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All airspeeds quoted in this section are *indicated airspeeds (IAS)* and assume zero instrument error.

NOTE

Immediate action procedures are delineated by bold type with the remaining procedures following. Emergency procedures have been formulated based on single pilot operation of the airplane.

EMERGENCY AIRSPEEDS (17,120 POUNDS/7765 KILOGRAMS)

One-Engine-Inoperative Best Angle-of-Climb (V_{XSE})	122 Knots
One-Engine-Inoperative Best Rate-of-Climb (V_{YSE})	128 Knots (Decrease 2 Knots per 5000 feet)
One-Engine-Inoperative En Route Climb (V_{ENR})	123 Knots
Air Minimum Control Speeds (V_{MCA}):	
Flaps Up	92 Knots
Flaps 17°	92 Knots
Emergency Descent	180 Knots
Maximum Range Glide	140 Knots

ENGINE FAILURE

NOTE

Although required one-engine-inoperative take-off performance can be achieved with wings level, best performance will be obtained with the aircraft banked 3° to 5° into the operating engine while maintaining a constant heading.

ENGINE FIRE OR FAILURE IN FLIGHT

NOTE

When operating on the ITT limit, placing the Bleed Air Valves to ENVIR OFF will decrease ITT, thereby allowing the pilot to select a higher power setting on the operating engine. The cabin will depressurize anytime the Bleed Air Valves are moved to the ENVIR OFF position.

Affected Engine:

- 1. Condition Lever** **FUEL CUTOFF**
- 2. Propeller Lever** **FEATHER**
- 3. Firewall Fuel Valve** **PULL CLOSED**
- 4. Fire Extinguisher, if required** **ACTUATE**
- 5. Eng Auto Ignition** **OFF**
- 6. Autofeather** **OFF**
- 7. Prop Sync** **OFF**
- 8. Generator** **OFF**
- 9. Electrical Load** **ENSURE WITHIN LIMITS**
- 10. Bleed Air Valve** **INST & ENVIR OFF**

ENGINE FIRE ON GROUND

Affected Engine:

1. Condition Lever FUEL CUTOFF
2. Firewall Fuel Valve PULL CLOSED
3. Ignition and Engine Start Switch STARTER ONLY
4. Fire Extinguisher, if required ACTUATE

ENGINE FAILURE DURING TAKEOFF (AT OR BELOW V_1) - TAKEOFF ABORTED

1. Power Levers GROUND FINE

WARNING

Do not use reverse thrust with one engine inoperative. Care must be exercised when using single-engine ground fine on surfaces with reduced friction.

2. Brakes MAXIMUM (OR AS REQUIRED TO ACHIEVE STOPPING DISTANCE)

NOTE

Normal taxi operations are not possible without the power steering option.

ENGINE FAILURE DURING TAKEOFF (AT OR ABOVE V_1) - TAKEOFF CONTINUED

1. V_R Speed ROTATE TO APPROXIMATELY 8°
2. Landing Gear (when positive climb established) UP
3. Airspeed MAINTAIN V_2 TO 400 FEET AGL
4. Propeller (inoperative engine) VERIFY FEATHERED

WARNING

Do not retard the failed engine power lever until the autofeather system has completely stopped propeller rotation.

5. Airspeed (at 400 feet AGL minimum) ACCELERATE TO V_{ENR} CLIMB SPEED
6. Flaps UP
7. Power REDUCE TO MCP
8. Bleed Air Valve (operative engine) ENVIR OFF
9. Climb To 1500 feet AGL and Accomplish the Following Cleanup Procedures (inoperative engine):
 - a. Condition Lever FUEL CUTOFF
 - b. Propeller Lever FEATHER
 - c. Firewall Fuel Valve PULL CLOSED
 - d. Eng Auto Ignition OFF
 - e. Autofeather Switch OFF
 - f. Prop Sync OFF
 - g. Generator OFF
10. Electrical Load ENSURE WITHIN LIMITS

ENGINE FAILURE IN FLIGHT BELOW AIR MINIMUM CONTROL SPEED (V_{MCA})

1. Reduce power on operative engine as required to maintain control.
2. Lower nose to accelerate above V_{MCA} .
3. Adjust power as required.
4. Secure affected engine as in ENGINE FIRE OR FAILURE IN FLIGHT procedure.

