

INST-021320

**INSTRUCTIONS FOR INSTALLATION OF HARTZELL**

**4C1-F650A1/76C04(B)-0.6**

**PROPELLER ON CIRRUS SR22 AIRCRAFT**

**STC SA04468CH**

**LOG OF REVISIONS**

Revision	Revised Pages	Description of Revision	Date
IR	All	Initial Release	07/09/2020

NOTE: All changes are indicated by a black vertical line along the left margin.

FAA Approved \_\_\_\_\_

Les Doud  
STC ODA administrator  
Hartzell STC ODA-100082-CE

Date \_\_\_\_\_

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***Please read these instructions and the Instructions for Continued Airworthiness before starting installation. If you have any questions regarding installation of this STC, please contact Hartzell Propeller at:***

***Phone: (937) 778-4376 or  
1-800-942-7767***

***E-mail: [techsupport@hartzellprop.com](mailto:techsupport@hartzellprop.com)***

**GENERAL**

These STC installation instructions provide the necessary information to install either a 4C1-F650A1/76C04-0.6 propeller or a 4C1-F650A1/76C04B-0.6 propeller with Hartzell model 107593(P) aluminum spinner, along with the optional governor model S-1-90, on the following airplanes:

**Table 1. Aircraft included in this STC**

<b>Aircraft Config</b>	<b>Aircraft Serial Number Range</b>	<b>Max TOGW (lb<sub>f</sub>)</b>	<b>Engine Model</b>	<b>Engine Power/RPM Takeoff Rating</b>
SR22	0002 – 3914	3,400	IO-550-N	310 HP / 2,700 RPM
SR22	3915 & subsequent	3,600	IO-550-N	310 HP / 2,700 RPM

It is the responsibility of the installer to verify compatibility of this STC with previously approved modifications installed on the airplane.

**APPLICABLE MODELS**

This STC propeller conversion applies to all Cirrus aircraft listed in Table 1, equipped with the listed 310 HP engine. No other aircraft / engine combinations are applicable.

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**Section A: Field Installation of STC**

- A.1 Remove the original propeller and spinner per the applicable Cirrus Airplane Maintenance Manual procedures. If installing the optional Hartzell S-1-90 governor, remove the currently-installed governor per the applicable Cirrus Airplane Maintenance Manual procedures.
- A.2 If installing a propeller without ice protection, install the spinner bulkhead on the new propeller hub per Hartzell Propeller Owner's Manual 480 using the "Installation of a Metal Spinner Bulkhead on a Propeller Hub" instructions in the "Bulkhead Installation" section of the manual. Propellers with ice protection include the spinner bulkhead preinstalled as part of the ice protection installation. Ice protection system details and configuration specifications are provided in Hartzell Manual 180, reference Anti-Ice Kit Part # 107638.
- A.3 Install new propeller and spinner dome on aircraft in accordance with Hartzell Propeller Owner's Manual 480 and Spinner Maintenance Manual 127. Follow installation instructions for "Installation of "F" Flange Propellers" in Manual 480. Also reference the Cirrus Airplane Maintenance Manual section appropriate to the aircraft S/N and the configuration being modified. If installing the optional S-1-90 governor, install the governor per the applicable Cirrus SR22 Airplane Maintenance Manual procedures. Use the provided AN3-7 bolt to connect the governor control cable to the governor control arm.

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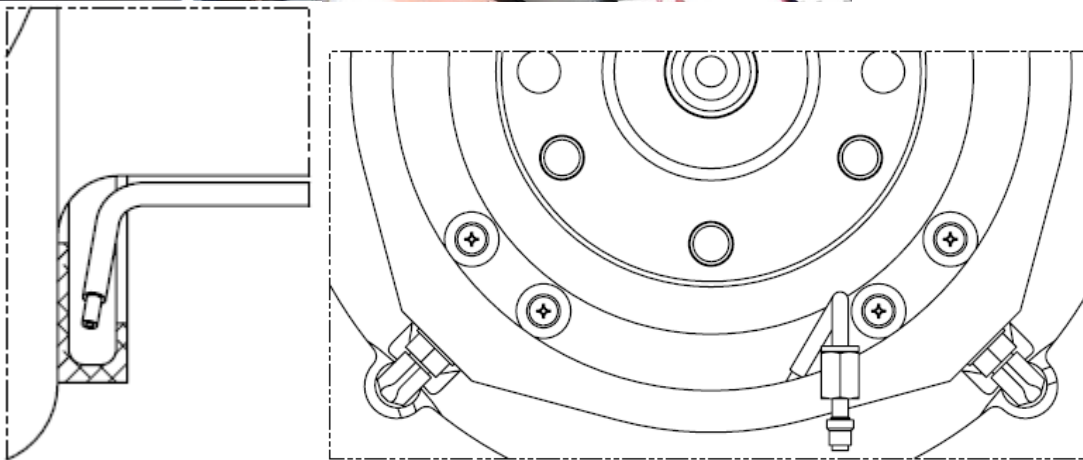
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**For propellers with ice protection:**

A.4 Position the anti-ice slinger ring feed tube centered in the slinger ring groove with the orifice just below flush with the inboard lip of the slinger ring groove. Ensure adequate clearance to rotating components. See images below. Reference Hartzell Manual 180 for blade feed tube positioning, do not position per the Cirrus SR22 Airplane Maintenance Manual.



