



**N773BA**

**Fact Book**

## AIRSPPEED LIMITATIONS

Airspeed limitations and their operational significance are shown in Figure 2-1. Maneuvering speeds shown apply to normal category operations. The utility category maneuvering speed is 98 KIAS at 2200 pounds.

SYMBOL	SPEED	KCAS	KIAS	REMARKS
V <sub>NE</sub>	Never Exceed Speed	160	163	Do not exceed this speed in any operation.
V <sub>NO</sub>	Maximum Structural Cruising Speed	126	129	Do not exceed this speed except in smooth air, and then only with caution.
V <sub>A</sub>	Maneuvering Speed: 2550 Pounds 2200 Pounds 1900 Pounds	102 95 88	105 98 90	Do not make full or abrupt control movements above this speed.
V <sub>FE</sub>	Maximum Flap Extended Speed: 10° Flaps 10° to 30° Flaps	107 85	110 85	Do not exceed this speed with flaps down.
----	Maximum Window Open Speed	160	163	Do not exceed this speed with windows open.

Figure 2-1. Airspeed Limitations

## AIRPEED INDICATOR MARKINGS

Airspeed indicator markings and their color code significance are shown in Figure 2-2.

<b>MARKING</b>	<b>KIAS VALUE OR RANGE</b>	<b>SIGNIFICANCE</b>
<b>White Arc</b>	40 - 85	Full Flap Operating Range.
<b>Green Arc</b>	48 - 129	Normal Operating Range.
<b>Yellow Arc</b>	129-163	Operations must be conducted with caution and only in smooth air.
<b>Red Line</b>	163	Maximum speed for all operations.

Figure 2-2. Airspeed Indicator Markings

## POWERPLANT LIMITATIONS

Engine Manufacturer: Textron Lycoming.

Engine Model Number: IO-360-L2A.

Maximum Power: 180 BHP rating.

Engine Operating Limits for Takeoff and Continuous Operations:

Maximum Engine Speed: 2700 RPM.

### NOTE

The static RPM range at full throttle is 2300 - 2400 RPM.

Maximum Oil Temperature: 245°F (118°C).

Oil Pressure, Minimum: 20 PSI.

Maximum: 115 PSI.

# CHECKLIST PROCEDURES

## PREFLIGHT INSPECTION

### ① CABIN

1. Pitot Tube Cover -- REMOVE. Check for pitot stoppage.
2. Pilot's Operating Handbook -- AVAILABLE IN THE AIRPLANE.
3. Airplane Weight and Balance -- CHECKED.
4. Parking Brake -- SET.
5. Control Wheel Lock -- REMOVE.
6. Ignition Switch -- OFF.
7. Avionics Master Switch -- OFF.

### WARNING

WHEN TURNING ON THE MASTER SWITCH, USING AN EXTERNAL POWER SOURCE, OR PULLING THE PROPELLER THROUGH BY HAND, TREAT THE PROPELLER AS IF THE IGNITION SWITCH WERE ON. DO NOT STAND, NOR ALLOW ANYONE ELSE TO STAND, WITHIN THE ARC OF THE PROPELLER, SINCE A LOOSE OR BROKEN WIRE OR A COMPONENT MALFUNCTION COULD CAUSE THE PROPELLER TO ROTATE.

8. Master Switch -- ON.
9. Fuel Quantity Indicators -- CHECK QUANTITY and ENSURE LOW FUEL ANNUNCIATORS (L LOW FUEL R) ARE EXTINGUISHED.
10. Avionics Master Switch -- ON.
11. Avionics Cooling Fan -- CHECK AUDIBLY FOR OPERATION.
12. Avionics Master Switch -- OFF.
13. Static Pressure Alternate Source Valve -- OFF.
14. Annunciator Panel Switch -- PLACE AND HOLD IN TST POSITION and ensure all annunciators illuminate.

15. Annunciator Panel Test Switch -- RELEASE. Check that appropriate annunciators remain on.

### NOTE

When Master Switch is turned ON, some annunciators will flash for approximately 10 seconds before illuminating steadily. When panel TST switch is toggled up and held in position, all remaining lights will flash until the switch is released.

16. Fuel Selector Valve -- BOTH.
17. Fuel Shutoff Valve -- ON (Push Full In).
18. Flaps -- EXTEND.
19. Pitot Heat -- ON. (Carefully check that pitot tube is warm to touch within 30 seconds.)
20. Pitot Heat -- OFF.
21. Master Switch -- OFF.
22. Baggage Door -- CHECK, lock with key.

## ② EMPENNAGE

1. Rudder Gust Lock (if installed) -- REMOVE.
2. Tail Tie-Down -- DISCONNECT.
3. Control Surfaces -- CHECK freedom of movement and security.
4. Trim Tab -- CHECK security.
5. Antennas -- CHECK for security of attachment and general condition.