OIL PRESSURE LOW (L or R OIL PRES LO Annunciator)

1. Oil Pressure GageCONFIRM BELOW 60 PSI
2. If ConfirmedSECURE ENGINE OR LAND AT
THE NEAREST SUITABLE AIRPORT
USING THE MINIMUM POWER
REQUIRED TO SUSTAIN FLIGHT

CAUTION

On airplanes UE-262 and after, and those airplanes incorporating Kit No. 129-3006-1, the propeller deice may not function in the Auto Mode on an engine with an OIL PRES LO annunciator illuminated. If propeller deice is required, use the Manual mode.

PROPELLER COLLISIONS DURING GROUND OPERATIONS

WARNING

During collisions, the higher the propeller RPM, the greater the risk of propeller blades, or portions of blades, separating from the propeller hub causing damage to the fuselage and physical harm to the passengers.

If maximum braking and maximum reverse are insufficient and a collision is imminent:

1. Power LeversGROUND FINE OR IDLE
2. Condition LeversFUEL CUTOFF

FUEL SYSTEM

FUEL PRESSURE LOW (L or R FUEL PRES LO Annunciator)

1. Standby Pump (failed side)..... ON
2. Check FUEL PRES LO AnnunciatorEXTINGUISHED

If FUEL PRES LO Annunciator Does Not Extinguish:

3. Altitude MAINTAIN MINIMUM SAFE ALTITUDE
4. Land at nearest suitable airport.

SMOKE AND FUME ELIMINATION

Attempt to identify the source of smoke or fumes. Smoke associated with electrical failures is usually gray or tan in color, and irritating to the nose and eyes. Smoke produced by environmental system failures is generally white in color, and much less irritating. The presence of smoke or fumes in the cockpit or cabin may illuminate

the LAVATORY SMOKE warning annunciator (if installed) when the lavatory is not, in fact, the source. If minimal smoke is evident in the cockpit or cabin, but the LAVATORY SMOKE warning annunciator is illuminated, lavatory smoke or fire may be indicated.

If smoke is prevalent in the cabin, cabin oxygen masks should not be deployed unless the cabin altitude exceeds 15,000 feet, and then they should be used only until the cabin altitude is reduced to 15,000 feet or lower.

WINDSHIELD ELECTRICAL FAULT

The smell of an electrical overheat, or observing smoke and/or fire at the lower inboard corner of either windshield adjacent to the center post, may indicate an overheat condition in the electrical power terminal for the normal heat mode of the pilot's or copilot's windshield heat.

1. WSHLD ANTI-ICE Switches OFF

If Smoke and/or Fire Does Not Cease:

2. Conduct ELECTRICAL SMOKE OR FIRE procedure.

If Smoke and/or Fire Extinguishes:

3. Continue flight with Windshield Anti-Ice OFF, if possible.

If Windshield Anti-Ice is Required:

4. If the source of the smell, smoke, or fire can be associated with the pilot's or copilot's windshield, the opposite windshield (without the overheat condition) may be operated in the NORMAL or HI windshield heat mode.

ELECTRICAL SMOKE OR FIRE

1. Oxygen

- a. Oxygen Control CONFIRM ON
- b. Crew DON MASK, AND GOGGLES (if installed)
 - Mask Selector Switch EMERG (if installed) or 100%
 - Purge Valve (if installed) OPEN
- c. Headsets DON
- d. MIC Selector Switches OXYGEN MASK

NOTE

Crew communication with oxygen masks on may be improved by turning the HOT INTPH switches OFF and using the INTPH switch on the control wheel.

2. Instrument Emergency Lights, if required ON
3. Avionics Switch OFF

NOTE

Maintain aircraft control using the standby attitude indicator.

4. Generators OFF

To Facilitate Smoke Removal:

5. Pilot and Copilot Air PULL ON
6. Defrost Air PULL ON
7. Cabin Air PULL TO DECREASE
8. Cockpit Door or Curtain OPEN

WARNING

Dissipation of smoke is not sufficient evidence that a fire has been extinguished. If it cannot be visually confirmed that no fire exists, land at the nearest suitable airport.

NOTE

Equipment which remains operable and is controllable by the pilot is indicated by a **WHITE CIRCLE** around the control. These items may be turned off to further isolate the cause of the fire/smoke.

