

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

TO THE

AIRPLANE FLIGHT MANUAL

FOR

REIMS/CESSNA F182Q s/n F18200095 through F18200169

STC SA03608AT Maximum Gross Takeoff Weight Increase

Registration No. _____

Serial No. _____

This supplement must be attached to the latest revision FAA Approved Airplane Flight Manual whenever this aircraft is operated at weights above 2950 lbs. in accordance with Trolltune Corporation STC SA03608AT. The information contained in this document supplements or supersedes the basic manual only in those areas listed. For limitations, procedures and performance information not contained in this supplement, consult the basic airplane flight manual.

SECTION 1 - GENERAL

MAXIMUM CERTIFICATED WEIGHTS:

Maximum Ramp Weight: 3110 lbs.
Maximum Gross Takeoff Weight: 3100 lbs.
Maximum Landing Weight: 2950 lbs.

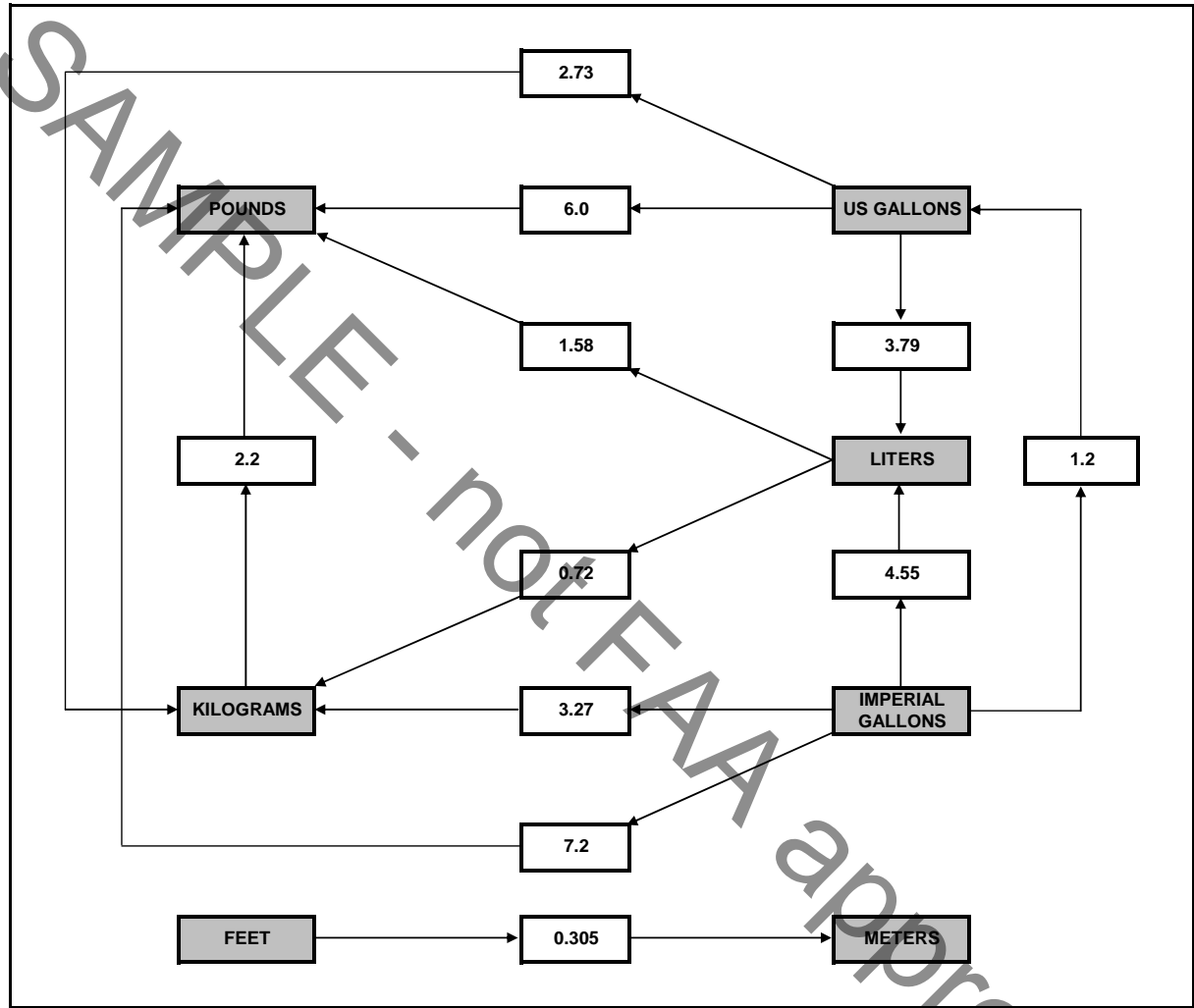
SPECIFIC LOADINGS:

Wing Loading: 17.8 lbs./sq. ft.
Power Loading: 13.5 lbs./hp.

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Manager, Flight Test Branch
Federal Aviation Administration
Atlanta Aircraft Certification Office

SECTION 1 - GENERAL (continued)



Metric / Imperial / US Units Conversion Chart

SECTION 2 - LIMITATIONS

WEIGHT LIMITS:

Maximum Ramp Weight: 3110 lbs.
 Maximum Takeoff Weight: 3100 lbs.
 Maximum Landing Weight: 2950 lbs.

A normal start, taxi and run-up time of ten minutes will consume approximately 10 lbs. of fuel. Normal landings must not be made at weights in excess of 2950 lbs. For a typical 3100 lbs. takeoff, climb, and cruise profile, this equates to a minimum flight duration of approximately one hour and forty-five minutes.

CENTER OF GRAVITY LIMITS:

Forward: 33.0 inches aft of datum at 2250 lbs. or less, with straight line variation to 40.9 inches aft of datum at 3100 lbs.
 Aft: 48.5 inches aft of datum at all weights except 46.0 inches aft of datum at weights above 2950 lbs. to 3100 lbs.

