

1997 2.4L (LD9) N-car (N-Malibu and N-Cutlass only) W/AUTO TRANS - ENGINE DIAGNOSTIC PARAMETERS
97c24T_NP9aE.doc

| SENSED PARAMETER | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA AND THRESHOLD VALUE(S) | SECONDARY PARAMETERS AND ENABLE CONDITIONS | TIME REQUIRED AND FREQUENCY | MIL ILLUM. TYPE |
|--------------------------------------|-------------------|---|---|---|---|------------------------|
| Manifold Pressure Sensor Rationality | P0106 | Functional Check | Part A: 1. MAP > 53 kPa or 2. Change Of MAP < 10 kPa or Part B: Change in MAP < Table value | Part A: 1. Idle 2. RPM > 800 TP Between 0% & 50 % Δ TP (from an idle condition) > 8% MAP < 53kPa Part B: RPM > 800 TP Between 0% & 50 % Δ TP > 8% MAP < 53kPa | 19/20 Cts Continuous Check | DTC Type A |
| Manifold Pressure Too Low | P0107 | This DTC Detects A Continuous Short To Low Or Open In Either The Signal Circuit Or MAP Sensor | MAP < 0.08V | RPM > 1000 TP Sensor > 15.2 % Or RPM < 1000 No TP Sensor High/Low DTC's | 400/500 Cts 125ms Per Ct Continuous Check | DTC Type A |
| Manifold Pressure Too High | P0108 | This DTC Detects A Continuous Short To high Or Open In the ground Circuit Or MAP Sensor | MAP > 3.80v | TP Sensor < 12% VSS < 1MPH Engine Should Run For At Least 20 - 40 Sec Before Malf Enable No TP Sensor High/Low DTC's | 80/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| Intake Air Temperature Too High | P0112 | The DTC detects a continuous short to ground in the IAT signal circuit or the IAT sensor | IAT < 48 Cts (> 128°C) | VSS > 15 Mph Engine Running > 320 Sec | 25/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| Intake Air Temperature Too Low | P0113 | The DTC detects a continuous short to ground in the IAT signal circuit or the IAT sensor | IAT > 253 Cts (< -57°C) | VSS < 15MPH Engine Running > 320 Sec | 25/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| High Coolant Temperature | P0117 | The DTC detects a continuous short to ground in the ECT signal circuit or the ECT sensor | ECT < 4 Cts (> 138°C) (High R) Or ECT < 36 Cts (> 142°C) (Low R) | Engine Running > 128 Sec | 50/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| Low Coolant Temperature | P0118 | The DTC detects a continuous short to ground in the ECT signal circuit or the ECT sensor | ECT > 251 Cts (< -50°C) (High R) Or ECT > 252 Cts (< -71°C) (Low R) | Engine Running > 60 Sec | 50/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| TP Sensor Stuck (Part A) | P0121 | The DTC detects a stuck low TP sensor | TP > 7% | VSS < 1MPH RPM < 1050 IAC < 150 Cts Δ MAP < 0 kPa | 10/25 Cts 125ms Per Ct Continuous Check | DTC Type A |

