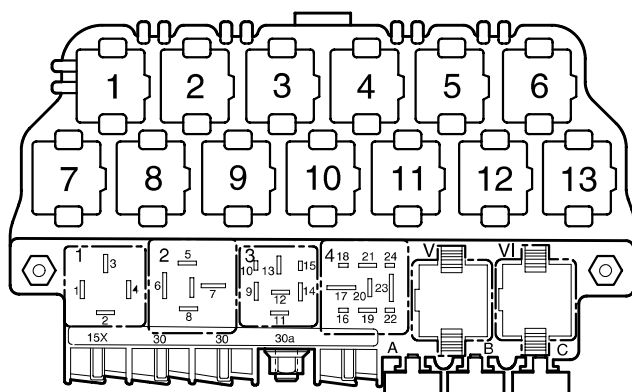


1.9L - Engine - Turbo Diesel Fuel Injection (DFI)/66KW, code ALH, (with manual transmission),

from September 1998

Deviate relay location and fuseplacements as well as the locations of multiple connectors see section "component locations".



97-14163

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

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

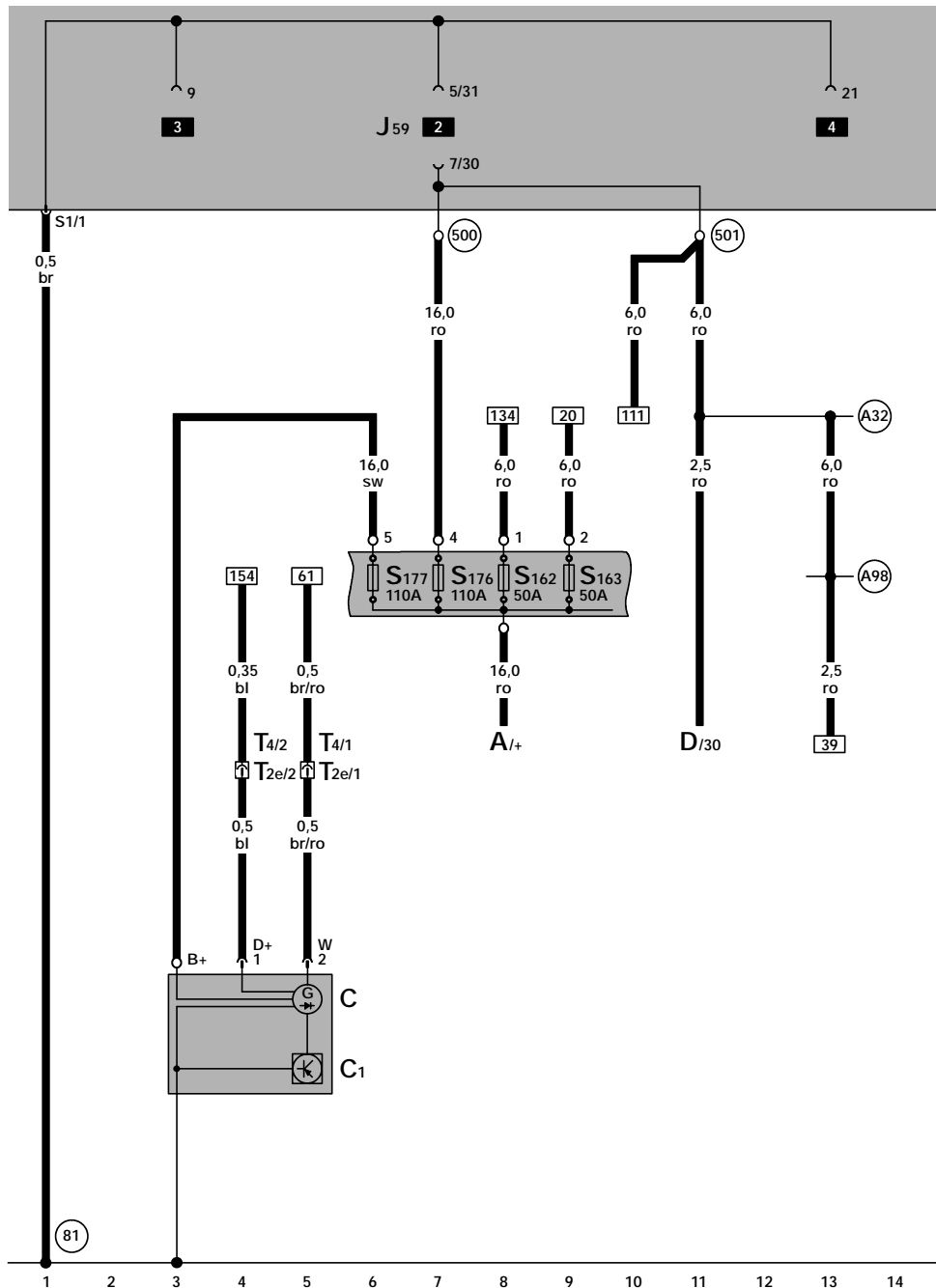
Relay panel:

- 2** Load Reduction Relay (18)

