

# CDS G3 and the PCM 09

## Section 2G - CDS G3 Fault Tables

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## CDS G3 Fault List (Numerical Order)

Fault codes may be classified as sticky or not sticky:

Type of fault	Method to clear
Not sticky	Clears immediately after the fault is resolved
Sticky	Requires a key cycle (off and on) after the fault is resolved to clear

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
0	None	No faults detected.	Indicates that there are no active faults.	Disabled	NA
1	SysVolt_RangeHigh	Battery voltage too high. Charging system stuck on maximum output.	Alternator is most likely overcharging. Check the regulator and sense circuit. 1. Charging system malfunction. 2. Wiring problem. Incorrect installation of 24- or 36-volt systems.	OBD-M-1	No details
2	SysVolt_RangeLow	Battery voltage too low.	Check for a loose alternator belt, alternator malfunction, excessive electrical load, and/or idling for extended periods of time with high electrical loads. 1. Charging system malfunction. 2. Loose belts. 3. Defective battery.	OBD-M-1	No details
3	SeaPumpPress_Low	Sea pump pressure too low.	Check the sea pump impeller and water inlet for obstructions. 1. Water supply pump problem. 2. Cooling system clogged or silted. 3. Extremely unlikely there is a sensor or wiring problem.	Not sticky, severe warning, reduced power	Fault disabled on 3.0L engines
5	ETC_Loss_Of_Control	ETC loss of control: Throttle plate movement does not match PCM commands.	The throttle plate will move but it doesn't move exactly as commanded. Therefore, there is a <b>loss of control</b> . 1. ETC motor A or motor B circuit problems. 2. ETC connector problems. 3. Defective ETC assembly.	Not sticky, severe warning, reduced power	Fault disabled on non-DTS engines
6	ETC_Sticking	ETC sticking: Throttle plate doesn't move when commanded.	By watching the TPS sensor signals the PCM can tell if the throttle plate is moving exactly as it commanded. In this case the PCM commands movement but does not see that movement in the TPS sensor signal. Hence, the plate is sticking. 1. ETC is mechanically stuck. 2. Motor A or motor B circuit problems including the connector. 3. TPS 1 or 2 sensor circuit problems.	Not sticky, severe warning, reduced power	Fault disabled on non-DTS engines
9	Guardian_Active	Guardian protection is active. Check the other faults for root cause.	This fault is a result of a separate fault. Any fault that indicates a problem that could cause engine damage will cause the Guardian program to activate. The more severe the problem the more Guardian will reduce the available power.	Not sticky, severe warning	Severe warning is disabled in MY12 calibrations

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
12	OilPress_Low	Engine oil pressure is too low.	<p>Indicates a problem with the engine's pressurized lubrication system. Do not overlook the oil level being too high, as that will cause aerated oil which will result in low oil pressure. Other common problems are incorrect grade of oil, diluted oil (with gasoline), worn engine or cam bearings, clogged pump pickup screen and possibly an out-of-calibration oil pressure sensor.</p> <ol style="list-style-type: none"> <li>Oil level in engine is too low.</li> <li>Sensor is bad but not shorted or open.</li> <li>There is a mechanical problem in the oil pressure system.</li> </ol>	Not sticky, severe warning	Fault disabled on 3.0L engines
15	MAP_Angle_RangeHigh	MAP sensor circuit high—Engine running. Check the PCM-to-sensor circuit.	<p>Treat this as a MAP sensor circuit high. The MAP signal lead is indicating 5 volts (or nearly 5 volts). Possible failed sensor shorted or open sensor wiring or defective PCM.</p> <ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	No details
16	MAP_Angle_RangeLow	MAP sensor circuit low—Engine running. Check the PCM-to-sensor circuit.	<p>Treat this as a MAP sensor circuit low. The MAP signal lead is indicating 0 volts (or nearly 0 volts). Failed sensor shorted or open wiring or defective PCM.</p> <ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	No details
19	Guardian_Overspeed	Engine RPM exceeded Guardian RPM limit at time of fault.	<p>The engine is exceeding the RPM limit currently set by Guardian. Guardian power limits can range from 90% down to forced idle (around 5%). This can be misleading as this is not the maximum engine RPM limit; it just means the engine is going faster than Guardian currently thinks it should.</p>	Not sticky, severe warning	Severe warning is disabled in MY12 calibrations
21	STBDECT_Overtemp	ECT (engine coolant temperature) is too high.	<p>The starboard cylinder head (on an outboard) is exceeding its maximum allowed temperature.</p> <ol style="list-style-type: none"> <li>Cooling system problem, bad pump or thermostat.</li> <li>Engine lugging, check propping.</li> <li>It is extremely unlikely there is a sensor or wiring problem.</li> </ol>	Not sticky, severe warning, reduced power	Used on all engines

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
22	Horn_OutputFault	Warning horn fault. Check the PCM-to-horn (tan/blue) circuit.	The PCM is not detecting the presence of the warning horn. Check the tan/blue lead for opens and shorts. Test the warning horn and replace it if necessary. <ol style="list-style-type: none"> <li>Defective horn.</li> <li>Horn not receiving B+.</li> <li>Circuit problem between horn and PCM.</li> </ol>	Not sticky	DTS: disabled
29	KnockSensor0Fault	Knock sensor fault. Check the port sensor circuit.	The PCM is not reading any signal from the port knock sensor. Check the knock sensor-to-PCM circuits for opens and shorts. Replace the sensor if the circuits test good. <ol style="list-style-type: none"> <li>Sensor mounting problem.</li> <li>Sensor or wiring problem.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky. Warning—calibration specific	3.0L, 4.3L: disabled
30	KnockSensor1Fault	Knock sensor fault. Check the starboard sensor circuit.	The PCM is not reading any signal from the starboard knock sensor. Check the knock sensor-to-PCM circuits for opens and shorts. Replace the sensor if the circuits test good. <ol style="list-style-type: none"> <li>Sensor mounting problem.</li> <li>Sensor or wiring problem.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky. Warning—calibration specific	3.0L, 4.3L: disabled
36	SeaPumpPress_RangeHigh	Sea pump pressure sensor circuit high. Check the PCM-to-sensor circuit.	Treat this as a sea pump sensor circuit high. The signal lead is reading 5 volts (or nearly 5 volts). Possible failed sensor shorted or open sensor wiring or defective PCM.	Not sticky, caution warning	3.0L: disabled
37	SeaPumpPress_RangeLow	Sea pump pressure sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as a sea pump sensor circuit low. The signal lead is reading 0 volts (or nearly 0 volts). Possible failed sensor shorted or open sensor wiring or defective PCM.	Not sticky, caution warning	3.0L: disabled
39	IAT_RangeHigh	MAT (manifold air temperature) sensor circuit high. Check the PCM-to-sensor circuit.	Treat this as an IAT sensor circuit high. The signal lead is reading 5 volts (or nearly 5 volts). The circuit is open. Check the resistance of the sensor wiring for an open circuit or a possible defective PCM. <ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
40	IAT_RangeLow	MAT (manifold air temp) sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as an IAT sensor circuit low. The signal lead is reading 0 volts (or nearly 0 volts). The signal lead is shorted to sensor ground or possibly engine ground. Check the sensor signal lead for shorts to ground. Check the sensor for shorts to ground. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	
43	EST1_OutputFault	EST 1 fault. Check the PCM-to-ignition coil #1 circuit.	Indicates that the low voltage trigger lead that connects the #1 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Used on all engines
45	EST2_OutputFault	EST 2 fault. Check the PCM-to-ignition coil #2 circuit.	Indicates that the low voltage trigger lead that connects the #2 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
47	EST3_OutputFault	EST 3 fault. Check the PCM-to-ignition coil #3 circuit.	Indicates that the low voltage trigger lead that connects the #3 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
49	EST4_OutputFault	EST 4 fault. Check the PCM-to-ignition coil #4 circuit.	Indicates that the low voltage trigger lead that connects the #4 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
51	EST5_OutputFault	EST 5 fault. Check the PCM-to-ignition coil #5 circuit.	Indicates that the low voltage trigger lead that connects the #5 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
53	EST6_OutputFault	EST 6 fault. Check the PCM-to-ignition coil #6 circuit.	Indicates that the low voltage trigger lead that connects the #6 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
55	EST7_OutputFault	EST 7 fault. Check the PCM-to-ignition coil #7 circuit.	Indicates that the low voltage trigger lead that connects the #7 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
57	EST8_OutputFault	EST 8 fault. Check the PCM-to-ignition coil #8 circuit.	Indicates that the low voltage trigger lead that connects the #8 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
75	FuelLevel1_RangeHigh	Fuel level 1 sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
76	FuelLevel1_RangeLow	Fuel level 1 sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-
77	EncoderFaultCrankCamTrig ger	CMP (camshaft position sensor) fault. Check the PCM-to-sensor circuits.	The camshaft sensor signal is missing, erratic, or incorrectly phased to the crankshaft sensor. Check the sensor leads for opens and shorts and loose or damaged connectors. Check the sensor for metal particles sticking to the sensor's magnet. Bump the engine over while monitoring the voltage of the signal lead for 0 to 5 volts changes as the cam gear vane passes the sensor.	OBD-M-1	3.0L: disabled

