

**HARTZELL PROPELLER LLC**  
**ALERT SERVICE BULLETIN**  
**HC-ASB-61-406**  
**Counterweight Mounting Bolt Replacement**

A. Effectivity

- (1) The Hartzell steel hub propeller models listed in Table 1 are affected by this Alert Service Bulletin **if** the propeller is used on agricultural/fire fighting aircraft:

HC-B3R30-4( )	HC-B3TN-5( )
HC-B3MN-5( )	HC-B3TW-3( )
HC-B3MP-3( )	HC-B4T(N,W)-(3,5)( )
HC-B3TN-(2,3,4)( )	HC-B5M(A,P)-(3,5)( )

**Affected Propeller Models**  
**Table 1**

**NOTE:** Agricultural/fire fighting aircraft are defined as aircraft used as aerial applicators as defined in 14 CFR 137.3, as specified in FAA order 8900.1, including forest fire fighting activities using chemicals (retardant, gel, or foam). These operations may expose the propeller to a relatively severe chemical/corrosive environment.

**WARNING:** DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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](http://www.hartzellprop.com) for a cross-reference of service documents.

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### C. Reason

- (1) Hartzell Propeller has received reports of counterweight separations caused by failures of the A-2036-( ) cap screws used to attach the counterweights to the counterweight clamps on affected propellers.
  - (a) Hartzell Propeller has replaced the A-2036-( ) cap screws with 107995-( ) 12-point bolts on affected propellers manufactured after May 29, 2020.

### D. Description

- (1) This Alert Service Bulletin provides Instructions for Continued Airworthiness (ICA).
- (2) This Alert Service Bulletin provides instructions for a counterweight hardware inspection to determine the part number of the counterweight attaching screw/bolt.
- (3) This Alert Service Bulletin requires replacement of A-2036-( ) cap screws with 107995-( ) 12-point bolts.
  - (a) Hartzell Propeller will provide the parts listed in the Material Information section and warrant the associated labor costs when hardware replacement is required by this Alert Service Bulletin.
  - (b) Refer to the Appendix section of this Alert Service Bulletin for additional information about the warranty program.
- (4) This Alert Service Bulletin provides instructions for replacing A-2036-( ) cap screws with 107995-( ) 12-point bolts.

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E. Compliance

- (1) Within 10 days of the release date of this Alert Service Bulletin, perform the Counterweight Mounting Bolt Inspection in accordance with the Accomplishment Instructions section in this Alert Service Bulletin.
  - (a) A-2036-( ) cap screws found in the Counterweight Mounting Bolt Inspection must be replaced with 107995-( ) 12-point bolts at next major aircraft inspection, not to exceed 240 hours TSO (Time Since Overhaul), or six months from the release date of this Alert Service Bulletin, whichever occurs first.
    - 1 If the propeller has more than 240 hours TSO at the time of the Counterweight Mounting Bolt Inspection, A-2036-( ) cap screws must be replaced with 107995-( ) 12-point bolts within 30 days of the inspection.

F. Approval

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

G. Manpower

Procedure	Allowable Man-hours
A-2036-( ) Screw Replacement	1 hour <u>per blade</u>

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

H. References

- (1) Hartzell Propeller Owner's Manual 139 (61-00-39)  
- available on the Hartzell website at [www.hartzellprop.com](http://www.hartzellprop.com)
- (2) Hartzell Propeller Owner's Manual 167 (61-00-67)  
- available on the Hartzell website at [www.hartzellprop.com](http://www.hartzellprop.com)
- (3) Hartzell Propeller Standard Practices Manual 202A (61-01-02) -  
Volume 7, Consumable Materials is available on the Hartzell website at  
[www.hartzellprop.com](http://www.hartzellprop.com)

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### Counterweight Mounting Bolt Replacement

#### 2. Material Information

##### A. Replacement Bolts Supplied by Hartzell Propeller

<u>Part Number</u>	<u>Description</u>	<u>Qty (per Cwt.)</u>	<u>Replaces</u>
107995-12	Bolt, 7/16-20, 12-point	2	A-2036-12
107995-14	Bolt, 7/16-20, 12-point	2	A-2036-14
107995-16	Bolt, 7/16-20, 12-point	2	A-2036-16
107995-22	Bolt, 7/16-20, 12-point	2	A-2036-22
107995-24	Bolt, 7/16-20, 12-point	2	A-2036-24
107995-30	Bolt, 7/16-20, 12-point	2	A-2036-30
107995-32	Bolt, 7/16-20, 12-point	2	A-2036-32

