

# SERVICE BULLETIN

## CRACKS, WEAR AND DISTORTION ON THE CARBURETOR FLANGE ON ROTAX<sup>®</sup> ENGINES TYPE 912 AND 914 (SERIES)

**SB-912-030**

**SB-914-019**

### 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:

- 912 A<sup>1)</sup> (Series)
- 912 F<sup>1)</sup> (Series)
- 912 S<sup>1)</sup> (Series)
- 914 F all engines on which the genuine ROTAX<sup>®</sup> airbox assembly or its support have been changed.

<sup>1)</sup> with the exception of engines already equipped with the genuine ROTAX<sup>®</sup> airbox assembly with support.

◆ **NOTE:** The genuine ROTAX<sup>®</sup> airbox assy. acts also as additional support of the carburetors, if the airbox is properly supported.

▲ **WARNING:** In case of inadequate support (e.g. insufficient support of the airbox, integration of the intake intercoolers on the ROTAX<sup>®</sup> engine type 914, etc.) an additional carburetor support has to be provided.

#### 1.2) Concurrent ASB/SB/SI and SL

SI-03-1995 Cracks in the carburetor flange, Type 912 Series (current relevant edition)

#### 1.3) Reason

One or more of the following could result in increased stress and consequently in damage of the carburetor flange assembly:

- Unapproved and untested changes of installation, as for instance carburetor installation with intake manifolds pointing outwards
- Use of an airbox assembly and airfilter not approved or distributed by ROTAX<sup>®</sup>
- Improper carburetor synchronisation
- Unsuitable idle speed (too low)
- Unsuitable engine suspension / non-neutralized vibrations
- Propeller balance out of tolerance
- Minimum friction torque in the backlash in the propeller gearbox with overload clutch is below as specified in the relevant Operators Manual (chapter „Daily checks“)
- Carburetor attachment not as specified by engine manufacturer
- Lack of maintenance
- Unsuitable fuel, not as specified in the relevant Operators Manual or with more than 5 % Alcohol added
- Excessive weight on the carburetors or carburetor flanges

Vibration, impacts, forces etc., occurring mainly at start procedure but also feasible at all conditions of operation might result in damage of the carburetor flanges.

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

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**1.4) Subject**

Cracks, wear and distortion on the carburetor flange on ROTAX® engine type 912 und 914 (Series)

**1.5) Compliance**

- Within the next 10 hours of operation the carburetor flanges must be inspected for damage, cracks, wear and distortion according to the following instructions in section 3. Replace as required.
- Every 50 hours of operation the carburetor flanges must be inspected for damage, cracks, wear and distortion according to the following instructions in section 3. Replace as required.

**1.6) Approval**

The technical content of this Service Bulletin is approved by ACG.

**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

- 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 carburetor flange as per the following instructions.

**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**

- none

**2.3) Material requirement per engine**

For the replacement of the carburetor flange the following parts are required:

- ◆ NOTE: The new parts volume is only necessary if cracks have been detected in the carburetor flange.

Fig item no	New part no	Qty per engine	Description	Old part no	application
	267 787*	2	rubber flange		ROTAX® 912 / 914

\* ▲ WARNING: Don't use this part no. 267 787 together with part no. 847 890 spacer ring.

**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**

none

### 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 (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one.

#### 3.1) Inspection of the carburetor flanges

Inspection of the carburetor flanges in accordance with the relevant Maintenance Manual and the information contained in Section 4) Appendix, Figure 1 .

#### 3.2) Replacement/Installation of the carburetor flanges

Replacement/Installation of the carburetor flanges in accordance with the relevant Maintenance Manual. Restore aircraft to original operating configuration.

- Reconnect negative terminal of the aircraft battery.

#### 3.3) Test run

Conduct test run including ignition check and leakage test in accordance with the current Maintenance Manual of the respective engine type. If necessary the carburetors have to be newly synchronized in accordance with the relevant Maintenance Manual.

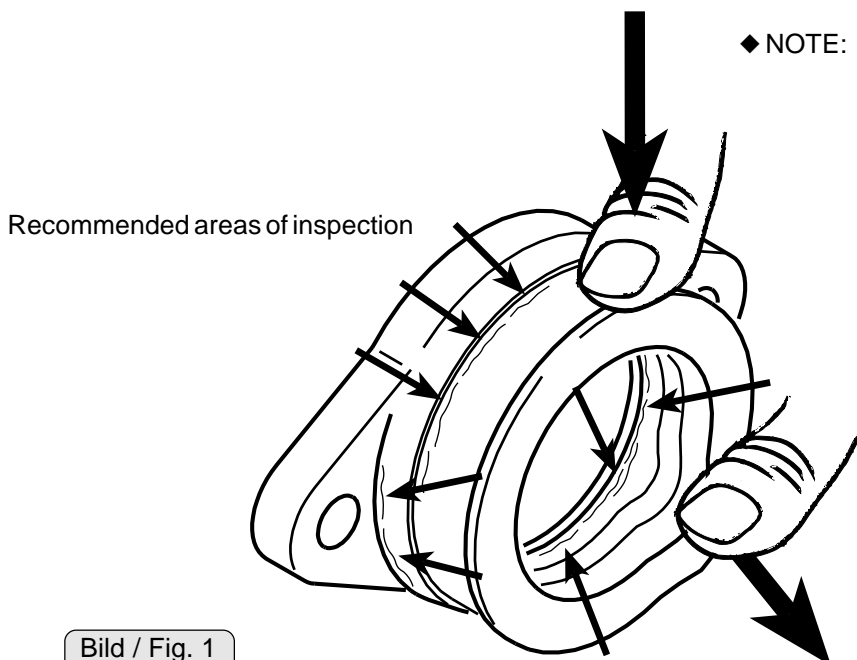
#### 3.4) Summary

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

▲ **WARNING:** Non-compliance with these instructions could result in engine damage, personal injury or death!

### 4) Appendix

The following drawing should convey additional information:



◆ **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.

Bild / Fig. 1

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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.