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

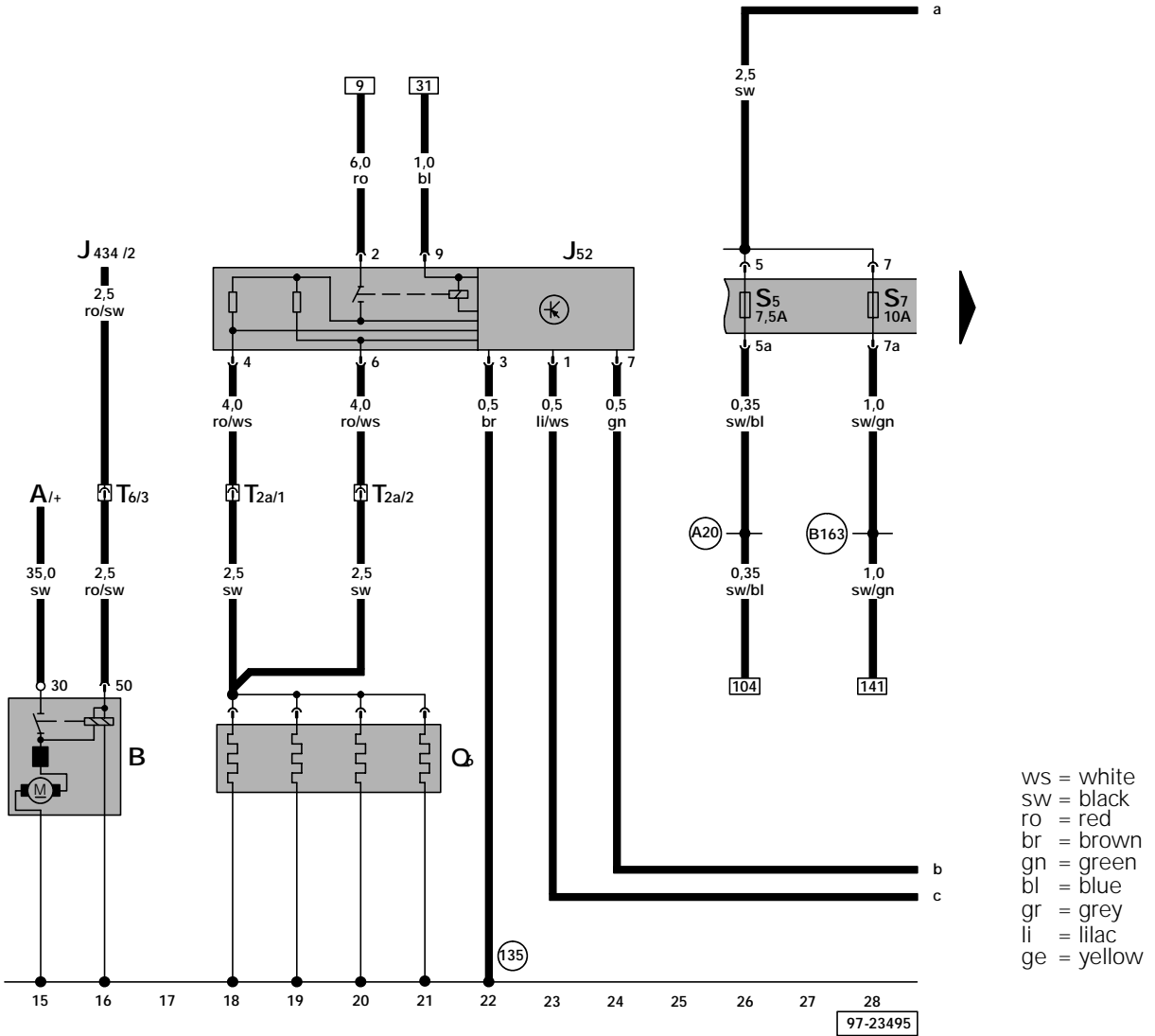
Fuse colors

- 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



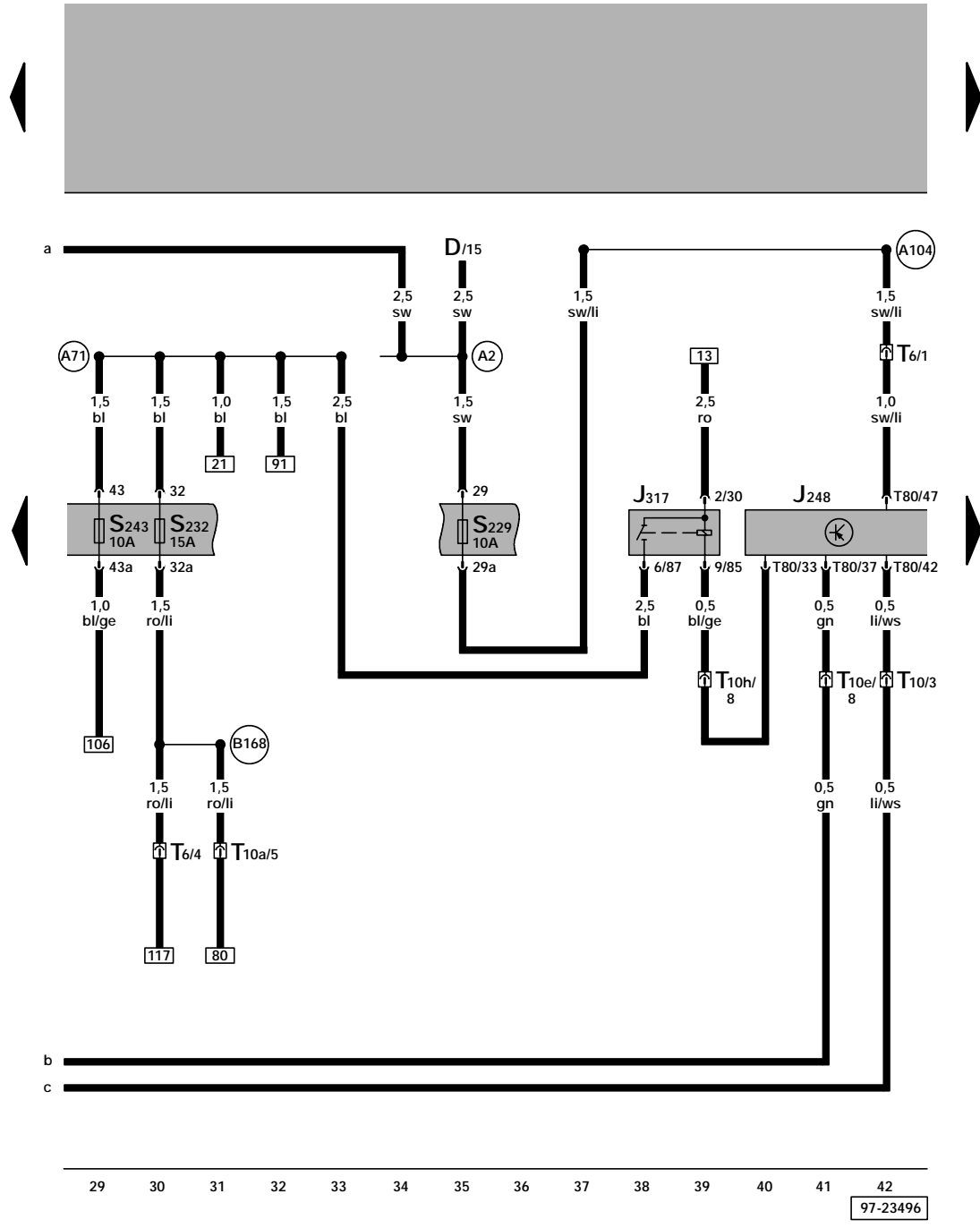
ws = white
 sw = black
 ro = red
 br = brown
 gn = green
 bl = blue
 gr = grey
 li = lilac
 ge = yellow