##### B. Additional Parts Supplied by Hartzell Propeller

<u>Part Number</u>	<u>Description</u>	<u>Qty (per Cwt.)</u>
A-285	Spring Pin, 3/32", Corrosion Resistant	2

##### C. Consumable Materials (locally procured)

<u>CM Number</u>	<u>Description</u>
CM46	Gasket Sealant
CM352	Corrosion Inhibitor

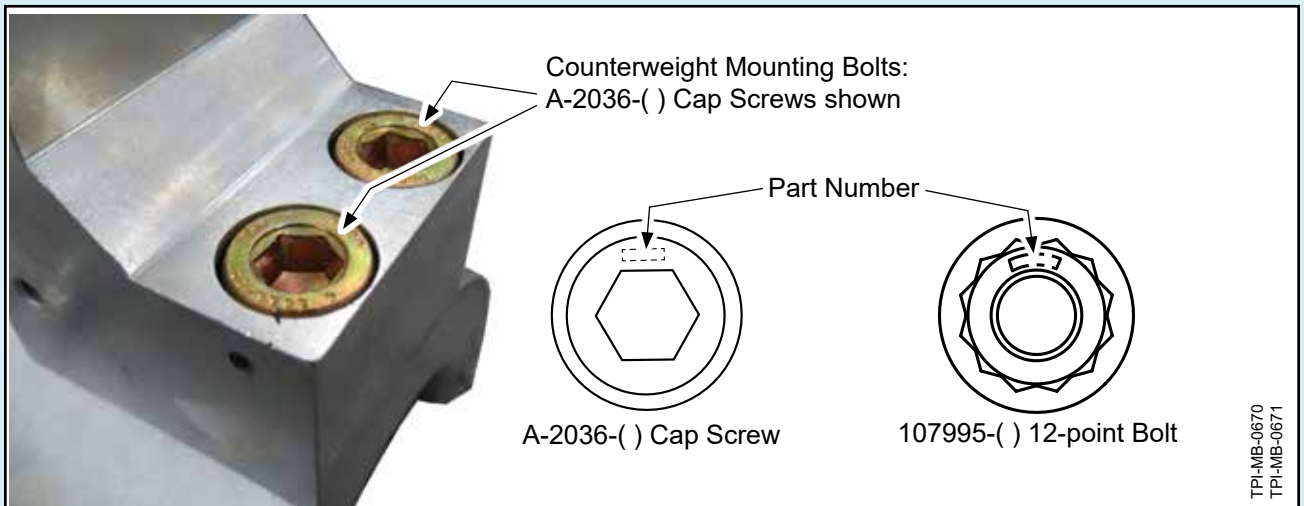
**NOTE:** All CM numbers in this Alert Service Bulletin refer to the Consumable Materials chapter of Hartzell Propeller Standard Practices Manual 202A (61-01-02).

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3. Accomplishment Instructions

A. Counterweight Mounting Bolt Inspection

- (1) Remove the spinner dome in accordance with the applicable Hartzell Propeller Owner's Manual.
- (2) Visually examine the counterweight mounting bolts to determine the part number of the hardware used on the affected propeller. Refer to Figure 1.
  - (a) If A-2036-( ) cap screws are used:
    - 1 Complete and sign the Parts Order/Compliance Form in the Appendix section of this Alert Service Bulletin.
      - a Send the completed form to Hartzell Propeller to initiate the order for the required parts.
    - 2 Replace all A-2036-( ) cap screws with 107995-( ) 12-point bolts in accordance with the Counterweight Mounting Bolt Replacement procedure in this section.
  - (b) If 107995-( ) 12-point bolts are used:
    - 1 No further action is required.
    - 2 Install the spinner dome in accordance with the applicable Hartzell Propeller Owner's Manual.
    - 3 Make an entry in the propeller logbook indicating compliance with the required inspection in this Alert Service Bulletin.



