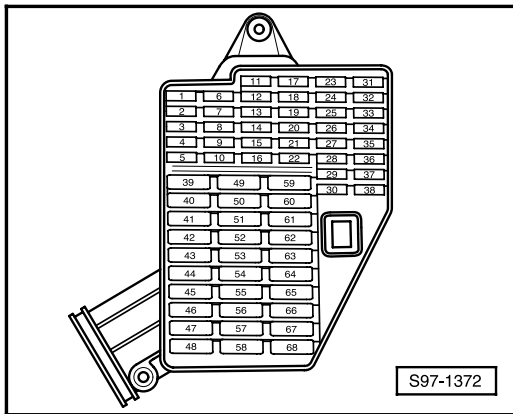


1.9-ltr. - TDI with unit injection/74 kW, engine code ATD, as of November 2001

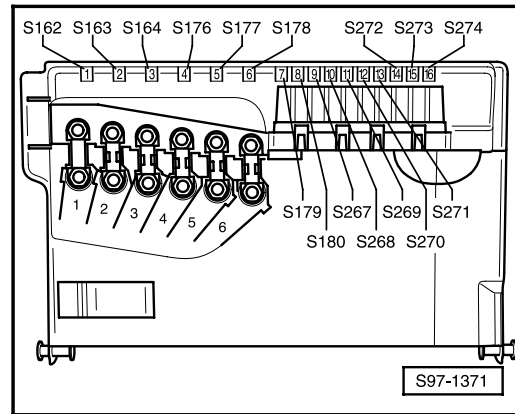
Fuse holder:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

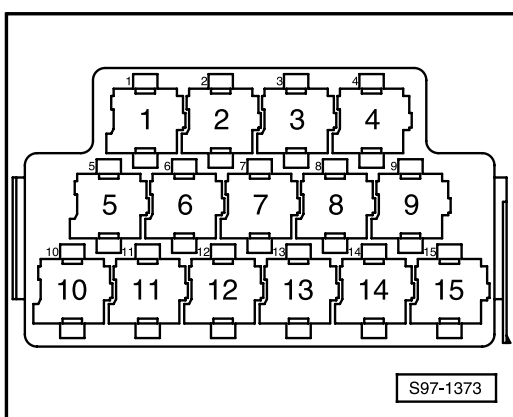
Fuse holder on battery:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

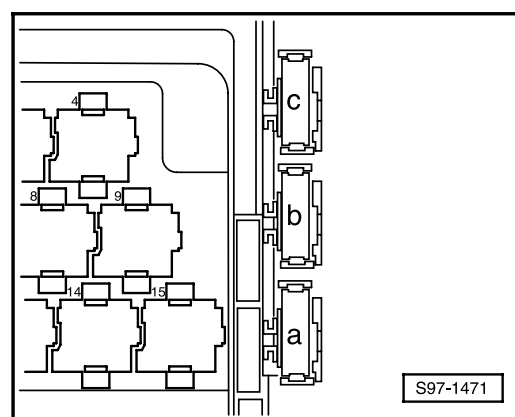
Relay holder:



Relay position assignment:

- 3** - Glow plug relay
- 4** - Fuel pump relay
- 8** - Low heating capacity relay
- 9** - High heating capacity relay
- 15** - Diesel direct injection system relay

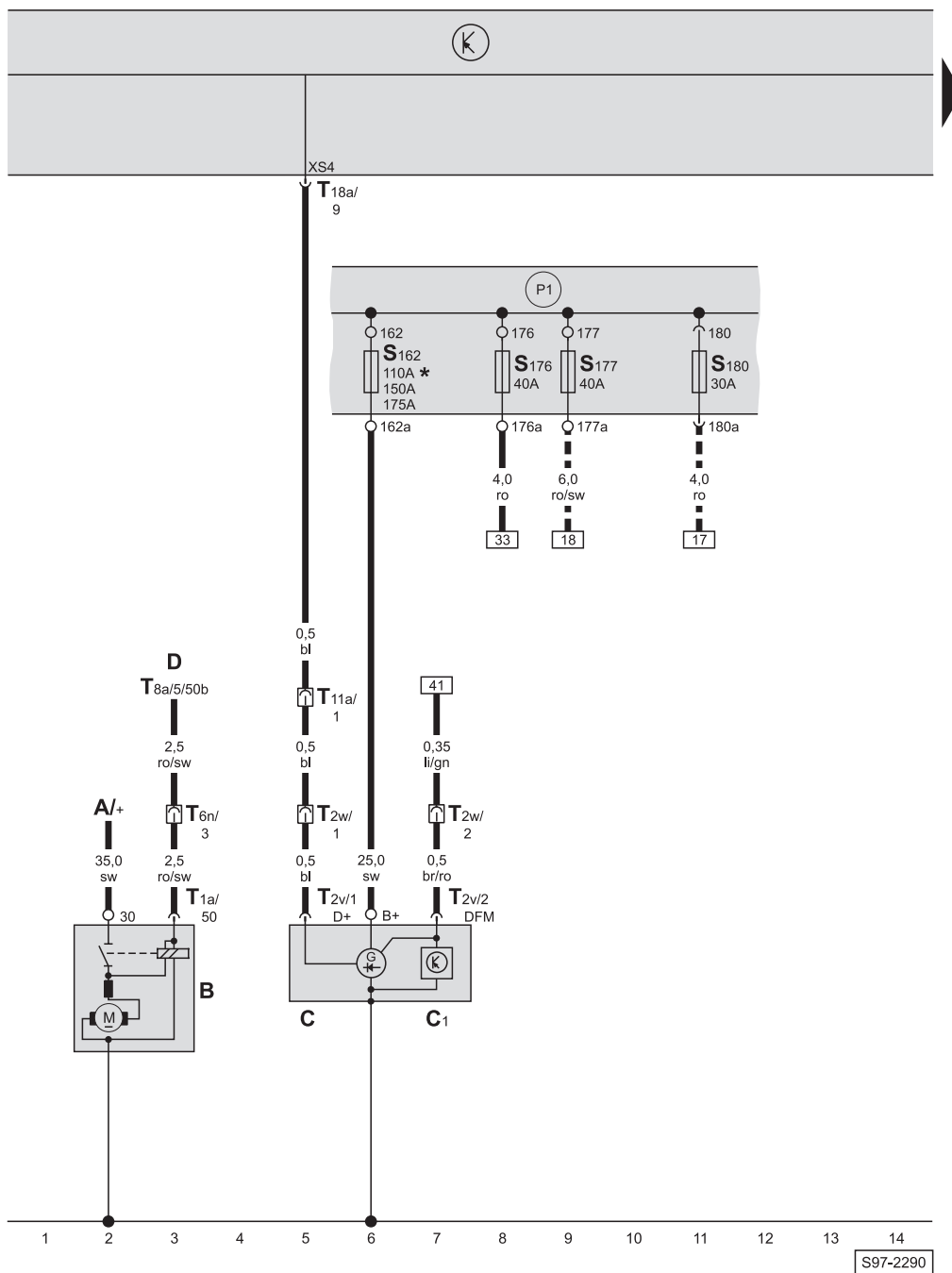
Additional fuse holder:



Fuse position assignment:

- a** - S276 - Fuse -1- for heating element
- b** - S277 - Fuse -2- for heating element
- c** - S278 - Fuse -3- for heating element

Starter, alternator, fuse holder on battery

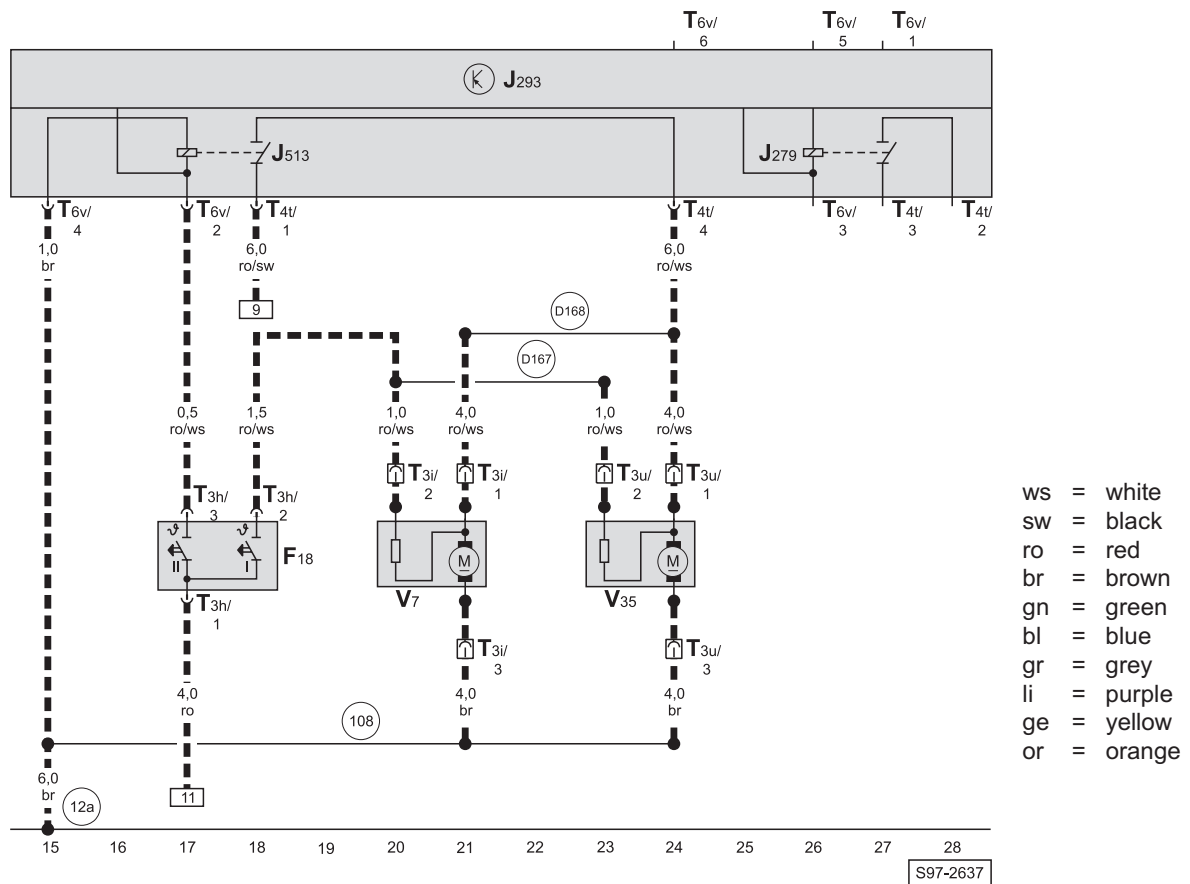
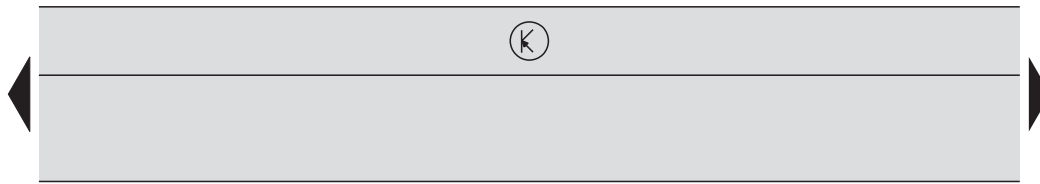


- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- A - Battery
- B - Starter
- C - Alternator
- C1 - Voltage regulator
- D - Ignition/starter switch
- S162 - Fuse -1- (30), in fuse holder on battery
- S176 - Fuse -4- (30), in fuse holder on battery
- S177 - Fuse -5- (30), in fuse holder on battery
- S180 - Fuse -8- (30), in fuse holder on battery
- T1a - 1-pin connector, at starter
- T2v - 2-pin connector, at alternator
- T2w - 2-pin connector, in bracket at gearbox
- T6n - 6-pin connector, at left of bulkhead (blue)
- T8a - 8-pin connector, at ignition/starter switch
- T11a - 11-pin connector, at left of bulkhead (white)
- T18a - 18-pin connector, at electrical system control unit (brown)

- (P1) - Positive connection (30), in fuse holder on battery
- * - Varies according to optional equipment
- ■ ■ - Does not apply to models with air conditioning

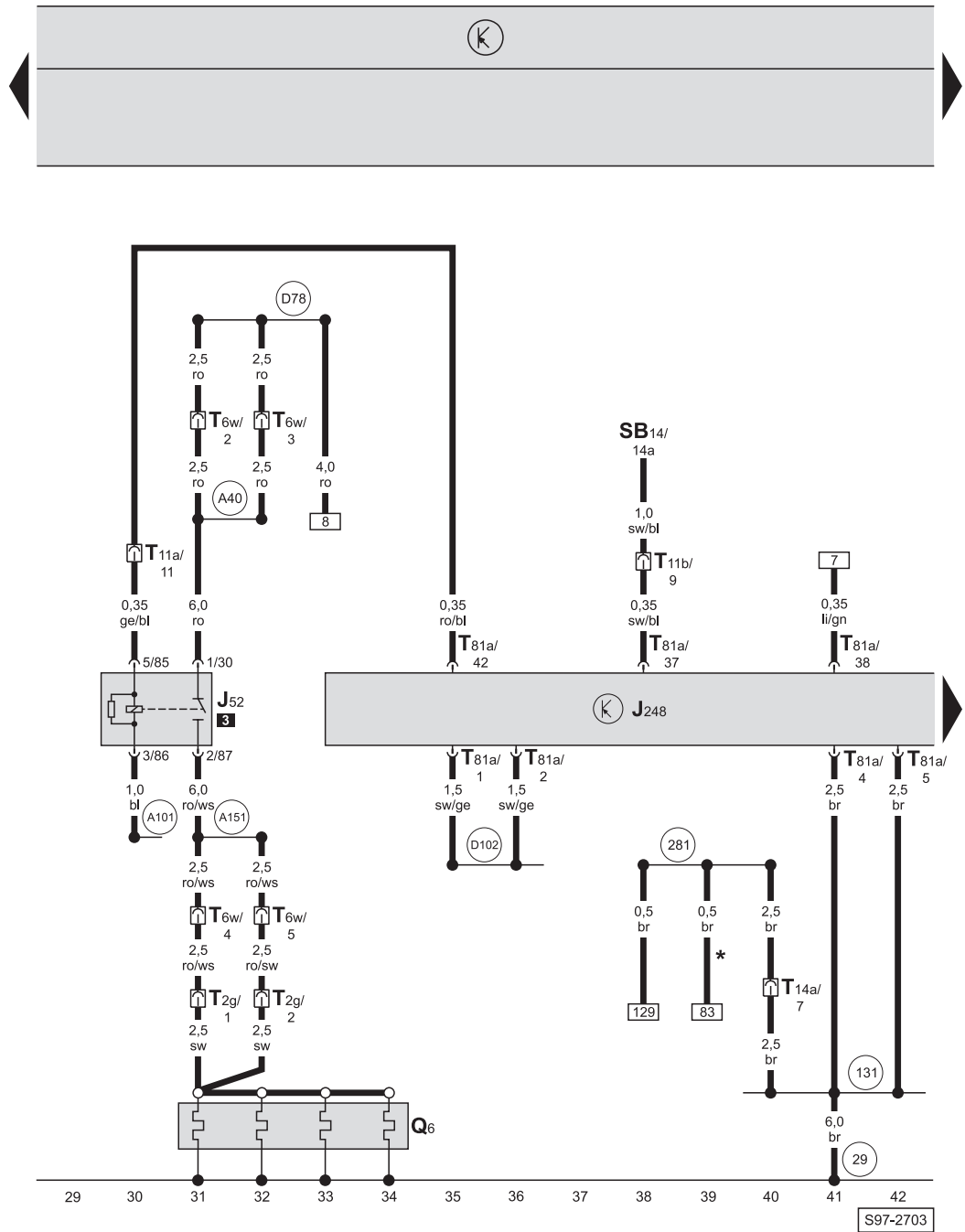
Radiator fan control unit, radiator fan thermostats, radiator fan



