

B.G.A. TECHNICAL COMMITTEE

TECHNICAL NEWSHEET

TNS 5/6/86

PART 1 Airworthiness "Aggro" (Please add to the 1986 pink pages).

- Corrections a) Page 3 Slingsby T59 (Kestrel), please refer also to page 13 "Glassflugel". These two lists should be combined.
b) Page 8 Delete reference to "Libelle" which is included on page 13.

Many thanks to those who pointed out these errors, and apologies for any confusion!

- 1.1 Disc Wheel Brake Fires A Grob Accro fuselage was badly damaged by fire whilst being towed out. Presumably the brake was partially applied? (Reported by RAFGSA Germany).
- 1.2 SF25E (and all series SF25/T.61) Water ingress damage to both spars adjacent to the spoiler boxes. (Damage has also been reported at the spar roots). At least 5 cases of costly major repairs have been reported on aircraft which are not more than 18 months old. Special protection and precautions should be taken. (Reported by Westland Flying Group).
- 1.3 Pirat Rudder Cables Damaged The attached sketch illustrates a foul on the aileron bell crank lever. Pirat cables should be inspected a.s.a.p. (Reported by Fred Breeze and by South Wales Gliding Club TNS/5/77 refers).
- 1.4 Piper PA18 & PA19 (Cubs) Lift - Strut Fork End Inspection Piper service bulletin 157D (April 1986) requires action additional to that already notified. (Refers also to Pa11, 12, 14, 15, 16 & 17) Details from Agents or M3 Approval Maintenance Organisations).
- 1.5 Auster Tow Hooks (OTFUR Type) Wear of the over-centre linkage stop may cause these hooks to lock-up under load. Maintenance and periodic testing should be included in the LAMS Inspections. (Reported by RINGC Lee-On-Solent after an in-flight hang-up).
- 1.6 IS.28 M.2 (Motor Glider) Service Bulletin CO-14 requires replacement of the Bowden cable support to the brake-cable and pedal stops. (Details from U.K. Agents, Classic Aeroplane, 0452-85661).
- 1.7 Valentin Tairun 17E (Motor Gliders) The attached CAA (Foreign) Airworthiness Directives dated Feb/March 1986 should be checked for compliance, and recorded in the log books.
- 1.8 Grob 109B "Measures for improvement of the flutter behaviour" Grob T1 817-29 introduces a rudder damper, additional aileron mass balance and changes to the upper and lower suspension of the fuselage. (Serial No's as listed in TI available from U.K Agents 0491-37184).
- 1.9 T21 (Sedbergh) Cracks radiating from the top holes in frame 1 Refer also to TNS 9/85 and inspect a.s.a.p. (Reported by S Torrance - Cambridge Gliding Club).
- 1.10 Extracts from G.A.S.I.L.'s
 - (a) Carburettor Floats, effects of MOGAS (in U.S.A.).
 - (b) Scheibe SF 25 Oil filler cap not secured.
 - (c) Altimeter Millibar Scales In operative (both Kollsman and United Instruments type 5934).
 - (d) Flexible Pressure Hoses (Fuel, oil, & hydraulic), guidelines from the CAA on requirements for test and inspection (LAMS issue 2).

- 1.11 KA6E Spring - Trim attachment bracket (lower) In a recent fatal accident, the bracket was found to have been cracked, and may have failed totally prior to impact. All such trim systems should be inspected a.s.a.p. and recorded in the Log Book.
- 1.12 Grob 109 CAA Foreign Airworthiness Directives (Vol III - May 1986), must be complied with as listed herein.
- 1.13 Retracting - Gear Warning Devices May cause more damage to both airframes and occupants than they prevent, if spurious warnings are generated on final approach, which result in serious mismanagement of the aeroplane.

