

## BGA TECHNICAL COMMITTEE

### TECHNICAL NEWSHEET 1/2/98

#### PART 1     Airworthiness "AGGRO"

Herewith the BGA 1998 "Yellow Pages" Compendium of Airworthiness information, kindly compiled by Tim Macfadyen. Please refer to this document at CofA renewals.

- 1.1.     PW-5 Bulletin No.8 (Mandatory) requires replacement of canopy locks.

PW-5 Bulletin No.6 - corrects errors in Bulletin 6/PW-5/97

Copies available from UK Agents.

- 1.2.     WASSAMER 26/28. 3 Airworthiness Directives are listed herewith in a letter from Mike Gagg. Wrekin G.C..

- 1.3.     Scheibe SF25, SF28 and SF36. Service Bulletins herewith, refer to FUEL SHUT OFF VALVES.

- 1.4.     Marianne 201A, 201B and 201B1 SB. 201-12 (2) herewith. extends the Service Life to 12000 hours.

- 1.5.     DG500 and DG500M. Modification to the CG Release Cable Pulley. T/Notes 348-9 and 843-9 require immediate action. LBA A/D 1998-023 refers

- 1.6.     DG400, 500M and 600M. DG INFO 4-97 (herewith) recommends the fitting EGT gauges in order to prolong engine life.

- 1.7.     DG400. T/Note 826/36 introduces a better propeller.

- 1.8.     ALL DG Series - Inspection procedures for increase of service time. The programme is included herewith.

- 1.9.     M.T. Propeller. The current list of LBA A/D's is enclosed.

- 1.10.    GROB G.109 - Pitch Change Bolt Failure. Extract from GASIL identifies the problem.

- 1.11.    TOST C.G. Hook Failures.

- (1)     Duo Discus, fracture of part of the mechanism. Manual Release inoperative, back release OK.

- (2) KA21 Self locking nut departed, centre pivot bolt migrated and sheared. Manual Release inoperative, back release OK.

Tost Hooks have serial numbers, and the factory record their service history. In case (2) above, the factory had no record since 1975!

## PART 2      GENERAL MATTERS

### 2.1.      CAA Charges for CofA Renewals (Tugs, SLMG's).

They increase from £56 per 500kg (or part thereof) to £58 per 500kgs, with effect 1st April 1998. (Airworthiness Notice No. 25 refers). Typically this equates to £58 x 6 = £348 for a three year renewal. (Payable to BGA).

### 2.2.      PA 25 (Pawnees) A/D 95-12-01 (Wing Fuselage NDT). Please send copies of your NDT Reports to BGA so that we can continue to negotiate with the FAA in ATLANTA CITY.

### 2.3.      Calibration of Altimeters.

For those gliders which are to be flown in CONTROLLED AIRSPACE, it is a requirement of the BGA Airspace Committee that altimeters shall be calibrated to the ICAO/CAA standard of accuracy, at the prescribed intervals. A calibration certificate should be available.

HAPPY NEW YEAR!

Dick Stratton  
Chief Technical Officer

Tel & fax: +44 (0)1384 567889

Michael H. Gagg,  
5, Doverdale Close,  
Halesowen,  
West Midlands.  
B63 2AT  
12th Jan 1998

Mr. R. B. Stratton,  
BGA Chief Technical Officer.

Dear Dick,

Wassmer WA26 & WA28 gliders (mandatory inspections).

As you may be aware, I have owned for some time now a WA26P 'Squale'. I have managed to obtain a photocopy of the complete maintenance manual and spares list which is also largely applicable to the WA28 'Espadon'. Other than the mandatory inspection for worn rudder cables which has already been published in BGA tech notes last year there are three other mandatory inspections which other inspectors should know about. I enclose photocopies of the French originals and the following is my (rough) translation of them.

AD78-142 (A) relates to checking the L'Hotellier coupling to the elevator to make sure it is correctly oriented with the lock facing sideways on the left. This is almost certainly embodied in all aircraft by now.

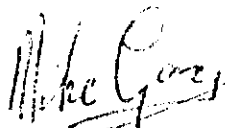
AD79-42(A) relates to checking the rear wing attachment bar in the fuselage for cracks and replacing it if any cracking is found by a new reinforced bar. Again, this should almost certainly be embodied in all aircraft by now, it has been on all the aircraft I have seen.

AD88-089 (A)R1 is really vital and needs doing at every annual inspection. It concerns the structural integrity of the tailplane support.