## ③ RIGHT WING Trailing Edge

1. Aileron -- CHECK freedom of movement and security.
2. Flap -- CHECK for security and condition.

## ④ RIGHT WING

1. Wing Tie-Down -- DISCONNECT.

2. Main Wheel Tire -- CHECK for proper inflation and general condition (weather checks, tread depth and wear, etc...).
3. Fuel Tank Sump Quick Drain Valves -- DRAIN at least a cupful of fuel (using sampler cup) from each sump location to check for water, sediment, and proper fuel grade before each flight and after each refueling. If water is observed, take further samples until clear and then gently rock wings and lower tail to the ground to move any additional contaminants to the sampling points. Take repeated samples from all fuel drain points until all contamination has been removed. If contaminants are still present, refer to **WARNING** below and do not fly airplane.

**⚠ WARNING**

**IF, AFTER REPEATED SAMPLING, EVIDENCE OF CONTAMINATION STILL EXISTS, THE AIRPLANE SHOULD NOT BE FLOWN. TANKS SHOULD BE DRAINED AND SYSTEM PURGED BY QUALIFIED MAINTENANCE PERSONNEL. ALL EVIDENCE OF CONTAMINATION MUST BE REMOVED BEFORE FURTHER FLIGHT.**

4. Fuel Quantity -- CHECK VISUALLY for desired level.
5. Fuel Filler Cap -- SECURE and VENT UNOBSTRUCTED.

**⑤ NOSE**

1. Fuel Strainer Quick Drain Valve (Located on bottom of fuselage) -- DRAIN at least a cupful of fuel (using sampler cup) from valve to check for water, sediment, and proper fuel grade before each flight and after each refueling. If water is observed, take further samples until clear and then gently rock wings and lower tail to the ground to move any additional contaminants to the sampling points. Take repeated samples from all fuel drain points, including the fuel reservoir and fuel selector, until all contamination has been removed. If contaminants are still present, refer to **WARNING** above and do not fly the airplane.

2. Engine Oil Dipstick/Filler Cap -- CHECK oil level, then check dipstick/filler cap SECURE. Do not operate with less than five quarts. Fill to eight quarts for extended flight.
3. Engine Cooling Air Inlets -- CLEAR of obstructions.
4. Propeller and Spinner -- CHECK for nicks and security.
5. Air Filter -- CHECK for restrictions by dust or other foreign matter.
6. Nose Wheel Strut and Tire -- CHECK for proper inflation of strut and general condition (weather checks, tread depth and wear, etc...) of tire.
7. Left Static Source Opening -- CHECK for stoppage.

## 6 LEFT WING

1. Fuel Quantity -- CHECK VISUALLY for desired level.
2. Fuel Filler Cap -- SECURE and VENT UNOBSTRUCTED.
3. Fuel Tank Sump Quick Drain Valves -- DRAIN at least a cupful of fuel (using sampler cup) from each sump location to check for water, sediment, and proper fuel grade before each flight and after each refueling. If water is observed, take further samples until clear and then gently rock wings and lower tail to the ground to move any additional contaminants to the sampling points. Take repeated samples from all fuel drain points until all contamination has been removed. If contaminants are still present, refer to WARNING on page 4-9 and do not fly airplane.
4. Main Wheel Tire -- CHECK for proper inflation and general condition (weather checks, tread depth and wear, etc...).

## ⑦ LEFT WING Leading Edge

1. Fuel Tank Vent Opening -- CHECK for stoppage.
2. Stall Warning Opening -- CHECK for stoppage. To check the system, place a clean handkerchief over the vent opening and apply suction; a sound from the warning horn will confirm system operation.
3. Wing Tie-Down -- DISCONNECT.
4. Landing/Taxi Light(s) -- CHECK for condition and cleanliness of cover.

## ⑧ LEFT WING Trailing Edge

1. Aileron-- CHECK for freedom of movement and security.
2. Flap -- CHECK for security and condition.

## BEFORE STARTING ENGINE

1. Preflight Inspection -- COMPLETE.
2. Passenger Briefing -- COMPLETE.
3. Seats and Seat Belts -- ADJUST and LOCK. Ensure inertia reel locking.
4. Brakes -- TEST and SET.
5. Circuit Breakers -- CHECK IN.
6. Electrical Equipment, Autopilot (if installed) -- OFF.

### CAUTION

**THE AVIONICS MASTER SWITCH MUST BE OFF DURING ENGINE START TO PREVENT POSSIBLE DAMAGE TO AVIONICS.**

7. Avionics Master Switch -- OFF.
8. Fuel Selector Valve -- BOTH.
9. Fuel Shutoff Valve -- ON (push full in).
10. Avionics Circuit Breakers -- CHECK IN.



## **STARTING ENGINE (With Battery)**

1. Throttle -- OPEN 1/4 INCH.
2. Mixture -- IDLE CUT OFF.
3. Propeller Area -- CLEAR.
4. Master Switch -- ON.
5. Auxiliary Fuel Pump Switch -- ON.
6. Mixture -- ADVANCE until fuel flow just starts to rise, then return to IDLE CUT OFF position.
7. Auxiliary Fuel Pump -- OFF.

