

BRITISH GLIDING ASSOCIATION

BGA TECHNICAL COMMITTEE

TECHNICAL NEWSHEET TNS 1/2/94

PART 1 Airworthiness "AGGRO". Herewith the BGA 1994 Compendium of Airworthiness Directives, Mandatory Modifications and check list of Special Inspection and Defects.

Please refer to this document at C.of.A. renewal times, (or whenever appropriate) and record in the Log Book, evidence of compliance as well as on BGA Inspection Proforma, Form 267.

- 1.1. KA13's (JUBI BUILT) Corrosion of the Aileron Mass Balance attachment. Failure of this attachment could initiate flutter. Repair or replace as required. Reported by Lasham, who have a replacement source.
- 1.2. PIK 20/20E
  - a) Jamming of the Elevator Control, by misaligned trim spring fouling seat pan.
  - b) Scoring of the Elevator Control Tube by set screws of excessive length in the cockpit area.
  - c) PIK 20E Fuel Tank damaged by the seat-back cable tube clamps. (Reported by John McWilliam).
- 1.3. "JUNIOR" Trim Spring Failures - as illustrated herewith, a recurring defect.
- 1.4. ASK 23 - Inspection of Main Bulkhead II. A/D 93-196 herewith explains the problem. Refer also to Tech. Note 6.
- 1.5. LS6 (LS7?) Lower Airbrake Paddle Cracked. Sketch herewith from Tim Macfadyen.
- 1.6. JANTAR STANDARD - Replacement of "SPAR ROOT PIVOT". Bulletin BE 044/03, sent by BGA to owners 29/9/93 is further amplified by BE 037/89, which requires MANDATORY REPLACEMENT of the SPAR END SPIGOT, following a failure. (Details from Anglo Polish Sailplanes 0628 39690). Extract of BE 037/89 herewith by Steve Young Highland G.C).
- 1.7. Grob G.109 (SLMG) Inspection of Float Valves and Carburettor Membranes. Service Bulletin TM 4601-7 is attached.
- 1.8. Extracts from GASIL include :-
  - a) Propeller Fatality
  - b) Spark Plug Failures
  - c) Refuelling incident (Pawnee)
  - d) Engine failure after tack off/Turning back!

**PART 2    GENERAL INFORMATION**

- 2.1.    LOG BOOK KEEPING (CAA Registered). To re-enforce the legal requirements of ARTICLE II of the Air Navigation Order, in respect of "Inspection, overhaul, repair, replacement and modification", and of the requirements of the "Light Aircraft Maintenance Schedule" (Lams Blue Book), extracts from CAP 520 "Light Aircraft Maintenance" are attached. Please be advised that failure to comply may invalidate your C.of.A. and consequently your Insurance Cover!
- 2.2.    Log Book Keeping (gliders). Why not comply with the above in all essential details?
- 2.3.    Weak Links - latest list herewith.
- 2.4.    BGA 1994 Price Lists - attached.
- 2.5.    Hoffmann H.36 Dimona Technical Product Support is now provided by Airborne Composites, (Tim Dews - 0985 40981) who has access to Service Bulletins etc).

**HAPPY NEW YEAR !**

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*

**93-196 Schleicher**

Date of issue: 27.09.1993

Affected sailplanes:

German Type Certificate No.: 353

SCHLEICHER  
ASK 23 and ASK 23 B  
- S/No's.: all

Subject:

Inspection of the main bulkhead II (landing gear bulkhead) for damages

Reason:

As it has been stated already in the Technical Note No. 6 (dated October 17, 1990), worn out or badly adjusted or not-in-time readjusted wheel brakes may result in damages to the main bulkhead II (landing gear bulkhead) if when operating the airbrake control bellcrank I hits the bulkhead (damaging it and peeling it off the fuselage shell). This case also was noticed as a result of extremely rough landings. Therefore, the Repair Instruction 'B' (dated October 17, 1990) was issued for the ASK 23 and ASK 23 B.

Action:

Inspection of main bulkhead in accordance with Schleicher Technical Note No. 10

Compliance:

Prior to or on the next annual C. of A. inspection, but not later than March 31, 1994.

Technical publication of the manufacturer:

Alexander Schleicher ASK 23 / ASK 23 B Technical Note No. 10 dated September 14, 1993 which becomes herewith part of this AD and may be obtained from Messrs.