SECTION 3 - EMERGENCY PROCEDURES

AIRSPEDS FOR EMERGENCY OPERATION:

ENGINE FAILURE AFTER TAKEOFF, 3100 lbs:
 Wing Flaps Up: 75 KIAS
 Wing Flaps Down: 70 KIAS

MANEUVERING SPEED:
 3100 lbs.: 111 KIAS

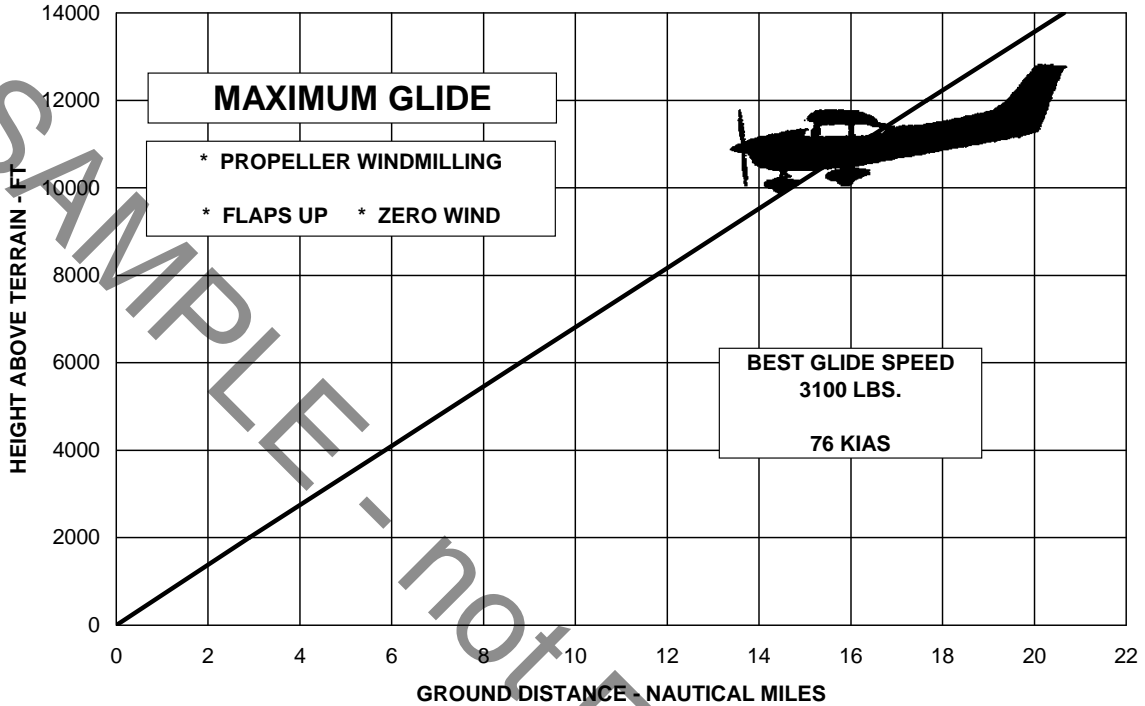
MAXIMUM GLIDE:
 3100 lbs.: 76 KIAS

PRECAUTIONARY LANDING WITH ENGINE POWER:
 3100 lbs 70 KIAS

LANDING WITHOUT ENGINE POWER, 3100 LBS:
 Wing Flaps Up: 75 KIAS
 Wing Flaps Down: 70 KIAS

DITCHING WITHOUT ENGINE POWER, 3100 lbs:
 Wing Flaps Up: 75 KIAS
 Wing Flaps 10 degrees: 70 KIAS

SECTION 3 - EMERGENCY PROCEDURES (continued)



SECTION 4 - NORMAL PROCEDURES

SPEEDS FOR NORMAL OPERATION, 3100 lbs.:

TAKEOFF:

Short Field Takeoff, Flaps 20°, Speed at 50 Feet: 59 KIAS

ENROUTE CLIMB, FLAPS UP:

Best Rate of Climb, Sea Level: 81 KIAS

Best Rate of Climb, 10,000 Feet: 75 KIAS

Best Angle of Climb, Sea Level: 59 KIAS

Best Angle of Climb, 10,000 Feet 66 KIAS

MAXIMUM RECOMMENDED TURBULENT AIR PENETRATION SPEED:

3100 lbs.: 111 KIAS

MAXIMUM DEMONSTRATED CROSSWIND VELOCITY:

Takeoff or Landing 15 KNOTS

SECTION 4 - NORMAL PROCEDURES (continued)**NOISE ABATEMENT:**

The certificated noise level for the Model F182Q at 3100 pounds maximum weight is 79.5 dB(A), determined according to Appendix G of 14 CFR Part 36 through Amendment 28. No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into, or out of, any airport.

SECTION 5 - PERFORMANCE

Refer to the following performance charts for operations at weights above 2950 lbs. to 3100 lbs.:

STALL SPEEDS

CONDITIONS:
Power Off

NOTES:

1. Maximum altitude loss during a stall recovery may be as much as 250 feet.
2. KIAS values are approximate

MOST REARWARD CENTER OF GRAVITY

| WEIGHT (LBS) | FLAP DEFLECTION | ANGLE OF BANK | | | | | | | |
|-----------------|--------------------|---------------|------|------|------|------|------|------|------|
| | | 0° | | 30° | | 45° | | 60° | |
| | | KIAS | KCAS | KIAS | KCAS | KIAS | KCAS | KIAS | KCAS |
| 3100 | UP | 44 | 58 | 50 | 63 | 58 | 69 | 73 | 82 |
| | 20° | 41 | 53 | 46 | 57 | 54 | 63 | 67 | 75 |
| | 40° | 41 | 52 | 46 | 56 | 53 | 62 | 67 | 74 |

MOST FORWARD CENTER OF GRAVITY

| WEIGHT (LBS) | FLAP DEFLECTION | ANGLE OF BANK | | | | | | | |
|-----------------|--------------------|---------------|------|------|------|------|------|------|------|
| | | 0° | | 30° | | 45° | | 60° | |
| | | KIAS | KCAS | KIAS | KCAS | KIAS | KCAS | KIAS | KCAS |
| 3100 | UP | 49 | 60 | 55 | 65 | 63 | 71 | 78 | 85 |
| | 20° | 48 | 56 | 53 | 60 | 60 | 66 | 73 | 79 |
| | 40° | 46 | 55 | 51 | 59 | 58 | 65 | 71 | 77 |

SECTION 5 - PERFORMANCE (continued)

**TAKEOFF DISTANCE
MAXIMUM WEIGHT 3100 LBS**

SHORT FIELD

CONDITIONS:
Flaps 20°
2400 RPM, Full Throttle and Mixture Set Prior to
Brake Release
Cowl Flaps Open
Paved, Level, Dry Runway
Zero Wind

NOTES:

1. Short field technique as specified in Section 4 of the basic Airplane Flight Manual.
2. Prior to takeoff from fields above 5000 feet elevation, the mixture should be leaned to give maximum power in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. Where distance value has been deleted, climb performance after lift-off is less than 150 fpm at takeoff speed.
5. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