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| TP Sensor Stuck (Part B) | P0121 | Normal Operating Range Of 0% To 99.6% | TP Vs RPM Table TP > 33% At 1600 RPM TP > 55% At 2400 RPM TP > 60.4% At 3200 RPM TP > 79% At 4000 RPM TP > 75.7% At 4800 RPM TP > 99.6% At 5600 RPM | MAP < 37.2 kPa TP Sensor Δ < 2% No MAP Sensor High/Low DTC's | 50/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| TP Sensor Low | P0122 | Normal Operating Range Of .33v - 4.24v | TP Sensor < 0.16v | Engine Running | 50/200 Cts 125ms Per Ct Continuous Check | DTC Type A |
| TP Sensor High (Part "A") | P0123 | Normal Operating Range Of .33v - 4.24v | TP Sensor > 3.9v | Engine Running RPM < 1500 MAP < 60 kPa | 110/200 Cts 125ms Per Ct Continuous Check | DTC Type A |
| TP Sensor High (Part "B") | P0123 | Normal Operating Range Of .33v - 4.24v | TP Sensor > 4.8v | N/A | 110/200 Cts 125ms Per Ct Continuous Check | DTC Type A |
| Time For Closed Loop | P0125 | This DTC Detects If A Stabilized Minimum Closed Loop Temperature Is Reached And Maintained After Engine Start-Up | If Closed Loop Timer Is Exceeded: 120 Sec At 50°F (10°C) 300 Sec At 20°F (-7°C) ECT < 70°F (21°C) | ECT Shorts Tests Not Failing And ECT DTC's Not Active IAT Sensor DTC's Not Active Start Up ECT < 21°C IAT > -7°C ECT > -7°C Max Idle Time<: 90sec At 50°F (10°C) 225 Sec At 20°F (-7°C) Min Air Flow < 10 GPM To Be Considered Idle | 11 Cts 125ms Per Ct Once An Ignition Cycle | DTC Type B |
| O2S 1 Lean | P0131 | Normal Operating Range Which Varies 150mv - 850mv | O2S 1 < 43 mv | Engine Running > 25 Sec TP Between 4.7% & 50.2% A/F Ratio Between 14.5 And 14.7 ECT > 70°C Engine Operating In Closed Loop No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 999/1000 Cts 125ms Per Ct Continuous Check | DTC Type A |

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|-------------------------|-------------------|---|---|--|--|------------------------|
| O2S 1 Rich | P0132 | Normal Operating Range Which Varies 150mv - 850mv | O2S 1 > 945mv | Engine Running > 25 Sec TP Between 4.7% & 50.2% A/F Ratio 14.5 & 14.7 ECT > 70°C Engine Operating In Closed Loop No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 399/400 Cts 125ms Per Ct Continuous Check | DTC Type A |
| O2S 1 Slow Response | P0133 | Normal Operating Range Which Varies 150mv - 850mv This DTC Determines If The O2S 1 Is Functioning Properly By Checking Its Response Time | Avg O2S 1 Response Times: R/L > 249ms L/R > 249ms Ratio Of L/R To R/L Is > 3.5 Or < 0.44 | TP Between 8% & 20% RPM Between 1600 & 2600 EVAP > 36% Pwm PLM > 128 No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 100 Sec Once An Ignition Cycle | DTC Type B |
| O2S 1 Open | P0134 | Normal Operating Range Which Varies 150mv - 850mv | O2S 1 > 399mv & < 499mv | Engine Running > 30 Sec TP Between 8% & 56% ECT > 70°C No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 999/1000 Cts 125ms Per Ct Continuous Check | DTC Type A |

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| O2S 2 Lean | P0137 | Normal Operating Range Which Varies 150mv - 850mv | O2S 2 < 43mv | Engine Running > 25 Sec TP Between 4.7% & 50.2% A/F Ratio Between 14.5 & 14.7 ECT > 40°C No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 999/1000 Cts 125ms Per Ct Continuous Check | DTC Type B |
| O2S 2 Rich | P0138 | Normal Operating Range Which Varies 150mv - 850mv | O2S 2 > 1042 mv | Engine Running > 25 Sec TP Between 4.7% & 50.2% ECT > 40°C A/F Ratio between 14.5 & 14.7 No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 399/400 Cts 125ms Per Ct Continuous Check | DTC Type B |
| O2S 2 Open | P0140 | Normal Operating Range Which Varies 150mv - 850mv | O2S 2 Between 425mv & 456mv | Engine Running > 30 Sec TP Between 5% & 56% ECT > 40°C No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 999/1000 Cts 125ms Per Ct Continuous Check | DTC Type B |

