

## DIAGNOSTIC TROUBLE CODE CHART

### HINT:

The parameters listed in the chart are for reference only. Factors such as instrument type may cause readings to differ slightly from stated values. If any DTCs are displayed during a check mode DTC check, check the circuit for the DTCs listed in the table below. For details of each DTC, refer to the page indicated.

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0010	Camshaft Position "A" Actuator Circuit (Bank 1)	- Open or short in Oil Control Valve (OCV) circuit - OCV - ECM	Comes on	DTC stored	<a href="#">ES-58</a>
P0011	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 1)	- Valve timing - OCV - OCV filter - Camshaft timing gear assembly - ECM	Comes on	DTC stored	<a href="#">ES-62</a>
P0012	Camshaft Position "A" - Timing Over-Retarded (Bank 1)	- Valve timing - OCV - OCV filter - Camshaft timing gear assembly - ECM	Comes on	DTC stored	<a href="#">ES-62</a>
P0016	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A)	- Mechanical system (timing chain has jumped tooth or chain stretched) - ECM	Comes on	DTC stored	<a href="#">ES-67</a>
P0031	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 1)	- Open or short in Heated Oxygen (HO2) sensor heater circuit - HO2 sensor heater - EFI relay - ECM	Comes on	DTC stored	<a href="#">ES-69</a>
P0032	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 1)	- Short in Heated Oxygen (HO2) sensor heater circuit - HO2 sensor heater - EFI relay - ECM	Comes on	DTC stored	<a href="#">ES-69</a>
P0037	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	- Open or short in Heated Oxygen (HO2) sensor heater circuit - HO2 sensor heater - EFI relay - ECM	Comes on	DTC stored	<a href="#">ES-69</a>
P0038	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	- Short in Heated Oxygen (HO2) sensor heater circuit - HO2 sensor heater - EFI relay - ECM	Comes on	DTC stored	<a href="#">ES-69</a>
P0100	Mass or Volume Air Flow Circuit	- Open or short in Mass Air Flow (MAF) meter circuit - MAF meter - ECM	Comes on	DTC stored	<a href="#">ES-75</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0101	Mass Air Flow Circuit Range / Performance Problem	- MAF meter	Comes on	DTC stored	<a href="#">ES-82</a>
P0102	Mass or Volume Air Flow Circuit Low Input	- Open or short in MAF meter circuit - MAF meter - ECM	Comes on	DTC stored	<a href="#">ES-75</a>
P0103	Mass or Volume Air Flow Circuit High Input	- Open or short in MAF meter circuit - MAF meter - ECM	Comes on	DTC stored	<a href="#">ES-75</a>
P0110	Intake Air Temperature Circuit Malfunction	- Open or short in Intake Air Temperature (IAT) sensor circuit - IAT sensor (built into Mass Air Flow [MAF] meter) - ECM	Comes on	DTC stored	<a href="#">ES-84</a>
P0112	Intake Air Temperature Circuit Low Input	- Short in Intake Air Temperature (IAT) sensor circuit - IAT sensor (built into Mass Air Flow [MAF] meter) - ECM	Comes on	DTC stored	<a href="#">ES-84</a>
P0113	Intake Air Temperature Circuit High Input	- Open in Intake Air Temperature (IAT) sensor circuit - IAT sensor (built into Mass Air Flow [MAF] meter) - ECM	Comes on	DTC stored	<a href="#">ES-84</a>
P0115	Engine Coolant Temperature Circuit Malfunction	- Open or short in Engine Coolant Temperature (ECT) sensor circuit - ECT sensor - ECM	Comes on	DTC stored	<a href="#">ES-89</a>
P0116	Engine Coolant Temperature Circuit Range / Performance Problem	- ECT sensor - Thermostat	Comes on	DTC stored	<a href="#">ES-94</a>
P0117	Engine Coolant Temperature Circuit Low Input	- Short in ECT sensor circuit - ECT sensor - ECM	Comes on	DTC stored	<a href="#">ES-89</a>
P0118	Engine Coolant Temperature Circuit High Input	- Open in ECT sensor circuit - ECT sensor - ECM	Comes on	DTC stored	<a href="#">ES-89</a>
P0120	Throttle / Pedal Position Sensor / Switch "A" Circuit	- Throttle Position (TP) sensor - ECM	Comes on	DTC stored	<a href="#">ES-97</a>
