HARTZELL PROPELLER INC.

SERVICE BULLETIN

TRANSMITTAL SHEET

HC-SB-61-379

Propeller - Counterweight Clamp Inspection

November 28, 2017

This page transmits a revision to Service Bulletin HC-SB-61-379.

- Original Issue, dated Oct 02/17
- Revision 1, dated Nov 28/17

Propeller assemblies that have complied with the inspections required in a previous revision of this Service Bulletin are affected.

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

Revision 1 is issued to change the following in the Service Bulletin:

- Revised the section, "Effectivity"
- Revised the section, "Compliance"
  (added the Terminating Action for this Service Bulletin)
- Revised the section, "Visual Inspection"
- Added the section, "Counterweight Clamp Replacement"

This Service Bulletin is reissued in its entirety.

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Propeller - Counterweight Clamp Inspection

1. Planning Information

   A. Effectivity

      (1) Hartzell Propeller Inc. lightweight turbine propellers HC-E5A-2( )/E9193( ) installed on Pilatus PC-21 aircraft are affected by this Service Bulletin - except as specified in sections 1.A.(1)(a) through 1.A.(1)(c).

         (a) HC-E5A-2( )/E9193( ) propellers installed on Pilatus PC-21 aircraft that are currently (or that have been previously) operated out of Pearce Air Force Base in Bullsbrook, Australia are not affected by this Service Bulletin.

            1 Hartzell Propeller Inc. Alert Service Bulletin HC-ASB-61-378 was issued to address the affected propellers operated out of Pearce Air Force Base.

         (b) New propellers that were shipped from Hartzell Propeller Inc. on or after 09/25/17 are not affected by this Service Bulletin.

            1 New propellers that were shipped from Hartzell Propeller Inc. on or after 09/25/17 will have gray Polane® paint on the counterweight clamps.

         (c) Propellers that contain five counterweight clamps that have been overhauled and painted in accordance with Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35), Revision 30 or later, are not affected by this Service Bulletin.

      WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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.

C. Reason

(1) Hartzell Propeller Inc. received a report of a counterweight clamp separation on a propeller causing damage to the spinner and adjacent blade.

(a) Hartzell has received reports of additional cracked counterweight clamps at the same operator.

(b) All clamps that have evidence of cracks have also shown evidence of operation in a corrosive environment.

(2) Hartzell Propeller Inc. is requiring inspection of the counterweight clamps and the associated mounting hardware on the affected propellers.

(3) Regulatory action is not expected.

D. Description

(1) This Service Bulletin provides Instructions for Continued Airworthiness (ICA).

(2) This Service Bulletin provides instructions for a repetitive visual inspection of the counterweight clamps on the affected propellers.

E. Compliance

(1) If the affected propeller has previously complied with Hartzell Propeller Inc. Inspection Memo HTZ-PIL Y17-002, dated August 29, 2017:

(a) At repetitive intervals not to exceed 300 flight hours or 12 calendar months, whichever occurs first, perform a visual inspection in accordance with the Accomplishment Instructions in this Service Bulletin.

(b) Terminating Action

1 At next propeller overhaul, perform the Counterweight Clamp Replacement procedure in accordance with the Accomplishment Instructions in this Service Bulletin.

NOTE: Overhaul periods are specified in Hartzell Propeller Inc. Service Letter HC-SL-61-61Y.

2 Make an entry in the propeller logbook indicating that all five counterweight clamps were replaced as terminating action for this Service Bulletin.

(2) If the affected propeller has not previously complied with Hartzell Propeller Inc. Inspection Memo HTZ-PIL Y17-002, dated August 29, 2017, and:

(a) The propeller has never been overhauled and Time Since New (TSN) is greater than 300 flight hours or 12 calendar months

-OR-

The propeller has been overhauled and the Time Since Overhaul (TSO) is greater than 300 flight hours or 12 calendar months

1 Within 150 flight hours or six calendar months, perform a visual inspection in accordance with the Accomplishment Instructions in this Service Bulletin.

2 At repetitive intervals not to exceed 300 flight hours or 12 calendar months, whichever occurs first, perform a visual inspection in accordance with the Accomplishment Instructions in this Service Bulletin.

