051ZH-14

DIAGNOSTIC TROUBLE CODE CHART

HINT:

Parameters listed in the chart may be different than your readings depending on the type of instrument used and other factors.

During the DTC check, refer to the table below if a malfunction code is displayed. For details about each code, refer to the page number in the DTC chart's left column.

DTC No. (See Page)	Detection Item	Trouble Area	MIL *1	Memory
P0010 (05–59)	Camshaft Position "A" Actuator Circuit (Bank 1)	Open or short in OCV circuit OCV ECM	0	0
P0011 (05–65)	Camshaft Position "A" –Timing Over– Advanced or System Per- formance (Bank 1)	Valve timing OCV VVT controller assembly ECM	0	0
P0012 (05–65)	Camshaft Position "A" –Timing Over– Retarded (Bank 1)	Same as DTC No. P0011	0	0
P0016 (05–73)	Crankshaft Position – Camshaft Position Correlation (Bank 1 Sensor 1)	Mechanical system (jumped tooth of timing chain, chain stretched) ECM	0	0
P0031*4 (05–75)	Oxygen (A/F) Sensor Heater Circuit Low (Bank 1 Sensor 1)	Open or short in heater circuit of A/F sensor A/F sensor heater EFI relay EFI fuse ECM	0	0
P0032*4 (05–75)	Oxygen (A/F) Sensor Heater Circuit High (Bank 1 Sensor 1)	Short in heater circuit of A/F sensor A/F sensor heater ECM	0	0
P0037 (05–398)	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	Open or short in heater circuit of heated oxygen sensor Heated oxygen sensor heater EFI relay EFI fuse ECM	0	0
P0038 (05–398)	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	Short in heater circuit of heated oxygen sensor Heated oxygen sensor heater ECM	0	0
P0043 (05–398)	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 3)	Same as DTC No. P0037	0	0
P0044 (05–398)	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 3)	Same as DTC No. P0038	0	0
P0100 (05–84)	Mass or volume Air Flow Circuit	Open or short in mass air flow meter circuit Mass air flow meter ECM	0	0
P0101 (05–91)	Mass or volume Air Flow Circuit Range/Performance Problem	Mass air flow meter	0	0
P0102 (05–84)	Mass or volume Air Flow Circuit Low Input	Open or short in mass air flow meter circuit Mass air flow meter ECM	0	0
P0103 (05–84)	Mass or volume Air Flow Circuit High Input	Open in mass air flow meter circuit (E2G circuit) Short in mass air flow meter circuit (to +B circuit) Mass air flow meter ECM	0	0
P0110 (05–93)	Intake Air Temperature Circuit	Open or short in intake air temperature sensor circuit Intake air temperature sensor (built in mass air flow meter) ECM	0	0
P0112 (05–93)	Intake Air Temperature Circuit Low Input	Same as DTC No. P0110	0	0

