

## **Vehicle: Electrical Diagrams**

### **Powertrain Management**

## **Wiring Diagram Index**

### **IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions

<b>COMPONENTS</b>	<b>TRACKS</b>
A/C Switch	29-42
Airbag Control Module	99-112
Angle sensors for throttle cable (power accelerator actuation)	57-70
Battery	1-14
Brake Light Switch	113-126
Brake Pedal Switch (Cruise control/Diesel Direct Injection)	113-126
Button for cruise control (set)	113-126
Camshaft Position (CMP) Sensor	57-70
Clutch Vacuum Vent Valve Switch	113-126
Control module with indicator unit in instrument panel insert	141-154, 155-168
Coolant FC (Fan Control) Control Module	71-84
Cruise Control Switch	113-126
Fuel Injectors	85-98
Data Bus On Board Diagnostic interface	155-168
Electronic Power Control (EPC) Lamp	141-154
Engine Coolant Level (ECL) Sensor	127-140
Engine Coolant Level/Temperature (ECL/ECT) Warning Light	141-154
Engine Coolant Temperature (ECT) Gauge	155-168
Engine Coolant Temperature (ECT) Sensors	29-42
Engine Speed (RPM) Sensor	71-84
Evaporative Emission (EVAP) Canister Purge Regulator Valve	99-112
Fuel Gauge	155-168
Fuel Pump (FP)	127-140
Fuel Pump (FP) Relay	99-112
Generator (GEN)	1-14
Generator (GEN) Warning Light	141-154

<b>COMPONENTS</b>	<b>TRACKS</b>
Heated Oxygen Sensor (HO2S), black	43-56
Ignition Coils with Power Output Stage	15-28
Ignition/Starter Switch	1-14, 99-112
Knock Sensors (KS)	57-70, 71-84
Leak Detection Pump (LDP)	99-112
Load Reduction Relay	1-14
Locking relay for starter (clutch pedal switch)	1-14
Low Fuel Level Warning Light	155-168
Malfunction Indicator Lamp (MIL)	155-168
Mass Air Flow (MAF) Sensor	85-98
	15-28, 29-42, 43-56, 57-70
Motronic Engine Control Module (ECM)	71-84, 85-98, 99-112, 113-126
Motronic Engine Control Module (ECM) power supply relay, in protective housing, in engine compartment, left, production control number (428)	71-84
Multi-function Indicator (MFI)	155-168

Heated Oxygen Sensor - Multi-function Indicator

<b>COMPONENTS</b>	<b>TRACKS</b>
Oil Pressure Switch	141-154
Oil Pressure Warning Light	141-154
Oxygen Sensor (O2S) behind Three Way Catalytic Converter (TWC), brown	43-56
Positive crankcase ventilation (PVC) heating element	127-140
Secondary Air Injection (AIR) Pump Motor/Relay	43-56
Sender -2- for accelerator pedal position	99-112
Sender for fuel gauge	127-140
Spark Plug Connectors	15-28
Spark Plugs	15-28
Speedometer	155-168
Speedometer Vehicle Speed Sensor (VSS)	141-154
Starter	1-14
Throttle drive (power accelerator actuation)	57-70
Throttle Position (TP) Sensor	99-112
Throttle Valve Control Module	57-70
Transmission Control Module (TCM)	29-42
Transmission Control Module (TCM), behind instrument panel, center	155-168
Voltage Regulator (VR)	1-14
Warning Buzzer	141-154

#### Oil Pressure Switch - Warning Buzzer

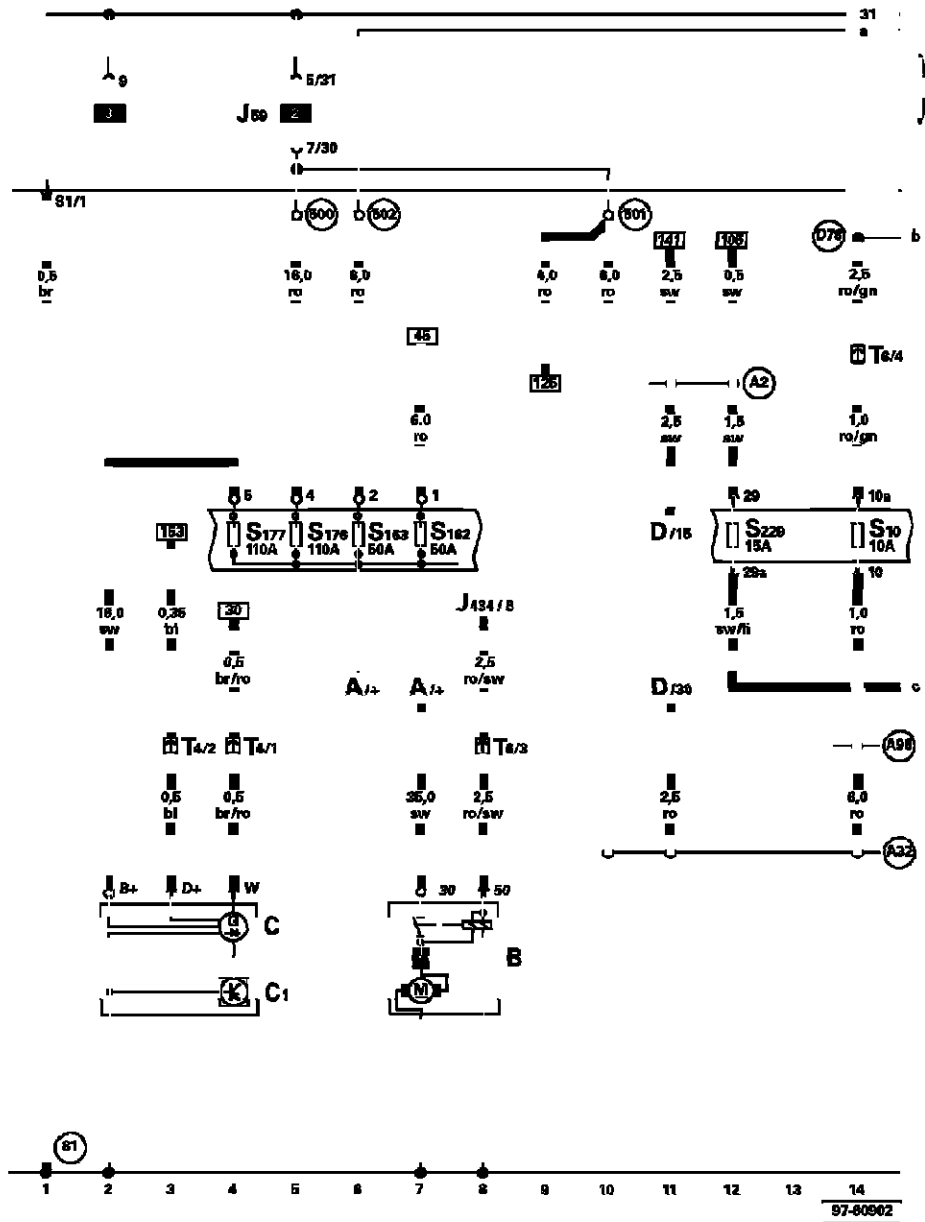
NOTE: Starting with fuse 23, fuses in the fuse holder are identified with an additional numeral 2 added to the number when shown in the wiring diagram (i.e. fuse 23 in the vehicle becomes 223 in the diagrams, fuse 24 becomes 224, and so on).

