BRITISH GLIDING ASSOCIATION

Technical Committee

TNS 5/6/90

PART 1 Airworthiness "Aggro" - Please add to the BGA 1990 Yellow Pages.

At the request of two of our readers, we are separating out the "pure" gliders from the motor-glider and tug scenarios!.

1.0 Glider Airworthiness

1.1 KA2B. Control Stick Separation from its socket in flight leaving the instructor in the hands of the Student! After two incidents a more secure fixing was devised. (Reported by Shenington G.C.).

1.2 Kestrel Aileron - possible foul from gel-coat detatchment - Sketch by Chris Batty is self explanatory.

1.3 Pik 20D. Elevator foul in cockpit. Flaplever leaf spring found to be loose and fouling the elevator control, when flaps in a negative position. (Reported by Peter Kingsford. Sketch herewith).

1.4 Tost Hooks - Failure of Main Bush Belly Hook on ST34 found to be defective due to breakup of the main bush. New type of cast Tost hook. Bush material may have been brittle. Reported by F.M. MacFadyen and repeated to UK Agents.

1.5 KA7. Failure of the Instructors Handle
Excessive force was required because the brake paddle was unglued enough to foul on the airbrakes box. Reported by E.Sussex G.C.

1.6 Grob Twin - Astir LBA1AD/89-5/2, and Grob TM-315-38/1, required placarding of Aileron Lever to prevent incorrect assembly of bolts. New clevis nuts are now available and should be installed (A/D herewith).

1.7 PZL "Junior" (Details from Agents).

Bulletin BK/006/90 requires replacement of lower rudder hinge. and,
Bulletin BE/005/89 extends the service life of the "Junior" to 3000 hours, subject to mandatory inspection at 1000 hour intervals.

1.8 Puchatz (Details from Agents)

Bulletin BR 40/50-3/90 requires replacement of the pin securing the tailplane. and,
Bulletin BE-38/50-3/90 requires securing of the T.50 cable pulley in the trimming control circuit, against the eventual disconnection of the bearing..

1.9 Body Restraint Harnesses (All types of harnesses in all types of gliders and motor-gliders).

How effective are your harness systems in proving the restraint necessary to avoid personal injury?

Examples have been seen of harnesses so installed that :-

a) they "creep" through the buckles.

b) cannot be adjusted tight enough.

c) are in poor condition.

In one case a pilot was catapulted and broke the canopy, when he opened the speed brakes. He claims that the vibration from his "Turbo" caused the straps to slip. Why not have a purge on harness installations.

1.10 BIJAVE Control stick fouls the student and the instrument panel! Sketch illustrates how this can be arranged. (From Tony Moss, Borders G.C.).

1.11 Pitot/Static System Malfunctions in "wet" conditions.

The attached note is for your Notice Board.

Part 2. Airworthiness "Aggro". Powered Aircraft

2.1 D.G.400, CAA/Foreign Airworthiness Directives Vol III, Issue 6 (herewith), lists current Mandatory actions on D.G. 400's.

2.2 BOMBADIER - Rotax Series 582 and 532 Engines

CAA AD-06-03-090 (herewith) requires action.

2.3 Glider Tugs - Floor Mounted Release Controls

As approved for Banner Towing are unacceptable for Glider Towing, where negative "g" loads may prevent access in tug-upset incidents.

BGA minor modifications are available.

2.4 Grob 109B. Failure of Rudder Drive at Fork End

Sketch herewith, requires repeated inspections.

2.5 SF25B/T61 Falke - Incorrect Installation of Fuel Filter

Sketch herewith explains the problems. Fuel flow restrictions had been detected. (from Roy Garner).

2.6 Extracts from G.A.S.I.L's, copies herewith.

a) Cracked Control System Bellcranks Piper PA12, PA14, P18 (CUB) & PA25 (Pawnee).

b) Mogas Operation.

c) Propellor Bolts - over torqued. (BGA Note-correct torque setting are particularly important on Wooden Props!

2.7 Extracts from AAIB Bulletin 5/90 (herewith)

a) New 24 Hour Reporting Phone Number.

b) PA25-150 (Pawnee) Tailplane Failure.

c) Druine Condor Engine Failure.

d) Piper PA28-140 - Serious accident following SIMULATED ENGINE FAILURE!.

