

## DIAGNOSTIC TROUBLE CODE CHART

### HINT:

Parameters listed in the chart may be different from your readings depending on the type of instruments and other factors.

If any DTCs are displayed during a check mode, check the circuit for the DTCs listed in the below. For details of each DTC, refer to the page indicated.

### SFI SYSTEM

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0010	Camshaft Position "A" Actuator Circuit (Bank 1)	1. Open or short in OCV (bank 1) circuit 2. OCV (bank 1) 3. ECM	Come on	DTC Stored	<a href="#">ES-57</a>
P0011	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 1)	1. Valve timing 2. OCV (bank 1) 3. Camshaft timing gear assembly 4. ECM	Come on	DTC Stored	<a href="#">ES-64</a>
P0012	Camshaft Position "A" - Timing Over-Retarded (Bank 1)	1. Valve timing 2. OCV (bank 1) 3. Camshaft timing gear assembly 4. ECM	Come on	DTC Stored	<a href="#">ES-64</a>
P0016	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A)	1. Mechanical system (Timing belt has jumped tooth, belt is stretched) 2. ECM	Come on	DTC Stored	<a href="#">ES-72</a>
P0018	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor A)	1. Mechanical system (Timing belt has jumped tooth, belt is stretched) 2. ECM	Come on	DTC Stored	<a href="#">ES-72</a>
P0020	Camshaft Position "A" Actuator Circuit (Bank 2)	1. Open or short in OCV (bank 2) circuit 2. OCV (bank 2) 3. ECM	Come on	DTC Stored	<a href="#">ES-57</a>
P0021	Camshaft Position "A" - Timing Over-Advanced or System Performance (Bank 2)	1. Valve timing 2. OCV (bank 2) 3. Camshaft timing gear assembly 4. ECM	Come on	DTC Stored	<a href="#">ES-64</a>
P0022	Camshaft Position "A" - Timing Over-Retarded (Bank 2)	1. Valve timing 2. OCV (bank 2) 3. Camshaft timing gear assembly 4. ECM	Come on	DTC Stored	<a href="#">ES-64</a>
P0031 *1	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 1 Sensor 1)	1. Open or short in heater circuit of A/F sensor 2. A/F sensor heater (bank 1 sensor 1) 3. A/F relay 4. ECM	Come on	DTC Stored	<a href="#">ES-74</a>
P0032 *1	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 1 Sensor 1)	1. Open or short in heater circuit of A/F sensor 2. A/F sensor heater (bank 1 sensor 1) 3. A/F relay 4. ECM	Come on	DTC Stored	<a href="#">ES-74</a>

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DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0037	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	1. Open or short in heater circuit of heated oxygen sensor 2. Heated oxygen sensor heater (bank 1 sensor 2) 3. EFI MAIN relay 4. ECM	Come on	DTC Stored	<a href="#">ES-79</a>
P0038	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 2)	1. Open or short in heater circuit of heated oxygen sensor 2. Heated oxygen sensor heater (bank 1 sensor 2) 3. EFI MAIN relay 4. ECM	Come on	DTC Stored	<a href="#">ES-79</a>
P0051 *1	Oxygen (A/F) Sensor Heater Control Circuit Low (Bank 2 Sensor 1)	1. Open or short in heater circuit of A/F sensor 2. A/F sensor heater (bank 2 sensor 1) 3. A/F relay 4. ECM	Come on	DTC Stored	<a href="#">ES-74</a>
P0052 *1	Oxygen (A/F) Sensor Heater Control Circuit High (Bank 2 Sensor 1)	1. Open or short in heater circuit of A/F sensor 2. A/F sensor heater (bank 2 sensor 1) 3. A/F relay 4. ECM	Come on	DTC Stored	<a href="#">ES-74</a>
P0057	Oxygen Sensor Heater Control Circuit Low (Bank 2 Sensor 2)	1. Open or short in heater circuit of A/F sensor 2. A/F sensor heater (bank 2 sensor 2) 3. A/F relay 4. ECM	Come on	DTC Stored	<a href="#">ES-79</a>
P0058	Oxygen Sensor Heater Control Circuit High (Bank 2 Sensor 2)	1. Open or short in heater circuit of A/F sensor 2. A/F sensor heater (bank 2 sensor 2) 3. A/F relay 4. ECM	Come on	DTC Stored	<a href="#">ES-79</a>
