Telephone:
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Accessing and erasing

- The engine control module (ECM) fault memory can only be accessed and erased using diagnostic equipment connected to the data link connector (DLC).

Trouble code identification

EOBD type	Fault location	Probable cause
P0, P2, U0	Refer to EOBD trouble code tables	-
P1000	Engine control module (ECM) memory erased - no codes stored	Memory erased, ECM
P1100	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - circuit malfunction	Wiring, supply voltage, earth connection, MAF sensor, ECM
P1101	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - range/performance problem	Wiring, supply voltage, earth connection, intake leak, MAF sensor, ECM
P1102	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - voltage low	Wiring short to earth, supply voltage, earth connection, MAF sensor, ECM
P1112	Intake air temperature (IAT) sensor - circuit intermittent	Wiring, poor connection, IAT sensor, ECM
P1116	Engine coolant temperature (ECT) sensor - range/performance problem	Wiring, ECT sensor, ECM
P1117	Radiator outlet engine coolant temperature (ECT) - low input	Wiring, ECT sensor, ECM
P1118	Radiator outlet engine coolant temperature (ECT) - high input	Wiring, ECT sensor, ECM
P1120	Throttle position (TP) sensor - range/performance problem	Wiring, supply voltage, TP sensor, ECM
P1121	Throttle position (TP) sensor - range/performance problem	Wiring, supply voltage, TP sensor, ECM
P1122	Throttle position (TP) sensor - circuit malfunction	Wiring, supply voltage, TP sensor, ECM
P1123	Throttle position (TP) sensor - voltage low	Wiring short to earth, supply voltage, earth connection, TP sensor, ECM
P1124	Throttle position (TP) sensor - voltage high	Wiring open circuit/short to positive, TP sensor, ECM
P1125	Throttle position (TP) sensor - circuit intermittent	Wiring, TP sensor, ECM

P1128	Heated oxygen sensor (HO2S), upstream - transposed	Wiring transposed
P1129	Heated oxygen sensors (HO2S) 1 - sensors transposed	Wiring
P1130	Heated oxygen sensor (HO2S), upstream, bank 1 - range/performance problem	Wiring, heater supply voltage, earth connection, HO2S, ECM
P1131	Heated oxygen sensor (HO2S), upstream, bank 1 - mixture too lean	Intake leak, fuel pressure low, injector(s) blocked, HO2S, ECM
P1132	Heated oxygen sensor (HO2S), upstream, bank 1 - mixture too rich	Intake blockage, fuel pressure high, injector(s) leaking, HO2S, ECM
P1137	Heated oxygen sensor (HO2S) 2 - cylinders 1, 2, 3 - mixture weak	Wiring, HO2S
P1138	Heated oxygen sensor (HO2S) 2 - cylinders 1, 2, 3 - mixture rich	Wiring, HO2S
P1150	Heated oxygen sensor (HO2S), upstream, bank 2 - range/performance problem	Wiring, heater supply voltage, earth connection, HO2S, ECM
P1151	Heated oxygen sensor (HO2S), upstream, bank 2 - mixture too lean	Intake leak, fuel pressure low, injector(s) blocked, HO2S, ECM
P1152	Heated oxygen sensor (HO2S), upstream, bank 2 - mixture too rich	Intake blockage, fuel pressure high, injector(s) leaking, HO2S, ECM
P1157	Heated oxygen sensor (HO2S) 2 - cylinders 4, 5, 6 - mixture weak	Wiring, HO2S
P1158	Heated oxygen sensor (HO2S) 2 - cylinders 4, 5, 6 - mixture rich	Wiring, HO2S
P1170	Downstream fuel trim (FT), bank 1 - malfunction	Wiring, HO2S
P1171	System too lean, bank 1	Intake/fuel system, injectors, HO2S, MAF/VAF sensor, ECT sensor
P1172	System too rich, bank 1 & 2	Intake/fuel system, injectors, HO2S, MAF/VAF sensor, ECT sensor
P1173	Downstream fuel trim (FT), bank 2 - malfunction	Intake/fuel system, injectors, HO2S, MAF/VAF sensor, ECT sensor
P1174	System too lean, bank 2	Intake/fuel system, injectors, HO2S, MAF/VAF sensor, ECT sensor
P1176	Fuel trim (FT) lean mixture	Fuel pressure, injectors, MAF sensor/MAP sensor, intake leak
P1177	Fuel trim (FT) rich mixture	Fuel pressure, injectors, MAF sensor/MAP sensor, EVAP system
P1178	Fuel trim (FT) lean mixture	Fuel pressure, injectors, MAF sensor/MAP sensor, intake leak
P1179	Fuel trim (FT) rich mixture	Fuel pressure, injectors, MAF sensor/MAP sensor, intake leak
P1185	Oxygen sensor heater 1 - cylinders 1, 2, 3, 4, 5, 6	Wiring, HO2S
P1186	Oxygen sensor heater 1 - cylinders 1, 2, 3, 4, 5, 6	Wiring, HO2S
P1187	Oxygen sensor heater 1 - cylinders 1, 2, 3, 4, 5, 6 - circuit malfunction	Wiring, HO2S
P1188	Fuel trim (FT), bank 1 - adaptation	Intake/fuel system, injectors, HO2S, MAF/VAF sensor, ECT sensor
P1189	Fuel trim (FT), bank 2 - adaptation	Intake/fuel system, injectors, HO2S, MAF/VAF sensor, ECT sensor
P1190	Oxygen sensor heater 1 - cylinders 1, 2, 3, 4, 5, 6 - heater resistance low	Wiring, HO2S

P1191	Oxygen sensor heater 2 - cylinders 1, 2, 3, 4, 5, 6	Wiring, HO2S
P1192	Oxygen sensor heater 2 - cylinders 1, 2, 3, 4, 5, 6	Wiring, HO2S
P1193	Oxygen sensor heater 2 - cylinders 1, 2, 3, 4, 5, 6 - circuit malfunction	Wiring, HO2S
P1194	Oxygen sensor heater 2 - cylinders 1, 2, 3, 4, 5, 6 - heater resistance	Wiring, HO2S
P1195	Oxygen sensor heater 2 - cylinders 1, 2, 3, 4, 5, 6 - heater resistance low	Wiring, HO2S
P1196	Oxygen sensor heater 2 - cylinders 1, 2, 3, 4, 5, 6 - heater resistance low	Wiring, HO2S
P1199	Fuel level sensor	Wiring, fuel level sensor
P1201	Injector - cylinder 1 - open/short circuit to earth	Wiring, injector
P1202	Injector - cylinder 2 - open/short circuit to earth	Wiring, injector
P1203	Injector - cylinder 3 - open/short circuit to earth	Wiring, injector
P1204	Injector - cylinder 4 - open/short circuit to earth	Wiring, injector
P1205	Injector - cylinder 5 - open/short circuit to earth	Wiring, injector
P1206	Injector - cylinder 6 - open/short circuit to earth	Wiring, injector
P1207	Injector - cylinder 7 - open/short circuit to earth	Wiring, injector
P1208	Injector - cylinder 8 - open/short circuit to earth	Wiring, injector
P1230	Fuel pump relay - open circuit	Wiring, relay
P1231	Fuel pump relay - short circuit to positive	Wiring, relay
P1232	Fuel pump relay - short circuit to earth	Wiring, relay
P1235	Fuel pump (FP) - range/performance problem	Wiring, fuel pump (FP), ECM
P1244	Alternator, load input - voltage low	Wiring short to earth, alternator, ECM
P1245	Alternator, load input - voltage high	Wiring short to earth, battery was disconnected, alternator, ECM
P1246	Alternator, load input - circuit malfunction	Wiring, earth connection, alternator, ECM
P1260	Engine disabled by PATS	Incorrect/damaged key, wiring, immobilizer defective, ECM
P1270	Engine speed (RPM) - range/performance problem	Engine over revved in neutral, wheel slippage
P1287	Engine fuel demand - range/performance problem	Intake/exhaust leak, intake blocked, MAF/VAF sensor, fuel pressure/pump, injector(s), EGR system, EVAP canister purge valve, HO2S
P1288	Cylinder head temperature - range/performance problem	Wiring, cooling system fault, ECM
P1289	Cylinder head temperature - voltage high	Wiring, cooling system fault, ECM
P1290	Cylinder head temperature - voltage low	Wiring, cooling system fault, ECM
P1299	Cylinder head temperature - protection active	Wiring, cooling system fault, ECM
P1300	Random/multiple cylinder(s) - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1301	Cylinder 1 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1302	Cylinder 2 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM

P1303	Cylinder 3 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1304	Cylinder 4 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1305	Cylinder 5 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1306	Cylinder 6 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1307	Cylinder 7 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1308	Cylinder 8 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P1313	Misfire/catalyst damage - bank 1	Engine mechanical fault, wiring, ignition/fuel system, injector(s), MAP sensor, TP sensor, ECT sensor, EVAP system, ECM
P1314	Misfire/catalyst damage - bank 2	Engine mechanical fault, wiring, ignition/fuel system, injector(s), MAP sensor, TP sensor, ECT sensor, EVAP system, ECM
P1315	Persistent misfire	Other trouble code(s) stored (P0301-P0306)
P1316	Misfire	Wiring, other trouble code(s) stored, ignition/fuel system, MAP sensor, TP sensor, ECT sensor, IAT sensor, injector(s), ECM
P1317	Antilock brake system (ABS) - rough road signal, low	Circuit malfunction
P1318	Antilock brake system (ABS) - rough road signal, high	Circuit malfunction
P1319	Misfire detected with low fuel level	Low fuel level
P1351	Ignition diagnostic module - circuit malfunction	Wiring, ignition system, ECM
P1352	Ignition coil A, primary - circuit malfunction	Wiring, ignition coil, ECM
P1353	Ignition coil B, primary - circuit malfunction	Wiring, ignition coil, ECM
P1356	Ignition pick-up signal - circuit malfunction	Wiring, ignition system, ECM
P1357	Ignition diagnostic module	Wiring, ignition system, ECM
P1358	Ignition diagnostic module - range/performance problem	Wiring, ignition system, ECM
P1359	Spark advance signal - circuit malfunction	Wiring, ignition system, ECM
P1360	Ignition coil A, secondary - circuit malfunction	Wiring, ignition coil, ECM
P1361	Ignition coil B, secondary - circuit malfunction	Wiring, ignition coil, ECM
P1362	Ignition coil C, secondary - circuit malfunction	Wiring, ignition coil, ECM
P1363	Ignition coil, cylinder 3 - no activation	Wiring, ignition coil, engine control (EC) relay, ECM
P1364	Ignition coil, primary - circuit malfunction	Wiring, ignition coil, ECM
P1365	Ignition coil, secondary - circuit malfunction	Wiring, ignition coil, ECM
P1371	Ignition coil, cylinder 1 - early activation	Wiring, ignition coil, engine control (EC) relay, ECM
P1372	Ignition coil, cylinder 2 - early activation	Wiring, ignition coil, engine control (EC) relay, ECM
P1373	Ignition coil, cylinder 3 - early activation	Wiring, ignition coil, engine control (EC) relay, ECM
P1374	Ignition coil, cylinder 4 - early activation	Wiring, ignition coil, engine control (EC) relay, ECM
P1380	Camshaft position (CMP) actuator - circuit malfunction	Wiring, CMP actuator, ECM

P1381	Camshaft position (CMP) actuator - timing over-advanced	Valve timing, engine mechanical fault, CMP actuator
P1383	Camshaft position (CMP) actuator - timing over retarded	Valve timing, engine mechanical fault, CMP actuator
P1400	Exhaust gas pressure sensor - voltage low	Wiring short to earth, exhaust gas pressure sensor, ECM
P1401	Exhaust gas pressure sensor - voltage high	Wiring short to positive, exhaust gas pressure sensor, ECM
P1402	Exhaust gas recirculation (EGR) system	Wiring short to earth, EGR valve, ECM
P1403	Pressure transducer - hoses transposed	Hose blocked/missing/transposed, mechanical fault, pressure transducer
P1404	Pressure transducer - metering orifice restricted	Hose leak/blockage, mechanical fault, pressure transducer
P1407	Exhaust gas recirculation (EGR) system - no flow detected	Hose leak/blockage, wiring, EGR valve, EGR solenoid, ECM
P1408	Exhaust gas recirculation (EGR) system - incorrect flow detected	Hose leak/blockage, wiring, EGR valve, EGR solenoid, ECM
P1409	Electronic vacuum regulator	Wiring, EGR valve, EGR solenoid, ECM
P1412	Secondary air injection (AIR) system, bank 1 - malfunction	Wiring, control valve, air pump, ECM
P1413	Secondary air injection (AIR) system, bank 1 - control valve open	Wiring, control valve, ECM
P1414	Secondary air injection (AIR) system, bank 1 - low flow	Wiring, control valve, air pump, ECM
P1415	Secondary air injection (AIR) system, bank 2 - malfunction	Wiring, control valve, air pump, ECM
P1416	Secondary air injection (AIR) system, bank 2 - control valve open	Wiring, control valve, ECM
P1417	Secondary air injection (AIR) system, bank 2 - low flow	Wiring, control valve, air pump, ECM
P1440	Evaporative emission (EVAP) canister purge valve - circuit open	Wiring, EVAP canister purge valve, ECM
P1441	Evaporative emission (EVAP) canister purge valve	Wiring, EVAP canister purge valve, hose connection(s)
P1442	Evaporative emission (EVAP) system - leak detected	Hose connection(s), intake leak, EVAP canister, EVAP canister purge valve
P1443	Evaporative emission (EVAP) system - circuit malfunction	Wiring, EVAP canister purge valve, ECM
P1450	Evaporative emission (EVAP) pressure pump - circuit plausibility	Wiring, pressure pump, ECM
P1451	Evaporative emission (EVAP) pressure pump - circuit high	Wiring, pressure pump, ECM
P1452	Evaporative emission (EVAP) pressure pump - current low	Wiring, pressure pump, ECM
P1453	Evaporative emission (EVAP) pressure pump - current high	Wiring, pressure pump, ECM
P1461	AC refrigerant pressure sensor - low input	AC refrigerant pressure too low (incorrectly charged), wiring, AC refrigerant pressure sensor, ECM

P1462	AC refrigerant pressure sensor - high input	AC refrigerant pressure too high (cooling fault/incorrectly charged), wiring, AC refrigerant pressure sensor, ECM
P1463	AC refrigerant pressure sensor	Wiring, AC refrigerant pressure sensor, ECM
P1465	Air conditioning (AC) - relay	Wiring, AC relay
P1469	Air conditioning (AC) - low cycling period of AC compressor	Wiring, AC system
P1500	Vehicle speed sensor (VSS)	Wiring, VSS, ECM
P1504	Idle air control (IAC)	Wiring, IAC valve, ECM
P1505	Idle air control (IAC)	Wiring, IAC valve, ECM
P1506	Idle air control (IAC) - value high	Wiring short to positive, IAC valve, ECM
P1507	Idle air control (IAC) - value low	Wiring short to earth, IAC valve, ECM
P1508	Idle air control (IAC) valve - circuit malfunction	Wiring open circuit, IAC valve, ECM
P1509	Idle air control (IAC) valve opening coil - malfunction	Wiring, IAC valve
P1510	Idle air control (IAC) valve opening coil - circuit malfunction	Wiring, IAC valve
P1512	Intake manifold air control system, bank 1 - valve stuck closed	Wiring, intake manifold air control system, mechanical fault
P1513	Idle air control (IAC) valve opening coil - circuit low	Wiring short circuit to earth, IAC valve
P1514	Idle air control (IAC) valve opening coil - circuit high	Wiring short circuit to positive, IAC valve
P1516	Intake manifold air control system	Wiring, intake manifold air control system, mechanical fault
P1517	Park/neutral position (PNP) switch - cranking neutral/drive	Wiring, PNP switch
P1518	Intake manifold air control system - valve stuck open	Wiring, intake manifold air control system, mechanical fault
P1519	Intake manifold air control system - valve stuck closed	Wiring, intake manifold air control system, mechanical fault
P1520	Intake manifold air control system - circuit malfunction	Wiring, intake manifold air control system
P1535	AC compressor request - malfunction	Wiring, AC master switch, AC control module
P1536	AC compressor request - compressor relay, open circuit	Wiring, compressor relay
P1537	AC compressor request - compressor relay, short circuit to earth	Wiring, compressor relay
P1538	AC compressor request - compressor relay, short circuit to positive	Wiring, compressor relay
P1550	Idle air control (IAC) valve closing coil - malfunction	Wiring, IAC valve
P1551	Idle air control (IAC) valve closing coil - circuit malfunction	Wiring, IAC valve
P1552	Idle air control (IAC) valve closing coil - circuit low	Wiring open circuit/short to earth, IAC valve
P1553	Idle air control (IAC) valve closing coil - circuit high	Wiring open circuit/short to positive, IAC valve

P1590	Antilock brake system (ABS) rough road signal - error message from ABS control unit	Wiring, ABS system
P1591	Antilock brake system (ABS) rough road signal - open/short circuit to earth	Wiring, ABS system
P1592	Antilock brake system (ABS) rough road signal - open/short circuit to positive	Wiring, ABS system
P1605	Power interuption in KAM	Wiring, battery terminal corrosion, loose battery connection, ECM
P1607	Engine control module (ECM) - MIL circuit	Wiring short circuit, engine malfunction indicator lamp (MIL), ECM
P1608	Engine control module (ECM) - MIL circuit	Open circuit, engine malfunction indicator lamp (MIL), ECM
P1620	Engine control module (ECM) - programming incomplete	ECM
P1621	Immobilizer control module	Communication error
P1622	Engine control module (ECM) - coding	Incorrectly coded
P1623	Engine control module (ECM)	Immobilizer - circuit malfunction
P1641	Fuel pump (FP) - failure	Fuel pump (FP), fuel pipe blockage, mechanical fault
P1642	Fuel pump (FP) - voltage high	Wiring short to positive, relay, Fuel pump (FP)
P1643	Fuel pump (FP) - voltage low	Wiring short to earth, relay, Fuel pump (FP)
P1644	Fuel pump (FP) - pump speed control	-
P1645	Fuel pump (FP)	Fuel pump (FP), fuel pressure regulator, fuel pipe blockage, mechanical fault
P1650	Power steering pressure (PSP) switch	Wiring, PSP switch, ECM
P1651	Power steering pressure (PSP) switch - circuit malfunction	Wiring, PSP switch, ECM
P1663	Throttle angle/torque signal - ABS/HDC wiring open circuit	Wiring, ABS system, HDC system
P1664	Throttle angle/torque signal - ABS/HDC wiring short to earth	Wiring, ABS system, HDC system
P1665	Throttle angle/torque signal - ABS/HDC wiring short to positive	Wiring, ABS system, HDC system
P1666	Immobilizer signal - CAN data bus	Wiring, immobilizer control module
P1667	Immobilizer signal - CAN data bus	Wiring short circuit to earth
P1668	Immobilizer signal - CAN data bus	Wiring open circuit
P1669	Engine control module (ECM) cooling fan - circuit malfunction	Wiring, module cooling fan relay, cooling fan motor
P1670	Engine control module (ECM) cooling fan - circuit low	Wiring short circuit to earth, cooling fan motor
P1671	Engine control module (ECM) cooling fan - circuit high	Wiring open circuit, cooling fan motor
P1672	Immobilizer signal - incorrect code	Incorrect key, immobilizer control module
P1673	Immobilizer signal	ECM not configured
P1674	Immobilizer signal - no valid code received	Incorrect key, wiring, immobilizer control module
P1675	Condenser fan - circuit malfunction	Wiring open/short circuit, condenser fan relay
P1700	Transfer box - low range signal implausible	Wiring, transmission mode selection switch, transfer box
P1701	Transfer box - fault signal	Wiring, transfer box
P1702	Transfer box signal line - communication error	Wiring, ECM

P1703	Transfer box link - signal line	Wiring open circuit/short to positive
P1704	Digital transmission selector	Wiring, digital transmission selector, ECM/TCM
P1705	High vehicle speed observed in park	Wiring, digital transmission selector/transmission range (TR) switch, transmission range (TR) sensor, PNP switch, VSS, ECM/TCM
P1708	Transfer box link - signal line	Wiring short circuit to earth
P1711	Transmission fluid temperature (TFT) - range/performance problem	Wiring, TFT sensor, ECM/TCM
P1713	Transmission fluid temperature (TFT) - value low	Wiring short to earth, TFT sensor, ECM/TCM
P1714	Shift solenoid (SS) 1 - defective	Wiring, SS, ECM/TCM
P1715	Shift solenoid (SS) 2 - defective	Wiring, SS, ECM/TCM
P1716	Shift solenoid (SS) 3 - defective	Wiring, SS, ECM/TCM
P1717	Coast clutch solenoid (CCS) - defective	Wiring, CCS, ECM/TCM
P1718	Transmission fluid temperature (TFT) - value high	Wiring short to positive, TFT sensor, ECM/TCM
P1728	Transmission component slipping	Torque converter clutch (TCC)
P1729	Transmission mode selection switch 4x4L - circuit malfunction	Wiring, transmission mode selection switch, ECM/TCM
P1740	Torque converter clutch (TCC)	Wiring, TCC solenoid, ECM/TCM
P1741	Torque converter clutch (TCC)	Wiring, TCC solenoid, ECM/TCM
P1742	Torque converter clutch (TCC)	Wiring, TCC solenoid, ECM/TCM
P1744	Torque converter clutch (TCC)	Wiring, TCC solenoid, ECM/TCM
P1745	Transmission fluid pressure (TFP) solenoid	Wiring, TFP solenoid, ECM/TCM
P1746	Transmission fluid pressure (TFP) solenoid - solenoid open	Wiring, TFP solenoid, ECM/TCM
P1747	Transmission fluid pressure (TFP) solenoid - solenoid closed	Wiring, TFP solenoid, ECM/TCM
P1749	Transmission fluid pressure (TFP) solenoid - low pressure	Wiring, TFP solenoid, ECM/TCM
P1750	Transmission fluid pressure (TFP) - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM
P1751	Shift solenoid (SS) 1 - defective	Wiring, SS, ECM/TCM
P1752	Transmission fluid pressure (TFP), 1st gear - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM
P1753	Transmission fluid pressure (TFP), 2nd gear - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM
P1754	Coast clutch solenoid (CCS) - circuit malfunction	Wiring, CCS, ECM/TCM
P1755	Transmission fluid pressure (TFP), 3rd gear - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM
P1756	Shift solenoid (SS) 2 - defective	Wiring, SS, ECM/TCM
P1757	Transmission fluid pressure (TFP), 4th gear - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM
P1758	Transmission fluid pressure (TFP) - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM

P1759	Transmission fluid pressure (TFP) - maximum control limit reached	Wiring, TFP solenoid, transmission, ECM/TCM
P1760	Transmission fluid pressure (TFP) solenoid - short circuit	Wiring, TFP solenoid, ECM/TCM
P1761	Shift solenoid (SS) 3 - defective	Wiring, SS, ECM/TCM
P1765	Injection timing	-
P1766	Coast clutch solenoid (CCS) - defective	Wiring, CCS, ECM/TCM
P1767	Torque converter clutch (TCC)	Wiring, TCC, TCM
P1768	Economy/sport mode switch, winter weather	Wiring, economy/sport mode switch, TCM
P1769	Torque modulation circuit	-
P1775	Engine control module (ECM) - TCM signal	Wiring, ECM
P1776	Transmission control system - torque interface malfunction	Wiring, ECM/TCM
P1777	Engine control module (ECM) - TCM retard signal	Wiring, ECM
P1779	Transmission warning lamp	Wiring, poor connection, transmission warning lamp, ECM/TCM
P1780	Transmission mode selection switch - O/D Cancel	Wiring, digital transmission selector/transmission mode selection switch/PNP switch, ECM/TCM
P1781	Transmission mode selection switch 4x4 - circuit out of self-test range	Wiring, operator error, digital transmission selector/transmission mode selection switch/PNP switch, ECM/TCM
P1783	Transmission over temperature condition	Transmission fluid level low, transmission mechanical fault, TFT sensor, TCM
P1784	Transmission - mechanical fault	Transmission mechanical fault
P1785	Transmission - mechanical fault	Transmission mechanical fault
P1788	Torque converter clutch (TCC) solenoid - open circuit	Wiring, TCC solenoid, ECM/TCM
P1789	Torque converter clutch (TCC) solenoid - closed circuit	Wiring, TCC solenoid, ECM/TCM
P1792	Barometric pressure (BARO) sensor	Wiring, BARO sensor, ECM
P1795	Battery voltage	Wiring, poor connection, battery, alternator

EOBD codes

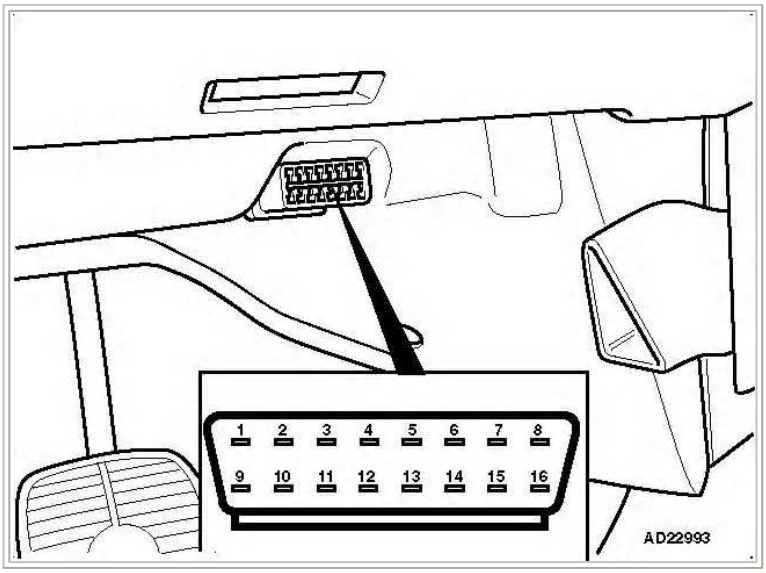
- All EOBD codes starting with P0 have standard meanings irrespective of vehicle make or model.
- The following list covers all P0 codes allocated at the time of publication.

EOBD codes

- All EOBD codes starting with P2 have standard meanings irrespective of vehicle make or model.
- The following list covers all P2 codes allocated at the time of publication.

EOBD codes

- All EOBD codes starting with U0 have standard meanings irrespective of vehicle make or model.
- The following list covers all U0 codes allocated at the time of publication.



EOBD code	Fault location
U0001	Controller area network (CAN) data bus, high speed bus
U0002	Controller area network (CAN) data bus, high speed bus - performance problem
U0003	Controller area network (CAN) data bus, high speed bus (+) - open circuit
U0004	Controller area network (CAN) data bus, high speed bus (+) - voltage low
U0005	Controller area network (CAN) data bus, high speed bus (+) - voltage high
U0006	Controller area network (CAN) data bus, high speed bus (-) - open circuit
U0007	Controller area network (CAN) data bus, high speed bus (-) - voltage low
U0008	Controller area network (CAN) data bus, high speed bus (-) - voltage high
U0009	Controller area network (CAN) data bus, high speed bus (-) - shorted to data bus (+)
U0010	Controller area network (CAN) data bus, medium speed bus
U0011	Controller area network (CAN) data bus, medium speed bus - performance problem
U0012	Controller area network (CAN) data bus, medium speed bus (+) - open circuit
U0013	Controller area network (CAN) data bus, medium speed bus (+) - voltage low
U0014	Controller area network (CAN) data bus, medium speed bus (+) - voltage high
U0015	Controller area network (CAN) data bus, medium speed bus (-) - open circuit
U0016	Controller area network (CAN) data bus, medium speed bus (-) - voltage low
U0017	Controller area network (CAN) data bus, medium speed bus (-) - voltage high
U0018	Controller area network (CAN) data bus, medium speed bus (-) - shorted to data bus (+)
U0019	Controller area network (CAN) data bus, low speed bus
U0020	Controller area network (CAN) data bus, low speed bus - performance problem
U0021	Controller area network (CAN) data bus, low speed bus (+) - open circuit
U0022	Controller area network (CAN) data bus, low speed bus (+) - voltage low
U0023	Controller area network (CAN) data bus, low speed bus (+) - voltage high
U0024	Controller area network (CAN) data bus, low speed bus (-) - open circuit
U0025	Controller area network (CAN) data bus, low speed bus (-) - voltage low
U0026	Controller area network (CAN) data bus, low speed bus (-) - voltage high

U0027	Controller area network (CAN) data bus, low speed bus (-) - shorted to data bus (+)
U0028	Vehicle area network (VAN) data bus A
U0029	Vehicle area network (VAN) data bus A - performance problem
U0030	Vehicle area network (VAN) data bus A (+) - open circuit
U0031	Vehicle area network (VAN) data bus A (+) - voltage low
U0032	Vehicle area network (VAN) data bus A (+) - voltage high
U0033	Vehicle area network (VAN) data bus A (-) - open circuit
U0034	Vehicle area network (VAN) data bus A (-) - voltage low
U0035	Vehicle area network (VAN) data bus A (-) - voltage high
U0036	Vehicle area network (VAN) data bus A (-) - shorted to data bus A (+)
U0037	Vehicle area network (VAN) data bus B
U0038	Vehicle area network (VAN) data bus B - performance problem
U0039	Vehicle area network (VAN) data bus B (+) - open circuit
U0040	Vehicle area network (VAN) data bus B (+) - voltage low
U0041	Vehicle area network (VAN) data bus B (+) - voltage high
U0042	Vehicle area network (VAN) data bus B (-) - open circuit
U0043	Vehicle area network (VAN) data bus B (-) - voltage low
U0044	Vehicle area network (VAN) data bus B (-) - voltage high
U0045	Vehicle area network (VAN) data bus B (-) - shorted to data bus B (+)
U0046	Vehicle area network (VAN) data bus C
U0047	Vehicle area network (VAN) data bus C - performance problem
U0048	Vehicle area network (VAN) data bus C (+) - open circuit
U0049	Vehicle area network (VAN) data bus C (+) - voltage low
U0050	Vehicle area network (VAN) data bus C (+) - voltage high
U0051	Vehicle area network (VAN) data bus C (-) - open circuit
U0052	Vehicle area network (VAN) data bus C (-) - voltage low
U0053	Vehicle area network (VAN) data bus C (-) - voltage high
U0054	Vehicle area network (VAN) data bus C (-) - shorted to data bus C (+)
U0055	Vehicle area network (VAN) data bus D
U0056	Vehicle area network (VAN) data bus D - performance problem
U0057	Vehicle area network (VAN) data bus D (+) - open circuit
U0058	Vehicle area network (VAN) data bus D (+) - voltage low
U0059	Vehicle area network (VAN) data bus D (+) - voltage high
U0060	Vehicle area network (VAN) data bus D (-) - open circuit
U0061	Vehicle area network (VAN) data bus D (-) - voltage low
U0062	Vehicle area network (VAN) data bus D (-) - voltage high
U0063	Vehicle area network (VAN) data bus D (-) - shorted to data bus D (+)
U0064	Vehicle area network (VAN) data bus E
U0065	Vehicle area network (VAN) data bus E - performance problem
U0066	Vehicle area network (VAN) data bus E (+) - open circuit
U0067	Vehicle area network (VAN) data bus E (+) - voltage low

U0068	Vehicle area network (VAN) data bus E (+) - voltage high
U0069	Vehicle area network (VAN) data bus E (-) - open circuit
U0070	Vehicle area network (VAN) data bus E (-) - voltage low
U0071	Vehicle area network (VAN) data bus E (-) - voltage high
U0072	Vehicle area network (VAN) data bus E (-) - shorted to data bus E (+)
U0073	Control module - data bus Off
U0074	Control module communication bus B - data bus OFF
U0100	Data bus, engine control module (ECM) A - no communication
U0101	Data bus, transmission control module (TCM) - no communication
U0102	Data bus, transfer box control module - no communication
U0103	Data bus, gear shift module - no communication
U0104	Data bus, cruise control module - no communication
U0105	Data bus, injector control module - no communication
U0106	Data bus, glow plug control module - no communication
U0107	Data bus, throttle actuator control (TAC) module - no communication
U0108	Data bus, alternative fuel control module - no communication
U0109	Data bus, fuel pump (FP) control module - no communication
U010A	Exhaust gas recirculation (EGR) control module A - communication signal lost
U010C	Turbocharger (TC)/supercharger (SC) control module A - communication signal lost
U010D	Turbocharger (TC)/supercharger (SC) control module B - communication signal lost
U010E	Reductant control module - communication signal lost
U010F	AC control module - communication signal lost
U0110	Data bus, drive motor control module - no communication
U0111	Data bus, battery energy control module A - no communication
U0112	Data bus, battery energy control module B - no communication
U0113	Data bus, emissions critical control information - no communication
U0114	Data bus, four wheel drive clutch control module - no communication
U0115	Data bus, engine control module (ECM) B - no communication
U0116	Lost communication with coolant temperature control module
U0117	Lost communication with power take-off (PTO) control module
U0118	Lost communication with fuel additive control module
U0119	Lost communication with fuel cell control module
U011A	Exhaust gas sensor control module - communication signal lost
U011B	Rocker arm control module A - communication signal lost
U011C	Rocker arm control module B - communication signal lost
U0120	Lost communication with starter/generator control module
U0121	Data bus, anti-lock brake system (ABS) control module - no communication
U0122	Data bus, vehicle dynamics control module - no communication
U0123	Data bus, yaw rate sensor module - no communication
U0124	Data bus, lateral acceleration sensor module - no communication
U0125	Data bus, multi-axis acceleration sensor module - no communication

U0126	Data bus, steering position sensor control module - no communication
U0127	Data bus, tyre pressure monitor module - no communication
U0128	Data bus, parking brake control module - no communication
U0129	Data bus, brake system control module - no communication
U0130	Data bus, steering effort control module - no communication
U0131	Data bus, power steering control module - no communication
U0132	Data bus, suspension ride height control module - no communication
U0133	Lost communication with active roll control module
U0134	Lost communication with power steering control module, rear
U0135	Lost communication with differential control module, front
U0136	Lost communication with differential control module, rear
U0137	Lost communication with trailer brake control module
U0138	Lost communication with all-terrain control module
U0139	Lost communication with suspension control module B
U0140	Data bus, body control module (BCM) - no communication
U0141	Data bus, body control module (BCM) A - no communication
U0142	Data bus, body control module (BCM) B - no communication
U0143	Data bus, body control module (BCM) C - no communication
U0144	Data bus, body control module (BCM) D - no communication
U0145	Data bus, body control module (BCM) E - no communication
U0146	Data bus, gateway A - no communication
U0147	Data bus, gateway B - no communication
U0148	Data bus, gateway C - no communication
U0149	Data bus, gateway D - no communication
U0150	Data bus, gateway E - no communication
U0151	Data bus, supplementary restraint system (SRS) control module - no communication
U0152	Data bus, supplementary restraint system (SRS) control module, left - no communication
U0153	Data bus, supplementary restraint system (SRS) control module, right - no communication
U0154	Data bus, supplementary restraint system (SRS) occupant sensing control module - no communication
U0155	Data bus, instrumentation control module - no communication
U0156	Data bus, information centre A - no communication
U0157	Data bus, information centre B - no communication
U0158	Data bus, head up display - no communication
U0159	Data bus, parking aid control module A - no communication
U0160	Data bus, audible alert control module - no communication
U0161	Data bus, compass module - no communication
U0162	Data bus, navigation display module - no communication
U0163	Data bus, navigation control module - no communication
U0164	Data bus, AC control module - no communication
U0165	Data bus, AC control module, rear
U0166	Data bus, auxiliary heater control module - no communication

U0167	Data bus, immobilizer control module - no communication
U0168	Data bus, alarm system control module - no communication
U0169	Data bus, sunroof control module - no communication
U0170	Data bus, supplementary restraint system (SRS) sensor A - no communication
U0171	Data bus, supplementary restraint system (SRS) sensor B - no communication
U0172	Data bus, supplementary restraint system (SRS) sensor C - no communication
U0173	Data bus, supplementary restraint system (SRS) sensor D - no communication
U0174	Data bus, supplementary restraint system (SRS) sensor E - no communication
U0175	Data bus, supplementary restraint system (SRS) sensor F - no communication
U0176	Data bus, supplementary restraint system (SRS) sensor G - no communication
U0177	Data bus, supplementary restraint system (SRS) sensor H - no communication
U0178	Data bus, supplementary restraint system (SRS) sensor I - no communication
U0179	Data bus, supplementary restraint system (SRS) sensor J - no communication
U017A	Supplementary restraint system (SRS) system sensor K - communication signal lost
U017B	Supplementary restraint system (SRS) system sensor L - communication signal lost
U017C	Supplementary restraint system (SRS) system sensor M - communication signal lost
U017D	Supplementary restraint system (SRS) system sensor N - communication signal lost
U0180	Data bus, automatic lighting control module - no communication
U0181	Data bus, headlamp level control module - no communication
U0182	Data bus, lamps control module, front - no communication
U0183	Data bus, lamps control module, rear - no communication
U0184	Data bus, radio - no communication
U0185	Data bus, aerial module - no communication
U0186	Data bus, audio unit output amplifier - no communication
U0187	Data bus, digital disc player/changer module A - no communication
U0188	Data bus, digital disc player/changer module B - no communication
U0189	Data bus, digital disc player/changer module C - no communication
U0190	Data bus, digital disc player/changer module D - no communication
U0191	Data bus, television - no communication
U0192	Data bus, personal computer - no communication
U0193	Data bus, digital audio control module A - no communication
U0194	Data bus, digital audio control module B - no communication
U0195	Data bus, subscription entertainment receiver module - no communication
U0196	Data bus, entertainment control module, rear - no communication
U0197	Data bus, telephone control module - no communication
U0198	Data bus, telematics control module - no communication
U0199	Data bus, door function control module A - no communication
U0200	Data bus, door function control module B - no communication
U0201	Data bus, door function control module C - no communication
U0202	Data bus, door function control module D - no communication
U0203	Data bus, door function control module E - no communication

U0204	Data bus, door function control module F - no communication
U0205	Data bus, door function control module G - no communication
U0206	Data bus, convertible top control module - no communication
U0207	Data bus, moveable roof control module - no communication
U0208	Data bus, seat adjustment control module A - no communication
U0209	Data bus, seat adjustment control module B - no communication
U0210	Data bus, seat adjustment control module C - no communication
U0211	Data bus, seat adjustment control module D - no communication
U0212	Data bus, steering column control module - no communication
U0213	Data bus, mirror control module A - no communication
U0214	Data bus, remote function actuation - no communication
U0215	Data bus, door contact switch A - no communication
U0216	Data bus, door contact switch B - no communication
U0217	Data bus, door contact switch C - no communication
U0218	Data bus, door contact switch D - no communication
U0219	Data bus, door contact switch E - no communication
U0220	Data bus, door contact switch F - no communication
U0221	Data bus, door contact switch G - no communication
U0222	Data bus, electric window motor A - no communication
U0223	Data bus, electric window motor B - no communication
U0224	Data bus, electric window motor C - no communication
U0225	Data bus, electric window motor D - no communication
U0226	Data bus, electric window motor E - no communication
U0227	Data bus, electric window motor F - no communication
U0228	Data bus, electric window motor G - no communication
U0229	Data bus, heated steering wheel module - no communication
U0230	Data bus, tailgate control module - no communication
U0231	Data bus, rain sensor control module - no communication
U0232	Data bus, side obstacle detection control module, left - no communication
U0233	Data bus, side obstacle detection control module, right - no communication
U0234	Data bus, convenience recall module - no communication
U0235	Data bus, cruise control front distance range sensor - no communication
U023A	Image processing module A - communication signal lost
U023B	Image processing module B - communication signal lost
U023C	Image processing module C - communication signal lost
U025A	Special purpose vehicle control module B - communication signal lost
U025B	Special purpose vehicle control module C - communication signal lost
U025C	Special purpose vehicle control module D - communication signal lost
U0286	Lost communication with radiator anti-tamper device
U0287	Lost communication with transmission fluid pump module
U0288	Lost communication with DC to AC converter control module A

