

Emergency Checklists

| Engine Failure During Takeoff Roll | |
|------------------------------------|---------|
| Throttle | IDLE |
| Brakes | APPLY |
| Flaps | RETRACT |
| Mixture | CUT-OFF |
| Magnetos | OFF |
| Standby battery | OFF |
| Master (ALT and BAT) | OFF |

| Engine Failure Immediately After Takeoff | |
|--|--|
| Airspeed | Flaps up: 70 KIAS Flaps 10°-FULL: 65 KIAS |
| Mixture | CUT-OFF |
| Fuel shutoff valve | OFF (pull full out) |
| Magnetos | OFF |
| Flaps | AS REQUIRED (FULL recommended) |
| Standby battery | OFF |
| Master (ALT and BAT) | OFF |
| Door | UNLATCH |
| Land | STRAIGHT AHEAD |

| Engine Failure During Flight (Restart Procedures) | |
|--|------------------------------------|
| Airspeed | 68 KIAS (best glide speed) |
| Fuel shutoff valve | ON (push full in) |
| Fuel selector valve | BOTH |
| Fuel pump | ON |
| Mixture | RICH (if restart has not occurred) |
| Magnetos | BOTH |
| If propeller stopped: START, advance throttle slowly, lean mixture as required | |
| Fuel pump | OFF |
| If fuel flow drops to zero, turn fuel pump back on | |

| Emergency Landing Without Engine Power | |
|--|--|
| Seats, seatbelts | UPRIGHT, SECURE |
| Airspeed | Flaps up: 70 KIAS Flaps 10°-FULL: 65 KIAS |
| Mixture | CUT-OFF |
| Fuel shutoff valve | OFF (pull) |
| Magnetos | OFF |
| Flaps | AS REQUIRED (FULL recommended) |
| Standby battery | OFF |
| Master (ALT and BAT) | OFF (when landing is assured) |
| Doors | UNLATCH BEFORE TOUCHDOWN |
| Touchdown | SLIGHTLY TAIL LOW |
| Brakes | APPLY HEAVILY |

| Precautionary Landing With Engine Power | |
|---|---|
| Seats, seatbelts | UPRIGHT, SECURE |
| Airspeed | 65 KIAS |
| Flaps | 20° |
| Selected field | FLY OVER, noting terrain and obstructions |
| Flaps | FULL (on final approach) |
| Airspeed | 65 KIAS |
| Standby battery | OFF |
| Master (ALT and BAT) | OFF (when landing assured) |
| Doors | UNLATCH BEFORE TOUCHDOWN |
| Touchdown | SLIGHTLY TAIL LOW |
| Mixture | CUT-OFF |
| Magnetos | OFF |
| Brakes | APPLY HEAVILY |

| Ditching | |
|--|---|
| Radio | MAYDAY on 121.5 MHz (Give location, intentions) |
| Transponder | SQUAWK 7700 |
| Heavy objects (in baggage area) | SECURE or JETTISON (if possible) |
| Seats, seatbelts | UPRIGHT, SECURE |
| Flaps | 20°-FULL |
| Power | 300 FT/MIN DESCENT AT 55 KIAS |
| If no power available, approach flaps up 70 KIAS or flaps 10° 65 KIAS | |
| Strong wind, heavy seas: LAND INTO WIND | |
| Light wind, heavy swells: LAND PARALLEL TO SWELLS | |
| Doors | UNLATCH |
| Touchdown | LEVEL ATTITUDE at established rate of descent |
| Face | CUSHION at touchdown with folded coat |
| ELT | ACTIVATE |
| Airplane | EVACUATE THROUGH CABIN DOORS |
| If necessary, open window and flood cabin to equalize pressure so doors can be opened. | |
| Life vests, raft | INFLATE WHEN CLEAR OF AIRPLANE |

| Fire During Start on Ground | |
|--|---|
| Magnetos switch | START (continue cranking to start the engine) |
| If engine starts: Power 1800 RPM for a few minutes Engine SHUTDOWN | |
| If engine fails to start: Throttle FULL Mixture CUT-OFF Magnetos switch START (continue cranking) | |
| Fuel shutoff valve | OFF (pull) |
| Fuel pump | OFF |
| Magnetos | OFF |
| Standby battery | OFF |
| Master (ALT and BAT) | OFF |
| Engine | SECURE |
| Parking brake | RELEASE |
| Fire extinguisher | OBTAIN |
| Airplane | EVACUATE |
| Fire | EXTINGUISH via fire extinguisher, wool blanket, or dirt |