P0100	Mass or Volume Air Flow Circuit	1. Open or short in MAF meter circuit 2. MAF meter 3. ECM	Come on	DTC Stored	<a href="#">ES-84</a>
P0101	Mass Air Flow Circuit Range / Performance Problem	MAF meter	Come on	DTC Stored	<a href="#">ES-91</a>
P0102	Mass or Volume Air Flow Circuit Low Input	1. Open or short in MAF meter circuit 2. MAF meter 3. ECM	Come on	DTC Stored	<a href="#">ES-84</a>
P0103	Mass or Volume Air Flow Circuit High Input	1. Open or short in MAF meter circuit 2. MAF meter 3. ECM	Come on	DTC Stored	<a href="#">ES-84</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0110	Intake Air Temperature Circuit Malfunction	1. Open or short in IAT sensor circuit 2. IAT sensor (built in MAF meter) 3. ECM	Come on	DTC Stored	<a href="#">ES-94</a>
P0112	Intake Air Temperature Circuit Low Input	1. Short in IAT sensor circuit 2. IAT sensor (built in MAF meter) 3. ECM	Come on	DTC Stored	<a href="#">ES-94</a>
P0113	Intake Air Temperature Circuit High Input	1. Open in IAT sensor circuit 2. IAT sensor (built in MAF meter) 3. ECM	Come on	DTC Stored	<a href="#">ES-94</a>
P0115	Engine Coolant Temperature Circuit Malfunction	1. Open or short in ECT sensor circuit 2. ECT sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-100</a>
P0116	Engine Coolant Temperature Circuit Range / Performance Problem	1. Thermostat 2. ECT sensor	Come on	DTC Stored	<a href="#">ES-105</a>
P0117	Engine Coolant Temperature Circuit Low Input	1. Short in ECT sensor circuit 2. ECT sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-100</a>
P0118	Engine Coolant Temperature Circuit High Input	1. Open in ECT sensor circuit 2. ECT sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-100</a>
P0120	Throttle Pedal Position Sensor / Switch "A" Circuit Malfunction	1. Throttle position sensor (built in throttle body) 2. ECM	Come on	DTC Stored	<a href="#">ES-107</a>
P0121	Throttle / Pedal Position Sensor / Switch "A" Circuit Range / Performance Problem	Throttle position sensor (built in throttle body)	Come on	DTC Stored	<a href="#">ES-116</a>
P0122	Throttle / Pedal Position Sensor / Switch "A" Circuit Low Input	1. Throttle position sensor (built in throttle body) 2. Short in VTA1 circuit 3. Open in VC circuit 4. ECM	Come on	DTC Stored	<a href="#">ES-107</a>
P0123	Throttle / Pedal Position Sensor / Switch "A" Circuit High Input	1. Throttle position sensor (built in throttle body) 2. Open in VTA1 circuit 3. Open in E2 circuit 4. Short in VC and VTA1 circuits 5. ECM	Come on	DTC Stored	<a href="#">ES-107</a>
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	1. Cooling system 2. ECT sensor 3. Thermostat	Come on	DTC Stored	<a href="#">ES-119</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0128	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)	1. Thermostat (water inlet) 2. Cooling system 3. ECT sensor 4. ECM	Come on	DTC Stored	<a href="#">ES-122</a>
P0136	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	1. Open or short in heated oxygen sensor circuit 2. Heated oxygen sensor (bank 1) 3. Heated oxygen sensor heater (bank 1) 4. A/F sensor (bank 1) 5. A/F sensor heater (bank 1) 6. EFI MAIN relay (bank 1)	Come on	DTC Stored	<a href="#">ES-125</a>
P0137	Oxygen Sensor Circuit Low Voltage (Bank 1 Sensor 2)	1. Heated oxygen sensor circuit (bank 1) 2. Heated oxygen sensor (bank 1) 3. Oxygen sensor heater (bank 1)	Come on	DTC Stored	<a href="#">ES-125</a>
P0138	Oxygen Sensor Circuit High Voltage (Bank 1 Sensor 2)	1. Heated oxygen sensor circuit (bank 1) 2. Heated oxygen sensor (bank 1) 3. Oxygen sensor heater (bank 1)	Come on	DTC Stored	<a href="#">ES-125</a>
