THE GLIDING FEDERATION OF AUSTRALIA

TO THE OWNER OF THE PARTY OF TH

AIRWORTHINESS DIRECTIVE

GFA AD 312

Issue 1

TYPES AFFECTED:

DG300 and DG300 Elan, All serial numbers.

SUBJECT:

For the Issue of an Australian Certificate of Airworthiness Each DG 300 type sailplane must comply with the following LBA approved Glaser-Dirks Technical Notes:-

TN 359/7, TN 359/8, TN 359/9, TN 359/10

ACTION REQUIRED:

Carry out instructions in accordance with the above Glaser-Dirks Technical Notes, at or before the initial C. of A. inspection.

IMPLEMENTATION:

- 1. Instructions in TN 359/7 and TN 359/9 can be carried out by the owner.
- 2. Instructions in TN 359/8 and 359/10 to be carried out by a DoA 1109 Glider Inspector endorsed "Approved Modifications FRP" and must be recorded in the sailplane logbook.

MATERIALS:

- 1. Manual pages available from the GFA Secretariat.
- 2. As listed in the various Technical Notes, obtainable from Glaser-Dirks, Postfach 4120, 7520 Bruchsal 4, West Germany.

ENCLOSURES:

TN 359/7, TN 359/8, TN 359/9, TN 359/10

COMPLIANCE:

The requirements of this Airworthiness Directive are mandatory. This Airworthiness Directive is issued pursuant to Air Navigation Regulations under the delegated authority of the Secretary of the Department of Aviation.

Issued by:

In Burn

Chief Technical Officer, Airworthiness

12 /3/1987

For and on behalf of:

GLIDING FEDERATION OF AUSTRALIA

Sheet 1 of 1

Glaser-Dirks Technical Note DG-300 Flugzeugbau GmbH DG-300 ELAN No. 359/7 7520 Bruchsal 4 Manual revisions Subject: Sailplanes DG-300, EG-300 ELAN Effectivity: Serial No.: all Within 30 days Accomplishment: To improve the manual several pages have been Reason: revised. English units of measure have been included. Instructions: Exchange the following manual pages for the new issues May 1985 Flight manual page 0 list of amendments pages:1,2,4-6,8,10-12,15,16,19,21,22,24,25,28,30,31, admendments and corrections, English units of measure Maintenance manual list of amendments page 0 pages 1-3, 11, 14, 17 a, 17 b, 21,23 amendments and corrections. English units of measure Repair manual

page 3/1 list of amendments

pages 3/7 issued Jan. 1985 pages 3/2, 3/6, 9,10,11 issued May 1985

Marking of pages

a) Sailplanes equipped with the safety tow release "Europa G 73"

TN 359/7

b) Sailplanes equipped with the special tow release "SH 72" following TN 359/4 TN 359/4, TN 359/7

Material:

Manual pages see above with corresponding

markings.

Remarks:

These measures may be executed by the owner himself and are to be entered in the aircraft logs mentioning TN 359/7 or TN 359/4, TN 359/7

Bruchsal 4, den Sept. 4, 1985

Gezeichnet:

W. O

(Dirks)

LBA-anerkannt

06. Sep. 1985



Claser-Dirks Technical Note DG-300 Flugzeugbau GmbH No. 359/7 DG-300 ELAN 7520 Bruchsal 4 Subject: Manual revisions Effectivity: Sailplanes DG-300, EG-300 ELAN Serial No.: all Accomplishment: Within 30 days To improve the manual several pages have been Reason: revised. English units of measure have been included. Instructions: Exchange the following manual pages for the new issues May 1985 Flight manual page 0 list of amendments pages 1,2,4-6,8,10-12,15,16,19,21,22,24,25,28,30,31, admendments and corrections, English units of measure Maintenance manual list of umendments page 0 pages 1-3, 11, 14, 17 a, 17 b, 21,23 amendments and corrections. English units of measure Repair manual page 3/1 list of amendments pages 3/7 issued Jan. 1985 pages 3/2, 3/6, 9,10,11 issued May 1985 Marking of pages a) Sailplanes equipped with the safety tow release "Europa G 73" TN 359/7 b) Sailplanes equipped with the special tow release "SH 72" following TN 359/4 TN 359/4, TN 359/7 Material: Manual pages see above with corresponding markings. Remarks: These measures may be executed by the owner himself and are to be entered in the aircraft

