

BRITISH GLIDING ASSOCIATION

TECHNICAL COMMITTEE

TNS 11/12/80

1. AIRWORTHINESS "AGGRO" (These items will be included in the 1981 list)
 - 1.1. Bocian IE Lower Rudder Attachment Bracket Fractured, at bolt hole on rudder spar. Replaced in 14 swg mild steel - Report by Colin Golding. Borders G.C.
 - 1.2. Standard Cirrus (Serial NO's as listed in Tech Note 278-25 herewith) Elevator Drive - outer race of the lower ball bearing on the elevator drive may be "broken". Replace at Annual Inspection.
 - 1.3. Standard Cirrus (Serial NO's as listed in Tech Note 278-26 herewith) Attachment of the elevator (T-fitting). Inspect for cracks in the welded joint of the pins. Repeat at 300 hr intervals.
 - 1.4. Hornet C. Glasflugel AD/80-221 requires modification to aileron mass balance. "Maximum permitted water ballast is restricted to 90 kg until Tech. Note 206-9 is complied with. (Mailed to owners 7/10/80 copy herewith).
 - 1.5. KA-7 Rudder Pedals Loose. Derby & Lancs modification Ref. BGA/K7/1/80 herewith provides an acceptable "fix" to a recurring problem.
 - 1.6. Standard Libelle and Libelle 201B. Elevator linkage at base of the stick - cracked. Tech Note 201-22 (herewith) applies to serial NO's 1-476 and requires replacement. (Mailed to owners).
 - 1.7. Diamant 16.5/18M. Restrictions imposed by F.A.A. A/D 80-18-09 do not apply if F.F.A. Service Bulletins 07 and 08 are complied with. (Mailed to owners 30/9/80).
 - 1.8. Canopy Locking Problems:
 1. VTC Cirrus. Canopy came adrift on winch launch when signalling "Too Fast". MOD BGA/VTC Cirrus/1/80 devised by P.R. Philpot, Blackpool & Fylde G.C. may be incorporated (sketch attached).
 2. Vega (T.65) Screws became loose in catch assembly on canopy structure; canopy unlocked during launch. (Reported by RAFGSA, Bicester).
 - 1.9. Nimbus 2 Series. C.G. Towing Hook. Tech Note 286-14 requires replacement of "S-72" type hooks by "Europa G-72" type hook. (copy herewith).

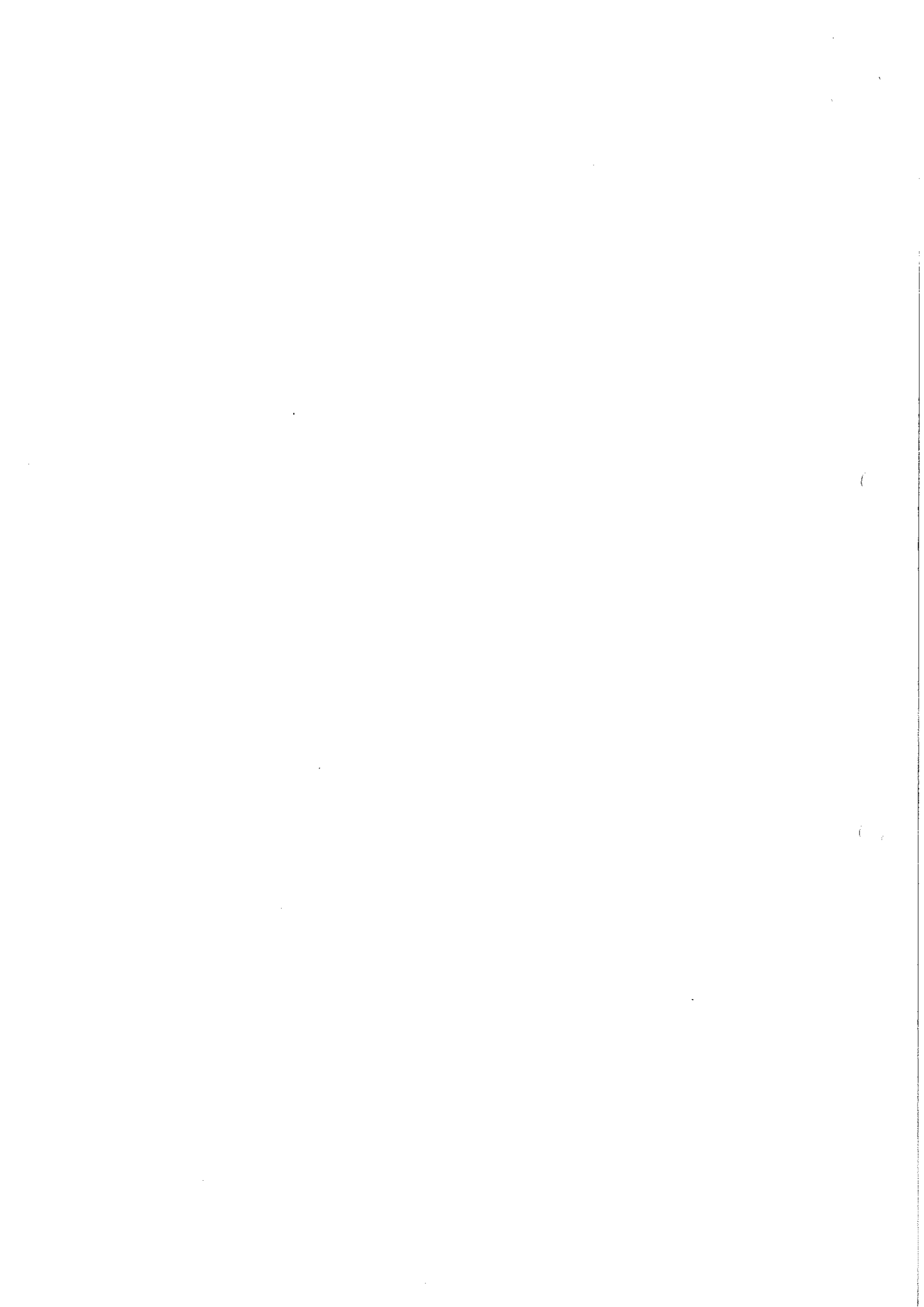
- 1.10. Water Ingress into spars (Falke/Super Falke etc.)
Gliders/Motor Gliders stored out of doors or on open trailers may suffer expensive damage due to water penetrating into wing roots or air brakes, and causing delamination (Ref. also G.A.S.I.L. 11/80)
- 1.11. Cirrus VTC - Undercarriage collapse.
Undercarriage operating cable found to be stretched allowing gear to collapse on landing. (Reported by P. Philpot, Blackpool and Fylde G.C.)
- 1.12. T61 Series/SF25B & E Motor Gliders. Fatal accident in Finland. Inspection of Wing Root fittings for ovality and main pin for correct length. (Slingsby Tech Note 94 and CAA letter to operators No. 345, attached herewith).
- 1.13. Slingsby T.65A. T.65D "Vega". T.l. No 95 has been issued to eliminate the speed restriction imposed due to "AILERON/WING VIBRATION" (T1.92) Ailerons have to be balanced in accordance with T1.95, (made mandatory by C.A.A.) Copies from Slingsby Engineering Limited.

