

# BRITISH GLIDING ASSOCIATION

Tech.Committee.TNS 2/3/79.

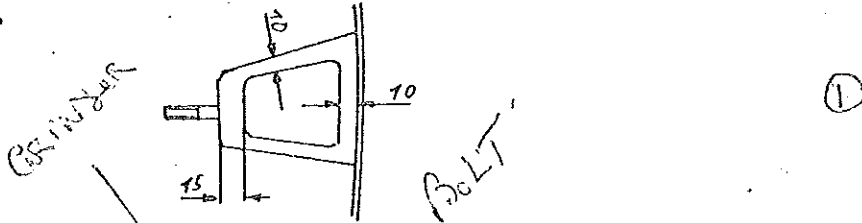
- 1.0. Airworthiness "AGGRO". The 1979 Compendium of Defects and Mandatory Inspections has been assembled in the incorrect sequence, due to a manufacturing blunder by the Editor! The page on "T.59 Kestrel" does not logically precede the "T.59 - Contd." page. De-rivet, re-shuffle, re-rivet etc. to achieve correct sequence. (Next year pages will be NUMBERED!).
- 1.1. D.G. 100, attached document (in German) locates the missing washer referred to in AD/78-164, TI301-6, and TNS 8/9/78.
- 1.2. L.S.1. Rudder, Elevator and Aileron Bearings. Enclosed AD 79-44 requires inspection for missing washers.
- 1.3. LiBelle Seat-Pans, may distort and interfere with Release Cable operation to the C.G. Hook. Additional block may be required to support seat pan. (Gordon Camp).
- 1.4. Diamant. Tech. Notes 07 and 08 effect Serial Nos. 11 thru 80, and require modifications to wing-spar and shear-web to remove speed restrictions. (copies available from FFA and B.G.A.).
- 1.5. Diamant. All Serial Nos. 16.5 and 18M. Tech.Note 09 requires immediate inspection of elevator fork-end for bending (copy attached).
- 1.6. T.61 "Falke". - Vickers - Slingsby T.I.No.81 requires inspection for de-lamination of tail-plane spars. (copy attached).
  
- 2.0. General Matters. (Extracts from PFA Magazine).
- 2.1. Propellers. "Propeller making for the Amateur", design, construction and repair of wooden propellers, £2.50p. from Eric Clutton, 92, Newlands Street, Stoke-on-Trent, ST4.2RF.
- 2.2. Propeller Manufacturer - Brian Mills 022-026-2951.
  
- 3.0. Tugs.
- 3.1. Fabric Testing. The enclosed extract from EAA-ADF-1 (FAA) publication is self-explanatory. In addition to the use of "Light thumb-pressure" (CAA Notice No.20 - issue 5) enclosed leaflet also advocates pencil-erasers, or knuckle pressure!

Reparaturanweisung DG-100

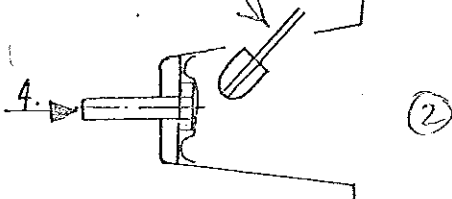
Reparatur des Lagerbocks RU 19

BCM TNS/2/3/79

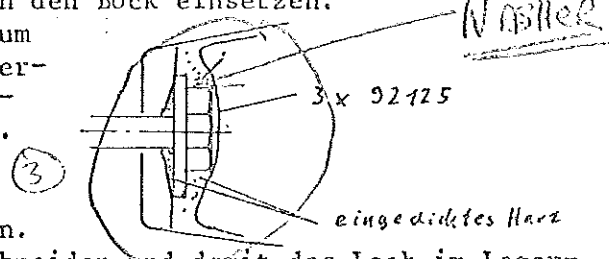
1. Den Höhensteuerumlenkhebel demontieren.
2. Ein Loch von oben in den Bock fräsen. Dabei s. Skizze Abstand zu den Seiten halten.



3. Das Gewebe hinter dem Schraubenkopf wegschleifen. Werkzeug. Hochtouriger Schleifer mit Schleifkopf  $\varnothing$  14mm. Körnung 60-80.



4. Die Schraube herausschlagen.
5. Den Bock innen an der Stelle des Schraubenkopfes aufräumen.
6. Schraube M6 x 35 LN 9037 mit Scheibe 6,4 DIN 9021 entfetten, an Einklebestelle etwas anrauen und mit eingedicktem Harz in den Bock einsetzen.
7. eingedicktes Harz um den Schraubenkopf herum angeben. 3 Lagen 92125 auf einer Folie außerhalb laminieren. Ein Stück 30mm x 30mm ausschneiden und über den Schraubenkopf legen.



