

B.G.A. Technical Committee
Technical Newsheet TNS 1/2/84

PART 1 AIRWORTHINESS "AGGRO" the 1984 "Yellow Pages" herewith, replace last year's Pink Pages, which should be scrapped!

At C of A renewal time Form 267 item 53 requires compliance to be shown with the latest list of Airworthiness Directives, Mandatory Modifications and Special Inspections for UK and Foreign Gliders and Motor-Gliders. Please enter such compliance in log books also.

Please add the following to the 1984 Yellow Pages

- 1.1. BOCIAN Rudder Cable Failure (previously reported in TNS/8/78). The following was mailed to owners 19/12/83. "An incident has been reported to the B.G.A. by the Coventry G.C. of the failure of a rudder cable in the vicinity of a pulley, during a spin recovery demonstration. An immediate inspection should be made of all Bocians, and thereafter at each C of A renewal, particular attention should be paid to such critical areas".
- 1.2. GROB A.109 (Motor-Glider). Compliance with the following directives must be recorded on C.A.A. Form AD202L and BGA Form 267, when submissions are made for the issue/renewal of Certificates of Airworthiness:
 - (a) T.N. 817-8 Flight Manual - correction of pages.
 - (b) T.N. 817-10 " " & spin recovery.
 - (c) Hoffmann T.N. EB28 (AD 83-150) - propeller inspection, tacho calibration and RPM limitations. (Details from UK Agents).
- 1.3. KA-7 (and similar types) Cracking of lower rudder hinge. First reported TNS/1/79. Recurring defect requires repeated inspections.
- 1.4. Structures - inspection of ventilation and drainage. Wooden, metal and G.R.P. structures require periodic inspection to ensure proper drainage and ventilation. Many types listed in the 1984 "Yellow Pages" include defects from these causes.
- 1.5. Loose Article Inspections. Before floors are replaced, and other areas are finally closed up, it is strongly recommended that an independant inspection is made for tools, debris and loose articles.
- 1.6. Security of Radio Installations. The canopy of a glider was recently shattered by an unsecured radio set, during flight in turbulent conditions.
- 1.7. Extracts from AIB/CAA Reports. The following are attached:
 - AIB/13/83. Accident to Jodel D.140 - Glider Tug.
 - AIB/13/83. Motor-Glider Accident - KA14.
 - G.A.S.I.L. Curtis sump drain valves (Lycoming).
 - G.A.S.I.L. Undercarriage failure - Jodel 1050.

Appendix to TNS1/2/83

Para 2. General Matters. C.A.A. C. of A. Renewals.

The Appendix to this TNS reminds all concerned on the procedures necessary to achieve "fumble-free" initial issue or renewal of CAA Certificate of Airworthiness.

2.1. New types not previously type certificated by CAA in the UK. Please consult B.G.A. Technical Procedure Manual Section 12, and make application on CAA Form 3 directly to CAA (Airworthiness Division), Brabazon House, Cromwell Road, Redhill, RH1 1SQ. (Redhill 65966).

2.2. Initial Issue to a type previously approved (new and second-hand).

- (a) Register on CA Form 1.
- (b) CAA application on CAA Form 3.
- (c) Export or current domestic C of A from country of origin.
- (d) B.G.A. Form 267 (Glider Inspection Report).
- (e) B.G.A. Form 267(M) Motor Inspection Report.
- (f) B.G.A. Form 267(FT) Flight Test Report.
- (g) Show compliance with CAA Airworthiness Approval Note for the type and Mandatory Inspections etc., and record on Form 267.

NOTE: CAA Form AD202L is not required for initial issues.

- (h) Cheque for CAA statutory fees plus CAA surcharge (CAA Notice No. 25), made payable to B.G.A. (Consult B.G.A. Office).

2.3. C of A Renewal (3 year "STAR" Inspection).

(B.G.A. Technical Procedure Manual Section 13 will be amended in due course).

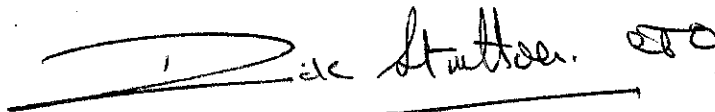
The L.A.M.S. (Blue Book) Schedule allows 62 day anticipation for the "STAR" inspection, and advantage should be taken of this concession to avoid unnecessary loss-of-use of the motor-glider.

Please submit the following:

- (a) Expiring C of A.
- (b) B.G.A. Form 267 - Glider Inspection Report.
- (c) B.G.A. Form 267M - Motor Inspection Report.
- (d) B.G.A. Form 267FT - Flight Test.
- (e) Check compliance with mandatory mods. and inspections.
- (f) Complete CAA Form AD202L (from B.G.A. Office).
- (g) Cheque to B.G.A. for CAA statutory fees (CAA Notice No. 25 and consult B.G.A. Office).

