

Fuel Capacity:

Standard Tanks:

Total Capacity: 43 gallons.

Total Capacity Each Tank: 21.5 gallons.

Total Usable: 40 gallons.

Long Range Tanks:

Total Capacity: 54 gallons.

Total Capacity Each Tank: 27 gallons.

Total Usable: 50 gallons.

Integral Tanks:

Total Capacity: 68 gallons.

Total Capacity Each Tank: 34 gallons.

Total Usable: 62 gallons.

**NOTE**

To ensure maximum fuel capacity when refueling and minimize cross-feeding when parked on a sloping surface, place the fuel selector valve in either LEFT or RIGHT position.

**OIL**

Oil Specification:

MIL-L-6082 Aviation Grade Straight Mineral Oil: Used when the airplane was delivered from the factory and should be used to replenish the supply during the first 25 hours. This oil should be drained after the first 25 hours of operation. Refill the engine and continue to use until a total of 50 hours has accumulated or oil consumption has stabilized.

MIL-L-22851 Aviation Grade Ashless Dispersant Oil: Oil conforming to Avco Lycoming Service Instruction No. 1014, and all revisions and supplements thereto, **must be used** after first 50 hours or oil consumption has stabilized.

Recommended Viscosity for Temperature Range:

All temperatures, use multi-viscosity oil or

Above 16° C (60° F), use SAE 50

-1° C (30° F) to 32° C (90° F), use SAE 40

-18° C (0° F) to 21° C (70° F), use SAE 30

**NOTE**

When operating temperatures overlap, use the lighter grade of oil.

Oil Capacity:

Sump: 7 Quarts.

Total: 8 Quarts.

## TIME, FUEL, AND DISTANCE TO CLIMB

### MAXIMUM RATE OF CLIMB

**CONDITIONS:**

Flaps Up  
Full Throttle  
Standard Temperature

**NOTES:**

1. Add 1.1 gallons of fuel for engine start, taxi and takeoff allowance.
2. Mixture leaned above 3000 feet for maximum RPM.
3. Increase time, fuel and distance by 10% for each 10°C above standard temperature.
4. Distances shown are based on zero wind.

| WEIGHT<br>LBS | PRESSURE<br>ALTITUDE<br>FT | TEMP<br>°C | CLIMB<br>SPEED<br>KIAS | RATE OF<br>CLIMB<br>FPM | FROM SEA LEVEL |                      |                |
|---------------|----------------------------|------------|------------------------|-------------------------|----------------|----------------------|----------------|
|               |                            |            |                        |                         | TIME<br>MIN    | FUEL USED<br>GALLONS | DISTANCE<br>NM |
| 2400          | S.L.                       | 15         | 76                     | 700                     | 0              | 0.0                  | 0              |
|               | 1000                       | 13         | 76                     | 655                     | 1              | 0.3                  | 2              |
|               | 2000                       | 11         | 75                     | 610                     | 3              | 0.6                  | 4              |
|               | 3000                       | 9          | 75                     | 560                     | 5              | 1.0                  | 6              |
|               | 4000                       | 7          | 74                     | 515                     | 7              | 1.4                  | 9              |
|               | 5000                       | 5          | 74                     | 470                     | 9              | 1.7                  | 11             |
|               | 6000                       | 3          | 73                     | 425                     | 11             | 2.2                  | 14             |
|               | 7000                       | 1          | 72                     | 375                     | 14             | 2.6                  | 18             |
|               | 8000                       | -1         | 72                     | 330                     | 17             | 3.1                  | 22             |
|               | 9000                       | -3         | 71                     | 285                     | 20             | 3.6                  | 26             |
|               | 10,000                     | -5         | 71                     | 240                     | 24             | 4.2                  | 32             |
|               | 11,000                     | -7         | 70                     | 190                     | 29             | 4.9                  | 38             |
|               | 12,000                     | -9         | 70                     | 145                     | 35             | 5.8                  | 47             |

