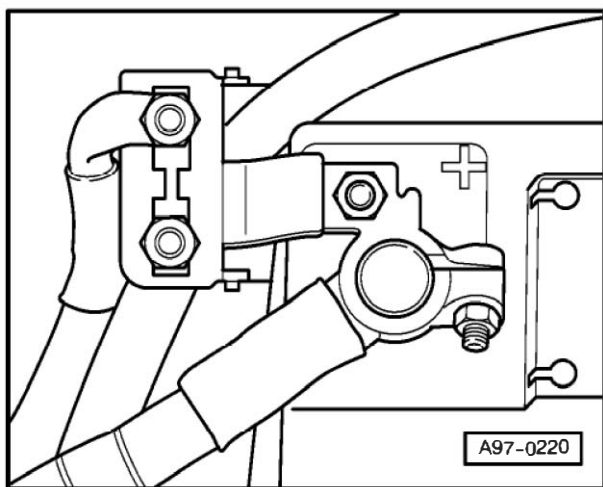
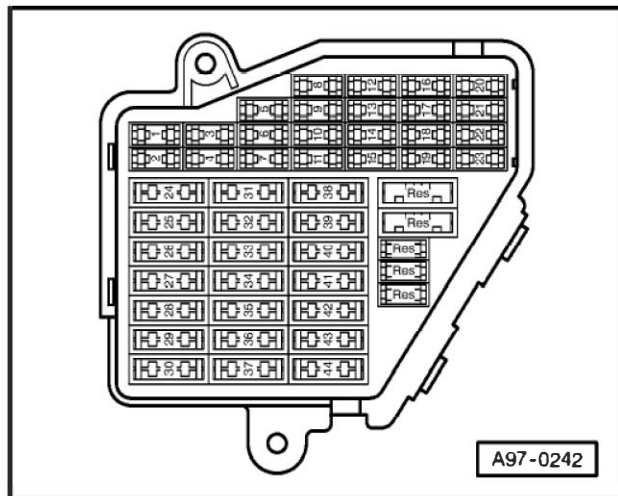


4.2 I - Injection Engine (253 kW - Motronic - 8 Cylinder) engine code BHF

from 2003 m. y.

**Main fuse**

◆ on the Battery

**Fuse holder**

- ◆ Instrument panel driver side

Fuse Colors

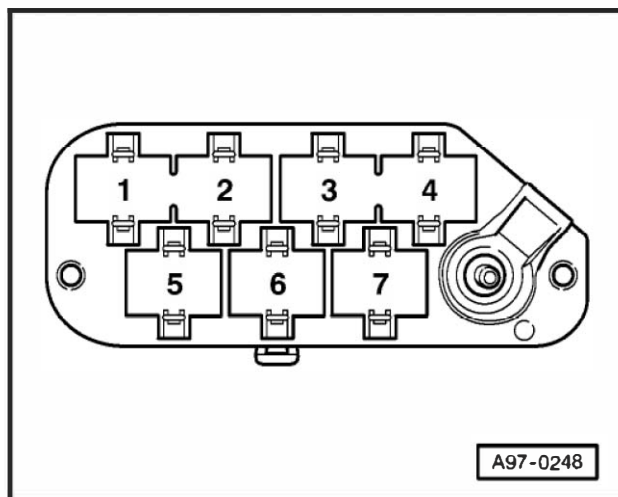
- 30 A - Green
- 25 A - Withe
- 20 A - Yellow
- 15 A - Blue
- 10 A - Red
- 7,5 A - Brown
- 5 A - Beige

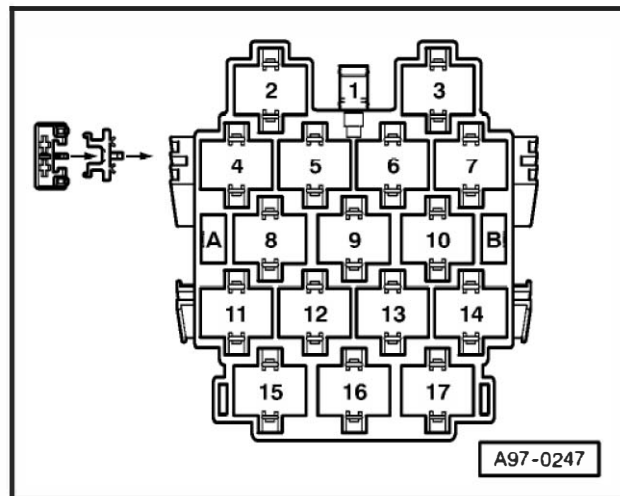
Note:

Fuse in fusebox from 23 onwards are numbered 223 onwards in Current Flow Diagram.

Coupling station with threaded connection

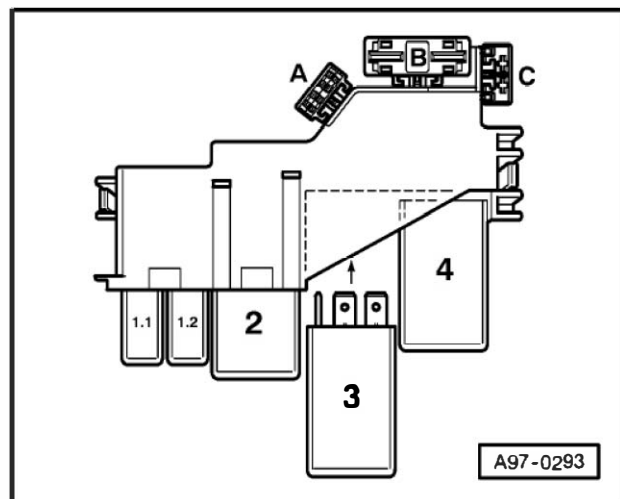
- ◆ in the electronics box, plenum chamber
 - 1 - 10-Pin Connector, black (T10)
 - 2 - 10-Pin Connector, brown (T10a)
 - 3 - 17-Pin Connector, red (T17d)
 - 6 - 17-Pin Connector, white (T17e)





Connector station A-pillar

- ◆ behind side trim, left
 - 13 - 10-Pin Connector, violet (T10c)
 - 14 - 10-Pin Connector, grey (T10d)
 - 15 - 17-Pin Connector, green (T17b)
 - 16 - 17-Pin Connector, red (T17a)
 - 17 - 17-Pin Connector, black (T17)

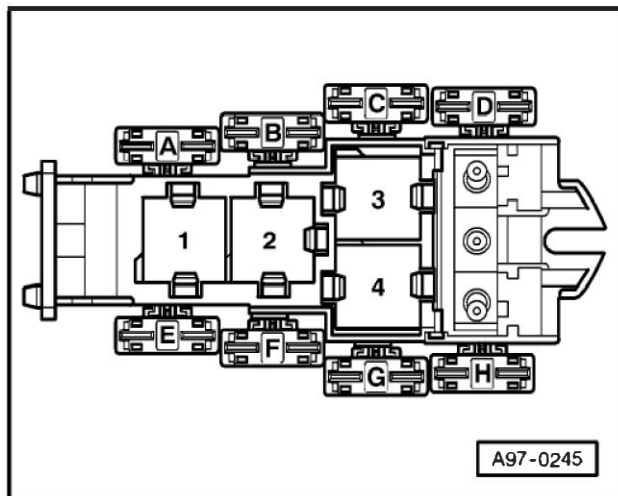


4-Position Relay Carrier

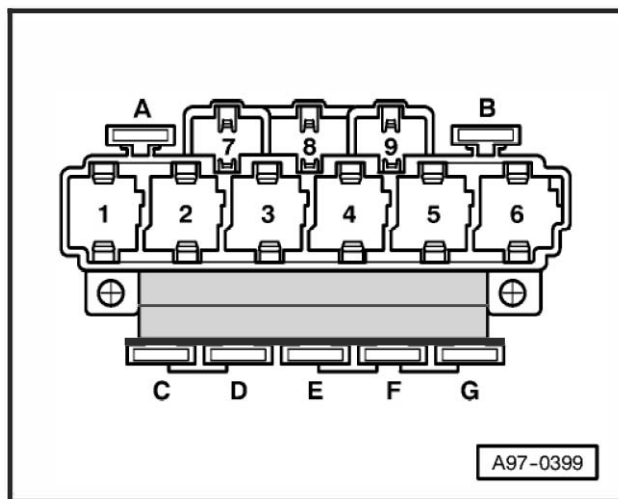
- ◆ in the electronics box, plenum chamber
 - 1.1 - Coolant Circulation Pump Relay (J151)
 - 2 - Secondary Air Injection (AIR) Pump Relay (J299)
 - 3 - Motronic Engine Control Module (ECM) Power Supply Relay (J271)
 - 4 - Locking relay for starter (J434)
 - A - Engine Electronics Fuse (S282)
 - B - Fuse for secondary air pump (S130)
 - C - Automatic Transmission After-Run Fuse (S286)