NOTE 1) The Light Aircraft Maintenance Schedule (L.A.M.S. Blue Book) must have been submitted to CAA for a once only endorsement authorising "STAR Inspection" under B.G.A. Approval DAI/8378/73 - check for correct amendment of L.A.M.S. and for this endorsement. If not endorsed, submit to CAA via the B.G.A. with the Renewal documentation.

NOTE 2) Whereas every effort is made to avoid delays, at least two weeks should be allowed for Renewal procedures. The CAA will normally return the C of A to the Registered Owner.



B.G.A. Price List for 1984

Inspector Renewals (including £250,000 insurance cover)		£10.00
Glider C. of A. Renewals		£14.95
Glider log books	hardback	£5.60
	softback	£2.75
Daily Inspection books		£0.85
Standard Repairs to Gliders		£3.45
B.G.A. forms 267 (blocks)		£3.95
B.G.A. (Proforma) 267M and 267 FT		F.O.C.
C.A.A. Form AD 202L		F.O.C.
B.G.A. LAMS (Proforma Schedules)		F.O.C.
EA-AC 43 - 1A & 2 Aircraft Inspection		£9.70

C.A.A. Statutory Charges (C.A.A. Notice No. 25 - April 1983)

Renewals - £26 per 500 kgs. (or part thereof) per year of validity.

Typically, for 550 kg motor glider, equals
£52 x 3 years = £156

Initial issues (Type already approved)

£156 + £39 surcharge = £195

New Type (Requiring C.A.A. type investigation) consult C.A.A.

Aircraft type and registration:	Jodel D 140 G-BHCI (light single engined fixed wing aircraft)	
Year of manufacture:	1960	
Date and time (GMT):	14 May 1983 at 1650 hrs	
Location:	Challock Aerodrome, Kent	
Type of flight:	<u>Glider towing</u>	
Persons on board:	Crew — 1	Passengers — Nil
Injuries:	Crew — Minor	Passengers — N/A
Nature of damage:	Substantial damage to starboard wing, fin, tailplane, under-carriage and engine mounting structure	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	50 years	
Commander's total flying experience:	480 hours powered flying (of which 75 hours were on type) 20 hours gliding	

The aircraft had taken off with a K8 glider in tow when, at a height of approximately 150 feet, the engine failed. The tug pilot released the glider and elected to turn right to avoid trees ahead and land downwind. There was some power recovery during the descent and turn but the right wing hit the ground during the manoeuvre and the aircraft landed heavily.

At impact the shoulder straps of the pilot's restraint harness became detached at their anchor points and the pilot received facial injuries.

The take off had been performed with the rear tank selected and an indication of more than one quarter full for that tank. The recorded outside air temperature was 8°C and the carburettor hot air control was set to "cold". The fuel being used was "Mogas" to BS 4040. This aircraft type, powered, as here, by a Lycoming O-360-A2A engine, has not been approved by the CAA for use with "Mogas".

Examination of the aircraft has failed to establish the cause of the loss of power.

BGA Note (1)

The following extract from CAA Notice No. 98 should be drawn to the attention of every tug pilot:-

"(e) After any prolonged period of "heat soak" at low fuel flow (e.g. hot day ground idling) establish availability of full power before commencing at take off."

BGA Note (2)

This means running at a high enough fuel flow (RPM) for long enough, to shift "hot" fuel out of the system!

BGA Note (3)

Check correct selection and operation of the fuel boost-pump if fitted.

No: 13/83

NOTOR GLIDER ACCIDENT.

Ref: EW/G83/08/06

Aircraft type and registration: Schleicher ASK 14 G-AYRN (motor glider)

Year of manufacture: 1970

Date and time (GMT): 13 August 1983 at 1630 hrs

Location: London Gliding Club, Dunstable

Type of flight: Private

Persons on board: Crew — 1 Passengers — Nil

Injuries: Crew — Nil Passengers — N/A

Nature of damage: Damage to undercarriage and supporting structure

Commander's Licence: Private Pilot's Licence

Commander's Age: 49 years

Commander's total flying experience: 149 hours (of which 2 hours were on type)

The aircraft was taking off towards the north east. The pilot, who was flying this type of aircraft for only the second time had been briefed to apply back-pressure on the stick during the take-off run to prevent the propeller striking the ground.

