

A L L Diagnostic Trouble Codes (DTC): Diagnostic Trouble Code Descriptions**Engine Control System - SFI System****DIAGNOSTIC TROUBLE CODE CHART**

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0010	Camshaft Position "A" Actuator Circuit (Bank 1) [Intake Camshaft Timing Oil Control Valve (Bank 1)]	►Open or short in Oil Control Valve (OCV) circuit for intake camshaft ►OCV (bank 1) ►ECM	◀	◀
P0011	Camshaft Position "A" - Timing Over - Advanced or System Performance (Bank 1) [Camshaft Timing Actuator locked at advance position (Bank 1)]	►Valve timing ►OCV for intake camshaft ►OCV filter ►Intake camshaft timing gear assembly ►ECM	◀	◀
P0012	Camshaft Position "A" - Timing Over- Retarded (Bank 1) [Camshaft Timing Actuator locked at retard position (Bank 1)]	►Same as DTC P0011	◀	◀
P0013	Camshaft Position "B" Actuator Circuit (Bank 1) [Exhaust Camshaft Timing Oil Control Valve (Bank 1)]	►Open or short in Oil Control Valve (OCV) circuit for exhaust camshaft ►OCV for exhaust camshaft ►ECM	◀	◀
P0014	Camshaft Position "B" Advanced or System Performance (Bank 1) [Camshaft Timing Actuator locked at advance position (Bank 1)]	►Valve timing ►OCV for exhaust camshaft ►OCV filter ►Exhaust camshaft timing gear assembly ►ECM	◀	◀
P0015	Camshaft Position "B" - Timing Over- Retarded (Bank1) [Camshaft Timing Actuator locked at retard position (Bank 1)]	►Same as DTC P0014	◀	◀
P0016	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A) [Camshaft position misalignment (Bank 1)]	►Mechanical system (Timing chain has jumped teeth or chain is stretched) ►ECM	◀	◀
P0017	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor 2) [Camshaft position misalignment (Bank 1)]	►Same as DTC P0016	◀	◀
P0018	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor A)	►Same as DTC P0016	◀	◀
	Crankshaft Position - Camshaft Position Correlation (Bank 2)			

P0010 - P0018

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0019	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor 2) [Camshaft position misalignment (Bank 2)]	▶Same as DTC P0016	◀	◀
P0020	Camshaft Position "A" Actuator Circuit (Bank 2) [Camshaft Timing Oil Control Valve (Bank 2)]	▶Open or short in Oil Control Valve (OCV) circuit for intake camshaft ▶OCV (bank 2) ▶ECM	◀	◀
P0021	Camshaft Position "A" - Timing Over - Advanced or System Performance (Bank 2) [Camshaft Timing Actuator locked at advance position (Bank 2)]	▶Same as DTC P0011	◀	◀
P0022	Camshaft Position "A" -Timing Over- Retarded (Bank 2) [Camshaft Timing Actuator locked at retard position (Bank 2)]	▶Same as DTC P0011	◀	◀
P0023	Camshaft Position "B" Actuator Circuit (Bank 2) [Camshaft Timing Oil Control Valve (Bank 2)]	▶Open or short in Oil Control Valve circuit (OCV) for exhaust camshaft ▶OCV for exhaust camshaft ▶ECM	◀	◀
P0024	Camshaft Position "B" Advanced or System Performance (Bank 2) [Camshaft Timing Actuator locked at advance position (Bank 2)]	▶Same as DTC P0014	◀	◀
P0025	Camshaft Position "B" - Timing Over- Retarded (Bank 2) [Camshaft Timing Actuator locked at retard position (Bank 2)]	▶Same as DTC P0014	◀	◀
P0031 *3	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 1 Sensor 1) [Air Fuel Ratio Sensor Heater low input (Bank 1 Sensor 1)]	▶Open in Air-Fuel Ratio (A/F) sensor heater circuit ▶A/F sensor heater (bank 1 sensor 1) ▶A/F sensor heater relay ▶ECM	◀	◀
P0032 *3	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 1 Sensor 1) [Air Fuel Ratio Sensor Heater high input (Bank 1 Sensor 1)]	▶Short in A/F sensor heater circuit ▶A/F sensor heater (bank 1 sensor 1) ▶A/F sensor heater relay ▶ECM	◀	◀
P0037	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2) [Heated Oxygen Sensor Heater low input (Bank 1 Sensor 2)]	▶Open in Heated Oxygen (HO2) sensor heater circuit ▶HO2 sensor heater (bank 1 sensor 2) ▶EFI relay ▶ECM	◀	◀
P0038	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2) [Heated Oxygen Sensor Heater high input (Bank 1 Sensor 2)]	▶Short in HO2 sensor heater circuit ▶HO2 sensor heater (bank 1 sensor 2) ▶EFI relay ▶ECM	◀	◀
P0051 *3	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 2 Sensor 1) [Air Fuel Ratio Sensor Heater low input (Bank 2 Sensor 1)]	▶Open in A/F sensor heater circuit ▶A/F sensor heater (bank 2 sensor 1) ▶A/F sensor heater relay	◀	◀

