

## BGA TECHNICAL COMMITTEE

### TECHNICAL NEWSHEET 7/8/97

- PART 1**     Airworthiness "AGGRO" Please add to the 1997 Red Pages.
- 1.1.     KA21. Failure of Bell-Crank in Air Brake System Should have been replaced by Tech.Note 20 (TNS 6/88 refers). (Reported by Mick Woods - Cranwell G.C).
  - 1.2.     G.103 Twin Astir - Canopy Jettison Release Handle Assembly may have been disengaged from the Canopy Jettison Systems. (Both Cockpits). Check for correct assembly and operation a.s.a.p. (Reported by HQ. LC. Wyton).
  - 1.3.     SZD "JUNIOR". Following ground-loop inspection, bevel gears which drive the airbrakes were found to be cracked. (Derby & Lancs G.C.).
  - 1.4.     OLYMPIA 460 Series Sailplanes are no longer "grounded" by CAA, provided they have been modified after satisfactory spar inspections. (CAA Directive herewith).
  - 1.5.     DISCUS (CS) Airbrake/Aileron Interference. Reported in TNS 6/6/97, more detailed report herewith.
  - 1.6.     M.T. Propellers. Current list of Airworthiness Directives (A/D's) herewith.
  - 1.7.     PIRAT Aileron Connecting Rod damaged during rigging / de-rigging. (Sketch herewith).
  - 1.8.     LS4/LS4A Increase in Service Life to 12000 Hrs. Subject to multi-stage inspection at 3000 hrs. Tech Bulletin 4027 a enclosed.
  - 1.9.     Aeromof AMT 200 (XIMANGU). A/D 97-04-02 concerns flexible hoses.
  - 1.10.     DG800A - Use of Unleaded Fuel. T/N 873/8 is attached.
  - 1.11.     DG500M Propeller Mounting Plate - cracked and Unleaded Fuel. TN 843/8 is attached.
  - 1.12.     DG600M Unleaded Fuel and Increase in Service Life TN 866/6 refers.
  - 1.13.     DG400 Unleaded Fuel and Increase in Service Life. TN 826/35 refers.
  - 1.14.     KA2B - Both canopies unlocked and partially opened in side slip approach. Check canopy locks a.s.a.p. (Derby & Lancs G.C.).

- 1.15. KA21 - Canopy Damaged in heavy landing by pilot wearing a BGA baseball cap with a STUD IN THE CROWN. (Pilot injured too!).
- 1.16. SF25 and SF28 and SF36 SLMG's/ LBA A/D 97-140 (attached) requires ACTION ON TRUMA V8 FUEL VALVES.

## PART 2 GENERAL MATTERS

- 2.1. "OTFUR" Releases are product supported by Cair Aviation Ltd (01293 543832).
- 2.2. Health & Safety Executive Policy on Private Clubs, is repeated herewith. Common-sense dictates that we implement sensible precautions to protect our members and visitors from any form of accident!
- 2.3. PA25 - Pawnee - A/D 95-12-01 Inspection of wing to fuselage attachments. Correspondence with FAA Atlanta & Certification Office is repeated here for information. Please send copies of bi-annual NDT to BGA.
- 2.4. French Validations Advice from Peter Hearne is repeated herewith.
- 2.5. PA-25 - Pawnee - GASIL 2/97 recommends check cables to limit the damage if the undercarriage fails, (copy herewith).
- 2.6. PPL Limitations on Aircraft Maintenance (Article 12/5 ANO) are repeated herewith.
- 2.7. Glider Altimeters should be checked for Gross Errors, whenever they are suspect.

Dick Stratton  
Chief Technical Officer

British Gliding Association Ltd  
Kimberley House  
Vaughan Way  
Leicester  
LE1 4SE



**OLYMPIA SAILPLANES  
REVOCATION OF DIRECTION TO CEASE FLYING  
DATED: 22 AUGUST 1996**

The Civil Aviation Authority of United Kingdom in exercise of its powers under Article 107(1) of the Air Navigation (No.2) Order 1995 as amended hereby revokes the Direction imposed on Olympia Series Sailplanes having metal to wood bonded spar construction subject to the following conditions:

1. Aircraft are inspected in accordance with British Gliding Association Inspection Schedule TNS 12/96 (copy attached) and are found to be free of corrosion.
2. Aircraft are modified in accordance with Modification ref. BGA/OLY 460 Series 1/97 Issue 1 (copy attached).

A circular stamp with the text 'CIVIL AVIATION AUTHORITY' around the perimeter. Inside the stamp, there is a handwritten signature in black ink that appears to read 'P. W. Doolan'.

P W DOOLAN  
Deputy Head  
Applications & Certification Section  
24 June 1997

**DEFECT REPORT - Discus C.S. Airbrake/Aileron Interference**

Glider Type - Schempp Hirth Discus C.S.

Works No. - 100CS BGA No. 4147

Manufactured 1992

Incident

- 24.5.1997 approximately 1700 hours. Location near Dunchurch, Warwickshire.

After making the final turn in preparation for a field landing full airbrake was extended at which point the aileron movement in the right direction became restricted. Partial closure of the airbrakes removed the restriction and a normal landing was successfully completed.

Examination of the flying control linkages revealed that a conflict could occur between rod end bearing bolts on the crank arms associated with aileron and brake drives mounted right-hand side - mid fuselage.

