



## SERVICE INSTRUCTION

# Running modifications of the Bing constant depression carburetor for ROTAX® Engine Type 912 and 914 (Series) and 582 UL mod. 99/mod. 17 (Series)

ATA System: 73-00-00 Fuel system

### 1) Planning information

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

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

#### 1.1) Applicability

All versions of ROTAX® engines types:

Engine type	Serial number
912 (Series)	all
914 (Series)	all
582 UL Mod. 99/Mod. 17	all

NOTE: It is NOT mandatory to retrofit carburetors with older configurations state unless affected by a Service Bulletin.

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

In addition to this Service Instruction, the following Service Instructions must be observed and complied with:

- SI-912-012 /SI-914-014, title "Routine modifications of the Bing constant depression carburetor", current issue.
- SI-2ST-005, title "Running modifications on carburetors", current issue.

#### 1.3) Reason

In the course of continued development and our commitment to product improvement, changes to several carburetor parts have been introduced.

#### 1.4) Subject

Running modifications of the Bing constant depression carburetor for ROTAX® Engine Type 912 and 914 (Series) and 582 UL mod. 99/mod. 17 (Series).

#### 1.5) Compliance

NONE - For Information Only.

#### 1.6) Approval

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

#### 1.7) Labor time and credit

Estimated labor hours:

Engine installed in the aircraft - - - labor time will depend on airframe installation and therefore no estimate is available from the engine manufacturer.

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### 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:

- Illustrated Parts Catalog (IPC)
- Maintenance Manual Line (MML)
- Maintenance Manual Heavy (MMH)

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 parts are interchangeable
- Used parts and new parts may be intermixed with some reservations.

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## 2) Material Information

### 2.1) Material- cost and availability

Price and availability will be provided on request by ROTAX® Authorized Distributors or their independent Service Centers.

### 2.2) Company support information

- 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®.

### 2.3) Material requirement and credit per engine

None.

### 2.4) Material requirement per spare part

Following list shall provide an overview on changed or affected spare part numbers of the new carburetor generation "MY 2017".

Section	New part no.	Qty/ engine	Description	Old part no.	Application
3.2.2	830721	2	Gasket	830720 / 830724 / 830728	Float chamber
3.2.3	963026*	1	Throttle valve lever	963026	For cylinder 1/3
3.2.3	963021*	1	Throttle valve lever	963021	For cylinder 2/4
3.2.4	963230*	1	Float chamber assy. 1/3	963230	912 A/F/S
3.2.4	963232*	1	Float chamber assy. 2/4	963232	912 A/F/S
3.2.4	963235*	1	Float chamber assy. 1/3	963235	914 A/F
3.2.4	963237*	1	Float chamber assy. 2/4	963237	914 A/F
3.2.5	963666*	2	Throttle valve	963666	Throttle shaft
3.2.6	861189	2	Floats (pair)	861188	Carburetor

\* NOTE: Part number has not changed. These changes were introduced by an increase in revision state of the part.

### 2.5) Rework of parts

None.

### 2.6) Special tooling/lubricant-/adhesives-/sealing compound/price and availability

None.

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### 3) Accomplishment/Instructions

- ROTAX® reserves the right to make any amendments to existing documents, which might become necessary due to this standardization, at the time of next revision or issue.

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® - Authorized Distributors or their independent 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



**WARNING**

Identifies an instruction which, if not followed, may cause serious injury or even fatal injury.



**CAUTION**

Identifies an instruction which, if not followed, may cause minor or moderate injury.

**NOTICE**

Identifies an instruction which, if not followed, may severely damage the engine or could void any warranty.

### **ENVIRONMENTAL NOTE**

Environmental notes give you tips on environmental protection.

NOTE: Indicates supplementary information which may be needed to fully complete or understand an instruction.

#### 3.1) General

The modifications do have an effect on individual part changes and have been introduced in the different carburetor serial number ranges. Due to the relevant logistic chain the modifications were introduced as a running change in several steps and different carburetor serial numbers. For detailed information see the following section.

