



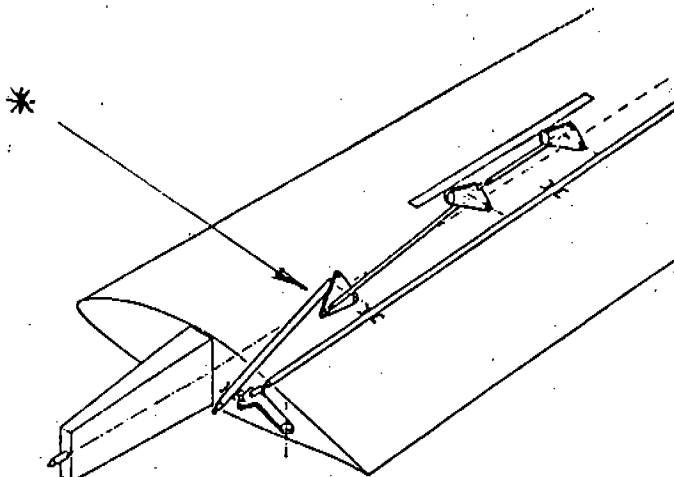
AIRWORTHINESS DIRECTIVE

TYPE AFFECTED

GROB TWIN ASTIR GLIDERS (All s/no's NOT G 103)

SUBJECT:

INSPECTION/REPLACEMENT OF DIVEBRAKE SYSTEM INTERMEDIATE BELCRANKS.



BACKGROUND:

- (1) During 1979, original production, cast bellcranks were found to crack in service. These were replaced by GROB with a stronger casting.
- (2) In August 1982 the "stronger" casting was found to be cracking in service.
- (3) GFA issued an "immediate inspection request" and started to negotiate a further replacement quadrant to be supplied by the manufacturer.
- (4) A trial installation of a new bellcrank (supplied by GROB from G103) was done by Waikerie Gliding Club, allowing this AD to be issued.

REQUIRED ACTION:

(1) UNTIL MODIFICATION:

- (a) Bellcrank to be inspected (through the inspection hole cut in accordance with the inspection request dated 9/9/82) at intervals not exceeding 25 hrs.
- (b) If cracking becomes visible the glider is to be taken out of service until modified.

(2) MODIFICATION - GROB

- (a) GROB have supplied G 103 Bellcranks and installation kits to be fitted through 2 holes cut in the lower skin, one of which remains a permanent inspection panel. This is fully detailed on GROB TM 103 - 5 - 11 which is included with each kit

Issued by: *[Signature]* Chief Technical Officer
Airworthiness

For and on behalf of:

GLIDING FEDERATION OF AUSTRALIA

Date 8/4/83

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MODIFICATION - GROB (cont'd)

This kit is available from E.SCHNEIDER PTY.LTD.

2 Wells Rd. Gawler S.A.

- (b) The 4 GROB drawings supplied with the kit, may be inaccurate. copies of corrected drawings are available from the GFA secretariat (if nat attached to this AD)

(3) MODIFICATION - GFA

An alternative Bellcrank can be manufactured in steel to D.Llewellyn Drawing 79-C-8, and installed in accordance with the GROB instructions. Drawing 79-C-8 is available from the GFA secretariat.

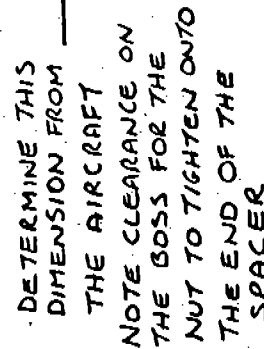
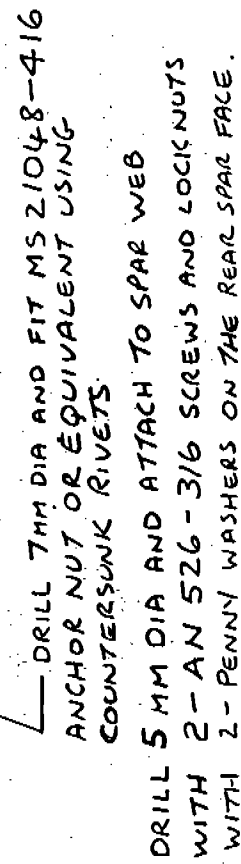
INSTALLATION RECOMMENDATION As drawn by GROB, later removal of the Bellcrank can only be carried out by re-opening the 80x120 access hole in the leading edge. On sheet 3 of this AD is a suggested scheme which provides a captive nut allowing removal of the pivot bolt, without cutting an access hole;-

