



DTC Summaries

NipponDenso V12 Engine Management

OBD II MONITORING CONDITIONS:

When testing for DTC reoccurrence, it can be determined if the Service Drive Cycle was of sufficient length by performing a PDU "Systems Readiness Test".

The Systems Readiness Test occurs automatically when the PDU reads the DTCs from the ECM memory and reports if a full OBD check has or has not been completed since the memory was last cleared.

If DTC P1000 is stored in memory, the on-board diagnostic tests **have not** been completed;
if DTC P1111 is stored in memory, all on-board diagnostic tests **have** been completed.

PDU DATALOGGER ACRONYMS

ACCLTCH	Compressor clutch	HO2S2AM	Oxygen sensor heater Bank A downstream
ACLOAD	Air conditioning request	HO2S2B	Heated oxygen sensor Bank B downstream
AIRPUMP	Secondary air injection pump (AIRP) relay	HO2S2BM	Oxygen sensor heater Bank B downstream
AIRVLV	Air valve	HTDSC	Heated windshield request
BATT	Battery voltage	IAT	Intake air temperature
DTCS	Number of DTCs flagged	IDLE	Idle switch
ECT	Engine coolant temperature	ISCPOSA	Idle air control valve (IAC) Bank A
ETS	Engine torque reduction	ISCPOSB	Idle air control valve (IAC) Bank B
EVAPPA	Evaporative emission (purge) valve Bank A	LOADINH	Load inhibit
EVAPPB	Evaporative emission (purge) valve Bank B	MAPSA	Manifold absolute pressure sensor Bank A
FUEL	Fuel level	MAPSB	Manifold absolute pressure sensor Bank B
GEAR	Park / Neutral	MIL	CHECK ENGINE MIL
HO2S1A	Heated oxygen sensor Bank A upstream	PSTEER	Power steering switch
HO2S1AM	Oxygen sensor heater Bank A upstream	RPM	Engine speed
HO2S1B	Heated oxygen sensor Bank B upstream	TPS	Throttle position sensor
HO2S1BM	Oxygen sensor heater Bank B upstream	CRANK	Engine cranking signal
HO2S2A	Heated oxygen sensor Bank A downstream	VSS	Vehicle speed

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0105	HACS circuit malfunction	Ignition ON > 1 second	1	HACS failure (internal ECM fault)
P0106	A Bank MAPS range / performance	Engine at normal operating temperature; idle 17 minutes then accelerate	2	Throttle rod disconnected or incorrectly adjusted Leaking or blocked hose between MAPS and intake manifold Blocked gas filter Failed sensor element
P0107	A Bank MAPS sense circuit low voltage	Ignition ON > 5 seconds	1	MAPS disconnected MAPS to ECM sense wire open circuit or short circuit to ground MAPS to ECM power supply wire open circuit or short circuit to ground MAPS failure
P0108	A Bank MAPS sense circuit high voltage	Ignition ON > 5 seconds	1	MAPS to ECM signal ground wire open circuit MAPS to ECM wiring (supply, sense, signal ground) short circuit to each other MAPS sensing circuit short circuit to B+ voltage MAPS failure
P0111	IATS range / performance	Engine idle > 30 seconds	2	IATS power supply failure; short or open circuit IATS failure
P0112	IATS sense circuit high voltage (low air temperature)	Ignition ON > 5 seconds	1	IATS disconnected IATS to ECM wiring open circuit or high resistance IATS sensing circuit short circuit to B+ voltage IATS failure
P0113	IATS sense circuit low voltage (high air temperature)	Ignition ON > 5 seconds	1	IATS to ECM wiring short circuit to ground IATS failure
P0116	ECTS range / performance	Engine at normal operating temperature; idle > 20 minutes	2	Low coolant level Engine thermostat stuck open ECTS connector high resistance when hot ECTS element failure

* Number of consecutive trips required to activate CHECK ENGINE MIL.

