

HARTZELL PROPELLER INC. **SERVICE BULLETIN**

TRANSMITTAL SHEET

SERVICE BULLETIN HC-SB-61-136

Propellers

Blades - Additional Overhaul and Inspection Procedures for Single- and Double-Shoulder Blade Bores

April 25, 2003

This page transmits Revision I to Service Bulletin 136 (HC-SB-61-136), dated August 26, 1982.

- Revision A, dated July 12/83
- Revision B, dated January 28/86
- Revision C, dated March 03/86
- Revision D, dated May 23/86
- Revision E, dated October 14/88
- Revision F, dated August 10/90
- Revision G, dated November 15/91
- Revision H, dated March 12/93
- Revision I, dated April 25/03

Propeller assemblies that have previously complied with Revision H of this Service Bulletin are not required to comply with this revision until the next compliance interval as specified by Airworthiness Directives 88-24-15, 87-16-02, 87-05-01, 86-05-12, and 96-18-14.

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

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

Some of these changes that do not affect technical content may not be highlighted in this transmittal sheet.

This revision is issued to change the following:

- This revision has been issued to align the inspections required by this Service Bulletin with the practices currently specified in Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33) overhaul of a Hartzell aluminum blade.

This Service Bulletin is reissued in its entirety.

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1. Planning Information

A. Effectivity

All Single- and Double-Shoulder Aluminum Blades Manufactured by Hartzell Propeller Inc.

B. Concurrent Requirements

None

C. Reason

(1) During the cleaning and repair process of the subject blades, corrosion, scratches, scrapes, tool marks or pits may be present on the inside blade shank bore or bores and the radius adjacent to the balance hole.

(2) These marks can be susceptible to corrosive attack. To preclude this possibility, the incorporation of the following inspection and rework procedures are to be incorporated into the overhaul procedures.

D. Description

This Service Bulletin introduces blade inspection and rework processes designed to address damage or corrosion in the blade shank bore and balance hole radius during rework.

E. Compliance

Compliance is required during overhaul or as specified in Airworthiness Directives or other Hartzell Bulletins.

F. Approval

This Service Bulletin is approved by the Manager, FAA, Chicago Aircraft Certification Office, ACE 115C, by approval document dated April 25, 2003 as an alternative means of compliance with Airworthiness Directives 88-24-15, 87-16-02, 87-05-01, 86-05-12, and 96-18-14.

G. Manpower

The inspections specified by this Service Bulletin require no additional man-hours when performed in conjunction with propeller overhaul.

H. Weight and Balance

No Change

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I. References

Hartzell Aluminum Blade Manual 133C (61-13-33)
Hartzell Standard Practices Manual 202A (61-01-02)

J. Other Publication Affected

None

2. Material Information

A. Consumable Materials

<u>CM Number</u>	<u>Keyword</u>	<u>Qty</u>
CM11	Acetone	As Required
CM23	Kwik Dry Stoddard Solvent	As Required
N/A	10 percent sodium hydroxide solution	As Required
N/A	25 percent nitric acid solution	As Required
N/A	Dye penetrant	As Required
N/A	Chemical conversion coating	As Required
CM25	Reducer, Wash primer	As Required
CM33	Polane Paint, Black	As Required
CM49	Sealer, 3M EC776 Coating	As Required
CM80	Vacuum Oil, No. 4	As Required

NOTE: All CM references in this bulletin are to the Consumable Materials chapter of Hartzell Standard Practices Manual 202A (61-01-02).

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3. Accomplishment Instructions

A. Inspection

NOTE: The following procedure requires that the propeller be removed from the aircraft and disassembled in accordance with the appropriate manual.

- (1) Remove and discard all blade bore bearings and bushings. Remove the bearing spacers from the blade bore in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (2) Remove lead from the balance hole in accordance with the Blade Balance Hole Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (3) Clean the balance hole in accordance with the Blade Balance Hole Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (4) Visually and dimensionally inspect the balance hole in accordance with the Blade Balance Hole Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (5) Rework the balance hole, if required, in accordance with the Blade Balance Hole Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (6) Eddy current inspect the balance hole in accordance with the Blade Balance Hole Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (7) Shot peen the balance hole, if required, in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (8) Clean the blade bore in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (9) Visually and dimensionally inspect the blade bore in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).

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- (10) Rework the blade bore, if required, in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (11) Dimensionally inspect the blade bore in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (12) Chemically etch the blade bore in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (13) Perform a dye penetrant inspection of the blade bore in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33). The visible dye method is no longer permitted for this inspection.
- (14) Apply chemical conversion coating to the blade bore and balance hole in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (15) Paint the blade bore and balance hole in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (16) Install the bearing spacer and new bearings and bushings in accordance with the Blade Bore Inspection and Overhaul section in the Blade Shank Overhaul Chapter of Hartzell Aluminum Blade Overhaul Manual 133C (61-13-33).
- (17) Make a logbook entry noting compliance with this Service Bulletin.