

Trouble code <sup>1</sup>	Fault location	Probable cause
P0000	No fault found	-
P0001	Fuel volume regulator control - circuit open	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 control - circuit open	Wiring open circuit, fuel shut-off valve
P0006	Fuel shut-off valve control - circuit low	Wiring short to earth, fuel shut-off valve
P0007	Fuel shut-off valve control - circuit high	Wiring short to positive, fuel shut-off valve
P0008	Engine position system, bank 1 - performance	Mechanical fault
P0009	Engine position system, bank 2 - performance	Mechanical fault
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 A - 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 A - correlation	Wiring, CKP sensor, CMP sensor, mechanical fault
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 circuit, bank 1 - range/performance	Wiring, intake valve control solenoid
P0027	Exhaust valve control solenoid circuit, bank 1 - range/performance	Wiring, exhaust valve control solenoid
P0028	Intake valve control solenoid circuit, bank 2 - range/performance	Wiring, intake valve control solenoid



<sup>1</sup> Some dates for EOBD:

2001	2002	2003	2004	2005
Gasoline cars less than 2500kg	Gasoline cars more than 2500kg	Mileage after DTC Lamp on	Diesel less than 2500kg, < 6 pass. total	Software Calibration Identification number

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P0029	Exhaust valve control solenoid circuit, bank 2 - range/performance	Wiring, exhaust valve control solenoid
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 (1C) wastegate regulating valve - circuit malfunction	Wiring, TC wastegate regulating valve, ECM
P0034	Turbocharger (TC) wastegate regulating valve - circuit low	Wiring short to earth, TC wastegate regulating valve, ECM
P0035	Turbocharger (TC) wastegate regulating 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	Turbo/supercharger bypass valve, control circuit » range/performance	Wiring, bypass valve
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	Turbo/supercharger boost control solenoid - circuit open	Wiring, boost control solenoid
P0046	Turbo/supercharger boost control solenoid - circuit range/performance	Wiring, boost control solenoid, mechanical fault
P0047	Turbo/supercharger boost control solenoid - circuit low	Wiring short to earth, boost control solenoid
P0048	Turbo/supercharger boost control solenoid - circuit high	Wiring short to positive, boost control solenoid
P0049	Turbo/supercharger turbine - over-speed	Mechanical fault
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
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 pressure (MAP) sensor/Mass air flow (MAP) sensor - throttle position correlation	Wiring, MAP sensor, MAP sensor, mechanical fault
P0069	Manifold pressure (MAP) sensor - barometric pressure correlation	MAP sensor, mechanical fault
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
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 - performance problem	Fuel pressure regulator, mechanical fault
P0090	Fuel metering solenoid - open circuit	Wiring open circuit, fuel metering solenoid, ECM
P0091	Fuel metering solenoid - short to earth	Wiring short to earth, fuel metering solenoid, ECM
P0092	Fuel metering solenoid - short to positive	Wiring short to positive, fuel metering solenoid, ECM
P0093	Fuel system leak detected - large leak	Wiring, fuel pressure sensor, mechanical fault
P0094	Fuel system leak detected - small leak	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
P0100	Mass airflow (MAF) sensor/volume airflow (VAF) sensor - circuit malfunction	Wiring, MAF/VAF sensor, ECM

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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
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 (ÄNO) sensor - circuit malfunction	Wiring, ÄNO sensor, ECM
P0116	Engine coolant temperature (ÄNO) sensor - range/performance problem	Coolant thermostat, poor connection, wiring, ÄNO sensor
P0117	Engine coolant temperature (ÄNO) sensor - low input	Coolant thermostat, wiring short to earth, ÄNO sensor
P0118	Engine coolant temperature (ÄNO) sensor - high input	Coolant thermostat, wiring open circuit/short to positive, earth wire defective, ÄNO sensor
P0119	Engine coolant temperature (ÄNO) sensor - circuit intermittent	Wiring, poor connection, ÄNO sensor, ECM
P0120	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - circuit malfunction	Wiring, TP/APP sensor, ECM
	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - circuit malfunction	Wiring, TP/APP switch, ECM
P0121	Throttle position (TP) sensor A/accelerator pedal position (APR) sensor A - range/performance problem	Accelerator cable adjustment, TP/APP sensor
	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - range/performance problem	Accelerator cable adjustment, TP/APP switch
P0122	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - low input	Wiring short to earth, TP/APP sensor, ECM
	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - low input	Wiring short to earth, TP/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
	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - high input	Wiring short to positive, TP/APP switch, ECM
P0124	Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - circuit intermittent	Wiring, poor connection, TP/APP sensor, ECM
	Throttle position (TP) switch A/accelerator pedal position (APP) switch A - circuit intermittent	Wiring, poor connection, TP/APP switch, ECM
P0125	Insufficient coolant temperature for closed loop fuel control	Wiring, cooling system, coolant thermostat, ÄNO sensor
P0126	Insufficient coolant temperature for stable operation	Wiring, cooling system, coolant thermostat, ÄNO sensor

P0127	Intake air temperature - too high	Wiring short to earth, IAT sensor 2, mechanical fault, ECM
P0128	Coolant thermostat - coolant temp below thermostat regulating temperature	Mechanical fault
P0129	Barometric pressure - too low	Wiring, BARO sensor, mechanical fault
P0130	Heated oxygen sensor (HO2S) 1, bank 1 - circuit malfunction	Heating inoperative, poor connection, wiring, HO2S
	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
	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
	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
	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
	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
	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
	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
	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
	Oxygen sensor (O2S) 2, bank 1 - slow response	Wiring, O2S
P0140	Heated oxygen sensor (HO2S) 2, bank 1 - no activity detected	Wiring, heating inoperative, HO2S, ECM
	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
	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
	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
	Oxygen sensor (O2S) 3, bank 1 - slow response	Wiring, O2S
P0146	Heated oxygen sensor (HO2S) 3, bank 1 - no activity detected	Wiring, HO2S, ECM
	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
P0150	Heated oxygen sensor (HO2S) 1, bank 2 - circuit malfunction	Wiring, HO2S, ECM
	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
	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
	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

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	Oxygen sensor (O2S) 1, bank 2 - slow response	Wiring, O2S
P0154	Heated oxygen sensor (HO2S) 1, bank 2 - no activity detected	Wiring, HO2S, ECM
	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
	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
	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
	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
	Oxygen sensor (O2S) 2, bank 2 - slow response	Wiring, O2S
P0160	Heated oxygen sensor (HO2S) 2, bank 2 - no activity detected	Wiring, HO2S, ECM
	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
	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
	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
	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
	Oxygen sensor (O2S) 3, bank 2 - slow response	Wiring, O2S
P0166	Heated oxygen sensor (HO2S) 3, bank 2 - no activity detected	Wiring, HO2S, ECM
	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 A - circuit malfunction	Wiring, fuel temperature sensor, ECM

