EMERGENCY PROCEDURES XL2

GENERAL

This section provides the recommended procedures for coping with various emergency or critical situations. All of the emergency procedures required by the FAA, as well as those necessary for the operation of the airplane are presented.

This section contains the emergency procedures checklist. They supply an immediate action sequence to be followed during critical situations with little emphasis on operation of the systems.

The amplified emergency procedures corresponding to the emergency procedures checklist items are found in the Aircraft Flight Manual (AFM). These amplified procedures contain additional information to provide the pilot with a more complete description of the procedures so they may be more easily understood.

Pilots must familiarize themselves with the procedures in this section and must be prepared to take the appropriate action should an emergency situation arise. The procedures are offered as a course of action for coping with the particular situation or condition described. They are not a substitute for sound judgment and common sense.

Most basic emergency procedures are a normal part of pilot training. The information presented in this section is not intended to replace that training. The pilot should review standard emergency procedures periodically to remain proficient in them.

All emergency procedures outlined in boxes need to be committed to memory and can be referred to if time permits. Procedures that are not outlined in boxes should be performed by reference to the appropriate emergency checklist.

ENGINE FAILURE DURING FLIGHT

1. Establish Best Glide Attitude ..... 80 KIAS
2. Fuel Selector Valve ..... CHECK ON
3. Throttle ..... OPEN ¾ INCH
4. Fuel Boost Pump Mode Switch ..... ON
5. FADEC A and B PWR Switches ..... RECYCLE SIMULTANIOUSLY
6. Ignition Switch ..... CHECK BOTH
7. Ignition Switch (If Prop NOT Windmilling) ..... START
8. Throttle .....ADJUST TO OBTAIN BEST ENGINE OPERATION
9. Repeat steps 2 – 6 as necessary with prop windmilling.
10. If engine does not start, perform ***Forced Landing*** checklist.

FORCED LANDING

1. Establish Best Glide Attitude ..... 80 KIAS
2. Radio ..... TRANSMIT (121.5 mHz) MAYDAY (giving location and intentions)
3. Transponder ..... SQUAWK 7700
4. ELT (if off airport) ..... ACTIVATE
5. Ignition Switch ..... OFF
6. FADEC A and B PWR Switches ..... OFF
7. Fuel Boost Pump Mode Switch ..... OFF
8. Throttle ..... IDLE
9. Fuel Selector Valve ..... OFF (lift knob to turn OFF)
10. Flaps (when field is made) ..... AS REQUIRED or 30°
11. Master Switch ..... OFF
12. Seat Belts and Shoulder Harness ..... SECURE

WARNING

Flaps will not operate when Master Switch is off. Do not turn the Master Switch off until after flaps have been set to their final desired position and the landing is assured.

ENGINE PARTIAL POWER LOSS

Engine roughness is most frequently caused by ignition problems (misfire, fouled spark plugs, etc.), and less frequently by fuel injection problems (failed or blocked fuel injector, etc.).

1. Fuel Boost Pump Mode Switch.....ON
2. Fuel Selector Valve..... CHECK ON
3. Alternate Induction Air.....PULL ON
4. Ignition Switch.....CHECK R, L, BOTH
   If engine operation is significantly smoother in either the L or R position, leave the switch in that position.
5. LAND.....AS SOON AS PRACTICAL

ENGINE FAILURE AFTER TAKEOFF

1. Best Glide or Landing Speed (as appropriate) ..... ESTABLISH
2. Flaps ..... AS REQUIRED

If time permits:

3. Ignition Switch.....OFF
4. FADEC A and B PWR Switches.....OFF
5. Master Switch .....OFF
6. Throttle..... IDLE
7. Fuel Selector Valve.....OFF (lift knob to turn OFF)
8. Seat Belts and Shoulder Harness..... SECURE

ENGINE FAILURE DURING TAKEOFF ROLL

1. Throttle..... IDLE
2. Brakes .....APPLY

After aircraft stops:

3. Ignition Switch.....OFF
4. FADEC A and B PWR switches.....OFF
5. Master Switch .....OFF
6. Fuel Selector Valve.....OFF (lift knob to turn OFF)

ENGINE FIRE DURING START

1. Ignition Switch..... START
   Continue turning the engine over in attempt to obtain successful start that will suck flame and accumulated fuel into engine.

