

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.

DTC No. (See Page)	Detection Item	Trouble Area	MIL *1	Memory
P0031 *4 (05-255)	Oxygen Sensor Heater Circuit Low (Bank 1 Sensor 1)	• Open in heater circuit of A/F sensor • A/F sensor heater • A/F sensor heater relay • ECM	○	○
P0032 *4 (05-255)	Oxygen Sensor Heater Circuit High (Bank 1 Sensor 1)	• Short in heater circuit of A/F sensor • A/F sensor heater • A/F sensor heater relay • ECM	○	○
P0037 (05-258)	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	• Open in heater circuit of oxygen sensor • Oxygen sensor heater • E.F.I. ECU relay • ECM	○	○
P0038 (05-258)	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	• Short in heater circuit of oxygen sensor • Oxygen sensor heater • E.F.I. ECU relay • ECM	○	○
P0051 *4 (05-255)	Oxygen Sensor Heater Circuit Low (Bank 2 Sensor 1)	• Same as DTC No. P0031	○	○
P0052 *4 (05-255)	Oxygen Sensor Heater Circuit High (Bank 2 Sensor 1)	• Same as DTC No. P0032	○	○
P0057 (05-258)	Oxygen Sensor Heater Circuit Low (Bank 2 Sensor 2)	• Same as DTC No. P0037	○	○
P0058 (05-258)	Oxygen Sensor Heater Circuit High (Bank 2 Sensor 2)	• Same as DTC No. P0038	○	○
P0100 (05-261)	Mass or volume Air Flow Circuit	• Open or short in mass air flow meter circuit • Mass air flow meter • ECM	○	○
P0101 (05-266)	Mass or volume Air Flow Circuit Range/Performance Problem	• Mass air flow meter	○	○
P0102 (05-261)	Mass or volume Air Flow Circuit Low Input	• Open or short in mass air flow meter circuit • Mass air flow meter • ECM	○	○
P0103 (05-261)	Mass or volume Air Flow Circuit High Input	• Open in mass air flow meter circuit (E2G circuit) • Short in mass air flow meter circuit (+B circuit) • Mass air flow meter • ECM	○	○
P0110 (05-267)	Intake Air Temperature Circuit	• Open or short in intake air temp. sensor circuit • Intake air temp. sensor (built in mass air flow meter) • ECM	○	○
P0112 (05-267)	Intake Air Temperature Circuit Low Input	• Short in intake air temp. sensor circuit • Intake air temp. sensor (built in mass air flow meter) • ECM	○	○
P0113 (05-267)	Intake Air Temperature Circuit High Input	• Open in intake air temp. sensor circuit • Intake air temp. sensor (built in mass air flow meter) • ECM	○	○
P0115 (05-271)	Engine Coolant Temperature Circuit	• Open or short in engine coolant temp. sensor circuit • Engine coolant temp. sensor • ECM	○	○