PART 2 General Matters

- 2.1 Major repairs and repair reports (Gliders & Motor Gliders). Copies of the reports which are to be inserted in the Log Books, should be sent to the B.G.A, for inclusion in the aircraft's file. In the case of Civil Registered Motor-Gliders, a copy of the report may be required by the CAA. Major repair reports should include reference to the repair scheme's origin i.e. "Standard Repairs to Gliders" or "EAC AC43-13 Acceptable methods. Techniques & Practices, Aircraft Inspection and Repair", or to Manufacturer's Manuals. Drawings etc. (Ref B.G.A. Technical Procedure Manual Paras 7.5, 7.6, 7.7, 7.8, and 7.9 inclusive).
- 2.2 Blaniks Bulletin L13/061 (Available from the Agent, Peter Clifford Aviation, White Waltham Airfield, Nr Maidenhead, Berks O62 882 3341), varies and extends the manufacturers recommended overhaul periods. It does not extend the structural "safe" life beyond that already extended in the U.K. by the B.G.A, to 25,000 launches or 5225 hours.
- 2.3 Weak - Link Ratings The enclosed B.G.A. Technical Committee policy statement on weak-link ratings is self-explanatory. To avoid conflict between the glider and the cable parachute, Club's may care to consider the introduction of much longer straps. The Van Gelder winch at Dunstable uses 100ft long straps!
- 2.4 T.31 (Cadet MK III) Winch Launch Hook David Bullock and Bob McLean at Rufforth, have moved the hook one frame further aft, and the winch launch performance has improved dramatically!
- 2.5 Mogas Operatives In recent discussions with the CAA, the B.G.A. have unequivocally campaigned for the withdrawal of the dedicated fuel supply requirement. (Notice No. 98 Appendix - Air Navigation Order (1980) Exemption Page 4).

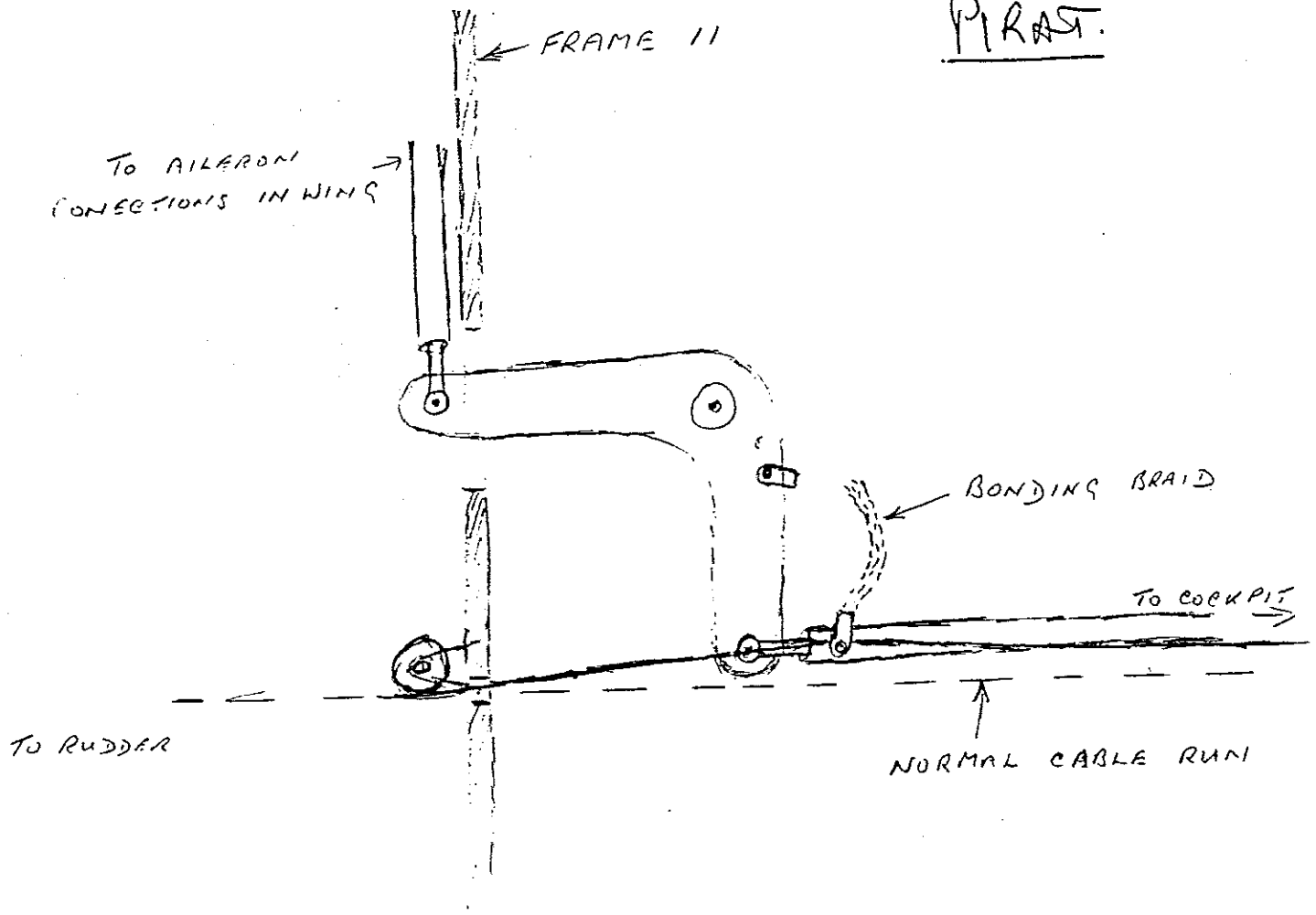
Some Insurers will endorse their policy for the uplift of "non-dedicated" fuel, provided the operator takes reasonable care to safeguard such supplies. In the meanwhile the Director General of Airworthiness has undertaken to review the matter with some urgency. No timescale for the resolution of this problem can be determined, since it seems to have become tangled up with Article 82 of the Air Navigation Order fitted "Aviation Fuel at Aerodromes". Club Committees may wish to take note of Article 82.