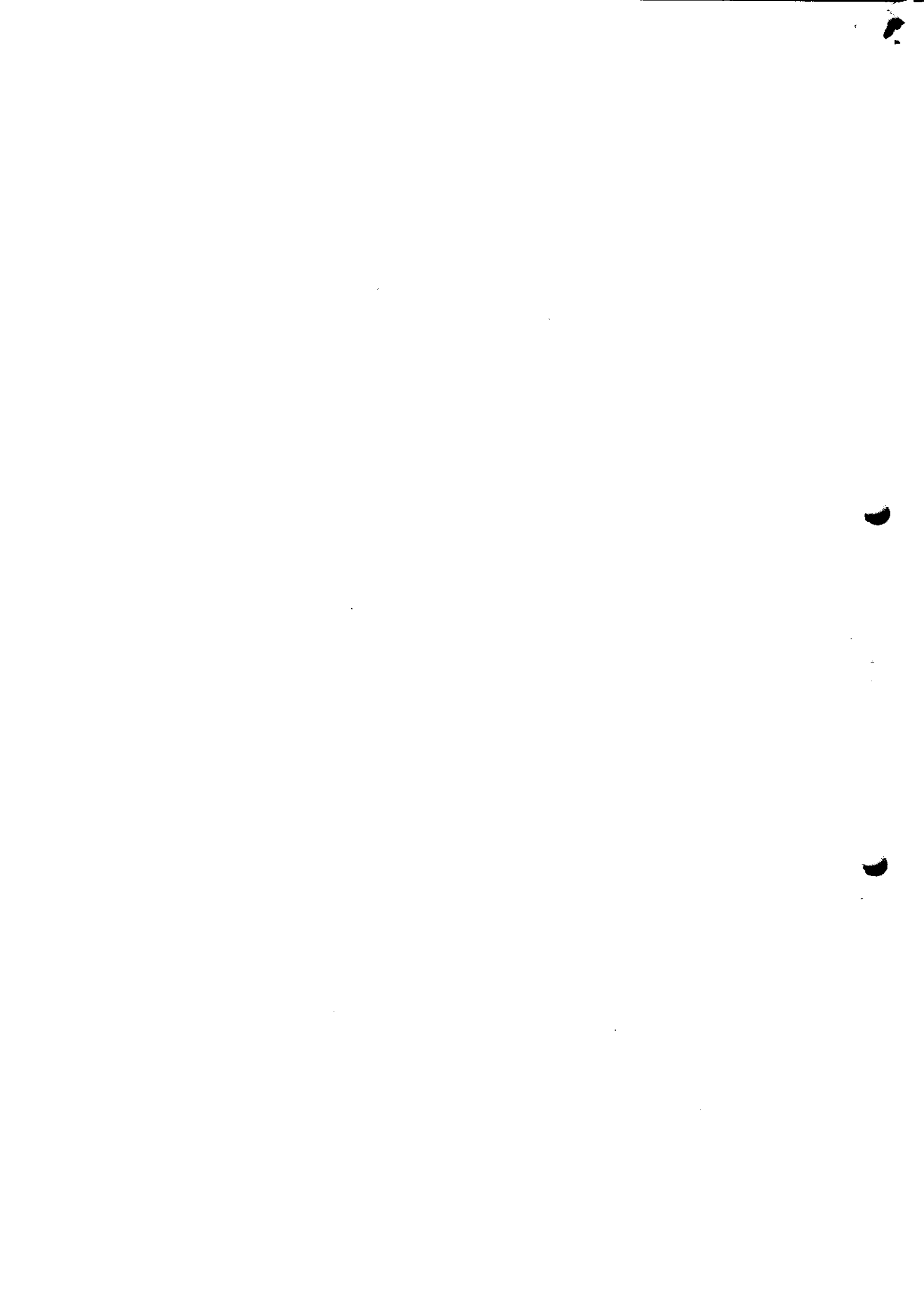
Briefly what it says is;

- 1) Inspect the fuselage skin around the base of the fin for traces of rubbing by the trim tab actuation arms.
- 2) After removing tailplane and the metal shear deck plate below the tailplane mounting (38 M4 screws!) check the following;
  - 2.1) Inspect the metal plate looking for cracking or buckling.
  - 2.2) Inspect the internal fuselage for delamination of the fibreglass in which the steel tube tail support frame is embedded and check the steel framework itself for corrosion.
- 3) If you find anything wrong, take the glider out of service and apply the appropriate repair scheme in Wassmer Service bulletin No.33.
- 4) If nothing is wrong return the glider to service.
- 5) Record that these checks have been carried out in the glider log book.