P0116 (05-275)	Engine Coolant Temperature Circuit Range/Performance Problem	•Cooling system •Engine coolant temp. sensor	○	○
P0117 (05-271)	Engine Coolant Temperature Circuit Low Input	•Short in engine coolant temp. sensor circuit •Engine coolant temp. sensor •ECM	○	○
P0118 (05-271)	Engine Coolant Temperature Circuit High Input	•Open or short in engine coolant temp. sensor circuit •Engine coolant temp. sensor •ECM	○	○
P0120 (05-277)	Throttle/Pedal Position Sensor/Switch "A" Circuit	•Open or short in throttle position sensor circuit •Throttle position sensor •Wire harness •ECM	○	○
P0121 (05-282)	Throttle/Pedal Position Sensor/Switch "A" Circuit Range/Performance Problem	•Throttle position sensor	○	○
P0122 (05-277)	Throttle/Pedal Position Sensor/Switch "A" Circuit Low Input	•Same as DTC No. P0120	○	○
P0123 (05-277)	Throttle/Pedal Position Sensor/Switch "A" Circuit High Input	•Open in throttle position sensor circuit (E2 circuit) •Short in throttle position sensor circuit (+B circuit) •Throttle position sensor •ECM	○	○
P0125 (05-275)	Insufficient Coolant Temperature for Closed Loop Fuel Control	•Same as DTC No. P0116	○	○
P0128 (05-283)	Coolant Thermostat (Coolant Temperature Below Thermostat regulating temperature)	•Thermostat •Cooling system •Engine coolant temp. sensor •ECM	○	○
P0134 *4 (05-284)	Oxygen Sensor Circuit No Activity Detected (Bank 1 Sensor 1)	•Open or short in A/F sensor (bank 1, 2 sensor 1) circuit •A/F sensor (bank 1, 2 sensor 1) •A/F sensor heater •A/F sensor heater relay •A/F sensor heater and relay circuit •Air induction system •Fuel pressure •Injector •Gas leakage in exhaust system •PCV hose connection •PCV valve and hose. •ECM	○	○
P0136 (05-293)	Heated Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	•Open or short in oxygen sensor circuit •Oxygen sensor •Oxygen sensor heater	○	○
P0154 *4 (05-284)	Oxygen Sensor Circuit No Activity Detected (Bank 2 Sensor 1)	•Same as DTC No. P0134	○	○
P0156 (05-293)	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)	•Same as DTC No. P0136	○	○
P0171 (05-297)	System too Lean (Bank 1)	•Air induction system •Injector blockage •Mass air flow meter •Engine coolant temperature sensor •Fuel pressure •Gas leakage in exhaust system •Open or short in A/F sensor circuit •A/F sensor (bank 1, 2 sensor 1) •A/F sensor heater relay •A/F sensor heater and relay circuit •Open or short in oxygen sensor (bank 1, 2 sensor 1) circuit •Oxygen sensor (bank 1, 2 sensor 1) •PCV hose connection •PCV hose	○	○

DIAGNOSTICS – SFI SYSTEM (1MZ-FE)

P0172 (05-297)	System too Rich (Bank 1)	• Injector leak, blockage • Mass air flow meter • Engine coolant temperature sensor • Ignition system • Fuel pressure • Gas leakage in exhaust system • Open or short in A/F sensor circuit • A/F sensor (bank 1, 2 sensor 1) • A/F sensor heater relay • A/F sensor heater and relay circuit • Open or short in oxygen sensor (bank 1, 2 sensor 1) circuit • Oxygen sensor (bank 1, 2 sensor 1)	○	○
P0174 (05-297)	System too Lean (Bank2)	• Same as DTC No. P0171	○	○
P0175 (05-297)	System too Rich (Bank2)	• Same as DTC No. P0172	○	○
P0220 (05-277)	Throttle/Pedal Position Sensor/ Switch "B" Circuit	• Same as DTC No. P0120	○	○
P0222 (05-277)	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low Input	• Same as DTC No. P0120	○	○
P0223 (05-277)	Throttle/Pedal Position Sensor/ Switch "B" Circuit High Input	• Same as DTC No. P0120	○	○
P0300 (05-305)	Random/Multiple Cylinder Misfire Detected	• Open or short in engine wire • Connector connection • Vacuum hose connection • Ignition system • Injector • Fuel pressure • Mass air flow meter • Engine coolant temperature sensor • Compression pressure • Valve clearance • Valve timing • PCV hose connection • PCV hose • ECM	○ *2	○
P0301 (05-305)	Cylinder 1 Misfire Detected		○ *2	○
P0302 (05-305)	Cylinder 2 Misfire Detected		○ *2	○
P0303 (05-305)	Cylinder 3 Misfire Detected		○ *2	○
P0304 (05-305)	Cylinder 4 Misfire Detected		○ *2	○
P0305 (05-305)	Cylinder 5 Misfire Detected		○ *2	○
P0306 (05-305)	Cylinder 6 Misfire Detected		○ *2	○
P0325 (05-318)	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)	• Open or short in knock sensor 1 circuit • Knock sensor 1 (looseness) • ECM	○	○
P0330 (05-318)	Knock Sensor 2 Circuit (Bank 2)	• Open or short in knock sensor 2 circuit • Knock sensor 2 (looseness) • ECM	○	○
P0335 (05-322)	Crankshaft Position Sensor "A" Circuit	• Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Crankshaft timing pulley • ECM	○	○
P0339 (05-322)	Crankshaft Position Sensor "A" Circuit Intermittent	• Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Crankshaft timing pulley • ECM	—	○
P0340 (05-325)	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	• Open or short in camshaft position sensor circuit • Camshaft position sensor	○	○
P0341 (05-325)	Camshaft Position Sensor "A" Circuit Range/Performance (Bank 1 or Single Sensor)	• Camshaft timing pulley • Jumping teeth of timing belt • ECM	○	○

