

EMERGENCY PROCEDURES

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AIRSPEEDS

AIRSPEEDS FOR EMERGENCY OPERATIONS

ENGINE FAILURE AFTER TAKEOFF

Wing Flaps UP	65 KIAS
Wing Flaps 10° - FULL	60 KIAS

MANEUVERING SPEED

2450 POUNDS	99 KIAS
2200 POUNDS	94 KIAS
1600 POUNDS	82 KIAS

MAXIMUM GLIDE

65 KIAS

PRECAUTIONARY LANDING WITH ENGINE POWER

60 KIAS

LANDING WITHOUT ENGINE POWER

Wing Flaps UP	65 KIAS
Wing Flaps 10° - FULL	60 KIAS

EMERGENCY PROCEDURES

Procedures in the Emergency Procedures Checklist portion of this section shown in **bold-faced** type are immediate action items which should be committed to memory.

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF ROLL

1. Throttle Control IDLE (pull full out)
2. Brakes **APPLY**
3. Wing Flaps **RETRACT**
4. Mixture Control IDLE CUTOFF (pull full out)
5. MAGNETOS Switch OFF
6. STBY BATT Switch OFF
7. MASTER Switch (ALT and BAT) OFF

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed **65 KIAS (Flaps UP)**
60 KIAS (Flaps 10° - FULL)
2. Mixture Control IDLE CUTOFF (pull full out)
3. FUEL SHUTOFF Valve OFF (pull full out)
4. MAGNETOS Switch OFF
5. Wing Flaps **AS REQUIRED (FULL recommended)**
6. STBY BATT Switch OFF
7. MASTER Switch (ALT and BAT) OFF
8. Cabin Door **UNLATCH**
9. Land **STRAIGHT AHEAD**

(Continued Next Page)

ENGINE FAILURES (Continued)

ENGINE FAILURE DURING FLIGHT (RESTART PROCEDURES)

1. Airspeed **65 KIAS (best glide speed)**
2. FUEL SHUTOFF Valve **ON (push full in)**
3. FUEL SELECTOR Valve **BOTH**
4. FUEL PUMP Switch **ON**
5. Mixture Control **RICH (if restart has not occurred)**
6. MAGNETOS Switch **BOTH (or START if propeller is stopped)**

NOTE

If propeller is windmilling, engine will restart automatically within a few seconds. If propeller has stopped (possible at low speeds), turn MAGNETOS switch to START, advance throttle slowly from idle, and lean the mixture from full rich, as required, to obtain smooth operation.

7. FUEL PUMP Switch OFF

NOTE

If the indicated fuel flow (FFLOW GPH) immediately drops to zero, a sign of failure of the engine-driven fuel pump, return the FUEL PUMP switch to the ON position.

FORCED LANDINGS

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Pilot and Passenger Seat Backs MOST UPRIGHT POSITION
2. Seats and Seat Belts SECURE
3. Airspeed 65 KIAS (Flaps UP)
4. Mixture Control 60 KIAS (Flaps 10° - FULL)
5. FUEL SHUTOFF Valve IDLE CUTOFF (pull full out)
6. MAGNETOS Switch OFF (pull full out)
7. Wing Flaps AS REQUIRED (FULL recommended)
8. STBY BATT Switch OFF
9. MASTER Switch (ALT and BAT) OFF (when landing is assured)
10. Doors UNLATCH PRIOR TO TOUCHDOWN
11. Touchdown SLIGHTLY TAIL LOW
12. Brakes APPLY HEAVILY

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Pilot and Passenger Seat Backs MOST UPRIGHT POSITION
2. Seats and Seat Belts SECURE
3. Airspeed 60 KIAS
4. Wing Flaps 20°
5. Selected Field FLY OVER (noting terrain and obstructions)
6. Wing Flaps FULL (on final approach)
7. Airspeed 60 KIAS
8. STBY BATT Switch OFF
9. MASTER Switch (ALT and BAT) OFF (when landing assured)
10. Doors UNLATCH PRIOR TO TOUCHDOWN
11. Touchdown SLIGHTLY TAIL LOW
12. Mixture Control IDLE CUTOFF (pull full out)
13. MAGNETOS Switch OFF
14. Brakes APPLY HEAVILY

(Continued Next Page)

FORCED LANDINGS (Continued)

DITCHING

1. Radio TRANSMIT MAYDAY on 121.5 MHZ (Give location, Intentions and SQUAWK 7700)
2. Heavy Objects (in baggage area) SECURE OR JETTISON (if possible)
3. Pilot and Passenger Seat Backs MOST UPRIGHT POSITION
4. Seats and Seat Belts SECURE
5. Wing Flaps 20° - FULL
6. Power ESTABLISH 300 FT/MIN DESCENT AT 55 KIAS

NOTE

If no power is available, approach at 65 KIAS with Flaps UP or 60 KIAS with Flaps 10°.