P0186	Fuel temperature sensor A - range/performance problem	Fuel temperature sensor
P0187	Fuel temperature sensor A - low input	Wiring short to earth, fuel temperature sensor, ECM
P0188	Fuel temperature sensor A - high input	Wiring short to positive, fuel temperature sensor, ECM
P0189	Fuel temperature sensor A - circuit intermittent	Wiring, poor connection, fuel temperature sensor, ECM
P0190	Fuel rail pressure (FRP) sensor- circuit malfunction	Wiring, fuel rail pressure 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
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, cooling system, coolant thermostat, AÑO sensor
P0218	Transmission over temperature condition	Wiring, TFT sensor, ECM
P0219	Engine over speed condition	Incorrect gear change
P0220	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor A - circuit malfunction	Wiring, TP/APP sensor, ECM
	Throttle position (TP) switch B/accelerator pedal position (APP) switch A - circuit malfunction	Wiring, TP/APP switch, ECM
P0221	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor A - range/performance problem	Accelerator cable adjustment, TP/APP sensor
	Throttle position (TP) switch B/accelerator pedal position (APP) switch A - range/performance problem	Accelerator cable adjustment, TP/APP switch
P0222	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor A - low input	Wiring short to earth, TP/APP sensor, ECM
	Throttle position (TP) switch B/accelerator pedal position (APP) switch A - low input	Wiring short to earth, TP/APP switch, ECM
P0223	Throttle position (TP) sensor B/accelerator pedal position (APP) sensor A - high input	Wiring short to positive, TP/APP sensor, ECM
	Throttle position (TP) switch B/accelerator pedal position (APP) switch A - high input	Wiring short to positive, TP/APP switch, ECM
P0224	Throttle position (IP) sensor B/accelerator pedal position (APP) sensor A - circuit intermittent	Wiring, poor connection, TP/APP sensor, ECM
	Throttle position (TP) switch B/accelerator pedal position (APP) switch A - circuit intermittent	Wiring, poor connection, TP/APP switch, ECM

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P0225	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor Ñ - circuit malfunction	Wiring, TP/APP sensor, ECM
	Throttle position (TP) switch C/accelerator pedal position (APP) switch Ñ - circuit malfunction	Wiring, TP/APP switch, ECM
P0226	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor Ñ - range/performance problem	Accelerator cable adjustment, TP/APP sensor
	Throttle position (TP) switch C/accelerator pedal position (APP) switch Ñ - range/performance problem	Accelerator cable adjustment, TP/APP switch
P0227	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor Ñ - low input	Wiring short to earth, TP/APP sensor, ECM
	Throttle position (TP) switch C/accelerator pedal position (APP) switch Ñ - low input	Wiring short to earth, TP/APP switch, ECM
P0228	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor Ñ - high input	Wiring short to positive, TP/APP sensor, ECM
	Throttle position (TP) switch C/accelerator pedal position (APP) switch Ñ - high input	Wiring short to positive, TP/APP switch, ECM
P0229	Throttle position (TP) sensor C/accelerator pedal position (APP) sensor Ñ - circuit intermittent	Wiring, poor connection, TP/APP sensor, ECM
	Throttle position (TP) switch C/accelerator pedal position (APP) switch Ñ - circuit intermittent	Wiring, poor connection, TP/APP switch, 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
P0234	Engine boost condition - limit exceeded	Hose connection(s), wiring, TC wastegate regulating valve, TC wastegate
P0235	Engine boost condition - limit not reached	Hose connection(s), wiring, TC wastegate regulating valve, TC wastegate, TC
P0236	Manifold absolute pressure (MAP) sensor A, TC system - range/performance problem	Intake/exhaust leak, hose connection(s), MAP sensor
P0237	Manifold absolute pressure (MAP) sensor A, TC system - low input	Wiring short to earth, MAP sensor, ECM
P0238	Manifold absolute pressure (MAP) sensor A, TC system - high input	Wiring short to positive, MAP sensor, ECM
P0239	Manifold absolute pressure (MAP) sensor B, TC system - circuit malfunction	Wiring, MAP sensor, ECM
P0240	Manifold absolute pressure (MAP) sensor B, TC system - range/performance problem	Intake/exhaust leak, hose connection(s), MAP sensor
P0241	Manifold absolute pressure (MAP) sensor B, TC system - low input	Wiring short to earth, MAP sensor, ECM
P0242	Manifold absolute pressure (MAP) sensor B, TC system - high input	Wiring short to positive, MAP sensor, ECM
P0243	Turbocharger (TC) wastegate regulating valve A - circuit malfunction	Wiring, TC wastegate regulating valve, ECM
P0244	Turbocharger (TC) wastegate regulating valve A- range/performance problem	TC wastegate regulating valve
P0245	Turbocharger (TC) wastegate regulating valve A - circuit low	Wiring short to earth, TC wastegate regulating valve, ECM
P0246	Turbocharger (TC) wastegate regulating valve A - circuit high	Wiring short to positive, TC wastegate regulating valve, ECM
P0247	Turbocharger (TC) wastegate regulating valve Å - circuit malfunction	Wiring, TC wastegate regulating valve, ECM
P0248	Turbocharger (TC) wastegate regulating valve 8 - range/performance problem	TC wastegate regulating valve
P0249	Turbocharger (TC) wastegate regulating valve Å - circuit low	Wiring short to earth, TC wastegate regulating valve, ECM
P0250	Turbocharger (TC) wastegate regulating valve Å - circuit high	Wiring short to positive, TC wastegate regulating valve, ECM



P0251	Injection pump A, rotor/cam - circuit malfunction	Wiring, injection pump, ECM
P0252	Injection pump A, rotor/cam - range/performance problem	Injection pump
P0253	Injection pump A, rotor/cam - circuit low	Wiring short to earth, injection pump, ECM
P0254	Injection pump A, rotor/cam - circuit high	Wiring short to positive, injection pump, ECM
P0255	Injection pump A, rotor/cam - circuit intermittent	Wiring, poor connection, injection pump, ECM
P0256	Injection pump B, rotor/cam - circuit malfunction	Wiring, injection pump, ECM
P0257	Injection pump B, rotor/cam - range/performance problem	Injection pump
P0258	Injection pump B, rotor/cam - circuit low	Wiring short to earth, injection pump, ECM
P0259	Injection pump B, rotor/cam - circuit high	Wiring short to positive, injection pump, ECM
P0260	Injection pump B, rotor/cam - 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	Injectors 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	Turbo/supercharger - low boost	Mechanical fault
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

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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 startup - first 1000 revolutions	Engine mechanical fault, wiring, ignition/fuel system, injector
P0317	Rough road hardware not present	Wiring, ECM
P0318	Rough road sensor signal A - circuit malfunction	Wiring, rough road sensor A, mechanical fault
P0319	Rough road sensor signal 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
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
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 $\hat{A}$ - malfunction	Wiring, CKP/RPM/CMP sensor, ECM
P0376	Timing reference, high resolution signal $\hat{A}$ - too many pulses	Wiring, CKP/RPM/CMP sensor, ECM
P0377	Timing reference, high resolution signal $\hat{A}$ - too few pulses	Wiring, CKP/RPM/CMP sensor, ECM

