C172N | Pro Standards 1 of 18

NORMAL CHECKLIST

FIRST FLIGHT OF TH	IE DAY			CLIMB		
PASSENGER / CREW BRIEF		COMPLETE	FLAPS	PF	UP PM	CONFIRMED
AIRWORTHINESS ACCEPTANCE	PF/PM	COMPLETE	MIXTURE			LEAN
PREFLIGHT	PF/PM	COMPLETE	LIGHTS			SET
			PITOT HEAT			SET
BEFORE STAR	Т					
SEAT-BELTS	PF/PM	CHECKED		CRUISE		
FUEL SELECTOR		ВОТН	POWER			SET
TRIM		TAKEOFF	MIXTURE			LEANED
MIXTURE		SET	LIGHTS			SET
EXTERIOR / INTERIOR LIGHTS		SET				
CARBURETOR HEAT		OFF	D	DESCENT		
CIRCUIT BREAKERS		CHECKED	APPROACH BRIEFING			COMPLETE
AVIONICS SWITCH		OFF	FUEL SELECTOR			BOTH
	_		MIXTURE			SET
AFTER START			LIGHTS			SET
ENGINE INSTRUMENTS		CHECKED	COMS / NAVS			SET
AMMETER		CHECKED	ALTIMETER	PF		1 CHECKED
ANNUNCIATORS		CHECKED	SEAT-BELTS		PF/P	M CHECKED
MIXTURE		LEANED				
DEFODE TAVI				ER LANDIN	IG	
BEFORE TAXI		COMPLETE	TRIM			TAKEOFF °
TAKEOFF BRIEFING FLIGHT INSTRUMENTS		COMPLETE	FLAPS			
	ВΜ	CHECKED	MIXTURE			LEAN
COMS / NAVS	· PM	SET	CARBURETOR HEAT			OFF
TRANSPONDER		SET	PITOT HEAT			OFF
TRANSPONDER		361	LIGHTS			SET
RUN-UP			SHUTD	OWN / SEC	CURE	
FLIGHT CONTROLS		CHECKED	AVIONICS MASTER	• · · · · · · · · · · · · · · · · · · ·		OFF
FUEL SELECTOR		ВОТН	MAGNETO GROUNDING			CHECK
TRIM		TAKEOFF	MIXTURE			CUT-OFF
RUN-UP		COMPLETE	ELECTRICAL SWITCHE	S		OFF
MIXTURE		SET	MASTER SWITCH			OFF
			AIRCRAFT			SECURE
BEFORE TAKEO	FF		FUEL SELECTOR			L / R
	PM	SET	POSTFLIGHT			COMPLETE
COMS / NAVS		SET				

SET

PF____° PM CONFIRMED

TAKEOFF

CHECKED

CHECKED CHECKED

CLOSED

CRITICAL AIRSPEEDS			
V _R	55 KIAS	V_{FE}	85 KIAS
V _X	59 KIAS	LANDING SPEED	60 KIAS
V _Y	73 KIAS	V A 2300 lbs	97 KIAS
BEST GLIDE	65 KIAS	V_{REF}	54 KIAS



TRANSPONDER

ANNUNCIATORS

ENGINE INSTRUMENTS

DOORS / WINDOWS

MIXTURE

AMMETER

FLAPS

C172N | Pro Standards 2 of 18

EMERGENCY QUICK REFERENCE CHECKLIST

ENGINE FAILURE DURING TAKEOFF RUN

THROTTLE	IDLE
BRAKES	APPLY
WING FLAPS	RETRACT

MIXTURE IDLE CUT-OFF IGNITION SWITCH OFF MASTER SWITCH OFF

ENGINE FAILURE AFTER TAKEOFF

AIRSPEED	
IF FLAPS UP	65 KIAS
IF FLAPS DOWN	60 KIAS
MIXTURE	IDLE CUT-OFF
FUEL SELECTOR VALVE	OFF
IGNITION SWITCH	OFF

WING FLAPS AS REQUIRED MASTER SWITCH OFF

ENGINE FAILURE DURING FLIGHT

AIRSPEED	65 KIAS
CARBURETOR HEAT	ON
FUEL SELECTOR VALVE	BOTH
MIXTURE	RICH
IGNITION SWITCH	

IF PROPELLER WINDMILLING BOTH IF PROPELLER STOPPED START PRIMER IN AND LOCKED

DURING START ON GROUND

CRANKING CONTINUE

TO GET A START WHICH WOULD SUCK THE FLAMES AND ACCUMULATED FUEL THROUGH THE CARBURETOR AND INTO THE ENGINE.

