

Trouble Code	Fault Location
<b>P1000 – P1099 (Fuel and air metering and auxiliary emission control)</b>	
P101C	BPV position fault while engine is in SCR heating mode
P101D	BPV position fault while engine is not in SCR heating mode
P101E	BPV CAN sensor has permanent governor deviation
P101F	BPV CAN sensor overload
P1020	BPV CAN sensor unspecified actuator fault
P1021	BPV CAN sensor command timeout
P1022	BPV CAN sensor current too high
P1023	BPV CAN sensor temperature too high
P1024	BPV CAN sensor power supply fault
P1025	BPV CAN sensor position fault
P1026	BPV CAN sensor calibration fault
P1027	BPV Power supply fault
P102A	Post Air Temperature BPV over range
P102B	Post Air Temperature BPV under range
P102C	Broken Turbine fault
P102D	AMF CAN sensor burn off timeout fault
P102E	AMF PCB temperature out of range at powerup
P102F	BPV temperature out of range at powerup
P1030	EGR temperature out of range at powerup
P1031	Vehicle speed acceleration/deceleration diagnostic fault
P1032	Vehicle speed not zero at key on check fault
P1037	Air pressure pre-BPV under range
P1038	Air pressure pre-BPV over range
P1039	DOCP Doc pressure too high fault
P103C	NOXCD NOx controller feedback monitor, inner clamping symptom
P103D	NOXCD NOx controller feedback monitor, EGR actuation limited symptom (low limit)

P103E	NOXCD NOx controller feedback monitor, EGR actuation limited symptom (high limit)
P103F	NOXCD NOx controller feedback monitor, VGT surge clamping symptom
P1040	DOCP Doc pressure too low fault
P1042	EMPCD P3 (exhaust air pressure before turbine) controller feedback monitor, inner clamping symptom
P1043	EMPCD P3 (exhaust air pressure before turbine) controller feedback monitor, VGT actuation limited symptom (low limit)
P1044	EMPCD P3 (exhaust air pressure before turbine) controller feedback monitor, VGT actuation limited symptom (high limit)
P1045	EMPCD P3 (exhaust air perssure before turbine) controller feedback monitor, VGT surge clamping symptom
P1046	High error fault of FAFPD diagnosis in idle
P1047	Low error fault of FAFPD diagnosis in idle
P1048	High error fault of FAFPD diagnosis in overrun
P1049	Low error fault of FAFPD diagnosis in overrun
P104A	Error of the FAFPD overflow diagnosis
P104B	APSPD P2 (boost air pressure) sensor plausibility fault (high threshold)
P104C	APSPD P2 (boost air pressure) sensor plausibility fault (low threshold)
P104D	APSPD P3 (exhaust air pressure before turbine) sensor plausibility fault (high threshold)
P1050	APSPD P5 (pre-DOC (or pos BPV) air pressure) sensor plausibility fault
P1051	SFS Preheat Plausibility fault
P1053	SFS Speed Plausibility fault
P1054	SFS Downhill Speed Controller Plausibility fault
P1055	SFS Retarder Plausibility fault
P1057	APSPD P3 (exhaust air pressure before turbine) sensor plausibility fault (low threshold)
P1058	APSPD Boost air pressure lo fault
P1062	SFS Cruise control Plausibility fault

P1081	Fuel temperature plausibility fault
P1086	Detects if the pressure in the rail does not rise within a given time period after the running of the engine, a keyoff-keyon or the entrance into
P1087	Fuel pressure low warning
P1088	Detects when rail pressure goes over threshold (APV) in the absence of railp sensor fault
P1089	Detects when rail pressure goes over threshold (APV) in the absence of railp sensor fault
P108A	Build up fault when low pres supply insufficient.
P1090	Detects when rail pressure goes over threshold (APV) in the absence of railp sensor fault
P1091	Rail Pressure Sensor high plausibility fault detected via HPV learning check.
P109C	High Pressure (dump) Valve current feedback min range fault
P109D	High Pressure (dump) Valve current feedback max range fault
<b>P1100 – P1199 (Fuel and air metering)</b>	
P1105	Engine Protection System - Approaching Shutdown state
P1106	Engine Protection System - Derated performance state
P1110	Intake air cooling temperature out of range
P1111	Boost air temp rate of change fault
P1115	Coolant temp high warning level
P1122	Sticking cruise fault
P1127	Post Intercooler Air Temperature high warning
P1128	Air temp too high
P1133	WRAF heater CJ125 short-circuit to battery fault for heater diagnostic
P1134	WRAF heater CJ125 short-circuit to ground fault for heater diagnostic
P1135	WRAF heater CJ125 short-to-battery fault
P1136	WRAF heater CJ125 short-to-ground fault
P1137	Wraf heater supply voltage test fault
P1138	WRAF heater CJ125 undervoltage fault

