

**HARTZELL PROPELLER INC.**  
**SERVICE BULLETIN**  
**HM-SB-001**

**Hovercraft Propellers -  
Hub/Blade Identification and Component Replating**

1. Planning Information

A. Effectivity

- (1) Hartzell Propeller Inc. aluminum hub hovercraft propeller model 103000 is affected by this Service Bulletin.
  - (a) The affected propeller assemblies are installed on Hoverwork Limited model AP1-88/400 hovercraft.
- (2) Hartzell Propeller Inc. composite propeller blade model 103117 is affected by this Service Bulletin.
  - (a) The affected composite propeller blades are installed in the 103000 hovercraft propeller assemblies 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**WARNING:** DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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 NON-AVIATION 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](http://www.hartzellprop.com) for a cross-reference of service documents.

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C. Reason

- (1) Hartzell Propeller Inc. has implemented a new model numbering system for propeller assemblies used in maritime applications. The new numbering system incorporates "HM" into the model number to denote "Hartzell Maritime".
  - (a) The new model number for Hartzell Propeller Inc. 5-blade hovercraft propeller assemblies is HM-5V1-B1000-A. The HM-5V1-B1000-A model is identical to the 103000 propeller model affected by this Service Bulletin.
    - 1 To integrate the affected 103000 propellers into the Hartzell Propeller Inc. maritime model numbering system, this Service Bulletin provides instructions for restamping the hub units on the affected propellers with "HM-5V1-B1000-A".
- (2) Hartzell Propeller Inc. has implemented a new model numbering system for composite propeller blades used in maritime applications. The new numbering system incorporates "M" into the model number to denote "Maritime".
  - (a) The new model number for the composite blades used in Hartzell Propeller Inc. 5-blade hovercraft propeller assemblies is 108MH92. The 108MH92 model composite blade is identical to the 103117 composite blade model affected by this Service Bulletin.
    - 1 To integrate the affected 103117 composite blade assemblies into the Hartzell Propeller Inc. maritime blade model numbering system, this Service Bulletin provides instructions for restamping the affected blades with "108MH92".
- (3) Hartzell Propeller Inc. has determined through field evaluations that the nickel plating on the 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate did not provide adequate corrosion resistance when used in maritime applications.
  - (a) To improve the corrosion resistance, Hartzell Propeller Inc. now manufactures the 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate with cadmium plating.
    - 1 This Service Bulletin provides instructions for replating the 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate to meet current production specifications.

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D. Description

- (1) This Service Bulletin provides Instructions for Continued Operation (ICO).
- (2) This Service Bulletin provides instructions for restamping the hub unit on affected 103000 propellers with the Hartzell Propeller Inc. maritime propeller model number "HM-5V1-B1000-A".
- (3) This Service Bulletin provides instructions for restamping the affected 103117 composite blades with the Hartzell Propeller Inc. maritime composite blade model number "108MH92".
- (4) This Service Bulletin provides instructions for removing the nickel plating from the 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate.
- (5) This Service Bulletin provides instructions for replating the 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate to meet current production specifications.

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E. Compliance

- (1) At next propeller overhaul, restamp the hub unit on the affected 103000 propeller assembly with "HM-5V1-B1000-A" in accordance with the Accomplishment Instructions in this Service Bulletin.

NOTE: Overhaul intervals are specified in Hartzell Propeller Inc. Service Letter HM-SL-001.

- (2) At next propeller overhaul, restamp the affected 103117 composite propeller blade with "108MH92" in accordance with the Accomplishment Instructions in this Service Bulletin.

NOTE: Overhaul intervals are specified in Hartzell Propeller Inc. Service Letter HM-SL-001.

- (3) At next propeller overhaul, remove the nickel plating and replate the 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate in accordance with the Accomplishment Instructions in this Service Bulletin.

NOTE: Overhaul intervals are specified in Hartzell Propeller Inc. Service Letter HM-SL-001.

- (4) Completion of the Compliance requirements 1.E.(1) thru 1.E.(3) is terminating action for this Service Bulletin.

F. Approval

- (1) This technical document is approved by Hartzell Propeller Inc.

G. Manpower

- (1) No additional man-hours are required when performed at overhaul.

