BRITISH GLIDING ASSOCIATION

TECH. COMMITTEE. TNS 4.5.79.

1.0. Airworthiness "AGGRO". (Please add to the 1979 Yellow Pages).

1.1. Standard Cirrus - all series. Tech-Note 278-23 (enclosed) requires inspection of BALL JOINTS in Air-Brake Drive Lever, at 500 hrs. or Annually. (LBA AD 79-51 Refers).

1.2. Ground Loop - Inspections. A further case of significant internal tail-end damage, affecting torsional stiffness and structual integrity, has been discovered on a G.R.P. Sailplane during C. of A. renewal inspection (D. Paton.Chiltern).

1.3. Rigging of Controls. B.G.A. Form 267, Item 47 "Range of Controls - checked" reminds Inspectors that a periodic check of control rigging is a good idea! Incorrectly rigged controls not only affect performance, but may also degrade handling characteristics and thereby impair Airworthiness! (Report on Dart).

1.4. ASW 20's Serial No. 20,001 thru 20,113 (except 20111) Safety measures for Inspection Hole-Cover in fuselage. Tech. Note 4 (enclosed) and AD. 78-303 requires modification at next Annual Inspection.

1.5. ASW 19's. Serial Nos. 19,001 thru 19,232) Tech.Note 7, and AD 78-303, requires Inspection Hole Cover modification as for ASW 20.

1.6. K.6.- AIR-BRAKE PUSH-ROD Adjuster LINK bent in centre-section. Incorrect adjustment of wheel-brake interconnection, resulted in over-travel of Air Brake system. (Ref. Maintenance Ma nual). (Robin Bull, Midlands G.C.).

2.0. GENERAL MATTERS.

2.1. Propeller Conspicuity.Enclosed extract from G.A.S.I. Bulletin, applies to MOTOR-GLIDERS and TUGS.

2.2. ASW 19. Increased all-up-weight to 454 Kg.(1000/LBs). Tech. Note 6A & 6B, introduces modifications to towing-hook attachment, and airspeed indicator markings, and Flight Mannual amendments to achieve increased weight.

2.3. Bungee - Braided Shock Absorber Cords. The enclosed price list is kindly provided by Robin Bull (Midlands G.C.)

2.4. Blanik Undercarriage Oleo - Servicing. Jack Little, (Northumbria G.C.), 29, Deepdale Road, Morden Estate, N. Shields, Tyne & Wear, NE30 3AN, has equipment to fit new seals etc., and can offer to service oleos and has spare unit for exchange.

2.5. New Types. Please add E.78 "Silene" to B.G.A. approved list, subject to the fitting of lightning-strike protection (bonding).

2.6. Parachutes (Personal and Braking). Two samples in very poor condition were demonstrated at the B.G.A. A.G.M. In one case a personal parachute was "congealed" and would not spring out of the pack. In another case, thinner webbing had been fitted to existing buckles and would readily thread through these, even under modest loads. Club Managements, in particular, should consider the liabilities which might arise from making such Club property available to Club Members!

3.0. TUGS.

3.1. TOWING Accident (fatal) ABOYNE.
A.I.B. Bulletin 3/79 is enclosed. Why NOT place on NOTICE BOARD?

3.2. Propeller Conspicuity. G.A.S.I. Bulletin reports fatal accident. Conspicuity paint scheme is enclosed.

3.3. CHIPMUNK - recurring defects. Both flap and trim cables have been failing throughout the service life of the Chipmunk since 1950. (H.S.A.TNS refer). These items should be inspected frequently on Chipmunks used for towing, where the operational duty-cycle of such items is higher than Normal, (H.S.A./Chipmunk TNS 150 (trim) and TNS 170 (Flaps) - Refer.

3.4. C.A.A/B.G.A. TUG MAINTENANCE APPROVAL. C.A.A. letter 9/91/DAI/8378/73 dated 29/3/79 states:-
"The terms of approval of your Association to be extended to include Tug Aircraft ....." Therefore, this very successful state of negotiation now requires Clubs, who consider themselves eligible, and in need of D.I.Y. Tug Maintenance, to take steps to bring their facilities into line with C.A.A. B.C.A.R. A8-15 approval Ref. BGA/TNS/6-7-78. B.G.A. Technical Procedure Manual (T) Tugs has yet to be finally agreed with C.A.A, before issue to applicant Clubs. This document will then form the basis of formal agreements between CAA/BGA/and BGA Clubs. When Clubs become eligible they should advise C.T.O. with a view to joint inspection with C.A.A.

