

## SERVICE INFORMATION NO. SI 40NG-027

**NOTE:** SI's are used only:  
1) To distribute information from DAI to our customers.  
2) To distribute applicable information/documents from our suppliers to our customers with additional information.  
Typically there is no revision service for SI's. Each new information or change of that will be sent along with a new SI.

### I. TECHNICAL DETAILS

#### 1.1 Airplanes affected:

All DA 40 NG airplanes

#### 1.2 Subject:

EASA Airworthiness Directive No. 2013-0025R1 and Austro Engine Mandatory Service Bulletin MSB-E4-007/4

ATA-Code: 72-00

#### 1.3 Reason:

EASA has issued Airworthiness Directive No. 2013-0025R1 which revises the existing Airworthiness Directive No. 2013-0025 dated 06-Feb-2013. EASA AD No. 2013-0025R1 allows alternative P/ N waste gate controllers be installed as replacement parts and refers to Austro Engine Mandatory Service Bulletin No. MSB-E4-007/4 which supersedes MSB-E4-007/3 dated 28-Nov-2012.


#### 1.4 Information:

For detailed technical information refer to EASA Airworthiness Directive No. 2013-0025R1 and Austro Engine Mandatory Service Bulletin MSB-E4-007/4 which are applicable without any further additions or restrictions.

### II. OTHERS

EASA Airworthiness Directive No. 2013-0025R1 and Austro Engine Mandatory Service Bulletin MSB-E4-007/4 are attached to this Service Information.

In case of doubt contact EASA or Austro Engine GmbH.

<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>	
	<p><b>AD No.: 2013-0025R1</b></p> <p><b>Date: 30 April 2013</b></p> <p>Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.</p>	
<p>This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
<p><b>Design Approval Holder's Name:</b> AUSTRO ENGINE GmbH</p>	<p><b>Type/Model designation(s):</b> E4 engines</p>	
<p>TCDS Number: EASA.E.200</p>		
<p>Foreign AD: Not applicable</p>		
<p>Revision: This AD revises EASA AD 2013-0025 dated 06 February 2013.</p>		
<b>ATA 72</b>	<b>Engine – Waste Gate Controller – Replacement</b>	
<p><b>Manufacturer(s):</b></p>	<p>Austro Engine GmbH</p>	
<p><b>Applicability:</b></p>	<p>Model E4 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Diamond Aircraft Industries DA 40 NG and DA 42 NG aeroplanes.</p>	
<p><b>Reason:</b></p>	<p>Several power loss events have been reported on Austro E4 engines, due to fracture of the waste gate controller lever.</p> <p>This condition, if not corrected, could lead to further cases of power loss events, possibly resulting in forced landing, damage to the aeroplane and injury to occupants.</p> <p>To address this potential unsafe condition, Austro Engine introduced a waste gate controller of improved design, Part Number (P/N) E4A-41-120-000 revision (Rev.) 070.</p> <p>Consequently, EASA issued AD 2013-0025 to require replacement of all previous revisions of P/N E4A-41-120-000 and P/N E4B-41-120-000 waste gate controllers with improved design P/N E4A-41-120-000 Rev.070 units.</p> <p>Since that AD was issued, it was established that other P/N waste gate controllers are eligible for installation.</p> <p>For the reason described above, this AD is revised to allow alternative P/N waste gate controllers be installed as replacement parts.</p>	

