

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

P14EA Revision 4 TRW Hartzell HC-83V  September 15, 1982
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TYPE CERTIFICATE DATA SHEET NO. P14EA

Propellers of models described herein conforming with this data sheet (which is a part of type certificate No. P14EA) 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. 20 spline; Special Flange 4" B.C.
Hub material	Alloy steel
Blade material	Aluminum alloy
No. of blades	Three
Hub models eligible	HC-83V20-1, -2; HC-83VF-2, -3

Blades Eligible (See Note 2)	Maximum Continuous		Takeoff		Diameter Limits	Approx. Weight Complete (For Reference Only) (See NOTES 3 & 7)
	HP	RPM	HP	RPM		
	<u>Hub Model HC-83VF-2(), -3()</u>					
V7636(-)0 to V7636(-)6	260	2600	260	2600	76 - 70" (-0 to -6)	83 lb.
V8433(-)0 to V8433(-)6	240	2600	240	2600	84" - 78" (-0 to -6)	87 lb.
V9333(-)0 to V9333(-)13	320	2060	340	2180	93" - 80" (-0 to -13)	103 lb.

Page No.	1	2	3	4
Rev. No.	4	3	3	3

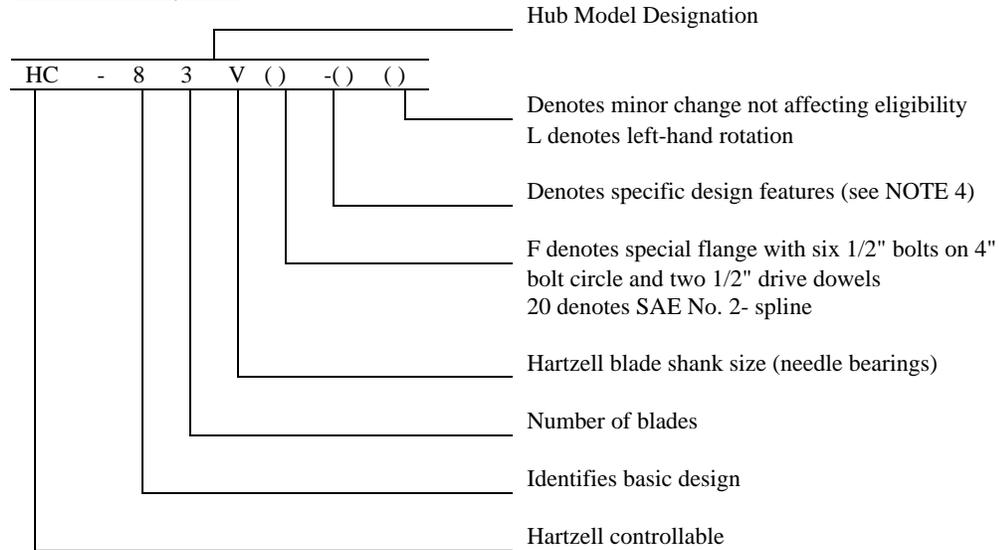
Blades Eligible (See Note 2)	Maximum Continuous		Takeoff		Diameter Limits	Approx. Weight Complete (For Reference Only) (See NOTES 3 & 7)
	HP	RPM	HP	RPM		
<u>Hub Models HC-38V20-1(), -2()</u>						
V7636(-)-0 to V7636(-)-6	280	2180	295	2180	76" - 70" (-0 to -6)	87 lb.
V8433(-)-0 to V8433(-)-6	280	2180	280	2180	84" - 78" (-0 to -6)	91 lb.
V8833(-)-0 to V8833(-)-10	280	1925	295	2180	88" - 78" (-0 to -10)	93 lb.
V9333C-0 to V9333C-13	320	2060	340	2180	93" - 80" (-0 to -13)	98 lb.

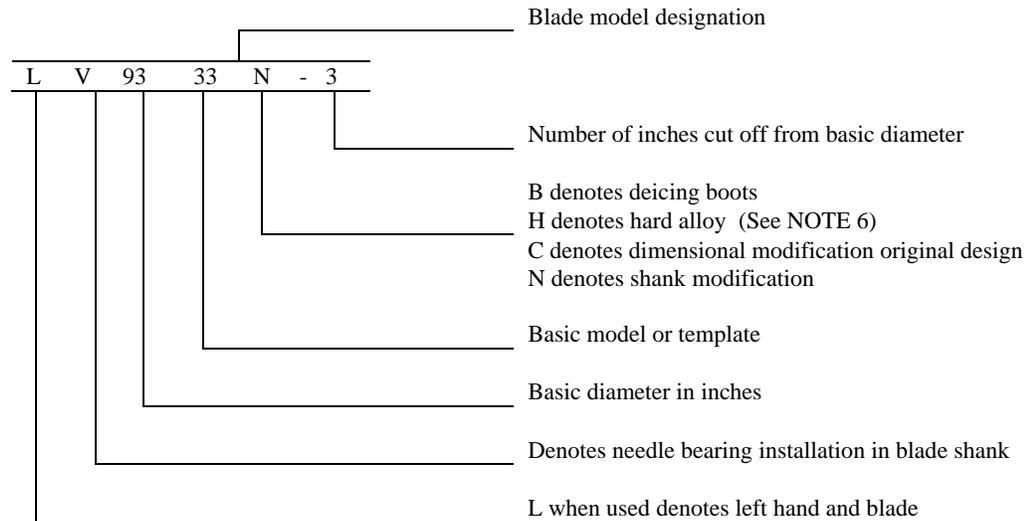
Certification basis Civil Air Regulations Part 14 effective December 15, 1956 with Amendment 14-1 thereto  
 Type Certificate No.  
 Date of application for Type Certificate  
 See Note 11