Bruchsal 4, den Sept. 4, 1985

Gezeichnet:

(Dirks)

W. 0

LBA-anerkannt:

06. Sep. 1985

logs mentioning TN 359/7 or TN 359/4, TN 359/7



Glaser-Dirks Flugzeugbau GmbH 7520 Bruchsal 4

Technical note DG-300 TN 359/8 page 1 from 3

Subject:

Additional tow hook for aerotow

Effectivity:

Sailplanes DG-300, DG-300 ELAN

only as an option

Accomplishment:

non

Reason:

In addition to the C.G. tow hook a tow hook only for aerotow can be installed as an option. The installation place is below the instrument panel.

Postfactory installation is possible.

Instructions:

1. Installation of the nose tow hook Tost "E75" according to installation plan EFK, drawings R83 and R84. For postfactory installation the installed control cable is to cut so that the cable leading to the C.G. hook can be used for the new installation. Cut the nylon tubes according to plan EFK. Remove the pulley and its cover under the instrument panel. Make a cutout in the left wall under the instrument console referring to drawing R84 for installation of the GFRP part R85. Grind away the upper and lower glued joints of the wall.

Assemble the bulkheads R81 and R82 provisionally to the tow hook. Place the assembly exactly in the middle of the fuselage and mark the position of the glued joints for the bulkheads and a cutout diameter 53 mm (2.1 in.) for the ring of the tow hook see drawing R83.

Next you have to alter the position of the pitot and static pressure lines according to installation plan ED/1. The lines should come out of the GFRP wall min. 90 mm (3.5 in.) above the fuselage bottom. If not, you have to reposition them prior to the installation of the tow hook.

Mill a cutout 2 mm deep for the rubber cover see drawing R86 in the lower fuselage surface. The nylon line for the pitot pressure is to bend to the left by heating it. To prevent a wrinkle in the tube insert a dia. 3,2 mm (1/8 in.) control cable in the line prior to heating. The line should be bend so that there is no interferring with the tow hook. The plastic hose for the pitot pressure is to lengthen by 130 mm (5.1 in.).

The length of the static hoses are 140 mm (5.5 in.) left and 120 mm (4.7 in.) right, measured from the T-tube fitting.

To prevent from chafing at the tow hook the hoses are to be fixed with a plain loop cushioned clamp dia. 22×15 , which is to be fixed at the left upper mounting bolt of the pedal adjustment device. The original bolt is to be exchanged against a bolt M 6 x 30 DIN 912-8.8.

Roughen the glued joint areas at the bulkheads, the fuselage and the wall R85. Assemble the tow hook with the lever R79/1 and the bulkheads.

Mix the resin 50 g (1,76 ounces) GE 162 and 19 g (.67 ounces) hardener Laromin C 260. Brush all glued joint areas with the resin mixture. Thicken some of the resin mixture with cotton flocks and apply on the glued joint areas. Glue in the wall R85 and the bulkheads with the towhook. Fix the nylon tubes according to plan EFK with 2 layers of glassfibre fabric 92125.

Curing procedure: 12 h room temperature, 18 h 55° C (131°F)

Assemble the bellcrank R80 provisionally with the clevis rod ends and the adjustmentscrew R79/3 to the bulkhead and the towhook. Adjust R79/3 for a distance of 75 mm (2.96 in.) of the axes. Insert the control cables with thimbles and Nicopress sleeves according to plan EFK and mark the positions. Take out the bellcrank R80 and press the sleeves with a Nicopress tool groove M (see also maintenance manual 4.2).

Find assemble the bell crank.

Adjust the adjustment screw R79/3 so that the cable leading to the C.G. tow release is just not tensioned. Lock the fork rod ends with the counter nuts. Glue in the rubber cover according to drawing R86 with Pattex contact adhesive or similar. Cover the joint with thin plastic tape.

2. Function test

Carry out a function test at the front release and at the C.G. release.

For testing use a rope with the original Tost double rings (marked LN $6\,5091$ - Tost).

Pull the rope parallel to the lower fuselage surface with min. 50 daN (110 lbs.) to the front.

