BGA TECHNICAL COMMITTEE

TECHNICAL NEWSHEET 3/4/96

PART 1 Airworthiness "AGGRO" Please add to the BGA's 1996 Compendium.

1.1. Monerai (Kit built sailplanes). **Wing skins disbonded from the Ribs - Inspect as soon as possible.**

1.2. Libelle, Hornet, Kestrel, Glasflugel 604 & BS1. Separation of Glass Fibre Laminated Covering the Spar Stub Fittings. Tech-Note (herewith) requires inspection **annually**.

1.3. KA8 Series. LBA AD 96-005 (herewith) requires action as follows :-

a) Canopy retaining cord.
b) Rudder pedals.
c) Elevator control linkage.
d) Corrosion inspection.
e) Flight Manual amendment.
f) Dimensional check - wing pins.

Action please as soon as possible.

1.4. Pilatus B.4. - Structural Corrosion at fin to fuselage joint - check for cracks in the paint work. (Reported by Neil Scully).

1.5. LS6 - Cosmetic distortion of the wing top skins was caused by overheating, when wing covers of other than a heat reflecting material, were applied last summer! Beware of Dark Materials.

1.6. Libelle Series, Kestrel, Glasflugel 604 and BS1.

Weight & Static Movement of Control Surfaces.

After repair, control surfaces must be balanced in accordance with Tech Notes, amending the Manual, dated 31/3/96. These are available from BGA office.

1.7. Piper PA25 (Pawnee) FAA A/D 95-12-01 - requires NDT Inspection of wing to fuselage joints by July 1996.

Consult your (M3) Approval Maintenance organisation for compliance.

1.8. Libelle - (all series). Aileron Activating Shaft Cracked. Tech Note 201-33 (herewith) requires immediate action.

1.9. GROB 102 (Astir) - Aileron Controls Jammed after Looping Manoeuvre. 6lbs of Acorns removed from the wing! Glider had been stored, rigged at Lasham.

PART 2 GENERAL MATTERS

2.1. CofA Renewal Submissions - Civil Registered tugs & SLMG's. (Ref Airworthiness Notice No. 25 dated 14/3/96).

The CAA charges have been revised ref TNS 1/2/96. Cheques Payable to BGA.

2.2. CAA Airworthiness Notice are now at Issue 117 - Have you a fully amended copy in respect of Tugs & SLMG's. Available from CAA Printing & Publication Services, Greville House, 37 Gratton Road, Cheltenham, Glos, GL50 2BN. (01242 - 235151)

2.3. CAA FORMS AD 202NR (Renewals Tugs & SLMG's)

Section 3 "Certification" is for signature by BGA CTO under our (M3) Approval DAI/8378/73.

2.4. M.T. Propellers. List of Foreign Airworthiness Directives - herewith.

Dick Stratton
Chief Technical Officer

TNS 3/3/96

Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

In case of any difficulty, reference should be made to the German original issue

KA.8's

96-005 Schleicher

Date of issue: January 22, 1996

Affected airplanes:
German Type Certificate No.: 216

Schleicher
K8, K8B und K8C including any license- and home-built sailplanes
- S/No's.: all

Subject:
A1) Canopy retaining cord; inspection/replacement
A2) Rudder pedals; inspection/modification
A3) Elevator control linkage; inspection/replacement
A4) Inspection of the fuselage tube skelton and the control linkages for corrosin
B1) Amendment of the K8 Flight and Operations Manual
B2) Specification of the maximum diameter for the wing attachement pins

Reason:
For safety reason and on requirement by the LBA a complete inspection of the fuselage tube skeleton and of all control linkages is scheduled and required by the Technical Note.

Actions:

ad A1) Check wether the canopy retaining cord uses a snap hook as weak link at the fuselage

ad A2) Inspection and adjustment of the rudder pedals. To prevent bending of pedal boards, it is recommended to modify the attachment collar.

ad A3) Inspection of elevator push rods for bending, deformation od damage. If necessary, replace rods by a new one.

ad A4) Insection of fuselage skeleton and control linkage tubes for corrosion. If necessary, replace concerned parts.

ad B1) Insert Technical Note into Flight and Maintenance Manual

ad B2) Specify diameter for the wing attachment pins. If the tolerance of the bore in the wing attachment fitting is exceeded, the fittings must be replaced.

Compliance:
Actions A1) up to A4) must be performed at each annual inspection, but for the first time at latest on April 30, 1996.
Action B1) must be performed at the next annual inspection, but not later than April 30, 1996.
Action B2) Recommended if necessary.

Technical publication of the manufacturer:
Schleicher Technical Note No. 24, dated December 04, 1995 which becomes herewith part of this AD and may be obtained from Messrs.

Alexander Schleicher GmbH & Co
Huhnrain 1

D-36163 Poppenhausen

Federal Republic of Germany

Accomplishment and log book entry:
Action to be accomplished by an approved service station and to be checked and entered in the log by a licensed inspector.

* * *

SHEET: 1 of 4	K 8 Technical Note No. 24	Alexander Schleicher GmbH & Co. Segelflugzeugbau XXXX 6416 Poppenhausen

new zip code: D-36163

Subject:

A1) Canopy retaining cord
A2) Rudder pedals
A3) Elevator control linkage
A4) Inspection of the fuselage tube skeleton and the control linkages for corrosion.
B1) Amendment of the K8 Flight and Operations Manual.
B2) Specification of the max.diameter for the wing attachment pins

Serial number applicability:

K8, K88, K8C, Data Sheet no.216, all serial no.s including any license- or home-built gliders and any variations thereof.