If Smoke Persists or if Extinguishing of Fire is Not Visually Confirmed:

- 9. Master Switch OFF
- 10. Vent Air PULL ON
- 11. Land at the nearest suitable airport. Press GND COMM switch, if installed, to restore Comm 1. Plan on a flaps-up landing. Lower landing gear manually.

NOTE

Opening a storm window (after depressurizing) will facilitate smoke and fume removal.

If conditions require the partial restoration of power, one or more of the following procedures may be used. Verify proper voltage on the Volt Select Meter. Each set of procedures assumes the Master Switch is initially OFF.

- To Restore Left Generator Bus and Triple Fed Bus Only:
 - a. GEN TIES Switch OPEN
 - b. Left Generator RESET, then ON
 - c. Avionics Switch, if required ON
- To Restore Right Generator Bus and Triple Fed Bus Only:
 - a. GEN TIES Switch OPEN
 - b. Right Generator RESET, then ON
 - c. Avionics Switch, if required ON
- To Restore All Buses Except the Center Bus:
 - a. GEN TIES Switch OPEN
 - b. Left and Right Generators RESET, then ON
 - c. Battery ON
 - d. BUS SENSE Switch TEST
 - e. Avionics Switch, if required ON
- To Restore the Battery Bus, Triple Fed Bus, and Center Bus Only:
 - a. Battery ON
 - b. Avionics Switch, if required ON

NOTE

Battery power will be available for approximately 30 minutes with a 50-amp discharge on the battery ammeter.

ENVIRONMENTAL SYSTEM SMOKE OR FUMES

1. Oxygen

- a. Oxygen Control CONFIRM ON
- b. Crew DON MASK, AND GOGGLES (if installed)
 - Mask Selector Switch EMERG (if installed) or 100%
 - Purge Valve (if installed) OPEN
- c. Headsets DON
- d. MIC Selector Switches OXYGEN MASK

NOTE

Crew communication with oxygen masks on may be improved by turning the HOT INTPH switches OFF and using the INTPH switch on the control wheel.

- 2. Pilot And Copilot Air PUSH OFF
- 3. Defrost Air PUSH OFF
- 4. Cabin Air PUSH IN
- 5. Blowers HIGH

NOTE

Tests have demonstrated that FAA requirements for smoke evacuation can be achieved if blowers are inoperative.

- 6. Overhead Air Vent OPEN
- 7. Cockpit Door or Curtain OPEN
- 8. Bleed Air Valves LEFT ENVIR OFF

If Smoke Decreases:

- 9. Continue operation with Left Bleed Air Valve OFF.

If Smoke Persists:

- 10. Bleed Air Valves LEFT OPEN,
RIGHT ENVIR OFF

If Smoke Decreases:

- 11. Continue operation with Right Bleed Air Valve OFF.

NOTE

Each engine bleed air valve must remain off long enough to allow time for smoke purging to positively identify the smoke source.

If Smoke Persists:

- 12. Bleed Air Valves ENVIR OFF
- 13. Cabin Pressure Switch DUMP
- 14. Vent Air PULL ON
- 15. Land at nearest suitable airport.

NOTE

Opening a storm window (after depressurizing) will facilitate smoke and fume removal.

LAVATORY SMOKE OR FIRE (LAVATORY SMOKE Annunciator) (If Installed)

1. FURN Switch OFF
2. Second Crew Member (If Available) VISUALLY CONFIRM AND COMBAT THE SMOKE OR FIRE

WARNING

Dissipation of smoke is not sufficient evidence that a fire has been extinguished.

If It Cannot Be Visually Confirmed That No Fire Exists:

3. Cabin Lights
 - a. Cabin Full/Partial OFF
 - b. Reading OFF
 - c. FSB OFF
4. Land at nearest suitable airport.

If Lavatory Smoke or Fumes Enter The Cockpit or Cabin:

5. Oxygen
 - a. Oxygen Control CONFIRM ON
 - b. Crew DON MASK, AND GOGGLES (if installed)
Mask Selector Switch EMERG (if installed) or 100%
Purge Valve (if installed) OPEN
 - c. Headsets DON
 - d. MIC Selector Switches OXYGEN MASK

NOTE

Crew communication with oxygen masks on may be improved by turning the HOT INTPH switches OFF and using the INTPH switch on the control wheel.

