
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Propellers - Variable Pitch - Hartzell**AD/PHZL/85****Propeller Blade Thrust Bearing****1/2006**

Applicability: Hartzell Propeller Inc. model HD-E6C-3() propellers.

Note 1: These propellers are installed on, but not limited to Fairchild Dornier GmbH 328-100 series aeroplanes.

Note 2: 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.

Requirement: 1. Unless previously accomplished in accordance with Hartzell ASB HD-ASB-61-026, dated 6 August 2001, or Hartzell Service Letter HD-SL-61-034, dated 7 May 2001, 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 or later FAA approved revisions.

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

2. Unless previously accomplished 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 23 May 2001 or later FAA approved revisions.
3. Unless previously accomplished 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 23 May 2001 or later FAA approved revisions.
4. Remove from service cracked propeller hubs and replace with a serviceable hub.
5. 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.

Note 3: FAA AD 2002-22-08 Amdt 39-12933 refers.

Propellers - Variable Pitch - Hartzell

AD/PHZL/85 (continued)

Compliance: For Requirement 1, 2 and 3:

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 first.

4. Before further flight after the effective date of this AD.
5. After the effective date of this AD.

This Airworthiness Directive becomes effective on 19 January 2006.

Background: 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 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.



James Coyne
Delegate of the Civil Aviation Safety Authority

30 November 2005