

**ROTAX engine type 505 and type 505 A**

- Object:** Introduction of a new electronic box with a modified wiring on the stator plate.
- Concerned:** Motorglider engines type 505 and 505 A up to engine serial no. 3.332,887 in case of replacement, beginning with engine serial no. 3.332,888 the new electronic box is mounted in general.
- Reason:** The present electronic box is no more available.
- Urgency:** as required.
- Measures:**
- a) Case of Replacement:**
- 1) Exchange of both electronic boxes complete, according to the instruction mentioned below.
 - 2) Exchange of the operator's manual.
 - 3) Entry of the change in the log book with date of effectiveness and reference to this TB.
- b) New engine:**
- no actions, beginning with engine no. 3.332,888 in serial production from the factory.
- Center of gravity:** not concerned
- Remarks:**
- Modified operator's manual is available at BOMBARDIER-ROTAX GmbH, Günskirchen.
 - New parts as required are to be requested from the manufacturer.
 - All works are to be executed by an aircraft mechanic.

Günskirchen, 1992 01 28

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Approval of translation has been done by best knowledge and judgement — In any case the original text in German language is authoritative.



**Mounting instruction:****1) tools required:**

- spark plug wrench
- side cutter
- suitable crimping tool to fit the faston connectors
- copper bit.

2) necessary parts:**1 x retrofit kit 965 679 consisting of:**

- 1 x Operator's manual, 2nd edition of January 1992, corresponding to the engine type,
- 2 x 965 675 DUCATI electronic box complete,
- 4 x 897 055 spark plug BR8ES,
- 4 x 964 067 faston connector
- 2 x 964 062 faston connector
- 2 x 260 780 connector housing
- 2 x 964 074 insulation sheath
- 2 x 864 854 wire 70 mm
- 2 x 860 171 shrink hose 40 mm

3) removing of the electronic box:

Remove all four ignition cables from the spark plugs. Take off the connection from the electronic boxes and remove the electronic boxes.

4) adjustment of the plug connections:

- 4.1) Dismount all faston connectors ①, by depressing the barb ②, from the connector housing ③.
- 4.2) Cut the cables at the end ④ of the faston connectors.
- 4.3) Remove protection caps ⑤.
- 4.4) The screening metal braid ⑥ is no more necessary, however it should remain on the harness as the mass cables for the ignition boxes are soldered on the screening metal braid.
Otherwise, you have to install two new mass cables, beginning at the stator plate.
- 4.5) On the harness for the sparking circuit 2 the shrink hose has to be cut off and the brown mass cable (70 mm, included in the retrofit kit) has to be soldered instead of the mass cable, which is too short. The new shrink hose (included in the retrofit kit) has to be fitted.
- 4.6) Put the new insulation sheath over the black and white wires of sparking circuit 1 and fit the faston connector on both wires. The wires with the fitted faston connector have to be fitted in the insulation sheath till it is locked. The same happens with the black and the white/red wires of sparking circuit 2.

- 4.7) Put the connector housing ⑨ on the red and brown wires of sparking circuit 1 resp. 2. Fit the faston connector ⑩ on the red conduction and the faston connector ⑧ on the brown one.

ATTENTION: Do not exchange the colours of the wires!

- 4.8) Mount the DUCATI-electronic boxes by suitable holding devices (have to be requested from the aircraft manufacturer) and establish the connection according to the wiring diagram (in the operator's manual).

- 4.9) Change all 4 spark plugs to type **BR8ES**.

5) Check:

- 5.1) Check ignition timing according to the operator's manual.

- 5.2) Make a test run and check both ignition circuits. **electronic box 2**