The rod end bearing bolt connecting the aileron drive rod from the cockpit to the crank arm was installed the wrong way, such that the excess threaded length could make contact with the head of the rod end bearing bolt connecting the airbrake self connect horn drive rod to it's crank arm.

The bolt on the aileron drive rod end was reversed and checked by a BGA inspector - no conflict is possible in this position - the aircraft has been returned to service.

Reference to the aircraft log book implies that this defect has been present since original manufacture as there have been no recorded instances of any need to disconnect this drive rod.

Normal pre-flight control checks would not reveal the problem unless aileron movement was checked whilst holding airbrakes fully open.



M.E. Hughes  
16.6.97

**SAFETY REGULATION GROUP**

TNS 7/8/97

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Our ref 9/97/CtAw/184

6 June 1997

**LBA AIRWORTHINESS DIRECTIVE 97-140  
SCHEIBE SF25 AND SF28A MOTOR GLIDERS  
FUEL SHUT OFF VALVE TRUMA V8**

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.

A handwritten signature in black ink, appearing to read 'R J TEW'.

R J TEW  
Applications and Certification Section



**Airworthiness  
Directive  
97-140**

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

**Scheibe**

**Effective Date: June 05, 1997**

**Affected:**

Kind of aeronautical product: powered Sailplane  
Manufacturer: Scheibe Flugzeugbau, Dachau, Germany  
Type: SF 25, SF 28 and SF 36  
Models affected: all, equipped with new fuel shut off valves TRUMA V8  
Serial numbers affected: all  
German Type Certificate No.: 653, 770 and 819

**Subject:**

Fuel shut off valve TRUMA V8

**Reason:**

After delivery of the above fuel shut off valves an investigation shows some of them with wrong inner sealing ring material. Two following deliveries has had the same problems. This fuel shut off valves with wrong sealing material, delivered since 01.06.1996 are marked with

- a) only a 96 on the red valve handle
- b) with an engraving on the right side of the fuel shut off valve body like 2.7 SF seen in fuel flow direction and additional a 97 on the red valve handle or
- c) with an engraving on the right side of the fuel shut of valve body like 3.7 SF seen in fuel flow direction and additional a 97 on the red valve handle.

**Action:**

Exchange of fuel shut off valve with the correct fuel shut off valve marked like 3,1.7 SF or 3.97 V in accordance with the Service Bulletin.

**Compliance:**

Before the next flight.

**Technical publication of the manufacturer:**

Scheibe Flugzeugbau Service Bulletin No. 653-67, 770-20, 819-4 dated April 04, 1997 which becomes herewith part of this AD and must be obtained from Messrs.:

Scheibe Flugzeugbau GmbH  
August.Pfaltz Str. 23

D-86551 Dachau

Federal Republik 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.

**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.
97-006/2	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.

AEROMOT AMT-200 MOTORGLIDERS

X-IMANGU.

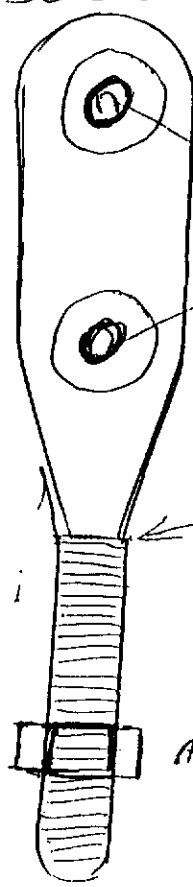
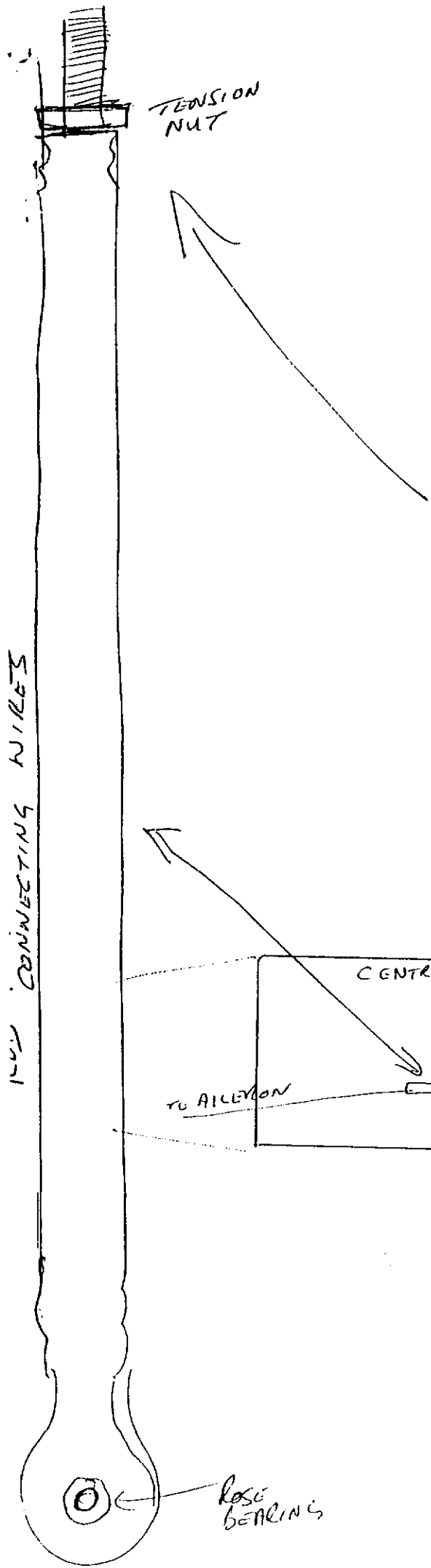
PART 1 – DEPARTAMENTO DE AVIACO CIVIL AIRWORTHINESS DIRECTIVES