Release from the cockpit. Ensure for safe release with low pilot forces.

Manual pages

The following manual pages are to be exchanged against pages issued Oct. 1985 and marked TN 359/8. Follow the new instructions marked with a bar at the side of the pages.

page	subject
0	list of amendments
4	tow hooks
17	tow hooks
21	aerotow
33	tow hooks
0	list of ammendments
3	tow hooks
11	tow hooks
14	tow hooks
	0 4 17 21 33 0 3

file the plan EFK behind diagram 4

Weight and C.G.:

The weight increases by .9 kg (2 lbs) at 1260 mm (49.6 in.) in front of datum. For postfactory installation calculate the new empty weight C.G. or carry out a new C.G. weighing. Write a new C.G. weighing report.

Material:

- 1 tow release Tost E75 (special version for DG-single seaters) with bush R79/2 and bolt M6x 85 DIN 931-8.8 zn.
- 1 lever R79/1
- 1 adjustment screw R79/3
- 1 bellcrank R80
- 1 clevisrod end G 6 x 12 DIN 71752 left hand thread

page 3 from 3

1clevis rod end G 6 x 24 DIN 71752 1 nut DIN 439-8 M6 left hand thread 1 nut DIN 439-8 M6 2clevis pins 6 x 18/16,5 DIN 1434 zn 2 cotter pins 1,5 x 12 600 mm (24 in.) control cable dia. 3,2 mm (1/8 in.) LN 9374 1 bolt M6 x 30 LN 9037 2 bolts M6 x 60 DIN 912-8.8 zn 5 self locking nuts M6 DIN 985-8 zn 9 washers 6.4 DIN 125 Stzn 3 Nicopress sleeves 28-3-M copper-zinc plated 2 thimbles 3 mm DIN 6899 A 1 plain loop type cushioned clamp dia. 22 x 1,5 1 rubber cover R86 (rubber from carwheel tube 2 mm (.08 in.) thick) Glasfibre 92125 ca. $100 \times 100 \text{ mm}$ (4 x 4 in.) Epoxyresin GE 162 50 g (1,76 ounces) + hardener Laromin C260 19g (.67 ounces) cotton flocks 100 g (3,53 ounces) One of each tow hook bulkhead R81,R82 1 GFRP Wall R85 Drawings R83, R84, R86 Installation plans EFK, ED/1

Remarks:

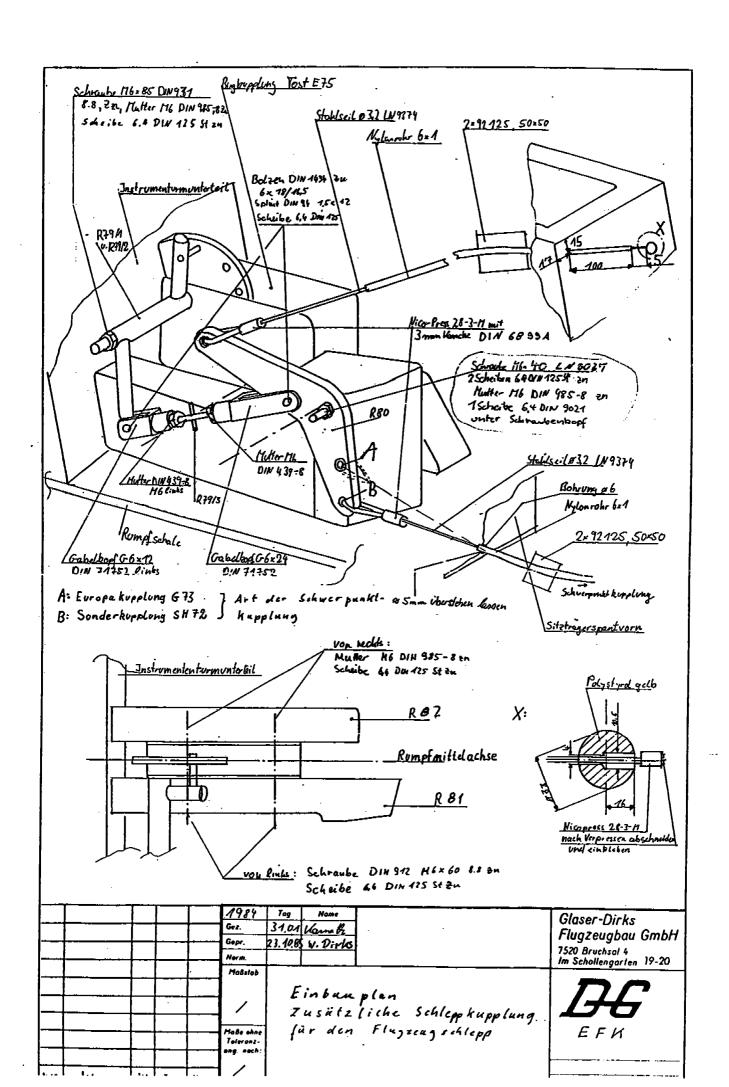
This modification is only to be carried out by the manufacturer or by a certified repair station. The execution is to be listed in the aircraft logs mentioning TN 359/8.

