K 8
Technical Note
No. 24

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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, K8B, 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 Certification 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 predamaged, 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 atttachment 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.

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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.

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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:

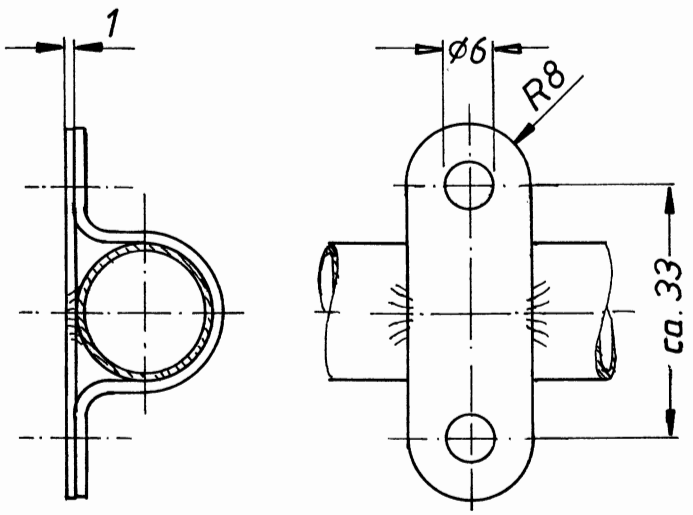
Any required materials and/or replacement parts may be ordered from Messrs. SCHLEICHER (Tel. +49(0)6658-890 or -8929, FAX +49(0)6658-8940) stating the glider type and the serial number of the aircraft in question.

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 pedal assembly. Material: 1.7734.4
Welding procedure WIG to spec DIN 1912, welding wire material: 1.7734.2



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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.
(Lutz-W. Jumtow)

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.