2. GENERAL INFORMATION

- 2.1. Kestrel Modification No 11 (T1. No.49) introduces. Sealing of flap and aileron gaps to improve performance - copies from S.E.Ltd.
- 2.2. VHF Radio Transmitters in the Band 118-136 MHz C.A.A. Notice No. 91 (herewith) spells out the I.C.A.O. requirement for frequency accuracy of 0.003%.
- 2.3. PIK 20E. Revised electrical system has been introduced to reduce the static electrical load, and thereby extend the capacity of the battery during flight, by "off-loading" certain relays. Service letter H 2SE - 1A refers.
- 2.4. KA-13 - modification to introduce roller on front skid. Ken Allington, Buckminster G.C. has innovated a roller assembly for runway use.
- 2.5. Second-Hand (Imported) Gliders.
KA-2 wing has been found to incorporate unorthodox repairs prior to importation. Whereas foreign export Cs. of A. or other forms of airworthiness documentation should be produced when applying for B.G.A. Certification, such repairs may not be recorded in log books.

3. TUGS

- 3.1. C. of A. Renewals (3 years) LAMS "Star" Inspections.
 - a) Some renewals become due in 1981, under the revised CAA/BCAR A8-15 procedures.
 - b) CAIP Leaflet BL1-15 defines the requirements for "Star" Inspections and is required reading if you wish to avoid rip-off! (from BGA office price 25p)



c) Tug Managers/Owners/Operators should take action now to meet the new requirements.

3.2. Management of Fuel Installations at Aerodromes. Article 76A of the AIR NAVIGATION ORDER may apply, if you retail fuel at your pumps. (Copy attached herewith).

3.3. Carb-Icing. Tests with BGA "Airedale" confirm that the increased volatility of winter grade motor spirit, reduces the choke temperature by a further 7° C and increased vigilance is required to detect the onset of carb-icing (power loss) at any throttle setting.

3.4. Extracts from General Aviation Safety Instruction Leaflet 11/80 Attached.

(a) Aileron structure unglued (applicable all wooden aircraft and gliders). Prevent water soakage of structures.

(b) Winter Flying - precautions.

(c) Oil line failures - Citabria.

(d) IAMS schedules - "R" licence signatures no longer required for simple VHF COMM systems.

(e) Crankcase breather blocked by unorthodox modification.

4. 1981 PRICE LIST

Annual Fee	£8.50
G.A.I.P. Leaflets	£8.50
Forms 267	£3.05
Standard repairs to Gliders	£2.80
Notes for Motor Glider	
Instructors	.90p
Technical Procedure Manual	.90p
Technical Procedure Manual (T)	.90p
Winch and Auto Tow Equipment	.90p
Tug Managers Advisory Package	.90p

5. 1981 INSPECTORS LIST

Being compiled - last chance to renew your inspection approval.

HAPPY CHRISTMAS AND NEW YEAR

R.B. STRATTON

C.T.O.

SUBJECT : Elevator drive.

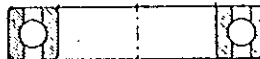
EFFECTIVITY : Sailplane Standard Cirrus, T.C.No. 278, G 23 EU,
G - 88, IM - 64
Serial Nos.: 21, 23, 27, 30, 32 to 34, 36 to 52,
54 to 120.

ACCOMPLISHMENT : At the next annual inspection or until
December 31, 1980 at latest.

REASON : In some cases the outer race of the lower ball
bearing on the elevator drive fitting is broken.

ACTIONS : 1. Check which type of a lower ball bearing is
installed on the elevator drive fitting (see
Service Manual page 20, part No. 3 a) :

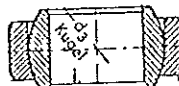
(a) ball bearing EL 6



(b) ball bearing, self-aligning



(c) hinge bearing



If one of the bearings (b) or (c) is installed,
the following action 2. must not be carried out.

2. Replace the lower ball bearing EL 6 (a) by a
bearing ring with inner bronze bushing in
accord with the drawing
Standard Cirrus No. HS 4 - 30.013/1.

MATERIAL : One bearing ring with bronze bushing.

Supplier: Schempp-Hirth GmbH & Co KG
Krebenstrasse 25
7312 Kirchheim-Teck, West Germany

WEIGHT : No change.

C.G. POSITION : No change.

Kirchheim-Teck, September 17, 1980

Signature :
(Treiber)

LBA - approved:

September 24, 1980

SUBJECT : Attachment of the elevator (T-fitting)

EFFECTIVITY : Sailplane Standard Cirrus, T.C.No. 278, G 23 EU,
G - 88, IM - 64

Variant Standard Cirrus

Serial Nos.: 1 to 397, 399 to 572, 574 to 585,
587 to 592, 594, 596, 600.

Variant Standard Cirrus B - Serial No.: 398

ACCOMPLISHMENT : At the next annual inspection or until
December 31, 1980 at latest.

REASON : On some sailplanes fine cracks in the welded joint
of the pins on the elevator attachment T-fitting
were observed.

ACTIONS : 1. Inspect the welded joint of the pins on the
T-fitting (see Service Manual page 20, part 1 a)
as follows :
Put a sleeve tube with 10 mm inner diameter onto
the pins, apply force in span direction and at
the same time inspect the welded joint of the
pins for fine cracks using an at least
five-fold magnifying lens.

2. If fine cracks in the welded joint should be
observed, rework the welding utilizing
electric arc welding.

3. Service Manual

Supplementary to Section "Prescribed periodic
maintenance" of page 30 :

Page 30 a

"After every 300 flying hours the following
actions of the Technical Note No. 278 - 26
must be carried out again :

1. See above text

2. See above text"

3. *If it should occur again ask the manufacturer.*

MATERIAL : Arc welding electrodes for low carbon steel
(not heat-treated after welding).

WEIGHT AND

C.G. POSITION : No change.