**Counterweight Mounting Bolt Inspection**  
**Figure 1**

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## Counterweight Mounting Bolt Replacement

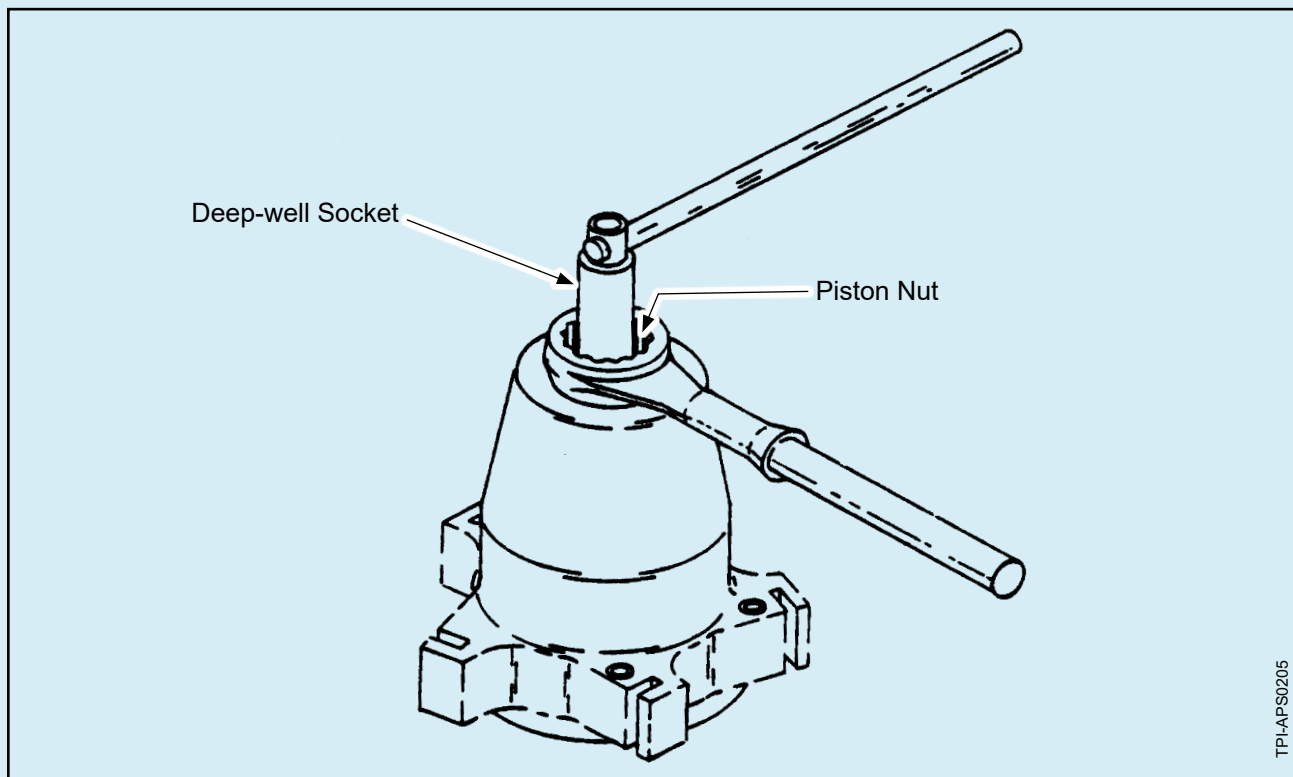
### B. A-2036-( ) Cap Screw Replacement

**ATTENTION:** Counterweight mounting bolt replacement 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.

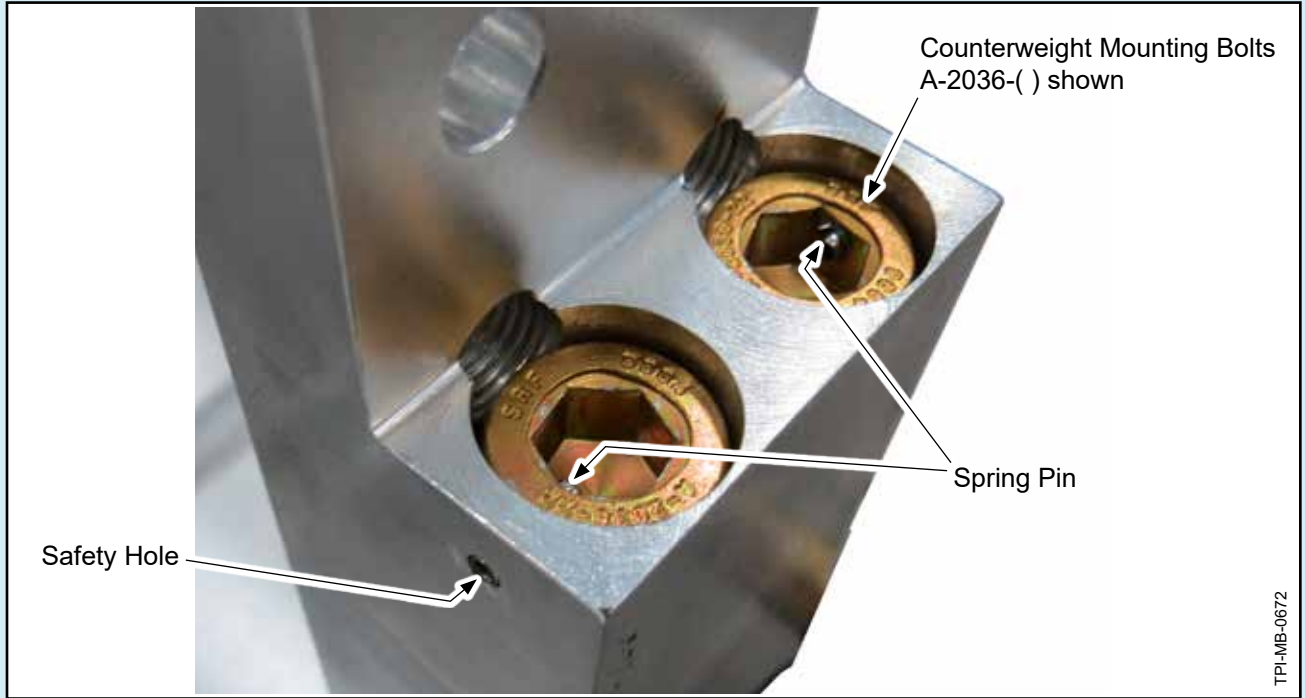
