

Fault Codes

Section 4A - Fault Codes

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Mercury UFC List - V6/V8 FourStroke

The following table lists every fault currently (as of this writing) enabled on Mercury V6 and V8 FourStroke outboard engines. Not all faults will apply to every model. The faults are presented in the order of their Mercury universal fault code (UFC). The columns contain the following information

- Fault (first half of the UFC)
 - Code (3 or 4 digits)
 - Description (as presented in CDS G3)
- Failure (second half of the UFC)
 - Code (1 or 2 digits)
 - Description (as presented in CDS G3)
- PCM Fault Name - The full fault name, as displayed in CDS G3. The fault descriptions and resolutions in this section are listed alphabetically by this name.

Fault		Failure		PCM Fault Name
Code	Description	Code	Description	
0	Fault system	0	The system has no active faults.	(None)
101	Ignition circuit 1	16	The ECU has detected a problem when trying to output a signal to this device.	EST1_OutputFault
102	Ignition circuit 2	16	The ECU has detected a problem when trying to output a signal to this device.	EST2_OutputFault
103	Ignition circuit 3	16	The ECU has detected a problem when trying to output a signal to this device.	EST3_OutputFault
104	Ignition circuit 4	16	The ECU has detected a problem when trying to output a signal to this device.	EST4_OutputFault
201	Fuel injector circuit 1	16	The ECU has detected a problem when trying to output a signal to this device.	INJ1_OutputFault
202	Fuel injector circuit 2	16	The ECU has detected a problem when trying to output a signal to this device.	INJ2_OutputFault
203	Fuel injector circuit 3	16	The ECU has detected a problem when trying to output a signal to this device.	INJ3_OutputFault
204	Fuel injector circuit 4	16	The ECU has detected a problem when trying to output a signal to this device.	INJ4_OutputFault
205	Fuel injector circuit 5	16	The ECU has detected a problem when trying to output a signal to this device.	INJ5_OutputFault
206	Fuel injector circuit 6	16	The ECU has detected a problem when trying to output a signal to this device.	INJ6_OutputFault
207	Fuel injector circuit 7	16	The ECU has detected a problem when trying to output a signal to this device.	INJ7_OutputFault
208	Fuel injector circuit 8	16	The ECU has detected a problem when trying to output a signal to this device.	INJ8_OutputFault
301	Throttle position sensor A	24	The input circuit for the sensor is above the valid limit.	TPS1_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	TPS1_RangeLow
302	Throttle position sensor B	24	The input circuit for the sensor is above the valid limit.	TPS2_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	TPS2_RangeLow
311	Throttle position sensors A and B	6	The device, calculation or process detected a fault.	Dual_TPS_Faults
331	Throttle position sensors A and B difference	6	The device, calculation or process detected a fault.	ETC_TPSDisagree
341	Throttle position sensor adapt A	6	The device, calculation or process detected a fault.	TPS1_ETC_NoAdapt

Fault Codes

Fault		Failure		PCM Fault Name
Code	Description	Code	Description	
342	Throttle position sensor adapt B	6	The device, calculation or process detected a fault.	TPS2_ETC_NoAdapt
401	Manifold pressure sensor using time sampling	24	The input circuit for the sensor is above the valid limit.	MAP_Time_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	MAP_Time_RangeLow
402	Manifold pressure sensor using angle sampling	24	The input circuit for the sensor is above the valid limit.	MAP_Angle_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	MAP_Angle_RangeLow
404	Manifold pressure sensor and throttle position sensor A rationality	6	The device, calculation or process detected a fault.	MAPR_TPS1Rationality
405	Manifold pressure sensor and throttle position sensor B rationality	6	The device, calculation or process detected a fault.	MAPR_TPS2Rationality
407	Manifold pressure sensor barometer reading	17	The signal or result is outside the expected range.	BaroRange
421	Seawater pump pressure	24	The input circuit for the sensor is above the valid limit.	SeaPumpPress_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	SeaPumpPress_RangeLow
431	Oil pressure	21	Relative to a specified threshold, the value is too low.	OilPress_Low
		24	The input circuit for the sensor is above the valid limit.	OilPress_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	OilPress_RangeLow
511	Intake manifold air temperature	24	The input circuit for the sensor is above the valid limit.	IAT_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	IAT_RangeLow
521	Engine coolant temperature starboard	20	A temperature sensor value is higher than normal.	StbdECT_Overtemp
		24	The input circuit for the sensor is above the valid limit.	StbdECT_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	StbdECT_RangeLow
531	Oil temperature	24	The input circuit for the sensor is above the valid limit.	OilTemp_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	OilTemp_RangeLow
572	Bank 1 exhaust gas temperature sensor	24	The input circuit for the sensor is above the valid limit.	EGT_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	EGT_RangeLow
601	Sensor supply voltage A	4	The signal received is valid but is higher than the expected range.	XDRPa_RangeHigh
		5	The signal received is valid but is lower than the expected range.	XDRPa_RangeLow
602	Sensor supply voltage B	4	The signal received is valid but is higher than the expected range.	XDRPb_RangeHigh
		5	The signal received is valid but is lower than the expected range.	XDRPb_RangeLow

Fault		Failure		PCM Fault Name
Code	Description	Code	Description	
603	Sensor supply voltage C	4	The signal received is valid but is higher than the expected range.	XDRPc_RangeHigh
		5	The signal received is valid but is lower than the expected range.	XDRPc_RangeLow
621	System voltage	4	The signal received is valid but is higher than the expected range.	SysVolt_RangeHigh
		5	The signal received is valid but is lower than the expected range.	SysVolt_RangeLow
711	Oil level sensor	6	The device, calculation or process detected a fault.	OilLevel_Sensor_Faulted
		12	The device is disabled due to conditions present.	OilLevel_Sensor_Invalid
		19	Conditions are such that the test cannot be performed.	OilLevelInvalid
		24	The input circuit for the sensor is above the valid limit.	OilLevel_RangeHigh
713	Crankcase oil level	21	Relative to a specified threshold, the value is too low.	OilLevel_Critically_Low
821	O2 sensor Port S1	1	The output signal from the ECU to the device is open circuit or has too much resistance.	UEGO1_Sensor_Open
		27	The input signal to the ECU from the device is short circuit or has too little resistance.	UEGO1_Sensor_Short
822	O2 sensor heater Port S1	4	The signal received is valid but is higher than the expected range.	UEGO1_HtrUpLimit
		5	The signal received is valid but is lower than the expected range.	UEGO1_HtrLwrLimit
		16	The ECU has detected a problem when trying to output a signal to this device.	UEGO1_HtrOpnShrt
902	Short term fuel trim Port	4	The signal received is valid but is higher than the expected range.	O2Control_ITermHighPort
		5	The signal received is valid but is lower than the expected range.	O2Control_ITermLowPort
1012	Engine or drive trim position	24	The input circuit for the sensor is above the valid limit.	TrimPos_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	TrimPos_RangeLow
1021	Shift position A from shift actuator	24	The input circuit for the sensor is above the valid limit.	ShiftPos_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	ShiftPos_RangeLow
1023	Shift position B from shift actuator	24	The input circuit for the sensor is above the valid limit.	ShiftPos2_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	ShiftPos2_RangeLow
1024	Shift position from shift actuator A and B difference	6	The device, calculation or process detected a fault.	ShiftPositionSensor_Diff
1025	Shift position A and B from shift actuator	6	The device, calculation or process detected a fault.	Dual_ShiftPosSen_Fault
1051	Camshaft synchronization	23	A particular state or condition exists.	Camshaft_Encoder_Fault
1052	Crankshaft or camshaft trigger	6	The device, calculation or process detected a fault.	EncoderFaultCrankCamTrigger
1061	Mechanical demand sensor A	24	The input circuit for the sensor is above the valid limit.	DemandSensor1_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	DemandSensor1_RangeLow

