

# HARTZELL PROPELLER INC.

# SERVICE LETTER

HC-SL-61-231

## Propellers - Use of Propeller Jack

### 1. Planning Information

#### A. Effectivity

All Hartzell propeller assemblies are affected by this Service Letter.

#### B. Reason

Hartzell has received information concerning a propeller jack or aircraft nose jack that uses the propeller to support the weight of the aircraft. This use of the propeller jack is unauthorized and could damage the propeller leading to an unsafe flight condition.

#### C. Description

- (1) Use of any part of the propeller to support the aircraft is unauthorized and can cause damage to the propeller hub and to internal and external components of the propeller assembly.
- (2) Using the propeller to push, pull, hoist, support or otherwise bear the weight of the aircraft directly contradicts the warnings and instructions published in Hartzell service documents.

#### D. Compliance

- (1) Immediately, stop use of a propeller jack or any other device that uses the propeller as a support point.
- (2) If a propeller jack has been used, before further flight, the propeller must be inspected in accordance with the Accomplishment section of this Service Letter.

#### E. Approval

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

#### F. Other Publications Affected

None

#### G. References

- (1) Hartzell Hydro Selective Propeller Overhaul Manual 100D
- (2) Hartzell Hydro Selective Propeller Overhaul Manual 100E (61-10-00)
- (3) Hartzell Steel Hub Propeller Overhaul Manual 105A
- (4) Hartzell Owner's Manual 106R
- (5) Hartzell Steel Hub Propeller Overhaul Manual 108A
- (6) Hartzell Steel Hub Propeller Overhaul Manual 109A

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- (7) Hartzell Steel Hub Propeller Overhaul Manual 110
- (8) Hartzell Steel Hub Propeller Overhaul Manual 111
- (9) Hartzell Steel Hub Propeller Overhaul Manual 112A
- (10) Hartzell Compact Non-Feathering and Aerobatic Propeller Overhaul Manual 113B  
(61-10-13)
- (11) Hartzell Steel Hub Propeller Overhaul Manual 114B
- (12) Hartzell Steel Hub Propeller Overhaul Manual 114C (61-10-14)
- (13) Hartzell Owner's Manual 115N (61-00-15)
- (14) Hartzell Compact Constant Speed and Feathering Propeller Overhaul Manual  
117D (61-10-17)
- (15) Hartzell Steel Hub Turbine Propeller Overhaul Manual 118F (61-10-18)
- (16) Hartzell Steel Hub Propellers for Goodyear Airship Overhaul Manual 119
- (17) Hartzell Reversible Steel Hub Propeller Overhaul Manual 120
- (18) Hartzell Reversible Steel Hub Propeller Overhaul Manual 121
- (19) Hartzell Reversible Steel Hub Propeller Overhaul Manual 122
- (20) Hartzell Reversible Propeller Overhaul Manual 131
- (21) Hartzell Five Blade Turbine Engine Propeller Overhaul Manual 132A (61-10-32)
- (22) Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33)
- (23) Hartzell Owner's Manual 134
- (24) Hartzell Composite Blade Overhaul Manual 135F (61-13-35)
- (25) Hartzell Reversible Propeller Overhaul Manual 136
- (26) Hartzell Owner's Manual 139 (61-00-39)
- (27) Hartzell Owner's Manual 140 (61-00-40)
- (28) Hartzell Four Blade Lightweight Turbine Propeller Overhaul Manual 141  
(61-10-16)
- (29) Hartzell Three and Four Blade Lightweight Turbine Propeller Overhaul Manual 142  
(61-10-42)
- (30) Hartzell Four Blade Lightweight Turbine Propeller Overhaul Manual 143A  
(61-10-43)

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- (31) Hartzell Six Blade Lightweight Turbine Propeller Overhaul Manual 144
- (32) Hartzell Owner's Manual 145 (61-00-45)
- (33) Hartzell Owner's Manual 146 (61-00-46)
- (34) Hartzell Owner's Manual 147 (61-00-47)
- (35) Hartzell Composite Spinner Maintenance Manual 148 (61-16-48)
- (36) Hartzell Owner's Manual 149 (61-00-49)
- (37) Hartzell Owner's Manual 154
- (38) Hartzell Four Blade Lightweight Turbine Propellers with Composite Blades Overhaul Manual 156A (61-10-56)
- (39) Hartzell Five and Six Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58)
- (40) Hartzell Maintenance Manual for HD-E6C-3( ) ( ) Propeller 161 (61-10-61)
- (41) Hartzell Owner's Manual 167 (61-00-67)
- (42) Hartzell Owner's Manual 168 (61-00-68)
- (43) Hartzell Owner's Manual 169 (61-00-69)
- (44) Hartzell Owner's Manual 174 (61-00-74)

## 2. Material Requirements

This inspection does not require a propeller overhaul. Normal re-use practices apply to all fasteners but all seals require replacement. Refer to the appropriate Hartzell Overhaul Manual for part numbers.

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### 3. Accomplishment

A. Discontinue use of the propeller jack or any device that uses the propeller or any part of the propeller to support the aircraft weight.

#### B. Inspection

##### (1) For Aluminum Hub Propellers:

(a) Check blade track in accordance with the appropriate Hartzell Owner's Manual.

(b) Remove propeller from aircraft in accordance with the appropriate Hartzell Owner's Manual.

(c) Disassemble propeller to the point of blade removal in accordance with the appropriate Hartzell Overhaul Manual.