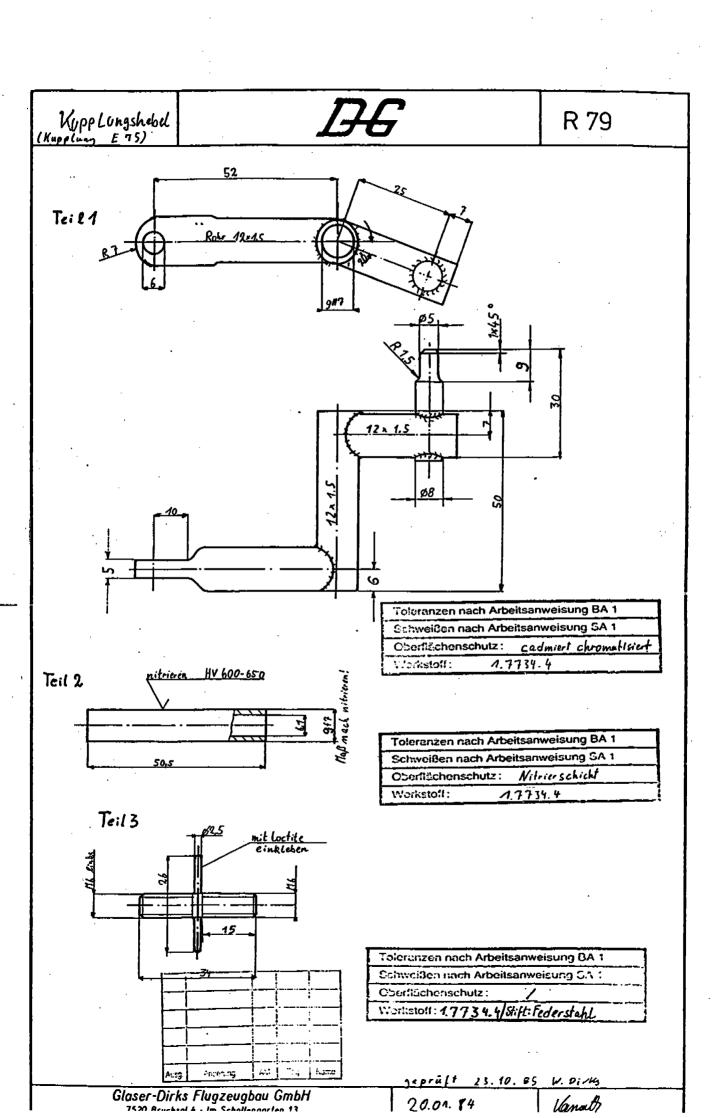
In addition a detailed inspection is to be carried out and to be attested.

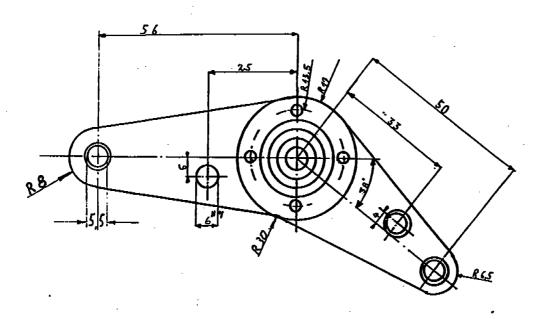
Bruchsal 4, 29.01.85

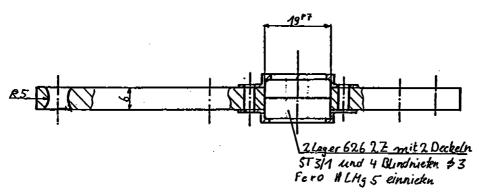
LBA-approved:

W. OCC. signed Dipl.-Ing. W. Dirks The German original of this TN has been approved by the LBA under the date of 28.01.1986, and is signed by Mr. Skov. The translation into English has been done by best knowledge and judgement. In any case of doubt the German original is authoritative.