4-Position Relay Carrier with threaded connection

- ◆ Instrument panel driver side

**9-Position Relay Carrier with Vehicle Electrical System Control Module**

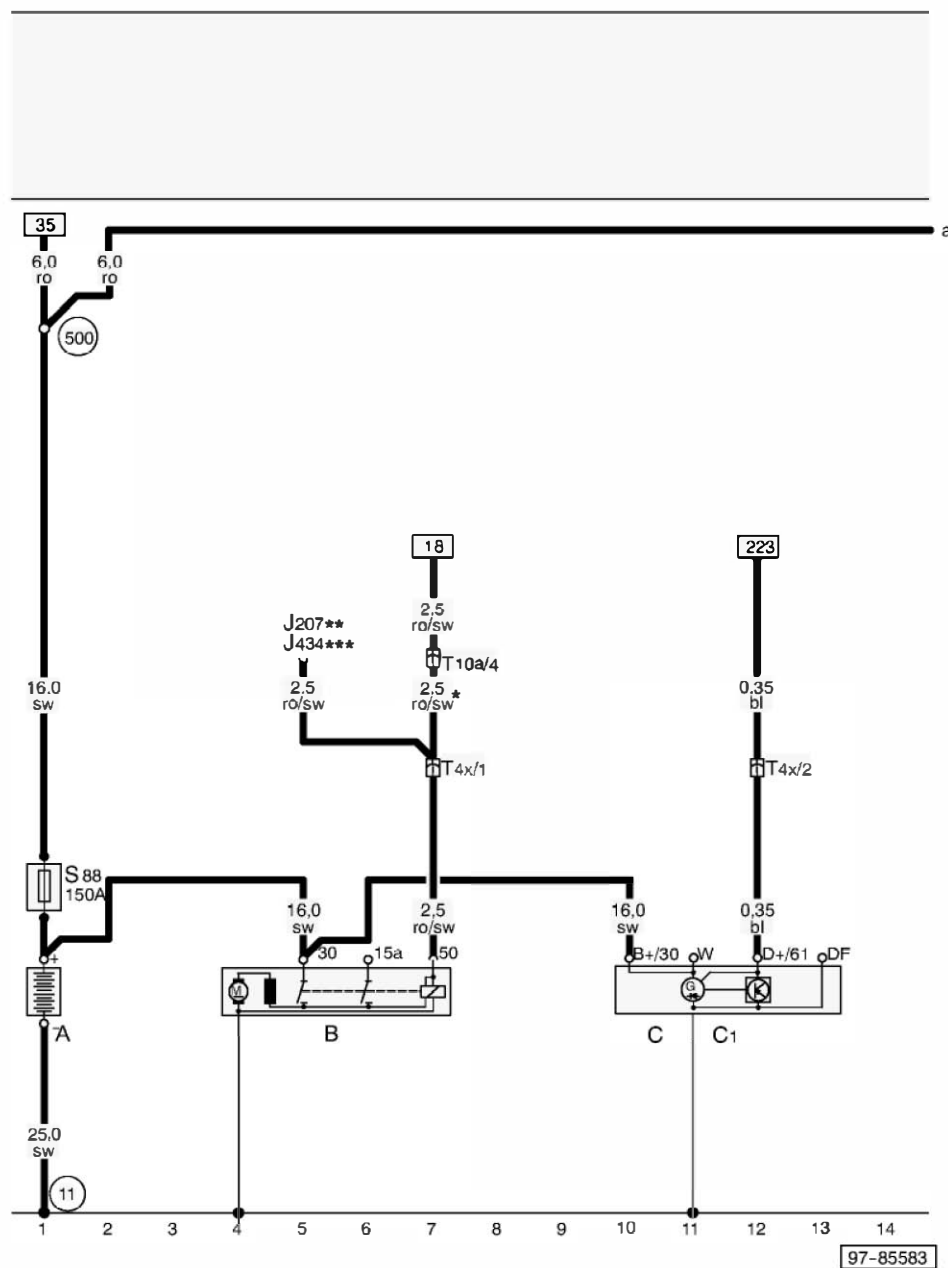
- ◆ Instrument panel driver side, behind 3-Pin Relay Carrier
1 - Fuel Pump (FP) Relay (J17)



Battery, Starter, Generator (GEN)

- A - Battery
 - B - Starter
 - C - Generator (GEN)
 - C1 - Voltage Regulator (VR)
 - J207** - Starting Interlock Relay
 - J434 - Starter Lock/Clutch Pedal Switch Relay
 - S88 - Fuse Strip
 - T4x - 4-Pin Connector, black, near battery
 - T10a - 10-Pin Connector, brown, connector station E-box, plenum chamber
- (11) - Ground Connection (in battery box)
- (500) - Threaded Connection -1- terminal 30 (on relay panel)
- * - Manual transmission only
- ** - Automatic transmission (AG6) only → Current wiring diagram for automatic transmission
- *** - Manual transmission (USA/CDN) only → applicable Locking relay for starter, clutch pedal switch wiring diagram

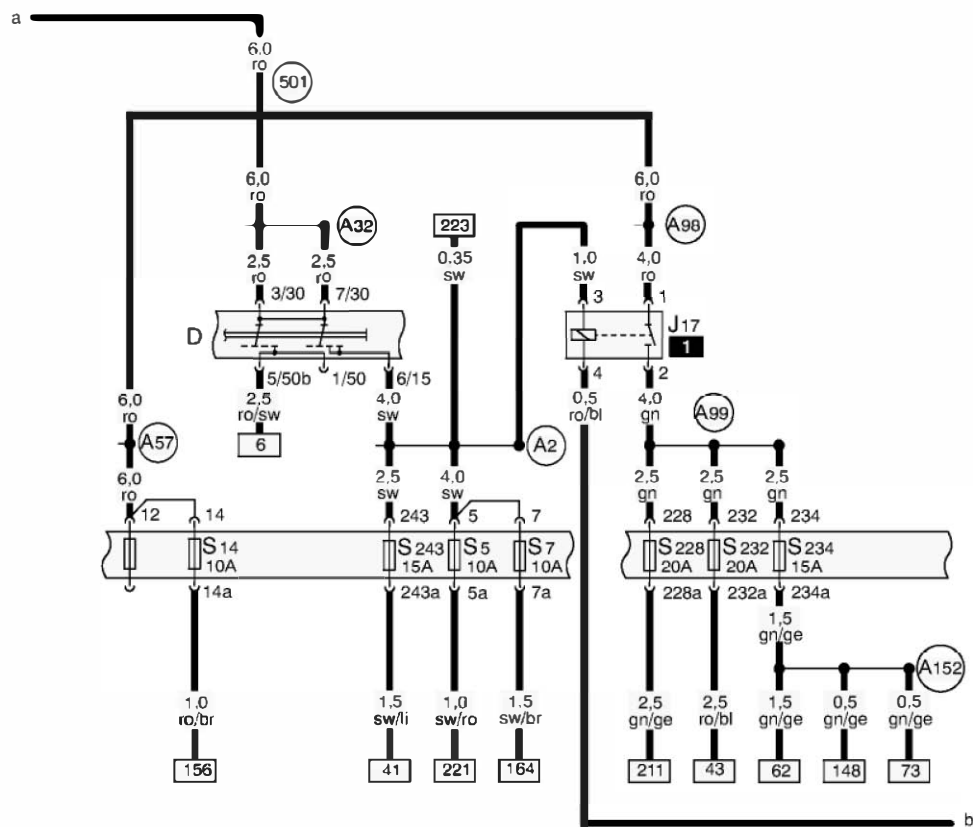
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 sw = black
 ro = red
 br = brown
 gn = green
 bl = blue
 gr = grey
 li = lilac
 ge = yellow
 or = orange



Fuel Pump (FP) Relay, Ignition/Starter Switch, Fuses

- D - Ignition/Starter Switch
- J17 - Fuel Pump (FP) Relay
- S5 - Fuse in fuse holder/relay panel
- S7 - Fuse in fuse holder/relay panel
- S14 - Fuse in fuse holder/relay panel
- S228 - Fuse in fuse holder
- S232 - Fuse in fuse holder
- S234 - Fuse in fuse holder
- S243 - Fuse in fuse holder

- 501 - Threaded connection -2- (30), on the relay plate
- A2 - Plus connection (15), in instrument panel wiring harness
- A32 - Plus connection (30), in instrument panel wiring harness
- A57 - Plus connection -3- (30), in instrument panel wiring harness
- A98 - Plus connection -4- (30), in instrument panel wiring harness
- A99 - Connector -1- (87), in instrument panel wiring harness
- A152 - Connection -5- (87), in instrument panel wiring harness