7. Approach INTO THE WIND
High Winds, Heavy Seas PARALLEL TO SWELLS
Light Winds, Heavy Swells UNLATCH
8. Cabin Doors UNLATCH
9. Touchdown LEVEL ATTITUDE AT ESTABLISHED RATE-OF-DESCENT
10. Face CUSHION at touchdown with folded coat
11. ELT ACTIVATE
12. Airplane EVACUATE THROUGH CABIN DOORS (If necessary, open window and flood cabin to equalize pressure so doors can be opened)
13. Life Vests and Raft INFLATE WHEN CLEAR OF AIRPLANE

FIRES

DURING START ON GROUND

1. MAGNETOS Switch.....START
(Continue cranking to start the engine)

IF ENGINE STARTS

2. Power.....1800 RPM for a few minutes
3. Engine.....SHUTDOWN and inspect for damage

IF ENGINE FAILS TO START

2. Throttle Control.....FULL (push full in)
3. Mixture Control.....IDLE CUTOFF (pull full out)
4. MAGNETOS Switch.....START (continue cranking)
5. FUEL SHUTOFF Valve.....OFF (pull full out)
6. FUEL PUMP Switch.....OFF
7. MAGNETOS Switch.....OFF
8. STBY BATT Switch.....OFF
9. MASTER Switch (ALT and BAT).....OFF
10. Engine.....SECURE
11. Parking Brake.....RELEASE
12. Fire Extinguisher.....OBTAIN
(Have ground attendants obtain if not installed)
13. Airplane.....EVACUATE
14. Fire.....EXTINGUISH
(Using fire extinguisher, wool blanket or dirt)
15. Fire Damage.....INSPECT
(Repair or replace damaged components and/or wiring before conducting another flight)

(Continued Next Page)

FIRES (Continued)

ENGINE FIRE IN FLIGHT

1. Mixture Control.....IDLE CUTOFF (pull full out)
2. FUEL SHUTOFF Valve.....OFF (pull full out)
3. FUEL PUMP Switch.....OFF
4. MASTER Switch (ALT and BAT).....OFF
5. Cabin Heat and Air.....OFF (except overhead vents)
6. Airspeed.....100 KIAS
(If fire is not extinguished, increase glide speed to find an airspeed, within airspeed limitations, which will provide an incombustible mixture)
7. Forced Landing.....EXECUTE
(Refer to EMERGENCY LANDING WITHOUT ENGINE POWER, page E-6)

(Continued Next Page)

FIRES (Continued)

ELECTRICAL FIRE IN FLIGHT

- 1. STBY BATT Switch OFF
- 2. MASTER Switch (ALT and BAT) OFF
- 3. Vents/Cabin Air/Heat CLOSED
- 4. Fire Extinguisher ACTIVATE (if available)
- 5. AVIONICS Switch (BUS 1 and BUS 2) OFF
- 6. All Other Switches (except MAGNETOS switch) OFF

WARNING

AFTER THE FIRE EXTINGUISHER HAS BEEN USED, MAKE SURE THAT THE FIRE IS EXTINGUISHED BEFORE EXTERIOR AIR IS USED TO REMOVE SMOKE FROM THE CABIN.

- 7. Vents/Cabin Air/Heat. OPEN
(When sure that fire is completely extinguished)

IF FIRE HAS BEEN EXTINGUISHED AND ELECTRICAL POWER IS NECESSARY FOR CONTINUED FLIGHT TO NEAREST SUITABLE AIRPORT OR LANDING AREA

- 8. Circuit Breakers CHECK for OPEN circuit(s), do not reset
- 9. MASTER Switch (ALT and BAT) ON
- 10. STBY BATT Switch ON
- 11. AVIONICS Switch (BUS 1) ON
- 12. AVIONICS Switch (BUS 2) ON

(Continued Next Page)

FIRES (Continued)

CABIN FIRE

- 1. STBY BATT Switch OFF
- 2. MASTER Switch (ALT and BAT) OFF
- 3. Vents/Cabin Air/Heat CLOSED (to avoid drafts)
- 4. Fire Extinguisher ACTIVATE (if available)

WARNING

AFTER THE FIRE EXTINGUISHER HAS BEEN USED, MAKE SURE THAT THE FIRE IS EXTINGUISHED BEFORE EXTERIOR AIR IS USED TO REMOVE SMOKE FROM THE CABIN.