Compliance:

ad A) Action to be accomplished with each annual C. of A. inspection, but for the first time before or on April 30, 1996.
ad B1) Action to be accomplished with the next annual C. of A. inspection, but before or on April 30, 1996, at the latest.
ad B2) As need be.

Reason:

For safety reasons and on requirement by the German CAA (Luftfahrt-Bundesamt) a complete inspection of the fuselage tube skeleton and of all control linkages is scheduled and required by this Technical Note.

ad A1) When a canopy retaining cord is used which either does not comply with the Type Certificate's status and/or is wrongly fitted, it may cause the canopy not to detach from the fuselage in case of canopy emergency jettison.

ad A2) In case of extreme overloading the rudder pedals the attach collars of the pedal boards may bend. As a result also the full deflection of the rudder can become restricted.

ad A3) The inspections of several aircraft reported that pre-damaged, bent and broken elevator push rods had been found.
A serious flight accident happened which was presumably due to a bent elevator push rod which remained undetected for a longer period and then caused the rod to break at the kink point.
Where the keel tube has been bent (eg: in a crash landing) it is possible that also the elevator push rod has been damaged without this being noticed. Also on transports in rough terrain it is possible that the elevator may deflect downwards and hence by its mass may bend a pre-damaged elevator push rod leading to a break of the rod.

ad A4) As a consequence of penetrated moisture corrosion damages may develop at the inside walls of the tubes of the fuselage skeleton and of the control linkages.

ad B2) Play between wing-to-fuselage attachment can be removed by reaming the attachment fittings and using oversize pins. If "attachment pins for wing, front" and/or "Plug-in pins for wing attachment, rear" have to be replaced, oversize pins may be used.

new zip code: D-36163

Action:

ad A1) Check whether the canopy retaining cord uses a snap hook as weak link at the fuselage (eg: Simplex-snap hook to spec DIN 5287, hook length 30 to 35 mm). This snap hook should open at a tensile load of ~ 34 kg.
Other means of fixing, such as leather sloop or Nylon cord without weak link are not permissible and must be replaced by the prescribed type of fixing.

ad A2) Checking the rudder pedals:
With the rudder neutral the pedals left and right must be evenly adjusted. Check the pedal board angle versus the pedal (dimensions see drawing L-216.42-U01). The angle must meet the specified dimension.
Engage the pedal adjustment into its foremost position and check full deflection of the rudder.
Where pedals or attachment collars are bent, these can be either repaired or replaced by new ones.
In order to impede the bending of the pedal boards it is optionally recommended to weld an additional butt strap onto the attachment collar (see Fig.A2).

ad A3) Inspect elevator push rods L-216.44-U 01 and L-216.44-U 02 for bending, deformation, or damage. If any of these are found, the push rod must be replaced by a new one. Never try to straighten any bent push rod: even only slightly bent rods must be replaced !

ad A4) Inspect for corrosion:
If there is suspicion of corrosion, the keel tubes or the primary tubes of the fuselage skeleton as well as all control linkage tubes using a control check hole must be inspected internally for corrosion. Tubes may also use drill holes for the purpose of mounting fairings, pockets etc. and these are particularly endangered.
So the wall thickness must be inspected by suitable procedures. The specification of the wall thickness of the fuselage skeleton tubes is detailed in drawing L-216.11-S1, issue Jan.17, 1958, or L-216.11-S1 with revision entry dated Nov.24, 1961, applicable as of serial number 1014.
Where in doubt check the wall thickness by knocking (check from the sound) or by a suitable ultrasonics test equipment for measuring the thickness of the layers, else in case of push rods with thread connectors check the tube inside wall for corrosion damages using an endoscope.
If the inside tube walls are all right, then the interior of the tubes must be preserved. In any case this must not increase the mass of the push rods noticeably!
Where rust is found, tubes must be replaced.
During each annual C. of A. inspection checks for rust pitting or rust formation must be included.

ad B1) **This Technical Note must be inserted into the Flight and Maintenance Manual K 8 as annex to "Attachments" and the insertion must be certified in the Manual.**

ad B2) For the maximum oversize diameters of the "attachment pins for wing, front" (AS P/N 080.11.0730) and/or "Plug-in pins for wing attachment, rear" (AS P/N 080.11.0511) please observe:
the material thickness of the fitting around the bore at its thinnest section must still be at least half of the diameter of the pin!
The bore in the "wing attachment fitting, front" and in the "main fitting, rear" must have H7 tolerance (off size). If tolerance is exceeded, the fittings must be replaced.

Material & drawings:

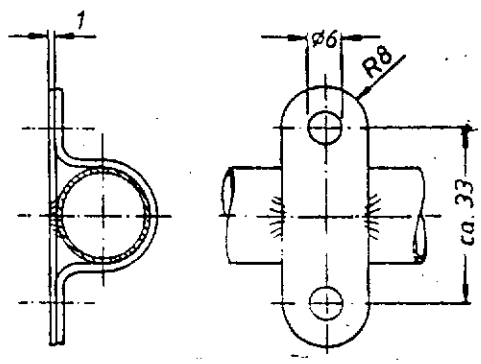
Any required materials and/or replacement parts may be ordered from Messrs. SCHLEICHER (Tel. +49(0)6658-890 or -8929, FAX +49(0)6658-8940) stating the glider type and the serial number of the aircraft in question.

