

B.G.A. TECHNICAL COMMITTEE
TECHNICAL NEWSHEET TNS 7/8/87

PART 1. AIRWORTHINESS "AGGRO" (Please add to the 1987 Green Pages)

- 1.1. T.65 VEGA FLAP/BRAKE UNIVERSAL JOINT FAILURE T/Note 328-8 has been mailed by B.G.A. to registered owners and requires immediate action (copy herewith).
- 1.2. T.50 SKYLARKS - FIN FAILURE T/Note 107/T50 has been mailed to owners & requires immediate action. (copy herewith).
- 1.3. MINI-NIMBUS B. ELEVATOR DRIVE BRACKET. T/Note 328-8 has been mailed to owners and requires immediate action. (Refer to TNS/12/85). (Copy herewith).
- 1.4. ASK 21 ^{RUDDER} PEDAL SUPPORT FITTING - CRACKED T/Note 19, herewith requires inspection and/or exchange.
- 1.5. T.51 DART HEAVY LANDING INSPECTIONS OF LONGERONS Ref TNS 3/85. Inspections of longerons both forward in (the cockpit) and aft are required. (Sketch attached). Strongly recommend all Darts be inspected (Reported by D. Masterson).
- 1.6. GLASFLUGEL MOSQUITO CRACKS IN THE RUDDER DRIVE ACTUATOR Whereas this NDT inspection has previously been confined to Kestrels (ref TNS 1/87), a case of a crack in a Mosquito has been reported in the U.S.A. An annual inspection is therefore recommended.
- 1.7. KA 13 FIN SPAR ROTTEN AT THE BASE The attached sketch from the Stratford-on-Avon G.C. is self-explanatory. Drainage & ventilation is required.
- 1.8. ASTIRS - Elevator control rods corroded in the rear fuselage. Reported by Southdown Aero Services .
- 1.9. SHK LOOSE RUDDER/ELEVATOR ASSEMBLY due to wear in the mounting holes in the rear fuselage frame. Mounting (bracing) struts found cracked. (Sketch attached).
- 1.10. T.59 KESTREL (19M) GRP "JUNK" HAS BEEN FOUND in the area of the wing tips, and may migrate towards the aileron drive system. Reported by Southdown Aero.
- 1.11. JANTAR 3. GRP "JUNK" IN THE WINGS successfully jammed the ailerons. Give all Jantars a good shake out. (Reported by R. Targett).
- 1.12. JANTAR 3 (could include all series) FAILURE OF THE AILERON DRIVE tube support bearings in the wings. This source of foreign objects could endanger your health! (Reported by R. Targett).
- 1.13. ASTIRS - ELEVATOR VERTICAL DRIVE END FITTINGS LOOSE 4 cases of loose rivets reported by Southdown Aero.
- 1.14. KA.8 (AND OTHER TYPES) KINEMATIC AILERON DRIVE SYSTEMS Interconnection between aileron/elevator systems requires that the ailerons be rigged neutral, with the stick forward. (Ref. maintenance manual page 3).
- 1.15. BOCIAN (IE) CRACKS IN THE FRAME FORWARD OF THE FIN carrying the elevator drive. Inspect/repair as required. Reported by Highlands G.C.
- 1.16. SF.25 MOTOR GLIDERS (all Series) Scheibe Mod 134 introduces a Carburettor heat system. (Mandatory C.A.A. Mod.).

- 1.17 SF.25E BATTERY POSITIVE Terminal damaged by contact with the CHOKE CABLE. Could cause an electrical FIRE!
- 1.18. H.36 DIMONA FLIGHT LIMITATIONS LBA A/D 86-177-3 supercedes AD/86/177-2 Copies from Agents.
- 1.19. VALENTIN 17E TAIFUN AD/87-84 requires Inspection of Rudder Pedals, airbrake actuating levers, and revision of flight manual Tech Note 11/818 Refers from UK agents.
- 1.20. VENTUS (Turbo) FUEL TANK/HEADREST A welded seam in the fuel tank, which forms the headrest, should be protected with rubber, if serious injury is to be avoided. (seen at R.A.F.G.S.A. Bicester).
- 1.21. GROB G103 TWIN ASTIR/ACCRO FRONT CANOPY LOCKS An unlocked canopy sustained damage during a launch. Red marking tape to align with the unlocked position, or Green markings to align with the locked position are recommended. (Reported by Army G.C. Detmold).
- 1.22. EXTRACTS FROM GENERAL AVIATION SAFETY INFORMATION LEAFLETS (G.A.S.I.L.S.)
- (1) PAINT STRIPPER 6/87
 - (2) COMPRESSION CHECKS 6/87
 - (3) RF5 CORRODED TAILPLANE BRACKETS 6/87
 - (4) PA18s CUBS - LIVE MAGNETO SWITCHES.
- 1.23 FOURNIER RF.3. & RF.6 MANDATORY MODIFICATIONS. The latest C.A.A. Foreign A.D. list Oct/Nov/86 is attached.
- 1.24. PA-18 CUBS AIRWORTHINESS DIRECTIVES (REPETITIVE)
- AD 60-10-08 - FUEL SELECTOR - detent (100 hours)
AD 60-05-01 - EXHAUST SYSTEMS (50 hours)
- The CAA's authorisation dated 28.8.85 to the BGA by which BGA club pilots may sign for the compliance with those MANDATORY checks at the intervals stated, is repeated herewith for INFORMATION.
- 1.25. VERY LARGE LOOSE ARTICLES IN COCKPITS Insecured BATTERIES and improperly secured Oxygen Bottles have been found lying around in gliders. In turbulent flight, or in rough take-off or landing conditions, these could have damaging consequences. Likewise radio installations must be secured, and nothing must impair your prospects of escaping in an emergency. Reported by Southern Sailplanes.
- 1.26. CRASHWORTHINESS In a recent very serious accident to a KA21, the fracturing of the G.R.P. Instrument panels may well have minimised leg injuries, compared with what might have been inflicted by metal panels. It makes you think!
- 1.27. PLACARDING OF ESSENTIAL GLIDER LIMITATIONS as defined in the Flight Manual (or C. of A.) must be revised and made legible at C. of A. renewals, and prominently displayed to all pilots at all times. Colour codes instruments are an acceptable form of speed placarding.
- 1.28. HARNESS RELEASE BOXES (KA21 AND MANY OTHER TYPES) LOOSE PIVOT BOLT Harnesses labelled "FREDRICH GADRINGER (W.GERMANY) but manufactured by Pacific Scientific, Anaheim,, USA may develop a fault which results in the insecure locking of each harness attachment in the Release box. Centre pivot nut (below flush cap) may have loosened off. (Reported by R.A.F.G.S.A. Bicester).
- 1.29. T.65D VEGA (1) AIRBRAKES JAMMED OPEN due to failed weld between flap/aileron interconnection in the fuselage
- (2) Elevator flutter @ 124 kts
 - (3) Control Column assembly pulled free of the cockpit floor
 - (4) Flap detached due to failure of all 6 flap actuator fittings.
- (Reported by M.F. Cuming).

- 1.30. GROB (G.103) TWIN ASTIRS, TWIN II ACCRO SERIES REAR RELEASE KNOB
S.B. 315-32 requires RELOCATION Guide Sleeve to prevent the aft tow hook actuator knob dropping into the stick boot & obstructing the stick. (Copies from Agents).
- 1.31. BELLANCA CHAMPION (TUG) Cracks in the undercarriage at the attachment point failed during a "hard" landing. Inspect all such structures regularly (Cambridge G.C.).
- 1.32. GROB 109 (A & B) SERIES - FUEL COCKS TM/817-23 requires immediate inspection for wear and tear of the lower sealing ring, which may fail and obstruct the fuel flow. (Copies from agents).

PART 2. GENERAL MATTERS

- 2.1. SALE OF UK GLIDERS - ABROAD A recent case of selling a PIK 20B to Israel has highlighted the importance of documentation showing compliance with all relevant mandatory modifications, service bulletins etc. Whereas a C.A.A. Export C. of A. might be obtainable, having I.C.A.O. recognition, foreign airworthiness authorities may be persuaded to accept current B.G.A. certification? Check with the purchaser before you complete the detail!
- 2.2. BLANIK UNDERCARRIAGE SUPPORT STRUCTURE REPAIR SCHEME B.G.A. have approved Borders G.C. modification. Sketch attached (Ref Blanik 1/87).
- 2.3. NIMBUS (SERIES) T/Note 286-23 introduces optional tailwheel. (from U.K. agents.)
- 2.4. ROLLADEN-SCHNEIDER AGENCY (UK) Is now the responsibility of Martyn Wells. Long Compton 217.
- 2.5. IDENTIFICATION OF B.G.A. REGISTERED GLIDERS

For airworthiness record purposes all B.G.A. registered gliders must display B.G.A. numbers preferably in permanent form. B.G.A. Operational Regulations 3.2 (b) require that a card be displayed in the cockpit. Such identification may assist the investigation of accidents/incidents.
- 2.6. JANUS (all models) RUDDER CONTROL T/Note 295-15 introduces one piece rudder control cables to simplify and improve directional control (Sketch attached)
- 2.7. JANUS B & C OPTIONAL TAILWHEEL T/Note 295-17 refers.
- 2.8. JANUS (ALL MODELS) PROVISION FOR TRIM BALLAST T/Note 295-18 makes provision for trim weights on the nosewheel housing.
- 2.9. JANUS C 6000 HRS IS THE CURRENT SERVICE LIFE At the annual inspection prior, to 6000 hours, comply with T/Note 295-16. (Copies from Agents).

R.B. STRATTON
CHIEF TECHNICAL OFFICER
28th July 1987

TECHNICAL INSTRUCTION

BGA/TNS/7/8/87.

Issue No. 1

TITLE

INSPECTION OF SKYLARK GLIDER AFT FIN SPARS AT
LONGERON CUTOUTS

T.I. No.