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|----------------------------------|-------------------|-------------------------------------|---|--|--|------------------------|
| O2S 2 Heater Circuit Malfunction | P0141 | 11.5v - 13.6v | O2S 2 Voltage Changes > ±150mv From Mean O2S 2 Bias Voltage | ECT And IAT < 40°C Difference In ECT & IAT < 7°C TP Must Not Be > 20% For > 3.75 Sec. No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | Time Determined By Table Once An Ignition Cycle | DTC Type B |
| Fuel Trim Lean | P0171 | Fuel Trim Index Between 110 And 145 | Fuel Trim Index > 160 | Baro > 73.8 kPa ECT > 60°C & < 115°C IAT > -25°C & < 115 °C MAP > 27kPa RPM Between 750 & 3400 VSS < 70MPH No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No Injector DTC's No Misfire DTC's No KS DTC's No CKP Sensor DTC's No CMP Sensor DTC's No EGR DTC's No EVAP Purge Valve DTC's No VSS DTC's No IAC Valve DTC's No Flash Memory Error DTC's | 4 Sec Continuous Check | DTC Type B |

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|--|---|---------------------------------------|--|--|---|---|
| Fuel Trim Rich | P0172 | Fuel Trim Index Between 110 And 145 | Fuel Trim Index < 75 | Baro > 73.8 kPa ECT > 60°C & < 115°C IAT > -25°C & < 115 °C MAP > 27kPa RPM Between 750 & 3400 VSS < 70MPH No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No Injector DTC's No Misfire DTC's No KS DTC's No CKP Sensor DTC's No CMP Sensor DTC's No EGR DTC's No EVAP Purge Valve DTC's No VSS DTC's No IAC Valve DTC's No Flash Memory Error DTC's | 16 Sec Once Every 250 Seconds | DTC Type B |
| Injector Circuit Problem | P0200 | Bpw 1 - 4 Ms (At Idle) | Injector Current < 4 Amps | N/A | 7 Sec Continuous Check | DTC Type A |
| Random Misfire Cylinder 1 Misfire Cylinder 2 Misfire Cylinder 3 Misfire Cylinder 4 Misfire | P0300 P0301 P0302 P0303 P0304 | Change in crankshaft angular velocity | FTP Threshold - 1.5% I/M Threshold - 1.5% Catalyst Damage - see speed/load chart | Engine run time > 5 sec RPM Between 469 & 6406 ECT > -7°C & < 123°C Fuel level > 10% No MAP Sensor Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No Fuel Trim DTC's No KS DTC's No CKP Sensor DTC's No CMP Sensor DTC's No EGR DTC's No VSS DTC's No IAC Valve DTC's No Flash Memory Error DTC's | Emission Level 10failed 200 revolution blocks out of 16 Catalyst Damage Level 4 failed 200 revolution block(s) in the FTP region Catalyst Damage Level 1 to 5 failed 200 revolution block(s) outside the FTP region Continuous Check | DTC Type B EMISSION DTC Type A CATALYST DAMAGING |
| Knock Sensor (KS) Output | P0325 | Instantaneous Voltage > 1.0v | Instantaneous Voltage < 1.0v | RPM > 1200 ECT > 56°C MAP > 60 kPa | 60 Sec Continuous Check | DTC Type A |