For the interior wall preservation of the tubes you may use e.g. **the preservative agent "Hohlraumkonservierung ML", P/N 3762, by Messrs.VOSSCHEMIE or any equivalent product.**

Drawings applicable to this TN:
L-216.42-U01; L-216.44-U 01; L-216.44-U 02;
L-216.11-S1, issue 17.01.1958 or
L-216.11-S1, rev. of 24.11.1961, valid as of s/n. 1014.

Fig. A2

Reinforcing the attachment collars for pedal boards at the pecal assembly. Material: 1.7734.4
Welding procedure WIG to spec DIN 1912, welding wire material: 1.7734.2



SHEET: 4 of 4	K 8 Technical Note No. 24	Alexander Schleicher GmbH & Co. Segelflugzeugbau XXXXX 6416 Poppenhausen

new zip code: D-36163

Notes: If the inspection as per actions A2, A3, or A4 reveals any damages, a copy of the report of findings must be returned to Messrs. SCHLEICHER including the serial number of the aircraft in question, its number of take-offs and total flight hours!

The above actions must be accomplished by a competent person.
The accomplishment of the actions must be certified by a licensed aviation inspector in the glider's inspection documents, in the Flight and Maintenance Manual, and in the log-book.

Poppenhausen, Dec.4, 1995

ALEXANDER SCHLEICHER
GmbH & Co.

The German original of this Technical Note has been approved by the LBA under the date of Dec.7, 1995 (signature: WALTER). The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is controlling.

mm 7.92

Libelle. Kestrel. BS1. etc

TECHNICAL NOTE NO.
201-31, 205-19, 206-17
301-36, 401-24,
501-7, 604-5

Sailplane model:

	ATC No.
H 301 Libelle und H 301 B	251
Std.Libelle ,Std.Lib. 201 B, Std.Lib. 203	251
Club Libelle 205 und Hornet	304
Kestrel	276
Glasflügel 604	281
BS 1	

Subject : Glass fiber laminate covering the spar stub fittings

Affected : As listed above

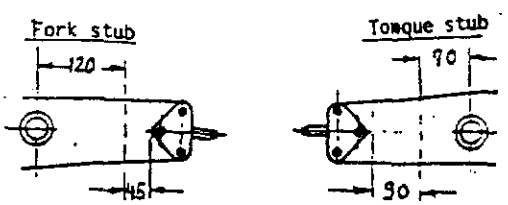
Urgency : Inspection for a separation of the laminate on the occasion of each annual inspection

Reason : Separation of laminate from wing attachment fittings allowing the ingress of moisture which in turn may lead to corrosion

Actions :

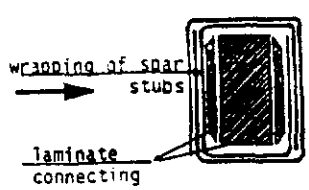
1. Inspection for a separation of the laminate at each annual inspection.
A separation of the laminate is recognized by gaps showing at the face of the spar stub(s).
If gaps are found, the fitting must be checked for corrosion by carefully lifting the laminate.
If the fitting is free from corrosion, the laminate must be rebonded to the fitting as follows:
Place wing leading edge down on trestles. Using thin wooden wedges force the gap to open and, with the aid of a syringe (internal diameter of needle to be 0.8 mm), carefully inject thickened resin into the cavity (Scheufler resin No. 285, mixed 100 :38 with hardener No. 285 and "Aerosil" added). Next remove wedges and, using two clamps, two 8 mm hard core foam plates and two 16 mm wooden boards, press laminate against fitting and remove excessive resin. After curing and heat treatment (for 12 hours at 54° C) sand spar stub face and apply UP gelcoat (Schwabbellack).

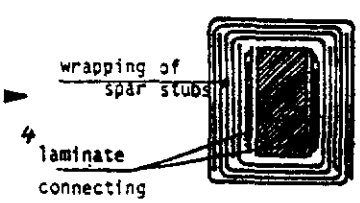
2. If corrosion was found on the fitting, proceed as follows:
First remove gelcoat from spar stub (if such was applied by the manufacturer) and remove laminate as shown in the sketch (such preparing the area to be scarfed later on) -



all DIMS. in mm

make sure that the spar flange rovings and the laminate connecting the upper and lower stube halves are never been sanded. Furthermore remove any laminate adhering to the fitting.

