



AIRCRAFT ENGINES

SERVICE INSTRUCTION

CHANGE OF THE EXHAUST GASKET ON ROTAX® ENGINE TYPE 582 UL, MODEL 90/99 AND ON ROTAX® ENGINE TYPE 618 UL SI-2ST-002

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.
- **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 mod. 90 without exception
- 582 UL mod. 99 commencing with S/N 5,305.901
- 618 UL without exception

1.2) Concurrent ASB/SB/SI and SL

none

1.3) Reason

In the course of product improvement on the engine type 582, model 90/99 and on engine 618 UL, new exhaust gaskets of a better material have been introduced.

1.4) Subject

Change of the exhaust gasket on ROTAX® engine type 582 UL, model 90/99 and on ROTAX® engine type 618 UL. 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) Manpower

none

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 (OM)
Installation Manual (IM)
Maintenance Manual (MM)
current issue of the Illustrated Parts Catalog (IPC)

1.12) Other publications affected

none

1.13) Interchangeability of parts

At exchange take care of the following:

- For the engines of the the type 582 UL model 90/99 and for the 618 UL, the old type exhaust gasket is running out of production, the new thinner gaskets of better quality are readily available.
- Redundant parts and new parts may not be intermixed on one engine.
- The installation of the new exhaust gasket in Serial Production on the engine 582 UL mod. 99 was introduced with engine no. 5,307.485.

2) Material Information

2.1) Material - cost and availability

Price and availability will be supplied on request by ROTAX[®] Authorized Distributors or their Service Center.

2.2) Company support information

none

2.3) Material requirement per engine

parts requirement for ROTAX[®] 582 UL model 90/99:

item no.	New part no.	Qty.	Description	Old part no.	application
(2)	850.633	2	Exhaust gasket	850.630	ROTAX [®] 582 UL mod. 90/99

parts requirement for ROTAX[®] 618 UL:

item no.	New part no.	Qty.	Description	Old part no.	application
(3)	850.552	2	Exhaust gasket	850.550	ROTAX [®] 618 UL

2.4) Special tooling/lubricant-/adhesives-/sealing compound - Price and availability

Price and availability will be supplied on request by ROTAX[®] Authorized Distributors or their Service Center.

Parts requirement:

item no.	New part no.	Qty.	Description	Old part no.	remarks
(1)	876.904	1	Aligning tool		ROTAX [®] 582 UL mod. 90/99 and ROTAX [®] 618 UL

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
- Persons with type-specific training

▲ **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.

▲ **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.

- Secure aircraft against unauthorized operation.
- Disconnect negative terminal of aircraft battery.

3.1) Removal of the exhaust manifold

See fig. 2 and 3

- Remove the six Allen screws M8x30 (582 UL mod. 90/99) or eight Allen screws M6x25 (618 UL) and lockwashers.

- Remove the exhaust manifold and the old exhaust gaskets (3,5)

■ **ATTENTION:** Make absolutely sure that no debris or old gasket materials remains in the cylinder or crankcase.

- Clean the sealing surfaces on both cylinders and exhaust manifold from any old gasket material or debris.

3.2) Installation of the exhaust manifold

See fig. 2 and 3

- Check the sealing surface of the exhaust manifold for deformation. If necessary true-up on a flat surface.

- Verify alignment of the cylinders by use of the listed alignment tool (1) or with the original exhaust manifold and check with a feeler gauge (2). At a gap on the mating face in excess (of max. 0,3 mm/0,012 in) reset the cylinders (see fig. 1).

▲ **WARNING:** Fit either only old or only new type exhaust gaskets but never mix old and new gaskets as they are of different thickness (see fig. 3 and 4).

◆ **NOTE:** Fit the new exhaust gaskets (4,6) with the printed side towards exhaust manifold.

- Attach the new exhaust gaskets (4,6) and exhaust manifold with the six Allen screws M8x30 (582 UL mod. 90/99) or with eight Allen screws M6x25 (618 UL) along with new lock washers.

- Tighten the 6 screws M8x30 (582 UL mod. 90/99) crosswise to 22 Nm or 195 lb.in.

- Tighten the 8 screws M6x25 (618 UL) crosswise to 10 Nm or 90 lb.in.

- Reconnect the minus terminal of the aircraft battery.

3.3) Test run

Start engine. Conduct test run including ignition check and leakage test of the exhaust gaskets.

