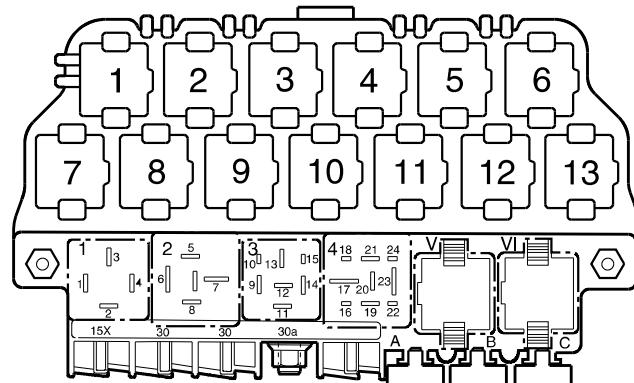


1.6 l/77 kW 4LV, engine codes BCB

From May 2002

For alternatives to relay and fuse positions as well as multi-pin connector wiring - see "Fitting locations" section.

Relay locations on the 13 position additional relay carrier above the relay plate:



97-14163

Relay locations on relay plate:

2 - J59 - X contact relief relay (100)

4 - J17 - Fuel pump relay (409)



Note!

◆ The number in brackets behind the part designation denotes the control number on the housing.

Fuse colours

30 A - green

25 A - white

20 A - yellow

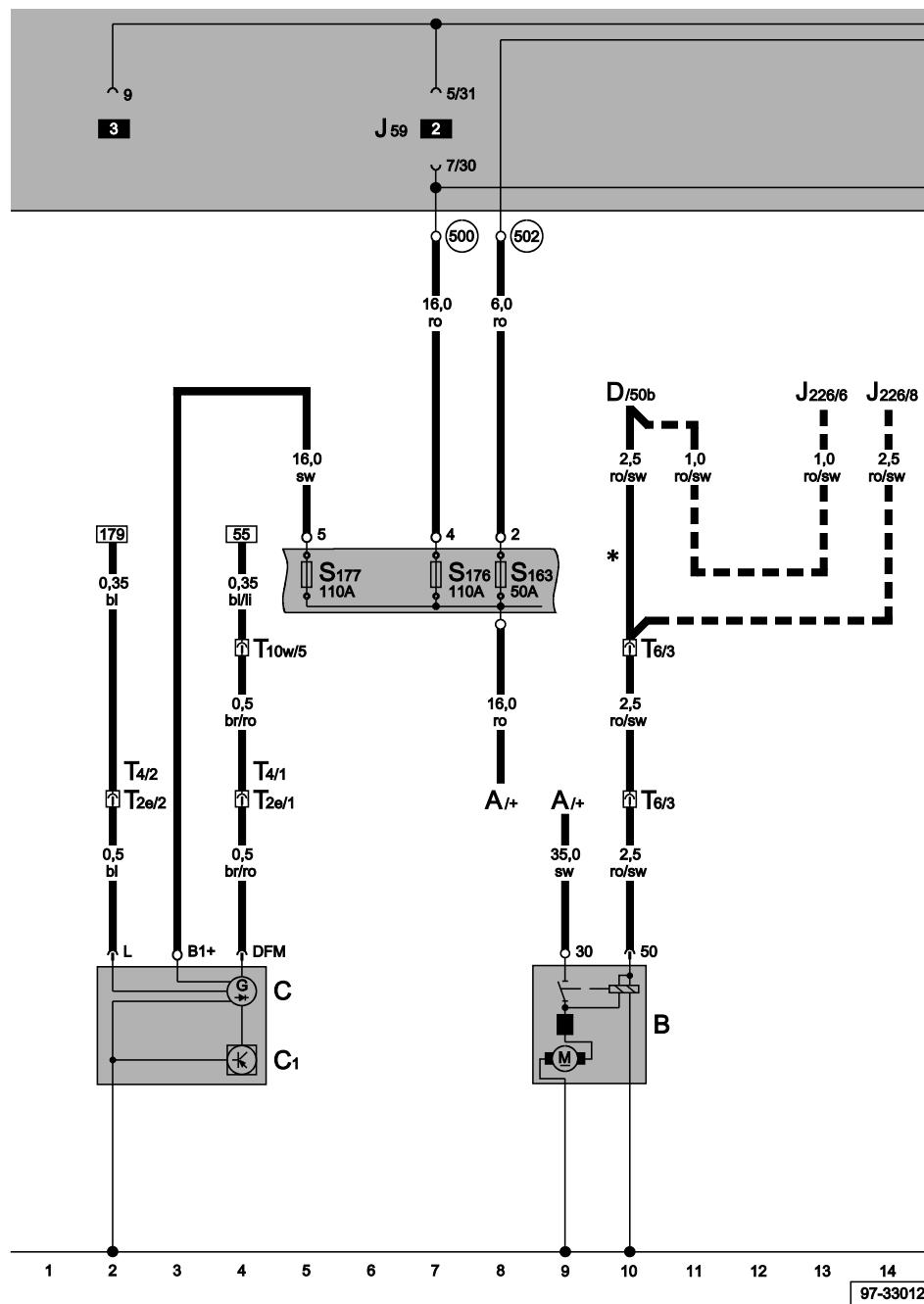
15 A - blue

10 A - red

7.5 A - brown

5 A - beige

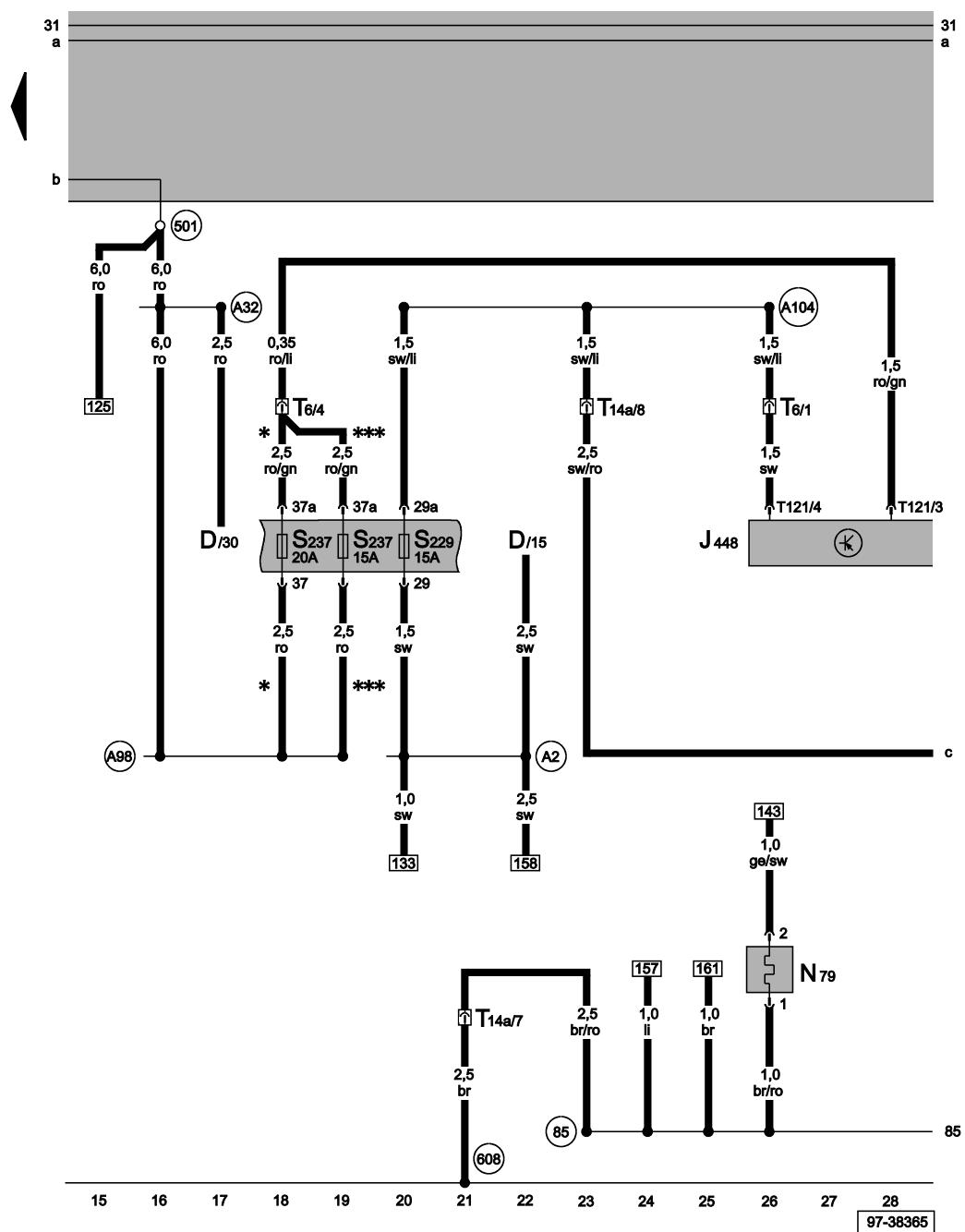
3 A - purple



Alternator, starter

- A Battery
 B Starter
 C Alternator
 C1 Voltage regulator
 D Ignition/starter switch
 J59 X contact relief relay
 J226 Starter inhibitor and reversing light relay
 S163 Fuse -2- (30), in fuse box/battery
 S176 Fuse -4- (30), in fuse box/battery
 S177 Fuse -5- (30), in fuse box/battery
 T2e 2-pin connector, near starter (only models without air conditioner)
 T4 4-pin connector, near starter (only models with air conditioner)
 T6 6-pin connector, brown, in protective housing for connectors, on left in plenum chamber