P0351 (05-328)	Ignition Coil "A" Primary/Secondary Circuit	- Ignition system - Open or short in IGF or IGT1 – 6 circuit from ignition coil assy to ECM - No.1 –6 ignition coil assy - ECM	☐	☐
P0352 (05-328)	Ignition Coil "B" Primary/Secondary Circuit		☐	☐
P0353 (05-328)	Ignition Coil "C" Primary/Secondary Circuit		☐	☐
P0354 (05-328)	Ignition Coil "D" Primary/Secondary Circuit		☐	☐
P0355 (05-328)	Ignition Coil "E" Primary/Secondary Circuit		☐	☐
P0356 (05-328)	Ignition Coil "F" Primary/Secondary Circuit		☐	☐
P0401 (05-335)	Exhaust Gas Recirculation Flow Insufficient Detected	- Open or short in EGR gas temp. sensor circuit - EGR gas temp. sensor - Vacuum hose disconnected or blocked - Open in VSV circuit for EGR - VSV for EGR - EGR system - EGR valve (stuck closed) - Vacuum control valve - ECM	☐	☐
P0402 (05-343)	Exhaust Gas Recirculation Flow Excessive Detected	- Vacuum hose disconnected or blocked - Short in VSV circuit for EGR - VSV for EGR - EGR valve stuck open - Open or short in EGR valve position sensor circuit - EGR valve position sensor - ECM	☐	☐
P0405 (05-346)	Exhaust Gas Recirculation Sensor "A" Circuit Low	- Open in EGR valve position sensor circuit - EGR valve position sensor - ECM	☐	☐
P0406 (05-346)	Exhaust Gas Recirculation Sensor "A" Circuit High	- Short in EGR valve position sensor circuit - EGR valve position sensor - ECM	☐	☐
P0409 (05-350)	Exhaust Gas Recirculation Sensor "A" Circuit	EGR valve position sensor	☐	☐
P0420 (05-351)	Catalyst System Efficiency Below Threshold (Bank 1)	- Exhaust manifold sub-assy RH (front catalyst bank 1) - Exhaust pipe assy front (rear catalyst) - Gas leakage on exhaust system - Heated oxygen sensor (bank 1 sensor 2) - A/F sensor (bank 1 sensor 1)	☐	☐
P0430 (05-351)	Catalyst System Efficiency Below Threshold (Bank 2)	- Exhaust manifold converter sub-assy No.2 (front catalyst bank 2) - Exhaust pipe assy front (rear catalyst) - Gas leakage on exhaust system - Heated oxygen sensor (bank 2 sensor 2) - A/F sensor (bank 2 sensor 1)	☐	☐
P0441 (05-354)	Evaporative Emission Control System Incorrect Purge Flow	- Fuel tank cap incorrectly installed - Fuel tank cap cracked or damaged - Vacuum hose cracks, holed blocked, damaged or disconnected - Open or short in vapor pressure sensor circuit - Vapor pressure sensor - Open or short in VSV circuit for EVAP - VSV for EVAP - Open or short in VSV circuit for CCV - VSV for CCV - Open or short in VSV circuit for pressure switching valve - VSV for pressure switching valve - Fuel tank cracked, holed or damaged - Charcoal canister cracked, holed or damaged - Fuel tank over fill check valve cracked damaged - ECM	☐	☐

