

Subjects:

1. Inspection of the rudder pedals.
2. Change/supplement to the Flight and Maintenance Manuals in order to provide the owners with new inspection and assembly instructions.
3. Inspection and exchange of the airbrake bellcrank in the fuselage.
4. Inspection and if the case arises, reinforcement of the rear canopy hinge.

Serial number applicability:

All serial no.s 21001 thru 21345 including;
this is factory-standard as of serial no. 21346.

Compliance:

Actions under points 1.1, 1.2, 3.1, 3.2, 4.1 and 4.2 prior to the next take-off.

The action under point 4.3 is optional.

All other actions until the next annual glider re-inspection, however, at the latest by April 30, 1988.

Reason:

1. With some few ASK 21s it happened that the plastic tube slipped out of the S-shaped rudder pedal tube and jammed the rudder when the pedals were in the rear position.
2. Past experience keeps showing that the assembly of the quick-release connectors of the control circuits at the wing to fuselage transition and especially at the elevator (the latter applies only to the serial no.s up to 21205, after that the ASK 21 series production included the automatic elevator connection as factory-standard) again and again has been done incorrectly or even just completely forgotten.
In order to prevent this from happening, the manuals are supplemented with new inspection and assembly instructions referring to the points in question.
3. In two cases the pre-flight checks on the ground with the ASK 21 showed the airbrake bellcrank in the fuselage (210.43.0005) cracked --> see Maintenance Manual p.16, item 5 (for the US-edition of the manuals see the corresponding "Instructions For Continued Airworthiness" p. 19, item 5).
4. With a few ASK 21s the support tube for the gas spring at the rear canopy hinge was broken. These cracks result from the fact that the gliders were left outside with the canopy open for a longer period of time and by this an overload of the canopy hinge due to continuous shaking in the wind was caused. This is a gross operating error ! On the Flight Manual p. 37, V.3, it is clearly stated "When parking the sailplane the canopies have to be locked." (For the FAA-approved US-Edition of the Flight Manual this is p.43, V.3. !).

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Action:

- 1.1 Prior to the next take off it must be checked whether the plastic tube has slipped out of the S-shaped rudder pedal tube.
Note: the plastic tube is in its correct place when its both ends stand out from the S-shaped tube for about the same length.
- 1.2 If the plastic tube has slipped out or displaced, the following action must be taken prior to the next take-off: the plastic tube must be completely pulled out of the S-shaped tube, then has to be de-greased and sanded with emery paper (40 grains). Now a thickened resin-hardener mixture is brushed on the outside of the plastic tube and then the tube is pushed again into the S-shaped tube such that its both ends stand out from the S-shaped tube for the same length. Watch out: the resin must not get between the rudder cable and the plastic tube ! Finally fill in further resin-hardener mixture between the two tubes from above using an injection syringe.
- 1.3 The plastic tube being in its correct place and fixed such that it will not shift when pressure is applied to the tube end (unload the rudder pedal spring for this purpose), the flight operation can be continued.
In any case for all gliders this action (filling in the resin-hardener mixture between the two tubes from above using an injection syringe; see point "Material") must be accomplished until the next annual glider re-inspection, however, at the latest by April 30, 1988.
- 2.1 The following pages in the manuals must be exchanged for respectively added as new pages with the note "TN-No.20 dated 16.10.87" :
Flight Manual: Check List 1 and pp. 21, 36a, 36b, 37.
Maintenance Manual: pp. 40a, 43a, 43b and 43c.

For the FAA-approved US-Edition of the manuals this applies to the following pages:-
Flight Manual: pp. 2, 3, 4, 30, 31, 42, 42a, 43.
Instructions For Continued
Airworthiness: pp. 2, 3, 43, 45, 45a, 45b, 60.
- 2.2 The accomplishment of the change/ supplement to the Manuals must be documented on the respective page "Amendments Record" (for the FAA-approved US-edition this applies to the page "Log Of Revisions").
- 2.3 The inspection and assembly instructions provided on the new manual pages must be duly regarded !
- 3.1 Prior to the next take-off it must be checked if the air-brake bellcrank in the fuselage shows cracks or deformations --> see Fig. 1.

