

Subject: Preventive measure against unintentional PIO (pilot induced oscillations).

Serial number applicability: All ASW 20 and 20 L, serial no.s 20001 thru 20611.

Compliance: Accomplishment of the action required under this T.N. until the next annual glider inspection, but at the latest until March 31, 1988.

Reason: Various flight and accidents reports from pilots with little experience with the ASW 20 do indicate that the pilots themselves did induce (unintentionally) pitch oscillations.

Besides strong turbulence and rough air the following circumstances - mostly in multiple combinations - were found:-

1. Incorrect fastening of safety harnesses.
2. Wrong installation of asymmetric AUTOFLUG-safety harnesses.
3. Soft seat cushions.
4. Loose lead cushions, used in the seat or on the backrest.
5. Rear C.G. positions.
6. Trim untightened.
7. Sticks misplaced to the rear and sticks which are too much cranked.

Sticks which are either too much cranked or misplaced too far to the rear, favor PIOs because in rough air the forearm and the hand on the stick are propped up behind the universal joint of the stick and from this unintentional elevator deflections result which still reinforce the maneuvering g-loads.

Action:

1. Check that your stick form is identical with the enclosed drawing (200.48.001). Only sticks with this stated crank angle are permissible; sticks differing from that are no longer allowed, even if there should be a previous LBA-approved Modification For A Single Unit for another stick type. Re-install the original stick type. In the case that a brake lever is (to be) fitted to the stick, the extension by means of the wooden compensating piece (200.48.0012) is permissible.
2. Check the most forward position of the stick as per drawing (200.11.S4) and if necessary re-adjust. The adjustment is done at the variable head in front of the stick; for this purpose the elevator must also be in the full down position within the tolerances given in the Operations Manual page 42 (ASW 20) or page 46 (ASW20 L).
3. Remove the existing trim knob; as the landing gear locking mechanism is no more secure while works at the trim are accomplished, the seatpan has to be removed also and the fuselage must be jacked up. The new, spring-loaded trim knob must be installed as shown on drawing 200.49.0030. Attention must be paid that the green knurled head screw ① is absolutely locked with the retaining nut ⑦.

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With the elevator in the zero position, the trim knob must be adjusted at about 10 mm behind the front edge of the slotted gate; the adjustment is done at the universal joint of the trim spring pot. Finally check that all parts are free-moving and re-install the seatpan.

4. If the 4-part, asymmetric AUTOFLUG safety harness (consisting of shoulder harness FAG 7B-1, and lap belt FAG 7E-1) is installed in your glider, it must be checked whether the short lap belt member is mounted at the right cockpit wall (in flight direction !) and is diagonally opposite to the long shoulder harness which is mounted at the main bulkhead close to the red parachute static line anchoring ring. Only then the prescribed position to strap oneself in can be achieved.
5. Exchange the following pages in the respective Flight and Operations Manuals:-  
ASW 20: p. 13, 19, 20, and 38;  
ASW 20 L: p. 14, 20, 21, and 42;  
for pages with the same numbers but with the reference entry of T.N. no.30 dated 01.04.87.  
These pages give important notes for preventing PIO.
6. The exchange of the pages in the Manuals must be documented on page 4 "Amendments to the Manual".

Material & drawings:

See drawings: 200.11.S4; 200.48.0001; 200.48.0012; and 200.49.0030.  
Manual pages as stated under above para ACTION, points 5 & 6.

Mass and C.G.:

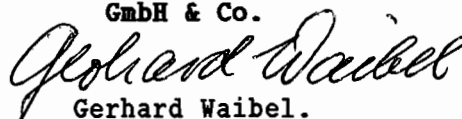
The influence of this mod is negligible.

Notes:

This action can be accomplished by a competent person. The accomplishment of this mod must be inspected by an aviation inspector holding the appropriate license and certified in the glider logbook and in the inspection certificates.

