



Mandatory Service Bulletin
No. MSB-E4-017/1

Austro Engine GmbH
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MANDATORY SERVICE BULLETIN

No. MSB-E4-017/1
SUPERSEDES DOC. No. MSB-E4-017

1. BASIC INFORMATION

1.1. SUBJECT

Check/Exchange of timing chain.

1.2. ENGINES AFFECTED

Type: E4 Engine
Serial numbers: All

1.3. REASON

On few engines considerable wear of the timing chain has been detected, which could lead to a fraction of the timing chain and a subsequent loss of power. A check of the condition of the timing chain has been defined including instructions for exchanging the timing chain and the chain wheel if applicable. Refer to the maintenance manual of the E4 engine for details.

1.4. TIME OF COMPLIANCE

Ensure that Temporary Revision MM-TR-MDC-E4-325d is incorporated into the maintenance manual E4.08.04. Refer to section 05-20-00 "Schedule Maintenance Inspections and Checks" of the maintenance manual of the E4 engine for details.



CAUTION:

Engines with more than 1000 hours operation time have to conduct a check of the timing chain according to section 85-40-40 of the maintenance manual within the next 100 hours.

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1.5. CONCURRENT DOCUMENTS / REFERENCES

Maintenance Manual – Doc. No.: E4.08.04, latest effective issue with
Temporary Revision MM-TR-MDC-E4-325d incorporated.

1.6. OTHER PUBLICATIONS AFFECTED

None.

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2. TECHNICAL DETAILS

Ensure that Temporary Revision MM-TR-MDC-E4-325d is incorporated into the maintenance manual E4.08.04. Refer to instructions given in the maintenance manual section 85-40-40 "Check of timing chain".

2.1. ILLUSTRATIONS

None.

2.2. MASS (WEIGHT)

Not affected.

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

Required material for checking the tension of the timing chain:

| Amount | Part Name | Part Number | Rev. Number | <i>E4 Engine configuration</i> | |
|--------|------------------------------|----------------|-------------|--------------------------------|-------|
| | | | | -A | -B/-C |
| 1 | Seal Boost Pressure Manifold | E4A-04-000-004 | 000 | | X |
| 1 | Seal Alu | E4A-75-600-401 | 000 | X | X |

Required material if the timing chain and the timing chain wheel have to be replaced:

| Amount | Part Name | Part Number | Rev. Number |
|--------|--------------------------------|------------------------------|-------------|
| 6 | Toothed Washer | DIN 6797 A6,4-VZ | --- |
| 2 | Ring Seal | DIN 7603-C12x16x2 CU | --- |
| 4 | Ring Seal | E4A-03-000-801 | 000 |
| 4 | Screw (Injector Fixing) | E4A-03-000-802 | 000 |
| 1 | Seal Boost Pressure Manifold | E4A-04-000-004 | 000 |
| 3 | O-Ring Oil Return Line | E4A-05-000-103 | 000 |
| 1 | Seal Oil Return Line | E4A-05-000-104 | 000 |
| 1 | Chain wheel | E4A-07-000-101 | 000 |
| 3 | Screws for chain wheel | E4A-07-000-402 | 000 |
| 2 | Screws for assy sensor housing | E4A-22-000-803 ^{*)} | 000 |
| 1 | Timing chain, open version | E4A-75-100-000 | 020 |

^{*)} E4A-22-000-803 is fully interchangeable with E4A-01-000-801, E4A-10-000-803 and E4A-55-100-802.

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3.2. SPECIAL TOOLS

Required material for checking the tension of the timing chain:

| Amount | Part Name | Part Number |
|--------|-----------------------------|-------------|
| 1 | Timing chain measuring tool | AEP-00150 |

Required material if the timing chain and the timing chain wheel have to be replaced:

| Amount | Part Name | Part Number |
|--------|-------------------------|-------------------------|
| 1 | Camshaft adjusting tool | AE300T009 |
| 1 | Sealant Pistol | AE300T027 |
| 1 | Sealant (black) | AE300T028 ^{*)} |
| 1 | Grease for Injectors | AE300T029 |
| 1 | Chain guiding bar | AEP-00139 |
| 1 | Chain opening tool | AEP-00158 |
| 1 | Chain closing tool | AEP-00159 |
| 1 | Chain coupling | AEP-00160 |

*) Alternatively Loctite 5970 can be used.

3.3. LABOR EFFORT

Not specified; conducted during line maintenance.

3.4. CREDIT

None.

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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 section 2 TECHNICAL DETAILS 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 section 1.4.
- 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).

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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.

6. APPENDIX

None

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