BRITISH GLIDING ASSOCIATION

BGA TECHNICAL COMMITTEE

TECHNICAL NEWSHEET TNS 9/10/94

PART 1 Airworthiness "Aggro". Please refer to the BGA 1994 Red Pages.

1.1. Nimbus 2 Aileron Disconnect - jammed ailerons, and successful evacuation by parachute! The lock-nut securing the rod-end attachment to the outer aileron was not locked, the connector became disconnected and the rod-end jammed the ailerons. (Lasham Report sent to owners).

1.2. Pik 20E - Fuel Pipe Flow Restriction. Full bore flow checks should be made at C.of.A. renewal inspections, or whenever fuel systems are disconnected, for whatever reasons. Collapsed hoses have been identified.

1.3. Astir Water-Ballast Control System - detached from the side of the fuselage, and jammed the aileron controls. (Reported by Derek Piggott).

1.4. Bocian 1E - Wing Tip Skidplate caught in wing tip holders Wedding Ring! Tip-plate detached, glider rotated through 90 degree, severely damaging rear fuselage. (reported by Lleweni Parc).

1.5. SZD-55 Bulletin RE7-55-1/94 (Flight Manual Revisions), should be available from UK Agents, Anglo-Polish Sailplanes. Telephone 0628 39690.

1.6. SZD Series Sailplanes. Recommended Control Cable Replacement Periods. Bulletin BE 007/94 makes recommendations for replacement of hemp cored cables at 1000 hrs/ 6 yrs, and steel cored cables 1500 hrs / 12 years. Rudder cables have variable lives as per attached extract from the above SB.

1.7. Bendix Magnetos (TCM) FAA AD/94/01/03 issued in TNS 7/8/94 is revised, copy herewith, requires replacement of coils.

1.8. Grob G.102, G.103, G.109 and G.109B. FAA A/D 94-17-06 draws attention to AIRBRAKE STOPS, which may already have been actioned by Grob Service Bulletins?

1.9. STEMME 10. LBA A/D 94-260 (herewith), requires inspection and or replacement of turnbuckle eye-bolt in the Rudder Circuit.

1.10. Scheibe Series S.L.M.G's. LBA A/D 94-261 and Scheibe S.B. 653/62, and 770-18 (herewith), requires inspection and modification to Air Brake Pulley Connection inside the Wings.

1.11. Unsecured Battery - Leads jam the controls on Twin-Astir - How secure are the loose articles in your gliders. (Enstone Eagles G.C.).

1.12. Piper Cub Undercarriage Failure - is illustrated in AAIB Bulletin 9/94 (herewith).

1.13. Pegasus - Weld Failure in Speed Brake Mechanism. Details herewith from the Mynd.

PART 2 GENERAL MATTERS

2.1. Glider Identification. BGA Notice dated 8/8/94 is repeated for action by BGA Inspectors at C.of.A. Renewal.

2.2. Health and Safety - Unleaded Petrol. Letter from Dr. Peter Saundby is attached.

2.3. White Weak Links. (Tost No.5 daN 500/1100 lbs). Recurring failures of the White Weak Link when applied to the gliders listed below, may, one day, cause accidents. It is suggested that you may wish to up-grade to Blue (Tost No.4. daN 600/1320 lbs).

Vega (all variants), Std Cirrus, Astir's (Single, all variants).

2.4. WEDEKIND Safety Device for Control Connectors. Letter from Klaus Wedekind (herewith) extends the application list (TNS 7/8/94 refers).

2.5. Dye Penetrant NDT. Useful information is attached hereto.

2.6. Flight Testing S.L.M.G.'s. CAA have requested the use of a revised BGA Form 267 FT, (herewith). They require the BGA to check the climb performance against that scheduled in the Flight Manual (or elsewhere) for each type. This will require very stable meteorological conditions, if meaningful accuracy is to be achieved, corrected for temperature. Schedules of Performance for Most S.L.M.G.'s are attached.

2.7. BGA Inspector Renewal Applications - are due 1st October and your renewal Proforma has been sent to you. Don't forget that the fee includes your Insurance Indemnity Cover.

2.8. Aviation Fuel Handling at Aerodromes

Article 87 of the Air Navigation Order - places responsibilities on any person who has the management of a full installation on a UK Aerodrome, to quality assure such fuel in accordance with CAP 74. (Civil Air Publication 74 £1.75 from CAA Publications 0242 263993). Article 106 defines an "Aerodrome" and this definition includes all gliding sites.

DO YOU COMPLY WITH CAP 74?

Dick Stratton
Chief Technical Officer

Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

In case of any difficulty, reference should be made to the German original issue

94-260 Stemme

Date of issue: 25 August 1994

Affected airplanes:
German Type Certificate No.: 846

STEMME

S 10

- Serial Numbers: 10-03 to 10-58

Subject:
Flight Controls,
Rudder,
Control Cable Connection In The Tail Boom,
Turnbuckles.

Reason:
This Airworthiness Directive is promoted by reports of rupture of the turnbuckle eye bolt in the rudder control cable system.
The cables comming from the R/H and L/H pedals meet at the turnbuckle in the tailboom in such a way that the turnbuckle eye bolt is subject not only to tensile stress but in addition a bending moment is produced. Since the load is not constant, a fatigue strengh problem arises. Depending upon the operating conditions, the rupture may appear after a time-in-service above approximately 200 hours.

Action:
- One time visual inspection.
- Modification.

Compliance:
- Prior to further flight - perform a visual inspection of the affected Parts, described in the Stemme Service Bulletin No. A31-10-018, dated 26 July 1994.
- In case of a positive test result - prior to further flight - perform the modification in accordance with Stemme Service Bulletin No. A31-10-018, dated 26 July 1994.
- In case of a negative test result - prior to the accumulation of 150 hours total time-in-service or within 20 hours time-in-service - preform the modification in accordance with Stemme Service Bulletin No. A31-10-018, dated 26 July 1994.

Technical publication of the manufacturer:
Stemme Service Bulletin No. A31-10-018, dated 26 July 1994, which becomes herewith part of this AD and may be obtained from manufacturer.

Stemme GmbH & Co. KG
Flugplatz Gebäude 47
D-15344 Straußberg

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 by a licensed inspector.