(d) Remove the preload plate from the blade in accordance with the appropriate Hartzell Overhaul Manual.

(e) Visually inspect the hub preload shelf for damage in accordance with Hartzell Standard Practices Manual 202A (61-01-02). Hub repairs must be in accordance with Hartzell Standard Practices Manual 202A (61-01-02).

NOTE: Paint and anodize do not need to be removed for this inspection.

(f) Inspect the preload plate in accordance with the appropriate Hartzell Overhaul Manual for flatness.

1 If the preload plate is not flat, the plate must be replaced.

NOTE: The preload plate inner bearing race does not need to be removed from the preload plate for the inspection.

(g) Visually inspect the blade retention bearing in accordance with the appropriate Hartzell Overhaul Manual for brinelling or dimpling in the ball track.

1 If brinelling or dimpling exceed limits specified, the blade retention bearing must be replaced.

2 If one or more brinell marks or dimples are significantly different than the rest, the blade retention bearing must be replaced.

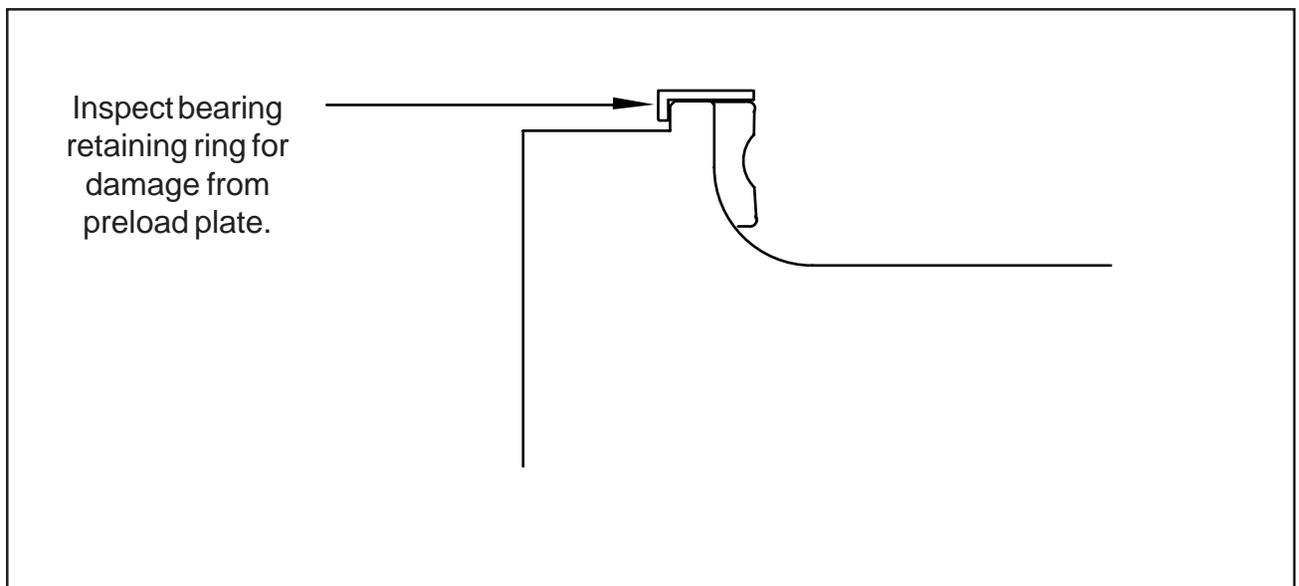
(h) Inspect de-ice or anti-ice boot for damage in accordance with the appropriate Hartzell Owner's Manual. Replace boot as required.

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- (i) Visually inspect the blade butt for abnormal damage in accordance with Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33) or Hartzell Composite Blade Overhaul Manual 135F (61-13-35).
  - 1 Aluminum blades required visual inspection of the bearing retaining ring for damage due to hitting the preload plate. This inspection can be performed with the retaining ring installed. Refer to Figure 1.
    - a If the retaining ring is damaged, the blade shank must be overhauled in accordance with Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
  - (j) Reassemble the propeller in accordance with the appropriate Hartzell Overhaul Manual.
  - (k) Make a logbook entry noting compliance with this Service Letter.
- (2) For Steel Hub Propellers:
  - (a) Check blade track in accordance with the appropriate Hartzell Owner's Manual.
  - (b) Remove propeller from aircraft in accordance with the appropriate Hartzell Owner's Manual.



**Aluminum Blade Bearing Retention Lip  
Figure 1**

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- (c) Disassemble propeller to the point of blade removal in accordance with the appropriate Hartzell Overhaul Manual.
- (d) Visually inspect the retention bearing in accordance with the appropriate Hartzell Overhaul Manual for brinelling or dimpling in the ball track.
  - 1 If brinelling or dimpling exceed limits specified, the blade retention bearing must be replaced.
  - 2 If one or more brinell marks or dimples are significantly different than the rest, the blade retention bearing must be replaced.
- (e) Inspect de-ice or anti-ice boot for damage in accordance with the appropriate Hartzell Owner's Manual. Replace boot as required.
- (f) Inspect clamp for damage in accordance with Hartzell Standard Practices Manual 202A (61-01-02).
- (g) Reassemble propeller in accordance with the appropriate Hartzell Overhaul Manual.
- (h) Make logbook entry noting compliance with this Service Letter.