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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2004-18958; Directorate Identifier 2004-NE-32-AD; Amendment 39-14137; AD 2005-13-01]**

**RIN 2120-AA64**

**Airworthiness Directives; [Hoffmann Propeller GmbH & Co KG Models HO-V343 and HO-V343K Propellers]**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is superseding an existing airworthiness directive (AD) for Hoffmann Propeller GmbH & Co KG Models HO-V343 and HO-V343K propellers. That AD currently requires initial and repetitive visual inspections of propeller blades for blade shake and blade nut preload. That AD also requires initial and repetitive eddy current inspections of blade hubs for damage and cracks. This AD requires an ultrasonic inspection of the propeller hub and an eddy current inspection of the propeller hub if any cracks are discovered during ultrasonic inspection. Additionally, this AD requires sending a hub inspection report to the manufacturer. This AD also requires replacement of the propeller if any signs of blade shake, cracks, or other damage to the propeller hub outside serviceable limits are detected during the inspections. This AD results from the discovery of a propeller blade separation due to a possible hub failure. We are issuing this AD to prevent propeller hub failure and blade separation due to an unknown root cause, leading to damage and possible loss of control of the airplane.

**DATES:** Effective July 7, 2005. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of July 7, 2005.

We must receive any comments on this AD by August 22, 2005.

**ADDRESSES:** Use one of the following addresses to comment on this proposed AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.
- Fax: (202) 493-2251.

- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.  
Contact Hoffmann Propeller GmbH & Co KG, K pferlingstra e 9, D-83022 Rosenheim, Germany, telephone ++49-(0)8031-1878-0; fax ++49-(0)8031-1878-78 for the service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Frank Walsh, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7158; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** On August 24, 2004, the FAA issued AD 2004-18-01, Amendment 39-13778 (69 FR 53603, September 2, 2004). That AD requires initial and repetitive visual inspections of propeller blades for blade shake and blade nut preload. That AD also requires initial and repetitive eddy current inspections of blade hubs for damage and cracks. That AD resulted from a report of a blade separating from either a model HO-V343 or HO-V343K propeller. That condition, if not corrected, could result in propeller hub failure and blade separation due to an unknown root cause, leading to damage and possible loss of control of the airplane.

### **Actions Since AD 2004-18-01 Was Issued**

Since that AD was issued, the Luftfahrt-Bundesamt (LBA), which is the aviation authority for Germany, notified us that an unsafe condition might still exist on Hoffmann propeller models HO-V343 and HO-V343K propellers. The LBA advises that another instance of a propeller blade separation due to possible hub failure has been reported. The root cause of the failure is not known and is still under investigation. This AD requires an ultrasonic inspection of the propeller hub and eddy current inspection of the propeller hub if any cracks are discovered during ultrasonic inspection. Additionally, this AD requires sending a hub inspection report to the manufacturer. This AD also requires replacement of the propeller if any signs of blade shake, cracks, or other damage to the propeller hub outside serviceable limits are detected during the inspections. We certificated these propellers for use in the U.S. in 1997 and it is possible that some U.S. airplanes have acquired sufficient service hours for the propellers to be subject to the failure mode. We are issuing this AD to prevent propeller hub failure and blade separation due to an unknown root cause, leading to damage and possible loss of control of the airplane.

### **Relevant Service Information**

We have reviewed and approved the technical contents of Hoffmann Propeller GmbH & Co KG Service Instruction (SI) No. 61-10-05 SI E 4D, dated March 16, 2005. This SI describes procedures for initial and repetitive visual inspections of propeller blades for blade shake, blade nut preload, and inspection of blade retaining threads for cracks. This service instruction also describes procedures for initial and repetitive ultrasonic and eddy current inspections of blade hubs for damage or cracks. The LBA classified this service instruction as mandatory and issued AD D-2004-352R4 in order to ensure the airworthiness of these Hoffmann Propeller GmbH & Co KG propellers in Germany.

### **Bilateral Airworthiness Agreement**

This propeller model is manufactured in Germany and is type certificated for operation in the United States under the provisions of   21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Under this bilateral airworthiness agreement, the LBA has kept the FAA informed of the situation described above. We have examined the findings of the LBA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

## **FAA's Determination and Requirements of This AD**

The unsafe condition described previously is likely to exist or develop on other Hoffmann Propeller GmbH & Co KG Models HO-V343 and HO-V343K propellers of the same type design. We are issuing this AD to prevent propeller hub failure and blade separation due to an unknown root cause, leading to damage and possible loss of control of the airplane.

This AD requires initial and repetitive visual inspections of propeller blades for blade shake and blade nut preload. This AD also requires an ultrasonic inspection of the propeller hub and an eddy current inspection of the propeller hub if any cracks are discovered during ultrasonic inspection. Additionally, this AD requires sending a hub inspection report to the manufacturer. This AD also requires replacement of the propeller if any signs of blade shake, cracks, or other damage to the propeller hub outside serviceable limits are detected during the inspections. You must use the service information described previously to perform the actions required by this AD.

