

BMW Manufacturer-specific OBD2 Codes

Codes	Definition
P1001	WT control circuit malfunction – no signal, bank 1
P1002	VVT sensor circuit, solenoid loss, bank 1
P1003	VVT sensor circuit malfunction – no input, bank 1
P1004	VVT supply voltage circuit malfunction – high input, bank 1
P1005	VVT self-test, bank 1 – adaptive learning – positions not stored
P1006	WT self-test – out of range, bank 1
P1007	VVT self-test – out of range, bank 1
P1008	VVT control circuit , bank 1 – diagnostic fault
P1009	VVT sensor circuit, bank 1 -diagnostic fault
P1010	VVT control motor, bank 1 – position circuit malfunction
P1011	VVT control circuit – current too high
P1012	WT control circuit, bank 1 – high input
P1013	VVT control circuit, bank 1 – low input
P1014	WT control motor, bank 1 – supply voltage high input
P1015	WT control motor, bank 1 – supply voltage low input
P1017	VVT control module – internal fault, current too high
P1018	VVT control module – internal fault, voltage low
P1019	VVT starting position/rest position comparison – circuit malfunction, bank 1
P101A	WT overload protection – high input, bank 1
P101B	P101B - Oxygen Sensor Circuit No Activity Detected Bank 2 Sensor 1
P1020	WT overload protection, control motor- current high, bank 1
P1021	WT overload protection – control motor current too high
P1022	WT overload protection – control motor temperature too high
P1023	Fuel Control Mixture Lean Bank 1 Sensor 1
P1024	Fuel Control Mixture Lean Bank 2 Sensor 1
P1025	Fuel Control Mixture Rich Bank 2 Sensor 1
P1026	O2 Sensor Circuit Slow Response in Lean Control Range Bank 1 Sensor 1
P1027	O2 Sensor Circuit Slow Response in Rich Control Range Bank 1 Sensor 1
P1028	Pre-Catalyst Fuel Trim Too Rich Bank 1
P102C	Pre-Catalyst Fuel Trim Too Lean Bank 2
P1030	O2 Sensor Circuit Slow Response in Rich Control Range Bank 2 Sensor 1
P1031	O2 Sensor Circuit Slow Switching From Lean to Rich Bank 1 Sensor 1
P1033	O2 Sensor Circuit Slow Switching From Lean to Rich Bank 2 Sensor 1
P1034	O2 Sensor Circuit Slow Response after Coast Down Fuel Cutoff Bank 1 Sensor 1
P1036	O2 Sensor Circuit Slow Response after Coast Down Fuel Cutoff Bank 2 Sensor 2
P1037	Throttle position sensor (TPS), sensor A and B – range/performance
P1039	Manifold differential pressure (MOP) sensor, bank 1 – pressure above upper limit
P103A	Manifold differential pressure (MOP) sensor, bank 1 – pressure below lower limit
P1040	Engine Coolant Temperature Radiator Outlet Sensor High Input

P1041	Mass Or Volume Air Flow Circuit Low Input Bank 2
P1042	Mass Or Volume Air Flow Circuit High Input Bank 2
P1043	Intake air temperature (IAT) sensor 1, bank 1 – maximum temperature implausible
P1044	Intake air temperature (IAT) sensor 1, bank 1 – minimum temperature implausible
P1045	Heated oxygen sensor (HO2S) 1, bank 2 – open circuit
P1046	Pedal Position 1 Range/Performance Problem
P1047	Pedal Position 1 High Input
P1048	Heated oxygen sensor (HO2S) 1, bank 1 – open circuit
P1049	Heated oxygen sensor (HO2S) 2, bank 2 – dynamic test malfunction
P1050	O2 Sensor Heater Control Circuit Bank 1 Sensor 1
P1051	O2 Sensor Heater Circuit Signal Intermittent Bank 1 Sensor 2
P1052	O2 Sensor Heater Circuit Low Voltage Bank 1 Sensor 1
P1053	O2 Sensor Heater Circuit High Voltage Bank 1 Sensor 1
P1054	O2 Sensor Heater Circuit Signal Intermittent Bank 1 Sensor 2
P1055	O2 Sensor Heater Circuit High Voltage Bank 1 Sensor 2