P0139	Oxygen Sensor Circuit Slow Response (Bank 1 Sensor 2)	1. Short in heated oxygen sensor (bank 1 sensor 2) circuit 2. Short in heated oxygen sensor (bank 1 sensor 2) 3. ECM internal circuit malfunction	Come on	DTC Stored	<a href="#">ES-125</a>
P0156	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)	1. Heated oxygen sensor circuit (bank 2) 2. Heated oxygen sensor (bank 2) 3. Heated oxygen sensor heater (bank 2) 4. A/F sensor (bank 2) 5. A/F sensor heater (bank 2)	Come on	DTC Stored	<a href="#">ES-125</a>
P0157	Oxygen Sensor Circuit Low Voltage (Bank 2 Sensor 2)	1. Heated oxygen sensor circuit (bank 2) 2. Heated oxygen sensor (bank 2) 3. Oxygen sensor heater (bank 2)	Come on	DTC Stored	<a href="#">ES-125</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0158	Oxygen Sensor Circuit High Voltage (Bank 2 Sensor 2)	1. Heated oxygen sensor circuit (bank 2) 2. Heated oxygen sensor (bank 2) 3. Oxygen sensor heater (bank 2)	Come on	DTC Stored	<a href="#">ES-125</a>
P0159	Oxygen Sensor Circuit Slow Response (Bank 2 Sensor 2)	1. Short in heated oxygen sensor (bank 2 sensor 2) circuit 2. Short in heated oxygen sensor (bank 2 sensor 2) 3. ECM internal circuit malfunction	Come on	DTC Stored	<a href="#">ES-125</a>
P0171	System Too Lean (Bank 1)	1. Air induction system 2. Injector blockage 3. MAF meter 4. ECT sensor 5. Fuel pressure 6. Gas leakage in exhaust system 7. Open or short in A/F sensor (bank 1 sensor 1) circuit 8. A/F sensor (bank 1 sensor 1) 9. A/F sensor heater (bank 1 sensor 1) 10. A/F relay 11. A/F sensor heater and A/F relay circuit 12. PCV valve and hose 13. PCV hose connection 14. ECM	Come on	DTC Stored	<a href="#">ES-140</a>
P0172	System Too Rich (Bank 1)	1. Injection leak, blockage 2. MAF meter 3. ECT sensor 4. Ignition system 5. Fuel pressure 6. Gas leakage in exhaust system 7. Open or short in A/F sensor (bank 1 sensor 1) circuit 8. A/F sensor (bank 1 sensor 1) 9. A/F sensor heater (bank 1 sensor 1) 10. A/F relay 11. A/F sensor heater and A/F relay circuits 12. ECM	Come on	DTC Stored	<a href="#">ES-140</a>

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DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0174	System Too Lean (Bank 2)	1. Air induction system 2. Injector blockage 3. MAF meter 4. ECT sensor 5. Fuel pressure 6. Gas leakage in exhaust system 7. Open or short in A/F sensor (bank 2 sensor 1) circuit 8. A/F sensor (bank 2 sensor 1) 9. A/F sensor heater (bank 2 sensor 1) 10. A/F relay 11. A/F sensor heater and A/F relay circuit 12. PCV valve and hose 13. PCV hose connection 14. ECM	Come on	DTC Stored	<a href="#">ES-140</a>
P0175	System Too Rich (Bank 2)	1. Injection leak, blockage 2. MAF meter 3. ECT sensor 4. Ignition system 5. Fuel pressure 6. Gas leakage in exhaust system 7. Open or short in A/F sensor (bank 2 sensor 1) circuit 8. A/F sensor (bank 2 sensor 1) 9. A/F sensor heater (bank 2 sensor 1) 10. A/F relay 11. A/F sensor heater and A/F relay circuits 12. ECM	Come on	DTC Stored	<a href="#">ES-140</a>
P0220	Throttle / Pedal Position Sensor / Switch "B" Circuit	1. Throttle position sensor (built in throttle body) 2. ECM	Come on	DTC Stored	<a href="#">ES-107</a>
P0222	Throttle / Pedal Position Sensor / Switch "B" Circuit Low Input	1. Throttle position sensor (built in throttle body) 2. Short in VTA2 circuit 3. Open in VC circuit 4. ECM	Come on	DTC Stored	<a href="#">ES-107</a>
P0223	Throttle / Pedal Position Sensor / Switch "B" Circuit High Input	1. Throttle position sensor (built in throttle body) 2. Open in VTA2 circuit 3. Open in E2 circuit 4. Short between VC and VTA2 circuits 5. ECM	Come on	DTC Stored	<a href="#">ES-107</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0300 *3	Random / Multiple Cylinder Misfire Detected	1. Open or short in engine wire harness 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV valve and hose 14. Air induction system 15. ECM	Come on or flash	DTC Stored	<a href="#">ES-152</a>
