HARTZELL PROPELLER INC.

SERVICE LETTER

TRANSMITTAL SHEET

HC-SL-61-275

Propeller - New Cylinder, Stop Plate, and Pitch Stop Plate

August 6, 2009

This page transmits a revision to Service Letter HC-SL-61-275.

- Original Issue, dated Mar 10/08
- Revision 1, dated Aug 06/09

Propeller assemblies that have previously complied with the requirements in any version of this Service Letter are not affected by this revision.

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.

This revision is issued to change the following in the Service Letter:

- Add CAUTION for use of latest revision.
- Makes the use of sealant on the exposed cylinder threads optional for the 102345-1 cylinder assembly.

This Service Letter is reissued in its entirety.

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1. Planning Information

   A. Effectivity

      (1) Hartzell HC-E5N-3( )(L) propellers installed on Piaggio P-180 Avanti with serial numbers up to and including HF263 or KU125, except serial numbers listed in Table 1, are affected by this Service Letter.

      (2) Assemblies that have previously complied with a version of this Service Letter are not affected by this revision.

      CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE LETTER. INFORMATION CONTAINED IN THIS SERVICE LETTER MAY BE SIGNIFCANTLY CHANGED FROM EARLIER REVISIONS. USE OF OBSOLETE INFORMATION MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE SERVICE LETTER INDEX FOR THE MOST RECENT REVISION LEVEL OF THIS SERVICE LETTER.

   B. Reason

      (1) The current design and installation of the stop plate on the HC-E5N-3( ) propellers may permit movement of the stop plate.

      (2) Hartzell has made design changes to the cylinder assembly, and the pitch stop plate to permit installation of stop plates. The stop plates will prevent possible movement of the pitch stop plate.

      (3) Movement of the stop plate has not been a service problem on the Piaggio P-180 aircraft. These design changes are considered a design improvement.

      (4) Regulatory action is not expected.

   C. Description

      (1) This Service Letter introduces the new 102345-1 cylinder assembly. This cylinder assembly has two slots to permit installation of the A-7428 stop plates.

      (2) The A-7428 stop plates are designed to attach to the C-7420-1 pitch stop plate and fit in the slots of the cylinder. This prevents the pitch stop plate from rotating in the cylinder.

      (3) This Service Letter provides assembly instructions using the A-7428 stop plates.

      (4) Revision 1 to this Service Letter makes the use of sealant on the exposed cylinder threads optional for the 102345-1 cylinder assembly.

D. Compliance

(1) When replacement of the D-3738-1 cylinder assembly or the C-3739 stop plate is required, the 102345-1 cylinder assembly, the C-7420-1 pitch stop plate, and the A-7428 stop plates must be installed.

E. Approval

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

F. References

(1) Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58)

G. Other Publications Affected

(1) Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58)

2. Material Information

A. Components:

Current Part Number	Description	New Part Number	Quantity
D-3738-1	Cylinder Assembly	102345-1	1
C-3739	Pitch Stop Plate	C-7420-1	1
	Stop Plate	A-7428	1
	Screw, Attaching	B-3384-2H	2
	Washer	B-3851-0463	2

B. Consumable Materials:

(1) Sealant CM93, Hartzell P/N A-6741-93-1, RTV, Black, optional for the 102345-1

HC-E5N-3( )	HC-E5N-3( )L
KU117	HF256
KU119	HF259
	HF260
	HF261
	HF262
Serial Number KU126 and higher	Serial Number HF264 and higher

Propeller Serial Numbers Not Affected
Table 1

3. Accomplishment Instructions

A. Disassemble the propeller as needed in accordance with Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58).

B. Assembly

(1) Install the 102345-1 cylinder assembly in accordance with Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58).

(2) Install the C-7420-1 pitch stop plate in accordance with Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58).

(3) After all blade angles have been set, put an A-7428 stop plate on top of the pitch stop plate with the tab in one of the slots in the cylinder.

(4) Using two B-3384-2H screws and two B-3851-0463 washers, attach the A-7428 stop plate to the pitch stop plate. Torque 9 to 11 ft-lb. (12 to 14 N•m). Safety the screws with 0.032 inch (0.81 mm) minimum diameter stainless steel wire.

(5) Continue with propeller assembly in accordance with Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58).

(a) Application of sealant CM93 to the exposed cylinder threads is optional for the 102345-1 cylinder assembly.

