



GFA AIRWORTHINESS DIRECTIVE

TYPE AFFECTED: Ventus 2c, S/N 1 to 66
Discus 2b, S/N 1 to 107

SUBJECT: Removal of screws in undercarriage and replacement with new items, to eliminate risk of undercarriage collapse.

BACKGROUND: See description of fault under "Reason" in attached Schempp-Hirth Technical Note.

DOCUMENTATION: Schempp-Hirth Technical Note No 349-25/360-17 is attached and forms part of this AD.

ACTION REQUIRED: Comply with actions described in the above-mentioned Schempp-Hirth Technical Note.

Notes:

1. Gliders of certain serial numbers within the above-mentioned S/N range require replacement of the compression spring in the shock struts. See item 4 under "Actions" on page 1 of attached Schempp-Hirth TN.
2. Amendments to the maintenance manual are required in conjunction with the TN. See page 2 of the TN and also refer to AD 488 Issue 2 of 7 September 2001.

WEIGHT AND BALANCE: Not affected.

IMPLEMENTATION: At or before the next Form 2 Inspection, but in any case before 31. March 2002.

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.

SIGNED:

[Signature]
for



CHIEF TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

THE GLIDING FEDERATION
OF AUSTRALIA

SCHEMPP-HIRTH Flugzeugbau GmbH. Kirchheim/Teck	Technical Note No. 349 - 25 No. 360 - 17	Page No: 01 No of pages.: 02
<p><u>SUBJECT:</u></p> <p><u>AFFECTED:</u></p> <p><u>URGENCY:</u></p> <p><u>REASON:</u></p> <p><u>ACTIONS:</u></p>	<p>Landing gear</p> <p>Sailplane Ventus-2c (TC-No.: 349) S/N. 1 through 66</p> <p>Sailplane Discus-2b (TC-No.: 360) S/N. 1 through 107</p> <p>At the occasion of the next annual inspection but not later than March 31, 2002</p> <p>With full compression of the shock struts, it is possible that the tyre can touch the bolts of the strut and also the horizontal cross bar of the aft undercarriage strut. Due to this the undercarriage mechanism will come under loadings in the retracted position and may fail under unfavourable conditions.</p> <ol style="list-style-type: none"> 1. The screws from the shock strut to the aft undercarriage strut are to be removed. The new screws are to be installed (with head inboard) with a flat lock nut. Washers are not to be used under the head of the bolt!! Refer to photo in the appendix. 2. When free from pressure (clear of the ground) the distance between tyre and the horizontal cross bar of the aft undercarriage strut must be more than 46 mm (1,81 inch). If less than 46 mm (1,81 inch) the horizontal cross bar is to be ground to the same contour as the tyre (see appendix). Removal of the aft undercarriage strut refer to the working instructions in the appendix. 3. When free from pressure (clear of the ground) the shock struts have to be checked for play. Moving the lower part of the shock struts in longitudinal direction by more than 1 mm requires an exchange of the compression springs refer to the working instructions in the appendix. 4. <u>Only affected:</u> <u>Ventus-2c, S/N 63 through 66</u> <u>Discus-2b, S/N 87 through 107</u> <p>The compression spring in the shock struts must be replaced refer to the working instructions in the appendix.</p>	

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ACTIONS (ctd.)

5. Amendments of the Maintenance Manual
(Date of issue of amended pages is July 2001)

	variant		
	Ventus-2c	Discus-2b	Title
page	0.1.2	0.1.2	Record of revisions
page	3.2.4	3.2.4	Annual inspection

List of effective pages to be amended by hand.

MATERIAL:

2 off hexagonal screw M 10 x 40 x 51
(according drawing No. HS11 - 10.032/2)

2 off locking nut M 10 - SSN003

If required:

2 compression springs 6.5 x 24.5 x 123 x 10.5
(special spring according drawing No. HS11-10.032/1)
1 off cotter pin 2.5 mm
2 off cotter pin 2.0 mm

WEIGHT:

No alteration

C/G POSITION:

No alteration

NOTE:

This actions may be accomplished by an experienced person
and to be checked and entered in the log book by a licenced inspector.

