DIAGNOSTIC TROUBLE CODE CHART

HINT:
The parameters listed in the chart may not confirm exactly to those read during the DTC check due to the type of instrument or other factors.
If a trouble code is displayed during the DTC check in the check mode, check the circuit for the code listed in the table below. For details of each code, refer to the "See page" column in the DTC chart.

SFI SYSTEM:

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0010	Camshaft Position "A" Actuator Circuit (Bank 1)	1. Open or short in OCV for intake camshaft (bank 1) circuit 2. OCV for intake camshaft (bank 1) 3. ECM	Comes on	DTC stored	ES-75
P0011	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 1)	1. Valve timing 2. OCV for intake camshaft 3. OCV filter 4. Intake camshaft (bank 1) timing gear assembly 5. ECM	Comes on	DTC stored	ES-80
P0012	Camshaft Position "A" - Timing Over-Retarded (Bank 1)	1. Valve timing 2. OCV for intake camshaft 3. OCV filter 4. Intake camshaft (bank 2) timing gear assembly 5. ECM	Comes on	DTC stored	ES-80
P0013	Camshaft Position "B" Actuator Circuit / Open (Bank 1)	1. Open or short in OCV for exhaust camshaft (bank 1) circuit 2. OCV for exhaust camshaft (bank 1) 3. ECM	Comes on	DTC stored	ES-87
P0014	Camshaft Position "B" - Timing Over-Advanced or System Performance (Bank 1)	1. Valve timing 2. OCV for exhaust camshaft 3. OCV filter 4. Exhaust camshaft timing gear assembly 5. ECM	Comes on	DTC stored	ES-92
P0015	Camshaft Position "B" - Timing Over-Retarded (Bank 1)	1. Valve timing 2. OCV for exhaust camshaft 3. OCV filter 4. Exhaust camshaft timing gear assembly 5. ECM	Comes on	DTC stored	ES-92
P0016	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A)	1. Mechanical system (Timing chain has jumped teeth or chain stretched) 2. ECM	Comes on	DTC stored	ES-98

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0017	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B)	1. Mechanical system (Timing chain has jumped teeth or chain stretched) 2. ECM	Comes on	DTC stored	ES-98
P0018	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor A)	1. Mechanical system (Timing chain has jumped teeth or chain stretched) 2. ECM	Comes on	DTC stored	ES-98
P0019	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor B)	1. Mechanical system (Timing chain has jumped teeth or chain stretched) 2. ECM	Comes on	DTC stored	ES-98
P0020	Camshaft Position "A" Actuator Circuit (Bank 2)	1. Open or short in OCV for circuit intake camshaft (bank 2) circuit 2. OCV for intake camshaft (bank 2) 3. ECM	Comes on	DTC stored	ES-75
P0021	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 2)	1. Valve timing 2. OCV for intake camshaft 3. OCV filter 4. Intake camshaft (bank 1) timing gear assembly 5. ECM	Comes on	DTC stored	ES-80
P0022	Camshaft Position "A" - Timing Over-Retarded (Bank 2)	1. Valve timing 2. OCV for intake camshaft 3. OCV filter 4. Intake camshaft (bank 2) timing gear assembly 5. ECM	Comes on	DTC stored	ES-80
P0023	Camshaft Position "B" Actuator Circuit / Open (Bank 2)	1. Open or short in OCV for exhaust camshaft (bank 2) circuit 2. OCV for exhaust camshaft (bank 2) 3. ECM	Comes on	DTC stored	ES-87
P0024	Camshaft Position "B" - Timing Over-Advanced or System Performance (Bank 2)	1. Valve timing 2. OCV for exhaust camshaft 3. OCV filter 4. Exhaust camshaft timing gear assembly 5. ECM	Comes on	DTC stored	ES-92
P0025	Camshaft Position "B" - Timing Over-Retarded (Bank 2)	1. Valve timing 2. OCV for exhaust camshaft 3. OCV filter 4. Exhaust camshaft timing gear assembly 5. ECM	Comes on	DTC stored	ES-92

