




## DIAGNOSTIC TROUBLE CODE CHART

### HINT:

Parameters listed in the chart may not be exactly the same as your readings due to the type of instrument or other factors.

If a malfunction code is displayed during the DTC check in the check mode, check the circuit for the codes listed in the table below. For details of each code, refer to the "See page" under the respective "DTC No." in the DTC chart. 

### SAE DEFINED

DTC No. (See page)	Detection Item	Trouble Area	MIL*1	Memory
P0100 (DI-175)	Mass Air Flow Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in mass air flow meter circuit</li> <li>• Mass air flow meter</li> <li>• ECM</li> </ul>	○	○
P0101 (DI-179)	Mass Air Flow Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Mass air flow meter</li> </ul>	○	○
P0110 (DI-180)	Intake Air Temperature Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in intake air temp. sensor circuit</li> <li>• Intake air temp. sensor (built into mass air flow meter)</li> <li>• ECM</li> </ul>	○	○
P0115 (DI-184)	Engine Coolant Temperature Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in engine coolant temp. sensor circuit</li> <li>• Engine coolant temp. sensor</li> <li>• ECM</li> </ul>	○	○
P0116 (DI-188)	Engine Coolant Temperature Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Cooling system</li> <li>• Engine coolant temp. sensor</li> </ul>	○	○
P0120 (DI-190)	Throttle Pedal Position Sensor/Switch "A" Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in throttle position sensor circuit</li> <li>• Throttle position sensor</li> <li>• ECM</li> </ul>	○	○
P0121 (DI-194)	Throttle Pedal Position Sensor/Switch "A" Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Throttle position sensor</li> </ul>	○	○
P0125 (DI-195)	Insufficient Coolant Temperature for Closed Loop Fuel Control	<ul style="list-style-type: none"> <li>• PCV hose connection</li> <li>• PCV hose</li> <li>• Open or short in A/F sensor (bank 1 sensor 1) circuit</li> <li>• A/F sensor (bank 1 sensor 1)</li> <li>• Air induction system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• Gas leak of exhaust system</li> <li>• ECM</li> </ul>	○	○
P0128 (DI-200)	Thermostat Malfunction	<ul style="list-style-type: none"> <li>• Thermostat</li> <li>• Cooling system</li> <li>• Engine coolant temp. sensor</li> <li>• ECM</li> </ul>		
P0136 (DI-201)	O2 Sensor Circuit Malfunction (Bank 1 Sensor 2)	<ul style="list-style-type: none"> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Heated oxygen sensor</li> <li>• Gas leak on exhaust system</li> </ul>	○	○
P0141 (DI-203)	O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)	<ul style="list-style-type: none"> <li>• Open or short in heater circuit of heated oxygen sensor</li> <li>• Heated oxygen sensor</li> <li>• ECM</li> </ul>	○	○

