Airworthiness Directive Schedule
Propellers & Propeller Governors
Hartzell Series
27 May 2021

Notes:

1. This AD schedule is applicable to Hartzell propellers manufactured under FAA Type Certificate (TC) Numbers:

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2. The FAA is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for these propellers. State of Design ADs can be obtained directly from the FAA website at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAD.nsf/MainFrame?OpenFrameSet

3. The date above indicates the amendment date of this schedule.

4. Many of the following airworthiness directives contain brackets in the applicability paragraph. The brackets that appear in the propeller models indicate the presence or absence of additional letter(s) which vary the basic propeller hub model designation. The airworthiness directive is applicable regardless of whether these letters are present or absent on the propeller hub model designation.

5. New or amended ADs are shown with an asterisk *

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The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at https://www.aviation.govt.nz/aircraft/airworthiness/airworthiness-directives/links-to-state-of-design-airworthiness-directives/ If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below. | 34 |

72-08-04 | T10173( ) and T10176( ) Blades – Inspection | 34 |
87-15-05R1 | Propeller Blades – Inspection | 34 |
94-03-11 | Propeller Hub Arm Assemblies – Inspection | 34 |
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* 1987-05-01 | Blade Pilot Tube Bore Area - Inspection | 34 |
* 2004-07-25 | New Design Blades - Inspection | 35 |
DCA/HARTZ/101 Cancelled - Purpose Fulfilled

DCA/HARTZ/102 Split Rings - Modification

Applicability: HC-82X20-1B all except HC-2AX series

Requirement: To eliminate the possibility of split ring failures the following action must be taken:

1. All split rings P/N A-159 (including spares stocks) are to be withdrawn from service and mutilated to prevent further use not later than the completion of 50 hours TIS commencing 21 November 1958.

2. All topdressing aircraft shall be fitted with split rings P/N A-969. This will involve modification to the bearing according to Hartzell instructions and the addition of the numeral `1' after dash number of propeller. In the case of propellers on topdressing aircraft using engines of 225 hp or less with split rings P/N A-159-N already fitted, these rings may continue in service until next overhaul when split rings P/N A-969 shall be fitted.

3. Propellers fitted to engines exceeding 225 hp on topdressing operations must be fitted with A-969 split rings before further flight.

4. Normal category aircraft may have split rings P/N A-159-N, but rings P/N A-969 are strongly recommended.

5. All split rings shall be replaced at each overhaul.

6. In the case of propellers fitted to FU-24 (O-470-N) aircraft, split ring replacement must be accomplished in accordance with the provisions of NZCAR, Part III, Leaflet B.28-3.

7. Check that saw cuts of split rings are located on each side of the spider arm, or in plane of rotation, during assembly of propellers incorporating such rings.

Note: All work to be carried out in approved propeller overhaul shops.

Compliance: At overhaul
DCA/HARTZ/114B  Blade Clamps and Blade Bearing Races - Inspection

Experience with propellers using blade clamps has shown that, in addition to periodic blade clamp inspections, a part overhaul life inspection of bearing races for circumferential cracks is necessary.

**Applicability:** All models with clamps on piston engine installations

**Requirement:**
1. Remove and crack check blade clamps using magnetic particle inspection method. Particular attention should be paid to the inside surface of the clamps around the nipple tappings and bolt locations.
2. Remove blade bearing and inspect for serviceability. Crack check inner and outer bearing races.
3. Replace any clamp or bearing found defective before further flight.

**Compliance:**
- Agricultural aircraft - at intervals not exceeding half overhaul life except that propellers installed on AeroCommander B1 (Intermountain Callair) aircraft shall be inspected at intervals not exceeding 500 hours TIS.
- Non agricultural aircraft - at intervals not exceeding half overhaul life for propellers with clamps having 4000 or more hours TIS or where TTIS is unknown.

**Effective Date:**
- DCA/HARTZ/114A - 31 October 1973
- DCA/HARTZ/114B - 14 April 1978

DCA/HARTZ/115  Hub Spiders - Inspection

**Applicability:** HC-12X20-1, -2, -3, -5, -7B

**Requirement:** Hub spiders are to be replaced in accordance with Hartzell SB 32 amended 11 August 1964. (FAA AD 64-28-1 also refers)

**Compliance:** Within the next 100 hours TIS and thereafter every 25 hours TIS

DCA/HARTZ/116C Cancelled - DCA/HARTZ/139 now refers

DCA/HARTZ/117A Cancelled - Purpose Fulfilled

DCA/HARTZ/118  Blade and Hub - Inspection

**Applicability:** HC-92ZF-8847 when fitted to agricultural aircraft

**Requirement:** Hartzell SB 78

**Compliance:** Every 500 hours TIS for propellers with over 1000 hours TIS

DCA/HARTZ/119  Blade - Inspection

**Applicability:** Blades of design 7633-4 built prior to April 1968

**Requirement:** Hartzell SB 96

**Compliance:** As detailed
DCA/HARTZ/120B   Blades - Inspection & Shot Peening

                2. ( )7666A-( ) "Y" shank blades with S/N below C38994 used on but not limited to
                   HC-C2YK-1( ) , HC-C2YK-2( ) & HC-C2YK-4( ) propellers. Those blades only
                   used with HC-C2YK-2(-G)( ) dampered type propellers (hub model designation with
                   "G" suffix letter) are excluded.
                3. All other "Y" shank blades listed in Hartzell SB 97A.

Requirement: To detect blade shank cracks and prevent possible blade failure, accomplish the
              following:
                 (a) Inspect blade shanks and rework as necessary in accordance with Hartzell SB
                     94A.
                 (b) Inspect blade balance hole and rework in accordance with Hartzell SB 97A.
              2. Applicable to ( )7666A-( ) "Y" shank blades with S/N below C38994, as detailed
                 in AD Schedule.
                 (a) Inspect blade shanks in accordance with Hartzell SB 97A.
                 (b) Rework or replace blades as necessary in accordance with Hartzell SB 108.
              3. Applicable to all other "Y" shank blades listed in Hartzell SB 97A.
                 (a) Inspect and rework as necessary in accordance with Hartzell SBs 94A and 97A.
                 (FAA ADs 73-10-03 and 75-07-05 refer)

Compliance:  1. At intervals not exceeding 1000 hours TIS.
             2. Within the next 100 hours TIS, unless already accomplished, and thereafter at
                intervals not exceeding 1000 hours TIS.
             3. At each overhaul.

Effective Date:  1 May 1975

DCA/HARTZ/121   Cancelled – Purpose Fulfilled

Effective Date:  23 February 2012

DCA/HARTZ/122   Inspection and Shot Peening of Blades

Applicability: Propellers and blades fitted to United Aircraft of Canada PT6A, Airesearch TPE 331
              and Allison 250-B engines as detailed in the FAA directive.

Requirement: FAA AD 72-08-04

Compliance: As detailed in FAA AD 72-08-04.

Effective Date:  11 April 1972
DCA/HARTZ/123A   Spring Back up Kit - Modification
Applicability: Models HC-E2YK-2RB, HC-E2YR-2RB and HC-E2YL-2( ) propellers equipped with 8465-7R, 7663-4 or J7663-4 non-counterweighted type blades
Requirement: Hartzell SL 62.
(FAA AD 71-21-9 refers)
Compliance: At overhaul
Effective Date: DCA/HARTZ/123 - 31 August 1972
DCA/HARTZ/123A - 31 March 1978

DCA/HARTZ/124   Blades - Replacement
Applicability: All HC-C3YR-1/8475R propellers installed on Lycoming IO-720 series engines and all other "Y" shank model 8475 and 8477 non-counterweighted blades
Requirement: Install blades incorporating strengthened pitch change knob identified with letter `F', per Hartzell SB 101
Compliance: By 1200 hours TIS. Blades with 1000 hours or more TIS within next 200 hours TIS
Effective Date: 18 September 1974

DCA/HARTZ/126A   Blades - Inspection and Shot Peening
Applicability: Models HC-92WK-( ) and HC-92ZK-( ) series propellers which may be installed on but not limited to; Beech 95 series, Cessna 172, 175, Mooney M20A, Piper PA-23, PA-24, PA-25 and Lake LA-4.
Requirement: To prevent propeller blade separation, accomplish the following:-
1. Inspect blade clamp screw per Procedure No. 1 of Hartzell SB 202. If any clamp screws are found loose or broken , remove propeller and send to a repair organisation for disassembly and inspection per Procedure No. 2 of SB 202. If cracks are found during a dye penetrant inspection of the blade shank, replace with a serviceable blade that has been compressively rolled in the blade shank.
2. Send to a repair organisation for disassembly and inspection per Procedure No. 2 of SB 202. If cracks are found during a dye penetrant inspection of the blade shank, replace with a serviceable blade that has been compressively rolled in the blade shank.
(FAA AD 95-11-08 refers)
Compliance: 1. Within next 25 hours TIS.
2. At 300 hours TIS since last dye penetrant inspection or compliance with DCA/HARTZ/168, or within next 25 hours TIS whichever is the later. Thereafter at intervals not to exceed 500 hours TIS.
Effective Date: DCA/HARTZ/126 - 18 September 1974
DCA/HARTZ/126A - 4 August 1995

DCA/HARTZ/127   Cancelled: DCA/HARTZ/120B now refers

DCA/HARTZ/128   Damper Assembly Screws - Replacement
Applicability: Models HC-C2YK-2CG(F)/(F)C7666A and HC-C2YK-2CLG(F)/(F)JC7666A with damper assembly C-1576 having S/N detailed in Hartzell SB 103 and installed on Piper PA-34 series aircraft
Propellers & Propeller Governors

Hartzell Series

Requirement: Hartzell SB 103.
Compliance: Within the next 100 hours TIS
Effective Date: 31 May 1974

DCA/HARTZ/129 Hard Alloy Blades - Surface Cracks
Applicability: Hartzell T10173H( )-( ), T10176H( )-( ), T10178H( )-( ) and T10282H( )-( ) hard alloy type blades
Requirement: Hartzell SB 105A
(FAA AD 74-14-01 refers)
Compliance: All blades with less than 1000 hours TIS within the next 50 hours TIS. Blades with more than 1000 hours TIS are not affected
Effective Date: 18 September 1974

DCA/HARTZ/130A Attachment Bolts - Torque Check and Replacement
Requirement: To prevent propeller attaching bolt failures or improperly secured propellers, which could lead to separation of the propeller from the aircraft, accomplish the following:

1. On propellers presently installed with P/N A-2047 attachment bolts, check the torque of all eight propeller attaching bolts (with washers installed) with a torque wrench and an appropriate adapter. The torque should be 100 ft.lbs to 125 ft.lbs, with dry threads. Do not use any lubricant with the P/N A-2047 bolts.

