



AIRWORTHINESS DIRECTIVE

- TYPES AFFECTED: Powered sailplanes fitted with Rotax 535 (A, B and C) engines.
- SUBJECT: Security of the charging and lighting coils on the armature plate assembly.
- BACKGROUND: Overseas experience has required the issue of Rotax Technical Note No. 535-04 which asks for the inspection of the screws that attach the charging and lighting coils to the armature plate assembly.
- ACTION REQUIRED:
- (1) BEFORE NEXT FLIGHT.
- Check the tightness of the screws that attach the charging and lighting coils to the armature plate assembly in accordance to Technical Bulletin 535-04.
- If any of the screws or parts are noticed to be loose the engine must not be started.
- (2) If the screws or parts are found loose, carry out the detailed instructions of disassembly, overhaul and reassembly in accordance with Technical Bulletin 535-04.
 - (3) Carry out this inspection every 25 hours of engine running time regardless of whether the overhaul (in accordance with Technical Bulletin No. 535-04) is carried out.
 - (4) Replace page 9 of the Manual for Rotax engine type 535 with the attached manual page.
- WEIGHT/BALANCE No change.
- DOCUMENTATION: Bombardier Rotax Technical Bulletin 535-04 and Rotax engine type 535 Manual page 9 forms part of this Airworthiness Directive.
- IMPLEMENTATION: Action (1), (2) and (3) must carried out by the holder of a DA 1109 Glider Inspectors certificate endorsed for 25 hours or annual inspections of the Rotax 500 series engines.
- COMPLIANCE: The requirements of this Airworthiness Directive are mandatory. This Directive is issued pursuant to the Civil Aviation Regulations under the delegated authority of the Civil Aviation Authority (CE05/88).

ISSUED BY:

CHIEF TECHNICAL OFFICER
AIRWORTHINESS.

27/7/89

For and on behalf of:

GLIDING FEDERATION OF AUSTRALIA

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Subject : Fixation of charging coil and lighting coil on armature plate ass'y.

Models affected : Motorised glider engine type 535, all engines of execution A, B and C.

Reason : Caused by creep-behavior of contact surfaces, the screw connection might become loose and thus enables the coils to bend outwards, touching the magnetoring.

Priority, tasks : 1) Check the coil fixation after receipt of this information and then following at intervals of 25 hours running time.

2) If any connections or parts are noticed to be loose, you must not start engine anymore until remedies are carried out.

3) Completion in Manual page 9, item 8,2:
Check fixation of charging coil and ignition coil according to TECHNICAL BULLETIN No. 535-04.

Weight and center of gravity : Not affected.

Remarks : Request parts as required from Rotax or competent dealer.

This kind of engine service has to be carried out by a licensed and qualified person and confirmed in the aircraft logbook.

Gunskirchen, 1989 02 20

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Approved by
Bundesamt für Zivilluftfahrt

21. März 1989

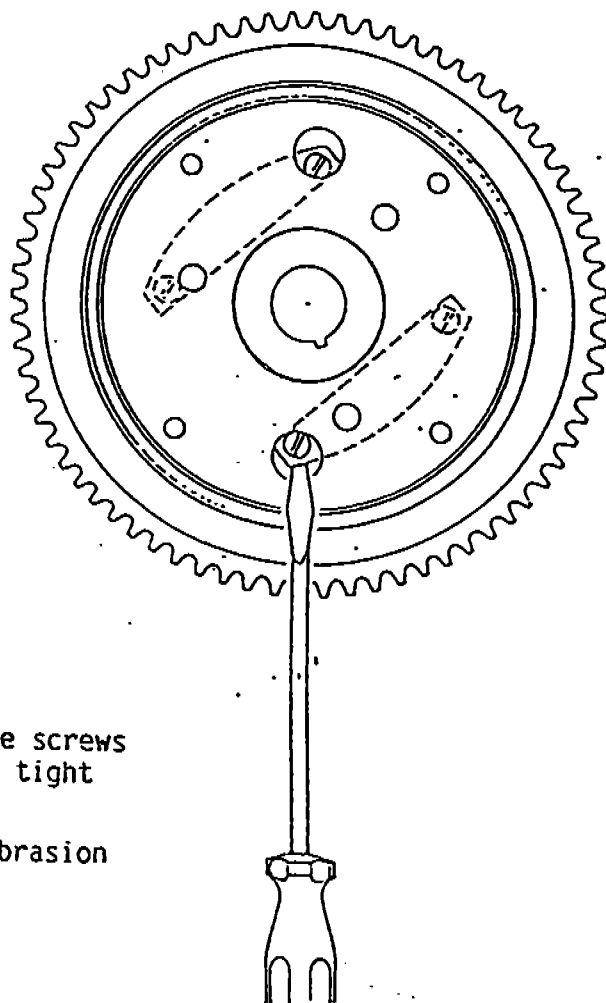
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Checking of the coil fixation

- 1) Take off cover washer, if installed (fig. 1, see 1.1. on page 3).
Do not reinstall because checking will be easier.
- 2) Check with screwdriver as illustrated for tightness of fixation.

