

HARTZELL PROPELLER INC.

ALERT SERVICE BULLETIN

TRANSMITTAL SHEET

HC-ASB-61-259

Propeller - Hub Replacement

November 13, 2009

This page transmits a revision to Alert Service Bulletin HC-ASB-61-259.

- Original Issue, dated Sep 04/02
- Revision 1, dated Nov 13/09

Propeller assemblies that have previously complied with the inspections required in a previous version of this Alert 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 Alert Service Bulletin:

- Adds CAUTION for use of latest revision.
- Identifies this Alert Service Bulletin as an alternate method of compliance to Airworthiness Directive 2003-01-03 by approval of the FAA.
- Updates References to reflect current document revisions.
- Updates Material Information section.
- Updates the Accomplishment Instructions for current references.
- Updates document to match current format requirements.
- Updates Table 1 to remove serial numbers that have already been retired from service.
- Provides notification that the Appendix issued with the original issue of this Alert Service Bulletin, including any pricing and warranty programs, is obsolete.

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1. Planning Information

A. Effectivity

- (1) Aluminum hub part numbers D-6522-1, D-6522-2, D-6529-1, D-6552-2, and D-6559-3, with a serial number that is listed in Table 1, are affected by this Alert Service Bulletin.
- (2) ()HC-()2Y()-() two-bladed, aluminum hub, "compact" series propellers, that have a hub installed with a serial number that is listed in Table 1 are affected.
- (3) Applications that have complied with the requirements of a previous version of this Alert Service Bulletin are not affected by this revision.

CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS ALERT SERVICE BULLETIN. INFORMATION CONTAINED IN THIS ALERT 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 ALERT SERVICE BULLETIN.

B. Concurrent Requirements

- (1) Hartzell Service Bulletin HC-SB-61-269 may also apply.
- (2) Hartzell Alert Service Bulletin HC-ASB-61-297 may also apply for left-hand rotational propellers.
- (3) Hartzell Service Bulletin HC-SB-61-227 may also apply.

C. Reason

- (1) A quality problem with forgings received from our supplier has resulted in subsurface discontinuities in some two bladed, "compact" series, aluminum propeller hubs. These discontinuities could serve as initiation points for fatigue cracks in the hub arms. If undetected, in time a crack could propagate from a discontinuity and result in blade separation and catastrophic results.
- (2) These discontinuities may not be detectable by the use of conventional penetrant or Eddy current inspection techniques.
- (3) All hubs listed in Table 1 must be retired from service.
- (4) Airworthiness Directive 2003-01-03 was released to address this issue.

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D. Description

- (1) This Alert Service Bulletin provides guidance and instructions for removing affected hubs from service and replacing them with serviceable hubs.

E. Compliance

- (1) An affected hub that is installed in a propeller on the following type aircraft must be replaced with a serviceable hub at the earliest convenience of the operator, not to exceed 50 hours time since new (TSN) or September 3, 2003 (12 months from the effective date of the original release of this Alert Service Bulletin), whichever occurs first. Refer to Table 1 for affected propeller serial numbers.
 - (a) Aerobatic aircraft (including certificated aerobatic aircraft, military trainers, or any aircraft routinely exposed to aerobatic usage).
 - (b) Agricultural aircraft.
 - (c) Piper PA-32() series aircraft with Lycoming 540 series engines rated at 300 HP or higher.
 - (d) Britten Norman BN-2() series aircraft with Lycoming 540 series engines.
- (2) An affected hub that is installed in a propeller on an aircraft type that is not listed in paragraph 1.E.(1) of this Alert Service Bulletin must be replaced with a serviceable hub at the earliest convenience of the operator, not to exceed 100 hours time since new (TSN) or September 3, 2003 (12 months from the effective date of the original release of this Alert Service Bulletin), whichever occurs first. Refer to Table 1 for affected propeller serial numbers.
- (3) An affected hub (listed in Table 1) that is not installed on an aircraft is considered unserviceable and must be retired from service in accordance with Hartzell Standard Practices Manual 202A (61-01-02).
- (4) Replacement of the affected hub in accordance with this Alert Service Bulletin is terminating action for this Alert Service Bulletin.

