

## DIAGNOSTIC TROUBLE CODE CHART

### HINT:

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

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

### SAE CONTROLLED

DTC No. (See page)	Detection Item	Trouble Area	MIL*1	Memory
P0100 (DI-25)	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-29)	Mass Air Flow Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Mass air flow meter</li> </ul>	○	○
P0110 (DI-30)	Intake Air Temp. 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-34)	Engine Coolant Temp. 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-38)	Engine Coolant Temp. Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Cooling system</li> <li>• Engine coolant temp. sensor</li> </ul>	○	○
P0120 (DI-40)	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-44)	Throttle/Pedal Position Sensor/Switch "A" Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Throttle position sensor</li> </ul>	○	○
P0125 (DI-45)	Insufficient Coolant Temp. for Closed Loop Fuel Control (California Spec.)	<ul style="list-style-type: none"> <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>• EGR system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• Gas leakage on exhaust system</li> <li>• ECM</li> </ul>	○	○
P0125 (DI-50)	Insufficient Coolant Temp. for Closed Loop Fuel Control (Except California Spec.)	<ul style="list-style-type: none"> <li>• Open or short in heated oxygen sensor (bank 1 sensor 1) circuit</li> <li>• Heated oxygen sensor (bank 1 sensor 1)</li> <li>• Air induction system</li> <li>• EGR system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• Gas leakage on exhaust system</li> <li>• ECM</li> </ul>	○	○
P0130 (DI-55)	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 1) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Heated oxygen sensor</li> <li>• Air induction system</li> <li>• EGR system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• ECM</li> </ul>	○	○

## DIAGNOSTICS – ENGINE (2RZ-FE, 3RZ-FE)

P0133 (DI-59)	Oxygen Sensor Circuit Slow Response (Bank 1 Sensor 1) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Heated oxygen sensor</li> <li>• Air induction system</li> <li>• EGR system</li> <li>• Fuel pressure</li> <li>• Injector</li> <li>• ECM</li> </ul>	○	○
P0135 (DI-62)	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Open or short in heater circuit of heated oxygen sensor</li> <li>• Heated oxygen sensor heater</li> <li>• ECM</li> </ul>	○	○
P0136 (DI-64)	Oxygen 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> </ul>	○	○
P0141 (DI-62)	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)	<ul style="list-style-type: none"> <li>• Same as DTC No. P0135</li> </ul>	○	○
P0171 (DI-66)	System too Lean (Fuel Trim) (California Spec.)	<ul style="list-style-type: none"> <li>• Air induction system</li> <li>• Injector blockage</li> <li>• Mass air flow meter</li> <li>• Engine coolant temp. sensor</li> <li>• Fuel pressure</li> <li>• Gas leakage on exhaust system</li> <li>• Open or short in heated oxygen sensor (bank 1 sensor 1) circuit</li> <li>• A/F sensor (bank 1 sensor 1)</li> <li>• ECM</li> </ul>	○	○
P0172 (DI-66)	System too Rich (Fuel Trim) (California Spec.)	<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 leakage on exhaust system</li> <li>• Open or short in heated oxygen sensor (bank 1 sensor 1) circuit</li> <li>• A/F sensor (bank 1 sensor 1)</li> <li>• ECM</li> </ul>	○	○
P0171 (DI-71)	System too Lean (Fuel Trim) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Air induction system</li> <li>• Injector blockage</li> <li>• Mass air flow meter</li> <li>• Engine coolant temp. sensor</li> <li>• Fuel pressure</li> <li>• Gas leakage on exhaust system</li> <li>• Open or short in heated oxygen sensor (bank 1 sensor 1) circuit</li> <li>• Heated oxygen sensor (bank 1 sensor 1)</li> <li>• ECM</li> </ul>	○	○
P0172 (DI-71)	System too Rich (Fuel Trim) (Except California Spec.)	<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 leakage on exhaust system</li> <li>• Open or short in heated oxygen sensor (bank 1 sensor 1) circuit</li> <li>• Heated oxygen sensor (bank 1 sensor 1)</li> <li>• ECM</li> </ul>	○	○