- F18 - Radiator fan thermostat
- J279 - Radiator fan relay, stage 1
- J293 - Radiator fan control unit
- J513 - Radiator fan relay, stage 2
- T3h - 3-pin connector, at radiator fan thermostat
- T3i - 3-pin connector, in bracket on left of radiator
- T3u - 3-pin connector, in bracket on left of radiator
- T4t - 4-pin connector, at radiator fan control unit
- T6v - 6-pin connector, at radiator fan control unit
- V7 - Radiator fan
- V35 - Radiator fan, right

- 12a - Earth point -2-, in engine compartment, on left below battery (at side member)
- 108 - Earth connection, in front left wiring harness
- D167 - Connection (fan stage 1), in engine compartment wiring loom
- D168 - Connection (fan stage 2), in engine compartment wiring loom
- - Does not apply to models with air conditioning

Diesel direct injection system control unit, glow plug relay, glow plugs



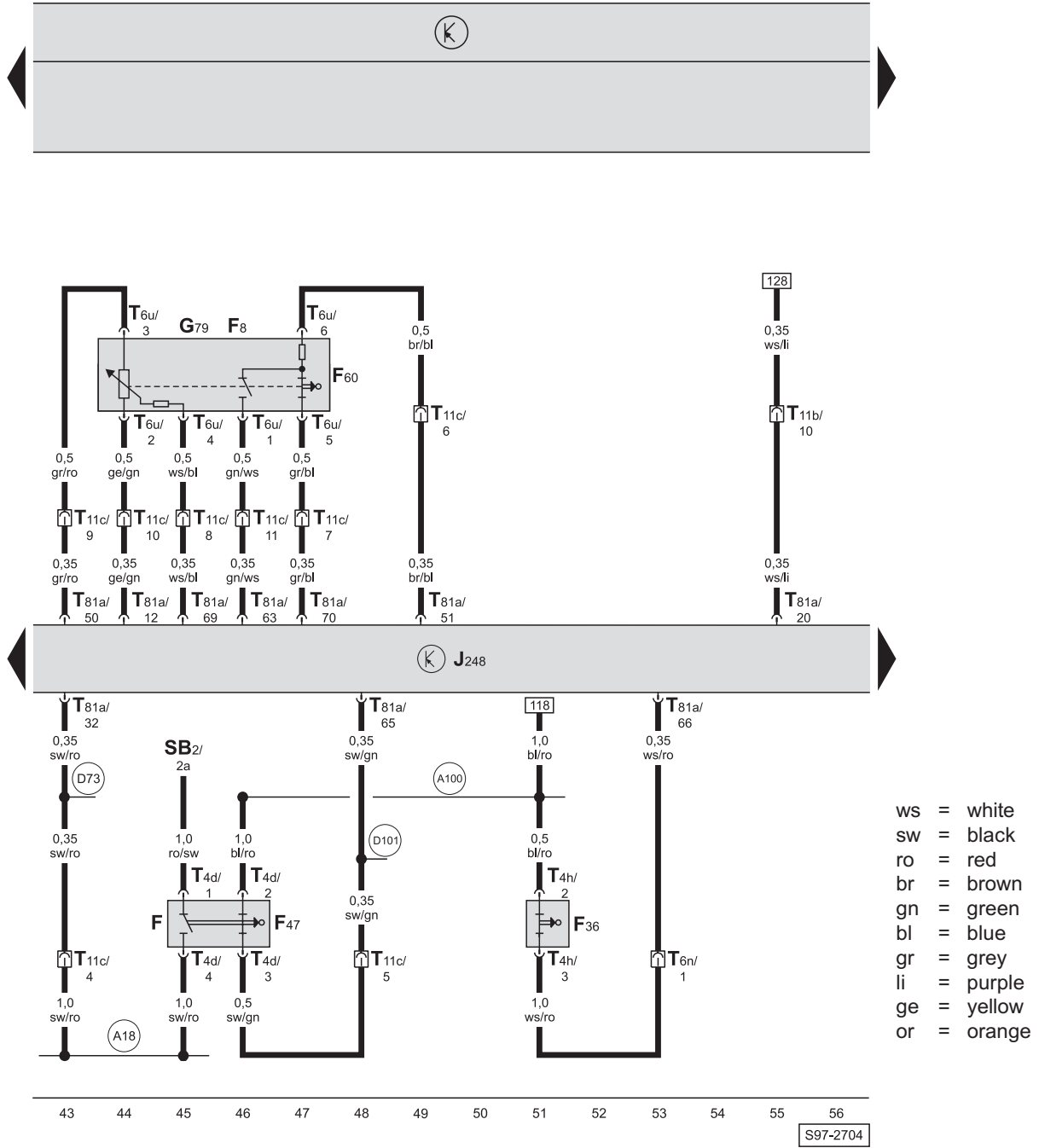
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- J52 - Glow plug relay
- J248 - Diesel direct injection system control unit
- Q6 - Glow plugs
- SB14 - Fuse, in fuse holder
- T2g - 2-pin connector, in left of engine compartment (connection of engine assembly wiring loom/engine compartment wiring loom)
- T6w - 6-pin connector, at left of bulkhead (grey)
- T11a - 11-pin connector, at left of bulkhead (white)
- T11b - 11-pin connector, at left of bulkhead (red)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/engine compartment wiring loom)
- T81a - 81-pin connector, at engine control unit

- 29 - Earth point, in left of engine compartment, behind battery (at suspension strut mounting)
- 131 - Earth connection -2-, in engine compartment wiring harness
- 281 - Earth connection -1-, in engine pre-assembly wiring loom
- A40 - Positive connection (30a), in wiring loom behind dash panel
- A101 - Connection (87), in wiring loom behind dash panel
- A151 - Connection (87), in wiring loom behind dash panel
- D78 - Positive connection -1- (30a), in engine compartment wiring loom
- D102 - Connection -2- (87a), in wiring loom in left of engine compartment

* - Applies only to models with optional equipment

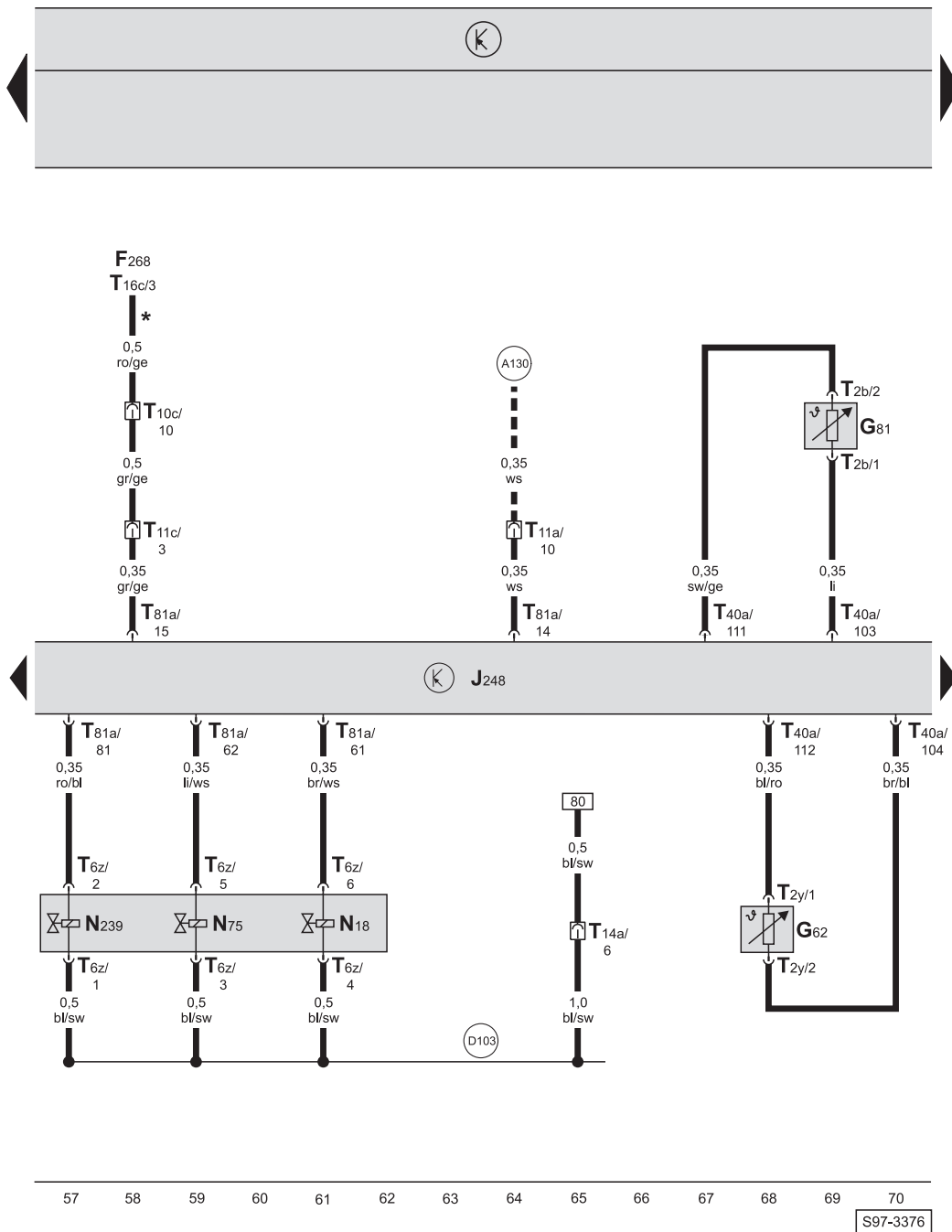
Diesel direct injection system control unit, accelerator pedal position sender, brake pedal switch, clutch pedal switch



- F - Brake light switch
- F8 - Kickdown switch
- F36 - Clutch pedal switch
- F47 - Brake pedal switch
- F60 - Idling speed switch
- G79 - Accelerator position sender
- J248 - Diesel direct injection system control unit
- SB2 - Fuse, in fuse holder
- T4d - 4-pin connector, at brake pedal switch
- T4h - 4-pin connector, at clutch pedal switch
- T6n - 6-pin connector, at left of bulkhead (blue)
- T6u - 6-pin connector, at accelerator pedal position sender
- T11b - 11-pin connector, at left of bulkhead (red)
- T11c - 11-pin connector, at left of bulkhead (blue)
- T81a - 81-pin connector, at engine control unit

- (A18) - Connection (54), in wiring loom behind dash panel
- (A100) - Connection (87a), in wiring loom behind dash panel
- (D73) - Connection (54), in left of engine compartment wiring loom
- (D101) - Connection (brake pedal switch), in engine compartment wiring loom

Diesel direct injection system control unit, coolant temperature sender, fuel temperature sender, exhaust gas recirculation valve, charge pressure control solenoid valve, intake manifold flap changeover valve

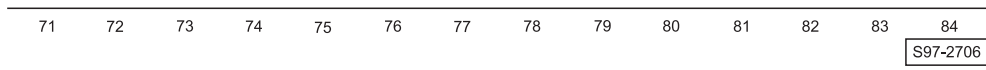
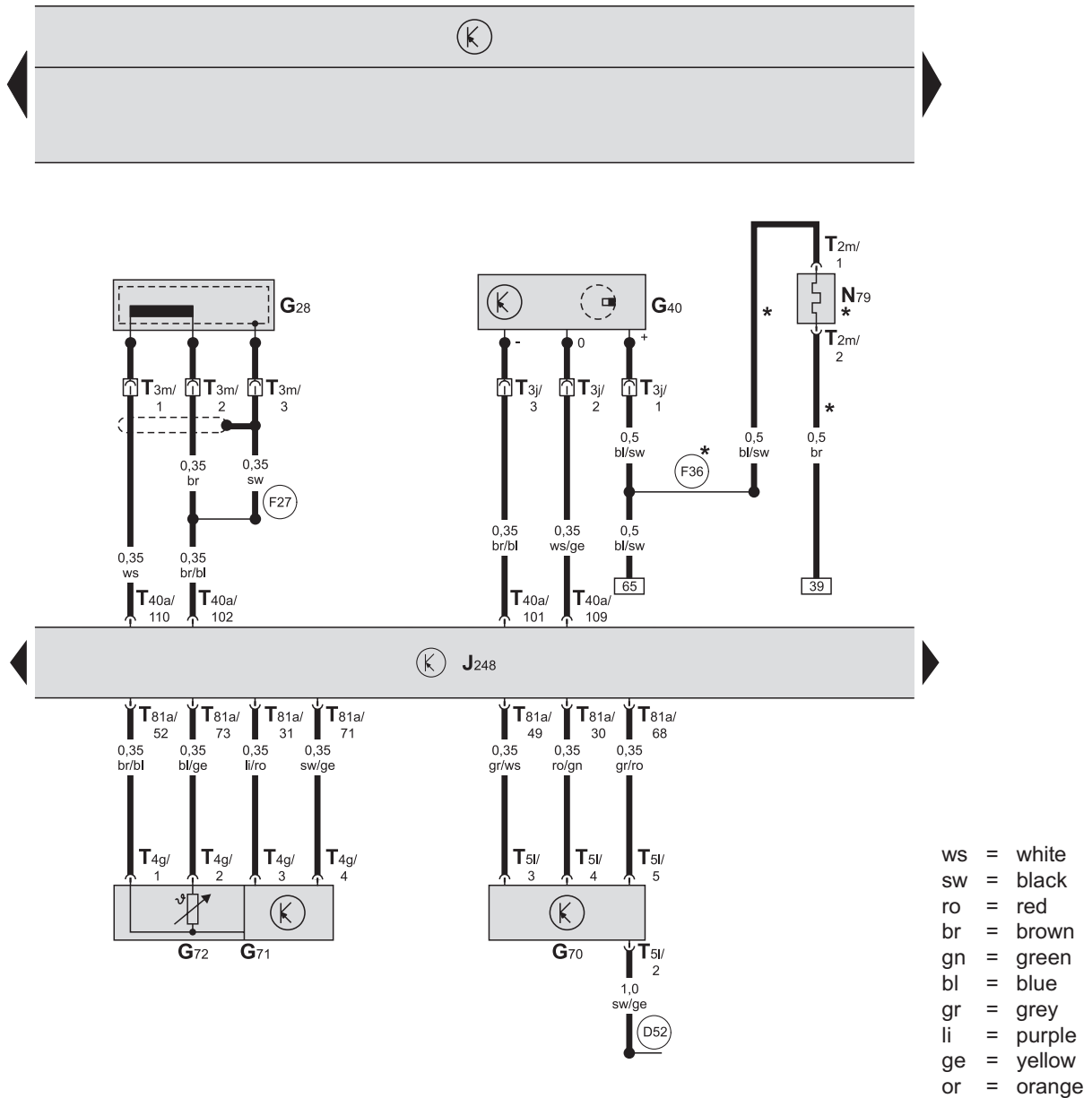