U0289	Lost communication with DC to AC converter control module B
U0291	Lost communication with gear shift module B
U0292	Lost communication with drive motor control module B
U0293	Lost communication with hybrid powertrain control module
U0294	Lost communication with powertrain control monitor module
U0295	Lost communication with AC to AC converter control module
U0296	Lost communication with AC to DC converter control module A
U0297	Lost communication with AC to DC converter control module B
U0298	Lost communication with DC to DC converter control module A
U0299	Lost communication with DC to DC converter control module B
U0300	Control module - internal software incompatibility
U0301	Software incompatibility - engine control module (ECM)
U0302	Software incompatibility - transmission control module (TCM)
U0303	Software incompatibility - transfer box control module
U0304	Software incompatibility - gear shift module
U0305	Software incompatibility - cruise control module
U0306	Software incompatibility - injector control module
U0307	Software incompatibility - glow plug control module
U0308	Software incompatibility - throttle actuator control (TAC) module
U0309	Software incompatibility - alternative fuel control module
U0310	Software incompatibility - fuel pump (FP) control module
U0311	Software incompatibility - drive motor control module
U0312	Software incompatibility - battery energy control module A
U0313	Software incompatibility - battery energy control module B
U0314	Software incompatibility - four wheel drive clutch control module
U0315	Software incompatibility - anti-lock brake system (ABS) control module
U0316	Software incompatibility - vehicle dynamics control module
U0317	Software incompatibility - parking brake control module
U0318	Software incompatibility - brake system control module
U0319	Software incompatibility - steering effort control module
U0320	Software incompatibility - power steering control module
U0321	Software incompatibility - suspension ride height control module
U0322	Software incompatibility - body control module
U0323	Software incompatibility - instrumentation control module
U0324	Software incompatibility - AC control module
U0325	Software incompatibility - auxiliary heater control module
U0326	Software incompatibility - immobilizer control module
U0327	Software incompatibility - alarm system control module
U0328	Software incompatibility - steering position sensor control module
U0329	Software incompatibility - steering column control module
U0330	Software incompatibility - tyre pressure monitor module

U0331	Software incompatibility - body control module A
U0332	Software incompatibility - multi-axis acceleration sensor module
U0333	Software incompatibility with gear shift control module B
U0334	Software incompatibility with audio system
U0335	Software incompatibility with hybrid battery pack sensor module
U0400	Invalid data received
U0401	Invalid data received - engine control module (ECM)
U0402	Invalid data received - transmission control module (TCM)
U0403	Invalid data received - transfer box control module
U0404	Invalid data received - gear shift module
U0405	Invalid data received - cruise control module
U0406	Invalid data received - injector control module
U0407	Invalid data received - glow plug control module
U0408	Invalid data received - throttle actuator control (TAC) module
U0409	Invalid data received - alternative fuel control module
U040A	Invalid data received from AC control module
U040B	Invalid data received from exhaust gas recirculation (EGR) control module A
U040C	Invalid data received from exhaust gas recirculation (EGR) control module B
U040D	Invalid data received from turbocharger (TC)/supercharger (SC) control module A
U040E	Invalid data received from turbocharger (TC)/supercharger (SC) control module B
U040F	Invalid data received from reductant control module
U0410	Invalid data received - fuel pump (FP) control module
U0411	Invalid data received - drive motor control module
U0412	Invalid data received - battery energy control module A
U0413	Invalid data received - battery energy control module B
U0414	Invalid data received - four wheel drive clutch control module
U0415	Invalid data received - anti-lock brake system (ABS) control module
U0416	Invalid data received - vehicle dynamics control module
U0417	Invalid data received - parking brake control module
U0418	Invalid data received - brake system control module
U0419	Invalid data received - steering effort control module
U041B	Invalid data received from exhaust gas sensor control module
U041C	Invalid data received from rocker arm control module A
U041D	Invalid data received from rocker arm control module B
U0420	Invalid data received - power steering control module
U0421	Invalid data received - suspension ride height control module
U0422	Invalid data received - body control module
U0423	Invalid data received - instrumentation control module
U0424	Invalid data received - AC control module
U0425	Invalid data received - auxiliary heater control module
U0426	Invalid data received - immobilizer control module

U0427	Invalid data received - alarm system control module
U0428	Invalid data received - steering position sensor control module
U0429	Invalid data received - steering column control module
U0430	Invalid data received - tyre pressure monitor module
U0431	Invalid data received - body control module A
U0432	Invalid data received from multi-axis acceleration sensor module
U0433	Invalid data received from cruise control distance range sensor, front
U0434	Invalid data received from active roll control module
U0435	Invalid data received from power steering control module, rear
U0436	Invalid data received from differential control module, front
U0437	Invalid data received from differential control module, rear
U0438	Invalid data received from trailer brake control module
U0439	Invalid data received from all-terrain control module
U043A	Invalid data received from suspension control module B
U0441	Invalid data received from emissions critical control information
U0442	Invalid data received from ECM/PCM B
U0443	Invalid data received from body control module (BCM) B
U0444	Invalid data received from body control module (BCM) C
U0445	Invalid data received from body control module (BCM) D
U0446	Invalid data received from body control module (BCM) E
U0447	Invalid data received from gateway A
U0448	Invalid data received from gateway B
U0449	Invalid data received from gateway C
U0450	Invalid data received from gateway D
U0451	Invalid data received from gateway E
U0452	Invalid data received from supplementary restraint system (SRS) control module
U0453	Invalid data received from side supplementary restraint system (SRS) control module, left
U0454	Invalid data received from side supplementary restraint system (SRS) control module, right
U0455	Invalid data received from restraints occupant classification system module
U0456	Invalid data received from coolant temperature control module
U0457	Invalid data received from information centre A
U0458	Invalid data received from information centre B
U0459	Invalid data received from head up display
U045A	Invalid data received from parking aid control module A
U0461	Invalid data received from audible alert control module
U0462	Invalid data received from compass module
U0463	Invalid data received from navigation display module
U0464	Invalid data received from navigation control module
U0465	Invalid data received from power take-off (PTO) control module
U0466	Invalid data received from AC control module, rear
U0467	Invalid data received from fuel additive control module

U0468	Invalid data received from fuel cell control module
U0469	Invalid data received from starter/generator control module
U046A	Invalid data received from sunroof control module
U0471	Invalid data received from supplementary restraint system (SRS) sensor A
U0472	Invalid data received from supplementary restraint system (SRS) sensor B
U0473	Invalid data received from supplementary restraint system (SRS) sensor C
U0474	Invalid data received from supplementary restraint system (SRS) sensor D
U0475	Invalid data received from supplementary restraint system (SRS) sensor E
U0476	Invalid data received from supplementary restraint system (SRS) sensor F
U0477	Invalid data received from supplementary restraint system (SRS) sensor G
U0478	Invalid data received from supplementary restraint system (SRS) sensor H
U0479	Invalid data received from supplementary restraint system (SRS) sensor I
U047A	Invalid data received from supplementary restraint system (SRS) system sensor J
U047B	Invalid data received from supplementary restraint system (SRS) system sensor K
U047C	Invalid data received from supplementary restraint system (SRS) system sensor L
U047D	Invalid data received from supplementary restraint system (SRS) system sensor M
U047E	Invalid data received from supplementary restraint system (SRS) system sensor N
U0481	Invalid data received from automatic lighting control module
U0482	Invalid data received from headlamp level control module
U0483	Invalid data received from lighting control module, front
U0484	Invalid data received from lighting control module, rear A
U0485	Invalid data received from audio system
U0486	Invalid data received from aerial module
U0487	Invalid data received from audio unit output amplifier A
U0488	Invalid data received from digital disc player/changer module A
U0489	Invalid data received from digital disc player/changer module B
U048A	Invalid data received from digital disc player/digital disc changer C
U0491	Invalid data received from digital disc player/changer module D
U0492	Invalid data received from television
U0493	Invalid data received from personal computer
U0494	Invalid data received from digital audio control module A
U0495	Invalid data received from digital audio control module B
U0496	Invalid data received from subscription entertainment receiver module
U0497	Invalid data received from entertainment control module, rear A
U0498	Invalid data received from telephone control module
U0499	Invalid data received from telematics control module
U049A	Invalid data received from door function control module A
U0501	Invalid data received from door function control module B
U0502	Invalid data received from door function control module C
U0503	Invalid data received from door function control module D
U0504	Invalid data received from door function control module E

U0505	Invalid data received from door function control module F
U0506	Invalid data received from door function control module G
U0507	Invalid data received from convertible top control module
U0508	Invalid data received from moveable roof control module
U0509	Invalid data received from seat control module A
U050A	Invalid data received from seat adjustment control module B
U0511	Invalid data received from seat control module C
U0512	Invalid data received from seat control module D
U0513	Invalid data received from yaw rate sensor
U0514	Invalid data received from mirror control module A
U0515	Invalid data received from remote function actuation
U0516	Invalid data received from door switch A
U0517	Invalid data received from door switch B
U0518	Invalid data received from door switch C
U0519	Invalid data received from door switch D
U051A	Invalid data received from door switch E
U0521	Invalid data received from door switch F
U0522	Invalid data received from door switch G
U0523	Invalid data received from door window motor A
U0524	Invalid data received from door window motor B
U0525	Invalid data received from door window motor C
U0526	Invalid data received from door window motor D
U0527	Invalid data received from door window motor E
U0528	Invalid data received from door window motor F
U0529	Invalid data received from door window motor G
U052A	Invalid data received from heated steering wheel function control module
U0531	Invalid data received from rear gate module
U0532	Invalid data received from rain sensing module
U0533	Invalid data received from side obstacle detection control module, left
U0534	Invalid data received from side obstacle detection control module, right
U0535	Invalid data received from convenience recall module
U0536	Invalid data received from lateral acceleration sensor module
U0537	Invalid data received from steering column lock control module
U0538	Invalid data received from digital audio control module C
U0539	Invalid data received from digital audio control module D
U053A	Invalid data received from entrapment control module A
U053B	Invalid data received from image processing module A
U053C	Invalid data received from image processing module B
U053D	Invalid data received from image processing module C
U0541	Invalid data received from entrapment control module B
U0542	Invalid data received from headlamp control module A

U0543	Invalid data received from headlamp control module B
U0544	Invalid data received from parking aid control module B
U0545	Invalid data received from running board control module
U0546	Invalid data received from entertainment control module, front
U0547	Invalid data received from seat control module E
U0548	Invalid data received from seat control module F
U0549	Invalid data received from remote accessory module
U054A	Invalid data received from rear entertainment control module B
U0551	Invalid data received from impact classification system module
U0552	Invalid data received from running board control module B
U0553	Invalid data received from lighting control module, rear B
U0554	Invalid data received from accessory protocol interface module
U0555	Invalid data received from remote start module
U0556	Invalid data received from front display interface module
U0557	Invalid data received from front controls interface module
U0558	Invalid data received from front controls/display interface module
U0559	Invalid data received from radio transceiver
U055A	Invalid data received from special purpose vehicle control module A
U055B	Invalid data received from special purpose vehicle control module B
U055C	Invalid data received from special purpose vehicle control module C
U055D	Invalid data received from special purpose vehicle control module D
U0561	Invalid data received from seat control switch module A
U0562	Invalid data received from seat control switch module B
U0563	Invalid data received from audio amplifier B
U0564	Invalid data received from speech recognition module
U0565	Invalid data received from camera module, rear
U0587	Invalid data received from radiator anti-tamper device
U0588	Invalid data received from transmission fluid pump module
U0589	Invalid data received from DC to AC converter control module A
U058A	Invalid data received from DC/AC converter control module B
U0592	Invalid data received from gear shift module B
U0593	Invalid data received from drive motor control module B
U0594	Invalid data received from hybrid powertrain control module
U0595	Invalid data received from powertrain control monitor module
U0596	Invalid data received from AC to AC converter control module
U0597	Invalid data received from AC to DC converter control module A
U0598	Invalid data received from AC to DC converter control module B
U0599	Invalid data received from DC to DC converter control module A
U059A	Invalid data received from DC to DC converter control module B
U210B	Fuel pump (FP) control module and SRS control module - communication signal lost

EOBD code	Fault location	Probable cause
P2000	Nitrogen oxides (NOx) trap, bank 1 - efficiency below threshold	NOx trap
P2001	Nitrogen oxides (NOx) trap, bank 2 - efficiency below threshold	NOx trap
P2002	Particulate trap, bank 1 - efficiency below threshold	Particulate trap
P2003	Particulate trap, bank 2 - efficiency below threshold	Particulate trap
P200A	Intake manifold air control actuator, bank 1 - performance problem	Wiring, intake manifold air control actuator, ECM
P200B	Intake manifold air control actuator, bank 2 - performance problem	Wiring, intake manifold air control actuator, ECM
P200C	Diesel particulate filter (DPF), bank 1 - over-temperature condition	-
P200D	Diesel particulate filter (DPF), bank 2 - over-temperature condition	-
P200E	Catalytic converter, bank 1 - over-temperature condition	-
P200F	Catalytic converter, bank 2 - over-temperature condition	-
P2004	Intake manifold air control actuator, bank 1 - actuator stuck open	Wiring, intake manifold air control actuator, mechanical fault
P2004	Intake manifold air control solenoid, bank 1 - solenoid stuck open	Wiring, intake manifold air control solenoid, mechanical fault
P2005	Intake manifold air control actuator, bank 2 - actuator stuck open	Wiring, intake manifold air control actuator, mechanical fault
P2005	Intake manifold air control solenoid, bank 2 - solenoid stuck open	Wiring, intake manifold air control solenoid, mechanical fault
P2006	Intake manifold air control actuator, bank 1 - actuator stuck closed	Wiring, intake manifold air control actuator, mechanical fault
P2006	Intake manifold air control solenoid, bank 1 - solenoid stuck closed	Wiring, intake manifold air control solenoid, mechanical fault
P2007	Intake manifold air control actuator, bank 2 - actuator stuck closed	Wiring, intake manifold air control actuator, mechanical fault
P2007	Intake manifold air control solenoid, bank 2 - solenoid stuck closed	Wiring, intake manifold air control solenoid, mechanical fault
P2008	Intake manifold air control actuator, bank 1 - open circuit	Wiring open circuit, intake manifold air control actuator
P2008	Intake manifold air control solenoid, bank 1 - open circuit	Wiring open circuit, intake manifold air control solenoid
P2009	Intake manifold air control actuator, bank 1 - circuit low	Wiring short to earth, intake manifold air control actuator
P2009	Intake manifold air control solenoid, bank 1 - circuit low	Wiring short to earth, intake manifold air control solenoid
P2010	Intake manifold air control actuator, bank 1 - circuit high	Wiring short to positive, intake manifold air control actuator
P2010	Intake manifold air control solenoid, bank 1 - circuit high	Wiring short to positive, intake manifold air control solenoid
P2011	Intake manifold air control actuator, bank 2 - open circuit	Wiring open circuit, intake manifold air control actuator
P2011	Intake manifold air control solenoid, bank 2 - open circuit	Wiring open circuit, intake manifold air control solenoid

P2012	Intake manifold air control actuator, bank 2 - circuit low	Wiring short to earth, intake manifold air control actuator
P2012	Intake manifold air control solenoid, bank 2 - circuit low	Wiring short to earth, intake manifold air control solenoid
P2013	Intake manifold air control actuator, bank 2 - circuit high	Wiring short to positive, intake manifold air control actuator
P2013	Intake manifold air control solenoid, bank 2 - circuit high	Wiring short to positive, intake manifold air control solenoid
P2014	Intake manifold air control actuator position sensor/switch, bank 1 - circuit malfunction	Wiring, intake manifold air control actuator position sensor/switch
P2015	Intake manifold air control actuator position sensor/switch, bank 1 - range/performance	Wiring, mechanical fault, intake manifold air control actuator position sensor/switch
P2016	Intake manifold air control actuator position sensor/switch, bank 1 - circuit low	Wiring short to earth, intake manifold air control actuator position sensor/switch
P2017	Intake manifold air control actuator position sensor/switch, bank 1 - circuit high	Wiring short to positive, intake manifold air control actuator position sensor/switch
P2018	Intake manifold air control actuator position sensor/switch, bank 1 - circuit intermittent	Wiring, poor connection, intake manifold air control actuator position sensor/switch
P2019	Intake manifold air control actuator position sensor/switch, bank 2 - circuit malfunction	Wiring, intake manifold air control actuator position sensor/switch
P2020	Intake manifold air control actuator position sensor/switch, bank 2 - range/performance	Wiring, mechanical fault, intake manifold air control actuator position sensor/switch
P2021	Intake manifold air control actuator position sensor/switch, bank 2 - circuit low	Wiring short to earth, intake manifold air control actuator position sensor/switch
P2022	Intake manifold air control actuator position sensor/switch, bank 2 - circuit high	Wiring short to positive, intake manifold air control actuator position sensor/switch
P2023	Intake manifold air control actuator position sensor/switch, bank 2 - circuit intermittent	Wiring, poor connection, intake manifold air control actuator position sensor/switch
P2024	Evaporative emission (EVAP) fuel vapour temperature sensor - circuit malfunction	Wiring, EVAP fuel vapour temperature sensor
P2025	Evaporative emission (EVAP) fuel vapour temperature sensor - range/performance	Wiring, EVAP fuel vapour temperature sensor
P2026	Evaporative emission (EVAP) fuel vapour temperature sensor - low voltage	Wiring short to earth, EVAP fuel vapour temperature sensor
P2027	Evaporative emission (EVAP) fuel vapour temperature sensor - high voltage	Wiring short to positive, EVAP fuel vapour temperature sensor
P2028	Evaporative emission (EVAP) fuel vapour temperature sensor - circuit intermittent	Wiring, poor connection, EVAP fuel vapour temperature sensor
P2029	Auxiliary heater (fuel fired) - system disabled	Auxiliary heater system
P202A	Reductant tank heater control - open circuit	Wiring, reductant tank heater, ECM
P202B	Reductant tank heater control - circuit low	Wiring, reductant tank heater, ECM
P202C	Reductant tank heater control - circuit high	Wiring, reductant tank heater, ECM
P202D	Reductant leakage	-
P202E	Reductant injector - circuit range/performance	Wiring, reductant injector, ECM
P202F	Reductant supply control - circuit range/performance	-
P2030	Auxiliary heater (fuel fired) - performance problem	Auxiliary heater system

P2031	Exhaust gas temperature (EGT) sensor 2, bank 1 - circuit malfunction	Wiring, EGT sensor
P2032	Exhaust gas temperature (EGT) sensor 2, bank 1 - circuit low	Wiring short to earth, EGT sensor
P2033	Exhaust gas temperature (EGT) sensor 2, bank 1 - circuit high	Wiring short to positive, EGT sensor
P2034	Exhaust gas temperature (EGT) sensor 2, bank 2 - circuit malfunction	Wiring, EGT sensor
P2035	Exhaust gas temperature (EGT) sensor 2, bank 2 - circuit low	Wiring short to earth, EGT sensor
P2036	Exhaust gas temperature (EGT) sensor 2, bank 2 - circuit high	Wiring short to positive, EGT sensor
P2037	Reductant injection air pressure sensor - circuit malfunction	Wiring, reductant injection air pressure sensor
P2038	Reductant injection air pressure sensor - range/performance	Wiring, reductant injection air pressure sensor
P2039	Reductant injection air pressure sensor - low input	Wiring short to earth, reductant injection air pressure sensor
P203A	Reductant level sensor - circuit malfunction	Wiring, reductant level sensor, ECM
P203B	Reductant level sensor - circuit range/performance	Wiring, reductant level sensor, ECM
P203C	Reductant level sensor - circuit low	Wiring, reductant level sensor, ECM
P203D	Reductant level sensor - circuit high	Wiring, reductant level sensor, ECM
P203E	Reductant level sensor - circuit intermittent/erratic	Wiring, reductant level sensor, ECM
P203F	Reductant level - low	-
P2040	Reductant injection air pressure sensor - high input	Wiring short to positive, reductant injection air pressure sensor
P2041	Reductant injection air pressure sensor - circuit intermittent	Wiring, reductant injection air pressure sensor
P2042	Reductant temperature sensor - circuit malfunction	Wiring, reductant temperature sensor
P2043	Reductant temperature sensor - range/performance	Wiring, reductant temperature sensor
P2044	Reductant temperature sensor - low input	Wiring, reductant temperature sensor
P2045	Reductant temperature sensor - high input	Wiring, reductant temperature sensor
P2046	Reductant temperature sensor - circuit intermittent	Wiring, reductant temperature sensor
P2047	Reductant injector 1, bank 1 - open circuit	Wiring, reductant injector
P2048	Reductant injector 1, bank 1 - circuit low	Wiring short to earth, reductant injector
P2049	Reductant injector 1, bank 1 - circuit high	Wiring short to positive, reductant injector
P204A	Reductant pressure sensor - circuit malfunction	Wiring, reductant pressure sensor, ECM
P204B	Reductant pressure sensor - circuit range/performance	Wiring, reductant pressure sensor, ECM
P204C	Reductant pressure sensor - circuit low	Wiring, reductant pressure sensor, ECM
P204D	Reductant pressure sensor - circuit high	Wiring, reductant pressure sensor, ECM
P204E	Reductant pressure sensor - circuit intermittent/erratic	Wiring, reductant pressure sensor, ECM
P204F	Reductant system, bank 1 - performance problem	-
P2050	Reductant injector 1, bank 2 - open circuit	Wiring, reductant injector
P2051	Reductant injector 1, bank 2 - circuit low	Wiring short to earth, reductant injector
P2052	Reductant injector 1, bank 2 - circuit high	Wiring short to positive, reductant injector
P2053	Reductant injector 2, bank 1 - open circuit	Wiring, reductant injector
P2054	Reductant injector 2, bank 1 - circuit low	Wiring short to earth, reductant injector
P2055	Reductant injector 2, bank 1 - circuit high	Wiring short to positive, reductant injector

P2056	Reductant injector 2, bank 2 - open circuit	Wiring, reductant injector
P2057	Reductant injector 2, bank 2 - circuit low	Wiring short to earth, reductant injector
P2058	Reductant injector 2, bank 2 - circuit high	Wiring short to positive, reductant injector
P2059	Reductant injection air pump - open circuit	Wiring, reductant injection air pump
P205A	Reductant temperature sensor - circuit malfunction	Wiring, reductant tank temperature sensor, ECM
P205B	Reductant temperature sensor - circuit range/performance	Wiring, reductant tank temperature sensor, ECM
P205C	Reductant temperature sensor - circuit low	Wiring, reductant tank temperature sensor, ECM
P205D	Reductant temperature sensor - circuit high	Wiring, reductant tank temperature sensor, ECM
P205E	Reductant temperature sensor - circuit intermittent/erratic	Wiring, reductant tank temperature sensor, ECM
P205F	Reductant system, bank 2 - performance problem	-
P2060	Reductant injection air pump - circuit low	Wiring short to earth, reductant injection air pump
P2061	Reductant injection air pump - circuit high	Wiring short to positive, reductant injection air pump
P2062	Reductant supply control - open circuit	Wiring
P2063	Reductant supply control - circuit low	Wiring
P2064	Reductant supply control - circuit high	Wiring
P2065	Fuel gauge tank sensor B - circuit malfunction	Wiring, fuel gauge tank sensor
P2066	Fuel gauge tank sensor B - performance problem	Wiring, fuel gauge tank sensor
P2067	Fuel gauge tank sensor B - circuit low	Wiring short to earth, fuel gauge tank sensor
P2068	Fuel gauge tank sensor B - circuit high	Wiring short to positive, fuel gauge tank sensor
P2069	Fuel gauge tank sensor B - circuit intermittent	Wiring, poor connection, fuel gauge tank sensor
P206A	Reductant quality sensor - malfunction	Wiring, reductant quality sensor, ECM
P206B	Reductant quality sensor - range/performance problem	Wiring, reductant quality sensor, ECM
P206C	Reductant quality sensor - circuit low	Wiring, reductant quality sensor, ECM
P206D	Reductant quality sensor - circuit high	Wiring, reductant quality sensor, ECM
P206E	Intake manifold air control actuator, bank 2 - actuator stuck open	Wiring, intake manifold air control actuator, ECM
P206F	Intake manifold air control actuator, bank 2 - actuator stuck closed	Wiring, intake manifold air control actuator, ECM
P2070	Intake manifold air control actuator - actuator stuck open	Wiring, intake manifold air control actuator, mechanical fault
P2070	Intake manifold air control solenoid - solenoid stuck open	Wiring, intake manifold air control solenoid, mechanical fault
P2071	Intake manifold air control actuator - actuator stuck closed	Wiring, intake manifold air control actuator, mechanical fault
P2071	Intake manifold air control solenoid - solenoid stuck closed	Wiring, intake manifold air control solenoid, mechanical fault
P2075	Intake manifold air control actuator position sensor/switch - circuit malfunction	Wiring, intake manifold air control actuator position sensor/switch
P2076	Intake manifold air control actuator position sensor/switch - range/performance	Wiring, intake manifold air control actuator position sensor/switch
P2077	Intake manifold air control actuator position sensor/switch - circuit low	Wiring short to earth, intake manifold air control actuator position sensor/switch
P2078	Intake manifold air control actuator position sensor/switch - circuit high	Wiring short to positive, intake manifold air control actuator position sensor/switch

P2079	Intake manifold air control actuator position sensor/switch - circuit intermittent	Wiring, poor connection, intake manifold air control actuator position sensor/switch
P207A	Intake manifold air control actuator position sensor/switch, bank 2 - circuit malfunction	Wiring, intake manifold air control actuator position sensor, ECM
P207B	Intake manifold air control actuator position sensor/switch, bank 2 - circuit range/performance	Wiring, intake manifold air control actuator position sensor, ECM
P207C	Intake manifold air control actuator position sensor/switch, bank 2 - circuit low	Wiring, intake manifold air control actuator position sensor, ECM
P207D	Intake manifold air control actuator position sensor/switch, bank 2 - circuit high	Wiring, intake manifold air control actuator position sensor, ECM
P207E	Intake manifold air control actuator position sensor/switch, bank 2 - circuit intermittent	Wiring, intake manifold air control actuator position sensor, ECM
P207F	Reductant quality - performance problem	-
P2080	Exhaust gas temperature (EGT) sensor 1, bank 1 - range/performance	Wiring, EGT sensor
P2081	Exhaust gas temperature (EGT) sensor 1, bank 1 - circuit intermittent	Wiring, poor connection, EGT sensor
P2082	Exhaust gas temperature (EGT) sensor 1, bank 2 - range/performance	Wiring, EGT sensor
P2083	Exhaust gas temperature (EGT) sensor 1, bank 2 - circuit intermittent	Wiring, poor connection, EGT sensor
P2084	Exhaust gas temperature (EGT) sensor 2, bank 1 - range/performance	Wiring, EGT sensor
P2085	Exhaust gas temperature (EGT) sensor 2, bank 1 - circuit intermittent	Wiring, poor connection, EGT sensor
P2086	Exhaust gas temperature (EGT) sensor 2, bank 2 - range/performance	Wiring, EGT sensor
P2087	Exhaust gas temperature (EGT) sensor 2, bank 2 - circuit intermittent	Wiring, poor connection, EGT sensor
P2088	Camshaft position (CMP) actuator A, bank 1 - circuit low	Wiring short to earth, CMP actuator
P2089	Camshaft position (CMP) actuator A, bank 1 - circuit high	Wiring short to positive, CMP actuator
P208A	Reductant pump control - open circuit	Wiring, reductant pump, ECM
P208B	Reductant pump control - range/performance problem	Wiring, reductant pump, ECM
P208C	Reductant pump control - circuit low	Wiring, reductant pump, ECM
P208D	Reductant pump control - circuit high	Wiring, reductant pump, ECM
P208E	Reductant injector 1, bank 1 - injector stuck closed	Reductant injector
P208F	Reductant injector 1, bank 2 - injector stuck closed	Wiring, reductant injector, ECM
P2090	Camshaft position (CMP) actuator B, bank 1 - circuit low	Wiring short to earth, CMP actuator
P2091	Camshaft position (CMP) actuator B, bank 1 - circuit high	Wiring short to positive, CMP actuator
P2092	Camshaft position (CMP) actuator A, bank 2 - circuit low	Wiring short to earth, CMP actuator
P2093	Camshaft position (CMP) actuator A, bank 2 - circuit high	Wiring short to positive, CMP actuator
P2094	Camshaft position (CMP) actuator B, bank 2 - circuit low	Wiring short to earth, CMP actuator
P2095	Camshaft position (CMP) actuator B, bank 2 - circuit high	Wiring short to positive, CMP actuator
P2096	Post catalytic converter fuel trim (FT), bank 1 - too lean	Catalytic converter, exhaust leak
P2097	Post catalytic converter fuel trim (FT), bank 1 - too rich	Catalytic converter

P2098	Post catalytic converter fuel trim (FT), bank 2 - too lean	Catalytic converter, exhaust leak
P2099	Post catalytic converter fuel trim (FT), bank 2 - too rich	Catalytic converter
P209A	Reductant injection air pressure sensor B - circuit malfunction	Wiring, reductant injection air pressure sensor, ECM
P209B	Reductant injection air pressure sensor B - circuit range/performance	Wiring, reductant injection air pressure sensor, ECM
P209C	Reductant injection air pressure sensor B - circuit low	Wiring, reductant injection air pressure sensor, ECM
P209D	Reductant injection air pressure sensor B - circuit high	Wiring, reductant injection air pressure sensor, ECM
P209E	Reductant injection air pressure sensor A/B - correlation	Wiring, reductant injection air pressure sensor, ECM
P209F	Reductant tank heater control - performance problem	Wiring, reductant tank heater, ECM
P20A0	Reductant purge control valve - open circuit	Wiring, reductant purge control valve, ECM
P20A1	Reductant purge control valve - performance problem	Wiring, reductant purge control valve, ECM
P20A2	Reductant purge control valve - circuit low	Wiring, reductant purge control valve, ECM
P20A3	Reductant purge control valve - circuit high	Wiring, reductant purge control valve, ECM
P20A4	Reductant purge control valve - valve stuck open	Wiring, reductant purge control valve, ECM
P20A5	Reductant purge control valve - valve stuck closed	Wiring, reductant purge control valve, ECM
P20A6	Reductant injection air pressure control valve - open circuit	Wiring, reductant injection air pressure control valve, ECM
P20A7	Reductant injection air pressure control valve - performance problem	Wiring, reductant injection air pressure control valve, ECM
P20A8	Reductant injection air pressure control valve - circuit low	Wiring, reductant injection air pressure control valve, ECM
P20A9	Reductant injection air pressure control valve - circuit high	Wiring, reductant injection air pressure control valve, ECM
P20AA	Reductant injection air pressure control valve - valve stuck open	Wiring, reductant injection air pressure control valve, ECM
P20AB	Reductant injection air pressure control valve - valve stuck closed	Wiring, reductant injection air pressure control valve, ECM
P20AC	Reductant metering unit temperature sensor - circuit malfunction	Wiring, reductant metering unit temperature sensor, ECM
P20AD	Reductant metering unit temperature sensor - circuit range/performance	Wiring, reductant metering unit temperature sensor, ECM
P20AE	Reductant metering unit temperature sensor - circuit low	Wiring, reductant metering unit temperature sensor, ECM
P20AF	Reductant metering unit temperature sensor - circuit high	Wiring, reductant metering unit temperature sensor, ECM
P20B0	Reductant metering unit temperature sensor - circuit intermittent/erratic	Wiring, reductant metering unit temperature sensor, ECM
P20B1	Reductant heater coolant control valve - open circuit	Wiring, reductant heater coolant control valve, ECM
P20B2	Reductant heater coolant control valve - performance problem	Wiring, reductant heater coolant control valve, ECM
P20B3	Reductant heater coolant control valve - circuit low	Wiring, reductant heater coolant control valve, ECM
P20B4	Reductant heater coolant control valve - circuit high	Wiring, reductant heater coolant control valve, ECM
P20B5	Reductant metering unit heater control - open circuit	Wiring, reductant heater, ECM
P20B6	Reductant metering unit heater - control performance problem	Wiring, reductant metering unit heater, ECM

P20B7	Reductant metering unit heater - control circuit low	Wiring, reductant metering unit heater, ECM
P20B8	Reductant metering unit heater control - circuit high	Wiring, reductant metering unit heater, ECM
P20B9	Reductant heater control A - open circuit	Wiring, reductant heater, ECM
P20BA	Reductant heater control A - circuit performance problem	Wiring, reductant heater, ECM
P20BB	Reductant heater control A - circuit low	Wiring, reductant heater, ECM
P20BC	Reductant heater control A - circuit high	Wiring, reductant heater, ECM
P20BD	Reductant heater control B - circuit open	Wiring, reductant heater, ECM
P20BE	Reductant heater control B - performance problem	Wiring, reductant heater, ECM
P20BF	Reductant heater control B - circuit low	Wiring, reductant heater, ECM
P20C0	Reductant heater control B - circuit high	Wiring, reductant heater, ECM
P20C1	Reductant heater control C - open circuit	Wiring, reductant heater, ECM
P20C2	Reductant heater control C - performance problem	Wiring, reductant heater, ECM
P20C3	Reductant heater control C - circuit low	Wiring, reductant heater, ECM
P20C4	Reductant heater control C - circuit high	Wiring, reductant heater, ECM
P20C5	Reductant heater control D - open circuit	Wiring, reductant heater, ECM
P20C6	Reductant heater control D - performance problem	Wiring, reductant heater, ECM
P20C7	Reductant heater control D - circuit low	Wiring, reductant heater, ECM
P20C8	Reductant heater control D - circuit high	Wiring, reductant heater, ECM
P20C9	Reductant control module - MIL activation requested	-
P20CA	Reductant injection air pressure - leak	-
P20CB	Exhaust after treatment fuel injector A - control circuit open	Wiring, exhaust after treatment fuel injector, ECM
P20CC	Exhaust after treatment fuel injector A - performance problem	Wiring, exhaust after treatment fuel injector, ECM
P20CD	Exhaust after treatment fuel injector A - control circuit low	Wiring, fuel injector, ECM
P20CE	Exhaust after treatment fuel injector A - control circuit high	Wiring, fuel injector, ECM
P20CF	Exhaust after treatment fuel injector A - injector stuck open	Wiring, exhaust after treatment fuel injector, ECM
P20D0	Exhaust after treatment fuel injector A - injector stuck closed	Wiring, exhaust after treatment fuel injector, ECM
P20D1	Exhaust after treatment fuel injector B - control circuit open	Wiring, exhaust after treatment fuel injector, ECM
P20D2	Exhaust after treatment fuel injector B - performance problem	Wiring, exhaust after treatment fuel injector, ECM
P20D3	Exhaust after treatment fuel injector B - control circuit low	Wiring, exhaust after treatment fuel injector, ECM
P20D4	Exhaust after treatment fuel injector B - control circuit high	Wiring, exhaust after treatment fuel injector, ECM
P20D5	Exhaust after treatment fuel injector B - injector stuck open	Wiring, exhaust after treatment fuel injector, ECM
P20D6	Exhaust after treatment fuel injector B - injector stuck closed	Wiring, exhaust after treatment fuel injector, ECM
P20D7	Exhaust after treatment fuel supply control - open circuit	-
P20D8	Exhaust after treatment fuel supply control - performance problem	-
P20D9	Exhaust after treatment fuel supply - control circuit low	-
P20DA	Exhaust after treatment fuel supply - control circuit high	-
P20DB	Exhaust after treatment fuel supply - control stuck open	-
P20DC	Exhaust after treatment fuel supply control - valve stuck closed	-
P20DD	Exhaust after treatment fuel pressure sensor - circuit malfunction	Wiring, exhaust after treatment fuel pressure sensor, ECM

P20DE	Exhaust after treatment fuel pressure sensor - circuit range/performance	Wiring, exhaust after treatment fuel pressure sensor, ECM
P20DF	Exhaust after treatment fuel pressure sensor - circuit low	Wiring, exhaust after treatment fuel pressure sensor, ECM
P20E0	Exhaust after treatment fuel pressure sensor - circuit high	Wiring, exhaust after treatment fuel pressure sensor, ECM
P20E1	Exhaust after treatment fuel pressure sensor - circuit intermittent/erratic	Wiring, exhaust after treatment fuel pressure sensor, ECM
P20E2	Exhaust gas temperature sensor 1/2, bank 1 - correlation	Wiring, exhaust gas temperature sensor, ECM
P20E3	Exhaust gas temperature sensor 1/3, bank 1 - correlation	Wiring, exhaust gas temperature sensor, ECM
P20E4	Exhaust gas temperature sensor 2/3, bank 1 - correlation	Wiring, exhaust gas temperature sensor, ECM
P20E5	Exhaust gas temperature sensor 1/2, bank 2 - correlation	Wiring, exhaust gas temperature sensor, ECM
P2100	Throttle actuator control (TAC) motor - open circuit	Wiring, TAC motor
P2101	Throttle actuator control (TAC) motor - range/performance	Wiring, TAC motor
P2102	Throttle actuator control (TAC) motor - circuit low	Wiring short to earth, TAC motor
P2103	Throttle actuator control (TAC) motor - circuit high	Wiring short to positive, TAC motor
P2104	Throttle actuator control (TAC) system - forced idle mode	Wiring, TAC motor, APP sensor, ECM
P2105	Throttle actuator control (TAC) system - forced engine shut down mode	Wiring, TAC motor, APP sensor, ECM
P2106	Throttle actuator control (TAC) system - forced limited power mode	Wiring, TAC motor, APP sensor, ECM
P2107	Throttle actuator control (TAC) control module - processor fault	TAC control module
P2108	Throttle actuator control (TAC) control module - performance problem	TAC control module
P2109	Accelerator pedal position (APP) sensor A - minimum stop performance	APP sensor
P2109	Throttle position (TP) sensor A - minimum stop performance	TP sensor, throttle valve tight/sticking
P210A	Throttle control unit B, control motor - open circuit	Wiring, throttle control unit, ECM
P210B	Throttle control unit B, control motor - circuit range/performance	Wiring, throttle control unit, ECM
P210C	Throttle control unit B, control motor - circuit low	Wiring, throttle control unit, ECM
P210D	Throttle control unit B, control motor - circuit high	Wiring, throttle control unit, ECM
P210E	Throttle position sensor (TPS)/accelerator pedal position (APP) sensor/switch, C/F voltage - correlation	Wiring, TPS, APP sensor/switch, ECM
P2110	Throttle actuator control (TAC) system - forced limited rpm mode	Wiring, TAC motor, APP sensor, ECM
P2111	Throttle actuator control (TAC) system - actuator stuck open	Throttle body, throttle valve tight/sticking
P2112	Throttle actuator control (TAC) system - actuator stuck closed	Throttle body, throttle valve tight/sticking
P2113	Accelerator pedal position (APP) sensor B - minimum stop performance	APP sensor
P2113	Throttle position (TP) sensor B - minimum stop performance	TP sensor, throttle valve tight/sticking
P2114	Accelerator pedal position (APP) sensor C - minimum stop performance	APP sensor

P2114	Throttle position (TP) sensor C - minimum stop performance	TP sensor, throttle valve tight/sticking
P2115	Accelerator pedal position (APP) sensor D - minimum stop performance	APP sensor
P2115	Throttle position (TP) sensor D - minimum stop performance	TP sensor, throttle valve tight/sticking
P2116	Accelerator pedal position (APP) sensor E - minimum stop performance	Wiring, TP sensor
P2116	Throttle position (TP) sensor E - minimum stop performance	Wiring, TP sensor
P2117	Accelerator pedal position (APP) sensor F - minimum stop performance	Wiring, APP sensor
P2117	Throttle position (TP) sensor F - minimum stop performance	Wiring, TP sensor
P2118	Throttle actuator control (TAC), throttle motor current - range/performance	Wiring, throttle motor
P2119	Throttle actuator control (TAC), throttle valve - range/performance	Throttle valve tight/sticking, throttle motor
P2120	Accelerator pedal position (APP) sensor/switch D - circuit malfunction	Wiring, APP sensor/switch
P2120	Throttle position (TP) sensor/switch D - circuit malfunction	Wiring, TP sensor/switch
P2121	Accelerator pedal position (APP) sensor/switch D - range/performance	Wiring, APP sensor/switch
P2121	Throttle position (TP) sensor/switch D - range/performance	Wiring, TP sensor/switch
P2122	Accelerator pedal position (APP) sensor/switch D - low input	Wiring short to earth, APP sensor/switch
P2122	Throttle position (TP) sensor/switch D - low input	Wiring short to earth, TP sensor/switch
P2123	Accelerator pedal position (APP) sensor/switch D - high input	Wiring short to positive, APP sensor/switch
P2123	Throttle position (TP) sensor/switch D - high input	Wiring short to positive, TP sensor/switch
P2124	Accelerator pedal position (APP) sensor/switch D - circuit intermittent	Wiring, poor connection, APP sensor/switch
P2124	Throttle position (TP) sensor/switch D - circuit intermittent	Wiring, poor connection, TP sensor/switch
P2125	Accelerator pedal position (APP) sensor/switch E - circuit malfunction	Wiring, APP sensor/switch
P2125	Throttle position (TP) sensor/switch E - circuit malfunction	Wiring, TP sensor/switch
P2126	Accelerator pedal position (APP) sensor/switch E - range/performance	Wiring, APP sensor/switch
P2126	Throttle position (TP) sensor/switch E - range/performance	Wiring, TP sensor/switch
P2127	Accelerator pedal position (APP) sensor/switch E - low input	Wiring short to earth, APP sensor/switch
P2127	Throttle position (TP) sensor/switch E - low input	Wiring short to earth, TP sensor/switch
P2128	Accelerator pedal position (APP) sensor/switch E - high input	Wiring short to positive, APP sensor/switch
P2128	Throttle position (TP) sensor/switch E - high input	Wiring short to positive, TP sensor/switch
P2129	Accelerator pedal position (APP) sensor/switch E - circuit intermittent	Wiring, poor connection, APP sensor/switch
P2129	Throttle position (TP) sensor/switch E - circuit intermittent	Wiring, poor connection, TP sensor/switch
P2130	Accelerator pedal position (APP) sensor/switch F - circuit malfunction	Wiring, APP sensor/switch
P2130	Throttle position (TP) sensor/switch F - circuit malfunction	Wiring, TP sensor/switch
P2131	Accelerator pedal position (APP) sensor/switch F - circuit range/performance	Wiring, APP sensor/switch