P0113 (05–93)	Intake Air Temperature Circuit High Input	Same as DTC No. P0110	0	0
P0115 (05–98)	Engine Coolant Temperature Circuit	Open or short in engine coolant temperature sensor circuit Engine coolant temperature sensor ECM	0	0
P0116 (05–103)	Engine Coolant Temperature Circuit Range/Performance Problem	Cooling system Engine coolant temperature sensor	0	0
P0117 (05–98)	Engine Coolant Temperature Circuit Low Input	Same as DTC No. P0115	0	0
P0118 (05–98)	Engine Coolant Temperature Circuit High Input	Same as DTC No. P0115	0	0
P0120 (05–105)	Throttle/Pedal Position Sensor/ Switch "A" Circuit	Open or short in throttle position sensor circuit Throttle body assy (Throttle position sensor) Wire harness ECM	0	0
P0121 (05–115)	Throttle/Pedal Position Sensor/ Switch "A" Circuit Range/Perfor- mance Problem	Throttle body assy (Throttle position sensor)	0	0
P0122 (05–105)	Throttle/Pedal Position Sensor/ Switch "A" Circuit Low Input	Same as DTC No. P0120	0	0
P0123 (05–105)	Throttle/Pedal Position Sensor/ Switch "A" Circuit High Input	Open in throttle position sensor circuit (E2 circuit) Short in throttle position sensor circuit (to +B circuit) Throttle body assy (Throttle position sensor) ECM	0	0
P0125 (05–117)	Insufficient Coolant Temperature for Closed Loop Fuel Control	Same as DTC No. P0116	0	0
P0128 (05–120)	Coolant Thermostat (Coolant Temperature Below Thermostat regulating temperature)	Thermostat Cooling system Engine coolant temperature sensor ECM	0	0
P0136 (05–403)	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	Open or short in heated oxygen sensor 2 (bank 1 sensor 2) circuit Heated oxygen sensor 2 (bank 1 sensor 2) Heated oxygen sensor 2 heater (bank 1 sensor 2) EFI relay	0	0
P0137 (05–403)	Oxygen Sensor Circuit Low Voltage (Bank 1 Sensor 2)	Open in heated oxygen sensor 2 (bank 1 sensor 2) circuit Heated oxygen sensor 2 (bank 1 sensor 2) Heated oxygen sensor 2 heater (bank 1 sensor 2) EFI relay	0	0
P0138 (05–403)	Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 2)	Short in heated oxygen sensor 2 (bank 1 sensor 2) circuit Heated oxygen sensor 2 (bank 1 sensor 2) Heated oxygen sensor 2 heater (bank 1 sensor 2) EFI relay	0	0
P0142 (05–418)	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 3)	Heated oxygen sensor 3 (bank 1 sensor 3)	0	0
P0143 (05–421)	Oxygen Sensor Circuit Low Voltage (Bank 1 Sensor 3)	Open or short in heated oxygen sensor 3 (bank 1 sensor 3) circuit Heated oxygen sensor 3 (bank 1 sensor 3) Heated oxygen sensor 3 heater (bank 1 sensor 3) EFI relay	0	0
P0144 (05–421)	Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 3)	Short in heated oxygen sensor 3 (bank 1 sensor 3) circuit Heated oxygen sensor 3 (bank 1 sensor 3)	0	0

DIAGNOSTICS – SFI SYSTEM (2AZ–FE(PZEV))

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P0171 (05–138)	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 A/F sensor heater EFI relay PCV hose connection PCV hose 	0	0
P0172 (05–138)	System too Rich (Bank 1)	 Injector leakage, 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 EFI relay A/F sensor heater 	0	0
P0220 (05–105)	Throttle/Pedal Position Sensor/ Switch "B" Circuit	• Same as DTC No. P0120	0	0
P0222 (05–105)	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low Input	• Same as DTC No. P0120	0	0
P0223 (05–105)	Throttle/Pedal Position Sensor/ Switch "B" Circuit High Input	• Same as DTC No. P0120	0	0
P0300 (05–152)	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 ECM	○*2	0
P0301 (05–152)	Cylinder 1 Misfire Detected	Same as DTC No. P0300	○*2	0
P0302 (05–152)	Cylinder 2 Misfire Detected	Same as DTC No. P0300	○*²2	0
P0303 (05–152)	Cylinder 3 Misfire Detected	Same as DTC No. P0300	○*2	0
P0304 (05–152)	Cylinder 4 Misfire Detected	Same as DTC No. P0300	○*2	0
P0327 (05–166)	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	Short in knock sensor circuit Knock sensor ECM	0	0
P0328 (05–166)	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	• Same as DTC No. P0327	0	0
P0335 (05–171)	Crankshaft Position Sensor "A" Circuit	Open or short in crankshaft position sensor circuit Crankshaft position sensor Crankshaft position sensor plate No. 1 ECM	0	0
P0339 (05–171)	Crankshaft Position Sensor "A" Circuit Intermittent	Same as DTC No. P0335		0