IF ENGINE STARTS:

POWER 1700 RPM FOR A FEW MINUTES. ENGINE SHUTDOWN AND INSPECT FOR

DAMAGE.

IF ENGINE FAILS TO START:

THROTTLE FULL OPEN
MIXTURE IDLE CUT-OFF
CRANKING CONTINUE
FIRE EXTINGUISHER OBTAIN

ELECTRICAL FIRE IN FLIGHT

MASTER SWITCH	OFF
AVIONICS POWER SWITCH	OFF
ALL OTHER SWITCHES	OFF
VENTS/CABIN AIR/HEAT	CLOSED

FIRE EXTINGUISHER ACTIVATE

CABIN FIRE

MASTER SWITCH	OFF
VENTS/CABIN AIR/HEAT	CLOSED

FIRE EXTINGUISHER ACTIVATE

ENGINE FIRE IN FLIGHT

MIXTURE	IDLE CUT-OFF
FUEL SELECTOR VALVE	OFF
MASTER SWITCH	OFF
CABIN HEAT AND AIR	OFF
AIRSPEED	100 KIAS

CARBON MONOXIDE INDICATION

CABIN HEAT	OFF
CABIN AIR	ON
CABIN VENTS	OPEN
CABIN WINDOWS	OPEN

C172N | Pro Standards 3 of 18

EMERGENCY CHECKLIST

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF RUN

ENGINE FAILURE AFTER TAKEOFF

ENGINE FAILURE DURING FLIGHT

FORCED LANDINGS

EMERGENCY LANDING WITHOUT ENGINE POWER

DITCHING

PRECAUTIONARY LANDING WITH ENGINE POWER

FIRES

DURING START ON GROUND

ENGINE FIRE IN FLIGHT

ELECTRICAL FIRE IN FLIGHT

CABIN FIRE

WING FIRE

ICING

INADVERTENT ICING ENCOUNTER

STATIC SOURCE BLOCKAGE

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

AMMETER SHOWS EXCESSIVE RATE OF CHARGE

AIRCRAFT ELECTRICAL SYSTEM FAILURE

LANDINGS

LANDING WITH A FLAT MAIN TIRE

NO FLAP LANDING

AVIONICS

Loss of Primary Flight Information

Synthetic Vision Malfunction

Navigation Data Failure (VOR/LOC/GS)

ANNUNCIATED PROCEDURES

CARBON MONOXIDE INDICATION

ADC Failure

ATTITUDE, ALT, or IAS monitor CAUTION

GPS Data Failure

Backup Battery Malfunction
Display Over temperature
AHRS ALIGN

ANNUNCIATION INDEX

C172N | Pro Standards 4 of 18

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF RUN

THROTTLE IDLE
BRAKES APPLY
WING FLAPS RETRACT
MIXTURE IDLE CUT-OFF

IGNITION SWITCH OFF MASTER SWITCH OFF

END.