For better verification in the future use paint-spot on the screw head.

sketch



Attention: Tight fit of the screws
themselves is no warranty for tight
fit of the whole set.

In case of dark traces of abrasion
the fit is loose.

- 3) In case of loose coil fixation proceed as described on page 3 to 6.

Instruction for disassembly and reassembly of magneto flywheel and
overhaul instruction of coil fixation

1) Disassembly:

- 1.1. Remove cover washer (if existing) by unscrewing three bolts
socket spanner, size 13 A/F. Reassembly not foreseen.
- 1.2. Fasten flywheel fixture (876 080) with three hex. hd. screws
M8 x 16.
- 1.3. Remove crankshaft hex. nut M22 x 1,5 with socket spanner,
size 30 A/F.
- 1.4. Place protection cap or mushroom-like protector (876.557) to
crankshaft end, fasten puller to flywheel fixture and pull
off magneto housing. Use suitable spanner, size 22 A/F.

Advice: If need be, break bond of housing to crankshaft taper
by carefully heating up to 120°C.

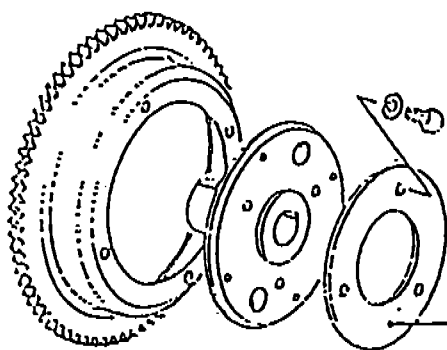


Fig. 1

Cover washer

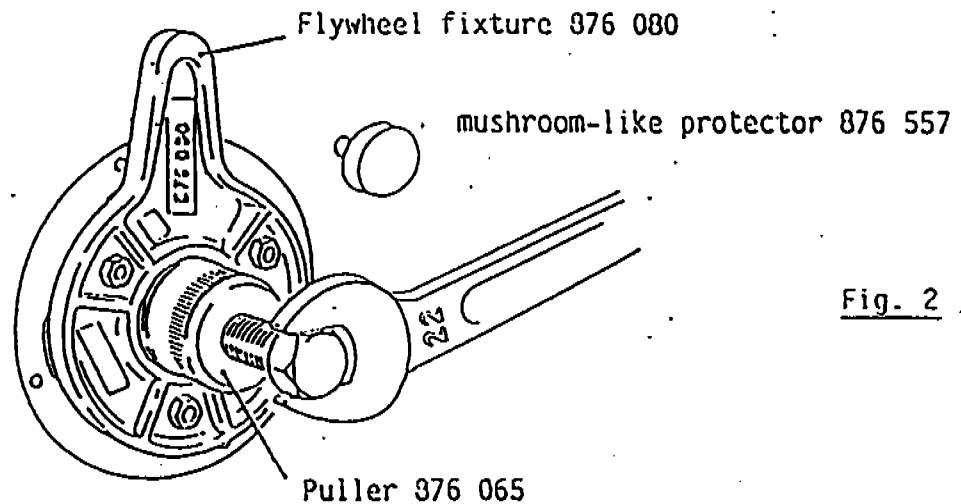


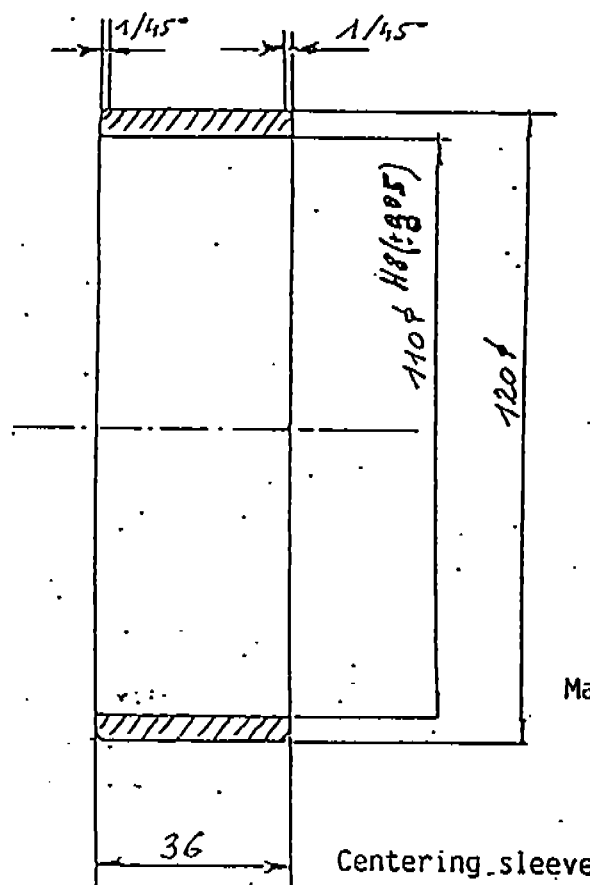
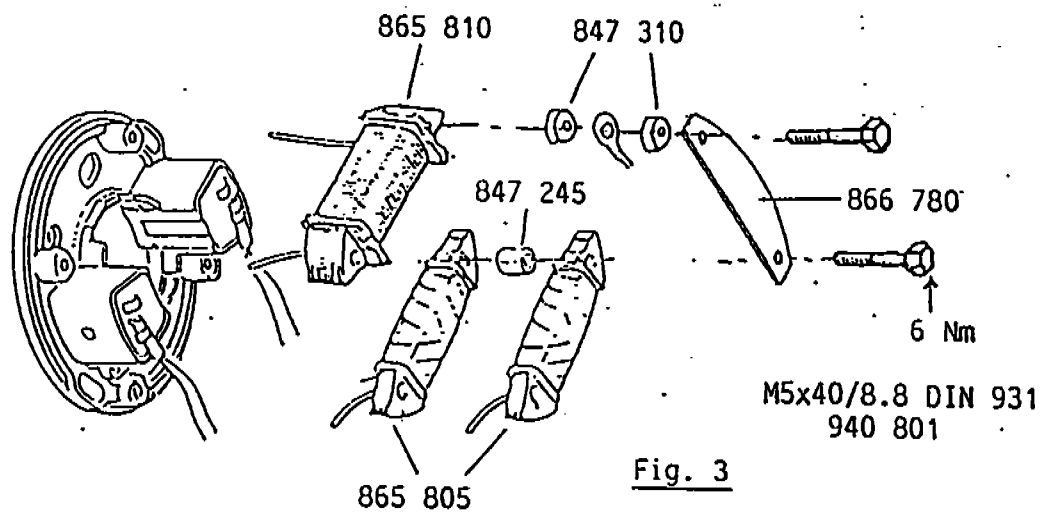
Fig. 2

2) Overhaul of coil fixation: Fig. 3 on page 5

- 2.1. Clean armature plate ass'y.
