ROTAX
AIRCRAFT ENGINES

SERVICE BULLETIN

NEW CHARGING COIL ASSY. WITH SUPPORT FOR ROTAX® ENGINE TYPE 505

SB-505-009 R1

OPTIONAL

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:

- 505 all

1.2) Concurrent ASB/SB/SI and SL

none

1.3) Reason

Due to a supplier change, the ROTAX® 505 engine is now configured with a new style charging coil.

1.4) Subject

New charging coil assy. with support for ROTAX® engine type 505.

This information is intended to assist the aircraft manufacturer and operator in achieving the proper operating conditions, correct engine installation and consequently optimum performance and reliability.

1.5) Compliance

At replaced by new part and repair/replacement of charging coils observe the instruction in section 3.1.

1.6) Approval

The technical content of this Service Bulletin has been approved by ACG.

1.7) Manpower

Estimated man-hours:

engine removed from the aircraft 0,5 h per unit.

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

1.11) References

In addition to this technical information refer to current issue of

- Illustrated Parts Catalog (IPC)
- Installation Instructions
- Repair Manual (RM)

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1.12) Other publications affected

none

1.13) Interchangeability of parts

At exchange take care of the following:

- At replacement of charging coil(s) the armature support has to be renewed too. This is included in the supply volume.
- An old type and new type charging coil may be fitted together as a working pair (one old style and one new style on same armature plate), but additional care needs to be put on changed positioning of the new charging coil.

◆ NOTE: Because of changed wiring at the new type charging coil assy the charging cable soldering point is opposit on the right side (see fig. 5).

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:

Fig.no.	New p/n	Qty/engine	Description	Old p/n	Application
(4, 6, 8)	865806	1	charging coil assy. with support	865805	armature plate assy.

2.4) Rework of parts

none

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

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

parts requirement:

Fig.no.	p/n	Qty/engine	Description	Old p/n	Application
	…….	as required	marking paint	……	……

■ CAUTION: In using these special tools observe the manufacturer´s specifications.

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

▲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: Perform work on a cold engine only.

▲WARNING: Should removal of a locking device (namely lock tabs, self-locking fasteners) be required when undergoing disassembly/assembly, always replace with a new one.

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

3.1) Instructions

(see fig. 1 to 4)

3.1.1 Removal of the charging coil

- Disassemble magneto side of the engine according to the current relevant Repair Manual to the state that enables the removal of the armature plate assy. (1).
- Unplug connections on the electronic boxes and from the air frame and remove the armature plate assy. (1) along with the cable harness.
- Remove the 4 hex.screws M5x40 (3) along with armature support (4) and distance sleeves (5).
- Draw out the red charging cable (6) from insulation hose (2) or screening braid and remove defective charging coil (8).

3.1.2 Installation of the charging coil

- Draw in the red charging cable (6) by a commonly used trace-wire through the insulation hose (2) or screening braid and position the charging coil (8) on the armature plate (1) (see fig. 1).

■ CAUTION: On the new charging coil (8) the wiring direction of the coil have been turned round, therefore the positioning (position of the charging cable 6) need to be followed as shown in fig. 3. At wrong installed charging coil no high tension output of the relevant electronic box and therefore no ignition spark will be created.

If an old type and a new type charging coil is fitted togehter as a working pair, the charging cable soldering point`s are at the opposite side (see fig. 5).

■ CAUTION: To prevent squeezing of the charging cables (6) route the cables parallel below the charging coil (8) (see fig. 2).

- Place distance sleeves (5) and new armature support (4) (supplied) in position.
- Apply LOCTITE 221 on the 4 hex. screws M5x40 (3) and just slightly tighten the screws, still allowing centering of this charging coils (8).
- Put centering sleeve (9) over the armature plate assy. (1) and align the charging coils by pushing coils onto sleeve (see fig. 4).
- Tighten the 4 hex. screws M5x20 (3) to 6 Nm (53 in.lb) and apply marking paint on screw heads.
- Draw cable harness (2) into crankcase and re-establish plug connections on electronic boxes and air frame.
- Re-assemble armature plate assy. (1) and magneto side components according to the current relevant Repair Manual.

- 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.

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 judgment - in any case the original text in the German language and the metric units (SI-system) are authoritative.