Alexander Schleicher GmbH

D-36163 Poppenhausen

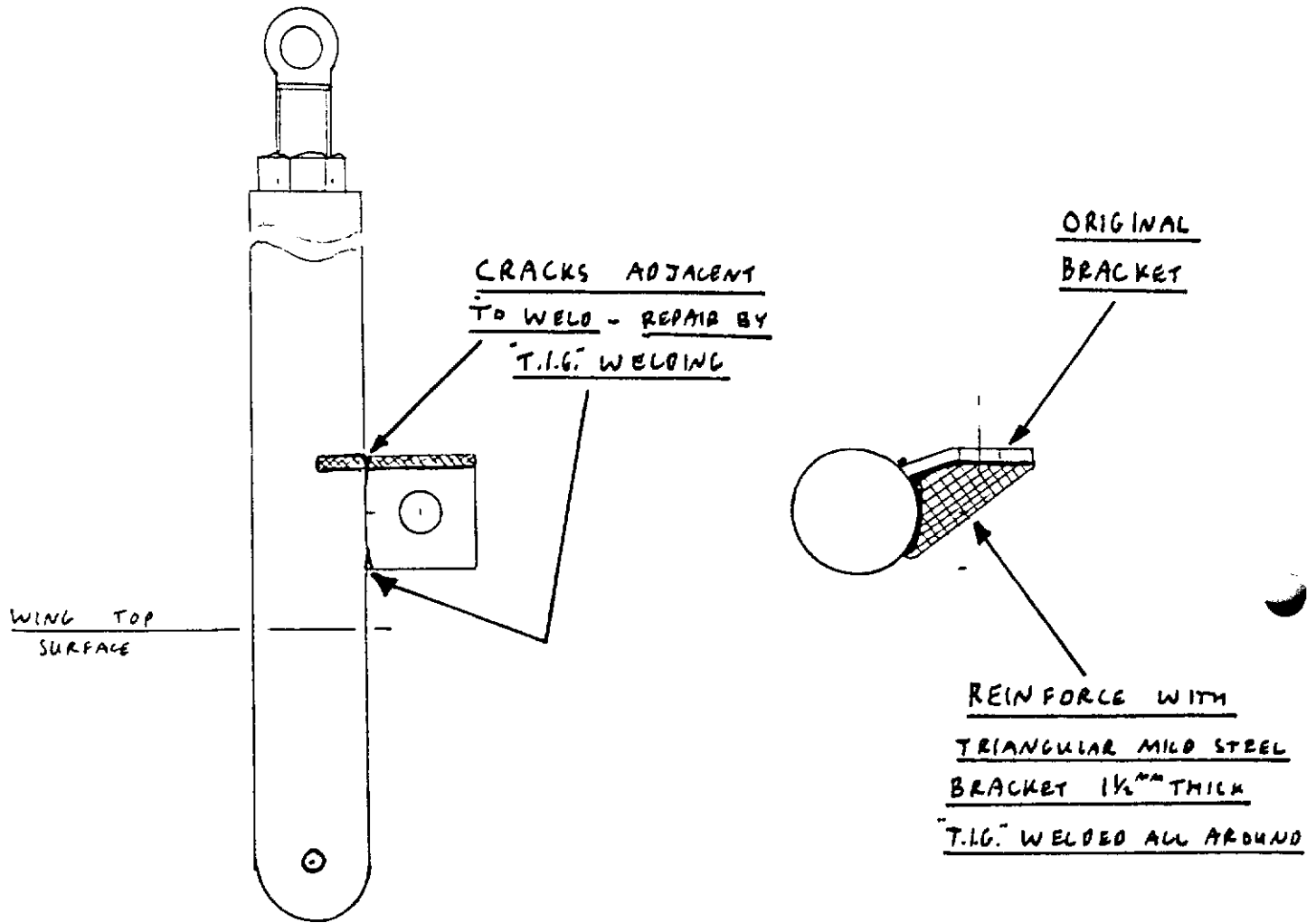
Federal Republic of Germany

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.

LS 6 CRACKS IN LOWER AIR BRAKE PADDLE MOUNTS

REPAIR AND REINFORCEMENT SCHEME (- ALSO LS 7?)



VIEW LOOKING AT AIR BRAKE ARM  
FROM IN FRONT OF WING WITH BRAKES  
OPEN & AIR BRAKE PADDLES REMOVED

VIEW LOOKING DOWN ON  
AIR BRAKE ARM

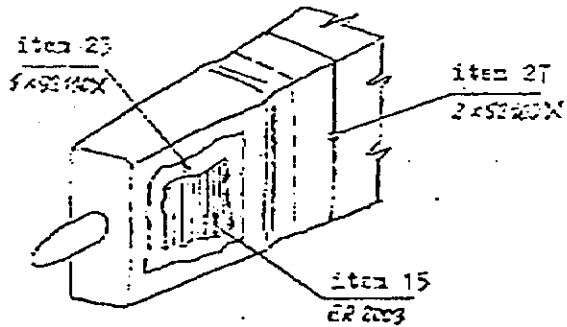
T. E. Macfarlane 1/A/130 E  
13 December 1993

Enclosure to Bulletin No BE-037/SJ, JANTAR-SJ.

PROCEDURES FOR WING SPAR ROOT PIN REPLACEMENT ON SZD-41A,  
SZD-48 AND SZD-48-1 GLIDERS.

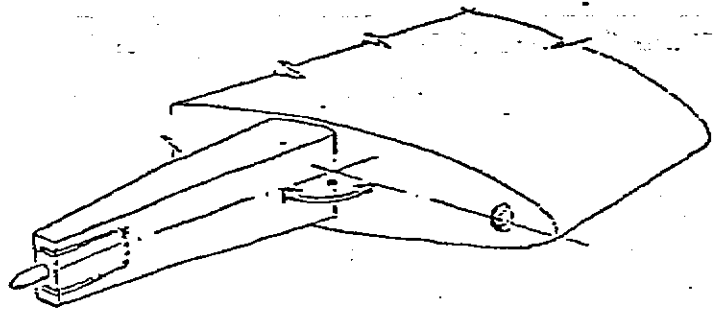
1. REMOVING OF "OLD" PINS.

- 1.1. Remove the fabrics item 27 and 23 and covering wrap item 15 (items acc. to drawing No 11-92-00 and 11-91-00, sheets 1 and 2) out of the spar roots. Smooth and clean the opened surfaces.



- 1.2. Mark the outline of the opening for duraluminized "block" with the pin on the external wall side (perpendicular to the root rib plane). Dimensions of the opening: length 160 mm (measured from the spar root), width 40 mm (symmetrical in respect to the pin axis).

- 1.3. According to the marking make the proper longitudinal cut and drills (avoid the damage of the opposite spar wall "oblique" in respect to the rib and spar longerons plane).



JANTAR. BE 037/89.

Junick. SINS/1/94

P H Pickett,  
25 Drew Crescent,  
Kenilworth,  
Warks. CV8 1RD.

