

HARTZELL PROPELLER INC.  
**SERVICE BULLETIN**  
TRANSMITTAL SHEET  
**HC-SB-61-315**

**Propeller - Hub Pitch Change Bore**

January 14, 2011

This page transmits a revision to Service Bulletin HC-SB-61-315.

- Original Issue, dated Oct 27/10
- Revision 1, dated Jan 14/11

Propeller assemblies that have previously complied with the modification requirements in a previous version of this Service Bulletin are not affected.

FAA approval has been obtained on technical data in this publication that affects type design.

Changes are shown by a change bar in the left margin of the revised pages.

This revision is issued to change the following in the Service Bulletin:

- Changes the previously listed serial number EE6714B (is affected) to the corrected serial number EE6814B (not affected) in the list of hubs modified at Hartzell Propeller before shipment.
- Adds a statement for Concurrent Requirements.

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1. Planning Information

A. Effectivity

(1) Hartzell compact aluminum hub propellers ( )HC-(C,G,L)(2,3,4)Y(F,K,R)-1( ) installed on any Hawker Beechcraft Bonanza or Debonair aircraft are affected by this Service Bulletin. Refer to Table 1 for a list of hub part numbers and affected serial number prefixes.

(a) Listed models/hubs that do not have a bushing installed or that have been previously modified/repared to include an aluminum bushing for the engine-side hub half in accordance with the Repair section of Hartzell Standard Practices Manual 202A, Volume 3 (61-01-02) are affected by this Service Bulletin.

(b) Listed models/hubs that have been previously modified/repared to include the Delrin<sup>®</sup> pitch change rod bore bushing for the engine-side hub half in accordance with the Repair section of Hartzell Standard Practices Manual 202A, Volume 3 (61-01-02) are not affected by this Service Bulletin.

1 The following propeller serial numbers were modified at the factory before shipment and are not affected by this Service Bulletin:

2-blade hubs:      EG225B                      EG227B

3-blade hubs:      EE6814B              EE6875B              EE6904B  
                            EE6843B              EE6876B              EE6907B  
                            EE6845B              EE6878B              EE6909B  
                            EE6869B              EE6879B              EE6912B  
                            EE6874B              EE6883B              EE6913B

(c) Listed models/hubs with a serial number prefix that is not listed in Table 1 are not affected by this Service Bulletin.

NOTE: New hubs are manufactured with a Delrin<sup>®</sup> pitch change rod bore bushing with a spiral retaining ring incorporated in the engine-side of the hub. These new hub part numbers have new serial number prefixes (not listed in Table 1) and are not affected by this Service Bulletin.

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- (2) Hartzell compact aluminum hub propellers ( )HC-(C,G,L)(2,3,4)Y(F,K,R)-1( ) installed on any aircraft other than the Hawker Beechcraft Bonanza or Debonair are not affected by this Service Bulletin.

**CAUTION:** DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE BULLETIN. INFORMATION CONTAINED IN THIS SERVICE BULLETIN MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. USE OF OBSOLETE INFORMATION MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE SERVICE BULLETIN INDEX FOR THE MOST RECENT REVISION LEVEL OF THIS SERVICE BULLETIN.

Propeller Model	Hub Part No.	Affected Serial Number Prefix	Applicable Procedure from Manual 202A	Engine-side		
				Bushing Part No.	Internal Spiral Retaining Ring Part No.	O-ring Part No.
BHC-C2YF-1( )	D-6531-( )	LQ	2	102580-1	A-5839-87	---
	D-2201-( )		1	102779	A-5839-93	C-3317-115-1
BHC-L2YF-1( )	D-6531-( )	EG	2	102580-1	A-5839-87	---
	D-2201-( )		1	102779	A-5839-93	C-3317-115-1
(P)HC-C3YF-1( )	E-7154-( )R	CL, EC, EE	1	102779	A-5839-93	C-3317-115-1
	D-3251-( )					
(P)HC-G3YF-1( )	E-7154-( )R	LC, HP	1	102779	A-5839-93	C-3317-115-1
	D-3251-( )					
PHC-L3YF-1( )	E-7154-( )R	FD	1	102779	A-5839-93	C-3317-115-1
	D-3251-( )					
PHC-L3Y(1)F-1( )	103025	NP	1	102779	A-5839-93	C-3317-115-1
HC-C3Y(K,R)-1( )	E-7157-( )R	DY	1	102779	A-5839-93	C-3317-115-1
	D-3251-( )					
HC-C4YF-1( )	E-4501-( )	GK	1	102779	A-5839-93	C-3317-115-1

