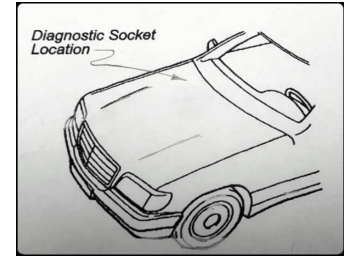




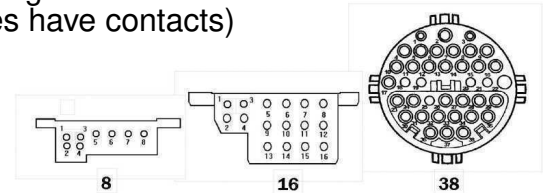
**Rick's
OBD1 Diagnostic Code Reader
Mercedes Benz 1988 - 1995**



Locate your diagnostic socket

On most W124/201 models you will find it near the battery or the firewall, while other models, such as R129 and W140 it may be located on the front fender or even under a circular cap (similar to a radiator cap) on the firewall.

- 8 socket - Black #1 ground, Red + on battery. (8 socket does not supply power)
- 16 socket - Black #1 ground, Red #16 power. (ignition on)
- 38 socket - Black #1 ground, Red #2 ignition on or #3 ignition off.
Yellow wire in the circuit to be tested (not all holes have contacts)



How to read Codes

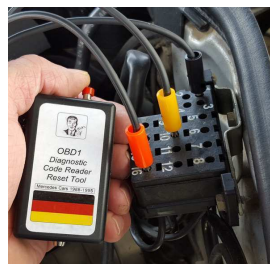
1. Turn on the ignition (engine not started)
2. Press and hold the red button for about 2-3 seconds and release. Count the number of lights and write them down. This is your DTC number. Continue until the light count repeats itself. No light flashes or 1 flash indicate no code is stored.
3. On your computer, open the PDF code file and open the search box using "Ctrl-f". In the search box, enter the "socket ##". Press "Enter" and find the socket ##, car year and model. Look for the light flash number in the DTC Readout column.

Clear Codes

4. To clear a code, read the codes again as you did in step 2, but this time after each code, press and hold the button for about 8 - 10 seconds. Do this after each code. In certain cases if a part is faulty and has not been replaced or repaired, you may not be able to clear the code. Once the new part is installed you can clear the code.



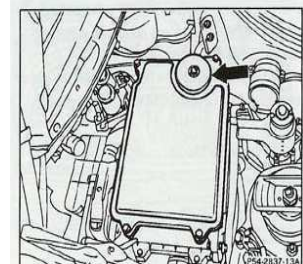
8 Socket



16 Socket



38 Socket



On some models, the diagnostic socket is located under a plastic panel on the passenger side of the vehicle up near the firewall. There is a larger alloy box about 12"x8"x4" with a screw cap on top. Look under that cap.

Mercedes OBD1 diagnostic codes - 1988-1995

Rick's Mercedes Code Reader - ebay rpotter66 or www.mercedescodereader.com

Table of Contents

8 - Socket Diagnostic Connector	3
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38 - Socket Diagnostic Connector	5,6
Obd1 Analog Codes	7
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Mercedes System With Abbreviations	110
Mercedes Acronyms	111
Mercedes USA Model Identifier	115

Connection Table

Test Lead of Cable	Connection source
Red	Power -To power supply socket or vehicle battery
Black	Ground - To socket 1
Yellow	To diagnostic test socket

Power supply (+) socket on the vehicle Diagnostic Connectors

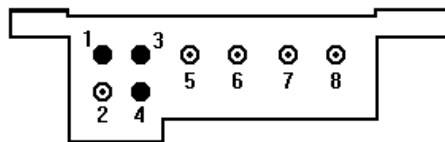
8-pole connector	Use with the battery extension cable to the vehicle battery
16-pole connector	Socket 16 (circuit 15 - ignition ON)* Not present in some models. Use battery +.
38-pole connector	Socket 3 (circuit 30 - Battery+)

*Must be performed with the ignition ON to power up the scanner.

Ground (-) socket on the vehicle Diagnostic Connectors

8-pole connector	socket 1
16-pole connector	socket 1
38-pole connector	socket 1

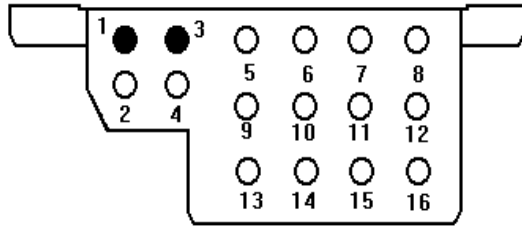
Connector Layout of Vehicle Diagnostic Connector



8-pole Diagnostic Connector

Models 201, 124, 126

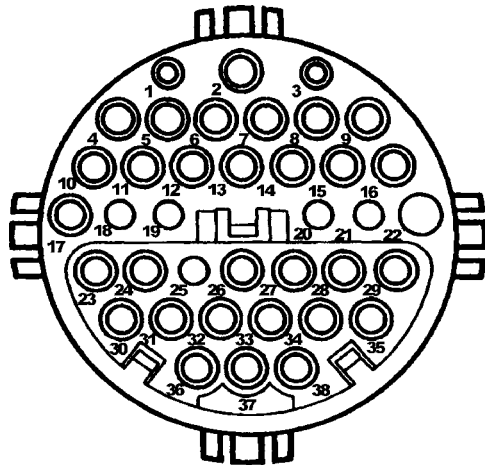
1	Ground
2	Not used
3	CIS-E Continuous fuel injection system (CFI)
4	ELR Diesel injection system - Electronic idle speed control system EDS Electronic diesel system
5	ASD Automatic locking differential 4MATIC Automatic-engaged four wheel drive (124 only)
6	SRS Supplemental Restraint System
7	A/C Air Conditioning
8	Not used



16-pole Diagnostic Connector

Models 124, 129

1	Ground
2	OBD Push-button for On Board Diagnostic (California only)
3	CIS-E Continuous Fuel injection system (CFI) DM Diagnostic Module - LED (California only)
4	EDS Electronic diesel system
5	ASD Automatic locking differential 4MATIC Automatic-engaged four wheel drive
6	SRS / AB Supplemental Restraint System / Air Bag
7	A/C Air Conditioning (Model 124) RB Roll Bar (Model 129)
8	DI Distributor ignition HFM-SFI HFM Sequential multi-port Fuel Injection/Ignition system PEC Pressurized engine control
9	ADS Adaptive Damping System RB Roll Bar (Model 124)
10	RST Roadster Soft Top (Model 129) TN-signal (Gasoline)
11	ATA Anti Theft Alarm system
12	IRCL Infrared Remote Central Locking
13	ETC Electronic automatic Transmission Control
14	EA Electronic Accelerator (Model 124) CC / ISC Cruise Control / Idle Speed Control (Model 124) ESCM Engine System Control Module (MAS), (Model 129)
15	Not used
16	Voltage, Ignition ON (Circuit 15) (Not equipped on all models.)



38-Pin Diagnostic Connector

Models 124.034/036, 129.058/063/067/076, 140, 170, 202, 208, 210

Pin	System	Description
1	Ground (Terminal 31)	W12 (Chassis Ground), W15 (Electronics Ground)
2	Voltage, terminal 87	Ignition Switch 12volts +
3	Voltage, terminal 30	Battery 12volts +
4	EDS	Electronic Diesel System
	IFI	In-line Fuel Injection
	DFI	Electronic Distributor-type Fuel Injection (Diesel)
	HFM-SFI	Hot-Film Engine Management Sequential Multiport Fuel Injection/ignition
	LH-SFI	LH Sequential Multiport Fuel Injection System Engines 104, 119 Engine 120 Right Bank
5	ME-SFI	Motor Electronics with Sequential Multiport Fuel Injection/ignition System Engine 119 Engine 120, Right Bank
	LH-SFI	LH Sequential Multiport Fuel Injection, Engine 120 Left Bank
6	ME-SFI	Motor Electronics with Sequential Multiport Fuel Injection/ignition System Engine 120 Left Bank
	ABS	Anti-lock Brake System
	ETS	Electronic Traction System
	ASR	Acceleration Slip Regulation
7	ESP	Electronic Stability Program
	EA	Electronic Accelerator+
	ISC	Idle Speed Control
8	CC	Cruise Control/idle Speed Control
	BM	Base Module
9	BAS	Brake Assist
	ASD	Automatic Locking Differential, Models 124, 129, 140
10	EATC	Electronic Automatic Transmission Control (5-speed AT) (722.6)
	ETC	Electronic Transmission Control (722.6)
11	ADS	Adaptive Damping System

12	SPS	Speed-sensitive Power Steering
13	TD	Speed Signal (Time Division) (Di) (Diesel) Models 202, 210
	TNA	Signal (Gasoline) on LH-SFI
	TN	Speed Signal (DI/KSS) (Gasoline) on HFM-SFI, ME-SFI
14	Lambda on/off ratio	LH-SFI Engine 119, LH-SFI Engine 120 LH-SFI, Right Bank
15	Lambda on/off ratio	LH-SFI Engine 120 Left Bank
	IC	Instrument Cluster
16	HEAT	Automatic Heater
	TA/C	Air Conditioning (Tempmatic)
	AA/C	Air Conditioning (Automatic)
17	DI	Distributor Ignition, Engines 104, 119, Engine 120, Right
	TD	Speed Signal (Time Division) (Di) (Diesel) Model 140
	TN	Speed Signal (DI/KSS) (Gasoline) on LH-SFI / model 202 HFM-SFI
18	DI	Distributor Ignition, Engine 120, Left
19	DM	Diagnostic Module
20	PSE	Pneumatic System Equipment, Model 140
	MFCM	Multi-function Control Module, Model 210
21	CF	Convenience Feature, Model 140
	RST	Roadster Soft Top, Model 129
22	RB	Roll Bar, Model 129
23	ATA	Anti-theft Alarm
24-25	-	
26	ASD	Automatic Locking Differential, Model 202
27	-	
28	PTS	Parktronic System, Model 140
29	-	
30	AB	Airbag/emergency Tensioning Retractor
31	RCL	Remote Central Locking
32-33	-	
34	CNS	Communication and Navigation System
35	-	
36	STH	Stationary Heater
36	ZUH	Heater Booster
37-38	-	

MERCEDES BENZ 1988 - 1995 ANALOG FAULT CODES - OBD1

ELECTRONIC DIESEL IDLE SPEED CONTROL (ELR)

201.126 1989 11

ELECTRONIC DIESEL SYSTEM (EDS)

124.128 1990-91 12
126.134 126.135 1990-91 12
124.128 1992-93 13
140.134 1992-93 13

CONTINUOUS FUEL INJECTION SYSTEM (CFI)

124.026 124.030 124.050 124.090 1988-89 (California only) 14
126.024 126.025 1988-89 (California only) 14
201.028 (1988-93) 201.029 1988-89 (California only) 14
107.048 1988-91 (California only) 14
126.035 126.039 126.045 1988-91 (California only) 14
124.026 124.030 124.090 124.230 124.290 1990-93 15
126.024 126.025 1990-93 15
201.029 1990-93 15
124.051 129.061 1990-93 17
129.066 1990-92 17

CONTINUOUS FUEL INJECTION SYSTEM (MAS CONTROLLER)

124.026 124.030 124.090 124.230 124.290 1990-92 19
129.066 1990-92 19
201.029 1990-92 19

LH SEQUENTIAL MULTIPOINT FUEL INJECTION SYSTEM (LH-SFI)

140.032 140.057 140.076 1992-93 20
124.034 124.036 1992-93 20
129.067 1992-95 20
140.042 140.043 140.051 1992-95 20

HFM SEQUENTIAL MULTIPOINT FUEL INJECTION SYSTEM

104 111 1993-97 22

BASE MODULE (BM)

124.034 124.036 1992-93 25
129.067 1992-95 25
140.032 140.042 140.043 140.051 140.057 140.076 1992-95 25

DIAGNOSTIC MODULE (DM)

124.034 124.036	1992-93	..... 26
129.067	1992-95	..... 26
140.032 140.042 140.043 140.051	1992-95	..... 28
140.057 140.076	1992-95	..... 28
124.028 124.032 124.052 124.092	1994-95	..... 31

DISTRIBUTOR IGNITION (DI) LH-SFI

140.032	1992-95	..... 33
124.051	1990-93	..... 35
129.061 129.066	1990-95	..... 36
124.034 124.036	1992-93	..... 36
129.067 129.076	1992-95	..... 36
140.042 140.043 140.051 140.057 140.070 140.076	1992-95 36

CRUISE CONTROL/IDLE SPEED CONTROL (CC/ISC) w/o ASR

124 129 140 202	1992-97 38
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ELECTRONIC ACCELERATOR / CRUISE CONTROL / IDLE SPEED CONTROL (EA/CC/ISC) w/ASR

124 129 140 202	1992-96 39
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ELECTRONIC AUTOMATIC TRANSMISSION CONTROL (ETC)

129 w/CFI	1990-93 41
129 140 w/HFM-SFI	1993-97 42

AUTOMATIC-ENGAGED FOUR-WHEEL DRIVE (4MATIC)

124.230 124.290	1990-93 43
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ADAPTIVE DAMPING SYSTEM (ADS)

129.061 129.066	1991-93 44
129.063 129.067 129.076	1991-95 45
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1991-94	..... 46

AUTOMATIC LOCKING DIFFERENTIAL (ASD)

124.128	1991-95	..... 47
126.134 126.135	1991	..... 47
129.061	1991-95	..... 47
140.134	1991-95	..... 47
201.028	1991-93	..... 47

ANTI-LOCK BRAKE SYSTEM (ABS & ABS wASR)

140.032 140.042 140.043 140.134	1992-93	48
124.034 124.036	1992-93	49
140.032 140.042 140.051 140.057 140.070 140.076	1992-93	49
202 210	1994-95	51
124.034	1994-95	52
129	1994-95	52
140	1994-95	52

ELECTRONIC TRACTION SYSTEMS (ASR, ETS)

129 140 202	1995	53
210	1995-96	53

SPEED SENSITIVE POWER STEERING (SPS)

140.032 140.042 140.051 140.057 140.070 140.076 140.134	1992-93	55
140	1994	56

CABRIOLET SOFT TOP (CST)

124.066	1993-95	57
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ROLL BAR (RB)

124.066	1993-95	58
129.061 129.066 129.067 129.076	1990-12/93	59

ROADSTER SOFT TOP (RST)

129.061 129.066 129.067 129.076	1990-93	60
129	1/94-6/96	62

INFRARED REMOTE CONTROL FOR CENTRAL LOCKING (IRCL)

129.061 129.066 129.067 129.076	1990-93	63
140	1990-96	64
129	1993-96	65

PNEUMATIC SYSTEMS EQUIPMENT (PSE)

129 140 202	1992-94	66
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ANTI-THEFT ALARM SYSTEM (ATA)

129.061 129.066 129.067 129.076	1990-93	67
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1990-93	67
129 140 202	1994-96	67

CELLULAR TELEPHONE (CT)

129.061 129.066 129.067 129.076	1992-95	.....	68
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1992-95	68

CONVENIENCE FEATURES (CF)

140	1992-96	69
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TEMPMATIC A/C

201.028 201.029 201.034 201.126 201.128	1988-93	71
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A/C

124.034 124.036	1992-95	73
124.026 124.030 124.050 124.090 124.051 124.230 124.290	1988-95	74
126.024 126.025 126.035 126.039 126.045 126.134 126.135	1988-91	.....	74

A/C SELF DIAGNOSTIC SYSTEMS

TAU 2.1			75
129 Chassis	1990-95	.....	78
129 Chassis	1996-98	.....	81
140 Chassis	1992-95	.....	84
140 Chassis	1996-97	.....	89
202 Chassis	1995	.....	93
202 Chassis	1996-98	.....	98
210 Chassis	1996-98	.....	101

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

107 126 140 201	1988-93	.....	104
124 129	1990-93	.....	105

TRANSMISSION MODULE OB15-12 INSTRUCTIONS

124.230 124.290 w/CFI	1990-93	.....	106
129 w/CFI	1990-93	.....	107
129 140 w/LH-SFI	1990-93	.....	108

ELECTRONIC IDLE SPEED CONTROL (ELR)

Model	Model Year
201.126	1989

Connect wires of Scanner as follows:

Scanner	Data Link Connector 8-pin
Yellow	Socket 4
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Speed sensor signal
3	Coolant temperature sensor signal
4	ELR control unit or Idle speed control (ISC) system

ELECTRONIC DIESEL SYSTEM (EDS)

Model	Model Year
124.128	1990-91
126.134 126.135	1990-91

Connect wires of Scanner as follows:

Scanner	Data Link Connector 8-pin
Yellow	Socket 4
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Fuel rack position sensor (L7)
3	Air flow sensor (B2/1)
4	EDS control unit (N39), atmospheric pressure sensor
5	EGR valve vacuum transducer (Y31/1) or malfunction in EGR control circuit
6	EDS control unit (N39), internal voltage supply
7	Starter ring gear speed sensor (L3)
8	Coolant temperature sensor (B11/4)
9	Intake air temperature sensor (B2/1a)
10	Voltage supply insufficient
11	Electronic idle speed control actuator or exhaust gas recirculation (EGR) valve vacuum transducer
12	Not used
13	Electronic diesel system control unit (n39), faulty (internal fault memory)
14	Electronic diesel system pressure sensor (B5/1), defective
15	Intake manifold air pressure control valve vacuum transducer (Y31/2), wastage vacuum transducer (Y31/3), or malfunction Intake manifold air pressure circuit

ELECTRONIC DIESEL SYSTEM (EDS)

Model	Model Year
124.128	1992-93
140.134	1992-93

Connect wires of Scanner as follows (124)

Scanner	Data Link Connector 8-pin
Yellow	Socket 4
Black	Socket 1
Red	Battery (+)

Connect wires of Scanner as follows (140)

Scanner	Data Link Connector 38-pin
Yellow	Socket 4
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Fuel rack position sensor (L7)
3	Air flow sensor signal (B2/1)
4	Electronic diesel system (EDS) control unit (N39) or atmospheric pressure sensor
5	Exhaust gas recirculation valve vacuum transducer (Y31/1) or fault in exhaust gas recirculation (EGR) control circuit
6	Electronic diesel system (EDS) control unit (N39), internal voltage supply
7	Starter ring gear speed sensor (L3)
8	Engine coolant temperature sensor (B11/4)
9	Intake air temperature sensor (B2/1a)
10	Voltage supply insufficient
11	Electronic idle speed control actuator (Y22) or exhaust gas recirculation (EGR) valve vacuum transducer (Y31/1) or Boost pressure cut-out switchover valve
12	Not used
13	Electronic diesel system control unit (N39), faulty (internal fault memory)
14	Electronic diesel system pressure sensor (B5/1), defective
15	Boost pressure control/ pressure control flap vacuum transducer (Y31/5) , or defect in Boost pressure control circuit.