| WEIGHT LBS | TAKEOFF SPEED KIAS | | PRESS ALT FT | 0°C | | 10°C | | 20°C | | 30°C | | 40°C | |
|---------------|-----------------------|-----------------------|--------------------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|
| | | | | GRND | TOTAL | GRND | TOTAL | GRND | TOTAL | GRND | TOTAL | GRND | TOTAL |
| | LIFTOFF ROLL | AT 50 FT 50 FT OBS | | ROLL | 50 FT OBS | ROLL | 50 FT OBS | ROLL | 50 FT OBS | ROLL | 50 FT OBS | ROLL | 50 FT OBS |
| 3100 | 50 | 59 | S.L. | 720 | 1365 | 775 | 1465 | 835 | 1570 | 895 | 1680 | 955 | 1800 |
| | | | 1000 | 785 | 1490 | 845 | 1600 | 910 | 1720 | 975 | 1845 | 1045 | 1980 |
| | | | 2000 | 860 | 1635 | 925 | 1760 | 995 | 1890 | 1065 | 2035 | 1140 | 2185 |
| | | | 3000 | 940 | 1800 | 1010 | 1940 | 1085 | 2090 | 1165 | 2255 | 1250 | 2430 |
| | | | 4000 | 1025 | 1990 | 1105 | 2150 | 1190 | 2320 | 1275 | 2510 | 1370 | 2715 |
| | | | 5000 | 1125 | 2210 | 1215 | 2395 | 1305 | 2595 | 1400 | 2815 | 1505 | 3060 |
| | | | 6000 | 1235 | 2470 | 1330 | 2685 | 1435 | 2925 | 1540 | 3190 | 1655 | 3490 |
| | | | 7000 | 1360 | 2780 | 1465 | 3040 | 1580 | 3330 | 1700 | 3665 | --- | --- |
| 8000 | 1500 | 3170 | 1615 | 3485 | 1740 | 3855 | --- | --- | --- | --- | | | |

SECTION 5 - PERFORMANCE (continued)

MAXIMUM RATE OF CLIMB

CONDITIONS:
Flaps Up
2400 RPM
Full Throttle
Cowl Flaps Open

NOTE:
Mixture leaned above 5000 feet for smooth engine operation and increased power.

| WEIGHT LBS | PRESS ALT FT | CLIMB SPEED KIAS | RATE OF CLIMB - FPM | | | |
|---------------|--------------------|------------------------|---------------------|------|-------|-------|
| | | | -20° C | 0° C | 20° C | 40° C |
| 3100 | S.L. | 81 | 1010 | 925 | 845 | 765 |
| | 2000 | 80 | 885 | 805 | 730 | 650 |
| | 4000 | 78 | 760 | 685 | 610 | 540 |
| | 6000 | 77 | 640 | 570 | 495 | 425 |
| | 8000 | 76 | 520 | 450 | 380 | 310 |
| | 10,000 | 75 | 405 | 335 | 265 | - |
| | 12,000 | 73 | 285 | 220 | 155 | - |
| | 14,000 | 72 | 170 | 105 | | - |

SECTION 5 - PERFORMANCE (continued)

TIME, FUEL, AND DISTANCE TO CLIMB

MAXIMUM RATE OF CLIMB

CONDITIONS:

Flaps Up
 2400 RPM
 Full Throttle
 Cowl Flaps Open
 Standard Temperature

NOTES:

1. Add 1.7 gallons of fuel for engine start, taxi and takeoff allowance.
2. Mixture may be leaned above 5000 feet for smooth engine operation and increased power.
3. Increase time, fuel and distance by 10% for each 10° C above standard temperature.
4. Distances shown are based on zero wind.

| WEIGHT LBS | PRESSURE ALTITUDE FT | TEMP °C | CLIMB SPEED KIAS | RATE OF CLIMB FPM | FROM SEA LEVEL | | |
|---------------|----------------------------|------------|------------------------|-------------------------|----------------|----------------------|----------------|
| | | | | | TIME MIN | FUEL USED GALLONS | DISTANCE NM |
| 3100 | S.L. | 15 | 81 | 865 | 0 | 0 | 0 |
| | 2000 | 11 | 80 | 760 | 2 | 0.8 | 3 |
| | 4000 | 7 | 78 | 660 | 5 | 1.7 | 7 |
| | 6000 | 3 | 77 | 555 | 9 | 2.7 | 12 |
| | 8000 | -1 | 76 | 455 | 13 | 3.9 | 18 |
| | 10,000 | -5 | 75 | 350 | 18 | 5.3 | 25 |
| | 12,000 | -9 | 73 | 250 | 25 | 7.1 | 36 |
| | 14,000 | -13 | 72 | 145 | 35 | 9.7 | 52 |

SECTION 5 - PERFORMANCE (continued)

TIME, FUEL, AND DISTANCE TO CLIMB

NORMAL CLIMB - 90 KIAS

CONDITIONS:
 Flaps Up
 2400 RPM
 23 Inches Hg or Full Throttle
 Cowl Flaps Open
 Standard Temperature

NOTES:

1. Add 1.7 gallons of fuel for engine start, taxi and takeoff allowance.
2. Mixture leaned above 5000 feet for smooth engine operation and increased power.
3. Increase time, fuel and distance by 10% for each 10° C above standard temperature.
4. Distances shown are based on zero wind.

| WEIGHT LBS | PRESSURE ALTITUDE FT | TEMP °C | RATE OF CLIMB FPM | FROM SEA LEVEL | | |
|---------------|----------------------------|------------|-------------------------|----------------|----------------------|----------------|
| | | | | TIME MIN | FUEL USED GALLONS | DISTANCE NM |
| 3100 | S.L. | 15 | 540 | 0 | 0 | 0 |
| | 2000 | 11 | 540 | 4 | 1.0 | 6 |
| | 4000 | 7 | 540 | 7 | 2.1 | 11 |
| | 6000 | 3 | 510 | 11 | 3.2 | 17 |
| | 8000 | -1 | 395 | 16 | 4.5 | 25 |
| | 10,000 | -5 | 285 | 22 | 6.1 | 35 |
| | 12,000 | -9 | 150 | 31 | 8.3 | 54 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 2000 FEET

CONDITIONS:
 3100 Pounds
 Recommended Lean Mixture
 Cowl Flaps Closed

NOTE
 For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

| | | 20° C BELOW STANDARD TEMP - 9° C | | | STANDARD TEMPERATURE 11° C | | | 20° C ABOVE STANDARD TEMP 31° C | | |
|------|----|--|------|------|----------------------------------|------|------|---------------------------------------|------|------|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 22 | 77 | 132 | 13.1 | 74 | 133 | 12.6 | 71 | 134 | 12.2 |
| | 21 | 72 | 129 | 12.3 | 69 | 130 | 11.8 | 67 | 131 | 11.4 |
| | 20 | 67 | 126 | 11.5 | 65 | 126 | 11.1 | 63 | 127 | 10.7 |
| | 19 | 62 | 122 | 10.7 | 60 | 122 | 10.3 | 58 | 122 | 10.0 |
| 2300 | 23 | 78 | 133 | 13.3 | 75 | 134 | 12.8 | 72 | 135 | 12.4 |
| | 22 | 73 | 130 | 12.5 | 70 | 131 | 12.0 | 68 | 131 | 11.6 |
| | 21 | 68 | 126 | 11.7 | 66 | 127 | 11.3 | 64 | 128 | 10.9 |
| | 20 | 64 | 123 | 10.9 | 62 | 123 | 10.5 | 60 | 123 | 10.2 |
| 2200 | 23 | 73 | 130 | 12.5 | 70 | 131 | 12.0 | 68 | 131 | 11.6 |
| | 22 | 69 | 127 | 11.7 | 66 | 127 | 11.3 | 64 | 128 | 10.9 |
| | 21 | 64 | 123 | 11.0 | 62 | 124 | 10.6 | 60 | 124 | 10.2 |
| | 20 | 60 | 119 | 10.2 | 58 | 120 | 9.9 | 56 | 120 | 9.6 |
| 2100 | 23 | 68 | 126 | 11.6 | 66 | 127 | 11.2 | 64 | 127 | 10.8 |
| | 22 | 64 | 123 | 10.9 | 62 | 123 | 10.5 | 60 | 124 | 10.2 |
| | 21 | 60 | 119 | 10.2 | 58 | 120 | 9.9 | 56 | 120 | 9.6 |
| | 20 | 56 | 115 | 9.6 | 54 | 115 | 9.3 | 52 | 115 | 9.0 |
| | 19 | 52 | 111 | 9.0 | 50 | 110 | 8.7 | 48 | 109 | 8.5 |
| | 18 | 47 | 106 | 8.4 | 46 | 105 | 8.1 | 44 | 103 | 7.9 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 4000 FEET

