Volkswagen Engine and Transmission Codes

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P0 Code P1 Code P2 Code P3 Code U0 Code P-Hex Code

DTC	Description
P0010	"A" Camshaft Position Actuator Circuit / Open, Bank 1
P0011	"A" Camshaft Position - Timing Over-Advanced or System Performance, Bank 1
P0012	"A" Camshaft Position - Timing Over-Retarded, Bank 1
P0013	"B" Camshaft Position - Actuator Circuit / Open, Bank 1
P0014	"B" Camshaft Position - Timing Over-Advanced or System Performance, Bank 1
P0015	"B" Camshaft Position - Timing Over-Retarded, Bank 1
P0016	Crankshaft Position - Camshaft Position Correlation, Bank 1 Sensor A
P0017	Crankshaft Position - Camshaft Position Correlation, Bank 1 Sensor B
P0018	Crankshaft Position - Camshaft Position Correlation, Bank 2 Sensor A
P0019	Crankshaft Position - Camshaft Position Correlation, Bank 2 Sensor B
P0020	"A" Camshaft Position Actuator Circuit / Open, Bank 2
P0021	"A" Camshaft Position - Timing Over-Advanced or System Performance, Bank 2
P0022	"A" Camshaft Position - Timing Over-Retarded, Bank 2
P0023	"B" Camshaft Position - Actuator Circuit / Open, Bank 2
P0024	"B" Camshaft Position - Timing Over-Advanced or System Performance, Bank 2
P0025	B Camshaft Position - Timing Over-Retarded, Bank 2
P0030	HO2S Heater Control Circuit, Bank 1 Sensor 1
P0031	HO2S Heater Control Circuit Low, Bank 1 Sensor 1
P0032	HO2S Heater Control Circuit High, Bank 1 Sensor 1
P0036	HO2S Heater Control Circuit, Bank 1 Sensor 2
P0037	HO2S Heater Control Circuit Low, Bank 1 Sensor 2
P0038	HO2S Heater Control Circuit High, Bank 1 Sensor 2
P0040	O2 Sensor Signals Swapped, Bank 1 Sensor 1/Bank 2 Sensor 1
P0041	O2 Sensor Signals Swapped, Bank 1 Sensor 2/ Bank 2 Sensor 2
P0042	HO2S Heater Control Circuit, Bank 1 Sensor 3
P0043	HO2S Heater Control Circuit Low, Bank 1 Sensor 3
P0044	HO2S Heater Control Circuit High, Bank 1 Sensor 3
P0050	HO2S Heater Control Circuit, Bank 2 Sensor 1
P0051	HO2S Heater Control Circuit Low, Bank 2 Sensor 1
P0052	HO2S Heater Control Circuit High, Bank 2 Sensor 1
P0056	HO2S Heater Control Circuit, Bank 2 Sensor 2

P0057	HO2S Heater Control Circuit Low, Bank 2 Sensor 2
P0058	HO2S Heater Control Circuit High, Bank 2 Sensor 2
P0068	MAP/MAF - Throttle Position Correlation
P0087	Fuel Rail/System Pressure - Too Low
P0088	Fuel Rail/System Pressure - Too High
P0089	Fuel Pressure Regulator 1 Performance
P0097	Intake Air Temperature Sensor 2 Circuit Low
P0098	Intake Air Temperature Sensor 2 Circuit High
P0100	Mass or Volume Air Flow "A" Circuit
P0101	Mass or Volume Air Flow "A" Circuit Range/Performance
P0102	Mass or Volume Air Flow "A" Circuit Low
P0103	Mass or Volume Air Flow "A" Circuit High
P0105	Manifold Absolute Pressure/Barometric Pressure Circuit
P0106	Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance
P0107	Manifold Absolute Pressure/Barometric Pressure Circuit Low
P0108	Manifold Absolute Pressure/Barometric Pressure Circuit High
P0112	Intake Air Temperature Sensor 1 Circuit Low
P0113	Intake Air Temperature Sensor 1 Circuit High
P0116	Engine Coolant Temperature Sensor 1 Circuit Range/Performance
P0117	Engine Coolant Temperature Sensor 1 Circuit Low
P0118	Engine Coolant Temperature Sensor 1 Circuit High
P0120	Throttle/Pedal Position Sensor/Switch "A" Circuit
P0121	Throttle/Pedal Position Sensor/Switch "A" Circuit Range/Performance
P0122	Throttle/Pedal Position Sensor/Switch "A" Circuit Low
P0123	Throttle/Pedal Position Sensor/Switch "A" Circuit High
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0130	O2 Sensor Circuit, Bank 1 Sensor 1
P0131	O2 Sensor Circuit Low Voltage, Bank 1 Sensor 1
P0132	O2 Sensor Circuit High Voltage, Bank 1 Sensor 1
P0133	O2 Sensor Circuit Slow Response, Bank 1 Sensor 1
P0134	O2 Sensor Circuit No Activity Detected, Bank 1 Sensor 1
P0135	O2 Sensor Heater Circuit, Bank 1 Sensor 1
P0136	O2 Sensor Circuit, Bank 1 Sensor 2
P0137	O2 Sensor Circuit Low Voltage, Bank 1 Sensor 2
P0138	O2 Sensor Circuit High Voltage, Bank 1 Sensor 2
P0139	O2 Sensor Circuit Slow Response, Bank 1 Sensor 2
P0140	O2 Sensor Circuit No Activity Detected, Bank 1 Sensor 2
P0141	O2 Sensor Heater Circuit, Bank 1 Sensor 2
P0142	O2 Sensor Circuit, Bank 1 Sensor 3
P0143	O2 Sensor Circuit Low Voltage, Bank 1 Sensor 3
P0144	O2 Sensor Circuit High Voltage, Bank 1 Sensor 3
P0145	O2 Sensor Circuit Slow Response, Bank 1 Sensor 3

P0146	O2 Sensor Circuit No Activity Detected, Bank 1 Sensor 3
P0147	O2 Sensor Heater Circuit, Bank 1 Sensor 3
P0150	O2 Sensor Circuit, Bank 2 Sensor 1
P0151	O2 Sensor Circuit Low Voltage, Bank 2 Sensor 1
P0152	O2 Sensor Circuit High Voltage, Bank 2 Sensor 1
P0153	O2 Sensor Circuit Slow Response, Bank 2 Sensor 1
P0154	O2 Sensor Circuit No Activity Detected, Bank 2 Sensor 1
P0155	O2 Sensor Heater Circuit, Bank 2 Sensor 1
P0156	O2 Sensor Circuit, Bank 2 Sensor 2
P0157	O2 Sensor Circuit Low Voltage, Bank 2 Sensor 2
P0158	O2 Sensor Circuit High Voltage, Bank 2 Sensor 2
P0159	O2 Sensor Circuit Slow Response, Bank 2 Sensor 2
P0160	O2 Sensor Circuit No Activity Detected, Bank 2 Sensor 2
P0161	O2 Sensor Heater Circuit, Bank 2 Sensor 2
P0169	Incorrect Fuel Composition
P0171	System Too Lean, Bank 1
P0172	System Too Rich, Bank 1
P0174	System Too Lean, Bank 2
P0175	System Too Rich, Bank 2
P0181	Fuel Temperature Sensor "A" Circuit Range/Performance
P0182	Fuel Temperature Sensor "A" Circuit Low
P0183	Fuel Temperature Sensor "A" Circuit High
P0188	Fuel Temperature Sensor "B" Circuit High
P0190	Fuel Rail Pressure Sensor "A" Circuit
P0192	Fuel Rail Pressure Sensor "A" Circuit Low
P0200	Injector Circuit/Open
P0201	Injector Circuit/Open - Cylinder 1
P0202	Injector Circuit/Open - Cylinder 2
P0203	Injector Circuit/Open - Cylinder 3
P0204	Injector Circuit/Open - Cylinder 4
P0205	Injector Circuit/Open - Cylinder 5
P0206	Injector Circuit/Open - Cylinder 6
P0207	Injector Circuit/Open - Cylinder 7
P0208	Injector Circuit/Open - Cylinder 8
P0209	Injector Circuit/Open - Cylinder 9
P0210	Injector Circuit/Open - Cylinder 10
P0211	Injector Circuit/Open - Cylinder 11
P0212	Injector Circuit/Open - Cylinder 12
P0216	Injector/Injection Timing Control Circuit
P0219	Engine Overspeed Condition
P0221	Throttle/Pedal Position Sensor/Switch "B" Circuit Range/Performance
P0222	Throttle/Pedal Position Sensor/Switch "B" Circuit Low
P0223	Throttle/Pedal Position Sensor/Switch "B" Circuit High
P0225	Throttle/Pedal Position Sensor/Switch "C" Circuit