PZL RUDDER CABLES

Glider type / Location		Tension member type	Operation period
SZD-55	fuselage	Bowden cable "S" type tension members of pedals	500 h/6 years
SZD-51-1 JUNIOR	fuselage	Bowden cable "S" type tension members of pedals	500 h/6 years
SZD-50-3 PUCHACZ	fuselage	"S" type tension members	
		of front pedals	500 h/6 years
		of rear pedals	500 h/6 years
SZD-45 A OGAR	fuselage	"S" tension members	
		of pedals	600 h/6 years
		rudder tension members	
		in the cockpit	600 h/6 years
		rudder tension members	
		and wheel tail	600 h/6 years
SZD-[illegible] JANTAR SZD-41, 48 JANTAR STD SZD-42 JANTAR 2	fuselage	"S" tension members of pedals	500 h/6 years
		Pedals connecting members /if used/	200 h/6 years
SZD-[illegible] COBRA	fuselage	Rudder tension members	300 h/6 years
		Elevator tension members	600 h/6 years
		Undercarriage connecting member	300 h/6 years
SZD-[illegible] [illegible]	fuselage	Rudder tension member	300 h/6 years
		Elevator tension member	300 h/6 years

SZD-30-C PIRAT C	fuselage	Pedal "S" tension members	500 h/ 6 years
		Winch - launching hook front tension member	500 h/6 years
SZD-30 PIRAT	fuselage	Rudder tension members	200 h/6 years
		Winch - launching hook front tension member	500 h/6 years
SZD-24-4A FOKA 4	fuselage	Rudder tension members	300 h/6 years
SZD-22-C MUCHA STANDARD	fuselage	Short pedal tension members	200 h/6 years
		Rudder tension members	600 h/6 years
SZD-12A MUCHA 100A	fuselage	Short pedal tension members	200 h/6 years
		Rudder tension members	600 h/6 years
SZD-9bis-1D, SZD-9bis-1E BOCIAN	fuselage	Pedal tension members	400 h/6 years
		Aileron tension members	400 h/6 years
		Air brake tension members	400 h/6 years
	wings	Air brake tension members	400 h/6 years

- THE END -

PZL RUDDER CABLES.

BW 94-18

BURKHART GROB LUFT-UND RAUMFAHRT
AIRWORTHINESS DIRECTIVE
SMALL AIRCRAFT & ROTORCRAFT

94-17-06 GROB LUFT UND RAUMFAHRT: Amendment 39-9002; Docket No. 93-CE-16-AD.

Applicability: Models G102, G103, G109, and G109B gliders (all serial numbers), certificated in any category.

Compliance: Required within the next 60 calendar days after the effective date of this AD, unless already accomplished.

To prevent airbrake failure caused by jamming of the airbrake fence, which could result in loss of control of the glider, accomplish the following:

(a) Inspect the airbrake stops for cracks in the surrounding gelcoat and to ensure that the outer airbrake swivel levers are in contact with stops during operation in accordance with the instructions in Grob Service Bulletin TM 306-31, TM 315-49, TM 320-6, and TM 817-36 (one document), dated September 14, 1992.

(b) Prior to further flight, repair any gelcoat cracks or any airbrake stops not in contact with the swivel levers in accordance with the instructions in Grob Service Bulletin TM 306-31, TM 315-49, TM 320-6, and TM 817-36 (one document), dated September 14, 1992.

(c) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, Brussels Aircraft Certification Office (ACO), FAA, Europe, Africa, and Middle East Office, c/o American Embassy, B-1000 Brussels, Belgium. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Brussels ACO.

NOTE: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Brussels ACO.

(d) The inspection required by this AD shall be done in accordance with Grob Service Bulletin TM 306-31, TM 315-49, TM 320-6, and TM 817-36 (one document), dated September 14, 1992. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from GROB Luft und Raumfahrt GmbH, D-8939 Mattsies, Federal Republic of Germany. Copies may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(e) This amendment becomes effective on September 30, 1994.

FOR FURTHER INFORMATION CONTACT:

Mr. E. S. Chalpin, Program Manager, Brussels Aircraft Certification Office, FAA, Europe, Africa, and Middle East Office, c/o American Embassy, B-1000 Brussels, Belgium; telephone (322) 513.38.30 ext. 2717; facsimile (322) 230.68.99; or Mr. Herman C. Belderok, Project Officer, Small Airplane Directorate, Aircraft Certification Service, FAA, 1201 Walnut, suite 900, Kansas City, Missouri 64106; telephone (816) 426-6932; facsimile (816) 426-2169.

BW 94-18

TELEDYNE CONTINENTAL MOTORS
AIRWORTHINESS DIRECTIVE
APPLIANCE
SMALL AIRCRAFT & ROTORCRAFT

Revision issued August 1994 to correct serial number listing of affected magnetos.

94-01-03 R1 Teledyne Continental Motors: Amendment 39-9006. Docket 93-ANE-44. Revises AD 94-01-03, Amendment 39-8785. Supersedes AD 73-07-04, Amendment 39-1731 (Bendix AD).

Applicability: Teledyne Continental Motors (TCM), formerly Bendix magnetos:

S-20, S-200, and S-600 series magnetos with red or black Bendix (not TCM) data plates having serial numbers (S/N's): lower than 2000000 without any letter prefix; or S/N's lower than A16058 having the letter "A" prefix.

S-20, S-200, and S-600 series magnetos with blue Bendix (not TCM) data plates marked "REMANUFACTURED" having S/N's lower than 901001.

S-1200 series magnetos with red Bendix (not TCM) data plates having S/N's: lower than 2000000 without any letter prefix; or S/N's lower than A132844 having the letter "A" prefix.

S-1200 series magnetos with blue Bendix (not TCM) data plates marked "REMANUFACTURED" having S/N's lower than 901001.

These magnetos are installed on but not limited to reciprocating engine powered aircraft manufactured by Beech, Cessna, Maule, Mooney, and Piper.

NOTE 1: Yellow Bendix or TCM service spare data plates may have been installed during a field overhaul; use model and S/N to determine applicability.

NOTE 2: No action is required for those magnetos in compliance with AD 94-01-03.

NOTE 3: Magnetos built by Bendix in Jacksonville, Florida, and Magnetos built by TCM in Atlanta, Georgia, as indicated on the data plate, are not affected by this AD.

NOTE 4: The paint on some early data plates may have been obliterated and the data plate will appear silver in color; use model and serial number to determine applicability.

NOTE 5: The FAA has received reports of some confusion as to what is meant by S-20, S-200, S-600, and S-1200 series magnetos as referenced in TCM Mandatory Service Bulletin (MSB) No. MSB644, dated April 4, 1994, and this AD. A typical example is S6RN-25, where the S designates single type ignition unit, the 6 designates the number of engine cylinders, the R designates right hand rotation, the N is the manufacturer designator (this did not change when TCM purchased the Bendix magneto product line), and the number after the dash indicates the series (a -25 is a S-20 series magneto, while a -1225 is a S-1200 series magneto).

Compliance: Required as indicated, unless accomplished previously.

To prevent magneto failure and subsequent engine failure, accomplish the following:

(a) For Bendix S-20 and S-200 series magnetos, replace Bendix ignition coils and rotating magnets identified in the Detailed Instructions of TCM MSB No. MSB644, dated April 4, 1994, with appropriate serviceable ignition coils and rotating magnets at the next 100 hour inspection, the next annual inspection, the next progressive inspection, or the next 100 hours time in service (TIS) after the effective date of this AD, whichever occurs first.

(b) For the Bendix S-600 series magnetos, replace Bendix rotating magnets identified in the Detailed Instructions of TCM MSB No. MSB644, dated April 4, 1994, with appropriate serviceable rotating magnets at the next 100 hour inspection, the next annual inspection, the next progressive inspection, or the next 100 hours TIS after the effective date of this AD, whichever occurs first.