<i>DAC AD No.</i>	<i>Description</i>	<i>Applicability – Compliance – Requirement</i>
97-04-02	Replacement flexible hoses.	Applicable to AMT-200 motorgliders serial numbers 200.046 through 200.066. Compliance required as detailed in AD. Aeromot Service Bulletin 200.079.036 also refers.



TURN BUCKLE

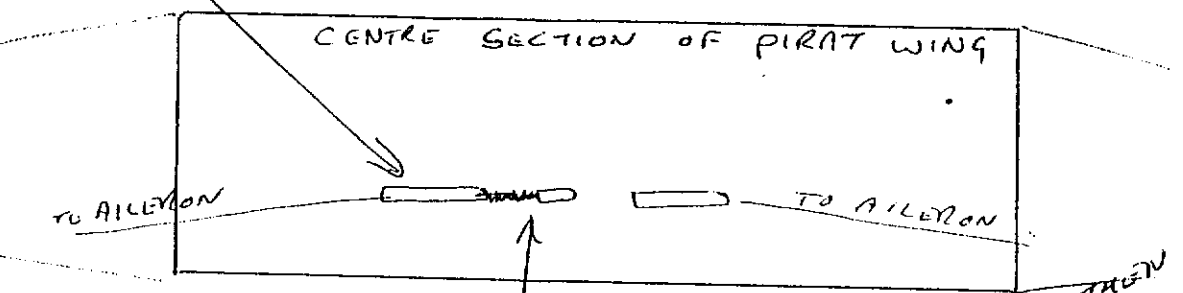
PIRAT



ROSE BEARINGS  
ROSE BEARINGS

STRESS FRACTURE  
(COMPLETE BREAK)  
CAUSED BY TURN BUCKLE  
BEING PUT UNDER STRESS  
WHEN LIFTING WING SECTION  
IT OFTEN GOT STUCK UNDER  
CONTROL ROD.

ADJUSTING NUT  
FOR TENSION  
ON AILERON



THIS PART OF WING  
IN CENTRE ~~CONNECTS~~ CONNECTS  
VIA ROSE BEARINGS TO ROD THEN  
TO THE STICK.

ROSE BEARING

PIRAT S.Z.D. 30  
WORKS NO B 534  
BCA NO 1819.  
BUILT 13<sup>th</sup> FEBRUARY 1972



**Airworthiness  
Directive  
87-254/2**

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

**Rolladen-Schneider**

**Effective Date: July 03, 1997**

**Affected:**

Kind of aeronautical product: Sailplane  
Manufacturer: Rolladen-Schneider, Egelsbach, Germany  
Type: LS 4  
Models affected: LS 4 and LS 4-a  
Serial numbers affected: all  
German Type Certificate No.: 345

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**Subject:**

Increase of service life

**Reason:**

Results of supplementary serviceability tests at main spar booms for wings proved that service life of GRP-sailplanes may be increased to 12000 hours, it airworthiness of each single sailplane is checked according to a special multiple-stage inspection program as included into Maintenance Manual.

**Action:**

Pages entitled „Inspection Sequence to increase Service Life“ should be added to Maintenance Manual and recorded in list of pages of Maintenance Manual.

**Compliance:**

Before reaching 3000 hours service life.

**Technical publication of the manufacturer:**

Rolladen-Schneider Technical Bulletin No. 4027a dated Oktober 23, 1995 which becomes herewith part of this AD and must be obtained from Messrs.:

Rolladen-Schneider  
Flugzeugbau GmbH  
Mühlstrasse 10

D-63329 Egelsbach  
Federal Republik of Germany  
Phone: +49 (0) 6103 4126  
Fax: +49 (0) 6103 45526

**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.

**Note:**

This AD supersedes the AD-No. 87-254.

ROLLADEN-SCHNEIDER Flugzeugbau GmbH LBA-Nr. ED - 4	Technical Bulletin No. 4027 a	LS4 LS4-a	Page 1 Edition Nov. 94
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Subject: Increase of service life

Effectivity: Sailplanes LS4 and LS4-a

Accomplishment: Before reaching 3000 hours service life

Reason: Results of supplementary serviceability tests at main spar booms for wings proved that service life of GRP-sailplanes may be increased to 12000 hours, if airworthiness of each single sailplane is checked according to a special multiple-stage inspection program as included into Maintenance Manual.

Instructions: Pages as given below entiteled "Inspection Sequence to increase Service Life" should be added to Maintenance Manual and recorded in list of pages of Maintenance Manual.

USA: Exchange pages 10-1 through 10-3 against Edition Nov. 1994

All other countries:  
Exchange pages 5-1 and 5-2 against Edition Nov. 94

Remarks: This regulation does not affect annual inspections.

Inspections required in chapter "Inspection Sequence to increase Service Life" of Maintenance Manual should only be carried out at the manufacturer or at an adequately licensed repair shop.