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0117	ECTS sense circuit high voltage (low coolant temperature)	Ignition ON > 5 seconds	1	ECTS disconnected ECTS to ECM wiring open circuit or high resistance ECTS sensing circuit short circuit to B+ voltage ECTS failure
P0118	ECTS sense circuit low voltage (high coolant temperature)	Ignition ON > 5 minutes	1	ECTS to ECM wiring short circuit to ground ECTS failure
P0121	TPS range / performance	Engine at normal operating temperature; drive steadily at 45 mph (72 km/h) (engine between 1500 – 2000 rpm) > 5 seconds	2	Blocked air filter Incorrect TPS setting or loose mounting screws Incorrect throttle linkage setting TPS power supply failure MAPS signal incorrect or not sensed IATS signal incorrect or not sensed TPS failure
P0122	TPS sense circuit low voltage	Ignition ON > 5 seconds	1	TPS disconnected TPS to ECM position sense wire open circuit or short circuit to ground TPS to ECM power supply wire open circuit or short circuit to ground TPS failure
P0123	TPS sense circuit high voltage	Ignition ON > 5 seconds	1	TPS to ECM signal ground wire open circuit TPS to ECM wiring (supply, sense, signal ground) short circuit to each other TPS sensing circuit short circuit to B+ voltage TPS failure
P0125	Insufficient coolant temperature for closed loop fuel control	Engine at normal operating temperature; idle > 20 minutes	2	Low coolant level Engine thermostat stuck open ECTS connector high resistance when hot ECTS failure

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0131	HO2S sense circuit low voltage – A bank, upstream (1)	Engine at normal operating temperature; drive steadily at 56 mph (90 km/h) > 1 minute (DTC P0131 may flag with warm engine @ 2000 rpm for 3 minutes)	2	HO2S disconnected HO2S to ECM wiring open circuit HO2S short circuit to ground HO2S failure
P0132	HO2S sense circuit high voltage – A bank, upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	HO2S sensing circuit short circuit to B+ voltage HO2S ground (BRD – braided shield) open circuit HO2S failure
P0133	HO2S sense circuit slow response – A bank, upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Engine misfire HO2S disconnected HO2S mechanical damage HO2S to ECM wiring open circuit HO2S sensing circuit short circuit to B+ voltage HO2S short circuit to ground HO2S ground (BRD – braided shield) open circuit Exhaust leak Low exhaust gas temperature Injector flow partially blocked Catalyst efficiency decrease HO2S failure HO2S heater circuit failure
P0134	HO2S sense circuit no activity – A bank, upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Engine misfire HO2S disconnected HO2S mechanical damage HO2S to ECM wiring open circuit HO2S sensing circuit short circuit to B+ voltage HO2S short circuit to ground HO2S ground (BRD – braided shield) open circuit Exhaust leak Low exhaust gas temperature Injector flow partially blocked Catalyst efficiency decrease HO2S failure

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0135	HO2S heater circuit malfunction – A bank, upstream (1)	Engine run > 45 seconds, idle	2	HO2S disconnected No HO2S heater power supply HO2S heater to power supply wiring open circuit HO2S heater to ECM wiring short circuit HO2S heater to ECM wiring open circuit HO2S failure
P0137	HO2S sense circuit low voltage – A bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0131 possible causes
P0138	HO2S sense circuit high voltage – A bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph 90 km/h) > 1 minute	2	Refer to P0132 possible causes
P0139	HO2S sense circuit slow response – A bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0133 possible causes
P0140	HO2S sense circuit no activity – A bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0134 possible causes
P0141	HO2S heater circuit malfunction – A bank, downstream (2)	Engine run > 45 seconds, idle	2	Refer to P0135 possible causes
P0151	HO2S sense circuit low voltage – B bank, upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute (DTC P0131 may flag with warm engine @ 2000 rpm for 3 minutes)	2	Refer to P0131 possible causes
P0152	HO2S sense circuit high voltage – B bank, upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0132 possible causes
P0153	HO2S sense circuit slow response – B bank), upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0133 possible causes
P0154	HO2S sense circuit no activity – B bank, upstream (1)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0134 possible causes
P0155	HO2S heater circuit malfunction – B bank, upstream (1)	Engine run > 45 seconds, idle	2	Refer to P0135 possible causes