Continuous Fuel Injection System (CFI)

Model	Model Year
107.048	1988-91 (California version only)
124.026 124.030 124.050 124.090	1988-89 (California version only)
126.024 126.025	1988-89 (California version only)
126.035 126.039 126.045	1988-91 (California version only)
201.028 (1988-93) 201.029	1988-89 (California version only)

Connect wires of Scanner as follows:

Scanner	Data Link Connector 8-pin
Yellow	Socket 3
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Throttle position switch - wide open throttle fault
3	Engine coolant temperature sensor
4	Air flow sensor position indicator
5	Oxygen sensor
6	Not used
7	TD-signal (rpm)
8	Altitude correction capsule
9	Electronic hydraulic actuator (EHA)
10	Throttle position switch - closed throttle position fault (idle)
12	Exhaust gas recirculation temperature sensor

Continuous Fuel Injection System (CFI)

Models	Model Years
124.026 124.030 124.090 124.230 124.290	1990-93
126.024 126.025	1990-93
201.029	1990-93

Connect Wires of Scanner as Follows:

Scanner	Data Link Connector 8 & 16-pin
Yellow	Socket 3
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Throttle position switch - wide open throttle (WOT), signal faulty
3	Engine coolant temperature signal read by CFI control module
4	Potentiometer voltage illogical
5	Oxygen sensor signal illogical
6	Not used
7	TNA signal(rpm) read by CFI control module
8	Altitude pressure signal from ignition control module illogical
9	Current to EHA is illogical
10	Throttle position switch - closed throttle position fault (idle)
11	Air injection system
12	Absolute pressure values from EZL ignition control module are illogical
13	Intake air temperature reading is illogical
14	Vehicle speed signal read by CFI control module is illogical
15	Not used
16	Exhaust gas recirculation
17	Oxygen sensor is shorted to positive or ground
18	Current to idle control valve is illogical
19	Not used

DTC Readout	Possible Cause of Failure
20	Not used
21	Not used
22	Oxygen sensor heating current illogical
23	Short circuit to positive in purge switchover valve circuit
24	Not used
25	Short circuit to positive in start valve circuit
26	Short circuit to positive in upshift delay solenoid valve circuit
27	Data exchange between CFI control module and ignition control module interrupted
28	Intermittent contact in engine coolant temperature sensor circuit
29	CFI and ignition control module reading different engine coolant temperature
30	Not used
31	Intermittent contact in engine coolant temperature sensor circuit
32	Not used
33	Not used
34	Engine coolant temperature read from ignition control module illogical

Continuous Fuel Injection System (CFI)

Models	Model Years
124.051 129.061	1990-93
129.066	1990-92

Connect wires of Scanner as follows:

Scanner	Data Link Connector 16-pin
Yellow	Socket 3
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Throttle position switch - wide open throttle fault (WOT), signal faulty
3	Engine coolant temperature in CFI control module illogical
4	Air flow sensor position indicator potentiometer current illogical
5	Oxygen sensor signal illogical
6	Not used
7	TNA- signal (rpm) at CFI control module illogical
8	Altitude correction signal from ignition control module
9	Current to EHA is illogical
10	Throttle position switch - closed throttle position fault (idle)
11	Air injection system, open or short circuit
12	Absolute pressure values from ignition control module illogical
13	Intake air temperature illogical
14	Speed signal at CFI control module illogical
15	Not used
16	Exhaust gas recirculation switchover valve, open or short circuit
17	Oxygen sensor signal wire shorted to positive or ground
18	Current to idle control valve is illogical

DTC Readout	Possible Cause of Failure
19	Not used
20	Not used
21	Not used
22	Oxygen sensor heater voltage illogical
23	Short to positive in purge switchover valve circuit
24	Not used
25	Short circuit to positive in start valve circuit
26	Short circuit to positive in upshift delay solenoid valve circuit
27	Data exchange between CFI control module and ignition control module
28	Intermittent contact in engine coolant temperature sensor circuit
29	CFI and ignition control module reading different engine coolant temperature
30	Not used
31	Intermittent contact in engine coolant temperature sensor circuit
32	Not used
33	Not used
34	Engine coolant temperature read from ignition control module illogical

Continuous Fuel Injection System (MAS CONTROLLER)

Models	Model Years
124.026 124.030 124.090 124.230 124.290 129.066 201.029	1990-92

Connect wires of Scanner as follows

Scanner	Data Link Connector 16-pin
Yellow	Socket 14
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Fuel pump relay (circuit 87) not functioning
3	TN/TD signal (RPM) interrupted
4	Output for oxygen sensor heater control defective
5	Output for air injection pump control defective
6	Output for kickdown switch control defective
7	Not used
8	Engine coolant temperature sensor signal out of range
9	Circuit 50 failure
10	Output failure of the start valve
11	A/C compressor engagement signal missing (87Z)
12	Output for A/C compressor control defective
13	Excessive A/C compressor clutch slippage
14	Vehicle speed signal illogical
15	Short circuit detected in fuel priming circuit

LH Sequential Multiport Fuel Injection System (LH-SFI)

Models	Model Years
140.032 140.057 140.076	1992-93
124.034 124.036	1992-93
129.067	1992-95
140.042 140.043 140.051	1992-95

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 4
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Engine coolant temperature sensor circuit 1, open or short circuit.
3	Engine coolant temperature sensor circuit 2, open or short circuit.
4	Voltage at mass air sensor with hot wire circuit. Open or short circuit.
5	Not used
6	Not used
7	TNA-signal (rpm signal) incorrect or open or short circuit.
8	Camshaft position sensor signal. Open or short circuit.
9	Starter signal (circuit 50) missing, open or short circuit.
10	Closed throttle position recognition from electronic accelerator control unit, short circuit.
11	Secondary air injection system, open or short circuit.
12	Burn-off control for mass air sensor with hot-wire, open or short circuit.
13	Intake air temperature sensor, open or short circuit.
14	Not used
15	Not used
16	Exhaust gas recirculation (EGR) switchover valve, open or short circuit.

DTC Readout	Possible Cause of Failure
17	CAN data: Electronic accelerator control module - no data transmission
18	CAN data: Ignition control module - no data transmission from DI module
19	Left LH-SFI control module no data transmission to right LH-SFI control module
20	LH-SFI control module - no data transmission
21	Oxygen sensor open circuit.
22	Oxygen sensor heater, open or short circuit.
23	Purge switchover valve, open or short circuit.
24	Left adjustable camshaft timing solenoid (Y49/1), open or short circuit
25	Adjustable camshaft timing solenoid, open or short circuit.
27	Injectors, open or short circuit.
29	I GR Start relay module (K29/1), open or short circuit

HFM Sequential Multiport Fuel Injection System

Engines	Model Year
104 111	1993-97

Connect wires of Scanner as follows (124)

Scanner	Data Link Connector 16-pin
Yellow	Socket 8
Black	Socket 1
Red	Socket 16

Connect wires of Scanner as follows (202 129 140)

Scanner	Data Link Connector 38-pin
Yellow	Socket 4
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Engine Coolant temperature sensor
3	Intake air temperature sensor
4	Hot film mass air flow sensor
5	CTP switch
6	Not used
7	Not used
8	Idle speed control (ISC) system at upper or lower control stop or CC or EA indicates "limp home" mode.
9	O2S 1 (before TWC) - voltage too high, circuit open or voltage implausible
10	O2S 2 (after TWC)voltage too high, circuit open or voltage implausible
11	O2S 1 heater (before TWC) - Current too high/low or short circuit.
12	O2S 2 heater (after TWC) - Current too high/low or short circuit.
13	O2S (Lambda) control system operating at rich or lean limit
14	Injector, cylinder 1

DTC Readout	Possible Cause of Failure
15	Injector, cylinder 2
16	Injector, cylinder 3
17	Injector, cylinder 4
18	Injector, cylinder 5
19	Injector, cylinder 6
20	Self-adaptation at idle speed or upper/lower partial load at rich or lean limit
21	Ignition output 3 or ignition coil for cylinder 1 and 6
22	Ignition output 1 or ignition coil for cylinder 2 and 5 (Engine 111, cylinder 1 and 4)
23	Ignition output 2 or ignition coil for cylinder 3 and 4 (Engine 111, cylinder 2 and 3)
24	CKP sensor or magnet for position sensor not recognized
25	CMP sensor not recognized or implausible
26	Not used
27	TN-signal (rpm signal) - open or short to ground
28	VSS - open circuit
29	Not used
30	Fuel pump relay module - open or short circuit
31	Not used
32	Knock sensors 1 and /or 2
33	Maximum retard setting on at least one cylinder has been reached or the ignition angle deviation between the individual cylinders is greater than 6 degrees crankshaft angle
34	Knock control-output switch in engine control module faulty Momentary fault in self-adaptation closed throttle speed/partial load
35	Model 124,129 and 140 AIR pump switchover valve and/or electromagnetic AIR pump clutch. Model 202 AIR pump switchover valve and/or AIR relay module
36	Purge control valve - open/short to ground or B+
37	Upshift delay switchover valve
38	Adjustable camshaft timing solenoid - open/short to ground or B+
39	Exhaust gas recirculation switchover valve - open/short to ground or B+
40	Transmission overload protection switch - open/short to ground or B+ or open or closed or implausible

DTC Readout	Possible Cause of Failure
41	CAN communication from engine control module faulty
42	CAN communication from ASR, EA/CC/ISC module or diagnostic module (OBD II) faulty
43	Starter signal (circuit 50) not present
44	Not used
45	Fuel safety shut-off of electronic accelerator or cruise control active
46	Resonance intake manifold switchover valve - open/short to ground or B+
48	O2S 2 (after TWC) heating circuit relay module - open/short to ground or B+
49	Voltage supply at engine control module implausible/low volts
50	Engine control module faulty or not coded.

Base Module (BM)

Models	Model Years
124.034 124.036	1992-93
129.067	1992-95
140.032 140.042 140.043 140.051 140.057 140.076	1992-95

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 8
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2, 3, 4	Not used
5	Maximum permissible temperature in module box exceeded
6	Electromagnetic a/c compressor clutch blocked
7	Poly v-belt slipping
8	Voltage supply for LH-SFI control module interrupted
9	Voltage supply for LH-SFI control module interrupted
10	Voltage supply for LH-SFI control module interrupted Voltage supply for fuel injectors interrupted
11	Voltage supply for accessory equipment control module interrupted
12	Voltage supply for ABS control module, ABS/ASR control module or ASD control module interrupted
13, 14	Not used
15	Voltage supply for kickdown valve interrupted
16	Voltage supply for electromagnetic a/c compressor clutch interrupted
17	Voltage supply for module box blower motor interrupted

Diagnostic Module (DM)

Models	Model Years
124.034 124.036	1992-1993
119.067	1992-1995
140.032 140.042 140.043 140.051	1992-1995

Connect wires of Scanner as follows

Scanner	Data link connector 38-pin
Yellow	Socket 19
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Oxygen sensor faulty
3	Lambda control faulty
4	Air injection system faulty
5	Exhaust gas recirculation faulty
6	Idle speed control faulty
7	Ignition system faulty
8	Engine coolant temperature sensor. Circuit open or circuit short
9	Intake air temperature sensor. Circuit open or circuit short
10	Voltage at mass air sensor too high/low
11	TNA-signal (rpm signal) faulty
12	Oxygen sensor greater, circuit open or circuit short
13	Camshaft position sensor signal from ignition control module faulty
14	Intake manifold pressure too low when starting
15	Wide open throttle position information faulty
16	Closed throttle position information faulty
17	Data exchange fault between individual control module
18	Adjustable camshaft timing solenoid circuit open or circuit short

DTC Readout	Possible Cause of Failure
19	Injector open or short circuit or emission control system adaptation at limit
20	Vehicle speed signal missing
21	Purge switchover valve, circuit open or circuit short
22	Camshaft position sensor signal faulty
23	Intake manifold pressure with engine running too low
24	Starter ring gear segments faulty
25	Knock sensors faulty
26	Upshift delay switchover valve, circuit open or circuit short
27	Engine coolant temperature sensor deviation between sensor circuit 1 and sensor circuit 2.
28	Engine coolant temperature sensor (engine coolant temperature change monitor)

Diagnostic Module (DM)

Models	Model Years
140.057 140.076	1992-1995

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 19
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Right oxygen sensor faulty
3	Lambda control of right LH-SFI control module faulty
4	Air injection at right cylinder bank faulty
5	Exhaust gas recirculation of right LH-SFI control module faulty
6	Idle speed control faulty
7	Ignition system for right cylinder faulty
8	Right engine coolant temperature sensor, circuit open or circuit short
9	Right intake air temperature sensor, circuit open or circuit short
10	Voltage at mass air sensor too high/low
11	Tn-signal (rpm signal) at right LH-SFI control module faulty
12	Oxygen sensor heater of right oxygen sensor, circuit open or circuit short
13	Camshaft position sensor signal of right ignition control module faulty
14	Intake manifold pressure at startup (in right ignition control module) too low or too high
15	Wide open throttle position information faulty
16	Closed throttle position information faulty
17	Data exchange fault between right-hand control modules LH-SFI ignition control module electronic accelerator
18	Right adjustable camshaft timing solenoid circuit open or circuit short

DTC Readout	Possible Cause of Failure
19	Right injector circuit open or circuit short or emission control system adaptation in right LH-SFI control module at limit
20	Vehicle speed signal missing
21	Right purge switchover valve, circuit open or circuit short
22	Right camshaft position sensor signal faulty
23	Intake manifold pressure(in right ignition control module) with engine running too low/high
24	Starter ring gear segments faulty
25	Knock sensors or right ignition control module faulty
26	Upshift delay switchover valve, circuit open or circuit short
27	Right engine coolant temperature sensor deviation between circuit 1, and sensor circuit 2.
28	Right engine coolant temperature sensor (engine coolant temperature change monitor)
34	Left oxygen sensor faulty
35	Lambda control of left LH-SFI control module faulty
36	Air injection at left cylinder bank faulty
37	Exhaust gas recirculation of left LH-SFI control module faulty
38	Not used
39	Ignition system for left cylinder faulty
40	Left engine coolant temperature sensor, circuit open or circuit short
41	Left intake air temperature sensor, circuit open or circuit short
42	Voltage at mass air sensor too high/low
43	Tn-signal (rpm signal) at left LH-SFI control module faulty
44	Oxygen sensor heater of left oxygen sensor, circuit open or circuit short
45	Camshaft position sensor signal of left ignition control module faulty
46	Intake manifold pressure at (in left ignition control module) faulty
47	Not used
48	Not used
49	Data exchange fault between left LH-SFI ignition control module

DTC Readout	Possible Cause of Failure
50	Left adjustable camshaft timing solenoid circuit open or circuit short
51	Left injector circuit open or circuit short or emission control system adaptation in left LH-SFI control module at limit
52	Not used vehicle speed signal missing
53	Left purge switchover valve, circuit open or circuit short
54	Left camshaft position sensor signal faulty
55	Intake manifold pressure(in left ignition control module) with engine running too low/high
56	Starter ring gear segments and/or left crankshaft position sensor faulty
57	Knock sensors or left ignition control module faulty
58	Not used
59	Left engine coolant temperature sensor deviation between circuit 1, and sensor circuit 2.
60	Left engine coolant temperature sensor (engine coolant temperature change monitor)

Diagnostic Module (DM)

Models	Model Year
124.028 124.032 124.052 124.092	1994-95

Connect wires of Scanner as follows

Scanner	Data link connector 16-pin
Yellow	Socket 3
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No Fault Found
2	Heated oxygen sensor faulty
3	Lambda control faulty
4	Air injection system faulty hot film mass air flow sensor with hot wire
5	Exhaust gas recirculation faulty
6	Idle speed control faulty
7	Ignition system faulty
8	Engine coolant temperature sensor open circuit
9	Intake air temperature sensor, open circuit
10	Voltage at mass air sensor too high/low
11	Tn-signal (rpm signal) at engine control module faulty
12	Heated oxygen sensor heater circuit open or circuit short
15	Injector, cylinder 2
16	Closed throttle position information faulty
17	Data exchange malfunction between individual control module
18	Adjustable camshaft timing solenoid circuit open or circuit short
19	Injectors circuit open or circuit short emission control module adaptation in engine control module at limit
20	Vehicle speed signal not present
21	Purge switchover valve circuit open or circuit short

DTC Readout	Possible Cause of Failure
22	Crankshaft position sensor signal faulty
23	Intake manifold pressure (in base module pressure sensor-) with engine running too high/low.
24	Starter ring gear segments and /or crankshaft position sensor faulty
25	Knock sensors or engine control module faulty
26	Upshift delay faulty
27	Not used
28	Engine coolant temperature sensor (engine coolant temperature change monitor)
44	Not used
45	Fuel safety shut-off electronic accelerator or cruise control active
46	Resonance intake manifold switchover valve
47	Not used
48	Not used
49	Voltage supply at engine control module 8v
50	Engine control module

Distributor Ignition (DI) LH-SFI

Model	Model Years
140.032	1992-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 17
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Maximum retard setting on at least one cylinder has been reached
3	Not used
4	Load sensor in ignition control module faulty.
5	Knock sensors 1 and/or 2 faulty.
6	Camshaft position sensor faulty.
7	Knock output switch in ignition control module faulty.
8	Transmission overload switch does not close.
9	Transmission overload switch does not open.
10	Not used.
11	Preference resistor faulty .
12	Tn-signal is outside the tolerance range.
13	Not used
14	Not used
15	Ignition coil 1 output from ignition control module faulty
16	Ignition coil 2 output from the DI defective or primary winding of the coil has an open circuit
17	Crankshaft position sensor faulty
18	Magnets for crankshaft position sensor (CKP) not recognized.
19	Not used

DTC Readout	Possible Cause of Failure
20	Ignition control module DTC memory faulty
21	Load sensor in control module faulty. (Recognized with engine running)
22	Not used
23	Not used
24	Not used
25	Not used
26	Ignition control module data exchange fault
27	LH-SFI control module data exchange fault
28	Electronic accelerator control module/idle speed control data exchange fault
34	Ignition misfire detected at cylinder 1 (104) / cylinder 1 (119)
35	Ignition misfire detected at cylinder 5 (104) / cylinder 5 (119)
36	Ignition misfire detected at cylinder 3 (104) / cylinder 4 (119)
37	Ignition misfire detected at cylinder 6 (104) / cylinder 8 (119)
38	Ignition misfire detected at cylinder 2 (104) / cylinder 6 (119)
39	Ignition misfire detected at cylinder 4 (104) / cylinder 3 (119)
40	Ignition misfire detected at cylinder 7 (119)
41	Ignition misfire detected at cylinder 2 (119)