P1056	Solenoid Valve Running Losses Control Circuit Electrical
P1057	Post catalytic convertor fuel trim (FT), bank 1 – too lean
P1058	Post catalytic convertor fuel trim (FT), bank 2 – too rich
P1059	Post catalytic convertor fuel trim (FT), bank 2 – too lean
P105A	Mass air flow (MAF) sensor – defective
P105B	O2 Sensor Heater Circuit Signal Intermittent Bank 2 Sensor 1
P1060	O2 Sensor Heater Circuit Low Voltage Bank 2 Sensor 1
P1061	O2 Sensor Heater Circuit High Voltage Bank 2 Sensor 1
P1062	O2 Sensor Heater Circuit Low Voltage Bank 2 Sensor 2
P1063	O2 Sensor Heater Circuit High Voltage Bank 2 Sensor 2
P1064	Mass air flow (MAF) sensor – defective
P1068	Fuel Trim Additive Bank 2 Low
P1069	Engine oil temperature (EOT) sensor - range/performance problem
P1070	Fuel Trim Additive Per Ignition Bank 1 Low
P1071	Fuel Trim Additive Per Ignition Bank 1 High
P1072	Fuel Trim Additive Per Ignition Bank 2 Low
P1075	Mass air flow (MAF) sensor – range/ performance
P1076	Ambient Pressure Sensor Learned Value Error
P1077	Ambient Pressure Sensor Rationality Check
P1078	Fuel trim (FT), Bank 1 - range/performance problem
P1079	Fuel Trim Adaptation Additive Bank 2 Malfunction
P107A	Heated oxygen sensor (HO2S) 1, Bank 1 - slow response
P107B	O2 Sensor Slow Response Bank 2
P107C	O2 Sensor Signal Circuit Slow Switching From Rich to Lean Bank 1 Sensor 1
P1080	O2 Sensor Signal Circuit Slow Switching From Rich to Lean Bank 2 Sensor 1
P1081	O2 Sensor Signal Circuit Slow Switching From Rich to Lean Bank 1 Sensor 2
P1082	O2 Sensor Signal Circuit Slow Switching From Rich to Lean Bank 2 Sensor 2
P1083	O2 Sensor Bank 1 Sensor 2 Open Circuit During Coast Down Fuel Cut-off
P1084	O2 Sensor Bank 2 Sensor 2 Open Circuit During Coast Down Fuel Cut-off
P1085	Heated oxygen sensor (HO2S) 2, Bank 2 - heater circuit malfunction
P1086	O2 Sensor Heater Control Circuit Bank 2 Sensor 2

P1087	Fuel trim (FT), Bank 1 - range/performance problem
P1088	Fuel Control Bank 2 Sensor 1
P1090	Pre-Catalyst Fuel Trim System Bank 1
P1091	Pre-Catalyst Fuel Trim System Bank 2
P1092	Post-catalyst Fuel Trim System Bank 1
P1093	Post-catalyst Fuel Trim System Bank 2
P1094	Manifold differential pressure (MOP) sensor, bank 1 – signal high
P1095	Manifold differential pressure (MOP) sensor, bank 1 – signal low
P1096	Fuel pump – speed too high
P1097	Fuel pump – speed too low
P1098	Fuel pump – emergency operation
P1100	Fuel pump – temperature too high
P1104	Pedal Position Sensor 2 High Input
P1105	Fuel pump relay – primary circuit high voltage
P110F	Fuel pump – emergency cut-off
P1112	Fuel Pressure Low
P1116	Charge Air Pressure Actuator Short Circuit To Ground
P1117	Engine torque difference Bank 1 to 2 - malfunction
P1118	Ambient Air Pressure Sensor Electrical
P111E	Switching Solenoid for Air Assisted Injection Valves Bank 1 Control Circuit Signal Low
P111F	Switching Solenoid for Air Assisted Injection Valves Bank 2 Control Circuit Electrical
P1120	Switching Solenoid for Air Assisted Injection Valves Bank 2 Control Circuit Signal Low
P1121	Switching Solenoid for Air Assisted Injection Valves Bank 2 Control Circuit Signal High
P1122	Camshaft position (CMP) sensor A, bank 1 – timing error
P1123	Ignition system diagnostic monitor, cylinder 1 – duration too short
P1124	Ignition system diagnostic monitor, cylinder 2 – duration too short
P112B	Ignition system diagnostic monitor, cylinder 3 – duration too short