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

97-53469

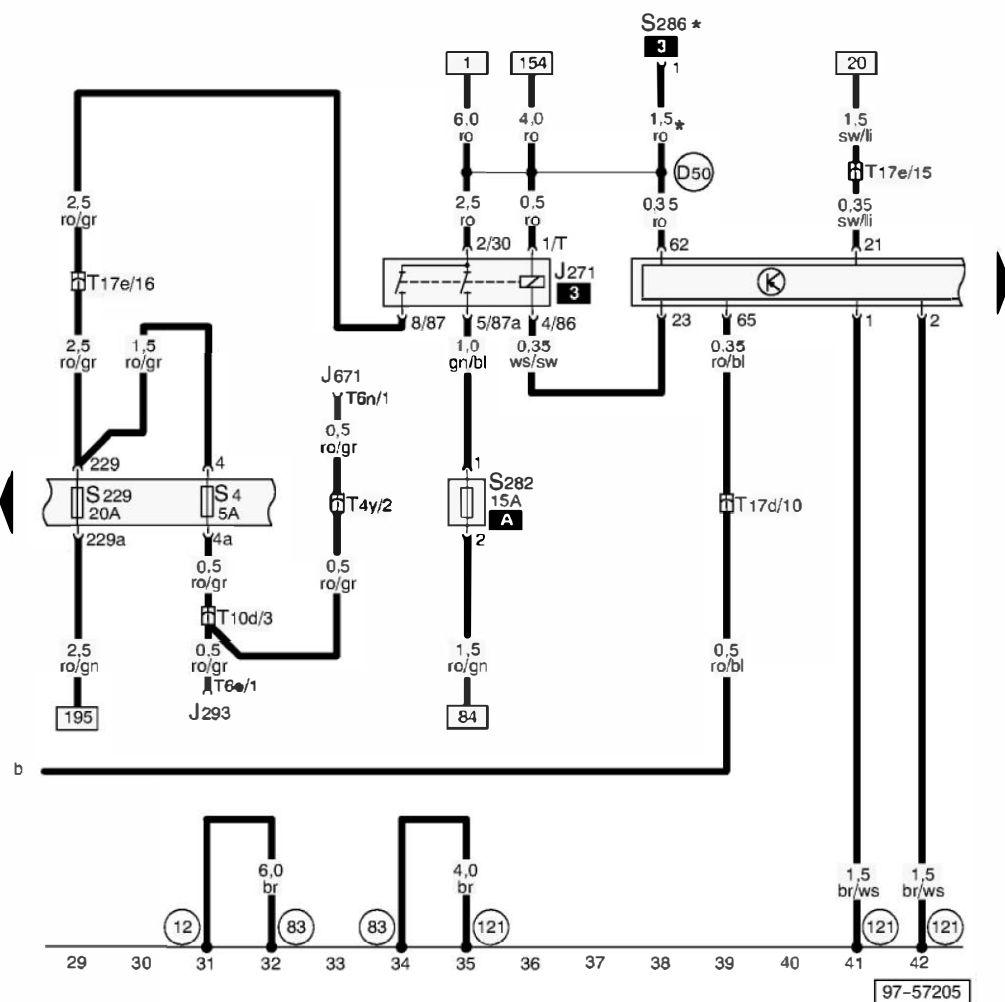
Motronic Engine Control Module (ECM), Motronic Engine Control Module (ECM) Power Supply Relay, Fuses

- J220 - Motronic Engine Control Module (ECM)
 J271 - Motronic Engine Control Module (ECM) Power Supply Relay
 J293 - Coolant FC (Fan Control) Control Module
 J671 - Coolant FC (Fan Control) Control Module 2
 S4 - Fuse
 S229 - Fuse in fuse holder
 S282 - Engine Electronics Fuse
 S286 - Automatic Transmission After-Run Fuse
 T4y - 4-Pin Connector, black, engine compartment
 T6n - 6-Pin Connector, on Coolant FC (Fan Control) Control Module 2
 T6o - 6-Pin Connector, on Coolant FC (Fan Control) Control Module
 T10d - 10-Pin Connector, grey, connector station A-pillar, left
 T17d - 17-Pin Connector, red, connector station E-box, plenum chamber
 T17e - 17-Pin Connector, white, connector station E-box, plenum chamber

- (12) - Ground connection, in engine compartment, left
 (83) - Ground connection -1-, in right front wiring harness
 (121) - ground connection -2-, in right front wiring harness
 (D50) - Plus connection (30), in engine compartment wiring harness

* - Automatic transmission (AG6) only

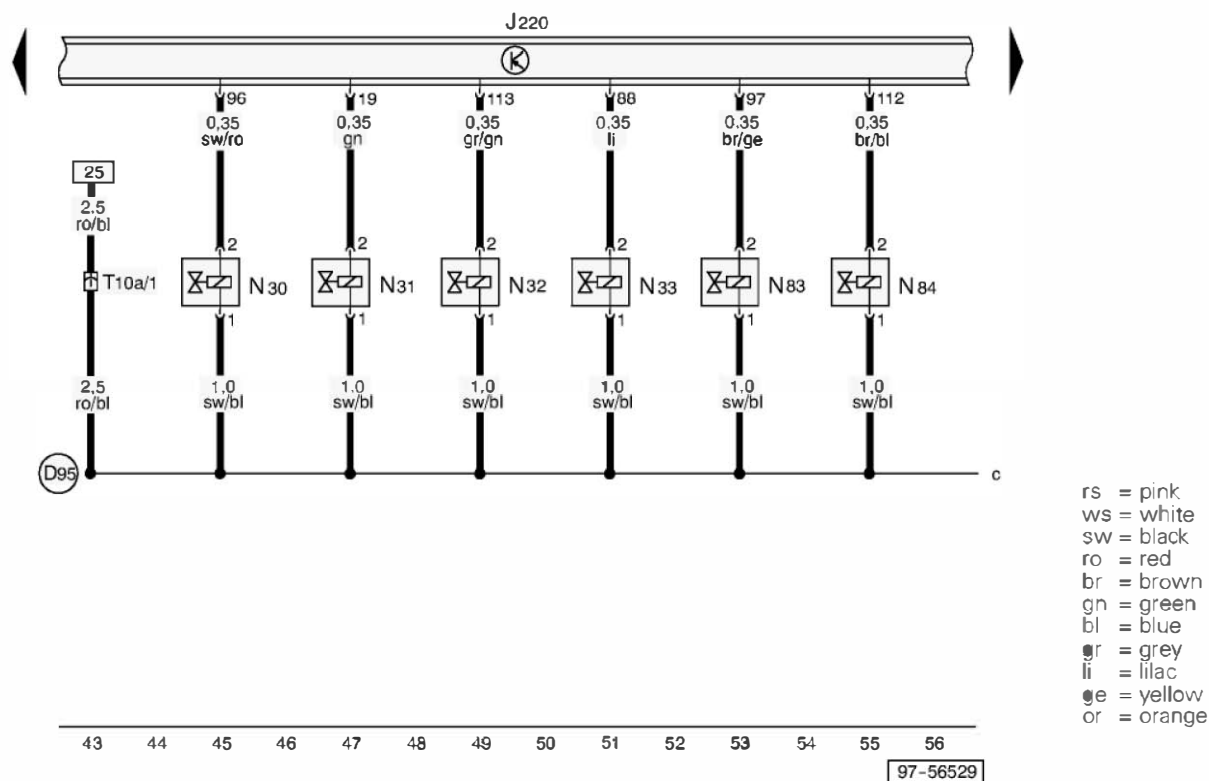
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 sw = black
 ro = red
 br = brown
 gn = green
 bl = blue
 gr = grey
 li = lilac
 ye = yellow
 or = orange



Motronic Engine Control Module (ECM), Cylinder Fuel Injectors

- 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
- N83 - Cylinder 5 Fuel Injector
- N84 - Cylinder 6 Fuel Injector
- T10a - 10-Pin Connector, brown, connector station E-box, plenum chamber

