

# SERVICE BULLETIN

## REPLACEMENT OF WASHER PART NO. 944072 (FLY WHEEL HUB) FOR ROTAX® ENGINE TYPE 912 AND 914 (SERIES)

SB-912-058UL

SB-914-041UL

### MANDATORY

#### Symbols used:

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.

| || A revision bar outside of the page margin indicates a change to text or graphic.

### 1) Planning information

#### 1.1) Engines affected

All versions of the engine type:

- 912 UL from S/N 6,770.178 up to S/N 6,770.241 / 6,770.245 up to 6,770.251
- 912 ULS from S/N 6,777.699 up to S/N 6,777.716 / 6,777.718 up to 6,777.832 / 6,777.861 up to 6,777.885 / 6,777.896 up to 6,777.967 / 6,777.973 up to 6,778.025 / 6,778.031 up to 6,778.107 / 6,778.115 up to 6,778.139 / 6,778.179 up to 6,778.196
- 912 ULSFR S/N 6,778.108
- 914 UL from S/N 6,774.240 up to S/N 6,774.261 / 6,774.263 up to 6,774.269 / 6,774.271 up to 6,774.308 / 6,774.313 up to 6,774.321 / 6,774.327 up to 6,774.386 / 6,774.396 up to 6,774.425
- Washers delivered as spare part no. 944072 are not affected.

For complete instructions and compliance to this Service Bulletin refer to Service Bulletin SB-912-058/SB-914-041, latest edition section 1.2 onward.

- ◆ **NOTE:** Section 1.6) Approval: Is not required for engines of the type UL (series).  
Section 3) Accomplishment: In addition: persons with adequate type-specific training.

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#### **1) Planning information**

##### **1.1) Engines affected**

All versions of the engine type:

- 912 A from S/N 4,410.888 up to S/N 4,410.899
- 912 F from S/N 4,412.986 up to S/N 4,412.987
- 912 S from S/N 4,924.087 up to S/N 4,924.139 / 4,924.141 up to 4,924.166
- 914 F from S/N 4,420.970 up to S/N 4,420.990 / 4,420.997 / 4,421.001 up to 4,421.003
- Washers delivered as spare part no. 944072 are not affected.

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

none

##### **1.3) Reason**

A deviation in hardening process could cause an exceeding of hardness of certain washer. This deviation could lead to cracks in the washer and could cause loosening of fly wheel, ignition failure or engine damage.

##### **1.4) Subject**

Replacement of washer part no. 944072 (fly wheel hub) for ROTAX® engine type 912 and 914 (Series).

##### **1.5) Compliance**

- Required within the next 10 flight hours of operation after the effective date of this Service Bulletin, but at the latest before 31 August 2011. The replacement of washer part no. 944072 identified by the engine serial number (S/N) listed in section 1.1) must be conducted according to the following instructions in section 3.

- ▲ **WARNING:** Non-compliance with these instructions could result in engine damages, personal injuries or death.

##### **1.6) Approval**

The technical content of this document is approved under the authority of DOA ref. EASA.21J.048.

### 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)

- ◆ NOTE: The status of Manuals can be determined by checking the table of amendments of the Manual. The 1<sup>st</sup> column of this table is the revision status. Compare this number to that listed on the ROTAX WebSite: [www.rotax-aircraft-engines.com](http://www.rotax-aircraft-engines.com). Updates and current revisions can be downloaded for free.

### 1.12) Other publications affected

none

### 1.13) Interchangeability of parts

- All washers according to section 1.1) must be returned F.O.B to a ROTAX<sup>®</sup> Authorized Distributor or their Service Center.

- ◆ NOTE: Used parts should be tagged with a respective "UNSERVICEABLE" mark.

## 2) Material Information

### 2.1) Material - cost and availability

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

### 2.2) Company support information

- 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

parts requirement:

Fig.no.	New p/n	Qty/engine	Description	Old p/n	Application
	944072	1	washer 17/36/5		fly wheel hub
	950141	1	gasket ring A8x13		crank case

### 2.4) Material requirement per spare part

none

### 2.5) Rework of parts

none

### 2.6) Special tooling/lubricant-/adhesives-/sealing compound

none

### 3) Accomplishment / Instructions

- ◆ NOTE: Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements to prevent mistakes from an incomplete review of all of the information in this document.

#### 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: Risk of scalds and burns! Allow engine to cool sufficiently and use appropriate safety gear while performing work.

▲ 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.

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

#### 3.1) Replacement of washer part no. 944072

See fig. 1.

1. Remove ignition cover (1).
2. Lock the crankshaft in accordance with the relevant Maintenance Manual (Line).
3. Remove hex. screw (4) in accordance with the relevant Maintenance Manual (Heavy).

◆ NOTE: Fly wheel hub does not have to be removed unless it has become loose.

■ CAUTION: If the fly wheel hub has loosened during the disassembly and/or in case of doubt, then remove, clean and install the fly wheel hub in accordance with the relevant Maintenance Manual. In this case the tightening torque is 45 Nm (33.2 ft.lb) + 180° angle to rotation.