- 5. Vents/Cabin Air/Heat. OPEN
(When sure that fire is completely extinguished)
- 6. Land the airplane as soon as possible to inspect for damage.

WING FIRE

- 1. LAND and TAXI Light Switches OFF
- 2. NAV Light Switch OFF
- 3. STROBE Light Switch OFF
- 4. PITOT HEAT Switch OFF

NOTE

Perform a sideslip to keep the flames away from the fuel tank and cabin. Land as soon as possible using flaps only as required for final approach and touchdown.

ICING

INADVERTENT ICING ENCOUNTER DURING FLIGHT

1. **PITOT HEAT Switch.**..... ON
2. **Turn back or change altitude** to obtain an outside air temperature that is less conducive to icing.
3. **Pull cabin heat control full out and open defroster control outlets** to obtain maximum windshield defroster airflow. Adjust cabin air control to get maximum defroster heat and airflow.
4. Watch for signs of induction air filter icing. A loss of engine RPM could be caused by ice blocking the air intake filter. Adjust the throttle as necessary to hold engine RPM. Adjust mixture, as necessary, for any change in power settings.
5. Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable "off airport" landing site.
6. With an ice accumulation of 0.25 inch or more on the wing leading edges, be prepared for significantly higher power requirements, higher approach and stall speeds, and a longer landing roll.
7. Leave wing flaps retracted. With a severe ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing flap extension could result in a loss of elevator effectiveness.
8. Open left window and, if practical, scrape ice from a portion of the windshield for visibility in the landing approach.
9. Perform a landing approach using a forward slip, if necessary, for improved visibility.
10. Approach at 65 to 75 KIAS depending upon the amount of ice accumulation.
11. Perform landing in level attitude.
12. Missed approaches should be avoided whenever possible because of severely reduced climb capability.

ICING (Continued)

STATIC SOURCE BLOCKAGE (ERRONEOUS INSTRUMENT READING SUSPECTED)

1. **ALT STATIC AIR Valve.**..... **PULL ON**
2. **CABIN HT and CABIN AIR Knobs** **PULL ON**
3. **Vents** **CLOSED**
4. **Airspeed** Refer to POH
(Section 5, Figure 5-1 (Sheet 2), Airspeed Calibration, Alternate Static Source correction chart.)

EXCESSIVE FUEL VAPOR

FUEL FLOW STABILIZATION PROCEDURE

(If flow fluctuations of 1 GPH or more, or power surges occur.)

1. **FUEL PUMP Switch** **ON**
2. **Mixture Control** **ADJUST**
(As necessary for smooth engine operation)
3. **Fuel Selector Valve** **SELECT OPPOSITE TANK**
(if vapor symptoms continue)
4. **FUEL PUMP Switch.** **OFF**
(after fuel flow has stabilized)

ABNORMAL LANDINGS

LANDING WITH A FLAT MAIN TIRE

- 1. Approach..... NORMAL
- 2. Wing Flaps..... FULL
- 3. Touchdown..... GOOD MAIN TIRE FIRST
(Hold airplane off flat tire as long as possible with aileron control)
- 4. Directional Control..... MAINTAIN
(Using brake on good wheel as required)

LANDING WITH A FLAT NOSE TIRE

- 1. Approach..... NORMAL
- 2. Wing Flaps..... AS REQUIRED
(85 to 110 KIAS - Flaps UP - 10°)
(Below 85 KIAS - Flaps 10° - FULL)
- 3. Touchdown..... ON MAINS
(Hold nosewheel off the ground as long as possible)
- 4. When nosewheel touches down, maintain full up elevator as airplane slows to stop.