P2131	Throttle position (TP) sensor/switch F - circuit range/performance	Wiring, TP sensor/switch
P2132	Accelerator pedal position (APP) sensor/switch F - low input	Wiring short to earth, APP sensor/switch
P2132	Throttle position (TP) sensor/switch F - low input	Wiring short to earth, TP sensor/switch
P2133	Accelerator pedal position (APP) sensor/switch F - high input	Wiring short to positive, APP sensor/switch
P2133	Throttle position (TP) sensor/switch F - high input	Wiring short to positive, TP sensor/switch
P2134	Accelerator pedal position (APP) sensor/switch F - circuit intermittent	Wiring, poor connection, APP sensor/switch
P2134	Throttle position (TP) sensor/switch F - circuit intermittent	Wiring, poor connection, TP sensor/switch
P2135	Accelerator pedal position (APP) sensor/switch A/B - voltage correlation	Wiring, APP sensor/switch
P2135	Throttle position (TP) sensor/switch A/B - voltage correlation	Wiring, TP sensor/switch
P2136	Accelerator pedal position (APP) sensor/switch A/C - voltage correlation	Wiring, APP sensor/switch
P2136	Throttle position (TP) sensor/switch A/C - voltage correlation	Wiring, TP sensor/switch
P2137	Accelerator pedal position (APP) sensor/switch B/C - voltage correlation	Wiring, APP sensor/switch
P2137	Throttle position (TP) sensor/switch B/C - voltage correlation	Wiring, TP sensor/switch
P2138	Accelerator pedal position (APP) sensor/switch D/E - voltage correlation	Wiring, APP sensor/switch
P2138	Throttle position (TP) sensor/switch D/E - voltage correlation	Wiring, TP sensor/switch
P2139	Accelerator pedal position (APP) sensor/switch D/F - voltage correlation	Wiring, APP sensor/switch
P2139	Throttle position (TP) sensor/switch D/F - voltage correlation	Wiring, TP sensor/switch
P213A	Exhaust gas recirculation (EGR) throttle B - open circuit	Wiring, EGR throttle, ECM
P213B	Exhaust gas recirculation (EGR) throttle B - control circuit range/performance	Wiring, EGR throttle, ECM
P213C	Exhaust gas recirculation (EGR) throttle B - control circuit low	Wiring, EGR throttle, ECM
P213D	Exhaust gas recirculation (EGR) throttle B - control circuit high	Wiring, EGR throttle, ECM
P213E	Fuel injection system fault - forced engine shut-down mode	-
P213F	Fuel pump (FP) system fault - forced engine shut-down mode	Wiring, FP, FP relay, ECM
P2140	Accelerator pedal position (APP) sensor/switch E/F - voltage correlation	Wiring, APP sensor/switch
P2140	Throttle position (TP) sensor/switch E/F - voltage correlation	Wiring, TP sensor/switch
P2141	Exhaust gas recirculation (EGR) throttle control valve - circuit low	Wiring short to earth, EGR throttle control valve
P2142	Exhaust gas recirculation (EGR) throttle control valve - circuit high	Wiring short to positive, EGR throttle control valve
P2143	Exhaust gas recirculation (EGR) vent control - open circuit	Wiring, EGR vent control
P2144	Exhaust gas recirculation (EGR) vent control - circuit low	Wiring short to earth, EGR vent control
P2145	Exhaust gas recirculation (EGR) vent control - circuit high	Wiring short to positive, EGR vent control
P2146	Injector - group A, supply voltage - open circuit	Wiring, engine control (EC) relay, injector
P2147	Injector - group A, supply voltage - circuit low	Wiring short to earth, engine control (EC) relay, injector

P2148	Injector - group A, supply voltage - circuit high	Wiring short to positive, engine control (EC) relay, injector
P2149	Injector - group B, supply voltage - open circuit	Wiring, engine control (EC) relay, injector
P2150	Injector - group B, supply voltage - circuit low	Wiring short to earth, engine control (EC) relay, injector
P2151	Injector - group B, supply voltage - circuit high	Wiring short to positive, engine control (EC) relay, injector
P2152	Injector - group C, supply voltage - open circuit	Wiring, engine control (EC) relay, injector
P2153	Injector - group C, supply voltage - circuit low	Wiring short to earth, engine control (EC) relay, injector
P2154	Injector - group C, supply voltage - circuit high	Wiring short to positive, engine control (EC) relay, injector
P2155	Injector - group D, supply voltage - open circuit	Wiring, engine control (EC) relay, injector
P2156	Injector - group D, supply voltage - circuit low	Wiring short to earth, engine control (EC) relay, injector
P2157	Injector - group D, supply voltage - circuit high	Wiring short to positive, engine control (EC) relay, injector
P2158	Vehicle speed sensor (VSS) B - circuit malfunction	Wiring, VSS
P2159	Vehicle speed sensor (VSS) B - range/performance	Wiring, VSS
P215A	Vehicle speed sensor (VSS)/wheel speed - correlation	Wiring, VSS, wheel speed sensor, incorrect tyre size, ECM
P215B	Vehicle speed sensor (VSS)/transmission output shaft speed (OSS) sensor - correlation	Wiring, VSS, OSS sensor, transmission mechanical fault, incorrect tyre size, ECM
P2160	Vehicle speed sensor (VSS) B - circuit low	Wiring short to earth, VSS
P2161	Vehicle speed sensor (VSS) B - circuit intermittent/erratic	Wiring, poor connection, VSS
P2162	Vehicle speed sensor (VSS) A/B - correlation	Wiring, VSS, incorrect tyre size
P2163	Accelerator pedal position (APP) sensor A - maximum stop performance	Wiring, APP sensor
P2163	Throttle position (TP) sensor A - maximum stop performance	Wiring, TP sensor
P2164	Accelerator pedal position (APP) sensor B - maximum stop performance	Wiring, APP sensor
P2164	Throttle position (TP) sensor B - maximum stop performance	Wiring, TP sensor
P2165	Accelerator pedal position (APP) sensor C - maximum stop performance	Wiring, APP sensor
P2165	Throttle position (TP) sensor C - maximum stop performance	Wiring, TP sensor
P2166	Accelerator pedal position (APP) sensor D - maximum stop performance	Wiring, APP sensor
P2166	Throttle position (TP) sensor D - maximum stop performance	Wiring, TP sensor
P2167	Accelerator pedal position (APP) sensor E - maximum stop performance	Wiring, APP sensor
P2167	Throttle position (TP) sensor E - maximum stop performance	Wiring, TP sensor
P2168	Accelerator pedal position (APP) sensor F - maximum stop performance	Wiring, APP sensor
P2168	Throttle position (TP) sensor F - maximum stop performance	Wiring, TP sensor
P2169	Exhaust gas pressure regulator vent solenoid - circuit open	Wiring, exhaust gas pressure regulator vent solenoid
P216A	Fuel injector group E, supply voltage - open circuit	Wiring, engine control (EC) relay, injectors, ECM
P216B	Fuel injector group E, supply voltage - circuit low	Wiring, engine control (EC) relay, injectors, ECM
P216C	Fuel injector group E, supply voltage - circuit high	Wiring, engine control (EC) relay, injectors, ECM

P216D	Fuel injector group F, supply voltage - open circuit	Wiring, engine control (EC) relay, injectors, ECM
P216E	Fuel injector group F, supply voltage - circuit low	Wiring, engine control (EC) relay, injectors, ECM
P216F	Fuel injector group F, supply voltage - circuit high	Wiring, engine control (EC) relay, injectors, ECM
P2170	Exhaust gas pressure regulator vent solenoid - circuit low	Wiring short to earth, exhaust gas pressure regulator vent solenoid
P2171	Exhaust gas pressure regulator vent solenoid - circuit high	Wiring short to positive, exhaust gas pressure regulator vent solenoid
P2172	Throttle actuator control (TAC) system - sudden high airflow detected	Intake system, throttle body
P2173	Throttle actuator control (TAC) system - high airflow detected	Intake system, throttle body
P2174	Throttle actuator control (TAC) system - sudden low airflow detected	Intake system, throttle body
P2175	Throttle actuator control (TAC) system - low airflow detected	Intake system, throttle body
P2176	Throttle actuator control (TAC) system - idle position not learned	Basic setting not carried out
P2177	System too lean off idle, bank 1	Fuel pressure, injectors, intake leak
P2178	System too rich off idle, bank 1	Fuel pressure, injectors, air intake restricted
P2179	System too lean off idle, bank 2	Fuel pressure, injectors, intake leak
P2180	System too rich off idle, bank 2	Fuel pressure, injectors, air intake restricted
P2181	Cooling system performance	Radiator, coolant thermostat, engine coolant blower motor
P2182	Engine coolant temperature (ECT) sensor 2 - circuit malfunction	Wiring, ECT sensor
P2183	Engine coolant temperature (ECT) sensor 2 - range/performance	Wiring, ECT sensor
P2184	Engine coolant temperature (ECT) sensor 2 - circuit low	Wiring short to earth, ECT sensor
P2185	Engine coolant temperature (ECT) sensor 2 - circuit high	Wiring short to positive, ECT sensor
P2186	Engine coolant temperature (ECT) sensor 2 - circuit intermittent/erratic	Wiring, poor connection, ECT sensor
P2187	System too lean at idle, bank 1	Fuel pressure, injectors, intake leak
P2188	System too rich at idle, bank 1	Fuel pressure, injectors, air intake restricted
P2189	System too lean at idle, bank 2	Fuel pressure, injectors, intake leak
P2190	System too rich at idle, bank 2	Fuel pressure, injectors, air intake restricted
P2191	System too lean at higher load, bank 1	Fuel pressure, injectors, intake leak
P2192	System too rich at higher load, bank 1	Fuel pressure, injectors, air intake restricted
P2193	System too lean at higher load, bank 2	Fuel pressure, injectors, intake leak
P2194	System too rich at higher load, bank 2	Fuel pressure, injectors, air intake restricted
P2195	Heated oxygen sensor (HO2S) 1, bank 1 - signal stuck lean	HO2S, fuel pressure, injectors, intake leak
P2195	Oxygen sensor (O2S) 1, bank 1 - signal stuck lean	O2S, fuel pressure, injectors, intake leak
P2196	Heated oxygen sensor (HO2S) 1, bank 1 - signal stuck rich	HO2S, fuel pressure, injectors, air intake restricted
P2196	Oxygen sensor (O2S) 1, bank 1 - signal stuck rich	O2S, fuel pressure, injectors, air intake restricted
P2197	Heated oxygen sensor (HO2S) 1, bank 2 - signal stuck lean	HO2S, fuel pressure, injectors, intake leak
P2197	Oxygen sensor (O2S) 1, bank 2 - signal stuck lean	O2S, fuel pressure, injectors, intake leak
P2198	Heated oxygen sensor (HO2S) 1, bank 2 - signal stuck rich	HO2S, fuel pressure, injectors, air intake restricted

P2198	Oxygen sensor (O2S) 1, bank 2 - signal stuck rich	O2S, fuel pressure, injectors, air intake restricted
P2199	Intake air temperature (IAT) sensor 1/2 - correlation	Wiring, IAT sensor
P2200	Nitrogen oxides (NOx) sensor, bank 1 - circuit malfunction	Wiring, NOx sensor
P2201	Nitrogen oxides (NOx) sensor, bank 1 - range/performance	Wiring, NOx sensor
P2202	Nitrogen oxides (NOx) sensor, bank 1 - low input	Wiring short to earth, NOx sensor
P2203	Nitrogen oxides (NOx) sensor, bank 1 - high input	Wiring short to positive, NOx sensor
P2204	Nitrogen oxides (NOx) sensor, bank 1 - intermittent input	Wiring, poor connection, NOx sensor
P2205	Nitrogen oxides (NOx) sensor, bank 1, heater control - open circuit	Wiring, NOx sensor
P2206	Nitrogen oxides (NOx) sensor, bank 1, heater control - circuit low	Wiring short to earth, NOx sensor
P2207	Nitrogen oxides (NOx) sensor, bank 1, heater control - circuit high	Wiring short to positive, NOx sensor
P2208	Nitrogen oxides (NOx) sensor, bank 1, heater sense circuit - malfunction	Wiring, NOx sensor
P2209	Nitrogen oxides (NOx) sensor, bank 1, heater sense circuit - range/performance	Wiring, NOx sensor
P2210	Nitrogen oxides (NOx) sensor, bank 1, heater sense circuit - low input	Wiring short to earth, NOx sensor
P2211	Nitrogen oxides (NOx) sensor, bank 1, heater sense circuit - high input	Wiring short to positive, NOx sensor
P2212	Nitrogen oxides (NOx) sensor, bank 1, heater sense circuit - circuit intermittent	Wiring, poor connection, NOx sensor
P2213	Nitrogen oxides (NOx) sensor, bank 2 - circuit malfunction	Wiring, NOx sensor
P2214	Nitrogen oxides (NOx) sensor, bank 2 - range/performance	Wiring, NOx sensor
P2215	Nitrogen oxides (NOx) sensor, bank 2 - low input	Wiring short to earth, NOx sensor
P2216	Nitrogen oxides (NOx) sensor, bank 2 - high input	Wiring short to positive, NOx sensor
P2217	Nitrogen oxides (NOx) sensor, bank 2 - intermittent input	Wiring, poor connection, NOx sensor
P2218	Nitrogen oxides (NOx) sensor, bank 2, heater control - open circuit	Wiring, NOx sensor
P2219	Nitrogen oxides (NOx) sensor, bank 2, heater control - circuit low	Wiring short to earth, NOx sensor
P2220	Nitrogen oxides (NOx) sensor, bank 2, heater control - circuit high	Wiring short to positive, NOx sensor
P2221	Nitrogen oxides (NOx) sensor, bank 2, heater sense circuit - circuit malfunction	Wiring, NOx sensor
P2222	Nitrogen oxides (NOx) sensor, bank 2, heater sense circuit - range/performance	Wiring, NOx sensor
P2223	Nitrogen oxides (NOx) sensor, bank 2, heater sense circuit - circuit low	Wiring short to earth, NOx sensor
P2224	Nitrogen oxides (NOx) sensor, bank 2, heater sense circuit - circuit high	Wiring short to positive, NOx sensor
P2225	Nitrogen oxides (NOx) sensor, bank 2, heater sense circuit - circuit intermittent	Wiring, poor connection, NOx sensor
P2226	Barometric pressure (BARO) sensor - circuit malfunction	Wiring, BARO sensor
P2227	Barometric pressure (BARO) sensor - range/performance	Wiring, BARO sensor

P2228	Barometric pressure (BARO) sensor - circuit low	Wiring short to earth, BARO sensor
P2229	Barometric pressure (BARO) sensor - circuit high	Wiring short to positive, BARO sensor
P2230	Barometric pressure (BARO) sensor - circuit intermittent	Wiring, poor connection, BARO sensor
P2231	Heated oxygen sensor (HO2S) 1, bank 1 - signal circuit shorted to heater circuit	Wiring, HO2S
P2232	Heated oxygen sensor (HO2S) 2, bank 1 - signal circuit shorted to heater circuit	Wiring, HO2S
P2233	Heated oxygen sensor (HO2S) 3, bank 1 - signal circuit shorted to heater circuit	Wiring, HO2S
P2234	Heated oxygen sensor (HO2S) 1, bank 2 - signal circuit shorted to heater circuit	Wiring, HO2S
P2235	Heated oxygen sensor (HO2S) 2, bank 2 - signal circuit shorted to heater circuit	Wiring, HO2S
P2236	Heated oxygen sensor (HO2S) 3, bank 2 - signal circuit shorted to heater circuit	Wiring, HO2S
P2237	Heated oxygen sensor (HO2S) 1, bank 1, positive current control - open circuit	Wiring, HO2S
P2237	Oxygen sensor (O2S) 1, bank 1, positive current control - open circuit	Wiring, O2S
P2238	Heated oxygen sensor (HO2S) 1, bank 1, positive current control - circuit low	Wiring short to earth, HO2S
P2238	Oxygen sensor (O2S) 1, bank 1, positive current control - circuit low	Wiring short to earth, O2S
P2239	Heated oxygen sensor (HO2S) 1, bank 1, positive current control - circuit high	Wiring short to positive, HO2S
P2239	Oxygen sensor (O2S) 1, bank 1, positive current control - circuit high	Wiring short to positive, O2S
P2240	Heated oxygen sensor (HO2S) 1, bank 2, positive current control - open circuit	Wiring, HO2S
P2240	Oxygen sensor (O2S) 1, bank 2, positive current control - open circuit	Wiring, O2S
P2241	Heated oxygen sensor (HO2S) 1, bank 2, positive current control - circuit low	Wiring short to earth, HO2S
P2241	Oxygen sensor (O2S) 1, bank 2, positive current control - circuit low	Wiring short to earth, O2S
P2242	Heated oxygen sensor (HO2S) 1, bank 2, positive current control - circuit high	Wiring short to positive, HO2S
P2242	Oxygen sensor (O2S) 1, bank 2, positive current control - circuit high	Wiring short to positive, O2S
P2243	Heated oxygen sensor (HO2S) 1, bank 1, reference voltage - open circuit	Wiring, HO2S
P2243	Oxygen sensor (O2S) 1, bank 1, reference voltage - open circuit	Wiring, O2S
P2244	Heated oxygen sensor (HO2S) 1, bank 1, reference voltage - performance problem	Wiring, HO2S
P2244	Oxygen sensor (O2S) 1, bank 1, reference voltage - performance problem	Wiring, O2S

P2245	Heated oxygen sensor (HO2S) 1, bank 1, reference voltage - circuit low	Wiring short to earth, HO2S
P2245	Oxygen sensor (O2S) 1, bank 1, reference voltage - circuit low	Wiring short to earth, O2S
P2246	Heated oxygen sensor (HO2S) 1, bank 1, reference voltage - circuit high	Wiring short to positive, HO2S
P2246	Oxygen sensor (O2S) 1, bank 1, reference voltage - circuit high	Wiring short to positive, O2S
P2247	Heated oxygen sensor (HO2S) 1, bank 2, reference voltage - open circuit	Wiring, HO2S
P2247	Oxygen sensor (O2S) 1, bank 2, reference voltage - open circuit	Wiring, O2S
P2248	Heated oxygen sensor (HO2S) 1, bank 2, reference voltage - performance problem	Wiring, HO2S
P2248	Oxygen sensor (O2S) 1, bank 2, reference voltage - performance problem	Wiring, O2S
P2249	Heated oxygen sensor (HO2S) 1, bank 2, reference voltage - circuit low	Wiring short to earth, HO2S
P2249	Oxygen sensor (O2S) 1, bank 2, reference voltage - circuit low	Wiring short to earth, O2S
P2250	Heated oxygen sensor (HO2S) 1, bank 2, reference voltage - circuit high	Wiring short to positive, HO2S
P2250	Oxygen sensor (O2S) 1, bank 2, reference voltage - circuit high	Wiring short to positive, O2S
P2251	Heated oxygen sensor (HO2S) 1, bank 1, negative current control - open circuit	Wiring, HO2S
P2251	Oxygen sensor (O2S) 1, bank 1, negative current control - open circuit	Wiring, O2S
P2252	Heated oxygen sensor (HO2S) 1, bank 1, negative current control - circuit low	Wiring short to earth, HO2S
P2252	Oxygen sensor (O2S) 1, bank 1, negative current control - circuit low	Wiring short to earth, O2S
P2253	Heated oxygen sensor (HO2S) 1, bank 1, negative current control - circuit high	Wiring short to positive, HO2S
P2253	Oxygen sensor (O2S) 1, bank 1, negative current control - circuit high	Wiring short to positive, O2S
P2254	Heated oxygen sensor (HO2S) 1, bank 2, negative current control - open circuit	Wiring, HO2S
P2254	Oxygen sensor (O2S) 1, bank 2, negative current control - open circuit	Wiring, O2S
P2255	Heated oxygen sensor (HO2S) 1, bank 2, negative current control - circuit low	Wiring short to earth, HO2S
P2255	Oxygen sensor (O2S) 1, bank 2, negative current control - circuit low	Wiring short to earth, O2S
P2256	Heated oxygen sensor (HO2S) 1, bank 2, negative current control - circuit high	Wiring short to positive, HO2S
P2256	Oxygen sensor (O2S) 1, bank 2, negative current control - circuit high	Wiring short to positive, O2S

P2257	Secondary air injection (AIR) system, control A - circuit low	Wiring short to earth, AIR pump relay, AIR pump, AIR solenoid
P2258	Secondary air injection (AIR) system, control A - circuit high	Wiring short to positive, AIR pump relay, AIR pump, AIR solenoid
P2259	Secondary air injection (AIR) system, control B - circuit low	Wiring short to earth, AIR pump relay, AIR pump, AIR solenoid
P2260	Secondary air injection (AIR) system, control B - circuit high	Wiring short to positive, AIR pump relay, AIR pump, AIR solenoid
P2261	Turbocharger (TC) bypass valve/supercharger (SC) bypass valve	Mechanical fault
P2262	Turbocharger (TC) boost pressure not detected	Mechanical fault
P2263	Turbocharger (TC) boost pressure/supercharger (SC) boost pressure - performance problem	Mechanical fault
P2264	Fuel/water separator sensor - circuit malfunction	Wiring, fuel/water separator sensor
P2265	Fuel/water separator sensor - range/performance	Wiring, fuel/water separator sensor
P2266	Fuel/water separator sensor - circuit low	Wiring short to earth, fuel/water separator sensor
P2267	Fuel/water separator sensor - circuit high	Wiring short to positive, fuel/water separator sensor
P2268	Fuel/water separator sensor - circuit intermittent	Wiring, poor connection, fuel/water separator sensor
P2269	Water in fuel	Water in fuel
P226A	Water-in-fuel warning lamp - circuit malfunction	Wiring, warning lamp, ECM
P2270	Heated oxygen sensor (HO2S) 2, bank 1 - signal stuck lean	Wiring, HO2S, fuel pressure, injectors, intake leak
P2270	Oxygen sensor (O2S) 2, bank 1 - signal stuck lean	Wiring, O2S, fuel pressure, injectors, intake leak
P2271	Heated oxygen sensor (HO2S) 2, bank 1 - signal stuck rich	Wiring, HO2S, fuel pressure, injectors, air intake restricted
P2271	Oxygen sensor (O2S) 2, bank 1 - signal stuck rich	Wiring, O2S, fuel pressure, injectors, air intake restricted
P2272	Heated oxygen sensor (HO2S) 2, bank 2 - signal stuck lean	Wiring, HO2S, fuel pressure, injectors, intake leak
P2272	Oxygen sensor (O2S) 2, bank 2 - signal stuck lean	Wiring, O2S, fuel pressure, injectors, intake leak
P2273	Heated oxygen sensor (HO2S) 2, bank 2 - signal stuck rich	Wiring, HO2S, fuel pressure, injectors, air intake restricted
P2273	Oxygen sensor (O2S) 2, bank 2 - signal stuck rich	Wiring, O2S, fuel pressure, injectors, air intake restricted
P2274	Heated oxygen sensor (HO2S) 3, bank 1 - signal stuck lean	Wiring, HO2S, fuel pressure, injectors, intake leak
P2274	Oxygen sensor (O2S) 3, bank 1 - signal stuck lean	Wiring, O2S, fuel pressure, injectors, intake leak
P2275	Heated oxygen sensor (HO2S) 3, bank 1 - signal stuck rich	Wiring, HO2S, fuel pressure, injectors, air intake restricted
P2275	Oxygen sensor (O2S) 3, bank 1 - signal stuck rich	Wiring, O2S, fuel pressure, injectors, air intake restricted
P2276	Heated oxygen sensor (HO2S) 3, bank 2 - signal stuck lean	Wiring, HO2S, fuel pressure, injectors, intake leak
P2276	Oxygen sensor (O2S) 3, bank 2 - signal stuck lean	Wiring, O2S, fuel pressure, injectors, intake leak
P2277	Heated oxygen sensor (HO2S) 3, bank 2 - signal stuck rich	Wiring, HO2S, fuel pressure, injectors, air intake restricted
P2277	Oxygen sensor (O2S) 3, bank 2 - signal stuck rich	Wiring, O2S, fuel pressure, injectors, air intake restricted

P2278	Heated oxygen sensor (HO2S) 3, bank 1/heated oxygen sensor (HO2S) 3, bank 2 - signals transposed	Wiring
P2278	Oxygen sensor (O2S) 3, bank 1/oxygen sensor (O2S) 3, bank 2 - signals transposed	Wiring
P2279	Intake air leak	Mechanical fault
P2280	Air leak/blockage between air filter and MAF sensor	Mechanical fault
P2281	Air leak between MAF sensor and throttle body	Mechanical fault
P2282	Air leak between throttle body and intake valves	Mechanical fault
P2283	Injector control pressure sensor - circuit malfunction	Wiring, injector control pressure sensor
P2284	Injector control pressure sensor - range/performance	Wiring, injector control pressure sensor
P2285	Injector control pressure sensor - circuit low	Wiring short to earth, injector control pressure sensor
P2286	Injector control pressure sensor - circuit high	Wiring short to positive, injector control pressure sensor
P2287	Injector control pressure sensor - circuit intermittent	Wiring, poor connection, injector control pressure sensor
P2288	Injector control pressure - pressure too high	Fuel pressure regulator, injector control pressure sensor
P2289	Injector control pressure, engine off - pressure too high	Fuel pressure regulator
P2290	Injector control pressure - pressure too low	Fuel pressure regulator, injector control pressure sensor
P2291	Injector control pressure, engine cranking - pressure too low	Fuel pressure regulator, injector control pressure sensor
P2292	Injector control pressure - erratic	Fuel pressure regulator, injector control pressure sensor
P2293	Fuel pressure regulator 2 - performance problem	Wiring, fuel pressure regulator
P2294	Fuel pressure regulator 2 - circuit malfunction	Wiring, fuel pressure regulator
P2295	Fuel pressure regulator 2 - circuit low	Wiring short to earth, fuel pressure regulator
P2296	Fuel pressure regulator 2 - circuit high	Wiring short to positive, fuel pressure regulator
P2297	Heated oxygen sensor (HO2S) 1, bank 1 - signal out of range during deceleration	HO2S, intake leak, exhaust leak, injectors
P2297	Oxygen sensor (O2S) 1, bank 1 - signal out of range during deceleration	O2S, intake leak, exhaust leak, injectors
P2298	Heated oxygen sensor (HO2S) 1, bank 2 - signal out of range during deceleration	HO2S, intake leak, exhaust leak, injectors
P2298	Oxygen sensor (O2S) 1, bank 2 - signal out of range during deceleration	O2S, intake leak, exhaust leak, injectors
P2299	Brake pedal position (BPP) switch/accelerator pedal position (APP) sensor - signals incompatible	Wiring, BPP switch, APP sensor
P2300	Ignition coil A, primary circuit - circuit low	Wiring short to earth, ignition coil
P2301	Ignition coil A, primary circuit - circuit high	Wiring short to positive, ignition coil
P2302	Ignition coil A, secondary circuit - malfunction	Wiring, ignition coil
P2303	Ignition coil B, primary circuit - circuit low	Wiring short to earth, ignition coil
P2304	Ignition coil B, primary circuit - circuit high	Wiring short to positive, ignition coil
P2305	Ignition coil B, secondary circuit - malfunction	Wiring, ignition coil
P2306	Ignition coil C, primary circuit - circuit low	Wiring short to earth, ignition coil
P2307	Ignition coil C, primary circuit - circuit high	Wiring short to positive, ignition coil

P2308	Ignition coil C, secondary circuit - malfunction	Wiring, ignition coil
P2309	Ignition coil D, primary circuit - circuit low	Wiring short to earth, ignition coil
P2310	Ignition coil D, primary circuit - circuit high	Wiring short to positive, ignition coil
P2311	Ignition coil D, secondary circuit - malfunction	Wiring, ignition coil
P2312	Ignition coil E, primary circuit - circuit low	Wiring short to earth, ignition coil
P2313	Ignition coil E, primary circuit - circuit high	Wiring short to positive, ignition coil
P2314	Ignition coil E, secondary circuit - malfunction	Wiring, ignition coil
P2315	Ignition coil F, primary circuit - circuit low	Wiring short to earth, ignition coil
P2316	Ignition coil F, primary circuit - circuit high	Wiring short to positive, ignition coil
P2317	Ignition coil F, secondary circuit - malfunction	Wiring, ignition coil
P2318	Ignition coil G, primary circuit - circuit low	Wiring short to earth, ignition coil
P2319	Ignition coil G, primary circuit - circuit high	Wiring short to positive, ignition coil
P2320	Ignition coil G, secondary circuit - malfunction	Wiring, ignition coil
P2321	Ignition coil H, primary circuit - circuit low	Wiring short to earth, ignition coil
P2322	Ignition coil H, primary circuit - circuit high	Wiring short to positive, ignition coil
P2323	Ignition coil H, secondary circuit - malfunction	Wiring, ignition coil
P2324	Ignition coil I, primary circuit - circuit low	Wiring short to earth, ignition coil
P2325	Ignition coil I, primary circuit - circuit high	Wiring short to positive, ignition coil
P2326	Ignition coil I, secondary circuit - malfunction	Wiring, ignition coil
P2327	Ignition coil J, primary circuit - circuit low	Wiring short to earth, ignition coil
P2328	Ignition coil J, primary circuit - circuit high	Wiring short to positive, ignition coil
P2329	Ignition coil J, secondary circuit - malfunction	Wiring, ignition coil
P2330	Ignition coil K, primary circuit - circuit low	Wiring short to earth, ignition coil
P2331	Ignition coil K, primary circuit - circuit high	Wiring short to positive, ignition coil
P2332	Ignition coil K, secondary circuit - malfunction	Wiring, ignition coil
P2333	Ignition coil L, primary circuit - circuit low	Wiring short to earth, ignition coil
P2334	Ignition coil L, primary circuit - circuit high	Wiring short to positive, ignition coil
P2335	Ignition coil L, secondary circuit - malfunction	Wiring, ignition coil
P2336	Cylinder 1 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2337	Cylinder 2 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2338	Cylinder 3 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2339	Cylinder 4 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2340	Cylinder 5 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2341	Cylinder 6 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2342	Cylinder 7 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault

P2343	Cylinder 8 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2344	Cylinder 9 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2345	Cylinder 10 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2346	Cylinder 11 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2347	Cylinder 12 - above knock threshold	Ignition timing, knock sensor (KS), fuel quality, mechanical fault
P2400	Evaporative emission (EVAP) leak detection pump, control - open circuit	Wiring, EVAP leak detection pump
P2401	Evaporative emission (EVAP) leak detection pump, control - circuit low	Wiring short to earth, EVAP leak detection pump
P2402	Evaporative emission (EVAP) leak detection pump, control - circuit high	Wiring short to positive, EVAP leak detection pump
P2403	Evaporative emission (EVAP) leak detection pump, sense circuit - open circuit	Wiring, EVAP leak detection pump
P2404	Evaporative emission (EVAP) leak detection pump, sense circuit - range/performance	Wiring, EVAP leak detection pump
P2405	Evaporative emission (EVAP) leak detection pump, sense circuit - circuit low	Wiring short to earth, EVAP leak detection pump
P2406	Evaporative emission (EVAP) leak detection pump, sense circuit - circuit high	Wiring short to positive, EVAP leak detection pump
P2407	Evaporative emission (EVAP) leak detection pump, sense circuit - circuit intermittent/erratic	Wiring, poor connection, EVAP leak detection pump
P2408	Fuel filler cap warning sensor/switch - circuit malfunction	Wiring, fuel filler cap warning sensor/switch
P2409	Fuel filler cap warning sensor/switch - range/performance	Wiring, fuel filler cap warning sensor/switch
P240A	Evaporative emission (EVAP) leak detection pump heater - open circuit	Wiring, EVAP leak detection pump heater, ECM
P240B	Evaporative emission (EVAP) leak detection pump heater - circuit low	Wiring, EVAP leak detection pump heater, ECM
P240C	Evaporative emission (EVAP) leak detection pump heater - circuit high	Wiring, EVAP leak detection pump heater, ECM
P2410	Fuel filler cap warning sensor/switch - circuit low	Wiring short to earth, fuel filler cap warning sensor/switch
P2411	Fuel filler cap warning sensor/switch - circuit high	Wiring short to positive, fuel filler cap warning sensor/switch
P2412	Fuel filler cap warning sensor/switch - circuit intermittent/erratic	Wiring, poor connection, fuel filler cap warning sensor/switch
P2413	Exhaust gas recirculation (EGR) system - performance problem	Hoses blocked/leaking, EGR solenoid, EGR valve
P2414	Heated oxygen sensor (HO2S) 1, bank 1 - exhaust sample error	Exhaust leak, HO2S
P2414	Oxygen sensor (O2S) 1, bank 1 - exhaust sample error	Exhaust leak, O2S
P2415	Heated oxygen sensor (HO2S) 1, bank 2 - exhaust sample error	Exhaust leak, HO2S

P2415	Oxygen sensor (O2S) 1, bank 2 - exhaust sample error	Exhaust leak, O2S
P2416	Heated oxygen sensor (HO2S) 2, bank 1/heated oxygen sensor (HO2S) 3, bank 1 - signals transposed	Wiring
P2416	Oxygen sensor (O2S) 2, bank 1/oxygen sensor (O2S) 3, bank 1 - signals transposed	Wiring
P2417	Heated oxygen sensor (HO2S) 2, bank 2/heated oxygen sensor (HO2S) 3, bank 2 - signals transposed	Wiring
P2417	Oxygen sensor (O2S) 2, bank 2/oxygen sensor (O2S) 3, bank 2 - signals transposed	Wiring
P2418	Evaporative emission (EVAP) switching valve - open circuit	Wiring, EVAP switching valve
P2419	Evaporative emission (EVAP) switching valve - circuit low	Wiring short to earth, EVAP switching valve
P2420	Evaporative emission (EVAP) switching valve - circuit high	Wiring short to positive, EVAP switching valve
P2421	Evaporative emission (EVAP) vent valve - valve stuck open	EVAP vent valve
P2422	Evaporative emission (EVAP) vent valve - valve stuck closed	EVAP vent valve
P2423	Hydrocarbon (HC) catalytic converter, bank 1 - efficiency below threshold	HC catalytic converter
P2424	Hydrocarbon (HC) catalytic converter, bank 2 - efficiency below threshold	HC catalytic converter
P2425	Exhaust gas recirculation (EGR) cooling valve - open circuit	Wiring, EGR cooling valve
P2426	Exhaust gas recirculation (EGR) cooling valve - circuit low	Wiring short to earth, EGR cooling valve
P2427	Exhaust gas recirculation (EGR) cooling valve - circuit high	Wiring short to positive, EGR cooling valve
P2428	Exhaust gas temperature (EGT), bank 1 - temperature too high	-
P2429	Exhaust gas temperature (EGT), bank 2 - temperature too high	-
P242A	Exhaust gas temperature sensor 3, bank 1 - circuit malfunction	Wiring, exhaust gas temperature sensor, ECM
P242B	Exhaust gas temperature sensor 3, bank 1 - circuit range/performance	Wiring, exhaust gas temperature sensor, ECM
P242C	Exhaust gas temperature sensor 3, bank 1 - circuit low	Wiring, exhaust gas temperature sensor, ECM
P242D	Exhaust gas temperature sensor 3, bank 1 - circuit high	Wiring, exhaust gas temperature sensor, ECM
P242E	Exhaust gas temperature sensor 3, bank 1 - circuit intermittent/erratic	Wiring, exhaust gas temperature sensor, ECM
P242F	Diesel particulate filter (DPF) - blockage/ash accumulation	DPF
P2430	Secondary air injection (AIR) system, air flow/pressure sensor, bank 1 - circuit malfunction	Wiring, air flow/pressure sensor
P2431	Secondary air injection (AIR) system, air flow/pressure sensor, bank 1 - range/performance	Wiring, air flow/pressure sensor
P2432	Secondary air injection (AIR) system, air flow/pressure sensor, bank 1 - circuit low	Wiring short to earth, air flow/pressure sensor
P2433	Secondary air injection (AIR) system, air flow/pressure sensor, bank 1 - circuit high	Wiring short to positive, air flow/pressure sensor
P2434	Secondary air injection (AIR) system, air flow/pressure sensor, bank 1 - circuit intermittent/erratic	Wiring, poor connection, air flow/pressure sensor
P2435	Secondary air injection (AIR) system, air flow/pressure sensor, bank 2 - circuit malfunction	Wiring, air flow/pressure sensor

P2436	Secondary air injection (AIR) system, air flow/pressure sensor, bank 2 - range/performance	Wiring, air flow/pressure sensor
P2437	Secondary air injection (AIR) system, air flow/pressure sensor, bank 2 - circuit low	Wiring short to earth, air flow/pressure sensor
P2438	Secondary air injection (AIR) system, air flow/pressure sensor, bank 2 - circuit high	Wiring short to positive, air flow/pressure sensor
P2439	Secondary air injection (AIR) system, air flow/pressure sensor, bank 2 - circuit intermittent/erratic	Wiring, poor connection, air flow/pressure sensor
P2440	Secondary air injection (AIR) switching valve, bank 1 - valve stuck open	AIR switching valve
P2441	Secondary air injection (AIR) switching valve, bank 1 - valve stuck closed	AIR switching valve
P2442	Secondary air injection (AIR) switching valve, bank 2 - valve stuck open	AIR switching valve
P2443	Secondary air injection (AIR) switching valve, bank 2 - valve stuck closed	AIR switching valve
P2444	Secondary air injection (AIR) pump, bank 1 - pump stuck on	AIR pump
P2445	Secondary air injection (AIR) pump, bank 1 - pump stuck off	AIR pump
P2446	Secondary air injection (AIR) pump, bank 2 - pump stuck on	AIR pump
P2447	Secondary air injection (AIR) pump, bank 2 - pump stuck off	AIR pump
P244A	Diesel particulate filter (DPF) - differential pressure too low	-
P244B	Diesel particulate filter (DPF) - differential pressure too high	-
P244C	Diesel particulate filter (DPF), bank 1 - exhaust temperature too low for regeneration	-
P244D	Diesel particulate filter (DPF), bank 1 - exhaust temperature too high for regeneration	-
P244E	Diesel particulate filter (DPF), bank 2 - exhaust temperature too low for regeneration	-
P244F	Diesel particulate filter (DPF), bank 2 - exhaust temperature too high for regeneration	-
P245A	Exhaust gas recirculation (EGR) cooler bypass valve - control circuit malfunction	Wiring, EGR cooler bypass valve, ECM
P245B	Exhaust gas recirculation (EGR) cooler bypass valve - control circuit range/performance	Wiring, EGR cooler bypass valve, ECM
P245C	Exhaust gas recirculation (EGR) cooler bypass valve - control circuit low	Wiring, EGR cooler bypass valve, ECM
P245D	Exhaust gas recirculation (EGR) cooler bypass valve - control circuit high	Wiring, EGR cooler bypass valve, ECM
P245E	Diesel particulate filter (DPF) pressure sensor B - circuit malfunction	Wiring, DPF pressure sensor, ECM
P245F	Diesel particulate filter (DPF) pressure differential sensor B - circuit range/performance	Wiring, DPF pressure differential sensor, ECM
P2500	Alternator warning lamp, L-terminal - circuit low	Wiring short to earth, alternator, instrument panel
P2501	Alternator warning lamp, L-terminal - circuit high	Wiring short to positive, alternator, instrument panel
P2502	Charging system voltage	Wiring, alternator, battery
P2503	Charging system - voltage low	Wiring, alternator, battery