- (a) Make up and fit nut retaining bracket
- (b) Replace the 6mm bolt with an AN4 bolt, reaming the spacer and bracket to suit.
- (c) Cut the spacer tube to allow removal.

SETTING SYSTEM OVER CENTRE Cracking of the cast bellcranks may be associated with the rigging of the overcentre locking action, if the cockpit lever load is too high the bellcrank twists and is highly stressed. A maximum front cockpit pilot hand load, to close, of 5 kg. is suggested, or the manufacturers recommended settings if available.

IMPLEMENTATION This AD may be carried out by holders of DOA 1109 certificates endorsed for minor or major FRP repair. Rigging of the system on completion is to be inspected by a C of A inspector, any type, all work to be fully detailed in the aircrafts Log Book.

COMPLIANCE All Bellcranks are to be replaced before October 31st.1983 irrespective of cracks being found in service. The requirements of this airworthiness Directive are mandatory. This Directive is issued pursuant to Air Navigation Regulations under delegated authority of the Secretary of the Department of Aviation..



- (1) Suggested scheme for nut retention and spacer removal for later servicing of Bellcrank assembly.
- (2) Make the bracket from 16 SWG mild steel - deburr and etch prime.
- (3) Replace 6mm bolt with a 1/4" American AN4 bolt reaming spacer and lug to suit.
- (4) Provision for Lockwiring the head of the bolt to provide for eventual failure of the anchor nut locking material, is recommended.