P0019 - P0051

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0052 *3	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 2 Sensor 1) [Air Fuel Ratio Sensor Heater high input (Bank 2 Sensor 1)]	<ul style="list-style-type: none"> ▶ Short in A/F sensor heater circuit ▶ A/F sensor heater (bank 2 sensor 1) ▶ A/F sensor heater relay ▶ ECM 	◀	◀
P0057	Oxygen Sensor Heater Control Circuit Low (Bank 2 Sensor 2) [Heated Oxygen Sensor Heater low input (Bank 2 Sensor 2)]	<ul style="list-style-type: none"> ▶ Open in HO2 sensor heater circuit ▶ HO2 sensor heater (bank 2 sensor 2) ▶ EFI relay ▶ ECM 	◀	◀
P0058	Oxygen Sensor Heater Control Circuit High (Bank 2 Sensor 2) [Heated Oxygen Sensor Heater high input (Bank 2 Sensor 2)]	<ul style="list-style-type: none"> ▶ Short in HO2 sensor heater circuit ▶ HO2 sensor heater (bank 2 sensor 2) ▶ EFI relay ▶ ECM 	◀	◀
P0100	Mass or volume Air Flow Circuit [Mass Air Flow Meter]	<ul style="list-style-type: none"> ▶ Open or short in Mass Air Flow (MAF) meter circuit ▶ MAF meter ▶ ECM 	◀	◀
P0101	Mass or volume Air Flow Circuit Range/Performance Problem [Mass Air Flow Meter irrationality]	<ul style="list-style-type: none"> ▶ MAF meter 	◀	◀
P0102	Mass or volume Air Flow Circuit Low Input [Mass Air Flow Meter low input]	<ul style="list-style-type: none"> ▶ Open in MAF meter circuit ▶ Short in ground circuit ▶ MAF meter ▶ ECM 	◀	◀
P0103	Mass or volume Air Flow Circuit High Input [Mass Air Flow Meter high input]	<ul style="list-style-type: none"> ▶ Short in MAF meter circuit (+B circuit) ▶ MAF meter ▶ ECM 	◀	◀
P0110	Intake Air Temperature Circuit [Intake Air Temperature Sensor]	<ul style="list-style-type: none"> ▶ Open or short in Intake Air Temperature (IAT) sensor circuit ▶ IAT sensor (built into Mass Air Flow [MAF] meter) ▶ ECM 	◀	◀
P0112	Intake Air Temperature Circuit Low Input [Intake Air Temperature Sensor low input]	<ul style="list-style-type: none"> ▶ Short in IAT sensor circuit ▶ IAT sensor (built into MAF meter) ▶ ECM 	◀	◀
P0113	Intake Air Temperature Circuit High Input [Intake Air Temperature Sensor high input]	<ul style="list-style-type: none"> ▶ Open in IAT sensor circuit ▶ IAT sensor (built into MAF meter) ▶ ECM 	◀	◀
P0115	Engine Coolant Temperature Circuit [Engine Coolant Temperature Sensor]	<ul style="list-style-type: none"> ▶ Open or short in Engine Coolant Temperature (ECT) sensor circuit ▶ ECT sensor ▶ ECM 	◀	◀
P0116	Engine Coolant Temperature Circuit Range/Performance Problem [Engine Coolant Temperature Sensor rationality]	<ul style="list-style-type: none"> ▶ ECT sensor 	◀	◀
P0117	Engine Coolant Temperature Circuit Low Input [Engine Coolant Temperature Sensor low input]	<ul style="list-style-type: none"> ▶ Short in ECT sensor circuit ▶ ECT sensor ▶ ECM 	◀	◀
P0118	Engine Coolant Temperature Circuit High Input [Engine Coolant Temperature Sensor high input]	<ul style="list-style-type: none"> ▶ Open in ECT sensor circuit ▶ ECT sensor ▶ ECM 	◀	◀

