

TN 826/20

- Subject: 1. Empty weight C.G. range  
2. Plugged piece of hose at the pneumatic fuel pump  
3. Manual revisions  
4. Locking pins on wing tips
- Effectivity: Motorglider DG-400  
Serial No. 4 - 1 up to 4-228
- Accomplishment: Latest date June 30 1988
- Reason: 1. When using thin parachutes, there is the possibility, that the pilots position is behind the position used for calculating the present empty weight C.G. range diagram.  
2. The plugged piece of hose at the pneumatic fuel pump which closes the extra outlet came off on 1 DG-400.  
3. Manual revisions  
4. On some DG-400's the head of the locking pins failed by shear due to vibrations when taxiing.
- Instructions: 1. Using the new empty weight C.G. range diagram and the data of the latest weight and balance report and the table on page 21 flight manual the actual min. cockpit load has to be determined.  
If this value exceeds 70 kg (154 lbs.) one of the following measures 1a or 1b has to be executed.
- 1a. Enter the new value for the min. cockpit load in the table on page 21 flight manual and in the cockpit data placard.
- 1b. Remove (if any) or reduce the amount of lead ballast in the tail of your DG-400. This requires removal of the rudder for access. Or install fixed ballast in the fuselage nose (two 6 mm insersts are installed).  
After this action execute a new weight and balance measurement.  
Enter the results into the table on page 21 flight manual and add the new weight and balance report to the logs.  
Adjust the rudder and secure it properly.
2. Check the plugged piece of hose at the pneumatic fuel pump for tight fit. Therefore check the hose clamp at the plug and at the pump. Check at every 25 h inspection again, see maintenance manual sect. 3.4.1 item 6.

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3. Exchange the following manual pages against the new pages issued April 1988. The changes are marked at the side.

Page Content and changes

**Flight manual**

- 0 Manual amendments
- 1 Content - new issue dates
- 2 " " " "
- 17 a RPM Indicator - new type
- 20 Loading chart
- 23 Length of the towing cable-changed to 30 - 70 m
- 28 Daily inspection - split pin for wing tip securing deleted
- 42 Wing tanks - text supplemented
- 46 Rigging of the wing tips - splitpin for wing tip securing no more necessary
- 47 Filling the wing water ballast tanks - warning supplemented
- 50 Service and care - new translation petroleum ether
- 50 a Charging the batteries supplemented

**Maintenance manual**

- 0.1 Manual amendments
- 1 Content - new issue dates
- 2 " " " "
- 3 Life time - plugged fuel line, flexible fuel bags
- 11 Tail wheel - supplemented
- 14 Spark plugs - new type Bosch W 3 CC
- 15 Gas strut - designation corrected
- 17 c Flexible fuel bags - supplemented
- 18 Regulator - new type Glaser-Dirks 4 E 26
- 23 Charging the batteries - supplemented
- 30 General maintenance - corrections
- 31 Greasing and oiling - corrections
- 32 Servicing the engine - cylinder head nuts (item 2), plugged fuel line (item 6) plugged fuel line
- 34 plugged fuel line
- 39 Removal of the spindle-drive - corrected
- 40 Removal of ext.-retr. motor - corrected
- 41 Replacement of the gas strut - changed
- 48 Pilot C.G. corrected
- 49 Instrumentation, accessories list - correction - new instruments
- 51 List of special tools - special wrenches supplemented
- diagr. 2 Landing gear - part no.'s amended
- diagr. 5 Waterballastsystem - part no.'s amended
- diagr. 6 Engine - spring washer part no.
- diagr. 7 Extension - retraction mechanism gas strut - corrected
- diagr. 8 Fuel system - plugged fuel line supplemented
- diagr. 10 Empty weight C.G. range - new diagram

File the installation sketch EFWK "landing gear doors" (issued Oct. 1987) and drawing W 33 and W 34 (issued March 1988) at the end of the maintenance manual.

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4. The locking pins of the 15 m wing tip and the 17 m wing tip extensions have to be exchanged against new pins part no. 4 F 31. Therefore the split pin at the locking device has to be removed. Then the locking pin and spring can be removed. The pins 4 F 31 have no hole for a split pin and no thread as this is unnecessary. Grease the parts when installing (see M.M. sect. 3.3). Use a new split pin 2 x 20 DIN 94 zn.

Material:

4 locking pins 4 F 31  
4 split pins 2 x 20 DIN 94 zn

Remarks:

Instruction 1, 1a, 1b, 2, 4 are to be executed by a licenced work shop and to be inspected and entered in the aircraft logs by a licenced inspector. Instruction 3 may be executed by the aircraft owner.

