

**Before Start**

Preflight.....COMPLETE  
Passenger Briefing .....COMPLETE  
Seats and Seat Belts .....ADJUST  
..... AND LOCK  
Brakes ..... TEST AND SET  
Circuit Breakers ..... CHECK IN  
Electrical Equip./Autopilot..... OFF  
Avionics Power ..... OFF  
Transponder .....STAND-BY  
Fuel Selector ..... BOTH  
Fuel Shutoff ..... ON

**Starting Engine (Battery)**

Beacon ..... ON

Throttle ..... OPEN ¼ INCH  
Mixture .....IDLE CUT OFF  
Propeller Area .....CLEAR  
Master Switch (BAT) .....ON  
-----PRIME (COLD) -----  
Fuel Pump .....ON  
Mixture ..... ADVANCE UNTIL  
..... FUEL FLOW THEN CUT-OFF  
Fuel Pump .....OFF  
-----  
Ignition Switch .....START  
Mixture ..... ADVANCE  
Oil Pressure ..... CHECK

**After Start**

Master Switch (ALT) ..... ON  
Lights ..... AS REQUIRED  
Avionics Power ..... ON  
Mixture ..... LEAN FOR TAXI  
Flaps ..... RETRACT  
-----  
ATIS/AWOS ..... OBTAIN  
CLEARANCE ..... OBTAIN

**Taxi Checks**

Brakes.....CHECK  
Instruments.....CHECK

**Runup**

Mixture..... RICH  
Throttle ..... 1800 RPM  
Magnetos ..... CHECK (150/50)  
Suction Gauge .....CHECK  
Engine Instruments .....CHECK  
Ammeter .....CHECK  
Annunciator Panel ..... CLEAR  
Mixture.....LEAN FOR TAXI

**Before Takeoff**

Passenger Seat Backs ... UPRIGHT  
Seats and Seat Belts ..... SECURE  
Cabin Doors.....CLOSED AND  
..... LOCKED  
Flight Controls..... FREE  
..... AND CORRECT  
Flight Instruments..... CHECK  
..... AND SET  
Fuel Quantity ..... CHECK  
Fuel Selector.....BOTH  
Elevator Trim ..... SET  
Avionics..... SET  
Autopilot..... OFF  
Wing Flaps..... SET  
-----  
Window ..... LATCHED  
Lights..... AS REQUIRED  
Transponder ..... ALT  
Time ..... RECORD

**Takeoff**

Rotate.....55 K  
Climb .....75 K  
500 AGL  
Climb .....80 K

**Climb**

Flaps..... UP  
Lights.....AS REQUIRED

**Cruise**

Power/RPM.....SET  
Trim.....ADJUST  
Mixture .....LEAN  
Engine Inst..... CHECK  
Ammeter ..... CHECK  
Vacuum..... CHECK  
Flight Plan ..... OPEN

**Descent**

Power ..... AS DESIRED  
Mixture .....ADJUST  
Fuel Selector..... BOTH

**Before Landing**

Seat Backs ..... UPRIGHT  
Seats and Seat Belts.... SECURE  
Fuel Selector..... BOTH  
Mixture ..... RICH  
Lights..... AS REQUIRED  
Autopilot ..... OFF  
Flaps..... AS REQUIRED

**After Landing**

Flaps..... UP  
Transponder ..... STAND-BY  
Lights.....AS REQUIRED  
Mixture ..... LEAN FOR TAXI

**Securing Airplane**

Parking Brake.....SET  
Avionics Power .....OFF  
Electrical Equipment.....OFF  
Panel Lights .....OFF  
Mixture .....IDLE CUT-OFF  
Ignition Switch .....OFF  
Master Switch.....OFF  
Control Lock..... INSTALL  
Fuel Selector ..... LEFT or RIGHT  
Flight Plan..... CLOSE

**Approach Speeds**

Downwind	100 K
Flaps	80 K
Final	65 K

**Speeds**

V <sub>X</sub>	60 K
V <sub>Y</sub>	79 K
Best Glide	65 K
V <sub>A</sub>	82-99 K
V <sub>FE</sub>	85 K

**Fire – During Start**

Cranking ..... CONTINUE  
 If Engine Starts  
 Power ..... 1700 RPM  
 Engine ..... SHUTDOWN  
 If Engine Fails to Start  
 Throttle ..... FULL OPEN  
 Mixture ..... IDLE CUT-OFF  
 Cranking ..... CONTINUE  
 Fuel Shutoff ..... OFF  
 Fuel Pump ..... OFF  
 Fire Extinguisher ..... OBTAIN  
 Engine ..... SECURE  
 Master Switch ..... OFF  
 Ignition Switch ..... OFF  
 Parking Brake ..... RELEASE  
 Airplane ..... EVACUATE  
 Fire ..... EXTINGUISH  
 Fire Damage ..... INSPECT

