PILOT'S CHECKLIST

TABLE OF CONTENTS

SR20

G1 OR G2 WITH ALL ELECTRIC AVIONICS

Quick Reference Checklist

for

SR20 Aircraft Serials 1268 thru 1877, 1879 thru 1885.

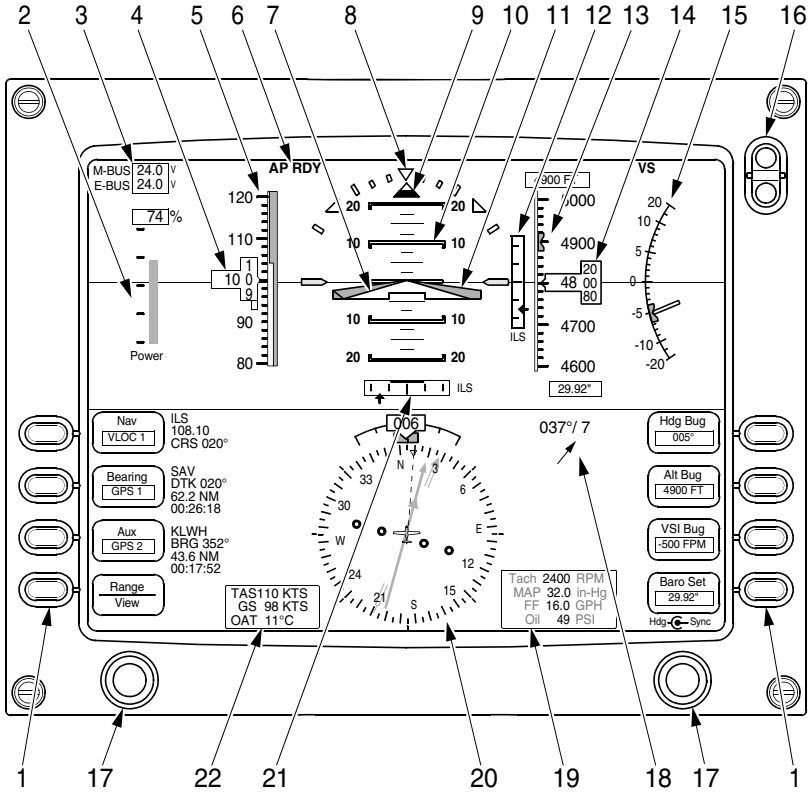
The procedures in this publication are abbreviated and derived from procedures in the FAA Approved Airplane Flight Manual and Pilot's Operating Handbook (POH) P/N 11934-003 Revision A10 Release. These procedures do not supersede the procedures in the basic POH. In the event of conflict, the basic POH shall take precedence.

ISSUED: July 2011
P/N 11935-003

Normal Procedures

Table of Contents

Primary Flight Display



LEGEND

1. Navigation & Avionics Configuration Buttons
2. Percent Power
3. Bus Voltages
4. Airspeed Window
5. Airspeed Tape
6. Autopilot Annunciations
7. Aircraft Reference Symbol
8. Bank Angle Indicator
9. Skid/Slip Indicator
10. Pitch Ladder
11. Flight Director Steering Command Bars
12. Vertical Deviation Indicator (VDI)
13. Altitude Tape
14. Altitude Window
15. Vertical Speed Indicator (VSI)
16. Brightness Control (BRT/DIM)
17. Mode and Display Selection
18. Wind Vector
19. Engine Information Data Block
20. Horizontal Situation Indicator (HSI)
21. Horizontal Deviation Indicator (HDI)
22. Air Data Block

SR20_FM07_2220A

Airspeeds for Normal Operation

Takeoff Rotation:

- Normal, Flaps 50%..... 67 KIAS
- Short Field, Flaps 50%..... 65 KIAS
- Obstacle Clearance, Flaps 50%..... 75 KIAS

Enroute Climb, Flaps Up:

- Normal, SL ..... 105 KIAS
- Normal, 10,000'..... 95 KIAS
- Best Rate of Climb, SL ..... 96 KIAS
- Best Rate of Climb, 10,000'..... 91 KIAS
- Best Angle of Climb, SL..... 81 KIAS
- Best Angle of Climb, 10,000' ..... 85 KIAS

Landing Approach:

- Normal Approach, Flaps Up..... 85 KIAS
- Normal Approach, Flaps 50% ..... 80 KIAS
- Normal Approach, Flaps 100% ..... 75 KIAS
- Short Field, Flaps 100%..... 75 KIAS

Go-Around, Flaps 50%:

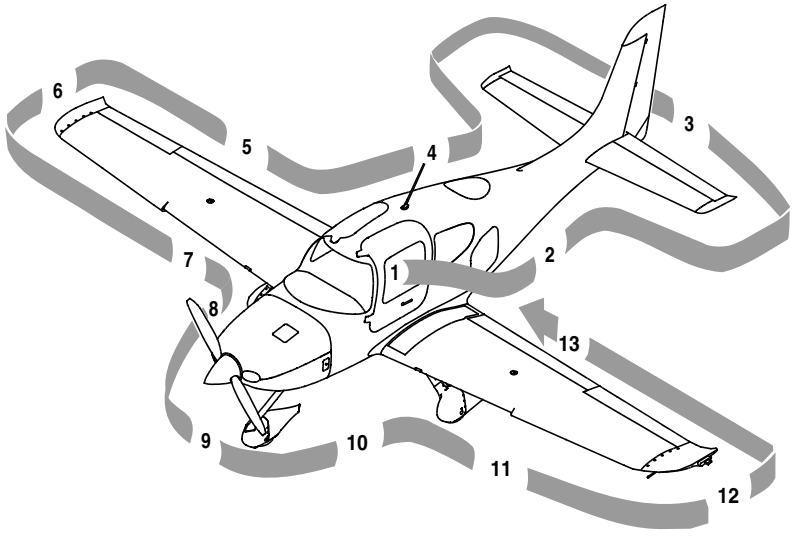
- Full Power..... 75 KIAS

Maximum Recommended Turbulent Air Penetration:

- 3000 Lb ..... 131 KIAS
- 2600 Lb ..... 122 KIAS
- 2200 Lb ..... 111 KIAS

Maximum Demonstrated Crosswind

- Takeoff or Landing..... 21 Knots



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Preflight Inspection

1. Cabin
   - a. Required Documents ..... On Board
   - b. Avionics Power Switch ..... OFF
   - c. Bat 2 Master Switch ..... ON
   - d. PFD - *Serials with PFD* ..... Verify On
   - e. Avionics Cooling Fan ..... Audible
   - f. Voltmeter ..... 23-25 Volts
   - g. Flap Position Light ..... OUT
   - h. Bat 1 Master Switch ..... ON
   - i. Lights ..... Check Operation
   - j. Stall Warning ..... Test
   - k. Fuel Quantity ..... Check
   - l. Fuel Selector ..... Select Fullest Tank
   - m. Flaps ..... 100%, Check Light ON
   - n. Oil Annunciator ..... On
   - o. Bat 1 and 2 Master Switches ..... OFF

p. Alternate Static Source ..... NORMAL
q. Circuit Breakers ..... IN
r. Fire Extinguisher ..... Charged and Available
s. Emergency Egress Hammer ..... Available
t. CAPS Handle ..... Pin Removed