3 Terminating Action

a At next propeller overhaul, perform the Counterweight Clamp Replacement procedure in accordance with the Accomplishment Instructions in this Service Bulletin.

NOTE: Overhaul periods are specified in Hartzell Propeller Inc. Service Letter HC-SL-61-61Y.

b Make an entry in the propeller logbook indicating that all five counterweight clamps were replaced as terminating action for this Service Bulletin.

F. Approval

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

G. Manpower

Procedure	Man-hours
Visual Inspection	3 hours
Counterweight Clamp Replacement	4 hours per clamp

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) Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35)

(2) Hartzell Propeller Inc. Propeller Owner's Manual 147 (61-00-47).

(3) Hartzell Propeller Inc. Five Blade Lightweight Turbine Propeller Overhaul Manual 157 (61-10-57)

(4) Hartzell Propeller Inc. Illustrated Tool and Equipment Manual 165A (61-00-65)

(5) Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02) - (Volume 7, Consumable Materials and Packaging and Storage is available on the Hartzell Propeller Inc. website at www.hartzellprop.com)

K. Other Publications Affected

(1) Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35)

2. Material Information

A. Counterweight Clamp and Mounting Hardware

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

Part Number	Description	Qty
B-3834-0632	Washer	AR
B-3828-6	Nut, Hex, Self-Locking, Flanged	AR
B-3822-36P	Screw, 3/8-24, Cap	AR
E-7486	PCP: Clamp, Counterweight	AR

B. Special Tooling

TE Number	Description
TE316	Unfeathering Tool
-	Torque wrench
-	7/16" twelve point crows foot adapter
-	5/16" hex bit socket
-	Flashlight

NOTE: All TE numbers in this Service Bulletin refer to Hartzell Propeller Inc. Tool and Equipment Manual 165A (61-00-65).

C. Consumable Materials

CM Number	Description	Qty
CM23	Stoddard solvent	AR

NOTE: All CM numbers in this Service Bulletin refer to the Consumable Materials and Packaging and Storage chapter of Hartzell Standard Practices Manual 202A (61-01-02).

3. Accomplishment Instructions

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

A. Visual Inspection

(1) The following procedure may be performed by a certified aircraft mechanic with the appropriate rating.

(2) Remove the spinner dome in accordance with Hartzell Propeller Inc. Owner's Manual 147 (61-00-47).

(a) The spinner dome fasteners can be reused.

(3) This visual inspection can be performed by moving the propeller blades to low pitch using the unfeathering tool TE316, or with the propeller blades in feather position using a boroscope.

(a) If using the unfeathering tool TE316, go to step 3.A.(4).
If using a boroscope, go to step 3.A.(5).

CAUTION: DO NOT USE BLADE PADDLES TO TURN BLADES.

(4) Install the unfeathering tool TE316 or equivalent.

(a) Turn the threaded rod of the unfeathering tool TE316 onto the end of the pitch change rod as far as possible.

WARNING: TIGHTEN THE THREADED ROD UNTIL IT IS SNUG. THE FEATHERING SPRING IS PRELOADED WITH APPROXIMATELY 600 LBS. (271.8 KG) OF FORCE. FAILURE TO TIGHTEN THE THREADED ROD ONTO THE PITCH CHANGE ROD CAN CAUSE THE FEATHERING SPRING TO RELEASE WHEN MOVING THE BLADES BACK TO FEATHER. THIS CAN CAUSE PROPELLER DAMAGE, SERIOUS INJURY AND/OR DEATH.