**Engine Failure - Restart**

**Airspeed ..... 65 KIAS**  
**Fuel Shutoff ..... ON**  
**Fuel Selector ..... BOTH**  
**Fuel Pump ..... ON**  
**Mixture ..... RICH**  
 Ignition Switch ..... BOTH  
 ..... (or START if Prop. Stopped)

**Electrical Fire IN FLIGHT**

**Master Switch ..... OFF**  
**Vents and Cabin Air ..... CLOSED**  
**Fire Extinguisher ..... ACTIVATE**  
 Avionics Power ..... OFF  
 All Other Switches ..... OFF  
 (except Ignition)  
 Vents and Cabin Air ..... OPEN  
 (when fire is out)  
 Master Switch ..... ON  
 Circuit Breakers ..... CHECK  
 Radio Switches ..... OFF  
 Avionics Power ..... ON  
 Radios/Electrical ..... ON  
 (one at a time)

**Pre-Flight (Cockpit)**

Magnetos ..... OFF  
 Master ..... OFF  
 Alt. Static ..... OFF  
 Throttle ..... IDLE  
 Mixture ..... CUT-OFF  
 Ckt. Breakers ..... CHECK  
 Transponder ..... STAND-BY  
 ELT ..... Armed  
 Radio Master ..... OFF  
 Master ..... ON  
 Fuel ..... CHECK  
 Lights ..... CHECK  
 Pitot Heat ..... CHECK  
 Avionics Fan. .... CHECK  
 Flaps ..... LOWER  
 Master ..... OFF  
 Controls ..... FREE

**Pre-Flight (Exterior)**

Flaps ..... CHECKED  
 Ailerons ..... CHECKED  
 Fuel ..... SAMPLED  
 Fuel Quantity ..... G  
 Oil ..... CHECKED (8-6 qts)  
 Propeller ..... CHECKED  
 Engine ..... CHECKED  
 Stall Warning ..... CHECKED  
 Pitot Mast ..... CHECKED  
 Static Ports ..... CHECKED  
 Elevators ..... CHECKED  
 Rudder ..... CHECKED  
 Skins/Rivets ..... CHECKED  
 Tie-downs ..... REMOVED  
 Chocks ..... REMOVED

**Engine Failure – Takeoff Roll**

**Throttle ..... IDLE**  
**Brakes ..... APPLY**  
 Flaps ..... RETRACT  
 Mixture ..... IDLE CUT-OFF  
 Ignition Switch ..... OFF  
 Master Switch ..... OFF

**Engine Fire – IN FLIGHT**

**Mixture ..... IDLE CUT OFF**  
**Fuel Shutoff ..... OFF**  
**Fuel Pump ..... OFF**  
**Master Switch ..... OFF**  
 Cabin Heat and Air ..... OFF  
 Airspeed ..... 100 K  
 Forced Landing ..... EXECUTE

**Cabin Fire**

**Master Switch ..... OFF**  
**Vents and Cabin Air ..... CLOSED**  
**Fire Extinguisher ..... ACTIVATE**  
 Vents/Cabin Air ..... OPEN  
 (when fire is out)  
 Flight ..... TERMINATE AS SOON  
 ..... AS PRACTICAL

**Electrical Failure – Excess Charge**

Alternator ..... OFF  
 Non-Essential Electrics ..... OFF  
 Flight ..... TERMINATE AS SOON  
 ..... AS PRACTICAL

**Engine Failure – After Takeoff**

**Airspeed ..... 65 KIAS (Flaps UP)**  
**..... 60 KIAS (Flaps DOWN)**  
 Mixture ..... IDLE CUT-OFF  
 Fuel Shutoff ..... OFF  
 Ignition Switch ..... OFF  
 Flaps ..... AS REQUIRED  
 Master Switch ..... OFF  
 Cabin Door ..... UNLATCH  
 Land ..... STRAIGHT AHEAD

**Emergency Landing Without Engine Power**

Seat Backs ..... UPRIGHT  
 Seats and Seat Belts ..... SECURE  
 Airspeed ..... 65 KIAS (Flaps UP)  
 ..... 60 KIAS (Flaps DOWN)  
 Mixture ..... IDLE CUT-OFF  
 Fuel Shutoff ..... OFF  
 Ignition Switch ..... OFF  
 Flaps ..... AS REQUIRED  
 ..... 30° RECOMMENDED  
 Master Switch ..... OFF  
 Doors ..... UNLATCH  
 Touchdown ..... TAIL LOW  
 Brakes ..... APPLY HEAVILY

**Electrical Failure – Low Voltage**

Avionics Power ..... OFF  
 Alternator Ckt Breaker ..... IN  
 Master Switch ..... OFF  
 Master Switch ..... ON  
 Low Voltage ..... CHECK OFF  
 Avionics Power ..... ON  
 Continued Low Voltage:  
 Alternator ..... OFF  
 Non-Essential Electrics ..... OFF  
 Flight ..... TERMINATE AS SOON  
 ..... AS PRACTICAL