

**INTERIOR**

1. Parking Brake **AS REQUIRED**
2. Required Documents **CHECK**
  - a. Tach/Hobbs **RECORD**
  - b. Squawks **REVIEW** (Review 100 inspection/oil change times)
3. Control Wheel Lock **REMOVE**
4. Ignition & Master Switch **OFF**
5. Avionics Master **OFF**
6. Beacon **CONFIRM ON**
7. Propeller **VISUALLY CLEAR**
8. Master Switch **ON**
9. Fuel Gauges **CHECK**
10. Flaps (Area Clear) **DOWN**
11. Lights for Night Ops **CHECK**
12. Master Switch **OFF**
13. Fuel Selector **BOTH**

**EXTERIOR**

1. Left Fuel Tank **QUANT CHECK & SUMP**
2. Right Fuel Tank **QUANT CHECK & SUMP**
3. Engine **SUMP & RETURN**
4. Oil Level **CHECK**
5. Baggage Door **LOCK**
6. Left Side Fuselage **CHECK**
7. Tail Tie-Down **DISCONNECT**
8. Tail Control Surfaces **CHECK** (Cable connections, safety wires & stops)
9. Nav Light/Beacon **CHECK**
10. Right Side Fuselage **CHECK**
11. Right Wing Flap **CHECK**
12. Right Wing Aileron **CHECK**
13. Right Wing Nav Light **CHECK**
14. Right Wing Tie-Down **DISCONNECT**
15. Right Tire & Brake Assembly **CHECK**
16. Cowling **SECURE**
17. Nose Wheel Assembly **CHECK**
18. Propeller & Spinner **CHECK**
19. Alternator Belt **CHECK**
20. Landing Light **SECURE**
21. Carburetor Air Filter **CHECK**
22. Static Port **CLEAR**
23. Pitot Tube Cover **REMOVE & CHECK**
24. Stall Warning Vent **CLEAR**
25. Fuel Tank Vent **CLEAR**
26. Left Wing Tie-Down **DISCONNECT**
27. Left Wing Navigation Light **CHECK**
28. Left Wing Aileron **CHECK**
29. Left Wing Flap **CHECK**
30. Left Tire and Brake Assy **CHECK**
31. Final Walk Around **COMPLETE**

**BEFORE STARTING ENGINE**

1. Exterior Preflight **COMPLETE**
2. Seats, Belts, Shoulder Harness **ADJUST & LOCK**
3. Fuel Selector Valve **BOTH**
4. Circuit Breakers **CHECK**
5. Brakes **TEST & SET** or **HOLD**

**STARTING ENGINE**

1. Mixture **RICH**
2. Carburetor Heat **PUSH COLD**
3. Prop Area **VISUALLY CLEAR**
4. Master Switch **ON**
5. Beacon **CONFIRM ON**
6. Primer **AS REQUIRED** then **LOCKED**
7. Throttle **OPEN 1/8 inch**
8. Propeller Area **YELL "CLEAR"**
9. Ignition Switch **START**
10. Oil Pressure **CHECK**
11. Mixture **LEAN 1"**
12. Flaps **UP & OFF**
13. Avionics Master **ON**
14. Transponder **ALT/CODE SET**
15. Navigation Lights **ON**
16. Magnetic Compass **CHECK**
17. Gyroscopic Compass **SET**
18. Altimeter **SET**
19. Comm 1 and 2 radio frequencies **SET**
20. Radio Check on Comm 2 **COMPLETE**

**BEFORE TAKEOFF**

1. Parking Brake **AS REQUIRED**
2. Flight Controls **FREE/CORRECT**
3. Elevator Trim **TAKEOFF**
4. Fuel Selector Valve **BOTH**
  - a. Engine Instruments/Ammeter **CHECK**
  - b. R/L Magnetos **CHECK:**
    - i. <125 RPM DROP
    - ii. <50 RPM DIFFERENCE
  - c. Carburetor Heat **CHECK**
    - i. Verify RPM drop,
    - ii. No subsequent RPM rise
  - d. Suction gage **CHECK**
  - e. Low Idle & Carburetor Heat **CHECK**
  - f. Carburetor Heat **COLD**
6. Flight Instruments **SET**
7. Radios & Navigation **SET**
8. Throttle Friction **ADJUST**
9. Landing Light **ON**
10. Briefing **COMPLETE**
  - a. Pax: seat belts, emerg. exits, sterile cockpit
  - b. Power loss on departure (density altitude)
11. Doors & Windows **CLSD & LCKD**

**FLOW CHECK (at hold short line)**

1. Fuel Selector Valve **BOTH**
2. Trim **SET**
3. Carb Heat **OFF**
4. Mixture **RICH**
5. Flaps **SET**
6. Radios **SET**
7. Engine Instruments **CHECK**

**NORMAL TAKEOFF**

1. Wing Flaps **UP**
2. Carburetor Heat **PUSH COLD**
3. Brakes **RELEASE**
4. Throttle **FULL POWER/CHK ENG**
5. Elevator Control **LIFT NOSE @ 60 MPH**
6. Climb Speed **75 to 85 MPH**

**ENROUTE CLIMB**

1. Airspeed **80 to 90 MPH**
  - a. Vy at 2000 lb = 86 MPH
2. Throttle **FULL**
3. Mixture **FULL RICH** - (lean above 3000 feet)

**CRUISE**

1. Power **2200 to 2700 RPM (<75%)**
2. Elevator Trim **ADJUST**
3. Mixture **LEAN to max RPM**

**DESCENT**

1. Fuel Selector **BOTH**
2. Mixture **FULL RICH**
3. Carb Heat **AS REQUIRED**
4. Throttle **AS REQUIRED**

**BEFORE LANDING**

1. Fuel Selector **BOTH**
2. Mixture **FULL RICH**
3. Carburetor Heat **PULL ON**
4. Landing Light **ON**
5. Airspeed **70 to 80 (FLAPS UP)**
6. Airspeed **65 to 75 (FLAPS DOWN)**

**NORMAL LANDING**

1. Touch Down **MAIN WHEELS 1st**
2. Landing Roll **LOWER NOSE WHEEL GENTLY**
3. Braking **MINIMUM REQUIRED**

**AFTER LANDING**

1. Clear Runway **CROSS HOLD LINE**
2. Fuel Selector **BOTH**
3. Elevator Trim **INDEX**
4. Carburetor Heat **PUSH COLD**
5. Wing Flaps **UP/OFF**
6. Fuel Quantity **CHECK**
7. Landing/Taxi Lights **AS REQUIRED**

**SHUTDOWN/SECURING AIRCRAFT**

1. Parking Brake **AS REQUIRED**
2. Avionics Master **OFF**
3. Landing and Taxi Lights **OFF**
4. Navigation Lights **OFF**
5. Mixture **IDLE/CUT OFF**

**AFTER PROP STOPS...**

6. Ignition Switch **OFF**
7. Key **REMOVE**
8. Master Switch **OFF**
9. Fuel Selector **LEFT** or **RIGHT**
10. Control Lock **INSTALL**
11. Tach/Hobbs/Squawks **RECORD**
12. Re-Fuel **AS NECESSARY**
13. Tie Down/Chock **AS NECESSARY**
14. Post Flight Inspection **COMPLETE**

## EMERGENCY PROCEDURES

### BALKED LANDING (Go-Around)

1. Throttle **FULL**
2. Carburetor Heat **PUSH COLD**
3. Wing Flaps **20 DEGREES**
4. Airspeed **65 MPH**
5. Climb to Clear Obstacles
6. Wing Flaps **RETRACT SLOWLY**

### SHORT FIELD TAKE-OFF

1. Wing Flaps **0 DEGREES**
2. Carburetor Heat **PUSH COLD**
3. Brakes **APPLY and HOLD**
4. Throttle **FULL POWER**
5. Brakes **RELEASE ACCEL. TO 60 MPH**
6. Climb at  $V_x$  (65 MPH) UNTIL CLEAR OF OBSTACLE
7. Wing Flaps **ACCELERATE & RETRACT**
8. Climb Speed **75 to 85 MPH**

### SHORT FIELD LANDING

1. Approach **SAME AS NORMAL LANDING**
2. On final **POWER IDLE**
3. Flaps **40 DEGREES**
4. Airspeed **65 MPH**
5. Touchdown **MAIN WHEELS FIRST**
6. Lower Nose Wheel Gently & Retract Flaps
7. Apply Back Pressure on Yoke
8. Brakes as Needed

### SOFT FIELD TAKE-OFF

1. Wing Flaps **10 DEGREES**
2. Roll onto runway without stopping and hold nosewheel off ground
3. Smoothly apply full power and hold nose off until aircraft becomes airborne.
4. Level off and allow aircraft to accelerate in ground effect.
5. Climb at  $V_x$  (65 MPH) until clear of obstacles
6. Retract flaps & accelerate to  $V_y$  (86 MPH @ 2000 lbs).

### SOFT FIELD LANDING

1. Approach same as **NORMAL LANDING**
2. On Final **POWER FAST IDLE**
3. Flaps **40 DEGREES**
4. Airspeed **65 MPH**
5. Touch Down with power slightly above idle on the main wheels at the slowest possible speed
6. Keep nose wheel off ground as long as possible
7. Allow surface drag to slow aircraft
8. Brakes are normally not required

### PAX BRIEFING (SAFETY)

- S – Seatbelt usage/Seat Adjustment  
A – Air vent locations, airsickness  
F – Fire Extinguisher (not installed)  
E – Exits, how to open doors  
T - Traffic (callouts) and Talking (sterile cockpit)  
Y - Your questions

### AIRSPEDS:

- $V_x$  **63 MPH (at 2000 lbs)\***  
 $V_y$  **86 MPH (at 2000 lbs)\***  
 $V_{ne}$  **182 MPH**  
 $V_{no}$  **145 MPH**  
 $V_{fe}$  **100 MPH**  
 $V_{s1}$  **57 MPH**  
 $V_{s0}$  **49 MPH**  
 $V_a$  **112 MPH (at 2300 lbs)**

\*Consult POH Section VI to determine speed based on actual weight

### POWER LOSS “ABCDEFG”

- A. AIRSPEED—Achieve Best Glide  
B. BEST landing location—Go there  
C. CHECKLIST—FLOW CHECK  
D. DECLARE emergency—with ATC  
E. EGRESS/ELECTRICAL: Prepare for it, Master OFF prior to landing  
F. FUEL OFF (Prior to landing)  
G. Good Luck

### POWER LOSS AFTER TAKEOFF

1. Maintain Aircraft Control
2. Best Glide **80 MPH**
3. Fuel Selector **OFF**
4. Mixture **IDLE/CUTOFF**
5. Flaps **DOWN**
6. Airspeed **65 to 75 MPH**
7. Master Switch **OFF**
8. Ignition Switch **OFF**
9. Doors **UNLATCH**
10. Land in tail-low attitude
11. Egress Aircraft

### POWER LOSS IN FLIGHT

1. Best Glide **80 MPH**
2. Carb Heat **ON**
3. Best Landing Location **CHOOSE**
4. Fuel Selector **CHECK**
5. Mixture **FULL RICH**
6. Ignition Switch **CHECK ALL**
  - a. Consider restarting engine if no damage suspected
7. Master **ON**
8. Fuel Primer **LOCKED**
9. If no restart, execute **FORCED LANDING** checklist

### ENGINE FIRE IN FLIGHT

1. Maintain Aircraft Control
2. Mixture **IDLE/CUTOFF**
3. Fuel Selector **OFF**
4. Cabin Heat/Air **PUSH OFF**
5. Master Switch **OFF**
6. Airspeed **120 MPH or as needed**
7. Execute **FORCED LANDING** checklist

### FORCED LANDING

1. Best Glide **80 MPH**
2. Best Landing Location **CHOOSE**
3. Mixture **IDLE/CUTOFF**
4. Squawk **7700**
5. Radio **DECLARE EMERGENCY**
6. Seat Belt Shoulder Harness **CHECK**
7. Flaps **AS NEEDED**
8. Master and Ignition **OFF**
9. Doors **UNLATCH**
10. Land in tail-low attitude

### ELECTRICAL FIRE IN FLIGHT

1. Maintain Aircraft Control
2. Master Switch **OFF**
3. Cabin Heat/Air **PUSH OFF**
4. Source of fire **TURN OFF**
5. Master Switch **ON**
6. If no fire **VENTS OPEN**
7. Land as conditions permit

### ENGINE FIRE DURING START

1. Continue cranking engine
2. If started, **1700 RPM 1-2 minutes, then shut down.**
3. If not started
  - a. Mixture **IDLE/CUTOFF**
  - b. Fuel Selector **OFF**
  - c. Ignition **OFF**
  - d. Master **OFF**
  - e. Egress Aircraft

### ICING

1. Maintain Aircraft Control
2. Pitot Heat **ON**
3. Carb Heat **ON**
4. Cabin Heat **PULL ON**
5. Notify ATC
6. Consider 180-degree turn
7. Descend to lower altitude
8. Increase engine speed
9. Flaps **DO NOT LOWER**
10. Land at faster airspeed

### EXCESSIVE RATE OF CHARGE

(Overvoltage light illuminates)

1. Maintain Aircraft Control
2. Master Switch **OFF, then ON**  
If light comes on again,
3. Reduce load on battery
4. Land as soon as possible

### LOW OIL PRESSURE

1. Maintain Aircraft Control
- Check oil temperature.** If normal,
2. Land at nearest suitable airfield  
**If oil temperature rising,**
3. Execute **FORCED LANDING** checklist