ENGINE FAILURE AFTER TAKEOFF

AIRSPEED

IF FLAPS UP65 KIASIF FLAPS DOWN60 KIASMIXTUREIDLE CUT-OFF

FUEL SELECTOR VALVE OFF IGNITION SWITCH OFF

WING FLAPS AS REQUIRED

MASTER SWITCH OFF

EMERGENCY LANDING WITHOUT ENGINE

POWER →

ENGINE FAILURE DURING FLIGHT

AIRSPEED 65 KIAS
CARBURETOR HEAT ON
FUEL SELECTOR VALVE BOTH
MIXTURE RICH

IGNITION SWITCH

IF PROPELLER WINDMILLING BOTH
IF PROPELLER STOPPED START
PRIMER IN AND LOCKED

IF UNABLE TO REACH LAND

DITCHING →

IF LANDING AREA ASSURED

EMERGENCY LANDING WITHOUT ENGINE POWER →

C172N | Pro Standards 5 of 18

FORCED LANDINGS

EMERGENCY LANDING WITHOUT ENGINE POWER

AIRSPEED

IF FLAPS UP 65 KIAS
IF FLAPS DOWN 60 KIAS
MIXTURE IDLE CUT-OFF

FUEL SELECTOR VALVE OFF IGNITION SWITCH OFF

WING FLAPS (40° RECOMMENDED) AS REQUIRED

MASTER SWITCH OFF DOORS UNLATCH PRIOR TO TOUCHDOWN.

TOUCHDOWN SLIGHTLY TAIL LOW.

BRAKES APPLY HEAVILY

END.

DITCHING

RADIO TRANSMIT

MAYDAY ON 121.5 MHZ, GIVING LOCATION AND INTENTIONS

SQUAWK

SQUAWK 7700 HEAVY OBJECTS SECURE OR JETTISON APPROACH

IF HIGH WINDS, HEAVY SEAS

INTO THE WIND.

IF LIGHT WINDS, HEAVY SWELLS PARALLEL TO SWELLS.

WING FLAPS 20° - 40° POWER ESTABLISH 300 FT/MIN DESCENT A T 55 KIAS.

IF NO POWER IS AVAILABLE, APPROACH AT 65 KIAS WITH FLAPS UP OR AT 60 KIAS WITH 10° FLAPS.

CABIN DOORS UNLATCH

TOUCHDOWN LEVEL ATTITUDE AT ESTABLISHED RATE OF DESCENT.

FACE CUSHION AT TOUCHDOWN WITH FOLDED COAT.

AIRPLANE EVACUATE THROUGH CABIN DOORS.

IF NECESSARY, OPEN WINDOW AND FLOOD CABIN TO EQUALIZE PRESSURE SO DOORS CAN BE OPENED.

LIFE VESTS AND RAFT INFLATE

END.

PRECAUTIONARY LANDING WITH ENGINE POWER

WING FLAPS 20°.
AIRSPEED 60 KIAS.
SELECTED FIELD FLY OVER

NOTING TERRAIN AND OBSTRUCTIONS, THEN RETRACT FLAPS UPON REACHING A SAFE ALTITUDE AND AIRSPEED

AVIONICS POWER SWITCH OFF
ELECTRICAL SWITCHES OFF
WING FLAPS 40°
AIRSPEED 60 KIAS
MASTER SWITCH OFF
DOORS UNLATCH PRIOR TO TOUCHDOWN.

TOUCHDOWN SLIGHTLY TAIL LOW.

IGNITION OFF

BRAKES APPLY HEAVILY

C172N | Pro Standards 6 of 18

FIRES

DURING START ON GROUND

CRANKING CONTINUE

TO GET A START WHICH WOULD SUCK THE FLAMES AND ACCUMULATED FUEL THROUGH THE CARBURETOR AND INTO THE ENGINE.

IF ENGINE STARTS:

POWER 1700 RPM FOR A FEW MINUTES. ENGINE SHUTDOWN AND INSPECT FOR DAMAGE.

IF ENGINE FAILS TO START:

THROTTLE FULL OPEN
MIXTURE IDLE CUT-OFF
CRANKING CONTINUE
FIRE EXTINGUISHER OBTAIN

ENGINE SECURE:

MASTER SWITCH OFF IGNITION SWITCH OFF FUEL SELECTOR VALVE OFF

FIRE EXTINGUISH

USING FIRE EXTINGUISHER. WOOL BLANKET, OR DIRT.

FIRE DAMAGE INSPECT, REPAIR DAMAGE OR REPLACE DAMAGED COMPONENTS OR WIRING BEFORE CONDUCTING ANOTHER FLIGHT.

END.