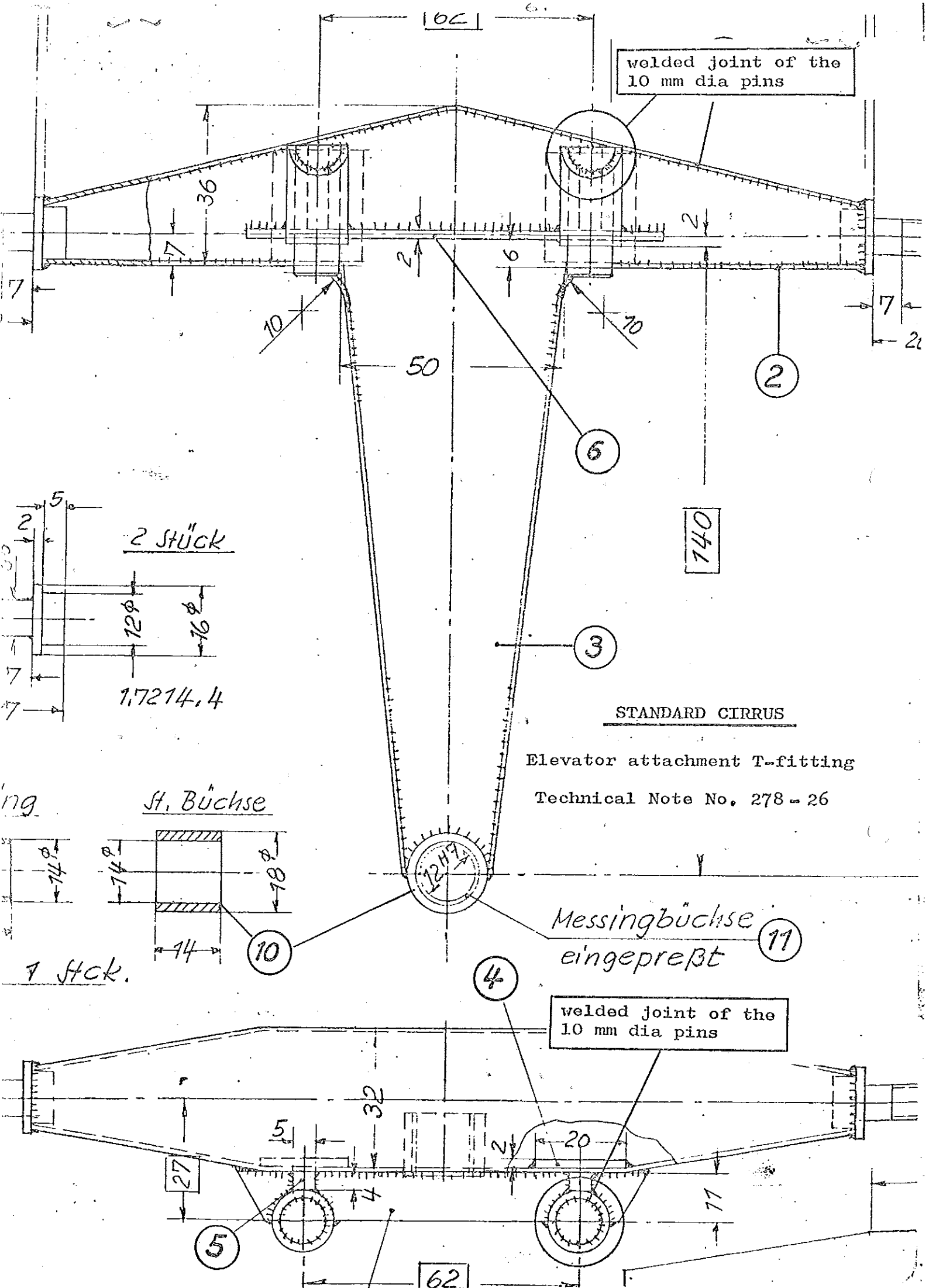
Kirchheim-Teck, September 17, 1980

Signature :

T. Trübner

LBA-approved:

September 24, 1980



7.

BSA TWS/12/80
To ALL OWNERS 7/12/80
P. CTO

AIRWORTHINESS DIRECTIVE

80-221 Glasflügel

Date of issue:
September 12, 1980

Affected glider:
German Type Certificate No. 304,
Hornet-C, all serial-numbers.

Subject:
Aileron mass balance

Reason:

According to "1. Nachtrag (N1) zum Flatternachweis für das Segelflugzeug HORNET-C" a modification of the aileron mass balance is required. Otherwise the maximum permitted water ballast is restricted to a total of 90 kg (40.8 lbs.).

Action and compliance:

1. Before the next flight page 13, chapter 2.5, of the Flight & Service Manual, has to be amended; insert ahead of the table:

"max. mass of water ballast: 90kg (until accomplishment of Technical Note 206-9)."

2. Until the next periodical inspection after the effective date of this AD, the ailerons have to be fitted with an additional mass balance in accordance with Technical Note No. 206-9.

The restriction under action 1 can be deleted now.

Technical publication of the manufacturer:

Glasflügel Technical Note No. 206-9 of August 18, 1980, which becomes herewith part of this AD and may be obtained from Messrs. Glasflügel, D-7318 Lenningen 1, West Germany.

Accomplishment and log book entry:

Action 1 to be accomplished by the operator and to be entered in the glider's log.

Action 2 to be accomplished by an approved service station and to be checked and entered in the glider's log by a licensed inspector.

TNS 1/2/80

SUBJECT: C.G. towing hook.

AFFECTED AIRCRAFT: Sailplane Nimbus-2, T.C. No. 286,
Variants: Nimbus-2
Nimbus-2 B
Nimbus-2 C

COMPLIANCE: At the next annual inspection.

REASON: After the issue of the Type Certificate for the sailplane Nimbus-2 the TOST company applied for and received the type approval for their towing hooks. According to the associated technical data sheet the TOST C.G. towing hook "S 72" is not suitable for the Nimbus-2 and cannot be used any more.

- ACTION:
1. Dismounting of the towing hook S 72 and removal of the two angular safety fittings.
 2. Enlargement of the cut-out in the bottom of the fuselage in accord with the drawing:
Nimbus-2 No. 10.082 A - Installation of the towing hook.
 3. Installation of the C.G. towing hook Europa G 72 or Europa G 73 in compliance with the drawing:
Nimbus-2 No. 10.082 A - Installation of the towing hook.
 4. Inspection of the function of the towing hook, where special attention is to be paid to the full opening of the hook and to the full clearance of the ring mouth at the bottom of the fuselage.
 5. Revisions of the Service Manuals
Nimbus-2
Page 30 - Maintenance, towing hook
Page 30 A - Attachment of the towing hook
Supplementary pages :
Page 32 - Replacement of the ball bearings of the wing attachment
Page 33 - Periodic inspections, towing hook
Pages 34, 35 - Annual inspections, maintenance schedule
Nimbus-2 B
Page 30 - Maintenance, towing hook
Page 30 A - Attachment of the towing hook
Page 33 - Periodic inspections, towing hook

P.T.O.

Nimbus-2 C

- Page 8 - Periodic inspections, towing hook
- Page 13 - Tow release hook
- Page 14 - Attachment of the tow release hook
- Page 20 - Safety belts, Tow release hook

ACCOMPLISHMENT: The actions 1. through 5. can be carried out by an expert person. Accomplishment to be entered in the sailplane log by a licensed inspector.

MATERIAL: TOST towing hook, safety hook "Europa G 72" or "Europa G 73".

Supplier:

Schempp-Hirth GmbH & Co KG
Krebenstrasse 25
D-7312 Kirchheim-Teck, FRG
TOST, Thalkirchnerstr. 62
D-8000 München 2, FRG

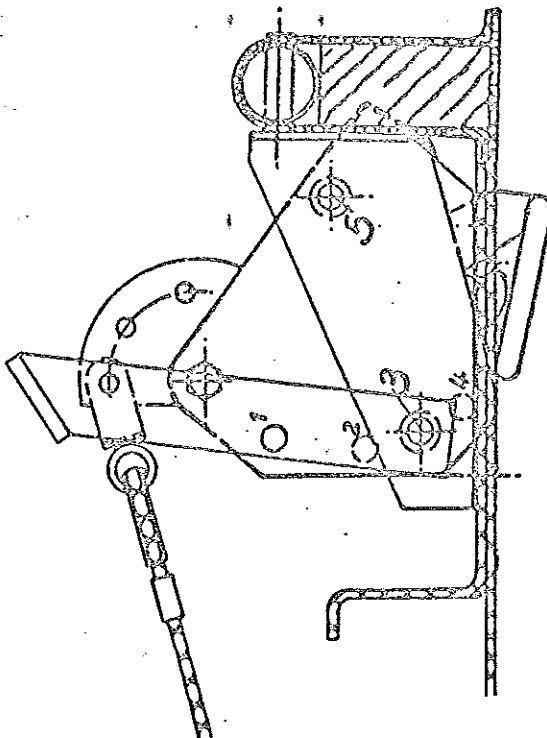
WEIGHT: No change.