4.00. PARISH NOTICE. C.T.O. will be away in USA/Canada 23rd April till 7th May, so please maintain a low technical profile during this period!

April, 1979.

Airworthiness Directive

79-51 Schempp-Hirth

Date of issue:
February 12, 1979

Affected sailplanes:
German Type Certificate No.278.
Standard Cirrus, Standard Cirrus B and Standard Cirrus CS11-57L, all serial numbers.

Subject:
Ball joints on the air brake drive lever in the fuselage.

Reason:
Possibility of fatigue fractures.

Action and compliance:
Action to be accomplished in accordance with Technical Note, 1.after 500 flight hours,2.for sailplanes with more than 500 hours at the next annual inspection, but not later than April 30, 1979, unless already accomplished.

Technical publication of the manufacturer:
Schempp-Hirth Technical Note No. 278-23 of January 1979 to be obtained from Messrs. Schempp-Hirth GmbH & Co.KG, Krebenstr.25, D-7312 Kirchheim-Teck, West-Germany.

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

TNS 4/79

Schempp-Hirth GmbH & Co KG Kirchheim-Teck	Technical Note No. 278 - 23

SUBJECT: Ball joints on the air brake drive lever in the fuselage.

EFFECTIVITY: Sailplane Standard Cirrus, German T.C.No. 278.
Models: Standard Cirrus
Standard Cirrus B
Standard Cirrus CS 11 - 75 L

ACCOMPLISHMENT: After 500 flying hours.
With more than 500 flying hours during the next annual inspection, but not later than 30 April, 1979.

REASON: On several sailplanes with a great number of flying hours a fatigue fracture of a ball joint on the air brake drive lever in the fuselage occured.

ACTIONS:

1. Remove the two ball joints and install new ball joints MS 961 - 150 - 150 with a rolled thread.

2. The following supplementary instructions are to be added to the Service Manual of the sailplane:

   Pages 30 and 31 - Prescribed periodic maintenance

3. The action 1. can be carried out ~~by the owner himself or~~ by an expert.
   The accomplishment of the actions are to be entered in the sailplane's log.

4. Additional action.
   The following instructions should be added to the Service Manual of the sailplane, if not yet entered:

   Page 24 - Ground handling

   Pages 26 and 26a - Adjustment of the air brakes

   Page 27 - Replacement of the wing attachment ball bearings

   Pages 28 and 29 - Weight and hinge moment of the control surfaces

MATERIAL: Two ball joints MS 961 - 150 - 150.
Supplementary pages of the Service Manual
Supplier: Schempp-Hirth GmbH & Co KG
Krebenstrasse 25.
7312 Kirchheim-Teck, West Germany

Kirchheim-Teck, January 1979	LBA approved:
Signature: ..... (Treiber)	11th Jan. 1979

ASW 20
Technical Note
No. 4

TNS 4/79

Alexander Schleicher
Segelflugzeugbau
6416 Poppenhausen

Kind : LBA Airworthiness Directive AD-Note no. 78 -

Subject : Safety measures for inspection hole cover in fuselage.

Effectivity : All ASW 20s. serial numbers 20 001 through 20113, except 20111.

Accomplishment : The modifications according to this TN 4a or 4b must be done for the next annual inspection. In the meantime the inspection hole - in accordance with the above AD-Note - must be carefully taped whenever the ASW 20 is operated.

Reason : During a cross country flight with an ASW 20 the inspection hole cover which was not taped was lifted up during a pullup into a strong thermal and was, subsequently, pulled into the fuselage by the attached bungee. There it jammed temporarily the aileron and flap control.

Instructions : TN 4a :
By means of a plywood ring shield (P/N 200.11.0127) the hole of which is narrower than the smallest width of the inspection hole cover it is prevented that the cover can get into the fuselage.

