

# SERVICE BULLETIN

## Replacement of the overload clutch of ROTAX® Engine Type 914 (Series)

ATA System: 72-00-00 Engine

**MANDATORY**

### 1) Planning information

To obtain satisfactory results, procedures specified in this publication must be accomplished with accepted methods and prevailing legal regulations.

BRP-Powertrain GmbH & Co KG. cannot accept any responsibility for the quality of work performed in accomplishing the requirements of this publication.

#### 1.1) Applicability

All engines of Series 914 F are affected, if at least one of following criteria applies:

##### Criterion A) Engine Serial number:

NOTE: At the time of shipping the affected propeller gearboxes were installed on the engines with the serial numbers listed below. However, the determining factor is the serial number of the propeller gearbox and not the serial number of the engine

Engine type	Serial number
914 F	from S/N 4 421 411 up to S/N 4 421 444 inclusive

##### installed propeller gearboxes with following serial number (S/N):

S/n 64205 up to 64209 inclusive / 64215 up to 64218 inclusive / 64362 / 64455 / 64696 up to 64718

NOTE: The respective serial number of the propeller gearbox is shown on the gearbox housing.

##### Criterion B) Note for the future exchange of overload clutches of the engines type 914 (Series):

For all engines of the engine type 914 (Series), which are not affected by criterion A and/or B, overload clutches with labeled part no. and S/N on the housing must be used at an future replacement of the clutch assy.

NOTE: Spare parts labeled with part no. and S/N will be available from the date of this Service Bulletin. See Fig.1

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

none

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### 1.3) Reason

Due to a deviation in the manufacturing process, during engine operation at the engine type 914 (Series) a unwanted slipping of the integrated overload clutch of the propeller gearbox can occur. This may lead to an increase of the engine speed above the specified limit of 5800 rpm at maximum take-off power.

#### **NOTICE**

If exceeding the max. permitted engine speed or boost pressure, a special inspection according to the Operators Manual section 4.2 and/or Maintenance Manual Line chapter 05-50-00 must be performed.

### 1.4) Subject

Replacement of the overload clutch of ROTAX® engine type 914 (Series).

### 1.5) Compliance

- The replacement must be carried out before the next flight, if you suspect a slipping clutch, especially if at engine speed increase the propeller speed does not increase at the same rate.

NOTE: Pay attention to overspeed and compliance with maximum take-off performance of 5 minutes.

- Before the initial installation in an aircraft and/or the initial start-up thereafter.
- Carry out the replacement of the clutch assy. on the engines listed in section 1.1., according to the instructions in section 3 at the next BRP maintenance event or within the next 25 hours of operation, but at the latest after 6 months (from the date of the initial issue of this Service Bulletin).

#### **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) Labor time

engine installed in the aircraft - - - labor 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 modifications

no change

### 1.11) References

In addition to this technical information refer to current issue of

- Operators Manual (OM)
- Maintenance Manual Heavy (MMH)
- Maintenance Manual Line (MML)

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

### 1.12) Other Publications affected

none

### 1.13) Interchangeability of parts

- all used parts are unserviceable and must be returned F.O.B to ROTAX<sup>®</sup> Authorized Distributors or their Service Centers.

## 2) Material Information

### 2.1) Material- cost and availability

Price and availability will be provided on request by ROTAX<sup>®</sup> Authorized Distributors or their Service Centers.

### 2.2) Company support information

- Any possible support by BRP-Powertrain will be provided on request by ROTAX<sup>®</sup> Authorized Distributors or their Service Centers.
- Exchanged parts must be returned F.O.B to ROTAX<sup>®</sup> Authorized Distributors or their Service Centers.
- Shipping costs, downtime costs, loss of income, telephone costs etc. or costs of conversion to other engine versions or additional work, as for instance simultaneous engine overhauls are not covered in this scope and will not be borne or reimbursed by ROTAX<sup>®</sup>.

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**2.3) Material requirement per engine**

parts requirement:

Fig.no.	New p/n	Qty/ engine	Description	Old p/n	Application
-	-	1	clutch assy.	996885	gearbox set part no. 887281 (slim)
-	-	1	clutch assy.	996910	gearbox set part no. 887703 and/or 887708 (wide)
-	-	1	sealing	950141	crankshaft fixation
-	-	2	ring halve	926035	gearbox
-	-	1	thrust washer	827992	gearbox
-	-	1	oil filter	825012	engine
-	-	2	gasket ring	250010	oil tank

**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:

Part no.	Qty /engine	Description	Application
877660	1	puller assy.	propeller gearbox
877620*	1	oil filter wrench	oil filter
240880	1	thread bolt crankshaft	crankcase (crankshaft fixation)
899791	as required	LOCTITE 5910	sealing surface gearbox
898351	as required	Klueber Isoflex Topas Nb5051	clutch assy.
-	as required	AeroShell Oil Sport Plus 4	engine

\* or equivalent

**NOTICE**

If using these special tools observe the manufacturers specifications.

### 3) Accomplishment/Instructions

**NOTE:** Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements.

**Accomplishment**

All measures must be implemented and confirmed by at least one of the following persons or organizations:

- ROTAX® - Distributors or their Service Centers
- Persons with approved qualifications for the corresponding engine types. Only authorized persons (iRMT, Level Heavy Maintenance) are entitled to carry out this work.

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

**Safety notice**



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.