### Track 1-14

#### IMPORTANT NOTE

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



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

- A - Battery
- B - Starter
- C - Generator (GEN)
- C1 - Voltage Regulator (VR)
- D - Ignition/Starter Switch
- J434 - Locking relay for starter (clutch pedal switch)
- J59 - Load Reduction Relay
- S10 - Fuse 10 in fuse/relay panel
- S162 - Fuse -1- (50), in fuse bracket/battery
- S163 - Fuse -2- (50), in fuse bracket/battery
- S176 - Fuse -4- (30), in fuse bracket/battery
- S177 - Fuse -5- (30), in fuse bracket/battery
- S229 - Fuse 29 in fuse/relay panel
- T4 - 4-Pin Connector, in engine compartment left
- T6 - 6-Pin Connector, brown, behind instrument panel, left

- (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
- (502) - Threaded connection -1- (30a) on the relay plate
- (A2) - plus connection (15), in instrument panel wiring harness
- (A32) - plus connection (30), in instrument panel wiring harness
- (A98) - Plus connector -4- (30), in instrument panel wiring harness
- (D78) - Plus connector -1- (30a), in engine compartment wiring harness

Track 1-14

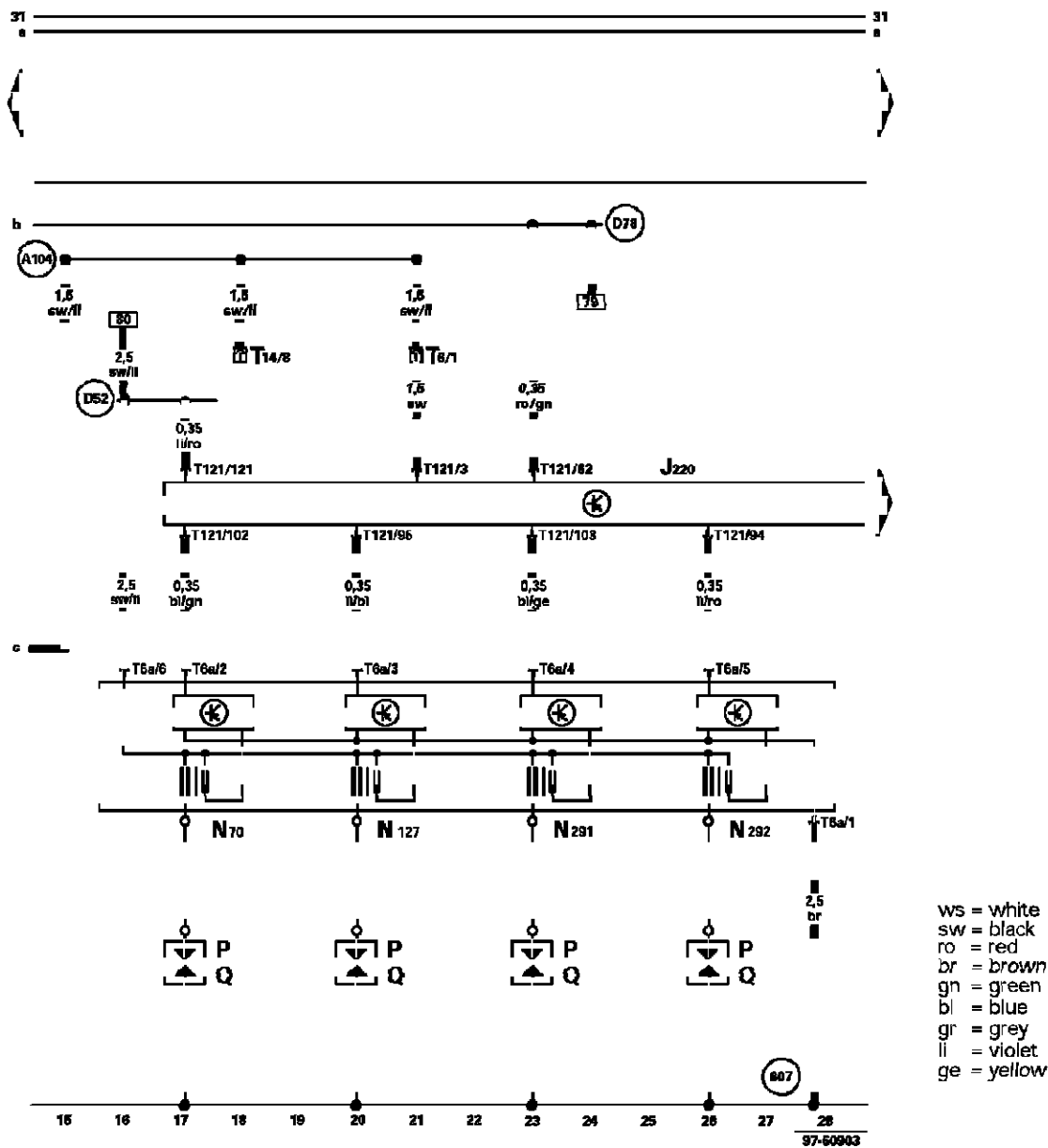
Next Track See: System Diagram/Track 15-28

Track 15-28

IMPORTANT NOTE

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- J220 - Motronic Engine Control Module (ECM)
- N70 - Ignition Coil 1 with Power Output Stage
- N127 - Ignition Coil 2 with Power Output Stage
- N291 - Ignition Coil 3 with Power Output Stage
- N292 - Ignition Coil 4 with Power Output Stage
- P - Spark Plug Connectors
- Q - Spark Plugs
- T6 - 6-Pin Connector, brown, behind instrument panel, left
- T6a - 6-Pin Connector
- T14 - 14-Pin Connector, in left plenum chamber
- T121 - 121-Pin Connector, at -J220-
- (607) - Ground connection (in left plenum chamber)
- (A104) - Plus connector -2- (15), in instrument panel wiring harness
- (D52) - plus connection (15a), in engine compartment wiring harness
- (D78) - Plus connector -1- (30a), In engine compartment wiring harness

Track 15-28

Next Track See: System Diagram/Track 29-42

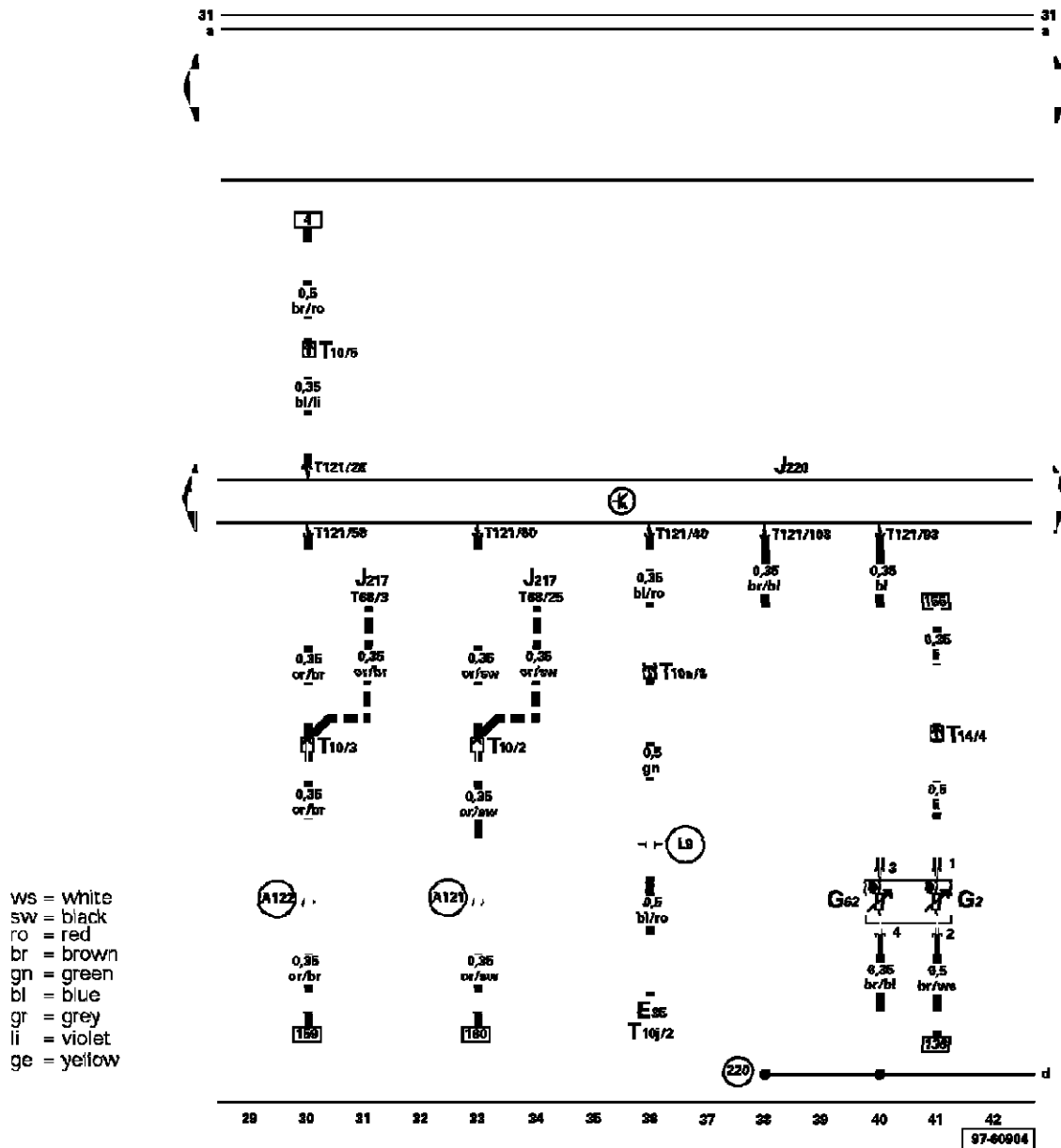
Previous Track See: System Diagram/Track 1-14

