



SERVICE BULLETIN

CHECKING OR REPLACEMENT OF THE EXHAUST BEND

ON ROTAX® ENGINE TYPE 914 (SERIES) SB-914-017 R1

MANDATORY

Repeating symbols:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

1) Planning information

1.1) Engines affected

All versions of the engine type:

- 914 F (Series) from S/N 4,420.001 to S/N 4,420.363

if they are equipped with the genuine ROTAX® exhaust bends part no. 979420/421/422, 979430/431/432, 979440/441/442 and 979450/451/452. In case of doubt contact your aircraft builder.

- ◆ **NOTE:** From the engine type S/N are obstructed modification exhaust bends together with optimized exhaust manifold and are from this Service Bulletin not more affected.

1.2) Concurrent ASB/SB/SI and SL

Further to this service bulletin the following additional service instructions must be observed and complied with:

- SI-25-1997, "Checking or replacement of the exhaust bend on ROTAX® engine type 914 (Series)" current issue.

1.3) Reason

One or more of the following could result in formation of cracks on the exhaust bends:

- Unapproved and untested modifications
- Improper carburetor synchronization
- Unsuitable idle speed (too low)
- Unsuitable engine suspension / non-neutralized vibrations
- Propeller balance out of tolerance
- Friction torque in the backlash range of gearbox not within tolerance
- Lack of maintenance
- Ground contact
- Excessive thermal strain

Vibrations, impacts, forces, thermal strain etc. could cause cracks on the exhaust bends.

- ▲ **WARNING:** Rectify any of the aforementioned without delay.

1.4) Subject

Checking or replacement of the exhaust bend.

1.5) Compliance

- Every 50 hours a checking of the exhaust bend must be conducted according to the following instructions in section 3.

1.6) Approval

The technical content of this Service Bulletin has been approved by ACG.

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1.7) Manpower

- estimated man-hours:
engine installed in the aircraft - - - manpower time will depend on installation and therefore no estimate is available from the engine manufacturer.

1.8) Mass data

- change of weight - - - none
- moment of inertia - - - unaffected

1.9) Electrical load data

no change

1.10) Software accomplishment summary

no change

1.11) References

In addition to this technical information refer to current issue of

- Illustrated Parts Catalog (IPC)
- Maintenance Manual (MM)

1.12) Other publications affected

none

1.13) Interchangeability of parts

At exchange take care of the following:

- If necessary remove the exhaust bend as per the following instructions and sent it to a ROTAX[®] Authorized Distributor or Service Center.

2) Material Information

2.1) Material - cost and availability

Price and availability will be supplied on request by ROTAX[®] Authorized Distributors or their Service Centers.

2.2) Company support information

- Exchanged parts must be returned F.O.B. to a ROTAX[®] Authorized Distributor or Service Center.
- Shipping cost, down time, loss of income, telephone costs etc. or cost of conversion to other engine versions or additional work, as for instance simultaneous engine overhaul is not covered in this scope and will not be borne or reimbursed by ROTAX[®].

2.3) Material requirement per engine

For the replacement of the exhaust bend the following parts are required:

- ◆ NOTE: The following new parts are only required when cracks have been detected in the respective exhaust bend.

| Fig item no | New part no | Qty per engine | Description | Old part no | application |
|-------------|-------------|----------------|--------------------------|-------------|---|
| | 979422 | 1 | exhaust bend assy cyl. 1 | | ROTAX [®] 914 |
| | 979432 | 1 | exhaust bend assy cyl. 2 | | ROTAX [®] 914 |
| | 979442 | 1 | exhaust bend assy cyl. 3 | | ROTAX [®] 914 |
| | 979452 | 1 | exhaust bend assy cyl. 4 | | ROTAX [®] 914 |
| | 942035 | 8 | lock nut M8 | | ROTAX [®] 914 (2 pieces each per exhaust bend) |

2.4) Material requirement per spare part

none

2.5) Rework of parts

none

**2.6) Special tooling/lubricant-/adhesives-/sealing compound -
Price and availability**

Price and availability:

- Price and availability will be supplied on request by ROTAX[®] Authorized Distributors or their Service Centers.

Parts requirement:

| Fig item no | New part no | Qty per engine | Description | Old part no | application |
|------------------------|------------------------|---------------------------|---------------------------------|------------------------|-------------------------|
| | 899651 | | LOCTITE [®] 648 | | studs exhaust |
| | 297434 | | LOCTITE [®] ANTI SEIZE | | labyrinth exhaust bends |

3) Accomplishment / Instructions

Accomplishment

All the measures must be taken and confirmed by the following persons or facilities:

- ROTAX[®] -Airworthiness representative
- ROTAX[®] -Distributors or their Service Centers
- Persons approved by the respective Aviation Authority

▲ **WARNING:** Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation. Secure aircraft against unauthorized operation. Disconnect negative terminal of aircraft battery.

▲ **WARNING:** Carry out work on a cold engine only.

▲ **WARNING:** Should removal of a locking device (namely lock tabs, self-locking fasteners) be required when undergoing disassembly/assembly, always replace with a new one.