- 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
- (500) - Threaded connection -1- (30) on the relay plate
- (501) - Threaded connection -2- (30) on the relay plate
- (A32) - Plus connection (30), in instrument panel wiring harness
- (A98) - Plus connector -4- (30), in instrument panel wiring harness



- A - Battery
- B - Starter
- J52 - Glow Plug Relay, on the thirteenfold auxiliary relay panel, above relay panel
- J434 - Locking relay for starter (clutch pedal switch), 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

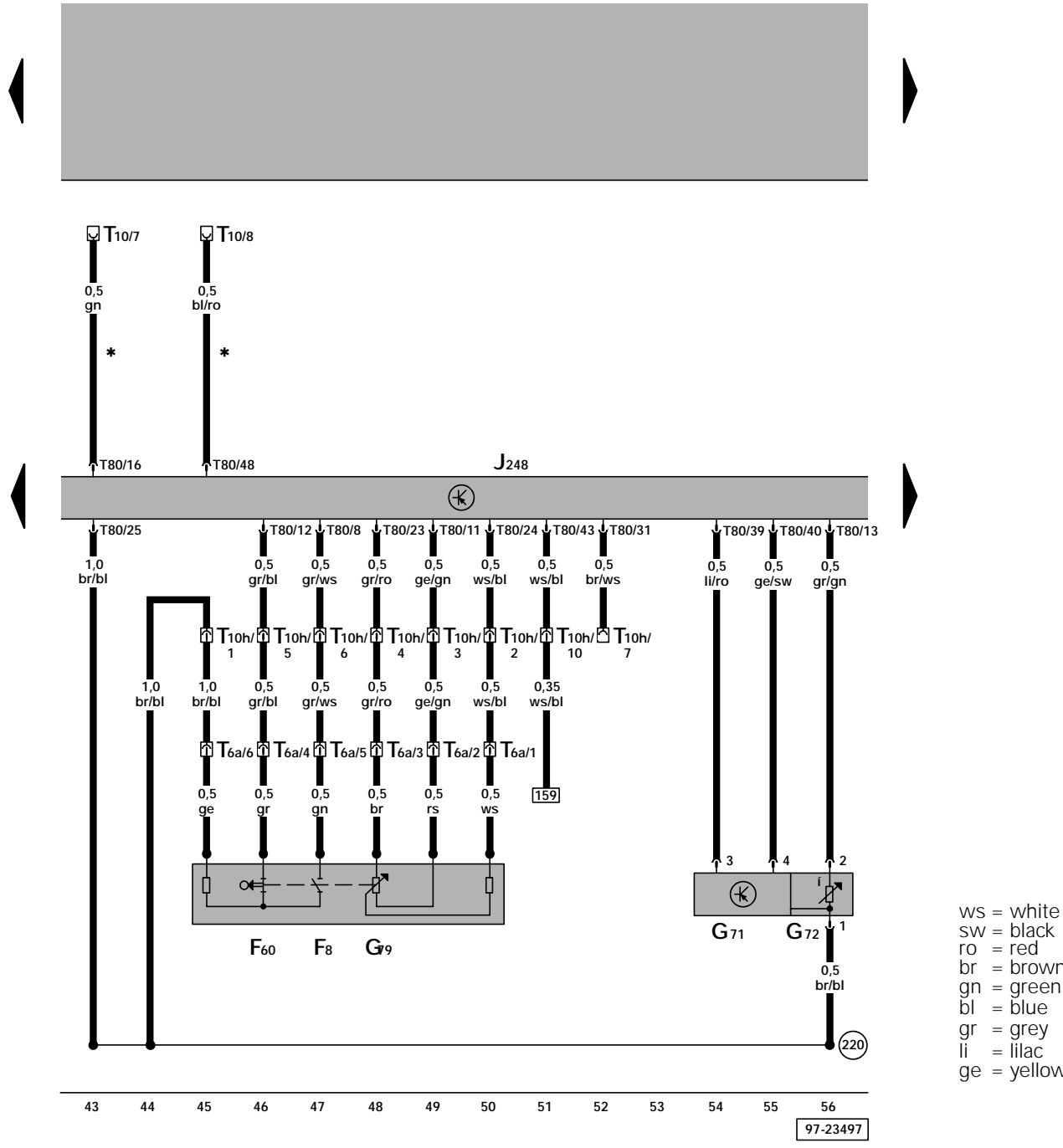
- (135) - Ground connection -2-, in instrument panel wiring harness
- (A20) - Wire connection (15a), in instrument panel wiring harness
- (B163) - Plus connector -1- (15) in wiring harness interior



