SECTION 3
EMERGENCY PROCEDURES

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INTRODUCTION

Section 3 provides checklists and amplified procedures for emergencies that may occur. Emergencies caused by malfunctions are extremely rare if proper maintenance and preflight inspection procedures are observed. Careful and conservative preflight planning and good judgment can minimize enroute and weather emergencies.

Warnings and procedures depicted in this AFM are immediate action or “memory items.” They should be committed to memory so that they can be performed immediately without reference to the checklist.

The phrase “land as soon as practical” means that flight may be continued to the next available airport, depending on weather conditions, the severity of the emergency, etc.

The phrase “land as soon as possible” means that a landing should be accomplished immediately or as rapidly as possible consistent with safety requirements. Depending on weather conditions, the severity of the emergency, etc., the pilot-in-command may elect to make this landing on a nearby suitable surface on which the airplane may be landed safely, even if this location is not on an airport.

Emergency procedures associated with avionics, and the ELT are found in Section 9.

AIRSPEEDS FOR EMERGENCY OPERATIONS

Maneuvering Speed:
1653 lbs.......................................................... 100 KIAS
1450 lbs.......................................................... 94 KIAS

Best Glide Speed:
1653 lbs.......................................................... 80 KIAS

Emergency Approach Speed without Engine Power:
Flaps Up .......................................................... 70 KIAS
Flaps 30° .......................................................... 65 KIAS
GROUND EMERGENCIES

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

If engine starts:
3. Power........... 1700 RPM (for up to 2 minutes, if conditions allow)
4. Engine............................SHUT DOWN (inspect for damage)

If engine does NOT start:
5. Ignition Switch............................................................ START
6. Throttle..........................................................FULL FORWARD
7. FADEC A and B PWR Switches.................................OFF
8. Fuel Selector Valve........................................OFF (lift knob to turn off)
9. Cranking .................................................. TERMINATE
10. Ignition Switch..........................................................OFF
11. Master Switch..........................................................OFF
12. Airplane.............................................................EVACUATE
13. Fire..................EXTINGUISH (use fire extinguisher as necessary)
14. Fire Damage.......................................................... INSPECT

Engine Failure during Takeoff Roll
(Aborted Takeoff Procedure)
1. Throttle................................................................. IDLE
2. Brakes........................................................... APPLY
3. After aircraft stops:
4. Ignition Switch..........................................................OFF
5. FADEC A and B PWR Switches.................................OFF
6. Master Switch..........................................................OFF
7. Fuel Selector Valve........................................OFF (lift knob to turn off)
IN-FLIGHT EMERGENCIES

Engine Failure after Takeoff

1. Best Glide or Landing Speed (as appropriate) ....................... 80 KIAS
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 Flight

(Troubleshoot/Restart Procedure)

If the engine fails at altitude, the primary task is to maintain control of the airplane and establish best glide speed while turning toward a suitable landing area. Only after this has been accomplished should the pilot attempt to determine the cause of engine failure, and if time and altitude permit, attempt a restart.

Restart attempts should not be performed if they distract the pilot from the primary task of flying the airplane at best glide speed to a suitable landing area. Restart attempts should be abandoned in sufficient time to allow completion of the forced landing checklist.

1. Best Glide Speed ............................................................... 80 KIAS
2. Fuel Selector Valve ....................................................... CHECK ON
3. Throttle ......................................................................... OPEN 3/4 INCH
4. Fuel Boost Pump Mode Switch ................................. CHECK ON
5. FADEC A and B PWR Switches .. RECYCLE SIMULTANEOUSLY
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.
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 Fire in Flight

The steps of the engine fire checklist ensure that the source of fuel is removed, and that the fire will be extinguished. Under no circumstances should a restart be attempted. Execute a forced landing without engine power.

1. Fuel Selector Valve..................................................OFF (lift knob to turn off)
2. Throttle...............................................................................OFF
3. Fuel Boost Pump Mode Switch ...............................................OFF
4. Airspeed............................................................................INCREASE

(If fire is not extinguished, increase glide speed to find an airspeed, within airspeed limitations, to extinguish.)