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P0340 (05–176)	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	Open or short in camshaft position sensor circuit Camshaft position sensor Camshaft timing gear Timing chain has jumped a tooth ECM	0	0
P0341 (05–176)	Camshaft Position Sensor "A" Circuit Range/Performance (Bank 1 or Single Sensor)	Same as DTC No. P0340	0	0
P0351* ³ (05–180)	Ignition Coil "A" Primary/Secondary Circuit	Ignition system Open or short in IGF or IGT circuit from ignition coil assy to ECM (ignition coil circuits 1 through 4) Ignition coil assy (ignition coils 1 through 4) ECM	0	0
P0352* ³ (05–180)	Ignition Coil "B" Primary/Sec- ondary Circuit	Same as DTC No. P0351	0	0
P0353* ³ (05–180)	Ignition Coil "C" Primary/Sec- ondary Circuit	Same as DTC No. P0351	0	0
P0354* ³ (05–180)	Ignition Coil "D" Primary/Sec- ondary Circuit	Same as DTC No. P0351	0	0
P0420 (05–426)	Catalyst System Efficiency Below Threshold (Bank 1)	Exhaust manifold with front catalyst and exhaust front pipe with rear catalyst both Gas leakage in exhaust system A/F sensor Heated oxygen sensor 2 (bank 1 sensor 2)	0	0
P0441 (05–433)	Evaporative Emission Control System Incorrect Purge Flow	Vacuum hose has cracks, holes, or is blocked, damaged or disconnected Fuel tank cap incorrectly installed Fuel tank cap has cracks, or is damaged. Open or short in vapor pressure sensor circuit Vapor pressure sensor Open or short in EVAP VSV circuit EVAP VSV Open or short in CCV circuit CCV Trap canister assy Fuel tank has cracks, holes, or is damaged Charcoal canister has cracks, holes, or is damaged Fuel tank over fill check valve has cracks, or is damaged ECM	0	0
P0442 (05–433)	Evaporative Emission Control System Leak detected (small leak)	• Same as DTC No. P0441	0	0
P0446 (05–433)	Evaporative Emission Control System Vent Control Circuit	Same as DTC No. P0441	0	0
P0451 (05–211)	Evaporative Emission Control System Pressure Sensor/Switch Range/Performance	Open or short in vapor pressure sensor circuit Vapor pressure sensor ECM	0	0
P0452 (05–211)	Evaporative Emission Control System Pressure Sensor/Switch Low Input	• Same as DTC No. P0451	0	0
P0453 (05–211)	Evaporative Emission Control System Pressure Sensor/Switch High Input	• Same as DTC No. P0451	0	0
P0456 (05–195)	Evaporative Emission Control System Leak Detected (very small leak)	• Same as DTC No. P0441	0	0

DIAGNOSTICS – SFI SYSTEM (2AZ–FE(PZEV))

