

B.G.A. TECHNICAL COMMITTEE

TECHNICAL NEWSHEET

TNS 9/10/84

PART 1 AIRWORTHINESS "AGGRO" (please add to 1984 Yellow Pages)

- 1.1. KA6 (CR) Structural Overload. Wing separation occurred at the root fitting during a series of loops in a glider not fitted with an accelerometer as required by B.G.A. Laws and Rules 7.10. Pilot escaped by parachute (No airworthiness degradation was detected). (E.Sussex G.C.).
- 1.2. FALKE - Spoiler hinges, - screws loose. Report on 'Venture' motor-glidern - inspect and repair as required. (Reported by H.Q. Air Cadets)
- 1.3. "FAUVETTE" (Breguet 9055). Centre line (alloy) main spar fitting found corroded. Inspect and rectify as required (C.P.F. Woodcock).
- 1.4. "FAUVETTE" (Breguet 9055). Fatal accident caused by insecurity of tailplane rigging pin. All owners were alerted 21.8.84. Sketch of secondary locking devices attached. (By courtesy of Jeremy Menzies).
- 1.5. LS3 Flaps and Speed-brakes restricted by dislodged micro-switch assembly. A case of a safety device proving to be a hazard! (Reported by K.H. Lloyd).
- 1.6. BLANIK Tow Release - cracks at the ends of the lay-shaft brackets. F.A.A. AD.78-23-14 requires inspection of release assembly forward of front rudder pedals.
- 1.7. PIK 20 (all variants) Cracks at lower rudder hinge. F.A.A. AD.84-15-07 requires inspection a.s.a.p.
- 1.8. PIK 20 (E) Flap Mass Balance Weights detached, (both flaps). Replaced by copper bar for improved security. Inspect a.s.a.p. (Reported by George Whitfield).
- 1.9. ASW 19/19B Tow Release cable guide fittings. Tech. Note 18 (herewith) requires check of cable assembly/adjustment to prevent premature release.
- 1.10 D.G. 400 Cracks in engine mounting structures. B.G.A. Notice to owners 14.8.84 requires recurring inspections.
- 1.11 Rallye MS880B - Corrosion (+ Dead Frog). Extract from C.A.A. G.A.S.I.L. 8/84 is not surprising!
- 1.12 Obscured water drain & unauthorised mods. Extract from G.A.S.I.L. is self-explanatory.
- 1.13 DART 17 Fatal accident associated with in-flight break-up, remains a mystery, and is the subject of A.I.B. investigation at Farnborough. As a precautionary measure (unrelated to this accident), checks should be made of the aileron system for backlash, which might lead to the onset of flutter (TNS 11/76 and 10/83 refer). (Kent G.C.).
- 1.14 ASTIR (CS) Assymetric speed-brake failure. Failure of the "A" bracket (inside the wing) which supports the geometric lock, resulted in one speed-brake opening, uncontrollably, in flight. The aircraft was landed without damage by controllable use of the opposite speed-brake. (X-Ray techniques are being developed by Southdown Aero Services - Lasham).

- 1.15 ELEVATOR NOT CONNECTED (Capstan) Take-off abandoned & glider damaged due to incomplete D.I. (H.B.).
- 2.0. GENERAL MATTERS
- 2.1. BLANIK Oleo inflation Extract from maintenance manual is available from the B.G.A. Office. Under-inflation may cause significant structural damage.
- 2.2. Maintenance of "GEL" Coatings Lesonal's guidelines (un-edited) are attached herewith.
- 2.3. TUGS - Overheating (Oil and cylinder heads).
- a) Oil coolers - leaks around the ducting to oil coolers, will degrade their performance.
 - b) Lycomings are prone to internal leaks at the thermostatic bypass valve, so that coolers run cool, but oil runs hot. (Lycoming Service Instruction 1316 refers).
 - c) Cylinder heads run hot if baffles are damaged or soft seal material becomes detached. Gaps through which air could escape should be sealed with appropriate materials. (Reports from several sources including I. Hammond R.N.G.A. Lee-on-Solent).
- 2.4. ASW 20 Optional mods. The following is available. Front two hook T/Note 6.
- 2.5. ASK 21 New canopy locking system Tech/Note 15 refers. (Available from U.K. agents).
- 2.6. C.A.A. Notice No. 35 Engine overhaul extensions Issue 14, June '84, amends para 3.1.3. (b) to allow extensions by 100 hours intervals.
- 2.7. AIRWORTHINESS STANDARDS Very occasionally rumours are circulated about lowered airworthiness standards arising from various sources. Frequently these are the manifestation of differences of opinion, and sometimes involve commercial considerations between competing parties. The B.G.A. Technical Committee can investigate such criticisms, only if they are properly documented by persons directly involved. B.G.A. standards of airworthiness inspection must be maintained. You have a responsibility to report accurately, factually and in writing any evidence of serious breach of these standards which you come across.
- 2.8. The Accident Investigation Branch (of the Dept. of Transport) located at R.A.E. Farnborough, Hants, GU14 6TD, now has telephone 0252/510300.
- 2.9. CAP 411 Light Aircraft Maintenance Schedules (L.A.M.S.) Applicable to tugs and motor gliders which are certificated in the Private, Public Transport or Aerial Work Categories, has recently been amended. These amendments make significant changes to the inspection cycle, and should be incorporated not only in aircraft documentation but also into club operating procedures.

