1.9L - Engine - Turbo Diesel Fuel Injection (DFI)/66KW, code ALH, (with automatic transmission),
from September 1998

Relay location on the thirteenfold auxiliary relay panel, above relay panel:

- 10 Glow Plug Relay (180)
- 12 Power Supply (Terminal 30, B+) Relay (109)

Relay panel:

- 2 Load Reduction Relay (18)

Note: Number in parentheses indicates production control number stamped on relay housing.

Fuse colors:

- 30 A - green
- 25 A - white
- 20 A - yellow
- 15 A - blue
- 10 A - red
- 7.5 A - brown
- 5 A - beige
- 3 A - violet
No. 5/2

Wiring diagram

Generator (GEN)

ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = lilac
ge = yellow

A - Battery
C - Generator (GEN)
C1 - Voltage Regulator (VR)
D - Ignition/Starter Switch
J59 - Load Reduction Relay
S162 - Fuse -1- (30) in fuse bracket/battery
S163 - Fuse -2- (30) in fuse bracket/battery
S176 - Fuse -4- (30) in fuse bracket/battery
S177 - Fuse -5- (30) in fuse bracket/battery
T2e - Double Connector, near starter (vehicles without air conditioning)
T4 - 4-Pin Connector, near starter (vehicles with air conditioning only)
81 - Ground connection -1-, in instrument panel wiring harness

- Threaded connection -1- (30) on the relay plate
- Threaded connection -2- (30) on the relay plate
- Plus connection (30), in instrument panel wiring harness
- Plus connector -4- (30), in instrument panel wiring harness

81 - Ground connection -1-, in instrument panel wiring harness
A - Battery
B - Starter
J 52 - Glow Plug Relay, on the thirteenfold auxiliary relay panel, above relay panel
J 226 - Park/Neutral Position (PNP) Relay, on the thirteenfold auxiliary relay panel, above relay panel
Q6 - Glow plugs (engine)
S5 - Fuse 5 in fuse holder
S7 - Fuse 7 in fuse holder
T2a - Double Connector, in engine compartment, in wiring duct, left
T6 - 6-Pin Connector, brown, in protective housing for connectors, in plenum chamber, left

- Ground connection -2-, in instrument panel wiring harness
- Wire connection (15a), in instrument panel wiring harness
- Plus connector -1- (15) in wiring harness interior

ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = lilac
ge = yellow
Diesel direct fuel injection (DFI) engine control module (ECM), power supply (terminal 30, B+) relay

D - Ignition/Starter Switch

J 248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center

J 317 - Power Supply (Terminal 30, B+) Relay, on the thirteendfold auxiliary relay panel, above relay panel

S229 - Fuse 29 in fuse holder
S232 - Fuse 32 in fuse holder
S243 - Fuse 43 in fuse holder

T6 - 6-Pin Connector, brown, in protective housing for connectors, in plenum chamber, left

T10 - 10-Pin Connector, orange, in protective housing for connectors, in plenum chamber, left

T10a - 10-Pin Connector, in engine compartment, in wiring duct, left

T10e - 10-Pin Connector, black, in protective housing for connectors, in plenum chamber, left
T10h - 10-Pin Connector, blue, in protective housing for connectors, in plenum chamber, left

T80 - Connector, 80 point

A2 - Plus connection (15), in instrument panel wiring harness
A71 - Connector (86), in instrument panel wiring harness
A104 - Plus connector -2- (15), in instrument panel wiring harness
B168 - Connection (86) in passenger compartment wiring harness
F8 - Kick Down Switch
F60 - Closed Throttle Position (CTP) Switch
G71 - Manifold Absolute Pressure (MAP) Sensor
G72 - Intake Air Temperature (IAT) Sensor
G79 - Throttle Position (TP) Sensor
J 248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
T6a - 6-Pin Connector, behind instrument panel, left
T10 - 10-Pin Connector, orange, in protective housing for connectors, in plenum chamber, left
T10h - 10-Pin Connector, blue, in protective housing for connectors, in plenum chamber, left
T80 - Connector, 80 point

 principalmente conexión (sensor ground), in engine compartment wiring harness

Edition 12/98
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Diesel direct fuel injection (DFI) engine control module (ECM), closed throttle position (CTP) switch, intake air temperature (IAT) sensor, manifold absolute pressure (MAP) sensor
Diesel direct fuel injection (DFI) engine control module (ECM), engine speed (RPM) sensor, engine coolant temperature (ECT) sensor, needle lift sensor

