

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

P10EA Revision 5 Hartzell HC-B4W July 30, 2004
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TYPE CERTIFICATE DATA SHEET NO. P10EA

Propellers of models described herein conforming with this data sheet (which is part of Type Certificate No. P10EA) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations provided they are installed, operated and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

Type Certificate Holder	Hartzell Propeller Inc. Piqua, OH 45356
Type	Constant speed; hydraulic (see NOTES 3 and 4)
Engine shaft	SAE Spline (see NOTE 1)
Hub material	Alloy Steel
Blade material	Aluminum Alloy
Number of blades	Four
Hub models	HC-B4W40-2 (see NOTES 1 and 4)

Blades (See NOTES 2 and 6)	Maximum Continuous		Takeoff		Diameter Limits (see NOTE 2)	Approx. Max. Wt. Complete (For Reference Only) (See NOTES 3 and 7)
	HP	RPM	HP	RPM		
W10160-6 ½ to W10160-11 ½	550	2200	600	2250	96" to 91" (-6 ½ to -11 ½)	160 lb.

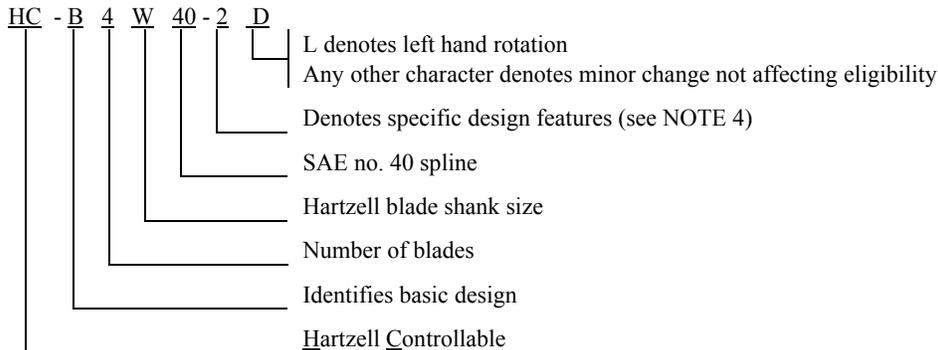
Certification Basis: Civil Air Regulations Part 14 effective December 15, 1956 with amendment 14-1 thereto.

Type certificate no. P10EA issued March 29, 1963.

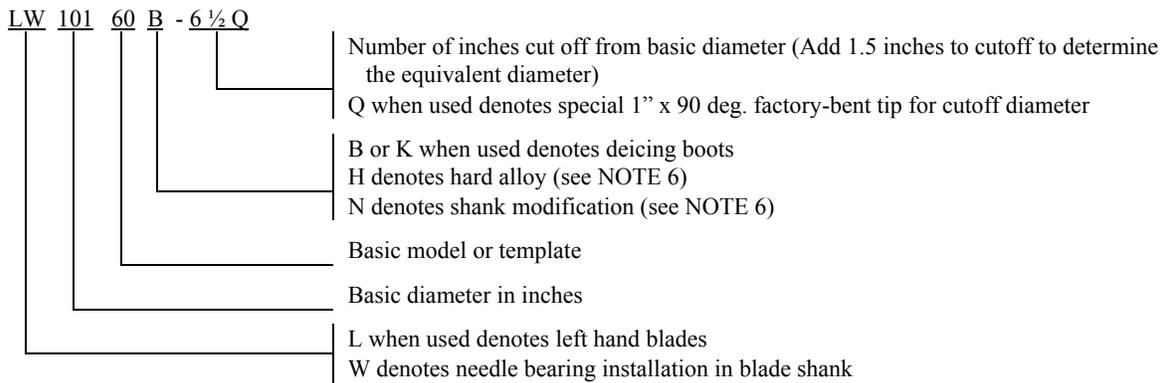
Date of application for Type Certificate: March 5, 1963.