R.B.Stratton
Chief Technical Officer
June 1986

PIRAT

BEA TNS/5/1/86

PIRAT.



PIRAT Rudder Cable
Foul on Aileron.

Reported by. MSK. May 86 /

4. THE LIGHT AIRCRAFT MAINTENANCE SCHEDULE - FLEXIBLE PRESSURE HOSES [E]

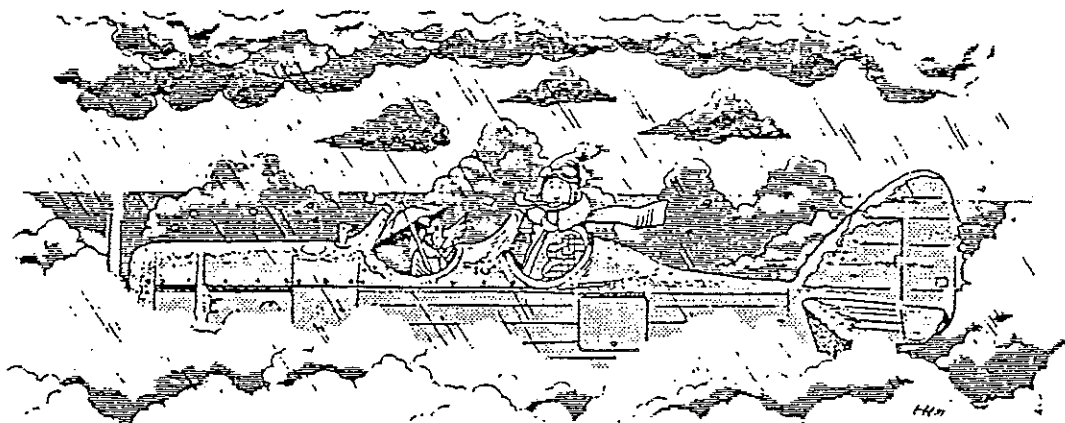
It has been brought to our attention that some organisations may have difficulty with interpretation of the requirement for flexible hose testing in the above Schedule. Basically para 2.2 of Section 3 only applies in the absence of manufacturers' recommendations. Thus where a manufacturer specifies any flexible hose inspection/test/replacement then such inspection/test/replacement shall be carried out even though the particular requirements may be less onerous than CAIP Chapter AL/3-13. It must be noted however that the Authority only specifies minimum standards and therefore any engineer certifying in accordance with the Schedule may require more work to be carried out when his particular experience suggests it would be prudent to do so. In this case the Authority should be informed through the Occurrence Reporting System of any hose failure which could cause concern so that mandatory action can be considered.

5/86

22 May 1986

1. SUMMER

P



In GASIL 11/85 Item 3 I did my country yokel act and from various signs correctly predicted the HARD WINTER. I won't stick my neck out and predict what the summer will be like but there are signs that it will arrive late.