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0031	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 1 Sensor 1)	1. Open in A/F sensor heater circuit 2. A/F sensor heater 3. A/F sensor heater relay 4. ECM	Comes on	DTC stored	ES-101
P0032	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 1 Sensor 1)	1. Short in A/F sensor heater circuit 2. A/F sensor heater 3. A/F sensor heater relay 4. ECM	Comes on	DTC stored	ES-101
P0037	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	1. Open in HO2 sensor heater circuit 2. HO2 sensor heater 3. EFI relay 4. ECM	Comes on	DTC stored	ES-109
P0038	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	1. Open in HO2 sensor heater circuit 2. HO2 sensor heater 3. EFI relay 4. ECM	Comes on	DTC stored	ES-109
P0051	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 2 Sensor 1)	1. Open in A/F sensor heater circuit 2. A/F sensor heater 3. A/F sensor heater relay 4. ECM	Comes on	DTC stored	ES-101
P0052	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 2 Sensor 1)	1. Short in A/F sensor heater circuit 2. A/F sensor heater 3. A/F sensor heater relay 4. ECM	Comes on	DTC stored	ES-101
P0057	Oxygen Sensor Heater Control Circuit Low (Bank 2 Sensor 2)	1. Open in HO2 sensor heater circuit 2. HO2 sensor heater 3. EFI relay 4. ECM	Comes on	DTC stored	ES-109
P0058	Oxygen Sensor Heater Control Circuit High (Bank 2 Sensor 2)	1. Open in HO2 sensor heater circuit 2. HO2 sensor heater 3. EFI relay 4. ECM	Comes on	DTC stored	ES-109
P0100	Mass or Volume Air Flow Circuit	1. Open or short in MAF meter circuit 2. MAF meter 3. ECM	Comes on	DTC stored	ES-116
P0101	Mass or Volume Air Flow Circuit Range / Performance Problem	MAF meter	Comes on	DTC stored	ES-122
P0102	Mass or Volume Air Flow Circuit Low Input	1. Open in MAF meter circuit 2. Short in ground circuit 3. MAF meter 4. ECM	Comes on	DTC stored	ES-116
P0103	Mass or Volume Air Flow Circuit High Input	1. Short in MAF meter circuit (+B circuit) 2. MAF meter 3. ECM	Comes on	DTC stored	ES-116

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0110	Intake Air Temperature Circuit	1. Open or short in IAT sensor circuit 2. IAT sensor (built into MAF meter) 3. ECM	Comes on	DTC stored	ES-124
P0111	Intake Air Temperature Sensor Gradient Too High	Mass air flow meter assembly	Comes on	DTC stored	ES-130
P0112	Intake Air Temperature Circuit Low Input	1. Short in IAT sensor circuit 2. IAT sensor (built into MAF meter) 3. ECM	Comes on	DTC stored	ES-124
P0113	Intake Air Temperature Circuit High Input	1. Open in IAT sensor circuit 2. IAT sensor (built into MAF meter) 3. ECM	Comes on	DTC stored	ES-124
P0115	Engine Coolant Temperature Circuit	1. Open or short in ECT sensor circuit 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-133
P0116	Engine Coolant Temperature Circuit Range / Performance Problem	1. Thermostat 2. ECT sensor	Comes on	DTC stored	ES-139
P0117	Engine Coolant Temperature Circuit Low Input	1. Short in ECT sensor circuit 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-133
P0118	Engine Coolant Temperature Circuit High Input	1. Open in ECT sensor circuit 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-133
P011B	Engine Coolant Temperature / Intake Air Temperature Correlation	1. IAT sensor 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-142
P0120	Throttle / Pedal Position Sensor / Switch "A" Circuit	1. Throttle Position (TP) sensor (built into throttle body) 2. ECM	Comes on	DTC stored	ES-145
P0121	Throttle / Pedal Position Sensor / Switch "A" Circuit Range / Performance Problem	TP sensor (built into throttle body)	Comes on	DTC stored	ES-152
P0122	Throttle / Pedal Position Sensor / Switch "A" Circuit Low Input	1. TP sensor (built into throttle body) 2. Short in VTA1 circuit 3. Open in VC circuit 4. ECM	Comes on	DTC stored	ES-145
P0123	Throttle / Pedal Position Sensor / Switch "A" Circuit High Input	1. TP sensor (built into throttle body) 2. Open in VTA1 circuit 3. Open in E2 circuit 4. Short between VC and VTA1 circuits 5. ECM	Comes on	DTC stored	ES-145

