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**ENGINE FAILURE/RESTART**

- Airspeed.....68KTS
- Fuel Shutoff Valve.....ON (push full in)
- Fuel Selector Valve.....BOTH
- Auxiliary Fuel Pump Switch.....ON
- Mixture... RICH (if restart has not occurred)
- Ignition Switch..... BOTH
- If prop stopped, Ignition Switch..... START
- Auxiliary Fuel Pump Switch..... OFF
- If engine stopped, Aux. F. Pump Switch.. ON

**FORCED LANDING**

- Airspeed. (flaps up)70KTS,(flaps dwn)65KTS
- Mixture..... IDLE CUTOFF
- Fuel Shutoff Valve..... OFF (pull full out)
- Ignition Switch..... OFF
- ATC..... "Mayday"
- Flaps..... As req'd (30degrees recmnd)
- Master Switch (Landing assured)..... OFF
- Doors..... Unlatch
- Touchdown..... Tail low
- Brakes..... Apply heavily

**SMOKE & FIRE**

**ENGINE**

- Mixture..... IDLE CUT OFF
- Fuel Shutoff Valve..... OFF (pull full out)
- Auxiliary Fuel Pump Switch..... OFF
- ATC..... "Mayday"
- Master Switch..... OFF

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- Cabin Heat/Air..... OFF (except top vents)
- Airspeed..... 100 KTS  
(increase speed may extinguish)
- Forced Landing..... Execute

**ELECTRICAL**

- Master Switch..... OFF
- Vents, Cabin Air, Heat..... CLOSED
- Fire Extinguisher..... Activate
- Avionics Master Switch..... OFF
- All Elec. Switches (except Ignition)..... OFF
- If fire is out:  
Vents, Cabin Air, Heat..... OPEN
- Land..... Nearest suitable airport

**CABIN**

- Master Switch..... OFF
- Vents/Cabin Air/ Heat..... CLOSED
- Fire Extinguisher..... Activate
- If fire is out:  
Vents/Cabin Air/ Heat..... OPEN
- Land..... Nearest suitable airport

**WING**

- Landing/Taxi Light Switches..... OFF
- Navigation/Strobe Light Switches..... OFF
- Pitot Heat Switch..... OFF

*Consider side slip to keep flames away from wing tank and cabin*

**ROUGH ENGINE**

**SPARK PLUG FOULING**

- Slight / Gradual change
- Ignition..... Select L or R momentarily  
verify power loss

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- Mixture..... LEAN
- If after several min's, still rough:*
- Mixture..... Enrich
- If still not smooth:*
- Land..... Nearest airport for repairs
- SUDDEN ROUGH / MISFIRE**
- Consider magneto problem*
- Ignition.. Select L or R momentarily to identify
- Ignition..... BOTH
- RPM & Mixture..... Adjust to different settings
- If unable to obtain smooth engine:*
- Magneto..... Select good side
- Land..... Nearest airport for repairs

**ELECTRICAL PROBLEMS**

**AMMETER – excessive charge / full scale deflection**

- Alternator..... OFF
- Non-Essential Electrical Equip..... OFF
- Land..... Nearest suitable airport

**“VOLTS” Annunciation Warning**

**(Ammeter Discharging)**

- Avionics Master Switch..... OFF
- Circuit Breaker (ALT FLD) ..... Check IN
- Master Switch..... OFF (both sides)
- Master Switch..... ON
- “VOLTS” Annunciation..... Check OFF
- Avionics Master Switch..... ON

*If “VOLTS” is displayed again:*

- Alternator..... OFF
- Nonessential Electrical Equip..... OFF
- Land..... Nearest suitable airport

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**ICING**

**Inadvertent Icing Encounter**

- Pitot Heat..... ON
- Escape..... 180° turn/change altitude
- Cabin Heat/Defrost..... Full ON
- RPM..... Increase to minimize prop ice

**STATIC BLOCKAGE**

- Alternate Static Source..... Pull ON
- Airspeed..... POH (Perf. Sect 5)
- Altitude..... Cruise 50'/appch 30' higher