CONDITIONS:
3100 Pounds
Recommended Lean Mixture
Cowl Flaps Closed

NOTE
For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

| | | 20° C BELOW STANDARD TEMP - 13° C | | | STANDARD TEMPERATURE 7° C | | | 20° C ABOVE STANDARD TEMP 27° C | | |
|------|----|---|------|------|---------------------------------|------|------|---------------------------------------|------|------|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 22 | - | - | - | 76 | 137 | 13.0 | 73 | 138 | 12.5 |
| | 21 | 74 | 133 | 12.6 | 71 | 134 | 12.1 | 69 | 134 | 11.7 |
| | 20 | 69 | 129 | 11.8 | 66 | 130 | 11.3 | 64 | 130 | 11.0 |
| | 19 | 64 | 125 | 10.9 | 62 | 126 | 10.6 | 60 | 126 | 10.2 |
| 2300 | 23 | - | - | - | 76 | 138 | 13.1 | 74 | 139 | 12.6 |
| | 22 | 75 | 133 | 12.8 | 72 | 134 | 12.3 | 70 | 135 | 11.9 |
| | 21 | 70 | 130 | 12.0 | 68 | 131 | 11.5 | 65 | 131 | 11.2 |
| | 20 | 66 | 126 | 11.2 | 63 | 127 | 10.8 | 61 | 127 | 10.4 |
| 2200 | 23 | 75 | 133 | 12.8 | 72 | 134 | 12.3 | 70 | 135 | 11.9 |
| | 22 | 70 | 130 | 12.0 | 68 | 131 | 11.6 | 66 | 131 | 11.2 |
| | 21 | 66 | 127 | 11.3 | 64 | 127 | 10.9 | 61 | 127 | 10.5 |
| | 20 | 62 | 123 | 10.5 | 59 | 123 | 10.2 | 57 | 123 | 9.8 |
| | 19 | 57 | 119 | 9.8 | 55 | 118 | 9.5 | 53 | 118 | 9.2 |
| 2100 | 23 | 70 | 130 | 11.9 | 67 | 131 | 11.5 | 65 | 131 | 11.1 |
| | 22 | 66 | 126 | 11.2 | 63 | 127 | 10.8 | 61 | 127 | 10.4 |
| | 21 | 62 | 123 | 10.5 | 59 | 123 | 10.1 | 57 | 123 | 9.8 |
| | 20 | 57 | 119 | 9.8 | 55 | 119 | 9.5 | 53 | 118 | 9.3 |
| | 19 | 53 | 114 | 9.2 | 51 | 114 | 8.9 | 50 | 113 | 8.7 |
| | 18 | 49 | 109 | 8.6 | 47 | 108 | 8.3 | 46 | 106 | 8.1 |
| | 17 | 45 | 103 | 8.0 | 43 | 101 | 7.8 | 42 | 100 | 7.6 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 6000 FEET

CONDITIONS:
3100 Pounds
Recommended Lean Mixture
Cowl Flaps Closed

NOTE

For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

| | | 20° C BELOW STANDARD TEMP - 17° C | | | STANDARD TEMPERATURE 3° C | | | 20° C ABOVE STANDARD TEMP 23° C | | |
|------|----|---|------|------|---------------------------------|------|------|---------------------------------------|------|------|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 22 | - | - | - | 77 | 141 | 13.3 | 75 | 142 | 12.8 |
| | 21 | 75 | 136 | 12.9 | 73 | 137 | 12.4 | 70 | 138 | 12.0 |
| | 20 | 71 | 133 | 12.1 | 68 | 133 | 11.6 | 66 | 134 | 11.2 |
| | 19 | 66 | 129 | 11.2 | 64 | 129 | 10.8 | 61 | 129 | 10.5 |
| 2300 | 22 | 77 | 137 | 13.1 | 74 | 138 | 12.6 | 71 | 139 | 12.2 |
| | 21 | 72 | 134 | 12.3 | 69 | 134 | 11.8 | 67 | 135 | 11.4 |
| | 20 | 67 | 130 | 11.5 | 65 | 130 | 11.1 | 63 | 131 | 10.7 |
| | 19 | 63 | 126 | 10.7 | 60 | 126 | 10.3 | 58 | 126 | 10.0 |
| 2200 | 22 | 72 | 134 | 12.3 | 69 | 135 | 11.9 | 67 | 135 | 11.5 |
| | 21 | 68 | 130 | 11.6 | 65 | 131 | 11.1 | 63 | 131 | 10.8 |
| | 20 | 63 | 126 | 10.8 | 61 | 127 | 10.4 | 59 | 127 | 10.1 |
| | 19 | 59 | 122 | 10.1 | 57 | 122 | 9.7 | 55 | 121 | 9.5 |
| 2100 | 22 | 67 | 130 | 11.5 | 66 | 131 | 11.1 | 63 | 131 | 10.7 |
| | 21 | 63 | 126 | 10.8 | 61 | 127 | 10.4 | 59 | 127 | 10.1 |
| | 19 | 55 | 118 | 9.5 | 53 | 117 | 9.2 | 51 | 116 | 8.9 |
| | 18 | 51 | 113 | 8.8 | 49 | 111 | 8.6 | 47 | 110 | 8.3 |
| | 17 | 47 | 107 | 8.2 | 45 | 105 | 8.0 | 43 | 103 | 7.8 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 8000 FEET