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P0378	Timing reference, high resolution signal A - intermittent erratic pulses	Wiring, poor connection, CKP/RPM/CMP sensor, ECM
P0379	Timing reference, high resolution signal A - no pulses	Wiring, CKP/RPM/CMP sensor, 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 A - malfunction	Wiring, glow plug relay, glow plugs, ECM
P0385	Crankshaft position (CKP) sensor A - circuit malfunction	Wiring, CKP sensor, ECM
P0386	Crankshaft position (CKP) sensor A - range/performance problem	Insecure sensor/rotor, air gap, wiring, CKP sensor
P0387	Crankshaft position (CKP) sensor A - low input	Wiring short to earth, CKP sensor, ECM
P0388	Crankshaft position (CKP) sensor A - high input	Wiring short to positive, CKP sensor, ECM
P0389	Crankshaft position (CKP) sensor A - 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 A - low input	Wiring short to earth, EGR valve position sensor, ECM
P0408	Exhaust gas recirculation (EGR) valve position sensor A - 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
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 A - circuit malfunction	Wiring, AIR solenoid, ECM
P0416	Secondary air injection (AIR) solenoid A - open circuit	Wiring open circuit, AIR solenoid, ECM
P0417	Secondary air injection (AIR) solenoid A - 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 A - circuit malfunction	Wiring, AIR pump relay, 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	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 - control circuit malfunction	Wiring, relay, 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	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 - control circuit malfunction	Wiring, relay, 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

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P0449	Evaporative emission (EVAP) system, vent valve - circuit malfunction	Wiring, EVAP canister purge 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 system - very small leak detected	Mechanical fault, hose connection(s), EVAP pressure sensor
P0457	Evaporative emission system - leak detected (fuel cap loose/off)	Mechanical fault, hose connection(s), EVAP pressure sensor
P0458	Evaporative emission system, purge control valve -circuit low	Wiring short to earth, EVAP valve
P0459	Evaporative emission system, purge control valve -circuit high	Wiring short to positive, EVAP valve
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
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
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 A - 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	Wiring, poor connection, ECM
P0489	Exhaust gas recirculation (EGR) system - circuit low	Wiring short to earth, EGR valve
P0490	Exhaust gas recirculation (EGR) system - circuit high	Wiring short to positive, EGR valve
P0491	Secondary air injection system, bank 1 - malfunction	Wiring, AIR solenoid, hose connections, mechanical fault
P0492	Secondary air injection system, bank 2 - malfunction	Wiring, AIR solenoid, hose connections, mechanical fault
P0493	Fan over-speed (clutch locked)	Fan clutch, mechanical fault
P0494	Fan speed - low	Wiring, relay, fan motor, mechanical fault
P0495	Fan speed - high	Wiring, relay, fan motor, mechanical fault
P0496	Evaporative emission system - high purge flow	Wiring, EVAP valve, mechanical fault
P0497	Evaporative emission system - low purge flow	Wiring, EVAP valve, hoses blocked, mechanical fault
P0498	Evaporative emission system, vent control - circuit low	Wiring short to earth, EVAP valve,
P0499	Evaporative emission system, vent control - circuit high	Wiring short to positive, EVAP valve
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 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) system - circuit low	Wiring short to earth, IAC valve, ECM
P0509	Idle air control (IAC) system - circuit high	Wiring short to positive, IAC valve, ECM
P0510	Closed throttle position (CTP) switch - circuit malfunction	Wiring, CTP switch, ECM
P0511	Idle air control (IAC) system - 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) system - circuit intermittent	Wiring, poor connection, IAC valve, ECM
P0519	Idle air control (IAC) system - circuit performance	Wiring, poor connection, IAC valve, 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, servo control - circuit range/performance	Wiring, poor connection, cruise control servo
P0526	Fan speed sensor - circuit malfunction	Wiring, poor connection, fan speed sensor, ECM

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P0527	Fan speed sensor - circuit range/performance	Wiring, poor connection, fan speed sensor
P0528	Fan speed sensor - no signal	Wiring, poor connection, fan speed sensor, ECM
P0529	Fan speed sensor - circuit intermittent	Wiring, poor connection, 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	A/C evaporator temperature sensor - circuit malfunction	Wiring, poor connection, A/C evaporator temperature sensor, ECM
P0536	A/C evaporator temperature sensor - circuit range/performance	Wiring, poor connection, A/C evaporator temperature sensor, ECM
P0537	A/C evaporator temperature sensor - circuit low	Wiring short to earth, A/C evaporator temperature sensor, ECM
P0538	A/C evaporator temperature sensor - circuit high	Wiring short to positive, A/C evaporator temperature sensor, ECM
P0539	A/C evaporator temperature sensor - circuit intermittent	Wiring, poor connection, A/C evaporator temperature sensor, 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 - circuit open	Wiring, intake air heater
P0544	Exhaust gas recirculation temperature (EGRT) sensor, bank 1 - circuit malfunction	Wiring, EGRT sensor, ECM
P0545	Exhaust gas recirculation temperature (EGRT) sensor, bank 1 - low input	Wiring short to earth, EGRT sensor, ECM
P0546	Exhaust gas recirculation temperature (EGRT) sensor, bank 1 - high input	Wiring short to positive, EGRT sensor, ECM
P0547	Exhaust gas temperature sensor, bank 2 sensor 1 - circuit malfunction	Wiring, poor connection, exhaust gas temperature sensor, ECM
P0548	Exhaust gas temperature sensor, bank 2 sensor 1 - circuit low	Wiring short to earth, exhaust gas temperature sensor, ECM
P0549	Exhaust gas temperature sensor, bank 2 sensor 1 - circuit high	Wiring short to positive, exhaust gas temperature 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 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
P0570	Cruise control system, APR sensor signal - malfunction	Wiring, APP sensor, ECM
P0571	Cruise/brake switch A - circuit malfunction	Wiring, cruise/brake switch, ECM
P0572	Cruise/brake switch A - circuit low	Wiring short to earth, cruise/brake switch, ECM
P0573	Cruise/brake switch A - circuit high	Wiring short to positive, cruise/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 input A - circuit stuck	Wiring, poor connection, multi-function switch, mechanical fault
P0579	Cruise control system, multi-function input A - circuit range/performance	Wiring, poor connection, multi-function switch, mechanical fault
P0580	Cruise control system, multi-function input A - circuit low	Wiring short to earth, multi-function switch, mechanical fault
P0581	Cruise control system, multi-function input A - circuit high	Wiring short to positive, multi-function switch, mechanical fault
P0582	Cruise control system, vacuum control - circuit open	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 input A/B - correlation	Mechanical fault
P0586	Cruise control system, vent control - circuit open	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 input A - circuit malfunction	Wiring, poor connection, multi-function switch, mechanical fault
P0590	Cruise control system, multi-function input A - circuit stuck	Wiring, poor connection, multi-function switch, mechanical fault
P0591	Cruise control system, multi-function input A - circuit range/performance	Wiring, poor connection, multi-function switch, mechanical fault
P0592	Cruise control system, multi-function input A - circuit low	Wiring short to earth, multi-function switch, mechanical fault
P0593	Cruise control system, multi-function input A - circuit high	Wiring short to positive, multi-function switch, mechanical fault
P0594	Cruise control system, servo control - circuit open	Wiring, servo control solenoid
P0595	Cruise control system, servo control - circuit low	Wiring short to earth, servo control solenoid
P0596	Cruise control system, servo control - circuit high	Wiring short to positive, servo control solenoid
P0597	Thermostat heater control system - circuit open	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

