



MANDATORY SERVICE BULLETIN

No. MSB-E4-022/5
SUPERSEDES MSB-E4-022/4

1. BASIC INFORMATION

1.1. SUBJECT

Waste Gate Control Rod.

1.2. ENGINES AFFECTED

Engine type: E4
Engine model(s): E4, E4P
Serial number(s): all

1.3. REASON

Waste gate control rods with insufficient fatigue life have been identified. Failure of the waste gate control rod will lead to a partial loss of power.

As precautionary action Austro Engine prescribes a time limit for the waste gate controllers without waste gate con-rod fail-safe bridge.

As terminating action for the time limit the waste-gate control-rod fail-safe bridge has been introduced. After installation of the waste-gate control-rod fail-safe bridge the waste-gate controller is set on condition with specified scheduled maintenance checks per Maintenance Manual.

1.4. TIME OF COMPLIANCE

Initial action:

- Upon reaching 250 flight hours in service time of the waste gate controller
- For E4-B and E4-C engines installed on DA 42 M-NG with external containers and E4-A engines:
For waste-gate controllers with more than 200 flight hours as of 27-Nov-2017 within the next 50 flight hours, but not later than 28-Feb-2018 if 250 flight hours in service time of the waste gate controller are exceeded as of 28-Feb-2018.
- All other engines:
For waste-gate controllers with more than 200 flight hours as of 27-Nov-2017 within the next 100 flight hours, but not later than 31-May-2018 if 250 flight hours in service time of the waste gate controller are exceeded as of 31-May-2018.

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Repetitive Action:

- Upon reaching 250 flight hours in service time of the waste gate controller

Terminating Action:

- Within 200 flight hours after 30-Apr-2018, but not later than 31-Oct-2018

Prior compliance with MSB-E4-022 through MSB-E4-022/2 is considered equivalent to the initial action or repetitive action, as applicable.

Prior compliance with the terminating action of MSB-E4-022/3 through MSB-E4-022/4 is considered equivalent to the terminating action of MSB-E4-022/5.

1.5. CONCURRENT DOCUMENTS / REFERENCES

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

1.6. OTHER PUBLICATIONS AFFECTED

None.

2. TECHNICAL DETAILS

2.1. ACCOMPLISHMENT / INSTRUCTIONS

Initial Action:

1. Make sure MM-TR-MDC-E4-386 and MM-TR-MDC-E4-399 are inserted into the Maintenance Manual or a revision of the Maintenance Manual with the Temporary Revisions incorporated is used.
2. Replace the waste gate controller according to Maintenance Manual section 81-00-33.
3. Install a new the spring loaded circlip E4A-41-100-801. Refer to figure 4

Repetitive Action:

1. Replace the waste gate controller according to Maintenance Manual section 81-00-33.
2. Install a new the spring loaded circlip E4A-41-100-801. Refer to figure 4.

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Terminating Action:

NOTE:

- Installing a waste-gate controller or a turbocharger with the waste-gate con-rod fail-safe bridge already installed is considered as accomplishment of the terminating action.
 - For new engines already produced with the waste-gate con-rod fail-safe bridge already installed, the terminating action may be recorded as completed.
1. Make sure MM-TR-MDC-E4-422 is inserted into the Maintenance Manual or a revision of the Maintenance Manual with the Temporary Revisions incorporated is used.
 2. If not yet installed, install a new spring loaded circlip E4A-41-100-801. Refer to figure 4.

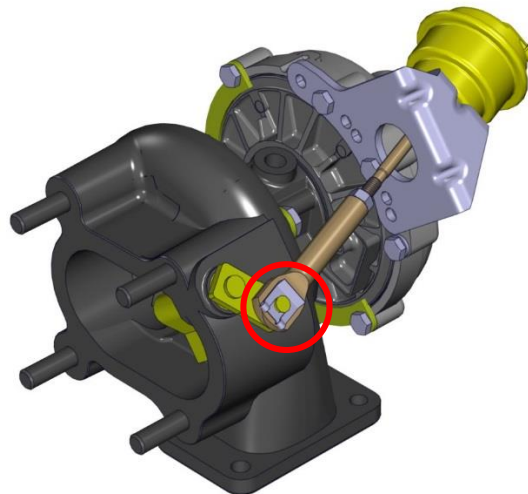


Figure 4: Waste Gate Circlip

3. Install the waste-gate con-rod fail-safe bridge according to Maintenance Manual section 81-00-36 or install a waste-gate controller with the fail-safe con-rod bridge already installed. Make sure there is sufficient clearance to adjacent parts.
4. For twin engine installations only: If there is insufficient clearance between the waste-gate con-rod fail-safe bridge and the fire sensor bracket, shim between the fire sensor bracket and the injector cover with bushings BU2-20-08-0050-C. Refer to Figure 5 and the Airplane Maintenance Manual for installation.

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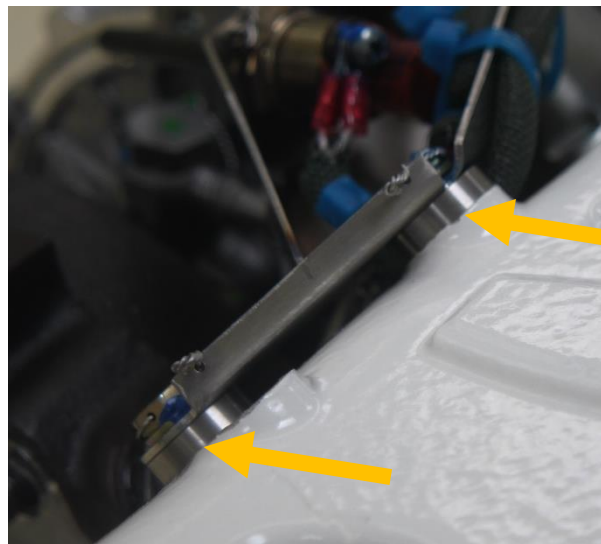


Figure 5: Fire sensor bracket shims

2.2. MASS (WEIGHT)

Negligible.

2.3. APPROVAL STATEMENT

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

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3. PLANNING INFORMATION

3.1. MATERIAL & AVAILABILITY

For replacement of the waste-gate controller:

Qty	Part Number	Description
1	E4A-41-120-000	Waste Gate Controller
1	E4A-41-100-801	Spring loaded circlip

For the terminating action:

Qty	Part Number	Description
1	E4A-41-100-801	Spring loaded circlip (if not yet installed)
1	AEP-00265-100	Bracket Assy 1
1	AEP-00265-100	Bracket Assy 2
2	AEP-00247-801	Screw with drill hole
2	E4A-53-300-801	Screw with drill hole
2	DS BU2-20-08-0050-C	Bushing (if necessary)
2	LN 9038 K 08 024	Hexagon Screw (if necessary)

3.2. SPECIAL TOOLS

As stated in the Maintenance Manual E4.08.04.

3.3. LABOR EFFORT

0.5 hours.

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4. REMARKS

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 chapter 1.
- In case of doubt please contact the Austro Engine GmbH – After Sales Support (e-mail: service@austroengine.at; Tel: +43 2622 23000 2525).
- For credit information contact Austro Engine GmbH – After Sales Support (e-mail: service@austroengine.at; Tel: +43 2622 23000 2525)

5. EXPLANATORY NOTES

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

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