



THE GLIDING FEDERATION OF AUSTRALIA

GFA AD 415
(ISSUE 1)

GFA AIRWORTHINESS DIRECTIVE

TYPE AFFECTED:	Model/Series	Affected Serial Numbers
	Standard Cirrus G (with tailplane and elevator)	All
	Nimbus 2B	All
	Nimbus 2C	All
	Nimbus 3	All
	Nimbus 3/25.4	All
	Janus B	up to S/N 284
	Janus C	up to S/N 284
	Janus Ce	up to S/N 284
	Mini Nimbus B	All
	Mini Nimbus C	All
	Ventus a	All
	Ventus b	All
	Ventus a/16.6	All
	Ventus b/16.6	All
	Ventus c	up to S/N 568
	Discus a	up to S/N 446
	Discus b	up to S/N 446
	Discus CS	up to S/N 98
	Nimbus 3D	up to S/N 11
BACKGROUND:	Overseas Experience has shown that moisture may enter the vertical elevator pushrod in the fin and cause corrosion and possible failure of the pushrod.	
DOCUMENTATION:	Combined Shempp-Hirth Technical Notes 278-33, 286-28, 295-22, 328-10, 349-16, 360-9, 373-5 which form part of this AD.	
ACTION REQUIRED:	1. Before next flight.	
	Carry out tests as specified in actions 1 and 2 of the attached Technical Note.	
	If any defects are found as a result of the above inspections then actions 3, 4 and 5 of the Technical Note must be complied with before next flight.	

SIGNED:

CHIEF TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

**THE GLIDING FEDERATION
OF AUSTRALIA**

GFA AD 415

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18 April, 1994

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2. Before 31 December 1993.

If not already completed carry out actions 3, 4 and 5 of the Technical Note.

WEIGHT AND BALANCE: Note affected.

IMPLEMENTATION: The requirements of this AD must be performed by the holder of a DA1109 Inspectors Certificate rated "Inspection for Issue of Maintenance Release" FRP.

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.

Schempp-Hirth Flugzeugbau GmbH Kramersstraße 25 - Postfach 14 43 D-7312 Kirchheim unter Teck LBA-Nr. 1 B 5	TECHNICAL NOTE NO. 278 - 33 286 - 28 293 - 22 328 - 10 349 - 16 360 - 9 373 - 5	S/N Page No. No. of pages																																										
Subject : Vertical elevator actuating rod inside the fin																																												
Affected :																																												
<table border="1"> <thead> <tr> <th>Sailplane model</th> <th>Type Certificate No.</th> <th>Serial numbers affected</th> </tr> </thead> <tbody> <tr> <td>Standard Cirrus G</td> <td>278</td> <td>all</td> </tr> <tr> <td>Nimbus-2B</td> <td rowspan="3">286</td> <td rowspan="3">all</td> </tr> <tr> <td>Nimbus-2C</td> </tr> <tr> <td>Nimbus-3</td> </tr> <tr> <td>Nimbus-3/24.5</td> <td></td> <td></td> </tr> <tr> <td>Janus B</td> <td rowspan="3">295</td> <td rowspan="3">up to S/N 284</td> </tr> <tr> <td>Janus C</td> </tr> <tr> <td>Janus Ce</td> </tr> <tr> <td>Mini Nimbus B</td> <td rowspan="3">328</td> <td rowspan="3">all</td> </tr> <tr> <td>Mini Nimbus C</td> </tr> <tr> <td>Ventus a</td> </tr> <tr> <td>Ventus b</td> <td rowspan="3">349</td> <td rowspan="3">all</td> </tr> <tr> <td>Ventus a/16.6</td> </tr> <tr> <td>Ventus b/16.6</td> </tr> <tr> <td>Ventus c</td> <td>349</td> <td>up to S/N 568</td> </tr> <tr> <td>Discus a</td> <td rowspan="2">360</td> <td rowspan="2">up to S/N 446</td> </tr> <tr> <td>Discus b</td> </tr> <tr> <td>Discus CS</td> <td>360</td> <td>up to S/N 98</td> </tr> <tr> <td>Nimbus-3D</td> <td>373</td> <td>up to S/N 11</td> </tr> </tbody> </table>			Sailplane model	Type Certificate No.	Serial numbers affected	Standard Cirrus G	278	all	Nimbus-2B	286	all	Nimbus-2C	Nimbus-3	Nimbus-3/24.5			Janus B	295	up to S/N 284	Janus C	Janus Ce	Mini Nimbus B	328	all	Mini Nimbus C	Ventus a	Ventus b	349	all	Ventus a/16.6	Ventus b/16.6	Ventus c	349	up to S/N 568	Discus a	360	up to S/N 446	Discus b	Discus CS	360	up to S/N 98	Nimbus-3D	373	up to S/N 11
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Urgency : Action ① and ② : Prior to next flight Action ③ and the following : Not later than December 31st, 1993																																												
Reason : By coincidence of unfavourable circumstances, the rubber bellows in the upper end rib of the fin (sealing the control rod opening) may become filled with water, which - with the elevator secured in "fully up" position - may seep through the bolt verification hole in the vertical elevator actuating tube and accumulate at its lower end. A failure of this tube due to corrosion - directly above the welded seam of the U-shaped rod end - is therefore possible.																																												