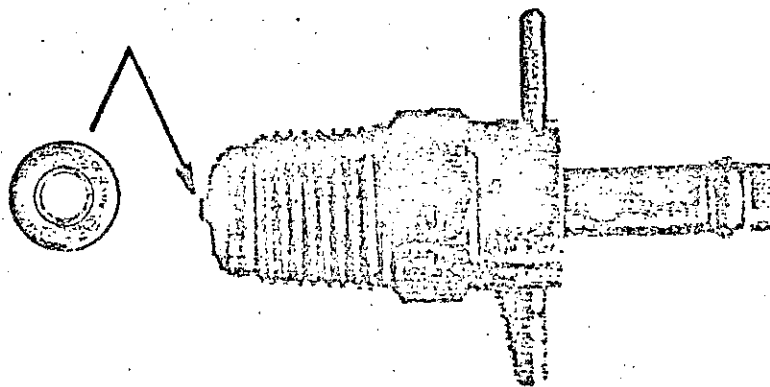
The first part of the take-off run had an uphill slope after which the ground dropped away. The aircraft struck a small bump and became airborne in an excessively nose-high attitude as it passed the crest of the uphill slope. The pilot states he pushed forward on the control column to regain flying speed but this was insufficient to prevent the aircraft from drifting to starboard and landing heavily on the mainwheel which caused the landing gear support structure to collapse. The pilot has also commented that he was not prepared for the relatively low take-off performance of this type of aeroplane.

1. OIL SUMP QUICK-DRAIN VALVE (GASIL).

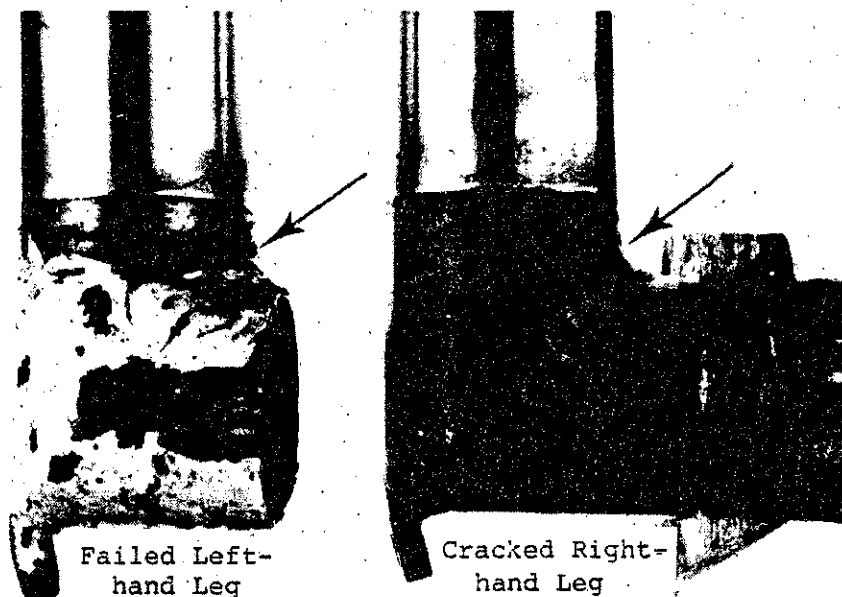
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Part : Curtis Engine Sump Quick-Drain Valve
Date : November 1983

A new sump quick-drain valve Part No. 61879-2 was collected from the stores. The end-cap was found to be detached, such that only the 'O' ring held the valve together. If the 'O' ring were to fail or roll out of its slot, the centre of the valve would fall out under spring pressure allowing the oil to drain from the sump. The Curtis CCB-37000 valve is fitted to most Lycoming engines.



Failure of the landing gear leg occurred near the weld between the bottom of the leg and the stub-axle. The left-hand wheel, axle and part of the leg detached on landing. Examination of the right-hand leg showed that it was cracked half way through in similar fashion. Laboratory examination confirmed that the crack had been present for some time and was a result of fatigue from landing and taxiing loads. (The welding process produces an adverse change of material microstructure in an area that by its design is subject to high stress levels.



The affected area is underneath the rubber gaiter and cannot be seen during a pre-flight check. All owners/operators would be well advised to check this area regularly, particularly if operating from a rough surface.

Tug undercarriage failures (B.G.A. Note).

Because of the high duty cycle of take-offs and landings, often from rough airfields, there is a risk of undercarriage failures. In particular those types which depend upon hinge-bolts (and related attachment tugs, welded to the airframe structure), require frequent inspection and/or replacement. (Includes Auster Variants, Piper Cub series and Citabria type undercarriage systems).

Nose wheel installations should be checked for correct extension (to avoid propeller damage), freedom from "shimmy" (to avoid cracking of attachments) and for corrosion.

Tail wheel installations should be inspected for broken springs, steering links and general condition.

