



適航指令發布單

Airworthiness Directive Issuance Form

民航局AD編號 AD number	CAA-2024-02-006緊急	發布日期 Date issued	2024/02/06
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	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.		
主旨摘要 Subject	Austro Engine Engine - Main Bearing / Studs - Replacement		
民航局 CAA	設計國民航主管機構 Original Authority		
<input type="radio"/> 本國產品 Native product	<input type="radio"/> FAA <input type="radio"/> Germany LBA <input checked="" type="radio"/> EASA <input type="radio"/> CAA-NL <input type="radio"/> Brazil <input type="radio"/> UK CAA <input type="radio"/> Transport Canada Civil Aviation <input type="radio"/> Japan CAB <input type="radio"/> DGAC <input type="radio"/> CAA of Israel <input type="radio"/> Other_____		
<input type="radio"/> 其他個案 Other			
	設計國AD編號 Original AD number	2024-0037-E	
	1. 直接採用原AD之內容? (Is the original AD directly adopted?) <input checked="" type="radio"/> 是(Yes) <input type="radio"/> 否(No)_ a. 生效日期另訂為(Re-specify the effective date as): b. 執行時限另訂為(Re-specify the compliance time or period as): 2. 使用人是否需要將AD執行結果向民航局提出報告? (Do users need to report the status of compliance to the CAA?) <input type="radio"/> 需要(Yes) <input checked="" type="radio"/> 不需要(No)		
備註 Note	Austro Engine MSB MSB-E4-042 original issue, dated 31 January 2024.		

註： 1. AD內容後附。
2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。
3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6330 / 6332, Fax：(02)2545-8464, adcaa@mail.caa.gov.tw

Note： 1. The AD text is enclosed.
2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval.
3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6330 / 6332, Fax：(02)2545-8464, adcaa@mail.caa.gov.tw



Emergency Airworthiness Directive

AD No.: 2024-0037-E

Issued: 02 February 2024

Note: This Emergency 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

TCDS Number(s): EASA.E.200

Foreign AD: Not applicable

Supersedure: None

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.

For the reason described above, this AD requires replacement of affected parts with serviceable parts and provides additional criteria for installation of parts and 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	Before next flight after the effective date of this AD. 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
2	A or B, whichever occurs first: A) Within 300 FH since first installation on an aeroplane, or since last overhaul, as applicable B) During the next scheduled engine maintenance, starting after the effective date of this AD

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.

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.

