



### 適航指令發布單

## Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2017-06-009A	發布日期 Date issued	2019/2/27
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Model E4 engines, all serial numbers having configuration “-B” or “-C”, and E4P engines, all serial numbers, installed on twin engine aeroplanes. These engines are known to be installed on, but not limited to, Diamond Aircraft Industries DA 42 NG, DA 42 M-NG and DA 62 aeroplanes.		
主旨摘要	Engine - Timing Chain - Replacement / Aircraft Flight Manual - Limitations Section - Amendment		
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <input type="checkbox"/> FAA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> Brazil <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> DGAC <input type="checkbox"/> Germany LBA <input type="checkbox"/> CAA-NL <input type="checkbox"/> UK CAA <input type="checkbox"/> Japan CAB <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國 AD 編號 Original AD number	2017-0103R1	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 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="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 72. This AD revises EASA AD 2017-0103 dated 14 June 2017(CAA-2017-06-009). Ref. Publications: Austro Engine SB MSB-E4-017/2, dated 02 December 2016. and Austro Engine Operation Manual OM-TR-MDC-E4-359b, dated 09 November 2016.		
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)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> 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)2349-6331~3, Fax:(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>			



## Airworthiness Directive

**AD No.:** 2017-0103R1

**Issued:** 25 February 2019

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:

AUSTRO ENGINE GmbH

### Type/Model designation(s):

E4 series engines

**Effective Date:** Revision 1: 11 March 2019  
Original issue: 28 June 2017

**TCDS Number(s):** EASA.E.200

**Foreign AD:** Not applicable

**Revision:** This AD revises EASA AD 2017-0103 dated 14 June 2017.

## ATA 72 – Engine – Timing Chain – Replacement / Aircraft Flight Manual – Limitations Section – Amendment

### Manufacturer(s):

Austro Engine GmbH (AE)

### Applicability:

Model E4 engines, all serial numbers having configuration “-B” or “-C”, and E4P engines, all serial numbers, installed on twin engine aeroplanes.

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

### Reason:

Considerable wear of the timing chain has been detected on some engines. This may have been caused by windmilling restarts, which are known to cause high stress to the timing chain.

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

To address this potential unsafe condition, AE included instructions in the engine maintenance manual to periodically inspect the condition of the timing chain and, depending on findings, to



replace the timing chain and the chain wheel. The operation manual was updated to allow windmilling restart only as an emergency procedure. AE also published Mandatory Service Bulletin (MSB) MSB-E4-017/2, providing instructions to replace the timing chain for engines with known windmilling restarts, and EASA issued AD 2017-0103, requiring replacement of the timing chain for engines with known windmilling restarts, and amendment of the applicable Aircraft Flight Manual (AFM).

Since that AD was issued, AE revised the applicable Airworthiness Limitation Section (ALS) including, among others, the limitation required by that AD. Consequently, EASA published AD 2019-0041, requiring accomplishment of the actions specified in the ALS.

For the reason described above, this AD is revised accordingly, removing the requirement of timing chain replacement. This action remain required through EASA AD 2019-0041.

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

Required as indicated, unless accomplished previously:

#### Replacement:

(1) DELETED.

(2) DELETED.

#### AFM update:

(3) Within 30 days after 28 June 2017 [the effective date of the original issue of this AD], amend the applicable AFM, as specified in Austro Engine Operation Manual OM-TR-MDC-E4-359b, to limit the use of windmilling restart only as emergency procedure, inform all flight crews and, thereafter, operate the aeroplane accordingly.

Note: For DA 42 NG and DA 42 M-NG aeroplanes, using AFM TR TR-MÄM-42-973, and for DA 62 aeroplanes, using AFM TR TR-MÄM-62-240 to update the applicable AFM is an acceptable method to comply with the requirements of paragraph (3) of this AD.

#### Parts installation:

(4) DELETED.

#### Ref. Publications:

Austro Engine SB MSB-E4-017/2, dated 02 December 2016.

Austro Engine Operation Manual OM-TR-MDC-E4-359b, dated 09 November 2016.

The use of later approved revisions of these documents 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 original issue of this AD was posted on 11 May 2017 as PAD 17-059 for consultation until 08 June 2017. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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](#).
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, Telephone +43-2622-23000-2525, E-mail [service@austroengine.at](mailto:service@austroengine.at).

The referenced publication can be downloaded directly from the Austro Engine GmbH [Service Bulletin](#) webpage.