R.B. STRATTON
CHIEF TECHNICAL OFFICER
2nd October, 1984.

AD/84-113.

INS 10/84

Subject: Possible incorrect mounting of the tow release cable guiding fittings, resulting in malfunction.

Affected gliders: All ASW 19 and ASW 19 B, serial numbers 19001 thru 19405.

Compliance: Prior to the next take-off.

Reason: Following a case of unintended release of the tow hook during take-off (which possibly was caused by an incorrect mounting of the tow release cable guiding fittings), an inspection of the neutral travel at the actuating cable line of the tow release is required.

Background: With older ASW 19 and ASW 19 B the cable guiding fittings were mounted in front of the control bulkhead (as shown in Fig.1), while with newer gliders the fittings were mounted as standard rear of the control bulkhead (See Fig.2).

Now the following error may arise:
If the cable guiding fittings are mounted in front of the control bulkhead with sufficient neutral travel, the neutral travel disappears in case that the fittings are mounted by mistake rear of the control bulkhead.

Therefore, all ASW 19 and ASW 19 B must be changed as standard to the mounting of the cable guiding fittings to the rear of the control bulkhead, with sufficient neutral travel (Fig.2).

Action:

1. Check whether the cable guiding fittings are mounted in front of the bulkhead (Fig.1) or rear of it (Fig.2).
2. If the fittings are mounted in front of the bulkhead, they must be remounted to the rear!
3. Now you have to check whether sufficient neutral travel is left, as indicated in Fig.2. With too little neutral travel the plastic tube at the ball grip may be shortened accordingly and/or the neutral travel may be extended by turning in the turnbuckle (Fig.2).

Notes: The actions 1. thru 3. can be accomplished by an expert and must be documented in the logbook.

Poppenhausen, July 3, 1984

ALEXANDER SCHLEICHER

GmbH & Co.

Adolf Waibel
(Erhard Waibel)

The German original of this TN has been approved by the LBA under the date of July 10, 1984, and is signed by Mr. SCHMALJOHANN. The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is authoritative.

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Cable guiding fittings mounted in front!

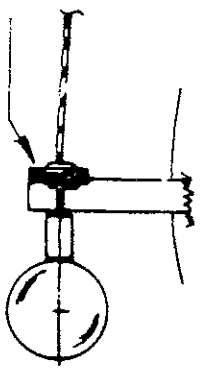


Fig. 1

12mm neutral travel
Cable guiding fittings mounted rear of the bulkhead!