Figure 5-7. Time, Fuel, and Distance to Climb

## CRUISE PERFORMANCE

**CONDITIONS:**

2400 Pounds

Recommended Lean Mixture (See Section 4, Cruise)

**NOTE:**

Cruise speeds are shown for an airplane equipped with speed fairings which increase the speeds by approximately two knots.

| PRESSURE<br>ALTITUDE<br>FT | RPM  | 20°C BELOW<br>STANDARD TEMP |      |     | STANDARD<br>TEMPERATURE |      |     | 20°C ABOVE<br>STANDARD TEMP |      |     |
|----------------------------|------|-----------------------------|------|-----|-------------------------|------|-----|-----------------------------|------|-----|
|                            |      | %<br>BHP                    | KTAS | GPH | %<br>BHP                | KTAS | GPH | %<br>BHP                    | KTAS | GPH |
| 2000                       | 2500 | ---                         | ---  | --- | 76                      | 114  | 8.5 | 72                          | 114  | 8.1 |
|                            | 2400 | 72                          | 110  | 8.1 | 69                      | 109  | 7.7 | 65                          | 108  | 7.3 |
|                            | 2300 | 65                          | 104  | 7.3 | 62                      | 103  | 6.9 | 59                          | 102  | 6.6 |
|                            | 2200 | 58                          | 99   | 6.6 | 55                      | 97   | 6.3 | 53                          | 96   | 6.1 |
|                            | 2100 | 52                          | 92   | 6.0 | 50                      | 91   | 5.8 | 48                          | 89   | 5.7 |
| 4000                       | 2550 | ---                         | ---  | --- | 76                      | 117  | 8.5 | 72                          | 116  | 8.1 |
|                            | 2500 | 77                          | 115  | 8.6 | 73                      | 114  | 8.1 | 69                          | 113  | 7.7 |
|                            | 2400 | 69                          | 109  | 7.8 | 65                      | 108  | 7.3 | 62                          | 107  | 7.0 |
|                            | 2300 | 62                          | 104  | 7.0 | 59                      | 102  | 6.6 | 57                          | 101  | 6.4 |
|                            | 2200 | 56                          | 98   | 6.3 | 54                      | 96   | 6.1 | 51                          | 94   | 5.9 |
| 6000                       | 2100 | 51                          | 91   | 5.8 | 48                      | 89   | 5.7 | 47                          | 88   | 5.5 |
|                            | 2600 | ---                         | ---  | --- | 77                      | 119  | 8.6 | 72                          | 118  | 8.1 |
|                            | 2500 | 73                          | 114  | 8.2 | 69                      | 113  | 7.8 | 66                          | 112  | 7.4 |
|                            | 2400 | 66                          | 108  | 7.4 | 63                      | 107  | 7.0 | 60                          | 106  | 6.7 |
|                            | 2300 | 60                          | 103  | 6.7 | 57                      | 101  | 6.4 | 55                          | 99   | 6.2 |
| 8000                       | 2200 | 54                          | 96   | 6.1 | 52                      | 95   | 5.9 | 50                          | 92   | 5.8 |
|                            | 2100 | 49                          | 90   | 5.7 | 47                      | 88   | 5.5 | 46                          | 86   | 5.5 |
|                            | 2650 | ---                         | ---  | --- | 77                      | 121  | 8.6 | 73                          | 120  | 8.1 |
|                            | 2600 | 77                          | 119  | 8.7 | 73                      | 118  | 8.2 | 69                          | 117  | 7.8 |
|                            | 2500 | 70                          | 113  | 7.8 | 66                      | 112  | 7.4 | 63                          | 111  | 7.1 |
| 10,000                     | 2400 | 63                          | 108  | 7.1 | 60                      | 106  | 6.7 | 58                          | 104  | 6.5 |
|                            | 2300 | 57                          | 101  | 6.4 | 55                      | 100  | 6.2 | 53                          | 97   | 6.0 |
|                            | 2200 | 52                          | 95   | 6.0 | 50                      | 93   | 5.8 | 49                          | 91   | 5.7 |
|                            | 2600 | 74                          | 118  | 8.3 | 70                      | 117  | 7.8 | 66                          | 115  | 7.4 |
|                            | 2500 | 67                          | 112  | 7.5 | 64                      | 111  | 7.1 | 61                          | 109  | 6.8 |
| 12,000                     | 2400 | 61                          | 106  | 6.8 | 58                      | 105  | 6.5 | 56                          | 102  | 6.3 |
|                            | 2300 | 55                          | 100  | 6.3 | 53                      | 98   | 6.0 | 51                          | 96   | 5.9 |
|                            | 2200 | 50                          | 93   | 5.8 | 49                      | 91   | 5.7 | 47                          | 89   | 5.6 |
|                            | 2550 | 67                          | 114  | 7.5 | 64                      | 112  | 7.1 | 61                          | 111  | 6.9 |
|                            | 2500 | 64                          | 111  | 7.2 | 61                      | 109  | 6.8 | 59                          | 107  | 6.6 |
|                            | 2400 | 59                          | 105  | 6.6 | 56                      | 103  | 6.3 | 54                          | 100  | 6.1 |
|                            | 2300 | 53                          | 98   | 6.1 | 51                      | 96   | 5.9 | 50                          | 94   | 5.8 |