Results of inspections must be recorded in an inspection report, commenting to each inspection step. If inspections are not carried out at the manufacturer, a copy of the report must be sent to him for analysis.

LBA-approved: 08.04.97



*b.o. Jung*

**LBA-AD 87-254/2**

ROLLADEN-SCHNEIDER Flugzeugbau GmbH LBA-Nr. EB - 4	Maintenance Manual	LS1 LS4-a	Page 5-1 Edition Nov. 94
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Components Life / TBO

1. Sailplane structural life limit: 3000 hours total flying time.

The life limit may be increased to 12000 hours according to the procedure outlined on page 5-2.

2. Safety harness Autoflug FAG-7H: Webbing life limit 12 years from manufacturing date.  
(if fitted)

See also Maintenance and Operating Instructions of manufacturer.

3. All Gadringer safety harnesses: Webbing life limit 12 years from manufacturing date.

See also Maintenance and Operating Instructions of manufacturer.

4. C.G. hook           Tost Europa G 73: 48 months or 2000 take offs >\*  
                          or Tost Europa G 72  
                          or Tost Europa G 88

5. Nose hook           Tost E 75:       48 months or 2000 take offs >\*  
                          or Tost E 72  
                          or Tost E 85

>\* See also Maintenance and Operating Instructions of manufacturer.

ROLLADEN-SCHNEIDER Flugzeugbau GmbH LBA-Nr. EB - 4	Maintenance Manual	LS4 LS4-a	Page 5-2 Edition Nov. 94
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### Inspection Sequence to increase Service Life

#### 1. General

Results of supplementary serviceability tests at main spar booms for wings proved, that service life of GRP-sailplanes may be increased to 12000 hours if airworthiness of each single sailplane (in addition to annual inspections) is checked according to a special multi-step inspection program.

#### 2. Schedule

When the sailplane has reached 3000 hours service life an inspection according to the program mentioned under 3. must be carried out. If the result of the inspection is positive or found defects repaired properly, the service life of this sailplane will be increased by 3000 hours to 6000 hours (1. step).

The inspection routine should be repeated when reaching 6000 hours. With a positive result or found defects repaired properly, service life will be increased by another 3000 hours to 9000 hours (2. step).

The inspecting routine should be repeated when reaching 9000 hours. With a positive result or found defects repaired properly, service life will be increased by another 1000 hours each to 10000 hours (3. step), 11000 hours (4. step) and 12000 hours (5. step).

3. The valid inspection program should be requested from the manufacturer stating serial number and service time.
4. Inspections should be carried out at the manufacturer or an adequately licensed repair shop.
5. Results of inspections must be recorded in an inspection report, commenting to each inspection step. If inspections are not carried out at the manufacturer, a copy of the report must be sent to them for analysis.
6. This inspection does not affect annual inspections.



**Subject:** Use of unleaded fuel, internal sealing of flaperon and rudder, manual revision

**Effectivity:** DG-800A, LA all serial numbers

**Accomplishment:** Instruction 1 and 5: Prior to refuelling unleaded fuel, at latest by 01.10.97  
Instructions 2,3 and 4: As desired

**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. To improve gliding performance installation of internal flaperon and rudder sealing is possible.
3. When securing with Loctite, some items must be considered, which have not previously been included in the maintenance manual.
4. Manual revision

**Instructions:**

1. Exchange of the drainer sealing ring for a sealing ring partno. 60504402.  
To accomplish this empty the fuel tank: Therefore use the separate electric fuel pump system and empty the tank through the tank filler opening.  
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 tightly 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 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 check for leaks.
2. Instead of leaded automotive fuel with min. 96 octane (RON) as per flight manual leaded and unleaded fuel with min. 95 octane (RON), e.g. „EURO-Super“, can also be used. Operating the engine with unleaded fuel „Super Plus“ with 98 octane (RON) is not necessary and not recommended. 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 months). Don't use the fuel in the motorglider again.

3. Installation of internal sealing of flaperon and rudder: See maintenance manual p. 80
4. Regard the new instructions for securing with Loctite. Check the lifetime of any Loctite in your possession
5. Exchange the following manual pages against the new pages dated march 1997 marked TN 826/35. Regard the marked changes.

Flight manual

0.1, 0.3, 0.4, 0.5, 2.6, 4.11,  
4.16, 6.3, 7.7

Maintenance manual

1, 2, 3, 4, 21, 24, 53, 80, 92, 94

Material: Manual pages, s. instruction 5  
Drainer valve sealing ring partno.6050 4402  
Sealing tape for drainer valve thread 0,1x12mm DIN DVGW, partno. 7000 0370  
Teflon-glassfabric for internal flaperon sealing part.no. 3000 3136  
V-seal for internal rudder sealing part.no. 7000 0295  
Talcum powder

Weight and Balance: Not affected

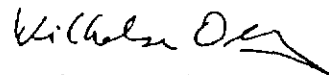
Bruchsal 4, den 10.04.1997



Author: Dipl. Ing. Swen Lehner

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. Wilhelm Dirks



## SAFETY REGULATION GROUP

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CIVIL AVIATION  
AUTHORITY

Our ref 9/97/CtAw/99

28 July 1997

### **LBA AIRWORTHINESS DIRECTIVE NO 97-224 GLASER-DIRKS DG-500M MOTOR GLIDERS CRACKS IN THE PROPELLER MOUNTING PLATE**

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



**Airworthiness  
Directive**

**97-224**

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

**Glaser-Dirks**

**Effective Date: 31 July 1997**

**Affected:**

Kind of aeronautical product: Motorglider  
Manufacturer: DG Flugzeugbau GmbH, Bruchsal, Germany  
Type: DG-500M  
Models affected: DG-500M  
Serial numbers affected: all  
German Type Certificate No.: 843

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**Subject:**

Powerplant system, cracks in the propeller mounting plate.

