



GFA AIRWORTHINESS DIRECTIVE

TYPE AFFECTED: DISCUS

MODELS AFFECTED: DISCUS bT, DISCUS 2T, (TC 863) Serial No's: 1 up to & including 33.

SUBJECT: Jamming of Elevator caused by loose mass balance weights.

BACKGROUND: During a Daily Inspection a roughness of the elevator control was noticed. This was traced to the tailplane and on removal of one of the elevators two loose pieces of lead were found. The outermost mass balance weight had separated from the leading edge of the elevator and was broken into two pieces.

DOCUMENTATION: Schempp-Hirth Technical Note No: 863-8 and Appendix to this Technical Note are attached to and form part of this AD.

ACTION REQUIRED:

1. The security of the mass balance weights on both elevators must be checked.
2. The elevators must be removed and the attachment of the mass balance weights is to be modified according to the instructions in the Technical Note and Appendix.
3. After refitting elevators check for correct free travel and deflections & if required, residual moment as in Item 4 of the Appendix.

WEIGHT AND BALANCE: Negligible

IMPLEMENTATION: Action 1: BEFORE NEXT FLIGHT.

SIGNED:

John G King
SENIOR TECHNICAL OFFICER AIRWORTHINESS



For and on behalf of:

THE GLIDING FEDERATION
OF AUSTRALIA

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Actions 2 & 3: At the next Form 2, but no later than December 31 2003.

COMPLIANCE:

The requirements of this GFA Airworthiness Directive are mandatory. This Directive is issued pursuant to the Rules and Regulations of the Gliding Federation of Australia.

SUBJECT: Elevator, fixing of mass balance weights

AFFECTED: Sailplane Ventus-2a, Ventus-2b (TC-No.: 349)
(all S/Nos complying with Modification Bulletin No. 349-42 or modified according Technical Note No. 349-27 and equipped with a new tail unit))
S/Nos: 1, 2, 31, 32, 48, 54, 71, 117, 124 through 151 and 153

Sailplane Discus-2a, Discus-2b (TC-No.: 360)
S/Nos: 1 through 185, 187 through 189

Powered sailplane Discus-2T (TC-No. 863)
S/Nos: 1 through 33

URGENCY: **Action 1: Before next flight!**
Action 2 and following:

At the occasion of the next annual inspection,
but not later than December 31, 2003

REASON: During a pre-flight check of a Discus-2T a roughness of the elevator control was noticed. After the removal of one elevator two loose pieces of lead were found. The outmost mass balance weight was separated and broken in two pieces.

ACTIONS:

1. The fixing of the outmost mass balance weight on both elevators has to be checked.
A hole of 6 mm (approx. 0.24 in) diameter has to be drilled in the symmetry plane of the tip of the stabilizer; distance 115 mm (4,53 in) from the trailing edge of the elevator.
With an adequate light at full positive and negative deflection the fixing of the mass balance weights has to be checked.
If a loose weight is noticed, actions 2 and the following must be carried out prior the next flight.
2. The elevators have to be removed and the fixation of the mass balance weights has to be modified according to the working instructions in the appendix.
3. After the re-installation of the elevators, check for free travel and proper deflections within the permitted range.

MATERIAL:

See working instructions in the appendix of this Technical Note.

WEIGHT:

Alteration negligible

C/G POSITION:

Alteration negligible

REMARK:

1. The action 1 can be accomplished by an experienced person and must be entered in the log book.
2. The actions 2 and 3 must be accomplished by a certified repair station and entered in the log book.

Kirchheim/Teck, September 16, 2003

Issued:

(H. Treiber)

LBA-approved:

The German original of this Technical Note
has been approved by the LBA under the date
of 23 SEP. 2003
and is signed by Mr. Blume
The translation into English has been done by
best knowledge and judgement.