5. FADEC A and B PWR Switches..........................................OFF
6. Ignition Switch.....................................................................OFF

**WARNING**

*DO NOT ATTEMPT TO RESTART THE ENGINE AFTER ENGINE FIRE IN FLIGHT.*

Cabin Fire in Flight

If the cause of the fire is readily apparent and accessible, use the fire extinguisher mounted to the headrest behind the passenger seat to extinguish flames and land as soon as practical. Opening the vents may feed the fire, but to avoid incapacitating the crew from smoke inhalation, it may be necessary to rid the cabin of smoke. If the cause of fire is not apparent, is electrical, or is not readily accessible, perform the following:
Electrical power is required for engine operation. Improper operation of electrical switches may cause immediate engine stoppage. Two independent sources of electrical power are provided for engine operation. It is important to understand their interactions. Details are provided in Section 7 - Airplane & Systems Description.

1. Master Switch ........................................................................... OFF

If engine loses power after master switch is turned OFF, turn Master Switch ON immediately and refer to Step 22.

HSA EBAT FL AND PPWR FL ANNUNCIATORS WILL 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.

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

TURNING OFF FADEC PWR B SWITCH WHEN MASTER SWITCH IS OFF WILL CAUSE IMMEDIATE LOSS OF ENGINE POWER.

5. Fire Extinguisher ........................................................................ ACTIVATE
6. Air Vents ........................................................................... OPEN TO VENT CABIN
7. LAND ............................................................... AS SOON AS PRACTICAL

If at any time during remainder of flight, the engine ceases to operate due to aircraft Secondary Power failure, it may be necessary to turn the Master Switch ON and the FADEC Primary Power (PWR A) ON if continued engine operation is needed. However, turning these switches ON may result in recurrence of cabin smoke.
If source of fire has been eliminated and electrical power is necessary for continuation of flight:

8. Circuit Breakers ......................... CHECK FOR FAULTY CIRCUIT
9. Master Switch .................................................................ON
10. Avionics Master Switch ..........................................................ON
11. Activate required systems one at a time. Pause several seconds between activating each system to isolate malfunctioning system. Continue flight to earliest practical landing with malfunctioning system off. Activate only the minimum amount of equipment necessary to complete a safe landing.

If source of fire has NOT been eliminated and smoke persists:

12. Master Switch .................................................................ON
13. FADEC PWR A Switch ..........................................................ON
14. FADEC PWR B Switch ..........................................................OFF
15. Secondary Power Source Circuit Breaker (SPSC) .......... PULL
16. Fire Extinguisher ..........................................................ACTIVATE
17. Air Vents ..........................................................OPEN TO VENT CABIN
18. LAND ..........................................................AS SOON AS PRACTICAL

**NOTE**

If at any time during remainder of flight the engine ceases to operate due to aircraft Primary Power failure, it may be necessary to turn the FADEC Secondary Power (PWR B) ON if continued engine operation is needed. However, turning this switch ON may result in recurrence of cabin smoke.

19. Circuit Breakers ......................... CHECK FOR FAULTY CIRCUIT
20. Avionics Master Switch ..........................................................ON
21. Activate required systems one at a time. Pause several seconds between activating each system to isolate malfunctioning system. Continue flight to earliest practical landing with malfunctioning system off. Activate only the minimum amount of equipment necessary to complete a safe landing.