Kirchheim/Teck, July 20, 2001

Issued:


(H. Treiber)

LBA-approved:

The German original has been approved by
the LBA under the date of

25 JULI 2001

and is signed of by Mr. Blume

The translation into English has been done
by best knowledge and judgement.;

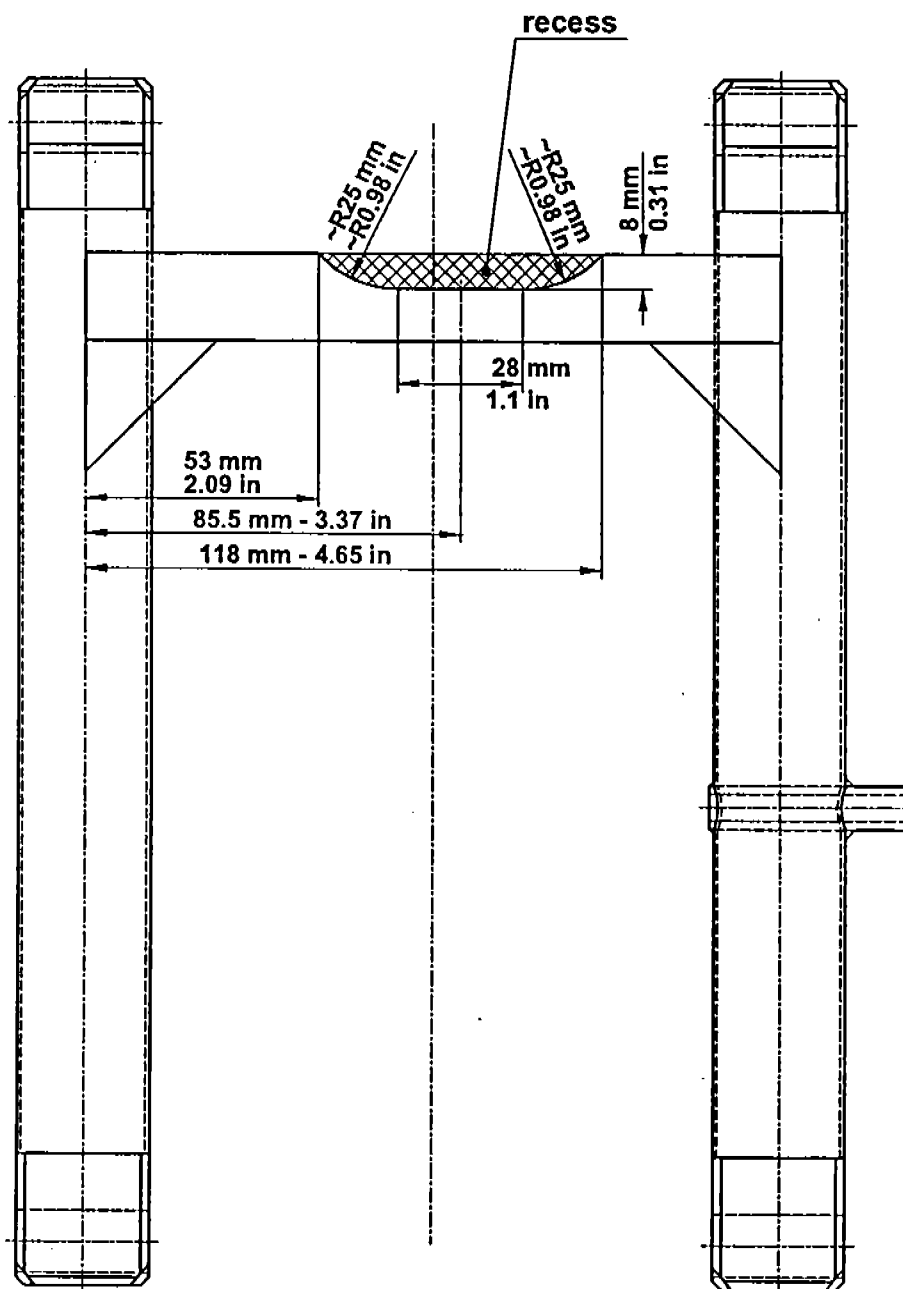
Removal of the aft undercarriage strut

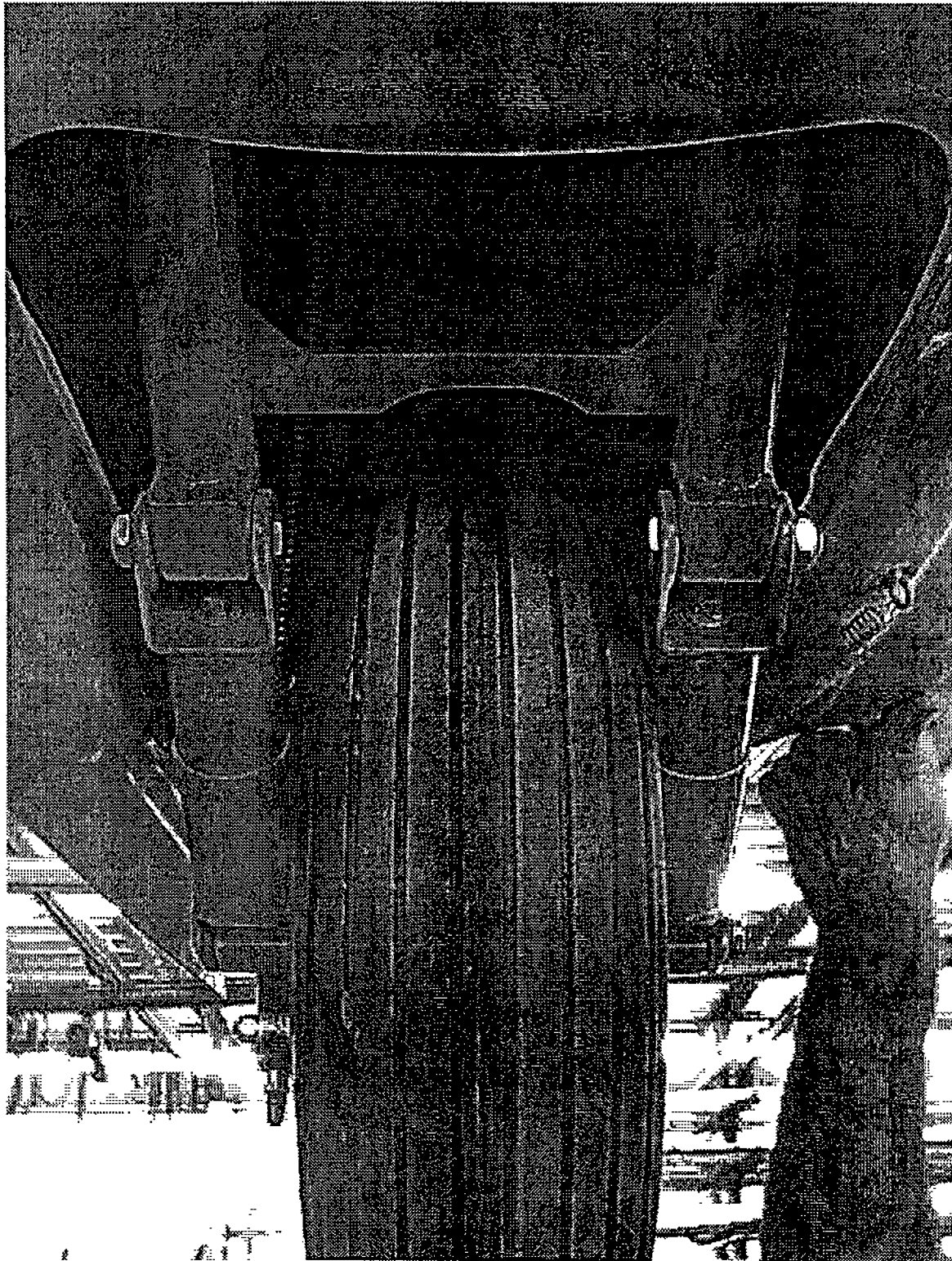
1. Unlock undercarriage and remove spring.
 - a) On the right side of the fuselage beneath the static pressure port remove sticker covering hole.
 - b) Remove spring from the ring at the screw of the undercarriage drive lever.
 - c) Remove spring from undercarriage rod.
2. Removal of screws from the aft undercarriage strut.
 - a) Top left screw completely remove.
 - b) Loosen top right nut and remove the screw from the bracket.
 - c) Bottom screws remove completely and brass bushing too.
3. Shock strut is to be lowered.
4. The aft undercarriage strut can now be removed.