Schempp-Hirth Flugzeugbau GmbH Kriemhildstr. 25 - Postfach 14 43 D-7312 Kirchheim unter Teck LBA-Nr. 1 B 5	<u>TECHNICAL NOTE NO.</u>		278 - 33	Page No. 3
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Material : The replacement elevator actuating rod may be obtained from the manufacturer

Schempp-Hirth Flugzeugbau GmbH
 Kriebitzstraße 25
 W-7312 Kirchheim/Teck
 FED. REPUBLIC OF GERMANY

Model	Drawing No.	Dimensions
Standard Cirrus G	HS 7-31.005	ø 20 x 0.5 x 985
Nimbus-2B	Nimbus-2B 31.005 or HS 5-31.005A	ø 18 x 1.0 x 1103 ø 20 x 0.5 x 1103
Nimbus-2C	HS 5-31.005A	ø 20 x 0.5 x 1103
Nimbus-2C S/N 236	HS10-31.005	ø 20 x 0.5 x 1233
Nimbus-3	HS10-31.005	ø 20 x 0.5 x 1233
Nimbus-3/24.5	HS10-31.005	ø 20 x 0.5 x 1233
Janus B	HS 5-31.005A	ø 20 x 0.5 x 1103
Janus C	HS 6-31.005	ø 14 x 1.0 x 1103
Janus C S/N 193, 240, 243, 248, 249, 251, 253 - 257, 260 - 263, 266		
Janus Ce	HS10-31.005	ø 20 x 0.5 x 1233
Mini Nimbus B	HS 7-31.005	ø 20 x 0.5 x 985
Mini Nimbus C		
Ventus a	HS 8-31.005	ø 20 x 0.5 x 985
Ventus b		
Ventus a/16.6		
Ventus b/16.6		
Ventus c	HS 8-31.305	ø 20 x 1.0 x 985
Discus a	HS 8-31.005	ø 20 x 0.5 x 985
Discus b		
Discus CS		
Nimbus-3D (with engine compartment)	HS10-31.005	ø 20 x 0.5 x 1233
Nimbus-3D (without engine compart- ment)	HM 5-31.005	ø 20 x 1.0 x 1232

Schempp-Hirth Flugzeugbau GmbH Kriebitzstraße 25 - Postfach 14 43 D-7312 Kirchheim unter Teck LBA-Nr. 1 B 5	<u>TECHNICAL NOTE NO.</u>		278 - 33	Page No. 2	No. of pages 4
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Actions : Prior to next flight:

- ① Load test of the elevator control system
 Remove horizontal tailplane, lock elevator actuating lever as shown in the sketch found in the appendix and pull back the control stick with the force prescribed.
- ② Thereafter mount the tailplane and check elevator for proper function with the aid of a helper.