SCHEMPP-HIRTH Flugzeugbau GmbH. Kirchheim/Teck	Appendix to Technical Note No. 349-28 / 360-20 / 863-8	Page: 1 No. of pages: 2
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Working Instructions for the fixation of the mass balance weights on the elevators

1. Remove the elevators.
Take care of the washers at the mounting screws.

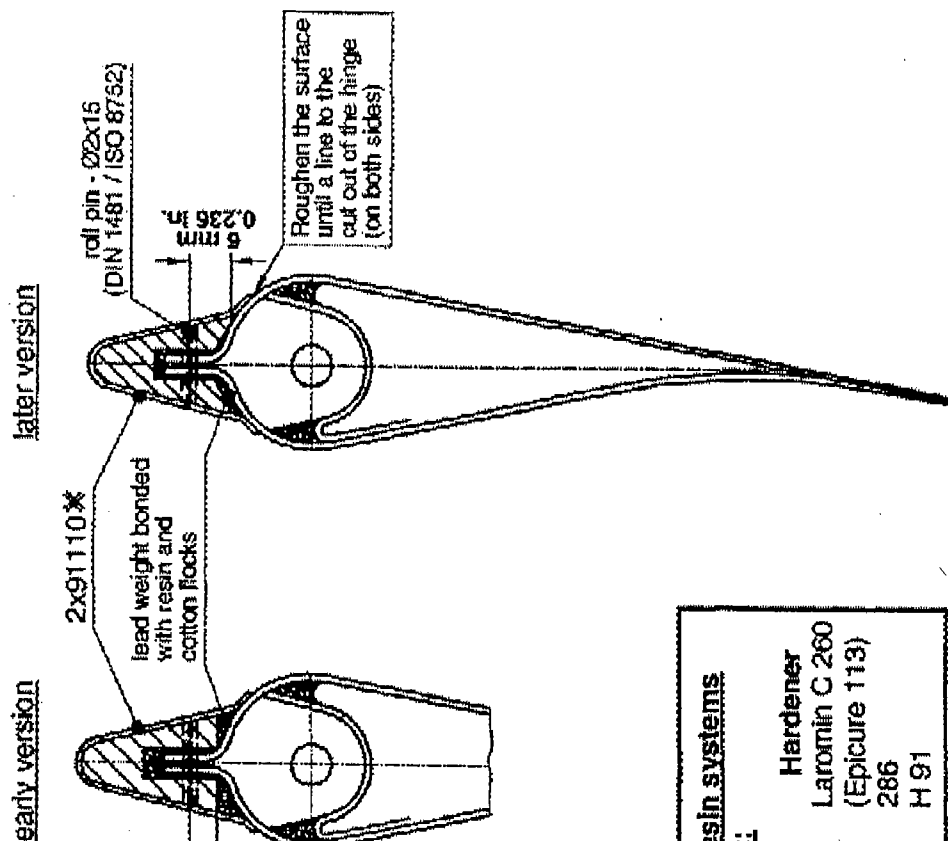
2. Check the fixing of the mass balance weights.

3. If the lead pieces are solidly fixed with resin and roll pins:
 - a) At the inboard lead pieces roughen the visible gaps and fill the gaps flat with resin thickened with cotton flocks.
 - b) At the outboard lead piece roughen the gap between lead and a line on the elevator, see sketch on page 2 and roughen the surface of the lead.
 - c) Fill the gaps flat with resin with cotton flocks and apply two layers of glasfibre on the lead, see sketch on page 2.

4. If a lead piece is not solidly fixed anymore (loose):
 - a) Remove the roll pins.
 - b) Roughen all bonding surfaces of the lead and elevator.
 - c) Attach the lead piece with resin with cotton flocks and take care that the gaps to the elevator are flat filled.
 - d) Apply additional glasfibre on the outboard lead piece, see item 3c.
 - e) After curing of the resin mount the roll pins again (drill new 2 mm holes) and grind the roll pins flat.
 - f) Determine the residual moment.
If the residual moment is outside the limit ask the manufacturer for instructions.

5. Reinstall the elevators.
Take care of the washers!

Outer lead weight



Suitable resin systems for repairs:

Resin	Hardener
Epicote 162 (GE 162)	Laromin C 260 (Epicure 113)
L 285	286
L 20	H 91

Inner lead weight