Effective Date:	Revision 1: 30 April 2013 Original issue: 20 February 2013						
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Within 110 flight hours, or during the next schedule engine maintenance, or within 3 months, whichever occurs first after 20 February 2013 [the effective date of the original issue of this AD], replace the waste gate controller in accordance with the instructions of Austro Engine Mandatory Service Bulletin (MSB) MSB-E4-007 Revision 3 (or later revision).</p> <p>(2) From 20 February 2013 [the effective date of the original issue of this AD], do not install on any engine a waste gate controller with a P/N as listed in Table 1 of this AD.</p> <p style="text-align: center;">Table 1 – Waste Gate Controllers not eligible for Installation</p> <table border="1" data-bbox="550 651 1350 797"> <thead> <tr> <th>Engine configuration</th> <th>P/N</th> </tr> </thead> <tbody> <tr> <td>E4-A</td> <td>E4A-41-120-000 Rev. 050 and lower</td> </tr> <tr> <td>E4-B</td> <td>E4B-41-120-000 Rev. 000</td> </tr> </tbody> </table>	Engine configuration	P/N	E4-A	E4A-41-120-000 Rev. 050 and lower	E4-B	E4B-41-120-000 Rev. 000
Engine configuration	P/N						
E4-A	E4A-41-120-000 Rev. 050 and lower						
E4-B	E4B-41-120-000 Rev. 000						
Ref. Publications:	<p>Austro Engine MSB-E4-007 Revision 3 dated 28 November 2012, or Revision 4 dated 24 April 2013.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>						
Remarks:	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. The original issue of this AD was posted on 08 January 2013 as PAD 13-004 for consultation until 05 February 2013. No comments were received during the consultation period.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: Austro Engine GmbH, Rudolf-Diesel-Straße 11, A-2700 Wiener Neustadt, Austria Telephone: +43 2622 23000 2525 Fax: +43 2622 23000-2711 E-mail: <a href="mailto:service@austroengine.at">service@austroengine.at</a>.</li> </ol> <p>The referenced publication can be downloaded directly from the Austro Engine GmbH <a href="#">Service Bulletin</a> webpage.</p>						



MSB Service Bulletin  
No. MSB-E4-007/4

Austro Engine GmbH  
Rudolf-Diesel-Strasse 11  
A-2700 Wiener Neustadt  
Tel: +43 2622 23000  
FAX: +43 2622 23000-2711

# MANDATORY SERVICE BULLETIN

**No. MSB-E4-007/4**  
**SUPERSEDES DOC. No. MSB-E4-007/3**

## 1. BASIC INFORMATION

### 1.1. SUBJECT

Replacement of Waste Gate Controller

### 1.2. ENGINES AFFECTED

Type: E4 Engine

Serial numbers:

- E4-A-00001 to E4-A-00051 having waste gate controller E4A-41-120-000 Rev. 050 or lower installed.
- E4-B-00001 to E4-B-00279 having waste gate controller E4B-41-120-000 Rev. 000 or E4A-41-120-000 Rev. 050 or lower installed.

#### ATTENTION:

The following waste gate controllers are **not** affected and Austro Engine GmbH has no objection against further use:

- E4A-41-120-000 Rev. 060 or higher
- E4B-41-120-000 Rev. 010
- E4C-41-120-000 Rev. 000

### 1.3. REASON

There have been cases where the rod of the Waste Gate Controller cracked. Therefore replacement with latest Waste Gate Controller design is necessary.

### 1.4. TIME OF COMPLIANCE

At next maintenance action from Date of 2<sup>nd</sup> Revision, but not later than 100 operating hours or later than 30<sup>th</sup> April 2013, whichever comes first.

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## 1.5. CONCURRENT DOCUMENTS / REFERENCES

Maintenance Manual – Doc. No.: E4.08.04, latest effective issue

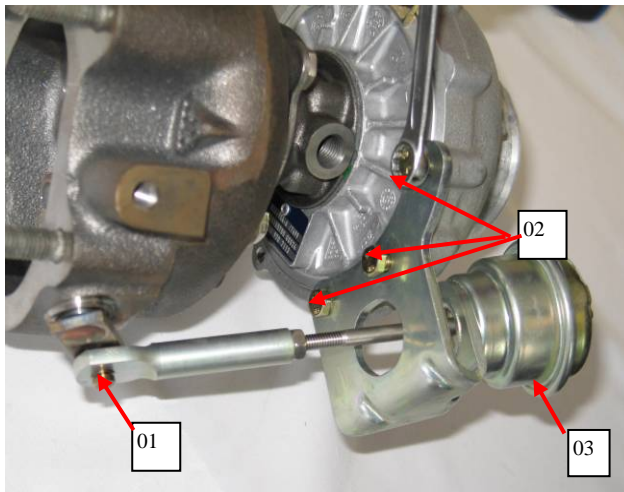
## 1.6. OTHER PUBLICATIONS AFFECTED

None.