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

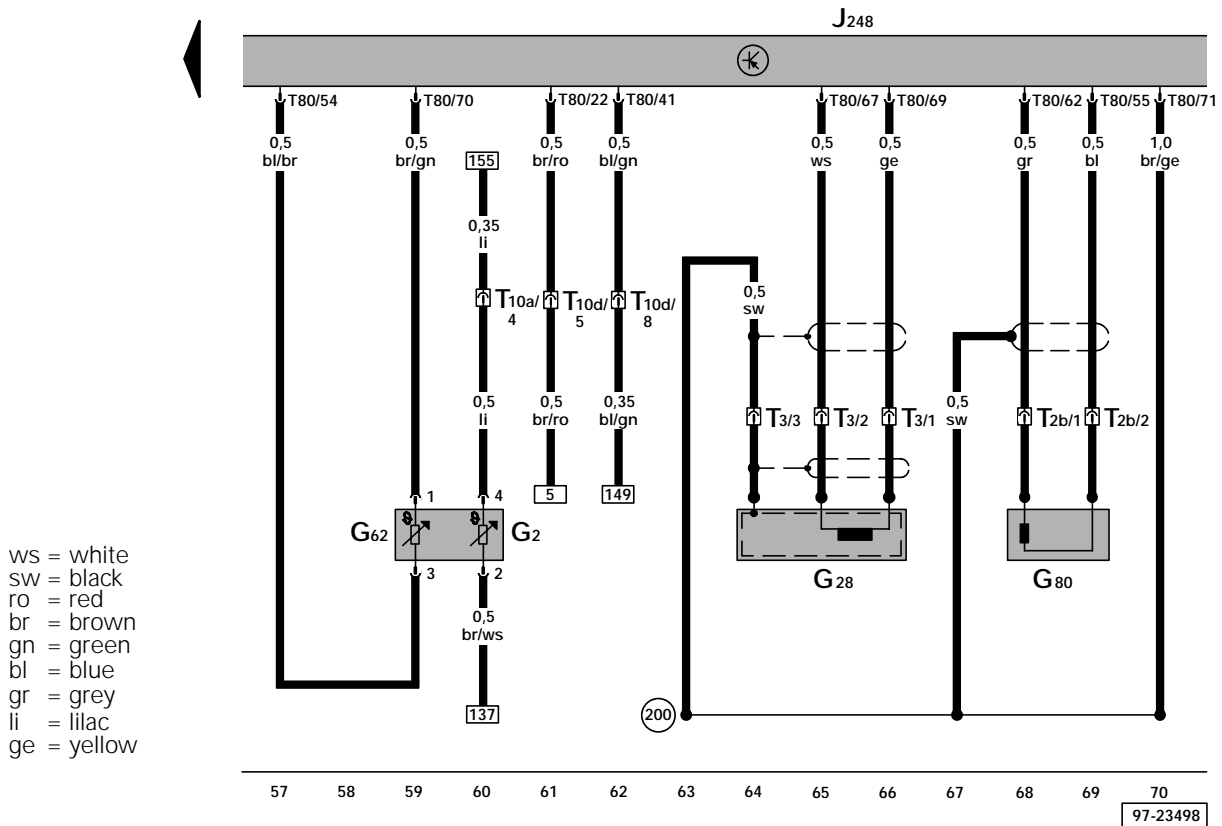
- D - Ignition/Starter Switch
- J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- J317 - Power Supply (Terminal 30, B+) Relay, on the thirteenfold auxiliary relay panel, above relay panel
- S229 - Fuse 29 in fuse holder
- S232 - Fuse 32 in fuse holder
- 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



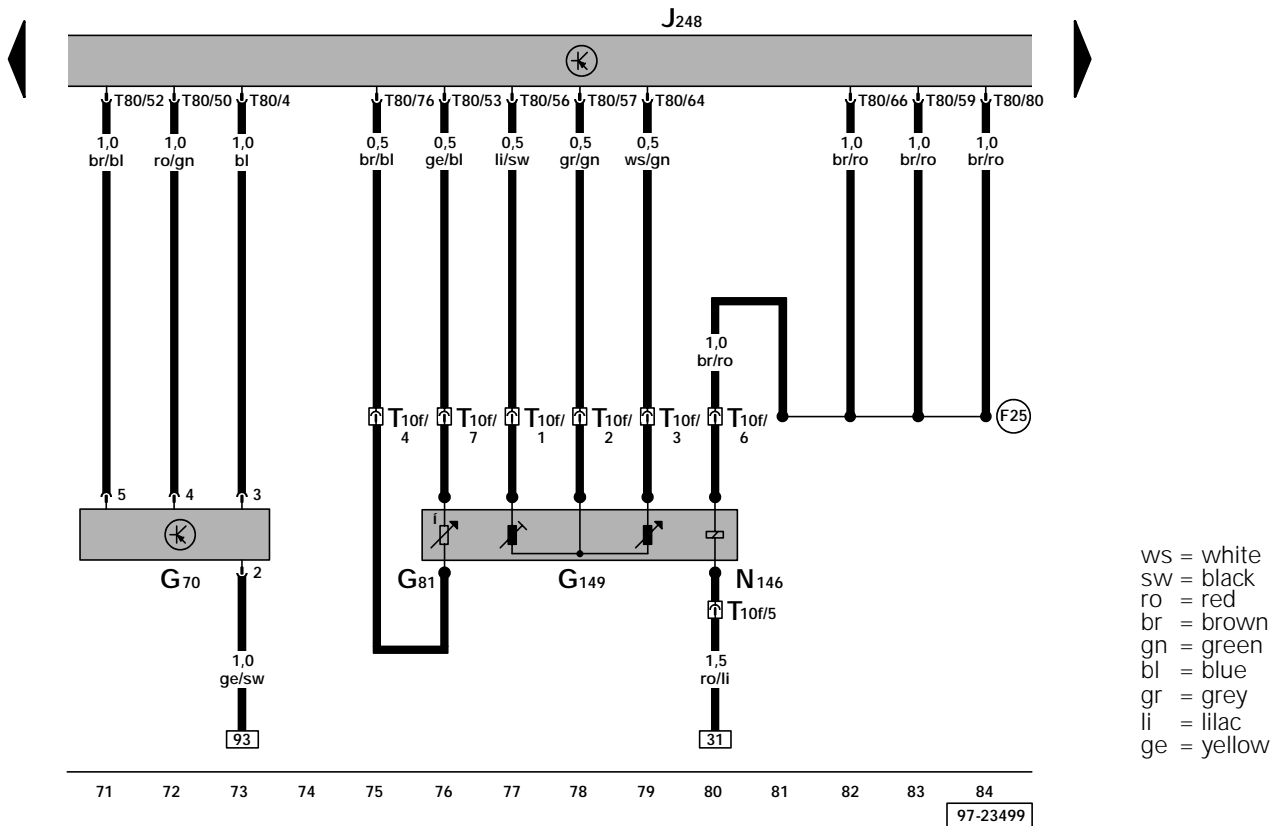
ws = white
 sw = black
 ro = red
 br = brown
 gn = green
 bl = blue
 gr = grey
 li = lilac
 ge = yellow

- 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
- J248 - 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
- (220) - Ground connection (sensor ground), in engine compartment wiring harness
- * - A/C connection