The Delrin<sup>®</sup> bushing modification required by this Service Bulletin was completed at the factory before shipment for some propellers. These propellers are not affected by this Service Bulletin. Refer to section A.(1)(b)1 of this Service Bulletin for the list of serial numbers excluded from effectivity.

**Affected Propeller and Hub Models with Required Repair Components**  
**Table 1**

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B. Concurrent Requirements

- (1) Additional service documents may apply to the components/propellers affected by this Service Bulletin. Compliance with additional service documents may be necessary in conjunction with the completion of the Accomplishment Instructions in this Service Bulletin. Refer to the Hartzell Propeller website at [www.hartzellprop.com](http://www.hartzellprop.com) for a cross-reference of service documents.

C. Reason

- (1) Hartzell Propeller Inc. has received reports of oil leaks into the propeller hub at the engine-side pitch change rod bore.
  - (a) Scoring of the pitch change rod bore is one type of damage that can lead to a leak at this location.
  - (b) An oil leak at this location can lead to hub pressurization and hydraulic lock, causing the propeller to operate as a fixed pitch propeller at the low pitch blade angle setting.
- (2) The Delrin<sup>®</sup> bushing modification required by this Service Bulletin will improve the reliability of the seal at the pitch change rod bore.
  - (a) The modification includes rework of the engine-side hub bore and installation of a new Delrin<sup>®</sup> bushing with a spiral retaining ring, in accordance with the existing repair procedures in the Aluminum Hub Overhaul chapter of Hartzell Standard Practices Manual 202A (61-01-02). Refer to Table 1 for the part numbers specific to the affected propeller model.
- (3) Aircraft models identified by this Service Bulletin are suspected of being sensitive to the maintenance of level flight when the propeller is at the low pitch blade angle setting and the aircraft is being flown at best glide airspeed. Refer to FAA Special Airworthiness Information Bulletin CE-10-21 and contact the aircraft manufacturer for additional details.
- (4) Regulatory action is expected.
- (5) Completion of the Accomplishment Instructions is terminating action for this Service Bulletin.

D. Description

- (1) This Service Bulletin requires modification of the engine-side hub half of the affected hubs to incorporate the Delrin<sup>®</sup> bushing and spiral retaining ring specified in Table 1 in accordance with the existing repair procedures in the Aluminum Hub Overhaul chapter of Hartzell Standard Practices Manual 202A (61-01-02).

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E. Compliance

- (1) Affected propellers that have not been maintained in accordance with the schedule identified in Hartzell Service Letter HC-SL-61-61Y, must complete the Accomplishment Instructions of this Service Bulletin within 200 flight hours, within 12 calendar months, or at next major disassembly, whichever occurs first.
- (2) Affected propellers that have been maintained in accordance with the schedule identified in Hartzell Service Letter HC-SL-61-61Y, must complete the Accomplishment Instructions of this Service Bulletin at next major disassembly or within the applicable limitations for both flight hours and calendar times specified in Hartzell Service Letter HC-SL-61-61Y, whichever occurs first.

NOTE 1: Aluminum hub propeller major disassembly is defined as any repair that requires the hub halves to be separated.

NOTE 2: Hartzell Service Letter HC-SL-61-61Y is available to the public on the Hartzell Propeller website at [www.hartzellprop.com](http://www.hartzellprop.com).

F. Approval

- (1) FAA approval has been obtained on technical data in this publication that affects type design.

G. Manpower

- (1) Approximately 2.0 man hours are required to perform the hub modification procedure when performed in conjunction with propeller overhaul.

