

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

P23EA  
Revision 4  
TRW Hartzell  
HC-82V  
  
September 15, 1982

TYPE CERTIFICATE DATA SHEET NO. P23EA

Propellers of models described herein conforming with this data sheet (which is a part of type certificate No. P23EA) 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	TRW Hartzell Propeller 350 Washington Avenue Piqua, Ohio 45356
Type	Constant speed; hydraulic (see Notes 3 and 4)
Engine shaft	SAE No. 2 flange, special flange 4" B.C.
Hub material	Alloy steel
Blade material	Aluminum alloy
Number of blades	Two
Hub models eligible	HC-82VF-2; HC-82VL-2, HC-82VK-2 (see Notes 1, 3 and 4, and "Blades Eligible")

Blades Eligible (See Note 2)	Maximum Continuous		Takeoff		Diameter Limits	Approx. Maximum Weight Complete with Grease, Mounting Bolts, etc.
	HP	RPM	HP	RPM		(See Notes 3 and 7)
<b>Hub Model HC-82VF-2, HC-82VK-2</b>						
V7636C-0 to V7636C-8	225	3000	225	3000	76" - 68" (-0 to -8)	64 lb.
V7636D-0 to V7636D-8	225	3000	225	3000	76" - 68" (-0 to -8)	64 lb.
V8433-0 to V8433-10	260	2625	260	2625	84" - 74" (-0 to -10)	67 lb.
V8433S-0 to V8433S-10	260	2625	260	2625	84" - 74" (-0 to -10)	67 lb.
V8833-0 to V8833-10	240	2600	240	2600	88" - 78" (-0 to -10)	68 lb.

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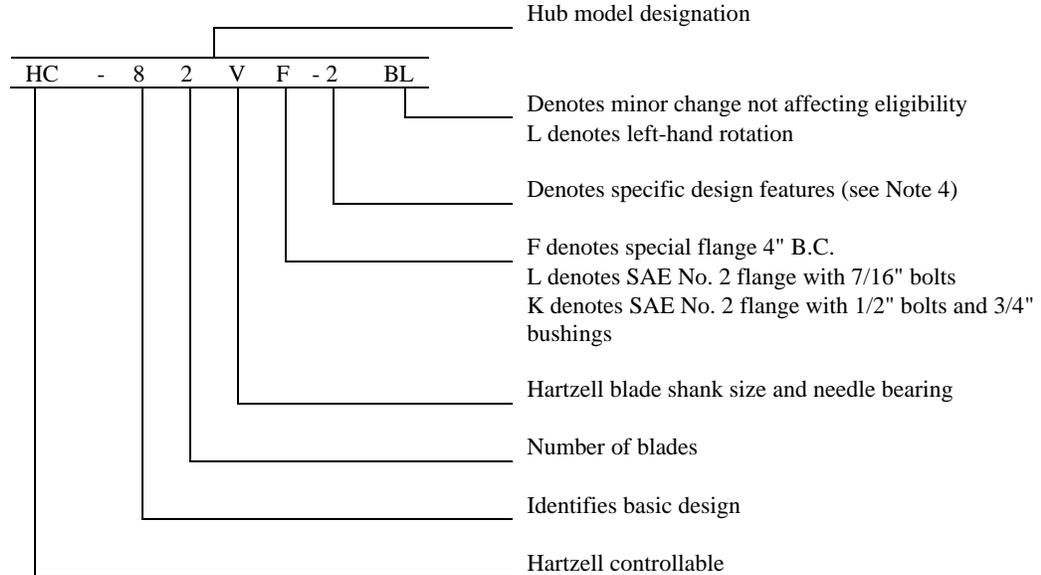
Blades Eligible (See Note 2)	Maximum Continuous		Takeoff		Diameter Limits	Approx. Maximum Weight Complete with Grease, Mounting Bolts, etc.
	HP	RPM	HP	RPM		(See Notes 3 and 7)
<b>Hub Model HC-82VL-2</b>						
V7636C-0 to V7636C-8	180	2700	180	2700	76" - 68" (-0 to -8)	64 lb.
V7636D-0 to V7636D-8	180	2700	180	2700	76" - 68" (-0 to -8)	64 lb.
V8433-0 to V8433-6	180	2700	180	2600	84" - 78" (-0 to -6)	67 lb.
V8433-8 to V8433-14	180	2700	180	2700	76" - 70" (-8 to -14)	67 lb.
V8433S-0 to V8433S-6	180	2600	180	2600	84" - 78" (-0 to -6)	67 lb.
V8433S-8 to V8433S-14	180	2700	180	2700	76" - 70" (-8 to -14)	67 lb.
V8833-0 to V8833-10	180	2600	180	2600	88" - 78" (-0 to -10)	68 lb.