Fault Codes

Fault		Failure		PCM Fault Name
Code	Description	Code	Description	
1062	Mechanical demand sensor B	24	The input circuit for the sensor is above the valid limit.	DemandSensor2_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	DemandSensor2_RangeLow
1063	Mechanical shift demand sensor A	24	The input circuit for the sensor is above the valid limit.	ShiftDmdSensor1_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	ShiftDmdSensor1_RangeLow
1064	Mechanical shift demand sensor A	24	The input circuit for the sensor is above the valid limit.	ShiftDmdSensor2_RangeHigh
		25	The input circuit for the sensor is below the valid limit.	ShiftDmdSensor2_RangeLow
1071	Mechanical demand sensor adapt A	6	The device, calculation or process detected a fault.	DmdSense1_NoAdapt
1072	Mechanical demand sensor adapt B	6	The device, calculation or process detected a fault.	DmdSense2_NoAdapt
1073	Mechanical demand sensors A and B difference	6	The device, calculation or process detected a fault.	DemandSensor_Diff
1074	Mechanical demand sensors A and B	6	The device, calculation or process detected a fault.	Dual_DemandSen_Fault
1077	Mechanical shift demand sensors A and B difference	6	The device, calculation or process detected a fault.	ShiftDemandSensor_Diff
1078	Mechanical shift demand sensors A and B	6	The device, calculation or process detected a fault.	Dual_ShiftDemandSen_Fault
1108	Water in fuel	25	The input circuit for the sensor is below the valid limit.	WaterInFuel_RangeLow
1109	Emergency stop	23	A particular state or condition exists.	ESTOP_Active
2011	Guardian	23	A particular state or condition exists.	Guardian_Active
2021	Guardian due to oil temperature	6	The device, calculation or process detected a fault.	Guardian_OilTemp
		23	A particular state or condition exists.	Guardian_Oil_Temp_Derate
2032	Guardian due to exhaust system temperature	23	A particular state or condition exists.	Guardian_EGTTemp
2051	Guardian due to oil pressure	23	A particular state or condition exists.	Guardian_OilPressure
2061	Guardian due to coolant pressure	23	A particular state or condition exists.	Guardian_WaterPressure
2081	Guardian due to overheat	23	A particular state or condition exists.	Guardian_Overheat
2091	Guardian due to overspeed	23	A particular state or condition exists.	Guardian_Overspeed
2092	Neutral overspeed	23	A particular state or condition exists.	Neutral_Overspeed
2101	Guardian due to power limit from helm module	23	A particular state or condition exists.	Guardian_uXPowerLimit
2111	Guardian due to voltage	23	A particular state or condition exists.	Guardian_Voltage
2124	Exhaust gas temperature S2	20	A temperature sensor value is higher than normal.	EGT_Overtemp
3002	Active exhaust valve	16	The ECU has detected a problem when trying to output a signal to this device.	AEV_OutputFault
3012	Electronic throttle control loss of control	6	The device, calculation or process detected a fault.	ETC_Loss_Of_Control
3013	Electronic throttle control output	6	The device, calculation or process detected a fault.	ETC_OutputFault
3014	Electronic throttle control sticking	6	The device, calculation or process detected a fault.	ETC_Sticking

Fault		Failure		PCM Fault Name
Code	Description	Code	Description	
3031	Electronic shift control commanded to actual position difference	6	The device, calculation or process detected a fault.	ESC_DesiredActualDiff
3032	Electronic shift control loss of control	6	The device, calculation or process detected a fault.	ESCLossOfControl
3033	Electronic shift control reverse adapt	6	The device, calculation or process detected a fault.	ESC_NoAdapt_Reverse
3034	Electronic shift control forward adapt	6	The device, calculation or process detected a fault.	ESC_NoAdapt_Forward
3037	Electronic shift control timeout	6	The device, calculation or process detected a fault.	ESC_TimeOut
3039	Reverse Gear Unavailable	23	A particular state or condition exists.	Loss_of_Shift_Command
3049	Hydraulic shift	16	The ECU has detected a problem when trying to output a signal to this device.	SHFT_OutputFault
3061	Fuel pump	16	The ECU has detected a problem when trying to output a signal to this device.	FULP_OutputFault
3152	Warning horn	16	The ECU has detected a problem when trying to output a signal to this device.	HORN_OutputFault
3171	Starter	16	The ECU has detected a problem when trying to output a signal to this device.	STRT_OutputFault
3181	Trim up	16	The ECU has detected a problem when trying to output a signal to this device.	TRMU_OutputFault
3182	Trim down	16	The ECU has detected a problem when trying to output a signal to this device.	TRMD_OutputFault
4001	Demand crosscheck	6	The device, calculation or process detected a fault.	Demand_XCheck_Diff
4002	Shift crosscheck	6	The device, calculation or process detected a fault.	Shift_XCheck_Diff
4003	Helm module crosscheck	6	The device, calculation or process detected a fault.	MicroChi_PWM_ADC
4004	CAN X Doc 01 state of health	6	The device, calculation or process detected a fault.	RxDoc1_SOH
4005	CAN P Doc 02 state of health	6	The device, calculation or process detected a fault.	RxDoc2_SOH
4006	CAN P Doc 03 state of health	6	The device, calculation or process detected a fault.	RxDoc3_SOH
4007	CAN X Doc 07 state of health	6	The device, calculation or process detected a fault.	RxDoc7_SOH
4008	CAN X Doc 09 state of health	6	The device, calculation or process detected a fault.	RxDoc9_SOH
4009	CAN X Doc 10 state of health	6	The device, calculation or process detected a fault.	RxDoc10_SOH
4010	CAN X Doc 11 state of health	6	The device, calculation or process detected a fault.	RxDoc11_SOH
4011	CAN bus authentication timeout	23	A particular state or condition exists.	AuthTimeout
4012	CAN P and CAN X state of health	6	The device, calculation or process detected a fault.	Dual_CAN_SOH_Faults
4013	Watchdog	23	A particular state or condition exists.	Watchdog_Active
4014	Watchdog module crosscheck	6	The device, calculation or process detected a fault.	Crosscheck_Failed
4016	Watchdog crosscheck state of health	6	The device, calculation or process detected a fault.	SPI_CrosscheckData_SOH
4501	Security device missing	23	A particular state or condition exists.	Security_Device_Missing

Fault Codes

Fault		Failure		PCM Fault Name
Code	Description	Code	Description	
4502	Security locked	23	A particular state or condition exists.	Security_Locked
4503	Security setup	23	A particular state or condition exists.	Security_Setup
4602	Fault blocker system voltage	23	A particular state or condition exists.	SysVolt_FaultBlocker

CDS G3 Freeze Frame Faults

The following pages list all of the faults that could be displayed in the CDS G3 Freeze Frame window for Mercury V6/V8 FourStroke outboards. The faults are sequenced alphabetically. Where applicable, the following details are provided for each fault:

- **Fault Type** - Fault codes may be classified as sticky or nonsticky:

Type of fault	Method to clear
Nonsticky	Clears immediately after the fault is resolved
Sticky	Requires a key cycle (off and on) after the fault is resolved to clear

- **Horn** - A fault can sound the warning horn. The types of warning are critical, caution, or none. Refer to **Section 1F - Audio Warning System** for details.
- **Guardian** - The Guardian Protection System monitors critical engine functions and will reduce engine power accordingly in an attempt to keep the engine running within safe operating parameters.
IMPORTANT: The Guardian Protection System cannot guarantee that powerhead damage will not occur when adverse operating conditions are encountered. The Guardian Protection System is designed to 1) warn the boat operator that the engine is operating under adverse conditions and 2) reduce power by limiting maximum RPM in an attempt to avoid or reduce the possibility of engine damage. The boat operator is ultimately responsible for proper engine operation.
- **UFC** - The universal fault code (UFC) is displayed on VesselView and in some SmartCraft gauges. For a list of faults sorted by UFC, refer to **Mercury UFC List - V6/V8 FourStroke**.
- **Transmission to Helm** - This column identifies whether the fault is transmitted to the helm. Yes = the fault is transmitted to the helm. No = the fault is not transmitted to the helm.
- **Freeze Frame Priority** - This column identifies the priority of the freeze frame; a higher value indicates higher importance.
- **Explanation** - An explanation is provided for what a given fault means.
- **Possible Causes** - The most likely causes for a given fault are presented in list format.
- **Summary of Fault Correction Possibilities**

A

AEV_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	3002-16	Yes	2

Explanation

The advanced sound control valve is not working properly.

Possible Causes

- Wiring problems
- Defective AEV valve

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace AEV valve

AuthTimeout

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	4011-23	Yes	2

Explanation

There is a communication problem with the SmartCraft control system.

Possible Causes

- Wiring issue
- Terminator resistor failed

Summary of Fault Correction Possibilities

- Check the resistance of CanP and Can V. The resistance should be 60 ohms. Correct the wiring issue if present.

B

BaroRange

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	407-17	No	2

Explanation

The manifold absolute pressure (MAP) sensor does not appear to be working properly.

Possible Causes

- Restricted MAP sensor hose
- Defective MAP sensor
- Wiring issues

Summary of Fault Correction Possibilities

- Inspect MAP sensor hose for restrictions
- Inspect MAP sensor wiring
- Replace MAP sensor

C

Camshaft_Encoder_Fault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1051-23	Yes	2

Explanation

The camshaft position sensor does not appear to be working properly.

Possible Causes

- Bad sensor
- Bad wiring
- Mechanical timing problem
- Metallic debris on sensor magnet
- Sensor reference damage

Summary of Fault Correction Possibilities

- Check wiring
- Check mechanical timing
- Check sensor for metallic debris
- Check target for damage

Crosscheck_Failed

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	4014-6	Yes	2

Explanation

There is a communication problem with the SmartCraft control system.

Possible Causes

- Open or short on CAN P (blue and white wires; should measure 58–60 ohms across bottom PCM engine harness pins A11 and A21 and across command module harness pins 8 and 9) or CAN H (brown and yellow wires; should measure 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7).
- Faulty terminator resistor

Summary of Fault Correction Possibilities

- Correct wiring issue
- Install correct count of resistors
- Replace faulty resistor

D

DemandSensor1_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1061-24	Yes	2

Explanation

The primary encoder in the throttle demand sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Sensor problem
- Wiring problem
- Throttle cable adjustment problem

Summary of Fault Correction Possibilities

- Check throttle cable adjustment
- Check wiring
- Replace sensor

DemandSensor1_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1061-25	Yes	2

Explanation

The primary encoder in the throttle demand sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem
- Sensor problem
- Throttle cable out of adjustment

Summary of Fault Correction Possibilities

- Check wiring

- Check throttle cable adjustment
- Replace sensor

DemandSensor2_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1062-24	Yes	2

Explanation

The secondary encoder in the throttle demand sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Sensor problem
- Wiring problem
- Throttle cable adjustment problem

Summary of Fault Correction Possibilities

- Check throttle cable adjustment
- Check wiring
- Replace sensor

DemandSensor2_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1062-25	Yes	2

Explanation

The secondary encoder in the throttle demand sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem
- Sensor problem
- Throttle cable out of adjustment

Summary of Fault Correction Possibilities

- Check wiring
- Check throttle cable adjustment
- Replace sensor

DemandSensor_Diff

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	1073-6	Yes	4

Explanation

The throttle demand sensor does not appear to be working properly. The difference between the primary and secondary encoder signals exceeded the valid limit.

Possible Causes

- Wiring problems
- Failed sensor

Summary of Fault Correction Possibilities

- Check wiring

Fault Codes

- Replace sensor

Demand_XCheck_Diff

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	4001-6	Yes	4

Explanation

This fault indicates that a command module isn't equal to the PCM in the cross check of demand value.

Possible Causes

- Incorrect positions used when configuring levers
- Faulty command module or PCM

Summary of Fault Correction Possibilities

- Reconfigure vessel
- Replace modules

DmdSense1_NoAdapt

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	1071-6	Yes	2

Explanation

The primary encoder in the throttle demand sensor does not appear to be working properly.

Possible Causes

- Wiring issue
- Failed sensor

Summary of Fault Correction Possibilities

- Check wiring
- Replace sensor

DmdSense2_NoAdapt

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	1072-6	Yes	2

Explanation

The secondary encoder in the throttle demand sensor does not appear to be working properly.

Possible Causes

- Wiring issue
- Failed sensor

Summary of Fault Correction Possibilities

- Check wiring
- Replace sensor

Dual_CAN_SOH_Faults

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	4012-6	Yes	4

Explanation

This fault indicates that communication between the helm and the PCM has been lost. There is a discrepancy between CAN circuits.

NOTE: The engine is locked in whichever gear it was in when the fault occurred.

Possible Causes

- Open or short on CAN P (blue and white wires; should measure 58–60 ohms across bottom PCM engine harness pins A11 and A21 and across command module harness pins 8 and 9) or CAN H (brown and yellow wires; should measure 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7).
- Faulty terminator resistor

Summary of Fault Correction Possibilities

- Correct wiring issue
- Install correct count of resistors
- Replace faulty resistor

Dual_DemandSen_Fault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	5%	1074-6	Yes	4

Explanation

The throttle demand sensor does not appear to be working properly.

Possible Causes

- Wiring problem
- Faulty sensor

Summary of Fault Correction Possibilities

- Repair wiring
- Replace sensor

Dual_ShiftDemandSen_Fault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	1078-6	Yes	4

Explanation

The shift demand sensor does not appear to be working properly.

Possible Causes

- Wiring problem
- Faulty sensor

Summary of Fault Correction Possibilities

- Repair wiring
- Replace sensor

Dual_ShiftPosSen_Fault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	1025-6	Yes	4

Explanation

The shift position sensors do not appear to be working properly.

Fault Codes

Possible Causes

- Wiring issue to shift actuator
- Failed shift actuator

Summary of Fault Correction Possibilities

- Inspect wiring to shift actuator
- Replace shift actuator

Dual_TPS_Faults

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	7%	311-6	Yes	4

Explanation

The throttle position sensors (TPS) do not agree.