6. Environmental Blowers AUTO
7. Environmental Mode Control OFF
8. Pilot and Copilot Air PULL ON
9. Defrost Air PULL ON
10. Cabin Air PULL TO DECREASE
11. Cockpit Door or Curtain OPEN

If Smoke or Fumes Persist In The Cockpit or Cabin:

12. Cabin Pressure Switch DUMP
13. Vent Air PULL ON

CABIN DOOR OR CARGO DOOR UNLOCKED (CABIN DOOR or CARGO DOOR Annunciator)

WARNING

Do not attempt to check the security of the cabin door or cargo door in flight. Remain as far from the doors as possible with seatbelts securely fastened.

WARNING

Do not attempt to check the security of the cabin door or cargo door in flight. Remain as far from the doors as possible with seatbelts securely fastened.

If the Cabin Door or Cargo Door Annunciator Illuminates, or If an Unlatched Cabin or Cargo Door Is Suspected:

1. All Occupants SEATED WITH SEAT BELTS SECURELY FASTENED
2. Cabin Differential Pressure REDUCE TO LOWEST PRACTICAL VALUE
(zero preferred) by descending and/or selecting higher cabin altitude.
3. OxygenAS REQUIRED
4. Land at nearest suitable airport.

EMERGENCY DESCENT

1. Power Levers IDLE
2. Propeller Levers SET 1700 RPM
3. Flaps 17°

NOTE

Tests have demonstrated that FAA requirements for emergency descents can be achieved with flaps up.

4. Landing Gear Control DN
5. Airspeed 180 KNOTS

GLIDE

1. Landing Gear Control UP
2. Flaps UP
3. Propellers FEATHERED
4. Airspeed 140 KNOTS
5. Glide Ratio 2.0 nautical miles for each 1000 feet of altitude. Decrease by .13 nautical miles for each 10 knots of headwind.

ELECTRICAL

SINGLE INVERTER OR AC BUS FAILURE (L or R AC BUS Annunciator)

Illumination of this Annunciator Indicates a Failure of Either the Inverter or its AC BUS.

1. AC BUS Switch (failed side) OFF, THEN ON
(AC BUS Annunciator - EXTINGUISHED)

If AC BUS Annunciator Does Not Extinguish:

2. AC BUS Switch (failed side) OFF
3. Attitude/Heading ControlUSE STANDBY ATTITUDE INDICATOR AND COMPASS, OR OPPOSITE SIDE INSTRUMENTS, AS REQUIRED

The remaining procedure may be followed, at the discretion of the flight crew, to determine whether the AC failure is due to a failed bus or a failed inverter. If the inverter has failed, the following procedure will restore the equipment powered by the failed inverter. If the AC bus has failed, the following procedure will render the good AC bus temporarily inoperative when step 5 is accomplished, with the remote possibility that it will not be able to be recovered.

4. Attitude/Heading ControlBE PREPARED TO USE THE STANDBY ATTITUDE INDICATOR AND COMPASS
5. AC BUS Switch (failed side) TRANSFER
(AC BUS Annunciator - EXTINGUISHED)
(Indicates a failure of the inverter)

If Both AC BUS Annunciators Illuminate When TRANSFER is Selected, a Failure of the Transferred AC bus is indicated.

- 6. AC BUS Switch (transferred side) OFF
(AC BUS Annunciator for Side Selected OFF - REMAINS ILLUMINATED)
(AC BUS Annunciator for Side Selected ON - EXTINGUISHED)
(UE-1 thru UE-92, Set Power per Step 10)

If the AC BUS Annunciator for the Side Selected ON does not Extinguish:

- 7. AC BUS Switch (side selected ON)) OFF, THEN ON
(AC BUS Annunciator for Side Selected OFF - REMAINS ILLUMINATED)
(AC BUS Annunciator for Side Selected ON - EXTINGUISHED)
(UE-1 thru UE-92, Set Power per Step 10)

If the AC BUS Annunciator for the Side Selected ON does not Extinguish, Neither AC Bus will Be Operative

- 8. Attitude/Heading Control USE STANDBY ATTITUDE INDICATOR AND COMPASS
- 9. Power (UE-1 thru UE-92): SET PER STEP 11

In UE-1 thru UE-92, the Torque Meter on the Side of a Failed AC Bus Will Be Inoperative.

