

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

1. Planning Information

A. Effectivity

- (1) Hartzell Propeller Inc. aluminum hub propellers PHC-C3YF-1RF installed by Textron Aviation on Beechcraft G36 (Bonanza) aircraft may be affected by this Service Bulletin.
 - (a) The affected propellers are equipped with an electrical de-ice system and installed on Beechcraft G36 (Bonanza) aircraft with the following serial numbers: E-3630 and E-3636 through E-3966
 - (b) Questions about effectivity, compliance, and/or warranty coverage related to this installation issue must be directed to Textron Aviation technical support.

WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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. FAILURE TO COMPLY WITH THIS 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 SERVICE BULLETIN INDEX FOR THE MOST RECENT REVISION LEVEL OF THIS SERVICE BULLETIN.

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 Inc. website at www.hartzellprop.com for a cross-reference of service documents.

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

C. Reason

- (1) Textron Aviation has informed Hartzell Propeller Inc. that the affected propellers were installed with A-1381 washers under the A-2044 propeller mounting nuts.
 - (a) All of the affected propellers are equipped with a de-ice system that requires a split mounting plate for installation onto the engine flange. The A-1381 washers do not fit correctly against the split mounting plate and can deform when the A-2044 mounting nuts are torqued.
 - 1 Deformed A-1381 washers can cause the A-2044 mounting nuts to lose the required torque.
 - a If the A-2044 mounting nuts lose the required torque, the propeller can become loose on the engine flange and cause damage to the mounting studs and/or the hub.

D. Description

- (1) This Service Bulletin provides Instructions for Continued Airworthiness (ICA).
- (2) This Service Bulletin provides instructions for a propeller mounting nut torque inspection of the affected propellers.
- (3) This Service Bulletin provides instructions for replacing the A-2044 propeller mounting nuts on affected propellers that were installed with A-1381 washers under the A-2044 nuts.
- (4) This Service Bulletin must be used in conjunction with Beechcraft Service Bulletin SB 61-4164.
 - (a) Questions about effectivity, compliance, and/or warranty coverage related to this installation issue must be directed to Textron Aviation technical support.

E. Compliance

- (1) At the next 100-hour or 12-month (annual-type) inspection, whichever occurs first, complete the "Propeller Mounting Nut Torque Inspection" in accordance with the Accomplishment Instructions in this Service Bulletin.
 - (a) Questions about effectivity, compliance, and/or warranty coverage related to this installation issue must be directed to Textron Aviation technical support.

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

F. Approval

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

G. Manpower

- (1) Refer to Beechcraft Service Bulletin SB 61-4164 for labor hour information.

H. Weight and Balance

- (1) Not changed

I. Electrical Load Data

- (1) Not changed

CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF A DOCUMENT.

J. References

- (1) Beechcraft Service Bulletin SB 61-4164
- (2) Hartzell Propeller Inc. Propeller Owner's Manual 115N (61-00-15)

2. Material Information

CAUTION: INSTRUCTIONS AND PROCEDURES IN THIS SERVICE BULLETIN INVOLVE PROPELLER CRITICAL PARTS. REFER TO THE APPLICABLE PROPELLER OVERHAUL OR OWNER'S MANUAL FOR INFORMATION ABOUT PROPELLER CRITICAL PARTS.

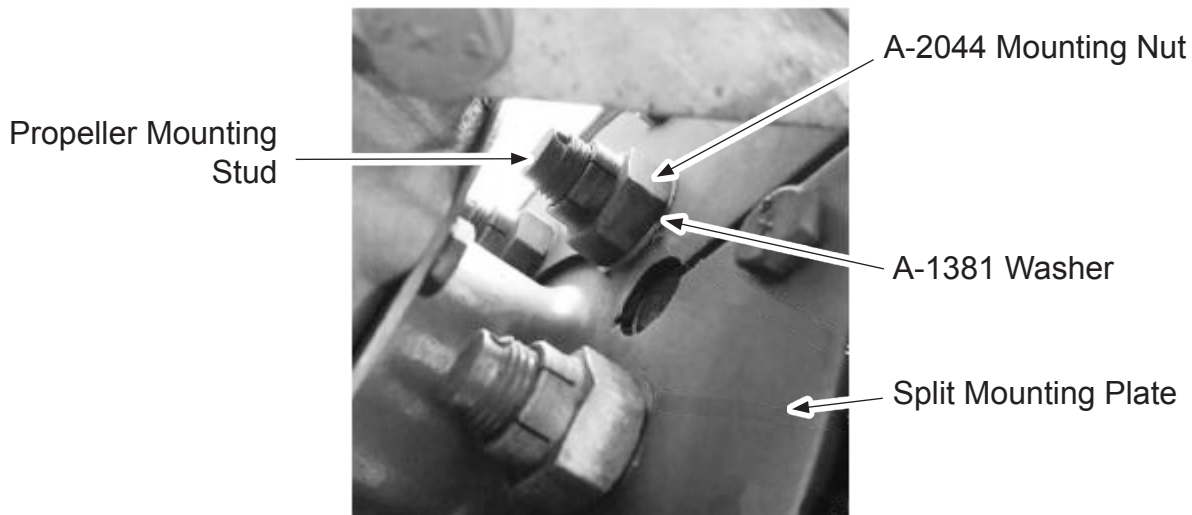
A. Material Required for Each Propeller

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
A-2044	Nut, 1/2-20, Hex, Self-Locking	6

