




## GFA AIRWORTHINESS DIRECTIVE

- TYPE AFFECTED:** Ventus 2cM, serial number 44 and 46 to 120;  
Discus bM, serial numbers 1 to 9;  
Nimbus 4DM. Serial numbers 1, 3 to 8, 10 to 19 and 21 to 48
- SUBJECT:** Installation of a new propeller hub and spindle overload device to the above-listed aircraft.
- BACKGROUND:** Issue 1 of this AD required the installation of a new propeller hub and spindle overload device to the above-listed aircraft, pursuant to LBA AD 2002-199 and Schempp-Hirth Technical Note Nos 825-31, 863-7 and 868-5 of 19 June 2002.
- The Schempp-Hirth factory has since determined that, although the replacement of the new propeller is still necessary on all the listed aircraft, the spindle overload device is now only necessary on the Nimbus 4DM in the serial number range listed above. Accordingly the factory has issued a new version of the Technical Note and the LBA has issued a revised AD to reflect this change.
- This issue of AD 578 is produced as a consequence of the above-named German documents and clarifies that the replacement propeller hub is required on all the listed types, but the spindle overload device is required on the Nimbus 4DM only.
- DOCUMENTATION:** Luftfahrt-Bundesamt (LBA) Airworthiness Directive No 2002-199/2 and Schempp-Hirth Technical Note No825-31, 863-7 and 868-5 of 15 November 2002 form part of this AD and supersede the equivalent documents which formed part of Issue 1 of AD 578.
- ACTION REQUIRED:** Carry out the actions specified in the attached LBA and Schempp-Hirth documents.
- WEIGHT AND BALANCE:** Not affected.

SIGNED:

  
SENIOR TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

THE GLIDING FEDERATION  
OF AUSTRALIA

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**IMPLEMENTATION:**

The German documents specify that the work must be completed by 31 December 2002, although the LBA AD also states that the effective date of the AD is 9 January 2003. The German documentation is therefore confusing and in any case did not arrive in Australia until the Christmas holiday. Therefore, for the purposes of implementation of this issue of the AD, the effective date is 28 February 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.



**Airworthiness  
Directive  
2002-199/2**

**Luftfahrt-Bundesamt**  
Airworthiness Directive Section  
Hermann-Blenk-Str. 26  
38108 Braunschweig  
Federal Republic of Germany

**Schempp-Hirth**

**Effective Date: January 09, 2003**

**Affected:**

Kind of aeronautical product:	Powered sailplane	
Manufacturer:	Schempp-Hirth, Kirchheim, Germany	
Type:	Ventus bT, Discus bT, Nimbus-4M	
Models affected:	Ventus-2cM, Discus bM, Nimbus-4DM	
Serial numbers affected:	Ventus-2cM	44, 46 up to 120
	Discus bM	1 up to 9
	Nimbus-4DM	1, 3 up to 8, 10 up to 19 and 21 up to 48.
German Type Certificate No.:	825, 863 and 868	

**Subject:**

Hub of propeller bearing, Spindle drive overload safety device and Supplements Maintenance Manual

**Reason:**

On one Ventus-2cM the hub of propeller bearing has failed after 11 engine hours. The fatigue failure was caused by a surface discontinuity at the transition from the front seat of the roller bearing to the conical part of hub. A new replacement reinforced hub together with the modified large belt pulley is now required in order to prevent further bearing failures.

**Action:**

Exchange of the large belt pulley, adjustment of the tension of the drive belt and installation of a mechanical spindle overload safety device (only for Nimbus-4DM).

The Actions must be done in accordance with the instructions given in the mentioned Service Bulletin.

**Compliance:**

If not already has been done, perform the actions within the next 5 engine hours (after July 25, 2002) but not later than December 31, 2002.

**Technical publication of the manufacturer:**

Schempp-Hirth Technical Note No. 825-31, 863-7, 868-5 dated November 15, 2002 becomes herewith part of this AD and may be obtained from Messrs.:

Schempp-Hirth  
Flugzeugbau GmbH  
Postfach 14 43  
73222 Kirchheim / Teck  
Federal Republic of Germany

Phone: ++ 49 7021 7298-0  
Fax: ++ 49 7021 7298-199  
www.schempp-hirth.com  
info@schempp-hirth.com

**Note:**

This AD supersedes the AD-No. 2002-199 dated July 25, 2002.

**Holders of affected aircraft registered in Germany have to observe the following:**

Action has to be accomplished by the owner of the aircraft or an approved service station and to be checked and entered in the log book by a licensed inspector.

As a result of the a.m. deficiencies, the airworthiness of the aircraft is affected to such an extent that after the expiry of the a.m. dates the aircraft may be operated only after proper accomplishment of the prescribed actions.