### **NOTE**

If engine is warm, omit priming procedure of steps 5, 6 and 7 above.

8. Ignition Switch -- START (release when engine starts).
9. Mixture -- ADVANCE smoothly to RICH when engine fires.

### **NOTE**

If engine floods, turn off auxiliary fuel pump, place mixture in idle cut off, open throttle 1/2 to full, and crank engine. When engine fires, advance mixture to full rich and retard throttle promptly.

10. Oil Pressure -- CHECK.
11. Navigation Lights and Flashing Beacon -- ON as required.
12. Avionics Master Switch -- ON.
13. Radios -- ON.
14. Flaps -- RETRACT.

## STARTING ENGINE (With External Power)

1. Throttle -- OPEN 1/4 INCH.
2. Mixture -- IDLE CUT OFF.
3. Propeller Area -- CLEAR.
4. External Power -- CONNECT to airplane receptacle.
5. Master Switch -- ON.
6. Auxiliary Fuel Pump Switch -- ON.
7. Mixture -- ADVANCE until fuel flow just starts to rise, then return to IDLE CUT OFF position.
8. Auxiliary Fuel Pump -- OFF.

### NOTE

If engine is warm, omit priming procedure of steps 6, 7 and 8 above.

9. Ignition Switch -- START (release when engine starts).
10. Mixture -- ADVANCE smoothly to RICH when engine fires.

### NOTE

If engine floods, turn off auxiliary fuel pump, place mixture in idle cut off, open throttle 1/2 to full, and crank engine. When engine fires, advance mixture to full rich and retard throttle promptly.

11. Oil Pressure -- CHECK.
12. External Power -- DISCONNECT from airplane receptacle.
13. Flashing Beacon and Navigation Lights -- ON as required.
14. Avionics Master Switch -- ON.
15. Radios -- ON.
16. Flaps -- RETRACT.

## BEFORE TAKEOFF

1. Parking Brake -- SET.
2. Passenger Seat Backs -- MOST UPRIGHT POSITION.
3. Seats and Seat Belts -- CHECK SECURE.
4. Cabin Doors -- CLOSED and LOCKED.
5. Flight Controls -- FREE and CORRECT.

6. Flight Instruments -- CHECK and SET.
7. Fuel Quantity -- CHECK.
8. Mixture -- RICH.
9. Fuel Selector Valve -- RECHECK BOTH.
10. Elevator Trim -- SET for takeoff.
11. Throttle -- 1800 RPM.
  - a. Magnetos -- CHECK (RPM drop should not exceed 150 RPM on either magneto or 50 RPM differential between magnetos).
  - b. Suction Gage -- CHECK.
  - c. Engine Instruments and Ammeter -- CHECK.
12. Annunciator Panel -- Ensure no annunciators are illuminated.
13. Throttle -- CHECK IDLE.
14. Throttle -- 1000 RPM or LESS.
15. Throttle Friction Lock -- ADJUST.
16. Strobe Lights -- AS DESIRED.
17. Radios and Avionics -- SET.
18. NAV/GPS Switch (if installed) -- SET.
19. Autopilot (if installed) -- OFF.
20. Wing Flaps -- SET for takeoff (0°-10°).
21. Brakes -- RELEASE.

## TAKEOFF

### NORMAL TAKEOFF

1. Wing Flaps -- 0°-10°.
2. Throttle -- FULL OPEN.
3. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM).
4. Elevator Control -- LIFT NOSE WHEEL (at 55 KIAS).
5. Climb Speed -- 70-80 KIAS.

## **SHORT FIELD TAKEOFF**

1. Wing Flaps -- 10°.
2. Brakes -- APPLY.
3. Throttle -- FULL OPEN.
4. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM).
5. Brakes -- RELEASE.
6. Elevator Control -- SLIGHTLY TAIL LOW.
7. Climb Speed -- 56 KIAS (until all obstacles are cleared).

## **ENROUTE CLIMB**

1. Airspeed -- 70-85 KIAS.
2. Throttle -- FULL OPEN.
3. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM).

## **CRUISE**

1. Power -- 2100-2700 RPM (No more than 75% is recommended).
2. Elevator Trim -- ADJUST.
3. Mixture -- LEAN.

## **DESCENT**

1. Power -- AS DESIRED.
2. Mixture -- ADJUST for smooth operation (full rich for idle power).
3. Fuel Selector Valve -- BOTH.

## **BEFORE LANDING**

1. Pilot and Passenger Seat Backs -- MOST UPRIGHT POSITION.
2. Seats and Seat Belts -- SECURED and LOCKED.
3. Fuel Selector Valve -- BOTH.
4. Mixture -- RICH.
5. Landing/Taxi Lights -- ON.
6. Autopilot (if installed) -- OFF.