If the torque of each P/N A-2047 bolt is within the 100 ft.lbs to 125 ft.lbs torque range, safety wire lock all attaching bolts in a manner approved by the manufacturer. At next propeller disassembly, remove all eight bolts and washers and replace with P/N B-3339 bolts and P/N A-2048-2 washers, or other equivalent manufacturer approved serviceable bolts and washers, per requirement 2 of this AD.

If the torque of any one of the bolts is found to be less than 100 ft.lbs, remove all eight bolts and washers and replace with P/N B-3339 bolts and P/N A-2048-2 washers, or other equivalent manufacturer approved serviceable bolts and washers, per requirement 2 of this AD.

2. Install all new propellers and serviceable propellers with P/N B-3339 bolts and P/N A-2048-2 washers, or other equivalent manufacturer approved serviceable bolts and washers, per Hartzell Owner’s Manual 139 (61-00-39) and Hartzell service instruction 140A, revision 9, taking note of the following:

(a) Install the propeller oil seal to the engine flange after ensuring that the engine and propeller flanges are clean.

(b) Carefully install propeller on the engine flange ensuring that complete and true contact is established.

(c) Apply MIL-T-83483 Petrolated Graphite, or Hartzell Lubricant P/N A-3338 to threads of the eight P/N B-3339 attaching bolts (and remainder of bolt if desired) and to the flat surfaces of the eight P/N A-2048-2 washers, or other equivalent manufacturer approved serviceable bolts and washers, and install the attaching bolts and flat washers through the engine flange and into the propeller flange.
(d) Torque all attaching bolts with a torque wrench and an appropriate adapter, to 40 ft.lbs, and then to 80 ft.lbs, following sequence "A" (shown below). Final torque all attaching bolts using sequence "B" (shown below) to 100 ft.lbs to 105 ft.lbs. Safety wire lock all attaching bolts in a manufacturer approved manner.

Note 1: A bolt with P/N A-2047 has the letter "H" stamped inside a triangle on the bolt. A bolt with P/N B-3339 has the P/N stamped inside the cupped head.

Note 2: The replacement of propeller attachment bolts and washers with P/N B-3339 bolts and P/N A-2048-2 washers, or other equivalent manufacturer approved serviceable bolts and washers, per Hartzell Owner's Manual 139 (61-00-39) and Hartzell service instruction 140A, revision 9, is a terminating action to this AD.

(FAA AD 83-08-01 R2 refers)

Compliance:
1. Within 300 hours TIS.
2. With every propeller replacement.

Effective Date:
DCA/HARTZ/130 - 27 May 1983
DCA/HARTZ/130A - 6 May 2005

DCA/HARTZ/131A Blade Clamp Assemblies - Inspection and Removal from Service

Applicability: All model ( )HC-( )( )(X,V) series propellers with Hartzell P/N C-3-( ) blade clamp assemblies with S/N prior K6337

Requirement: To prevent clamp failure:
1. Remove from service all clamp assemblies with mismatching S/N's on each clamp half, or with unreadable S/N's.
2. Remove from service all clamp assemblies with S/N in range 0 through D5293, or inspect as follows:
   (a) Visually inspect internal, inboard radius area of clamps, especially next to the clamp bolt hole, and remove from service all clamps with signs of corrosion.
   (b) Magnetic particle inspect all internal and external surfaces of clamp per Hartzell Specification No. H-S-7 dated 4 August 1981, or approved equivalent and remove from service all clamps with signs of cracks.
   (c) Dye-penetrant inspect all external surfaces of clamp assemblies and remove from service all clamps with signs of cracks.
3. Accomplish the following on all blade clamp assemblies with S/N's in range D5294 through K6336 per Hartzell SI 159B.
   (a) Using 10 power magnification, visually inspect inner bearing race radius, especially next to inner clamp bolt hole, for defects such as corrosion, tool marks, gouges, scratches etc.
(b) Remove all evidence of defects, and remove from service all clamps which exceed rework limitations specified in SI 159B.

(c) Magnetic particle inspect, and remove from service all cracked clamps.

(d) Replace all reworked clamps.

(FAA AD 85-14-10R2 refers)

**Compliance:**
By 11 December 1987, unless already accomplished. Repeat inspections required per para 2(c) at intervals not exceeding 100 hours TIS

**Effective Date:**
DCA/HARTZ/131 - 28 February 1986
DCA/HARTZ/131A - 9 October 1987

DCA/HARTZ/132  Cancelled: Purpose fulfilled

DCA/HARTZ/133D  Hub - Inspection

**Applicability:**
Model ( )HC-( )3Y( )-( ) series propellers with S/Ns detailed in Hartzell SB 165DE and installed on aircraft with Lycoming (L)TIO-540 series engines; or installed on agricultural aircraft regardless of engine type. These propellers are installed on but not limited to: FU24-950/954, PL-12/T-300, PA-31, PA-31-325, PA-31-350, PA-31P-350 and PA-32(R)-301T.

**Requirement:**
To prevent hub failure due to cracks that originate in the grease fitting holes on the hub, which could result in propeller blade separation and loss of the aircraft, accomplish the following:-

1. Perform a combination of visual and eddy current inspection per Hartzell SB 165E. Remove propellers with cracked hubs from service before further flight.

2. Replace with later style hub (post 1983) per SB 165E.

(FAA AD 94-17-13 refers)

**Compliance:**
1. Inspection:
   (a) For Piper PA-31-325, PA-31-350 aircraft, inspect within next 10 hours TIS and thereafter at intervals not to exceed 10 hours TIS.

   (b) Agricultural aircraft, inspect within next 25 hours TIS and thereafter at intervals not to exceed 25 hours TIS.

   (c) For all other affected aircraft, inspect within next 50 hours TIS and thereafter at intervals not to exceed 50 hours TIS.

   (d) If any abnormal or unexplained changes occur in propeller vibration or grease leakage, inspect prior to further flight.

2. Replacement:
   For Piper PA-31-325, PA-31-350 and Agricultural aircraft, replace at next overhaul or by 30 June 1995, whichever occurs first.

**Note 1:**
Propeller hubs affected by this AD that have been removed from service cannot be returned to service on aircraft types that are not subject to this AD. Cumulative fatigue damage may have occurred that is not yet detectable.

**Note 2:**
Alternative Rework. Performing interim modification per SB 165E allows an operator to extend the inspection period and replacement time of the propeller hub. This is considered an alternative means of compliance and a concession is required. Applications for a concession should be made on Form MOT 2120.

**Effective Date:**
DCA/HARTZ/133C - 24 August 1993
DCA/HARTZ/133D - 28 October 1994
Applicability: Model ( )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.

Model ( )HC-( )2Y( )-( ) propeller models (also known as Y-shank propellers) installed on Pilatus Britten Norman or Britten Norman BN-2 series aircraft (also known as Islander or Trislander) with Textron Lycoming 540 series engines.

Model ( )HC-( )2Y( )-( ) propeller models (also known as Y-shank propellers) installed on any aircraft certificated in the aerobatic category or used for aerobatics.

Model ( )HC-( )2Y( )-( ) propeller models (also known as Y-shank propellers) installed on any aircraft that have been or are used for agricultural operations.

Note 1: For reference the aircraft and propellers listed in table 2 of Hartzell Propeller Inc. SB No. HC-SB-61-227 revision 5 are affected by this AD. For aircraft not listed in table 2 of the SB, review the AD applicability to determine if the propeller hub fitted to the aircraft is affected.

Note 2: This AD revised to clarify the compliance and the requirements. This AD does not apply to Hartzell ( )HC-( )2Y( )-( ) propeller models with the suffix letter "B" at the end of the hub S/N.

Note 3: Affected 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 S/N. The parentheses appearing in the propeller model number indicates the presence or absence of an additional letter(s) that varies the basic propeller model. This AD applies regardless of whether these letters are present or absent in the propeller model designation.

Note 4: This AD is applicable to affected propellers regardless whether the propeller 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 accomplishment of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance. The application 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.

Requirement: To prevent failure of the propeller hub due to possible cracks, which could result in blade separation and loss of aircraft control, accomplish the following:

1. Eddy Current Inspection:
   Accomplish an Eddy Current Inspection (ECI) of the propeller hub fillet radius for cracks per Hartzell Propeller Inc. SB No. HC-SB-61-227 revision 5, dated 28 Sep 2006 or later FAA approved revisions.
   
   If any cracks are found, replace the propeller hub before further flight.
   
   If no cracks are found, permanently mark the end of the hub S/N with the suffix letter "E" per the instructions in SB No. HC-SB-61-227.

2. Hub Replacement:

3. Hub Replacement:

4. Reuse of Affected Propellers:
A propeller hub removed from service from an affected aircraft may not be reused on any aircraft.