P0052 - P0118

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0120	Throttle/Pedal Position Sensor/ Switch "A" Circuit [Throttle Position Sensor (Sensor 1)]	▶Throttle Position (TP) sensor (built into throttle body) ▶ECM	◀	◀
P0121	Throttle/Pedal Position Sensor/ Switch "A" Circuit Range/Performance Problem [Throttle Position Sensor rationality (Sensor 1)]	▶TP sensor (built into throttle body)	◀	◀
P0122	Throttle/Pedal Position Sensor/ Switch "A" Circuit Low Input [Throttle Position Sensor low input (Sensor 1)]	▶TP sensor (built into throttle body) ▶Short in VTA1 circuit ▶Open in VC circuit ▶ECM	◀	◀
P0123	Throttle/Pedal Position Sensor/ Switch "A" Circuit High Input [Throttle Position Sensor high input (Sensor 1)]	▶TP sensor (built into throttle body) ▶Open in VTA1 circuit ▶Open in E2 circuit ▶Short between VC and VTA1 circuits ▶ECM	◀	◀
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	▶Cooling system ▶ECT sensor ▶Thermostat	◀	◀
P0128	Coolant Thermostat (Coolant Temperature Below Thermostat regulating temperature)	▶Thermostat ▶Cooling system ▶ECT sensor ▶ECM	◀	◀
P0136	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	▶Open or short in HO2 sensor (bank 1 sensor 2) circuit ▶HO2 sensor (bank 1 sensor 2) ▶HO2 sensor heater (bank 1 sensor 2) ▶A/F sensor (bank 1 sensor 1) ▶EFI relay ▶Gas leakage from exhaust system	◀	◀
P0137	Oxygen Sensor Circuit Low Voltage (Bank 1 Sensor 2)	▶Open in HO2 sensor (bank 1 sensor 2) circuit ▶HO2 sensor (bank 1 sensor 2) ▶HO2 sensor heater (bank 1 sensor 2) ▶EFI relay ▶Gas leakage from exhaust system	◀	◀
P0138	Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 2)	▶Short in HO2 sensor (bank 1 sensor 2) circuit ▶HO2 sensor (bank 1 sensor 2) ▶ECM internal circuit malfunction	◀	◀
P0156	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)	▶Open or short in HO2 sensor (bank 2 sensor 2) circuit ▶HO2 sensor (bank 2 sensor 2) ▶HO2 sensor heater (bank 2 sensor 2) ▶A/F sensor (bank 2 sensor 1) ▶EFI relay ▶Gas leakage from exhaust system	◀	◀
P0157	Oxygen Sensor Circuit Low Voltage (Bank 2 Sensor 2)	▶Open in HO2 sensor (bank 2 sensor 2) circuit ▶HO2 sensor (bank 2 sensor 2) ▶HO2 sensor heater (bank 2 sensor 2) ▶EFI relay ▶Gas leakage from exhaust system	◀	◀
P0158	Oxygen Sensor Circuit High Voltage (Bank 2 Sensor 2)	▶Short in HO2 sensor (bank 2 sensor 2) circuit ▶HO2 sensor (bank 2 sensor 2)	◀	◀

P0120 - P0158

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0171	System Too Lean (Bank 1)	<ul style="list-style-type: none"> ▶ Air induction system ▶ Injector blockage ▶ MAF meter ▶ ECT sensor ▶ Fuel pressure ▶ Gas leakage from exhaust system ▶ Open or short in A/F sensor (bank 1 sensor 1) circuit ▶ A/F sensor (bank 1 sensor 1) ▶ A/F sensor heater (bank 1 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and A/F sensor heater relay circuits ▶ PCV hose connections ▶ PCV valve and hose ▶ ECM 	◀	◀
P0172	System Too Rich (Bank 1)	<ul style="list-style-type: none"> ▶ Injector leakage or blockage ▶ MAF meter ▶ ECT sensor ▶ Ignition system ▶ Fuel pressure ▶ Gas leakage from exhaust system ▶ Open or short in A/F sensor (bank 1 sensor 1) circuit ▶ A/F sensor (bank 1 sensor 1) ▶ A/F sensor heater (bank 1 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and A/F sensor heater relay circuits ▶ ECM 	◀	◀
P0174	System Too Lean (Bank 2)	<ul style="list-style-type: none"> ▶ Air induction system ▶ Injector blockage ▶ MAF meter ▶ ECT sensor ▶ Fuel pressure ▶ Gas leakage from exhaust system ▶ Open or short in A/F sensor (bank 2 sensor 1) circuit ▶ A/F sensor (bank 2 sensor 1) ▶ A/F sensor heater (bank 2 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and A/F sensor heater relay circuits ▶ PCV hose connections ▶ PCV valve and hose ▶ ECM 	◀	◀
P0175	System Too Rich (Bank 2)	<ul style="list-style-type: none"> ▶ Injector leakage or blockage ▶ MAF meter ▶ ECT sensor ▶ Ignition system ▶ Fuel pressure ▶ Gas leakage from exhaust system ▶ Open or short in A/F sensor (bank 2 sensor 1) circuit ▶ A/F sensor (bank 2 sensor 1) ▶ A/F sensor heater (bank 2 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and A/F sensor heater relay circuits ▶ ECM 	◀	◀
P0220	Throttle/Pedal Position Sensor/ Switch "B" Circuit [Throttle Position Sensor (Sensor 2)]	<ul style="list-style-type: none"> ▶ TP sensor (built into throttle body) ▶ ECM 	◀	◀
P0222	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low Input	<ul style="list-style-type: none"> ▶ TP sensor (built into throttle body) ▶ Short in VTA2 circuit 		
	[Throttle Position Sensor low input (Sensor 2)]	<ul style="list-style-type: none"> ▶ Open in VTA circuit ▶ ECM 	◀	◀