## **LANDING**

### **NORMAL LANDING**

1. Airspeed -- 65-75 KIAS (flaps UP).
2. Wing Flaps -- AS DESIRED (0°-10° below 110 KIAS, 10°-30° below 85 KIAS).
3. Airspeed -- 60-70 KIAS (flaps DOWN).
4. Touchdown -- MAIN WHEELS FIRST.
5. Landing Roll -- LOWER NOSE WHEEL GENTLY.
6. Braking -- MINIMUM REQUIRED.

### **SHORT FIELD LANDING**

1. Airspeed -- 65-75 KIAS (flaps UP).
2. Wing Flaps -- FULL DOWN (30°).
3. Airspeed -- 61 KIAS (until flare).
4. Power -- REDUCE to idle after clearing obstacle.
5. Touchdown -- MAIN WHEELS FIRST.
6. Brakes -- APPLY HEAVILY.
7. Wing Flaps -- RETRACT.

### **BALKED LANDING**

1. Throttle -- FULL OPEN.
2. Wing Flaps -- RETRACT TO 20°.
3. Climb Speed -- 60 KIAS.
4. Wing Flaps -- 10° (until obstacles are cleared).  
RETRACT (after reaching a safe altitude and 65 KIAS).

## **AFTER LANDING**

1. Wing Flaps -- UP.

## **SECURING AIRPLANE**

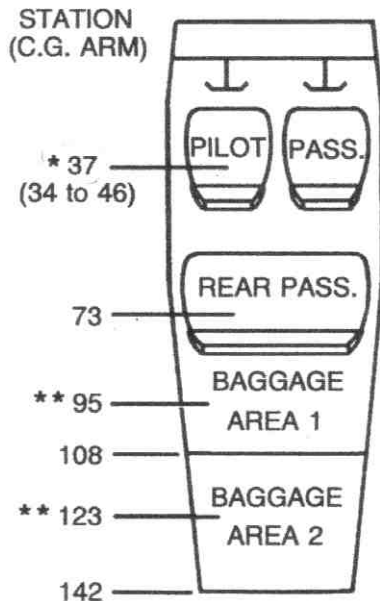
1. Parking Brake -- SET.
2. Avionics Master Switch, Electrical Equipment, Autopilot (if installed) -- OFF.
3. Mixture -- IDLE CUT OFF (pulled full out).
4. Ignition Switch -- OFF.
5. Master Switch -- OFF.
6. Control Lock -- INSTALL.
7. Fuel Selector Valve -- LEFT or RIGHT to prevent cross feeding.

# LOADING ARRANGEMENTS

\* Pilot or passenger center of gravity on adjustable seats positioned for average occupant. Numbers in parentheses indicate forward and aft limits of occupant center of gravity range.

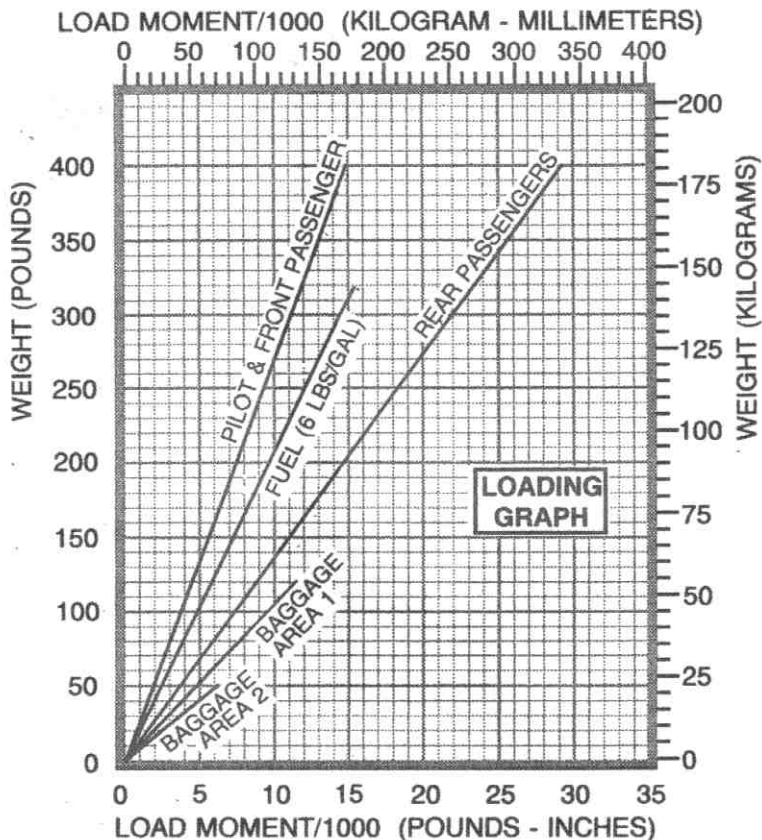
\*\* Arm measured to the center of the areas shown.