107/T50

CLASSIFICATION

The CAA has classified this TI mandatory for all UK certificated Skylark gliders. Gliders other than those used for public transport or aerial work, do not require a certificate of airworthiness in the UK and no such certificate is currently in force for any Skylark series glider.

COMPLIANCE

1. Before further flight, if any of the following conditions exist or are suspected at any time:
 - i. Gliders that have suffered heavy tail impact during take off and landing.
 - ii. Gliders that have been ground looped,
 - iii. Gliders on which previous repairs have been carried out in the area to be inspected on this TI.
2. At or before the next annual inspection for all other gliders.

OBJECTIVE

To establish the continuing airworthiness of all affected sailplanes.

JUSTIFICATION

Following an accident to Skylark 4 Works No.1403 (BGA No. 1137) (BGA New Sheet TNS/5/6/87 (Item 1.6) refers) where during a winch launch the fin separated from the fuselage. On subsequent investigation it appeared that the sternpost had failed where the longerons are reset into the sternpost members.

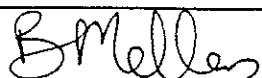
APPLICABILITY

Specific to Slingsby T50 Skylark 4 sailplanes but should be carried out on T41 Skylark 2 and T43 Skylark 3.

ACTION

- a) Gain access, see Fig. 1, Sheet 3, to the forward face of the base of the sternpost, to inspect for damage generally and specifically where the longerons pass through the fin spars. See Note 1.

ISSUED BY :



for and on behalf of SLINGSBY AVIATION LTD.

Kirkbymoorside, York YO6 6EZ, England Tel 0751 32474 Telex 57597

Date

23.6.87

Page

1 of 4

TECHNICAL INSTRUCTION

Issue No. 1

TITLE

T.I. No. 107/T50

INSPECTION OF SKYLARK GLIDER AFT FIN SPARS AT
LONGERON CUTOUTS

CONTINUED

- b) Apply an equal transverse load (approx. 25 lbs) ref. Fig.2 Sheet 4, alternatively in both directions to the top of the fin and check for equal movement each side. Also check for movement or noises in the affected areas, particularly on fin spar longeron connection. See Note 1.
- c) Inspect the sternpost in the area of the lower rudder hinge, for signs of plywood separation, compression shakes, de-bonding or damage inflicted by overtravel of the rudder. See Note 1.
- d) Check that the rudder cable stops limit the travel of the rudder at full deflection, port and stbd see relevant manuals for correct movement, and not the rudder contacting the fin post thus transferring loads into the fuselage. In particular inspect for signs of contact between lower rudder hinge mounting block on fin post and rudder leading edge.

Additionally check the condition of the stops on cable and fuselage (Note there should be 2 fairlead blocks fore and aft of members port and stbd).

Note: When rudder cable stops are clamped to cable they should show no sign of moving when loaded. See Note 2.

- e) Inspect the forward fin structure in the area of the tailplane cut-away, for signs of plywood separation or compression shakes etc. See Note 1.

CONSEQUENTIAL LIMITATIONS:

- Note 1) If there are any indications of structural damage or excessive fin movements the aircraft must be grounded until repair is carried out.
- 2) If rudder is contacting fin and or rudder stops suspect aircraft must be grounded until rectification action is carried out.

Note new parts may be obtainable from Slingsby Aviation Ltd.

ISSUED BY

B. Mellen

Date 23.6.87

Page 2 of 4

4

TITLE

T.I. No. 107/T50

INSPECTION OF SKYLARK GLIDER AFT FIN SPARS AT LONGERON CUTOUTS

CONTINUED

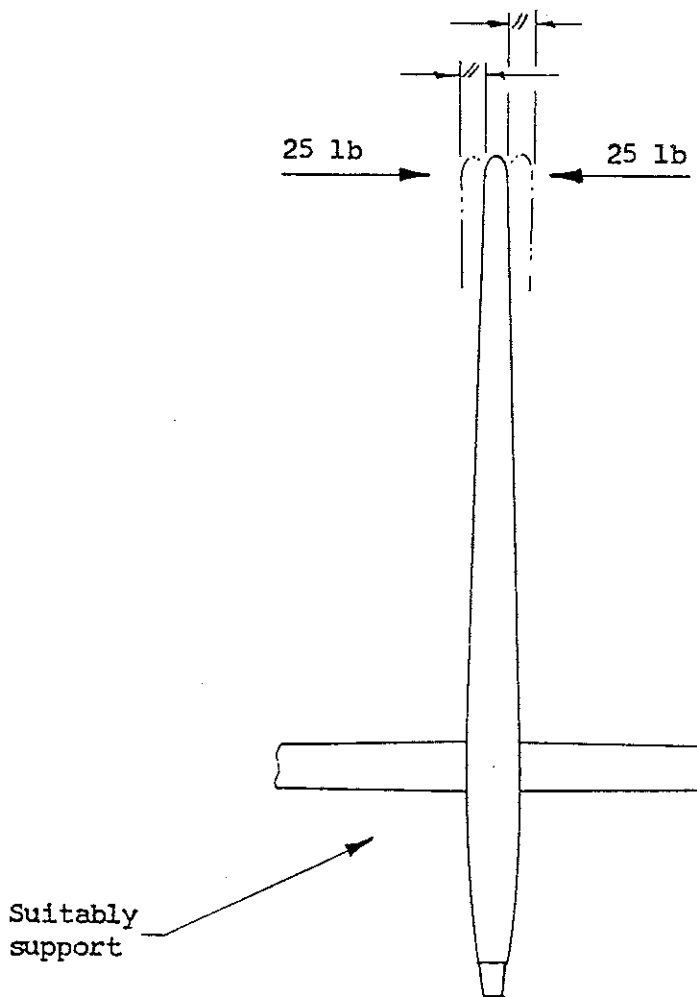


FIG. 2

VIEW LOOKING FWD

TITLE	T.I. No. 107/T50
INSPECTION OF SKYLARK GLIDER AFT FIN SPARS AT LONGERON CUTOUTS	

CONTINUED

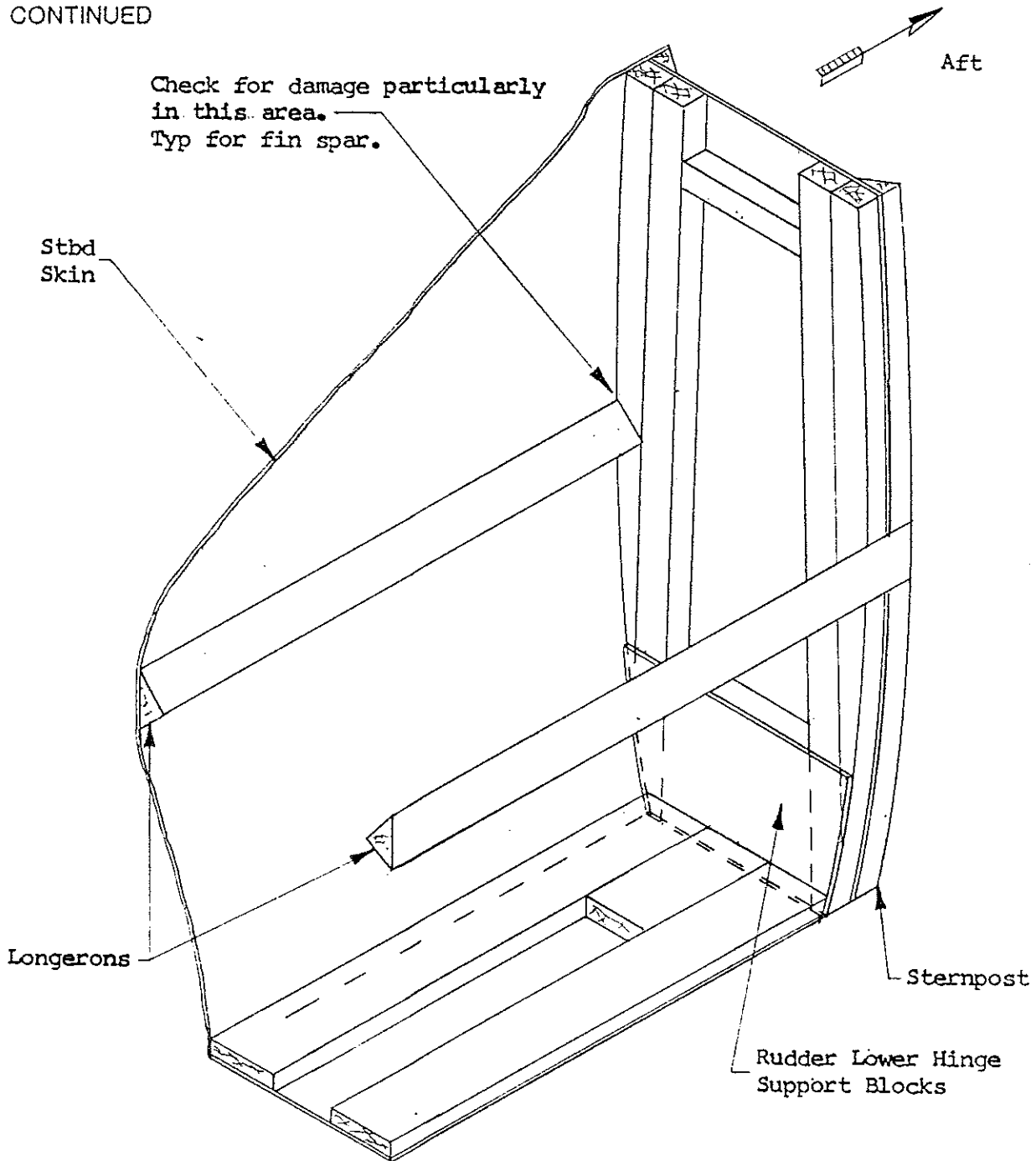


FIG. 1

VIEW ON FRONT FACE OF STERNPOST
FIN POST SIMILAR

Sent to OWNERS 22/7/87 TNS/7/8/87



BRITISH GLIDING ASSOCIATION
KIMBERLEY HOUSE,
VAUGHAN WAY, LEICESTER,
TEL. LEICESTER (0533) 531051

Issue No. 1

TECHNICAL INSTRUCTION

TITLE	INSPECTION OF UNIVERSAL JOINT AT FLAP/AIRBRAKE HANDLE FORWARD ATTACHMENT	T.I. No.	108/T65
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CLASSIFICATION: The CAA has classified this TI mandatory for all UK certificated T65A and D Vega gliders. Gliders other than those used for public transport or aerial work, do not require a certificate of airworthiness in the UK and no such certificate is currently in force on any of the relevant Vega types.

