

DIAGNOSTIC TROUBLE CODE CHART

HINT:

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

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

DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P0010/39 (05-36)	Camshaft Position "A" Actuator Circuit (Bank 1)	<ul style="list-style-type: none"> • Open or short in oil control valve circuit • Oil control valve • ECM 	○	○
P0011/59 (05-41)	Camshaft Position "A" –Timing Over–Advanced or System Performance (Bank 1)	<ul style="list-style-type: none"> • Valve timing • Oil control valve • Camshaft timing gear assembly • ECM 	○	○
P0012/59 (05-41)	Camshaft Position "A" –Timing Over– Retarded (Bank 1)	<ul style="list-style-type: none"> • Valve timing • Oil control valve • Camshaft timing gear assembly • ECM 	○	○
P0016/18 (05-48)	Crankshaft Position – Camshaft Position Correlation (Bank 1 Sensor A)	<ul style="list-style-type: none"> • Mechanical system (Jumped tooth of timing chain, chain stretched) • ECM 	○	○
P0031/21 *3 (05-49)	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heater circuit of A/F sensor • A/F sensor heater • EFI relay • ECM 	○	○
P0032/21 *3 (05-49)	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Short in heater circuit of A/F sensor • A/F sensor heater • EFI relay • ECM 	○	○
P0037 *4 (05-52)	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	<ul style="list-style-type: none"> • Open or short in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI relay • ECM 	○	○
P0038 *4 (05-52)	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	<ul style="list-style-type: none"> • Short in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI relay • ECM 	○	○
P0100/31 (05-55)	Mass or Volume Air Flow Circuit	<ul style="list-style-type: none"> • Open or short in mass air flow meter circuit • Mass air flow meter • ECM 	○	○
P0102/31 (05-55)	Mass or Volume Air Flow Circuit Low Input	<ul style="list-style-type: none"> • Open in mass air flow meter circuit • Short in ground circuit • Mass air flow meter • ECM 	○	○
P0103/31 (05-55)	Mass or Volume Air Flow Circuit High Input	<ul style="list-style-type: none"> • Short in mass air flow meter circuit (+B circuit) • Mass air flow meter • ECM 	○	○
P0110/24 (05-64)	Intake Air Temperature Circuit	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built into mass air flow meter) • ECM 	○	○
P0112/24 (05-64)	Intake Air Temperature Circuit Low Input	<ul style="list-style-type: none"> • Short in intake air temperature sensor circuit • Intake air temperature sensor (built into mass air flow meter) • ECM 	○	○
P0113/24 (05-64)	Intake Air Temperature Circuit High Input	<ul style="list-style-type: none"> • Open in intake air temperature sensor circuit • Intake air temperature sensor (built into mass air flow meter) • ECM 	○	○

DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P0115/22 (05-69)	Engine Coolant Temperature Circuit	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • ECM 	○	○
P0116 *5 (05-74)	Engine Coolant Temperature Circuit Range/Performance Problem	<ul style="list-style-type: none"> • Engine coolant temperature sensor 	○	○
P0117/22 (05-69)	Engine Coolant Temperature Circuit Low Input	<ul style="list-style-type: none"> • Short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • ECM 	○	○
P0118/22 (05-69)	Engine Coolant Temperature Circuit High Input	<ul style="list-style-type: none"> • Open in engine coolant temperature sensor circuit • Engine coolant temperature sensor • ECM 	○	○
P0120/41 (05-75)	Throttle/Pedal Position Sensor/Switch "A" Circuit	<ul style="list-style-type: none"> • Throttle position sensor (built into throttle body) • ECM 	○	○
P0122/41 (05-75)	Throttle/Pedal Position Sensor/Switch "A" Circuit Low Input	<ul style="list-style-type: none"> • Throttle position sensor (built into throttle body) • Short in VTA1 circuit • Open in VC circuit • ECM 	○	○
P0123/41 (05-75)	Throttle/Pedal Position Sensor/Switch "A" Circuit High Input	<ul style="list-style-type: none"> • Throttle position sensor (built into throttle body) • Open in VTA1 circuit • Open in E2 circuit • VC and VTA1 circuits are short-circuited • ECM 	○	○
P0136/27 (05-83)	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor (sensor 2) circuit • Heated oxygen sensor (sensor 2) • Heated oxygen sensor heater (sensor 2) • A/F sensor (sensor 1) • EFI relay 	○	○
P0141/27 *6 (05-92)	Oxygen Sensor Heater Circuit (Bank 1 Sensor 2)	<ul style="list-style-type: none"> • Open or short in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI relay • ECM 	—	○
P0171/25 (05-95)	System too Lean (Bank 1)	<ul style="list-style-type: none"> • 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 (sensor 1) circuit • A/F sensor (sensor 1) • A/F sensor heater (sensor 1) • A/F sensor heater relay • PCV valve and hose • PCV hose connection 	○	○
P0172/26 (05-95)	System too Rich (Bank 1)	<ul style="list-style-type: none"> • Injector leakage or 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 (sensor 1) circuit • A/F sensor (sensor 1) • A/F sensor heater • A/F sensor heater relay 	○	○
P0220/41 (05-75)	Throttle/Pedal Position Sensor/Switch "B" Circuit	<ul style="list-style-type: none"> • Throttle position sensor (built into throttle body) • ECM 	○	○

