

Fault Codes

Volkswagen / Audi / Seat / Skoda Instructions

Model Years 1988-98

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The specifications, information, and illustrations contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

This instruction manual tells you how to use the Scanner to perform diagnostic tests and find possible locations of vehicle problems. It does NOT tell you how to correct the problems. Consult the manufacturer vehicle service manual or other publication for repair instructions.

To take full advantage of the Scanner, you should be knowledgeable and well trained in each of the vehicle computer control systems described in this manual.

Service data that appear to be non-functional on some vehicles may be due to vehicle manufacturing design changes.

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VW/AUDI DIAGNOSTIC TROUBLE CODE (DTC) OVERVIEW

January 27, 1999

The Diagnostic Trouble Code (DTC) overview is organized according to VAG and SAE (OBD-II) trouble codes.

A=MIL Triggered on first occurrence
B=MIL Triggered on second occurrence

C=Non Emission related Fault - Service light only
D=Non Emission Fault - No warning light

This is an overview only.

For the most complete listing please refer to the factory repair manuals available from Baum Tools.

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
	P0217	Temp Light - Engine Hot	D+Temp Lamp
	P0218	Temp Light - Transaxle Hot	D+Temp Lamp
	P0326	Knock Sensor - Constant Knock	D
	P0351	Ignition - Faulty	D
	P0352	Ignition - Faulty	D
	P0420	Converter - Low Efficiency	A
	P0443	EVAP Purge - Circuit Fault	D
	P0500	VSS Sensor - No Signal	A
	P0560	Battery Voltage - Out of Range	D
	P0561	Battery Voltage - Unstable	D
	P0562	Battery Voltage - Low	D
	P0563	Battery Voltage - High	D
	P0565	Cruise Control - Circuit Fault	D
	P0571	Brake Switch - Circuit Fault	D
	P0572	Brake Switch - Low Voltage	D
	P0573	Brake Switch - High Voltage	D
	P0600	PCM - No Serial Data	A
	P0601	EPROM - Fault	A
	P0602	PCM Program - Fault	A
	P0604	PCM RAM Memory - Fault	A
	P0606	PCM Processor - Fault	A
	P1782	Engine/Transmission Data Electrical Connection Ignition Intervention. Also check for loose ECM power relay.	A
00000		No DTC Recognized	
00257		ABS Inlet Valve - Left Front (N101)	
00258	P0753	Shift Solenoid 1 - Open Circuit or Short to Ground or B+ (N88)	
00259		ABS Inlet Valve - Right Front (N99)	
00260	P0758	Shift Solenoid 2 - Open Circuit or Short to Ground or B+ (N89)	
00261		ABS Inlet Valve - Rear (N103)	
00262	P0763	Shift Solenoid 3 - Open Circuit or Short to Ground or B+ (N90)	
00263		Transmission 0107 - Mechanical/Hydraulic Malfunction	
00264	P0748	Shift Solenoid 4 - Open Circuit or Short to Ground or B+ (N91)	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00265		ABS Outlet Valve - Left Front (N102)	
00266	P0773	Shift Solenoid 5 - Open Circuit or Short to Ground or B+ (N92)	
00267		ABS Outlet - Right Front (N100)	
00268	P0748	Shift Solenoid 6 - Open Circuit or Short to Ground or B+ (N93)	
00269		ABS Outlet Valve - Rear (N104)	
00270	P1778	Shift Solenoid 7 - Open Circuit or Short to Ground or B+ (N94)	
00271		See VW or Audi Service Manual, Repair Group 01 (Depends on Which Vehicle Is under Test)	
00273		ABS Inlet Valve - Right Rear (N133)	
00274		ABS Outlet Valve - Left Rear (N134)	
00275		ABS Outlet Valve - Right Rear (N135)	
00276		ABS Outlet Valve - Right Rear (N136)	
00277		ABS Inlet or Outlet Valve - Left Front (N137)	
00278		ABS Main Valve (N105)	
00279		Differential Lock Valve 1 (N125)	
00280		Differential Lock Valve 2 (N126)	
00281		Vehicle Speed Sensor - No Signal (G68)	
00282		Throttle Position Actuator -V60	
00283	P1711	ABS Wheel Speed Signal #1 (Left Front) - Range/Performance - G47	
00284		ABS Inlet or Outlet Valve - Right Front - N138	
00285	P1716	ABS Wheel Speed Signal #2 (Right Front) - Range/Performance - G45	
00286		ABS Inlet or Outlet Valve - Left Front - N139	
00287	P1721	ABS Wheel Speed Signal #3 (Right Rear) - Range/Performance (G44)	
00289		ABS Inlet or Outlet Valve - Right Rear (N140)	
00290	P1726	ABS Wheel Speed Signal #4 (Left Rear) - Range/Performance. (G46)	
00291		Pressure / Fluid Level Warning Switch (F116 / F117)	
00292		Hydraulic Energy Supply Pressure Level	
00293	P0705	Multi-Function Transmission Range Switch - Malfunction (PRNDL Input) (F125)	
00294		Transmission Pressure Switch L (F174)	
00295		Transmission Pressure Switch 2 (F175)	
00296	P1704	Kick-down Switch - Short to ground (F8)	
00297	P0722	Vehicle Speed Sensor Circuit - No Signal	A
00297	P0715	Input/Turbine Speed Sensor Circuit - Malfunction	
00297		Transmission Vehicle Speed Sensor (G38)	
00297	P0721	Vehicle Speed Sensor Circuit - Range/Performance - Signal Noisy (G38)	A
00298		Rear Differential Lock Switch -E121	
00299		Transmission Shift-Range Program Switch - Short Circuit -E122	
00300	P0713	Transmission Fluid Temperature Sensor Circuit High Input (G93)	
00300	P0712	Transmission Fluid Temperature Sensor Circuit Low Input (G93)	
00301		ABS Return-flow Pump (V39)	
00302		ABS Solenoid Valve Relay (J106)	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00303		Board Computer Function Selector Switch (E91)	
00305		Fuel Consumption Indicator Signal	
00306		Secondary Air Injection - Cylinder Bank 1	
00307		Secondary Air Injection - Cylinder Bank 2	
00309		Cleaning Solution Metering Pump (V135)	
00310		Catalytic Convertor Temperature Sensors (G20)	
00312		Catalytic Convertor Control Temperature Sensors (G132)	
00313		Three Way Catalytic Converter - Signal Malfunction	
00314		EGR Two Way Valve (N161)	
00447		ABS-ASR Motor - Electrical Connection 2	
00501		Central Flap Motor Position Sensor -G92	
00512	P0341	Cam Sensor - Signal Error	B
00512		Camshaft Position Sensor - Not on Reference Mark	
00513	P0506	Engine Speed Sensor - G28 - Idle RPM Too Low	B
00513	P0507	Engine Speed Sensor - G28 - Idle RPM Too High	B
00513		Engine Speed Sensor - G28 - Signal Malfunction	
00514	P0336	Crankshaft Position Sensor - Erratic Signal - G4	A
00514		Crankshaft Position Sensor - G4	
00515		Camshaft Position Sensor (Hall Effect Sensor) - Short to B+ (G40) : Check CMP, if OK, replace distributor.	B
00515	P0340	Camshaft Position Sensor (Hall Effect Sensor) - No Signal (G40) : Check CMP, if OK, replace distributor.	B
00516		Throttle Position Sensor - Closed Switch -F60	
00517		Throttle Position Sensor - Wide-open Switch -F81	
00518	P0121	Throttle Position Sensor - Signal Out of Range (G69) Also check for loose ECM power relay.	
00519	P0106	MAP Sensor - Out of Range -G71	B
00519	P0107	MAP Sensor - Voltage Low -G71	A
00519	P0108	MAP Sensor - Voltage High -G71	A
00520		Volume Mass Air Flow Sensor -G19ig70	
00521		Co Fuel Trim Potentiometer -G74	
00522		Engine Coolant Temperature Sensor -G62	
00523	P0112	IAT Sensor - Temp High - Circuit Low - G42	A
00523	P0113	IAT Sensor - Temp Low - Circuit High - G42	A
00524		Knock Sensor 1 -G61	
00525	P0131	O2 Sensor - Voltage Low -G39	B
00526		Brake Light Switch - Incorrect signal (F)	
00527		Intake Air Temperature Sensor - G72	
00528		Barometric Pressure Sensor - F96	
00529	P0725	Engine Speed Input Circuit (RPM Sensor) - Malfunction. Also check for loose ECM power relay.	A
00529	P0727	Engine Speed Input Circuit (RPM Sensor) - No Signal	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00530		Throttle Position Sensor -G88	
00531		Mass Air Flow Sensor Reference Voltage	
00532	P1750	Supply Voltage (B+)	
00532	P1746	Transmission Control Module Relay - Supply Voltage (B+) Malfunction Low Battery or Bad Ground	
00533		Idle Air Control Regulation	
00534		Oil Temperature Sensor -G8	
00535		First Knock Sensor	
00536		Second Knock Sensor	
00537		Oxygen Sensor Control	
00538		Reference Voltage	
00539		Fuel Temperature Sensor -G81	
00540		Knock Sensor 2 -G66	
00541		Slide Travel Sensor -G99	
00542		Needle Lift Sensor -G80	
00543	P0726	Engine Speed Input Circuit - RPM Upper Limit Exceeded	
00544		Maximum Charge Air Pressure Exceeded	
00545	P1781	Engine Intervention Stuck Off. Also check for loose ECM power relay.	
00545	P1782	Engine Intervention Stuck On. Also check for loose ECM power relay.	
00545	P1780	Engine Intervention Unreadable. Also check for loose ECM power relay.	
00546		Data Communication Line Faulty	
00547		ABS Pressure Control Switch -F137	
00548	P0560	System Voltage Malfunction	
00549	P1771	Load Signal Stuck Off (RPM Signal missing)	
00549	P1772	Load Signal Stuck On (RPM Signal missing)	
00549		Fuel Consumption Signal	
00550		Injection Start Control	
00551		Catalytic Convertor Excess Temperature	
00552		Volume Air Flow Sensor (Position Sensor) -G19	
00553		Mass Air Flow Sensor -G70	
00554		Oxygen Sensor 2 - Control	
00555		Heating Circuit - Oxygen Sensor 2 -G108	
00558		Mixture Control Adjustment Limit - Lean Position	
00559		Mixture Control Adjustment Limit - Rich Position	
00560		EGR Temperature Sensor Switch Short or Implausible Value	
00561		Mixture Adjustment Control	
00575		Manifold Absolute Pressure Sensor	
00577		Knock Sensor Control - Cylinder 1	
00578		Knock Sensor Control - Cylinder 2	
00579		Knock Sensor Control - Cylinder 3	
00580		Knock Sensor Control - Cylinder 4	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00581		Knock Sensor Control - Cylinder 5	
00582		Knock Sensor Control - Cylinder 6	
00583		Knock Sensor Control - Cylinder 7	
00584		Knock Sensor Control - Cylinder 8	
00585		EGR Temperature Sensor - G98	
00586		EGR System Control	
00587		Mixture Control Adjustment Limit - Bad ECU ground, Air leak, Leaking Injector.	
00588		Air-bag Ignition Circuit - Driver Side -N95	
00589		Air-bag Ignition Circuit 1 - Passenger Side -N131	
00590		Air-bag Ignition Circuit 1 - Passenger Side -N132	
00591		Seat Belt Tensioner Switch - E24	
00592		Seat Smelt Tensioner Switch - E25	
00593		Seat Detect Switch - Passenger Side -F151	
00594		Air-bag Ignition Circuit	
00595		Crash Data Already Stored	
00596		Injector or Trans. Solenoid Wires - Short	
00597	P1728	Varying ABS Wheel Speed Signals - Range/Performance	
00598		Hydraulic/Mechanical Malfunction	
00599		Possibility-pressure Brake Light Switch	
00600		Temperature Regulator Flap Motor Position Sensor -G92	
00602		Foot-wall/defroster. Flap Motor Position Sensor -G114	
00603		Foot-wall/defroster Flap Motor -V85	
00604		Back Pressure Flap Motor Position Sensor -G113	
00605		Fresh Air Recirculation Flap Two-way Valve -N63	
00606		Engine Coolant Two-way Valve -N147	
00607		Outside Air Temperature Display -G106	
00608		Load Sensor -G119	
00609		Ignition Output 1	
00610		Ignition Output 2	
00611		Ignition Output 3	
00612		Ignition Output 4	
00613		Ignition Output 5	
00614		Ignition Output 6	
00615		Ignition Output 7	
00616		Ignition Output 8	
00617		Air-bag Deceleration Sensor - Left -G104	
00618		Air-bag Deceleration Sensor - Right -G105	
00619		Sensor Supply Line - Left	
00620		Sensor Supply Line - Right	
00621		Pressure Reduction Valve -N155	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00622		Draining Water from Fuel Filter	
00623		ABS/Transmission Electrical Connection	
00624		A/C Compressor Engagement	
00625		Vehicle Speed Signal	
00626		Glow Plug Indicator Light -29	
00627		Water Level Sensor -G120	
00628		Actuating Variable Control	
00629		Vacuum Vent Valve - Brake -F47	
00630		A/C Switched on	
00633		Wiring to Ignition/sensor for Delay	
00634		Series Resistance -N159	
00635		Oxygen Sensor Heating Circuit - Ahead of Catalytic Convertor	
00636		Acceleration Sensor - Right Front - G121	
00637		Acceleration Sensor - Left Front - G122	
00638	P1766	Throttle Angle Signal - Stuck Off. Also check for loose ECM power relay.	
00638	P1767	Throttle Angle Signal - Stuck On. Also check for loose ECM power relay.	
00638		Engine/Transmission Electrical Connection 2. Also check for loose ECM power relay.	
00639		Deceleration Sensor -G123	
00640		Oxygen Sensor Heating Relay -J278	
00641		ATF-Temperature too High	
00642		EDL Switch-over Valve - Right Front - N166	
00643		EDL Outlet Valve - Right Front - N167	
00644		EDL Switch-over Valve - Left Front -N168	
00645		EDL Outlet Valve - Left Front - N169	
00646		ABS-ASR Motor - Electrical Connection 1	
00648		Oxygen Sensor Heating Circuit - Behind Catalytic Convertor	
00649		ABS Inlet/outlet Valve - Rear -N160	
00650		Clutch Vacuum Vent Valve Switch -F36	
00651		Ignition Wiring	
00652	P0730	Transmission Shift-Range Controller - Incorrect Gear Ratio	
00652	P0731	Transmission Shift-Range Controller - Gear #1 - Incorrect Ratio	
00652	P0732	Transmission Shift-Range Controller - Gear #2 - Incorrect Ratio	
00652	P0733	Transmission Shift-Range Controller - Gear #3 - Incorrect Ratio	
00652	P0734	Transmission Shift-Range Controller - Gear #4 - Incorrect Ratio	
00653		Automatic Transmission Selector Lever	
00654		Seat Belt Tensioner Igniter 1 -N153	
00655		Seat Belt Tensioner Igniter 1 -N154	
00656		Air-bag Seat Detect Sensor -G128	
00657		Center Vent Adjusting Motor -V102	
00658		Operating Module	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00659		Self Test	
00660		Kick-down Switch / Throttle Position Sensor	
00661		Temperature Indicator	
00662		Tachometer -G5	
00663		Speedometer -G21	
00664		Fuel Gauge	
00665		Seat Belt Warning Light -K19	
00666		Signal	
00667		Ambient-temperature Signal	
00668		Battery Power Voltage Supply (Terminal 30)	
00669		Secondary Mil -K97,	
00670		Throttle Position Sensor -G127	
00671		Cruise Control Switch -E45 - Undefined Switch Position	
00672		ABS Hydraulic Pump with Series Resistance	
00673		Brake Pedal Pressed	
00674		Brake Released	
00675		IV-Left Front: OV OV-Left Front: OV - Left Front Wheel Locked	
00676		IV-Left Front: B+ OV-Left Front: OV - Left Front Wheel Locked	
00677		IV-Left Front: B+ OV-Left Front: B+ - Left Front Wheel Free	
00678		IV-Left Front: B+ OV-Left Front: OV - Left Front Wheel Free	
00679		Oxygen Sensor Heating Circuit in Front of Catalytic Convertor	
00680		IV-Right Front: OV OV-Right Front: OV - Right Front Wheel Locked	
00681		IV-Right Front: B+ OV-Right Front: OV - Right Front Wheel Locked	
00682		IV-Right Front: B+ OV-Right Front: B+ - Right Front Wheel Free	
00683		IV-Right Front: B+ OV-Right Front: OV - Right Front Wheel Free	
00684		Oxygen Sensor Heating Circuit. Behind Catalytic Convertor	
00685		IV-Left Rear: OV OV-Left Rear: OV - Left Rear Wheel Locked	
00686		IV-Left Rear: B+ OV-Left Rear: OV - Left Rear Wheel Locked	
00687		IV-Left Rear: B+ OV-Left Rear: B+ - Left Rear Wheel Free	
00688		IV-Left Rear: B+ OV-Left Rear: OV - Left Rear Wheel Free	
00689		Outside Air in Intake Air System	
00690		IV-Right Rear: OV OV-Right Rear: OV - Right Rear Wheel Locked	
00691		IV-Right Rear: B+ OV-Right Rear: OV - Right Rear Wheel Locked	
00692		IV-Right Rear: B+ OV-Right Rear: B+ - Right Rear Wheel Free	
00693		IV-Right Rear: B+ OV-Right Rear: OV - Right Rear Wheel Free	
00694		Switch and Instrument Lighting	
00695		Hydraulic Pump (B+) - Left Front/right Front Wheel Looked	
00696		ABS Pressure Reducing Valve. -N170	
00697		ABS Pressure Reducing Valve. -N171	
00698		Control Module Increased Current Consumption	
00699		Oxygen Sensor I - Behind Catalytic Convertor -G130	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00700		Oxygen Sensor 2 - Behind Catalytic Converter -G131	
00701		ECT Overheat Test	
00702		Flexible Fuel Sensor -G133	
00703		CTP Recognition TPS/CTP Switch	
00705		Coolant Fan Switched on	
00709		Sunlight Photo Sensor 2-g134	
00710		Defroster Flap Motor -V107	
00711		Left Foot Well Flap Motor -V108	
00712		Right Foot Well Flap Motor -V109	
00713		Left Center Vent Motor -110	
00714		Right Center Vent Motor -V111	
00715		Rear Foot Well Vent Motor -V112	
00716		Recirculation Flap Motor -V113	
00717		EVAP Flap Motor -V114	
00718		Upper Left Vent Switch -F179	
00719		Upper Right Vent Switch -F180	
00720		Lower Left Vent Switch -F181	
00721		Left Right Vent Switch -F182	
00722		Left Center Vent Switch -F183	
00723		Right Center Vent Switch -F184	
00724		Left Center Foot Well Vent Switch -F185	
00725		Right Rear Foot Well Vent Switch -F186	
00726		Center Rear Foot Well Vent Switch -F187	
00727		Defroster Flap Motor - Position Sensor -G135	
00728		Left Center Vent Motor - Position Sensor -G136	
00729		Right Center Vent Motor - Position Sensor -G137	
00730		Center Vent Motor - Position Sensor -G138	
00731		Left Foot Well Flap Motor - Position Sensor -G139	
00732		Right Foot Well Flap Motor - Position Sensor -G140	
00733		Rear Foot Well Left Vent Motor - Position Sensor -G141	
00734		Center Vent Position Sensor -G142	
00735		Recirculation Flap Position Sensor -G143. * If this code is found on late model VR6 (AAA) refer to code #01247.	
00736		EVAP Flap Motor. Position Sensor -G144	
00737		Left Heat Regulating Valve -N175	
00738		Rear Heat Regulating Valve -N176	
00739		Coolant Pump -V50	
00740		Cylinder 1 CKP Sensor -G145	
00741		Brake Pedal Position Status Monitoring	
00742		Battery Ventilation System	
00743		Battery Ventilation Sensor -G146	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00744		Battery Temperature Regulation	
00745		Insulation Status Monitoring	
00746		Battery Cell Failure	
00747		Front Battery Temperature Sensor -G52	
00748		Rear Battery Temperature Sensor -G53	
00749		Ventilation Flap	
00750		Fault Lamp Circuit	
00751		Battery Capacity Indicator	
00752		Fan and Battery Heating	
00753		Electrical Connector - Wheel Speed Sensor	
00754		ECT Warning Light	
00755		Engine Oil Pressure Warning Light -K3	
00756		Left Vent Temperature Sensor -G150	
00757		Left Vent Temperature Censor -G151	
00758		Secondary Air Injection System (Air)	
00759		Left Vent Temperature Regulator -G155	
00760		Right Vent Temperature Regulator (Actuator) -G156	
00761		Diagnostic Trouble Code Stored in Control Unit	
00762		Fuel Injector(s) -N181	
00763		Driver Side Gas Pressure Sensor -G147	
00764		Passenger Side Gas Pressure Sensor -G148	
00765		Slide Control Travel (Piston Displacement) Sensor -G149	
00766		Front Vent Temperature Sensor -G12	
00767		Rear Evaporator Temperature Sensor R-g153	
00768		Rear Heater Core Temperature Sensor -G154	
00769		Engine Coolant Temperature Sensor -G82	
00770		Engine Coolant Temperature Sensor -G83	
00771		Fuel Level Sensor -G	
00772		Oil Pressure Switch -F22	
00773		Oil Pressure Sensor -G10	
00774		Level Control System Sensor - Left Rear - G76	
00775		Level Control System Sensor - Right Rear - G77	
00776		Level Control System Sensor - Left Front - G78	
00777		Throttle Position Sensor -G79	
00778		Steering Angle Sensor -G85	
00779		Outside Air Temperature Sensor -G17	
00780		Vertical Motion Sensor -G90	
00781		Positioning Motor - Left Front -V76	
00782		Positioning Motor - Right Front - V77	
00783		Positioning Motor - Left Front - V78	
00784		Positioning Motor - Right Rear - V79	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
00785		Temperature Sensor - Instrument Panel -G56	
00786		Temperature Sensor - in Headliner -G86	
00787		Fresh Air Intake Duct Temperature Sensor -G89	
00788		Foot Well/defrost Flap Two-wag Valve -N118	
00789		Backup Switch -F41	
00790		Recirculating/fresh Air Flap	
00791		Air Conditioner Evaporator Temperature Switch -G33	
00792		Air Conditioner Pressure Switch -F129	
00793		Brake Pedal Position Sensor -G100	
00794		Hydraulic Pump Sensor -G101	
00795		Rear Axle Vertical Acceleration Sensor -G102	
00796		Fan for Integer Temperature Sensor -V42	
00797		Sunlight Photo Sensor -G107	
00798		Segment Test	
00799		Engine Coolant Temperature Sensor -G110	
00800		Ambient Temperature Sensor Fresh Air Blower -G109	
00801		A/C Refrigerant High Pressure Switch -F11b	
00802		A/C Refrigerant Low Pressure Switch -F73	
00803		Coil Spring Travel Sensor - Right Front - G118	
00804		Coil Spring Trawl Sensor - Left Front -G115	
00805		Suspension Strut Valve - Left Front - N148	
00806		Suspension Strut Valve - Right Front - N149	
00807		Suspension Strut Valve - Left Front - N150	
00808		Suspension Shut Valve - Right Rear - N151	
00811		System Not Ready for Activation	
00824		Traction Control Indicator Light -K86	
01016		Gas-filled Suspension Bleeder Valve -N106	
01017		Gas-filled Suspension System Compressor -V65	
01018		Coolant Fan -V7	
01019		Relay	
01020		Water Pump -V36	
01021		Differential Lock Indicator Light -K81	
01022		Interior Light - Combination Figure Activated	
01023		Warning Buzzer -H3	
01025		Malfunction Indicator Lamp Faulty	
01027		Rear Warm Air Fan -V47	
01028		Rear Evaporator Fan -V20	
01028		Fan Relay -J323	
01029		A/C Relay -J32	
01039		ECT Sensor -G2	
01040		ABS/Transmission Electrical Connection 2	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
01041		Traction Control System - Function Unreadable	
01044	P1749	Transmission Control Module - Incorrectly Coded	
01045		Tiptronic Switch -F189	
01046		Broke Pod Wear Indicator Light -L32	
01047		Brake and Parking Brake Warning Light -Kt	
01048		Diesel Electronic Warning Light -K104	
01049		Supply Voltage (Terminal 50)	
01050		Glow Plug Status Monitoring	
01051		Fuel MC Positioning Motor -V117	
01052		Throttle Position Sensor -G157	
01053		Injection Start-valve -N182	
01054		Power Supply Relay (Terminal 30) -J317	
01055		Injection Start-sensor -G158	
01057		Function - Constant Charge - Voltage	
01058		Function - Constant Charge - Current	
01059		Rotor Position Sensor -G159	
01060		Ignition Coil Lower Temperature Sensor -G160	
01061		Ignition Coil Upper Temperature Sensor -G161	
01070		Starter Relay -J53	
01071		Clutch Pedal Position Sensor -G162	
01072		Clutch Position - Vacuum Valve -N183	
01073		Clutch Pressure System	
01074		Clutch Position - Vent Valve	
01075		Vacuum Pump Relay -J320	
01076		Hydraulic Pump Clutch Relay -J319	
01077		Brake Booster Vacuum Switch -F190	
01078		TR Gear Selector Switch -F191	
01079		Power Steering Relay -J320	
01080		Power Steering Pressure Switch -F192	
01081		Priority Switch Valve -N185	
01082		Low Fuel Level Warning Light -K105	
01083		Low Windshield Fluid - Windshield Fluid Indicator Light or Sensor -K106	
01084		32oF (0o) Freeze Temperature Warning Light -K107	
01085		39oF (4o) Temperature Warning Light -K108	
01086		Speedometer - Vehicle Speed Sensor -G22	
01087		Basic Setting Not Performed	
01088		Mixture Control Adjustment 2	
01089		Tensioning Bow Raised Position Switch -F204	
01090		Tensioning Bow Stowed Position Switch -F203	
01091		Convertible Top Closed Position Switch -F202	
01092		Convertible Top Open Position Switch -F171	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
01093		Compartment Cover Open Position Switch -F201	
01094		Compartment Cover Left Switch 3-F195	
01095		Compartment Cover Unlocked Left Switch 2-F197	
01096		Compartment Cover Locked Left Switch 1-F199	
01097		Convertible Top Front Lock Switch -F172	
01098		Trunk Lid Closed Position Switch -F206	
01099		Luggage Compartment Switch (Locked)	
01100		Luggage Compartment Switch (Unlocked)	
01101		Convertible Top Latch Open Position Switch -F205	
01102		Compartment Cover Right Switch 3-F196	
01103		Compartment Cover Unlocked Right Switch 2-F198	
01104		Compartment Cover Locked Right Switch 1-F200	
01105		Solenoid Valve 8-N186	
01106		Power Window Opening Relay -J291	
01107		Convertible Top Locked Indicator Light -K98	
01108		Power Window Closing Relay -J292	
01109		Convertible Top Hydraulic Pump Relay -J321	
01110		Convertible Top Unlocking Solenoid -N187	
01111		Luggage Compartment Lock Actuator Motor 1	
01112		Actuator Motor 1 and 2 Power Supply	
01113		Luggage Compartment Lock Actuator Motor 2	
01114		Parking Brake Warning Light Switch -F9	
01115		Just 3 Byte Space	
01116		Convertible Top Unlocking Actuator Motor	
01117		Generator Terminal DF Load Signal	
01118		Engine Pre-heating Circuit	
01119		Transmission Shift-Range Gear Position Signal	
01120		Camshaft Adjustment 1	
01121		Camshaft Adjustment 2	
01122		Camshaft Position Sensor 2-G163	
01123		Triggering Faulty	
01124		Charge Time Status Monitoring	
01125		Intake Manifold Change-over	
01126		Engine Speed Signal	
01127		Reserve Fuel Indicating Lamp	
01128		Anti-theft System - Immobilizer Sensor -D2	
01129		S-terminal -H15	
01130		ABS Operation - Signal outside range of tolerance	
01131		Blinking Light Activation	
01132		Front Infrared Sensor -G166	
01133		Rear Infrared Sensor -G167	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
01134		Alarm Horn -12	
01135		Vehicle Interior-motion Sensor	
01136		Engine Start Interrupt	
01137		Central Locking Contact Switch	
01138		Central Locking - Drivers Door Unlock	
01139		Central Locking - Passenger Door Unlock	
01140		Central Locking - Trunk Lid Unlock	
01141		Trunk Lid Release Switch Motor	
01142		Central Locking - Unlocking Motor	
01143		Central Locking - Opening Motor	
01144		Central Locking - Opening Motor	
01145		Central Locking - Opening Motor	
01146		Central Locking - Closing Motor	
01147		Central Locking - Trunk Lid Release Motor -V120	
01148		Save Fuse Door - Activation	
01149		Save Fuse Door - Deactivating	
01150		Analog Indicator	
01151		Diesel Engine Safety Switch -F207	
01152		TR Gear Monitoring Switch -F209	
01153		E- (Economic) Switch - E163	
01154		Clutch System Pressure Switch -F210	
01155		Clutch, Mechanics	
01156		TR Gear Recognition Switch -F208	
01157		Alarm Horn Voltage Supply	
01158		Turn Signal Voltage Supply	
01159		Save Fuse Wiring	
01160		Coolant Glow Plug Relay -J325	
01165		Throttle Body Control Module -J338	
01166		Engine Torque Signal	
01167		Wide Open Throttle Stop - Throttle Stop Valve -N194	
01168		Idle Rpm Increase Valve -N177	
01169		Door Contact Switch - Driver Side -F2	
01170		Fuel Injection Duration Sensor -G175	
01172		Seat Heating Temperature Sensor - Driver Side -G59	
01173		Longitudinal Adjustment Motor - Driver Side -V28	
01174		Height Seat Adjustment - Driver Side -V38	
01175		Heated Seat Adjustment - Driver Side - E94	
01176		Key Faulty	
01177		Engine Control Unit	
01179		Incorrect Key Entry	
01180		Engine / A/C - Electrical Connection	

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
01181		Initializing - Only 2 Keys Pressed	
01182		Height Adaptation	
01183		Catalytic Convertor Warning Lamp -K72	
01184		Outlet Temperature Sensor -G174	
01185		Fresh Air Blower - Rear -V80	
01186		Rear Air Distribution Servo Motor -V136	
01187		Rear Temperature Flap Servo Motor -V137	
01188		Control Module Solenoid - Electrical Connector	
01190		Control Module Actuator Motor - Electrical Connector	
01192		Torque Converter Clutch	
01193		Low Heat Output -J359	
01194		High Heat Output -J360	
01196		Engine/Transmission Can Bus	
01197		Engine/Transmission Can Bus - Wire-A	
01198		Engine/Transmission Can Bus - Wire-B	
01199		Engine/ABS Electrical Connection	
01200		ABS Valves Voltage Supply - Fuse S54	
01201		ABS Pump Voltage Supply - Fuse S53	
01202		Diagnostic Wire	
01208		Data Record Changes - VIN	
01235		Secondary Air Injection - Solenoid Valve -N112	
01236		Shift-Lock Solenoid -N110	
01237		Fuel Cut-off Valve -N109	
01238		Ignition Timing (Spark Angle) Control	
01239		Throttle Position Actuator Vent Valve -N97	
01240		Throttle Position Actuator Breather Valve -N117	
01241		EVAP Canister Purge Solenoid Valve -N115	
01242		Final Stage in Control Unit	
01243		Intake Manifold Change-over Valve -Nix	
01244		Heating Oxygen Sensor Control Module -J208	
01245		Differential Pressure Regulator -N73	
01246		Early Fuel Evaporation Relay -J81	
01247		EVAP Canister Purge Regulator Valve -N80	
01248		Wide Open Throttle Enrichment Two-way Valve -N54	
01249	P0201	Cylinder 1 - Injector Fault -N30	D
01250	P0202	Cylinder 2 - Injector Fault -N31	D
01251	P0203	Cylinder 3 - Injector Fault -N32	D
01252	P0204	Cylinder 4 - Injector Fault -N33	D
01253	P0205	Cylinder 5 - Injector Fault -N83	D
01254	P0206	Cylinder 6 - Injector Fault -N84	D
01255	P0207	Cylinder 7 - Injector Fault -N85	D

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
01256	P0208	Cylinder 8 - Injector Fault -N86	D
01257		Idle Air Control Valve -N71	
01258		Air Flap Positioner -V63	
01259		Fuel Pump Relay Circuit -J17	
01260		Deceleration Fuel Cut-off Valve -N55	
01261		Oxygen Sensor Frequency Valve -N7	
01262		Wastage Bypass Regulator Valve -N75	
01263		Cold Start Injector -N17	
01264		Secondary Air Injection Pump Relay -J299	
01265		EGR Vacuum Regulator Solenoid Valve -N18	
01266		Glow Plug Relay -J52	
01267		Automatic Glow Time Control Unit -J179	
01268		Quantity Adjuster -N146	
01269		Injection Start Valve -N108	
01270		A/C Compressor Clutch -N25	
01271		Temperature Regulator Flap Motor -V68	
01272		Central Air Flap Motor -V70	
01273		Fresh Air Blower - V2	
01274		Air Flow Flap Motor - V71	
01275		Solenoid Relay	
01276		ABS Hydraulic Pump - V64	
01277		ABS Hydraulic Pump Relay -J185	
01278		Electronic Differential Lock Cut-off Relay -J263	
16486	P0102	Mass or Volume Air Flow Circuit - Low input	A
16487	P0103	Mass or Volume Air Flow Circuit - High Input	A
16496	P0112	IAT Sensor - Temp High - Circuit Low - G42	A
16497	P0113	IAT Sensor - Temp Low - Circuit High - G42	A
16500	P0116	Engine Coolant Temperature Circuit - Range/Performance Problem	A
16501	P0117	Engine Coolant Temperature Circuit - Low Input (High Temp)	A
16502	P0118	Engine Coolant Temperature Circuit - High Input (Low Temp)	A
16504	P0120	Throttle Position Sensor A - Circuit Malfunction	A
16505	P0121	Throttle Position Sensor A - Circuit - Performance Problem - Out of Range	A
16506	P0122	Throttle Position Sensor A Circuit - Low Voltage Input	A
16507	P0123	Throttle Position Sensor A Circuit - High Voltage Input	A
16509	P0125	Cooling System - Temp Too Low to Enter Closed Loop - G62	B
16514	P0130	O2 Sensor Circuit - Malfunction (Bank 1 Sensor 1)	A
16515	P0131	O2 Sensor Circuit - Voltage Low (Bank 1 Sensor 1)	B
16516	P0132	O2 Sensor Circuit - High Voltage (Bank 1 Sensor 1)	A
16517	P0133	O2 Sensor Circuit - Slow Response (Bank 1 Sensor 1)	B
16518	P0134	O2 Sensor Circuit - No Activity Detected (Bank 1 Sensor 1)	A

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
16519	P0135	O2 Sensor Heater Circuit - Malfunction (Bank 1 Sensor 1)	A
16520	P0136	O2 Sensor Circuit - Malfunction (Bank 1 Sensor 2)	A
16521	P0137	O2 Sensor Circuit - Low Voltage (Bank 1 Sensor 2)	B
16522	P0138	O2 Sensor Circuit - High Voltage (Bank 1 Sensor 2)	A
16524	P0140	O2 Sensor Circuit - Slow Response (Bank 1 Sensor 2)	B
16525	P0141	O2 Sensor Heater Circuit - Malfunction (Bank 1 Sensor 2)	A
16534	P0150	O2 Sensor Circuit - Malfunction (Bank 2 Sensor 1)	A
16536	P0152	O2 Sensor Circuit - High Voltage (Bank 2 Sensor 1)	A
16537	P0153	O2 Sensor Circuit - Slow Response (Bank 2 Sensor 1)	
16538	P0154	O2 Sensor Circuit - No Activity Detected (Bank 2 Sensor 1)	A
16539	P0155	O2 Sensor Heater Circuit - Malfunction (Bank 2 Sensor 1)	A
16540	P0156	O2 Sensor Circuit - Malfunction (Bank 2 Sensor 2)	A
16542	P0158	O2 Sensor Circuit - High Voltage (Bank 2 Sensor 2)	A
16543	P0159	O2 Sensor Circuit - Slow Response (Bank 2 Sensor 2)	
16544	P0160	O2 Sensor Circuit - No Activity Detected (Bank 2 Sensor 2)	A
16545	P0161	O2 Sensor Heater Circuit - Malfunction (Bank 2 Sensor 2)	A
16554	P0170	Fuel Trim - Malfunction (Bank 1)	A
16555	P0171	Fuel Trim - System Lean (Bank 1)	B
16556	P0172	Fuel Trim - System Rich (Bank 1)	B
16557	P0173	Fuel Trim - Malfunction (Bank 2)	B
16558	P0174	Fuel Trim - System Lean (Bank 2)	B
16559	P0175	Fuel Trim - System Rich (Bank 2)	B
16684	P0300	Random Misfire Detected - Any Cylinder	B
16685	P0301	Cylinder #1 - Misfire Detected	A or B / Blink
16686	P0302	Cylinder #2 - Misfire Detected	A or B / Blink
16687	P0303	Cylinder #3 - Misfire Detected	A or B / Blink
16688	P0304	Cylinder #4 - Misfire Detected	A or B / Blink
16689	P0305	Cylinder #5 - Misfire Detected	A or B / Blink
16690	P0306	Cylinder #6 - Misfire Detected	A or B / Blink
16691	P0307	Cylinder #7 - Misfire Detected	A or B / Blink
16692	P0308	Cylinder #8 - Misfire Detected	A or B / Blink
16706	P0322	Ignition/Distributor Engine Speed Input Circuit - No Signal	A or B / Blink
16711	P0327	Knock Sensor #1 Circuit - Low Input (Bank 1 or Single Sensor)	A
16716	P0332	Knock Sensor #2 Circuit - Low Input (Bank 2)	A
16721	P0337	Crankshaft Position Sensor Circuit - Low Input	A
16725	P0341	Camshaft Position Sensor Circuit - Out of Range/Performance	A
16784	P0400	Exhaust Gas Recirculation (EGR) - Flow Malfunction	B
16785	P0401	Exhaust Gas Recirculation (EGR) - Flow Insufficient	B
16786	P0402	Exhaust Gas Recirculation (EGR) - Flow Excessive	B
16795	P0411	Secondary Air Injection System (B2) - Incorrect Flow	B
16806	P0422	Main Catalyst Efficiency - Below Threshold (Bank 1)	B

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
16816	P0432	Main Catalyst Efficiency - Below Threshold (Bank 2)	B
16824	P0440	Evaporative Emission Control System (EVAP) - Purge Malfunction	B
16825	P0441	Evaporative Emission Control System - Incorrect Purge Flow	A
16826	P0442	Evaporative Emission Control System - Leak Detected (small leak)	B
16836	P0452	Evaporative Emission Control System - Pressure Sensor - Low Input	B
16837	P0453	Evaporative Emission Control System - Pressure Sensor - High Input	
16839	P0455	Evaporative Emission Control System - Leak Detected (gross leak)	
16845	P0461	Fuel Level Sensor Circuit - Range/Performance	B
16885	P0501	Vehicle Speed Sensor - Range/Performance	A
16890	P0506	Idle Control Module - RPM Lower Than Expected	A
16891	P0507	Idle Control Module - RPM Higher Than Expected	A
16894	P0510	Throttle Position Sensor - Closed Switch	B
16989	P0605	Internal Control Module Read Only Memory (EPROM) Error	B
17090	P0706	Transmission Range Sensor Circuit - Range/Performance	A
17091	P0707	Transmission Range Sensor Circuit - Low Input	D
17509	P1101	O2 Sensor Circuit (B1-S1) Voltage Too Low/Air Leak	D
17510	P1102	O2 Sensor Circuit Heating Circuit (B1-S1) - Short to B+	A
17511	P1103	O2 Sensor Circuit Heating Circuit (B1-S1) - Output Too Low	A
17512	P1104	O2 Sensor Circuit (B1-S2) Voltage Too Low - Air Leak	A
17513	P1105	O2 Sensor Circuit Heating Circuit (B1-S2) -Short to B+	A
17514	P1106	O2 Sensor Circuit (B2-S1) Voltage Too Low - Air Leak	A
17515	P1107	O2 Sensor Circuit Heating Circuit (B2-S1) - Short to B+	A
17516	P1108	O2 Sensor Circuit Heating Circuit (B2-S1) - Output too Low	A
17517	P1109	O2 Sensor Circuit (B2-S2) Voltage Too Low - Air Leak	A
17518	P1110	O2 Sensor Circuit Heating Circuit (B2-S2) - Short to B+	A
17535	P1127	Long Term Fuel Trim - System too Rich (Bank 1)	A
17536	P1128	Long Term Fuel Trim - System too Lean (Bank 1)	B
17609	P1201	Cylinder #1 Fuel Injector Circuit - Electrical Malfunction	B
17610	P1202	Cylinder #2 Fuel Injector Circuit - Electrical Malfunction	A
17611	P1203	Cylinder #3 Fuel Injector Circuit - Electrical Malfunction	A
17612	P1204	Cylinder #4 Fuel Injector Circuit - Electrical Malfunction	A
17613	P1205	Cylinder #5 Fuel Injector Circuit - Electrical Malfunction	A
17614	P1206	Cylinder #6 Fuel Injector Circuit - Electrical Malfunction	A
17615	P1207	Cylinder #7 Fuel Injector Circuit - Electrical Malfunction	A
17616	P1208	Cylinder #8 Fuel Injector Circuit - Electrical Malfunction	A
17621	P1213	Cylinder #1 Fuel Injector Circuit - Short to B+	A
17622	P1214	Cylinder #2 Fuel Injector Circuit - Short to B+	A
17623	P1215	Cylinder #3 Fuel Injector Circuit - Short to B+	A
17624	P1216	Cylinder #4 Fuel Injector Circuit - Short to B+	A
17625	P1217	Cylinder #5 Fuel Injector Circuit - Short to B+	A
17626	P1218	Cylinder #6 Fuel Injector Circuit - Shod to B+	A

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
17627	P1219	Cylinder #7 Fuel Injector Circuit - Shod to B+	A
17628	P1220	Cylinder #8 Fuel Injector Circuit - Shod to B+	A
17633	P1225	Cylinder #1 Fuel Injector Circuit - Short to Ground	A
17634	P1226	Cylinder #2 Fuel Injector Circuit - Short to Ground	A
17635	P1227	Cylinder #3 Fuel Injector Circuit - Short to Ground	A
17636	P1228	Cylinder #4 Fuel Injector Circuit - Short to Ground	A
17637	P1229	Cylinder #5 Fuel Injector Circuit - Short to Ground	A
17638	P1230	Cylinder #6 Fuel Injector Circuit - Short to Ground	A
17639	P1231	Cylinder #7 Fuel Injector Circuit - Short to Ground	A
17640	P1232	Cylinder #8 Fuel Injector Circuit - Short to Ground	A
17645	P1237	Cylinder #1 Fuel Injector Circuit - Open Circuit	A
17646	P1238	Cylinder #2 Fuel Injector Circuit - Open Circuit	A
17647	P1239	Cylinder #3 Fuel Injector Circuit - Open Circuit	A
17648	P1240	Cylinder #4 Fuel Injector Circuit - Open Circuit	A
17649	P1241	Cylinder #5 Fuel Injector Circuit - Open Circuit	A
17650	P1242	Cylinder #6 Fuel Injector Circuit - Open Circuit	A
17651	P1243	Cylinder #7 Fuel Injector Circuit - Open Circuit	A
17652	P1244	Cylinder #8 Fuel Injector Circuit - Open Circuit	A
17656	P1250	Fuel Level Too Low	A
17733	P1325	Cylinder #1 Knock Control Limit Attained	D
17734	P1326	Cylinder #2 Knock Control Limit Attained	D
17735	P1327	Cylinder #3 Knock Control Limit Attained	D
17736	P1328	Cylinder #4 Knock Control Limit Attained	D
17737	P1329	Cylinder #5 Knock Control Limit Attained	D
17738	P1330	Cylinder #6 Knock Control Limit Attained	D
17739	P1331	Cylinder #7 Knock Control Limit Attained	D
17740	P1332	Cylinder #8 Knock Control Limit Attained	D
17747	P1339	Crankshaft Position/Engine Speed Sensors Cross connected	D
17748	P1340	Camshaft/Crankshaft Position Sensors (B2) - Out of Sequence	A
17749	P1341	Ignition Coil Power Output Stage #1 - Short to Ground	A
17751	P1343	Ignition Coil Power Output Stage #2 - Short to Ground	A
17753	P1345	Ignition Coil Power Output Stage #3 - Short to Ground	A
17799	P1391	Camshaft Position Sensor (B2) - Short to Ground	A
17800	P1392	Camshaft Position Sensor Open (B2) - Short to B+	A
17801	P1393	Ignition Coil Power Output Stage #1 - Electrical Malfunction	A
17802	P1394	Ignition Coil Power Output Stage #2 - Electrical Malfunction	A
17803	P1395	Ignition Coil Power Output Stage #3 - Electrical Malfunction	A
17804	P1396	Engine Speed Sensor - Missing Tooth	A
17808	P1400	EGR Valve Circuit - Electrical Malfunction	A
17809	P1401	EGR Valve Circuit - Power Stage Short to Ground	A
17810	P1402	EGR Valve Circuit - Short to B+	A

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
17815	P1407	EGR Temperature Sensor - Signal too Low	A
17816	P1408	EGR Temperature Sensor - Signal too High	B
17817	P1409	Tank Ventilation Valve - Electrical Malfunction	B
17818	P1410	Tank Ventilation Valve - Short to B+	A
17819	P1411	Secondary Air Injection System (B2) - Restricted Flow	A
17822	P1414	Secondary Air Injection System (B2) - Leak Detected	B
17826	P1418	Fuel Level Sensor - Signal too High	B
17828	P1420	Secondary Air Injection System Control Module - Electrical Malfunction	
17829	P1421	Secondary Air Injection System Control Valve Circuit - Short to Ground	A
17830	P1422	Secondary Air Injection System Control Valve Circuit - Short to B+	A
17831	P1423	Secondary Air Injection System (B1) - Flow too Low	A
17832	P1424	Secondary Air Injection System (B1) - Leak Detected	B
17833	P1425	Tank Ventilation Valve - Short to Ground	A
17834	P1426	Tank Ventilation Valve - Open Circuit	A
17842	P1434	Secondary Air Injection System Pump Relay Circuit - Short to B+	A
17844	P1436	Secondary Air Injection System Pump Relay Circuit - Electrical Malfunction	A
17848	P1440	EGR Valve Circuit - Power Stage Open	A
17858	P1450	Secondary Air Injection System Pump Relay Circuit - Short to B+	A
17859	P1451	Secondary Air Injection System Pump Relay Circuit - Short to Ground	A
17860	P1452	Secondary Air Injection System Pump Relay Circuit - Open Circuit	A
17878	P1470	EVAP Emission Control System L.D.P Circuit - Malfunction	A
17879	P1471	EVAP Emission Control System L.D.P. Circuit - Short to B+	A
17883	P1475	EVAP Emission Control System L.D.P. - Malfunction Signal Circuit open	A
17884	P1476	EVAP Emission Control System L.D.P. - Malfunction/Insufficient Vacuum	A
17908	P1500	Fuel Pump Relay Circuit - Electrical Malfunction	A
17910	P1502	Fuel Pump Relay Circuit - Short to B+	A
17912	P1504	Intake Air System Bypass Air Determined	A
17913	P1505	CTP Switch not Closing - Open Circuit	A
17914	P1506	CTP Switch not Opening - Short to Ground	A
17917	P1509	IAC Circuit - Electrical Malfunction	A
17918	P1510	IAC Circuit - Short to B+	A
17919	P1511	Intake Manifold Changeover Valve Circuit - Electrical Malfunction	A
17920	P1512	Intake Manifold Changeover Valve Circuit - Short to B+	D
17951	P1543	Throttle Actuation Potentiometer - Signal too Low	D
17952	P1544	Throttle Actuation Potentiometer - Signal too High	A
17988	P1580	Throttle Actuator (B1) Fault	A
17990	P1582	Idle Adaption at Limit	B
18008	P1600	Power Supply (B+) Terminal 15 - Low Voltage	B
18010	P1602	Power Supply (B+) Terminal 30 - Low Voltage	D
18014	P1606	Rough Road Spec. Engine Torque ABS-SG - Electrical Malfunction	A

DTC (VAG)	DTC (SAE)	MALFUNCTION TEXT	MIL CONDITION
18019	P1611	MIL Call-up Circuit/Transmission Control Module - Short to Ground	D
18020	P1612	ECM - Incorrectly Coded	A
18021	P1613	MIL Call-up - Circuit Open or Short to B+	A
65535	P0603	Control Unit Failure or Internal Control Module Keep Alive Memory (KAM) Error or Power Failure to Control Unit or Bad Ground Contacts or No Faults Recorded (If MIL Not Illuminated)	A
65535		No Faults Recorded (If MIL Not Illuminated)	
65535		Control Unit Faulty (In Some Systems)	A

BLINK CODE REFERENCE

Volkswagen and Audi models beginning with production year 1988 utilize a system of injection, ignition and emissions fault diagnosis. These faults can be easily read with a simple set of tools and this document.

The tools needed consist of a simple test light (this is not needed if the vehicle is equipped with a CHECK ENGINE light) and a small jumper wire. (Jumper wires are normally sold in pairs. One can be used to construct the test light below.)

The test light (if needed) can be constructed with an LED, a 330 ohm 1/4 watt resistor and a jumper wire with alligator clips at each end.

- 1) Solder the resistor to the ground (-) side of the LED.
- 2) Cut the jumper wire into 2 pieces (make one slightly longer than the other).
- 3) Solder the shorter of the 2 wires to the resistor and the other to the Positive side of the LED.
- 4) Insulate between the LED leads and at the solder joints with some electrical tape or shrink wrap tubing.

****CAUTION**** If the car is equipped with an Anti-Theft radio do not do any tests on the electrical system without knowing the radio codes.

TESTING PROCEDURE

1988-90 / 4 cylinder / 50 state models - These models have a test connection near the fire wall or directly behind the air sensor plate.

1988 / 5 cylinder / California models - Records permanent faults.

1988 / 5 cylinder / 49 state models - Does not record permanent faults.

The test light should be connected to the POSITIVE (+) side of the battery and this test plug. The light should now be on, if not reverse the wires. California models will flash the CHECK ENGINE LIGHT for this test.

Turn the ignition to ON but do not start the engine.

Insert a spare fuse or insert the jumper wire into the fuel pump relay for at least 4 seconds, then remove.

The beginning of the fault code sequence is a single flash followed by a 2.5 second pause. The next flash series is the first fault code.

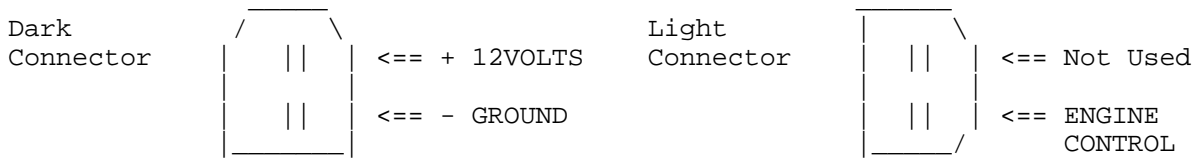
Fault codes consist of 4 digits

- 1st digit evenly spaced flashes, 2.5sec OFF
- 2nd digit evenly spaced flashes, 2.5sec OFF
- 3rd digit evenly spaced flashes, 2.5sec OFF
- 4th digit evenly spaced flashes, 2.5sec OFF

Each 4 digit code will keep repeating until the fuse is inserted in the fuel pump relay again. When you remove the fuse the second time the next fault code will flash, this will continue until you insert the fuse again.

The end-of-fault display is signaled by a 2.5 second ON light then 2.5 seconds OFF. This is known as code 0000 and will continue until the ignition is turned off.

1989-March 1990 / 5 cylinder / 49 state and California models - These models have the two (2) test connectors in the drivers side footwell. One connector is dark colored and one is light.



Connect the test light (if no CHECK ENGINE LIGHT is present) between the +12VOLTS and the ENGINE CONTROL.

Using the jumper wire connect the - ground to the ENGINE CONTROL for at least 4 seconds then disconnect.

The beginning of the fault code sequence is a single flash of the CHECK ENGINE LIGHT or test light followed by a 2.5 second pause. The next flash series is the first fault code.

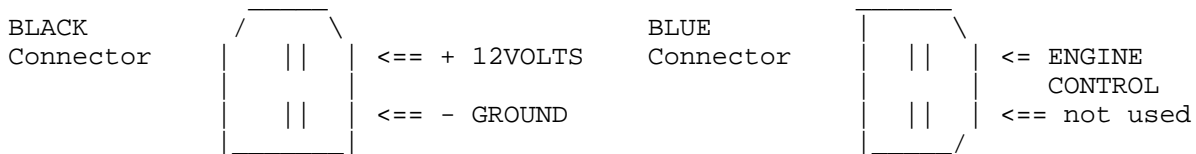
Fault codes consist of 4 digits

- 1st digit evenly spaced flashes, 2.5sec OFF
- 2nd digit evenly spaced flashes, 2.5sec OFF
- 3rd digit evenly spaced flashes, 2.5sec OFF
- 4th digit evenly spaced flashes, 2.5sec OFF

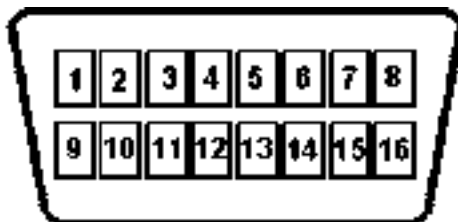
Each 4 digit code will keep repeating until the jumper is inserted again. When you remove the jumper the second time the next fault code will flash, this will continue until you insert the jumper again.

The end-of-fault display is signaled by a 2.5 second ON light then 2.5 seconds OFF. This is known as code 0000 and will continue until the ignition is turned off.

March 1990 to 1993 / 4,5,6 and 8 cylinder - These models have the three (3) test connectors under the shift column boot or above the pedals on the drivers side footwell. One connector is black, one is brown and one is blue. The BLACK connector is power, the TAN or WHITE connector is for the factory fault code reader #1551 and the BLUE connector is for blink code output.



1994-1995 / All makes and models - All vehicles are now equipped with the OBD-II connector found in the center console, in the transmission shift housing or near the steering column. It can be recognized by the symbol OBD or the picture of an engine with a lightning bolt through it. Blink codes are no longer used after model year 1995. Use the factory diagnostic tool VAG1552, VDS-PRO



OBD-II CONNECTOR (CAR)

Using the jumper wire connect the - ground to the ENGINE CONTROL or jumper the OBD-II connector between pin 4 (ground) and pin 15 (L-line) for at least 4 seconds then disconnect.

Read the code as a series of blinks of the CHECK ENGINE light. The beginning of the fault code sequence is a single flash followed by a 2.5 second pause. The next flash series is the first fault code.

Fault codes consist of 4 digits

- 1st digit evenly spaced flashes, 2.5sec OFF
- 2nd digit evenly spaced flashes, 2.5sec OFF
- 3rd digit evenly spaced flashes, 2.5sec OFF
- 4th digit evenly spaced flashes, 2.5sec OFF

Each 4 digit code will keep repeating until the jumper is inserted again. When you remove the jumper the second time the next fault code will flash, this will continue until you insert the jumper again.

The end-of-fault display is signaled by a 2.5 second ON light then 2.5 seconds OFF. This is known as code 0000 and will continue until the ignition is turned off.

CODE	FAULT
0000	End of fault sequence
1111	Bad ground to Electronic Control Unit (ECU) or ECU failure-check grounds or replace ECU
1119	Transmission Range - Defective wiring. Check for break or short.
1213	Vehicle Speed Sensor (VSS) - Check transmission speed sender wiring and the wiring of the instrument cluster
1231	Vehicle Speed Sensor (VSS) (G54) - Check transmission speed sender wiring and the wiring of the instrument cluster
1232	Throttle Position Actuator - Check defective actuator or wiring for break or short.
2111	Engine speed sender. (RPM)
2112	Ignition reference sender
2113	Hall sender - No speed signal from distributor; check Hall sensor and circuits or the Air-flow sensor plate is not moving freely; adjust potentiometer or lever.
2114	Hall sender not on reference point or distributor out of position.
2121	Idle switch - check switch & circuit.
2122	Hall sender - Check wiring for break or short.
2123	Full throttle switch; check switch & circuit.
2132	Electronic Control Module (ECM) - No ignition to injection signal.
2141	Knock sensor 1 control at maximum retard - test compression, change octane, adjust timing, check knock-sensor wires.
2142	Knock sensor 1 signal - Test sensor, check wiring for break or short.
2143	Knock sensor 2 control at maximum retard - test compression, change octane, adjust timing, check knock-sensor wires.
2144	Knock sensor 2 signal; test sensor.
2212	Throttle Potentiometer - Value out of range.

2214	RPM Signal - Idle speed to high or engine over-revved
2221	Vacuum Control - No vacuum to control unit. Check for leaks.
2222	Manifold Vacuum - Check vacuum line and wastegate for leaks. Pressure sensor - Sensor defective
2223	Altitude Sensor - Check sensor, check wiring for break or short.
2224	Turbo/Manifold pressure - Check turbo control wiring, check for over boost, air leak, defective wastegate valve, vacuum leak or defective pressure sensor.
2231	Idle-speed stabilizer adjustment limits exceeded; too-fast idle. Adjust throttle for full closing, check for vacuum leak, check ignition timing. Or Air Mass Sensor - Check sensor and wiring.
2232	Air mass/flow sensor - No signal. Check wiring for break or short.
2233	Air mass/flow sensor reference voltage open or short circuit
2234	ECM Supply voltage low.
2242	CO-potentiometer voltage low
2312	Coolant temperature sensor - Check wiring, check resistance.
2314	Transmission to Engine control module circuit. - Check wires for breaks or shorts.
2322	Intake Air Temperature Sensor - Check sensor and wiring.
2323	Mass Airflow Sensor - Check sensor and wiring for breaks.
2324	Mass Airflow Sensor - Check sensor and wiring for breaks or shorts to B+ or ground or check for air leak.
2331	Oxygen Sensor Control - Out of range. - Check ignition, air intake for leaks and injectors.
2332	Oxygen Sensor - Bank 2 - Check wiring for breaks or shorts.
2341	Oxygen sensor (O2) at control limit; check CO, lambda-sensor wire, lambda-sensor control, start valve, evaporative system and check for vacuum leaks.
2342	Oxygen Sensor Control - no signal - Check wiring, sensor.
2343	Rich limit; the pressure regulator has exceeded +10 mA for more than 5 minutes, closed-loop; check for vacuum leaks.
2344	Lean limit; the pressure actuator has exceeded -5mA for more than 5 minutes, closed loop; check idle.
2411	EGR System Malfunction
2412	Intake Air Temperature Sensor - Check sensor and wiring for breaks or shorts
2413	Mixture Control - Running rich Fuel pressure too low
3424	Malfunction Indicator Lamp (MIL) failure - Check lamp and wiring.
4311	Secondary Air Injection Pump Relay - Check relay and wiring.
4312	EGR Frequency Valve
4313	Secondary Air Injection Solenoid Valve - Check valve and wiring.
4331	EVAP Carbon Canister Solenoid Purge Valve 2

4332	Ignition Circuit Final Stage - Check for break or short to ground or B+ or bad ECM.
4343	EVAP Carbon Canister Solenoid Purge Valve 1
4411	Fuel Injector Cylinder 1 or 1 & 5
4412	Fuel Injector Cylinder 2 or 2 & 7
4413	Fuel Injector Cylinder 3 or 3 & 6
4414	Fuel Injector Cylinder 4 or 4 & 8
4421	Fuel Injector Cylinder 5
4422	Fuel Injector Cylinder 6
4423	Fuel Injector Cylinder 7
4424	Fuel Injector Cylinder 8
4431	Idle Air Control Valve / Idle Stabilizer - Check valve and wiring.
4433	Fuel Pump Relay
4442	Wastegate - Defective frequency valve or wiring. Boost pressure circuit - Check for short.
4443	EVAP Canister purge valve.
4444	No fault in system.

To erase KE3-Jetronic permanent faults

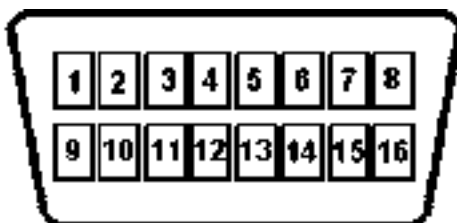
- 1) Turn ignition OFF
- 2) Insert fuse/jumper
- 3) Turn ignition ON
- 4) After 4 seconds remove fuse,
- 5) Insert, remove fuse/jumper 3 times until light flashes 4444
- 6) Insert fuse/jumper
- 7) After 4 seconds, remove fuse/jumper, end-of-fault should display.
- 8) Insert fuse/jumper, after 10 seconds, remove fuse/jumper.

To erase KE-Motronic/Motronic permanent faults

- 1) Turn ignition OFF
- 2) Insert jumper
- 3) Turn ignition ON
- 4) After 4 seconds remove jumper, end-of-fault should display
- 5) Insert jumper, after 10 seconds, remove jumper.

OBD-II PIN ASSIGNMENTS

Pin No.	Description
1	OEM
2	Bus + Line, SAE J1850
3	OEM
4	Ground, Chassis
5	Ground, Signal
6	OEM
7	K Line, ISO 9141
8	OEM
9	OEM
10	Bus - Line, Sae J1850
11	OEM
12	OEM
13	OEM
14	OEM
15	L Line, ISO 9141 (discontinued in later models)
16	Positive, Vehicle Battery



OBD-II CONNECTOR (CAR)

OBD-II TERMINOLOGY

This document covers the new standardized OBD-II terms and acronyms.

	OBD-II	Previous Term(s)
ENGINE CONTROLS	PCM (Powertrain Control Module)	ECA ECM ECU SMEC
	MIL (Malfunction Indicator Lamp)	CHECK ENGINE MAINTANENCE REQUIRED SERVICE ENGINE SOON POWER LOSS
	VCM (Vehicle Control Module)	ECA ECM ECU SMEC PCM
SENSORS	IAT (Inlet Air Temperature)	ACT ATS MAT

	ECT (Engine Coolant Temperature)	ECT CTS THA
	TP (Throttle Position)	TPS
	BARO (Barometric Pressure)	ALTITUDE APS
	MAP (Manifold Absolute Pressure)	MAP
	MDP (Manifold Differential Pressure)	VACUUM SENSOR
	MAF (Manifold Air Flow)	AFC VAF AIRFLOW
	KS (Knock Sensor)	KNOCK SENSOR
	O2S (Oxygen Sensor)	O2 EGO LAMBDA SENSOR
	HO2S (Heated Oxygen Sensor_)	HEATED O2 HEGO
	CKP (Crankshaft Position)	CRANKSHAFT SENSOR
	CMP (Camshaft Position)	CAM CID
ACTUATORS	IAC (Idle Air Control)	AIR BYPASS SOLENOID IAC
	ISC (Idle Speed Control)	IDLE SPEED AIR VALVE IDLE SPEED MOTOR ISC
	ICM (Ignition Control Module)	TFI IV HEI IGNITER
	MC (Mixture Control)	M/C SOLENOID FBC
	TCC (Torque Converter Clutch)	TCC Lock-Up Switch Lock-up Solinoid

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