A point to note is that the sea is unusually cold after last year's poor summer and the cold winter. It will take a long time to warm up, so even when the weather does turn warm, sea and coast fog especially in the Channel, could be expected - so if you plan to go to Le Touquet for lunch - watch out. Some other hot summer problems:-

- Reduction in aircraft performance eg 10% extra take-off distance for every 10°C above standard temperature.
- Bugs in pitot tubes, static vents and tank vents. Use properly marked pitot covers etc.
- More frequent thunderstorms and heat turbulence.
- Use of MOGAS limited to 20°C fuel tank temperature, so on a sunny/hot day you must use AVGAS. (But see Item 13.)
- A tank filled with cold fuel will over-flow as it warms up.
- High temperatures in parked aircraft which can 'cook' the avionics.
- Haze and particularly smoke from stubble burning at the end of summer.

16. MOGAS EFFECT ON CARBURETTOR FLOAT

GASL 4/86

E

Aircraft : Piper PA22 (Tripacar/Caribbean) (U.S.A)
Engine : Lycoming O-320

The aircraft had an engine failure and landed in soft field with minor damage. Investigation revealed that the aircraft has a STC for Mogas. The owner was using low lead fuel. The molded cellular carburettor float was found to be absorbing the fuel and losing its ability to float. Facet Aerospace Products Service Bulletin No A1-84 dated May 84 had not been accomplished. The reporter recommends AD to require use of metal floats for aircraft STC'd for automotive fuel. Carburettor was Facet MA4SPA.

6. OIL FILLER CAP LEFT OFF

P/E

Aircraft : Scheibe SF25 Motor Falke
Date : February 1986

During instrument training a strong smell of burning was noticed, immediately followed by choking smoke. The instructor took over, shut down the engine, feathered, opened ventilation, shut off cabin heat and turned off the master and fuel switches. During the rapid descent oil squirted up onto the canopy. A successful straight-in approach and landing on the airfield was completed after which the pilots quickly evacuated the aircraft. The oil filler cap was found behind the propellor hub and oil had leaked out over the engine and exhaust. The right-hand rear exhaust was also found to have been touching the firewall where burn marks could be seen.

The oil filler cap has now been wire-locked to prevent loss and the daily inspection has been amended to ensure it is tight fitting at the time. The engine has been remounted to give the correct exhaust clearance.