Yours sincerely,



Mike Gagg. (IC749ME)  
Wrekin G.C. RAFGSA



TNS 1/2/98

Scheibe-Flugzeugbau GmbH August-Pfaff-Str. 23 86551 Dachau LBAanerkennung I-B 3	<b>Service Bulletin 653-70, 770-21, 819- 6.</b>	SF 25B/C/D/E/K, SF 28, SF 36  Page 1 of 1
<b>Subject:</b>	Fuel shut- off valve	
<b>Affected:</b>	Motor glider of Firma Scheibe Flugzeugbau GmbH of the following types: SF 25, series B/C/D/E and K, all serialnumbers, TCDS - 653 SF 28, all series,all serialnumbers, TCDS - 770 SF 36, all series,all serialnumbers, TCDS - 819 which are equipped up to now with fuel shut- off valve TRUMA V8M.	
<b>Urgency:</b>	<b>At the next exchange of fuel shut-off valve corresponding to</b> SB 653- 41/2 (for SF 25) SB 770- 13/2 (for SF 28) For SF 36 A/R the term after SB 653- 41/2 is valid.	
<b>Reason:</b>	The supplier of the fuel shut- off valve TRUMA V8M has stopped the delivery of the fuel shut-off valve as an aircraft equipment. Therefore it is necessary to change to another fuel shut- off valve.	
<b>Action:</b>	<ol style="list-style-type: none"> <li>1. After expiration of the due time of 8 years according SB 653- 41/2 the up to now fuel shut- off valve TRUMA V8M has to be removed and scraped.</li> <li>2. For installation of the new fuel shut- off valve the cut out in the instrument panel is to enlarge, because the new fuel shut- off valve is a little bit longer.</li> <li>3. The new fuel shut- off valve, manufactured by <b>ARGUS; Typ NK series 490</b> has to be used. Ermeto parts GE 08-PLR has to be screwed in on both ends of the above Argus fuel shut- off valve. The from Scheibe Flugzeugbau GmbH obtainable fuel shut- off valves are marked with <i>SF M(onth) Y(ear) for example SF 08/97</i> on the valve body.</li> <li>4. A lifetime limit or a TBO has not been stated for the fuel shut- off valve ARGUS, Typ NK series 490.</li> </ol>	
<b>Remarks:</b>	<p>The above actions can be carried out by the owner of the motor glider,another authorized person or an approved service station. A logbook entry has to be done. After removal of the fuel shut- off valve TRUMA V8M an entry in the time change item list is to made. By application of the fuel shut- off valve <i>ARGUS, Typ NK series 490</i>, SB 653- 41/2 (for SF 25/ SF 36) and SB 770- 13/2 (for SF 28) isn't applicable in the future.</p>	
Scheibe Flugzeugbau GmbH Dachau, den 10-21-1997 LBA I-EB 2	<p>This service bulletin was originally written in German and approved by the German LBA. It is signed by Mr. H. Jung The translation has been accomplished to best of our knowledge and judgement. In case of doubt, the German original is authoritative.</p> <p>Musterprüfungsstelle (Hafenkom)  653-70E.DOC</p>	

Scheibe-Flugzeugbau GmbH August-Pfaff-Str. 23 86351 Dachau LBAanerkennung 1-B3	Operational instructions to	Service bulletin 653-70, 770-21, 819- 6	SF 25B/C/D/E/K, SF 28, SF 36 Page 1 of 1
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Affected: Motor glider of Scheibe Flugzeugbau GmbH of the following types:  
 SF 25, series B/C/D/E and K, all serialnumbers TCDS 653  
 SF 28, all series and serialnumbers TCDS 770  
 SF 36, all series and serialnumbers TCDS 819  
 equipped till now with fuel shut- off valve TRUMA V8M.

**Operational instructions for modification to ARGUS NK, Serie 490 fuel shut- off valve.**

1. The complete fuel is to be drained.
2. The fuel shut- off valve TRUMA V8M is to remove by opening the sleeve nuts on both ends of the valve body. The till now mounted sleeve nuts and cutting rings has to be removed from the steel pipe ends of the fuel line.
3. If necessary, eventually existing grooves on both ends of the fuel line steel pipes has to be polished by sand band. At this works you have to take care that no grinding dust can attain into the metal fuel line.
4. The up to now instrument panel cut out for the metal fuel line is to enlarge to  $\varnothing$  30 mm.
5. Slide on the new sleeve nuts and cutting rings to both ends of the metal fuel lines.
6. The *red* valve handle is to fasten on the valve moving shaft.
7. Mount the ARGUS NK Serie 490 fuel shut- off valve between the fuel line ends and slide in the steel pipe complete into the fuel shut- off cutting ring screwing on both ends of the fuel shut- off valve. Take care that the red valve handle in the open position of the fuel shut- off valve shows against flight direction.
8. Tighten the cutting ring screwing. Take care that fuel shut- off valve handle is in the closed position (90° upright) and that there is a distance of min. 5 mm to the above interior.
9. Fill up fuel system.
10. Open fuel shut- off valve and check all connections for leakages.
11. If an additional electric fuel pump is installed near by the tank, turn on this pump and check the fuel system for leakages.
12. An entry in the TCI- list is to made about the removal of the TRUMA- V8M fuel shut- off valve.

This time there is no necessity for a restricted lifetime or TBO for the fuel shut- off valve ARGUS, NK, Serie 490 considering the inner construction of the fuel shut- off valve. In the TCI list there is no corresponding entry to made.

The Service Bulletin 653-41/2, valid for SF 25 B /C /D /E /K, all serialnumbers  
SF 36A/R, all serialnumbers

and

770-13/2, valid for SF 28, all serialnumbers

are to be canceled *after* modification to fuel shut- off valve ARGUS NK, Serie 490 for the above motor glider. The corresponding points in the checklist or the annual inspection checklist has to be deleted after modification.