COMPLIANCE: Before further flight and at each annual unless Mod 16 fitted.

OBJECTIVE: To identify any damage to universal joint caused by mishandling.

JUSTIFICATION: Following an incident to T65A Vega Works No.1908 (BGA No.2497) where, during launch, one of the universal joint pivot pins sheared. The flap/airbrake handle then became detached from its forward mounting thus fully activating the airbrakes. Ref. Fig.1

APPLICABILITY: Slingsby T65A and D Vegas (Post Mod M06 and Post Mod M11), ie pre Mod M16 aircraft only.

ACTION: Visually inspect universal joint for: loose and deformed pivot pins, splayed jaws or any abnormal wear.

CONSEQUENTIAL LIMITATIONS: If there are any indications of the above defects, aircraft must not be flown until new universal joint is fitted or Mod M16 is incorporated. Refer Slingsby Aviation for details.

If original universal joint T65A-45-397 (modified Hookes Type 'O' Universal Joint Mollart Engineering, approx. 12mm outside dia) fitted or refitted, this T.I. to be carried out at each annual check, ref. Compliance Statement above.

To all BGA OWNERS
22/7/87

BRITISH GLIDING ASSOCIATION
KIMBERLEY HOUSE,
VAUGHAN WAY, LEICESTER,
TEL. LEICESTER (0533) 531051

21/7/87

ISSUED BY :	<i>B. Meller</i>	Date	6.7.87
for and on behalf of SLINGSBY AVIATION LTD. Kirkbymoorside, York YO6 6EZ England Tel 0751 32474 Telex 57597		Page	1 of 2

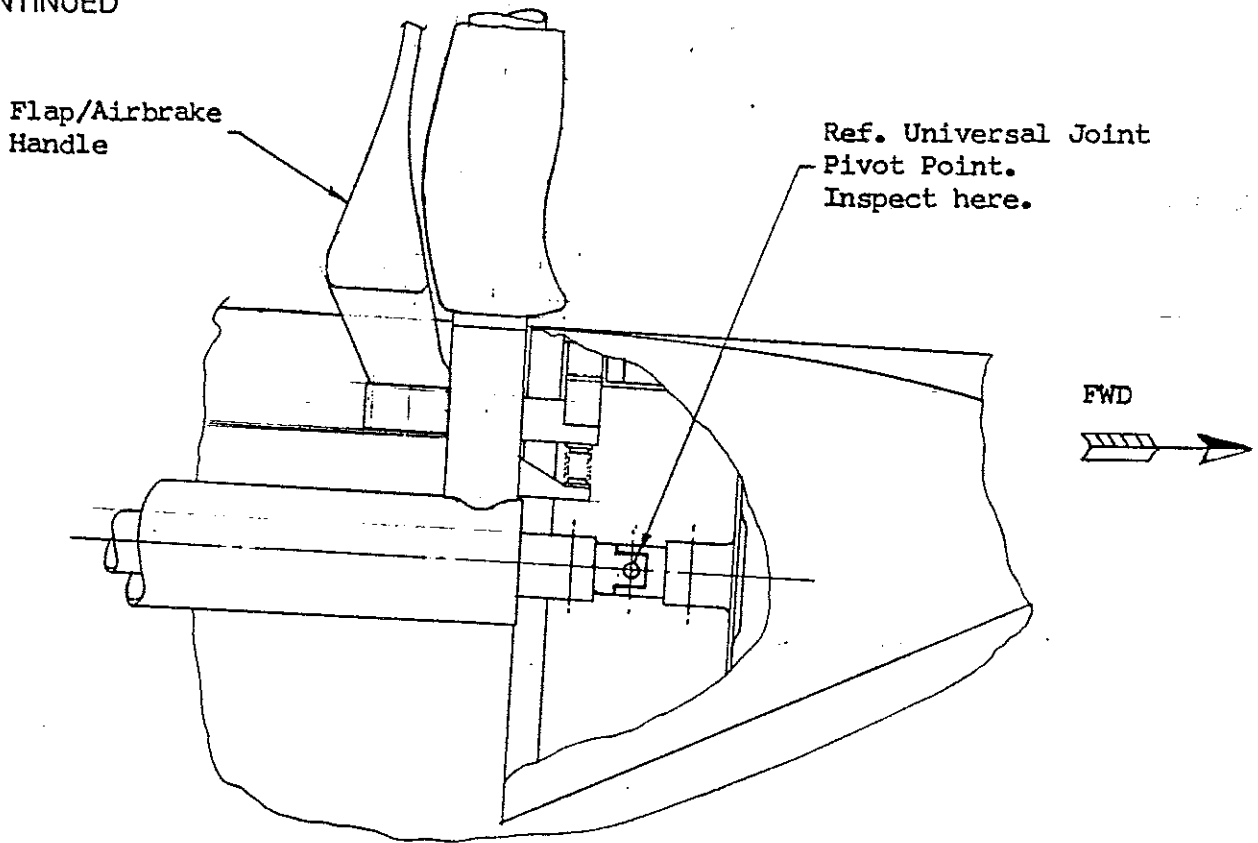
TECHNICAL INSTRUCTION

Issue No. 1

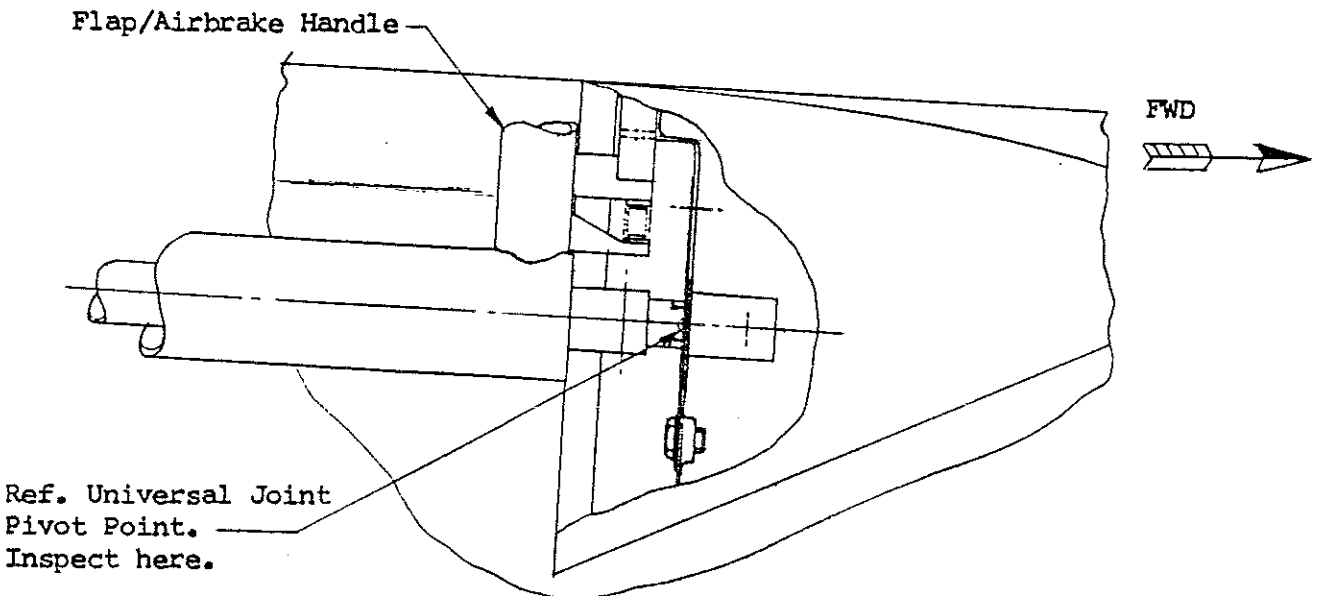
TITLE INSPECTION OF UNIVERSAL JOINT AT FLAP/AIRBRAKE HANDLE FORWARD ATTACHMENT

T.I. No. 108/T65

CONTINUED



POST MOD 06



POST MOD 11

FIG. 1

Subject: Inspection and exchange of the rudder pedal support fitting.

Affected gliders: All ASK 21 serial numbers 21001 thru 21312; as of serial number 21313 this is factory standard.

Compliance:

1. Check the rudder pedal support fitting prior to the next take-off.
2. If cracks are found in this fitting, it must be immediately exchanged for a new one. If cracks are not yet visible, the support fitting must be exchanged in any case by April 1, 1987.

Reason: On three ASK 21s which each have flown more than 1300 hours and more than 6000 take-offs respectively, this support fitting showed cracks or was broken (see Fig.1).

Action:

1. Order a new support fitting from the manufacturer; P/N 99.000.2174.
2. Remove the old support fitting; for this purpose the $\phi 4$ mm blind rivets must be drilled off.
3. Measure the position of the $\phi 4$ mm rivet holes on the removed fitting and transfer them accordingly onto the new fitting.
4. Install the new fitting and fix the upper pedal guide tube to the fitting using $\phi 5$ mm blind rivets.

Material & drawings: See drawing 99.000.2174.
2 (two) $\phi 5$ mm blind rivets, 8 mm long, made from aluminium alloy.