3. MILLIBAR SCALE INOPERATIVE ON KOLLSMAN ALTIMETER

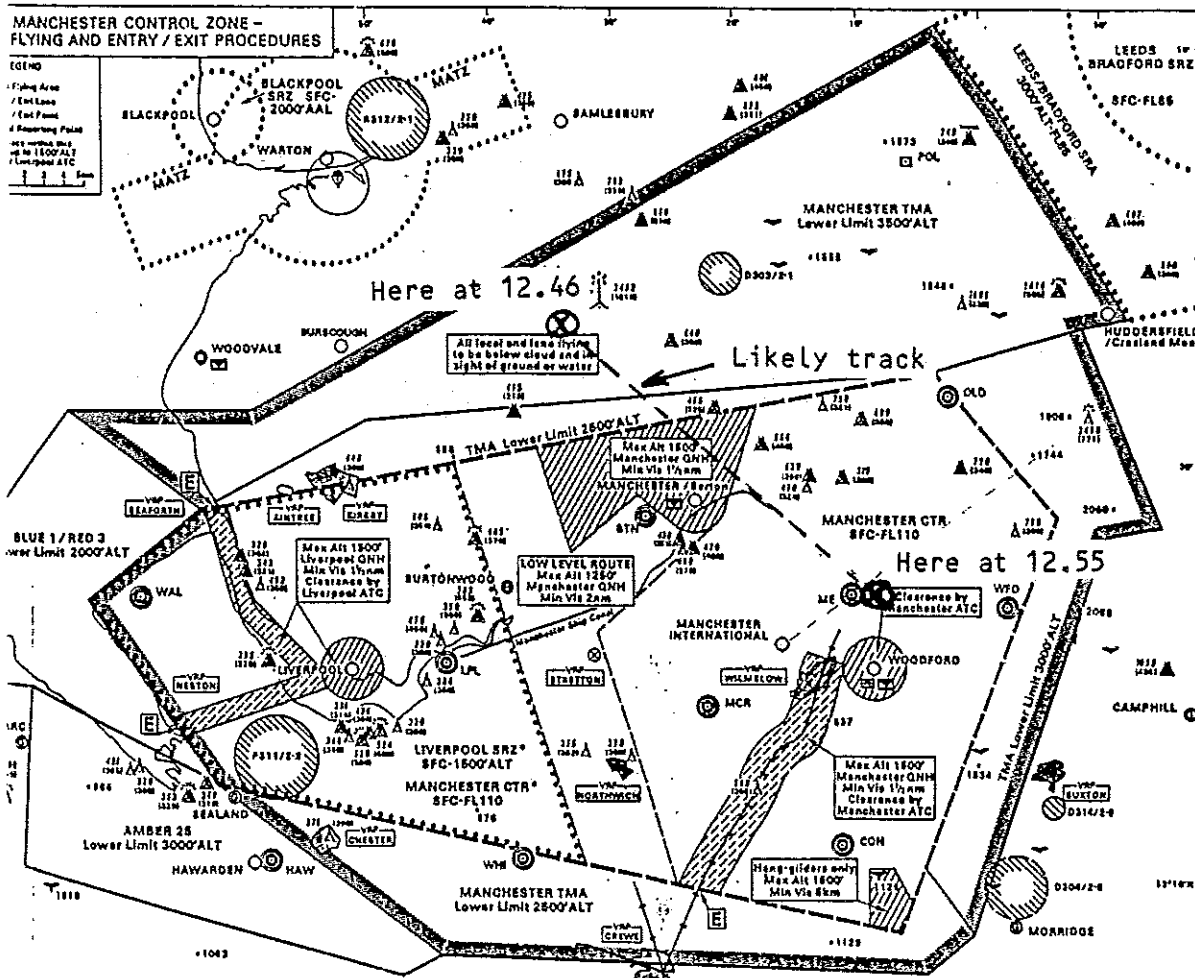
P/E

Aircraft : BAe Jetstream 31 (and possibly others)
Date : February 1986

When it was returned to the repair/overhaul agency an altimeter was found to have a missing locking pin which made the millibar adjustment inoperative. In addition the loose pin could have jammed the mechanism. The probable cause was the displacement of a circlip used to retain the pin. The manufacturer states that it is their normal practice to apply purple glyptol lacquer to the circlip and gear to prevent vibration-induced movement or accidental displacement during repair. The agency have highlighted this problem to their workshop and will now apply the lacquer whenever repair disturbs this assembly. The Model Numbers are B45152-00-005 and B45152-00-004.

CAA Comment:

BAe have traced all the instruments fitted to Jetstream aircraft, but it is not yet known whether the problem affects other aircraft types. This is similar to Item 16 in GASL 3/86 affecting United Instruments 5934 altimeters. The FAA are issuing an AD on United Instruments 5934 altimeters and in the meantime the CAA has sent out a Letter dated 12 March 1986 to all M3 approved companies.



CAA Comment:

The pilot was totally ignorant of the ATSORA service introduced in November 1985 via AIC66/1985 and whilst he knew of the existence of AIC's and Notams he seldom if ever read them. However, he always checked the current information displayed in the club briefing rooms.

The pilot was made aware of his responsibility to navigate his aircraft and comply with mandatory instructions issued by ATC units and to understand the implications of the status of different types of airspace. The point was reinforced that if an instruction is not understood, it must be queried. Equally, if complying with an instruction is likely to prejudice a pilot's ability to continue the flight safely, he must say so.

A firm reminder was given of the pilot's responsibility to avoid controlled airspace or to obtain clearance to enter. Likewise, if an infringement is suspected, it must be communicated without delay to the controlling authority.

All pilots should read AIC66/1985 (yellow 87) which describes the Air Traffic Services Outside Regulated Airspace. Alternatively the GASCO Flight Safety Bulletin Winter 1985/6 article on page 22 provides a shortened version.

TNS/S/6/86

Issue 2
February/March 1986

VALENTIN TAIFUN 17E MOTOR GLIDERS

CAA AD No
Associated
Material

Description

Applicability - Compliance - Requirement

PART 1 - LUFTFAHRT - BUNDESAMT AIRWORTHINESS DIRECTIVES

85-29

Flight Controls - Elevator control connection. Tailplane mounting.

Applicable to all Serial Nos. until 1032. Compliance required as detailed in Airworthiness Directive. Valentin Technical Information 3/818 also refers.

Landing Gear - Actuating struts of main gear and nose gear. Securing the bearing of the main landing gear.

Electrical Power - Push button starter.

Fuel - Emergency fuel shut-off valve.

85-129

Improvement of the stall characteristic.

Applicable to all Serial Nos. Compliance required as detailed in I.B. Airworthiness Directive. Valentin Technical Information 4/818 also refers.