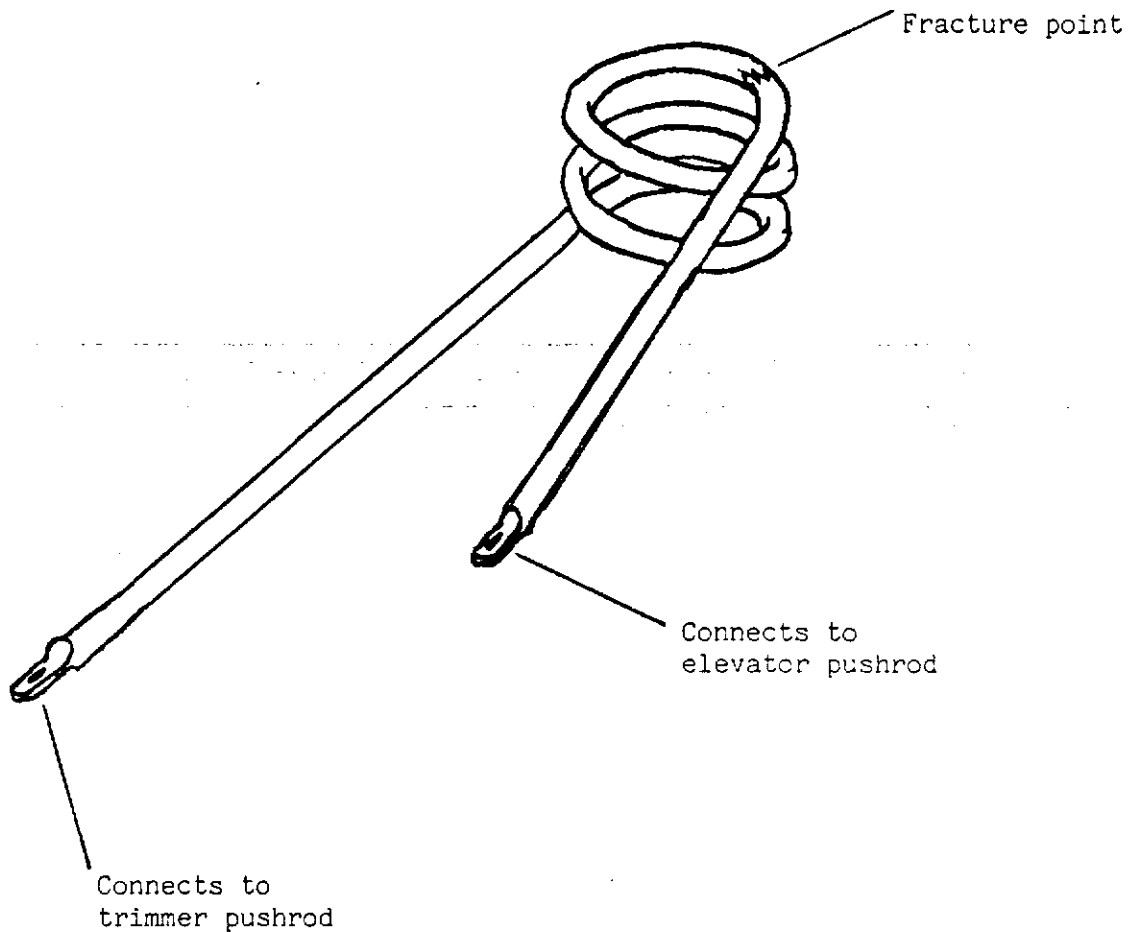
B.G.A.  
Kimberley House,  
Vaughan Way,  
Leicester. LE1 4SE.

30/11/93

Glider type: SZD Junior.

Subject: Trimmer spring.

Complete failure of trimmer mainspring occurred after only 18 months service, fortunately during pre-flight checks. Fracture occurred as illustrated below. Recommend inspection.



**Subject:** Inspection of the float needle valve in the L/H and R/H carburettor

**Concerned:** Aircraft Engine GROB 2500 E1/D1; all S/N's

**Urgency:** not later than 31 December 1993

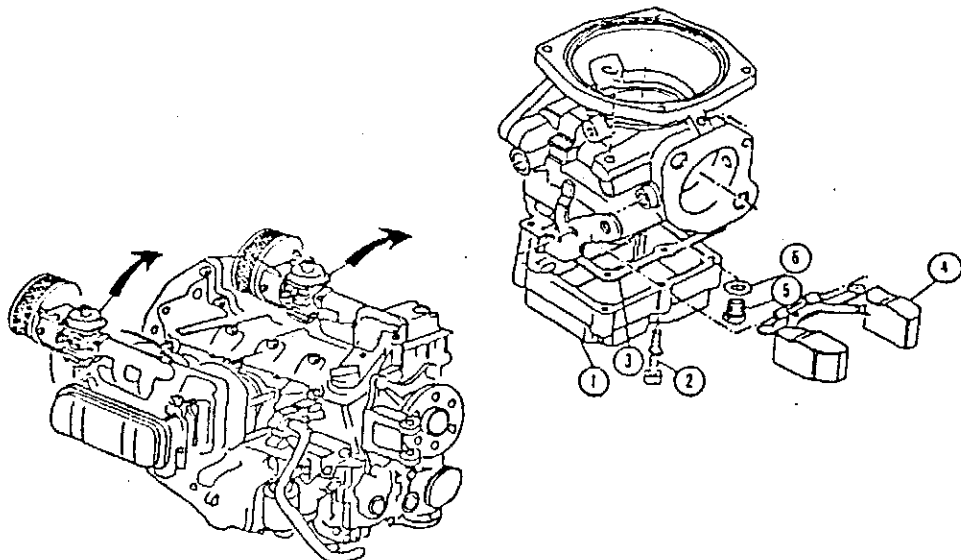
**Procedure:** The aircraft engine GROB 2500 is equipped with two Solex 150 CD3 carburettors. Due to spare parts delivery, unintentionally different types of float needle valves have been installed in the carburettors. Only one specific type is permissible. The use of a none permitted type could cause rough running engine or even engine failure. Therefore an inspection and, if necessary, an exchange of needle valves is mandatory.

**Actions:** The inspection or the exchange of needle valves in the carburettors must be performed as follows:

**Note:** The inspection must be performed on both carburettors.

1. Ensure, that the Battery Master Switch is "OFF", and the Ignition key is removed.
2. Remove upper and lower engine cowling.
3. Remove floatchamber (1) by removing 6 screws (2) with spring washer.
4. Remove floatchamber and gasket (3) downwards and drain fuel from the floatchamber.
5. Pull down float (4).
6. Remove needle valve (5) and gasket (6) (refer also to the "Assembly and Repair Manual GROB 2500")

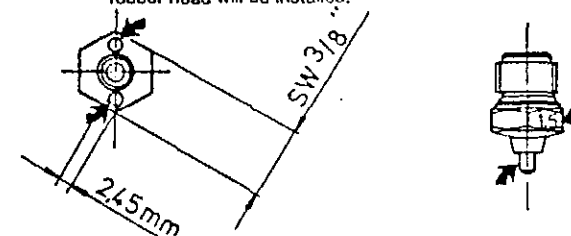
**Note:** The width of the hexagonal nut is  $3/8"$  (= 13,25 mm).



7. Check that the needle valve has the following characteristics:

- 2 drill holes of 2.45 mm dia
- 1.5 marking on hexagon flat
- the valve needle may have 2 colors (both are permitted):
  - yellow: valve needle is made of yellow brass material with rubber head
  - silver: valve needle is made of steel material

**Note:** During exchange, only valve needles from brass material with rubber head will be installed.



8. If the needle valve has the stated characteristics, it can be reinstalled using a new gasket.
9. If the needle valve has other characteristics as stated in workstep 7, a new needle valve P/N B.19052 and a new gasket must be installed.
10. Install float and adjust float to 16.5 mm (refer to "Assembly and Repair Manual GROB 2500").
11. Install float chamber using a new gasket P/N REF.28.
12. Install upper and lower engine cowling.
13. Perform an engine ground run and, if necessary, perform adjustments according to "Assembly and Repair Manual GROB 2500" and "Operations Manual GROB 2500".