ELECTRICAL POWER SUPPLY SYSTEM
MALFUNCTIONS

HIGH VOLTS ANNUNCIATOR COMES ON OR M BAT AMPS
MORE THAN 40

- 1. MASTER Switch (ALT Only)..... OFF
- 2. Electrical Load..... REDUCE IMMEDIATELY as follows:
 - a. AVIONICS Switch (BUS 1)..... OFF
 - b. PITOT HEAT..... OFF
 - c. BEACON Light..... OFF
 - d. LAND Light..... OFF
(Use as required for landing)
 - e. TAXI Light..... OFF
 - f. NAV Lights..... OFF
 - g. STROBE Lights..... OFF
 - h. CABIN PWR 12V..... OFF

NOTE

The Main Battery supplies electrical power to the Main and Essential Buses until M BUS VOLTS decreases below 20 volts. When M BUS VOLTS falls below 20 volts, the Standby Battery System will automatically supply electrical power to the Essential Bus for at least 30 minutes

Select COM1 MIC and NAV1 on the audio panel and tune to the active frequency before setting AVIONICS BUS 2 to OFF. If COM2 MIC and NAV2 are selected when AVIONICS BUS 2 is set to OFF, the COM and NAV radios cannot be tuned.

- i. COM1 and NAV1..... TUNE TO ACTIVE FREQUENCY
- j. COM1 MIC and NAV1..... SELECT
(COM2 MIC and NAV2 will be inoperative once AVIONICS BUS 2 is selected to OFF)

(Continued Next Page)

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS
(Continued)

HIGH VOLTS ANNUNCIATOR COMES ON OR M BAT AMPS
MORE THAN 40 (Continued)

NOTE

When AVIONICS BUS 2 is set to OFF, the following items
will not operate:

- | | |
|--------------------|----------------------|
| KAP 140 Autopilot | GMA 1347 Audio Panel |
| COMM 2 | NAV 2 |
| GTX 33 Transponder | GDU 1040 MFD |

- k. AVIONICS Switch (BUS 2). OFF
(KEEP ON if in clouds)

3. Land as soon as practical.

NOTE

Make sure a successful landing is possible before extending
flaps. The flap motor is a large electrical load during
operation.

LOW VOLTS ANNUNCIATOR COMES ON BELOW 1000 RPM

1. Throttle Control 1000 RPM
2. Low Voltage Annunciator (LOW VOLTS). CHECK OFF

LOW VOLTS ANNUNCIATOR REMAINS ON AT 1000 RPM

3. Authorized maintenance personnel must do electrical system
inspection prior to next flight.

(Continued Next Page)

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS
(Continued)

LOW VOLTS ANNUNCIATOR COMES ON OR DOES NOT GO
OFF AT HIGHER RPM

1. MASTER Switch (ALT Only) OFF
2. Alternator Circuit Breaker (ALT FIELD). CHECK IN
3. MASTER Switch (ALT and BAT) ON
4. Low Voltage Annunciator (LOW VOLTS). CHECK OFF
5. M BUS VOLTS CHECK 27.5 V minimum
6. M BAT AMPS CHECK CHARGING (+)

IF LOW VOLTS ANNUNCIATOR REMAINS ON

7. MASTER Switch (ALT Only) OFF
8. Electrical Load REDUCE IMMEDIATELY as follows:
a. AVIONICS Switch (BUS 1). OFF
b. PITOT HEAT OFF
c. BEACON Light OFF
d. LAND Light OFF
e. TAXI Light (Use as required for landing)
f. NAV Lights OFF
g. STROBE Lights. OFF
h. CABIN PWR 12V OFF

NOTE

- The Main Battery supplies electrical power to the Main and
Essential Buses until M BUS VOLTS decreases below 20
volts. When M BUS VOLTS falls below 20 volts, the Standby
Battery System will automatically supply electrical power to
the Essential Bus for at least 30 minutes

- Select COM1 MIC and NAV1 on the audio panel and tune to
the active frequency before setting AVIONICS BUS 2 to OFF.
If COM2 MIC and NAV2 are selected when AVIONICS BUS
2 is set to OFF, the COM and NAV radios cannot be tuned.

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ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS (Continued)

IF LOW VOLTS ANNUNCIATOR REMAINS ON (Continued)

- i. COM1 and NAV1 TUNE TO ACTIVE FREQUENCY
- j. COM1 MIC and NAV1 SELECT
(COM2 MIC and NAV2 will be inoperative once AVIONICS BUS
2 is selected to OFF)

NOTE

When AVIONICS BUS 2 is set to OFF, the following items
will not operate:

KAP 140 Autopilot	GMA 1347 Audio Panel
COMM 2	NAV 2
GTX 33 Transponder	GDU 1040 MFD

- k. AVIONICS Switch (BUS 2) OFF
(KEEP ON if in clouds)

9. Land as soon as practical.

NOTE

Make sure a successful landing is possible before extending
flaps. The flap motor is a large electrical load during
operation.