P112C	Ignition system diagnostic monitor, cylinder 4 – duration too short
P1130	Ignition system diagnostic monitor, cylinder 6 – duration too short
P1131	A' Camshaft Position Plausibility
P1132	Fuel System Error
P1134	B' Camshaft Position Plausibility
P1135	Knock sensor (KS) 2, bank 1 – low input
P1136	Knock sensor (KS) 2, bank 1 – high input
P1137	Knock Sensor 4 Low Input
P1138	Knock Sensor 4 High Input
P1139	Multiple Cylinder Misfire During Start
P113A	Multiple Cylinder Misfire With Fuel Cut-off
P113B	Misfire During Start Cylinder 1
P1140	Misfire Cylinder 1 With Fuel Cut-off
P1145	Misfire During Start Cylinder 2
P114A	Misfire Cylinder 2 With Fuel Cut-off
P114B	Misfire During Start Cylinder 3
P114C	Misfire Cylinder 3 With Fuel Cut-off
P114D	Misfire During Start Cylinder 4
P114F	Misfire Cylinder 4 With Fuel Cut-Off

P1150	Misfire During Start Cylinder 5
P1151	Misfire Cylinder 5 With Fuel Cut-Off
P1152	Misfire During Start Cylinder 6
P1153	Misfire Cylinder 6 With Fuel Cut-Off
P1155	Misfire During Start Cylinder 7
P1156	Misfire Cylinder 7 With Fuel Cut-Off
P1157	Misfire During Start Cylinder 8
P1159	Misfire Cylinder 8 With Fuel Cut-Off
P115A	Misfire Cylinder 9 With Fuel Cut-Off
P115B	Knock sensor (KS) 2, bank 1 – range/performance
P115C	Misfire During Start Cylinder 10
P1160	Misfire Cylinder 10 With Fuel Cut-Off
P1161	Misfire During Start Cylinder 11
P1162	Misfire Cylinder 11 With Fuel Cut-Off
P1163	Misfire During Start Cylinder 12
P1164	Misfire Cylinder 12 With Fuel Cut-Off
P1165	Ignition system diagnostic monitor – electrical malfunction
P116C	Knock Sensor 3 Circuit
P116E	Knock Sensor 4 Circuit
P1171	Knock sensor(s) (KS) - circuit malfunction
P1172	Crankshaft position (CKP) sensor – timing plausibility
P1173	Camshaft Position Sensor 'B' Circuit Bank 1
P1174	Heated Catalyst Battery Voltage or Current too Low During Heating Bank 1
P1175	Heated Catalyst Current Too High During Heating Bank 1
P1176	Heated Catalyst Power Switch Overtemperature Condition Bank 1
P1177	Carbon Canister Shut Off Valve Control Circuit Electrical
P1178	Heated Catalyst Current too High During Heating Bank 2
P1179	Heated Catalyst Power Switch Overtemperature Condition Bank 2
P1180	Heated Catalyst Internal Control Module Checksum/ROM Error
P1181	Fuel level signal, 1 – incorrect value
P1182	Fuel level signal, 2 – incorrect value
P1183	Secondary air injection (AIR), bank 1, bank 2 – insufficient flow detected
P1186	Fuel injection – injector cut-off
P1187	Secondary air injection (AIR), pump relay – signal low
P1188	Secondary air injection (AIR), pump relay – signal high
P1189	Mass air flow (MAF)/vane air flow (VAF) – flow too low
P1190	Throttle control system – incorrect air flow
P1191	Secondary Air Valve Or The Tube Blocked
P1192	Secondary Air System Air Mass Flow Sensor Disconnected or Stuck Signal
P1193	Secondary Air Valve Control Circuit Electrical
P1197	Secondary Air System Bank 2
P1198	Mass air flow (MAF)/vane air flow (VAF) – flow too high
P1199	Secondary Air Injection System Incorrect Flow Detected
P1214	Fuel tank leakage diagnostic module
P1215	Catalyst temperature sensor – wrong code
P1216	Purge Control Valve Control Circuit Signal Low

P1217	Catalyst temperature sensor – correlation error
P1221	Catalyst temperature sensor – range error
P1222	Purge Control Valve Control Circuit Signal High
P1223	Leakage Diagnostic Pump Control Open Circuit