P0121	Throttle / Pedal Position Sensor / Switch "A" Circuit Range / Performance Problem	- TP sensor	Comes on	DTC stored	<a href="#">ES-102</a>
P0122	Throttle / Pedal Position Sensor / Switch "A" Circuit Low Input	- TP sensor - Short in VTA circuit - Open in VC circuit - ECM	Comes on	DTC stored	<a href="#">ES-97</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0123	Throttle / Pedal Position Sensor / Switch "A" Circuit High Input	- TP sensor - Open in VTA circuit - Open in E2 circuit - Short between VC and VTA circuit - ECM	Comes on	DTC stored	<a href="#">ES-97</a>
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	- Cooling system - ECT sensor - Thermostat	Comes on	DTC stored	<a href="#">ES-104</a>
P0128	Thermostat Malfunction	- Thermostat - Cooling system - ECT sensor - ECM	Comes on	DTC stored	<a href="#">ES-107</a>
P0130	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 1)	- Open or short in Heated Oxygen (HO2) sensor (bank 1 sensor 1) circuit - HO2 sensor (bank 1 sensor 1) - HO2 sensor heater (bank 1 sensor 1) - EFI relay - Air induction system - Fuel pressure - Injector - ECM	Comes on	DTC stored	<a href="#">ES-110</a>
P0133	Oxygen Sensor Circuit Slow Response (Bank 1 Sensor 1)	- Open or short in Heated Oxygen (HO2) sensor (bank 1 sensor 1) circuit - HO2 sensor (bank 1 sensor 1) - HO2 sensor heater (bank 1 sensor 1) - EFI relay - Air induction system - Fuel pressure - Injector - ECM	Comes on	DTC stored	<a href="#">ES-120</a>
P0134	Oxygen Sensor Circuit No Activity Detected (Bank 1 Sensor 1)	- HO2S (bank 1 sensor 1) - Fuel pressure - Air induction system - Ventilation hose - Ventilation valve - Injector - Exhaust gas leakage	Comes on	DTC stored	<a href="#">ES-130</a>
P0136	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	- Open or short in Heated Oxygen (HO2) sensor (bank 1 sensor 2) circuit - HO2 sensor (bank 1 sensor 2) - HO2 sensor heater (bank 1 sensor 2) - EFI relay	Comes on	DTC stored	<a href="#">ES-139</a>
P0138	Heated Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 2)	- HO2 sensor (bank 1 sensor 2) - Short in HO2 sensor (bank 1 sensor 2) circuit	Comes on	DTC stored	<a href="#">ES-139</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0139	Oxygen Sensor Circuit Slow Response (Bank 1 Sensor 2)	- HO2 sensor (bank 1 sensor 2) - Short in HO2 sensor (bank 1 sensor 2) circuit	Comes on	DTC stored	<a href="#">ES-139</a>
P0171	System Too Lean (Bank 1)	- Air induction system - Injector blockage - Mass Air Flow (MAF) meter - Engine Coolant Temperature (ECT) sensor - Fuel pressure - Gas leakage from exhaust system - Open or short in HO2 sensor (bank 1 sensor 1) circuit - HO2 sensor (bank 1 sensor 1) - HO2 sensor heater (bank 1 sensor 1) - EFI relay - Ventilation valve and hose - Ventilation hose connections - ECM	Comes on	DTC stored	<a href="#">ES-148</a>
P0172	System Too Rich (Bank 1)	- Injector leak, blockage - MAF meter - ECT sensor - Ignition system - Fuel pressure - Gas leakage from exhaust system - Open or short in Heated Oxygen (HO2) sensor (bank 1 sensor 1) circuit - HO2 sensor (bank 1 sensor 1) - HO2 sensor heater (bank 1 sensor 1) - EFI relay - ECM	Comes on		<a href="#">ES-148</a>
P0300	Random / Multiple Cylinder Misfire Detected	- Open or short in engine wire harness - Connector connections - Vacuum hose connections - Ignition system - Injector - Fuel pressure - MAF meter - ECT sensor - Compression pressure - Valve clearance - Valve timing - Ventilation hose connections - Ventilation valve and hose - ECM	Blinks	DTC stored	<a href="#">ES-160</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0301	Cylinder 1 Misfire Detected	Same as P0300	Blinks	DTC stored	<a href="#">ES-160</a>
P0302	Cylinder 2 Misfire Detected	- Same as P0300	Blinks	DTC stored	<a href="#">ES-160</a>
P0303	Cylinder 3 Misfire Detected	- Same as P0300	Blinks	DTC stored	<a href="#">ES-160</a>
