EMERGENCY PROCEDURES

Cessna: C172S (AOA ESP GI275)
CVD: 01 Dec 21 (G1000/GFC700/GI275)

ENGINE FAILURE DURING TAKEOFF ROLL

1. **Throttle ..... IDLE (pull full out)**
2. **Brakes.....APPLY**
3. Wing Flaps..... Retract
4. Mixture....Idle Cutoff (pull full out)
5. Magnetos Switch .....Off
6. STBY Batt Switch… .....Off
7. Master Switch (ALT and BAT) .Off

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. **Airspeed…..…..…..70 KIAS - Flaps UP 65 KIAS Flaps 10º - FULL**
2. Mixture…Idle Cutoff (pull full out)
3. Fuel Shutoff Valve…….. Off ..... (pull full out)
4. Magnetos Switch.....Off
5. Wing Flaps..... As Required (Full Recommended)
6. STBY Batt Switch… .....Off
7. Master Switch (ALT and BAT). Off
8. Cabin Door… .....Unlatch
9. Land……..... Straight Ahead

ENGINE FAILURE DURING FLIGHT (Restart Procedures)

1. **Airspeed ..... 68 KIAS**
2. **Fuel Shutoff Valve……..….. ON ……(push full int)**
3. **Fuel Selector Valve .....BOTH**
4. **Fuel Pump Switch ..... ON**
5. **Mixture .....Rich .... (if restart has not occurred)**
6. Magnetos Switch..... Both (or START if propeller is stopped)

NOTE

If propeller is windmilling, engine will restart automatically within a few seconds. If propeller has stopped (possible at low speeds), turn Magnetos switch to START, advance throttle slowly from idle, and lean the mixture from full rich as required to obtain smooth operation.

7. Fuel Pump Switch… ..... Off

Note

If the indicated fuel flow (FFLOW GPH) immediately drops to zero, a sign of failure of the engine-driven fuel pump, return the FUEL PUMP switch to the ON position.

FORCED LANDING WITHOUT ENGINE POWER

1. Pilot & Passenger Seat Backs… Most Upright Position
2. Seats & Seat Belts… .....Secure
3. Airspeed .....70 KIAS - Flaps Up 65 KIAS Flaps-10º-Full
4. Mixture . ...Idle Cutoff (pull full out)
5. Fuel Shutoff Valve ……Off . ..... (pull full out)
6. Magnetos Switch ..... Off
7. Wing Flaps .....As Required .....(Full Recommended)
8. STBY Batt Switch…..... Off
9. Master Switch (ALT & BAT) .... Off (when landing is assured)
10. Doors……Unlatch prior to touchdown
11. Touchdown .....Slightly Tail Low
12. Brakes……Apply Heavily

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Pilot & Passenger Seat Backs…. ……..Most Upright Position
2. Seats & Seat Belts… .....Secure
3. Airspeed .....65 KIAS
4. Wing Flaps .....20°
5. Selected Field..... …..Fly Over (noting terrain and obstructions)
6. Wing Flaps……..Full (on final approach)
7. Airspeed .....65 KIAS
8. STBY Batt Switch…… ..... Off
9. Master Switch (ALT & BAT)…..…..Off ..... (when landing is assured)
10. Doors……Unlatch prior to Touchdown
11. Touchdown ..... Slightly Tail Low
12. Mixture..... Idle Cutoff (pull full out)
13. Magnetos Switch .....Off
14. Brakes ..... Apply Heavily

ENGINE FIRE DURING START

1. **Magnetos Switch…….START (continue cranking to start the engine)**

If Engine Starts

2. Power.....1800 RPM (for a few mins.)
3. Engine.....Shutdown and Inspect

If Engine Fails to Start:

