



## **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.

### **Sec. 39.13 [Amended]**

2. Section 39.13 is amended by adding a new airworthiness directive (AD), Amendment 39-12505, to read as follows:

**2001-23-08 Hartzell Propeller Inc.:** Amendment 39-12505. Docket No. 89-ANE-44. Supersedes priority letter AD 90-02-23.

*Applicability:* This airworthiness directive (AD) is applicable to Hartzell Inc ( )HC-( )2Y(-)( ) propeller models (also known as Y-shank propellers) installed on Piper PA-32 series aircraft with Textron Lycoming 540 series engines that are rated at 300 HP or higher, or installed on Pilatus Britten Norman or Britten Norman BN-2 series aircraft (also known as Islander or Trislander) with Textron Lycoming 540 series engines, or installed on any aircraft certificated in the acrobatic category, or installed on any aircraft that has ever been used for agricultural operations. These propellers have model numbers in the form of ( )HC-( )2Y(-)( ), which have no suffix letter or have the suffix letter "A" or "E" at the end of the hub serial number. This AD does not apply to Hartzell Propeller Inc ( )HC-( )2Y(-)( ) propeller models with the suffix letter "B" at the end of the hub serial number.

The following list of aircraft, type certificated in the acrobatic category or used for agricultural operations, may have Hartzell Y-shank propellers installed, but this list is for reference purposes only: Aermacchi S.p.A. (formerly SIAI-Marchetti) S.205 series aircraft, S.208 series aircraft, F.260 series aircraft; American Champion (formerly Bellanca, Champion) 8KCAB, 8GCBC; Aviat (licensed by Sky International (formerly White International and Pitts)) S-1T, S-2, S-2A, S-2S, S-2B ; Cessna A188A, A188B, T188C; Flugzeugwerke Altenrhein AG (FFA) AS202/18A "BRAVO", AS202/18A4 "BRAVO;" Great Lakes Aircraft Co. or Chaparral Motors 2T-1 series aircraft; Moravan National Corporation Zlin 526 ; Piper PA-25-260, PA-36-300; SOCATA--Groupe Aerospatiale (Morane Saulnier) MS893A, and MS893E.

**Note 1:** This airworthiness directive (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 (f) 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 actions to address it.

*Compliance:* Required as indicated, unless accomplished previously.

To prevent failure of the propeller hub resulting from cracks, that can cause blade separation and subsequent loss of aircraft control, accomplish the following:

### **Eddy Current Inspection**

(a) Perform initial and repetitive eddy current inspections (ECI) of the propeller hub fillet radius for cracks. The initial ECI is for propellers with no suffix letter at the end of the serial number and on propellers with serial numbers DN3607A, DN3609A, DN3613A, DN3615A, DN3628A, DN3630A, DN3641A, DN3940A, DN3944A, DN3949A, and DN3962A. The repetitive ECI is for propellers with the suffix letter "E" at the end of the hub serial number. Perform the ECI's in accordance with Hartzell Propeller Inc. Service Bulletin (SB) No. HC-SB-61-227, Revision 2, dated May 8, 2000, as follows:

(1) For propellers previously inspected visually in accordance with AD 90-02-23, perform the initial ECI within 50 hours time-in-service (TIS) since the last visual inspection. For all other applicable propellers, perform the initial ECI within 50 hours TIS after the effective date of this AD.

(i) Prior to further flight, remove from service cracked propeller hubs and replace with a serviceable part.

(ii) If no cracks are found, then permanently mark the end of the hub serial number with the suffix letter "E" in accordance with Hartzell Propeller Inc. SB No. HC-SB-61-227, Revision 2, dated May 8, 2000.

(2) Thereafter, perform the repetitive ECI at intervals not to exceed 150 hours TIS since last ECI. Prior to further flight, remove from service cracked propeller hubs and replace with a serviceable part.

## **Hub Replacement**

(b) Propellers with serial numbers DN3607A, DN3609A, DN3613A, DN3615A, DN3628A, DN3630A, DN3641A, DN3940A, DN3944A, DN3949A, and DN3962A are to be removed from service and replaced with serviceable parts at next overhaul but not to exceed 1,000 hours TIS or 72 months, whichever comes first, after the effective date of this AD and in accordance with Hartzell Propeller Inc. SB No. HC-SB-61-227, Revision 2, dated May 8, 2000.

(c) Propellers with the suffix "A" at the end of the serial number, excluding serial numbers, DN3607A, DN3609A, DN3613A, DN3615A, DN3628A, DN3630A, DN3641A, DN3940A, DN3944A, DN3949A, and DN3962A, are to be replaced in accordance with Hartzell Propeller Inc. Service Bulletin (SB) No. HC-SB-61-227, Revision 2, dated May 8, 2000, as follows:

(1) Propeller hubs on aircraft that have been used for agricultural operations are to be removed from service and replaced with serviceable parts at next overhaul but not to exceed 2,000 hours time-in-service (TIS) or 36 months, whichever comes first, after the effective date of this AD.

(2) Propeller hubs on aircraft certified in the acrobatic category are to be removed from service and replaced with serviceable parts at next overhaul but not to exceed 1,000 hours TIS or 72 months, whichever comes first, after the effective date of this AD.

(3) Propeller hubs installed on Piper PA-32 series aircraft with Textron Lycoming 540 series engines that are rated at 300 HP or higher, or installed on Pilatus Britten Norman or Britten Norman BN-2 series aircraft (also known as Islander or Trislander) with Textron Lycoming 540 series engines, are to be removed from service and replaced with serviceable parts at next overhaul but not to exceed 2,000 hours TIS or 72 months, whichever comes first, after the effective date of this AD.

(d) A propeller hub from an aircraft that is identified in the applicability section of this AD may not be removed and reused on an aircraft for which this AD is not applicable.

## **Terminating Action**

(e) Replacement of an affected propeller hub with a Hartzell propeller hub model with the serial number suffix letter "B" constitutes terminating action for the initial and repetitive inspection requirements of paragraph (a) of this AD. The hub replacement must be performed in accordance with Hartzell Propeller Inc. SB No. HC-SB-61-227, Revision 2, dated May 8, 2000.

## **Alternative Methods of Compliance**

(f) 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. Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago Aircraft Certification Office.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Chicago Aircraft Certification Office.

## **Special Flight Permits**

(g) 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 aircraft to a location where the inspection requirements of this AD can be accomplished.

## **Incorporation by Reference**

(h) The inspection and replacement must be done in accordance with Hartzell Propeller Inc. SB No. HC-SB-61-227, Revision 2, dated May 8, 2000. 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., Product Support Department, One Propeller Place, Piqua, OH 45356; telephone: (937) 778-4379, fax: (937) 778-4391. 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 of This AD**

(i) This amendment becomes effective on December 24, 2001.

Issued in Burlington, Massachusetts, on November 7, 2001.

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Aircraft Certification Service.

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