**Reason:**

During an inspection cracks have been found on the lower end of the propeller mounting plate near the bolt connections.

Cracks in this area could lead to loss of the propeller mounting plate which could followed by propeller separation, damages to the motorglider and serious injuries.

**Action:**

1. Crack inspection of the propeller mounting plate according to DG Flugzeugbau Technical Note TN 843/8, dated 10 April 1997.
2. These inspections must be repeated in intervals mentioned under compliance.
3. Replacement of the propeller mounting plate if any cracks were detected or only suspected.
4. Modification of the bolt connections of the propeller mounting plate by inserting an additional aluminium plate between propeller mounting plate and washers of the bolt connections for better stress distribution. "The modification has to be performed in accordance to DG Flugzeugbau Technical Note TN 843/8, dated 10 April 1997."

**Compliance:**

For the listed actions, the following compliance times has been laid down:

1. Before the next flight.
2. In the scope of every 25 hour inspection.
3. Before the next flight.
4. Before the next flight.

**Technical publication of the manufacturer:**

The DG Flugzeugbau Technical Note TN 843/8, dated 10 April 1997, which becomes herewith part of this AD can be obtained from Messrs.:

DG Flugzeugbau GmbH  
P.O. Box 4120  
76625 Bruchsal  
Germany  
Tel. + 49 7257-89-0  
Fax + 49 7257-8922

**Subject:** Inspection of the propeller mounting plate, use of unleaded fuel, manual revision

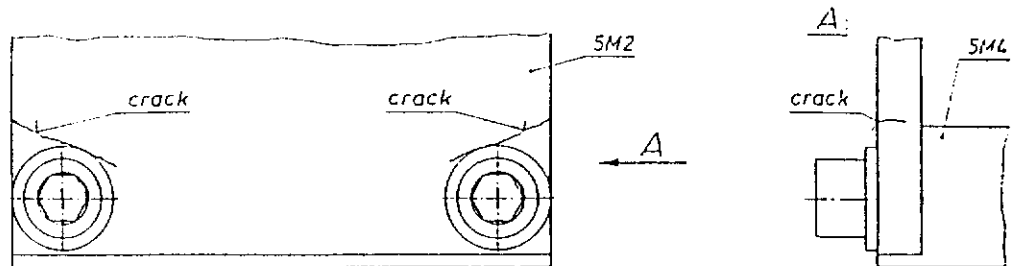
**Effectivity:** DG-500 M, all serial numbers

**Accomplishment:**

Instructions 1:	Prior to next flight.
Instructions 2 and 5:	Prior to refuelling unleaded fuel, at latest by 01.10.97. Maintenance manual page 47 and diagr.11 must be exchanged prior to next 25h inspection.
Instructions 3 and 4:	As desired.

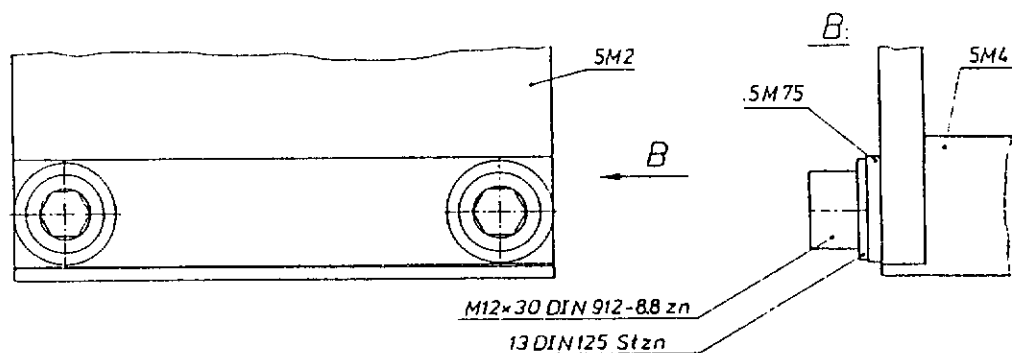
- Reason:**
1. On an inspection cracks were found in the propeller mounting plate 5M2 (s. maintenance manual diagram 11) near to the bolts connecting the plate to attachment 5M4. Prior to the next flight the propeller mounting plate must be inspected for cracks in the affected area. This item is also added to the 25 hour inspection of the powerplant. In addition an aluminium plate 5M75 must be inserted between propeller mounting plate and washers to avoid undesirable stressing of the propeller mounting plate.
  2. 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).
  3. When securing with Loctite, some items must be considered, which have not previously been included in the maintenance manual.
  4. Manual revision.