If no objections can be raised as to the perfect function of the elevator control (after having accomplished step ① and ②), then the following actions are to be carried out by December 31st, 1993 at the latest.

- ③ Remove vertical elevator actuating rod in compliance with the instructions given in the appendix.
- ④ Install a replacement elevator actuating rod (designation shown on page 3) - the relevant instructions are given in the appendix.
- ⑤ Mount horizontal tailplane and adjust ball bearing rod end (or U-shaped rod end) such that the elevator deflections are within the permitted range (see Maintenance Manual).
 Thereafter apply a red witness mark to jam nut and thread.

Weight : No alteration

C/G position : No alteration

SCHEMP-PHIRTH Flugzeugbau GmbH 7312 Kirchheim/Teck	APPENDIX TO TECHNICAL NOTE NO. 278-33, 286-28, 295-22, 328-10, 349-16, 360-09, 373-05	Page No. 3
Dimensions shown below are applicable to the following models: Nimbus-3, Nimbus-3/24.5 Nimbus-3D Janus B, Janus C		No. of pages 7
Note: Prior to drilling the openings into the fin, measure its chord for compliance with the sketch (see also page 5) if installed, the VHF-antenna is on the starboard side of the fin shroud on fin cut-out for rudder mass balance - extension of upper edge parallel to shroud on fin 369 mm 14.53 in. fin chord approx. 620 mm / 24.41 in. 20 mm 0.79 in.		

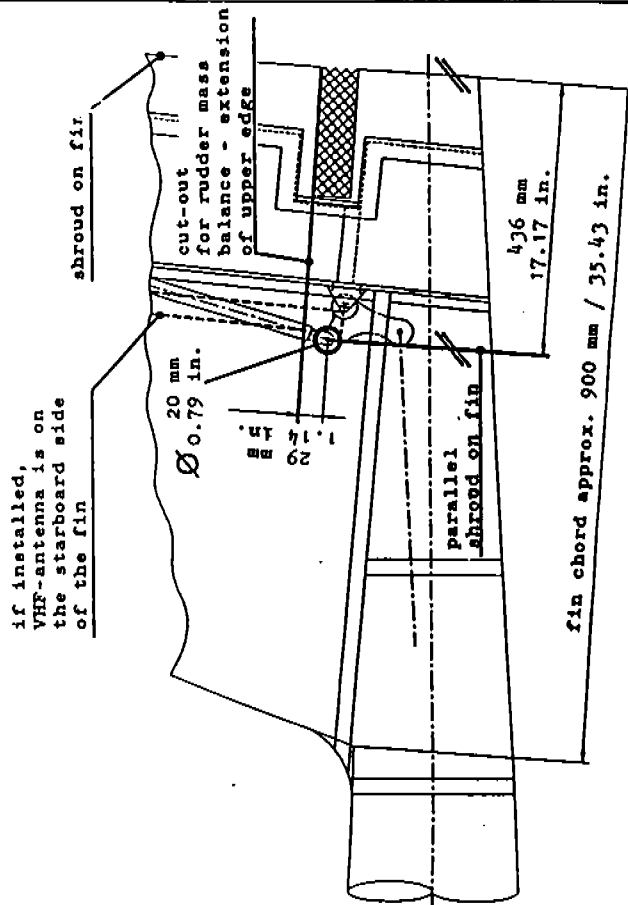
SCHEMP-PHIRTH Flugzeugbau GmbH 7312 Kirchheim/Teck	APPENDIX TO TECHNICAL NOTE NO. 278-33, 286-28, 295-22, 328-10, 349-16, 360-09, 373-05	Page No. 2
REMOVING THE VERTICAL ELEVATOR ACTUATING ROD (inside the fin)		No. of pages 7
- Drill a small hole (ϕ 6 mm/0.24 in.) through the skin of the fin on its port side as shown in the sketch on page 3 through 7. Check opening for proper alignment with the bolt to be removed and make sure that the VHF-antenna (if installed) will not be damaged when repeating the step on the far side - then enlarge opening appropriately to a diameter of 20 mm/0.79 in. - Repeat procedure on the starboard side - be careful not to damage the antenna (if installed). - Prior to disconnecting the upper end of the elevator actuating rod (from elevator actuating lever), measure the length of the thread projecting above the jam nut and register value (for reinstallation). WARNING: Only ball bearing rod ends type "14C6" (or - as used on some sailplanes - U-shaped rod ends) having a thread length of 60 mm/2.36 in. are permissible! - Disconnect lower end of vertical elevator actuating rod at the base of the fin by removing the bolt "M6" with the aid of a socket wrench. <u>Recommendation:</u> - Thin adhesive tape or grease in the wrench's socket will prevent the nut or the bolt from falling down into the tail boom while pulling out the tool. - The washer can be removed with the aid of a magnet. - Using a drift facilitates the removal of the bolt. - Remove bolt attaching the vertical elevator actuating rod to the elevator actuating lever.		
INSTALLING THE VERTICAL ELEVATOR ACTUATING ROD		
- Install replacement elevator actuating rod by reversing the above steps (5 through 3). - Mount horizontal tailplane and check elevator deflections - if necessary adjust ball bearing rod end (or U-shaped rod end) on actuating rod such that the deflections are within the permitted range. Make sure that the depth of the seating of the threaded rod end is at least 10 mm (0.39 in.). - Check for foreign particles in the fuselage tail boom and tape over the openings cut at the base of the fin.		