P0171 (DI-205)	System too Lean (Fuel Trim)	<ul style="list-style-type: none"> <li>• Air induction system</li> <li>• PCV hose connection</li> <li>• PCV hose</li> <li>• Injector blockage</li> <li>• Mass air flow meter</li> <li>• Engine coolant temp. sensor</li> <li>• Fuel pressure</li> <li>• Gas leak on exhaust system</li> <li>• Open or short in A/F sensor (Bank 1 sensor 1) circuit</li> <li>• A/F sensor (bank 1 sensor 1)</li> <li>• ECM</li> </ul>	○	○
P0172 (DI-205)	System too Rich (Fuel Trim)	<ul style="list-style-type: none"> <li>• Injector leak, blockage</li> <li>• Mass air flow meter</li> <li>• Engine coolant temp. sensor</li> <li>• Ignition system</li> <li>• Fuel pressure</li> <li>• Gas leak on exhaust system</li> <li>• Open or short in A/F sensor (bank 1 sensor 1) circuit</li> <li>• A/F sensor (bank 1 sensor 1)</li> <li>• ECM</li> </ul>	○	○
P0300 (DI-210)	Random/Multiple Cylinder Misfire Detected	<ul style="list-style-type: none"> <li>• Open or short engine wire</li> <li>• Connector connection</li> <li>• Vacuum hose connection</li> <li>• PCV hose connection</li> <li>• PCV hose</li> <li>• Ignition system</li> <li>• Injector</li> <li>• Fuel pressure</li> <li>• EGR system</li> <li>• Mass air flow meter</li> <li>• Engine coolant temp. sensor</li> <li>• Compression pressure</li> <li>• Valve clearance</li> <li>• Valve timing</li> <li>• ECM</li> </ul>	○*2	○
P0301 (DI-210)	Cylinder 1 Misfire Detected			
P0302 (DI-210)	Cylinder 2 Misfire Detected			
P0303 (DI-210)	Cylinder 3 Misfire Detected			
P0304 (DI-210)	Cylinder 4 Misfire Detected			
P0305 (DI-210)	Cylinder 5 Misfire Detected			
P0306 (DI-210)	Cylinder 6 Misfire Detected			
P0325 (DI-215)	Knock Sensor 1 Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in knock sensor 1 circuit</li> <li>• Knock sensor 1 (looseness)</li> <li>• ECM</li> </ul>	○	○
P0330 (DI-215)	Knock Sensor 2 Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in knock sensor 2 circuit</li> <li>• Knock sensor 2 (looseness)</li> <li>• ECM</li> </ul>	○	○
P0335 (DI-218)	Crankshaft Position Sensor "A" Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in crankshaft position sensor circuit</li> <li>• Crankshaft position sensor</li> <li>• Crankshaft timing pulley</li> <li>• ECM</li> </ul>	○	○
P0340 (DI-220)	Camshaft Position Sensor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in camshaft position sensor circuit</li> <li>• Camshaft position sensor</li> <li>• RH camshaft timing pulley</li> <li>• ECM</li> </ul>	○	○
P0420 (DI-222)	Catalyst System Efficiency Below Threshold (Bank 1)	<ul style="list-style-type: none"> <li>• Gas leakage on exhaust system</li> <li>• A/F sensor (bank 1 sensor 1)</li> <li>• Heated oxygen sensor (bank 1 sensor 2)</li> <li>• Three-way catalytic converter</li> </ul>	○	○

## DIAGNOSTICS – ENGINE (5VZ-FE)

P0440 (DI-225)	Evaporative Emission Control System Malfunction	<ul style="list-style-type: none"> <li>• Hose or tube cracked, hole, damaged or loose seal ((3) or (9) in Fig. 1)</li> <li>• Fuel tank cap incorrectly installed</li> <li>• Fuel tank cap cracked or damaged</li> <li>• Vacuum hose cracked, holed, blocked, damaged or disconnected ((1), (2), (4), (5), (6), (7), (8), (10) and (11) in Fig. 1)</li> <li>• Fuel tank cracked, holed or damaged</li> <li>• Charcoal canister cracked, holed or damaged</li> <li>• Open or short in vapor pressure sensor circuit</li> <li>• Vapor pressure sensor</li> <li>• Fuel tank over fill check valve cracked or damaged</li> <li>• ECM</li> </ul>	○	○
P0441 (DI-234)	Evaporative Emission Control System Incorrect Purge Flow	<ul style="list-style-type: none"> <li>• Vacuum hose cracks, holed blocked, damaged or disconnected ((1), (2), (3), (4), (5), (6), (7), (8), (9), (10) and (11) in Fig. 1)</li> <li>• Fuel tank cap incorrectly installed</li> <li>• Fuel tank cap cracked or damaged</li> <li>• Open or short in vapor pressure sensor circuit</li> <li>• Vapor pressure sensor</li> <li>• Open or short in VSV circuit for EVAP</li> <li>• VSV for EVAP</li> <li>• Open or short in VSV circuit for CCV</li> <li>• VSV for CCV</li> <li>• Open or short in VSV circuit for pressure switching valve</li> <li>• VSV for pressure switching valve</li> <li>• Fuel tank cracked, holed or damaged</li> <li>• Charcoal canister cracked, holed or damaged</li> <li>• Fuel tank over fill check valve cracked damaged</li> <li>• ECM</li> </ul>	○	○
P0442 (DI-225)	Evaporative Emission Control System Leak detected (Small Leak)	<ul style="list-style-type: none"> <li>• Same as DTC No. P0440</li> </ul>	○	○
P0446 (DI-234)	Evaporative Emission Control System Vent Control Malfunction	<ul style="list-style-type: none"> <li>• Same as DTC No. P0441</li> </ul>	○	○
P0450 (DI-251)	Evaporative Emission Control System Pressure Sensor Malfunction	<ul style="list-style-type: none"> <li>• Open or short in vapor pressure sensor circuit</li> <li>• Vapor pressure sensor</li> </ul>	○	○
P0451 (DI-251)	Evaporative Emission Control System Pressure Sensor Range/Performance	<ul style="list-style-type: none"> <li>• ECM</li> </ul>		
P0500 (DI-253)	Vehicle Speed Sensor Malfunction	<ul style="list-style-type: none"> <li>• Open or short in speed signal circuit</li> <li>• Combination meter</li> <li>• ECM</li> <li>• Open or short in speed sensor circuit for ABS</li> <li>• ABS ECU</li> </ul>	○	○
P0505 (DI-256)	Idle Control System Malfunction	<ul style="list-style-type: none"> <li>• PCV hose connection</li> <li>• PCV hose</li> <li>• Open or short in IAC valve circuit</li> <li>• IAC valve is stuck or closed</li> <li>• Open or short in A/C signal circuit</li> <li>• Air induction system</li> <li>• ECM</li> </ul>	○	○

