

HARTZELL PROPELLER LLC
ALERT SERVICE BULLETIN
HC-ASB-61-407
Beta Rod Nut/Safety Wire Inspection

1. Planning Information

A. Effectivity

- (1) Hartzell Propeller (4,6)D3-NK()() and 5D3-()() Raptor-series turbine propellers are affected by this Alert Service Bulletin.
- (2) Hartzell Propeller HC-D4N-3() and HC-E4(N,P,W)-3() lightweight turbine propellers are affected by this Alert Service Bulletin.

WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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. FAILURE TO COMPLY WITH THIS ALERT SERVICE BULLETIN OR THE USE OF OBSOLETE INFORMATION MAY CREATE AN UNSAFE CONDITION THAT MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE ALERT SERVICE BULLETIN INDEX FOR THE MOST RECENT REVISION LEVEL OF THIS ALERT SERVICE BULLETIN.

B. Concurrent Requirements

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

C. Reason

- (1) Hartzell Propeller LLC received information about an accident involving an affected propeller that went into uncommanded reverse during flight.
 - (a) The accident investigation found safety wire securing the beta rod nuts and evidence of interference between the safety wire and the cylinder on the affected propeller. Refer to Figure 1.
 - 1 Safety wire is **not** authorized for the beta rod nuts on affected propellers.