Poppenhausen, April 1, 1987

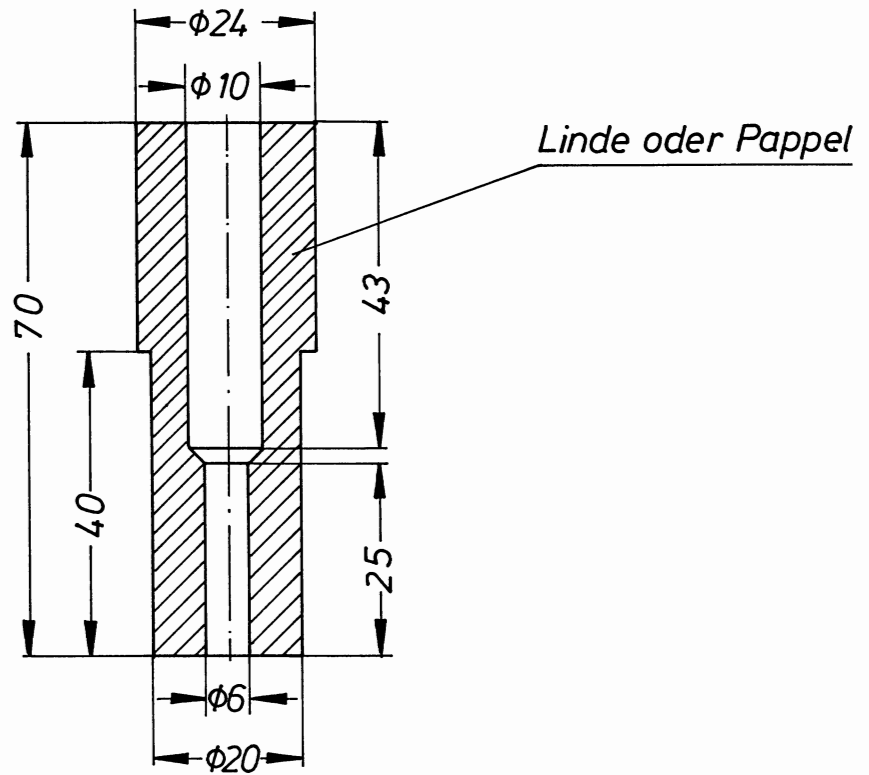
ALEXANDER SCHLEICHER  
GmbH & Co.

  
Gerhard Waibel.

The German original of this Technical Note has been approved by the LBA under the date of April 10, 1987 (signature: SCHMALJOHANN). 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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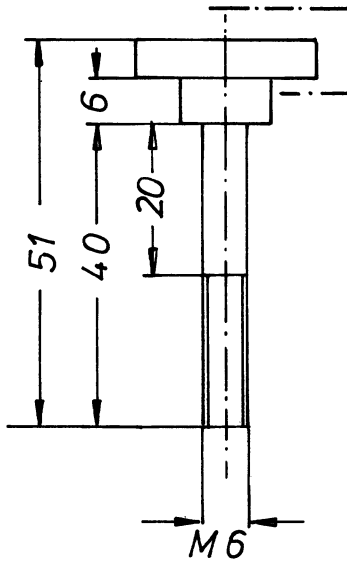


				Datum	Name	Typ	Benennung	Maßst.
				Bearb. 16.10.1878	Herrmann	ASW 20	Ausgleichsstück für Steuerknüppel	1:1
				Geprü.				
				Norm				
				A. Schleicher Segelflugzeugbau 6416 Poppenhausen		Zeichnungsnummer L-314 200.48.0012		Blatt
								Bl.
Zust.	Änderung	Datum	Na.	Urspr.	Ers. f.	Ers. d.		

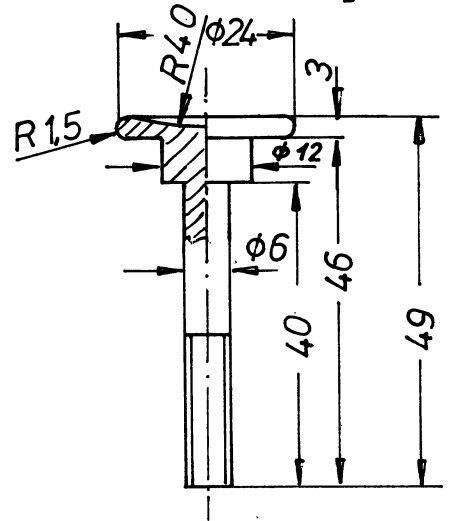
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Oberfläche	
blank	
sandgestrahlt	
atramentiert	X
lackiert	
haftgrundiert	
weiß	
grau	
braun	
grün	X

