Hartzell Propeller, Inc.
One Propeller Place
Piqua, OH 45356

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INSTALLATION INSTRUCTIONS

SUPPLEMENTAL TYPE CERTIFICATE

SA03162CH

INSTALLATION OF HARTZELL PROPELLER MODEL HC- F3YR-1(A)RF/F8068(B,K) ON *CESSNA MODEL T206H AIRCRAFT*

FAA APPROVED

FAA Approved: _____

MAY 04 2013

CHICAGO AIRCRAFT
CERTIFICATION OFFICE
CENTRAL REGION

Date: _____

LOG OF REVISIONS

Rev	Rev Date	Pages	Description of Revision	Hartzell Approved	FAA Approved
IR	10/15/2012	9	Initial Release	Bob Minnis	

Wrap the blade shanks in several layers of masking or duct tape before removing the spinner dome to prevent damaging the blade and blade paint.

1.0 INTRODUCTION

The modification replaces the existing McCauley Propeller with the Hartzell Propeller model number HC- F3YR-1(A)RF/F8068(B,K), constant speed propeller.

2.0 INSTALLATION INSTRUCTIONS

COMPATIBILITY OF THE INSTALLATION CHANGE WITH PREVIOUSLY APPROVED MODIFICATION MUST BE DETERMINED BY THE INSTALLER

2.1 Applicable Manuals:

- Hartzell Propeller Owner's Manual, 115N (Metal blade)
- Cessna Aircraft Company Maintenance Manual, Model T206H

Disconnect the ignition harness to the spark plugs before removing the existing propeller & spinner. Reconnect after the installation of the replacement propeller and spinner is completed.

Failure to comply can result in bodily injury when the propeller is rotated during removal or re-installation.

2.2 Removal and Installation

Removal / installation of the propeller spinner and propeller are to be accomplished in accordance with Hartzell Propeller Owner's Manual 115N, page 3-1 and Cessna Aircraft Company Maintenance Manual, Model T206H

Note: If the propeller is equipped with an anti-ice or a de-ice system, follow the manufacturer's instructions for removing the components necessary for propeller removal. See Appendix A for Ice Protection Installation Instructions.

2.3 Tooling requirements

- Safety wire pliers
- Torque wrench (1/2 inch drive)
- Torque wrench adapter (Hartzell P/N BST-2860)
- ¾ inch open end wrench

2.4 Consumables

- Quick Dry Stoddard Solvent or Methyl-Ethyl-Ketone (MEK)

2.5 Expendables

- 0.032 Stainless Steel Aircraft Safety Wire
- "O" ring – propeller to engine seal (C-3317-228) or other approved P/N

2.6 Pre-Installation

- Inspection of shipping package
  - Examine the exterior of the shipping container for signs of shipping damage, especially at the box ends around each blade. A hole, tear or crushed appearance at the end of the box (at the propeller tips) may indicate the propeller was dropped during shipment, possibly damaging the blades.

2.7 Uncrating

- Place the propeller on a firm support
- Remove the banding and any external wood bracing from the cardboard shipping container.
- Remove the cardboard from around the hub and blades. Place the propeller on a padded surface that supports the propeller over a large area. Never stand the propeller on a blade tip.
- Remove the plastic dust cover cup from the propeller-mounting flange (if installed).

2.8 Inspection after shipping

- After removing the propeller from the shipping container, examine the propeller components for shipping damage.

2.9 Placard and marking:

- Placard concerning other propellers are obsolete.

2.10 Perform static test, check for function and oil leakage.

- Perform full power static RPM check. Adjust low pitch stop per Section 4 of Hartzell Propeller Owner's Manual 115N.
- Check for proper governor control cable cushion, adjust as required.
- Adjust fuel flow in accordance with Cessna Service Instruction, Setup Procedures or in accordance with STC's that may be installed.
- After adjustment is complete, final safety checks are made, safety wire installation as required, perform flight test and make all required log book entries.

2.11 Change weight and balance record and equipment list:

Installation

Hartzell-Propeller HC- F3YR-1(A)RF/F8068(B,K) propeller with Spinner D-4578-1P:

Weight = 86 Lb.

2.12 Post-installation dynamic balance of the propeller / engine combination is recommended per Section 61-00-15 Page 6-29 of the Hartzell Owner's Manual 115N.

2.13 Make the appropriate logbook entries and return aircraft to service with FAA Form 337 referencing STC.

NOTE:
External configuration, mechanical and electrical interfaces, and limitations of the modified engine model remain identical to the currently approved aircraft models.