- F268 - Heater element contact switch (PTC)
- G62 - Coolant temperature sender
- G81 - Fuel temperature sender
- J248 - Diesel direct injection system control unit
- N18 - EGR valve
- N75 - Boost pressure control solenoid valve
- N239 - Intake manifold flap changeover valve
- T2b - Plug connection, 2-pin, at fuel temperature sender
- T2y - 2-pin connector, at coolant temperature sender
- T6z - Connector, 6-pin, at valve block
- T10c - 10-pin connector, behind dash panel on right
- T11a - 11-pin connector, at left of bulkhead (white)
- T11c - 11-pin connector, at left of bulkhead (blue)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)
- T16c - 16-pin connector, at fresh air controls
- T40a - 40-pin connector, at engine control unit
- T81a - 81-pin connector, at engine control unit

- (A130) - Connection (CCS), in wiring loom behind dash panel on left
- (D103) - Connection -3- (87a), in engine compartment wiring loom

- * - does not apply to models with air conditioning
- ■ ■ - Applies only to models with CCS

Diesel direct injection system control unit, engine speed sender, camshaft position sender, air mass meter, intake manifold pressure and intake manifold temperature sender

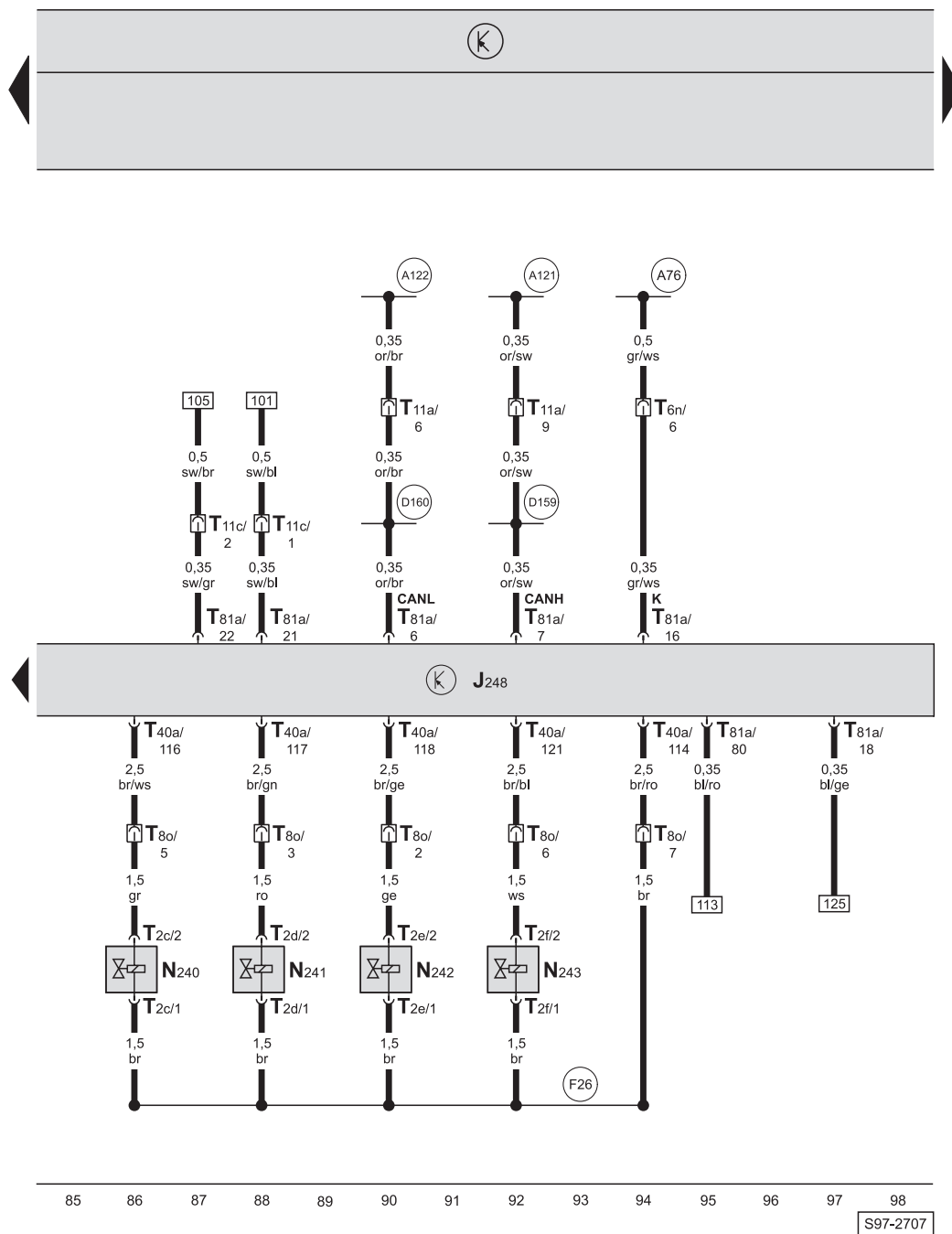


- G28 - Engine speed sender
- G40 - Camshaft position sender
- G70 - Air mass meter
- G71 - Intake manifold pressure sender
- G72 - Intake manifold temperature sender
- N79 - Crankcase breather heater element
- J248 - Diesel direct injection system control unit
- T2m - 2-pin connector, at crankcase breather heater element
- T3j - 3-pin connector, at camshaft position sender
- T3m - 3-pin connector, at engine speed sender
- T4g - 4-pin connector, at intake manifold pressure and intake manifold temperature sender
- T5l - 5-pin connector, at air mass meter
- T40a - 40-pin connector, at engine control unit
- T81a - 81-pin connector, at engine control unit

- (D52) - Positive connection (15a), in engine compartment wiring loom
- (F27) - Connection (screening), in engine pre-wiring wiring harness
- (F36) - Positive connection (87a), in engine assembly wiring loom

* - Applies only to models with optional equipment

Diesel direct injection system control unit, unit injectors

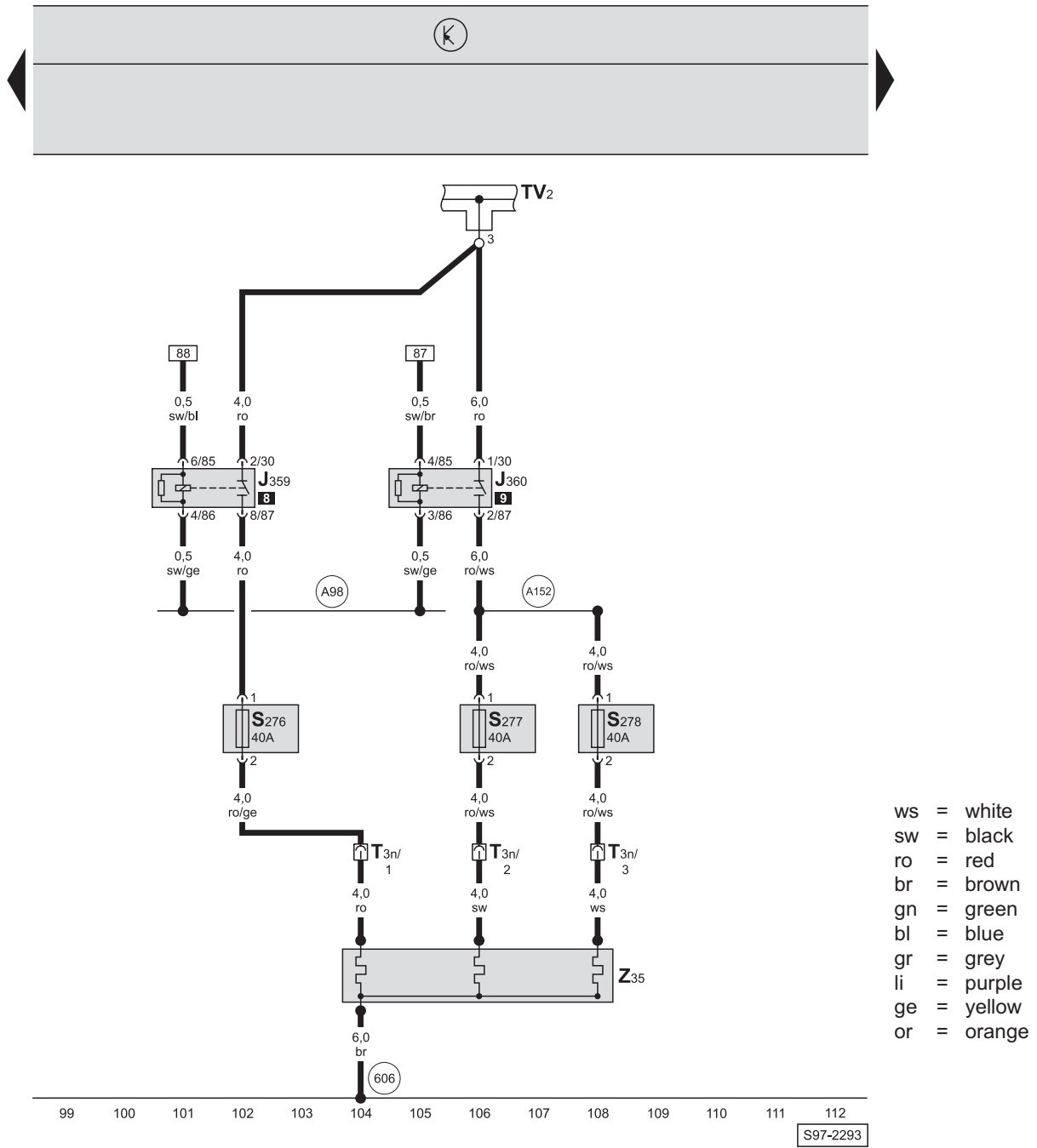


- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- J248 - Diesel direct injection system control unit
- N240 - Unit injector, cylinder 1
- N241 - Unit injector, cylinder 2
- N242 - Unit injector, cylinder 3
- N243 - Unit injector, cylinder 4
- T2c - Plug connection, 2-pin, at unit injector, cylinder 1
- T2d - Plug connection, 2-pin, at unit injector, cylinder 2
- T2e - Plug connection, 2-pin, at unit injector, cylinder 3
- T2f - Plug connection, 2-pin, at unit injector, cylinder 4
- T6n - 6-pin connector, at left of bulkhead (blue)
- T8o - Plug connection, 8-pin, at cylinder head
- T11a - 11-pin connector, at left of bulkhead (white)
- T11c - 11-pin connector, at left of bulkhead (blue)
- T40a - 40-pin connector, at engine control unit
- T81a - 81-pin connector, at engine control unit

- (A76) - Connection (K diagnosis wire), in wiring loom behind dash panel on left
- (A121) - Connection (CAN-H), in wiring loom behind dash panel on
- (A122) - Connection (CAN-L), in wiring loom behind dash panel
- (D159) - Connection (CAN-H), in engine compartment wiring loom
- (D160) - Connection (CAN-L), in engine compartment wiring loom
- (F26) - Connection (earth), in cylinder head wiring loom

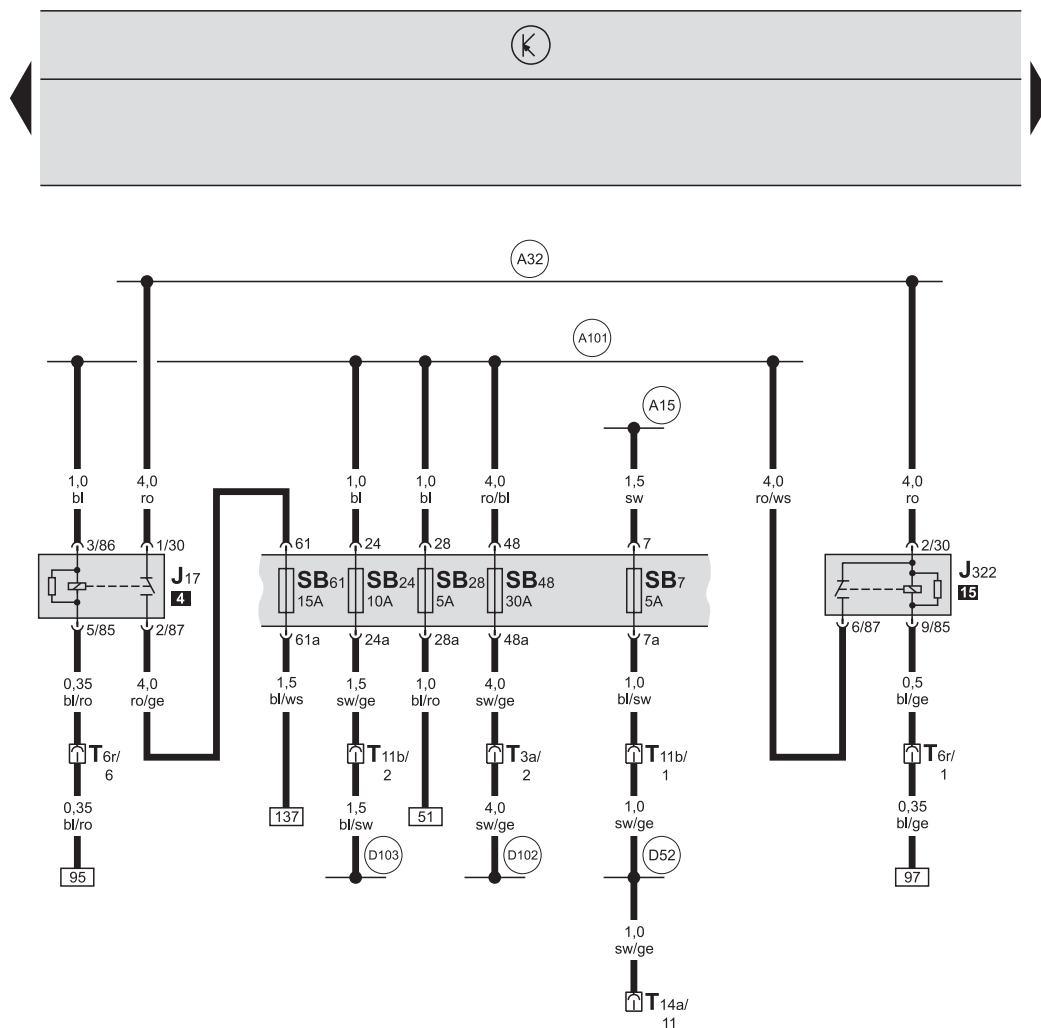
Low heating capacity relay, high heating capacity relay, heating element for additional heater (PTC), additional fuse holder



- J359 - Low heating capacity relay
- J360 - High heating capacity relay
- S276 - Fuse -1- for heater element
- S277 - Fuse -2- for heater element
- S278 - Fuse -3- for heater element
- T3n - 3-pin connector, behind dash panel (at PTC heating element)
- TV2 - Terminal 30 junction, behind dash panel on left
- Z35 - Additional heating heater element (PTC)

- 606 - Earth point, under the centre console, near gear stick
- A98 - Positive connection (30a), in wiring loom behind dash panel (applies only to models with telephone system)
- A152 - Connection (87), in wiring harness behind dash panel