- NOTES:**
1. The usable fuel C.G. arm for integral tanks is located at station 48.0.
  2. The rear cabin wall (approximate station 108) or aft baggage wall (approximate station 142) can be used as convenient interior reference points for determining the location of baggage area fuselage stations.



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Figure 6-3. Loading Arrangements

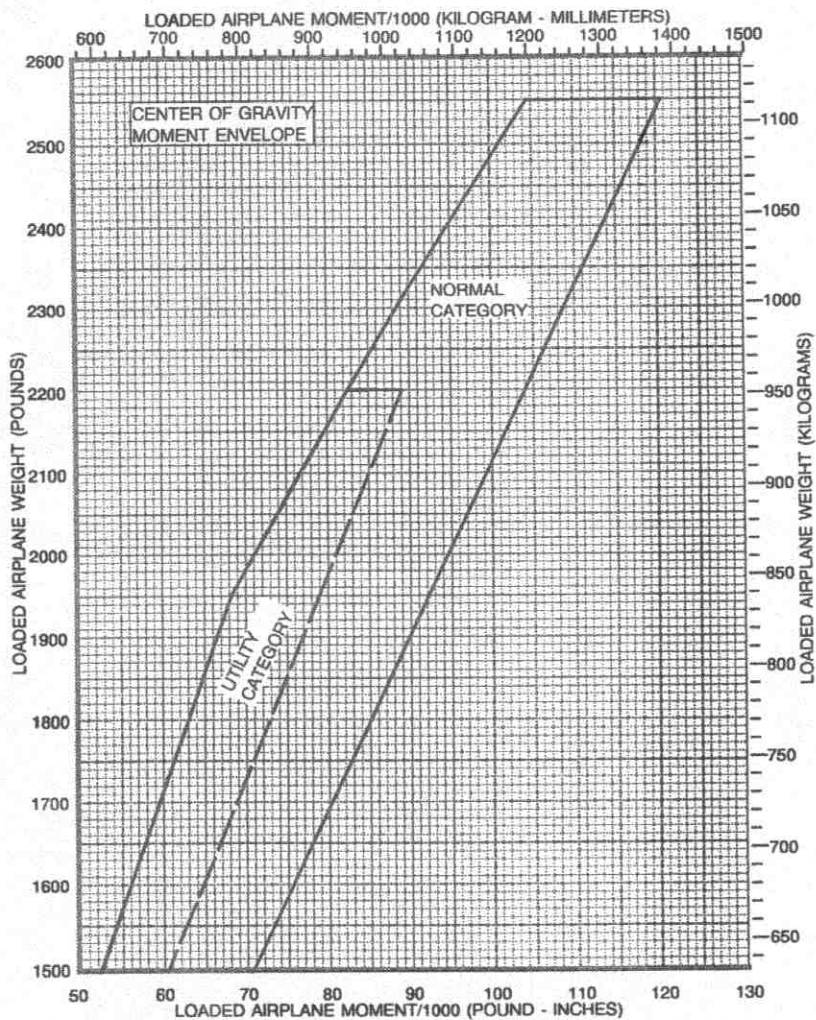


**NOTE:** LINE REPRESENTING ADJUSTABLE SEATS SHOWS THE PILOT OR PASSENGER CENTER OF GRAVITY ON ADJUSTABLE SEATS POSITIONED FOR AN AVERAGE OCCUPANT. REFER TO THE LOADING ARRANGEMENTS DIAGRAM FOR FORWARD AND AFT LIMITS OF OCCUPANT C.G. RANGE.