(D95) - Wire connection (injectors), in engine compartment wiring harness

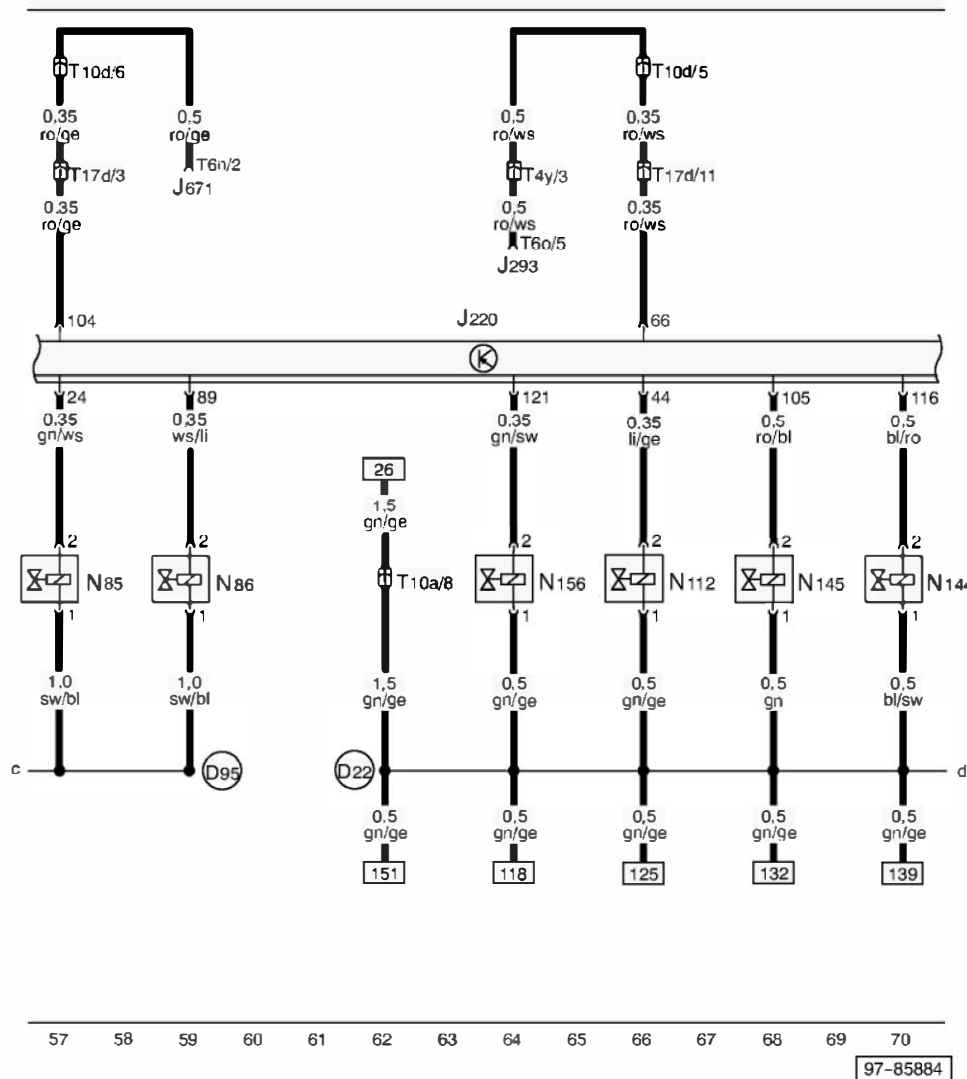


Motronic Engine Control Module (ECM), Secondary Air Injection (AIR) Solenoid Valve, Injectors, Electro-Hydraulic Engine Mount Solenoid Valve

- J220 - Motronic Engine Control Module (ECM)
 J293 - Coolant Fan Control (FC) Control Module
 J671 - Coolant Fan Control (FC) Control Module 2
 N85 - Cylinder 7 Fuel Injector
 N86 - Cylinder 8 Fuel Injector
 N112 - Secondary Air Injection (AIR) Solenoid Valve
 N144 - Left Electro-Hydraulic Engine Mount Solenoid Valve
 N145 - Right Electro-Hydraulic Engine Mount Solenoid Valve
 N156 - Intake Manifold Tuning (IMT) Valve
 T4y - 4-Pin Connector, black, engine compartment
 T6n - 6-Pin Connector, on Coolant FC (Fan Control) Control Module 2
 T6o - 6-Pin Connector, on Coolant FC (Fan Control) Control Module
 T10a - 10-Pin Connector, brown, connector station E-box, plenum chamber
 T10d - 10-Pin Connector, grey, connector station A-pillar, left
 T17d - 17-Pin Connector, red, connector station E-box, plenum chamber

- (D22) - Connection (over Fuse 234) (in right front wiring harness)
 (D95) - Injectors Connection (in engine compartment wiring harness)

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



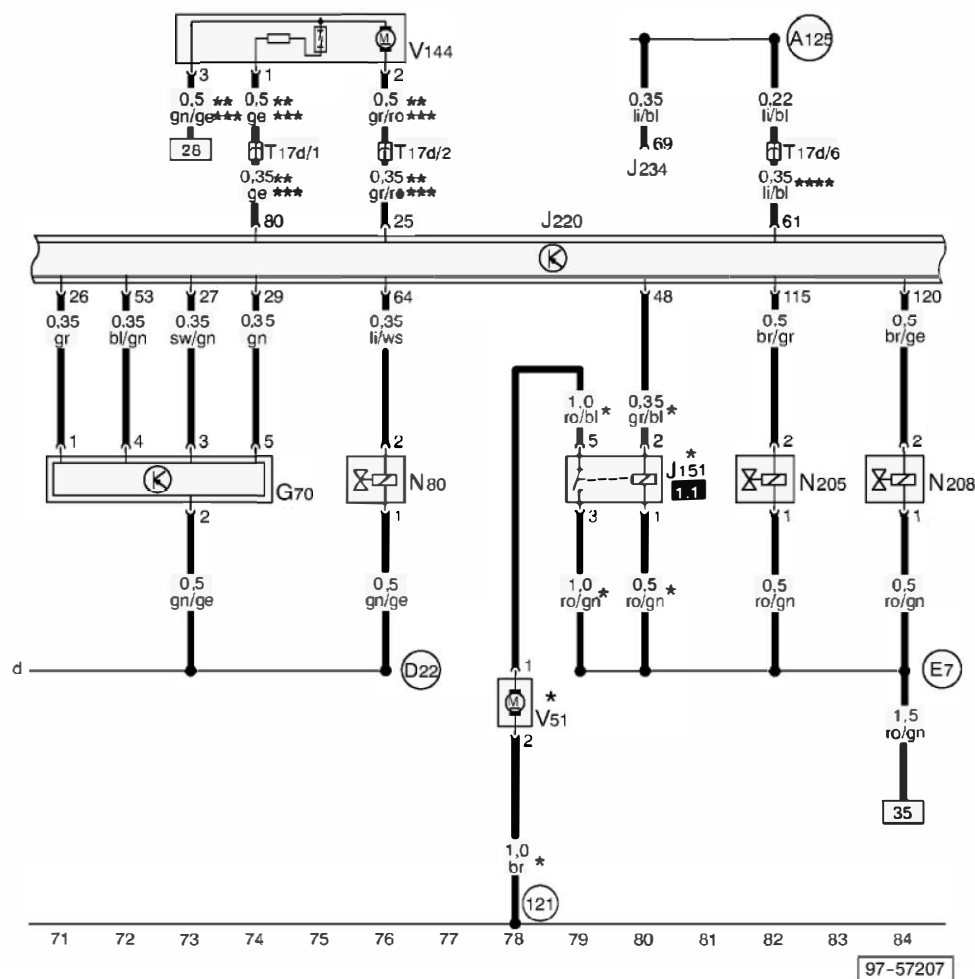
Motronic Engine Control Module (ECM), Valves for camshaft adjustment, After-Run Coolant Pump, Mass Air Flow (MAF) Sensor, Evaporative Emission (EVAP) Canister Purge Regulator Valve, Leak detection pump (LDP)

G70 - Mass Air Flow (MAF) Sensor
 J151 - Coolant Circulation Pump Relay
 J220 - Motronic Engine Control Module (ECM)
 J234 - Airbag Control Module
 N80 - Evaporative Emission (EVAP) Canister Purge Regulator Valve
 N205 - Valve -1- for camshaft adjustment
 N208 - Valve -2- for camshaft adjustment
 T17d - 17-Pin Connector, red, connector station E-box, plenum chamber
 V51 - After-Run Coolant Pump
 V144 - Leak detection pump (LDP)

(121) - ground connection -2-, in right front wiring harness
 A125 - Connection (crash signal) in instrument panel wiring harness
 D22 - Connector (over fuse 234), in wiring harness front, right
 E7 - Connection (87a) in Motronic wiring harness

* - Where applicable
 ** - Manual transmission only
 *** - Automatic transmission (AG6) only
 ***** - Where applicable (discontinued - running production change)

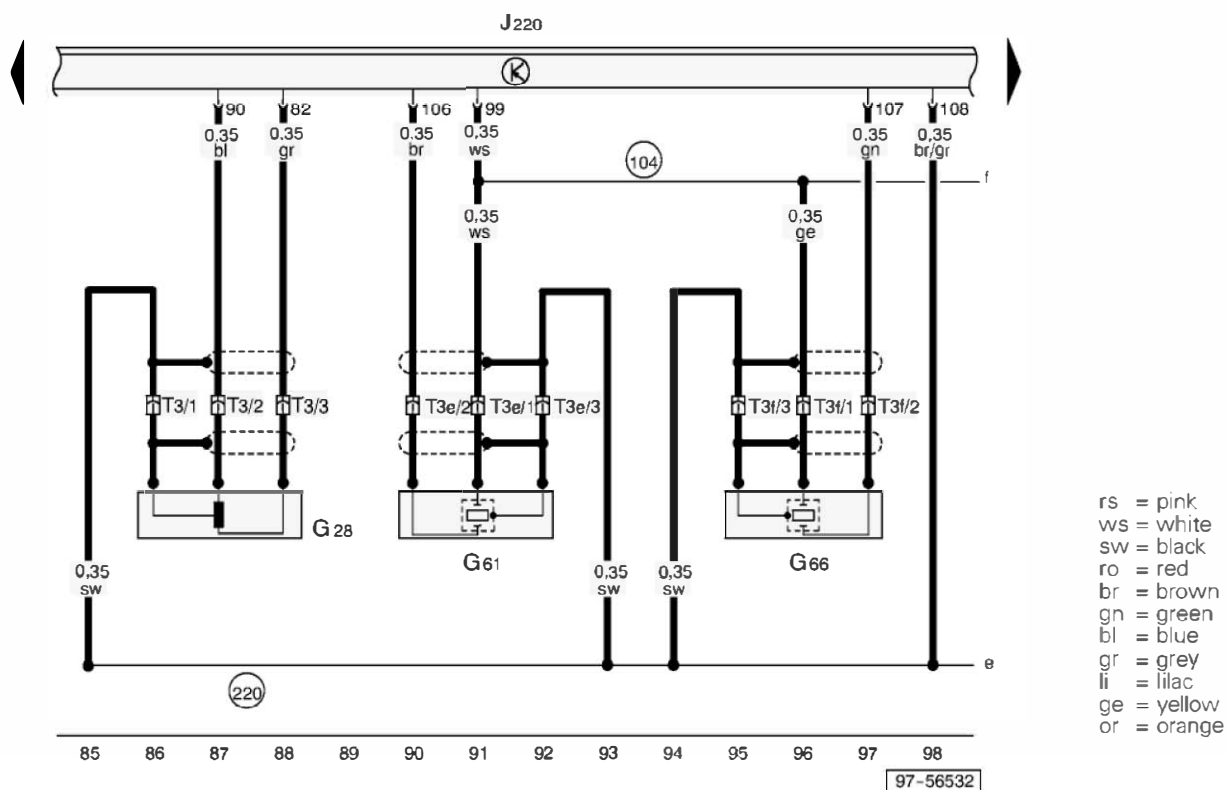
rs = pink
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 ro = red
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 gn = green
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Motronic Engine Control Module (ECM), Engine Speed (RPM) Sensor, Knock Sensors