P0171 - P0222

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0223	Throttle/Pedal Position Sensor/ Switch "B" Circuit High Input [Throttle Position Sensor high input (Sensor 2)]	<ul style="list-style-type: none"> ▶ TP sensor (built into throttle body) ▶ Open in VTA2 circuit ▶ Open in E2 circuit ▶ Short between VC and VTA2 circuits ▶ ECM 	◀	◀
P0300	Random/Multiple Cylinder Misfire Detected [Misfire (Multiple cylinder)]	<ul style="list-style-type: none"> ▶ Open or short in engine wire harness ▶ Connector connections ▶ Vacuum hose connection ▶ Ignition system ▶ Injector ▶ Fuel pressure ▶ Mass Air Flow (MAF) meter ▶ Engine Coolant Temperature (ECT) sensor ▶ Cylinder compression ▶ Valve clearance ▶ Valve timing ▶ PCV hose connection ▶ PCV hose ▶ ECM ▶ Air induction system 	-	◀
P0301	Cylinder 1 Misfire Detected [Misfire (Cylinder 1)]	▶ Same as DTC P0300	-	◀
P0302	Cylinder 2 Misfire Detected [Misfire (Cylinder 2)]	▶ Same as DTC P0300	-	◀
P0303	Cylinder 3 Misfire Detected [Misfire (Cylinder 3)]	▶ Same as DTC P0300	-	◀
P0304	Cylinder 4 Misfire Detected [Misfire (Cylinder 4)]	▶ Same as DTC P0300	-	◀
P0305	Cylinder 5 Misfire Detected [Misfire (Cylinder 5)]	▶ Same as DTC P0300	-	◀
P0306	Cylinder 6 Misfire Detected [Misfire (Cylinder 6)]	▶ Same as DTC P0300	-	◀
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor) [Knock Sensor low input (Bank 1)]	<ul style="list-style-type: none"> ▶ Short in knock sensor 1 circuit ▶ Knock sensor 1 ▶ ECM 	◀	◀
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor) [Knock Sensor high input (Bank 1)]	<ul style="list-style-type: none"> ▶ Open in knock sensor 1 circuit ▶ Knock sensor 1 ▶ ECM 	◀	◀
P0332	Knock Sensor 2 Circuit Low Input (Bank 2) [Knock Sensor low input (Bank 2)]	<ul style="list-style-type: none"> ▶ Short in knock sensor 2 circuit ▶ Knock sensor 2 ▶ ECM 	◀	◀
P0333	Knock Sensor 2 Circuit High Input (Bank 2) [Knock Sensor high input (Bank 2)]	<ul style="list-style-type: none"> ▶ Open in knock sensor 2 circuit ▶ Knock sensor 2 ▶ ECM 	◀	◀
P0335	Crankshaft Position Sensor "A" Circuit [Crankshaft Position Sensor]	<ul style="list-style-type: none"> ▶ Open or short in Crankshaft Position Sensor (CKP) circuit ▶ CKP sensor ▶ Sensor plate (CKP sensor plate) ▶ ECM 	◀	◀
P0339	Crankshaft Position Sensor "A" Circuit Intermittent [Crankshaft Position Sensor in-	▶ Same as DTC P0335	-	◀