P0226	Throttle/Pedal Position Sensor/Switch "C" Circuit Range/Performance
P0227	Throttle/Pedal Position Sensor/Switch "C" Circuit Low
P0228	Throttle/Pedal Position Sensor/Switch "C" Circuit High
P0230	System Too Rich at Idle
P0234	Turbocharger/Supercharger Overboost Condition
P0236	Turbocharger/Supercharger Boost Sensor "A" Circuit Range/Performance
P0237	Turbocharger/Supercharger Boost Sensor "A" Circuit Low
P0238	Turbocharger/Supercharger Boost Sensor "A" Circuit High
P0240	Turbocharger/Supercharger Boost Sensor "B" Circuit Range/Performance
P0241	Turbocharger/Supercharger Boost Sensor "B" Circuit Low
P0242	Turbocharger/Supercharger Boost Sensor "B" Circuit High
P0243	Turbocharger/Supercharger Wastegate Solenoid "A"
P0245	Turbocharger/Supercharger Wastegate Solenoid "A" Low
P0246	Turbocharger/Supercharger Wastegate Solenoid "A" High
P0247	Turbocharger/Supercharger Wastegate Solenoid "B"
P0249	Turbocharger/Supercharger Wastegate Solenoid "B" Low
P0250	Turbocharger/Supercharger Wastegate Solenoid "B" High
P0251	Injection Pump Fuel Metering Control "A" (Cam/Rotor/Injector)
P0252	Injection Pump Fuel Metering Control "A" Range/Performance (Cam/Rotor/Injector)
P0261	Cylinder 1 Injector Circuit Low
P0262	Cylinder 1 Injector Circuit High
P0263	Cylinder 1 Contribution/Balance
P0264	Cylinder 2 Injector Circuit Low
P0265	Cylinder 2 Injector Circuit High
P0266	Cylinder 2 Contribution/Balance
P0267	Cylinder 3 Injector Circuit Low
P0268	Cylinder 3 Injector Circuit High
P0269	Cylinder 3 Contribution/Balance
P0270	Cylinder 4 Injector Circuit Low
P0271	Cylinder 4 Injector Circuit High
P0272	Cylinder 4 Contribution/Balance
P0273	Cylinder 5 Injector Circuit Low
P0274	Cylinder 5 Injector Circuit High
P0275	Cylinder 5 Contribution/Balance
P0276	Cylinder 6 Injector Circuit Low
P0277	Cylinder 6 Injector Circuit High
P0278	Cylinder 6 Contribution/Balance
P0279	Cylinder 7 Injector Circuit Low
P0280	Cylinder 7 Injector Circuit High
P0281	Cylinder 7 Contribution/Balance
P0282	Cylinder 8 Injector Circuit Low
P0283	Cylinder 8 Injector Circuit High

P0284	Cylinder 8 Contribution/Balance
P0285	Cylinder 9 Injector Circuit Low
P0286	Cylinder 9 Injector Circuit High
P0287	Cylinder 9 Contribution/Balance
P0288	Cylinder 10 Injector Circuit Low
P0289	Cylinder 10 Injector Circuit High
P0290	Cylinder 10 Contribution/Balance
P0291	Cylinder 11 Injector Circuit Low
P0292	Cylinder 11 Injector Circuit High
P0294	Cylinder 12 Injector Circuit Low
P0295	Cylinder 12 Injector Circuit High
P0299	Turbocharger/Supercharger Underboost Condition
P0300	Random/Multiple Cylinder Misfire Detected
P0301	Cylinder 1 Misfire Detected
P0302	Cylinder 2 Misfire Detected
P0303	Cylinder 3 Misfire Detected
P0304	Cylinder 4 Misfire Detected
P0305	Cylinder 5 Misfire Detected
P0306	Cylinder 6 Misfire Detected
P0307	Cylinder 7 Misfire Detected
P0308	Cylinder 8 Misfire Detected
P0309	Cylinder 9 Misfire Detected
P0310	Cylinder 10 Misfire Detected
P0311	Cylinder 11 Misfire Detected
P0312	Cylinder 12 Misfire Detected
P0318	Rough Road Sensor "A" Signal Circuit
P0321	Ignition/Distributor Engine Speed Input Circuit Range/Performance
P0322	Ignition/Distributor Engine Speed Input Circuit No Signal
P0324	Knock Control System Error
P0327	Knock Sensor 1 Circuit Low Bank 1 or Single Sensor
P0328	Knock Sensor 1 Circuit High Bank 1 or Single Sensor
P0332	Knock Sensor 2 Circuit Low Bank 2
P0333	Knock Sensor 2 Circuit High Bank 2
P0340	Camshaft Position Sensor "A" Circuit, Bank 1 or Single Sensor
P0341	Camshaft Position Sensor "A" Circuit Range/Performance, Bank 1 or Single Sensor
P0342	Camshaft Position Sensor "A" Circuit Low, Bank 1 or Single Sensor
P0343	Camshaft Position Sensor "A" Circuit High, Bank 1 or Single Sensor
P0345	Camshaft Position Sensor "A" Circuit, Bank 2
P0346	Camshaft Position Sensor "A" Circuit Range/Performance, Bank 2
P0347	Camshaft Position Sensor "A" Circuit Low, Bank 2
P0348	Camshaft Position Sensor "A" Circuit High, Bank 2
P0351	Ignition Coil "A" Primary/Secondary Circuit
P0352	Ignition Coil "B" Primary/Secondary Circuit

P0353	Ignition Coil "C" Primary/Secondary Circuit
P0354	Ignition Coil "D" Primary/Secondary Circuit
P0355	Ignition Coil "E" Primary/Secondary Circuit
P0356	Ignition Coil "F" Primary/Secondary Circuit
P0357	Ignition Coil "G" Primary/Secondary Circuit
P0358	Ignition Coil "H" Primary/Secondary Circuit
P0359	Ignition Coil "I" Primary/Secondary Circuit
P0360	Ignition Coil "J" Primary/Secondary Circuit
P0361	Ignition Coil "K" Primary/Secondary Circuit
P0362	Ignition Coil "L" Primary/Secondary Circuit
P0365	Camshaft Position Sensor "B" Circuit, Bank 1
P0366	Camshaft Position Sensor "B" Circuit, Bank 1 Range/Performance
P0367	Camshaft Position Sensor "B" Circuit Low, Bank 1
P0368	Camshaft Position Sensor "B" Circuit High, Bank 1
P0380	Glow Plug/Heater Circuit "A"
P0381	Glow Plug/Heater Indicator Circuit
P0391	Camshaft Position Sensor "B" Circuit Range/Performance, Bank 2
P0392	Camshaft Position Sensor "B" Circuit Low, Bank 2
P0393	Camshaft Position Sensor "B" Circuit High, Bank 2
P0400	Exhaust Gas Recirculation Flow
P0401	Exhaust Gas Recirculation Flow Insufficient Detected
P0402	Exhaust Gas Recirculation Flow Excessive Detected
P0403	Exhaust Gas Recirculation Control Circuit
P0404	Exhaust Gas Recirculation Control Circuit Range/Performance
P0411	Secondary Air Injection System Incorrect Flow Detected
P0413	Secondary Air Injection System Switching Valve "A" Circuit Open
P0414	Secondary Air Injection System Switching Valve "A" Circuit Shorted
P0416	Secondary Air Injection System Switching Valve "B" Circuit Open
P0417	Secondary Air Injection System Switching Valve "B" Circuit Shorted
P0418	Secondary Air Injection System Control "A" Circuit
P0420	Catalyst System Efficiency Below Threshold, Bank 1
P0421	Warm Up Catalyst Efficiency Below Threshold, Bank 1
P0422	Main Catalyst Efficiency Below Threshold, Bank 1
P0423	Heated Catalyst Efficiency Below Threshold, Bank 1
P0424	Heated Catalyst Temperature Below Threshold, Bank 1
P0425	Catalyst Temperature Sensor Circuit, Bank 1 Sensor 1
P0426	Catalyst Temperature Sensor Circuit Range/Performance, Bank 1 Sensor 1
P0427	Catalyst Temperature Sensor Circuit Low, Bank 1 Sensor 1
P0428	Catalyst Temperature Sensor Circuit High, Bank 1 Sensor 1
P0429	Catalyst Heater Control Circuit, Bank 1
P0430	Catalyst System Efficiency Below Threshold, Bank 2
P0431	Warm Up Catalyst Efficiency Below Threshold, Bank 2
P0432	Main Catalyst Efficiency Below Threshold, Bank 2