Possible Causes

- Wiring problem to ETC
- Failed ETC

Summary of Fault Correction Possibilities

- Inspect wiring to ETC
- Replace ETC

E

EGT_Overtemp

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	10%	2124-20	Yes	4

Explanation

The value from the exhaust gas temperature (EGT) sensor is higher than normal, indicating that the exhaust manifold is overheating.

Possible Causes

- Restricted water flow to the outboard
- Plugged exhaust sprayer
- Defective wiring
- Defective sensor

Summary of Fault Correction Possibilities

- Restore water flow
- Remove debris from sprayer
- Check wiring
- Check sensor
- Replace sensor

EGT_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	572-24	Yes	2

Explanation

The exhaust gas temperature (EGT) sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Faulty wiring
- Faulty sensor

Summary of Fault Correction Possibilities

- Check wiring to sensor
- Check sensor
- Check exhaust sprayer outlets

EGT_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	572-25	Yes	2

Explanation

The exhaust gas temperature (EGT) sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem
- Bad sensor

Summary of Fault Correction Possibilities

- Check wiring
- Check sensor
- Replace sensor

ESCLossOfControl

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	3032-6	Yes	4

Explanation

The shift actuator does not appear to be working properly.

Possible Causes

- Wiring problem
- Worn linkage
- Gearcase problem
- Faulty shift actuator

Summary of Fault Correction Possibilities

- Correct wiring issue
- Replace worn shift linkage components
- Replace worn gearcase components
- Replace shift actuator

ESC_DesiredActualDiff

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	3031-6	Yes	4

Explanation

The shift actuator does not appear to be working properly.

Possible Causes

- Wiring problem
- Worn linkage
- Gearcase problem
- Faulty shift actuator

Summary of Fault Correction Possibilities

- Correct wiring issue
- Replace worn shift linkage components
- Replace worn gearcase components
- Replace shift actuator

ESC_NoAdapt_Forward

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	3034-6	Yes	2

Explanation

The shift actuator does not appear to be working properly.

Possible Causes

- Wiring problem
- Worn linkage
- Gearcase problem
- Faulty shift actuator

Summary of Fault Correction Possibilities

- Correct wiring issue
- Replace worn shift linkage components
- Replace worn gearcase components
- Replace shift actuator

ESC_NoAdapt_Reverse

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	3033-6	Yes	2

Explanation

The shift actuator does not appear to be working properly.

Possible Causes

- Wiring problem
- Worn linkage
- Gearcase problem
- Faulty shift actuator

Summary of Fault Correction Possibilities

- Correct wiring issue
- Replace worn shift linkage components
- Replace worn gearcase components
- Replace shift actuator

ESC_TimeOut

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	3037-6	Yes	2

Explanation

This fault indicates that the shift actuator has not physically moved with respect to the control lever (demand) position. This can also denote the PCM is constantly trying to adjust the ESC because it is falling out of the adapted position. If the ESC tries to continuously adjust, the PCM will time out the circuit. This fault is most prevalent under high torque use.

Possible Causes

- Linkage problem
- Wiring problem
- Faulty electronic shift control (ESC)
- Faulty gearcase

Summary of Fault Correction Possibilities

- Correct wiring issue
- Replace worn shift linkage components
- Replace worn gearcase components
- Replace shift actuator

EST1_OutputFault

EST2_OutputFault

EST3_OutputFault

EST4_OutputFault

The following information applies to **EST1_OutputFault**, **EST2_OutputFault**, **EST3_OutputFault**, and **EST4_OutputFault**.

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	101-16, 102-16, 103-16, 104-16	Yes	2

Explanation

The respective ignition coil (1, 2, 3, or 4) does not appear to be working properly; the PCM detected a problem when trying to send a signal to this coil.

Possible Causes

- Air in the fuel system
- Fouled spark plug
- Failed spark plug wire
- Failed ignition coil
- Damaged wiring to ignition coil

Summary of Fault Correction Possibilities

- Purge fuel system of air
- Replace spark plugs
- Inspect spark plug wires
- Replace ignition coil
- Repair wiring

ESTOP_Active

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	1109-23	Yes	1

Explanation

This fault indicates that an E-stop has been activated. The engine will power up, but the PCM will disregard a start command.

Possible Causes

- Lanyard has been activated or the circuit is shorted
- DTS (if equipped) calibration has not been correctly completed
- Failed command module

Summary of Fault Correction Possibilities

- Deactivate lanyard
- Calibrate DTS system (if equipped)

ETC_Loss_Of_Control

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	7%	3022-6	Yes	4

Explanation

The throttle position (TPS) signals indicate that the actual throttle blade position does not match where the PCM thinks it should be.

Possible Causes

- If this fault was triggered while the engine was in the stall state, the fault was created due to a lack of battery voltage most, likely due to a battery switch being off while the key was turned to the run position
- ETC failed

Summary of Fault Correction Possibilities

- Check the throttle position sensor (TPS) values and throttle % with CDS G3
- Check the connections and pins at the electronic throttle control (ETC)
- Inspect the ETC wiring for chaffing, opens, or a short
- Check for obstructions at the ETC shutter

ETC_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Severe	7%	3023-6	Yes	3

Explanation

The electronic throttle controller (ETC) does not appear to be working properly.

Possible Causes

- If this fault was triggered while the engine was in the stall state, the fault was created due to a lack of battery voltage most, likely due to a battery switch being off while the key was turned to the run position
- ETC failed

Summary of Fault Correction Possibilities

- Check the throttle position sensor (TPS) values and throttle % with CDS G3
- Check the connections and pins at the electronic throttle control (ETC)
- Inspect the ETC wiring for chaffing, opens, or a short
- Check for obstructions at the ETC shutter

ETC_Sticking

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Severe	7%	3014-6	Yes	4

Explanation

The electronic throttle controller (ETC) does not appear to be working properly.

Possible Causes

- Obstruction in the ETC
- Wiring issue

Summary of Fault Correction Possibilities

- Remove contamination from ETC
- Replace ETC

ETC_TPSDisagree

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Severe	7%	331-6	Yes	4

Explanation

The throttle position sensors do not agree.

Possible Causes

- Wiring problem
- Failed ETC

Summary of Fault Correction Possibilities

- Repair wiring problem
- Replace ETC

EncoderFaultCrankCamTrigger

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Severe	100%	1052-6	Yes	3

Explanation

Either the crankshaft position sensor (CPS) or the camshaft position sensor does not appear to be working properly.

Possible Causes

- Wiring problem
- Bad crankshaft position sensor
- Bad camshaft position sensor
- Mechanical timing problem

Summary of Fault Correction Possibilities

- Correct wiring problem
- Inspect crankshaft position sensor
- Inspect camshaft position sensor
- Correct mechanical timing issue

F

FULP_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	3061-16	Yes	3

Explanation

The fuel pump does not appear to be working properly. The PCM detected a problem when trying to send a signal to the fuel pump relay.

Possible Causes

- Wiring issue to fuel pump relay
- Failed fuel pump relay

Summary of Fault Correction Possibilities

- Correct wiring problem
- Replace fuel pump relay

G

Guardian_Active

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	2011-23	Yes	4

Explanation

This fault indicates that engine power is being limited by another fault. Check **Guardian Due to:** on Live Data for the cause. This fault will disappear when other faults are resolved.