NOTE: The ignition coils on the S-600 series magnetos already incorporate the improved design.

(c) For the Bendix S-1200 series magneto, replace Bendix ignition coils identified in the Detailed Instructions of TCM MSB No. MSB644, dated April 4, 1994, with appropriate serviceable ignition coils at the next 100 hour inspection, the next annual inspection, the next progressive inspection, or the next 100 hours TIS after the effective date of this AD, whichever occurs first.

NOTE: The rotating magnets on the S-1200 series magnetos already incorporate the improved design.

(d) After compliance with paragraphs (a), (b), or (c) of this AD, as applicable, and prior to further flight, mark the magneto in accordance with the Identification Instructions of TCM SB No. MSB644, dated April 4, 1994.

(e) An alternative method of compliance or adjustment of the initial compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta Aircraft Certification Office.

NOTE: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta Aircraft Certification Office.

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(g) The replacement and identification shall be done in accordance with the following service document:

Document No.	Pages	Date
TCM SB No. MSB644	1-3	April 4, 1994

Total pages: 3.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, AL 36601; telephone (205) 438-3411. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective on September 6, 1994.

FOR FURTHER INFORMATION CONTACT:

Jerry Robinette, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, 1669 Phoenix Parkway, Suite 210C, Atlanta, GA 30349; telephone (404) 991-3810, fax (404) 991-3606.

Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

In case of any difficulty, reference should be made to the German original issue

Date of issue: 25 August 1994

94-261 Scheibe Flugzeugbau / Sportavia-Pützer

Affected airplanes:
German Type Certificate No.: 653, 770

SCHEIBE

SF 25 A - Serial Numbers: all

SF 25 B - Serial Numbers: all
- Serial Numbers: all - by Sportavia-Pützer (construction under license)

SF 25 C - Serial Numbers: all - up to 44550 (except 44488)
- Serial Numbers: all - by Sportavia-Pützer (construction under license)

SF 25 D - Serial Numbers: all

SF 25 E - Serial Numbers: all

SF 25 K - Serial Numbers: all

SF 28 A - Serial Numbers: all

Subject:
Flight Controls,
Airbrake Contol Support Inside The Wings,
Airbrake-Pulley-Connection To The Rip-Block.

Reason:
This Airworthiness Directive is promoted by some annual inspection reports of disassociations of the airbrake-pulley-connection to the rip-block and one in flight occurence, on which the pilot was not able to extend the airbrakes.

Action:
- Inspection with an operational check.
- Modification.

Compliance:
- Prior to further flight - perform a inspection with an operational check of the affected Parts, described in the Scheibe Flugzeugbau Service Bulletin No. 653-62 / 770-18, dated 03 August 1994.
- Repeat the inspection with an operational check of the affected Parts, described in the Scheibe Flugzeugbau Service Bulletin No. 653-62 / 770-18, dated 03 August 1994 - at every 100-hour-inspection - until the modification is accomplished.
- In case of a positive inspection result - prior to further flight - perform the modification in accordance with the Scheibe Flugzeugbau Service Bulletin No. 653-62 / 770-18 with Working-Instruction 653-62-142 / 770-18-142, dated 03 August 1994.
- In case of a negative inspection result - perform the modification not later than 31 December 1994 - in accordance with the Scheibe Flugzeugbau Service Bulletin No. 653-62 / 770-18 with Working-Instruction 653-62-142 / 770-18-142, dated 03 August 1994.

Technical publication of the manufacturer:
Scheibe Flugzeugbau Service Bulletin No. 653-62 / 770-18 with Working-Instruction 653-62-142 / 770-18-142, dated 03 August 1994, which becomes herewith part of this AD and may be obtained from manufacturer.

Scheibe Flugzeugbau GmbH
Aug. Pfaltz-Str. 23
D-85221 Dachau

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 by a licensed inspector.

Subject: Improvement of airbrake-pulley-connection inside the wings.

Affected: Motorgliders like German "Kennblatt 653":

SF 25 A : all Serialnumbers (S/N)
SF 25 B : all S/N (46..) manufactured by Scheibe
all S/N manufactured under license by Pützer (S/N 48..)
SF 25 C : all S/N up to S/N 44550 (manufactured by Scheibe)
not S/N 44488
all S/N manufactured under license by Pützer (S/N 42..)
SF 25 D : all S/N
SF 25 E : all S/N
SF 25 K : all S/N

Motorgliders like German "Kennblatt 770":

SF 28 A Tandem-Falke : all S/N

Urgency: Before the next flight

Procedure: Inspection and functional check of airbrake-pulley-connection to the rib inside the wing.

Actions:

1. Open the inspetion-hole on the bottom-side of the wing in the airbrake-area before the next flight. During opening the airbrakes, check the airbrake-pulley-connection to the rib.
   If airbrake-pulley-connection moves together with the rib-block, action #3 is to do directly.
   A loose rib-block is to see during opening of the airbrake so the airbrake jumps out.
2. If the airbrake-pulley-connection is correct, every 100-hour-inspection action #1 is to do.
3. At next annual inspetion, but not later than 31st December 1994 the reinforcement like working-instruction 653-62-142/770-18-142 is to do.

Weight and Balance : Negligible.

Remarks: Action #1 and #2 are to do by an authoriized inspection-personal.
Action #3 is to do by the manufacturer or an authorized aviation workshop.
The actions need a logbookentry; action #3 is to certify by an authorized inspector.

Caution:

To avoid these damages, it is necessary to open the airbrakes themselves only by hand for 2/3 of the possible movement.
If you pull the rope of rib #0 for moving the airbrakes, **there is the possibility for greater moving the airbrakes as** necessary. In case of this, it is possible that the rope-end damages the pulley inside the wing.
Additional it is possible that the airbrake-pulley-connection-to-the-rib is damaged by the same process.

Dachau, 13.07.1994

LBA-approved

This service bulletin was originally written in German and approved by the German LBA on 03.08.1994 and is signed by Mr. A. Skov.
The Translation has been accomplished to best of our knowledge and judgement. In case of doubt, the German original is authoritative.

