



AIRWORTHINESS ADVICE NOTICE

TYPE AFFECTED: DG-500 all variants

SUBJECT: Miscellaneous airworthiness information.

BACKGROUND: This AN records airworthiness information which is useful to know.

APPROVED MODIFICATIONS:

1. DG-500 M. Technical Note 843/4 allows the replacement of the Bosch electronic ignition units with Ducati units as Bosh units are no longer available. Copies of this Technical Note may be obtained from the GFA Secretariat.
2. Combined DG Technical Note 843-6 and 348-5 describe the optional fitting of a headrest for the rear cockpit on serial numbers up to 5 E 135. Copies of this Technical Note may be obtained from the GFA Secretariat.
3. DG Flugzeugbau GmbH Technical Note 843/11 about retrofit of Exhaust Gas Temperature (EGT) probes. Monitoring of the EGT is the best possible way to avoid severe engine damage due to overheating caused by a too lean fuel-air mixture. Therefore the manufacturer now offers a retrofit kit. This is an optional modification.

REPORTED DEFECTS:

1. There has been one reported incidence of the nylon bush at the front of the dive brake handle displacing from the handle and preventing the dive brakes from being locked. This part should be regularly inspected to ensure the bush is not working its way out of the handle.
2. DG-500M. There have been at least 2 cases in Australia where the engine failed to extend or retract because of one of the terminals on the signal filter adjacent to the spindle motor failed. It is unclear whether the failure was a result of a dry solder joint or because of fatigue. In both cases the fault was rectified by carefully cleaning the terminal and resoldering it to the circuit board. It is

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recommended that these joints be inspected at each annual inspection.

3. CANOPY LOCKING PIN AND ASSEMBLY: (Previously AWA 2017-1/2) DG-500 and early production DG-1000 aircraft to serial number 10-144 could experience rear canopy locking mechanism failure which could prevent exit. The rear locking pins can unscrew and disconnect rendering the rear canopy locked closed. It is recommended at annual inspection to open the front and rear canopies and wipe clean each locking pin and apply a right hand tightening rotational force to the pins with fingers only. If the pin rotates, the canopy lock mechanism requires repair. Note that the rod is locked by nut and Loctite. Take care and ensure that the locking is not broken by carrying out the test. Current production from S/N 10-144 onwards have been changed to a welded unit preventing the pin working loose due to vibration.

4. UNDERCARRIAGE CONTROL KNOB NOT REMAINING IN LOCKED POSITION: (Previously AWA 2018-3) The DG-500 and DG-1000 are subject to the undercarriage control knob not remaining rotationally locked. The control push rod is subject to spring forces which 'breaks' the torque on the jam nut / lock washer combination permitting the rod to rotate on the end fitting threads.

Access is gained through the left rear seat control cover. Loctite stud locker high strength is recommended to supplement the lock washer and hold the fitting in correct orientation.



Figure 1: Undercarriage push rod in left rear cockpit



Figure 2: Undercarriage push rod in centre fuselage. Elevator trim shockcords are on right hand side

5. SHOCKCORDS: The DG-500 and DG-1000 variants use shock cords to apply added trim tension and apply tension to tow release cables when not under load. See example in Figure 2 above. The trim control will lose effectiveness if tension is lost, or the release cable could snag or foul if not kept under tension. The release knob hanging down is an indicator that the shock cord is losing effectiveness.

All shock cords used on these types will need replacement with time. They should be checked for effectiveness at each annual inspection. The trim mechanism is located beside the main wheel well. The release cables under the rear seat instrument binnacle.