F. Approval

- (1) This Alert Service Bulletin is approved by the Manager, FAA, Chicago Aircraft Certification Office, ACE 115C, by approval document dated November 10, 2009 as an alternate method of compliance with Airworthiness Directive 2003-01-03.

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G. Manpower

- (1) If the hub is part of a propeller assembly that is installed on an aircraft, the approximate man hours required to accomplish this Alert Service Bulletin are:
- | | |
|--------------------------------|----------------------|
| Propeller Removal/Installation | 2.0 man hours |
| Propeller Hub Replacement | 4.0 man hours |
| Dynamic Balancing | <u>3.0 man hours</u> |
| Total man-hours | 9.0 man hours |

H. Weight and Balance

- (1) Not Changed

I. Electrical Load Data

- (1) Not Changed

J. References

- (1) Hartzell Compact and Lightweight Compact Non-Feathering (-1) and Aerobatic (-4) Propeller Overhaul and Maintenance Manual 113B (61-10-13)
- (2) Hartzell Compact Constant Speed and Feathering Propeller Overhaul and Maintenance Manual 117D (61-10-17)
- (3) Hartzell Standard Practices Manual 202A (61-01-02)
- (4) Hartzell Propeller Owner's Manual 115N (61-00-15)
- (5) Hartzell Propeller Owner's Manual 145 (61-00-45)
- (6) FAA Airworthiness Directive 2003-01-03
- (7) Hartzell Service Bulletin HC-SB-61-227
- (8) Hartzell Service Bulletin HC-SB-61-269
- (9) Hartzell Service Bulletin HC-SB-61-297
- (10) Hartzell Service Letter HC-SL-61-61Y
- (11) Airframe Manufacturer's Maintenance Manual (AMM)

K. Other Publications Affected

- (1) None

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2. Material Information

A. Material Necessary for Each Propeller/Component

- (1) Refer to the applicable propeller overhaul manual for the current hub part number and other components required for reassembly.

B. Consumables

- (1) Refer to the applicable propeller overhaul manual for consumables required to perform propeller disassembly and assembly.

C. Special Tooling

- (1) None

3. Accomplishment Instructions

A. If the propeller is installed on an aircraft, remove the propeller in accordance with the airframe manufacturer's maintenance manual (AMM) and applicable Hartzell Propeller Owner's Manual.

B. Hub Replacement (Assembled Propeller)

- (1) Disassemble the propeller in accordance with the applicable propeller overhaul manual.
 - (a) Complete propeller overhaul is not required. Refer to Hartzell Service Letter HC-SL-61-61Y for overhaul periods.

CAUTION: MAKE SURE THAT THE SERVICEABLE REPLACEMENT HUB IS NOT LISTED IN TABLE 1 OF THIS ALERT SERVICE BULLETIN.

- (2) Reassemble the propeller with a serviceable hub in accordance with the applicable propeller overhaul manual.
- (3) Perform additional tasks required to return the propeller to service in accordance with the applicable propeller overhaul manual and Hartzell Standard Practices Manual 202A (61-01-02).
- (4) Make an entry in the propeller logbook indicating compliance with this Alert Service Bulletin and Airworthiness Directive 2003-01-03.

C. Affected hubs that are in stock must be retired from service in accordance with Hartzell Standard Practices Manual 202A (61-01-02).

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D. Recommended Service Facilities

- (1) Hartzell Propeller has a worldwide network of Recommended Service Facilities that are recommended by Hartzell Propeller for overhaul and repair of our products.
- (2) Each service facility must meet standard FAA requirements and additional Hartzell Propeller requirements before being recommended by Hartzell Propeller. Each service facility is audited by Hartzell Propeller to verify the continuation of the standards.
- (3) Hartzell Propeller recommends that you use one of these service facilities when having your propeller overhauled or repaired.
- (4) For a current list of Hartzell Propeller Recommended Service Facilities, contact Hartzell Product Support or refer to the Hartzell Propeller website at www.hartzellprop.com; select Product Support then Worldwide Network.