POSITION: No change.

- 30 A -
Service Manual

- NIMBUS-2 B -

Attachment of the tow release hook
in front of the landing wheel



Towing hook to be attached onto the bracket by the bolt 2, 3 and 5.

Techn. Note No. 286-14

June 1980

<p>GLASFLÜGEL DEUTSCH-BRASILIANISCHE FLUGZEUG- UND FAHRZEUGBAU GMBH TELEFON 07026/855 7318 LENNINGEN WÜRTT. 1</p>	<p>Technical Note No. 201 - 22</p>	<p>German Data Sheet No. 251</p>
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Subject: Elevator Linkage at the base of the stick

Affected: Glider-Model: Standard Libelle
 Standard Libelle 201 B

Works Nos. 1-476

Reason: Failure of a Linkage

Urgency: Action 1: Before next flight
 Action 2: Until November 1st 1980

Action 1: The Elevator Linkage at the base of the stick (see modified drawing No. 301-41-4/2) must be inspected carefully by means of a magnifying glass (magnification at least 5x) for possible cracks near the welded seam. This inspection must be made immediately and again following the application of high loads to the glider (e.g. hard landing or ground loops). If cracks are found the glider must not be flown until the defective part has been replaced.

Action 2: The Elevator Linkage at the base of the stick must be replaced by a modified part in accordance with drawing No. 301-41-4/2 Replacement must in all cases be effected until November 1st 1980.

Material: See drawing No. 301-41-4/2

Weight: No change

Center of Gravity: No change

Remarks: The modified Elevator Linkage according to drawing No. 301-41-4/2 is available from
 Glasflügel
 7318 Lenningen 1
 West Germany

Action 1 (visual inspection) must be carried out by a suitably experienced person, and the logbook annotated accordingly.

Action 2 (replacement of Linkage) must be inspected and certified by a licensed inspector.

Lenningen, den 29.07.1980

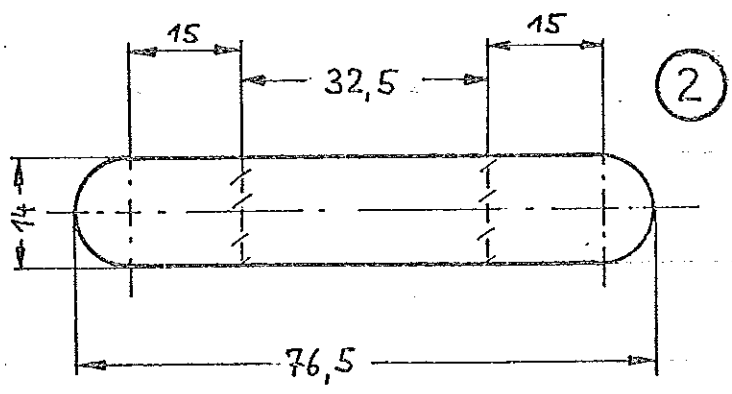
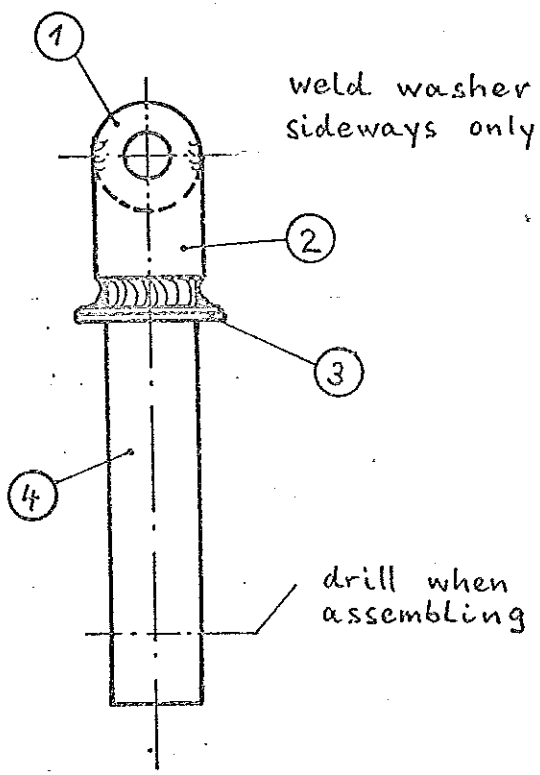
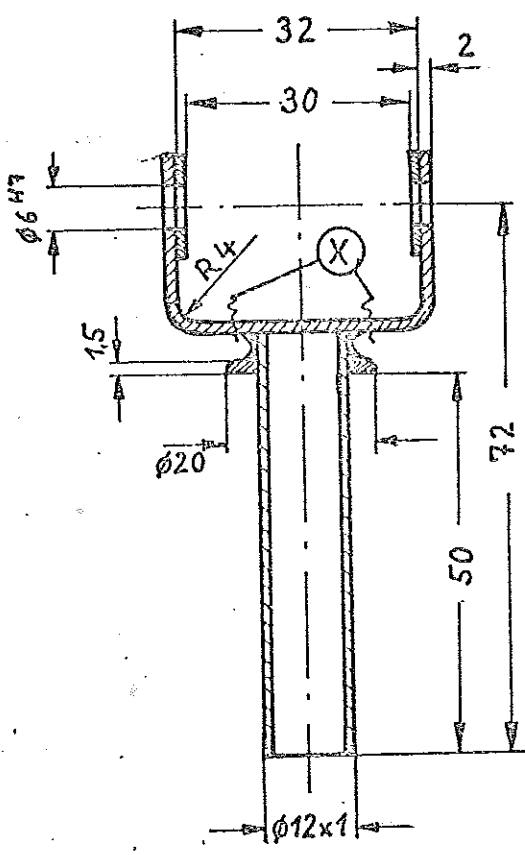


03. Sep. 1980

.....Martin Hansen.....