2. Left Fuselage
   a. Door Lock ..... Unlock
   b. COM 1 Antenna (top) ..... Condition and Attachment
   c. Wing/Fuselage Fairing ..... Check
   d. COM 2 Antenna (underside) ..... Condition and Attachment
   e. Baggage Door ..... Closed and Secure
   f. Static Button ..... Check for Blockage
   g. Parachute Cover ..... Sealed and Secure
3. Empennage
   a. Tiedown Rope ..... Remove
   b. Horizontal and Vertical Stabilizers ..... Condition
   c. Elevator and Tab ..... Condition and Movement
   d. Rudder ..... Freedom of Movement
   e. Rudder Trim Tab ..... Condition and Security
   f. Attachment hinges, bolts and cotter pins ..... Secure
4. Right Fuselage
   a. Static Button ..... Check for Blockage
   b. Wing/Fuselage Fairings ..... Check
   c. Door Lock ..... Unlock
5. Right Wing Trailing Edge
   a. Flap and Rub Strips (if installed) ..... Condition and Security
   b. Aileron and Tab ..... Condition and Movement
   c. Hinges, actuation arm, bolts, and cotter pins ..... Secure
6. Right Wing Tip
   a. Tip ..... Attachment
   b. Strobe, Nav Light and Lens ..... Condition and Security
   c. Fuel Vent (underside) ..... Unobstructed

(Continued on following page)

7. Right Wing Forward and Main Gear
   a. Leading Edge and Stall Strips ..... Condition
   b. Fuel Cap ..... Check Quantity and Secure
   c. Fuel Drains (2 underside) ..... Drain and Sample
   d. Wheel Fairings ..... Security, Accumulation of Debris
   e. Tire ..... Condition, Inflation, and Wear
   f. Wheel and Brakes ..... Fluid Leaks, Evidence of Overheating, General Condition, and Security.
   g. Chocks and Tiedown Ropes ..... Remove
   h. Cabin Air Vent ..... Unobstructed
8. Nose, Right Side
   a. Cowling ..... Attachments Secure
   b. Exhaust Pipe ..... Condition, Security, and Clearance
   c. Transponder Antenna (underside) ... Condition and Attachment
   d. Gascolator (underside) ..... Drain for 3 seconds, Sample
9. Nose gear, Propeller, and Spinner
   a. Tow Bar ..... Remove and Stow
   b. Strut ..... Condition
   c. Wheel Fairing ..... Security, Accumulation of Debris
   d. Wheel and Tire ..... Condition, Inflation, and Wear
   e. Propeller ..... Condition (indentations, nicks, etc.)
   f. Spinner ..... Condition, Security, and Oil Leaks
   g. Air Inlets ..... Unobstructed
   h. Alternator Belt ..... Condition and Tension
10. Nose, Left Side
   a. Landing Light ..... Condition
   b. Engine Oil ..... Check 6-8 quarts, Leaks, Cap & Door Secure
   c. Cowling ..... Attachments Secure
   d. External Power ..... Door Secure
   e. Exhaust Pipe ..... Condition, Security, and Clearance
11. Left Main Gear and Forward Wing
   a. Wheel fairings ..... Security, Accumulation of Debris
   b. Tire ..... Condition, Inflation, and Wear

c. Wheel and Brakes.....Fluid Leaks, Evidence of Overheating, General Condition, and Security.

d. Chocks and Tiedown Ropes ..... Remove

e. Fuel Drains (2 underside).....Drain and Sample

f. Cabin Air Vent ..... Unobstructed

g. Fuel Cap..... Check Quantity and Secure

h. Leading Edge and Stall Strips..... Condition

12. Left Wing Tip

a. Fuel Vent (underside)..... Unobstructed

b. Pitot Mast (underside)..... Cover Removed, Tube Clear

c. Strobe, Nav Light and Lens..... Condition and Security

d. Tip ..... Attachment

13. Left Wing Trailing Edge

a. Flap And Rub Strips (If installed) ..... Condition and Security

b. Aileron..... Freedom of movement

c. Hinges, actuation arm, bolts, and cotter pins..... Secure

Before Starting Engine

1. Preflight Inspection..... COMPLETED
2. Emergency Equipment ..... ON BOARD
3. Passengers..... BRIEFED
4. Seats, Seat Belts, and Harnesses ..... ADJUST & SECURE

Starting Engine

1. External Power (If applicable) ..... CONNECT
2. Brakes ..... HOLD
3. Bat Master Switches ..... ON (Check Volts)
4. Strobe Lights ..... ON
5. Mixture ..... FULL RICH
6. Power Lever ..... FULL FORWARD
7. Fuel Pump ..... PRIME, then BOOST
8. Propeller Area ..... CLEAR
9. Power Lever ..... OPEN ¼ INCH
10. Ignition Switch ..... START (Release after engine starts)
11. Power Lever ..... RETARD (to maintain 1000 RPM)
12. Oil Pressure ..... CHECK
13. Alt Master Switches ..... ON
14. Avionics Power Switch ..... ON
15. Engine Parameters ..... MONITOR
16. External Power (If applicable) ..... DISCONNECT
17. Amp Meter/Indication ..... CHECK

Before Taxiing

1. Flaps ..... UP (0%)
2. Radios/Avionics ..... AS REQUIRED
3. Cabin Heat/Defrost ..... AS REQUIRED
4. Fuel Selector ..... SWITCH TANK

Taxiing

1. Parking Brake ..... DISENGAGE
2. Brakes ..... CHECK
3. Directional Gyro/HSI Orientation ..... CHECK
4. Attitude Gyro ..... CHECK
5. Turn Coordinator ..... CHECK

Before Takeoff

1. Doors ..... LATCHED
2. CAPS Handle ..... Verify Pin Removed
3. Seat Belts and Shoulder Harness ..... SECURE
4. Fuel Quantity ..... CONFIRM
5. Fuel Selector ..... FULLEST TANK
6. Fuel Pump ..... ON
7. Flaps ..... SET 50% & CHECK
8. Transponder ..... SET
9. Autopilot ..... CHECK
10. Navigation Radios/GPS ..... SET for Takeoff
11. Cabin Heat/Defrost ..... AS REQUIRED
12. Brakes ..... HOLD
13. Power Lever ..... 1700 RPM
14. Alternator ..... CHECK
    a. Pitot Heat ..... ON
    b. Navigation Lights ..... ON
    c. Landing Light ..... ON
    d. Annunciator Lights ..... CHECK
15. Voltage ..... CHECK
16. Pitot Heat ..... AS REQUIRED
17. Navigation Lights ..... AS REQUIRED
18. Landing Light ..... AS REQUIRED
19. Magnetos ..... CHECK Left and Right
    a. Ignition Switch ..... R, note RPM, then BOTH
    b. Ignition Switch ..... L, note RPM, then BOTH
20. Engine Parameters ..... CHECK
21. Power Lever ..... 1000 RPM
22. Flight Instruments, HSI, and Altimeter ..... CHECK & SET
23. Flight Controls ..... FREE & CORRECT
24. Trim ..... SET Takeoff
25. Autopilot ..... DISCONNECT