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0340	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor circuit for intake camshaft ▶ VVT sensor for intake camshaft ▶ Camshaft timing pulley ▶ Jumped teeth of timing chain ▶ ECM 	◀	◀
P0342	Camshaft Position Sensor "A" Circuit Low Input (Bank 1 or Single Sensor)	▶ Same as DTC P0340	◀	◀
P0343	Camshaft Position Sensor "A" Circuit High Input (Bank 1 or Single Sensor)	▶ Same as DTC P0340	◀	◀
P0345	Camshaft Position Sensor "A" Circuit (Bank 2)	▶ Same as DTC P0340	◀	◀
P0347	Camshaft Position Sensor "A" Circuit Low Input (Bank 2)	▶ Same as DTC P0340	◀	◀
P0348	Camshaft Position Sensor "A" Circuit High Input (Bank 2)	▶ Same as DTC P0340	◀	◀
P0351 *4	Ignition Coil "A" Primary/Secondary Circuit [Ignition Coil (Cylinder 1)]	<ul style="list-style-type: none"> ▶ Ignition system ▶ Open or short in IGF1 or IGT circuit (1 to 6) between ignition coil with igniter and ECM ▶ No. 1 to No.6 ignition coils with igniters ▶ ECM 	◀	◀
P0352 *4	Ignition Coil "B" Primary/Secondary Circuit [Ignition Coil (Cylinder 2)]	▶ Same as DTC P0351	◀	◀
P0353 *4	Ignition Coil "C" Primary/Secondary Circuit [Ignition Coil (Cylinder 3)]	▶ Same as DTC P0351	◀	◀
P0354 *4	Ignition Coil "D" Primary/Secondary Circuit [Ignition Coil (Cylinder 4)]	▶ Same as DTC P0351	◀	◀
P0355 *4	Ignition Coil "E" Primary/Secondary Circuit [Ignition Coil (Cylinder 5)]	▶ Same as DTC P0351	◀	◀
P0356 *4	Ignition Coil "F" Primary/Secondary Circuit [Ignition Coil (Cylinder 6)]	▶ Same as DTC P0351	◀	◀
P0365	Camshaft Position Sensor "B" Circuit (Bank 1)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor for exhaust camshaft circuit ▶ VVT sensor for exhaust camshaft ▶ Exhaust camshaft ▶ ECM 	◀	◀
P0367	Camshaft Position Sensor "B" Circuit Low Input (Bank 1)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor for exhaust camshaft circuit ▶ VVT sensor for exhaust camshaft ▶ Exhaust camshaft ▶ Jumped teeth of timing chain ▶ ECM 	◀	◀
P0368	Camshaft Position Sensor "B" Circuit High Input (Bank 1)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor for exhaust camshaft circuit ▶ VVT sensor for exhaust camshaft ▶ Exhaust camshaft ▶ Jumped teeth of timing chain ▶ ECM 	◀	◀
P0390	Camshaft Position Sensor "B" Circuit (Bank 2)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor for exhaust camshaft circuit ▶ VVT sensor for exhaust camshaft ▶ Exhaust camshaft ▶ ECM 	◀	◀

P0340 - P0390

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0392	Camshaft Position Sensor "B" Circuit Low Input (Bank 2)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor for exhaust camshaft circuit ▶ VVT sensor for exhaust camshaft ▶ Exhaust camshaft ▶ Jumped teeth of timing belt ▶ ECM 	◀	◀
P0393	Camshaft Position Sensor "B" Circuit High Input (Bank 2)	<ul style="list-style-type: none"> ▶ Open or short in VVT sensor for exhaust camshaft circuit ▶ VVT sensor for exhaust camshaft ▶ Exhaust camshaft ▶ Jumped teeth of timing belt ▶ ECM 	◀	◀
P0420	Catalyst System Efficiency Be- low Threshold (Bank 1)	<ul style="list-style-type: none"> ▶ Gas leakage from exhaust system ▶ A/F sensor (bank 1 sensor 1) ▶ HO2 sensor (bank 1 sensor 2) ▶ Exhaust manifold (Three-Way Catalytic Converter [TWC]) 	◀	◀
P0430	Catalyst System Efficiency Be- low Threshold (Bank 2)	<ul style="list-style-type: none"> ▶ Gas leakage from exhaust system ▶ A/F sensor (bank 2 sensor 1) ▶ HO2 sensor (bank 2 sensor 2) ▶ Exhaust manifold (Three-Way Catalytic Converter [TWC]) 	◀	◀
P043E	Evaporative Emission System Reference Orifice Clog Up	<ul style="list-style-type: none"> ▶ Pump module ▶ Connector/wire harness (between pump module and ECM) ▶ Leakage from EVAP system ▶ ECM 	◀	◀
P043F	Evaporative Emission System Reference Orifice High Flow	<ul style="list-style-type: none"> ▶ Pump module ▶ Connector/wire harness (between pump module and ECM) ▶ Leakage from EVAP system ▶ ECM 	◀	◀
P0441	Evaporative Emission Control System Incorrect Purge Flow [Evaporative Emissions Canister Purge Valve]	<ul style="list-style-type: none"> ▶ Purge VSV ▶ Purge VSV circuit (between purge VSV and ECM) ▶ Leakage from EVAP line (between purge VSV and intake man- ifold) ▶ EVAP line clogged (between purge VSV and canister) ▶ ECM 	◀	◀
P0450	Evaporative Emission Control System Pressure Sensor/Switch [Fuel Tank Pressure Sensor]	<ul style="list-style-type: none"> ▶ Pump module (including pressure sensor) ▶ ECM 	◀	◀
P0451	Evaporative Emission Control System Pressure Sensor/Switch Range/Performance [Fuel Tank Pressure Sensor]	<ul style="list-style-type: none"> ▶ Pump module (including pressure sensor) ▶ Connector/wire harness (between pump module and ECM) ▶ ECM 	◀	◀
P0452	Evaporative Emission Control System Pressure Sensor/Switch Low Input [Fuel Tank Pressure Sensor low input]	<ul style="list-style-type: none"> ▶ Pump module (including pressure sensor) ▶ Connector/wire harness (between pump module and ECM) ▶ ECM 	◀	◀
P0453	Evaporative Emission Control System Pressure Sensor/Switch High Input [Fuel Tank Pressure Sensor high input]	<ul style="list-style-type: none"> ▶ Pump module (include pressure sensor) ▶ Connector/wire harness (between pump module and ECM) ▶ ECM 	◀	◀
P0455	Evaporative Emission Control System Leak Detected (gross leak) [Evaporative Emissions gross leak]	<ul style="list-style-type: none"> ▶ Fuel tank cap (loose) ▶ Leakage from EVAP line (between canister and fuel tank) ▶ Leakage from EVAP line (between purge VSV and canister) ▶ Leakage from pump module ▶ Leakage from fuel tank ▶ Leakage from canister 	◀	◀