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0157	HO2S sense circuit low voltage – B bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0131 possible causes
P0158	HO2S sense circuit high voltage – B bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0132 possible causes
P0159	HO2S sense circuit slow response – B bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0133 possible causes
P0160	HO2S sense circuit no activity – B bank, downstream (2)	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0134 possible causes
P0161	HO2S heater circuit malfunction – B bank, downstream (2)	Engine run > 45 seconds, idle	2	Refer to P0135 possible causes
P0171	A Bank combustion too lean –	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Engine misfire Fuel filter, system blockage Fuel injector blockage Fuel injector wiring open circuit Fuel pressure regulator failure (low fuel pressure) Low fuel pump output HO2S harness wiring condition fault Exhaust leak (before catalyst) ECM receiving incorrect signal from one or more of the following components: ECTS, MAPS, TPS, IATS
P0172	A Bank combustion too rich	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Blocked air filter Fuel system return pipe blockage Leaking fuel injector Fuel injector harness short circuit to ground Fuel pressure regulator failure (high fuel pressure) ECM receiving incorrect signal from one or more of the following components: ECTS, MAPS, TPS, IATS

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0174	B Bank combustion too lean	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0171 possible causes
P0175	B Bank combustion too rich	Engine at normal operating temperature; drive at 56 mph (90 km/h) > 1 minute	2	Refer to P0172 possible causes
P0201	Fuel injector circuit malfunction – A bank, cylinder 1	Engine at normal operating temperature; engine run > 10 seconds (DTC P0201 may flag at fast idle)	2	Injector disconnected Injector harness wiring open or short circuit Injector failure
P0202	Fuel injector circuit malfunction – A bank, cylinder 2	Engine at normal operating temperature; engine run > 10 seconds (DTC P0202 may flag at fast idle)	2	Refer to P0201 possible causes
P0203	Fuel injector circuit malfunction – A bank, cylinder 3	Engine at normal operating temperature; engine run > 10 seconds (DTC P0203 may flag at fast idle)	2	Refer to P0201 possible causes
P0204	Fuel injector circuit malfunction – A bank, cylinder 4	Engine at normal operating temperature; engine run > 10 seconds (DTC P0204 may flag at fast idle)	2	Refer to P0201 possible causes
P0205	Fuel injector circuit malfunction – A bank, cylinder 5	Engine at normal operating temperature; engine run > 10 seconds (DTC P0205 may flag at fast idle)	2	Refer to P0201 possible causes
P0206	Fuel injector circuit malfunction – A bank, cylinder 6	Engine at normal operating temperature; engine run > 10 seconds (DTC P0206 may flag at fast idle)	2	Refer to P0201 possible causes
P0207	Fuel injector circuit malfunction – B bank, cylinder 1	Engine at normal operating temperature; engine run > 10 seconds (DTC P0207 may flag at fast idle)	2	Refer to P0201 possible causes
P0208	Fuel injector circuit malfunction – B bank, cylinder 2	Engine at normal operating temperature; engine run > 10 seconds (DTC P0208 may flag at fast idle)	2	Refer to P0201 possible causes

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0209	Fuel injector circuit malfunction – B bank, cylinder 3	Engine at normal operating temperature; engine run > 10 seconds (DTC P0209 may flag at fast idle)	2	Refer to P0201 possible causes
P0210	Fuel injector circuit malfunction – B bank, cylinder 4	Engine at normal operating temperature; engine run > 10 seconds (DTC P0209 may flag at fast idle)	2	Refer to P0201 possible causes
P0211	Fuel injector circuit malfunction – B bank, cylinder 5	Engine at normal operating temperature; engine run > 10 seconds (DTC P0209 may flag at fast idle)	2	Refer to P0201 possible causes
P0212	Fuel injector circuit malfunction – B bank, cylinder 6	Engine at normal operating temperature; engine run > 10 seconds (DTC P0209 may flag at fast idle)	2	Refer to P0201 possible causes
P0300**	Random misfire detected	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Fuel contaminated Fuel injector(s) blocked or leaking Ignition secondary circuit breakdown (spark plugs, leads) Ignition coil pack failure Fuel pressure low Cylinder compression low Broken valve spring(s)
P0301**	Misfire detected – A bank, cylinder 1	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0302**	Misfire detected – A bank, cylinder 2	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0303**	Misfire detected – A bank, cylinder 3	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes

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** If DTCs P1313, P1314 or P1316 are flagged, one or more of the cylinder identification DTCs will also be flagged (random misfire P0300 or individual cylinder P0301 – P0306).

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0304**	Misfire detected – A bank, cylinder 4	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0305**	Misfire detected – A bank, cylinder 5	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0306**	Misfire detected – A bank, cylinder 6	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0307**	Misfire detected – B bank, cylinder 1	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0308**	Misfire detected – B bank, cylinder 2	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0309**	Misfire detected – B bank, cylinder 3	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0310**	Misfire detected – B bank, cylinder 4	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0311**	Misfire detected – B bank, cylinder 5	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0312**	Misfire detected – B bank, cylinder 6	Engine at idle > 2 minutes; drive below 2000 rpm > 2 minutes	1 or 2	Refer to P0300 possible causes
P0335	RPM Sensor circuit malfunction	Start engine, idle	1	RPM Sensor disconnected RPM Sensor sensing circuit open circuit, short circuit to ground or B+ voltage RPM Sensor failure

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0336	RPM Sensor range / performance	Start engine, idle	1	Foreign material on RPM Sensor face RPM Sensor / flywheel disc alignment Damaged flywheel disc Excessive crankshaft end float RPM Sensor failure
P0340	CMPS circuit malfunction	Start engine, idle	1	CMPS disconnected CMPS sensing circuit open circuit, short circuit to ground or B+ voltage Damaged or missing CMPS camshaft peg CMPS failure
P0410	AIR System malfunction	Engine at normal operating temperature; start, idle > 30 seconds	2	AIR pump drive belt failure AIR hose(s) failure AIR relay power supply failure AIR relay failure AIR pump clutch failure AIR pump failure AIR wiring harness open or short circuit ASV disconnected (vacuum) ASV failure AIR VSV wiring harness open or short circuit AIR check valve failure
P0414	AIR system VSV circuit short circuit	Fuel system tests complete (Refer to DTCs P0171 and P0172)	2	Refer to P0410 possible causes
P0420	Catalyst efficiency below threshold – A bank	Engine at normal operating temperature; drive steadily at 35 mph (56 km/h) > 3 minutes	3	Fuel contamination Exhaust system air leak (before catalyst) Engine misfire Catalyst mechanical damage Downstream HO2S fault present but undetected Excessive oil consumption

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0430	Catalyst efficiency below threshold – B bank	Engine at normal operating temperature; drive steadily at 35 mph (56 km/h) > 3 minutes	3	Refer to P0420 possible causes
P0441	EVAP system incorrect purge flow – A bank	Engine at normal operating temperature; vehicle stopped, idle > 2 minutes; fuel tank < 1/2 full; A/C OFF	2	A and B Bank EVAP valve harness connectors reversed EVAP purge hose blocked or disconnected EVAP canister atmosphere vent blocked EVAP valve failure
P0443	EVAP valve circuit malfunction – A bank	Ignition ON, not cranking > 10 seconds	2	EVAP valve disconnected ECM to EVAP valve "drive" circuit short circuit to EVAP valve "supply" circuit ECM to EVAP valve "drive" circuit short circuit to B+ voltage EVAP valve failure
P0461	Fuel level sense signal performance	Drive > 30 miles (48 km)	2	Instrument pack to ECM fuel level signal circuit; open circuit, short circuit to ground Instrument pack fault (incorrect fuel level signal) Fuel level sensor failure
P0462	Fuel level sense signal low voltage	Ignition ON > 1 minute	1	Instrument pack to ECM fuel level signal circuit; open circuit, short circuit to ground Instrument pack fault (incorrect fuel level signal) Fuel level sensor failure
P0463	Fuel level sense signal high voltage	Ignition ON > 1 minute	1	Instrument pack to ECM fuel level signal circuit; short circuit to B+ voltage Instrument pack fault (incorrect fuel level signal) Fuel level sensor failure
P0500	Vehicle speed sensor malfunction (signal from TCM)	Engine at normal operating temperature; drive at engine speed > 1600 rpm; release throttle and decelerate 1600 – 1400 rpm in DRIVE, without using brakes	2	VSS Wiring harness between TCM and ECM open or short circuit VSS failure