- G28 - Engine Speed (RPM) Sensor
 G61 - Knock Sensor (KS) 1
 G66 - Knock Sensor (KS) 2
 J220 - Motronic Engine Control Module (ECM)
 T3 - 3-Pin Connector, grey, on engine block
 T3e - 3-Pin Connector, blue, on engine block
 T3f - 3-Pin Connector, black, on engine block

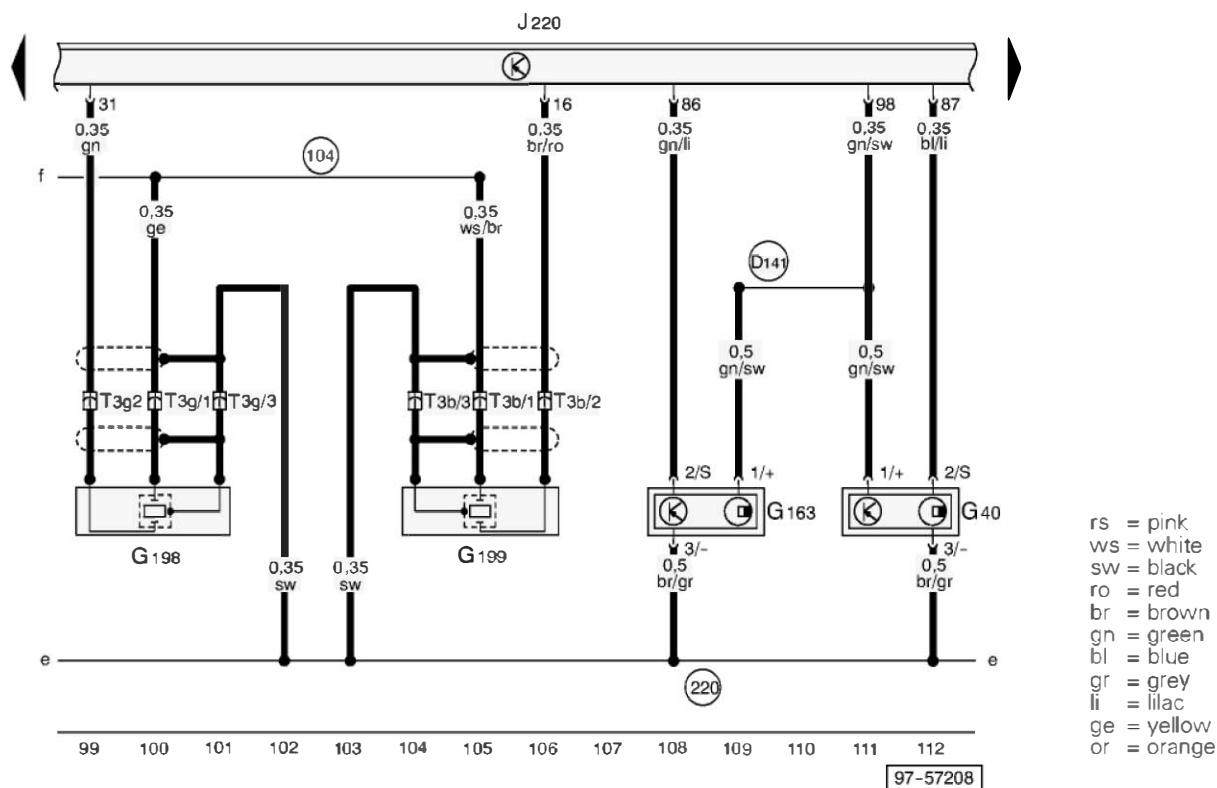
- (104) - Ground connection, in right front wiring harness - sensor Grounds -
 (220) - Ground connection (sensor Ground), in engine wiring harness



Motronic Engine Control Module (ECM), Camshaft Position (CMP) Sensor, Knock sensors

- G40 - Camshaft Position (CMP) Sensor
 G163 - Camshaft Position (CMP) Sensor 2
 G198 - Knock sensor 3
 G199 - Knock sensor 4
 J220 - Motronic Engine Control Module (ECM)
 T3b - 3-Pin Connector, blue, on engine block
 T3g - 3-Pin Connector, black, on engine block

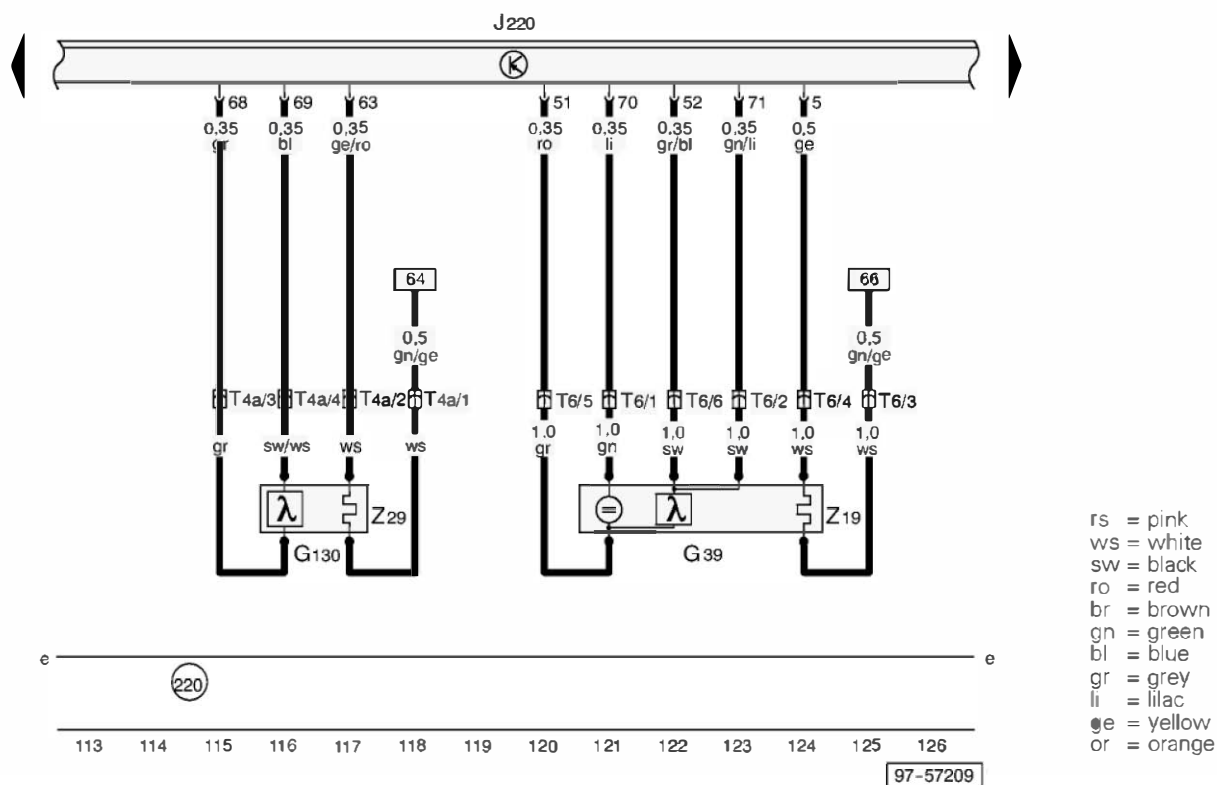
- (104) - Ground connection, in right front wiring harness (sensor Grounds)
 (220) - Ground connection (sensor ground), in engine compartment wiring harness
 (D141) - Connector (5V), in wiring harness, engine pre-wiring



Motronic Engine Control Module (ECM), Heated Oxygen Sensors

- G39 - Heated Oxygen Sensor (HO2S)
- G130 - Oxygen Sensor (O2S) Behind Three Way Catalytic Converter (TWC)
- J220 - Motronic Engine Control Module (ECM)
- T4a - 4-Pin Connector, green, connector station Heated Oxygen Sensor (HO2S) (firewall)
- T6 - 6-Pin Connector, black, connector station Heated Oxygen Sensor (HO2S) (firewall)
- Z19 - Oxygen Sensor (O2S) Heater
- Z29 - Oxygen Sensor (O2S) Heater 1 Behind Three Way Catalytic converter (TWC)