8. Bock außen 20mm um das Loch herum aufräumen.
9. Ein passendes Stück aus den 3 x 92125 ausschneiden und damit das Loch im Lagerbock wieder schließen. Dabei Überlappung min. 15mm einhalten.
10. Mindestens 12h bei 20° C Raumtemperatur aushärten lassen.
11. Den Umlenkhebel wieder montieren. Eine neue Stoppmutter M 6 DIN 985 verwenden.

Material: Harz: Glycidäther 162  
 Härter: Laromin C 260  
 Mischungsverhältnis: 100:38 Gewichtsteile  
 Füllstoff zum Eindicken: Baumwollflocken  
 Scheibe: 6,4 DIN 9021  
 Stopfmutter: M 6 DIN 985  
 Schraube : M 6 x 35 LN 9037

The above is reasonably obvious better way to carry out 301/6. Should the washer have been omitted and the part loose fig (3) would apply

Dag

INS 2/3/79

Airworthiness Directive

LS 1

79-44 Rolladen-Schneider

Date of issue:  
January 31, 1979

Affected sailplane:  
German Type Certificate No. 262.  
LS 1, models -0, -a, -b, -c, -d and -f, all serial numbers.

Subject:  
Rudder, aileron and elevator bearings.

Reason:  
The washers fixing the control surfaces in axial direction may be missing.

Action and compliance:  
Action to be accomplished in accordance with Technical Bulletin respectively new pages of Service Manual before further flight after effective date of this AD, unless already done.  
Repeat above action at each annual inspection.

Technical publication of the manufacturer:  
Rolladen-Schneider Technical Bulletin No. 37 of January 1, 1979, which becomes herewith part of this AD and may be obtained from Messrs. Rolladen-Schneider Flugzeugbau GmbH, Mühlstr. 10, D-6073 Egelsbach, Germany.

Accomplishment and log book entry:  
Action to be accomplished by a skilled person and to be entered in the sailplane's log.

TNS 2/3/79

DIAMANT

December 1978

No. 09

# SERVICE BULLETIN

Page 1 of 2

## INSPECTION AND POSSIBLE REPLACEMENT OF FORK END OF ELEVATOR PUSH ROD IN VERTICAL TAIL

### 1. Planning information

- 1.1 Applies to the following gliders:
- Type : DIAMANT HBV, 16,5 and 18
  - Serial Nos.: all
- 1.2 Reason: In one glider a bent fork end was detected
- 1.3 Purpose of the present bulletin: Instruction for visual inspection and, where necessary, replacement of the fork end
- 1.4 Compliance: Before the next flight as well as after hard impact of the fuselage end or at signs of noseheaviness
- 1.5 Approval: Approved by the Swiss Federal Air Office
- 1.6 Man power:
- 1.6.1 Inspection: 2 man-hours
  - 1.6.2 Repair : 8 man-hours
- 1.7 Material: Fork end D1.206-0405, available from Repair AG  
Locking lacquer
- 1.8 Tools: 2 Ring spanners 11 mm
- 1.9 Weight: Not affected
- 1.10 Balance: Not affected
- 1.11 Reference to other publications: - Flight Manual  
- Repair Manual

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**FFA**

Flug- und Fahrzeugwerke AG  
Altenrhein  
CH-9422 Staad SG

Technical Instruction No. 81.

Slingsby T61 Falke Motor Glider

Inspection of Tailplane Spar Booms

INTRODUCTION

Cases have recently occurred of cracks appearing in the laminated beech booms of the tailplane spars on T61E aircraft, the latest variant of the T61 Falke. As a result the following inspection notice has been raised covering all Falke types.

APPLICABILITY

The technical instruction is applicable to all Slingsby T61A, T61B, T61C and T61D Falke powered gliders.

COMPLIANCE

This inspection is MANDATORY on all gliders listed above and should be carried out within 2 months of receipt of this instruction.

PROCEDURE

Remove the tailplane from the aircraft and remove the elevator to give access to the spar. The laminated beech spar booms are to be inspected for any signs of cracking or delaminations between adjacent veneers of the beech timbers. If cracks are visible estimate the length, depth and width of the cracks with feeler gauges. If there appear to be cracks in the paint surface the paint is to be scraped away and the bare wood examined for cracking.

If the cracks are more than 5 mm deep and 0.25 mm wide and the crack runs for more than 100mm the aircraft is to be grounded until a repair has been effected.

Report all findings to the manufacturer, marked for the attention of the Chief Designer.

# SECTION 13

## Fabric Repair

### A. FABRIC TESTING

A properly applied and well cared for grade-A cotton fabric job should last for six or seven years, and linen and polyester fabric usually last much longer. But each time an airplane is given an inspection, the technician must certify that the fabric meets all of the strength requirements.