**Material:**

1. The gaskets for the float needle valve and for the floatchamber are attached to the Service Bulletin.
2. Float needle valves can be ordered from GROB with the attached Purchase Order.
3. Chapter 9 (page 53 - 57, 5 pages), "Carburettor", of the "Assembly and Repair Manual GROB 2500" is attached to the Service Bulletin.


**Weight and Balance:**

not concerned

**Remarks:**  
an

1. The inspection and the exchange of the float needle valve can be performed at authorized aviation work shop and has to be certified in the logbook by an authorized inspector.
2. If you have sold your motorglider in the meantime, would you kindly pass this information on to the new owner and forward his name and address and aircraft S/N to us.

Mattsies, 20 September 1993

  
Dipl.-Ing. J. Altmann  
(Airworthiness engineer  
certification staff)

LBA approved:

This Service Bulletin is originally written in German and approved by the German LBA on the 05 October 1993 and is signed by Mr. M. Bonium.

The translation has been accomplished to the best of our knowledge and judgement. In case of doubt, the German original is authoritative.

**Carburettor Membrane Inspection**

Inspect the carburettor membrane every 100 hours. This inspection does not require removal of the carburettor. Carburettor adjustment is not changed.

1. Remove the carburettor upper cover.
2. Remove the control piston spring.
3. Carefully pull out the control piston together with the carburettor membrane, taking care not to bend the nozzle needle.
4. Slightly stretch the membrane and check for cracks and embrittlement. If defects are found, replace the membrane.

To replace the membrane remove the inner ring of the control piston.

During installation take care that the membrane projections come to lie in the correct grooves.

Installation in the opposite sequence as the removal.



## 11. SOMETHING TO CHEW ON!

GASIL 12173

P

Aircraft type : Piper PA25 Pawnee  
Date : August 1993

The aircraft involved was used for glider towing and it was the second fuel stop of the day. The pilot taxied to the fuel pump and approached head-on at a very slow pace as is normal practice. The method in use at this aerodrome is to approach the fuelling point in this manner until the main wheels contact a stop bar. On this occasion, the approach to the stop bar was

approximately 6 inches to the right of normal where loose stones had formed a ramp against the stop bar allowing the wheel to roll over it. The pilot's first indication of a problem was when the idling propeller contacted and destroyed the light unit above the refuelling point.

Due to this occurrence, the stop

bar has been raised and cleaned to prevent a recurrence of this incident.

### CAA COMMENT:

It makes sense, if it is possible, to park parallel to any fuel installation for refuelling. This would have made the above incident highly unlikely.

## 12. PROPELLER FATALITY

P

Aircraft type : Piper PA24 Comanche  
Date : September 1993

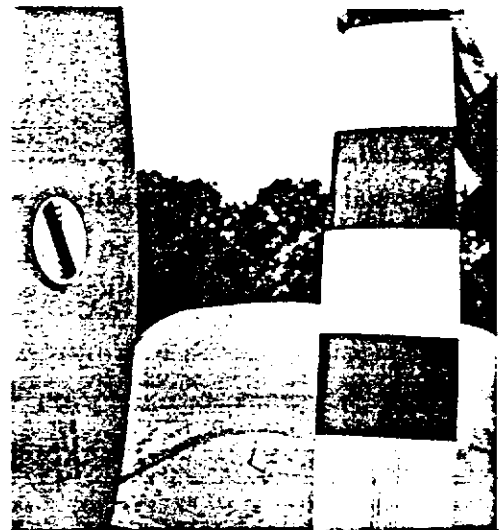
Extract from *National Transportation Safety Board Report, USA.*

"The pilot had started the engine, in the meantime his wife was attempting to remove the wheel chocks after engine start. The propeller struck her causing fatal injuries."

### CAA COMMENT:

Thankfully there has been no recent similar accidents in the UK. Continual vigilance and

avoidance of moving propellers will maintain the UK's records. Painting your propeller in accordance with the advice given in AIC 62/1992 (Pink 45) will undoubtedly aid conspicuity of the moving propeller. The AIC may be obtained from Printing and Publication Services, address on page 2 of this GASIL.



## E1. SPARK PLUG FAILURE

Aircraft type : Piper PA31 Navajo -- also PA25 - PAWNEE etc  
Date : October 1993  
Engine type : Lycoming TIO-540-A2C

The aircraft was at Flight Level 40 when the pilot observed a brown burn mark developing on the left-hand engine above the area of the exhaust manifold.

Pressures and temperatures were all normal, although an

unusual noise also started. The pilot reduced power on the left-hand engine and found that the noise disappeared and no further burn marks occurred. A safe landing was carried out.

Engineering examination revealed that the body of No 5 upper spark plug, upper portion, still attached to the lead, had hit

the cowling causing a small hole, the lower portion was still screwed into the cylinder. The plug was renewed, temporary repairs were carried out to the cowling and the aircraft returned to service. The engineer reported that it was not possible to ascertain from the log book when the plugs were last changed.

## 4. THE IMPOSSIBLE TURN (BACK!!)

P

The following was published by *Transport Canada* and provides interesting food for thought.

In May 1992 at Tumbler Ridge, B.C., a Piper Cherokee aircraft with five passengers crashed following an attempt by the pilot to return to the runway after experiencing an engine failure. The aircraft was only 100 feet above the ground when the engine problem occurred. The aircraft stalled during the attempted turn, causing loss of control at an altitude from which recovery was impossible.

This was not an isolated accident. During a 10-year period from 1982 to 1991, there were 176 accidents resulting from engine failure after takeoff in single-engine aircraft. In about half of these, the pilot tried to turn back to the departure runway instead of landing straight ahead. In most of these accidents, the pilot lost aircraft control while attempting the impossible return to the runway.

An analysis of these accidents showed that an aircraft crash caused by loss of control as a result of excessive manoeuvring is 10 times more likely to cause fatalities, and five times more likely to cause serious injuries than if the pilot had elected to land straight ahead. Lower groundspeed associated with a straight-ahead into-wind forced landing, as well as being under control prior to impact with the terrain, reduces the risk. Surprisingly, the data also revealed that experienced pilots are just as likely as novices to attempt the impossible.