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- 3.2 If cracks or deformations are found, the airbrake bellcrank must be removed prior to the next take-off and the new bellcrank with an additional support must be fitted --> see drawing 210.43.S5.
- 3.3 If no damages are found, flight operation can be continued for the present. Until the next annual glider re-inspection, however, at the latest by April 30, 1988, the new bellcrank in the fuselage (210.43.0005) must be fitted.
- 4.1 Prior to the next take-off it must be checked if the rear canopy hinge shows cracks --> see drawing 210.12.S5.
- 4.2 If cracks are found, prior to the next take-off the rear canopy must be disassembled and the canopy hinge must be reinforced as shown on drawing 210.12.S5.
- 4.3 If no damages are found, flight operation can be continued. As the canopy hinge is sufficiently rigid under normal conditions and with proper operation, we are of the opinion that it is not necessary to make the canopy hinge reinforcement mod obligatory. However, this mod can be accomplished optionally.

Material & drawings:

Resin Epikote 162: 100 parts in weight (≈ 50 g),
Hardener Epikure 113: 38 parts in weight (≈ 19 g),
or a similar Epoxy resin.
Aerosil to thicken the mixture: 10 parts in weight (≈ 10 g).
5 off spring clip no. 50030771 (Ford-brake-spring clip).
Airbrake bellcrank in the fuselage (210.43.0005),
Reinforcement for airbrake bellcrank support (210.43.0025)

Drawings : 210.12.S5
210.43.S5

Notes:

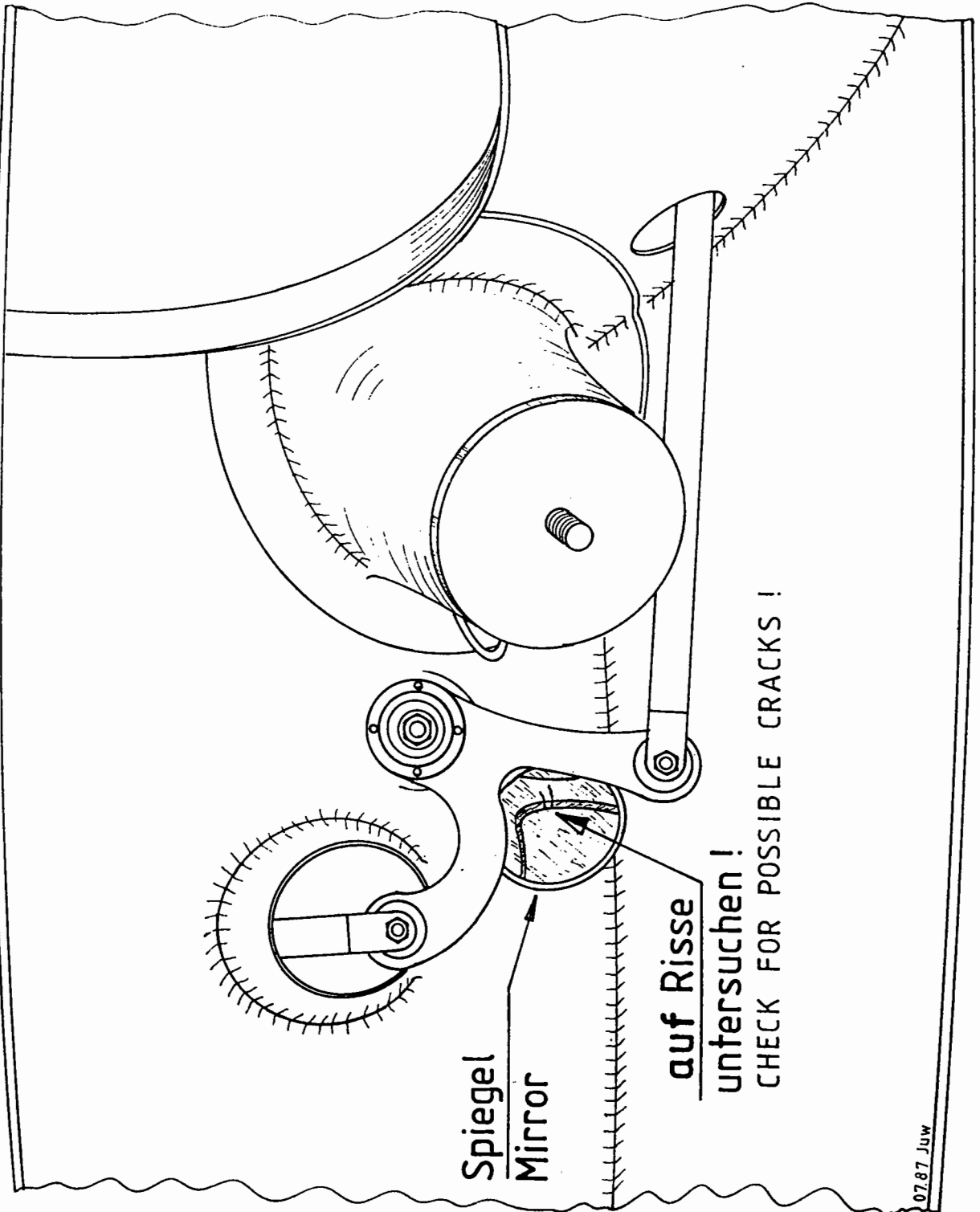
The action 1 through 3 can be accomplished by a competent person.
Action 4 must only be accomplished by the manufacturer or by a technical aviation service station holding an appropriate license.
The accomplishment of all actions must be examined by a licensed aviation inspector who has to document the accomplishment in the glider's inspection documents and logbook.