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P0605	Engine control module (ECM) - ROM error	ECM
P0606	Engine control module (ECM) - processor fault	ECM
P0607	Control module - performance	Control module
P0608	Engine control module (ECM), VSS output A - malfunction	ECM
P0609	Engine control module (ECM), VSS output A - malfunction	ECM
P0610	Control module - vehicle options error	Control module
P0611	Fuel injector control module - performance	Fuel injector control module
P0612	Fuel injector control module - relay control 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 relay - circuit malfunction	Wiring, poor connection, starter relay, ECM
P0616	Starter relay - circuit low	Wiring short to earth, starter relay, ECM
P0617	Starter relay - circuit high	Wiring short to positive, starter 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
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	Generator lamp control - circuit malfunction	Wiring, poor connection, bulb, ECM
P0624	Fuel cap lamp control - circuit malfunction	Wiring, poor connection, bulb, ECM
P0625	Generator field terminal - circuit low	Wiring short to earth, generator
P0626	Generator field terminal - circuit high	Wiring short to positive, generator
P0627	Fuel pump control - circuit open	Wiring, relay, fuel pump
P0628	Fuel pump control - circuit low	Wiring short to earth, relay, fuel pump
P0629	Fuel pump control - circuit high	Wiring short to positive, relay, fuel pump

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P0630	VIN not programmed or mismatch - ECM	ECM
P0631	VIN not programmed or mismatch - TCM	TCM
P0632	Odometer not programmed - ECM	ECM
P0633	Immobilizer key not programmed - ECM	ECM
P0634	ECM/TCM - internal temperature too high	Mechanical fault, ECM/TCM
P0635	Power steering (PAS) control - circuit malfunction	Wiring, poor connection, PAS pressure switch, ECM
P0636	Power steering (PAS) control - circuit low	Wiring short to earth, PAS pressure switch, ECM
P0637	Power Steering (PAS) control - circuit high	Wiring short to positive, PAS pressure switch, ECM
P0638	Throttle actuator control, bank 1 « range/performance problem	Basic setting not carried out (if applicable), ISC actuator/throttle motor, APP sensor
P0639	Throttle actuator control, bank 2 - range/performance	Wiring, throttle control unit
P0640	Intake air heater control - circuit malfunction	Wiring, relay, intake air heater
P0641	Sensor reference voltage A - circuit open	Wiring short to positive
P0642	Engine control module (ECM), knock control - defective	ECM
P0643	Sensor reference voltage A - circuit high	Wiring short to positive
P0644	Driver display, serial communication - circuit malfunction	Wiring, CAN data bus, ECM
P0645	Air conditioning (AC)	Wiring, AC system
P0646	A/C clutch relay control - circuit low	Wiring short to earth, A/C clutch relay
P0647	A/C clutch relay control - circuit high	Wiring short to positive, A/C clutch relay
P0648	Immobilizer lamp control - circuit malfunction	Wiring, poor connection, bulb, ECM
P0649	Cruise control lamp control - circuit	Wiring, poor connection, bulb, ECM
P0650	Malfunction indicator lamp (MIL) - circuit malfunction	Wiring, MIL, ECM
P0651	Sensor reference voltage 8 - circuit open	Wiring short to positive
P0652	Sensor reference voltage 8 - circuit low	Wiring short to earth
P0653	Sensor reference voltage 8 - 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 - circuit open	Wiring
P0658	Actuator supply voltage - circuit low	Wiring short to earth, actuator
P0659	Actuator supply voltage - circuit high	Wiring short to positive, actuator
P0660	Intake manifold tuning valve, bank 1 - circuit open	Wiring, intake manifold tuning valve
P0661	Intake manifold tuning valve, bank 1 - circuit low	Wiring short to earth, intake manifold tuning valve
P0662	Intake manifold tuning valve, bank 1 - circuit high	Wiring short to positive, intake manifold tuning valve
P0663	Intake manifold tuning valve, bank 2 - circuit open	Wiring, intake manifold tuning valve
P0664	Intake manifold tuning valve, bank 2 - circuit low	Wiring short to earth, intake manifold tuning valve
P0665	Intake manifold tuning valve, bank 2 - circuit high	Wiring short to positive, intake manifold
P0666	ECM/TCM internal temperature sensor - circuit malfunction	Wiring, poor connection, internal temperature sensor, ECM/TCM
P0667	ECM/TCM internal temperature sensor - range/performance	Wiring, poor connection, internal temperature sensor, ECM/TCM
P0668	ECM/TCM internal temperature sensor- circuit low	Wiring short to earth, internal temperature sensor, ECM/TCM
P0669	ECM/TCM internal temperature sensor- circuit high	Wiring short to positive, internal temperature sensor, ECM/TCM
P0670	Glow plug module control - circuit malfunction	Wiring, poor connection, control module, glow plug, ECM
P0671	Glow plug, cylinder 1 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0672	Glow plug, cylinder 2 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0673	Glow plug, cylinder 3 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0674	Glow plug, cylinder 4 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0675	Glow plug, cylinder 5 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0676	Glow plug, cylinder 6 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0677	Glow plug, cylinder 7 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0678	Glow plug, cylinder 8 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0679	Glow plug, cylinder 9 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0680	Glow plug, cylinder 10 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0681	Glow plug, cylinder 11 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0682	Glow plug, cylinder 12 - circuit malfunction	Wiring, poor connection, relay, control module, glow plug, ECM
P0683	Glow plug control module communication to ECM - malfunction	Wiring, poor connection, control module, ECM
P0684	Glow plug control module communication to ECM - range/performance	Wiring, poor connection, control module, ECM
P0685	ECM power relay control - circuit open	Wiring, ECM relay
P0686	ECM power relay control - circuit low	Wiring short to earth, ECM relay, ECM
P0687	Engine control relay - short to earth	Wiring short to earth, engine control relay, ECM
P0688	Engine control relay - short to positive	Wiring short to positive, engine control relay, ECM
P0689	ECM power relay sense - circuit low	Wiring short to earth, ECM relay, ECM
P0690	ECM power relay sense - circuit high	Wiring short to positive, ECM relay, ECM
P0691	Engine coolant blower motor 1 - short to earth	Wiring short to earth, engine coolant blower motor, ECM
P0692	Engine coolant blower motor 1 - short to positive	Wiring short to positive, engine coolant blower motor, ECM

