

DIAGNOSTIC TROUBLE CODE CHART

HINT:

Parameters listed in the chart may be different than your readings depending on the type of instrument and other factors.

If any DTCs are displayed during a check mode DTC check, check the trouble area for the DTCs listed in the table below.

For details of each DTC, refer to the "See page" below.

SFI system

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0010	Camshaft Position "A" Actuator Circuit (Bank 1)	1. Open or short in Oil Control Valve (OCV) circuit for intake camshaft (bank 1) 2. OCV for intake camshaft (bank 1) 3. ECM	Comes on	DTC stored	ES-74
P0011	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 1)	1. Valve timing 2. OCV for intake camshaft (bank 1) 3. OCV filter (bank 1) 4. Intake camshaft (bank 1) timing gear assembly 5. ECM	Comes on	DTC stored	ES-78
P0012	Camshaft Position "A" - Timing Over-Retarded (Bank 1)	Same as DTC P0011	Comes on	DTC stored	ES-78
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-86
P0014	Camshaft Position "B" - Timing Over-Advanced or System Performance (Bank 1)	1. Valve timing 2. OCV for exhaust camshaft (bank 1) 3. OCV filter (bank 1) 4. Exhaust camshaft 5. ECM	Comes on	DTC stored	ES-90
P0015	Camshaft Position "B" - Timing Over-Retarded (Bank 1)	1. Valve timing 2. OCV for exhaust camshaft (bank 1) 3. OCV filter (bank 1) 4. Exhaust camshaft 5. ECM	Comes on	DTC stored	ES-90
P0016	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A)	1. Mechanical system (Timing chain has jumped tooth or chain stretched) 2. ECM	Comes on	DTC stored	ES-98
P0017	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B)	1. Mechanical system (Timing chain has jumped tooth 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 tooth or chain stretched) 2. ECM	Comes on	DTC stored	ES-98

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0019	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor B)	1. Mechanical system (Timing chain has jumped tooth 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 circuit for intake camshaft (bank 2) 2. OCV for intake camshaft (bank 2) 3. ECM	Comes on	DTC stored	ES-74
P0021	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 2)	1. Valve timing 2. Oil Control Valve (OCV) for intake camshaft (bank 2) 3. OCV filter (bank 2) 4. Intake camshaft (bank 2) timing gear assembly 5. ECM	Comes on	DTC stored	ES-78
P0022	Camshaft Position "A" - Timing Over-Retarded (Bank 2)	1. Valve timing 2. OCV for intake camshaft (bank 2) 3. OCV filter (bank 2) 4. Intake camshaft (bank 2) timing gear assembly 5. ECM	Comes on	DTC stored	ES-78
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-86
P0024	Camshaft Position "B" - Timing Over-Advanced or System Performance (Bank 2)	1. Valve timing 2. OCV for exhaust camshaft (bank 2) 3. OCV filter (bank 2) 4. Exhaust camshaft timing gear assembly 5. ECM	Comes on	DTC stored	ES-90
P0025	Camshaft Position "B" - Timing Over-Retarded (Bank 2)	1. Valve timing 2. OCV for exhaust camshaft (bank 2) 3. OCV filter (bank 2) 4. Exhaust camshaft timing gear assembly 5. ECM	Comes on	DTC stored	ES-90
P0031	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 1 Sensor 1)	1. Open in Air-Fuel Ratio (A/F) sensor heater circuit 2. A/F sensor heater (bank 1 sensor 1) 3. Integration 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 (bank 1 sensor 1) 3. Integration relay 4. ECM	Comes on	DTC stored	ES-101