AIR DATA SYSTEM FAILURE

RED X - PFD AIRSPEED INDICATOR

1. ADC/AHRS Circuit Breaker CHECK IN
(ESS BUS and AVN BUS 1)
If open, reset (close) circuit breaker. If circuit breaker opens again,
do not reset.
2. Standby Airspeed Indicator USE FOR AIRSPEED
INFORMATION

RED X - PFD ALTITUDE INDICATOR

1. ADC/AHRS Circuit Breaker CHECK IN
(ESS BUS and AVN BUS 1)
If open, reset (close) circuit breaker. If circuit breaker opens again,
do not reset.
2. Standby Altimeter CHECK current barometric pressure SET
USE FOR ALTITUDE INFORMATION

ATTITUDE AND HEADING REFERENCE SYSTEM (AHRS) FAILURE

RED X - PFD ATTITUDE INDICATOR

1. ADC/AHRS Circuit Breaker CHECK IN
(ESS BUS and AVN BUS 1)
If open, reset (close) circuit breaker. If circuit breaker opens again,
do not reset.
2. Standby Attitude Indicator ... USE FOR ATTITUDE INFORMATION

RED X - HORIZONTAL SITUATION INDICATOR (HSI)

1. ADC/AHRS Circuit Breaker CHECK IN
(ESS BUS and AVN BUS 1)
If open, reset (close) circuit breaker. If circuit breaker opens again,
do not reset.
2. Non-Stabilized Magnetic Compass USE FOR HEADING
INFORMATION

DISPLAY COOLING ADVISORY

PFD1 COOLING OR MFD1 COOLING ANNUNCIATOR(S)

- 1. Cabin Heat (CABIN HT) REDUCE
(minimum preferred)
- 2. Forward Avionics Fan CHECK
(Feel for airflow from screen on glareshield)

IF FORWARD AVIONICS FAN HAS FAILED

- 3. STBY BATT Switch OFF
(Unless needed for emergency power)

IF PFD1 COOLING OR MFD1 COOLING ANNUNCIATOR DOES NOT GO OFF WITHIN 3 MINUTES OR IF BOTH PFD1 COOLING AND MFD1 COOLING ANNUNCIATORS COME ON

- 3. STBY BATT Switch OFF
(Land as soon as practical)

VACUUM SYSTEM FAILURE

LOW VACUUM ANNUNCIATOR COMES ON

- 1. Vacuum Indicator (VAC) CHECK EIS ENGINE page
to make sure vacuum pointer is in green arc limits

CAUTION

IF VACUUM POINTER IS OUT OF THE GREEN ARC DURING FLIGHT OR GYRO FLAG IS SHOWN ON THE STANDBY ATTITUDE INDICATOR, THE STANDBY ATTITUDE INDICATOR MUST NOT BE USED FOR ATTITUDE INFORMATION.

HIGH CARBON MONOXIDE (CO) LEVEL ANNUNCIATOR (if installed)

CO LVL HIGH ANNUNCIATOR COMES ON

- 1. CABIN HT Knob OFF (push full in)
- 2. CABIN AIR Knob ON (pull full out)
- 3. Cabin Vents OPEN
- 4. Cabin Windows OPEN
(163 KIAS maximum windows open speed)

CO LVL HIGH ANNUNCIATOR REMAINS ON

- 5. Land as soon as practical.