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	1. Cooling system 2. Engine coolant temperature sensor 3. Thermostat	Comes on	DTC stored	ES-154
P0128	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)	1. Thermostat 2. Cooling system 3. ECT sensor 4. ECM	Comes on	DTC stored	ES-157
P0136	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	1. Open or short in HO2 sensor (bank 1, 2 sensor 2) circuit 2. HO2 sensor (bank 1, 2 sensor 2) 3. HO2 sensor heater (bank 1, 2 sensor 2) 4. Air-Fuel Ratio (A/F) sensor (bank 1, 2 sensor 1) 5. EFI relay 6. Gas leakage from exhaust system	Comes on	DTC stored	ES-160
P0137	Oxygen Sensor Circuit Low Voltage (Bank 1 Sensor 2)	1. Open in HO2 sensor (bank 1, 2 sensor 2) circuit 2. HO2 sensor (bank 1, 2 sensor 2) 3. HO2 sensor heater (bank 1, 2 sensor 2) 4. EFI relay 5. Gas leakage from exhaust system	Comes on	DTC stored	ES-160
P0138	Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 2)	1. Short in HO2 sensor (bank 1, 2 sensor 2) circuit 2. HO2 sensor (bank 1, 2 sensor 2) 3. ECM internal circuit malfunction 4. Air-Fuel ratio (A/F) sensor (bank 1, 2 sensor 1)	Comes on	DTC stored	ES-160
P0141	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)	1. HO2 sensor 2. ECM	Comes on	DTC stored	ES-109
P0156	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)	1. Open or short in HO2 sensor (bank 1, 2 sensor 2) circuit 2. HO2 sensor (bank 1, 2 sensor 2) 3. HO2 sensor heater (bank 1, 2 sensor 2) 4. Air-Fuel Ratio (A/F) sensor (bank 1, 2 sensor 1) 5. EFI relay 6. Gas leakage from exhaust system	Comes on	DTC stored	ES-160

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0157	Oxygen Sensor Circuit Low Voltage (Bank 2 Sensor 2)	1. Open in HO2 sensor (bank 1, 2 sensor 2) circuit 2. HO2 sensor (bank 1, 2 sensor 2) 3. HO2 sensor heater (bank 1, 2 sensor 2) 4. EFI relay 5. Gas leakage from exhaust system	Comes on	DTC stored	ES-160
P0158	Oxygen Sensor Circuit High Voltage (Bank 2 Sensor 2)	1. Short in HO2 sensor (bank 1, 2 sensor 2) circuit 2. HO2 sensor (bank 1, 2 sensor 2) 3. ECM internal circuit malfunction 4. Air-Fuel ratio (A/F) sensor (bank 1, 2 sensor 1)	Comes on	DTC stored	ES-160
P0161	Oxygen Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)	1. HO2 sensor 2. ECM	Comes on	DTC stored	ES-109
P0171	System Too Lean (Bank 1)	1. Intake system 2. Injector blockage 3. Mass Air Flow (MAF) meter 4. Engine Coolant Temperature (ECT) sensor 5. Fuel pressure 6. Gas leakage from exhaust system 7. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 8. A/F sensor (bank 1, 2 sensor 1) 9. A/F sensor heater (bank 1, 2 sensor 1) 10. A/F sensor heater relay 11. A/F sensor heater and A/F sensor heater relay circuits 12. PCV valve and hose 13. PCV hose connections 14. ECM	Comes on	DTC stored	ES-180

