



Blades (See Note 2)	Maximum Continuous		Takeoff		Diameter Limits (See Note 2)	Approx. Max. Wt. Complete (For Reference Only) (See Notes 3 and 7)	Blade Construction (See Note 10)
	HP	RPM	HP	RPM			
8467-0 to 8467-14	400	2575	400	2575	86" to 72" (-0 to -14)	84.5 lb.	Aluminum Alloy
8468-0 to 8468-14	400	2700	400	2700	86" to 72" (-0 to -14)	81.5 lb.	Aluminum Alloy
8470-0 to 8470-14	400	2700	400	2700	86" to 72" (-0 to -14)	80.5 lb.	Aluminum Alloy
8475-0 to 8475-14	400	2650	400	2650	86" to 72" (-0 to -14)	84.5 lb.	Aluminum Alloy
8477-0 to 8477-14	400	2575	400	2575	86" to 72" (-0 to -14)	87.5 lb.	Aluminum Alloy
9587-6 to 9587-22	350	2575	350	2575	91" to 75" (-6 to -22)	84.5 lb.	Aluminum Alloy
9684-12 to 9684-18	330	2400	330	2400	84" to 78" (-12 to -18)	91.5 lb.	Aluminum Alloy
<u>Non-Counterweighted Propellers HC-E3YR-1</u>							
7391-0 to 7391-10	350	2700	350	2700	75" to 65" (-0 to -10)	80.0 lb.	Aluminum Alloy
<u>Non-Counterweighted Propellers HC-I3YR-1</u>							
N7605+2 to N7605-10	350	2700	350	2700	80" to 68" (+2 to -10)	62.5 lb.	Composite
<u>Non-Counterweighted Propellers HC-I3Y1R-1</u>							
N7605+2 to N7605-10	350	2700	350	2700	80" to 68" (+2 to -10)	58.0 lb.	Composite
<u>Non-Counterweighted Propellers HC-E3YR-1, HC-I3YR-1*</u>							
7690	350	2850	350	2850	78"	63.0 lb.	Aramid Composite
<u>Non-Counterweighted Propellers HC-E3YR-1, HC-I3YR-1*</u>							
7890	400	2700	400	2700	80"	70.0 lb.	Aramid Composite
<u>Counterweighted Propellers HC-E3YR-2, HC-E3YR-7, HC-I3YR-2, PHC-I3YF-2*</u>							
C7468-0 to C7468-10	350	2700	350	2700	76" to 66" (-0 to -10)	85.5 lb.	Aluminum Alloy
C7479-2 to C7479-8	380	2900	380	2900	74" to 68" (-2 to -8)	88.0 lb.	Aluminum Alloy
C7663-0 to C7663-10	310	2800	310	2800	78" to 68" (-0 to -10)	81.0 lb.	Aluminum Alloy
C7666-0 to C7666-10	310	2700	310	2700	78" to 68" (-0 to -10)	85.0 lb.	Aluminum Alloy
C7673-0 to C7673-10	310	2700	310	2700	78" to 68" (-0 to -10)	83.0 lb.	Aluminum Alloy
C7854-0 to C7854-8	400	2650	400	2650	80" to 72" (-0 to -8)	82.0 lb.	Aluminum Alloy

Blades (See Note 2)	Maximum Continuous		Takeoff		Diameter Limits (See Note 2)	Approx. Max. Wt. Complete (For Reference Only) (See Notes 3 and 7)	Blade Construction (See Note 10)
	HP	RPM	HP	RPM			
C8459-0 to C8459-14	400	2700	400	2700	86" to 72" (-0 to -14)	83.0 lb.	Aluminum Alloy
C8465-0 to C8465-14	400	2700	400	2700	86" to 72" (-0 to -14)	86.0 lb.	Aluminum Alloy
C8467-0 to C8467-14	400	2575	400	2575	86" to 72" (-0 to -14)	90.0 lb.	Aluminum Alloy
C8468-0 to C8468-14	400	2700	400	2700	86" to 72" (-0 to -14)	87.0 lb.	Aluminum Alloy
C8470-0 to C8470-14	400	2700	400	2700	86" to 72" (-0 to -14)	86.0 lb.	Aluminum Alloy
C8475-0 to C8475-14	400	2575	400	2575	86" to 72" (-0 to -14)	90.0 lb.	Aluminum Alloy
C8477-0 to C8477-14	400	2575	400	2575	86" to 72" (-0 to -14)	93.0 lb.	Aluminum Alloy
C9587-6 to C9587-22	350	2575	350	2575	91" to 75" (-6 to -22)	90.0 lb.	Aluminum Alloy
C9684-12 to C9684-18	330	2400	330	2400	84" to 78" (-12 to -18)	105.0 lb.	Aluminum Alloy
<u>Counterweighted Propellers HC-E3YR-2, HC-I3YR-2, PHC-I3YF-2*</u>							
C7693-0 to C7693-10	400	2700	400	2700	78" to 68" (-0 to -10)	85.5 lb.	Aluminum Alloy

