

SERVICE LETTER

USE OF THIRD PARTY AFTER-MARKET PISTON KITS IN ROTAX® ENGINES TYPE 912 i, 912 AND 914 (SERIES)

SL-912 i-006

SL-912-006 R1

SL-914-006 R1

This SL revises SL-912-006 Initial issue and SL-914-006 Initial issue dated January 2000

Repeating symbols:

Please, pay attention to the following symbols throughout the Service Bulletin emphasizing particular information.

▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.

■ **ATTENTION:** 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 i (series/pre-series engines)
- 912 (series/pre-series engines)
- 914 (series/pre-series engines)

1.2) Concurrent ASB/SB/SI and SL

- none

1.3) Reason

At least one replacement „high compression“ piston kit for the ROTAX® 912 UL engine is presently being marketed. The manufacturer of these piston kits claim up to a 15 HP increase in performance when installed in the standard ROTAX® 912UL engine.

▲ **WARNING:** The use of any third party after-market replacement pistons is not approved by ROTAX® and may result in engine damage and / or engine failure resulting in personal injury and / or death.

1.4) Subject

Use of Third Party After-market Piston Kits in ROTAX® engine Type 912 i (Series), 912 (Series) and 914 (Series). This information is intended to assist the aircraft builder and operator in achieving the proper operating conditions, correct engine installation and consequently optimum performance and reliability.

1.5) Compliance

NONE - For Information Only

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

1.6) Approval

not required

1.7) References

In addition to this technical information refer to

- current issue of the Operator's Manual (OM)
- engine data sheet
- power, torque and fuel consumption curves
- current issue of the Illustrated Parts Catalog (IPC)

- Installation Manual (IM) and Check List
- Maintenance Manual (MM)

2) Material Information

none

3) Accomplishment / Instructions

3.1) Information about third party after-market replacement piston kits

In addition, the manufacturers of these piston kits are suggesting that replacement of the pistons in the ROTAX[®] engine type 912 i (Series), 912 and 914 (Series) can be easily undertaken by owners or operators. The proper maintenance, especially the removal and replacement of the pistons on ROTAX[®] engines had to be carried out by an authorized ROTAX[®] Distributor or Service Center only.

▲ **WARNING:** The use of non approved parts in Rotax[®] engine types 912 i (Series), 912 and 914 (Series) is not recommended and is strongly discouraged.

No factory testing has been done with engines equipped with these after-market „high compression“ pistons, therefore the effects on engine performance, reliability and serviceability cannot be predicted.

The design, materials and workmanship of third party after-market pistons has not been verified. Defects in piston design, materials or construction may result in engine damage and / or catastrophic engine failure.

Use of third party „high compression“ replacement pistons may result in some, or all, of the following:

- cylinder and piston failure
- crankshaft or connecting rod failure
- damage to crankcase
- lean mixture operating conditions resulting in rough running and / or valveseat- and shaft burning
- damage from detonation or pre-ignition
- hard starting
- damage to the reduction gear unit

The manufacturers of some third party piston kits are also supplying instructions for the removal and replacement of pistons in the ROTAX[®] engine types 912 i (Series), 912 and 914 (Series). These instructions may not be complete and may lead to engine damage during disassembly or re-assembly of the engine. Engine damage may also occur due to incorrect re-assembly of the engine or by the improper reuse of parts such as O-rings and seals.

▲ **WARNING:** Removal and replacement of pistons in the ROTAX[®] engine types 912 i (Series), 912 and 914 (Series) is a procedure that requires the correct tools and proper training, and should not be attempted outside of an authorized ROTAX[®] Distributor or Service Center.

Use of any third party piston kits will void the ROTAX[®] engine warranty.

3.2) Summary

- The use of any third party, after-market replacement pistons for ROTAX[®] engine type 912 i (Series), 912 and 914 (Series) is NOT approved by ROTAX[®] and is very strongly discouraged.
- Use of any third party replacement piston may cause engine damage resulting in catastrophic engine failure.
- Use of any third party replacement pistons will void all ROTAX[®] engine warranties.

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.