Note 5: The replacement of an affected propeller hub per the instructions in SB No. HC-SB-61-227 with a Hartzell propeller hub with a suffix letter "B" at the end of the hub S/N is a terminating action to ECI inspection requirements of this AD.

Note 6: The inspections and hub replacements mandated by this AD must be accomplished per the instructions in Hartzell Propeller Inc. SB No. HC-SB-61-227 revision 5, dated 28 September 2006 or later FAA approved revisions.

(FAA AD 2001-23-08 refers)

Compliance:
1. Within the next 50 hours TIS unless previously accomplished within the last 150 hours TIS, and thereafter at intervals not to exceed 150 hours TIS.

2. At the next overhaul but not to exceed 1000 hours TIS or 72 months, whichever occurs sooner after 20 December 2001 (the effective date of DCA/HARTZ/134D).

3. Propeller hubs installed on any aircraft that have been used for agricultural operations:
   - At next overhaul but not to exceed 2000 hours TIS or 36 months, whichever occurs sooner after 20 December 2001 (the effective date of DCA/HARTZ/134D).
   - Propeller hubs installed on aircraft certificated in the acrobatic category:
     - At next overhaul but not to exceed 1000 hours TIS or 72 months, whichever occurs sooner after 20 December 2001 (the effective date of DCA/HARTZ/134D).
     - 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:
       - At next overhaul but not to exceed 2000 hours TIS or 72 months, whichever occurs sooner after 20 December 2001 (the effective date of DCA/HARTZ/134D).


Effective Date:
- DCA/HARTZ/134F - 1 June 2006
- DCA/HARTZ/134G - 23 December 2010

DCA/HARTZ/135 Cancelled – Purpose fulfilled and DCA/HARTZ/146 refers

Effective Date: 29 November 2007
DCA/HARTZ/136    Hub and Blade - Inspection and Replacement

Requirement: To prevent initiation of fatigue cracks in propeller assemblies and possible blade separation, accomplish FAA AD 95-01-02.

Compliance: Compliance is required as detailed in FAA AD 95-01-02.

Effective Date: 30 August 1996

DCA/HARTZ/137    Blade - Inspection
Applicability: Model HC-B3TN, HC-B5MP, HC-E4A and HC-D4N series propellers equipped with propeller blades identified by S/N in Hartzell ASB HC-ASB-61-220. These propellers may be installed on but not limited to Ayres S2R series aircraft.

Requirement: To prevent propeller blade separation caused by propeller blade shank cracks emanating from forging flaws, accomplish the following:

- 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 per ASB HC-ASB-61-220. Remove from service prior to further flight, propeller blades exhibiting forging flaws or cracks, and replace with serviceable parts.

(FAA AD 96-15-04 refers)

Compliance: Propellers installed on agricultural or aerobatic aircraft, within next 10 hours TIS. For propellers installed on other aircraft, within next 60 hours TIS.

For propellers that have not been inspected per this airworthiness directive and experience a sudden or unusual vibration, inspect prior to further flight.

Effective Date: 30 August 1996

DCA/HARTZ/138    Hub - Replacement
Applicability: Models HC-A3VF-7( ), HC-B3TF-7( ), HC-B3MN-3( ), HC-B3TN-2( ), HC-B3TN-3( ), HC-B3TN-5( ), HC-B4MN-5( ), HC-B4MP-3( ), HC-B4TN-3( ), HC-B4TN-5( ), HC-B5MA-3( ), HC-B5MP-3( ), HC-B5MP-5( ), HC-B3MN-5( ), HC-B3TN-4( ), HC-B4MP-4( ), and HC-B5MN-3( ) propellers.

These propellers may be installed on but not limited to the following aircraft: ASTA N22B, N24A; Ayres Corporation S-2R; Beech A36, 65-90, 65-90A, C90; Cessna 208, 208A, 421, 402, P210N; de Havilland DH.114, DHC-2, DHC-6; Embraer EMB-110P1, EMB-110P2; Mitsubishi MU-2B series; Pacific Aerospace 08-600; Pilatus PC-6/A-H2, /B1-H2, /B-H2, /B2-H2, /B2-H4, PC-7; Piper PA31-T1, -T2, -T3; PA31P; Schweizer (Grumman) G-164A, G-164B; and Twin Commander 690A, 690B, 690C, 695, 695A.

Requirement: To prevent propeller hub, blade, or blade clamp failure, accomplish the following:

1. Disassemble the propeller in accordance with Hartzell Propeller Inc. Service Manual 118F, Revision 2, dated May 1992, pages 15 to 19, for 3- and 4-bladed hub models, and Service Manual 132A, Revision 2, dated June 1992, pages IV-5 to IV-11, for 5-bladed hub models. Remove the hub from service, and replace the hub with a serviceable hub per the compliance schedule in Table 1 of this AD.
Utilise Table 1 of this AD in accordance with the following example: Model HC-B3TN-3( ) series propellers, starting with S/N BU1 through BU377, require replacement before the end of March of calendar year 1997. S/N BU378 through BU754 require hub replacement before the end of September of 1997, and so forth.

The affected hubs can only be replaced with serviceable hubs having a S/N not listed in Table 1 of this AD for that propeller model, or serviceable hubs having a S/N for which replacement is not yet required in accordance with Table 1 of this AD.

Some existing propeller hub S/Ns include a suffix letter, such as an "A." The presence or absence of this letter has no significance in determining compliance.

Since a hub may be used in various propeller models, the S/N and the model number shown in Table 1 of this AD may not coincide. Precedence is given to the hub S/N in determining compliance requirements. The hub model is only given as a reference.

Hub replacement must be accomplished by the end of the calendar month indicated at the top of the appropriate column in Table 1 of this AD. The S/N ranges in this table identify the propeller hubs that require replacement by the end of that month.

2. Perform a fluorescent penetrant inspection of blades for cracks in accordance with Hartzell Propeller Inc. SB 136H, dated March 12, 1993, prior to installing a serviceable hub.

Perform magnetic particle inspection of blade clamps for cracks in accordance with Hartzell Service Manual 202A, dated March 1993, pages 201 to 215, prior to installing a serviceable hub.

If cracks are found in either the blade or the blade clamps, prior to further flight replace with serviceable blade or blade clamps.


(FAA AD 96-18-14 refers)

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**Effective Date:** 25 October 1996
DCA/ HARTZ/139A   Blades - Rework and Inspection

Applicability: Model ( )HC-( )2(3)(X,V)( )-( ) series and HA-A2V20-1B series propellers with aluminium blades. These propellers are installed on but not limited to the following aircraft:

- Twin Commander: 500, 500A, 500S, 680F
- Beech: 35 series, 35-C33A, 58P, 95-A55, 95-B55
- Bellanca: 7GCA, 7GCB, 7GCC
- deHavilland: DH104, DH114
- GAF: N22B, N24A, N22S, N22C
- Grumman: G44, G44A
- Mooney: M20
- Pacific Aerospace: FU-24, FU-24A
- Pilatus: PC-3, PC-6, PC-6-H1, -H2
- SOCATA: GY.80-150, GY.80-160

Requirement: To prevent blade separation due to cracked blades, hubs, or blade clamps, which could result in loss of control of the aircraft, accomplish the following:-

A. For hub models ( )HC-(1,4,5,8)(2,3)(X,V)( )-( ) perform initial and repetitive inspections and, if necessary, replace with serviceable parts per Hartzell SB HC-SB-61-217, Revision 1, as follows:

1. Initially perform a fluorescent dye penetrant and eddy current inspection of the blade, an optical comparator inspection of the blade retention area, a dye penetrant inspection of the blade internal bearing bore, and a visual and magnetic particle inspection of the blade clamp and of the hub. The initial inspection is required within the following:
   (i) 1,000 hours time since new (TSN) for propellers with less than 900 hours TSN, provided that the initial inspections are performed within 60 months TSN or within next 24 months, whichever occurs later, or
   (ii) 100 hours TIS for propellers with 900 or more hours TSN, or unknown TSN, provided that the initial inspections are performed within 24 months.

2. Thereafter, perform repetitive fluorescent dye penetrant and eddy current inspection of the blade, an optical comparator inspection of the blade retention area, and a visual and magnetic particle inspection of the blade clamp. The repetitive inspection is required at intervals not to exceed 500 hours TIS or 60 months, whichever occurs first, since last inspection.

3. Thereafter, perform a repetitive visual and magnetic particle inspection of the hub. This repetitive hub inspection is required at intervals not to exceed 250 hours TIS or 60 months, whichever occurs first, since last inspection.

4. Thereafter, perform a repetitive dye penetrant inspection of the blade internal bearing bore. This repetitive blade internal bearing bore inspection is required at intervals not to exceed 60 months since last inspection.

B. For hub models ( )HC-(A,D)(2,3)(X,V)( )-( ), and HA-A2V20-1B, except HC-A3VF-7( ), perform initial and repetitive inspections and, if necessary, replace with serviceable parts per SB HC-SB-61-217, as follows:
1. Initially perform a fluorescent dye penetrant and eddy current inspection of the
blade, an optical comparator inspection of the blade retention area, a visual and
magnetic particle inspection of the blade clamp, and a dye penetrant inspection of the
blade internal bearing bore. The initial inspection is required within the following:
   (i) 1,000 hours TSN for propellers with less than 800 hours TSN, provided that the
        initial inspections are performed within 60 months TSN or within next 24 months,
        whichever calendar time occurs later, or
   (ii) 200 hours TIS for propellers with 800 or more hours TSN, or unknown TSN,
        provided that the initial inspections are performed within the next 24 months.
2. Thereafter, perform repetitive fluorescent dye penetrant and eddy current
   inspection of the blade, an optical comparator inspection of the blade retention area,
   and a visual and magnetic particle inspection of the blade clamp. The repetitive
   inspection is required at intervals not to exceed 500 hours TIS or 60 months,
   whichever occurs first, since last inspection.
3. Thereafter, perform repetitive dye penetrant inspections of the blade internal
   bearing bore. This repetitive blade internal bearing bore inspection is required at
   intervals not to exceed 60 months since last inspection.