■ **ATTENTION:** The screws for the exhaust manifold have to be retightened in accordance with the relevant maintenance schedule.

3.4) Summary

When fitting the exhaust gasket make sure to use only gaskets of the same thickness (see fig. 3 and 4).

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

4) Appendix

The following drawings should convey additional information:

Fig. 1

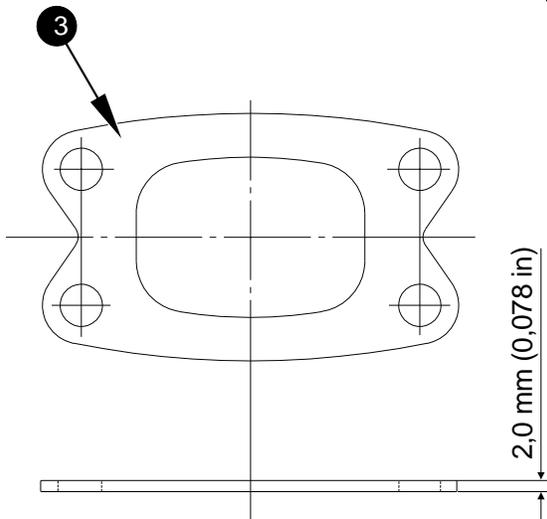


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◆ NOTE: The illustration shows the engine type 582 UL mod. 99

Rotax® Engine Type 582 UL mod. 90/99

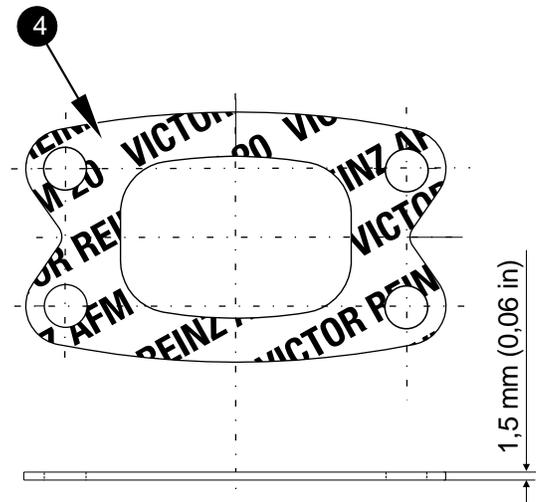
Exhaust gasket
OLD version
Part no. 850.630



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Exhaust gasket
NEW version
Part no. 850.633

Fig. 2



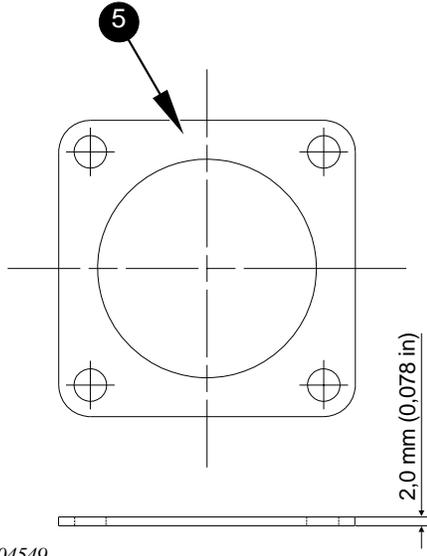
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View: **Cylinder / Exhaust gasket**

Fig.: 1 and 2

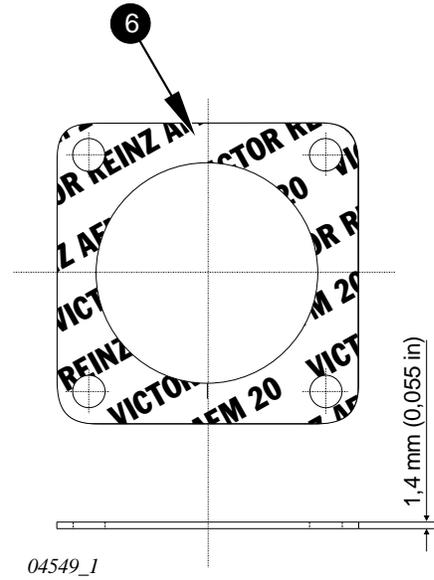
Rotax® Engine Type 618 UL

Exhaust gasket
OLD version
Part no. 850.550



Exhaust gasket
NEW version
Part no. 850.552

Fig. 3



View: **Exhaust gasket**

Fig.: **3**