Scheibe Flugzeugbau GmbH  
Dachau, den 21.10.1997  
LBA I- EB 2:

Musterprüfstelle

(Hersteller)  
AW653-70 DOC

TNS 112/98



Société Nouvelle Centrair

# BULLETIN DE SERVICE

N° 201-12 Révision 2

PLANEURS CENTRAIR  
201 tous types

Page 1/1

**OBJET :** EXTENSION LIMITE DE VIE A 12000 HEURES.

**VALIDITÉ :** Planeurs MARIANNE 201A, 201B et 201B1.

**BUT :** Mise à jour du manuel d'entretien concernant la limite de vie et les inspections associées.  
Application du programme d'extension de limite de vie pour tous les planeurs ayant 3000 heures de vol ou plus.

**APPLICATION :** Dès réception.

**DESCRIPTION :**

**1/ Pour tous les planeurs :**

Il est demandé de bien vouloir effectuer la mise à jour (pages 0.0, 0.1, 5.00, 5.01 et 5.1) du manuel d'entretien.

Ces pages forment les révisions suivantes :

- Manuel Français : Révision 10 de l'Édition 2
- Manuel Anglais (sauf US) : Révision 4 de l'Édition 1
- Manuel Anglais (pour US) : Révision 5 de l'Édition 1

**2/ Pour tous les planeurs ayant atteint ou dépassé 3000 heures de vol, se procurer auprès de S.N. CENTRAIR la Lettre de Service 201-08 Révision 1 ou ultérieure et appliquer le programme suivant les modalités qui y sont décrites (les planeurs ayant subi les visites suivant la Lettre de Service 201-08 non révisée sont également concernés).**

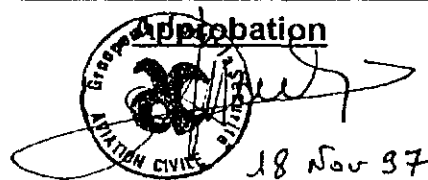
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CENT63-1b