Mass and C.G.: Neglectable.

Notes: The exchange of the fittings can be accomplished by a qualified person. The accomplishment of the action must be certified in the glider logbook and in the inspection certificates by an aviation inspector holding an appropriate license.

Poppenhausen, October 22, 1986

**BRITISH GLIDING ASSOCIATION
KIMBERLEY HOUSE,
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TEL. LEICESTER (0533) 531051**

ALEXANDER SCHLEICHER
GmbH & Co.

L.-W. Juntow
L.-W. Juntow

The German original of this Technical Note has been approved by the LBA under the date of Oct.29, 1986 (signature: FRIEß). The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is controlling.

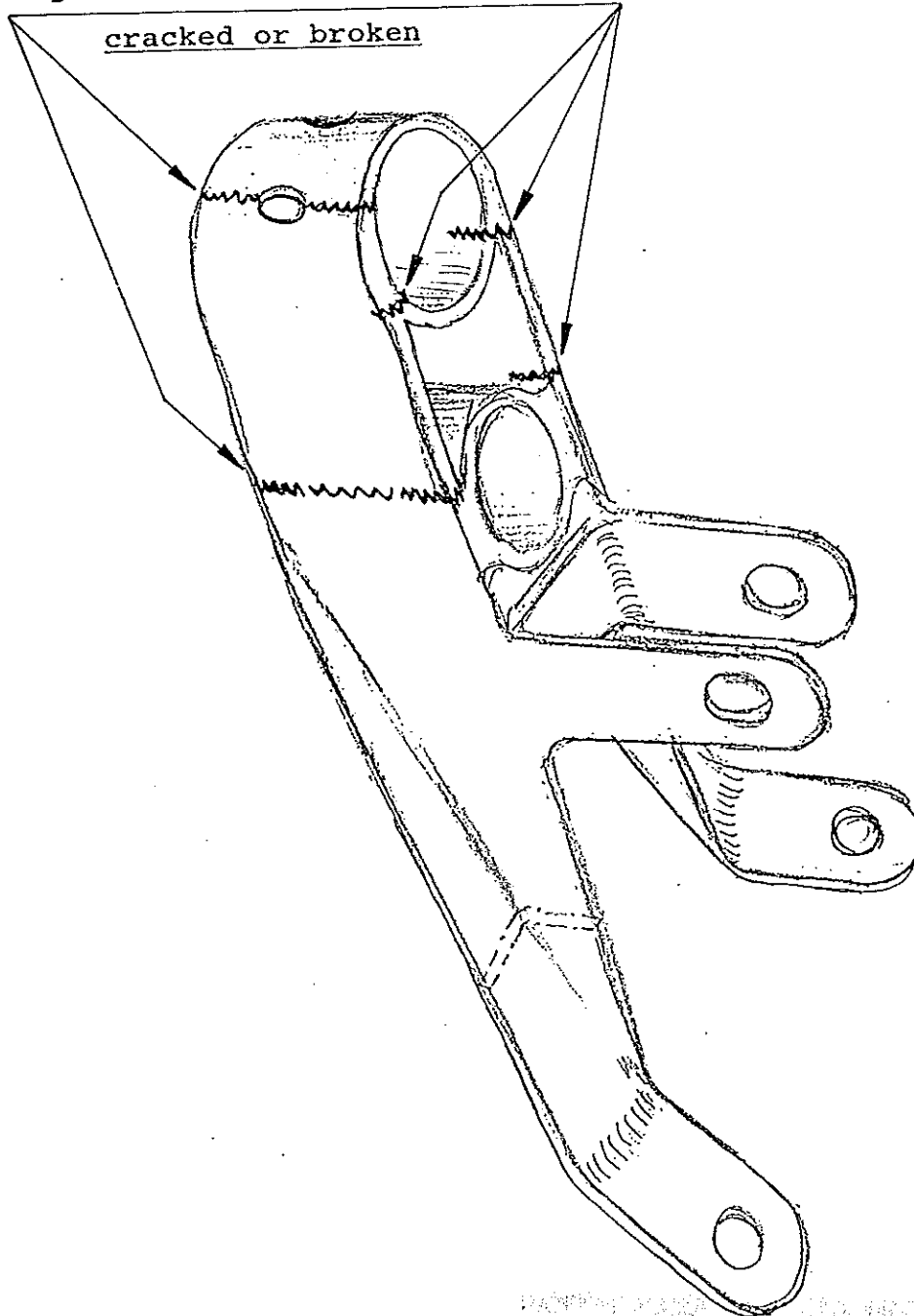
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Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres Inhalts nicht gestattet, soweit nicht ausdrücklich zugestanden.

Fig. 1

angerissen bzw. durchgebrochen

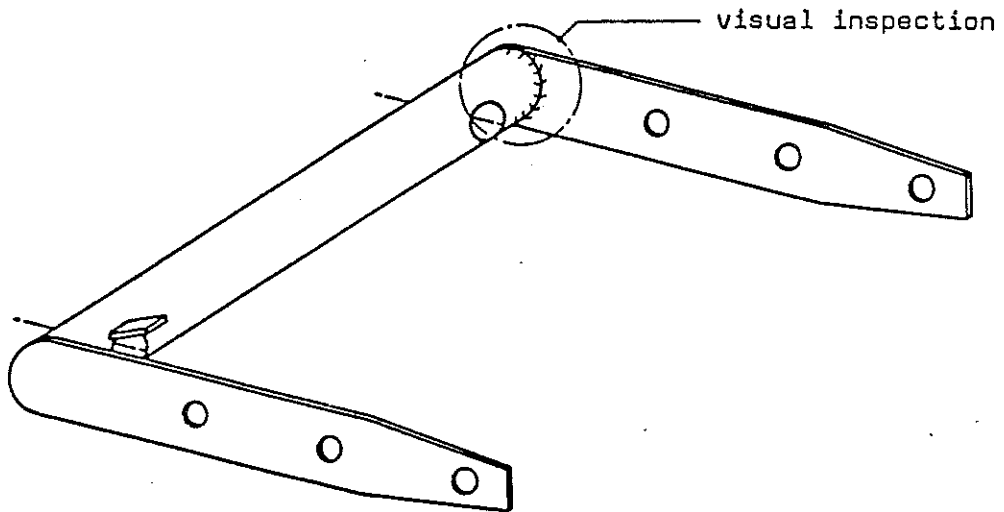
cracked or broken



DAUERHAFT VERBUNDEN
DURCH VERBUNDEN
AN DER STELLE DER VERBUNDEN
DURCH VERBUNDEN

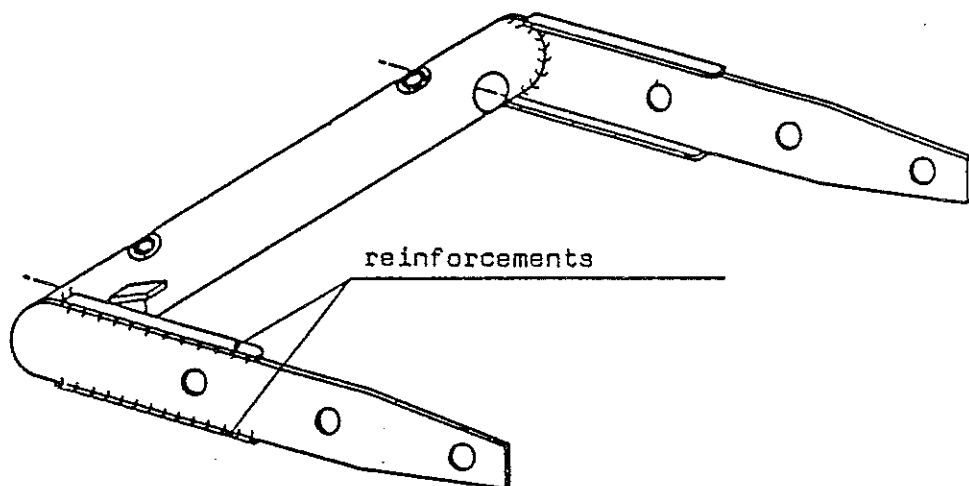
SKETCH 1

earlier type elevator drive bracket



SKETCH 2

reinforced elevator drive bracket



To all BGA OWNERS. 22/7/87

Subject : Elevator drive Ref BGA/TNS/12/85

Affected : Sailplane model "Mini-Nimbus 8",
(F.R.G. Type Certificate No. 328),
all serial numbers

Urgency : Action 1: Prior to every flight
Action 2: Not later than November 30th, 1987

Reason : Difficulties in the control of the sailplane were
encountered when an earlier type elevator drive
bracket broke on one side in flight.

Actions : 1. On sailplanes having an earlier type elevator drive
bracket according to sketch 1, a visual inspection
for possible cracks must be carried out while
twisting the two elevator halves against each other.

2. The earlier type elevator drive bracket must be
replaced by a reinforced bracket as shown in
sketch 2.
The installation must be done in accordance with
page No. HSS-30.055/1.

Weight : No change

C/G position : No change

Material : The reinforced elevator drive bracket, manufactured
according to

Drawing No.	Nomenclature
Nimbus-28, 30.055; incl. Modif. a	Elevator drive bracket

is available from the manufacturer of the sailplane.
BRITISH GLIDING ASSOCIATION
KIMBERLEY HOUSE,
VAUGHAN WAY, LEICESTER,
TEL. LEICESTER (0533) 53105.