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Poppenhausen, den 16.10.1987

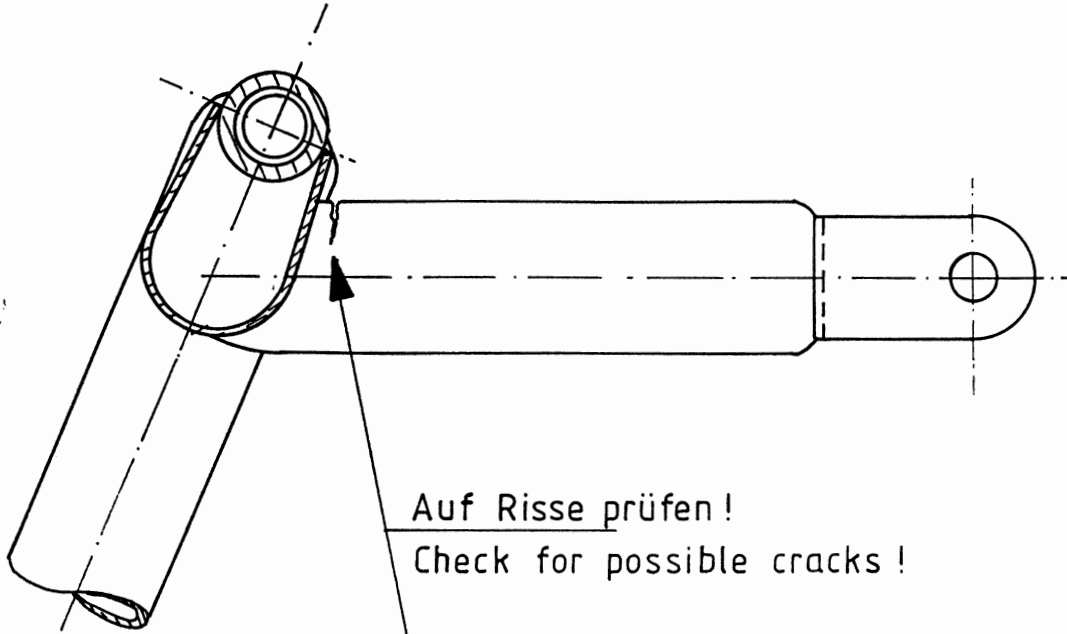
ALEXANDER SCHLEICHER
GmbH & Co.

i.A. *L.-W. Juntow*
(L.-W. Juntow)

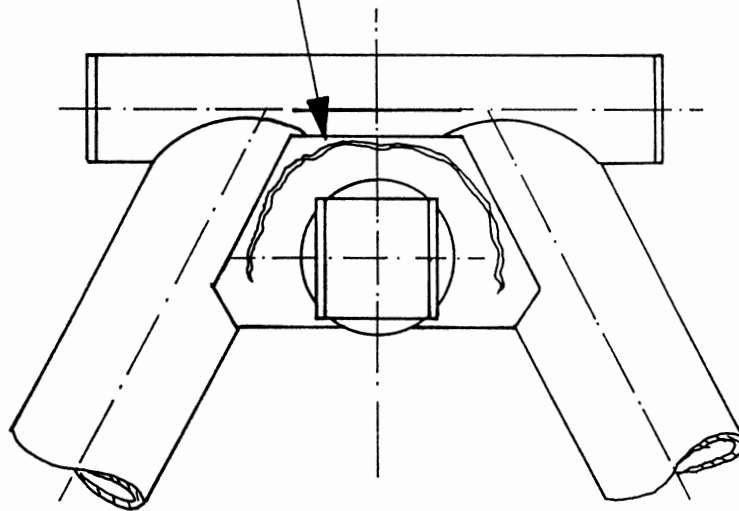
The German original of this Technical Note has been approved by the LBA under the date of Nov.3, 1987 (signature: FRIEß). The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is controlling.