- 10. For a Single AC Bus Failure SET N₁ ON FAILED SIDE TO MATCH N₁ ON OPERATING SIDE. OBSERVE ITT LIMIT.
- 11. For a Dual AC Bus Failure:
 - a. Propellers 1700 RPM
 - b. Power Levers SET
 - 1) Cruise SET FUEL FLOW PER CRUISE POWER TABLES IN THE POM
 - 2) All Other Conditions DO NOT EXCEED 500 POUNDS PER HOUR

SINGLE INVERTER FAILURE FOLLOWED BY A SECOND INVERTER OR AC BUS FAILURE (L and R AC BUS Annunciators)

Illumination of Both Annunciators Simultaneously After a Single Inverter Failure Has Been Remedied (by placing one AC Bus Switch to TRANSFER) Indicates a Failure of the Inverter Selected ON, or a Failure of Either AC Bus.

- 1. Attitude/Heading Control USE STANDBY ATTITUDE INDICATOR AND COMPASS
- 2. AC BUS Switch (transferred side) OFF
(AC BUS Annunciator for Side Selected OFF - REMAINS ILLUMINATED)
(AC BUS Annunciator for Side Selected ON - EXTINGUISHED)
(Indicates a Failure Of The AC BUS On The Transferred Side.
UE-1 thru UE-92, Set Power per Step 5)

If the AC BUS Annunciator for the Side Selected ON does not Extinguish:

- 3. AC BUS Switch (side selected ON) OFF, THEN ON
(AC BUS Annunciator for Side Selected OFF - REMAINS ILLUMINATED)
(AC BUS Annunciator for Side Selected ON - EXTINGUISHED)
(UE-1 thru UE-92, Set Power per Step 5)

If AC BUS Annunciator for the Side Selected ON does not Extinguish, Neither AC Bus Will Be Operative.

- 4. Power (UE-1 thru UE-92): SET PER STEP 6

In UE-1 thru UE-92, Torque Meter on the Side of a Failed AC Bus Will Be Inoperative.

- 5. For a Single AC Bus Failure SET N₁ ON FAILED SIDE TO MATCH N₁ ON OPERATING SIDE. OBSERVE ITT LIMIT.

- 6. For a Dual AC Bus Failure:
 - a. Propellers 1700 RPM
 - b. Power Levers SET
 - 1) Cruise SET FUEL FLOW PER CRUISE POWER TABLES IN THE POM
 - 2) All Other Conditions DO NOT EXCEED 500 POUNDS PER HOUR

DUAL INVERTER FAILURE (L and R AC BUS Annunciators)

Illumination of Both Annunciators Simultaneously (With Neither AC Bus Switch in Transfer), Indicates that a Failure In One Inverter is Affecting the Other Inverter.

- 1. Attitude/Heading Control **USE STANDBY ATTITUDE INDICATOR AND COMPASS**
- 2. Both AC BUS Switches OFF
- 3. L AC BUS Switch ON
(L AC BUS Annunciator - EXTINGUISHED)
(Indicates a Failure of the Right Inverter)

If L AC BUS Annunciator Extinguishes:

- 4. R AC BUS Switch TRANSFER
(R AC BUS Annunciator - EXTINGUISHED)

If L AC BUS Annunciator Does Not Extinguish, a Left Inverter Failure is Indicated.

- 5. L AC BUS Switch OFF
- 6. R AC BUS Switch ON
(R AC BUS Annunciator - EXTINGUISHED)

If R BUS Annunciator Extinguishes:

- 7. L AC Bus Switch TRANSFER
(L AC BUS Annunciator - EXTINGUISHED)

UE-1 thru UE-92:

If Neither AC Bus Can Be Restored, Torque Meters Will Be Inoperative. Set Power as Follows:

- 8. Propellers 1700 RPM
- 9. Power Levers SET
 - a. Cruise SET FUEL FLOW PER CRUISE POWER TABLES IN THE POM
 - b. All Other Conditions DO NOT EXCEED 500 POUNDS PER HOUR

DUAL GENERATOR FAILURE (L AND R DC GEN Annunciators)

- 1. Instrument Emergency Lights (if required) ON
- 2. Generators RESET, THEN ON

If Either Generator Will Reset:

- 3. Do not exceed 100% load on operating generator.