 T10w 10-pin connector, white, in protective housing for connectors, on left in plenum chamber
- 500 Screw connection -1- (30), on relay plate
 502 Screw connection -1- (30a), on relay plate
- * Only models with manual gearbox
 --- Only models with automatic gearbox

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



4LV control unit (injection system), crankcase breather heater element

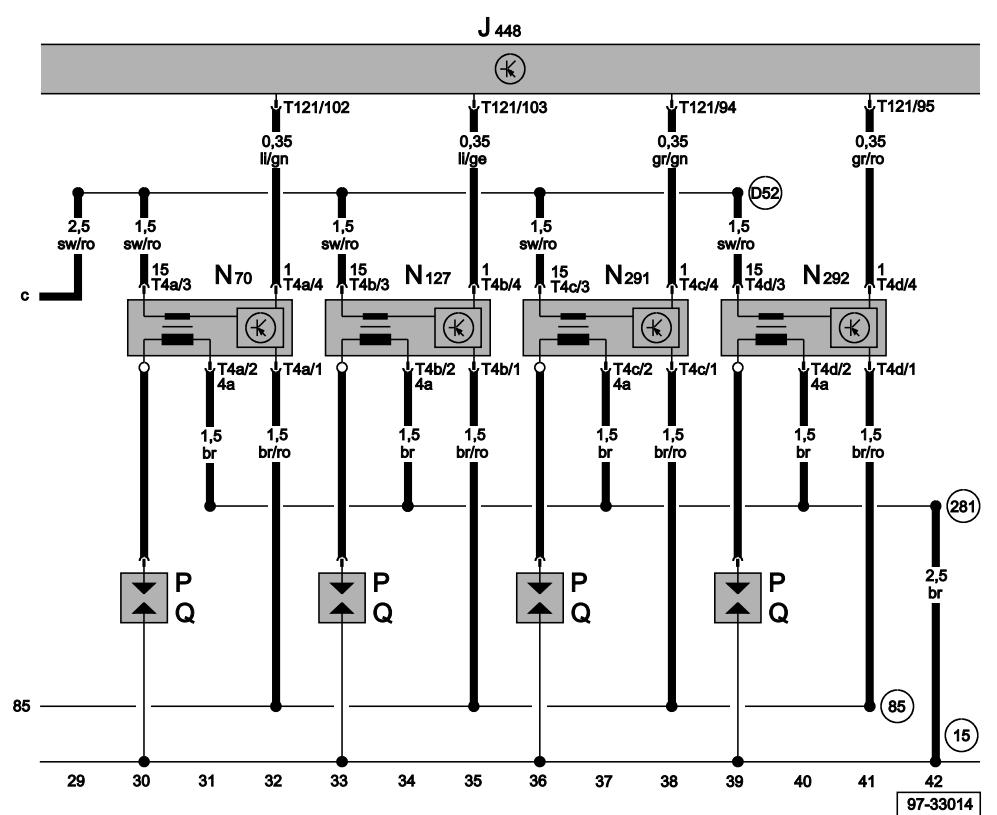
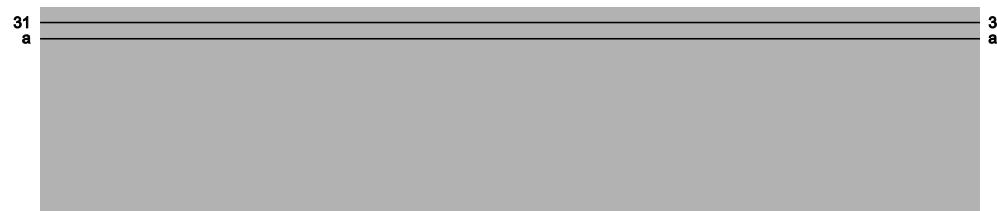
- D Ignition and starter switch
- J448 4AV/4CV control unit, injection system, in centre of plenum chamber
- N79 Crankcase breather heater element
- S229 Fuse 29 in fuse holder
- S237 Fuse 37 in fuse holder
- T6 6-pin connector, brown, in protective housing for connectors, on left in plenum chamber
- T14a 14-pin connector, near battery
- T121 121-pin connector
- 85 Earth connection 1, in engine compartment wiring harness
- 501 Screw connection 2 (30), on relay plate
- 608 Earth point, in centre of plenum chamber
- A2 Positive connection (15), in dash panel wiring harness
- A32 Positive connection (30), in dash panel wiring harness
- A98 Positive connection 4 (30), in dash panel wiring harness
- A104 Positive connection 2 (15), in dash panel wiring harness