## Track 29-42

### IMPORTANT NOTE

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- E35 - A/C Switch
- G2 - Engine Coolant Temperature (ECT) Sensor
- G62 - Engine Coolant Temperature (ECT) Sensor
- J217 - Transmission Control Module (TCM)
- J220 - Motronic Engine Control Module (ECM)
- T14 - 14-Pin Connector, in left plenum chamber
- T10 - 10-Pin Connector, white, behind instrument panel, left
- T10a - 10-Pin Connector, orange, behind instrument panel, left
- T10j - 10-Pin Connector
- T68 - 68-Pin Connector
- T121 - 121-Pin Connector, at -J220-
- (220) - Ground connection (sensor ground), in engine compartment wiring harness
- (A121) - Connection (high bus) in instrument panel wiring harness
- (A122) - Connection (low bus) in instrument panel wiring harness
- (L9) - Wire connection -1-, in A/C wiring harness
- - Automatic transmission only

Track 29-42

Next Track See: System Diagram/Track 43-56

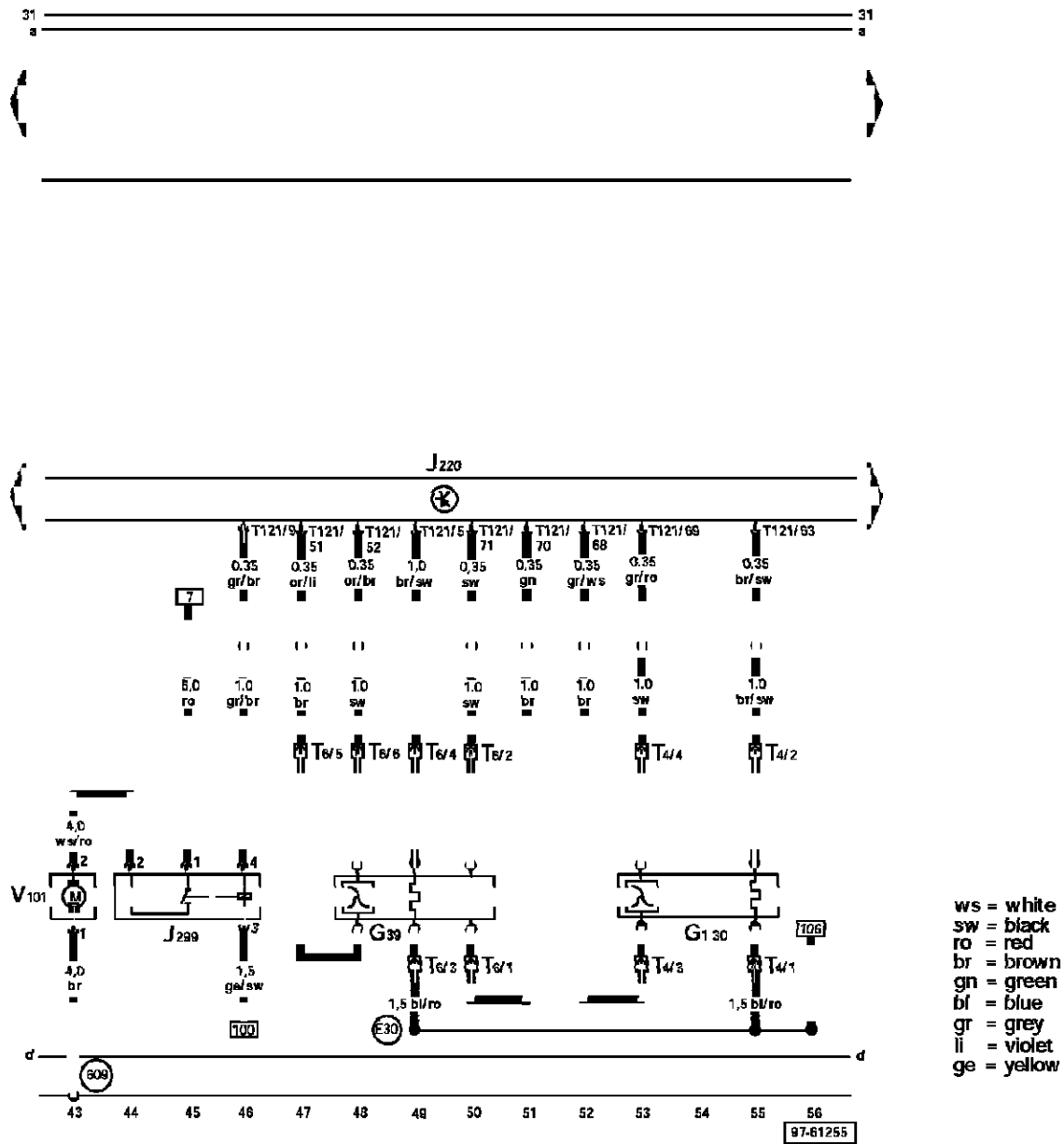
Previous Track See: System Diagram/Track 15-28

Track 43-56

**IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- G39 - Heated Oxygen Sensor (HO2S), black
- G130 - Oxygen Sensor (O2S) behind Three Way Catalytic Converter (TWC), brown
- J220 - Motronic Engine Control Module (ECM)
- J299 - Secondary Air Injection (AIR) Pump Relay
- V101 - Secondary Air Injection (AIR) Pump Motor
- T4 - 4-Pin Connector, brown
- T6 - 6-Pin Connector, black
- T121 - 121-Pin Connector, at -J220-

- (609) - Ground Connection (in right plenum chamber)
- (E30) - Connection (87a), in wiring harness engine

**Track 43-56**

Next Track See: System Diagram/Track 57-70

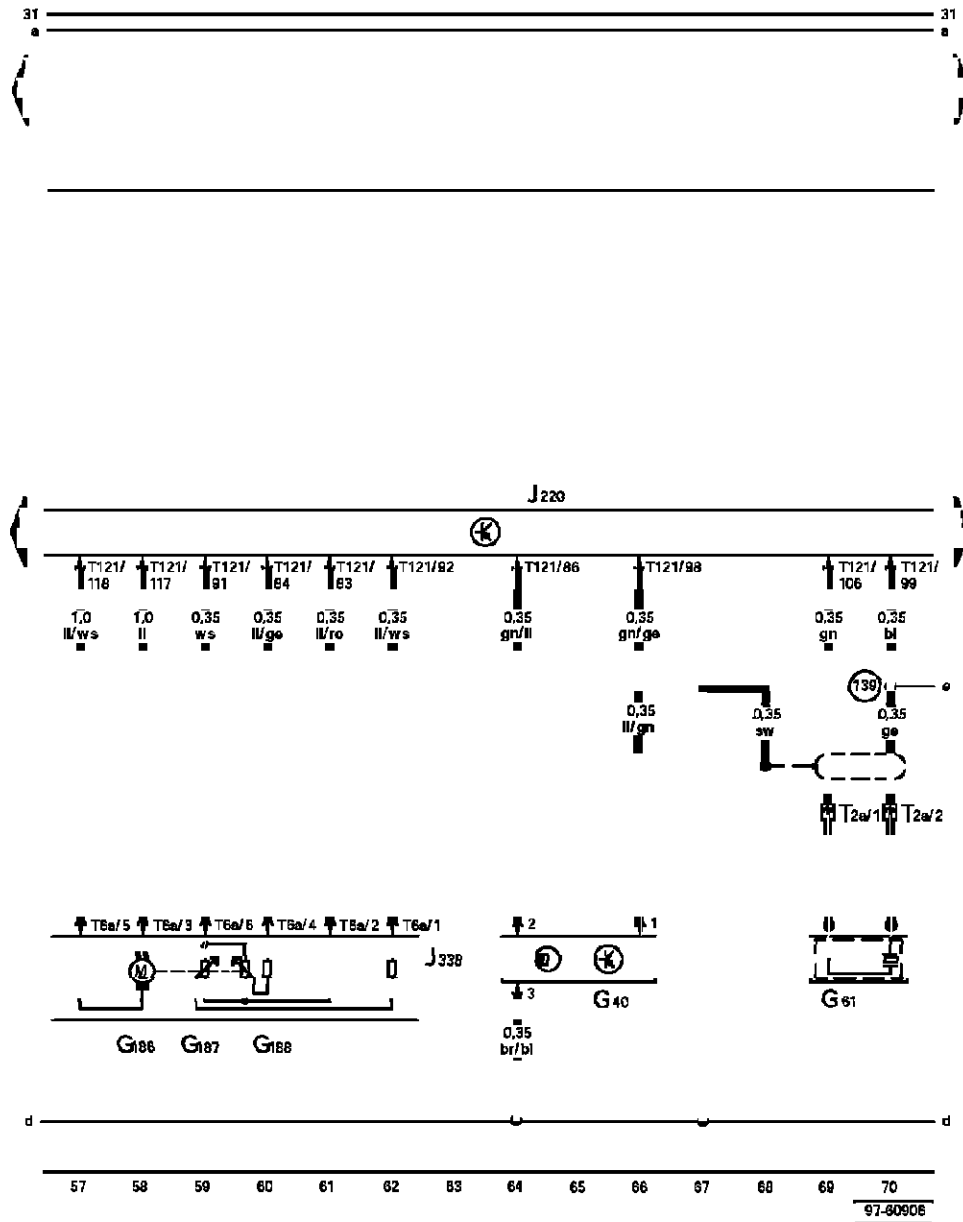
Previous Track See: System Diagram/Track 29-42