H. Haferkorn

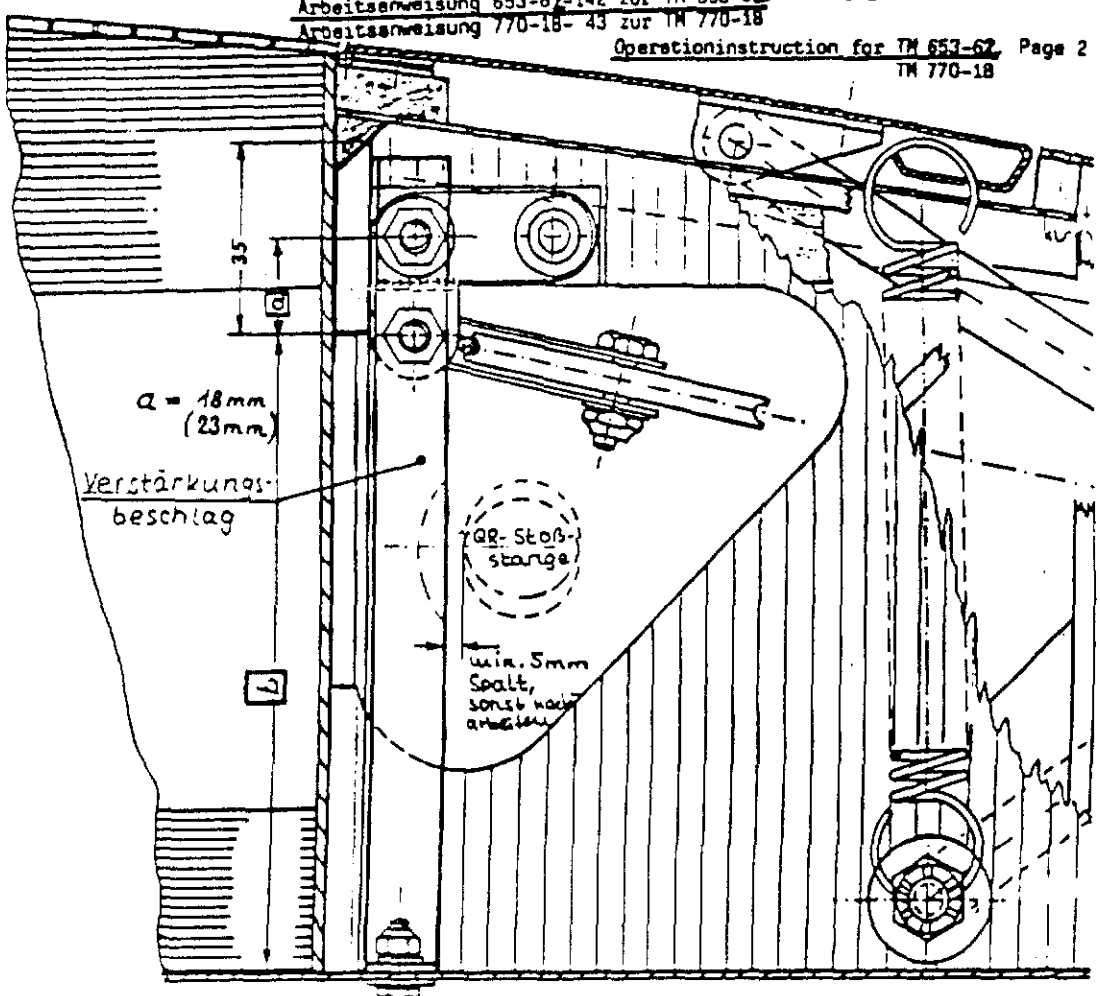
Musterprüfleitstelle

SCHEIBE FLUGZEUGBAU GMBH
D-85221 DACHAU, AUG.-PFALTZ-STR. 23
85208 DACHAU. POSTFACH 18 29
Anerkannter Herst. und Entw.-Betrieb
LBA-Nr. I-83 und I-EB2

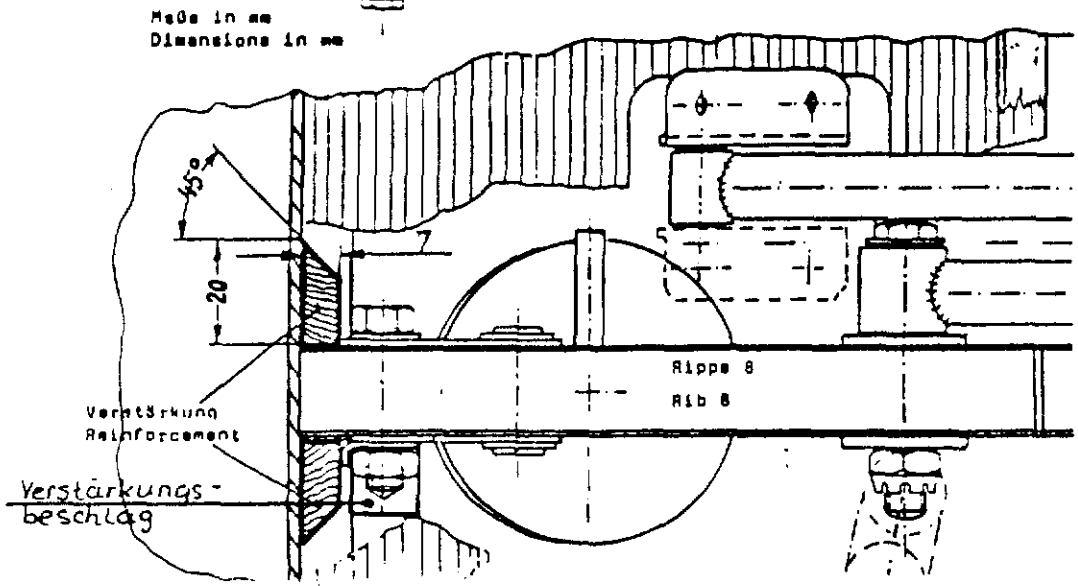
Maß a= 23 mm für:

SF 25 B ab S/N 46257
SF 25 C ab S/N 4474
SF 25 D ab S/N 46256-D
SF 25 E alle S/N
SF 25 K alle S/N
SF 28. ab S/N 5743

Maß b = jeweils angepaßt (abhängig von Maß a)



Maße in mm
Dimensions in mm



Dachau, 13.07.1994
Hr. Haferkorn (Musterprüfstelle

Rec'd fax 6/8/94

ABS
ANLAGEN-BERATUNG-SOFTWARE

ABS · Anlagen-Beratung-Software · Am Südhang 56 · 5242 Kirchen 1

Dipl.-Ing. Klaus Wedekind
Am Südhang 56
5242 Kirchen 1
Telefon 0 27 41 / 6 30 33
Fax 0049-2741-63268

Michael Russell

Fax 0044-279-850830

Ihr Schreiben vom	Ihr Zeichen	Mein Zeichen	Datum
		Wk/rw	06.08.94

WEDEKIND-Safety Device
Your inquiry dated 3rd August, 1994

Dear Micheal,

YES, my devices are LBA aproved for SCHEMPP-HIRTH-, SCHLEICHER-, DG- and GROB-sailplane types and for LS3a and LS1f too.
The licence of LBA is English written, the TM of SCHEMPP-HIRTH too but not the TM's for all other manufacturers.
Because of some differences in my devices I must know for every order the sailplane typ.

For ASW22 you can use the devices for all connectors expected the connector for the aileron between inner and outer wing which you have connecting before fixing the main bolt (there is not enough space in the outer wing for my device).
For this connector SCHLEICHER has developped a simple spring which goes into the hole of L'Hotellier (like SCHEMPP-HIRTH's idea before my devices came into the market). This spring in drawn in TM for ASW22.
Meantime all new sailplanes of types ASW22B, ASH25, ASK21 and ASK23 have installed the WEDEKIND-device, and more than 30% of German registrated gliders have it.