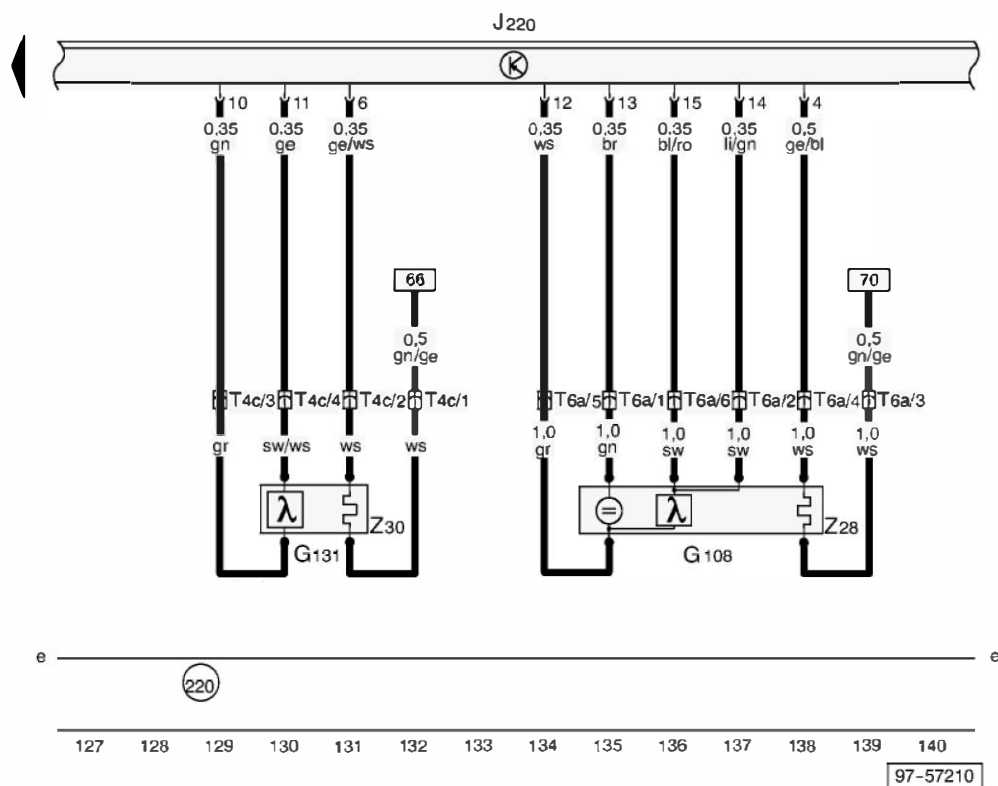
(220) - Ground connection (sensor ground), in engine compartment wiring harness



Motronic Engine Control Module (ECM), Heated Oxygen Sensors

- G108 - Heated Oxygen Sensor (HO2S) 2
- G131 - Oxygen Sensor (O2S) 2 Behind Three Way Catalytic Converter (TWC)
- J220 - Motronic Engine Control Module (ECM)
- T4c - 4-Pin Connector, brown, connector station Heated Oxygen Sensor (HO2S) (firewall)
- T6a - 6-Pin Connector, black, connector station Heated Oxygen Sensor (HO2S) (firewall)
- Z28 - Oxygen Sensor (O2S) 2 Heater
- Z30 - Oxygen Sensor (O2S) Heater 2 Behind Three Way Catalytic Converter

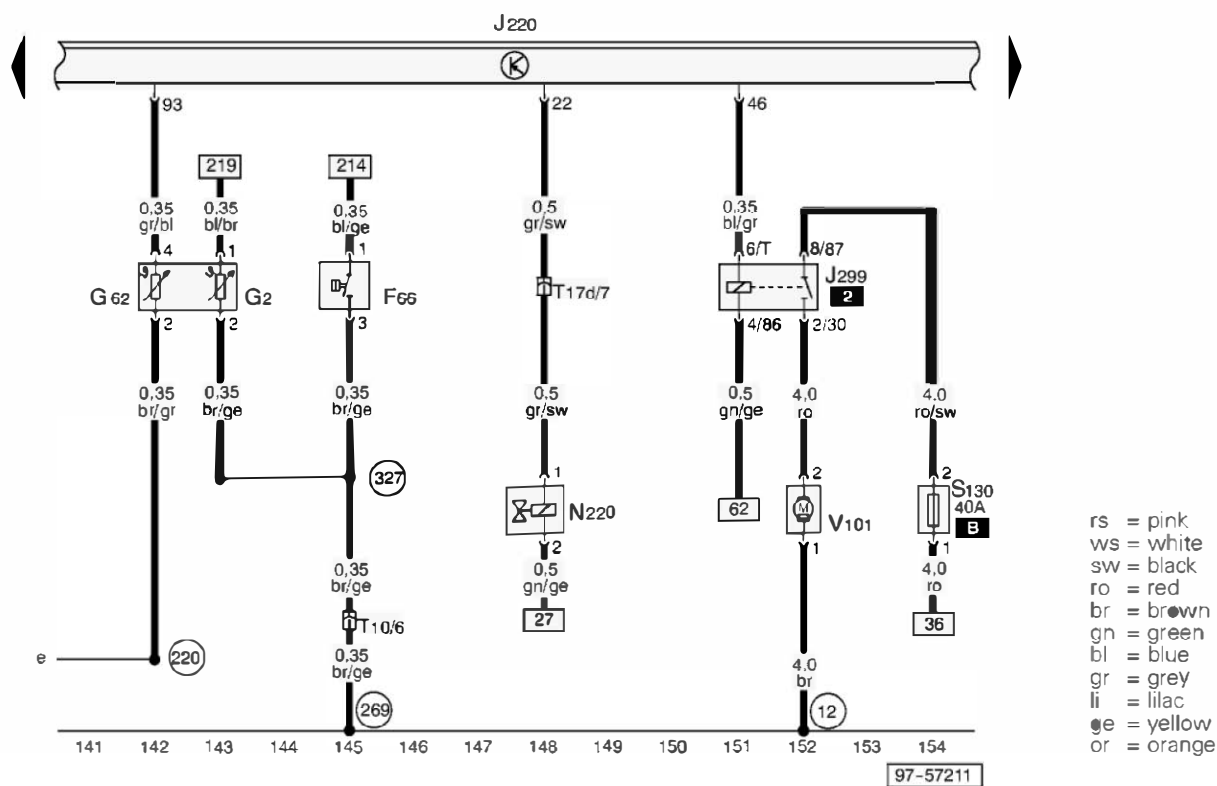
(220) - Ground connection (sensor Ground), in engine wiring harness



Motronic Engine Control Module (ECM), Secondary Air Injection (AIR) Pump Motor, Engine Coolant Level (ECL) Warning Switch, Valve for exhaust flap, Engine Coolant Temperature (ECT) Sensor

- F66 - Engine Coolant Level (ECL) Warning Switch
- G2 - Engine Coolant Temperature (ECT) Sensor
- G62 - Engine Coolant Temperature (ECT) Sensor
- J220 - Motronic Engine Control Module (ECM)
- J299 - Secondary Air Injection (AIR) Pump Relay
- N220 - Valve for exhaust flap
- S130 - Fuse for secondary air pump
- T10 - 10-Pin Connector, black, connector station E-box, plenum chamber
- T17d - 17-Pin Connector, red, connector station E-box, plenum chamber
- V101 - Secondary Air Injection (AIR) Pump Motor

- (12) - Ground connection, in engine compartment, left
- (220) - Ground connection (sensor ground), in engine compartment wiring harness
- (269) - Ground connector (sensor ground) -1-, in instrument panel wiring harness
- (327) - Sensor Ground Connection (in engine compartment wiring harness)