H. References

- (1) Hartzell Compact and Lightweight Compact Non-Feathering (-1) and Aerobatic (-4) Propeller Overhaul and Maintenance Manual 113B (61-10-13)
- (2) Hartzell Propeller Owner's Manual 115N (61-00-15)
- (3) Hartzell Standard Practices Manual 202A (61-01-02)
- (4) Hartzell Service Letter HC-SL-61-61Y
- (5) Hartzell Service Letter HC-SL-61-255
- (6) FAA Special Airworthiness Information Bulletin CE-10-21

I. Other Publications Affected

- (1) None

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2. Material Information

A. Material Necessary for Each Propeller

- (1) A bushing, spiral retaining ring, and o-ring (where applicable) will be needed for each affected propeller. Refer to Table 1 for the applicable part numbers.
- (2) No additional materials are required when performed in conjunction with propeller overhaul.

B. Consumables

- (1) No additional consumables are required when performed in conjunction with propeller overhaul.

3. Accomplishment Instructions

A. Remove the propeller in accordance with Hartzell Owner's Manual 115N (61-00-15).

B. Disassembly, inspection, and assembly of the propeller and propeller hub must be performed by an FAA certified, or international equivalent, propeller service facility.

C. Inspect the engine-side hub half for presence of a Delrin<sup>®</sup> bushing in accordance with Hartzell Standard Practices Manual 202A (61-10-02).

- (1) If no bushing is visible, proceed to section 3.D. to disassemble for internal inspection.
- (2) If an aluminum bushing is visible, proceed to section 3.D. to disassemble for modification.
- (3) If a Delrin<sup>®</sup> bushing is installed, further action is not required. Proceed to section 3.H.

D. Disassemble the propeller in accordance with Hartzell Compact and Lightweight Compact Non-Feathering (-1) and Aerobatic (-4) Propeller Overhaul and Maintenance Manual 113B (61-10-13).

- (1) If disassembled because an aluminum bushing was visible from section 3.C.(2), proceed to section 3.F.

E. Inspect the inside of the engine-side hub half for presence of a Delrin<sup>®</sup> bushing in accordance with Hartzell Standard Practices Manual 202A (61-10-02).

- (1) If no bushing is present, proceed to section 3.F. for modification.
- (2) If an aluminum bushing is present, proceed to section 3.F. for modification.
- (3) If a Delrin<sup>®</sup> bushing is installed, further action is not required. Proceed to section 3.H.

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**CAUTION:** THE REPAIR OF A PITCH CHANGE ROD BORE IS LIMITED TO FACILITIES HAVING APPROVAL TO PERFORM MOUNTING FLANGE DOWEL AND COMPACT ALUMINUM HUB BUSHING REWORK. FOR A LIST OF APPROVED FACILITIES, REFER TO THE HARTZELL PROPELLER WEB SITE AT [WWW.HARTZELLPROP.COM](http://WWW.HARTZELLPROP.COM) OR CONTACT HARTZELL PRODUCT SUPPORT.

- F. Accomplish the applicable repair procedure for the engine-side hub half in accordance with the Repair of the Hub Pitch Change Rod Bores section in the Aluminum Hub Overhaul chapter of Hartzell Standard Practices Manual 202A (61-01-02). Refer to Table 1.
- G. Reassemble the propeller in accordance with Hartzell Compact and Lightweight Compact Non-Feathering (-1) and Aerobatic (-4) Propeller Overhaul and Maintenance Manual 113B (61-10-13).
- H. Install the propeller in accordance with Hartzell Owner's Manual 115N (61-00-15).
- I. Make an entry in the propeller logbook indicating compliance with the terminating action for this Service Bulletin.
- J. Contact Information:

Hartzell Product Support  
1 Propeller Place  
Piqua, Ohio 45356 USA  
Phone: (001) 937.778.4379  
Fax: (001) 937.778.4391  
E-mail: [techsupport@hartzellprop.com](mailto:techsupport@hartzellprop.com)