Possible Causes

- Inspect for active faults on CDS G3

Summary of Fault Correction Possibilities

- Refer to **Section 1A - Troubleshooting MFD Faults**, or review the specific fault that is listed in CDS G3.

Guardian_EGTTemp

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	2032-23	Yes	4

Explanation

Engine Guardian is active due to exhaust overtemp. Power will be limited to prevent engine damage.

Possible Causes

- Restricted cooling water pickup
- Low cooling water flow
- Restricted or plugged exhaust water sprayer
- Wiring problem to sensor
- Sensor problem

Summary of Fault Correction Possibilities

- Correct cooling water flow problem
- Clean exhaust water sprayer
- Correct wiring problem
- Replace sensor

Guardian_OilPressure

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	2051-23	Yes	4

Explanation

Engine Guardian is active due to low oil pressure. Power will be limited to prevent engine damage.

Possible Causes

- Low engine oil
- Wiring problem to sensor
- Failed sensor
- Restricted oil pickup
- Mechanical problem in lubrication system

Summary of Fault Correction Possibilities

- Fill engine oil
- Inspect wiring
- Check sensor
- Inspect oil pump pickup screen
- Check mechanical oil pressure
- Check bearing clearances, oil pump, and oil pump relief valve

Guardian_Oil_Temp_Derate

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	Variable	2021-23	Yes	4

Explanation

Engine Guardian is active due to excessively high or low oil temp. Power will be limited to prevent engine damage.

Possible Causes

- Engine oil level low
- High ECT
- Wiring issue to sensor
- Failed sensor

Summary of Fault Correction Possibilities

- Fill oil level
- Repair cooling system
- Inspect wiring
- Replace sensor

Guardian_Overheat

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	Variable	2081-23	Yes	4

Explanation

Engine Guardian is active due to engine overtemp. Power will be limited to prevent engine damage.

Possible Causes

- Restricted water flow
- Restricted thermostat
- Blockage in cooling system

Summary of Fault Correction Possibilities

- Backflush cooling system
- Inspect thermostat
- Inspect water pump impeller

Guardian_Overspeed

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	2091-23	No	4

Explanation

Engine Guardian is active due to excessive engine speed. Power will be limited to prevent engine damage.

Possible Causes

- Engine is improperly propped
- Engine height is too high
- Engine is being trimmed too high
- Propeller is cavitating

Summary of Fault Correction Possibilities

- Install correct propeller on the engine
- Correct installation issues

Guardian_Voltage

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	2011-23	Yes	4

Explanation

Engine Guardian is active due to battery voltage. Power will be limited to prevent engine damage.

Possible Causes

- Failed alternator
- Failed fuseable link

Summary of Fault Correction Possibilities

- Replace alternator
- Replace fuseable link

Guardian_uXPowerLimit

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	2101-23	Yes	4

Explanation

Engine Guardian is active due to a helm fault. Power will be limited to prevent engine damage.

Possible Causes

- Use the CDS G3 diagnostic tool to read the command module faults.

Summary of Fault Correction Possibilities

- See the **DTS Diagnostic Manual** for fault explanations.

H

HORN_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	3152-16	Yes	2

Explanation

The warning horn does not appear to be working properly; the PCM detected a problem when trying to send a signal to the horn.

Possible Causes

- Wiring problem to helm
- Failed horn

Summary of Fault Correction Possibilities

- Inspect wiring to helm
- Replace horn

I

IAT_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	511-24	Yes	2

Explanation

The manifold air temperature (MAT) sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring problem to sensor
- Bad sensor

Summary of Fault Correction Possibilities

- Inspect wiring to sensor
- Inspect/replace sensor

IAT_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	511-25	Yes	2

Explanation

The manifold air temperature (MAT) sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem to sensor
- Bad sensor

Summary of Fault Correction Possibilities

- Inspect wiring to sensor
- Inspect/replace sensor

INJ1_OutputFault

INJ2_OutputFault

INJ3_OutputFault

INJ4_OutputFault

INJ5_OutputFault

INJ6_OutputFault

INJ7_OutputFault

INJ8_OutputFault

The following information applies to **INJ1_OutputFault**, **INJ2_OutputFault**, **INJ3_OutputFault**, **INJ4_OutputFault**, **INJ5_OutputFault**, **INJ6_OutputFault**, **INJ7_OutputFault**, and **INJ8_OutputFault**.

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	201-16, 202-16, 203-16, 204-16, 205-16, 206-16, 207-16, 208-16	Yes	2

Explanation

The respective fuel injector does not appear to be working properly; the PCM detected a problem when trying to send a signal to the indicated injector.

Possible Causes

- Wiring problem to fuel injector
- Failed fuel injector

Summary of Fault Correction Possibilities

- Correct wiring problem to fuel injector
- Replace fuel injector

L

Loss_of_Shift_Command

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	3039-23	Yes	3

Explanation

Reverse gear is not available. Moving the control lever into reverse will result in a forward gear shift.

Possible Causes

- Wiring problem to shift demand sensor
- Failed shift demand sensor

Summary of Fault Correction Possibilities

- Correct wiring problem to shift demand sensor
- Replace shift demand sensor

M

MAPR_TPS1Rationality

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	404-6	Yes	2

Explanation

The values received from the manifold absolute pressure (MAP) sensor and the primary encoder in the throttle position sensor (TPS) do not agree.

Possible Causes

- Wiring problem to either the MAP or to the ETC
- ETC opening is restricted or airflow to the engine is restricted
- Intake manifold has vacuum leak
- MAP sensor or ETC are failed

Summary of Fault Correction Possibilities

- Correct wiring to sensor or ETC
- Inspect sensor and ETC
- Inspect for manifold air leaks
- Inspect for obstructions to the engines air inlet to ETC

MAPR_TPS2Rationality

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	405-6	Yes	2

Explanation

The values received from the manifold absolute pressure (MAP) sensor and the secondary encoder in the throttle position sensor (TPS) do not agree.

Possible Causes

- Wiring problem to either the MAP or to the ETC
- ETC opening is restricted or airflow to the engine is restricted
- Intake manifold has vacuum leak
- MAP sensor or ETC are failed

Summary of Fault Correction Possibilities

- Correct wiring to sensor or ETC
- Inspect sensor and ETC
- Inspect for manifold air leaks
- Inspect for obstructions to the engines air inlet to ETC

MAP_Angle_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	402-24	No	1

Explanation

The manifold absolute pressure (MAP) sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Sensor out of range
- Wiring problem

Fault Codes

- Reference hose to map sensor failed
- Valve train issue

Summary of Fault Correction Possibilities

- Check reference hose for leaks
- Check wiring
- Replace sensor
- Check cylinder leak down

MAP_Angle_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	402-25	No	1

Explanation

The manifold absolute pressure (MAP) sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Sensor out of range
- Wiring problem
- Reference hose to sensor restricted
- Valve train issue

Summary of Fault Correction Possibilities

- Check reference hose for restriction
- Check wiring
- Replace sensor
- Check cylinder leak down

MAP_Time_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	401-24	Yes	2

Explanation

The manifold absolute pressure (MAP) sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Sensor out of range
- Wiring problem
- Reference hose to sensor restricted
- Valve train issue

Summary of Fault Correction Possibilities

- Check reference hose for restriction
- Check wiring
- Replace sensor
- Check cylinder leak down

MAP_Time_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	401-25	Yes	2

Explanation

The manifold absolute pressure (MAP) sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Sensor out of range
- Wiring problem
- Reference hose to sensor restricted
- Valve train issue

Summary of Fault Correction Possibilities

- Check reference hose for restriction
- Check wiring
- Replace sensor
- Check cylinder leak down

MicroChi_PWM_ADC

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	4003-6	Yes	4

Explanation

There is a communication problem with the SmartCraft control system.