153

GURTMITTE
SPAR CENTRE

HOLMGURT
SPAR BEAM

90

60

KLEINE ÖFFNUNG
VOR DEM HOLM

INSERT
RING

80 X 120
CUTOFF.

LAGERBOCK 103-4100.20

ANWINKLUNG

- DISTANZROHR 103-4123.03

LAGERSCHRAUBE M6 x78

SECHSKANTMUTTER M6 LNS

SCHEIBE 6.4

TO AVOID LOOSENING IN
SERVICE "LOCTITE" IS
RECOMMENDED TO RETAIN
SCREWS AND BOSSES

~~TESTED TO~~
STANGE ZUR
WURZELRIPPE
ROOT RIB

FLUGRICHTUNG

LE

STANGE ZUR
BREMSKLAPPE
*PUSHROD TO
AIR BRAKE*

2 SPACER
WASHERS
UNDER

- HOLMSTEG

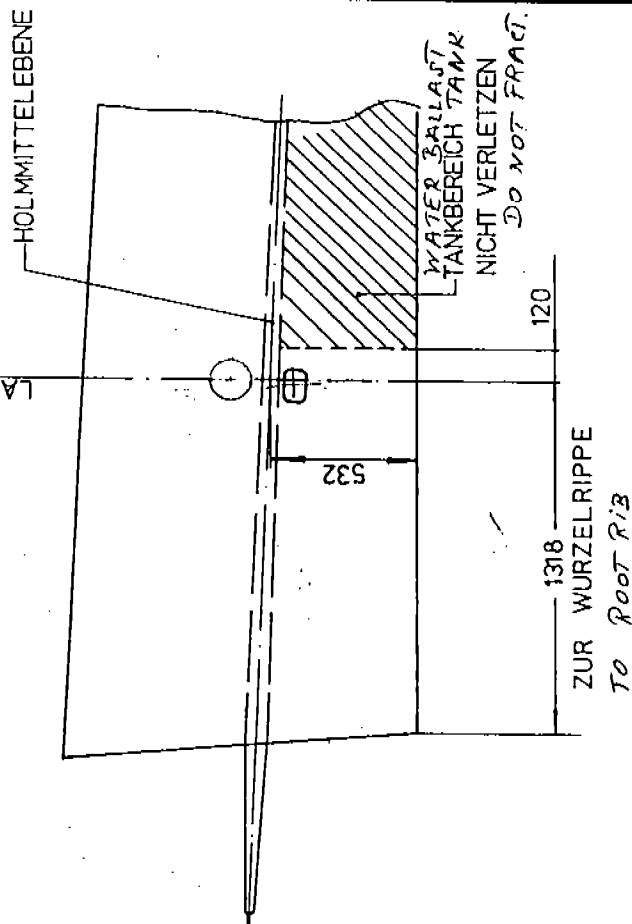
- FLÜGEL OBERSCHALE
WING UPPER SURF

HOLMMIT-
TELEBENE

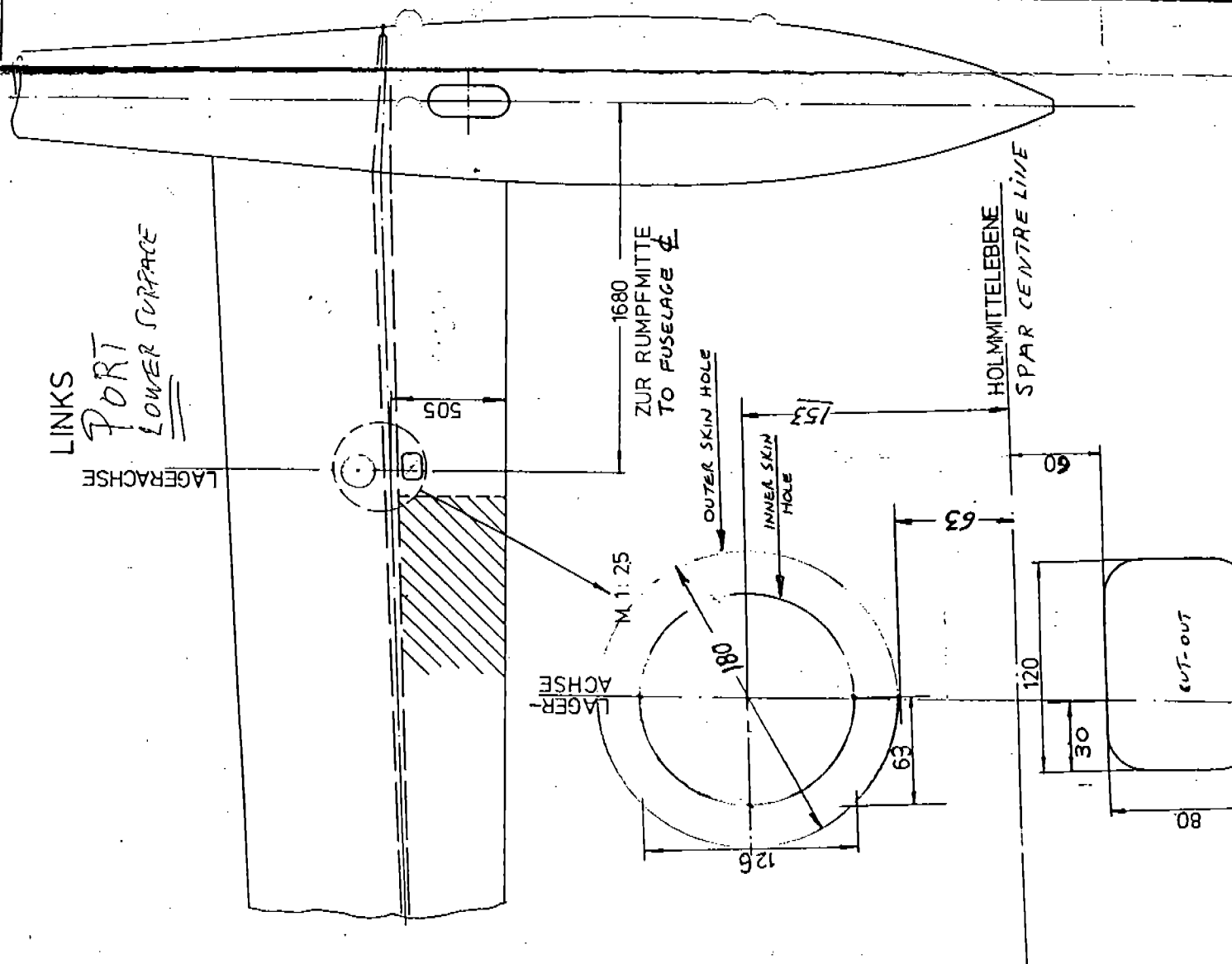
DETAIL X
EINZELHEIT X

FOR WING STBD.
FÜR TRAGWERK RECHTS

				G.F.A. ISSUE B-4-83					
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				Gepr.					
				Norm					
							Benennung ZEICHNUNG 2		
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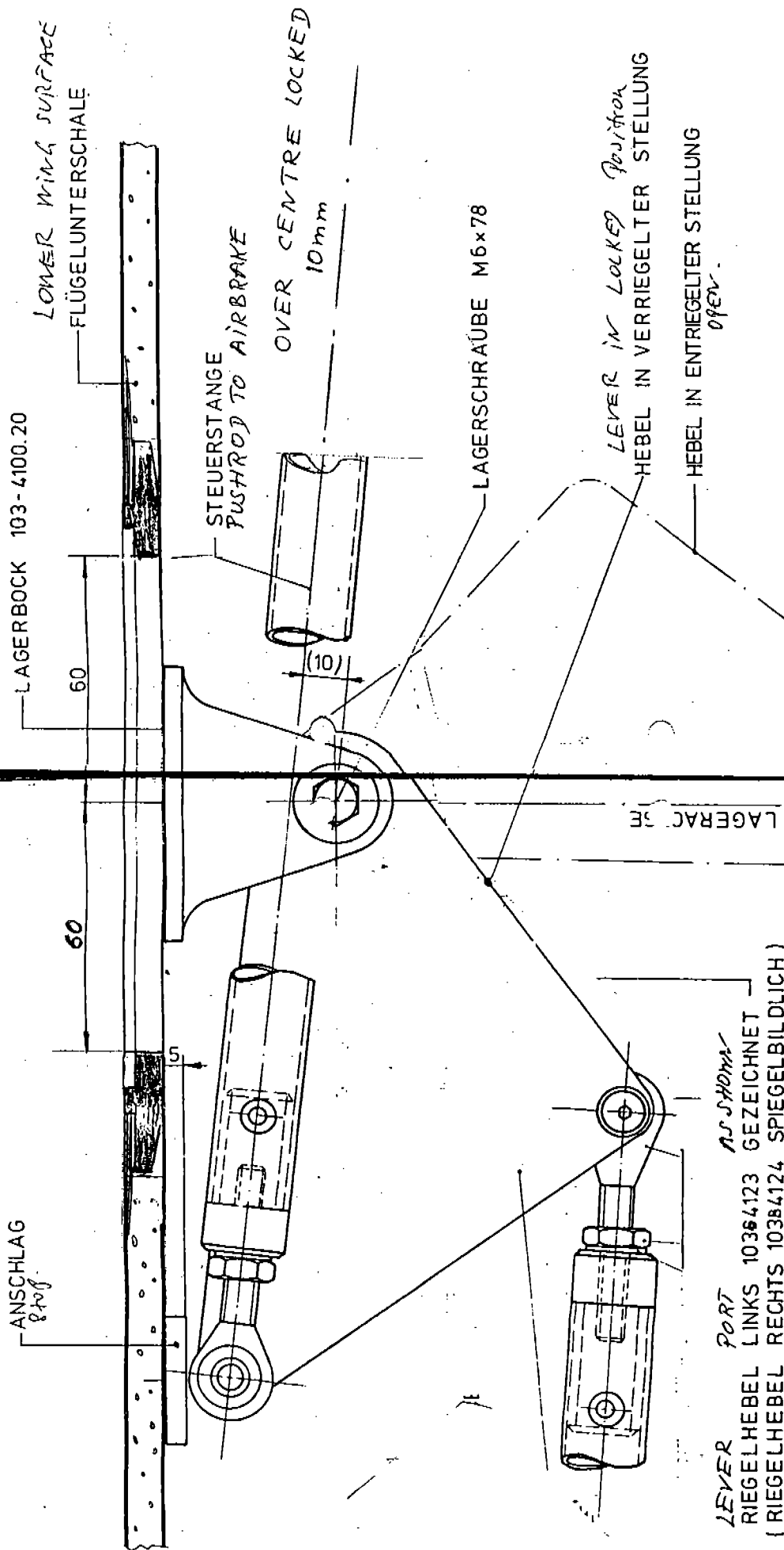


