



GFA AIRWORTHINESS DIRECTIVE

- TYPE AFFECTED:** DG-500 M
- SUBJECT:** Modifications for the issue of an Australian Certificate of Airworthiness.
- BACKGROUND:** During the First of Type validation inspection the following modifications were found to be necessary for the issue of an Australian Certificate of Airworthiness.
- DOCUMENTATION:** The First of Type validation report VIS1-93 and Technical bulletins as indicated below.
- ACTION REQUIRED:** These actions must be completed before first flight in Australia for newly imported gliders and before 31 December 1995 or the next annual inspection for gliders already in Australia.

Once these actions have been complied with the return slip at the end of the AD should be sent to the CTOA so that a certificate of airworthiness may be issued.

COMPLIANCE WITH MANUFACTURERS TECHNICAL BULLETINS.

1. Technical Note 843/2 which forms part of this AD.
 - a) For all serial numbers check that the Flight and maintenance manuals have been updated in accordance with Instruction 1 of Technical Note 843/2.
 - b) For serial numbers 5E3M2 to 5E33M17 check that Instruction 3 has been complied with.

The work instruction and manual amendment pages are available from the GFA Secretariat on request.

2. Technical Note 843/3-2 which forms part of this AD.

For serial numbers 5E30M14 to 5E60M25 check that the airbrake control hookup shaft has been modified in accordance with Technical Note 843/3-2.

3. Technical Note 843/5 which forms part of this AD.

For all serial numbers check that the Flight, Maintenance and Repair Manuals have been updated, that the rudder seal has been

SIGNED:

CHIEF TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

**THE GLIDING FEDERATION
OF AUSTRALIA**

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installed and the mounting for the cooling reservoir has been modified in accordance with Technical Note 843/5.

MODIFICATIONS

1. A drain hole must be drilled to prevent water accumulating in the top of the fin. This hole should be drilled through the outer skin (drain to the outside not down through the fin) at the lowest point in the fin rib. The correct position can be easily seen once the tailplane has been removed. The hole should be 4 mm diameter.

2. Colour coding of controls. JAR 22.780 reserves the colour red for use on canopy jettison controls only. Therefore the fuel shutoff valve must be painted black and the red sheath removed from the master switch.

WEIGHT AND BALANCE: Not affected

IMPLEMENTATION: The requirements of this Airworthiness Directive must be incorporated by persons rated "Inspection for Issue of Maintenance Release"

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.

AIRWORTHINESS DIRECTIVE COMPLIANCE SLIP

Return to: The GFA Secretariat. Building 130 Wirraway Rd Essendon Airport 3041

DG-500 M glider Reg VH-....., Serial Number, Certificate of
Registration No. G, complies with all the requirements of GFA AD 413 Issue 1.

Form 2 Inspector: Sign G

SUBJECT

: Manual revision, relocation of the ignition electronic boxes and of the cooling liquid reservoir.

EFFECTIVITY

: a) DG-500M all serial no's
b) DG-500M serial no. 5E3M2 up to 5E33M17

ACCOMPLISHMENT

: Instructions 1 and 3 latest April 30st, 1992
Instruction 2 during every flight

REASON

: a) Manual revision
b) Due to the high vibration level at the present location the wires at the plugs to the ignition electronic boxes may fail.
This causes disturbance of the indications of the DEI in the rear cockpit at the beginning and loss of ignition when the wires fail completely.
A more favourable location for the boxes was found.
This allows also to move the cooling liquid reservoir to the front which makes the engine retaining cable deflector unnecessary.

INSTRUCTIONS

: 1. Exchange the following manual pages against the new pages issued February 1992.
Please note all changes which are marked by a black vertical line in the left hand margin.
Flight manual
0.1 record of revisions
0.3-0.5 effective pages
2.6 two stroke oil
4.10 position of the screwed joint of hose clamp
4.15 determination of take off distance
4.17 Winch launch
Maintenance manual
1 record of revisions
3.4 content
4.9 position of the screwed joint of the hose clamp
65 checking the ignition timing
67 ignition unit - trouble shooting
68 " "
88 ident no's corrected
89 " " amended
91 new type of fuel filter
93 proximity switch
diagram 11 powerplant

2. Check during each flight if the display of the DEI in the rear cockpit is disturbed. This indicates failures of the wiring as described above.
If the indication is disturbed, it is prohibited to operate the engine, as long as instruction 3 is not completed.