Both cases: inspect and repair damage before conducting another flight.

| Engine Fire in Flight | |
|--|-----------------------------|
| Mixture | CUT-OFF |
| Fuel shutoff valve | OFF (pull) |
| Fuel pump | OFF |
| Master (ALT and BAT) | OFF |
| Cabin heat and air | OFF (except overhead vents) |
| Airspeed | 100 KIAS |
| If fire not extinguished, increase speed to find an airspeed, within airspeed limitations, which provides an incombustible mixture | |
| Forced landing | EXECUTE |
| Refer to Emergency Landing Without Engine Power checklist | |

| Electrical Fire in Flight | |
|---|-------|
| Standby battery | OFF |
| Master (ALT and BAT) | OFF |
| Vents/cabin air/heat | CLOSE |
| Fire extinguisher | USE |
| Avionics (BUS 1 and BUS 2) | OFF |
| All switches (except magnetos) | OFF |
| Vents/cabin air/heat | OPEN |
| When sure fire is completely extinguished | |
| If fire extinguished and electrical power necessary to continue flight: Circuit breakers CHECK, do not reset | |
| Master (ALT and BAT) | ON |
| Standby battery | ON |
| Avionics (BUS 1) | ON |
| Avionics (BUS 2) | ON |

| Cabin Fire | |
|---|----------------------------|
| Standby battery | OFF |
| Master (ALT and BAT) | OFF |
| Vents/cabin air/heat | CLOSE (to avoid drafts) |
| Fire extinguisher | USE |
| Vents/cabin air/heat | OPEN |
| When sure fire is completely extinguished | |
| Land | ASAP to inspect for damage |

| Wing Fire | |
|--|-----|
| Landing, taxi lights | OFF |
| Nav, strobe lights | OFF |
| Pitot heat | OFF |
| NOTE: Sideslip to keep flames away from fuel tanks and cabin. Land ASAP using flaps only as required for final approach and touchdown. | |

| Inadvertent Icing Encounter During Flight | |
|---|---------------------------|
| Pitot heat | ON |
| Turn or change altitude to obtain an OAT less conducive to icing. | |
| Cabin heat | FULL ON |
| Defrosters | OPEN |
| Cabin air | ADJUST |
| Maximize defroster heat and airflow | |
| Induction icing | MONITOR |
| Adjust throttle to hold RPM. Adjust mixture as needed for any change in power settings | |
| Land | NEAREST AIRPORT |
| With an extremely rapid ice build-up, select suitable off-airport landing site | |
| With ≥ 1/4 inch of ice on the leading edges, prepare for significantly higher stall speed | |
| Flaps | LEAVE RETRACTED |
| Open left window and scrape ice from windshield, if necessary for visibility | |
| Forward slip if necessary for visibility | |
| Approach speed | 65-75 KIAS |
| Depending on level of accumulation | |
| Landing | Perform in level attitude |
| Avoid missed approaches if possible | |
| Missed approaches should be avoided whenever possible | |

| Static Source Blockage (Erroneous Instrument Reading Suspected) | |
|---|--|
| Alternate static | PULL ON |
| Cabin heat/air | PULL ON |
| Vents | CLOSED |
| Airspeed | Consult calibration table Section 5, Figure 5-1 of POH |

| Excessive Fuel Vapor (Fuel Flow Stabilization Procedures) | |
|---|----------------------------------|
| If flow fluctuates ≥ 1 GPH or power surges occur | |
| Fuel pump | ON |
| Mixture | ADJUST |
| as necessary for smooth operation | |
| Fuel selector valve | SELECT OTHER |
| TANK (if symptoms continue) | |
| Fuel pump | OFF (after fuel flow stabilized) |

| Landing With a Flat Main Tire | |
|--|--|
| Approach | NORMAL |
| Flaps | FULL |
| Touchdown | GOOD MAIN TIRE FIRST |
| Keep flat tire in air as long as possible with aileron control | |
| Directional control | MAINTAIN using brake on good wheel as required |

| Landing With a Flat Nose Tire | |
|--|-------------|
| Approach | NORMAL |
| Flaps | AS REQUIRED |
| Touchdown | ON MAINS |
| Hold nosewheel off ground as long as possible, maintain full up elevator as airplane slows to stop | |