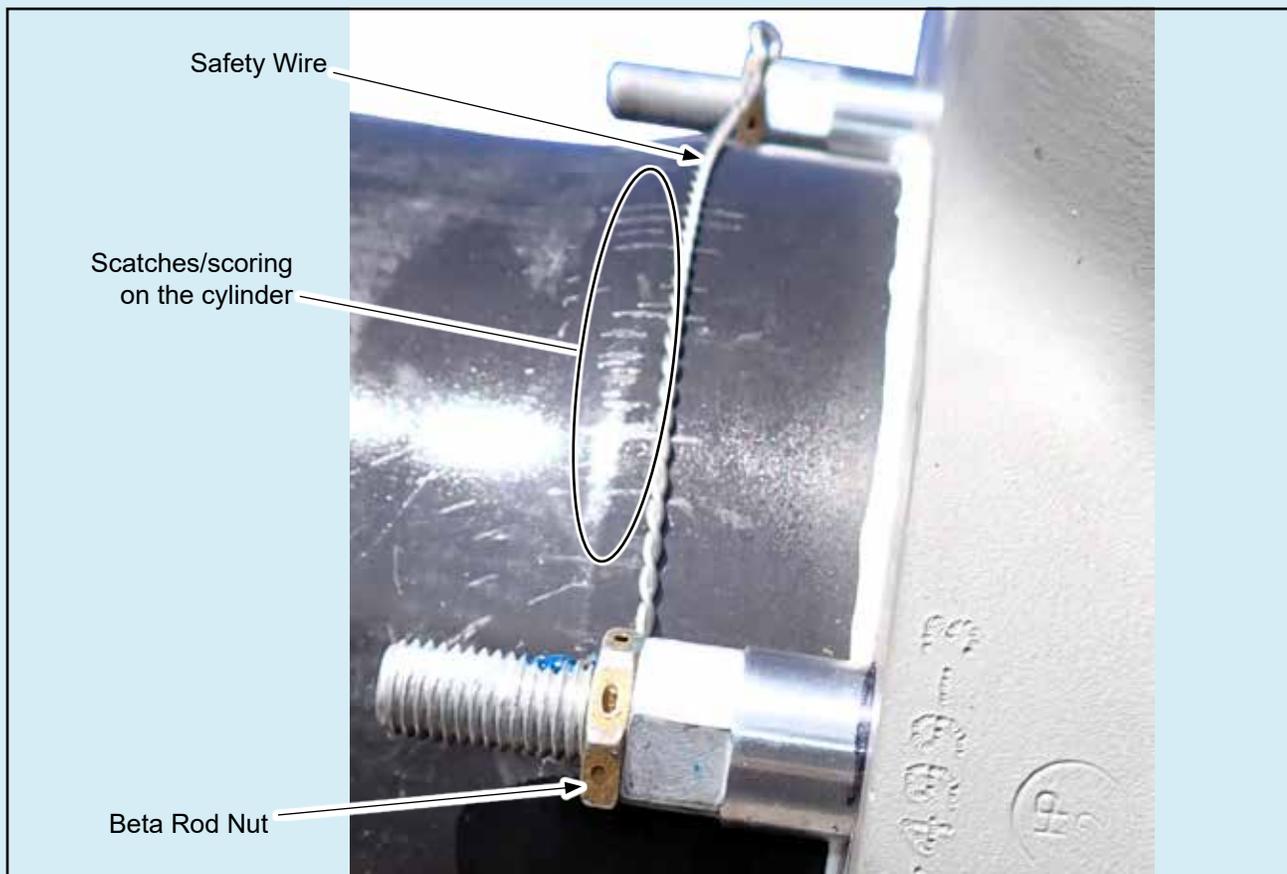
ALERT SERVICE BULLETIN

HC-ASB-61-407

Beta Rod Nut/Safety Wire Inspection

D. Description

- (1) This Alert Service Bulletin provides Instructions for Continued Airworthiness (ICA).
- (2) This Alert Service Bulletin provides instructions for a pre-flight inspection of the beta rod nuts on affected propellers.
- (3) This Alert Service Bulletin provides instructions for removing safety wire from the beta rod nuts on affected propellers (if present).



**Safety Wire Interference
Figure 1**

ALERT SERVICE BULLETIN

HC-ASB-61-407

Beta Rod Nut/Safety Wire Inspection

E. Compliance

- (1) At the next pre-flight inspection, perform the Safety Wire Inspection in accordance with the Accomplishment Instructions section in this Alert Service Bulletin.