* From May 2003
*** Up to April 2003

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

97-38385

4LV control unit (injection system), ignition system



J448 4LV control unit (injection system), in plenum chamber, centre

N70 Ignition coil 1 with output stage

N127 Ignition coil 2 with output stage

N291 Ignition coil 3 with output stage

N292 Ignition coil 4 with output stage

P Spark plug connector

Q Spark plugs

T4a 4-pin connector

T4b 4-pin connector

T4c 4-pin connector

T4d 4-pin connector

T121 121-pin connector

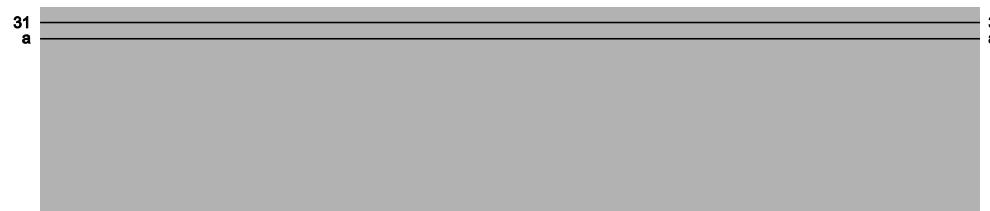
15 Earth point, on cylinder head

85 Earth connection -1-, in engine compartment wiring harness

281 Earth connection -1-, in engine prewiring wiring harness

D52 Positive (+) connection (15a), in engine compartment wiring harness

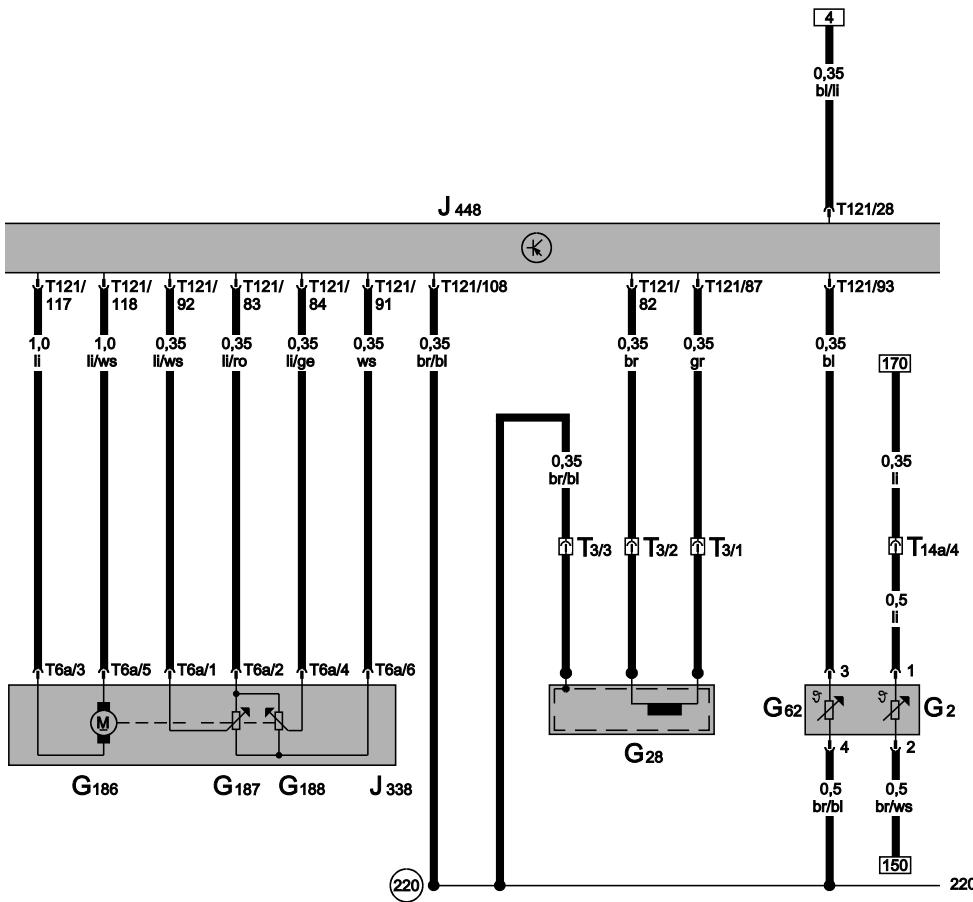
ws = white
 sw = black
 ro = red
 br = brown
 gn = green
 bl = blue
 gr = grey
 li = purple
 ge = yellow
 or = orange
 rs = pink



4LV control unit (injection system), throttle valve control module, engine speed sender, coolant temperature sender

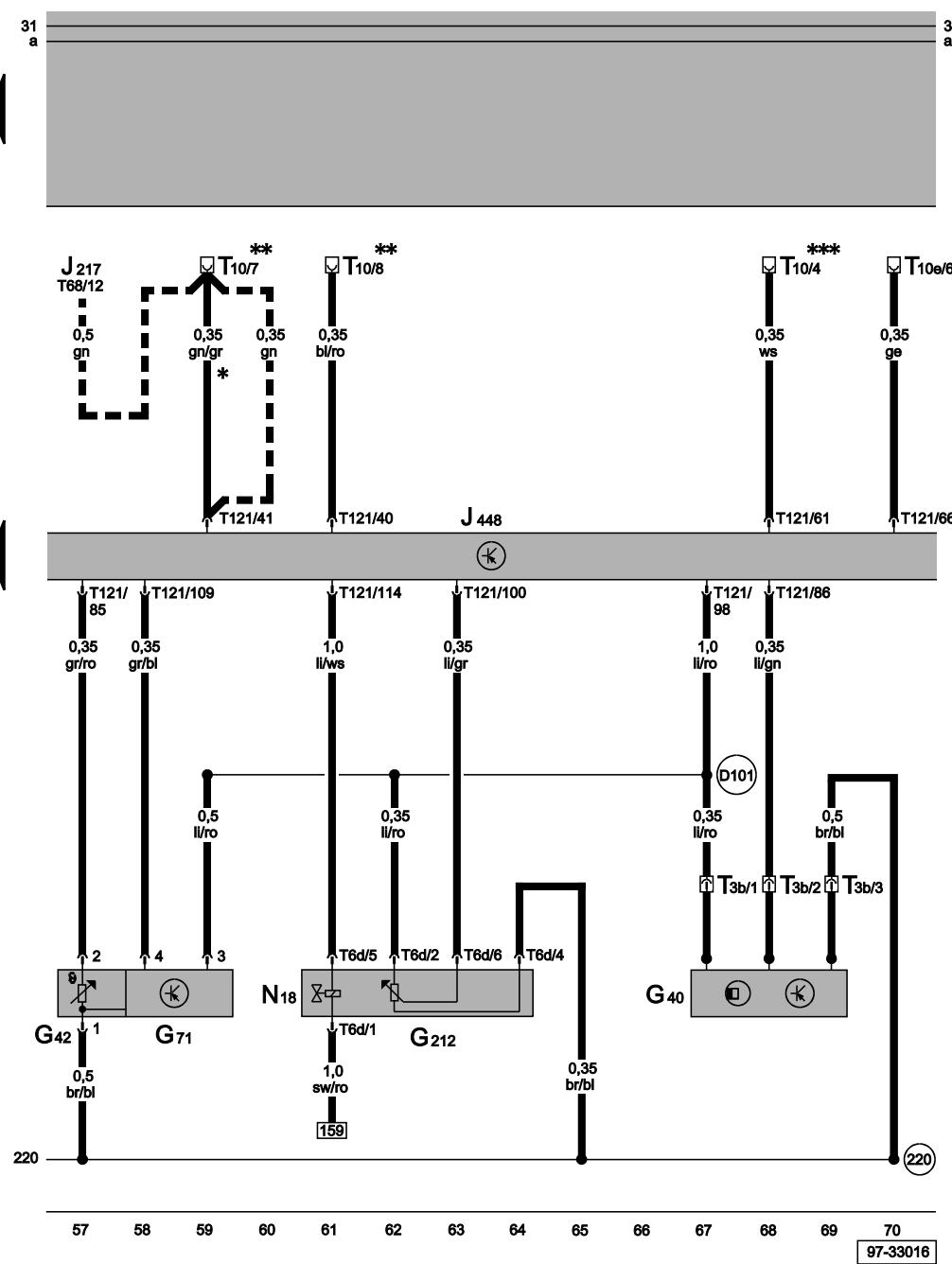
- G2 Coolant temperature sender
- G28 Engine speed sender
- G62 Coolant temperature sender
- G186 Throttle valve drive (electric throttle operation)
- G187 Throttle valve drive angle sender -1- (electric throttle operation)
- G188 Throttle valve drive angle sender -2- (electric throttle operation)
- J338 Throttle valve control unit
- J448 4LV control unit (injection system), in plenum chamber, centre
- T3 3-pin connector, on engine front
- T6a 6-pin connector
- T14a 14-pin connector, near battery
- T121 121-pin connector