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| CKP Sensor Position Resync | P0335 | 7x Resync Counter = 0 Counts | 7x Resync Counter > 15 Counts | Engine Running No CMP Sensor DTC's | 256 Sec Continuous Check | DTC Type A |
| CMP Sensor Position Resync | P0341 | Cam Resync Counter = 0 Counts | Cam Resync Counter > 15 Counts | Engine Running | 256 Seconds Continuous Check | DTC Type A |
| CMP Sensor Missing | P0342 | 0 - 255 Counts | No Change In Cam Activity > 16 Cycles | Engine Running | Continuous Check | DTC Type A |
| EGR Flow Insufficient (Note: On 6/19/96, CARB verbally approved the use of a third prep when testing this diagnostic for demonstration purposes.) | P0401 | Operates When EGR Is Used EGR Enables With IAT > 5°C EGR Disables With IAT < 3°C MAP Δ > MAP Cal Under Decel Conditions | MAP Δ < MAP Cal Under Decel Conditions | RPM Between 1100 & 2100 Vehicle Speed >25MPH No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No Fuel Trim Rich DTC's No Injector DTC's No Misfire DTC's No Cam Resync DTC's No EVAP Leak DTC's No VSS DTC's | 15 Tests Per Trip After Nvm Reset Otherwise Once Per Ignition Cycle | DTC Type A |
| EGR Open Valve Pintle Error | P0404 | Actual Wide Open EGR Vs Desired < 20% Or Desired EGR Pos Vs Actual EGR Pos < 9% | Actual Wide Open EGR Vs Desired > 20% Or Desired EGR Pos Vs Actual EGR Pos > 9% | EGR Enabled No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No Fuel Trim Rich DTC's No Injector DTC's No Misfire DTC's No Cam Resync DTC's No EVAP Leak DTC's No VSS DTC's | 22 Sec Continuous Check | DTC Type B |
| EGR Closed Valve Pintle Error | P1404 | Actual EGR Closed Position > 15 Cts | Actual EGR Closed Position < 15 Cts | EGR Enabled No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No Misfire DTC's No CKP Sensor DTC's No EVAP DTC's No VSS DTC's No IAC Valve DTC's | 5Sec 4 Fails per drive cycle (With pintle movement > 15% per each test) | DTC Type B |

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|------------------------|------------|---|---|---|--|-----------------|
| Catalyst Monitor | P0420 | Oxygen Storage Capability (OSC) Time Difference < 0.117 Sec | Oxygen Storage Capability (OSC) Time Difference \geq 0.117 Sec OSC Time Difference = OSC Worst Pass Thresh - OSC Compensation Factor * (O2S 2 Response Time - O2S 1 Response Time) OSC Worst Pass Thresh = 1.08 Sec | <u>Valid Idle Period Criteria</u> Engine Speed \geq 1000 RPM For Minimum Of 34 Sec Since End Of Last Idle Period. Min Engine Run Time: Time for hot start \geq 360 Sec Time for cold start \geq 450 Sec <u>Test Enable Conditions</u> Predicted Catalyst Temp \geq 510°C Baro \geq 72.3 kPa IAT Between -20.5°C & 80°C ECT Between 75°C & 125°C Idle \leq 200 Sec Test Attempted This Trip \leq 12 Tests Attempted This Idle Period < 1 -75 RPM \leq (Engine Speed - Desired Speed) \leq 150 RPM <u>Trip Enable Criteria</u> No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No Fuel Trim Rich DTC's No Injector DTC's No Misfire DTC's No EVAP Leak DTC's No VSS DTC's No O2S 1 DTC's No O2S 2 DTC's | 1 Test Attempted Per Valid Idle Period Max Of 6 Tests Per Trip Until Idle Catalyst I/M Flag Set Max Of 1 Test Per Trip After Catalyst I/M Flag Set 15.6 Ms Per Ct | DTC Type A |
| EVAP System Large Leak | P0440 | 0.5 To 4.5 V | Vac < 3.0 V | Baro > 75 kPa ECT Between 4°C & 30°C At Startup IAT Between 4°C & 30°C At Startup ECT - IAT < 8°C IAT - ECT < 1.5°C Fuel Level 15% - 85% TP Sensor Between 7% & 35% Engine Run Time > 120 Sec EVAP Solenoid Enabled No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No VSS DTC's | 400 Sec Once Per Ignition Cycle | DTC Type A |