Société Nouvelle CENTRAIR

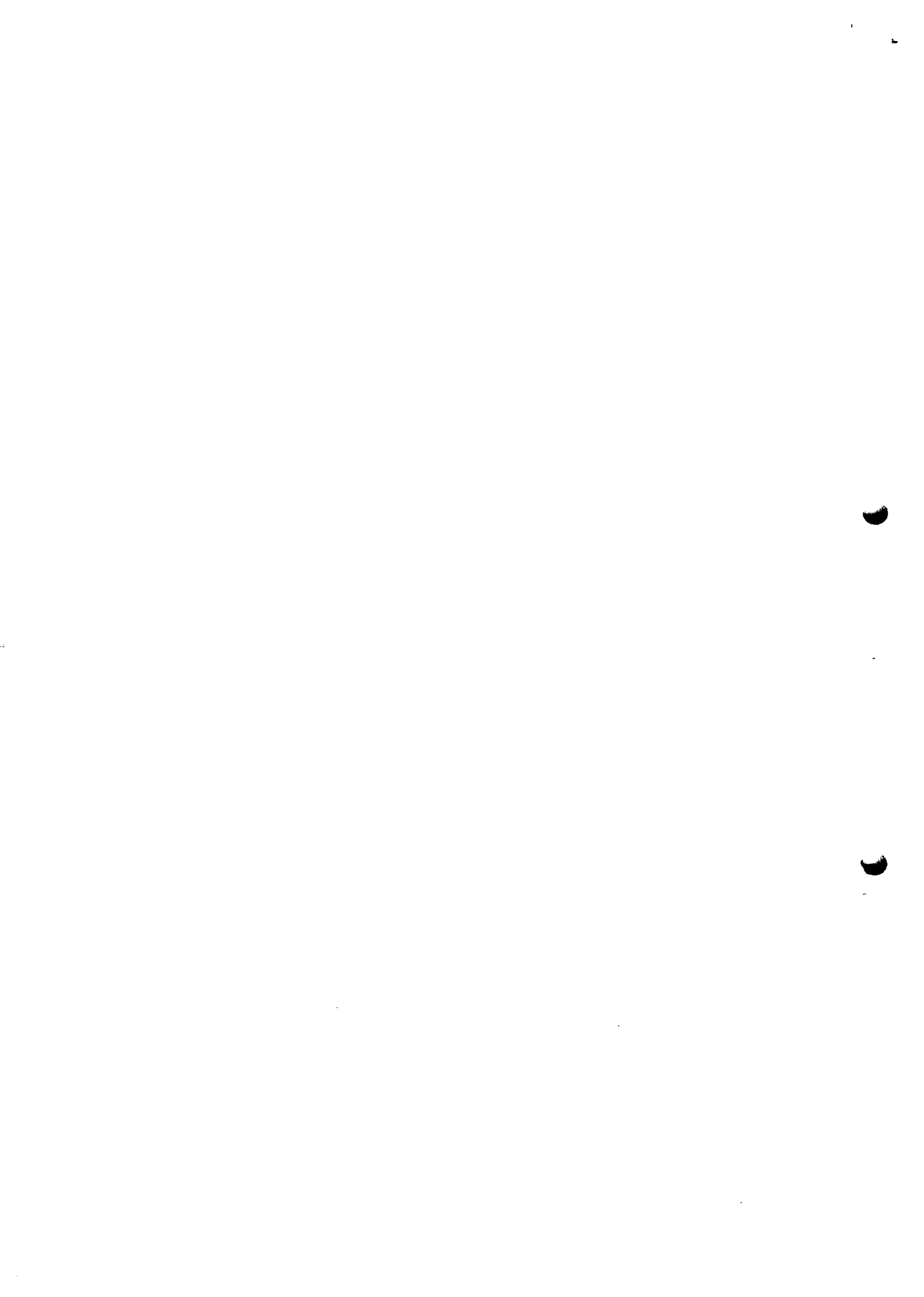
Aérodrome - 36300 LE BLANC  
FRANCE

Tél : 02.54.37.07.96 - Fax : 02.54.37.48.64



**Classification**

- Impératif
- Recommandé
- Pour information







**Airworthiness  
Directive  
1998-023**

**Luftfahrt-Bundesamt**  
Airworthiness Directive Section  
Lilienthalplatz 6  
38108 Braunschweig  
Federal Republic of Germany

**Glaser-Dirks**

**Effective Date: January 15, 1998**

**Affected:**

Kind of aeronautical product:	Powered Sailplanes
Manufacturer:	Glaser-Dirks, Bruchsal, Germany
Type:	DG-500M
Models affected:	DG-500M
Serial numbers affected:	all
German Type Certificate No.:	843

**Subject:**

Pulley for C.o.G.-tow release cable and Maintenance Manual revisions

**Reason:**

On a DG-500M the pulley for C.G.-tow release cable moved a little in axial direction as the ball bearing in the pulley came loose. With this incorrect position of the pulley the cable can come off the pulley and jam between pulley and the housing of the pulley.

The fluid of the hydraulic wheel brake system must be exchanged every 4 years. This was added also to the maintenance manual section „3. Maintenance“.

**Action:**

Inspection and if necessary exchanged of the pulley.  
Exchange of brake fluid.  
Exchange of some pages of the Maintenance Manual.

**Compliance:**

Inspection must be done before the next flight.  
Exchange of pulley, brake fluid and pages of the MM not later than February 28, 1998..

**Technical publication of the manufacturer:**

DG Flugzeugbau Technical Note No. 843-9 dated November 21, 1997 which becomes herewith part of this AD and must be obtained from Messrs.:

DG Flugzeugbau  
P.O. Box 41 20

D-76625 Bruchsal  
Phone: +49 (0) 7257-890

Federal Republic of Germany

**Accomplishment and log book entry:**

Action to be accomplished by an approved service station and to be checked and entered in the log book by a licensed inspector.

## SAFETY REGULATION GROUP

Aviation House  
Gatwick Airport South  
West Sussex  
RH6 0YR  
UNITED KINGDOM

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CIVIL AVIATION  
AUTHORITY

Our ref 9/97/CtAw/99

6 January 1998

**LBA AIRWORTHINESS DIRECTIVE 1998-023  
GLASER-DIRKS DG-500M MOTOR GLIDERS  
PULLEY FOR CoG -TOW RELEASE CABLE AND MAINTENANCE  
MANUAL REVISIONS**

This letter transmits a copy of the above referenced Airworthiness Directive for your attention.

The provisions of Article 9(7) of the Air Navigation Order (1995) as amended, are such that a Certificate of Airworthiness in respect of an aircraft registered in the United Kingdom will cease to be in force until any modification or inspection, being a modification or inspection required by the CAA is completed.

In accordance with Article 9(7) and Airworthiness Notice No. 36 the modification or inspection required by this Airworthiness Directive is mandatory for applicable aircraft on the UK Register.

**IT IS RECOMMENDED THAT YOU FORWARD A COPY OF THIS AIRWORTHINESS DIRECTIVE TO THE ORGANISATION THAT MAINTAINS YOUR AIRCRAFT.**



**R J TEW**  
Applications and Certification Section

Subject : Pulley for C.G.-tow release cable, manual revision

Effectivity : DG-500M, all serial no's

Accomplishment : Instruction 1 prior to next flight  
Instruction 2, 3, 4 at latest by February 28. 1998

Reason : 1.: On a DG-500 the pulley for C.G.-tow release cable moved a little in axial direction as the ball bearing in the pulley came loose. With this incorrect position of the pulley the cable can come off the pulley and jam between pulley and the housing of the pulley.  
2.: The fluid of the hydraulic wheel brake system must be exchanged every 4 years. This was added also to the maintenance manual section "3. Maintenance".  
3.: Manual revision