- 220 Earth connection (sender earth), in engine wiring harness



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

97-33015



4LV control unit (injection system), intake air temperature sender, intake manifold pressure sender, exhaust gas recirculation potentiometer, exhaust gas recirculation valve, hall sender

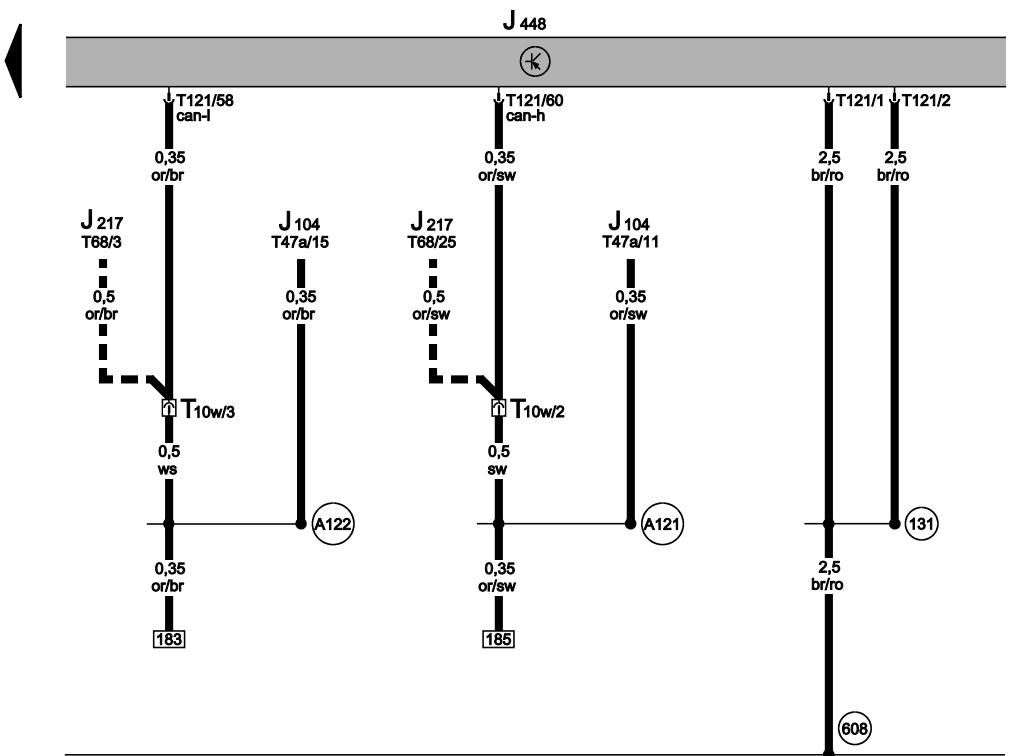
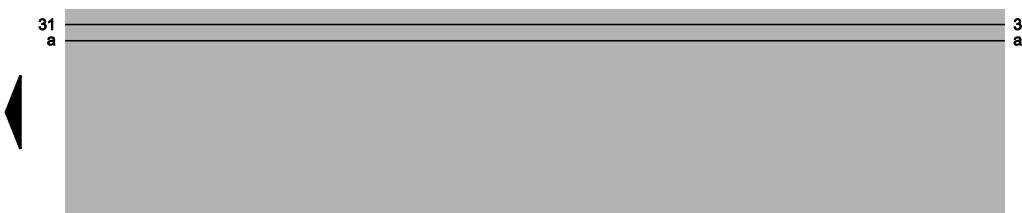
- G40 Hall sender
G42 Intake air temperature sender
G71 Intake manifold pressure sender
G212 Exhaust gas recirculation potentiometer
J217 Automatic gearbox control unit
J448 4LV control unit (injection system), in plenum chamber, centre
N18 Exhaust gas recirculation valve
T3b 3-pin connector, on cylinder head
T6d 6-pin connector
T10 10-pin connector, orange, in protective housing for connectors, on left in plenum chamber
T10e 10-pin connector, black, in protective housing for connectors, on left in plenum chamber
T68 68-pin connector
T121 121-pin connector

220 Earth connection (sender earth), in engine wiring harness

D101 Connection -1-, in engine compartment wiring harness

* Only models with manual gearbox
** Connection for air conditioner
*** Connection for radiator fan control unit
--- Only models with automatic gearbox

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



97-33017

4LV control unit (injection system)

J104 ABS/ABS with EDL control unit
 J217 Automatic gearbox control unit
 J448 4LV control unit (injection system), in plenum chamber, centre
 T10w 10-pin connector, white, in protective housing for connectors, on left in plenum chamber
 T47a 47-pin connector, ABS with EDL/TCS/ESP control unit
 T68 68-pin connector
 T121 121-pin connector

131 Earth connection -2-, in engine compartment wiring harness

608 Earth point, in plenum chamber, centre

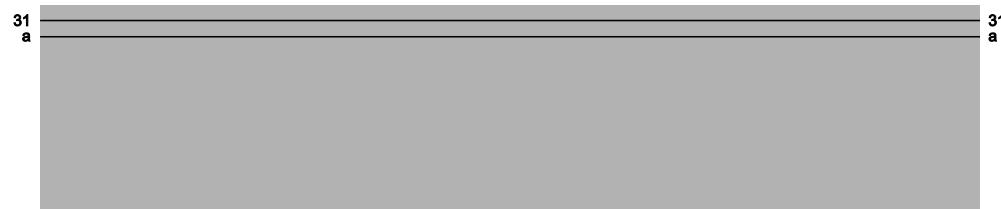
A121 Connection (high bus), in dash panel wiring harness

A122 Connection (low bus), in dash panel wiring harness

--- Only models with automatic gearbox

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

4LV control unit (injection system), injectors, knock sensor



G61 Knock sensor I

J448 4LV control unit (injection system), in plenum chamber, centre

N30 Injector, cylinder 1

N31 Injector, cylinder 2

N32 Injector, cylinder 3

N33 Injector, cylinder 4

S232 Fuse in fuse box

T2 2-pin connector, on cylinder head, left

T10 10-pin connector, orange, in protective housing for connectors, in plenum chamber, left