Normal time for mounting is about 10 minites each - but by all SCHLEICHER types you are needing for the non-abjustable L'Hotellier (brakes and flaps between inner and outer wing of ASW22/ASH25) about 30 minutes each.
ASW22 has 4 adjustable connectos and 6 non-adjustable - expected aileron between inner and outer wing.

Delivery time: from stock
Price: : DM 25,-- / each,
P + P : DM 24,--
Bank fees : DM 23,50 (you can save these fees by paying with EURO-cheque!!!)

Regards,

Klaus Wedekind

2/0 24/24

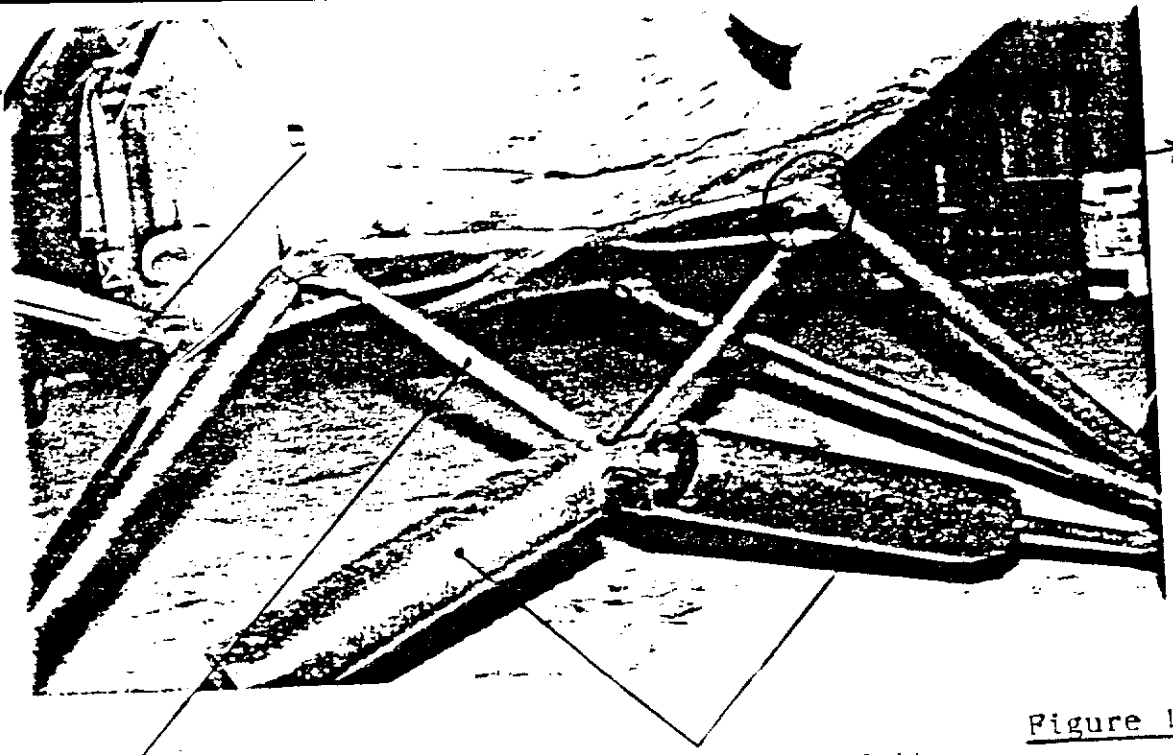


Figure 1

Figure 2

PIPER PA-18-150 GLIDER Tug.

AAIB Bulletin
9/94.

BOGUS PARTS WOULDN'T GET PAST YOU - WOULD THEY?

CAA Safety Promotion Section, Gatwick

FSP 6
220191

PEGASUS WELD FAILURE.

27 PORTWAY DRIVE, WEST WYCOMBE, BUCKS HP12 4AT
TELEPHONE 0494 451265

Incident at Long Mynd 15 August 1994

Distribution List:

Chris Harris	CFI
John Stuart	DCFI
Nick Heriz-Smith	Safety Officer
Nigel Holmes	Technical Officer
Roger Andrews	

I rigged and inspected Pegasus FVP, with an independent rigging and control check. I arrived at the launch point just as the winch driver was about to stop for lunch, having been delayed by losing the bottom of the tail skid. I then realised that I had left my parachute in the clubhouse, so rushed back to fetch it while Andrew Holmes and course members positioned the glider at the launch point. I returned to find that they had just completed the launch point positive control and cable release checks. I launched, and immediately after release noticed that the port airbrake was not fully closed. I opened the brakes and observed both paddles opening, but attempting to close them left the port brakes half open. I therefore dumped the water ballast, verified that the ailerons were both working normally and then landed. Not being certain whether the port brake would suck open or fall closed, and knowing the problems of rounding out the Pegasus with full airbrake, I elected to land at 55 knots, deep into the field to allow maximum undershoot and overshoot possibilities. Knowing that there was a failure of the brake mechanism, it did not seem very surprising to discover that the wheel brake had also failed.

Subsequent investigation showed that a weld had failed on a torque tube. There was evidence that this failure had been progressive, and another weld on the same tube was also showing signs of failure.