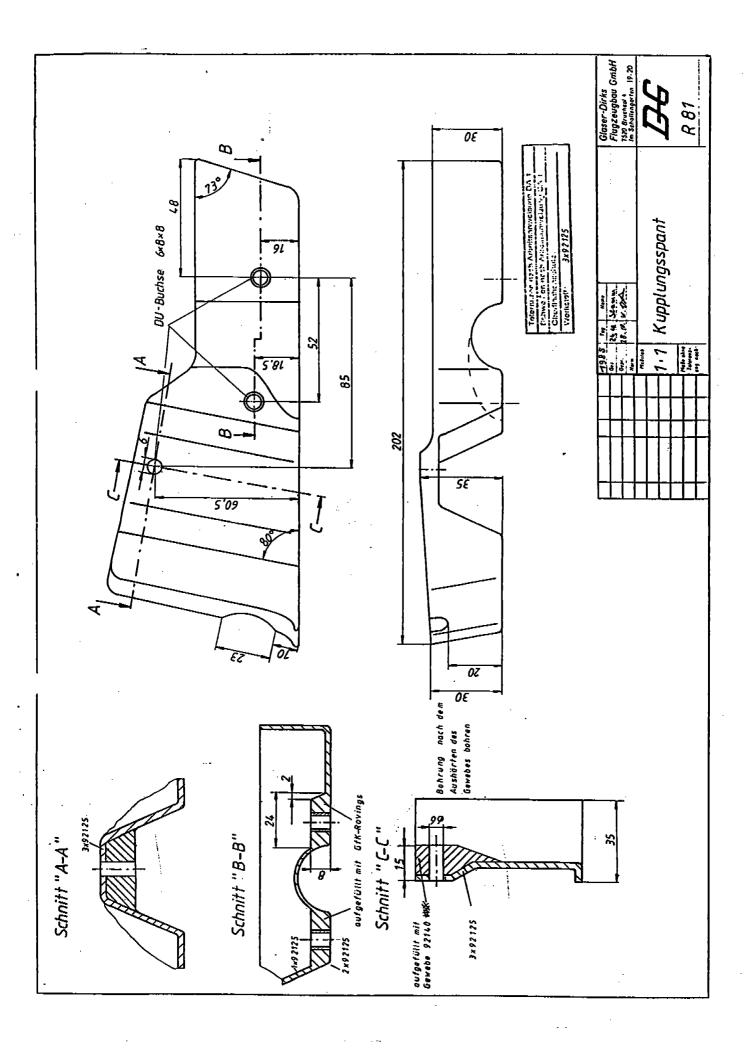


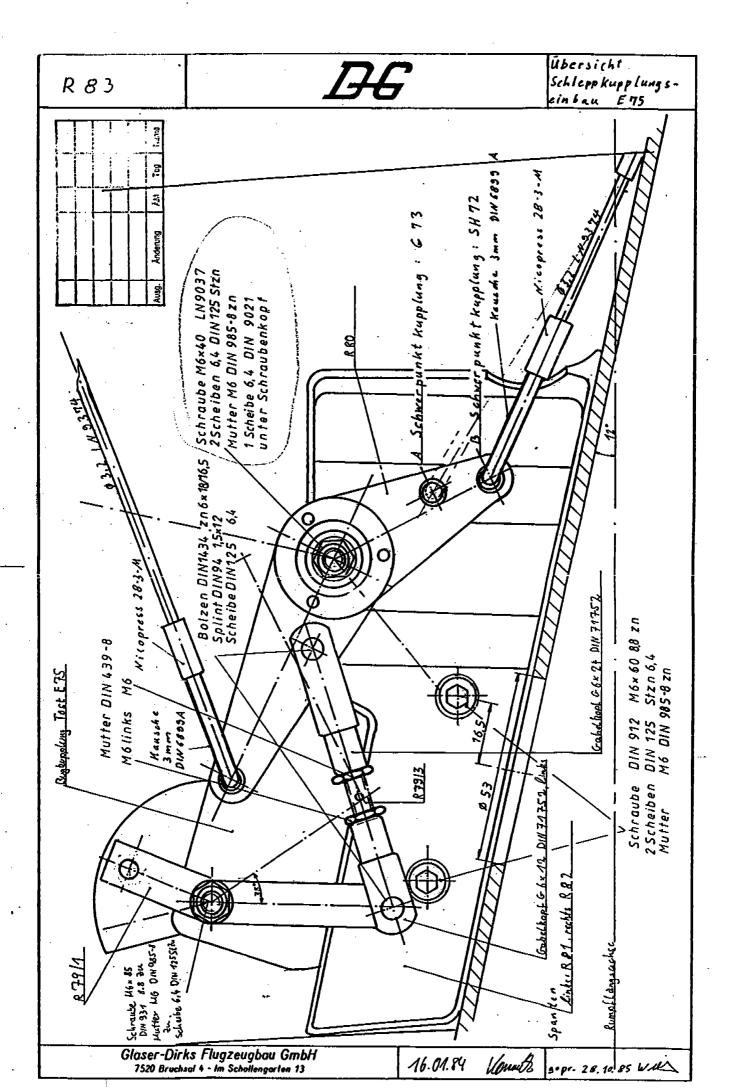
Toleranzon nach Arbeitsanweisung EA 1

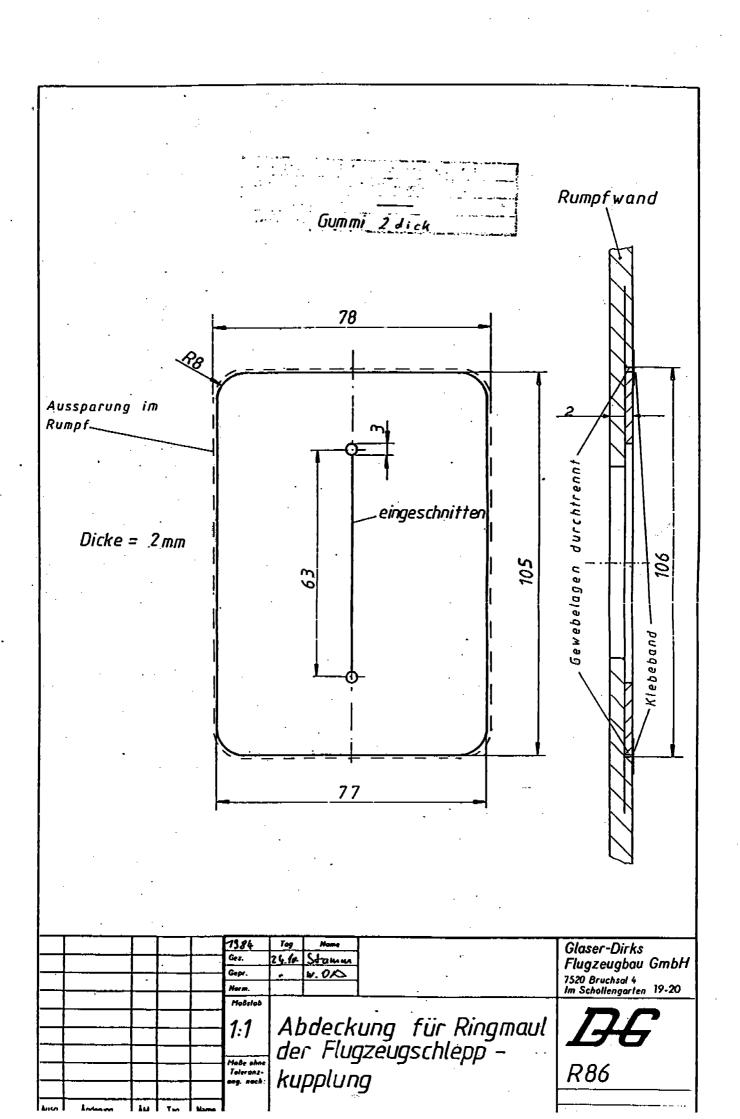
Schweißer: rutch Arbeitsanweisung SA 1

Oberilächenschutz: grondiert Werkstoff: Allig Si 1

1784 Gez. Gepr.	10g Nome 26.01 Warneth 23.145 W. Dir W.	Glaser-Dirks Flugzeugbau GmbH 7520 Bruchsol 4 Im Schollengarten 19-20
Hoëstob 1:1	Kupplungs um len khebe (BG
Haße ohne Toleranz- ang noch		R80