Prior to glueing in the plywood ring all the glue joints must be well fitted and sanded.
A mixture of
100 parts in weight of Epikote 162
38 parts in weight of Epikure 113,
thickened by 10 - 15 parts in weight of Aerosil,
may be used as a glue. However, it may be as well used Aerodux or a two-component epoxy glue (like UHU-plus)

For the cover itself or the bungee no modification is necessary.
See drawing on sheet 4 of this TN.

After the installation the plywood ring shield and the sanded areas around it are preserved by paint or epoxy resin.

TN 4b :
According to drawing 200.11.S10 the inspection hole cover belonging to the aircraft is modified such that a stiff steel skeet spring is attached to the rear and a turnlock to the other end.

For that, first, the metal parts are made according to drawings

200.11.0055
200.11.0056
200.11.0057.

It is a bit difficult to drill the Ø 16 mm hole of the lower part in a line with the conical hole of the upper surface of the cover. It is advisable first to drill a Ø 8 mm hole through the whole cover and then to bore the Ø 16 mm hole from the lower side and the conical sink from the upper side. The cover must be properly fixed in a stiff drilling machine.
The washer (1,5 mm thick, Ø 16/8) is used as a bearing in the FRP.
When assembling the turnlock the nuts are adjusted such that some friction between lock and FRP is produced.
The bungee and the opening pin are removed.
It will be necessary to shape the interior edge of the inspection hole so that spring and lock may move easily. A small carving in the middle (1/2 mm deep) will help to keep the lock in the middle position.

Material : See drawings.

Weight and balance : Influence neglectable.

Notes :

1. The modification according to TN 4b is effected in the series production as of serial number 20 114.

2. Modification kits for TN 4a or TN 4b are available at the Schleicher company.

3. The modifications according to this TN can be done by the owner of the sailplane himself, but subsequently must be approved by an authorized repait station and must be certified in the log book.

4. Even after the modification of the inspection hole cover it should be taped because flight tests experienced much noise and rattle which are felt to be uncomfortable.
Besides a considerable aerodynamic improvement is noticed by taping this cover.

Drawings : The following drawings were new made for this TN :

200.11.S10
200.11.0055
200.11.0056
200.11.0057.

Poppenhausen, September 11, 1978

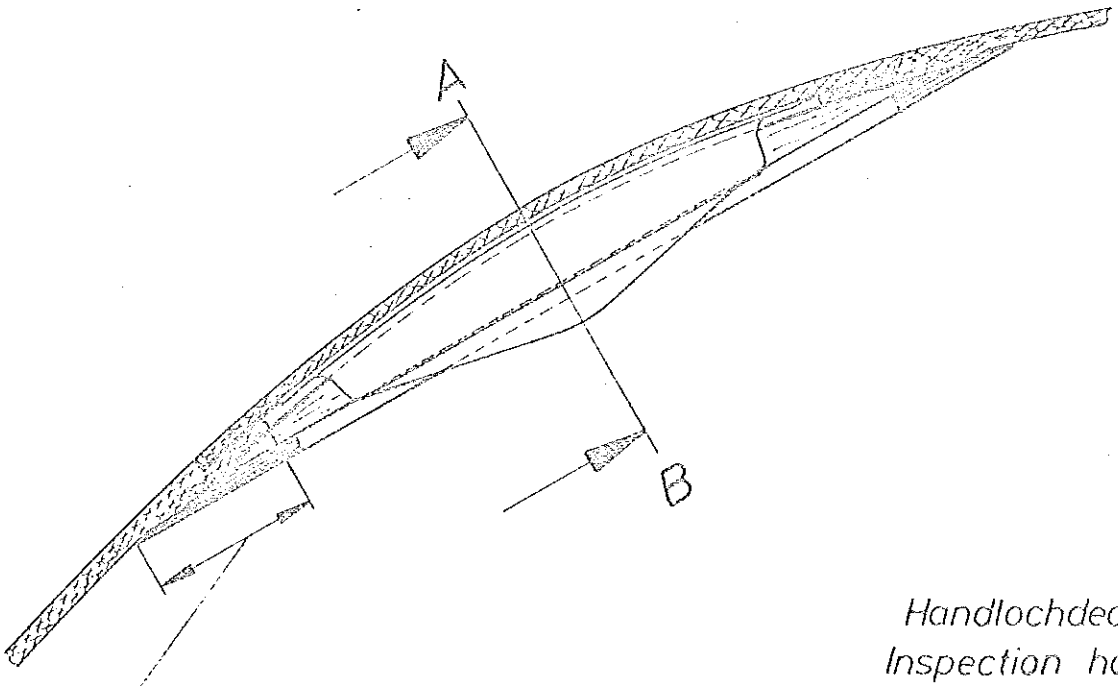
ALEXANDER SCHLEICHER
Segelflugzeugbau
Gerhard Waibel
(Gerhard Waibel)