P0392 - P0455

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0456	Evaporative Emission Control System Leak Detected (very small leak) [Evaporative Emissions leak (0.02 inch in diameter)]	▶Same as DTC P0455	◀	◀
P0500	Vehicle Speed Sensor "A" [Vehicle Speed Sensor]	▶Open or short in speed sensor circuit ▶Speed sensor ▶Combination meter ▶ECM ▶Skid control ECU	◀	◀
P0504	Brake Switch "A"/"B" Correlation [Stop Light Switch rationality]	▶Short in stop light switch signal circuit ▶STOP fuse ▶Stop light switch ▶ECM	-	◀
P0505	Idle Air Control System [Idle Speed Control function]	▶ETCS (Electronic Throttle Control System) ▶Air induction system ▶PCV hose connection ▶ECM	◀	◀
P0560	System Voltage [Engine Control Module power source]	▶Open in back up power source circuit ▶EFI No.1 fuse ▶ECM	◀	◀
P0571	Brake Switch "A" Circuit	▶Cruise control system	-	◀
P0604	Internal Control Module Random Access Memory (RAM) Error	▶ECM	◀	◀
P0606	ECM/PCM Processor	▶ECM	◀	◀
P0607	Control Module Performance	▶ECM	◀	◀
P0617	Starter Relay Circuit High	▶Park/Neutral Position (PNP) switch ▶Starter relay circuit ▶Ignition switch ▶ECM	◀	◀
P0630	VIN Not Programmed or Mismatch - ECM/PCM	▶ECM	◀	◀
P0657	Actuator Supply Voltage Circuit / Open	▶ECM	◀	◀
P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0710	Transmission Fluid Temperature Sensor "A" Circuit	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0711	Transmission Fluid Temperature Sensor "A" Circuit	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0712	Transmission Fluid Temperature Sensor "A" Circuit Low Input	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0713	Transmission Fluid Temperature Sensor "A" Circuit High Input	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0717	Turbine Speed Sensor Circuit No Signal	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0724	Brake Switch "B" Circuit High	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0741	Torque Converter Clutch Solenoid Performance	▶Electronic Controlled automatic Transmission (ECT)	◀	◀