- Instructions:**
1. The critical areas (at the lower end) of the propeller mounting plate must be inspected for cracks. To accomplish this first remove the bolts at the front face of the propeller mounting plate including washers, then clean the plate with a cloth. Now have a close look at the surrounding of the fixing bolts and the edges (s. sketch) using a magnifying glass (magnification min. 5x). Due to remains of lubricant soaked into the cracks they are easy to detect.



Because cracks might also start from impressions of the washers check this area very carefully. If cracks are detected or only suspected the propeller mounting plate must be replaced by a new part SM2.

Moreover an aluminium plate SM75 must be inserted between propeller mounting plate and washers for better stress distribution. Use longer bolts M12x30 DIN912-8.8zn instead of existing bolts to fix the propeller mounting plate.



2. Exchange of the drainer sealing ring for a sealing ring part no. 60504402.

To accomplish this empty the fuel tank. Therefore use the separate electric fuel pump system and empty the tank through the tank filler opening.

Note how far the drainer valve protrudes into 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 tightly 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 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 check for leaks.

3. Instead of leaded automotive fuel with min. 96 octane (RON) as per flight manual leaded and unleaded fuel with min. 95 octane (RON), e.g. „EURO-Super“, can also be used. Operating the engine with unleaded fuel „Super Plus“ with 98 octane (RON) is not necessary and not recommended. 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 months). Don't use this fuel in the motorglider again.
4. Study the new instructions for securing with Loctite. Check the lifetime of any Loctite in your possession.
5. Exchange the following manual pages against the new pages dated march 1997, marked TN 843/8. Regard the marked changes.

Flight manual  
0.1, 0.3, 2.6

Maintenance manual  
1, 3, 4, 47, 59, 92, diagr.11

Material: Manual pages, s. instruction 5  
Plate 5M75  
2 bolts M12x30 DIN912-8.8zn  
Propeller mounting plate 5M2 (if necessary)  
Drainer valve sealing ring part no.60504402  
Sealing tape for drainer valve thread 0,1x12mm DIN DVGW, part no. 70000370

All parts are available from DG-Flugzeugbau GmbH


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.

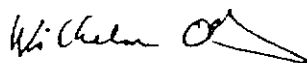
Bruchsal 4, den 10.04.1997

LBA approved:

The German original of this TN has been approved by the LBA under the date of ~~0.5. Juni 1997~~ and is signed by Mr. Fendt. The translation into english has been done by best knowledge and judgement.



Author: Dipl. Ing. Swen Lehner



Type certification inspector: Dipl. Ing. Wilhelm Dirks



TWS 7/8/97

**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.

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

0.1, 0.3-0.5, 2.6, 3.4,

6.11(DG-600M),

6.12(DG-600/18M), 8.7

Maintenance manual

1, 2-5, 36, 43-45, 45a, 52, 92, 93

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



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

Effectivity: DG-400, all serial numbers

Accomplishment: Instruction 1,4: Prior to refuelling unleaded fuel, at latest by 01.10.97  
Instruction 2,3: As desired

- 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. When securing with Loctite, some items must be considered, which have not previously been included in the maintenance manual.
  4. Manual revision

- Instructions:
1. Exchange of the drainer sealing ring for a sealing ring partno. 60504402.  
To accomplish this empty the fuel tank: Therefore use the separate electric fuel pump system and empty the tank through the tank filler opening.  
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 tightly 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 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 check for leaks.
  2. Instead of leaded automotive fuel with min. 96 octane (RON) as per flight manual leaded and unleaded fuel with min. 95 octane (RON), e.g. „EURO-Super“, can also be used. Operating the engine with unleaded fuel „Super Plus“ with 98 octane (RON) is not necessary and not recommended. 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 months). Don't use this fuel in the motorglider again.

3. Regard the 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 826/35. Regard the marked changes.

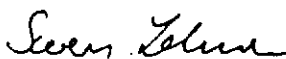
Flight manual  
0.1, 19

Maintenance manual  
0.2, 2, 3, 29, 29a, 46d, 53

Material: Manual pages, s. instruction 4  
Drainer valve sealing ring partno.60504402  
Sealing tape for drainer valve thread 0,1x12mm DIN DVGW, partno. 70000370

Weight and Balance: Not affected

Bruchsal 4, den 10.04.1997



Author: Dipl. Ing. Swen Lehner

LBA approved:

The German original of this TN has been approved by the LBA under the date of 0.5. 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. Wilhelm Dirks



# Atlanta Aircraft Certification Office

**To:** Dick Stratton  
**Company:** British Gliding Association  
**Phone:**  
**Fax:** 011 44 116 2515939

**From:** Christina Marsh  
**Company:** FAA - Atlanta ACO  
**Phone:** (404) 305-7362  
**Fax:** (404) 305-7348

**Date:** July 17, 1997

**Pages:** 1

**Subject:** AD 95-12-01

Dear Mr. Stratton,

This is in response to your facsimile dated July 15, 1997, regarding AD 95-12-01.

Inspection of PA-25 series aircraft in accordance with AD 95-12-01 is required within 12 calendar months after the effective date (July 7, 1995), and thereafter at intervals not to exceed 24 calendar months. Currently, the initial inspection has been required on the entire fleet. Results received from this inspection have been reviewed by this office and summarized in the Special Airworthiness Information Bulletin faxed to you on August 29, 1996.