The German original of this TN is approved by LBA under the date of 20.10.1978 and is signed by Frieß.

In any case of doubt the German text is authoritative.

ASW 20
Technische Mitteilung
Nr. 4

Alexander Schleicher
Segelflugzeugbau
6416 Poppenhausen

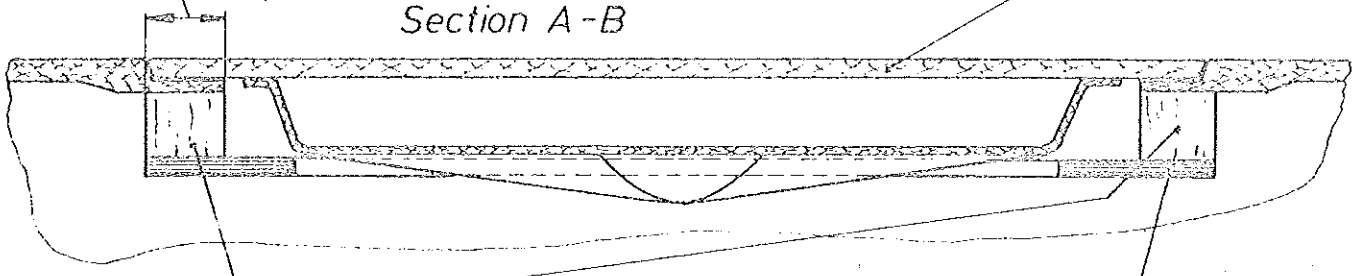


Handlochdeckel
Inspection hole cover

diesen Bereich vor dem verkleben aufrauhen

Sand this area prior to glueing

Schnitt A-B
Section A-B



bei Montage anpassen
Adjust for assembly

Lochblende
Shield

BUNGEE - BRAIDED SHOCK ABSORBER CORDS & FITTINGS
BRITISH STANDARDS INSTITUTION SPECIFICATIONS

CORD Prices per 100 Metres

SPECIFICATION BS.F70

5mm	dia.	£ 22.50
6.5mm	"	33.00
8mm	"	45.00
9.5mm	"	56.50
12.5mm	"	120.00
16mm	"	177.00
19mm	"	271.00
22mm	"	413.00
26mm	"	672.00

SPECIFICATION BS.F71

3mm	dia.	12.00
4mm	"	15.50
5mm	"	19.00
6.5mm	"	33.00
8mm	"	45.00
9.5mm	"	56.50

Medium Duty Cords above these diameters to quotation

Orders for 16mm, 22mm and 26mm under 100 metres to quotation only.

FERRULES

SP168/A	3 & 5mm	4.50	per 100
SP.168/B	6.5mm	5.75	" "
SP.168/C	8mm	7.00	" "
SP168/D	9.5mm	8.75	" "
SP168/F	12.5mm	16.50	" "
SP168/G	16mm	28.00	" "

ASSEMBLY WIRES

SP169/A	£1.50	per	100
SP169/B	1.50	"	"
SP169/C	1.75	"	"
SP169/D	1.75	"	"
SP169/F	3.75	"	"
SP169/G	6.00	"	"

LOCKING PINS

AGS1551/1	Per	100	3.25
AGS1551/2	"	"	3.50
AGS1551/3	"	"	4.00
AGS1551/4	5.25	"	"
AGS1551/5	10.00	"	"
AGS1551/6	15.00	"	"

ASSEMBLIES OF ABOVE (F70 = SP170. F71 = SP171)