MAXIMUM GLIDE

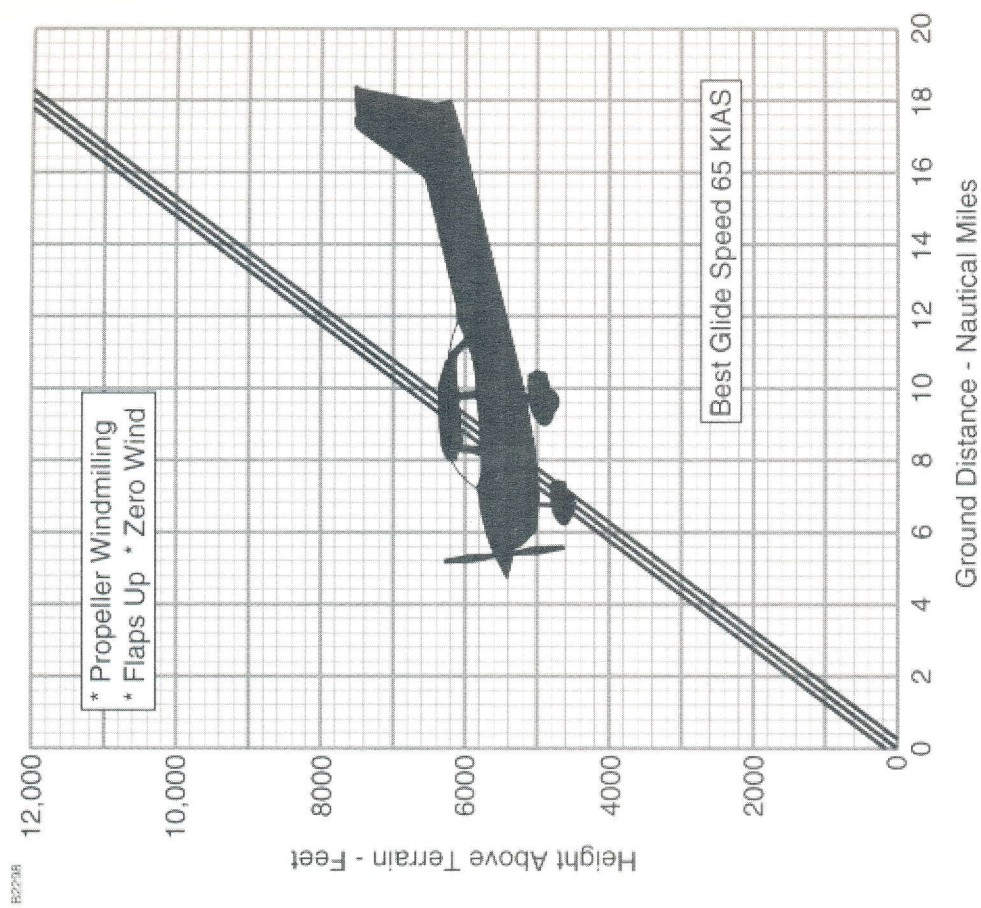


Figure 2

PERFORMANCE

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CROSSWIND COMPONENT	P-2
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DENSITY ALTITUDE CHART	P-7

SHORT FIELD TAKEOFF DISTANCE AT 2450 POUNDS

CONDITIONS:

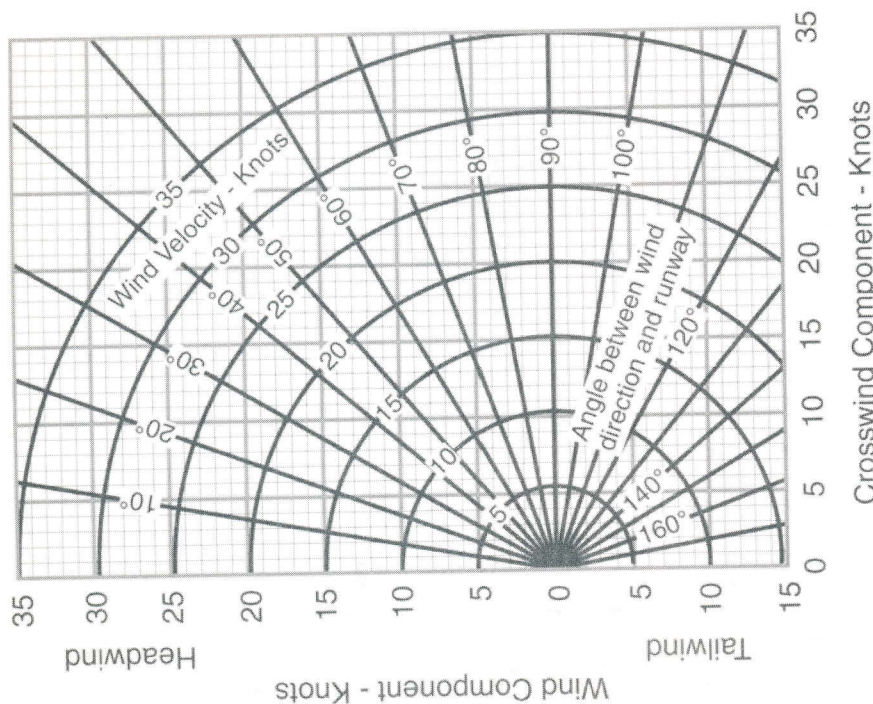
- Flaps 10°
- Full Throttle Prior to Brake Release
- Paved, Level, Dry Runway
- Zero Wind
- Lift Off: 51 KIAS
- Speed at 50 Feet: 57 KIAS