P0441	Evaporative Emission System Incorrect Purge Flow
P0442	Evaporative Emission System Leak Detected (small leak)
P0444	Evaporative Emission System Purge Control Valve Circuit Open
P0445	Evaporative Emission System Leak Detected (large leak)
P0449	Evaporative Emission System Vent Valve/Solenoid Circuit
P0455	Evaporative Emission System Leak Detected (large leak)
P0456	Evaporative Emission System Leak Detected (very small leak)
P0458	Evaporative Emission System Purge Control Valve Circuit Low
P0459	Evaporative Emission System Purge Control Valve Circuit High
P0480	Fan 1 Control Circuit
P0481	Fan 2 Control Circuit
P0489	Exhaust Gas Recirculation Control Circuit Low
P0490	Exhaust Gas Recirculation Control Circuit High
P0491	Secondary Air Injection System Insufficient Flow, Bank 1
P0492	Secondary Air Injection System Insufficient Flow, Bank 2
P0498	Evaporative Emission System Vent Valve Control Circuit Low
P0499	Evaporative Emission System Vent Valve Control Circuit High
P0501	Vehicle Speed Sensor "A" Range/Performance
P0505	Idle Air Control System
P0506	Idle Air Control System RPM Lower Than Expected
P0507	Idle Air Control System RPM Higher Than Expected
P0510	Closed Throttle Position Switch
P0544	Exhaust Gas Temperature Sensor Circuit, Bank 1 Sensor 1
P0545	Exhaust Gas Temperature Sensor Circuit Low, Bank 1 Sensor 1
P0546	Exhaust Gas Temperature Sensor Circuit High, Bank 1 Sensor 1
P0562	System Voltage Low
P0563	System Voltage High
P0564	Cruise Control Multi-Function Input "A" Circuit
P0597	Thermostat Heater Control Circuit/Open
P0598	Thermostat Heater Control Circuit Low
P0599	Thermostat Heater Control Circuit High
P0600	Serial Communication Link
P0601	Internal Control Module Memory Check Sum Error
P0602	Control Module Programming Error
P0603	Internal Control Module Keep Alive Memory (KAM) Error
P0604	Internal Control Module Random Access Memory (RAM) Error
P0605	Internal Control Module Read Only Memory (ROM) Error
P0606	Control Module Processor
P0607	Control Module Performance
P0608	Control Module VSS Output "A"
P0609	Control Module VSS Output "B"
P0613	TCM Processor
P0614	ECM / TCM Incompatible
P0627	Fuel Pump "A" Control Circuit/Open
P0629	Fuel Pump "A" Control Circuit High

P0638	Throttle Actuator Control Range/Performance, Bank 1
P0639	Throttle Actuator Control Range/Performance, Bank 2
P0641	Sensor Reference Voltage "A" Circuit/Open
P0642	Sensor Reference Voltage "A" Circuit Low
P0643	Sensor Reference Voltage "A" Circuit High
P0651	Sensor Reference Voltage "B" Circuit/Open
P0652	Sensor Reference Voltage "B" Circuit Low
P0653	Sensor Reference Voltage "B" Circuit High
P0657	Actuator Supply Voltage "A" Circuit/Open
P0658	Actuator Supply Voltage "A" Circuit Low
P0659	Actuator Supply Voltage "A" Circuit High
P0670	Glow Plug Control Module Control Circuit/Open
P0671	Cylinder 1 Glow Plug Circuit/Open
P0672	Cylinder 2 Glow Plug Circuit/Open
P0673	Cylinder 3 Glow Plug Circuit/Open
P0674	Cylinder 4 Glow Plug Circuit/Open
P0675	Cylinder 5 Glow Plug Circuit/Open
P0676	Cylinder 6 Glow Plug Circuit/Open
P0677	Cylinder 7 Glow Plug Circuit/Open
P0678	Cylinder 8 Glow Plug Circuit/Open
P0679	Cylinder 9 Glow Plug Circuit/Open
P0680	Cylinder 10 Glow Plug Circuit/Open
P0684	Glow Plug Control Module to PCM Communication Circuit Range/Performance
P0685	ECM/PCM Power Relay Control Circuit/Open
P0686	ECM/PCM Power Relay Control Circuit Low
P0687	ECM/PCM Power Relay Control Circuit High
P0688	ECM/PCM Power Relay Sense Circuit/Open
P0691	Fan 1 Control Circuit Low
P0692	Fan 1 Control Circuit High
P0693	Fan 2 Control Circuit Low
P0694	Fan 2 Control Circuit High
P0697	Sensor Reference Voltage "C" Circuit/Open
P0698	Sensor Reference Voltage "C" Circuit Low
P0699	Sensor Reference Voltage "C" Circuit High
P0700	Transmission Control System (MIL Request)
P0701	Transmission Control System Range/Performance
P0702	Transmission Control System Electrical
P0704	Clutch Switch Input Circuit
P0705	Transmission Range Sensor "A" Circuit (PRNDL Input)
P0706	Transmission Range Sensor "A" Circuit Range/Performance
P0710	Transmission Fluid Temperature Sensor "A" Circuit
P0711	Transmission Fluid Temperature Sensor "A" Circuit Range/Performance
P0712	Transmission Fluid Temperature Sensor "A" Circuit Low
P0713	Transmission Fluid Temperature Sensor "A" Circuit High

P0714	Transmission Fluid Temperature Sensor "A" Circuit Intermittent
P0715	Input/Turbine Speed Sensor "A" Circuit
P0716	Input/Turbine Speed Sensor "A" Circuit Range/Performance
P0717	Input/Turbine Speed Sensor "A" Circuit No Signal
P0720	Generator Control Circuit
P0721	Output Speed Sensor Circuit Range/Performance
P0722	Output Speed Sensor Circuit No Signal
P0725	Engine Speed Input Circuit
P0726	Engine Speed Input Circuit Range/Performance
P0727	Engine Speed Input Circuit No Signal
P0729	Gear 6 Incorrect Ratio
P0730	Incorrect Gear Ratio
P0731	Gear 1 Incorrect Ratio
P0732	Gear 2 Incorrect Ratio
P0733	Gear 3 Incorrect Ratio
P0734	Gear 4 Incorrect Ratio
P0735	Gear 5 Incorrect Ratio
P0736	Reverse Incorrect Ratio
P0740	Torque Converter Clutch Circuit/Open
P0741	Torque Converter Clutch Circuit Performance/Stuck Off
P0743	Torque Converter Clutch Circuit Electrical
P0746	Pressure Control Solenoid "A" Performance/Stuck Off
P0747	Pressure Control Solenoid "A" Stuck On
P0748	Pressure Control Solenoid "A" Electrical
P0749	Pressure Control Solenoid "A" Intermittent
P0751	Shift Solenoid "A" Performance/Stuck Off
P0752	Shift Solenoid "A" Stuck On
P0753	Shift Solenoid "A" Electrical
P0756	Shift Solenoid "B" Performance/Stuck Off
P0757	Shift Solenoid "B" Stuck On
P0758	Shift Solenoid "B" Electrical
P0761	Shift Solenoid "C" Performance/Stuck Off
P0762	Shift Solenoid "C" Stuck On
P0763	Shift Solenoid "C" Electrical
P0766	Shift Solenoid "D" Performance/Stuck Off
P0768	Shift Solenoid "D" Electrical
P0771	Shift Solenoid "E" Performance/Stuck Off
P0773	Shift Solenoid "E" Electrical
P0776	Pressure Control Solenoid "B" Performance/Stuck Off
P0777	Pressure Control Solenoid "B" Stuck On
P0778	Pressure Control Solenoid "B" Electrical
P0779	Pressure Control Solenoid "B" Intermittent
P0780	Shift Error
P0781	1-2 Shift
P0782	2-3 Shift

P0783	3-4 Shift
P0784	4-5 Shift
P0785	Shift Timing Solenoid "A"
P0791	Intermediate Shaft Speed Sensor "A" Circuit
P0796	Pressure Control Solenoid "C" Performance/Stuck Off
P0797	Pressure Control Solenoid "C" Stuck On
P0798	Pressure Control Solenoid "C" Electrical
P0799	Pressure Control Solenoid "C" Intermittent
P0811	Excessive Clutch "A" Slippage
P0820	Gear Lever X-Y Position Sensor Circuit
P0821	Gear Lever X Position Circuit
P0822	Gear Lever Y Position Circuit
P0829	5-6 Shift
P0838	Four Wheel Drive (4WD) Switch Circuit Low
P0840	Transmission Fluid Pressure Sensor/Switch "A" Circuit
P0841	Transmission Fluid Pressure Sensor/Switch "A" Circuit Range/Performance
P0842	Transmission Fluid Pressure Sensor/Switch "A" Circuit Low
P0845	Transmission Fluid Pressure Sensor/Switch "B" Circuit
P0846	Transmission Fluid Pressure Sensor/Switch "B" Circuit Range/Performance
P0863	TCM Communication Circuit
P0864	TCM Communication Circuit Range/Performance
P0865	TCM Communication Circuit Low
P0884	TCM Power Input Signal Intermittent
P0886	TCM Power Relay Control Circuit Low
P0887	TCM Power Relay Control Circuit High
P0889	TCM Power Relay Sense Circuit Range/Performance
P0890	TCM Power Relay Sense Circuit Low
P0891	TCM Power Relay Sense Circuit High
P0892	TCM Power Relay Sense Circuit Intermittent
P0914	Gear Shift Position Circuit
P0915	Gear Shift Position Circuit Range/Performance
P0918	Gear Shift Position Circuit Intermittent
P0919	Gear Shift Position Control Error
P0929	Gear Shift Lock Solenoid Control Circuit Range/Performance
P1009	Air Mass Meter 1/2 Implausible Signal from Load Detection
P1026	Activation Intake Manifold Flap for Air Stream Regulation Short Circuit to B+
P1027	Activation Intake Manifold Flap for Air Stream Regulation Short Circuit to Ground (GND)
P1028	Activation Intake Manifold Flap for Air Stream Regulation Open Circuit
P1073	Mass Air Flow (MAF) Sensor 2 -G246- Signal Too Small
P1074	Mass Air Flow (MAF) Sensor 2 -G246- Signal Too Large
P1081	Exhaust-Bank3, Mixture Adaptation Range 1 Lower Lean Limit Not

	Reached
P1082	Exhaust-Bank3, Mixture Adaptation Range 2 Lower Lean Limit Not Reached
P1083	Exhaust-Bank3, Mixture Adaptation Range 1 Rich Limit Exceeded
P1084	Exhaust-Bank3, Mixture Adaptation Range 2 Rich Limit Exceeded
P1085	Exhaust-Bank4, Mixture Adaptation Range 1 Lower Lean Limit Not Reached
P1086	Exhaust-Bank4, Mixture Adaptation Range 2 Lower Lean Limit Not Reached
P1087	Exhaust-Bank4, Mixture Adaptation Range 1 Rich Limit Exceeded
P1088	Exhaust-Bank4, Mixture Adaptation Range 2 Rich Limit Exceeded
P1102	HO2S Heater Control Circuit (Bank 1 Sensor 1) High
P1103	Bank1-Probe1, Heating Circuit Output Too Low
P1105	HO2S Heater Control Circuit (Bank 1 Sensor 2) High
P1107	HO2S Heater Control Circuit (Bank 2 Sensor 1) High
P1110	HO2S Heater Control Circuit (Bank 2 Sensor 2) High
P1113	Bank1, Sensor 1 Internal Resistance Too Large
P1114	Bank 1, sensor 2 Internal resistance too large
P1115	HO2S Heater Control Circuit (Bank 1 Sensor 1) Low
P1116	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P1117	HO2S Heater Control Circuit (Bank 1 Sensor 2) Low
P1118	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P1127	Bank1, Mixture Adaption (mult.) System Too Rich
P1128	Bank1, Mixture Adaption (mult.) System Too Lean
P1129	Bank2, Mixture Adaption (mult.) System Too Rich
P1130	Bank2, Mixture Adaption (mult.) System Too Lean
P1136	Bank1, Mixture Adaption (add.) System Too Lean
P1137	Bank1, Mixture Adaption (add.) System Too Rich
P1138	Bank2, mixture adaption (add.) system too lean
P1139	Bank2, Mixture Adaption (add.) System Too Rich
P1141	Load Detection Implausible Value
P1142	Load Detection Value Below Lower Limit
P1143	Load Detection Value Above Upper Limit
P1144	Mass Air Flow (MAF) Sensor -G70- Open Circuit/Short Circuit to Ground (GND)
P1145	Mass Air Flow (MAF) Sensor -G70- Short Circuit to B+
P1146	Air Mass Meter -G70 Supply Voltage
P1151	Long Term Fuel Trim Additive Air., Area 1 System Too Lean
P1152	Long Term Fuel Trim Additive Air., Area 2 System Too Lean
P1155	Manifold Absolute Pressure (MAP) Sensor -G71- Short Circuit to B+
P1156	Manifold Absolute Pressure (MAP) Sensor -G71- Open Circuit/Short to Ground (GND)
P1157	Manifold Absolute Pressure/Barometric Pressure Circuit
P1160	Intake Air Temperature (IAT) Sensor -G72- Short Circuit to Ground (GND)

P1161	Intake Air Temperature (IAT) Sensor -G72- Open Circuit/Short Circuit to B+
P1162	Fuel Temperature Sensor A Circuit Low
P1163	Fuel Temperature Sensor A Circuit High
P1164	Fuel Temperature Sensor -G81- Unplausible Signal
P1165	Long Term Fuel Trim Additive Air., Area 1 System Too Rich
P1166	Long Term Fuel Trim Additive Air., Area 2 System Too Rich
P1167	Mass Air Flow (MAF) Sensor 2 -G246- Unplausible Signal
P1171	Angle Sender 2 for Throttle Valve Drive -G188 Implausible Signal
P1172	Angle Sender 2 for Throttle Valve Drive -G188 Signal Too Low
P1173	Angle sender 2 for throttle valve drive -G188 Signal Too High
P1174	Fuel Trim, Bank 1 Injection Timing Deviation
P1175	Pre-Injection Switched Off
P1176	Bank1, Lambda Correction Downstream of Catalyst Control Limit Reached
P1177	Bank2, Lambda Correction Downstream of Catalyst Control Limit Reached
P1196	O2 Sensor Heater Circuit, Bank1 Sensor1 Electrical Fault
P1197	O2 Sensor Heater Circuit, Bank2 Sensor1 Electrical Fault
P1198	O2 Sensor Heater Circuit, Bank1 Sensor2 Eletrical Fault
P1199	HO2S Heater Control Circuit, Bank2 Sensor2
P1213	Cylinder 1 Injector Circuit High
P1214	Cylinder 2 Injector Circuit High
P1215	Cylinder 3 Injector Circuit High
P1216	Cylinder 4 Injector Circuit High
P1217	Cylinder 5 Fuel Injector -N83- Short circuit to B+
P1218	Cylinder 6 Fuel Injector -N84- Short circuit to B+
P1225	Cylinder 1 Injector Circuit Low
P1226	Cylinder 2 Injector Circuit Low
P1227	Cylinder 3 Injector Circuit Low
P1228	Cylinder 4 Injector Circuit Low
P1229	Cylinder 5 Fuel Injector -N83- Short Circuit to Ground (GND)
P1230	Cylinder 6 Fuel Injector -N84- Short Circuit to Ground (GND)
P1237	Cylinder 1 Injector -N30 Open Circuit
P1238	Cylinder 2 Injector -N31 Open Circuit
P1239	Cylinder 3 Injector -N32 Open Circuit
P1240	Cylinder 4 Injector -N33 Open Circuit
P1241	Cylinder 5 Injector -N83 Open Circuit
P1242	Cylinder 6 Injector -N84 Open Circuit
P1245	Needle Lift Sensor -G80- Short Circuit to Ground (GND)
P1246	Needle Lift Sender -G80 Implausible Signal
P1247	Needle Lift Sensor -G80- Open Circuit/Short Circuit to B+
P1248	Injection Pump Fuel Metering Control (A) Range/Performance
P1250	Fuel Level Too Low
P1251	Cold Start Injector -N108- Short Circuit to B+
P1252	Cold Start Injector -N108- Open Circuit/Short Circuit to Ground