P1230	Leakage Diagnostic Pump Control Circuit Signal Low
P1234	Leakage Diagnostic Pump Control Circuit Signal High
P1236	Diagnostic Module Tank Leakage Pump Control Open Circuit
P1244	Diagnostic Module Tank Leakage Pump Control Circuit Signal Low
P1250	Diagnostic Module Tank Leakage Pump Control Circuit Signal High
P1252	Fuel tank leakage diagnostic module – pump current too high
P1270	Fuel tank leakage diagnostic module – pump current too low
P1271	Fuel tank leakage diagnostic module – pump current too high
P1283	Diagnostic Module Tank Leakage Switching Solenoid Open Circuit
P1284	Diagnostic Module Tank Leakage Switching Solenoid Control Circuit Signal Low
P1285	Diagnostic Module Tank Leakage Switching Solenoid Control Circuit Signal High
P1287	Secondary air injection (AIR), pump relay – signal low
P1288	Secondary Air Injection Pump With Series Resistor Control Circuit Electrical
P1289	Heated Catalyst Heater Power Switch Temperature Sensor Electrical Bank 1
P1300	Heated Catalyst Heater Power Supply Open Circuit Bank 2
P1301	Heated Catalyst Heater Power Switch Temperature Sensor Electrical Bank 2
P1302	Heated Catalyst Gate Voltage Signal Low
P1303	Heated Catalyst Internal Control Module Checksum/ROM Error
P1304	Heated Catalyst Battery Temperature Sensor 1 Electrical
P1305	Heated Catalyst Battery Temperature Sensor 2 Electrical
P1306	Heated Catalyst Battery Temperature Sensor 1 or 2 Plausibility
P130A	Heated Catalyst Power Switch Temperature Sensor Plausibility
P1313	Heated Catalyst Comparison Battery Voltages of Power Switches Plausibility
P1314	Heated Catalyst Battery Disconnecting Switch Plausibility
P1317	Evaporative emission (EVAP) canister purge valve - ECM output stage
P1327	Diagnostic Module Tank Leakage Pump Current Plausibility
P1328	Leakage Diagnostic Pump Clamped Tube
P1329	Leakage Diagnostic Pump Reed Switch Did Not Open
P1330	Evaporative Emissions System Leak Detected
P1332	Brake Boost Vacuum System Mechanical Failure
P1333	Downstream Throttle Air Leak
P1340	Unmetered Air After Compressor
P1341	Electric fan self-test fault
P1342	Radiator ventilation self-test fault
P1343	Manifold differential pressure circuit, actuator 1 – mechanical fault
P1344	Manifold differential pressure circuit, actuator 2 – mechanical fault
P1345	Radiator ventilation, lower- electrical fault
P1346	Radiator ventilation, upper- electrical fault
P1347	Radiator ventilation – electrical fault
P1348	Battery temperature sensor circuit – temperature error
P1349	Idle Speed Control Valve Stuck Closed
P1350	Idle Speed Control Valve Closing Solenoid Control Circuit Signal High or Low

P1351	Idle Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1352	Idle Speed Control Valve Closing Solenoid Control Open Circuit
P1353	Idle Speed Control Valve Closing Solenoid Control Circuit Electrical
P1354	Idle Speed Control Valve Open Solenoid Control Circuit Signal High
P1355	Idle Speed Control Valve Open Solenoid Control Circuit Signal Low
P1356	Idle Speed Control Valve Opening Solenoid Control Open Circuit
P1357	Idle speed control (ISC) actuator - malfunction
P1358	Battery temperature sensor circuit – electrical fault
P1359	Battery temperature sensor circuit – electrical fault
P135B	Battery temperature sensor circuit
P135C	Battery temperature sensor circuit – voltage error
P1360	Battery temperature sensor circuit – current error
P1361	Idle Speed Control Valve Stuck