## **Track 57-70**

### **IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- G40 - Camshaft Position (CMP) Sensor
- G61 - Knock Sensor (KS) 1
- G186- Throttle drive (power accelerator actuation)
- G187- Angle sensor -1- for throttle drive (power accelerator actuation)
- G188- Angle sensor -2- for throttle drive (power accelerator actuation)
- J220 - Motronic Engine Control Module (ECM)
- J338 - Throttle Valve Control Module
- T2a - 2-Pin Connector
- T6a - 6-Pin Connector
- T121 - 121-Pin Connector, at -J220-
- (139) - Ground connection (sensor Ground), in Motronic Multiport Fuel Injection (MFI) wiring harness

Track 57-70

Next Track See: System Diagram/Track 71-84

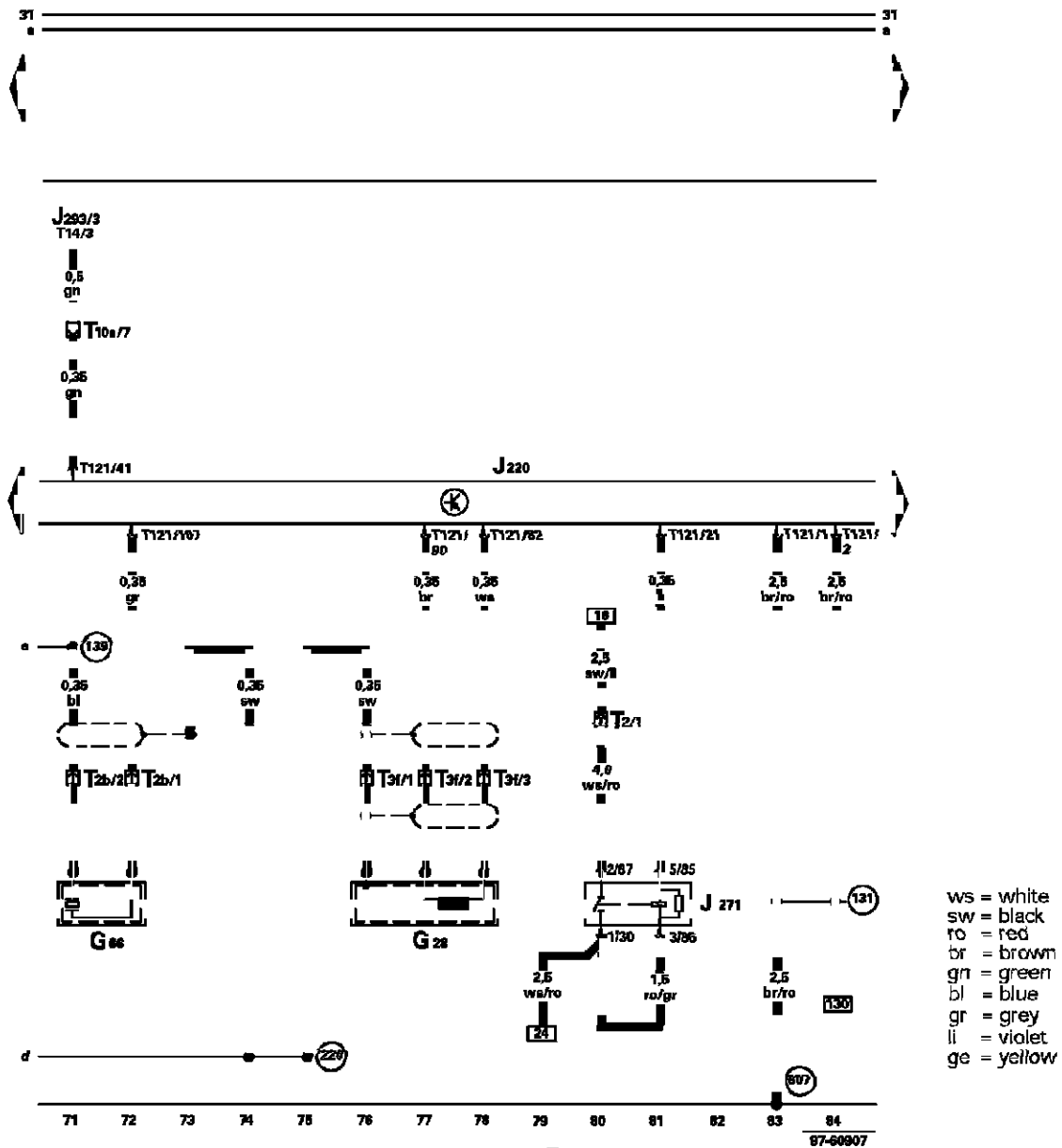
Previous Track See: System Diagram/Track 43-56

Track 71-84

**IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- G28 - Engine Speed (RPM) Sensor
- G66 - Knock Sensor (KS) 2
- J220 - Motronic Engine Control Module (ECM)
- J271 - Motronic Engine Control Module (ECM) power supply relay, in protective housing, in engine compartment, left, production control number (428)
- J293 - Coolant FC (Fan Control) Control Module
- T2 - 2-Pin Connector
- T2b - 2-Pin Connector
- T3f - 3-Pin Connector
- T10a - 10-Pin Connector, orange, behind instrument panel, left
- T14 - 14-Pin Connector in left plenum chamber
- T121 - 121-Pin Connector, at -J220-

- 131 - Ground connection -2-, in engine compartment wiring harness
- 607 - Ground Connection (in left plenum chamber)
- 139 - Ground connection (sensor Ground), in Motronic Multiport Fuel Injection (MFI) wiring harness
- 220 - Ground connection (sensor ground), in engine compartment wiring harness