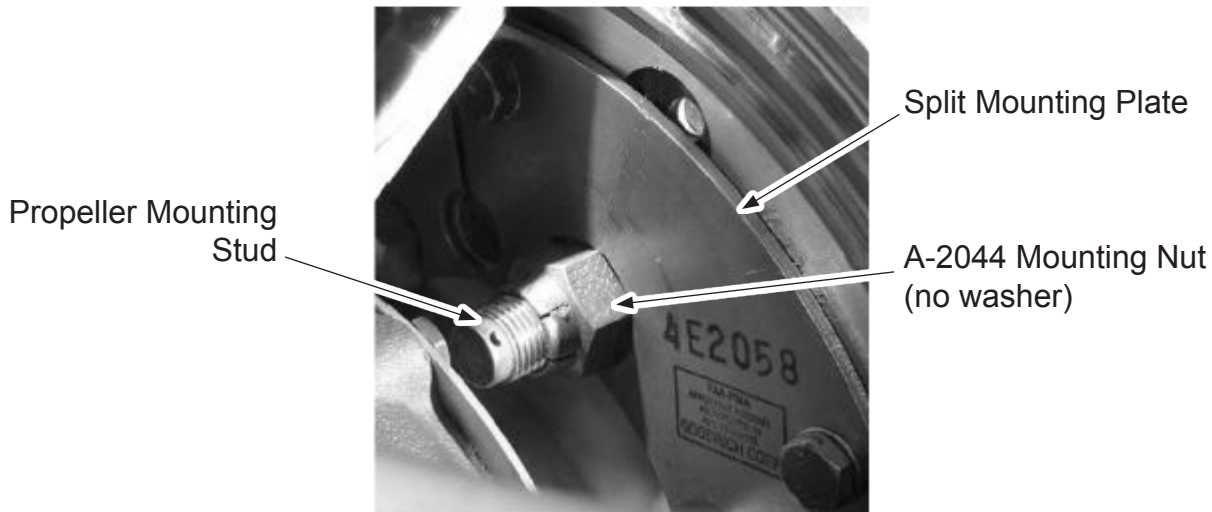
HARTZELL PROPELLER INC.
SERVICE BULLETIN

HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**



Incorrect Installation



Correct Installation

TPI-MB-0193

Propeller Mounting Studs/A-2044 Mounting Nuts
Figure 1

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

3. Accomplishment Instructions

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A. Propeller Mounting Nut Torque Inspection

- (1) This procedure must be performed by a certified aircraft mechanic with the appropriate rating or by a certified propeller repair station with the appropriate rating.
- (2) Remove the spinner dome in accordance with Hartzell Propeller Inc. Owner's Manual 115N (61-00-15).
- (3) Visually examine the propeller mounting studs and A-2044 mounting nuts. Refer to Figure 1.
 - (a) If there are washers installed under the A-2044 mounting nuts, go to step 3.A.(4).
 - (b) If there are no washers installed under the A-2044 mounting nuts, no further action is required.
 - 1 Make a record of the Propeller Mounting Stud/Nut Inspection in the propeller logbook.
 - 2 Indicate that the inspection was completed in accordance with this Service Bulletin and that no washers were installed under the A-2044 mounting nuts.
- (4) Check the propeller to determine if it is tightly mounted to the engine flange.
 - (a) If there is no movement of the propeller relative to the engine flange, go to step 3.A.(5).
 - (b) If the propeller is loose, there could be damage to the propeller mounting studs. Contact Textron Aviation technical support before further flight.

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

- (5) Using a calibrated torque wrench and appropriate adapter (if necessary), make sure that the breakaway torque on each of the A-2044 mounting nuts is equal to or greater than 60 Ft-Lbs (81 N•m) by loosening each nut and recording the breakaway torque.
 - (a) Refer to Hartzell Propeller Inc. Owner's Manual 115N (61-00-15) for the correct use of a torque wrench adapter.
 - (b) If the breakaway torque on any of the A-2044 mounting nuts is less than 60 Ft-Lbs (81 N•m) or if any of the propeller mounting studs appear loose, cracked, or stretched:
 - 1 Contact the Hartzell Propeller Inc. Product Support Department before further flight.
 - (c) If the breakaway torque on all of the A-2044 mounting nuts is equal to or greater than 60 Ft-Lbs (81 N•m):
 - 1 Remove and discard all six A-2044 mounting nuts and A-1381 washers.
 - 2 Install six new A-2044 mounting nuts in the correct sequence in accordance with Hartzell Propeller Inc. Owner's Manual 115N (61-00-15).
 - a The installation torque for the A-2044 mounting nuts is 70-80 Ft-Lbs (95-108 N•m) dry.
- (6) Make a record in the propeller logbook indicating compliance with the propeller mounting nut torque inspection as terminating action for Hartzell Propeller Inc. Service Bulletin HC-SB-61-373.
- (7) Refer to Beechcraft Service Bulletin SB 61-4164 for additional instructions for documenting the inspection and warranty compliance.

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

B. Recommended Service Facilities

- (1) Hartzell Propeller Inc. 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 Inc. requirements before being recommended by Hartzell Propeller Inc. Each service facility is audited by Hartzell Propeller Inc. to verify the continuation of the standards.
- (3) Hartzell Propeller Inc. recommends that you use one of these service facilities when having your propeller overhauled or repaired.
- (4) For a current list of Hartzell Propeller Inc. Recommended Service Facilities, contact Hartzell Propeller Inc. Product Support or refer to the Hartzell Propeller Inc. website at www.hartzellprop.com.

C. Contact Information

Hartzell Propeller Inc.
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One Propeller Place
Piqua, Ohio 45356-2634 USA
Phone: (001) 937.778.4379
Fax: (001) 937.778.4215
E-mail: techsupport@hartzellprop.com

Textron Aviation
Technical Support Department
Phone: 800.429.5372 or
316.676.3140

HARTZELL PROPELLER INC.
SERVICE BULLETIN

HC-SB-61-373

**Propeller - Propeller Mounting Nut Torque Inspection
and Replacement**

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