P1362	Manifold differential pressure circuit – electrical fault
P1363	Manifold differential pressure circuit – signal low
P1364	Manifold differential pressure circuit – signal high
P1365	Engine off timer – implausible signal
P1377	MS40/41/42/46/M5. 2: Inlet camshaft control system, end position - plausibility
P1381	Battery temperature sensor circuit – electrical fault
P1382	Battery temperature sensor circuit – electrical fault
P1383	Battery temperature sensor circuit
P1384	Oil quality sensor- communication error
P1385	Inlet camshaft control system, camshaft position - plausibility
P1386	Camshaft Position Actuator 'A' Signal High Bank 1
P1396	Camshaft position (CMP) actuator, inlet camshaft - ECM output stage
P1397	Inlet camshaft control system, Bank 2 - ECM output stage
P1400	Camshaft Position Actuator 'A' Control Circuit Signal Low Bank 1
P1401	Camshaft Position Actuator 'A' Control Circuit Signal High Bank 1
P1402	Camshaft position (CMP) actuator, exhaust camshaft - ECM output stage
P1403	Idle Air Control Actuator 2 Target Position Fault
P1404	Camshaft Position Actuator 'B' Control Open Circuit Bank 1
P1405	Camshaft Position Actuator 'B' Control Open Circuit Bank 2
P1406	Camshaft Position Actuator 'B' Control Circuit Signal Low Bank 2
P1407	Camshaft Position Actuator 'B' Control Circuit Signal High Bank 2
P1408	Electronic stability program (ESP) control switch – input too high
P140A	Electronic stability program (ESP) control switch – input too low
P140E	Pedal Position Sensor Electrical
P1413	Pedal Position Sensor
P1414	Pedal Position Sensor
P1415	Pedal Position Sensor
P1417	Pedal Position Sensor
P1418	Idle speed control (ISC) actuator - malfunction
P1419	Engine off timer – timeout
P1420	Camshaft Position Actuator 'A' Control Open Circuit Bank 1
P1421	Engine position system B, bank 1 – performance
P1422	Engine position system A, bank 1 – performance –

P1423	Camshaft Position Actuator 'A' Control Open Circuit Bank 1
P1424	Cruise control signal – interface fault
P1432	Camshaft Position Actuator 'B' Control Open Circuit Bank 1
P1434	Cold start idle air control (IAC) system – RPM lower then expected
P1438	Cruise control switch – defective
P1439	Control Module Selection
P143C	Camshaft Position Actuator 'B' Control Open Circuit Bank 1
P143E	Camshaft Position Actuator 'A' Control Open Circuit Bank 2
P1440	Cruise control signal – interface fault
P1441	Oil pump circuit – high voltage
P1442	Oil pump circuit – low voltage
P1443	Oil pump circuit – open circuit
P1444	Random/multiple cylinder(s) - misfire detected
P1445	Oil quality sensor – temperature error
P1446	Oil quality sensor – temperature error
P1447	Knock sensor(s) (KS) - circuit malfunction
P1448	Idle Air Control Actuator 2 Random Access Memory Error
P1449	Engine oil pressure – mechanical control solenoid sticking deactivated
P1450	Engine oil pressure – too high
P1451	Engine oil pressure – too high before start
P1452	Engine oil pressure – too low before start
P1453	Charging system – battery discharged
P1454	Charging system – voltage low
P1457	Charging system – voltage high
P1459	Charging system – battery discharged/disconnected
P1460	Charging system – battery discharged
P1461	ECM self-test – electrical fault
P1462	Map Cooling Thermostat Control Circuit Signal Low
P1463	Map Cooling Thermostat Control Circuit Signal High
P1464	Engine coolant temperature (ECT) sensor, ECM controlled cooling system - ECM output stage