Note: All Hartzell-Propeller manuals and service information can be ordered through your Hartzell-Propeller distributor or (if prepaid) directly from:

Hartzell Propeller Inc.
One Propeller Place
Piqua, Ohio 45356

Email
techsupport@hartzellprop.com
Telephone
(937) 778-4379
8am - 5pm US Eastern Time
(937) 778-4376
after hours AOG support
Or web site http://www.hartzellprop.com

APPENDIX A

Propeller de-ice kit (28 volt) is eligible on the following models:

T206H

NOTES:

1. ***For electric de-ice equipped propeller installation, refer to Hartzell drawing 105226, Rev. IR, or later FAA approved revision and below listed instructions.***
2. ***Installation with de-iced propeller limited to aircraft that had a 3-blade propeller previously installed.***

De-ice installation for HC-F3YR-1(A)RF/F8068(B,K) propeller on Cessna T206H aircraft:

NOTE: Installation limited to aircraft with a previously installed 3-blade propeller equipped with existing electro-thermal de-ice system.

1. After removal of the original propeller and spinner, remove the starter ring gear/slip ring assembly. This de-ice installation requires removal of the existing D-40498 slip ring and replacement of the slip ring wire harness leads. All other serviceable airframe and cabin-mounted de-ice equipment may be retained and used with this STC (i.e. brush block, bracket, timer, indicating system). Refer to latest Cessna wiring diagrams and maintenance manuals for existing propeller de-ice system information.
2. Remove the D-40498 slip ring from the starter ring gear in accordance with Cessna aircraft maintenance manual(s). Remove the B-40705 slip ring wire harness leads and replace with Hartzell P/N 104511 slip ring wire harness per Cessna maintenance manuals and Figure 1.

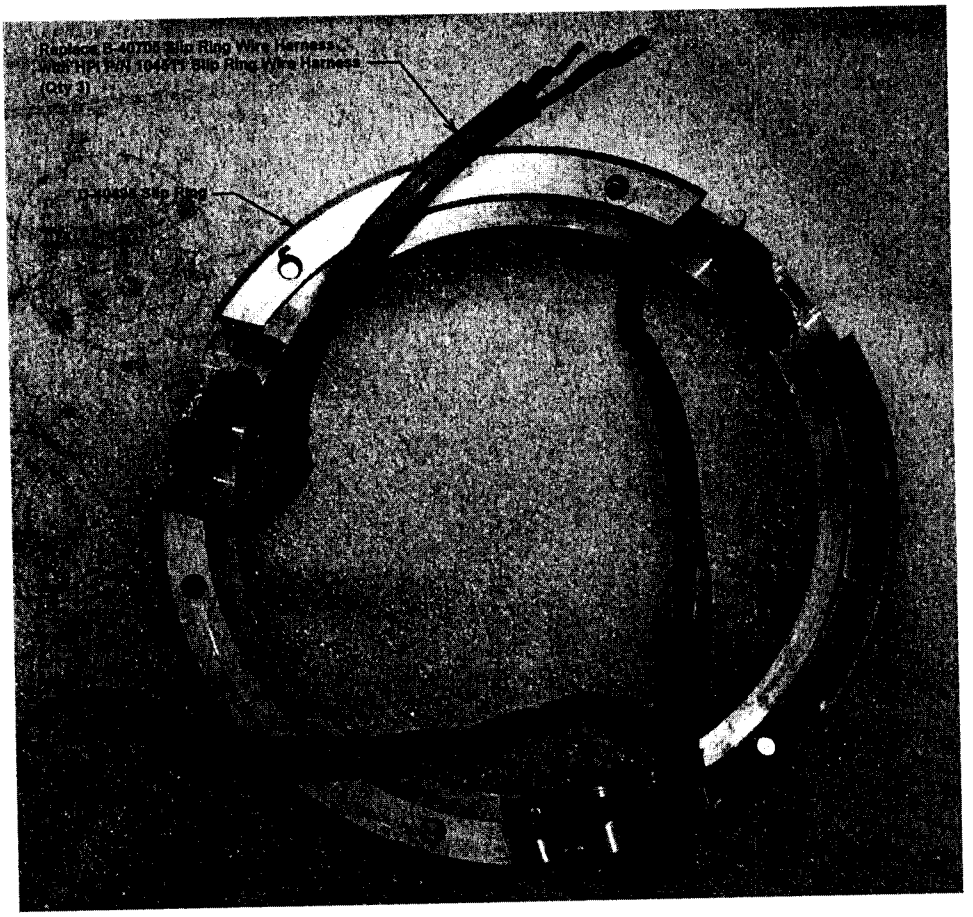

FIGURE 1

3. Verify P/N 104511 inboard (outer diameter terminal) and ground (inner diameter terminal) leads are connected per Figure 2. Torque nuts 8-10 in-lbs. Completely cover nuts, studs and un-insulated ends of terminals with GE RTV 123 (HPI P/N A-6741-93-1) or GE RTV 6703.