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0172	System Too Rich (Bank 1)	1. Injector leakage or blockage 2. MAF meter 3. ECT sensor 4. Ignition system 5. Fuel pressure 6. Gas leakage from exhaust system 7. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 8. A/F sensor (bank 1, 2 sensor 1) 9. A/F sensor heater (bank 1, 2 sensor 1) 10. A/F sensor heater relay 11. A/F sensor heater and A/F sensor heater relay circuits 12. ECM	Comes on	DTC stored	ES-180
P0174	System Too Lean (Bank 2)	1. Intake system 2. Injector blockage 3. Mass Air Flow (MAF) meter 4. Engine Coolant Temperature (ECT) sensor 5. Fuel pressure 6. Gas leakage from exhaust system 7. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 8. A/F sensor (bank 1, 2 sensor 1) 9. A/F sensor heater (bank 1, 2 sensor 1) 10. A/F sensor heater relay 11. A/F sensor heater and A/F sensor heater relay circuits 12. PCV valve and hose 13. PCV hose connections 14. ECM	Comes on	DTC stored	ES-180

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0175	System Too Rich (Bank 2)	1. Injector leakage or blockage 2. MAF meter 3. ECT sensor 4. Ignition system 5. Fuel pressure 6. Gas leakage from exhaust system 7. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 8. A/F sensor (bank 1, 2 sensor 1) 9. A/F sensor heater (bank 1, 2 sensor 1) 10. A/F sensor heater relay 11. A/F sensor heater and A/F sensor heater relay circuits 12. ECM	Comes on	DTC stored	ES-180
P0220	Throttle / Pedal Position Sensor / Switch "B" Circuit	1. TP sensor (built into throttle body) 2. ECM	Comes on	DTC stored	ES-145
P0222	Throttle / Pedal Position Sensor / Switch "B" Circuit Low Input	1. TP sensor (built into throttle body) 2. Short in VTA2 circuit 3. Open in VC circuit 4. ECM	Comes on	DTC stored	ES-145
P0223	Throttle / Pedal Position Sensor / Switch "B" Circuit High Input	1. TP sensor (built into throttle body) 2. Open in VTA2 circuit 3. Open in E2 circuit 4. Short between VC and VTA2 circuits 5. ECM	Comes on	DTC stored	ES-145
P0230	Fuel Pump Primary Circuit	1. Open or short in FUEL PUMP relay circuit 2. FUEL PUMP relay 3. ECM	Does not come on	DTC stored	ES-192