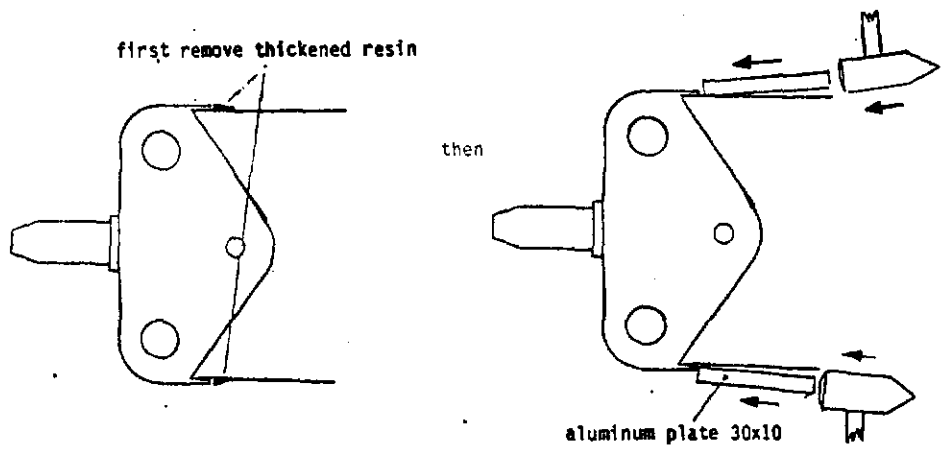




Next check whether the inner side of the latter has corroded.
This is recognized by a discolouring at the edges of the fitting and at the laminate next to it. If no so much damage is found and no change of the original condition can be assumed, clean the outer sides of the fitting (using a metal brush) and apply a fresh two component corrosion protection.

If there is suspicion that there is corrosion on the inner side of the fitting, it has to be removed as follows:

Drive out hollow rivets imbedded in the spar flanges - but make sure that a counter weight is held against the driving force, Thereafter, w ith rivets removed, carefully loosen and extract the fitting with the aid of an alumin um plate - see sketch.



Next sandblast the fitting(Using only approved material) and apply a fresh corrosion pretection. Then carefully smooth the spar stub (using a 400 grid sand paper), apply a thin coat of resin, push fittig fully home and install hollow rivets. The step between fitting and stub and between connecting glass layers should be filled uo using thickened resin.

Finally the spar stub glass layers must be re-wrapped (note displacement of 15 mm) as shown in the sketch on page 1 (using Scheufler Epoxy resin No.285, mixed with hardener No. 285, laminate to be covered by Nylon cloth).

After curing and heat treatment, the aerea (depending on the sailplane model) is to be coated with white Schwabbellack (gelcoat).

Note: Laminate separated from the wing attachment fitting(s) may be rebonded by a qualified person having an appropriate authorization.

The renewal of the wrapped stub laminate may only be conducted by a certified repair station.

The proper accomplishment is to be checked by a licensed inspector and must be entered in the aircraft log book.

Material: All required materials may be obtained from

Hansjörg Streifeneder
Glasfaser-Flugzeug-Service GmbH
Hofener Weg
D-72582 Grabenstetten

Glass cloth No. 92125 may also be obtained from

Interglas GmbH
Benzstr. 14
D-89155 Erbach

Resin and resin hardener may also be obtained from

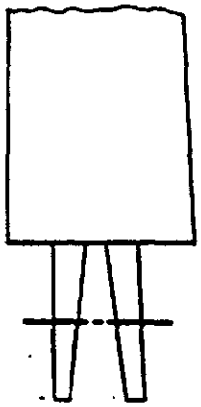
Martin G.Scheufler
Kunstharzprodukte GmbH
Am Ostkai 21/22
D-70327 Stuttgart

Grabenstetten, December 15., 1995

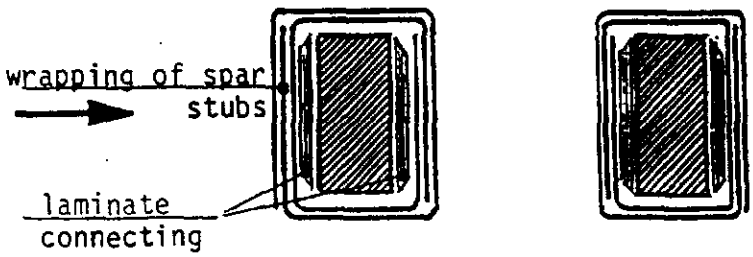
Issued: H. Streifeneder
(Streifeneder)

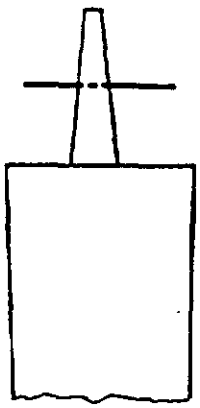
LBA-approved:

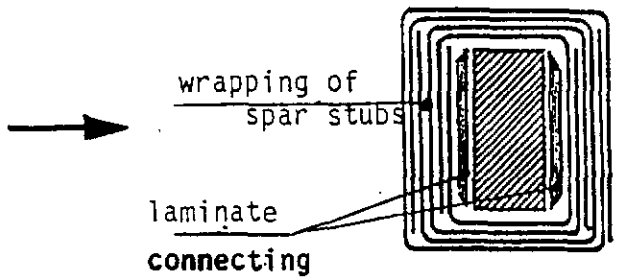
The German original of this Technical Note has been approved by the Luftfahrt-Bundesamt under the date of 08. Jan. 1996 and is signed by Mr. U. Kapp.
The translation into English has been done by best knowledge and judgement.