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
84	OilPress_RangeHigh	Engine oil pressure sensor circuit high. Check the PCM-to-sensor circuit.	Treat this as an oil pressure sensor circuit high. The signal lead is reading 5 volts (or nearly 5 volts). Check the sensor and sensor wiring for opens and shorts. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Not sticky, caution warning	3.0L: disabled
85	OilPress_RangeLow	Engine oil pressure sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as an oil pressure sensor circuit low. The signal lead is reading 0 volts (or nearly 0 volts). Check the sensor and sensor wiring for opens and shorts. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Not sticky, caution warning	3.0L: disabled
93	PitotPress_RangeHigh	Pitot pressure sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
94	PitotPress_RangeLow	Pitot pressure sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-
101	RxDoc1_SOH	CAN communication fault: Type 1. Check the CAN X bus.	The PCM and command module cannot communicate properly over the CAN X circuit. Check for proper termination and that the command module and PCM calibrations are compatible. Check the yellow and brown leads in the main CAN bus for opens and shorts. Consider substituting a known good 14-pin CAN harness and recheck faults. Possible defective PCM and/or command module.	Not sticky, severe warning	Non-DTS: disabled
102	RxDoc2_SOH	CAN communication fault: Type 2. Troll control data missing.	Most likely a PCM and command module software mismatch issue.	Not sticky or disabled- Calibration specific	Warning mode is also calibration specific
103	RxDoc3_SOH	CAN communication fault: Type 3. Check the CAN P bus.	The PCM and command module cannot communicate properly over the CAN P circuit. Check for proper termination and that the command module and PCM calibrations are compatible. Check the blue and white leads in the main CAN bus for opens and shorts. Consider substituting a known good 14-pin CAN harness and recheck faults. Possible defective PCM and/or command module.	Not sticky, severe warning	Non-DTS: disabled



Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
107	ShiftPos_RangeHigh	ESC fault: Position sensor circuit high. Check the PCM-to-sensor circuit.	<p>Treat this fault like a TPS circuit high. The ESC sensor signal is reading 5 volts (or nearly 5 volts). Check the sensor leads for opens and shorts. The sensor cannot be replaced. You must replace the entire ESC. Possible defective PCM.</p> <ol style="list-style-type: none"> <li>1. Sensor is open or shorted internally.</li> <li>2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>3. It is extremely unlikely that the PCM is bad.</li> </ol>	Sticky, caution warning	MY12 calibrations: Warning changed to severe. Non-DTS: disabled.
108	ShiftPos_RangeLow	ESC fault: Position sensor circuit low. Check the PCM-to-sensor circuit.	<p>Treat this fault like a TPS circuit low. The ESC sensor signal is reading 0 volts (or nearly 0 volts). Check the sensor leads for opens and shorts. The sensor cannot be replaced. You must replace the entire ESC. Possible defective PCM.</p> <ol style="list-style-type: none"> <li>1. Sensor is open or shorted internally.</li> <li>2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>3. It is extremely unlikely that the PCM is bad.</li> </ol>	Sticky, caution warning	MY12 calibrations: Warning changed to severe. Non-DTS: disabled.
110	Neutral_Switch_Fault	Neutral position switch fault. Check the switch adjustment first.	<p>Switch is misadjusted or circuit is failed in the on position. The switch signal reads 0 (or nearly 0) volts or 5 (or nearly 5) volts depending on the switch position. If the switch signal disagrees with the ESC sensor signal, this fault is set. Ensure that the switch activates without sticking and that the switch plunger is depressed when the ESC actuator is in neutral.</p>	Not sticky	Warning mode is calibration specific
111	STBDECT_RangeHigh	ECT (engine coolant temp) sensor circuit high. Check the PCM-to-sensor circuit.	<p>Treat this as an ECT sensor circuit high. The sensor signal is reading 5 (or nearly 5) volts. The signal lead is open or the sensor is open. Check the signal lead for open circuits and check the resistance of the sensor. Possible defective PCM.</p> <ol style="list-style-type: none"> <li>1. Sensor is open or shorted internally.</li> <li>2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>3. It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	-

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
112	STBDECT_RangeLow	ECT (engine coolant temp) sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as an ECT sensor circuit low. The sensor signal is reading 0 (or nearly 0) volts. The signal lead is shorted to sensor ground or possibly engine ground. Check the signal lead for shorts to ground. Check the sensor for a short circuit. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	-
117	STRT_OutputFault	Starter fault. Check the PCM-to-starter relay circuit.	The PCM has detected an open circuit or short circuit in the relay control circuit. This circuit uses pins 85 and 86 in the relay. Battery voltage is always present on one of these pins. The PCM will ground the other through a yellow/black lead. Check the yellow/black lead between the PCM and the starter relay for shorts and opens. Check the relay winding (pins 85 and 86) for opens and shorts. Check for battery voltage to the relay control circuits. Refer to <b>Section 3A</b> .	Not sticky	Non-DTS: disabled
118	SteeringPos_RangeHigh	Steering position sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
119	SteeringPos_RangeLow	Steering position sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-
120	TPS1_RangeHigh	TPS 1 sensor circuit high. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	All engines
121	TPS1_RangeLow	TPS 1 sensor circuit low. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	All engines
124	TPS1_Mech_NoAdapt	TPS 1 sensor failed to adapt: Throttle plate not in idle position at key up.	Mechanical engine: TPS sensor was reading outside the window specified for adaptation to occur as the key was turned on. Possible tampering with the throttle body stop screw.	OBD-M-1	DTS: disabled
125	TPS2_RangeHigh	TPS 2 sensor circuit high. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	Non-DTS: disabled

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
126	TPS2_RangeLow	TPS 2 sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	Non-DTS: disabled
129	TPS2_ETC_NoAdapt	ETC fault: TPS 2 sensor failed to adapt during engine shut down.	DTS engines: TPS 2 did not indicate that the throttle plate moved to the specified closed throttle position during the engine shut down process.	OBD-M-1	Non-DTS: disabled
130	TrimPos_RangeHigh	Trim position sensor circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky	Non-DTS: disabled
131	TrimPos_RangeLow	Trim position sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky	Non-DTS: disabled
133	XDRPa_RangeLow	Power 1 voltage (sensor power 1) too low.	5-volt power for engine sensors.	OBD-M-1	
135	Neutral_Overspeed	Engine RPM exceeded neutral RPM limit.	MerCruiser engines use a neutral RPM limit of 3500 RPM.	Not sticky	Warning mode is calibration specific
148	ESC_NSW_Diff	ESC fault: Shift position sensor and neutral switch disagree.	If the switch opens and closes properly then the problem is in the ESC sensor circuit.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
149	ETC_Idle_Range_Error	ETC fault: Throttle plate is not within specified range at idle.	Possible throttle body damage or tampering.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
150	Dual_CAN_SOH_Faults	CAN bus fault: Both CAN P and CAN X are faulting-DTS control compromised.	There is no communication between command module and PCM.	Sticky, severe warning	Non-DTS: disabled
151	FULP_OutputFault	Fuel pump relay fault. Check the PCM-to-pump relay circuit.	Fuel pump relay or relay control circuit (relay pins 85 and 86) problem.	Not sticky, severe warning	
153	DriveLubeLow	Drive lube bottle is low	Possible leak, stuck float switch, or wiring issue.	Not sticky, caution warning	