P0456 - P0741

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P0746	Pressure Control Solenoid "A" Performance (Shift Solenoid Valve SL1)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0748	Pressure Control Solenoid "A" Electrical (Shift Solenoid Valve SL1)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0766	Shift Solenoid "D" Performance (Shift Solenoid Valve S4)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0771	Shift Solenoid "E" Performance (Shift Solenoid Valve SR)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0776	Pressure Control Solenoid "B" Performance (Shift Solenoid Valve SL2)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0778	Pressure Control Solenoid "B" Electrical (Shift Solenoid Valve SL2)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0793	Intermediate Shaft Speed Sensor "A"	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0796	Pressure Control Solenoid "C" Performance (Shift Solenoid Valve SL3)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0798	Pressure Control Solenoid "C" Electrical (Shift Solenoid Valve SL3)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0982	Shift Solenoid "D" Control Circuit Low (Shift Solenoid Valve S4)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0983	Shift Solenoid "D" Control Circuit High (Shift Solenoid Valve S4)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0985	Shift Solenoid "E" Control Circuit Low (Shift Solenoid Valve SR)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P0986	Shift Solenoid "E" Control Circuit High (Shift Solenoid Valve SR)	▶Electronic Controlled automatic Transmission (ECT)	◀	◀
P2102	Throttle Actuator Control Motor Circuit Low (Open)	▶Open in throttle actuator circuit ▶Throttle actuator ▶ECM	◀	◀
P2103	Throttle Actuator Control Motor Circuit High (Short)	▶Short in throttle actuator circuit ▶Throttle actuator ▶Throttle valve ▶Throttle body ▶ECM	◀	◀
P2111	Throttle Actuator Control System - Stuck Open	▶Throttle actuator ▶Throttle body ▶Throttle valve	◀	◀
P2112	Throttle Actuator Control System - Stuck Closed	▶Same as DTC P2111	◀	◀
P2118	Throttle Actuator Control Motor Current Range/Performance [Electronic Throttle Control System power source]	▶Open in ETCS power source circuit ▶ETCS fuse ▶ECM	◀	◀
P2119	Throttle Actuator Control Throttle Body Range/Performance [Electronic Throttle Control System error]	▶ETCS ▶ECM	◀	◀

P0746 - P2119

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P2120	Throttle/Pedal Position Sensor/ Switch "D" Circuit (Open) [Accelerator Pedal Position Sensor (Sensor 1)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ ECM 	◀	◀
P2121	Throttle/Pedal Position Sensor/ Switch "D" Circuit Range/Performance [Accelerator Pedal Position Sensor rationality (Sensor 1)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ ECM 	◀	◀
P2122	Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input [Accelerator Pedal Position Sensor low input (Sensor 1)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ Open in VCP1 circuit ▶ Open or ground short in VPA circuit ▶ ECM 	◀	◀
P2123	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input (Open) [Accelerator Pedal Position Sensor high input (Sensor 1)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ Open in EPA circuit ▶ ECM 	◀	◀
P2125	Throttle/Pedal Position Sensor/ Switch "E" Circuit (Open) [Accelerator Pedal Position Sensor (Sensor 2)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ ECM 	◀	◀
P2127	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input [Accelerator Pedal Position Sensor low input (Sensor 2)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ Open in VCP2 circuit ▶ Open or ground short in VPA2 circuit ▶ ECM 	◀	◀
P2128	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input [Accelerator Pedal Position Sensor high input (Sensor 2)]	<ul style="list-style-type: none"> ▶ Accelerator Pedal Position (APP) sensor ▶ Open in EPA2 circuit ▶ ECM 	◀	◀
P2135	Throttle/Pedal Position Sensor/ Switch "A"/"B" Voltage Correlation [Throttle Position Sensor malfunction]	<ul style="list-style-type: none"> ▶ Short between VTA1 and VTA2 circuits ▶ TP sensor (built into throttle body) ▶ ECM 	◀	◀
P2138	Throttle/Pedal Position Sensor/ Switch "D"/"E" Voltage Correlation [Accelerator Pedal Position Sensor malfunction]	<ul style="list-style-type: none"> ▶ Short between VPA and VPA2 circuits ▶ APP sensor ▶ ECM 	◀	◀
P2195 *3	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 1 Sensor 1) [Air Fuel Ratio Sensor signal stuck Lean (Bank 1 Sensor 1)]	<ul style="list-style-type: none"> ▶ Open or short in A/F sensor (bank 1 sensor 1) circuit ▶ A/F sensor (bank 1 sensor 1) ▶ A/F sensor heater (bank 1 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and relay circuits ▶ Air induction system ▶ Fuel pressure ▶ Injector ▶ ECM 	◀	◀
P2196 *3	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 1 Sensor 1) [Air Fuel Ratio Sensor signal stuck Rich (Bank 1 Sensor 1)]	<ul style="list-style-type: none"> ▶ Same as DTC P2195 	◀	◀