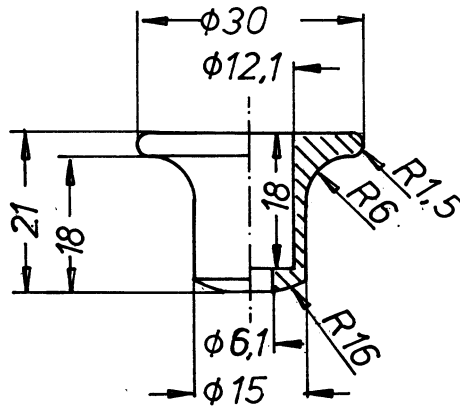
①



wahlweise Ausführung

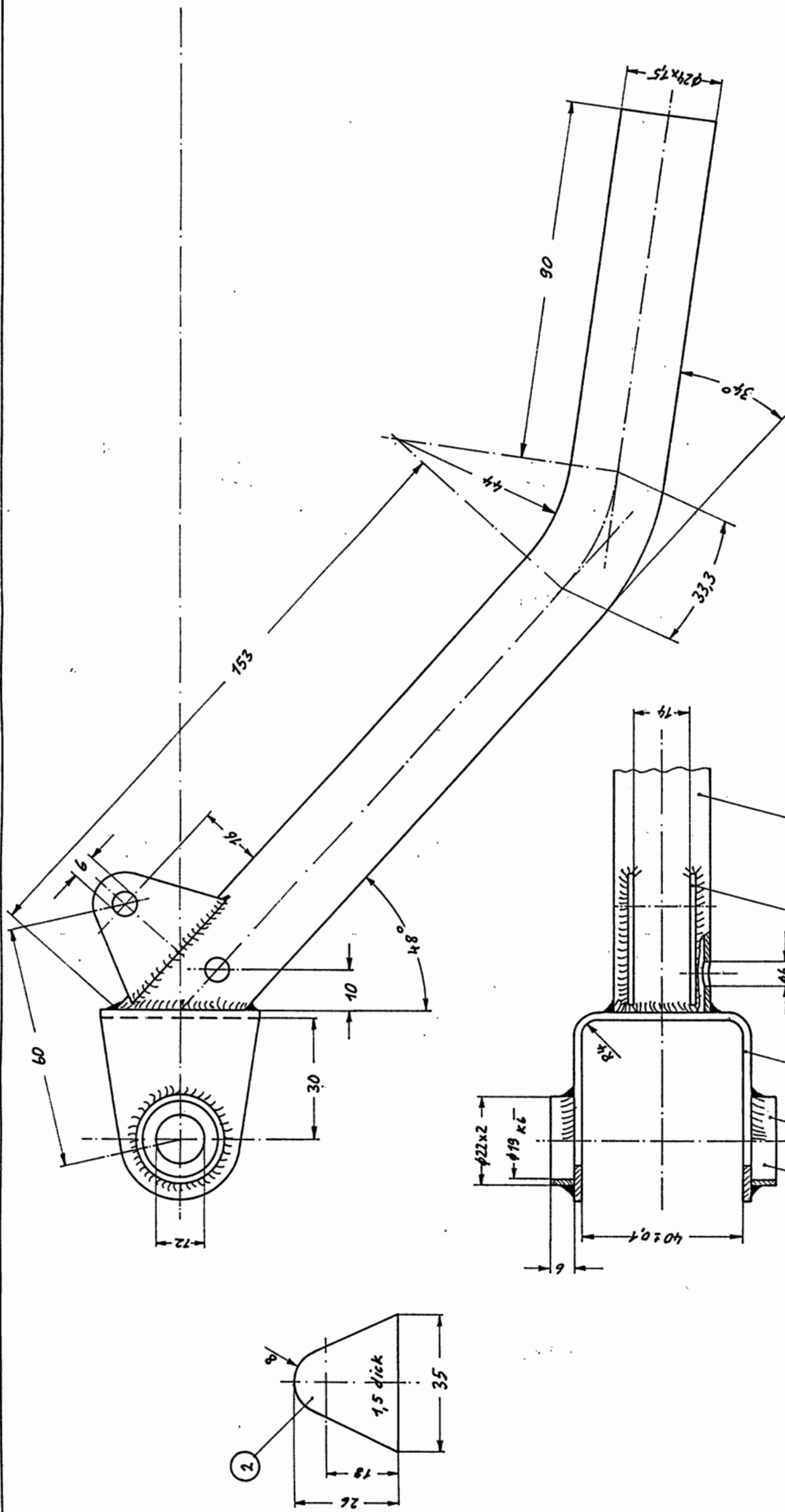


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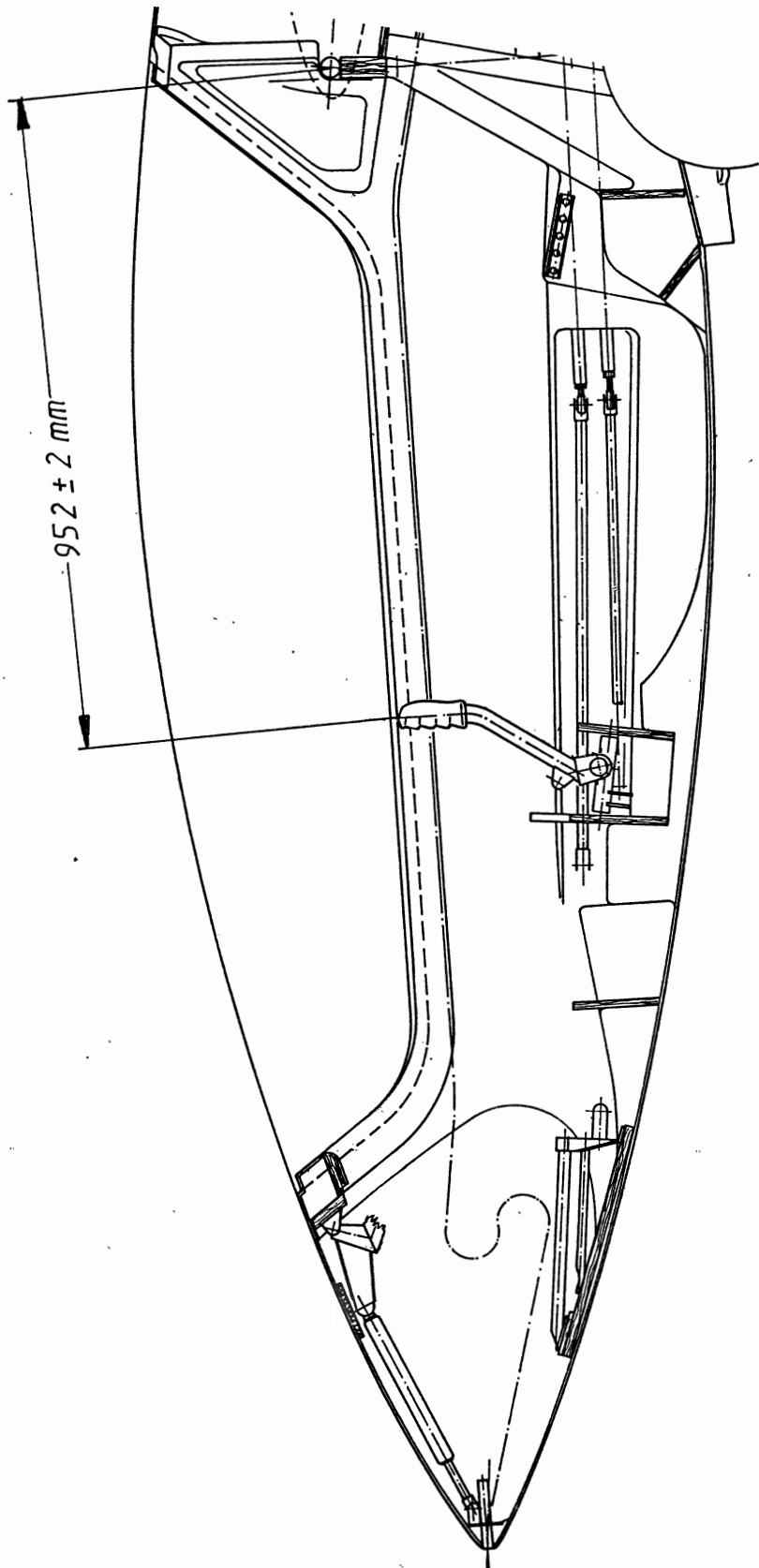
gratfrei

1	Klemmgriff	2	RCH 1000	phi 30 - 21	
1	Rändelschraube M6 x 40 (45)	1	wahlweise Al-Leg.	DIN 464 - 5.8	ohne Rändel !
St.	Benennung	Lfd. Nr.	Werkstoff	Rohmaße Teil- oder DIN-Nr.	Bemerkung
			Datum	Name	Typ
			Bearb. 19.03.87	Juw	
			Geprü.		ASW 20
			Norm		Klemmgriff für Trimmung Einzelteile
			A. Schleicher GmbH & Co Segelflugzeugbau 6416 Poppenhausen		Zeichnungsnummer L-314 200.49.0030
					Blatt 2 2 Bl.
					TM-Nr. 30
Zust.	Anderung	Datum	Na.	Urspr.	Ers. f.
					Ers. d.



2	Peridel-Kugellager (SKF)	5		126			
2	Rohrbuchse	4	St. 35.29	Ø 22 x 2 - 6			
1	U-Bock	3	1.72.14.4	130 x 40 x 2			
2	Lasche	2	1.72.14.4	35 x 26 x 1,5			aus 79.009.3130 gefertigt
1	Rohr	1	St. 35.29	Ø 24 x 1,5 ca. 280	Verlärft	Rohmdie Prof.- oder DIN-Nr.	Bemerkung
				Steuerknüppel		Zzeichnung Nr. L-314	
				1:1		200.48.0001	
						99.000.7154	

18 KL  
+ 2  
- 11



				Datum	Name	Typ	Benennung	Maßst.
				Bearb. 03.08.87	Juw	ASW 20	vorderste Knüppel-	1:10
				Geprü.		ASW 20 L	stellung	
				Norm			full forward stick position	
				A. Schleicher Segelflugzeugbau 6416 Poppenhausen		Zeichnungsnummer L-314 200.11.S4		Blatt
							TM-Nr.30	Bl.
Zust.	Änderung	Datum	Na	Urspr	Ers. f.	Ers. d.		