To date, the fleet has not been required to perform the second round of inspections and therefore, an assessment of the adequacy of the repetitive inspection interval is not possible. The second required inspection will not be complete on the entire fleet until August of 1998; therefore, we are unable to comment on your proposal for a three year interval.

Regards-

*Christina Marsh*



Reference no: HSC(G)1

Commission date: 11/1/1995

## HEALTH AND SAFETY AT WORK ETC ACT 1974: APPLICATION TO PRIVATE CLUBS

### Introduction

1 This guidance gives advice on the application of the Health and Safety at Work etc Act 1974 (HSWA) to private clubs; and sets out the view of the Health and Safety Commission on the approach which should be taken to enforcement.

2 There is no statutory definition of a private club. This guidance applies to private clubs, such as sailing clubs, where there is activity or recreation by subscribing members making regular use of the facilities.

3 It will usually be possible to draw a distinction between a private club and an activity centre for the public, run on commercial lines. This guidance applies only to the former.

### Application of the Act

4 Many private clubs provide employment, either in connection with their main activities or as a sideline. Others are run by members, on a voluntary basis. Where there is employment, Sections 2 and 3 of the HSWA place duties on the employer to ensure, so far as is reasonably practicable, the health and safety of his employees and other persons who may be affected by the undertaking.

5 Section 4 protects those who are not employees in certain specified circumstances. It places duties on persons in control of non-domestic premises where those premises are made available to people as a place of work or where people may use plant or substances provided there for their use. Reasonable measures must be taken by those in control to ensure, so far as is reasonably practicable, that the premises and any plant or substance in the premises, or provided for use there, are safe and without risks to health.

### Role of Governing Bodies

6 Sporting activities recognised as potentially dangerous - eg diving, sailing, horse-riding - are often subject to governing bodies which regulate safety in the sport. The Commission recognises the important role these bodies play in self-regulation. HSE often works with them at national level to develop guidance on the approach to risks likely to affect employees or members of the public, including club members.

However, since it is the governing bodies which issue the guidance, in some cases it may go beyond what is required to comply with the law.

7 Enforcing authorities should take account of any advice or guidance available from the governing body responsible for the sport before deciding on enforcement action in connection with risks to health and safety which arise from participation in that sport.

### Approach to Enforcement

8 The Health and Safety at Work etc Act 1974 (HSWA) should not be used to cut across the freedom of individuals voluntarily to take risks outside their working environment. Where there is no employment, there should be no intervention by an enforcing authority in the sporting or other activities of private clubs as described in paragraph 2 above, except in reaction to serious incidents or follow-up of complaints.

9 Where there are known to be employed or self-employed persons working in a private club, plans for any preventive inspection should be based solely on the risks arising from the employment activities, eg in the restaurant of a sailing club's premises or work undertaken by instructors; and should not take account of other risks club members or their invited guests choose to take, eg in racing dinghies on the open sea.

10 The general principles set out above need to be qualified where members of the public who are not club members (as described in paragraph 2), or their invited guests, are put at risk by the club's activities. For example, some ostensibly private clubs offer their facilities for use by non-members under short-term membership arrangements. Some have 'open days' where large numbers of the public are admitted to view the facilities or as spectators of club competitions, etc. Considering whether preventive inspection under the HSWA is appropriate in the circumstances, an enforcing authority should take account of the nature and extent of the risks and the degree of control which the club can be expected to exercise and whether there is any other legislation which offers a more appropriate basis for enforcement.

### Enquiries

11 Enquiries on this guidance may be raised with The Local Authority Unit, HSE (0171 717 6442).



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## British Gliding Association

13th June 1997

### FLASH NOTICE TO ALL BGA CLUBS

#### FRENCH VALIDATIONS

I met with the Head of the Light Aviation Section of the French equivalent of the CAA Safety Regulator Group on Wednesday 11th June in Paris.

At this meeting we reached a provisional accord as follows.

1. Medical examination. The French DGAC will accept a CAA PPL/SPL medical in place of a French medical with the very important proviso that the CAA must write to them to confirm that the British Class 3 is the same as an ICAO Class 2. The CAA have told me that they will do this and the letter/fax will hopefully go over to Paris next week. However any CAA medical will only be accepted for the same validity as the French PPL Class 2, i.e. 2 years under 40 years old and 1 year over 40 years old.
2. The flight test will be a normal check flight to demonstrate safe and competent flying, any special conditions in the area, airfield procedures etc. This amounts to no more than a normal site check though it is annoying for those who have already completed one. Be sure to get the French instructor to sign the logbook entry with his number and date to avoid being asked to repeat it in later years.
3. The list of document copies to be submitted, i.e. Certificate, Log Book pages, Passport etc. remains unaltered.
4. Provided the above conditions are met British pilots can fly as follows:-
  - A. British single seaters. As P1
  - B. French registered single seaters. As Student Pilot.
  - C. British 2 Seaters. Two British pilots with French validation may fly together. The DGAC are considering allowing British pilots with Instructor Ratings to fly as P1 with a student.
  - D. French registered 2 seaters. Best not to ask.
5. The DGAC intimated that the requirement to present a copy of the British gliders CofA would be withdrawn. However I suggest you continue to submit

Patron  
Vice Presidents

HRH The Duke of Edinburgh KG  
Christopher R Simpson MA LLM  
Roger Q Barrett  
Tom Zealley BA PhD  
Ben Watson MA FCA  
Bill Walker MP  
Air Vice Marshal Don Spottiswood CB  
CVO AFC MA

these until we have this in writing. You should of course take your CofA plus insurance documents with you to France.