Subject:

Marking of canopy emergency release and ventilation

Concerning: DG-300, DG-300 ELAN, 3 E 1 to 3 E 175

accomplishment: Before next flight

Reason:

- a) As the correct procedure for the emergency release of the canopy seems to be uncommon to most pilots, although it is described in the flight manual, the canopy opening lever should also be marked red. This is to indicate that both, the opening lever and the emergency release knob have to be operated to release the canopy.
- b) For better identification the placard for the ventilation will be fixed at the ventilation operating knob.

Measures:

- The canopy opening lever is to be marked red (e.g. red nitro-enamel)
- 2. The placard for the ventilation is to be removed carefully from the canopy frame, to be cut round and to be glued to the ventilation operating knob. If the adhesive power is no more sufficient, please use a suitable glue (e.g. Pattex).
- 3. Exchange the following manual pages against the new edition June 1986

DG-300, DG-300 ELAN: Flight manual:

S. 8 description of the cockpit controls

S. 18 emergency procedures

Maintenance manual:

digaram 6 placarting

- 4. Note the changed instructions on the manual pages.
- 5. Check the canopy emergency release.

Remarks:

The measures may be executed by the owner himself and are to be attested in the aircraft logs.

Bruchsal 4, 24.06.86

LBA-approved:

Dipl.-Ing. W. Dirks

The German original of this TN has been approved by the LBA under the date of 1st July 1986 and is signed by Mr. Skov. The translation into English has been done by best knowledge and judgement. In any case of doubt the German original is authoritative.

Glaser-Dirks Flugzeugbau GmbH Im Schollengarten 19 - 20 7520 Bruchsal 4

Subject:

Deviations from German type for export to Australia

Concerning:

DG-300, DG-300 ELAN for export to Australia

Measures:

- 1. Installation of an additional forward tow hook, see TN 359/8.
- 2. Trim ballast
 - a) Change in flight manual section 2.8 Loading chart page 13

with pilots weighing less than 65 kg (143 lbs) necessary lead ballast must be added in the trim weight box at the right hand side of the instrument console. 1 of the 3 trim weights will compensate for 3,5 kg (7.7 lbs) pilot weight.

- b) sect. 2.8 page 14:min. cockpit load 65 kg (143 lbs)
- c) Maintenance manual diagram 5 approved empty weight C.G. range:curve for 65 kg (143 lbs) added. 70 kg line dashed.
- d) Installation of a trim weight box according to drawing R 19 at the right hand side of the instrument console as installed originally in the DG-100.
- e) Use of the trim weights part R 19/1 min. 2.2 kg each.
- Dipstick for waterballasttank:
 Marking with red plastic shrink hose with black shrink hose inbetween.
- 4. Control cable for fin tank dump valve: cockpit end fitted with thimble HC 2 and nicopress sleeve 28-1-C and fixed by a clevis pin (Splintbolzen) in the fork end.
- 5. Ballast chart for fintank (kg, l): fixed at the left cockpit side cover (from page 16 flight manual)
- Flight manual page 10 cloud flying: Australia added
- 7. Flight manual page 23 corrected text:
 Spins
 It is not necessary to extend the dive brakes during spin recovery. The DG-300 shows a very large nose down pitch after leaving spin. So you have to flare out correspondingly.
- 8. Gelcoat: Lesonal Schwabbellack from serial no. 3 E 141 on.

Bruchsal 4, 21th July 1986

Willelm Od

GLIDING FEDERATION OF AUSTRALIA
APPROVED MODIFICATION

M. Illum

DATE 30/7/86

CHIEF RECHNICAL OFFICER ARRIVORTHINESS