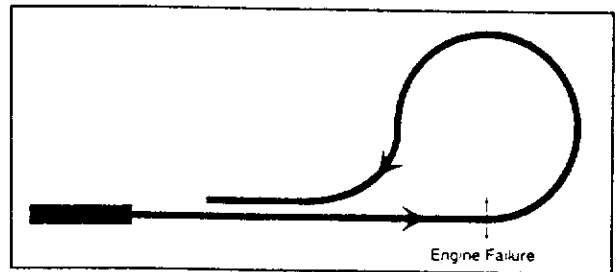
Using data from the Cessna 172 Aircraft Flight Manual, our test pilots crunched some numbers to help convince you that straight ahead and under control is your only real option.

Using the following conditions, the analysis was done for an engine failure at 500 ft and 1000 ft.

### Conditions and Assumptions

Altitude	Sea level
Temperature	ISA
Wind	Calm
Climb Speed	75 KIAS
Rate of Climb to 500 feet	688 ft/min
Rate of Climb to 1000 feet	675 ft/min
Glide speed after engine failure	65 KIAS
Glide performance	1.5 miles/1000 ft
Bank angle in turn back	30 degrees

The analysis assumes a straight climbout followed by a 270-degree turn, a reversed 90-degree turn and a straight return to the runway. It also assumed that the climb starts at the end of the runway at 50 ft and at the specified climb speed. Flap extension for landing was not considered.



Results	Failure at 500 ft	Failure at 1000 ft
Time to climb	39 secs	84 secs
Distance covered	4937 ft	10,634 ft
Radius of turn	648 ft	648 ft
Return distance covered during turns	1296 ft	1296 ft
Distance remaining to runway	3641 ft	9338 ft
Total distance from failure back to runway	7711 ft	13,408 ft
Glide capability after engine failure	4560 ft	9120 ft

The analysis shows that from 500 ft a turn back would result in a landing 3150 ft short of the runway, and from 1000 ft the landing would be 4300 ft short.

You can argue that a tighter turn reduces the distance back, but it also increases the load factor and therefore degrades glide performance, gaining you no advantage.

If a 10-knot headwind is considered and the numbers re-crunched, the results show that the landing would still be 1840 ft short of the runway for the 500-ft case and 1460 ft short for the 1000-ft case.

The calculations indicate that given sufficient wind a return to the fields **may be theoretically possible**, but the hazards of a downwind landing in such a strong wind would not make this advisable, especially if one considers the very low groundspeed expected during a forced landing directly into a strong wind.

In summary, for a single-engine aircraft, given reasonable wind conditions, it is not possible to return to the takeoff runway following an engine failure. Straight ahead and into wind is the only option. △

CAP 520

## Light Aircraft Maintenance

General guidance on implementation of the light aircraft maintenance scheme (LAMS), for aircraft not exceeding 2730 kg MTWA, with a Certificate of Airworthiness in the Transport, Aerial Work or Private Category

## 6 LOG BOOK ENTRIES

- 6.1 A standard form of log book entry for scheduled maintenance is included in the introductory pages of the Schedule; a proforma rubber stamp allowing space for the appropriate signatures, authority, date and maintenance schedule reference, may be utilised.
- 6.2 A summary of the additional work carried out, including mandatory requirements, should be written in the appropriate log book Part A where it will be certified in accordance with the ANO. The standardised log books do not cater for the additional inclusion of loose, typed "log book entry" pages.
- 6.3 Where a pilot intends to sign for a 50 hr check on a fixed wing aircraft in the Private Category, it should be understood that he may only sign for the scheduled maintenance and for the rectification work provided this falls within the scope of the Air Navigation (General) Regulation 16. Certification by the pilot of work which falls outside this scope, or of other work made mandatory by the CAA, is not permitted and must be certified by an appropriately licensed engineer or organisation approved by the Authority for the purpose.

## 7 USE OF THE SCHEDULE

- 7.1 The Schedule is written in general terms and provision is made for it to be tailored to specific aircraft. It is the responsibility of the operator to ensure that it reflects the maintenance requirements of the particular aircraft, consideration having been given to such factors as the modification state and the equipment fitted to the aircraft.

For this purpose, maintenance and overhaul requirements published by the aircraft, engine and propeller manufacturers must be examined to ascertain their specific requirements for the particular type of aircraft.

These maintenance requirements should then be added to the basic schedule in the Mandatory Requirements, Supplementary Inspections and Servicing pages as applicable. (See Appendix to this Part 3.)

- 7.2 Entries in the Mandatory Requirements, Supplementary Inspections and Servicing pages should be sufficient to identify the work required and the location of the relevant information, to enable it to be completed satisfactorily. For the majority of items a one line entry should be sufficient, as shown on sample pages included in the Appendix to this Part 3. Any deletions should be initialled by the licensed aircraft engineer concerned, quoting his licence number and a brief reason for deletion.
- 7.3 The Schedule should be periodically reviewed and amended as necessary to reflect aircraft current usage, equipment installed, manufacturers recommendations, change of ownership, etc.

## 8 PRIVATE CATEGORY AIRCRAFT

- 8.1 A pilot who is the owner/operator of an aircraft in the Private Category is permitted to perform certain rectification work in accordance with the Air Navigation (General) Regulation 16 and to sign the necessary log book entry. The Light Aircraft Maintenance Schedule takes this a stage further and allows him to carry out and sign for the 50 hr check.
- 8.2 Since the 50 hr check requires visual inspection of various components in order to assess their serviceability, it is important that due consideration should be given to the practical aspects of this task before it is undertaken. It is strongly recommended that guidance be sought from the Licensed Aircraft Maintenance Engineer or the Approved Organisation who normally carry out the maintenance work on the particular aircraft, not only to obtain advice but also to foster the mutual understanding which is essential to the operator/maintenance organisation relationship if a satisfactory standard of maintenance is to be achieved at an acceptable cost.

## 9 ALTERNATIVE MAINTENANCE SCHEDULES

9.1 If an owner wishes to maintain his aircraft to a maintenance schedule other than the standard LAMS, the following points must be borne in mind.

- (a) The schedule will have to be submitted to the CAA and be approved before it can be put into use.
- (b) The C of A for each aircraft which is to be maintained to the schedule will have to be endorsed to include the schedule reference number.