Instructions : 1. Check the position of the pulley. If the pulley is out of centre, the pulley must be replaced prior to the next flight. To get access to the pulley the rear seat must be removed. Unscrew the bolts of the hinges at the front end of the seat. The pulley is located in the lower end of the fuselage main bulkhead at the left hand side behind the C.G. tow hook.  
2. Replace the pulley by an aluminium pulley part no. S 30. The mounting bolt is accessible from the landing gear box. Use a new self-locking nut for reinstallation of the pulley.  
3. If the brake fluid hasn't been exchanged within the last 4 years, you have to exchange the brake fluid according to the maintenance manual.  
4. Exchange the following manual pages against the new pages issued October 1997 marked with TN 348/9.  
Maintenance manual  
1,3, 52

Material : 1 Pulley S 30  
1 self-locking nut M6 DIN 985-8zn  
Brake fluid DOT 3, DOT4 or SAEJ 1703  
Manual pages see instruction 4

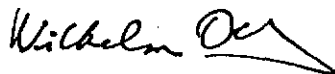
Weight and balance : Influence negligible

Remarks : Instruction No. 2 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: 21. Nov. 97

LBA – approved:

Author:  
Dipl. Ing. Wilhelm Dirks



The German original of this TN has been approved by the LBA under the date of 26. Nov. 1997 and is signed by Mr. Fendt. The translation into English has been done by best knowledge and judgement. In any case of doubt the German original is authoritative.

Type certification inspector:  
Dipl. Ing. Swen Lehner



- Subject : Pulley for C.G.-tow release cable, increase of service time, manual revision
- Effectivity : DG-500 all models, all serial no's up to 5E176
- Accomplishment : Instruction 1 prior to next flight  
Instruction 2, 3, 4 at latest by February 28. 1998
- Reason : 1.: On a DG-500 the pulley for C.G.-tow release cable moved a little in axial direction as the ball bearing in the pulley came loose. With this incorrect position of the pulley the cable can come off the pulley and jam between pulley and the housing of the pulley.  
2.: The fluid of the hydraulic wheel brake system must be exchanged every 4 years. This was added to the maintenance manual section "3. Maintenance".  
3.: For DG-500/22 ELAN, DG-500/20 ELAN, DG-500 ELAN TRAINER service life is extended to 12000 flight hours.  
4.: Manual revision
- Instructions : 1. Check the position of the pulley. If the pulley is out of centre, the pulley must be replaced prior to the next flight. To get access to the pulley the rear seat must be removed. Unscrew the bolts of the hinges at the front end of the seat. The pulley is located in the lower end of the fuselage main bulkhead at the left hand side behind the C.G. tow hook.  
2. Replace the pulley by an aluminium pulley part no. S 30. The mounting bolt is accessible from the landing gear box. Use a new self-locking nut for reinstallation of the pulley.  
3. If the brake fluid hasn't been exchanged within the last 4 years, you have to exchange the brake fluid according to the maintenance manual.  
4. Exchange the following manual pages against the new pages issued October 1997 marked with TN 348/9.
- | Type                | Flight manual  | Maintenance manual      |
|---------------------|--|-------------------------|
| DG-500 ELAN ORION   | 0.1, 0.3, 0.4, 4.2, 4.18, 5.6, 6.7,<br>7.1, 7.9, 7.10                              | 2, 26                   |
| DG-500/20 ELAN      | 0.1, 0.3, 0.4, 2.5, 4.3, 5.2, 6.5, 6.7,<br>6.9, 7.1, 7.9, 7.10                     | 2, 4, 23, 27            |
| DG-500/22 ELAN      | 0.1, 0.3, 0.4, 1.2, 2.5, 4.3, 5.2, 5.5,<br>6.2, 6.5, 6.7, 6.9, 7.1, 7.9, 7.10      | 2, 4, 21, 23, 27        |
| DG-500 ELAN TRAINER | 0.1, 0.3, 0.4, 1.3, 4.1, 4.2, 4.3, 5.2,<br>5.5, 5.6, 6.2, 6.4, 6.7, 7.1, 7.9, 7.10 | 2, 4, 15, 18, 21,<br>25 |
- Material : 1 Pulley S 30  
1 self-locking nut M6 DIN 985-8zn  
Brake fluid DOT 3, DOT4 or SAEJ 1703  
Manual pages see instruction 4
- Weight and balance : Influence negligible
- Remarks : Instruction No. 2 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: 21.Nov. 97

Author:  
Dipl. Ing. Wilhelm Dirks



Type certification  
inspector:  
Dipl. Ing. Swen Lehner



LBA – approved:

The German original of this TN has been approved by  
the LBA under the date of 26. Nov. 1997  
and is signed by Mr. Fendt. The translation into English  
has been done by best knowledge and judgement. In any  
case of doubt the German original is authoritative.

EGT probes for retrofit

Dear owner of a DG-400, DG-500M or DG-600M.