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P0506	Idle air control system: rpm lower than expected – A bank	Engine at normal operating temperature; vehicle stopped, idle > 3 minutes	2	IACV hoses blocked or leaking IACV disconnected IACV failure IACV stuck closed (foreign material) IACV “drive” circuits open or short circuit Undetected MAPS fault (hose blocked or disconnected) Incorrect fuel pressure Misfire Seized power steering pump Seized air conditioning compressor
P0507	Idle air control system: rpm higher than expected – A bank	Engine at normal operating temperature; vehicle stopped, idle > 3 minutes	2	IACV disconnected Brake servo diaphragm failure Intake manifold leak IACV gasket air leak IACV stuck open (foreign material) IACV “drive” circuits open or short circuit Undetected MAPS fault (hose blocked or disconnected) Incorrect fuel pressure TPS setting incorrect Throttle linkage / valve setting incorrect
P0603	ECM PECUS programmed data corrupted	Ignition ON > 5 seconds	1	ECM failure
P0605	ECM ROM data corrupted	Ignition ON > 5 seconds	1	ECM failure
P1000	System Readiness Check	OBD tests not complete since last memory clear	1 **	System Readiness Check report only
P1106	B Bank MAPS range / performance	Engine at normal operating temperature; idle > 4 seconds then accelerate	2	Throttle rod disconnected or incorrectly adjusted Leaking or blocked hose between MAPS and intake manifold Blocked gas filter Failed sensor element

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** DTC does not activate the CHECK ENGINE MIL.

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P1107	B Bank MAPS sense circuit low voltage	Ignition ON > 5 seconds	1	MAPS disconnected MAPS to ECM sense wire open circuit or short circuit to ground MAPS to ECM power supply wire open circuit or short circuit to ground MAPS failure
P1108	B Bank MAPS sense circuit high voltage	Ignition ON > 5 seconds	1	MAPS to ECM wiring (supply, sense, signal ground) short circuit to each other MAPS sensing circuit short circuit to B+ voltage MAPS failure
P1111	System Readiness Check	OBD tests completed since last memory clear	1 **	System Readiness Check report only
P1198	Fuel level sense circuit high voltage	Ignition ON > 1 minute	1	Fuel level sense wire open circuit, short circuit to B+ voltage Fuel level sensor failure
P1199	Fuel level sense circuit low voltage / malfunction	Ignition ON > 1 minute	1	Fuel level sense wire short circuit to ground Fuel level sensor failure
P1240	MAPS and TPS power supply malfunction	Engine at normal operating temperature; MAPS and TPS tests complete	2	A Bank MAPS, B Bank MAPS and TPS failure DTCs flagged at once Refer to P1241 and P1242 possible causes
P1241	MAPS and TPS power supply circuit low voltage	Ignition ON > 5 seconds	2	MAPS and TPS sensor power supply wire(s) short circuit to ground
P1242	MAPS and TPS power supply circuit high voltage	Ignition ON > 5 seconds	2	MAPS and TPS sensor power supply wire(s) high resistance or short circuit MAPS and TPS sensor power supply wire(s) short circuit to B+ voltage
P1244	HACS range / performance	Ignition ON > 5 seconds; not cranking	2	HACS failure (ECM fault)