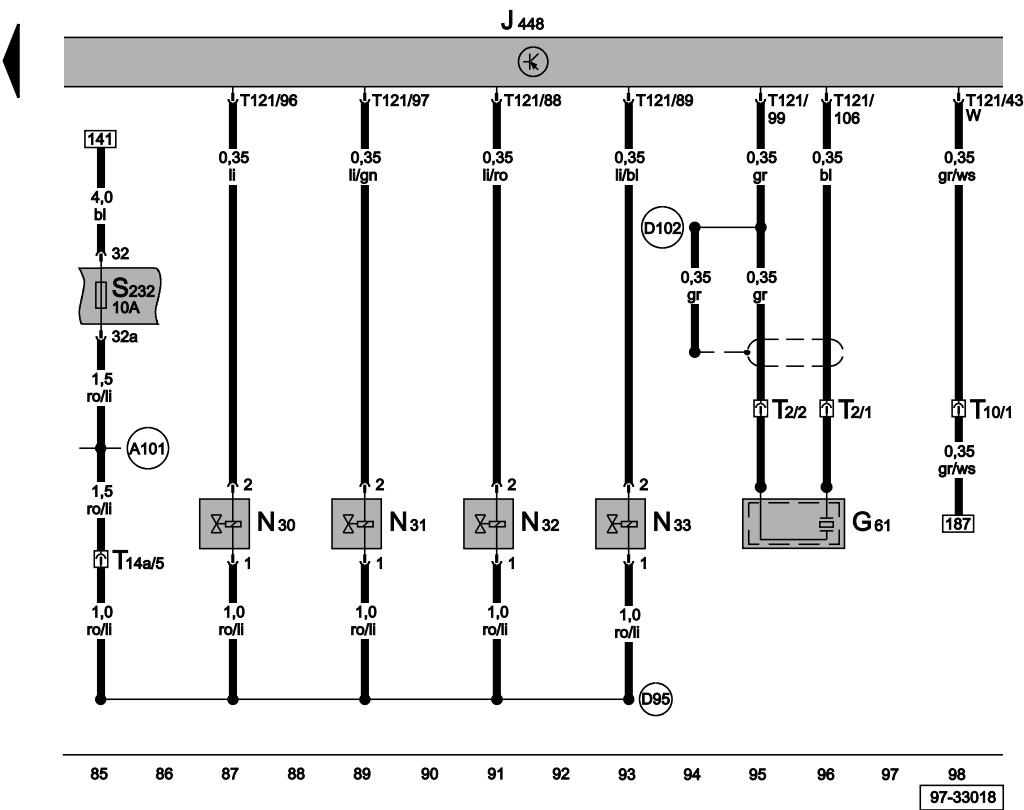
T14a 14-pin connector, near battery

T121 121-pin connector

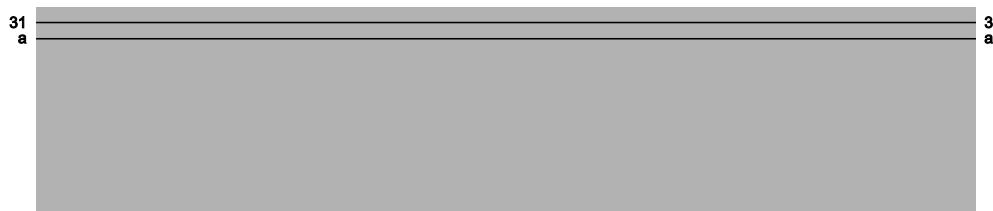
A101 Connection -3- (87), in dash panel wiring harness

D95 Connection (injectors), in engine compartment wiring harness

D102 Connection -2-, in engine compartment wiring harness



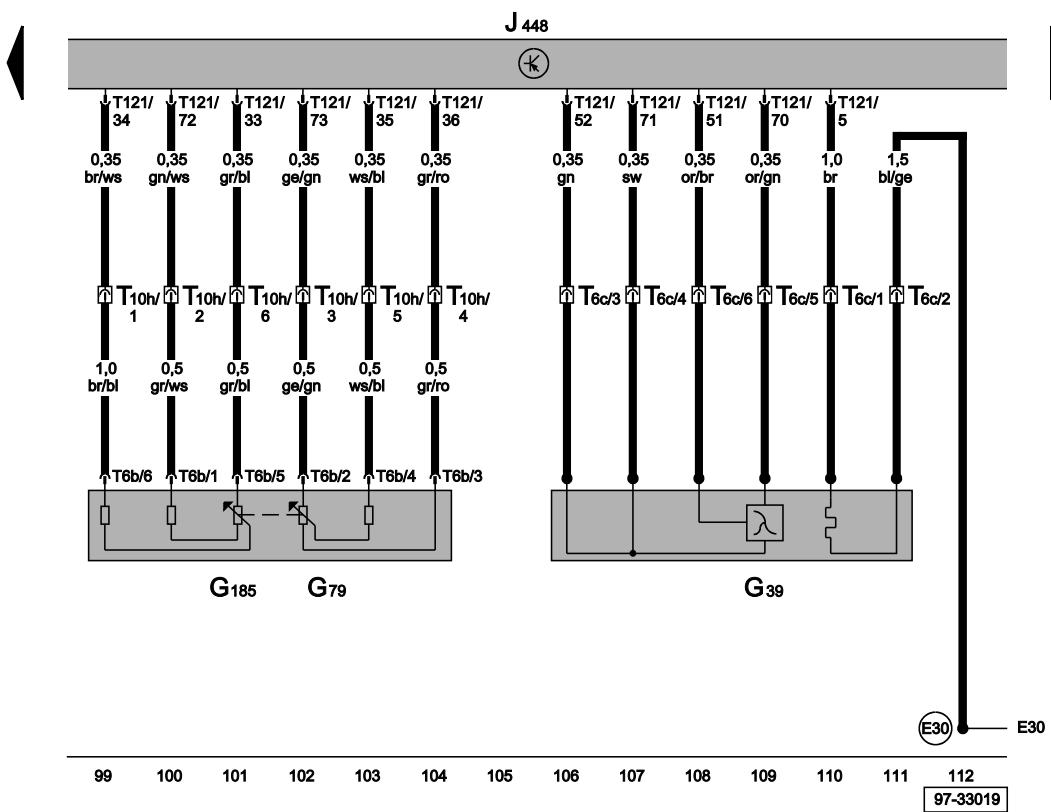
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange
rs = pink



4LV control unit (injection system), accelerator pedal position sender, lambda probe (before catalytic converter)

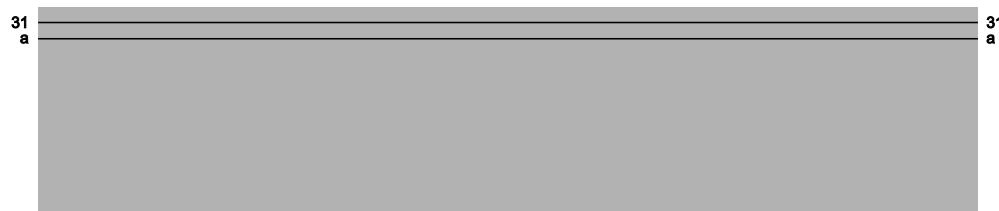
- G39 Lambda probe
- G79 Accelerator pedal position sender
- G185 Accelerator pedal position sender -2-
- J448 4LV control unit (injection system), in plenum chamber, centre
- T6b 6-pin connector
- T6c 6-pin connector, near catalyst
- T10h 10-pin connector, blue, in protective housing for connectors, on left in plenum chamber
- T121 121-pin connector

E30 Connection (87a), in engine wiring harness



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

97-33019



4LV control unit (injection system), cruise control system switch (CCS), clutch pedal switch, CCS brake pedal switch, brake light switch