P1465	MIL Request Signal Active
P1466	Accelerator pedal position (APP) sensor, supply voltage 2 – electrical fault
P1467	Throttle valve – adaptation failure
P1468	Throttle valve adaptation – limp home position incorrect
P1470	Throttle valve adaptation – return spring test failed, bank 1
P1472	Throttle valve adaptation – mechanical stop not adapted, bank 1
P1473	Throttle valve control circuit, bank 1 -circuit malfunction
P1475	Throttle position control – control deviation, bank 1
P1476	Throttle position control – throttle stuck temporarily, bank 1
P1477	Throttle position control – throttle stuck permanently, bank 1
P1478	Throttle valve adaptation – mechanical stop not adapted, bank 1
P1479	Accelerator pedal position (APP) sensor, supply voltage 1 – electrical fault
P1497	ECM – internal fault
P1498	Cruise control module self-test – internal fault
P14A3	Pressure Of Diesel Particulate Filter Implausible To Atmospheric Pressure Or Boost Pressure
P14C0	Cruise control signal – malfunction

P14C1	Cruise control signal – implausible signal
P14C2	ECM – internal fault
P14C3	Throttle valve actuator, start test – adaptive learning not complete
P14C4	Malfunction indicator lamp (MIL) - circuit malfunction
P14C5	Throttle valve adaptation – limp home position failed
P14C6	ECM – internal fault
P1500	ECM – internal fault
P1501	Time out control module – knock sensor (KS) bus
P1502	Time out control module – output bus
P1503	ECM self-test – cruise control monitoring fault
P1504	ECM self-test- mass air flow (MAF) sensor monitoring fault
P1505	ECM self-test – throttle position (TP) monitoring fault
P1506	ECM self-test – speed monitoring reset
P1507	ECM self-test – accelerator pedal position (APP) monitoring fault
P1508	ECM self-test- idle air control (IAC) system fault
P1509	ECM self-test – idle air control (IAC) system fault
P150A	ECM self-test – cruise control distance monitoring fault
P150B	ECM self-test- torque converter clutch (TCC) monitoring fault
P150C	ECM self-test- torque loss monitoring fault
P150D	ECM self-test – electronic stability program (ESP) monitoring
P150E	ECM self-test – speed limitation monitoring fault
P150F	CAN interface timeout
P1510	Fuel pump circuit – no signal
P1511	CAN Torque Interface
P1512	WT limp home mode – high input
P1513	WT limp home mode – open circuit
P1515	WT control circuit, solenoid loss, bank 1
P1519	WT control circuit – reset malfunction, bank 1
P151A	WT control circuit malfunction – implausible sensor data, bank 1
P151B	WT control circuit – reset malfunction, bank 2
P151C	WT control circuit malfunction – implausible sensor data, bank 2
P1520	WT sensor circuit, solenoid loss, bank 1
P1521	WT sensor circuit malfunction – implausible sensor data, bank 1
P1522	VVT sensor circuit – implausible sensor data, bank 1
P1523	WT sensor circuit – implausible sensor data, bank 2
P1524	WT supply voltage circuit malfunction – high input, bank 1
P1525	WT supply voltage circuit malfunction -low input, bank 1
P1526	WT supply voltage circuit malfunction – high input, bank 2
P1527	WT supply voltage circuit malfunction – low input, bank 2
P1528	VVT self-test – out of range, bank 1
P1529	VVT self-test- out of range, bank 1
P152A	VVT self-test – no value, bank 1
P152B	VVT self-test – out of range, bank 2
P1530	VVT self-test – out of range, bank 2
P1531	VVT self-test – no value, bank 2
P1532	WT control motor, bank 1 – position circuit malfunction