P2504	Charging system - voltage high	Wiring, alternator, battery
P2505	Engine control module (ECM) - supply voltage	Wiring, fuses, engine control (EC) relay
P2506	Engine control module (ECM) - supply voltage, range/performance	Wiring, fuses, engine control (EC) relay
P2507	Engine control module (ECM) - supply voltage low	Wiring short to earth, fuses, engine control (EC) relay
P2508	Engine control module (ECM) - supply voltage high	Charging system
P2509	Engine control module (ECM) - supply voltage, intermittent	Wiring, fuses, engine control (EC) relay
P250A	Engine oil level sensor - circuit malfunction	Wiring, engine oil level sensor, ECM
P250B	Engine oil level sensor - circuit range/performance	Wiring, engine oil level sensor, ECM
P250C	Engine oil level sensor - circuit low	Wiring, engine oil level sensor, ECM
P250D	Engine oil level sensor - circuit high	Wiring, engine oil level sensor, ECM
P250E	Engine oil level sensor - circuit intermittent/erratic	Wiring, engine oil level sensor, ECM
P250F	Engine oil level too low	Wiring, engine oil level, ECM
P2510	Engine control (EC) relay, sense circuit - range/performance	Wiring, fuses, EC relay
P2511	Engine control (EC) relay, sense circuit - circuit intermittent	Wiring, poor connection, EC relay
P2512	Event data recorder request - open circuit	Wiring
P2513	Event data recorder request - circuit low	Wiring short to earth
P2514	Event data recorder request - circuit high	Wiring short to positive
P2515	AC refrigerant pressure sensor B - circuit malfunction	Wiring, AC refrigerant pressure sensor
P2516	AC refrigerant pressure sensor B - range/performance	Wiring, AC refrigerant pressure sensor
P2517	AC refrigerant pressure sensor B - circuit low	Wiring short to earth, AC refrigerant pressure sensor
P2518	AC refrigerant pressure sensor B - circuit high	Wiring short to positive, AC refrigerant pressure sensor
P2519	AC request A - circuit malfunction	Wiring, AC control module, AC master switch, AC refrigerant pressure switch/sensor
P251A	Power take-off (PTO) enable switch - open circuit	Wiring, PTO enable switch, ECM
P251B	Power take-off (PTO) enable switch - circuit low	Wiring, PTO enable switch, ECM
P251C	Power take-off (PTO) enable switch - circuit high	Wiring, PTO enable switch, ECM
P251D	Power take-off (PTO), engine shut-down - open circuit	Wiring, ECM
P251E	Power take-off (PTO), engine shut-down - circuit low	Wiring, ECM
P251F	Power take-off (PTO) monitoring, engine shut-off control - circuit high	Wiring, ECM
P2520	AC request A - circuit low	Wiring short to earth, AC control module, AC master switch, AC refrigerant pressure switch/sensor
P2521	AC request A - circuit high	Wiring short to positive, AC control module
P2522	AC request B - circuit malfunction	Wiring, AC control module, AC master switch, AC refrigerant pressure switch/sensor
P2523	AC request B - circuit low	Wiring short to earth, AC control module, AC master switch, AC refrigerant pressure switch/sensor
P2524	AC request B - circuit high	Wiring short to positive, AC control module
P2525	Vacuum reservoir pressure sensor - circuit malfunction	Wiring, vacuum reservoir pressure sensor
P2526	Vacuum reservoir pressure sensor - range/performance	Wiring, vacuum reservoir pressure sensor, hoses blocked/leaking
P2527	Vacuum reservoir pressure sensor - circuit low	Wiring short to earth, vacuum reservoir pressure sensor

P2528	Vacuum reservoir pressure sensor - circuit high	Wiring short to positive, vacuum reservoir pressure sensor
P2529	Vacuum reservoir pressure sensor - circuit intermittent	Wiring, poor connection, vacuum reservoir pressure sensor
P252A	Engine oil quality sensor - circuit malfunction	Wiring, engine oil quality sensor, ECM
P252B	Engine oil quality sensor - circuit range/performance	Wiring, engine oil quality sensor, ECM
P252C	Engine oil quality sensor - circuit low	Wiring, engine oil quality sensor, ECM
P252D	Engine oil quality sensor - circuit high	Wiring, engine oil quality sensor, ECM
P252E	Engine oil quality sensor - circuit intermittent/erratic	Wiring, engine oil quality sensor, ECM
P252F	Engine oil level too high	Engine oil level
P2530	Ignition switch, ON position - circuit malfunction	Wiring, fuse, ignition switch
P2531	Ignition switch, ON position - circuit low	Wiring short to earth, fuse, ignition switch
P2532	Ignition switch, ON position - circuit high	Wiring short to positive, fuse, ignition switch
P2533	Ignition switch, ON/start position - circuit malfunction	Wiring, fuse, ignition switch
P2534	Ignition switch, ON/start position - circuit low	Wiring short to earth, fuse, ignition switch
P2535	Ignition switch, ON/start position - circuit high	Wiring short to positive, fuse, ignition switch
P2536	Ignition switch, accessory position - circuit malfunction	Wiring, fuse, ignition switch
P2537	Ignition switch, accessory position - circuit low	Wiring short to earth, fuse, ignition switch
P2538	Ignition switch, accessory position - circuit high	Wiring short to positive, fuse, ignition switch
P2539	Fuel low pressure sensor - circuit malfunction	Wiring, fuel low pressure sensor
P253A	Power take-off (PTO) monitoring - circuit open	Wiring, ECM
P253B	Power take-off (PTO) monitoring - circuit range/performance	Wiring, ECM
P253C	Power take-off (PTO) monitoring - circuit low	Wiring, ECM
P253D	Power take-off (PTO) monitoring - circuit high	Wiring, ECM
P253E	Power take-off (PTO) - sense circuit intermittent malfunction	-
P253F	Engine oil deteriorated	Engine oil
P2540	Fuel low pressure sensor - range/performance	Wiring, fuel low pressure sensor
P2541	Fuel low pressure sensor - circuit low	Wiring short to earth, fuel low pressure sensor
P2542	Fuel low pressure sensor - circuit high	Wiring short to positive, fuel low pressure sensor
P2543	Fuel low pressure sensor - circuit intermittent	Wiring, poor connection, fuel low pressure sensor
P2544	Torque management request, input signal A - malfunction	Wiring, ECM, TCM
P2545	Torque management request, input signal A - range/performance	Wiring, ECM, TCM
P2546	Torque management request, input signal A - signal low	Wiring short to earth, ECM, TCM
P2547	Torque management request, input signal A - signal high	Wiring short to positive, ECM, TCM
P2548	Torque management request, input signal B - malfunction	Wiring, ECM, TCM
P2549	Torque management request, input signal B - range/performance	Wiring, ECM, TCM
P254A	Power take-off (PTO) speed selector sensor/switch 1 - open circuit	Wiring, PTO speed selector sensor/switch, ECM
P254B	Power take-off (PTO) speed selector sensor/switch 1 - circuit range/performance	Wiring, PTO speed selector sensor/switch, ECM

P254C	Power take-off (PTO) speed selector sensor/switch 1 - circuit low	Wiring, PTO speed selector sensor/switch, ECM
P254D	Power take-off (PTO) speed selector sensor/switch 1 - circuit high	Wiring, PTO speed selector sensor/switch, ECM
P254E	Power take-off (PTO) speed selector sensor/switch 1 - circuit intermittent/erratic	Wiring, PTO speed selector sensor/switch, ECM
P254F	Bonnet switch - open circuit	Wiring, bonnet switch, ECM
P2550	Torque management request, input signal B - signal low	Wiring short to earth, ECM, TCM
P2551	Torque management request, input signal B - signal high	Wiring short to positive, ECM, TCM
P2552	Throttle/fuel inhibit - circuit malfunction	Wiring
P2553	Throttle/fuel inhibit - range/performance	Wiring
P2554	Throttle/fuel inhibit - circuit low	Wiring short to earth
P2555	Throttle/fuel inhibit - circuit high	Wiring short to positive
P2556	Engine coolant 'low' sensor/switch - circuit malfunction	Wiring, engine coolant 'low' sensor/switch
P2557	Engine coolant 'low' sensor/switch - range/performance	Wiring, engine coolant 'low' sensor/switch
P2558	Engine coolant 'low' sensor/switch - circuit low	Wiring short to earth, engine coolant 'low' sensor/switch
P2559	Engine coolant 'low' sensor/switch - circuit high	Wiring short to positive, engine coolant 'low' sensor/switch
P255A	Power take-off (PTO) speed selector sensor/switch 2 - open circuit	Wiring, PTO speed selector sensor/switch, ECM
P255B	Power take-off (PTO) speed selector sensor/switch 2 - circuit range/performance	Wiring, PTO speed selector sensor/switch, ECM
P255C	Power take-off (PTO) speed selector sensor/switch 2 - circuit low	Wiring, PTO speed selector sensor/switch, ECM
P255D	Power take-off (PTO) speed selector sensor/switch 2 - circuit high	Wiring, PTO speed selector sensor/switch, ECM
P255E	Power take-off (PTO) speed selector sensor/switch 2 - circuit intermittent/erratic	Wiring, PTO speed selector sensor/switch, ECM
P255F	AC request A - circuit range/performance	Wiring, AC control module, ECM
P2560	Engine coolant level low	Engine coolant level low
P2561	AC control module - MIL activation requested	AC control module trouble codes stored
P2562	Turbocharger (TC) boost control position sensor - circuit malfunction	Wiring, TC boost control position sensor
P2563	Turbocharger (TC) boost control position sensor - range/performance	Wiring, TC boost control position sensor
P2564	Turbocharger (TC) boost control position sensor - circuit low	Wiring short to earth, TC boost control position sensor
P2565	Turbocharger (TC) boost control position sensor - circuit high	Wiring short to positive, TC boost control position sensor
P2566	Turbocharger (TC) boost control position sensor - circuit intermittent	Wiring, poor connection, TC boost control position sensor
P2567	Direct ozone reduction catalytic converter temperature sensor - circuit malfunction	Wiring, direct ozone reduction catalytic converter temperature sensor
P2568	Direct ozone reduction catalytic converter temperature sensor - range/performance	Wiring, direct ozone reduction catalytic converter temperature sensor
P2569	Direct ozone reduction catalytic converter temperature sensor - circuit low	Wiring short to earth, direct ozone reduction catalytic converter temperature sensor

P256A	Engine idle speed selector sensor/switch - open circuit	Wiring, engine idle speed selector sensor/switch, ECM
P256B	Engine idle speed selector sensor/switch - circuit range/performance	Wiring, engine idle speed selector sensor/switch, ECM
P256C	Engine idle speed selector sensor/switch - circuit low	Wiring, engine idle speed selector sensor/switch, ECM
P256D	Engine idle speed selector sensor/switch - circuit high	Wiring, engine idle speed selector sensor/switch, ECM
P256E	Engine idle speed selector sensor/switch - circuit intermittent/erratic	Wiring, engine idle speed selector sensor/switch, ECM
P256F	AC request B - circuit range/performance	Wiring, AC control module, ECM
P2570	Direct ozone reduction catalytic converter temperature sensor - circuit high	Wiring short to positive, direct ozone reduction catalytic converter temperature sensor
P2571	Direct ozone reduction catalytic converter temperature sensor - circuit intermittent/erratic	Wiring, poor connection, direct ozone reduction catalytic converter temperature sensor
P2572	Direct ozone reduction catalytic converter deterioration sensor	Wiring, direct ozone reduction catalytic converter deterioration sensor
P2573	Direct ozone reduction catalytic converter deterioration sensor - range/performance	Wiring, direct ozone reduction catalytic converter deterioration sensor
P2574	Direct ozone reduction catalytic converter deterioration sensor - circuit low	Wiring short to earth, direct ozone reduction catalytic converter deterioration sensor
P2575	Direct ozone reduction catalytic converter deterioration sensor - circuit high	Wiring short to positive, direct ozone reduction catalytic converter deterioration sensor
P2576	Direct ozone reduction catalytic converter deterioration sensor - circuit intermittent/erratic	Wiring, poor connection, direct ozone reduction catalytic converter deterioration sensor
P2577	Direct ozone reduction catalytic converter - efficiency below threshold	Direct ozone reduction catalytic converter
P257A	Vacuum reservoir control - open circuit	-
P257B	Vacuum reservoir control - circuit low	-
P257C	Vacuum reservoir control - circuit high	-
P257D	Bonnet switch - circuit range/performance	Wiring, bonnet switch, ECM
P257E	Bonnet switch - circuit low	Wiring, bonnet switch, ECM
P257F	Bonnet switch - circuit high	Wiring, bonnet switch, ECM
P258A	Vacuum pump - control circuit open	Wiring, vacuum pump, ECM
P258B	Vacuum pump control - range/performance problem	Wiring, vacuum pump, ECM
P258C	Vacuum pump control - circuit low	Wiring, vacuum pump, ECM
P258D	Vacuum pump - control circuit high	Wiring, vacuum pump, ECM
P258E	Power take-off (PTO) enable switch - performance problem	Wiring, PTO enable switch, ECM
P258F	Torque management request - output signal malfunction	Wiring, TCM, ECM
P2600	Engine coolant pump motor - open circuit	Wiring, engine coolant pump relay
P2601	Engine coolant pump motor - range/performance	Wiring, engine coolant pump relay
P2602	Engine coolant pump motor - circuit low	Wiring short to earth, engine coolant pump relay
P2603	Engine coolant pump motor - circuit high	Wiring short to positive, engine coolant pump relay
P2604	Intake air heater A - range/performance	Wiring, intake air heater relay, intake air heater
P2605	Intake air heater A - open circuit	Wiring, intake air heater relay, intake air heater
P2606	Intake air heater B - range/performance	Wiring, intake air heater relay, intake air heater

P2607	Intake air heater B - circuit low	Wiring short to earth, intake air heater relay, intake air heater
P2608	Intake air heater B - circuit high	Wiring short to positive, intake air heater relay, intake air heater
P2609	Intake air heater system - performance problem	Wiring, intake air heater relay, intake air heater
P260A	Power take-off (PTO), control - open circuit	Wiring
P260B	Power take-off (PTO), control - circuit low	Wiring, ECM
P260C	Power take-off (PTO) control - circuit high	-
P260D	Power take-off (PTO) engaged warning lamp - control circuit	Wiring, warning lamp, ECM
P260F	Evaporative emission (EVAP) system - monitoring processor performance problem	ECM
P2610	Engine control module (ECM) - internal engine off timer performance	ECM
P2611	AC refrigerant distribution valve - open circuit	Wiring, AC refrigerant distribution valve
P2612	AC refrigerant distribution valve - circuit low	Wiring short to earth, AC refrigerant distribution valve
P2613	AC refrigerant distribution valve - circuit high	Wiring short to positive, AC refrigerant distribution valve
P2614	Camshaft position (CMP), output signal - open circuit	Wiring, ECM
P2615	Camshaft position (CMP), output signal - circuit low	Wiring short to earth, ECM
P2616	Camshaft position (CMP), output signal - circuit high	Wiring short to positive, ECM
P2617	Crankshaft position (CKP), output signal - open circuit	Wiring, ECM
P2618	Crankshaft position (CKP), output signal - circuit low	Wiring short to earth, ECM
P2619	Crankshaft position (CKP), output signal - circuit high	Wiring short to positive, ECM
P2620	Throttle position (TP), output signal - open circuit	Wiring, ECM
P2621	Throttle position (TP), output signal - circuit low	Wiring short to earth, ECM
P2622	Throttle position (TP), output signal - circuit high	Wiring short to positive, ECM
P2623	Injector control pressure regulator - open circuit	Wiring, injector control pressure regulator
P2624	Injector control pressure regulator - circuit low	Wiring short to earth, injector control pressure regulator
P2625	Injector control pressure regulator - circuit high	Wiring short to positive, injector control pressure regulator
P2626	Heated oxygen sensor (HO2S) 1, bank 1, pumping current trim - open circuit	Wiring, HO2S, ECM
P2626	Oxygen sensor (O2S) 1, bank 1, pumping current trim - open circuit	Wiring, O2S, ECM
P2627	Heated oxygen sensor (HO2S) 1, bank 1, pumping current trim - circuit low	Wiring short to earth, HO2S, ECM
P2627	Oxygen sensor (O2S) 1, bank 1, pumping current trim - circuit low	Wiring short to earth, O2S, ECM
P2628	Heated oxygen sensor (HO2S) 1, bank 1, pumping current trim - circuit high	Wiring short to positive, HO2S, ECM
P2628	Oxygen sensor (O2S) 1, bank 1, pumping current trim - circuit high	Wiring short to positive, O2S, ECM
P2629	Heated oxygen sensor (HO2S) 1, bank 2, pumping current trim - open circuit	Wiring, HO2S, ECM
P2629	Oxygen sensor (O2S) 1, bank 2, pumping current trim - open circuit	Wiring, O2S, ECM

P2630	Heated oxygen sensor (HO2S) 1, bank 2, pumping current trim - circuit low	Wiring short to earth, HO2S, ECM
P2630	Oxygen sensor (O2S) 1, bank 2, pumping current trim - circuit low	Wiring short to earth, O2S, ECM
P2631	Heated oxygen sensor (HO2S) 1, bank 2, pumping current trim - circuit high	Wiring short to positive, HO2S, ECM
P2631	Oxygen sensor (O2S) 1, bank 2, pumping current trim - circuit high	Wiring short to positive, O2S, ECM
P2632	Fuel pump (FP) B, control - open circuit	Wiring, FP relay, ECM
P2633	Fuel pump (FP) B, control - circuit low	Wiring short to earth, FP relay, ECM
P2634	Fuel pump (FP) B, control - circuit high	Wiring short to positive, FP relay, ECM
P2635	Fuel pump (FP) A - low flow/performance problem	Fuel filter blocked, fuel pump (FP)
P2636	Fuel pump (FP) B - low flow/performance problem	Fuel filter blocked, fuel pump (FP)
P2637	Torque management, feedback signal A - malfunction	Wiring, ECM, TCM
P2638	Torque management, feedback signal A - range/performance	Wiring, ECM, TCM
P2639	Torque management, feedback signal A - signal low	Wiring short to earth, ECM, TCM
P2640	Torque management, feedback signal A - signal high	Wiring short to positive, ECM, TCM
P2641	Torque management, feedback signal B - malfunction	Wiring, ECM, TCM
P2642	Torque management, feedback signal B - range/performance	Wiring, ECM, TCM
P2643	Torque management, feedback signal B - signal low	Wiring short to earth, ECM, TCM
P2644	Torque management, feedback signal B - signal high	Wiring short to positive, ECM, TCM
P2645	Rocker arm actuator A, bank 1 - open circuit	Wiring, rocker arm actuator
P2646	Rocker arm actuator A, bank 1 - performance problem or actuator stuck off	Wiring, rocker arm actuator
P2647	Rocker arm actuator A, bank 1 - actuator stuck on	Rocker arm actuator
P2648	Rocker arm actuator A, bank 1 - circuit low	Wiring short to earth, rocker arm actuator
P2649	Rocker arm actuator A, bank 1 - circuit high	Wiring short to positive, rocker arm actuator
P264A	Rocker arm actuator position sensor A, bank 1 - circuit malfunction	Wiring, rocker arm actuator position sensor, ECM
P264B	Rocker arm actuator position sensor A, bank 1 - circuit range/performance	Wiring, rocker arm actuator position sensor, ECM
P264C	Rocker arm actuator position sensor A, bank 1 - circuit low	Wiring, rocker arm actuator position sensor, ECM
P264D	Rocker arm actuator position sensor A, bank 1 - circuit high	Wiring, rocker arm actuator position sensor, ECM
P264E	Rocker arm actuator position sensor A, bank 1 - circuit intermittent/erratic	Wiring, rocker arm actuator position sensor, ECM
P2650	Rocker arm actuator B, bank 1 - open circuit	Wiring, rocker arm actuator
P2651	Rocker arm actuator B, bank 1 - performance problem or actuator stuck off	Rocker arm actuator
P2652	Rocker arm actuator B, bank 1 - actuator stuck on	Rocker arm actuator
P2653	Rocker arm actuator B, bank 1 - circuit low	Wiring short to earth, rocker arm actuator
P2654	Rocker arm actuator B, bank 1 - circuit high	Wiring short to positive, rocker arm actuator
P2655	Rocker arm actuator A, bank 2 - open circuit	Wiring, rocker arm actuator

P2656	Rocker arm actuator A, bank 2 - performance problem or actuator stuck off	Rocker arm actuator
P2657	Rocker arm actuator A, bank 2 - actuator stuck on	Rocker arm actuator
P2658	Rocker arm actuator A, bank 2 - circuit low	Wiring short to earth, rocker arm actuator
P2659	Rocker arm actuator A, bank 2 - circuit high	Wiring short to positive, rocker arm actuator
P265A	Rocker arm actuator position sensor B, bank 1 - circuit malfunction	Wiring, rocker arm actuator position sensor, ECM
P265B	Rocker arm actuator position sensor B, bank 1 - circuit range/performance	Wiring, rocker arm actuator position sensor, ECM
P265C	Rocker arm actuator position sensor B, bank 1 - circuit low	Wiring, rocker arm actuator position sensor, ECM
P265D	Rocker arm actuator position sensor B, bank 1 - circuit high	Wiring, rocker arm actuator position sensor, ECM
P265E	Rocker arm actuator position sensor B, bank 1 - circuit intermittent/erratic	Wiring, rocker arm actuator position sensor, ECM
P2660	Rocker arm actuator B, bank 2 - open circuit	Wiring, rocker arm actuator
P2661	Rocker arm actuator B, bank 2 - performance problem or actuator stuck off	Rocker arm actuator
P2662	Rocker arm actuator B, bank 2 - actuator stuck on	Rocker arm actuator
P2663	Rocker arm actuator B, bank 2 - circuit low	Wiring short to earth, rocker arm actuator
P2664	Rocker arm actuator B, bank 2 - circuit high	Wiring short to positive, rocker arm actuator
P2665	Fuel shut-off solenoid B - open circuit	Wiring, fuel shut-off solenoid
P2666	Fuel shut-off solenoid B - circuit low	Wiring short to earth, fuel shut-off solenoid
P2667	Fuel shut-off solenoid B - circuit high	Wiring short to positive, fuel shut-off solenoid
P2668	Fuel mode indicator lamp - circuit malfunction	Wiring, fuel mode indicator lamp
P2669	Actuator supply voltage B - open circuit	Wiring, ECM
P266A	Rocker arm actuator position sensor A, bank 2 - circuit malfunction	Wiring, rocker arm actuator position sensor, ECM
P266B	Rocker arm actuator position sensor A, bank 2 - circuit range/performance	Wiring, rocker arm actuator position sensor, ECM
P266C	Rocker arm actuator position sensor A, bank 2 - circuit low	Wiring, rocker arm actuator position sensor, ECM
P266D	Rocker arm actuator position sensor A, bank 2 - circuit high	Wiring, rocker arm actuator position sensor, ECM
P266E	Rocker arm actuator position sensor A, bank 2 - circuit intermittent/erratic	Wiring, rocker arm actuator position sensor, ECM
P2670	Actuator supply voltage B - circuit low	Wiring short to earth, ECM
P2671	Actuator supply voltage B - circuit high	Wiring short to positive, ECM
P267A	Rocker arm actuator position sensor B, bank 2 - circuit malfunction	Wiring, rocker arm actuator position sensor, ECM
P267B	Rocker arm actuator position sensor B, bank 2 - circuit range/performance	Wiring, rocker arm actuator position sensor, ECM
P267C	Rocker arm actuator position sensor B, bank 2 - circuit low	Wiring, rocker arm actuator position sensor, ECM
P267D	Rocker arm actuator position sensor B, bank 2 - circuit high	Wiring, rocker arm actuator position sensor, ECM
P267E	Rocker arm actuator position sensor B, bank 2 - circuit intermittent/erratic	Wiring, rocker arm actuator position sensor, ECM
P268A	Injector - calibration not learned/programmed	Calibration not learned
P268B	Fuel high pressure pump - calibration not learned/programmed	Calibration not learned

P268C	Injector 1 - data incompatible	Wiring, injector, ECM
P268D	Injector 2 - data incompatible	Wiring, injector, ECM
P268E	Injector 3 - data incompatible	Wiring, injector, ECM
P268F	Injector 4 - data incompatible	Wiring, injector, ECM
P2700	Transmission friction element A, apply time - range/performance	Transmission mechanical fault, shift solenoid (SS)
P2701	Transmission friction element B, apply time - range/performance	Transmission mechanical fault, shift solenoid (SS)
P2702	Transmission friction element C, apply time - range/performance	Transmission mechanical fault, shift solenoid (SS)
P2703	Transmission friction element D, apply time - range/performance	Transmission mechanical fault, shift solenoid (SS)
P2704	Transmission friction element E, apply time - range/performance	Transmission mechanical fault, shift solenoid (SS)
P2705	Transmission friction element F, apply time - range/performance	Transmission mechanical fault, shift solenoid (SS)
P2706	Shift solenoid (SS) F - circuit malfunction	Transmission mechanical fault, shift solenoid (SS)
P2707	Shift solenoid (SS) F - performance problem or solenoid stuck off	Transmission mechanical fault, shift solenoid (SS)
P2708	Shift solenoid (SS) F - solenoid stuck on	Transmission mechanical fault, shift solenoid (SS)
P2709	Shift solenoid (SS) F - electrical	Wiring, shift solenoid (SS)
P2710	Shift solenoid (SS) F - intermittent	Wiring, poor connection, shift solenoid (SS)
P2711	Unexpected mechanical gear disengagement	Operator error, transmission mechanical fault
P2712	Hydraulic power unit leakage	-
P2713	Transmission fluid pressure (TFP) solenoid D - circuit malfunction	Wiring, TFP solenoid, TCM
P2714	Transmission fluid pressure (TFP) solenoid D - performance problem or solenoid stuck off	Wiring, TFP solenoid, transmission mechanical fault
P2715	Transmission fluid pressure (TFP) solenoid D - solenoid stuck on	TFP solenoid, transmission mechanical fault
P2716	Transmission fluid pressure (TFP) solenoid D - electrical	Wiring, TFP solenoid
P2717	Transmission fluid pressure (TFP) solenoid D - circuit intermittent	Wiring, poor connection, TFP solenoid, TCM
P2718	Transmission fluid pressure (TFP) solenoid D - open circuit	Wiring, TFP solenoid, TCM
P2719	Transmission fluid pressure (TFP) solenoid D - range/performance	TFP solenoid, transmission mechanical fault
P2720	Transmission fluid pressure (TFP) solenoid D - circuit low	Wiring short to earth, TFP solenoid, TCM
P2721	Transmission fluid pressure (TFP) solenoid D - circuit high	Wiring short to positive, TFP solenoid, TCM
P2722	Transmission fluid pressure (TFP) solenoid E - circuit malfunction	Wiring, TFP solenoid, TCM
P2723	Transmission fluid pressure (TFP) solenoid E - performance problem or solenoid stuck off	Wiring, TFP solenoid, transmission mechanical fault
P2724	Transmission fluid pressure (TFP) solenoid E - solenoid stuck on	TFP solenoid, transmission mechanical fault
P2725	Transmission fluid pressure (TFP) solenoid E - electrical	Wiring, TFP solenoid

P2726	Transmission fluid pressure (TFP) solenoid E - circuit intermittent	Wiring, poor connection, TFP solenoid, TCM
P2727	Transmission fluid pressure (TFP) solenoid E - open circuit	Wiring, TFP solenoid, TCM
P2728	Transmission fluid pressure (TFP) solenoid E - range/performance	TFP solenoid, transmission mechanical fault
P2729	Transmission fluid pressure (TFP) solenoid E - circuit low	Wiring short to earth, TFP solenoid, TCM
P2730	Transmission fluid pressure (TFP) solenoid E - circuit high	Wiring short to positive, TFP solenoid, TCM
P2731	Transmission fluid pressure (TFP) solenoid F - circuit malfunction	Wiring, TFP solenoid, TCM
P2732	Transmission fluid pressure (TFP) solenoid F - performance problem or solenoid stuck off	Wiring, TFP solenoid, transmission mechanical fault
P2733	Transmission fluid pressure (TFP) solenoid F - solenoid stuck on	TFP solenoid, transmission mechanical fault
P2734	Transmission fluid pressure (TFP) solenoid F - electrical	Wiring, TFP solenoid
P2735	Transmission fluid pressure (TFP) solenoid F - circuit intermittent	Wiring, poor connection, TFP solenoid, TCM
P2736	Transmission fluid pressure (TFP) solenoid F - open circuit	Wiring, TFP solenoid, TCM
P2737	Transmission fluid pressure (TFP) solenoid F - range/performance	TFP solenoid, transmission mechanical fault
P2738	Transmission fluid pressure (TFP) solenoid F - circuit low	Wiring short to earth, TFP solenoid, TCM
P2739	Transmission fluid pressure (TFP) solenoid F - circuit high	Wiring short to positive, TFP solenoid, TCM
P273A	Transmission friction element G, apply time - range/performance problem	Shift solenoid (SS), transmission mechanical fault, TCM, ECM
P273B	Transmission friction element H, apply time - range/performance problem	Shift solenoid (SS), transmission mechanical fault, TCM, ECM
P2740	Transmission fluid temperature (TFT) sensor B - circuit malfunction	Wiring, TFT sensor
P2741	Transmission fluid temperature (TFT) sensor B - circuit range/performance	Wiring, TFT sensor
P2742	Transmission fluid temperature (TFT) sensor B - circuit low	Wiring short to earth, TFT sensor
P2743	Transmission fluid temperature (TFT) sensor B - circuit high	Wiring short to positive, TFT sensor
P2744	Transmission fluid temperature (TFT) sensor B - circuit intermittent	Wiring, poor connection, TFT sensor
P2745	Transmission intermediate shaft speed sensor B - circuit malfunction	Wiring, transmission intermediate shaft speed sensor, ECM, TCM
P2746	Transmission intermediate shaft speed sensor B - range/performance	Wiring, transmission intermediate shaft speed sensor, ECM, TCM
P2747	Transmission intermediate shaft speed sensor B - no signal	Wiring, transmission intermediate shaft speed sensor, ECM, TCM
P2748	Transmission intermediate shaft speed sensor B - circuit intermittent	Wiring, poor connection, transmission intermediate shaft speed sensor, ECM, TCM
P2749	Transmission intermediate shaft speed sensor C - circuit malfunction	Wiring, transmission intermediate shaft speed sensor, ECM, TCM
P2750	Transmission intermediate shaft speed sensor C - range/performance	Wiring, transmission intermediate shaft speed sensor, ECM, TCM

P2751	Transmission intermediate shaft speed sensor C - no signal	Wiring, transmission intermediate shaft speed sensor, ECM, TCM
P2752	Transmission intermediate shaft speed sensor C - circuit intermittent	Wiring, poor connection, transmission intermediate shaft speed sensor, ECM, TCM
P2753	Transmission fluid cooler - open circuit	Wiring, transmission fluid cooler
P2754	Transmission fluid cooler - circuit low	Wiring short to earth, transmission fluid cooler
P2755	Transmission fluid cooler - circuit high	Wiring short to positive, transmission fluid cooler
P2756	Torque converter clutch (TCC) pressure control solenoid - circuit malfunction	Wiring, TCC pressure control solenoid
P2757	Torque converter clutch (TCC) pressure control solenoid - performance problem or solenoid stuck off	TCC pressure control solenoid
P2758	Torque converter clutch (TCC) pressure control solenoid - solenoid stuck on	TCC pressure control solenoid
P2759	Torque converter clutch (TCC) pressure control solenoid - electrical fault	Wiring, TCC pressure control solenoid
P2760	Torque converter clutch (TCC) pressure control solenoid - circuit intermittent	Wiring, poor connection, TCC pressure control solenoid
P2761	Torque converter clutch (TCC) pressure control solenoid - open circuit	Wiring, TCC pressure control solenoid
P2762	Torque converter clutch (TCC) pressure control solenoid - range/performance	Wiring, TCC pressure control solenoid
P2763	Torque converter clutch (TCC) pressure control solenoid - circuit high	Wiring short to positive, TCC pressure control solenoid
P2764	Torque converter clutch (TCC) pressure control solenoid - circuit low	Wiring short to earth, TCC pressure control solenoid
P2765	Transmission input shaft speed sensor/turbine shaft speed (TSS) sensor B - circuit malfunction	Wiring, transmission input shaft speed sensor/TSS sensor
P2766	Transmission input shaft speed sensor/turbine shaft speed (TSS) sensor B - range/performance	Wiring, transmission input shaft speed sensor/TSS sensor
P2767	Transmission input shaft speed sensor/turbine shaft speed (TSS) sensor B - no signal	Wiring, transmission input shaft speed sensor/TSS sensor
P2768	Transmission input shaft speed sensor/turbine shaft speed (TSS) sensor B - circuit intermittent	Wiring, poor connection, transmission input shaft speed sensor/TSS sensor
P2769	Torque converter clutch (TCC) - circuit low	Wiring short to earth, TCC
P2770	Torque converter clutch (TCC) - circuit high	Wiring short to positive, TCC
P2771	Four wheel drive, low gear ratio switch - circuit malfunction	Wiring, low gear ratio switch
P2772	Four wheel drive, low gear ratio switch - range/performance	Wiring, low gear ratio switch
P2773	Four wheel drive, low gear ratio switch - circuit low	Wiring short to earth, low gear ratio switch
P2774	Four wheel drive, low gear ratio switch - circuit high	Wiring short to positive, low gear ratio switch
P2775	Transmission gear selection switch, upshift - range/performance	Wiring, transmission gear selection switch
P2776	Transmission gear selection switch, upshift - circuit low	Wiring short to earth, transmission gear selection switch
P2777	Transmission gear selection switch, upshift - circuit high	Wiring short to positive, transmission gear selection switch
P2778	Transmission gear selection switch, upshift - circuit intermittent/erratic	Wiring, poor connection, transmission gear selection switch

P2779	Transmission gear selection switch, downshift - range/performance	Wiring, transmission gear selection switch
P2780	Transmission gear selection switch, downshift - circuit low	Wiring short to earth, transmission gear selection switch
P2781	Transmission gear selection switch, downshift - circuit high	Wiring short to positive, transmission gear selection switch
P2782	Transmission gear selection switch, downshift - circuit intermittent/erratic	Wiring, poor connection, transmission gear selection switch
P2783	Torque converter - temperature too high	Transmission fluid level low, transmission mechanical fault, TCC slipping
P2784	Transmission input shaft speed sensor/turbine shaft speed (TSS) sensor A/B - correlation	Wiring, transmission input shaft speed sensor/TSS sensor
P2785	Clutch actuator - temperature too high	-
P2786	Gear shift actuator - temperature too high	-
P2787	Clutch - temperature too high	Clutch slipping
P2788	Auto shift manual (ASM) transmission, adaptive learning - at limit	-
P2789	Clutch, adaptive learning - at limit	-
P278A	Transmission kick-down switch - circuit malfunction	Wiring, transmission kick-down switch, TCM, ECM
P278B	Transmission kick-down switch - circuit range/performance	Wiring, transmission kick-down switch, TCM, ECM
P278C	Transmission kick-down switch - circuit low	Wiring, transmission kick-down switch, TCM, ECM
P278D	Transmission kick-down switch - circuit high	Wiring, transmission kick-down switch, TCM, ECM
P278E	Transmission kick-down switch - circuit intermittent/erratic	Wiring, transmission kick-down switch, TCM, ECM
P2790	Gate select direction - circuit malfunction	Wiring
P2791	Gate select direction - circuit low	Wiring short to earth
P2792	Gate select direction - circuit high	Wiring short to positive
P2793	Gear shift direction - circuit malfunction	Wiring
P2794	Gear shift direction - circuit low	Wiring short to earth
P2795	Gear shift direction - circuit high	Wiring short to positive
P281A	Transmission fluid pressure (TFP) solenoid H - intermittent	Wiring, TFP solenoid, ECM
P281B	Transmission fluid pressure (TFP) solenoid H - control circuit open	Wiring, TFP solenoid, ECM
P281C	Transmission fluid pressure (TFP) solenoid H - control circuit range/performance	Wiring, TFP solenoid, ECM
P281D	Transmission fluid pressure (TFP) solenoid H - control circuit low	Wiring, TFP solenoid, ECM
P281E	Transmission fluid pressure (TFP) solenoid H - control circuit high	Wiring, TFP solenoid, ECM
P281F	Transmission fluid pressure (TFP) solenoid J - malfunction	Wiring, TFP solenoid, ECM
P282A	Transmission fluid pressure (TFP) solenoid K - solenoid stuck on	Wiring, TFP solenoid, transmission mechanical fault, ECM
P282B	Transmission fluid pressure (TFP) solenoid K - electrical	Wiring, TFP solenoid, ECM
P282C	Transmission fluid pressure (TFP) solenoid K - intermittent	Wiring, TFP solenoid, ECM
P282D	Transmission fluid pressure (TFP) solenoid K - control circuit open	Wiring, TFP solenoid, ECM

P282E	Transmission fluid pressure (TFP) solenoid K - control circuit range/performance	Wiring, TFP solenoid, ECM
P282F	Transmission fluid pressure (TFP) solenoid K - control circuit low	Wiring, TFP solenoid, ECM
P2A00	Heated oxygen sensor (HO2S) 1, bank 1 - circuit range/performance	Wiring, HO2S, ECM
P2A01	Heated oxygen sensor (HO2S) 2, bank 1 - circuit range/performance	Wiring, HO2S, ECM
P2A02	Heated oxygen sensor (HO2S) 3, bank 1 - circuit range/performance	Wiring, HO2S, ECM
P2A03	Heated oxygen sensor (HO2S) 1, bank 2 - circuit range/performance	Wiring, HO2S, ECM
P2A04	Heated oxygen sensor (HO2S) 2, bank 2 - circuit range/performance	Wiring, HO2S, ECM
P2A05	Heated oxygen sensor (HO2S) 3, bank 2 - circuit range/performance	Wiring, HO2S, ECM
P2A06	Heated oxygen sensor (HO2S) 1, bank 1 - circuit negative voltage	Wiring, HO2S, ECM
P2A07	Heated oxygen sensor (HO2S) 2, bank 1 - circuit negative voltage	Wiring, HO2S, ECM
P2A08	Heated oxygen sensor (HO2S) 3, bank 1 - circuit negative voltage	Wiring, HO2S, ECM
P2A09	Heated oxygen sensor (HO2S) 1, bank 2 - circuit negative voltage	Wiring, HO2S, ECM
P2A10	Heated oxygen sensor (HO2S) 2, bank 2 - circuit negative voltage	Wiring, HO2S, ECM
P2A11	Heated oxygen sensor (HO2S) 3, bank 2 - circuit negative voltage	Wiring, HO2S, ECM

EOBD code	Fault location	Probable cause
P0000	No fault found	-
P0001	Fuel volume regulator control - open circuit	Wiring, regulator control solenoid
P0002	Fuel volume regulator control - circuit range/performance	Wiring, regulator control solenoid
P0003	Fuel volume regulator control - circuit low	Wiring short to earth, regulator control solenoid
P0004	Fuel volume regulator control - circuit high	Wiring open circuit/short to positive, regulator control solenoid
P0005	Fuel shut-off valve - open circuit	Wiring open circuit, fuel shut-off valve
P0006	Fuel shut-off valve - circuit low	Wiring short to earth, fuel shut-off valve
P0007	Fuel shut-off valve - circuit high	Wiring short to positive, fuel shut-off valve
P0008	Engine position system, bank 1 - engine performance	Mechanical fault
P0009	Engine position system, bank 2 - engine performance	Mechanical fault
P000A	Intake camshaft position A, bank 1 - slow response	Wiring, mechanical fault, ECM
P000B	Exhaust camshaft position B, bank 1 - slow response	Wiring, mechanical fault, ECM
P000C	Intake camshaft position A, bank 2 - slow response	Wiring, mechanical fault, ECM
P000D	Exhaust camshaft position B, bank 2 - slow response	Wiring, mechanical fault, ECM
P000E	Fuel quantity adjuster control - learning limit exceeded	Wiring, fuel quantity adjuster, injectors, ECM