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	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft	Grnd Roll Ft	Total Ft To Clear 50 Ft Obst	Grnd Roll Ft
S. L.	845	1510	910	980	1625	1055	1055	1745	1055	1055	1875	1135	1135	2015	1135
1000	925	1660	1000	1075	1790	1160	1160	1925	1160	1160	2070	1245	1245	2220	1245
2000	1015	1830	1095	1185	1970	1275	1275	2125	1275	1275	2290	1365	1365	2455	1365
3000	1115	2020	1205	1305	2185	1435	1435	2360	1435	1435	2540	1505	1505	2730	1505
4000	1230	2245	1330	1435	2430	1585	1585	2630	1585	1585	2830	1655	1655	3045	1655
5000	1355	2500	1470	1585	2715	1705	1705	2945	1705	1705	3175	1830	1830	3430	1830
6000	1500	2805	1625	1750	3060	1880	1880	3315	1880	1880	3590	2020	2020	3895	2020
7000	1660	3170	1795	1935	3470	1935	1935	3770	1935	1935	4105	2240	2240	4485	2240
8000	1840	3620	1995	2150	3975	2150	2150	4345	2150	2150	4775	---	---	---	---

NOTE

- Short field technique as specified in NORMAL PROCEDURES page N-19.
- Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
- 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.
- For operation on dry, grass runway, increase distances by 15% of the "ground roll" figure.
- Where distance value has been deleted, climb performance is minimal.

CROSSWIND COMPONENT



NOTE

Maximum Demonstrated Crosswind velocity is 15 Knots (not a limitation).

Figure 3

CRUISE PERFORMANCE

CONDITIONS:
2450 Pounds
Recommended Lean Mixture At All Altitudes
(Refer to POH/AFM, 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	2250	---	---	---	79	115	9.0	74	114	8.5
	2200	79	112	9.1	74	112	8.5	70	111	8.0
	2100	69	107	7.9	65	106	7.5	62	105	7.1
	2000	61	101	7.0	58	99	6.6	55	97	6.4
	1900	54	94	6.2	51	91	5.9	50	89	5.8
4000	2300	--	---	---	79	117	9.1	75	117	8.6
	2250	80	115	9.2	75	114	8.6	70	114	8.1
	2200	75	112	8.6	70	111	8.1	66	110	7.6
	2100	66	106	7.6	62	105	7.1	59	103	6.8
	2000	58	100	6.7	55	98	6.4	53	95	6.2
6000	1900	52	92	6.0	50	90	5.8	49	87	5.6
	2350	--	---	---	80	120	9.2	75	119	8.6
	2300	80	117	9.2	75	117	8.6	71	116	8.1
	2250	76	115	8.7	71	114	8.1	67	113	7.7
	2200	71	112	8.1	67	111	7.7	64	109	7.3
	2100	63	105	7.2	60	104	6.9	57	101	6.6
	2000	56	98	6.4	53	96	6.2	52	93	6.0

NOTE

- Maximum cruise power using recommended lean mixture is 80% MCP. Values above 80% MCP are shown in table for interpolation purposes only. Operations above 80% MCP must use full rich mixture.
- Cruise speeds are shown for an airplane equipped with speed fairings. Without speed fairings, decrease speeds shown by 2 knots.

CRUISE PERFORMANCE

CONDITIONS:
2450 Pounds
Recommended Lean Mixture At All Altitudes
(Refer to POH/AFM, 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	2400	---	---	---	80	122	9.2	76	121	8.7
	2350	81	120	9.3	76	119	8.7	71	118	8.2
	2300	76	117	8.7	71	116	8.2	68	115	7.8
	2200	68	111	7.7	64	110	7.3	61	107	7.0
	2100	60	104	6.9	57	102	6.6	55	99	6.4
10,000	2000	54	96	6.2	52	94	6.0	51	91	5.9
	2350	76	119	8.8	72	118	8.2	68	117	7.8
	2300	72	116	8.3	68	115	7.8	65	113	7.4
	2250	68	113	7.8	65	112	7.4	61	109	7.1
	2200	65	110	7.4	61	108	7.0	59	105	6.7
12,000	2100	58	102	6.6	55	100	6.4	54	97	6.2
	2000	52	94	6.1	51	91	5.9	50	88	5.8
	2350	73	119	8.3	69	117	7.9	65	115	7.5
	2300	69	115	7.9	65	113	7.5	62	111	7.1
	2250	65	112	7.5	62	109	7.1	59	107	6.8
	2200	62	108	7.1	59	105	6.8	57	103	6.6
	2100	56	100	6.4	54	97	6.2	53	94	6.1

NOTE

- Maximum cruise power using recommended lean mixture is 80% MCP. Values above 80% MCP are shown in table for interpolation purposes only. Operations above 80% MCP must use full rich mixture.
- Cruise speeds are shown for an airplane equipped with speed fairings. Without speed fairings, decrease speeds shown by 2 knots.

