

Manual No. 115N  
61-00-15  
Revision 25  
February 2022

# Propeller Owner's Manual and Logbook

“Compact” Models with Aluminum Blades

Constant Speed, Non-Counterweighted  
( )HC-( )( )Y( )-1( )

Constant Speed, Counterweighted  
( )HC-( )( )Y( )-4( )

Constant Speed and Feathering  
( )HC-( )( )Y( )-2( )

Constant Speed and Feathering, Turbine  
( )HC-( )( )Y( )-5( )

**Hartzell Propeller Inc.**  
One Propeller Place  
Piqua, OH 45356-2634 U.S.A.  
Ph: 937-778-4200 (Hartzell Propeller Inc.)  
Ph: 937-778-4379 (Product Support)  
Product Support Fax: 937-778-4215

- (3) The following instructions may be used to determine the correct pressure.
- (a) To use these instructions, the propeller model number must be known, and it must be determined if the propeller blades are counterweighted.
  - (b) The propeller model number is recorded in the log book, and is also stamped on the propeller hub. The propeller model number indicates the presence of a spring kit by an "S," "U," or "T" after the dash number. For example: HC-C3YR-2LUF indicates a "U" spring kit.
  - (c) To determine if the blades are counterweighted, remove the spinner dome and examine the base of the blade. Compare the blades to those shown in the Figure 6-6.

**B. Basic pressures:**

NOTE: Propellers on certain aircraft and engine combinations have experienced instances of inadvertent feathering. These events occurred either at the time of shut down or at low engine RPM. Hartzell Propeller Inc. has determined that this tendency to feather may be reduced or eliminated by lowering the air charge within the propeller cylinder. Those propellers authorized for operation with a reduced air charge are listed in this section.

- (1) All four-blade compact propellers - Table 6-5  
Except: HC-C4YR-2(L)/F(J)C7663DB-6Q - Table 6-6
- (2) All propellers with no counterweights and no spring - Table 6-1
- (3) All propellers with no counterweights and an "S" spring - Table 6-2  
Except: HC-E2Y(K,R)-2RBS( ) - Table 6-3

| °F  | °C  | P.S.I  | Bar         |
|-----|-----|--------|-------------|
| 100 | 38  | 188 ±2 | 12.96 ±0.13 |
| 90  | 32  | 185 ±2 | 12.75 ±0.13 |
| 80  | 27  | 182 ±2 | 12.54 ±0.13 |
| 70  | 21  | 178 ±2 | 12.27 ±0.13 |
| 60  | 16  | 175 ±2 | 12.06 ±0.13 |
| 50  | 10  | 172 ±2 | 11.85 ±0.13 |
| 40  | 4   | 168 ±2 | 11.58 ±0.13 |
| 30  | 1   | 165 ±2 | 11.37 ±0.13 |
| 20  | -7  | 162 ±2 | 11.16 ±0.13 |
| 10  | -12 | 159 ±2 | 10.96 ±0.13 |
| 0   | -18 | 154 ±2 | 10.61 ±0.13 |
| -10 | -23 | 152 ±2 | 10.48 ±0.13 |
| -20 | -29 | 149 ±2 | 10.27 ±0.13 |
| -30 | -34 | 146 ±2 | 10.06 ±0.13 |

**Table 6-1**  
**Air Charge Pressure**

| °F  | °C  | P.S.I | Bar        |
|-----|-----|-------|------------|
| 100 | 38  | 53 ±2 | 3.65 ±0.13 |
| 70  | 21  | 50 ±2 | 3.44 ±0.13 |
| 40  | 4   | 47 ±2 | 3.24 ±0.13 |
| 10  | -12 | 44 ±2 | 3.03 ±0.13 |
| -20 | -29 | 42 ±2 | 2.89 ±0.13 |

**Table 6-2**  
**Air Charge Pressure**

| °F  | °C  | P.S.I | Bar        |
|-----|-----|-------|------------|
| 100 | 38  | 74 ±2 | 5.10 ±0.13 |
| 70  | 21  | 70 ±2 | 4.82 ±0.13 |
| 40  | 4   | 66 ±2 | 4.55 ±0.13 |
| 10  | -12 | 62 ±2 | 4.27 ±0.13 |
| -20 | -29 | 58 ±2 | 3.99 ±0.13 |

**Table 6-3**  
**Air Charge Pressure**