21/7/87

Kirchheim/Teck, May 6th, 1987

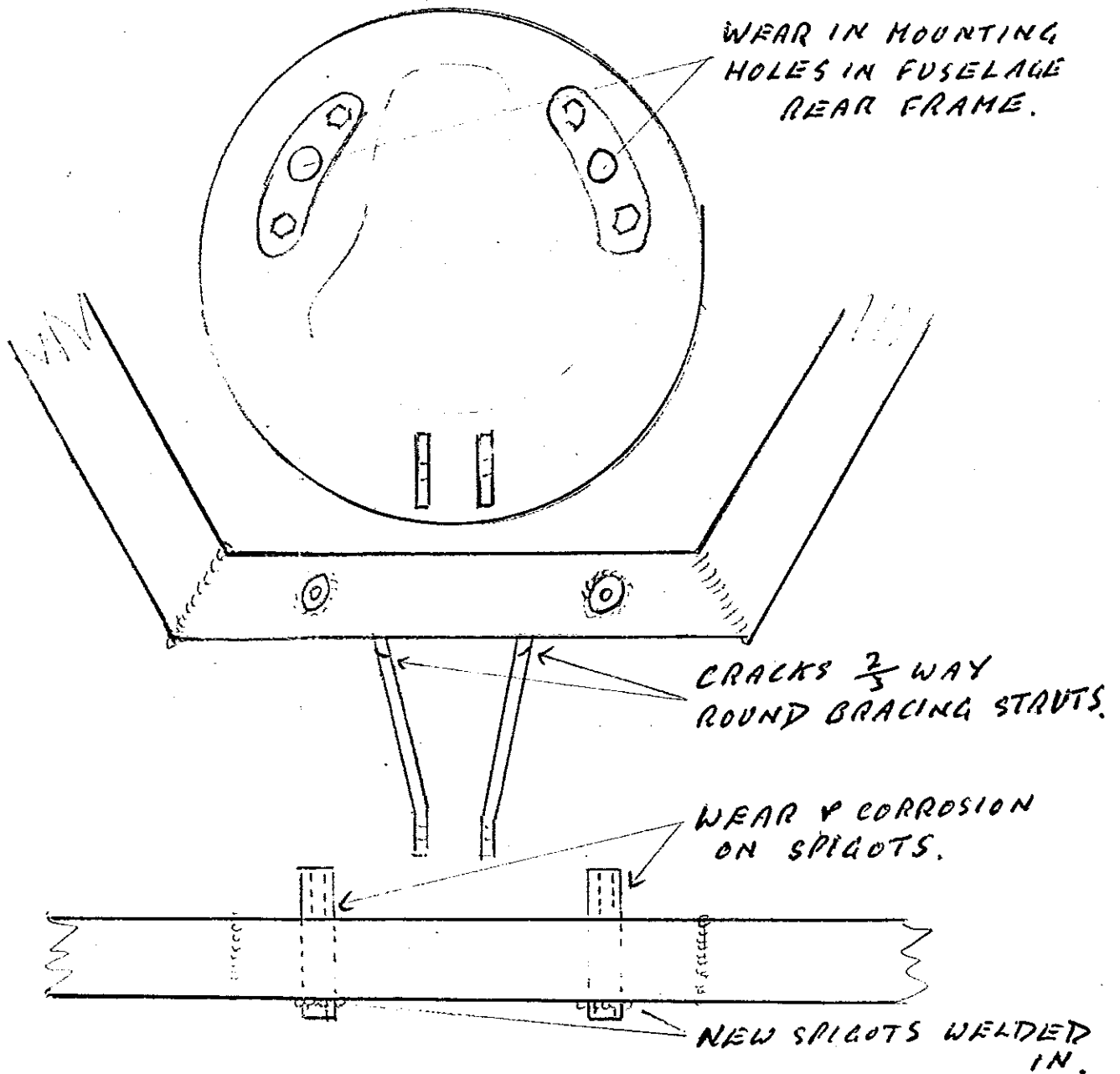
Issued: *H. Treiber*
(H. Treiber)

LBA-approved:

The German original of this Technical
Note has been approved by the LBA
under the date of *May 26, 1987*...
and is signed by Mr. *SKOV*...
The translation into English has been
done by best knowledge and judgement.
In any case of doubt the German
original is authoritative.

SHK. 1

SHK 1 WORKS/AB LOOSE RUDDER/ELEVATOR ASSY.



Excessive fore & aft movement noticed in elevators. When fairing was removed excessive movement found in mounting spigots and both bracing struts were cracked $\frac{2}{3}$ way through. New spigots .020" oversize fitted - fuselage plates & frame reamed to accept new spigots & bracing struts welded.

E.W. ROOM. WORDS GRINDING CLUB (OCKLINGTON).

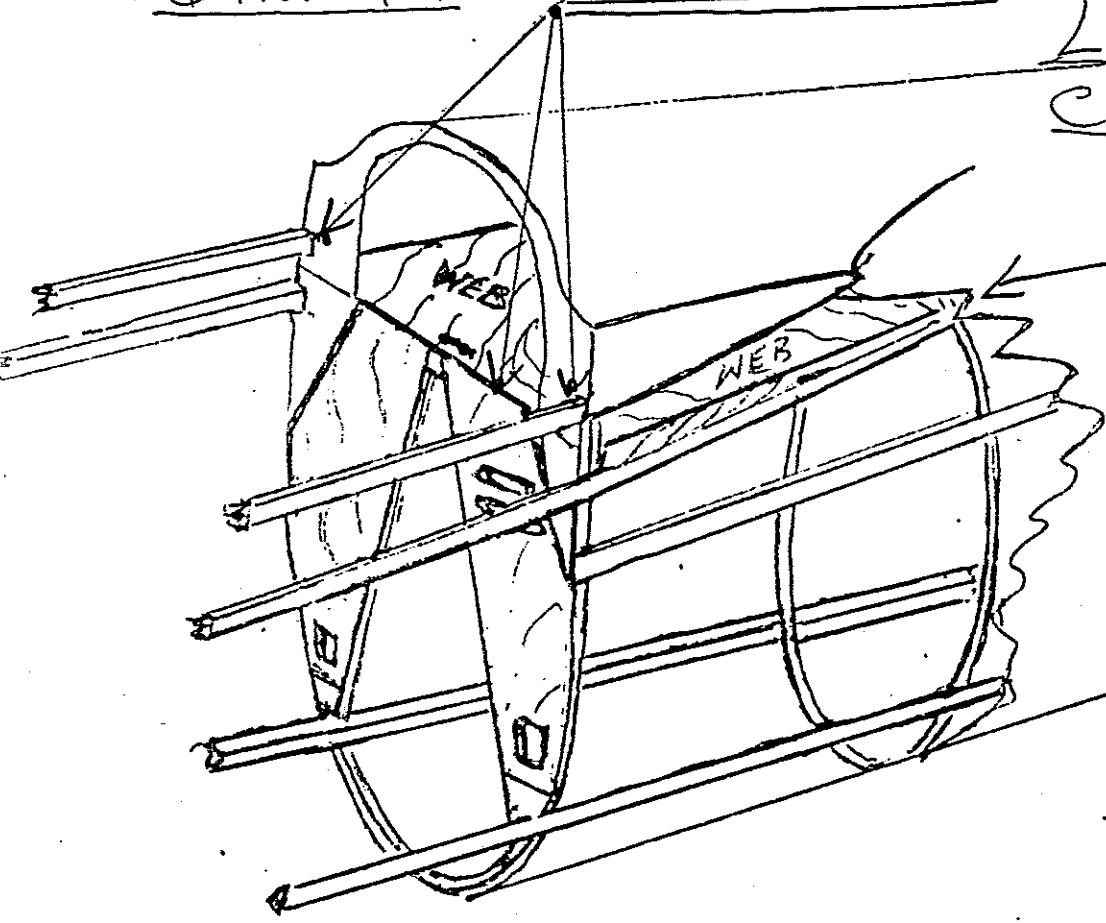
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DART ITR

INITIAL FAILURE POINTS.

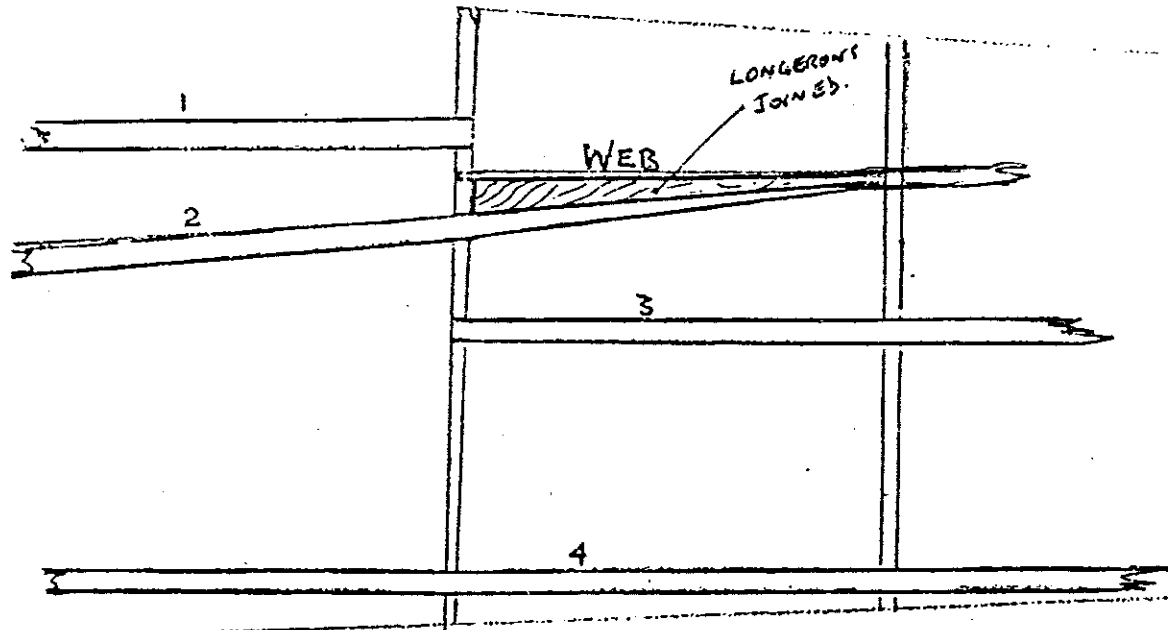
HEAVY
LANDING
Checks

CRACKS
Ref TNS/3/85



D. Martenson
Blackpool & Fylde G.C.
July 1987

LONGERONS' ARRANGEMENT



LONGERONS 1 & 3 - NON-CONTINUOUS.
" 2 & 4 - CONTINUOUS.

