

# DIAGNOSTIC TROUBLE CODE CHART

## ENGINE TROUBLE CODES

### 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 that code listed in the table below. For details of each code, turn to the page referred to under the "See Page" for the respective DTC No. in the DTC chart.

\*1:  ••• CHECK ENG is indicated.

-  ••• CHECK ENG is not indicated.

\*2: Only LH bank ECU is detected.

\*3: Only RH bank ECU is detected.

\*4: Both LH and RH bank ECU are detected.

\*5: Replace Engine ECU

DTC No. (See Page)	Detection Item	Trouble Area	CHECK ENG*1	Memory
P0100/31*4 (DI-29)	Air Flow Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in air flow meter circuit</li> <li>• Air flow meter</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0110/24*4 (DI-36)	Intake Air Temp. Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in intake air temp. sensor circuit</li> <li>• Intake air temp. sensor (inside air flow meter)</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0115/22*4 (DI-42)	Water Temp. Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in water temp. sensor circuit</li> <li>• Water temp. sensor</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0120/41*4 (DI-48)	Throttle Position Sensor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in throttle position sensor circuit</li> <li>• Throttle position sensor</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0130/21*4 (DI-55)	Oxygen Sensor Circuit Malfunction (Bank 1 (2) Sensor 1)	<ul style="list-style-type: none"> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Heated oxygen sensor</li> <li>• Fuel trim malfunction</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0135/21*4 (DI-61)	Oxygen Sensor Heater Circuit Malfunction (Bank 1 (2) Sensor 1)	<ul style="list-style-type: none"> <li>• Open or short in heater circuit of heated oxygen sensor</li> <li>• Heated oxygen sensor heater</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0136/27*4 (DI-63)	Oxygen Sensor Circuit Malfunction (Bank 1 (2) Sensor 2)	<ul style="list-style-type: none"> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Heated oxygen sensor</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0141/27*4 (DI-61)	Oxygen Sensor Heater Circuit Malfunction (Bank 1 (2) Sensor 2)	<ul style="list-style-type: none"> <li>• Same as DTC No. P0135/21</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
P0171/25*4 (DI-65)	Fuel Trim System too Lean	<ul style="list-style-type: none"> <li>• Air intake (hose loose)</li> <li>• Gas leakage on exhaust system</li> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Fuel line pressure</li> <li>• Injector blockage</li> <li>• Heated oxygen sensor</li> <li>• Air flow meter</li> <li>• Water temp. sensor</li> <li>• Engine ECU</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

P0172/26 (DI-65)	Fuel Trim System Too Rich	<ul style="list-style-type: none"> <li>• Injector leak, blockage</li> <li>• Air flow meter</li> <li>• Water temp. sensor</li> <li>• Ignition system</li> <li>• Fuel line pressure</li> <li>• Gas leakage on exhaust system</li> <li>• Open or short in heated oxygen sensor circuit</li> <li>• Heated oxygen sensor</li> <li>• Engine ECU</li> </ul>	○	○
P0325/52*4 (DI-69)	Knock Sensor 1(2) Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in knock sensor 1(2) circuit</li> <li>• Knock sensor 1(2) looseness</li> <li>• Knock sensor 1(2)</li> <li>• Engine ECU</li> </ul>	○	○
P0330/55*4 (DI-69)	Knock Sensor 3(4) Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in knock sensor 2 circuit</li> <li>• Knock sensor 3(4) looseness</li> <li>• Knock sensor 3(4)</li> <li>• Engine ECU</li> </ul>	○	○
P0335/12, 13*4 (DI-73)	Crankshaft Position Sensor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in crankshaft position sensor circuit</li> <li>• Crankshaft position sensor</li> <li>• Signal plate</li> <li>• Engine ECU</li> </ul>	○	○
P0340/12, 13*4 (DI-76)	Camshaft Position Sensor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in camshaft position sensor circuit</li> <li>• Camshaft position sensor</li> <li>• Engine ECU</li> </ul>	○	○
P0500/42*2 (DI-78)	Vehicle Speed Sensor Malfunction	<ul style="list-style-type: none"> <li>• Open or short in vehicle speed sensor circuit</li> <li>• Vehicle speed sensor</li> <li>• Combination meter</li> <li>• Engine ECU</li> </ul>	○	○
P0605/95*5	Engine ECU Internal failure	<ul style="list-style-type: none"> <li>• Engine ECU</li> </ul>	○	○
P1200/78*3 (DI-97)	Fuel Pump Relay/Engine ECU Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in fuel pump relay circuit</li> <li>• Fuel pump relay</li> <li>• Fuel pump resistor</li> <li>• Engine ECU</li> </ul>	-	○
P1202/79*4 (DI-100)	Fuel Pump Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in fuel pump circuit</li> <li>• Fuel pump change relay</li> <li>• Fuel pump</li> <li>• Engine ECU</li> </ul>	○	○
P1300/14*4 (DI-102)	Igniter Circuit Malfunction	<ul style="list-style-type: none"> <li>• Open or short in IGF or IGT circuit from igniter to engine ECU</li> <li>• Igniter</li> <li>• EFI main relay</li> <li>• Engine ECU</li> </ul>	○	○
P1335/13*4 (DI-109)	Crankshaft Position Sensor Circuit Malfunction (during engine running)	<ul style="list-style-type: none"> <li>• Open or short in crankshaft position sensor circuit</li> <li>• Crankshaft position sensor</li> <li>• Signal plate</li> <li>• Engine ECU</li> </ul>	-	○
P1346/18*4 (DI-110)	VVT Sensor Circuit Range/Performance Problem	<ul style="list-style-type: none"> <li>• Mechanical system malfunction (Jumping teeth to timing belt, belt stretched)</li> <li>• Engine ECU</li> </ul>	○	○
P1349/59*4 (DI-111)	VVT System Malfunction	<ul style="list-style-type: none"> <li>• Valve timing</li> <li>• Oil control valve</li> <li>• VVT controller assembly</li> <li>• Engine ECU</li> </ul>	○	○