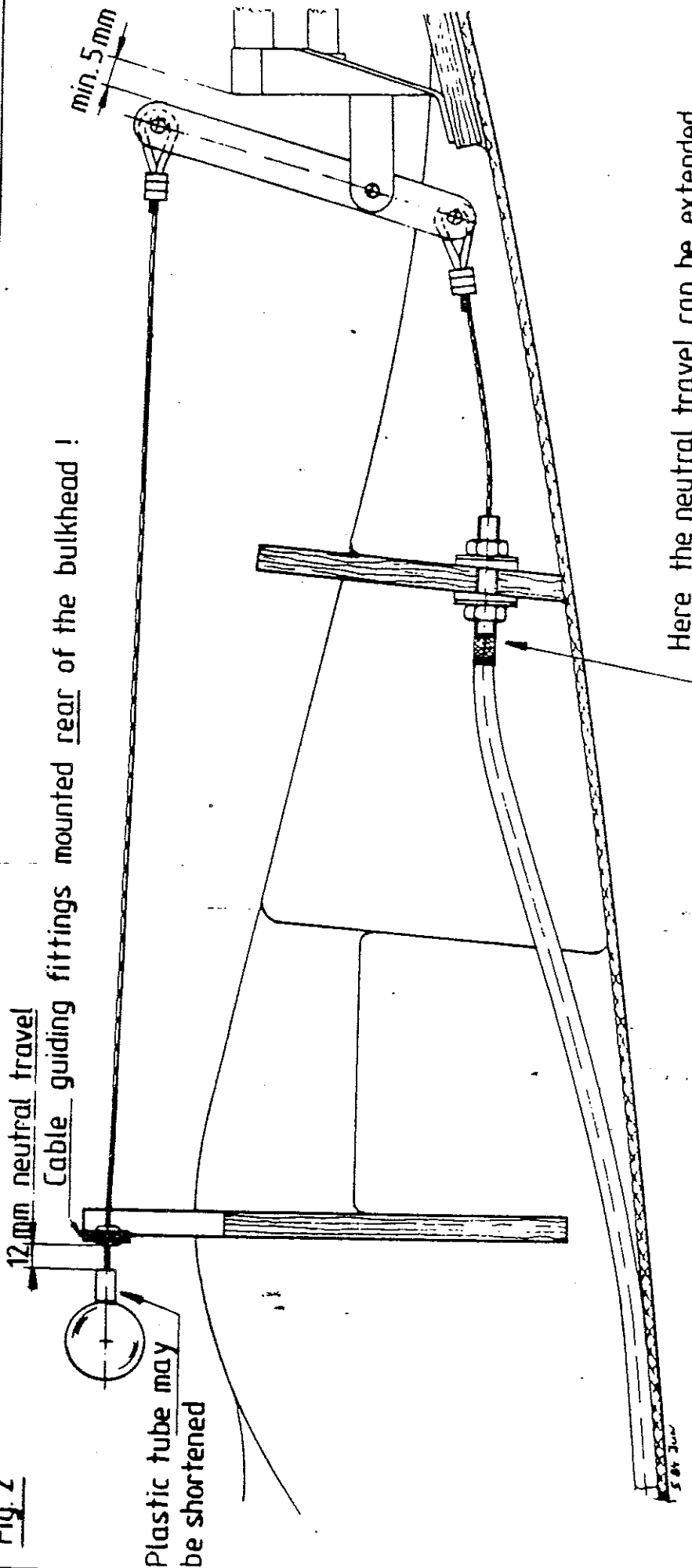


Fig. 2

Plastic tube may be shortened

Here the neutral travel can be extended by turning in the turnbuckle.



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

Administrator and Secretary: Barry Rolfe

British Gliding Association

Kimberley House, Vaughan Way, Leicester
Telephone 0533 531051

BGA/TNS 9/10/84

21st August, 1984.

TO: BREGUET 905 "FAUVETTE" OWNERS

SECURITY OF TAILPLANE/FIN RETAINING PINS

- 1.0. A fatal accident in the U.K. has been attributed to the loss of the single safety pin leading to the loss in flight, of the starboard fin/tailplane retaining pin.
- 2.0. It was discovered that some "Fauvettes" have already been fitted with a second means of securing the main pin, and it is strongly recommended that this option be incorporated in all gliders of this type. (Will anyone with details send sketch to B.G.A.)
- 3.0. Duplicate Inspections should be carried out, and recorded in the D.I. books of all gliders which have been re-rigged.

R.B. STRATTON
CHIEF TECHNICAL OFFICER.