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0037	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	1. Open in Heated Oxygen (HO2) sensor heater circuit 2. HO2 sensor heater (bank 1 sensor 2) 3. Integration relay (EFI MAIN relay) 4. ECM	Comes on	DTC stored	ES-107
P0038	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	1. Short in HO2 sensor heater circuit 2. HO2 sensor heater (bank 1 sensor 2) 3. Integration relay (EFI MAIN relay) 4. ECM	Comes on	DTC stored	ES-107
P0051	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 2 Sensor 1)	1. Open in A/F sensor heater (bank 2 sensor 1) circuit 2. A/F sensor heater (bank 2 sensor 1) 3. Integration 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 (bank 2 sensor 1) circuit 2. A/F sensor heater (bank 2 sensor 1) 3. Integration relay 4. ECM	Comes on	DTC stored	ES-101
P0057	Oxygen Sensor Heater Control Circuit Low (Bank 2 Sensor 2)	1. Open in Heated Oxygen (HO2) sensor heater circuit 2. HO2 sensor heater (bank 2 sensor 2) 3. Integration relay (EFI MAIN relay) 4. ECM	Comes on	DTC stored	ES-107
P0058	Oxygen Sensor Heater Control Circuit High (Bank 2 Sensor 2)	1. Short in HO2 sensor heater circuit 2. HO2 sensor heater (bank 2 sensor 2) 3. Integration relay (EFI MAIN relay) 4. ECM	Comes on	DTC stored	ES-107
P0100	Mass or Volume Air Flow Circuit	1. Open or short in Mass Air Flow (MAF) meter circuit 2. MAF meter 3. ECM	Comes on	DTC stored	ES-115
P0101	Mass Air Flow Circuit Range / Performance Problem	1. MAF meter 2. Air induction system 3. PCV hose connections	Comes on	DTC stored	ES-122
P0102	Mass or Volume Air Flow Circuit Low Input	1. Open or short in MAF meter circuit 2. MAF meter 3. ECM	Comes on	DTC stored	ES-115
P0103	Mass or Volume Air Flow Circuit High Input	1. Open or short in MAF meter circuit 2. MAF meter 3. ECM	Comes on	DTC stored	ES-115

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0110	Intake Air Temperature Circuit Malfunction	1. Open or short in Intake Air Temperature (IAT) sensor circuit 2. IAT sensor (built into MAF meter) 3. ECM	Comes on	DTC stored	ES-125
P0111	Intake Air Temperature Sensor Gradient Too High	Mass air flow meter	Comes on	DTC stored	ES-131
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-125
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-125
P0115	Engine Coolant Temperature Circuit Malfunction	1. Open or short in Engine Coolant Temperature (ECT) sensor circuit 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-134
P0116	Engine Coolant Temperature Circuit Range / Performance Problem	1. Thermostat 2. ECT sensor	Comes on	DTC stored	ES-140
P0117	Engine Coolant Temperature Circuit Low Input	1. Short in ECT sensor circuit 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-134
P0118	Engine Coolant Temperature Circuit High Input	1. Open in ECT sensor circuit 2. ECT sensor 3. ECM	Comes on	DTC stored	ES-134
P0120	Throttle / Pedal Position Sensor / Switch "A" Circuit Malfunction	1. Throttle Position (TP) sensor (built into throttle body) 2. ECM	Comes on	DTC stored	ES-143
P0121	Throttle / Pedal Position Sensor / Switch "A" Circuit Range / Performance Problem	TP sensor (built into throttle body)	Comes on	DTC stored	ES-150
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-143
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-143

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	1. Cooling system 2. ECT sensor 3. Thermostat	Comes on	DTC stored	ES-152
P0128	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)	1. Thermostat 2. Cooling system 3. ECT sensor 4. ECM	Comes on	DTC stored	ES-155
P0136	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	1. Open or short in HO2 sensor (bank 1 sensor 2) circuit 2. HO2 sensor (bank 1 sensor 2) 3. HO2 sensor heater (bank 1 sensor 2) 4. Air-Fuel Ratio (A/F) sensor (bank 1 sensor 1) 5. Integration relay (EFI MAIN relay) 6. Gas leakage from exhaust system	Comes on	DTC stored	ES-158
P0137	Oxygen Sensor Circuit Low Voltage (Bank 1 Sensor 2)	1. Open in HO2 sensor (bank 1 sensor 2) circuit 2. HO2 sensor (bank 1 sensor 2) 3. HO2 sensor heater (bank 1 sensor 2) 4. Integration relay (EFI MAIN relay) 5. Gas leakage from exhaust system	Comes on	DTC stored	ES-158
P0138	Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 2)	1. Short in HO2 sensor (bank 1 sensor 2) circuit 2. HO2 sensor (bank 1 sensor 2) 3. ECM internal circuit malfunction	Comes on	DTC stored	ES-158
P0141	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)	1. Open or short in HO2 sensor heater circuit 2. HO2 sensor heater (bank 1 sensor 2) 3. Integration relay (EFI MAIN relay) 4. ECM	Comes on	DTC stored	ES-107
P0156	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)	1. Open or short in HO2 sensor (bank 2 sensor 2) circuit 2. HO2 sensor (bank 2 sensor 2) 3. HO2 sensor heater (bank 2 sensor 2) 4. Air-Fuel Ratio (A/F) sensor (bank 2 sensor 1) 5. Integration relay (EFI MAIN relay) 6. Gas leakage from exhaust system	Comes on	DTC stored	ES-158