P000F	Fuel system over pressure relief valve activated	Wiring, mechanical fault, ECM
P0010	Camshaft position (CMP) actuator, intake/left/front, bank 1 - circuit malfunction	Wiring, CMP actuator, ECM
P0011	Camshaft position (CMP), intake/left/front, bank 1 - timing over-advanced/system performance	Valve timing, engine mechanical fault, CMP actuator
P0012	Camshaft position (CMP), intake/left/front, bank 1 - timing over-retarded	Valve timing, engine mechanical fault, CMP actuator
P0013	Camshaft position (CMP) actuator, intake/left/front, bank 1 - circuit malfunction	Wiring, CMP actuator, ECM
P0014	Camshaft position (CMP) actuator, exhaust/right/rear, bank 1 - timing over-advanced/system performance	Valve timing, engine mechanical fault, CMP actuator
P0015	Camshaft position (CMP) actuator, exhaust/right/rear, bank 1 - timing over-retarded	Valve timing, engine mechanical fault, CMP actuator
P0016	Crankshaft position/camshaft position, bank 1 sensor A - correlation	Wiring, CKP sensor, CMP sensor, mechanical fault
P0017	Crankshaft position/camshaft position, bank 1 sensor B - correlation	Wiring, CKP sensor, CMP sensor, mechanical fault
P0018	Crankshaft position/camshaft position, bank 2 sensor A - correlation	Wiring, CKP sensor, CMP sensor, mechanical fault
P0019	Crankshaft position/camshaft position, bank 2 sensor B - correlation	Wiring, CKP sensor, CMP sensor, mechanical fault
P001A	Intake camshaft profile control A, bank 1 - open circuit	Wiring, mechanical fault, ECM
P001B	Intake camshaft profile control A, bank 1 - circuit low	Wiring, ECM
P001C	Intake camshaft profile control A - bank 1 - circuit high	Wiring, mechanical fault, ECM
P001D	Intake camshaft profile control A, bank 2 - open circuit	Wiring, mechanical fault, ECM
P001E	Intake camshaft profile control A, bank 2 - circuit low	Wiring, mechanical fault, ECM
P001F	Intake camshaft profile control A, bank 2 - circuit high	Wiring, ECM
P0020	Camshaft position (CMP) actuator, intake/left/front, bank 2 - circuit malfunction	Wiring, CMP actuator, ECM
P0021	Camshaft position (CMP), intake/left/front, bank 2 - timing over-advanced/system performance	Valve timing, engine mechanical fault, CMP actuator
P0022	Camshaft position (CMP), intake/left/front, bank 2 - timing over-retarded	Valve timing, engine mechanical fault, CMP actuator
P0023	Camshaft position (CMP) actuator, exhaust/right/rear, bank 2 - circuit malfunction	Wiring, CMP actuator, ECM
P0024	Camshaft position (CMP), exhaust/right/rear, bank 2 - timing over-advanced/system performance	Valve timing, engine mechanical fault, CMP actuator
P0025	Camshaft position (CMP), exhaust/right/rear, bank 2 - timing over-retarded	Valve timing, engine mechanical fault, CMP actuator
P0026	Intake valve control solenoid, bank 1 - range/performance problem	Wiring, intake valve control solenoid
P0027	Exhaust valve control solenoid, bank 1 - range/performance problem	Wiring, exhaust valve control solenoid
P0028	Intake valve control solenoid, bank 2 - range/performance problem	Wiring, intake valve control solenoid
P0029	Exhaust valve control solenoid, bank 2 - range/performance problem	Wiring, exhaust valve control solenoid
P002A	Exhaust camshaft profile control B, bank 1 - open circuit	Wiring, ECM
P002B	Exhaust camshaft profile control B, bank 1 - circuit low	Wiring, ECM

P002C	Exhaust camshaft profile control B, bank 1 - circuit high	Wiring, mechanical fault, ECM
P002D	Exhaust camshaft profile control B, bank 2 - open circuit	Wiring, mechanical fault, ECM
P002E	Exhaust camshaft profile control B, bank 2 - circuit low	Wiring, mechanical fault, ECM
P002F	Exhaust camshaft profile control B, bank 2 - circuit high	Wiring, mechanical fault, ECM
P0030	Heated oxygen sensor (HO2S) 1, bank 1, heater control - circuit malfunction	Wiring, HO2S, ECM
P0031	Heated oxygen sensor (HO2S) 1, bank 1, heater control - circuit low	Wiring short to earth, HO2S, ECM
P0032	Heated oxygen sensor (HO2S) 1, bank 1, heater control - circuit high	Wiring short to positive, HO2S, ECM
P0033	Turbocharger (TC) bypass valve - circuit malfunction	Wiring, TC wastegate regulating valve, ECM
P0034	Turbocharger (TC) bypass valve - circuit low	Wiring short to earth, TC wastegate regulating valve, ECM
P0035	Turbocharger (TC) bypass valve - circuit high	Wiring short to positive, TC wastegate regulating valve, ECM
P0036	Heated oxygen sensor (HO2S) 2, bank 1, heater control - circuit malfunction	Wiring, HO2S, ECM
P0037	Heated oxygen sensor (HO2S) 2, bank 1, heater control - circuit low	Wiring short to earth, HO2S, ECM
P0038	Heated oxygen sensor (HO2S) 2, bank 1, heater control - circuit high	Wiring short to positive, HO2S, ECM
P0039	Turbocharger (TC) bypass valve/supercharger (SC) bypass valve, control - range/performance problem	Wiring, bypass valve
P003A	Turbocharger (TC)/supercharger (SC) boost pressure control A - learning limit exceeded	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P003B	Turbocharger (TC)/supercharger (SC) boost pressure control B - learning limit exceeded	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P003C	Intake camshaft profile control A, bank 1 - performance or stuck off	Wiring, mechanical fault, ECM
P003D	Intake camshaft profile control A, bank 1 - stuck on	Wiring, mechanical fault, ECM
P003E	Intake camshaft profile control A, bank 2 - performance problem or stuck off	Wiring, mechanical fault, ECM
P003F	Intake camshaft profile control A, bank 2 - stuck on	Wiring, mechanical fault, ECM
P0040	Oxygen sensor signals swapped, bank 1 sensor 1/bank 2 sensor 1	Wiring
P0041	Oxygen sensor signals swapped, bank 1 sensor 2/bank 2 sensor 2	Wiring
P0042	Heated oxygen sensor (HO2S) 3, bank 1, heater control - circuit malfunction	Wiring, HO2S, ECM
P0043	Heated oxygen sensor (HO2S) 3, bank 1, heater control - circuit low	Wiring short to earth, HO2S, ECM
P0044	Heated oxygen sensor (HO2S) 3, bank 1, heater control - circuit high	Wiring short to positive, HO2S, ECM
P0045	Turbocharger (TC) boost control solenoid/supercharger (SC) boost control solenoid - open circuit	Wiring, TC/SC boost control solenoid
P0046	Turbocharger (TC) boost control solenoid/supercharger (SC) boost control solenoid - circuit range/performance	Wiring, TC/SC boost control solenoid, mechanical fault
P0047	Turbocharger (TC) boost control solenoid/supercharger (SC) boost control solenoid - circuit low	Wiring short to earth, TC/SC boost control solenoid
P0048	Turbocharger (TC) boost control solenoid/supercharger (SC) boost control solenoid - circuit high	Wiring short to positive, TC/SC boost control solenoid

P0049	Turbocharger (TC)/supercharger (SC) turbine - over-speed	Mechanical fault
P004A	Turbocharger (TC)/supercharger (SC) boost pressure control B - open circuit	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P004B	Turbocharger (TC)/supercharger (SC) boost pressure control B - circuit range/performance	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P004C	Turbocharger (TC)/supercharger (SC) boost pressure control B - circuit low	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P004D	Turbocharger (TC)/supercharger (SC) boost pressure control B - circuit high	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P004E	Turbocharger (TC)/supercharger (SC) boost pressure control A - circuit intermittent/erratic	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P004F	Turbocharger (TC)/supercharger (SC) boost pressure control B - circuit intermittent/erratic	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P0050	Heated oxygen sensor (HO2S) 1, bank 2, heater control - circuit malfunction	Wiring, HO2S, ECM
P0051	Heated oxygen sensor (HO2S) 1, bank 2, heater control - circuit low	Wiring short to earth, HO2S, ECM
P0052	Heated oxygen sensor (HO2S) 1, bank 2, heater control - circuit high	Wiring short to positive, HO2S, ECM
P0053	Heated oxygen sensor (HO2S), bank 1, sensor 1 - heater resistance	Wiring, HO2S
P0054	Heated oxygen sensor (HO2S), bank 1, sensor 2 - heater resistance	Wiring, HO2S
P0055	Heated oxygen sensor (HO2S), bank 1, sensor 3 - heater resistance	Wiring, HO2S
P0056	Heated oxygen sensor (HO2S) 2, bank 2, heater control - circuit malfunction	Wiring, HO2S, ECM
P0057	Heated oxygen sensor (HO2S) 2, bank 2, heater control - heater circuit low	Wiring short to earth, HO2S, ECM
P0058	Heated oxygen sensor (HO2S) 2, bank 2, heater control - circuit high	Wiring short to positive, HO2S, ECM
P0059	Heated oxygen sensor (HO2S), bank 2, sensor 1 - heater resistance	Wiring, HO2S
P005A	Exhaust camshaft profile control B, bank 1 - performance or stuck off	Wiring, mechanical fault, ECM
P005B	Exhaust camshaft profile control B, bank 1 - stuck on	Wiring, mechanical fault, ECM
P005C	Exhaust camshaft profile control B, bank 2 - performance or stuck off	Wiring, mechanical fault, ECM
P005D	Exhaust camshaft profile control B, bank 2 - stuck on	Wiring, mechanical fault, ECM
P005E	Turbocharger (TC)/supercharger (SC) boost pressure control B - supply voltage low	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P005F	Turbocharger (TC)/supercharger (SC) boost pressure control B - supply voltage high	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P0060	Heated oxygen sensor (HO2S), bank 2, sensor 2 - heater resistance	Wiring, HO2S
P0061	Heated oxygen sensor (HO2S), bank 2, sensor 3 - heater resistance	Wiring, HO2S
P0062	Heated oxygen sensor (HO2S) 3, bank 2, heater control - circuit malfunction	Wiring, HO2S, ECM

P0063	Heated oxygen sensor (HO2S) 3, bank 2, heater control - circuit low	Wiring short to earth, HO2S, ECM
P0064	Heated oxygen sensor (HO2S) 3, bank 2, heater control - circuit high	Wiring short to positive, HO2S, ECM
P0065	Air assisted injector - range/performance problem	Air assisted injector
P0066	Air assisted injector - circuit malfunction/circuit low	Wiring short to earth, air assisted injector, ECM
P0067	Air assisted injector - circuit high	Wiring short to positive, air assisted injector, ECM
P0068	Manifold absolute pressure (MAP) sensor/mass air flow (MAF) sensor - throttle position correlation	Wiring, MAP sensor, MAF sensor, mechanical fault
P0069	Manifold absolute pressure (MAP) sensor/barometric pressure (BARO) sensor - correlation	MAP sensor, mechanical fault
P006A	MAP sensor/MAF or VAF sensor bank 1 - correlation	Wiring, MAP sensor, MAF sensor, VAF sensor, ECM
P006B	Manifold absolute pressure (MAP) sensor/exhaust pressure - correlation	Wiring, MAP sensor, exhaust gas pressure sensor, ECM
P006C	MAP sensor/turbocharger (TC)/supercharger (SC) boost pressure sensor - correlation	Wiring, TC/SC boost pressure sensor, ECM
P006D	Barometric pressure (BARO)/turbocharger (TC)/supercharger (SC) intake pressure - correlation	Wiring, BARO sensor, TC/SC intake pressure sensor, mechanical fault, ECM
P006E	Turbocharger (TC)/supercharger (SC) boost pressure control A - supply voltage low	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P006F	Turbocharger (TC)/supercharger (SC) boost pressure control A - supply voltage high	Wiring, TC/SC boost control solenoid, TC/SC boost pressure actuator, ECM
P0070	Outside air temperature sensor - circuit malfunction	Wiring, outside air temperature sensor, ECM
P0071	Outside air temperature sensor - range/performance problem	Outside air temperature sensor
P0072	Outside air temperature sensor - low input	Wiring short to earth, outside air temperature sensor, ECM
P0073	Outside air temperature sensor - high input	Wiring short to positive, outside air temperature sensor, ECM
P0074	Outside air temperature sensor - circuit intermittent	Wiring, poor connection, outside air temperature sensor, ECM
P0075	Intake valve control solenoid, bank 1 - circuit malfunction	Wiring, intake valve control solenoid, ECM
P0076	Intake valve control solenoid, bank 1 - circuit low	Wiring short to earth, intake valve control solenoid, ECM
P0077	Intake valve control solenoid, bank 1 - circuit high	Wiring short to positive, intake valve control solenoid, ECM
P0078	Exhaust valve control solenoid, bank 1 - circuit malfunction	Wiring, exhaust valve control solenoid, ECM
P0079	Exhaust valve control solenoid, bank 1 - circuit low	Wiring short to earth, exhaust valve control solenoid, ECM
P007A	Turbocharger (TC) intercooler temperature sensor, bank 1 - circuit malfunction	Wiring, TC intercooler temperature sensor, ECM
P007B	Turbocharger (TC) intercooler temperature sensor, bank 1 - circuit range/performance	Wiring, TC intercooler temperature sensor, ECM
P007C	Turbocharger (TC) intercooler temperature sensor, bank 1 - circuit low	Wiring, TC intercooler temperature sensor, ECM
P007D	Turbocharger (TC) intercooler temperature sensor, bank 1 - circuit high	Wiring, TC intercooler temperature sensor, ECM
P007E	Turbocharger (TC) intercooler temperature sensor, bank 1 - circuit intermittent/erratic	Wiring, TC intercooler temperature sensor, ECM
P007F	Turbocharger (TC) intercooler temperature sensor, bank 1/2 - correlation	Wiring, TC intercooler temperature sensor, ECM
P0080	Exhaust valve control solenoid, bank 1 - circuit high	Wiring short to positive, exhaust valve control solenoid, ECM

P0081	Intake valve control solenoid, bank 2 - circuit malfunction	Wiring, intake valve control solenoid, ECM
P0082	Intake valve control solenoid, bank 2 - circuit low	Wiring short to earth, intake valve control solenoid, ECM
P0083	Intake valve control solenoid, bank 2 - circuit high	Wiring short to positive, intake valve control solenoid, ECM
P0084	Exhaust valve control solenoid, bank 2 - circuit malfunction	Wiring, exhaust valve control solenoid, ECM
P0085	Exhaust valve control solenoid, bank 2 - circuit low	Wiring short to earth, exhaust valve control solenoid, ECM
P0086	Exhaust valve control solenoid, bank 2 - circuit high	Wiring short to positive, exhaust valve control solenoid, ECM
P0087	Fuel rail/system pressure too low	Fuel pump, fuel pressure regulator, fuel supply pipe blockage, mechanical fault
P0088	Fuel rail/system pressure too high	Fuel pump, fuel pressure regulator, fuel return pipe blockage, mechanical fault
P0089	Fuel pressure regulator 1 - performance problem	Fuel pressure regulator, mechanical fault
P008A	Low pressure fuel system - pressure too low	Wiring, fuel pump (FP), restricted fuel supply, fuel pressure control valve
P008B	Low pressure fuel system - pressure too high	Fuel pressure relief valve
P008C	Fuel cooling pump motor control - open circuit	Wiring, fuel cooling pump motor, ECM
P008D	Fuel cooling pump motor - circuit low	Wiring, fuel cooling pump motor, ECM
P008E	Fuel cooling pump motor - control circuit high	Wiring, fuel cooling pump motor, ECM
P008F	Engine coolant temperature (ECT)/fuel temperature - correlation	Wiring, ECT sensor, fuel temperature sensor, ECM
P0090	Fuel pressure regulator 1 - open circuit	Wiring open circuit, fuel metering solenoid, ECM
P0091	Fuel pressure regulator 1 - short to earth	Wiring short to earth, fuel metering solenoid, ECM
P0092	Fuel pressure regulator 1 - short to positive	Wiring short to positive, fuel metering solenoid, ECM
P0093	Fuel system leak - large leak detected	Wiring, fuel pressure sensor, mechanical fault
P0094	Fuel system leak - small leak detected	Wiring, fuel pressure sensor, mechanical fault
P0095	Intake air temperature (IAT) sensor 2 - circuit malfunction	Wiring, poor connection, IAT sensor, ECM
P0096	Intake air temperature (IAT) sensor 2 - circuit range/performance	Wiring, poor connection, IAT sensor, ECM
P0097	Intake air temperature (IAT) sensor 2 - circuit low input	Wiring short to earth, IAT sensor, ECM
P0098	Intake air temperature (IAT) sensor 2 - circuit high input	Wiring short to positive, IAT sensor, ECM
P0099	Intake air temperature (IAT) sensor 2 - circuit intermittent/erratic	Wiring, poor connection, IAT sensor, ECM
P009A	Intake air temperature (IAT)/outside air temperature - correlation	Wiring, IAT sensor, outside air temperature sensor, ECM
P009B	Fuel pressure relief system - control circuit open	Wiring, fuel pressure relief valve, ECM
P009C	Fuel pressure relief system - control circuit low	Wiring, fuel pressure relief valve, ECM
P009D	Fuel pressure relief system - control circuit high	Wiring, fuel pressure regulator control solenoid, ECM
P009E	Fuel pressure relief system - performance problem or stuck off	Wiring, fuel pressure relief valve, mechanical fault, ECM
P009F	Fuel pressure relief system - valve stuck	Wiring, fuel pressure relief valve, ECM
P00A0	Turbocharger (TC) intercooler temperature sensor, bank 2 - circuit malfunction	Wiring, TC intercooler temperature sensor, ECM
P00A1	Turbocharger (TC) intercooler temperature sensor, bank 2 - circuit range/performance	Wiring, TC intercooler temperature sensor, ECM
P00A2	Turbocharger (TC) intercooler temperature sensor bank 2 - circuit low	Wiring, TC intercooler temperature sensor, ECM
P00A3	Turbocharger (TC) intercooler temperature sensor, bank 2 - circuit high	Wiring, TC intercooler temperature sensor, ECM

P00A4	Turbocharger (TC) intercooler temperature sensor - circuit intermittent/erratic, bank 2	Wiring, TC intercooler temperature sensor, ECM
P00A5	Intake air temperature (IAT) sensor 2, bank 2 - circuit malfunction	Wiring, IAT sensor, ECM
P00A6	Intake air temperature (IAT) sensor 2, bank 2 - circuit range/performance	Wiring, IAT sensor, ECM
P00A7	Intake air temperature (IAT) sensor 2, bank 2 - circuit low	Wiring, IAT sensor, ECM
P00A8	Intake air temperature (IAT) sensor 2, bank 2 - circuit high	Wiring, IAT sensor, ECM
P00A9	Intake air temperature (IAT) sensor 2, bank 2 - circuit intermittent/erratic	Wiring, IAT sensor, ECM
P00AA	Intake air temperature (IAT) sensor 1, bank 2 - circuit malfunction	Wiring, IAT sensor, ECM
P00AB	Intake air temperature (IAT) sensor 1, bank 2 - circuit range/performance	Wiring, IAT sensor, ECM
P00AC	Intake air temperature (IAT) sensor 1, bank 2 - circuit low	Wiring, IAT sensor, ECM
P00AD	Intake air temperature (IAT) sensor 1, bank 2 - circuit high	Wiring, IAT sensor, ECM
P00AE	Intake air temperature (IAT) sensor 1, bank 2 - circuit intermittent/erratic	Wiring, IAT sensor, ECM
P00AF	Turbocharger (TC)/supercharger (SC) boost pressure control A - module performance	Wiring, ECM
P00B0	Turbocharger (TC)/supercharger (SC) boost pressure control B - module performance	ECM
P00B1	Radiator coolant temperature sensor - circuit malfunction	Wiring, radiator coolant temperature sensor, ECM
P00B2	Radiator coolant temperature sensor - circuit range/performance	Wiring, radiator coolant temperature sensor, ECM
P00B3	Radiator coolant temperature sensor - circuit low	Wiring, radiator coolant temperature sensor, ECM
P00B4	Radiator coolant temperature sensor - circuit high	Wiring, radiator coolant temperature sensor, ECM
P00B5	Radiator coolant temperature sensor - circuit intermittent/erratic	Wiring, radiator coolant temperature sensor, ECM
P00B6	Radiator coolant temperature/engine coolant temperature (ECT) - correlation	Wiring, radiator coolant temperature sensor, ECT sensor, ECM
P00B7	Engine coolant flow low - performance problem	Thermostat, radiator, engine coolant pump
P00B8	MAP sensor/MAF sensor or VAF sensor, bank 2 - correlation	Wiring, MAP sensor, MAF sensor, VAF sensor, hose blocked/leaking - ECM
P0100	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - circuit malfunction	Wiring, MAF/VAF sensor, ECM
P0101	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - range/performance problem	Intake leak/blockage, MAF/VAF sensor
P0102	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - low input	Wiring short to earth, MAF/VAF sensor, ECM
P0103	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - high input	Wiring short to positive, MAF/VAF sensor, ECM
P0104	Mass air flow (MAF) sensor/volume air flow (VAF) sensor - circuit intermittent	Wiring, poor connection, MAF/VAF sensor, ECM
P0105	Manifold absolute pressure (MAP) sensor/barometric pressure (BARO) sensor - circuit malfunction	Wiring, MAP sensor, BARO sensor, ECM
P0106	Manifold absolute pressure (MAP) sensor/barometric pressure (BARO) sensor - range/performance problem	Intake/exhaust leak, wiring, MAP sensor, BARO sensor
P0107	Manifold absolute pressure (MAP) sensor/barometric pressure (BARO) sensor - low input	Wiring short to earth, MAP sensor, BARO sensor, ECM

P0108	Manifold absolute pressure (MAP) sensor/barometric pressure (BARO) sensor - high input	Wiring short to positive, MAP sensor, BARO sensor, ECM
P0109	Manifold absolute pressure (MAP) sensor/barometric pressure (BARO) sensor - circuit intermittent	Wiring, poor connection, MAP sensor, BARO sensor, ECM
P010A	MAF sensor or VAF sensor B - circuit malfunction	Wiring, MAF sensor, VAF sensor, ECM
P010B	Exhaust gas recirculation (EGR) control module B - communication malfunction	Wiring, EGR control module, ECM
P010B	MAF sensor or VAF sensor B - circuit range/performance	Wiring, MAF sensor, VAF sensor, ECM
P010C	MAF sensor or VAF sensor B - circuit low	Wiring, MAF sensor, VAF sensor, ECM
P010D	MAF sensor or VAF sensor B - circuit high	Wiring, MAF sensor, VAF sensor, ECM
P010E	MAF sensor or VAF sensor B - circuit intermittent/erratic	Wiring, MAF sensor, VAF sensor, ECM
P010F	MAF sensor or VAF sensor A/B - correlation	Wiring, MAF sensor, VAF sensor, ECM
P0110	Intake air temperature (IAT) sensor - circuit malfunction	Wiring, IAT sensor, ECM
P0111	Intake air temperature (IAT) sensor - range/performance problem	IAT sensor
P0112	Intake air temperature (IAT) sensor - low input	Wiring short to earth, IAT sensor, ECM
P0113	Intake air temperature (IAT) sensor - high input	Wiring open circuit/short to positive, earth wire defective, IAT sensor, ECM
P0114	Intake air temperature (IAT) sensor - circuit intermittent	Wiring, poor connection, IAT sensor, ECM
P0115	Engine coolant temperature (ECT) sensor - circuit malfunction	Wiring, ECT sensor, ECM
P0116	Engine coolant temperature (ECT) sensor - range/performance problem	Coolant thermostat, poor connection, wiring, ECT sensor
P0117	Engine coolant temperature (ECT) sensor - low input	Coolant thermostat, wiring short to earth, ECT sensor
P0118	Engine coolant temperature (ECT) sensor - high input	Coolant thermostat, wiring open circuit/short to positive, earth wire defective, ECT sensor
P0119	Engine coolant temperature (ECT) sensor - circuit intermittent	Wiring, poor connection, ECT sensor, ECM
P011A	Engine coolant temperature (ECT) sensor 1/2 - correlation	Wiring, ECT sensor, ECM
P011B	Engine coolant temperature (ECT)/intake air temperature (IAT) - correlation	Wiring, ECT sensor, IAT sensor, ECM
P011C	Charge air temperature/intake air temperature (IAT), bank 1 - correlation	Wiring, IAT sensor, TC/SC boost air temperature sensor, ECM
P011D	Charge air temperature/intake air temperature (IAT), bank 2 - correlation	Wiring, IAT sensor, TC/SC boost air temperature sensor, ECM
P0120	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - circuit malfunction	Wiring, TP/APP sensor, ECM
P0120	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - circuit malfunction	Wiring, TP switch, APP switch, ECM
P0121	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - range/performance problem	Accelerator cable adjustment, TP/APP sensor
P0121	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - range/performance problem	Accelerator cable adjustment, TP switch, APP switch
P0122	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - low input	Wiring short to earth, TP/APP sensor, ECM
P0122	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - low input	Wiring short to earth, TP switch, APP switch, ECM
P0123	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - high input	Wiring short to positive, TP/APP sensor, ECM

P0123	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - high input	Wiring short to positive, TP switch, APP switch, ECM
P0124	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - circuit intermittent	Wiring, poor connection, TP/APP sensor, ECM
P0124	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - circuit intermittent	Wiring, poor connection, TP switch, APP switch, ECM
P0125	Insufficient coolant temperature for closed loop fuel control	Wiring, engine cooling system, coolant thermostat, ECT sensor
P0126	Insufficient coolant temperature for stable operation	Wiring, engine cooling system, coolant thermostat, ECT sensor
P0127	Intake air temperature too high	Wiring short to earth, IAT sensor 2, mechanical fault, ECM
P0128	Coolant thermostat - coolant temperature below thermostat regulating temperature	Mechanical fault
P0129	Barometric pressure too low	Wiring, BARO sensor, mechanical fault
P012A	Turbocharger (TC)/supercharger (SC) intake pressure sensor - circuit malfunction	Wiring, TC/SC intake pressure sensor, ECM
P012B	Turbocharger (TC)/supercharger (SC) intake pressure sensor - circuit range/performance	Wiring, TC/SC intake pressure sensor, ECM
P012C	Turbocharger (TC)/supercharger (SC) intake pressure sensor - circuit low	Wiring, TC/SC intake pressure sensor, ECM
P012D	Turbocharger (TC)/supercharger (SC) intake pressure sensor - circuit high	Wiring, TC/SC intake pressure sensor, ECM
P012E	Turbocharger (TC)/supercharger (SC) intake pressure sensor - circuit intermittent/erratic	Wiring, TC/SC intake pressure sensor, ECM
P0130	Heated oxygen sensor (HO2S) 1, bank 1 - circuit malfunction	Heating inoperative, poor connection, wiring, HO2S
P0130	Oxygen sensor (O2S) 1, bank 1 - circuit malfunction	Wiring, O2S, ECM
P0131	Heated oxygen sensor (HO2S) 1, bank 1 - low voltage	Exhaust leak, wiring short to earth, HO2S, ECM
P0131	Oxygen sensor (O2S) 1, bank 1 - low voltage	Exhaust leak, wiring short to earth, O2S, ECM
P0132	Heated oxygen sensor (HO2S) 1, bank 1 - high voltage	Wiring short to positive, HO2S, ECM
P0132	Oxygen sensor (O2S) 1, bank 1 - high voltage	Wiring short to positive, O2S, ECM
P0133	Heated oxygen sensor (HO2S) 1, bank 1 - slow response	Heating inoperative, wiring, HO2S
P0133	Oxygen sensor (O2S) 1, bank 1 - slow response	Wiring, O2S
P0134	Heated oxygen sensor (HO2S) 1, bank 1 - no activity detected	Wiring open circuit, heating inoperative, HO2S
P0134	Oxygen sensor (O2S) 1, bank 1 - no activity detected	Wiring, O2S
P0135	Heated oxygen sensor (HO2S) 1, bank 1, heater control - circuit malfunction	Fuse, wiring, HO2S, ECM
P0136	Heated oxygen sensor (HO2S) 2, bank 1 - circuit malfunction	Heating inoperative, wiring, HO2S, ECM
P0136	Oxygen sensor (O2S) 2, bank 1 - circuit malfunction	Wiring, O2S, ECM
P0137	Heated oxygen sensor (HO2S) 2, bank 1 - low voltage	Exhaust leak, wiring short to earth, HO2S, ECM
P0137	Oxygen sensor (O2S) 2, bank 1 - low voltage	Exhaust leak, wiring short to earth, O2S, ECM
P0138	Heated oxygen sensor (HO2S) 2, bank 1 - high voltage	Wiring short to positive, HO2S, ECM
P0138	Oxygen sensor (O2S) 2, bank 1 - high voltage	Wiring short to positive, O2S, ECM
P0139	Heated oxygen sensor (HO2S) 2, bank 1 - slow response	Heating inoperative, wiring, HO2S
P0139	Oxygen sensor (O2S) 2, bank 1 - slow response	Wiring, O2S
P013A	Heated oxygen sensor (HO2S) 2, bank 1 - slow response rich to lean	Wiring, HO2S, ECM

P013B	Heated oxygen sensor (HO2S) 2, bank 1 - slow response lean to rich	Wiring, HO2S, ECM
P013C	Heated oxygen sensor (HO2S) 2, bank 2 - slow response rich to lean	Wiring, HO2S, ECM
P013D	Heated oxygen sensor (HO2S) 2, bank 2 - slow response lean to rich	Wiring, HO2S, ECM
P013E	Heated oxygen sensor (HO2S) 2, bank 1 - delayed response rich to lean	Wiring, HO2S, ECM
P013F	Heated oxygen sensor (HO2S) 2, bank 1 - delayed response lean to rich	Wiring, HO2S, ECM
P0140	Heated oxygen sensor (HO2S) 2, bank 1 - no activity detected	Wiring, heating inoperative, HO2S, ECM
P0140	Oxygen sensor (O2S) 2, bank 1 - no activity detected	Wiring, O2S, ECM
P0141	Heated oxygen sensor (HO2S) 2, bank 1, heater control - circuit malfunction	Wiring, HO2S, ECM
P0142	Heated oxygen sensor (HO2S) 3, bank 1 - circuit malfunction	Wiring, HO2S, ECM
P0143	Heated oxygen sensor (HO2S) 3, bank 1 - low voltage	Exhaust leak, wiring short to earth, HO2S, ECM
P0143	Oxygen sensor (O2S) 3, bank 1 - low voltage	Exhaust leak, wiring short to earth, O2S, ECM
P0144	Heated oxygen sensor (HO2S) 3, bank 1 - high voltage	Wiring short to positive, HO2S, ECM
P0144	Oxygen sensor (O2S) 3, bank 1 - high voltage	Wiring short to positive, O2S, ECM
P0145	Heated oxygen sensor (HO2S) 3, bank 1 - slow response	Heating inoperative, wiring, HO2S
P0145	Oxygen sensor (O2S) 3, bank 1 - slow response	Wiring, O2S
P0146	Heated oxygen sensor (HO2S) 3, bank 1 - no activity detected	Wiring, HO2S, ECM
P0146	Oxygen sensor (O2S) 3, bank 1 - no activity detected	Wiring, O2S, ECM
P0147	Heated oxygen sensor (HO2S) 3, bank 1, heater control - circuit malfunction	Wiring, HO2S, ECM
P0148	Fuel delivery error	Fuel pump/fuel injection pump
P0149	Fuel timing error	Fuel pump/fuel injection pump
P014A	Heated oxygen sensor (HO2S) 2, bank 2 - delayed response rich to lean	Wiring, HO2S, ECM
P014B	Heated oxygen sensor (HO2S) 2, bank 2 - delayed response lean to rich	Wiring, HO2S, ECM
P0150	Heated oxygen sensor (HO2S) 1, bank 2 - circuit malfunction	Wiring, HO2S, ECM
P0150	Oxygen sensor (O2S) 1, bank 2 - circuit malfunction	Wiring, O2S, ECM
P0151	Heated oxygen sensor (HO2S) 1, bank 2 - low voltage	Exhaust leak, wiring short to earth, HO2S, ECM
P0151	Oxygen sensor (O2S) 1, bank 2 - low voltage	Exhaust leak, wiring short to earth, O2S, ECM
P0152	Heated oxygen sensor (HO2S) 1, bank 2 - high voltage	Wiring short to positive, HO2S, ECM
P0152	Oxygen sensor (O2S) 1, bank 2 - high voltage	Wiring short to positive, O2S, ECM
P0153	Heated oxygen sensor (HO2S) 1, bank 2 - slow response	Heating inoperative, wiring, HO2S
P0153	Oxygen sensor (O2S) 1, bank 2 - slow response	Wiring, O2S
P0154	Heated oxygen sensor (HO2S) 1, bank 2 - no activity detected	Wiring, HO2S, ECM
P0154	Oxygen sensor (O2S) 1, bank 2 - no activity detected	Wiring, O2S, ECM
P0155	Heated oxygen sensor (HO2S) 1, bank 2, heater control - circuit malfunction	Wiring, HO2S, ECM
P0156	Heated oxygen sensor (HO2S) 2, bank 2 - circuit malfunction	Heating inoperative, wiring, HO2S, ECM
P0156	Oxygen sensor (O2S) 2, bank 2 - circuit malfunction	Wiring, O2S, ECM

P0157	Heated oxygen sensor (HO2S) 2, bank 2 - low voltage	Exhaust leak, wiring short to earth, HO2S, ECM
P0157	Oxygen sensor (O2S) 2, bank 2 - low voltage	Exhaust leak, wiring short to earth, O2S, ECM
P0158	Heated oxygen sensor (HO2S) 2, bank 2 - high voltage	Wiring short to positive, HO2S, ECM
P0158	Oxygen sensor (O2S) 2, bank 2 - high voltage	Wiring short to positive, O2S, ECM
P0159	Heated oxygen sensor (HO2S) 2, bank 2 - slow response	Heating inoperative, wiring, HO2S
P0159	Oxygen sensor (O2S) 2, bank 2 - slow response	Wiring, O2S
P0160	Heated oxygen sensor (HO2S) 2, bank 2 - no activity detected	Wiring, HO2S, ECM
P0160	Oxygen sensor (O2S) 2, bank 2 - no activity detected	Wiring, O2S, ECM
P0161	Heated oxygen sensor (HO2S) 2, bank 2, heater control - circuit malfunction	Wiring, HO2S, ECM
P0162	Heated oxygen sensor (HO2S) 3, bank 2 - circuit malfunction	Wiring, HO2S, ECM
P0162	Oxygen sensor (O2S) 3, bank 2 - circuit malfunction	Wiring, O2S, ECM
P0163	Heated oxygen sensor (HO2S) 3, bank 2 - low voltage	Exhaust leak, wiring short to earth, HO2S, ECM
P0163	Oxygen sensor (O2S) 3, bank 2 - low voltage	Exhaust leak, wiring short to earth, O2S, ECM
P0164	Heated oxygen sensor (HO2S) 3, bank 2 - high voltage	Wiring short to positive, HO2S, ECM
P0164	Oxygen sensor (O2S) 3, bank 2 - high voltage	Wiring short to positive, O2S, ECM
P0165	Heated oxygen sensor (HO2S) 3, bank 2 - slow response	Heating inoperative, wiring, HO2S
P0165	Oxygen sensor (O2S) 3, bank 2 - slow response	Wiring, O2S
P0166	Heated oxygen sensor (HO2S) 3, bank 2 - no activity detected	Wiring, HO2S, ECM
P0166	Oxygen sensor (O2S) 3, bank 2 - no activity detected	Wiring, O2S, ECM
P0167	Heated oxygen sensor (HO2S) 3, bank 2, heater control - circuit malfunction	Wiring, HO2S, ECM
P0168	Fuel temperature too high	Wiring, fuel temperature sensor, mechanical fault
P0169	Incorrect fuel composition	Wiring, fuel composition sensor, mechanical fault
P0170	Fuel trim (FT), bank 1 - malfunction	Intake leak, AIR system, fuel pressure/pump, injector(s), EVAP canister purge valve, HO2S
P0171	System too lean, bank 1	Intake/exhaust leak, AIR system, MAF/VAF sensor, fuel pressure/pump, injector(s), HO2S
P0172	System too rich, bank 1	Intake blocked, EVAP canister purge valve, fuel pressure, EGR system, injector(s), HO2S
P0173	Fuel trim (FT), bank 2 - malfunction	Intake leak, AIR system, fuel pressure/pump, injector(s), EVAP canister purge valve, HO2S
P0174	System too lean, bank 2	Intake/exhaust leak, fuel pressure/pump, injector(s), AIR system, hose connection(s)
P0175	System too rich, bank 2	Intake blocked, EVAP canister purge valve, fuel pressure, EGR system, injector(s), HO2S
P0176	Fuel composition sensor - circuit malfunction	Wiring, fuel composition sensor, ECM
P0177	Fuel composition sensor - range/performance problem	Fuel composition sensor
P0178	Fuel composition sensor - low input	Wiring short to earth, fuel composition sensor, ECM
P0179	Fuel composition sensor - high input	Wiring short to positive, fuel composition sensor, ECM
P0180	Fuel temperature sensor A - circuit malfunction	Wiring, fuel temperature sensor, ECM
P0181	Fuel temperature sensor A - range/performance problem	Fuel temperature sensor
P0182	Fuel temperature sensor A - low input	Wiring short to earth, fuel temperature sensor, ECM
P0183	Fuel temperature sensor A - high input	Wiring short to positive, fuel temperature sensor, ECM
P0184	Fuel temperature sensor A - circuit intermittent	Wiring, poor connection, fuel temperature sensor, ECM

P0185	Fuel temperature sensor B - circuit malfunction	Wiring, fuel temperature sensor, ECM
P0186	Fuel temperature sensor B - range/performance problem	Fuel temperature sensor
P0187	Fuel temperature sensor B - low input	Wiring short to earth, fuel temperature sensor, ECM
P0188	Fuel temperature sensor B - high input	Wiring short to positive, fuel temperature sensor, ECM
P0189	Fuel temperature sensor B - circuit intermittent	Wiring, poor connection, fuel temperature sensor, ECM
P018A	Fuel pressure sensor B - circuit malfunction	Wiring, fuel pressure sensor, ECM
P018B	Fuel pressure sensor B - circuit range/performance	Wiring, fuel pressure sensor, ECM
P018C	Fuel pressure sensor B - circuit low	Wiring, fuel pressure sensor, ECM
P018D	Fuel pressure sensor B - circuit high	Wiring, fuel pressure sensor, ECM
P018E	Fuel pressure sensor B - circuit intermittent/erratic	Wiring, fuel pressure sensor, ECM
P0190	Fuel rail pressure (FRP) sensor - circuit malfunction	Wiring, FRP sensor, ECM
P0191	Fuel rail pressure (FRP) sensor - range/performance problem	Wiring, FRP sensor
P0192	Fuel rail pressure (FRP) sensor - low input	Wiring short to earth, FRP sensor
P0193	Fuel rail pressure (FRP) sensor - high input	Wiring short to positive, FRP sensor
P0194	Fuel rail pressure (FRP) sensor - circuit intermittent	Wiring, poor connection, FRP sensor
P0195	Engine oil temperature (EOT) sensor - circuit malfunction	Wiring, EOT sensor, ECM
P0196	Engine oil temperature (EOT) sensor - range/performance problem	EOT sensor
P0197	Engine oil temperature (EOT) sensor - low input	Wiring short to earth, EOT sensor
P0198	Engine oil temperature (EOT) sensor - high input	Wiring short to positive, EOT sensor
P0199	Engine oil temperature (EOT) sensor - circuit intermittent	Wiring, poor connection, EOT sensor, ECM
P0200	Injector - circuit malfunction	Wiring, injector, ECM
P0201	Injector 1 - circuit malfunction	Wiring, injector, ECM
P0202	Injector 2 - circuit malfunction	Wiring, injector, ECM
P0203	Injector 3 - circuit malfunction	Wiring, injector, ECM
P0204	Injector 4 - circuit malfunction	Wiring, injector, ECM
P0205	Injector 5 - circuit malfunction	Wiring, injector, ECM
P0206	Injector 6 - circuit malfunction	Wiring, injector, ECM
P0207	Injector 7 - circuit malfunction	Wiring, injector, ECM
P0208	Injector 8 - circuit malfunction	Wiring, injector, ECM
P0209	Injector 9 - circuit malfunction	Wiring, injector, ECM
P020A	Injection timing, cylinder 1	CKP sensor, CMP sensor, mechanical fault
P020B	Injection timing, cylinder 2	CKP sensor, CMP sensor, mechanical fault
P020C	Injection timing, cylinder 3	CKP sensor, CMP sensor, mechanical fault
P020D	Injection timing, cylinder 4	CKP sensor, CMP sensor, mechanical fault
P020E	Injection timing, cylinder 5	CKP sensor, CMP sensor, mechanical fault
P020F	Injection timing, cylinder 6	CKP sensor, CMP sensor, mechanical fault
P0210	Injector 10 - circuit malfunction	Wiring, injector, ECM
P0211	Injector 11 - circuit malfunction	Wiring, injector, ECM
P0212	Injector 12 - circuit malfunction	Wiring, injector, ECM
P0213	Cold start injector 1 - circuit malfunction	Wiring, cold start injector, ECM
P0214	Cold start injector 2 - circuit malfunction	Wiring, cold start injector, ECM
P0215	Fuel shut-off solenoid - circuit malfunction	Wiring, fuel shut-off solenoid, ECM
P0216	Fuel injection timing control - circuit malfunction	Wiring, fuel injection timing control solenoid, ECM