ENGINE FIRE IN FLIGHT

MIXTURE IDLE CUT-OFF
FUEL SELECTOR VALVE OFF
MASTER SWITCH OFF
CABIN HEAT AND AIR OFF
AIRSPEED 100 KIAS

IF FIRE IS NOT EXTINGUISHED

INCREASE GLIDE SPEED TO FIND AN AIRSPEED WHICH WILL PROVIDE AN INCOMBUSTIBLE MIXTURE.

IF FIRE IS EXTINGUISHED

FORCED LANDING EXECUTE

EMERGENCY LANDING WITHOUT ENGINE POWER →

ELECTRICAL FIRE IN FLIGHT

MASTER SWITCH OFF
AVIONICS POWER SWITCH OFF
ALL OTHER SWITCHES OFF
VENTS/CABIN AIR/HEAT CLOSED
FIRE EXTINGUISHER ACTIVATE

AFTER DISCHARGING AN EXTINGUISHER WITHIN A CLOSED CABIN, VENTILATE THE CABIN.

IF FIRE APPEARS OUT AND ELECTRICAL POWER IS NECESSARY FOR CONTINUANCE OF FLIGHT

MASTER SWITCH ON CIRCUIT BREAKERS CHECK

FOR FAULTY CIRCUIT, DO NOT RESET.

RADIO SWITCHES OFF
AVIONICS POWER SWITCH ON
RADIO/ELECTRICAL SWITCHES ON ONE AT A
TIME WITH DELAY AFTER EACH UNTIL SHORT

CIRCUIT IS LOCALIZED.

IF FIRE IS EXTINGUISHED

VENTS/CABIN AIR/HEAT OPEN

PRECAUTIONARY LANDING WITH ENGINE POWER →

CABIN FIRE

MASTER SWITCH OFF
VENTS/CABIN AIR/HEAT CLOSED
FIRE EXTINGUISHER ACTIVATE

AFTER DISCHARGING AN EXTINGUISHER WITHIN A CLOSED CABIN. VENTILATE THE CABIN.

LAND THE AIRPLANE AS SOON AS POSSIBLE TO INSPECT FOR DAMAGE.

PRECAUTIONARY LANDING WITH ENGINE POWER →

C172N | Pro Standards 7 of 18

WING FIRE

NAVIGATION LIGHT SWITCH OFF PITOT HEAT SWITCH OFF STROBE LIGHT SWITCH OFF

NOTE

PERFORM A SIDESLIP TO KEEP THE FLAMES AWAY FROM THE FUEL TANK AND CABIN, AND LAND AS SOON AS POSSIBLE USING FLAPS ONLY AS REQUIRED FOR FINAL APPROACH AND TOUCHDOWN

PRECAUTIONARY LANDING WITH ENGINE POWER →

C172N | Pro Standards 8 of 18

ICING

INADVERTENT ICING ENCOUNTER

TURN PITOT HEAT SWITCH ON FULL CABIN HEAT DEFROSTER OUTLET **OPEN CABIN AIR MAXIMUM THROTTLE INCREASE NEAREST AIRPORT** LAND LANDING FLAPS UP APPROACH SPEED 75 KIAS

TURN BACK OR CHANGE ALTITUDE TO OBTAIN AN OUTSIDE AIR TEMPERATURE THAT IS LESS CONDUCIVE TO ICING.

PULL CABIN HEAT CONTROL FULL OUT AND OPEN DEFROSTER OUTLET TO OBTAIN MAXIMUM WINDSHIELD DEFROSTER AIRFLOW. ADJUST CABIN AIR CONTROL TO GET MAXIMUM DEFROSTER HEAT AND AIRFLOW.

OPEN THE THROTTLE TO INCREASE ENGINE SPEED AND MINIMIZE ICE BUILD UP ON PROPELLER BLADES

WATCH FOR SIGNS OF CARBURETOR AIR FILTER ICE AND APPLY CARBURETOR HEAT AS REQUIRED. AN UNEXPLAINED LOSS IN ENGINE SPEED COULD BE CAUSED BY CARBURETOR ICE OR AIR INTAKE FILTER ICE. LEAN THE MIXTURE FOR MAXIMUM RPM. IF CARBURETOR HEAT IS USED CONTINUOUSLY.