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0157	Oxygen Sensor Circuit Low Voltage (Bank 2 Sensor 2)	<ol style="list-style-type: none"> 1. Open in HO2 sensor (bank 2 sensor 2) circuit 2. HO2 sensor (bank 2 sensor 2) 3. HO2 sensor heater (bank 2 sensor 2) 4. integration relay (EFI MAIN relay) 5. Gas leakage from exhaust system 	Comes on	DTC stored	ES-158
P0158	Oxygen Sensor Circuit High Voltage (Bank 2 Sensor 2)	<ol style="list-style-type: none"> 1. Short in HO2 sensor (bank 2 sensor 2) circuit 2. HO2 sensor (bank 2 sensor 2) 3. ECM internal circuit malfunction 	Comes on	DTC stored	ES-158
P0161	Oxygen Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)	<ol style="list-style-type: none"> 1. Open or short in HO2 sensor heater circuit 2. HO2 sensor heater (bank 2 sensor 2) 3. Integration relay (EFI MAIN relay) 4. ECM 	Comes on	DTC stored	ES-107
P0171	System Too Lean (Bank 1)	<ol style="list-style-type: none"> 1. Air induction system 2. Injector blockage 3. MAF meter 4. ECT sensor 5. Fuel pressure 6. Gas leakage from exhaust system 7. Open or short in A/F sensor (bank 1 sensor 1) circuit 8. A/F sensor (bank 1 sensor 1) 9. A/F sensor heater (bank 1 sensor 1) 10. Integration relay 11. A/F sensor heater and integration relay circuits 12. PCV valve and hose 13. PCV hose connections 14. ECM 	Comes on	DTC stored	ES-176

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0172	System Too Rich (Bank 1)	<ol style="list-style-type: none"> 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 sensor 1) circuit 8. A/F sensor (bank 1 sensor 1) 9. A/F sensor heater (bank 1 sensor 1) 10. Integration relay 11. A/F sensor heater and integration relay circuits 12. ECM 	Comes on	DTC stored	ES-176
P0174	System Too Lean (Bank 2)	<ol style="list-style-type: none"> 1. Air induction 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 2 sensor 1) circuit 8. A/F sensor (bank 2 sensor 1) 9. A/F sensor heater (bank 2 sensor 1) 10. Integration relay 11. A/F sensor heater and integration relay circuits 12. PCV valve and hose 13. PCV hose connections 14. ECM 	Comes on	DTC stored	ES-176
P0175	System Too Rich (Bank 2)	<ol style="list-style-type: none"> 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 2 sensor 1) circuit 8. A/F sensor (bank 2 sensor 1) 9. A/F sensor heater (bank 2 sensor 1) 10. Integration relay 11. A/F sensor heater and integration relay circuits 12. ECM 	Comes on	DTC stored	ES-176

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0220	Throttle / Pedal Position Sensor / Switch "B" Circuit	1. TP sensor (built into throttle body) 2. ECM	Comes on	DTC stored	ES-143
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-143
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-143
P0230	Fuel Pump Primary Circuit	1. Open or short in F/PMP relay circuit 2. F/PMP relay 3. ECM	-	DTC stored	ES-185
P0300	Random / Multiple Cylinder Misfire Detected	1. Open or short in engine wire harness 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV valve and hose 13. PCV hose connections 14. Air induction system 15. ECM	Comes on/Blinks*1	DTC stored	ES-189
P0301	Cylinder 1 Misfire Detected	Same as DTC P0300	Comes on/Blinks*1	DTC stored	ES-189
P0302	Cylinder 2 Misfire Detected	Same as DTC P0300	Comes on/Blinks*1	DTC stored	ES-189
P0303	Cylinder 3 Misfire Detected	Same as DTC P0300	Comes on/Blinks*1	DTC stored	ES-189
P0304	Cylinder 4 Misfire Detected	Same as DTC P0300	Comes on/Blinks*1	DTC stored	ES-189
P0305	Cylinder 5 Misfire Detected	Same as DTC P0300	Comes on/Blinks*1	DTC stored	ES-189
P0306	Cylinder 6 Misfire Detected	Same as DTC P0300	Comes on/Blinks*1	DTC stored	ES-189
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	1. Short in knock sensor circuit (bank 1) 2. Knock sensor (bank 1) 3. ECM	Comes on	DTC stored	ES-201