G2 - Engine Coolant Temperature (ECT) Sensor
G28 - Engine Speed (RPM) Sensor
G62 - Engine Coolant Temperature (ECT) Sensor
G80 - Needle Lift Sensor
J 248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
T2b - Double Connector, in engine compartment, front
T3 - 3-Pin Connector, in engine compartment, front
T10a - 10-Pin Connector, in engine compartment, in wiring duct, left
T10d - 10-Pin Connector, green, in protective housing for connectors, in plenum chamber, left
T80 - Connector, 80 point

Edition 12/98
USA.5102.01.21
J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center

G70 - Mass Air Flow (MAF) Sensor
G81 - Fuel Temperature Sensor
G149 - Modulating Piston Displacement Sensor
J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
N146 - Quantity Adjuster
T10f - 10-Pin Connector, in engine compartment, front
T80 - Connector, 80 point

F25 - Wire connection -1-, in Diesel Direct Fuel Injection (DFI) system wiring harness
Wiring diagram

Diesel Direct Fuel Injection (DFI) engine control module (ECM), cold start injector, fuel cut-off valve, wastegate bypass regulator valve, EGR vacuum regulator solenoid valve

J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
N18 - EGR Vacuum Regulator Solenoid Valve
N75 - Wastegate Bypass Regulator Valve
N108 - Cold Start Injector
N109 - Fuel Cut-off Valve
N239 - Change-over valve for intake manifold flap
S234 - Fuse 34 in fuse holder
T6 - 6-Pin Connector, brown, in protective housing for connectors, in plenum chamber, left
T10a - 10-Pin Connector, in engine compartment, in wiring duct, left
T10f - 10-Pin Connector, in engine compartment, front
T80 - Connector, 80 point

ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = lilac
ge = yellow

Connector -2- (87), in instrument panel wiring harness
Connector (87a), in wiring harness engine
E45 - Cruise Control Switch**
E227 - Cruise Control Push Button (SET)**
F - Brake Light Switch
F47 - Brake Vacuum Vent Valve Switch for cruise control/diesel
J 248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
S13 - Fuse 13 in fuse holder
T10e - 10-Pin Connector, black, in protective housing for connectors, in plenum chamber, left
T10s - 10-Pin Connector, near steering column**
T80 - Connector, 80 point
A18 - Wire connection (54), in instrument panel wiring harness

** Vehicles with cruise control only

USA.5102.01.21
Edition 12/98
Diesel direct fuel injection (DFI) engine control module (ECM), cruise control switch, brake vacuum vent valve switch, brake light switch
Diesel direct fuel injection (DFI) engine control module (ECM)

- ABS Control Module (w/EDL), in engine compartment, left
- Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- Transmission Control Module (TCM), in plenum chamber, center
- Double Connector, in engine compartment, in wiring duct, left
- 10-Pin Connector, orange, in protective housing for connectors, in plenum chamber, left
- 10-Pin Connector, green, in protective housing for connectors, in plenum chamber, left
- 25-Pin Connector, on ABS Control Module (w/EDL)
- 68-Pin Connector
- Connector, 80 point

ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = lilac
ge = yellow
or = orange

- Connection (high bus), in instrument panel wiring harness
- Connection (low bus), in instrument panel wiring harness
- Wire connection (86), in engine compartment wiring harness
- Vehicles with Multi-Function Indicator (MFI) only