P1139	Wraf heater calibration test fault
P113A	Wraf heater control test fault
P113B	Wraf heater spi test fault
P1158	Front Axle LH Wheel Speed out of range fault
P1159	Front Axle RH Wheel Speed out of range fault
P1160	Rear Axle LH Wheel Speed out of range fault
P1161	Rear Axle RH Wheel Speed out of range fault
P1162	TCO1 message vehicle speed out of range fault
P1163	Transmission output shaft speed out of range
P1167	Indicates warning of leak flow restriction is blockage
P1168	Indicates that leak flow restriction is blocked
P1171	AFC correction minimum limits have been reached. System may be running lean.
P1172	AFC correction maximum limits have been reached. System may be running rich.
P1180	Fuel is hot due to too low fuel level and high amb temp.
P1181	Fuel temp rate of change fault
P118A	Control error HPV pos when low pres supply insufficient.
P1191	Indicates that the fuel filter is clogged
P1194	Indicates that the fuel filter is very clogged
P1195	Rail pressure calibration medium range fault
P1196	Rail pressure calibration high range fault
P1197	Rail pressure gradient fault
<b>P1200 – P1299 (Fuel and air metering – injector circuit)</b>	
P1201	Cylinder 1: Injector needle valve open circuit
P1202	Cylinder 1: Injector needle valve short circuit across injector
P1203	Cylinder 1: Injector needle valve low side short circuit to ground
P1204	Cylinder 1: Injector needle valve low side short circuit to battery voltage
P1205	Cylinder 5: Injector needle valve open circuit
P1206	Cylinder 5: Injector needle valve short circuit across injector

P1207	Cylinder 5: Injector needle valve low side short circuit to ground
P1208	Cylinder 5: Injector needle valve low side short circuit to battery voltage
P1209	Cylinder 3: Injector needle valve open circuit
P1210	Cylinder 3: Injector needle valve short circuit across injector
P1211	Cylinder 3: Injector needle valve low side short circuit to ground
P1212	Cylinder 3: Injector needle valve low side short circuit to battery voltage
P1213	Cylinder 6: Injector needle valve open circuit
P1214	Cylinder 6: Injector needle valve short circuit across injector
P1215	Cylinder 6: Injector needle valve low side short circuit to ground
P1216	Cylinder 6: Injector needle valve low side short circuit to battery voltage
P1217	Cylinder 2: Injector needle valve open circuit
P1218	Cylinder 2: Injector needle valve short circuit across injector
P1219	Cylinder 2: Injector needle valve low side short circuit to ground
P1220	Cylinder 2: Injector needle valve low side short circuit to battery voltage
P1221	Cylinder 4: Injector needle valve open circuit
P1222	Cylinder 4: Injector needle valve short circuit across injector
P1223	Cylinder 4: Injector needle valve low side short circuit to ground
P1224	Cylinder 4: Injector needle valve low side short circuit to battery voltage
P1225	Cylinder 1 2 or 3: Injector needle valve high side short circuit to ground
P1226	Cylinder 1 2 or 3: Injector needle valve high side short circuit to battery voltage
P1227	Cylinder 4 5 or 6: Injector needle valve high side short circuit to ground
P1228	Cylinder 4 5 or 6: Injector needle valve high side short circuit to battery voltage
P1230	Cylinder 1: Injector spill valve short circuit across injector
P1234	Cylinder 5: Injector spill valve short circuit across injector