1 Tighten the threaded rod until it is snug.

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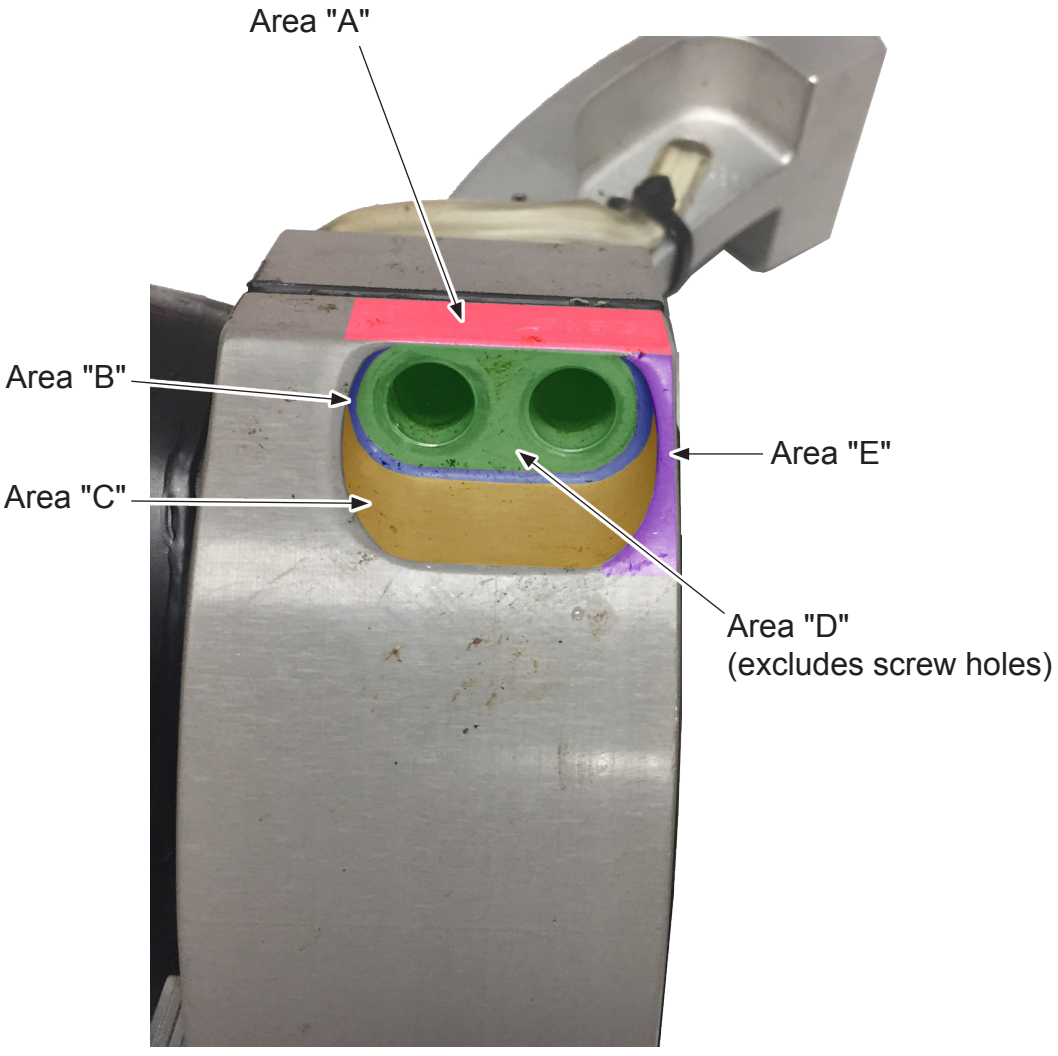
Propeller - Counterweight Clamp Inspection

NOTE: For clarity, the counterweight clamp screws are not shown.



Inspection Areas
Figure 1

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Propeller - Counterweight Clamp Inspection

Example of a Cracked Counterweight Clamp
Figure 2

(b) Put the cylindrical part of the unfeathering tool TE316 over the threaded rod and put it on top of the cylinder.

1 Put the notch in the bottom of the unfeathering tool TE316 over the stop plate on the top of the cylinder.

(c) Install the 1-1/2 inch nut onto the threaded rod of the unfeathering tool TE316.

1 Turn the 1-1/2 inch nut until it touches the thrust bearing.

2 Continue turning the nut until the blades move to an angle that will permit access to the counterweight clamp hardware on the trail edge of the blade.

(5) Using Stoddard solvent CM23 or equivalent, clean the counterweight clamps before performing the visual inspection.