C. For hub models HC-A3VF-7() perform initial and repetitive inspections and, if
   necessary, replace with serviceable parts per SB HC-SB-61-217, Revision 1, as
   follows:
1. Initially perform a fluorescent dye penetrant and eddy current inspection of the
   blade, an optical comparator inspection of the blade retention area, a visual and
   magnetic particle inspection of the blade clamp, and a dye penetrant inspection of the
   blade internal bearing bore. The initial inspection is required within the following:
   (i) 3,000 hours TSN for propellers that have never been overhauled and have less
        than 2,500 hours TSN on the effective date of this AD, provided that the initial
        inspections are performed within 60 months TSN or within next 24 months,
        whichever calendar time occurs later, or
   (ii) 3,000 hours TIS since last overhaul for propellers that have been overhauled but
        have less than 2,500 hours TIS since last overhaul, provided that the initial
        inspections are performed within 60 months TIS since last overhaul or within next 24
        months, whichever calendar time occurs later, or
   (iii) 500 hours TIS, for propellers that have never been overhauled and have 2,500 or
        more hours TSN, or propellers which have been overhauled and have 2,500 or more
        hours TIS since last overhaul, or propellers with unknown TSN, provided that the
        initial inspections are performed within next 24 months.
2. Thereafter, perform repetitive fluorescent dye penetrant and eddy current
   inspection of the blade, an optical comparator inspection of the blade retention area,
   and a visual and magnetic particle inspection of the blade clamp. The repetitive
   inspection is required at intervals not to exceed 3000 hours TIS or 60 months,
   whichever occurs first, since last inspection.
3. Thereafter, perform repetitive dye penetrant inspections of the blade internal
   bearing bore. This repetitive blade internal bearing bore inspection is required at
   intervals not to exceed 60 months since last inspection.

D. The initial inspection of the internal blade bearing bore required by paragraphs
   A.1, B.1, or C.1 of this AD need not be accomplished again if previously
   accomplished per page 4 of SB HC-SB-61-217, Revision 1.
E. If not previously accomplished, shot peen the propeller blade shank area during
   the initial inspection required by paragraphs A.1, B.1, or C.1, as applicable, and
   perform the shot peening per SB HC-SB-61-217, Revision 1. Re-shot peening of the
   propeller blade shank area during the repetitive inspections required by paragraphs
   A.2, B.2, or C.2 as applicable, is required only if the propeller blade shank area has
   been repaired or has excessive wear or damage per SB HC-SB-61-217, Revision 1.
F. Replacement of affected propellers or modification to Hartzell model “MV” series propellers constitutes terminating action for the initial and repetitive inspections specified in paragraphs A. through E. of this AD. Hartzell “MV” series propellers were certified as models (HC-(2,3)MV(-) and HA-A2MV20-1. Information on modifying the affected propellers may be found in Hartzell SB No’s HC-SB-61-232 and HC-SB-61-233.

(FAA AD 97-18-02R1 refers)

**Compliance:**
Compliance is required at the times specified within the requirement of this airworthiness directive

**Effective Date:**
DCA/HARTZ/139  26 September 1997
DCA/HARTZ/139A  25 September 2003

DCA/HARTZ/140  BASCO Overhauled Propellers - Maintenance Actions

**Applicability:**
Propellers overhauled by Brothers Aero Service Company Inc (BASCO), USA, from November 1996 to October 1998. Propellers affected are Y–shank series propellers and those listed by hub S/N in FAA airworthiness directive 2001-07-03.

**Requirement:**
To prevent failure of the propellers returned to service by BASCO, accomplish the following:

1) Disassemble,
2) Clean,
3) Inspect for the following:
   (i) Nicks,
   (ii) Scratches,
   (iii) Failure of blades to meet minimum dimensions,
   (iv) Alodine or paint or both applied over corrosion,
   (v) Lack of chemical conversion coating applied beneath the de-ice boots,
   (vi) Bolts incorrectly torqued,
   (vii) Incorrect parts,
   (viii) Incorrect installation of parts, and
   (ix) Reinstallation of parts intended for one-time use.
4) Repair and replace with serviceable parts, as necessary,
5) Perform a cold roll operation on the blade shanks,
6) Reassemble and test.

**Note:**
Information on performing an overhaul of the affected propellers may be found in the applicable Hartzell Propeller Overhaul Manual.

(FAA AD 2001-07-03 refers)

**Compliance:**
Within next 10 hours TIS.

**Effective Date:**
31 May 2001
DCA/HARTZ/141A   HC-C2YR-4CF Propeller – Service Life Reduction

Applicability: Model HC-C2YR-4CF propellers with hubs P/N D-6522-1 or D-2201-16 and propeller blades P/N FC8477A-4 fitted to Sky International Inc (Pitts) S-2S and S-2B aircraft with Textron Lycoming model AEIO-540-D4A5 engines.

Note 1: This AD revised to add note 2 which specifies the relevant manufacturer instructions which pertains to the subject of this AD.

Requirement: To prevent fatigue failure of propeller hubs which may result in loss of the aircraft, accomplish the following:

1. Remove hubs P/N D-6522-1 or D-2201-16 and blades P/N FC8477A-4 from service before exceeding 2000 flight hours and replace with serviceable hubs and blades before further flight.

2. Affected hubs and propeller blades that have accumulated 2000 hours TIS shall not be fitted to any aircraft.

3. Affected hubs and propeller blades that have been removed from a Sky International Inc (Pitts) S-2S or S-2B aircraft shall not be reused on any other aircraft.

Note 2: The Pitts S-2S and S-2B propeller blade and hub unit life limits specified in the airworthiness limitations section of Hartzell Propeller Maintenance Manual 113B and the propeller application data for the Aviat (Pitts) S-2S and S-2B aircraft specified in Hartzell Application Guide 159 pertains to the subject of this AD.

(FAA AD 2003-03-20 refers)

Compliance:
1. By 2000 hours TTIS.

Effective Date:
DCA/HARTZ/141 - 27 February 2003
DCA/HARTZ/141A - 30 October 2008

DCA/HARTZ/142  Two Bladed Aluminium Hubs - Replacement

Applicability: Model ()HC-()2Y( )-() propellers, with propeller hub P/N D-6522-1, D-6522-2, D-6529-1, and D-6559-3, and the S/N listed in the following table:

<table>
<thead>
<tr>
<th>Propeller S/N</th>
<th>Hub S/N</th>
<th>Hub P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU11115B</td>
<td>A61365B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11116B</td>
<td>A61366B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11117B</td>
<td>A61367B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11119B</td>
<td>A61369B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11125B</td>
<td>A61375B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11131B</td>
<td>A61381B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11134B</td>
<td>A61384B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11135B</td>
<td>A61385B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AY515B</td>
<td>A61397B</td>
<td>D-6522-2</td>
</tr>
<tr>
<td>AY516B</td>
<td>A61398B</td>
<td>D-6522-2</td>
</tr>
<tr>
<td>CH36140B</td>
<td>A61409B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36141B</td>
<td>A61410B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36151B</td>
<td>A61420B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36152B</td>
<td>A61421B</td>
<td>D-6529-1</td>
</tr>
</tbody>
</table>
Requirement: To prevent in-flight propeller blade separation resulting in airframe and engine damage, and possible loss of the aircraft, accomplish the following:

1. For Piper PA-32( ) series craft with Lycoming 540 series engines rated at 300 horse power or higher, Britten Norman BN-2 series aircraft with Lycoming 540 series engines, aerobatic aircraft, and craft used for agricultural purposes, remove affected hubs listed by S/N in Table 1 of this AD and replace with serviceable hubs, in accordance with paragraphs 3.A. through 3.B.(3) of ASB HC-ASB-61-259.

<table>
<thead>
<tr>
<th>Propeller S/N</th>
<th>Hub S/N</th>
<th>Hub P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH36211B</td>
<td>A61596B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36212B</td>
<td>A61597B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36213B</td>
<td>A61598B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36215B</td>
<td>A61601B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>CH36216B</td>
<td>A61602B</td>
<td>D-6529-1</td>
</tr>
<tr>
<td>AU11145B</td>
<td>A61603B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11147B</td>
<td>A61605B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AU11155B</td>
<td>A61613B</td>
<td>D-6522-1</td>
</tr>
<tr>
<td>AY520B</td>
<td>A61743B</td>
<td>D-6522-2</td>
</tr>
<tr>
<td>AU11175B</td>
<td>A61893B</td>
<td>D-6522-1</td>
</tr>
</tbody>
</table>
2. For aircraft other than those types listed in paragraph 1 of this AD, remove affected hubs listed by S/N in Table 1 of this AD, and replace with serviceable hubs, in accordance with paragraphs 3.A. through 3.B.(3) of ASB HC-ASB-61-259.

3. Do not install any propeller assembly that has a hub with a P/N D-6522-1, D-6522-2, D-6529-1, or D-6559-3, with a S/N listed in Table 1 of this AD.

(FAA AD 2003-01-03 refers)

Compliance:
1. By 50 hours TSN or by 27 February 2004, whichever occurs first.
2. By 100 hours TSN or by 27 February 2004, whichever occurs first.
3. After the effective date of this AD.

Effective Date: 27 February 2003

DCA/HARTZ/143 Anti Ice Boots – Removal and Inspection

Applicability: Model HC-C2Y(K,R)-1BF/FS477-4 propellers with TKS (Aircraft De-icing) Ltd. anti-ice boots that were installed by Socata-Groupe Aerospatiale, using TKS Ltd. Procedure P232, Specification for the Attachment of Propeller Overshoes. These propellers were installed on but may not be limited to, Socata TB-20 and TB-21 aircraft.