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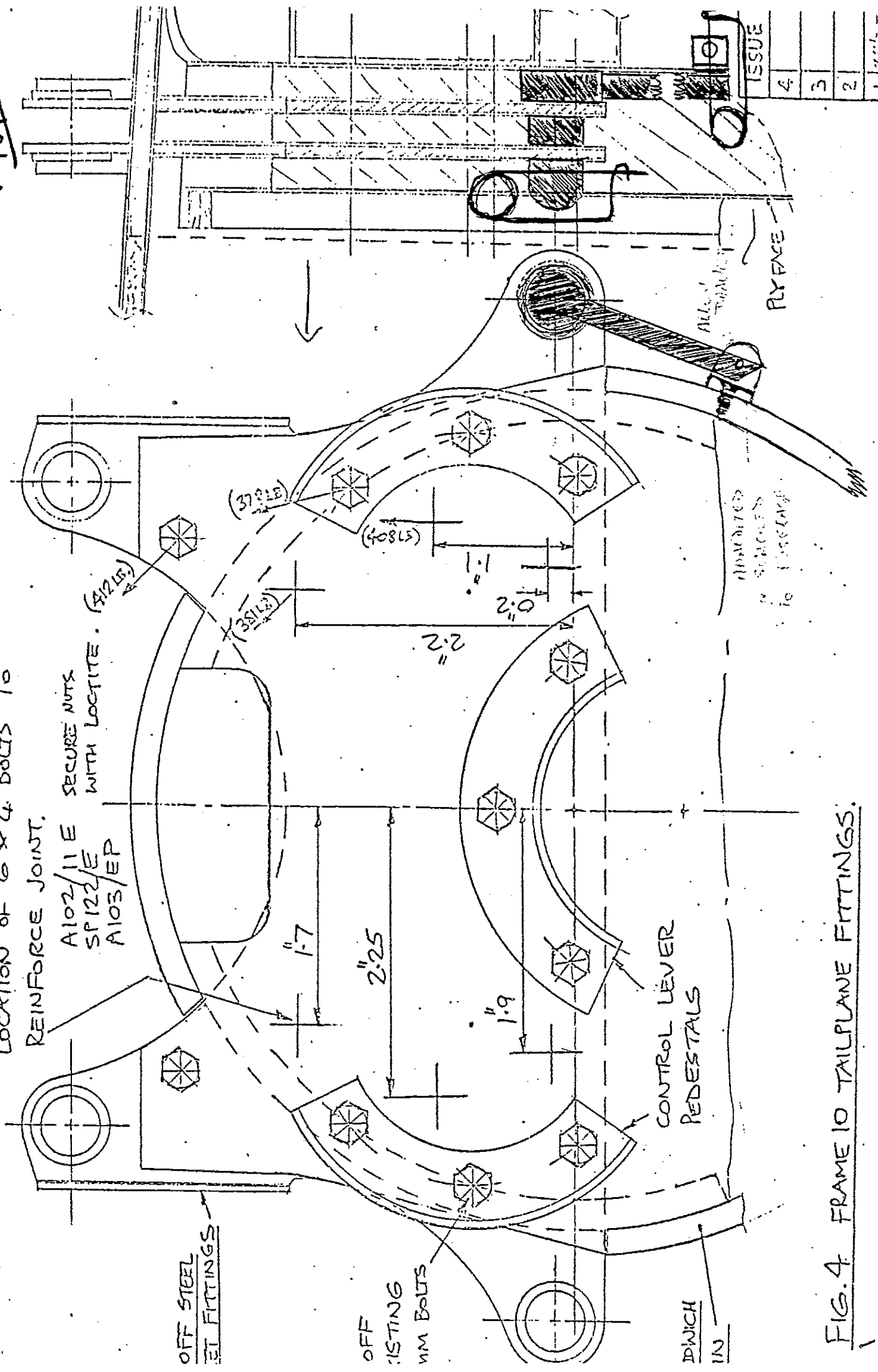
Frame 10

DECON DRAWING

10/11/84

BGA FNS/10/84

LOCATION OF 6 x 1/4" BOLTS TO REINFORCE JOINT.
 A102/11E SECURE NUTS WITH LOCTITE.
 SP122/E
 A103/EP



ISSUE			
4			
3			
2			
1			

FIG. 4 FRAME 10 TAILPLANE FITTINGS.



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British Gliding Association

14th August 1984

REF: B.G.A./TNS/9.10.1984

D.G. 400 Cracks in Engine Support Structures

(1) Forward Lower Engine Mounting "saddle" clamps.