DIAGNOSTICS – SFI SYSTEM (1MZ-FE)

P0442 (05-378)	Evaporative Emission Control System Leak detected (small leak)	• Fuel tank cap incorrectly installed • Fuel tank cap cracked or damaged • Hose or tube cracked, hole, damaged or loose seal • Vacuum hose cracked, holed, blocked, damaged or disconnected • Fuel tank cracked, holed or damaged • Charcoal canister cracked, holed or damaged • Open or short in vapor pressure sensor circuit • VSV for CCV • VSV for EVAP • VSV for pressure switching valve • Vapor pressure sensor • Fuel tank over fill check valve cracked or damaged • ECM	○	○
P0446 (05-354)	Evaporative Emission Control System Vent Control Circuit	• Same as DTC No. P0441	○	○
P0451 (05-390)	Evaporative Emission Control System Pressure Sensor/Switch Range/Performance	• Open or short in vapor pressure sensor circuit • Vapor pressure sensor • ECM	○	○
P0452 (05-390)	Evaporative Emission Control System Pressure Sensor/Switch Low Input	• Open in vapor pressure sensor circuit • Vapor pressure sensor • ECM	○	○
P0453 (05-390)	Evaporative Emission Control System Pressure Sensor/Switch High Input	• Short or short in vapor pressure sensor circuit • Vapor pressure sensor • ECM	○	○
P0456 (05-378)	Evaporative Emission Control System Leak Detected (very small leak)	• Same as DTC No. P0442	○	○
P0500 (05-392)	Vehicle Speed Sensor "A"	• Combination meter • Open or short in speed sensor circuit	○	○
P0503 (05-392)	Vehicle Speed Sensor "A" Inter-mittent/Erratic/High	• Vehicle speed sensor • ECM • Skid control computer assy	○	○
P0504 (05-395)	Brake Switch Correlation	• Short in stop light switch signal circuit • Stop light switch • ECM	○	○
P0505 (05-399)	Idle Control System	• Throttle body assy • Air induction system • PCV hose connection • ECM	○	○
P0513 (05-1309)	Incorrect Immobilizer Key	• Immobilizer system	—	○
P0560 (05-402)	System Voltage	• Open in back up power source circuit • ECM	○	○
P0571 (05-404)	Brake Switch "A" Circuit	• Short in stop light switch signal circuit • Stop light switch • ECM	○	○
P0604 (05-405)	Internal Control Module Random Access Memory (RAM) Error	• ECM	○	○
P0606 (05-405)	ECM/PCM Processor	• ECM	○	○
P0607 (05-405)	Control Module Performance	• ECM	○	○
P0617 (05-406)	Starter Relay Circuit High	• Short in park/neutral position switch circuit • Park/neutral position switch • Ignition switch • ECM	○	○
P0657 (05-405)	Actuator Supply Voltage Circuit / Open	• ECM	○	○