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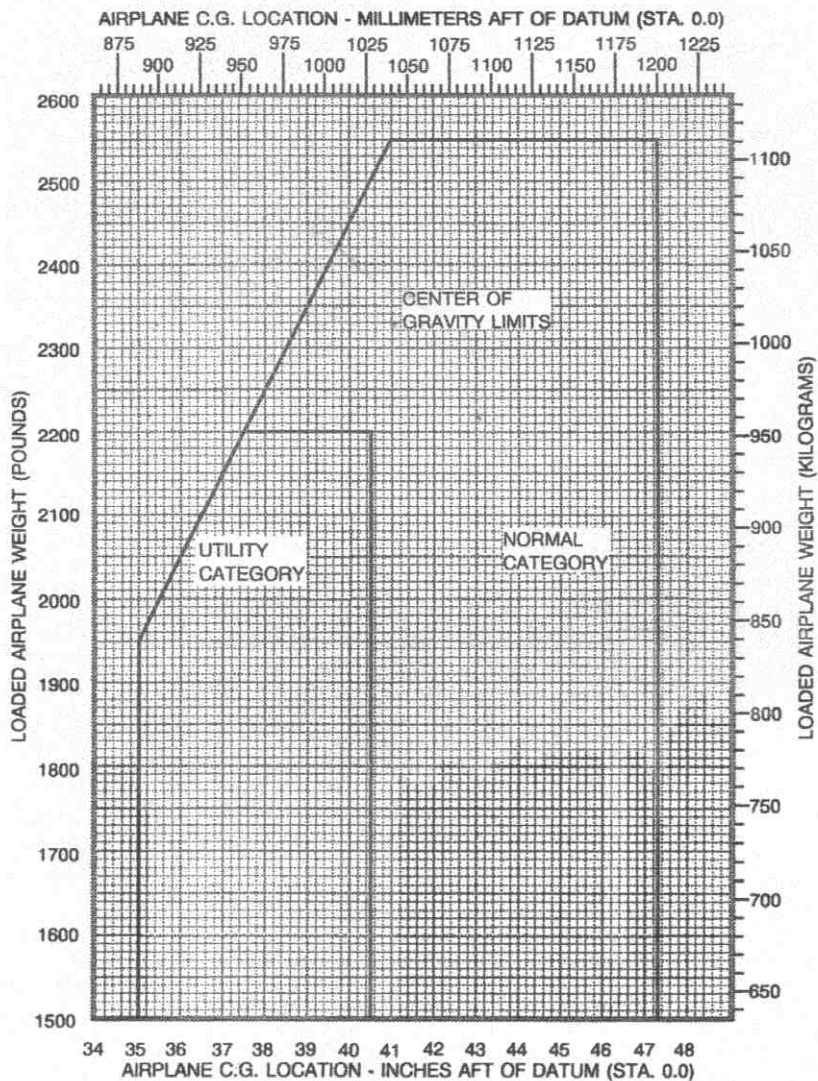
Figure 6-6. Loading Graph





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Figure 6-7. Center of Gravity Moment Envelope



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Figure 6-8. Center of Gravity Limits

## STALL SPEEDS AT 2550 POUNDS

Conditions:  
Power Off

### MOST REARWARD CENTER OF GRAVITY

FLAP SETTING	ANGLE OF BANK							
	0°		30°		45°		60°	
	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
UP	48	53	52	57	57	63	68	75
10°	42	50	45	54	50	59	59	71
30°	40	48	43	52	48	57	57	68

### MOST FORWARD CENTER OF GRAVITY

FLAP SETTING	ANGLE OF BANK							
	0°		30°		45°		60°	
	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
UP	48	53	52	57	57	63	68	75
10°	43	51	46	55	51	61	61	72
30°	40	48	43	52	48	57	57	68

#### NOTES:

- Altitude loss during a stall recovery may be as much as 230 feet.
- KIAS values are approximate.

Figure 5-3. Stall Speeds

# SHORT FIELD TAKEOFF DISTANCE AT 2550 POUNDS

**CONDITIONS:**

Flaps 10°  
 Full Throttle Prior to Brake Release  
 Paved, level, dry runway  
 Zero Wind  
 Lift Off: 51 KIAS  
 Speed at 50 Ft: 56 KIAS

Press Alt In Feet	0°C		10°C		20°C		30°C		40°C	
	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst
S. L.	860	1465	925	1575	995	1690	1070	1810	1150	1945
1000	940	1600	1010	1720	1090	1850	1170	1990	1260	2135
2000	1025	1755	1110	1890	1195	2035	1285	2190	1380	2355
3000	1125	1925	1215	2080	1310	2240	1410	2420	1515	2605
4000	1235	2120	1335	2295	1440	2480	1550	2685	1660	2880
5000	1355	2345	1465	2545	1585	2755	1705	2975	1825	3205
6000	1495	2605	1615	2830	1745	3075	1875	3320	2010	3585
7000	1645	2910	1785	3170	1920	3440	2065	3730	2215	4045
8000	1820	3265	1970	3575	2120	3880	2280	4225	2450	4615

**NOTES:**

1. Short field technique as specified in Section 4.
2. Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tail winds up to 10 knots, increase distances by 10% for each 2 knots.
4. For operation on dry, grass runway, increase distances by 15% of the "ground roll" figure.

Figure 5-5. Short Field Takeoff Distance (Sheet 1 of 3)

## TIME, FUEL AND DISTANCE TO CLIMB AT 2550 POUNDS

**CONDITIONS:**

Flaps Up  
Full Throttle  
Standard Temperature

PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB FPM	FROM SEA LEVEL		
			TIME IN MIN	FUEL USED GAL	DIST NM
S.L.	74	730	0	0.0	0
1000	73	695	1	0.4	2
2000	73	655	3	0.8	4
3000	73	620	4	1.2	6
4000	73	600	6	1.5	8
5000	73	550	8	1.9	10
6000	73	505	10	2.2	13
7000	73	455	12	2.6	16
8000	72	410	14	3.0	19
9000	72	360	17	3.4	22
10,000	72	315	20	3.9	27
11,000	72	265	24	4.4	32
12,000	72	220	28	5.0	38

**NOTES:**

1. Add 1.4 gallons of fuel for engine start, taxi and takeoff allowance.
2. Mixture leaned above 3,000 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.