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0300	Random / Multiple Cylinder Misfire Detected	1. Open or short in engine wire harness 2. Connector connection 3. Vacuum hose connections 4. Ignition system 5. Injector 6. Fuel pressure 7. Mass Air Flow (MAF) meter 8. Engine Coolant Temperature (ECT) sensor 9. Compression pressure 10. Valve timing 11. Valve clearance 12. PCV valve and hose 13. PCV hose connections 14. Intake system 15. ECM	Comes on	DTC stored	ES-196
P0301	Cylinder 1 Misfire Detected	Same as DTC P0300	Comes on	DTC stored	ES-196
P0302	Cylinder 2 Misfire Detected	Same as DTC P0300	Comes on	DTC stored	ES-196
P0303	Cylinder 3 Misfire Detected	Same as DTC P0300	Comes on	DTC stored	ES-196
P0304	Cylinder 4 Misfire Detected	Same as DTC P0300	Comes on	DTC stored	ES-196
P0305	Cylinder 5 Misfire Detected	Same as DTC P0300	Comes on	DTC stored	ES-196
P0306	Cylinder 6 Misfire Detected	Same as DTC P0300	Comes on	DTC stored	ES-196
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	1. Short in knock sensor 1 or 2 circuit 2. Knock sensor 1 or 2 3. ECM	Comes on	DTC stored	ES-213
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	1. Open in knock sensor 1 or 2 circuit 2. Knock sensor 1 or 2 3. ECM	Comes on	DTC stored	ES-213
P0332	Knock Sensor 2 Circuit Low Input (Bank 2)	1. Short in knock sensor 1 or 2 circuit 2. Knock sensor 1 or 2 3. ECM	Comes on	DTC stored	ES-213
P0333	Knock Sensor 2 Circuit High Input (Bank 2)	1. Open in knock sensor 1 or 2 circuit 2. Knock sensor 1 or 2 3. ECM	Comes on	DTC stored	ES-213
P0335	Crankshaft Position Sensor "A" Circuit	1. Open or short in CKP sensor circuit 2. CKP sensor 3. Sensor plate (CKP sensor plate) 4. ECM	Comes on	DTC stored	ES-220

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0339	Crankshaft Position Sensor "A" Circuit Intermittent	1. Open or short in CKP sensor circuit 2. CKP sensor 3. Sensor plate (CKP sensor plate) 4. ECM	Does not come on	DTC stored	ES-220
P0340	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	1. Open or short in VVT sensor circuit for intake camshaft 2. VVT sensor for intake camshaft 3. Camshaft timing gear for intake camshaft 4. Jumped tooth of timing chain for intake camshaft 5. ECM	Comes on	DTC stored	ES-226
P0342	Camshaft Position Sensor "A" Circuit Low Input (Bank 1 or Single Sensor)	1. Open or short in VVT sensor circuit for intake camshaft 2. VVT sensor for intake camshaft 3. Camshaft timing gear for intake camshaft 4. Jumped tooth of timing chain for intake camshaft 5. ECM	Comes on	DTC stored	ES-226
P0343	Camshaft Position Sensor "A" Circuit High Input (Bank 1 or Single Sensor)	1. Open or short in VVT sensor circuit for intake camshaft 2. VVT sensor for intake camshaft 3. Camshaft timing gear for intake camshaft 4. Jumped tooth of timing chain for intake camshaft 5. ECM	Comes on	DTC stored	ES-226
P0345	Camshaft Position Sensor "A" Circuit (Bank 2)	1. Open or short in VVT sensor circuit for intake camshaft 2. VVT sensor for intake camshaft 3. Camshaft timing gear for intake camshaft 4. Jumped tooth of timing chain for intake camshaft 5. ECM	Comes on	DTC stored	ES-226
P0347	Camshaft Position Sensor "A" Circuit Low Input (Bank 2)	1. Open or short in VVT sensor circuit for intake camshaft 2. VVT sensor for intake camshaft 3. Camshaft timing gear for intake camshaft 4. Jumped tooth of timing chain for intake camshaft 5. ECM	Comes on	DTC stored	ES-226

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0348	Camshaft Position Sensor "A" Circuit High Input (Bank 2)	1. Open or short in VVT sensor circuit for intake camshaft 2. VVT sensor for intake camshaft 3. Camshaft timing gear for intake camshaft 4. Jumped tooth of timing chain for intake camshaft 5. ECM	Comes on	DTC stored	ES-226
P0351	Ignition Coil "A" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IGF1 or IGT circuit (1 to 6) between ignition coil with igniter and ECM 3. No. 1 to No. 6 ignition coils with igniters 4. ECM	Comes on	DTC stored	ES-233
P0352	Ignition Coil "B" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-233
P0353	Ignition Coil "C" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-233
P0354	Ignition Coil "D" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-233
P0355	Ignition Coil "E" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-233
P0356	Ignition Coil "F" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-233
P0365	Camshaft Position Sensor "B" Circuit (Bank 1)	1. Open or short in VVT sensor for exhaust camshaft circuit 2. VVT sensor for exhaust camshaft 3. Exhaust camshaft 4. ECM	Comes on	DTC stored	ES-244
P0367	Camshaft Position Sensor "B" Circuit Low Input (Bank 1)	1. Open or short in VVT sensor for exhaust camshaft circuit 2. VVT sensor for exhaust camshaft 3. Exhaust camshaft 4. Jumped teeth of timing chain 5. ECM	Comes on	DTC stored	ES-244