P0304	Cylinder 4 Misfire Detected	- Same as P0300	Blinks	DTC stored	<a href="#">ES-160</a>
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	- Short in knock sensor 1 circuit - Knock sensor 1 - ECM	Comes on	DTC stored	<a href="#">ES-171</a>
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	- Open in knock sensor 1 circuit - Knock sensor 1 - ECM	Comes on	DTC stored	<a href="#">ES-171</a>
P0335	Crankshaft Position Sensor "A" Circuit	- Open or short in Crankshaft position (CKP) sensor circuit - CKP sensor - Crankshaft (sensor plate) - ECM	Comes on	DTC stored	<a href="#">ES-175</a>
P0339	Crankshaft Position Sensor "A" Circuit Intermittent	- Same as P0335	-	DTC stored	<a href="#">ES-175</a>
P0340	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	- Open or short in Camshaft Position (CMP) sensor circuit - CMP sensor - Camshaft - Timing chain has jumped tooth - ECM	Comes on	DTC stored	<a href="#">ES-180</a>
P0351	Ignition Coil "A" Primary / Secondary Circuit	- Ignition system - Open or short in IGF or IGT circuit (1 to 4) between ignition coil with igniter and ECM - Ignition coils with igniters - ECM	Comes on	DTC stored	<a href="#">ES-184</a>
P0352	Ignition Coil "B" Primary / Secondary Circuit	- Same as P0351	Comes on	DTC stored	<a href="#">ES-184</a>
P0353	Ignition Coil "C" Primary / Secondary Circuit	- Same as P0351	Comes on	DTC stored	<a href="#">ES-184</a>
P0354	Ignition Coil "D" Primary / Secondary Circuit	- Same as P0351	Comes on	DTC stored	<a href="#">ES-184</a>
P0420	Catalyst System Efficiency Below Threshold (Bank 1)	- Gas leakage from exhaust system - Heated Oxygen (HO2) sensor (bank 1 sensor 1, 2) - Three-way Catalytic Converter (TWC)	Comes on	DTC stored	<a href="#">ES-193</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P043E	Evaporative Emission System Leak Detection Reference Orifice Low Flow	- Canister pump module - Connector/Wire harness (Canister pump module - ECM) - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM - Leakage from EVAP system	Comes on	DTC stored	<a href="#">ES-199</a>
P043F	Evaporative Emission System Reference Orifice High Flow	- Canister pump module - Connector/Wire harness (Canister pump module - ECM) - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM - Leakage from EVAP system	Comes on	DTC stored	<a href="#">ES-199</a>
P0441	Evaporative Emission Control System Incorrect Purge Flow	- Purge VSV - Connector/Wire harness (Purge VSV - ECM) - ECM - Canister pump module - Leakage from EVAP line (Purge VSV - intake manifold) - Leakage from EVAP system	Comes on	DTC stored	<a href="#">ES-207</a>
P0450	Evaporative Emission Control System Pressure Sensor Malfunction	- Canister pump module - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM	Comes on	DTC stored	<a href="#">ES-215</a>
P0451	Evaporative Emission Control System Pressure Sensor Range / Performance	- Canister pump module - Connector/ Wire harness (Canister pump module - ECM) - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM	Comes on	DTC stored	<a href="#">ES-215</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0452	Evaporative Emission Control System Pressure Sensor / Switch Low Input	<ul style="list-style-type: none"> <li>- Canister pump module</li> <li>- Connector/ Wire harness (Canister pump module - ECM)</li> <li>- EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose)</li> <li>- ECM</li> </ul>	Comes on	DTC stored	<a href="#">ES-215</a>
P0453	Evaporative Emission Control System Pressure Sensor / Switch High Input	<ul style="list-style-type: none"> <li>- Canister pump module</li> <li>- Connector/ Wire harness (Canister pump module - ECM)</li> <li>- EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose)</li> <li>- ECM</li> </ul>	Comes on	DTC stored	<a href="#">ES-215</a>