PLAN A LANDING AT THE NEAREST AIRPORT.

WITH AN EXTREMELY RAPID ICE BUILD-UP, SELECT A SUITABLE "OFF AIRPORT" LANDING SITE.

WITH AN ICE ACCUMULATION OF 1/4 INCH OR MORE ON THE WING LEADING EDGES, BE PREPARED FOR SIGNIFICANTLY HIGHER STALL SPEED.

LEAVE WING FLAPS RETRACTED.

WITH A SEVERE ICE BUILD-UP ON THE HORIZONTAL TAIL, THE CHANGE IN WING WAKE AIRFLOW DIRECTION CAUSED BY WING FLAP EXTENSION COULD RESULT IN A LOSS OF ELEVATOR EFFECTIVE NESS.

OPEN LEFT WINDOW AND, IF PRACTICAL, SCRAPE ICE FROM A PORTION OF THE WINDSHIELD FOR VISIBILITY IN THE LANDING APPROACH.

PERFORM A LANDING APPROACH USING A FORWARD SLIP, IF NECESSARY, FOR IMPROVED VISIBILITY. APPROACH AT 65 TO 75 KIAS DEPENDING UPON THE AMOUNT OF THE ACCUMULATION.

END.

STATIC SOURCE BLOCKAGE

(ERRONEOUS INSTRUMENT READING SUSPECTED)

ALTERNATE STATIC SOURCE VALVE PULL ON AIRSPEED CONSULT APPROPRIATE CALIBRATION TABLES IN SECTION 5

C172N | Pro Standards 9 of 18

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

AMMETER SHOWS EXCESSIVE RATE OF CHARGE

(FULL SCALE DEFLECTION)

ALTERNATOR OFF NONESSENTIAL ELECTRICAL EQUIPMENT OFF FLIGHT TERMINATE

END.

AIRCRAFT ELECTRICAL SYSTEM FAILURE

OPERATION ON BACKUP BATTERY

DISPLAYS EQUIPPED WITH A BACKUP BATTERY WILL CONTINUE TO OPERATE AFTER A LOSS OF AIRCRAFT ELECTRICAL POWER.

OPERATION ON BATTERY POWER IS INDICATED BY THE PRESENCE OF A BATTERY ICON ON THE AFFECTED DISPLAY.

GREEN BATTERY INDICATION 60MINS
YELLOW BATTERY INDICATION 59MINS - 15MINS
RED BATTERY LESS THAN 15MINS

BACKUP BATTERY TEMPERATURE CHECK

IF TEMP -19°C - 79° C

BATTERY CHARGE CHECK FLIGHT TERMINATE

IF BATT TEMP OUTSIDE OPERATING RANGE

BACKUP BATTERY POWER OFF FLIGHT CONDITIONS VFR

FLIGHT TERMINATE

NOTE

FOR PROTECTION, BACKUP BATTERY OPERATION IS INHIBITED IF THE BATTERY'S TEMPERATURE DROPS BELOW -20° C OR EXCEEDS 80° C. BATTERY

CAUTION

TO CONSERVE POWER AND TO PRESERVE THE DISPLAY OF PRIMARY FLIGHT DATA AND DIRECT-TO NAVIGATION CAPABILITIES WITH THE OPTIONAL VGPS RECEIVER, GI 275 BACKUP BATTERY OPERATION INTERNALLY LOAD-SHEDS INTERFACES, WHICH WILL DISABLE THE NORMAL INTERFACE WITH CERTIFIED NAVIGATORS OR OTHER HAZARD AWARENESS SYSTEMS. DEPENDING ON HOW THESE WERE INSTALLED AND CONFIGURED TO THE GI 275, SOME INFORMATION FROM THESE CONFIGURED SYSTEMS WILL NOT BE AVAILABLE WHEN THE GI 275 IS OPERATING ON ITS BACKUP BATTERY.