Normal Takeoff

1. Brakes..... RELEASE (Steer with Rudder Only)
2. Power Lever..... FULL FORWARD
3. Engine Parameters .....CHECK
4. Brakes..... RELEASE (Steer with Rudder Only)
5. Elevator Control ..... ROTATE Smoothly at 65-70 KIAS
6. At 85 KIAS, Flaps ..... UP

Short Field Takeoff

1. Flaps..... 50%
2. Brakes ..... HOLD
3. Power Lever..... FULL FORWARD
4. Engine Parameters .....CHECK
5. Brakes..... RELEASE (Steer with Rudder Only)
6. Elevator Control .....ROTATE Smoothly at 65 KIAS
7. Airspeed at Obstacle ..... 75 KIAS

Climb

1. Climb Power..... SET
2. Flaps..... Verify UP
3. Mixture.....FULL RICH
4. Engine Parameters .....CHECK
5. Fuel Pump ..... OFF

Cruise

1. Fuel Pump ..... OFF
2. Cruise Power ..... SET
3. Mixture ..... LEAN as required
4. Engine Parameters ..... MONITOR
5. Fuel Flow and Balance ..... MONITOR

Cruise Leaning

Mixture Description	Exhaust Gas Temperature
Best Power	75° F Rich Of Peak EGT
Best Economy	50° F Lean Of Peak EGT

Descent

1. Altimeter ..... SET
2. Cabin Heat/Defrost ..... AS REQUIRED
3. Landing Light ..... ON
4. Fuel System ..... CHECK
5. Mixture ..... AS REQUIRED
6. Brake Pressure ..... CHECK

Before Landing

1. Seat Belt and Shoulder Harness ..... SECURE
2. Fuel Pump ..... BOOST
3. Mixture ..... FULL RICH
4. Flaps ..... AS REQUIRED
5. Autopilot ..... AS REQUIRED

Balked Landing/Go-Around

1. Autopilot ..... DISENGAGE
2. Power Lever ..... FULL FORWARD
3. Flaps 50%
4. Airspeed ..... BEST ANGLE OF CLIMB (81 – 83 KIAS)

   After clear of obstacles:
5. Flaps ..... UP

After Landing

1. Power Lever ..... 1000 RPM
2. Fuel Pump ..... OFF
3. Flaps ..... UP
4. Transponder ..... STBY
5. Lights ..... AS REQUIRED
6. Pitot Heat ..... OFF

Shutdown

1. Fuel Pump (if used) ..... OFF
2. Throttle ..... IDLE
3. Ignition Switch ..... CYCLE - MAG GROUNDING CHECK
4. Mixture ..... CUTOFF
5. All Switches ..... OFF
6. Magnetos ..... OFF
7. ELT ..... TRANSMIT LIGHT OUT
8. Chocks, Tie-downs, Pitot Covers ..... AS REQUIRED

Performance

Table of Contents

Takeoff Distance: 2500 LB

WEIGHT = 2500 LB Speed at Liftoff = 65 KIAS Speed over 50 Ft Obstacle = 70 KIAS Flaps - 50% · Takeoff Pwr · Dry Paved	Headwind: Subtract 10% for each 12 knots headwind. Tailwind: Add 10% for each 2 knots tailwind up to 10 knots. Runway Slope: Ref. Factors. Dry Grass: Add 20% to Ground Roll. Wet Grass: Add 30% to Ground Roll.

PRESS ALT FT	DISTANCE FT	TEMPERATURE ~ °C					
		0	10	20	30	40	ISA
SL	Grnd Roll	813	878	946	1016	1090	912
	50 ft	1212	1303	1398	1496	1597	1350
1000	Grnd Roll	892	964	1038	1116	1196	986
	50 ft	1326	1426	1529	1636	1747	1457
2000	Grnd Roll	980	1059	1141	1226	1314	1067
	50 ft	1451	1561	1674	1791	1912	1572
3000	Grnd Roll	1078	1164	1254	1348	1445	1156
	50 ft	1590	1709	1834	1962	2095	1697
4000	Grnd Roll	1185	1281	1380	1483	1590	1253
	50 ft	1743	1874	2010	2151	2297	1835
5000	Grnd Roll	1305	1410	1519	1632	1750	1358
	50 ft	1912	2056	2205	2360	2520	1985
6000	Grnd Roll	1438	1553	1673	1798	1928	1473
	50 ft	2098	2256	2421	2590	2766	2140
7000	Grnd Roll	1585	1712	1845			1599
	50 ft	2305	2479	2659			2324
8000	Grnd Roll	1749	1889	2035			1737
	50 ft	2534	2725	2923			2517
9000	Grnd Roll	1931	2085	2247			1887
	50 ft	2787	2997	3216			2727
10000	Grnd Roll	2133	2304				2050
	50 ft	3068	3299				2986

Takeoff Distance: 3000 LB

WEIGHT = 3000 LB Speed at Liftoff = 68 KIAS Speed over 50 Ft. Obstacle = 75 KIAS Flaps - 50% · Takeoff Pwr · Dry Paved							Headwind: Subtract 10% for each 12 knots headwind. Tailwind: Add 10% for each 2 knots tailwind up to 10 knots. Runway Slope: Ref. Factors. Dry Grass: Add 20% to Ground Roll. Wet Grass: Add 30% to Ground Roll.
PRESS ALT FT	DISTANCE FT	TEMPERATURE ~ °C					
		0	10	20	30	40	ISA
SL	Grnd Roll	1287	1390	1497	1608	1724	1446
	50 ft	1848	1988	2132	2282	2437	2064
1000	Grnd Roll	1412	1526	1643	1766	1893	1564
	50 ft	2022	2175	2333	2497	2666	2226
2000	Grnd Roll	1552	1676	1805	1940	2079	1692
	50 ft	2214	2381	2555	2734	2920	2402
3000	Grnd Roll	1706	1842	1985	2132	2286	1831
	50 ft	2426	2609	2799	2996	3200	2593
4000	Grnd Roll	1877	2027	2183	2346	2515	1983
	50 ft	2660	2861	3069	3285	3509	2802
5000	Grnd Roll	2066	2231	2404	2583	2769	2149
	50 ft	2919	3139	3368	3605	3850	3029
6000	Grnd Roll	2276	2458	2648	2845	3050	2329
	50 ft	3205	3447	3698	3959	4228	3276
7000	Grnd Roll	2509	2710	2919			2528
	50 ft	3522	3788	4064			3547
8000	Grnd Roll	2768	2990	3221			2744
	50 ft	3872	4165	4469			3841
9000	Grnd Roll	3056	3301	3555			2980
	50 ft	4261	4583	4917			4160
10000	Grnd Roll	3376	3646				3241
	50 ft	4691	5046				4514

Cruise Performance

Conditions:

- Mixture ..... Best Power
- Weight ..... 2600 LB
- Winds ..... Zero
- Shaded Cells: Cruise Pwr above 85% not recommended.