<u>CAA AD No</u>	<u>Associated Material</u>	<u>Description</u>	<u>Applicability - Compliance - Requirement</u>
	85-263	Installation of a stall warning device.	Applicable to all Serial Nos. Compliance required as detailed in Airworthiness Directive. Valentin Technical Information 8/818 also refers.



The British Gliding Association Ltd
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British Gliding Association

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The Secretary and Secretary Emerita

13.5.1986.

BGA Technical Committee

REF: BGA/TNS/5/6/86

Policy on Weak-Links

Towards More Productive Launching

1) Introduction

With the acquisition of higher-powered launching equipment, heavier two-seat gliders, & stronger cable it is inevitable that the B.G.A. policy on weak-link ratings has to be revised, if more productive launching is to be realised.

Reference to this aspect of launching, was drawn by John Gibson, in his unique explanation of the dynamics of launching in his article in S & S (August/Sept 85) titled "A LOOK AT WING LAUNCHING"

2) New Policy

The B.G.A. Technical Committee, at its meeting on May 7th 1986, endorsed a recommendation by the Chief Technical Officer, that the U.K. should adopt the European system as typified by the Tost/range of colour coded weak-links. It further agreed that the weak-link rating should not exceed that which is approved for each type of glider, in that type of glider's type certificate, Flight Manual, or Certificate of Airworthiness. Except that :

3) For the older types of U.K. gliders certificated to B.C.A.R. Section E, it will be acceptable to uprate the weak-link from the traditional 1000lbs to 1100 lbs (500kp) equating with the Tost "white" link.

4) Colour Coding.

Whether Tost type weak-link are used or not, it is essential to adopt the following colour code:-

Tost No1	Black.	(1000kp)	=	2200 lbs.
"	" 2	<u>Brown.</u>	(850kp)	= 1870 lbs.
"	" 3	<u>Red.</u>	(750kp)	= 1650 lbs.
"	" 4	Blue.	(600kp)	= 1320 lbs.
"	" 5	<u>White.</u>	(500kp)	= 1100 lbs.
"	" 6	Yellow.	(400kp)	= 980 lbs.
"	" 7	Green.	(300kp)	= 660 lbs.

It is not, of course intended that all 7 variants should be required. In most cases Brown, Red and White will meet all requirements.

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5) TO ELIMINATE ERRORS

The BGA Technical Committee strongly recommend that the approved weak-link rating for each type be identified on a PLACARD in the cockpit, and colour coded adjacent to the hook(s).

b) This Technical Newsheet supercedes para 4.3 of BGA Operational Regulations, which will be ammended in due course

Yours Sincerely.

R.B. Stratton
Chief Technical Officer.

Weak-Link List (Incomplete)

BGA CNS/5/6/86

Tost BROWN. Rated at 1870 lbs

(How Strong Is Your Cable?)

ASK 13	2350 lbs
ASK 21	1870 lbs
Cirrus (open)	1896 lbs.
Rhoulerche II	2000 lbs
Nimbus III	2000 lbs
ASW 22	1870 lbs.

Tost BLUE Rated 1320 lbs.

LS6	1760 lbs
SF27A	1654 lbs
Puchatz.	1600 lbs
ASW 20.	1320 lbs
PIK 20.	1320 lbs
ASW 17.	1320 lbs
PIRAT	1516 lbs
KA6 CR.	1400 lbs
SF 26A	1433 lbs
KA6E	1400 lbs
JANUS.	1653 lbs
TWIN-ASTIR.	1323 lbs
LS 4	1323 lbs
DISCUS.	1499 lbs
VENTUS	1320 lbs
BOCIAN.	1518 lbs
NILBUS 2	1320 lbs
DG 300.	1500 lbs

Tost WHITE Rated at 1100 lbs.

Pilatus 34	1100 lbs
Cirrus STD	1100 lbs
Astir CS	1100 lbs
ASK 18	1100 lbs
UK Gliders to BCAR/E	1100 lbs
VEGA	1100 lbs
I.S. 30.	1100 lbs

SCVA TNS 5/86

TOST GmbH - FLUGZEUGGERATEBAU MÜNCHEN
 Thalkirchner Str. 62 - 8000 München 2 - Tel. (089) 530 90 67 - Telex 528 215
 FRANK. LONDON SAILPLANES. 0582/62068

FRANK. Chiltons Sailplanes. 0494/445854. (08Pat.)