SCHEMP-P-HIRTH Flugzeugbau GmbH 7312 Kirchheim/Teck	APPENDIX TO TECHNICAL NOTE NO. 278-33, 286-28, 295-22, 328-10, 349-16, 360-09, 373-05	Page No. 5
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Dimensions shown below are applicable to the following models:

Nimbus-3/24.5 (s/N 37 only)
Nimbus-3D
Janus Ce

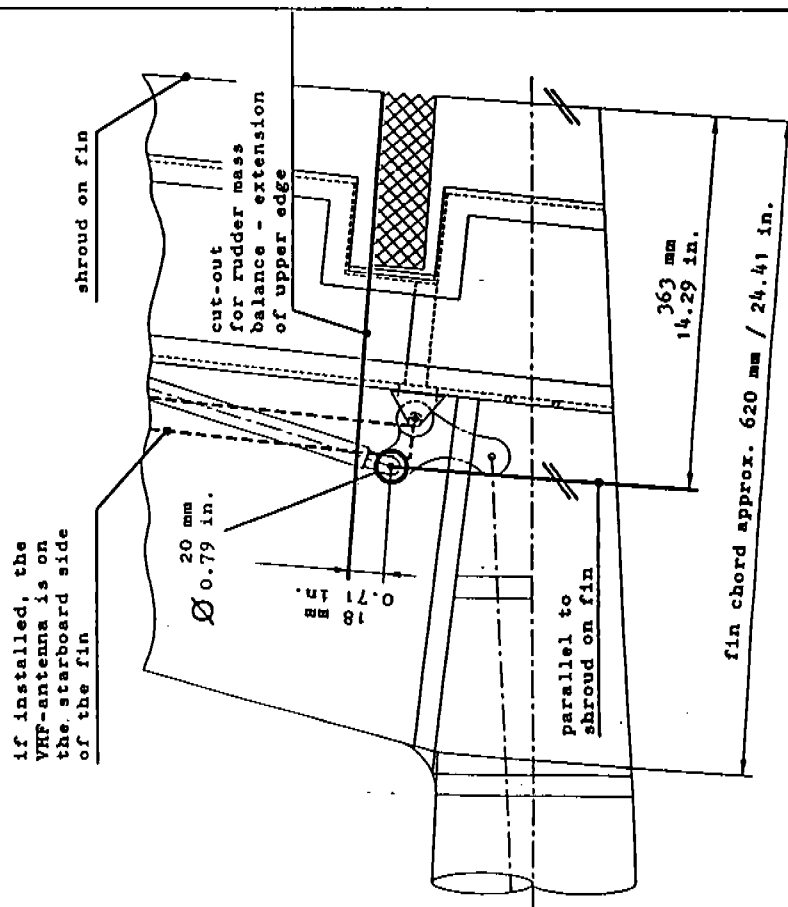
Note: Prior to drilling the openings into the fin, measure its chord for compliance with the sketch (see also page 3)