P0301	Cylinder 1 Misfire Detected	1. Open or short in engine wire 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV hose 14. ECM	Come on or flash	DTC Stored	<a href="#">ES-152</a>
P0302	Cylinder 2 Misfire Detected	1. Open or short in engine wire 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV hose 14. ECM	Come on or flash	DTC Stored	<a href="#">ES-152</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0303	Cylinder 3 Misfire Detected	1. Open or short in engine wire 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV hose 14. ECM	Come on or flash	DTC Stored	<a href="#">ES-152</a>
P0304	Cylinder 4 Misfire Detected	1. Open or short in engine wire 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV hose 14. ECM	Come on or flash	DTC Stored	<a href="#">ES-152</a>
P0305	Cylinder 5 Misfire Detected	1. Open or short in engine wire 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV hose 14. ECM	Come on or flash	DTC Stored	<a href="#">ES-152</a>



DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0306	Cylinder 6 Misfire Detected	1. Open or short in engine wire 2. Connector connection 3. Vacuum hose connection 4. Ignition system 5. Injector 6. Fuel pressure 7. MAF meter 8. ECT sensor 9. Compression pressure 10. Valve clearance 11. Valve timing 12. PCV hose connection 13. PCV hose 14. ECM	Come on	DTC Stored	<a href="#">ES-152</a>
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	1. Short in knock sensor 1 circuit 2. Knock sensor 1 3. ECM	Come on	DTC Stored	<a href="#">ES-165</a>
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	1. Open in knock sensor 1 circuit 2. Knock sensor 1 3. ECM	Come on	DTC Stored	<a href="#">ES-165</a>
P0332	Knock Sensor 2 Circuit Low Input (Bank 2)	1. Short in knock sensor 2 circuit 2. Knock sensor 2 3. ECM	Come on	DTC Stored	<a href="#">ES-165</a>
P0333	Knock Sensor 2 Circuit High Input (Bank 2)	1. Open in knock sensor 2 circuit 2. Knock sensor 2 3. ECM	Come on	DTC Stored	<a href="#">ES-165</a>
P0335	Crankshaft Position Sensor "A" Circuit	1. Open or short in crankshaft position sensor circuit 2. Crankshaft position sensor 3. Crankshaft timing pulley 4. ECM	Come on	DTC Stored	<a href="#">ES-170</a>
P0339	Crankshaft Position Sensor "A" Circuit Intermittent	1. Open or short in crankshaft position sensor circuit 2. Crankshaft position sensor 3. Crankshaft timing pulley 4. ECM	Come on	DTC Stored	<a href="#">ES-170</a>
P0340	Camshaft Position Sensor Circuit Malfunction	1. Open or short in VVT sensor circuit 2. VVT sensor 3. Camshaft timing pulley 4. Timing belt has jumped tooth 5. ECM	Come on	DTC Stored	<a href="#">ES-176</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0341	Camshaft Position Sensor "A" Circuit Range / Performance (Bank 1 or Single Sensor)	1. Open or short in VVT sensor circuit 2. VVT sensor 3. Camshaft timing pulley 4. Timing belt has jumped tooth 5. ECM	Come on	DTC Stored	<a href="#">ES-176</a>
P0345	Camshaft Position Sensor "A" Circuit (Bank 2)	1. Open or short in VVT sensor circuit 2. VVT sensor 3. Camshaft timing pulley 4. Timing belt has jumped tooth 5. ECM	Come on	DTC Stored	<a href="#">ES-176</a>
P0346	Camshaft Position Sensor "A" Circuit Range / Performance (Bank 2)	1. Open or short in VVT sensor circuit 2. VVT sensor 3. Camshaft timing pulley 4. Timing belt has jumped tooth 5. ECM	Come on	DTC Stored	<a href="#">ES-176</a>
P0351 *2	Ignition Coil "A" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IFG1 or IGT1 circuit from ignition coil with igniter to ECM (ignition coil circuit 1) 3. Ignition coil with igniter (ignition coil 1) 4. ECM	Come on	DTC Stored	<a href="#">ES-182</a>
P0352 *2	Ignition Coil "B" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IFG1 or IGT2 circuit from ignition coil with igniter to ECM (ignition coil circuit 2) 3. Ignition coil with igniter (ignition coil 2) 4. ECM	Come on	DTC Stored	<a href="#">ES-182</a>
P0353 *2	Ignition Coil "C" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IFG1 or IGT3 circuit from ignition coil with igniter to ECM (ignition coil circuit 3) 3. Ignition coil with igniter (ignition coil 3) 4. ECM	Come on	DTC Stored	<a href="#">ES-182</a>
P0354 *2	Ignition Coil "D" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IFG1 or IGT4 circuit from ignition coil with igniter to ECM (ignition coil circuit 4) 3. Ignition coil with igniter (ignition coil 4) 4. ECM	Come on	DTC Stored	<a href="#">ES-182</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0355 *2	Ignition Coil "E" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IFG1 or IGT5 circuit from ignition coil with igniter to ECM (ignition coil circuit 5) 3. Ignition coil with igniter (ignition coil 5) 4. ECM	Come on	DTC Stored	<a href="#">ES-182</a>
P0356 *2	Ignition Coil "F" Primary / Secondary Circuit	1. Ignition system 2. Open or short in IFG1 or IGT6 circuit from ignition coil with igniter to ECM (ignition coil circuit 6) 3. Ignition coil with igniter (ignition coil 6) 4. ECM	Come on	DTC Stored	<a href="#">ES-182</a>
P0420 *2	Catalyst System Efficiency Below Threshold (Bank 1)	1. Gas leakage in exhaust system 2. A/F sensor (bank 1 sensor 1) 3. Heated oxygen sensor (bank 1 sensor 2) 4. Three-way catalytic converter (inside exhaust manifold)	Come on	DTC Stored	<a href="#">ES-190</a>
P0430 *2	Catalyst System Efficiency Below Threshold (Bank 2)	1. Gas leakage in exhaust system 2. A/F sensor (bank 2 sensor 1) 3. Heated oxygen sensor (bank 2 sensor 2) 4. Three-way catalytic converter (inside exhaust manifold)	Come on	DTC Stored	<a href="#">ES-190</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0441 *3	Evaporative Emission Control System Incorrect Purge Flow	1. Vacuum hose has cracks, holes, or is blocked, damaged or disconnected 2. Fuel tank cap is incorrectly installed 3. Fuel tank cap has cracks, or is damaged 4. Open or short in vapor pressure sensor circuit 5. Vapor pressure sensor 6. Open or short in VSV circuit for EVAP 7. EVAP VSV 8. Open or short in VSV circuit for CCV 9. CCV 10. Fuel tank has cracks, holes, or is damaged 11. Charcoal canister has cracks, holes, or is damaged 12. Fuel tank over fill check valve has cracks, or is damaged 13. ECM	Come on	DTC Stored	<a href="#">ES-197</a>
P0442	Evaporative Emission Control System Leak Detected (Small Leak)	1. Vacuum hose has cracks, holes, or is blocked, damaged or disconnected 2. Fuel tank cap is incorrectly installed 3. Fuel tank cap has cracks, or is damaged 4. Open or short in vapor pressure sensor circuit 5. Vapor pressure sensor 6. Open or short in VSV circuit for EVAP 7. EVAP VSV 8. Open or short in VSV circuit for CCV 9. CCV 10. Fuel tank has cracks, holes, or is damaged 11. Charcoal canister has cracks, holes, or is damaged 12. Fuel tank over fill check valve has cracks, or is damaged 13. ECM	Come on	DTC Stored	<a href="#">ES-203</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0446 *3	Evaporative Emission Control System Vent Control Circuit	1. Vacuum hose has cracks, holes, or is blocked, damaged or disconnected 2. Fuel tank cap is incorrectly installed 3. Fuel tank cap has cracks, or is damaged 4. Open or short in vapor pressure sensor circuit 5. Vapor pressure sensor 6. Open or short in VSV circuit for EVAP 7. EVAP VSV 8. Open or short in VSV circuit for CCV 9. CCV 10. Fuel tank has cracks, holes, or is damaged 11. Charcoal canister has cracks, holes, or is damaged 12. Fuel tank over fill check valve has cracks, or is damaged 13. ECM	Come on	DTC Stored	<a href="#">ES-209</a>
P0451	Evaporative Emission Control System Pressure Sensor Range / Performance	1. Open or short in vapor pressure sensor circuit 2. Vapor pressure sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-212</a>
P0452	Evaporative Emission Control System Pressure Sensor / Switch Low Input	1. Open or short in vapor pressure sensor circuit 2. Vapor pressure sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-212</a>
P0453	Evaporative Emission Control System Pressure Sensor / Switch High Input	1. Open or short in vapor pressure sensor circuit 2. Vapor pressure sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-212</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0455	Evaporative Emission Control System Leak Detected (Gross Leak)	1. Vacuum hose has cracks, holes, or is blocked, damaged or disconnected 2. Fuel tank cap is incorrectly installed 3. Fuel tank cap has cracks, or is damaged 4. Open or short in vapor pressure sensor circuit 5. Vapor pressure sensor 6. Open or short in VSV circuit for EVAP 7. EVAP VSV 8. Open or short in VSV circuit for CCV 9. CCV 10. Fuel tank has cracks, holes, or is damaged 11. Charcoal canister has cracks, holes, or is damaged 12. Fuel tank over fill check valve has cracks, or is damaged 13. ECM	Come on	DTC Stored	<a href="#">ES-203</a>
P0456	Evaporative Emission Control System Leak Detected (Very Small Leak)	1. Vacuum hose has cracks, holes, or is blocked, damaged or disconnected 2. Fuel tank cap is incorrectly installed 3. Fuel tank cap has cracks, or is damaged 4. Open or short in vapor pressure sensor circuit 5. Vapor pressure sensor 6. Open or short in VSV circuit for EVAP 7. EVAP VSV 8. Open or short in VSV circuit for CCV 9. CCV 10. Fuel tank has cracks, holes, or is damaged 11. Charcoal canister has cracks, holes, or is damaged 12. Fuel tank over fill check valve has cracks, or is damaged 13. ECM	Come on	DTC Stored	<a href="#">ES-203</a>
P0500	Vehicle Speed Sensor "A"	1. Open or short in speed sensor circuit 2. Speed sensor 3. Combination meter 4. ECM 5. Skid control ECU	Come on	DTC Stored	<a href="#">ES-218</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P0503	Vehicle Speed Sensor "A" Intermittent / Erratic / High	1. Open or short in speed sensor circuit 2. Speed sensor 3. Combination meter 4. ECM 5. Skid control ECU	Dose not come on	DTC Stored	<a href="#">ES-218</a>
P0504	Brake Switch "A" / "B" Correlation	1. Short in stop light switch signal circuit 2. Stop light switch 3. ECM	Dose not come on	DTC Stored	<a href="#">ES-221</a>
P0505	Idle Control System Malfunction	1. Electric throttle control system 2. Air induction system 3. PCV hose connection	Come on	DTC Stored	<a href="#">ES-227</a>
P0560	System Voltage	1. Open in back-up power source circuit 2. ECM	Come on	DTC Stored	<a href="#">ES-230</a>
P0604	Internal Control Module Random Access Memory (RAM) Error	ECM	Come on	DTC Stored	<a href="#">ES-234</a>
P0606	ECM / PCM Processor	ECM	Come on	DTC Stored	<a href="#">ES-234</a>
P0607	Control Module Performance	ECM	Come on	DTC Stored	<a href="#">ES-234</a>
P0617	Starter Relay Circuit High	1. Short in park/neutral position switch circuit 2. PNP switch 3. Ignition switch 4. ECM	Come on	DTC Stored	<a href="#">ES-236</a>
P0630	VIN not Programmed or Mismatch - ECM / PCM	ECM	Come on	DTC Stored	<a href="#">ES-242</a>
P0657	Actuator Supply Voltage Circuit / Open	ECM	Come on	DTC Stored	<a href="#">ES-234</a>
P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	1. Short in park/neutral position switch circuit 2. PNP switch 3. ECM	Come on	DTC Stored	<a href="#">ES-244</a>
P1645	Gateway ECU Malfunction	1. Gateway ECU 2. A/C ECU 3. Combination bus	Come on	DTC Not Stored	<a href="#">ES-245</a>
P2102	Throttle Actuator Control Motor Circuit Low	1. Open in throttle control motor circuit 2. Throttle control motor 3. ECM	Come on	DTC Stored	<a href="#">ES-246</a>
P2103	Throttle Actuator Control Motor Circuit High	1. Short in throttle control motor circuit 2. Throttle control motor 3. ECM	Come on	DTC Stored	<a href="#">ES-246</a>
P2111	Throttle Actuator Control System - Stuck Open	1. Throttle control motor circuit 2. Throttle control motor 3. Throttle body 4. Throttle valve	Come on	DTC Stored	<a href="#">ES-249</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2112	Throttle Actuator Control System - Stuck Closed	1. Throttle control motor circuit 2. Throttle control motor 3. Throttle body 4. Throttle valve	Come on	DTC Stored	<a href="#">ES-249</a>
P2118	Throttle Actuator Control Motor Current Range / Performance	1. Open in ETCS power source circuit 2. ETCS fuse 3. ECM	Come on	DTC Stored	<a href="#">ES-252</a>
P2119	Throttle Actuator Control Throttle Body Range / Performance	1. Electronic throttle control system 2. ETCS fuse 3. ECM	Come on	DTC Stored	<a href="#">ES-256</a>
P2120	Throttle / Pedal Position Sensor / Switch "D" Circuit	1. Accelerator pedal position sensor 2. ECM	Come on	DTC Stored	<a href="#">ES-258</a>
P2121	Throttle / Pedal Position Sensor / Switch "D" Circuit Range / Performance	1. Accelerator pedal position sensor circuit 2. Accelerator pedal position sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-267</a>
P2122	Throttle / Pedal Position Sensor / Switch "D" Circuit Low Input	1. Accelerator pedal position sensor 2. Open in VCP1 circuit 3. Open or short to ground in VPA1 circuit 4. ECM	Come on	DTC Stored	<a href="#">ES-258</a>
P2123	Throttle / Pedal Position Sensor / Switch "D" Circuit High Input	1. Accelerator pedal position sensor 2. Open in EPA circuit 3. ECM	Come on	DTC Stored	<a href="#">ES-258</a>
P2125	Throttle / Pedal Position Sensor / Switch "E" Circuit	1. Accelerator pedal position sensor 2. ECM	Come on	DTC Stored	<a href="#">ES-258</a>
P2127	Throttle / Pedal Position Sensor / Switch "E" Circuit Low Input	1. Accelerator pedal position sensor 2. Open in VCP2 circuit 3. Open or short to ground in VPA2 circuit 4. ECM	Come on	DTC Stored	<a href="#">ES-258</a>
P2128	Throttle / Pedal Position Sensor / Switch "E" Circuit High Input	1. Accelerator pedal position sensor 2. Open in EPA2 circuit 3. ECM	Come on	DTC Stored	<a href="#">ES-258</a>
P2135	Throttle / Pedal Position Sensor / Switch "A" / "B" Voltage Correlation	1. Short between VTA1 and VTA2 circuits 2. Throttle position sensor (built in throttle body) 3. ECM	Come on	DTC Stored	<a href="#">ES-107</a>
P2138	Throttle / Pedal Position Sensor / Switch "D" / "E" Voltage Correlation	1. VPA1 and VPA2 circuits are short-circuited 2. Accelerator pedal position sensor 3. ECM	Come on	DTC Stored	<a href="#">ES-258</a>



DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2195 *1	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 1 Sensor 1)	1. Open or short in A/ F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor (bank 1 sensor 1) heater 4. A/F relay 5. Air induction system 6. Fuel pressure 7. Injector 8. PCV hose connection 9. ECM	Come on	DTC Stored	<a href="#">ES-271</a>