If the airplane has a wing loading of greater than nine pounds per square foot or a never-exceed speed of more than 160 miles per hour, the fabric must test in excess of 56 pounds per inch, which is 70% of the strength of new grade-A cotton fabric. If the airplane has a wing loading of less than nine pounds per square foot and a never-exceed speed of less than 160 miles per hour, the strength of the fabric may drop to 46 pounds per inch before it is considered to be unairworthy.

Experienced inspectors often use a rule-of-thumb-type check for the fabric to assure themselves that the fabric is well above the minimum strength by punching it with either their knuckle or with the eraser end of a lead pencil. But a much more practical way of determining quantitatively the strength of the fabric is to use a fabric punch tester similar to the Seybolt tester.

The tester consists of a specially shaped hardened steel point, spring-loaded inside of a housing having a wide face. The tester is held perpendicular to the fabric, and the point is pressed down into the fabric until the face contacts the surface of the fabric. A colored indicator protrudes from the back of the housing to indicate the relative strength of the fabric. If the fabric is good, the indicator will show up in one of the green bands; if it is marginal, it will only go up to the yellow band, and if it is rotten, the indicator will reach only to the red band. The small hole left by the tester is covered with a small circular patch. The indication of this type of tester is not quantitative enough to use by itself to condemn the fabric on an airplane.

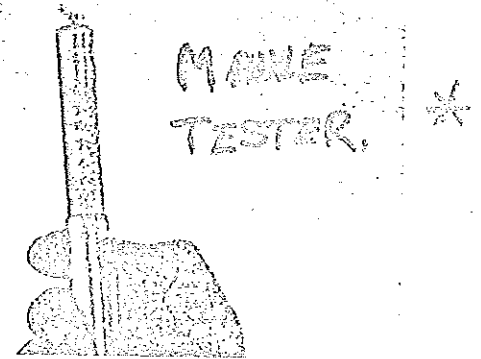


Fig. 37 Punch type fabric testers give a good indication of the relative strength of the fabric, but an indication of weak fabric should be backed up with a pull test before condemning the fabric.

If the punch tester shows the fabric to be marginal, a strip of fabric should be removed from the airplane, usually from the top of the wing, and if at all possible from a dark painted area. Remove all of the dope from the fabric and wash it in acetone, then ravel it to exactly one inch in width. The strip is then placed in a pull tester and an even pull is applied to it until it breaks. If it breaks below the required strength, the airplane must be re-covered before it can be returned to service.

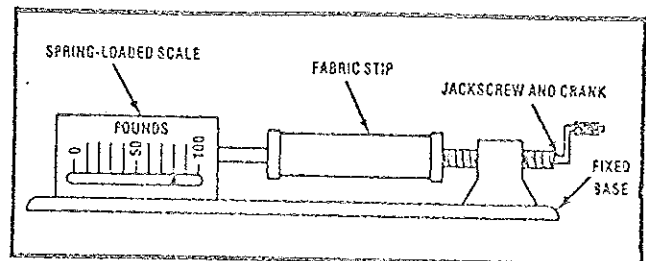


Fig. 38 Fabric pull tester

### B. REJUVENATION

The finish of a fabric-covered airplane will weather, fade, and crack as a result of the plasticizer migrating out of the surface. This weathered finish is brittle rather than resilient, and any time it is punched, it will crack in a cir-

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# Civil Aviation Authority

Airworthiness Division

Serial No. 9/215/157

To: \*Applicant  
Radio Install Section  
Surveyor  
Aircraft Projects Department  
Flight Manuals Section  
Applications and Certification Section

## MINOR MODIFICATION

Aircraft Type PIPER PA18-90		Nationality and Registration Marks G-APZK
Name and Address of Registered Owner  RAF Gliding & Soaring Assoc., RAF Bicester Bicester Oxon		Name and Address of Applicant  Mr R B Stratton RAFGSA Bicester Oxon
Applicant's Modification No.  RBS/ZK/1/79	Original Drawings affected  Nil	New Drawings introduced  Nil
Nature of Modification  To delete floor mounted Glider Release Control Lever and to replace with Roof Mounted Cable, Port Side. Placard removed from Instrument Panel and re-located Port Wing Root Panel.  <u>Remarks:</u> Cable is attached to lefthand windscreen diagonal tube and an estimated static load of less than 8 lb will operate the release gear.		
Amendments in accordance with BCAR, Section A, Chapter A6-1, A6-2, A6-4 or A6-7, as appropriate, are required to the following*:-  Flight Manual                    ) Maintenance Manual            ) Overhaul Manual                ) Repair Manual                   ) Crew Manual                      ) Maintenance Schedule         )  Nil		

The above modification is deemed to be a minor modification, and may be embodied subject to compliance with British Civil Airworthiness Requirements, Chapter A4-1.

Date 18 January 1979

D C Frost  
D C Frost  
For the Civil Aviation Authority

\*Delete as appropriate