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Bruchsal 4, April 20 1988

Signature:



Dipl. Ing. W. Dirks

LBA-approved:

The German original of this TN has been approved by the LBA under the date of April 29, 1988 and is signed by Mr. Skov.

The translation into English has been done by best knowledge and judgement. In any case of doubt the German original is authoritative.

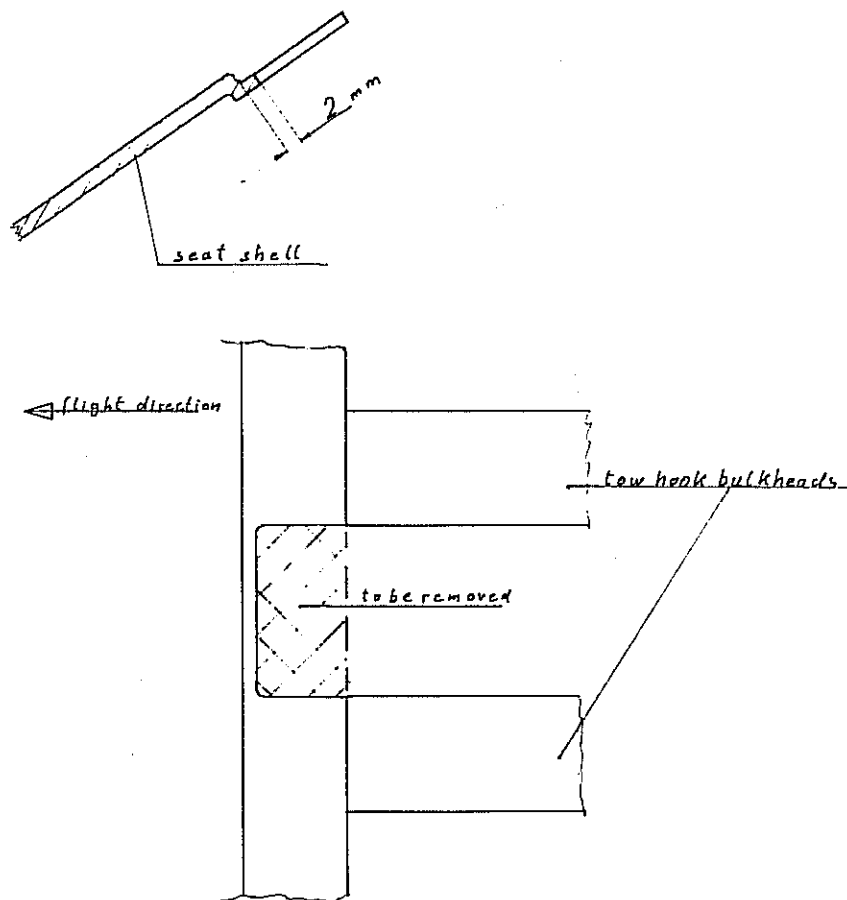
## Instruction

### Modification for easier disassembly of the C.G. tow hook

Effectivity: All DG-Singleseaters

Reason: As the cut-out in the seat shell is relatively small for disassembling the tow hook it is possible to loosen the seatshell from the tow hook bulkheads when disassembling the tow hook.

Instructions: The cut-out in the sheat shell shall be enlarged to the front see scetch. This can be done with a fine rasp or with a power grinder.



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Bruchsal 4, March 1st 1988

Signature: *Wilhelm Dirks*

Dipl. Ing. W. Dirks

1. DESCRIPTION OF UNSAFE CONDITION:

- a) When using thin parachutes, there is the possibility, that the pilots position is behind the position used for calculating the present empty mass C.G. range diagram.
- b) The plugged piece of hose at the pneumatic fuel pump which closes the extra outlet came off on 1 DG-400.
- c) On some DG-400's the head of the locking pins failed by shear due to vibrations.

2. PROBABLE CONSEQUENCE, IF UNSAFE CONDITION IS NOT RECTIFIED:

- a) flight behind aft C.G.
- b) fuel flowing into fuselage, insufficient fuel flow to engine.
- c) locking bolt falling out and wing tip coming off.

3. IS CONDITION LIKELY TO EXIST IN OTHER PRODUCTS OF THE SAME TYPE?

YES see 4.