◆ **NOTE:** All work has to be performed in accordance with the relevant Maintenance Manual.

3.1) Checking of the exhaust bend:

(see fig. 1)

- Inspect the exhaust bends (1) in accordance with the relevant Maintenance Manual.

◆ **NOTE:** Scrutinize the exhaust bends for exterior traces of smoke, cracks and other faults especially about the EGT-terminals (2). (see fig. 1)

- If cracks are detected replace the exhaust bend in accordance with the relevant Maintenance Manual.

- Restore aircraft to original operating configuration.

- Connect negative terminal of aircraft battery.

3.2) Test run

Conduct test run including ignition check and leakage test.

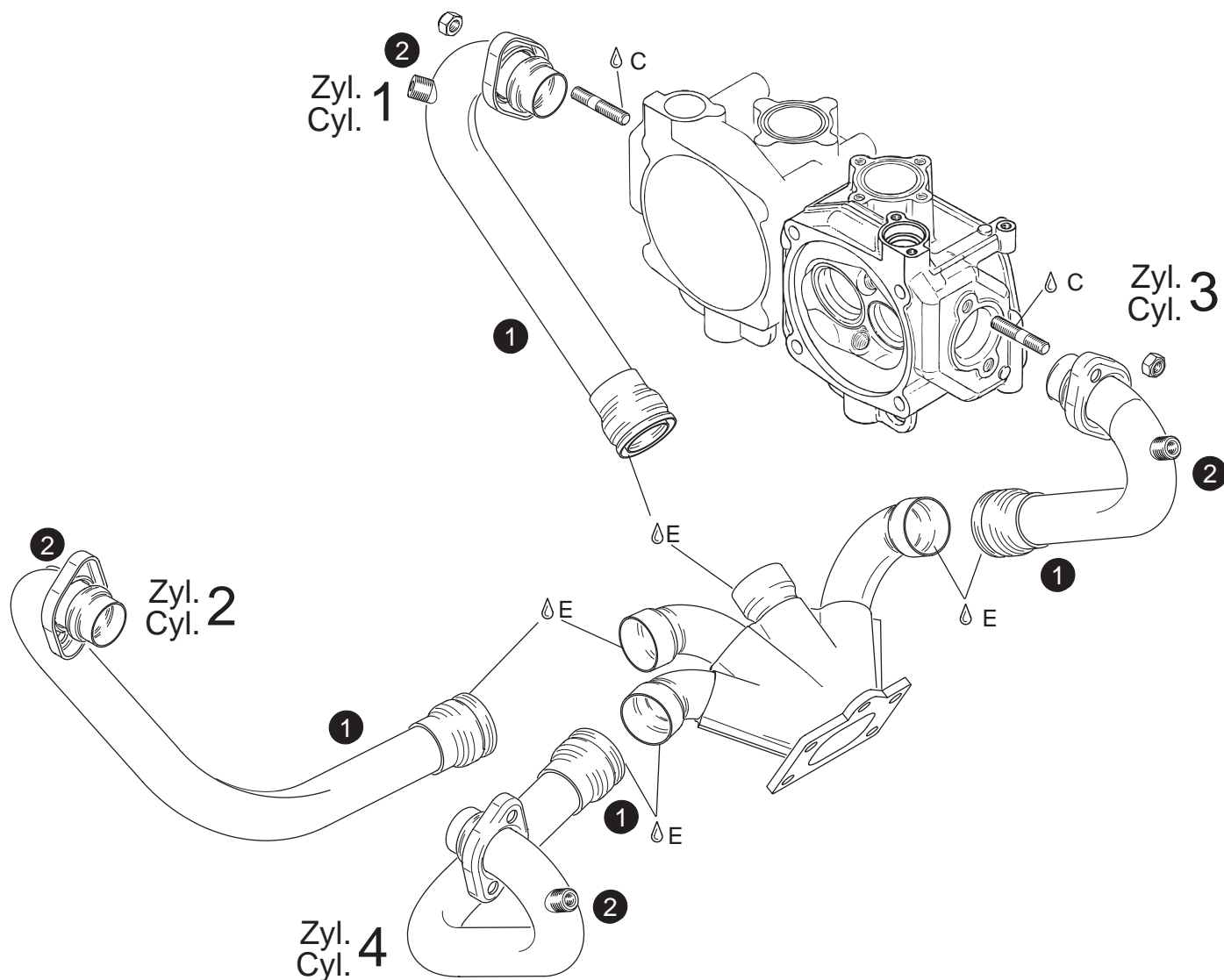
3.3) Summary

These instructions (section 3) have to be conducted in compliance with section 1.5.

Approval of translation to best knowledge and judgement - in any case the original text in German language and the metric units (SI-system) are authoritative.

4) Appendix

The following drawings should convey additional information:



△C: LOCTITE 648

△E: LOCTITE ANTI SEIZE

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fig. 1

◆ NOTE: The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function. Exploded views are **no technical** drawings and are for reference only. For specific detail, refer to the current documents of the respective engine type.