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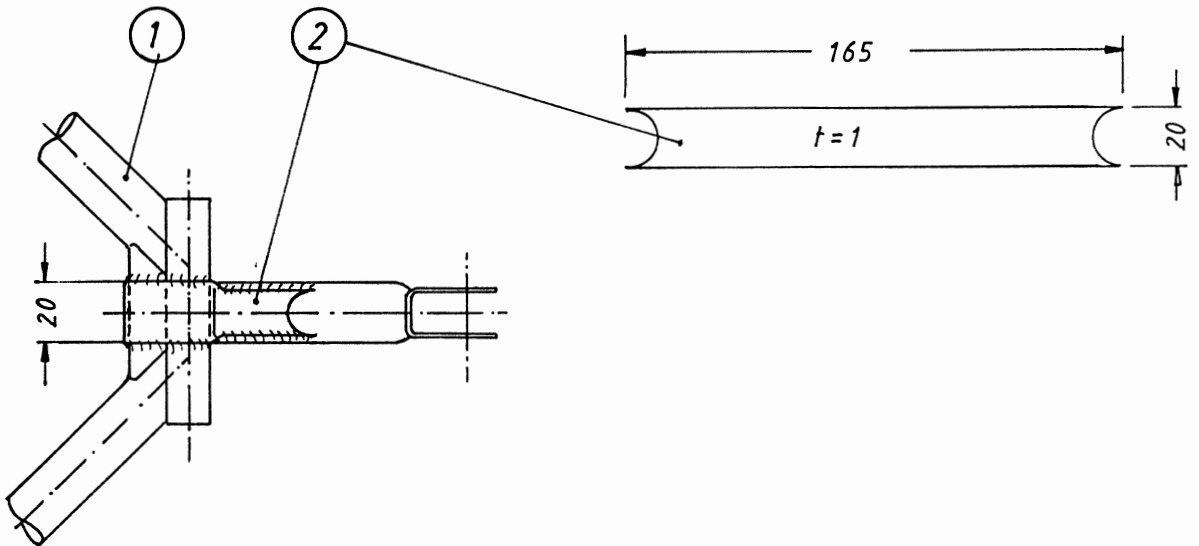
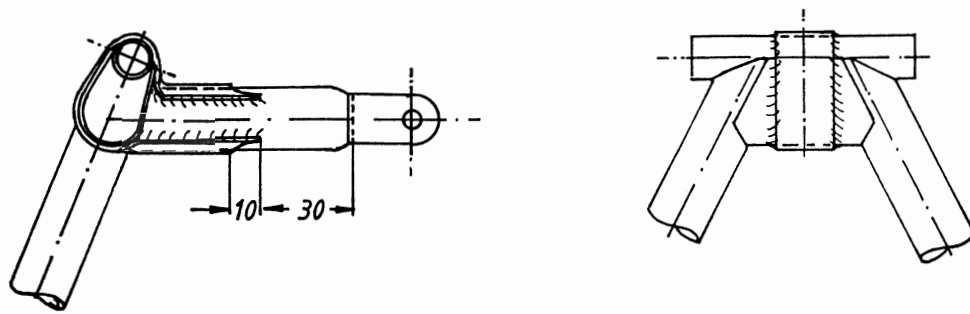
Auf Risse prüfen!
Check for possible cracks!