CONDITIONS:
 3100 Pounds
 Recommended Lean Mixture
 Cowl Flaps Closed

NOTE

For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

| | | 20° C BELOW STANDARD TEMP - 21° C | | | STANDARD TEMPERATURE -1° C | | | 20° C ABOVE STANDARD TEMP 19° C | | |
|------|----|---|------|------|----------------------------------|------|------|---------------------------------------|------|------|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 21 | 77 | 140 | 13.3 | 74 | 141 | 12.7 | 72 | 142 | 12.3 |
| | 20 | 72 | 136 | 12.4 | 70 | 137 | 11.9 | 67 | 138 | 11.5 |
| | 19 | 68 | 132 | 11.5 | 65 | 133 | 11.1 | 63 | 133 | 10.7 |
| | 18 | 63 | 128 | 10.7 | 60 | 128 | 10.3 | 58 | 128 | 10.0 |
| 2300 | 21 | 74 | 137 | 12.6 | 71 | 138 | 12.1 | 69 | 139 | 11.7 |
| | 20 | 69 | 134 | 11.8 | 66 | 134 | 11.3 | 64 | 134 | 11.0 |
| | 19 | 64 | 130 | 11.0 | 62 | 130 | 10.6 | 60 | 129 | 10.2 |
| | 18 | 60 | 125 | 10.2 | 58 | 125 | 9.9 | 56 | 124 | 9.6 |
| 2200 | 21 | 69 | 134 | 11.8 | 67 | 135 | 11.4 | 65 | 135 | 11.0 |
| | 20 | 65 | 130 | 11.1 | 63 | 130 | 10.7 | 60 | 130 | 10.3 |
| | 19 | 61 | 126 | 10.3 | 58 | 126 | 10.0 | 56 | 125 | 9.7 |
| | 18 | 56 | 121 | 9.7 | 54 | 120 | 9.3 | 52 | 119 | 9.1 |
| 2100 | 21 | 65 | 130 | 11.1 | 63 | 130 | 10.7 | 60 | 130 | 10.3 |
| | 20 | 61 | 126 | 10.4 | 59 | 126 | 10.0 | 57 | 125 | 9.7 |
| | 19 | 57 | 122 | 9.7 | 54 | 121 | 9.4 | 53 | 120 | 9.1 |
| | 18 | 52 | 116 | 9.1 | 50 | 115 | 8.8 | 49 | 113 | 8.5 |
| | 17 | 48 | 110 | 8.5 | 46 | 108 | 8.2 | 45 | 106 | 8.0 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 10,000 FEET

CONDITIONS:
 3100 Pounds
 Recommended Lean Mixture
 Cowl Flaps Closed

NOTE

For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

| | | 20° C BELOW STANDARD TEMP - 25° C | | | STANDARD TEMPERATURE - 5° C | | | 20° C ABOVE STANDARD TEMP 15° C | | |
|------|----|---|------|------|-----------------------------------|------|------|---------------------------------------|------|------|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 20 | 74 | 140 | 12.7 | 71 | 141 | 12.2 | 69 | 141 | 11.8 |
| | 19 | 69 | 136 | 11.8 | 67 | 137 | 11.4 | 64 | 137 | 11.0 |
| | 18 | 65 | 132 | 11.0 | 62 | 132 | 10.6 | 60 | 131 | 10.2 |
| | 17 | 60 | 127 | 10.2 | 57 | 126 | 9.8 | 55 | 125 | 9.5 |
| 2300 | 20 | 71 | 137 | 12.1 | 68 | 138 | 11.6 | 66 | 138 | 11.2 |
| | 19 | 66 | 133 | 11.3 | 64 | 133 | 10.9 | 61 | 133 | 10.5 |
| | 18 | 61 | 129 | 10.5 | 59 | 128 | 10.1 | 57 | 128 | 9.8 |
| | 17 | 57 | 123 | 9.7 | 55 | 122 | 9.4 | 53 | 121 | 9.1 |
| 2200 | 20 | 67 | 134 | 11.4 | 64 | 134 | 11.0 | 62 | 134 | 10.6 |
| | 19 | 62 | 129 | 10.6 | 60 | 129 | 10.2 | 58 | 129 | 9.9 |
| | 18 | 58 | 125 | 9.9 | 56 | 124 | 9.6 | 54 | 123 | 9.3 |
| | 17 | 53 | 119 | 9.2 | 51 | 118 | 8.9 | 50 | 116 | 8.7 |
| 2100 | 20 | 63 | 130 | 10.7 | 60 | 130 | 10.3 | 58 | 129 | 9.9 |
| | 19 | 58 | 125 | 10.0 | 56 | 124 | 9.6 | 54 | 123 | 9.4 |
| | 18 | 54 | 120 | 9.3 | 52 | 119 | 9.0 | 50 | 117 | 8.8 |
| | 17 | 50 | 114 | 8.7 | 48 | 112 | 8.4 | 46 | 110 | 8.2 |
| | 16 | 46 | 107 | 8.1 | 44 | 104 | 7.8 | 42 | 102 | 7.6 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 12,000 FEET

CONDITIONS:
 3100 Pounds
 Recommended Lean Mixture
 Cowl Flaps Closed

NOTE

For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

| | | 20° C BELOW STANDARD TEMP - 29° C | | | STANDARD TEMPERATURE -9° C | | | 20° C ABOVE STANDARD TEMP 11° C | | |
|------|----|---|------|------|----------------------------------|------|------|---------------------------------------|------|------|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 18 | 66 | 136 | 11.3 | 64 | 136 | 10.9 | 61 | 135 | 10.5 |
| | 17 | 61 | 130 | 10.5 | 59 | 130 | 10.1 | 57 | 129 | 9.8 |
| | 16 | 56 | 124 | 9.7 | 54 | 123 | 9.4 | 52 | 122 | 9.1 |
| | 15 | 51 | 117 | 9.0 | 50 | 116 | 8.7 | 48 | 114 | 8.4 |
| 2300 | 18 | 63 | 132 | 10.8 | 61 | 132 | 10.4 | 59 | 131 | 10.0 |
| | 17 | 58 | 127 | 10.0 | 56 | 126 | 9.7 | 54 | 125 | 9.4 |
| | 16 | 54 | 121 | 9.3 | 52 | 119 | 9.0 | 50 | 117 | 8.7 |
| | 15 | 49 | 113 | 8.6 | 47 | 112 | 8.3 | 45 | 109 | 8.1 |
| 2200 | 18 | 59 | 128 | 10.2 | 57 | 128 | 9.8 | 55 | 126 | 9.5 |
| | 17 | 55 | 123 | 9.5 | 53 | 121 | 9.2 | 51 | 119 | 8.9 |
| | 16 | 51 | 116 | 8.8 | 49 | 114 | 8.5 | 47 | 112 | 8.3 |
| | 15 | 46 | 108 | 8.2 | 44 | 106 | 7.9 | 43 | 103 | 7.7 |
| 2100 | 18 | 56 | 124 | 9.6 | 54 | 122 | 9.3 | 52 | 120 | 9.0 |
| | 17 | 51 | 117 | 8.9 | 49 | 115 | 8.7 | 48 | 113 | 8.4 |
| | 16 | 47 | 110 | 8.3 | 45 | 108 | 8.1 | 44 | 106 | 7.8 |

SECTION 5 - PERFORMANCE (continued)

CRUISE PERFORMANCE
PRESSURE ALTITUDE 14,000 FEET

CONDITIONS:
 3100 Pounds
 Recommended Lean Mixture
 Cowl Flaps Closed

NOTE

For best fuel economy at 65% power or less, operate at the leanest mixture that results in smooth engine operation or at peak EGT if an EGT indicator is installed.