Requirement: To prevent propeller blade separation, damage to the aircraft, and possible loss of the aircraft, do the following:

1. For propellers that have been overhauled after the installation of TKS (Aircraft De-icing) Ltd. Anti-ice boots, and have had the anti-ice boots re-installed using Hartzell Manual 133C (ATA 61-13-33) "Aluminum Blade Overhaul", AS&T Procedure 4700INS, or other approved procedures (excluding TKS Procedure P232) no further action is required.

2. For propellers that have had the anti-ice boots installed using the TKS Procedure P232, but have not had anti-ice boots re-installed using Hartzell Manual 133C (ATA 61-13-33) "Aluminum Blade Overhaul", AS&T Procedure 4700INS, or other approved procedures (excluding TKS Procedure P232), remove anti-ice boots, inspect and rework anti-ice boot areas of propeller blades, and install new anti-ice boots in accordance with paragraph 3 of the Accomplishment Instructions of Hartzell Propeller Inc. ASB HC-ASB-61-251, dated April 10, 2001 using the compliance schedule as follows:

(FAA AD 2002-06-02 refers)

Compliance:

<table>
<thead>
<tr>
<th>Propeller TIS</th>
<th>Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 500 hours TIS and less than 3 years time-since-new (TSN).</td>
<td>Within 200 hours TIS but not to exceed 600 hours TSN, or prior to accumulating 4 years TSN, whichever occurs first.</td>
</tr>
<tr>
<td>Greater than 500 hours TIS, or 3 years or more TSN but less than 6 years TSN</td>
<td>Within 100 hours TIS, or 1 year from the effective date of this AD, whichever occurs first</td>
</tr>
<tr>
<td>Six years or more TSN</td>
<td>Within 50 hours TIS, or within 6 months from the effective date of this AD, whichever occurs first</td>
</tr>
</tbody>
</table>

Effective Date: 24 April 2003
DCA/HARTZ/144   Australian Air Props – Removal from Service

Applicability: Hartzell 2 bladed ‘Y’ shank aluminium hub propellers (HC-)2Y-() and Hartzell 2 bladed ‘Y’ shank aluminium hubs last released by Australian Air Props Pty Ltd, Building 515, Hartzell Place, Bankstown Airport NSW, in the period 1 January 1991 through 31 December 1996 and those propellers listed in table 1.

Requirement: Due to incorrect overhaul practices which may lead to failure of the propeller hub and loss of control of the aircraft, remove from service;

1. Any Hartzell ()HC-()2Y()-() propeller incorporating a hub last released by Australian Air Props PTY Ltd following a propeller strike, in the period 1 January 1991 through 31 December 1996, and;

2. Propeller Hubs listed in table 1 of this directive.

For propellers removed IAW with requirement 1, dismantle the propeller and inspect the hub preload plate shelf area for evidence of a machining repair. Remove from service any propeller hub found to have machining of the preload plate shelf contrary to Hartzell Standard Practices Manual 202A.

For propellers listed in table 1 of this directive, remove hub from service and scrap IAW the manufacturer's procedures.

Report any propellers removed from service IAW the requirements of this AD to Team Leader Continuing Airworthiness, Aircraft Certification Unit, CAA.

(CASA AD AD/PHZL/77 refers)

Compliance: Within 50 Hours TIS or 31 October 2003 whichever occurs first.

Effective Date: 31 August 2003

Table 1:

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HC-F2YL-1</td>
<td>EU211</td>
</tr>
<tr>
<td>HC-E2YL-2</td>
<td>BG2664</td>
</tr>
<tr>
<td>HC-E2YL-2</td>
<td>BG2721</td>
</tr>
<tr>
<td>HC-E2YL-2</td>
<td>DP3940</td>
</tr>
<tr>
<td>HC-E2YL-2</td>
<td>BG3628</td>
</tr>
<tr>
<td>HC-M2YR-1</td>
<td>EN359</td>
</tr>
<tr>
<td>HC-M2YR-1</td>
<td>FB818</td>
</tr>
<tr>
<td>HC-M2YR-1</td>
<td>FB394</td>
</tr>
<tr>
<td>HC-C2YF-2</td>
<td>AM3316</td>
</tr>
<tr>
<td>HC-C2YF-2</td>
<td>AM3088</td>
</tr>
</tbody>
</table>

DCA/HARTZ/145   T & W Propellers Inc - Overhaul

Applicability: All Hartzell Propellers that were overhauled by T&W Propellers Inc, of Chino California and are listed in Table 1 of FAA AD 2003-13-17
Requirement: Following an NTSB investigation the FAA determined that T & W Propellers were not properly carrying out propeller repairs and overhauls. The investigation revealed that overhaul processes had not been carried out rendering the propellers unserviceable. To avoid failure of the propeller and loss of control of the aircraft:

Remove propellers from service and return to an authorised propeller repair centre other than T & W Propellers for disassembly and re-inspection.

(FAA AD 2003-13-17 refers)

Compliance: Within 10 hours TIS

Effective Date: 31 August 2003

DCA/HARTZ/146B  Blade Pitch Change Knobs – Inspection and Rework

Applicability: Model ( )HC-( )Y( )-( )(( ) propellers with ‘Y’ shank aluminium blades having an ‘F’ pitch change knob, fitted to Textron Lycoming IO-720 series engines installed on FU24 series aircraft.

Note 1: This AD revised to mandate the shot peening of pitch change knobs of new or first life blades that have not been shotpeened at manufacture or in accordance with previous revisions of this AD or DCA/HARTZ/135. Pitch change knobs shall also be shotpeened at every overhaul, or when damage, wear or rework exceeds the depth of the pebble grain surface.

Note 2: Propellers with aluminium blades having an ‘F’ pitch change knob can be identified by prefix letter ‘F’ before the blade model number. Propeller blades with a S/N higher than J88010 may have been shot peened at manufacture. After several occurrences of pitch change knob fractures, Hartzell introduced the shotpeening of pitch change knobs at manufacture from 1 December 2005. (refer Hartzell Service Letter No. HC-SL-61-245).

Requirement: To prevent failure of a blade pitch change knob possibly resulting in loss of aircraft control, accomplish the following:

1. Inspect, rework and shotpeen pitch change knobs per the instructions in Hartzell Alert Service Bulletin (ASB) No. HC-ASB-61-263, revision 2 and per the instructions in the blade shank overhaul chapter of Hartzell Aluminum Overhaul Manual No. 133C (61-13-33).

2. Before fitting a propeller blade, ensure the pitch change knob has been shotpeened per requirement 1 of this AD.

Note 3: This AD amplifies the shot peening requirements specified in ASB No. HC-ASB-61-263 and Hartzell Aluminum Overhaul Manual No. 133C (61-13-33). In 2003 Hartzell introduced the shotpeening of the pitch change knobs at every overhaul. Shotpeening applies a compressive layer improving the resistance to fatigue which can be compromised by damage, in service loads, rework or wear.

(NZ Occurrence 07/2080 refers)

Compliance: 1. At the next calendar inspection, or next 100 hours TIS whichever occurs sooner, unless previously accomplished at manufacture or last propeller overhaul whichever is the later, and thereafter at every propeller overhaul, or when the damage, wear or rework on the pitch change knob exceeds the depth of the pebble grain surface.

2. From 29 November 2007

Effective Date: DCA/HARTZ/146  -  25 September 2003
DCA/HARTZ/146A  -  25 September 2003
DCA/HARTZ/146B  -  29 November 2007
DCA/HARTZ/147  Propeller Blades - Replacement

Applicability: Model HC-B3TN-5( ) propellers, with part numbers (P/N's) T10176H(B)-5, T10176H(K)-5, T10176H-5, T10178H-11, T10178H-11R, T10178H(B)-11, and T10178H(B)-11R blades, that are installed on Mitsubishi MU-2 aircraft.

Note 1: These blades may be fitted to other aircraft types including Rockwell 690A and Cessna 441, however the propeller state of design authority advises failures to date have been limited to the MU-2. Compliance with the SB is recommended for other aircraft types.

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. To prevent propeller blade separation, damage to the aircraft, and possible loss of the aircraft, remove and replace propeller blades in accordance with paragraphs 3.A. through 3.C.(3) of the Accomplishment Instructions in Hartzell SB HC-SB-61-250.
2. After the effective date of this AD, do not install any propeller blade removed in accordance with Hartzell SB HC-SB-61-250, on any aircraft.

Compliance: Within 200 TIS or before 31 March 2006.

Effective Date: 31 March 2005

DCA/HARTZ/148  Blade Pilot Tube Bore - Inspection

Applicability: All model HC-B3TN-5( )/T10282( ) propellers installed on Fairchild aircraft models SA226-TC, SA226-AT and SA226-T with Garrett TPE331-10UA-511G engines, and excluding propellers with blades P/N T10282N( ), T10282NB( ), T10282NK( ), or T10282NE( ).

Note 1: Aircraft incorporating STCs SA344GL-D, SA4872SW, and SA345GL-D have these engine, propeller, and aircraft combinations.