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P1245	Engine crank signal low voltage	Start engine, idle	2	Starter relay coil to ECM wire (parallel circuit to BPM) open circuit
P1246	Engine crank signal high voltage	Engine at normal operating temperature; accelerate from stop to 31 mph (50 km/h); decelerate to stop; repeat 5 times	2	Starter relay coil to ECM wire (parallel circuit to BPM) short circuit to B+ voltage Body Processor Module (BPM) fault
P1313**	Catalyst damage misfire detected – A bank	Drive with rpm below 2100 at steady speed > 2 minutes	1	Refer to P0300 possible causes
P1314**	Catalyst damage misfire detected – B bank	Drive with rpm below 2100 at steady speed > 2 minutes	1	Refer to P0300 possible causes
P1316**	Misfire excess emission	Drive with rpm below 2100 at steady speed > 2 minutes	2	Refer to P0300 possible causes
P1335	CKPS circuit malfunction	Engine run > 5 seconds, idle	1	CKPS disconnected CKPS sensing circuit open circuit, short circuit to ground or B+ voltage CKPS / crankshaft disc alignment Damaged or missing pulser ring tooth CKPS failure
P1336	CKPS range / performance	Engine run > 5 seconds, idle	1	Foreign material on CKPS face CKPS / crankshaft disc alignment Damaged or missing pulser ring tooth CKPS failure
P1367	Ignition monitor – A bank	Engine run > 10 seconds, idle	1	Ignition module disconnected Ignition module to ECM harness open circuit, short circuit to ground or B+ voltage Ignition coil failure Ignition coil relay failure Ignition module failure

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P1368	Ignition monitor – B bank	Engine run > 10 seconds, idle	1	Refer to P1367 possible causes
P1441	EVAP system incorrect purge flow – B bank	Engine at normal operating temperature; vehicle stopped, idle > 2 minutes; fuel tank < 1/2 full; A/C OFF	2	Refer to P0441 possible causes
P1443	EVAP valve circuit malfunction – B bank	Ignition ON, not cranking > 10 seconds	2	Refer to P0433 possible causes
P1506	Idle air control system: rpm lower than expected – B bank	Engine at normal operating temperature; vehicle stopped, idle > 3 minutes	2	Refer to P0506 possible causes
P1507	Idle air control system: rpm higher than expected – B bank	Engine at normal operating temperature; vehicle stopped, idle > 3 minutes	2	Refer to P0507 possible causes
P1512	TPS Idle switch sense circuit low voltage	Accelerate from stop to > 20 mph (32 km/h); decelerate to stop; repeat 5 times	2	TPS incorrect setting TPS harness short circuit to ground TPS harness short circuit across wires
P1513	TPS Idle switch sense circuit high voltage	Accelerate from stop to > 20 mph (32 km/h); decelerate to stop; repeat 5 times	2	TPS incorrect setting TPS disconnected TPS harness open circuit
P1516	Gear change NEUTRAL / DRIVE malfunction	Drive steadily at 55 mph (88 km/h) > 30 seconds	2	Linear gear position switch setting incorrect Gear selector cable setting incorrect Linear gear position switch to ECM wiring harness open circuit
P1517	Engine cranking NEUTRAL / DRIVE malfunction	Start engine	2	Linear gear position switch setting incorrect Gear selector cable setting incorrect Linear gear position switch wiring harness short circuit to ground
P1641	Fuel pump relay 1 malfunction	Ignition ON > 5 seconds	2	Relay failure Relay to ECM wiring (coil circuit) open or short circuit Relay to fuel pump wiring (switched circuit) open or short circuit

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DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS (see page 1)	TRIPS*	POSSIBLE CAUSES
P1646	Fuel pump relay 2 malfunction	Ignition ON > 5 seconds	2	Refer to P1641 possible faults
P1775	TCM / CHECK ENGINE MIL request	Ignition ON > 5 seconds	1	Possible transmission fault – check for flagged TCM DTCs
P1776	Torque reduction request signal duration fault	Ignition ON > 12 seconds	1	Torque reduction signal wire open circuit Torque reduction signal wire short circuit to ground Torque reduction signal wire short circuit to B+ voltage

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