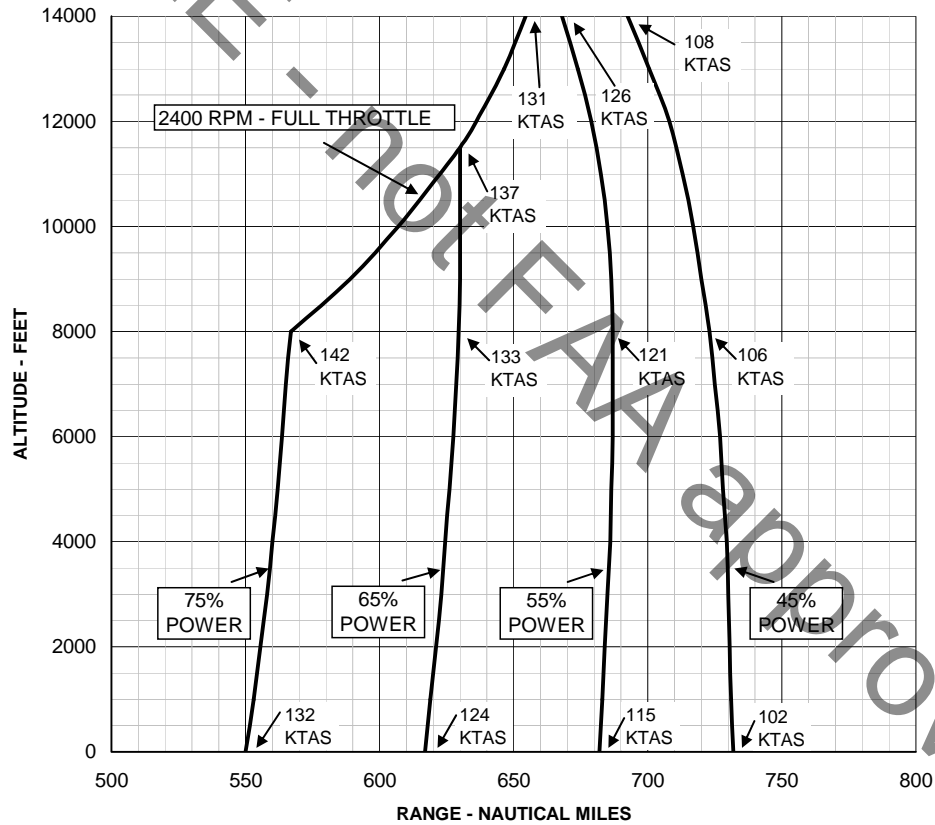
| | | 20° C BELOW STANDARD TEMP - 33° C | | | STANDARD TEMPERATURE -13° C | | | 20° C ABOVE STANDARD TEMP 7° C | | |
|------|----|---|------|-----|-----------------------------------|------|-----|--------------------------------------|------|-----|
| RPM | MP | % BHP | KTAS | GPH | % BHP | KTAS | GPH | % BHP | KTAS | GPH |
| 2400 | 16 | 58 | 128 | 9.9 | 56 | 127 | 9.6 | 54 | 125 | 9.3 |
| | 15 | 53 | 121 | 9.2 | 51 | 119 | 8.9 | 49 | 117 | 8.6 |
| | 14 | 48 | 113 | 8.5 | 46 | 110 | 8.2 | 45 | 108 | 8.0 |
| 2300 | 16 | 55 | 124 | 9.5 | 53 | 123 | 9.2 | 51 | 121 | 8.9 |
| | 15 | 51 | 117 | 8.8 | 49 | 115 | 8.5 | 47 | 112 | 8.3 |
| | 14 | 46 | 109 | 8.1 | 44 | 106 | 7.9 | 42 | 103 | 7.7 |
| 2200 | 16 | 52 | 120 | 9.0 | 50 | 118 | 8.8 | 48 | 115 | 8.5 |
| | 15 | 48 | 112 | 8.4 | 46 | 110 | 8.1 | 44 | 107 | 7.9 |
| 2100 | 16 | 49 | 114 | 8.5 | 47 | 112 | 8.3 | 45 | 109 | 8.0 |

SECTION 5 - PERFORMANCE (continued)

RANGE PROFILE
45 MINUTES RESERVE
65 GALLONS USABLE FUEL

CONDITIONS:
 3100 Pounds
 Recommended Lean Mixture for Cruise
 Standard Temperature
 Zero Wind

NOTE:
 This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the distance during a normal climb up to 10,000 feet and a maximum climb above 10,000 feet.

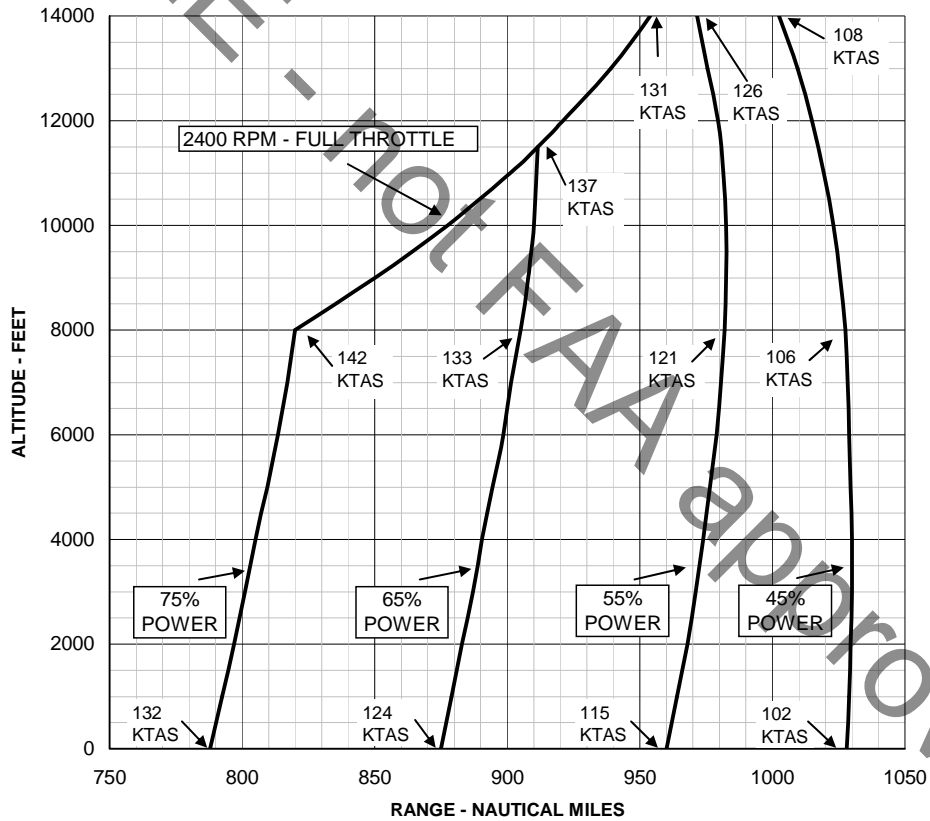


SECTION 5 - PERFORMANCE (continued)

**RANGE PROFILE
45 MINUTES RESERVE
88 GALLONS USABLE FUEL**

CONDITIONS:
3100 Pounds
Recommended Lean Mixture for Cruise
Standard Temperature
Zero Wind

NOTE:
This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the distance during a normal climb up to 10,000 feet and a maximum climb above 10,000 feet.