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

## CRUISE PERFORMANCE

**CONDITIONS:**

2550 Pounds

Recommended Lean Mixture At All Altitudes (Refer to Section 4, Cruise)

PRESS ALT FT	RPM	20°C BELOW STANDARD TEMP			STANDARD TEMPERATURE			20°C ABOVE STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2000	2550	83	117	11.1	77	118	10.5	72	117	9.9
	2500	78	115	10.6	73	115	9.9	68	115	9.4
	2400	69	111	9.6	64	110	9.0	60	109	8.5
	2300	61	105	8.6	57	104	8.1	53	102	7.7
	2200	53	99	7.7	50	97	7.3	47	95	6.9
	2100	47	92	6.9	44	90	6.6	42	89	6.3
4000	2600	83	120	11.1	77	120	10.4	72	119	9.8
	2550	79	118	10.6	73	117	9.9	68	117	9.4
	2500	74	115	10.1	69	115	9.5	64	114	8.9
	2400	65	110	9.1	61	109	8.5	57	107	8.1
	2300	58	104	8.2	54	102	7.7	51	101	7.3
	2200	51	98	7.4	48	96	7.0	45	94	6.7
	2100	45	91	6.6	42	89	6.4	40	87	6.1
6000	2650	83	122	11.1	77	122	10.4	72	121	9.8
	2600	78	120	10.6	73	119	9.9	68	118	9.4
	2500	70	115	9.6	65	114	9.0	60	112	8.5
	2400	62	109	8.6	57	108	8.2	54	106	7.7
	2300	54	103	7.8	51	101	7.4	48	99	7.0
	2200	48	96	7.1	45	94	6.7	43	92	6.4

Figure 5-8. Cruise Performance (Sheet 1 of 2)

## CRUISE PERFORMANCE

**CONDITIONS:**

2550 Pounds

Recommended Lean Mixture At All Altitudes (Refer to Section 4, Cruise)

PRESS ALT FT	RPM	20°C BELOW STANDARD TEMP			STANDARD TEMPERATURE			20°C ABOVE STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
8000	2700	83	125	11.1	77	124	10.4	71	123	9.7
	2650	78	122	10.5	72	122	9.9	67	120	9.3
	2600	74	120	10.0	68	119	9.4	64	117	8.9
	2500	65	114	9.1	61	112	8.6	57	111	8.1
	2400	58	108	8.2	54	106	7.8	51	104	7.4
	2300	52	101	7.5	48	99	7.1	46	97	6.8
	2200	46	94	6.8	43	92	6.5	41	90	6.2
10,000	2700	78	124	10.5	72	123	9.8	67	122	9.3
	2650	73	122	10.0	68	120	9.4	63	119	8.9
	2600	69	119	9.5	64	117	9.0	60	115	8.5
	2500	62	113	8.7	57	111	8.2	54	109	7.8
	2400	55	106	7.9	51	104	7.5	49	102	7.1
	2300	49	100	7.2	46	97	6.8	44	95	6.5
12,000	2650	69	121	9.5	64	119	8.9	60	117	8.5
	2600	65	118	9.1	61	116	8.5	57	114	8.1
	2500	58	111	8.3	54	109	7.8	51	107	7.4
	2400	52	105	7.5	49	102	7.1	46	100	6.8
	2300	47	98	6.9	44	95	6.6	41	92	6.3

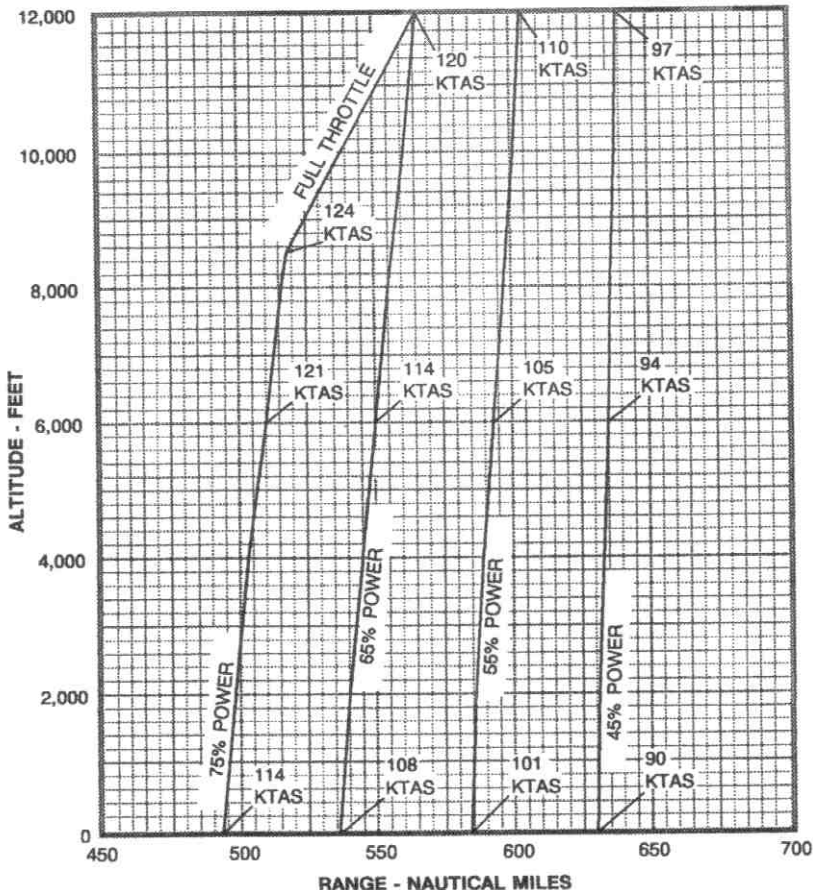
Figure 5-8. Cruise Performance (Sheet 2 of 2)