If engine loses power when master switch is turned off:

**WARNING**

LOSS OF ENGINE POWER WHEN MASTER SWITCH IS TURNED OFF INDICATES MALFUNCTION OF FADEC PWR B CIRCUIT AND/OR FADEC BACKUP BATTERY. ENGINE WILL BE POWERED BY AIRPLANE PRIMARY SYSTEM ONLY.
22. Master Switch ........................................... BACK ON IMMEDIATELY
23. Engine .................................................. RESTART IF NECESSARY
24. FADEC PWR B Switch ................................................. OFF
25. Secondary Power Source Circuit Breaker (SPSC) ............ PULL
26. Avionics Master Switch .................................................. OFF
27. All Electrical Switches ........... OFF (except FADEC PWR A switch)
28. Fire Extinguisher ........................................ ACTIVATE
29. Air Vents .................................................. OPEN TO VENT CABIN
30. LAND .................................................. AS SOON AS PRACTICAL

**NOTE**

If at any time during remainder of flight the engine ceases to operate due to aircraft primary power failure, it may be necessary to turn the FADEC secondary power (PWR B) ON if continued engine operation is needed. However, turning this switch ON may result in recurrence of cabin smoke.

If source of fire has been eliminated and electrical power is necessary for continuation of flight,

31. Circuit Breakers ....................... CHECK FOR FAULTY CIRCUIT
32. Avionics Master Switch ...................... ON
33. Activate required systems one at a time. Pause several seconds between activating each system to isolate malfunctioning system. Continue flight to earliest possible landing with malfunctioning system off. Activate only the minimum amount of equipment necessary to complete a safe landing.

**Smoke and Fumes Elimination**

If smoke and/or fumes are detected in the cabin, check the engine instruments for any sign of malfunction. If a fuel leak has occurred, actuation of electrical components may cause a fire. If there is a strong smell of fuel in the cockpit, divert to the nearest suitable landing field. Perform a Forced Landing pattern and shut down the fuel supply to the engine once a safe landing is assured.

1. Cabin Heat ............................................... OFF
2. Fresh Air Vents ........................................... OPEN
3. Prepare to land as soon as possible.
Low Oil Pressure

An indication of low oil pressure may be a problem with the oil pressure indicating system or the engine oil pressure relief valve. However, it may also be an indication of internal mechanical damage to the engine and a warning of imminent complete engine failure.

Monitor oil pressure, oil temperature, and cylinder head temperature indications. If oil temperature remains normal, proceed to the nearest airport for landing.

An increase in oil temperature and cylinder head temperature is a confirmation of probable mechanical malfunction. Set power to the minimum required for continued flight to the nearest suitable airport or off-airport landing area. Land as soon as possible, including consideration of a precautionary off-airport landing while engine power is still available. Be prepared for a complete loss of power at any time.

1. Throttle........................................................MINIMUM REQUIRED
2. LAND ..........................................................AS SOON AS POSSIBLE

Executing a 180° Turn In Weather

Upon inadvertently entering weather, an immediate plan to turn back should be executed as follows:

1. Note the compass heading.
2. Start the timer on the digital clock.
3. Initiate a standard rate left turn, holding the turn coordinator airplane wing opposite the lower left index mark for 60 seconds and then roll back to level flight by leveling the miniature airplane.
4. Check accuracy of the turn by observing the compass heading which should be the reciprocal of the original heading.
5. Maintain altitude and airspeed by cautious application of elevator control.
6. Avoid over controlling by keeping hands clear of the stick as much as possible and steering only with rudder.
Inadvertent Flight Into Icing Conditions

Flight into known or forecast icing conditions is prohibited. However, if an inadvertent encounter with icing conditions occurs:

1. Pitot Heat .................................................. ON
2. Cabin Heat for Defrost .................. CLOSE BOTH HEATER VENTS
3. Throttle .................................................. INCREASE TO KEEP ICE OFF PROP
4. Alternate Induction Air ....................... PULL ON
5. Heading .................................................. CHECK AND VERIFY
6. Maneuver ......................... TURN 180° AND/OR CHANGE ALTITUDE
(to exit icing conditions as soon as possible)

Inadvertent Flight Into Instrument Meteorological Conditions

If Instrument Meteorological Conditions (IMC) are inadvertently encountered, maintain control of the airplane by reference to flight instruments and perform the following:

1. Airplane Control .................................. INITIALLY ESTABLISH STRAIGHT AND LEVEL FLIGHT
2. Pitot Heat .................................................. ON
3. Heading .................................................. CHECK AND VERIFY
4. Standard Rate Turn ..................... INITIATE AND TURN 180°

Suspected Lightning Strike During Flight

Flight through or in the vicinity of thunderstorms is not recommended under any circumstances. However, if it is suspected that the aircraft has been hit by lightning, perform the following:

1. Airspeed .................................................. REDUCE TO 80 KIAS
   (exit thunderstorm conditions as soon as possible)
2. LAND .................................................. AS SOON AS PRACTICAL
Door Open In Flight
Abort takeoff if door opens during takeoff roll. In flight, do not allow efforts to re-close the door to interfere with the primary task of maintaining control and flying the airplane.

1. Flaps .............................................................. 20°
2. Airspeed ............................................................. REDUCE TO 65 KIAS
3. Door .............................................................. CLOSE AND LATCH

NOTE

Yaw airplane in direction of open door if necessary.

If unable to latch door in flight, or if damaged:

4. LAND ............................................................. AS SOON AS PRACTICAL
5. Final Approach Speed ............................................. 65 KIAS

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

1. Ailerons .............................................................. NEUTRAL
2. Rudder ............................................................. APPLY AND HOLD FULL RUDDER
   (opposite direction of rotation)
3. After Rudder Application ....................................... MOVE STICK FORWARD

NOTE

To break stalled condition, at aft C.G. locations, full forward stick may be required.

4. Throttle .............................................................. IDLE
5. Neutralize Rudder ............................................. MAKE SMOOTH PULL-UP
   FROM THE RESULTING DIVE
6. Throttle .............................................................. ADJUST FOR STRAIGHT AND LEVEL FLIGHT

NOTE

If disorientation makes determining direction of rotation difficult, refer to the turn coordinator. It will be fully deflected in the direction of rotation.

Emergency Descent

1. Throttle .............................................................. IDLE
2. Airspeed ............................................................. 80 KIAS
3. Flaps .............................................................. 30°
4. Airspeed ............................................................. MAINTAIN 80 KIAS
5. Spiral .............................................................. TO EMERGENCY LANDING SPOT
LANDING EMERGENCIES

Forced Landing (Engine Out)

If restart attempts have failed and a forced landing is unavoidable, select a suitable field and prepare to land. If time and altitude permits, transmit a Mayday message on 121.5 mHz and set the transponder, if installed, to code 7700. Complete the checklist items to minimize the risk of fire after landing. Before a forced landing, particularly in rough or mountainous terrain, it is a good safety practice to manually activate the ELT.

Plan to touch down approximately one third the way into the available landing distance. Far less damage and risk of injury will result from overrunning the far end of the field at low speed on the ground than from potentially stalling into or short of the near end of the field at high speed while still airborne.

1. Best Glide Speed ............................................................... 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. Airspeed ........................................................................ 65 KIAS
12. Master Switch .................................................................... OFF
13. Seat Belts and Shoulder Harness .............................................. SECURE

**WARNING**

**FLAPS WILL NOT OPERATE WHEN MASTER SWITCH IS OFF. DO NOT TURN THE MASTER SWITCH OFF UNTIL FLAPS HAVE BEEN SET TO THEIR FINAL DESIRED POSITION AND THE LANDING IS ASSURED.**

Ditching

1. Best Glide Speed ............................................................... 80 KIAS
2. Radio ..........................................................TRANSMIT (121.5 MHz) MAYDAY (giving location and intentions)
3. Transponder .......................................................... SQUAWK 7700
4. ELT ........................................................................ ACTIVATE
5. Loose Objects ..........................................................SECURE (if possible)
6. Seat Belts and Shoulder Harness .............................................. SECURE
7. Flaps .......................................................... 30°
8. Power................................... ESTABLISH 300 FPM DESCENT AT 65 KIAS
9. Approach .................................................. INTO WIND
   (for high winds and heavy seas)
10. Approach ........................................ PARALLEL TO SWELLS
    (for light winds, heavy swells)
11. Touchdown ......................................... LEVEL ATTITUDE

   **NOTE**

At established rate of descent; avoid an excessive nose-high attitude to prevent stalling into water.

