

- (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 6-4.

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

- (4) All propellers with counterweights and no spring - Table 6-4

Except: BHC-C2YF-2CKF/FC8459-8R(B) or
BHC-C2YF-2CLKF/FJC8459-8R(B)
when installed on the Piper PA-34-200T
with Continental TSIO-360-E(B) or LTSIO-
360-(B) engines - Refer to Table 6-10.

NOTE: For BHC-C2YF-2CKF/FC8459-8R(B)
or BHC-C2YF-2CLKF/FJC8459-8R(B)
model propellers that have been
upgraded with the installation of a
feather assist spring - Refer to Table
6-6.

NOTE: Propeller models indicated by * in the
exceptions below have a "U" spring installed,
which is not indicated in the part number.

Except: HC-C3YF-5F* - Table 6-8
HC-C3YN-5A* - Table 6-5
HC-H3YF-3LF - Table 6-4
PHC-I3YF-2AL* - Table 6-5
PHC-J3YF-2(F) - Table 6-9

- (5) All propellers with counterweights and a "T" spring - Table 6-5

Except: HC-E3YR-2ATF on Fuji Model 700
Commander - Table 6-7

- (6) All propellers with counterweights and a "U" spring -
Table 6-5

Except: See Note under (4), above.
(B)HC-C2YF-2(C)(L)(K)U() - Table 6-6
PHC-C3YF-2(L)KUF - Table 6-6
PHC-H3YF-2KUF when installed on the Avia
Accord - Refer to Table 6-6.
PHC-C3YF-2UF/FC7663()-2R when installed
on the Beech 95-(A,B)55(A,B) Baron with
IO-470-L engines - Refer to Table 6-6.
HC-C2YL-2CUF/FC7663-4 when installed
on the Piper PA-23, PA-23-160 with O-320
engines - Refer to Table 6-6.

HC-C3YR-2UF/FC8468()-6R when installed on the Aero Commander 500B, 500S, 500U with Lycoming IO-540-B1(A,C)5, IO-540-E1(A,B)5, or TIO-540-J2B(D) engines - Refer to Table 6-6.

HC-C2YF-2CUF/FC8468()-3 when installed on the Cessna 310(A,B,C,D,E,F,G,H), or E310H, with O-470-M or IO-470-D engines- Refer to Table 6-6.

HC-C2YK-2CUF/FC7666C(B)-4 when installed on the Beech 95, B95, B95A, D95A, or E95 Travel Air with O-360 or IO-360 engines- Refer to Table 6-6.

HC-C4YR-2(L)/F(J)C7663DB-6Q propellers on PA-31 aircraft (Colemill Panther). Refer to Table 6-6.

HC-M2YR-2C(L)EUF/F(J)C7666A when installed on the Beech 76 Duchess with (L)O-360-A1G6D engines - Refer to Table 6-6.

| °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**

| °F | °C | P.S.I. | Bar |
|-----|-----|--------|-------------|
| 100 | 38 | 86 ± 2 | 5.92 ± 0.13 |
| 90 | 32 | 84 ± 2 | 5.79 ± 0.13 |
| 80 | 27 | 82 ± 2 | 5.65 ± 0.13 |
| 70 | 21 | 80 ± 2 | 5.51 ± 0.13 |
| 60 | 16 | 78 ± 2 | 5.37 ± 0.13 |
| 50 | 10 | 76 ± 2 | 5.24 ± 0.13 |
| 40 | 4 | 74 ± 2 | 5.10 ± 0.13 |
| 30 | 1 | 72 ± 2 | 4.96 ± 0.13 |
| 20 | -7 | 70 ± 2 | 4.82 ± 0.13 |
| 10 | -12 | 68 ± 2 | 4.68 ± 0.13 |
| 0 | -18 | 66 ± 2 | 4.55 ± 0.13 |
| -10 | -23 | 64 ± 2 | 4.41 ± 0.13 |
| -20 | -29 | 62 ± 2 | 4.27 ± 0.13 |
| -30 | -34 | 60 ± 2 | 4.13 ± 0.13 |

**Table 6-4
Air Charge Pressure**

| °F | °C | P.S.I. | Bar |
|-----------|------------|--------|-------------|
| 100 to 70 | 38 to 21 | 41 ± 2 | 2.82 ± 0.13 |
| 40 to 70 | 4 to 21 | 38 ± 2 | 2.62 ± 0.13 |
| 0 to 40 | -18 to 4 | 36 ± 2 | 2.48 ± 0.13 |
| -30 to 0 | -34 to -18 | 33 ± 2 | 2.27 ± 0.13 |

**Table 6-5
Air Charge Pressure**

| °F | °C | P.S.I. | kPa |
|-----------|------------|--------|----------|
| 100 to 70 | 38 to 21 | 22 ± 2 | 152 ± 13 |
| 40 to 70 | 4 to 21 | 17 ± 2 | 118 ± 13 |
| 0 to 40 | -18 to 4 | 14 ± 2 | 97 ± 13 |
| -30 to 0 | -34 to -18 | 9 ± 2 | 62 ± 13 |

**Table 6-6
Air Charge Pressure**

| °F | °C | P.S.I | Bar |
|-----------|------------|--------|-------------|
| 100 to 70 | 38 to 21 | 66 ± 2 | 4.55 ± 0.13 |
| 40 to 70 | 4 to 21 | 62 ± 2 | 4.27 ± 0.13 |
| 0 to 40 | -18 to 4 | 58 ± 2 | 3.99 ± 0.13 |
| -30 to 0 | -34 to -18 | 53 ± 2 | 3.65 ± 0.13 |

**Table 6-7
Air Charge Pressure**

| °F | °C | P.S.I | kPa |
|-----------|------------|--------|----------|
| 100 to 70 | 38 to 21 | 27 ± 2 | 187 ± 13 |
| 40 to 70 | 4 to 21 | 25 ± 2 | 173 ± 13 |
| 0 to 40 | -18 to 4 | 24 ± 2 | 166 ± 13 |
| -30 to 0 | -34 to -18 | 22 ± 2 | 152 ± 13 |

**Table 6-8
Air Charge Pressure**

| °F | °C | P.S.I. | Bar |
|-----|-----|---------|-------------|
| 100 | 38 | 104 ± 2 | 7.17 ± 0.13 |
| 70 | 21 | 98 ± 2 | 6.75 ± 0.13 |
| 40 | 4 | 92 ± 2 | 6.34 ± 0.13 |
| 10 | -12 | 87 ± 2 | 5.99 ± 0.13 |
| -20 | -29 | 81 ± 2 | 5.58 ± 0.13 |

**Table 6-9
Air Charge Pressure**

| °F | °C | P.S.I. | kPa |
|-----------|------------|--------|----------|
| 100 to 70 | 38 to 21 | 62 ± 2 | 428 ± 13 |
| 40 to 70 | 4 to 21 | 57 ± 2 | 394 ± 13 |
| 0 to 40 | -18 to 4 | 54 ± 2 | 373 ± 13 |
| -30 to 0 | -34 to -18 | 49 ± 2 | 338 ± 13 |

**Table 6-10
Air Charge Pressure**