9.2 In order to approve the schedule the CAA will require to see that the contents constitute a suitable programme for the maintenance of the aircraft. The owner should therefore:—

- (a) show the source of the technical inspection contents, e.g. the aircraft manufacturer's recommendations, and the currency of this information;
- (b) indicate any changes made by the owner to the above source information;
- (c) make provision for Radio and Avionic maintenance, if these are not catered for in (a), plus the equivalent of the LAMS Section 8, Radio out-of-phase items;
- (d) include a list of all lified items by calendar time and/or flying hours, service life limits and retirement (scrap) lives;
- (e) contact the CAA to obtain details of such standard maintenance practices as are applicable to the aircraft, provide for recording amendments to the schedule and present the whole document for approval in a format acceptable to the Authority.

9.3 The CAA will indicate approval of the schedule, after any amendments that are necessary by issue of an Approval Document (Form AD 271).

# LAMS

**SECTION 9 - PLACARD AND NOTICE REQUIREMENTS**

Registration Marks: G-B---

LAMS Fixed Wing

The following Placards and Notices, additional to those made mandatory by the type certification for the aircraft, are required to be installed in this aeroplane.

Date Entered	Notice (Wording)	Location
11-9-85	CONTINUOUS LIGHT AFTER ENGINE START REQUIRES IMMEDIATE INVESTIGATION	BELOW RED WARNING LIGHT, BESIDE IGNITION SWITCH
--	NO PITCH INFORMATION	ON TURN COORDINATOR FACE
11-9-85	"This indicator is not fitted with limit stops and a rate of change of altitude in excess of the maximum calibration will cause indication in the reverse sense." (AN53)	BELOW VSI ON R/H PANEL
11-9-85	"This radio installation does not comply with the standard required for Public Transport Operations. Such operations are prohibited where radio is a mandatory requirement." "CLASS 3"	TO RIGHT OF RADIO CONTROLLERS ON No.2 DME CONTROLLER.

**SECTION 10 - MANDATORY REQUIREMENTS, SUPPLEMENTARY INSPECTIONS AND SERVICING -- SCHEDULED AT LESS THAN 150 FLYING HOURS**

LAMS Fixed Wing

Aircraft Type: PIPER PA34-200

Registration Marks: G-B---

Constructor's No.: 34-72-----

Date Entered	System	Detail	Reference Information	Frequency	
				Hours	Calendar
11-9-85	Engine AD72-17-01	Power loss due to failure of the induction air box valve	PSB 358 (until kit 760722v incorp'd)	100	
--	Rudder AD73-13-01	Determine rudder trim tab free play	PSB 390A (until kit 760800v inc)	100	
--	Heater AD82-07-03	Inspection and pressure decay test	Janitrol maint + overhaul manual	100	
--	Engine AD83-14-05	Blockage of muffler exit by failed heat exchanger baffle	PSB 762	100	
--	Controls CAA 0616 PRE 78	Inspect rudder bar assembly for cracks	PSL 671 (CAA letter ALA 6008 1/2/74)	50	
--	Propeller AN55	Routine maintenance of blades	(at all inspections)	all	all

It must be remembered that mandatory inspections require certification whenever completed. The inclusion of repetitive inspections in the Maintenance Schedule should be regarded as a means to better control only and individual certification requirements must be borne in mind in each case.

Special inspections and other requirements peculiar to a particular model of aeroplane or its equipment should be entered in the above record. It is the responsibility of the operator to ensure that this record is accurate and current. (See Section 2, para 6.)

USE OF LAMS SCHEDULE SECTIONS 9 AND 10

## **PART 4—LOG BOOKS (CAPs 398, 399 and 400)**

### **1 INTRODUCTION**

1.1 These log books have been designed to reduce to a minimum the time spent in entering and retrieving information. The A5 size (150 mm × 210 mm approximately) together with a colour coding for the covers (Aircraft Blue (CAP 398); Engine Grey (CAP 399); Variable Pitch Propeller Yellow (CAP 400)) are also considered to be of advantage for handling and ease of reference.

A matching ring binder, which can accommodate the relevant number of log books together with the relevant Maintenance Schedule is also available.

1.2 Each log book has its own "Instructions for Use" and separate Sections for "Identification Details", "Maintenance", "Check Inspection Record" and "Modifications and Other Technical Instructions", these in turn are identified by a colour code for ease of reference.

Further information and guidance on completion of entries is contained in the following paragraphs.

(Reference should also be made to CAIP Leaflet BL/1-10, Aircraft, Engine and Propeller Log Books.)

### **2 PART A—MAINTENANCE (White Paper)**

2.1 The 'number of flights', 'flight times' and 'engine cycles' entered in the aircraft log book will be the master for all the log books, as both engine and variable pitch propeller log books only provide for the entry of accumulated hours covering a certain period.

2.2 A signature in Column 7 against the relevant 'Particulars of Maintenance and Other Work Carried Out' will, where the issue of such a certificate is prescribed, automatically constitute a signature to a Certificate of Release to Service, thus obviating the need for the inclusion of a separate certificate on each occasion. All scheduled maintenance checks must be entered in Part A so that they can be certified, together with all modifications, structural repairs and significant component replacements.

This section should constitute a summarised record of all the work done on the aircraft namely, scheduled checks, modifications, mandatory requirements, major component changes and specified work. It is not sufficient to simply refer to worksheets or files.

2.3 Mandatory Inspections or modifications recorded in Part C (Pink Pages) to show the history of compliance must be also entered in Part A so that a Certificate of Release to Service can be issued in each case.

### **3 PART B—CHECK INSPECTION RECORD (Green Paper)**

3.1 The layout in all books is similar, and basically the same information has to be entered in each case.

3.2 At the end of every scheduled check, the type of check carried out, date and total hours are entered in their respective columns to provide a continuous record of maintenance. As its title makes clear, this is a record which can be quickly referred to and should avoid the possibility of overrunning the next scheduled check. (This is in addition to entering the relevant details in Part A.)

3.3 Some specimen entries are contained in the Appendix 2 to this Part 4. It is recommended that where a new log book is started, the date and flying hours of the next Annual, 150 (or 100) and 50 hr checks are entered in these pages to ensure none are subsequently overlooked.