If Neither Generator Will Reset:

- 4. Non-Essential Equipment OFF
- 5. Either AC BUS Switch XFER



Do not rely on the Standby EFIS Power System for sustained operation of the pilot's EADI and EHSI. Maintain pitch and roll control using the Standby Attitude Indicator.

NOTE

Power for both inverters automatically shifts to the center bus with a dual generator failure. When this occurs, the 26V and 115V AC Shed Buses of each inverter will automatically shed, rendering the following items inoperative:

- Pilot's RMI Heading Card
 - No. 2 Bearing Pointer on both RMI's
 - Radar stabilization
6. Autopilot DISENGAGE
 7. Battery Ammeter SEE LOAD MANAGEMENT
 8. Land at nearest suitable airport.
 9. Flaps DO NOT EXTEND
 10. Landing Gear EXTEND MANUALLY

NOTE

Equipment which remains operable is designated by a WHITE CIRCLE around the control switch.

LOAD MANAGEMENT

Monitor Battery Discharge Ammeter in overhead panel. A 75% battery capacity will discharge in the following times.

60-Amp Discharge	25 minutes
50-Amp Discharge	30 minutes
40-Amp Discharge	37 minutes
30-Amp Discharge	50 minutes
20-Amp Discharge	75 minutes
10-Amp Discharge	150 minutes

Adjust electrical loads as desired.

WARNING

Do not place the GEN TIES switch in the MAN CLOSE position. This action reconnects the left and right generator bus loads and severely limits the battery duration.

FLIGHT CONTROLS

UNSCHEDULED ELECTRIC ELEVATOR TRIM (If Installed)

1. Airplane Attitude MAINTAIN (using elevator control)
2. Control Wheel Disconnect Switch DEPRESS FULLY (PITCH TRIM OFF Annunciator - ILLUMINATED)

NOTE

Autopilot will disengage and Rudder Boost will be interrupted when the disconnect switch is depressed.

3. Manually retrim airplane.
4. Elev Trim Switch (pedestal) OFF
(PITCH TRIM OFF Annunciator EXTINGUISHED)

UNSCHEDULED RUDDER BOOST ACTIVATION

Rudder boost operation without a large variation of power between the engines indicates a failure of the system.

1. Control Wheel Disconnect Switch **DEPRESS and HOLD (1st level)**
2. Rudder Boost/Yaw Control Test Switch **OFF**

If Condition Persists:

3. Rudder Boost Circuit Breaker **PULL**
4. Perform normal landing.

ENVIRONMENTAL SYSTEMS

USE OF OXYGEN



The following table sets forth the average time of useful consciousness (time from onset of hypoxia until loss of effective performance) at various altitudes.

25,000 feet	3 to 5 minutes
22,000 feet	5 to 10 minutes
12 - 18,000 feet	30 minutes or more

1. Oxygen Control **CONFIRM ON**
2. Cabin Oxygen Control **PULL ON**
3. Crew **DON MASK**
4. Mask Selector Switch **SET**
 - Inflatable Type Harness **NORMAL**
 - Strap Type Harness **NORMAL (100% AT CABIN ALTITUDES ABOVE 20,000 FEET)**

NOTE

If smoke or fumes are evident, see Smoke and Fume Elimination in this section.

5. Headsets **DON**
6. MIC Selector Switches **OXYGEN MASK**
7. Passengers **PULL LANYARD PIN, DON MASK**
8. Cabin Oxygen Outlet Pressure Gage **CHECK THAT GAGE INDICATION
CORRESPONDS TO CABIN
PRESSURE ALTITUDE.**

CAUTION

If the cabin oxygen outlet pressure gage indication does not correspond to the cabin pressure altitude, descend to an altitude not requiring passenger oxygen as soon as practical.

If gage reading indicates an altitude lower than the cabin altitude, passengers are not receiving an adequate flow of oxygen.

If gage reading indicates an altitude higher than the cabin altitude, passengers are receiving too much oxygen and calculated oxygen duration times will not be achieved.

NOTE

Crew communication with oxygen masks on may be improved by turning the HOT INTPH switches OFF and using the INTPH switch on the control wheel.

- 9. Oxygen Duration CONFIRM FOR THE EXISTING CABIN ALTITUDE.
See OXYGEN SYSTEM in Section IV, NORMAL PROCEDURES, for duration tables.