P0217	Engine over temperature condition	Wiring, engine cooling system, coolant thermostat, ECT sensor
P0218	Transmission over temperature condition	Wiring, TFT sensor, ECM
P0219	Engine over speed condition	Incorrect gear change
P021A	Injection timing, cylinder 7	CKP sensor, CMP sensor, mechanical fault
P021B	Injection timing, cylinder 8	CKP sensor, CMP sensor, mechanical fault
P021C	Injection timing, cylinder 9	CKP sensor, CMP sensor, mechanical fault
P021D	Injection timing, cylinder 10	CKP sensor, CMP sensor, mechanical fault
P021E	Injection timing, cylinder 11	CKP sensor, CMP sensor, mechanical fault
P021F	Injection timing, cylinder 12	CKP sensor, CMP sensor, mechanical fault
P0220	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor B - circuit malfunction	Wiring, TP/APP sensor, ECM
P0220	Throttle position (TP) switch B/accelerator pedal position (APP) switch B - circuit malfunction	Wiring, TP switch, APP switch, ECM
P0221	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor B - range/performance problem	Accelerator cable adjustment, TP/APP sensor
P0221	Throttle position (TP) switch B/accelerator pedal position (APP) switch B - range/performance problem	Accelerator cable adjustment, TP switch, APP switch
P0222	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor B - low input	Wiring short to earth, TP/APP sensor, ECM
P0222	Throttle position (TP) switch B/accelerator pedal position (APP) switch B - low input	Wiring short to earth, TP switch, APP switch, ECM
P0223	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor B - high input	Wiring short to positive, TP/APP sensor, ECM
P0223	Throttle position (TP) switch B/accelerator pedal position (APP) switch B - high input	Wiring short to positive, TP switch, APP switch, ECM
P0224	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor B - circuit intermittent	Wiring, poor connection, TP/APP sensor, ECM
P0224	Throttle position (TP) switch B/accelerator pedal position (APP) switch B - circuit intermittent	Wiring, poor connection, TP switch, APP switch, ECM
P0225	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor C - circuit malfunction	Wiring, TP/APP sensor, ECM
P0225	Throttle position (TP) switch C/accelerator pedal position (APP) switch C - circuit malfunction	Wiring, TP switch, APP switch, ECM
P0226	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor C - range/performance problem	Accelerator cable adjustment, TP/APP sensor
P0226	Throttle position (TP) switch C/accelerator pedal position (APP) switch C - range/performance problem	Accelerator cable adjustment, TP switch, APP switch
P0227	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor C - low input	Wiring short to earth, TP/APP sensor, ECM
P0227	Throttle position (TP) switch C/accelerator pedal position (APP) switch C - low input	Wiring short to earth, TP switch, APP switch, ECM
P0228	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor C - high input	Wiring short to positive, TP/APP sensor, ECM
P0228	Throttle position (TP) switch C/accelerator pedal position (APP) switch C - high input	Wiring short to positive, TP switch, APP switch, ECM
P0229	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor C - circuit intermittent	Wiring, poor connection, TP/APP sensor, ECM
P0229	Throttle position (TP) switch C/accelerator pedal position (APP) switch C - circuit intermittent	Wiring, poor connection, TP switch, APP switch, ECM

P022A	Turbocharger (TC) intercooler bypass actuator A - open circuit	Wiring, TC intercooler bypass actuator, ECM
P022B	Turbocharger (TC) intercooler bypass actuator control A - circuit low	Wiring, TC intercooler bypass actuator, ECM
P022C	Turbocharger (TC) intercooler bypass actuator A - circuit high	Wiring, TC intercooler bypass actuator, ECM
P022D	Turbocharger (TC) intercooler bypass actuator control B - open circuit	Wiring, TC intercooler bypass actuator, ECM
P022E	Turbocharger (TC) intercooler bypass actuator control B - circuit low	Wiring, TC intercooler bypass actuator, ECM
P022F	Turbocharger (TC) intercooler bypass actuator control B - circuit high	Wiring, TC intercooler bypass actuator, ECM
P0230	Fuel pump relay - circuit malfunction	Wiring, fuel pump relay, ECM
P0231	Fuel pump relay - circuit low	Wiring short to earth, fuel pump relay, ECM
P0232	Fuel pump relay - circuit high	Wiring short to positive, fuel pump relay, ECM
P0233	Fuel pump relay - circuit intermittent	Wiring, poor connection, fuel pump relay, ECM
P023A	Turbocharger (TC) intercooler coolant pump - open circuit	Wiring, TC intercooler coolant pump, ECM
P023B	Turbocharger (TC) intercooler coolant pump - circuit low	Wiring, TC intercooler coolant pump, ECM
P023C	Turbocharger (TC) intercooler coolant pump - control circuit high	Wiring, TC intercooler coolant pump, ECM
P023D	Manifold absolute pressure (MAP) sensor/turbocharger (TC)/supercharger (SC) boost pressure sensor A - correlation	Wiring, MAP sensor, TC/SC boost pressure sensor, ECM
P023E	Manifold absolute pressure (MAP) sensor/turbocharger (TC)/supercharger (SC) boost pressure sensor B - correlation	Wiring, MAP sensor, TC/SC boost pressure sensor, ECM
P023F	Fuel pump (FP), secondary - open circuit	Wiring, fuel pump (FP), fuel pump relay, ECM
P0234	Turbocharger (TC), engine boost condition - limit exceeded	Hose connection(s), wiring, TC wastegate regulating valve, TC wastegate
P0234	Supercharger (SC), engine boost condition - limit exceeded	Wiring, SC bypass valve/motor, SC
P0235	Manifold absolute pressure (MAP) sensor A, TC system - circuit malfunction	Wiring, MAP sensor
P0235	Turbocharger (TC) boost pressure sensor A/supercharger (SC) boost pressure sensor A - circuit malfunction	Wiring, TC/SC boost pressure sensor
P0236	Manifold absolute pressure (MAP) sensor A, TC system - range/performance problem	Intake/exhaust leak, hose connection(s), MAP sensor
P0236	Turbocharger (TC) boost pressure sensor A/supercharger (SC) boost pressure sensor A - range/performance problem	Intake/exhaust leak, hose connection(s), TC/SC boost pressure sensor
P0237	Manifold absolute pressure (MAP) sensor A, TC system - low input	Wiring short to earth, MAP sensor, ECM
P0237	Turbocharger (TC) boost pressure sensor/supercharger (SC) boost pressure sensor A - low input	Wiring short to earth, TC/SC boost pressure sensor, ECM
P0238	Manifold absolute pressure (MAP) sensor A, TC system - high input	Wiring short to positive, MAP sensor, ECM
P0238	Turbocharger (TC) boost pressure sensor A/supercharger (SC) boost pressure sensor A - high input	Wiring short to positive, TC/SC boost pressure sensor, ECM
P0239	Manifold absolute pressure (MAP) sensor B, TC system - circuit malfunction	Wiring, MAP sensor, ECM
P0239	Turbocharger (TC) boost pressure sensor B/supercharger (SC) boost pressure sensor - circuit malfunction	Wiring, TC/SC boost pressure sensor, ECM

P0240	Manifold absolute pressure (MAP) sensor B, TC system - range/performance problem	Intake/exhaust leak, hose connection(s), MAP sensor
P0240	Turbocharger (TC) boost pressure sensor B/supercharger (SC) boost pressure sensor B - range/performance problem	Intake/exhaust leak, hose connection(s), TC/SC boost pressure sensor
P0241	Manifold absolute pressure (MAP) sensor B, TC system - low input	Wiring short to earth, MAP sensor, ECM
P0241	Turbocharger (TC) boost pressure sensor B/supercharger (SC) boost pressure sensor B - low input	Wiring short to earth, TC/SC boost pressure sensor, ECM
P0242	Manifold absolute pressure (MAP) sensor B, TC system - high input	Wiring short to positive, MAP sensor, ECM
P0242	Turbocharger (TC) boost pressure sensor B/supercharger (SC) boost pressure sensor B - high input	Wiring short to positive, TC/SC boost pressure sensor, ECM
P0243	Supercharger (SC) bypass valve A - circuit malfunction	Wiring, SC bypass valve, ECM
P0243	Turbocharger (TC) wastegate regulating valve A - circuit malfunction	Wiring, TC wastegate regulating valve, ECM
P0244	Supercharger (SC) bypass valve A - range/performance problem	SC bypass valve
P0244	Turbocharger (TC) wastegate regulating valve A - range/performance problem	TC wastegate regulating valve
P0245	Supercharger (SC) bypass valve A - circuit low	Wiring short to earth, SC bypass valve, ECM
P0245	Turbocharger (TC) wastegate regulating valve A - circuit low	Wiring short to earth, TC wastegate regulating valve, ECM
P0246	Supercharger (SC) bypass valve A - circuit high	Wiring short to positive, SC bypass valve, ECM
P0246	Turbocharger (TC) wastegate regulating valve A - circuit high	Wiring short to positive, TC wastegate regulating valve, ECM
P0247	Supercharger (SC) bypass valve B - circuit malfunction	Wiring, SC bypass valve, ECM
P0247	Turbocharger (TC) wastegate regulating valve B - circuit malfunction	Wiring, TC wastegate regulating valve, ECM
P0248	Supercharger (SC) bypass valve B - range/performance problem	SC bypass valve
P0248	Turbocharger (TC) wastegate regulating valve B - range/performance problem	TC wastegate regulating valve
P0249	Supercharger (SC) bypass valve B - circuit low	Wiring short to earth, SC bypass valve, ECM
P0249	Turbocharger (TC) wastegate regulating valve B - circuit low	Wiring short to earth, TC wastegate regulating valve, ECM
P024A	Turbocharger (TC) intercooler bypass actuator A - range/performance problem	Wiring, TC intercooler bypass actuator, ECM
P024B	Turbocharger (TC) intercooler bypass actuator A - actuator stuck	Wiring, TC intercooler bypass actuator, mechanical fault, ECM
P024C	Turbocharger (TC) intercooler bypass actuator position sensor A - circuit malfunction	Wiring, TC intercooler bypass actuator position sensor, ECM
P024D	Charge air cooler bypass position sensor A - circuit range/performance	Wiring, charge air cooler bypass position sensor, ECM
P024E	Turbocharger (TC) intercooler bypass actuator position sensor A - circuit low	Wiring, TC intercooler bypass actuator position sensor, ECM
P024F	Turbocharger (TC) intercooler bypass actuator position sensor A - circuit high	Wiring, TC intercooler bypass actuator position sensor, ECM
P0250	Supercharger (SC) bypass valve B - circuit high	Wiring short to positive, SC bypass valve, ECM
P0250	Turbocharger (TC) wastegate regulating valve B - circuit high	Wiring short to positive, TC wastegate regulating valve, ECM
P0251	Injection pump fuel metering control A, cam/rotor/injector - circuit malfunction	Wiring, injection pump, ECM

P0252	Injection pump fuel metering control A, cam/rotor/injector - range/performance problem	Injection pump
P0253	Injection pump fuel metering control A, cam/rotor/injector - circuit low	Wiring short to earth, injection pump, ECM
P0254	Injection pump fuel metering control A, cam/rotor/injector - circuit high	Wiring short to positive, injection pump, ECM
P0255	Injection pump fuel metering control A, cam/rotor/injector - circuit intermittent	Wiring, poor connection, injection pump, ECM
P0256	Injection pump fuel metering control B, cam/rotor/injector - circuit malfunction	Wiring, injection pump, ECM
P0257	Injection pump fuel metering control B, cam/rotor/injector - range/performance problem	Injection pump
P0258	Injection pump fuel metering control B, cam/rotor/injector - circuit low	Wiring short to earth, injection pump, ECM
P0259	Injection pump fuel metering control B, cam/rotor/injector - circuit high	Wiring short to positive, injection pump, ECM
P025A	Fuel pump (FP) control module - open circuit	Wiring, FP control module, ECM
P025B	Fuel pump (FP) control module - circuit range/performance	Wiring, FP control module, ECM
P025C	Fuel pump (FP) control module - circuit low	Wiring, FP control module, ECM
P025D	Fuel pump (FP) control module - circuit high	Wiring, FP control module, ECM
P0260	Injection pump fuel metering control B, cam/rotor/injector - circuit intermittent	Wiring, poor connection, injection pump, ECM
P0261	Injector 1 - circuit low	Wiring short to earth, injector, ECM
P0262	Injector 1 - circuit high	Wiring short to positive, injector, ECM
P0263	Cylinder 1 - contribution/balance fault	Wiring, fuel system, ECM
P0264	Injector 2 - circuit low	Wiring short to earth, injector, ECM
P0265	Injector 2 - circuit high	Wiring short to positive, injector, ECM
P0266	Cylinder 2 - contribution/balance fault	Wiring, fuel system, ECM
P0267	Injector 3 - circuit low	Wiring short to earth, injector, ECM
P0268	Injector 3 - circuit high	Wiring short to positive, injector, ECM
P0269	Cylinder 3 - contribution/balance fault	Wiring, fuel system, ECM
P0270	Injector 4 - circuit low	Wiring short to earth, injector, ECM
P0271	Injector 4 - circuit high	Wiring short to positive, injector, ECM
P0272	Cylinder 4 - contribution/balance fault	Wiring, fuel system, ECM
P0273	Injector 5 - circuit low	Wiring short to earth, injector, ECM
P0274	Injector 5 - circuit high	Wiring short to positive, injector, ECM
P0275	Cylinder 5 - contribution/balance fault	Wiring, fuel system, ECM
P0276	Injector 6 - circuit low	Wiring short to earth, injector, ECM
P0277	Injector 6 - circuit high	Wiring short to positive, injector, ECM
P0278	Cylinder 6 - contribution/balance fault	Wiring, fuel system, ECM
P0279	Injector 7 - circuit low	Wiring short to earth, injector, ECM
P0280	Injector 7 - circuit high	Wiring short to positive, injector, ECM
P0281	Cylinder 7 - contribution/balance fault	Wiring, fuel system, ECM
P0282	Injector 8 - circuit low	Wiring short to earth, injector, ECM
P0283	Injector 8 - circuit high	Wiring short to positive, injector, ECM
P0284	Cylinder 8 - contribution/balance fault	Wiring, fuel system, ECM
P0285	Injector 9 - circuit low	Wiring short to earth, injector, ECM

P0286	Injector 9 - circuit high	Wiring short to positive, injector, ECM
P0287	Cylinder 9 - contribution/balance fault	Wiring, fuel system, ECM
P0288	Injector 10 - circuit low	Wiring short to earth, injector, ECM
P0289	Injector 10 - circuit high	Wiring short to positive, injector, ECM
P0290	Cylinder 10 - contribution/balance fault	Wiring, fuel system, ECM
P0291	Injector 11 - circuit low	Wiring short to earth, injector, ECM
P0292	Injector 11 - circuit high	Wiring short to positive, injector, ECM
P0293	Cylinder 11 - contribution/balance fault	Wiring, fuel system, ECM
P0294	Injector 12 - circuit low	Wiring short to earth, injector, ECM
P0295	Injector 12 - circuit high	Wiring short to positive, injector, ECM
P0296	Cylinder 12 - contribution/balance fault	Wiring, fuel system, ECM
P0297	Vehicle over-speed condition	Wiring, VSS, mechanical fault
P0298	Engine oil temperature too high	Wiring, EOT sensor, mechanical fault
P0299	Turbocharger (TC)/supercharger (SC) - low boost	Mechanical fault
P029A	Fuel trim (FT), cylinder 1 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P029B	Fuel trim (FT), cylinder 1 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P029C	Injector 1 - blockage	Injector
P029D	Injector 1 - leak	Injector
P029E	Fuel trim (FT), cylinder 2 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P029F	Fuel trim (FT), cylinder 2 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02A0	Injector 2 - leak	Injector
P02A1	Injector 2 - leak	Injector
P02A2	Fuel trim (FT), cylinder 3 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02A3	Fuel trim (FT), cylinder 3 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02A4	Injector 3 - leak	Injector
P02A5	Injector 3 - leak	Injector
P02A6	Fuel trim (FT), cylinder 4 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02A7	Fuel trim (FT), cylinder 4 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02A8	Injector 4 - leak	Injector
P02A9	Injector 4 - leak	Injector
P02AA	Fuel trim (FT), cylinder 5 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02AB	Fuel trim (FT), cylinder 5 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02AC	Cylinder 5 - injector leaking	Injector
P02AD	Injector 5 - leak	Injector
P02AE	Fuel trim (FT), cylinder 6 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02AF	Fuel trim (FT), cylinder 6 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM

P02B0	Injector 6 - leak	Injector
P02B1	Injector 6 - leak	Injector
P02B2	Fuel trim (FT), cylinder 7 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02B3	Fuel trim (FT), cylinder 7 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02B4	Injector 7 - leak	Injector
P02B5	Injector 7 - leak	Injector
P02B6	Fuel trim (FT), cylinder 8 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02B7	Fuel trim (FT), cylinder 8 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02B8	Injector 8 - leak	Injector
P02B9	Injector 8 - leak	Injector
P02BA	Fuel trim (FT), cylinder 9 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02BB	Injector 9 - offset learning at minimum limit	Wiring, injector, ECM
P02BC	Injector 9 - leak	Injector
P02BD	Injector 9 - leak	Injector
P02BE	Fuel trim (FT), cylinder 10 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02BF	Fuel trim (FT), cylinder 10 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02C0	Injector 10 - leak	Injector
P02C1	Injector 10 - leak	Injector
P02C2	Fuel trim (FT), cylinder 11 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02C3	Fuel trim (FT), cylinder 11 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02C4	Injector 11 - leak	Injector
P02C5	Injector 11 - leak	Injector
P02C6	Fuel trim (FT), cylinder 12 - maximum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02C7	Fuel trim (FT), cylinder 12 - minimum control limit reached	Injector, fuel pressure, MAF sensor, VAF sensor, MAP sensor, ECM
P02C8	Injector 12 - blockage	Injector
P02C9	Injector 12 - leak	Injector
P02CA	Turbocharger (TC)/supercharger (SC) B - overboost condition	Wiring, TC wastegate actuator, SC control valve, ECM
P02CB	Turbocharger (TC)/supercharger (SC) B - underboost condition	Wiring, MAP sensor, TC/SC boost pressure sensor, turbocharger (TC) wastegate actuator, TC, SC, mechanical fault, ECM
P02CC	Injector 1 - offset learning at minimum limit	Wiring, injector, ECM
P02CD	Injector 1 - offset learning at maximum limit	Wiring, injector, ECM
P02CE	Injector 2 - offset learning at minimum limit	Wiring, injector, ECM
P02CF	Injector 2 - offset learning at maximum limit	Wiring, injector, ECM
P02D0	Injector 3 - offset learning at minimum limit	Wiring, injector, ECM
P02D1	Injector 3 - offset learning at maximum limit	Wiring, injector, ECM

P02D2	Injector 4 - offset learning at minimum limit	Wiring, injector, ECM
P02D3	Injector 4 - offset learning at maximum limit	Wiring, injector, ECM
P02D4	Injector 5 - offset learning at minimum limit	Wiring, injector, ECM
P02D5	Injector 5 - offset learning at maximum limit	Wiring, injector, ECM
P02D6	Injector 6 - offset learning at minimum limit	Wiring, injector, ECM
P02D7	Injector 6 - offset learning at maximum limit	Wiring, injector, ECM
P02D8	Injector 7 - offset learning at minimum limit	Wiring, injector, ECM
P02D9	Injector 7 - offset learning at maximum limit	Wiring, injector, ECM
P02DA	Injector 8 - offset learning at minimum limit	Wiring, injector, ECM
P02DB	Injector 8 - offset learning at maximum limit	Wiring, injector, ECM
P02DC	Injector 9 - offset learning at minimum limit	Wiring, injector, ECM
P02DD	Injector 9 - offset learning at maximum limit	Wiring, injector, ECM
P02DE	Injector 10 - offset learning at minimum limit	Wiring, injector, ECM
P02DF	Injector 10 - offset learning at maximum limit	Wiring, injector, ECM
P02E0	Intake air flap control actuator - open circuit	Wiring, intake air flap control actuator, ECM
P02E1	Intake air flap control actuator - performance problem	Wiring, intake air flap control actuator, intake air flap control actuator position sensor, mechanical fault, ECM
P02E2	Intake air flap control actuator - circuit low	Wiring, intake air flap control actuator, ECM
P02E3	Intake air flap control actuator - circuit high	Wiring, intake air flap control actuator, ECM
P02E4	Intake air flap control actuator - actuator stuck open	Wiring, intake air flap control actuator, intake air flap control actuator position sensor, mechanical fault, ECM
P02E5	Intake air flap control actuator - actuator stuck closed	Intake air flap control actuator, mechanical fault
P02E6	Intake air flap control actuator position sensor - circuit malfunction	Wiring, intake air flap control actuator position sensor, ECM
P02E7	Intake air flap control actuator position sensor - range/performance	Wiring, intake air flap control actuator position sensor, ECM
P02E8	Intake air flap control actuator position sensor - circuit low	Wiring, intake air flap control actuator position sensor, ECM
P02E9	Intake air flap control actuator position sensor - circuit high	Wiring, intake air flap control actuator position sensor, ECM
P02EA	Intake air flap control actuator position sensor - circuit intermittent/erratic	Wiring, intake air flap control actuator position sensor, ECM
P0300	Random/multiple cylinder(s) - misfire detected	Spark plug(s), HT lead(s), injector(s), ignition coil(s), low compression, wiring
P0301	Cylinder 1 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0302	Cylinder 2 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0303	Cylinder 3 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0304	Cylinder 4 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0305	Cylinder 5 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0306	Cylinder 6 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0307	Cylinder 7 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM

P0308	Cylinder 8 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0309	Cylinder 9 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0310	Cylinder 10 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0311	Cylinder 11 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0312	Cylinder 12 - misfire detected	Engine mechanical fault, wiring, ignition/fuel system, injector, ECT/MAF sensor, ECM
P0313	Misfire detected - low fuel level	Fuel system, mechanical fault
P0314	Single cylinder misfire - cylinder not specified	Engine mechanical fault, wiring, ignition/fuel system, injector
P0315	Crankshaft position system - variation not learned	Engine mechanical fault, wiring
P0316	Misfire detected during start-up - first 1000 revolutions	Engine mechanical fault, wiring, ignition/fuel system, injector
P0317	Rough road hardware not present	Wiring, ECM
P0318	Rough road sensor A - circuit malfunction	Wiring, rough road sensor A, mechanical fault
P0319	Rough road sensor B - circuit malfunction	Wiring, rough road sensor B, mechanical fault
P0320	Crankshaft position (CKP) sensor/engine speed (RPM) sensor - circuit malfunction	Wiring, CKP/RPM sensor, ECM
P0321	Crankshaft position (CKP) sensor/engine speed (RPM) sensor - range/performance problem	Air gap, metal particle contamination, insecure sensor/rotor, wiring, CKP/RPM sensor
P0322	Crankshaft position (CKP) sensor/engine speed (RPM) sensor - no signal	Wiring, CKP/RPM sensor, ECM
P0323	Crankshaft position (CKP) sensor/engine speed (RPM) sensor - circuit intermittent	Wiring, poor connection, CKP/RPM sensor, ECM
P0324	Knock control system error	Wiring, poor connection, KS, ECM
P0325	Knock sensor (KS) 1, bank 1 - circuit malfunction	Wiring, poor connection, KS
P0326	Knock sensor (KS) 1, bank 1 - range/performance problem	Wiring, KS incorrectly tightened, KS
P0327	Knock sensor (KS) 1, bank 1 - low input	Insecure KS, poor connection, wiring short to earth, incorrectly tightened, KS, ECM
P0328	Knock sensor (KS) 1, bank 1 - high input	Wiring short to positive, KS incorrectly tightened, KS, ECM
P0329	Knock sensor (KS) 1, bank 1 - circuit intermittent	Wiring, poor connection, KS, ECM
P032A	Knock sensor (KS) 3, bank 1 - circuit malfunction	Wiring, KS, ECM
P032B	Knock sensor (KS) 3, bank 1 - circuit range/performance	Wiring, KS, ECM
P032C	Knock sensor (KS) 3, bank 1 - circuit low	Wiring, KS, ECM
P032D	Knock sensor (KS) 3, bank 1 - circuit high	Wiring, KS, ECM
P032E	Knock sensor (KS) 3, bank 1 - circuit intermittent	Wiring, KS, ECM
P0330	Knock sensor (KS) 2, bank 2 - circuit malfunction	Wiring, KS, ECM
P0331	Knock sensor (KS) 2, bank 2 - range/performance problem	Wiring, KS incorrectly tightened, KS
P0332	Knock sensor (KS) 2, bank 2 - low input	Insecure KS, poor connection, wiring short to earth, KS incorrectly tightened, KS, ECM
P0333	Knock sensor (KS) 2, bank 2 - high input	Wiring short to positive, KS incorrectly tightened, KS, ECM
P0334	Knock sensor (KS) 2, bank 2 - circuit intermittent	Wiring, poor connection, KS, ECM
P0335	Crankshaft position (CKP) sensor - circuit malfunction	Wiring, CKP sensor, ECM
P0336	Crankshaft position (CKP) sensor - range/performance problem	Insecure sensor/rotor, air gap, wiring, CKP sensor

P0337	Crankshaft position (CKP) sensor - low input	Wiring short to earth, CKP sensor, ECM
P0338	Crankshaft position (CKP) sensor - high input	Wiring short to positive, CKP sensor, ECM
P0339	Crankshaft position (CKP) sensor - circuit intermittent	Wiring, poor connection, CKP sensor, ECM
P033A	Knock sensor (KS) 4, bank 2 - circuit malfunction	Wiring, KS, ECM
P033B	Knock sensor (KS) 4, bank 2 - circuit range/performance	Wiring, KS, ECM
P033C	Knock sensor (KS) 4, bank 2 - circuit low	Wiring, KS, ECM
P033D	Knock sensor (KS) 4, bank 2 - circuit high	Wiring, KS, ECM
P033E	Knock sensor (KS) 4, bank 2 - circuit intermittent	Wiring, KS, ECM
P0340	Camshaft position (CMP) sensor A, bank 1 - circuit malfunction	Wiring, CMP sensor, ECM
P0341	Camshaft position (CMP) sensor A, bank 1 - range/performance problem	Insecure sensor/rotor, air gap, wiring, CMP sensor
P0342	Camshaft position (CMP) sensor A, bank 1 - low input	Wiring short to earth, CMP sensor, ECM
P0343	Camshaft position (CMP) sensor A, bank 1 - high input	Wiring short to positive, CMP sensor, ECM
P0344	Camshaft position (CMP) sensor A, bank 1 - circuit intermittent	Wiring, poor connection, CMP sensor, ECM
P0345	Camshaft position (CMP) sensor A, bank 2 - circuit malfunction	Wiring, CMP sensor, ECM
P0346	Camshaft position (CMP) sensor A, bank 2 - range/performance problem	Insecure sensor/rotor, air gap, wiring, CMP sensor
P0347	Camshaft position (CMP) sensor A, bank 2 - low input	Wiring short to earth, CMP sensor, ECM
P0348	Camshaft position (CMP) sensor A, bank 2 - high input	Wiring short to positive, CMP sensor, ECM
P0349	Camshaft position (CMP) sensor A, bank 2 - circuit intermittent	Wiring, poor connection, CMP sensor, ECM
P0350	Ignition coil, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0351	Ignition coil A, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0352	Ignition coil B, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0353	Ignition coil C, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0354	Ignition coil D, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0355	Ignition coil E, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0356	Ignition coil F, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0357	Ignition coil G, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0358	Ignition coil H, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0359	Ignition coil I, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0360	Ignition coil J, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0361	Ignition coil K, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0362	Ignition coil L, primary/secondary - circuit malfunction	Wiring, ignition coil, ECM
P0363	Misfire detected - fuelling disabled	Fuel system, mechanical fault
P0365	Camshaft position (CMP) sensor B, bank 1 - circuit malfunction	Wiring, poor connection, CMP sensor, ECM
P0366	Camshaft position (CMP) sensor B, bank 1 - circuit range/performance	Wiring, poor connection, CMP sensor
P0367	Camshaft position (CMP) sensor B, bank 1 - circuit low input	Wiring short to earth, CMP sensor, ECM
P0368	Camshaft position (CMP) sensor B, bank 1 - circuit high input	Wiring short to positive, CMP sensor, ECM
P0369	Camshaft position (CMP) sensor B, bank 1 - circuit intermittent	Wiring, poor connection, ECM
P0370	Timing reference, high resolution signal A - malfunction	Wiring, CKP/RPM/CMP sensor, ECM

P0371	Timing reference, high resolution signal A - too many pulses	Wiring, CKP/RPM/CMP sensor, ECM
P0372	Timing reference, high resolution signal A - too few pulses	Wiring, CKP/RPM/CMP sensor, ECM
P0373	Timing reference, high resolution signal A - intermittent/erratic pulses	Wiring, poor connection, CKP/RPM/CMP sensor, ECM
P0374	Timing reference, high resolution signal A - no pulses	Wiring, CKP/RPM/CMP sensor, ECM
P0375	Timing reference, high resolution signal B - malfunction	Wiring, CKP/RPM/CMP sensor, ECM
P0376	Timing reference, high resolution signal B - too many pulses	Wiring, CKP/RPM/CMP sensor, ECM
P0377	Timing reference, high resolution signal B - too few pulses	Wiring, CKP/RPM/CMP sensor, ECM
P0378	Timing reference, high resolution signal B - intermittent/erratic pulses	Wiring, poor connection, CKP/RPM/CMP sensor, ECM
P0379	Timing reference, high resolution signal B - no pulses	Wiring, CKP/RPM/CMP sensor, ECM
P037D	Glow plug monitoring - circuit malfunction	Wiring, glow plug control module, ECM
P037E	Glow plug monitoring - circuit low	Wiring, glow plug control module, ECM
P037F	Glow plug monitoring - circuit high	Wiring, glow plug control module, ECM
P0380	Glow plugs, circuit A - malfunction	Wiring, glow plug relay, fuse, glow plugs, ECM
P0381	Glow plug warning lamp - circuit malfunction	Wiring, glow plug warning lamp, ECM
P0382	Glow plugs, circuit B - malfunction	Wiring, glow plug relay, fuse, glow plugs, ECM
P0383	Glow plug control module - circuit low	Wiring short to earth, glow plug control module
P0384	Glow plug control module - circuit high	Wiring short to positive, glow plug control module
P0385	Crankshaft position (CKP) sensor B - circuit malfunction	Wiring, CKP sensor, ECM
P0386	Crankshaft position (CKP) sensor B - range/performance problem	Insecure sensor/rotor, air gap, wiring, CKP sensor
P0387	Crankshaft position (CKP) sensor B - low input	Wiring short to earth, CKP sensor, ECM
P0388	Crankshaft position (CKP) sensor B - high input	Wiring short to positive, CKP sensor, ECM
P0389	Crankshaft position (CKP) sensor B - circuit intermittent	Wiring, poor connection, CKP sensor, ECM
P0390	Camshaft position (CMP) sensor B, bank 2 - circuit malfunction	Wiring, poor connection, CMP sensor, ECM
P0391	Camshaft position (CMP) sensor B, bank 2 - circuit range/performance	Wiring, poor connection, CMP sensor
P0392	Camshaft position (CMP) sensor B, bank 2 - circuit low input	Wiring short to earth, CMP sensor, ECM
P0393	Camshaft position (CMP) sensor B, bank 2 - circuit high input	Wiring short to positive, CMP sensor, ECM
P0394	Camshaft position (CMP) sensor B, bank 2 - circuit intermittent	Wiring, poor connection, ECM
P0400	Exhaust gas recirculation (EGR) system - flow malfunction	Hose leak/blockage, basic setting not carried out (if applicable), wiring, EGR valve, EGR solenoid, ECM
P0401	Exhaust gas recirculation (EGR) system - insufficient flow detected	Hose leak/blockage, basic setting not carried out (if applicable), wiring, EGR valve, EGR solenoid, ECM
P0402	Exhaust gas recirculation (EGR) system - excessive flow detected	Hose leak/blockage, basic setting not carried out (if applicable), wiring, EGR valve, EGR solenoid, ECM
P0403	Exhaust gas recirculation (EGR) - circuit malfunction	Wiring, EGR solenoid, ECM
P0404	Exhaust gas recirculation (EGR) system - range/performance problem	Hose leak/blockage, wiring, EGR valve/solenoid
P0405	Exhaust gas recirculation (EGR) valve position sensor A - low input	Wiring short to earth, EGR valve position sensor, ECM
P0406	Exhaust gas recirculation (EGR) valve position sensor A - high input	Wiring short to positive, EGR valve position sensor, ECM
P0407	Exhaust gas recirculation (EGR) valve position sensor B - low input	Wiring short to earth, EGR valve position sensor, ECM

P0408	Exhaust gas recirculation (EGR) valve position sensor B - high input	Wiring short to positive, EGR valve position sensor, ECM
P0409	Exhaust gas recirculation (EGR) sensor A - circuit malfunction	Wiring, poor connection, EGR sensor, ECM
P040A	Exhaust gas recirculation (EGR) temperature sensor A - circuit malfunction	Wiring, EGR temperature sensor, ECM
P040B	Exhaust gas recirculation (EGR) temperature sensor A - circuit range/performance	Wiring, EGR temperature sensor, ECM
P040C	Exhaust gas recirculation (EGR) temperature sensor A - circuit low	Wiring, EGR temperature sensor, ECM
P040D	Exhaust gas recirculation (EGR) temperature sensor A - circuit high	Wiring, EGR temperature sensor, ECM
P040E	Exhaust gas recirculation (EGR) temperature sensor A - circuit intermittent/erratic	Wiring, EGR temperature sensor, ECM
P040F	Exhaust gas recirculation (EGR) temperature sensor A/B - correlation	Wiring, EGR temperature sensor, ECM
P0410	Secondary air injection (AIR) system - malfunction	Wiring, AIR valve, AIR solenoid, ECM
P0411	Secondary air injection (AIR) system - incorrect flow detected	AIR pump, AIR valve, AIR hose(s)
P0412	Secondary air injection (AIR) solenoid A - circuit malfunction	Wiring, AIR solenoid, ECM
P0413	Secondary air injection (AIR) solenoid A - open circuit	Wiring open circuit, AIR solenoid, ECM
P0414	Secondary air injection (AIR) solenoid A - short circuit	Wiring short circuit, AIR solenoid, ECM
P0415	Secondary air injection (AIR) solenoid B - circuit malfunction	Wiring, AIR solenoid, ECM
P0416	Secondary air injection (AIR) solenoid B - open circuit	Wiring open circuit, AIR solenoid, ECM
P0417	Secondary air injection (AIR) solenoid B - short circuit	Wiring short circuit, AIR solenoid, ECM
P0418	Secondary air injection (AIR) pump relay A - circuit malfunction	Wiring, AIR pump relay, ECM
P0419	Secondary air injection (AIR) pump relay B - circuit malfunction	Wiring, AIR pump relay, ECM
P041A	Exhaust gas recirculation (EGR) temperature sensor B - circuit malfunction	Wiring, EGR temperature sensor, ECM
P041B	Exhaust gas recirculation (EGR) temperature sensor B - circuit range/performance	Wiring, EGR temperature sensor, ECM
P041C	Exhaust gas recirculation (EGR) temperature sensor B - circuit low	Wiring, EGR temperature sensor, ECM
P041D	Exhaust gas recirculation (EGR) temperature sensor B - circuit high	Wiring, EGR temperature sensor, ECM
P041E	Exhaust gas recirculation (EGR) temperature sensor B - circuit intermittent/erratic	Wiring, EGR temperature sensor, ECM
P041F	Secondary air injection (AIR) switching valve A - circuit low	Wiring, AIR switching valve, ECM
P0420	Catalytic converter system, bank 1 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0421	Warm up catalytic converter, bank 1 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0422	Main catalytic converter, bank 1 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0423	Heated catalytic converter, bank 1 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0424	Heated catalytic converter, bank 1 - temperature below threshold	Catalytic converter, wiring, HO2S 2

P0425	Catalytic converter temperature sensor, bank 1	Wiring, poor connection, catalytic converter temperature sensor, ECM
P0426	Catalytic converter temperature sensor, bank 1 - range/performance problem	Wiring, poor connection, catalytic converter temperature sensor
P0427	Catalytic converter temperature sensor, bank 1 - low input	Wiring short to earth, catalytic converter temperature sensor, ECM
P0428	Catalytic converter temperature sensor, bank 1 - high input	Wiring short to positive, catalytic converter temperature sensor, ECM
P0429	Catalytic converter heater, bank 1 - circuit malfunction	Wiring, relay, ECM
P042A	Catalytic converter temperature sensor 2, bank 1 - circuit malfunction	Wiring, catalytic converter temperature sensor, ECM
P042B	Catalytic converter temperature sensor 2, bank 1 - circuit range/performance	Wiring, catalytic converter temperature sensor, ECM
P042C	Catalytic converter temperature sensor 2, bank 1 - circuit low	Wiring, catalytic converter temperature sensor, ECM
P042D	Catalytic converter temperature sensor 2, bank 1 - circuit high	Wiring, catalytic converter temperature sensor, ECM
P042E	Exhaust gas recirculation (EGR) valve actuator A - actuator stuck open	Wiring, EGR valve actuator, mechanical fault, ECM
P042F	Exhaust gas recirculation (EGR) valve actuator A - actuator stuck closed	Wiring, EGR valve actuator, mechanical fault, ECM
P0430	Catalytic converter system, bank 2 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0431	Warm up catalytic converter, bank 2 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0432	Main catalytic converter, bank 2 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0433	Heated catalytic converter, bank 2 - efficiency below threshold	Catalytic converter, wiring, HO2S 2
P0434	Heated catalytic converter, bank 2 - temperature below threshold	Catalytic converter, wiring, HO2S 2
P0435	Catalytic converter temperature sensor, bank 2	Wiring, poor connection, catalytic converter temperature sensor, ECM
P0436	Catalytic converter temperature sensor, bank 2 - range/performance problem	Wiring, poor connection, catalytic converter temperature sensor
P0437	Catalytic converter temperature sensor, bank 2 - low input	Wiring short to earth, catalytic converter temperature sensor, ECM
P0438	Catalytic converter temperature sensor, bank 2 - high input	Wiring short to positive, catalytic converter temperature sensor, ECM
P0439	Catalytic converter heater, bank 2 - circuit malfunction	Wiring, relay, ECM
P043A	Catalytic converter temperature sensor 2, bank 2 - circuit malfunction	Wiring, catalytic converter temperature sensor, ECM
P043B	Catalytic converter temperature sensor 2, bank 2 - circuit range/performance	Wiring, catalytic converter temperature sensor, ECM
P043C	Catalytic converter temperature sensor 2, bank 2 - circuit low	Wiring, catalytic converter temperature sensor, ECM
P043D	Catalytic converter temperature sensor 2, bank 2 - circuit high	Wiring, catalytic converter temperature sensor, ECM
P043E	Evaporative emission (EVAP) leak detection reference orifice - low flow	Wiring, EVAP leak detection control module, hose connections, ECM
P043F	Evaporative emission (EVAP) leak detection system reference orifice - excessive flow detected	Wiring, EVAP leak detection control module, hose connections, ECM