If Engine Starts:

2. Power.....1700 RPM (for up to two minutes, if conditions allow)
3. Engine.....SHUT DOWN (inspect for damage)

If Engine does NOT Start:

4. Ignition Switch..... START
5. Throttle.....FULL FORWARD
6. FADEC A and B PWR Switches.....OFF
7. Fuel Selector Valve.....OFF (lift knob to turn OFF)
8. Cranking..... TERMINATE
9. Ignition Switch.....OFF
10. Master Switch .....OFF
11. Airplane.....EVACUATE
12. Fire..... EXTINGUISH
    (Use fire extinguisher as necessary)
13. Fire Damage .....INSPECT

ENGINE FIRE IN FLIGHT

1. Fuel Selector Valve.....OFF (lift knob to turn off)
2. Throttle..... IDLE
3. Cabin Heat……..... OFF
4. Fuel Boost Pump Mode Switch.....OFF
5. FADEC A and B PWR Switches .....OFF
6. Ignition Switch.....OFF
7. Perform ***Forced Landing*** checklist

WARNING

Do not attempt to restart engine after engine fire in flight.

CABIN FIRE IN FLIGHT

1. Master Switch.....OFF
2. FADEC PWR A Switch.....OFF
3. Avionics Master Switch .....OFF
4. All Electrical Switches ..... OFF (Except FADEC PWR B Switch)

WARNING

Turning off FADEC PWR B switch when Master Switch is OFF will cause immediate loss of engine power.

5. Cabin Heat……..OFF
6. Fire Extinguisher ..... ACTIVATE
7. Air Vents.....OPEN TO VENT CABIN
8. LAND..... AS SOON AS PRACTICAL

DOOR OPEN IN FLIGHT

Abort takeoff if door opens during takeoff. In flight, do not allow efforts to re-close the door interfere with the primary task of maintaining control and flying the airplane.

1. Airspeed ..... REDUCE TO 80-90 KIAS
2. Door ..... CLOSE AND LATCH
   Yaw airplane in direction of open door if necessary.
3. Approach Speed .....NORMAL

If unable to latch door in flight, or if damage has occurred:

4. LAND..... AS SOON AS PRACTICAL

SPIN RECOVERY

If an inadvertent spin occurs, use the following recovery procedure:

1. Throttle .....IDLE
2. Ailerons ..... NEUTRAL
3. Rudder ..... FULL OPPOSITE DIRECTION OF SPIN
4. Control Stick……..FORWARD TO BREAK STALL
5. Neutralize Rudder .....MAKE SMOOTH PULL–UP
6. Throttle…….ADJUST FOR STRAIGHT AND LEVEL FLIGHT

SYSTEM MALFUNCTIONS

HSA FAULT LIGHT INDICATIONS

BOTH HSA "EBAT FL" AND "PPWR FL" ANNUNCIATORS ILLUMINATED:

1. FADEC PWR A and B switches ..... CHECK ON
2. FADEC PWR A and B circuit breakers..... CHECK IN

If Annunciators Remain ON:

3. LAND .....AS SOON AS PRACTICAL

WARNING

Engine may continue to operate normally from the emergency battery for up to 60 minutes if the emergency battery is properly maintained and fully charged. Plan to land well within 60 minutes from illumination of EBAT FL and PPWR FL annunciators.

