

Pilot's Operating Handbook and  
FAA Approved Airplane Flight Manual  
Supplement  
for

# Hartzell Compact Series Propeller w/ Composite Blades

When Hartzell Propeller Model Number PHC-J3YF-1N/N7605 or PHC-J3Y1F-1N/N7605 is installed in the Cirrus Design SR22, this POH Supplement is applicable and must be inserted in the Supplements Section (Section 9) of the Cirrus Design SR22 Pilot's Operating Handbook. This document must be carried in the airplane at all times. Information in this supplement adds to, supersedes, or deletes information in the basic SR22 Pilot's Operating Handbook.

This POH Supplement Change, dated Revision 01: Oct 23, 2008, supersedes and replaces the Original release of this POH Supplement dated 06-17-06.

FAA Approved Joseph C. Miss <sup>23</sup> Oct 2008  
Date \_\_\_\_\_  
for Charles Smalley, Acting Manager  
Chicago Aircraft Certification Office, ACE-115C  
Federal Aviation Administration

## Section 1 - General

For additional information on Hartzell Compact Series Propeller with Composite Blades refer to Hartzell Propeller Owner's Manual, p/n 145, revision 1 or later.

## Section 2 - Limitations

### Power Plant Limitations

#### *Hartzell Compact Series Propeller with Composite Blades*

Propeller Type..... Constant Speed, Three Blade  
Model Number..... PHC-J3YF-1N/N7605  
Diameter.....78.0"

#### *Hartzell Compact Series Lightweight Hub Propeller with Composite Blades*

Propeller Type..... Constant Speed, Three Blade  
Model Number..... PHC-J3Y1F-1N/N7605  
Diameter.....78.0"

## Section 3 - Emergency Procedures

Glide performance on aircraft with the subject propeller installed is slightly reduced. Refer to the following table.

# Maximum Glide

**Conditions**

Power OFF  
 Propeller Windmilling  
 Flaps 0% (UP)  
 Wind Zero

**Example:**

Altitude 10,000 ft. AGL  
 Airspeed Best Glide  

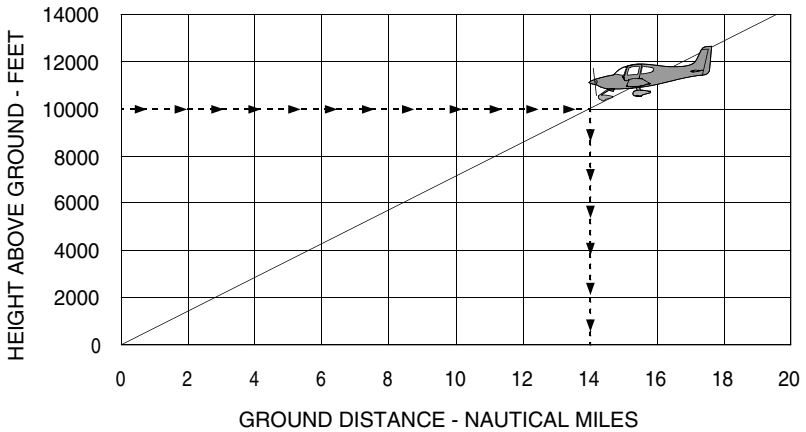

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 Glide Distance 13.9 NM

**Best Glide Speed**

3400 lb 88 KIAS

**Maximum Glide Ratio ~ 8.5 : 1**



SR22\_FM09\_2438

**Figure - 1**  
**Maximum Glide**

## Section 4 - Normal Procedures

### Climb

Aircraft with subject propeller must use higher climb speeds to facilitate engine cooling. For climb, follow basic AFM procedure but use performance data in Section 5 of this supplement.

### Noise Characteristics/Abatement

The certificated noise levels for the Cirrus Design SR22 established in accordance with FAR 36 Appendix G are:

Configuration	Actual	Maximum Allowable
Hartzel 3-blade Propeller PHC-J3YF-1N/N7605	83.50 dB(A)	88.00 dB(A)

## Section 5 - Performance

Installation of the subject propeller changes the climb airspeeds required to meet engine cooling requirements on hot days. Refer to the basic AFM for all performance information except for the following tables.

## Enroute Climb Gradient

**Conditions:**

- Power ..... Full Throttle
- Mixture ..... Set Per Placard
- Flaps ..... 0% (UP)
- Airspeed ..... Best Rate of Climb

**Example:**

Outside Air Temp ..... 20°C  
 Weight ..... 3400 LB  
 Pressure Altitude ..... 4000 FT  


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 Climb Airspeed ..... 109 Knots  
 Gradient ..... 529 FT/NM

• Note •

- Climb Gradients shown are the gain in altitude for the horizontal distance traversed expressed as Feet per Nautical Mile.
- For operation in air colder than this table provides, use coldest data shown.
- For operation in air warmer than this table provides, use extreme caution.