Fork stubs

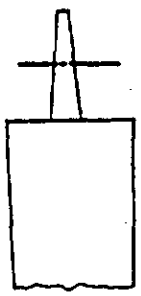


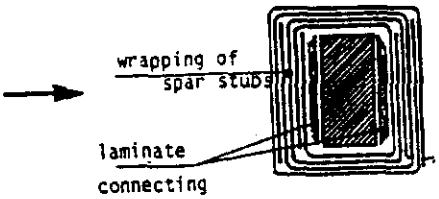




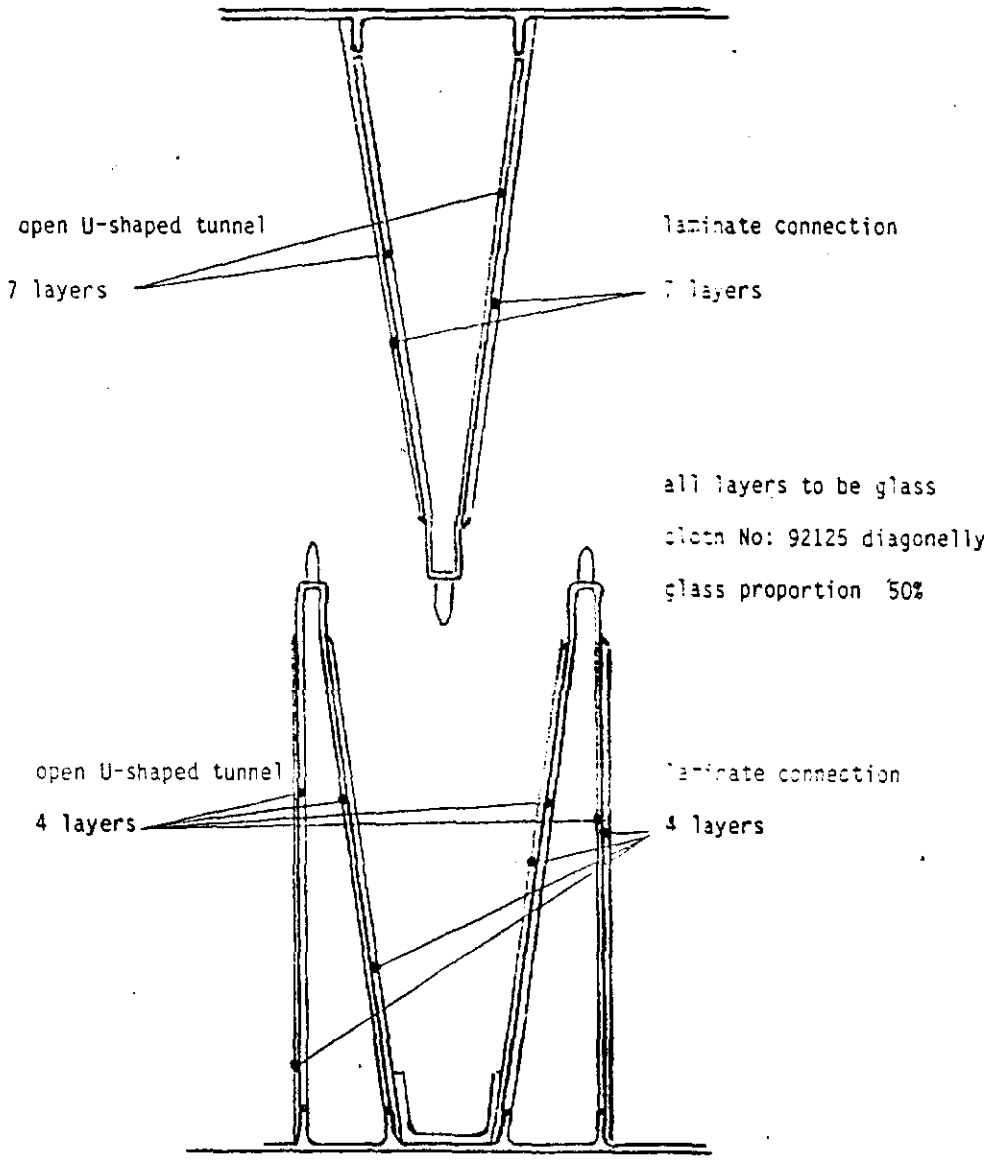
Torque stub

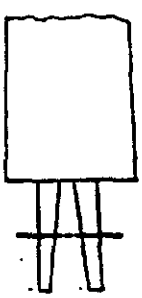
Model	Wrapping (diagonally) of spar stubs
201 205 206 301 401	Interglas 92 125 ※



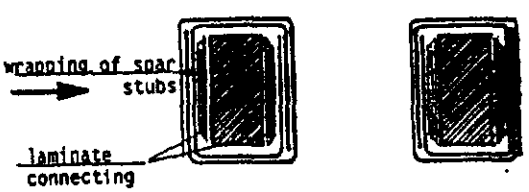


Tongue stub





Fork stubs



Issue 5
March 1996

MT PROPELLERS

PART 1 – LUFTFAHRT-BUNDESAMT AIRWORTHINESS DIRECTIVES

LBA AD No.	*Description*	*Applicability – Compliance – Requirement*
90–214 Issue 2	Possible loss of a propeller blade.	Applicable to MTV–1–( ) propellers serial nos. up to 89048 and MTV–6–C propellers serial nos. up to 90023. Compliance required as detailed in AD. MT-Propeller Service Bulletin TM No. 4A also refers.
92–367	Change of emergency procedures for powered gliders.	Applicable to MTV-Propellers which have the automatic control unit P–120–A or P–120–U installed. Compliance required as detailed in AD. MT-Propeller Service Bulletin TM No. 6 also refers.
93–088/2	Replacement of the electric motor of the propeller servo.	Applicable to MTV–1– ( ), –7– ( ), –10– ( ), –17– ( ), –18– ( ), and –20– ( ) propellers. Compliance required as detailed in AD. MT-Propeller Service Bulletin TM No. 7 also refers.
94–098	Replacement of PU erosion strip to avoid sudden loss of metal erosion sheet.	Applicable to MT and MTV Series propellers as detailed in AD. Compliance required as detailed in AD. MT–Propeller Service Bulletin No 8 also refers.