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Propeller/Hub Model	Propeller Serial Number	Hub Part Number	Hub Serial Number
HC-C2Y	AU11117B	D-6522-1	A61367B
HC-C2Y	AU11118B	D-6522-1	A61368B
HC-C2Y	AU11121B	D-6522-1	A61371B
HC-C2Y	AU11145B	D-6522-1	A61603B
HC-C2Y	AU11149B	D-6522-1	A61607B
HC-C2Y	AU11151B	D-6522-1	A61609B
HC-C2Y	AU11152B	D-6522-1	A61610B
HC-C2Y	AU11153B	D-6522-1	A61611B
HC-C2Y	AU11165B	D-6522-1	A61745B
HC-C2Y	AU11166B	D-6522-1	A61746B
HC-C2Y	AU11167B	D-6522-1	A61747B
HC-C2Y	AU11168B	D-6522-1	A61748B
HC-C2Y	AU11169B	D-6522-1	A61749B
HC-C2Y	AU11170B	D-6522-1	A61750B
HC-C2Y	AU11171B	D-6522-1	A61751B
HC-C2Y	AU11172B	D-6522-1	A61752B
HC-C2Y_-1	CH36151B	D-6529-1	A61420B
HC-C2Y_-1	CH36152B	D-6529-1	A61421B
HC-C2Y_-1	CH36154B	D-6529-1	A61423B
HC-C2Y_-1	CH36156B	D-6529-1	A61426B
HC-C2Y_-1	CH36158B	D-6529-1	A61428B
HC-C2Y_-1	CH36160B	D-6529-1	A61554B
HC-C2Y_-1	CH36169B	D-6529-1	A61544B
HC-C2Y_-1	CH36170B	D-6529-1	A61545B
HC-C2Y_-1	CH36171B	D-6529-1	A61546B
HC-C2Y_-1	CH36172B	D-6529-1	A61547B
HC-C2Y_-1	CH36173B	D-6529-1	A61548B
HC-C2Y_-1	CH36174B	D-6529-1	A61549B
HC-C2Y_-1	CH36175B	D-6529-1	A61550B
HC-C2Y_-1	CH36176B	D-6529-1	A61551B
HC-C2Y_-1	CH36177B	D-6529-1	A61552B
HC-C2Y_-1	CH36216B	D-6529-1	A61602B
HC-C2Y_-1	CH36221B	D-6529-1	A61765B
HC-C2Y_-1	CH36224B	D-6529-1	A61768B

**Propeller/Hub Serial Number Effectivity
Table 1**

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Propeller/Hub Model	Propeller Serial Number	Hub Part Number	Hub Serial Number
HC-C2Y_-1	CH36226B	D-6529-1	A61770B
HC-C2Y_-1	CH36240B	D-6529-1	A61785B
HC-C2Y_-1	CH36241B	D-6529-1	A61786B
HC-C2Y_-1	CH36242B	D-6529-1	A61787B
HC-C2Y_-1	CH36243B	D-6529-1	A61788B
HC-C2Y_-1	CH36244B	D-6529-1	A61789B
HC-C2Y_-1	CH36245B	D-6529-1	A61790B
HC-C2Y_-1	CH36246B	D-6529-1	A61791B
HC-C2Y_-1	CH36247B	D-6529-1	A61792B
HC-C2Y_-1	CH36248B	D-6529-1	A61793B
HC-C2Y_-1	CH36249B	D-6529-1	A61794B
HC-C2Y_-1	CH36250B	D-6529-1	A61795B
HC-C2Y_-1	CH36251B	D-6529-1	A61796B
HC-C2YK-1BF/F7666A-2	CH36196B	D-6529-1	A61571B
HC-C2YK-1BF/F7666A-4	CH36159B	D-6529-1	A61553B
HC-C2YK-1BF/F7666A-4	CH36162B	D-6529-1	A61556B
HC-C2YK-1BF/F7666A-4	CH36165B	D-6529-1	A61560B
HC-C2YK-1BF/F7666A-4	CH36195B	D-6529-1	A61570B
HC-C2YR-1BF/F7666A	CH36179B	D-6529-1	A61574B
HC-C2YR-1BF/F8475T+2	CH36178B	D-6529-1	A61573B
HC-C2YR-1BF/F8475T+2	CH36183B	D-6529-1	A61578B
HC-F2YL-1F/F7663-3	EU376B	D-6559-3	A61443B

Propeller/Hub Serial Number Effectivity
Table 1, continued

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