Reports from New Zealand indicate that cracks may occur around the bolt holes of the black painted saddle clamps which secure the engine to the machined light alloy retractable mounting.

(2) Aft Support Structure Securing the top (rear) propellor shaft bearing to the engine.

A case has been reported in U.K of a fatigue crack developing right across light-alloy machined support assembly. The crack probably originated from poorly finished machining.

(3) Pre-Flight Inspections are strongly recommended.

(4) The manufacturer and the CAA are being informed.


R.B. Stratton
Chief Technical Officer

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DR 400. ENGINE MOUNTING CRACKS.

BGA TNS 10/84

ALL OWNERS 14/8/8

G. BLJ.W. (Hong Kong)

G. BLJ.D. (LASHAM)

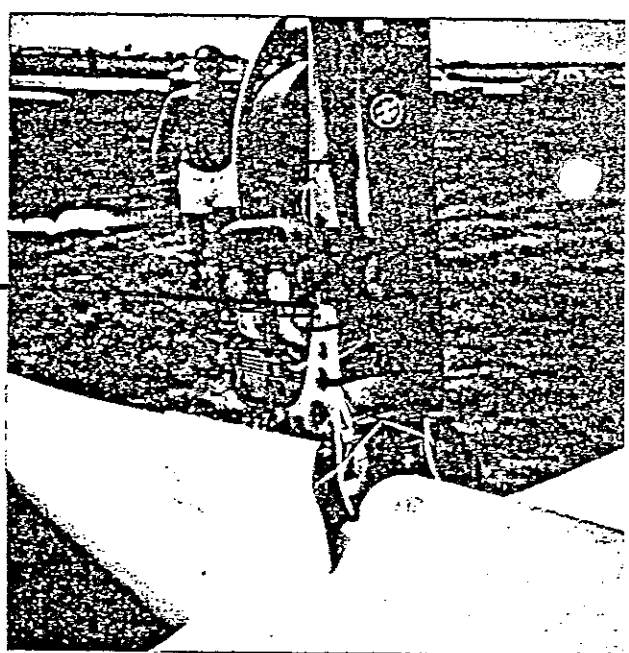
G. J.R.D.R. (N. Ireland)

C.A.A.

~~ASST. MANAGER~~
GLASER - DIRKS

SADDLE CLAMPS

CRACKS.
at Bolt Holes



CRACK



Maintenance of UP coatings on gliders (GEL).

1. Suitable are usual polishes (car refinishing products) with or without silicon additives and water which can also be mixed with normal additives of usual rinsings. Not only for removing of flies but also of fingerprints, glued dust and lubricants tar removing products on benzene basis (also car refinishing sets) are suitable. However, they should not act very long time with the rags, cotton wool or similar on the areas as a swelling and following "collapse" might be possible.
2. Don't rub very strong in order to avoid loss of gloss which necessitates again polishing. If polished with buffing wheels of drilling or grinding machines (buffing machines) a local overheating has to be avoided in any case as due to the heat a thermoplastic detachment of the UP paint from EP laminate could occur. First these defects are invisible but under disadvantageous conditions (flight conditions, influences of coldness or sun, etc.) they can draw after peelings on greater areas. In extreme cases already during polishing a blistering detachment could occur.
3. Above all chlorinated hydrocarbons must be avoided because they destroy within a relatively short period of time the UP paint layer and makes it detaching (for example methylene chloride, trichloroethylene (Tri) chloroform, Tetra (chlorinated hydrocarbon), trichloroethanol, Per, etc.).
4. Also strong solvents and thinners are not suitable as a swelling and following "collapse" might be possible. These are especially ester- and/or ketone containing thinners, nitro- synthetic and other thinners, acetone, ethyl acetate and other thinners. Alcohols such as spirits or isopropanol (isopropylalcohol) can be used for cleaning, like benzenes and other aliphatic hydrocarbons, however very carefully without strong rubbing or longer lasting influence.
5. For tempering and removing of hardened relics of flies only water can be used for a longer period of time, never organic solvents (same procedure as for car paint cleaning).