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**AUTOPILOT MALFUNCTION**

**PITCH TRIM RUNAWAY**

*Airplane deviates unexpectedly from the planned flight path*

**Control Wheel.....Grip firmly**  
**AP DISC Button.....Press & Hold**  
**CAUTION: High elevator control force**  
**A/C Attitude....Maintain & Regain control**

Elevator Trim.....Manual re-trim  
 Autopilot CB.....Pull

NOTE: Do not release the AP DISC button until after pulling the AUTOPILOT circuit breaker. Pulling the AUTOPILOT circuit breaker will render the autopilot, electric trim, and ESP inoperative.

AP Disc Button.....Release

WARNING: In flight, do not overpower the AUTOPILOT. The trim will operate in the direction opposing the overpower force, which will result in large out-of-trim forces. Do not attempt to re-engage the autopilot or use manual electric pitch trim until the cause of the malfunction has been corrected.

**OVERSPEED PROTECTION**

**“MAXSPD” & “AIRSPEED-AIRSPEED” alrt**

Throttle.....Reduce  
 Aircraft Attitude.....Monitor

*After overspeed condition is corrected:*

Autopilot.....Reselect  
 Throttle.....As necessary

NOTE: Overspeed Protection Mode provides a pitch up command to decelerate the airplane at or below the maximum autopilot operating speed.

**UNDERSPEED PROTECTION**

**“MINSPD” & “AIRSPEED-AIRSPEED” alrt**

Throttle.....Increase as required  
 Aircraft Attitude.....Monitor

*After underspeed condition is corrected:*

Autopilot.....Reselect  
 Throttle.....As necessary

NOTE: Underspeed Protection Mode provides a pitch down command to maintain 65 KTS

**PITCH TRIM FAILURE**

**“PTRIM” Indicates pitch trim servo failure**

Control Wheel.....Grip firmly  
 AP DISC Button.....Press and Release

*Be prepared for high elev. control forces*

Elevator Trim.....Manually re-trim

NOTE: The autopilot may be re-engaged. Refer to the normal procedures section of the AFMS, MANUAL PITCH TRIM WITH AUTOPILOT ENGAGED

**ESP ACTIVATION**

Throttle.....As required  
 Aircraft Attitude...Maintain/Regain Control

NOTE: If ESP is active for approximately 10 seconds, the autopilot will automatically engage in LVL mode, an aural ‘ENGAGING AUTOPILOT’ will be heard, and the autopilot will roll the wings level and fly at zero-vertical speed. ESP may be disabled by pressing and holding the AP DISC button. Releasing the button will allow ESP to function.

Legend: **BOLD IN RED BOX** = MEMORY ITEM

**ALERTS & ANNUNCIATIONS**

**WARNING ANNUNCIATIONS - RED**

ALERT	ACTION	NOTE
<b>TERRAIN OBSTACLE</b> <small>"Terrain Ahead! Pull Up!" "Terrain, Terrain Pull Up!" "Obstacle Ahead! Pull Up!" "Obstacle, Obstacle Pull Up!" "Sink Rate, Pull Up!"</small>	Disconnect AP and initiate maximum performance climb (max T/O power and Vx climb IAS)	- Only climb maneuver is recommended unless in VMC or it is determined that turning and climbing is the safest course of action. - The arrow indicates the terrain is outside the Synthetic Vision field of view.
Red X	Reference the data source or alternate equip	A red X through any display field indicates that it is not receiving data, or it is corrupted.
Red Engine Parameter	Take appropriate action to correct condition causing engine parameter exceedance	The engine parameter has exceeded the warning threshold.
AP	Manually fly the airplane. Silence the AP discn tone and remove the annun. by pressing the AP annun in the FD mode bar	Autopilot has failed or is inoperative.
AFCS	Manually fly the airplane	Flight Director and Autopilot have failed.
	Manually fly the airplane	Autopilot Failure.
PTRIM	Manually trim the airplane using the pitch trim wheel	Electric pitch trim is inoperative.
	Select full screen mode on display to view WARNING annunciations	Display is in split screen mode and WARNING annun aren't displayed.