\*1: MIL lights up.

\*2: MIL lights up or blinking.

## MANUFACTURER DEFINED

DTC No. (See page)	Detection Item	Trouble Area	MIL*	Memory
P1130 (DI-260)	A/F Sensor Circuit Range/Performance Malfunction (Bank 1 Sensor 1)	<ul style="list-style-type: none"> <li>• Open or short in A/F sensor circuit</li> <li>• A/F sensor</li> <li>• Air induction system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• ECM</li> </ul>	○	○
P1133 (DI-264)	A/F Sensor Circuit Response Malfunction (Bank 1 Sensor 1)	<ul style="list-style-type: none"> <li>• Open or short in A/F sensor circuit</li> <li>• A/F sensor</li> <li>• Air induction system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• ECM</li> </ul>	○	○
P1135 (DI-268)	A/F Sensor Heater Circuit Malfunction (Bank1 Sensor 1)	<ul style="list-style-type: none"> <li>• Open or short in heater circuit of A/F sensor</li> <li>• A/F sensor heater</li> <li>• ECM</li> </ul>	○	○
P1300 (DI-270)	Igniter Circuit Malfunction	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT circuit from igniter to ECM</li> <li>• Igniter</li> <li>• Ignition coil</li> <li>• ECM</li> </ul>	○	○
P1335 (DI-275)	Crankshaft Position Sensor Circuit Malfunction (During engine running)	<ul style="list-style-type: none"> <li>• Open or short in crankshaft position sensor circuit</li> <li>• Crankshaft position sensor</li> <li>• Crankshaft timing pulley</li> <li>• ECM</li> </ul>	-	○
P1520 (DI-276)	Stop Light Switch Signal Malfunction (Only for A/T)	<ul style="list-style-type: none"> <li>• Short in stop light switch signal circuit</li> <li>• Stop light switch</li> <li>• ECM</li> </ul>	○	○
P1600 (DI-279)	ECM BATT Malfunction	<ul style="list-style-type: none"> <li>• Open in back up power source circuit</li> <li>• ECM</li> </ul>	○	○
P1700 (DI-336)	Vehicle Speed Sensor No.2 Malfunction	<ul style="list-style-type: none"> <li>• Open or short in No.2 vehicle speed sensor circuit</li> <li>• No.2 vehicle speed sensor</li> <li>• ECM</li> </ul>	○	○
P1780 (DI-281)	Park/Neutral Position Switch Malfunction (Only for A/T)	<ul style="list-style-type: none"> <li>• Short in park/neutral position switch circuit</li> <li>• Park/neutral position switch</li> <li>• ECM</li> </ul>	○	○
P1782 (DI-344)	Transfer L4 SW Circuit Malfunction (Only for 4WD)	<ul style="list-style-type: none"> <li>• Transfer L4 position switch</li> <li>• Transfer L4 position switch circuit</li> <li>• ECM</li> </ul>	○	○
P1783 (DI-348)	Transfer N SW Circuit Malfunction (Only for 4WD)	<ul style="list-style-type: none"> <li>• Transfer neutral position switch</li> <li>• Transfer neutral position switch circuit</li> <li>• ECM</li> </ul>	○	○

\*: – ... MIL does not light up. ○ ... MIL lights up.