Subject: Aileron actuating shaft

Affected: Sailplane model: Standard Libelle, Standard Libelle 201B, Standard Libelle 203
All serial numbers

Accomplishment: Method 1: Prior to next flight
Method 2 or 3: Until 31.12.96

Reason: Cracks on aileron operating lever's welding seams due to overloading in case of derigging without disconnection of aileron controls.

Method 1: Before the next flight the aileron actuating shaft in the fuselage (see drawing no. 201-47-3 enclosed) must be checked by a licensed inspector nearby the welding seams using an electric torch and a magnifying-mirror (min. double magnification). Overloading of the joint might be indicated e.g. by local paint peeling. If there is any damage in suspect the actuating shaft must be removed and subjected to a magniflux inspection. Magniflux inspection must be done by a licensed aircraft maintenance and engineering service using a inspection procedure proved and permitted for aviation use. If there are no hints on cracks or any other damage flying operation can be continued until 31.12.96. After this date instructions according to either method 2 or method 3 must be accomplished.

Method 2: When inspection according to method 1 showed any damage, the actuating shaft must be removed for repair at once ! All welding prescribed below may only be done by a licensed aircraft welder within a licensed and appropriate equipped aircraft maintenance service ! Welding joints must be done with the WIG-inert protective atmosphere welding system (wolfram inert gas welding system) with welding material 1.7734.2 !
First remove all paint. All cracks detected must be welded (groove welding). Then the plates pos. 7 must be welded to the actuating shaft according to drawing no. 201-47-3-1. Finally the actuating shaft must be finished with primer and paint RAL 7003. Reinstallation of the aileron actuating shaft has to be done according to removal.

Method 3: If method 2 was not accomplished the original actuating shaft can be replaced by a new and reinforced shaft according to drawing no. 201-47-3, Change "2".

Material: See drawing no. 201-47-3 and 201-47-3-1

Mass and balance: Not affected

Remarks: Concerning rigging and derigging procedure we refer to the flight manual page E12 !
After repair according to method 2 or replacement of the actuating shaft according to method 3 the aileron deflections must be checked.
Correct accomplishment of all methods must be checked and certified in the aircrafts logbook together with the aircraft's operating hours by a licensed inspector.
Plates, welding material and spare parts as mentioned above are available from :

Hansjörg Streifeneder
Glasfaser-Flugzeug-Service GmbH
Hofener Weg
D-72582 Grabenstetten