A.5 Attach Hartzell Propeller, Inc. Airplane Flight Manual Supplement AFMS-021320 to the existing Pilot's Operating Handbook and FAA Approved Airplane Flight Manual. Revise weight and balance records to show:

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**Removal** of original propeller, spinner, & governor

Item	Model	Weight [lb]	Arm [in.]
Propeller (with ice protection)	PHC-J3Y1F-1N/N7605(C)B	61.5	48.0
Propeller (without ice protection)	PHC-J3Y1F-1N/N7605(C)	58.3	48.0
Composite Spinner	102870	2.30	48.0
Aluminum Spinner, polished	A-2295-11P	4.45	48.0
Aluminum Spinner, painted	A-2295-11	4.75	48.0
Governor	15524-001	3.2	61.7

**Installation** of the appropriate Hartzell propeller, spinner, & governor:

Item	Model	Weight [lb]	Arm [in.]
Propeller (with ice protection)	4C1-F650A1/76C04B-0.6	63.8	48.0
Propeller (without ice protection)	4C1-F650A1/76C04-0.6	62.6	48.0
Spinner	107593(P)	4.8	48.0
Governor (optional)	S-1-90	2.7	61.7

- A.6 Perform Post-Installation Checks in accordance with Hartzell Propeller Owner's Manual 480. Due to no pilot propeller control, high speed full throttle taxi may be necessary in order to cycle the propeller and purge the system of air.
- A.7 Make the appropriate logbook entries and return aircraft to service with FAA Form 337 referencing this STC.
- A.8 Perform a functional check-flight using normal procedures, note maximum RPM setting and adjust governor high-RPM stop in accordance with Cirrus SR22 Airplane Maintenance Manual, if necessary.
- A.9 Post-installation dynamic balance of the propeller/engine combination is recommended, but not required, per Chapter 6 of Hartzell Propeller Owner's Manual 480.

**Section B: Cirrus Factory Installation of STC**

- B.1 If installing a propeller without ice protection, install the spinner bulkhead on the new propeller hub per Hartzell Propeller Owner's Manual 480 using the "Installation of a Metal Spinner Bulkhead on a Propeller Hub" instructions in the "Bulkhead Installation" section of the manual. Propellers with ice protection include the spinner bulkhead preinstalled as part of the ice protection installation. Ice protection system details and configuration specifications are provided in Hartzell Manual 180, reference Anti-Ice Kit Part # 107638.
- B.2 Install propeller and spinner dome on aircraft in accordance with Hartzell Propeller Owner's Manual 480 and Spinner Maintenance Manual 127. Follow installation instructions for "Installation of "F" Flange Propellers" in Manual 480. If installing the optional S-1-90 governor,

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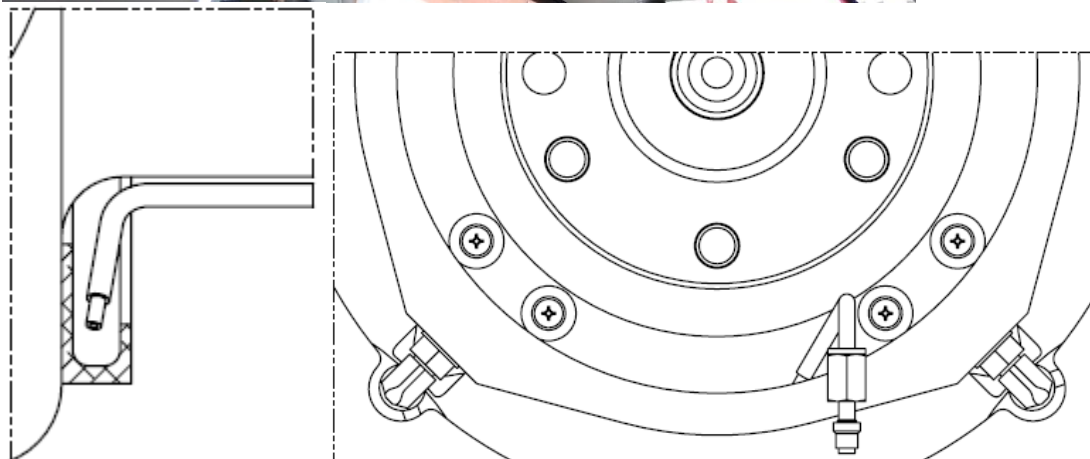
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install the governor per the applicable Cirrus SR22 Airplane Maintenance Manual procedures. Use the provided AN3-7 bolt to connect the governor control cable to the governor control arm.

**For propellers with ice protection:**

B.3 Position the anti-ice slinger ring feed tube centered in the slinger ring groove with the orifice just below flush with the inboard lip of the slinger ring groove. Ensure adequate clearance to rotating components. See images below. Reference Hartzell Manual 180 for blade feed tube positioning, do not position per the Cirrus installation drawings.



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B.4 Attach Hartzell Propeller Inc. Airplane Flight Manual Supplement AFMS-021320 to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

B.5 Update AFM equipment list with the appropriate information below:

Item	Model	Weight [lb]	Arm [in.]
Propeller (with ice protection)	4C1-F650A1/76C04B-0.6	63.8	48.0
Propeller (without ice protection)	4C1-F650A1/76C04-0.6	62.6	48.0
Spinner	107593(P)	4.8	48.0
Governor (optional)	S-1-90	2.7	61.7

B.6 Perform Post-Installation Checks in accordance with Hartzell Propeller Owner's Manual 480. Due to no pilot propeller control, high speed full throttle ground run may be necessary in order to cycle the propeller and purge the system of air.

B.7 Post-installation dynamic balance of the propeller/engine combination is recommended, but not required, per Chapter 6 of Hartzell Propeller Owner's Manual 480.

B.8 Perform a production flight test using normal procedures, note maximum RPM setting and adjust governor high-RPM stop if necessary.

B.9 Make appropriate logbook entries prior to issuance of Airworthiness Certificate.

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**END**