P0440	Evaporative emission (EVAP) system - malfunction	Hose connection(s), intake leak, EVAP canister purge valve
P0441	Evaporative emission (EVAP) system - incorrect flow detected	Hose connection(s), intake leak, EVAP canister purge valve
P0442	Evaporative emission (EVAP) system - small leak detected	Hose connection(s), intake leak, EVAP canister, EVAP canister purge valve
P0443	Evaporative emission (EVAP) canister purge valve - circuit malfunction	Wiring, EVAP canister purge valve, ECM
P0444	Evaporative emission (EVAP) canister purge valve - open circuit	Wiring open circuit, EVAP canister purge valve, ECM
P0445	Evaporative emission (EVAP) canister purge valve - short circuit	Wiring short circuit, EVAP canister purge valve, ECM
P0446	Evaporative emission (EVAP) system, vent control - circuit malfunction	Wiring, EVAP canister purge valve, ECM
P0447	Evaporative emission (EVAP) system, vent control - open circuit	Wiring open circuit, EVAP canister purge valve, ECM
P0448	Evaporative emission (EVAP) system, vent control - short circuit	Wiring short circuit, EVAP canister purge valve, ECM
P0449	Evaporative emission (EVAP) system, vent valve - circuit malfunction	Wiring, EVAP canister purge valve, ECM
P044A	Exhaust gas recirculation (EGR) sensor C - circuit malfunction	Wiring, EGR sensor, ECM
P044B	Exhaust gas recirculation (EGR) sensor C - range/performance problem	Wiring, EGR sensor, ECM
P044C	Exhaust gas recirculation (EGR) valve position sensor C - circuit low	Wiring, EGR valve position sensor, ECM
P044D	Exhaust gas recirculation (EGR) sensor C - circuit high	Wiring, EGR sensor, ECM
P044E	Exhaust gas recirculation (EGR) sensor C - circuit intermittent/erratic	Wiring, EGR sensor, ECM
P044F	Secondary air injection (AIR) switching valve A - circuit high	Wiring, AIR switching valve, ECM
P0450	Evaporative emission (EVAP) pressure sensor - circuit malfunction	Wiring, EVAP pressure sensor, ECM
P0451	Evaporative emission (EVAP) pressure sensor - range/performance problem	EVAP pressure sensor
P0452	Evaporative emission (EVAP) pressure sensor - low input	Wiring short to earth, EVAP pressure sensor, ECM
P0453	Evaporative emission (EVAP) pressure sensor - high input	Wiring short to positive, EVAP pressure sensor, ECM
P0454	Evaporative emission (EVAP) pressure sensor - circuit intermittent	Wiring, poor connection, EVAP pressure sensor, ECM
P0455	Evaporative emission (EVAP) system - large leak detected	Hose connection(s), intake leak, EVAP canister, EVAP canister purge valve
P0456	Evaporative emission (EVAP) system - very small leak detected	Mechanical fault, hose connection(s), EVAP pressure sensor
P0457	Evaporative emission (EVAP) system - leak detected (filler cap loose/off)	Mechanical fault, hose connection(s), EVAP pressure sensor
P0458	Evaporative emission (EVAP) system, EVAP valve - circuit low	Wiring short to earth, EVAP valve
P0459	Evaporative emission (EVAP) system, EVAP valve - circuit high	Wiring short to positive, EVAP valve
P045A	Exhaust gas recirculation (EGR) valve actuator B - circuit malfunction	Wiring, EGR valve actuator, ECM

P045B	Exhaust gas recirculation (EGR) valve B - circuit range/performance	Wiring, EGR valve, ECM
P045C	Exhaust gas recirculation (EGR) valve actuator B - circuit low	Wiring, EGR valve actuator, ECM
P045D	Exhaust gas recirculation (EGR) valve actuator B - circuit high	Wiring, EGR valve actuator, ECM
P045E	Exhaust gas recirculation (EGR) valve actuator B - actuator stuck open	Wiring, EGR valve actuator, mechanical fault, ECM
P045F	Exhaust gas recirculation (EGR) valve B - valve stuck closed	Wiring, EGR valve, mechanical fault, ECM
P0460	Fuel tank level sensor - circuit malfunction	Wiring, fuel tank level sensor, ECM
P0461	Fuel tank level sensor - range/performance problem	Wiring, fuel tank level sensor
P0462	Fuel tank level sensor - low input	Wiring short to earth, fuel tank level sensor, ECM
P0463	Fuel tank level sensor - high input	Wiring short to positive, fuel tank level sensor, ECM
P0464	Fuel tank level sensor - circuit intermittent	Wiring, poor connection, fuel tank level sensor, ECM
P0465	Evaporative emission (EVAP) canister purge flow sensor - circuit malfunction	Wiring, EVAP canister purge flow sensor, ECM
P0466	Evaporative emission (EVAP) canister purge flow sensor - range/performance problem	EVAP canister purge flow sensor
P0467	Evaporative emission (EVAP) canister purge flow sensor - low input	Wiring short to earth, EVAP canister purge flow sensor, ECM
P0468	Evaporative emission (EVAP) canister purge flow sensor - high input	Wiring short to positive, EVAP canister purge flow sensor, ECM
P0469	Evaporative emission (EVAP) canister purge flow sensor - circuit intermittent	Wiring, poor connection, EVAP canister purge flow sensor, ECM
P046A	Catalytic converter temperature sensor 1/2, bank 1 - correlation	Wiring, catalytic converter temperature sensor, ECM
P046B	Catalytic converter temperature sensor 1/2, bank 2 - correlation	Wiring, catalytic converter temperature sensor, ECM
P046C	Exhaust gas recirculation (EGR) valve position sensor A - range/performance problem	Wiring, EGR valve position sensor, ECM
P046D	Exhaust gas recirculation (EGR) sensor A - intermittent/erratic	Wiring, EGR sensor, ECM
P046E	Exhaust gas recirculation (EGR) sensor B - range/performance problem	Wiring, EGR sensor, ECM
P046F	Exhaust gas recirculation (EGR) sensor B - intermittent/erratic	Wiring, EGR sensor, ECM
P0470	Exhaust gas pressure sensor - circuit malfunction	Wiring, exhaust gas pressure sensor, ECM
P0471	Exhaust gas pressure sensor - range/performance problem	Exhaust gas pressure sensor
P0472	Exhaust gas pressure sensor - low input	Wiring short to earth, exhaust gas pressure sensor, ECM
P0473	Exhaust gas pressure sensor - high input	Wiring short to positive, exhaust gas pressure sensor, ECM
P0474	Exhaust gas pressure sensor - circuit intermittent	Wiring, poor connection, exhaust gas pressure sensor, ECM
P0475	Exhaust gas pressure control valve - circuit malfunction	Wiring, exhaust gas pressure control valve, ECM
P0476	Exhaust gas pressure control valve - range/performance problem	Exhaust gas pressure control valve
P0477	Exhaust gas pressure control valve - low input	Wiring short to earth, exhaust gas pressure control valve, ECM
P0478	Exhaust gas pressure control valve - high input	Wiring short to positive, exhaust gas pressure control valve, ECM

P0479	Exhaust gas pressure control valve - circuit intermittent	Wiring, poor connection, exhaust gas pressure control valve, ECM
P047A	Exhaust gas pressure sensor B - circuit	Wiring, exhaust gas pressure sensor, ECM
P047B	Exhaust gas pressure sensor B - circuit range/performance	Wiring, exhaust gas pressure sensor, ECM
P047C	Exhaust gas pressure sensor B - circuit low	Wiring, exhaust gas pressure sensor, ECM
P047D	Exhaust gas pressure sensor B - circuit high	Wiring, exhaust gas pressure sensor, ECM
P047E	Exhaust gas pressure sensor B - circuit intermittent/erratic	Wiring, exhaust gas pressure sensor, ECM
P047F	Exhaust gas pressure control valve - valve stuck open	Wiring, exhaust gas pressure control valve, mechanical fault, ECM
P0480	Engine coolant blower motor 1 - circuit malfunction	Wiring, engine coolant blower motor, ECM
P0481	Engine coolant blower motor 2 - circuit malfunction	Wiring, engine coolant blower motor, ECM
P0482	Engine coolant blower motor 3 - circuit malfunction	Wiring, engine coolant blower motor, ECM
P0483	Engine coolant blower motor, rationality check - malfunction	Wiring, engine coolant blower motor, ECM
P0484	Engine coolant blower motor - circuit over current	Wiring, engine coolant blower motor, ECM
P0485	Engine coolant blower motor, power/earth - circuit malfunction	Wiring, engine coolant blower motor, ECM
P0486	Exhaust gas recirculation (EGR) valve position sensor B - circuit malfunction	Wiring, poor connection, EGR valve position sensor, ECM
P0487	Exhaust gas recirculation (EGR) system, throttle position control - circuit malfunction	Wiring, poor connection, ECM
P0488	Exhaust gas recirculation (EGR) system, throttle position control - range/performance problem	Wiring, poor connection, ECM
P0489	Exhaust gas recirculation (EGR) system - circuit low	Wiring short to earth, EGR valve
P048A	Exhaust gas control actuator - actuator stuck closed	Wiring, exhaust gas control actuator, mechanical fault, ECM
P048B	Exhaust gas control actuator position sensor/switch - circuit malfunction	Wiring, exhaust gas control actuator position sensor, ECM
P048C	Exhaust gas control actuator position sensor/switch - circuit range/performance	Wiring, exhaust gas control actuator position sensor, ECM
P048D	Exhaust gas pressure control valve position sensor/switch - circuit low	Wiring, exhaust gas pressure control valve position sensor/switch, ECM
P048E	Exhaust gas pressure control valve position sensor/switch - circuit high	Wiring, exhaust gas pressure control valve position sensor, ECM
P048F	Exhaust gas control actuator position sensor/switch - circuit intermittent/erratic	Wiring, exhaust gas control actuator position sensor/switch, ECM
P0490	Exhaust gas recirculation (EGR) system - circuit high	Wiring short to positive, EGR valve
P0491	Secondary air injection (AIR) system, bank 1 - malfunction	Wiring, AIR solenoid, hose connections, mechanical fault
P0492	Secondary air injection (AIR) system, bank 2 - malfunction	Wiring, AIR solenoid, hose connections, mechanical fault
P0493	Engine coolant blower motor over-speed (clutch locked)	Blower motor clutch, mechanical fault
P0494	Engine coolant blower motor speed - low	Wiring, relay, blower motor, mechanical fault
P0495	Engine coolant blower motor speed - high	Wiring, relay, blower motor, mechanical fault
P0496	Evaporative emission (EVAP) system - high purge flow	Wiring, EVAP valve, mechanical fault
P0497	Evaporative emission (EVAP) system - low purge flow	Wiring, EVAP valve, hoses blocked, mechanical fault
P0498	Evaporative emission (EVAP) system, vent control - circuit low	Wiring short to earth, EVAP valve
P0499	Evaporative emission (EVAP) system, vent control - circuit high	Wiring short to positive, EVAP valve

P049A	Exhaust gas recirculation (EGR) valve actuator B - flow malfunction	Wiring, EGR valve actuator, ECM
P049B	Exhaust gas recirculation (EGR) B - insufficient flow detected	Wiring, EGR valve actuator, exhaust blockage, MAF sensor, MAP sensor, VAF sensor, ECM
P049C	Exhaust gas recirculation (EGR) valve actuator B - excessive flow detected	Wiring, EGR valve actuator, ECM
P049D	Exhaust gas recirculation (EGR) valve actuator A - learning limit exceeded	Wiring, EGR valve actuator, ECM
P049E	Exhaust gas recirculation (EGR) valve B - learning limit exceeded	Wiring, EGR valve, ECM
P0500	Vehicle speed sensor (VSS) - circuit malfunction	Wiring, VSS, ECM
P0501	Vehicle speed sensor (VSS) - range/performance problem	Wiring, speedometer, VSS, CAN data bus
P0502	Vehicle speed sensor (VSS) - low input	Wiring short to earth, VSS, ECM
P0503	Vehicle speed sensor (VSS) - intermittent/erratic/high input	Wiring, poor connection, other connected system, instrument panel, VSS
P0504	Brake pedal position (BPP) switch A/B - correlation	Wiring, mechanical fault
P0505	Idle speed control (ISC) system - malfunction	Wiring, ISC actuator/IAC valve, throttle motor, throttle valve tight/sticking, ECM
P0506	Idle speed control (ISC) system - rpm lower than expected	Wiring, ISC actuator/IAC valve, throttle motor, throttle valve tight/sticking, ECM
P0507	Idle speed control (ISC) system - rpm higher than expected	Wiring, ISC actuator/IAC valve, throttle motor, throttle valve tight/sticking, ECM
P0508	Idle air control (IAC) - circuit low	Wiring short to earth, IAC valve, ECM
P0509	Idle air control (IAC) - circuit high	Wiring short to positive, IAC valve, ECM
P050A	Idle air control (IAC) valve, cold start - performance problem	Wiring, IAC valve, ECM
P050B	Ignition timing, cold start - performance problem	Wiring, CKP sensor, CMP sensor, mechanical fault, ECM
P050C	Engine coolant temperature (ECT) sensor, cold start - performance problem	Wiring, ECT sensor, ECM
P050D	Cold start rough idle	Wiring, IAC valve, intake manifold air leak, ECM
P050E	Exhaust temperature, cold start - out of range	Wiring, exhaust gas temperature sensor, ECM
P0510	Closed throttle position (CTP) switch - circuit malfunction	Wiring, CTP switch, ECM
P0511	Idle air control (IAC) - circuit malfunction	Wiring, poor connection, IAC valve, ECM
P0512	Starter request circuit - malfunction	Wiring, immobilizer system, relay
P0513	Incorrect immobilizer key	Immobilizer system
P0514	Battery temperature sensor - circuit range/performance	Wiring, poor connection, battery temperature sensor
P0515	Battery temperature sensor - circuit malfunction	Wiring, poor connection, battery temperature sensor
P0516	Battery temperature sensor - circuit low	Wiring short to earth, battery temperature sensor, ECM
P0517	Battery temperature sensor - circuit high	Wiring short to positive, battery temperature sensor, ECM
P0518	Idle air control (IAC) - circuit intermittent	Wiring, poor connection, IAC valve, ECM
P0519	Idle air control (IAC) - circuit performance	Wiring, poor connection, IAC valve, ECM
P051A	Crankcase pressure sensor - circuit malfunction	Wiring, crankcase pressure sensor, ECM
P051B	Crankcase pressure sensor - circuit range/performance	Wiring, crankcase pressure sensor, ECM
P051C	Crankcase pressure sensor - circuit low	Wiring, crankcase pressure sensor, ECM
P051D	Crankcase pressure sensor - circuit high	Wiring, crankcase pressure sensor, ECM
P051E	Crankcase pressure sensor - circuit intermittent	Wiring, crankcase pressure sensor, ECM
P0520	Engine oil pressure sensor/switch - circuit malfunction	Wiring, engine oil pressure sensor/switch, ECM
P0521	Engine oil pressure sensor/switch - range/performance problem	Engine oil pressure sensor/switch

P0522	Engine oil pressure sensor/switch - low voltage	Wiring short to earth, engine oil pressure sensor/switch, ECM
P0523	Engine oil pressure sensor/switch - high voltage	Wiring short to positive, engine oil pressure sensor/switch, ECM
P0524	Engine oil pressure too low	Mechanical fault
P0525	Cruise control system, actuator control - circuit range/performance	Wiring, poor connection, cruise control actuator
P0526	Engine coolant blower motor speed sensor - circuit malfunction	Wiring, poor connection, blower motor speed sensor, ECM
P0527	Engine coolant blower motor speed sensor - circuit range/performance	Wiring, poor connection, blower motor speed sensor
P0528	Engine coolant blower motor speed sensor - no signal	Wiring, poor connection, blower motor speed sensor, ECM
P0529	Engine coolant blower motor speed sensor - circuit intermittent	Wiring, poor connection, ECM
P052A	Camshaft timing - cold start, bank 1 - timing over-advanced	Wiring, CKP sensor, CMP sensor, camshaft position (CMP) actuator, mechanical fault, ECM
P052B	Camshaft timing - cold start, bank 1 - timing over-retarded	Wiring, CKP sensor, CMP sensor, camshaft position (CMP) actuator, mechanical fault, ECM
P052C	Camshaft timing - cold start, bank 2 - timing over-advanced	Wiring, CKP sensor, CMP sensor, camshaft position (CMP) actuator, mechanical fault, ECM
P052D	Camshaft timing - cold start, bank 2 - timing over-retarded	Wiring, CKP sensor, CMP sensor, camshaft position (CMP) actuator, mechanical fault, ECM
P0530	AC refrigerant pressure sensor - circuit malfunction	Wiring, AC refrigerant pressure sensor, ECM
P0531	AC refrigerant pressure sensor - range/performance problem	AC refrigerant pressure sensor
P0532	AC refrigerant pressure sensor - low input	AC refrigerant pressure too low (incorrectly charged), wiring, AC refrigerant pressure sensor, ECM
P0533	AC refrigerant pressure sensor - high input	AC refrigerant pressure too high (cooling fault/incorrectly charged), wiring, AC refrigerant pressure sensor, ECM
P0534	AC refrigerant charge loss	AC leak, wiring, AC refrigerant pressure sensor
P0535	AC evaporator temperature sensor - circuit malfunction	Wiring, poor connection, AC evaporator temperature sensor, ECM
P0536	AC evaporator temperature sensor - circuit range/performance	Wiring, poor connection, AC evaporator temperature sensor, ECM
P0537	AC evaporator temperature sensor - circuit low	Wiring short to earth, AC evaporator temperature sensor, ECM
P0538	AC evaporator temperature sensor - circuit high	Wiring short to positive, AC evaporator temperature sensor, ECM
P0539	AC evaporator temperature sensor - circuit intermittent	Wiring, poor connection, AC evaporator temperature sensor, ECM
P053A	Crankcase breather heater - open circuit	Wiring, crankcase breather heater, ECM
P053B	Crankcase breather heater - circuit low	Wiring, crankcase breather heater, ECM
P053C	Crankcase breather heater - circuit high	Wiring, crankcase breather heater, ECM
P0540	Intake air heater A - circuit malfunction	Wiring, relay, intake air heater
P0541	Intake air heater A - circuit low	Wiring short to earth, intake air heater
P0542	Intake air heater A - circuit high	Wiring short to positive, intake air heater
P0543	Intake air heater A - open circuit	Wiring, intake air heater

P0544	Exhaust gas temperature (EGT) sensor 1, bank 1 - circuit malfunction	Wiring, EGT sensor, ECM
P0545	Exhaust gas temperature (EGT) sensor 1, bank 1 - low input	Wiring short to earth, EGT sensor, ECM
P0546	Exhaust gas temperature (EGT) sensor 1, bank 1 - high input	Wiring short to positive, EGT sensor, ECM
P0547	Exhaust gas temperature (EGT) sensor 1, bank 2 - circuit malfunction	Wiring, poor connection, EGT sensor, ECM
P0548	Exhaust gas temperature (EGT) sensor 1, bank 2 - circuit low	Wiring short to earth, EGT sensor, ECM
P0549	Exhaust gas temperature (EGT) sensor 1, bank 2 - circuit high	Wiring short to positive, EGT sensor, ECM
P0550	Power steering pressure (PSP) sensor/switch - circuit malfunction	Wiring, PSP sensor/switch, ECM
P0551	Power steering pressure (PSP) sensor/switch - range/performance problem	PAS system, PSP sensor/switch
P0552	Power steering pressure (PSP) sensor/switch - low input	Wiring short to earth, PSP sensor/switch, ECM
P0553	Power steering pressure (PSP) sensor/switch - high input	Wiring short to positive, PSP sensor/switch, ECM
P0554	Power steering pressure (PSP) sensor/switch - circuit intermittent	Wiring, poor connection, PSP sensor/switch, ECM
P0555	Brake booster pressure sensor - circuit malfunction	Wiring, poor connection, brake booster pressure sensor, ECM
P0556	Brake booster pressure sensor - circuit range/performance	Wiring, poor connection, brake booster pressure sensor, ECM
P0557	Brake booster pressure sensor - circuit low input	Wiring short to earth, brake booster pressure sensor, ECM
P0558	Brake booster pressure sensor - circuit high input	Wiring short to positive, brake booster pressure sensor, ECM
P0559	Brake booster pressure sensor - circuit intermittent	Wiring, poor connection, brake booster pressure sensor, ECM
P0560	System voltage - malfunction	Wiring, poor connection, battery, alternator
P0561	System voltage - unstable	Wiring, poor connection, battery, alternator
P0562	System voltage - low	Wiring, poor connection, battery, alternator
P0563	System voltage - high	Alternator
P0564	Cruise control system, multi-function switch input A - circuit malfunction	Wiring, poor connection, multi-function switch, mechanical fault
P0565	Cruise control master switch, ON signal - malfunction	Wiring, cruise control master switch, ECM
P0566	Cruise control master switch, OFF signal - malfunction	Wiring, cruise control master switch, ECM
P0567	Cruise control selector switch, RESUME signal - malfunction	Wiring, cruise control selector switch, ECM
P0568	Cruise control master switch, SET signal - malfunction	Wiring, cruise control master switch, ECM
P0569	Cruise control selector switch, COAST signal - malfunction	Wiring, cruise control selector switch, ECM
P056A	Cruise control increase distance signal malfunction	Wiring, cruise control distance range control module, ECM
P056B	Cruise control decrease distance signal malfunction	Wiring, cruise control distance range control module, ECM
P0570	Cruise control system, APP sensor signal - malfunction	Wiring, APP sensor, ECM
P0571	Cruise control/brake switch A - circuit malfunction	Wiring, cruise control/brake switch, ECM
P0572	Cruise control/brake switch A - circuit low	Wiring short to earth, cruise control/brake switch, ECM
P0573	Cruise control/brake switch A - circuit high	Wiring short to positive, cruise control/brake switch, ECM
P0574	Cruise control system - vehicle speed too high	Mechanical fault
P0575	Cruise control system - input circuit malfunction	Wiring, poor connection, mechanical fault, ECM
P0576	Cruise control system - input circuit low	Wiring short to earth
P0577	Cruise control system - input circuit high	Wiring short to positive

P0578	Cruise control system, multi-function switch input A - circuit stuck	Wiring, poor connection, multi-function switch, mechanical fault
P0579	Cruise control system, multi-function switch input A - circuit range/performance	Wiring, poor connection, multi-function switch, mechanical fault
P0580	Cruise control system, multi-function switch input A - circuit low	Wiring short to earth, multi-function switch, mechanical fault
P0581	Cruise control system, multi-function switch input A - circuit high	Wiring short to positive, multi-function switch, mechanical fault
P0582	Cruise control system, vacuum control - open circuit	Wiring, vacuum control solenoid
P0583	Cruise control system, vacuum control - circuit low	Wiring short to earth, vacuum control solenoid
P0584	Cruise control system, vacuum control - circuit high	Wiring short to positive, vacuum control solenoid
P0585	Cruise control system, multi-function switch input A/B - correlation	Mechanical fault
P0586	Cruise control system, vent control - open circuit	Wiring, vent control solenoid
P0587	Cruise control system, vent control - circuit low	Wiring short to earth, vent control solenoid
P0588	Cruise control system, vent control - circuit high	Wiring short to positive, vent control solenoid
P0589	Cruise control system, multi-function switch input B - circuit malfunction	Wiring, poor connection, multi-function switch, mechanical fault
P0590	Cruise control system, multi-function switch input B - circuit stuck	Wiring, poor connection, multi-function switch, mechanical fault
P0591	Cruise control system, multi-function switch input B - circuit range/performance	Wiring, poor connection, multi-function switch, mechanical fault
P0592	Cruise control system, multi-function switch input B - circuit low	Wiring short to earth, multi-function switch, mechanical fault
P0593	Cruise control system, multi-function switch input B - circuit high	Wiring short to positive, multi-function switch, mechanical fault
P0594	Cruise control system, actuator control - open circuit	Wiring, actuator
P0595	Cruise control system, actuator control - circuit low	Wiring short to earth, actuator
P0596	Cruise control system, actuator control - circuit high	Wiring short to positive, actuator
P0597	Thermostat heater control system - open circuit	Wiring, relay, thermostat heater
P0598	Thermostat heater control system - circuit low	Wiring short to earth, relay, thermostat heater
P0599	Thermostat heater control system - circuit high	Wiring short to positive, relay, thermostat heater
P0600	CAN data bus - malfunction	Wiring, connected system, ECM
P0601	Engine control module (ECM) - memory check sum error	ECM
P0602	Engine control module (ECM) - programming error	ECM
P0603	Engine control module (ECM) - KAM error	ECM
P0604	Engine control module (ECM) - RAM error	ECM
P0605	Engine control module (ECM) - ROM error	ECM
P0606	Engine control module (ECM)/powertrain control module (PCM) - processor fault	ECM/PCM
P0607	Engine control module (ECM) - performance problem	ECM
P0608	Engine control module (ECM), VSS output A - malfunction	ECM
P0609	Engine control module (ECM), VSS output B - malfunction	ECM
P060A	Engine control module (ECM), monitoring processor performance problem	ECM
P060B	Engine control module (ECM), A/D processing performance	ECM
P060C	Engine control module (ECM), main processor - performance problem	ECM

P060D	Engine control module (ECM), accelerator pedal position - performance problem	ECM
P060E	Engine control module (ECM), throttle position (TP) - performance problem	ECM
P060F	Engine control module (ECM), engine coolant temperature (ECT) - performance problem	ECM
P0610	Engine control module (ECM) - vehicle options error	ECM
P0611	Fuel injector control module - performance problem	Fuel injector control module
P0612	Fuel injector control module - control relay circuit	Wiring, relay, fuel injector control module
P0613	Transmission control module (TCM) - processor error	TCM
P0614	Engine control module (ECM)/transmission control module (TCM) - mismatch	ECM/TCM
P0615	Starter motor relay - circuit malfunction	Wiring, poor connection, starter motor relay, ECM
P0616	Starter motor relay - circuit low	Wiring short to earth, starter motor relay, ECM
P0617	Starter motor relay - circuit high	Wiring short to positive, starter motor relay, ECM
P0618	Alternative fuel control module - KAM error	Alternative fuel control module
P0619	Alternative fuel control module - RAM/ROM error	Alternative fuel control module
P061A	Engine control module (ECM), engine torque - performance problem	ECM
P061B	Engine control module (ECM), torque calculation - performance problem	ECM
P061C	Engine control module (ECM), engine rpm - performance problem	ECM
P061D	Engine control module (ECM), engine air mass - performance problem	ECM
P061E	Engine control module (ECM), brake pedal position (BPP) switch/sensor - performance problem	ECM
P061F	Engine control module (ECM), throttle actuator controller - performance problem	ECM
P0620	Alternator, control - circuit malfunction	Wiring, alternator, battery, ECM
P0621	Alternator warning lamp - circuit malfunction	Wiring, alternator warning lamp, ECM
P0622	Alternator field control - circuit malfunction	Wiring, alternator, battery, ECM
P0623	Alternator warning lamp, control - circuit malfunction	Wiring, poor connection, bulb, ECM
P0624	Filler cap warning lamp, control - circuit malfunction	Wiring, poor connection, bulb, ECM
P0625	Alternator field terminal - circuit low	Wiring short to earth, alternator
P0626	Alternator field terminal - circuit high	Wiring short to positive, alternator
P0627	Fuel pump (FP) control - open circuit	Wiring, relay, fuel pump (FP)
P0628	Fuel pump (FP) control - circuit low	Wiring short to earth, relay, fuel pump (FP)
P0629	Fuel pump (FP) control - circuit high	Wiring short to positive, relay, fuel pump (FP)
P062A	Fuel pump (FP) A - control circuit range/performance	Wiring, FP, ECM
P062B	Engine control module (ECM), fuel injector control - performance problem	ECM
P062C	Engine control module (ECM), vehicle speed - performance problem	ECM
P062D	Injector control module, bank 1 - performance problem	Wiring, injector control module, ECM
P062E	Injector control module, bank 2 - performance problem	Wiring, injector control module, ECM
P062F	Engine control module (ECM), EEPROM error	ECM
P0630	VIN not programmed or mismatch - ECM/PCM	ECM/PCM

P0631	VIN not programmed or mismatch - TCM	TCM
P0632	Odometer not programmed - ECM/PCM	Programming, ECM/PCM
P0633	Immobilizer key not programmed - ECM/PCM	Programming, ECM/PCM
P0634	PCM/ECM/TCM - internal temperature too high	Mechanical fault, PCM/ECM/TCM
P0635	Power steering control - circuit malfunction	Wiring, poor connection, PSP sensor/switch, ECM
P0636	Power steering control - circuit low	Wiring short to earth, PSP sensor/switch, ECM
P0637	Power steering control - circuit high	Wiring short to positive, PSP sensor/switch, ECM
P0638	Throttle actuator control (TAC), bank 1 - range/performance problem	Basic setting not carried out (if applicable), ISC actuator/throttle motor, APP sensor
P0639	Throttle actuator control (TAC), bank 2 - range/performance problem	Wiring, throttle control unit
P063A	Generator voltage monitoring - circuit malfunction	Wiring, generator, ECM
P063B	Generator voltage monitoring - circuit range/performance	Wiring, generator, ECM
P063C	Generator voltage monitoring - circuit low	Wiring, generator, ECM
P063D	Generator voltage monitoring - circuit high	Wiring, generator, ECM
P063E	Throttle control unit, automatic configuration - input not present	Wiring, throttle control unit, ECM
P063F	Engine coolant temperature (ECT) sensor, automatic configuration - input not present	Wiring, ECT sensor, ECM
P0640	Intake air heater control - circuit malfunction	Wiring, relay, intake air heater
P0641	Sensor reference voltage A - open circuit	Wiring
P0642	Sensor reference voltage A - circuit low	Wiring
P0643	Sensor reference voltage A - circuit high	Wiring short to positive
P0644	Driver display, serial communication - circuit malfunction	Wiring, CAN data bus, ECM
P0645	AC compressor clutch relay - circuit malfunction	Wiring, AC compressor clutch relay
P0646	AC compressor clutch relay - circuit low	Wiring short to earth, AC compressor clutch relay
P0647	AC compressor clutch relay - circuit high	Wiring short to positive, AC compressor clutch relay
P0648	Immobilizer warning lamp, control - circuit malfunction	Wiring, poor connection, bulb, ECM
P0649	Cruise control indicator lamp, control - circuit malfunction	Wiring, poor connection, bulb, ECM
P064A	Fuel pump (FP) control module - malfunction	Wiring, FP, ECM
P064B	Power take-off (PTO) control module - malfunction	Wiring, PTO control module, ECM
P064C	Glow plug control module - malfunction	Wiring, glow plug, ECM
P064D	Engine control module (ECM), HO2S processor, bank 1 - performance problem	ECM
P064E	Engine control module (ECM), O2S processor, bank 2 - performance problem	ECM
P064F	Unauthorized software - non original equipment calibration detected	Unauthorized software
P0650	Malfunction indicator lamp (MIL), control - circuit malfunction	Wiring, MIL, ECM
P0651	Sensor reference voltage B - open circuit	Wiring
P0652	Sensor reference voltage B - circuit low	Wiring short to earth
P0653	Sensor reference voltage B - circuit high	Wiring short to positive
P0654	Engine rpm, output - circuit malfunction	Wiring, ECM
P0655	Engine hot lamp output - circuit malfunction	Wiring, engine hot lamp, ECM
P0656	Fuel level output - circuit malfunction	Wiring, ECM
P0657	Actuator supply voltage - open circuit	Wiring
P0658	Actuator supply voltage - circuit low	Wiring short to earth, actuator

P0659	Actuator supply voltage - circuit high	Wiring short to positive, actuator
P065A	Generator - performance problem	Wiring, generator, ECM
P065B	Generator - control circuit range/performance	Wiring, generator, ECM
P065C	Generator - mechanical fault/performance problem	Generator
P065D	Reductant system malfunction lamp - circuit malfunction	Wiring, reductant system malfunction lamp, ECM
P065E	Intake manifold air control actuator, bank 1 - performance problem	Wiring, intake manifold air control actuator, ECM
P065F	Intake manifold air control actuator bank 2 - performance problem	Wiring, intake manifold air control actuator, ECM
P0660	Intake manifold air control solenoid, bank 1 - open circuit	Wiring, intake manifold air control solenoid
P0661	Intake manifold air control solenoid, bank 1 - circuit low	Wiring short to earth, intake manifold air control solenoid
P0662	Intake manifold air control solenoid, bank 1 - circuit high	Wiring short to positive, intake manifold air control solenoid
P0663	Intake manifold air control solenoid, bank 2 - open circuit	Wiring, intake manifold air control solenoid
P0664	Intake manifold air control solenoid, bank 2 - circuit low	Wiring short to earth, intake manifold air control solenoid
P0665	Intake manifold air control solenoid, bank 2 - circuit high	Wiring short to positive, intake manifold
P0666	ECM/PCM/TCM internal temperature sensor - circuit malfunction	Poor connection, internal temperature sensor, ECM/PCM/TCM
P0667	ECM/PCM/TCM internal temperature sensor - range/performance problem	Poor connection, internal temperature sensor, ECM/PCM/TCM
P0668	ECM/PCM/TCM internal temperature sensor - circuit low	Internal short to earth, internal temperature sensor, ECM/PCM/TCM
P0669	ECM/PCM/TCM internal temperature sensor - circuit high	Internal short to positive, internal temperature sensor, ECM/PCM/TCM
P066A	Glow plug, cylinder 1 - circuit low	Wiring, glow plug, ECM
P066B	Glow plug, cylinder 1 - circuit high	Wiring, glow plug, ECM
P066C	Glow plug, cylinder 2 - circuit low	Wiring, glow plug, ECM
P066D	Glow plug, cylinder 2 - circuit high	Wiring, glow plug, ECM
P066E	Glow plug, cylinder 3 - circuit low	Wiring, glow plug, ECM
P066F	Glow plug, cylinder 3 - circuit high	Wiring, glow plug, ECM
P0670	Glow plug control module - circuit malfunction	Wiring, poor connection, glow plug control module, glow plug, ECM
P0671	Glow plug, cylinder 1 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0672	Glow plug, cylinder 2 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0673	Glow plug, cylinder 3 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0674	Glow plug, cylinder 4 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0675	Glow plug, cylinder 5 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0676	Glow plug, cylinder 6 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0677	Glow plug, cylinder 7 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0678	Glow plug, cylinder 8 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM

P0679	Glow plug, cylinder 9 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P067A	Glow plug, cylinder 4 - circuit low	Wiring, glow plug, ECM
P067B	Glow plug, cylinder 4 - circuit high	Wiring, glow plug, ECM
P067C	Glow plug, cylinder 5 - circuit low	Wiring, glow plug, ECM
P067D	Glow plug, cylinder 5 - circuit high	Wiring, glow plug, ECM
P067E	Glow plug, cylinder 6 - circuit low	Wiring, glow plug, ECM
P067F	Glow plug, cylinder 6 - circuit high	Wiring, glow plug, ECM
P0680	Glow plug, cylinder 10 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0681	Glow plug, cylinder 11 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0682	Glow plug, cylinder 12 - circuit malfunction	Wiring, poor connection, relay, glow plug control module, glow plug, ECM
P0683	Glow plug control module to ECM/PCM communication error	Wiring, poor connection, glow plug control module, ECM/PCM
P0684	Glow plug control module to ECM/PCM communication error - range/performance problem	Wiring, poor connection, glow plug control module, ECM/PCM
P0685	Engine control (EC) relay - open circuit	Wiring, EC relay
P0686	Engine control (EC) relay - circuit low	Wiring short to earth, EC relay, ECM
P0687	Engine control (EC) relay - short to earth	Wiring short to earth, EC relay, ECM
P0688	Engine control (EC) relay - short to positive	Wiring short to positive, EC relay, ECM
P0689	Engine control (EC) relay - sense circuit low	Wiring short to earth, EC relay, ECM
P068A	Engine control (EC) relay - shut-off early	Wiring, EC relay, ECM
P068B	Engine control (EC) relay - shut-off delay	Wiring, EC relay, ECM
P068C	Glow plug, cylinder 7 - circuit low	Wiring, glow plug, ECM
P068D	Glow plug, cylinder 7 - circuit high	Wiring, glow plug, ECM
P068E	Glow plug, cylinder 8 - circuit low	Wiring, glow plug, ECM
P068F	Glow plug, cylinder 8 - circuit high	Wiring, glow plug, ECM
P0690	Engine control (EC) relay - sense circuit high	Wiring short to positive, EC relay, ECM
P0691	Engine coolant blower motor 1 - circuit low	Wiring short to earth, engine coolant blower motor, ECM
P0692	Engine coolant blower motor 1 - circuit high	Wiring short to positive, engine coolant blower motor, ECM
P0693	Engine coolant blower motor 2 - circuit low	Wiring short to earth, engine coolant blower motor, ECM
P0694	Engine coolant blower motor 2 - circuit high	Wiring short to positive, engine coolant blower motor, ECM
P0695	Engine coolant blower motor 3 - circuit low	Wiring short to earth, engine coolant blower motor
P0696	Engine coolant blower motor 3 - circuit high	Wiring short to positive, engine coolant blower motor
P0697	Sensor reference voltage C - open circuit	Wiring
P0698	Sensor reference voltage C - circuit low	Wiring short to earth
P0699	Sensor reference voltage C - circuit high	Wiring short to positive
P069A	Glow plug, cylinder 9 - circuit low	Wiring, glow plug, ECM
P069B	Glow plug, cylinder 9 - circuit high	Wiring, glow plug, ECM
P069C	Glow plug, cylinder 10 - circuit low	Wiring, glow plug, ECM
P069D	Glow plug, cylinder 10 - circuit high	Wiring, glow plug, ECM
P069E	Fuel pump (FP) control module - MIL activation requested	Wiring, FP, FP control module, ECM
P069F	Throttle control system warning lamp - circuit malfunction	Wiring, warning lamp, ECM

P06A0	Variable AC compressor control - circuit malfunction	Wiring, AC control module, AC compressor variable displacement solenoid, ECM
P06A1	Variable AC compressor control - circuit low	Wiring, AC control module, AC compressor variable displacement solenoid, ECM
P06A2	Variable AC compressor control - circuit high	Wiring, AC control module, AC compressor variable displacement solenoid, ECM
P06A3	Sensor reference voltage D - open circuit	Wiring, ECM
P06A4	Sensor reference voltage D - circuit low	Wiring, sensor short circuit, ECM
P06A5	Sensor reference voltage D - circuit high	Wiring, ECM
P06A6	Sensor reference voltage A - circuit range/performance	Wiring, ECM
P06A7	Sensor reference voltage B - circuit range/performance	Wiring, ECM
P06A8	Sensor reference voltage C - circuit range/performance	Wiring, ECM
P06A9	Sensor reference voltage D - circuit range/performance	Wiring, ECM
P0700	Transmission control system, MIL request - circuit malfunction	Wiring, ECM/PCM/TCM
P0701	Transmission control system - range/performance problem	Wiring, ECM/PCM/TCM
P0702	Transmission control system - electrical	Wiring, ECM/PCM/TCM
P0703	Brake switch B - circuit malfunction	Wiring, brake switch, ECM/PCM/TCM
P0704	Clutch pedal position (CPP) switch - circuit malfunction	Wiring, CPP switch, ECM/PCM/TCM
P0705	Transmission range (TR) sensor, PRNDL input - circuit malfunction	Wiring, TR sensor, ECM/PCM/TCM
P0706	Transmission range (TR) sensor - range/performance problem	Wiring, TR sensor
P0707	Transmission range (TR) sensor - low input	Wiring short to earth, TR sensor, ECM/PCM/TCM
P0708	Transmission range (TR) sensor - high input	Wiring short to positive, TR sensor, ECM/PCM/TCM
P0709	Transmission range (TR) sensor - circuit intermittent	Wiring, poor connection, TR sensor, ECM/PCM/TCM
P070A	Transmission fluid level sensor - circuit malfunction	Wiring, transmission fluid level sensor, ECM
P070B	Transmission fluid level sensor - circuit range/performance	Wiring, transmission fluid level sensor, ECM
P070C	Transmission fluid level sensor - circuit low	Wiring, transmission fluid level sensor, ECM
P070D	Transmission fluid level sensor - circuit high	Wiring, transmission fluid level sensor, ECM
P070E	Transmission fluid level sensor - circuit intermittent/erratic	Wiring, transmission fluid level sensor, ECM
P070F	Transmission fluid level - low	Transmission fluid level - low
P0710	Transmission fluid temperature (TFT) sensor - circuit malfunction	Wiring, TFT sensor, ECM, ECM/PCM/TCM
P0711	Transmission fluid temperature (TFT) sensor - range/performance problem	Wiring, TFT sensor
P0712	Transmission fluid temperature (TFT) sensor - low input	Wiring short to earth, TFT sensor, ECM/PCM/TCM
P0713	Transmission fluid temperature (TFT) sensor - high input	Wiring short to positive, TFT sensor, ECM/PCM/TCM
P0714	Transmission fluid temperature (TFT) sensor - circuit intermittent	Wiring, poor connection, TFT sensor, ECM/PCM/TCM
P0715	Turbine shaft speed (TSS) sensor - circuit malfunction	Wiring, TSS sensor, ECM/PCM/TCM
P0716	Turbine shaft speed (TSS) sensor - range/performance problem	Wiring, TSS sensor
P0717	Turbine shaft speed (TSS) sensor - no signal	Wiring, TSS sensor, ECM/PCM/TCM
P0718	Turbine shaft speed (TSS) sensor - circuit intermittent	Wiring, poor connection, TSS sensor, ECM/PCM/TCM
P0719	Brake switch B - circuit low	Wiring short to earth, brake switch, ECM/PCM/TCM
P071A	Transmission mode selection switch A - circuit malfunction	Transmission mode selection switch, ECM

P071B	Transmission mode selection switch A - circuit low	Wiring, transmission mode selection switch, ECM
P071C	Transmission mode selection switch A - circuit high	Transmission mode selection switch, ECM
P071D	Transmission mode selection switch B - circuit malfunction	Wiring, transmission mode selection switch, ECM
P071E	Transmission mode selection switch B - circuit low	Wiring, transmission mode selection switch, ECM
P071F	Transmission mode selection switch B - circuit high	Wiring, transmission mode selection switch, ECM
P0720	Output shaft speed (OSS) sensor - circuit malfunction	Wiring, VSS, ECM/PCM/TCM
P0721	Output shaft speed (OSS) sensor - range/performance problem	Wiring, VSS
P0722	Output shaft speed (OSS) sensor - no signal	Wiring, VSS, ECM/PCM/TCM
P0723	Output shaft speed (OSS) sensor - circuit intermittent	Wiring, poor connection, VSS, ECM/PCM/TCM
P0724	Brake switch B - circuit high	Wiring short to positive, brake switch, ECM/PCM/TCM
P0725	Engine RPM input - circuit malfunction	Wiring, CKP/RPM sensor, ECM/PCM/TCM
P0726	Engine RPM input - range/performance problem	Wiring, CKP/RPM sensor
P0727	Engine RPM input - no signal	Wiring, CKP/RPM sensor, ECM/PCM/TCM
P0728	Engine RPM input - circuit intermittent	Wiring, poor connection, CKP/RPM sensor, ECM/PCM/TCM
P0729	Gear 6 - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P072A	Transmission system - stuck in neutral	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P072B	Transmission system - stuck in reverse	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P072C	Transmission system - stuck in gear 1	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P072D	Transmission system - stuck in gear 2	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P072E	Transmission system - stuck in gear 3	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P072F	Transmission system - stuck in gear 4	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P0730	Incorrect gear ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0731	Gear 1 - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0732	Gear 2 - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0733	Gear 3 - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0734	Gear 4 - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0735	Gear 5 - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0736	Reverse gear - incorrect ratio	Wiring, TR sensor/switch, shift solenoids, transmission mechanical fault
P0737	TCM engine speed - output circuit	Wiring, TCM
P0738	TCM engine speed - output circuit low	Wiring, TCM
P0739	TCM engine speed - output circuit high	Wiring, TCM
P073A	Transmission system - stuck in gear 5	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM

P073B	Transmission system - stuck in gear 6	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P073C	Transmission system - stuck in gear 7	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P073D	Transmission system - unable to engage neutral	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P073E	Transmission system - unable to engage gear reverse	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P073F	Transmission system - unable to engage gear 1	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P0740	Torque converter clutch (TCC) solenoid - circuit malfunction	Wiring, TCC solenoid, ECM/PCM/TCM
P0741	Torque converter clutch (TCC) solenoid - performance or stuck off	Wiring, TCC solenoid
P0742	Torque converter clutch (TCC) solenoid - stuck on	Wiring, TCC solenoid
P0743	Torque converter clutch (TCC) solenoid - electrical	Wiring, TCC solenoid, ECM/PCM/TCM
P0744	Torque converter clutch (TCC) solenoid - circuit intermittent	Wiring, poor connection, TCC solenoid, ECM/PCM/TCM
P0745	Transmission fluid pressure (TFP) solenoid - circuit malfunction	Wiring, TFP solenoid, ECM/PCM/TCM
P0746	Transmission fluid pressure (TFP) solenoid - performance or stuck off	Wiring, TFP solenoid
P0747	Transmission fluid pressure (TFP) solenoid - stuck on	Wiring, TFP solenoid
P0748	Transmission fluid pressure (TFP) solenoid - electrical	Wiring, TFP solenoid, ECM/PCM/TCM
P0749	Transmission fluid pressure (TFP) solenoid - circuit intermittent	Wiring, poor connection, TFP solenoid, ECM/PCM/TCM
P074A	Transmission system - unable to engage gear 2	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P074B	Transmission system - unable to engage gear 3	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P074C	Transmission system - unable to engage gear 4	Wiring, SS, TCM, ECM
P074D	Transmission system - unable to engage gear 5	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P074E	Transmission system - unable to engage gear 6	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P074F	Transmission system - unable to engage gear 7	Wiring, shift solenoid (SS), transmission mechanical fault, TCM, ECM
P0750	Shift solenoid (SS) A - circuit malfunction	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0751	Shift solenoid (SS) A - performance or stuck off	Wiring, shift solenoid
P0752	Shift solenoid (SS) A - stuck on	Wiring, shift solenoid
P0753	Shift solenoid (SS) A - electrical	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0754	Shift solenoid (SS) A - circuit intermittent	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0755	Shift solenoid (SS) B - circuit malfunction	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0756	Shift solenoid (SS) B - performance or stuck off	Wiring, shift solenoid
P0757	Shift solenoid (SS) B - stuck on	Wiring, shift solenoid
P0758	Shift solenoid (SS) B - electrical	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0759	Shift solenoid (SS) B - circuit intermittent	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P075A	Shift solenoid (SS) G - malfunction	Wiring, SS, transmission mechanical fault, ECM
P075B	Shift solenoid (SS) G - performance problem or stuck off	Wiring, SS, TCM, ECM

P075C	Shift solenoid (SS) G - solenoid stuck on	Wiring, SS, transmission mechanical fault, ECM
P075D	Shift solenoid (SS) G - electrical	Wiring, SS, TCM, ECM
P075E	Shift solenoid (SS) G - intermittent	Wiring, SS, TCM, ECM
P075F	Transmission fluid level - high	Transmission fluid level - high
P0760	Shift solenoid (SS) C - circuit malfunction	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0761	Shift solenoid (SS) C - performance or stuck off	Wiring, shift solenoid
P0762	Shift solenoid (SS) C - stuck on	Wiring, shift solenoid
P0763	Shift solenoid (SS) C - electrical	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0764	Shift solenoid (SS) C - circuit intermittent	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0765	Shift solenoid (SS) D - circuit malfunction	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0766	Shift solenoid (SS) D - performance or stuck off	Wiring, shift solenoid
P0767	Shift solenoid (SS) D - stuck on	Wiring, shift solenoid
P0768	Shift solenoid (SS) D - electrical	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0769	Shift solenoid (SS) D - circuit intermittent	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P076A	Shift solenoid (SS) H - malfunction	Wiring, SS, TCM, ECM
P076B	Shift solenoid (SS) H - performance problem or stuck off	Wiring, SS, TCM, ECM
P076C	Shift solenoid (SS) H - solenoid stuck on	Wiring, SS, TCM, ECM
P076D	Shift solenoid (SS) H - electrical	Wiring, SS, TCM, ECM
P076E	Shift solenoid (SS) H - intermittent	Wiring, SS, TCM, ECM
P076F	Transmission system - gear 7 ratio incorrect	Transmission mechanical fault, VSS, incorrect tyre size
P0770	Shift solenoid (SS) E - circuit malfunction	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0771	Shift solenoid (SS) E - performance or stuck off	Wiring, shift solenoid
P0772	Shift solenoid (SS) E - stuck on	Wiring, shift solenoid
P0773	Shift solenoid (SS) E - electrical	Wiring, shift solenoid (SS), ECM/PCM/TCM
P0774	Shift solenoid (SS) E - circuit intermittent	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0775	Pressure control solenoid B - malfunction	Pressure control solenoid
P0776	Pressure control solenoid B - performance or stuck off	Wiring, pressure control solenoid
P0777	Pressure control solenoid B - stuck on	Wiring, pressure control solenoid
P0778	Pressure control solenoid B - electrical malfunction	Wiring, pressure control solenoid
P0779	Pressure control solenoid B - circuit intermittent	Wiring, poor connection, pressure control solenoid
P0780	Gear selection - shift malfunction	Wiring, TR sensor, shift solenoids, transmission mechanical fault
P0781	Gear selection, 1-2 - shift malfunction	Wiring, TR sensor, shift solenoids, transmission mechanical fault
P0782	Gear selection, 2-3 - shift malfunction	Wiring, TR sensor, shift solenoids, transmission mechanical fault
P0783	Gear selection, 3-4 - shift malfunction	Wiring, TR sensor, shift solenoids, transmission mechanical fault
P0784	Gear selection, 4-5 - shift malfunction	Wiring, TR sensor, shift solenoids, transmission mechanical fault
P0785	Shift/timing solenoid - circuit malfunction	Wiring, shift/timing solenoid, ECM/PCM/TCM
P0786	Shift/timing solenoid - range/performance problem	Wiring, shift/timing solenoid
P0787	Shift/timing solenoid - low	Wiring short to earth, shift/timing solenoid, ECM/PCM/TCM

P0788	Shift/timing solenoid - high	Wiring short to positive, shift/timing solenoid, ECM/PCM/TCM
P0789	Shift/timing solenoid - circuit intermittent	Wiring, poor connection, shift/timing solenoid, ECM/PCM/TCM
P078A	Shift solenoid (SS), timing B - malfunction	Wiring, SS, transmission mechanical fault, ECM
P078B	Shift solenoid (SS) B - range/performance problem	Wiring, SS, TCM, ECM
P078C	Shift solenoid (SS) B, shifting-times - circuit low	Wiring, SS, TCM, ECM
P078D	Shift solenoid (SS), timing B - circuit high	Wiring, SS, TCM, ECM
P078E	Shift solenoid (SS) B - intermittent	Wiring, SS, TCM, ECM
P0790	Transmission mode selection switch - circuit malfunction	Wiring, transmission mode selection switch, ECM/PCM/TCM
P0791	Intermediate shaft speed sensor - circuit malfunction	Wiring, poor connection, intermediate shaft speed sensor, ECM/PCM/TCM
P0792	Intermediate shaft speed sensor - range/performance problem	Wiring, poor connection, intermediate shaft speed sensor, ECM/PCM/TCM
P0793	Intermediate shaft speed sensor - no signal	Wiring, poor connection, short to earth, intermediate shaft speed sensor, ECM/PCM/TCM
P0794	Intermediate shaft speed sensor - circuit intermittent	Wiring, poor connection, intermediate shaft speed sensor, ECM/PCM/TCM
P0795	Transmission fluid pressure (TFP) solenoid C - circuit malfunction	Wiring, poor connection, TFP solenoid, ECM/PCM/TCM
P0796	Transmission fluid pressure (TFP) solenoid C - performance or stuck off	Wiring, poor connection, TFP solenoid, ECM/PCM/TCM
P0797	Transmission fluid pressure (TFP) solenoid C - stuck on	Wiring, poor connection, TFP solenoid, ECM/PCM/TCM
P0798	Transmission fluid pressure (TFP) solenoid C - electrical malfunction	Wiring, poor connection, TFP solenoid, ECM/PCM/TCM
P0799	Transmission fluid pressure (TFP) solenoid C - circuit intermittent	Wiring, poor connection, ECM/PCM/TCM
P0800	Transfer box control system, MIL request - circuit malfunction	Wiring, mechanical fault
P0801	Reverse inhibit circuit - circuit malfunction	Wiring, poor connection
P0802	Transmission control system, MIL request - open circuit	Wiring, mechanical fault
P0803	1-4 Upshift (Skip shift) solenoid - circuit malfunction	Wiring, poor connection, upshift solenoid
P0804	1-4 Upshift (Skip shift) warning lamp - circuit malfunction	Wiring, poor connection
P0805	Clutch position sensor - circuit malfunction	Wiring, poor connection, clutch position sensor, ECM/PCM/TCM
P0806	Clutch position sensor - range/performance problem	Wiring, poor connection, clutch position sensor, ECM/PCM/TCM
P0807	Clutch position sensor - low input	Wiring short to earth, clutch position sensor, ECM/PCM/TCM
P0808	Clutch position sensor - high input	Wiring short to positive, clutch position sensor, ECM/PCM/TCM
P0809	Clutch position sensor - circuit intermittent	Wiring, poor connection, clutch position sensor, ECM/PCM/TCM
P080A	Clutch position not learned	Wiring, CPP sensor, ECM
P080B	Shift solenoid (SS), upshift/skip shift - circuit range/performance	Wiring, SS, TCM, ECM
P080C	Shift solenoid (SS), upshift/skip shift - circuit low	Wiring, SS, TCM, ECM
P080D	Shift solenoid (SS), upshift/skip shift - circuit high	Wiring, SS, TCM, ECM
P0810	Clutch position control error	Wiring, poor connection, ECM/PCM/TCM

P0811	Excessive clutch slip	Wiring, poor connection, mechanical fault, ECM/PCM/TCM
P0812	Reverse gear - input circuit malfunction	Wiring, poor connection, ECM/PCM/TCM
P0813	Reverse gear - output circuit malfunction	Wiring, poor connection, ECM/PCM/TCM
P0814	Transmission range (TR) display - circuit malfunction	Wiring, poor connection, TR sensor, ECM/PCM/TCM
P0815	Transmission gear selection switch, upshift - circuit malfunction	Wiring, poor connection, transmission gear selection switch, ECM/PCM/TCM
P0816	Transmission gear selection switch, downshift - circuit malfunction	Wiring, poor connection, transmission gear selection switch, ECM/PCM/TCM
P0817	Starter disable circuit - malfunction	Wiring, poor connection, ECM/PCM/TCM
P0818	Driveline disconnect switch - circuit malfunction	Wiring, poor connection, upshift switch, ECM/PCM/TCM
P0819	Transmission gear selection switch, upshift/downshift - correlation to transmission range (TR)	Wiring, poor connection, transmission gear selection switch, transmission mechanical fault, ECM/PCM/TCM
P081A	Starter disable circuit - signal low	Wiring, starter motor relay, ECM
P081B	Starter disable circuit - signal high	Wiring, starter motor relay, ECM
P081C	Park position input signal - circuit malfunction	Wiring, PNP switch, transmission range (TR) sensor, ECM
P081D	Neutral position input signal - circuit malfunction	Wiring, PNP switch, transmission range (TR) sensor, ECM
P081E	Transmission clutch B - excessive clutch slip	Transmission mechanical fault
P0820	Gear lever X-Y position sensor - circuit malfunction	Wiring, poor connection, gear lever position sensor, ECM/PCM/TCM
P0821	Gear lever X position sensor - circuit malfunction	Wiring, poor connection, gear lever position sensor, ECM/PCM/TCM
P0822	Gear lever Y position sensor - circuit malfunction	Wiring, poor connection, gear lever position sensor, ECM/PCM/TCM
P0823	Gear lever X position sensor - circuit intermittent	Wiring, poor connection, gear lever position sensor, ECM/PCM/TCM
P0824	Gear lever Y position sensor - circuit intermittent	Wiring, poor connection, gear lever position sensor, ECM/PCM/TCM
P0825	Gear lever push-pull switch - circuit malfunction	Wiring, poor connection, gear lever push-pull switch, ECM/PCM/TCM
P0826	Transmission gear selection switch, upshift/downshift - circuit malfunction	Wiring, transmission gear selection switch
P0827	Transmission gear selection switch, upshift/downshift - circuit low	Wiring short to earth, transmission gear selection switch
P0828	Transmission gear selection switch, upshift/downshift - circuit high	Wiring short to positive, transmission gear selection switch
P0829	5-6 Upshift	Mechanical fault
P0830	Clutch pedal position (CPP) switch A - circuit malfunction	Wiring, poor connection, CPP switch, ECM/PCM/TCM
P0831	Clutch pedal position (CPP) switch A - low input	Wiring short to earth, CPP switch, ECM/PCM/TCM
P0832	Clutch pedal position (CPP) switch A - high input	Wiring short to positive, CPP switch, ECM/PCM/TCM
P0833	Clutch pedal position (CPP) switch B - circuit malfunction	Wiring, poor connection, CPP switch, ECM/PCM/TCM
P0834	Clutch pedal position (CPP) switch B - low input	Wiring short to earth, CPP switch, ECM/PCM/TCM
P0835	Clutch pedal position (CPP) switch B - high input	Wiring short to positive, CPP switch, ECM/PCM/TCM
P0836	Four wheel drive switch - circuit malfunction	Wiring, poor connection, four wheel drive switch, ECM/PCM/TCM
P0837	Four wheel drive switch - range/performance problem	Wiring, poor connection, four wheel drive switch, ECM/PCM/TCM
P0838	Four wheel drive switch - low input	Wiring short to earth, four wheel drive switch, ECM/PCM/TCM

P0839	Four wheel drive switch - high input	Wiring short to positive, four wheel drive switch, ECM/PCM/TCM
P083A	Transmission fluid pressure (TFP) sensor/switch G - circuit malfunction	Wiring, transmission fluid pressure (TFP) sensor, ECM
P083B	Transmission fluid pressure (TFP) sensor/switch G - circuit range/performance	Wiring, transmission fluid pressure (TFP) sensor, ECM
P083C	Transmission fluid pressure (TFP) sensor/switch G - circuit low	Wiring, transmission fluid pressure (TFP) sensor, ECM
P083D	Transmission fluid pressure (TFP) sensor/switch G - circuit high	Wiring, transmission fluid pressure (TFP) sensor, ECM
P083E	Transmission fluid pressure (TFP) sensor/switch G - circuit intermittent	Wiring, transmission fluid pressure (TFP) sensor, ECM
P083F	Clutch pedal position (CPP) switch A/B - correlation	Wiring, CPP switch, CPP switch incorrectly adjusted, ECM
P0840	Transmission fluid pressure (TFP) sensor A - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0840	Transmission fluid pressure (TFP) switch A - circuit malfunction	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0841	Transmission fluid pressure (TFP) sensor A - range/performance problem	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0841	Transmission fluid pressure (TFP) switch A - range/performance problem	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0842	Transmission fluid pressure (TFP) sensor A - low input	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0842	Transmission fluid pressure (TFP) switch A - low input	Wiring short to earth, TFP switch, ECM/PCM/TCM
P0843	Transmission fluid pressure (TFP) sensor A - high input	Wiring short to positive, TFP sensor, ECM/PCM/TCM
P0843	Transmission fluid pressure (TFP) switch A - high input	Wiring short to positive, TFP switch, ECM/PCM/TCM
P0844	Transmission fluid pressure (TFP) sensor A - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0844	Transmission fluid pressure (TFP) switch A - circuit intermittent	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0845	Transmission fluid pressure (TFP) sensor B - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0845	Transmission fluid pressure (TFP) switch B - circuit malfunction	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0846	Transmission fluid pressure (TFP) sensor B - range/performance problem	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0846	Transmission fluid pressure (TFP) switch B - range/performance problem	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0847	Transmission fluid pressure (TFP) sensor B - low input	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0847	Transmission fluid pressure (TFP) switch B - low input	Wiring short to earth, TFP switch, ECM/PCM/TCM
P0848	Transmission fluid pressure (TFP) sensor B - high input	Wiring short to positive, TFP sensor, ECM/PCM/TCM
P0848	Transmission fluid pressure (TFP) switch B - high input	Wiring short to positive, TFP switch, ECM/PCM/TCM
P0849	Transmission fluid pressure (TFP) sensor B - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0849	Transmission fluid pressure (TFP) switch B - circuit intermittent	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P084A	Transmission fluid pressure (TFP) sensor/switch H - circuit malfunction	Wiring, transmission fluid pressure (TFP) sensor/switch, ECM
P084B	Transmission fluid pressure (TFP) sensor/switch H - circuit range/performance	Wiring, transmission fluid pressure (TFP) sensor, ECM

P084C	Transmission fluid pressure (TFP) sensor/switch H - circuit low	Wiring, transmission fluid pressure (TFP) sensor/switch, ECM
P084D	Transmission fluid pressure (TFP) sensor/switch H - circuit high	Wiring, transmission fluid pressure (TFP) sensor/switch, ECM
P084E	Transmission fluid pressure (TFP) sensor/switch H - circuit intermittent	Wiring, transmission fluid pressure (TFP) sensor, ECM
P0850	Park/neutral position (PNP) switch - input circuit malfunction	Wiring, PNP switch, ECM/PCM/TCM
P0851	Park/neutral position (PNP) switch - input circuit low	Wiring short to earth, PNP switch, ECM/PCM/TCM
P0852	Park/neutral position (PNP) switch - input circuit high	Wiring short to positive, PNP switch, ECM/PCM/TCM
P0853	Drive switch - input circuit malfunction	Wiring, drive switch, ECM/PCM/TCM
P0854	Drive switch - input circuit low	Wiring short to earth, drive switch, ECM/PCM/TCM
P0855	Drive switch - input circuit high	Wiring short to positive, drive switch, ECM/PCM/TCM
P0856	Traction control input signal - malfunction	Wiring, poor connection, ECM/PCM/TCM
P0857	Traction control input signal - range/performance problem	Wiring, poor connection, ECM/PCM/TCM
P0858	Traction control input signal - low	Wiring short to earth, ECM/PCM/TCM
P0859	Traction control input signal - high	Wiring short to positive, ECM/PCM/TCM
P085A	Gear shift control module B, communication circuit - malfunction	Wiring, gear shift module, ECM
P085B	Gear shift control module B, communication circuit - signal low	Wiring, gear shift module, ECM
P085C	Gear shift control module B, communication circuit - signal high	Wiring, gear shift module, ECM
P0860	Gear shift module communication circuit - malfunction	Wiring, poor connection, gear shift module, ECM/PCM/TCM
P0861	Gear shift module communication circuit - low input	Wiring short to earth, gear shift module, ECM/PCM/TCM
P0862	Gear shift module communication circuit - high input	Wiring short to positive, gear shift module, ECM/PCM/TCM
P0863	Transmission control module (TCM), communication - circuit malfunction	Wiring, poor connection, TCM
P0864	Transmission control module (TCM), communication - range/performance problem	Wiring, poor connection, TCM
P0865	Transmission control module (TCM), communication - low input	Wiring short to earth, TCM
P0866	Transmission control module (TCM), communication - high input	Wiring short to positive, TCM
P0867	Transmission fluid pressure (TFP) sensor	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0868	Transmission fluid pressure (TFP) sensor - low	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0869	Transmission fluid pressure (TFP) sensor - high	Wiring short to positive, TFP sensor, ECM/PCM/TCM
P0870	Transmission fluid pressure (TFP) sensor C - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0870	Transmission fluid pressure (TFP) switch C - circuit malfunction	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0871	Transmission fluid pressure (TFP) sensor C - range/performance problem	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0871	Transmission fluid pressure (TFP) switch C - range/performance problem	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0872	Transmission fluid pressure (TFP) sensor C - circuit low	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0872	Transmission fluid pressure (TFP) switch C - circuit low	Wiring short to earth, TFP switch, ECM/PCM/TCM
P0873	Transmission fluid pressure (TFP) sensor C - circuit high	Wiring short to positive, TFP sensor, ECM/PCM/TCM

P0873	Transmission fluid pressure (TFP) switch C - circuit high	Wiring short to positive, TFP switch, ECM/PCM/TCM
P0874	Transmission fluid pressure (TFP) sensor C - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0874	Transmission fluid pressure (TFP) switch C - circuit intermittent	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0875	Transmission fluid pressure (TFP) sensor D - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0875	Transmission fluid pressure (TFP) switch D - circuit malfunction	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0876	Transmission fluid pressure (TFP) sensor D - range/performance problem	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0876	Transmission fluid pressure (TFP) switch D - range/performance problem	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0877	Transmission fluid pressure (TFP) sensor D - circuit low	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0877	Transmission fluid pressure (TFP) switch D - circuit low	Wiring short to earth, TFP switch, ECM/PCM/TCM
P0878	Transmission fluid pressure (TFP) sensor D - circuit high	Wiring short to positive, TFP sensor, ECM/PCM/TCM
P0878	Transmission fluid pressure (TFP) switch D - circuit high	Wiring short to positive, TFP switch, ECM/PCM/TCM
P0879	Transmission fluid pressure (TFP) sensor D - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0879	Transmission fluid pressure (TFP) switch D - circuit intermittent	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0880	Transmission control module (TCM) - power input signal malfunction	Wiring, poor connection, TCM
P0881	Transmission control module (TCM) - power input signal range/performance	Wiring, poor connection, TCM
P0882	Transmission control module (TCM) - power input signal low	Wiring short to earth, TCM
P0883	Transmission control module (TCM) - power input signal high	Wiring short to positive, TCM
P0884	Transmission control module (TCM), power input signal - circuit intermittent	Wiring, poor connection, TCM
P0885	Transmission control module (TCM) power relay, control - open circuit	Wiring, poor connection, TCM power relay, TCM
P0886	Transmission control module (TCM) power relay, control - circuit low	Wiring short to earth, TCM power relay, TCM
P0887	Transmission control module (TCM) power relay, control - circuit high	Wiring short to positive, TCM power relay, TCM
P0888	Transmission control module (TCM) power relay, sense circuit malfunction	Wiring, poor connection, TCM power relay, TCM
P0889	Transmission control module (TCM) power relay, sense circuit range/performance	Wiring, poor connection, TCM power relay, TCM
P0890	Transmission control module (TCM) power relay, sense circuit low	Wiring short to earth, TCM power relay, TCM
P0891	Transmission control module (TCM) power relay, sense circuit high	Wiring short to positive, TCM power relay, TCM
P0892	Transmission control module (TCM) power relay, sense circuit intermittent malfunction	Wiring, poor connection, TCM power relay, TCM
P0893	Multiple gears engaged	Mechanical fault
P0894	Transmission component slipping	Mechanical fault
P0895	Shift time too short	Mechanical fault
P0896	Shift time too long	Mechanical fault

P0897	Transmission fluid deteriorated	Mechanical fault
P0898	Transmission control system - MIL request - circuit low	Wiring short to earth, poor connection
P0899	Transmission control system - MIL request - circuit high	Wiring short to positive, poor connection
P0900	Clutch actuator - open circuit	Wiring, clutch actuator, ECM/PCM/TCM
P0901	Clutch actuator - circuit range/performance	Wiring, poor connection, clutch actuator, ECM/PCM/TCM
P0902	Clutch actuator - circuit low	Wiring short to earth, clutch actuator, ECM/PCM/TCM
P0903	Clutch actuator - circuit high	Wiring short to positive, clutch actuator, ECM/PCM/TCM
P0904	Transmission gate select position circuit - malfunction	Wiring, poor connection, ECM/PCM/TCM
P0905	Transmission gate select position circuit - range/performance problem	Wiring, poor connection, ECM/PCM/TCM
P0906	Transmission gate select position circuit - low	Wiring short to earth, ECM/PCM/TCM
P0907	Transmission gate select position circuit - high	Wiring short to positive, ECM/PCM/TCM
P0908	Transmission gate select position circuit - circuit intermittent	Wiring, poor connection, ECM/PCM/TCM
P0909	Transmission gate select control error	Mechanical fault
P0910	Transmission gate select actuator - open circuit	Wiring, transmission gate select actuator, ECM/PCM/TCM
P0911	Transmission gate select actuator - circuit range/performance	Wiring, poor connection, transmission gate select actuator, ECM/PCM/TCM
P0912	Transmission gate select actuator - circuit low	Wiring short to earth, transmission gate select actuator, ECM/PCM/TCM
P0913	Transmission gate select actuator - circuit high	Wiring short to positive, transmission gate select actuator, ECM/PCM/TCM
P0914	Gear shift position circuit - malfunction	Wiring, poor connection, ECM/PCM/TCM
P0915	Gear shift position circuit - range/performance problem	Wiring, poor connection, ECM/PCM/TCM
P0916	Gear shift position circuit - low	Wiring short to earth, ECM/PCM/TCM
P0917	Gear shift position circuit - high	Wiring short to positive, ECM/PCM/TCM
P0918	Gear shift position circuit - circuit intermittent	Wiring, poor connection, ECM/PCM/TCM
P0919	Gear shift position control - error	Wiring, poor connection, ECM/PCM/TCM
P0920	Gear shift forward actuator - open circuit	Wiring, gear shift forward actuator, ECM/PCM/TCM
P0921	Gear shift forward actuator - circuit range/performance	Wiring, poor connection, gear shift forward actuator, ECM/PCM/TCM
P0922	Gear shift forward actuator - circuit low	Wiring short to earth, gear shift forward actuator, ECM/PCM/TCM
P0923	Gear shift forward actuator - circuit high	Wiring short to positive, gear shift forward actuator, ECM/PCM/TCM
P0924	Gear shift reverse actuator - open circuit	Wiring, gear shift reverse actuator, ECM/PCM/TCM
P0925	Gear shift reverse actuator - circuit range/performance	Wiring, poor connection, gear shift reverse actuator, ECM/PCM/TCM
P0926	Gear shift reverse actuator - circuit low	Wiring short to earth, gear shift reverse actuator, ECM/PCM/TCM
P0927	Gear shift reverse actuator - circuit high	Wiring short to positive, gear shift reverse actuator, ECM/PCM/TCM
P0928	Gear shift lock solenoid - open circuit	Wiring, gear shift lock solenoid, ECM/PCM/TCM
P0929	Gear shift lock solenoid - circuit range/performance	Wiring, gear shift lock solenoid, ECM/PCM/TCM
P0930	Gear shift lock solenoid - circuit low	Wiring short to earth, gear shift lock solenoid, ECM/PCM/TCM
P0931	Gear shift lock solenoid - circuit high	Wiring short to positive, gear shift lock solenoid, ECM/PCM/TCM

P0932	Hydraulic pressure sensor - circuit malfunction	Wiring, poor connection, hydraulic pressure sensor, ECM/PCM/TCM
P0933	Hydraulic pressure sensor - range/performance problem	Wiring, hydraulic pressure sensor, ECM/PCM/TCM
P0934	Hydraulic pressure sensor - circuit low input	Wiring short to earth, hydraulic pressure sensor, ECM/PCM/TCM
P0935	Hydraulic pressure sensor - circuit high input	Wiring short to positive, hydraulic pressure sensor, ECM/PCM/TCM
P0936	Hydraulic pressure sensor - circuit intermittent	Wiring, poor connection, hydraulic pressure sensor, ECM/PCM/TCM
P0937	Hydraulic oil temperature sensor - circuit malfunction	Wiring, poor connection, hydraulic oil temperature sensor, ECM/PCM/TCM
P0938	Hydraulic oil temperature sensor - range/performance problem	Wiring, hydraulic oil temperature sensor, ECM/PCM/TCM
P0939	Hydraulic oil temperature sensor - circuit low input	Wiring short to earth, hydraulic oil temperature sensor, ECM/PCM/TCM
P0940	Hydraulic oil temperature sensor - circuit high input	Wiring short to positive, hydraulic oil temperature sensor, ECM/PCM/TCM
P0941	Hydraulic oil temperature sensor - circuit intermittent	Wiring, poor connection, hydraulic oil temperature sensor, ECM/PCM/TCM
P0942	Hydraulic pressure unit	Mechanical fault
P0943	Hydraulic pressure unit - cycling period too short	Mechanical fault
P0944	Hydraulic pressure unit - loss of pressure	Mechanical fault
P0945	Hydraulic pump relay - open circuit	Wiring, hydraulic pump relay, ECM/PCM/TCM
P0946	Hydraulic pump relay - circuit range/performance	Wiring, hydraulic pump relay, ECM/PCM/TCM
P0947	Hydraulic pump relay - circuit low	Wiring short to earth, hydraulic pump relay, ECM/PCM/TCM
P0948	Hydraulic pump relay - circuit high	Wiring short to positive, hydraulic pump relay, ECM/PCM/TCM
P0949	Auto shift manual (ASM) transmission - adaptive learning not done	ECM/PCM/TCM
P0950	Auto shift manual (ASM) transmission, control - circuit malfunction	Wiring, poor connection, ECM/PCM/TCM
P0951	Auto shift manual (ASM) transmission, control - range/performance problem	Wiring, poor connection, ECM/PCM/TCM
P0952	Auto shift manual (ASM) transmission, control - circuit low	Wiring, poor connection, short to earth, ECM/PCM/TCM
P0953	Auto shift manual (ASM) transmission, control - circuit high	Wiring, poor connection, short to positive, ECM/PCM/TCM
P0954	Auto shift manual (ASM) transmission, control - circuit intermittent	Wiring, poor connection, ECM/PCM/TCM
P0955	Auto shift manual (ASM) transmission, mode - circuit malfunction	Wiring, poor connection, ECM/PCM/TCM
P0956	Auto shift manual (ASM) transmission, mode - range/performance problem	Wiring, poor connection, ECM/PCM/TCM
P0957	Auto shift manual (ASM) transmission, mode - circuit low	Wiring, poor connection, short to earth, ECM/PCM/TCM
P0958	Auto shift manual (ASM) transmission, mode - circuit high	Wiring, poor connection, short to positive, ECM/PCM/TCM
P0959	Auto shift manual (ASM) transmission, mode - circuit intermittent	Wiring, poor connection, ECM/PCM/TCM
P0960	Pressure control (PC) solenoid A - open circuit	Wiring, poor connection, pressure control solenoid, ECM/PCM/TCM

P0961	Pressure control (PC) solenoid A - range/performance problem	Wiring, poor connection, pressure control solenoid, ECM/PCM/TCM
P0962	Pressure control (PC) solenoid A - circuit low	Wiring short to earth, pressure control solenoid, ECM/PCM/TCM
P0963	Pressure control (PC) solenoid A - circuit high	Wiring short to positive, pressure control solenoid, ECM/PCM/TCM
P0964	Pressure control (PC) solenoid B - open circuit	Wiring, poor connection, pressure control solenoid, ECM/PCM/TCM
P0965	Pressure control (PC) solenoid B - range/performance problem	Wiring, poor connection, pressure control solenoid, ECM/PCM/TCM
P0966	Pressure control (PC) solenoid B - circuit low	Wiring short to earth, pressure control solenoid, ECM/PCM/TCM
P0967	Pressure control (PC) solenoid B - circuit high	Wiring short to positive, pressure control solenoid, ECM/PCM/TCM
P0968	Pressure control (PC) solenoid C - open circuit	Wiring, poor connection, pressure control solenoid, ECM/PCM/TCM
P0969	Pressure control (PC) solenoid C - range/performance problem	Wiring, poor connection, pressure control solenoid, ECM/PCM/TCM
P0970	Pressure control (PC) solenoid C - circuit low	Wiring short to earth, pressure control solenoid, ECM/PCM/TCM
P0971	Pressure control (PC) solenoid C - circuit high	Wiring short to positive, pressure control solenoid, ECM/PCM/TCM
P0972	Shift solenoid (SS) A - range/performance problem	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0973	Shift solenoid (SS) A - circuit low	Wiring short to earth, shift solenoid (SS), ECM/PCM/TCM
P0974	Shift solenoid (SS) A - circuit high	Wiring short to positive, shift solenoid (SS), ECM/PCM/TCM
P0975	Shift solenoid (SS) B - range/performance problem	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0976	Shift solenoid (SS) B - circuit low	Wiring short to earth, shift solenoid (SS), ECM/PCM/TCM
P0977	Shift solenoid (SS) B - circuit high	Wiring short to positive, shift solenoid (SS), ECM/PCM/TCM
P0978	Shift solenoid (SS) C - range/performance problem	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0979	Shift solenoid (SS) C - circuit low	Wiring short to earth, shift solenoid (SS), ECM/PCM/TCM
P0980	Shift solenoid (SS) C - circuit high	Wiring short to positive, shift solenoid (SS), ECM/PCM/TCM
P0981	Shift solenoid (SS) D - range/performance problem	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0982	Shift solenoid (SS) D - circuit low	Wiring short to earth, shift solenoid (SS), ECM/PCM/TCM
P0983	Shift solenoid (SS) D - circuit high	Wiring short to positive, shift solenoid (SS), ECM/PCM/TCM
P0984	Shift solenoid (SS) E - range/performance problem	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0985	Shift solenoid (SS) E - circuit low	Wiring short to earth, shift solenoid (SS), ECM/PCM/TCM
P0986	Shift solenoid (SS) E - circuit high	Wiring short to positive, shift solenoid (SS), ECM/PCM/TCM
P0987	Transmission fluid pressure (TFP) sensor E - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/PCM/TCM

P0987	Transmission fluid pressure (TFP) switch E - circuit malfunction	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0988	Transmission fluid pressure (TFP) sensor E - range/performance problem	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0988	Transmission fluid pressure (TFP) switch E - range/performance problem	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0989	Transmission fluid pressure (TFP) sensor E - circuit low	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0989	Transmission fluid pressure (TFP) switch E - circuit low	Wiring short to earth, TFP switch, ECM/PCM/TCM
P0990	Transmission fluid pressure (TFP) sensor E - circuit high	Wiring short to positive, TFP sensor, ECM/PCM/TCM
P0990	Transmission fluid pressure (TFP) switch E - circuit high	Wiring short to positive, TFP switch, ECM/PCM/TCM
P0991	Transmission fluid pressure (TFP) sensor E - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0991	Transmission fluid pressure (TFP) switch E - circuit intermittent	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0992	Transmission fluid pressure (TFP) sensor F - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0992	Transmission fluid pressure (TFP) switch F - circuit malfunction	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0993	Transmission fluid pressure (TFP) sensor F - range/performance problem	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0993	Transmission fluid pressure (TFP) switch F - range/performance problem	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0994	Transmission fluid pressure (TFP) sensor F - circuit low	Wiring short to earth, TFP sensor, ECM/PCM/TCM
P0994	Transmission fluid pressure (TFP) switch F - circuit low	Wiring short to earth, TFP switch, ECM/PCM/TCM
P0995	Transmission fluid pressure (TFP) sensor F - circuit high	Wiring short to positive, TFP sensor, ECM/PCM/TCM
P0995	Transmission fluid pressure (TFP) switch F - circuit high	Wiring short to positive, TFP switch, ECM/PCM/TCM
P0996	Transmission fluid pressure (TFP) sensor F - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/PCM/TCM
P0996	Transmission fluid pressure (TFP) switch F - circuit intermittent	Wiring, poor connection, TFP switch, ECM/PCM/TCM
P0997	Shift solenoid (SS) F - range/performance problem	Wiring, poor connection, shift solenoid (SS), ECM/PCM/TCM
P0998	Shift solenoid (SS) F - circuit low	Wiring short to earth, shift solenoid (SS), ECM/PCM/TCM
P0999	Shift solenoid (SS) F - circuit high	Wiring short to positive, shift solenoid (SS), ECM/PCM/TCM
P099A	Shift solenoid (SS) G - control circuit range/performance	Wiring, SS, TCM, ECM
P099B	Shift solenoid (SS) G - control circuit low	Wiring, SS, TCM, ECM
P099C	Shift solenoid (SS) G - control circuit high	Wiring, SS, TCM, ECM
P099D	Shift solenoid (SS) H - control circuit range/performance	Wiring, SS, TCM, ECM
P099E	Shift solenoid (SS) H - control circuit low	Wiring, SS, TCM, ECM
P099F	Shift solenoid (SS) H - control circuit high	Wiring, SS, TCM, ECM