H. Weight and Balance

- (1) Not changed

I. Electrical Load Data

- (1) Not changed

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**J. References**

- (1) Hartzell Propeller Inc. Inspection, Repair, and Overhaul Maintenance Manual for Propeller Series HD-E6-3( )( ) Manual 161 (61-10-61)
- (2) Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35)
- (3) Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02) - Volumes 1 thru 11 (Volume 7, Consumable Materials is available on the Hartzell Propeller website at [www.hartzellprop.com](http://www.hartzellprop.com))
- (4) Hartzell Propeller Inc. Operation, Maintenance Manual, and Logbook Manual 300  
(Available on the Hartzell Propeller website at [www.hartzellprop.com](http://www.hartzellprop.com))
- (5) Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301

**K. Other Publications Affected**

- (1) Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02) - Volume 10
- (2) Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301

**2. Material Information**

**A. Materials**

- (1) Parts and consumable materials required for the overhaul and plating procedures are specified in the applicable overhaul manuals.

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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. Removal and Disassembly

- (1) Remove the propeller from the craft in accordance with Hartzell Propeller Inc. Operation, Maintenance Manual, and Logbook Manual 300.
- (2) Propeller disassembly, inspection, and assembly of the propeller and propeller hub must be performed by a certified propeller repair station with the appropriate rating.
  - (a) Disassemble the propeller and remove the blades in accordance with Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301.

B. Marking/Overhauling the Hub Unit

- (1) Restamp the "103000" hub unit as a "HM-5V1-B1000-A" hub unit in accordance with the Parts Identification and Marking chapter of Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02).
- (2) Overhaul the hub unit in accordance with Hartzell Propeller Inc. Inspection, Repair, and Overhaul Maintenance Manual for Propeller Series HD-E6-3( )( ) Manual 161 (61-10-61).
- (3) Complete the propeller overhaul in accordance with Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301.
- (4) Make an entry in the propeller logbook indicating the propeller model number change in compliance with this Service Bulletin.

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C. Marking/Overhauling the Blade Assembly

- (1) Restamp the "103117" blade assembly as a "108MH92" blade assembly in accordance with the Parts Identification and Marking chapter of Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02).
- (2) Overhaul the blade assembly in accordance with Hartzell Propeller Inc. Composite Propeller Blade Maintenance Manual 135F (61-13-35).
- (3) Make an entry in the propeller logbook indicating the blade model number change in compliance with this Service Bulletin.

D. Removing Nickel Plating

- (1) Return the nickel plated 102997 Engine Flange Spacer, 103015 Mounting Flange Cylinder, and 103017 Cover Plate to Hartzell Propeller Inc. for plating removal.
  - (a) Contact Hartzell Propeller Inc. for part return instructions.

E. Replating the Affected Components

- (1) 102997 Engine Flange Spacer
  - (a) Remove nickel plating in accordance with the Accomplishment Instructions in this Service Bulletin.
  - (b) Inspect the 102997 engine flange spacer in accordance with the instructions for the Engine Flange Unit P/N 103184 in the Check chapter of Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301 - except do not replating with nickel as specified.
  - (c) Apply cadmium plating and bake for a minimum of 23 hours in accordance with the Cadmium Replating chapter in Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02).