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	1. Open in knock sensor circuit (bank 1) 2. Knock sensor (bank 1) 3. ECM	Comes on	DTC stored	ES-201
P0332	Knock Sensor 2 Circuit Low Input (Bank 2)	1. Short in knock sensor circuit (bank 2) 2. Knock sensor (bank 2) 3. ECM	Comes on	DTC stored	ES-201
P0333	Knock Sensor 2 Circuit High Input (Bank 2)	1. Open in knock sensor circuit (bank 2) 2. Knock sensor (bank 2) 3. ECM	Comes on	DTC stored	ES-201
P0335	Crankshaft Position Sensor "A" Circuit	1. Open or short in Crankshaft Position (CKP) sensor circuit 2. CKP sensor 3. CKP sensor plate 4. ECM	Comes on	DTC stored	ES-207
P0339	Crankshaft Position Sensor "A" Circuit Intermittent	Same as DTC P0335	-	DTC stored	ES-207
P0340	Camshaft Position Sensor Circuit Malfunction	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-214
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-214
P0343	Camshaft Position Sensor "A" Circuit High Input (Bank 1 or Single Sensor)	1. Open or short in VVT sensor for intake camshaft circuit 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-214

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0345	Camshaft Position Sensor "A" Circuit (Bank 2)	1. Open or short in VVT sensor for intake camshaft circuit 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-214
P0347	Camshaft Position Sensor "A" Circuit Low Input (Bank 2)	1. Open or short in VVT sensor for intake camshaft circuit 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-214
P0348	Camshaft Position Sensor "A" Circuit High Input (Bank 2)	1. Open or short in VVT sensor for intake camshaft circuit 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-214
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-220
P0352	Ignition Coil "B" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-220
P0353	Ignition Coil "C" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-220
P0354	Ignition Coil "D" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-220
P0355	Ignition Coil "E" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-220
P0356	Ignition Coil "F" Primary / Secondary Circuit	Same as DTC P0351	Comes on	DTC stored	ES-220

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
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. Jumped tooth of timing chain 5. ECM	Comes on	DTC stored	ES-229
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 tooth of timing chain 5. ECM	Comes on	DTC stored	ES-229
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 tooth of timing chain 5. ECM	Comes on	DTC stored	ES-229
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. Jumped tooth of timing chain 5. ECM	Comes on	DTC stored	ES-229
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 tooth of timing chain 5. ECM	Comes on	DTC stored	ES-229
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 tooth of timing chain 5. ECM	Comes on	DTC stored	ES-229

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0420	Catalyst System Efficiency Below Threshold (Bank 1)	1. Front exhaust pipe (with Three-Way Catalytic Converter) 2. Gas leakage from exhaust system 3. A/F sensor (bank 1 sensor 1) 4. HO2 sensor (bank 1 sensor 2)	Comes on	DTC stored	ES-234
P0430	Catalyst System Efficiency Below Threshold (Bank 2)	1. Front exhaust pipe (with TWC) 2. Gas leakage from exhaust system 3. A/F sensor (bank 2 sensor 1) 4. HO2 sensor (bank 2 sensor 2)	Comes on	DTC stored	ES-234
P043E	Evaporative Emission System Reference Orifice Clog Up	1. Canister pump module 2. Connector / wire harness (between canister pump module and ECM) 3. Leakage from EVAP system 4. ECM	Comes on	DTC stored	ES-241
P043F	Evaporative Emission System Reference Orifice High Flow	1. Canister pump module 2. Connector / wire harness (between canister pump module and ECM) 3. Leakage from EVAP system 4. ECM	Comes on	DTC stored	ES-241
P0441	Evaporative Emission Control System Incorrect Purge Flow	1. Purge VSV 2. Connector/wire harness (Purge VSV - ECM) 3. Canister pump module 4. Leakage from EVAP system 5. Leakage from EVAP line (Purge VSV - Intake manifold) 6. ECM	Comes on	DTC stored	ES-245
P0450	Evaporative Emission Control System Pressure Sensor / Switch	1. Canister pump module 2. EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) 3. ECM	Comes on	DTC stored	ES-252

