subsequent engine inspection, failure of one inner main bearing screw was identified. Subsequent investigation determined that certain screws, meeting the lower end of their design specification, could fail when installed on the inner main bearing position and the engine is operated in specific operating conditions.

This condition, if not corrected, could lead to engine failure, reduced control of the aeroplane and, for single engine aeroplanes, in emergency landing, possibly resulting in damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, Austro Engine published the MSB, providing instructions to replace the affected part with screws of higher class, and EASA issued Emergency AD 2024-0037-E, requiring replacement of affected parts with serviceable parts and providing additional criteria for installation of the affected parts and engines.

Since that AD was issued, requests for clarification about the compliance time for Group 2 engines have been received. This AD is revised accordingly, to provide clarifications, and to introduce an allowance for ferry flights for Group 2 engines.

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

Required as indicated by this AD, unless the actions required by this AD have been already accomplished:

Replacement:

- (1) For Group 1 and Group 2 engines: Within the compliance time as specified in Table 1 of this AD, as applicable, replace each affected part installed on the inner main bearings with a serviceable part in accordance with the instructions of the MSB.



Table 1 – Main Bearing Screws Replacement

Group	Compliance Time
1	<p>Before next flight after the effective date of this AD.</p> <p>A single ferry flight, without passengers and not exceeding 3 flight hours (FH), is allowed to a maintenance location, where the action required by this AD can be accomplished</p>
2	<p>A or B, whichever occurs first:</p> <p>A) Within 300 FH since first installation on an aeroplane, or since last overhaul, as applicable, or before next flight after the effective date of this AD, whichever occurs later. A single ferry flight, without passengers and not exceeding 3 flight hours (FH), is allowed to a maintenance location, where the action required by this AD can be accomplished.</p> <p>B) During the next scheduled engine maintenance, starting after the effective date of this AD</p>

Part(s) Installation:

- (2) For Group 1, Group 2 and Group 3 engines: From the effective date of this AD, do not install an engine core, having a s/n listed in Table 1 or Table 2 of the MSB, on any engine, unless the main bearing screws installed on the inner main bearings of that engine core have been replaced with serviceable parts in accordance with the instructions of the MSB.
- (3) For Group 1, Group 2 and Group 3 engines: From the effective date of this AD, do not install any affected part on the inner main bearings of any engine (position 3 to 8 inclusive, as shown in Figure 1 of the MSB).

Ref. Publications:

Austro Engine MSB MSB-E4-042 original issue dated 31 January 2024 and Revision 1 dated 05 February 2024.

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. The results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.
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 Austro Engine GmbH, Rudolf-Diesel-Str. 11, 2700 Wiener Neustadt, Austria, via [Diamond Partners Portal](#), or by telephone: +43 2622 23000 2525.