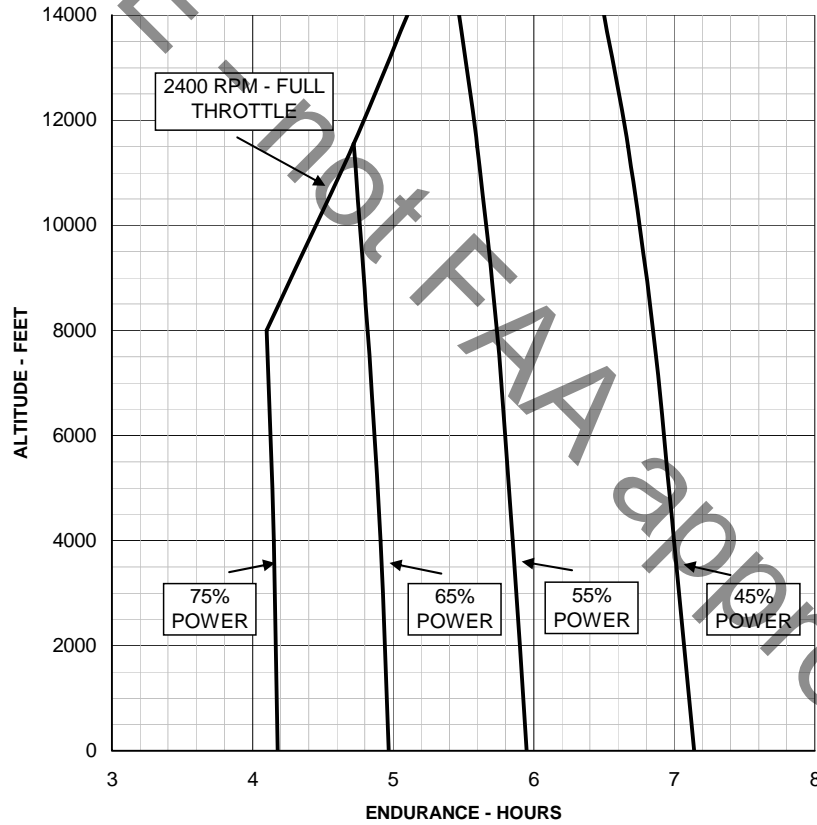


SECTION 5 - PERFORMANCE (continued)

ENDURANCE PROFILE
45 MINUTES RESERVE
65 GALLONS USABLE FUEL

CONDITIONS:
3100 Pounds
Recommended Lean Mixture for Cruise
Standard Temperature

NOTE:
This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the time during a normal climb up to 10,000 feet and a maximum climb above 10,000 feet.

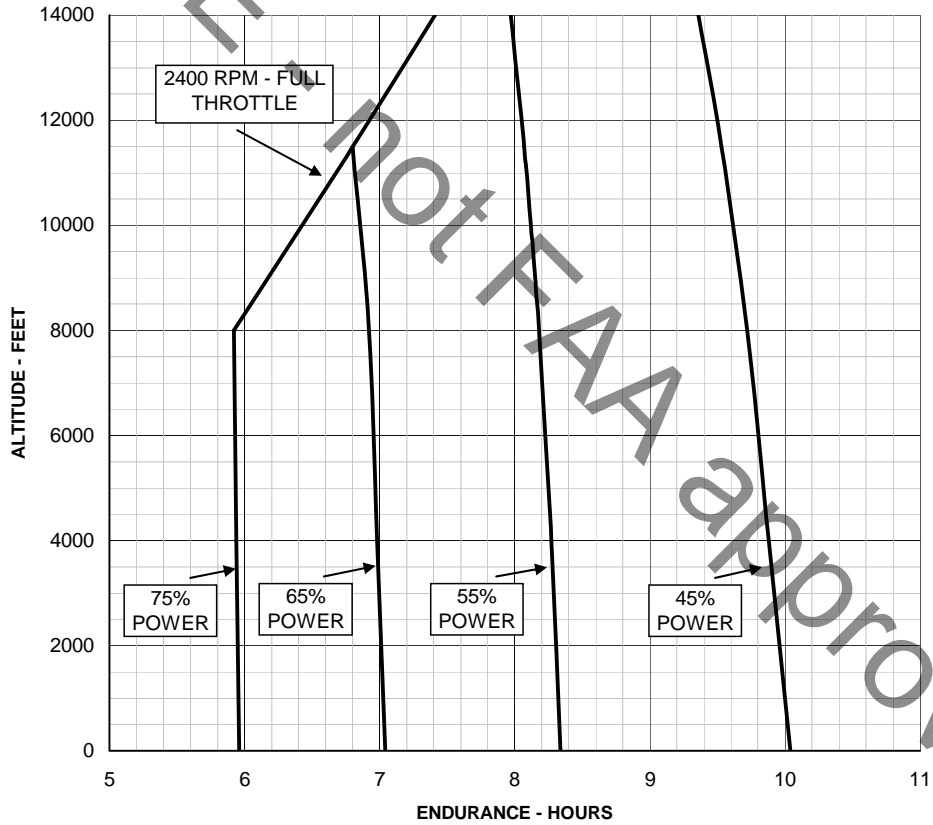


SECTION 5 - PERFORMANCE (continued)