(6) Perform a visual inspection of each counterweight clamp in accordance with the following steps:

(a) Visually examine Areas A, B, C, D, and E of the counterweight clamps for cracks. Refer to Figure 1 for inspection areas and Figure 2 for an example of a cracked counterweight clamp.

NOTE: It is not necessary to remove counterweight clamp screws to perform the visual inspection.

1 Cracks have occurred in Area E on the counterweight clamp.

2 If a crack is found during the visual inspection, retire all five of the counterweight clamps in accordance with Hartzell Propeller Standard Practices Manual 202A (61-01-02).

a Replace all five of the counterweight clamps in accordance with the Accomplishment Instructions in this Service Bulletin before further flight.

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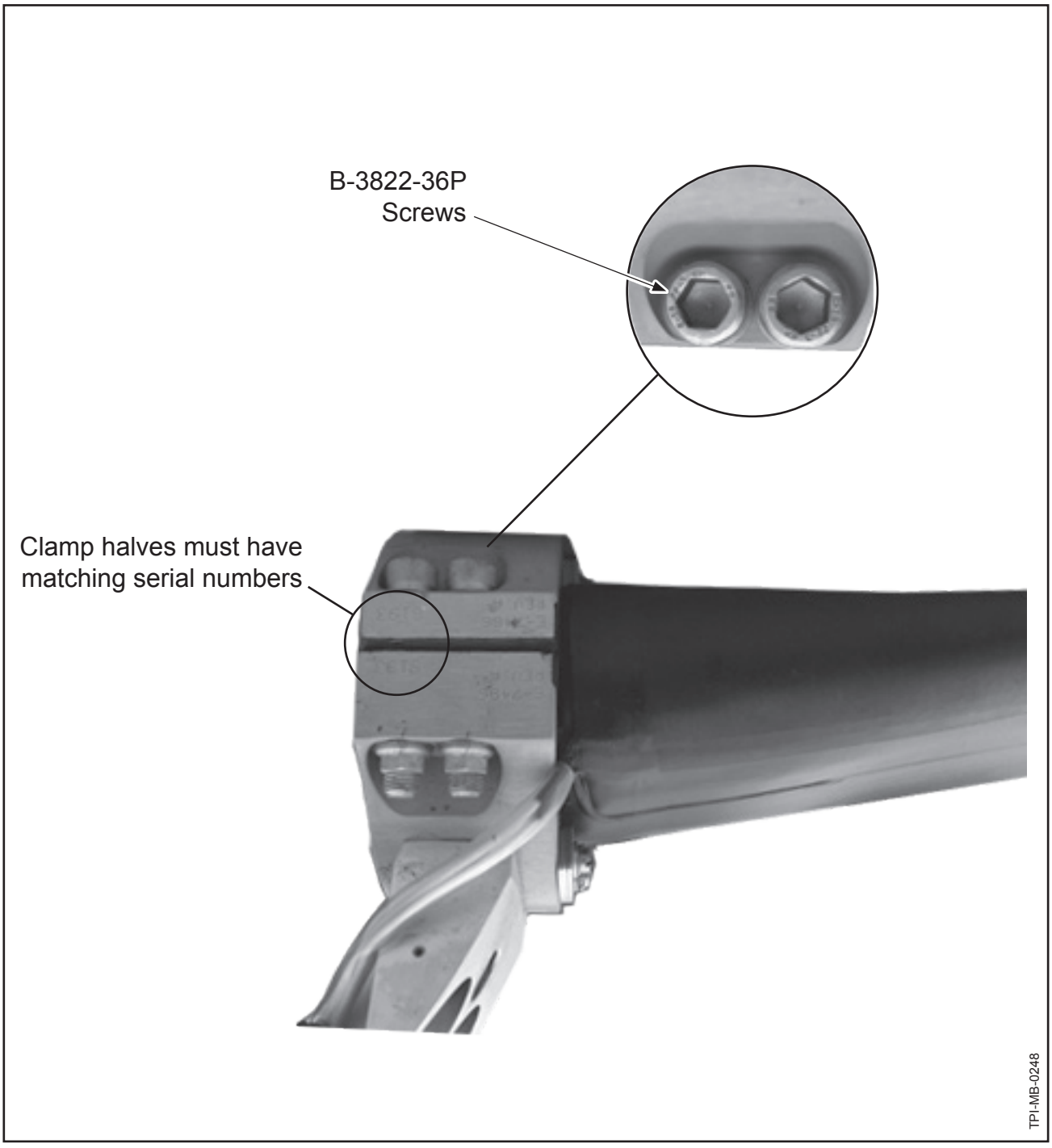
Propeller - Counterweight Clamp Inspection



