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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. 2001-NE-43-AD; Amendment 39-12933; AD 2002-22-08]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Hartzell Propeller Inc., Model HD-E6C-3( ) Propellers**

**AGENCY:** Federal Aviation Administration, DOT.

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

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to Hartzell Propeller Inc. model HD-E6C-3( ) propellers. This action requires replacement of the current design propeller blade thrust bearing with a new design propeller blade thrust bearing and visual and eddy current inspection (ECI) of propeller hubs for cracks. This amendment is prompted by reports of fractured thrust bearings observed during disassembly, one or more blades becoming jammed in position during operation, pitch change fork fractures causing loss of blade pitch control, and excessive vibration. The actions specified in this AD are intended to prevent loss of aircraft control due to loss of blade pitch control, inability to fully feather the propeller, hub fracture, and blade release.

**DATES:** Effective November 19, 2002. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of November 19, 2002.

Comments for inclusion in the Rules Docket must be received on or before January 3, 2002.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2001-NE-43-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: [9-ane-adcomment@faa.gov](mailto:9-ane-adcomment@faa.gov). Comments sent via the Internet must contain the docket number in the subject line. The service information referenced in this AD may be obtained from Hartzell Propeller Inc., Technical Publications Department, One Propeller Place, Piqua, OH 45356; telephone (937) 778-4200; fax (937) 778-4365. This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Tomaso DiPaolo, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone (847) 294-7031; fax (847) 294-7834.

**SUPPLEMENTARY INFORMATION:** The FAA and Hartzell Propeller Inc. have been reviewing and investigating reports of current design propeller blade thrust bearings, P/N's C-2882-1, C-2882-2, and C-7075, found fractured during disassembly, one or more blades becoming jammed in position during operation, pitch change fork fractures causing loss of blade pitch control, and excessive vibration. The current design thrust bearings have demonstrated a tendency to have brittle fracture and reduced strength characteristics, for which the cause has yet to be determined. This action requires replacement of the current design propeller blade thrust bearings, P/N's C-2882-1, C-2882-2, and C-7075, with a new design propeller blade thrust bearing, P/N C-7438, and a 10X magnification-assisted visual inspection and ECI of propeller hubs for cracks. This amendment is prompted by reports of fractured thrust bearings observed during disassembly, one or more blades becoming jammed in position during operation, pitch change fork fractures causing loss of blade pitch control, and excessive vibration. This condition, if not corrected, could result in loss of aircraft control due to loss of blade pitch control, inability to fully feather the propeller, hub fracture, and blade release.

### **Manufacturer's Service Information**

The FAA has reviewed and approved the technical contents of the following Hartzell Propeller Inc. Alert Service Bulletins (ASB's):

- ASB HD-ASB-61-026, dated August 6, 2001, that describes the schedule and procedures for replacing P/N's C-2882-1, C-2882-2, and C-7075 propeller thrust bearings with blade thrust bearing P/N C-7438.
- ASB HD-ASB-61-023, Revision 1, dated May 23, 2001, that describes procedures for 10X magnification-assisted visual inspections of the O-ring groove and hub-half and parting surface areas and ECI inspections of propeller hubs, P/N D-5108-( ), for cracks in the bearing retention radius.

### **FAA's Determination of an Unsafe Condition and Required Actions**

Since an unsafe condition has been identified that is likely to exist or develop on other Hartzell Propeller Inc. model HD-E6C-3( ) propellers of the same type design, this AD is being issued to prevent loss of aircraft control due to loss of blade pitch control, inability to fully feather the propeller, hub fracture, and blade release. This AD requires within 50 hours time-in-service (TIS) after the effective date of this AD, or nine months after the effective date of this AD, or when the propeller is next disassembled after the effective date of this AD, whichever occurs earliest:

- Replacement of the current design propeller blade thrust bearings P/N's C-2882-1, C-2882-2, and C-7075 with a new design propeller blade thrust bearing P/N C-7438.
- 10X Magnification-assisted visual inspections and ECI of propeller hubs for cracks.