SP170/050/0300 mm	37.25	per 100	+ 2.25 per 100 mm or part
" 065 "	50.25	"	+ 3.30 "
" 080 "	64.50	"	+ 4.50 "
" 095 "	75.50	"	+ 5.65 "
" 125 "	189.00	"	+12.00 "
" 160 "	277.50	"	+17.70 "
SP171/030/0300	32.00	"	+ 1.20 "
" 040 "	33.00	"	+ 1.55 "
" 050 "	35.50	"	+ 1.90 "
" 065 "	47.25	"	+ 3.30 "
" 080 "	56.75	"	+ 4.50 "
" 095 "	67.25	"	+ 5.65 "

Bungee Rings, Thimbled Assemblies, Welded Ferrule Assemblies - Quotation upon request.

FABRICS etc. F. No's 8-32-34-35-49-54-55-58-114-120 etc.
DTD. No's. 481-575-673-773-786-837-5502-5620 etc. DEF. 5020

Prices - ex Works.

AQD/CAA Release £1.00 extra or at cost for special requirements.

NOTE SMALL ORDERS ARE SUBJECT TO SURCHARGE (NORMALLY 25%)

LIST No. 629

TNS 4/5/79

13. PASSENGER WALKED INTO PROPELLER

Aircraft : Aero Commander 685 (Foreign registered)
Date : January 1979

A recent fatal accident involved a passenger who walked into a propeller while the engines were running. A survey of UK accidents of this type shows that a total of 24 occurred between 1962 and the present time; 12 of these were fatal, 5 on single-engined aircraft and 7 on multi-engined aircraft.

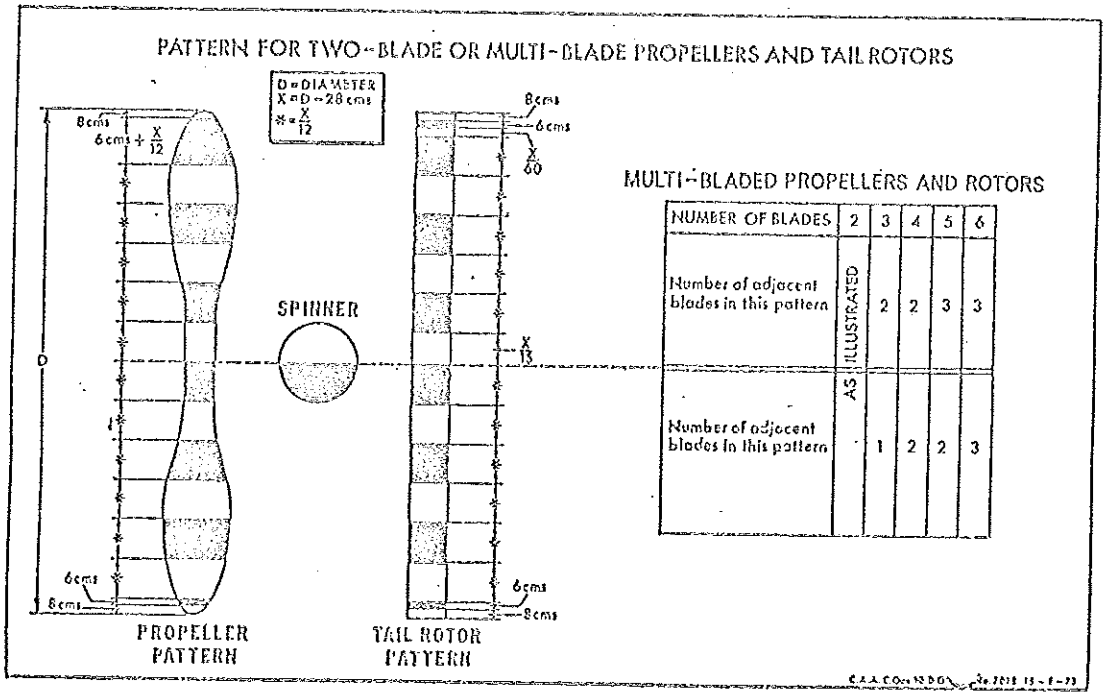
The following information has previously been published by CAA on propeller and tail-rotor markings: "Accident figures indicate that propeller and tail-rotor conspicuity should be improved and the Authority has evaluated, by means of ground and flight trials, experimental markings produced by the RAF Institute of Aviation Medicine. The asymmetric markings (see diagram), give a marked flicker effect and have proved to be effective over a wide range of propeller and rotor speeds and against varied backgrounds. The Authority, while not intending to make them mandatory, recommends that aircraft owners and operators should adopt them in the interests of safety."