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0451	Evaporative Emission Control System Pressure Sensor Range / Performance	1. Canister pump module 2. Connector/wire harness (Canister pump module - ECM) 3. EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) 4. ECM	Comes on	DTC stored	ES-252
P0452	Evaporative Emission Control System Pressure Sensor / Switch Low Input	Same as DTC P0451	Comes on	DTC stored	ES-252
P0453	Evaporative Emission Control System Pressure Sensor / Switch High Input	Same as DTC P0451	Comes on	DTC stored	ES-252
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. Canister pump module 5. Leakage from fuel tank 6. Leakage from canister	Comes on	DTC stored	ES-262
P0456	Evaporative Emission Control System Leak Detected (Very Small Leak)	Same as DTC P0455	Comes on	DTC stored	ES-262
P0500	Vehicle Speed Sensor "A"	1. Open or short in speed signal circuit 2. Vehicle speed sensor 3. Combination meter 4. ECM 5. Skid control ECU	Comes on	DTC stored	ES-266
P0504	Brake Switch "A" / "B" Correlation	1. Short in stop light switch signal circuit 2. STOP fuse 3. IGN fuse 4. Stop light switch 5. ECM	-	DTC stored	ES-271
P0505	Idle Control System Malfunction	1. ETCS (Electronic Throttle Control System) 2. Air induction system 3. PCV hose connections 4. ECM	Comes on	DTC stored	ES-275

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P050A	Cold Start Idle Air Control System Performance	1. Throttle body assembly 2. MAF meter 3. Air induction system 4. PCV hose connections 5. VVT system 6. Air cleaner filter element 7. ECM	Comes on	DTC stored	ES-279
P050B	Cold Start Ignition Timing Performance	Same as DTC P050A	Comes on	DTC stored	ES-279
P0516	Battery Temperature Sensor Circuit Low	1. Battery current sensor 2. Short in battery current sensor circuit 3. ECM	-	DTC stored	ES-285
P0517	Battery Temperature Sensor Circuit High	1. Battery current sensor 2. Open in battery current sensor circuit 3. ECM	-	DTC stored	ES-285
P0560	System Voltage	1. Open in back up power source circuit 2. Battery 3. Battery terminals 4. EFI MAIN fuse 5. ECM	Comes on	DTC stored	ES-287
P0604	Internal Control Module Random Access Memory (RAM) Error	ECM	Comes on	DTC stored	ES-291
P0606	ECM / PCM Processor	ECM	Comes on/*2	DTC stored	ES-291
P0607	Control Module Performance	ECM	Comes on	DTC stored	ES-291
P0617	Starter Relay Circuit High	1. Park/Neutral Position (PNP) switch 2. ST relay circuit 3. Ignition switch 4. ECM	Comes on	DTC stored	ES-293
P0630	VIN not Programmed or Mismatch - ECM / PCM	ECM	Comes on	DTC stored	ES-298
P0657	Actuator Supply Voltage Circuit / Open	ECM	Comes on	DTC stored	ES-291
P0724	Brake Switch "B" Circuit High	1. Short in stop light switch circuit 2. Stop light switch 3. ECM	Comes on	DTC stored	ES-300
P1550	Battery Current Sensor Circuit	1. Open or short in battery current sensor circuit 2. Battery current sensor 3. ECM	-	DTC stored	ES-303
P1551	Battery Current Sensor Circuit Low	1. Short in battery current sensor circuit 2. Battery current sensor 3. ECM	-	DTC stored	ES-303

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P1552	Battery Current Sensor Circuit High	1. Open in battery current sensor circuit 2. Battery current sensor 3. ECM	-	DTC stored	ES-303
P1602	Deterioration of Battery	1. Battery 2. ECM back-up power source circuit	-	DTC stored	ES-306
P2102	Throttle Actuator Control Motor Circuit Low	1. Open in throttle actuator circuit 2. Throttle actuator 3. ECM	Comes on	DTC stored	ES-307
P2103	Throttle Actuator Control Motor Circuit High	1. Short in throttle actuator circuit 2. Throttle actuator 3. Throttle valve 4. Throttle body assembly 5. ECM	Comes on	DTC stored	ES-307
P2111	Throttle Actuator Control System - Stuck Open	1. Throttle actuator 2. Throttle body assembly 3. Throttle valve	Comes on	DTC stored	ES-311
P2112	Throttle Actuator Control System - Stuck Closed	Same as DTC P2111	Comes on	DTC stored	ES-311
P2118	Throttle Actuator Control Motor Current Range / Performance	1. Open in ETCS power source circuit 2. Battery 3. Battery terminals 4. ETCS fuse 5. ECM	Comes on	DTC stored	ES-314
P2119	Throttle Actuator Control Throttle Body Range / Performance	1. ETCS 2. ECM	Comes on	DTC stored	ES-321
P2120	Throttle / Pedal Position Sensor / Switch "D" Circuit	1. Accelerator Pedal Position (APP) sensor 2. ECM	Comes on	DTC stored	ES-324
P2121	Throttle / Pedal Position Sensor / Switch "D" Circuit Range / Performance	1. APP sensor 2. ECM	Comes on	DTC stored	ES-331
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-324
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-324
P2125	Throttle / Pedal Position Sensor / Switch "E" Circuit	1. APP sensor 2. ECM	Comes on	DTC stored	ES-324
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-324