• Note •

Subtract 10 KTAS if nose wheel pant and fairing removed. Lower KTAS by 10% if nose and main wheel pants & fairings are removed.

Press Alt	RPM	MAP	ISA - 30°C			ISA			ISA + 30°C		
			PWR	KTAS	GPH	PWR	KTAS	GPH	PWR	KTAS	GPH
2000	2700	27.8	101%	160	16.0	95%	160	15.0	91%	157	14.2
	2500	27.8	90%	154	14.1	85%	154	13.4	81%	151	12.9
	2500	26.6	85%	151	13.4	80%	151	12.8	76%	148	11.7
	2500	25.4	80%	147	12.7	75%	147	11.6	72%	144	11.3
	2500	24.1	74%	143	11.5	70%	143	11.1	67%	140	10.7
	2500	22.9	69%	139	11.0	65%	139	10.6	62%	136	10.2
	2500	22.0	65%	136	10.5	62%	136	10.2	59%	133	9.9
	2500	19.7	55%	127	9.5	52%	127	9.20	50%	124	8.9
4000	2700	25.8	94%	159	14.8	89%	159	14.4	84%	157	13.4
	2500	25.8	84%	153	13.3	79%	153	12.7	75%	150	11.7
	2500	24.8	80%	150	12.7	75%	150	11.6	72%	147	11.2
	2500	23.6	75%	146	11.5	70%	146	11.1	67%	143	10.8
	2500	22.3	69%	141	10.9	65%	141	10.5	62%	138	10.2
	2500	21.0	63%	136	10.3	60%	136	10.0	57%	133	9.7
	2500	19.8	58%	131	9.8	55%	131	9.4	52%	129	9.2
6000	2700	24.0	88%	159	13.8	83%	159	13.1	79%	156	12.6
	2500	24.0	79%	152	12.0	74%	152	11.5	71%	149	11.1
	2500	23.0	74%	148	11.5	70%	148	11.1	67%	145	10.7
	2500	21.8	69%	144	11.0	65%	144	10.6	62%	141	10.2
	2500	20.8	65%	140	10.4	61%	140	10.0	58%	137	9.7
	2500	19.4	59%	134	9.8	55%	134	9.5	53%	131	9.2

Cruise Performance

Press Alt	RPM	MAP	ISA - 30°C			ISA			ISA + 30°C		
			PWR	KTAS	GPH	PWR	KTAS	GPH	PWR	KTAS	GPH
8000	**2700**	**22.2**	82%	157	12.9	77%	157	11.6	73%	154	11.4
	2500	**22.2**	73%	150	11.4	69%	150	11.0	65%	147	10.6
	2500	**21.2**	69%	146	10.9	65%	146	10.5	62%	143	10.2
	2500	**20.1**	64%	142	10.4	60%	142	10.0	57%	139	9.7
	2500	**18.9**	59%	136	9.8	55%	136	9.5	52%	134	9.2
	2500	**17.7**	53%	131	9.2	50%	131	8.9	48%	128	8.7
10000	**2700**	**20.6**	76%	155	11.7	72%	155	11.2	68%	152	10.9
	2500	**20.6**	68%	148	10.8	64%	148	10.5	61%	145	10.1
	2500	**19.6**	64%	144	10.4	60%	144	10.0	57%	141	9.7
	2500	**18.5**	59%	139	9.8	55%	139	9.5	53%	136	9.2
	2500	**17.3**	54%	134	9.3	50%	134	9.0	48%	131	8.7
12000	**2700**	**19.0**	70%	153	11.1	66%	153	10.7	63%	150	10.3
	2500	**19.0**	63%	146	10.3	59%	146	9.9	56%	143	9.6
	2500	**18.0**	59%	141	9.8	55%	141	9.5	52%	138	9.2
	2500	**16.8**	53%	136	9.2	50%	136	8.9	47%	133	8.6
14000	**2700**	**17.6**	66%	151	10.5	62%	151	10.2	58%	148	9.8
	2500	**17.6**	59%	144	9.8	55%	144	9.5	52%	141	9.2
	2500	**16.5**	54%	142	9.3	50%	142	9.0	48%	139	8.7

Landing Distance

WEIGHT = 2900 LB Speed over 50 Ft Obstacle = 75 KIAS Flaps - 100% · Idle · Dry, Level Paved Surface	Headwind: Subtract 10% per each 13 knots headwind. Tailwind: Add 10% for each 2 knots tailwind up to 10 knots. Runway Slope: Ref. Factors. Dry Grass: Add 20% to Ground Roll Wet Grass: Add 60% to Ground Roll

PRESS ALT FT	DISTANCE FT	TEMPERATURE ~ °C					
		0	10	20	30	40	ISA
SL	Grnd Roll	962	997	1032	1067	1102	1014
	Total	1972	2017	2063	2109	2156	2040
1000	Grnd Roll	997	1034	1070	1067	1143	1045
	Total	2018	2065	2113	2161	2210	2079
2000	Grnd Roll	1034	1072	1110	1148	1186	1076
	Total	2066	2116	2166	2217	2268	2121
3000	Grnd Roll	1073	1112	1151	1191	1230	1108
	Total	2117	2169	2222	2275	2329	2164
4000	Grnd Roll	1113	1154	1195	1236		1142
	Total	2170	2225	2281	2337		2209
5000	Grnd Roll	1156	1198	1240	1283		1177
	Total	2227	2285	2343	2402		2256
6000	Grnd Roll	1200	1244	1288	1332		1214
	Total	2287	2348	2409	2471		2306
7000	Grnd Roll	1246	1292	1337			1251
	Total	2351	2415	2479			2358
8000	Grnd Roll	1295	1342	1389			1291
	Total	2418	2485	2553			2412
9000	Grnd Roll	1345	1394	1444			1331
	Total	2490	2560	2631			2470
10000	Grnd Roll	1398	1449				1373
	Total	2565	2639				2529

Wind Components

Conditions:

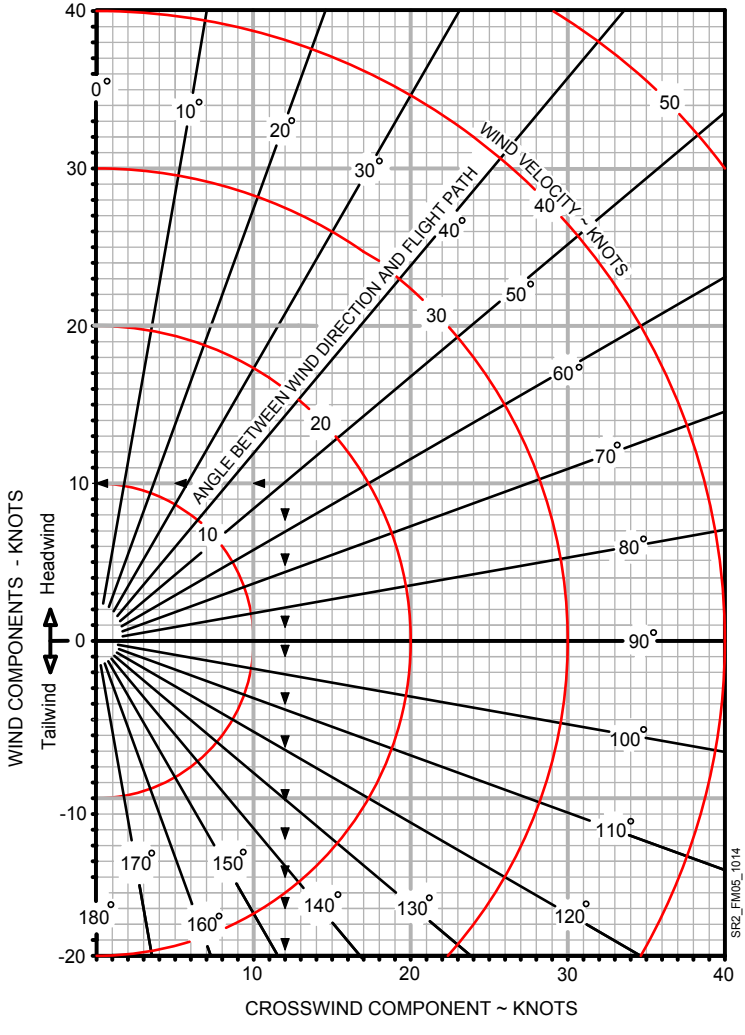
- Runway Heading ..... 10°
- Wind Direction ..... 60°
- Wind Velocity .....15 Knots

Example: (See Chart ▶ ▶ ▶)

Wind/Flight Path Angle .....50°
Crosswind Component..... 12 Knots
Headwind Component ..... 10 Knots

• Note •

The maximum demonstrated crosswind is 20 knots. Value not considered limiting.



Weight and Balance

Loading Calculations

For Moment/1000, refer to Loading Data table on following page.

Description	Weight	Moment/1000
1. Empty Weight *Includes unusable fuel and full oil*		
2. Front Seats Occupants *Pilot and Passenger*		
3. Rear Seats Occupants		
4. Baggage *130 lb maximum*		
5. **Zero Fuel Condition** *Subtotal items 1 thru 4*		
6. Fuel Load *56 Gallon @6.0 lb/gal. maximum*		
7. **Ramp Weight** *Subtotal items 5 and 6*		
8. Fuel for start, taxi, and runup *Normally 6 lb at avg. mmnt of 922.8*	-	-
9. **Takeoff Weight** *Subtract Item 8 from item 7*		

Calculation Instructions

1. Enter the current basic empty weight and moment from the aircraft's Weight and Balance Record.
2. Enter the total weight and moment/1000 for the front seat occupants from the adjacent Loading Data Table.
3. Enter the total weight and moment/1000 for the rear seat occupants from the adjacent Loading Data Table.
4. Enter the total weight and moment/1000 for the baggage from the adjacent Loading Data Table.
5. If desired, subtotal the weight and moment/1000 entries from steps 1 - 4.
6. Enter the weight and moment/1000 of usable fuel loaded on the airplane.
7. Subtotal the weight and moment/1000.
8. Enter values for typical start, taxi, and run-up operations of 6 pounds at an average moment\1000 of 0.922.
9. Subtract step 8 weight and moment/1000 from the Ramp Weight to determine the Takeoff Weight and moment/1000.
   a. Verify Takeoff Weight does not exceed the 3000 pounds.
   b. Verify Moment/1000 does falls between the interpolated minimum and maximum values listed on the adjacent Moment Limits Table.

Loading Data

Use this table to determine the Moment/1000.

Weight LB	Fwd Pass FS 143.5	Aft Pass FS 180.0	Baggage FS 208.0	Fuel FS 154.9	Weight LB	Fwd Pass FS 143.5	Aft Pass FS 180.0	Fuel FS 154.9
20	2.87	3.60	4.16	3.08	220	31.57	39.60	33.83
40	5.74	7.20	8.32	6.15	240	34.44	43.20	36.90
60	8.61	10.80	12.48	9.23	260	37.31	46.80	39.98
80	11.48	14.40	16.64	12.30	280	40.18	50.40	43.05
100	14.35	18.00	20.80	15.38	300	43.05	54.00	46.13
120	17.22	21.60	24.96	18.45	320	45.92	57.60	49.20
140	20.09	25.20	(27.04)*	21.53	340	48.79	61.20	52.28
160	22.96	28.80		24.60	360	51.66	64.80	55.35
180	25.83	32.40		27.68	380	54.53	68.40	
200	28.70	36.00		30.75	400	57.40	72.00	

* 130 lb Maximum

Moment Limits

Use this table to determine if Loading Calculations are within limits.

Weight	Moment/1000		Weight	Moment/1000	
LB	Minimum	Maximum	LB	Minimum	Maximum
2110	293	305	2600	366	383
2150	299	311	2650	374	391
2200	306	320	2700	381	399
2250	314	328	2750	390	406
2300	321	336	2800	398	414
2350	329	344	2850	407	422
2400	336	352	2900	415	429
2450	344	360	2950	424	437
2500	351	368	3000	432	444
2550	359	376			

Temperature Conversion

To convert from Celsius (°C) to Fahrenheit (°F), find, in the shaded columns, the number representing the temperature value (°C) to be converted. The equivalent Fahrenheit temperature is read to the right.

▶ EXAMPLE: 38°C = 100°F.

To convert from Fahrenheit (°F) to Celsius (°C), find in the shaded columns area, the number representing the temperature value (°F) to be converted. The equivalent Celsius temperature is read to the left.

▶ EXAMPLE: 38°F = 3°C.

Temp to Convert °C or °F			Temp to Convert °C or °F			Temp to Convert °C or °F		
°C	◀ ▶	°F	°C	◀ ▶	°F	°C	◀ ▶	°F
-50	**-58**	-72	-17	**2**	36	17	**62**	144
-49	**-56**	-69	-16	**4**	39	18	**64**	147
-48	**-54**	-65	-14	**6**	43	19	**66**	151
-47	**-52**	-62	-13	**8**	46	20	**68**	154
-46	**-50**	-58	-12	**10**	50	21	**70**	158
-44	**-48**	-54	-11	**12**	54	22	**72**	162
-43	**-46**	-51	-10	**14**	57	23	**74**	165
-42	**-44**	-47	-9	**16**	61	24	**76**	169
-41	**-42**	-44	-8	**18**	64	26	**78**	172
-40	**-40**	-40	-7	**20**	68	27	**80**	176
-39	**-38**	-36	-6	**22**	72	28	**82**	180
-38	**-36**	-33	-4	**24**	75	29	**84**	183
-37	**-34**	-29	-3	**26**	79	30	**86**	187
-36	**-32**	-26	-2	**28**	82	31	**88**	190
-34	**-30**	-22	-1	**30**	86	32	**90**	194
-33	**-28**	-18	0	**32**	90	33	**92**	198
-32	**-26**	-15	1	**34**	93	34	**94**	201
-31	**-24**	-11	2	**36**	97	36	**96**	205
-30	**-22**	-8	3	**38**	100	37	**98**	208
-29	**-20**	-4	4	**40**	104	38	**100**	212
-28	**-18**	0	6	**42**	108	39	**102**	216
-27	**-16**	3	7	**44**	111	40	**104**	219
-26	**-14**	7	8	**46**	115	41	**106**	223
-24	**-12**	10	9	**48**	118	42	**108**	226
-23	**-10**	14	10	**50**	122	43	**110**	230
-22	**-8**	18	11	**52**	126	44	**112**	234
-21	**-6**	21	12	**54**	129	46	**114**	237
-20	**-4**	25	13	**56**	133	47	**116**	241
-19	**-2**	28	14	**58**	136	48	**118**	244
-18	**0**	32	16	**60**	140	49	**120**	248