The various modifications need to be considered during the next repair work / major overhaul.

NOTE: The various color markings on the carburetor housing do have no relevant reference information for the end user.

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### 3.2) Individual part changes are as follows:

#### 3.2.1) Parts free of CR6+ chromium

See Fig. 5.

NOTE: Due to changing regulations all individual parts listed below are now free of CR6+ chromium.

Overview of parts with Cr6-free surface:

Item no.	Part no.	Description	Application
1	847910	Distance sleeve	Chamber top, spring attachment
2	244073	Washer 4.3	Fixation of throttle valve position sensor
3	841030	Combined screw M4x22	Fixation of throttle valve position sensor
4	938289	Return spring	Throttle lever
5	851072	Support 1/3	Chamber top, throttle cable
5	851074	Support 2/4	Chamber top, throttle cable
6	240761	Slotted head screw M5x16	Chamber top, throttle cable
7	942541	Hex. nut M6x0.75 hight 3 mm	Chamber top
7	261200	Hex nut M5	Chamber top
8	827160	Shim	Main jet
9	941200	Slotted head screw M3x6	Throttle valve fixation
10	241847	Allen screw M5x12	Throttle cable fixation
11	847740	Graduated sleeve	Throttle cable fixation
12	827800	Washer A 5.5	Throttle cable fixation
13	842030	Lock nut M5	Throttle cable fixation
14	841210	Combined screw M4x12	Diaphragm fixation
-	640220	Slotted head screw M6x5	Carburetor housing (2-stroke)
-	241430	Hex. screw M5x12	Cover plate fixation (2-stroke)
-	963167	Adjustment screw	Carburetor housing (2-stroke)

Parts with Cr6-free surface have been introduced as of:

Carburetor part no. 892500	from S/N 171420 inclusive
Carburetor part no. 892505	from S/N 171421 inclusive
Carburetor part no. 892520	from S/N 171517 inclusive
Carburetor part no. 892525	from S/N 171501 inclusive
Carburetor part no. 892530	from S/N 171748 inclusive
Carburetor part no. 892535	from S/N 171679 inclusive

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### 3.2.2) Gasket for float chamber

See Fig. 5.

The material of the float chamber (item no. 15) gasket (item no. 16) was changed to a Viton based material with new part no. 830721. This new gasket can be used instead of previous paper or cork gaskets part no. 830720 / 830724 / 830728.

New Viton gaskets have been introduced as of:

Carburetor part no. 892500	from S/N 172977 inclusive
Carburetor part no. 892505	from S/N 172883 inclusive
Carburetor part no. 892520	from S/N 172340 inclusive
Carburetor part no. 892525	from S/N 172450 inclusive
Carburetor part no. 892530	from S/N 172633 inclusive
Carburetor part no. 892535	from S/N 172783 inclusive

### 3.2.3) Throttle valve levers

See Fig. 1.

Throttle valve levers (1) were changed to a pressed notch style which provides improved connection to the throttle valve shaft. For the revised throttle levers part no. 963026 for the 1/3 carburetor and part no. 963021 for the 2/4 carburetor.

New throttle valve levers have been introduced as of:

Carburetor part no. 892500	from S/N 171420 inclusive
Carburetor part no. 892505	from S/N 171421 inclusive
Carburetor part no. 892520	from S/N 171517 inclusive
Carburetor part no. 892525	from S/N 171501 inclusive
Carburetor part no. 892530	from S/N 171748 inclusive
Carburetor part no. 892535	from S/N 171679 inclusive