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
158	PORTEMCT_RangeHigh	Port EMCT sensor circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	
159	PORTEMCT_RangeLow	Port EMCT sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	
160	PORTEMCT_Overtemp	Port EMCT is too hot. Check the port exhaust manifold	Verify that the manifold temperature is near the temperature sensor. Check for defective or worn water pump, clogged coolers or strainers. The manifold may be full of sediment or corrosion.	Not sticky, severe warning	
176	ESC_DesiredActualDiff	ESC fault: ERC shift position and actual gear position disagree.	The control handle is in one gear, yet the PCM thinks the engine is in a different gear.	Not sticky, severe warning	Non-DTS: disabled
177	STBDEMCT_RangeHigh	Starboard EMCT sensor circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	Not used on 3.0L MPI
178	STBDEMCT_RangeLow	Starboard EMCT sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	Not used on 3.0L MPI
179	STBDEMCT_Overtemp	Starboard EMCT is too hot. Check the starboard exhaust manifold.	Verify that the manifold temperature is near the temperature sensor. Check for defective or worn water pump, clogged coolers or strainers. The manifold may be full of sediment or corrosion.	Not sticky, severe warning	Not used on 3.0L MPI
184	TRMD_OutputFault	Trim down fault. Check the PCM-to-down relay circuit.	A trim down relay or relay control circuit (relay pins 85 and 86) problem. Refer to <b>Section 3A</b> .	Not sticky, caution warning	Non-DTS: disabled
185	TRMU_OutputFault	Trim up fault. Check the PCM-to-up relay circuit.	A trim down relay or relay control circuit (relay pins 85 and 86) problem. Refer to <b>Section 3A</b> .	Not sticky, caution warning	Non-DTS: disabled
186	RxDoc7_SOH	CAN communication fault: Type 7. Trim control data missing.	Check the CAN wiring.	Not sticky, severe warning	Non-DTS: disabled
189	Demand_XCheck_Diff	PCM and DTS command module disagree on demand request.	Command module and PCM are not making calculations correctly. Refer to DTS manual.	Sticky, severe warning	Non-DTS: disabled

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
190	Shift_XCheck_Diff	PCM and DTS command module disagree on ERC shift request.	Command module and PCM are not making calculations correctly. Refer to DTS manual.	Sticky, severe warning	Non-DTS: disabled
191	FuelLevel2_RangeHigh	Fuel level 2 sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
192	FuelLevel2_RangeLow	Fuel level 2 sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-
193	ESC_ShiftAnticipate_Flag	Shift fault: Alpha shift system problem keeps the shift anticipate switch on.	Switch stays on because the clutch dog has not disengaged. Caused by incorrect shift adjustments or binding in the shift system, keeping the load lever tripped.	Not sticky, severe warning	Alpha engines: enabled. All others: disabled
194	ESC_TimeOut	ESC fault: Actuator taking too long to complete shift. Check the ESC and shift linkage.	Look for binding from the ESC down into the gearcase.	Disabled	
196	TransTempHigh	Transmission temperature too high.	Check the transmission cooler fluid level, incorrect shift adjustments, low internal pressures resulting in clutch slippage, and/or engine modifications greatly increasing horsepower and torque.	Not sticky, severe warning	Stern drive engines: disabled
212	SmartStartAbort	SmartStart failed—No RPM detected.	If the engine cranks but doesn't start, check the crankshaft sensor for problems.	Not sticky, severe warning	Non-DTS: disabled
215	RxDoc9_SOH	CAN communication fault: Type 9. Crosscheck data missing.	Check the CAN X wiring.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
216	RxDoc10_SOH	CAN communication fault: Type 10. Dual engine synchronization data missing.	Should only occur on twin-engine boats. Most likely a software issue between modules.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
217	XDRPb_RangeLow	Power 2 voltage (sensor power 2) too low.	This circuit powers the boat and/or SmartCraft sensors.	Not sticky, caution warning	-
218	MicroChi_PWM_ADC	Command module ADC check: command module failed a test calculation.	The PCM sends a CAN message to the command module asking it to make a specific calculation. The answer is sent back to the PCM and compared to the correct answer. The fault trips if the answer received is incorrect. Possible mismatched software or faulty command module.	Not sticky, severe warning	Non-DTS: disabled

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
219	ESCLossOfControl	ESC loss of control: PCM cannot tell if the ESC is responding to PCM commands.	PCM is sending out commands for the ESC to move but the position sensor is not confirming these commands. PCM is not sure exactly where the ESC really is.	Not sticky, severe warning	Non-DTS: disabled
227	ShiftPressA_RangeHigh	Shift fault: Transmission pressure sensor A circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	-	Non-DTS: disabled
228	ShiftPressA_RangeLow	Shift fault: Transmission pressure sensor A circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	-	Non-DTS: disabled
229	HShiftA_Press_Fault	Shift fault: Transmission pressure sensor A indicates abnormal pressure.	Transmission pressure higher or lower than expected at that RPM.	-	Non-DTS: disabled
230	ShiftPressB_RangeHigh	Shift fault: Transmission pressure sensor B circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	-	Non-DTS: disabled
231	ShiftPressB_RangeLow	Shift fault: Transmission pressure sensor B circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	-	Non-DTS: disabled
232	HShiftB_Press_Fault	Shift fault: Transmission pressure sensor B indicates abnormal pressure.	Transmission pressure higher or lower than expected at that RPM.	-	Non-DTS: disabled
233	HShift_Indeterminate	Shift fault: PCM cannot determine gear position.	Check transmission pressure sensors.	-	-
234	HShift_Press_High	Shift fault: Transmission shift pressure is too high.	-	-	-
235	HShift_DesiredActualDiff	Shift fault: ERC shift position and actual gear position disagree.	ERC control handle is in one gear, yet the PCM thinks the engine is in a different gear (from the transmission pressure sensor readings).	-	Non-DTS: disabled
236	ESTOP_Active	Emergency stop activated. Check the lanyard and ESTOP black/yellow circuit.	The black/yellow wire is shorted to ground somewhere from engine to helm.	Not sticky	-
237	Excessive_Knock	Knock fault.	Excessive knock detected.	Not sticky	-

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
300	ESC_NoAdapt_Forward	ESC adaptation failure: Forward gear. Check the ESC and shift linkage.	Check for binding as the ESC moves the gearcase into forward gear.	Not sticky	-
301	ESC_NoAdapt_Reverse	ESC adaptation failure: Reverse gear. Check the ESC and shift linkage.	Check for binding as the ESC moves the gearcase into reverse gear.	Not sticky	-
302	O2SR_r_PostSwitchRatioP ORT	Port postcatalyst O2 sensor (C) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
303	O2SR_r_PreSwitchRatioPO RT	Port precatlyst O2 sensor (A) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
304	O2SR_r_PostSwitchRatioST BD	Starboard postcatalyst O2 sensor (D) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
305	O2SR_r_PreSwitchRatioST BD	Starboard precatlyst O2 sensor (B) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
306	TTCL_TimeToClosedLoop	Taking too long to enter closed-loop fuel control mode. Check the cooling system for slow or no warmup.	The engine will not achieve closed-loop mode within the time limit if cooling system problems are causing the engine to take too long to reach operating temperature or never reaching operating temperature.	OBD-M	-
307	MAPR_TPS1Rationality	MAP sensor and TPS 1 sensor signals disagree.	Map signal and TPS 1 signal not where they should be (relative to each other).	OBD-M	-
308	MAPR_TPS2Rationality	MAP sensor and TPS 2 sensor signals disagree.	Map signal and TPS 2 signal not where they should be (relative to each other).	OBD-M	-
309	MAPR_MAPRationality	MAP sensor data may be incorrect.	-	-	-
310	CATM_OSCEXcessAbortPO RT	OBD-M fault: Port catalyst diagnostic test failed to run properly.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
311	CATM_OSC_IndexPORT	Port catalyst failed diagnostic test. Port catalyst may be defective.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
312	CATM_O2LeanResponseP ORT	Port precatlyst O2 sensor A- Failed rich-to-lean response time.	Monitoring the O2 sensor response to changing air/fuel mixtures. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
313	CATM_O2RichResponsePO RT	Port precatlyst O2 sensor A- Failed lean-to-rich response time.	Monitoring the O2 sensor response to changing air/fuel mixtures. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
314	CATM_OSCEXcessAbortSTBD	OBD-M fault: Starboard catalyst diagnostic test failed to run properly.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	4-cylinder engine does not use this sensor
315	CATM_OSC_IndexSTBD	Starboard catalyst failed diagnostic test-Starboard catalyst may be defective.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
316	CATM_O2LeanResponseSTBD	Starboard precatlyst O2 sensor B-Failed rich-to-lean response time.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Monitoring the O2 sensor response to changing air/fuel mixtures.	OBD-M	4-cylinder engine does not use this sensor
317	CATM_O2RichResponseSTBD	Starboard precatlyst O2 sensor B-Failed lean-to-rich response time.	Monitoring the O2 sensor response to changing air/fuel mixtures. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	4-cylinder engine does not use this sensor
318	TPS1_ETC_NoAdapt	ETC fault: TPS 1 sensor failed to adapt during engine shut down.	DTS engine: TPS 1 did not indicate that the throttle plate moved to the specified closed throttle position during the engine shut down process.	OBD-M	-
319	O2Control_ITermHighPORT	OBD-M fault: Port cylinder bank fuel trim value too positive (too rich).	PCM has had to add too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
320	O2Control_ITermLowPORT	OBD-M fault: Port cylinder bank fuel trim value too negative (too lean).	PCM has had to remove too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
321	O2Control_ITermHighSTBD	OBD-M fault: Starboard cylinder bank fuel trim value too positive (too rich).	PCM has had to add too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
322	O2Control_ITermLowSTBD	OBD-M fault: Starboard cylinder bank fuel trim value too negative (too lean).	PCM has had to remove too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
323	Guardian_uXPowerLimit	Guardian due to: DTS command module faults.	Fix any command module faults to correct this fault. Refer to DTS manual.	Sticky	-
324	Guardian_Voltage	Guardian due to: Battery voltage unacceptable.	Battery voltage higher or lower than allowable.	Not sticky	-
325	Guardian_Overheat	Guardian due to: Engine coolant too hot.	-	Not sticky	-



Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
326	Guardian_ManifoldTemp	Guardian due to: Exhaust manifolds too hot.	-	Not sticky	-
327	Guardian_OilPressure	Guardian due to: Engine oil pressure too low.	-	Not sticky	-
328	Guardian_WaterPressure	Guardian due to: Sea pump pressure too low.	-	Not sticky	-
330	Bank_B_Misfire	Starboard cylinder bank misfire limit exceeded.	-	OBD-M	-
331	Bank_A_Misfire	Port cylinder bank misfire limit exceeded.	-	OBD-M	-
332	ETC_TPSSDisagree	ETC fault: TPS 1 and TPS 2 sensor signals disagree.	If TPS 1 reads X, then TPS 2 should read Y; one of them is incorrect.	Not sticky	-
333	Dual_TPS_Faults	ETC fault: Both TPS 1 and TPS 2 sensors are faulting- ETC control is compromised.	The PCM does not know where the throttle plate is.	Not sticky	-
334	BaroRange	BARO data is abnormal when key turned on.	Baro readings are primarily taken at key-up.	OBD-M	-
335	CC_LIAC_RangeHigh	IAC valve circuit high.	Check PCM-to-IAC circuit.	OBD-M	-
336	CC_LIAC_RangeLow	IAC valve circuit low.	Check PCM-to-IAC circuit.	OBD-M	-
339	ETC_OutputFault	ETC fault: ETC not responding.	Throttle control compromised. Check the PCM-to-ETC motor A and B circuits.	Not sticky	-
340	INJ1_OutputFault	Fuel injector 1 fault.	Check the PCM-to-injector #1 circuit.	OBD-M	-
341	INJ2_OutputFault	Fuel injector 2 fault.	Check the PCM-to-injector #2 circuit.	OBD-M	-
342	INJ3_OutputFault	Fuel injector 3 fault.	Check the PCM-to-injector #3 circuit.	OBD-M	-
343	INJ4_OutputFault	Fuel injector 4 fault.	Check the PCM-to-injector #4 circuit.	OBD-M	-
344	INJ5_OutputFault	Fuel injector 5 fault.	Check the PCM-to-injector #5 circuit.	OBD-M	-
345	INJ6_OutputFault	Fuel injector 6 fault.	Check the PCM-to-injector #6 circuit.	OBD-M	-
346	INJ7_OutputFault	Fuel injector 7 fault.	Check the PCM-to-injector #7 circuit.	OBD-M	-
347	INJ8_OutputFault	Fuel injector 8 fault.	Check the PCM-to-injector #8 circuit.	OBD-M	-
348	LIAC_OutputFault	IAC valve fault: IAC not responding.	Check the PCM-to-IAC circuit.	Not sticky	-
349	SHFT_OutputFault	ESC fault: ESC not responding.	Check the PCM-to-ESC motor A and B circuits.	Not sticky	-
350	TRMR_OutputFault	Trim limit relay fault.	Trim limit relay or relay control circuit (relay pins 85 and 86) problem. Check the PCM-to-trim limit relay circuit.	Not sticky	-

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
351	MIL_OutputFault	MIL (malfunction indicator lamp) fault.	Check PCM-to-lamp (on dash) circuit.	Not sticky	-
352	O2HA_OutputFault	Port precatlyst O2 sensor A heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
353	O2HB_OutputFault	Starboard precatlyst O2 sensor B heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
354	O2HC_OutputFault	Port postcatlyst O2 sensor C heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
355	O2HD_OutputFault	Starboard postcatlyst O2 sensor D heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
360	MAP_Time_RangeHigh	MAP sensor circuit high-Key on-engine off.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	Not sticky	-
361	MAP_Time_RangeLow	MAP sensor circuit low-Key on-engine off.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	Not sticky	-
362	O2A_RangeHigh	Port precatlyst O2 sensor A-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
363	O2A_RangeLow	Port precatlyst O2 sensor A-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
364	O2A_Open_circuit	Port precatlyst O2 sensor A-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
365	O2B_RangeHigh	Starboard precatlyst O2 sensor B-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
366	O2B_RangeLow	Starboard precatlyst O2 sensor B-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
367	O2B_Open_circuit	Starboard precatlyst O2 sensor B-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
368	O2C_RangeHigh	Port postcatlyst O2 sensor C-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
369	O2C_RangeLow	Port postcatlyst O2 sensor C-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
370	O2C_Open_circuit	Port postcatlyst O2 sensor C-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
371	O2D_RangeHigh	Starboard postcatlyst O2 sensor D-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
372	O2D_RangeLow	Starboard postcatlyst O2 sensor D-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-

Fault ID	CDS G3 Fault Text	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
373	O2D_Open_circuit	Starboard postcatalyst O2 sensor D-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .	OBD-M	-
376	OilPressSwLow	Engine oil pressure is low.	-	Not sticky	-
377	ShiftAnticipate_Noisy	Shift anticipation switch signal is erratic.	-	-	-
378	XDRPa_RangeHigh	Power 1 voltage (sensor power) too high.	-	OBD-M	-
379	XDRPb_RangeHigh	Power 2 voltage (sensor power 2) too high.	This circuit powers the boat and/or SmartCraft sensors.	Not sticky	-
386	RxDoc11_SOH	CAN communication fault: Type 11. Cruise control data missing.	Check the command module for faults. Check the circuit wiring.	Not sticky	-
387	AuthTimeout	CAN fault: PCM failed to authenticate within specified time.	Check the command module for faults. Check the circuit wiring.	Not sticky	-
388	SysVolt_FaultBlocker	PCM system voltage (driver power) too low.	Check if battery switch is in the off position. Battery voltage is too low at the PCM's driver power pins (C3G and C3H). Check the PCM-to-battery circuit (includes main power relay and fuse/circuit breaker).	Not sticky	-
389	PO2S_LeanRangeSTBD	Starboard postcatalyst O2 sensor D stuck reporting lean.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		4-cylinder engine does not use this sensor
390	PO2S_RichRangeSTBD	Starboard postcatalyst O2 sensor D stuck reporting rich.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		4-cylinder engine does not use this sensor
391	PO2S_LeanRangePORT	Port postcatalyst O2 sensor C stuck reporting lean.	Once per key cycle. Part of monitoring test. Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		
392	PO2S_RichRangePORT	Port postcatalyst O2 sensor C stuck reporting rich.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		
396	Engine_Misfire	OBD-M fault: Engine misfire limit exceeded.	This is for both cylinder banks (all cylinders). Refer to <b>Section 3C - Misfire and OBD-M Diagnostics</b> .		
397	Airflow_Limit_Exceeded	Calculated air flow too high.	Check for engine modifications. The restrictor plate may have been removed.		Applies to 8.2L base mechanical shift engines

