

# EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

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**DATE: August 7, 2003**

**AD #: 2003-16-51**

Send to all owners and operators of Schempp-Hirth Flugzeugbau GmbH Model Duo-Discus gliders, serial numbers 165 through 389.

## **Discussion**

**What events have caused this AD?** The Luftfahrt-Bundesamt (LBA), which is the airworthiness authority for Germany, recently notified FAA that an unsafe condition may exist on certain Schempp-Hirth (SCHEMPP-HIRTH) Flugzeugbau GmbH Model Duo-Discus gliders. The LBA reports an in-flight failure of the wing structure at maneuvering loads. Initial analysis indicates failure in the bonding of the spar cap and spar web.

SCHEMPP-HIRTH has received additional reports of bonding problems of the spar cap and spar web.

**What are the consequences if the condition is not corrected?** Failure of the bonding of the spar cap and spar web, if not detected and corrected, could result in an in-flight failure of the wing.

**Is there service information that applies to this subject?** SCHEMPP-HIRTH has issued:

- Technical Note No. 396-8/No. 890-3, dated August 1, 2003; and
- Appendix to Technical Note No. 396-8/No. 890-3, dated August 1, 2003.

**What are the provisions of this service information?** The service information includes procedures for:

- inspecting the bonding of the spar cap and spar web; and
- repairing any defective bonding of the spar cap and spar web.

**What action did the LBA take?** The LBA classified this service bulletin as mandatory and issued German AD Number 2003-246/2, dated August 1, 2003, in order to ensure the continued airworthiness of these gliders in Germany.

**Was this in accordance with the bilateral airworthiness agreement?** This glider model is manufactured in Germany and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement.

Pursuant to this bilateral airworthiness agreement, the LBA has kept us informed of the situation described above.

### **The FAA's Determination and an Explanation of the Provisions of this AD**

**What has FAA decided?** The FAA has examined the findings of the LBA; reviewed all available information, including the service information referenced above; and determined that:

- the unsafe condition referenced in this document exists or could develop on other SCHEMPP-HIRTH Model Duo-Discus gliders of the same type design;
- the actions specified in the previously-referenced service information should be accomplished on the affected gliders; and
- AD action should be taken in order to correct this unsafe condition.

**What does this AD require?** This AD requires you to accomplish the actions in:

- Technical Note No. 396-8/No. 890-3, dated August 1, 2003; and
- Appendix to Technical Note No. 396-8/No. 890-3, dated August 1, 2003.

In preparation of this rule, we contacted type clubs and aircraft operators to obtain technical information and information on operational and economic impacts. We have included, in the rulemaking docket, a discussion of information that may have influenced this action.

### **Presentation of the Actual AD**

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958), pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this action.

### **2003-16-51 SCHEMPP-HIRTH FLUGZEUGBAU GMBH: Docket No. 2003-CE-33-AD.**

(a) What gliders are affected by this AD? This AD applies to Model Duo-Discus gliders, serial numbers 165 through 389, that are certificated in any category.

(b) Who must comply with this AD? Anyone who wishes to operate any of the gliders identified in paragraph (a) of this AD must comply with this AD.

(c) What problem does this AD address? This AD is intended to detect and correct failure of the bonding of the spar cap and spar web, which if not detected and corrected, could result in an in-flight failure of the wing.

(d) What actions must I accomplish to address this problem? To address this problem, you must perform the following, unless already accomplished:

Actions	Compliance	Procedures
(1) Inspect the bonding between the spar cap and the spar web for defects.	Prior to further flight after receipt of this emergency AD.	In accordance with SCHEMPP-HIRTH Flugzeugbau GmbH. Hircheim/Teck Technical Note No. 396-8, No. 890-3, dated August 1, 2003; and SCHEMPP-HIRTH Flugzeugbau GmbH. Hircheim/Teck Appendix to Technical Note No. 396-8 / No. 890-3, dated August 1, 2003.
(2) Repair any defect in the bonding between the spar cap and the spar web, as specified in the service information.	Prior to further flight after the inspection required by paragraph (d)(1) of this AD.	In accordance with SCHEMPP-HIRTH Flugzeugbau GmbH. Hircheim/Teck Technical Note No. 396-8, No. 890-3, dated August 1, 2003; and SCHEMPP-HIRTH Flugzeugbau GmbH. Hircheim/Teck Appendix to Technical Note No. 396-8 / No. 890-3, dated August 1, 2003.

(e) Are special flight permits allowed? No. Special flight permits are not allowed by this AD. The FAA has determined that the safety issue is severe enough that the gliders must be free of bonding defects in the spar area before further operation.

(f) Can I comply with this AD in any other way? To use an alternative method of compliance or adjust the compliance time, follow the procedures in 14 CFR 39.19. Send these requests to the Manager, Standards Office, Small Airplane Directorate. For information on any already approved alternative methods of compliance, contact Gregory Davidson, Aerospace Engineer, FAA, Small Airplane Directorate, Room 301, 901 Locust, Kansas City, Missouri 64106; telephone: (816) 329-4130; facsimile: (816) 329-4090.

(g) Where can I obtain the service information referenced in this document? You may get copies of the documents referenced in this AD from Schempp-Hirth Flugzeugbau GmbH, Postfach 1443, 73222 Kirchem/Teck, Federal Republic of Germany; telephone: 49 7021 7298-0; facsimile: 49 7021 7298-199. You may view these documents at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106.

(h) **When does this AD become effective? This emergency AD becomes effective immediately upon receipt.**

Note: The subject of this AD is addressed in German AD Number 2003-246/2, dated August 1, 2003.

Issued in Kansas City, Missouri, on August 7, 2003.

Michael Gallagher,  
 Manager, Small Airplane Directorate,  
 Aircraft Certification Service.