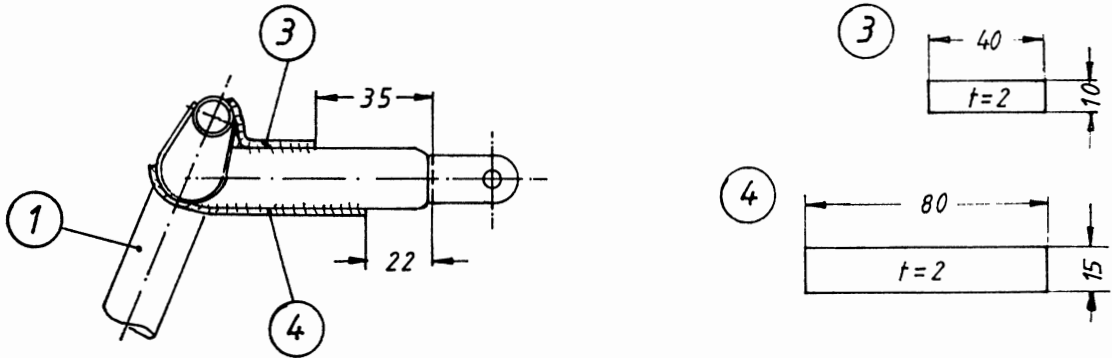
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				Geprü.				
				Norm				
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Zust.	Änderung	Datum	Na.	Urspr.	Ers I		Ers d	

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Wahlweise Ausführung (von London Sailplane LTD.)