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P0693	Engine coolant blower motor 2 - short to earth	Wiring short to earth, engine coolant blower motor, ECM
P0694	Engine coolant blower motor 2 - short to positive	Wiring short to positive, engine coolant blower motor, ECM
P0695	Fan 3 control - circuit low	Wiring short to earth, fan motor
P0696	Fan 3 control - circuit high	Wiring short to positive, fan motor
P0697	Sensor reference voltage Ñ - circuit open	Wiring short to positive
P0698	Sensor reference voltage Ñ - circuit low	Wiring short to earth
P0699	Sensor reference voltage Ñ - circuit high	Wiring short to positive
P0700	Transmission control system - malfunction *	Wiring, TCM
P0701	Transmission control system - range/performance problem	Wiring, TCM
P0702	Transmission control system - electrical	Wiring, TCM
P0703	Torque converter/brake switch Å - circuit malfunction	Wiring, torque converter/brake switch, ECM/TCM
P0704	Clutch pedal position (CPP) switch - circuit malfunction	Wiring, CPP switch, ECM/TCM
P0705	Transmission range (TR) sensor/switch, PRNDL input - circuit malfunction	Wiring, TR sensor/switch, ECM/TCM
P0706	Transmission range (TR) sensor/switch - range/performance problem	Wiring, TR sensor/switch
P0707	Transmission range (TR) sensor/switch - low input	Wiring short to earth, TR sensor/switch, ECM/TCM
P0708	Transmission range (TR) sensor/switch - high input	Wiring short to positive, TR sensor/switch, ECM/TCM
P0709	Transmission range (TR) sensor/switch - circuit intermittent	Wiring, poor connection, TR sensor/switch, ECM/TCM
P0710	Transmission fluid temperature (TFT) sensor- circuit malfunction	Wiring, TFT sensor, ECM, ECM/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/TCM
P0713	Transmission fluid temperature (TFT) sensor- high input	Wiring short to positive, TFT sensor, ECM/TCM
P0714	Transmission fluid temperature (TFT) sensor- circuit intermittent	Wiring, poor connection, TFT sensor, ECM/TCM
P0715	Turbine shaft speed (TSS) sensor - circuit malfunction	Wiring, TSS sensor, ECM/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/TCM
P0718	Turbine shaft speed (TSS) sensor - circuit intermittent	Wiring, poor connection, TSS sensor, ECM/TCM
P0719	Torque converter/brake switch Å - circuit low	Wiring short to earth, torque converter/brake switch, ECM/TCM
P0720	Output shaft speed (OSS) sensor - circuit malfunction	Wiring, OSS sensor, ECM/TCM
P0721	Output shaft speed (OSS) sensor - range/performance problem	Wiring, OSS sensor
P0722	Output shaft speed (OSS) sensor - no signal	Wiring, OSS sensor, ECM/TCM
P0723	Output shaft speed (OSS) sensor - circuit intermittent	Wiring, poor connection, OSS sensor, ECM/TCM
P0724	Torque converter/brake switch Å - circuit high	Wiring short to positive, torque converter/brake switch, ECM/TCM
P0725	Engine RPM input - circuit malfunction	Wiring, CKP/RPM sensor, ECM/TCM
P0726	Engine RPM input - range/performance problem	Wiring, CKP/RPM sensor
P0727	Engine RPM input - no signal	Wiring, CKP/RPM sensor, ECM/TCM
P0728	Engine RPM input - circuit intermittent	Wiring, poor connection, CKP/RPM sensor, ECM/TCM
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 - 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
P0740	Torque converter clutch (TCC) solenoid - circuit malfunction	Wiring, TCC solenoid, ECM/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/TCM
P0744	Torque converter clutch (TCC) solenoid - circuit intermittent	Wiring, poor connection, TCC solenoid, ECM/TCM
P0745	Transmission fluid pressure (TFP) solenoid - circuit malfunction	Wiring, TFP solenoid, ECM/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/TCM
P0749	Transmission fluid pressure (TFP) solenoid - circuit intermittent	Wiring, poor connection, TFP solenoid, ECM/TCM
P0750	Shift solenoid (SS) A - circuit malfunction	Wiring, shift solenoid, ECM/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, ECM/TCM
P0754	Shift solenoid (SS) A - circuit intermittent	Wiring, poor connection, shift solenoid, ECM/TCM
P0755	Shift solenoid (SS) $\hat{A}$ - circuit malfunction	Wiring, shift solenoid, ECM/TCM
P0756	Shift solenoid (SS) $\hat{A}$ - performance or stuck off	Wiring, shift solenoid
P0757	Shift solenoid (SS) $\hat{A}$ - stuck on	Wiring, shift solenoid
P0758	Shift solenoid (SS) $\hat{A}$ - electrical	Wiring, shift solenoid, ECM/TCM
P0759	Shift solenoid (SS) $\hat{A}$ - circuit intermittent	Wiring, poor connection, shift solenoid, ECM/TCM
P0760	Shift solenoid (SS) $\hat{N}$ - circuit malfunction	Wiring, shift solenoid, ECM/TCM
P0761	Shift solenoid (SS) $\hat{N}$ - performance or stuck off	Wiring, shift solenoid
P0762	Shift solenoid (SS) $\hat{N}$ - stuck on	Wiring, shift solenoid
P0763	Shift solenoid (SS) $\hat{N}$ - electrical	Wiring, shift solenoid, ECM/TCM
P0764	Shift solenoid (SS) $\hat{N}$ - circuit intermittent	Wiring, poor connection, shift solenoid, ECM/TCM
P0765	Shift solenoid (SS) D - circuit malfunction	Wiring, shift solenoid, ECM/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, ECM/TCM
P0769	Shift solenoid (SS) D - circuit intermittent	Wiring, poor connection, shift solenoid, ECM/TCM
P0770	Shift solenoid (SS) E - circuit malfunction	Wiring, shift solenoid, ECM/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, ECM/TCM
P0774	Shift solenoid (SS) E - circuit intermittent	Wiring, poor connection, shift solenoid, ECM/TCM
P0775	Pressure control solenoid $\hat{A}$ - malfunction	Pressure control solenoid
P0776	Pressure control solenoid $\hat{A}$ - performance or stuck off	Wiring, pressure control solenoid
P0777	Pressure control solenoid $\hat{A}$ - stuck on	Wiring, pressure control solenoid
P0778	Pressure control solenoid $\hat{A}$ - electrical malfunction	Wiring, pressure control solenoid
P0779	Pressure control solenoid $\hat{A}$ - 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