P1235	Turbo Speed Plausibility fault
P1238	Cylinder 3: Injector spill valve short circuit across injector
P1242	Cylinder 6: Injector spill valve short circuit across injector
P1246	Cylinder 2: Injector spill valve short circuit across injector
P1250	Cylinder 4: Injector spill valve short circuit across injector
P1263	Increase in combustion in cylinder 1 relative to the others.
P1266	Increase in combustion in cylinder 2 relative to the others.
P1269	Increase in combustion in cylinder 3 relative to the others.
P1272	Increase in combustion in cylinder 4 relative to the others.
P1275	Increase in combustion in cylinder 5 relative to the others.
P1278	Increase in combustion in cylinder 6 relative to the others.
P127A	EGR mass flow sensor egr too low fault data
P127B	EGR mass flow sensor egr too high fault data
P127C	EGR mass flow sensor plausibility fault data
P1280	AMF CAN sensor flow out of range
P1281	AMF CAN sensor reduced accuracy
P1282	AMF CAN sensor pulsation compensation active fault
P1283	AMF CAN sensor pulsation detected
P1284	AMF CAN sensor medium temperature out of range
P1285	AMF CAN sensor checksum error
P1286	AMF CAN sensor defective
P1287	AMF CAN sensor pcb over temperature
P1288	AMF CAN sensor supply voltage out of range
P1289	AMF CAN sensor water droplet impact fault
P128A	AMF CAN sensor burn off failed
P128A	Control error OMV pos when low pres supply insufficient.
P128E	Detects if the rail pressure error is low in rail discharge mode
P128F	Detects if the rail pressure error is high in rail discharge mode
P1298	Fault data for the oil system temperature high monitor

P12CD	Too long time between two tests at a certain rail pressure for injector 0.
P12CF	Too long time between two tests at a certain rail pressure for injector 1.
P12D1	Too long time between two tests at a certain rail pressure for injector 2.
P12D3	Too long time between two tests at a certain rail pressure for injector 3.
P12D5	Too long time between two tests at a certain rail pressure for injector 4.
P12D7	Too long time between two tests at a certain rail pressure for injector 5.
<b>P1300 – P1399 (Ignition system or misfire)</b>	
P1300	Combustion fault diagnosed by CSID module
P1301	Intermittent misfire cylinder 1
P1302	Intermittent misfire cylinder 5
P1303	Intermittent misfire cylinder 3
P1304	Intermittent misfire cylinder 6
P1305	Intermittent misfire cylinder 2
P1306	Intermittent misfire cylinder 4
P1335	No crank signal - Start on cam only.w/ fixed timing
P1336	High frequency corruption of crank signal during start up.
P1340	No cam sync - Possible long cranking period
P1341	High frequency corruption of cam signal during start up. Possible long crank
P1350	VGT status invalid fault detected
P1351	VGT data unreliable fault detected
P1352	VGT learn fault detected
P1354	VGT power supply low fault detected
P1356	VGT temperature too high fault detected
P138A	Control error discharge pos when low pres supply insufficient.
<b>P1400 – P1499 (Emission control)</b>	
P1400	EGR high rate fault when estimated EGR rate is greater than a APV

P1401	CCV pressure sensor max range fault
P1402	CCV pressure sensor min range fault
P1403	CCV pressure sensor offset fault
P1404	CCVCD fault if pressure sensor reading deviates too much from expected value at key on
P1405	Venturi pressure out of range low
P1406	Venturi pressure out of range high
P1407	CCVCD leakage fault
P1408	CCVCD fault if pressure has been detected as too high
P1409	EGR - Filtered air pressure high fault when air pressure is greater than a APV
P140A	CCVCD fault if pump (rotor) speed is detected to be too high
P140B	Venturi temperature rate of change fault
P140C	CCV inlet temperature sensor under range
P140D	CCV inlet temperature sensor over range
P140E	CCVCD fault if pump (rotor) speed is detected to be too low
P140F	Venturi Delta Pressure Plausibility (Positive) fault
P141C	CCV outlet temperature sensor under range
P141D	CCV outlet temperature sensor over range
P1457	Egr / Egr cooler temperature High warning
P1458	EGR output temperature differs from the predicted EGR temperature
P1480	EGR CAN sensor has permanent governor deviation
P1481	EGR CAN sensor overload
P1482	EGR CAN sensor unspecified actuator fault
P1483	EGR CAN sensor command timeout
P1484	EGR CAN sensor current too high
P1485	EGR CAN sensor temperature too high
P1486	EGR CAN sensor power supply fault
P1487	EGR CAN sensor position fault
P1488	EGR CAN sensor calibration fault