P0300 (DI-75)	Random/Multiple Cylinder Misfire Detected	<ul style="list-style-type: none"> <li>• Open or short in engine wire</li> <li>• Connector connection</li> </ul>		
P0301 (DI-75)	Cylinder 1 Misfire Detected	<ul style="list-style-type: none"> <li>• Vacuum hose connection</li> <li>• Ignition system</li> <li>• Injector</li> </ul>		
P0302 (DI-75)	Cylinder 2 Misfire Detected	<ul style="list-style-type: none"> <li>• Fuel pressure</li> <li>• EGR system</li> <li>• Mass air flow meter</li> </ul>	○*2	○
P0303 (DI-75)	Cylinder 3 Misfire Detected	<ul style="list-style-type: none"> <li>• Engine coolant temp. sensor</li> <li>• Compression pressure</li> </ul>		
P0304 (DI-75)	Cylinder 4 Misfire Detected	<ul style="list-style-type: none"> <li>• Valve clearance</li> <li>• Valve timing</li> <li>• ECM</li> </ul>		
P0325 (DI-81)	Knock Sensor 1 Circuit Malfunction (Bank 1)	<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>	○	○
P0335 (DI-84)	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>• Signal plate (Crankshaft position sensor rotor)</li> <li>• ECM</li> </ul>	○	○
P0340 (DI-86)	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>• ECM</li> </ul>	○	○
P0401 (DI-88)	Exhaust Gas Recirculation Flow Insufficient Detected (Except 2RZ-FE for California Spec.)	<ul style="list-style-type: none"> <li>• Open in EGR gas temp. sensor circuit</li> <li>• EGR gas temp. sensor</li> <li>• Vacuum or EGR hose disconnected</li> <li>• Open or short in VSV circuit for EGR</li> <li>• VSV for EGR</li> <li>• EGR system</li> <li>• EGR vacuum modulator</li> <li>• EGR valve stuck closed</li> <li>• ECM</li> </ul>	○	○
P0402 (DI-98)	Exhaust Gas Recirculation Flow Excessive Detected (Except 2RZ-FE for California Spec.)	<ul style="list-style-type: none"> <li>• Short in EGR gas temp. sensor circuit</li> <li>• EGR gas temp. sensor</li> <li>• Open in VSV circuit for EGR</li> <li>• VSV for EGR</li> <li>• EGR valve stuck open</li> <li>• ECM</li> </ul>	○	○
P0420 (DI-102)	Catalyst System Efficiency Below Threshold (Bank 1) (California Spec.)	<ul style="list-style-type: none"> <li>• Gas leakage on exhaust system</li> <li>• A/F sensor</li> <li>• Three-way catalytic convertor</li> </ul>	○	○
P0420 (DI-105)	Catalyst System Efficiency Below Threshold (Bank 1) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Gas leakage on exhaust system</li> <li>• Heated oxygen sensor</li> <li>• Three-way catalytic convertor</li> </ul>	○	○
P0440 (DI-108)	Evaporative Emission Control System Malfunction	<ul style="list-style-type: none"> <li>• Hose or tube cracked, holed, damaged or loose seal ((3) 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) or (2) 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>• ECM</li> </ul>	○	○