Requirement: To prevent possible blade failure near the hub which can result in blade separation, engine separation, damage to the aircraft, and possible loss of the aircraft, accomplish the following:
1. Perform a document search to determine that the propeller blades meet the initial and repetitive compliance requirements of AD 88-24-15.
2. Perform a document search to determine that propeller blades P/N T10282( ) have been replaced with P/N T10282N( ), T10282NB( ), T10282NK( ), or T10282NE( ) propeller blades.
3. If the actions in requirement 1 and 2 have not been done, then do one of the following:
   a) Inspect the blades per Hartzell SB 136, revision "I", or
   b) Replace propeller blades with P/N T10282N( ), T10282NB( ), T10282NK( ) or T10282NE( ) as applicable.
4. If the actions in requirement 1 have been done, but not the actions in requirement 2, then inspect the blades per Hartzell SB 136, revision "I". Replace all blades showing evidence of cracks or other unairworthy conditions, before further flight.
Note 2:  After the effective date of this AD, compliance is restricted to SB No. 136, revision "I". Installation of propeller blades, P/N T10282N( ), T10282NB( ), T10282NK( ), or T10282NE( ) as applicable, onto a Hartzell Propeller Inc. model HC-B3TN-5( ) propeller, constitutes terminating action to the inspections, repairs, and replacements specified in requirements 3 and 4. 

(FAA AD 2005-04-08 refers)

Compliance:

1. Within 50 hours TIS.
2. Within 50 hours TIS.
3. Inspect or replace within 500 hours TSN or TSO, or before 31 March 2007, whichever occurs first, and thereafter within 500 TIS intervals.
4. Within 500 hours since the last Hartzell SB 136 inspection, and thereafter within 500 TIS intervals.

Effective Date: 31 March 2005

DCA/HARTZ/149  Propeller Blades – Inspection and Overhaul

Applicability:  Hartzell Propellers listed in the following table and which have last been returned to service by Southern California Propeller Service of Inglewood, CA.

<table>
<thead>
<tr>
<th>Hartzell Propeller, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>()HC–()2,3,4Y()–().</td>
</tr>
<tr>
<td>()HA–()–().</td>
</tr>
<tr>
<td>HC–B(3,4)(M,P,R,T)(A,N,P)–().</td>
</tr>
<tr>
<td>HC–(D,E)(4,5)(A,B,N,P)–().</td>
</tr>
</tbody>
</table>

Note 1:  For Hartzell propeller models listed in this table, any letter or number (or lack of a letter or number or any combination of letters or numbers) could appear where open parentheses are shown in the model number.

Note 2:  No further action is required for propeller models listed in this table that have last been serviced, repaired or overhauled by a manufacturer approved service center other than Southern California Propeller Service.

Requirement:  To prevent blade failure that could result in separation of a propeller blades and loss of control of the aircraft, disassemble and clean the propeller and inspect per the applicable propeller manufacturer's service documentation for the following:

- Cracks, corrosion or pits, nicks, scratches, blade minimum dimensions, unapproved localized heating of blade, unapproved use of helicoil inserts in actuating pin holes, improperly drilled actuating pin holes, chemical conversion coat or paint or both applied over corrosion, lack of chemical conversion coating, lack of paint on internal surfaces, bolts incorrectly torqued, incorrect parts, incorrect installation of parts, reinstallation of parts intended for one-time use, and lack of proper shot peening.

Repair and replace with serviceable parts as required, and reassemble and test per the applicable propeller manufacturer's service documentation.

(FAA AD 2005-14-11 refers)

Compliance:  Within the next 28 days.

Effective Date: 25 August 2005
DCA/HARTZ/150  Attachment Bolts – Inspection and Replacement


Requirement: To prevent propeller mounting bolt failures or improperly secured propellers, which could lead to separation of the propeller from the aircraft, accomplish the following:

1. If P/N B-3339 bolts from LFC manufacturing Lot No. 12 or Lot No. 56 are fitted, visually inspect and torque check of all eight mounting flange bolts per the instructions in paragraphs 3.A through to 3.B.(5) of Hartzell Propeller Inc. Alert Service Bulletin No. HC-ASB-61-279, revision 2 and Alert Service Bulletin Appendix No. HC-ASBA- 61-279, revision 2. If the attachment bolts are not from the affected batch no further action is required.

If any bolt fails the torque check, replace all eight bolts with P/N B-3339 bolts that are not from LFC Manufacturing Lot No. 12 or Lot No. 56 or other equivalent manufacturer approved bolts per ASB HC-ASB-61-279.

Note 1: For the location of bolt identification marks refer to figure 1 in ASB HC-ASB-61-279.

2. Replace all LFC Manufacturing Lot No. 12 and Lot No. 56 bolts P/N B-3339, with bolts P/N B-3339 that are not from LFC Manufacturing Lot No. 12 or Lot No. 56 or other equivalent manufacturer approved bolts, per the instructions in paragraph 3.C of ASB HC-ASB-61-279.

Note 2: Accomplishment of requirement 2 is a terminating action to the requirements of this AD.

(FAA AD 2005-14-12 refers)

Compliance:

1. Within 50 hours TIS or by 29 September 2006, whichever occurs first, and thereafter torque check of all eight mounting flange bolts at intervals not to exceed 100 hour TIS.


Effective Date: 29 September 2005

DCA/HARTZ/151  Goodrich ‘FASTprop’ De-icers – Inspection and Replacement


These propeller de-icers are installed on, but not limited to, the aircraft listed in table 1 of FAA AD 2005-18-20.

Requirement: To prevent propeller de-icers from detaching from the propeller blade, resulting in damage to the aircraft, and possible injury to passengers and crewmembers, accomplish the following:

1. Inspect propeller de-icers per the accomplishment instructions in paragraphs 2.A(3) through to (5) of Goodrich De-icing and Specialty Systems Alert Service Bulletin (ASB) No. 30-60-00-1. Repair or replace as required before further flight.

2. Inspect propeller de-icers per the ‘Pre-flight Walkaround Visual Check’ in paragraph 2.A(2) of ASB No. 30-60-00-1. Repair or replace as required before further flight, per the accomplishment instructions in paragraphs 2.A(3) through to (5) of ASB No. 30-60-00-1.

(FAA AD 2005-18-20 refers)
Note 1: Certificated maintenance personnel must perform the initial inspection per requirement 1. Thereafter the pilot may perform the repetitive visual inspection per requirement 2 in accordance with CAR Part 43, Appendix A. The pilot must be trained and authorised (Part 43, Subpart B refers) and certification must be provided (Part 43, Subpart C refers).

Note 2: The replacement of "FASTprop" propeller de-icers with a manufacturer approved propeller de-icer, per ASB No. 30-60-00-1 is a terminating action to this AD.

Compliance:
1. Within the next 10 hours TIS.
2. Once per day at the first daily preflight inspection.

Effective Date: 27 October 2005

DCA/HARTZ/152 Propeller Hubs – Inspection and Repair

Applicability: Hartzell propeller assemblies with hub model series specified in the following table:

<table>
<thead>
<tr>
<th>Hub Model Series</th>
<th>Hub Model Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>HC–92W</td>
<td>HC–B3R</td>
</tr>
<tr>
<td>BHC–92W</td>
<td>HC–B3W</td>
</tr>
<tr>
<td>HC–92Z</td>
<td>BHC–B3W</td>
</tr>
<tr>
<td>BHC–92Z</td>
<td>HA–B3Z</td>
</tr>
<tr>
<td>HC–B3P</td>
<td>HC–B3Z</td>
</tr>
</tbody>
</table>

These propellers assemblies are installed on, but not limited to, Beech 18 and 35 series aircraft, Cessna 172, 175, 175A, 190, 195, 195A, 195B, 421 and 421A aircraft, Pacific Aerospace Fletcher FU-24 and FU-24A aircraft, and Piper PA-23, PA-24 and PA-25 aircraft.

Requirement: To detect corrosion and mechanical damage that can cause failure of a propeller, which could result in loss of control of the aircraft, inspect and rework the propeller blade bore and balance hole, per the accomplishment instructions in paragraph 3.A, of Hartzell Service Bulletin No. HC-SB-61-136, revision I and the applicable Hartzell Blade Overhaul Manual.

(FAA AD 2005-18-12 refers)

Note 1: Refer to the applicable Hartzell maintenance manuals for information on inspecting the propeller components for cracks, corrosion or pits, nicks, scratches, wear, blade minimum dimensions, and damage in the blade balance bore.

Note 2: Actions accomplished per Hartzell Service Bulletin No. HC-SB-61-136, revision G or H are acceptable.

Note 3: Propellers are to be inspected per Advisory Circular AC43-5A and CAR Part 43 Appendix C every 4 years.

Note 4: Propellers are to be overhauled at the TBO recommended by the manufacturer in terms of operating hours, per Advisory Circular AC43-5A.

Compliance:
For propellers with more than 10 years TSO by 27 October 2008 (36 months).
For propellers with more than 15 years TSO by 27 April 2008 (24 months).
For propellers with more than 20 years TSO by 27 October 2007 (18 months).
For propellers with more than 25 years TSO, or if the TSO is unknown, by 27 April 2007 (12 months).

Effective Date: 27 April 2006
有效的日期：2009年11月26日

适用性：型号HC-B5MP-3( )/M10282A( )+6和HC-B5MP-3( )/M10876( )( )( )五叶螺旋桨。

注释1：
螺旋桨型号中出现的括号表示是否存在额外的字母，这些字母决定了基本螺旋桨型号。此AD即使螺旋桨模型中是否存在这些字母也仍然适用。

要求：
为了防止螺旋桨因螺栓的脱开而造成发动机和螺旋桨连接处的摩擦而丧失预紧力，从而导致螺栓的失效，应进行以下操作：
   如果检测到任何螺栓的扭矩小于90 ft-lbs，则应移除螺旋桨，对连接法兰进行检修，然后更换所有连接螺栓，按照SB No. HC-SB-61-275中的第3.B.1到3.B.(5)段进行。
   如果检测到任何螺栓的扭矩小于90 ft-lbs，则应移除螺旋桨，对连接法兰进行检修，然后更换所有连接螺栓，按照SB No. HC-SB-61-275中的第3.B.1到3.B.(5)段进行。
   配合此操作，请按照SB No. HC-SB-61-275中的第3.B.1到3.B.(5)段进行。

注释2：
每当螺旋桨从发动机上移除，或在安装到已列出的螺旋桨型号的飞机上，应按照SB No. HC-SB-61-275中的第3.B.1到3.B.(5)段进行。

遵守：
1. 对于TSN为3000小时或更多时：
   如果螺栓扭矩检测从未进行过，应在首次飞行前进行一次，或
   在上次检测后120小时TIS内，或下一次检测前120小时TIS内。
   之后每120小时TIS内，或者在任何情况下，无论是否已经完成，或
   在下一次检测前120小时TIS内。
For propellers with less than 3000 hours TSN:
Within 3000 hours TSN and thereafter at intervals not to exceed 120 hours TIS.