Abnormal Procedures

Table of Contents

Ground Procedures

Brake Failure During Taxi

1. Engine Power.....AS REQUIRED
2. Directional Control ..... MAINTAIN WITH RUDDER
3. Brake Pedal(s) ..... PUMP

If directional control can not be maintained:

4. Mixture ..... CUTOFF

Aborted Takeoff

1. Power Lever ..... IDLE
2. Brakes.....AS REQUIRED

In-Flight Procedures

Inadvertent Icing Encounter

1. Pitot Heat ..... ON
2. Exit icing conditions. Turn back or change altitude.
3. Cabin Heat ..... MAXIMUM
4. Windshield Defrost ..... FULL OPEN
5. Alternate Induction Air ..... ON

Inadvertent IMC Encounter

1. Airplane Control ..... Establish Straight and Level Flight
2. Autopilot ..... Engage to hold Heading and Altitude
3. Heading ..... Reset to initiate 180° turn

Door Open In Flight

1. Airplane Control ..... MAINTAIN

Landing Procedures

Landing With Failed Brakes

One brake inoperative

1. Land on the side of runway corresponding to the inoperative brake.
2. Maintain directional control using rudder and working brake.

Both brakes inoperative

1. Divert to the longest, widest runway with the most direct headwind.
2. Land on downwind side of the runway.
3. Use the rudder for obstacle avoidance.
4. Perform *Emergency Engine Shutdown on Ground* checklist.

Landing With Flat Tire

Main Gear

1. Land on the side of the runway corresponding to the good tire.
2. Maintain directional control with the brakes and rudder.
3. Do not taxi. Stop the airplane and perform a normal engine shutdown.

Nose Gear

1. Land in the center of the runway.
2. Hold the nosewheel off the ground as long as possible.
3. Do not taxi. Stop the airplane and perform a normal engine shutdown.

System Malfunctions

Alternator Failure

ALT 1 Light Steady

1. ALT 1 Master Switch ..... OFF
2. Alternator 1 Circuit Breaker ..... CHECK and RESET
3. ALT 1 Master Switch ..... ON

If alternator does not reset:

4. Switch off unnecessary equipment on Main Bus 1, Main Bus 2, and the Non-Essential Buses to reduce loads. Monitor voltage.
5. ALT 1 Master Switch ..... OFF
6. Land as soon as practical.

ALT 1 Light Flashing

Serials 1005 thru 1581:

1. Ammeter Switch ..... BATT
2. If charging rate is greater than 30 amps, reduce load on Main Bus 1, Main Bus 2, and Non-Essential buses.
3. Monitor ammeter until battery charge rate is less than 15 amps.
4. When battery charge rate is within limits, add loads as necessary for flight conditions.

ALT 2 Light Steady

1. ALT 2 Master Switch ..... OFF
2. Alternator 2 Circuit Breaker ..... CHECK and RESET
3. ALT 2 Master Switch ..... ON

If alternator does not reset:

4. Switch off unnecessary equipment on Main Bus 1, Main Bus 2, and Non-Essential Buses to reduce loads.
5. ALT 2 Master Switch ..... OFF
6. Land as soon as practical.

Engine Indicating System Failure

Serials 1644, 1663 and Subsequent:

1. ANNUN / ENGINE INST Circuit Breaker ..... Cycle
2. Land as soon as practical.

LOW VOLTS Warning Light Illuminated

1. Land as soon as practical.

Communications Failure

1. Switches, Controls ..... CHECK
2. Frequency ..... CHANGE
3. Circuit Breakers ..... CHECK
4. Headset ..... CHANGE
5. Hand Held Microphone ..... CONNECT

Pitot Static Malfunction

Static Source Blocked

1. Pitot Heat ..... ON
2. Alternate Static Source ..... OPEN

Pitot Tube Blocked

1. Pitot Heat ..... ON

Electric Trim/Autopilot Failure

1. Airplane Control ..... MAINTAIN MANUALLY
2. Autopilot (if engaged) ..... Disengage

If Problem Is Not Corrected:

3. Circuit Breakers ..... PULL AS Required
   - PITCH TRIM
   - ROLL TRIM
   - AUTOPILOT
4. Power Lever ..... AS REQUIRED
5. Control Yoke ..... MANUALLY HOLD PRESSURE
6. Land as soon as practical.

Emergency Procedures

Table of Contents

Airspeeds For Emergency Operations

Maneuvering Speed:

- 3000 lb..... 131 KIAS
- 2600 lb..... 122 KIAS
- 2200 lb..... 111 KIAS

Best Glide:

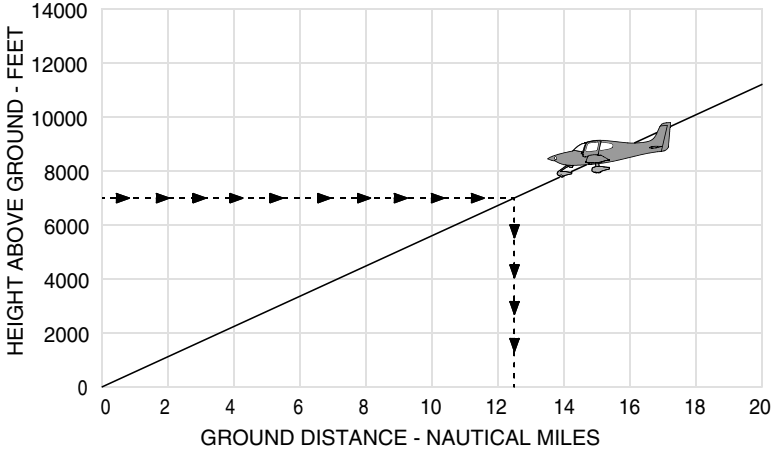
- 3000 lb..... 96 KIAS
- 2500 lb..... 87 KIAS

Emergency Landing (Engine-Out):

- Flaps Up ..... 86 KIAS
- Flaps 50% ..... 81 KIAS
- Flaps 100% ..... 75 KIAS

Maximum Glide

Glide Ratio ≈ 10.9 : 1



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Memory Items

Checklist steps emphasized by underlining such as the example below, should be memorized for accomplishment without reference to the procedure.