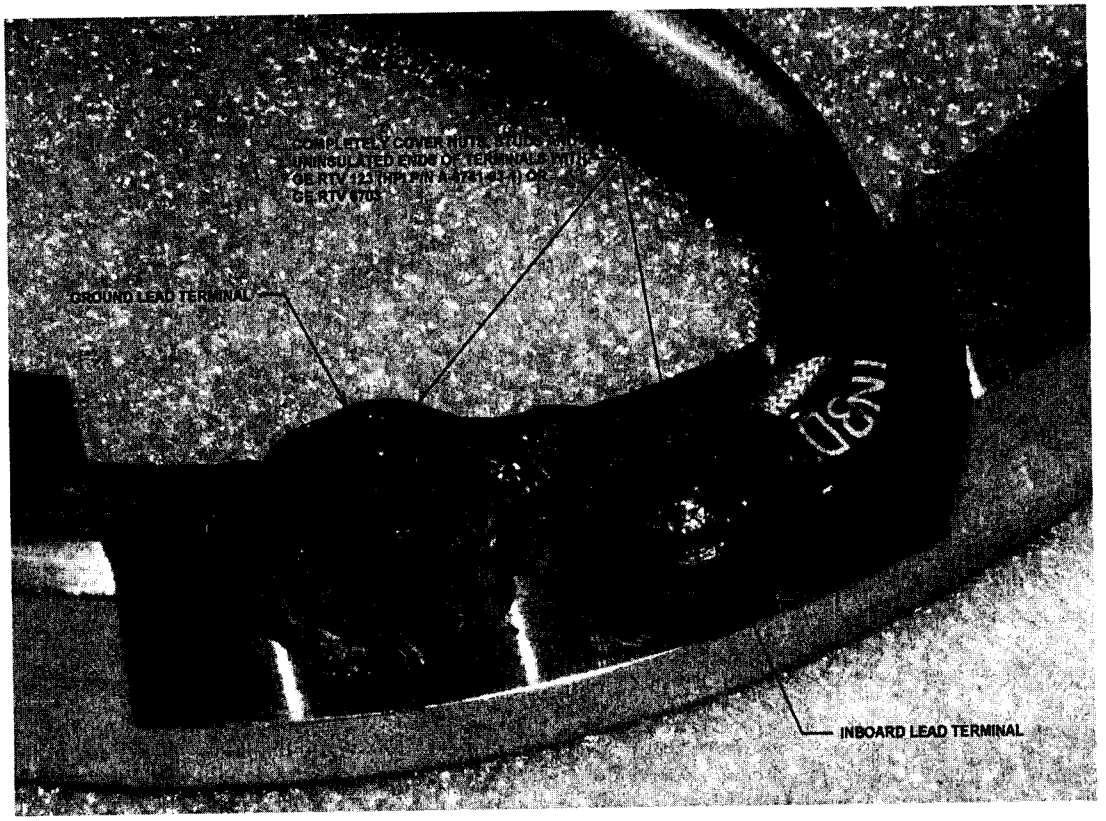

FIGURE 2

4. Route the newly installed wire harness leads through the starter ring gear holes and re-install the slip ring to the starter ring gear in accordance with Cessna aircraft maintenance manual(s). Install the starter ring gear onto the aircraft engine and verify proper alignment of slip ring/brush block per Cessna maintenance manual(s).
5. Install STC propeller – refer to Section 2.2.
6. Attach slip ring lead wires to spinner bulkhead and install remaining de-ice parts in accordance with Hartzell drawing 105226 and propeller de-ice kit 104522.
7. Verify proper function of the propeller de-ice system per latest Cessna service manual.

APPENDIX B

Pitch Stop Settings: Degrees measured at 30" station

Blade Design	Horsepower	RPM	Low	High
F8068	310	2500	15.0 +/- .2	32.0 +/- 1.0

If necessary, adjust low pitch stops per Section 4 of Hartzell Propeller Owner's Manual No. 115N. Should low pitch stop need to be adjusted more than 1 degree (3/4 turn), this may be an indication that your engine is not making rated horsepower.

The above data represent **SEA LEVEL** standard day conditions.

CAUTION

Special attention should be made when checking the stop setting for a turbocharged engine. The ability of these engines to maintain rated power to well above 12,000 ft. MSL, where the air density is much less, will allow the RPM's to be much higher than that of the sea level propeller setting. It is recommended that propeller adjustment be made at sea level. If this is not practicable, setting the propeller at greater than 3000 ft. density altitudes will result in a higher RPM than it would at lower altitudes.