12. Airplane .................................................. EVACUATE

   **NOTE**

Through open the canopy doors. If necessary, open vent windows to flood cabin and equalize pressure to allow doors to be opened. Use safety hammer if necessary.

13. Life Vests and Life Raft (if available) ................. INFLATE
   (when clear of airplane)

   **NOTE**

If no engine power is available, approach at 70 KIAS with flaps UP or 65 KIAS with flaps at 30°.

**Landing With a Flat Main Gear Tire**

1. Approach Speed ........................................ 65 KIAS
2. Line Up ................. ON SIDE OF RUNWAY OPPOSITE FLAT TIRE
   (Airplane will tend to turn toward flat tire after touchdown.)
3. Flaps .......................................................... 30°
4. Touchdown ......................... GOOD SIDE MAIN TIRE FIRST
   (Hold airplane off flat tire as long as possible using ailerons.)
5. Directional Control .................. MAINTAIN
   (Using rudder and brake on good tire side as required.)
Landing With A Flat Nose Tire

Do not attempt to taxi airplane with flat main or nose gear tire.

1. Approach Speed.......................................................... 65 KIAS
2. Flaps........................................................................... NO MORE THAN 20°
3. Touchdown.................................................................. ON MAIN GEAR
   (Hold nose wheel off the ground as long as possible)
4. Elevator ................................................................. MAINTAIN FULL AFT STICK
   (After nose wheel touches down)
5. Brakes ........................................................................ USE MINIMUM REQUIRED
6. Ignition Switch .......................................................... OFF
   (If operational considerations permit)

Landing Without Elevator Control

Manipulating the electric pitch trim and throttle provides attitude control should primary elevator control be lost. Make small adjustments to trim and throttle to adjust pitch attitude and airspeed for best glide angle for landing.

Choose the longest available runway. The final power reduction after the landing flare will cause a nose-down pitch and a possible nose wheel first touchdown. Make a gradual power reduction while simultaneously selecting nose-up elevator trim.

1. Throttle ....................................................................... REDUCE
2. Trim ................................................................. NOSE UP, SLOW TO VFE
3. Flaps........................................................................... FLAPS UP
4. Approach Speed 70 KIAS, USE TRIM AND POWER TO ADJUST
5. Throttle ........................................................ AS REQUIRED FOR GLIDE ANGLE

Landing With Elevator Trim Inoperative

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

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

3. 3. Throttle ........................................................................ REDUCE
4. 4. Trim .......................................................................... NOSE UP, SLOW TO VFE
5. 5. Flaps.......................................................................... FLAPS UP
6. 6. Approach Speed......... 70 KIAS, USE TRIM AND POWER TO ADJUST
7. 7. Throttle ........................................................ AS REQUIRED FOR GLIDE ANGLE
SYSTEM MALFUNCTIONS

Elevator Trim Runaway

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
   USE ELEVATOR TRIM INOPERATIVE CHECKLIST

   NOTE

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

Engine Instrument System Malfunction

A blanking of the engine instruments display may indicate a
malfunction of the engine instruments system. Blanking of the
engine instruments system will not affect engine performance or
continued engine operation. FADEC control of the engine is
unaffected by the engine instrument system status. The FADEC
HSA system will continue to provide the pilot with engine health and
status information for continued flight to the nearest suitable airport.
Refer to the HSA Fault Light Indications section of this manual as
required to determine engine status.