## 2. TECHNICAL DETAILS

### 2.1. ACCOMPLISHMENT / INSTRUCTIONS

Removal of installed Waste Gate Controller:



1. Disconnect Hose at the top of the Waste Gate Controller
2. Remove three M6 Bolts [02]
3. Remove Circlip [01]
4. Disconnect rod from waste gate lever and remove waste gate controller [03]

Install new Waste Gate Controller according to table section 3.1.



**Note:** Austro Engine GmbH has no objection against further use of Waste Gate Controllers E4A- E4A-41-120-000 Rev.060, E4B-41-120-000 Rev.010 or E4C-41-120-000 Rev.000 in the same configuration of the E4 engine as installed.

1. Install the three M6 Bolts [02] and torque them with 7 Nm
2. Attach external pump to the top of the Waste Gate Controller and apply pressure till the rod starts to move
3. Connect rod to waste gate lever
4. Adjust Waste Gate Controller according to Engine Maintenance Manual E4.08.04, Chapter 81-00-32.



**Note:** For fixing of the rod on the waste gate lever use new circlip.

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## 2.2. ILLUSTRATIONS

None.

## 2.3. MASS (WEIGHT)

Not affected.

## 2.4. APPROVAL STATEMENT

The technical content of this document has been approved under the authority of DOA No. EASA.21J.399.

## 3. PLANNING INFORMATION

### 3.1. MATERIAL & AVAILABILITY

The following spare part can be mounted on the E4-A, E4-B and E4-C configuration of the E4 engine:

Amount	Part Name	Part Number	Rev. Number
1	Waste Gate Controller	E4A-41-120-000	070 or higher
1	Circlip	DIN 6799-5	---

For materials & availability please contact the Austro Engine GmbH – After Sales Support (e-mail: [service@austroengine.at](mailto:service@austroengine.at); Tel: +43 2622 23000 2525)

### 3.2. SPECIAL TOOLS

Not applicable.

### 3.3. LABOR EFFORT

Approximately 30 minutes.

### 3.4. CREDIT

Materials as listed in section 3.1 and transportation costs of part if within warranty time period.

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## 4. REMARKS

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### **NOTE:**

- All measures must be carried out by a certified engine station and certified engine mechanics.
- The accomplishment of the instructions shown under chapter 2.1 must be confirmed in the respective engine log book.
- The accomplishment of the instructions must be carried out within the time of compliance according to chapter 1.4.
- In case of doubt please contact the Austro Engine GmbH – After Sales Support (e-mail: [service@austroengine.at](mailto:service@austroengine.at); Tel: +43 2622 23000 2525).
- For credit information contact Austro Engine GmbH – After Sales Support (e-mail: [service@austroengine.at](mailto:service@austroengine.at); Tel: +43 2622 23000 2525).

## 5. EXPLANATORY NOTES

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### 5.1. SYMBOL EXPLANATION



**WARNING:** Disregarding these safety rules can cause personal injury or even death.



**CAUTION:** Disregarding these special instructions and safety measures can cause damage to the engine or other components.



**NOTE:** Additional note or instruction for better understanding of an instruction.

## 6. APPENDIX

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Execution Report

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## EXECUTION REPORT TO SERVICE BULLETIN MSB-E4-007/4

### ENGINE DATA

Engine serial number: \_\_\_\_\_

Engine operating hours: \_\_\_\_\_

Date of exchange: \_\_\_\_\_

### AIRCRAFT DATA

Aircraft serial number: \_\_\_\_\_

Aircraft registration: \_\_\_\_\_

\_\_\_\_\_  
Date, Name, Signature

Please submit the completed form to fax No.: +43(0)2622-23000-2709 or to the following e-mail address: [service@austroengine.at](mailto:service@austroengine.at).

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