Production Basis: Production Certificate no. 10

NOTE 1. Hub Model Designation

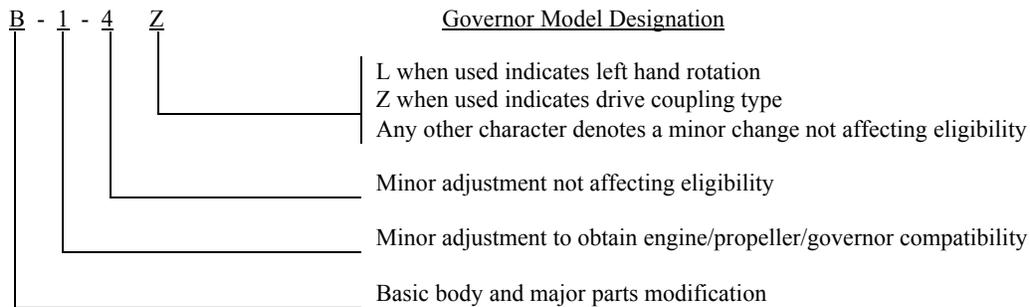


NOTE 2. Blade Model Designation



NOTE 3. Pitch Control

(a) Approved with Hartzell governors per drawings C-4770 and C-4772. Wt.: 4.5 to 6 lb. (see NOTE 10)



(b) The -2 models have counterweighted blades and use governor oil to decrease pitch. (see NOTE 4)

(c) Governors must be approved as part of the aircraft installation regardless of manufacturer. (see NOTE 10)

(d) Maximum control pressure for all models: 400 psig

NOTE 4. (a) Feathering The -2 models incorporate feathering and unfeathering features.

(b) Reversing Not applicable

NOTE 5. Left-Hand Models

The left-hand version of an approved model propeller is approved at the same rating and diameter as listed for the right-hand model. (See NOTES 1 and 2)

NOTE 6. Interchangeability

(a) Blades

- (1) Blades with the suffix “N” in the basic model number may replace those without an “N” either individually or as a set. When the aircraft Type Certificate or Supplemental Type Certificate specifies blades with the letter “N” in the basic model number, the “N” character must be retained in all replacement blade models.

For example: Blades without the “N” suffix may be replaced by “N” suffix blades.
Blades with the “N” suffix may only be replaced by “N” suffix blades.

- (2) Hard and soft alloy blades of the same model designation are interchangeable. (See NOTE 2)

(b) Governors (See NOTE 3)

Hartzell governors with a “Z” suffix in their model designation may be used interchangeably with corresponding governors without the “Z”. For example, the F-6-24Z is a replacement for the F-6-24 and the F-6-24 is a replacement for the F-6-24Z.

NOTE 7. Accessories

(a) Propeller spinner (weight of spinner extra)

Approved with Hartzell and other manufacturer's spinners when listed on Hartzell type design data.

NOTE 8. Shank Fairings Not applicable

NOTE 9. Special Limits

Table of Propeller - Engine Combinations
Approved Vibrationwise for Use on Normal Category Single Engine Tractor Aircraft

The maximum and minimum propeller diameters that can be used from a vibration standpoint are shown below. No reduction below the minimum diameter listed is permissible, since this figure includes the diameter reduction allowable for repair purposes.

The engine models listed below are the configurations on the engine type certificate unless specifically stated otherwise. Modifications to the engine or airframe that alter the power of the engine models listed below during any phase of operation have the potential to increase propeller stresses and are not approved by this list. Such modifications include, but are not limited to, the addition of a turbocharger or turbonormalizer, increased boost pressure, increased compression ratio, increased RPM, altered ignition timing, electronic ignition, full authority digital engine controls (FADEC), or tuned induction or exhaust. Also, any change to the mass or stiffness of the crankshaft/counterweight assembly is not approved by this list.

<u>Hub Model</u>	<u>Blade Model</u>	<u>Engine Model</u>	<u>Max. Dia. (inches)</u>	<u>Min. Dia. (inches)</u>	<u>Placards</u>
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None

NOTE 10. The propeller installation must be approved as part of the aircraft Type Certificate and demonstrate compliance with the applicable aircraft airworthiness requirements.

Propeller models listed herein consist of basic hub and blade models. Most propeller models include additional characters to denote minor changes and specific features as explained in NOTES 1 and 2. Refer to the aircraft Type Certificate Data Sheet for the specific propeller model applicable to the installation.

NOTE 11. Retirement Time

(a) Life Limits and Mandatory Inspections

- (1) Airworthiness limitations, if any, are stated in Hartzell Service Letter 61().

NOTE 12. Special Notes

Refer to Hartzell Manual no. 202() for overspeed and overtorque limits.

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