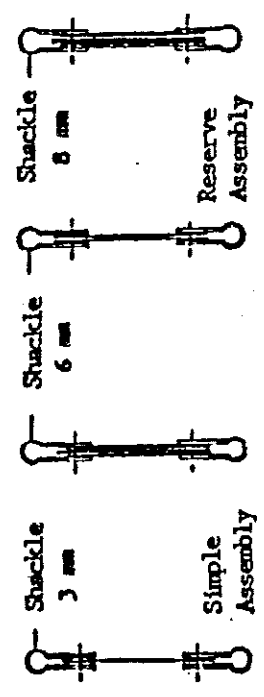
T O S T - Weak Links

Stress Load Ranges

Application	Designation	Colour	Breaking load = kp	LBS
for W/L and A/T	1	black	1000 ± 100	2200
	2	brown	850 ± 85	1870
	3	red	750 ± 75	1650
	4	blue	600 ± 60	1320
	5	white	500 ± 50	1100
	6	yellow	400 ± 40	880
	7	green	300 ± 30	660
Special purpose UltraLights Hanggliders and Kites	8	violet	200 ± 20	
	9	grey	150 ± 15	
	10	gold	100 ± 10	
	11	orange	80 ± 10	
	12	alumin.	50 ± 10	

New classification valid from SEP 1979

Assembly Examples

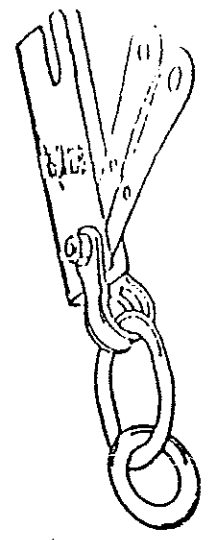


w/o protective cover - with w/o protective cover - with

Important operating recommendations:-

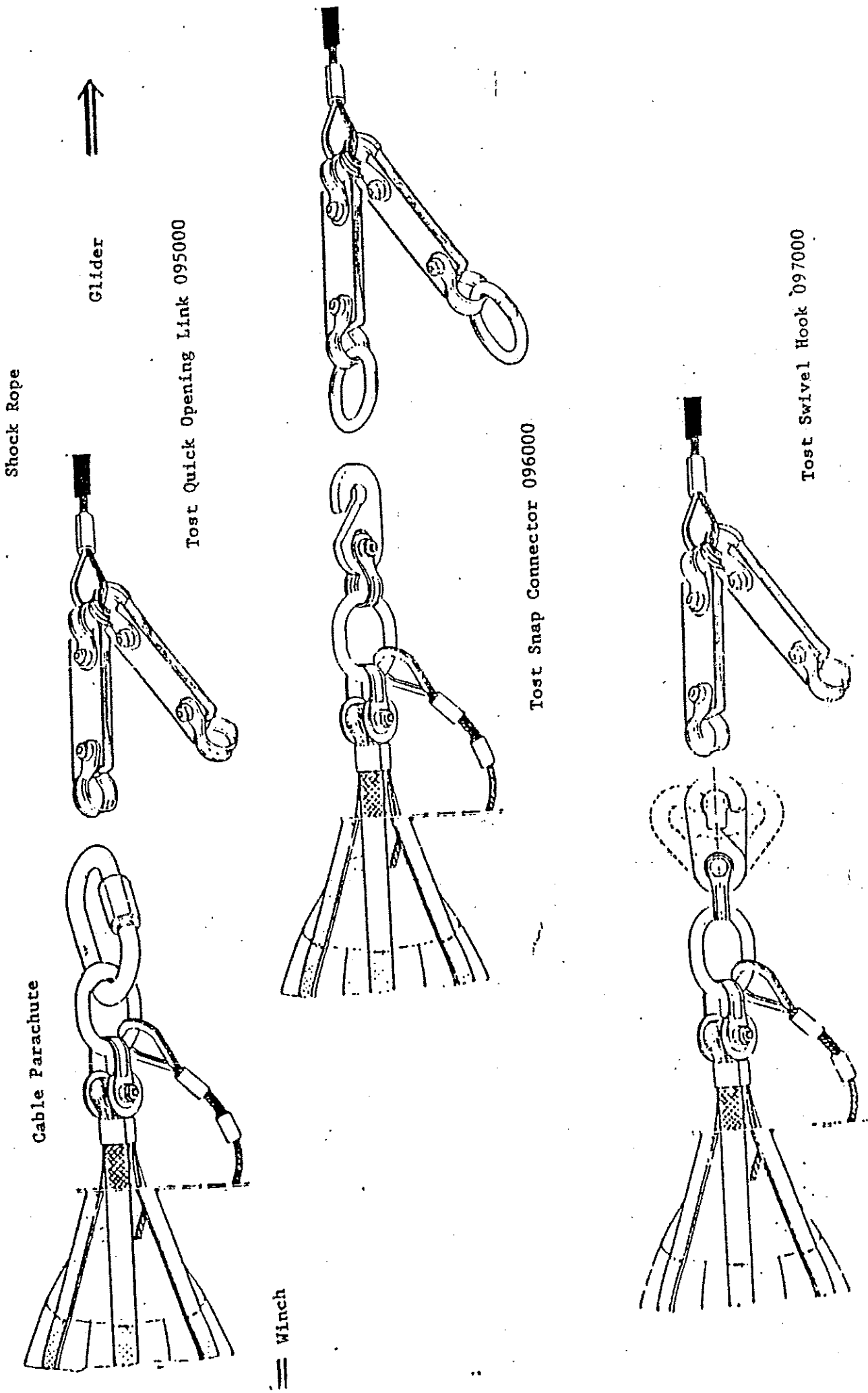
- visibly deformed or damaged weak link inserts should be immediately replaced, as also if overstraining has been noticed (e.g: overstressed launches)
 - after 200 launches, weak link inserts should be renewed on principle. A single insert is a lot cheaper than even one interrupted launch.
 - as a protection against deformation of weak link inserts and consequent reduction of breaking load we recommend the use of our protective steel covers.
 - we recommend the so-called "reserve assembly mode", using one each of the weak link inserts of the same breaking load group with round hole and with elongated hole. The first overload breaks the round hole insert as intended, but thanks to the reserve insert with elongated hole the launch can continue.
- When using "reserve assembly mode" the following must be strictly observed:-
- never use two inserts of the same kind, i.e. both with round hole or both with elongated hole, as this would double the breaking load.
 - inserts with breaking load of less than 350 kp should be used only in reserve assembly mode
 - only the appropriate shackles - see assembly examples - and special bolts with laid-down shank length must be used to avoid pinching insert in steel cover, thereby increasing breaking load.
 - for launching of gliders of different all-up weights, we recommend a fan arrangement of the various weak links required - see over
 - overloads during cable retrieve can be avoided by using a No.7 weak link.