SHORT FIELD LANDING DISTANCE AT 2450 POUNDS

CONDITIONS:

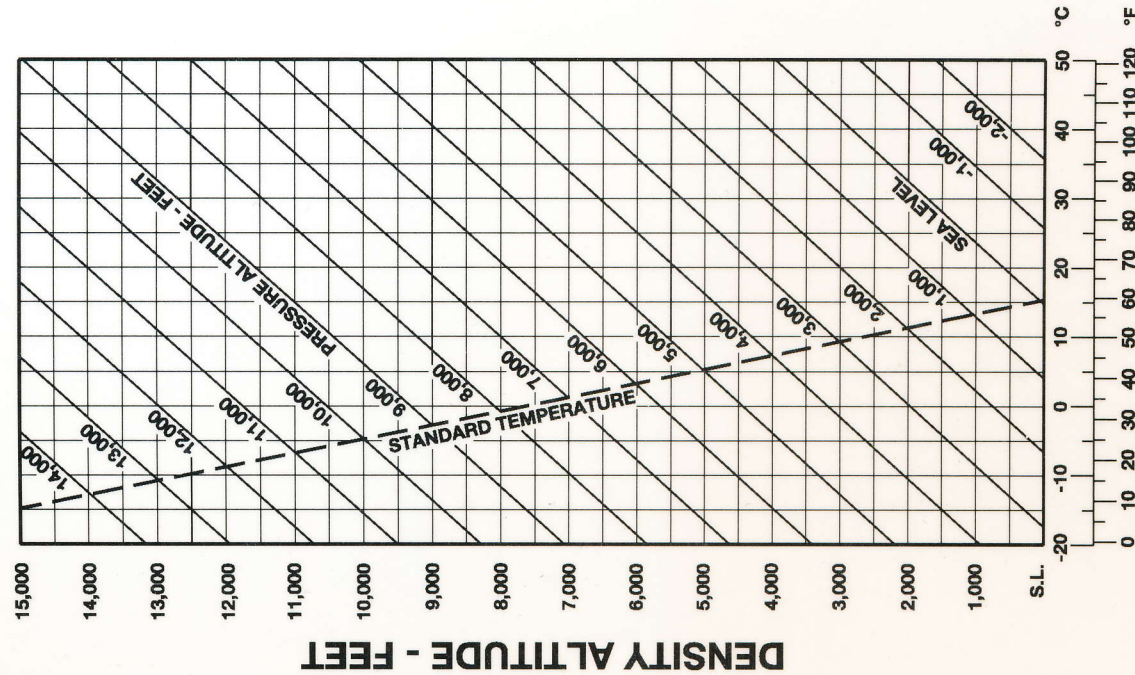
- Flaps - FULL
- Maximum Braking
- Zero Wind
- Power Off
- Paved, Level, Dry Runway
- Speed at 50 Feet: 62 KIAS

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.	525	1250	540	1280	560	1310	580	1340	600	1370
1000	545	1280	560	1310	580	1345	600	1375	620	1405
2000	565	1310	585	1345	605	1375	625	1410	645	1440
3000	585	1345	605	1380	625	1415	650	1445	670	1480
4000	605	1380	630	1415	650	1450	670	1485	695	1520
5000	630	1415	650	1455	675	1490	700	1525	720	1560
6000	655	1455	675	1490	700	1530	725	1565	750	1605
7000	680	1495	705	1535	730	1570	755	1610	775	1650
8000	705	1535	730	1575	755	1615	780	1655	810	1695

NOTE

- Short field technique as specified in NORMAL PROCEDURES page N-23.
- 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.
- For operation on dry, grass runway, increase distances by 45% of the "ground roll" figure.
- If landing with flaps up, increase the approach speed by 7 KIAS and allow for 35% longer distances.

DENSITY ALTITUDE CHART



OUTSIDE AIR TEMPERATURE

0565T1064

Figure 4