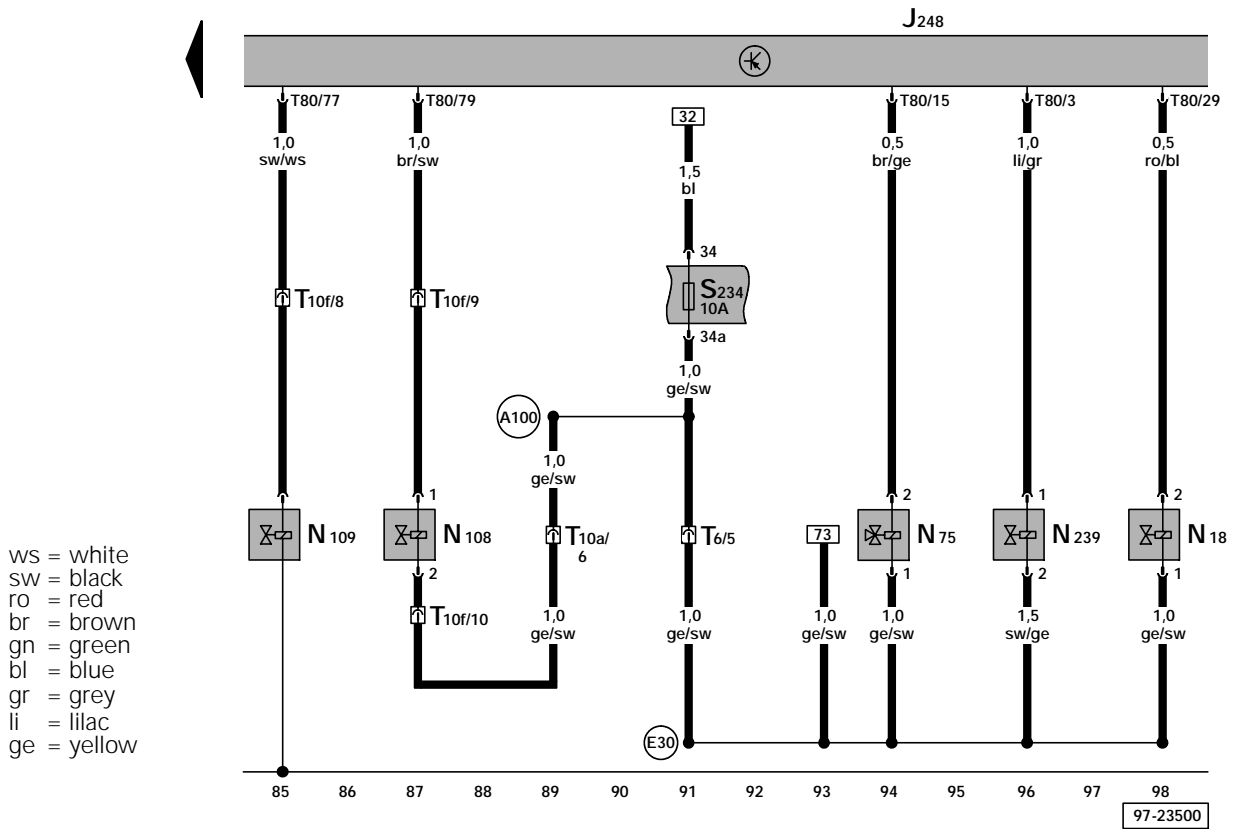
- G2 - Engine Coolant Temperature (ECT) Sensor
- G28 - Engine Speed (RPM) Sensor
- G62 - Engine Coolant Temperature (ECT) Sensor
- G80 - Needle Lift Sensor
- J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- T2b - Double Connector, in engine compartment, 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

(200) - Ground connection (shielding), in engine compartment wiring harness



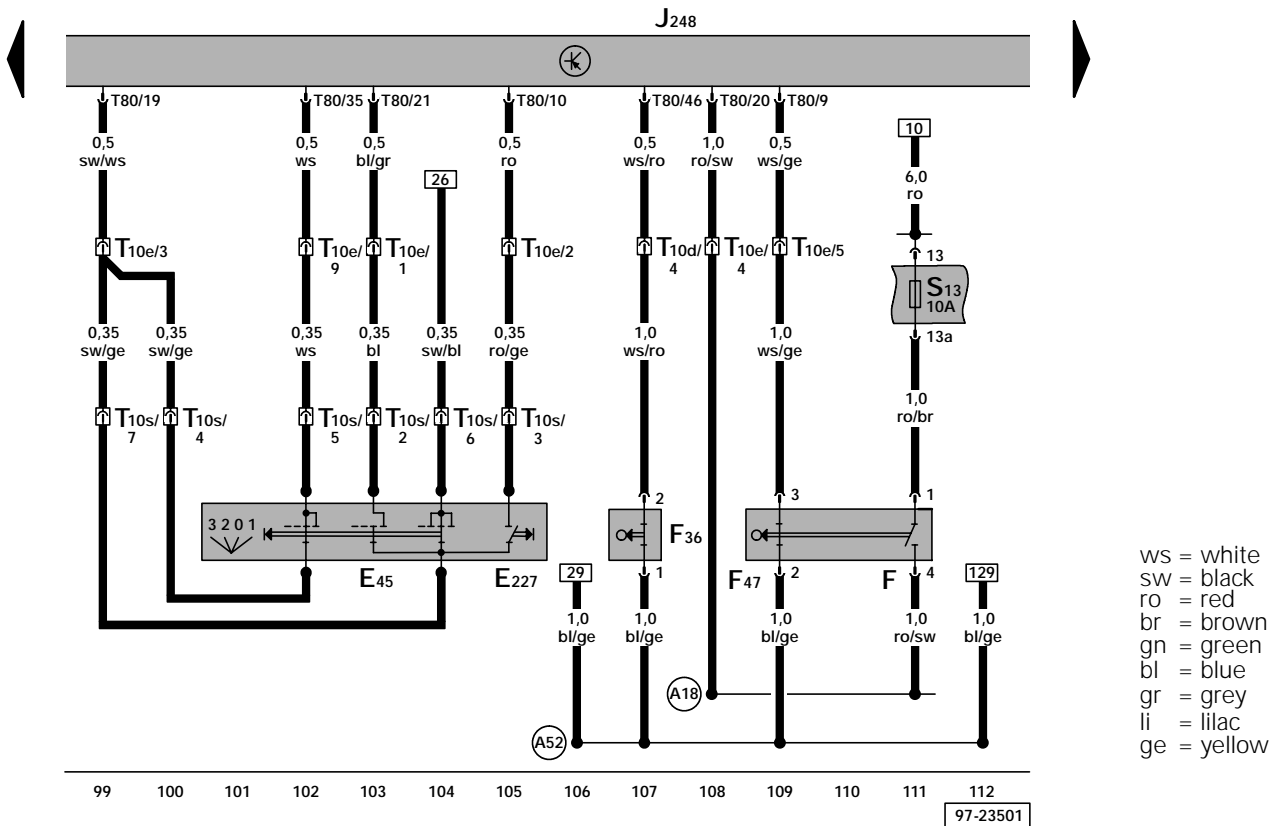
ws = white
 sw = black
 ro = red
 br = brown
 gn = green
 bl = blue
 gr = grey
 li = lilac
 ge = yellow