	GND)
P1255	Engine Coolant Temperature (ECT) Sensor -G62- Short Circuit to Ground
P1256	Engine Coolant Temperature (ECT) Sensor -G62- Open Circuit/Short Circuit to B+
P1280	Air Control Valve for Injectors -N212 Air Flow Too Low
P1296	Malfunction in Cooling System
P1300	Misfire Detected Low Fuel
P1321	Knock Sensor 3-G198 Signal Too Low
P1322	Knock Sensor 3-G198 Signal Too High
P1323	Knock Sensor 4-G199 Signal Too Low
P1324	Knock Sensor 4-G199 Signal Too High
P1335	Engine Torque Monitoring 2 Value Above Upper Control Limit
P1336	EngineTorque Monitoring Value Above Upper Control Limit
P1337	Bank1, Camshaft Position (CMP) =>Sensor -G40- Short Circuit to Ground (GND)
P1338	Bank 1, Camshaft Position (CMP) Sensor -G40- = > Open Circuit/Short Circuit to Ground (GND)
P1340	Camshaft Position Sensor-G40, Engine Speed Sensor-G28 Incorrect Allocation
P1341	Ignition Coil Power Output Stage 1 Short Circuit to Ground (GND)
P1343	Ignition Coil Power Output Stage 2 Short circuit to Ground (GND)
P1345	Ignition Coil Power Output Stage 3 Short Circuit to Ground (GND)
P1354	Modulating Piston Movement Sender -G149 Electrical Fault in Circuit
P1355	Ignition Activation Cylinder 1 Open Circuit
P1356	Ignition Activation Cylinder 1 Short Circuit to B+
P1357	Ignition Activation Cylinder 1 Short Circuit to Ground (GND)
P1358	Ignition Activation Cylinder 2 Open Circuit
P1359	Ignition Activation Cylinder 2 Short Circuit to B+
P1360	Ignition Activation Cylinder 2 Short Circuit to Ground (GND)
P1361	Ignition Activation Cylinder 3 Open Circuit
P1362	Ignition Activation Cylinder 3 Short Circuit to B+
P1363	Ignition Activation Cylinder 3 Short Circuit to Ground (GND)
P1364	Ignition Activation Cylinder 4 Open Circuit
P1365	Ignition Activation Cylinder 4 Short Circuit to B+
P1366	Ignition Activation Cylinder 4 Short Circuit to Ground (GND)
P1387	Internal Control Module Memory Check Sum Error
P1388	Internal Control Module Memory Check Sum Error
P1391	Bank2, Camshaft Position (CMP) =>Sensor 2 -G163- Short Circuit to Ground (GND)
P1392	Bank2, Camshaft Position (CMP) = >Sensor 2 -G163- Open Circuit/Short Circuit to B+
P1393	Ignition Output 1 Electrical Fault in Circuit
P1394	Ignition Output 2 Electrical Fault in Circuit
P1395	Ignition Output 3 Electrical Fault in Circuit

P1401	EGR Vacuum Regulator Solenoid Valve -N18- Short Circuit to Ground (GND)
P1402	EGR Vacuum Regulator Solenoid Valve -N18- Short Circuit to B+
P1407	Exhaust Gas Recirculatio Sensor (A) Circuit Low
P1408	Exhaust Gas Recirculatio Sensor (A) Circuit High
P1410	Evaporative Emission (EVAP) Canister Purge Regulator Valve - N80- Short Circuit to B+
P1411	Bank2, Secondary Air System Air Flow Too Low
P1413	Pressure Sensor for Exhaust Gas Recirculation Signal Too High
P1414	Bank2, Secondary Air System Leak Detected
P1418	Fuel Level Sensor (A) Circuit High
P1420	Secondary Air Injection System Switching Valve (A) Circuit Malfunction
P1421	Secondary Air Injection (AIR) Solenoid Valve -N112- Short Circuit to Ground (GND)
P1422	Secondary Air Injection (AIR) Solenoid Valve -N112- Short Circuit to B+
P1424	Bank1, Secondary Air System Leak Detected
P1425	Evaporative Emission (EVAP) Canister Purge Regulator Valve - N80- Short Circuit to Ground (GND)
P1426	Evaporative Emission System Pure Control Valve Circuit Open
P1432	Secondary Air Injection System Switching Valve (A) Circuit Open
P1433	Secondary Air Pump Relay-J299 Open Circuit
P1434	Secondary Air Injection (AIR) Pump Relay -J299- Short Circuit to B+
P1435	Secondary Air Injection (AIR) Pump Relay -J299- Short Circuit to Ground (GND)
P1437	Valve -2- for EGR -N213- Short Circuit to B+
P1438	Valve -2- for EGR -N213- Open Circuit/Short Circuit to Ground (GND)
P1440	Exhaust Gas Recirculation Valve -N18 Open Circuit
P1441	Exhaust Gas Recirculation Valve -N18- Open Circuit/Short Circuit to Ground (GND)
P1446	Temperature Sensor 1 for Catalyst -G20- Short Circuit to Ground (GND)
P1450	Secondary Air Injection System Short Circuit to B+
P1451	Secondary Air Injection System Short Circuit to Ground (GND)
P1452	Secondary Air System Open Circuit
P1467	Evaporative Emission (EVAP) Canister Purge Solenoid Valve - N115- Short to B+
P1468	Evaporative Emission (EVAP) Canister Purge Solenoid Valve - N115- Short to Ground
P1469	Evaporative Emission (EVAP) Canister Purge Solenoid Valve - N115- Open
P1471	EVAP Emission Control LPD Circuit Short Circuit to B+
P1472	EVAP Emission Control LPD Circuit Short Circuit to Ground (GND)
P1473	Leak Diagnosis Pump - Tank Breather System Open Circuit

P1475	Leak Diagnosis Pump - Tank Breather System Malfunction/No Signal
P1476	Leak Diagnosis Pump - Tank Breather System Malfunction/Vacuum Too Low
P1477	Leak Diagnosis Pump - Tank Breather System Malfunction
P1482	Secondary Air Injection (AIR) Pump Relay 2 -J545- Short Circuit to B+
P1483	Secondary Air Injection (AIR) Pump Relay 2 -J545- Short Circuit to Ground (GND)
P1484	Secondary Air Injection (AIR) Pump Relay 2 -J545- Electrical Malfunction in Circuit
P1489	Evaporative Emission (EVAP) Canister Purge Regulator Valve 2 - N333- Short Circuit to B+
P1490	Evaporative Emission (EVAP) Canister Purge Regulator Valve 2 - N333- Short Circuit to Ground (GND)
P1491	Evaporative Emission (EVAP) Canister Purge Regulator Valve 2 - N333- Open Circuit
P1497	Secondary Air System, Bank 3 Flow Faulty
P1498	Secondary Air System, Bank 4 Flow Faulty
P1500	Fuel Pump Primary Circuit Fault in Electrical Circuit
P1501	Fuel Pump (FP) Relay -J17- Short Circuit to Ground (GND)
P1502	Fuel Pump (FP) Relay -J17- Short circuit to B+
P1505	Idling Switch -F60 Does Not Close/Open Circuit
P1506	Closed Thottle Position (CTP) Switch -F60- Does Not Open/Short Circuit to Ground (GND)
P1517	Main Relay =>-J271 Electrical Fault in Circuit
P1519	A' Camshaft Position Actuator Circuit Bank 1 Malfunction
P1522	A' Camshaft Position Actuator Circuit Bank 2 Malfunction
P1541	Fuel Pump Relay -J17 Open Circuit
P1542	Angle Sender 1 for Throttle Valve Drive -G187 Implausible Signal
P1543	Angle Sender 1 for Throttle Valve Drive -G187 Signal Too Low
P1544	Angle Sender 1 for Throttle Valve Drive -G187 Signal Too High
P1545	Throttle Valve Control System Malfunction
P1546	Turbo/Super Charger Wastegate Solenoid (A) High Input/Short to B+
P1549	Turbo/Super Charger Wastegate Solenoid (A) Open/Short Circuit to Ground
P1556	Turbo/Super Charger Boost Sensor (A) Circuit Control Limit Not Reached
P1557	Turbo/Super Charger Overboost Condition Control Limit Exceeded
P1558	Throttle Valve Drive -G186 Electrical Fault in Circuit
P1559	Throttle Valve Control Part -J338- Fault in Basic Settings
P1560	Engine Overspeed Condition
P1562	Quantity Adjuster -N146 Upper Limit Stop Value
P1563	Quantity Adjuster -N146 Lower Limit Stop Value
P1565	Throttle Valve Control Part -J338- Lower Stop Not Reached
P1568	Throttle Valve Control Module -J338- Mechanical Malfunction

P1580	Throttle Valve Drive - Bank 1 Malfunction
P1582	Idling Speed Regulation Adaptation Limit Reached
P1592	Height Sensor/Charge Pressure Sensor Unplausible Ratio
P1603	Internal Control Module Memory Check Sum Error
P1604	Internal Control Module Memory Check Sum Error
P160C	Coolant Pump2 Control Circuit Open
P160E	Coolant Pump 2 Control Circuit Low
P160F	Coolant Pump 2 Control Circuit High
P1611	Request MIL on Short Circuit to Ground (GND)
P1612	Engine Control Unit Incorrect Coding
P1613	Request MIL on Open Circuit/Short Circuit to B+
P1618	Glow Plug Relay -J52- Short Circuit to B+
P1619	Glow Plug Relay -J52- Open Circuit/Short Circuit to Ground (GND)
P1625	Data-Bus-Drivetrain Implausible Message From Transmission Control Module
P1626	Data-Bus-Drivetrain Missing Message From Transmission Control Module
P1629	Data-Bus-Drivetrain Missing Message From ADC Control Module
P1630	Throttle/Pedal Position Sensor/Switch -C- Circuit Low
P1631	Throttle/Pedal Position Sensor/Switch -C- Circuit High
P1632	Throttle/Pedal Position Sensor/Switch -C- Circuit Voltage Supply
P1633	Accelerator Pedal Position Sender 2 -G185 Signal Too Low
P1634	Accelerator Pedal Position Sender 2 -G185 Signal Too High
P1639	Throttle/Pedal Position Sensor/Switch -C- Circuit High
P1640	Internal Control Module Memory Check Sum Error
P1647	Checking Coding/Versions of Control Modules in CAN-Bus
P1648	Data-Bus-Driving Gear Faulty
P1649	Data-Bus-Drivetrain Missing Message From ABS Control Module
P1650	Data-Bus-Drivetrain Missing Message From Instrument Cluster
P1673	Speed Signal Malfunction Message Fom ABS Control Module
P1681	Control Unit Programming Programming Not Finished
P1702	Malfunction Cannot Activate Envisioned Replacement Function, Since Another Malfunction With Equal Pritority is Present
P1745	Voltage Supply for Solenoid Valves Short Circuit to B+
P1746	Supply Voltage for Solenoid Valves Electrical Fault in Circuit
P1747	Voltage supply for solenoid valves Open circuit/short circuit to Ground (GND)
P1748	Internal Control Module Memory Check Sum Error
P1750	System Voltage Low Voltage
P1751	System Voltage High Voltage
P1778	Valve 7 Electrical Fault in Circuit
P1780	Torque Withdrawal Faulty
P1813	Pressure Control Valve 1 -N215 Electrical Fault in Circuit
P1814	Pressure Control Valve -1- for Auto. Transmission -N215- Open

	Circuit/Short Circuit to Ground (GND)
P1815	Pressure Control Valve -1- for Auto. Transmission -N215- Short Circuit to B+
P1818	Pressure Control Valve 2 -N216 Electrical Fault in Circuit
P1819	Pressure Control Valve -2- for Auto. Transmission -N216- Open Circuit/Short Circuit to Ground (GND)
P1820	Pressure Control Valve -2- for Auto. Transmission -N216- Short Circuit to B+
P1823	Pressure Control Valve 3 -N217 Electrical Fault in Circuit
P1824	Pressure Control Valve -3- for Auto. Transmission -N217- Open Circuit/Short Circuit to Ground (GND)
P1825	Pressure Control Valve -3- for Auto. Transmission -N217- Short Circuit to B+
P1828	Pressure Control Valve 4 -N218 Electrical Fault in Circuit
P1829	Pressure Control Valve -4- for Auto. Transmission -N218- Open Circuit/Short Circuit to Ground (GND)
P1830	Pressure Control Valve -4- for Auto. Transmission -N218- Short Circuit to B+
P1841	Engine control module/Transmission Control Module (TCM) Versions not compatible
P1850	Data-Bus-Drivetrain Missing Message From Engine Control Module
P1854	Data-Bus-Driving Fear Hardware Faulty
P1855	Data-Bus-Driving Gear Software Version Monitoring
P1857	Load Signal Fault Signal From Engine Control Unit
P1861	Throttle Position (TP) Sensor -G79- Malfunction Indication From Engine Control Module (ECM)
P1866	Data-Bus-Driving Fear Missing Messages
P1924	Control Module Pin Coding Unplausible Signal
P1953	Turbocharger (TC) Control Module 2 Faulty
P1954	Automatic Glow Time Control Module 2, Electrical Circuit Electrical Malfunction Electrical Circuit
P1955	Glow Plug Control Module 2 to PCM Comm. Circuit Range/Performance
P2004	Intake Manifold Runner Control Stuck Open
P2008	Intake Manifold Runner Control Circuit/Open, Bank 1
P2014	Intake Manifold Runner Position Sensor/Switch Circuit, Bank 1
P2015	Intake Manifold Runner Position Sensor/Switch Circuit Range/Performance, Bank 1
P2016	Intake Manifold Runner Position Sensor/Switch Circuit Low, Bank 1
P2088	A Camshaft Position Actuator Control Circuit Low, Bank 1
P2089	A Camshaft Position Actuator Control Circuit High, Bank 1
P2090	B Camshaft Position Actuator Control Circuit Low, Bank 1
P2091	B Camshaft Position Actuator Control Circuit High, Bank 1
P2092	A Camshaft Position Actuator Control Circuit Low, Bank 2
P2093	A Camshaft Position Actuator Control Circuit High, Bank 2
P2094	B Camshaft Position Actuator Control Circuit Low, Bank 2

P2095	B Camshaft Position Actuator Control Circuit High, Bank 2
P2096	Post Catalyst Fuel Trim System Too Lean Bank 1
P2097	Post Catalyst Fuel Trim System Too Rich Bank 1
P2098	Post Catalyst Fuel Trim System Too Lean Bank 2
P2099	Post Catalyst Fuel Trim System Too Rich Bank 2
P2100	Throttle Actuator Control Motor Circuit/Open
P2101	Throttle Actuator Control Motor Circuit Range/Performance
P2102	Throttle Actuator Control Motor Circuit Low
P2103	Throttle Actuator Control Motor Circuit High
P2106	Throttle Actuator Control System - Forced Limited Power
P2108	Throttle Actuator Control Module Performance
P2110	Throttle Actuator Control System - Forced Limited RPM
P2122	Throttle/Pedal Position Sensor/Switch "D" Circuit Low
P2123	Throttle/Pedal Position Sensor/Switch "D" Circuit High
P2127	Throttle/Pedal Position Sensor/Switch "E" Circuit Low
P2128	Throttle/Pedal Position Sensor/Switch "E" Circuit High
P2133	Throttle/Pedal Position Sensor/Switch "F" Circuit High
P2138	Throttle/Pedal Position Sensor/Switch "D"/"E" Voltage Correlation
P2146	Fuel Injector Group "A" Supply Voltage Circuit/Open
P2149	Fuel Injector Group "B" Supply Voltage Circuit/Open
P2152	Fuel Injector Group "C" Supply Voltage Circuit/Open
P2177	System Too Lean Off Idle, Bank 1
P2178	System Too Rich Off Idle, Bank 1
P2179	System Too Lean Off Idle, Bank 2
P2180	System Too Rich Off Idle, Bank 2
P2181	Cooling System Performance
P2184	Engine Coolant Temperature Sensor 2 Circuit Low
P2185	Engine Coolant Temperature Sensor 2 Circuit High
P2187	System Too Lean at Idle, Bank 1
P2188	System Too Rich at Idle, Bank 1
P2189	System Too Lean at Idle
P2190	System Too Rich at Idle
P2191	System Too Lean at Higher Load, Bank 1
P2192	System Too Rich at Higher Load, Bank 1
P2193	System Too Lean at Higher Load, Bank 2
P2194	System Too Rich at Higher Load, Bank 2
P2195	O2 Sensor Signal Biased/Stuck Lean, Bank 1 Sensor 1
P2196	O2 Sensor Signal Biased/Stuck Rich, Bank 1 Sensor 1
P2197	O2 Sensor Signal Biased/Stuck Lean
P2198	O2 Sensor Signal Biased/Stuck Rich, Bank 2 Sensor 1
P2199	Intake Air Temperature Sensor 1/ 2 Correlation
P2231	O2 Sensor Signal Circuit Shorted to Heater Circuit, Bank 1 Sensor 1
P2234	O2 Sensor Signal Circuit Shorted to Heater Circuit, Bank 2 Sensor 1
P2237	O2 Sensor Positive Current Control Circuit/Open, Bank 1 Sensor 1

P2238	O2 Sensor Positive Current Control Circuit Low
P2239	O2 Sensor Positive Current Control Circuit High
P2240	O2 Sensor Positive Current Control Circuit/Open, Bank 2 Sensor 1
P2241	O2 Sensor Positive Current Control Circuit Low
P2242	O2 Sensor Positive Current Control Circuit High
P2243	O2 Sensor Reference Voltage Circuit/Open, Bank 1 Sensor 1
P2245	O2 Sensor Reference Voltage Circuit Low
P2246	O2 Sensor Reference Voltage Circuit High
P2247	O2 Sensor Reference Voltage Circuit/Open, Bank 2 Sensor 1
P2249	O2 Sensor Reference Voltage Circuit Low
P2250	O2 Sensor Reference Voltage Circuit High
P2251	O2 Sensor Negative Current Control Circuit/Open, Bank 1 Sensor 1
P2252	O2 Sensor Negative Current Control Circuit Low
P2253	O2 Sensor Negative Current Control Circuit High
P2254	O2 Sensor Negative Current Control Circuit/Open, Bank 2 Sensor 1
P2255	O2 Sensor Negative Current Control Circuit Low
P2256	O2 Sensor Negative Current Control Circuit High
P2257	Secondary Air Injection System Control "A" Circuit Low
P2258	Secondary Air Injection System Control "A" Circuit High
P2263	Turbocharger/Supercharger Boost System Performance
P2270	O2 Sensor Signal Stuck Lean, Bank 1 Sensor 2
P2271	O2 Sensor Signal Stuck Rich, Bank 1 Sensor 2
P2272	O2 Sensor Signal Stuck Lean, Bank 1 Sensor 2
P2273	O2 Sensor Signal Stuck Rich, Bank 1 Sensor 2
P2274	O2 Sensor Signal Stuck Lean, Bank 1 Sensor 3
P2275	O2 Sensor Signal Stuck Rich, Bank 1 Sensor 3
P2279	Intake Air System Leak
P2293	Fuel Pressure Regulator 2 Performance
P2294	Fuel Pressure Regulator 2 Control Circuit
P2295	Fuel Pressure Regulator 2 Control Circuit Low
P2296	Fuel Pressure Regulator 2 Control Circuit High
P2300	Ignition Coil "A" Primary Control Circuit Low
P2301	Ignition Coil "A" Primary Control Circuit High
P2303	Ignition Coil "B" Primary Control Circuit Low
P2304	Ignition Coil "B" Primary Control Circuit High
P2306	Ignition Coil "C" Primary Control Circuit Low
P2307	Ignition Coil "C" Primary Control Circuit High
P2309	Ignition Coil "D" Primary Control Circuit Low
P2310	Ignition Coil "D" Primary Control Circuit High
P2312	Ignition Coil "E" Primary Control Circuit Low
P2313	Ignition Coil "E" Primary Control Circuit High
P2315	Ignition Coil "F" Primary Control Circuit Low
P2316	Ignition Coil "F" Primary Control Circuit High

P2400	Evaporative Emission System Leak Detection Pump Control Circuit/Open
P2401	Evaporative Emission System Leak Detection Pump Control Circuit Low
P2402	Evaporative Emission System Leak Detection Pump Control Circuit High
P2403	Evaporative Emission System Leak Detection Pump Sense Circuit/Open
P2404	Evaporative Emission System Leak Detection Pump Sense Circuit Range/Performance
P2413	Exhaust Gas Recirculation System Performance
P2414	O2 Sensor Exhaust Sample Error, Bank 1 Sensor 1
P2415	O2 Sensor Exhaust Sample Error, Bank 2 Sensor 1
P2416	O2 Sensor Signals Swapped, Bank 1 Sensor 2/Bank 1 Sensor 3
P2422	Evaporative Emission System Vent Valve Stuck Closed
P2425	Exhaust Gas Recirculation Cooling Valve Control Circuit/Open
P2426	Exhaust Gas Recirculation Cooling Valve Control Circuit Low
P2427	Exhaust Gas Recirculation Cooling Valve Control Circuit High
P2539	Low Pressure Fuel System Sensor Circuit
P2540	Low Pressure Fuel System Sensor Circuit Range/Performance
P2541	Low Pressure Fuel System Sensor Circuit Low
P2564	Turbocharger Boost Control Position Sensor "A" Circuit Low
P2565	Turbocharger Boost Control Position Sensor "A" Circuit High
P2600	Coolant Pump Control Circuit/Open
P2602	Coolant Pump Control Circuit Low
P2603	Coolant Pump Control Circuit High
P2626	O2 Sensor Pumping Current Trim Circuit/Open, Bank 1 Sensor 1
P2629	O2 Sensor Pumping Current Trim Circuit/Open, Bank 1 Sensor 1
P2632	Fuel Pump "B" Control Circuit /Open
P2634	Fuel Pump "B" Control Circuit High
P2637	Torque Management Feedback Signal "A"
P2714	Pressure Control Solenoid "D" Performance/Stuck Off
P2715	Pressure Control Solenoid "D" Stuck On
P2716	Pressure Control Solenoid "D" Electrical
P2717	Pressure Control Solenoid "D" Intermittent
P2723	Pressure Control Solenoid "E" Performance/Stuck Off
P2724	Pressure Control Solenoid "E" Stuck On
P2725	Pressure Control Solenoid "E" Electrical
P2726	Pressure Control Solenoid "E" Intermittent
P2732	Pressure Control Solenoid "F" Performance/Stuck Off
P2733	Pressure Control Solenoid "F" Stuck On
P2734	Pressure Control Solenoid "F" Electrical
P2735	Pressure Control Solenoid "F" Intermittent
P3000	Glow Plug Indictor Light -K29- Malfunction Message From Instrument Cluster
P3011	Fuel Pump (FP) 2 Relay -J49- Short Circuit to B+

P3012	Fuel Pump (FP) 2 Relay -J49- Open Circuit/Short Circuit to Ground (GND)
P3025	Angle Sensor 1 (on Throttle Drive 2 Power Accelerator Actuation) - G297- Unplausible Signal
P3026	Angle Sensor 1 (on Throttle Drive 2 Power Accelerator Actuation) - G297- Signal Too Small
P3027	Angle Sensor 1 (on Throttle Drive 2 Power Accelerator Actuation) - G297- Signal Too Large
P3028	Angle Sensor 2 (on Throttle Drive 2 Power Accelerator Actuation) - G298- Unplausible Signal
P3029	Angle Sensor 2 (on Throttle Drive 2 Power Accelerator Actuation) - G298- Signal Too Small
P3030	Angle Sensor 2 (on Throttle Drive 2 Power Accelerator Actuation) - G298- Signal Too Large
P3031	Throttle Drive 2 (Power Accelerator Actuation) -G296- Electrical Malfunction in Circuit
P3032	Throttle Valve Control Module 2 -J544- Malfunction in Basic Setting
P3033	Intake Air Temperature (IAT) Sensor 2 -G299- Signal Too Small
P3034	Intake Air Temperature (IAT) Sensor 2 -G299- Signal Too Large
P3035	Throttle Valve Control Module 2 -J544- Mechanical Malfunction
P3038	Throttle Valve Control Module 2 -J544- Lower Impact Is Not Being Reached
P3047	Activation Starter Relay 2 Short Circuit to B+
P3048	Activation Starter Relay 2 Short Circuit to Ground (GND)
P3049	Activation Starter Relay 2 Open Circuit
P3057	Exhaust Pressure Sensor 2 High
P3058	Exhaust Gas Recirc.Flow 2 Insufficient Detected
P3059	Exhaust Gas Recirc.Flow Excessive Detected
P3060	Cooling Bypass Valve, Exhaust Gas Recirculation Flow Electrical
P3061	Cooling Bypass Valve 2, Exhaust Gas Recirculation Flow Electrical
P3062	Turbo/Super Charger Overboost Condition
P3063	Turbo/Super Charger Underboost
P3081	Engine Temperature Too Low
P3130	Exhaust Gas Recirculation (EGR) System Control Limit Exceeded
P3131	Exhaust Gas Recirculation (EGR) System Lowest Control Limit Exceeded
P3144	Exhaust-Bank 3, Sensor 1, Oxygen Sensor Signal Implausibly Lean
P3145	Exhaust-Bank 3, Sensor 1, Oxygen Sensor Signal Implausibly Rich
P3146	Exhaust-Bank 4, Sensor 1, Oxygen Sensor Signal Implausibly Lean
P3147	Exhaust-Bank 4, Sensor 1, Oxygen Sensor Signal Implausibly Rich
P3148	Exhaust-Bank 3, Oxygen Sensor Before Cat, Heater Circuit Regulation at Upper Impact