P0500 (05–216)	Vehicle Speed Sensor "A"	Combination meter Open or short in speed sensor circuit Vehicle speed sensor ECM Skid control computer assy	0	0
P0504 (05–219)	Brake Switch Correlation	Short in stop light switch signal circuit Stop light switch ECM	_	0
P0505 (05–225)	Idle Control System	Throttle body assy Air induction system PCV hose connection PCV hose ECM	0	0
P0560 (05–228)	System Voltage	Open in back-up power source circuit ECM	0	0
P0604 (05–232)	Internal Control Module Random Access Memory (RAM) Error	•ECM	0	0
P0606 (05–232)	ECM/PCM Processor	•ECM	0	0
P0607 (05–232)	Control Module Performance	•ECM	0	0
P0617 (05–234)	Starter Relay Circuit High	Short in park/neutral position switch Park/neutral position switch Ignition switch ECM	0	0
P0630 (05–240)	VIN not Programmed or Mis- match – ECM/PCM	• ECM	0	0
P0657 (05–232)	Actuator Supply Voltage Circuit / Open	•ECM	0	0
P0705 (05–1154)	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	Short in park/neutral position switch circuit Park/neutral position switch ECM	0	0
P0710 (05–1159)	Transmission Fluid Temperature Sensor "A" circuit	Electronic controlled automatic transmission (ECT)	0	0
P0711 (05–1164)	Transmission Fluid Temperature Sensor "A" Performance	Electronic controlled automatic transmission (ECT)	0	0
P0712 (05–1159)	Transmission Fluid Temperature Sensor "A" Circuit Low Input	Electronic controlled automatic transmission (ECT)	0	0
P0713 (05–1159)	Transmission Fluid Temperature Sensor "A" Circuit High Input	Electronic controlled automatic transmission (ECT)	0	0
P0717 (05–1168)	Input/Turbine Speed Sensor "A" Circuit No Signal	Electronic controlled automatic transmission (ECT)	0	0
P0724 (05–1172)	Brake Switch "B" Circuit High	Short in stop light switch signal circuit Stop light switch ECM	0	0
P0741 (05–1175)	Torque Converter Clutch Circuit Performance or Stuck Off	Electronic controlled automatic transmission (ECT)	0	0
P0746 (05–1180)	Pressure Control Solenoid "A" Performance (Shift Solenoid Valve SL1)	Electronic controlled automatic transmission (ECT)	0	0
P0748 (05–1184)	Pressure Control Solenoid "A" Electrical (Shift Solenoid Valve SL1)	Electronic controlled automatic transmission (ECT)	0	0
P0766 (05–1187)	Shift Solenoid "D" Performance (Shift Solenoid Valve S4)	Electronic controlled automatic transmission (ECT)	0	0
P0771 (05–1192)	Shift Solenoid "E" Performance (Shift Solenoid Valve SR)	Electronic controlled automatic transmission (ECT)	0	0
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P0776 (05–1197)	Pressure Control Solenoid "B" Performance (Shift Solenoid Valve SL2)	Electronic controlled automatic transmission (ECT)	0	0
P0778 (05–1202)	Pressure Control Solenoid "B" Electrical (Shift Solenoid Valve SL2)	Electronic controlled automatic transmission (ECT)	0	0
P0793 (05–1205)	Intermediate Shaft Speed Sensor "A" Circuit No Signal	Electronic controlled automatic transmission (ECT)	0	0
P0796 (05–1209)	Pressure Control Solenoid "C" Performance (Shift Solenoid Valve SL3)	Electronic controlled automatic transmission (ECT)	0	0
P0798 (05–1214)	Pressure Control Solenoid "C" Electrical (Shift Solenoid Valve SL3)	Electronic controlled automatic transmission (ECT)	0	0
P0982 (05–1217)	Shift Solenoid "D" Control Low	Electronic controlled automatic transmission (ECT)	0	0
P0983 (05–1217)	Shift Solenoid "D" Control High	Electronic controlled automatic transmission (ECT)	0	0
P0985 (05–1220)	Pressure Control Solenoid "E" Performance (Shift Solenoid Valve SR)	Electronic controlled automatic transmission (ECT)	0	0
P0986 (05–1220)	Pressure Control Solenoid "E" Electrical (Shift Solenoid Valve SR)	Electronic controlled automatic transmission (ECT)	0	0
P2004 (05–463)	Intake Manifold Runner Control Stuck Open (Bank 1)	IMRV motor circuit IMRV motor IMRV position sensor IMRV IMRV Connector connection ECM	0	0
P2006 (05–463)	Intake Manifold Runner Control Stuck Closed (Bank 1)	Same as DTC No. P2004	0	0
P2009 (05–473)	Intake Manifold Runner Control Circuit Low (Bank 1)	Open in IMRV motor circuit IMRV motor ECM	0	0
P2010 (05–473)	Intake Manifold Runner Control Circuit High (Bank 1)	Short in IMRV motor circuit IMRV motor ECM	0	0
P2014 (05–477)	Intake Manifold Runner Position Sensor/Switch Circuit (Bank 1)	Open or short in IMRV position sensor circuit IMRV position sensor ECM	0	0
P2016 (05–477)	Intake Manifold Runner Position Sensor/Switch Circuit Low (Bank 1)	• Same as DTC No. P2004	0	0
P2017 (05–477)	Intake Manifold Runner Position Sensor/Switch Circuit High (Bank 1)	• Same as DTC No. P2004	0	0
P2102 (05–242)	Throttle Actuator Control Motor Circuit Low	Open or short in throttle control motor circuit Throttle body assy (Throttle motor) ECM	0	0
P2103 (05–242)	Throttle Actuator Control Motor Circuit High	Same as DTC No. P2102	0	0
P2111 (05–246)	Throttle Actuator Control System – Stuck Open	Throttle control motor circuit Throttle control motor Throttle body Throttle valve	0	0
P2112 (05–246)	Throttle Actuator Control System – Stuck Closed	Same as DTC No. P2111	0	0

DIAGNOSTICS – SFI SYSTEM (2AZ–FE(PZEV))