- 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



- 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

- (A100) - Connector -2- (87), in instrument panel wiring harness
- (E30) - Connector (87a), in wiring harness engine

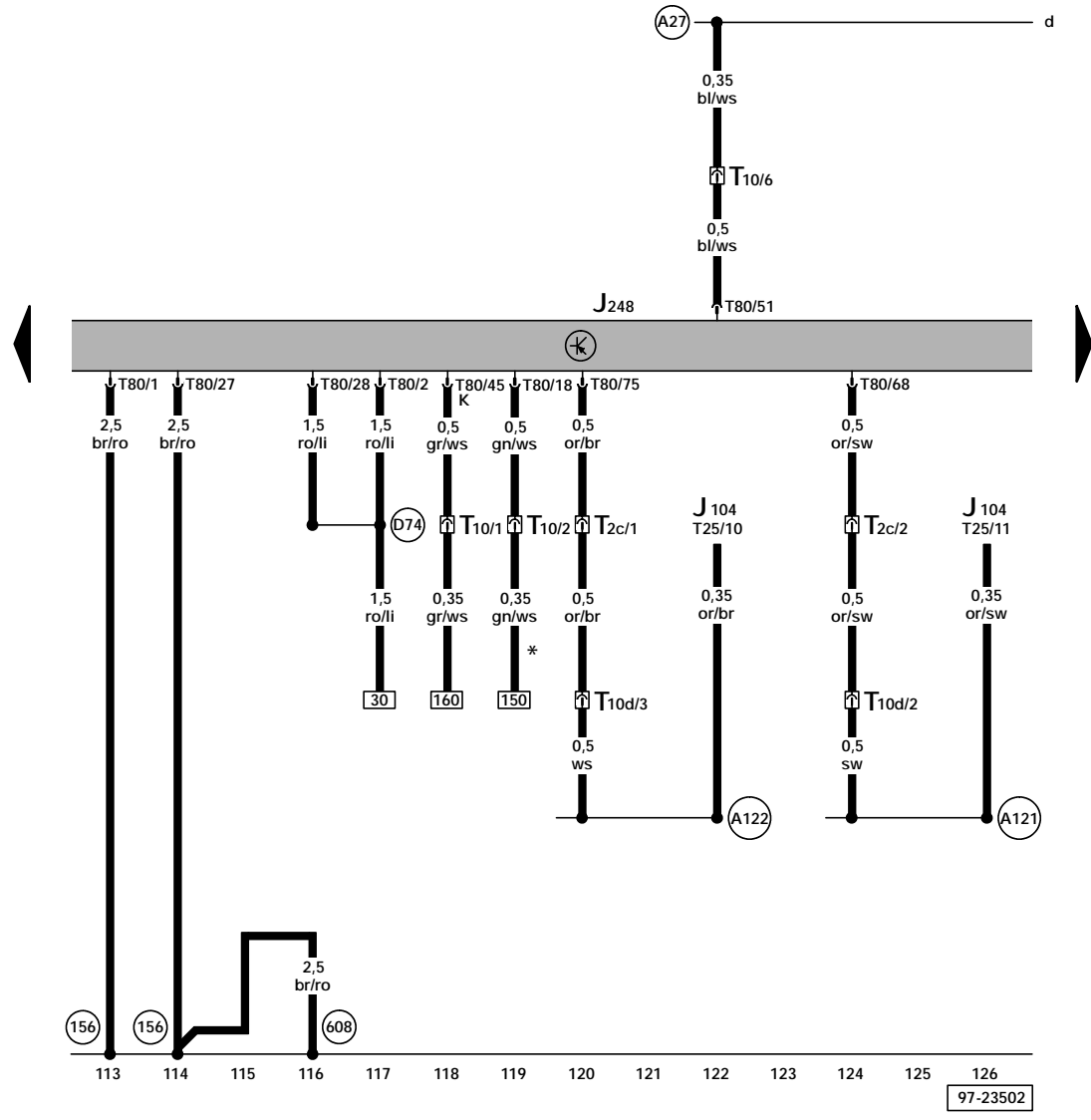


ws = white
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 br = brown
 gn = green
 bl = blue
 gr = grey
 li = lilac
 ge = yellow

- E45 - Cruise Control Switch**
- E227 - Cruise Control Push Button (SET)**
- F - Brake Light Switch
- F36 - Clutch Vacuum Vent Valve Switch
- F47 - Brake Vacuum Vent Valve Switch for cruise control/diesel
- J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- S13 - Fuse 13 in fuse holder
- T10d - 10-Pin Connector, green, in protective housing for connectors, in plenum chamber, left
- 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
- (A52) - Plus connection (30), in instrument panel wiring harness