C. Inspection Requirements

(1) Visually and dimensionally inspect the 102345-1 Cylinder Assembly in accordance with cylinder inspection requirements specified in the Check chapter of Hartzell Five Blade Lightweight Turbine Propeller Overhaul Manual 158A (61-10-58).

(2) Visually and dimensionally inspect the C-7420-1 pitch stop plate in accordance with Table 2.

(3) Visually inspect the A-7428 stop plate in accordance with Table 2.

D. Make a logbook entry indicating compliance with this Service Letter.

E. Replacement Parts

(1) The D-3738-1 cylinder assembly has been replaced by the 102345-1 cylinder assembly. The D-3738-1 cylinder is no longer available from Hartzell.

(2) The C-7420-1 pitch stop plate is an alternate for the C-3739 pitch stop plate. The C-3739 pitch stop plate will be available from Hartzell Propeller Inc. The C-7420-1 pitch stop plate and the C-3739 pitch stop plate are not interchangeable.

(3) When the 102345-1 cylinder assembly is installed, the C-7420-1 pitch stop plate and the A-7428 stop plates must be installed.

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Inspect	Serviceable Limits	Corrective Action
A. PLATE, STOP, PITCH		
(1) Visually inspect the pitch stop plate for corrosion, wear, or other foreign object damage.	Corrosion is not permitted. If the pitch stop plate is damaged, dimensionally inspect. Maximum permitted depth of wear or damage is 0.005 inch (0.13 mm).	Remove corrosion using glass bead cleaning. Refer to the Cleaning chapter of Hartzell Standard Practices Manual 202A (61-01-02). Rework is permitted to 0.010 inch (0.25 mm) depth. Maximum total area of rework must not be more than 2 square inches (1290 sq. mm). If the wear or damage is more than the permitted serviceable limits, replace the pitch stop plate.
(2) Visually inspect the pitch stop plate for pitting.	Pitting to a maximum depth of 0.005 inch (0.13 mm) is permitted. Individual pits must be no greater than 0.062 inch (1.57 mm) diameter. No more than 10 nonlinear pits less than 0.062 inch (1.57 mm) diameter within a 1 square inch (645 sq. mm.) area are permitted. Pits may be no closer than 2 diameters (0.125 inch 3.17 mm). “Pin-point” penetrant indications (from pitting) are permitted. Linear pitting is not permitted.	Rework is permitted to a depth of 0.010 inch (0.25 mm). Maximum total area of rework must not be more than 2 square inches (1290 sq. mm). If repair is more than the permitted serviceable limits, replace the pitch stop plate.

Inspection Criteria
Table 2

Inspect	Serviceable Limits	Corrective Action
(3) Using a 10X magnifying glass, visually inspect the pitch stop plate OD threads for cracks or damage.	Damage to 1/2 of one thread total accumulated damage is permitted.	If the damage is more than the permitted serviceable limits, replace the pitch stop plate.
(4) Visually inspect the 14 pitch stop plate threaded holes for damage.	One thread of total accumulated damage is permitted per threaded hole.	If the damage is more than the permitted serviceable limits, replace the pitch stop plate.
(5) Visually inspect the four flat bottom non-threaded holes for damage.	Some displaced material is permitted. Diameter must not be more than 0.300 inch (7.62 mm) diameter at the widest portion. Depth not to be more than 0.290 inch (7.36 mm).	If the damage is more than the permitted serviceable limits, replace the pitch stop plate.

Inspection Criteria
Table 2, continued

Inspect	Serviceable Limits	Corrective Action
B. PLATE, STOP		
(1) Visually inspect the stop plate for corrosion, pitting, wear, or damage.	Corrosion is not permitted. If the stop plate is pitted, worn, or damaged, dimensionally inspect. Maximum permitted depth of pitting, wear, or damage is 0.008 inch (0.20 mm).	Remove corrosion using glass bead cleaning. Refer to the Cleaning chapter of Hartzell Standard Practices Manual 202A (61-01-02). If the pitting, wear, or damage is more than the permitted serviceable limits, replace the stop plate.
(2) Visually inspect the stop plate for Cadmium plate coverage.	A maximum of 10 percent of the base metal visible is permitted.	If the Cadmium plate coverage is less than the permitted serviceable limits, Cadmium replate the stop plate in accordance with the Cadmium Replating chapter of Hartzell Standard Practices Manual 202A (61-01-02).

Inspection Criteria
Table 2, continued