P1533	VVT actuator, bank 1 – direction of rotation malfunction
P1534	VVT control motor, bank 2 – position circuit malfunction
P1540	VVT actuator, bank 2 – direction of rotation malfunction
P1541	VVT CAN timeout, bank 1
P1542	VVT CAN timeout, bank 1
P1543	VVT CAN timeout, bank 2
P1544	VVT CAN timeout, bank 2
P1545	VVT control module, bank 1 – EEPROM error
P1546	VVT control module, bank 1 – RAM error
P1550	VVT control module, bank 1 – ROM error
P1551	VVT control module, bank 2 – RAM error
P1552	VVT control module, bank 2 – ROM error
P1553	VVT control circuit, bank 1 – high input
P1554	VVT control circuit, bank 1 – low input
P1556	WT control circuit, bank 1 – short circuit
P155A	VVT control circuit, bank 1 – circuit malfunction
P1560	VVT control circuit, bank 2 – high input
P1561	VVT control circuit, bank 2 – short circuit
P1562	WT control motor, bank 1 – supply voltage high input
P1563	VVT control motor, bank 1 – supply voltage low input
P1564	VVT control motor, bank 1 – supply voltage circuit malfunction
P1565	WT control motor, bank 2 – supply voltage high input
P1569	WT control motor, bank 2 – supply voltage low input
P1576	VVT control motor, bank 2 supply voltage circuit malfunction
P1577	WT limp home mode, bank 1 – circuit malfunction
P1578	WT limp home mode, bank 1 – full stroke position not reached
P1582	VVT limp home mode, bank 1 – mass air flow (MAF) signal malfunction
P1583	WT starting position/rest position comparison – circuit malfunction, bank 1
P1584	WT sensor circuit – reset malfunction, bank 2
P1585	WT sensor circuit malfunction – no input, bank 2
P1586	WT control module, bank 1 – internal fault
P1587	WT control module, bank 2 – internal fault
P1588	WT overload protection – high input, bank 1
P1589	WT overload protection, ECU temperature – high input, bank 1
P1593	WT overload protection, control motor temperature – high input, bank 1
P1598	VVT overload protection, control motor – current high, bank 1
P15A1	WT overload protection – high input, bank 2
P15A2	WT overload protection, ECU temperature – high input, bank 2
P15A3	WT overload protection, control motor temperature – high input, bank 2
P15A6	WT overload protection, control motor – current high, bank 2
P15A7	Manifold differential pressure (MDP) sensor, bank 1 – pressure above upper limit
P15B9	Check Valve (Intake Manifold) Leak Detected
P1603	Manifold differential pressure (MOP) sensor, bank 1 – pressure above upper limit
P160A	Manifold differential pressure (MOP) sensor, bank 1 – pressure above upper limit
P160C	Intake air temperature (IAT) sensor 1, bank 1 – maximum temperature implausible
P160D	Engine coolant temperature (ECT) sensor – minimum temperature implausible

P160E	Heated oxygen sensor (H02S) 2, bank 2 – dynamic test malfunction
P160F	Mass air flow (MAF)/volume air flow (VAF), 1 – incorrect signal
P1614	Mass air flow (MAF)/volume air flow (VAF), A – above upper limit
P1618	Mass air flow (MAF)/volume air flow (VAF), A – below lower limit
P1619	Mass air flow (MAF)/volume air flow (VAF), A- incorrect signal
P1620	Mass air flow (MAF)/volume air flow (VAF), A – above upper limit
P1622	Manifold differential pressure (MOP) sensor, bank 1 – signal high
P1624	Manifold differential pressure (MOP) sensor, bank 1 – signal low
P1625	Manifold differential pressure (MOP) sensor, bank 1 – implausible signal
P1630	Knock sensor (KS) 2, bank 1 – low input