Track 71-84

Next Track See: System Diagram/Track 85-98

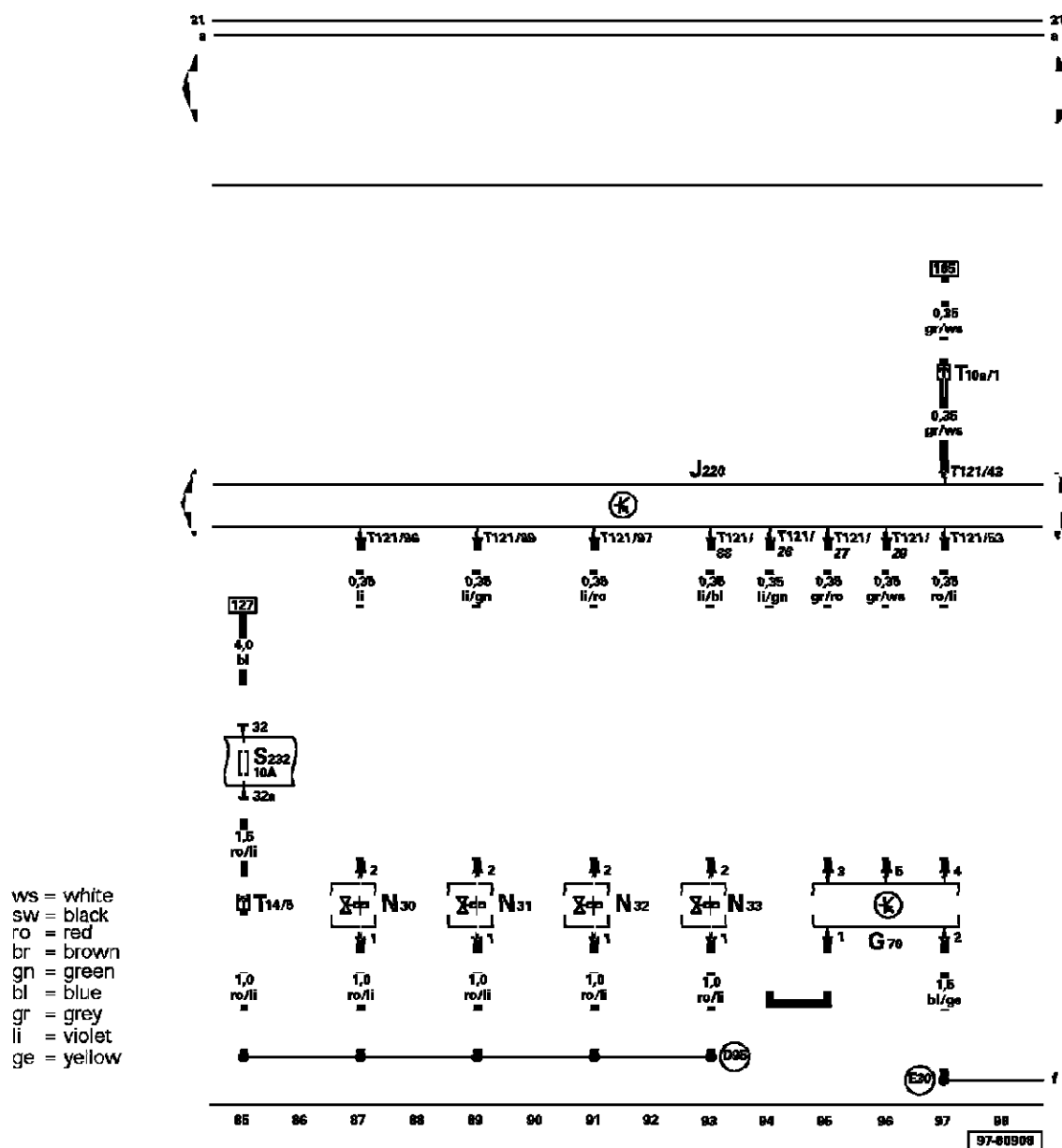
Previous Track See: System Diagram/Track 57-70

Track 85-98

**IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- G70 - Mass Air Flow (MAF) Sensor
- J220 - Motronic Engine Control Module (ECM)
- N30 - Cylinder 1 Fuel Injector
- N31 - Cylinder 2 Fuel Injector
- N32 - Cylinder 3 Fuel Injector
- N33 - Cylinder 4 Fuel Injector
- S232 - Fuse 32 in fuse/relay panel
- T10a - 10-Pin Connector, orange, behind instrument panel, left
- T14 - 14-Pin Connector
- T121 - 121-Pin Connector, at J220-

- (D95) - wire connection (injectors), in engine compartment wiring harness
- (E30) - Connector (87a), in wiring harness engine

Next Track See: System Diagram/Track 99-112

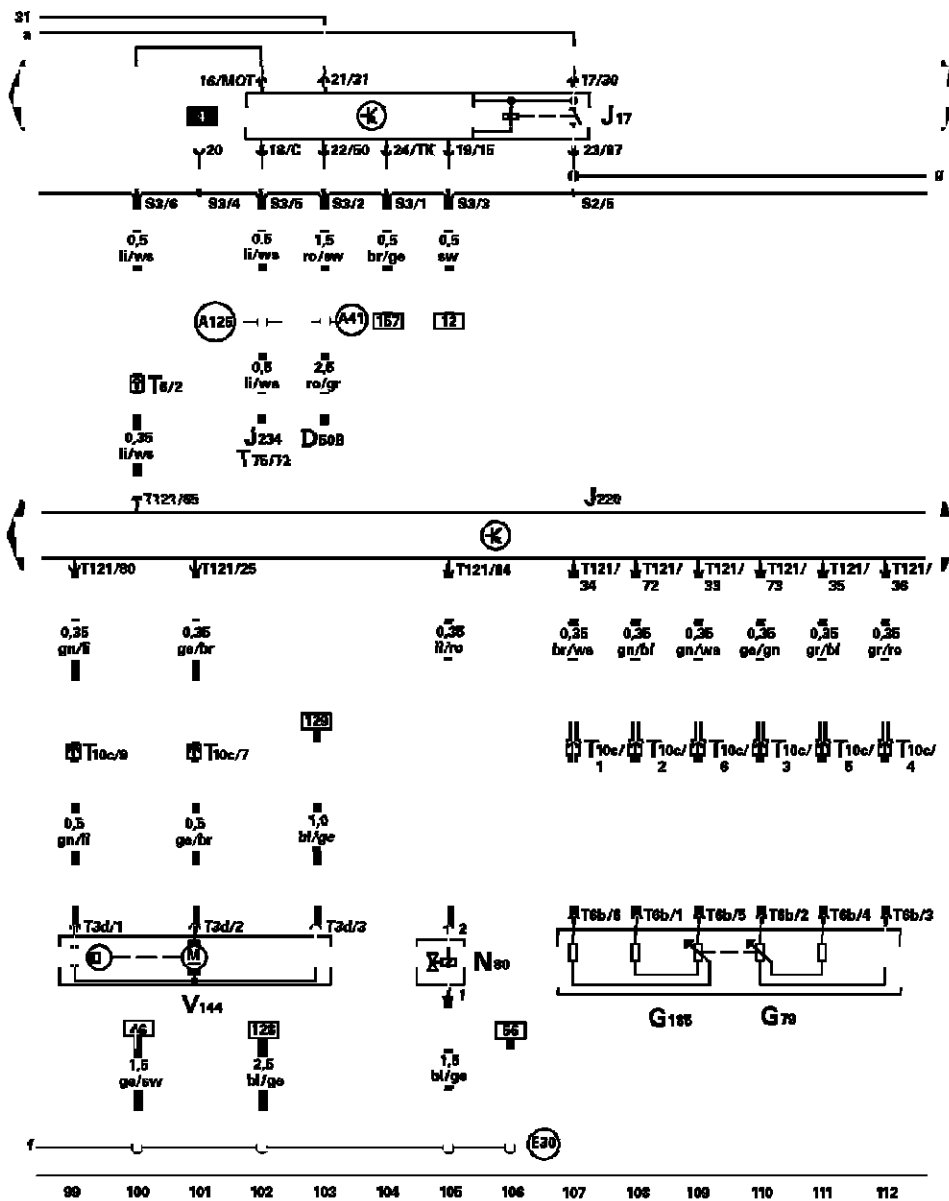
Previous Track See: System Diagram/Track 71-84

## **Track 99-112**

### **IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



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

- D - Ignition/Stater Switch
- G79 - Throttle Position (TP) Sensor
- G185 - Sender -2- for accelerator pedal position
- J17 - Fuel Pump (FP) Relay
- J220 - Motronic Engine Control Module (ECM)
- J234 - Airbag Control Module
- N80 - Evaporative Emission (EVAP) Canister Purge Regulator Valve
- V144 - Leak Detection Pump (LDP)
- T3d - 3-Pin Connector
- T6 - 6-Pin Connector, brown, behind instrument panel, left
- T6b - 6-Pin Connector
- T10c - 10-Pin Connector, blue, behind instrument panel, left
- T75 - 75-Pin Connector
- T121 - 121-Pin Connector, at -J220-
- A41 - plus connection (50), in instrument panel wiring harness
- A125 - Connection (crash signal) in instrument panel wiring harness
- E30 - Connector (87a), in wiring harness engine