- 2.2. Remove both coils..
- 2.3. Check coils for signs of wear, damage on holes and contact faces. Exchange as required. Clean contact surfaces to provide good contact.
- 2.4. Use new hex. screws M5 x 40, 8.8, DIN 931, Rotax p.n. 940 801 instead of previous screws.
- 2.5. Apply Loctite 221 to screws and contactfaces and slightly fasten screws.
- 2.6. Place centering sleeve (fig. 4 on page 5) over armature plate, push coils outwards and tighten screws. Screw torque 6 Nm.

Remark: Centering sleeve absolutely necessary to achieve correct distance between poles and magneto.

Attention: Works to 2.5. and 2.6. have to be performed within 5 min., prior to curing of Loctite.

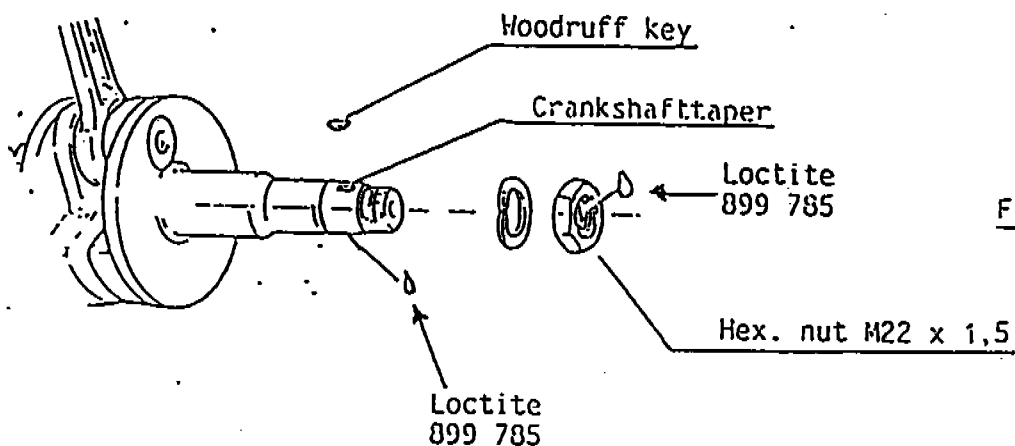


3) Refitting of magneto flywheel:

- 3.1. Degrease taper of crankshaft and magneto housing with suitable degreasing agent.
- 3.2. Insert woodruff key (fig. 5).
- 3.3. Apply Loctite 221 on crankshaft taper.
- 3.4. Fit flywheel housing complete with magneto ring and starter gear on crankshaft.

Important: Make sure that armature plate ass'y and flywheel ass'y is clean and free of foreign matter.

- 3.5. Secure hex. nut M22 x 1,5 with Loctite 221. Tighten with 140 Nm.



- 4) Meet three hours curing time for Loctite, prior to engine start.