**CAUTION:** DO NOT LET THE PITCH CHANGE ROD ROTATE WHEN REMOVING THE PISTON NUT.

- (2) Using a deep-well socket (of applicable size) and a breaker bar, hold the pitch change rod to prevent rotation, then remove the piston nut on top of the cylinder. Refer to Figure 2.
  - (a) Retain the piston nut for reassembly.



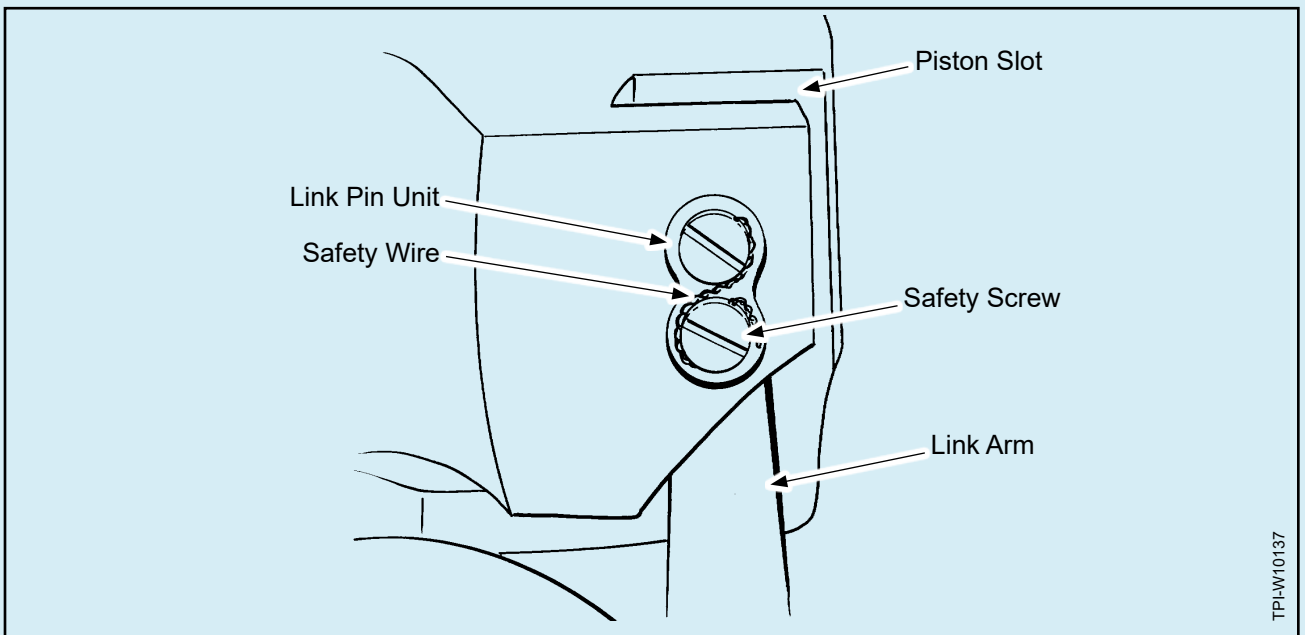
**Piston Nut Removal/Installation**  
**Figure 2**