1. FADEC HSA .................................................................MONITOR
2. Throttle.................................................................MINIMUM REQUIRED
3. LAND .................................................................AS SOON AS PRACTICAL
   HSA FAULT LIGHT INDICATIONS
4. Both HSA “EBAT FL” and “PPWR FL” Annunciators ....Illuminated
5. FADEC PWR A and B Switches.................................CHECK ON
6. FADEC PWR A and B Circuit Breakers.........................CHECK IN

   If annunciators remain ON:

7. 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.
8. HSA “EBAT FL” Annunciators ONLY ............................Illuminated
9. FADEC PWR B Switch..................................................CHECK ON
10. FADEC PWR B Circuit Breakers..................................CHECK IN

If annunciators remains illuminated:

11. 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 WARN” Annunciator Illuminated**

1. Ignition Switch ......................................................CHECK BOTH
2. Engine Instruments.....................................................MONITOR
3. LAND.................................................................AS SOON AS PRACTICAL

**WARNING**

**ILLUMINATION OF THE RED FADEC WARN ANNUNCIATOR LIGHT IS TO BE TREATED AS A POTENTIAL FOR PARTIAL OR TOTAL LOSS OF ENGINE POWER - CRITICAL CONDITION WITH IMMINENT PARTIAL OR TOTAL LOSS OF ENGINE POWER.**

**HSA Yellow “FADEC CAUTION” Annunciator Illuminated**

1. FADEC PWR A and B Switches.................................CHECK ON
2. Ignition Switch ......................................................CHECK BOTH
3. Engine Instruments.....................................................MONITOR

If condition or annunciation persists:

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

**WARNING**

**ILLUMINATION OF THE YELLOW FADEC CAUTION ANNUNCIATOR INDICATES A FAULT IN THE FADEC SYSTEM HAS OCCURRED. A SECOND FAULT COULD RESULT IN PARTIAL OR TOTAL LOSS OF ENGINE POWER.**
HSA “FUEL PMP” Annunciator Illuminated In Flight

The FUEL PMP annunciator will illuminate anytime the Fuel Boost Pump Mode Switch is moved from the AUTO position. If the FUEL PMP annunciator is illuminated with the Fuel Boost Pump Mode Switch in the AUTO position, it may indicate engine driven fuel pump failure.

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. Fuel Pressure Gauge ..................................................... MONITOR
5. LAND .......................................................... AS SOON AS PRACTICAL
ELECTRICAL SYSTEM MALFUNCTIONS

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.

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

Voltmeter Abnormally Low In Flight
1. Non-essential Electrical Equipment......................................... OFF
2. Perform “ALT FAIL” Annunciator Illuminated In Flight checklist.
3. Voltmeter In Red Arc In Flight
4. LAND........................................................................... AS SOON AS PRACTICAL

“ALT FAIL” Annunciator Illuminated In Flight
Illumination of the ALT FAIL annunciator 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
8. If ALT FAIL annunciator remains illuminated:
9. Alternator Side of Master Switch............................................. OFF
10. LAND.......................................................... AS SOON AS PRACTICAL
PITOT/STATIC MALFUNCTION

Erratic indications of the pitot/static instruments (airspeed indicator, altimeter, and vertical speed indicator) may indicate blocked pitot/static source (due to either icing or other causes). Descend to warmer air if the following procedure doesn’t clear the problem.

Static Source Blocked

With the alternate static source open, adjust indicated airspeed according to the Airspeed Calibration - Alternate Static Source table in Section 5 as appropriate.

1. Pitot Heat ...................................................................................ON
2. Alternate Static Source ...............................................................OPEN

NOTE

If the alternate static source doesn’t work, in an emergency, cabin pressure can be supplied to the static pressure instruments by breaking the glass in the face of the vertical speed indicator (VSI). When static pressure is supplied through the VSI, the vertical speed indications will be reversed (i.e. the needle will indicate UP during descent and DOWN during climb).

Pitot Tube Blocked

If only the airspeed indicator is providing erroneous information, use the following procedure. Descend to warmer air if turning the Pitot Heat ON does not correct the problem. If an approach must be made with a blocked pitot tube, use known pitch and power settings and the GPS groundspeed (if installed), taking into account the surface winds.

1. Pitot Heat ...................................................................................ON