P0455	Evaporative Emission Control System Leak Detected (Gross Leak)	<ul style="list-style-type: none"> <li>- Fuel cap (loose)</li> <li>- Leakage from EVAP line (Canister - Fuel tank)</li> <li>- Leakage from EVAP line (Purge VSV - canister)</li> <li>- Canister pump module</li> <li>- Leakage from fuel tank</li> <li>- Leakage from canister</li> </ul>	Comes on	DTC stored	<a href="#">ES-225</a>
P0456	Evaporative Emission Control System Leak Detected (Very Small Leak)	- Same as P0445	Comes on	DTC stored	<a href="#">ES-225</a>
P0500	Vehicle Speed Sensor "A"	<ul style="list-style-type: none"> <li>- Open or short in speed sensor circuit</li> <li>- Vehicle speed sensor</li> <li>- Combination meter</li> <li>- ECM</li> <li>- Skid control ECU</li> </ul>	Comes on	DTC stored	<a href="#">ES-231</a>
P0505	Idle Control System Malfunction	<ul style="list-style-type: none"> <li>- Open or short in Idle Air Control (IAC) valve circuit</li> <li>- IAC valve stuck or closed</li> <li>- A/C switch circuit</li> <li>- Air induction system</li> <li>- Ventilation valve and hose</li> <li>- ECM</li> </ul>	Comes on	DTC stored	<a href="#">ES-234</a>
P0511	Idle Air Control Circuit	<ul style="list-style-type: none"> <li>- Open or short in Idle Air Control (IAC) valve circuit</li> <li>- IAC valve stuck or closed</li> <li>- ECM</li> </ul>	Comes on	DTC stored	<a href="#">ES-234</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0550	Power Steering Pressure Sensor Circuit Malfunction	- Open or short in power steering pressure sensor circuit - Power steering pressure sensor - ECM	Comes on	DTC stored	<a href="#">ES-241</a>
P0552	Power Steering Pressure Sensor Circuit Low Input	- Open or short in power steering pressure sensor circuit - Power steering pressure sensor - ECM	Comes on	DTC stored	<a href="#">ES-241</a>
P0553	Power Steering Pressure Sensor Circuit High Input	- Open or short in power steering pressure sensor circuit - Power steering pressure sensor - ECM	Comes on	DTC stored	<a href="#">ES-241</a>
P0560	System Voltage	- Open in back-up power source circuit - EFI fuse - ECM	Comes on	DTC stored	<a href="#">ES-244</a>
P0606	ECM / PCM Processor	- ECM	-	-	<a href="#">ES-248</a>
P0617	Starter Relay Circuit High	- Short in Park/ Neutral Position (PNP) switch circuit - PNP switch - Clutch start switch - ECM	Comes on	DTC stored	<a href="#">ES-249</a>
P0630	VIN not Programmed or Mismatch - ECM / PCM	- ECM	Comes on	DTC stored	<a href="#">ES-253</a>
P2195	Oxygen Sensor Signal Stuck Lean (Bank 1 Sensor 1)	- Open or short in Heated Oxygen (HO2) sensor (bank 1 sensor 1) circuit - HO2 sensor (bank 1 sensor 1) - HO2 sensor heater (bank 1 sensor 1) - EFI relay - Air induction system - Fuel pressure - Injector - ECM	Comes on	DTC stored	<a href="#">ES-110</a>
P2196	Oxygen Sensor Signal Stuck Rich (Bank 1 Sensor 1)	- Same as P2195	Comes on	DTC stored	<a href="#">ES-110</a>
P2401	Evaporative Emission Leak Detection Pump Stuck OFF	- Canister pump module - Connector/Wire harness (Canister pump module - ECM) - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM	Comes on	DTC stored	<a href="#">ES-255</a>



DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2402	Evaporative Emission Leak Detection Pump Stuck ON	- Canister pump module - Connector/Wire harness (Canister pump module - ECM) - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM	Comes on	DTC stored	<a href="#">ES-255</a>
P2419	Evaporative Emission Pressure Switching Valve Stuck ON	- Canister pump module - Connector/Wire harness (Canister pump module - ECM) - EVAP system hose (pipe from air inlet port to canister pump module, canister filter, fuel tank vent hose) - ECM	Comes on	DTC stored	<a href="#">ES-263</a>
P2420	Evaporative Emission Pressure Switching Valve Stuck OFF	- Canister pump module - Connector/Wire harness (Canister pump module - ECM) - ECM	Comes on	DTC stored	<a href="#">ES-263</a>
P2610	ECM / PCM Internal Engine Off Timer Performance	- ECM	Comes on	DTC stored	<a href="#">ES-270</a>