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0368	Camshaft Position Sensor "B" Circuit High Input (Bank 1)	1. Open or short in VVT sensor for exhaust camshaft circuit 2. VVT sensor for exhaust camshaft 3. Exhaust camshaft 4. Jumped teeth of timing chain 5. ECM	Comes on	DTC stored	ES-244
P0390	Camshaft Position Sensor "B" Circuit (Bank 2)	1. Open or short in VVT sensor for exhaust camshaft circuit 2. VVT sensor for exhaust camshaft 3. Exhaust camshaft 4. ECM	Comes on	DTC stored	ES-244
P0392	Camshaft Position Sensor "B" Circuit Low Input (Bank 2)	1. Open or short in VVT sensor for exhaust camshaft circuit 2. VVT sensor for exhaust camshaft 3. Exhaust camshaft 4. Jumped teeth of timing chain 5. ECM	Comes on	DTC stored	ES-244
P0393	Camshaft Position Sensor "B" Circuit High Input (Bank 2)	1. Open or short in VVT sensor for exhaust camshaft circuit 2. VVT sensor for exhaust camshaft 3. Exhaust camshaft 4. Jumped teeth of timing chain 5. ECM	Comes on	DTC stored	ES-244
P0420	Catalyst System Efficiency Below Threshold (Bank 1)	1. Gas leakage from exhaust system 2. A/F sensor (bank 1 sensor 1) 3. HO2 sensor (bank 1 sensor 2) 4. Exhaust manifold (TWC)	Comes on	DTC stored	ES-250
P0430	Catalyst System Efficiency Below Threshold (Bank 2)	1. Gas leakage from exhaust system 2. A/F sensor (bank 2 sensor 1) 3. HO2 sensor (bank 2 sensor 2) 4. Exhaust manifold (TWC)	Comes on	DTC stored	ES-250
P043E	Evaporative Emission System Reference Orifice Clog Up	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-257
P043F	Evaporative Emission System Reference Orifice High Flow	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-257

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0441	Evaporative Emission Control System Incorrect Purge Flow	1. Purge VSV 2. Purge VSV circuit (between purge VSV and ECM) 3. Leakage from EVAP line (between purge VSV and intake manifold) 4. EVAP line clogged (between purge VSV and canister) 5. ECM	Comes on	DTC stored	ES-262
P0450	Evaporative Emission Control System Pressure Sensor / Switch	1. Pump module 2. ECM	Comes on	DTC stored	ES-269
P0451	Evaporative Emission Control System Pressure Sensor Range / Performance	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-269
P0452	Evaporative Emission Control System Pressure Sensor / Switch Low Input	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-269
P0453	Evaporative Emission Control System Pressure Sensor / Switch High Input	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-269
P0455	Evaporative Emission Control System Leak Detected (Gross Leak)	1. Fuel tank cap (loose) 2. Leakage from EVAP line (Canister - Fuel tank) 3. Leakage from EVAP line (Purge VSV - Canister) 4. Leakage from pump module 5. Leakage from fuel tank 6. Leakage from canister	Comes on	DTC stored	ES-278
P0456	Evaporative Emission Control System Leak Detected (Very Small Leak)	Same as DTC P0455	Comes on	DTC stored	ES-278
P0500	Vehicle Speed Sensor "A"	1. Open or short in speed sensor circuit 2. Speed sensor 3. Combination meter 4. ECM 5. Skid control ECU	Comes on	DTC stored	ES-283
P0504	Brake Switch "A" / "B" Correlation	1. Short in stop light switch signal circuit 2. STOP fuse 3. Stop light switch 4. ECM	Does not come on	DTC stored	ES-288