Grabenstetten, 04.03.96

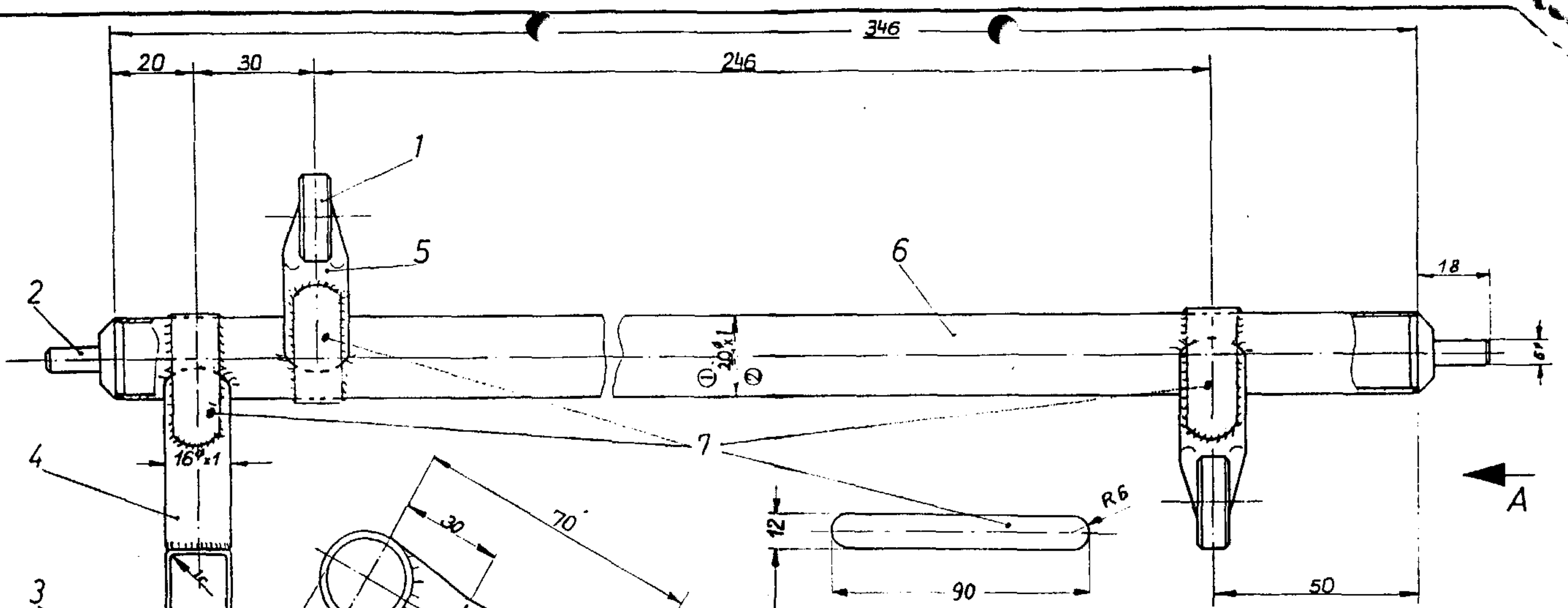
Glasfaser-Flugzeug-Service GmbH

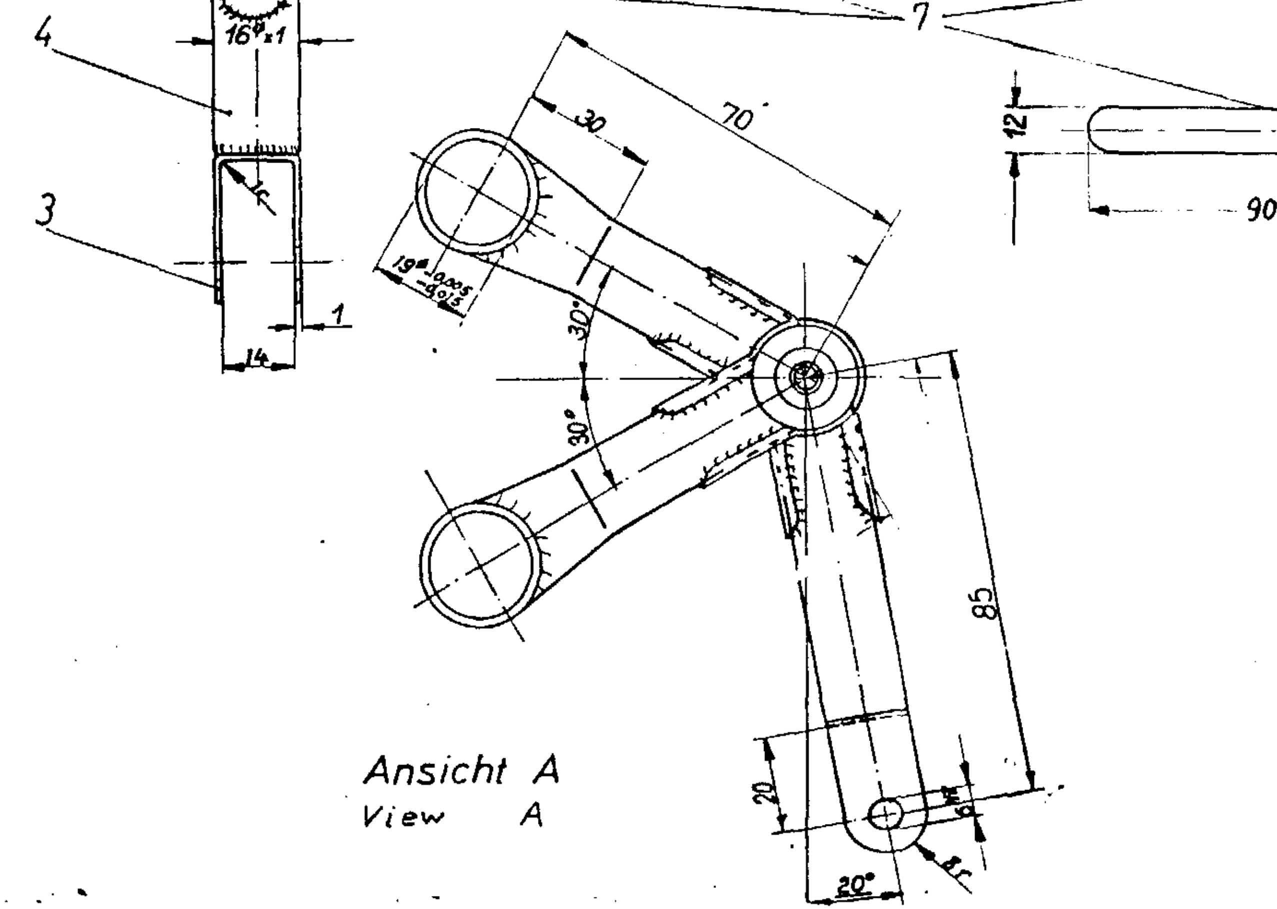
H. Streifeneder

Hansjörg Streifeneder

The German original of this technical note has been approved by the Luftfahrt Bundesamt under the date of 18. März 1996 and is signed by Mr. M. Bopp

The translation into English has been done by best knowledge and judgement.





