

Hartzell Propeller LLC One Propeller Place Piqua, OH 45356	Title: Installation Instructions, Hartzell 3C1-R430A1/80C01 Propeller on Aviat A-1, A-1A, A-1B, A-1C Aircraft	By: ETB	Page 1 of 6
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		App: JMK	Rev/Date: B 10FEB2025

INSTALLATION INSTRUCTIONS, HARTZELL 3C1-R430A1/80C01 PROPELLER ON AVIAT A-1, A-1A, A-1B, A-1C AIRCRAFT

DOCUMENT NO. 61-24170-39-01

LOG OF REVISIONS

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N/C	ALL	Initial Release	17JUN2024	JMK
A	3, 6	Updated weights and low pitch settings	06DEC2024	JMK
B	ALL	Updated company in header	10FEB2025	JMK

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REFERENCES

The following references must be available to the installer. Contact the associated manufacturer to determine revision status of each document.

1. Hartzell Propeller Owner's Manual 480, latest revision
2. Document Number 61-24170-24-01, Instructions for Continued Airworthiness, Aviat A-1, A-1A, A-1B, A-1C Aircraft with Hartzell 3C1-R430A1/80C01 Propeller, latest revision
3. 70192-002, Aviat Aircraft, Inc. Model A-1 and A-1A Instructions for Continued Airworthiness, latest revision
4. 70192-004, Aviat Aircraft, Inc. Model A-1B Instructions for Continued Airworthiness, latest approved revision
5. 70192-006, Aviat Aircraft, Inc. Model A-1C Instructions for Continued Airworthiness, latest approved revision
6. A22NM, Type Certificate Data Sheet, latest approved revision

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1 APPLICABILITY

This document describes the installation of a Hartzell 3C1-R430A1/80C01 constant speed three-blade propeller with 80 inch diameter utilizing carbon composite blades.

This modification is applicable to the Aviat Aircraft, Inc. A-1, A-1A, A-1B, A-1C-180, and A-1C-200 models, including increased gross weight variants. The applicable engines are Lycoming O-360-C1G, O-360-A1P, IO-360-A1D6.

This modification is not applicable to A-1B aircraft with the "Engine Option Group Configuration" per Section III.a and III.b of Type Certificate Data Sheet A22NM.

The installation of this propeller requires that 8.50 X 6 (or larger) tires be installed in order to achieve adequate propeller ground clearance. See aircraft Type Certificate Data Sheet A22NM Notes 13 and 14 for tire types that are currently approved that meet this size criteria.

2 PROPELLER SPECIFICATIONS

Propeller: Hartzell 3C1-R430A1/80C01

Maximum Diameter: 80 inches

Minimum Diameter: 80 inches

Low Pitch Blade Angle (measured at 30 inch blade station):

Aircraft equipped with Lycoming O-360-C1G or -A1P engine: $9.1^{\circ} \pm 0.2^{\circ}$

Aircraft equipped with Lycoming IO-360-A1D6 engine: $9.5^{\circ} \pm 0.2^{\circ}$

High Pitch Blade Angle (measured at 30 inch blade station): $30.0^{\circ} \pm 1.0^{\circ}$

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3 INSTALLATION

3.1 PROPELLER INSTALLATION

1. Remove existing propeller in accordance with the Aviat Aircraft Instructions for Continued Airworthiness.
2. Perform pre-installation procedures on the new propeller in accordance with Hartzell Owner's Manual 480 in the "Installation and Removal" section. Note: This propeller is a 3C1 style propeller which does not have an air charge.
3. This propeller is approved with the following spinner part numbers: 107974 (primed for paint), 107974F1 (painted matterhorn white), 107974F2 (painted sterling silver metallic).
4. Install the spinner bulkhead on the new propeller hub in accordance with Hartzell Owner's Manual 480 using the procedures found in the Bulkhead Installation subsection of the "Installation and Removal" section.
5. Install the new Hartzell propeller on the aircraft in accordance with Hartzell Owner's Manual 480 "Installation and Removal" section. Use installation instructions for Installation of "R" Flange Propellers in Manual 480.
6. Install the Hartzell spinner dome on the propeller in accordance with Hartzell Owner's Manual 480 using the procedures found in the Spinner Dome Installation subsection of the "Installation and Removal" section.

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3.2 INSTRUMENT AND PLACARD REMARKING

1. If the existing tachometer is not already marked per the markings below, remove it in accordance with the Aviat Aircraft Instructions for Continued Airworthiness referenced above in Step 1 and remark it as follows, then re-install in the same location.
Green Arc: 500 to 2700 RPM
Red Radial: 2700 RPM
2. If a propeller speed restriction placard is installed on the instrument panel adjacent to the tachometer, remove it. It is not required with the new propeller.
3. Perform a ground run-up, leak check and idle RPM check. Adjust engine idle speed if necessary to achieve 600-675 rpm at idle in accordance with the Aviat Aircraft Instructions for Continued Airworthiness referenced above in Step 1.
4. Re-install engine cowlings in accordance with the Aviat Aircraft Instructions for Continued Airworthiness referenced above in step 1.

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3.3 DOCUMENTATION

1. The aircraft empty weight and balance must be updated to reflect the new propeller. The weight and arm for the 3C1-R430A1/80C01 propeller is 46 lbs at FS 4.0. A reference table of exchange weights, depending on the previously installed propeller, is shown in the table below.

If

HC-C2YK-1BF/F7666A	is being removed, then	Subtract 16.0 lbs. at FS 4.0
HC-C2YR-1N/F7605		Subtract 0.5 lbs. at FS 4.0
HC-C2YR-1BF/F8477-4		Subtract 16.5 lbs. at FS 4.0
MTV-15-B/205-58		Add 0.5 lbs. at FS 4.0

2. Insert a copy of Airplane Flight Manual Supplement 61-24170-25-01 inside the aircraft in the "Supplements" section of the existing AFM.
3. Complete FAA form 337 and return the aircraft to service.
4. Perform a functional flight test using normal procedures. Note takeoff RPM during the takeoff roll and climbout. If the aircraft previously had an MTV-15-B/205-58 propeller or if the aircraft is a A-1C-180 model with a Hartzell HC-C2YR-1BF/F8477-4 propeller, the maximum RPM has been previously reduced to 2600 RPM or 2650 RPM due to noise requirements. Adjust the governor high RPM stop in accordance with Aviat Aircraft Instructions for Continued Airworthiness if necessary to achieve 2700 RPM.

END