Distributor Ignition (DI)

Model	Model Years
124.051	1990-1995
129.061 129.066	1990-1995

Connect wires of Scanner as follows:

Scanner	Data Link Connector 16-pin
Yellow	Socket 8
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Maximum retard setting on at least one cylinder has been reached
3	Engine coolant temperature sensor faulty
4	Load sensor in EAL/AKR control module faulty
5	Knock sensors 1 and/or 2 faulty
6	Camshaft position sensor faulty
7	Knock output switch in EAL/AKR ignition control module faulty
8	Transmission overload switch does not close
9	Transmission overload switch does not open
10	Data exchange from EAL/AKR engine control module to CFI control module faulty.
11	Preference resistor faulty
12	Tn-signal is outside the tolerance range
13	Full load contact does not open.
14	Idle speed contact does not open.
15	Ignition coil 1 output from EAL/AKR ignition control module faulty
16	Ignition coil 2 output from EAL/AKR ignition control module faulty
17	Crankshaft position sensor faulty

Distributor Ignition (DI)

Models	Model Years
124.034 124.036	1992-1995
129.067 129.076	1992-1995
140.042 140.043 140.051 140.057 140.070 140.076	1992-1995

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 17
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Maximum retard setting on at least one cylinder has been reached
3	Not used
4	Load sensor in EAL/AKR control module faulty
5	Knock sensors 1 and/or 2 faulty
6	Camshaft position sensor faulty
7	Knock output switch in ignition control module faulty
8	Transmission overload switch does not close
9	Transmission overload switch does not open
10	Not used
11	Reference resistor (ignition control module) faulty
12	TN-signal (engine RPM) is outside the tolerance range
13	Not used
14	Not used
15	Ignition coil 1 output from ignition control module faulty or primary winding of ignition coil has open circuit
16	Ignition coil 2 output from ignition control module faulty or primary winding of ignition coil has open circuit

DTC Readout	Possible Cause of Failure
17	Crankshaft position sensor faulty
18	Magnets for crankshaft position sensor not recognized
19	Ground, Coding from Left EZL/AKR Ignition Control Module Not Present
20	Ignition control module DTC memory faulty
21	Load sensor in control module faulty. (recognized with engine running)
22	Not used
23	Not used
24	Not used
25	Not used
26	Ignition control module data exchange fault
27	Control module data exchange fault
28	Electronic accelerator control module/idle speed control data exchange fault

Cruise Control/Idle Speed Control (CC/ISC) w/o ASR

Models	Model Years
124 129 140 202	1992-97

Connect wires of Scanner as follows (W124)

Scanner	Data Link Connector 16-pin
Yellow	Socket 14
Black	Socket 1
Red	Socket 16

Connect wires of Scanner as follows (129 140 202)

Scanner	Data Link Connector 38-pin
Yellow	Socket 7
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Cruise control/idle speed control module
3	Cruise control/idle speed control actuator
4	Cruise control switch
5	Stop lamp switch
6	Starter lock-out/backup lamp switch
7	Data bus (CAN)
8	Left front axle vehicle speed sensor
9	Left rear axle vehicle speed sensor or Hall-effect speed sensor Rear axle vehicle speed sensor from ABS control module Rear axle vehicle speed sensor from ETS/SPS control module Incorrect CC/ISC control module installed ETS signal
10	Engine speed (RPM) signal (TNA)
11	Fuel safety shut-off to LH-SFI control module
12	Cruise control/idle speed control voltage supply

Electronic Accelerator / Cruise Control / Idle Speed Control (EA/CC/ISC) w/ASR

Models	Model Year
124 129 140 202	1992-96

Connect wires of Scanner as follows (W124)

Scanner	Data Link Connector 16-pin
Yellow	Socket 14
Black	Socket 1
Red	Socket 16

Connect wires of Scanner as follows (W202 W129 W140)

Scanner	Data Link Connector 38-pin
Yellow	Socket 7
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	EA/CC/ISC control module (N4/1) or Safety contact switch (M16/1s1) or Stop lamp switch or Cruise control switch or Actual value potentiometer or Starter lock-out/back-up lamp switch or engine speed signal or vehicle speed signal or closed throttle position switch or safety relay in EA/CC/ISC control module
3	Right EA/CC/ISC actuator (left cylinder bank) (M16/1)
4	Cruise control switch (S40)
5	Stop lamp switch (S9/1)
6	Starter lock-out/backup lamp switch
7	CAN data bus signal from EA/CC/ISC, ABS/ASR, HFM-SFI or LH-SFI (right or left) control module faulty.
8	Left front axle vehicle speed sensor from ABS/ASR control module
9	Left rear axle vehicle speed sensor from ABS/ASR control module or in 124 chassis Hall-effect speed sensor.
10	Engine speed signal (TN) from base module (LH-SFI) or engine control module (HFM-SFI)

11	Closed throttle recognition signal to engine control module (HFM-SFI or Left LH-SFI) Fuel safety shut-off to engine control module (HFM-SFI or left or right LH-SFI)
12	EA/CC/ISC control module voltage supply
13	Left EA/CC/ISC actuator (right cylinder bank) or actual value potentiometer (M16/4r1 or M16/4r2) or actuator motor (M16/4m1) or magnetic clutch (M16/4k1).
14	Closed throttle position contact switch
15	CAN data exchange with ABS/ASR control module illogical

Electronic Automatic Transmission Control (ETC) with CFI

Models	Model Years
129	1990-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 16-pin
Yellow	Socket 13
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Not used
3	Engine load signal interrupted
4	Throttle valve switch (potentiometer) interrupted
5	Engine speed (RPM) signal interrupted
6	Vehicle speed signal interrupted
7	Output fault in 5-speed automatic transmission control module or fault in control valve.
8	5-speed automatic transmission control module
9	Control valve
10	Control valve short circuit

Electronic Automatic Transmission Control (ETC) w/LH-SFI

Model	Model Years
129	1990-1993
140	1990-1996

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 10
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Not used
3	Transmission overload protection switch (4/5 gear) faulty
4	CAN data line to Electronic Accelerator/Cruise Control Module
5	CAN data line to ignition control module (knock sensor)
6	CAN data line - short or open circuit
7	Open circuit at control valve or transmission control module (5-speed automatic)
8	5-speed automatic transmission control module
9	Control valve faulty
10	Control valve short circuit

Also test BM and DI systems.

Automatic-engaged Four-wheel Drive (4MATIC)

Models	Model Years
124.230 124.290	1990-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 8-pin
Yellow	Socket 5
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	4MATIC control module
3	Brake light switch
4	Left front axle vehicle speed sensor
5	Right front axle vehicle speed sensor
6	Rear speed sensor signal
7	All 3 vehicle speed sensors
8	Over volts protection relay, front axle train valve
9	Over volts protection relay, central differential lock valve
10	Over volts protection relay, stop lamp switch, Rear axle differential lock valve
11	Steering angle sensor signal

Adaptive Damping System (ADS)

Models	Model Years
129.061 129.066	1991-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 16-pin
Yellow	Socket 9
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Adaptive damping system control module
3	Body acceleration sensor
4	Wheel acceleration sensor
5	Steering angle sensor
6	Front axle solenoid valves 1
7	Front axle solenoid valves 2
8	Rear axle solenoid valves 1
9	Rear axle solenoid valves 2
10	Not used
11	Not used
12	ABS signal
13	Oil level switch (ADS)
14	Steering angle sensor not activated

Adaptive Damping System (ADS)

Models	Model Years
129.067 129.076	1991-1995

Connect wires of Scanner as follows

Scanner	Data link connector 38-pin
Yellow	Socket 11
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No fault found
2	Adaptive damping system control module
3	Body acceleration sensor
4	Wheel acceleration sensor
5	Steering angle sensor
6	Front axle solenoid valves 1
7	Front axle solenoid valves 2
8	Rear axle solenoid valves 1
9	Rear axle solenoid valves 2
12	Right front axle vehicle speed signal
13	Oil level switch (ADS)
14	Steering angle sensor not activated/initialized
15	Comfort or sport switch (ADS) short circuit
17	Vehicle load sensor
18	Adaptive damping system warning lamp
19	Volts supply too low
20	Steering angle sensor
21	Volts supply too high
22	Comfort or sport switch (ADS)

Adaptive Damping System (ADS)

Models	Model Years
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1991-1994

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 11
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No fault found
2	Adaptive damping system control module
3	Body acceleration sensor
4	Wheel acceleration sensor
5	Steering angle sensor
6	Front axle solenoid valves 1
7	Front axle solenoid valves 2
8	Rear axle solenoid valves 1
9	Rear axle solenoid valves 2
12	Right front axle vehicle speed signal
13	Oil level switch (ADS)
14	Steering angle sensor not activated
15	Comfort or sport switch (ADS)
17	Vehicle load sensor
18	Adaptive damping system warning lamp
19	Volts supply too low
20	Steering angle sensor
21	Volts supply too high
22	Comfort or sport switch (ADS)

Automatic Locking Differential (ASD)

Models	Model Years
124.128	1991-1995
126.134 126.135	1991
129.061	1991-1995
140.134	1991-1995
201.028	1991-1993

Connect wires of Scanner as follows (Model 124 126 129)

Scanner	Data Link Connector 8-pin
Yellow	Socket 5
Black	Socket 1
Red	Battery (+)

Connect wires of Scanner as follows (Model 140.134)

Scanner	Data Link Connector 38-pin
Yellow	Socket 9
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible cause of faults
1	No fault found
2	Adaptive damping system control module
3	Stop lamp switch
4	Left front axle vehicle speed sensor signal
5	Right front axle vehicle speed sensor signal
6	Rear speed sensor signal
7	No speed signal from any sensor, missing ground
8	Adaptive damping system valve or stop lamp switch

Anti-lock Brake System (ABS)

Models	Model Years
140.032 140.042 140.043 140.134	1992-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 6
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No faults found
2	Left front axle vehicle speed sensor signal
3	Right front axle vehicle speed sensor signal
4	Rear axle speed sensor signal
6	Left front axle solenoid valve
7	Right front axle solenoid valve
8	Rear axle solenoid valve
10	Return/pressure pump motor or return/pressure pump relay
11	Solenoid valves relay
12	Master cylinder switchover valve
13	Stop lamp switch
14	ABS Lateral acceleration sensor
15	ABS control module
16	Vehicle speed sensors incorrect, dirty or damaged toothed rotor
17	Low voltage at solenoid valves relay

Anti-lock Brake System (ABS & ABS w/ASR)

Models	Model Years
124.034 124.036	1992-1995
140.032 140.042 140.051 140.057 140.070 140.076	1992-1995

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 6
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No fault found
2	Left front axle vehicle speed sensor signal
3	Right front axle vehicle speed sensor signal
4	Left rear axle vehicle speed sensor signal
5	Right rear axle vehicle speed sensor signal
6	Left front axle solenoid valve
7	Right front axle solenoid valve
8	Left rear axle solenoid valve
9	Right rear axle solenoid valve
10	Return/pressure pump motor or return/pressure pump relay
11	Solenoid valves relay
12	Models 140.04/05 Master cylinder switchover valve
13	Stop lamp switch(ASD/ASR)
14	Models 140.04/05 ABS lateral acceleration sensor
15	ABS/ASR control module
16	Vehicle speed sensors incorrect, dirty or damaged toothed rotor
17	Low volts at solenoid valves relay
20	Switchover or solenoid valve

DTC Readout	Possible Cause of Faults
21	Pressure switch charge
22	Pressure switch charge
23	Pressure switch hydraulic system
24	ASR charging pump
30	CAN data line to electronic accelerator/cruise control/idle speed control module
31	CAN data line to LH-SFI control module left LH-SFI control module Right LH-SFI control module
32	CAN data line to left ignition control module right ignition control module Ignition control module, LH-SFI
33	CAN data line, short or open circuit

Anti-lock Brake System (ABS)

Model	Model Years
202 210	1994-95

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 6
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No fault found
2	Left front axle vehicle speed sensor, open circuit
3	Right front axle vehicle speed sensor, open circuit
4	Rear speed sensor, open circuit
6	Solenoid valve, Left front axle
7	Solenoid valve, Right front axle
8	Solenoid valve, Rear axle
10	Return/pressure pump motor or return/pressure pump relay
11	Solenoid valves relay
15	ABS control module
16	Vehicle speed sensors
17	Battery volts low
25	Left front vehicle speed sensors signal Illogical
26	Right front vehicle speed sensors signal Illogical
27	Rear front vehicle speed sensors signal Illogical

Anti-lock Brake System (ABS & ABS w/ASR)

Models	Model Year
124.034	1994-95
129	1994-95
140	1994-95

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 6
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No fault found
2	Left front axle vehicle speed sensor, open circuit
3	Right front axle vehicle speed sensor, open circuit
4	Rear speed sensor, open circuit
6	Left front axle solenoid valves
7	Right front axle solenoid valves
8	Solenoid valve, rear axle
10	Return pump motor or return pump relay
11	Solenoid valves relay
12	Models 140.04/05 Master cylinder switchover valve
13	Brake lamp switch
14	Models 140.04/05 Lateral acceleration sensor
15	ABS control module
16	Vehicle speed sensors signal Illogical
17	Solenoid valves relay
25	Left front vehicle speed sensors signal, Illogical
26	Right front vehicle speed sensors signal, Illogical
27	Rear front vehicle speed sensors signal, Illogical
29	Models 140.04/05 Lateral acceleration sensor signal, Illogical

Electronic Traction Systems (ASR, ETS)

Models	Model Years
129 140 202	1995
210	1995-96

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 6
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Faults
1	No fault found
2	ASR/SPS or ETS/SPS control module
3	Left front axle VSS sensor, open circuit
4	Right front axle VSS sensor, open circuit
5	Left rear axle VSS sensor, open circuit
6	Right rear axle VSS sensor, open circuit
7	Left front axle VSS valves, illogical
8	Right front axle VSS valves illogical
9	Left rear axle VSS valve illogical
10	Right rear axle VSS valve illogical
11	VSS signal illogical
12	ASR/ETS hydraulic unit, solenoid valves relay
13	ASR/ETS hydraulic unit, Left front axle solenoid valves(hold)
14	ASR/ETS hydraulic unit, Left front axle solenoid valve(hold)
15	ASR/ETS hydraulic unit, right front axle solenoid valve (release)
16	ASR/ETS hydraulic unit, right front axle solenoid valve (release)
17	ASR/ETS hydraulic unit, left rear axle solenoid valve(hold)
18	ASR/ETS hydraulic unit, left rear axle solenoid valve (release)

DTC Readout	Possible Cause of Faults
19	ASR/ETS hydraulic unit, right rear axle solenoid valve(hold)
20	ASR/ETS hydraulic unit, right rear axle solenoid valve (release)
21	ASR/ETS hydraulic unit, switchover/solenoid valve
22	ASR/ETS hydraulic unit, inlet solenoid valve
23	ASR only: ASR system pressure too low
24	ASR/ETS hydraulic unit, high-pressure/return pump relay
27	Stop lamp switch
28	Battery voltage too low, circuit 87
29	ETS only Circuit 30, volts supply
30	ASR only CAN data bus to EA/CC/ISC control module, interrupted
31	ASR only CAN communication with LH-SFI control module Left LH-SFI control module right LH-SFI control module faulty CAN communication with engine control module faulty
32	ASR only CAN communication with DI or left and right DI control module, faulty
33	ASR only CAN communication faulty in general
34	ETS only Brakes overheated
35	Model 129.076,140.04/05/07 Master brake cylinder switchover valve
36	Model 129.076,140.04/05/07 ASR lateral acceleration sensor, open circuit
37	Model 129.076,140.04/05/07 ASR lateral acceleration sensor, illogical
38	ETS only EST/SPS control module not identify the software (not coded)
39	Model 140/210 ETS/SPS or ASR/SPS control module
40	Model 140 SPS P-valve
41	Model 140/210 ASR/SPS or ETS/SPS control module

Speed Sensitive Power Steering (SPS)

Models	Model Years
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1992-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 12
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Speed sensitive power steering control module
3	Left/center rear axle speed sensor signal
4	Right rear axle vehicle speed sensor signal
5	Diffident vehicle speed signals from right and left rear axle sensor
6	No vehicle speed sensor signal
7	Inductive speed sensor, transmission faulty
8	Short circuit between positive connection of speed sensitive power steering valve and ground (-)
9	Short circuit at speed sensitive power steering valve
10	Open circuit at speed sensitive power steering valve
11	Volts supply at speed sensitive power steering control module

Speed Sensitive Power Steering (SPS)

Model	Model Years
140	1994

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 12
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Speed sensitive power steering control module
3	Comparison of axle vehicle speed signal attars/left front axle vehicle speed signal faulty
4	Axle vehicle speed signal status missing
5	Speed-sensitive power steering control module
6	Speed-sensitive power steering P-valve; short circuit
7	Speed-sensitive power steering P-valve; open circuit
8	Short circuit between speed sensitive power steering P-valve (+) and ground (-)

Cabriolet Soft top (CST)

Model	Model Years
124.066	1993-95

Connect wires of Scanner as follows

Scanner	Data Link Connector
Yellow	Power Soft top test connection (4 pole) at Socket 2. The connection is located at the right front passenger footwell. To avoid the need for an extension cable, connect the black lead of code scanner to any good ground and red lead to a battery + source inside vehicle.
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Volts low
3	Normal operating time exceeded
4	Limit switch signals Illogical
5	Soft top compartment cover "locked", limit switch,
6	Soft top compartment cover "closed", limit switch,
7	Soft top compartment cover "open", limit switch
8	Soft top fabric bow "locked", limit switch
9	Soft top fabric bow "down", limit switch
10	Soft top fabric bow "raised", limit switch
11	Left front soft top "locked", limit switch
12	Right front soft top "locked", limit switch
13	Soft top "open" switch (soft top in storage compartment), limit switch ,
14	Soft top "overhead", limit switch
15	Soft top "retracted", limit switch
16	Roll bar "extended", limit switch,
17	Automatic deployment of roll bar has occurred
18	Power soft top switch
19	Vehicle speed signal
20	Circuit in power soft top control module, solenoid valve, roll bar retracted
21	Circuit hydraulic unit, circuit solenoid valve, roll bar retracted
22	Circuit in power soft top control module, solenoid valve, roll bar extended
23	Circuit solenoid valve, roll bar extended
24	Circuit in power soft top control module, Power windows