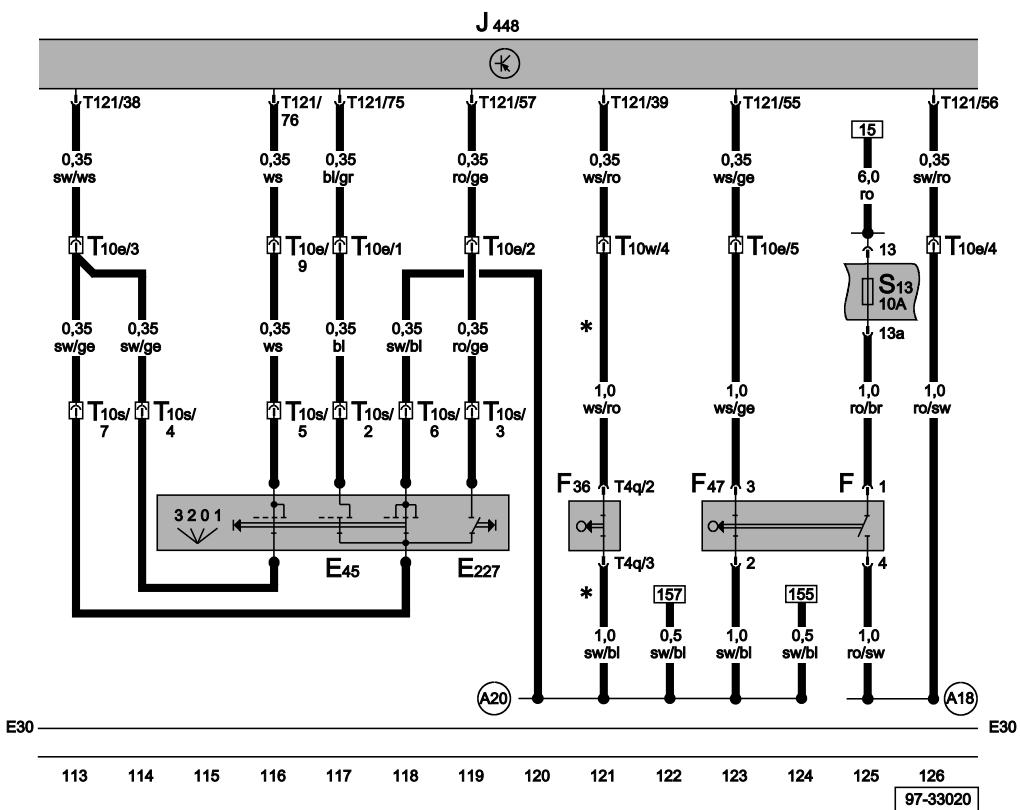
- E45 Cruise control system switch**
- E227 Cruise control system (CCS) button (Set)**
- F Brake light switch
- F36 Clutch pedal switch**
- F47 Cruise control system brake pedal switch
- J448 4LV control unit (injection system), in plenum chamber, centre
- S13 Fuse in fuse box
- T4q 4-pin connector
- T10e 10-pin connector, black, in protective housing for connectors, on left in plenum chamber
- T10s 10-pin connector, next to steering column
- T10w 10-pin connector, white, in protective housing for connectors, on left in plenum chamber
- T121 121-pin connector

(A18) Connection (54), in dash panel wiring harness

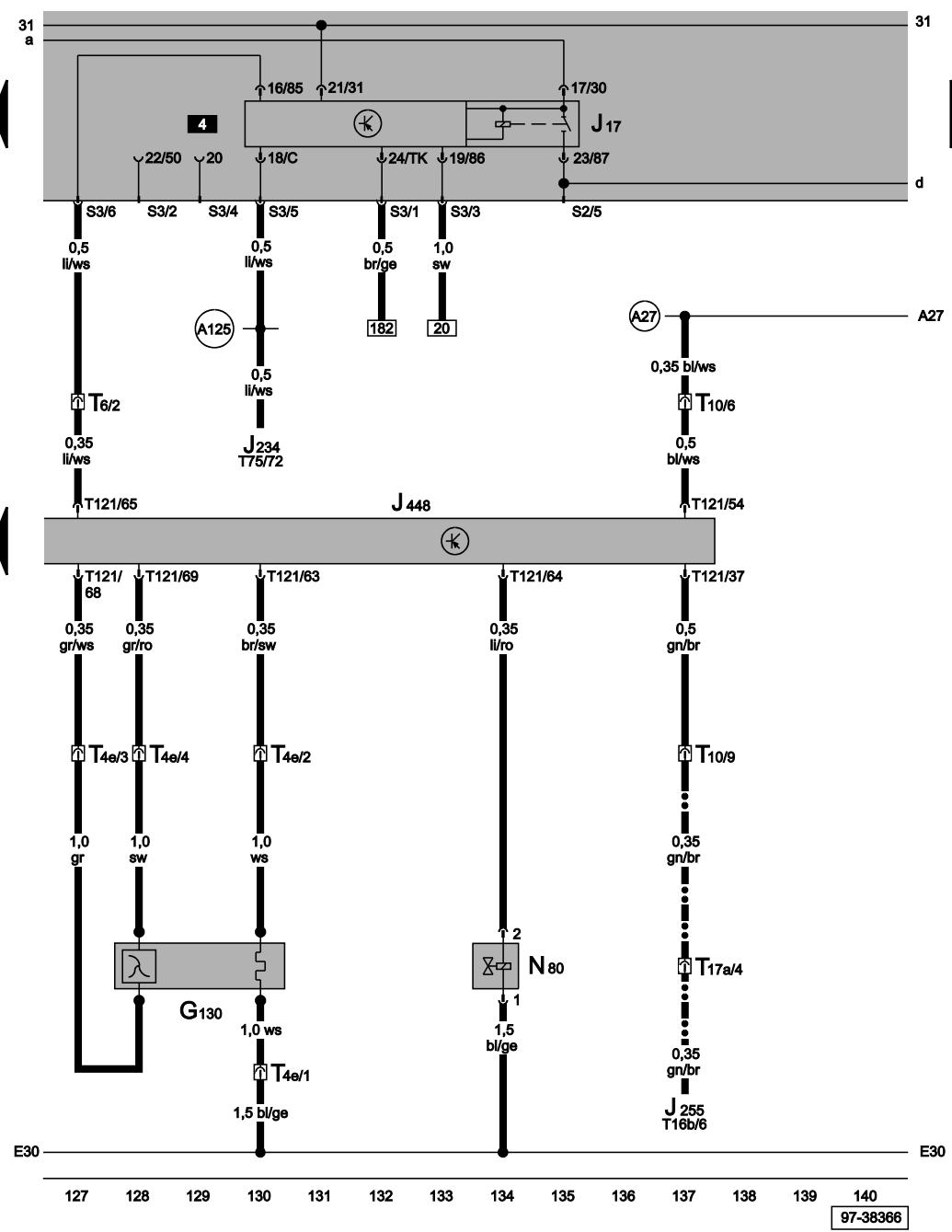
(A20) Connection (15a), in dash panel wiring harness