F. Approval

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

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PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH
THE MOST RECENT REVISION OF A DOCUMENT.

G. References

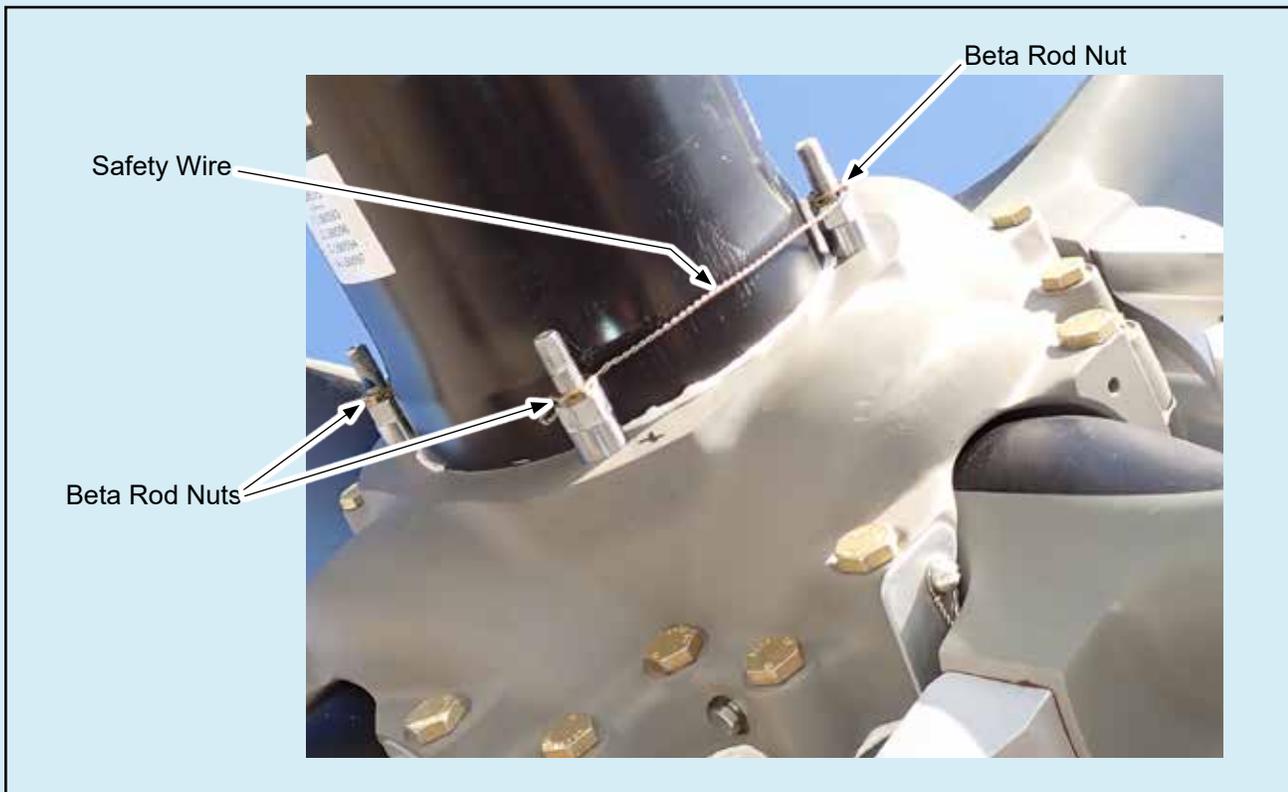
- (1) Hartzell Propeller Owner's Manuals:
 - available on the Hartzell website at www.hartzellprop.com
 - (a) Manual 147 (61-00-47)
Lightweight Turbine Propellers/Composite Blades
 - (b) Manual 149 (61-00-49)
Lightweight Turbine Propellers/Aluminum Blades
 - (c) Manual 486 (61-00-86)
Raptor-series Turbine Propellers
- (2) Hartzell Propeller Overhaul Manuals:
 - (a) Manual 143A (61-10-43)
Four-blade Lightweight Turbine Propellers
 - (b) Manual 496 (61-10-96)
Raptor-series Turbine Propellers