Track 99-112

Next Track See: System Diagram/Track 113-126

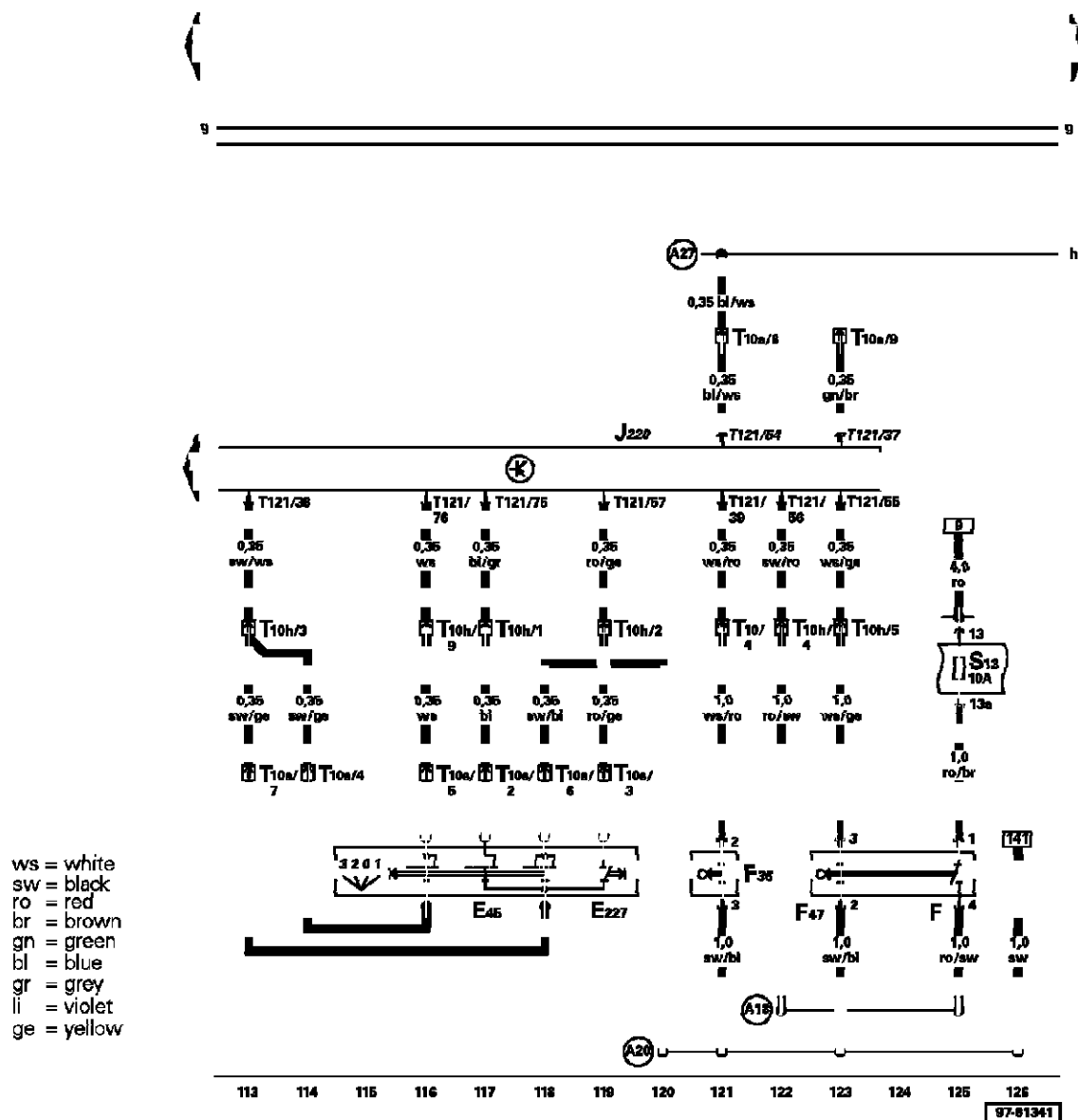
Previous Track See: System Diagram/Track 85-98

## Track 113-126

### IMPORTANT NOTE

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



- E45 - Cruise Control Switch
- E227 - Button for cruise control (set)
- F - Brake Light Switch
- F36 - Clutch Vacuum Vent Valve Switch
- F47 - Brake Pedal Switch (Cruise control/Diesel Direct Injection)
- J220 - Motronic Engine Control Module (ECM)
- S13 - Fuse 13 in fuse/relay panel
- T10a - 10-Pin Connector, orange, behind instrument panel, left
- T10 - 10-Pin Connector, white, behind instrument panel, left
- T10h - 10-Pin Connector, black, behind instrument panel, left
- T10s - 10-Pin Connector, near steering column

- T121 - 121-Pin Connector, at -J220-
- A18 - wire connection (54), in instrument panel wiring harness
- A20 - wire connection (15a), in instrument panel wiring harness
- A27 - Wire Connection (vehicle speed signal), in instrument panel wiring harness

Track 113-126

Next Track See: System Diagram/Track 127-140

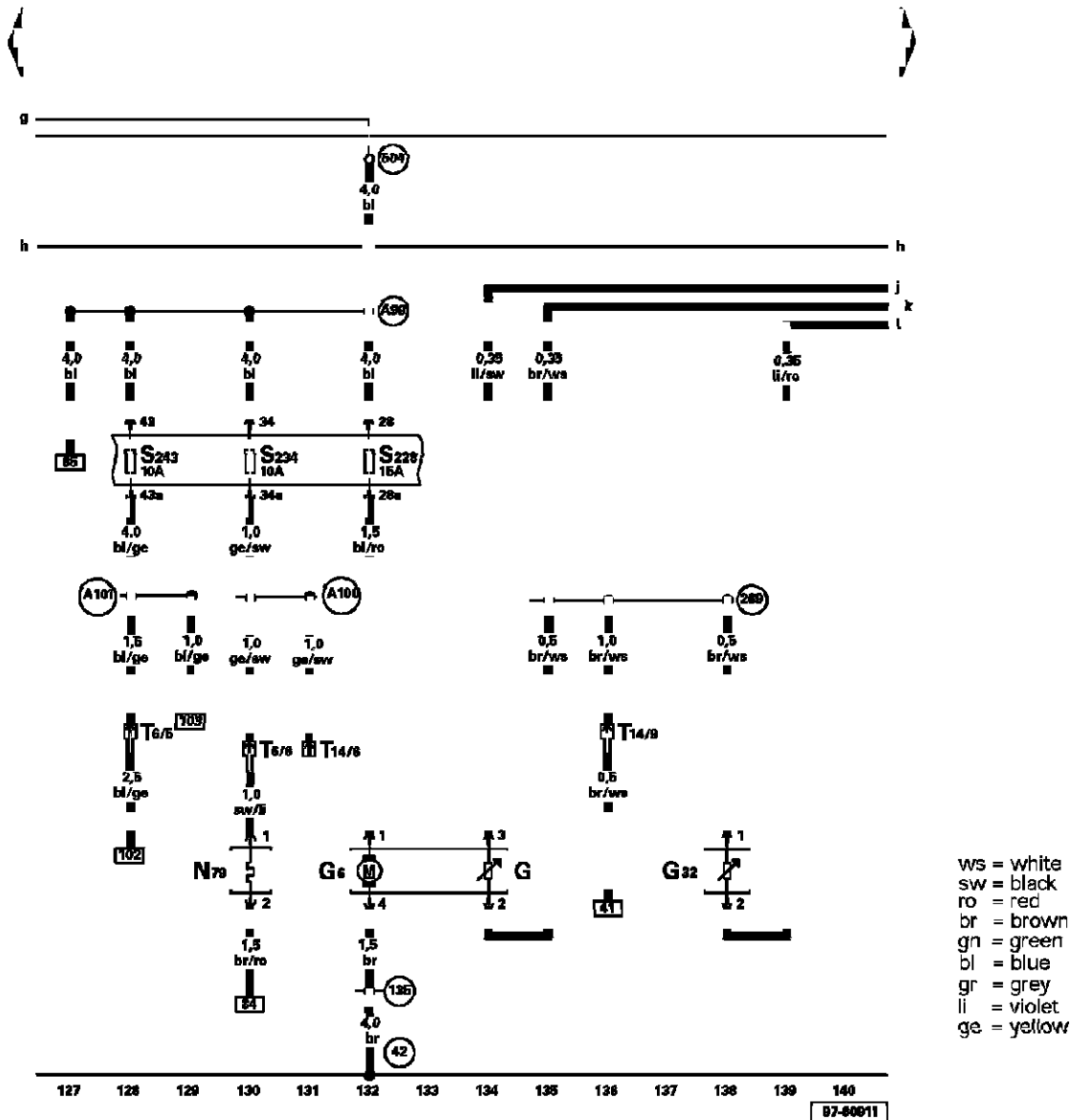
Previous Track See: System Diagram/Track 99-112