## DIAGNOSTICS – ENGINE (2RZ-FE, 3RZ-FE)

P0441 (DI-115)	Evaporative Emission Control System Incorrect Purge Flow	<ul style="list-style-type: none"> <li>• Vacuum hose cracked, holed, damaged, blocked or disconnected ((1), (4), (5), (6) and (7) in Fig. 1)</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> </ul>	○	○
P0446 (DI-115)	Evaporative Emission Control System Vent Control Malfunction	<ul style="list-style-type: none"> <li>• VSV for EVAP</li> <li>• Open or short in VSV circuit for vapor pressure sensor</li> <li>• VSV for vapor pressure sensor</li> <li>• Charcoal canister cracked, holed or damaged</li> <li>• ECM</li> </ul>	○	○
P0450 (DI-127)	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-127)	Evaporative Emission Control System Pressure Sensor Range/Performance	<ul style="list-style-type: none"> <li>• ECM</li> </ul>	○	○
P0500 (DI-129)	Vehicle Speed Sensor Malfunction (For 2RZ-FE)	<ul style="list-style-type: none"> <li>• Speedometer cable</li> <li>• Open or short in vehicle speed sensor circuit</li> <li>• Vehicle speed sensor</li> <li>• ECM</li> </ul>	○	○
P0500 (DI-129)	Vehicle Speed Sensor Malfunction (For 3RZ-FE)	<ul style="list-style-type: none"> <li>• Combination meter</li> <li>• Open or short in vehicle speed sensor circuit</li> <li>• Vehicle speed sensor</li> <li>• ECM</li> </ul>	○	○
P0505 (DI-132)	Idle Control System Malfunction	<ul style="list-style-type: none"> <li>• Open or short in IAC valve circuit</li> <li>• IAC valve is stuck or closed</li> <li>• Open or short in A/C switch circuit</li> <li>• Air induction system</li> <li>• ECM</li> </ul>	○	○

\*1: MIL lights up.

\*2: MIL lights up or blinking.

**MANUFACTURER CONTROLLED**

DTC No. (See Page)	Detection Item	Trouble Area	MIL*	Memory
P1130 (DI-301)	A/F Sensor Circuit Range/Performance Malfunction (Bank 1 Sensor 1) (California Spec.)	<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-306)	A/F Sensor Circuit Response Malfunction (Bank 1 Sensor 1) (California Spec.)	<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-145)	A/F Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) (California Spec.)	<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-152)	Igniter Circuit Malfunction (No.1) (California Spec.)	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT1 circuit from No.1 ignition coil with igniter to ECM</li> <li>• No.1 ignition coil with igniter</li> <li>• ECM</li> </ul>	○	○

P1305 (DI-152)	Igniter Circuit Malfunction (No.2) (California Spec.)	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT2 circuit from No.2 ignition coil with igniter to ECM</li> <li>• No.2 ignition coil with igniter</li> <li>• ECM</li> </ul>	○	○
P1310 (DI-152)	Igniter Circuit Malfunction (No.3) (California Spec.)	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT3 circuit from No.3 ignition coil with igniter to ECM</li> <li>• No.3 ignition coil with igniter</li> <li>• ECM</li> </ul>	○	○
P1315 (DI-152)	Igniter Circuit Malfunction (No.4) (California Spec.)	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT4 circuit from No.4 ignition coil with igniter to ECM</li> <li>• No.4 ignition coil with igniter</li> <li>• ECM</li> </ul>	○	○
P1300 (DI-147)	Igniter Circuit Malfunction (No.1) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT1 circuit from No.1 ignition coil with igniter to ECM</li> <li>• No.1 ignition coil with igniter</li> <li>• ECM</li> </ul>	○	○
P1310 (DI-147)	Igniter Circuit Malfunction (No.2) (Except California Spec.)	<ul style="list-style-type: none"> <li>• Ignition system</li> <li>• Open or short in IGF or IGT2 circuit from No.2 ignition coil with igniter to ECM</li> <li>• No.2 ignition coil with igniter</li> <li>• ECM</li> </ul>	○	○
P1335 (DI-158)	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>• Signal plate (Crankshaft position sensor rotor)</li> <li>• ECM</li> </ul>	–	○
P1520 (DI-159)	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-162)	ECM BATT Malfunction	<ul style="list-style-type: none"> <li>• Open in back up power source circuit</li> <li>• ECM</li> </ul>	○	○
P1780 (DI-165)	Park/Neutral Position Switch Malfunction (Only for 3RZ-FE 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>	○	○

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