2. **Throttle .... FULL (push full in)**
3. **Mixture ……IDLE CUTOFF (pull full out)**
4. **Magnetos Switch…….START (continue cranking)**
5. **Fuel Shutoff Valve……OFF (pull full out)**
6. **Fuel Pump Switch……OFF**
7. **Magnetos Switch……..OFF**
8. **STBY Batt Switch……..OFF**
9. **Master Switch (ALT & BAT)…OFF**
10. Engine……Secure
11. Parking Brake……..Release
12. Fire Extinguisher…….....Obtain
13. Airplane……..…Evacuate
14. Fire……Extinguish (using fire extinguisher, wool blanket or dirt)
15. Fire Damage..... Inspect

ENGINE FIRE IN FLIGHT

1. **Mixture..…..…..…..…..IDLE CUTOFF (pull full out)**
2. **Fuel Shutoff Valve……OFF (pull full out)**
3. **Fuel Pump Switch……OFF**
4. **Master Switch (ALT & BAT)….OFF**
5. Cabin Vents….Open (as needed)
6. Cabin HT and Cabin Air Control Knobs……Off (push full in) (to avoid drafts)
7. Airspeed……..100 KIAS (If fire is not extinguished, increase glide speed to find an airspeed, between airspeed limitations which will provide an incombustible mixture)
8. Forced Landing…Execute (refer to Emergency Landing without Engine Power)

ELECTRICAL FIRE IN FLIGHT

1. **STBY Batt Switch……OFF**
2. **Master Switch (ALT & BAT)…OFF**
3. **Cabin Vents……CLOSED (to avoid drafts)**
4. **Cabin HT and Cabin Air Control Knobs…..…..…..…..…..…..OFF (push full in) (to avoid drafts)**
5. **Fire Extinguisher…..ACTIVATE**
6. Avionics Switch (Bus 1 & Bus 2)…..Off
7. All Other Switches (Except Magnetos switch)……..Off

Warning
After the fire extinguisher has been used, make sure the fire is extinguished before external air is used to remove smoke from the cabin.

8. Cabin Vents……Open (when sure fire is completely extinguished)
9. Cabin HT and Cabin Air Control Knobs……..……On (pull full out) (when sure that fire is completely extinguished)

If fire has been extinguished and electrical power is necessary for continued flight to nearest suitable airport or landing area

10. Circuit Breakers……..…Check (for Open circuit(s), do not reset)
11. Master Switch (ALT & BAT)…..…On
12. STBY Batt Switch…… ...ARM
13. Avionics Switch (Bus1)……..On
14. Avionics Switch (Bus2)……..On

CABIN FIRE

1. **STBY Batt Switch……OFF**
2. **Master Switch (ALT & BAT)…..…OFF**
3. **Cabin Vents……..OFF**
4. **Cabin HT and Cabin Air Control Knobs ……OFF (push full in) (to avoid drafts)**
5. **Fire Extinguisher……...ACTIVATE**

Warning
After the fire extinguisher has been used, make sure the fire is extinguished before external air is used to remove smoke from the cabin.

6. Cabin Vents……. Open (when sure fire is completely extinguished)
7. Cabin HT and Cabin Air Control Knobs……ON (when sure fire is completely extinguished)
8. Land as soon as possible to inspect for damage.

WING FIRE

1. **Land and Taxi Lights...……..OFF**
2. **Nav Light Switch…..……OFF**
3. **Strobe Lights switch..……OFF**
4. **Pitot Heat Switch……OFF**

Note
Perform a sideslip to keep flames away from the fuel tank and cabin. Land as soon as possible using flaps only as required for final approach & touchdown.

AUTOPILOT OR ELECTRIC TRIM FAILURE

AP or PTRM Annunciator(s) Come On

1. **Control Wheel……..GRASP FIRMLY (regain control of airplane)**
2. **A/P TRIM DISC Button..……PRESS AND HOLD (throughout recovery)**
3. **Elevator and Rudder Trim Controls .…ADJUST MANUALLY (as necessary)**
4. **Autopilot Circuit Breaker…...…OPEN (pull Out)**
5. A/P Trim DISC Button…….Release

Warning
Following an autopilot, autotrim or manual electric trim system malfunction, do not engage the autopilot until the cause of the malfunction has been corrected.

