

ENGINE FIRE DURING START

- STARTER CRANK ENGINE
- MIXTURE IDLE CUT-OFF
- THROTTLE OPEN
- ELECTRIC FUEL PUMP OFF
- FUEL SELECTOR OFF

abandon aircraft if fire continues

ENGINE POWER LOSS DURING TAKEOFF

▶ **if sufficient runway** Land straight ahead

▶ **if insufficient runway**

- SAFE AIRSPEED Maintain
- FLY to avoid obstructions Only shallow turn
- FLAPS as situation requires

▶ **if sufficient altitude to attempt restart**

- SAFE AIRSPEED Maintain
- FUEL SELECTOR SWITCH to tank containing fuel
- ELECTRIC FUEL PUMP Check ON
- MIXTURE Check RICH
- CARBURETOR HEATER ON
- PRIMER Locked

if power is not regained proceed with **POWER OFF LANDING**

ENGINE POWER LOSS IN FLIGHT

- FUEL SELECTOR SWITCH to tank containing fuel
- ELECTRIC FUEL PUMP ON
- MIXTURE RICH
- CARBURETOR HEAT ON
- ENGINE GAUGES Check for indication of cause
- PRIMER Check LOCKED

if no fuel pressure indicated check tank selector position to be sure it is on a tank containing fuel

▶ **when power is restored**

- CARBURETOR HEAT OFF
- ELECTRIC FUEL PUMP OFF

▶ **if power is not restored prepare for POWER OFF LANDING**

Trim for 73 KIAS

POWER OFF LANDING

Locate suitable airfield.

Establish spiral pattern.

1000ft above airfield at downwind position for normal landing approach.

When field can easily be reached slow to 63 KIAS for shortest landing.

Touchdown should normally be made at lowest possible airspeed with full flaps.

▶ **when committed to landing**

- IGNITION OFF
- MASTER SWITCH OFF
- FUEL SELECTOR OFF
- MIXTURE IDLE CUT-OFF
- SEAT BELTS AND HARNESSSES Tight

FIRE IN FLIGHT

Source of fire check

▶ **ELECTRICAL FIRE (smoke in cabin)**

- MASTER SWITCH OFF
- VENTS OPEN
- CABIN HEAT OFF

Land as soon as practical (**ASAP**)

▶ **ENGINE FIRE**

- FUEL SELECTOR OFF
- THROTTLE CLOSED
- MIXTURE IDLE CUT-OFF
- ELECTRIC FUEL PUMP Check OFF
- HEATER OFF
- DEFROSTER OFF

proceed with **POWER OFF LANDING** procedure

LOSS OF OIL PRESSURE

Land as soon as possible (**ASAP**) and investigate cause

Prepare for **POWER OFF LANDING**

LOSS OF FUEL PRESSURE

- ELECTRIC FUEL PUMP ON
- FUEL SELECTOR Check on full tank

HIGH OIL TEMPERATURE

Land at nearest airport and investigate the problem

Prepare for **POWER OFF LANDING**

ELECTRICAL FAILURES

▶ ALT annunciator light illuminated

- AMMETER Check to verify inop. Alt.
 - ▶ **if AMMETER shows zero**
 - ALT SWITCH OFF
 - reduce electrical loads to minimum
 - ALT CIRCUIT BREAKER check and RESET as required
 - ALT SWITCH ON
 - ▶ **if power not restored**
 - ALT SWITCH OFF
 - If alternator output cannot be restored, reduce electrical loads and land as soon as practical (**ASAP**).
 - The battery is the only remaining source of electrical power

▶ ELECTRICAL OVERLOAD (Alternator over 20 amps above known electrical load)

- ALT SWITCH ON
- BATT SWITCH OFF
- ▶ **if alternator loads are reduced**
 - ELECTRICAL LOAD Reduce to minimum

Land as soon as practical (**ASAP**)

NOTE: Due to increased system voltage and radio frequency noise, operation with ALT switch ON and BATT switch OFF should be made only when required by an electrical system failure.

▶ if alternator loads are not reduced

- ALT SWITCH OFF
- BATT SWITCH as required

Land as soon as possible (**ASAP**)

Anticipate **COMPLETE ELECTRICAL FAILURE**

SPIN RECOVERY

- THROTTLE IDLE
- AILERONS NEUTRAL
- RUDDER FULL OPPOSITE to direction of rotation
- CONTROL WHEEL FULL FORWARD
- RUDDER NEUTRAL (when rotation stops)
- CONTROL WHEEL as required to smoothly regain level flight attitude

OPEN DOOR

If both upper and lower latches are open, the door will trail slightly open and airspeeds will be reduced slightly

To close the door in flight: **SLOW AIRPLANE to 89 KIAS**

- CABIN VENTS CLOSE
- STORM WINDOW OPEN

▶ if upper latch is open

- UPPER LATCH LATCH

▶ if side latch is open

PULL ON ARM REST while moving latch handle to latched position

▶ if both latches are open

LATCH side latch then **LATCH** top latch

ENGINE ROUGHNESS

- CARBURETOR HEAT ON
 - ▶ **if roughness continues after one minute**
 - CARBURETOR HEAT OFF
 - MIXTURE ADJUST for max smoothness
 - ELECTRIC FUEL PUMP ON
 - FUEL SELECTOR SWITCH tanks
 - ENGINE GAUGES Check
 - MAGNETO SWITCH L then R then BOTH
- if operation is satisfactory on either one, continue on that magneto at reduced power and full RICH mixture to first airport (**ASAP**)
- Prepare for **POWER OFF LANDING**

CARBURETOR ICING

- CARBURETOR HEAT ON
- MIXTURE ADJUST for max smoothness

▶ if roughness persists

Prepare for a precautionary landing at pilot's discretion

NOTE: Partial carburetor heat may be worse than no heat at all, since it may melt part of the ice which will refreeze in the intake system. Therefore when using carburetor heat always use **FULL HEAT**; and when ice is removed, return the control to the **FULL COLD** position