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|----------------------------|------------|------------------------------|--|--|--|-----------------|
| EVAP Small Leak Detected | P0442 | 0.5 To 4.5 V | 0.024 - 0.10 V Per Sec Decay Varies With Fuel Level | Baro > 75 kPa ECT Between 4°C & 30°C At Startup IAT Between 4°C & 30°C At Startup ECT - IAT < 8°C IAT - ECT < 1.5°C Fuel Level 15% - 85% TP Sensor Between 7% & 35% Engine Run Time > 120 Sec EVAP Solenoid Enabled No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No VSS DTC's | 15 Sec Once Per Ignition Cycle | DTC Type A |
| EVAP Canister Vent Blocked | P0446 | 0.5 To 4.5 V | Vac > 4.2v | Baro > 75 kPa ECT Between 4°C & 30°C At Startup IAT Between 4°C & 30°C At Startup ECT - IAT < 8°C IAT - ECT < 1.5°C Fuel Level 15% - 85% TP Sensor Between 7% & 35% Engine Run Time > 120 Sec EVAP Solenoid Enabled No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No VSS DTC's | 100 Sec Once Per Ignition Cycle | DTC Type A |
| Low Speed Fan Fault | P0480 | Fan Fault Line Low | Fan Fault Line High | Voltage > 10v Fan Commanded On | 50/100 Cts 125ms Per Ct Continuous Check | DTC Type A |
| High Speed Fan Fault | P0481 | Fan Fault Line Low | Fan Fault Line High | Voltage > 10v Fan Commanded On | 50/100 Cts 125ms Per Ct Continuous Check | DTC Type A |

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| Idle Speed Low | P0506 | 10 - 72 Steps At Idle | IAC > 150 Steps | Engine Run Time > 20 Sec Baro > 72kPa ECT > 40°C Idle Speed > 100 RPM Below Desired Idle Stabilized For 5 Sec No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No Injector DTC's No CKP Sensor DTC's No CMP Sensor DTC's No EGR DTC's No EVAP Flow Or Leaking DTC's No EVAP Vent Blocked DTC's No VSS DTC's | 18.5 Sec Continuous Check | DTC Type B |
| Idle Speed High | P0507 | 10 - 72 Steps At Idle | IAC < 2 Steps | Engine Run Time > 20 Sec Baro > 72kPa ECT > 40°C Idle Speed > 60 RPM Above Desired Idle Stabilized For 5 Sec No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No Injector DTC's No CKP Sensor DTC's No CMP Sensor DTC's No EGR DTC's No EVAP Flow Or Leaking DTC's No EVAP Vent Blocked DTC's No VSS DTC's | 12.5 Sec Continuous Check | DTC Type B |
| PCM Has EEPROM Flash Error | P0601 | Correct Checksum | Checksum Detection Incorrect > 3 Times | N/A | Immediate | DTC Type A |
| EEPROM Not Programmed | P0602 | Programmed EEPROM | Unprogrammed EEPROM | N/A | Immediate | DTC Type A |

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|-----------------------------------|-------------------|--|---|---|--|------------------------|
| O2S 1 Not Enough Switches | P1133 | Normal Operation Which Varies From 150mv - 850mv | O2S 1 Switch Numbers L/R < 10 Cts R/L < 15 Cts | 1600 - 2600 RPM EVAP > 36% Pwm PLM > 128 TP Between 9% & 20 % No MAP Low/Rationality DTC's No IAT Sensor DTC's No ECT Sensor High/Low DTC's No TP Sensor DTC's No Injector DTC's No Misfire DTC's No EGR Position DTC's No EVAP Purge Valve Leaking DTC's No IAC Valve DTC's | 100 Sec Once An Ignition Cycle | DTC Type B |
| Misfire Crank Angle Sensing Error | P1336 | Crankshaft Compensation Factor (CCF) Sum = 2 | CCF Sum Above Or Below 2 By 7 Counts (2 = 65536 Counts) | No Crank Sensor DTC's No Cam Sensor DTC's | .5 Sec Once Per Ignition Cycle | DTC Type A |
| EGR Sensor Signal Low | P0405 | Actual Closed EGR Vs Desired Closed EGR <6 Cts | Actual Closed EGR Vs Desired Closed EGR >6 Cts | EGR Enabled No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No Fuel Trim Rich DTC's No Injector DTC's No Misfire DTC's No Cam Resync DTC's No EVAP Leak DTC's No VSS DTC's | 25Sec Continuous Check | DTC Type B |
| Purge Valve Leaking | P1441 | 0.5 To 4.5 V | Vac > 2.0v | Baro > 75 kPa ECT Between 4°C & 30°C At Startup IAT Between 4°C & 30°C At Startup ECT - IAT < 8°C IAT - ECT < 1.5°C Fuel Level 15% - 85% TP Sensor Between 7% & 35% Engine Run Time > 0 Sec No MAP Sensor DTC's No IAT Sensor DTC's No ECT Sensor DTC's No TP Sensor DTC's No O2S 1 DTC's No VSS DTC's | 240 Sec Once Per Ignition Cycle | DTC Type A |
| EEPROM General Fault | P1621 | Correct Checksum | Incorrect Checksum | N/A | Immediately | DTC Type A |

