



AIRCRAFT ENGINES

# SERVICE INSTRUCTION

## MODIFIED ROTARY VALVE COVER FOR ROTAX® ENGINE TYPE 582 UL SI-2ST-005

### 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:

- 582 UL mod. 99\* from S/N 5,305.901 to S/N 5,381.288

- 582 UL mod. 90\*\*

\* if the engine is installed inverted (up side down) and with mixture lubrication (oil injection pump).

\*\*if the engine is installed inverted (up side down) and equipped with the rotary valve cover part no. 910 316 and mixture lubrication (oil injection pump).

If in doubt, contact the aircraft manufacturer.

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

none

#### 1.3) Reason

The following combination of engine installation and engine lubrication could result in fuel collecting in the rotary valve cover:

- engine installed inverted and configured with mixture lubrication (oil injection pump).

#### 1.4) Subject

Modified rotary valve cover for ROTAX® engine type 582 UL

#### 1.5) Compliance

- Within the next 10 hours of operation, but at the latest by June 1<sup>st</sup> 2002 a conversion or rework of rotary valve cover must be conducted according to the following instructions in section 3.

#### 1.6) References

In addition to this technical information refer to current issue of

- Operator's Manual (OM)

- Maintenance Manual (MM)

- Repair Manual (RM)

- Illustrated Parts Catalog (IPC)

- all relevant Service Instructions (SI)

#### 1.7) Interchangeability of parts

The rotary valve cover part no. 910 316 can be reworked or be replaced by rotary valve cover part no. 811 940.

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## 2) Material Information

### 2.1) Material - cost and availability

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

### 2.2) Material requirement per engine

parts requirement:

Fig.no.	New p/n	Qty/engine	Description	Old p/n	Application
(1)	811 940	1	rotary valve cover	910 316	582 UL

### 2.3) Rework of parts

The rotary valve cover part no. 910 316 can be reworked according section 3.1.2.

## 3) Accomplishment / Instructions

### Accomplishment

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

- ROTAX<sup>®</sup> -Distributors or their Service Centers
- Persons with type-specific training (applicable only for non-certified engines)
- ▲ **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) Instructions on rework of the rotary valve cover

- ◆ **NOTE:** On the 582 UL mod. 99 the new rotary valve cover part no. 811 940 with drain bore, has been already installed on serial production, commencing with engine S/N 5,381.289.

#### 3.1.1) Removal of the rotary valve cover

Remove all the components on the suction side of the engine so that the rotary valve cover (1) can be removed according to the relevant Repair Manual.

- **CAUTION:** When removing the rotary valve cover (1) make sure to hold the rotary valve in position while lifting the rotary valve cover, and mark position of the rotary valve by pencil so the initial position can be easily found.

#### 3.1.2) Rework of rotary valve cover

See fig. 1 and 2

- Drill a 0.118 in dia. (drill size 32) hole (see Figure 1 item 2) through the rotary valve cover (see Figure 1 and 2 item 1).

- Chamfer the bore by 0.02 in x 45° (see Figure 2 item 2) on the rotary valve side and deburr completely.

- ◆ **NOTE:** Thoroughly clean chips and emulsion after machining operation from the rotary valve cover (see Figure 1 item 1).

#### 3.1.3) Installation of the rotary valve cover

- Fit the rotary valve, rotary valve cover and intake components as per the relevant Repair Manual.

- **CAUTION:** Verify position of the rotary valve without fail. Adjust as required.

- Verify throttle and choke Bowden cables. Adjust as required.

- Verify carburetor synchronization.

- 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 in accordance with the current Maintenance Manual of the respective engine type.

### **3.3) Summary**

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

Following drawings should convey additional information:

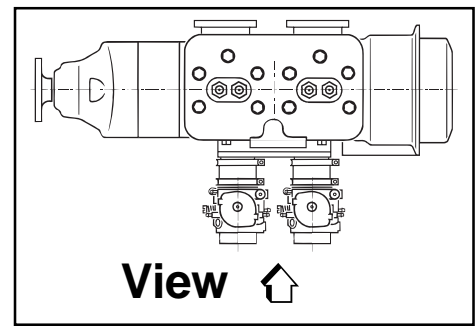


Bild / Fig. 1

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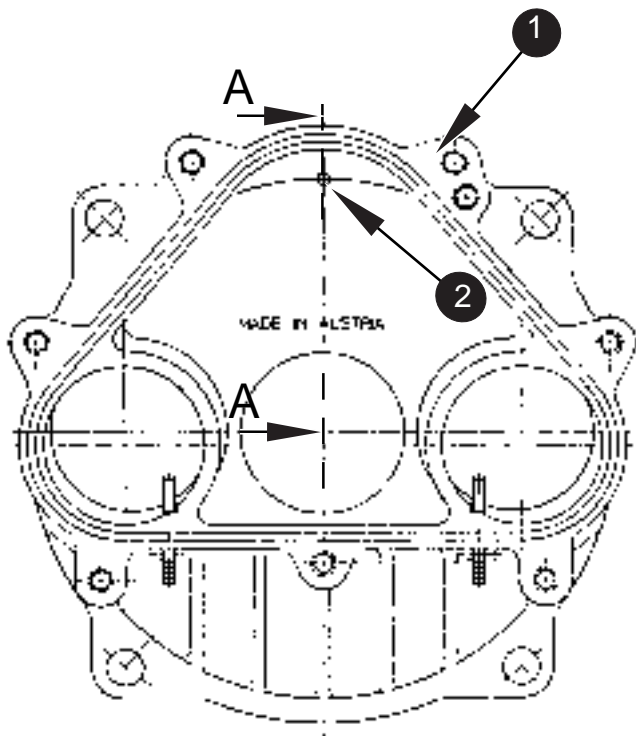
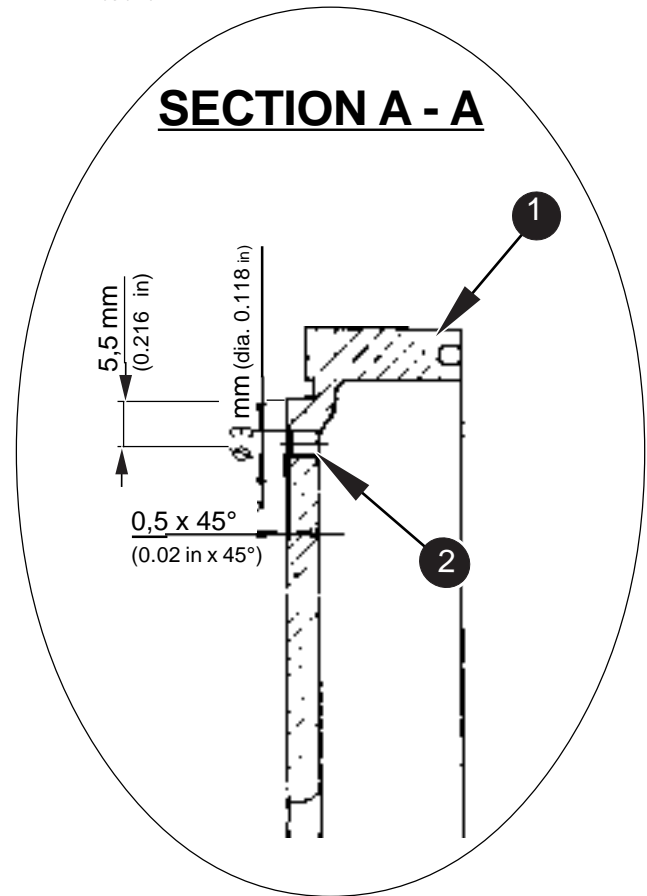


Bild / Fig. 2

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View: **rotary valve cover**  
**Fig.: 1 and 2**

- ◆ 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.