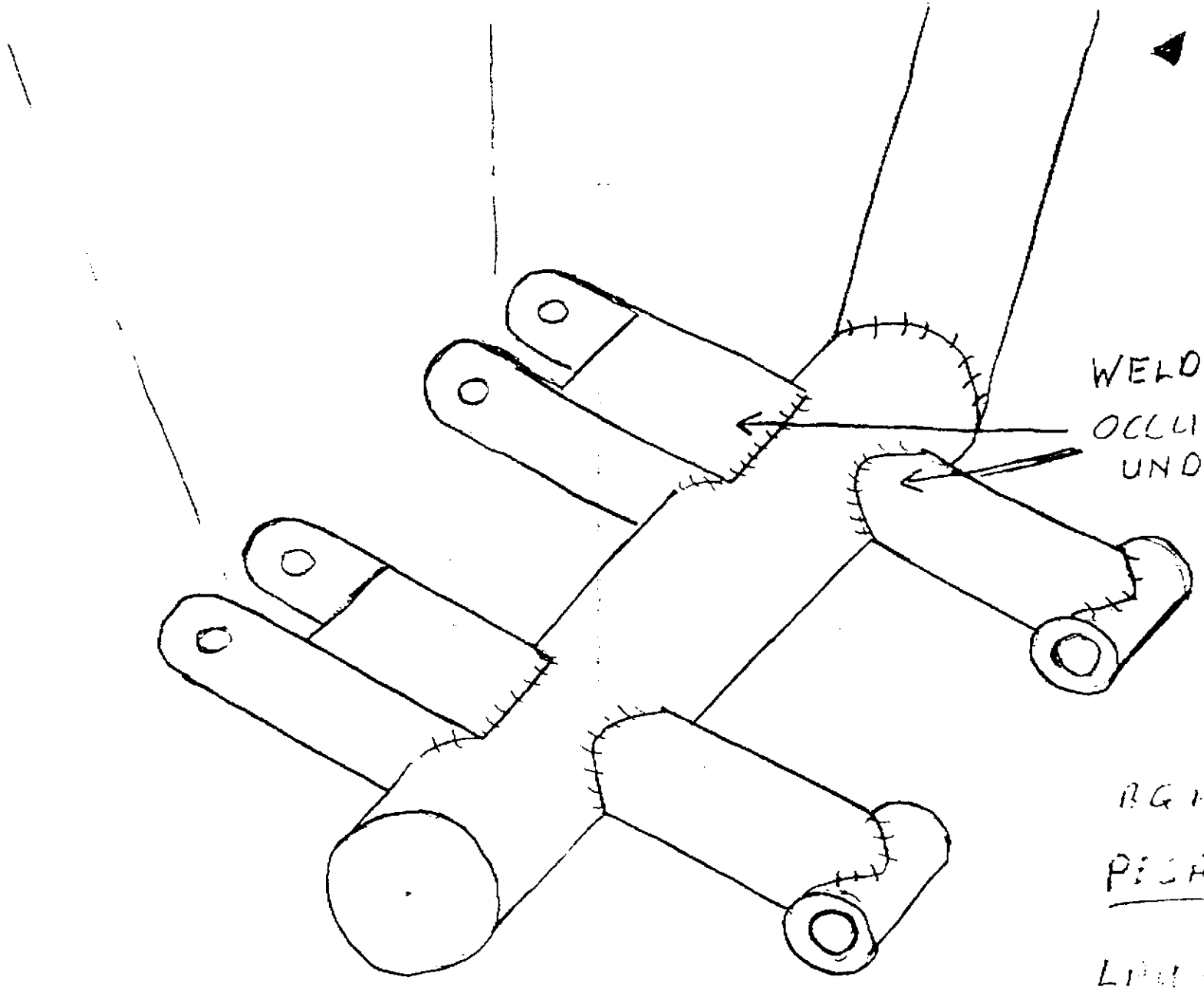
Normally, as part of my pre-flight checks I ensure that both brake paddles are full extended and then both flush. Clearly I could not have done so this time, but relied on the feel of the lever locking. The retrieve driver would have been too far away to notice anything wrong, and the wing tip holder was on the starboard wing. The brake would only have been sticking out at the inboard end, with the outboard end virtually flush.

Clearly the component could have failed at any time. It seems incredible that it should fail immediately after two successive positive checks. The law of Sod seems to apply here. However, the situation would have been much worse if the failure had occurred while opening the brakes for a field landing; at least I discovered the problem at a safe height, over my home airfield, on a day without the field being crowded.

I think this incident reminds us all of the importance of proper checks, and not allowing ourselves be be rushed

John Parry

FOR ATTN DIGBY TRATTON



PEGASUS

BGA 3561

PEGASUS 101A

LIMITS 650

900

Dr. R.P. Saundby, FFPHM, MFOM, MRAeS.
Persondy,
Llangynidr,
Crickhowell, Powys.
NP8 1NT

The British Gliding Association Ltd.
Registered No. 422605 England
Registered Office as address

Administrator and Secretary: Barry Rolfe

Kimberley House, Vaughan Way,
Leicester LE1 4SE
Telephone 0533 531051
Facsimile 0533 515939

British Gliding Association

Ref. RPS/MEDQ

Tel.0874 730932
Work Tel. 0443 485122 Ext.5911
Work Fax. 0443 485068

3 August 1994

R.B. Stratton, Esq.
Brashfield Bungalow,
Buckingham Road.
BICESTER
Oxon

Dear Dick,

OCCUPATIONAL HEALTH - UNLEADED PETROL

It has come to my notice that gliding clubs have been using unleaded petrol for the cleaning of gel coat surfaces. The prime purpose is the removal of the remains of adhesives which come from tape, but there is also grease marking. It is understood that at least one of the glider manufacturers in Germany recommended unleaded petrol for this purpose.

Unleaded petrol is specified as a fuel, not as a solvent, and contains varying amounts of benzene. This is a dangerous substance, and can cause cancers in humans.

The solvent properties of 'petroleum spirits' or 'white spirit' are very similar to unleaded petrol, but the toxicological problems are minimal. White spirit is easily available, relatively cheap, and is the solvent of choice for aircraft cleaning. I have tried it myself, and recommended it to the RAFGSA Centre.

Could this information be brought to the attention of those responsible for glider maintenance. Supporting documents are attached.

Yours sincerely,

P.E

APPENDIX I

DYE PENETRANTS

Several dye penetrant type inspection kits are now available that will reveal the presence of surface cracks or defects and subsurface flaws that extend to the surface of the part being inspected. These penetrant type inspection methods are considered acceptable, provided the part being inspected has been thoroughly cleaned, all areas are readily accessible for viewing, and the manufacturer's recommendations as to the method of application are closely followed.

a. **Cleaning.** An inspection is initiated by first cleaning the surface to be inspected of dirt, loose scale, oil, and grease. Precleaning may usually be accomplished by vapor degreasing or with volatile cleaners. Use a volatile cleaner as it will evaporate from the defects before applying the penetrant dye. Sand blasting is not as desirable a cleaning method, since surface indications may be obscured. It is not necessary to remove anodic films from parts to be inspected, since the dye readily penetrates such films. Special procedures for removing the excess dye should be followed.

b. **Application of Penetrant.** The penetrant is applied by brushing, spraying, or by dipping and allowing to stand for a minimum of 2 minutes. Dwell time may be extended up to 15 minutes, depending upon the temperature of the part and fineness of the defect or surface condition. Parts being inspected should be dry and heated to at least 70° F., but not over 130° F. Very small indications require increased penetration periods.

c. **Removal of Dye Penetrant.** Surplus penetrant is usually removed by application of a special cleaner or remover, or by washing with plain water and allowing the part to dry. Water rinse may also be used in conjunction with the remover, subject to the manufacturer's recommendations.

d. **Application of Developer.** A light and even coat of developer is applied by spraying, brushing, or dipping. When dipping, avoid excess accumulation. Penetrant that has penetrated into cracks or other openings in the surface of the material will be drawn out by the developer resulting in a bright red indication. Some idea of the size of the defect may be obtained after experience by watching the size and rate of growth of the indication.

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British Gliding Association

8th August 1994

TO: MEMBER CLUBS

This is to bring all Club Secretaries up to date with one or two items of BGA news. The first is to let you know that our new telephone number is **0116 2531051** (**fax 0116 2515939**) and can be used now at the same time as our existing old number. Only the new number will be usable from April next year and just to remind you we are enclosing a complimentary pen with a note of the new number.