Fuel pump relay, diesel direct injection system relay, fuse holder



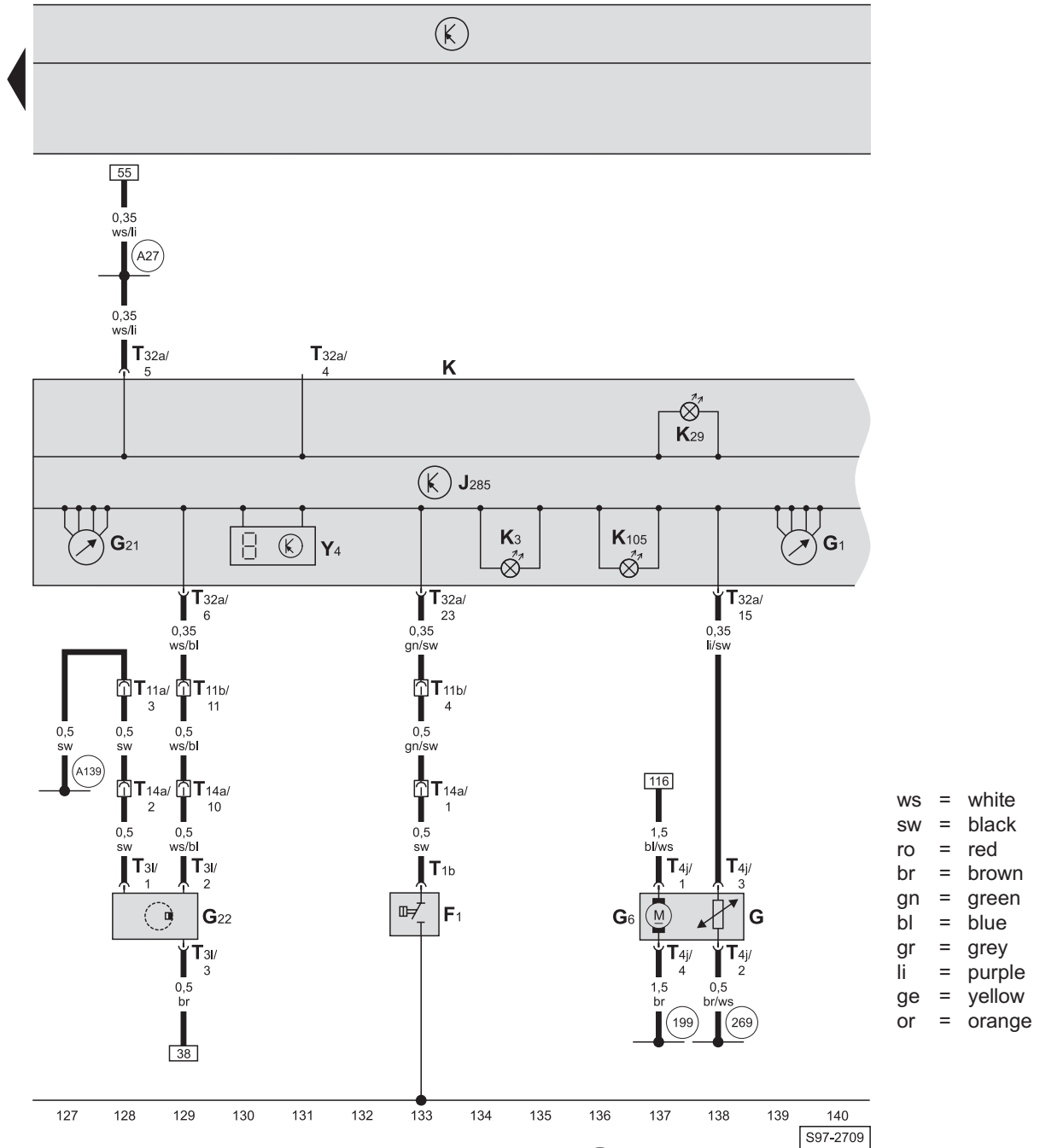
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

113 114 115 116 117 118 119 120 121 122 123 124 125 126
S97-2708

- J17 - Fuel pump relay
- J322 - Diesel direct injection system relay
- T3a - 3-pin connector, at left of bulkhead (grey)
- T6r - 6-pin connector, at left of bulkhead (brown)
- T11b - 11-pin connector, at left of bulkhead (red)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)

- A15 - Positive connection (15), in wiring loom behind dash panel
- A32 - Positive connection (30a), in wiring loom behind dash panel on left
- A101 - Connection (87), in wiring loom behind dash panel
- D52 - Positive connection (15a), in engine compartment wiring loom
- D102 - Connection -2- (87a), in wiring loom in left of engine compartment
- D103 - Connection -3- (87a), in engine compartment wiring loom

Dash panel insert, control unit in dash panel insert, warning lights, oil pressure switch, fuel gauge sender, fuel pump, speedometer sender, fuel gauge, speedometer, odometer display



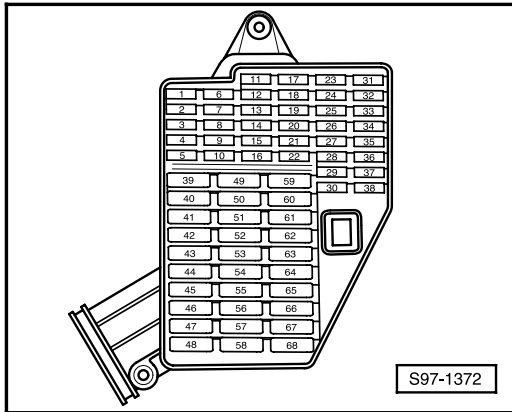
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- F1 - Oil pressure switch
- G - Fuel gauge sender
- G1 - Fuel gauge
- G6 - Fuel pump
- G21 - Speedometer
- G22 - Speedometer sender
- J285 - Control unit in dash panel insert
- K - Dash panel insert
- K3 - Oil pressure warning lamp
- K29 - Glow period warning lamp
- K105 - Reserve fuel warning lamp
- T1b - 1-pin connector, at oil pressure switch
- T3l - 3-pin connector, at speedometer sender
- T4j - 4-pin connector, at fuel pump
- T11a - 11-pin connector, at left of bulkhead (white)
- T11b - 11-pin connector, at left of bulkhead (red)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)
- T32a - 32-pin connector, at dash panel insert
- Y4 - Odometer display

- 199 - Earth connection, in wiring harness behind dash panel
- 269 - Earth connection (sender earth) -1-, in wiring harness behind dash panel
- A27 - Connection (vehicle speed signal), in wiring loom behind dash panel
- A139 - Positive connection (15), in wiring loom behind dash panel

Gas discharge bulbs, as of November 2001

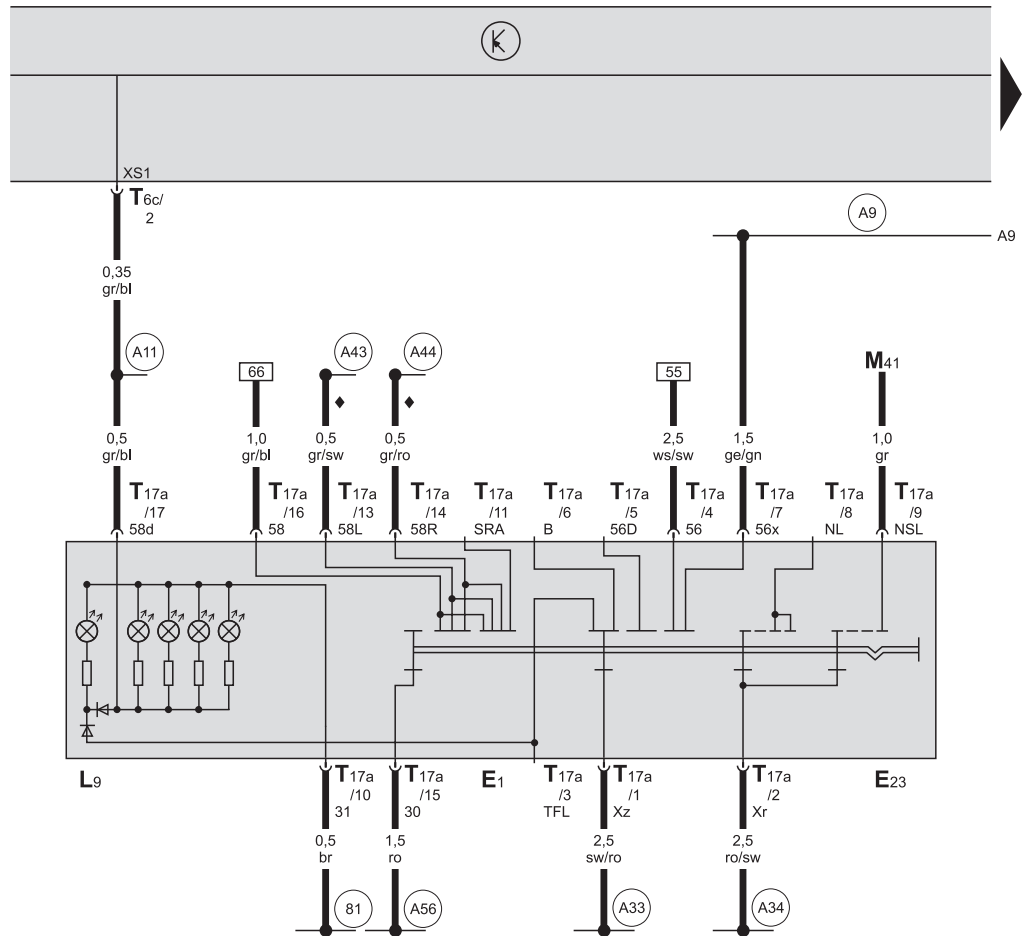
Fuse holder:



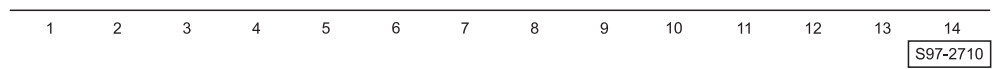
Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

Light switch



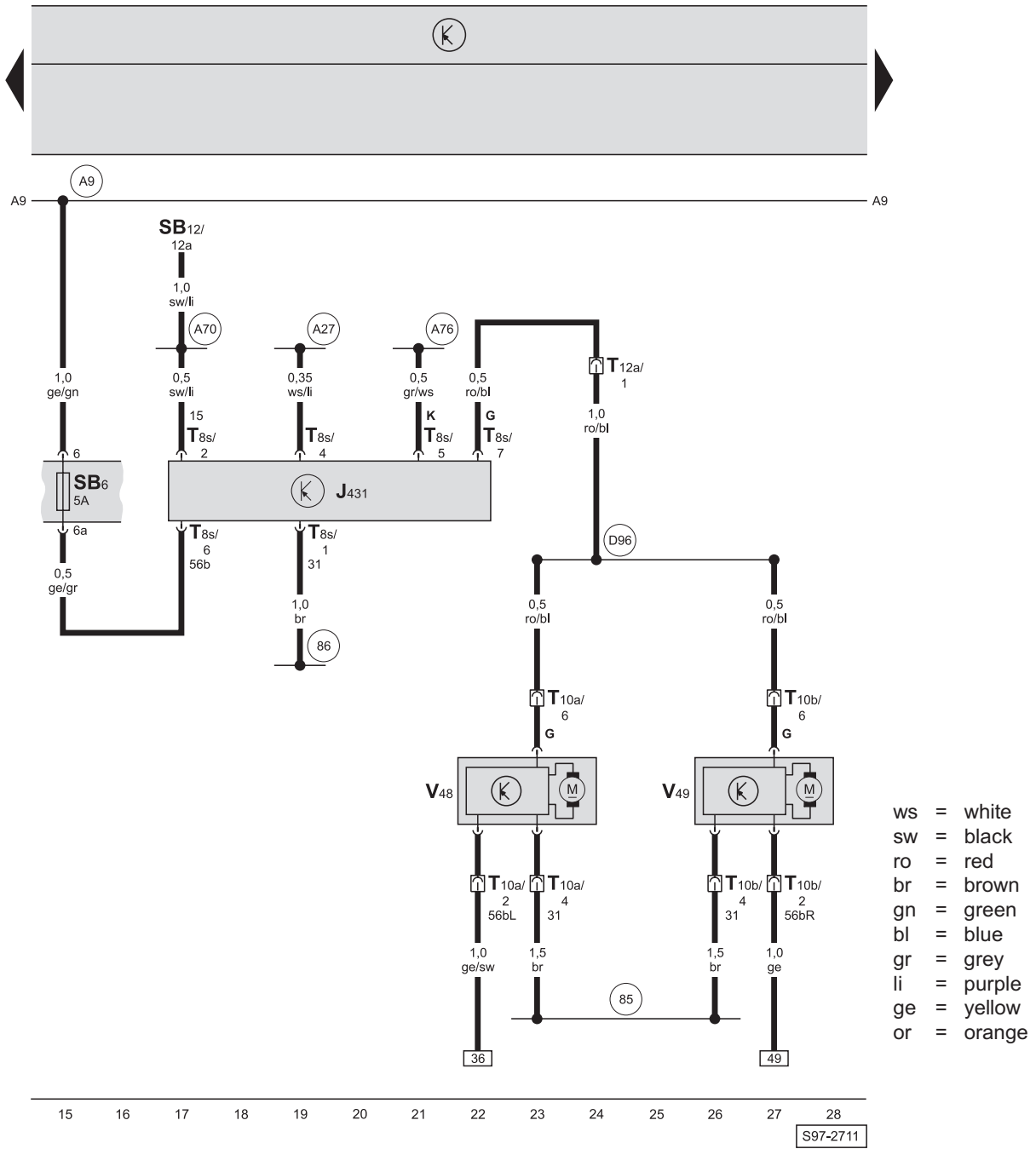
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange



- E1 - Light switch
- E23 - Front and rear fog light switch
- L9 - Lighting switch illumination bulb
- M41 - Left tail light and rear fog light bulb
- T6c - 6-pin connector, at electrical system control unit (black)
- T17a - 17-pin connector, at light switch

- 81 - Earth connection, in wiring harness behind dash panel
- A9 - Connection (56b), in wiring loom behind dash panel
- A11 - Positive connection (58b), in wiring loom behind dash panel
- A33 - Positive connection (75), in wiring loom behind dash panel
- A34 - Positive connection (75x), in wiring loom behind dash panel
- A43 - Connection (57L), in wiring loom behind dash panel
- A44 - Connection (57R), in wiring loom behind dash panel
- A56 - Positive connection (30a), in wiring loom behind dash panel
- ◆ - Does not apply to models with daytime running lights