SCHEMP-P-HIRTH Flugzeugbau GmbH 7312 Kirchheim/Teck	APPENDIX TO TECHNICAL NOTE NO. 278-33, 286-28, 295-22, 328-10, 349-16, 360-09, 373-05	Page No. 4
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Dimensions shown below are applicable to the following models:

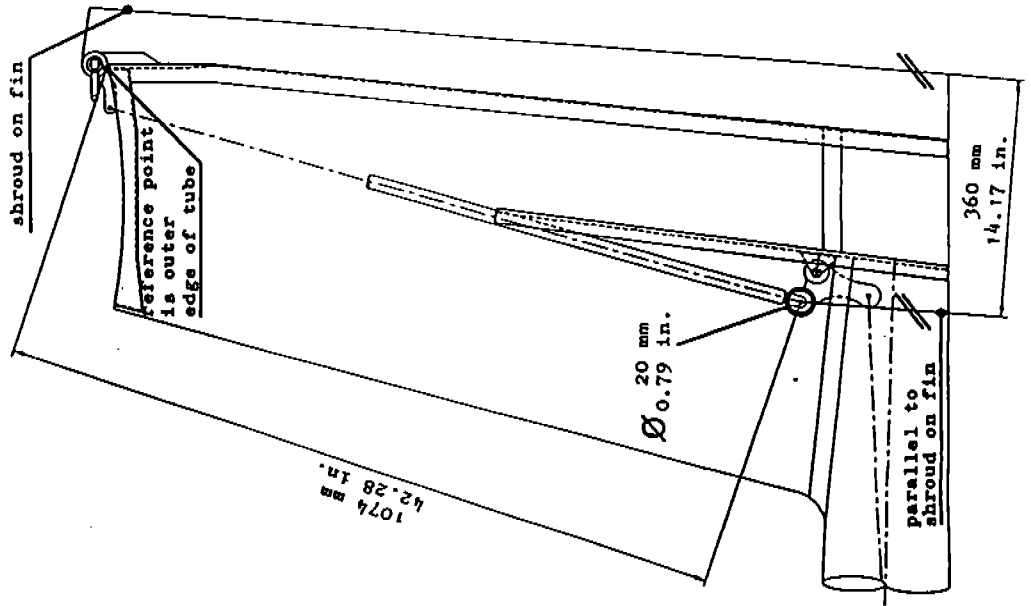
Nimbus-2B, Nimbus-2C



SCHEMPH-HIRTH Flugzeugbau GmbH 7312 Kirchheim/Teck	APPENDIX TO TECHNICAL NOTE NO. 278-33, 286-28, 295-22, 328-10, 349-16, 360-09, 373-05	Page No. 7 No. of pages 7
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Dimensions shown below are applicable to the following models:

Standard Cirrus G
Mini Nimbus B, Mini Nimbus C



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Dimensions shown below are applicable to the following models:

Ventus a, Ventus a/16.6, Ventus b, Ventus b/16.6
Ventus c
Discus a, Discus b, Discus CS