Glider Identification - hopefully you will all have read in the current August/September issue of S&G confirmation of the Operational Regulation on this subject which went through the AGM earlier this year. From next January all gliders will have to display identification markings registered with the BGA - these will be either the free tri-graphs, or competition numbers or the new markings we are about to introduce. We have extended the competition numbers which run from 1 to 998 to include a combination of a single letter plus one or two numbers running from A1 to Z99. These will be issued annually for a fee as with competition numbers at present and remain with the registered owner rather than with the aircraft.

If anybody wants to purchase a new marking in the series of A1 to Z99 then they should apply with the fee of £12.00 to the BGA office as soon as possible. All applications will be kept by us until 30th September and if there are duplicates then they will be balloted before being issued as approved markings in October. We would like to give priority to some member Clubs that are currently using this type of marking on their gliders so they should write in and apply to us before the end of September.

VAT - hopefully Club Treasurers are battling now with the local Customs & Excise on the new partial exemption rules for sporting clubs. The BGA are hiring a firm of tax experts who will be reviewing the entire BGA office operation in this respect so that we are able to operate as a partially exempt concern hopefully from the beginning of our next financial year 1st October. This will obviously have a major effect on current charges to Clubs such as the annual subscription.

BGA Shop - don't forget we still have the new Soaring 'T' Shirts

available for £6.95 each in top quality white cotton (M,L or XL) with a wonderful colour soaring print on the front. Also in stock our new Baseball Caps specially designed for us with a glider silhouette on the front - these are £4.40 each and available in Royal Blue, Navy, Red, Purple, Green and Burgundy. If your Club needs further individual copies of the recently issued Instructors Manual these can also now be purchased from the shop at a price of £13.50 including p&p.

AGM 1995 - We are delighted that the 1995 event will be organised once again by the Yorkshire Gliding Club at Harrogate over the weekend of 4/5 March 1995. Full details will soon be available and we hope that members will book for this expanded event which will include the AGM, Conference Sessions, a Dinner/Dance and a Gliding Exhibition.

Barry Rolfe
Secretary

APPENDIX 6 **B.G.A. FLIGHT TEST REPORT** **TYPE**.....

B.G.A. INSP 267 FT **REGISTRATION**.....

PART 7 **M-G PERFORMANCE AND HANDLING (Weather)**..... **Location**.....

7.1 Engine Ground Starting..... Max Static RPM.....

Idle RPM..... Oil/Press.....

Gen/alternator output..... Oil Temp:.....

Carb Heat RPM Drop..... At Full Power.....

7.2 **T/O and Climb Performance** (Set 1013 mb, Record G/L Temp .....

Record T/O Weight..... C.G. at..... Fuel Load.....

TIME	HEIGHT	RPM	IAS	OIL/TEMP	OIL PRESS
0 MIN					
1 MIN					
2 MIN					
3 MIN					
4 MIN					
5 MIN					

Mean R/C.....

Handling at T/O and Climb..... Trim.....

7.3 **Engine RPM at V_{NE} Throttle Closed** IAS..... RPM.....

(handling at V_{NE}).....

7.4 **Feathering/Unfeathering in Flight**

7.5 **Restarting** (a) Starter motor/unfeather.....

(b) Unfeather/dive to IAS..... Height Loss.....

7.6 **Stalls** - Clean and Gear/flaps down (Record IAS/BUFFET)

7.7 **Stability Assessment** (Engine-on/Engine-off)

7.8 Handling - Airbrakes, flaps - Gear Down - (approach and landing).

7.9 **Aerobatic Manoeuvres and Spinning**

7.10 **Overshoot and Climb Out** Trim.....

7.11 **Landings - Power Off**

7.12 **Landings - Power On**

7.13 **Ground Handling** - (Taxi-ing, manoeuvring, brakes)

7.14 **Cockpit Layout** - Placards.

7.15 **General Remarks**
(Verification of Flight Manual)

7.16 **Post Flight Performance Analysis**

Measured Rate of Climb from 7.2	.....ft/min
Scheduled Rate of Climb from Manual for test altitude, weight and temperature	.....ft/min
Difference (Measured - Scheduled)	.....ft/min
Performance result acceptable	YES/NO
Other Flight Test Results acceptable	YES/NO
Recorded defects	1. .....
	2. .....
	3. .....

Signed for B.G.A. ..... Date.....

PPL Number.....

BGA Note To correct climb performance for temperatures varying from ISA. 15°C
For temperatures above 15° subtract 4ft/min.
For temperatures below 15° add 4ft/min

PERFORMANCE OF Retractable Engine Sailplanes

Make/Model	Span	Wing/Ld.	Empty/Gross	L/D	Engine/HP	Climb/fpm xx	T.O. Run xx	Over 50' xx	Starter	Alt/Gen
DG-400	15M	9.83	661/1058	42	ROTAX 505/43	687'	679'	906'	ELEC.	YES
DG-400	17M	8.91	870/1014	45	ROTAX 505/43	726'	502'	797'	ELEC.	YES
DG-600/M	15M	9.83	672/1157	44.5	ROTAX 275/24	396' [3]	911'	1823' [3]	ELEC.	YES
DG-600M	17M	9.28	683/1157	48.5	ROTAX 275/24	426' [3]	886' [3]	1772' [3]	ELEC.	YES
DG-500M [2]	22M	9.24	1157/1819	47+	ROTAX 535/60	490' [2]	N/A	N/A	ELEC.	YES
DG-800A	18M	9.10	723/1157	50	ROTAX 505A/43	728' [4]	N/A	885'	ELEC.	YES
DG-800B	18M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ASW-24E	15M	10.24	606/1102	43	ROTAX 275/24	452' [1]	656' [1]	1312' [1]	ELEC.	NO
ASW-22BE	25M	9.42	1124/1654	60	ROTAX 505A/49	433'	N/A	N/A	ELEC.	N/A
ASH-25E [2, S]	25M	9.42	1157/1653	57	ROTAX 277/24	157'	—	—	MANU.	NO
ASH-26E	18M	9.22	772/1159	50	MWAE 50R/50 (WANKEL)	N/A	N/A	N/A	ELEC.	YES
NIMBUS 4T [S]	26.4M	9.17	1124/1763	60	SOLO/25-27	N/A	—	—	N/A	N/A
NIMBUS 4M	26.4M	9.2	1279/1764	60	ROTAX 505A/43	354'	983'	1633'	ELEC.	YES
NIMBUS 3DM [2]	24.6M	9.7	1290/1764	57	ROTAX 535/60	433'	885'	1310'	ELEC.	YES
NIMBUS 4DM [2]	26.5M	9.1	1312/1764	60	ROTAX 535C/59	550'	N/A	N/A	ELEC.	YES
JANUS CM [2]	20M	8.2	1047/1543	42.5	ROTAX 535/60	354'	920'	N/A	ELEC.	YES
VENTUS CT [S]	17.6M	8.6	637/948	48	SOLO/20.8	290'	—	—	NONE	NO
VENTUS CM	17.6M	8.7	661/948	48	SOLO/25-27	472'	920'	1608'	ELEC.	NO
VENTUS 2	18M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DISCUS BT [S]	15M	8.7	606/992	42+	SOLO/20.8	N/A	—	—	NONE	NO
DISCUS BM	15M	10.2	694/1157	42+	ROTAX 463/48	690'	656'	1148'	ELEC.	YES
PIK-20E	15M	9.63	660/1036	41	ROTAX 501/43	550'	777'	1505'	ELEC.	YES
PIK-30	17M	8.86	682/1014	45	ROTAX 505/43	605'	699'	1354'	ELEC.	YES
STEMME S10 [2]	23M	9.3	1400/1874	50	LIMBACH/95	690'	984'	N/A	ELEC.	YES
GROB 103/SL [2]	18M	8.3	1048/1565	38	ROTAX 505A/43	453'	1000'	1640'	ELEC.	YES