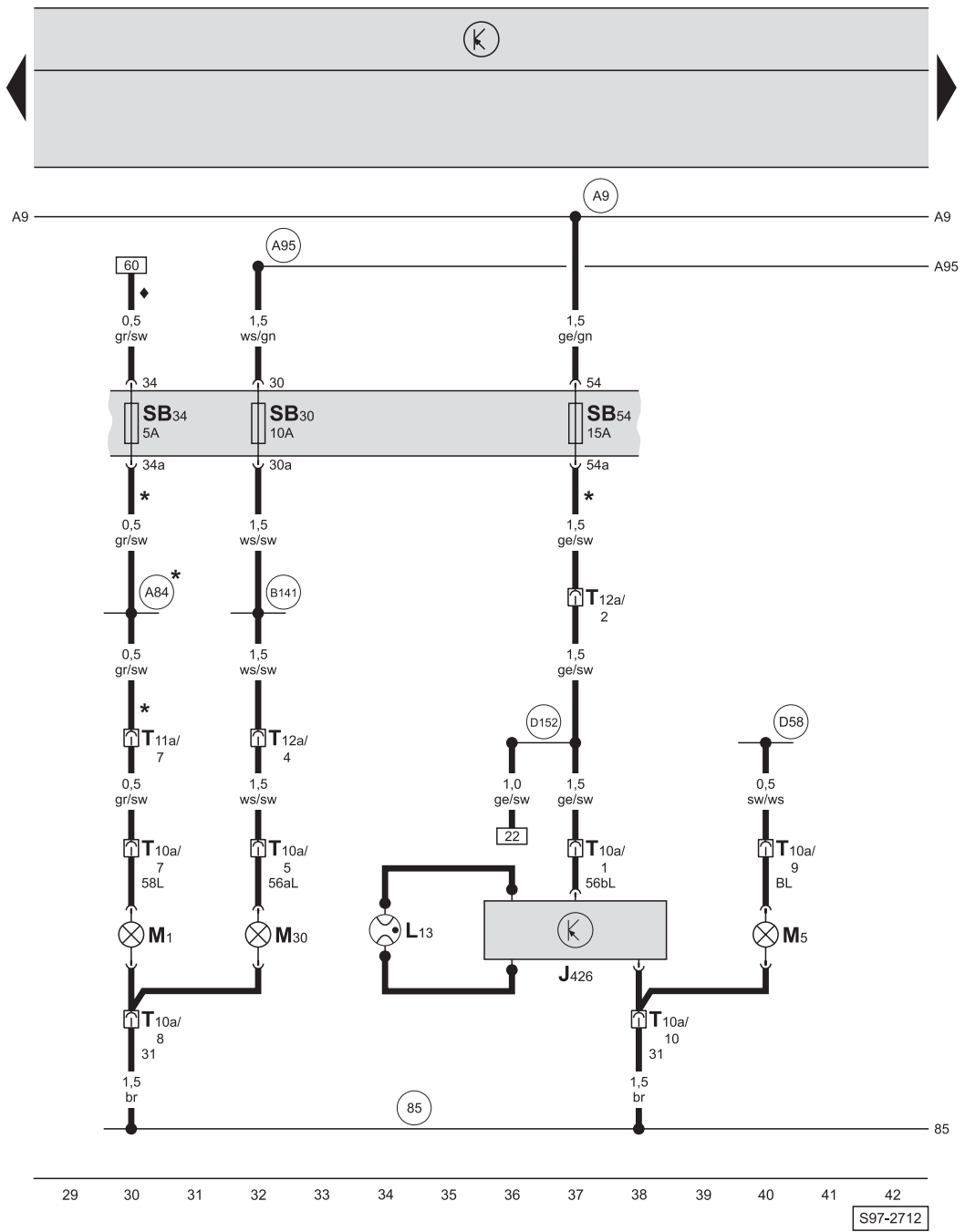
Headlight range adjustment control unit, headlight range adjustment , fuse holder



- J431 - Headlight beam adjustment control unit (at rear axle)
- SB12 - Fuse, in fuse holder
- T8s - Connector, 8-pin, at headlight range adjustment control unit
- T10a - 10-pin connector, at left headlight
- T10b - 10-pin connector, at right headlight
- T12a - 12-pin connector, at left of bulkhead (white)
- V48 - Headlight range control motor, left
- V49 - Headlight range control motor, right

- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- 86 - Earth connection -1-, in rear interior wiring loom
- A9 - Connection (56b), in wiring loom behind dash panel
- A27 - Connection (vehicle speed signal), in wiring loom behind dash panel
- A70 - Positive connection (15a), in wiring loom behind dash panel
- A76 - Connection (K diagnosis wire), in wiring loom behind dash panel on left
- D96 - Connection (headlight range control), in engine compartment wiring loom

Left gas discharge light, fuse holder



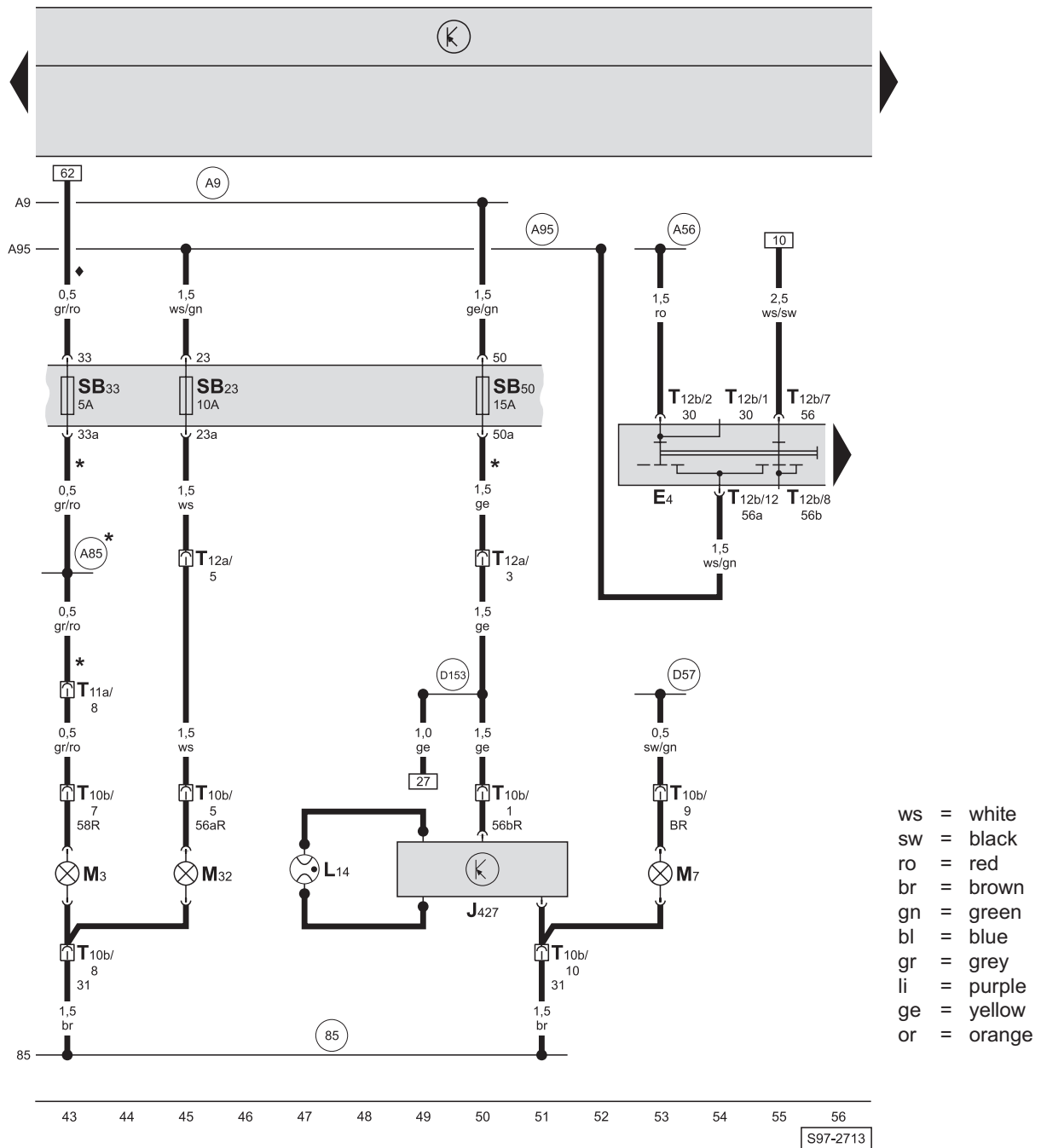
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- J426 - Left headlight ballast unit (gas discharge)
- L13 - Left gas discharge light
- M1 - Side light bulb, left
- M5 - Turn signal bulb, front left
- M30 - Headlight main beam bulb, left
- T10a - 10-pin connector, at left headlight
- T11a - 11-pin connector, at left of bulkhead (white)
- T12a - 12-pin connector, at left of bulkhead (white)

- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- A9 - Connection (56b), in wiring loom behind dash panel
- A84 - Connection (58L), in wiring loom behind dash panel
- A95 - Connection (56a), in wiring loom behind dash panel
- B141 - Connection (56aL), in wiring loom behind dash panel
- D58 - Connection (left turn signal light), in left engine compartment wiring loom
- D152 - Positive connection (56bL), in left engine compartment wiring loom

- * - Does not apply to models with bulb failure indicator
- ◆ - Does not apply to models with daytime running lights

Right gas discharge bulb, dimming and headlight flasher switch, fuse holder



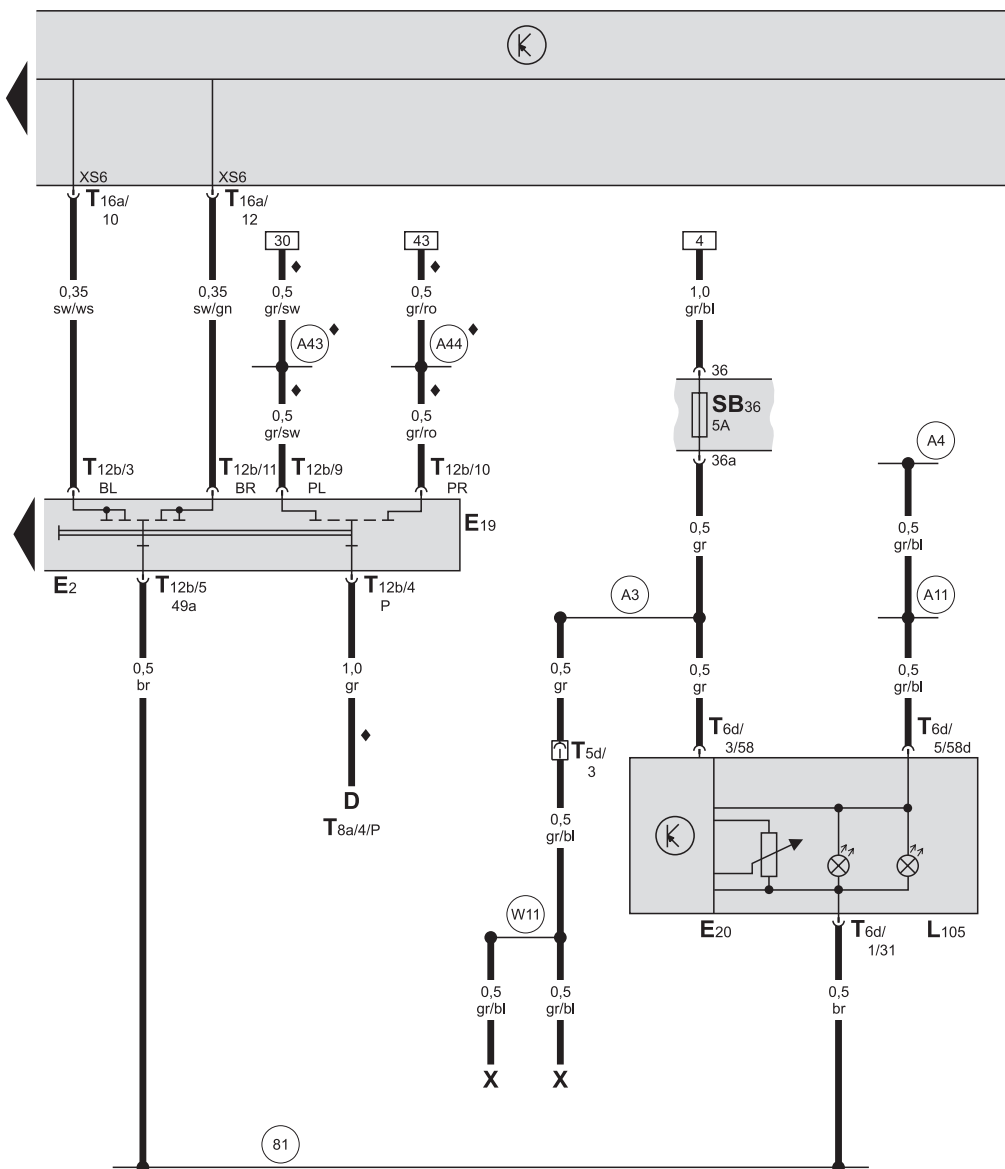
- ws = white
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- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- E4 - Headlight dipper/flasher switch
- J427 - Right headlight ballast unit (gas discharge)
- L14 - Right gas discharge light
- M3 - Side light bulb, right
- M7 - Turn signal bulb, front right
- M32 - Headlight main beam bulb, right
- T10b - 10-pin connector, at right headlight
- T11a - 11-pin connector, at left of bulkhead (white)
- T12a - 12-pin connector, at left of bulkhead (white)
- T12b - 12-pin connector, at headlight dipper/flasher switch

- (85) - Earth connection -1-, in wiring loom in left of engine compartment
- (A9) - Connection (56b), in wiring loom behind dash panel
- (A56) - Positive connection (30a), in wiring loom behind dash panel
- (A85) - Connection (58R), in wiring loom behind dash panel
- (A95) - Connection (56a), in wiring loom behind dash panel
- (D57) - Connection (right turn signal light), in right engine compartment wiring loom
- (D153) - Positive connection (56bR), in right engine compartment wiring loom

- * - Does not apply to models with bulb failure indicator
- ◆ - Does not apply to models with daytime running lights

Turn signal switch, parking light switch, lighting rheostat - switches and instruments



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

57 58 59 60 61 62 63 64 65 66 67 68 69 70

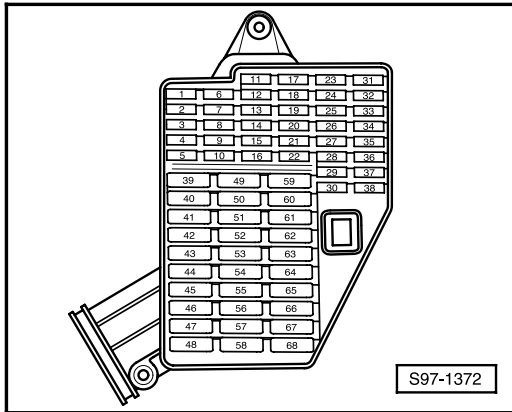
S97-2714

- D - Ignition/starter switch
- E2 - Turn signal switch
- E19 - Parking light switch
- E20 - Switches and instruments lighting control
- L105 - Illumination for lighting rheostat
- T6d - Connector, 6-pin, at switch lighting rheostat
- T8a - 8-pin connector, at ignition/starter switch
- T12b - 12-pin connector, at turn signal light switch
- T16a - 16-pin connector, at electrical system control unit (black)
- X - Number plate light

- 81 - Earth connection, in wiring harness behind dash panel
- A3 - Positive connection (58), in wiring loom behind dash panel
- A4 - Positive connection (58b), in wiring loom behind dash panel
- A11 - Positive connection (58b), in wiring loom behind dash panel
- A43 - Connection (57L), in wiring loom behind dash panel
- A44 - Connection (57R), in wiring loom behind dash panel
- W11 - Connection (58), in tailgate wiring loom
- ◆ - Does not apply to models with daytime running lights

