GEAR UP CLIMB PERFORMANCE

Figure 5-17

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5-19
GEAR DOWN CLIMB PERFORMANCE

Figure 5-19
FUEL, TIME AND DISTANCE TO CLIMB

Figure 5-21
## Power Setting Table for Lycoming Model IO-360-C1C6

Engine as Installed in PA-28R-201 Arrow  
**Best Power Mixture**

<table>
<thead>
<tr>
<th>Pressure Altitude</th>
<th>ISA Temperature °F °C</th>
<th>55% power 110 BHP @ Prop Mixture Peak EGT + 100°F RPM and Manifold Press.</th>
<th>65% power 130 BHP @ Prop Mixture Peak EGT + 100°F RPM and Manifold Press.</th>
<th>75% power 150 BHP @ Prop Mixture Peak EGT + 100°F RPM and Manifold Press.</th>
<th>Pressure Altitude Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>55 13</td>
<td>23.4 21.4</td>
<td>25.8 23.7</td>
<td>26.0 23.7</td>
<td>1000 2000</td>
</tr>
<tr>
<td>2000</td>
<td>52 11</td>
<td>23.0 21.1</td>
<td>25.4 23.4</td>
<td>25.8 23.4</td>
<td>2000</td>
</tr>
<tr>
<td>3000</td>
<td>48 9</td>
<td>22.6 20.8</td>
<td>25.1 23.1</td>
<td>25.3 23.1</td>
<td>3000</td>
</tr>
<tr>
<td>4000</td>
<td>45 7</td>
<td>22.3 20.5</td>
<td>24.7 22.8</td>
<td>24.9 22.6</td>
<td>4000</td>
</tr>
<tr>
<td>5000</td>
<td>41 5</td>
<td>21.9 20.2</td>
<td>24.3 22.4</td>
<td>24.6 22.4</td>
<td>5000</td>
</tr>
<tr>
<td>6000</td>
<td>38 3</td>
<td>21.6 19.9</td>
<td>24.0 21.9</td>
<td>24.3 21.8</td>
<td>6000</td>
</tr>
<tr>
<td>7000</td>
<td>35 2</td>
<td>21.3 19.7</td>
<td>23.7 21.8</td>
<td>24.0 21.6</td>
<td>7000</td>
</tr>
<tr>
<td>7500</td>
<td>32 0</td>
<td>21.0 F.T.</td>
<td>21.6 F.T.</td>
<td>21.8 F.T.</td>
<td>7500</td>
</tr>
<tr>
<td>8000</td>
<td>30 -1</td>
<td>20.8 19.6</td>
<td>21.4 19.5</td>
<td>21.2 19.4</td>
<td>8000</td>
</tr>
<tr>
<td>9000</td>
<td>27 -3</td>
<td>20.5 19.2</td>
<td>21.1 19.1</td>
<td>21.0 19.0</td>
<td>9000</td>
</tr>
<tr>
<td>9400</td>
<td>25 -4</td>
<td>20.3 18.9</td>
<td>F.T. 18.8</td>
<td>21.0 18.8</td>
<td>9400</td>
</tr>
<tr>
<td>10000</td>
<td>23 -5</td>
<td>20.0 18.7</td>
<td>F.T. 18.7</td>
<td>21.0 18.7</td>
<td>10000</td>
</tr>
<tr>
<td>11000</td>
<td>19 -7</td>
<td>19.6 18.4</td>
<td>F.T. 18.4</td>
<td>21.0 18.4</td>
<td>11000</td>
</tr>
<tr>
<td>12000</td>
<td>16 -9</td>
<td></td>
<td>18.1</td>
<td>21.0 18.1</td>
<td>12000</td>
</tr>
<tr>
<td>13000</td>
<td>12 -11</td>
<td></td>
<td>17.8</td>
<td>21.0 17.8</td>
<td>13000</td>
</tr>
<tr>
<td>14000</td>
<td>9 -13</td>
<td></td>
<td>17.5</td>
<td>21.0 17.5</td>
<td>14000</td>
</tr>
</tbody>
</table>

**Note:**
To maintain constant power, correct manifold pressure approximately 0.16" Hg for each 10°F (5.5°C) variation in inlet air temperature from standard altitude temperature. Add manifold pressure for air temperatures above standard; subtract for temperatures below standard. Full throttle manifold pressure values may not be obtainable when atmospheric conditions are non-standard.
## Power Setting Table for Lycoming Model IO-360-C1C6