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0505	Idle Control System Malfunction	1. ETCS 2. Intake system 3. PCV hose connection 4. ECM	Comes on	DTC stored	ES-292
P050A	Cold Start Idle Air Control System Performance	1. Throttle body assembly 2. Mass air flow meter 3. Intake system 4. PCV hose connections 5. VVT system 6. Air cleaner filter element 7. ECM	Comes on (except when there is a malfunction in the cruise control switch circuit)	DTC stored	ES-296
P050B	Cold Start Ignition Timing Performance	1. Throttle body assembly 2. Mass air flow meter 3. Intake system 4. PCV hose connections 5. VVT system 6. Air cleaner filter element 7. ECM	Comes on	DTC stored	ES-302
P0560	System Voltage	1. Open in back up power source circuit 2. EFI No. 1 fuse 3. ECM	Comes on	DTC stored	ES-308
P0604	Internal Control Module Random Access Memory (RAM) Error	ECM	Comes on	DTC stored	ES-312
P0606	ECM / PCM Processor	1. Exhaust gas leak 2. HO2 sensor 3. ECM	Comes on (Except when there is a malfunction in the ECM internal circuit)	DTC stored	ES-314
P0607	Control Module Performance	ECM	Comes on (Except when there is a malfunction in the cruise control switch circuit)	DTC stored	ES-317
P0617	Starter Relay Circuit High	1. Park/Neutral Position (PNP) switch 2. Starter relay circuit 3. Ignition switch 4. ECM	Comes on	DTC stored	ES-319
P0630	VIN not Programmed or Mismatch - ECM / PCM	ECM	Comes on	DTC stored	ES-324
P0657	Actuator Supply Voltage Circuit / Open	ECM	Comes on	DTC stored	ES-326
P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	1. Open or short in park/neutral position switch circuit 2. Park/neutral position switch 3. ECM	Comes on	DTC stored	ES-328

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P0724	Brake Switch "B" Circuit High	1. Short in stop light switch signal circuit 2. Stop light switch 3. ECM	Comes on	DTC stored	ES-288
P2102	Throttle Actuator Control Motor Circuit Low	1. Open in throttle actuator circuit 2. Throttle actuator 3. ECM	Comes on	DTC stored	ES-329
P2103	Throttle Actuator Control Motor Circuit High	1. Short in throttle actuator circuit 2. Throttle actuator 3. Throttle valve 4. Throttle body 5. ECM	Comes on	DTC stored	ES-329
P2111	Throttle Actuator Control System - Stuck Open	1. Throttle actuator 2. Throttle body 3. Throttle valve	Comes on	DTC stored	ES-333
P2112	Throttle Actuator Control System - Stuck Closed	1. Throttle actuator 2. Throttle body 3. Throttle valve	Comes on	DTC stored	ES-333
P2118	Throttle Actuator Control Motor Current Range / Performance	1. Open in ETCS power source circuit 2. ETCS fuse 3. ECM	Comes on	DTC stored	ES-336
P2119	Throttle Actuator Control Throttle Body Range / Performance	1. ETCS 2. ECM	Comes on	DTC stored	ES-340
P2120	Throttle / Pedal Position Sensor / Switch "D" Circuit	1. Accelerator Pedal Position (APP) sensor 2. ECM	Comes on	DTC stored	ES-343
P2121	Throttle / Pedal Position Sensor / Switch "D" Circuit Range / Performance	1. Accelerator position (APP) sensor 2. ECM	Comes on	DTC stored	ES-351
P2122	Throttle / Pedal Position Sensor / Switch "D" Circuit Low Input	1. APP sensor 2. Open in VCP1 circuit 3. Open or ground short in VPA circuit 4. ECM	Comes on	DTC stored	ES-343
P2123	Throttle / Pedal Position Sensor / Switch "D" Circuit High Input	1. APP sensor 2. Open in EPA circuit 3. ECM	Comes on	DTC stored	ES-343
P2125	Throttle / Pedal Position Sensor / Switch "E" Circuit	1. APP sensor 2. ECM	Comes on	DTC stored	ES-343
P2127	Throttle / Pedal Position Sensor / Switch "E" Circuit Low Input	1. APP sensor 2. Open in VCP2 circuit 3. Open or ground short in VPA2 circuit 4. ECM	Comes on	DTC stored	ES-343
P2128	Throttle / Pedal Position Sensor / Switch "E" Circuit High Input	1. APP sensor 2. Open in EPA2 circuit 3. ECM	Comes on	DTC stored	ES-343