| HIGH VOLTS or M Bat Amps > 40 | |
|--------------------------------------|-----|
| Master (ALT only) | OFF |
| Reduce Electrical Load checklist RUN | |

| LOW VOLTS Annunciator Comes On < 1000 RPM | |
|---|------------|
| Throttle | 1000 RPM |
| Low voltage annunciator | VERIFY OFF |
| If annunciator remains on, run "LOW VOLTS Annunciator On ≥ 1000 RPM" checklist, and have electrical system inspected before next flight | |

| LOW VOLTS Annunciator On ≥ 1000 RPM | |
|--|----------------------|
| Master (ALT only) | OFF |
| ALT FIELD breaker | CHECK IN |
| Master (ALT and BAT) | ON |
| LOW VOLTS annunciator | VERIFY OFF |
| M Bus volts | VERIFY 27.5V minimum |
| M Bat amps | VERIFY POSITIVE |
| If LOW VOLTS annunciator remains on: Reduce Electrical Load checklist RUN | |

| Reduce Electrical Load | |
|--|--------------------------------|
| Avionics (BUS 1) | OFF |
| Pitot heat | OFF |
| Beacon, taxi, nav, strobe lights | OFF |
| Landing light | OFF (use as req'd for landing) |
| Cabin power 12V | OFF |
| Note: When M bus volts drops below 20V, the standby battery will supply power to the essential bus for at least 30 minutes | |
| COM1, NAV1 | TUNE |
| COM1 MIC and NAV1 | SELECT |
| If COM2 MIC and NAV2 are selected when avionics bus 2 is off, the radios cannot be tuned | |
| Avionics (BUS 2) OFF if clear of clouds | |
| The following items will not operate: autopilot, COM2, transponder, audio panel, NAV2, MFD | |
| Land | AS SOON AS PRACTICAL |
| Make sure a successful landing is possible before extending flaps. Flap motor is a large electrical load. | |

| Red X - PFD Airspeed Indicator | |
|--|----------------------------------|
| ADC/AHRS circuit breakers | CHECK IN (ESS BUS and AVN BUS 1) |
| If open, reset circuit breaker. If circuit breaker opens again, do not reset | |
| Standby airspeed indicator | USE for airspeed information |

| Red X - PFD Altitude Indicator | |
|--|---|
| ADC/AHRS circuit breakers | CHECK IN (ESS BUS and AVN BUS 1) |
| If open, reset circuit breaker. If circuit breaker opens again, do not reset | |
| Standby altimeter | CHECK current barometric pressure SET. USE for altitude information |

| Red X - PFD Attitude Indicator | |
|--|----------------------------------|
| ADC/AHRS circuit breakers | CHECK IN (ESS BUS and AVN BUS 1) |
| If open, reset circuit breaker. If circuit breaker opens again, do not reset | |
| Standby attitude indicator | USE for attitude information |

| Red X - Horizontal Situation Indicator | |
|--|----------------------------------|
| ADC/AHRS circuit breakers | CHECK IN (ESS BUS and AVN BUS 1) |
| If open, reset circuit breaker. If circuit breaker opens again, do not reset | |
| Magnetic compass | USE for heading information |

| PFD1 COOLING or MFD1 COOLING Annunciator(s) | |
|--|---|
| Cabin heat | REDUCE (minimum preferred) |
| Forward avionics fan | CHECK (feel for airflow from screen on glareshield) |
| If forward avionics fan failed: Standby battery OFF unless needed for emergency power | |
| If PFD1 COOLING or MFD1 COOLING annunciator does not go off within 3 minutes or if both annunciators come on: Standby battery OFF (land as soon as practical) | |

| LOW VACUUM Annunciator Comes On | |
|--|---|
| Vacuum indicator | CHECK EIS ENGINE page to make sure vacuum pointer is within green arc |
| If vacuum pointer not in green arc or gyro flag shows on standby attitude indicator, do not use standby attitude indicator | |

| High Carbon Monoxide (CO) Level | |
|--|--|
| Cabin heat | OFF (push full in) |
| Cabin air | ON (pull full out) |
| Cabin vents | OPEN |
| Windows | OPEN (163 KIAS maximum windows open speed) |
| If high CO level remains: Land AS SOON AS PRACTICAL | |