[2] = 2-PLACE; [S] = SUSTAINER [1] 815#; [2] 1609#; [3] 970#; [4] 992#; xx = At Max. Gross Wt.; 15C/ Sea Level; N/A = Info. not avail.
Takeoff Distances for positive flap/hard surface/no wind. Data compiled from manufacturer's handbooks and may very from actual performance.

Manufacturers & Dealers

DG Sailplanes:
Glaser-Dirks Flugzeugbau
Postfach 4120
7520 Bruchsal,
GERMANY
FAX: 011-49-7257-8922

US DEALER:
Glaser-Dirks USA
Oliver Dyer-Bennet
5847 Sharpe Rd.
Calistoga, CA 94515
707-942-5727
FAX: 707-942-0885

ASW/ASH Sailplanes:
Schleicher Segelflugzeubau
Postfach 60-Huhnain 1
D6416 Poppenhausen,
GERMANY
FAX: 011-49-6658-8940

US DEALER:
Eastern Sailplane
c/o John Murray
P.O. box 753
Wynesville, OH 45068
513-897-5667

Nimbus/Janus/Ventus Discus Sailplanes:
Schempp-Hirth Flugzeubau
Krebenstr. 25
D-7312 Kircheim Tek
GERMANY
FAX: 011-49-7021-5809

US DEALER:
Kunaff & Grove, Inc.
RR#1 Box 434
Julian, PA 16844
814-355-2483

PIK-20/30 Sailplanes:
Laurus, X.
c/o Issoire Aviation (SIREN)
B P. #1
63501 Issoire, Cadex,
FRANCE

US DEALER:
Burl Schanneier
6552 Indria Hill Way
Fallbrook, CA 92028
619-941-3703

Stemme Sailplanes:
Stemme GmbH
Gustaf-Meyer
Allee 25
1000 Berlin 65
GERMANY
FAX: 011-49-30469-4649

US DEALER:
STEMME USA
2110 S. Brentwood Blvd.,
Suite 21B
St. Louis, MO 63105
314-721-5904
FAX: 314-726-5114

Grob Sailplanes:
Burkart Grob Flugzeubau
Postfach 1257,
Am Flugplatz
8939 Mattsies,
GERMANY
001-49-826S-9980

US DEALER:
Grob Systems, Inc.
I-75 & Airport Dr.
P.O. Box 225
Bluffton, OH 45817
419-358-9015
FAX: 419-358-3660

This info compiled by SLSPA 6/94

PERFORMANCE of Fixed Engine Motorgliders

Make/Model	Span	Wing/Ld.	Empty/Gross	L/D	Engine/HP	Climb/fpm xx	T.O. Run xx	Useful Load	Pwr Load	Range
Aerotechnik L-13E Vivat	16.8M	7.3	1102/1587	24	MIKRON/65	490	897'	465#	24.4	287
Fournier RF-10	17.5M	8.46	1170/1700	30	LIMBACH/80	600	N/A	530#.	21.25	620
Scheibe SF-25C 2000 Falke	15.2M	7.3	925/1430	24	LIMBACH/80	624	330'	505#	17.87	435
Brasov M2A (S 28 M2)	15M	8.57	1234/1675	27	ROTAX 912	846	820'	441#	20.9	485
Hoffman H-36 Dimona	16M	10.0	1140/1680	27	LIMBACH/80	560	600'	485#	21.0	680
Hoffman HK-36R Super Dimona	16.2M	10.30	1201/1698	28	ROTAX 912A/80	830	575'	497#	21.22	630
Grob 109A	16.6M	8.28	1280/1820	30	LIMBACH/80	530	1410'	540#	22.75	540
Grob 109B	17.3M	9.16	1367/1874	28	GROB/90	650	643'	507#	20.82	735
Taifun	17M	9.54	1260/1808	30	LIMBACH 80	630	657'	548#	22.6	658
Hobbyliner HB-23	16.4M	8.16	1278/1675	N/A	VW-98	750	525'	441#	17.09	500

All motorgliders are 2-place ships. XX = Sea level @ 15C @ Max. Gross Wt.; N/A = Info not available.
Performance and Specifications compiled from manufacturers handbooks and may vary from actual performance.

SLINGSBY T61(F) 350 ft/min.

Manufacturers:

Aerotechnik: (Vivat)
Airport Kunovice
686 04 Uherske Hradiste
CZECHOSLOVAKIA
FAX: 011-49-42-632-5128

Fournier Aviation: (RF-10)
26, rue de la Republique
78100 St-Germain-En-Laye
FRANCE

Scheibe Flugzeugbau GMBH:
8060 Dachau
Aug.-Pflatz-Strasse 23
GERMANY
FAX: 011-49-8131-6985

Brasov: (IS 28 M2)
Romanian Aeronautical Ind.
ROMAINIA

HOAC: (Super Dimona)
A-2700 Wienet Neustadt
N.A. Ottostrasse 5
AUSTRIA
FAX: 011-43-2622-26780

Burkhart Grob Flugzeugbau (G-109)
Am Flugplatz
8939 Mattsies
GERMANY
FAX: 011-49-8268-998?

FFT: (Taifun)
Mengen
GERMANY
FAX: 011-49-7572-6054?

HB Brditschka GMBH: (Hobbyliner)
Str. 42-46
4053 Haid
AUSTRIA

Dealers: US/Canada/Europe

Moravia, USA Ltd.: (Vivat)
P.O. Box 8067
Wichita, KS 67208
FAX: 316-636-9718

Brasov: (IS 28 M2)
Flite-Lite, Inc.
11037 SW 40th Ct.
Davie, FL 33328
FAX: 305-473-1234

Solaire: (Super Dimona)
Mike Slingluff
41 Cottonwood Lane
Hilton Head Island
SC 29926

Grob:
Grob Systems, Inc.
I-75 & Airport Dr.
Bluffton, OH 45817
419-358-9615

Hobbyliner:
HB-Aircraft USA, Inc.
150 E. 74th St.
New York, NY 10021
212-517-1025

Fournier:
None Listed

Taifun:
None Listed