Manufacturers of gliders informed that for repair paintings it is irrelevant whether a refinishing product with or without additive of silicone is used, because as a matter of principle it has to be sanded until the laminate layer. Do-it-yourself repairs from glider groups - which possibly don't sand very well - can't exclude difficulties, also if marks with nitro-paints or similar shall be applied. In all these cases thorough sanding is indispensable.

-2-

A "usual" treatment of high performance gliders before competitions is said to be that the unfavourable aerodynamics due to pearls of raindrops will be excluded by washing the whole machine with solvents in order to obtain a homogeneous rain wetting. Herewith the wax protection will be completely removed and in eventually existing fissures or deep sanding scrapers the erosion will become effective. The UP paint is exposed without protection to the influences of sun, UV rays and other hard conditions. Altitude record flights have reached more than 10.000 meters, temperatures of -30°C and more are given as well as very intensive UV rays and extreme hard conditions for the flight (Australia, Africa, etc.). Under these circumstances this "aerodynamic treatment" has to be refused, no paint material is able to support these conditions. If there are claims for fissures on high performance gliders the maintenance of the painting has to be checked thoroughly.

6. Usual cleaning products for plastic furnitures (Pronto) based on formations of layers in order to avoid electrostatic charges by air- and other frictions should be used only for the plexi-glass (acrylic glass) cowlings as UP paints with EP laminates will be less electrostatical charged and the existing film in connection with polishes gives a stubborn grease which only can be removed by solvents.

7. Summary:

Recommandations for mainenance and cleaning:

- | | |
|---------------------------------------|---|
| Unrestricted: | Polishes with and without additivs of silicone, water with and without usual additives of rinsings |
| Restricted: | Benzenes or tar removers based on benzenes, alcohols like spirits and isopropanol (isopropylalcohol) only light wiping no longer lasting influences with rags |
| Not suitable - not to be recommended: | All kinds of thinners, especially nitro thinners acetone, ethyl acetate, all esters and ketones |
| Absolutely destructive for paints: | Chlorated hydro carbons as trichloroethanol, trichloroethylene (Tri), Tetre (-chlorided carbon) methylen chloride, chloroform, Per, ets. |

8. Other products customary in trade have to be checked thoroughly before use.

**CAP 411****Light aircraft maintenance schedule
fixed wing**

CAA/LAMS/FW/1978 Issue 2

*Civil Aviation Authority London***SECTION 5 – THE MAINTENANCE CHECK CYCLE****LAMS Fixed Wing****Transport and Aerial Work Category**

- Check A — Prior to first flight of the day.
 50 Hour Check — Not exceeding 50 flying hours, or
 62 days, whichever is the sooner.
 150 Hour Check — Not exceeding 150 flying hours.
 Annual Check — Not exceeding 12 months, but see
 Note (2).

Annual Checks shall be completed only by Organisations approved by the CAA in accordance with BCAR, Section A, Chapter A8–15. See also Foreword para 8.

Private Category

- Check A — Prior to first flight of the day.
 50 Hour Check — Not exceeding 50 flying hours.
 150 Hour Check — Not exceeding 150 flying hours.
 Annual Check — Not exceeding 12 months, but see
 Note (2).

The Annual Check which coincides with the Certificate of Airworthiness renewal shall be completed only by Organisations approved by the CAA in accordance with BCAR, Section A, Chapter A8–15. See also Foreword para 8.

- NOTES: (1) Provided that airworthiness is not impaired, it is permitted to extend the period prescribed for any complete maintenance check, with the exception of the Annual Check, by a maximum of 10%. Extensions are not required to be deducted from the next scheduled period. An extension may only be authorized by persons acceptable as signatories for the prescribed Check. The extension shall be recorded in the appropriate log book.
- (2) The Annual Check may be anticipated by a maximum period of 62 days without loss of the continuity of the maintenance pattern. Thus, for example, where the full 62 days is invoked, the following Annual Check would become due 14 months after the completion of the Annual Check which was anticipated. The period by which the Annual Check was anticipated and the date of the next Annual Check shall be recorded in the appropriate log book.
- (3) For extension periods for radio maintenance activities, refer to Section 8.
- (4) See also Section 2 paras 4, 5 and 6.

*** MAINTENANCE CYCLE UPDATED!**

General Aviation Safety Information

13. OBSCURED WATER DRAIN AND UNAUTHORISED TOWING HOOK AND BATTERY

P/E

Aircraft : Piper High Wing
Date : May 1984

TWA AIRCRAFT.