4. SERIAL NUMBER APPLICABILITY: 4 - 1 up to 4 - 228

5. DIFFERENCES BETWEEN FCAA A.D. AND SERVICE BULLETIN, IF ANY?

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6. BASIS OF SERVICE OF LIFE LIMITED PARTS (e.g. service experience, test or analysis): /

7. BASIS OF INSPECTION TIMES:

- a) /
- b) every 25 h see M.M. 3.4.1  
life time 5 years see M.M. 0.2
- c) daily inspection

8. AVAILABILITY OF REPLACEMENT PARTS:

- a), b), no parts necessary
- c) parts will be supplied at no charge with TN 826/20

9. COMPATIBILITY OF MODIFICATION WITH OTHER AIRPLANE COMPONENTS:

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10. NUMBER OF SIMILAR INCIDENTS/REPORTS: none

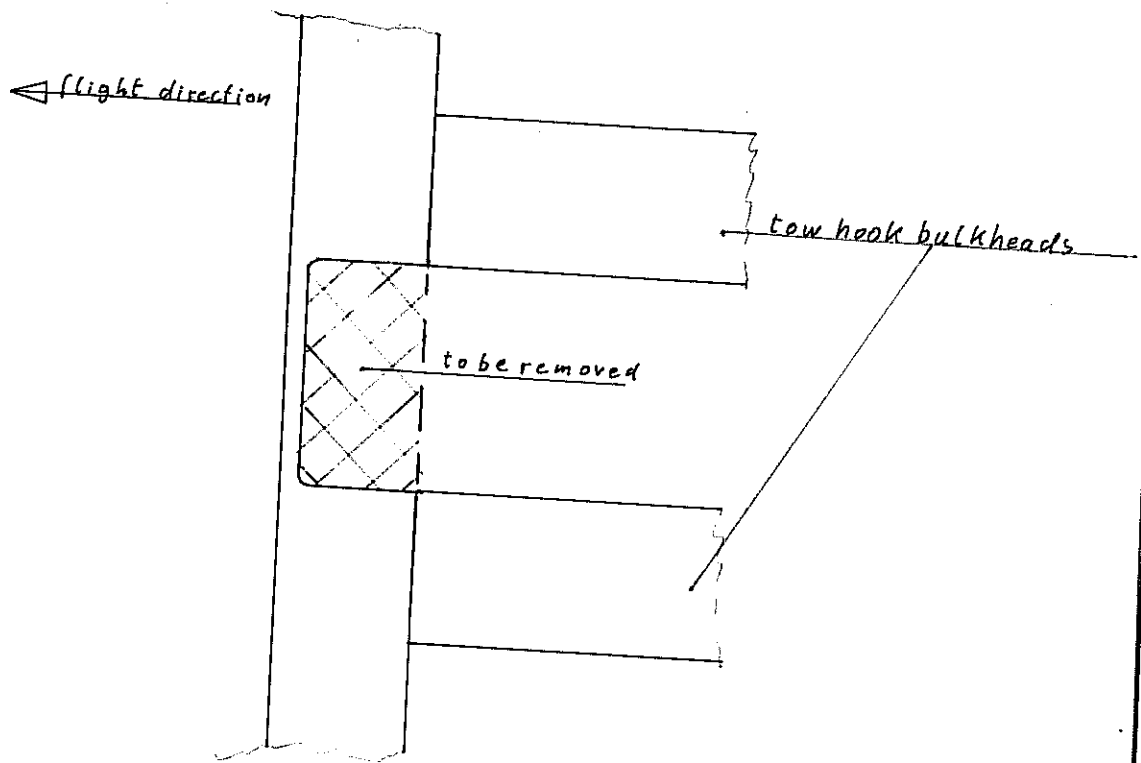
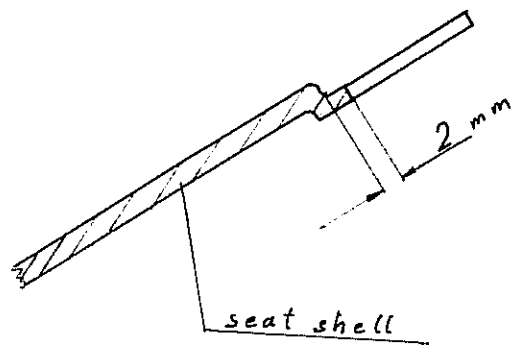
11. APPROXIMATE COST TO ACCOMPLISH MODIFICATION/INSPECTION:

instruction 1a of TN 826/20 no cost  
instruction 1b cost of weight and balance and 1 or 2 working hours.