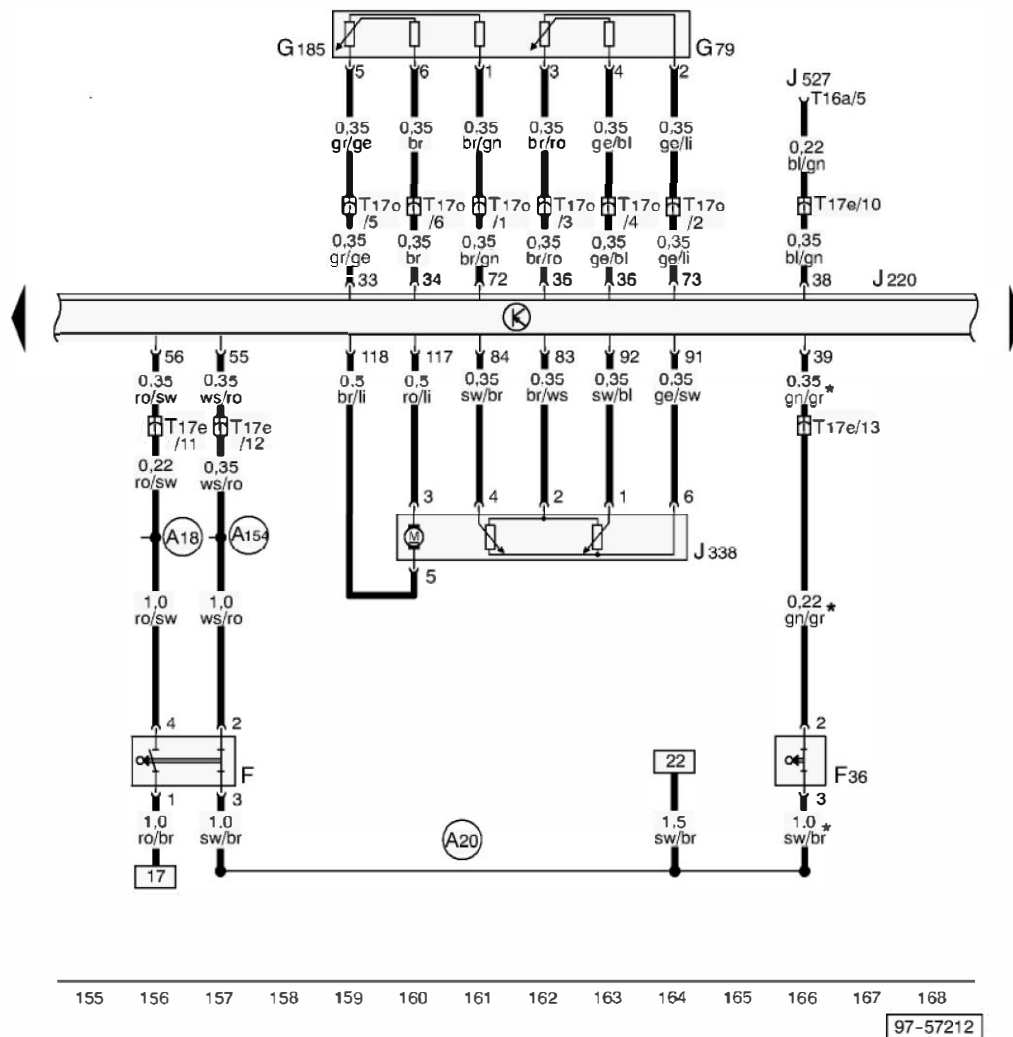


Motronic Engine Control Module (ECM), Throttle Position (TP) Sensor, Throttle Valve Control Module

- F - Brake Light Switch
 F36 - Clutch Vacuum Vent Valve Switch
 G79 - Throttle Position (TP) Sensor
 G185 - Sender 2 for accelerator pedal position
 J220 - Motronic Engine Control Module (ECM)
 J338 - Throttle Valve Control Module
 J527 - Steering Column Electronic Systems Control Module
 T16a - 16-Pin Connector, black, on steering Column Electronic Systems Control Module
 T17e - 17-Pin Connector, white, connector station E-box, plenum chamber

- (A18) - Wire connection (54), in instrument panel wiring harness
 (A20) - Wire connection (15a), in instrument panel wiring harness
 (A154) - Wire connection (Brake Light Switch), in instrument panel wiring harness

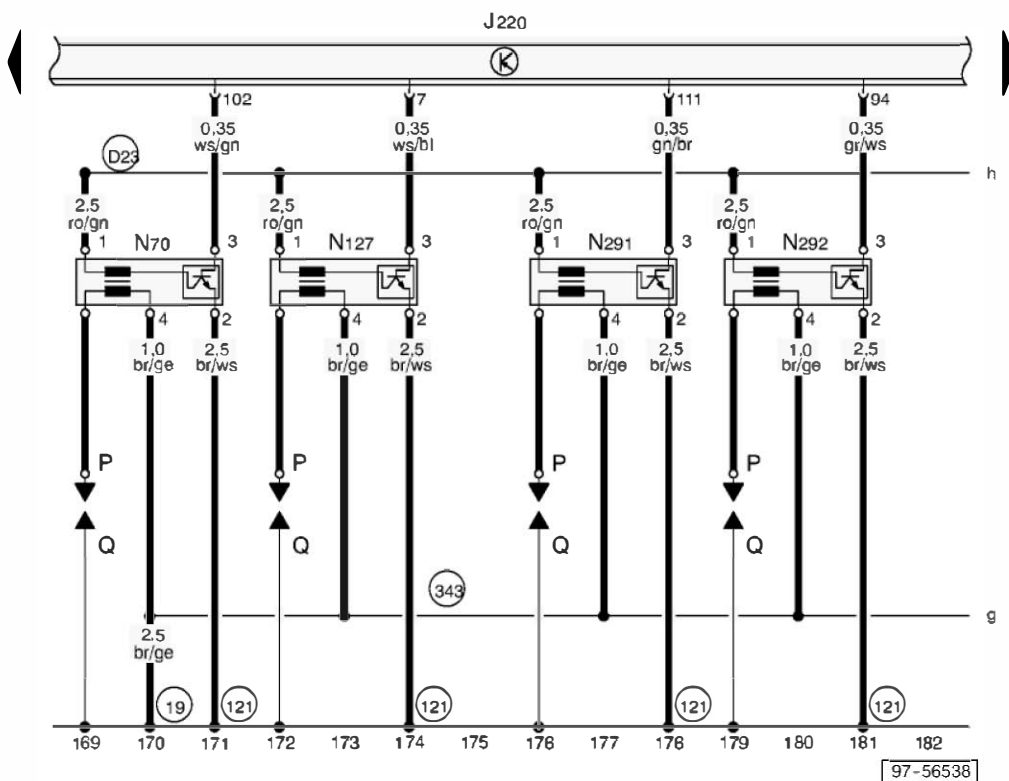
* - Manual transmission only



Motronic Engine Control Module (ECM), Ignition Coils

- 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

- (19) - Ground connection, near ignition coil
- (121) - ground connection -2-, in right front wiring harness
- (343) - Ignition Coil Ground Connection (in fuel injection wiring harness)
- (D23) - Connector (over fuse 229), in wiring harness front, right

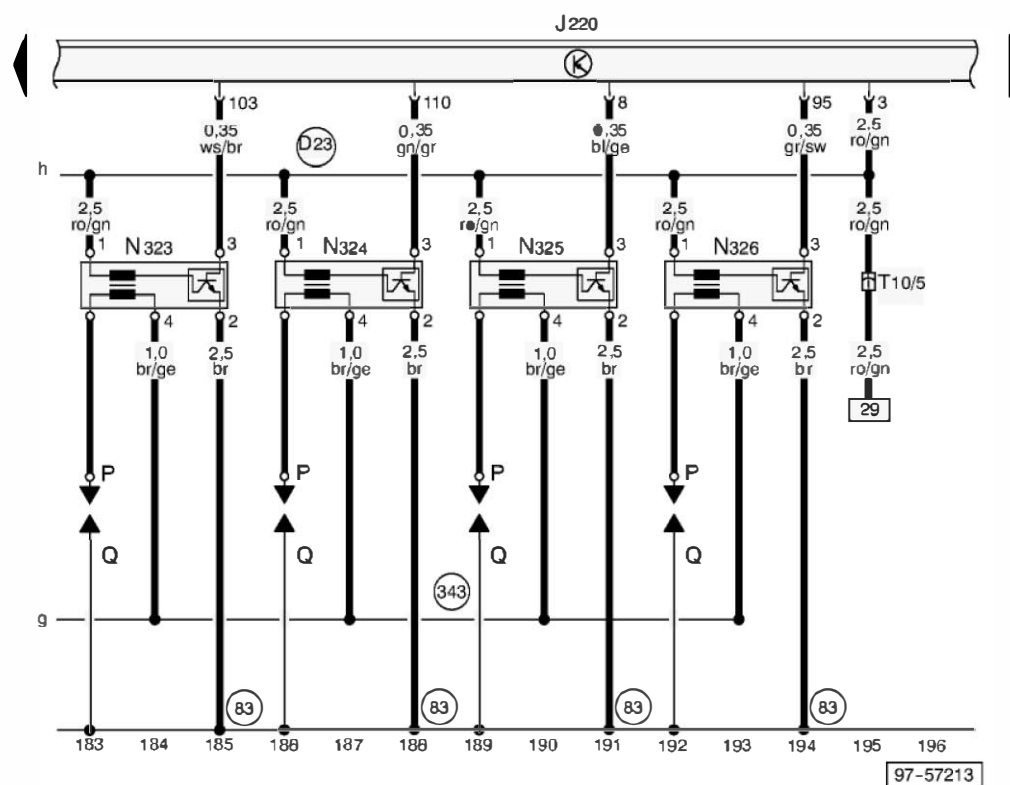


rs = pink
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = lilac
ge = yellow
or = orange

Motronic Engine Control Module (ECM), Ignition Coils

- J220 - Motronic Engine Control Module (ECM)
 N323 - Ignition Coil 5 with Power Output Stage
 N324 - Ignition Coil 6 with Power Output Stage
 N325 - Ignition Coil 7 with Power Output Stage
 N326 - Ignition Coil 8 with Power Output Stage
 P - Spark Plug Connectors
 Q - Spark Plugs
 T10 - 10-Pin Connector, black, connector station
 E-box, plenum chamber