## CDS G3 Fault List (Alphabetical Order)

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
Airflow_Limit_Exceeded	397	Calculated air flow too high.	Check for engine modifications. The restrictor plate may have been removed.		Applies to 8.2L base mechanical shift engines
AuthTimeout	387	CAN fault: PCM failed to authenticate within specified time.	Check the command module for faults. Check the circuit wiring.	Not sticky	-
Bank_B_Misfire	330	Starboard cylinder bank misfire limit exceeded.	-	OBD-M	-
Bank_A_Misfire	331	Port cylinder bank misfire limit exceeded.	-	OBD-M	-
BaroRange	334	BARO data is abnormal when key turned on.	Baro readings are primarily taken at key-up.	OBD-M	-
CATM_O2LeanResponse PORT	312	Port pre-catalyst O2 sensor A- Failed rich-to-lean response time.	Monitoring the O2 sensor response to changing air/fuel mixtures. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
CATM_O2LeanResponse STBD	316	Starboard pre-catalyst O2 sensor B- Failed rich-to-lean response time.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Monitoring the O2 sensor response to changing air/fuel mixtures.	OBD-M	4-cylinder engine does not use this sensor
CATM_O2RichResponse PORT	313	Port pre-catalyst O2 sensor A- Failed lean-to-rich response time.	Monitoring the O2 sensor response to changing air/fuel mixtures. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
CATM_O2RichResponse STBD	317	Starboard pre-catalyst O2 sensor B- Failed lean-to-rich response time.	Monitoring the O2 sensor response to changing air/fuel mixtures. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	4-cylinder engine does not use this sensor
CATM_OSC_IndexPORT	311	Port catalyst failed diagnostic test-Port catalyst may be defective.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
CATM_OSC_IndexSTBD	315	Starboard catalyst failed diagnostic test-Starboard catalyst may be defective.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-
CATM_OSCExcessAbort PORT	310	OBD-M fault: Port catalyst diagnostic test failed to run properly.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
CATM_OSCEExcessAbort STBD	314	OBD-M fault: Starboard catalyst diagnostic test failed to run properly.	Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> .	OBD-M	4-cylinder engine does not use this sensor
CC_LIAC_RangeHigh	335	IAC valve circuit high.	Check PCM-to-IAC circuit.	OBD-M	-
CC_LIAC_RangeLow	336	IAC valve circuit low.	Check PCM-to-IAC circuit.	OBD-M	-
Demand_XCheck_Diff	189	PCM and DTS command module disagree on demand request.	Command module and PCM are not making calculations correctly.	Sticky, severe warning	Non-DTS: disabled
DriveLubelow	153	Drive lube bottle is low.	Possible leak, stuck float switch, or wiring issue.	Not sticky, caution warning	
Dual_CAN_SOH_Faults	150	CAN bus fault: Both CAN P and CAN X are faulting—DTS control compromised.	There is no communication between the command module and the PCM.	Sticky, severe warning	Non-DTS: disabled
Dual_TPS_Faults	333	ETC fault: Both TPS 1 and TPS 2 sensors are faulting—ETC control is compromised.	The PCM does not know where the throttle plate is.	Not sticky	-
EncoderFaultCrankCam Trigger	77	CMP (camshaft position sensor) fault. Check the PCM-to-sensor circuits.	The camshaft sensor signal is missing, erratic, or incorrectly phased to the crankshaft sensor. Check the sensor leads for opens and shorts and loose or damaged connectors. Check the sensor for metal particles sticking to the sensor's magnet. Bump the engine over while monitoring the voltage of the signal lead for 0 to 5 volts changes as the cam gear vane passes the sensor.	OBD-M-1	3.0L: disabled
Engine_Misfire	396	OBD-M fault: Engine misfire limit exceeded.	This is for both cylinder banks (all cylinders). Refer to <b>Section 3C - Misfire and OBD-M Diagnostics</b> .		
ESC_DesiredActualDiff	176	ESC fault: ERC shift position and actual gear position disagree.	The control handle is in one gear, yet the PCM thinks the engine is in a different gear.	Not sticky, severe warning	Non-DTS: disabled
ESC_NoAdapt_Forward	300	ESC adaptation failure: Forward gear. Check the ESC and shift linkage.	Check for binding as the ESC moves the gearcase into forward gear.	Not sticky	-
ESC_NoAdapt_Reverse	301	ESC adaptation failure: Reverse gear. Check the ESC and shift linkage.	Check for binding as the ESC moves the gearcase into reverse gear.	Not sticky	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
ESC_NSW_Diff	148	ESC fault: Shift position sensor and neutral switch disagree.	If the switch opens and closes properly then the problem is in the ESC sensor circuit.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
ESC_ShiftAnticipate_Flag	193	Shift fault: Alpha shift system problem keeps the shift anticipate switch on.	Switch stays on because the clutch dog has not disengaged. Caused by incorrect shift adjustments or binding in the shift system keeping the load lever tripped.	Not sticky, severe warning	Alpha engines: enabled. All others: disabled
ESC_TimeOut	194	ESC fault: Actuator taking too long to complete shift. Check the ESC and shift linkage.	Look for binding from the ESC down into the gearcase.	Disabled	
ESCLossOfControl	219	ESC loss of control: PCM cannot tell if the ESC is responding to PCM commands.	PCM is sending out commands for the ESC to move but the position sensor is not confirming these commands. The PCM is not sure exactly where the ESC really is.	Not sticky, severe warning	Non-DTS: disabled
EST1_OutputFault	43	EST 1 fault. Check the PCM-to-ignition coil #1 circuit.	Indicates that the low voltage trigger lead that connects the #1 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Used on all engines
EST2_OutputFault	45	EST 2 fault. Check the PCM-to-ignition coil #2 circuit.	Indicates that the low voltage trigger lead that connects the #2 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
EST3_OutputFault	47	EST 3 fault. Check the PCM-to-ignition coil #3 circuit.	Indicates that the low voltage trigger lead that connects the #3 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
EST4_OutputFault	49	EST 4 fault. Check the PCM-to-ignition coil #4 circuit.	Indicates that the low voltage trigger lead that connects the #4 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
EST5_OutputFault	51	EST 5 fault. Check the PCM-to-ignition coil #5 circuit.	Indicates that the low voltage trigger lead that connects the #5 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
EST6_OutputFault	53	EST 6 fault. Check the PCM-to-ignition coil #6 circuit.	Indicates that the low voltage trigger lead that connects the #6 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
EST7_OutputFault	55	EST 7 fault. Check the PCM-to-ignition coil #7 circuit.	Indicates that the low voltage trigger lead that connects the #7 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
EST8_OutputFault	57	EST 8 fault. Check the PCM-to-ignition coil #8 circuit.	Indicates that the low voltage trigger lead that connects the #8 ignition coil to the PCM is either reading a constant 5 volts (or nearly 5 volts) or a constant 0 volts (or nearly 0 volts). Usually caused by a shorted or open trigger lead or a defective ignition coil. Possible failed PCM. When the engine is spinning, the signal fluctuates from 0 to 5 volts (much like a square wave DC signal) and never sticks at either reading.	Not sticky	Distributor ignitions: disabled
ESTOP_Active	236	Emergency stop activated. Check the lanyard and ESTOP black/yellow circuit.	The black/yellow wire is shorted to ground somewhere from the engine to the helm.	Not sticky	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
ETC_Idle_Range_Error	149	ETC fault: Throttle plate is not within specified range at idle.	Possible throttle body damage or tampering.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
ETC_Loss_Of_Control	5	ETC loss of control: Throttle plate movement does not match PCM commands.	The throttle plate will move but it doesn't move exactly as commanded. Therefore, there is a loss of control. 1. ETC motor A or motor B circuit problems. 2. ETC connector problems. 3. Defective ETC assembly.	Not sticky, severe warning, reduced power	Fault disabled on non-DTS engines
ETC_OutputFault	339	ETC fault: ETC not responding.	Throttle control compromised. Check the PCM-to-ETC motor A and B circuits.	Not sticky	-
ETC_Sticking	6	ETC sticking: Throttle plate doesn't move when commanded.	By watching the TPS sensor signals the PCM can tell if the throttle plate is moving exactly as it commanded. In this case the PCM commands movement but does not see that movement in the TPS sensor signal. Hence, the plate is sticking. 1. ETC is mechanically stuck. 2. Motor A or motor B circuit problems including the connector. 3. TPS 1 or 2 sensor circuit problems.	Not sticky, severe warning, reduced power	Fault disabled on non-DTS engines
ETC_TPSDisagree	332	ETC fault: TPS 1 and TPS 2 sensor signals disagree.	If TPS 1 reads X, then TPS 2 should read Y; one of them is incorrect.	Not sticky	-
Excessive_Knock	237	Knock fault.	Excessive knock detected.	Not sticky	-
FuelLevel1_RangeHigh	75	Fuel level 1 sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
FuelLevel1_RangeLow	76	Fuel level 1 sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-
FuelLevel2_RangeHigh	191	Fuel level 2 sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
FuelLevel2_RangeLow	192	Fuel level 2 sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-
FULP_OutputFault	151	Fuel pump relay fault. Check the PCM-to-pump relay circuit.	Fuel pump relay or relay control circuit (relay pins 85 and 86) problem.	Not sticky, severe warning	
Guardian_Active	9	Guardian protection is active. Check the other faults for root cause.	This fault is a result of a separate fault. Any fault that indicates a problem that could cause engine damage will cause the Guardian program to activate. The more severe the problem the more Guardian will reduce the available power.	Not sticky, severe warning	Severe warning is disabled in MY12 calibrations
Guardian_ManifoldTemp	326	Guardian due to: Exhaust manifolds too hot.	-	Not sticky	-



CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
Guardian_OilPressure	327	Guardian due to: Engine oil pressure too low.	-	Not sticky	-
Guardian_Overheat	325	Guardian due to: Engine coolant too hot.	-	Not sticky	-
Guardian_Overspeed	19	Engine RPM exceeded Guardian RPM limit at time of fault.	The engine is exceeding the RPM limit currently set by Guardian. Guardian power limits can range from 90% down to forced idle (around 5%). This can be misleading as this is not the maximum engine RPM limit; it just means the engine is going faster than Guardian currently thinks it should.	Not sticky, severe warning	Severe warning is disabled in MY12 calibrations
Guardian_uXPowerLimit	323	Guardian due to: DTS command module faults.	Fix any command module faults to correct this fault.	Sticky	-
Guardian_Voltage	324	Guardian due to: Battery voltage unacceptable.	Battery voltage higher or lower than allowable.	Not sticky	-
Guardian_WaterPressure	328	Guardian due to: Sea pump pressure too low.	-	Not sticky	-
Horn_OutputFault	22	Warning horn fault. Check the PCM-to-horn (tan/blue) circuit.	The PCM is not detecting the presence of the warning horn. Check the tan/blue lead for opens and shorts. Test the warning horn and replace if necessary. 1. Defective horn. 2. Horn not receiving B+. 3. Circuit problem between horn and PCM.	Not sticky	DTS: disabled
HShift_DesiredActualDiff	235	Shift fault: ERC shift position and actual gear position disagree.	ERC control handle is in one gear, yet the PCM thinks the engine is in a different gear (from the transmission pressure sensor readings).	-	Non-DTS: disabled
HShiftA_Press_Fault	229	Shift fault: Transmission pressure sensor A indicates abnormal pressure.	Transmission pressure higher or lower than expected at that RPM.	-	Non-DTS: disabled
HShiftB_Press_Fault	232	Shift fault: Transmission pressure sensor B indicates abnormal pressure.	Transmission pressure higher or lower than expected at that RPM.	-	Non-DTS: disabled
HShift_Indeterminate	233	Shift fault: PCM cannot determine gear position.	Check transmission pressure sensors.	-	-
HShift_Press_High	234	Shift fault: Transmission shift pressure is too high.	-	-	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
IAT_RangeHigh	39	MAT (manifold air temperature) sensor circuit high. Check the PCM-to-sensor circuit.	Treat this as an IAT sensor circuit high. The signal lead is reading 5 volts (or nearly 5 volts). The circuit is open. Check the resistance of the sensor wiring for an open circuit or a possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	
IAT_RangeLow	40	MAT (manifold air temperature) sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as an IAT sensor circuit low. The signal lead is reading 0 volts (or nearly 0 volts). The signal lead is shorted to sensor ground or possibly engine ground. Check the sensor signal lead for shorts to ground. Check the sensor for shorts to ground. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	
INJ1_OutputFault	340	Fuel injector 1 fault.	Check the PCM-to-injector #1 circuit.	OBD-M	-
INJ2_OutputFault	341	Fuel injector 2 fault.	Check the PCM-to-injector #2 circuit.	OBD-M	-
INJ3_OutputFault	342	Fuel injector 3 fault.	Check the PCM-to-injector #3 circuit.	OBD-M	-
INJ4_OutputFault	343	Fuel injector 4 fault.	Check the PCM-to-injector #4 circuit.	OBD-M	-
INJ5_OutputFault	344	Fuel injector 5 fault.	Check the PCM-to-injector #5 circuit.	OBD-M	-
INJ6_OutputFault	345	Fuel injector 6 fault.	Check the PCM-to-injector #6 circuit.	OBD-M	-
INJ7_OutputFault	346	Fuel injector 7 fault.	Check the PCM-to-injector #7 circuit.	OBD-M	-
INJ8_OutputFault	347	Fuel injector 8 fault.	Check the PCM-to-injector #8 circuit.	OBD-M	-
KnockSensor0Fault	29	Knock sensor fault. Check the port sensor circuit.	The PCM is not reading any signal from the port knock sensor. Check the knock sensor-to-PCM circuits for opens and shorts. Replace the sensor if the circuits test good. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Not sticky. Warning- calibration specific	3.0L, 4.3L: disabled

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
KnockSensor1Fault	30	Knock sensor fault. Check the starboard sensor circuit.	The PCM is not reading any signal from the starboard knock sensor. Check the knock sensor-to-PCM circuits for opens and shorts. Replace the sensor if the circuits test good. 1. Sensor mounting problem. 2. Sensor or wiring problem. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Not sticky. Warning—calibration specific	3.0L, 4.3L: disabled
LIAC_OutputFault	348	IAC valve fault: IAC not responding.	Check the PCM-to-IAC circuit.	Not sticky	–
MAP_Angle_RangeHigh	15	MAP sensor circuit high—Engine running. Check the PCM-to-sensor circuit.	Treat this as a MAP sensor circuit high. The MAP signal lead is indicating 5 volts (or nearly 5 volts). Possible failed sensor shorted or open sensor wiring or defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	No details
MAP_Angle_RangeLow	16	MAP sensor circuit low—Engine running. Check the PCM-to-sensor circuit.	Treat this as a MAP sensor circuit low. The MAP signal lead is indicating 0 volts (or nearly 0 volts). Failed sensor shorted or open wiring or defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	No details
MAP_Time_RangeHigh	360	MAP sensor circuit high—Key on—engine off.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A</b> for wiring diagrams.	Not sticky	–
MAP_Time_RangeLow	361	MAP sensor circuit low—Key on—engine off.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A</b> for wiring diagrams.	Not sticky	–
MAPR_MAPRationality	309	MAP sensor data may be incorrect.	–	–	–
MAPR_TPS1Rationality	307	MAP sensor and TPS 1 sensor signals disagree.	Map signal and TPS 1 signal not where they should be relative to each other.	OBD-M	–
MAPR_TPS2Rationality	308	MAP sensor and TPS 2 sensor signals disagree.	Map signal and TPS 2 signal not where they should be relative to each other.	OBD-M	–
MicroChi_PWM_ADC	218	Command module ADC check: command module failed a test calculation.	The PCM sends a CAN message to the command module asking it to make a specific calculation. The answer is sent back to the PCM and compared to the correct answer. The fault trips if the answer received is incorrect. Possible mismatched software or faulty command module.	Not sticky, severe warning	Non-DTS: disabled