4           PART C—MODIFICATIONS AND OTHER TECHNICAL INSTRUCTIONS  
              (Pink Paper)

- 4.1 The layout in all books is similar, and basically the same information has to be entered in each case. Some specimen entries are contained in the Appendix 2 to this Part 4.
- 4.2 This Part is designed to serve only as a record of compliance with Airworthiness Directives and with mandatory and non-mandatory Service Bulletins, Service Letters, Technical News Sheets and the like.
- 4.3 In addition to columns for the identification of the technical instructions, their subjects and the date and hours at compliance, the degree and method of compliance have also to be entered.
- 4.4 Provision is made for a quick method of indicating compliance with both 'one-time' and 'recurring' modifications and inspections.
- 4.5 It is essential that log books reflect the current state in respect of Mandatory Modifications and Inspections and Airworthiness Directives. It is recommended that when a new log book is started a summary of all the repetitive inspections is transferred to the new log book to ensure that none is subsequently overlooked.
- 4.6 In the event of these pages becoming full before the remainder of the log book has been utilised, suitably ruled pink cards of A5 size should be punched and retained in the ring binder as continuation pages. When this action is taken it is important to record the fact on the last pink page and to continue the page numbering on the newly introduced cards.
- 4.7 It is a common practice to include repetitive mandatory inspections as part of a scheduled maintenance check so that they are not overlooked. This is accomplished in the LAMS case by transferring the specific repetitive item from the log book Part C pages to Sections 10 or 11 of the LAMS schedule for that aircraft. (See also Appendix to Part 3.)

This is an acceptable means of controlling short-term repetitives, and avoids congesting the pink pages with multiple entries. Where compliance with a repetitive requirement is very frequent, e.g. at less than 25 hr intervals, control and certification elsewhere is acceptable, such as in the Technical Log, providing Part C of the Log Book is annotated accordingly.

NOTE: It is good practice, for future reference, to record those Mandatory Inspections/Modifications, etc., that are "Not Applicable" on the front page of Part C.

- 4.8 Mandatory Inspections must be separately certified in the log book white pages as they occur and any associated engineering tasks such as NDT checks, examination of filter contents, measurements, etc., should be recorded in work-sheets.
- 5           **ADDITIONAL RECORDS** Where it is necessary to record details of "out-of-phase" tasks or lives of components etc., it is suggested that cards to the same A5 size should be made up locally, punched, and kept in the ring binder behind the log books.

The log books are designed to accommodate handwritten entries or the use of hand-stamps for standardised entries such as the check completion certification. It is not intended that additional sheets recording details of work done should be attached to log pages. If it is desired to prepare a typed summary of the work done, e.g. for submission to the owner, it is suggested that this is done separately and a copy retained in the aircraft records.

- 6           **TURBINE ENGINES** In the case of turbine engines it is permissible to continue the use of the log books supplied by the engine manufacturer in conjunction with the Engine Log Book (CAP 399). (See also CAIP Leaflet BL/1-10, paragraph 5.2.3.)



7 LOG BOOKS DATED JUNE 1977 These log books are pre-printed with a Certificate of Compliance text at the top of each page in Part A. Such log books should have a CAA 'sticker' affixed inside the front cover, printed in red, which states that such text is superseded by the following statement:—

"The work recorded below has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service."

CERTIFICATION OF MAINTENANCE

Specimen page from aircraft log book (CAP 398) with entries from sample transport category aircraft (page coloured white in log book Part A, same colour and similar layout in Engine and VP Propeller log books).

TEXT OF STICKER

LOG BOOKS - CAP 398/399/400 DATED JUNE 1977

IMPORTANT NOTE

- 1 Any reference to a Certificate of Compliance in this Log Book shall be construed as a Certificate of Release to Service.
- 2 The certification statement at the top of each page in Part A of this Log Book is superseded by the following statement:  
The work recorded below has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.
- 3 The effective date of the above change is 21 December 1984.
- 4 Please affix this sticker to the inside front cover of Log Books CAP 398/399/400 dated June 1977.

NOTE: A HANDSTAMP MAY BE USED TO ENTER THIS COMMON TEXT

Year	No. of Flights	Flight Time		Total Since Manufacture		Engine Cycles	1 hereby certify that the inspection/overhaul/repair/replacement/modification specified in Column 6 below has been carried out in accordance with the requirements of British Civil Airworthiness Requirements Chapter A4-3.	
		h	m	h	m		Particulars of Maintenance and Other Work Carried Out on the Aircraft	Signature Authority Date
1985	7							
at/bf	689			1571	50	1306		
29/3	1	1	55	1573	45	7		
30/3	1		10	1573	55	8		
31/5	2	2	25	1576	20	1310	50 hour Check.	
2/6	1	1	10	1577	30	1		
15/6	1		50	1578	20	2		
21/7	2	3	15	1581	35	4	10% Extension granted to 150 hour check. now due at 1592 hours GA Bloggs 21/7/85 LAE 72345	
22/7	1	2	10	1583	45	5		
27/7	1	2	30	1586	15	1316	150 hour Check.	
30/7	1	1	15	1587	30	7		
31/7	1		30	1588	-	8		
2/8	1		10	1588	10	9		
4/8	1	2	05	1590	15	0		
5/8	1	1	55	1592	10	1		
7/8	2	3	05	1595	15	3		
9/8	1	1	35	1596	50	4		
12/8	1		15	1597	05	1325		
at/bf	708			1597	05	1325		

BLOGGS AVIATION AMR 999 1/2 hours 1576-20  
 50 hour Check completed to my satisfaction.  
 Maintenance Schedule CAA/LAMS/FW/1978 Issue 2  
 SB 127. New battery fitted PE No K12845  
 Approved Antipoll No R 78910  
 FAA. AD 84-32-01 Part (b) complied with  
 Aileron control system inspected after cable replacement 1st INSPECTION  
 2nd INSPECTION

G.A. Bloggs  
 LAE 72345  
 31-5-85  
 Airframe/Engine/Radio.  
 G.A. Bloggs 21/6/85  
 LAE 72345  
 A.N. Othas 31/5/85  
 LAE 71267

BLOGGS AVIATION AMR 999 1/2 hours 1586-15  
 150 hour Check completed to my satisfaction.  
 Maintenance Schedule CAA/LAMS/FW/1978 Issue 2

A.N. Othas  
 LAE 71267  
 27/7/85  
 Airframe/Engine/Radio.