P3149	Exhaust-Bank 3, Oxygen Sensor Before Cat, Heater Circuit Regulation at Lower Impact
P3150	Exhaust-Bank 4, Oxygen Sensor Before Cat, Heater Circuit Regulation at Upper Impact
P3151	Exhaust-Bank 4, Oxygen Sensor Before Cat, Heater Circuit Regulation at Lower Impact
P3152	Exhaust-Bank 3, Sensor 1 Inner Resistance Implausible
P3153	Exhaust-Bank 4, Sensor 1 Inner Resistance Implausible
P3175	Exhaust-Bank 3, Mixture Adaptation Range 3 Lean Limit Not Reached
P3176	Exhaust-Bank 3, Mixture Adaptation Range 3 Rich Limit Exceeded
P3177	Exhaust-Bank 4, Mixture Adaptation Range 3 Lean Limit Not Reached
P3178	Exhaust-Bank 4, Mixture Adaptation Range 3 Rich Limit Exceeded
P3200	Emissions-Bank 3 Sensor1, Heater Circuit Short Circuit to Ground (GND)
P3201	Emissions-Bank 3 Sensor 1, Heater Circuit Short Circuit to B+
P3202	Emissions-Bank 3 Sensor 1, Heater Circuit Open Circuit
P3207	Emissions-Bank 3 Sensor 1, Electrical Malfunction in Circuit
P3208	Emissions-Bank 3 Sensor 1, No Activity
P3209	Emissions-Bank 3 Sensor 1, Signal Too Slow
P3211	Exhaust-Bank 1 Sensor 1, Heater Return Connection
P3212	Exhaust-Bank 2 Sensor 1, Heater Return Connection
P3213	Exhaust-Bank 3 Sensor 1, Heater Return Connection
P3214	Exhaust-Bank 4 Sensor 1, Heater Return Connection
P3215	Emissions-Bank 3 Sensor 2, Heater Circuit Short Circuit to Ground (GND)
P3216	Emissions-Bank 3 Sensor 2, Heater Circuit Short Circuit to B+
P3217	Emissions-Bank 3 Sensor 2, Heater Circuit Open Circuit
P3218	Emissions-Bank 3 Sensor 2, Heater Circuit Electrical Malfunction
P3220	Emissions-Bank 3 Sensor 2, Voltage Too Low
P3221	Emissions-Bank 3 Sensor 2, Voltage Too High
P3222	Emissions-Bank 3 Sensor 2, Electrical Malfunction in Circuit
P3223	Emissions-Bank 3 Sensor 2, No activity
P3224	Emissions-Bank 3 Sensor 2, Signal Too Slow
P3225	Exhaust-Bank 3, O2 Correction Behind Catalyst, B1 Limit Attained
P3226	Exhaust-Bank 4, O2 Correction Behind Catalyst, B1 Limit Attained
P3230	Emissions-Bank 4 Sensor 1, Heater Circuit Short Circuit to Ground (GND)
P3231	Emissions-Bank 4 Sensor 1, Heater Circuit Short Circuit to B+
P3232	Emissions-Bank 4 Sensor 1, Heater Circuit Open Circuit
P3237	Emissions-Bank 4 Sensor 1, Electrical Malfunction in Circuit
P3238	Emissions-Bank 4 Sensor 1, No Activity
P3239	Emissions-Bank 4 Sensor 1, Signal Too Slow
P3245	Emissions-Bank 4 Sensor 2, Heater Circuit Short Circuit to Ground (GND)

P3246	Emissions-Bank 4 Sensor 2, Heater Circuit Short Circuit to B+
P3247	Emissions-Bank 4 Sensor 2, Heater Circuit Open Circuit
P3248	Emissions-Bank 4 Sensor 2, Heater Circuit Electrical Malfunction
P3250	Emissions-Bank 4 Sensor 2, Voltage Too Low
P3251	Emissions-Bank 4 Sensor 2, Voltage Too High
P3252	Emissions-Bank 4 Sensor 2, Electrical Malfunction in Circuit
P3253	Emissions-Bank 4 Sensor 2, No Activity
P3254	Emissions-Bank 4 Sensor 2, Signal Too Slow
P3261	Exhaust Bank 3/4 Oxygen Sensors Before Catalytic Converter Swapped
P3262	Exhaust Bank 1/2 Oxygen Sensors Behind Catalytic Converter Swapped
P3263	Exhaust Bank 3/4 Oxygen Sensors Behind Catalytic Converter Swapped
P3278	Linear 02 Sensor, Exhaust-Bank 3/Pump Current Open Circuit
P3281	Linear 02 Sensor, Exhaust-Bank 3/Reference Voltage Open Circuit
P3285	Linear 02 Sensor, Exhaust-Bank3/Common Ground Wire Open Circuit
P3288	Linear 02 Sensor, Exhaust-Bank 4/Pump Current Open Circuit
P3291	Linear 02 Sensor, Exhaust-Bank 4/Reference Voltage Open Circuit
P3292	Linear 02 Sensor, Exhaust-Bank 4/Reference Voltage Short Circuit to Ground
P3295	Linear 02 Sensor, Exhaust-Bank 4/Common Ground Wire Open Circuit
P3298	Catalytic Converter System, Exhaust-Bank 3 Effectiveness Too Low
P3299	Catalytic Converter System, Exhaust-Bank 4 Effectiveness Too Low
P3328	Intake Flap Motor 2 Short to B+
P3329	Intake Flap Motor 2 Open/Short to Ground
P3330	Intake Flap Motor 2 No Signal
P3331	Intake Flap Motor 2 Faulty
P3339	Automatic Glow Time Control Relay 2 Electrical Malfunction in Circuit
P3376	Intake Air Temperature Sensor 3 Circuit-G520 Low
P3377	Intake Air Temperature Sensor 3 Circuit-G520 High
U0001	High Speed CAN Communication Bus
U0002	High Speed CAN Communication Bus Performance
U0073	Control Module Communication Bus Off
U0100	Lost Communication With ECM/PCM "A"
U0101	Lost Communication With TCM
U0103	Lost Communication With Gear Shift Module "A"
U0115	Lost Communication With ECM/PCM "B"
U0121	Lost Communication With Anti-Lock Brake System (ABS) Control Module
U0155	Lost Communication With Instrument Panel Cluster (IPC) Control

	Module
U0302	Software Incompatibility With Transmission Control Module
U0315	Software Incompatibility With Anti-Lock Brake System Control Module
U0402	Invalid Data Received From TCM
U0404	Invalid Data Received From Gear Shift Control Module "A"
U0415	Invalid Data Received From Anti-Lock Brake System (ABS) Control Module
P-Hex Codes	
P000A	"A" Camshaft Position Slow Response, Bank 1
P000B	"B" Camshaft Position Slow Response, Bank 1
P000C	"A" Camshaft Position Slow Response, Bank 2
P000D	"B" Camshaft Position Slow Response, Bank 2
P010B	Mass or Volume Air Flow "B" Circuit Range/Performance
P010C	Mass or Volume Air Flow "B" Circuit Low
P010D	Mass or Volume Air Flow "B" Circuit High
P016A	ISO/SAE reserved
P025A	Fuel Pump Module Control Circuit/Open
P025C	Fuel Pump Module Control Circuit Low
P025D	Fuel Pump Module Control Circuit High
P050A	Cold Start Idle Air Control System Performance
P062B	Internal Control Module Fuel Injector Control Performance
P117A	Bank1, Lambda Correction Catalyst Center Control Limit Reached
P117C	Bank3, Oxygen Sensor Correction Behind Cat Lean Control Limit Exceeded
P117D	Bank3, Oxygen Sensor Correction Behind Cat Rich Control Limit Exceeded
P117E	Bank4, Oxygen Sensor Correction Behind Cat Lean Control Limit Exceeded
P117F	Bank4, Oxygen Sensor Correction Behind Cat Rich Control Limit Exceeded
P118A	Bank3-Probe1, Voltage Too Low/Leakage Air
P118B	Bank4-Probe2, Voltage Too Low/Leakage Air
P12A1	Fuel Rail Pressure Sensor Inappropriately Low
P12A2	Fuel Rail Pressure Sensor Inappropriately High
P12A4	Fuel Rail Pump Control Valve Stuck Closed
P160C	Coolant Pump2 Control Circuit Open
P160E	Coolant Pump 2 Control Circuit Low
P160F	Coolant Pump 2 Control Circuit High

Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen retailer or other qualified shop. We especially urge you to consult an authorized Volkswagen retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen.

- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.

- Volkswagen is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Volkswagen retailer parts department for the latest information.

- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the VAG 1551 Scan Tool (ST).

- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.

- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.

- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.

- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.

- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.

- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.

- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.

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Cautions & Warnings

- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.

- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.

- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly; do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.

- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.

- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.

- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.

- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.

- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.

- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.

- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).

- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians should test, disassemble or service the airbag system.

Cautions & Warnings

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.

- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the VAG 1551 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.

- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.

- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.

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