HSA "EBAT FL" ANNUNCIATOR *ONLY* ILLUMINATED:

1. FADEC PWR B Switch ..... CHECK ON
2. FADEC PWR B Circuit Breakers..... CHECK IN

If annunciator remains illuminated:

3. LAND .....AS SOON AS PRACTICAL

WARNING

Illumination of only the EBAT FL annunciator may indicate failure of the emergency battery. Should the alternator also fail, the engine will only be powered by the primary battery, which is also affected by other electrical loads.

HSA RED "FADEC WARNING" CAPTION ILLUMINATED:

1. Engine Instruments..... MONITOR
2. LAND .....AS SOON AS PRACTICAL

HSA "FUEL PMP" ANNUNCIATOR ILLUMINATED IN FLIGHT:

1. Fuel Boost Pump Mode Switch ..... CHECK AUTO
2. Fuel Pressure Gauge ..... MONITOR

If Condition or Annunciation persists:

3. Fuel Boost Pump Mode Switch ..... ON
4. LAND ..... AS SOON AS PRACTICAL

ELECTRICAL SYSTEM MALFUNCTIONS

AMMETER ABNORMALLY HIGH:

1. Alternator Side (ONLY) of Master Switch ..... OFF
2. Non-essential Electrical Equipment ..... OFF
3. LAND ..... AS SOON AS PRACTICAL

WARNING

After loss or shutdown of alternator, EBAT FL and PPWR FL annunciators may illuminate. Engine may continue to operate normally from the emergency battery for up to 60 minutes if the battery is properly maintained and fully charged. Plan to land well within 60 minutes from illumination of EBAT FL and PPWR FL annunciators.

VOLTMETER ABNORMALLY LOW DURING FLIGHT:

1. Non-essential Electrical Equipment ..... OFF
2. Perform ***"ALT FAIL" Annunciator Illuminates During Flight*** checklist.

VOLTMETER IN RED ARC DURING FLIGHT:

1. LAND ..... AS SOON AS PRACTICAL

"ALT FAIL" ANNUNCIATOR ILLUMINATES DURING FLIGHT

Illumination of the ALT FAIL light in-flight can result either from alternator failure or from alternator "tripping offline" due to momentary over voltage. The following procedure should reset the alternator system.

1. Ammeter ..... CHECK FOR 0 AMPS
2. Alternator Side of Master Switch ..... OFF
3. Non-essential Electrical Equipment ..... OFF
4. Alternator Circuit Breaker ..... CHECK IN
5. Alternator Side of Master Switch ..... ON
6. ALT FAIL Annunciator ..... CHECK OFF
7. Voltmeter ..... CHECK IN GREEN ARC

If ALT FAIL annunciator remains illuminated:

8. Alternator Side of Master Switch ..... OFF
9. LAND ..... AS SOON AS PRACTICAL

WARNING

After loss or shutdown of alternator, EBAT FL and PPWR FL annunciators may illuminate. Engine may continue to operate normally from the emergency battery for up to 60 minutes if the battery is properly maintained and fully charged. Plan to land well within 60 minutes from illumination of EBAT FL and PPWR FL annunciators.

ELEVATOR TRIM MALFUNCTIONS

ELEVATOR TRIM INOPERATIVE:

1. ELEV TRIM Circuit Breaker .....CHECK, RESET IF NECESSARY
2. Trim Motor.....CHECK BOTH DIRECTIONS

NOTE
If trim moves in only one direction, minimize further use of trim to reduce out-of-trim forces on landing.

UNCOMMANDED ELEVATOR TRIM MOTION:

1. Control Stick.....RESTRAIN
   To maintain flight path and contain out-of-trim forces.
2. Elevator Trim Switch .....ACTUATE IN OPPOSITE DIRECTION
   This may halt trim motion and/or trip ELEV TRIM circuit breaker.
3. ELEV TRIM Circuit Breaker .....PULL, DO NOT RESET
4. LAND..... AS SOON AS PRACTICAL

NOTE
To relieve control stick forces, if trim has runaway nose down, use full flaps (30°) for landing; if trim has runaway nose up, land with flaps up (0°).