1. Best Glide Speed..... ESTABLISH

Ground Emergencies

Engine Fire During Start

1. Mixture ..... CUTOFF
2. Fuel Pump ..... OFF
3. Fuel Selector ..... OFF
4. Power Lever ..... FORWARD
5. Starter ..... CRANK
6. If flames persist, perform *Emergency Engine Shutdown on Ground* and *Emergency Ground Egress* checklists.

Emergency Engine Shutdown On Ground

1. Power Lever ..... IDLE
2. Fuel Pump (if used) ..... OFF
3. Mixture ..... CUTOFF
4. Fuel Selector ..... OFF
5. Ignition Switch ..... OFF
6. Bat-Alt Master Switches ..... OFF

Emergency Ground Egress

1. Engine ..... SHUTDOWN
2. Seat belts ..... RELEASE
3. Airplane ..... EXIT

In-Flight Emergencies

Engine Failure On Takeoff (Low Altitude)

1. Best Glide or Landing Speed (as appropriate) ..... ESTABLISH
2. Mixture ..... CUTOFF
3. Fuel Selector ..... OFF
4. Ignition Switch ..... OFF
5. Flaps ..... AS REQUIRED

If time permits:

6. Power Lever ..... IDLE
7. Fuel Pump ..... OFF
8. Bat-Alt Master Switches ..... OFF
9. Seat Belts ..... ENSURE SECURED

Engine Failure In Flight

1. Best Glide Speed ..... ESTABLISH
2. Mixture ..... FULL RICH
3. Fuel Selector ..... SWITCH TANKS
4. Fuel Pump ..... BOOST
5. Alternate Induction Air ..... ON
6. Ignition Switch ..... CHECK, BOTH
7. If no start, perform *Engine Airstart* or *Forced Landing* checklist.

Engine Airstart

1. Bat Master Switches ..... ON
2. Power Lever ..... ½" OPEN
3. Mixture ..... RICH, AS REQ'D
4. Fuel Selector ..... SWITCH TANKS
5. Ignition Switch ..... BOTH
6. Fuel Pump ..... BOOST
7. Alternate Induction Air ..... ON
8. Alt Master Switches ..... OFF
9. Starter (Propeller not Windmilling) ..... ENGAGE
10. Power Lever ..... slowly INCREASE

11. Alt Master Switches ..... ON
12. If no start, perform *Forced Landing* checklist.

Engine Partial Power Loss

1. Fuel Pump ..... BOOST
2. Fuel Selector ..... SWITCH TANKS
3. Mixture ..... CHECK appropriate for flight conditions
4. Power Lever ..... SWEEP
5. Alternate Induction Air ..... ON
6. Ignition Switch ..... BOTH, L, then R
7. Land as soon as practical.

Low Oil Pressure

1. Power Lever ..... MINIMUM REQUIRED
2. Land as soon as possible.

Propeller Governor Failure

Propeller RPM Will Not Increase

1. Oil Pressure ..... CHECK
2. Land as soon as practical.

Propeller Overspeeds Or Will Not Decrease

1. Power Lever ..... ADJUST (to keep RPM in limits)
2. Airspeed ..... REDUCE to 80 KIAS
3. Land as soon as practical.

Smoke and Fume Elimination

1. Temperature Selector ..... COLD
2. Vent Selector ..... FEET/PANEL/DEFROST MIXTURE
3. Air Vents ..... FULL OPEN
4. Airflow Selector (if installed) ..... SET TO MAXIMUM

   If source of smoke and fume is firewall forward:

   a. Airflow Selector ..... OFF
5. Prepare to land as soon as possible.

   If airflow is not sufficient to clear smoke or fumes from cabin:

   a. Cabin Doors ..... PARTIALLY OPEN

Engine Fire In Flight

1. Mixture ..... CUTOFF
2. Fuel Pump ..... OFF
3. Fuel Selector ..... OFF
4. Airflow Selector ..... OFF
5. Power Lever ..... IDLE
6. Ignition Switch ..... OFF
7. Cabin Doors ..... PARTIALLY OPEN
8. Land as soon as possible.

Wing Fire In Flight

1. Pitot Heat Switch ..... OFF
2. Navigation Light Switch ..... OFF
3. Landing Light ..... OFF
4. Strobe Light Switch ..... OFF
5. If possible, side slip to keep flames away from fuel tank and cabin.
6. Land as soon as possible.

Cabin Fire In Flight

Warning: *Serials 1337 and subsequent:* If in IMC conditions, turn ALT 1, ALT 2, and BAT 1 switches OFF. Power from battery 2 will keep the PFD operational for about 30 minutes.

1. Bat-Alt Master Switches ..... OFF, AS REQ'D
2. Vents/Cabin Air/Heat ..... OFF

3. Air Vents ..... CLOSED
4. Fire Extinguisher ..... ACTIVATE

If airflow is not sufficient to clear smoke or fumes from cabin:

5. Cabin Doors ..... PARTIALLY OPEN
6. When fire extinguished, Air Vents ..... OPEN, FULL COLD
7. Avionics Power Switch ..... OFF
8. All other switches ..... OFF
9. Land as soon as possible.

If setting master switches off eliminated source of fire or fumes and airplane is in night, weather, or IFR conditions:

10. Bat-Alt Master Switches ..... ON
11. Avionics Power Switch ..... ON
12. Activate required systems one at a time. Activate only the minimum amount of equipment necessary to complete a safe landing.

Emergency Descent

1. Power Lever ..... IDLE
2. Mixture ..... AS REQUIRED
3. Airspeed ..... V_{NE} (200 KIAS)

Inadvertent Spiral Dive During IMC Flight

1. Power Lever ..... IDLE
2. Stop the spiral dive by using coordinated aileron and rudder control while referring to the attitude indicator and turn coordinator to level the wings.
3. Cautiously apply elevator back pressure to bring airplane to level flight attitude.
4. Trim for level flight.
5. Set power as required.
6. Use autopilot if functional otherwise keep hands off control yoke, use rudder to hold constant heading.
7. Exit IMC conditions as soon as possible.

Inadvertent Spin Entry

1. CAPS ..... Activate

CAPS Deployment

1. Airspeed ..... MINIMUM POSSIBLE

   The maximum demonstrated deployment speed is 135 KIAS.

2. Mixture (If time and altitude permit) ..... CUTOFF
3. Activation Handle Cover ..... REMOVE
4. Activation Handle ..... PULL STRAIGHT DOWN

   Pull activation T-handle from its holder. Clasp both hands around the handle and pull straight down in a strong, steady, and continuous motion. Maintain maximum pull force until the rocket activates. Pull forces up to, or exceeding, 45 pounds may be required. Bending of the handle-housing mount is to be expected.

   Warning: Jerking or rapidly pulling on the activation T-handle will greatly increase the pull forces required to activate rocket. Use a firm and steady pulling motion - a “chin-up” type pull enhances successful activation.