3.0 General Information

3.1 Hoffman S.B. E.I.L. (19/5/88) gives manufacturers recommend overhaul periods for propellers.

3.2 KA7 - KA17 Replacement tail skid shoes have been devised by Northumbria G.C., Sketch refers.

3.3 Grob G-109B "Quiet" exhaust sytems are introduced by TM 817-26, from UK Agents.

3.4 Chilbolton Aviation (0264/860827) may be able to help with Austers, Chipmunks, Tiger Moths and other types of light aircraft. Contact Ian Grace.

3.5 Safety Foam Cushions in Gliders The RAFGSA policy statement (herewith) is worth considering by all those who have a responsibility for minimising accidental damage to both their employees and their club members..

Pitot/Static System Malfunctions. When Flying in "Wet" Conditions

The BGA Technical Committee wish to draw your attention to the very likely possibility that the Pitot/Static Systems installed in many modern gliders, will provide erroneous indications, when flown in "wet" conditions. Such malfunctions may occur both in rain, in cloud and in icing conditions.

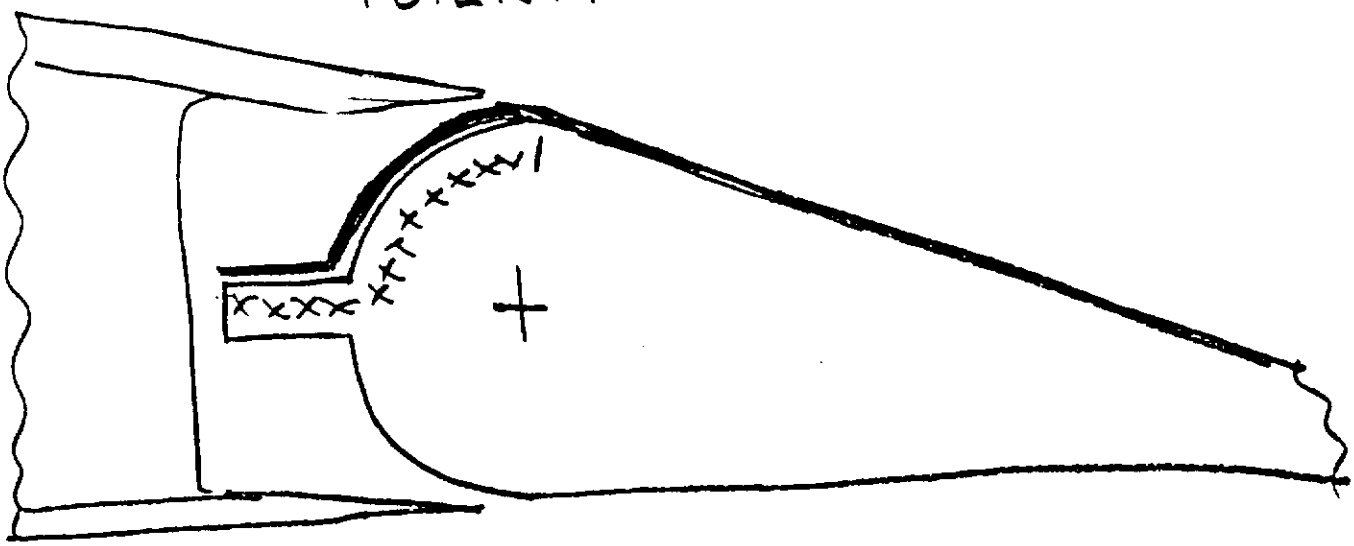
The very small bore (Standard) pitot head is unprotected aginst the ingress of moisture. Static systems are equally prone to the ingress of moisture.

Whereas an acceptable standard of alternative (cockpit) static can be installed, with a change over valve, the only solution to the pitot system, is one of the "pot" type, installed in the nose (where practical). Such pitot systems are fitted to the past generation of UK built gliders and may be offered as options by some of todays foreign manufacturers.

When an aircraft is certificated in accordance with joint airworthiness requirements Part 22 (Sailplanes and Powered Sailplanes) the limitations in the Flight Manual, (which forms part of its certification) shall be observed. And, whereas, JAR22.1325 "Static Pressure Systems" requires that - a)"positive drainage of moisture is required"!, it may not always drain fast enough or effectively!

R.B. STRATTON
CHIEF TECHNICAL OFFICER,
BGA TECHNICAL COMITTEE.