Counterweight Clamp/Screw Identification
Figure 3

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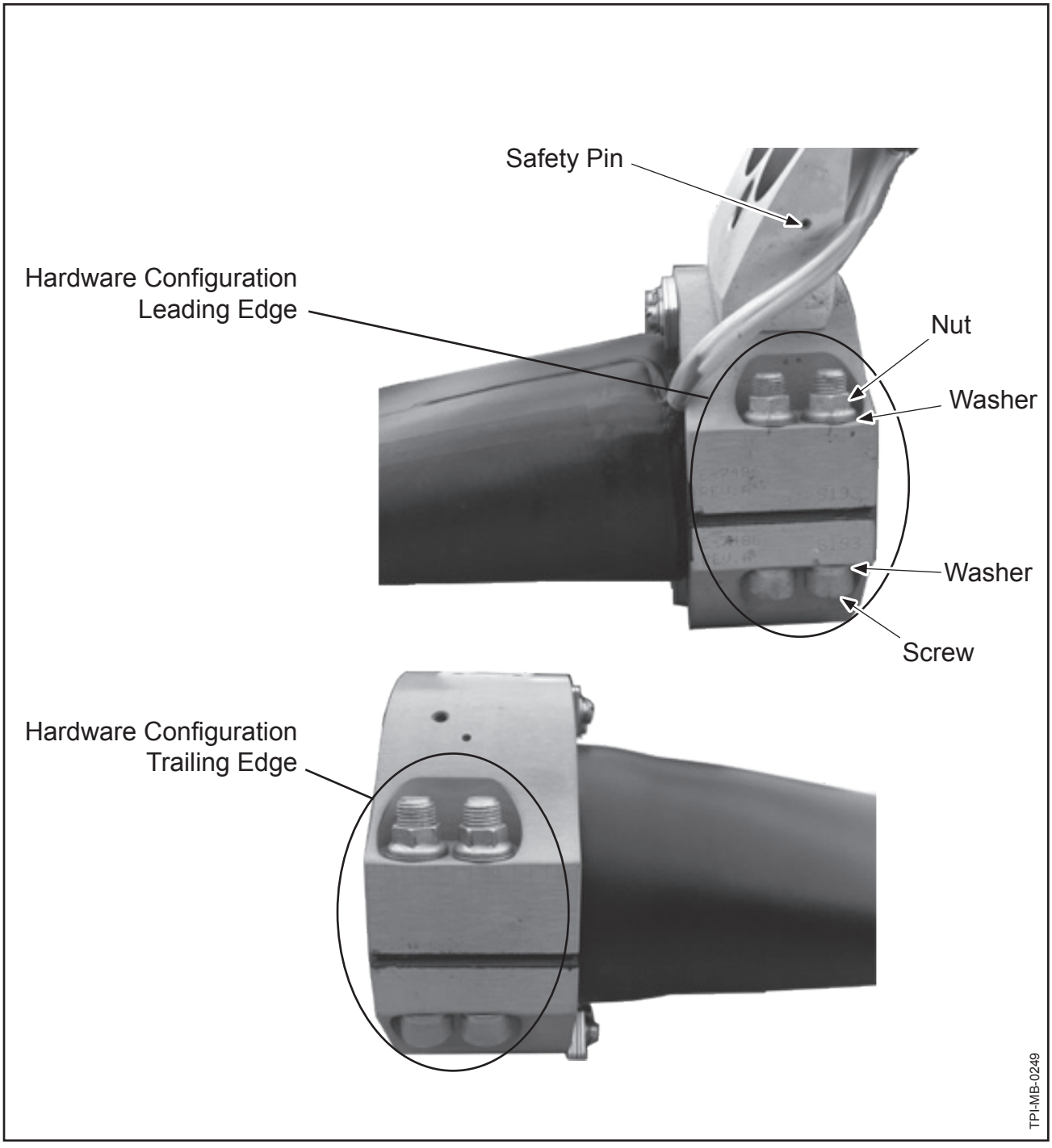
Propeller - Counterweight Clamp Inspection