Enquiries regarding this Airworthiness Directive should be referred to Mr. Olaf Schneider, Airworthiness Directive Section, at the above address, fax-no. 0049 531/2355-725. Please note, that in case of any difficulty, reference should be made to the German issue!

SCHEMPP-HIRTH Flugzeugbau GmbH. Kirchheim/Teck	Technical Note No. 825-31, 863-7, 868-5	Page: 01 No. of pages: 03
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**SUBJECT:**

- Hub of propeller bearing
- Spindle drive overload safety device
- Supplements Maintenance Manual

**AFFECTED:**

- Powered sailplane model Ventus-2cM (ATC No. 825)  
(when equipped with the SOLO engine type 2625-01)  
S/N 44 and 46 through 120
- Powered sailplane model Discus bM (ATC No. 863)  
S/N 1 through 9
- Powered sailplane model Nimbus-4DM (ATC No. 868)  
S/N 1, 3 through 8, 10 through 19 and 21 through 48

**URGENCY:**

Within the next 5 engine hours and not later than  
December 31<sup>st</sup>, 2002

**REASON:**

On one Ventus-2cM the hub of the propeller bearing has failed after  
11 engine hours.  
The fatigue failure was caused by a surface discontinuity at the  
transition from the front seat of the roller bearing to the conical part of  
hub.  
A new replacement reinforced hub together with the modified large belt  
pulley is now used.

**ACTIONS:**

1. Remove the large belt pulley together with the hub according  
the instructions section 5.10 of the Maintenance Manual.
2. Install the modified large belt pulley and the mounted new hub  
according the instructions section 5.10 of the Maintenance Manual.
3. Adjust the tension of the drive belt according the instructions  
section 5.11 and 5.12 of the Maintenance Manual.
4. Mechanical spindle overload safety device.

Powered sailplane Nimbus-4DM

S/N 1, 3 through 8, 10 through 19, 21 through 24 and 26 through 29

Install the spindle overload safety device according the instructions  
section 5.13 of the Maintenance Manual.

**ACTIONS:**

(ctd.)

**5a. Powered sailplane Discus bM**

**Supplements of the Maintenance Manual**  
**(revised pages dated June 2002)**

<u>Page</u>	<u>Title</u>
0.1.1	Record of revisions
0.2.1	List of effective pages <sup>7</sup>
0.2.2	List of effective pages <sup>7</sup>
0.3.2	Table of contents
5.10.1	Toothed drive belt, removal-installation
5.10.2	
5.10.3	
5.10.4	
5.10.5	Measuring tension toothed drive belt
5.11.1	
5.11.2	
5.11.3	
5.11.4	Adjusting tension of drive belt
5.11.5	
5.12.1	
5.12.2	

<sup>7</sup> List of effective pages to be amended by hand

**5b. Powered sailplane Nimbus-4DM**

**S/N 1, 3 through 8, 10 through 19, 21 through 24 and 26 through 29**

**Supplements of the Maintenance Manual**  
**(revised pages dated June 2002)**

<u>Page</u>	<u>Title</u>
0.1.6	Record of revisions
0.2.1	List of effective pages <sup>7</sup>
0.2.2	List of effective pages <sup>7</sup>
0.3.2	Table of contents
5.10.1	Toothed drive belt, removal-installation
5.10.2	
5.10.3	
5.10.4	
5.10.5	Measuring tension toothed drive belt
5.11.1	
5.11.2	
5.11.3	
5.11.4	Adjusting tension of drive belt
5.11.5	
5.12.1	
5.12.2	
5.13	Spindle drive overload safety device

<sup>7</sup> List of effective pages to be amended by hand

ACTIONS:

(ctd.)

- 6.a) All functions should be checked included retraction and extension of the power plant  
b) An engine test run must be performed.

MATERIAL:

<u>Item</u>	<u>Draw.-No. / Norm</u>	<u>Title</u>
1	WB-S 03 II/1	Large belt pulley (large belt pulley according drawing No. WB-S 03 II modified)
1	WB-S 04 I	Hub for large belt pulley
1	320/22	Tapered roller bearing
1	WB-S5/2	Washer
1	M20x1,5, DIN 937	Caste nut
1	3,2x40, DIN 94	Cotter pin
1	M03 RT 965	Spindle overload safety device*)
2	T 80 L	cable tie*)

\*) deleted for Discus bM

WEIGHT:

Alteration negligible

C.G. POSITION:

Alteration negligible

REMARK:

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

This Issue supersedes the issue dated June 10<sup>th</sup>, 2002

Kirchheim/Teck, November 15, 2002

Issued: H. Treiber  
(H. Treiber)

LBA-approved:

The German original has been approved by  
the LBA under the date of **27. NOV. 2002**

and is signed by Mr. Blume

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