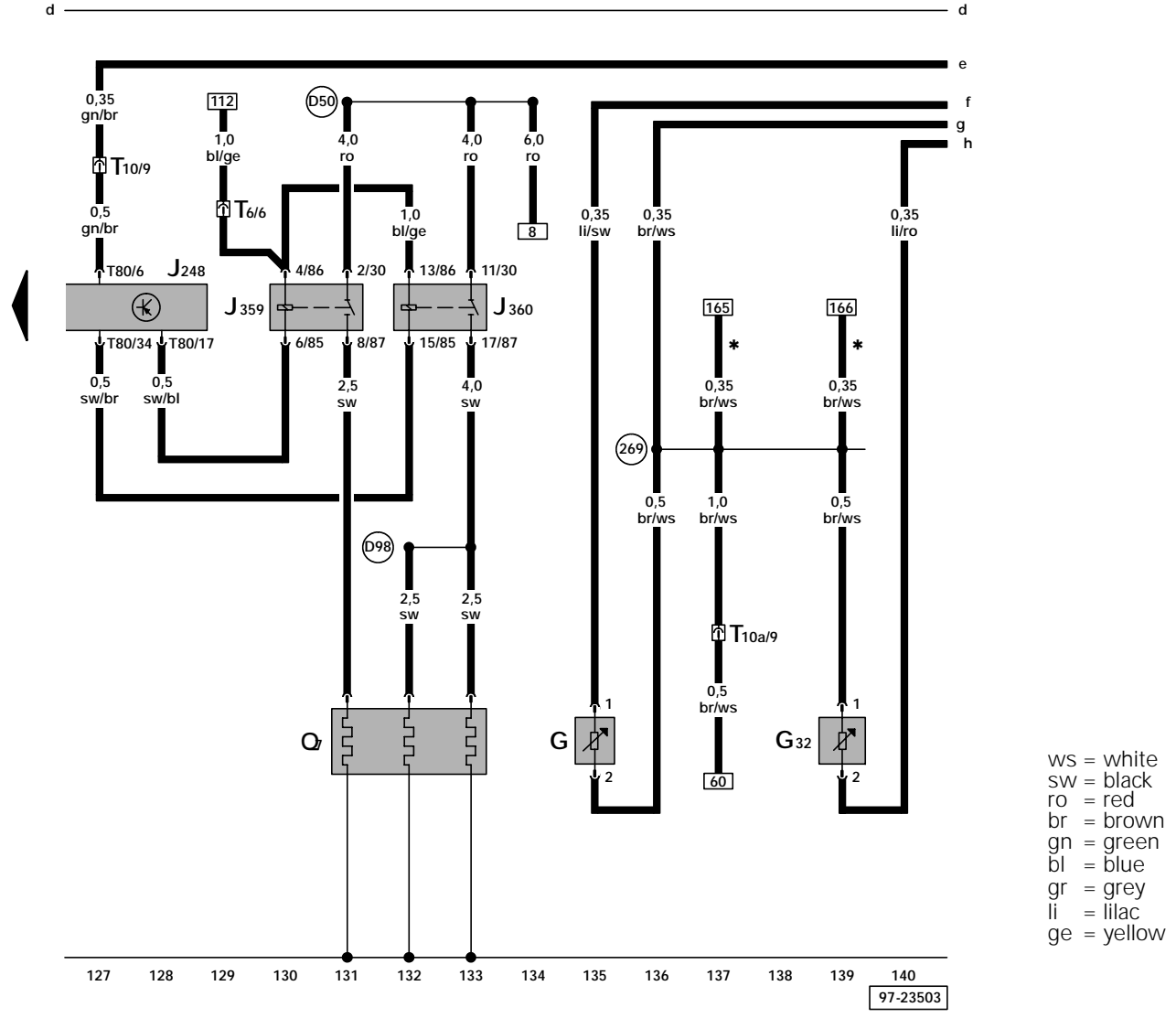
** - Vehicles with cruise control only



- J104 - ABS Control Module (w/EDL), in engine compartment, left
- J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- T2c - Double Connector, in engine compartment, in wiring duct, left
- T10 - 10-Pin Connector, orange, in protective housing for connectors, in plenum chamber, left
- T10d - 10-Pin Connector, green, in protective housing for connectors, in plenum chamber, left
- T25 - 25-Pin Connector, on ABS Control Module (w/EDL)
- T80 - Connector, 80 point

- (156) - Ground connection, in Diesel Direct Fuel Injection (DFI) wiring harness
- (A27) - Wire Connection (vehicle speed signal), in instrument panel wiring harness
- (A121) - Connection (high bus), in instrument panel wiring harness
- (A122) - Connection (low bus), in instrument panel wiring harness
- (D74) - Wire connection (86), in engine compartment wiring harness
- * - Vehicles with Multi-Function Indicator (MFI) only

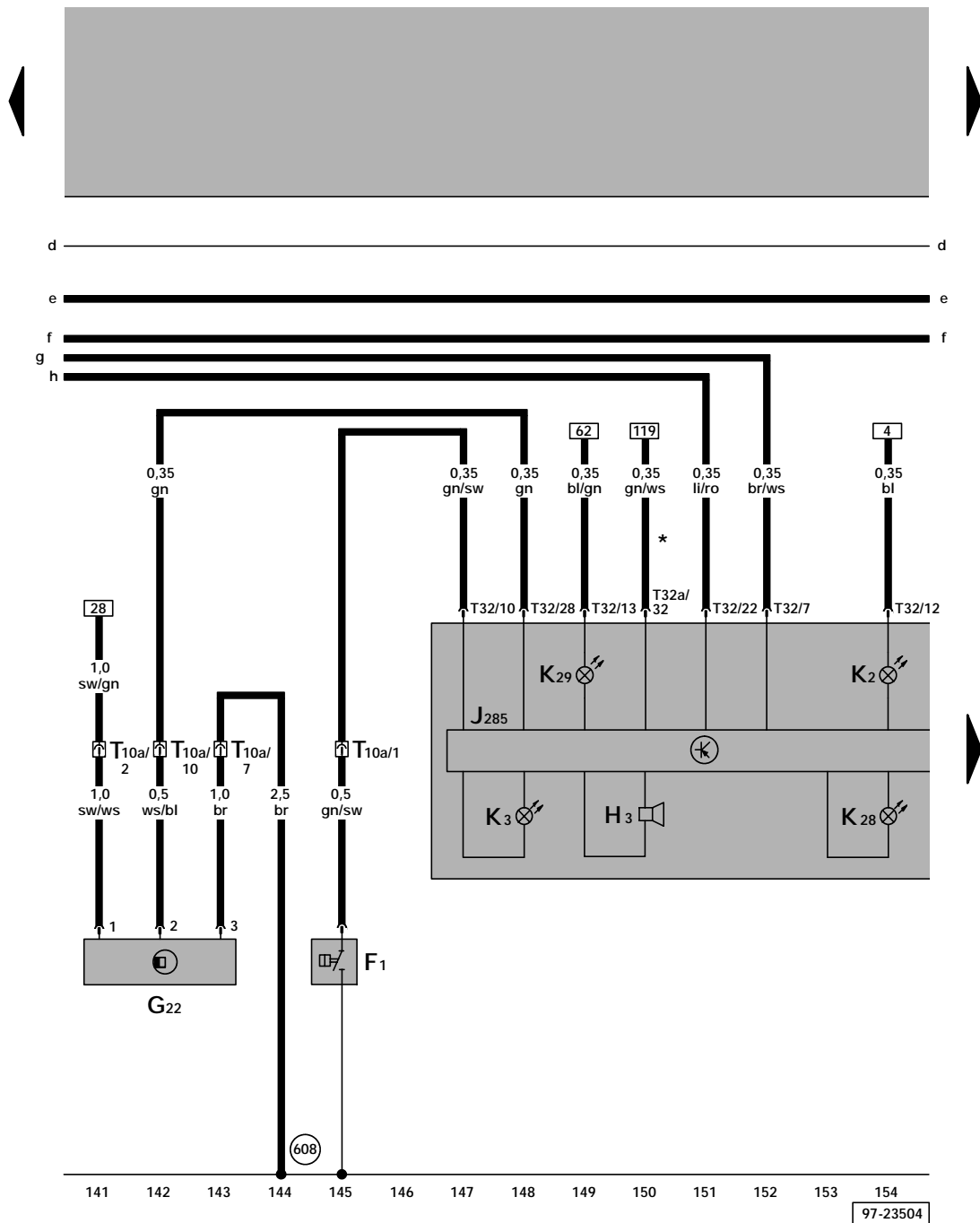
(608) - Ground Connection (in center plenum chamber)