DART LONGERON
INSPECTION

APART FROM OUTER SKIN. INTEGRITY OF WEB TO FRAME TOP GLUING AND LONGERON "NOTCH" GLUING MUST BE SOUND. FAILURE IN TENSION COULD OCCUR.

884/TNS/7/87

Issue 7
October/November/December 1986

FOURNIER RF3 SERIES MOTOR GLIDERS AND FOURNIER RF6 SERIES AIRCRAFT

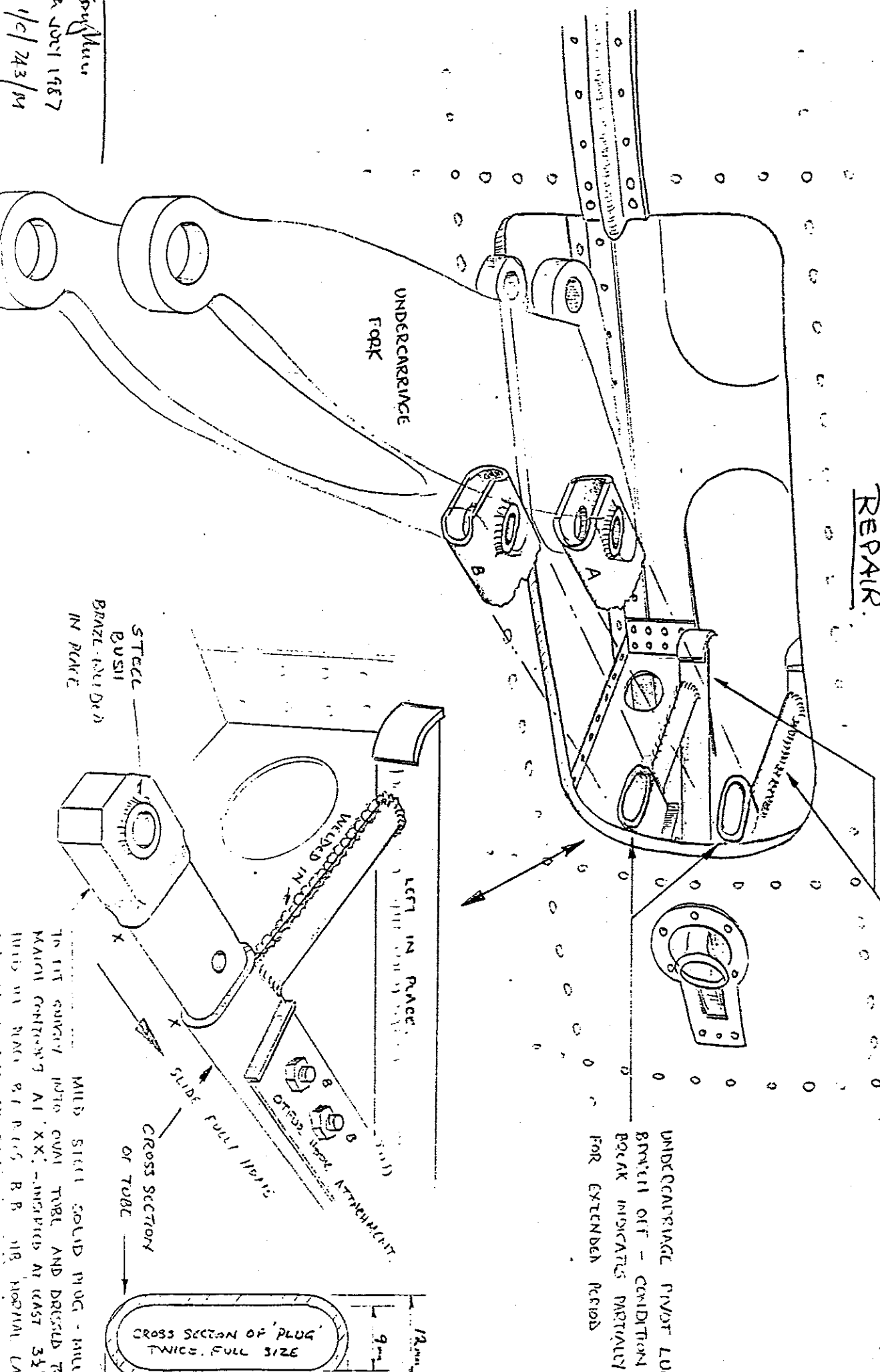
<u>CAA AD No</u>	<u>Associated Material</u>	<u>Description</u>	<u>Applicability - Compliance - Requirement</u>
<u>PART 1 - DIRECTION GENERALE DE L'AVIATION CIVILE AIRWORTHINESS DIRECTIVES</u>			
67-39-1		<u>Wing Skin</u> - Inspection for cracks and deterioration of glued joints.	Applicable to all RF3 Series aircraft. INSPECT the critical zone every 30 flight hours until modified in accordance with Service Bulletin Alpavia No 2.
79-234		<u>Fuselage</u> - Modification to the <u>fireproof bulkhead</u> - Inspection of a seal supporting plate.	Applicable to all RF6B-100 aircraft. Compliance required as detailed in AD. Fournier Aviation Service Bulletin No 3 also refers.
79-235		<u>Flight Controls</u> - Inspection and replacement of aileron control coupling rod.	Applicable to all RF6B-100 aircraft. Compliance required as detailed in AD. Fournier Aviation Service Bulletin No 2 also refers.
86-31		<u>Aircraft Structure and Flight Controls</u> - Inspection for corrosion of metal parts.	Applicable to all RF6B-100 and RF6B-120 aircraft. Compliance required as detailed in AD. Fournier circular dated 10.01.1986 also refers.
75-76		<u>Operating Limitations</u> - Normal category certification only.	Applicable to all RF3 Series aircraft. Install a plate in the cockpit on the wheel well with the following notice no later than 15 May 1975: U category operation and spins prohibited.

BLANK - BORDERS GLIDING CLUB - MILFIELD, SUGGESTED MOD/REPAIR
 FOLLOWING UNDERCARRIAGE CLEANSE AFTER NORMAL LANDING.

BRVA Lead.

BRVA Blank 1/1/8
 2.1718

BLANK UNDERCARRIAGE REPAIR.



17th JUNE 1987
 1/c/243/M

Longman

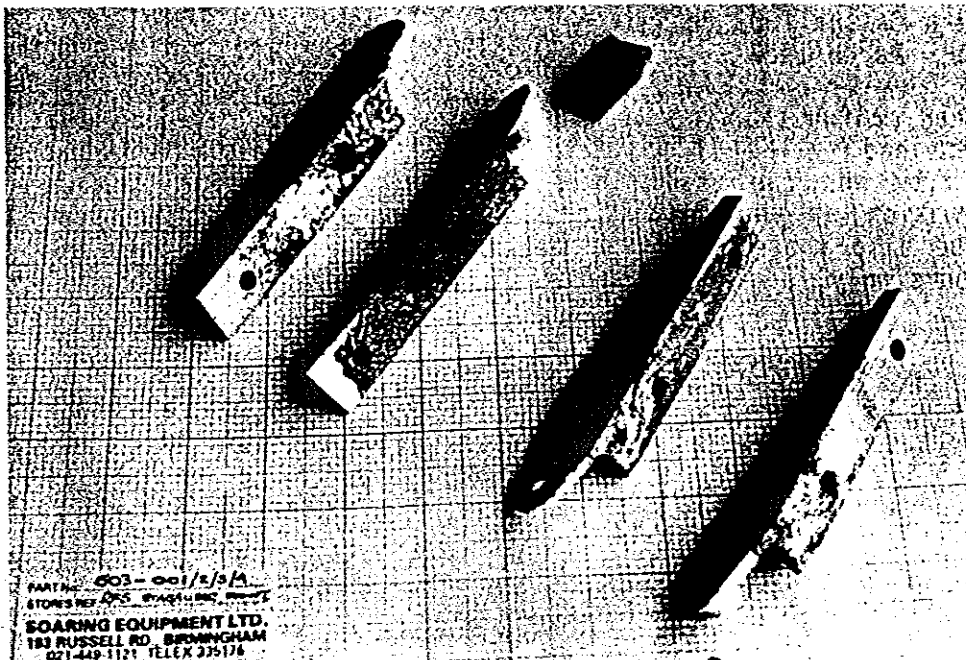
2. SEVERE TAILPLANE MOUNT BRACKET CORROSION

E

Aircraft : Fournier RF5
Date : February 1987

Severe layer type inter-crystalline corrosion was found on all four attachment brackets, one of which has been so badly affected as to reduce the web thickness of the alloy extrusion from 3mm to 1mm, with substantial pieces detached. The Part Nos are 503-001, 002, 003 and 004. It should be noted that only a part of the bracket can be seen even when the tailplane is removed and access must be gained to enable the extrusion within the tailplane to be checked. The worst corrosion is on the face in contact with the wood. The reporter strongly suggests that the parts be removed and inspected for corrosion, as a visual inspection without disassembly may not show the problem. Two similar cases have been reported previously and a Service Bulletin S-01-85 was sent to all RF5 owners on the UK Register in October 1986 by Soaring Equipment Limited.

The most recently found case was on a 4100 hour aircraft manufactured in 1970 which had flown 82 hours since its last annual inspection in April 1986.



CAA Comment:

All owners should check for this serious fault. The tailplane attachment brackets on the RF4 and RF5B should be of steel and therefore not affected by this problem.