P1489	EGR valve stuck closed
P148A	OMV trim hi when low pres supply insufficient.
P1490	EGR valve stuck open
P1493	Fan speed out of range low fault
P1494	Fan speed out of range high fault
P1495	EGR failure detected causing fuel derate
P1496	System fault has caused the system to go into PM mode and close EGR valve.
P1497	EGR position fault while engine is in SCR heating mode
P1498	EGR position fault while engine is not in SCR heating mode
<b>P1500 – P1599 (Vehicle or idle speed control)</b>	
P1501	Vehicle speed sensor open circuit
P1502	Vehicle speed pulse width modulated mark space ratio
P1503	Vehicle speed sensor short circuit to battery voltage
P1504	Vehicle speed pulse width modulated duty cycle
P1505	Vehicle speed sensor frequency
P150F	Oil level startup low warning level
P1513	DEFOI Urea consumption category fault
P1514	DEFOI Urea dosing category fault
P1515	DEFOI EGR system category fault
P1516	DEFOI Monitor system category fault
P1517	DEFOI Urea quality category fault
P1518	DEFOI Torque reduction fault
P1519	DEFOI urea level warning fault (1st threshold)
P151A	DEFOI vehicle speed limit fault
P151B	DEFOI upcoming vehicle speed limit warning fault
P151C	DEFOI urea level low fault (2nd threshold)
P151D	DEFOI urea level medium fault (3rd threshold)
P151E	DEFOI urea severe fault (4th threshold)
P151F	DEFOI Engine speed limit failure

P1523	Oil pressure too high
P1524	Fault data for the oil system pressure low monitor
P1526	CM1 000986 out of range fault
P1529	Crankcase gas flow efficiency low
P153A	Crankcase gas flow leak
P153B	Crankcase Oil Mist Separator rotor underspeed
P153C	Crankcase Oil Mist Separator rotor overspeed
P1556	Coolant Level Sensor Plausibility fault
P1558	Coolant level sensor under range two
P1559	Coolant level sensor over range two
P1560	Coolant Level Low warning
P1563	Battery supply too low
P1564	Fuel Pressure out of range at powerup
P1565	Idle diagnostic speed error fault
P1566	Idle diagnostic fuel error fault
P1567	Acceleration pedal angle fault
P1568	Coolant Pump 1 PWM driver short circuit low
P1569	Coolant Pump 1 PWM driver short circuit high
P156A	Coolant Pump 1 PWM driver short open circuit
P156B	Coolant Pump 2 PWM driver short circuit low
P156C	Coolant Pump 2 PWM driver short circuit high
P156D	Coolant Pump 2 PWM driver short open circuit
P156E	Tachometer PWM driver short circuit low
P156F	Tachometer PWM driver short circuit high
P1570	Oil Temperature signal warm up fault
P1571	Oil Temperature signal normal operation fault
P1572	Post Compressor temperature plausibility fault
P1573	Intake Manifold Air Temperature too high
P1580	Turbo speed malfunction low
P1581	Turbo speed malfunction high

P158A	HPV trim HI when low pres supply insufficient.
<b>P1600 – P1699 (ECM – computer output circuit)</b>	
P1601	Customer data area checksum failure
P160A	Scheduler integrity error
P1644	Sensor 5V reference over range
P1645	Sensor 5V reference under range
P1650	Red stop lamp low side driver open circuit
P1652	Red stop lamp low side driver short circuit high
P1653	Amber warning lamp low side driver open circuit
P1655	Amber warning lamp low side driver short circuit high
P1682	Oil level high side driver open circuit
P1683	Oil level high side driver short circuit high
P1684	Oil level high side driver short circuit low
P1686	Starter motor low side driver open circuit
P1687	Starter motor low side driver short circuit high
P1688	Starter motor low side driver short circuit low
P1693	Ether Fluid Control ext pwm driver open circuit / short circuit high
P1694	Ether Fluid Control ext pwm driver short circuit low
P1698	Voltage reference 4 minimum range fault
P1699	Voltage reference 4 maximum range fault
<b>P1700 – P1799 (Transmission)</b>	
P1704	O2SRD Lambda Sensor Dynamic Overrun Diagnostic
P1705	O2SRD Lambda Sensor Model Dynamic Response Diagnostic low fault
P1706	O2SRD Lambda Sensor Model Dynamic Response Diagnostic high fault
P1707	O2SPD Lambda Sensor NOx sensor plausibility low fault
P1708	O2SPD Lambda Sensor NOx sensor plausibility high fault
P1709	O2SPD Lambda Sensor Overrun diagnostic
P170A	O2SPD Lambda Sensor Model Level Plausibility level low fault