The actions must be done in accordance with the service bulletins described previously.

### **Immediate Adoption of This AD**

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2001-NE-43-AD." The postcard will be date stamped and returned to the commenter.

## **Regulatory Analysis**

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would 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. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

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

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

## **Adoption of the Amendment**

Accordingly, pursuant to 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. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



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

*We post ADs on the internet at "[www.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl)"*

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).

**2002-22-08 Hartzell Propeller Inc.:** Amendment 39-12933. Docket No. 2001-NE-43-AD.

**Applicability:** This airworthiness directive (AD) is applicable to Hartzell Propeller Inc. model HD-E6C-3( ) propellers. These propellers are installed on, but not limited to Fairchild Dornier GmbH 328-100 series airplanes.

**Note 1:** The parentheses indicate the presence or absence of an additional letter(s) which vary the basic propeller blade model designation. This AD still applies regardless of whether these letters are present or absent on the propeller blade model designation.

**Note 2:** This AD applies to each propeller identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For propellers that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Compliance with this AD is required as indicated, unless already done.

To prevent loss of aircraft control due to loss of blade pitch control, inability to fully feather the propeller, hub fracture, and blade release, do the following:

## **Replacement of Propeller Blade Thrust Bearings**

(a) Within 50 hours time-in-service (TIS) after the effective date of this AD, or nine months after the effective date of this AD, or when the propeller is next disassembled after the effective date of this AD, whichever occurs earliest, do the following:

(1) Replace all propeller blade thrust bearings, part numbers (P/N's) C-2882-1, C-2882-2, and C-7075, with thrust bearings P/N C-7438, in accordance with paragraph 3 of the Accomplishment Instructions of Hartzell Alert Service Bulletin (ASB) HD-SB-61-026, dated August 6, 2001.

(2) Perform a visual inspection of the propeller hub for cracks, in accordance with paragraph 3 of the Accomplishment Instructions of Hartzell Alert Service Bulletin (ASB) HD-ASB-61-023, Revision 1, dated May 23, 2001. Before further flight, remove from service cracked propeller hubs and replace with a serviceable hub.

(3) Perform an eddy current inspection (ECI) of the propeller hub for cracks, in accordance with paragraph 3 of the Accomplishment Instructions of Hartzell ASB HD-ASB-61-023, Revision 1, dated May 23, 2001. Before further flight, remove from service cracked propeller hubs and replace with a serviceable hub.

(b) Propellers that have had blade thrust bearings replaced using Hartzell ASB HD-ASB-61-026, dated August 6, 2001, or Hartzell Service Letter HD-SL-61-034, dated May 7, 2001, are considered to be in compliance with paragraph (a)(1) of this AD.

(c) After the effective date of this AD, do not install propeller blade thrust bearings P/N's C-2882-1, C-2882-2, or C-7075 into any HD-E6C-3( ) Hartzell propeller models.

### Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Chicago Aircraft Certification Office (ACO). Operators must submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

**Note 3:** Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Chicago ACO.

### Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

### Documents That Have Been Incorporated by Reference

(f) The replacement and inspections must be done in accordance with the following Hartzell service bulletin and alert service bulletins:

Document No.	Pages	Revision	Date
ASB HD-ASB-61-023	All	1	May 23, 2001.
Total pages: 11			
ASB HD-ASB-61-026	All	Original	Aug. 6, 2001.
Total pages: 8			

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Hartzell Propeller Inc., Technical Publications Department, One Propeller Place, Piqua, OH 45356; telephone: (937) 778-4200; fax: (937) 778-4365. Copies may be inspected, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

### Effective Date

(g) This amendment becomes effective on November 19, 2002.

Issued in Burlington, Massachusetts, on October 25, 2002.

Francis A. Favara,  
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.  
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