The Annual Inspection revealed that an unapproved towing hook was fitted to the tailwheel axle. This prevented the castellated axle nut from going on far enough for it to be split-pinned. Furthermore the battery was found to be an automobile type, and the lower collecting bowl/water drain was found to be obscured by the aircraft fabric. When the fabric was cut away to gain access to the drain, a quarter of a pint of water and sediment was obtained. The drain had been obscured some time previously when the aircraft was re-covered. The owner was not aware of the drain point in the area. A Woods ring and removable panel have now been fitted.

CAA Comment:

The fitment of a towing hook is a Major Modification.

(Unless already type approved) AK

2. DEAD FROG IN CORRODED AIRCRAFT

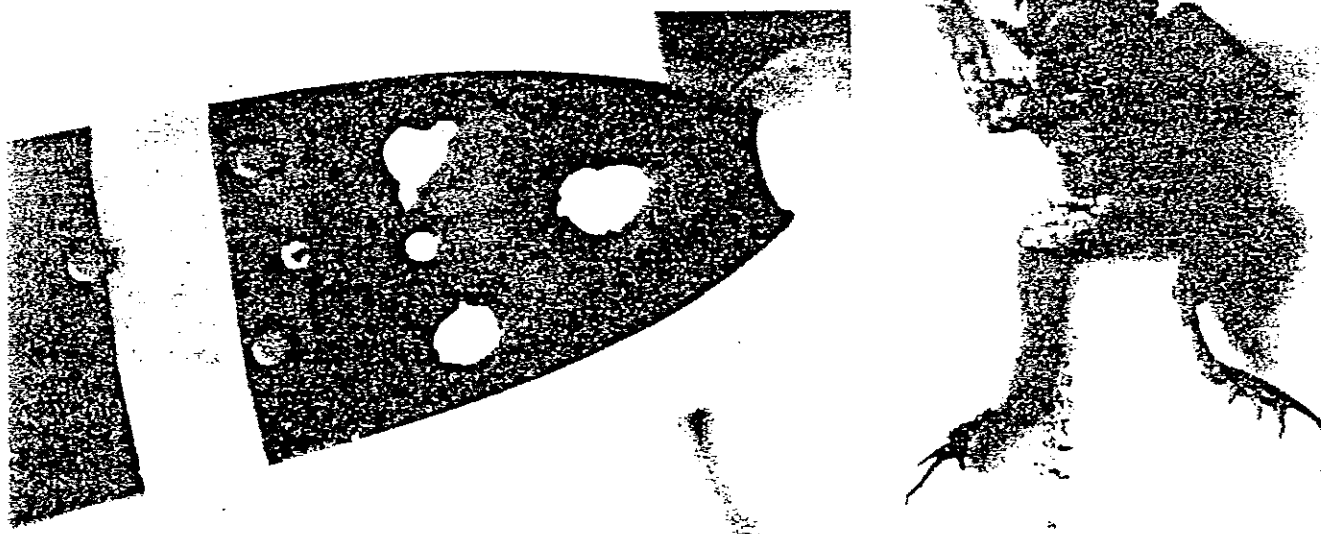
E

Aircraft : MS880B Rallye
Date : May 1984

During the Annual Inspection and compliance with CAA AD 002-02-84 (SB 133/2A) severe exfoliation and corrosion were found on the 1545 hour aircraft. The fuselage spine, under fin fairing, fin, canopy rails and wing skin riblet flanges were affected. The rudder mass balance weight attachment had corroded such that the weight had broken away (see photograph below). While inspecting the tailplane inner surface for corrosion, the mummified remains of a frog were found. With difficulty this was extracted. The aircraft was manufactured and imported in 1973.

CAA Comment:

We do not know if the frog was built in at manufacture, or entered the aircraft after arrival in the UK.



The records used to compile this document include information reported to the CAA, information obtained from CAA investigations and deductions by CAA staff based on the available information. The authenticity of the contents or the absence of errors and omissions cannot be guaranteed.

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In order to identify the broad subject matter each item is classified as follows:

Operational items mostly of interest to pilots

Airworthiness items mainly for engineers

Items which involve both operational and airworthiness interests

P
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P/E