* Only models with manual gearbox

** Only models with CCS



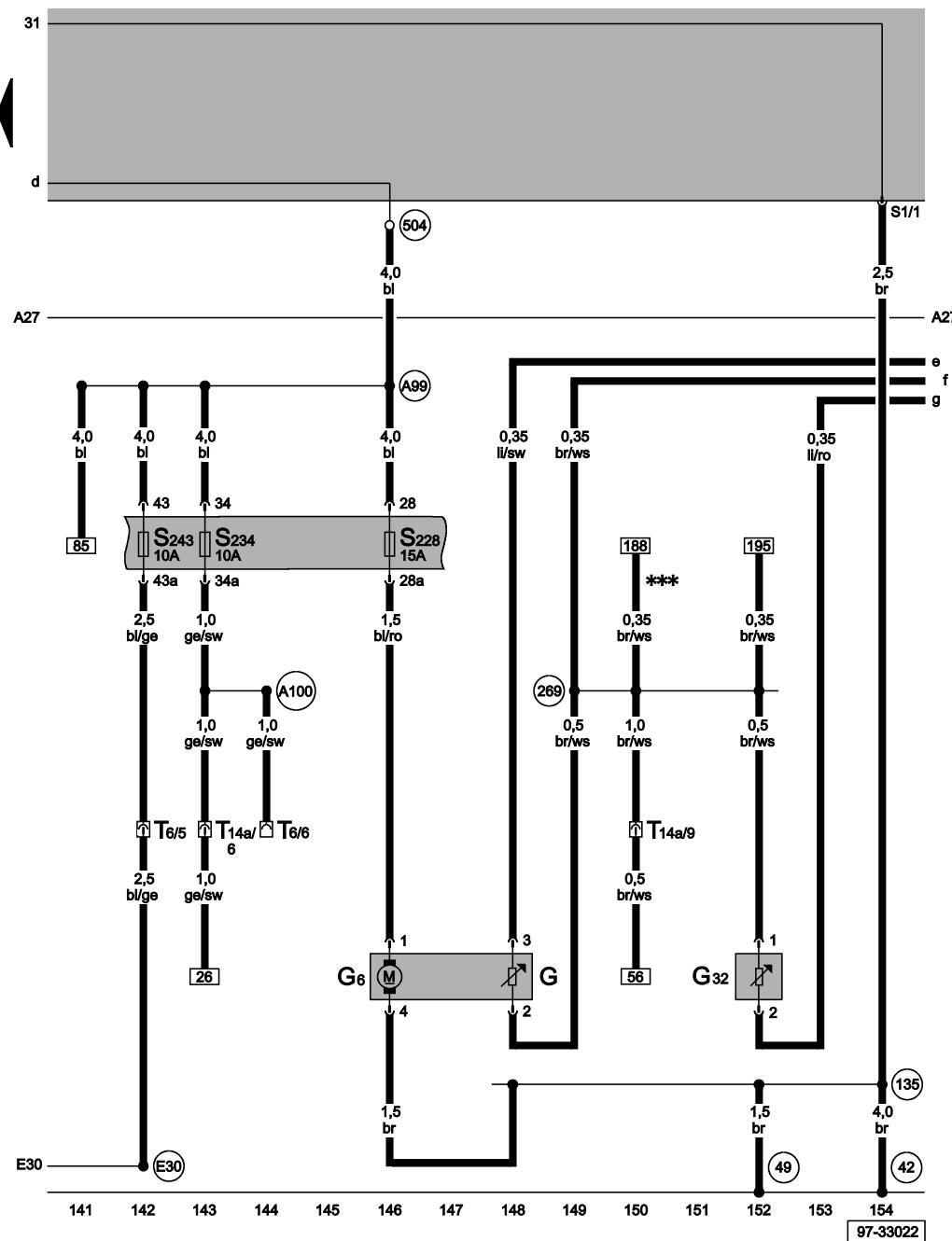
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange
rs = pink



4LV control unit (injection system), fuel pump relay, lambda probe after catalytic converter, active charcoal filter solenoid valve

- G130 Lambda probe after catalytic converter
 - J17 Fuel pump relay
 - J234 Airbag control unit
 - J255 Climatronic control unit
 - J448 4AV/4CV control unit, injection system, in centre of plenum chamber
 - N80 Active charcoal filter system solenoid valve 1
 - T4e 4-pin connector, near catalytic converter
 - T6 6-pin connector, brown, in protective housing for connectors, on left in plenum chamber
 - T10 10-pin connector, orange, in protective housing for connectors on left in plenum chamber
 - T16b 16-pin connector
 - T17a 17-pin connector, in centre behind dash panel
 - T75 75-pin connector
 - T121 121-pin connector
 - A27 Connection (speed signal), in dash panel wiring harness
 - A125 Connection (crash signal), in dash panel wiring harness
- ***- Applies only to models fitted with Climatronic

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

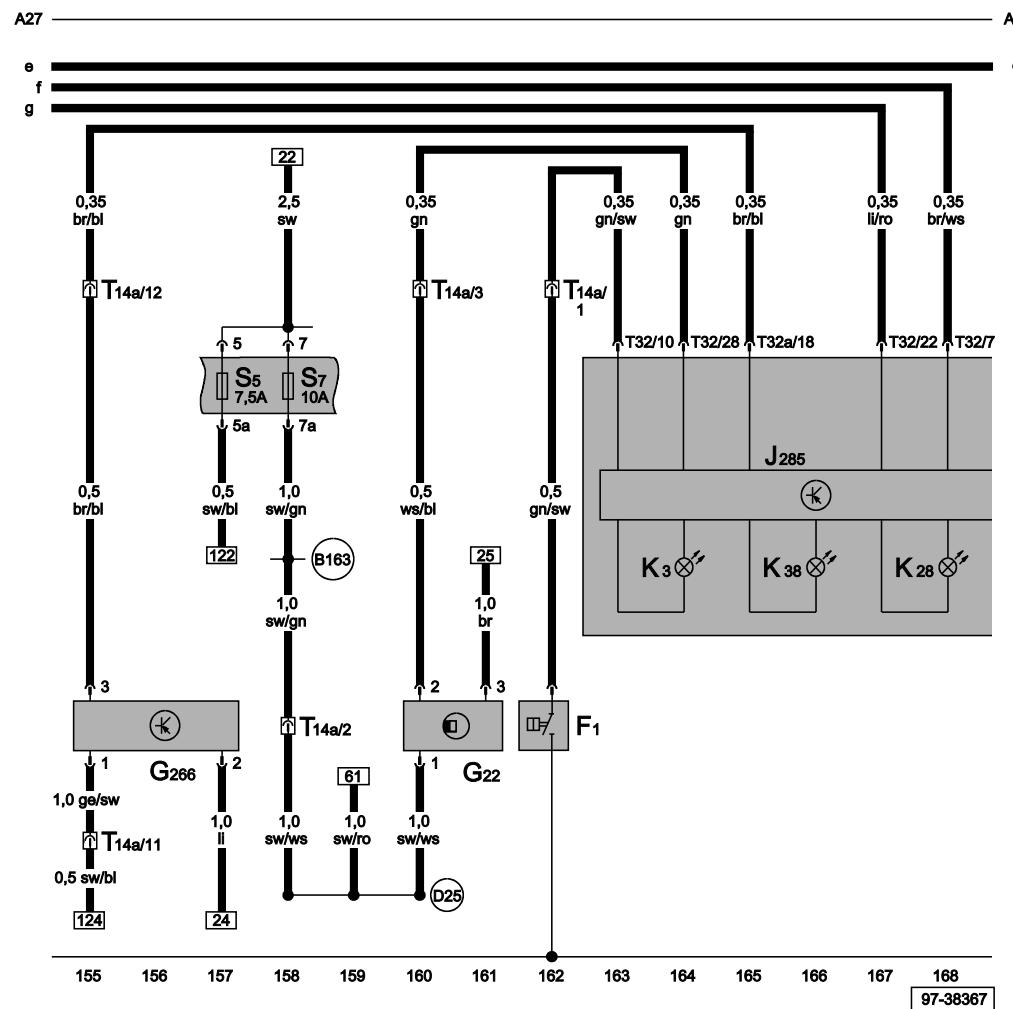


Fuel pump, fuel gauge sender, coolant shortage indicator sender

- G Fuel gauge sender
 - G6 Fuel pump
 - G32 Coolant shortage indicator sender
 - S228 Fuse 28 in fuse box
 - S234 Fuse in fuse box
 - S243 Fuse 43 in fuse box
 - T6 6-pin connector, brown, in protective housing for connectors, on left in plenum chamber
 - T14a 14-pin connector, near battery
 - 42 Earth point, next to steering column
 - 49 Earth point, next to steering column
 - 135 Earth connection -2-, in dash panel wiring harness
 - 269 Earth connection (sender earth) -1-, in dash panel wiring harness
 - 504 Screw connection -1- (87F), on relay plate
 - A99 Connection -1- (87), in dash panel wiring harness
 - A100 Connection -2- (87), in dash panel wiring harness
 - E30 Connection (87a), in engine wiring harness
- *** Only models without Climatronic