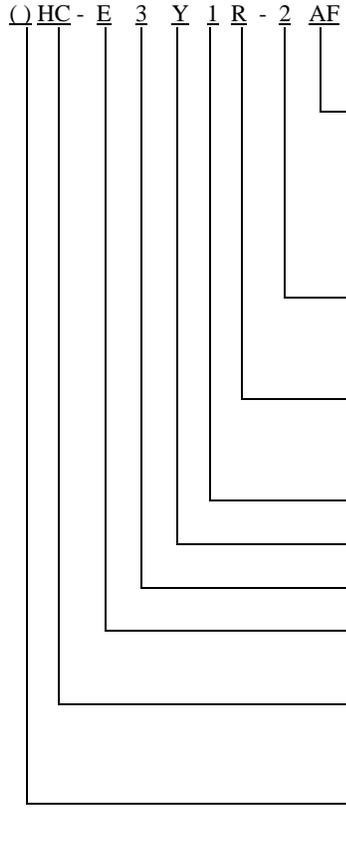
\* Weights shown are for HC-E3YR-1 and -2 models only. Subtract 2 lb. for ( )HC-I3Y( ) models and add 5 lb. for HC-E3YR-7.

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Certification Basis:	<p>14 CFR Part 35 effective February 1, 1965 with amendments 35-1 and 35-2 thereto. Type Certificate No. P33EA issued April 29, 1968 under Delegated Option Authorization procedures of 14 CFR Part 21 Subpart J.</p> <p>Date of application for Type Certificate: March 22, 1968.</p> <p>The following models were included under the original certification basis: HC-E3YR-1, HC-E3YR-2</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 and 35-4 effective May 2, 1977: HC-E3YR-1</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-5 effective October 14, 1980: HC-E3YR-1, HC-E3YR-2, HC-E3YR-7, HC-I3YR-1, HC-I3YR-2</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-6 effective August 1, 1990: HC-E3YR-1, HC-I3YR-1, PHC-I3YF-1, PHC-I3YF-2, HC-E3YR-2, HC-I3YR-2</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-6 effective August 1, 1990 and Special Conditions 35-002-SC as published in the Federal Register Vol. 66., no. 192, Docket no. NE124 on October 3, 2001: HC-I3YR-1, HC-I3Y1R-1</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-8 effective December 23, 2008: HC-I3YR-1, HC-I3Y1R-1</p> <p>Models added after August 31, 2009 are approved in accordance with Organization Designation Authorization procedures of 14 CFR Part 183 Subpart D:</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-9 effective march 19, 2013: HC-E3YR-1</p>
Production Basis:	Production Certificate no. 10

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Note 1: Hub Model Designation



L denotes left hand rotation  
 T denotes spring kit (package) in hub extension  
 U denotes spring kit (package) in propeller dome  
 R when used with -1 model denotes a piston area of 21.6 sq. in.  
 F when used denotes modified pitch change system (See Note 6)  
 A when used with -2 model signifies a single piece shaft extension  
 Any other character denotes a minor change not affecting eligibility

Denotes specific design features (See Note 4)  
 -1: non-feathering, no counterweights, governor oil pressure increases pitch  
 -2: feathering with counterweights, governor oil pressure decreases pitch  
 -7: non-feathering, reversing, with counterweights, governor oil pressure decreases pitch

R denotes SAE #2 flange with six 1/2" bolts and five 3/4" bushings on a 4-3/4" bolt circle  
 F denotes special flange with six 1/2" bolts and two 1/2" dowels on a 4" bolt circle

1 when used denoted hub design modification compatible only with blade models listed in the front of this Data Sheet

Hartzell blade shank size

Number of blades

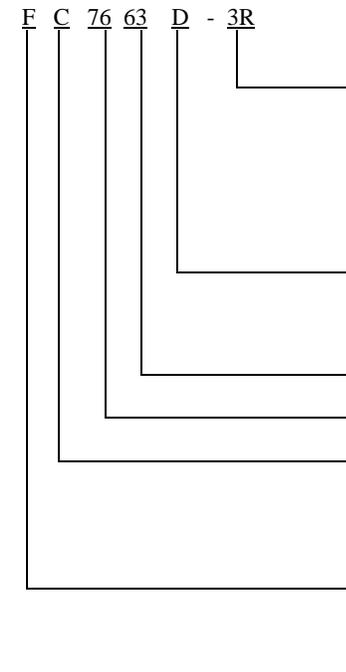
E denotes a 5 inch integral shaft extension  
 I denotes a 2 inch integral shaft extension

Hartzell Controllable

When used indicates Flange Angular Index with respect to #1 blade, viewed clockwise facing propeller flange.