Track 127-140

**IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



Track 127-140

Next Track See: System Diagram/Track 141-154

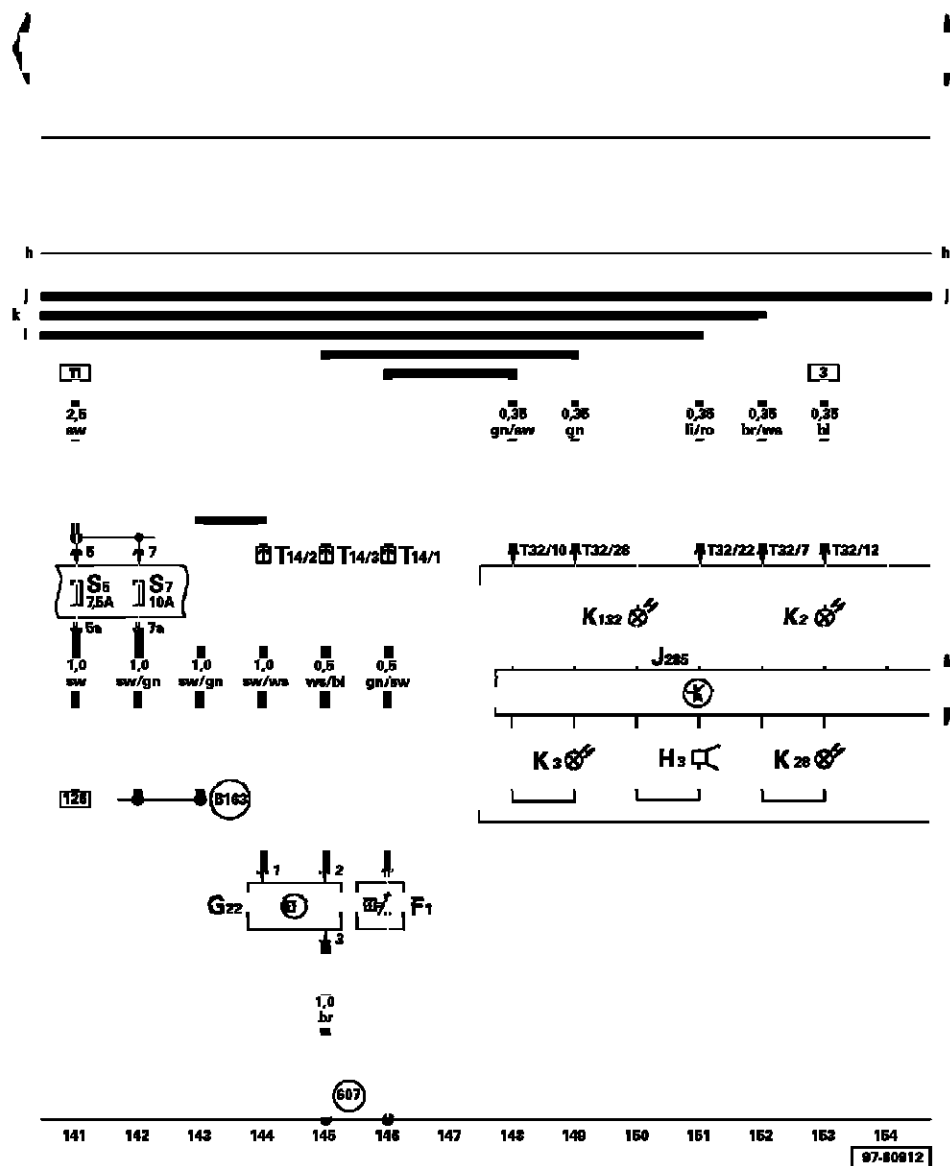
Previous Track See: System Diagram/Track 113-126

Track 141-154

**IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



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

- 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
- K132 - Electronic Power Control (EPC) Lamp
- S5 - Fuse 5 in fuse/relay panel
- S7 - Fuse 7 in fuse/relay panel
- T14 - 14-Pin Connector
- T32 - 32-Pin Connector, blue

- (607) - Ground Connection (in left plenum chamber)
- (8163) - Plus connector -1- (15) in wiring harness interior

**Track 141-154**

Next Track See: System Diagram/Track 155-168

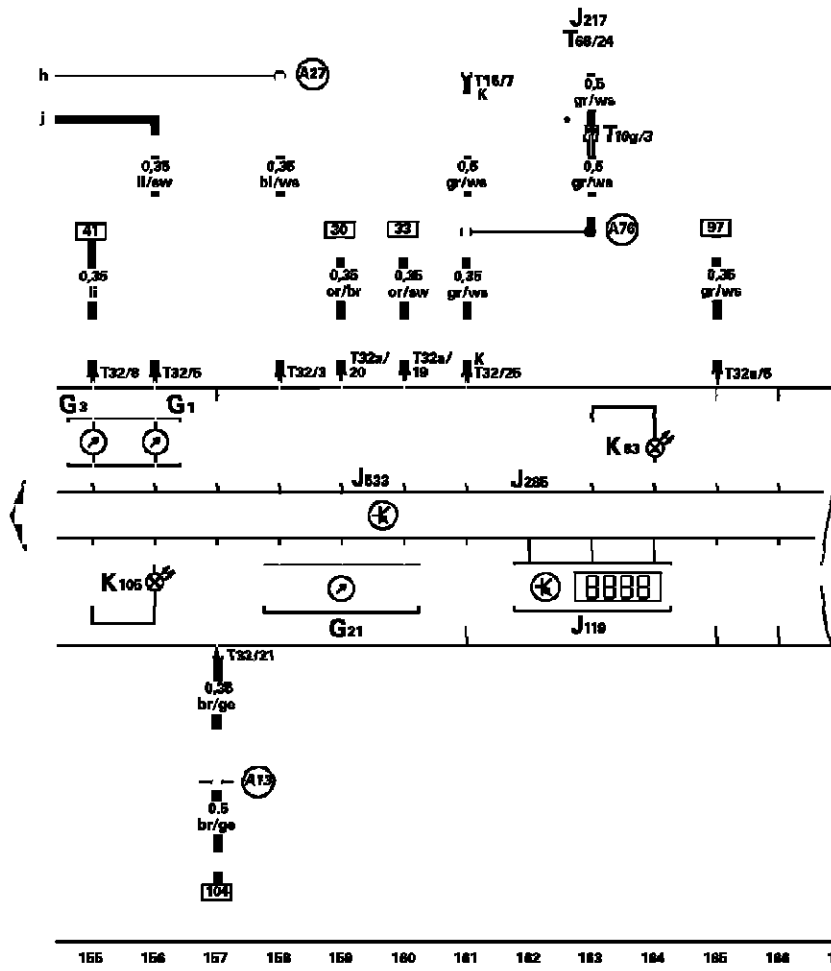
Previous Track See: System Diagram/Track 127-140

**Track 155-168**

**IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions



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

97-00913

- G1 - Fuel Gauge
- G3 - Engine Coolant Temperature (ECT) Gauge
- G21 - Speedometer
- J119 - Multi-function Indicator (MFA)
- J217 - Transmission Control Module (TCM), behind instrument panel, center
- J285 - Control module with indicator unit in instrument panel insert
- J533 - Data Bus On Board Diagnostic Interface
- K83 - Malfunction Indicator lamp (MIL)
- K105 - Low Fuel Level Warning Light
- T10g - 10-Pin Connector, grey, behind instrument panel, left
- T16 - 16-Pin Connector, Data link Connector (DLC), below steering column, left
- T32 - 32-Pin Connector, blue
- T32a - 32-Pin Connector, green
- T68 - 68-Pin Connector
- A13 - wire connection (door contact switch) in instrument panel wiring harness
- A27 - Wire Connection (vehicle speed signal), in instrument panel wiring harness
- A76 - Connector (K-diagnosis wire) in instrument panel wiring harness
- - Automatic transmission only

Track 155-168

Previous Track See: System Diagram/Track 141-154

System Diagram

For wiring diagrams and information please refer to "Powertrain Management : Diagrams : Electrical". See: Powertrain

## Management/Diagrams/Electrical Diagrams

**NOTE:** Attempting to use "Track" style wiring diagrams without a thorough understanding of their construction may prove frustrating. Please refer to "Diagram Information and Instructions" for information on how to use these diagrams effectively.

