

SERVICE INSTRUCTION

INSTALLATION INSTRUCTIONS FOR THE NEW DESIGN PISTON FOR 582 UL WITH MONO HOOK PISTON PIN CIRCLIP GROOVES

SI-2ST-001

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:

- 582 UL DCDI model 90
- 582 UL DCDI model 99
- 618 UL DCDI

The piston part no. 888.590 for mono-hook circlip part no. 845.540 were introduced into serial production as of the following serial number:

- 582 UL DCDI model 90: from S/N 5,236.549
- 582 UL DCDI model 99: from begin of serial production

1.2) Concurrent SB/SI und SL

none

1.3) Reason

In the course of further development the piston part no. 888.590 and the mono-hook circlip part no. 845.540 to secure the piston pin have been introduced.

1.4) Subject

Installation instructions and general notes for installation of the piston 888.590 and the mono-hook circlips 845.540.

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1.5) Fristen

- INFORMATION

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.

- At installation of the mono-hook circlips proceed as per the following instructions.

◆ **NOTE:** The piston part no. 888.590 replaces the piston part no. 887.080 once out of stock. Up to now it is installed in engine 582 UL DCDI model 90 and in engine 618 UL DCDI.

As long as in stock the piston 887.080 may be used further in engine 582 UL DCDI model 90 and in engine 618 UL DCDI.

▲ **WARNING:** On engine 582 UL DCDI model 99 only the piston part no. 888.590 is allowed to be used.

▲ **WARNING:** The piston part no. 888.590 must be used together with mono-hook circlip 845.540.

1.6) Approval

not necessary

1.7) Manpower

- estimated man-hours:

engine installed in the aircraft - - - manpower, depending on installation and therefore no statement is feasible 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

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1.11) References

In addition to this technical information refer to

- current issue of the Operator's Manual
- engine data sheet
- power, torque and fuel consumption curves
- current issue of the illustrated parts catalog
- engine installation instruction and installation check list
- all service information regarding your engine
- Repair Manual

1.12) Other publications affected

none

1.13) Interchangeability of parts

all redundant parts which cannot be used must be destroyed

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2) Material Information

2.1) Material - cost and availability

cost and availability will be supplied on request by ROTAX_a authorized distributors.

2.2) Company support information

none

2.3) Material volume per engine

parts volume:

The following parts are readily available for installation:

item no.	New part no.	Qty.	Description	Old part no.	remarks
	845.540	as reg'd	mono hook circlip		582 / 618
	888.590	as reg'd	piston		582 / 618
	888.591	as reg'd	piston 1 st oversize		582 / 618
	888.592	as reg'd	piston 2 nd oversize		582 / 618

2.4) Material volume per spare part

none

2.5) Rework of parts

none

2.6) Special tooling - Price and availability

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

- parts volume:

For the installation of the mono hook circlip the following new tool is necessary:

item no.	New part no.	Qty.	Description	Old part no.	remarks
	877.805	as reg'd	installation pusher		582 / 618

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3) Accomplishment / Instructions

Accomplishment

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

- ROTAX[®]-Distributors or their Service Center
- Persons with the respective Aviation Authority permission.
- Persons with type-specific training (applicable only for non-certified engines)
- ▲ **WARNING:** Proceed with this work only in a non-smoking area and not near open flames. Switch off ignition and secure engine against unintentional operation.
- Secure aircraft against unauthorized operation.
- Disconnect minus pole of aircraft battery.
- ▲ **WARNING:** Proceed with work on a cold engine and grounded ignition only.

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3.1) Installation of the piston and fitting of the mono-hook circlips

Push new mono-hook circlip into circlip installation sleeve (3) (fig. 1). The slot in the circlip should be positioned as shown in fig. 1- **view A** with the hook on the right side viewed from back of the installation tool. Slide the sleeve on the installation pusher (1) (fig. 1) and insert the installation pusher into the positioning gauge (5) (fig.2) and push circlip to a positive stop. The installation pusher assembly with the guidance pin can now be inserted into the piston pin (see fig. 1).

◆ **NOTE:** The slot (2) (fig. 1) in the installation sleeve has to align with mono-hook circlip groove in the piston.

Support the piston with one hand and with the other hand insert the mono-hook circlip by a firm push into groove in piston.

Check mono hook circlip for tight fit.