Unfortunately operational experience has shown that engine failures due to overheating of the engines occurred. Overheating is caused by a too lean a fuel mixture, resulting in damage to the pistons. Reasons may be wrong settings of the carburettor main nozzle, clogged fuel filters or carburettor nozzles. The CHT gauge or the coolant temperature gauge are not able to detect overheating in the combustion chambers fast enough. The only practical way to warn the pilot early enough to prevent engine damage is to measure and to display the exhaust gas temperature (EGT). For engines with 2 carburettors the EGT indication is the only possibility for correct synchronisation of the carburettors.

For these reasons we are already offering EGT probes for the DG-800 motorglider versions as an option.

To increase the safety of the DG-motorglider fleet we should like to develop and supply EGT probes and gauges for retrofit now.

For the DG-400 the retrofit kit consists of 2 EGT probes, 1 gauge with LCD display and transducer and 1 wiring set with selection switch. The gauge needs a space of 35mm by 20mm in the instrument panel. This kit may also be installed in motorgliders of other brands.

The cost is DM 980,- ex works + tax.

For the DG-500M and DG-600M it is possible to display the EGT values in the DEI. This saves instrument panel space. The DEI must be removed and shipped to DG for modification. The kit consists of 1 EGT probe, 1 wiring set and the DEI modification.

The cost is DM 620,- ex works + tax.

However we need at least 20 orders to start the production of such retrofit kits.

If you are interested to equip your glider with an EGT probe, please fill the attached form and mail or fax it to the DG factory as soon as possible.

With kind regards

*Wilhelm Dirks*

Dipl. Ing. Wilhelm Dirks  
DG Flugzeugbau GmbH

-----X-----

To  
DG Flugzeugbau GmbH  
Attn. Wilhelm Dirks  
Postfach 4120  
D 76625 Bruchsal  
Germany

Sender  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
glider type \_\_\_\_\_ serial no. \_\_\_\_\_

FAX +4972578935

Dear DG factory,

- Yes I want to purchase the EGT retrofit kit for my glider.  
Please send an order confirmation and more information as soon as possible.

\_\_\_\_\_  
Date signature

Subject : Better Propeller for DG-400

Effectivity : DG-400 all serial No.'s if TN 826/29 will be or has been executed

Accomplishment : none. optional

Reason : Noise measurements have been executed by the swiss authorities with a DG-400 which was equipped with a noise absorbing fairing according to TN 826/29 and with a DG-800 propeller MT 136 R 75-1B. The measurement in climb configuration according to ICAO Amendment 16 Chapter 10 showed a noise reduction of 2.6 dB(A) compared to the same measurement without fairing and with the original propeller, although no advantage was taken from the improved take-off and climb performance due to the MT propeller.  
In addition the engine sound is more agreeable.  
So for environmental reasons it is desirable that as many DG-400 owners as possible install the noise absorbing fairing and the MT propeller.

Instructions : 1. Execute TN 826/29, if not already done  
2. Exchange the propeller against the propeller MT 136 R 75-1B. Installation see propeller manual and maintenance manual DG-400.  
3. Exchange the following manual pages against the new pages issued June 97 and marked TN 826/36  
Flight manual: 0.1, 1, 6  
maintenance manual: 0.2, 1, 3a, 13

Material : 1. Propeller type MT 136 R 75-1B  
2. Propeller manual: MT-Propeller Operation and installation manual No. E-203  
3. Manual pages see instruction 3.

Weight and balance : negligible

Remarks : Instructions may be executed by the owner and are to be inspected and entered in the aircraft logs by a licensed inspector.

Bruchsal, date: June 20. 97

LBA - approved: 06. Aug. 1997

Author:  
Dipl. Ing. Wilhelm Dirks

*Wilhelm Dirks*

The German original of this TN has been approved by the LBA under the date of \_\_\_\_\_ and is signed by Mr. Fendt. The translation into English has been done by best knowledge and judgement.

Type certification  
inspector:  
Dipl. Ing. Sven Lehner

*Sven Lehner*

DG Flugzeugbau GmbH

Übersicht: Prüfprogramme zur Erhöhung der Betriebszeit von DG Flugzeugen

List of content: Inspection procedures for increase of service time

Typ DG- type DG-	Ausgabe issued	bei Betriebsstunden at operating time hours		max. Lebensdauer service time	TM Nr. Datum	LBA/LTA Datum
100	November 1984 January. 1986	3000 4000 5000		6000	301/11 8. 05.85	85-126 15.07.85
200	November 1984 January. 1986	3000 4000 5000		6000	323/5 15.02.85	85-80
300	November 1984 January. 1986	3000 4000 5000		6000	-,	...-,
400	November 1984 January. 1986	3000 6000 7000 8000	9000 10000 11000	12000	826/35 10.04.97	-,
500/22 ELAN 500ELAN Trainer 500/20 ELAN	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000	12000	348/9 21.11.97	-,
500 ELAN ORION	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000	12000	-,	-,
500M	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000	12000	843/7 19.02.96	
600	Januar 1996 January 1996	3000 4000 5000		6000	-,	-,
600M	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000	12000	866/6 10.04.97	-,
800A,LA	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000	12000	-,	-,
800B	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000 12000	12000	-,	-,
800S	Januar 1996 January 1996	3000 6000 7000 8000	9000 10000 11000	12000	-,	-,

