
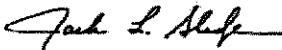
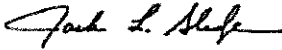
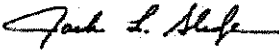



BY: Jack L. Sledge	DATE: 1/17/16	 P.O. Box 1209 Decatur, Texas 76234	DRAWING NO.: 2801
APPROVED:			REVISION: C
PAGE: 1 of 3		TITLE: <u>Inst'l Instructions for Composite Hartzell Propeller</u>	MAKE/MODEL: American Champion 8GCBC

Log of Revisions


<u>Revision Letter</u>	<u>Revision Date</u>	<u>Change Description</u>	<u>Approval</u>
IR	8/17/15	Initial Release	
A	9/16/15	Step 2 – Changed Spinner P/N, was 106215 and 836-52P Step 11 – Added footnote “*or lower limit of tach scale whichever is greater.”	
B	10/30/15	Step 4 – Changed low pitch blade Stop angle for O-360-C engines, was 10.0°	
C	1/17/16	Removed Lycoming O-360-C2A and -C2E engines from Table 1.	

Installation Instructions

- 1) The following reference material is required in addition to the installation instructions outlined herein:
 - American Champion Aircraft 8GCBC Service Manual document number SM-701, latest FAA approved revision.
 - Hartzell Propeller Owner's Manual no. 145, latest FAA approved revision.
- 2) Installation Eligibility: The Hartzell composite propellers and spinner listed below are approved for installation on the American Champion Aircraft Corp. model 8GCBC in combination with the engines shown in Table 1 below. Note: If aircraft is equipped with a fixed pitch propeller, it is not eligible for this new propeller installation.


<u>Aircraft Model</u>	<u>Engine Make/Model</u>	<u>Propeller Make/Model</u>	<u>Spinner Assy Part Number</u>
8GCBC	Lycoming O-360-C1A O-360-C1E O-360-C1G	Hartzell HC-C2YR-1N/NG8301-3	D-4798P
	Lycoming IO-390-A1B6	Hartzell BHC-C2YR-1N/NG8301-3	

Table 1
Approved Engine/Propeller Combinations

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- 3) The diameter limits for the Hartzell model number HC-C2YR-1N/NG8301-3 and BHC-C2YR-1N/NG8301-3 propellers on these aircraft are:
 - Maximum Diameter: 80.0 inches, no cutoff allowed.
- 4) The blade angle limits for the Hartzell composite propellers are:
 - Low Pitch Blade Angle (measured at 30 inch blade station):
Aircraft equipped with Lycoming O-360-C engines: $9.4^{\circ} \pm 0.2^{\circ}$
Aircraft equipped with Lycoming IO-390-A1B6 engine: $10.5^{\circ} \pm 0.2^{\circ}$
 - High Pitch Blade Angle (measured at 30 inch blade station): $30.0^{\circ} \pm 1.0^{\circ}$
- 5) These instructions outline the procedures for removing the existing propeller and installing the Hartzell model number HC-C2YR-1N/NG8301-3 and BHC-C2YR-1N/NG8301-3 propellers in accordance with Supplemental Type Certificate number SA SC.
- 6) Remove the existing propeller and spinner in accordance with the aircraft maintenance manual(s) referenced above in step 1.
- 7) Perform the pre-installation procedures on the new propeller in accordance with Hartzell Owner's Manual 145 in the "Installation and Removal" section. Note: These propellers are a -1 style propeller which does not have an air charge.
- 8) Install the spinner bulkhead on the new propeller hub in accordance with Hartzell Owner's Manual 145 using the procedures found in the Spinner Pre-Installation subsection of the "Installation and Removal" section.
- 9) Install the new Hartzell propeller on the aircraft in accordance with Hartzell Owner's Manual 145 "Installation and Removal" section. Use installation instructions for Installation of "R" Flange Propellers in Manual 145.
- 10) Install the Hartzell spinner dome on the propeller in accordance with Hartzell Owner's Manual 145 using the procedures found in the Spinner Installation subsection of the "Installation and Removal" section. Note: Use the procedures for a Single Piece Spinner Dome.
- 11) If the existing tachometer instrument is not marked per the markings below, remove it in accordance with the aircraft maintenance manual(s) referenced above in Step 1 and remark it as follows:

Green Arc:	*500 to 2700 RPM	*or lower limit of tach scale, whichever is greater.
Red Radial:	2700 RPM	
- 12) If a propeller rpm restriction placard is installed on the instrument panel, remove it. It is not required with the new Hartzell composite propeller.
- 13) Perform a ground run-up, leak check and idle rpm check. Adjust engine idle speed if necessary to achieve 600-700 rpm at idle in accordance with the aircraft maintenance manual listed above in Step 1.
- 14) Re-install engine cowling in accordance with the aircraft maintenance manual referenced above in step 1.
- 15) The weight and center of gravity of the new composite Hartzell propellers is shown in Table 2 below:

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Propeller Model	Weight (lbs)	C.G. (inches)
HC-C2YR-1N/NG8301-3	44.5	-58.58
BHC-C2YR-1N/NG8301-3		

Table 2
Propeller Weight and C.G.

Update the aircraft empty weight and balance records to reflect the removal of the existing propeller and spinner and the installation of the new Hartzell composite propeller and spinner.

- 16) Insert the Alamo Aerospace "Pilot's Operating Handbook and FAA Approved Airplane Flight Manual Supplement", report number 55187-5 in Section 9 of the existing POH/AFM.
- 17) Complete FAA form 337 and return the aircraft to service.