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## Volkswagen Diagnostic Trouble Codes DTC Table - General

From model year 1996, vehicles manufactured for the North American market are equipped with a Government required diagnostic system known as On-Board Diagnostics II (OBD II). This system monitors operation and function of all engine management system activity and automatic transmission operation to insure compliance with specified emission levels.

Vehicle emission levels are constantly monitored by the OBD II system and malfunctions are recognized and recorded. A Malfunction Indicator Light (MIL) in the instrument cluster alerts the driver to the fault and the need to have the system checked for fault codes. These codes follow a standard format and are known as Diagnostic Trouble Codes (DTCs).

DTCs are assigned two codes. The first code is a numerical code assigned by the factory. The second code is referred to as a P-code and follows a structure required by law and defined by the Society of Automotive Engineers (SAE). This standard uses a letter to designate the system and four numbers to further identify and detail the malfunction as listed below.

### [Scan Tool Supplier List](#)

### Search

This is about a 35 page table. You may want to search for the DTC you need using your browser's "find" feature. (Often this is under the 'edit' menu / 'find', in Internet Explorer, also use Ctrl+F).

First digit structure is as follows:

- Pxxxx for powertrain
- Bxxxx for body
- Cxxxx for chassis
- Uxxxx for future systems

Second digit structure is:

- P0xxx Government required codes
- P1xxx Manufacturer codes for additional emission system function; not required but reported to the government

Third digit structure is:

- Px1xx measurement of air and fuel
- Px2xx measurement of air and fuel
- Px3xx ignition system
- Px4xx additional emission control
- Px5xx speed and idle regulation
- Px6xx computer and output signals

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- Px7xx transmission
- Px8xx transmission
- Px9xx control modules, input and output signals

The fourth and fifth digits designate the individual components and systems.

VW Diagnostic Trouble Codes (DTCs) and data can be retrieved with VW/Audi Factory Scan Tools such as the VAG 1551, VAG 1552, or the new diagnostic computer VAS 5051 through a Data Link Connector (DLC). For location of the data link connector, see *Maintenance* section. Several aftermarket scan tools and computer programs are also capable of retrieving this information in this factory mode. The factory mode also allows the scan tool to be used for other system diagnostic functions and information retrieval.

Some DTC information can also be retrieved in a generic mode. The generic mode is not as complete as the factory mode, but allows commercially available scan tools to be used simply to read DTCs. Generic scan tool mode does not have the capability to retrieve the detailed information of a manufacturer-specific scan tool.

### Scan Tool Code Table

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#### NOTE -

The following table contains a list of available scan tool codes for all Volkswagen and Audi vehicles available at the time of publication. Not all of the codes apply to the vehicles covered by this manual.

DTC	P-code	Description
16394	P0010	-A- Camshaft Pos. Actuator Circ. Bank 1 Malfunction
16395	P0020	-A- Camshaft Pos. Actuator Circ. Bank 2 Malfunction
16449	P0065	Air Assisted Injector Control Range/Performance
16450	P0066	Air Assisted Injector Control Low Input/Short to ground
16451	P0067	Air Assisted Injector Control Input/Short to B+
16485	P0101	Mass or Volume Air Flow Circ Range/Performance
16486	P0102	Mass or Volume Air Flow Circ Low Input
16487	P0103	Mass or Volume Air Flow Circ High Input
16489	P0105	Manifold Abs.Pressure or Bar.Pressure Voltage supply
16490	P0106	Manifold Abs.Pressure or Bar.Pressure Range/Performance

16491	P0107	<b>Manifold Abs.Pressure or Bar.Pressure Low Input</b>
16492	P0108	<b>Manifold Abs.Pressure or Bar.Pressure High Input</b>
16496	P0112	<b>Intake Air Temp.Circ Low Input</b>
16497	P0113	<b>Intake Air Temp.Circ High Input</b>
16500	P0116	<b>Engine Coolant Temp.Circ Range/Performance</b>
16501	P0117	<b>Engine Coolant Temp.Circ Low Input</b>
16502	P0118	<b>Engine Coolant Temp.Circ High Input</b>
16504	P0120	<b>Throttle/Pedal Pos.Sensor A Circ Malfunction</b>
16505	P0121	<b>Throttle/Pedal Pos.Sensor A Circ Range/Performance</b>
16506	P0122	<b>Throttle/Pedal Pos.Sensor A Circ Low Input</b>
16507	P0123	<b>Throttle/Pedal Pos.Sensor A Circ High Input</b>
16509	P0125	<b>Insufficient Coolant Temp.for Closed Loop Fuel Control</b>
16512	P0128	<b>Coolant Thermostat/Valve Temperature below control range</b>
16514	P0130	<b>O2 Sensor Circ.,Bank1-Sensor1 Malfunction</b>
16515	P0131	<b>O2 Sensor Circ.,Bank1-Sensor1 Low Voltage</b>
16516	P0132	<b>O2 Sensor Circ.,Bank1-Sensor1 High Voltage</b>
16517	P0133	<b>O2 Sensor Circ.,Bank1-Sensor1 Slow Response</b>
16518	P0134	<b>O2 Sensor Circ.,Bank1-Sensor1 No Activity Detected</b>
16519	P0135	<b>O2 Sensor Heater Circ.,Bank1-Sensor1 Malfunction</b>
16520	P0136	<b>O2 Sensor Circ.,Bank1-Sensor2 Malfunction</b>
16521	P0137	<b>O2 Sensor Circ.,Bank1-Sensor2 Low Voltage</b>
16522	P0138	<b>O2 Sensor Circ.,Bank1-Sensor2 High Voltage</b>
16523	P0139	<b>O2 Sensor Circ.,Bank1-Sensor2 Slow Response</b>
16524	P0140	<b>O2 Sensor Circ.,Bank1-Sensor2 No Activity Detected</b>
16525	P0141	<b>O2 Sensor Heater Circ.,Bank1-Sensor2 Malfunction</b>
16534	P0150	<b>O2 Sensor Circ.,Bank2-Sensor1 Malfunction</b>

16535	P0151	<b>O2 Sensor Circ.,Bank2-Sensor1 Low Voltage</b>
16536	P0152	<b>O2 Sensor Circ.,Bank2-Sensor1 High Voltage</b>
16537	P0153	<b>O2 Sensor Circ.,Bank2-Sensor1 Slow Response</b>
16538	P0154	<b>O2 Sensor Circ.,Bank2-Sensor1 No Activity Detected</b>
16539	P0155	<b>O2 Sensor Heater Circ.,Bank2-Sensor1 Malfunction</b>
16540	P0156	<b>O2 Sensor Circ.,Bank2-Sensor2 Malfunction</b>
16541	P0157	<b>O2 Sensor Circ.,Bank2-Sensor2 Low Voltage</b>
16542	P0158	<b>O2 Sensor Circ.,Bank2-Sensor2 High Voltage</b>
16543	P0159	<b>O2 Sensor Circ.,Bank2-Sensor2 Slow Response</b>
16544	P0160	<b>O2 Sensor Circ.,Bank2-Sensor2 No Activity Detected</b>
16545	P0161	<b>O2 Sensor Heater Circ.,Bank2-Sensor2 Malfunction</b>
16554	P0170	<b>Fuel Trim,Bank1 Malfunction</b>
16555	P0171	<b>Fuel Trim,Bank1 System too Lean</b>
16556	P0172	<b>Fuel Trim,Bank1 System too Rich</b>
16557	P0173	<b>Fuel Trim,Bank2 Malfunction</b>
16558	P0174	<b>Fuel Trim,Bank2 System too Lean</b>
16559	P0175	<b>Fuel Trim,Bank2 System too Rich</b>
16566	P0182	<b>Fuel temperature sender-G81 Short to ground</b>
16567	P0183	<b>Fuel temperature sender-G81 Interruption/Short to B+</b>
16581	P0197	<b>Engine Oil Temperature Circuit Low Input</b>
16582	P0198	<b>Engine Oil Temperature Circuit High Input</b>
16585	P0201	<b>Cyl.1, Injector Circuit Fault in electrical circuit</b>
16586	P0202	<b>Cyl.2, Injector Circuit Fault in electrical circuit</b>
16587	P0203	<b>Cyl.3, Injector Circuit Fault in electrical circuit</b>
16588	P0204	<b>Cyl.4, Injector Circuit Fault in electrical circuit</b>
16589	P0205	<b>Cyl.5 Injector Circuit Fault in electrical circuit</b>

16590	P0206	<b>Cyl.6 Injector Circuit Fault in electrical circuit</b>
16591	P0207	<b>Cyl.7 Injector Circuit Fault in electrical circuit</b>
16592	P0208	<b>Cyl.8 Injector Circuit Fault in electrical circuit</b>
16599	P0215	<b>Engine Shut-Off Solenoid Malfunction</b>
16600	P0216	<b>Injector/Injection Timing Control Malfunction</b>
16603	P0219	<b>Engine Overspeed Condition</b>
16605	P0221	<b>Throttle Pos. Sensor -B- Circuit Range/Performance</b>
16606	P0222	<b>Throttle Pos. Sensor -B- Circuit Low Input</b>
16607	P0223	<b>Throttle Pos. Sensor -B- Circuit High Input</b>
16609	P0225	<b>Throttle Pos. Sensor -C- Circuit Voltage supply</b>
16610	P0226	<b>Throttle Pos. Sensor -C- Circuit Range/Performance</b>
16611	P0227	<b>Throttle Pos. Sensor -C- Circuit Low Input</b>
16612	P0228	<b>Throttle Pos. Sensor -C- Circuit High Input</b>
16614	P0230	<b>Fuel Pump Primary Circuit Fault in electrical circuit</b>
16618	P0234	<b>Turbocharger Overboost Condition Control limit exceeded</b>
16619	P0235	<b>Turbocharger Boost Sensor (A) Circ Control limit not reached</b>
16620	P0236	<b>Turbocharger Boost Sensor (A) Circ Range/Performance</b>
16621	P0237	<b>Turbocharger Boost Sensor (A) Circ Low Input</b>
16622	P0238	<b>Turbocharger Boost Sensor (A) Circ High Input</b>
16627	P0243	<b>Turbocharger Wastegate Solenoid (A) Open/Short Circuit to Ground</b>
16629	P0245	<b>Turbocharger Wastegate Solenoid (A) Low Input/Short to ground</b>
16630	P0246	<b>Turbocharger Wastegate Solenoid (A) High Input/Short to B+</b>
16636	P0252	<b>Injection Pump Metering Control (A) Range/Performance</b>
16645	P0261	<b>Cyl.1 Injector Circuit Low Input/Short to ground</b>
16646	P0262	<b>Cyl.1 Injector Circuit High Input/Short to B+</b>
16648	P0264	<b>Cyl.2 Injector Circuit Low Input/Short to ground</b>

16649	P0265	<b>Cyl.2 Injector Circuit High Input/Short to B+</b>
16651	P0267	<b>Cyl.3 Injector Circuit Low Input/Short to ground</b>
16652	P0268	<b>Cyl.3 Injector Circuit High Input/Short to B+</b>
16654	P0270	<b>Cyl.4 Injector Circuit Low Input/Short to ground</b>
16655	P0271	<b>Cyl.4 Injector Circuit High Input/Short to B+</b>
16657	P0273	<b>Cyl.5 Injector Circuit Low Input/Short to ground</b>
16658	P0274	<b>Cyl.5 Injector Circuit High Input/Short to B+</b>
16660	P0276	<b>Cyl.6 Injector Circuit Low Input/Short to ground</b>
16661	P0277	<b>Cyl.6 Injector Circuit High Input/Short to B+</b>
16663	P0279	<b>Cyl.7 Injector Circuit Low Input/Short to ground</b>
16664	P0280	<b>Cyl.7 Injector Circuit High Input/Short to B+</b>
16666	P0282	<b>Cyl.8 Injector Circuit Low Input/Short to ground</b>
16667	P0283	<b>Cyl.8 Injector Circuit High Input/Short to B+</b>
16684	P0300	<b>Random/Multiple Cylinder Misfire Detected</b>
16685	P0301	<b>Cyl.1 Misfire Detected</b>
16686	P0302	<b>Cyl.2 Misfire Detected</b>
16687	P0303	<b>Cyl.3 Misfire Detected</b>
16688	P0304	<b>Cyl.4 Misfire Detected</b>
16689	P0305	<b>Cyl.5 Misfire Detected</b>
16690	P0306	<b>Cyl.6 Misfire Detected</b>
16691	P0307	<b>Cyl.7 Misfire Detected</b>
16692	P0308	<b>Cyl.8 Misfire Detected</b>
16697	P0313	<b>Misfire Detected Low Fuel Level</b>
16698	P0314	<b>Single Cylinder Misfire</b>
16705	P0321	<b>Ign./Distributor Eng.Speed Inp.Circ Range/Performance</b>
16706	P0322	<b>Ign./Distributor Eng.Speed Inp.Circ No Signal</b>

16709	P0325	<b>Knock Sensor 1 Circuit Electrical Fault in Circuit</b>
16710	P0326	<b>Knock Sensor 1 Circuit Range/Performance</b>
16711	P0327	<b>Knock Sensor 1 Circ Low Input</b>
16712	P0328	<b>Knock Sensor 1 Circ High Input</b>
16716	P0332	<b>Knock Sensor 2 Circ Low Input</b>
16717	P0333	<b>Knock Sensor 2 Circ High Input</b>
16719	P0335	<b>Crankshaft Pos. Sensor (A) Circ Malfunction</b>
16720	P0336	<b>Crankshaft Pos. Sensor (A) Circ Range/Performance/Missing tooth</b>
16721	P0337	<b>Crankshaft Pos.Sensor (A) Circ Low Input</b>
16724	P0340	<b>Camshaft Pos. Sensor (A) Circ Incorrect allocation</b>
16725	P0341	<b>Camshaft Pos.Sensor Circ Range/Performance</b>
16726	P0342	<b>Camshaft Pos.Sensor Circ Low Input</b>
16727	P0343	<b>Camshaft Pos.Sensor Circ High Input</b>
16735	P0351	<b>Ignition Coil (A) Cyl.1 Prim./Sec. Circ Malfunction</b>
16736	P0352	<b>Ignition Coil (B) Cyl.2 Prim./Sec. Circ Malfunction</b>
16737	P0353	<b>Ignition Coil (C) Cyl.3 Prim./Sec. Circ Malfunction</b>
16738	P0354	<b>Ignition Coil (D) Cyl.4 Prim./Sec. Circ Malfunction</b>
16739	P0355	<b>Ignition Coil (E) Cyl.5 Prim./Sec. Circ Malfunction</b>
16740	P0356	<b>Ignition Coil (F) Cyl.6 Prim./Sec. Circ Malfunction</b>
16741	P0357	<b>Ignition Coil (G) Cyl.7 Prim./Sec. Circ Malfunction</b>
16742	P0358	<b>Ignition Coil (H) Cyl.8 Prim./Sec. Circ Malfunction</b>
16764	P0380	<b>Glow Plug/Heater Circuit (A) Electrical Fault in Circuit</b>
16784	P0400	<b>Exhaust Gas Recirc.Flow Malfunction</b>
16785	P0401	<b>Exhaust Gas Recirc.Flow Insufficient Detected</b>
16786	P0402	<b>Exhaust Gas Recirc.Flow Excessive Detected</b>
16787	P0403	<b>Exhaust Gas Recirc. Contr. Circ Malfunction</b>

16788	P0404	<b>Exhaust Gas Recirc. Contr. Circ Range/Performance</b>
16789	P0405	<b>Exhaust Gas Recirc. Sensor (A) Circ Low Input</b>
16790	P0406	<b>Exhaust Gas Recirc. Sensor (A) Circ High Input</b>
16791	P0407	<b>Exhaust Gas Recirc. Sensor (B) Circ Low Input</b>
16792	P0408	<b>Exhaust Gas Recirc. Sensor (B) Circ High Input</b>
16794	P0410	<b>Sec.Air Inj.Sys Malfunction</b>
16795	P0411	<b>Sec.Air Inj.Sys. Incorrect Flow Detected</b>
16796	P0412	<b>Sec.Air Inj.Sys.Switching Valve A Circ Malfunction</b>
16802	P0418	<b>Sec. Air Inj. Sys. Relay (A) Contr. Circ Malfunction</b>
16804	P0420	<b>Catalyst System,Bank1 Efficiency Below Threshold</b>
16806	P0422	<b>Main Catalyst,Bank1 Below Threshold</b>
16811	P0427	<b>Catalyst Temperature Sensor, Bank 1 Low Input/Short to ground</b>
16812	P0428	<b>Catalyst Temperature Sensor, Bank 1 High Input/Open/Short Circuit to B+</b>
16816	P0432	<b>Main Catalyst,Bank2 Efficiency Below Threshold</b>
16820	P0436	<b>Catalyst Temperature Sensor, Bank 2 Range/Performance</b>
16821	P0437	<b>Catalyst Temperature Sensor, Bank 2 Low Input/Short to ground</b>
16822	P0438	<b>Catalyst Temperature Sensor, Bank 2 High Input/Open/Short Circuit to B+</b>
16824	P0440	<b>EVAP Emission Contr.Sys. Malfunction</b>
16825	P0441	<b>EVAP Emission Contr.Sys.Incorrect Purge Flow</b>
16826	P0442	<b>EVAP Emission Contr.Sys.(Small Leak) Leak Detected</b>
16827	P0443	<b>EVAP Emiss. Contr. Sys. Purge Valve Circ Electrical Fault in Circuit</b>
16836	P0452	<b>EVAP Emission Contr.Sys.Press.Sensor Low Input</b>
16837	P0453	<b>EVAP Emission Contr.Sys.Press.Sensor High Input</b>
16839	P0455	<b>EVAP Emission Contr.Sys.(Gross Leak) Leak Detected</b>
16845	P0461	<b>Fuel Level Sensor Circ Range/Performance</b>
16846	P0462	<b>Fuel Level Sensor Circuit Low Input</b>



16847	P0463	<b>Fuel Level Sensor Circuit High Input</b>
16885	P0501	<b>Vehicle Speed Sensor Range/Performance</b>
16887	P0503	<b>Vehicle Speed Sensor Intermittent/Erratic/High Input</b>
16889	P0505	<b>Idle Control System Malfunction</b>
16890	P0506	<b>Idle Control System RPM Lower than Expected</b>
16891	P0507	<b>Idle Control System Higher than Expected</b>
16894	P0510	<b>Closed Throttle Pos.Switch Malfunction</b>
16915	P0531	<b>A/C Refrigerant Pressure Sensor Circuit Range/Performance</b>
16916	P0532	<b>A/C Refrigerant Pressure Sensor Circuit Low Input</b>
16917	P0533	<b>A/C Refrigerant Pressure Sensor Circuit High Input</b>
16935	P0551	<b>Power Steering Pressure Sensor Circuit Range/Performance</b>
16944	P0560	<b>System Voltage Malfunction</b>
16946	P0562	<b>System Voltage Low Voltage</b>
16947	P0563	<b>System Voltage High Voltage</b>
16952	P0568	<b>Cruise Control Set Signal Incorrect Signal</b>
16955	P0571	<b>Cruise/Brake Switch (A) Circ Malfunction</b>
16984	P0600	<b>Serial Comm. Link (Data Bus) Message Missing</b>
16985	P0601	<b>Internal Contr.Module Memory Check Sum Error</b>
16986	P0602	<b>Control Module Programming Error/Malfunction</b>
16987	P0603	<b>Internal Contr.Module (KAM) Error</b>
16988	P0604	<b>Internal Contr.Module Random Access Memory (RAM) Error</b>
16989	P0605	<b>Internal Contr.Module ROM Test Error</b>
16990	P0606	<b>ECM/PCM Processor</b>
17026	P0642	<b>Knock Control Control Module Malfunction</b>
17029	P0645	<b>A/C Clutch Relay Control Circuit</b>
17034	P0650	<b>MIL Control Circuit Electrical Fault in Circuit</b>

17038	P0654	<b>Engine RPM Output Circuit Electrical Fault in Circuit</b>
17040	P0656	<b>Fuel Level Output Circuit Electrical Fault in Circuit</b>
17084	P0700	<b>Transm.Contr.System Malfunction</b>
17086	P0702	<b>Transm.Contr.System Electrical</b>
17087	P0703	<b>Torque Converter/Brake Switch B Circ Malfunction</b>
17089	P0705	<b>Transm.Range Sensor Circ.(PRNDL Inp.) Malfunction</b>
17090	P0706	<b>Transm.Range Sensor Circ Range/Performance</b>
17091	P0707	<b>Transm.Range Sensor Circ Low Input</b>
17092	P0708	<b>Transm.Range Sensor Circ High Input</b>
17094	P0710	<b>Transm.Fluid Temp.Sensor Circ. Malfunction</b>
17095	P0711	<b>Transm.Fluid Temp.Sensor Circ. Range/Performance</b>
17096	P0712	<b>Transm.Fluid Temp.Sensor Circ. Low Input</b>
17097	P0713	<b>Transm.Fluid Temp.Sensor Circ. High Input</b>
17099	P0715	<b>Input Turbine/Speed Sensor Circ. Malfunction</b>
17100	P0716	<b>Input Turbine/Speed Sensor Circ. Range/Performance</b>
17101	P0717	<b>Input Turbine/Speed Sensor Circ. No Signal</b>
17105	P0721	<b>Output Speed Sensor Circ Range/Performance</b>
17106	P0722	<b>Output Speed Sensor Circ No Signal</b>
17109	P0725	<b>Engine Speed Inp.Circ. Malfunction</b>
17110	P0726	<b>Engine Speed Inp.Circ. Range/Performance</b>
17111	P0727	<b>Engine Speed Inp.Circ. No Signal</b>
17114	P0730	<b>Gear Incorrect Ratio</b>
17115	P0731	<b>Gear 1 Incorrect Ratio</b>
17116	P0732	<b>Gear 2 Incorrect Ratio</b>
17117	P0733	<b>Gear 3 Incorrect Ratio</b>
17118	P0734	<b>Gear 4 Incorrect Ratio</b>

17119	P0735	<b>Gear 5 Incorrect Ratio</b>
17124	P0740	<b>Torque Converter Clutch Circ Malfunction</b>
17125	P0741	<b>Torque Converter Clutch Circ Performance or Stuck Off</b>
17132	P0748	<b>Pressure Contr.Solenoid Electrical</b>
17134	P0750	<b>Shift Solenoid A malfunction</b>
17135	P0751	<b>Shift Solenoid A Performance or Stuck Off</b>
17136	P0752	<b>Shift Solenoid A Stuck On</b>
17137	P0753	<b>Shift Solenoid A Electrical</b>
17140	P0756	<b>Shift Solenoid B Performance or Stuck Off</b>
17141	P0757	<b>Shift Solenoid B Stuck On</b>
17142	P0758	<b>Shift Solenoid B Electrical</b>
17145	P0761	<b>Shift Solenoid C Performance or Stuck Off</b>
17146	P0762	<b>Shift Solenoid C Stuck On</b>
17147	P0763	<b>Shift Solenoid C Electrical</b>
17152	P0768	<b>Shift Solenoid D Electrical</b>
17157	P0773	<b>Shift Solenoid E Electrical</b>
17174	P0790	<b>Normal/Performance Switch Circ Malfunction</b>
17509	P1101	<b>O2 Sensor Circ.,Bank1-Sensor1 Voltage too Low/Air Leak</b>
17510	P1102	<b>O2 Sensor Heating Circ.,Bank1-Sensor1 Short to B+</b>
17511	P1103	<b>O2 Sensor Heating Circ.,Bank1-Sensor1 Output too Low</b>
17512	P1104	<b>Bank1-Sensor2 Voltage too Low/Air Leak</b>
17513	P1105	<b>O2 Sensor Heating Circ.,Bank1-Sensor2 Short to B+</b>
17514	P1106	<b>O2 Sensor Circ.,Bank2-Sensor1 Voltage too Low/Air Leak</b>
17515	P1107	<b>O2 Sensor Heating Circ.,Bank2-Sensor1 Short to B+</b>
17516	P1108	<b>O2 Sensor Heating Circ.,Bank2-Sensor1 Output too Low</b>
17517	P1109	<b>O2 Sensor Circ.,Bank2-Sensor2 Voltage too Low/Air Leak</b>

17518	P1110	<b>O2 Sensor Heating Circ.,Bank2-Sensor2 Short to B+</b>
17519	P1111	<b>O2 Control (Bank 1) System too lean</b>
17520	P1112	<b>O2 Control (Bank 1) System too rich</b>
17521	P1113	<b>Bank1-Sensor1 Internal Resistance too High</b>
17522	P1114	<b>Bank1-Sensor2 Internal Resistant too High</b>
17523	P1115	<b>O2 Sensor Heater Circ.,Bank1-Sensor1 Short to Ground</b>
17524	P1116	<b>O2 Sensor Heater Circ.,Bank1-Sensor1 Open</b>
17525	P1117	<b>O2 Sensor Heater Circ.,Bank1-Sensor2 Short to Ground</b>
17526	P1118	<b>O2 Sensor Heater Circ.,Bank1-Sensor2 Open</b>
17527	P1119	<b>O2 Sensor Heater Circ.,Bank2-Sensor1 Short to Ground</b>
17528	P1120	<b>O2 Sensor Heater Circ.,Bank2-Sensor1 Open</b>
17529	P1121	<b>O2 Sensor Heater Circ.,Bank2-Sensor2 Short to Ground</b>
17530	P1122	<b>O2 Sensor Heater Circ.,Bank2-Sensor2 Open</b>
17531	P1123	<b>Long Term Fuel Trim Add.Air.,Bank1 System too Rich</b>
17532	P1124	<b>Long Term Fuel Trim Add.Air.,Bank1 System too Lean</b>
17533	P1125	<b>Long Term Fuel Trim Add.Air.,Bank2 System too Rich</b>
17534	P1126	<b>Long Term Fuel Trim Add.Air.,Bank2 System too Lean</b>
17535	P1127	<b>Long Term Fuel Trim mult.,Bank1 System too Rich</b>
17536	P1128	<b>Long Term Fuel Trim mult.,Bank1 System too Lean</b>
17537	P1129	<b>Long Term Fuel Trim mult.,Bank2 System too Rich</b>
17538	P1130	<b>Long Term Fuel Trim mult.,Bank2 System too Lean</b>
17539	P1131	<b>Bank2-Sensor1 Internal Rsistance too High</b>
17540	P1132	<b>O2 Sensor Heating Circ.,Bank1+2-Sensor1 Short to B+</b>
17541	P1133	<b>O2 Sensor Heating Circ.,Bank1+2-Sensor1 Electrical Malfunction</b>
17542	P1134	<b>O2 Sensor Heating Circ.,Bank1+2-Sensor2 Short to B+</b>
17543	P1135	<b>O2 Sensor Heating Circ.,Bank1+2-Sensor2 Electrical Malfunction</b>

17544	P1136	<b>Long Term Fuel Trim Add.Fuel,Bank1 System too Lean</b>
17545	P1137	<b>Long Term Fuel Trim Add.Fuel,Bank1 System too Rich</b>
17546	P1138	<b>Long Term Fuel Trim Add.Fuel,Bank2 System too Lean</b>
17547	P1139	<b>Long Term Fuel Trim Add.Fuel,Bank2 System too Rich</b>
17548	P1140	<b>Bank2-Sensor2 Internal Resistance too High</b>
17549	P1141	<b>Load Calculation Cross Check Range/Performance</b>
17550	P1142	<b>Load Calculation Cross Check Lower Limit Exceeded</b>
17551	P1143	<b>Load Calculation Cross Check Upper Limit Exceeded</b>
17552	P1144	<b>Mass or Volume Air Flow Circ Open/Short to Ground</b>
17553	P1145	<b>Mass or Volume Air Flow Circ Short to B+</b>
17554	P1146	<b>Mass or Volume Air Flow Circ Supply Malfunction</b>
17555	P1147	<b>O2 Control (Bank 2) System too lean</b>
17556	P1148	<b>O2 Control (Bank 2) System too rich</b>
17557	P1149	<b>O2 Control (Bank 1) Out of range</b>
17558	P1150	<b>O2 Control (Bank 2) Out of range</b>
17559	P1151	<b>Bank1, Long Term Fuel Trim, Range 1 Leanness Lower Limit Exceeded</b>
17560	P1152	<b>Bank1, Long Term Fuel Trim, Range 2 Leanness Lower Limit Exceeded</b>
17562	P1154	<b>Manifold Switch Over Malfunction</b>
17563	P1155	<b>Manifold Abs.Pressure Sensor Circ. Short to B+</b>
17564	P1156	<b>Manifold Abs.Pressure Sensor Circ. Open/Short to Ground</b>
17565	P1157	<b>Manifold Abs.Pressure Sensor Circ. Power Supply Malfunction</b>
17566	P1158	<b>Manifold Abs.Pressure Sensor Circ. Range/Performance</b>
17568	P1160	<b>Manifold Temp.Sensor Circ. Short to Ground</b>
17569	P1161	<b>Manifold Temp.Sensor Circ. Open/Short to B+</b>
17570	P1162	<b>Fuel Temp.Sensor Circ. Short to Ground</b>
17571	P1163	<b>Fuel Temp.Sensor Circ. Open/Short to B+</b>

17572	P1164	<b>Fuel Temperature Sensor Range/Performance/Incorrect Signal</b>
17573	P1165	<b>Bank1, Long Term Fuel Trim, Range 1 Rich Limit Exceeded</b>
17574	P1166	<b>Bank1, Long Term Fuel Trim, Range 2 Rich Limit Exceeded</b>
17579	P1171	<b>Throttle Actuation Potentiometer Sign.2 Range/Performance</b>
17580	P1172	<b>Throttle Actuation Potentiometer Sign.2 Signal too Low</b>
17581	P1173	<b>Throttle Actuation Potentiometer Sign.2 Signal too High</b>
17582	P1174	<b>Fuel Trim, Bank 1 Different injection times</b>
17584	P1176	<b>O2 Correction Behind Catalyst,B1 Limit Attained</b>
17585	P1177	<b>O2 Correction Behind Catalyst,B2 Limit Attained</b>
17586	P1178	<b>Linear O2 Sensor / Pump Current Open Circuit</b>
17587	P1179	<b>Linear O2 Sensor / Pump Current Short to ground</b>
17588	P1180	<b>Linear O2 Sensor / Pump Current Short to B+</b>
17589	P1181	<b>Linear O2 Sensor / Reference Voltage Open Circuit</b>
17590	P1182	<b>Linear O2 Sensor / Reference Voltage Short to ground</b>
17591	P1183	<b>Linear O2 Sensor / Reference Voltage Short to B+</b>
17592	P1184	<b>Linear O2 Sensor / Common Ground Wire Open Circuit</b>
17593	P1185	<b>Linear O2 Sensor / Common Ground Wire Short to ground</b>
17594	P1186	<b>Linear O2 Sensor / Common Ground Wire Short to B+</b>
17595	P1187	<b>Linear O2 Sensor / Compens. Resistor Open Circuit</b>
17596	P1188	<b>Linear O2 Sensor / Compens. Resistor Short to ground</b>
17597	P1189	<b>Linear O2 Sensor / Compens. Resistor Short to B+</b>
17598	P1190	<b>Linear O2 Sensor / Reference Voltage Incorrect Signal</b>
17604	P1196	<b>O2 Sensor Heater Circ.,Bank1-Sensor1 Electrical Malfunction</b>
17605	P1197	<b>O2 Sensor Heater Circ.,Bank2-Sensor1 Electrical Malfunction</b>
17606	P1198	<b>O2 Sensor Heater Circ.,Bank1-Sensor2 Electrical Malfunction</b>
17607	P1199	<b>O2 Sensor Heater Circ.,Bank2-Sensor2 Electrical Malfunction</b>

17609	P1201	<b>Cyl.1-Fuel Inj.Circ. Electrical Malfunction</b>
17610	P1202	<b>Cyl.2-Fuel Inj.Circ. Electrical Malfunction</b>
17611	P1203	<b>Cyl.3-Fuel Inj.Circ. Electrical Malfunction</b>
17612	P1204	<b>Cyl.4-Fuel Inj.Circ. Electrical Malfunction</b>
17613	P1205	<b>Cyl.5-Fuel Inj.Circ. Electrical Malfunction</b>
17614	P1206	<b>Cyl.6-Fuel Inj.Circ. Electrical Malfunction</b>
17615	P1207	<b>Cyl.7-Fuel Inj.Circ. Electrical Malfunction</b>
17616	P1208	<b>Cyl.8-Fuel Inj.Circ. Electrical Malfunction</b>
17617	P1209	<b>Intake valves for cylinder shut-off Short circuit to ground</b>
17618	P1210	<b>Intake valves for cylinder shut-off Short to B+</b>
17619	P1211	<b>Intake valves for cylinder shut-off Open circuit</b>
17621	P1213	<b>Cyl.1-Fuel Inj.Circ. Short to B+</b>
17622	P1214	<b>Cyl.2-Fuel Inj.Circ. Short to B+</b>
17623	P1215	<b>Cyl.3-Fuel Inj.Circ. Short to B+</b>
17624	P1216	<b>Cyl.4-Fuel Inj.Circ. Short to B+</b>
17625	P1217	<b>Cyl.5-Fuel Inj.Circ. Short to B+</b>
17626	P1218	<b>Cyl.6-Fuel Inj.Circ. Short to B+</b>
17627	P1219	<b>Cyl.7-Fuel Inj.Circ. Short to B+</b>
17628	P1220	<b>Cyl.8-Fuel Inj.Circ. Short to B+</b>
17629	P1221	<b>Cylinder shut-off exhaust valves Short circuit to ground</b>
17630	P1222	<b>Cylinder shut-off exhaust valves Short to B+</b>
17631	P1223	<b>Cylinder shut-off exhaust valves Open circuit</b>
17633	P1225	<b>Cyl.1-Fuel Inj.Circ. Short to Ground</b>
17634	P1226	<b>Cyl.2-Fuel Inj.Circ. Short to Ground</b>
17635	P1227	<b>Cyl.3-Fuel Inj.Circ. Short to Ground</b>
17636	P1228	<b>Cyl.4-Fuel Inj.Circ. Short to Ground</b>

17637	P1229	<b>Cyl.5-Fuel Inj.Circ. Short to Ground</b>
17638	P1230	<b>Cyl.6-Fuel Inj.Circ. Short to Ground</b>
17639	P1231	<b>Cyl.7-Fuel Inj.Circ. Short to Ground</b>
17640	P1232	<b>Cyl.8-Fuel Inj.Circ. Short to Ground</b>
17645	P1237	<b>Cyl.1-Fuel Inj.Circ. Open Circ.</b>
17646	P1238	<b>Cyl.2-Fuel Inj.Circ. Open Circ.</b>
17647	P1239	<b>Cyl.3-Fuel Inj.Circ. Open Circ.</b>
17648	P1240	<b>Cyl.4-Fuel Inj.Circ. Open Circ.</b>
17649	P1241	<b>Cyl.5-Fuel Inj.Circ. Open Circ.</b>
17650	P1242	<b>Cyl.6-Fuel Inj.Circ. Open Circ.</b>
17651	P1243	<b>Cyl.7-Fuel Inj.Circ. Open Circ.</b>
17652	P1244	<b>Cyl.8-Fuel Inj.Circ. Open Circ.</b>
17653	P1245	<b>Needle Lift Sensor Circ. Short to Ground</b>
17654	P1246	<b>Needle Lift Sensor Circ. Range/Performance</b>
17655	P1247	<b>Needle Lift Sensor Circ. Open/Short to B+</b>
17656	P1248	<b>Injection Start Control Deviation</b>
17657	P1249	<b>Fuel consumption signal Electrical Fault in Circuit</b>
17658	P1250	<b>Fuel Level Too Low</b>
17659	P1251	<b>Start of Injection Solenoid Circ Short to B+</b>
17660	P1252	<b>Start of Injection Solenoid Circ Open/Short to Ground</b>
17661	P1253	<b>Fuel consumption signal Short to ground</b>
17662	P1254	<b>Fuel consumption signal Short to B+</b>
17663	P1255	<b>Engine Coolant Temp.Circ Short to Ground</b>
17664	P1256	<b>Engine Coolant Temp.Circ Open/Short to B+</b>
17665	P1257	<b>Engine Coolant System Valve Open</b>
17666	P1258	<b>Engine Coolant System Valve Short to B+</b>



17667	P1259	<b>Engine Coolant System Valve Short to Ground</b>
17688	P1280	<b>Fuel Inj.Air Contr.Valve Circ. Flow too Low</b>
17691	P1283	<b>Fuel Inj.Air Contr.Valve Circ. Electrical Malfunction</b>
17692	P1284	<b>Fuel Inj.Air Contr.Valve Circ. Open</b>
17693	P1285	<b>Fuel Inj.Air Contr.Valve Circ. Short to Ground</b>
17694	P1286	<b>Fuel Inj.Air Contr.Valve Circ. Short to B+</b>
17695	P1287	<b>Turbocharger bypass valve open</b>
17696	P1288	<b>Turbocharger bypass valve short to B+</b>
17697	P1289	<b>Turbocharger bypass valve short to ground</b>
17704	P1296	<b>Cooling system malfunction</b>
17705	P1297	<b>Connection turbocharger - throttle valve pressure hose</b>
17708	P1300	<b>Misfire detected Reason: Fuel level too low</b>
17721	P1319	<b>Knock Sensor 1 Circ. Short to Ground</b>
17728	P1320	<b>Knock Sensor 2 Circ. Short to Ground</b>
17729	P1321	<b>Knock Sensor 3 Circ. Low Input</b>
17730	P1322	<b>Knock Sensor 3 Circ. High Input</b>
17731	P1323	<b>Knock Sensor 4 Circ. Low Input</b>
17732	P1324	<b>Knock Sensor 4 Circ. High Input</b>
17733	P1325	<b>Cyl.1-Knock Contr. Limit Attained</b>
17734	P1326	<b>Cyl.2-Knock Contr. Limit Attained</b>
17735	P1327	<b>Cyl.3-Knock Contr. Limit Attained</b>
17736	P1328	<b>Cyl.4-Knock Contr. Limit Attained</b>
17737	P1329	<b>Cyl.5-Knock Contr. Limit Attained</b>
17738	P1330	<b>Cyl.6-Knock Contr. Limit Attained</b>
17739	P1331	<b>Cyl.7-Knock Contr. Limit Attained</b>
17740	P1332	<b>Cyl.8-Knock Contr. Limit Attained</b>

17743	P1335	<b>Engine Torque Monitoring 2 Control Limint Exceeded</b>
17744	P1336	<b>Engine Torque Monitoring Adaptation at limit</b>
17745	P1337	<b>Camshaft Pos.Sensor,Bank1 Short to Ground</b>
17746	P1338	<b>Camshaft Pos.Sensor,Bank1 Open Circ./Short to B+</b>
17747	P1339	<b>Crankshaft Pos./Engine Speed Sensor Cross Connected</b>
17748	P1340	<b>Crankshaft-/Camshaft Pos.Sens.Signals Out of Sequence</b>
17749	P1341	<b>Ignition Coil Power Output Stage 1 Short to Ground</b>
17750	P1342	<b>Ignition Coil Power Output Stage 1 Short to B+</b>
17751	P1343	<b>Ignition Coil Power Output Stage 2 Short to Ground</b>
17752	P1344	<b>Ignition Coil Power Output Stage 2 Short to B+</b>
17753	P1345	<b>Ignition Coil Power Output Stage 3 Short to Ground</b>
17754	P1346	<b>Ignition Coil Power Output Stage 3 Short to B+</b>
17755	P1347	<b>Bank2,Crankshaft-/Camshaft os.Sens.Sign. Out of Sequence</b>
17756	P1348	<b>Ignition Coil Power Output Stage 1 Open Circuit</b>
17757	P1349	<b>Ignition Coil Power Output Stage 2 Open Circuit</b>
17758	P1350	<b>Ignition Coil Power Output Stage 3 Open Circuit</b>
17762	P1354	<b>Modulation Piston Displ.Sensor Circ. Malfunction</b>
17763	P1355	<b>Cyl. 1, ignition circuit Open Circuit</b>
17764	P1356	<b>Cyl. 1, ignition circuit Short to B+</b>
17765	P1357	<b>Cyl. 1, ignition circuit Short to ground</b>
17766	P1358	<b>Cyl. 2, ignition circuit Open Circuit</b>
17767	P1359	<b>Cyl. 2, ignition circuit Short Circuit to B+</b>
17768	P1360	<b>Cyl. 2, ignition circuit Short Circuit to Ground</b>
17769	P1361	<b>Cyl. 3, ignition circuit Open Circuit</b>
17770	P1362	<b>Cyl. 3, ignition circuit Short Circuit to B+</b>
17771	P1363	<b>Cyl. 3, ignition circuit Short Circuit to ground</b>

17772	P1364	<b>Cyl. 4 ignition circuit Open Circuit</b>
17773	P1365	<b>Cyl. 4 ignition circuit Short circuit to B+</b>
17774	P1366	<b>Cyl. 4 ignition circuit Short circuit to ground</b>
17775	P1367	<b>Cyl. 5, ignition circuit Open Circuit</b>
17776	P1368	<b>Cyl. 5, ignition circuit Short Circuit to B+</b>
17777	P1369	<b>Cyl. 5, ignition circuit short to ground</b>
17778	P1370	<b>Cyl. 6, ignition circuit Open Circuit</b>
17779	P1371	<b>Cyl. 6, ignition circuit Short Circuit to B+</b>
17780	P1372	<b>Cyl. 6, ignition circuit short to ground</b>
17781	P1373	<b>Cyl. 7, ignition circuit Open Circuit</b>
17782	P1374	<b>Cyl. 7, ignition circuit Short Circuit to B+</b>
17783	P1375	<b>Cyl. 7, ignition circuit short to ground</b>
17784	P1376	<b>Cyl. 8, ignition circuit Open Circuit</b>
17785	P1377	<b>Cyl. 8, ignition circuit Short Circuit to B+</b>
17786	P1378	<b>Cyl. 8, ignition circuit short to ground</b>
17794	P1386	<b>Internal Control Module Knock Control Circ.Error</b>
17795	P1387	<b>Internal Contr. Module altitude sensor error</b>
17796	P1388	<b>Internal Contr. Module drive by wire error</b>
17799	P1391	<b>Camshaft Pos.Sensor,Bank2 Short to Ground</b>
17800	P1392	<b>Camshaft Pos.Sensor,Bank2 Open Circ./Short to B+</b>
17801	P1393	<b>Ignition Coil Power Output Stage 1 Electrical Malfunction</b>
17802	P1394	<b>Ignition Coil Power Output Stage 2 Electrical Malfunction</b>
17803	P1395	<b>Ignition Coil Power Output Stage 3 Electrical Malfunction</b>
17804	P1396	<b>Engine Speed Sensor Missing Tooth</b>
17805	P1397	<b>Engine speed wheel Adaptation limit reached</b>
17806	P1398	<b>Engine RPM signal, TD Short to ground</b>

17807	P1399	Engine RPM signal, TD Short Circuit to B+
17808	P1400	EGR Valve Circ Electrical Malfunction
17809	P1401	EGR Valve Circ Short to Ground
17810	P1402	EGR Valve Circ Short to B+
17811	P1403	EGR Flow Deviation
17812	P1404	EGR Flow Basic Setting not carried out
17814	P1406	EGR Temp.Sensor Range/Performance
17815	P1407	EGR Temp.Sensor Signal too Low
17816	P1408	EGR Temp.Sensor Signal too High
17817	P1409	Tank Ventilation Valve Circ. Electrical Malfunction
17818	P1410	Tank Ventilation Valve Circ. Short to B+
17819	P1411	Sec.Air Inj.Sys.,Bank2 Flow too Flow
17820	P1412	EGR Different.Pressure Sensor Signal too Low
17821	P1413	EGR Different.Pressure Sensor Signal too High
17822	P1414	Sec.Air Inj.Sys.,Bank2 Leak Detected
17825	P1417	Fuel Level Sensor Circ Signal too Low
17826	P1418	Fuel Level Sensor Circ Signal too High
17828	P1420	Sec.Air Inj.Valve Circ Electrical Malfunction
17829	P1421	Sec.Air Inj.Valve Circ Short to Ground
17830	P1422	Sec.Air Inj.Sys.Contr.Valve Circ Short to B+
17831	P1423	Sec.Air Inj.Sys.,Bank1 Flow too Low
17832	P1424	Sec.Air Inj.Sys.,Bank1 Leak Detected
17833	P1425	Tank Vent.Valve Short to Ground
17834	P1426	Tank Vent.Valve Open
17840	P1432	Sec.Air Inj.Valve Open
17841	P1433	Sec.Air Inj.Sys.Pump Relay Circ. open

17842	P1434	<b>Sec.Air Inj.Sys.Pump Relay Circ. Short to B+</b>
17843	P1435	<b>Sec.Air Inj.Sys.Pump Relay Circ. Short to ground</b>
17844	P1436	<b>Sec.Air Inj.Sys.Pump Relay Circ. Electrical Malfunction</b>
17847	P1439	<b>EGR Potentiometer Error in Basic Seting</b>
17848	P1440	<b>EGR Valve Power Stage Open</b>
17849	P1441	<b>EGR Valve Circ Open/Short to Ground</b>
17850	P1442	<b>EGR Valve Position Sensor Signal too high</b>
17851	P1443	<b>EGR Valve Position Sensor Signal too low</b>
17852	P1444	<b>EGR Valve Position Sensor range/performance</b>
17853	P1445	<b>Catalyst Temp.Sensor 2 Circ. Range/Performance</b>
17854	P1446	<b>Catalyst Temp.Circ Short to Ground</b>
17855	P1447	<b>Catalyst Temp.Circ Open/Short to B+</b>
17856	P1448	<b>Catalyst Temp.Sensor 2 Circ. Short to Ground</b>
17857	P1449	<b>Catalyst Temp.Sensor 2 Circ. Open/Short to B+</b>
17858	P1450	<b>Sec.Air Inj.Sys.Circ Short to B+</b>
17859	P1451	<b>Sec.Air Inj.Sys.Circ Short to Ground</b>
17860	P1452	<b>Sec.Air Inj.Sys. Open Circ.</b>
17861	P1453	<b>Exhaust gas temperature sensor 1 open/short to B+</b>
17862	P1454	<b>Exhaust gas temperature sensor short 1 to ground</b>
17863	P1455	<b>Exhaust gas temperature sensor 1 range/performance</b>
17864	P1456	<b>Exhaust gas temperature control bank 1 limit attained</b>
17865	P1457	<b>Exhaust gas temperature sensor 2 open/short to B+</b>
17866	P1458	<b>Exhaust gas temperature sensor 2 short to ground</b>
17867	P1459	<b>Exhaust gas temperature sensor 2 range/performance</b>
17868	P1460	<b>Exhaust gas temperature control bank 2 limit attained</b>
17869	P1461	<b>Exhaust gas temperature control bank 1 Range/Performance</b>

17870	P1462	<b>Exhaust gas temperature control bank 2 Range/Performance</b>
17873	P1465	<b>Additive Pump Short Circuit to B+</b>
17874	P1466	<b>Additive Pump Open/Short to Ground</b>
17875	P1467	<b>EVAP Canister Purge Solenoid Valve Short Circuit to B+</b>
17876	P1468	<b>EVAP Canister Purge Solenoid Valve Short Circuit to Ground</b>
17877	P1469	<b>EVAP Canister Purge Solenoid Valve Open Circuit</b>
17878	P1470	<b>EVAP Emission Contr.LDP Circ Electrical Malfunction</b>
17879	P1471	<b>EVAP Emission Contr.LDP Circ Short to B+</b>
17880	P1472	<b>EVAP Emission Contr.LDP Circ Short to Ground</b>
17881	P1473	<b>EVAP Emission Contr.LDP Circ Open Circ.</b>
17882	P1474	<b>EVAP Canister Purge Solenoid Valve electrical malfunction</b>
17883	P1475	<b>EVAP Emission Contr.LDP Circ Malfunction/Signal Circ.Open</b>
17884	P1476	<b>EVAP Emission Contr.LDP Circ Malfunction/Insufficient Vacuum</b>
17885	P1477	<b>EVAP Emission Contr.LDP Circ Malfunction</b>
17886	P1478	<b>EVAP Emission Contr.LDP Circ Clamped Tube Detected</b>
17908	P1500	<b>Fuel Pump Relay Circ. Electrical Malfunction</b>
17909	P1501	<b>Fuel Pump Relay Circ. Short to Ground</b>
17910	P1502	<b>Fuel Pump Relay Circ. Short to B+</b>
17911	P1503	<b>Load signal from Alternator Term. DF Range/performance/Incorrect Signal</b>
17912	P1504	<b>Intake Air Sys.Bypass Leak Detected</b>
17913	P1505	<b>Closed Throttle Pos. Does Not Close/Open Circ</b>
17914	P1506	<b>Closed Throttle Pos.Switch Does Not Open/Short to Ground</b>
17915	P1507	<b>Idle Sys.Learned Value Lower Limit Attained</b>
17916	P1508	<b>Idle Sys.Learned Value Upper Limit Attained</b>
17917	P1509	<b>Idle Air Control Circ. Electrical Malfunction</b>
17918	P1510	<b>Idle Air Control Circ. Short to B+</b>

17919	P1511	<b>Intake Manifold Changeover Valve circuit electrical malfunction</b>
17920	P1512	<b>Intake Manifold Changeover Valve circuit Short to B+</b>
17921	P1513	<b>Intake Manifold Changeover Valve2 circuit Short to B+</b>
17922	P1514	<b>Intake Manifold Changeover Valve2 circuit Short to ground</b>
17923	P1515	<b>Intake Manifold Changeover Valve circuit Short to Ground</b>
17924	P1516	<b>Intake Manifold Changeover Valve circuit Open</b>
17925	P1517	<b>Main Relay Circ. Electrical Malfunction</b>
17926	P1518	<b>Main Relay Circ. Short to B+</b>
17927	P1519	<b>Intake Camshaft Contr.,Bank1 Malfunction</b>
17928	P1520	<b>Intake Manifold Changeover Valve2 circuit Open</b>
17929	P1521	<b>Intake Manifold Changeover Valve2 circuit electrical malfunction</b>
17930	P1522	<b>Intake Camshaft Contr.,Bank2 Malfunction</b>
17931	P1523	<b>Crash Signal from Airbag Control Unit range/performance</b>
17933	P1525	<b>Intake Camshaft Contr.Circ.,Bank1 Electrical Malfunction</b>
17934	P1526	<b>Intake Camshaft Contr.Circ.,Bank1 Short to B+</b>
17935	P1527	<b>Intake Camshaft Contr.Circ.,Bank1 Short to Ground</b>
17936	P1528	<b>Intake Camshaft Contr.Circ.,Bank1 Open</b>
17937	P1529	<b>Camshaft Control Circuit Short to B+</b>
17938	P1530	<b>Camshaft Control Circuit Short to ground</b>
17939	P1531	<b>Camshaft Control Circuit open</b>
17941	P1533	<b>Intake Camshaft Contr.Circ.,Bank2 Electrical Malfunction</b>
17942	P1534	<b>Intake Camshaft Contr.Circ.,Bank2 Short to B+</b>
17943	P1535	<b>Intake Camshaft Contr.Circ.,Bank2 Short to Ground</b>
17944	P1536	<b>Intake Camshaft Contr.Circ.,Bank2 Open</b>
17945	P1537	<b>Engine Shutoff Solenoid Malfunction</b>
17946	P1538	<b>Engine Shutoff Solenoid Open/Short to Ground</b>

17947	P1539	<b>Clutch Vacuum Vent Valve Switch Incorrect signal</b>
17948	P1540	<b>Vehicle Speed Sensor High Input</b>
17949	P1541	<b>Fuel Pump Relay Circ Open</b>
17950	P1542	<b>Throttle Actuation Potentiometer Range/Performance</b>
17951	P1543	<b>Throttle Actuation Potentiometer Signal too Low</b>
17952	P1544	<b>Throttle Actuation Potentiometer Signal too High</b>
17953	P1545	<b>Throttle Pos.Contr Malfunction</b>
17954	P1546	<b>Boost Pressure Contr.Valve Short to B+</b>
17955	P1547	<b>Boost Pressure Contr.Valve Short to Ground</b>
17956	P1548	<b>Boost Pressure Contr.Valve Open</b>
17957	P1549	<b>Boost Pressure Contr.Valve Short to Ground</b>
17958	P1550	<b>Charge Pressure Deviation</b>
17959	P1551	<b>Barometric Pressure Sensor Circ. Short to B+</b>
17960	P1552	<b>Barometric Pressure Sensor Circ. Open/Short to Ground</b>
17961	P1553	<b>Barometric/manifold pressure signal ratio out of range</b>
17962	P1554	<b>Idle Speed Contr.Throttle Pos. Basic Setting Conditions not met</b>
17963	P1555	<b>Charge Pressure Upper Limit exceeded</b>
17964	P1556	<b>Charge Pressure Contr. Negative Deviation</b>
17965	P1557	<b>Charge Pressure Contr. Positive Deviation</b>
17966	P1558	<b>Throttle Actuator Electrical Malfunction</b>
17967	P1559	<b>Idle Speed Contr.Throttle Pos. Adaptation Malfunction</b>
17968	P1560	<b>Maximum Engine Speed Exceeded</b>
17969	P1561	<b>Quantity Adjuster Deviation</b>
17970	P1562	<b>Quantity Adjuster Upper Limit Attained</b>
17971	P1563	<b>Quantity Adjuster Lower Limit Attained</b>
17972	P1564	<b>Idle Speed Contr.Throttle Pos. Low Voltage During Adaptation</b>



17973	P1565	<b>Idle Speed Control Throttle Position lower limit not attained</b>
17974	P1566	<b>Load signal from A/C compressor range/performance</b>
17975	P1567	<b>Load signal from A/C compressor no signal</b>
17976	P1568	<b>Idle Speed Contr.Throttle Pos. mechanical Malfunction</b>
17977	P1569	<b>Cruise control switch Incorrect signal</b>
17978	P1570	<b>Contr.Module Locked</b>
17979	P1571	<b>Left Eng. Mount Solenoid Valve Short to B+</b>
17980	P1572	<b>Left Eng. Mount Solenoid Valve Short to ground</b>
17981	P1573	<b>Left Eng. Mount Solenoid Valve Open circuit</b>
17982	P1574	<b>Left Eng. Mount Solenoid Valve Electrical fault in circuit</b>
17983	P1575	<b>Right Eng. Mount Solenoid Valve Short to B+</b>
17984	P1576	<b>Right Eng. Mount Solenoid Valve Short to ground</b>
17985	P1577	<b>Right Eng. Mount Solenoid Valve Open circuit</b>
17986	P1578	<b>Right Eng. Mount Solenoid Valve Electrical fault in circuit</b>
17987	P1579	<b>Idle Speed Contr.Throttle Pos. Adaptation not started</b>
17988	P1580	<b>Throttle Actuator B1 Malfunction</b>
17989	P1581	<b>Idle Speed Contr.Throttle Pos. Basic Setting Not Carried Out</b>
17990	P1582	<b>Idle Adaptation at Limit</b>
17991	P1583	<b>Transmission mount valves Short to B+</b>
17992	P1584	<b>Transmission mount valves Short to ground</b>
17993	P1585	<b>Transmission mount valves Open circuit</b>
17994	P1586	<b>Engine mount solenoid valves Short to B+</b>
17995	P1587	<b>Engine mount solenoid valves Short to ground</b>
17996	P1588	<b>Engine mount solenoid valves Open circuit</b>
18008	P1600	<b>Power Supply (B+) Terminal 15 Low Voltage</b>
18010	P1602	<b>Power Supply (B+) Terminal 30 Low Voltage</b>

18011	P1603	<b>Internal Control Module Malfunction</b>
18012	P1604	<b>Internal Control Module Driver Error</b>
18013	P1605	<b>Rough Road/Acceleration Sensor Electrical Malfunction</b>
18014	P1606	<b>Rough Road Spec Engine Torque ABS-ECU Electrical Malfunction</b>
18015	P1607	<b>Vehicle speed signal Error message from instrument cluster</b>
18016	P1608	<b>Steering angle signal Error message from steering angle sensor</b>
18017	P1609	<b>Crash shut-down activated</b>
18019	P1611	<b>MIL Call-up Circ./Transm.Contr.Module Short to Ground</b>
18020	P1612	<b>Electronic Control Module Incorrect Coding</b>
18021	P1613	<b>MIL Call-up Circ Open/Short to B+</b>
18022	P1614	<b>MIL Call-up Circ./Transm.Contr.Module Range/Performance</b>
18023	P1615	<b>Engine Oil Temperature Sensor Circuit range/performance</b>
18024	P1616	<b>Glow Plug/Heater Indicator Circ. Short to B+</b>
18025	P1617	<b>Glow Plug/Heater Indicator Circ. Open/Short to Ground</b>
18026	P1618	<b>Glow Plug/Heater Relay Circ. Short to B+</b>
18027	P1619	<b>Glow Plug/Heater Relay Circ. Open/Short to Ground</b>
18028	P1620	<b>Engine coolant temperature signal open/short to B+</b>
18029	P1621	<b>Engine coolant temperature signal short to ground</b>
18030	P1622	<b>Engine coolant temperature signal range/performance</b>
18031	P1623	<b>Data Bus Powertrain No Communication</b>
18032	P1624	<b>MIL Request Sign.active</b>
18033	P1625	<b>Data-Bus Powertrain Unplausible Message from Transm.Contr.</b>
18034	P1626	<b>Data-Bus Powertrain Missing Message from Transm.Contr.</b>
18035	P1627	<b>Data-Bus Powertrain missing message from fuel injection pump</b>
18036	P1628	<b>Data-Bus Powertrain missing message from steering sensor</b>
18037	P1629	<b>Data-Bus Powertrain missing message from distance control</b>

18038	P1630	<b>Accelera.Pedal Pos.Sensor 1 Signal too Low</b>
18039	P1631	<b>Accelera.Pedal Pos.Sensor 1 Signal too High</b>
18040	P1632	<b>Accelera.Pedal Pos.Sensor 1 Power Supply Malfunction</b>
18041	P1633	<b>Accelera.Pedal Pos.Sensor 2 Signal too Low</b>
18042	P1634	<b>Accelera.Pedal Pos.Sensor 2 Signal too High</b>
18043	P1635	<b>Data Bus Powertrain missing message f.air condition control</b>
18044	P1636	<b>Data Bus Powertrain missing message from Airbag control</b>
18045	P1637	<b>Data Bus Powertrain missing message f.central electr.control</b>
18046	P1638	<b>Data Bus Powertrain missing message from clutch control</b>
18047	P1639	<b>Accelera.Pedal Pos.Sensor 1+2 Range/Performance</b>
18048	P1640	<b>Internal Contr.Module (EEPROM) Error</b>
18049	P1641	<b>Please check DTC Memory of Air Condition ECU</b>
18050	P1642	<b>Please check DTC Memory of Airbag ECU</b>
18051	P1643	<b>Please check DTC Memory of central electric ECU</b>
18052	P1644	<b>Please check DTC Memory of clutch ECU</b>
18053	P1645	<b>Data Bus Powertrain missing message f.all wheel drive contr.</b>
18054	P1646	<b>Please Check DTC Memory of all wheel drive ECU</b>
18055	P1647	<b>Please check coding of ECUs in Data Bus Powertrain</b>
18056	P1648	<b>Data Bus Powertrain Malfunction</b>
18057	P1649	<b>Data Bus Powertrain Missing message from ABS Control Module</b>
18058	P1650	<b>Data Bus Powertrain Missing message fr.instrument panel ECU</b>
18059	P1651	<b>Data Bus Powertrain missing messages</b>
18060	P1652	<b>Please check DTC Memory of transmission ECU</b>
18061	P1653	<b>Please check DTC Memory of ABS Control Module</b>
18062	P1654	<b>Please check DTC Memory of control panel ECU</b>
18063	P1655	<b>Please check DTC Memory of ADR Control Module</b>

18064	P1656	<b>A/C clutch relay circuit short to ground</b>
18065	P1657	<b>A/C clutch relay circuit short to B+</b>
18066	P1658	<b>Data Bus Powertrain Incorrect signal from ADR Control Module</b>
18084	P1676	<b>Drive by Wire-MIL Circ. Electrical Malfunction</b>
18085	P1677	<b>Drive by Wire-MIL Circ. Short to B+</b>
18086	P1678	<b>Drive by Wire-MIL Circ. Short to Ground</b>
18087	P1679	<b>Drive by Wire-MIL Circ. Open</b>
18089	P1681	<b>Contr.Unit Programming, Programming not Finished</b>
18092	P1684	<b>Contr.Unit Programming Communication Error</b>
18094	P1686	<b>Contr.Unit Error Programming Error</b>
18098	P1690	<b>Malfunction Indication Light Malfunction</b>
18099	P1691	<b>Malfunction Indication Light Open</b>
18100	P1692	<b>Malfunction Indication Light Short to Ground</b>
18101	P1693	<b>Malfunction Indication Light Short to B+</b>
18102	P1694	<b>Malfunction Indication Light Open/Short to Ground</b>
18112	P1704	<b>Kick Down Switch Malfunction</b>
18113	P1705	<b>Gear/Ratio Monitoring Adaptation limit reached</b>
18119	P1711	<b>Wheel Speed Signal 1 Range/Performance</b>
18124	P1716	<b>Wheel Speed Signal 2 Range/Performance</b>
18129	P1721	<b>Wheel Speed Signal 3 Range/Performance</b>
18131	P1723	<b>Starter Interlock Circ. Open</b>
18132	P1724	<b>Starter Interlock Circ. Short to Ground</b>
18134	P1726	<b>Wheel Speed Signal 4 Range/Performance</b>
18136	P1728	<b>Different Wheel Speed Signals Range/Performance</b>
18137	P1729	<b>Starter Interlock Circ. Short to B+</b>
18141	P1733	<b>Tiptronic Switch Down Circ. Short to Ground</b>

18147	P1739	<b>Tiptronic Switch up Circ. Short to Ground</b>
18148	P1740	<b>Clutch temperature control</b>
18149	P1741	<b>Clutch pressure adaptation at limit</b>
18150	P1742	<b>Clutch torque adaptation at limit</b>
18151	P1743	<b>Clutch slip control signal too high</b>
18152	P1744	<b>Tiptronic Switch Recognition Circ. Short to Ground</b>
18153	P1745	<b>Transm.Contr.Unit Relay Short to B+</b>
18154	P1746	<b>Transm.Contr.Unit Relay Malfunction</b>
18155	P1747	<b>Transm.Contr.Unit Relay Open/Short to Ground</b>
18156	P1748	<b>Transm.Contr.Unit Self-Check</b>
18157	P1749	<b>Transm.Contr.Unit Incorrect Coded</b>
18158	P1750	<b>Power Supply Voltage Low Voltage</b>
18159	P1751	<b>Power Supply Voltage High Voltage</b>
18160	P1752	<b>Power Supply Malfunction</b>
18168	P1760	<b>Shift Lock Malfunction</b>
18169	P1761	<b>Shift Lock Short to Ground</b>
18170	P1762	<b>Shift Lock Short to B+</b>
18171	P1763	<b>Shift Lock Open</b>
18172	P1764	<b>Transmission temperature control</b>
18173	P1765	<b>Hydraulic Pressure Sensor 2 adaptation at limit</b>
18174	P1766	<b>Throttle Angle Signal Stuck Off</b>
18175	P1767	<b>Throttle Angle Signal Stuck On</b>
18176	P1768	<b>Hydraulic Pressure Sensor 2 Too High</b>
18177	P1769	<b>Hydraulic Pressure Sensor 2 Too Low</b>
18178	P1770	<b>Load Signal Range/Performance</b>
18179	P1771	<b>Load Signal Stuck Off</b>

18180	P1772	<b>Load Signal Stuck On</b>
18181	P1773	<b>Hydraulic Pressure Sensor 1 Too High</b>
18182	P1774	<b>Hydraulic Pressure Sensor 1 Too Low</b>
18183	P1775	<b>Hydraulic Pressure Sensor 1 adaptation at limit</b>
18184	P1776	<b>Hydraulic Pressure Sensor 1 range/performance</b>
18185	P1777	<b>Hydraulic Pressure Sensor 2 range/performance</b>
18186	P1778	<b>Solenoid EV7 Electrical Malfunction</b>
18189	P1781	<b>Engine Torque Reduction Open/Short to Ground</b>
18190	P1782	<b>Engine Torque Reduction Short to B+</b>
18192	P1784	<b>Shift up/down Wire Open/Short to Ground</b>
18193	P1785	<b>Shift up/down Wire Short to B+</b>
18194	P1786	<b>Reversing Light Circ. Open</b>
18195	P1787	<b>Reversing Light Circ. Short to Ground</b>
18196	P1788	<b>Reversing Light Circ. Short to B+</b>
18197	P1789	<b>Idle Speed Intervention Circ. Error Message from Engine Contr.</b>
18198	P1790	<b>Transmission Range Display Circ. Open</b>
18199	P1791	<b>Transmission Range Display Circ. Short to Ground</b>
18200	P1792	<b>Transmission Range Display Circ. Short to B+</b>
18201	P1793	<b>Output Speed Sensor 2 Circ. No Signal</b>
18203	P1795	<b>Vehicle Speed Signal Circ. Open</b>
18204	P1796	<b>Vehicle Speed Signal Circ. Short to Ground</b>
18205	P1797	<b>Vehicle Speed Signal Circ. Short to B+</b>
18206	P1798	<b>Output Speed Sensor 2 Circ. Range/Performance</b>
18207	P1799	<b>Output Speed Sensor 2 Circ. Rpm too High</b>
18221	P1813	<b>Pressure Contr.Solenoid 1 Electrical</b>
18222	P1814	<b>Pressure Contr.Solenoid 1 Open/Short to Ground</b>

18223	P1815	<b>Pressure Contr.Solenoid 1 Short to B+</b>
18226	P1818	<b>Pressure Contr.Solenoid 2 Electrical</b>
18227	P1819	<b>Pressure Contr.Solenoid 2 Open/Short to Ground</b>
18228	P1820	<b>Pressure Contr.Solenoid 2 Short to B+</b>
18231	P1823	<b>Pressure Contr.Solenoid 3 Electrical</b>
18232	P1824	<b>Pressure Contr.Solenoid 3 Open/Short to Ground</b>
18233	P1825	<b>Pressure Contr.Solenoid 3 Short to B+</b>
18236	P1828	<b>Pressure Contr.Solenoid 4 Electrical</b>
18237	P1829	<b>Pressure Contr.Solenoid 4 Open/Short to Ground</b>
18238	P1830	<b>Pressure Contr.Solenoid 4 Short to B+</b>
18242	P1834	<b>Pressure Contr.Solenoid 5 Open/Short to Ground</b>
18243	P1835	<b>Pressure Contr.Solenoid 5 Short to B+</b>
18249	P1841	<b>Engine/Transmission Control Modules Versions do not match</b>
18250	P1842	<b>Please check DTC Memory of instrument panel ECU</b>
18251	P1843	<b>Please check DTC Memory of ADR Control Module</b>
18252	P1844	<b>Please check DTC Memory of central electric control ECU</b>
18255	P1847	<b>Please check DTC Memory of brake system ECU</b>
18256	P1848	<b>Please check DTC Memory of engine ECU</b>
18257	P1849	<b>Please check DTC Memory of transmission ECU</b>
18258	P1850	<b>Data-Bus Powertrain Missing Message from Engine Contr.</b>
18259	P1851	<b>Data-Bus Powertrain Missing Message from Brake Contr.</b>
18260	P1852	<b>Data-Bus Powertrain Unplausible Message from Engine Contr.</b>
18261	P1853	<b>Data-Bus Powertrain Unplausible Message from Brake Contr.</b>
18262	P1854	<b>Data-Bus Powertrain Hardware Defective</b>
18263	P1855	<b>Data-Bus Powertrain Software version Contr.</b>
18264	P1856	<b>Throttle/Pedal Pos.Sensor A Circ. Error Message from Engine Contr.</b>

18265	P1857	<b>Load Signal Error Message from Engine Contr.</b>
18266	P1858	<b>Engine Speed Input Circ. Error Message from Engine Contr.</b>
18267	P1859	<b>Brake Switch Circ. Error Message from Engine Contr.</b>
18268	P1860	<b>Kick Down Switch Error Message from Engine Contr.</b>
18269	P1861	<b>Throttle Position (TP) sensor Error Message from ECM</b>
18270	P1862	<b>Data Bus Powertrain Missing message from instr. panel ECU</b>
18271	P1863	<b>Data Bus Powertrain Missing Message from St. Angle Sensor</b>
18272	P1864	<b>Data Bus Powertrain Missing message from ADR control module</b>
18273	P1865	<b>Data Bus Powertrain Missing message from central electronics</b>
18274	P1866	<b>Data Bus Powertrain Missing messages</b>

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### Aftermarket suppliers of diagnostic scan tools

The following suppliers offer diagnostic scan tools that can be used to retrieve scan tool codes as listed in the table above.

- Assenmacher Specialty Tools, Inc.  
6440 Odell Place  
Boulder, CO 80301  
(800)525-2943  
[www.asttool.com](http://www.asttool.com)
- Baum Tools Unlimited, Inc.  
PO Box 5867  
Sarasota, FL 34277  
(800)848-6657  
[www.baumtools.com](http://www.baumtools.com)
- Mac Tools  
4635 Hilton Corporate Drive  
Columbus, OH 43232  
(800)622-8655  
[www.mactools.com](http://www.mactools.com)
- Ross-Tech  
888 Sumneytown Pike  
Lansdale, PA 19446  
215-361-8942  
[www.ross-tech.com](http://www.ross-tech.com)
- Snap-On Technologies, Inc.  
2801 80th St.  
Kenosha, WI 53141-1410  
(262)656-5200  
[www.snapon.com](http://www.snapon.com)



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