Possible Causes

- Wiring issue
- Clean power issue
- Failed command module

Summary of Fault Correction Possibilities

- Inspect clean power harness
- Inspect helm wiring
- Replace command module

N**Neutral_Overspeed**

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	2092-23	No	1

Explanation

Engine speed is above specified limits with the engine in neutral.

Possible Causes

- Engine is not in gear
- Shift demand sensor failed

Summary of Fault Correction Possibilities

- Put engine into gear
- Inspect shift demand sensor

O

O2Control_ITermHighPort

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	None	100%	902-4	No	5

Explanation

The fuel system does not appear to be working properly; the PCM received a signal from the oxygen sensor that is valid, but is higher than expected. The system has added fuel up to its allowable limit.

Possible Causes

- Low fuel rail pressure
- Restricted fuel injectors
- Intake manifold vacuum leak

Summary of Fault Correction Possibilities

- Correct fuel pressure issues
- Service fuel injectors
- Correct vacuum leak

O2Control_ITermLowPort

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	None	100%	902-5	No	5

Explanation

The fuel system does not appear to be working properly; the PCM received a signal from the oxygen sensor that is valid, but is lower than expected. The system has removed fuel up to its allowable limit.

Possible Causes

- High fuel rail pressure
- Leaking fuel injectors
- Fuel being introduced from another source

Summary of Fault Correction Possibilities

- Correct fuel rail pressure
- Service injectors
- Investigate source of alternate fuel

OilLevelInvalid

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	711-19	No	2

Explanation

The engine oil level could not be determined.

Possible Causes

- Engine oil level low
- Engine oil level high
- Wiring issue
- Failed sensor

Summary of Fault Correction Possibilities

- Verify engine oil level is correct
- Inspect wiring
- Replace sensor

OilLevel_Critically_Low

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	713-21	Yes	2

Explanation

The engine oil level appears to be low; the PCM received a signal from the oil level sensor that is lower than the specified threshold.

Possible Causes

- Engine oil level low
- Wiring issue
- Failed sensor

Summary of Fault Correction Possibilities

- Fill engine oil level
- Inspect wiring
- Replace sensor

OilLevel_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	711-24	Yes	2

Explanation

The engine oil level sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Engine oil level too high
- Wiring problem
- Failed sensor

Summary of Fault Correction Possibilities

- Correct oil level
- Inspect wiring
- Replace sensor

OilLevel_Sensor_Faulted

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	711-6	Yes	2

Explanation

The engine oil level sensor does not appear to be working properly.

Possible Causes

- Failed sensor
- Wiring problem

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace sensor

OilLevel_Sensor_Invalid

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	711-12	No	2

Explanation

The engine oil level sensor does not appear to be working properly.

Possible Causes

- Failed sensor
- Wiring problem

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace sensor

OilPress_Low

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	431-21	Yes	2

Explanation

The engine oil pressure appears to be low; the PCM received a signal from the oil pressure sensor that is lower than the specified threshold.

Possible Causes

- Low oil level
- Wiring problem to sensor
- Sensor failed
- Oil pickup restricted
- Mechanical problem in powerhead/oil pump

Summary of Fault Correction Possibilities

- Correct engine oil level
- Check wiring to sensor
- Replace sensor
- Check oil pickup tube and screen
- Inspect powerhead/oil pump

OilPress_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	431-24	Yes	2

Explanation

The oil pressure sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Engine oil pressure too high
- Wiring problem to sensor

- Failed sensor

Summary of Fault Correction Possibilities

- Check oil pressure with a mechanical gauge, if too high inspect oil pressure relief valve.
- Inspect wiring
- Replace sensor

OilPress_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	431-25	Yes	2

Explanation

The oil pressure sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Low engine oil pressure
- Wiring problem to sensor
- Failed sensor

Summary of Fault Correction Possibilities

- Check engine oil pressure with mechanical gauge. If low, inspect oil pressure relief valve.
- Correct wiring issue to sensor
- Replace sensor

OilTemp_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	531-24	Yes	2

Explanation

The oil temperature sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring problem to sensor
- Failed sensor

Summary of Fault Correction Possibilities

- Inspect wiring to sensor
- Replace sensor

OilTemp_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	531-25	Yes	2

Explanation

The oil temperature sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem to sensor
- Failed sensor

Summary of Fault Correction Possibilities

- Inspect wiring to sensor
- Replace sensor

R

RxDoc1_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	4004-6	Yes	3

Explanation

This fault indicates that there is a wiring or circuit problem on CAN X.

Possible Causes

- Open or short on CAN X (brown and yellow wires)
- Faulty terminator resistor
- Should measure 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7. Resistance across pins A31 and A32 at PCM should show approximately 37.1K ohms. Resistance across command module pins 6 and 7 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

RxDoc2_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	4005-6	Yes	2

Explanation

This fault indicates that there is a wiring or circuit problem with CAN P. This fault is not typically used on outboard applications.

Possible Causes

- Open or short on CAN X (brown and yellow wires)
- Faulty terminator resistor
- Should have 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7. Resistance across pins A31 and A32 at PCM should show approximately 37.1K ohms. Resistance across command module pins 6 and 7 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

RxDoc3_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	4006-6	Yes	3

Explanation

This fault indicates that there is a wiring or circuit problem with CAN P.

Possible Causes

- Open or short on CAN P (blue and white wires)
- Faulty terminator resistor

- Should have 58–60 ohms across bottom PCM engine harness pins A11 and A21 and across command module harness pins 8 and 9. Resistance across pins A11 and A21 at the PCM should show approximately 37.1K ohms. Resistance across command module pins 8 and 9 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

RxDoc7_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	4007-6	Yes	3

What's Probably Wrong

This fault indicates that there is a problem with the CAN bus.

Possible Causes

- Open or short on CAN P (blue and white wires)
- Faulty terminator resistor
- Should have 58–60 ohms across bottom PCM engine harness pins A11 and A21 and across command module harness pins 8 and 9. Resistance across pins A11 and A21 at the PCM should show approximately 37.1K ohms. Resistance across command module pins 8 and 9 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

RxDoc9_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	4008-6	Yes	3

Explanation

This fault indicates that there is a wiring or circuit problem on CAN X.

Possible Causes

- Open or short on CAN X (brown and yellow wires)
- Faulty terminator resistor
- Should have 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7. Resistance across pins A31 and A32 at PCM should show approximately 37.1K ohms. Resistance across command module pins 6 and 7 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

RxDoc10_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	4009-6	Yes	3

Explanation

There is a communication problem with the SmartCraft control system.

Possible Causes

- Open or short on CAN X (brown and yellow wires)
- Faulty terminator resistor
- Should have 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7. Resistance across pins A31 and A32 at PCM should show approximately 37.1K ohms. Resistance across command module pins 6 and 7 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

RxDoc11_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	4010-6	Yes	3

Explanation

There is a communication problem with the SmartCraft control system. Cruise control may not work properly.