Schmagor

(X) Position of possible cracks on original Elevator Linkage



- ① washer (2x) St $\varnothing 14 \times \varnothing 5,5 \times 1$
- ② frame 1.7734.4 $76,5 \times 14 \times 2$
- ③ washer St $\varnothing 20 \times \varnothing 12 \times 1,5$
- ④ tube 1.7734.4 $\varnothing 12 \times 1 \times 56$

heat-treatment after welding: Tempering in controlled atmosphere
1 hour at 550°C



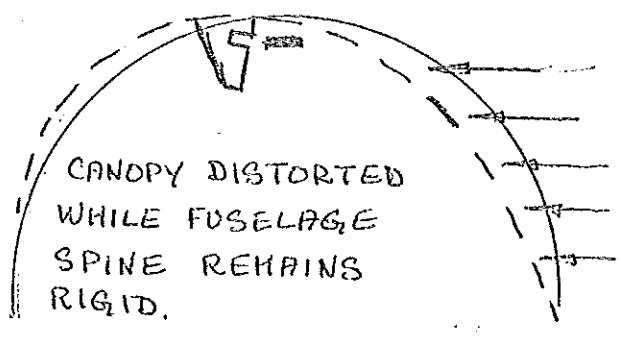
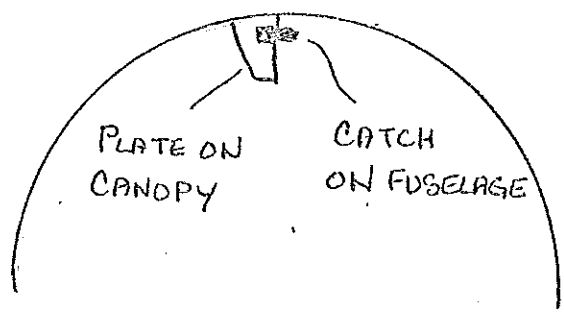
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Elevator Linkage

301-41-4/2

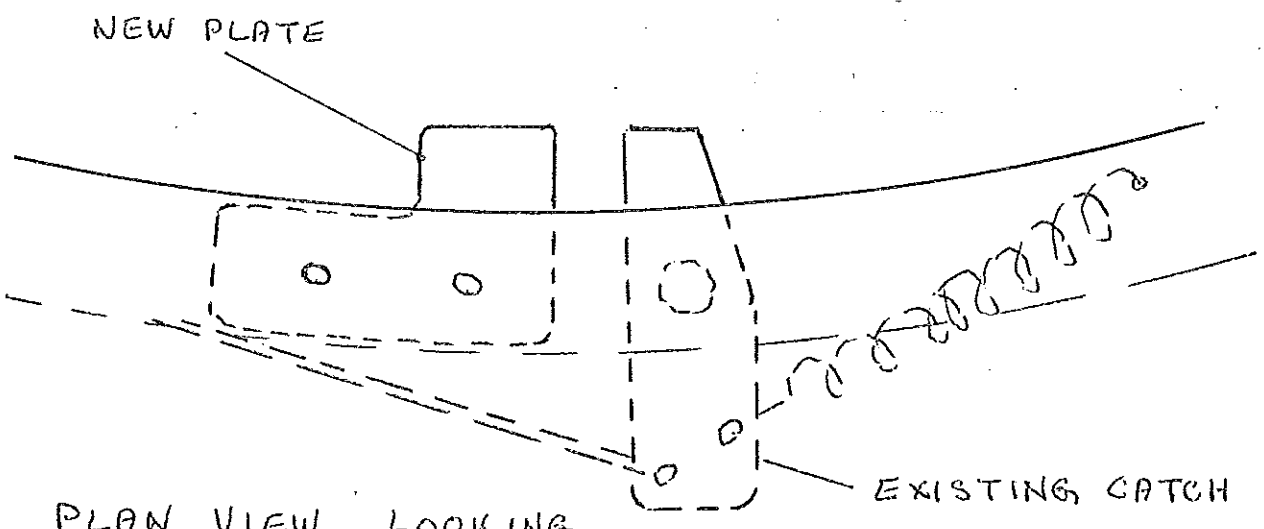
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Hansen

SUGGESTED CAUSE OF CANOPY DISENGAGEMENT
VTC CIRBUS.

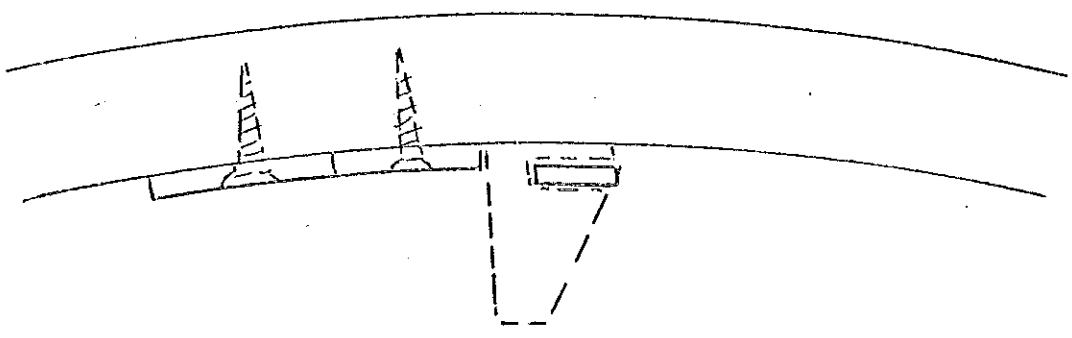


VIEWS ON REAR ARCH OF CANOPY LOOKING FORWARD

DIAGRAM SHOWING PLATE ADDED TO BGA 1835



PLAN VIEW LOOKING DOWN ON TOP OF FUSELAGE



VIEW LOOKING FORWARD SHOWING PLATE ON CANOPY PREVENTED FROM MOVING Laterally, PLATE MATERIAL 12SWG, L72 AS THAT WAS READILY AVAILABLE. WILL BE CHANGED TO STEEL IF IT WEARS.

BGA/VTC CIRBUS/11/80.