### Engine as Installed in PA-28R-201 Arrow  Best Economy Mixture

<table>
<thead>
<tr>
<th>Pressure Altitude</th>
<th>ISA Temperature °F</th>
<th>55% Power 110 BHP @ Propeller Mixture Peak EGT Manifold Pressure - In. Hg</th>
<th>65% Power 130 BHP @ Propeller Mixture Peak EGT Manifold Pressure - In. Hg</th>
<th>Pressure Altitude Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet</td>
<td>2200 RPM</td>
<td>2500 RPM</td>
<td>2200 RPM</td>
<td>2500 RPM</td>
</tr>
<tr>
<td>S.L.</td>
<td>59</td>
<td>24.8</td>
<td>22.2</td>
<td>27.5</td>
</tr>
<tr>
<td>1000</td>
<td>55</td>
<td>24.4</td>
<td>22.0</td>
<td>27.1</td>
</tr>
<tr>
<td>2000</td>
<td>52</td>
<td>24.0</td>
<td>21.8</td>
<td>26.7</td>
</tr>
<tr>
<td>3000</td>
<td>48</td>
<td>23.7</td>
<td>21.5</td>
<td>26.3</td>
</tr>
<tr>
<td>4000</td>
<td>45</td>
<td>23.3</td>
<td>21.3</td>
<td>26.0</td>
</tr>
<tr>
<td>5000</td>
<td>41</td>
<td>22.9</td>
<td>21.1</td>
<td>25.6</td>
</tr>
<tr>
<td>5250</td>
<td>40</td>
<td>22.8</td>
<td>21.0</td>
<td>F.T.</td>
</tr>
<tr>
<td>6000</td>
<td>38</td>
<td>22.5</td>
<td>20.8</td>
<td>F.T.</td>
</tr>
<tr>
<td>7000</td>
<td>34</td>
<td>22.1</td>
<td>20.6</td>
<td>22.8</td>
</tr>
<tr>
<td>8000</td>
<td>30</td>
<td>21.8</td>
<td>20.4</td>
<td>22.6</td>
</tr>
<tr>
<td>8750</td>
<td>28</td>
<td>21.5</td>
<td>20.2</td>
<td>F.T.</td>
</tr>
<tr>
<td>9000</td>
<td>27</td>
<td>21.3</td>
<td>20.1</td>
<td>9000</td>
</tr>
<tr>
<td>10000</td>
<td>23</td>
<td>19.9</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>11000</td>
<td>19</td>
<td>18.7</td>
<td>11000</td>
<td></td>
</tr>
<tr>
<td>12000</td>
<td>16</td>
<td>18.0</td>
<td>12000</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** To maintain constant power, correct manifold pressure approximately 0.16" Hg for each 10°F (5.5°C) variation in inlet air temperature from standard altitude temperature. Add manifold pressure for air temperatures above standard; subtract for temperatures below standard. Full throttle manifold pressure values may not be obtainable when atmospheric conditions are non-standard.
BEST POWER CRUISE (75% Power)

Figure 5-25
BEST POWER CRUISE (55% Power)

Figure 5-25b

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5-25b
ECONOMY CRUISE (55% Power 2200 RPM)
Figure 5-27

Fuel Flow: 8.5 GPH
Cruise Pressure Altitude: 6000 ft
Cruise Temperature: 10°C
Cruise True Airspeed: 120 knots (approx)
ECONOMY CRUISE (55% Power 2500 RPM)
Figure 5-27a

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 5-26a
ECONOMY CRUISE (65% Power 2200 RPM)

Figure 5-27b
ECONOMY CRUISE 65% POWER

MIXTURE: PEAK EGT
CRUISE RPM: 2500
Gear Up, Flaps UP, 2750 Pounds Gross Weight

Fuel Flow: 10.3 GPH
Cruise Pressure Altitude: 6000 ft
Cruise Temperature: 10°C
Cruise True Airspeed: 130 kt (approx)

Pressure Altitude - Feet
12000 11000 10000 9000 8000 7000 6000 5000 4000 3000 2000 1000 0
S.L. 105 110 115 120 125 130 135

TRUE AIRSPEED - KNOTS

ECONOMY CRUISE (65% Power 2500 RPM)
Figure 5-27c

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5-26c
BEST POWER RANGE (2500 RPM)

Figure 5-29
BEST POWER RANGE

Example:
- Cruise Pressure Altitude: 6000 ft
- Cruise Power: 65%
- Total Range With Reserve: 721 NM
- Total Range Without Reserve: 808 NM

MIXTURE: 100°F RICH OF PEAK EGT
- CRUISE RPM: 2200
- FUEL: 72 GALS USABLE
- ASSOCIATED CONDITIONS:
  - 2750 LBS, I.S.A., NO WIND
- Range includes fuel required for takeoff, climb, & powered descent

FUEL FLOWS
- Power GPH
  - 65%: 11.0
  - 55%: 9.6

Note: RANGE - NAUTICAL MILES (Includes Takeoff, Climb & Descent Dist.)
- Add 2 N.M. for each 10°F above I.S.A.; Subtract 2 N.M. for each 10°F below. (Applicable to 65% power only)
BEST ECONOMY RANGE (2200 RPM)

Figure 5-31

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BEST ECONOMY RANGE (2500 RPM)

Figure 5-31a
BEST POWER ENDURANCE (2500 RPM)
Figure 5-33

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BEST POWER ENDURANCE (2200 RPM)

Figure 5-33a
BEST ECONOMY ENDURANCE (2200 RPM)
Figure 5-33b

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5-29b