C172N | Pro Standards 10 of 18

LANDINGS

LANDING WITH A FLAT MAIN TIRE

APPROACH **NORMAL** GOOD TIRE FIRST, TOUCHDOWN HOLD AIRPLANE OFF FLAT TIRE AS LONG AS POSSIBLE.

END.

NO FLAP LANDING

APPROACH 70 KIAS

END.

AVIONICS

Loss of Primary Flight Information

IF THE PRIMARY GI 275 ADI FAILS (LOSS OF SOME OR ALL PRIMARY FLIGHT INFORMATION, DISPLAY IS BLANK, FROZEN, OR UNRESPONSIVE).

STANDBY INSTRUMENTS REFERENCE **NAVIATION SOURCES** REFERENCE FLIGHT CONDITIONS VFR **TERMINATE FLIGHT**

END.

SYNTHETIC VISION MALFUNCTION

IF THE SYNTHETIC VISION DEPICTION IS KNOWN OR SUSPECTED TO BE INACCURATE OR MALFUNCTIONING:

SYNTHETIC TERRAIN OFF

TURN OFF SYNTHETIC TERRAIN USING THE MENU ightarrowOPTIONS \rightarrow TERRAIN SVT MENU ON THE ADI.

END.

NAVIGATION DATA FAILURE (VOR/LOC/GS)

NAVIGATION DATA FAILURE MAY BE INDICATED BY ANY OR ALL OF THE FOLLOWING:

LOSS OF COURSE DEVIATION INFORMATION ON

ADI

LOSS OF GLIDESLOPE/GLIDEPATH

INFORMATION ON ADI

LOSS OF BEARING POINTER ON HSI

NAVIGATION SOURCE CHANGE EXTERNAL NAVIGATION SOURCE USE

ANNUNCIATED PROCEDURES

CARBON MONOXIDE INDICATION

CABIN HEAT OFF
CABIN AIR ON
CABIN VENTS OPEN
CABIN WINDOWS OPEN
FLIGHT TERMINATE

END.

LOW-VOLTAGE LIGHT ILLUMINATES

(AMMETER INDICATES DISCHARGE)

NOTE

ILLUMINATION OF THE LOW-VOLTAGE LIGHT MAY OCCUR DURING LOW RPM CONDITIONS WITH AN ELECTRICAL LOAD ON THE SYSTEM SUCH AS DURING A LOW RPM TAXI. UNDER THESE CONDITIONS, THE LIGHT WILL GO OUT AT HIGHER RPM. THE MASTER SWITCH NEED NOT BE RECYCLED SINCE AN OVER-VOLTAGE CONDITION HAS NOT OCCURRED TO DE-ACTIVATE THE ALTERNATOR SYSTEM.

AVIONICS POWER SWITCH OFF
MASTER SWITCH OFF
MASTER SWITCH ON
LOW-VOLTAGE LIGHT CHECK OFF
AVIONICS POWER SWITCH ON

IF LOW-VOLTAGE LIGHT ILLUMINATES AGAIN:

ALTERNATOR OFF NONESSENTIAL RADIO OFF ELECTRICAL EQUIPMENT OFF FLIGHT TERMINATE

AIRCRAFT ELECTRICAL SYSTEM FAILURE →

ADC Failure

ADC FAILURE IS INDICATED BY:

RED X OVER THE AIRSPEED AND ALTITUDE

TAPES

YELLOW X OVER THE DIGITAL VERTICAL SPEED

VALUE

STANDBY INSTRUMENTS REFERENCE
NAVIATION SOURCES REFERENCE
FLIGHT CONDITIONS VFR
FLIGHT TERMINATE

CONTINUE →

IF VALID GPS DATA IS AVAILABLE:

THE GI 275 WILL AUTOMATICALLY REVERT TO DISPLAY GPS-CALCULATED ALTITUDE RELATIVE TO MEAN SEA LEVEL. GPS ALTITUDE IS DISPLAYED IN MAGENTA, IN THE SAME LOCATION AS NORMAL OPERATION.

END.

ATTITUDE. ALT. OR IAS MONITOR CAUTION

IF AN ATTITUDE, ALT, OR IAS MISCOMPARE CAUTION IS DISPLAYED IN YELLOW ON THE ATTITUDE DISPLAY OR AIRSPEED/ALTITUDE TAPE:

STANDBY INSTRUMENTS CROSSCHECK
NAVIATION SOURCES REFERENCE
FLIGHT CONDITIONS VFR
FLIGHT TERMINATE

NOTE

WHITE ATTITUDE/ALT/IAS NO COMPARE ANNUNCIATIONS INDICATE THAT THE OTHER AHRS/ADC SOURCE IS NOT AVAILABLE.

END.

GPS DATA FAILURE

GPS DATA FAILURE MAY BE INDICATED BY ANY OR ALL OF THE FOLLOWING:

LOSS OF GPS COURSE DEVIATION INFORMATION ON HSI

YELLOW "LOI" TEXT ON THE ADI
YELLOW "DR" TEXT ON THE MOVING MAP
YELLOW "NO GPS POSITION" TEXT ON THE

MOVING MAP.

LOSS OF WAYPOINT BEARING/DISTANCE INFORMATION

CDI SOURCE CHANGE

END.

BACKUP BATTERY MALFUNCTION

A MALFUNCTION OF THE BACKUP BATTERY IS INDICATED BY THE FOLLOWING INDICATION IN THE UPPER LEFT CORNER OF THE SCREEN WITH A SYSTEM ADVISORY MESSAGE:

FLIGHT CONDITIONS VFR FLIGHT TERMINATE

C172N | Pro Standards 12 of 18

DISPLAY OVER TEMPERATURE

IF THE DISPLAY IS IN AN OVERHEATING CONDITION, THE SYSTEM WILL ALERT THE PILOT WITH A SYSTEM MESSAGE. THE SYSTEM MESSAGE WILL READ "DISPLAY OVER TEMPERATURE"

STANDBY INSTRUMENTS REFERENCE NAVIATION SOURCES REFERENCE

LOSS OF PRIMARY FLIGHT INFORMATION →

AHRS ALIGN

IF AN "AHRS ALIGN / KEEP WINGS LEVEL" ANNUNCIATION IS DISPLAYED ON THE ATTITUDE INDICATOR IN FLIGHT, LIMIT AIRCRAFT OPERATION TO:

±10° BANK ±5° PITCH 200 KTAS OR LESS

CAUTION

EXCEEDING THESE VALUES MAY DELAY OR PREVENT AHRS ALIGNMENT.

C172N | Pro Standards 13 of 18

ANNUNCIATION INDEX

3.3.1 WARNING Annunciations – Red			
Annunciation	Pilot Action	Cause	
HDG Fail	Use Standby Magnetic Compass or GPS track information	Display system is not receiving valid heading input from the ADAHRS or AHRS; accompanied by a red X through the digital heading display.	
Red X ATTITUDE FAIL HDG FAIL TOUR TOUR	Reference the data source or alternate equipment.	A red X through any display field, indicates that display field is not receiving data or is corrupted.	
Red EIS Alert Banner OIL PRESS	Observe the warning indication on the EIS display and take appropriate action.	One or more engine parameters have exceeded a warning threshold.	
Red Engine Parameter	Take appropriate action to correct condition causing engine parameter exceedance	The engine parameter has exceeded the warning threshold.	
Terrain warning TER	Take appropriate action to maneuver the aircraft away from the conflicting terrain	Terrain warning due to aircraft proximity to surrounding terrain	