- How to Read Displayed Page of Wiring Diagram
- Wiring Diagram Circuit Identification
- Symbols Used In Wiring Diagrams
- Wire Color Code Identification
- Wire Size Conversion

See: Diagram Information and Instructions

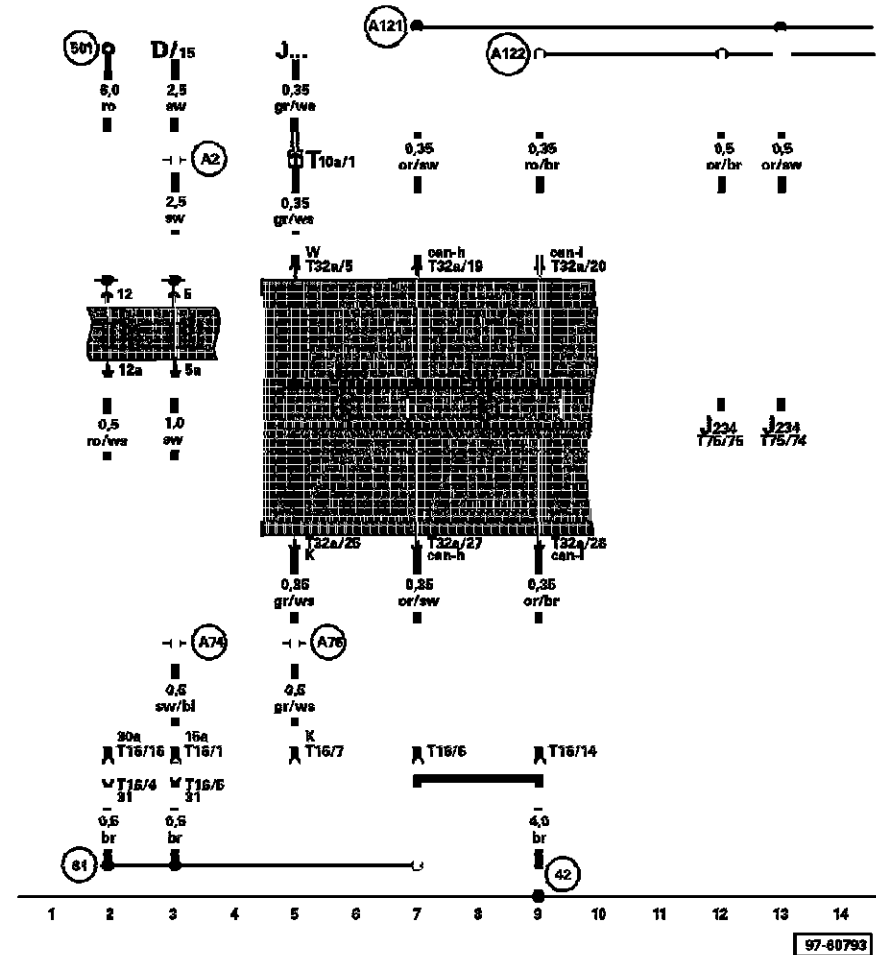
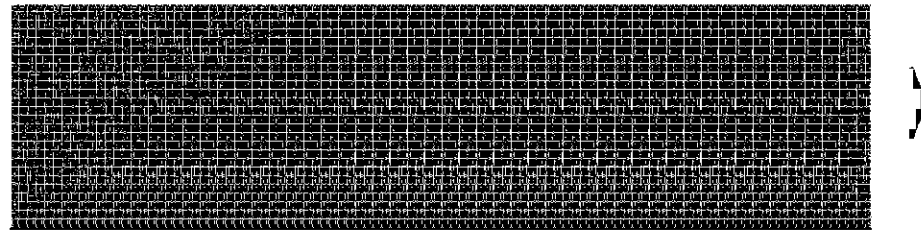
## **Data Link Connector**

### **IMPORTANT NOTE**

This manufacturer uses "Track" style wiring diagrams.

For information on how to use these diagrams effectively, please refer to Diagram Information and Instructions. See: Diagram Information and Instructions

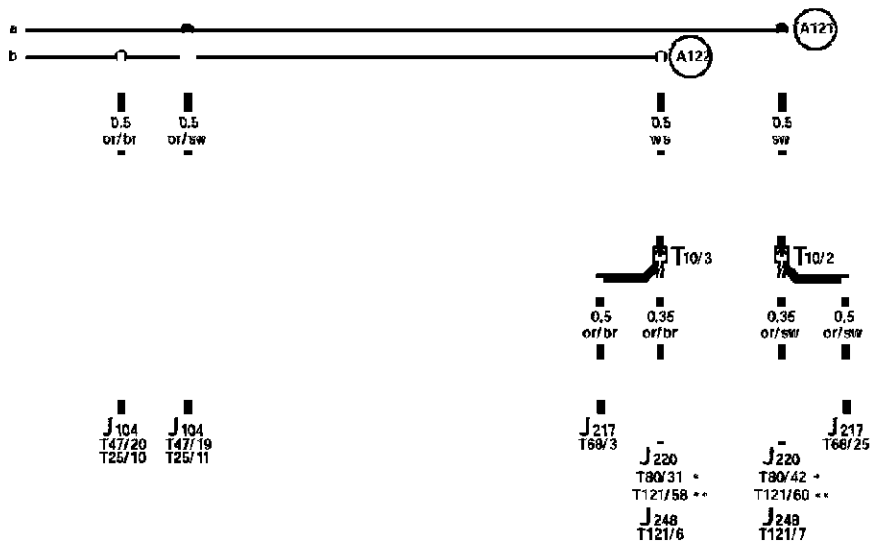
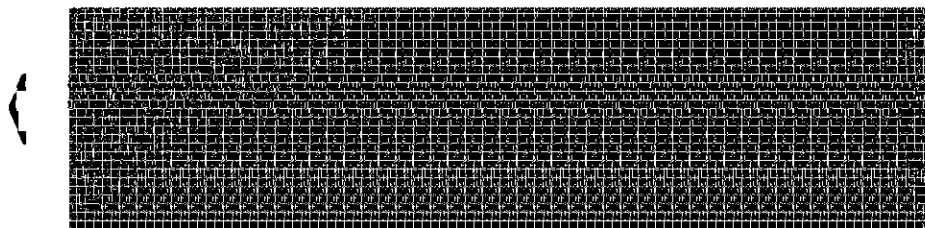
## **Can-Bus Powertrain**



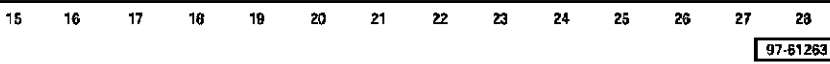
ws = white  
 sw = black  
 ro = red  
 br = brown  
 gn = green  
 bl = blue  
 gr = grey  
 li = violet  
 ge = yellow

- D - Ignition/Starter Switch
- J234 - Airbag Control Module
- J285 - Control module with indicator unit in instrument panel insert
- J533 - Data bus on board diagnostic interface
- J... - Engine Control Module (ECM)
- S5 - Fuse 5 in fuse holder
- S12 - Fuse 12 in fuse holder
- T10a - 10-Pin Connector, orange, behind instrument panel, left
- T16 - 16-Pin Connector, Data Link Connector (DLC), below steering column, left
- T32 - 32-Pin Connector, blue
- T32a - 32-Pin Connector, green
- T75 - 75-Pin Connector

- 42 - Ground connection, beside steering column
- 81 - Ground connection -1-, in instrument panel wiring harness
- 501 - Threaded connection -2- (30) on the relay plate
- A2 - Plus connection (15), in instrument panel wiring harness
- A74 - Connector (15a - fuse 5) in instrument panel wiring harness
- A76 - Connector (K-diagnosis wire) in instrument panel wiring harness
- A121 - Connection (high bus) in instrument panel wiring harness
- A122 - Connection (low bus) in instrument panel wiring harness



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



- J104 - ABS Control Module (w/EDL)
- J217 - Transmission Control Module (TCM)
- J220 - Motronic Engine Control Module (ECM)
- J248 - Diesel Direct Fuel Injection (DFI) Engine Control Module (ECM)
- T10 - 10-Pin Connector, white, behind instrument panel, left
- T25 - 25-Pin Connector
- T47 - 47-Pin Connector
- T68 - 68-Pin Connector
- T80 - 80-Pin Connector
- T121 - 121-Pin Connector

- A122** - Connection (low bus) in instrument panel wiring harness
- \* - 2.0L engine until model year 2000
- \*\* - 1.8L engine and for 2.0L starting from model change 2001

**A121** - Connection (high bus) in instrument panel wiring harness