Possible Causes

- Open or short on CAN X (brown and yellow wires)
- Faulty terminator resistor
- Should have 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7. Resistance across pins A31 and A32 at PCM should show approximately 37.1K ohms. Resistance across command module pins 6 and 7 should show approximately 37.1K ohms.

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace terminator resistor
- Replace command module

S

SHFT_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	3049-16	Yes	3

Explanation

The shift actuator does not appear to be working properly; the PCM detected a problem when trying to send a signal to the actuator.

Possible Causes

- Wiring issue to shift actuator
- Shift actuator failed
- Gearcase issue

Summary of Fault Correction Possibilities

- Inspect wiring
- Inspect gearcase for free shifting
- Replace shift actuator

SPI_CrosscheckData_SOH

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	4016-6	Yes	4

Explanation

There is a communication problem with the SmartCraft control system.

Possible Causes

- Open or short on CAN P (blue and white wires; should measure 58–60 ohms across bottom PCM engine harness pins A11 and A21 and across command module harness pins 8 and 9) or CAN H (brown and yellow wires; should measure 58–60 ohms across bottom PCM engine harness pins A31 and A32 and across command module harness pins 6 and 7).
- Faulty terminator resistor

Summary of Fault Correction Possibilities

- Correct wiring issue
- Install correct count of resistors
- Replace faulty resistor

STRT_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	3171-16	Yes	3

Explanation

The starting system does not appear to be working properly; the PCM detected a problem when trying to send a signal to the start relay. The engine may not start.

Possible Causes

- Wiring issue
- Start relay failed
- Starter failed

Summary of Fault Correction Possibilities

- Check wiring to relay and to starter
- Replace start relay
- Replace starter

Security_Device_Missing

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	4501-23	No	3

Explanation

This fault indicates that the security device is missing or is providing no reading.

Possible Causes

- Device offline
- Wiring problem

Summary of Fault Correction Possibilities

- Inspect device connectors
- Inspect wiring

Security_Locked

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	5%	4502-23	No	4

Explanation

This fault indicates that the security device is locked.

Possible Causes

- Device FOB incorrect
- Wiring problem

Summary of Fault Correction Possibilities

- Use correct FOB
- Inspect wiring
- Re-setup system

Security_Setup

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	None	5%	4503-23	No	4

Explanation

This fault indicates that the security device is not set up.

Possible Causes

- Setup not completed

Summary of Fault Correction Possibilities

- Set up security system

ShiftDemandSensor_Diff

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	1077-6	Yes	4

Explanation

The shift demand sensor does not appear to be working properly.

Possible Causes

- Wiring problem to sensor
- Sensor failed

Summary of Fault Correction Possibilities

- Correct wiring problem
- Inspect/replace sensor

ShiftDmdSensor1_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1063-24	Yes	2

Explanation

The primary encoder in the shift demand sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring problem to sensor
- Sensor failed

Summary of Fault Correction Possibilities

- Correct wiring problem
- Inspect/replace sensor

ShiftDmdSensor1_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1063-25	Yes	2

Explanation

The primary encoder in the shift demand sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem to sensor
- Sensor failed

Summary of Fault Correction Possibilities

- Correct wiring problem
- Inspect/replace sensor

ShiftDmdSensor2_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1064-24	Yes	2

Explanation

The secondary encoder in the shift demand sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring problem to sensor
- Sensor failed

Summary of Fault Correction Possibilities

- Correct wiring problem
- Inspect/replace sensor

ShiftDmdSensor2_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	1064-25	Yes	2

Explanation

The secondary encoder in the shift demand sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem to sensor
- Sensor failed

Summary of Fault Correction Possibilities

- Correct wiring problem
- Inspect/replace sensor

ShiftPos2_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	1023-24	Yes	2

Explanation

The secondary shift position encoder in the shift actuator does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring issue to actuator
- Failed shift actuator

Summary of Fault Correction Possibilities

- Check wiring to actuator
- Replace actuator

ShiftPos2_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	1023-25	Yes	2

Explanation

The secondary shift position encoder in the shift actuator does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring issue to actuator
- Failed shift actuator

Summary of Fault Correction Possibilities

- Check wiring to actuator
- Replace actuator

ShiftPos_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	50%	1021-24	Yes	2

Explanation

The primary shift position encoder in the shift actuator does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring problem to actuator
- Mechanical issue in gearcase
- Failed actuator

Summary of Fault Correction Possibilities

- Check wiring to shift actuator
- Inspect gearcase for proper shifting

- Replace actuator

ShiftPos_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	50%	1021-25	Yes	2

Explanation

The primary shift position encoder in the shift actuator does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem to actuator
- Mechanical issue in gearcase
- Failed actuator

Summary of Fault Correction Possibilities

- Check wiring to shift actuator
- Inspect gearcase for proper shifting
- Replace actuator

ShiftPositionSensor_Diff

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	100%	1024-6	Yes	4

Explanation

This fault indicates that the shift actuator's determination of its position and the commanded position do not agree.

Possible Causes

- Worn linkage
- Gearcase stuck in gear
- Faulty shift actuator
- Faulty electronic remote control (ERC)

Summary of Fault Correction Possibilities

- Inspect gearcase
- Replace shift actuator

Shift_XCheck_Diff

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Critical	5%	4002-6	Yes	4

Explanation

This fault indicates that the command module isn't equal to the PCM in cross-check of shift position.

Possible Causes

- Incorrect DTS system configuration
- Faulty command module or PCM
- Failed shift actuator
- Gearcase stuck in gear

Summary of Fault Correction Possibilities

- Reconfigure DTS system

Fault Codes

- Check helm wiring
- Check gearcase for free shifting
- Inspect shift actuator

StbdECT_Overtemp

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	521-20	Yes	4

Explanation

The engine appears to be overheating; the PCM received a signal from the engine coolant temperature (ECT) sensor that is higher than normal.

Possible Causes

- Restricted cooling water flow
- Restricted thermostat
- Degraded water pump impeller

Summary of Fault Correction Possibilities

- Check for cooling system blockage
- Inspect thermostat
- Inspect water pump impeller

StbdECT_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	521-24	Yes	2

Explanation

The engine coolant temperature (ECT) sensor does not appear to be working properly; the PCM received a signal that is above the valid limit.

Possible Causes

- Wiring problem to sensor
- Failed sensor

Summary of Fault Correction Possibilities

- Inspect wiring to sensor
- Replace sensor

StbdECT_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	521-25	Yes	2

Explanation

The engine coolant temperature (ECT) sensor does not appear to be working properly; the PCM received a signal that is below the valid limit.

Possible Causes

- Wiring problem to sensor
- Failed sensor

Summary of Fault Correction Possibilities

- Inspect wiring to sensor
- Replace sensor

SysVolt_FaultBlocker

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	4602-23	Yes	3

Explanation

Battery voltage is outside of specified limits.

Possible Causes

- Over charging
- Under charging

Summary of Fault Correction Possibilities

- Replace alternator

SysVolt_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	621-4	Yes	3

Explanation

Battery voltage is above the normal limit; the battery voltage as seen by the PCM is valid, but is higher than expected.

Possible Causes

- Alternator failed

Summary of Fault Correction Possibilities

- Replace alternator

SysVolt_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	621-5	Yes	3

Explanation

Battery voltage is below the normal limit; the battery voltage as seen by the PCM is valid, but is lower than expected.