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|------------------------------------|-------|---|---|---|--|------------|
| EVAP Fuel Level Sensor Circuit | P0460 | 0 - 255 Counts | Tank Level Moves < 4 Counts In 120 Miles | Engine Running | Continuous Check | DTC Type C |
| A/C Pressure Diagnostic (Part "A") | P0530 | .1v - 4.9v | A/C < .20v | A/C Requested IAT > 0°C | 15 Sec Continuous Check | DTC Type C |
| A/C Pressure Diagnostic (Part "B") | P0530 | .1v - 4.9v | A/C > 4.9v With Clutch "On" A/C > 3.98v With Clutch "Off" | IAT > 0°C | 15 Sec Continuous Check | DTC Type C |
| System Voltage Low | P0562 | 11.35v - 15.5v | Voltage < 10.1v | RPM > 1300 | 240 Sec Continuous Check | DTC Type C |
| System Voltage High | P0563 | 11.35v - 15.5v | Voltage > 17v | N/A | Immediate Continuous Check | DTC Type C |
| PRNDL Error | P0705 | Recognizable PRNDL | Unrecognizable PRNDL | VSS > 5MPH | 5 Sec Continuous Check | DTC Type C |
| Lean Fuel Monitor | P1171 | O2S 1 Under Power Enrichment Mode Which Varies From 850mv - 905mv | O2S 1 < 300mv | Vehicle In Power Enrichment Mode | 5 Sec Continuous Check | DTC Type C |
| Passlock Theft Detected | P1629 | Correct Password | Incorrect Or No Password Detected | Cylinder Lock Reverse Rotation < 1 Second | Immediately Once Per Ignition Cycle | DTC Type C |
| Class Ii Fault With The PCM | P1601 | Receiving Data From IPC | Scheduler Message Not Received From The PCM | Engine Running > 15 Secondsv | 5 Sec Continuous Check | DTC Type C |
| No ICC Communication With The PCM | P1602 | Receiving Data From ICC | Scheduler Message Not Received From ICC | Engine Running > 15 Sec | 5 Sec Continuous Check | DTC Type C |
| No BFC Communication With The PCM | P1610 | Receiving Data From BFC | Scheduler Message Not Received From BFC | Engine Running > 15 Sec | 5 Sec Continuous Check | DTC Type C |
| Class Ii Fault Eith VTD Controller | P1626 | Scheduler Message Received From VTD Controller | Scheduler Message Not Received From VTD Controller Or Correct Password Nor Received Before Fuel Cutoff Decision | Engine Running > 15 Sec | 5 Sec Continuous Check | DTC Type C |
| Learn Password Mode | P1630 | Password Learn Mode Not Enabled | Password Learn Mode Enabled | N/A | Immediately Continuous Check | DTC Type C |
| Incorrect Password | P1631 | Correct Password Received | Incorrect Password Received | N/A | Immediately Continuous Check | DTC Type C |

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|---------------------|-------|---------------------|--|-----|---------------------------------|------------|
| Fuel Disable By VTD | P1632 | Fuel System Enabled | Fuel Disable Password Recieved Or Good Password Not Recieved | N/A | Immediately Continuous Check | DTC Type C |
|---------------------|-------|---------------------|--|-----|---------------------------------|------------|