- (83) - Ground connection -1-, in right front wiring harness
 (343) - Ignition Coil Ground Connection (in fuel injection wiring harness)
 (D23) - Connector (over fuse 229), in wiring harness front, right

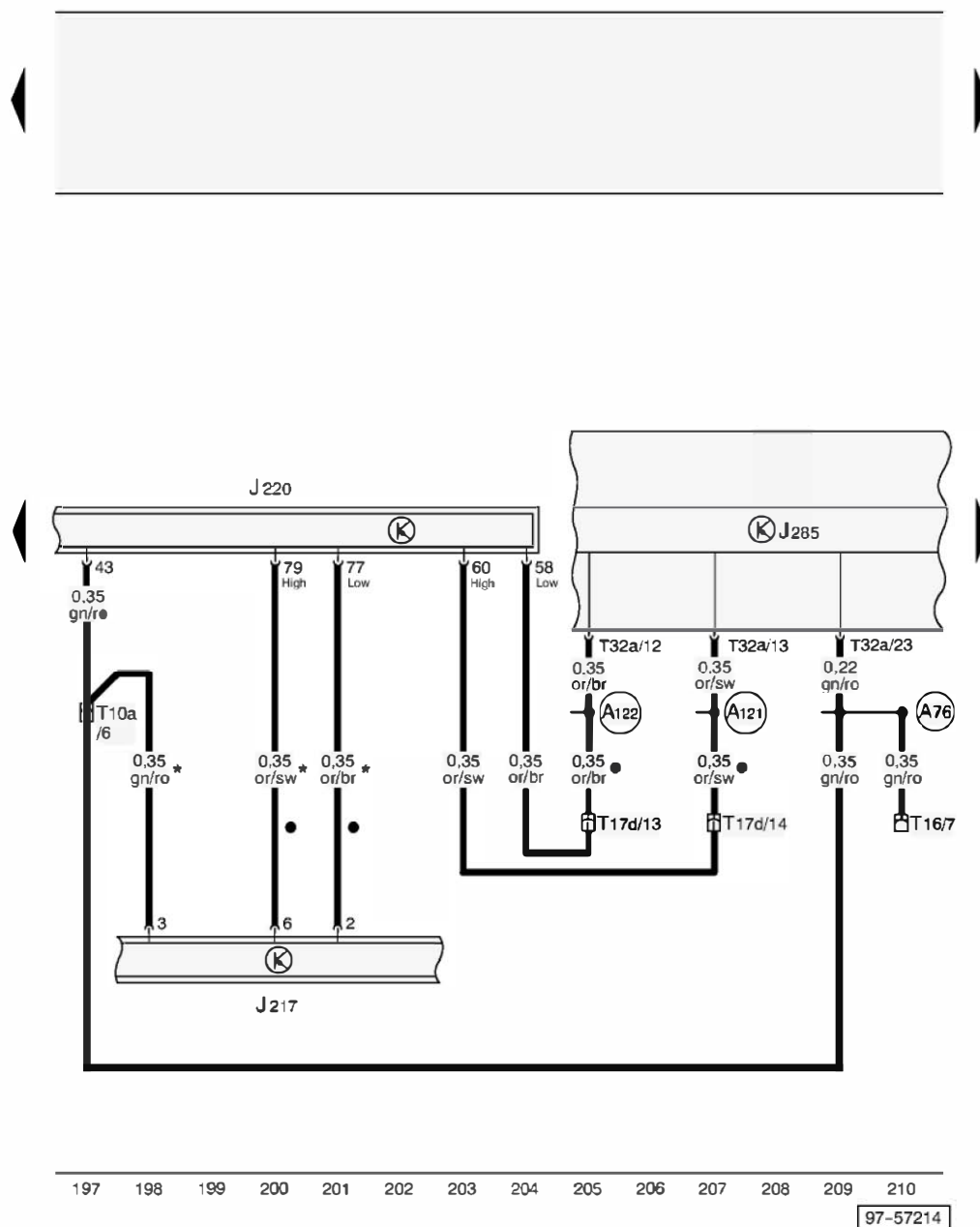


Motronic Engine Control Module (ECM), Transmission Control Module (TCM), CAN-Bus (Data bus)

- J217 - Transmission Control Module (TCM)
 J220 - Motronic Engine Control Module (ECM)
 J285 - Control module with indicator unit in instrument panel insert
 T10a - 10-Pin Connector, brown, connector station E-box, plenum chamber
 T16 - 16-Pin Connector, black, Data Link Connector (DLC)
 T17d - 17-Pin Connector, red, connector station E-box, plenum chamber
 T32a - 32-Pin Connector, green, on instrument panel insert

- (A76) - Wire connection (K-diagnosis wire), in instrument panel wiring harness
 (A121) - Wire connection (High-bus), in instrument panel wiring harness
 (A122) - Wire connection (Low-bus), in instrument panel wiring harness

- * - Automatic transmission (AG6) only
 • - CAN-Bus (Data bus)



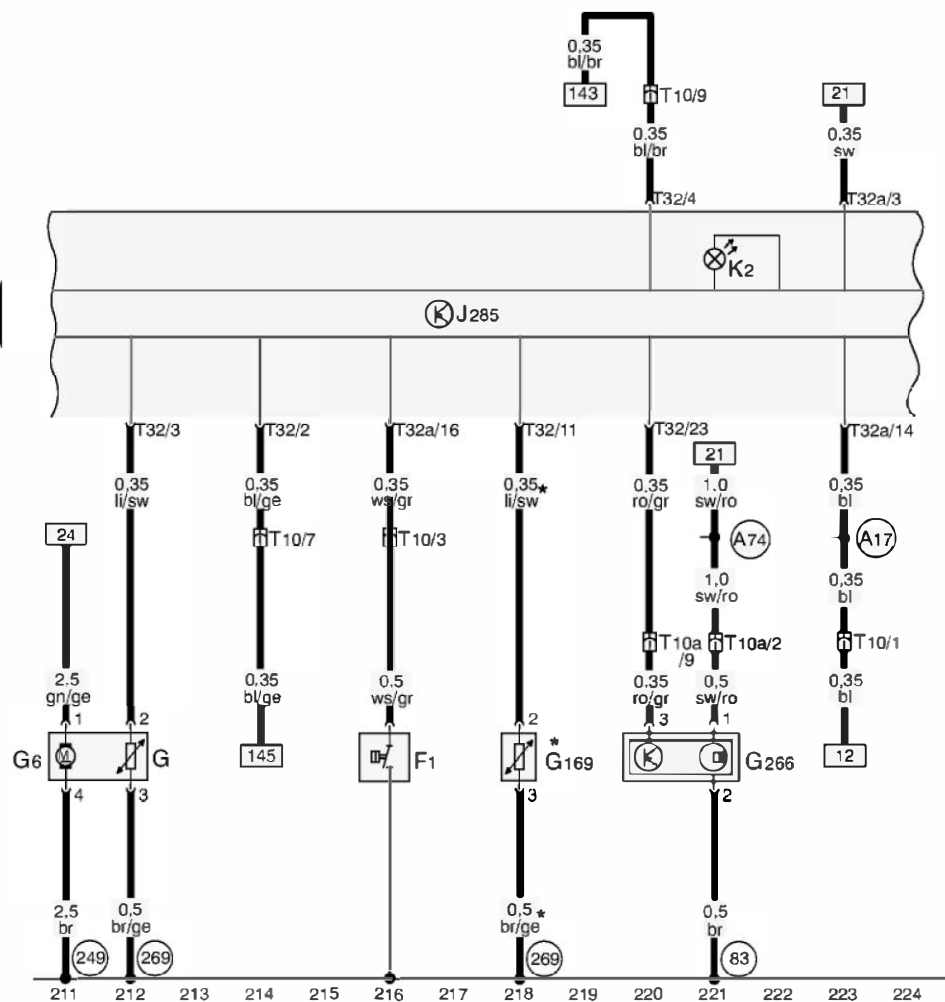
Control module with indicator unit in instrument panel insert, Oil Pressure Switch, Fuel Pump (FP), Oil Level Thermal Sensor

- F1 - Oil Pressure Switch
- G - Sender for fuel gauge
- G6 - Fuel Pump (FP)
- G169 - Fuel Level Sensor 2
- G266 - Oil Level Thermal Sensor
- J285 - Control module with indicator unit in instrument panel insert
- K2 - Generator (GEN) Warning Light
- T10 - 10-Pin Connector, black, connector station E-box, plenum chamber
- T10a - 10-Pin Connector, brown, connector station E-box, plenum chamber
- T32 - 32-Pin Connector, blue, on instrument panel insert
- T32a - 32-Pin Connector, green, on instrument panel insert

- 83 - Ground connection -1-, in right front wiring harness
- 249 - Ground connection -2-, in wiring harness interior
- 269 - Ground connection (sensor Ground) -1-, in instrument panel wiring harness
- A17 - Wire connection (61), in instrument panel wiring harness
- A74 - Connector (15a, fuse 5), in instrument panel wiring harness

* - quattro only

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



97-57215