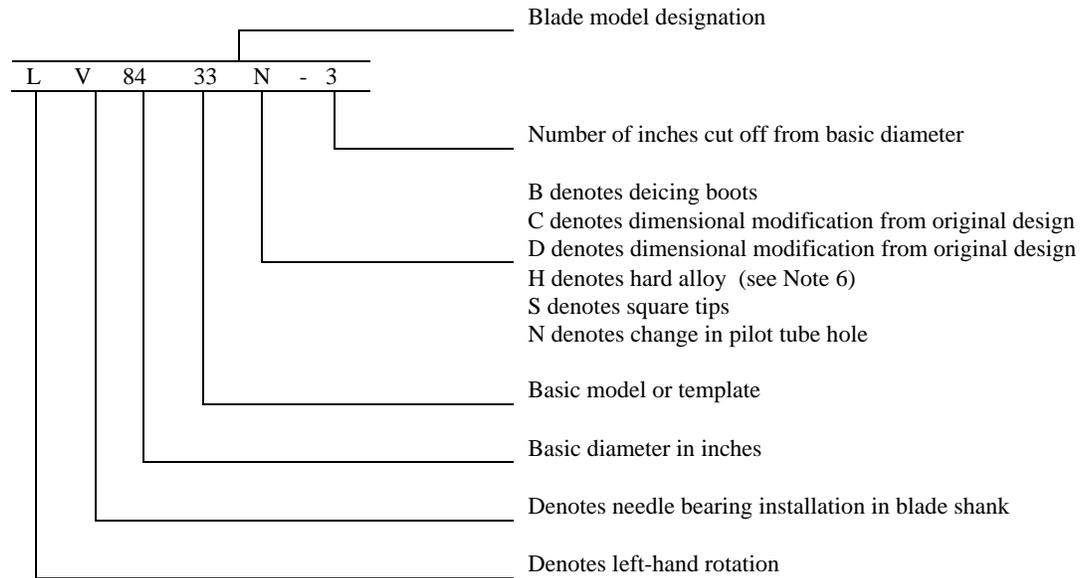
Certification basis FAR 35 effective February 1, 1965, with Amendments 35-1 and 35-2 thereto.  
 Type Certificate No. P23EA issued March 4, 1966.  
 Date of Application for Type Certificate Decemer 1, 1965.

Production basis Production Certificate No. 10.

NOTE 1.

Hub Model Designation



NOTE 2. Blade Model Designation

- NOTE 3. Pitch Control. Eligible with the following governors:
- |  |             |
|--|-------------|
| Hartzell Models B-(x)-(x)- and D-(x)-(x) and F-(x)-(x) | Wt. 4.5 lb. |
| Hoof Model 1-000-007 series                            | Wt. 3.5 lb. |
| Woodward Model x210xxx or x210x-xxx                    |             |
| Hamilton Standard Models 1A4, 1M12, 1P12, and 1Q12     | Wt. 4.5 lb. |

The Hartzell B-0 is the only model which is interchangeable with the Hamilton Standard 1M12 or 1Q12. Other Hartzell models are not interchangeable with any Hamilton Standard model without modification of the latter.

- 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 eligible at the same rating and diameter as listed for the right-hand model. See Notes 1 and 2.

NOTE 6. Interchangeability.  
Blades.

(a) Hard alloy blades eligible only on seaplanes and amphibious aircraft.

(b) Blade models with suffix "N" are interchangeable with blades listed in this type certificate.

Propellers. Only propellers listed in this data sheet may be replaced by corresponding propellers listed in Type Certificate Data Sheet No. P24EA provided model designations are the same except that the identifying basic design digit "8" (see Note 1) is replaced by the letter "A". Only propellers listed in this data sheet are eligible as replacements for corresponding propellers listed in propeller data sheet NO. P878 and P908 in accordance with Note 6.

NOTES 7. Accessories

(a) Propeller Anti-Icing

- (1) Eligible with fluid feed shoes or Icx boots installed in accordance with Hartzell Special Instructions No. 59.
- (2) Eligible with Hartzell fluid feed equipment on propeller models for which the equipment is available.
- (3) Eligible with Cessna 0850305 slinger ring installed only on Cessna spinner (see item (c)(2) below).

- (b) Propeller Deicing
- (1) Eligible with Goodrich Electrical Propeller Deicer when installed according to instruction given in Goodrich Report 59-728.
  - (2) Eligible with Goodyear Electrical Propeller Deicer when installed according to instruction given in Goodyear Report No. 147 dated October 23, 1961.
- (c) Propeller Spinner
- (1) Eligible with Hartzell spinner (weight of spinners extra).
  - (2) Eligible with Cessna spinner dome 0752006 and bulkhead 0850300.

NOTE 8. Not applicable.

NOTE 9.

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.

Hub Model	Blade Model	Engine Model	Max. Dia. (Inches)	Min. Dia. (Inches)	Placards
HC-82V	V7636C	Lycoming O-290-D2A	74	72	Never exceed 2750 rpm
		Lycoming O-320	76	72	None
	V7636D	Lycoming O-290-D2A	76	72	None
		Lycoming O-320	76	70	None
		Lycoming O-320-B1A	72	70	None
		Lycoming O-340	76	72	None
	V8433	Continental O-470-A	84	82	None
		Continental O-470-B	84	80	None
		Continental O-470-H	84	81	None
	HC-82V	V8433	Continental O-470-H	84	82
Continental O-470-K			84	78	None
Continental O-470-L			84	78	None
Continental O-470-M			84	80	None
Continental IO-470-C			84	80	None
Continental IO-470-D			80	78	None
Lycoming O-320			72	70	None
Lycoming O-340			72	70	None
Lycoming O-340-A1A			72	70	None
Lycoming O-540-A1A			77	76	Avoid continuous operation between 2225 and 2275 rpm
Lycoming O-540-A1A			82	80	None
Lycoming O-540-A1A5, -A1B5			77	73	None
Lycoming O-540-A2B			82	80	None
Lycoming O-540-B1A5			77	73	None
Lycoming O-540-B1B5			77	73	None
V8833		Continental O-470-A	88	86	None
		Continental O-470-E	88	86	None
		Continental O-470-J	88	86	None
		Continental O-470-K	88	86	None
		Continental O-470-L	88	86	None
		Lycoming O-540-A1A5	88	86	Avoid continuous operation between 1950 and 2200 rpm

NOTE 10. The word "eligible" as used herein does not signify approval as part of this type certificate. "Eligible" accessories and governors must be approved as part of the aircraft type certificate upon compliance with the applicable airworthiness requirements.

.....END.....