## **FAA's Determination of the Effective Date**

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

## **Interim Action**

These actions are interim actions and we may take further rulemaking actions in the future.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2004-18958; Directorate Identifier 2004-NE-32-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the DMS Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78) or you may visit <http://dms.dot.gov>.

## **Examining the AD Docket**

You may examine the docket that contains the AD, any comments received, and any final disposition in person at the DMS Docket Offices between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in ADDRESSES. Comments will be available in the AD docket shortly after the DMS receives them.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2004-NE-32-AD" in your request.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Amendment 39-13778 (69 FR 53603, September 2, 2004), and by adding a new airworthiness directive, Amendment 39-14137, to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

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

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2005-13-01 Hoffmann Propeller GmbH & Co KG:** Amendment 39-14137. Docket No. FAA-2004-18958; Directorate Identifier 2004-E-32-AD.

## Effective Date

- (a) This airworthiness directive (AD) becomes effective July 7, 2005.

## Affected ADs

- (b) This AD supersedes AD 2004-18-01, Amendment 39-13778.

## Applicability

(c) This AD applies to Hoffmann Propeller GmbH & Co KG (Hoffmann Propeller) models HO-V343 and HO-V343K propellers. These propellers are installed on, but not limited to, general aviation airplanes possibly having an FAA-approved Supplemental Type Certificate.

## Unsafe Condition

(d) This AD results from a report of a blade separating from either a model HO-V343 or HO-V343K propeller. We are issuing this AD to prevent propeller hub failure and blade separation due to an unknown root cause, leading to damage and possible loss of control of the airplane.

## Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

## Propeller Blade Shake Inspection During Preflight Inspection

(f) For all propellers, perform an inspection for propeller blade shake at each preflight inspection. If you have any blade shake, replace the propeller assembly.

## Propeller Blade Nut Preload Inspection

(g) For all propellers, use paragraph 2.1 of the Accomplishment Instructions of Hoffmann Propeller Service Instruction (SI) No. 61-10-05 SI E 4D, dated March 16, 2005, to inspect blade nut preload at the following intervals:

- (1) Before further flight after the effective date of this AD.
- (2) Inspect within 50 flight hours (FH) time-since-initial inspection.

(3) Thereafter, inspect within 100 FH time-since-last inspection (TSLI).

(h) If the blade nut preload inspection shows a loss of the blade nut preload, before further flight perform an ultrasonic inspection (UI) as specified in paragraph (i) of this AD.

### **Ultrasonic Inspection**

(i) If the propeller meets any of the conditions detailed in subparagraphs (1) and (2) below, before further flight, calibrate the ultrasonic probe and conduct an ultrasonic inspection of the propeller hub blade retaining threads for cracks inserting the probe in each hub arm bore. Use paragraph 2.2 of the Accomplishment Instructions of Hoffmann Propeller Service Instruction (SI) No. 61-10-05 SI E 4D, dated March 16, 2005, to perform the inspection.

(1) The propeller hub has accumulated 500 or more FH time-since-new (TSN), and has not been inspected using an ultrasonic or eddy current method, or

(2) The blade nut preload and final retorque force inspection called for in paragraph (g) of this AD indicates a loss of blade retention nut preload torque below allowable limits.

(j) For propellers with hubs that have accumulated 500 or more FH TSN repeat the ultrasonic inspection within intervals of 100 FH TSLI.

### **Eddy Current Inspection**

(k) If the ultrasonic inspection shows any signs of cracks or damage, conduct an eddy current inspection of the threads in the hub bore before further flight. Use paragraph 2.3 of the Accomplishment Instructions of Hoffmann Propeller Service Instruction (SI) No. 61-10-05 SI E 4D, dated March 16, 2005, to perform this inspection.

(l) If you find any signs of cracks or damage to the propeller hub outside serviceable limits during the eddy current inspection, repair or replace the propeller before further flight.

### **Credit for Previous Inspections**

(m) Previous credit is allowed for propeller hub inspections performed under the requirements of AD 2004-18-01.

### **Hub Inspection Report**

(n) Complete Hoffmann Hub Inspection Report HO-V343 detailing any blade shake, blade nut preload history and final blade nut retorque force and forward report to Hoffmann Propeller GmbH & Co KG, K pferlingstra e 9, D-83022 Rosenheim, Germany, telephone ++49-(0)8031-1878-0; fax ++49-(0)8031-1878-78.

### **Alternative Methods of Compliance (AMOCs)**

(o) The Manager, Boston Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

### **Material Incorporated by Reference**

(p) You must use Hoffmann Propeller Service Instruction No. 61-10-05 SI E 4D, dated March 16, 2005, to perform the checks and inspections required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C.

552(a) and 1 CFR part 51. You can get a copy from Hoffmann Propeller GmbH & Co KG, K pferlingstra e 9, D-83022 Rosenheim, Germany, telephone ++49-(0)8031-1878-0; fax ++49-(0)8031-1878-78; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

### **Related Information**

(q) LBA airworthiness directive D-2004-352R4, dated April 10, 2005, which holds EASA Approval No. 2005-2514, also addresses the subject of this AD.

Issued in Burlington, Massachusetts, on June 13, 2005.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 05-12172 Filed 6-21-05; 8:45 am]

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