2. Within the next 120 hours TIS for flanges that were resurfaced 1500 hours ago and thereafter at intervals not to exceed 120 hours TIS.

3. Within the next 120 hours TIS for flanges that were resurfaced 1500 hours ago and thereafter at intervals not to exceed 1500 hours TIS.

Effective Date: 30 November 2006

DCA/HARTZ/155 Propeller Maintenance – Inspection and Rework

Applicability: Hartzell propellers which have been serviced by Oxford Aviation Limited in the United Kingdom (trading as CSE Aviation) before November 2003.

Note 1: For a list of affected propeller P/Ns and S/Ns refer to table 1 in FAA AD 2006-24-07.

Requirement: To detect and correct inspections and repairs that might not have been accomplished, and which if left uncorrected could result in the propeller blade separating from the hub and cause loss of aircraft control, accomplish the following:

Determine if the propeller has been serviced, repaired or overhauled by Oxford Aviation Limited (trading as CSE Aviation) before November 2003.

If not, no further action is required.

If the propeller has been serviced, repaired or overhauled by Oxford Aviation Limited (trading as CSE Aviation), before November 2003 contact the Aircraft Certification Unit for further instruction at:

Civil Aviation Authority
P O Box 31-441
LOWER HUTT
Attention: Team Leader - Continuing Airworthiness

(FAA AD 2006-24-07 refers)

Note 2: If the propeller has been overhauled by another approved propeller repair facility after October 2003, no further action is required.

Compliance: Within the next 50 hours TIS or by 21 February 2007, whichever is the sooner.

Effective Date: 21 December 2006

DCA/HARTZ/156 Propeller Blade Shank – Inspection and Rework

Applicability: Model ( )HC-( )( )Y( )-( )( ) compact series constant speed or feathering propellers fitted with Hartzell manufactured "Y" shank aluminum blades.

Note 1: The parentheses appearing in the propeller model number indicates the presence or absence of an additional letter(s) that varies the basic propeller model. This AD applies regardless of whether these letters are present or absent in the propeller model designation.

Note 2: Propellers are considered in compliance with the inspection and rework requirements of this AD if all the blades have a S/N D47534 onwards, or if all the blades are identified with the letters "PR" or "R" which is ink-stamped on the camber side, or if the letters "RD" are metal-stamped on the blade butt.

Note 3: This AD supersedes FAA AD 2002-09-08 and no further action is required for propellers in compliance with FAA AD 77-12-06R2.

Requirement: To prevent failure of the propeller blade due to the possibility of fatigue cracks in the aluminium blade shank radius, which could result in damage to the aircraft and loss of aircraft control, accomplish the following:

1. For model ( )HC-( )( )Y( ) compact series “Y” shank propellers that have not been inspected and reworked in accordance with FAA AD 77-12-06R2, remove and inspect blades per the instructions in Hartzell Service Bulletin (SB) No. 118A. Rework or replace blades as required before further flight.

Note 4: Hartzell SB No. 118A requires the cold rolling of the propeller blade shank. Cold rolling is a critical requirement in the prevention of cracks in the blade. Any rework in the blade shank area will necessitate the cold rolling of the blade shank area, apart from the one-time cold rolling requirement of this AD.

2. Instrument panel modifications on aircraft fitted with propeller models ( )HC-C2YK-( )( )( )/( )( )7666A-( ), installed on (undampened) 200 hp or more Lycoming IO-360 series engines, that have not been modified per FAA AD 77-12-06R2:

For standard category aircraft re-mark the engine tachometer face or bezel with a red arc restricting the engine speed range between 2,000 and 2,350 rpm, and remove the present vibration placard and affix a new placard near the engine tachometer that states:

"Avoid continuous operation between 2,000 and 2,350 rpm."

For acrobatic aircraft, re-mark the engine tachometer face or bezel with a red arc restricting the engine speed range, i.e., between 2,000 and 2,350 rpm and also between 2,600 and 2,700 rpm (red line), and remove the present vibration placard and affix a new placard near the engine tachometer that states:

"Avoid continuous operation between 2,000 and 2,350 rpm and above 2,600 rpm in acrobatic flight."

Note 5: These propellers are installed on, but are not limited to, Mooney M20E and M20F aircraft, Piper PA-28R-200 aircraft, and Pitts S-1T and S-2A aircraft.

3. For model ( )HC-C2YK-( )( )( )/( )( )8475( )-( ) or ( )8477( )-( ) propellers that have not been inspected and reworked in accordance with FAA AD 74-15-02, remove the propeller and modify the pitch change mechanism, and replace the blades with equivalent model blades prefixed with a letter "F" per Hartzell Service Letter No. 69 and Hartzell SB No. 101D. Inspect and repair or replace blades per the instructions in Hartzell SB No. 118A.

(FAA AD 2007-26-09 refers)

Compliance: 1. 2. & 3. By 31 March 2008

Effective Date: 28 February 2008
DCA/HARTZ/157  Propeller Hubs – Inspection and Replacement

Applicability: Lefthand rotating model ( )HC-( )((2,3))Y(K,R)-2 two and three bladed aluminum hub "compact" series propellers, with hubs having a non-suffix S/N and lubrication holes located on the shoulder of the hub blade socket.

These propellers are known to be installed on Lycoming LIO-360 series and LO-360 series engines, fitted to Piper Seneca PA-34-200 aircraft and Seminole PA-44-180 aircraft, and Hawker Beechcraft model 76 Duchess aircraft.

Note 1: The parentheses appearing in the propeller model number indicates the presence or absence of an additional letter(s) that varies the basic propeller model. This AD still applies regardless of whether these letters are present or absent in the propeller model designation.

Requirement: To prevent failure of the propeller hub, which could result in blade separation and loss of aircraft control, accomplish the following:


If any cracks are found, replace the propeller hub before further flight.

If no cracks are found, mark the propeller per the instructions in paragraph 3.A(5)(a) of ASB No. HC-ASB-61-297.

Note 2: Replacing the non-suffix S/N propeller hub with a propeller hub identified by an "A" or a "B" suffix letter in the propeller hub S/N is a terminating action to the requirements of this AD. Replacement propeller hub P/Ns can be found in paragraph 2.A of ASB No. HC-SB-61-297.

2. Propeller hubs which have been removed from an affected propeller with a non-suffix S/N or a "E" suffix in the S/N, shall not be fitted to any engine on any aircraft.

(FAA AD 2008-13-28 refers)

Compliance: 1. Within the next 50 hours TiS or by 31 July 2009, whichever occurs sooner, unless previously accomplished within the last 50 hours TiS, and thereafter at intervals not to exceed 50 hours TiS or 12 months whichever occurs sooner.


Effective Date: 31 July 2008

DCA/HARTZ/158  Counterweight Slug Attach Bolts – Inspection and Replacement

Applicability: The following steel hub turbine propeller models fitted with propeller blade counterweight slug bolts P/N B-3386-14H from LFC manufacturing lot 224:

Model HC-B3TN-5K propellers fitted to AERO COMMANDER 680T, 680V and 681 aircraft
Model HC-B3TN-5DL, -5FL, -5NL propellers fitted to AERO COMMANDER 690(A, B, C) and 695A aircraft
Model HC-A3MVF-7B propellers fitted to AEROSPACE TECHNOLOGIES N22B, N24A, N22S and N22C aircraft
Model HC-A3VF-7, -7B propellers fitted to AEROSPACE TECHNOLOGIES N22B, N24A, N22S and N22C aircraft
Model HC-B5MP-3A, -3C propellers fitted to AIR TRACTOR AT-502A aircraft
Model HC-B5MP-3C propellers fitted to AIR TRACTOR AT-503 and 602 aircraft
Model HC-B5MA-3D(T) propellers fitted to AIR TRACTOR AT-802 aircraft
Model HC-B5MP-3F propellers fitted to AIR TRACTOR AT-802 aircraft
Model HC-B5MA-5A propellers fitted to ANTONOV AN-38 aircraft
Model HC-B3TN-5V propellers fitted to AYRES S-2R aircraft
Model HC-B4TN-5NL, -5PL propellers fitted to AYRES S-2R(-1340), -G(5, 6, 10), -R3S, -R1820, -(T(6, 11, 15, 34, 45, 65) aircraft
Model HC-B5MP-3C propellers fitted to AYRES S-2R(HG)-T65 aircraft
Model HC-B3TN-3AE propellers fitted to AYRES S-2R-T( ) aircraft
Model HC-B3TN-5K propellers fitted to BEECH 1900C aircraft
Model HC-B4MP-3B propellers fitted to BEECH 300, 300LW aircraft
Model HC-B3TF-7A propellers fitted to BEECH A36, A36TC aircraft
Model HC-B4MP-3C propellers fitted to BEECH B300, B300C aircraft
Model HC-B4MN-5AL propellers fitted to CASA C-212-CC and -CF aircraft
Model HC-B3TF-7A propellers fitted to CESSNA 206 aircraft
Model HC-B3TF-7 propellers fitted to CESSNA 208 aircraft
Model HC-B3TN-3AEY, -3AF propellers fitted to CESSNA 208, 208A and 208B aircraft
Model HC-B3TF-7A propellers fitted to CESSNA P210N aircraft
Model HC-B3TN-3AEY propellers fitted to DE HAVILLAND CANADA DHC-3 aircraft
Model HC-B4TN-5NL propellers fitted to DE HAVILLAND CANADA DHC-3 aircraft
Model HC-B5MA-3M propellers fitted to DE HAVILLAND CANADA DHC-4 aircraft
Model HC-B4TN-5ML propellers fitted to DORNIER DO228-100, -101, -200, -201, -202 and -212 aircraft
Model HC-B4TN-5L propellers fitted to DORNIER DO228-200, -201, -202 and -212 propellers
Model HC-B3TF-7A propellers fitted to DOUGLAS DC-3C aircraft
Model HC-B5MA-2 EMBRAER EMB-314 aircraft
Model HC-B4TN-5EL, -5HL, -5KL propellers fitted to FAIRCHILD AIRCRAFT SA-226T(B) aircraft
Model HC-B3TF-7, -7A propellers fitted to FLUG & FAHRZEUGWERKE AG AS202/32TP aircraft
Model HC-B3TF-7A propellers fitted to FUJI KM-2D (T-5) aircraft
Model HC-B5MP-5 propellers fitted to GRUMMAN S-2 aircraft
Model HC-B5MA-5H propellers fitted to GRUMMAN S-2F3AT aircraft
Model HC-B3TF-7A propellers fitted to MAULE M-7-420 and MX(T)-7-420 aircraft
Model HC-B5MP-3(A) propellers fitted to NORD 262 FRAKES aircraft
Model HC-B5MP-3C propellers fitted to NORMAN AEROPLANE NAC 6-65 aircraft
Model HC-B5MP-3D propellers fitted to POLISH AVIATION (MIELEC) M-28 and -28B aircraft
Model HC-B5MP-3G propellers fitted to POLISH AVIATION (MIELEC) M-28B aircraft
Model HC-B3TN-5U propellers fitted to PZL MIELEC M18 aircraft
Model HC-B3TF-7A propellers fitted to PZL MIELEC M18, M18A and M18B aircraft
Model HC-B5MP-3A propellers fitted to SHORT BROTHERS SD3-30 aircraft
Model HC-B5MP-3C propellers fitted to SHORT BROTHERS SD3-60-200 and SD3-SHERPA-200 aircraft
Model HC-B3TF-7A propellers fitted to SIAI MARCHETTI (AERMACCHI) F.260C and D aircraft
Model HC-B3TF-7A propellers fitted to SIAI MARCHETTI (AERMACCHI) SM-1019 aircraft
Model HC-B3TF-7A propellers fitted to SIAI MARCHETTI (VULCANAIR) CANGURO aircraft
Model HC-B5MP-3(F) propellers fitted to THRUSH AIRCRAFT S-2R-T660 aircraft
Model HC-B3TN-5FL, -5NL TWIN COMMANDER 690A, 690B and 690C aircraft
Model HC-B3TF-7A propellers fitted to VALMET L-90TP aircraft
Model HC-B3TF-7A propellers fitted to VULCANAIR (PARTENAVIA) AP68TP-300 and -600 aircraft.

Note 1: Affected propellers are known to be installed on, but not limited to the above mentioned aircraft models. This AD is also applicable to all other aircraft fitted with affected steel hub turbine propeller models with counterweight slug bolts P/N B-3386-14H from LFC manufacturing lot 224.

Requirement: To prevent separation of a propeller blade counterweight slug which could result in injury and damage to the aircraft, determine if propeller blade counterweight slug bolts P/N B-3386-14H from LFC manufacturing lot 224 are fitted to the propeller. If affected counterweight slug bolts are fitted to the propeller replace the bolts with serviceable bolts before further flight.

Note 2: For the purpose of this AD a serviceable counterweight slug bolt is a P/N B-3386-14H bolt from a LFC manufacturing lot other than lot 224.


(FAA AD 2009-10-14 refers)

Compliance: Within the next 50 hours TIS unless previously accomplished.

Effective Date: 25 June 2009

DCA/HARTZ/159 Propellers Hubs – Inspection and Replacement

Applicability: Model ( )HC-( )2Y(K,R)-( ) series propellers fitted with propeller hubs without a S/N suffix and those propeller hubs with an ‘E’ S/N suffix that are fitted to Lycoming O-, IO-, LO-, LIO-, TO-, LTO-, AIO-, AEIO- and TIO-360 engine series.

Note 1: This AD supersedes DCA/HARTZ/153 to expand the propeller and engine applicability. The parentheses in the propeller model number indicates the presence or absence of an additional letter(s) which varies the basic propeller model designation. This AD still applies regardless of whether these letters are present or absent in the propeller model designation.

Requirement: To prevent failure of the propeller hub which could result in blade separation and loss of aircraft control, accomplish the following:

Perform an eddy current inspection (ECI) of the front cylinder half of the propeller hub for cracks per the instructions in paragraphs 3.A. through to 3.A.(4)(g) of Hartzell Propeller Inc. SB No. HC-SB-61-269 revision 3 dated 17 September 2007.

If any cracks are found, replace the propeller hub before further flight.

If no cracks are found, mark the propeller to indicate initial AD compliance per the instructions in paragraph 3.A.(6)(a) of SB No. HC-SB-61-269.

Note 2: Do not repetitively mark the propeller once it is initially marked per the requirements of this AD.
Note 3: Hartzell Propeller SB No. HC-SB-61-269 revision 4 dated 13 November 2009 is approved as an alternate method of compliance with DCA/HARTZ/159.

Note 4: Any propeller hub P/N D-6522-1 retired from service by AD DCA/HARTZ/142 (FAA AD 2003-01-03 refers) must not be returned to service with the accomplishment of this AD.

Note 5: This AD is not applicable to model ()HC-()2Y(K, R)-() series propellers fitted to aerobatic aircraft (including certificated aerobatic aircraft, military trainers or any aircraft routinely exposed to aerobatics); agricultural aircraft; Piper PA-32() series aircraft fitted with Lycoming 540 series reciprocating engines rated at 300 hp or higher; and Britten Norman BN-2() series aircraft fitted with Lycoming 540 series reciprocating engines. AD DCA/HARTZ/134F (FAA AD 2001-23-08 refers) is applicable to these aircraft and addresses the same unsafe condition.

Note 6: The repetitive inspections required by this AD can be terminated if the propeller hub without a S/N suffix is replaced with a propeller hub identified with an "A" or "B" S/N suffix. Do not install a suffix "A" propeller hub that was previously installed on an aircraft affected by the original issue or later revision of Hartzell Propeller Inc. SB No. HC-SB-61-227. Replacement propeller hub P/N can be found in the material information in paragraph 2.A. of SB No. HC-SB-61-269.

Note 7: Hartzell SB No. HC-SB-61-227 revision 2, dated 18 April 2005, and AD DCA/HARTZ/134F (FAA AD 2001-23-08 refers) pertains to the subject of this AD. (FAA AD 2009-22-03 refers)

Compliance: Within the next 50 hours TIS unless previously accomplished, and thereafter at intervals not to exceed 100 hours TIS.

Effective Date: 26 November 2009
The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at

If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below.

72-08-04 T10173( ) and T10176( ) Blades – Inspection

Applicability: Hartzell T10173( ) and T10176( ) type blades including S/N listed in FAA AD 72-08-04 installed on Hartzell HC-B3TN-2, HC-B3TN-3, HC-B3TN-5, HC-B3TF-7, and HC-B4TN-3 series propellers used on United Aircraft of Canada PT6A-, AiResearch TPE331- and Allison 250-B type engines.  
(DCA/HARTZ/122 refers)

Effective Date: 11 April 1972

87-15-05R1 Propeller Blades – Inspection

Applicability: Hartzell HC-B4TN-5( )L/LT10574(B,K), LT1O574A(B,K), and LT1O574A(S)(B,K) propellers installed on Dornier Model 228-100 and - 200 series aircraft.  

Effective Date: 2 December 1987

94-03-11 Propeller Hub Arm Assemblies – Inspection

Applicability: Hartzell HC-B4 series propellers, except those propellers installed on Mitsubishi MU-2B-26A, -36A, -40, and -60 aircraft. Affected propellers are installed on, but not limited to the following aircraft: Beech F90 King Air, A100 and A100A King Air, B100 King Air; Construcciones Aeronauticas, SA (CASA) C-212-CB, -CC, and -CF; De Havilland Heron–Saunders conversion ST-27B; Dornier DO228-100, -101, -200, -201, -202, -212; Embraer EMB-121A1 Xingu; Fairchild SA226-TB Merlin IIIB; Let L-410A; and Shorts SC-7 series 3, variant 200.  

Effective Date: 28 February 1994

95-03-03 Propeller Hub Arm Bore – Inspection


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

Effective Date: 17 March 1995

2013-15-04 Hydraulic Bladder Diaphragm – Inspection

Applicability: Hartzell HC-(1,D)2(X,V,MV)20-7, HC-(1,D)2(X,V,MV)20-8, and HC-(1,D)3(X,V,MV)20-8 with a propeller hydraulic bladder diaphragm P/N B-119-2 installed without a tab.  

Effective Date: 30 August 2013

* 1987-05-01 Blade Pilot Tube Bore Area – Inspection

Applicability: Hartzell HC-B5MP-3( )/M10876( ) propellers. These propellers are known to be installed on, but not limited to, Air Tractor AT-602 and Short Brothers model SD3-60 aircraft.  

Effective Date: 27 May 2021
* 2004-07-25  **New Design Blades - Inspection**

**Applicability:** Hartzell HC-B5MP-3C/M10876K propellers.

These propellers are known to be installed on, but not limited to, Air Tractor AT-602 and Short Brothers model SD3-60 aircraft.

**Effective Date:** 27 May 2021