#### 3.1) Instructions

Step	Procedure
1	Check the criteria given on page 2, section 1.1, if the aircraft is affected by this SB.
2	Check the engine logbook and maintenance documentation, if this SB has already been accomplished.

#### 3.2) Disassembly of the propeller gearbox

Preparation work for replacement of the propeller gearbox according to the Maintenance Manual of the aircraft manufacturer.

Carry out removal of the propeller gearbox according to the relevant Maintenance Manual (Heavy).

#### 3.3) Replacement of the overload clutch

Carry out the replacement of the overload clutch according to the latest Maintenance Manual Heavy.

#### 3.4) Return of clutch assy.

After removing the clutch assy. it has to be marked with the serial number and duration of the propeller gearbox and returned to ROTAX® Authorized Distributors or their Service Centers according to section 2.2.

#### 3.5) Installation of the clutch assy.

Carry out the installation of the clutch assy. according to the latest Maintenance Manual Heavy.

#### 3.6) Installation of the propeller gearbox

Carry out the installation of the propeller gearbox according to the latest Maintenance Manual Heavy.

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**3.7) Finishing work**

- Restore aircraft to original operating configuration according to the instructions of the aircraft manufacturer.
- Connect negative terminal of aircraft battery.

**3.8) Test run**

Conduct test run. See also chapter 12-20-00 current issue of Maintenance Manual Line for the engine type 912/914 Series.

**NOTICE**

After replacing the propeller gearbox inspect the oil filter according to the latest Maintenance Manual (Line Maintenance, chap. 12-00-00) must be carried out.

**3.9) Checking the oil filter and magnetic plug**

Step	Procedure
1	Unscrew oil filter with oil filter wrench.
2	Cut the oil filter.
3	Detailed inspection of the filter insert for contamination. In case of doubt an authorized ROTAX® distributor or service center must be contacted.
4	Install new oil filter according to the Maintenance Manual and check for tightness.
5	Check the magnetic plug according to the latest Maintenance Manual Line, section 12-00-00.

**3.10) Summary**

These instructions (section 3) have to be followed in accordance with the deadlines from 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.

**3.11) Enquiries**

Enquiries regarding this Service Bulletin should be sent to the ROTAX® authorized distributor of your area. A list of all distributors is provided on [www.FLYROTAX.com](http://www.FLYROTAX.com).

#### 4) Appendix

The following drawings/schematics/tables should convey additional information:

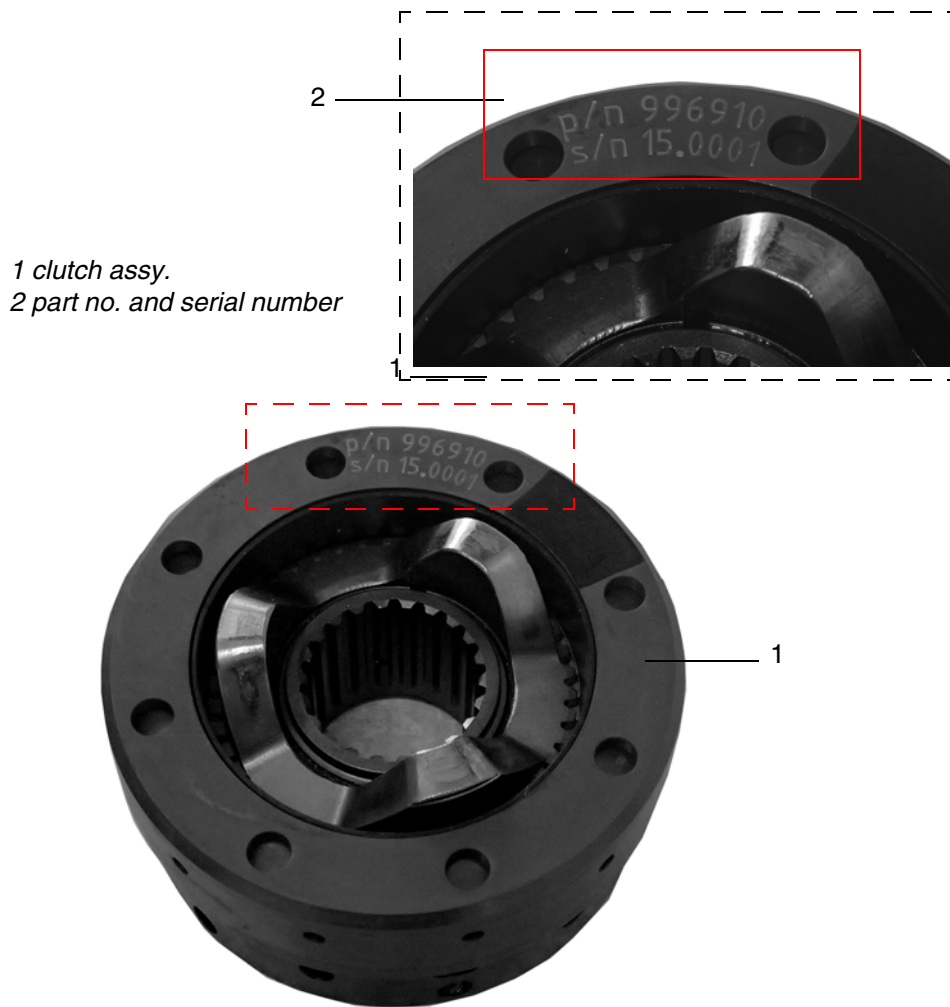


Fig. 1  
overload clutch

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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.

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