P0705 (05-689)	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	• Short in park/neutral position switch circuit • Park/neutral position switch • ECM	○	○
P0710 (05-693)	Transmission Fluid Temperature Sensor "A" circuit	• Electronic controlled automatic transmission (ECT)	○	○
P0711 (05-696)	Transmission Fluid Temperature Sensor "A" Performance	• Electronic controlled automatic transmission (ECT)	○	○
P0712 (05-693)	Transmission Fluid Temperature Sensor "A" Circuit Low Input	• Electronic controlled automatic transmission (ECT)	○	○
P0713 (05-693)	Transmission Fluid Temperature Sensor "A" Circuit High Input	• Electronic controlled automatic transmission (ECT)	○	○
P0717 (05-698)	Input/Turbine Speed Sensor "A" Circuit No Signal	• Electronic controlled automatic transmission (ECT)	○	○
P0724 (05-412)	Brake Switch "B" Circuit High	• Short in stop light switch signal circuit • Stop light switch • ECM	○	○
P0741 (05-702)	Torque Converter Clutch Circuit Performance or Stuck Off	• Electronic controlled automatic transmission (ECT)	○	○
P0743 (05-706)	Torque Converter Clutch Circuit Electrical	• Electronic controlled automatic transmission (ECT)	○	○
P0746 (05-709)	Pressure Control Solenoid "A" Performance (Shift Solenoid Valve SL1)	• Electronic controlled automatic transmission (ECT)	○	○
P0748 (05-714)	Pressure Control Solenoid "A" Electrical (Shift Solenoid Valve SL1)	• Electronic controlled automatic transmission (ECT)	○	○
P0766 (05-709)	Shift Solenoid "D" Performance (Shift Solenoid Valve S4)	• Electronic controlled automatic transmission (ECT)	○	○
P0776 (05-709)	Pressure Control Solenoid "B" Performance (Shift Solenoid Valve SL2)	• Electronic controlled automatic transmission (ECT)	○	○
P0778 (05-714)	Pressure Control Solenoid "B" Electrical (Shift Solenoid Valve SL2)	• Electronic controlled automatic transmission (ECT)	○	○
P0793 (05-721)	Intermediate Shaft Speed Sensor "A" Circuit No Signal	• Electronic controlled automatic transmission (ECT)	○	○
P0850 (05-689)	Park/Neutral Switch Input Circuit	• Same as DTC No. P0705	○	○
P0982 (05-714)	Shift Solenoid "D" Control Low	• Electronic controlled automatic transmission (ECT)	○	○
P0983 (05-714)	Shift Solenoid "D" Control High	• Electronic controlled automatic transmission (ECT)	○	○
P2102 (05-416)	Throttle Actuator Control Motor Circuit Low	• Open or short in throttle control motor circuit • Throttle body assy (Throttle motor) • ECM	○	○
P2103 (05-416)	Throttle Actuator Control Motor Circuit High		○	○
P2111 (05-421)	Throttle Actuator Control System – Stuck Open	• Throttle control motor circuit • Throttle control motor	○	○
P2112 (05-421)	Throttle Actuator Control System – Stuck Closed	• Throttle body • Throttle valve	○	○
P2118 (05-423)	Actuator Control Motor Current Range/Performance	• Open in ETCS power source circuit • ECM	○	○
P2119 (05-426)	Throttle Actuator Control Throttle Body Range/Performance	• Electric throttle control system • ECM	○	○
P2120 (05-428)	Throttle/Pedal Position Sensor/Switch "D" Circuit	• Open or short in accelerator pedal position sensor circuit • Accelerator pedal position sensor • ECM	○	○

DIAGNOSTICS – SFI SYSTEM (1MZ-FE)