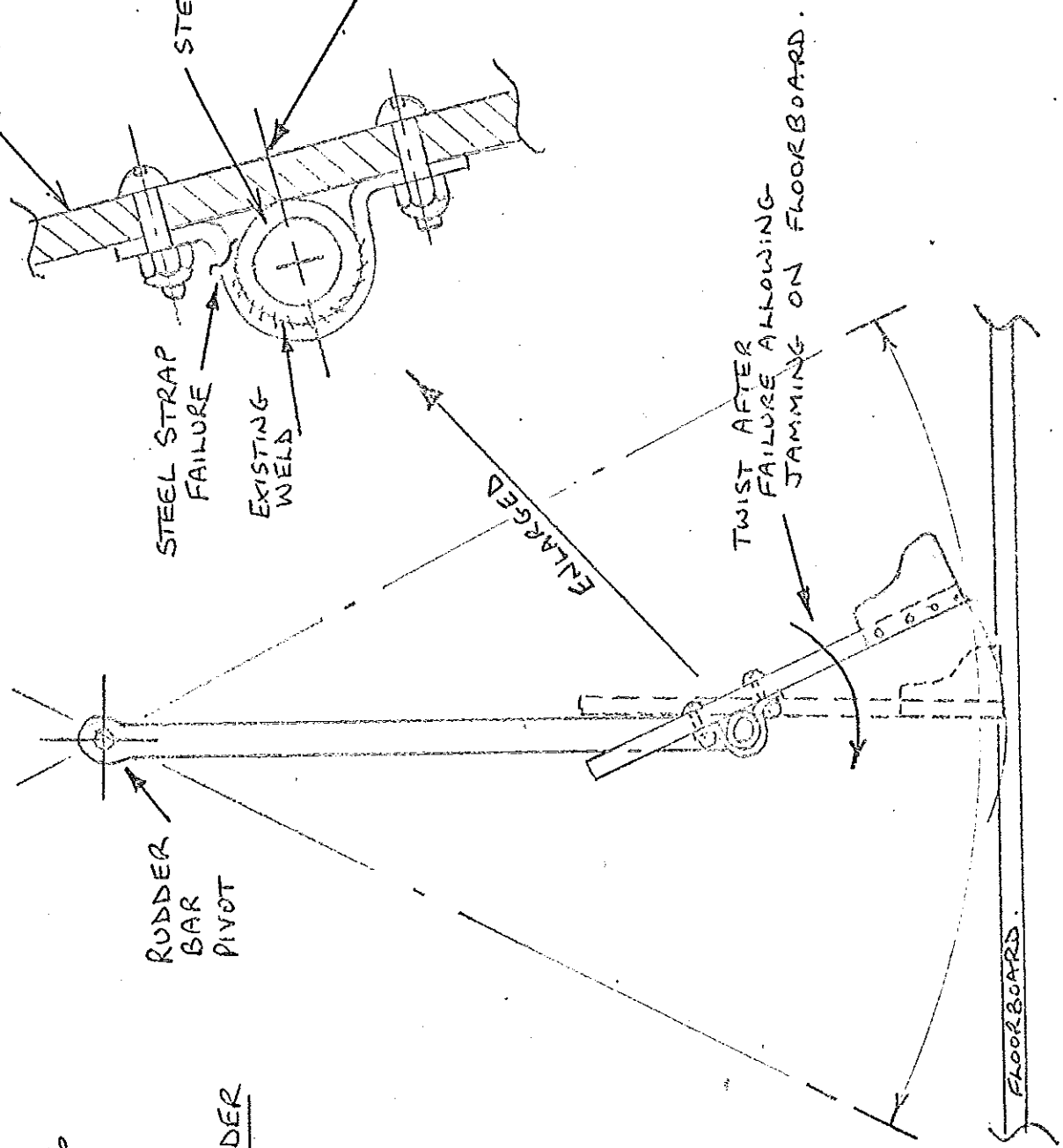
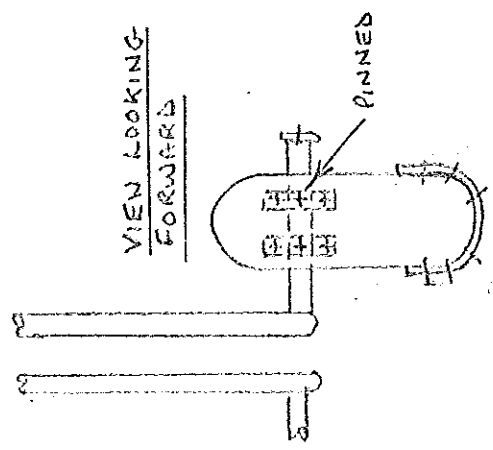
PRP. hulpot

DERBYSHIRE & LANCASHIRE GLIDING CLUB K7

D-5220
WORKS No 766
BGA 2489

FAILURE OF
STARBOARD RUDDER
PEDAL

VIEW LOOKING
FORWARD



MOD
PINNED BY
2 OFF 4-BA
BOLTS.

K7 - Forward Rudder Pedal Modification.

BGA K7 | 1 | 80.

Drawn D.M. Smith.
25/9/80.

TNS/12/80
CAN BE KEPT TO DRAW

Slingsby Engineering Limited

Kirkbymoorside

York. YO6 6EZ

TECHNICAL INSTRUCTION NO. 94

SLINGSBY T61A, B, C & D AIRCRAFT

MANDATORY INSPECTION OF WING ROOT FITTING

INTRODUCTION

A recent fatal accident to a T61A aircraft may have been caused by deficiencies in the wing root fitting/pin attachment area. This instruction requires a three point inspection to be carried out of this area before the next flight.

APPLICABILITY

All T61A, B, C & D Slingsby Falke aircraft.

COMPLIANCE

This instruction has been made mandatory by the C.A.A. and is to be carried out before the next flight and reported back to Slingsby Engineering Limited. Nil returns are required.

PROCEDURE

1. Remove the wings from the aircraft. Determine the amount of ovality in all the main pin holes in the root fittings.
2. Fitting the main pin to the port (female) fittings pull the pin such that the safety pin is tight on to the upper fitting and determine the amount of plain length of the pin protruding from the bottom fitting.
3. Measure the gap at the extreme end of the port (female) fittings between the plates to determine if the plates have been sprung apart during rigging etc. The correct dimension is 33.5mm.

Cont'd.....

Results of this inspection are to be communicated to Slingsby Engineering Limited. If ovality exceeds .010" or the main pin plain portion does not come outside of the lower fitting, the aircraft should not be flown until remedial action is taken. In the event of any query, please contact the undersigned.



R Sanders
Chief Designer/Aircraft Division

For and on behalf of
Slingsby Engineering Limited

RS/PMS
11.11.80

TNS/12/80

Civil Aviation Authority**AIRWORTHINESS NOTICE****No. 91***Issue 1.**5th November, 1980.***THIS NOTICE GIVES DETAILS OF A
MANDATORY ACTION****COMMUNICATIONS TRANSMITTERS IN THE
VHF RADIO TELEPHONY BAND 118-136 MHz****1 Introduction**

1.1 ICAO Annex 10, Vol. 1, Part 1, para 4.7.1.1, introduced by amendment 52 dated 23rd May, 1974, states:—

“Where 25 kHz channel spacing is introduced, the radio frequency of operation shall not vary more than plus or minus 0.003 per cent from the assigned frequency for new transmitters installed after 1 January, 1974, and for all transmitters after 1 January, 1981”.

1.2 By the end of 1980 a number of ground stations in the UK will be operating on frequencies assigned in accordance with this 25 kHz channel spacing basis.

2 Requirement With effect from 1st January, 1981 all VHF transmissions from UK registered aircraft shall comply with the frequency tolerance limits of ± 0.003 per cent prescribed by ICAO.

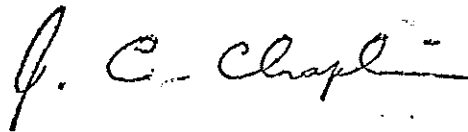
3 Implementation

3.1 After 1st January, 1981 new installations of VHF communications equipment in aircraft will be approved only if the equipment manufacturer's specification for the equipment shows the transmitter frequency tolerance to be within the limits prescribed in paragraph 2.

3.2 Approval of existing installations of equipment will remain valid for the time being provided the actual transmissions conform to the required new tolerance.

3.3 The CAA will continue to monitor aircraft transmissions and to inform any operator whose equipment is observed as failing to comply with paragraph 2.

3.4 In January, 1983 the CAA will review all UK approved airborne VHF Transmitting Equipment, the specifications of which do not indicate compliance with paragraph 2, with a view to cancelling the approval of any such equipment which is not then fitted to any UK registered aircraft. The approval of any equipment which has been transmitting outside the prescribed tolerance limits and for which modification has not proved to be practical or effective will also be cancelled.



for the Civil Aviation Authority.

Airworthiness Division,
Brabazon House,
Redhill, Surrey RH1 1SQ.

Civil Aviation Authority
Brabazon House
Redhill
Surrey RH1 1SQ
Telephone Redhill 65966
Telex 27100 Telegrams & Cables Bordair Redhill



Airworthiness Division

CAA KIDLINGTON

Ref: 9/92/LTO/345

11 November 1980

LETTER TO OPERATORS NO 345
SCHEIBE FALKE MOTOR GLIDERS
WING SPIGOT FITTINGS

REC	18.11.80
SIGN	
FILE	

A recent fatal accident to a Slingsby T61A Self Launching Motor Glider may have been caused by deficiencies in the wing root fitting/pin attachment area. In view of this, Slingsby Engineering Limited have issued Technical Instruction No. 94 which requires a mandatory inspection of this area before next flight and the results reported back to Slingsby Engineering Limited.