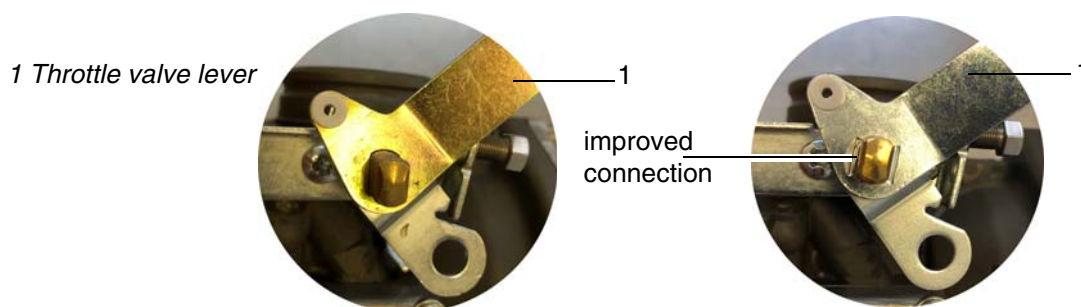


Fig. 1  
Throttle valve levers OLD and NEW

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## 3.2.4) Float chamber assembly

See Fig. 2.

The installation of the float chamber pins (1) was changed to a blind hole in the float chamber bottom instead of a through bore. The float pins are now approximately 2 mm (0.078 in.) longer. Part numbers for the revised float chambers are listed in section 2.4 of this Service Instruction. New float chamber assemblies have been introduced as of:

Carburetor part no. 892500	from S/N 171420 inclusive
Carburetor part no. 892505	from S/N 171421 inclusive
Carburetor part no. 892520	from S/N 171517 inclusive
Carburetor part no. 892525	from S/N 171501 inclusive
Carburetor part no. 892530	from S/N 171748 inclusive
Carburetor part no. 892535	from S/N 171679 inclusive

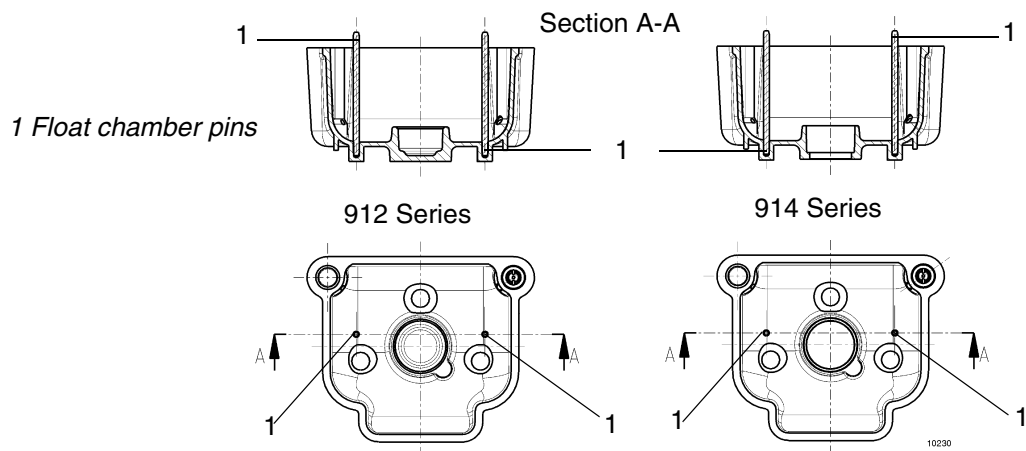


Fig. 2  
Float chamber pins

## 3.2.5) Throttle valve

See Fig. 3.

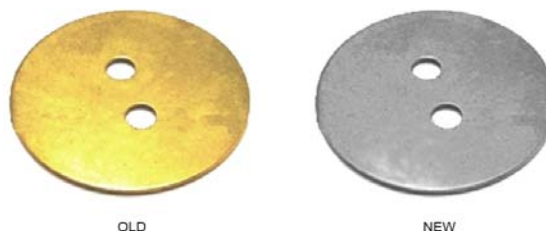
The throttle valve was changed to a machining process instead of die cutting process. The part number for the throttle valve is 963666.

New throttle valve has been introduced as of:

Carburetor part no. 892500	from S/N 171420 inclusive
Carburetor part no. 892505	from S/N 171421 inclusive
Carburetor part no. 892520	from S/N 171517 inclusive
Carburetor part no. 892525	from S/N 171501 inclusive
Carburetor part no. 892530	from S/N 171748 inclusive
Carburetor part no. 892535	from S/N 171679 inclusive

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*Fig. 3*  
*Throttle valve OLD and NEW*

### 3.2.6 Floats (pair)

See [Fig. 4](#).