P2121 (05-436)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Range/Performance	• Accelerator pedal position sensor • ECM	☐	☐
P2122 (05-428)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input	• Same as DTC No. P2120	☐	☐
P2123 (05-428)	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input		☐	☐
P2125 (05-428)	Throttle/Pedal Position Sensor/ Switch "E" Circuit		☐	☐
P2127 (05-428)	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input		☐	☐
P2128 (05-428)	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input	• Same as DTC No. P2120	☐	☐
P2135 (05-277)	Throttle Pedal Position Sensor/ Switch "A"/"B" Voltage Correlation	• Same as DTC No. P0120	☐	☐
P2138 (05-428)	Throttle Pedal Position Sensor/ Switch "D"/"E" Voltage Correlation	• Same as DTC No. P2120	☐	☐
P2195 *4 (05-438)	Oxygen Sensor Signal Stuck Lean (Bank 1 Sensor 1)	• Open or short in A/F sensor (bank 1, 2 sensor 1) circuit • A/F sensor (bank 1, 2 sensor 1) • A/F sensor heater • A/F sensor heater relay • A/F sensor heater and relay circuit • Air induction system • Fuel pressure • Injector • ECM	☐	☐
P2196 *4 (05-438)	Oxygen Sensor Signal Stuck Rich (Bank 1 Sensor 1)		☐	☐
P2197 *4 (05-438)	Oxygen Sensor Signal Stuck Lean (Bank 2 Sensor 1)		☐	☐
P2198 *4 (05-438)	Oxygen Sensor Signal Stuck Rich (Bank 2 Sensor 1)		☐	☐
P2237 *4 (05-447)	Oxygen Sensor Pumping Current Circuit / Open (for A/F sensor) (Bank 1 Sensor 1)	• Open or short in A/F sensor (bank 1, 2 sensor 1) circuit • A/F sensor (bank 1, 2 sensor 1) • A/F sensor heater • A/F sensor heater relay • A/F sensor heater and relay circuit • ECM	☐	☐
P2238 *4 (05-447)	Oxygen Sensor Pumping Current Circuit / Low (for A/F sensor) (Bank 1 Sensor 1)		☐	☐
P2239 *4 (05-447)	Oxygen Sensor Pumping Current Circuit / High (for A/F sensor) (Bank 1 Sensor 1)		☐	☐
P2240 *4 (05-447)	Oxygen Sensor Pumping Current Circuit / Open (for A/F sensor) (Bank 2 Sensor 1)		☐	☐
P2241 *4 (05-447)	Oxygen Sensor Pumping Current Circuit / Low (for A/F sensor) (Bank 2 Sensor 1)		☐	☐
P2242 *4 (05-447)	Oxygen Sensor Pumping Current Circuit / High (for A/F sensor) (Bank 2 Sensor 1)		☐	☐
P2251 *4 (05-447)	Oxygen Sensor Reference Ground Circuit / Open (for A/F sensor) (Bank 1 Sensor 1)		☐	☐
P2252 *4 (05-447)	Oxygen Sensor Reference Ground Circuit Low (for A/F sensor) (Bank 1 Sensor 1)		☐	☐
P2253 *4 (05-447)	Oxygen Sensor Reference Ground Circuit High (for A/F sensor) (Bank 1 Sensor 1)		☐	☐
P2254 *4 (05-447)	Oxygen Sensor Reference Ground Circuit / Open (for A/F sensor) (Bank 1 Sensor 1)		☐	☐

P2255 *4 (05-447)	Oxygen Sensor Reference Ground Circuit Low (for A/F sensor) (Bank 1 Sensor 1)	• Open or short in A/F sensor (bank 1, 2 sensor 1) circuit • A/F sensor (bank 1, 2 sensor 1) • A/F sensor heater	○	○
P2256 *4 (05-447)	Oxygen Sensor Reference Ground Circuit High (for A/F sensor) (Bank 1 Sensor 1)	• A/F sensor heater relay • A/F sensor heater and relay circuit • ECM	○	○
P2716 (05-724)	Pressure Control Solenoid "D" Electrical	• Electronic controlled automatic transmission (ECT)	○	○
P2A00 (05-451)	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	• Open or short in A/F sensor (bank 1, 2 sensor 1) circuit • A/F sensor (bank 1, 2 sensor 1) • A/F sensor heater • A/F sensor heater relay	○	○
P2A03 (05-451)	A/F Sensor Circuit Slow Response (Bank 2 Sensor 1)	• A/F sensor heater and relay circuit • Air induction system • Fuel pressure • Injector • ECM	○	○
B2796 (05-1310)	No Communication in Immobilizer System	• Immobilizer system	—	○
B2797 (05-1313)	Communication Malfunction No.1	• Immobilizer system	—	○
B2798 (05-1313)	Communication Malfunction No.2	• Immobilizer system	—	○

*1: MIL lights up

*2: MIL light up or blinking

*3: Replace ECM

*4: This DTC is recorded when A/F sensor is in a malfunction, although the detection item is oxygen sensor.