Due to the Slingsby T61A being a Scheibe SF 25.B.Falke, built under licence, it has been decided to also have all Schiebe SF 25.B and SF 25.E. Self Launching Motor Gliders on the U.K. Register, inspected in a similar manner. The following inspection is therefore declared mandatory and must be undertaken before the next flight:-

1. Remove the wings from the aircraft. Determine the amount of ovality in all the main pin holes in the root fittings.
2. Fitting the main pin to the port (female) fittings pull the pin such that the safety pin is tight on to the upper fitting and determine the amount of plain length of the pin protruding from the bottom fitting.
3. Measure the gap at the extreme end of the port (female) fittings between the plates to determine if the plates have been sprung apart during rigging etc. The correct dimension is 33.5mm.

The results of this inspection are to be communicated to

Slingsby Engineering Limited
Kirkbymoorside
York
Y06 6EZ Tel: 0751-31751

If ovality exceeds 0.010" or the main pin plain portion does not protrude outside the lower fitting, the aircraft should not be flown until remedial action has been taken. In the event of any query resulting from this Letter to Operators, please contact:

R. Sanders. (Chief Designer)
SLINGSBY Engineering Ltd

~~cont. over/.....~~

MANAGEMENT OF AIRFIELD Fuel Pumps

ARB LAC SUPPLEMENTARY WORKING PAPER NO 11/80

Article 76A. ANO.

Agenda Item 3.2 - MOTOR GASOLINE IN SMALL PISTON ENGINES

Because the quality control of aviation fuel is a question that should be taken into account when the Committee considers this matter, it may find it helpful to be reminded of the provisions in Article 76A of the Air Navigation Order.

The following is an extract taken from the version printed in CAP 393.

Aviation Fuel at Aerodromes

76A (1) A person who has the management of any aviation fuel installation on an aerodrome in the United Kingdom shall not cause or permit any fuel to be delivered to that installation or from it to an aircraft unless:—

- (a) when the aviation fuel is delivered into the installation he is satisfied that:
 - i) the installation is capable of storing and dispensing the fuel so as not to render it unfit for use in aircraft; and
 - ii) the installation is marked in a manner appropriate to the grade of fuel stored or if different grades are stored in different parts each part is so marked; and
 - iii) in the case of delivery into the installation or part thereof from a vehicle or vessel, the fuel has been sampled and is of a grade appropriate to that installation or that part of the installation as the case may be and is fit for use in aircraft.
- (b) when any aviation fuel is dispensed from the installation he is satisfied as the result of sampling that the fuel is fit for use in aircraft:

Provided that this paragraph shall not apply in respect of fuel which has been removed from an aircraft and it is intended for use in another aircraft operated by the same operator as the aircraft from which it has been removed.

- (2) A person to whom paragraph (1) of this Article applies shall keep a written record in respect of each installation of which he has the management, which record shall include:—
 - (a) particulars of the grade and quantity of aviation fuel delivered and the date of delivery;
 - (b) particulars of all samples taken of the aviation fuel and of the results of tests of those samples;
 - (c) particulars of the maintenance and cleaning of the installation;

and he shall preserve the written record for a period of 12 months or such longer period as the Authority may in a particular case direct and shall, within a reasonable time after being requested to do so by an authorised person, produce such record to that person.

- (3) (a) A person shall not cause or permit any aviation fuel to be dispensed for use in an aircraft if he knows or has reason to believe that the aviation fuel is not fit for use in aircraft.
- (b) If it appears to the Authority or an authorised person that any aviation fuel is intended or likely to be delivered in contravention of any provision of this Article, the Authority or that authorised person may direct the person having the management of the installation not to permit aviation fuel to be dispensed from that installation until the direction has been revoked by the Authority or by an authorised person.

(4) For the purpose of this Article:—

"aviation fuel" means fuel intended for use in aircraft;

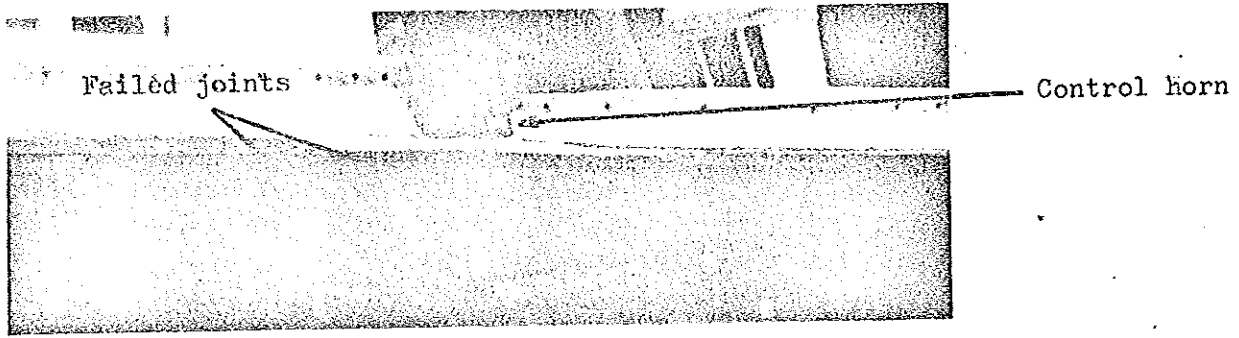
"aviation fuel installation" means any apparatus or container, including a vehicle, designed, manufactured or adapted for the storage of aviation fuel or for the delivery of such fuel to an aircraft.

Extract from R.A.S.I.L 11/80

8. AILERON STRUCTURE UNGLUED !!

Aircraft : Jodel DR1050 Ambassadeur (applicable to other wooden aircraft)
Date : August 1980

During the aircraft's annual inspection it was found that the right-hand aileron control horns could be moved without the aileron moving. When the fabric was removed it was found that none of the ribs or webs of the main open box spar construction were glued to one another at all, only the fabric was holding it together. The aircraft was manufactured in 1962 by SAN.



CAA Comment:

The aircraft had flown less than 30 hours in the last five years. It is believed that the aircraft has been hangared most of the time but was kept outside for a short time last winter. Other glue failures on Jodel aircraft are being investigated by CAA with emphasis on determining the types of glue involved, and the models which might be affected.

The following inspections particularly apply to Jodel aircraft which have been assembled using a casein type of adhesive, and are believed to have been parked in the open.