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
MIL_OutputFault	351	MIL (malfunction indicator lamp) fault.	Check PCM-to-lamp (on dash) circuit.	Not sticky	-
Neutral_Overspeed	135	Engine RPM exceeded neutral RPM limit.	MerCruiser engines use a neutral RPM limit of 3500 RPM.	Not sticky	Warning mode is calibration specific
Neutral_Switch_Fault	110	Neutral position switch fault. Check the switch adjustment first.	Switch is misadjusted or circuit is failed in the on position. The switch signal reads 0 (or nearly 0) volts or 5 (or nearly 5) volts depending on the switch position. If the switch signal disagrees with the ESC sensor signal, this fault is set. Ensure that the switch activates without sticking and that the switch plunger is depressed when the ESC actuator is in neutral.	Not sticky	Warning mode is calibration specific
None	0	No faults detected.	Indicates that there are no active faults.	Disabled	NA
O2A_Open_circuit	364	Port precatlyst O2 sensor A-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2A_RangeHigh	362	Port precatlyst O2 sensor A-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2A_RangeLow	363	Port precatlyst O2 sensor A-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2B_Open_circuit	367	Starboard precatlyst O2 sensor B-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2B_RangeHigh	365	Starboard precatlyst O2 sensor B-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2B_RangeLow	366	Starboard precatlyst O2 sensor B-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2C_Open_circuit	370	Port postcatlyst O2 sensor C-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2C_RangeHigh	368	Port postcatlyst O2 sensor C-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2C_RangeLow	369	Port postcatlyst O2 sensor C-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2Control_ITermHighPORT	319	OBD-M fault: Port cylinder bank fuel trim value too positive (too rich).	PCM has had to add too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
O2Control_ITermHighSTBD	321	OBD-M fault: Starboard cylinder bank fuel trim value too positive (too rich).	PCM has had to add too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
O2Control_ITermLowPORT	320	OBD-M fault: Port cylinder bank fuel trim value too negative (too lean).	PCM has had to remove too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
O2Control_ITermLowSTBD	322	OBD-M fault: Starboard cylinder bank fuel trim value too negative (too lean).	PCM has had to remove too much fuel trying to get the correct O2 reading. Check the Live Data screen for reason. Refer to <b>Section 2B - PCM 09 and Emissions Control Overview</b> . Refer to <b>Section 2D - O2 Fuel System Monitor Faults</b> .	OBD-M	-
O2D_Open_circuit	373	Starboard postcatalyst O2 sensor D-Open circuit.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2D_RangeHigh	371	Starboard postcatalyst O2 sensor D-Circuit high.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2D_RangeLow	372	Starboard postcatalyst O2 sensor D-Circuit low.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2HA_OutputFault	352	Port precatlyst O2 sensor A heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2HB_OutputFault	353	Starboard precatlyst O2 sensor B heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2HC_OutputFault	354	Port postcatalyst O2 sensor C heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2HD_OutputFault	355	Starboard postcatalyst O2 sensor D heater fault.	Check the fuse and PCM-to-heater circuit. Refer to <b>Section 3A - O2 Sensors</b> . Also refer to <b>Section 2D - O2 Sensor Diagnostics</b> .	OBD-M	-
O2SR_r_PostSwitchRatioPORT	302	Port postcatalyst O2 sensor (C) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
O2SR_r_PostSwitchRatioSTBD	304	Starboard postcatalyst O2 sensor (D) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
O2SR_r_PreSwitchRatioPORT	303	Port precatlyst O2 sensor (A) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-
O2SR_r_PreSwitchRatioSTBD	305	Starboard precatlyst O2 sensor (B) switch ratio fault.	4-cylinder engine does not use this sensor.	OBD-M	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
OilPress_Low	12	Engine oil pressure is too low.	<p>Indicates a problem with the engine's pressurized lubrication system. Do not overlook the oil level being too high, as that will cause aerated oil, which will result in low oil pressure. Other common problems are incorrect grade of oil, diluted oil (with gasoline), worn engine or cam bearings, clogged pump pickup screen, and possibly an out-of-calibration oil pressure sensor.</p> <ol style="list-style-type: none"> <li>Oil level in engine is too low.</li> <li>Sensor is bad but not shorted or open.</li> <li>There is a mechanical problem in the oil pressure system.</li> </ol>	Not sticky, severe warning	Fault disabled on 3.0L engines.
OilPress_RangeHigh	84	Engine oil pressure sensor circuit high. Check the PCM-to-sensor circuit.	<p>Treat this as an oil pressure sensor circuit high. The signal lead is reading 5 volts (or nearly 5 volts). Check the sensor and sensor wiring for opens and shorts. Possible defective PCM.</p> <ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	3.0L: disabled
OilPress_RangeLow	85	Engine oil pressure sensor circuit low. Check the PCM-to-sensor circuit.	<p>Treat this as an oil pressure sensor circuit low. The signal lead is reading 0 volts (or nearly 0 volts). Check the sensor and sensor wiring for opens and shorts. Possible defective PCM.</p> <ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	3.0L: disabled
OilPressSwLow	376	Engine oil pressure is low.	-	Not sticky	-
PO2S_LeaRangePORT	391	Port postcatalyst O2 sensor C stuck reporting lean.	Once per key cycle. Part of monitoring test. Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		
PO2S_LeaRangeSTBD	389	Starboard postcatalyst O2 sensor D stuck reporting lean.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		4-cylinder engine does not use this sensor
PO2S_RichRangePORT	392	Port postcatalyst O2 sensor C stuck reporting rich.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		
PO2S_RichRangeSTBD	390	Starboard postcatalyst O2 sensor D stuck reporting rich.	Check the PCM-to-sensor circuit. Refer to <b>Section 3A - O2 Sensors</b> .		4-cylinder engine does not use this sensor

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
PORTEMCT_Overtemp	160	Port EMCT is too hot. Check the port exhaust manifold.	Verify that the manifold temperature is near the temperature sensor. Check for defective or worn water pump, clogged coolers or strainers. The manifold may be full of sediment or corrosion.	Not sticky, severe warning	
PORTEMCT_RangeHigh	158	Port EMCT sensor circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	
PORTEMCT_RangeLow	159	Port EMCT sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky, caution warning	
RxDoc1_SOH	101	CAN communication fault: Type 1. Check the CAN X bus.	The PCM and command module cannot communicate properly over the CAN X circuit. Check for proper termination and that the command module and PCM calibrations are compatible. Check the yellow and brown leads in the main CAN bus for opens and shorts. Consider substituting a known good 14-pin CAN harness and recheck faults. Possible defective PCM and/or command module.	Not sticky, severe warning	Non-DTS: disabled
RxDoc10_SOH	216	CAN communication fault: Type 10. Dual engine synchronization data missing.	Should only occur on twin-engine boats. Most likely a software issue between modules.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
RxDoc11_SOH	386	CAN communication fault: Type 11. Cruise control data missing.	Check the command module for faults. Check the circuit wiring.	Not sticky	-
RxDoc2_SOH	102	CAN communication fault: Type 2. Troll control data missing.	Most likely a PCM and command module software mismatch issue.	Not sticky or disabled- Calibration specific	Warning mode is also calibration specific
RxDoc3_SOH	103	CAN communication fault: Type 3. Check the CAN P bus.	The PCM and command module cannot communicate properly over the CAN P circuit. Check for proper termination and that the command module and PCM calibrations are compatible. Check the blue and white leads in the main CAN bus for opens and shorts. Consider substituting a known good 14-pin CAN harness and recheck faults. Possible defective PCM and/or command module.	Not sticky, severe warning	Non-DTS: disabled
RxDoc7_SOH	186	CAN communication fault: Type 7. Trim control data missing.	Check the CAN wiring.	Not sticky, severe warning	Non-DTS: disabled

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
RxDoc9_SOH	215	CAN communication fault: Type 9. Crosscheck data missing.	Check the CAN X wiring.	Not sticky. Warning mode is calibration specific	Non-DTS: disabled
SeaPumpPress_Low	3	Sea pump pressure too low.	Check the sea pump impeller and water inlet for obstructions. 1. Water supply pump problem. 2. Cooling system clogged or silted. 3. Extremely unlikely there is a sensor or wiring problem.	Not sticky, severe warning, reduced power	Fault disabled on 3.0L engines
SeaPumpPress_RangeHigh	36	Sea pump pressure sensor circuit high. Check the PCM-to-sensor circuit.	Treat this as a sea pump sensor circuit high. The signal lead is reading 5 volts (or nearly 5 volts). Possible failed sensor shorted or open sensor wiring or defective PCM.	Not sticky, caution warning	3.0L: disabled
SeaPumpPress_RangeLow	37	Sea pump pressure sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as a sea pump sensor circuit low. The signal lead is reading 0 volts (or nearly 0 volts). Possible failed sensor shorted or open sensor wiring or defective PCM.	Not sticky, caution warning	3.0L: disabled
SHFT_OutputFault	349	ESC fault: ESC not responding.	Check the PCM-to-ESC motor A and B circuits.	Not sticky	-
ShiftAnticipate_Noisy	377	Shift anticipation switch signal is erratic.	-	-	-
Shift_XCheck_Diff	190	PCM and DTS command module disagree on ERC shift request.	Command module and PCM are not making calculations correctly.	Sticky, severe warning	Non-DTS: disabled
ShiftPos_RangeHigh	107	ESC fault: Position sensor circuit high. Check the PCM-to-sensor circuit.	Treat this fault like a TPS circuit high. The ESC sensor signal is reading 5 volts (or nearly 5 volts). Check the sensor leads for opens and shorts. The sensor cannot be replaced; you must replace the entire ESC. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Sticky, caution warning	MY12 calibrations—warning changed to severe. Non-DTS: disabled



CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
ShiftPos_RangeLow	108	ESC fault: Position sensor circuit low. Check the PCM-to-sensor circuit.	Treat this fault like a TPS circuit low. The ESC sensor signal is reading 0 volts (or nearly 0 volts). Check the sensor leads for opens and shorts. The sensor cannot be replaced; you must replace the entire ESC. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Sticky, caution warning	MY12 calibrations—warning changed to severe. Non-DTS: disabled
ShiftPressA_RangeHigh	227	Shift fault: Transmission pressure sensor A circuit high. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	–	Non-DTS: disabled
ShiftPressA_RangeLow	228	Shift fault: Transmission pressure sensor A circuit low. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	–	Non-DTS: disabled
ShiftPressB_RangeHigh	230	Shift fault: Transmission pressure sensor B circuit high. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	–	Non-DTS: disabled
ShiftPressB_RangeLow	231	Shift fault: Transmission pressure sensor B circuit low. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	–	Non-DTS: disabled
SmartStartAbort	212	SmartStart failed—No RPM detected.	If the engine cranks but doesn't start, check the crankshaft sensor for problems.	Not sticky, severe warning	Non-DTS: disabled
STBDECT_Overtemp	21	ECT (engine coolant temperature) is too high.	The starboard cylinder head (on an outboard) is exceeding its maximum allowed temperature. 1. Cooling system problem, bad pump or thermostat. 2. Engine lugging, check propping. 3. It is extremely unlikely there is a sensor or wiring problem.	Not sticky, severe warning, reduced power	Used on all engines

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
STBDECT_RangeHigh	111	ECT (engine coolant temperature) sensor circuit high. Check the PCM-to-sensor circuit.	Treat this as an ECT sensor circuit high. The sensor signal is reading 5 (or nearly 5) volts. The signal lead is open or the sensor is open. Check the signal lead for open circuits and check the resistance of the sensor. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	
STBDECT_RangeLow	112	ECT (engine coolant temperature) sensor circuit low. Check the PCM-to-sensor circuit.	Treat this as an ECT sensor circuit low. The sensor signal is reading 0 (or nearly 0) volts. The signal lead is shorted to sensor ground or possibly engine ground. Check the signal lead for shorts to ground. Check the sensor for a short circuit. Possible defective PCM. 1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	
STBDEMCT_Overtemp	179	Starboard EMCT is too hot. Check the starboard exhaust manifold.	Verify that the manifold temperature is near the temperature sensor. Check for defective or worn water pump, clogged coolers or strainers. The manifold may be full of sediment or corrosion.	Not sticky, severe warning	Not used on 3.0L MPI
STBDEMCT_RangeHigh	177	Starboard EMCT sensor circuit high. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Not sticky, caution warning	Not used on 3.0L MPI
STBDEMCT_RangeLow	178	Starboard EMCT sensor circuit low. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	Not sticky, caution warning	Not used on 3.0L MPI
SteeringPos_RangeHigh	118	Steering position sensor circuit high.	Check PCM-to-sensor circuit.	Not sticky	-
SteeringPos_RangeLow	119	Steering position sensor circuit low.	Check PCM-to-sensor circuit.	Not sticky	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
START_OutputFault	117	Starter fault. Check the PCM-to-starter relay circuit.	The PCM has detected an open circuit or short circuit in the relay control circuit. This circuit uses pins 85 and 86 in the relay. Battery voltage is always present on one of these pins. The PCM will ground the other through a yellow/black lead. Check the yellow/black lead between the PCM and the starter relay for shorts and opens. Check the relay winding (pins 85 and 86) for opens and shorts. Check for battery voltage to the relay control circuits. Refer to <b>Section 3A</b> .	Not sticky	Non-DTS: disabled
SysVolt_FaultBlocker	388	PCM system voltage (driver power) too low.	Check if battery switch is in the off position. Battery voltage is too low at the PCM's driver power pins (C3G and C3H). Check the PCM-to-battery circuit (includes main power relay and fuse/circuit breaker).	Not sticky	-
SysVolt_RangeHigh	1	Battery voltage too high. Charging system stuck on maximum output.	Alternator is most likely overcharging. Check the regulator and sense circuit. 1. Charging system malfunction. 2. Wiring problem. Incorrect installation of 24- or 36-volt systems.	OBD-M-1	No details
SysVolt_RangeLow	2	Battery voltage too low.	Check for loose alternator belt, alternator malfunction, excessive electrical load, and/or idling for extended periods of time with high electrical loads. 1. Charging system malfunction. 2. Loose belt. Defective battery.	OBD-M-1	No details
TPS1_ETC_NoAdapt	318	ETC fault: TPS 1 sensor failed to adapt during engine shut down.	DTS engine: TPS 1 did not indicate that the throttle plate moved to the specified closed throttle position during the engine shut down process.	OBD-M	-
TPS1_Mech_NoAdapt	124	TPS 1 sensor failed to adapt: Throttle plate not in idle position at key up.	Mechanical engine: TPS sensor was reading outside the window specified for adaptation to occur as the key was turned on. Possible throttle body stop screw tampering.	OBD-M-1	DTS: disabled
TPS1_RangeHigh	120	TPS 1 sensor circuit high. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	All engines
TPS1_RangeLow	121	TPS 1 sensor circuit low. Check the PCM-to-sensor circuit.	1. Sensor is open or shorted internally. 2. A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams. 3. It is extremely unlikely that the PCM is bad.	OBD-M-1	All engines

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
TPS2_ETC_NoAdapt	129	ETC fault: TPS 2 sensor failed to adapt during engine shut down.	DTS engine: TPS 2 did not indicate that the throttle plate moved to the specified closed throttle position during the engine shut down process.	OBD-M-1	Non-DTS: disabled
TPS2_RangeHigh	125	TPS 2 sensor circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	Non-DTS: disabled
TPS2_RangeLow	126	TPS 2 sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	OBD-M-1	Non-DTS: disabled
TransTempHigh	196	Transmission temperature too high.	Check the transmission cooler fluid level, incorrect shift adjustments, low internal pressures resulting in clutch slippage, and/or engine modifications greatly increasing horsepower and torque.	Not sticky, severe warning	Stemdrive engines: disabled
TrimPos_RangeHigh	130	Trim position sensor circuit high. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky	Non-DTS: disabled
TrimPos_RangeLow	131	Trim position sensor circuit low. Check the PCM-to-sensor circuit.	<ol style="list-style-type: none"> <li>Sensor is open or shorted internally.</li> <li>A sensor wire is open or shorted. Refer to <b>Section 3A</b> for wiring diagrams.</li> <li>It is extremely unlikely that the PCM is bad.</li> </ol>	Not sticky	Non-DTS: disabled
TRMD_OutputFault	184	Trim down fault. Check the PCM-to-down relay circuit	A trim down relay or relay control circuit (relay pins 85 and 86) problem.	Not sticky, caution warning	Non-DTS: disabled
TRMR_OutputFault	350	Trim limit relay fault.	Trim limit relay or relay control circuit (relay pins 85 and 86) problem. Check the PCM-to-trim limit relay circuit. Refer to <b>Section 3A</b> .	Not sticky	-
TRMU_OutputFault	185	Trim up fault. Check the PCM-to-up relay circuit.	A trim down relay or relay control circuit (relay pins 85 and 86) problem. Refer to <b>Section 3A</b> .	Not sticky, caution warning	Non-DTS: disabled
TTCL_TimeToClosedLoop	306	Taking too long to enter closed-loop fuel control mode. Check the cooling system for slow or no warmup.	The engine will not achieve closed-loop mode within the time limit if cooling system problems are causing the engine to take too long to reach operating temperature or never reaching operating temperature.	OBD-M	-
XDRPa_RangeHigh	378	Power 1 voltage (sensor power) too high.	-	OBD-M	-

CDS G3 Fault Text	Fault ID	Fault Description:	Notes/Possible Causes/Descriptions	Fault Details:	Application Details:
XDRPa_RangeLow	133	Power 1 voltage (sensor power 1) too low.	5-volt power for engine sensors.	OBD-M-1	
XDRPb_RangeHigh	379	Power 2 voltage (sensor power 2) too high.	This circuit powers the boat and/or SmartCraft sensors.	Not sticky	-
XDRPb_RangeLow	217	Power 2 voltage (sensor power 2) too low.	This circuit powers the boat and/or SmartCraft sensors.	Not sticky, caution warning	-

## Notes: