

DIAGNOSTIC TROUBLE CODE CHART

HINT:

Parameters listed in the chart may not be exactly the same as your reading due to the type of instrument or other factors.

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

UNLEADED GASOLINE ENGINE:

DTC No. (See page)	Detection Item	Trouble Area	CHK ENG*1	Memory
P0031 (DI-35)	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0032 (DI-35)	Oxygen Sensor Heater Control Circuit High (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Short in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0037 (DI-35)	Oxygen Sensor Heater Control Circuit Low (Bank 1 Sensor 2)	<ul style="list-style-type: none"> • Open in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0038 (DI-35)	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 or ECD relay • Engine ECU 	○	○
P0051 (DI-35)	Oxygen Sensor Heater Control Circuit Low (Bank 2 Sensor 1)	<ul style="list-style-type: none"> • Open in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0052 (DI-35)	Oxygen Sensor Heater Control Circuit High (Bank 2 Sensor 1)	<ul style="list-style-type: none"> • Short in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0057 (DI-35)	Oxygen Sensor Heater Control Circuit Low (Bank 2 Sensor 2)	<ul style="list-style-type: none"> • Open in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0058 (DI-35)	Oxygen Sensor Heater Control Circuit High (Bank 2 Sensor 2)	<ul style="list-style-type: none"> • Short in heater circuit of heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Engine ECU 	○	○
P0100 (DI-42)	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 • Engine ECU 	○	○
P0102 (DI-42)	Mass or Volume Air Flow Circuit Low Input	<ul style="list-style-type: none"> • Open or short in mass air flow meter circuit • Mass air flow meter • Engine ECU 	○	○
P0103 (DI-42)	Mass or Volume Air Flow Circuit High Input	<ul style="list-style-type: none"> • Open or short in mass air flow meter circuit (+B circuit) • Mass air flow meter • Engine ECU 	○	○

P0110 (DI-50)	Intake Air Temperature Circuit	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built in mass air flow meter) • Engine ECU 	○	○
P0112 (DI-50)	Intake Air Temperature Circuit Low Input	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built in mass air flow meter) • Engine ECU 	○	○
P0113 (DI-50)	Intake Air Temperature Circuit High Input	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built in mass air flow meter) • Engine ECU 	○	○
P0115 (DI-56)	Engine Coolant Temperature Circuit	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • Engine ECU 	○	○
P0116 (DI-62)	Engine Coolant Temperature Circuit Range/Performance Problem	<ul style="list-style-type: none"> • Engine coolant temperature sensor 	○	○
P0117 (DI-56)	Engine Coolant Temperature Circuit Low Input	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • Engine ECU 	○	○
P0118 (DI-56)	Engine Coolant Temperature Circuit High Input	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • Engine ECU 	○	○
P0120 (DI-63)	Throttle Pedal Position Sensor/Switch "A" Circuit	<ul style="list-style-type: none"> • Throttle control motor and sensor • Engine ECU 	○	○
P0121 (DI-74)	Throttle/Pedal Position Sensor/Switch "A" Circuit Range/Performance Problem	<ul style="list-style-type: none"> • Throttle control motor and sensor 	○	○
P0122 (DI-63)	Throttle/Pedal Position Sensor/Switch "A" Circuit Low Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Short in VTA1 circuit • Open in VC circuit • Engine ECU 	○	○
P0123 (DI-63)	Throttle/Pedal Position Sensor/Switch "A" Circuit High Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Open in VTA1 circuit • Open in E2 circuit • VC and VTA1 circuit are short-circuited • Engine ECU 	○	○
P0130*3 (DI-75)	Oxygen Sensor Circuit (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • Injector • Engine ECU 	○	○
P0133*3 (DI-85)	Oxygen Sensor Circuit Slow Response (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • Injector • Engine ECU 	○	○

DIAGNOSTICS – ENGINE

P0134 (DI-95)	Oxygen Sensor Circuit No Activity Detected (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • PCV hose connection • PCV valve and hose • Injector • Gas leakage on exhaust system • PCV piping • Engine ECU 	○	○
P0136 (DI-104)	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay 	○	○
P0150*3 (DI-75)	Oxygen Sensor Circuit (Bank 2 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • Injector • Engine ECU 	○	○
P0153*3 (DI-85)	Oxygen Sensor Circuit Slow Response (Bank 2 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • Injector • Engine ECU 	○	○
P0154 (DI-95)	Oxygen Sensor Circuit No Activity Detected (Bank 2 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • PCV hose connection • PCV valve and hose • Injector • Gas leakage on exhaust system • PCV piping • Engine ECU 	○	○
P0156 (DI-104)	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay 	○	○

P0171*3 (DI-11)	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 on exhaust system • Open or short in heated oxygen sensor (bank 1 sensor 1) circuit • Heated oxygen sensor (bank 1 sensor 1) • Heated oxygen sensor heater • EFI or ECD relay • PCV piping • Engine ECU 	○	○
P0172*3 (DI-11)	System too Rich (Bank 1)	<ul style="list-style-type: none"> • Injector leak, blockage • Mass air flow meter • Engine coolant temperature sensor • Ignition system • Fuel pressure • Gas leakage in exhaust system • Open or short in heated oxygen sensor (bank 1 sensor 1) circuit • Heated oxygen sensor (bank 1 sensor 1) • Engine ECU 	○	○
P0174*3 (DI-11)	System too Lean (Bank 2)	<ul style="list-style-type: none"> • Air induction system • Injector blockage • Mass air flow meter • Engine coolant temperature sensor • Fuel pressure • Gas leakage on exhaust system • Open or short in heated oxygen sensor (bank 2 sensor 1) circuit • Heated oxygen sensor (bank 2 sensor 1) • Heated oxygen sensor heater • EFI or ECD relay • PCV piping • Engine ECU 	○	○
P0175*3 (DI-11)	System too Rich (Bank 2)	<ul style="list-style-type: none"> • Injector leak, blockage • Mass air flow meter • Engine coolant temperature sensor • Ignition system • Fuel pressure • Gas leakage in exhaust system • Open or short in heated oxygen sensor (bank 2 sensor 1) circuit • Heated oxygen sensor (bank 2 sensor 1) • Engine ECU 	○	○
P0220 (DI-63)	Throttle/Pedal Position Sensor/ Switch "B" Circuit	<ul style="list-style-type: none"> • Throttle control motor and sensor • Engine ECU 	○	○
P0222 (DI-63)	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Short in VTA2 circuit • Open in VC circuit • Engine ECU 	○	○
P0223 (DI-63)	Throttle/Pedal Position Sensor/ Switch "B" Circuit High Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Open in VTA2 circuit • Open in E2 circuit • VC and VTA2 circuit are short-circuited • Engine ECU 	○	○

DIAGNOSTICS – ENGINE

P0230 (DI-125)	Fuel Pump Primary Circuit	<ul style="list-style-type: none"> • Open or short in fuel pump relay circuit • Fuel pump relay • Circuit opening relay • Fuel pump • Engine ECU 	–	○
P0300*3 (DI-130)	Random/Multiple Cylinder Misfire Detected	<ul style="list-style-type: none"> • 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 piping • Engine ECU 	○*2	○
P0301*3 (DI-130)	Cylinder 1 Misfire Detected		○*2	○
P0302*3 (DI-130)	Cylinder 2 Misfire Detected		○*2	○
P0303*3 (DI-130)	Cylinder 3 Misfire Detected		○*2	○
P0304*3 (DI-130)	Cylinder 4 Misfire Detected		○*2	○
P0305*3 (DI-130)	Cylinder 5 Misfire Detected		○*2	○
P0306*3 (DI-130)	Cylinder 6 Misfire Detected		○*2	○
P0307*3 (DI-130)	Cylinder 7 Misfire Detected		○*2	○
P0308*3 (DI-130)	Cylinder 8 Misfire Detected		○*2	○
P0325 (DI-148)	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • Open or short in knock sensor 1 circuit • Knock sensor 1 (looseness) • Engine ECU 	○	○
P0330 (DI-148)	Knock Sensor 2 Circuit (Bank 2)	<ul style="list-style-type: none"> • Open or short in knock sensor 2 circuit • Knock sensor 2 (looseness) • Engine ECU 	○	○
P0335 (DI-152)	Crankshaft Position Sensor "A" Circuit	<ul style="list-style-type: none"> • Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Signal plate • Engine ECU 	○	○
P0339 (DI-152)	Crankshaft Position Sensor "A" Circuit Intermittent	<ul style="list-style-type: none"> • Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Signal plate • Engine ECU 	–	○
P0340 (DI-157)	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 • LH camshaft timing pulley • Jumping teeth of timing belt • Engine ECU 	○	○
P0341 (DI-157)	Camshaft Position Sensor "A" Circuit Range/Performance (Bank 1 or Single Sensor)		○	○
P0351 (DI-161)	Ignition Coil "A" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 1 circuit from No. 1 ignition coil with igniter to engine ECU • No. 1 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0352 (DI-161)	Ignition Coil "B" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 2 circuit from No. 2 ignition coil with igniter to engine ECU • No. 2 ignition coil with igniter • Ignition system • Engine ECU 	○	○

P0353 (DI-161)	Ignition Coil "C" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 3 circuit from No. 3 ignition coil with igniter to engine ECU • No. 3 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0354 (DI-161)	Ignition Coil "D" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 4 circuit from No. 4 ignition coil with igniter to engine ECU • No. 4 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0355 (DI-161)	Ignition Coil "E" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 5 circuit from No. 5 ignition coil with igniter to engine ECU • No. 5 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0356 (DI-161)	Ignition Coil "F" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 6 circuit from No. 6 ignition coil with igniter to engine ECU • No. 6 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0357 (DI-161)	Ignition Coil "G" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 7 circuit from No. 7 ignition coil with igniter to engine ECU • No. 7 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0358 (DI-161)	Ignition Coil "H" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 8 circuit from No. 8 ignition coil with igniter to engine ECU • No. 8 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0420*3 (DI-172)	Catalyst System Efficiency Below Threshold (Bank 1)	<ul style="list-style-type: none"> • Gas leakage on exhaust system • Heated oxygen sensor (bank 1 sensor 1, 2) • Three-way catalytic converter 	○	○
P0430*3 (DI-172)	Catalyst System Efficiency Below Threshold (Bank 2)	<ul style="list-style-type: none"> • Gas leakage on exhaust system • Heated oxygen sensor (bank 2 sensor 1, 2) • Three-way catalytic converter 	○	○
P0443 (DI-179)	Evaporative Emission Control System Purge Control Valve Circuit	<ul style="list-style-type: none"> • VSV for EVAP • Open or short in VSV circuit for EVAP • Engine ECU 	○	○
P0500 (DI-182)	Vehicle Speed Sensor "A"	<ul style="list-style-type: none"> • Combination meter • Open or short in vehicle speed sensor circuit 	○	○
P0503 (DI-182)	Vehicle Speed Sensor "A" Intermittent/Erratic/High	<ul style="list-style-type: none"> • Vehicle speed sensor • Engine ECU 	–	○
P0504 (DI-185)	Brake Switch "A"/"B" Correlation	<ul style="list-style-type: none"> • Short in stop lamp switch signal circuit • STOP fuse • Stop lamp switch • Engine ECU 	–	○
P0505*3 (DI-193)	Idle Air Control System	<ul style="list-style-type: none"> • Air induction system • Electric throttle control system • PCV hose connection 	○	○
P0560 (DI-196)	System Voltage	<ul style="list-style-type: none"> • Back-up power source circuit • EFI or ECD No. 1 fuse • Engine ECU 	○	○
P0604 (DI-199)	Internal Control Module Random Access Memory (RAM) Error	<ul style="list-style-type: none"> • Engine ECU 	○	○

DIAGNOSTICS – ENGINE

P0606 (DI-199)	Engine ECU/PCM Processor	• Engine ECU	○	○
P0607 (DI-199)	Control Module Performance	• Engine ECU	○	○
P0617 (DI-200)	Starter Relay Circuit High	• Park/neutral position switch • Starter relay circuit • Ignition switch • Engine ECU	○	○
P0657 (DI-199)	Actuator Supply Voltage Circuit / Open	• Engine ECU	○	○
P2102 (DI-206)	Throttle Actuator Control Motor Circuit Low	• Open in throttle control motor and sensor circuit • Throttle control motor and sensor • Engine ECU	○	○
P2103 (DI-206)	Throttle Actuator Control Motor Circuit High	• Short in throttle control motor and sensor circuit • Throttle control motor and sensor • Throttle valve • Throttle body • Engine ECU	○	○
P2111 (DI-209)	Throttle Actuator Control System – Stuck Open	• Throttle control motor and sensor circuit • Throttle control motor and sensor • Throttle valve • Throttle body	○	○
P2112 (DI-209)	Throttle Actuator Control System – Stuck Closed	• Throttle control motor and sensor circuit • Throttle control motor and sensor • Throttle valve • Throttle body	○	○
P2118 (DI-212)	Throttle Actuator Control Motor Current Range/Performance	• Open in throttle control motor and sensor power source circuit • ETCS fuse • Engine ECU	○	○
P2119 (DI-216)	Throttle Actuator Control Throttle Body Range/Performance	• Electric throttle control system • Throttle body	○	○
P2120 (DI-218)	Throttle/Pedal Position Sensor/ Switch "D" Circuit	• Accelerator pedal position sensor • Engine ECU	○	○
P2121 (DI-225)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Range/Performance	• Accelerator pedal position sensor	○	○
P2122 (DI-218)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input	• Accelerator pedal position sensor • VCPA circuit open • VPA circuit open or ground short • Engine ECU	○	○
P2123 (DI-218)	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input	• Accelerator pedal position sensor • EPA circuit open • Engine ECU	○	○
P2125 (DI-218)	Throttle/Pedal Position Sensor/ Switch "E" Circuit	• Accelerator pedal position sensor • Engine ECU	○	○
P2127 (DI-218)	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input	• Accelerator pedal position sensor • VCP2 circuit open • VPA2 circuit open or ground short • Engine ECU	○	○
P2128 (DI-218)	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input	• Accelerator pedal position sensor • EPA circuit open • Engine ECU	○	○

P2135 (DI-63)	Throttle Pedal Position Sensor/ Switch "A" / "B" Voltage Correlation	<ul style="list-style-type: none"> • VTA1 and VTA2 circuit are short-circuited • Throttle control motor and sensor • Engine ECU 	<input type="radio"/>	<input type="radio"/>
P2138 (DI-218)	Throttle Pedal Position Sensor/ Switch "D" / "E" Voltage Correlation	<ul style="list-style-type: none"> • VPA and VPA2 circuit are short circuited • Accelerator pedal position sensor • Engine ECU 	<input type="radio"/>	<input type="radio"/>
P2195* ³ (DI-75)	Oxygen Sensor Signal Stuck Lean (Bank 1 Sensor 1)	<ul style="list-style-type: none"> • Open or short in heated oxygen sensor circuit • Heated oxygen sensor • Heated oxygen sensor heater • EFI or ECD relay • Air induction system • Fuel pressure • Injector • Engine ECU 	<input type="radio"/>	<input type="radio"/>
P2196* ³ (DI-75)	Oxygen Sensor Signal Stuck Rich (Bank 1 Sensor 1)		<input type="radio"/>	<input type="radio"/>
P2197* ³ (DI-75)	Oxygen Sensor Signal Stuck Lean (Bank 2 Sensor 1)		<input type="radio"/>	<input type="radio"/>
P2198* ³ (DI-75)	Oxygen Sensor Signal Stuck Rich (Bank 2 Sensor 1)		<input type="radio"/>	<input type="radio"/>

*1: – Check engine warning light does not light up.

☐ Check engine warning light lights up.

*2: Check engine warning light lights up or blinks.

*3: Europe only

LEADED GASOLINE ENGINE:

DTC No. (See page)	Detection Item	Trouble Area	CHK ENG*1	Memory
P0100/31 (DI-42)	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 • Engine ECU 	○	○
P0102/31 (DI-42)	Mass or Volume Air Flow Circuit Low Input	<ul style="list-style-type: none"> • Open or short in mass air flow meter circuit • Mass air flow meter • Engine ECU 	○	○
P0103/31 (DI-42)	Mass or Volume Air Flow Circuit High Input	<ul style="list-style-type: none"> • Open or short in mass air flow meter circuit (+B circuit) • Mass air flow meter • Engine ECU 	○	○
P0110/24 (DI-50)	Intake Air Temperature Circuit	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built in mass air flow meter) • Engine ECU 	○	○
P0112/24 (DI-50)	Intake Air Temperature Circuit Low Input	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built in mass air flow meter) • Engine ECU 	○	○
P0113/24 (DI-50)	Intake Air Temperature Circuit High Input	<ul style="list-style-type: none"> • Open or short in intake air temperature sensor circuit • Intake air temperature sensor (built in mass air flow meter) • Engine ECU 	○	○
P0115/22 (DI-56)	Engine Coolant Temperature Circuit	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • Engine ECU 	○	○
P0117/22 (DI-56)	Engine Coolant Temperature Circuit Low Input	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • Engine ECU 	○	○
P0118/22 (DI-56)	Engine Coolant Temperature Circuit High Input	<ul style="list-style-type: none"> • Open or short in engine coolant temperature sensor circuit • Engine coolant temperature sensor • Engine ECU 	○	○
P0120/41 (DI-63)	Throttle Pedal Position Sensor/ Switch "A" Circuit	<ul style="list-style-type: none"> • Throttle control motor and sensor • Engine ECU 	○	○
P0121/41 (DI-74)	Throttle/Pedal Position Sensor/ Switch "A" Circuit Range/Performance Problem	<ul style="list-style-type: none"> • Throttle control motor and sensor 	○	○
P0122/41 (DI-63)	Throttle/Pedal Position Sensor/ Switch "A" Circuit Low Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Short in VTA1 circuit • Open in VC circuit • Engine ECU 	○	○
P0123/41 (DI-63)	Throttle/Pedal Position Sensor/ Switch "A" Circuit High Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Open in VTA1 circuit • Open in E2 circuit • VC and VTA1 circuit are short-circuited • Engine ECU 	○	○
P0220/41 (DI-63)	Throttle/Pedal Position Sensor/ Switch "B" Circuit	<ul style="list-style-type: none"> • Throttle control motor and sensor • Engine ECU 	○	○
P0222/41 (DI-63)	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Short in VTA2 circuit • Open in VC circuit • Engine ECU 	○	○

P0223/41 (DI-63)	Throttle/Pedal Position Sensor/ Switch "B" Circuit High Input	<ul style="list-style-type: none"> • Throttle control motor and sensor • Open in VTA2 circuit • Open in E2 circuit • VC and VTA2 circuit are short-circuited • Engine ECU 	○	○
P0230/78 (DI-125)	Fuel Pump Primary Circuit	<ul style="list-style-type: none"> • Open or short in fuel pump relay circuit • Fuel pump relay • Circuit opening relay • Fuel pump • Engine ECU 	–	○
P0325//52 (DI-148)	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • Open or short in knock sensor 1 circuit • Knock sensor 1 (looseness) • Engine ECU 	○	○
P0330/55 (DI-148)	Knock Sensor 2 Circuit (Bank 2)	<ul style="list-style-type: none"> • Open or short in knock sensor 2 circuit • Knock sensor 2 (looseness) • Engine ECU 	○	○
P0335/12, 13 (DI-152)	Crankshaft Position Sensor "A" Circuit	<ul style="list-style-type: none"> • Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Signal plate • Engine ECU 	○	○
P0339/13 (DI-152)	Crankshaft Position Sensor "A" Circuit Intermittent	<ul style="list-style-type: none"> • Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Signal plate • Engine ECU 	–	○
P0340/12 (DI-157)	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 	○	○
P0341/12 (DI-157)	Camshaft Position Sensor "A" Circuit Range/Performance (Bank 1 or Single Sensor)	<ul style="list-style-type: none"> • LH camshaft timing pulley • Jumping teeth of timing belt • Engine ECU 	○	○
P0351/14 (DI-161)	Ignition Coil "A" Primary/Second- ary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 1 circuit from No. 1 ignition coil with igniter to engine ECU • No. 1 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0352/14 (DI-161)	Ignition Coil "B" Primary/Second- ary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 2 circuit from No. 2 ignition coil with igniter to engine ECU • No. 2 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0353/15 (DI-161)	Ignition Coil "C" Primary/Second- ary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 3 circuit from No. 3 ignition coil with igniter to engine ECU • No. 3 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0354/15 (DI-161)	Ignition Coil "D" Primary/Second- ary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 4 circuit from No. 4 ignition coil with igniter to engine ECU • No. 4 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0355/14 (DI-161)	Ignition Coil "E" Primary/Second- ary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 5 circuit from No. 5 ignition coil with igniter to engine ECU • No. 5 ignition coil with igniter • Ignition system • Engine ECU 	○	○

DIAGNOSTICS – ENGINE

P0356/14 (DI-161)	Ignition Coil "F" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 6 circuit from No. 6 ignition coil with igniter to engine ECU • No. 6 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0357/15 (DI-161)	Ignition Coil "G" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 1 and IGT 7 circuit from No. 7 ignition coil with igniter to engine ECU • No. 7 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0358/15 (DI-161)	Ignition Coil "H" Primary/Secondary Circuit	<ul style="list-style-type: none"> • Open or short in IGF 2 and IGT 8 circuit from No. 8 ignition coil with igniter to engine ECU • No. 8 ignition coil with igniter • Ignition system • Engine ECU 	○	○
P0500/42 (DI-182)	Vehicle Speed Sensor "A"	<ul style="list-style-type: none"> • Combination meter • Open or short in vehicle speed sensor circuit • Vehicle speed sensor • Engine ECU 	○	○
P0504/51 (DI-185)	Brake Switch "A"/"B" Correlation	<ul style="list-style-type: none"> • Short in stop lamp switch signal circuit • STOP fuse • Stop lamp switch • Engine ECU 	-	○
P0604/89 (DI-199)	Internal Control Module Random Access Memory (RAM) Error	<ul style="list-style-type: none"> • Engine ECU 	○	○
P0606/89 (DI-199)	Engine ECU/PCM Processor	<ul style="list-style-type: none"> • Engine ECU 	○	○
P0607/89 (DI-199)	Control Module Performance	<ul style="list-style-type: none"> • Engine ECU 	○	○
P0657/89 (DI-199)	Actuator Supply Voltage Circuit / Open	<ul style="list-style-type: none"> • Engine ECU 	○	○
P2102/41 (DI-206)	Throttle Actuator Control Motor Circuit Low	<ul style="list-style-type: none"> • Open in throttle control motor and sensor circuit • Throttle control motor and sensor • Engine ECU 	○	○
P2103/41 (DI-206)	Throttle Actuator Control Motor Circuit High	<ul style="list-style-type: none"> • Short in throttle control motor and sensor circuit • Throttle control motor and sensor • Throttle valve • Throttle body • Engine ECU 	○	○
P2111/41 (DI-209)	Throttle Actuator Control System – Stuck Open	<ul style="list-style-type: none"> • Throttle control motor and sensor circuit • Throttle control motor and sensor • Throttle valve • Throttle body 	○	○
P2112/41 (DI-209)	Throttle Actuator Control System – Stuck Closed	<ul style="list-style-type: none"> • Throttle control motor and sensor circuit • Throttle control motor and sensor • Throttle valve • Throttle body 	○	○
P2118/89 (DI-212)	Throttle Actuator Control Motor Current Range/Performance	<ul style="list-style-type: none"> • Open in throttle control motor and sensor power source circuit • ETCS fuse • Engine ECU 	○	○
P2119/89 (DI-216)	Throttle Actuator Control Throttle Body Range/Performance	<ul style="list-style-type: none"> • Electric throttle control system • Throttle body 	○	○
P2120/19 (DI-218)	Throttle/Pedal Position Sensor/ Switch "D" Circuit	<ul style="list-style-type: none"> • Accelerator pedal position sensor • Engine ECU 	○	○

P2121/19 (DI-225)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Range/Performance	• Accelerator pedal position sensor	○	○
P2122/19 (DI-218)	Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input	• Accelerator pedal position sensor • VCPA circuit open • VPA circuit open or ground short • Engine ECU	○	○
P2123/19 (DI-218)	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input	• Accelerator pedal position sensor • EPA circuit open • Engine ECU	○	○
P2125/19 (DI-218)	Throttle/Pedal Position Sensor/ Switch "E" Circuit	• Accelerator pedal position sensor • Engine ECU	○	○
P2127/19 (DI-218)	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input	• Accelerator pedal position sensor • VCP2 circuit open • VPA2 circuit open or ground short • Engine ECU	○	○
P2128/19 (DI-218)	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input	• Accelerator pedal position sensor • EPA circuit open • Engine ECU	○	○
P2135/41 (DI-63)	Throttle Pedal Position Sensor/ Switch "A" / "B" Voltage Correlation	• VTA1 and VTA2 circuit are short-circuited • Throttle control motor and sensor • Engine ECU	○	○
P2138/19 (DI-218)	Throttle Pedal Position Sensor/ Switch "D" / "E" Voltage Correlation	• VPA and VPA2 circuit are short circuited • Accelerator pedal position sensor • Engine ECU	○	○

*1: – Check engine warning light does not lights up.

○ Check engine warning light lights up.

*2: Check engine warning light lights up or blinks.

ETCS Trouble Codes

DTC No. (See Page)	Detection Item	Trouble Area	ETCS* 2nd START*	Memory
21 (DI-206)	Throttle Control Motor Circuit Malfunction	• Same as DTC No. P2102/41	○	○
23 (DI-212)	ETCS Actuator Power Source Circuit Malfunction	• Same as DTC No. P2118/89	○	○
24 (DI-212)	ETCS Actuator Power Source Circuit Malfunction	• Same as DTC No. P2103/41	○	○
31 (DI-209)	Throttle Control Motor Lock Malfunction	• Same as DTC No. P2111/89, P2112/89	○	○
32, 38, 39 (DI-216)	Electric Throttle Control System Malfunction	• Same as DTC No. P2119/89	○	○
33, 36 (DI-199)	ECU Malfunction (ETCS)	• Same as DTC No. P0606/89	○	○
34, 35 (DI-199)	Control Module Performance	• Same as DTC No. P0607/89	○	○

*: ○ ... Check ETCS indicator light (M/T) or 2nd START indicator light (A/T) lights up