P170B	O2SPD Lambda Sensor Model Level Plausibility level high fault
P170C	UNSRD NOx Sensor Overrun diagnostic
P170D	UNSRD NOx Sensor Up Model Dynamic Response negative fault
P170E	UNSRD NOx Sensor Up Model Dynamic Response positive fault
P170F	UNSPD NOx Sensor Overrun diagnostic
P1710	UNSPD NOx Model NOx Plausibility low fault
P1711	UNSPD NOx Model NOx Plausibility high fault
P1717	ARSPD T5 Plausibility Check
P1718	NOXCD NOx Control Deviation Diagnosis - positive
P1719	NOXCD NOx Control Deviation Diagnosis - negative
P171B	EGRRD NOx Governor Slow Response - decrement
P171C	EGRRD NOx Governor Slow Response - increment
P171D	EMTVP T3 Model disable diagnosis
P1721	SCRTD Heating Mode diagnosis
P1722	BPVDD Back Pressure Valve Diagnostic
P1723	EMPCD P3 ControlDeviation diagnosis fault - positive
P1724	EMPCD P3 ControlDeviation diagnosis fault - negative
P1726	EMPRD P3 Governor Slow Response diagnosis
P1727	VGTTDD Actuator PosDev diagnosis
P1729	DPFRM NMD regeneration Time out fault
P1751	Mil lamp driver short circuit to battery fault
<b>P1800 – P1899 (Transmission)</b>	
P1839	Upstream NOx sensor AT11GC1 high rate fault
P1840	Upstream NOx sensor AT11GC1 low rate fault
P1841	Upstream NOx sensor AT11GC2 high rate fault
P1842	Upstream NOx sensor AT11GC2 low rate fault
P1845	Upstream NOx sensor compatibility monitor fault
P1846	Upstream NOx sensor ECU-ID message high rate fault
P1847	Upstream NOx sensor ECU-ID message low rate fault
P1848	Upstream NOx sensor heater FMI monitor fault

P1849	Upstream NOx sensor heater response monitor fault.
P1850	Upstream NOx sensor heater-related data not available fault
P1851	Upstream NOx sensor heater-related data out of range fault
P1852	Upstream NOx sensor info-related data not available fault
P1853	Upstream NOx sensor info-related data out of range fault
P1854	Upstream NOx sensor NOx FMI monitor circuit fault
P1855	Upstream NOx sensor NOx persistent invalid monitor fault
P1856	Upstream NOx sensor NOx signal-related data not available fault
P1857	Upstream NOx sensor NOx signal-related data out of range fault
P1858	Upstream NOx sensor O2 FMI monitor circuit fault
P1859	Upstream NOx sensor O2 persistent invalid monitor fault
P1860	Upstream NOx sensor O2 signal-related data not available fault
P1861	Upstream NOx sensor O2 signal-related data out of range fault
P1862	Upstream NOx sensor power status low monitor faults
P1863	Propb AST 522902 out of range fault
P1863	Upstream NOx sensor power-related data not available fault
P1864	Upstream NOx sensor power-related data out of range fault
P1864	AFC slow learn compensation under range.
P1865	AFC slow learn compensation over range.
P1866	Exhaust Gas Pressure (pre turbine) sensor out of range high
P1867	Exhaust Gas Temperature (post BPV) sensor out of range high
P1868	Ambient air temperature sensor out of range high
P1869	Fuel temperature sensor out or range low
P1870	Crankcase ventilation pressure sensor out of range low
P1871	Turbocharger compressor pressure sensor out of range low
P1872	Turbocharger compressor pressure sensor out of range high
P1873	Turbocharger compressor temperature sensor out of range low
P1874	Turbocharger compressor temperature sensor out of range high
P1875	Relative humidity sensor out of range low
P1876	Barometric pressure sensor out of range high

P1876	Ambeint air temperature sensor out of range low
P1878	CCV pump speed sensor out or range high
P1879	Coolant temperature sensor out of range high
P187B	Coolant pump speed sensor out of range high
P1880	Fuel pressure sensor out of range high
P1882	Fuel temperature sensor out of range high
P1887	Post BPV pressure sensor out of range high
P188C	Air pressure sensor out of range high
P1891	Pre turbine pressure sensor out of range low
P1896	Turbo speed sensor out of range high
<b>P1900 – P1999 (Transmission)</b>	
P1909	Fault data for upstream NOx sensor heater warmup monitor