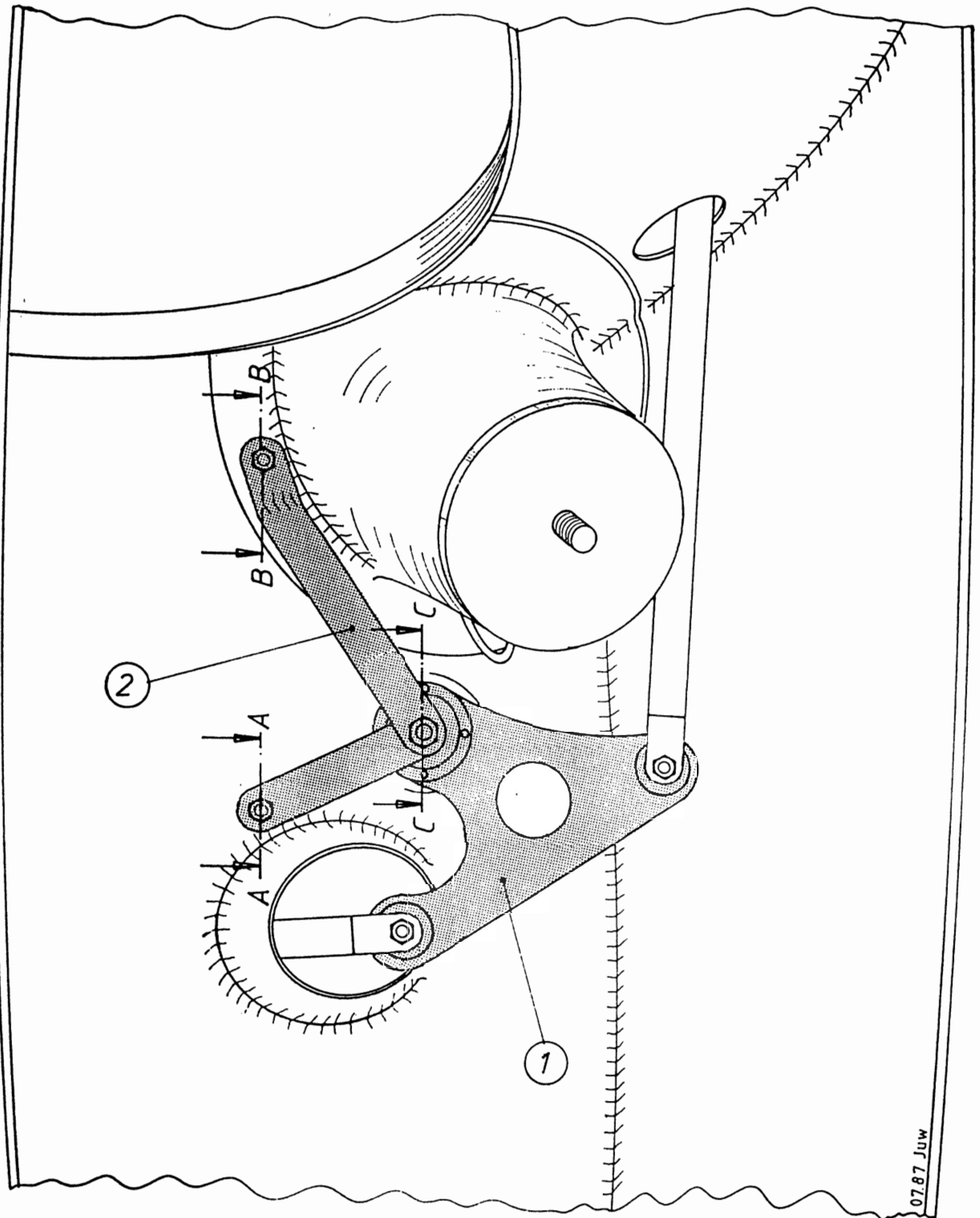


WIG-Schweißverfahren DIN 1912

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1	Verstärkungsblech	2	1.7214.4 / 1.7734.4	1 x 20 x 170			
1	Haubengelenkbeschlag, hinten	1		210.12.0016			
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			Geprü				
			Norm				
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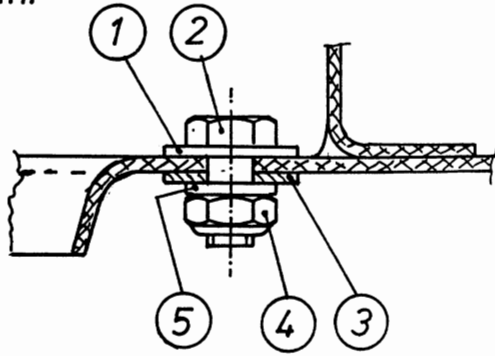
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1	Verstärkung	2		210.43.0025			
1	Umlenkhebel	1		210.43.0005			
St.	Benennung	Lfd Nr	Werkstoff	Rohmaße Teil- oder DIN-Nr.	Bemerkung		
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			Geprü		ASK 21	BK-Umlenkhebel im R	%
			Norm				
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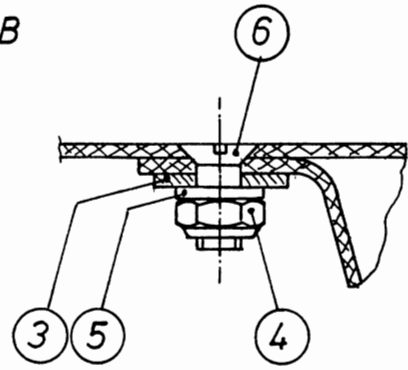
Teilschnitt

A - A



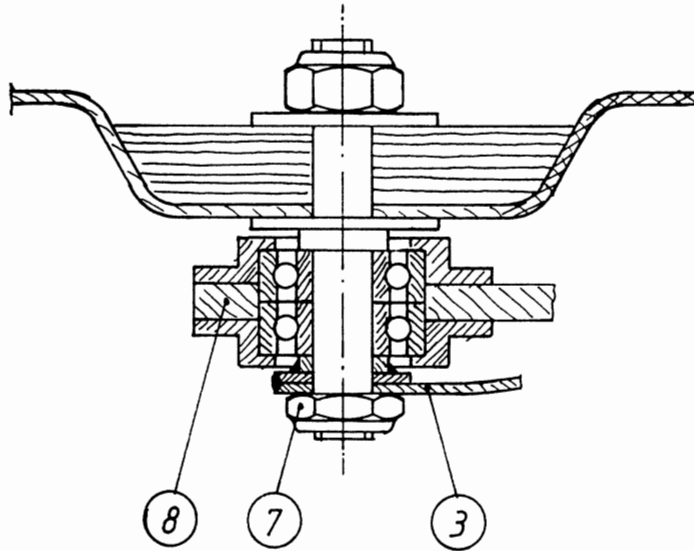
Teilschnitt

B - B



Teilschnitt

C - C



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1	Umlenkhebel f. BK im R.	8		210 43.0005	
1	Sicherungsmutter M6 SNM 003	7		Süko - Norm	
1	Senkschraube M6 x 14	6		DIN 963 - 5.8	
2	Scheibe 6,4	5		DIN 125 - St	
2	Sicherungsmutter NM6	4		DIN 980 - 6	
1	Verstärkung	3		210. 43. 0025	
1	6 kt - Schraube M6 x 14	2		DIN 933 - 8.8	
1	Scheibe 6,4	1		DIN 9021 - St	

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Zust.	Änderung	Datum	Na.	Urspr	Ers f
					Ers d
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