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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/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/TCM
P0788	Shift/timing solenoid - high	Wiring short to positive, shift/timing solenoid, ECM/TCM
P0789	Shift/timing solenoid - intermittent	Wiring, poor connection, shift/timing solenoid, ECM/TCM
P0790	Transmission mode selection switch - circuit malfunction	Wiring, transmission mode selection switch, ECM/TCM
P0791	Intermediate shaft speed sensor - circuit malfunction	Wiring, poor connection, intermediate shaft speed sensor, ECM/TCM
P0792	Intermediate shaft speed sensor - range/performance problem	Wiring, poor connection, intermediate shaft speed sensor, ECM/TCM
P0793	Intermediate shaft speed sensor - no signal	Wiring, poor connection, short to earth, intermediate shaft speed sensor, ECM/TCM
P0794	Intermediate shaft speed sensor - intermittent circuit malfunction	Wiring, poor connection, intermediate shaft speed sensor, ECM/TCM
P0795	Transmission fluid pressure (TFP) solenoid N - circuit malfunction	Wiring, poor connection, TFP solenoid, ECM/TCM
P0796	Transmission fluid pressure (TFP) solenoid N - performance or stuck off	Wiring, poor connection, TFP solenoid, ECM/TCM
P0797	Transmission fluid pressure (TFP) solenoid N - stuck on	Wiring, poor connection, TFP solenoid, ECM/TCM
P0798	Transmission fluid pressure (TFP) solenoid N - electrical malfunction	Wiring, poor connection, TFP solenoid, ECM/TCM
P0799	Transmission fluid pressure (TFP) solenoid N -intermittent circuit malfunction	Wiring, poor connection, ECM/TCM
P0800	Transfer case control system, MIL request - malfunction	Wiring, mechanical fault
P0801	Reverse inhibit circuit - malfunction	Wiring, poor connection
P0802	Transmission control system, MIL request - circuit open	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/TCM
P0806	Clutch position sensor - range/performance problem	Wiring, poor connection, clutch position sensor, ECM/TCM
P0807	Clutch position sensor - low input	Wiring, short to earth, clutch position sensor, ECM/TCM
P0808	Clutch position sensor - high input	Wiring, short to positive, clutch position sensor, ECM/TCM
P0809	Clutch position sensor - intermittent circuit malfunction	Wiring, poor connection, clutch position sensor, ECM/TCM
P0810	Clutch position control error	Wiring, poor connection, ECM/TCM
P0811	Excessive clutch slip	Wiring, poor connection, mechanical fault, ECM/TCM
P0812	Reverse gear - input circuit malfunction	Wiring, poor connection, ECM/TCM
P0813	Reverse gear - output circuit malfunction	Wiring, poor connection, ECM/TCM
P0814	Transmission range (TR) display - circuit malfunction	Wiring, poor connection, TR sensor, ECM/TCM
P0815	Upshift switch - circuit malfunction	Wiring, poor connection, upshift switch, ECM/TCM
P0816	Downshift switch - circuit malfunction	Wiring, poor connection, downshift switch, ECM/TCM
P0817	Starter disable circuit - malfunction	Wiring, poor connection, ECM/TCM
P0818	Driveline disconnect switch - circuit malfunction	Wiring, poor connection, upshift switch, ECM/TCM
P0819	Up and down shift switch to transmission range - correlation	Wiring, poor connection, TR sensor, ECM/TCM
P0820	Gear lever X-Y position sensor - circuit malfunction	Wiring, poor connection, gear lever position sensor, ECM/TCM

P0821	Gear lever X position sensor - circuit malfunction	Wiring, poor connection, gear lever position sensor, ECM/TCM
P0822	Gear lever Y position sensor - circuit malfunction	Wiring, poor connection, gear lever position sensor, ECM/TCM
P0823	Gear lever X position sensor - circuit intermittent	Wiring, poor connection, gear lever position sensor, ECM/TCM
P0824	Gear lever Y position sensor - circuit intermittent	Wiring, poor connection, gear lever position sensor, ECM/TCM
P0825	Gear lever push-pull switch - circuit malfunction	Wiring, poor connection, gear lever push-pull switch, ECM/TCM
P0826	Up and down switch - input circuit	Wiring, Up/down switch
P0827	Up and down switch - input circuit low	Wiring short to earth, Up/down switch
P0828	Up and down switch - input circuit high	Wiring short to positive, Up/down switch
P0829	5-6 Shift	Mechanical fault
P0830	Clutch pedal position (CPP) switch A - circuit malfunction	Wiring, poor connection, CPP switch, ECM/TCM
P0831	Clutch pedal position (CPP) switch A - low input	Wiring, short to earth, CPP switch, ECM/TCM
P0832	Clutch pedal position (CPP) switch A - high input	Wiring, short to positive, CPP switch, ECM/TCM
P0833	Clutch pedal position (CPP) switch $\hat{A}$ - circuit malfunction	Wiring, poor connection, CPP switch, ECM/TCM
P0834	Clutch pedal position (CPP) switch $\hat{A}$ - low input	Wiring, short to earth, CPP switch, ECM/TCM
P0835	Clutch pedal position (CPP) switch $\hat{A}$ - high input	Wiring, short to positive, CPP switch, ECM/TCM
P0836	Four wheel drive switch - circuit malfunction	Wiring, poor connection, four wheel drive switch, ECM/TCM
P0837	Four wheel drive switch - range/performance problem	Wiring, poor connection, four wheel drive switch, ECM/TCM
P0838	Four wheel drive switch - low input	Wiring, short to earth, four wheel drive switch, ECM/TCM
P0839	Four wheel drive switch - high input	Wiring, short to positive, four wheel drive switch, ECM/TCM
P0840	Transmission fluid pressure (TFP) sensor A - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
P0840	Transmission fluid pressure (TFP) switch A - circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0841	Transmission fluid pressure (TFP) sensor A - range/performance problem	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch A - range/performance problem	Wiring, poor connection, TFP switch, ECM/TCM
P0842	Transmission fluid pressure (TFP) sensor A - low input	Wiring, short to earth, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch A - low input	Wiring, short to earth, TFP switch, ECM/TCM
P0843	Transmission fluid pressure (TFP) sensor A - high input	Wiring, short to positive, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch A - high input	Wiring, short to positive, TFP switch, ECM/TCM
P0844	Transmission fluid pressure (TFP) sensor A - intermittent circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch A - intermittent circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0845	Transmission fluid pressure (TFP) sensor $\hat{A}$ - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch $\hat{A}$ - circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0846	Transmission fluid pressure (TFP) sensor $\hat{A}$ - range/performance problem	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch $\hat{A}$ - range/performance problem	Wiring, poor connection, TFP switch, ECM/TCM
P0847	Transmission fluid pressure (TFP) sensor $\hat{A}$ - low input	Wiring, short to earth, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch $\hat{A}$ - low input	Wiring, short to earth, TFP switch, ECM/TCM
P0848	Transmission fluid pressure (TFP) sensor $\hat{A}$ - high input	Wiring, short to positive, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch $\hat{A}$ - high input	Wiring, short to positive, TFP switch, ECM/TCM
P0849	Transmission fluid pressure (TFP) sensor $\hat{A}$ - intermittent circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM

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	Transmission fluid pressure (TFP) switch A - intermittent circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0850	Park/neutral position (PNP) switch - input circuit malfunction	Wiring, PNP switch, ECM/TCM
P0851	Park/neutral position (PNP) switch - input circuit low	Wiring, short to earth, PNP switch, ECM/TCM
P0852	Park/neutral position (PNP) switch - input circuit high	Wiring, short to positive, PNP switch, ECM/TCM
P0853	Drive switch - input circuit malfunction	Wiring, drive switch, ECM/TCM
P0854	Drive switch - input circuit low	Wiring, short to earth, drive switch, ECM/TCM
P0855	Drive switch - input circuit high	Wiring, short to positive, drive switch, ECM/TCM
P0856	Traction control input signal - malfunction	Wiring, poor connection, ECM/TCM
P0857	Traction control input signal - range/performance problem	Wiring, poor connection, ECM/TCM
P0858	Traction control input signal - low	Wiring, short to earth, ECM/TCM
P0859	Traction control input signal - high	Wiring, short to positive, ECM/TCM
P0860	Gear shift module communication circuit - malfunction	Wiring, poor connection, gear shift module, ECM/TCM
P0861	Gear shift module communication circuit - low input	Wiring, short to earth, gear shift module, ECM/TCM
P0862	Gear shift module communication circuit - high input	Wiring, short to positive, gear shift module, ECM/TCM
P0863	Transmission control module (TCM) communication circuit - malfunction	Wiring, poor connection, TCM
P0864	Transmission control module (TCM) communication circuit - range/performance problem	Wiring, poor connection, TCM
P0865	Transmission control module (TCM) communication circuit - low input	Wiring, short to earth, TCM
P0866	Transmission control module (TCM) communication circuit - high input	Wiring, short to positive, TCM
P0867	Transmission fluid pressure (TFP) sensor	Wiring, poor connection, TFP sensor, ECM/TCM
P0868	Transmission fluid pressure (TFP) sensor - low	Wiring, short to earth, TFP sensor, ECM/TCM
P0869	Transmission fluid pressure (TFP) sensor - high	Wiring, short to positive, TFP sensor, ECM/TCM
P0870	Transmission fluid pressure (TFP) sensor N - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch N - circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0871	Transmission fluid pressure (TFP) sensor N - range/performance	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch N - range/performance	Wiring, poor connection, TFP switch, ECM/TCM
P0872	Transmission fluid pressure (TFP) sensor N - circuit low	Wiring, short to earth, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch N - circuit low	Wiring, short to earth, TFP switch, ECM/TCM
P0873	Transmission fluid pressure (TFP) sensor N - circuit high	Wiring, short to positive, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch N - circuit high	Wiring, short to positive, TFP switch, ECM/TCM
P0874	Transmission fluid pressure (TFP) sensor N - intermittent circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch N - intermittent circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0875	Transmission fluid pressure (TFP) sensor D - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch D - circuit malfunction	Wiring, poor connection, TFP switch, ECM/TCM
P0876	Transmission fluid pressure (TFP) sensor D - range/performance	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch D - range/performance	Wiring, poor connection, TFP switch, ECM/TCM
P0877	Transmission fluid pressure (TFP) sensor D - circuit low	Wiring, short to earth, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch D - circuit low	Wiring, short to earth, TFP switch, ECM/TCM
P0878	Transmission fluid pressure (TFP) sensor D - circuit high	Wiring, short to positive, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch D - circuit high	Wiring, short to positive, TFP switch, ECM/TCM
P0879	Transmission fluid pressure (TFP) sensor D - intermittent circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch D - intermittent circuit malfunction	Wiring, poor connection, TFP switch, ECM/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 intermittent malfunction	Wiring, poor connection, TCM
P0885	Transmission control module (TCM) power relay - control circuit open	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, poor connection, short to earth
P0899	Transmission control system - MIL request - circuit high	Wiring, poor connection, short to positive
P0900	Clutch actuator - circuit open	Wiring, clutch actuator, ECM/TCM
P0901	Clutch actuator - circuit range/performance	Wiring, poor connection, clutch actuator, ECM/TCM
P0902	Clutch actuator - circuit low	Wiring, short to earth, clutch actuator, ECM/TCM
P0903	Clutch actuator - circuit high	Wiring, short to positive, clutch actuator, ECM/TCM
P0904	Transmission gate select position circuit - malfunction	Wiring, poor connection, ECM/TCM
P0905	Transmission gate select position circuit - range/performance	Wiring, poor connection, ECM/TCM
P0906	Transmission gate select position circuit - low	Wiring, short to earth, ECM/TCM
P0907	Transmission gate select position circuit - high	Wiring, short to positive, ECM/TCM
P0908	Transmission gate select position circuit - intermittent circuit malfunction	Wiring, poor connection, ECM/TCM
P0909	Transmission gate select control error	Mechanical fault
P0910	Transmission gate select actuator - circuit open	Wiring, transmission gate select actuator, ECM/TCM
P0911	Transmission gate select actuator - circuit range/performance	Wiring, poor connection, transmission gate select actuator, ECM/TCM
P0912	Transmission gate select actuator - circuit low	Wiring, short to earth, transmission gate select actuator, ECM/TCM
P0913	Transmission gate select actuator - circuit high	Wiring, short to positive, transmission gate select actuator, ECM/TCM
P0914	Gear shift position circuit - malfunction	Wiring, poor connection, ECM/TCM
P0915	Gear shift position circuit - range/performance	Wiring, poor connection, ECM/TCM
P0916	Gear shift position circuit - low	Wiring, short to earth, ECM/TCM
P0917	Gear shift position circuit - high	Wiring, short to positive, ECM/TCM
P0918	Gear shift position circuit - intermittent malfunction	Wiring, poor connection, ECM/TCM
P0919	Gear shift position control - error	Wiring, poor connection, ECM/TCM
P0920	Gear shift forward actuator - circuit open	Wiring, gear shift forward actuator, ECM/TCM