4. Install hex. screw (4). **Tightening torque 120 Nm (89 ft.lb).**

■ CAUTION: During installation the new washer (2) part no. 944072 must be used.

5. Remove locking pin of crankshaft in accordance with the relevant Maintenance Manual.
6. Check trigger coil gap, if necessary adjust it in accordance with the relevant Maintenance Manual.
7. Install ignition cover (1). The hex. screws (6) are locked with Loctite 221. Tightening torque 5 Nm (44 in. lb.).

- 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.

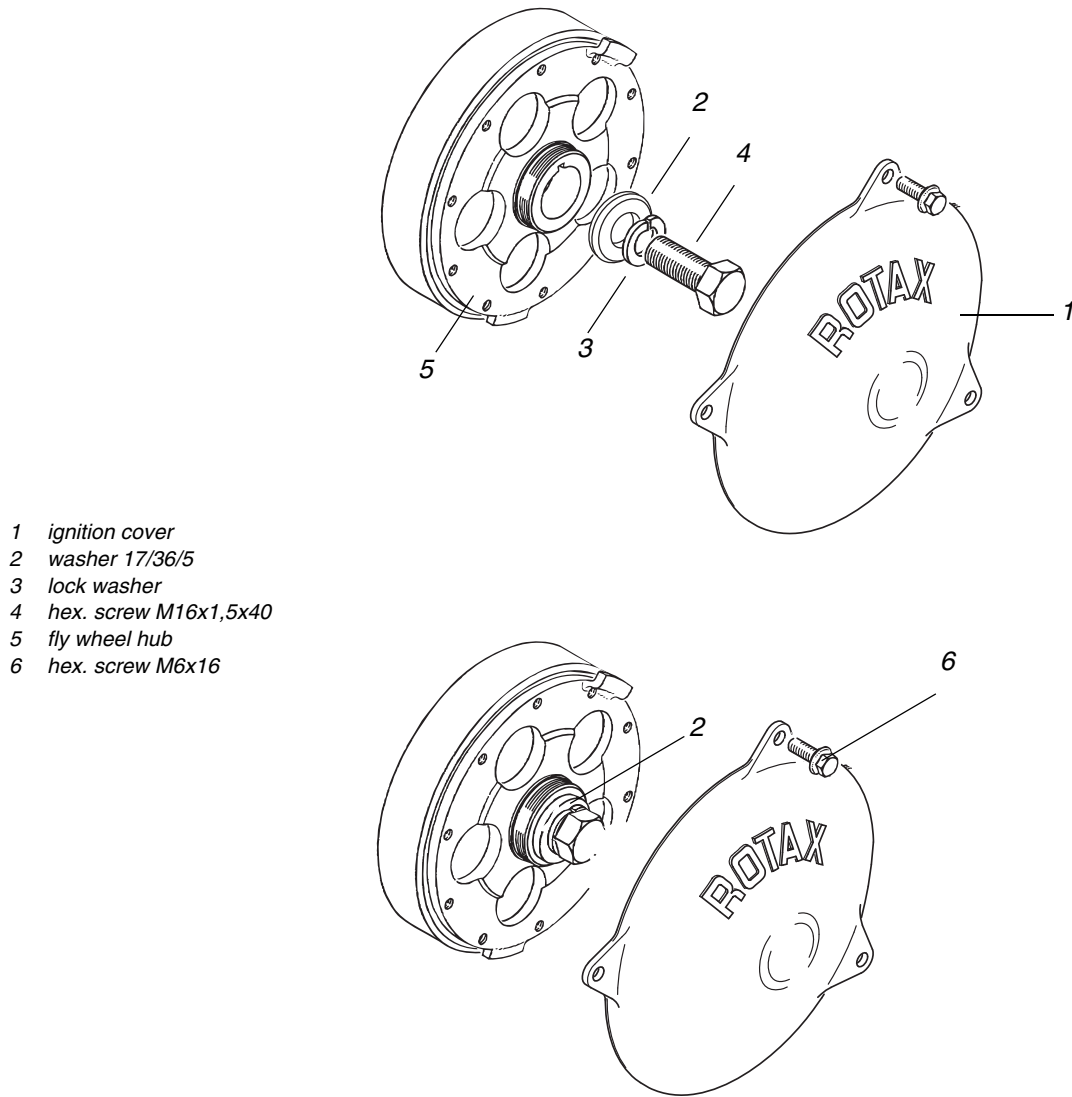
#### 3.3) Summary

These instructions (section 3) have to be conducted in accordance with compliance in section 1.5. The execution of the mandatory Service Bulletin must be confirmed in the logbook.

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:



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**Fig. 1**

#### **magneto ring, fly wheel hub, ignition cover**

- ◆ **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 **not technical drawings** and are for reference only. For specific detail, refer to the current documents of the respective engine type.