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P2135	Throttle / Pedal Position Sensor / Switch "A" / "B" Voltage Correlation	1. Short between VTA1 and VTA2 circuits 2. TP sensor (built into throttle body) 3. ECM	Comes on	DTC stored	ES-145
P2138	Throttle / Pedal Position Sensor / Switch "D" / "E" Voltage Correlation	1. Short between VPA and VPA2 circuits 2. APP sensor 3. ECM	Comes on	DTC stored	ES-343
P2195	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor (bank 1, 2 sensor 1) heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. Intake system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-355
P2196	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor (bank 1, 2 sensor 1) heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. Intake system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-355
P2197	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor (bank 1, 2 sensor 1) heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. Intake system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-355

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P2198	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor (bank 1, 2 sensor 1) heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. Intake system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-355
P2238	Oxygen (A/F) Sensor Pumping Current Circuit Low (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater (bank 1, 2 sensor 1) 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2239	Oxygen (A/F) Sensor Pumping Current Circuit High (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2241	Oxygen (A/F) Sensor Pumping Current Circuit Low (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater (bank 1, 2 sensor 1) 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2242	Oxygen (A/F) Sensor Pumping Current Circuit High (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P2252	Oxygen (A/F) Sensor Reference Ground Circuit Low (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2253	Oxygen (A/F) Sensor Reference Ground Circuit High (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2255	Oxygen (A/F) Sensor Reference Ground Circuit Low (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2256	Oxygen (A/F) Sensor Reference Ground Circuit High (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 1, 2 sensor 1) circuit 2. A/F sensor (bank 1, 2 sensor 1) 3. A/F sensor heater 4. A/F sensor heater relay 5. A/F sensor heater and relay circuits 6. ECM	Comes on	DTC stored	ES-372
P2401	Evaporative Emission System Leak Detection Pump Control Circuit Low	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-257
P2402	Evaporative Emission System Leak Detection Pump Control Circuit High	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-257
P2419	Evaporative Emission System Switching Valve Control Circuit Low	1. Pump module 2. Connector/wire harness (Pump module - ECM) 3. ECM	Comes on	DTC stored	ES-257

DTC Code	Detection Item	Suspected Trouble Area	MIL	Memory	See page
P2420	Evaporative Emission System Switching Valve Control Circuit High	1. Pump module (0.02 inch orifice, vacuum pump, vent valve) 2. Connector / wire harness (pump module - ECM) 3. ECM	Comes on	DTC stored	ES-380
P2610	ECM / PCM Internal Engine Off Timer Performance	ECM	Comes on	DTC stored	ES-384
P2A00	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	1. Open or short in A/F sensor circuit 2. A/F sensor 3. ECM	Comes on	DTC stored	ES-387
P2A03	A/F Sensor Circuit Slow Response (Bank 2 Sensor 1)	1. Open or short in A/F sensor circuit 2. A/F sensor 3. ECM	Comes on	DTC stored	ES-387