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P0921	Gear shift forward actuator - circuit range/performance	Wiring, poor connection, gear shift forward actuator, ECM/TCM
P0922	Gear shift forward actuator - circuit low	Wiring, short to earth, gear shift forward actuator, ECM/TCM
P0923	Gear shift forward actuator - circuit high	Wiring, short to positive, gear shift forward actuator, ECM/TCM
P0924	Gear shift reverse actuator - circuit open	Wiring, gear shift reverse actuator, ECM/TCM
P0925	Gear shift reverse actuator - circuit range/performance	Wiring, poor connection, gear shift reverse actuator, ECM/TCM
P0926	Gear shift reverse actuator - circuit low	Wiring, short to earth, gear shift reverse actuator, ECM/TCM
P0927	Gear shift reverse actuator - circuit high	Wiring, short to positive, gear shift reverse actuator, ECM/TCM
P0928	Gear shift lock solenoid - circuit open	Wiring, gear shift lock solenoid, ECM/TCM
P0929	Gear shift lock solenoid - circuit range/performance	Wiring, gear shift lock solenoid, ECM/TCM
P0930	Gear shift lock solenoid - circuit low	Wiring, short to earth, gear shift lock solenoid, ECM/TCM
P0931	Gear shift lock solenoid - circuit high	Wiring, short to positive, gear shift lock solenoid, ECM/TCM
P0932	Hydraulic pressure sensor - circuit malfunction	Wiring, poor connection, hydraulic pressure sensor, ECM/TCM
P0933	Hydraulic pressure sensor- range/performance	Wiring, hydraulic pressure sensor, ECM/TCM
P0934	Hydraulic pressure sensor - circuit low input	Wiring, short to earth, hydraulic pressure sensor, ECM/TCM
P0935	Hydraulic pressure sensor - circuit high input	Wiring, short to positive, hydraulic pressure sensor, ECM/TCM
P0936	Hydraulic pressure sensor - circuit intermittent	Wiring, poor connection, hydraulic pressure sensor, ECM/TCM
P0937	Hydraulic oil temperature sensor - circuit malfunction	Wiring, poor connection, hydraulic oil temperature sensor, ECM/TCM
P0938	Hydraulic oil temperature sensor - range/performance	Wiring, hydraulic oil temperature sensor, ECM/TCM
P0939	Hydraulic oil temperature sensor - circuit low input	Wiring, short to earth, hydraulic oil temperature sensor, ECM/TCM
P0940	Hydraulic oil temperature sensor - circuit high input	Wiring, short to positive, hydraulic oil temperature sensor, ECM/TCM
P0941	Hydraulic oil temperature sensor - circuit intermittent	Wiring, poor connection, hydraulic oil temperature sensor, ECM/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 - circuit open	Wiring, hydraulic pump relay, ECM/TCM
P0946	Hydraulic pump relay - circuit range/performance	Wiring, hydraulic pump relay, ECM/TCM
P0947	Hydraulic pump relay - circuit low	Wiring, short to earth, hydraulic pump relay, ECM/TCM
P0948	Hydraulic pump relay - circuit high	Wiring, short to positive, hydraulic pump relay, ECM/TCM
P0949	ASM - adaptive learning not done	ECM/TCM
P0950	ASM control circuit	Wiring, poor connection, ECM/TCM
P0951	ASM control circuit - range/performance	Wiring, poor connection, ECM/TCM
P0952	ASM control circuit - low	Wiring, poor connection, short to earth, ECM/TCM
P0953	ASM control circuit - high	Wiring, poor connection, short to positive, ECM/TCM
P0954	ASM - intermittent circuit malfunction	Wiring, poor connection, ECM/TCM
P0955	ASM mode circuit - malfunction	Wiring, poor connection, ECM/TCM
P0956	ASM mode circuit - range/performance	Wiring, poor connection, ECM/TCM
P0957	ASM mode circuit - low	Wiring, poor connection, short to earth, ECM/TCM
P0958	ASM mode circuit - high	Wiring, poor connection, short to positive, ECM/TCM
P0959	ASM mode circuit - intermittent circuit malfunction	Wiring, poor connection, ECM/TCM
P0960	Pressure control (PC) solenoid A - control circuit open	Wiring, poor connection, pressure control solenoid, ECM/TCM
P0961	Pressure control (PC) solenoid A - control circuit range/performance	Wiring, poor connection, pressure control solenoid, ECM/TCM

P0962	Pressure control (PC) solenoid A - control circuit low	Wiring, short to earth, pressure control solenoid, ECM/TCM
P0963	Pressure control (PC) solenoid A - control circuit high	Wiring, short to positive, pressure control solenoid, ECM/TCM
P0964	Pressure control (PC) solenoid A - control circuit open	Wiring, poor connection, pressure control solenoid, ECM/TCM
P0965	Pressure control (PC) solenoid A - control circuit range/performance	Wiring, poor connection, pressure control solenoid, ECM/TCM
P0966	Pressure control (PC) solenoid A - control circuit low	Wiring, short to earth, pressure control solenoid, ECM/TCM
P0967	Pressure control (PC) solenoid A - control circuit high	Wiring, short to positive, pressure control solenoid, ECM/TCM
P0968	Pressure control (PC) solenoid N - control circuit open	Wiring, poor connection, pressure control solenoid, ECM/TCM
P0969	Pressure control (PC) solenoid N - control circuit range/performance	Wiring, poor connection, pressure control solenoid, ECM/TCM
P0970	Pressure control (PC) solenoid N - control circuit low	Wiring, short to earth, pressure control solenoid, ECM/TCM
P0971	Pressure control (PC) solenoid N - control circuit high	Wiring, short to positive, pressure control solenoid, ECM/TCM
P0972	Shift solenoid (SS) A - control circuit range/performance	Wiring, poor connection, shift solenoid, ECM/TCM
P0973	Shift solenoid (SS) A - control circuit low	Wiring, short to earth, shift solenoid, ECM/TCM
P0974	Shift solenoid (SS) A - control circuit high	Wiring, short to positive, shift solenoid, ECM/TCM
P0975	Shift solenoid (SS) A - control circuit range/performance	Wiring, poor connection, shift solenoid, ECM/TCM
P0976	Shift solenoid (SS) A - control circuit low	Wiring, short to earth, shift solenoid, ECM/TCM
P0977	Shift solenoid (SS) A - control circuit high	Wiring, short to positive, shift solenoid, ECM/TCM
P0978	Shift solenoid (SS) N - control circuit range/performance	Wiring, poor connection, shift solenoid, ECM/TCM
P0979	Shift solenoid (SS) N - control circuit low	Wiring, short to earth, shift solenoid, ECM/TCM
P0980	Shift solenoid (SS) N - control circuit high	Wiring, short to positive, shift solenoid, ECM/TCM
P0981	Shift solenoid (SS) D - control circuit range/performance	Wiring, poor connection, shift solenoid, ECM/TCM
P0982	Shift solenoid (SS) D - control circuit low	Wiring, short to earth, shift solenoid, ECM/TCM
P0983	Shift solenoid (SS) D - control circuit high	Wiring, short to positive, shift solenoid, ECM/TCM
P0984	Shift solenoid (SS) E - control circuit range/performance	Wiring, poor connection, shift solenoid, ECM/TCM
P0985	Shift solenoid (SS) E - control circuit low	Wiring, short to earth, shift solenoid, ECM/TCM
P0986	Shift solenoid (SS) E - control circuit high	Wiring, short to positive, shift solenoid, ECM/TCM
P0987	Transmission fluid pressure (TFP) sensor E - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
P0988	Transmission fluid pressure (TFP) sensor E - circuit range/performance	Wiring, poor connection, TFP sensor, ECM/TCM
P0989	Transmission fluid pressure (TFP) sensor E - circuit low	Wiring, short to earth, TFP sensor, ECM/TCM
P0990	Transmission fluid pressure (TFP) sensor E - circuit high	Wiring, short to positive, TFP sensor, ECM/TCM
	Transmission fluid pressure (TFP) switch E - circuit high	Wiring, short to positive, TFP switch, ECM/TCM
P0991	Transmission fluid pressure (TFP) sensor E - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/TCM
P0992	Transmission fluid pressure (TFP) sensor F - circuit malfunction	Wiring, poor connection, TFP sensor, ECM/TCM
P0993	Transmission fluid pressure (TFP) sensor F - circuit range/performance	Wiring, poor connection, TFP sensor, ECM/TCM
P0994	Transmission fluid pressure (TFP) sensor F - circuit low	Wiring, short to earth, TFP sensor, ECM/TCM
P0995	Transmission fluid pressure (TFP) sensor F - circuit high	Wiring, short to positive, TFP sensor, ECM/TCM
P0996	Transmission fluid pressure (TFP) sensor F - circuit intermittent	Wiring, poor connection, TFP sensor, ECM/TCM
P0997	Shift solenoid (SS) F - control circuit range/performance	Wiring, poor connection, shift solenoid, ECM/TCM
P0998	Shift solenoid (SS) F - control circuit low	Wiring short to earth, shift solenoid, ECM/TCM
P0999	Shift solenoid (SS) F - control circuit high	Wiring short to positive, shift solenoid, ECM/TCM