CABIN DECOMPRESSION (CAB ALT HI Annunciator)

If CAB ALT HI Annunciator Illuminates, Indicating That Cabin Altitude Has Exceeded Approximately 10,000 Feet:

- 1. Oxygen Control CONFIRM ON
- 2. Cabin Oxygen Control PULL ON
- 3. Crew DON MASK
- 4. Mask Selector Switch SET
 - Inflatable Type Harness NORMAL
 - Strap Type Harness NORMAL (100% AT CABIN ALTITUDES ABOVE 20,000 FEET)
- 5. Headsets DON
- 6. MIC Selector Switches OXYGEN MASK
- 7. Passengers PULL LANYARD PIN, DON MASK
- 8. Cabin Oxygen Outlet Pressure Gage. CHECK THAT GAGE INDICATION CORRESPONDS TO CABIN PRESSURE ALTITUDE

CAUTION

If the Cabin Oxygen Outlet Pressure Gage indication does not correspond to the cabin pressure altitude, descend to an altitude not requiring passenger oxygen as soon as practical.

If gage reading indicates an altitude lower than the cabin altitude, passengers are not receiving an adequate flow of oxygen.

If gage reading indicates an altitude higher than the cabin altitude, passengers are receiving too much oxygen and calculated oxygen duration times will not be achieved.

NOTE

Crew communication with oxygen masks on may be improved by turning the HOT INTPH switches OFF and using the INTPH switch on the control wheel.

9. Determine cause of pressure loss:
 - a. Cabin Pressure Switch CHECK PRESS
 - b. Cabin Controller CHECK FOR PROPER SETTING
 - c. Bleed Air Valves CHECK OPEN

If Unable To Correct Problem and Cabin Altitude Approaches 15,000 Feet, or If Decompression Is Rapid:

10. Execute EMERGENCY DESCENT procedure.
11. Range DETERMINE FOR FINAL CRUISE ALTITUDE
12. Oxygen Duration CONFIRM FOR THE EXISTING CABIN ALTITUDE
See OXYGEN SYSTEM in Section IV, NORMAL PROCEDURES, for duration tables.

HIGH DIFFERENTIAL PRESSURE (CAB DIFF HI Annunciator)

1. Bleed Air Valves ENVIR OFF
2. Oxygen (crew and passengers) AS REQ'D
3. Descend AS REQ'D

BLEED AIR LINE FAILURE (L or R BL AIR FAIL Annunciator)

BL AIR FAIL annunciators should be monitored during engine start procedure. Either engine will extinguish both annunciators upon starting.

Illumination of the L or R BL AIR FAIL annunciator in flight indicates possible rupture of a bleed air line aft of the engine firewall.

1. Bleed Air Valve (affected engine) INST & ENVIR OFF
(ENVIR OFF Annunciator illuminated)
2. Engine Instruments MONITOR

NOTE

The L or R BL AIR FAIL annunciator will not extinguish after closing the bleed air valve.

NOTE

Failure of both pneumatic pressure sources will cause the L and R BLEED AIR FAIL annunciators to illuminate. If this occurs, the following additional symptoms will be observed:

- The L and R BK DI OVHT annunciators will illuminate (if installed).
- The Gyro Suction gage and Pneumatic Pressure gage will read zero.
- The Cabin altitude will increase at an uncontrollable rate.

ENVIRONMENTAL FAILURE (L or R ENVIR FAIL Annunciator)

Either an overtemperature or overpressure condition in the bleed air duct will cause the L or R ENVIR FAIL annunciator to illuminate. Either condition will cause the pressure regulator in the inboard wing leading edge and the temperature regulators (2) in the nacelle on the affected side to automatically close.

1. Bleed Air Valve (affected side) CYCLE TO ENVIR OFF
AND BACK TO OPEN

If ENVIR FAIL Annunciator Extinguishes, Continue Operation. If Annunciator Remains Illuminated:

2. Bleed Air Valve (affected side) ENVIR OFF
(ENVIR FAIL Annunciator extinguished,
ENVIR OFF Annunciator illuminated)

MARK-VI GROUND PROXIMITY WARNING SYSTEM (If Installed)

DEACTIVATION

If the pilot in command determines that activation of the GPWS will interfere in dealing with emergency conditions, the system may be deactivated by pulling the GPWS circuit breaker located on the right circuit breaker panel.

