

HARTZELL PROPELLER INC.

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TB20-NST
January 14, 2000

INSTRUCTIONS FOR INSTALLATION,
AND POST-MAINTENANCE RE-INSTALLATION,
OF A HARTZELL HC-C3YR-1RF/F7693F(B) PROPELLER
ON SOCATA TB 20 AND TB 21 AIRCRAFT

LOG OF REVISIONS

<u>Revision Number</u>	<u>Revised Pages</u>	<u>Description of Revision</u>	<u>Date</u>
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NOTE: All changes are indicated by a black vertical line along the left margin.

A P P R O V E D

APR 04 2000

FAA Approved _____ Date _____

CHICAGO AIRCRAFT
CERTIFICATION OFFICE
CENTRAL REGION

TB20-NST

**INSTRUCTIONS FOR INSTALLATION OF A
HARTZELL HC-C3YR-1RF/F7693F(B) PROPELLER
ON SOCATA TB 20 AND TB 21 AIRCRAFT**

SECTION 1: Aircraft which are not equipped with a propeller anti-ice system

1. Remove the original propeller and spinner.
2. Install new propeller and spinner in accordance with Hartzell Owner's Manual number 115().
3. Attach Hartzell Propeller Inc. Airplane Flight Manual Supplement HP-TB20-AFMS (for TB 20 aircraft) or HP-TB21-AFMS (for TB 21 aircraft) to the existing SOCATA Airplane Flight Manual.
4. Revise weight and balance records to show:

Removal of the original Hartzell two-blade propeller and propeller spinner,

Weight of propeller and spinner = 63.0 pounds,
Moment arm = - 47.6 inches.

Installation of Hartzell HC-C3YR-1RF/F7693F propeller and Hartzell A-2295-3P spinner,

Weight of propeller and spinner = 77.5 pounds,
Moment arm = - 47.6 inches.

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

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TB20-NST

**INSTRUCTIONS FOR INSTALLATION OF A
HARTZELL HC-C3YR-1RF/F7693F(B) PROPELLER
ON SOCATA TB 20 AND TB 21 AIRCRAFT**

SECTION 2: Aircraft which are equipped with a propeller anti-ice system

1. Remove the original propeller and spinner.
2. Remove the anti-ice filler tube at the coupling nut near the starter motor.
3. Install the C-4689 travel tube units on the propeller hub per Hartzell drawing D-4695. Leave the tubes loose temporarily.
4. Slide slinger ring attachment bolts (B-3384-17H) and washers (B-3834-0463) through the spinner bulkhead. Install bulkhead to hub per Hartzell drawing D-4695 and Hartzell Manual 115().
5. Slide B-4692 spacers and D-4688 slinger ring unit over the B3384-17H bolts. Leave the slinger ring loose temporarily to gain access to the propeller/engine mounting bolts. Install the propeller on the engine in accordance with Hartzell Owner's Manual number 115().
6. Connect D-4688 slinger ring unit to the C-4689 travel tube units using the rubber A-1866-3 hose pieces, as shown in Hartzell drawing D-4695. Check travel tube-to-blade clearances per Hartzell drawing D-4695, Notes 2 and 3. Safety wire the rubber A-1866-3 hose pieces, as shown in Hartzell drawing D-4695, Note 5.

NOTE: Adjustment of travel tubes and slinger ring tubing is sometimes required during installation due to tolerance stack-up and welding distortion. Carefully bend the tubing to avoid collapsing the tube wall.

7. Torque hub bolts in accordance with Hartzell Owner's Manual number 115(). Torque B-3808-4 nuts for slinger ring to 30-40 in-lbs.
8. Reinstall the anti-ice filler tube at the coupling nut near the starter motor and bend the filler tube aft as required. Check filler tube-to-slinger ring clearance per Hartzell drawing D-4695, Note 4.

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**INSTRUCTIONS FOR INSTALLATION OF A
HARTZELL HC-C3YR-1RF/F7693F(B) PROPELLER
ON SOCATA TB 20 AND TB 21 AIRCRAFT**

SECTION 2: Aircraft which are equipped with a propeller anti-ice system, continued

9. Install spinner dome in accordance with Hartzell Owner's Manual number 115().
10. Attach Hartzell Propeller Inc. Airplane Flight Manual Supplement HP-TB20-AFMS (for TB 20 aircraft) or HP-TB21-AFMS (for TB 21 aircraft) to the existing SOCATA Airplane Flight Manual.
11. Revise weight and balance records to show:

Removal of the original Hartzell two-blade propeller and propeller spinner,

Weight of propeller and spinner = 64.0 pounds,
Moment arm = - 47.6 inches.

Installation of Hartzell HC-C3YR-1RF/F7693FB propeller, Hartzell A-2295-3P spinner, and C-4686 anti-ice kit,

Weight of propeller and spinner = 79.5 pounds,
Moment arm = - 47.6 inches.
12. Make the appropriate logbook entries and return aircraft to service with FAA Form 337 referencing STC.

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Date _____

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