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
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-324
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-143
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-324
P2195	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor heater (bank 1 sensor 1) 4. Integration relay 5. A/F sensor heater and integration relay circuits 6. Air induction system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-334
P2196	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 1 Sensor 1)	Same as DTC P2195	Comes on	DTC stored	ES-334
P2197	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor heater (bank 2 sensor 1) 4. Integration relay 5. A/F sensor heater and integration relay circuits 6. Air induction system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-334
P2198	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor heater (bank 2 sensor 1) 4. Integration relay 5. A/F sensor heater and integration relay circuits 6. Air induction system 7. Fuel pressure 8. Injector 9. ECM	Comes on	DTC stored	ES-334

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2238	Oxygen (A/F) Sensor Pumping Current Circuit Low (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor heater (bank 1 sensor 1) 4. Integration relay 5. A/F sensor heater and integration relay circuits 6. ECM	Comes on	DTC stored	ES-350
P2239	Oxygen (A/F) Sensor Pumping Current Circuit High (Bank 1 Sensor 1)	Same as DTC P2238	Comes on	DTC stored	ES-350
P2241	Oxygen (A/F) Sensor Pumping Current Circuit Low (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor heater (bank 2 sensor 1) 4. Integration relay 5. A/F sensor heater and integration relay circuits 6. ECM	Comes on	DTC stored	ES-350
P2242	Oxygen (A/F) Sensor Pumping Current Circuit High (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor heater (bank 2 sensor 1) 4. Integration relay 5. A/F sensor heater and integration relay circuits 6. ECM	Comes on	DTC stored	ES-350
P2252	Oxygen (A/F) Sensor Reference Ground Circuit Low (Bank 1 Sensor 1)	Same as DTC P2238	Comes on	DTC stored	ES-350
P2253	Oxygen (A/F) Sensor Reference Ground Circuit High (Bank 1 Sensor 1)	Same as DTC P2238	Comes on	DTC stored	ES-350
P2255	Oxygen (A/F) Sensor Reference Ground Circuit Low (Bank 2 Sensor 1)	Same as DTC P2241	Comes on	DTC stored	ES-350
P2256	Oxygen (A/F) Sensor Reference Ground Circuit High (Bank 2 Sensor 1)	Same as DTC P2241	Comes on	DTC stored	ES-350
P2401	Evaporative Emission Leak Detection Pump Stuck OFF	1. Canister pump module 2. Connector / wire harness (between canister pump module and ECM) 3. ECM 4. Leakage from EVAP system	Comes on	DTC stored	ES-241

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2402	Evaporative Emission Leak Detection Pump Stuck ON	1. Canister pump module 2. Connector / wire harness (between canister pump module and ECM) 3. ECM	Comes on	DTC stored	ES-241
P2419	Evaporative Emission System Switching Valve Control Circuit Low	1. Canister pump module 2. Connector / wire harness (between canister pump module and ECM) 3. ECM	Comes on	DTC stored	ES-241
P2420	Evaporative Emission System Switching Valve Control Circuit High	1. Canister pump module 2. Connector / wire harness (between canister pump module and ECM) 3. ECM	Comes on	DTC stored	ES-356
P2610	ECM / PCM Internal Engine Off Timer Performance	ECM	Comes on	DTC stored	ES-360
P2A00	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	1. Open or short in A/F sensor circuit (bank 1 sensor 1) 2. A/F sensor (bank 1 sensor 1) 3. ECM	Comes on	DTC stored	ES-362
P2A03	A/F Sensor Circuit Slow Response (Bank 2 Sensor 1)	1. Open or short in A/F sensor circuit (bank 2 sensor 1) 2. A/F sensor (bank 2 sensor 1) 3. ECM	Comes on	DTC stored	ES-362

HINT:

*1: MIL flashes when a catalyst damaged misfire is detected.

*2: MIL does not flash when A/F sensor transistor malfunction and sub O2 sensor transistor malfunction are detected.