**CAUTION ANNUNCIATIONS - AMBER**

ALERT	ACTION	NOTE
<b>TERRAIN OBSTACLE</b> <small>"CAUTION, Terrain" "CAUTION, Terrain Ahead" "CAUTION, Obstacle" "CAUTION, Obstacle Ahead" "CAUTION, Sink Rate"</small>	Take corrective action until the alert ceases. Using all available information to determine the appropriate action, alter the flight path away from the threat by stopping descent, climbing, and/or turning	The arrow indicates the terrain is outside the Synthetic Vision field of view.
AP	Manually fly the airplane	Pilot has disconnected the AP.
ECS FAIL	None	The Electrical Control System has failed (GAD 27 FAILED)
↑TRIM UP↑	Manually trim nose up	The autopilot is holding excessive force due to the aircraft being of trim due to changes in airspeed or power.
↓TRIM DOWN↓	Manually trim nose down	

MIN SPEED	Add maximum available power. Autopilot will lower aircraft nose to increase airspeed	Airspeed is too slow, approaching stall speed.
MAX SPEED	Reduce power. Autopilot will raise aircraft nose to reduce airspeed	Airspeed is approaching maximum airspeed limit.
	Use standby compass	Displayed heading is outside of the internal accuracy limits.
	Select full screen mode on display to view CAUTION annunciations	Display is in split screen mode and CAUTION annunciations are not displayed.
AHRS ALIGN – Keep Wings Level	Fly aircraft manually and crosscheck attitude indication with standby attitude indicator and other sources of attitude information. Limit aircraft attitude to ±10° bank and ±5° pitch as AHRS Aligns – OK to taxi	Attitude and Heading Reference System is aligning. AHRS may not align with excessive pitch/bank angles.
AHRS ALIGN	Fly aircraft manually and crosscheck attitude indication with standby attitude indicator and other sources of attitude information (airspeed, heading, attitude, etc.)	The AHRS monitors have detected a possible AHRS malfunction or an error with the attitude presentation. The AHRS is attempting to realign itself. The autopilot may automatically disconnect.
ATT MISCOMP	Cross-check the flagged information against other sources to identify erroneous information	Difference detected between the G3X Touch and attitude display and the G5 attitude display.
AHRS FAIL ATTITUDE FAIL	Use standby attitude source, or, if AHRS REVERT message is also displayed, continue to use G3X Touch. Attitude will be from the G5	The GSU 25 AHRS has failed.
AHRS REVERT	Continue to use the G3X Touch	The GSU 25 AHRS has failed and attitude from the G5 is being displayed on the G3X Touch.
AIR MISCOMP IAS MISCOMP	Cross-check the flagged information against other sources to identify erroneous information	Difference detected between the G3X Touch airspeed or altitude and the G5 airspeed or altitude.
ADC FAIL	Use standby airspeed and altitude indicato, or, if ADC REVERT message is also displayed, continue to use G3X Touch	The GSU 25 air data computer has failed
ADC REVERT	Continue to use G3X Touch	GSU 25 air data computer has failed. Air data from G5 is displayed on G3X Touch.
(Flashing) MESSAGE	Press the flashing message annunciation to view a new system message	A new system message has annunciated.
Amber EIS Parameter	Take appropriate action to correct condition causing parameter exceedance	The engine parameter has exceeded the caution threshold
TRAFFIC	Visually acquire the traffic to see and avoid	The interfaced traffic system has determined that nearby traffic may be a threat to the aircraft
TAWS N/A, TAWS FAIL	Use vigilance, terrain depiction, and TAWS alerting is no longer provided	Database errors or lack of GPS position.

**ADVISORY ANNUNCIATIONS - WHITE**

ALERT	ACTION	NOTE
NO COMP	Cross check information between G5 and PFD. Determine which unit is in error	The unit will not be able to perform the miscompare monitor function.