Possible Causes

- Alternator is not charging
- Fuseable link is failed
- More amp draw than alternator can keep up to
- Wiring issue to alternator

Summary of Fault Correction Possibilities

- Inspect alternator
- Inspect fuseable link
- Monitor charging system draws
- Inspect wiring to alternator

T

TPS1_ETC_NoAdapt

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	341-6	Yes	2

Explanation

This fault indicates that the TPS 1 signal was outside the valid range when trying to adapt. Adapt occurs when exiting crank on way to start.

Possible Causes

- Faulty sensor internal to ETC
- Low system voltage to ETC

Summary of Fault Correction Possibilities

- Check wiring to ETC
- Replace ETC

TPS1_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	301-24	Yes	2

Explanation

This fault indicates that the TPS 1 sensor circuit is shorted.

Possible Causes

- Wiring or faulty sensor internal to ETC

Summary of Fault Correction Possibilities

- If the sensor, ETC needs to be replaced

TPS1_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	301-25	Yes	2

Explanation

This fault indicates that the TPS 1 sensor circuit is open.

Possible Causes

- Wiring or faulty sensor internal to ETC

Summary of Fault Correction Possibilities

- If the sensor, ETC needs to be replaced

TPS2_ETC_NoAdapt

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	342-6	Yes	2

Explanation

This fault indicates that the TPS 2 signal was outside the valid range when trying to adapt. Adapt occurs when exiting crank on way to start.

Possible Causes

- Faulty sensor internal to ETC

Summary of Fault Correction Possibilities

- Replace ETC

TPS2_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	302-24	Yes	2

Explanation

This fault indicates that the TPS 2 sensor circuit is shorted.

Possible Causes

- Wiring or faulty sensor internal to ETC

Summary of Fault Correction Possibilities

- If the sensor, ETC needs to be replaced

TPS2_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Sticky	Caution	100%	302-25	Yes	2

Explanation

This fault indicates that the TPS 2 sensor circuit is open.

Possible Causes

- Wiring or faulty sensor internal to ETC

Summary of Fault Correction Possibilities

- If the sensor, ETC needs to be replaced

TRMD_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	3182-16	Yes	2

Explanation

The trim down relay does not appear to be working properly; the PCM detected a problem when trying to send a signal to the trim down relay.

Possible Causes

- Wiring issue to relay
- Failed relay
- PT is not moving when system expected movement

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace relay

TRMU_OutputFault

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	3181-16	Yes	2

Explanation

The trim up relay does not appear to be working properly; the PCM detected a problem when trying to send a signal to the trim up relay.

Possible Causes

- Wiring problem to relay
- Failed relay
- PT is not moving when system expected movement

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace relay
- Inspect PT system

TrimPos_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	1012-24	Yes	2

Explanation

This fault indicates that the trim sensor circuit is shorted.

Possible Causes

- Wiring or faulty sensor

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace sensor

TrimPos_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	1012-25	Yes	2

Explanation

This fault indicates that the trim sensor circuit is open.

Possible Causes

- Wiring or faulty sensor

Summary of Fault Correction Possibilities

- Inspect wiring
- Replace sensor

U

UEGO1_HtrLwrLimit

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	822-5	No	2

Explanation

The oxygen (O2) sensor does not appear to be working properly; the PCM received a signal that is valid, but is lower than expected. The O2 sensor is not heating up.

Possible Causes

- Wiring to O2 sensor failed
- O2 sensor failed
- O2 sensor fuse failed

Summary of Fault Correction Possibilities

- Inspect wiring to O2 sensor
- Inspect O2 sensor fuse
- Replace O2 sensor

UEGO1_HtrOpnShrt

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	822-16	No	2

Explanation

The oxygen (O2) sensor does not appear to be working properly; the PCM detected a problem when trying to send a signal to the O2 sensor heater.

Possible Causes

- Wiring to O2 sensor failed
- O2 sensor failed
- O2 sensor fuse failed

Summary of Fault Correction Possibilities

- Inspect wiring to O2 sensor
- Inspect O2 sensor fuse
- Replace O2 sensor

UEGO1_HtrUpLimit

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	822-4	No	2

Explanation

The oxygen (O2) sensor does not appear to be working properly; the PCM received a signal that is valid, but higher than expected. The O2 sensor is getting too hot.

Possible Causes

- Wiring to O2 sensor failed
- O2 sensor failed
- O2 sensor fuse failed

Summary of Fault Correction Possibilities

- Inspect wiring to O2 sensor
- Inspect O2 sensor fuse
- Replace O2 sensor

UEGO1_Sensor_Open

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	None	100%	821-1	No	2

Explanation

The oxygen (O2) sensor does not appear to be working properly; the output circuit from the PCM to the O2 sensor is open or has too much resistance.

Possible Causes

- Wiring to O2 sensor failed
- O2 sensor failed
- O2 sensor fuse failed

Summary of Fault Correction Possibilities

- Inspect wiring to O2 sensor
- Inspect O2 sensor fuse
- Replace O2 sensor

W

Watchdog_Active

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	5%	4013-23	Yes	4

Explanation

There is a communication problem with the SmartCraft control system.

Possible Causes

- Watchdog security system is enabled

Summary of Fault Correction Possibilities

- Disable system with FOB

WaterInFuel_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	1108-25	Yes	2

Explanation

The PCM received a signal from the water-in-fuel filter that is below the valid limit.

Possible Causes

- Wiring problem
- Bad sensor
- Contaminated fuel

Summary of Fault Correction Possibilities

- inspect wiring
- Inspect sensor
- Inspect fuel quality

X

XDRPa_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	601-4	Yes	3

Explanation

The sensor power supply (transducer power 1) voltage is high; the value is valid, but is higher than expected.

Possible Causes

- Problem with engine wire harness

Summary of Fault Correction Possibilities

- Inspect engine wire harness for shorts or opens

XDRPa_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	601-5	Yes	3

Explanation

The sensor power supply (transducer power 1) voltage is low; the value is valid, but is lower than expected.

Possible Causes

- Engine wire harness issues
- Shorted sensor

Summary of Fault Correction Possibilities

- Inspect wire harness
- Inspect sensors for shorts

XDRPb_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	602-4	Yes	3

Explanation

The sensor power supply (transducer power 2) voltage is high; the value is valid, but is higher than expected.

Possible Causes

- Problem with engine wire harness

Summary of Fault Correction Possibilities

- Inspect wire harness

XDRPb_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Critical	100%	602-5	Yes	3

Explanation

The sensor power supply (transducer power 2) voltage is low; the value is valid, but is lower than expected.

Possible Causes

- Engine wire harness issues
- Shorted sensor

Summary of Fault Correction Possibilities

- Inspect wire harness
- Inspect sensors for shorts

XDRPc_RangeHigh

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	603-4	Yes	2

Explanation

The sensor power supply (transducer power 3) voltage is high; the value is valid, but is higher than expected.

Possible Causes

- Problem with engine wire harness

Summary of Fault Correction Possibilities

- Inspect wire harness

XDRPc_RangeLow

Fault Type:	Horn:	Guardian:	UFC:	Transmission to Helm:	Freeze Frame Priority:
Nonsticky	Caution	100%	603-5	Yes	2

Explanation

The sensor power supply (transducer power 3) voltage is low; the value is valid, but is lower than expected.

Possible Causes

- Engine wire harness issues
- Shorted sensor

Summary of Fault Correction Possibilities

- Inspect wire harness
- Inspect sensors for shorts