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

Dash panel insert, oil pressure warning, oil level and oil temperature warning, speedometer sender, coolant temperature and coolant shortage warning lamp



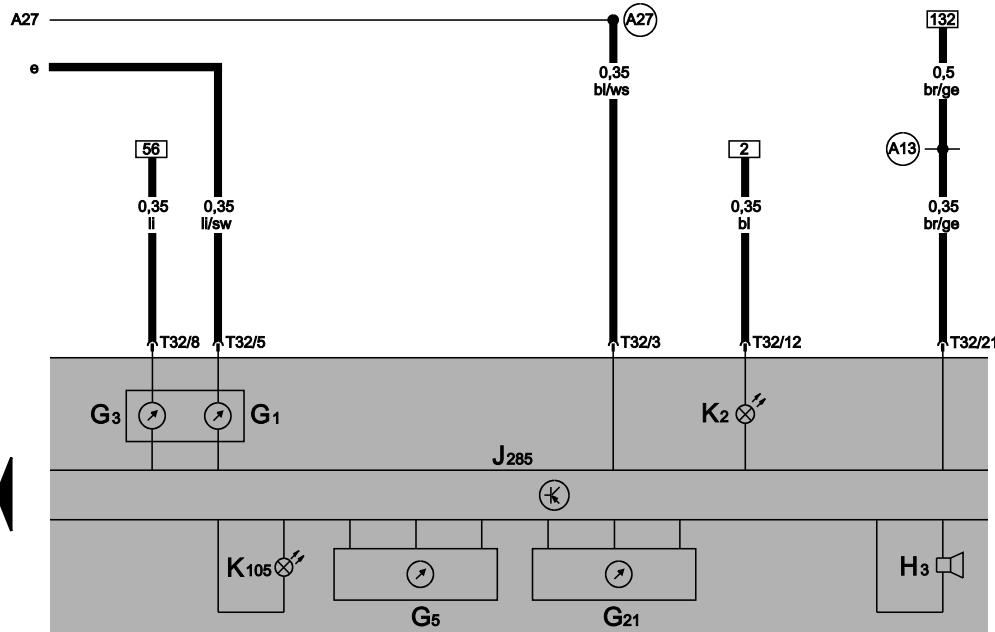
- F1 Oil pressure switch
- G22 Speedometer sender, on gearbox
- G266 Oil level and oil temperature sender*
- J285 Control unit in dash panel insert
- K3 Oil pressure warning lamp
- K28 Coolant temperature and coolant shortage warning lamp
- K38 Oil level warning lamp*
- S5 Fuse 5 in fuse holder
- S7 Fuse 7 in fuse holder
- T14a 14-pin connector, in cable channel on left in engine compartment
- T32 32-pin connector, blue
- T32a 32-pin connector, green

B163 Positive connection 1 (15), in interior wiring harness

D25 Positive connection (15), in engine pre-wiring harness

* Applies only with flexible service interval display

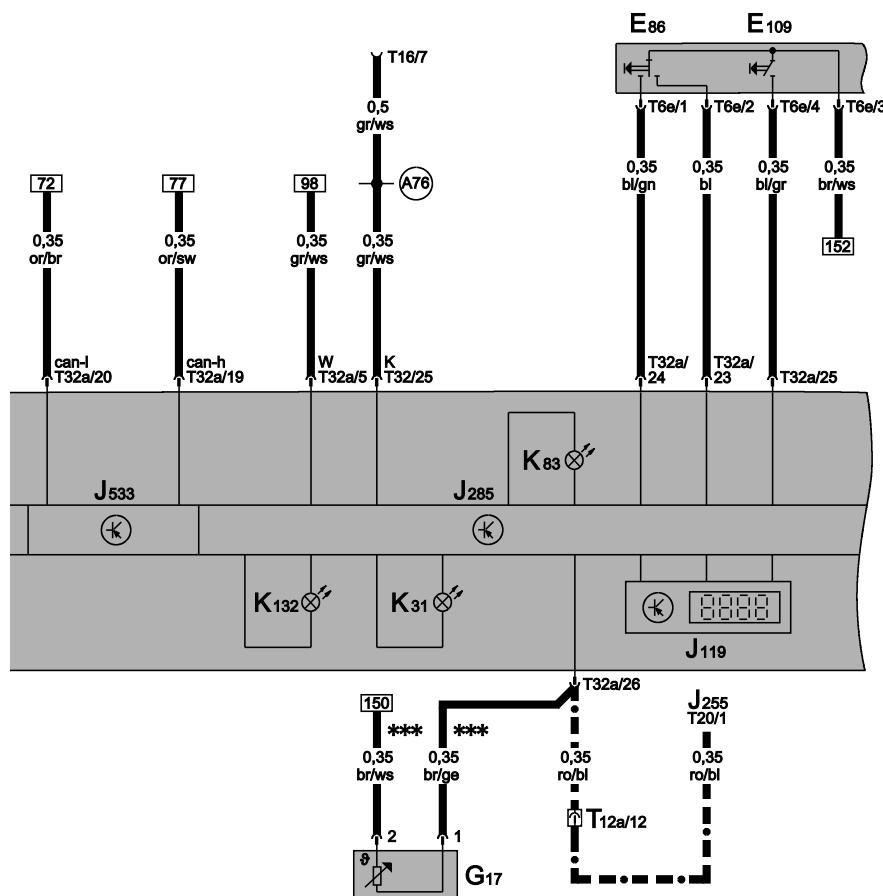
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange
rs = pink



Dash panel insert, coolant temperature and coolant shortage indicator, fuel gauge, rev. counter, speedometer, alternator warning lamp

- G1 Fuel gauge
- G3 Coolant temperature gauge
- G5 Rev. counter
- G21 Speedometer
- H3 Warning buzzer
- J285 Control unit with display in dash panel insert
- K2 Alternator warning lamp
- K105 Reserve fuel warning lamp
- T32 32-pin connector, blue
- A13 Connection (door contact switch), in dash panel wiring harness
- A27 Connection (speed signal), in dash panel wiring harness

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



183 184 185 186 187 188 189 190 191 192 193 194 195 196

97-33025

Dash panel insert, electrically operated throttle fault lamp, CCS warning lamp, multi-function display, ambient temperature display, exhaust emissions warning lamp, diagnostic socket

- E86 Multi-function display call-up button
 - E109 Multi-function display, memory switch
 - G17 Ambient temperature sensor
 - J119 Multi-function display
 - J255 Climatronic control unit
 - J285 Control unit with display in dash panel insert
 - J533 Data bus diagnostic interface, in dash panel insert
 - K31 Cruise control system warning lamp
 - K83 Exhaust emissions warning lamp
 - K132 Electronic power control fault lamp
 - T6e 6-pin connector
 - T12a 12-pin connector, behind dash panel, centre
 - T16 16-pin connector, in dash panel centre, self-diagnosis connection
 - T20 20-pin connector
 - T32 32-pin connector, blue
 - T32a 32-pin connector, green
 - A76 Connection (diagnosis wire K), in dash panel wiring harness
- *** Only models without Climatronic
-- Only models with Climatronic

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