4) Appendix

the following drawings should provide additional information:

fig.1

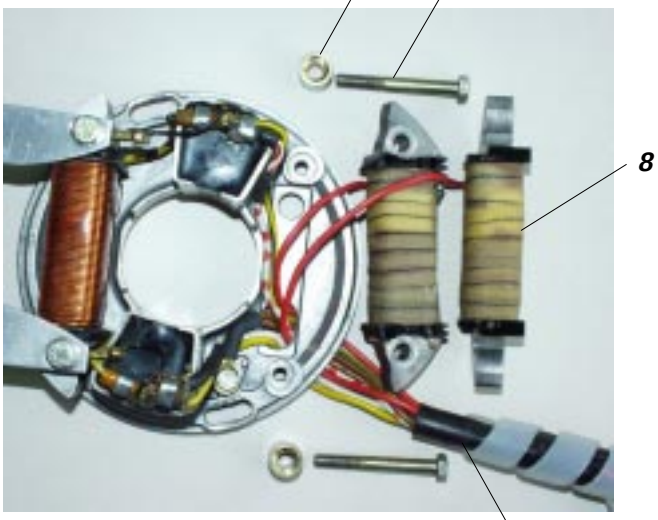

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fig. 2

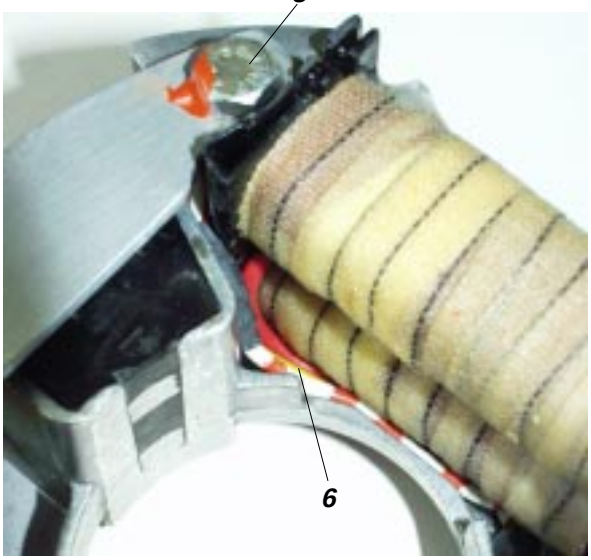

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fig. 3

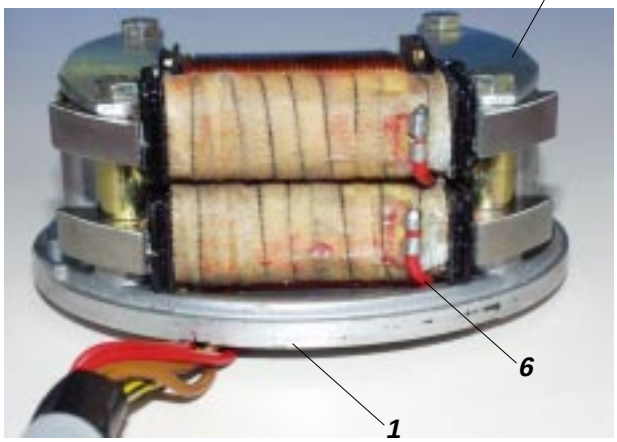

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fig. 5

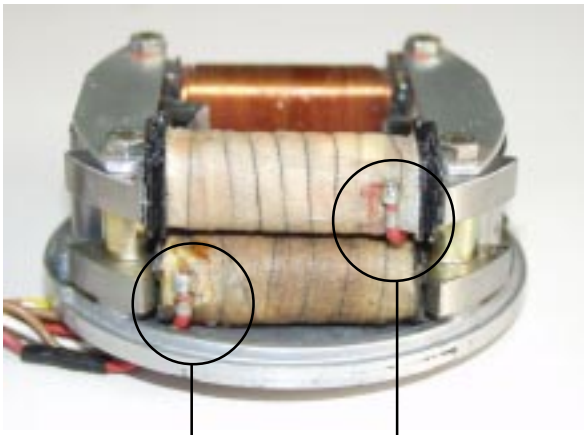

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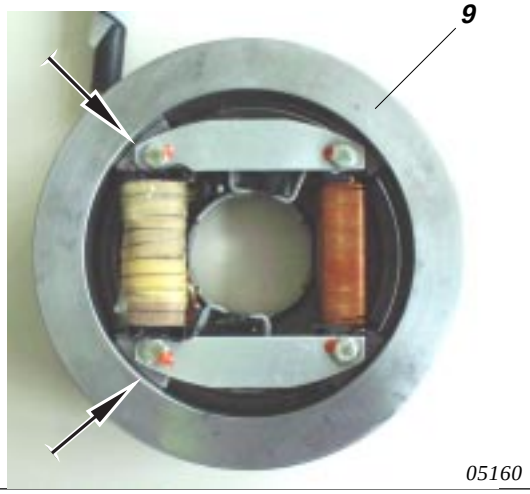
fig. 4



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◆ 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 **not technical** drawings and are for reference only. For specific detail, refer to the current documents of the respective engine type.