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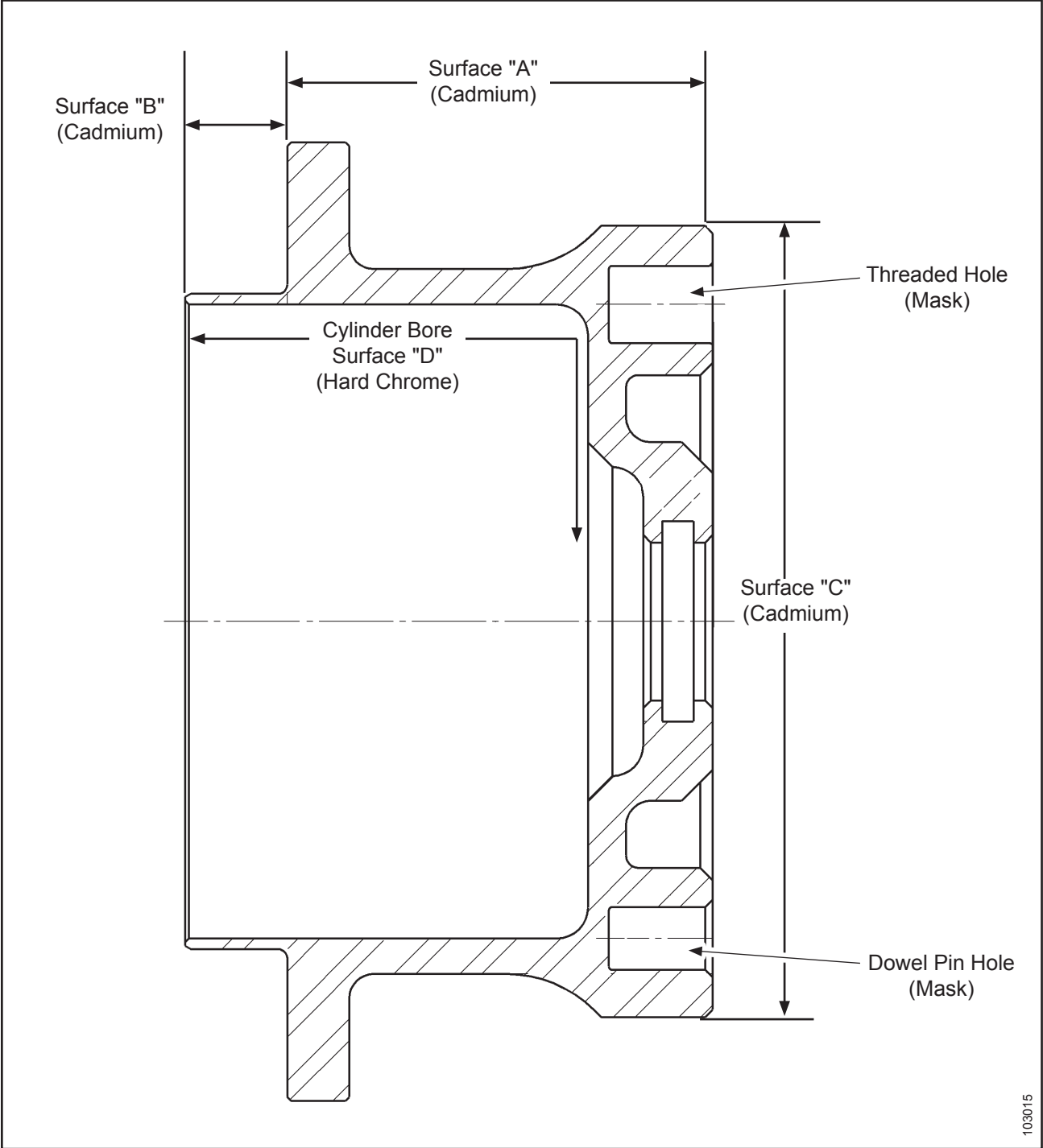
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- (2) 103017 Cover Plate
  - (a) Remove nickel plating in accordance with the Accomplishment Instructions in this Service Bulletin.
  - (b) Inspect the 103017 mounting cover plate in accordance with the Check chapter of Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301.
  - (c) Apply cadmium plating and bake for a minimum of 23 hours in accordance with the Cadmium Replating chapter in Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02).
- (3) 103015 Mounting Flange Cylinder - Refer to Figure 1
  - (a) Remove nickel plating in accordance with the Accomplishment Instructions in this Service Bulletin.
  - (b) Inspect the 103015 mounting flange cylinder in accordance with the Check chapter of Hartzell Propeller Inc. Hovercraft Propeller Maintenance and Overhaul Manual 301.
  - (c) Mask all threaded holes and dowel pin holes.
  - (d) Apply cadmium plating to Surfaces "A", "B", and "C" and bake for a minimum of 23 hours in accordance with the Cadmium Replating chapter in Hartzell Propeller Inc. Standard Practices Manual 202A (61-01-02).
  - (e) Return the 103015 Mounting Flange Cylinder to Hartzell Propeller Inc. for hard chrome plating of the cylinder bore, Surface "D".
    - 1 Contact Hartzell Propeller Inc. for part return instructions.
- (4) Make an entry in the propeller logbook indicating compliance with the replating instructions for the components specified in this Service Bulletin.



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103015

**103015 Mounting Flange Cylinder Replating  
Figure 1**

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F. 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 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](http://www.hartzellprop.com).

G. Contact Information

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