21. 11. 1997 W. Dirks

**MT PROPELLERS**

**PART 1 – LUFTFAHRT-BUNDESAMT AIRWORTHINESS DIRECTIVES**

<i>LBA AD No.</i>	<i>Description</i>	<i>Applicability – Compliance – Requirement</i>
90-214 Issue 2	Possible loss of a propeller blade.	Applicable to MTV-1-( ) propellers serial nos. up to 89048 and MTV-6-C propellers serial nos. up to 90023. Compliance required as detailed in AD. MT-Propeller Service Bulletin TM No. 4A also refers.
92-367	Change of emergency procedures for powered gliders.	Applicable to MTV-Propellers which have the automatic control unit P-120-A or P-120-U installed. Compliance required as detailed in AD. MT-Propeller Service Bulletin TM No. 6 also refers.
93-088/2	Replacement of the electric motor of the propeller servo.	Applicable to MTV-1- ( ), -7- ( ), -10- ( ), -17- ( ), -18- ( ), and -20- ( ) propellers. Compliance required as detailed in AD. MT-Propeller Service Bulletin TM No. 7 also refers.
94-098	Replacement of PU erosion strip to avoid sudden loss of metal erosion sheet.	Applicable to MT and MTV Series propellers as detailed in AD. Compliance required as detailed in AD. MT-Propeller Service Bulletin No 8 also refers.
97-006/3	Hub, crack inspection and rework or replacement of the hub.	Applicable to MTV-3-B, version MTV-3-B-C equipped with propeller blades L250-21. Compliance required as detailed in AD. MT-Propeller Service Bulletin No. 12 also refers.



# PITCH CHANGE BOLT FAILURE

Aircraft type : Grob G109  
Date : October 1995

Both bolts had failed on one side of the hub. The fracture faces were smooth and indicated that fatigue failure was most likely, with the crack probably initiating in the last thread of the bolt near the aft face of the locknut. The bolts had been fitted approximately 1200 flying hours previously. The failure was found at a 50 hour check, the previous 50 hour check having been satisfactory.

Hoffman, the manufacturer of the HO-V62R/L160BT propellers, stated that only a few propellers with broken pitch

change rods have been reported. They consider there are several reasons or combinations of reasons for the failure.

- Wrong field adjustment of the low pitch setting, resulting in too big a wobble of the thrust plate or a misalignment of the pitch change rods.
- The ball-bearings being in permanent contact with the thrust plate when the propeller is in the take-off position.
- The ball-bearings are misaligned or worn out.
- The actuating lever for the

ball-bearings is bent, misaligned, worn out or loose.

- The pitch change rpm is set too high, Hoffman recommends 1800 to 2000 rpm.
- Wrong pitch change procedure.
- Wrong maintenance procedure.

Hoffman are attempting to have the aircraft manuals changed.

## CAA COMMENT:

All operators and maintainers should note the Hoffman comments.

# CRACKED PROPELLER HUB

Aircraft type : Piper PA34 Seneca  
Date : August 1994

The aircraft had been carrying a deferred defect on the propeller de-icing. When the spinner was removed for investigation, oil was found to be leaking from the hub due to a large crack. The hub had been fitted 431 hours

previously.

The hub was returned to Hartzell who concluded that damage may have initiated the cracking. Both CAA AD 001-07-94 and

FAA AD 90-02-23 mandate Hartzell Service Bulletin 164C. Hartzell are in the process of re-issuing the Bulletin to increase effectivity and have replaced the 50 hour/flight visual inspection with eddy current inspections.

# ALL THREE PROPELLER BLADE FERRULES CRACKED

Aircraft type : Cessna 206  
Date : July 1996

Excessive vibration had been reported in flight and disassembly of the propeller revealed that ferrules on at least 2 blades had cracked. One had cracked so severely that it had failed to provide any blade pre-loading, probably leading to the vibration. This ferrule bearing retaining flange had separated about 40% of the circumference. If the rest of the flange had broken away,

then it is possible that the blade may have separated from the retention nut securing it to the hub and departed from the aircraft. The most severely cracked ferrule had 5 pitch change pin locations which is contrary to the MacCauley Service Letter 1993-3. Further work revealed that all 3 ferrules were cracked and the hub assembly had to be scrapped following eddy current

inspections.

## CAA COMMENT:

Investigation revealed that the previous overhauler (Santa Monica Propellers) released ferrules with re-work to them which was beyond that detailed in MacCauley Service Letter 1993-3. The FAA and MacCauley have been advised of this incident.