P2120 - P2196

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P2197 *3	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 2 Sensor 1) [Air Fuel Ratio Sensor signal stuck Lean (Bank 2 Sensor 1)]	<ul style="list-style-type: none"> ▶ Open or short in A/F sensor (bank 2 sensor 1) circuit ▶ A/F sensor (bank 2 sensor 1) ▶ A/F sensor heater (bank 2 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and relay circuits ▶ Air induction system ▶ Fuel pressure ▶ Injector ▶ ECM 	◀	◀
P2198 *3	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 2 Sensor 1) [Air Fuel Ratio Sensor signal stuck Rich (Bank 2 Sensor 1)]	▶ Same as DTC P2197	◀	◀
P2238 *3	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 (bank 1 sensor 1) circuit ▶ A/F sensor (bank 1 sensor 1) ▶ A/F sensor heater (bank 1 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and relay circuits ▶ ECM 	◀	◀
P2239 *3	Oxygen Sensor Pumping Current Circuit High (for A/F sensor) (Bank 1 Sensor 1)	▶ Same as DTC P2238	◀	◀
P2241 *3	Oxygen Sensor Pumping Current Circuit Low (for A/F sensor) (Bank 2 Sensor 1)	<ul style="list-style-type: none"> ▶ Open or short in A/F sensor (bank 2 sensor 1) circuit ▶ A/F sensor (bank 2 sensor 1) ▶ A/F sensor heater (bank 2 sensor 1) ▶ A/F sensor heater relay ▶ A/F sensor heater and relay circuits ▶ ECM 	◀	◀
P2242 *3	Oxygen Sensor Pumping Current Circuit High (for A/F sensor) (Bank 2 Sensor 1)	▶ Same as DTC P2241	◀	◀
P2252 *3	Oxygen Sensor Reference Ground Circuit Low (for A/F sensor) (Bank 1 Sensor 1)	▶ Same as DTC P2238	◀	◀
P2253 *3	Oxygen Sensor Reference Ground Circuit High (for A/F sensor) (Bank 1 Sensor 1)	▶ Same as DTC P2238	◀	◀
P2255 *3	Oxygen Sensor Reference Ground Circuit Low (for A/F sensor) (Bank 2 Sensor 1)	▶ Same as DTC P2241	◀	◀
P2256 *3	Oxygen Sensor Reference Ground Circuit High (for A/F sensor) (Bank 2 Sensor 1)	▶ Same as DTC P2241	◀	◀
P2401	Evaporative Emission System Leak Detection Pump Control Circuit Low	<ul style="list-style-type: none"> ▶ Pump module ▶ Connector/wire harness (between pump module and ECM) ▶ ECM ▶ Leakage from EVAP system 	◀	◀
P2402	Evaporative Emission System Leak Detection Pump Control Circuit High	<ul style="list-style-type: none"> ▶ Pump module ▶ Connector/wire harness (between pump module and ECM) ▶ ECM 	◀	◀
P2419	Evaporative Emission System Switching Valve Control Circuit Low	<ul style="list-style-type: none"> ▶ Pump module ▶ Connector/wire harness (between pump module and ECM) ▶ ECM 	◀	◀
P2420	Evaporative Emission System Switching Valve Control Circuit High	<ul style="list-style-type: none"> ▶ Pump module ▶ Connector/wire harness (between pump module and ECM) ▶ ECM 	◀	◀
		▶ Malfunction EVAP System		

P2197 - P2420

DTC No.	Detection Item	Suspected Trouble Area	MIL*1	Memory*2
P2610	ECM/PCM Internal Engine Off Timer Performance	►ECM	◀	◀
P2716	Pressure Control Solenoid "D" Electrical (Shift Solenoid Valve SLT)	►Electronic Controlled automatic Transmission (ECT)	◀	◀
P2769	Torque Converter Clutch Solenoid Circuit Low (Shift Solenoid Valve DSL)	►Electronic Controlled automatic Transmission (ECT)	◀	◀
P2770	Torque Converter Clutch Solenoid Circuit High (Shift Solenoid Valve DSL)	►Electronic Controlled automatic Transmission (ECT)	◀	◀
P2A00	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	►Open or short in A/F sensor (bank 1 sensor 1) circuit ►A/F sensor (bank1 sensor 1) ►ECM	◀	◀
P2A03	A/F Sensor Circuit Slow Response (Bank 2 Sensor 1)	►Open or short in A/F sensor (bank 2 sensor 1) circuit ►A/F sensor (bank 2 sensor 1) ►ECM	◀	◀
B2799	Engine Immobilizer System Malfunction	►Immobilizer system	-	◀

*1: "◀"...MIL (Malfunction Indicator Lamp) is illuminated, "-"...MIL is not illuminated

*2: "◀"...DTC is stored in the ECM

*3: This DTC is related to the A/F sensor, although the caption in the detection item column refers to it as the heated oxygen sensor.

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

P2610 - B2799

HINT: The parameters listed in the chart may not conform exactly to those read during the DTC check due to the type of instrument or other factors.

If a trouble code is displayed during the DTC check in the check mode, check the circuit for the code listed in the table. For details of each code, refer to the Diagnostic Trouble Code Chart under the respective "DTC No". in the DTC chart.