1. Refer to Civil Aircraft Inspection Procedures Leaflet AL/7-9 for inspection methods other than those described below.
2. Apply reasonably heavy hand pressure to the top of the leading edge riblets along the full length of each wing to check for signs of looseness at the attachments to the front face of the main spar.
3. Remove the fairing and access panels around the main landing gear leg and spar attachments. Inspect the spar area uncovered for signs of water ingress and soakage, particularly on the top spar face and joints. If evidence of deterioration is found consideration should be given to extension of the inspection both inboard and outboard in the spar areas. Access will have to be provided as necessary.
4. Apply differential hand pressure to the trailing edges of all control surfaces. Check for signs of structural looseness.
5. Inspect the lower half of the rudder for evidence of water ingress and soakage. Cut fabric as necessary.
6. Apply hand pressure to the rear portion of the wing rib immediately inboard of the aileron. Check for signs of structural looseness both of this rib and the tertiary spar to which the aileron hinges are attached.
7. Check for signs of water soakage and ingress along the length of the rear face of the aileron tertiary spar in the vicinity of the gap-filling material (which tends to act as a conduit for water).
8. Apply heavier-than-normal weight along the length of wing walkway ribs and check for signs of structural looseness.

Owners and operators of all wooden aircraft, but especially the old ones, are recommended to follow similar procedures annually (but more frequently if kept outside).

21.

16. OIL LINE FAILURE

Aircraft : Champion 7KCAB Citabria
Date : September 1980
Engine : Lycoming IO-320

While on the approach the engine began to seize and it finally stopped on landing. There was found to be a $\frac{1}{4}$ in. long split in the flexible oil line from the oil pressure gauge to the engine. This had allowed the entire contents of the sump to be gradually pumped out without any noticeable loss of oil pressure until the final few minutes of the flight. The oil line is believed to be 10 to 11 years old, during which the engine had flown about 650 hours.

CAA Comment:

In 1976 the FAA issued AD 76.25.6 (to Piper SB531) relating to Piper PA28-140 Cherokees with Lycoming O-320 engines. This required that the hoses to and from the oil cooler were changed on certain serial number aircraft with more than 950 hours (see GASIL 5/77 p.4). It would appear to be a wise precaution to periodically renew such hoses on any aircraft type.

17. LIGHT AIRCRAFT MAINTENANCE SCHEDULES (FIXED AND ROTARY WING)

The CAA has published Amendment No.2 to the Light Aircraft Maintenance Schedules Reference CAA/LAMS/FW/1978 (Fixed Wing) and CAA/LAMS/H/1978 (Rotary Wing).

In both schedules the effect of the amendment is to delete the requirement for a Certificate of Maintenance in Category 'R' (Radio), where the radio installation comprises only VHF Communication Equipment.

Note: Certificates of Maintenance are required only for aircraft operating in the Transport and Aerial work categories.

Owners and Operators of aircraft the MTA of which does not exceed 2730 kg, and which are maintained to the appropriate LAMS schedule as a condition of the Certificate of Airworthiness, will receive the amendment automatically and in due course. Other persons interested in the amendment may obtain it for 50p including postage (remittance with order) from: CAA Printing and Publication Services, 37 Gratton Road, Cheltenham, Glos GL50 2BN.

It is permissible for Operators to implement the easement of this Amendment without waiting for receipt of the Amendment replacement pages. The authority for this action may be quoted as CAA Letter to Operators No.338 dated 24 October 1980.

18. CRANKCASE BREATHER BLOCKED

Aircraft : Piper PA20 Pacer (applicable to other aircraft)
Date : June 1980
Engine : Lycoming O-290

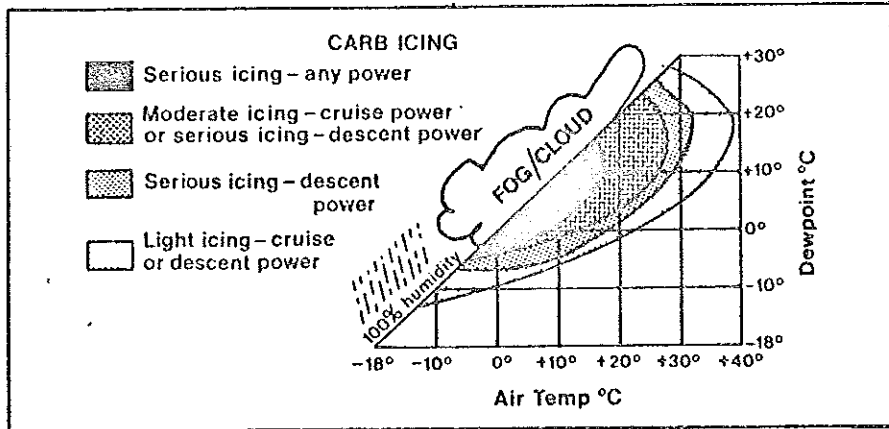
During cruise there was suddenly a strong smell of burning and smoke in the cabin with a lot of oil on the windscreen. Fortunately the aircraft was near an aerodrome, and after a PAN call an emergency landing was made after oil pressure was finally lost. A sideslip approach to provide vision was necessary.

The cause was blockage of the crankcase breather pipe by a non-standard extension of the rubber hose and fittings which led to internal pressure damaging the oil seal at the front of the crankshaft. Oil was expelled onto the exhaust system and windscreen.

YOU FLY IN WINTER

In addition to the points made in the occurrences described in this issue and in GASIL 11/79, the following winter precautions, some of which were published in GASIL 11/79 are suggested:

- a. Ensure that the correct winter grade of grease has been used in the control and trim systems, engine controls and landing gear.
- b. The engine may need a manufacturer's approved winter cooling restrictor to allow the oil to become warm enough to maintain cylinders at satisfactory operating temperatures.
- c. Check that control surface drain holes are clear. Water freezing inside can cause damage to the surface and seriously upset the balance of the surface.
- d. Cabin heaters, either combustion or exhaust muff types, can cause exhaust gasses to enter the cabin. Make sure the cabin heater system is working properly. Carbon monoxide is colourless, odourless, tasteless and very lethal.
- e. Ensure that all snow and ice is cleared from the aircraft, especially wings, control surfaces, windscreen, pitot and static ports. Cold hands are better than a broken neck.
- f. During the pre-flight inspection, check that the pitot heat is working.
- g. There is a greater risk of water condensation in aircraft fuel tanks in winter. Check all water drains. There can be as many as five, even on some single-engined aircraft.
- h. Beware of wheel fairings becoming jammed full of mud, snow and slush.
- i. Do not fly in icing conditions for which the aircraft is not cleared. Many general aviation aeroplanes are not cleared for flight in any icing conditions. This includes all general aviation helicopters. Most clearances are only for flight in light icing conditions. Light icing is the equivalent of a build up of $\frac{1}{2}$ in of ice in 40 nautical miles.
- j. The chart below shows when carburettor icing is most likely to occur.



- i) Ensure the carb heat works during the pre-take off checks.
- ii) During flight monitor engine instruments for loss of rpm (fixed pitch) or manifold pressure (constant speed), which could mean carb ice is forming.
- iii) Apply full carb heat periodically - and keep it on long enough to be effective. The engine may continue to run roughly for a

- short period until the ice melts.
- iv) Use full carb heat for several minutes before a descent, and periodically warm the engine during a closed throttle descent.
- k. Have warm clothing available in case of heater failure, or a forced landing.
- l. After flight in heavy rain ensure pitot-static and intake drains are clear. Trapped water may freeze in winter.
- m. Always carry a night-stop kit so that you do not put pressure on yourself to get home in bad weather.

B.C.A NOTE. The FIRST Accident to
a glider Turb, caused by CARB-ICING
has already occurred, to start the 1980/81
winter season!

Red