Production basis Production Certificate No. 10.

NOTE 1.

Hub Model Designation



NOTE 2. Blade Model DesignationNOTE 3. Pitch Control. Eligible with the following controls:

Hartzell Models B-(x)-(x)- and F-(x)-(x)	Wt. 4.5 lb.
Woodward x210xxx series	Wt. 3.5 lb.
Hamilton Standard 1M12, 1P12, and 1Q12, 1A4	Wt. 4.5 lb.
Hoof Model 1,000,007 Series	Wt. 3.5 lb.

The Hartzell B-0 model is the only model which is interchangeable with the Hamilton Standard 1M12 or 1Q12. Other Hartzell models are not interchangeable with any other Hamilton Standard model with modification of the letter.

NOTE 4. Feathering. The -2 and -3 models incorporates a feathering and unfeathering feature. The -1 model does not feather.

Reversing. The -3 model is eligible for installation as reversing propellers with appropriate reversing controls.

NOTE 5. Left-Hand Models. The left-hand version of an approved propeller model is eligible at the same rating and diameter as listed for the right hand model. See NOTES 1 and 2.NOTE 6. Interchangeability.(a) Blades.

Only blades listed in the same group of the following listed groups are sufficiently similar aerodynamically and vibrationwise to permit interchangeability in the same diameter without a flight test. Group (1) 9333C

9333CH (Hard alloy blades are only interchangeable on seaplanes and amphibious aircraft.

(b) Propellers.

Only propellers listed in this data sheet are eligible as replacements for corresponding propellers listed in Type Certificate Data Sheets No. P-6EA and P884 provided the propeller model designations are the same except that the identifying basic design digit "8" (See NOTE 1) is replaced by the letter "A" and the "V" is replaced by the letter "X".

## NOTES 7.

Accessories(a) Propeller Anti-Icing.

- (1) Eligible with fluid feed shoes or Icxex 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.

(b) Propeller Deicing.

- (1) Eligible with Goodrich electrical propeller deicer when installed according to instruction given in Goodrich Report No. 59-728.
- (2) Eligible with Goodyear electrical propeller deicer when installed according to instruction given in Goodyear Report No. AP-147 dated October 23, 1961.

(c) Propeller Spinner.

- (1) Eligible with Hartzell spinner (weight of spinner extra).

## 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.

Propeller Model	Engine Model	Max. Dia. (Inches)	Min. Dia. (Inches)	Placards
V8433	Lycoming GO-435	84	84	None
	Lycoming GO-435-C2B, -C2B1	84	84	None
	Lycoming GO-480-A1A	84	84	None
	Lycoming GO-480-D1A	84	84	None
	Lycoming GO-480-B, -B1B, -B1C, -B1D	84	84	None
	Lycoming GO-480-B1A6	84	84	"Avoid continuous operation on ground between 1300 and 1650 and between 2100 and 2500 rpm."
V8833	Lycoming GO-480-C1B6	86	82	"Avoid continuous operation in flight below 2400 rpm."
V9333C	Lycoming GO-435-C2B	93	87	None
	Lycoming GO-435-C2B1	90	90	None
	Lycoming GO-480-C2C6	93	89	None
	Lycoming GSO-480-A1A6	93	88	None
	Lycoming GO-480-C1D6	93	89	None
	Lycoming GSO-480-B1A6	93	88	None
	Lycoming GSO-480-B2D6	93	91	"Avoid continuous operation between 2800 and 3100 rpm."
	Lycoming GO-480-F2A	90	87	None
	Lycoming GO-480-F2A6	93	87	None
	Lycoming GO-480-F4A6	93	87	None
Lycoming GO-480-F4B6	93	87	None	

## 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 aircraft airworthiness requirements.

## NOTE 11.

Due to an inadvertent duplication TC P49GL was issued for Hub Models HC-83V20-1, and HC-83VF-2, -3. TC P49GL was canceled December 5, 1980. All propellers which were certified under TC P49GL are hereby eligible under TC P14EA.

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