Edition 12/98
USA.5102.01.21
**Golf/Jetta**

**No. 5/11**

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**Wiring diagram**

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**Edition 02/99**

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**USA.5102.02.21**

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**Diesel direct fuel injection (DFI) engine control module (ECM), fuel level sensor, engine coolant level (ECL) sensor, positive crankcase ventilation (PCV) heating element**

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**Legend**

- **G** - Fuel Level Sensor
- **G32** - Engine Coolant Level (ECL) Sensor
- **J 248** - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- **N79** - Positive Crankcase Ventilation (PCV) Heating Element
- **T6** - 6-Pin Connector, brown, in protective housing for connectors, in plenum chamber, left
- **T10** - 10-Pin Connector, orange, in protective housing for connectors, in plenum chamber, left
- **T10a** - 10-Pin Connector, in engine compartment, in wiring duct, left
- **T80** - Connector, 80 point
- **156** - Ground connection, in Diesel Direct Fuel Injection (DFI) wiring harness
- **269** - Ground connection (sensor ground) -1-, in instrument panel wiring harness
- **A27** - Wire Connection (vehicle speed signal), in instrument panel wiring harness
- **D50** - Plus connection (30), in engine compartment wiring harness
- **D98** - Wire connection (glow plugs), in engine compartment wiring harness
- *** - Vehicles with Multi-Function Indicator (MFI) only

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**Color Codes**

- **ws** = white
- **sw** = black
- **ro** = red
- **br** = brown
- **gn** = green
- **bl** = blue
- **gr** = grey
- **ge** = yellow

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**Notes**

- **li** = lilac
- **li/ro** = lilac/red
- **li/sw** = lilac/black
- **br/ro** = brown/red
- **br/ws** = brown/white
- **br/bs** = brown/blue
- **br/ge** = brown/yellow
- **bl/ws** = blue/white
- **bl/ro** = blue/red
- **bl/ge** = blue/yellow
- **gr/ws** = grey/white
- **gr/ro** = grey/red
- **gr/ge** = grey/yellow

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**Symbols**

- **A27** - Wire Connection
- **D50** - Plus Connection
- **D98** - Wire Connection (Glow Plugs)
- *** - Vehicles with Multi-Function Indicator (MFI) only**

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**Key Points**

- **156** - Ground Connection, in Diesel Direct Fuel Injection (DFI) wiring harness
- **269** - Ground connection (sensor ground) -1-, in instrument panel wiring harness
- **A27** - Wire Connection (vehicle speed signal), in instrument panel wiring harness
- **D50** - Plus connection (30), in engine compartment wiring harness
- **D98** - Wire connection (glow plugs), in engine compartment wiring harness
- *** - Vehicles with Multi-Function Indicator (MFI) only**

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**Dimensions**

- **595.0x842.0**

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**Notes on Diagram**

- **Edition 02/99**
- **USA.5102.02.21**
- Diesel direct fuel injection (DFI) engine control module (ECM), fuel level sensor, engine coolant level (ECL) sensor, positive crankcase ventilation (PCV) heating element
**F1** - Oil Pressure Switch  
**G22** - Speedometer Vehicle Speed Sensor (VSS)  
**H3** - Warning Buzzer  
**J 285** - Control module with indicator unit in instrument panel insert  
**K2** - Generator (GEN) Warning Light  
**K3** - Oil Pressure Warning Light  
**K28** - Engine Coolant Level/Temperature (ECL/ECT) Warning Light  
**K29** - Glow Plug Indicator Light  
**T10a** - 10-Pin Connector, in engine compartment, in wiring duct, left  
**T32** - 32-Pin Connector, blue  
**T32a** - 32-Pin Connector, green  

* - Vehicles with Multi-Function Indicator (MFI) only  

**608** - Ground Connection (in center plenum chamber)
Instrument cluster, multi-function indicator (MFI), engine coolant temperature (ECT) gauge, fuel gauge, speedometer, malfunction indicator lamp (MIL), outside air temperature sensor