IN-FLIGHT ACTIVATION OF GPWS WARNING (GPWS Annunciator and Continuous "Pull Up, Pull Up" Voice Message)

IN IMC OR AT NIGHT:

1. Wings LEVEL
2. Airspeed 122 KIAS
3. Power MAX ALLOWABLE
4. Gear and Flaps RETRACT
5. Continue Climb at 122 KIAS Until all Visual and Aural Warnings Cease

IN DAY VMC:

1. Evaluate Flight Path With Respect To Terrain
2. Take Action As Necessary To Recover Safe Terrain Clearance

IN-FLIGHT ACTIVATION OF GPWS ALERTS (GPWS Annunciator and Voice Message)

Mode	Voice Message	Condition	Action
1	"Sink Rate"	Excessive Rate of Descent in Relation to AGL Altitude.	Level Wings and Reduce Rate of Descent Until Visual and Aural Alerts Cease.
2	"Terrain, Terrain"	Terrain Rising Excessively Fast Underneath the Airplane.	Immediately Adjust Flight Path Away From Terrain.
3	"Don't Sink"	Excessive Altitude Loss after Takeoff or Missed Approach.	Level Wings and Immediately Establish a Positive Rate of Climb.
4a	"Too Low, Terrain"	Insufficient Terrain Clearance During Cruise	Adjust Flight Path to Recover Safe Terrain Clearance Until Visual and Aural Alerts Cease.
4a	"Too Low, Gear"	Insufficient Terrain Clearance, or Landing Gear is Not Down Below 500 feet AGL.	Execute Go-Around if Proper Terrain Clearance or Landing Gear Position Cannot be Immediately Verified.
4b	"Too Low, Flaps"	Insufficient Terrain Clearance or Flaps Not in Landing Configuration Below 170 feet AGL.	Execute Go-Around if Proper Terrain Clearance or Flap Position Cannot be Immediately Verified.
4c	"Too Low, Terrain"	Continued Descent, or Terrain Rising Faster Than Airplane is Climbing, After Takeoff or Missed Approach.	Adjust Flight Path to Recover Safe Terrain Clearance Until Visual and Aural Alerts Cease.

IN-FLIGHT ACTIVATION OF BELOW GLIDESLOPE ALERT (BELOW GS Annunciator and "Below Glideslope" Voice Message)

Mode	Voice Message	Condition	Action
5	"Below Glideslope"	Deviation Below Glideslope Exceeds Approximately a 1.3 Dot Fly Up Command.	Immediately Climb To Re-Establish Proper Glidepath or Execute a Go-Around.

IN-FLIGHT ACTIVATION OF OPTIONAL VOICE MESSAGES

Mode	Voice Message	Condition	Action
6	"Five Hundred"	Airplane is Descending Through 500 feet AGL.	None. Advisory Only.
6	"Minimums, Minimums"	Airplane is Descending Through The DH Altitude Set on the Radio Altimeter.	Advisory Only. Execute Go-Around if Runway is Not in Sight and DH or MDA is confirmed on the Pilot's Altimeter.

EMERGENCY EXIT

- Escape Hatch Handle PULL

CAUTION

The inside and outside handles may be locked from the inside with the Ground Lock pin. Before flight, make certain the Ground Lock pins are not installed.

NOTE

This is a plug-type hatch and opens into the cabin. The hatch can either be set aside inside the cabin, or placed outside the cabin through the hatch opening.

SPINS

Intentional spins are prohibited. If an unintentional spin is encountered, perform the following procedure **IMMEDIATELY** – **THE LONGER THE DELAY, THE MORE DIFFICULT RECOVERY WILL BECOME.** Steps 1 through 3 should be done **AGGRESSIVELY** and **SIMULTANEOUSLY**. The full forward position of the control column may be reduced slightly, if required, to prevent the airplane from exceeding a 90° nose down (inverted) attitude.

1. Control Column FULL FORWARD, AILERONS NEUTRAL
2. Full Rudder OPPOSITE THE DIRECTION OF SPIN
3. Power Levers IDLE
4. Rudder NEUTRALIZE WHEN ROTATION STOPS
5. Execute a smooth pullout.

NOTE

The Federal Aviation Administration does not recommend spin testing of multi-engine airplanes. The recovery technique presented above is based on the best available information, but shall not be construed as any assurance that the airplane can, in fact, be recovered from a spin. In accordance with industry practice, no spin tests have been conducted on this airplane.