

SERVICE BULLETIN

CHECKING OR REPLACEMENT OF

TENSION SPRINGS ON EXHAUST SYSTEM

FOR ROTAX® ENGINE TYPE 582UL

SB-2ST-001

MANDATORY

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 from S/N 5,437.606 to S/N 5,437.800
- from S/N 5,503.001 to S/N 5,503.573

as well as spare part deliveries from September 14th to December 12th, 2001 where tension springs part no. 938 790 (also part of exhaust assy.) were replaced in the course of maintenance or repair work.

Spare part deliveries from invoice date December 12th, 2001 on are not affected.

Following engines are not affected:

5,503.273 bis 5,503.277 / 5,503.554 bis 5,503.563 / 5,503.565 bis 5,503.572.

1.2) Concurrent ASB/SB/SI and SL

Further to this service bulletin the following additional service instructions must be observed and complied with: SI-11-1987 "Exhaust Systems for ROTAX® UL Engines", latest edition.

1.3) Reason

Deviations of material could result in cracking of the exhaust springs during installation or in operation. In a few cases, spring fractures were detected during installation and in operation.

1.4) Subject

Checking or replacement of tension springs on the exhaust system.

1.5) Compliance

- At the next 25^h-check, however, April 1st, 2002 at the latest, the tension springs shall be replaced as per the following instructions section 3.

1.6) Manpower

Estimated man-hours:

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

1.7) Mass data

- change of weight - - - none.
- moment of inertia - - - unaffected.

1.8) Electrical load data

no change

1.9) References

In addition to this technical information refer to the following documents in their latest edition:

- Illustrated Parts Catalog (IPC)
- Installation Manual (IM)
- all relevant Service Instructions (SI)
- Repair Manual (ICR)
- Maintenance Manual (MM)

1.10) Other publications affected

none

1.11) Interchangeability of parts

- All parts are interchangeable.
- All used parts are unserviceable and must be scrapped.

2) Material Information

2.1) Material - cost and availability

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

2.2) Company support information

- Shipping cost, down time, loss of income, telephone costs etc. or cost of conversion to other engine versions or additional work, as for instance simultaneous engine overhaul is not covered in this scope and will not be borne by ROTAX[®].

2.3) Material requirement per engine

Parts requirement:

Fig. No	New p/n	Qty/engine	Description	Old p/n	Application
(1)	938 790	8	tension spring	938 790	exhaust system

◆ NOTE: Tension spring distinguishing features see section 3.1.

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

Price and availability

Fig. No	p/n	Qty/engine	Description	Old p/n	Application
(1)	297 431		LOCTITE [®] Anti-Seize		exhaust system

3) Accomplishment / Instructions

Accomplishment

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

- ROTAX[®] - Airworthiness representative
- ROTAX[®] - Distributors or their Service Centers
- Persons approved by the respective Aviation Authority
- Persons with type-specific training

▲ **WARNING:** Proceed with this work only in a non-smoking area and not close to open flames, etc. Switch ignition to "OFF" and secure engine against unauthorized operation.

- Secure aircraft against unauthorized operation.

- Disconnect negative terminal of aircraft battery.

▲ **WARNING:** Always wear safety glasses when removing / installing springs.

◆ **NOTE:** All work has to be performed in accordance with current, relevant Maintenance Manual.

3.1) Distinguishing features

The affected (faulty) tension springs can be identified by black, bright surfaces.

Qualitatively flawless tension springs show a dark brown, dull surface.

■ **CAUTION:** After prolonged operation, due to high operating temperatures, there may be no distinct distinguishing features left as described that could aid in discerning the tension springs. Replace the tension springs in case of doubt.

3.1.1) Removing the tension springs

- Remove the lock tabs from tension spring.

■ **CAUTION:** Take care to use suitable protective equipment as disassembly may result in cracking of the tension spring.

- Detach tension springs with suitable tools one by one.

- Clean ball joint with appropriate cleaning agent (dry rag or equivalent) and inspect for wear.

3.1.2) Installation of the tension springs

- Lubricate ball joint with heat-resistant lubricant (LOCTITE[®] "Anti-Seize" or equivalent).

- Install new tension springs with appropriate tools.

- Exhaust springs shall be secured against loss and vibrations with wire.

See Fig. 1.

- Restore aircraft to original operating configuration.

- Connect negative terminal of aircraft battery.

3.2) Test run

Conduct engine test run including ignition check and leakage test including exhaust system.

3.3) Summary

These instructions (section 3) shall be conducted in accordance with compliance in section 1.5.

4) Appendix

The following drawings should convey additional information:

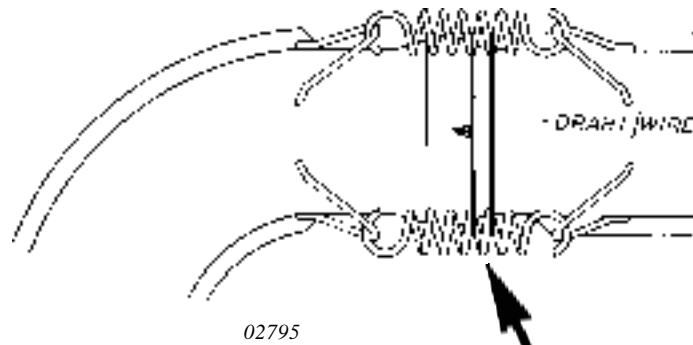
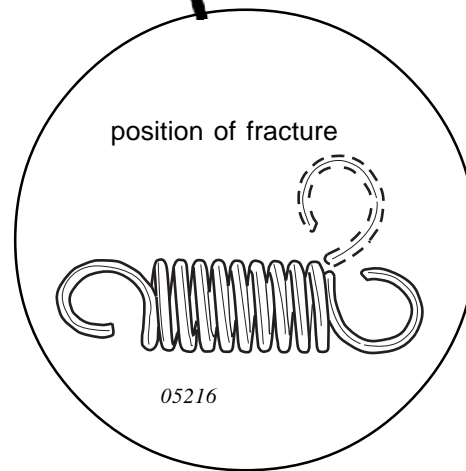
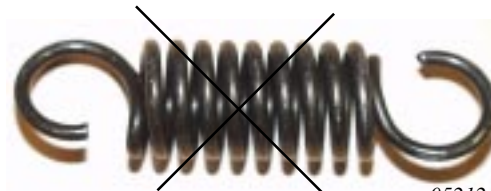


Bild / Fig. 1



In order
Surface: dark brown, dull



Faulty
Surface: black, bright

◆ 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.