3. PROPELLER BLADE LINK PIN CAME OUT

E

Aircraft : Beech 90 King Air
Date : March 1987

During ground engine runs following installation of two propellers (Hartzell 118F133A) vibration and engine rocking occurred on the left-hand engine when the power lever was pulled back to ground idle. An emergency shutdown was carried out. Inspection of the propeller revealed that the No 2 blade link pin had come out due to failure of the locking plate retaining screw. Rectification action was taken by the overhaul agents and all safety screws 501A10-6 were renewed.

During subsequent ground runs the same failure occurred again. On this occasion further inspection established that failure of the retaining screw was because it had been struck by the weight retaining slug, Part No A3039 which had been assembled the wrong way round.

5. PAIN STRIPPER

E

When a Trislander aircraft was dismantled after an accident, significant corrosion was found on many internal surfaces, particularly in the area of the wing/fuselage intersection. Although in this case the corrosion only affected secondary structure, it may not have been noticed during routine maintenance as it was almost totally obscured when the wing was mounted in position on the fuselage. The corrosion was not a contributory factor in the accident.

It was subsequently discovered that the 16 year old, 13000 hour aircraft had at some time been stripped of paint and it is considered likely that liberal application of paint stripper may have resulted in these inaccessible areas becoming contaminated by the fluid. This could have damaged the protective paint, leaving areas of structure exposed and vulnerable to corrosion. Additionally, while paint stripper is designed not to be corrosive during normal application, the long term effect of its presence on light alloy surfaces are less certain.

Clearly the effect of paint stripper induced corrosion in areas where it may not be detected for a long time, if at all, could be far more severe. Extreme care should therefore be taken during the application of paint stripper, to ensure that it is not allowed to penetrate areas of structure which cannot be readily cleaned and where consequent damage may not be detected. The following CAA publications refer:

- Civil Aircraft Inspection Procedures (CAIP No. BL/6-20) "Paint Finishing of Metal Aircraft" (Section 11)
- Airworthiness Notice No 12 Appendix 22, "Painting of Aircraft".

6. WING CORROSION

E

Aircraft : Socata TB10 Tobago (TB9 Tampico also applicable)
Date : March 1987

During the annual inspection, exfoliation corrosion was discovered in several areas of the main wing spars. The worst areas were on the lower rear radius located in and up to 12" outboard of the landing gear bays. Sections of spar about 6 feet long are not inspectable and agreement is being obtained to fit an additional inspection panel in each wing. Furthermore one rib in the left wing was corroded beyond repair. Corrosion was in the vicinity of the lower inboard landing gear attachment nut plates. The 1979 aircraft had flown 1116 hours.

CAA Comment:
The CAA is investigating.

7. ENGINE FAULT NOT DETECTED BY COMPRESSION CHECK

E

Aircraft : Britten Norman BN2A Islander
Date : April 1987
Engine : Lycoming O-540

The aircraft was on a 500 hour inspection for C of A renewal and a pre-check ground run was made during which the following compression readings were taken on the left-hand engine, No 1 71/80, No 2 72/80, No 3 78/80, No 4 77/80, No 5 76/80, No 6 76/80. When the oil pressure filter was removed and inspected, a small amount of ferrous metal was apparent. Further investigation revealed that the left-hand magneto bearing cage had broken up. From experience, it was decided to remove the cylinders to inspect the cam shaft and cam followers for damage.

When the cylinders were removed, it was found that the number 1 piston top ring had completely disappeared and the number 2 piston had only one tenth of the top ring remaining and both piston ring lands were badly damaged or worn. It was decided to carry out a top overhaul.

The reporter is very concerned that the compression check did not warrant cylinder removal. The engine had flown 1618 hours since overhaul with 18 since inspection.

13. LIVE MAGNETOS

P/E

PIPER PA-18 TRGS,

Aircraft : Piper High Wing
Date : February 1987

The aircraft does not have a starter and is therefore hand swung. The normal procedure is to prime the engine, then turn by hand approximately four turns, switch the mags to ON whereupon it normally fires at the first swing of the prop.

The pilot owner of the aircraft was pulling the engine through with the magneto switch in the OFF position when the engine fired. Fortunately he was doing it properly and was not struck by the propeller.

Investigation revealed that the switch can be moved slightly (less than 1/16th") beyond the OFF position to open the magneto circuit, thus allowing both magnetos to become live. The switch appeared to be in as new condition and identical to the item illustrated in Airworthiness Directive 50-04-01 except that the type fitted to the aircraft in question is an AC Type A-9, where the AD details AAF Type A8. The switch fitting is engraved AC Type A9 and between OFF and L it is engraved BAT. The lever is a formed metal type as described in FAA AD50-04-01. The 1952 aircraft had flown 2777 hours.

CAA Comment:

As we have said many times previously, propellers should always be treated as live and the above incident, which had a happy ending, is a good illustration of the need for this. This event also illustrates the importance of old AD's. It would appear that anyone who has a Briggs & Stratton or Sisco magneto switch in their aircraft should if necessary fit a new switch. In fact it would be a good idea, if the switches on all aircraft were checked for serviceability.

See also two items at the end of this issue on ignition switches from FAA ALERTS.

Repeat TWS/7/8/85

9/97/268A

CIVIL AVIATION AUTHORITY

AUTHORISATION

The Civil Aviation Authority, in exercise of its powers under Article 10(6) of the Air Navigation Order(1980), as amended, hereby authorises:-

Holders of appropriately type rated Pilots Licenses

to issue Certificates of Release to Service (C.R.S.) in respect of F.A.A. Airworthiness Directives 60-10-08 and 68-05-01 concerning Piper PA 18 Series aircraft,subject to the following conditions:-

- 1. The signatories for C.R.S. shall be nominated by the Chief Technical Officer of the British Gliding Association (B.G.A.) and shall be the owners or operators of the subject aircraft engaged in glider towing for the B.G.A.
 - 2. Copies of the Airworthiness Directives shall be available to the individuals authorised.
 - 3. The signatories for C.R.S. shall quote their Pilots Licence number followed by the reference of this Authorisation, 9/97/268A at each certification.
 - 4. The Airworthiness Directives shall be re-certified by a Licenced or Approved engineer at each 150 hour Check.
- This Authorisation shall have effect from 28th August 1985.



Signed:
R C WILLIAMS

for the Civil Aviation Authority

Date: 28 AUGUST 1985

PA-18 - Fuel Selectors

60-10-08 PIPER: Amdt. 149 Part 507 Federal Register May 13, 1960. Applies to All PA-22, PA-20, PA-18 Airplanes Equipped With Two Wing Tanks.

Compliance required prior to July 15, 1960, and every 100 hours' time in service thereafter.

Several accidents have occurred involving engine fuel starvation attributed to a lack of detent action in the fuel selector valve (P/N 11383), causing the pilot to position the selector improperly.

If the detent pin in the valve shaft is improperly centered or if the spring retaining washer is installed upside down, the pin will not engage the slotted detent washer. Therefore, the fuel selector valve in the above listed models must be thoroughly cycled to determine whether or not detent engagement is positive. There should be four distinct detents in one complete cycle. If detent engagement is not positive, the valve must be replaced prior to further flight.

Also, determine if the position of the fuel valve handle at detent engagement coincides with the proper markings on the indicator plate. If the handle does not coincide with the markings, the plate must be repositioned accordingly. (Piper Service Bulletin No. 141 covers this subject.)

EXHAUST SYSTEM. PA-18 Cub.

68-05-01 PIPER: Amdt. 39-726. Applies to Piper J3, J4, J5, PA-11, PA-12, PA-14, PA-15, PA-16, PA-17, PA-18, PA-19, PA-20, PA-22, and PA-24 type airplanes, except PA-24-400 and PA-24-260 aircraft serial numbers 24-4783, 24-4804 and subsequent.

Compliance required as indicated.

(a) For all airplanes except Models J3, J4, J5, PA-11 and those referenced in paragraphs (i) and (j), which have exhaust mufflers with 950 or more hours time in service on the effective date of this AD, comply with paragraph (e) within the next 50 hours time in service and thereafter at intervals not to exceed 50 hours time in service from the last inspection.

(b) For all airplanes except Models J3, J4, J5, PA-11 and those referenced in paragraphs (i) and (j), which have exhaust mufflers with less than 950 hours time in service on the effective date of this AD, comply with paragraph (e) within the next 50 hours time in service, and thereafter at intervals not to exceed 100 hours time in service from the last inspection. After the exhaust muffler has accumulated 950 hours time in service, comply with the inspection requirements of paragraph (a).

(c) For all Models J3, J4, J5, and PA-11 airplanes which have exhaust mufflers with 950 or more hours' time in service on the effective date of this AD, comply with paragraph (e) within the next 50 hours' time in service and thereafter at intervals not to exceed 50 hours time in service from the last inspection.

(d) For all Models J3, J4, J5, and PA-11 airplanes which have exhaust mufflers with less than 950 hours' time in service on the effective date of this AD, comply with paragraph (e) prior to the accumulation of 1000 hours' time in service and thereafter at intervals not to exceed 50 hours' time in service.

(e) Inspect in accordance with paragraph (f), and paragraph (g) if applicable, the engine exhaust muffler and shroud assembly (including the internal baffle tube and tail pipe), carburetor heat shroud and air duct, support braces, clamps and brackets, exhaust stacks and manifolds. Do not alter those mufflers incorporating an internal baffle tube to remove the tube without prior FAA approval.

(Piper Service Letter No. 324B describes the critical areas.)

(f) Remove muffler assembly, disconnect air ducts, stacks, and shrouds as necessary, and visually inspect exterior and interior surfaces with a probe light and mirror for signs of cracks, corrosion, burn-throughs, heat damage, collapsed stack, or weld separations. For carburetor type engines, special attention should

50 HRS - PA-18's. EXHAUST SYSTEM INSPECTION.

P.T.O →

be given to the exhaust stack under the carburetor heat shroud. Except during the initial inspection, the muffler need not be removed from the airplane, provided visual inspection with probe light and mirror is made through the muffler tail pipe outlet and one end of the muffler at the stack connection.