P1631	Knock sensor (KS) 2, bank 1 – high input
P1632	Knock sensor (KS) 3 – low input
P1633	Knock sensor (KS) circuit 2, bank 1 – internal failure
P1634	ECM self-test – bank 1 knock control malfunction
P1635	Knock sensor (KS), 3 – control circuit internal failure
P1636	ECM self-test- bank 1 knock control fault
P1637	Fuel tank leakage diagnostic module – pump current too high
P1638	Fuel tank leakage diagnostic module – pump current too high
P1639	Radiator ventilation, upper- electrical fault
P163C	Radiator ventilation – electrical fault
P163E	Battery temperature sensor circuit – electrical fault
P1641	Battery temperature sensor circuit – electrical fault
P1642	Battery temperature sensor circuit
P1643	Battery temperature sensor circuit – temperature error
P1644	Battery temperature sensor circuit – current error
P1645	Manifold differential pressure circuit – electrical fault
P1649	Manifold differential pressure circuit – signal low
P164C	Manifold differential pressure circuit – signal high
P1650	Battery temperature sensor circuit – electrical fault
P165F	Battery temperature sensor circuit – electrical fault
P166A	Battery temperature sensor circuit
P166B	Oil quality sensor – communication error
P166C	Oil quality sensor – communication error
P166F	Vehicle speed sensor (VSS) – speed too low compared to reference value
P1675	Vehicle speed sensor (VSS) – speed too low compared to reference value
P1676	Engine off timer – timeout
P1677	Cold start idle air control (IAC) system – RPM higher then expected
P1678	Cold start idle air control (IAC) system – RPM lower then expected
P1680	Vehicle speed sensor (VSS) signal
P1681	Vehicle speed sensor (VSS) signal
P1685	Oil quality sensor – temperature error
P1686	ECM self-test- torque monitoring
P1690	Charging system – battery discharged
P1694	Charging system – voltage low
P169A	Charging system – voltage high
P16A0	Charging system – battery discharged/ disconnected

P16A1	Charging system – battery discharged
P16A3	Cruise control – no signal
P16A4	Throttle valve adaptation – limp home position incorrect
P16A5	Throttle valve adaptation – return spring test failed, bank 1
P16A6	Throttle valve adaptation – mechanical stop not adapted, bank 1
P16A7	Throttle position control – control deviation, bank 1
P16A8	Throttle position control – throttle stuck temporarily, bank 1
P16A9	Throttle position control – throttle stuck permanently, bank 1
P16B0	Engine control module (ECM) – incorrect voltage
P16B1	Engine control module (ECM) – incorrect voltage
P16B2	Engine control module (ECM) – communication error
P16B3	Throttle valve adaptation – aborted
P16B4	Throttle valve adaptation – aborted
P16B6	Throttle valve actuator – adaptation failure
P16B7	Throttle valve adaptation – mechanical stop not adapted, bank 1
P16B8	Engine control module (ECM) – RAM malfunction
P16B9	Engine control module (ECM) – ROM malfunction
P16C0	Starter request circuit – engine start request while engine is running
P16C1	Cruise control – implausible signal
P16C2	Cruise control – no signal
P16C5	Cruise control – no response
P16C6	Throttle position (TP) control circuit – internal malfunction
P16C8	Throttle position (TP) control circuit- speed ratio error
P1721	Throttle position (TP) control circuit – malfunction
P1732	ECM, knock sensor (KS) control – internal failure
P1770	CAN data bus monitoring – ETC timeout
P3263	EML Frequently Illuminating