



**GFA AIRWORTHINESS DIRECTIVE**

**CANCELLED 18/06/2020**

**REFER TYPE CERTIFICATE HOLDERS  
CURRENT DATA**

TYPE AFFECTED: DG-600M and DG-600/18M

SUBJECT: Use of unleaded fuel, increase in service life and manual amendments.

BACKGROUND: High Octane (Premium) unleaded of at least 95 RON may be used provided the fuel drain sealing ring is replaced.

Overseas testing has shown that the service life may be increased to 12 000 hours.

The manuals have been updated to reflect latest practice.

DOCUMENTATION: DG Technical Note TN 866/6 which forms part of this AD.

ACTION REQUIRED:

1. Before the next Annual Inspection and before using unleaded fuel the drainer sealing ring must be replaced in accordance with Instruction 1 of TN 866/6. Parts may be obtained from DG Flugzeugbau or their Australian Agent.
2. Before 1 October 1997 amend the Flight and Maintenance Manuals by replacing pages 0.1, 0.3-0.5, 2.6, 3.4, 6.11(DG-600M), 6.11(DG-600/18M) and 8.7 in the Flight Manual and pages 1, 2-5, 36, 43-45, 45a, 52, 92, and 93 in the Maintenance Manual with pages dated March 1997. These pages must be complied with in all future servicing. Attention is drawn to the improved procedures for using Loctite.

Pages may be obtained from the GFA Secretariat.

SIGNED: Jonathon Shand

For and on behalf of:

CHIEF TECHNICAL OFFICER AIRWORTHINESS

THE GLIDING FEDERATION  
OF AUSTRALIA

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3. The service life of the DG-600M and DG-600/18M is increased to 12 000 hours provided the life extension inspections required in Section 2.4 of the relevant Maintenance Manual are complied with.

**WEIGHT AND BALANCE:** Not affected.

**IMPLEMENTATION:** Installation of the sealing ring must be completed by persons rated for Annual Inspections on the DG-600M or the DG-600/18M.

Manual amendments may be completed by the Certificate Holder.

Life extension inspections may be completed by persons rated for Airworthiness Surveys on the DG-600M or the DG-600/18M.

**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.

Manual amendments may be completed by the Certificate Holder.

Life extension inspections may be completed by persons rated for Airworthiness Surveys on the DG-600M or the DG-600/18M.

# 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.

## DG Flugzeugbau GmbH

Postfach 4120, 76625 Bruchsal 4  
Telefon 0 72 57 / 89-0, Telefax 0 72 57 / 89 22  
LBA anerkannter Herstellungsbetrieb IB 2  
LBA anerkannter Luftfahrttechnischer Betrieb IIA 284  
LBA anerkannter Entwicklungsbetrieb IEB 8

Technical note TN 866/6

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Subject: Use of unleaded fuel, increase of service life, manual revision

Effectivity: DG-600M, DG-600/18M all serial numbers

Accomplishment: Instruction 1,4: Prior to refueling unleaded fuel, latest until 01.10.97

- Reason:
1. Because leaded fuel will soon not be available, tests have been executed to find out whether it can be replaced by unleaded fuel. It was most important to check if the GFRP fuel tank would be damaged by some components added in high portions to the unleaded fuel, especially MTBE. In addition the drainer valve sealing ring designed for aviation gasoline may be affected. All other parts of the fuel system are from automotive origins and are therefore suitable for unleaded fuel.  
The tests showed that the GFRP fuel tank tolerates unleaded automotive fuel of present quality as well as leaded automotive fuel used in the past. AVGAS 100 LL was also tested and proved to be the least aggressive fuel.  
The drainer valve sealing ring is not resistant to automotive fuel and must be replaced.  
Moreover the Bombardier-Rotax company confirmed in the meantime that contrary to the manual, engines for motorgliders can be operated with unleaded automotive fuel with minimum 95 octane (RON).
  2. The results of fatigue tests have demonstrated that the service life can be extended to 12.000 h flight hours. The access holes necessary for the inspections have been installed during production.
  3. In some countries the TBO's recommended by Rotax are regarded only as recommendations and are not mandatory. Therefore the TBO data will be taken out of the DG-600 M maintenance manual.
  4. When securing with Loctite, some items must be considered, which have not previously been included in the maintenance manual.
  5. Manual revision

- Instructions:
1. Exchange of the drainer sealing ring for a sealing ring part no. 60504402.  
To accomplish this empty the fuel tank. Therefore disconnect the fuel hose coming from the fuselage at the mechanical fuel pump. Lengthen the fuel hose with another hose into a fuel can. Switch on ignition to empty the tank using the fuel pump installed in the aircraft. Note position of the drainer valve thread in the landing gear box, then remove the drainer valve using a 13 mm socket wrench. Press the drainer valve sleeve to direction „open“ and dismantle the sealing ring using a pointed but not sharp edged tool. The new sealing ring can be installed without a tool: Put the ring over the flange edge, roll it down to the groove and check proper position of the sealing. Before reinstallation remove old sealing tape on the drainer's thread. Then roll up minimum three windings with new sealing tape (winding direction clockwise when you look on the thread end). The sealing tape must not interfere with the sealing ring, after winding check the operation of the drainer valve. When reinstalling the drainer valve take care to screw in deep enough to avoid interference with the landing gear. Refuel the fuel tank and test for leaks.
  2. Instead of leaded automotive fuel with min. 96 octane (RON) as per flight manual also leaded and unleaded fuel with min. 95 octane (RON), e.g. „EURO-Super“, can be used. Operating the engine with unleaded fuel „Super Plus“ with 98 octane (RON) is not necessary and not recommended.

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If there is no unleaded fuel with 95 octane (RON) available (e.g. in USA) it is possible to mix unleaded fuel with min. 92 octane (RON) with AVGAS 100 LL, mixing ratio 50:50.

Empty the fuel tank for extended storage periods (more than 3 month). Don't use this fuel in the glider again.

3. Regard the new instructions for securing with Loctite. Check the lifetime of any Loctite in your possession
4. Exchange the following manual pages against the new pages dated March 1997, marked TN 866/6. Regard the marked changes.

Flight manual	Maintenance manual
0.1, 0.3-0.5, 2.6, 3.4,	1, 2-5, 36, 43-45, 45a, 52, 92, 93
6.11(DG-600M),	
6.12(DG-600/18M), 8.7	

Material: Manual pages, s. instruction 4  
Drainer valve sealing ring, part no.60504402  
Sealing tape for drainer valve thread 0,1x12mm DIN DVGW, part no. 70000370

Weight and Balance: Not affected

Remarks: All instructions can be executed by the owner or another experienced person.  
Accomplishment of all instructions must be entered into the aircraft logs by a licensed inspector

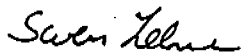
Bruchsal 4, den 10.04.1997



Author: Dipl. Ing. Wilhelm Dirks

LBA approved:

The German original of this TN has been approved by the LBA under the date of 05. Juni 1997 and is signed by Mr. Fendt. The translation into english has been done by best knowledge and judgement.



Type certification inspector Dipl. Ing Swen Lehner