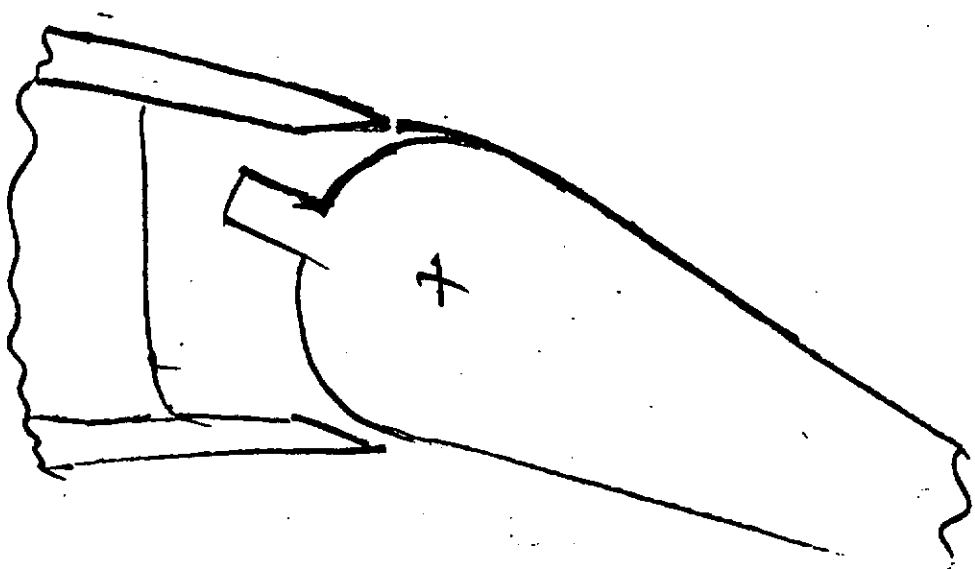
KESTREL AILERON GELCOAT DETACHMENT - POTENTIAL CONTROL JAM.



TOP SURFACE OF AILERON HAD BEEN SPRAY GELCOATED (VERY THICK) ON TOP OF MOULD APPLIED GEL COAT.

IN SHROUD RADIUS (MARKED xxxx) GEL COAT HAD COMPLETELY DETACHED AND STARTED TO BREAK UP.

AILERON JAM COULD RESULT FROM LOOSE GELCOAT IN SHROUD BOX OR BY FREE EDGE, THUS:



23.4.90.
Chris Roth.

TNS/5/6/90

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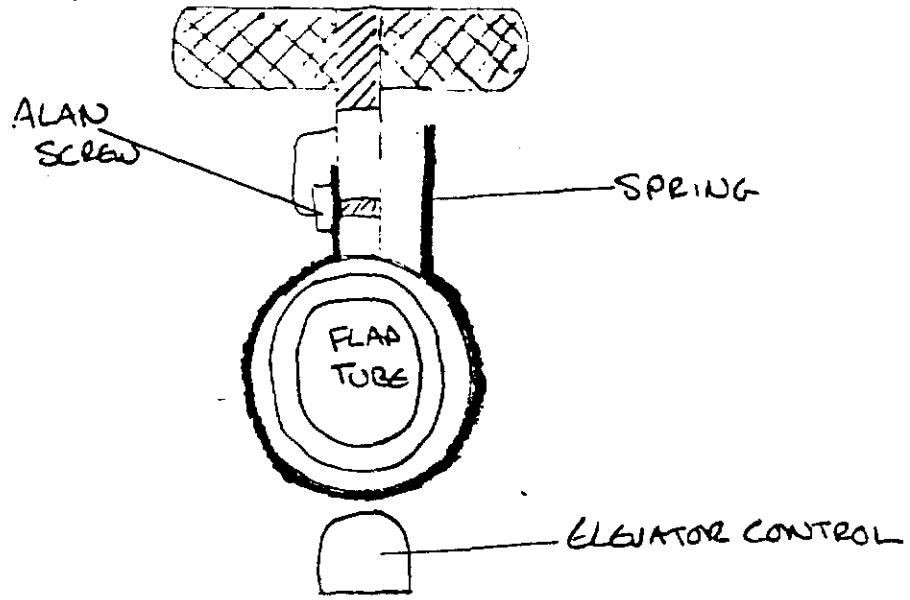

The elevator control should be checked for full movement with the flap lever in full negative position and full positive position before every flight.

P.B. Kingsford.

PIK.20D

Reserved with Loctite