6. Motor gliders. No problem. Both licence and CofA are issued by CAA.
7. French Comps. As detailed for the group clearance by FFVV. However you must have a PPL medical.

I am revisiting Paris on 24th June where I hope we will agree a formal document. In the meantime if you get into discussion with the local DGAC offices you should quote the content of this note and say that it is an outcome of a meeting with M. Jean Nobel, CHEF DE LA MISSION AVIATION LEGERE, SERVICE DE LA FORMATION AERONAUTIQUE, ET DU CONTROLE TECHNIQUE. Tel: (0) 1 41 09 44 61 FAX: (0) 1 41 09 45 99.

Do not contact M. Nobel yourselves but ask the regional DGAC office to do so. Any further queries to me at home Tel: 01622 812385 Fax: 01622 813073. And from 7th July onwards at Gap Tel: 0033 4 92 54 18 33 Fax: 0033 4 92 540256. However I hope by then we will have it all on the rails.

Peter Hearne  
Vice Chairman

# 14. FAILED LANDING GEAR (Update GASIL 2/97 Item 17)

P/E

Aircraft type : Piper PA25 Pawnee  
Date : January 1997

An experienced aircraft engineer wrote in and pointed out that the cracked shock strut problem was a well-known fault on the bungee geared Pawnees (models A, B, C, some model Ds) when he worked on them in the late

1960s, 70s and 80s in England, New Zealand and Australia.

"The local remedy was to put a check cable around the fuselage structure and around the top of the leg. Then, should the shock

strut break, the aircraft just goes a bit one wing low."

It is believed that similar check cables are available for Piper Cubs and Super Cubs.

## Pilots maintenance - prescribed repairs or replacements

16 For the purposes of article 12(5), the following repairs or replacements are hereby prescribed -

- (1) Replacement of landing gear tyres, landing skids or skid shoes;
- (2) Replacement of elastic shock absorber cord units on landing gear where special tools are not required;
- (3) Replacement of defective safety wiring or split pins excluding those in engine, transmission, flight control and rotor systems;
- (4) Patch-repairs to fabric not requiring rib stitching or the removal of structural parts or control surfaces, if the repairs do not cover up structural damage and do not include repairs to rotor blades;
- (5) Repairs to upholstery and decorative furnishing of the cabin or cockpit interior when repair does not require dismantling of any structure or operating system or interfere with an operating system or affect the structure of the aircraft;
- (6) Repairs, not requiring welding, to fairings, non-structural cover plates and cowlings;
- (7) Replacement of side windows where that work does not interfere with the structure or with any operating system;
- (8) Replacement of safety belts or safety harness;
- (9) Replacement of seats or seat parts not involving dismantling of any structure or of any operating system;
- (10) Replacement of bulbs, reflectors, glasses, lenses or lights;
- (11) Replacement of any cowling not requiring removal of the propeller, rotors or disconnection of engine or flight controls;
- (12) Replacement of unserviceable sparking plugs;
- (13) Replacement of batteries;
- (14) Replacement of wings and tail surfaces and controls, the attachments of which are designed to provide for assembly immediately before each flight and dismantling after each flight;
- (15) Replacement of main rotor blades that are designed for removal where special tools are not required;
- (16) Replacement of generator and fan belts designed for removal where special tools are not required;
- (17) Replacement of VHF communication equipment, being equipment which is not combined with navigation equipment.



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## British Gliding Association

### BGA NEWSLETTER

JULY 97

#### FLYING IN FRANCE (Again!)

Further to the circular letters we sent to all clubs on 13th and 27th June we now have official confirmation that the French will accept UK glider pilots with a BGA certificate and a CAA Class 3 medical giving 24 months validity for those under 40 years old and 12 months for those over 40.

We enclose with this Newsletter copies of the original French notice of 15th May together with the amendment of 4th July and an English translation. It is suggested that you should take these with you if you visit a French gliding club.

The "Vol de Controle" is intended to be a straight forward site check. We suggest that you get the French instructor concerned to sign your logbook as well as any certificate. As soon as you have done a satisfactory check flight then you are free to fly - you don't have to wait for any further approval from the district DGAC office provided you have all your documents with you. It is suggested that you send a photocopy of your medical to the district DGAC office explaining that you are carrying the original document with you to produce at the gliding club. Most districts seem to respond well to faxed transmissions. For your information we enclose a map of France showing the DGAC areas and contact details for the various district offices.

Unfortunately for the time being you will still have to send photocopies of your BGA CofA for ratification in advance as previously notified.

In case of any difficulty with DGAC local offices we suggest you refer them to M. Jean Nobel, Chef de la Mission Aviation Legere or to Madam Guyomarc'h at the address on the amendment document of 4th July.

#### TUG AIRCRAFT

You will already be aware that last year the CAA legal department announced that a proportion of BGA towing activity was considered to be aerial work and therefore that to operate the tug aircraft with a private category CofA was in breach of the Air Navigation Order. Following negotiation we have obtained a 12 month exemption for the current year in order that glider towing within the club environment can continue to take place by aircraft certificated in the private category.

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Bill Walker MP  
Air Vice Marshal Don Spottiswood CB  
CVO AFC MA