New floats pair part no. 861189 has been introduced as of:

Carburetor part no. 892500	from S/N 185575 inclusive
Carburetor part no. 892505	from S/N 185690 inclusive
Carburetor part no. 892520	from S/N 185475 inclusive
Carburetor part no. 892525	from S/N 185630 inclusive
Carburetor part no. 892530	from S/N 185425 inclusive
Carburetor part no. 892535	from S/N 185326 inclusive

Maintenance (Line) - related information

Pay attention to the specifications of the latest version of the Maintenance Manual Line (MML) for respective engine type.

#### **NOTICE**

As per Maintenance Manual Line (MML) let the floats dry for 1-2 minutes. Only weigh dry floats. In no case the max. weight (of both floats together) is allowed to exceed 7 grams (0.0154 lb.). This applies to all floats, old and new.

See relevant Maintenance Manual Line (MML) Chapter 12-20-00.

Maintenance (Heavy) - related information

Pay attention to the specifications of the latest version of the Maintenance Manual Heavy (MMH) for respective engine type, Chapter 73-00-00 section Fuel system.

NOTE: Carburetor floats must be replaced as a pair.



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The new floats are not marked with any identification “dots”, but have instead of the “B” an “R” as an identification mark.

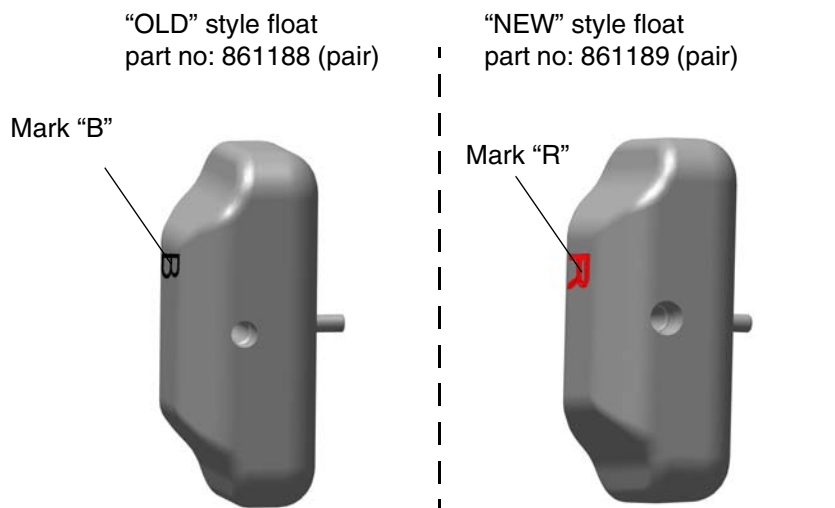


Fig. 4  
Floats OLD and NEW

### 3.2.7) Maintenance/Gasket set carburetor

See Fig. 5.

The various modifications on the carburetors are introduced in an ongoing process into the following sets and their relevant overhaul sets etc.:

item no.	Part no.	Description	Engine type
17	889534	Maintenance set carburetor	912/912S
17	889536	Maintenance set carburetor (which will eventually be replaced by part no. 889534 due to the standardization of parts)	914
18	996949	Gasket set carburetor	582 UL MY 99/MY 17

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### 3.3) Test run

Conduct test run. See Chapter 12-20-00 of the latest Maintenance Manual Line for the respective engine type.

### 3.4) Summary

These instructions (section 3) have to be followed in accordance with the deadlines specified in section 1.5.

The execution of the Service Instruction must be confirmed in the logbook.



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

Translation into other languages might be performed in the course of language localization but does not lie within ROTAX® scope of responsibility.

In any case the original text in English language and the metric units are authoritative.

### 3.5) Inquiries

Inquiries regarding this Service Instruction should be sent to the ROTAX® Authorized Distributor of your area.

A list of all ROTAX® Authorized Distributors or their independent Service Centers is provided on [www.FLYROTAX.com](http://www.FLYROTAX.com).