C172N | Pro Standards 14 of 18

3.3.2 CAUTION Annunciations – Yellow				
Annunciation	Pilot Action	Cause		
AHRS ALIGN – Keep Wings Level AHRS ALIGN Keep Wings Level	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 NOT READY – Do Not Takeoff AHRS NOT READY DO NOT TAKEOFF	Remain stationary and allow AHRS to finish initialization and allow navigators to acquire sufficient GPS position.	AHRS sensors are not ready for flight. Additionally, the interfaced navigator does not have sufficient GPS position.		
LOI	Loss of Integrity Monitoring	GPS integrity is insufficient for the current phase of flight.		
No GPS Position No GPS POS	Use alternate information for positional and situational awareness	GPS data is unavailable.		
Yellow X	Reference the data source or alternate equipment.	A yellow X through any display field, indicates that display field is not receiving data or is corrupted.		
ATTITUDE	Fly aircraft manually and crosscheck attitude indication with standby attitude indicator and other sources of attitude information (airspeed, heading, altitude, etc.)	The ADI attitude monitors have detected an AHRS malfunction or an error between AHRS sources (if multiple sources installed). Autopilot may disconnect if AHRS is being used to drive the autopilot.		

C172N | Pro Standards 15 of 18

3.3.3 Advisories – White				
Annunciation	Pilot Action	Cause		
ATTITUDE, ALT, or IAS (text on ADI) ATTITUDE ALT IAS	Be aware that the other (unselected) AHRS/ADC source is not available	The other (unselected) AHRS/ADC source is unavailable.		
AHRS 1/2/3 AHRS 1	Confirm intended AHRS source selection	The ADI is using the cross-side AHRS sensor (multiple ADI and ADC installations only).		
ADC 1/2/3 ADC 1	Confirm intended ADC source selection	The ADI is using the cross- side ADC sensor (multiple ADI and ADC installations only).		
Messages Icon	View and consider advisory messages. Refer to the GI 275 Pilot Guide for appropriate pilot or service action.	Typically, these indicate system or database status, or data communication issues within the GI 275 System.		
Terrain Inhibited TER	Use vigilance, traffic system will not provide alerting.	Terrain is inhibited or a terrain test is in progress		
External Navigator Message Icon	View and consider advisory messages on interfaced navigator. Refer to Pilot Guide for the external navigator for appropriate pilot of service action.	Typically, these indicate system or database status.		

C172N | Pro Standards 16 of 18

C172N | **Pro Standards** 17 of 18

ALT and/or IAS (text on ADI)	Cross-check the flagged information against other sources to identify erroneous information.	Differences detected between displayed airspeed and/or altitude (multiple ADC installations only).
AHRS 1/2/3 AHRS 1	Confirm intended AHRS source selection	The ADI is using the cross-side AHRS sensor and AHRS monitor is indicating a miscompare or no- compare (multiple ADI and AHRS installations only).
ADC 1/2/3 ADC 1	Confirm intended ADC source selection	The ADI is using the cross-side ADC sensor and ADC monitor is indicating a miscompare or nocompare (multiple ADI and ADC installations only).
Yellow Alert Banner on EIS BATT VOLTS	Observe the caution indication on the EIS display and take appropriate action.	One or more engine parameters have exceeded a caution threshold.
Yellow EIS Parameter	Take appropriate action to correct condition causing engine parameter exceedance.	The engine parameter has exceeded the caution threshold.
Traffic Caution	Visually acquire the traffic to see and avoid.	The interfaced traffic system has determined that nearby traffic may be a threat to the aircraft.
Terrain Caution TER	Take appropriate action to maneuver the aircraft away from the conflicting terrain	Terrain caution due to aircraft proximity to surrounding terrain
TAWS N/A, TAWS FAIL	Use vigilance, terrain depiction and TAWS alerting are no longer provided.	External system that is providing TAWS alerting has failed, or the GI 275 cannot communicate with the system.

C172N | Pro Standards 18 of 18

Battery Fault	Observe the fault condition on the GI 275 by entering the system messages for further details. Seek VFR flight conditions or land as practical.	The Internal battery has detected an issue which may not allow the battery to charge or discharge properly. Such as "Charge Inhibited - unable to charge the battery"
GPSS Invalid	Set an active GPS leg to engage GPSS mode or select HDG as the function.	GPSS mode invalid, wings level command sent to autopilot, no active GPS leg, GPS not selected on HSI/ADI 1.
GLIDE GLIDE	Smart Glide is active on the GTN.	Reference the GTN Xi AFMS for Smart Glide details and pilot actions.