

96-15-04

Amendment 39-9697.

Docket 96- ANE-18.

Applicability: Hartzell Propeller Inc. HC-B3TN, HC-B5MP, HC-E4A, and HC-D4N series propellers, equipped with propeller blades identified by serial number in Hartzell Propeller Inc. Alert Service Bulletin (ASB) No. HC-ASB-61-220, dated July 8, 1996. The propeller blades identified by serial numbers are limited to those manufactured between March 1992 and June 1996, and represent a group of aluminum propeller blade designs, which are: D9327(), D9512A(), LT10673(), LT10673()-2Q, M10282()+6, M10876(), LT10876()-2Q, and E10477K. These propellers are installed on but not limited to the following aircraft:

Aerospatiale Nord 262 series (STC modified), Air Tractor, Inc. AT-502, AT-503, and AT-802 series, Antonov AN-28 series, Ayres S2R series, McDonnell Douglas DC-3 series (STC modified), Norman Aeroplane NAC 6 series, Pilatus Aircraft Ltd. PC-7 mk II, PC-9, and PC-12 series, PZL PZL-M18, Short Brothers plc S-312 Tucano (military), SD3, and C-23 (military) series. Twin Commander Aircraft Corp. 690 and 695 series (STC modified).

NOTE 1: The above is not an exhaustive list of aircraft which may contain the affected Hartzell Propeller Inc. Models HC-B3TN, HC-B5MP, HC-E4A, and HC-D4N series propellers because of installation approvals made by, for example, Supplemental Type Certificate or field approval under FAA Form 337 "Major Repair and Alteration." It is the responsibility of the owner, operator, and person returning the aircraft to service to determine if an aircraft has an affected propeller.

NOTE 2: 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 (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: Required as indicated, unless accomplished previously.

To prevent propeller blade separation caused by propeller blade shank cracks emanating from forging flaws, which could result in loss of control of the aircraft, accomplish the following:

- (a) For propellers installed on agricultural or acrobatic aircraft, such as Air Tractor, Inc., AT-502A, AT-503, AT-802; Ayres Corporation S2R-T65, S2RHG-265; Norman Aeroplane NAC 6; Pilatus Aircraft Ltd. PC-7 mk II, PC-9; PZL PZL-M18, and Short Brothers Ltd. S-312 Tucano (military) aircraft, accomplish the following:
 - (1) Within 10 hours TIS after the effective date of this AD, disassemble the propeller and perform a one-time fluorescent dye penetrant inspection of a twelve-inch long area on both the face and camber sides of propeller blade shanks for forging flaws or cracks, in accordance with Hartzell Propeller Inc. ASB No. HC-ASB-61- 220, dated July 8, 1996.
 - (2) Prior to further flight, remove from service propeller blades exhibiting forging flaws or cracks and replace with serviceable parts.
- (b) For all other propellers, regardless of aircraft installation, accomplish the following:
 - (1) Within 60 hours TIS after the effective date of this AD, disassemble the propeller and perform a one-time fluorescent dye penetrant inspection of a twelve-inch long area on both the face and camber sides of propeller blade shanks for forging flaws or cracks in accordance with Hartzell Propeller Inc. ASB No. HC-ASB-61- 220, dated July 8, 1996.

- (2) Prior to further flight, remove from service propeller blades exhibiting forging flaws or cracks and replace with serviceable parts.
- (c) For propellers that have not been inspected in accordance with this AD, which experience a sudden or unusual vibration, accomplish the following:
 - (1) Prior to further flight, disassemble the propeller and perform a one-time fluorescent dye penetrant inspection of a twelve-inch long area on both the face and camber sides of propeller blade shanks for forging flaws or cracks in accordance with Hartzell Propeller Inc. ASB No. HC-ASB-61-220, dated July 8, 1996.
 - (2) Prior to further flight, remove from service propeller blades exhibiting forging flaws or cracks and replace with serviceable parts.
- (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. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Chicago Aircraft Certification Office.

NOTE: 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.

- (e) Except for propellers subject to paragraph (c) of this AD, 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 requirements of this AD can be accomplished.
- (f) The actions required by this AD shall be done in accordance with the following Hartzell Propeller Inc. service document:

Document No.	Pages	Date
ASB No. HC-ASB-61-220	1-24	July 8, 1996

Total pages: 24.

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., One Propeller Place, Piqua, OH 45356-2634; telephone (513) 778-4388, fax (513) 778-4321. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief 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.

- (g) This amendment becomes effective on July 29, 1996.