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## 4) Appendix

The following drawings should convey additional information:

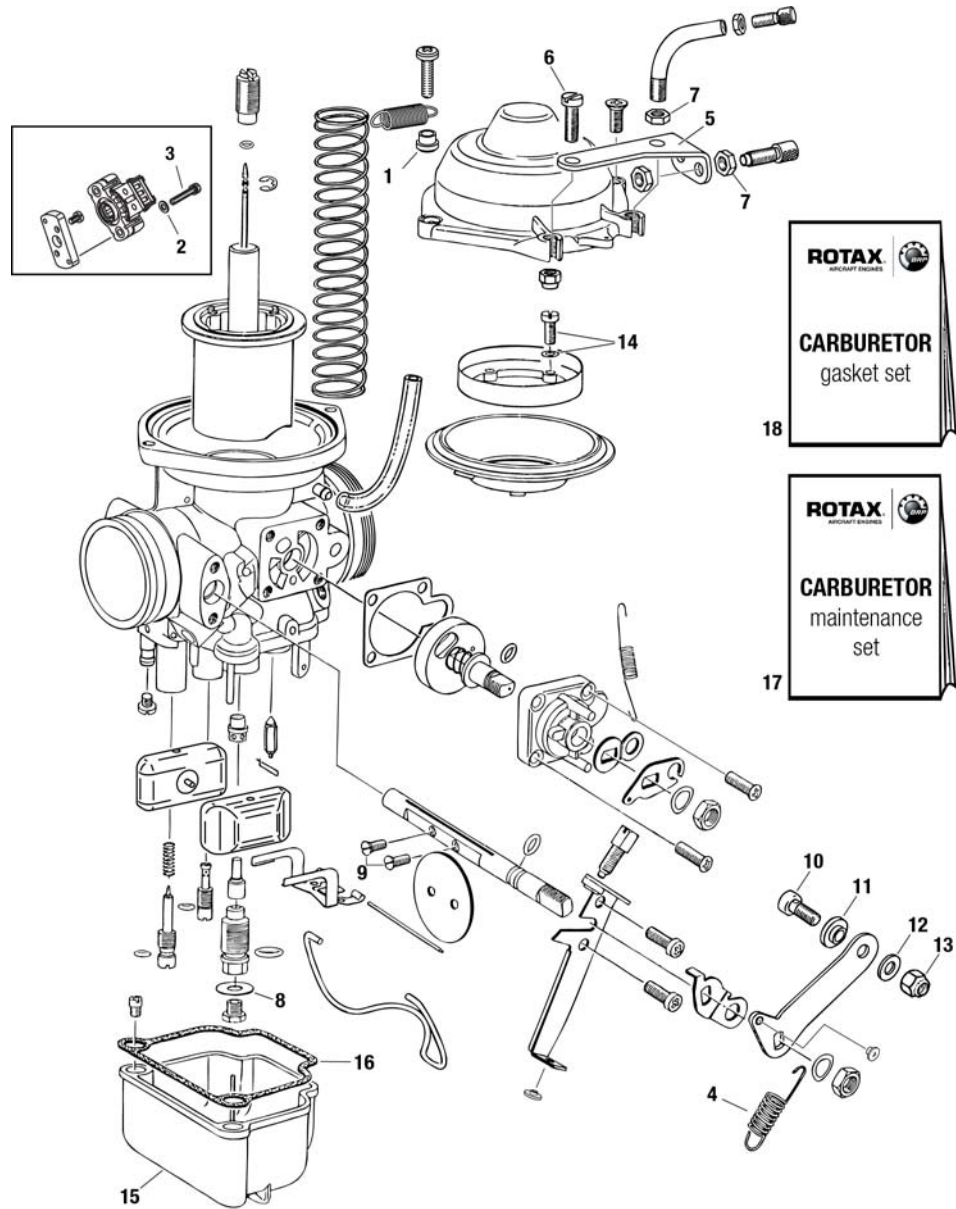


Fig. 5  
Carburetor parts

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

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