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DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P0222/41 (05-75)	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low Input	<ul style="list-style-type: none"> • Throttle position sensor (built into throttle body) • Short in VTA2 circuit • Open in VC circuit • ECM 	○	○
P0223/41 (05-75)	Throttle/Pedal Position Sensor/ Switch "B" Circuit High Input	<ul style="list-style-type: none"> • Throttle position sensor (built into throttle body) • Open in VTA2 circuit • Open in E2 circuit • VC and VTA2 circuits are short-circuited • ECM 	○	○
P0300 *5 (05-107)	Random/Multiple Cylinder Misfire Detected	<ul style="list-style-type: none"> • Open or short in engine wire harness • 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 *5 (05-107)	Cylinder 1 Misfire Detected	• Same as DTC P0300	○*2	○
P0302 *5 (05-107)	Cylinder 2 Misfire Detected	• Same as DTC P0300	○*2	○
P0303 *5 (05-107)	Cylinder 3 Misfire Detected	• Same as DTC P0300	○*2	○
P0304 *5 (05-107)	Cylinder 4 Misfire Detected	• Same as DTC P0300	○*2	○
P0325/52 (05-121)	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • Open or short in knock sensor circuit • Knock sensor (under-torqued or looseness) • ECM 	○	○
P0327/52 (05-121)	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • Short in knock sensor circuit • Knock sensor • ECM 	○	○
P0328/52 (05-121)	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • Open in knock sensor circuit • Knock sensor • ECM 	○	○
P0335/12, 13 (05-125)	Crankshaft Position Sensor "A" Circuit	<ul style="list-style-type: none"> • Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Sensor plate (crankshaft) • ECM 	○	○
P0339/13 (05-125)	Crankshaft Position Sensor "A" Circuit Intermittent	• Same as DTC P0335/12, 13	—	○
P0340/12 (05-129)	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • Open or short in camshaft position sensor circuit • Camshaft position sensor • Camshaft timing pulley • Jumped tooth of timing chain • ECM 	○	○
P0341/12 (05-129)	Camshaft Position Sensor "A" Circuit Range/Performance (Bank 1 or Single Sensor)	• Same as DTC P0340/12	○	○

DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P0351/14 *4 (05-132)	Ignition Coil "A" Primary/Secondary Circuit	<ul style="list-style-type: none"> Ignition system Open or short in IGF or IGT1 to 4 circuits from ignition coil with igniter to ECM No. 1 to No. 4 ignition coil with igniter ECM 	○	○
P0352/15 *4 (05-132)	Ignition Coil "B" Primary/Secondary Circuit	<ul style="list-style-type: none"> Same as DTC P0351/14 	○	○
P0353/14 *4 (05-132)	Ignition Coil "C" Primary/Secondary Circuit	<ul style="list-style-type: none"> Same as DTC P0351/14 	○	○
P0354/15 *4 (05-132)	Ignition Coil "D" Primary/Secondary Circuit	<ul style="list-style-type: none"> Same as DTC P0351/14 	○	○
P0420 *5 (05-139)	Catalyst System Efficiency Below Threshold (Bank 1)	<ul style="list-style-type: none"> Gas leakage in exhaust system A/F sensor (sensor 1) Heated oxygen sensor (sensor 2) Three-way catalytic converter 	○	○
P0443 *5 (05-143)	Evaporative Emission Control System Purge Control Valve Circuit	<ul style="list-style-type: none"> Open or short in EVAP VSV circuit EVAP VSV ECM 	○	○
P0500/42 (05-146)	Vehicle Speed Sensor "A"	<ul style="list-style-type: none"> Open or short in speed sensor circuit Speed sensor Combination meter ECM Skid control ECU 	○	○
P0504/51 (05-149)	Brake Switch "A"/"B" Correlation	<ul style="list-style-type: none"> Short in stop lamp switch signal circuit Stop lamp fuse Stop lamp switch ECM 	—	○
P0505 *5 (05-156)	Idle Air Control System	<ul style="list-style-type: none"> Electronic throttle control system Air induction system PCV hose connection 	○	○
P0560 *5 (05-158)	System Voltage	<ul style="list-style-type: none"> Open in back-up power source circuit ECM 	○	○
P0604/89 (05-161)	Internal Control Module Random Access Memory (RAM) Error	<ul style="list-style-type: none"> ECM 	○	○
P0606/89 (05-161)	ECM/PCM Processor	<ul style="list-style-type: none"> ECM 	—	○
P0607/89 (05-161)	Control Module Performance	<ul style="list-style-type: none"> ECM 	—	○
P0617 *5 (05-162)	Starter Relay Circuit High	<ul style="list-style-type: none"> Short in park/neutral position switch circuit (A/T) Short in STA circuit Park/neutral position switch (A/T) ECM 	○	○
P0657/89 (05-161)	Actuator Supply Voltage Circuit / Open	<ul style="list-style-type: none"> ECM 	○	○
P0705 *5 (05-786)	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	<ul style="list-style-type: none"> Electronic controlled automatic transmission (ECT) 	○	○
P0710/38 (05-792)	Transmission Fluid Temperature Sensor "A" Circuit	<ul style="list-style-type: none"> Electronic controlled automatic transmission (ECT) 	○	○
P0711 (05-795)	Transmission Fluid Temperature Sensor "A" Performance	<ul style="list-style-type: none"> Electronic controlled automatic transmission (ECT) 	○	○
P0712/38 (05-792)	Transmission Fluid Temperature Sensor "A" Circuit Low Input	<ul style="list-style-type: none"> Electronic controlled automatic transmission (ECT) 	○	○
P0713/38 (05-792)	Transmission Fluid Temperature Sensor "A" Circuit High Input	<ul style="list-style-type: none"> Electronic controlled automatic transmission (ECT) 	○	○
P0717/37 (05-798)	Input/Turbine Speed Sensor "A" Circuit No Signal	<ul style="list-style-type: none"> Electronic controlled automatic transmission (ECT) 	○	○

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DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P0724 *5 (05-801)	Brake Switch "B" Circuit High	•Electronic controlled automatic transmission (ECT)	○	○
P0741/64 (05-803)	Torque Converter Clutch Solenoid Performance (Shift Solenoid Valve DSL)	•Electronic controlled automatic transmission (ECT)	○	○
P0746/62 (05-807)	Pressure Control Solenoid "A" Performance (Shift Solenoid Valve SL1)	•Electronic controlled automatic transmission (ECT)	○	○
P0748/62 (05-810)	Pressure Control Solenoid "A" Electrical (Shift Solenoid Valve SL1)	•Electronic controlled automatic transmission (ECT)	○	○
P0766 (05-813)	Shift Solenoid "D" Performance (Shift Solenoid Valve S4)	•Electronic controlled automatic transmission (ECT)	○	○
P0776/63 (05-816)	Pressure Control Solenoid "B" Performance (Shift Solenoid Valve SL2)	•Electronic controlled automatic transmission (ECT)	○	○
P0778/63 (05-819)	Pressure Control Solenoid "B" Electrical (Shift Solenoid Valve SL2)	•Electronic controlled automatic transmission (ECT)	○	○
P0793/67 (05-822)	Intermediate Shift Speed Sensor "A" Circuit No Signal	•Electronic controlled automatic transmission (ECT)	○	○
P0850 (05-786)	Park/Neutral Switch Input Circuit	•Electronic controlled automatic transmission (ECT)	○	○
P0982/65 (05-825)	Shift Solenoid "D" Performance Control Circuit Low (Shift Solenoid Valve S4)	•Electronic controlled automatic transmission (ECT)	○	○
P0983/65 (05-825)	Shift Solenoid "D" Performance Control Circuit High (Shift Solenoid Valve S4)	•Electronic controlled automatic transmission (ECT)	○	○
P2102/41 (05-186)	Throttle Actuator Control Motor Circuit Low	•Open in throttle control motor circuit •Throttle control motor •ECM	○	○
P2103/41 (05-186)	Throttle Actuator Control Motor Circuit High	•Short in throttle control motor circuit •Throttle control motor •Throttle valve •Throttle body assembly •ECM	○	○
P2111/41 (05-189)	Throttle Actuator Control System – Stuck Open	•Throttle control motor •Throttle body assembly •Throttle valve	○	○
P2112/41 (05-189)	Throttle Actuator Control System – Stuck Closed	•Same as DTC P2111/41	○	○
P2118/89 (05-171)	Throttle Actuator Control Motor Current Range/Performance	•Open in ETCS power source circuit •ETCS fuse •ECM	○	○
P2119/89 (05-171)	Throttle Actuator Control Throttle Body Range/Performance	•Electric throttle control system •ECM	○	○
P2120/19 (05-176)	Throttle/Pedal Position Sensor/Switch "D" Circuit	•Accelerator pedal position sensor •ECM	○	○
P2121/19 (05-188)	Throttle/Pedal Position Sensor/Switch "D" Circuit Range/Performance	•Accelerator pedal position sensor circuit •Accelerator pedal position sensor •ECM	○	○
P2122/19 (05-176)	Throttle/Pedal Position Sensor/Switch "D" Circuit Low Input	•Accelerator pedal position sensor •Open in VCP1 circuit •Open or ground short in VPA1 circuit •ECM	○	○

DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P2123/19 (05-176)	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input	<ul style="list-style-type: none"> • Accelerator pedal position sensor • Open in EPA circuit • ECM 	○	○
P2125/19 (05-176)	Throttle/Pedal Position Sensor/ Switch "E" Circuit	<ul style="list-style-type: none"> • Accelerator pedal position sensor • ECM 	○	○
P2127/19 (05-176)	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input	<ul style="list-style-type: none"> • Accelerator pedal position sensor • Open in VCP2 circuit • Open or ground short in VPA2 circuit • ECM 	○	○
P2128/19 (05-176)	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input	<ul style="list-style-type: none"> • Accelerator pedal position sensor • Open in EPA2 circuit • ECM 	○	○
P2135/41 (05-75)	Throttle/Pedal Position Sensor/ Switch "A"/"B" Voltage Correlation	<ul style="list-style-type: none"> • VTA1 and VTA2 circuits are short-circuited • Throttle position sensor (built into throttle body) • ECM 	○	○
P2138/19 (05-176)	Throttle/Pedal Position Sensor/ Switch "D"/"E" Voltage Correlation	<ul style="list-style-type: none"> • VPA and VPA2 circuits are short-circuited • Accelerator pedal position sensor • ECM 	○	○
P2195 *3, *5 (05-192)	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in A/F sensor (sensor 1) circuit • A/F sensor (sensor 1) • A/F sensor (sensor 1) heater • EFI relay • A/F sensor heater and relay circuit • Air induction system • Fuel pressure • Injector • ECM 	○	○
P2196 *3, *5 (05-192)	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Same as DTC P2195 	○	○
P2238/21 *3 (05-204)	Oxygen Sensor Pumping Current Circuit Low (for A/F sensor) (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in A/F sensor (sensor 1) circuit • A/F sensor (sensor 1) • A/F sensor (sensor 1) heater • EFI relay • A/F sensor heater and relay circuit • ECM 	○	○
P2239/21 *3 (05-204)	Oxygen Sensor Pumping Current Circuit High (for A/F sensor) (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Same as DTC P2238/21 	○	○
P2252/21 *3 (05-204)	Oxygen Sensor Reference Ground Circuit Low (for A/F sensor) (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Same as DTC P2238/21 	○	○
P2253/21 *3 (05-204)	Oxygen Sensor Reference Ground Circuit High (for A/F sensor) (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Same as DTC P2238/21 	○	○
P2716/77 (05-828)	Pressure Control Solenoid "D" Electrical (Shift Solenoid Valve S4)	<ul style="list-style-type: none"> • Electronic controlled automatic transmission (ECT) 	○	○
P2769/64 (05-831)	DSL Solenoid Circuit Low	<ul style="list-style-type: none"> • Electronic controlled automatic transmission (ECT) 	○	○
P2770/64 (05-831)	DSL Solenoid Circuit High	<ul style="list-style-type: none"> • Electronic controlled automatic transmission (ECT) 	○	○

DIAGNOSTICS – SFI SYSTEM (1AZ-FE)

DTC No. (See Page)	Detection Item	Trouble Area	*1 MIL	Memory
P2A00 *5 (05-209)	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in A/F sensor (sensor 1) circuit • A/F sensor (sensor 1) • A/F sensor (sensor 1) heater • EFI relay • A/F sensor heater and relay circuit • Air induction system • Fuel pressure • Injector • ECM 	○	○
B2799	Engine Immobilizer System Malfunction	<ul style="list-style-type: none"> • Immobilizer system 	—	○

*1: MIL (Malfunction indicator lamp) illuminates.

*2: MIL illuminates or flashes continuously.

*3: This DTC is related to the A/F sensor, although the detection item is described as the oxygen sensor.

*4: This DTC indicates a malfunction related to the primary circuit.

*5: European spec.

*6: Non-European spec.