P2196 *1	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 1 Sensor 1)	1. Open or short in A/ F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor (bank 1 sensor 1) heater 4. A/F relay 5. A/F sensor heater and relay circuit 6. Air induction system 7. Fuel pressure 8. Injector 9. PCV hose connection 10. ECM	Come on	DTC Stored	<a href="#">ES-271</a>
P2197 *1	Oxygen (A/F) Sensor Signal Stuck Lean (Bank 2 Sensor 1)	1. Open or short in A/ F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor (bank 2 sensor 1) heater 4. A/F relay 5. A/F sensor heater and relay circuit 6. Air induction system 7. Fuel pressure 8. Injector 9. PCV hose connection 10. ECM	Come on	DTC Stored	<a href="#">ES-271</a>
P2198 *1	Oxygen (A/F) Sensor Signal Stuck Rich (Bank 2 Sensor 1)	1. Open or short in A/ F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor (bank 2 sensor 1) heater 4. A/F relay 5. A/F sensor heater and relay circuit 6. Air induction system 7. Fuel pressure 8. Injector 9. PCV hose connection 10. ECM	Come on	DTC Stored	<a href="#">ES-271</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2238 *1	Oxygen (A/F) Sensor Pumping Current Circuit Low (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor (bank 1 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2239 *1	Oxygen (A/F) Sensor Pumping Current Circuit High (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor (bank 1 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2241 *1	Oxygen (A/F) Sensor Pumping Current Circuit Low (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor (bank 2 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2242 *1	Oxygen (A/F) Sensor Pumping Current Circuit High (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor (bank 2 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2252 *1	Oxygen (A/F) Sensor Reference Ground Circuit Low (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor (bank 1 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2253 *1	Oxygen (A/F) Sensor Reference Ground Circuit High (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor (bank 1 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2255 *1	Oxygen (A/F) Sensor Reference Ground Circuit Low (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor (bank 2 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2256 *1	Oxygen (A/F) Sensor Reference Ground Circuit High (Bank 2 Sensor 1)	1. Open or short in A/F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor (bank 2 sensor 1) heater 4. A/F relay 5. Open or short in A/F sensor heater and relay circuit 6. ECM	Come on	DTC Stored	<a href="#">ES-285</a>
P2A00	A/F Sensor Circuit Slow Response (Bank 1 Sensor 1)	1. Open or short in A/F sensor (bank 1 sensor 1) circuit 2. A/F sensor (bank 1 sensor 1) 3. A/F sensor heater 4. A/F relay 5. A/F sensor heater and relay circuit 6. Air induction system 7. Fuel pressure 8. Injector 9. PCV hose connection 10. ECM	Come on	DTC Stored	<a href="#">ES-291</a>

DTC No.	Detection Item	Trouble Area	MIL	Memory	See page
P2A03	A/F Sensor Circuit Slow Response (Bank 2 Sensor 1)	1. Open or short in A/ F sensor (bank 2 sensor 1) circuit 2. A/F sensor (bank 2 sensor 1) 3. A/F sensor heater 4. A/F relay 5. A/F sensor heater and relay circuit 6. Air induction system 7. Fuel pressure 8. Injector 9. PCV hose connection 10. ECM	Come on	DTC Stored	<a href="#">ES-291</a>

- \*1: This DTC is related to A/F sensor, although the caption is oxygen sensor.
- \*2: This DTC indicates a malfunction related to primary circuit.
- \*3: This DTC is not present for Taiwan spec.