HOLMMITTELEBENE
SPAR CENTRE LINE

G.F.A ISSUE 8-4-83 MS.

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GROB



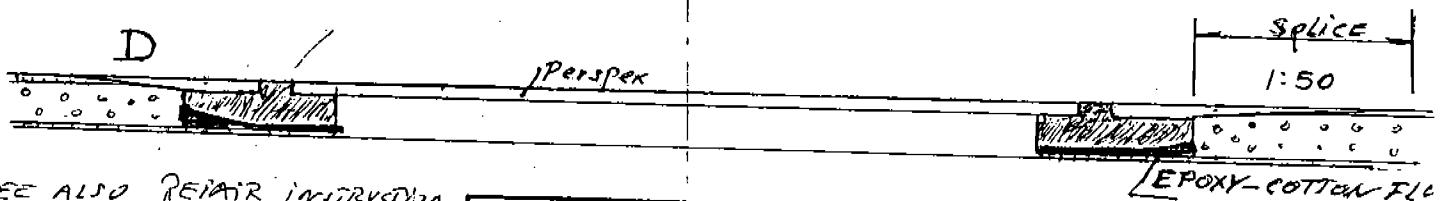
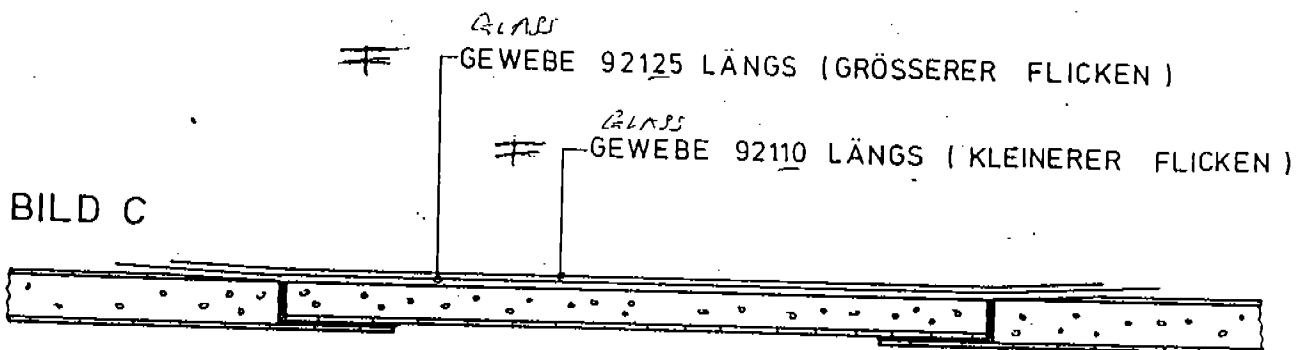
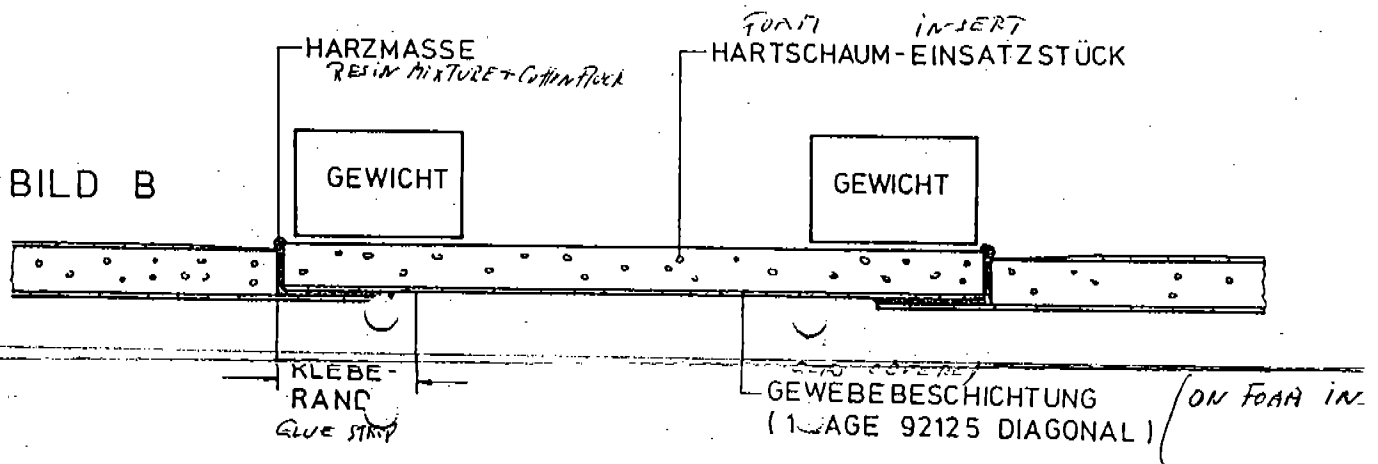
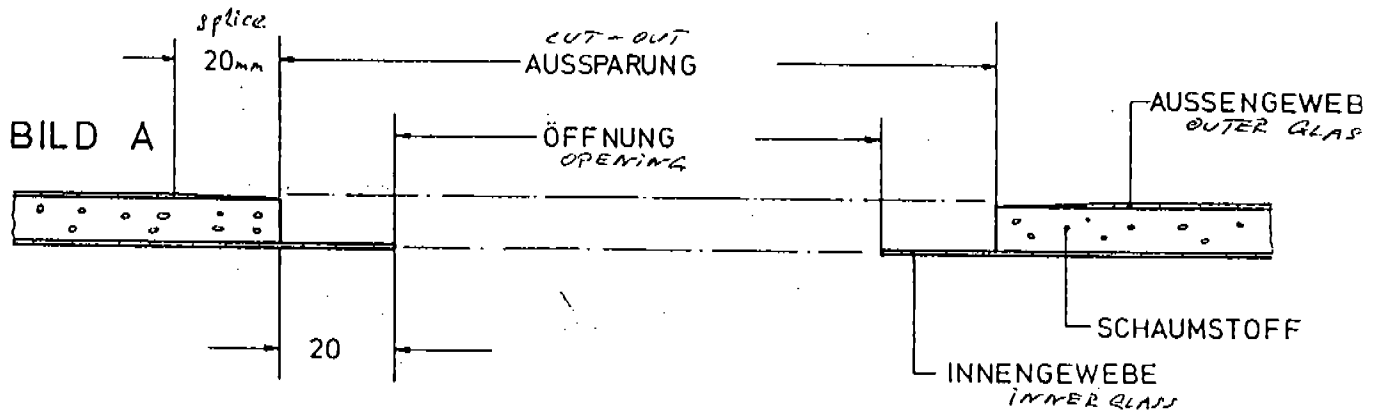
SEEN FROM REAR
ANSICHT VON HINTEN
To Root R/B
ZUR WURZELRIPPE
UND EINDELNITTE



ZEICHNUNG 3

1:1

G 103 TM03-5-II



SEE ALSO REPAIR INSTRUCTIONS
VERGLEICHE AUCH REPARATUR-
ANLEITUNG TWIN ASTIR:
SEITE 9, ABB. 2 und 3
PAGE
INMANUAL

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