Installation of the aft undercarriage strut

1. Assemble the aft undercarriage strut from the top first.
2. With lowered undercarriage the shock strut should be swing upwards and the brass bushing should be inserted.
3. Insert the new **flat headed** screws from the inner side and mount the flat locking nut.
4. Replace the spring firstly to the ring at the screw of the undercarriage lever than to the front of the undercarriage rod.

Aft undercarriage strut with cross bar





Replacement of the compression spring in the shock struts

1. Extended locked gear (clear of the ground):
 - a) Hook out spring at the gear doors and fix gear doors in the up position.
 - b) Remove cotter pin and castle nut from right side of the wheel axle.
 - c) Remove wheel axle.
2. a) **Main wheel with hydraulic disc brake:**

Remove anchor screw for the torque plate and move wheel down for suspension.

b) Main wheel with mechanical drum brake:
 - 1) Unlock gear
 - 2) Move wheel down and forward so that the main wheel axle is clear of the bearing.
 - 3) Withdraw main wheel axle
(take care of the order of washers and spacers: left 1 mm, right 1mm and 4.5 mm).
 - 4) Tilt wheel from anchor bolt of wheel hub and move down.
 - 5) Remove wheel from drum brake.
 - 6) Extend gear and lock.
3. Remove both brass bushings of the wheel axle from the front gear strut and the shock struts.
4. Mark the parts of the shock struts (upper, lower part, right, left side, flight direction).
5. Remove the upper screw at the shock strut.
6. Removal of the shock strut:
 - a) Remove cotter pin and washer from the mounting screw.
 - b) Remove mounting allen screw with the aid of a 6 mm allen wrench.
 - c) Remove compression spring.
7. Mounting of the shock struts:
 - a) Insert (with grease) new special compression spring.
 - b) With the aid of the mounting allen screw tighten the two parts of the shock struts until the hole for the cotter pin is clear of the washer.
 - c) Mount 2 mm cotter pin.
 - d) Verify the correct position of the shock strut fittings refer to photo on page 05.

Replacement of the compression spring in the shock struts (ctd.)

8. Mount upper part of the shock strut at the aft gear strut (screw head inside).
9. Insert brass bushings at the lower fitting of the shock strut together with the front gear strut.
10. **Main wheel with hydraulic disc brake:**
 - a) Move wheel with spacer on the right side and torque plate in the gear strut and mount the wheel axle from the left side.
 - b) Mount anchor screw for torque plate (Loctite 243 on thread).
11. **Main wheel with mechanical drum brake:**
 - a) Unlock gear.
 - b) Mount wheel with drum brake.
 - c) Tilt in complete wheel in gear strut that the anchor bolt engages in the gear strut.
 - d) Insert main wheel axle with the washers and spacer in the correct order (1 mm left, 1 mm right, spacer 4.5 mm).
 - e) Extend gear and lock.
 - f) Push wheel up and insert wheel axle from left.
12. Mount castle nut with the cotter pin on the right side of the wheel axle.
13. Hook on the spring at the gear doors.