Daytime running lights - gas discharge bulbs, as of November 2001

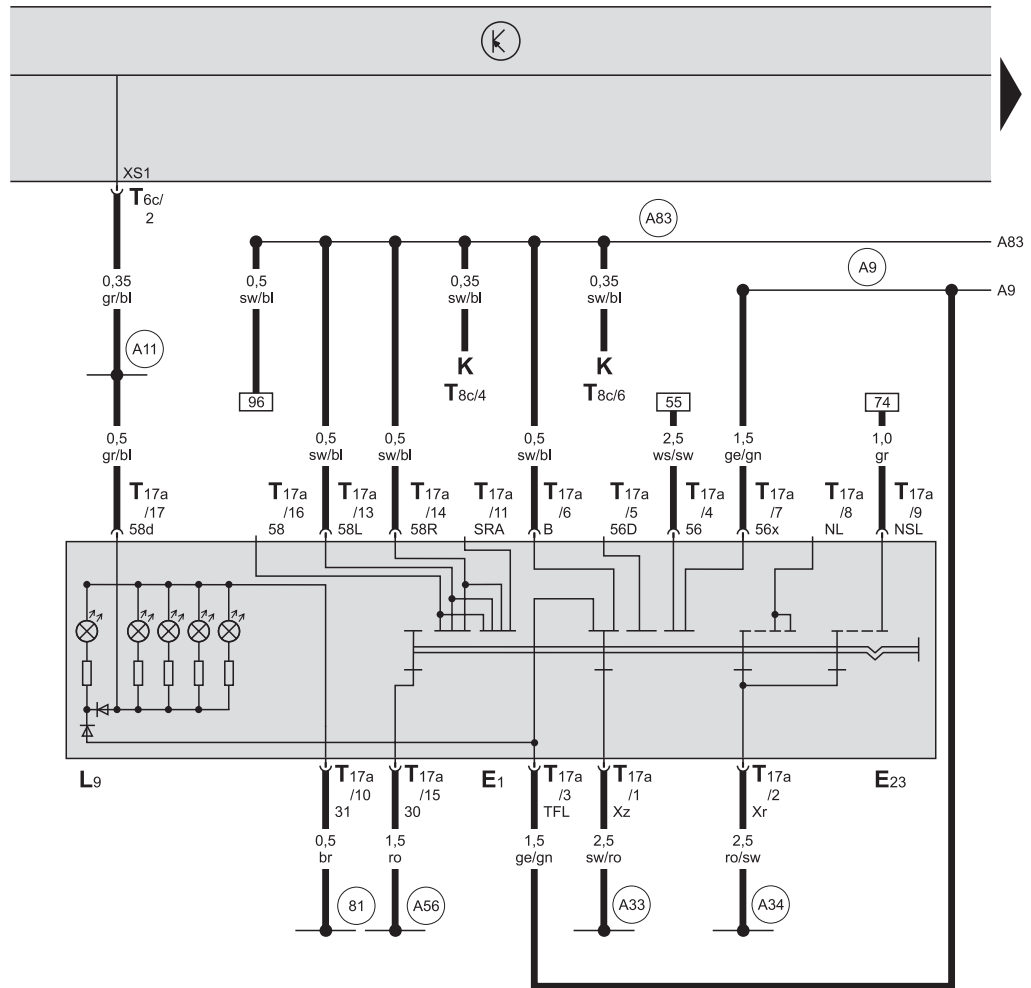
Fuse holder:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

Light switch



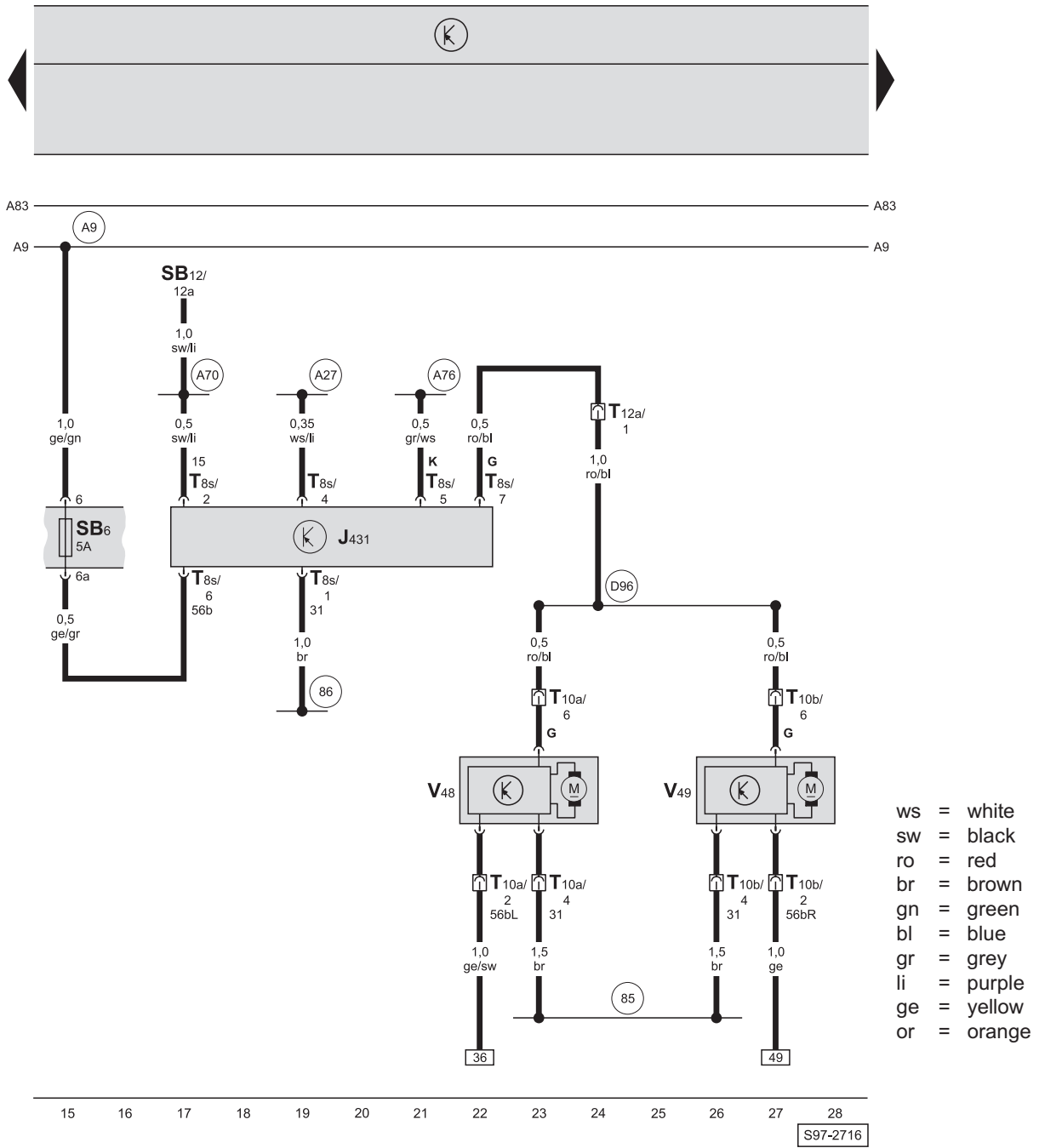
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange



- E1 - Light switch
- E23 - Front and rear fog light switch
- K - Dash panel insert
- L9 - Lighting switch illumination bulb
- T6c - 6-pin connector, at electrical system control unit (black)
- T8c - 8-pin connector, at dash panel insert
- T17a - 17-pin connector, at light switch

- 81 - Earth connection, in wiring harness behind dash panel
- A9 - Connection (56b), in wiring loom behind dash panel
- A11 - Positive connection (58b), in wiring loom behind dash panel
- A33 - Positive connection (75), in wiring loom behind dash panel
- A34 - Positive connection (75x), in wiring loom behind dash panel
- A56 - Positive connection (30a), in wiring loom behind dash panel
- A83 - Connection (58, daytime running lights), in wiring loom behind dash panel on left

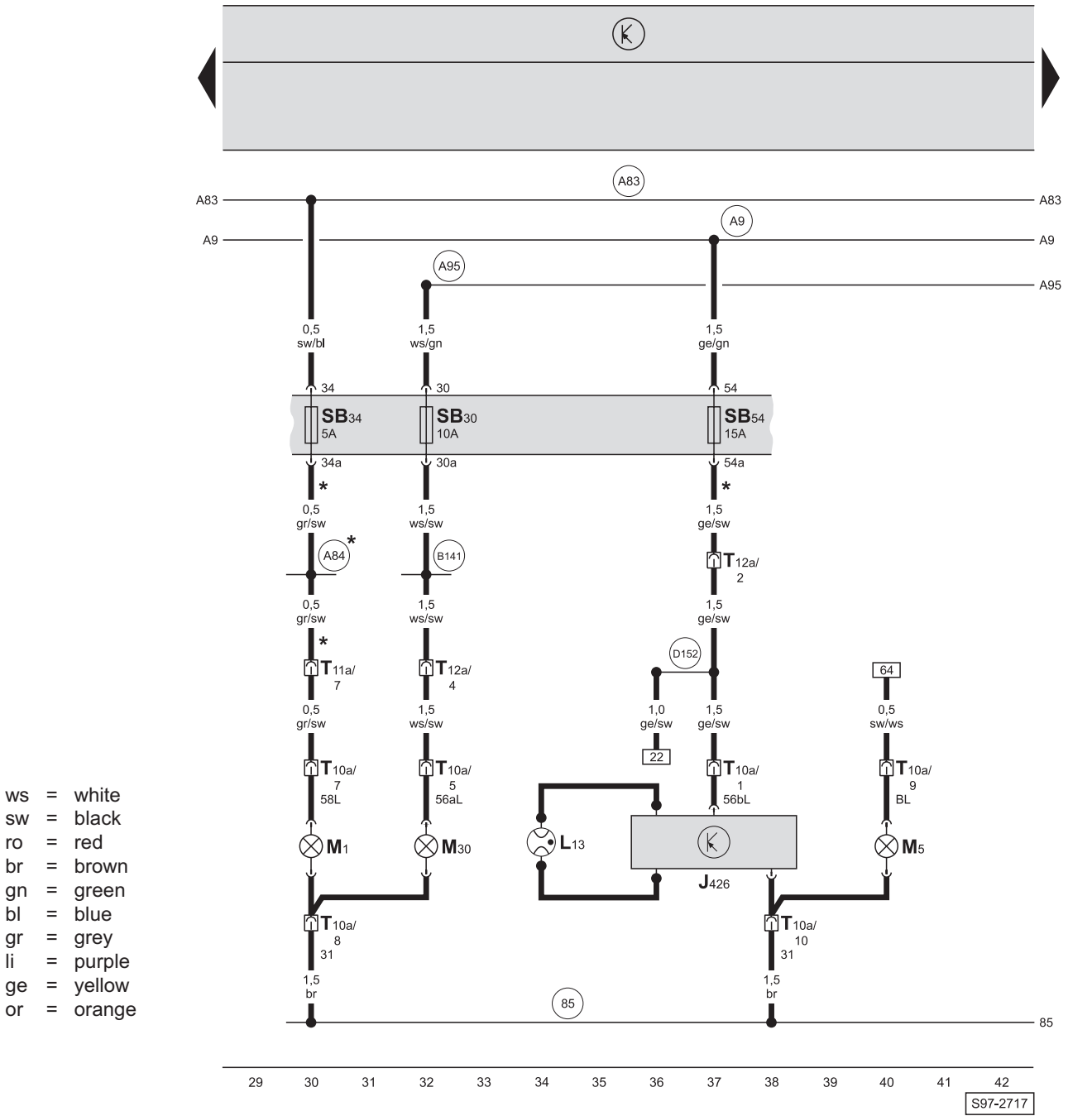
Headlight range adjustment control unit, headlight range adjustment , fuse holder



- J431 - Headlight beam adjustment control unit (at rear axle)
- SB12 - Fuse, in fuse holder
- T8s - Connector, 8-pin, at headlight range adjustment control unit
- T10a - 10-pin connector, at left headlight
- T10b - 10-pin connector, at right headlight
- T12a - 12-pin connector, at left of bulkhead (white)
- V48 - Headlight range control motor, left
- V49 - Headlight range control motor, right

- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- 86 - Earth connection -1-, in rear interior wiring loom
- A9 - Connection (56b), in wiring loom behind dash panel
- A27 - Connection (vehicle speed signal), in wiring loom behind dash panel
- A70 - Positive connection (15a), in wiring loom behind dash panel
- A76 - Connection (K diagnosis wire), in wiring loom behind dash panel on left
- D96 - Connection (headlight range control), in engine compartment wiring loom

Left gas discharge light, fuse holder

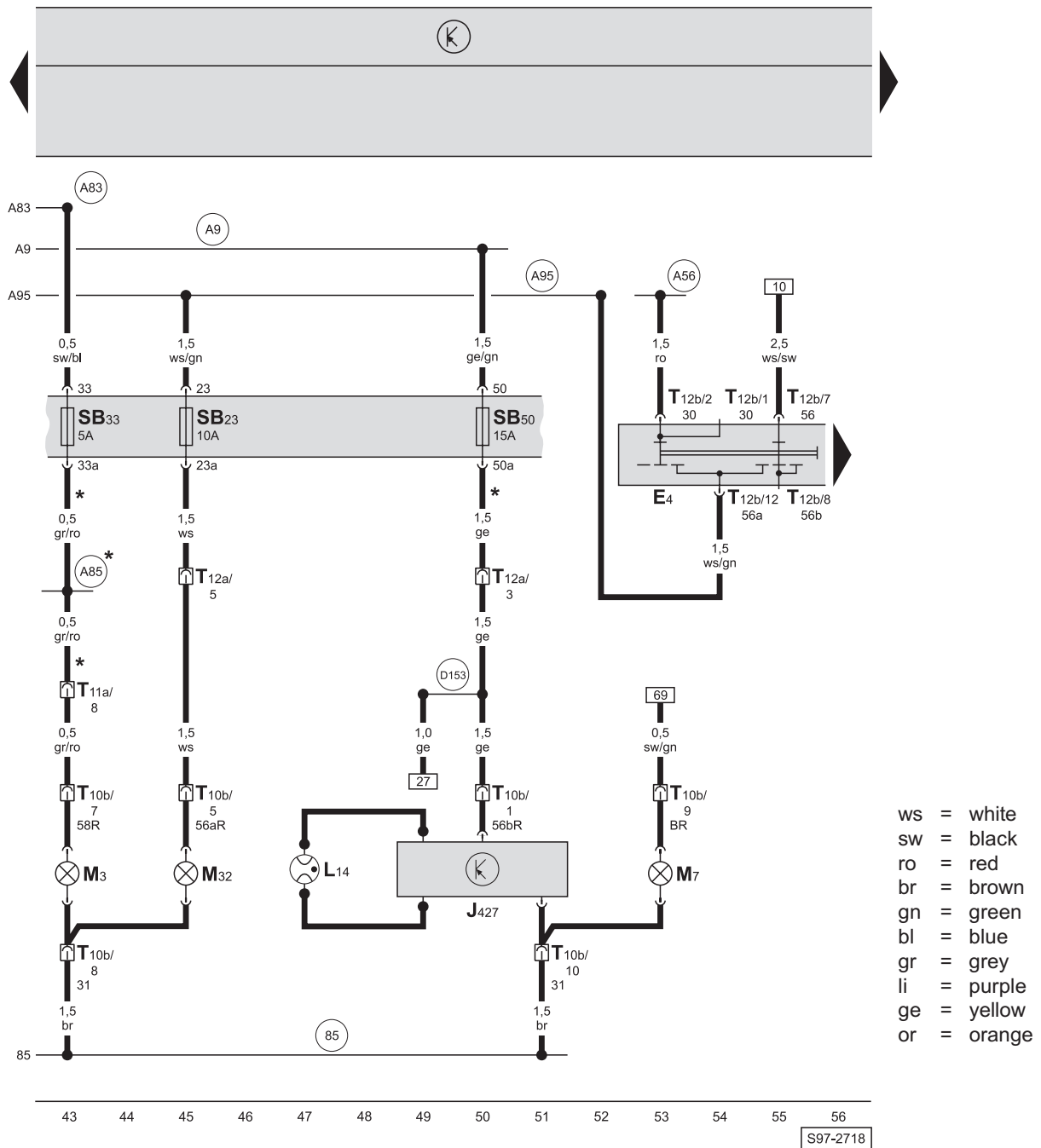


- J426 - Left headlight ballast unit (gas discharge)
- L13 - Left gas discharge light
- M1 - Side light bulb, left
- M5 - Turn signal bulb, front left
- M30 - Headlight main beam bulb, left
- T10a - 10-pin connector, at left headlight
- T11a - 11-pin connector, at left of bulkhead (white)
- T12a - 12-pin connector, at left of bulkhead (white)

- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- A9 - Connection (56b), in wiring loom behind dash panel
- A83 - Connection (58, daytime running lights), in wiring loom behind dash panel on left
- A84 - Connection (58L), in wiring loom behind dash panel
- A95 - Connection (56a), in wiring loom behind dash panel
- B141 - Connection (56aL), in wiring loom behind dash panel
- D152 - Positive connection (56bL), in left engine compartment wiring loom

* - Does not apply to models with bulb failure indicator

Right gas discharge bulb, dimming and headlight flasher switch, fuse holder

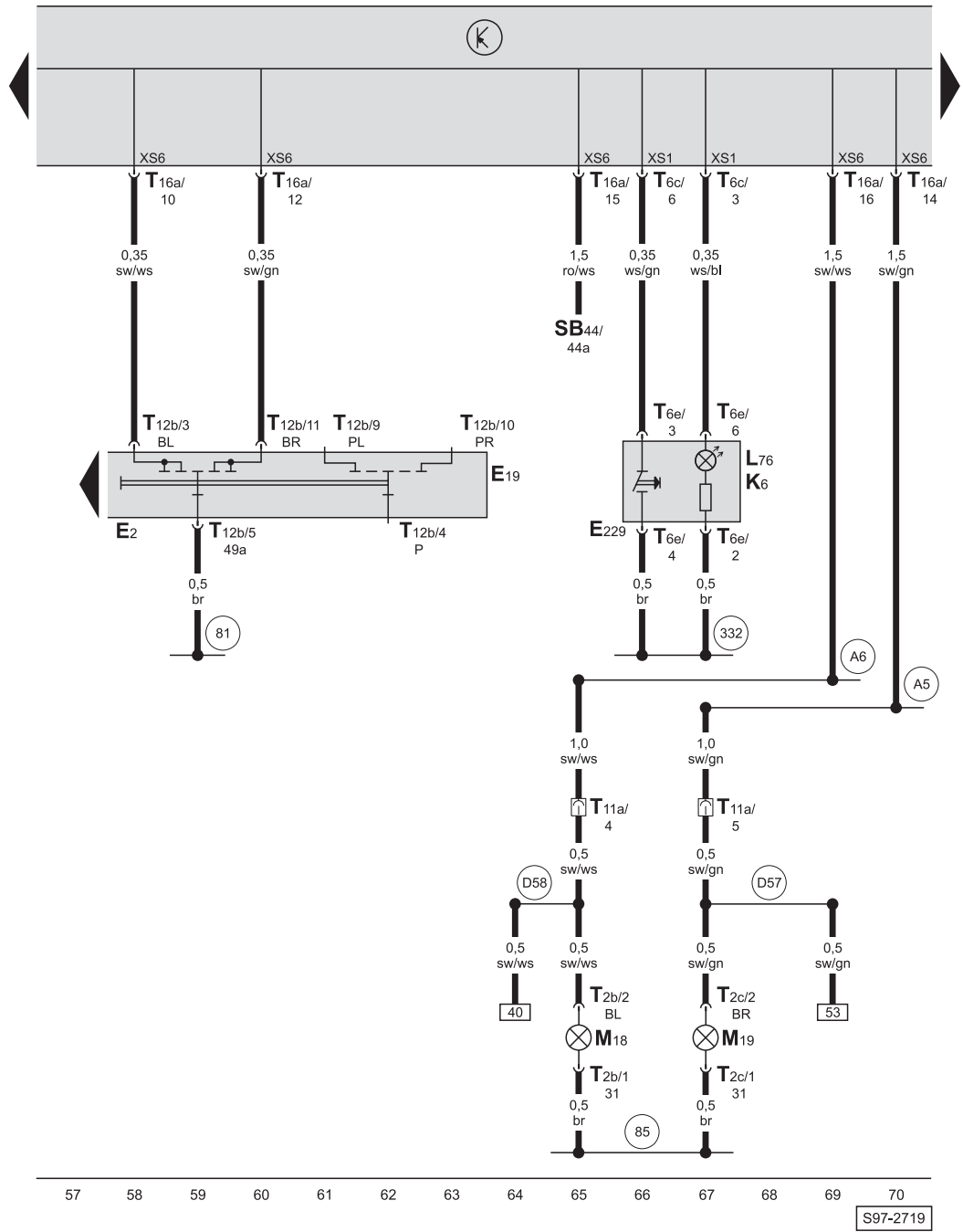


- E4 - Headlight dipper/flasher switch
- J427 - Right headlight ballast unit (gas discharge)
- L14 - Right gas discharge light
- M3 - Side light bulb, right
- M7 - Turn signal bulb, front right
- M32 - Headlight main beam bulb, right
- T10b - 10-pin connector, at right headlight
- T11a - 11-pin connector, at left of bulkhead (white)
- T12a - 12-pin connector, at left of bulkhead (white)
- T12b - 12-pin connector, at headlight dipper/flasher switch

- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- A9 - Connection (56b), in wiring loom behind dash panel
- A56 - Positive connection (30a), in wiring loom behind dash panel
- A83 - Connection (58, daytime running lights), in wiring loom behind dash panel on left
- A85 - Connection (58R), in wiring loom behind dash panel
- A95 - Connection (56a), in wiring loom behind dash panel
- D153 - Positive connection (56bR), in right engine compartment wiring loom

* - Does not apply to models with bulb failure indicator

Turn signal light switch, parking light switch, hazard warning light pushbutton, side turn signal light



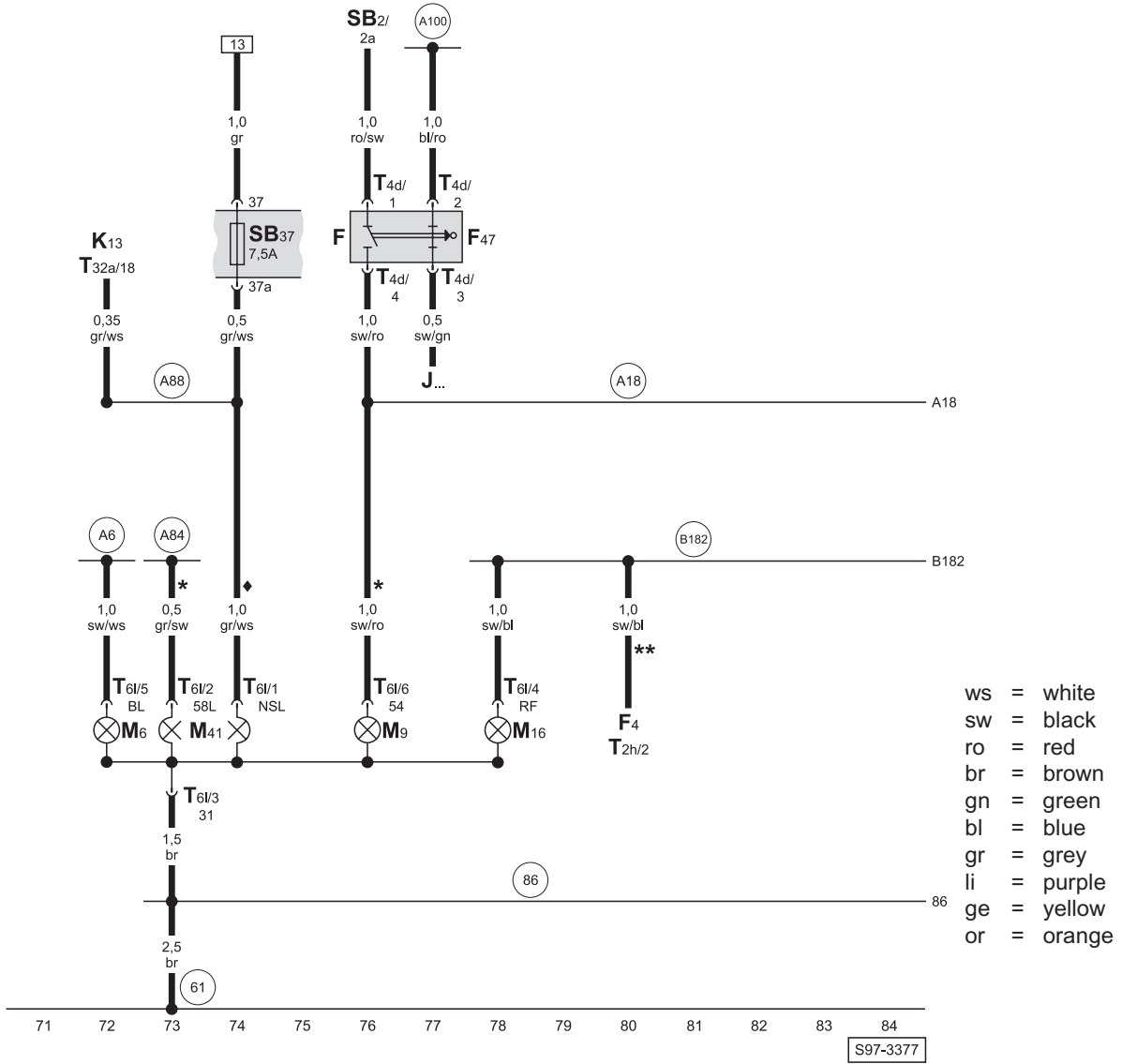
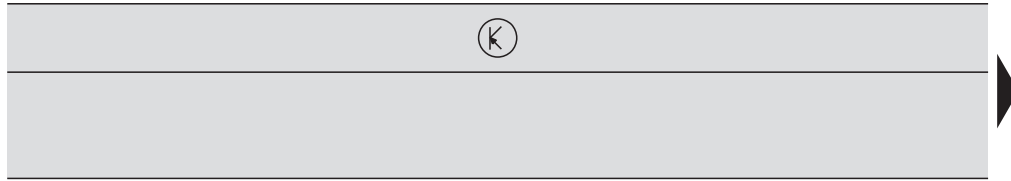
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- E2 - Turn signal switch
- E19 - Parking light switch
- E229 - Button for hazard warning lights
- K6 - Hazard warning light system warning lamp
- L76 - Warning light switch illumination bulb
- M18 - Side turn signal bulb, left
- M19 - Side turn signal bulb, right
- SB44 - Fuse, in fuse holder
- T2b - 2-pin connector, at left side turn signal light
- T2c - 2-pin connector, at right side turn signal light
- T6c - 6-pin connector, at electrical system control unit (black)
- T6e - 6-pin connector, at hazard warning light pushbutton
- T11a - 11-pin connector, at left of bulkhead (white)
- T12b - 12-pin connector, at turn signal light switch
- T16a - 16-pin connector, at electrical system control unit (black)

- 81 - Earth connection, in wiring harness behind dash panel
- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- 332 - Earth connection, in wiring harness behind dash panel
- A5 - Positive connection (right turn signal light), in wiring loom behind dash panel
- A6 - Positive connection (left turn signal light), in wiring loom behind dash panel
- D57 - Connection (right turn signal light), in right engine compartment wiring loom
- D58 - Connection (left turn signal light), in left engine compartment wiring loom

S97-2719

Brake light switch, left tail light, fuse holder

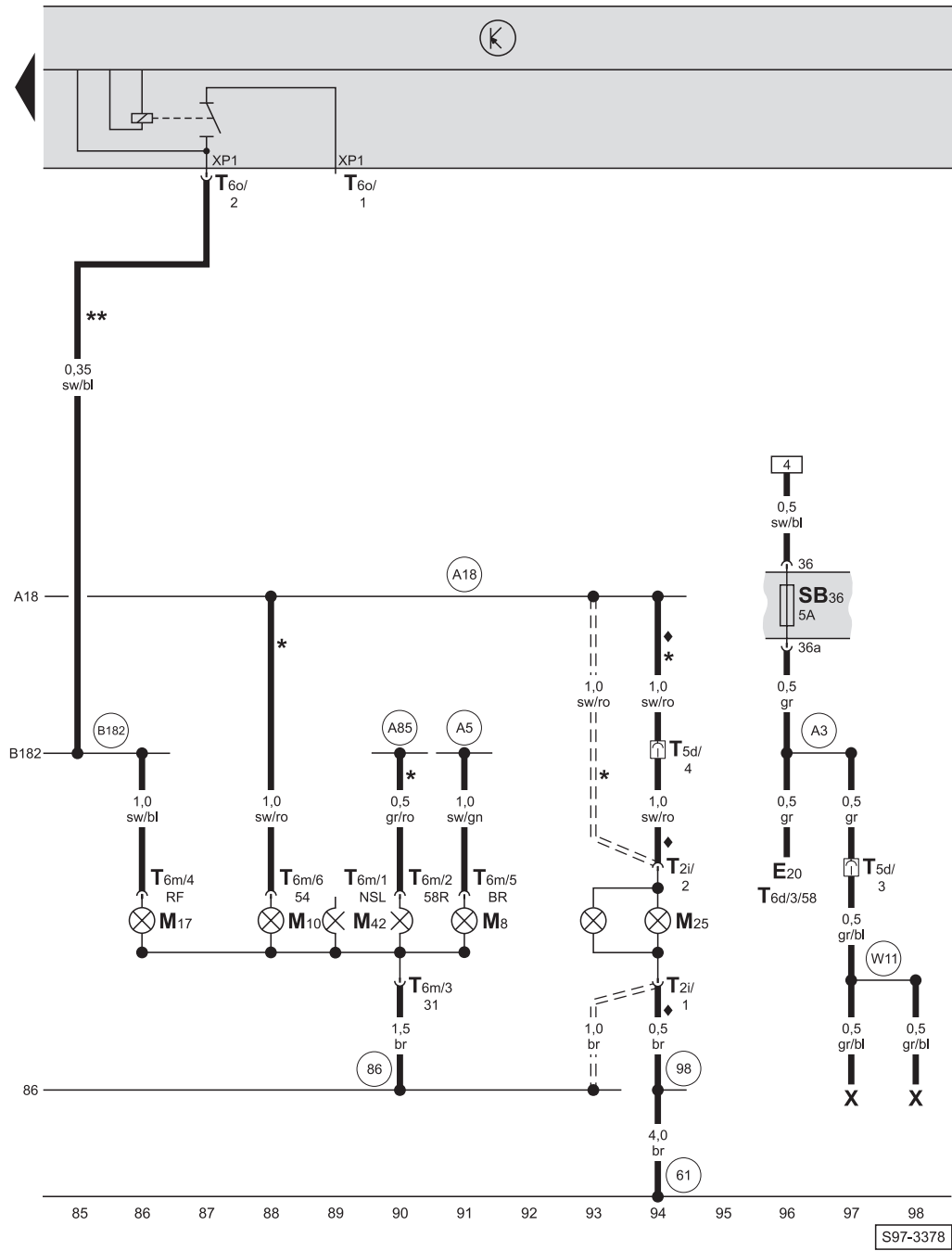


- F - Brake light switch
- F4 - Reversing light switch
- F47 - Brake pedal switch
- J... - Engine control units
- K13 - Rear fog light warning lamp
- M6 - Turn signal bulb, rear left
- M9 - Brake light bulb, left
- M16 - Reversing light bulb left
- M41 - Left tail light and rear fog light bulb
- T2h - 2-pin connector, at reversing light switch
- T4d - 4-pin connector, at brake pedal switch
- T6l - 6-pin connector, at left tail light
- T32a - 32-pin connector, at dash panel insert