Which weak link to use for your glider you can see from the glider manual. To simplify this we have compiled a table of all gliders, based on LBA list I/31/78 which is available free of charge on request.



Complete weak link in reserve assembly mode with protective cover and coupling rings

Tost - Connection components in the weak link fan assembly mode for winch launching



Issue 3
May 1986

GROB G109 SERIES MOTOR GLIDERS

<u>CAA AD No</u>	<u>Associated Material</u>	<u>Description</u>	<u>Applicability - Compliance - Requirement</u>
		<u>PART 1 - LUFTFAHRT-BUNDESAMT AIRWORTHINESS DIRECTIVES</u>	
83-6		<u>Flight Manual - Correction of pages.</u>	Applicable to all Serial Nos. Exchange pages 4, 11, 31, 37, 41 and 43 of the Flight Manual dated 14-12-1982 on or before 31 March 1983 for new ones. Grob Technical Note No. 817-8 refers.
83-104		<u>Gravity Range - Correction of Flight Manual and procedure for spin recovery.</u>	Applicable to all Serial Nos. Action to be accomplished in accordance with Grob Technical Note No. 817-10 not later than 15 July 1983.
85-132		<u>Main Landing Gear - Fractures of the undercarriage legs.</u>	Applicable to G109 and G109B Serial Nos. as detailed in L.B. Airworthiness Directive 85-132. Compliance required as detailed in Airworthiness Directive. Grob Technical Information TM 817-19 also refers.
85-218/2		<u>Flight Controls - Aileron flutter at speeds above 190 km/h.</u>	Applicable to G109B Serial Nos as detailed in AD. Compliance required as detailed in AD. Grob Technical Note No 817-20 also refers.

B.G.A NOTE: COMPLIANCE WITH THESE

Mandatory Requirements must be shown on CAA

Form 2024 (Item 2.9(c)), and checked at L.A.H.S

50/50/50/Annual Inspections. FLIGHT MANUAL Amendments must be checked, also.