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

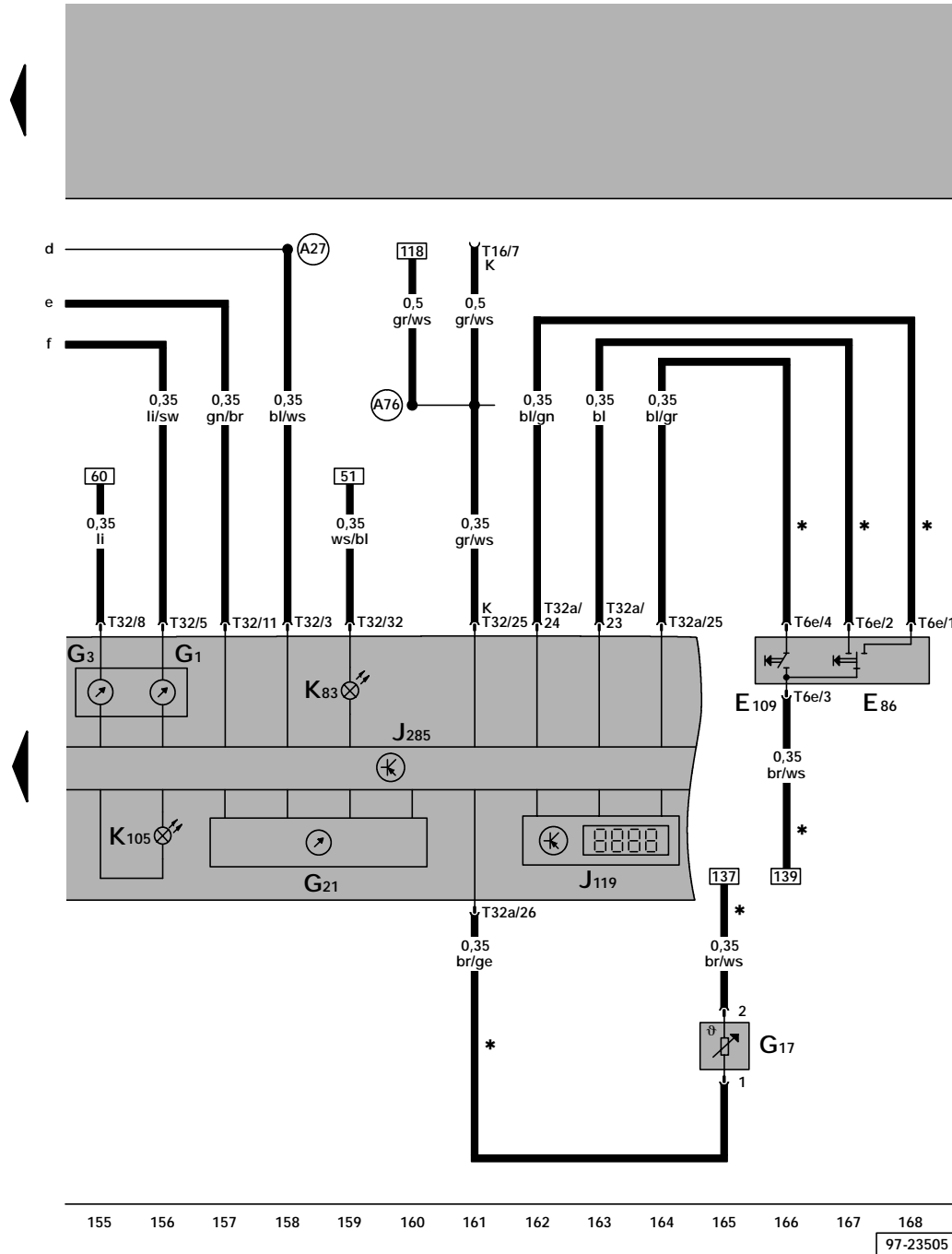
- G - Fuel Level Sensor
- G32 - Engine Coolant Level (ECL) Sensor
- J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM), in plenum chamber, center
- J359 - Relay for preheating coolant, low heat output, in protective housing, in engine compartment, left, production control number (53)
- J360 - Relay for preheating coolant, high heat output, in protective housing, in engine compartment, left, production control number (53)
- Q7 - Glow plugs (coolant)
- 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
- (269) - Ground connection (sensor ground) -1-, 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



- F1 - Oil Pressure Switch
- G22 - Speedometer Vehicle Speed Sensor (VSS)
- H3 - Warning Buzzer
- J285 - 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

- (608) - Ground Connection (in center plenum chamber)
- * - Vehicles with Multi-Function Indicator (MFI) only



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

- E86 - Multi-Function Indicator Mode Select Switch
- E109 - Multi-Function Indicator Memory Switch
- G1 - Fuel gauge
- G3 - Engine Coolant Temperature (ECT) Gauge
- G17 - Outside Air Temperature Sensor
- G21 - Speedometer
- J119 - Multi-function Indicator (MFI)
- J285 - Control module with indicator unit in instrument panel insert
- K83 - Malfunction Indicator Lamp (MIL)
- K105 - Low Fuel Level Warning Light
- T6e - 6-Pin Connector
- T16 - Data Link Connector (DLC), below instrument panel, center
- T32 - 32-Pin Connector, blue
- T32a - 32-Pin Connector, green

- (A27) - Wire Connection (vehicle speed signal), in instrument panel wiring harness
- (A76) - Connector (K-diagnosis wire), in instrument panel wiring harness
- * - Vehicles with Multi-Function Indicator (MFI) only