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Counterweight Mounting Bolt Replacement



TPI-MB-0672

**Safety Holes/Spring Pins**  
**Figure 3**



TPI-W10137

**Piston Link Arms**  
**Figure 4**

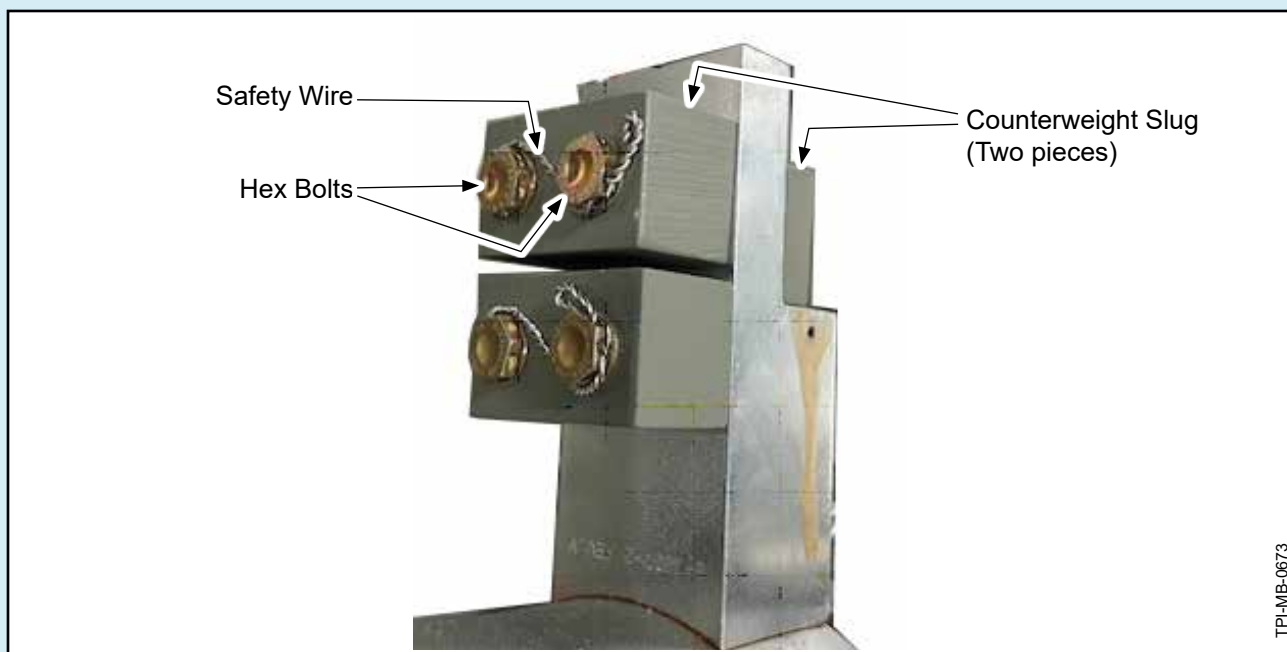
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### Counterweight Mounting Bolt Replacement