▲ **WARNING:** If circlip is improperly fitted it may rest incorrectly. In a case like that remove circlip again and fit a new one into correct position.

Proceed the same way on the other side of piston.

▲ **WARNING:** Use mono-hook circlips only once. Scrap removed circlips.

Circlip installation tool to be handled with caution to prevent injury by escaping circlips.

Proceed in accordance with instructions stated herein. The measures have to be taken by ROTAX, Rotax-distributors or their Service Centers

Non-compliance with these recommendations could result in engine damage, personal injuries or death!

3.2) Test run:

Start the engine. Conduct testrun inclusive ignition check and leakage test in accordance with the current Maintenance Manual of the engine type.

3.3) Summary

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

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.

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4) Appendix

- The illustrations should convey additional information.

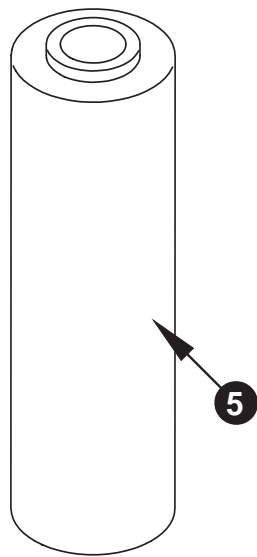
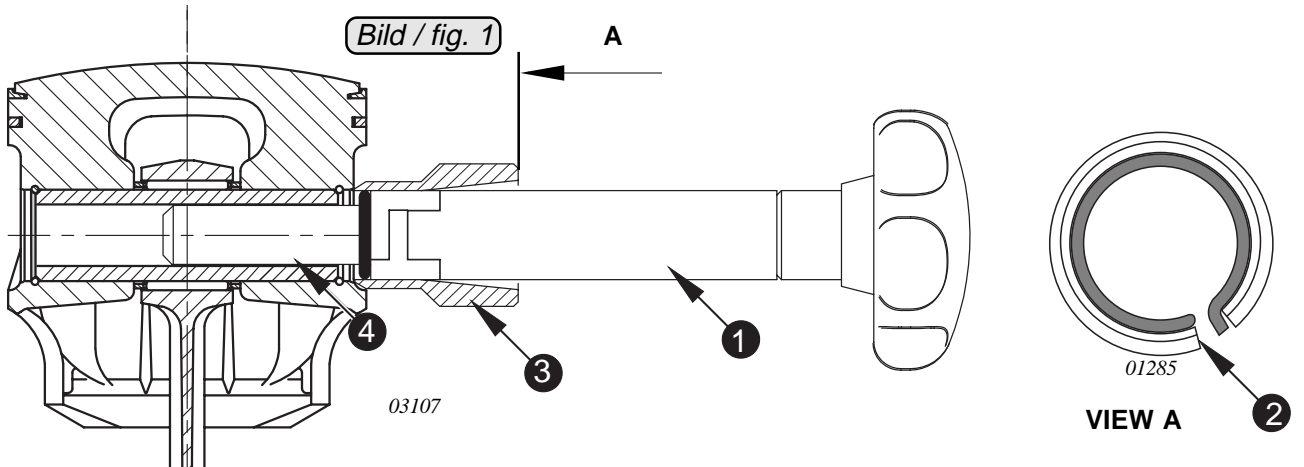
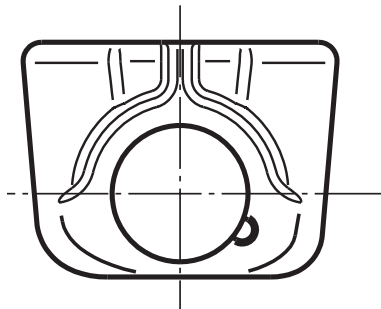
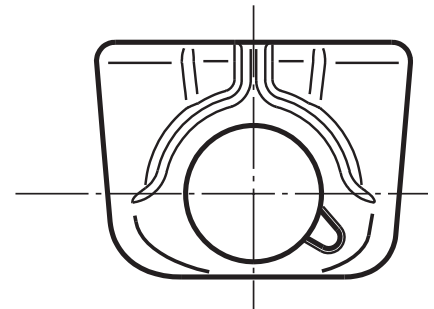


Bild / fig. 2

03108



Circlip groove of piston part no. 887.080



mono hook circlip groove of piston part no. 888.590

Bild / fig. 3

03600