All dimensions in mm

1 Maß 20×0,75 in 20×1 ab Wnr 508 geändert 20.2.94.

1 Dim. 20×0,75 changed into 20×1 after Sn 508

2 Maß 20×1 in 20×1.5 für Neufertigung ab 2.5.94.

2 Dim. 20×1 changed into 20×1.5 for reproduction after 2.5.94.

Pos. Nr.	Stückzahl	Benennung	Werkstoff	Zchn. Nr. / Abmess.	Gew.
7	3×	Blech metalsheet	1.7734.4	90×12×1	
6	1×	Rohr tube	St 35.29	$20^{\phi}\times 1\times 346$	
5	2×	Rohr tube	St 35.29	$16^{\phi}\times 1\times 65$	
4	1×	Rohr tube	St 35.29	$16^{\phi}\times 1\times 60$	
3	1×	U-Blech U-sheet	1.7214.4	16×1×71	
2	2×	Bolzen pin		201-47-11-3	
1	2×	Anschweißring Weldring		301-100-24	

	Tag	Name
Gez.	29.8.81	[illegible]
Gepr.		
Norm		

GLASFLÜGEL
ING. EUGEN HÄNLE
SCHLATTSTALL KR. NÜRTINGEN

Maßstab: 1:1, 1:2

LIBELLES

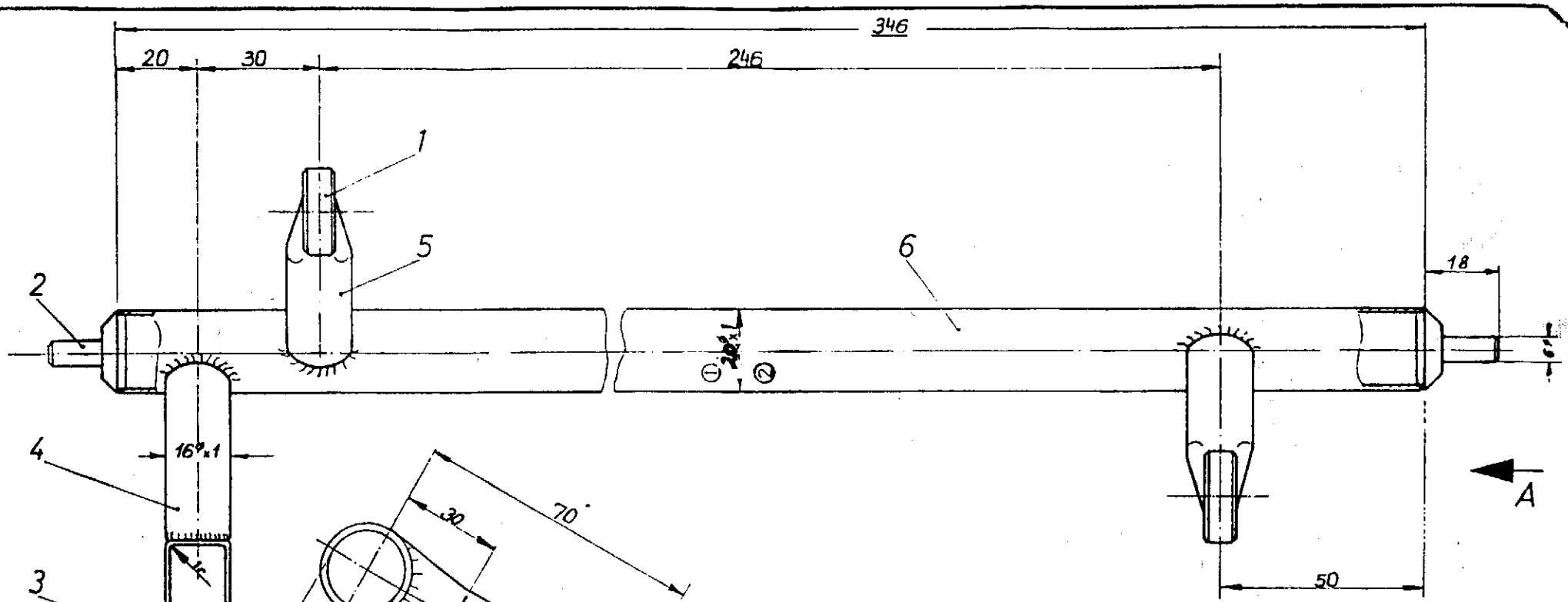
Qr. Antriebswelle

Aileron actuating shaft

201-47-3-1

Techn. Mitteilung 201-31

Blatt 3/3



Ansicht A
View A

All dimensions in mm

① Maß 20x0,75 in 20x1 ab Whr 508 geändert 20.2.74 Ued.
① Dim. 20x0.75 changed into 20x1 after SN 508
② Maß 20x1 in 20x1.5 für Neufertigung ab 2.5.94
② Dim. 20x1 changed into 20x1.5 for reproduction after 2.5.94

Pos. Nr.	Stück-zahl	Benennung	Werkstoff	Zeichn. Nr. / Abmess.	Gew.
6	1x	Rohr tube	St 35.29	20⁹x1x346	
5	2x	Rohr tube	St 35.29	16⁹x1x65	
4	1x	Rohr tube	St 35.29	16⁹x1x60	
3	1x	U-Blech U-sheet	1.7214.4	16x1x71	
2	2x	Bolzen pin		201-47-11-3	
1	2x	Anschweißring Welding		301-100-24	

	Tag	Name
Gez.	29.8.91	
Gepr.		
Norm		
Material		

GLASFLÜGEL
ING. EUGEN HÄNLE
SCHLATTSTALL b/d. NÜRTINGEN

LIBELLE S.

Qr. Antriebswelle
Aileron actuating shaft

201-47-3

Techn. Hilfeleistung