**CAUTION:** DO NOT USE BLADE PADDLES TO TURN BLADES.

- (3) Manually turn the blades to low pitch or until the counterweight mounting bolts, safety holes, and staking pins are accessible. Refer to Figure 3.
  - (a) If additional blade movement is required to access the bolts/holes/pins, disconnect the piston link arms in accordance with Figure 4 and the following steps:
    - 1 Remove safety wire from each link pin unit.
    - 2 Remove the safety screw from each link pin unit.
    - 3 Remove each link pin unit.
    - 4 Slide the link arms out of the the piston slots.
- (4) 3-blade Propeller Models Only: It may be necessary to remove two-piece counterweight slugs to access the counterweight mounting bolts. Refer to Figure 5 and the following steps:
  - (a) Remove safety wire from the two hex head bolts attaching the two-piece counterweight slug.
  - (b) Remove the two hex bolts and the two-piece counterweight slug.
    - 1 Retain the hex head bolts for reassembly.



**Two-piece Counterweight Slugs**  
**Figure 5**



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- (5) Remove and discard the spring pins (p/n A-285) that secure the A-2036-( ) cap screws to the counterweights. Refer to Figure 3.
  - (a) Using a punch, drive the spring pin inward, then remove and discard the pin.

**CAUTION:** DO NOT REMOVE THE COUNTERWEIGHTS.

- (6) Working one counterweight at a time, perform the following steps:
  - (a) Remove and discard one A-2036-( ) cap screw from the counterweight.

**CAUTION:** DO NOT EXCEED THE THREAD OD OF THE BOLT WHEN APPLYING GASKET SEALANT CM46. INSTALL THE BOLT WITHIN 1 HOUR AFTER APPLYING THE GASKET SEALANT.

- (b) Apply a thin layer of gasket sealant CM46 to the underside of the bolt head and the threads of one 107995-( ) 12-point bolt.
  - (c) Install the 107995-( ) 12-point bolt with CM46 gasket sealant in place of the A-2036-( ) that was removed.
    - 1 Torque the 107995-( ) 12-point bolt to 65 Ft-Lbs. (88 N•m).
  - (d) Repeat steps (6)(a) through (6)(c)1 for the other A-2036-( ) cap screw.
- (7) Repeat step (6) of this procedure for the remaining counterweights.
- (8) Install one spring pin (p/n A-285) through each 107995-( ) 12-point bolt in accordance with Figure 3 and the following steps:
  - (a) Using a No. 42 drill bit (0.0935 inch dia.) through the safety hole in the counterweight, drill through the head of the 107995-( ) 12-point bolt.
  - (b) Install a new spring pin (p/n A-285) through the safety hole until it is flush with the counterweight surface.
- (9) 3-blade Propeller Models Only: If two-piece counterweight slugs were removed, reinstall in accordance with Figure 5 and the following steps:
  - (a) Install the two-piece counterweight slug using the two hex head bolts.
    - 1 Apply the applicable torque the two hex head bolts:
      - a 3/8"-24 UNF-3B thread bolts - 36 Ft-Lbs (48 N•m)
      - b 1/4"-28 UNF-3B thread bolts - 120 In-Lbs (13 N•m)
  - (b) Safety the two hex head bolts using 0.032 inch (0.81 mm) minimum diameter stainless steel safety wire.

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### Counterweight Mounting Bolt Replacement

CAUTION: USE CAUTION WHEN APPLYING CORROSION INHIBITOR CM352 AROUND DE-ICE COMPONENTS.

(10) Apply corrosion inhibitor CM352 to the specified areas of the counterweight in accordance with the following steps:

- (a) Spray the corrosion inhibitor CM352 into a cup or container.
- (b) Using a soft bristled brush, apply corrosion inhibitor CM352 to the 107995-( ) bolt heads, spring pins, and bolt wells of the counterweights. Refer to Figure 3.
  - 1 Be sure the bolt heads, spring pins, and bolt wells are completely covered with corrosion inhibitor CM352.
  - 2 Keep the corrosion inhibitor CM352 away from de-ice components.
  - 3 Optionally, corrosion inhibitor CM352 can be applied to all exposed surfaces of the counterweight.

