



GFA AIRWORTHINESS DIRECTIVE

TYPE AFFECTED:	DG-500 MB powered sailplanes TCDS LBA 843 DG-800 B powered sailplanes TCDS LBA 800
APPLICABILITY:	DG-500 MB and DG-800 B. All serial no's.
SUBJECT:	Starter Ring Gear Inspection / Replacement.
REASON:	Experience has shown that cracking can occur in the Zinc coated Starter Ring Gears as fitted to Solo 2625-01 and 2625-02 engines. It is thought that this occurs as a result of hydrogen embrittlement caused by the plating process. Accordingly, regular inspections are now mandated to detect this damage.
DOCUMENTATION:	The EASA has produced AD 2009-0169-E, and DG-Flugzeugbau has produced Technical Note 800-36/843-30 initial issue, which is attached & forms part of this AD.
ACTION REQUIRED:	<p>BEFORE FURTHER FLIGHT:- Identify whether the aircraft is fitted with a zinc plated or painted Starter Ring gear. The painted version has <i>no</i> lightening holes. If the ring gear is of the painted type no further action is required.</p> <p>If the ring gear is of the zinc plated type it must be inspected for cracks in accordance with the above TN. If a crack is found the ring gear must be replaced with the painted type before further operation of the engine.</p> <p>This inspection is to be repeated at each DI, until such time as the ring gear is replaced with the painted type. The plated ring gear may be replaced with the painted type at the operators discretion. Fitting a painted type ring gear cancels the requirement for daily inspection IAW the above TN.</p>
WEIGHT AND BALANCE:	Negligible.
IMPLEMENTATION:	<p>Inspections may be performed by the holder of a GFA Section 2 Daily Inspector-, Two-stroke or higher maintenance authorization.</p> <p>Replacement of the Ring Gear may be performed by the holder of a GFA Section 2 Maintenance Authority rated for Replacement of Components or higher authorization.</p>
COMPLIANCE:	The requirements of this GFA Airworthiness Directive are mandatory. This Directive is issued pursuant to the Rules and Regulations of the Gliding Federation of Australia Inc.

SIGNED:

SENIOR TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

© THE GLIDING FEDERATION
OF AUSTRALIA INC.

DG Flugzeugbau GmbH
76646 Bruchsal


Technical note
No. 800/36, 843/30

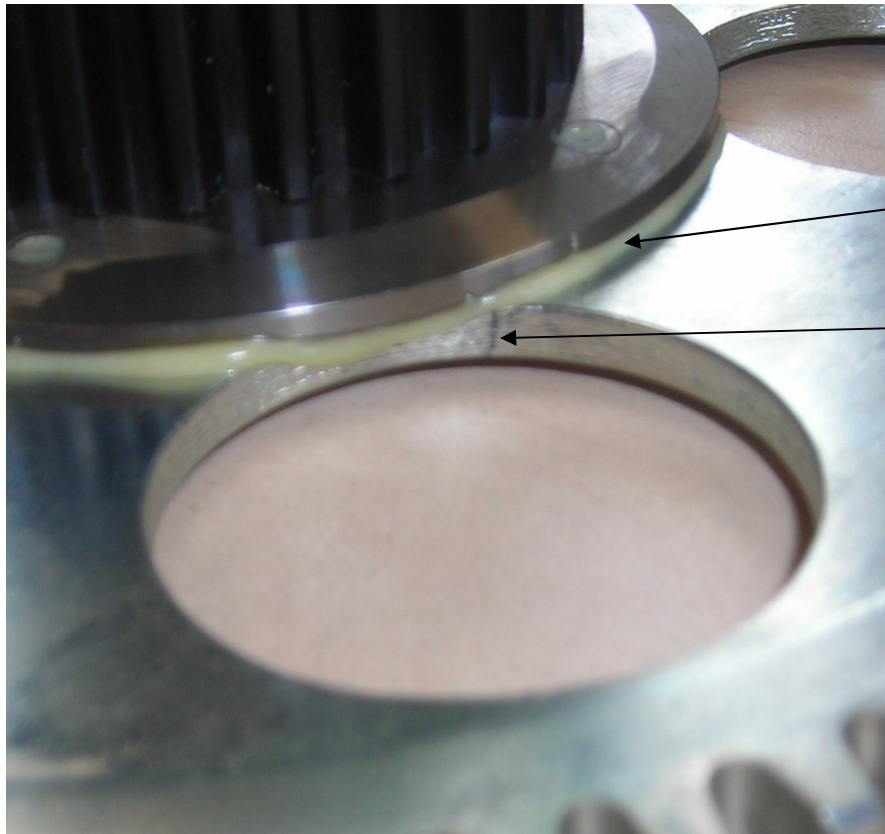
page 1 from 2

- Subject : Starter ring gear for Solo 2625 01 and 2625 02, zinc coated version
- Effectivity : DG-800B and DG-500MB with zinc coated starter ring gears
- Accomplishment : 1. Prior to next take-off
2. At each pre-flight inspection
3. If cracks have been detected exchange prior to next use of engine
- Reason : One of the zinc coated ring gears cracked and the escaping parts caused severe damage to the starter motor, the engine mount and the drive belt.
To date no reports of cracking have been received on the painted starter ring gears, which have been in service much longer than the zinc coated type. It is the manufacturers opinion that the zinc plating process may cause Hydrogen embrittlement which may encourage cracking.
- Instructions : 1. Determine if the starter ring gear is zinc coated or painted. Painted starter ring gears are not affected by this TN.
2. During each pre-flight inspection extend the powerplant just so far, that you can turn the propeller. Clean the lightening holes in the starter ring gear with a piece of cloth soaked with Acetone or cleaning benzine. Check for cracks see photo on page 2.
3. If cracks are visible the starter ring gear must be exchanged prior to next use of the engine. To accomplish this the starter ring gear assembled with adapter and lower drive belt pulley must be removed from the engine according to MM DG-800B and DG-500MB section 4.16.2 item 3, DG-808C section 4.17.2 item 3 and ship the assembly to DG Flugzeugbau for modification.
- Material : Painted starter ring gear without lightening holes
- Weight and balance : influence negligible
- Remarks : Instruction No. 1 may be executed by the pilot/owner himself and is to be inspected and entered in the aircraft logs by a licensed inspector at latest with the next annual inspection.
- Instruction No. 2 may be executed by the pilot/owner himself.
- Instruction No. 3 is to be executed by the manufacturer or by a licensed workshop and to be inspected and entered in the aircraft logs by a licensed inspector.

Bruchsal, date:

Author: Modifications approved by EASA Date 27. July 2009
under Approval No. EASA.A.C. 12694

Wilhelm 



adhesive

crack in starter ring gear