B.G.A. WINCH/AUTO TOW WEAK LINKS

Revised April 1991 From TOST DATA SHEET 2/4/90  
With Amendment As Authorised By B.G.A.\*

NOT EXCEEDING KPNOT EXCEEDING KP

ASTIR (s) Single	500	No.5	Eagle	600	No.4
TWIN ASTIR	845	No.3	EON. PRIMARY	500	No.5
ASH 25	900	No.2.	EON. BABY	600	No.4
ASK 14	830	No.3	ELF.S.2.	540	No.5
ASK 15	500	No.5	Falcon	500	No.5*
ASK 17	600	No.4	Fauvel	500*	No.5
ASK 19	600	No.4	Fauvette 905	500*	No.5
ASK 20	600	No.4	FOKA 3/4/5	720	No.4
ASK 21	1000	No.1	Geier II	765	No.3
ASK 22	900	No.2	Glasflugel 604	850	No.2
ASK 23	680	No.4	Goevier III	1030	No.1
ASK 24	600	No.4	Grunau /5	540	No.4
AV.36	600	No.4	Gull 1/3/4	500	No.5
Austria Std.	670	No.4	Harbinger	500	No.5*
BergFalke 2	970	No.2	Hornet	500	No.5
BergFalke 3	1070	No.1	Hutter 17	500	No.5
BergFalke 4	750	No.3*	Iris (D77)	500*	No.5
Bijave (WA30)	600*	No.4	IS.28B2	600	No.4
Blanik	630	No.4	IS.29/30/32	500	No.5
Bocians	1000	No.1	Jantor Std	530	No.5
Breguet 905	600	No.4	Jantar 2	600	No.4
BG. 135	600	No.4	Jantar 3	600	No.4
Cadet Mk1 & 2	500	No.5	Janus B	600	No.4
Cadet Mk3 (T31)	500	No.5	Janus C	750	No.3
Caproni A21	600	No.4	Jaskolka	500*	No.5
Capstan	600*	No.4	Javelot	500*	No.5
Carman JP15	600	No.5	Junior	500	No.5
Centrair 101	600	No.4	JP 36A	500*	No.5
Cirrus	860	No.2	KA 1 & 3	450	No.6
Cirrus (Std)	500	No.5	KA 2	600	No.4
Cumulus	540	No.5	KA 4	900	No.2
Cobra	600	No.4	KA 6	650	No.4
Condor	1000	No.1	KA 7	1080	No.1
			KA 8	668	No.4
Dart 15/17/	500	No.5	KA 13	1080	No.1
Delphin	700	No.4	Kestrel 17/19	630	No.4
Diamant 16.5/18	935	No.2	Kite 1.2B	500*	No.5
Discus	650	No.4	Kranich II/III	960	No.2
DG 100/200/	500	No.5	Kranjanek	500*	No.5
DG 400	500	No.5	LAK 12	600*	No.4
DG 300/600	680	No.4	Libelle (201)	500	No.5
Doppleraab	800	No.3	Libelle H.301	670	No.4

NOT EXCEEDING KP

LS 1	500	No.5
LS 3	600	No.4
LS 4	600	No.4
LS 6	600	No.4
LS 7	600	No.4
LO-100	650	No.4
M 100	500*	No.5
M 200	600*	No.4
Meise	670	No.4
MG 19A	950	No.2
Mosquito	650	No.4
Moswey	650	No.4
Minimoa	500	No.5
Mucha Std.	820	No.3
MU 13	535	No.5
Nimbus 2	600	No.2
Nimbus 3	750	No.3
Nimbus 3.24 & 3D	1040	No.1
Nimbus - Mini	600	No.4
Olympia 1&2	500*	No.5
Olympia 460/463	500*	No.5
Olympia 419	600*	No.4
Peak 100	600*	No.4
Petrel	500*	No.5
Phoebus (all)	1000	No.1
PIK 20E	600	No.4
PIK 16/20	530	No.5
Pilatus P4	500	No.5
Pirat	600*	No.4
Prefect	500*	No.5
Puchacz	750	No.3
Rheinland	500*	No.5
Rhonlander 2	500*	No.5
Rhonlerche 2	900	No.2
Rhonsperber	500*	No.5
Sagitta	600*	No.4
SB.5	600*	No.4
SF.26	650	No.4
SF.27A	750	No.3
SF.34	600	No.4
S.G.38	300	No.7
SHK	700	No.4
SIE 3	700	No.4
Silene (E.78)	600*	No.4
Sky	500	No.5
Skylark 1.2.3.4.	500	No.5
Spatz	520	No.5
Sperber	1030	No.1
Suid III	500	No.5
Swallow	500	No.5
Swift	500	No.5

NOT EXCEEDING KP

T.21	500*	No.5
T.31	500*	No.5
T.53/YS53	750*	No.3
Torva	500*	No.5
Tutor	500*	No.5
Vega	600	No.4
Ventus	650	No.4
Viking (V.G.C.)	500*	No.5
Wassamer WA26	500*	No.5
Weihe	670	No.4
Zugvogel 1.2.	720	No.4
Zugvogel 3.	742	No.4
Zugvogel 4	690	No.4

TOST COLOUR CODING

Black No.1	1000 daN =	2200 lbs
Brown No.2	850	= 1870 lbs
Red No.3	750	= 1650 lbs
Blue No.4	600	= 1320 lbs
White No.5	500	= 1100 lbs

N.B. If in doubt:

Tost apply a factor of 1.3 x Max all up weight of glider to determine Weak Link Strength for winch/autotow.

DATA FROM TOST Kindly Supplied to BGA By Chiltern Sailplanes Ltd, Booker Airfield, Marlow, Bucks. SL7 3DR. 0494-445854

INS 1/2/92      ISSUE 6.      Amendments as indicated in BOLD.

23/1/94

**B.G.A. CHARGES (1994)**CERTIFICATES

'A' Endorsement	£ 8.00
'A' Pin Badge	£ 2.50
'B' Endorsement	£ 4.50
'B' Pin Badge	£ 2.50
Bronze Endorsement	£ 6.50
Bronze Pin Badge	£ 2.50
Silver, Gold & Diamond - per leg	£ 6.50
Silver Pin Badge	£ 2.50
Gold Pin Badge	£ 2.50
UK Cross-Country Diploma - each part	£ 6.25
if applying simultaneously for both	£ 12.00

## CERTIFICATE OF AIRWORTHINESS

Glider - issue/renewal per year	£ 35.00
Motor Glider - renewal	£294.00 (3 yrs)
COMPETITION LICENCE - issue/renewal per year	£ 10.00
COMPETITION NUMBER - issue/renewals per year	£ 12.00
A.E.I. RECORD CARD	£ 15.00
INSTRUCTOR RECORD CARD	£ 25.00
INSPECTORS - issue/renewals per year	£ 17.50
INSTRUCTOR RENEWAL PER YEAR	£ 10.00
OFFICIAL OBSERVER - issue	£ 7.50

20th century countries - low