Roll Bar (RB)

Model	Model Year
124.066	1993-95

Connect wires of Scanner as follows

Scanner	Data Link Connector 16-pin
Yellow	Socket 9
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No faults found
2	Roll bar control module
3	Roll bar control module volts supply
6	Roll bar deployment solenoid, open circuit, short circuit to Battery + or ground (-).
7	Rear axle switch, short circuit to Battery + or ground (-).
8	Roll bar indicator lamp faulty

Roll Bar (RB)

Models	Model Years
129.061 129.066 129.067 129.076	1990-12/93

Connect wires of Scanner as follows (Model 129.061/066)

Scanner	Data Link Connector 16-pin
Yellow	Socket 7
Black	Socket 1
Red	Socket 16

Connect wires of Scanner as follows (Model 129.067/076, all 129 from 1993)

Scanner	Data Link Connector 38-pin
Yellow	Socket 22
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No faults found
2	Roll bar control module
3	Volts supply
4	Driver seat belt lock relay open circuit or short circuit to Battery + or ground (-).
5	Passenger seat belt lock relay open circuit or short circuit to Battery + or ground (-).
6	Roll bar deployment solenoid, open circuit or short circuit to Battery + or ground (-).
7	Left and/or right axle switch, roll bar, short circuit to 30 or 31
8	Roll bar warning lamp
9	SRS warning lamp and/or code scanner button held to erase faulty
10	SRS control unit

Roadster Soft Top (RST)

Models	Model Years
129.061 129.066 129.067 129.076	1990-12/93

Connect wires of Scanner as follows (Model 129.061/066)

Scanner	Data Link Connector 16-pin
Yellow	Socket 10
Black	Socket 1
Red	Socket 16

Connect wires of Scanner as follows (Model 129.067/076, all 129 from 1993)

Scanner	Data Link Connector 38-pin
Yellow	Socket 21
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No faults stored
2	Limit switch, left locked, soft top storage compartment cover
3	Limit switch, right locked, soft top storage compartment cover
4	Limit switch, left closed, soft top storage compartment cover
5	Limit switch, right closed, soft top storage compartment cover
6	Limit switch, left locked, soft top fabric bow
7	Limit switch, right locked, soft top fabric bow
8	Limit switch, left closed, soft top fabric bow
9	Limit switch, right closed, soft top fabric bow
10	Limit switch, left front locked, soft top
11	Limit switch, right front locked, soft top
12	Limit switch soft top storage compartment cover open
13	Limit switch soft top fabric bow raised
14	Limit switch soft top down (in storage compartment)
15	Limit switch soft top up (secondary closing speed)

DTC Readout	Possible Cause of Failure
16	Limit switch roll bar retracted
17	Limit switch left side window down Circuit in power soft top control module, solenoid valve, roll bar retracted
18	Limit switch right side window down Circuit hydraulic unit, circuit solenoid valve, roll bar retracted
19	Axle vehicle speed signal illogical Circuit in power soft top control module, solenoid valve, roll bar extended
20	Hardtop installed recognition Circuit solenoid valve, roll bar extended
21	Power soft top switch Circuit in power soft top control module, Power windows
22	Roll bar switch
23	Roll bar control module
24	Roll bar crash deployment
25	Limit switch signals illogical
26	Operation time exceeded
27	Insufficient volts
28	No speedometer signal
29	No axle vehicle wheel speed sensor signal
30	Soft top operation blocked

Roadster Soft Top (RST)

Model	Model Years
129	1/94-6/96

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 21
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No faults stored
2	Low voltage
3	RST/RB hydraulic unit locked up.
4	Vehicle speed sensor fault
5	RST/RB hydraulic unit
6	Right or left power window activation
7	Right or left front soft top "locked" switch fault, Soft top open/closed switch, Fabric bow locked switch,
8	Power soft top control module defective
9	Roll bar crash deployment has occurred
10	Power soft top switch or Roll bar switch.
11	Power soft top switch indicator lamp or Roll bar switch indicator lamp or Warning buzzer.

Infrared Remote Control for Central Locking (IRCL)

Models	Model Years
129.061 129.066 129.067 129.076	1990-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 16-pin
Yellow	Socket 12
Black	Socket 1
Red	Socket 16

Scanner	Data Link Connector 38-pin
Yellow	Socket 31
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Infrared remote control module
3	Supply pump, central locking system short to ground
4	Infrared remote control receiver, Left front door/Right front door/Trunk lid Red indicator lamps, short to ground
5	Infrared remote control receiver, Left front door/Right front door/Trunk lid Green indicator lamps, short to ground
6	Supply pump, central locking system, short to circuit 30
7	Infrared remote control receiver, Left front door/Right front door/Trunk lid Red indicator lamps, short to circuit 30 or open circuit
8	Infrared remote control receiver, Left front door/Right front door/Trunk lid Green indicator lamps, in receiver have short to short to circuit 30 or open circuit
9	Driver door switch group wiring, short to circuit 30 ATA/convenience microswitch wiring short to circuit 30 ATA/convenience microswitch wiring short to circuit 30
10	Ignition/starter switch-position recognition switch, open circuit
11	Ignition/starter switch-position recognition switch, open circuit 31
12	Left front door actuator, open circuit
13	Right door actuator, open circuit
14	Trunk lid lock actuator, open circuit

Infrared Remote Control for Central Locking (IRCL)

Model	Model Years
140	1992-96

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 31
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Left front door actuator, open circuit
3	Warning buzzer -open circuit
4	Warning buzzer -open circuit to ground
5	Red indicator lamps, short to ground
6	Green indicator lamps, short to ground
7	Short to positive, lock circuit 1
8	Short to positive, lock circuit 2
9	Red indicator lamps, short to positive
10	Green indicator lamps, short to positive
11	Infrared remote control module faulty
12	Immobilization output, short to circuit 30 (Battery +)

Infrared Remote Control for Central Locking (IRCL)

Model	Model Years
129	1993-96

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 31
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	IRCL control module
3	Supply pump, central locking system short to ground
4	Infrared remote control receiver, Left front door/Right front door/Trunk lid Red indicator lamps, short to ground
5	Infrared remote control receiver, Left front door/Right front door/Trunk lid Green indicator lamps, short to ground
6	Supply pump, central locking system, short to B (+)
7	Infrared remote control receiver, Left front door/Right front door/Trunk lid Red indicator lamps, short to B (+) or open circuit
8	Infrared remote control receiver, Left front door/Right front door/Trunk lid Green indicator lamps, short to B (+) or open circuit
9	Driver door switch group wiring, short to B (+) ATA/CF microswitch wiring short to B (+) ATA/CF microswitch wiring short to B (+)
10	Ignition/starter switch-position recognition switch, open circuit
11	Ignition/starter switch-position recognition switch, open circuit 31
12	Left front door actuator, open circuit
13	Right door actuator, open circuit
14	Trunk lid lock actuator, open circuit
15	Immobilization output, short to B (+)

Pneumatic Systems Equipment (PSE)

Models	Model Years
129 140 202	1992-94

Connect wires of Scanner as follows

Scanner	Data link connector 38-pin
Yellow	Socket 20
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Central locking system, air demand too high, leakage
3	Retractable trunk lid grip, air demand too high, leakage
4	Backup assist, air demand too high, leakage
5	Orthopedic backrest pressure, air demand too high, leakage
6	Manifold vacuum assist, air demand too high, leakage
7	Short to positive, lock circuit 1
8	Short to positive, lock circuit 2
9	Signal fault, Rear head restraint retraction
10	Signal fault, Central locking interior control switch
11	Signal fault, Front door
12	Signal from lock circuit 1 is present for longer than 2 minutes
13	Signal from lock circuit 2 is present for longer than 2 minutes,
14	Central locking interior control switch signal is present for longer than 2 minutes
15	Rear head restraint retraction signal is present for longer than 2 minutes
16	Not used
17	Pneumatic control module faulty

Anti-theft Alarm System(ATA)

Models	Model Years
129.061 129.066 129.067 129.076	1990-93
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1990-93
129 140 202	1994-96

Connect wires of Scanner as follows (Model 129.061, 129.066)

Scanner	Data Link Connector 16-pin
Yellow	Socket 11
Black	Socket 1
Red	Battery (+)

Connect wires of Scanner as follows (Model 129, 140, 202)

Scanner	Data Link Connector 38-pin
Yellow	Socket 23
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Alarm activated, trunk sensor circuit
3	Alarm activated, engine hood circuit
4	Alarm triggered, glove compartment
5	Alarm activated, rear door circuit Console compartment circuit
6	Alarm activated, front door circuit
10	Alarm activated, radio circuit
12	Alarm activated, ignition circuit
14	Alarm activated, brake circuit
19	AT Control module faulty
20	Left front door actuator, No ground connection
21	ATA disarmed, Starter lock-out relay module. short to circuit 30
23	ATA armed, Open to circuit 30

Cellular Telephone (CT)

Models	Model Years
129.061 129.066 129.067 129.076	1992-95
140.032 140.042 140.051 140.057 140.070 140.076 140.134	1992-95

If a fault code is set, the code is shown on the in-car telephones display and the phone goes off-line.

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	TR memory defect (ROM)
2	TR memory defect (RAM)
3	NAM defect
4	ESN defect
5	TR memory defect (EE PROM)
6	TR output power defect
7	IDCM defect
8	TR output power control defect

Convenience Features (CF)

Model	Model Year
140	1992-96

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 21
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Control module, Close circuit for left front power window motor
3	Control module, Open circuit for left front power window motor
4	Control module, Close circuit for right front power window motor
5	Control module, Open circuit for right front power window motor
6	Control module, Close circuit for left rear power window motor
7	Control module, Open circuit for left rear front power window motor
8	Control module, Close circuit for right rear power window motor
9	Control module, Open circuit for right rear power window motor
10	Switch for left front power window Closing time exceeded
11	Switch for left front power window Opening time exceeded
12	Switch for right front power window Closing time exceeded
13	Switch for right front power window Opening time exceeded
14	Left rear power window circuit and left rear power window switch front console closing time exceeded
15	Left rear power window circuit and left rear power window switch front console opening time exceeded
16	Right rear power window circuit and right rear power window switch front console closing time exceeded
17	Right rear power window circuit and right rear power window switch front console opening time exceeded
18	Circuit for left front lock switch, right front, trunk lid lock switch closing time exceeded, lock switch circuit 2

DTC Readout	Possible Cause of Failure
19	Circuit for left front lock switch, right front, trunk lid lock switch opening time exceeded, lock switch circuit 1
20	Left front power window switch short to ground or wires reversed
21	Right front power window switch short to ground or wires reversed
22	Left rear window circuit and left rear power window switch front console short to ground or wires reversed
23	Right rear power window circuit and right rear power window switch front console short to ground or wires reversed
24	Left front power window motor , wiring or speed sensor
25	Right front power window motor, wiring or speed sensor
26	Left rear power window motor, wiring or speed sensor
27	Right rear power window motor, wiring or speed sensor
28	Left front power window motor, sensor wiring reversed
29	Right front power window motor, sensor wiring reversed
30	Left rear power window motor, sensor wiring reversed
31	Right rear power window motor, sensor wiring reversed
32	Left front power window motor, Speed sensor signal faulty
33	Right front power window motor, Speed sensor signal faulty
34	Left rear power window motor, Speed sensor signal faulty
35	Right rear power window motor, Speed sensor signal faulty
36	Convenience control module faulty
37	Volts too low(9V), circuit 30E fuse F4-11
38	Sliding/pop-up roof switch circuit short, check wiring harness
39	Volts supply circuit 30 A, control module
40	Volts supply circuit 30 B, control module

Tempmatic A/C

Models	Model Year
201.028 201.029 201.034 201.126 201.128	1988-93

Connect wires of Scanner as follows

Scanner	Data Link Connector 8-pin
Yellow	Socket 7
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	In car temperature sensor, short circuit
3	In car temperature sensor, open circuit
4	Outside temperature sensor, short circuit
5	Outside temperature sensor, open circuit
6	Evaporator temperature sensor, short circuit
7	Evaporator temperature sensor, open circuit
12	Coolant temperature gauge sensor, short circuit
13	Coolant temperature gauge sensor, open circuit
14	Feedback potentiometer, short circuit
15	Feedback potentiometer, open circuit
30	Coolant pump, short circuit
33	A/C compressor control module, short circuit
34	Auxiliary fan relay short circuit
50	Switchover valve unit (5 connections) between pins 5 and 4 faulty
51	Switchover valve unit (5 connections) between pins 5 and 6 faulty
52	Switchover valve unit (5 connections) between pins 5 and 2 faulty
54	Switchover valve unit (5 connections) between pins 5 and 3 faulty
55	Switchover valve unit (4 connections) between pins 5 and 1 faulty
56	Switchover valve unit (4 connections) between pins 5 and 2 faulty

DTC Readout	Possible Cause of Failure
57	Switchover valve unit (4 connections) between pins 5 and 1 faulty
58	Switchover valve blend air flaps (warm) short circuit
59	Switchover valve blend air flaps (cold) short circuit
60	Switchover valve blend air flaps (closes) short circuit
61	Blower switch, low speed faulty
62	Blower switch, high speed faulty

A/C

Models	Model Year
124.034 124.036	1992-1995

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 16
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Short circuit, In car temperature sensor
3	Open circuit, In car temperature sensor
4	Short circuit, Outside temperature sensor
5	Open circuit, Outside temperature sensor
6	Short circuit, Evaporator temperature sensor
7	Open circuit, Evaporator temperature sensor
8	Short circuit Left heat exchanger temperature sensor
9	Left heat exchanger sensor, open
10	Right heat exchanger temperature sensor, short circuit
11	Right heat exchanger temperature sensor, open
12	Engine coolant temperature sensor, short circuit
13	Engine coolant temperature sensor, open circuit
30	Circulation pump, short or open circuit
31/32	Duo valve short circuit/open
33	compressor cut-out control module short circuit/open
34	Auxiliary fan 2nd stage (actuation), short circuit
56	Switchover valve fresh air/recirculated air flaps, long stroke short circuit
57	Switchover valve fresh air/recalculated air flaps, long stroke short circuit

A/C

Models	Model Years
124.026 124.030 124.050 124.090 124.051 124.230 124.290	1988-95
126.024 126.025 126.035 126.039 126.045 126.134 126.135	1988-91

Connect wires of Scanner as follows

Scanner	Data Link Connector 8-pin
Yellow	Socket 7
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	In car temperature sensor, short circuit
3	In car temperature sensor, open circuit
4	Outside temperature sensor, short circuit
5	Outside temperature sensor, open circuit
6	Evaporator temperature sensor, short circuit
7	Evaporator temperature sensor, open circuit
8	Heater core temperature sensor, short-circuit
9	Heater core sensor, open
12	Engine coolant temperature sensor, short circuit
13	Engine coolant temperature sensor, open circuit
30	Coolant pump, short circuit
31	Duo valve short circuit/open
33	A/C compressor control module short circuit
34	Auxiliary fan relay faulty
50	Switchover valve unit, faulty at between pins 5 and 8 (7 connections)
51	Switchover valve unit, faulty between pins 8 and 7 (7 connections)
52	Switchover valve unit, faulty between pins 8 and 3(7 connections)
54	Switchover valve unit, faulty between pins 8 and 4 (7 connections)
55	Switchover valve unit, faulty between pins 8 and 6(7 connections)
56	Switchover valve unit, faulty between pins 8 and 2(7 connections)
57	Switchover valve unit, faulty between pins 8 and 1(7 connections)

A/C SELF DIAGNOSTIC SYSTEMS

TAU 2.1

READING ACTUAL VALUES

1. Remove the operating console from the TAU
2. At the upper side of the operating console there is a display.
3. Ignition ON : Position 1
4. The fan speed selector NOT on position 1
5. The display alternates between the sensor/component number and the value of that sensor/component.
Example: "OP E" : Open circuit or "CL O" : Closed circuit.

COMPONENT UNDER TEST

Number	Component
02	Interior Temperature Sensor
04	Exterior Temperature Sensor
06	Evaporator Temperature Sensor
08	Left Heater Core Temperature Sensor
10	Right Heater Core Temperature Sensor
12	Engine Coolant Temperature Sensor (ECT)
14	Left Temperature Selector Wheel Setting (Degree C)
16	Right Temperature Selector Wheel Setting (Degree C)
18	Vehicle Speed Signal(km/h)
20	Soft Top OPEN : "U", Soft Top CLOSED : "O"
22	Power Supply Voltage
83	OFF/ON (Not Used)
84	Blower Motor Voltage "050" (0.5v) - "600" (6.0v)

FAULT DIAGNOSIS

- 1 Turn temperature selector wheel into the white area.
- 2 Place the air speed selector at position 0 and the air direction to "DOWN"
- 3 IGNITION = ON : Position 1
- 4 Within the next 10 sec., press the "RECIRCULATE AIR" and "REST" button simultaneously for 3 sec.
- 5 Press the AUTO button until all error numbers are read and recorded.