Counterweight Clamp Hardware Configuration
Figure 4

(b) Visually examine the counterweight clamps and the associated hardware for the following:

1 Make sure that the counterweight clamps have matching serial numbers to indicate a matched set. Refer to Figure 3.

a If required, install a new or serviceable counterweight clamp with matching serial numbers in accordance with the Accomplishment Instructions in this Service Bulletin before further flight.

(1) Retire the counterweight clamp(s) with mismatched serial numbers in accordance with Hartzell Propeller Standard Practices Manual 202A (61-01-02).

2 Check for loose or damaged counterweight clamp mounting hardware.

a Make sure that the correct counterweight clamp screws (B-3822-36P) are installed. Refer to Figure 3.

b Make sure that the counterweight clamp hardware is installed in the correct orientation. Refer to Figure 4.

c Make sure that the safety pins in the counterweight attachment bolts are installed. Refer to Figure 4.

d Replace any missing, damaged, or incorrect mounting hardware in accordance with Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35) before further flight. Refer to the Material Information section in this Service Bulletin for part number information.

NOTE: Counterweight clamp/mounting hardware installation must be performed by a certified propeller repair station with the appropriate rating.

(c) Visually examine Area C and Area E of the counterweight clamp (refer to Figure 1) for damage to the anodize coating that may have occured during hardware installation.

1 If there is damage to the anodize coating, clean the damaged area using Stoddard solvent CM23 or equivalent, then apply Ardrox AV 30 to the damaged area in accordance with the manufacturer's instructions.

(d) If using the unfeathering tool TE316, go to step 3.A.(7).
If using a boroscope, go to step 3.A.(8).

CAUTION: DO NOT USE BLADE PADDLES TO TURN BLADES.

(7) Move the propeller blades to feather position, then remove the unfeathering tool TE316.

WARNING: MAKE SURE THE THREADED ROD OF THE UNFEATHERING TOOL TE316 DOES NOT ROTATE WHEN LOOSENING THE 1-1/2 INCH NUT. THE FEATHERING SPRING IS PRELOADED WITH APPROXIMATELY 600 LBS. OF FORCE. IF THE THREADED ROD OF THE UNFEATHERING TOOL ROTATES, THE SPRING CAN RELEASE, CAUSING THE 1-1/2 INCH NUT TO BECOME A DANGEROUS PROJECTILE. THIS CAN CAUSE PROPELLER DAMAGE OR SERIOUS INJURY.

(a) Loosen the 1-1/2 inch nut of the unfeathering tool TE316 until the blades move to feather position.

(b) Remove the threaded rod and the cylindrical part of the unfeathering tool TE316.

(8) Install the spinner dome in accordance with Hartzell Propeller Inc. Owner's Manual 147 (61-00-47).

(9) Report any findings from this inspection to the Product Support Department at Hartzell Propeller Inc.

(10) Make an entry in the propeller logbook indicating that the visual inspection was completed in accordance with this Service Bulletin.

B. Counterweight Clamp Replacement

(1) Remove the propeller in accordance with Hartzell Propeller Inc. Owner's Manual 147 (61-00-47).

(2) Counterweight clamp replacement must be performed by a certified propeller repair station with the appropriate rating.

(a) Remove the unpainted counterweight clamp(s) in accordance with Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35).

(b) Install new or serviceable painted counterweight clamp(s) in accordance with Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35), Revision 30 or later.

1 Painted counterweight clamps that were shipped from Hartzell Propeller Inc. on or after 09/25/17 are considered "new".

2 Counterweight clamps that have been overhauled and painted in accordance with Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35), Revision 30 or later are considered "serviceable".

C. 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 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.

D. Contact Information

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