(g) If the inspection specified in paragraph (f) shows that the exhaust stacks and internal baffle tube are in good condition, but there are areas inside the muffler which cannot be adequately inspected with a probe light and mirror, accomplish one of the following:

(1) Accomplish a submerged pressure check of the muffler and exhaust stack at 10 psi air pressure.

(2) Conduct a ground test using a carbon monoxide indicator by heading the airplane into the wind, warming the engine on the ground, advancing the throttle to full static r.p.m. with cabin heat valves open, and taking readings of the heated airstream inside the cabin at each outlet (including rear seat heat outlet, if installed). Appropriate sampling procedures applicable to the particular indicator must be followed. If carbon monoxide concentration exceeds .005 percent or if a dangerous reading is obtained on an indicator not calibrated in percentages, inspect in accordance with (f), and perform a submerged pressure check of the muffler and exhaust stack at 10 psi air pressure before further flight.

(3) Close and secure cabin heat valves at the firewall until a complete muffler inspection in accordance with paragraph (f) is accomplished.

(h) Replace or repair parts found to have the defects listed in paragraph (f) before further flight, and thereafter comply with the inspection requirements of paragraph (b) or (d), whichever is applicable. Make welding repairs in accordance with Advisory Circular AC 43.13-1 or an FAA-approved equivalent. Pressure-check mufflers and stacks that are repair-welded before reinstallation. (Care should be exercised when reinstalling the exhaust system components to prevent distortion or preloading of parts.)

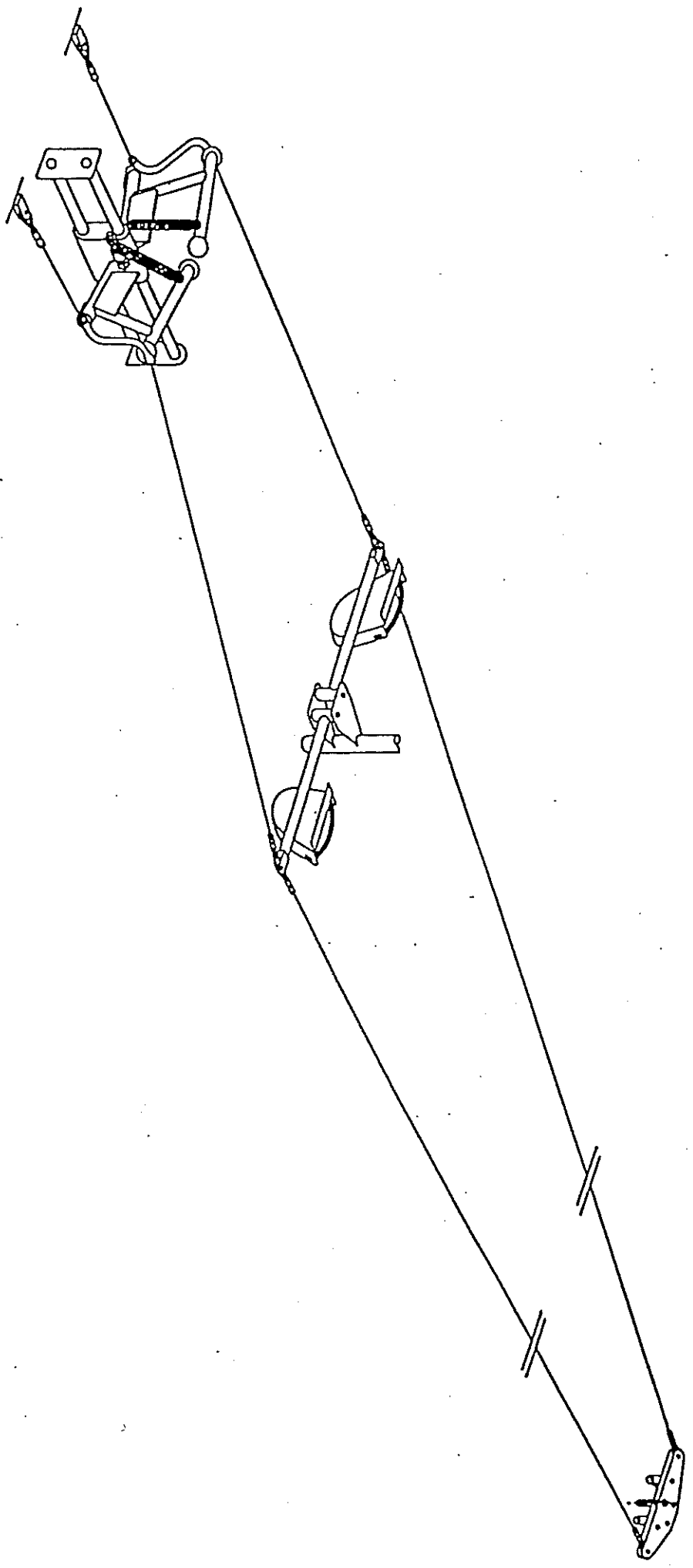
(i) The repetitive inspection of paragraph (a) and (b) may be discontinued when hollow muffler P/N 24506 or P/N 26385 is installed on Model PA-24 aircraft; and on Model PA-24-250 aircraft when installed in combination with muffler support Kit. No. 756775 (Service Letter No. 412A) or Kit No. 757058 (Service Letter No. 481) as applicable, or an equivalent modification approved by the Chief, Engineering and Manufacturing Branch, FAA, Eastern Region.

(j) For applicable PA-24-260 airplanes, the repetitive inspections of paragraph (b) must be accomplished at 50 hour intervals in lieu of 100 hour intervals until a barrier device is installed in each muffler in accordance with Piper Service Letter No. 518 or an equivalent modification approved by the Chief, Engineering and Manufacturing Branch, FAA, Eastern Region. Upon installation of the barrier devices, the repetitive inspections of paragraph (a) and (b) may be discontinued. (Piper Service Letters Nos. 324B, 324C, 412A, 481 and 518 cover this same subject.)

Effective March 31, 1968.

Revised March 5, 1969.

JANUS C



RUDDER CONTROL IN THE FUSELAGE

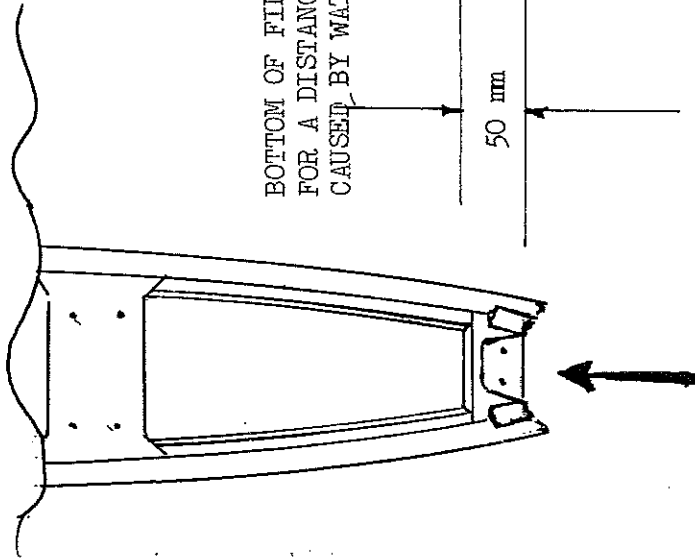
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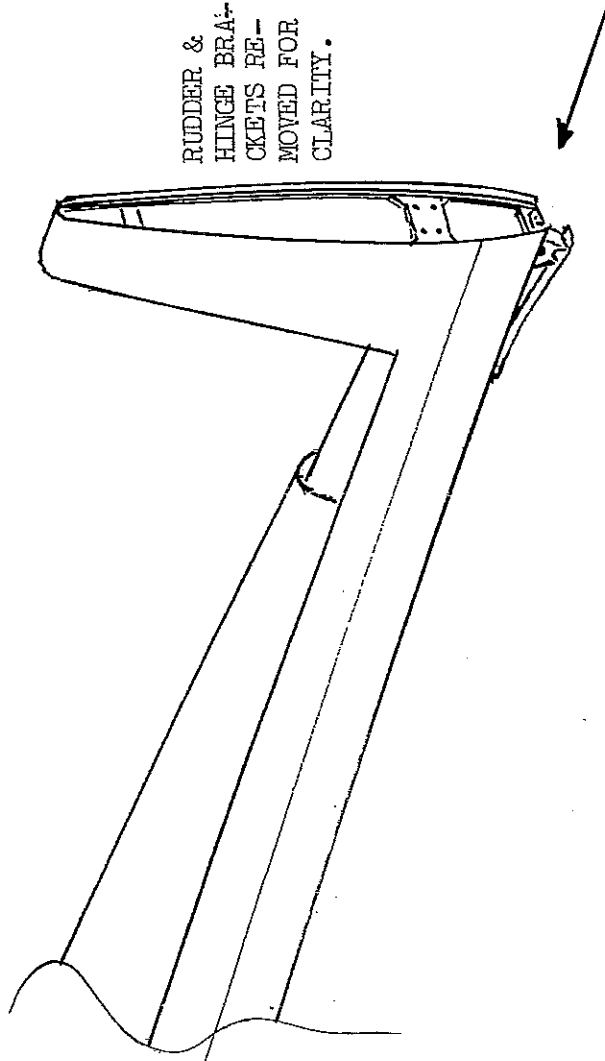
HPS. 6000

Lchs. 34500



BOTTOM OF FIN POST ROTTON
 FOR A DISTANCE OF 50mm
 CAUSED BY WATER INGRESS

50 mm



RUDDER &
 HINGE BRACKET
 SLEETS RE-
 MOVED FOR
 CLARITY.

STRATFORD-ON-AVON R.C.