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - TAU 2.1		
DTC Readout	Description	Cause
1	No DTC's Stored in System Memory.	No faults
2	In-Car Temperature Sensor (B10/4)	Short Circuit
3	In-Car Temperature Sensor (B10/4)	Open Circuit
4	Outside Temperature Sensor (B10/5)	Short Circuit
5	Outside Temperature Sensor (B10/5)	Open Circuit
6	Evaporator Temperature Sensor (B10/6)	Short Circuit
7	Evaporator Temperature Sensor (B10/6)	Open Circuit
8	Heater Core Temperature Sensor (B10/1))	Short Circuit
9	Heater Core Temperature Sensor (B10/1)	Open Circuit
10	Heater Core Temperature Sensor (Right)	Short Circuit
11	Heater Core Temperature Sensor(Right)	Open Circuit
12	Engine Coolant Temperature Sensor (B10/8)	Short Circuit
13	Engine Coolant Temperature Sensor (B10/8)	Open Circuit
16	Center Air Vent Control Module (N18/2r2)	Short Circuit
17	Center Air Vent Control Module (N18/2r2)	Open Circuit
18	Center Air Vent Feedback Potentiometer (R23/3)	Short Circuit
19	Center Air Vent Feedback Potentiometer (R23/3)	Open Circuit
20	Left Air Vent Control Module (N18/2r1)	Short Circuit
21	Left Air Vent Control Module (N18/2r1)	Open Circuit
22	Left Air Vent Feedback Potentiometer (R23/1)	Short Circuit
23	Left Air Vent Feedback Potentiometer (R23/1)	Open Circuit
24	Right Air Vent Control Module (N18/2r3)	Short Circuit
25	Right Air Vent Control Module (N18/2r3)	Open Circuit
26	Right Air Vent Feedback Potentiometer (R23/2)	Short Circuit
27	Right Air Vent Feedback Potentiometer (R23/2)	Open Circuit
30	Auxiliary Coolant Pump	Short Circuit
31	Automatic A/C Monovalve (Left)	Short Circuit
32	Automatic A/C Monovalve (Right)	Short Circuit
33	A/C Compressor Signal	Short Circuit

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - TAU 2.1		
DTC Readout	Description	Cause
34	Auxiliary Fan Signal 2 Stage	Short Circuit
35	Auxiliary Fan Signal 1 Stage	Short Circuit
50	Switchover Valve Block Signal	Short Circuit
70	Auxiliary Coolant Pump	Open Circuit
71	Automatic A/C Monovalve (Left)	Open Circuit
72	Automatic A/C Monovalve (Right)	Open Circuit
73	A/C Compressor Signal	Open Circuit
74	Auxiliary Fan Signal 2nd Stage	Open Circuit
75	Auxiliary Fan Signal 1st Stage	Open Circuit

A/C SELF DIAGNOSTIC SYSTEMS

129 Chassis to 8/95

READING ACTUAL VALUES

1. IGNITION ON : Position 1
2. Press the REST button and within 1 second press blower speed button 4.
3. The temperature window (upper left) will alternately display the test step number (ex. "02" In-car Temp) or "OP E" for Open Circuit or "Cl 0" for Closed Circuit.
4. Press "F" button to go to higher test.
5. Press "C" button to go to a lower test.
6. To end this test mode turn IGNITION OFF : Position 0 for longer then 5 seconds.

COMPONENT UNDER TEST

Number	Component
02	In-Car Temperature Sensor
04	Outside Temperature Sensor
06	Evaporator Temperature Sensor
08	Heater Core Temperature Sensor
12	Engine Coolant Temperature (ETC) Sensor
14	Temperature Selector Wheel Setting
18	Vehicle Speed Signal(km/h)
20	Soft Top OPEN : "U" ; Soft Top CLOSED : "O"
22	Power Supply Voltage
83	OFF/ON (Not Used)
84	Blower motor voltage "050" (0,5V) - "600" (6,0V)

FAULT DIAGNOSIS

1. Turn temperature selector wheel into the white area.
2. IGNITION ON : Position 1
3. Within the next 10 sec., press the "F", "RECIRCULATE AIR" and "REST" buttons simultaneously for 2 to 4 seconds.
4. The display will show the permanent DTC's stored. press the "RECIRCULATE AIR" button after each is displayed until the display reads "END"
5. Press "RECIRCULATE AIR" button again and the intermittent DTC's will be shown. A SQUARE is shown after each DTC to indicate that it is intermittent. Press the "RECIRCULATE AIR" button again to see the next DTC. Until "END" is shown.
6. To erase the DTC's : IGNITION ON : Position 1 Press the "RECIRCULATE AIR", "REST" and "UP" buttons simultaneously until --- is displayed in the window.

FAULT CODES - 129 Chassis to 8/95		
DTC Readout	Description	Cause
1	No DTC's Stored in System Memory.	No Faults

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 129 Chassis to 8/95		
DTC Readout	Description	Cause
2	In-Car Temperature Sensor (B10/4)	Short Circuit
3	In-Car Temperature Sensor (B10/4)	Open Circuit
4	Outside Temperature Sensor (B10/5)	Short Circuit
5	Outside Temperature Sensor (B10/5)	Open Circuit
6	Evaporator Temperature Sensor (B10/6)	Short Circuit
7	Evaporator Temperature Sensor (B10/6)	Open Circuit
8	Heater Core Temperature Sensor (B10/1)(Left)	Short Circuit
9	Heater Core Temperature Sensor (B10/1)(Left)	Open Circuit
10	Heater Core Temperature Sensor (Right)	Short Circuit
11	Heater Core Temperature Sensor(Right)	Open Circuit
12	Engine Coolant Temperature Sensor (B10/8)	Short Circuit
13	Engine Coolant Temperature Sensor (B10/8)	Open Circuit
16	Center Air Vent Control Module (N18/2r2)	Short Circuit
17	Center Air Vent Control Module (N18/2r2)	Open Circuit
18	Center Air Vent Feedback Potentiometer (R23/3)	Short Circuit
19	Center Air Vent Feedback Potentiometer (R23/3)	Open Circuit
20	Left Air Vent Control Module (N18/2r1)	Short Circuit
21	Left Air Vent Control Module (N18/2r1)	Open Circuit
22	Left Air Vent Feedback Potentiometer (R23/1)	Short Circuit
23	Left Air Vent Feedback Potentiometer (R23/1)	Open Circuit
24	Right Air Vent Control Module (N18/2r3)	Short Circuit
25	Right Air Vent Control Module (N18/2r3)	Open Circuit
26	Right Air Vent Feedback Potentiometer (R23/2)	Short Circuit
27	Right Air Vent Feedback Potentiometer (R23/2)	Open Circuit
30	Auxiliary Coolant Pump (M13)	Short Circuit
31	Automatic A/C Monovalve (Y19)	Short Circuit
32	Automatic A/C Monovalve (Right)	Short Circuit
33	A/C Compressor Signal	Short Circuit
34	Auxiliary Fan Signal, 2nd Stage	Short Circuit
35	Auxiliary Fan Signal, 1st Stage	Short Circuit
50	Switchover Valve Block Signal (Y11)	Short Circuit
70	Auxiliary Coolant Pump (M13)	Open Circuit

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 129 Chassis to 8/95		
DTC Readout	Description	Cause
71	Automatic A/C Monovalve (Y19)	Open Circuit
72	Automatic A/C Monovalve (Right)	Open Circuit
73	A/C Compressor Signal	Open Circuit
74	Auxiliary Fan Signal, 2nd Stage	Open Circuit
75	Auxiliary Fan Signal, 1st Stage	Open Circuit

A/C SELF DIAGNOSTIC SYSTEMS

129 Chassis from 9/95

READING ACTUAL VALUES

1. IGNITION : Position 1
2. Set temperature selector to 72 degrees F.
3. Press the REST button for more than 6 seconds.
4. The left display will alternately show the number "01" and the in-car temperature.
5. Press the FAN button and the next component number and its value will be displayed.
6. Press the REST button to end the test program.

COMPONENT UNDER TEST

Number	Component
01	In-Car Temperature Sensor with Aspirator Blower (B10/4)
02	Outside Temperature Sensor (B14)
03	Left Heater Core Temperature Sensor (B10/2)
05	Evaporator Temperature Sensor (B10/6)
06	Engine Coolant Temperature Sensor (ECT) (B11/4)
07	Refrigerant Pressure in Bar
08	Refrigerant Temperature Sensor (B12/1)
09	Not Used
10	Blower Control Voltage
20	Control Current for Auxiliary Fan exp. : 7 = 7 mA
21	Engine RPM. example 00..99 (x100) = 9900
22	Vehicle Speed
23	PIN 58D exp. 99.0 = 99% of Battery Voltage
24	Battery Voltage : 12.8 = 12,8 Volt
40	A/C Controller Software Version Coding
41	A/C Controller Hardware Version
42	Variant code 1
43	Variant code 2
50	Not Used
51	Not Used
52	Not Used
54	ON/OFF A/C Compressor emergency off signal from engine control module.

A/C SELF DIAGNOSTIC SYSTEMS

60	Roof "OPE" = OPEN, "CLO" = CLOSED
61	Left Air Outlet, Potentiometer Voltage
62	Vacuum Actuator 46, Feedback Potentiometer Voltage
63	Center Air Outlet, Potentiometer Voltage
64	Vacuum Actuator 47, Feedback Potentiometer Voltage
65	Right Air Outlet, Potentiometer Voltage
66	Vacuum Actuator 47, Feedback Potentiometer Voltage

FAULT DIAGNOSIS

1. IGNITION : Position 1
2. Temperature selector wheel : "LO"
3. Within 20 seconds press the REST and DEFROST buttons simultaneously for more than 5 seconds.
4. The LED in the RECIRCULATE button flashes and "dl A" appears on the display.
5. Press the AUTO button until all DTC's are displayed and recorded.
6. The current faults are displayed first, then the intermittent faults. "END" is displayed when all codes have been displayed.
7. To erase codes press AUTO again, "dEL" will be displayed. Press v and ^ simultaneously for more than 5 seconds. The display will then show "---". Press AUTO to cancel the erase.
8. IGNITION : OFF to end the test program.

FAULT CODES - 129 Chassis from 9/95	
DTC Readout	Description
026	CAN Bus Communication
226	In-Car Air Temperature Sensor (B10/4)
227	Outside Air Temperature Sensor (B14)
228	Heater Core Temperature Sensor (B10/2)
230	Evaporator Temperature Sensor (B10/6)
231	Engine Coolant Temperature Sensor (B11/4)
232	Refrigerant Pressure Sensor (B12)
233	Refrigerant Temperature Sensor (B12/1)
241	Refrigerant Level
416	Coolant Circulation Pump (A31m1)
417	Automatic A/C Monovalve (Y19)
419	A/C Compressor Electromagnetic Clutch (A9k1)
420	Closed (Idle) Throttle Speed Increase

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 129 Chassis from 9/95	
DTC Readout	Description
421	Auxiliary Fan Control Module (N65/1)
422	Serial Interface Connection (K1) to Instrument Cluster (IC)
423	Switchover Valve Block (15 connection multiplex) (Y11)
459	Serial Interface Connection (K2) to Instrument Cluster (IC)

A/C SELF DIAGNOSTIC SYSTEMS

140 Chassis to 8/95

READING ACTUAL VALUES

1. Turn temperature selector wheel into the white area.
2. IGNITION = ON : Position 1
3. Press the left and right "AUTO" buttons.
4. Within 20 seconds press the "REST" button for more than 5 sec.
5. LEFT DISPLAY = Component Number
RIGHT DISPLAY = Actual Component Value or "HI" for a short circuit or "LO" for an open circuit
6. Press the left "AUTO" button to monitor the next component.
7. Press the "REST" button to end the test mode.

COMPONENTS UNDER TEST

Number	Component
01	In-Car Temperature Sensor with Aspirator Blower (B10/4)
02	Outside Temperature Sensor (B10/5)
03	Left Heater Core Temperature Sensor (B10/2)
04	Right Heater Core Temperature Sensor (B10/3)
05	Evaporator Temperature Sensor (B10/6)
06	Engine Coolant Temperature (ECT) Sensor (A/C) (B10/8)
07	Refrigerant Pressure in Bar : Ex. 06'4 = 6.4 Bar
08	Blower Control Voltage from 8(min) - 60(max)
09	Software Status, A/C Pushbutton Control Module(N22) Mfg.
10	Left rear heater core temperature sensor (B10/9)
11	Right rear heater core temperature sensor (B10/10)
12	Rear Evaporator Temperature Sensor (B10/11)
13	Software Status, Rear A/C Pushbutton Control Module(N22) Mfg.
16	Control Module Applicable for Charcoal Filter : "A"=YES "0"=NO

FAULT DIAGNOSIS

1. Turn the left selector wheel into the red area.
2. Turn the right selector wheel into the blue area.
3. IGNITION = ON : Position 1.
4. Press the "AUTO" button.
5. Within 20 seconds, press the "REST" and "O" button for more than 2 seconds.
6. The display will show the permanent DTC's stored. Left window "E0" or "E1", right window "01", "02"...etc.
Record each DTC and press the right "AUTO" button to display the next code. Continue until "END" is displayed.
7. To erase the DTC's : Turn IGNITION OFF, Then turn IGNITION ON : Position 1. Press the left "AUTO" button. A "d" (delete) is displayed in the left window. By pressing the right "AUTO" button the DTC will be deleted. Alternate left and right "AUTO" buttons until all DTCs are erased and "E0 00" is displayed.

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 140 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
001	No DTC's Stored in System Memory.		
002	A/C Pushbutton Control Module (N22)		
003	Rear A/C Pushbutton Control Module (N22/3)		
006	Connection to the Switchover Valve Block (Y11)		
007	Data Exchange (CAN B)	Short Circuit.	
008	Data Exchange (CAN A)	Short Circuit.	
009	Data Exchange (CAN A and CAN B)	Short Circuit.	
010	Make the Diagnosis Again.		
011	Data Exchange (CAN B)	Open Circuit.	
012	Data Exchange (CAN A)	Open Circuit.	
013	Connection with the Rear A/C Pushbutton Control Module		
014	Data Exchange (CAN B) : Rear A/C Control Module	Open Circuit.	
015	Data Exchange (CAN A) : Rear A/C Control Module	Open Circuit.	
016	In-Car Air Temperature Sensor (B10/4)	Short Circuit	CONTINUOUS
017	In-Car Air Temperature Sensor (B10/4)	Short Circuit	INTERMITTENT
018	In-Car Air Temperature Sensor (B10/4)	Short or Open Circuit	CONTINUOUS
019	In-Car Air Temperature Sensor (B10/4)	Short or Open Circuit	INTERMITTENT
024	Left Heater Core Temperature Sensor (B10/2)	Short Circuit	CONTINUOUS
025	Left Heater Core Temperature Sensor (B10/2)	Short Circuit	INTERMITTENT
026	Left Heater Core Temperature Sensor (B10/2)	Short or Open Circuit	CONTINUOUS
027	Left Heater Core Temperature Sensor (B10/2)	Short or Open Circuit	INTERMITTENT
028	Right Heater Core Temperature Sensor (B10/3)	Short Circuit	CONTINUOUS
029	Right Heater Core Temperature Sensor (B10/3)	Short Circuit	INTERMITTENT
030	Right Heater Core Temperature Sensor (B10/3)	Short or Open Circuit	CONTINUOUS
031	Right Heater Core Temperature Sensor (B10/3)	Short or Open Circuit	INTERMITTENT
032	Outside Air Temperature Sensor (B10/5)	Short Circuit	CONTINUOUS
033	Outside Air Temperature Sensor (B10/5)	Short Circuit	INTERMITTENT
034	Outside Air Temperature Sensor (B10/5)	Short or Open Circuit	CONTINUOUS
035	Outside Air Temperature Sensor (B10/5)	Short or Open Circuit	INTERMITTENT

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 140 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
036	Evaporator Temperature Sensor (B10/6)	Short Circuit	CONTINUOUS
037	Evaporator Temperature Sensor (B10/6)	Short Circuit	INTERMITTENT
038	Evaporator Temperature Sensor (B10/6)	Short or Open Circuit	CONTINUOUS
039	Evaporator Temperature Sensor (B10/6)	Short or Open Circuit	INTERMITTENT
040	Engine Coolant Temperature Sensor (B10/8)	Short Circuit	CONTINUOUS
041	Engine Coolant Temperature Sensor (B10/8)	Short Circuit	INTERMITTENT
042	Engine Coolant Temperature Sensor (B10/8)	Short or Open Circuit	CONTINUOUS
043	Engine Coolant Temperature Sensor (B10/8)	Short or Open Circuit	INTERMITTENT
044	Refrigerant Pressure Sensor (B12)	Short Circuit	CONTINUOUS
045	Refrigerant Pressure Sensor (B12)	Short Circuit	INTERMITTENT
046	Refrigerant Pressure Sensor (B12)	Short or Open Circuit	CONTINUOUS
047	Refrigerant Pressure Sensor (B12)	Short or Open Circuit	INTERMITTENT
048	Left Temperature Wheel	Short Circuit	CONTINUOUS
049	Left Temperature Wheel	Short Circuit	INTERMITTENT
050	Left Temperature Wheel	Short or Open Circuit	CONTINUOUS
051	Left Temperature Wheel	Short or Open Circuit	INTERMITTENT
052	Right Temperature Wheel	Short Circuit	CONTINUOUS
053	Right Temperature Wheel	Short Circuit	INTERMITTENT
054	Right Temperature Wheel	Short or Open Circuit	CONTINUOUS
055	Right Temperature Wheel	Short or Open Circuit	INTERMITTENT
072	Heater Supply Unit Coolant Circulation Pump (A31m1)	Short Circuit	CONTINUOUS
073	Heater Supply Unit Coolant Circulation Pump (A31m1)	Short Circuit	INTERMITTENT
074	Coolant Circulation Pump (A31m1)	Short or Open Circuit	CONTINUOUS
075	Coolant Circulation Pump (A31m1)	Short or Open Circuit	INTERMITTENT
076	Coolant Circulation Pump (A31m1)	Overload	CONTINUOUS
077	Coolant Circulation Pump (A31m1)	Overload	INTERMITTENT
080	Left Duovalve (Water Valve) (A31y1)	Short Circuit	CONTINUOUS
081	Left Duovalve (Water Valve) (A31y1)	Short Circuit	INTERMITTENT
082	Left Duovalve (Water Valve) (A31y1)	Short or Open Circuit	CONTINUOUS
083	Left Duovalve (Water Valve) (A31y1)	Short or Open Circuit	INTERMITTENT
084	Right Duovalve (Water Valve) (A31y2)	Short Circuit	CONTINUOUS

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 140 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
085	Right Duovalve (Water Valve) (A31y2)	Short Circuit	INTERMITTENT
086	Right Duovalve (Water Valve) (A31y2)	Short or Open Circuit	CONTINUOUS
087	Right Duovalve (Water Valve) (A31y2)	Short or Open Circuit	INTERMITTENT
088	A/C Compressor Ground Activation		CONTINUOUS
089	A/C Compressor Ground Activation		INTERMITTENT
090	A/C Compressor Ground Activation	Short or Open Circuit	CONTINUOUS
091	A/C Compressor Ground Activation	Short or Open Circuit	INTERMITTENT
096	Auxiliary Fan, 1ST Stage Activation	Short Circuit	CONTINUOUS
097	Auxiliary Fan, 1ST Stage Activation	Short Circuit	INTERMITTENT
098	Auxiliary Fan, 1ST Stage Activation	Short or Open Circuit	CONTINUOUS
099	Auxiliary Fan, 1ST Stage Activation	Short or Open Circuit	INTERMITTENT
100	Auxiliary Fan, 2ND Stage Activation	Short Circuit	CONTINUOUS
101	Auxiliary Fan, 2ND Stage Activation	Short Circuit	INTERMITTENT
102	Auxiliary Fan, 2ND Stage Activation	Short or Open Circuit	CONTINUOUS
103	Auxiliary Fan, 2ND Stage Activation	Short or Open Circuit	INTERMITTENT
104	Auxiliary Fan, 3RD Stage Activation	Short Circuit	CONTINUOUS
105	Auxiliary Fan, 3RD Stage Activation	Short Circuit	INTERMITTENT
106	Auxiliary Fan, 3RD Stage Activation	Short or Open Circuit	CONTINUOUS
107	Auxiliary Fan, 3RD Stage Activation	Short or Open Circuit	INTERMITTENT
108	Auxiliary Coolant Pump Control Relay Module (K30), Power Supply	Short Circuit	CONTINUOUS
109	Auxiliary Coolant Pump Control Relay Module (K30), Power Supply	Short Circuit	INTERMITTENT
110	Auxiliary Coolant Pump Control Relay Module (K30), Power Supply	Short or Open Circuit	CONTINUOUS
111	Auxiliary Coolant Pump Control Relay Module (K30), Power Supply	Short or Open Circuit	INTERMITTENT
112	Engine RPM Increase Diode Matrix (V2)	Short Circuit	CONTINUOUS
113	Engine RPM Increase Diode Matrix (V2)	Short Circuit	INTERMITTENT
114	Engine RPM Increase Diode Matrix (V2)	Short or Open Circuit	CONTINUOUS
115	Engine RPM Increase Diode Matrix (V2)	Short or Open Circuit	INTERMITTENT
116	Activated Charcoal Filter Actuator (A32m2) : (OPEN)	Short Circuit	CONTINUOUS
117	Activated Charcoal Filter Actuator (A32m2) : (OPEN)	Short Circuit	INTERMITTENT

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 140 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
118	Activated Charcoal Filter Actuator (A32m2) : (OPEN)	Short or Open Circuit	CONTINUOUS
119	Activated Charcoal Filter Actuator (A32m2) : (OPEN)	Short or Open Circuit	INTERMITTENT
120	Activated Charcoal Filter Actuator (A32m2) : (CLOSED)	Short Circuit	CONTINUOUS
121	Activated Charcoal Filter Actuator (A32m2) : (CLOSED)	Short Circuit	INTERMITTENT
122	Activated Charcoal Filter Actuator (A32m2) : (CLOSED)	Short or Open Circuit	CONTINUOUS
123	Activated Charcoal Filter Actuator (A32m2) : (CLOSED)	Short or Open Circuit	INTERMITTENT
128	Left Rear Heater Core Temperature Sensor (B10/9)	Short Circuit	CONTINUOUS
129	Left Rear Heater Core Temperature Sensor (B10/9)	Short Circuit	INTERMITTENT
130	Left Rear Heater Core Temperature Sensor (B10/9)	Short or Open Circuit	CONTINUOUS
131	Left Rear Heater Core Temperature Sensor (B10/9)	Short or Open Circuit	INTERMITTENT
132	Right Rear Heater Core Temperature Sensor (B10/10)	Short Circuit	CONTINUOUS
133	Right Rear Heater Core Temperature Sensor (B10/10)	Short Circuit	INTERMITTENT
134	Right Rear Heater Core Temperature Sensor (B10/10)	Short or Open Circuit	CONTINUOUS
135	Right Rear Heater Core Temperature Sensor (B10/10)	Short or Open Circuit	INTERMITTENT
136	Left Temperature Selector wheel	Short Circuit	CONTINUOUS
137	Left Temperature Selector wheel	Short Circuit	INTERMITTENT
138	Left Temperature Selector wheel	Short or Open Circuit	CONTINUOUS
139	Left Temperature Selector wheel	Short or Open Circuit	INTERMITTENT
140	Right Temperature Selector wheel	Short Circuit	CONTINUOUS
141	Right Temperature Selector wheel	Short Circuit	INTERMITTENT
142	Right Temperature Selector wheel	Short or Open Circuit	CONTINUOUS
143	Right Temperature Selector wheel	Short or Open Circuit	INTERMITTENT
144	Rear Evaporator Temperature Sensor (B10/11)	Short Circuit	CONTINUOUS

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 140 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
145	Rear Evaporator Temperature Sensor (B10/11)	Short Circuit	INTERMITTENT
146	Rear Evaporator Temperature Sensor (B10/11)	Short or Open Circuit	CONTINUOUS
147	Rear Evaporator Temperature Sensor (B10/11)	Short or Open Circuit	INTERMITTENT
148	Coolant Circulation Pump (A31/1m1)	Short Circuit	CONTINUOUS
149	Coolant Circulation Pump (A31/1m1)	Short Circuit	INTERMITTENT
150	Coolant Circulation Pump (A31/1m1)	Short or Open Circuit	CONTINUOUS
151	Coolant Circulation Pump (A31/1m1)	Short or Open Circuit	INTERMITTENT
152	Coolant Circulation Pump (A31/1m1)	Overload	CONTINUOUS
153	Coolant Circulation Pump (A31/1m1)	Overload	INTERMITTENT
156	Left Duovalve (Water Valve) (A31/1y1)	Short Circuit	CONTINUOUS
157	Left Duovalve (Water Valve) (A31/1y1)	Short Circuit	INTERMITTENT
158	Left Duovalve (Water Valve) (A31/1y1)	Short or Open Circuit	CONTINUOUS
159	Left Duovalve (Water Valve) (A31/1y1)	Short or Open Circuit	INTERMITTENT
160	Right Duovalve (Water Valve) (A31/1y2)	Short Circuit	CONTINUOUS
161	Right Duovalve (Water Valve) (A31/1y2)	Short Circuit	INTERMITTENT
162	Right Duovalve (Water Valve) (A31/1y2)	Short or Open Circuit	CONTINUOUS
163	Right Duovalve (Water Valve) (A31/1y2)	Short or Open Circuit	INTERMITTENT
164	Rear Refrigerant Shut-Off Valve (Y67)	Short Circuit	CONTINUOUS
165	Rear Refrigerant Shut-Off Valve (Y67)	Short Circuit	INTERMITTENT
166	Rear Refrigerant Shut-Off Valve (Y67)	Short or Open Circuit	CONTINUOUS
167	Rear Refrigerant Shut-Off Valve (Y67)	Short or Open Circuit	INTERMITTENT
168	Rear Tunnel Flap Vacuum Valve (Y67/1)	Short Circuit	CONTINUOUS
169	Rear Tunnel Flap Vacuum Valve (Y67/1)	Short Circuit	INTERMITTENT
170	Rear Tunnel Flap Vacuum Valve (Y67/1)	Short or Open Circuit	CONTINUOUS
171	Rear Tunnel Flap Vacuum Valve (Y67/1)	Short or Open Circuit	INTERMITTENT

140 Chassis from 9/95

READING ACTUAL VALUES

1. IGNITION : Position 1
2. Press the AUTO button
3. Set both temperature selectors to 72 degrees F.
4. Press the REST button for more than 5 seconds.
5. The left display will alternately show the number "1" and the in-car temperature.
6. Press the AUTO button and the next component number and its value will be displayed.
7. Press the REST button to end the test program.

A/C SELF DIAGNOSTIC SYSTEMS

COMPONENT UNDER TEST

Number	Component
01	In-Car Temperature Sensor with Aspirator Blower (B10/4)
02	Outside Temperature Sensor (B10/5) 1996, (B14) as of 1997
03	Left Heater Core Temperature Sensor (B10/2)
04	Right Heater Core Temperature Sensor (B10/3)
05	Evaporator Temperature Sensor (B10/6)
06	Engine Coolant Temperature (ECT) Sensor (A/C) (B11/4)
07	Refrigerant Pressure in Bar
08	Refrigerant Temperature Sensor (B12/1)
10	Blower Control Voltage
11	Emissions (Refrigerant Leak) Sensor (B31)
12	Sun (Excessive Heat) Sensor (B32)
20	Control Current for Auxiliary Fan example : 7 = 7 mA
21	Engine RPM. example 00..99 (x100) = 9900
22	Vehicle Speed
23	PIN 58D example. 99.0 = 99% of Battery Voltage
24	Battery Voltage : 12.8 = 12,8 Volt
30	Left Rear Heater Core Temperature Sensor (B10/9)
31	Right Rear Heater Core Temperature sensor (B10/10)
32	Rear Evaporator Temperature Sensor (B10/11)
33	Rear Blower Control Voltage
34	Left Rear Temperature Sensor version
35	Right Rear Temperature Sensor
38	Rear A/C Controller Software Version Coding
39	Rear A/C Controller Hardware Version
40	Front A/C Controller Software Version Coding
41	Front A/C Controller Hardware Version
42	Variant code 1
43	Variant code 2

A/C SELF DIAGNOSTIC SYSTEMS

FAULT DIAGNOSIS

1. IGNITION : Position 1
2. Left Temperature selector wheel : HI
Right Temperature selector wheel : LO
3. Within 20 seconds press the REST and EC buttons simultaneously for more than 5 seconds.
4. The LED in the RECIRCULATE button flashes and "OFF" appears on the display.
5. Press the right AUTO button until all DTC's are displayed and recorded.
6. To erase all codes must be read out. Press both AUTO buttons simultaneously for more than 2 seconds. "d" will be displayed on the left and "FF" is displayed on the right. The erase can be canceled by pressing the AUTO button.
7. Reset temperature selector to normal setting.
8. IGNITION : OFF to end the test program.

FAULT CODES - 140 Chassis from 9/95	
DTC Readout	Description
026	CAN Bus Communication
226	In-Car Air Temperature Sensor (B10/4)
227	Outside Air Temperature Sensor (B10/5) to 1996, (B14) as of 1997
228	Left Heater Core Temperature Sensor (B10/2)
229	Right Heater Core Temperature Sensor (B10/3)
230	Evaporator Temperature Sensor (B10/6)
231	Engine Coolant Temperature Sensor (B11/4) DFI or IFI models Right Engine Coolant Temperature Sensor (B11/10) to 1996
232	Refrigerant Pressure Sensor (B12)
233	Refrigerant Temperature Sensor (B12/1)
234	Sun Sensor (B32)
235	Emissions (Refrigerant Leak) Sensor (B31)
241	Refrigerant Level
416	Coolant Circulation Pump (A31m1)
417	Left Duovalve (Water Valve) (Y21y1)
418	Right Duovalve (Water Valve) (Y21y2)
419	A/C Compressor Electromagnetic Clutch (A9k1)
420	Closed (Idle) Throttle Speed Increase
421	Pulse Module (N65)
422	Serial Interface Connection (K1) to Instrument Cluster (IC)
423	Switchover Valve Block (Y11)
424	Activated Charcoal Filter Actuator (A32m2) : OPEN
425	Activated Charcoal Filter Actuator (A32m2) : CLOSE
432	Maximum Heat

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 140 Chassis from 9/95	
DTC Readout	Description
459	Serial Interface Connection (K2) to Instrument Cluster (IC)
460	LED - Center Air Outlet "Warm"
461	LED - Center Air Outlet "Cold"
462	Wide Open Throttle (WOT) Position Signal - Diesel Engine Only

A/C SELF DIAGNOSTIC SYSTEMS

202 Chassis to 8/95

READING ACTUAL VALUES

1. IGNITION : Position 1
2. Set temperature selection to 72 degrees F (Press v and ^ simultaneously).
3. Press the AUTO button.
4. Press the REST button for more than 5 seconds.
5. The display will alternately show the number "01" and the in-car temperature or "LO" if there is an open circuit or "HI" if there is a short circuit.
6. Press the "Top Air Outlet" button to increase the component tested and the "Bottom Air Outlet" button to decrease the component number tested.
7. Press the REST button to end the test program.

COMPONENT UNDER TEST

Number	Component
01	In-Car Temperature Sensor with Aspirator Blower (B10/4)
02	Outside Temperature Sensor (B10/5)
03	Heater Core Temperature Sensor (B10/1)
05	Evaporator Temperature Sensor (B10/6)
06	Engine Coolant Temperature (ECT) Sensor (A/C) (B10/8)
07	Refrigerant Pressure in Bar
08	Blower Control Voltage
09	Software Status of A/C Pushbutton Control Module
15	Selected In-Car Temperature
20	Version Code
21	Engine Speed in RPM
22	A/C Compressor Speed in RPM
23	Vehicle Speed in km/h
50	Not Used
51	Number of Current Poly-V Belt Slip Recognitions
52	Number of Stored Poly-V Belt Slip Recognitions

FAULT DIAGNOSIS

1. IGNITION : Position 1
2. Press the V button until "LO" appears on the display.
3. Within 20 seconds press the REST and BLOWER buttons simultaneously for more then 2 seconds.
4. The LED in the RECIRCULATE button flashes and "dl R" appears on the display
5. Press the AUTO button until all DTC's are displayed and recorded. Continuous faults are displayed first. if no faults are stored, "En d" is displayed. Press AUTO again to retrieve intermittent faults. If no intermittent faults are stored, "En d" is displayed.

A/C SELF DIAGNOSTIC SYSTEMS

- 6 Press the AUTO button until "dE L" is displayed. To erase codes press both V and ^ simultaneously for at least 5 seconds. The display will show "---"
- 7 IGNITION : OFF to end the test program.

FAULT CODES - 202 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
01	No ERROR Stored	No Faults	
02	A/C Pushbutton Control Module (N22).	Power failure or damaged computer	
03	In-Car Temperature Sensor with Aspirator Blower (B10/4)	Short circuit	CONTINUOUS
04	In Car Temperature Sensor with Aspirator Blower (B10/4)	Short circuit	INTERMITTENT
05	In-Car Temperature Sensor with Aspirator Blower (B10/4)	Short or Open circuit	CONTINUOUS
06	In-Car Temperature Sensor with Aspirator Blower (B10/4)	Short or Open circuit	INTERMITTENT
07	Outside Air Temperature Sensor (B10/5)	Short circuit	CONTINUOUS
08	Outside Air Temperature Sensor (B10/5)	Short circuit	INTERMITTENT
09	Outside air Temperature Sensor (B10/5)	Short or Open circuit	CONTINUOUS
10	Outside air Temperature Sensor (B10/5)	Short or Open circuit	INTERMITTENT
11	Heater Core Temperature Sensor (B10/1)	Short circuit	CONTINUOUS
12	Heater Core Temperature Sensor (B10/1)	Short circuit	INTERMITTENT
13	Heater Core Temperature Sensor (B10/1)	Short or Open circuit	CONTINUOUS
14	Heater Core Temperature Sensor (B10/1)	Short or Open circuit	INTERMITTENT
19	Evaporator Temperature Sensor (B10/6)	Short circuit	CONTINUOUS
20	Evaporator Temperature Sensor (B10/6)	Short circuit	INTERMITTENT
21	Evaporator Temperature Sensor (B10/6)	Short or Open circuit	CONTINUOUS
22	Evaporator Temperature Sensor (B10/6)	Short or Open circuit	INTERMITTENT
23	Engine Coolant Temperature Sensor (ETC) (B10/8)	Short circuit	CONTINUOUS
24	Engine Coolant Temperature Sensor (ETC) (B10/8)	Short circuit	INTERMITTENT
25	Engine Coolant Temperature Sensor (ETC) (B10/8)	Short or Open circuit	CONTINUOUS
26	Engine Coolant Temperature Sensor (ETC) (B10/8)	Short or Open circuit	INTERMITTENT
27	Refrigerant Pressure Sensor (B12)	Short circuit	CONTINUOUS
28	Refrigerant Pressure Sensor (B12)	Short circuit	INTERMITTENT

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 202 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
29	Refrigerant Pressure Sensor (B12)	Short or Open circuit	CONTINUOUS
30	Refrigerant Pressure Sensor (B12)	Short or Open circuit	INTERMITTENT
31	A/C Compressor RPM Sensor (A9I1)	Bad Sensor	
32	Poly-V Belt Slip Recognition	Slipping Belt	
47	Auxiliary Coolant Pump (M13)	Unknown	
48	Auxiliary Coolant Pump (M13)	Short circuit	INTERMITTENT
49	Auxiliary Coolant Pump (M13)	Short or Open circuit	CONTINUOUS
50	Auxiliary Coolant Pump (M13)	Short or Open circuit	INTERMITTENT
51	Duovalve (Water Valve) (Y21)	Short circuit	CONTINUOUS
52	Duovalve (Water Valve) (Y21)	Short circuit	INTERMITTENT
53	Duovalve (Water Valve) (Y21)	Short or Open circuit	CONTINUOUS
54	Duovalve (Water Valve) (Y21)	Short or Open circuit	INTERMITTENT
59	A/C Compressor Electromagnetic Clutch (A9k1)	Short circuit	CONTINUOUS
60	A/C Compressor Electromagnetic Clutch (A9k1)	Short circuit	INTERMITTENT
61	A/C Compressor Electromagnetic Clutch (A9k1)	Short or Open circuit	CONTINUOUS
62	A/C Compressor Electromagnetic Clutch (A9k1)	Short or Open circuit	INTERMITTENT
63	Activation of Auxiliary Fan Stage 1	Short circuit	CONTINUOUS
64	Activation of Auxiliary Fan Stage 1	Short circuit	INTERMITTENT
65	Activation of Auxiliary Fan Stage 1	Short or Open circuit	CONTINUOUS
66	Activation of Auxiliary Fan Stage 1	Short or Open circuit	INTERMITTENT
67	Activation of Auxiliary Fan Stage 2	Short circuit	CONTINUOUS
68	Activation of Auxiliary Fan Stage 2	Short circuit	INTERMITTENT
69	Activation of Auxiliary Fan Stage 2	Short or Open circuit	CONTINUOUS
70	Activation of Auxiliary Fan Stage 2	Short or Open circuit	INTERMITTENT
71	Closed (Idle) Throttle Speed Increase	Short or Open circuit	CONTINUOUS
72	Closed (Idle) Throttle Speed Increase	Short or Open circuit	INTERMITTENT
73	Closed (Idle) Throttle Speed Increase	Short circuit	CONTINUOUS
74	Closed (Idle) Throttle Speed Increase	Short circuit	INTERMITTENT
75	Switchover Valve Block (Y11/3), Diverter Flap		CONTINUOUS

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 202 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
76	Switchover Valve Block (Y11/3), Diverter Flap		INTERMITTENT
77	Switchover Valve Block (Y11/3), Diverter Flap	Short or Open circuit	CONTINUOUS
78	Switchover Valve Block (Y11/3), Diverter Flap	Short or Open circuit	INTERMITTENT
79	Switchover Valve Block (Y11/3), Tempering Flap		CONTINUOUS
80	Switchover Valve Block (Y11/3), Tempering Flap		INTERMITTENT
81	Switchover Valve Block (Y11/3), Tempering Flap	Short or Open circuit	CONTINUOUS
82	Switchover Valve Block (Y11/3), Tempering Flap	Short or Open circuit	INTERMITTENT
83	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Long Stroke (80%)		CONTINUOUS
84	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Long Stroke (80%)		INTERMITTENT
85	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Long Stroke (80%)	Short or Open circuit	CONTINUOUS
86	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap	Short or Open circuit	INTERMITTENT
87	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Short Stroke (20%)		CONTINUOUS
88	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Short Stroke (20%)		INTERMITTENT
89	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Short Stroke (20%)	Short or Open circuit	CONTINUOUS
90	Switchover Valve Block (Y11/3), Fresh/Recirculating Air Flap Short Stroke (20%)	Short or Open circuit	INTERMITTENT
91	Switchover Valve Block (Y11/3), Defroster Flap Long Stroke (80%)		CONTINUOUS
92	Switchover Valve Block (Y11/3), Defroster Flap Long Stroke (80%)		INTERMITTENT

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 202 Chassis to 8/95			
DTC Readout	Description	Cause	Fault Type
93	Switchover Valve Block (Y11/3), Defroster Flap Long Stroke (80%)	Short or Open circuit	CONTINUOUS
94	Switchover Valve Block (Y11/3), Defroster Flap Long Stroke (80%)	Short or Open circuit	INTERMITTENT
95	Switchover Valve Block (Y11/3), Defroster Flap Short Stroke (20%)		CONTINUOUS
96	Switchover Valve Block (Y11/3), Defroster Flap Short Stroke (20%)		INTERMITTENT
97	Switchover Valve Block (Y11/3), Defroster Flap Short Stroke (20%)	Short or Open circuit	CONTINUOUS
98	Switchover Valve Block (Y11/3), Defroster Flap Short Stroke (20%)	Short or Open circuit	INTERMITTENT
99	Switchover Valve Block (Y11/3), Footwell Flap Long Stroke (80%)		CONTINUOUS
100	Switchover Valve Block (Y11/3), Footwell Flap Long Stroke (80%)		INTERMITTENT
101	Switchover Valve Block (Y11/3), Footwell Flap Long Stroke (80%)	Short or Open circuit	CONTINUOUS
102	Switchover Valve Block (Y11/3), Footwell Flap Long Stroke (80%)	Short or Open circuit	INTERMITTENT
103	Switchover Valve Block (Y11/3), Footwell Flap Short Stroke (20%)		CONTINUOUS
104	Switchover Valve Block (Y11/3), Footwell Flap Short Stroke (20%)		INTERMITTENT
105	Switchover Valve Block (Y11/3), Footwell Flap Short Stroke (20%)	Short or Open circuit	CONTINUOUS
106	Switchover Valve Block (Y11/3), Footwell Flap Short Stroke (20%)	Short or Open circuit	INTERMITTENT

A/C SELF DIAGNOSTIC SYSTEMS

202 Chassis from 9/95

READING ACTUAL VALUES

1. IGNITION : Position 1
2. Set temperature selector to 72 degrees F.
3. Press the REST button for more than 6 seconds.
4. The left display will alternately show the number "01" and the in-car temperature.
5. Press the FAN button and the next component number and its value will be displayed.
6. Press the REST button to end the test program.

COMPONENT UNDER TEST

Number	Component
01	In-Car Temperature Sensor with Aspirator Blower (B10/4)
02	Outside Temperature Sensor (B14)
03	Heater Core Temperature Sensor (B10/1)
05	Evaporator Temperature Sensor (B10/6)
06	Engine Coolant Temperature Sensor (ECT) (B11/4)
07	Refrigerant Pressure in Bar
08	Refrigerant Temperature Sensor (B12/1)
09	Not Used
10	Blower Control Voltage
20	Control Current for Auxiliary Fan exp. : 7 = 7 mA
21	Engine RPM. example 00..99 (x100) = 9900
22	Vehicle Speed
23	PIN 58D exp. 99.0 = 99% of Battery Voltage
24	Battery Voltage : 12.8 = 12,8 Volt
40	A/C Controller Software Version Coding
41	A/C Controller Hardware Version
42	Variant code 1
43	Variant code 2
50	Not Used
51	Not Used
52	Not Used
54	ON/OFF A/C Compressor emergency off signal from engine control module.

A/C SELF DIAGNOSTIC SYSTEMS

FAULT DIAGNOSIS

1. IGNITION : Position 1
2. Temperature selector wheel : "LO"
3. Within 20 seconds press the REST and DEFROST buttons simultaneously for more than 5 seconds.
4. The LED in the RECIRCULATE button flashes and "dl A" appears on the display.
5. Press the AUTO button until all DTC's are displayed and recorded.
6. The current faults are displayed first, then the intermittent faults. "END" is displayed when all codes have been displayed.
7. To erase codes press v and ^ simultaneously for more than 5 seconds. The display will then show "---". Press AUTO to cancel the erase.
8. IGNITION : OFF to end the test program.

FAULT CODES - 202 Chassis from 9/95	
DTC Readout	Description
026	CAN Bus Communication
226	In-Car Air Temperature Sensor (B10/4)
227	Outside Air Temperature Sensor (B14)
228	Heater Core Temperature Sensor (B10/1)
230	Evaporator Temperature Sensor (B10/6)
231	Engine Coolant Temperature Sensor (B11/4)
232	Refrigerant Pressure Sensor (B12)
233	Refrigerant Temperature Sensor (B12/1)
241	Refrigerant Level
416	Coolant Circulation Pump (A31m1)
417	Left Duovalve (Water Valve) (Y21y1)
418	Right Duovalve (Water Valve) (Y21y2)
419	A/C Compressor Electromagnetic Clutch (A9k1)
420	Closed (Idle) Throttle Speed Increase
421	Pulse Module (N65)
422	Serial Interface Connection (K1) to Instrument Cluster (IC)
451	Diverter Flap (Y11/3)
452	Blend Air Flap (Y11/3)
453	Fresh/Recirculated Air Flap (Y11/3) Long Stroke
454	Fresh/Recirculated Air Flap (Y11/3) Short Stroke
455	Defroster Outlet Flap (Y11/3) Long Stroke
456	Defroster Outlet Flap (Y11/3) Short Stroke
457	Footwell Flap (Y11/3) Long Stroke
458	Footwell Flap (Y11/3) Short Stroke
459	Serial Interface Connection (K2) to Instrument Cluster (IC)

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 202 Chassis from 9/95	
DTC Readout	Description
462	Wide Open Throttle (WOT) Position Signal - Diesel Engine Only

A/C SELF DIAGNOSTIC SYSTEMS

210 Chassis from 9/95

READING ACTUAL VALUES

1. IGNITION : Position 1
2. Press the AUTO button
3. Set both temperature selectors to 72 degrees F.
4. Press the REST button for more than 5 seconds.
5. The left display will alternately show the number "1" and the in-car temperature.
6. Press the AUTO button and the next component number and its value will be displayed.
7. Press the REST button to end the test program.

COMPONENT UNDER TEST

Number	Component
01	In-Car Temperature Sensor with Aspirator Blower (B10/4)
02	Outside Temperature Sensor (B14)
03	Left Heater Core Temperature Sensor (B10/1)
04	Right Heater Core Temperature Sensor (B10/1)
05	Evaporator Temperature Sensor (B10/6)
06	Engine Coolant Temperature (ECT) Sensor (A/C) (B1/4)
07	Refrigerant Pressure in Bar
08	Refrigerant Temperature Sensor (B12/1)
10	Blower Control Voltage
11	Emissions (Refrigerant Leak) Sensor (B31)
12	Sun (Excessive Heat) Sensor (B32)
20	Control Current for Auxiliary Fan exp. : 7 = 7 mA
21	Engine RPM. example 00..99 (x100) = 9900
22	Vehicle Speed
23	PIN 58D exp. 99.0 = 99% of Battery Voltage
24	Battery Voltage : 12.8 = 12,8 Volt
40	Software Version Encoded
41	Hardware Version

A/C SELF DIAGNOSTIC SYSTEMS

FAULT DIAGNOSIS

1. IGNITION : Position 1
2. Left Temperature selector wheel : HI
Right Temperature selector wheel : LO
3. Within 20 seconds press the REST and EC buttons simultaneously for more than 5 seconds.
4. The LED in the RECIRCULATE button flashes and "dl R" appears on the display
5. Press the right AUTO button until all DTC's are displayed and recorded.
6. To erase all codes must be read out. Press both AUTO buttons simultaneously for more than 2 seconds. "d" will be displayed on the left and "FF" is displayed on the right. The erase can be canceled by pressing the AUTO.
7. Reset temperature selector to normal setting.
8. IGNITION : OFF to end the test program.

FAULT CODES - 210 Chassis from 9/95	
DTC Readout	Description
026	CAN - Communication
226	In-Car Air Temperature Sensor (B10/4)
227	Outside Air Temperature Sensor (B14)
228	Left Heater Core Temperature Sensor (B10/1)
229	Right Heater Core Temperature Sensor (B10/1)
230	Evaporator Temperature Sensor (B10/6)
231	Engine Coolant Temperature Sensor (B10/8)
232	Refrigerant Pressure Sensor (B12)
233	Refrigerant Temperature Sensor (B12/1)
234	Sun Sensor (B32)
235	Emissions (Refrigerant Leak) Sensor (B31)
241	Refrigerant Level
416	Coolant Circulation Pump (M13)
417	Left Duovalve (Water Valve) (Y21y1)
418	Right Duovalve (Water Valve) (Y21y2)
419	A/C Compressor Electromagnetic Clutch (A9k1)
420	Closed (Idle) Throttle Speed Increase
421	Pulse Module
422	Serial Interface Connection (K1) to Instrument Cluster (IC)
423	Switchover Valve Block (Y11)
424	Activated Charcoal Filter Actuator (A32m2) : OPEN
425	Activated Charcoal Filter Actuator (A32m2) : CLOSE
432	Maximum Heat
459	Serial Interface Connection (K2) to Instrument Cluster (IC)

A/C SELF DIAGNOSTIC SYSTEMS

FAULT CODES - 210 Chassis from 9/95	
DTC Readout	Description
462	Wide Open Throttle (WOT) Position Signal - Diesel Engine Only

Supplemental Restraint System (SRS)

Models	Model Years
107 126 201 140	1988-1993

Connect wires of Scanner as follows

Scanner	Data Link Connector 8-pin
Yellow	Socket 6
Black	Socket 1
Red	Battery (+)

Scanner	Data link connector 38-pin
Yellow	Socket 30
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	SRS Control unit
3	SRS - Driver air bag
4	Front passenger Airbag
5	Driver seat belt buckle
6	Front passenger seat belt buckle
7	Airbag resistor, Front passenger
8	Circuit 15R, Voltage supply
9	Waning lamp faulty
10	Control unit was activated

Supplemental Restraint System (SRS)

Models	Model Years
124 129	1990-93

Connect wires of Scanner as follows (124, 129.061/066)

Scanner	Data Link Connector 8 or 16-pin
Yellow	Socket 6
Black	Socket 1
Red	Battery (+)

Connect wires of Scanner as follows (129.067/076)

Scanner	Data link connector 38-pin
Yellow	Socket 30
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	SRS Control unit self test failure
3	Driver Airbag squib
4	Front passenger Airbag squib
5	Airbag/ETR, Driver seat belt buckle switch
6	Front passenger seat belt buckle switch (ETR)
7	Front passenger Airbag resistor
8	Voltage supply interrupted
9	SRS Warning Lamp (with flashing SRS warning lamp Impulse counter scan tool button held too little time to read out the DTC memory or too long to erase DTC codes. Reread codes.)
10	SRS Control unit activated.

Automatic-engaged Four-wheel Drive (4MATIC)

Models	Model Years
124.230 124.290	1990-93

Connect wires of Scanner as follows

Scanner	Data Link Connector 8-pin
Yellow	Socket 5
Black	Socket 1
Red	Battery (+)

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	4MATIC control module
3	Brake light switch
4	Left front axle vehicle speed sensor
5	Right front axle vehicle speed sensor
6	Rear speed sensor signal
7	All 3 vehicle speed sensors
8	Over volts protection relay, front axle train valve
9	Over volts protection relay, central differential lock valve
10	Over volts protection relay, stop lamp switch, Rear axle differential lock valve
11	Steering angle sensor signal

Electronic Automatic Transmission Control 5-Speed (ETC) with CFI

Models	Model Years
129	1990-93

Connect wires of Scanner as follows

Scanner	Data Link Connector 16-pin
Yellow	Socket 13
Black	Socket 1
Red	Socket 16

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Not used
3	Engine load signal interrupted
4	Throttle valve position switch (potentiometer) interrupted
5	Engine speed signal (RPM) interrupted
6	Vehicle speed sensor interrupted
7	Output fault in TCM (N15/1) or fault in the valve block control valve circuit (Y3/1y2)
8	Transmission control module (TCM) (N15/1)
9	Valve control valve block (Y3/1y2)
10	Valve control valve block (Y3/1y2), short circuit

Electronic Automatic Transmission Control 5-Speed (ETC) with LH-SFI

Models	Model Years
129 140	1990-93

Connect wires of Scanner as follows

Scanner	Data Link Connector 38-pin
Yellow	Socket 10
Black	Socket 1
Red	Socket 3

FAULT CODE TABLE

DTC Readout	Possible Cause of Failure
1	No fault found
2	Engine control module (N3/4) does not match TCM
3	Transmission overload protection switch 4th/5th gear defective
4	CAN data line from EA/CC/ISC control module (N4/1) signal distorted
5	CAN data line from DI control module (N1/3) or HFM control module signal distorted
6	CAN data line signal distorted
7	Valve control valve block (Y3/1y2), open circuit or TCM (N15/1) defective
8	Automatic Transmission Control Module (TCM) (N15/1) defective
9	Valve control valve block (Y3/1y2)
10	Valve control valve block (Y3/1y2), short circuit

Active, Stored and Registered Fault Codes

Active Faults:

These faults are detected while the car is running at idle or speed and indicate components that are failing. These codes cannot be erased, and are only meaningful with the ignition on and the engine running. Codes found in this system with the key ON with engine off have no meaning. Components not present on the vehicle may be flagged as failing by the cars internal diagnostics due to the nature of the cars computer. This is particularly true in C-Class (W202) cars.

Stored or Permanent Faults:

Recorded in the permanent memory of the cars system controller and are the main cause of MIL (Check Engine Light) illumination. These codes can be erased.

Registered Faults:

Stored in the temporary memory of the cars system controller. This temporary memory records the number of times a component fails. When a certain number of failures have occurred the fault is moved to permanent storage and the Check Engine Light (MIL) will be illuminated. On cars equipped with fault registers, the Check Engine Light may stay on after the stored or permanent fault has been erased if another occurrence of the fault has happened since the permanent fault was stored. To extinguish the light, erase the stored and registered faults. These codes can be erased.

Check Engine Light

Mercedes S(140), SL(129), E(210) and C(202) class have multiple systems which can turn on a Check Engine Light. All related systems must be tested for codes and repaired before the code reader light will extinguish.

129 LH	LH (pin 4 & 5) EA/CC/ISC (pin 7), BM (pin 8), DI (pin 17 & 18) and DM (pin19)
140 LH	LH (pin 4) EA/CC/ISC (pin 7), BM (pin8), DI (kpin 17) and DM (pin 19)
124 HFM	HFM (pin 8) EA/CC/ISC (pin 14), and DM (pin 3)
140 HFM	HFM (pin 4) EA/CC/ISC (pin 7), BM (pin 8), DI (pin 17) and DM (pin 19)
202 HFM	HFM (pin 4) EA/CC/ISC (pin 7) (except C220) and DM (pin 19)
210 HFM	HFM (pin 4) EA/CC/ISC (pin 7), BM (pin 8), DI (pin 17) and DM (pin 19)

Mercedes System With Abbreviations

SYSTEM	DESCRIPTION	ANALOG	DIGITAL
A/C	Air Conditioning / Heating	1988-93	
ABS	Anti-lock Brake System	1992-95	1992-97
ADS	Automatic Damping System (Suspension)	1991-93	
ASD	Automatic Locking Differential	1991-93	
ASR	Acceleration Slip Regulation	1992-95	1992-97
ATA	Anti-theft Alarm System	1990-95	
BM	Base Module (Master ECU Controller)	1992-95	
CC	Cruise Control (Tempomat)	1992-95	
CF	Convenience Feature	1992-95	
CFI	Continuous Fuel Injection (CIS-E)	1988-92	
CST	Cabriolet Soft Top	1993-95	
DI	Distributor Ignition System	1990-93	
DM (USA)	Diagnostic Module (Emissions)	1990-93	1991-98
EA	Electronic Accelerator	1992-95	
EDS	Electronic Diesel System	1990-93	
ELR	Diesel Electronic Idle Speed Control	1989	
HFM-SFI	Hot Film Engine Management	1993-95	1994-97
IRCL	Infrared Remote Central Locking	1990-95	
ISC	Idle Speed Control	1992-95	
KE	Continuous Injection System (CIS-E)	1987-92	
LH-SFI	LH Sequential Fuel Management	1990-93	1991-93
MAS	Engine System Control Module (Mas)	1990-93	
ME-SFI	Motor Electronic Injection		1996-98
PMS		1993-95	1994-97
PSE	Pneumatic System Equipment	1992-95	
RB	Roll Bar Control	1990-95	
RST	Roadster Soft Top	1992-95	
SPS	Speed-sensitive Power Steering	1992-95	
SRS	Supplemental Restraint System (Airbag)	1988-93	1993-98

TRANSMISSION MODULE OB15-12

4MATIC	4 Wheel Drive Transmission Control	1990-93	1993-95
ETC/EGS	Electronic Transmission Control	1990-93	1993-97

Mercedes Acronyms

<u>ACRONYM</u>	<u>DESCRIPTION</u>
4MATIC	4 Wheel Drive Transmission Control
A/C (Automatic)*	Air Conditioning (Automatic)
A/C (Tempmatic)*	Air Conditioning (Tempmatic)
AB	Supplemental Restraint System (Airbag)
ABS	Anti-lock Brake System
ADM	Automatic Dimming Inside Rearview Mirror
ADS	Automatic Damping System (Suspension)
AIR	Secondary Air Injection
AP	Accelerator Pedal
AS	Antenna System
ASD	Automatic Locking Differential
ASR	Acceleration Slip Regulation
AT	Automatic Transmission
ATA*	Anti-theft Alarm System
BA	Backup Assist
BARO	Barometric Pressure
BCAPC	Barometric Pressure-charge Air Pressure Compensation
BM*	Base Module (Master ECU Controller)
BPC	Barometric Pressure Compensation
CA	Closing Assist
CAN	Controller Area Network
CC*	Cruise Control (Tempomat)
CDC	Cd Changer
CF	Convenience Feature
CFI	Continuous Fuel Injection
CKA	Crank Angle
CKP	Crankshaft Position
CL	Central Locking
CLUS	Instrument Cluster
CMP	Camshaft Position
CST*	Cabriolet Soft Top
CTEL	Cellular Telephone
CTP	Closed Throttle Position (Idle)

Mercedes Acronyms

DFI*	Electronic Distributor-type Fuel Injection
DI*	Distributor Ignition System
DM (USA)	Diagnostic Module (Emissions)
DTC	Diagnostic Trouble Code
EA*	Electronic Accelerator
EAG	Electronic Automatic Transmission Control
EATC*	Electronic Automatic Transmission Control
ECL	Engine Coolant Level
ECT	Engine Coolant Temperature
EDC	Electronic Diesel Control
EDR	Electronic Diesel Regulation
EDS	Electronic Diesel System
EDW*	Anti-theft Alarm System
EFP*	Electronic Accelerator
EGR	Exhaust Gas Recirculation
EGS	Electronic Transmission Control
EIFI	Electronic In-line Fuel Injection
EMSC	Electric Mirror, Steering Column Adjustment, Heated Mirrors
ERE*	Electronic In-line Fuel System
ESA	Electric Seat Adjustment
ESC	Electric Steering Column Adjustment
ESCM	Engine System Control Module
ESP	Electronic Stability Program
ETC	Electronic Transmission Control
ETR	Emergency Tensioning Retractor
ETS	Electronic Traction System
EVAP	Evaporative Emission Control System
EVE	Electronic Distributor-type Fuel Injection
EZL	Distributor Ignition System
FAN	Fanfare Horns
FFS	Frame Floor System
FP	Fuel Pump
GM	Base Module (Master ECU Controller)
HAU	Automatic Heater

Mercedes Acronyms

HCS	Headlamp Cleaning System
HEAT	Automatic Heater
HFM	Hot Film Engine Management
HFS	Hands Free System
HHT	Hand Held Tester
HORN	Horn Signal System
HS	Heated Seats
IAT	Intake Air Temperature
IC	Instrument Cluster
IDC	In Dash Controller
IFI*	Electronic In-line Fuel System(diesel)
IFZ	Infrared Remote Central Locking (IRCL)
IRCL*	Infrared Remote Central Locking
ISC*	Idle Speed Control
KE	Continuous Injection System (CIS)
KFB	Convenience Feature
KI	Instrument Cluster
KLA	Air Conditioning
KS	Knock Sensor
KSS	Knock Sensor System
LH-SFI	LH Sequential Fuel Management Bank 1 (1-6 Cylinders)
LH2-SFI	LH Sequential Fuel Management Bank 2 (7-12 Cylinders)
LLR	Cruise Control
LS	Loudspeaker System
MAF	Mass Air Flow
MAP	Manifold Absolute Pressure
ME	Motor Electronics
MIL	Malfunction Indicator Lamp (Check Engine)
MT	Manual Transmission
MVA	Manifold Vacuum Assist
O2S	Oxygen (O2) Sensor
OBD	On-board Diagnostics
OC	Oxidation Catalytic Convertor
OSB	Orthopedic Seat Backrest

Mercedes Acronyms

PL	Power Lock
PML	Speed-sensitive Power Steering
PMP	Partial Intake Manifold Preheater
PNP	Park/neutral Position
PS	Power Steering
PSE	Pneumatic System Equipment
PTS	Parktronic System
RB*	Roll Bar Control
RD	Radio
REST	Residual Engine Heat Utilization
RHR	Retractable Rear Head Restraints
RHS	Rear Heated Seats
RPM	Revolutions per Minute (Engine Speed)
RST*	Roadster Soft Top
RTG	Retractable Trunk Lid Grip
RV	Roadster Soft Top
SBE	Seat Belt Extender
SLO	Starter Lock-out
SMS	Service Microfiche System
SPS	Speed-sensitive Power Steering
SRS	Supplemental Restraint System (Airbag)
STH	Stationary Heater
TB	Throttle Body
TC	Turbo Charger
TCM	Transmission Control Module
TD	Speed Signal (Time Division) (EZL)
TDC	Top Dead Center
TIC	Transistorized Ignition Control
TN	Speed Signal (EZL/AKR)
TRAP	Trap Oxidizer
TS	Towing Sensor
TVV	Tank Ventilation Valve
TWC	Three Way Catalytic Convertor
ÜRB	Roll Bar Control
VAF	Volume Air Flow
VSS	Vehicle Speed Signal
WOT	Wide Open Throttle (Full Load)

Mercedes Benz USA Model Identifier

MODEL	YEARS	CHASSIS	ENGINE	TRANSMISSION	STEERING
190C	1961-65	110	121.924	GA190C	LO 1
190D 2.2	1984-85	201.122	601.921	717.4/722.4	LO75Z/68
190D 2.5	1986-89	201.126	602.911	717.4/722.4	LS68
190D 2.5 TURBO	1987-	201.128	602.961	722.4	LS68
190DC	1961-65	110	621.912	GA190DC	LO 1
190E 2.3	1982-86	201.024	102.961 K	717.4/722.4	LS68
190E 2.3	1982-86	201.024	102.985 KE	717.4/722.4	LS68
190E 2.3	1987-93	201.028	102.985 KE	717.413/722.408	765.903
190E 2.3-16v	1984-87	201.034	102.983 KE	717.4/722.4	765.9
190E 2.5-16v	1988-93	201E25	102.983 KE	717.4/722.4	765.9
190E 2.6	1986-93	201.029	103.942 KE	717.432/722.409	765.903
200	1965-68	110	121.940	GA190C	LO 1
200CE	1990-93	124.021	102 KE	717.4/722.400	765.905
200D	1965-68	110	621.918	GA190DC	LO 1
200E	1993	124.021	102.963 KE	717.4/722.400	765.905
200TE	1988-92	124.021	102. KE	717.4/722.400	765.905
220	1967-72	115.010	115.920	722.1	L1Z/LS75/765.706
220B	1959-65	111	180.940	GA220B	LO 1
220D	1967-72	115.110	615.912	722.2	L1Z/LS75/765.706
220SB	1959-65	111	180.941	GA220SB	LO 1
220SE Cabriolet	1951-65	111.023	127.984	GA220SEB	LO 1
220SE Coupe	1959-65	111.021	127.984	GA220SEB	LO 1
220SEB	1959-65	111	127.982	GA220SEB	LO 1
220SEB/C	1951-65	111	127.984	GA220SEB	LO 1
230		123.023	115.954	722.1	765.706
230	1965-66	110	180.945	GA230	LO 1
230	1967-72	114.015	180.954	722.2	L1Z/LS75/765.706
230	1973-78	115.017	115.951	716/722.1	L1Z/765.706
230S	1965-68	111	180.945	GA220B,SB	LO 1

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MODEL	YEARS	CHASSIS	ENGINE	TRANSMISSION	STEERING
230SL	1963-68	113.042	127.981	GA230SL	LO 1
240D	1973-75	115.117	616.916	716/722.1	L1Z
240D	1976-85	123.123	616.912	716.0.,2/722.1	L1Z/765.706
250	1967-69	114.010	114.920	722.2	L1Z/LS75/765.706
250	1970-75	114.011	130.923	722.2	L1Z/LS75/765.706
250C	1969-75	114.023	130.923	722.2	L1Z/LS75/765.706
250D	1986-93	124.125	602.912	722.414	765.904
250S	1963-68	108	108.920	GA230SL	LO 1
250SE	1965-68	108	129.980	GA230SL	LO 1
250SE Cabriolet	1965-68	111.023	129.980	GA230SL	LO 1
250SE Coupe	1965-68	111.021	129.980	GA230SL	LO 1
250SL		113.043	129.982		LO 1
260E	1985-88	124.026	103.940 KE	717.4/722.4	LSC068/O068
280	1972-76	114.060	110.921	722.1	L1Z/LS75/765.706
280C	1972-76	114.073	110.921	716/717/722.1	L1Z/LS75/765.706
280CE	1977-85	123.053	110.984 K	716.0/722.1	765.706
280E	1976-85	123.033	110.984 K	716.0/722.1	765.706
280S	1967-72	108.016	130.920	722.2	L1K/LS75
280S	1972-80	116.020	110.922	716/722.1	765.706
280SE	1967-72	108.018	130.980	722.2	L1K/LS75
280SE	1972-80	116.024	110.985	716.0/722.1	765.706
280SE 3.5 Cabriolet		111.025	116.980		LO 1
280SE 3.5 Coupe		111.024	116.980		LO 1
280SE 4.5	1971-72	108.067	117.984	722.0	LS75
280SE Cabriolet		111.025	130.980		LO 1
280SE Coupe		111.024	130.980		LO 1
280SEL		108.019	130.980	722.2	L1K/LS75
280SEL 4.5	1971-72	108.068	117.984	722.0	LS75
280SL		113.044	130.983		LO 1
300CD	1977-80	123.150	617.912	722.1	765.706
300CD Turbo	1982-85	123.153	617.952	722.3/.4	765.706
300CE	1987-89	124.050	103.983 KE	717.4/722.3	LS68
300CE	1990-92	124.051	104.980 KE	717.4/722.3	LSH068/C068
300CE	1993-96	124.052	104.992 HFM	717.4/722.369	765.908
300CE Cabriolet	1993-96	124.066	104.992 HFM	717.4/722.369	765.904
300D	1975	115.114	617.910	716/722.1	L1Z
300D	1976-85	123.130	617.912	716.0/722.1	765.706

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MODEL	YEARS	CHASSIS	ENGINE	TRANSMISSION	STEERING
300D 2.5Turbo	1988-93	124.128	602.962	717.4/722.4	765
300D Turbo	1982-85	123.130	617.952	722.3/4	765.706
300D Turbo	1985-	124.133	603.960	722.3	LS68
300E	1985-92	124.030	103.983 KE	717.4/722.3	765
300E	1993-96	124.032	104.992 HFM	722.369	765.904
300E 2.6	1985-92	124.026	103.940 KE	717.4/722.4	765
300E 2.8	1985-93	124.028	103.942 KE	717.4/722.4	765.904
300E 4MATIC	1987-93	124.230	103.985 KE	717.4/722.342	765.906
300SD Turbo	1978-80	116.120	617.950	722.1	765.706
300SD Turbo	1981-85	126.120	617.951	722.3	765.706
300SD Turbo	1992-93	140.134	603.971	722.367	765.940
300SDL Turbo	1985-88	126.125	603.961	722.3	765.706
300SE	1961-65	112	189	GA300SE,-E,-EH	DB
300SE	1985-92	126.024	103.981 KE	717.4/722.351	765.706
300SE	1992-93	140.032	104.990 KE	722.502	765.940
300SE/C	1961-67	112	189	GA300SE,-E,-EH	DB
300SEB	1965-72	108	189	GA300SE-EH	DB
300SEL		109.016	130.981		
300SEL	1966-68	109	189	GA300SE-EH	DB
300SEL	1985-92	126.025	103.981 KE	717.431/722.319	765.706
300SEL 3.5	1969-72	109.056	116.981	722.2	LS75
300SEL 4.5	1971-72	109.057	117.981	722.0	LS75
300SEL 6.3	1967-72	109.018	100.981	K4A050	LS75
300SL	1988-93	129.061	103 KE	722.500	765.907
300SL-24	1990-92	129.061	104.981 KE	722.500	765.907
300TD	1978-85	123.190	617.912	716.0/722.1	765.706
300TD Turbo	1981-84	123.193	617.952	722.3/4	765.706
300TD Turbo	1985-	124.193	603.960	722.3	LS68
300TE	1985-93	124.090/.092	103.983 KE	717.4/722.369	765.904
300TE 4MATIC	1987-93	124.290	103.985 KE	717.4/722.342	765.906
350SD Turbo	1989-6/91	126.134	603.970	722.361	765.706
350SDL Turbo	1989-6/91	126.135	603.970	722.361	765.706
380SE	1985-89	126.032	116.963	722.3	765.706
380SEC	1985-	126.043	116.983	722.3	765.706
380SEL	1980-84	126.033	116.961	722.3	765.706
380SEL	1985-89	126.033	116.963	722.3	765.706
380SL	1980-89	107.045	116.960	722.3	765.706

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380SLC	1980-89	107.025	116.960	722.3	765.706
400E	1990-93	124.034	119.975 LH	722.354	765.921
400SE	7/91-	140.042	119.971 LH	722.3	
400SEL	1992-93	140.043	119.971 LH	722.366	765.940
420SEL	1985-6/91	126.035	116.965 KE	722.351	765.706
450SE	1972-73	116.032	117.983	722.0	765.706
450SE	1974-80	116.032	117.986	722.0	765.706
450SEL	1972-73	116.033	117.983	722.0	765.706
450SEL	1974-80	116.033	117.986	722.0	765.706
450SL	1971-74	107.044	117.982	722.0	765.706
450SL	1975-80	107.044	117.985	722.0	765.706
450SLC	1971-74	107.024	117.982	722.0	765.706
450SLC	1975-80	107.024	117.985	722.0	765.706
500E	1993	124.036	119.974 LH	722.365	765.921
500SEC	-1992	126.044	117.965 KE	722.356	765.706
500SEC	1992-93	140.070	119.970 LH	722.370	765.940
500SEL	1985-6/91	126.037	117.963 KA	722.311	765.706
500SEL	1992-93	140.051	119.970 LH	722.370	765.940
500SL	1990-92	129.066	119.960 KE	722.3	LSG068
500SL	1992-93	129.067	119.972 LH	722.364	765.907
560SEC	1985-	126.045	117.968 KE	722.350	765.706
560SEL	1985-	126.039	117.968 KE	722.350	765.706
6.9	1975	116.036	100.985	722.0	765.706
600	1964-	100.012	100.980	K4A050	LS75
600	1964-	100	100	GA600	DB
600	1990-93	129.076	120.981 LH	722.3	LSG068
600 Long 4 Door	1964-	100.014	100.980	K4A050	LS75
600 Long 6 Door	1964-	100.016	100.980	K4A050	LS75
600SEC	1992-93	140.076	120.980 LH	722.362	765.940
600SEL	1992-93	140.057	120.980 LH	722.362	765.940
600SL	1990-93	129.076	120.981 LH	722.362	765.907
C180	1994-	202.018	111.920 PMS	717.416/722.421	765.950
C200D	1994-	202.120	601.913	717.416/722.425	765.950
C220	1994-96	202.022	111.961 HFM	722.423	765.950
C220D	1994	202.121	604.910 EVE	717.416/722.426	765.950
C230K	1997-99	202.023	111.974 ME 2.1	722.600	765.950
C250D	1994	202.125	605.910 ERE	717.417/722.427	765.950

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MODEL	YEARS	CHASSIS	ENGINE	TRANSMISSION	STEERING
C280	1994-96	202.028	104.941 HFM	722.424	765.950
C280	1997-	202.028	104.941 HFM	722.604	765.950/765.922
C280	1998-99	202.029	112.920 ME-2.0	722.606	765.950
C36AMG	1996-97	202.028	104.941 HFM	722.604	765.922
C36AMG	1996-96	202.028	104.941 HFM	722.424	765.922
C43 AMG	1998-99	202.033	113.944 ME 2.0	722.631	765.
CL500 (Coupe)	1996-97	140.070	119.980 ME 1.0	722.620	765.940
CL500 S500 (Coupe)	1996-97	140.070	119.970 ME 1.0	722.620	765.940
CL600 S600	1996-98	140.076	120.982 ME	722.621	765.940
CLK320 (COUPE)	1998	208.365	112.940 ME 2.0	722.607	765.952
E250D	1992-94	124D25	602		
E250D Turbo	1988-95	124D25	602		
E280	1994-95	124.028	104.942 HFM	722.433/722.504	765.904
E300	1994-95	124.230	103.985 KE	722.342	765.906
E300 TURBO DIESEL	1998	210.025	606.982	722.608	768.002
E300D	1994-95	124.131	606.910	722.4/722.435	765.904
E300D TURBO	1994-95	124.133	603.960	722.4/722.317	765.904
E300D	1997-99	210.020	606.912	722.600	768.003
E300TD TURBO	1994-95	124.193	603.960	722.4/722.317	765.904
E320	1994-95	124.032/052	104.992 HFM	722.369	765.904
E320	1996-97	210.055	104.995 HFM	722.605	768.903
E320	1998-99	210.065/082/265/282	112.941 ME 2.0	722.607/664	768.002/006
E420	1994-95	124.034	119.975 LH	722.366	765.921
E420	1996-97	210.072	119.985 ME 1.0	722.625	768.003
E430	1998-99	210.070	113.940 ME 2.0	722.623	768.002
E500	1994-95	124.036	119.974 LH	722.370	765.921
E55 AMG	1999	210	113? ME 2.0	722.6	
ML320	1998-99	163.154	112.942	722.662	ZF.970.402
ML430	1999	163.1	113. ME 2.0	722.6	ZF.970.402
S320	1997-98	140.033 (Long)	104.994 HFM	722.605	765.940
S320	1997-98	140.032	104.994 HFM	722.605	765.940
S320	1994-96	140.032	104.994 HFM	722.508	765.940
S320	1996	140.033 (Long)	104.994 HFM	722.508	765.940
S350 Turbo Diesel	1994-95	140.134	603.971	722.367	765.940
S420	1994-95	140.043	119.971 LH	722.366	765.940
S420	1996-97	140.043	119.981 ME 1.0	722.622	765.940
S430	1998	208.	113. ME 2.0	722.6	

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MODEL	YEARS	CHASSIS	ENGINE	TRANSMISSION	STEERING
S500 (Coupe)	1994-95	140.070	119.970 LH	722.3	765.940
S500	1994-95	140.051	119.970 LH	722.370	765.940
S500	1996-98	140.051	119.980 ME 1.0	722.620	765.940
S600	1996-97	140.057	120.982 ME 1.0	722.621	765.940
S600	1994-95	140.057	120.980 LH	722.362	765.940
SL320	1994-96	129.063	104.991 HFM	722.507	765.907
SL320	1997	129.063	104.991 HFM	722.605	765.907
SL500	1994-95	129.067	119.972 LH	722.364	765.907
SL500	1996-99	129.067	119.982 ME 1.0	722.620	765.907
SL600	1994-95	129.076	120.981 LH	722.362	765.907
SL600	1996-98	129.076	120.983 ME 1.0	722.621	765.907
SLK230	1998-99	170.447	111.973 ME 2.1	722.605	765.951
SLK430	1999	170.4	113. ME 2.0	722.6	

Mercedes production is generally from July to June. This means the 1994 model year has production dates of 7/93 - 6/94.

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