Colours: Markings should be in black and white.

Painting: The finish should be gloss. Aircraft owners should consult the aircraft manufacturer in cases where no specific information is available as to what types of paint may be used on propeller or rotor surfaces.

Restoration of painted surfaces and repeated applications of paint should be carefully controlled to ensure that excessive and uneven build up of paint does not occur.

Blades to be painted: A propeller which is outside the pilot's field of vision when he looks ahead should be painted on both sides and the spinner painted as illustrated. Blade surfaces within the pilot's field of vision ahead should not be painted and any spinner similarly located should be painted completely in white.



CAA General Comment:
RAE Bedford has carried out additional experiments and subsequently painted all their propeller tips red. This has proved beneficial under certain light conditions. The reverse side of the propeller tip has also been painted red to improve conspicuity from the rear at low RPM. The Federal Aviation Administration

has also conducted studies on propeller conspicuity and these will be taken into account in any future revision of this information. Emphasis should also be placed on the supervision of baggage and passenger handling and the inherent dangers of running engines during these operations.

14. ENGINE STARTED DURING PROPELLER SWING TO CLEAR ENGINE

Aircraft : Cessna 172 Regn G-AWPV
Date : January 1979
Further information: Notifiable accident at Enniskillen

A recent general aircraft accident occurred during the process of hand turning the engine to clear the cylinders. The engine started. Efforts to board the aircraft failed when footing was lost on the ground. The aircraft subsequently careered into a fence, causing substantial damage.

CAA Comment:
This accident could have involved serious injury or loss of life (see also GASIL 3/78 p.3, 12/78 p.7 and 3/77 p.7).
The following extracts from the Civil Aircraft Inspection Procedures Part II "Aircraft Handling" are relevant to this incident:

(a) An aircraft should normally be parked with brakes on and chocks in front of the main-wheels. The ground immediately in front of the propeller should be checked for loose gravel or foreign objects.

(b) When cold, engines should always be turned at least two revolutions before being started to free the reciprocating and rotating parts and to determine whether a hydraulic lock has formed. The engine should normally be turned over by hand, but when this is not possible the starter may be used. Magneto switches must be "off" when turning the engine and the engine must always be treated as "live" in case the switches are defective and not earthing the magneto primary circuits.

Accidents Investigation Branch
Department of Trade

Kingsgate House, 66-74 Victoria Street, London SW1E 6SJ
Telephone 01 212 8852 (Direct dialling)

AIB Bulletin

No: 3/79
27 March 1979

Ref: EW/C642

Aircraft:	Bellanca 7GCBC (Champion) G-BEOS	
Date and time:	11 October 1978 at 1240 hrs GMT	
Location:	Aboyne Aerodrome, Aberdeenshire	
Type of flight:	Private - Glider Towing	
Persons on board:	Crew - 1	Passengers - nil
Injuries:	Crew - 1 (fatal)	Passengers - n/a
Nature of damage:	Aircraft destroyed on impact	
Commander's Licence:	Private Pilot's Licence	
Commander's total flying experience:	737 hours	

The aircraft was taking off from Aboyne towing a K6 glider. Shortly after take-off the glider pilot experienced severe turbulence and lost sight of the tug aircraft below him, whereupon he released the tow.

Eyewitnesses reported seeing the tug aircraft assume a near vertical nose-down attitude at a height of between 100 and 150 feet and dive to the ground.

The tow rope had broken eight feet behind the aircraft before it was released from the glider.

The aircraft struck the ground diving at an angle of about 30 degrees; the structure was demolished and the pilot killed on impact. The short eight foot length of broken tow rope was still attached to the aircraft on impact and had been released when the release mechanism was actuated under impact forces.

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