3. Relocation of the ignition electronic boxes and of the cooling liquid reservoir according to working instruction No. 1 to TN 843/2.

MATERIAL

: Manual pages see instruction 1
Working instruction no. 1 to TN 843/2
Drawings 5M2, 5M66, 5M67, 5V10
Material according to material list in working instruction no. 1 to TN 843/2

WEIGHT AND
BALANCE

: influence negligible

REMARKS

: The instructions 1 and 2 may be executed by the 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 4, date

Febr. 19th, 1992
LBA - approved:
The German original of this TN has been approved by the LBA under the date of March 4th, 1992 and is signed by Mr. Walter. The translation into English has been done by best knowledge and judgement. In any case of doubt the German original is authoritative.

Author:

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Type certification inspector:

R. Lange

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LBA-Inspektor Heideggermann 18 25
LBA-Inspektor Lohmeyer 18 279

Technical note
No. 843/3-2

Page 1 from 1

SUBJECT : Airbrake control / control - hook up shaft
5 St 57

EFFECTIVITY : DG-500M ser.no. 5E30M14 up to 5E60M25

ACCOMPLISHMENT : Before next flight, but latest until
Dec. 31., 1992

REASON : During service cracks have been detected in
the welding of the lever to the torsion
tube, which may cause complete desintegra-
tion of the lever.

INSTRUCTIONS : Remove part 5 St 57 (see maintenance manual
diagramm 3) and ship it to:
Factory Wolf Hirth GmbH, Flugplatz Nabern
D-7312 Kirchheim-Teck 6 for modification
according to drawing 5 St 57 change b
issued 25.08.92.
When reinstalling secure the two bolts
which secure the shaft against axial move-
ment with Loctite 72 b. Use a new self-
locking nut M6 DIN 985-8 zn.

MATERIAL : /

**WEIGHT AND
BALANCE** : negligible

REMARKS : This TN 843/3-2 replaces TN 843/3 issued
26.08.92.
The instructions may be executed by the
owner. They are to be inspected and entered
in the aircraft logs by a licensed inspector

Bruchsal 4, date 28.10.92

LBA - approved:
The German original of this TN has
been approved by the LBA under the
date of 28.10.92 and is signed by
Mr. Ferdt. The translation into Eng-
lish has been done by best knowledge
and judgement. In any case of doubt
the German original is authoritative

Author:

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Type certification inspector:

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Technical note
No. 843/5

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SUBJECT : Manual revision / rudder sealing / cooling
liquid reservoir

EFFECTIVITY : DG-500 M all serial no.'s.

ACCOMPLISHMENT : February 28, 1993

REASON : 1. Manual revision
2. During flight tests at very high speeds
rudder vibrations caused by flow sepa-
ration have been detected. By sealing the
rudder gap these vibrations can be elimi-
nated.
3. The bracket 5M68/1 of the cooling liquid
reservoir may fail due to vibrations.

INSTRUCTIONS : 1. Manual revision
Exchange the following manual pages
against the new pages issued Sept. 1992.
Please note all changes which are marked
by a black vertical line on the left hand
margin.
Flight manual
0.1, 0.3, 0.4, 0.5, 3.4, 6.6, 6.7, 7.2,
7.7, 7.8, 8.7
Maintenance manual
1-4, 6, 9, 11, 17, 19, 37, 39, 40, 44,
46, 49-51, 66-69, 75, 81, 88, 91, 93
diagram 11, Service-Information 0-2/92
Repair manual
1, 2, 8
2. Install the rudder gap sealing according
to maintenance sect. 1.3.5.
3. Modify the mounting of the cooling liquid
reservoir according to working instru-
tion No. 1 for TN 843/5.

MATERIAL : The manual pages see instruction 1.
2 strips 1.48 m (59 in.) combi sealing 30/15
Working instruction No. 1 for TN 843/5 with
material
drawing 5 M 2
drawing 5 M 69

REMARKS : The instructions may be executed by the
owner himself and are to be entered in the
aircraft logs.

Bruchsal 4, Nov. 30, 1992

LBA - approved:
The German original of this TN has
been approved by the LBA under the
date of 30.11.92 and is signed by
Mr. Ferdt. The translation into Eng-
lish has been done by best knowledge
and judgement. In any case of doubt
the German original is authoritative

Author: W. Dirks

W. Dirks

Type certification inspector:

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