CAUTION: DO NOT USE BLADE PADDLES TO TURN BLADES.

(11) Manually turn the blades back to feather or high pitch.

- (a) If the piston link arms were disconnected, reconnect the link arms in accordance with Figure 4 and the following steps:
  - 1 Slide the link arms into the the piston slots.
  - 2 Install the link pin units.
  - 3 Install the safety screw into each link pin unit.
    - a Torque the safety screws to 22-26 In-Lbs (2.5-2.9 N•m)
  - 4 Safety the link pin unit/safety screws using 0.032 inch (0.81 mm) minimum diameter stainless steel safety wire.

(12) Install the piston nut onto the pitch change rod.

CAUTION: DO NOT LET THE PITCH CHANGE ROD ROTATE WHEN TORQUING THE PISTON NUT.

- (a) Using a deep-well socket (of applicable size) and a breaker bar, hold the pitch change rod to prevent rotation, then torque the piston nut to 108-132 Ft-Lbs. (147-178 N•m). Refer to Figure 2.

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- (13) Install the spinner dome in accordance with the applicable Hartzell Propeller Owner's Manual.
- (14) Make an entry in the propeller logbook indicating the A-2036-( ) cap screws were replaced in accordance with this Alert Service Bulletin.

**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 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 website at [www.hartzellprop.com](http://www.hartzellprop.com).

**D. Contact Information**

Hartzell Propeller LLC  
Attn.: Product Support Department  
One Propeller Place  
Piqua, Ohio 45356-2634 USA  
Phone: (001) 937.778.4379  
Fax: (001) 937.778.4391  
E-mail: [techsupport@hartzellprop.com](mailto:techsupport@hartzellprop.com)

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Counterweight Mounting Bolt Replacement

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**HARTZELL PROPELLER LLC**  
**ALERT SERVICE BULLETIN APPENDIX**  
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**Counterweight Mounting Bolt Replacement**

1. Warranty Program Information

A. Eligibility

- (1) The Hartzell steel hub propeller models listed in Table 1 of this Alert Service Bulletin are eligible for this warranty program **if** the propeller is used on agricultural/fire fighting aircraft:

B. Parts

- (1) Hartzell Propeller will provide the applicable parts listed in the Material Information section of this Alert Service Bulletin free of charge when the completed and signed Parts Order/Compliance form is processed.

C. Labor

- (1) Hartzell Propeller will authorize payment for the allowable labor charges when the A-2036-( ) Cap Screw Replacement is performed in accordance with the Accomplishment Instructions in this Alert Service Bulletin.
  - (a) Refer to the Manpower section of this Alert Service Bulletin for warranted procedures and allowable man-hours.
  - (b) Labor charges will be reimbursed at the service facility's CURRENT POSTED SHOP LABOR RATE, pending Hartzell Propeller approval.
  - (c) Send the invoice for labor charges to Hartzell Propeller for processing.

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**Parts Order/Compliance Form**

<b>Warranty Claim Number:</b>		
<b>Propeller Information:</b>		
Propeller Model:	Propeller S/N:	
TSN (Time Since New):	TSO (Time Since Overhaul):	
<b>Aircraft Information</b>		
Aircraft Model:	Aircraft Registration #:	
<b>Owner Information:</b>		
Name:		
City:	State:	
Zip/Postal Code:	Country:	
E-mail:	Phone:	
<b>Repair Facility/Shipping Information:</b>		
Company:	Contact Name:	
Address:		
City:	State:	
Zip/Postal Code:	Country:	
E-mail:	Phone:	Fax:
<b>Replacement Parts:</b>		
Refer to the Material Information section of this Alert Service Bulletin for a p/n cross-reference of A-2036-( ) cap screws and 107995-( ) 12-point bolt.	Part Number:	Qty.
	<b>107995- ____</b>	
	<b>A-285</b>	
<b>Signature:</b>		
Repair Technician's Signature:	Date:	
Send this completed <b>and signed</b> form to Hartzell Propeller Product Support Department: Fax - (001) 937.778.4215 or E-mail - warranty@hartzellprop.com		

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Authorized By:
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