# RANGE PROFILE

## 45 MINUTES RESERVE

### 53 GALLONS USABLE FUEL

CONDITIONS:  
 2550 Pounds  
 Recommended Lean Mixture for Cruise At All Altitudes  
 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.

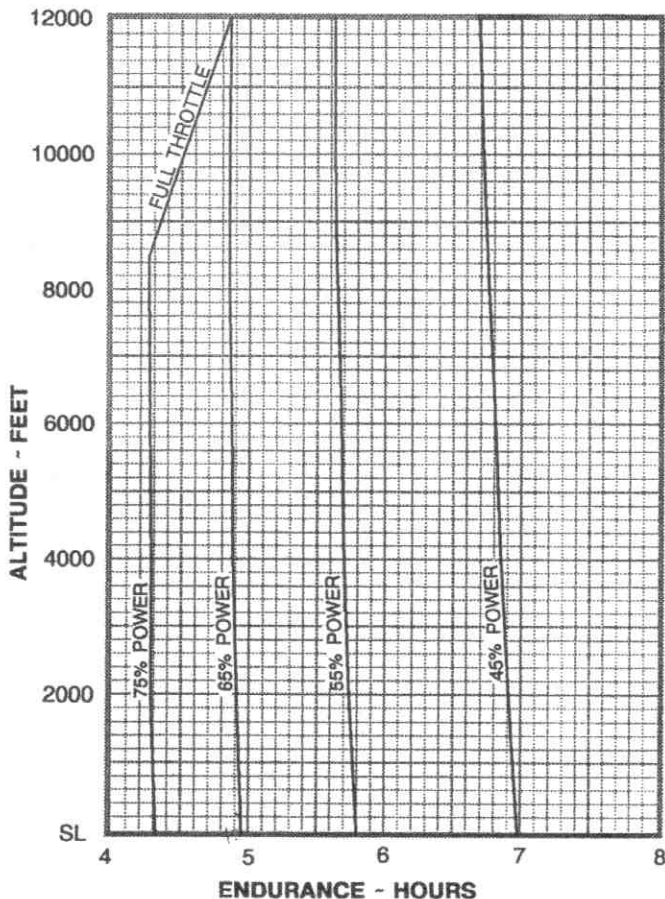
Figure 5-9. Range Profile



# ENDURANCE PROFILE

45 MINUTES RESERVE  
53 GALLONS USABLE FUEL

CONDITIONS:  
2550 Pounds  
Recommended Lean Mixture for Cruise At All Altitudes  
Standard Temperature



NOTE:

1. This chart allows for the fuel used for engine start, taxi, takeoff and climb, and the time during climb.

Figure 5-10. Endurance Profile

## SHORT FIELD LANDING DISTANCE AT 2550 POUNDS

### CONDITIONS:

Flaps 30°  
 Power Off  
 Maximum Braking  
 Paved, level, dry runway  
 Zero Wind  
 Speed at 50 Ft: 61 KIAS

Press Alt In Feet	0°C		10°C		20°C		30°C		40°C	
	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst
S. L.	545	1290	565	1320	585	1350	605	1380	625	1415
1000	565	1320	585	1350	605	1385	625	1420	650	1450
2000	585	1355	610	1385	630	1420	650	1455	670	1490
3000	610	1385	630	1425	655	1460	675	1495	695	1530
4000	630	1425	655	1460	675	1495	700	1535	725	1570
5000	655	1460	680	1500	705	1535	725	1575	750	1615
6000	680	1500	705	1540	730	1580	755	1620	780	1660
7000	705	1545	730	1585	760	1625	785	1665	810	1705
8000	735	1585	760	1630	790	1670	815	1715	840	1755

### NOTES:

1. Short field technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tail winds up to 10 knots, increase distances by 10% for each 2 knots.
3. For operation on dry, grass runway, increase distances by 45% of the "ground roll" figure.
4. If landing with flaps up, increase the approach speed by 9 KIAS and allow for 35% longer distances.

Figure 5-11. Short Field Landing Distance