Figure 5-8. Cruise Performance

## RANGE PROFILE

### 45 MINUTES RESERVE 40 GALLONS USABLE FUEL

#### CONDITIONS:

2400 Pounds  
Recommended Lean Mixture for Cruise  
Standard Temperature  
Zero Wind

#### NOTES:

1. This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the distance during climb.
2. Performance is shown for an airplane equipped with speed fairings which increase the cruise speeds by approximately two knots.

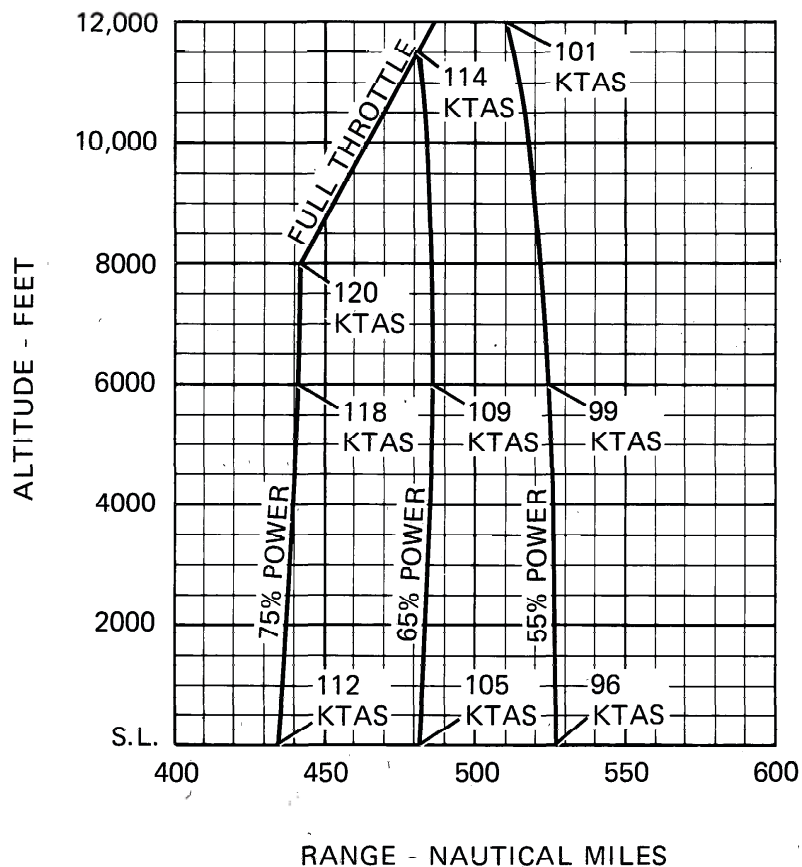


Figure 5-9. Range Profile (Sheet 1 of 3)