
SERVICE INFORMATION LETTER NO. SI40NG-064

NOTE: Service Information Letters are used only:

1. To distribute information from Diamond Aircraft Industries Inc. to our customers.
2. To distribute applicable information/documents from our suppliers to our customers with additional information.

NOTE: Typically there is no revision service for Service Information Letter (SIL). Each new information or change will be sent along with a new SIL.

1. TECHNICAL DETAILS

1.1 Aircraft Affected

All DA40NG aircraft

1.2 Subject

EASA Airworthiness Directive No. 2018-0125
EASA Airworthiness Directive No. 2017-0250
FAA Airworthiness Directive No. 2018-07-16
ATA-Code: 72-00

1.3 Reason

EASA issued Airworthiness Directive No. 2018-0125(supersedes AD 2017-0250) mandating MSB-E4-002 Rev. 3. This new revision of the MSB introduces an engine modification which installs a waste-gate control-rod fail-safe bridge and a new circlip. This modification once implemented cancels the life limitation introduced previously for aircraft under the EASA jurisdiction. Aircraft in operation in the United States remain bound to the FAA AD until this AD has been updated.

1.4 Information

For detailed technical information refer to EASA Airworthiness Directive No. 2018-0125, FAA Airworthiness Directive No. 2018-07-16 and Austro Engine Mandatory Service Bulletin No. MSB-E4-022 Rev. 3.

EASA Airworthiness Directive No. 2018-0125 is attached to this Service Information.

2. OTHER DETAILS

To obtain satisfactory results, procedures specified in this service information letter must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service information letter. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service information letter if it is not incorporated. If you no longer own the aircraft to which this service information letter applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries Inc. at the address below.

Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad, London, Ontario, Canada
N5V 1S2

Customer Support: Phn: (519)457-4041 Fax:(519)457-4045 Email: customersupport@diamondair.com
Technical Publications: Email: techpubs@diamondair.com



Airworthiness Directive

AD No.: 2018-0125

Issued: 06 June 2018

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:

AUSTRO ENGINE GmbH

Type/Model designation(s):

E4 engines

Effective Date: 04 July 2018

TCDS Number(s): EASA.E.200

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0250 dated 18 December 2017.

ATA 72 – Engine – Turbocharger Waste Gate Controller and Control Rod Circlip – Life Limit / Modification

Manufacturer(s):

Austro Engine GmbH

Applicability:

Model E4 and E4P engines, all serial numbers.

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-E4-022 revision 3 dated 16 April 2018.

Circlip: Waste gate control rod circlips.

Groups: Group 1 engines have configuration “-B” or “-C”, and are installed on DA 42 M-NG aeroplanes with external containers; or have configuration “-A”. Group 2 engines are those in any other configuration than those in Group 1.



Reason:

Occurrences were reported where, on some engines, turbocharger waste gate control rods were found broken and/or disconnected. Investigation results indicate that these failures were due to insufficient fatigue life or improper handling of the waste gate control rod and improper installation of the non-spring-loaded circlip.

These conditions, if not corrected, could lead to improper operation of the waste gate with consequent engine power loss, possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, Austro Engine designed a new spring loaded circlip and published MSB-E4-022 (later revised), introducing a life limit for the affected waste gate controllers and circlips. Consequently, EASA issued AD 2017-0250, requiring implementation of those life limits, and prohibiting reinstallation of non-spring-loaded circlips.

Since that AD was issued, Austro Engine developed a modification, which allows replacing the waste gate controller and the circlip on condition, and issued the MSB accordingly.

For the reason stated above, this AD retains the requirements of EASA AD 2017-0250, which is superseded, and requires an engine modification by installing a waste-gate control-rod fail-safe bridge and a new circlip, which cancels the life limitations.

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

Required as indicated, unless accomplished previously:

Re-statement of the requirements of EASA AD 2017-0250:**Replacement:**

- (1) Within the compliance time as identified in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 250 flight hours (FH), replace the waste gate controller and the circlip in accordance with the instructions of Austro Engine MSB-E4-022, revision 2.

Table 1 – Initial replacement compliance time

Group	Compliance Time (A or B, whichever occurs later)	
1	A	Within 50 FH or 2 months, whichever occurs first after 01 January 2018 [the effective date of EASA AD 2017-0250]
	B	Within 250 FH since first installation on an engine
2	A	Within 100 FH or 5 months, whichever occurs first after 01 January 2018 [the effective date of EASA AD 2017-0250]
	B	Within 250 FH since first installation on an engine



Parts Installation:

- (2) From 01 January 2018 [the effective date of EASA AD 2017-0250], do not install on any engine a non-spring-loaded circlip Part Number DIN6799-5.

New requirements of this AD:**Modification:**

- (3) Within 200 FH or 6 months, whichever occurs first after the effective date of this AD, modify the engine in accordance with the instructions of the MSB.

Terminating Action:

- (4) Modification of an engine, as required by paragraph (3) of this AD, cancels the replacement requirement of paragraph (1) of this AD for that engine.

Ref. Publications:

Austro Engine MSB MSB-E4-022 revision 2 dated 27 November 2017, and revision 3 dated 16 April 2018.

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. This AD was posted on 08 May 2018 as PAD 18-067 for consultation until 05 June 2018. 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.
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, A-2700 Wiener Neustadt, Austria Telephone +43-2622-23000-2525, E-mail service@austroengine.at.

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