ENDURANCE PROFILE
45 MINUTES RESERVE
88 GALLONS USABLE FUEL

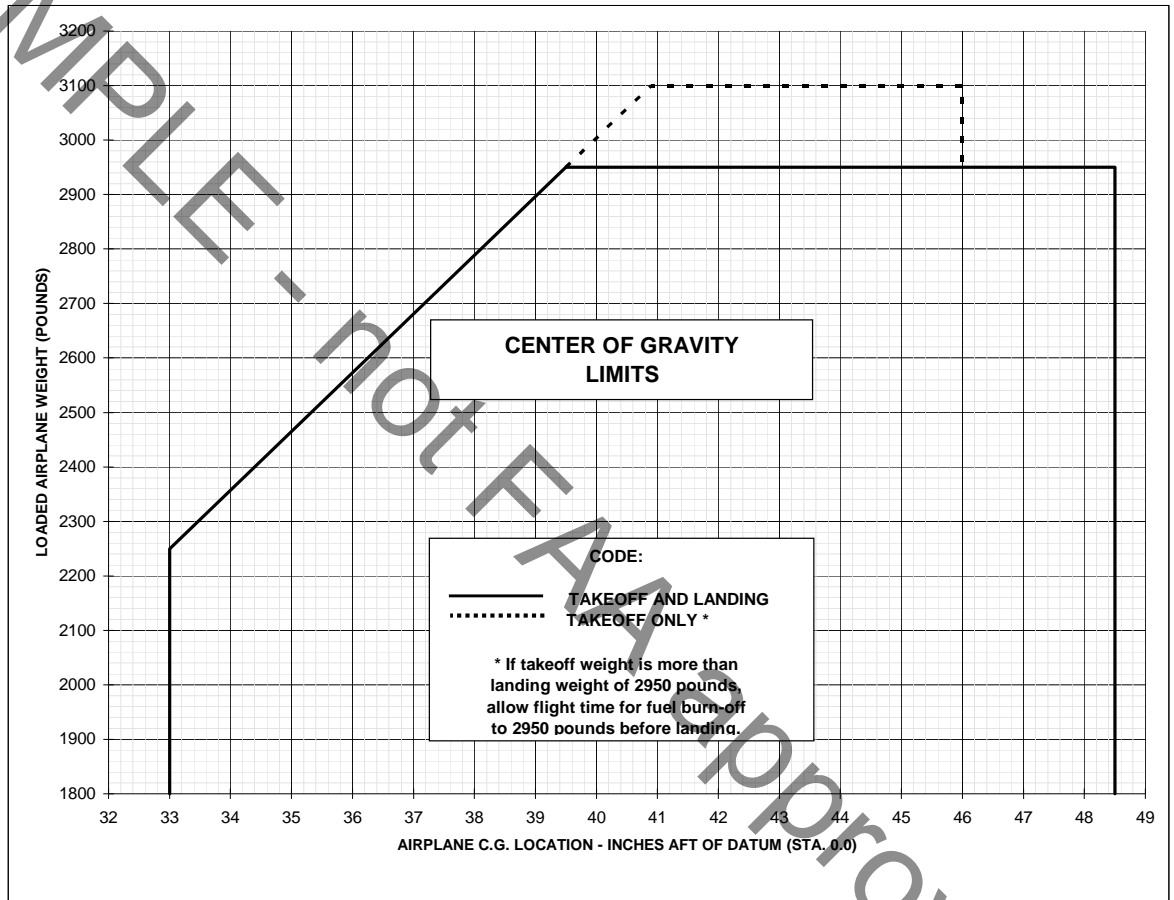
CONDITIONS:
3100 Pounds
Recommended Lean Mixture for Cruise
Standard Temperature

NOTE:
This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the time during a normal climb up to 10,000 feet and a maximum climb above 10,000 feet.

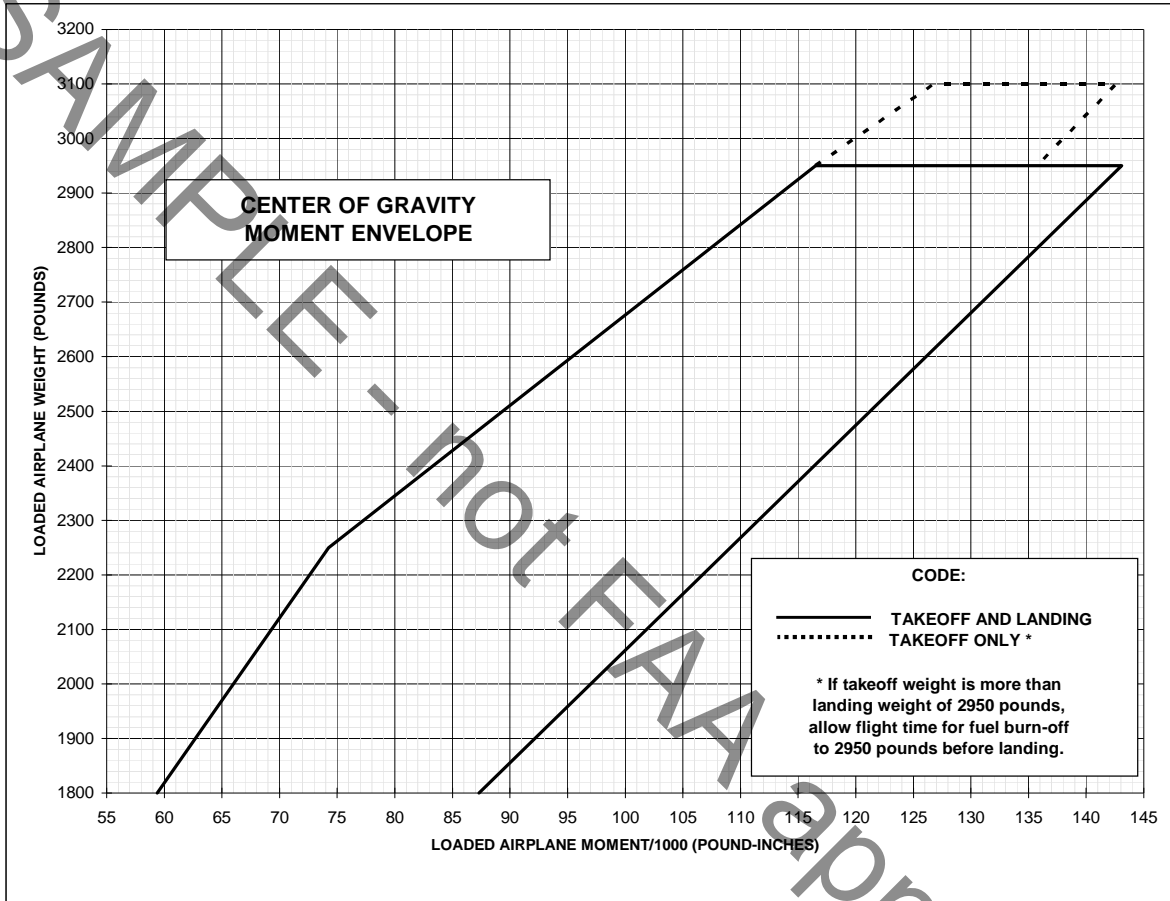


SECTION 6 - WEIGHT & BALANCE / EQUIPMENT LIST

Center of gravity limitations and envelopes are changed for operation at weights above 2950 lbs. to and including 3100 lbs. Use the following limit and moment envelopes:



SECTION 6 - WEIGHT & BALANCE / EQUIPMENT LIST (continued)



SECTION 7 - AIRPLANE SYSTEMS AND DESCRIPTIONS

NO CHANGES

SECTION 8 - HANDLING, SERVICE & MAINTENANCE

NO CHANGES

SECTION 9 - SUPPLEMENTS

ADDED AIRPLANE FLIGHT MANUAL SUPPLEMENT AFMS7001-SW-RF