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ALERT SERVICE BULLETIN
HC-ASB-61-407
Beta Rod Nut/Safety Wire Inspection

2. Accomplishment Instructions

A. Safety Wire Inspection

- (1) Using an appropriate light source, examine the fore-side beta rod nuts through the blade cutouts in the spinner dome. (Refer to Figure 2 - for clarity, the spinner dome is not shown)
 - (a) If there is safety wire on the beta rod nuts:
 - 1 Before further flight, remove the safety wire in accordance with the instructions in this Alert Service Bulletin.
 - (b) If there is no safety wire on the beta rod nuts:
 - 1 Make a record of this inspection in the propeller logbook indicating compliance with this Alert Service Bulletin.
 - 2 No further action is required.

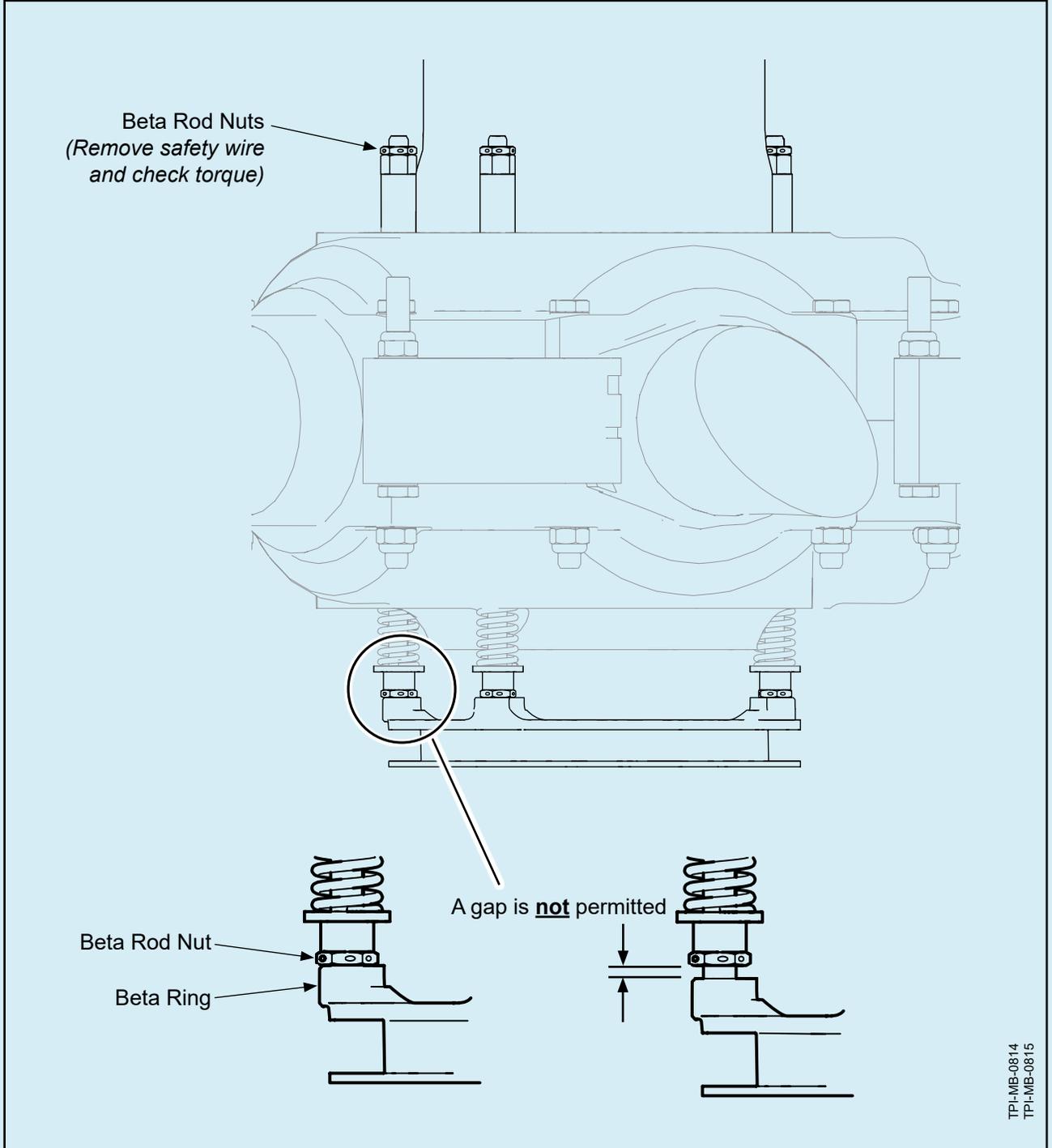


Beta Rod Nut Inspection
Figure 2

ALERT SERVICE BULLETIN

HC-ASB-61-407

Beta Rod Nut/Safety Wire Inspection



Beta Rod Nut Inspections
Figure 3

HARTZELL PROPELLER LLC
ALERT SERVICE BULLETIN
HC-ASB-61-407
Beta Rod Nut/Safety Wire Inspection

B. Safety Wire Removal/Beta Rod Nut Inspection

NOTE: Safety wire removal must be performed by a certified airframe and powerplant mechanic with the appropriate rating or by a certified propeller repair station with the appropriate rating.

- (1) Remove the spinner dome in accordance with the applicable Hartzell Propeller owner's manual.
- (2) Remove the safety wire between the fore-side beta rod nuts.
- (3) Using a calibrated torque wrench, verify the torque on the fore-side beta rod nuts is 120 In-Lbs (13.5 N•m) \pm 10%.
- (4) Visually examine the aft-side beta rod nuts in accordance with Figure 3 and the following steps:
 - (a) If the beta rod nuts are flush against the beta ring, go to step (5).
 - (b) If there is a gap between the beta rod nut(s) and the beta ring:
 - 1 Remove the propeller in accordance with the applicable Hartzell Propeller owner's manual.

NOTE: The beta ring height and run-out check must be performed by a certified propeller repair station with the appropriate rating.

- 2 Check the beta ring height and perform a beta ring run-out check in accordance with the applicable Hartzell Propeller overhaul manual.
 - 3 Install the propeller in accordance with the applicable Hartzell Propeller owner's manual.
- (5) Install the spinner dome in accordance with the applicable Hartzell Propeller owner's manual.
- (6) Make an entry in the propeller logbook indicating the safety wire removal/beta rod nut inspection was performed in accordance with this Alert Service Bulletin.

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ALERT SERVICE BULLETIN

HC-ASB-61-407

Beta Rod Nut/Safety Wire Inspection

C. Recommended Service Facilities

- (1) Hartzell Propeller LLC has a worldwide network of Recommended Service Facilities 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. Each service facility is audited by Hartzell Propeller to verify compliance with Hartzell 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 website at www.hartzellprop.com.

D. Contact Information

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ALERT SERVICE BULLETIN

HC-ASB-61-407

Beta Rod Nut/Safety Wire Inspection

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