   After deployment:

5. Mixture ..... CHECK, CUTOFF
6. Fuel Selector ..... OFF
7. Bat-Alt Master Switches ..... OFF
8. Ignition Switch ..... OFF
9. Fuel Pump ..... OFF
10. ELT ..... ON
11. Seat Belts and Harnesses ..... TIGHTEN
12. Loose Items ..... SECURE
13. Assume emergency landing body position.
14. After airplane comes to a complete stop, evacuate quickly and move upwind.

Landing Emergencies

Emergency Landing Without Engine Power

1. Best Glide Speed ..... ESTABLISH
2. Radio ..... Transmit (121.5 MHz) MAYDAY
3. Transponder ..... SQUAWK 7700
4. If off airport, ELT ..... ACTIVATE
5. Power Lever ..... IDLE
6. Mixture ..... CUTOFF
7. Fuel Selector ..... OFF
8. Ignition Switch ..... OFF
9. Fuel Pump ..... OFF
10. Flaps (when landing is assured) 100%
11. Master Switches ..... OFF
12. Seat Belt(s) ..... SECURED

Ditching

1. Radio ..... Transmit (121.5 MHz) MAYDAY giving location and intentions
2. Transponder ..... SQUAWK 7700
3. CAPS ..... ACTIVATE

   If available, life preservers should be donned and life raft should be prepared for immediate evacuation upon touchdown.

   Consider unlatching a door prior to assuming the emergency landing body position in order to provide a ready escape path.

4. Airplane ..... EVACUATE

   It may be necessary to allow some cabin flooding to equalize pressure on the doors. If the doors cannot be opened, break out the windows with the egress hammer and crawl through the opening.

5. Flotation Devices ..... INFLATE WHEN CLEAR OF AIRPLANE

Landing Without Elevator Control

1. Flaps ..... SET 50%
2. Trim ..... SET 80 KIAS
3. Power ..... AS REQUIRED FOR GLIDE ANGLE

System Malfunctions

PFD - Loss of Air Data

1. Land as soon as practical.
2. Standby Instruments (altitude, airspeed) ..... MONITOR

If failure occurs while flying in IMC:

3. Exit IMC.

PFD - Loss of Attitude Data

1. Standby Instruments (attitude, heading) ..... MONITOR

If failure occurs while flying in IMC:

2. Autopilot GPSS Mode .....ACTIVATE
3. Autopilot Altitude Hold .....ACTIVATE
4. Exit IMC.

Power Lever Linkage Failure

1. Power Lever Movement ..... VERIFY
2. Power.....SET if able
3. Flaps.....SET if needed
4. Mixture.....AS REQUIRED (full rich to cut-off)
5. Land as soon as possible.

Annunciator Panel / MFD EMAX Messages

Engine Speed > 2710 RPM for 5s:

Check RPM — ACK

Oil Temperature ≥ 240°F:

Check Oil Temp — ACK

Oil Pressure < 10 psi OR > 99 psi:

Check Oil Press — ACK

Cylinder Head Temperature > 460°F:

Check CHT — ACK

Main Bus Volts < 24.5v OR > 32.0v:

Check Main Bus — ACK

Essential Bus Volts < 24.5v OR > 32.0v:

Check Essential Bus — ACK

Fuel Flow > 30.0 gallons per hour:

Check Fuel Flow — ACK

Fuel Remaining < 9.9 gallons:

Check Fuel Remaining — ACK

Oil Temperature ≥ 235°F:

Monitor Oil Temp — ACK

Oil Pressure < 30 psi OR > 75 psi:

Check Oil Press — ACK

Cylinder Head Temperature > 420°F:

Check CHT — ACK

Alternator 1 < 2 A for 20 s or more:

Check Alt 1 — ACK

Alternator 2 < 2 A for 20 s or more:

Check Alt 2 — ACK

Battery 1 < -4 A for 30 s or more:

Check Batt 1 — ACK

Fuel Flow > 26.7 gallons per hour:

Check Fuel Flow — ACK

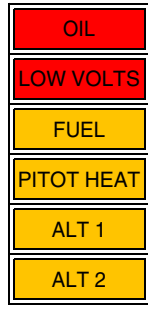
Fuel Remaining < 28.0 gallons:

Check Fuel Remaing — ACK

Low Fuel Condition
Each tank below apprx. 14 gallons.

System Voltage Below 24.5v

High Oil Temperature
OR Low Oil Pressure



Flashing: ALT 2 Overload
Steady: ALT 2 Failure

Flashing: ALT 1 Overload
Steady: ALT 1 Failure

Pitot Switch "ON"
No Power to Pitot Mast

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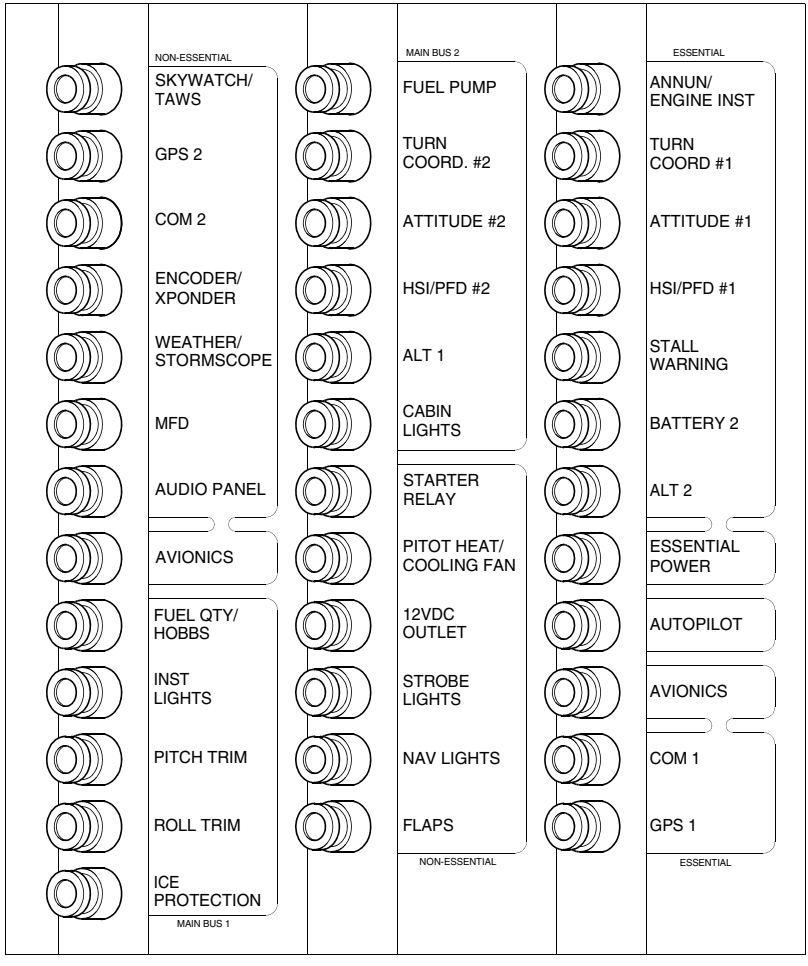
Circuit Breaker Panel



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