UNDERSPEED PROTECTION ACTIVATION AND RECOVERY (IF EQUIPPED)

(Red UPS ACTIVE Warning Annunciator on the PFD on ESP equipped aircraft)

May also be accompanied by an amber MINSPD annunciator above the airspeed tape display and aural “AIRSPEED” alert)

1. **Throttle Control ..... INCREASE POWER AS REQUIRED TO CORRECT UNDERSPEED CONDITION**
2. **Aircraft Attitude and Altitude…….... ……..... MONITOR**

After underspeed condition is corrected:

3. Autopilot ..... Reselect Vertical and Lateral Modes (if necessary)
4. Throttle Control ..... ……Adjust as necessary

WARNING
An abrupt power increase with underspeed protection active may result in a nose-up mistrim condition.

NOTE
Autopilot Underspeed Protection mode provides a pitch down command to maintain sufficient airspeed. When power is applied to correct the underspeed condition the resulting nose up attitude may be high to climb back to the programmed vertical path. Underspeed Protection Mode recovery is not available below 200 feet AGL (61 meters), except in go-around (GA) mode.

ESP ACTIVATION (IF EQUIPPED)

1. **Power……..AS REQUIRED**
2. **Aircraft Attitude…….... MAINTAIN/REGAIN CONTROL**

NOTE
If ESP is active due to pitch, roll or high airspeed limits for at least 50% of the last 20 seconds, the autopilot will automatically engage in LVL mode, an aural ‘ENGAGING AUTOPILOT’ alert will be played, and the autopilot will roll the wings level and fly at zero-vertical speed.

NOTE
If ESP is active due to a low airspeed/stall warning condition above 200 feet AGL, the system will apply pitch-down forces but the autopilot will not automatically engage in LVL mode.

3. **Autopilot Modes …….AS DESIRED**

ESP ACTIVATION WITH FAILURE OF AIRSPEED OR STALL WARNING SYSTEM (IF EQUIPPED)

1. **Power ..... AS REQUIRED**
2. **Aircraft Attitude ……..... ...…..MAINTAIN/REGAIN CONTROL**
3. **A/P DISC Button……..…PRESS AND HOLD TO REMOVE ESP SERVO FORCES**
4. **Autopilot Circuit Breaker……PULL**

INADVERTENT ICING ENCOUNTER DURING FLIGHT

1. **Pitot Heat Switch……..ON**
2. **Turn back or change altitude to obtain an outside air temperature that is less conducive to icing**
3. **Cabin HT Control Knob……ON (pull full out)**
4. **Defroster Control Outlets…..OPEN (to obtain maximum windshield defroster airflow)**
5. **Cabin Air Control Knob….ADJUST (to obtain maximum windshield defroster airflow)**
6. Refer to POH for following steps

STATIC SOURCE BLOCKAGE (ERRONEOUS INSTRUMENT READING SUSPECTED)

1. **Alt Static Air Valve……..PULL ON**
2. Cabin Vents……Closed
3. Cabin HT and Cabin Air knobs… On (pull full out)
4. Airspeed - Refer to Section 5, Figure 5-1 (Sheet 2) Airspeed Calibration, Alternate Static Source correction chart.

HIGH CARBON MONOXIDE (CO) LEVEL ADVISORY

CO LVL HIGH ANNUNCIATOR COMES ON

1. **Cabin HT Knob…….. OFF (push full in)**
2. **Cabin Air Knob ……..ON (pull full out)**
3. **Cabin Vents…….. OPEN**
4. Cabin Windows - OPEN (163 KIAS maximum windows open speed)

CO LVL HIGH ANNUNCIATOR REMAINS ON

5. Land as soon as practical

FOR ALL OTHER EMERGENCY / ABNORMAL PROCEDURES, SEE POH SECTION 3

This checklist is a guide to coordinate Pilot Operating Handbook and STC data applicable to this particular aircraft only. The applicable Pilot Operating Handbook and STC installations remain the official documentation for this aircraft. The pilot in command is responsible for complying with all items in the Pilot Operating Handbook and applicable STCs.