<u>Prefix</u>	<u>Angular Index</u>	<u>Clocking Feature</u>	<u>Flange</u>
Blank .	0 and 180 degrees	Non counter bored hole	R
P	0 and 180 degrees	Dowel pins	F

Note 2: Blade Model Designation



Number when used indicates inches cut off from (or added to if +) basic diameter  
 Q when used denotes special 1" x 90 deg. factory-bent tip. No cutoff permitted.  
 R when used denotes specifically rounded tip for cutoff diameter.  
 Any other character in this location denotes tip shape

D or F denotes a dimensional modification from the original design  
 B or K denotes deicing boots  
 C when used with N7605 blades denotes material modification (See NOTE 6)  
 R when used denotes a rounded tip for the basic diameter  
 S when used denotes a square tip for the basic diameter \*  
 Any other character denotes a minor modification not affecting eligibility

Basic blade model

Basic diameter for a two blade propeller. Add two inches for three blade propellers. \*\*

When used denotes counterweighted blades

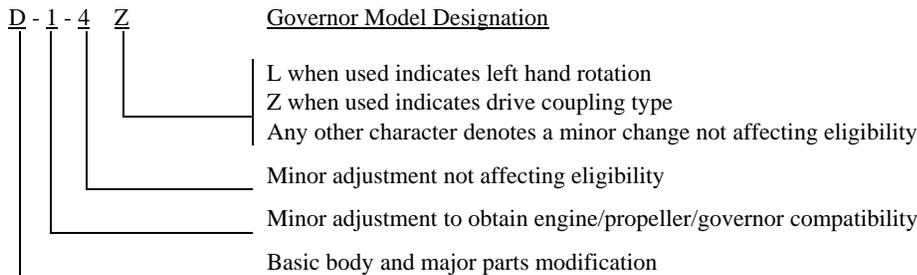
Denotes blade configuration: right-hand tractor unless otherwise noted  
 F denotes a large pitch change knob (See Note 6)  
 H denotes right-hand pusher  
 J denotes left-hand tractor  
 L denotes left-hand pusher  
 N denotes composite blade shank type  
 No prefix is used for composite blades

\* Blades may incorporate either round or square tips, yet may not be marked with an “R” or “S” in their model designation. This character is used to distinguish between two or more tip shapes available at the same diameter. Certain blades use “S” to denote shot peening of the exterior surface. (See Note 6)

\*\* Do not add the two inch diameter correction to the 9684 and C9684 blade designs.

Note 3: Pitch Control

(a) Approved with Hartzell governors per drawings C-4770 and C-4772. Wt.: 4.5 lb. (See Note 10)



(b) The -1 propeller models use oil to increase pitch and do not have counterweighted blades. The -2 and -7 models have counterweighted blades and use oil to decrease pitch. (See Note 4)

(c) Maximum governor output pressure: 350 psi for all propeller models

(d) All governors must be approved as part of the aircraft installation regardless of manufacturer. (See Note 10)

Note 4: Feathering The -1 and -7 models do not feather. The -2 models incorporate feathering and unfeathering features.

Reversing The -7 models incorporate reversing.

Note 5: Left-Hand Models

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

Note 6: Interchangeability

(a) Propellers

“F” type propellers with the modified pitch change system are interchangeable with corresponding propellers with the standard pitch change system. (See Notes 1 and 2)

(b) Governors

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.

(c) Blades

(1) Shot-peened blades may replace non shot-peened blades either individually or as a set (See Note 2)

(2) N7605C( ) blades may replace N7605( ) blades either individually or as a set. N7605( ) blades may not replace N7605C( ) blades.

(d) Ice Protection Systems

Refer to Hartzell Service Letter HC-SL-30-260 for ice protection system component interchangeability.

Note 7: Accessories (See Note 10)

- (a) Propeller ice protection system (weight of ice protection equipment extra)
  - (1) Propeller models listed in this data sheet are approved for use with propeller ice protection equipment listed in Hartzell Manual 159( ) or in other Hartzell type design data.
  - (2) All propeller ice protection equipment must be approved as part of the aircraft installation regardless of manufacturer.
- (b) Propeller spinner (weight of spinner extra)
  - (1) Approved with Hartzell and other manufacturers' spinners when listed on Hartzell type design data.
  - (2) All propeller spinners must be approved as part of the aircraft installation regardless of manufacturer.
- (c) Pressure control valve (weight of pressure control valve extra)
  - Required for operation of -7 model propellers

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 turbnormalizer, 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>
HC-E3YR	F7673( )R F7673( )-( )R	LYC TIO-540-S1AD	78	76	none
HC-E3YR	( )8468	LYC TIO-540-A2B	80	78	none
HC-E3YR	8468	LYC IO-540-K1A5, -K1B5, -K1C5, -K1D5, -L1A5, -M1A5	84	76	none
HC-E3YR	F8475	LYC IO-720-A1A, -A1B, -A1BD	82	80	none
HC-E3YR	F8475	LYC IO-720-A1A, -A1B, -A1BD	80	76	none
HC-E3YR	F9587A-10	LYC TIO-540-J2B	87	86	Do not exceed 30 inches manifold pressure below 2400 RPM

Note 10: 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.

Propellers with composite blades must be evaluated for bird impact resistance prior to approval on any type aircraft. Hartzell Propeller must perform tests and/or analyses based on aircraft configuration and operating conditions to determine the potential hazard as a result of a bird impact.

Note 11: Retirement Time

(a) Life Limits and Mandatory Inspections

(1) Airworthiness limitations, if any, are specified in Hartzell Manuals 115N or 145()

Note 12: Special Notes

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

(b) Refer to Hartzell Service Letter HC-SL-61-61( ) for recommended overhaul periods.

END