P2118 (05–249)	Actuator Control Motor Current Range/Performance	Open in ETCS power source circuit ECM	0	0
P2119 (05–254)	Throttle Actuator Control Throttle Body Range/Performance	Electronic throttle control system ECM	0	0
P2120 (05–256)	Throttle/Pedal Position Sensor/ Switch "D" Circuit	Open or short in accelerator pedal position sensor circuit Accelerator pedal position sensor ECM	0	0
P2121 (05–265)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Range/Perfor- mance	Accelerator pedal position sensor ECM	0	0
P2122 (05–256)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input	Same as DTC No. P2120	0	0
P2123 (05–256)	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input	Same as DTC No. P2120	0	0
P2125 (05–256)	Throttle/Pedal Position Sensor/ Switch "E" Circuit	Same as DTC No. P2120	0	0
P2127 (05–256)	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input	Same as DTC No. P2120	0	0
P2128 (05–256)	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input	Same as DTC No. P2120	0	0
P2135 (05–105)	Throttle Pedal Position Sensor/ Switch "A"/"B" Voltage Correla- tion	• Same as DTC No. P0120	0	0
P2138 (05–256)	Throttle Pedal Position Sensor/ Switch "D"/"E" Voltage Correla- tion	• Same as DTC No. P2120	0	0
P2195*4 (05–269)	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 1 Sensor 1)	Open or short in A/F sensor circuit A/F sensor A/F sensor heater EFI relay A/F sensor heater and EFI relay circuit Air induction system Fuel pressure Injector ECM	0	0
P2196*4 (05–269)	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 1 Sensor 1)	Same as DTC No. P2195	0	0
P2237*4 (05–282)	Oxygen Sensor Pumping Current Circuit / Open (for A/F sensor) (Bank 1 Sensor 1)	Open or short in A/F sensor circuit A/F sensor A/F sensor heater FFI relay Open or short in heater circuit of A/F sensor ECM	0	0
P2238*4 (05-282)	Oxygen Sensor Pumping Current Circuit / Low (for A/F sensor) (Bank 1 Sensor 1)	• Same as DTC No. P2237	0	0
P2239*4 (05–282)	Oxygen Sensor Pumping Current Circuit / High (for A/F sensor) (Bank 1 Sensor 1)	• Same as DTC No. P2237	0	0
P2251* ⁴ (05–282)	Oxygen Sensor Reference Ground Circuit / Open (for A/F sensor) (Bank 1 Sensor 1)	Open or short in A/F sensor circuit A/F sensor A/F sensor heater EFI relay Open or short in heater circuit of A/F sensor ECM	0	0
P2252*4 (05-282)	Oxygen Sensor Reference Ground Circuit Low (for A/F sen- sor) (Bank 1 Sensor 1)	• Same as DTC No. P2251	0	0

P2253* ⁴ (05–282)	Oxygen Sensor Reference Ground Circuit High (for A/F sensor) (Bank 1 Sensor 1)	Same as DTC No. P2251	0	0
P2423 (05–484)	Toyota-HCAC-System (Bank 1)	HC adsorb three—way catalyst (inside exhaust front pipe) Gas leakage in exhaust system Heated oxygen sensor 2 (bank 1 sensor 2) Heated oxygen sensor 3 (bank 1 sensor 3)	0	0
P2716 (05–1223)	Pressure Control Solenoid "D" Electrical	Electronic controlled automatic transmission (ECT)	0	0
P2769 (05–1227)	DSL Solenoid Circuit Low	Electronic controlled automatic transmission (ECT)	0	0
P2770 (05–1227)	DSL Solenoid Circuit High	Electronic controlled automatic transmission (ECT)	0	0
P2A00 (05–288)	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	Open or short in A/F sensor circuit A/F sensor A/F sensor heater EFI relay A/F sensor and EFI relay circuit Air induction system Fuel pressure Injector PCV hose connection ECM	0	0
B2799 (05–2131)	Engine Immobilizer System Mal- function	• Immobilizer system	-	0

^{*1:} MIL illuminates

^{*2:} MIL illuminates or flashes continuously

^{*3:} This DTC is indicate a malfunction related to primary circuit.

^{*4:} This DTC is related to A/F sensor, although the caption is oxygen sensor.