April 20 1988

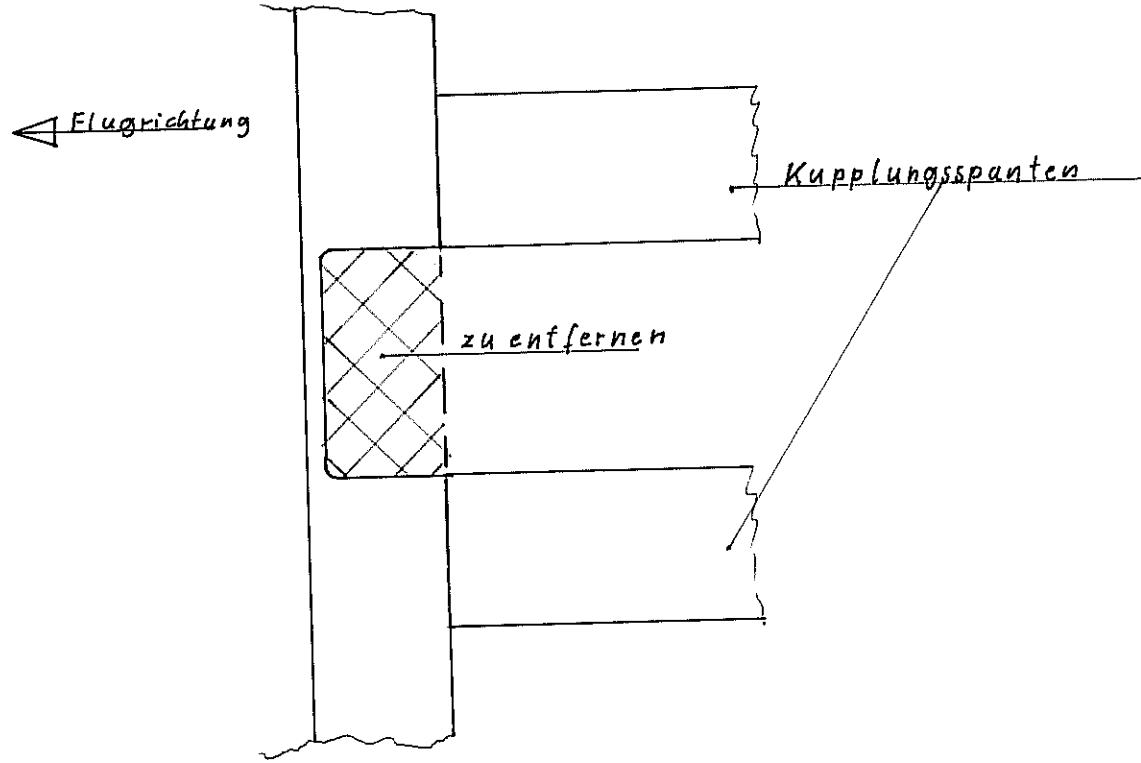
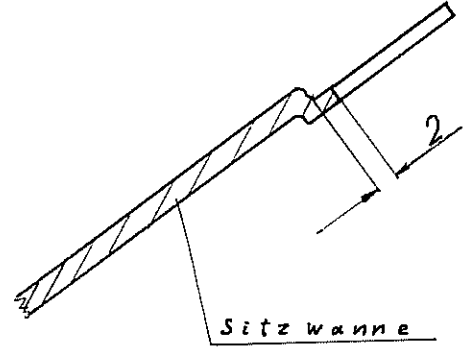


Dipl.-Ing. W. Dirks



Einzelnachweis zur <b>Glaser-Ditks Flugzeugbau GmbH</b> in Schlieroden 19-20, 7520 Bruchsal Telefon 07141-1071, Telefax 782210 GltB LEA-Bezeichnung: H020/10/20/10 LEA-Bezeichnung: Luftfahrzeugteil BA 220 LEA-Bezeichnung: Luftfahrzeugteil BA 220		JAR-22 § 22
Proof of compliance with <b>JAR 22</b>	Muster BG Geräte Nr.:	JAR-22 § 22
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Glas-Dirks Flugzeugbau GmbH Im Schollengarten 19-20, 7520 Bruchsal 4 Telefon 07257-1071 Telex 7822410 GLDG LBA anerkannter Herstellerbetrieb IB 25 LBA anerkannter Luftfahrttechnischer Betrieb IIA 279 LBA anerkannter Luftfahrttechnischer Betrieb IEB 8		Muster Type	DG	Geräte Nr.:	Kapitel Chapter	Seite page	von from
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