## DIAGNOSTICS – ENGINE

P1630/87 (DI-119)	Malfunction in Skid Control ECU Communication Circuit	<ul style="list-style-type: none"> <li>• Wire harness</li> <li>• Engine ECU</li> <li>• Skid control ECU</li> </ul>	-	○
P1640/89*4 (DI-120)	Communication Malfunction No.1	<ul style="list-style-type: none"> <li>• Wire harness</li> <li>• Engine ECU</li> </ul>	○	○
P1641/89*4 (DI-121)	Communication Malfunction No.2	<ul style="list-style-type: none"> <li>• Wire harness</li> <li>• Engine ECU</li> </ul>	○	○
P1656/39*4 (DI-122)	OCV Circuit Malfunction (Bank1)	<ul style="list-style-type: none"> <li>• Open or short in Oil control valve circuit</li> <li>• Oil control valve</li> <li>• Engine ECU</li> </ul>	○	○
B1300/56*3 (DI-25)	Water Temp. Sensor (For Hydraulic Cooling Fan) Circuit Malfunction	<ul style="list-style-type: none"> <li>• Water Temp. Sensor (for hydraulic cooling fan)</li> <li>• Engine ECU</li> </ul>	-	○
B1305/57*3 (DI-27)	Hydraulic Gear Motor Control Solenoid Circuit Malfunction	<ul style="list-style-type: none"> <li>• Hydraulic Motor Gear Pump</li> <li>• Engine ECU</li> </ul>	-	○

## ECTS TROUBLE CODES (When not use hand-held tester)

DTC No. (See Page)	Detection Item	Trouble Area	Multi Warning Light	Memory
P1127/11 (DI-93)	ETCS Actuator Power Source Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle control relay</li> <li>• THRO LH (THRO RH) fuse</li> <li>• Engine ECU</li> <li>• Wire harness and connector</li> </ul>	○	○
P1127/12 (DI-93)	ETCS Actuator Power Source Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle control relay</li> <li>• Engine ECU</li> <li>• Wire harness and connector</li> </ul>	○	○
P1125/21 (DI-90)	Throttle Control Motor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle control motor</li> <li>• Engine ECU</li> <li>• Open or short in throttle control motor circuit</li> </ul>	○	○
P1125/22 (DI-90)	Throttle Control Motor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle control motor</li> <li>• Engine ECU</li> <li>• Open or short in throttle control motor circuit</li> </ul>	○	○
P1125/23 (DI-90)	Throttle Control Motor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle control motor</li> <li>• Engine ECU</li> <li>• Wire harness and connector</li> </ul>	○	○
P1125/24 (DI-90)	Throttle Control Motor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle body</li> <li>• Throttle control motor</li> </ul>	○	○
P0120/31 (DI-48)	Throttle Position Sensor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle position sensor</li> <li>• Engine ECU</li> <li>• Open or short in throttle position sensor circuit</li> </ul>	○	○
51	ETCS Actuator Power Source Circuit Malfunction	<ul style="list-style-type: none"> <li>• Throttle control relay</li> <li>• Engine ECU</li> <li>• Wire harness and connector</li> </ul>	-	○
P1127/52 (DI-93)			○	○
P1121/91 (DI-81)	Accelerator Pedal Position Sensor Circuit Malfunction	<ul style="list-style-type: none"> <li>• Accelerator pedal sensor</li> <li>• Engine ECU</li> <li>• Wire harness and connector</li> </ul>	○	○