Weight	Press Alt	Climb Speed	CLIMB GRADIENT - Feet per Nautical Mile				
			Temperature ~°C				
			-20	0	20	40	ISA
LB	FT	KIAS					
<b>3400</b>	SL	112	769	731	694	657	703
	2000	110	682	645	610	574	689
	4000	109	598	563	529	495	607
	6000	108	518	484	451	419	528
	8000	107	440	408	376	346	452
	10000	105	366	335	305	276	379
	12000	104	295	266	237	209	308
	14000	103	228	199	171	145	240
	16000	102	163	135	109	84	175
<b>2900</b>	SL	112	951	907	862	819	873
	2000	110	849	806	763	722	867
	4000	109	751	709	669	629	771
	6000	108	657	617	578	540	679
	8000	107	567	529	491	455	591
	10000	105	481	444	408	374	506
	12000	104	398	363	329	296	425
	14000	103	320	286	253	222	346
	16000	102	244	212	181	152	271

## Enroute Rate of Climb

**Conditions:**

- Power.....Full Throttle
- Mixture.....Set Per Placard
- Flaps.....0% (UP)
- Airspeed .....Best Rate of Climb

**Example:**

Outside Air Temp ..... 20°C  
 Weight..... 3400 LB  
 Pressure Altitude..... 6000 FT

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Climb Airspeed..... 108 Knots  
 Rate of Climb ..... 913 FPM

• Note •

- Rate-of-Climb values shown are change in altitude in feet per unit time expressed in Feet per Minute.
- For operation in air colder than this table provides, use coldest data shown.
- For operation in air warmer than this table provides, use extreme caution.

Weight LB	Press Alt FT	Climb Speed KIAS	RATE OF CLIMB ~ Feet per Minute				
			Temperature ~°C				
			-20	0	20	40	ISA
3400	SL	112	1328	1314	1292	1266	1298
	2000	110	1211	1192	1167	1138	1179
	4000	109	1093	1070	1041	1008	1060
	6000	108	974	946	913	877	941
	8000	107	853	821	784	745	822
	10000	105	730	694	654	612	703
	12000	104	606	566	523	477	584
	14000	103	481	437	390	341	465
16000	102	354	306	255	203	346	
2900	SL	112	1636	1622	1600	1572	1606
	2000	110	1503	1484	1458	1426	1479
	4000	109	1368	1345	1314	1278	1344
	6000	108	1233	1204	1169	1130	1208
	8000	107	1095	1062	1023	980	1073
	10000	105	957	918	875	829	939
	12000	104	816	773	726	676	804
	14000	103	675	627	576	523	670
16000	102	532	480	425	368	536	

## Section 6 - Weight & Balance

Installation of the subject propeller adds the following optional (Sym = O) equipment at the weight and arm shown in the following table.

ATA / Item	Description	Sym	Part Number	Unit Wt	Arm
61-01	Propeller Installation <i>without</i> Ice Protection	O	13599-007	67.2	48.0
61-02	Propeller Installation <i>with</i> Ice Protection	O	15319-00x	68.0	48.0
61-03	Lightweight Hub Propeller Installation <i>without</i> Ice Protection	O	13599-010	62.4	48.0
61-04	Lightweight Hub Propeller Installation <i>with</i> Ice Protection	O	15319-013	63.2	48.0

## Section 7 - Systems Description

The airplane employs a 3 blade, constant speed, non-feathering propeller. The composite blades are mounted in an aluminum hub which contains the pitch changing mechanism consisting of a piston/cylinder, piston rod, and blade actuating components. Refer to the basic POH for additional information on the propeller system.

## **Section 8 - Handling, Servicing & Maintenance**

### **Propeller Servicing**

The spinner and backing plate should be cleaned and inspected for cracks frequently. Before each flight the propeller should be inspected for nicks, scratches, and gouges. If found, they should be repaired as soon as possible by a rated mechanic, since a nick or scratch causes an area of increased stress which can lead to serious cracks or the loss of a propeller tip.

Propeller blades are painted with a durable specialized coating that is resistant to abrasion. If this coating becomes eroded, it is necessary to repaint the blades to provide proper erosion protection. Painting should be performed by an authorized propeller repair station.

It is permissible to perform a blade touch-up with aerosol paint in accordance with Hartzell Propeller Owner's Manual, p/n 145, revision 1 or later.

### **Section 10 - Safety Information**

No Change.