- (61) - Earth point, C-pillar left
- (86) - Earth connection -1-, in rear interior wiring loom
- (A6) - Positive connection (left turn signal light), in wiring loom behind dash panel
- (A18) - Connection (54), in wiring loom behind dash panel
- (A84) - Connection (58L), in wiring loom behind dash panel
- (A88) - Connection (NSL), in wiring loom behind dash panel
- (A100) - Connection (87a), in wiring loom behind dash panel
- (B182) - Connection (RF), in interior wiring loom

- * - Does not apply to models with bulb failure indicator
- ** - Does not apply to models with automatic gearbox
- ◆ - does not apply to models with trailer coupling

Right tail light, centre high-mounted brake light, licence plate light, fuse holder



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

- E20 - Switches and instruments lighting control
- M8 - Turn signal bulb, rear right
- M10 - Brake light bulb, right
- M17 - Reversing light bulb right
- M25 - Centre high-mounted brake light bulb
- M42 - Right tail light and rear fog light bulb
- T2i - 2-pin connector, at centre high-mounted brake light
- T5d - 5-pin connector, at left C pillar (pink)
- T6d - Connector, 6-pin, at switch lighting rheostat
- T6m - 6-pin connector, at right tail light
- T6o - 6-pin connector, at electrical system control unit (black)
- X - Number plate light

- (61) - Earth point, C-pillar left

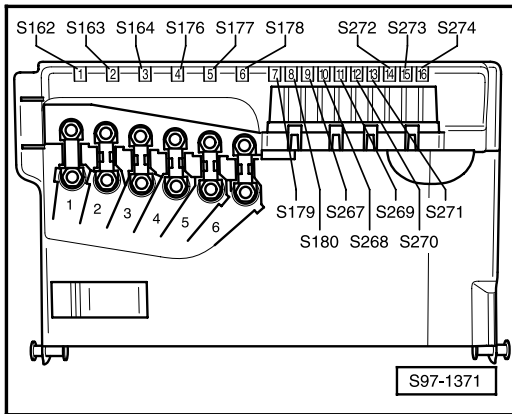
- (86) - Earth connection -1-, in rear interior wiring loom
- (98) - Earth connection, in engine compartment wiring harness
- A3 - Positive connection (58), in wiring loom behind dash panel
- A5 - Positive connection (right turn signal light), in wiring loom behind dash panel
- A18 - Connection (54), in wiring loom behind dash panel
- A85 - Connection (58R), in wiring loom behind dash panel
- B182 - Connection (RF), in interior wiring loom
- W11 - Connection (58), in tailgate wiring loom

- * - Does not apply to models with bulb failure indicator
- ** - Does not apply to models with automatic gearbox
- ◆ - does not apply to Notchback models
- === - applies only to Saloon models

S97-3378

Windscreen wiper motor for 1.4-ltr./50 kW fitted with cruise control system not fitted with ABS, as of December 2001

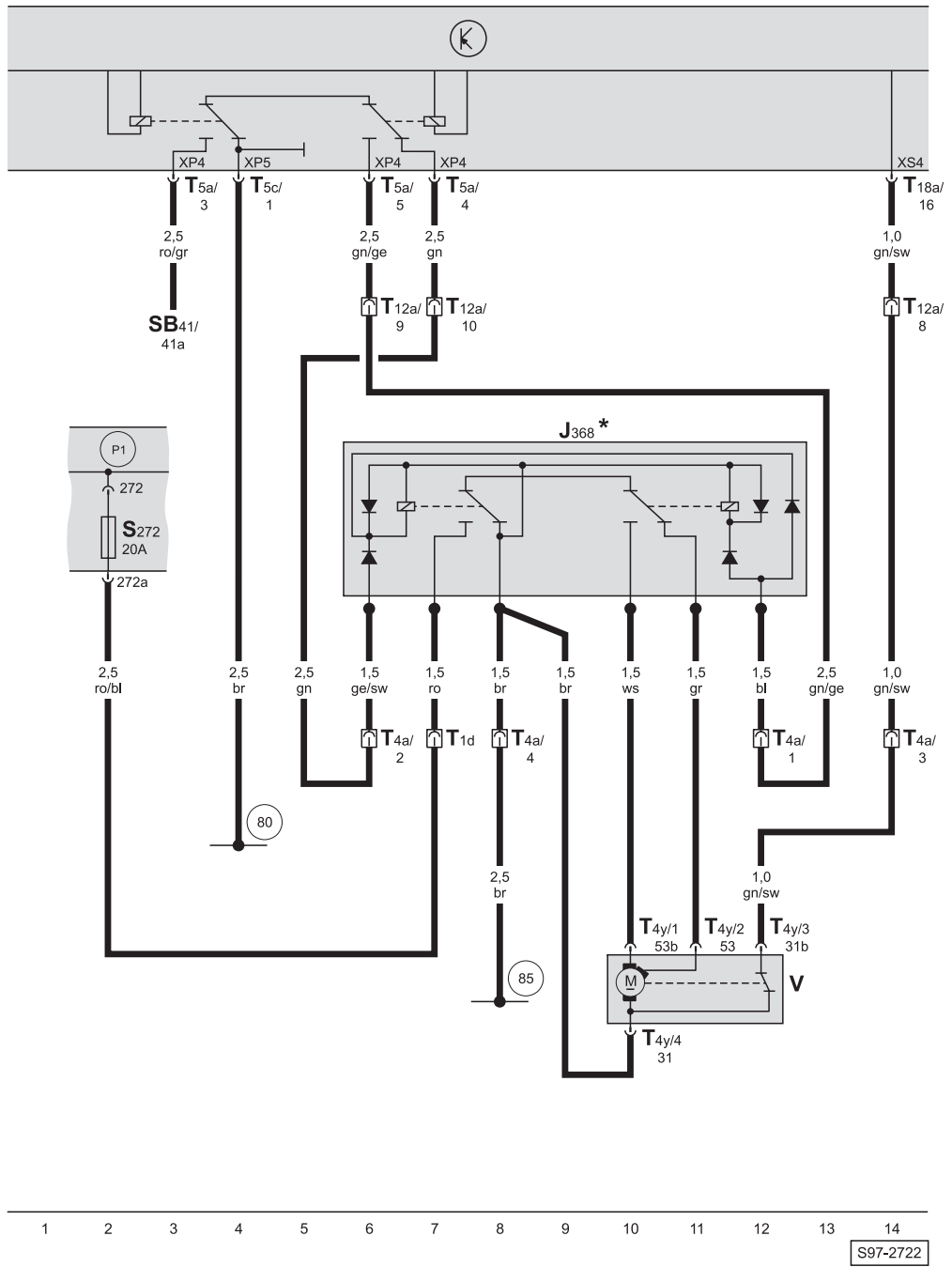
Fuse holder on battery:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

Windscreen wiper motor, windscreen wiper motor changeover relay, fuse holder on battery



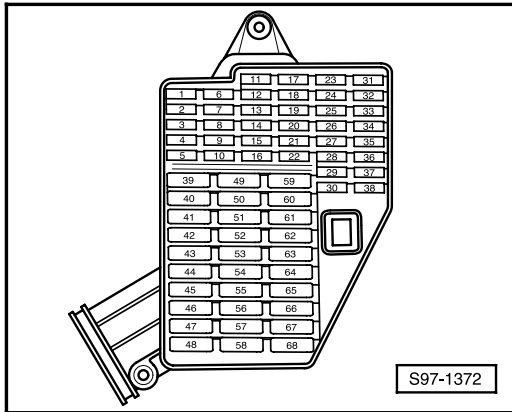
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- J368 - Windscreen wiper motor changeover relay
- S272 - Fuse -14- (30), in fuse holder on battery
- SB41 - Fuse, in fuse holder
- T1d - Connector, 1-pin, at windscreen wiper motor changeover relay
- T4a - Connector, 4-pin, at windscreen wiper motor changeover relay
- T4y - Connector, 4-pin, at windscreen wiper motor
- T5a - 5-pin connector, at electrical system control unit (black)
- T5c - 5-pin connector, at electrical system control unit (brown)
- T12a - 12-pin connector, at left of bulkhead (white)
- T18a - 18-pin connector, at electrical system control unit (brown)
- V - Windscreen wiper motor

- 80 - Earth connection, in wiring harness behind dash panel
- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- P1 - Positive connection (30), in fuse holder on battery
- * - close to windscreen wiper motor

Headlight range control for Classic models, from January 2002

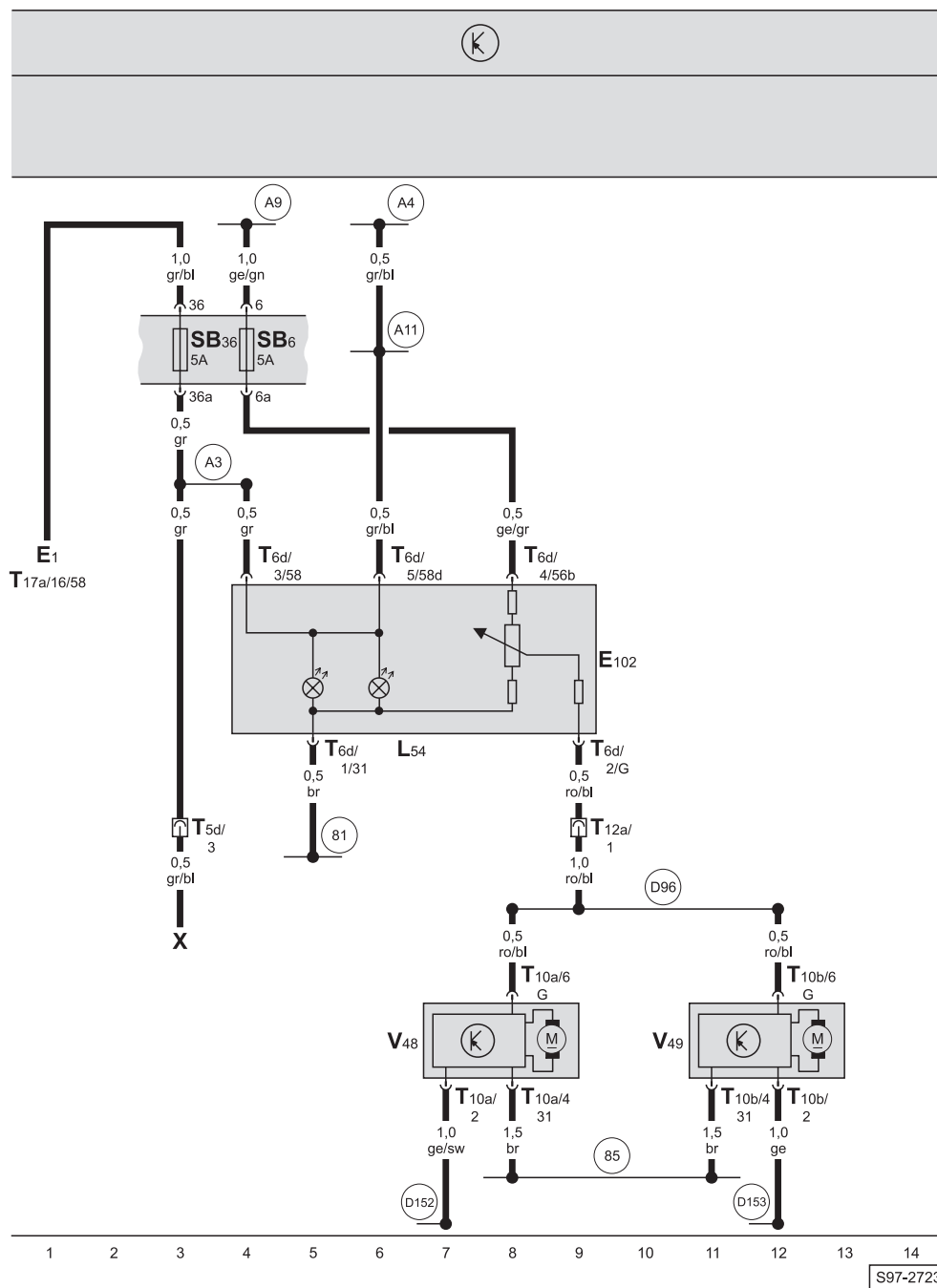
Fuse holder:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

Headlight beam control adjuster, headlight beam control, fuse holder (does not apply to models fitted with gas discharge bulbs)



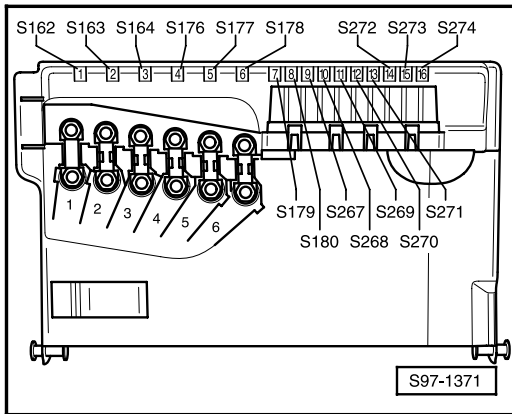
- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- E1 - Light switch
- E102 - Headlight range control adjuster
- L54 - Headlight range control regulator illumination
- T5d - 5-pin connector, at left C pillar (pink)
- T6d - 6-pin connector, at lighting control and headlight range control adjuster
- T10a - 10-pin connector, at left headlight
- T10b - 10-pin connector, at right headlight
- T12a - 12-pin connector, at left of bulkhead (white)
- T17a - 17-pin connector, at light switch
- V48 - Headlight range control motor, left
- V49 - Headlight range control motor, right
- X - Number plate light

- 81 - Earth connection, in wiring harness behind dash panel
- 85 - Earth connection -1-, in wiring loom in left of engine compartment
- A3 - Positive connection (58), in wiring loom behind dash panel
- A4 - Positive connection (58b), in wiring loom behind dash panel
- A9 - Connection (56b), in wiring loom behind dash panel
- A11 - Positive connection (58b), in wiring loom behind dash panel
- D96 - Connection (headlight range control), in engine compartment wiring loom
- D152 - Positive connection (56bL), in left engine compartment wiring loom
- D153 - Positive connection (56bR), in right engine compartment wiring loom

Power assisted steering (KOYO), as of February 2002

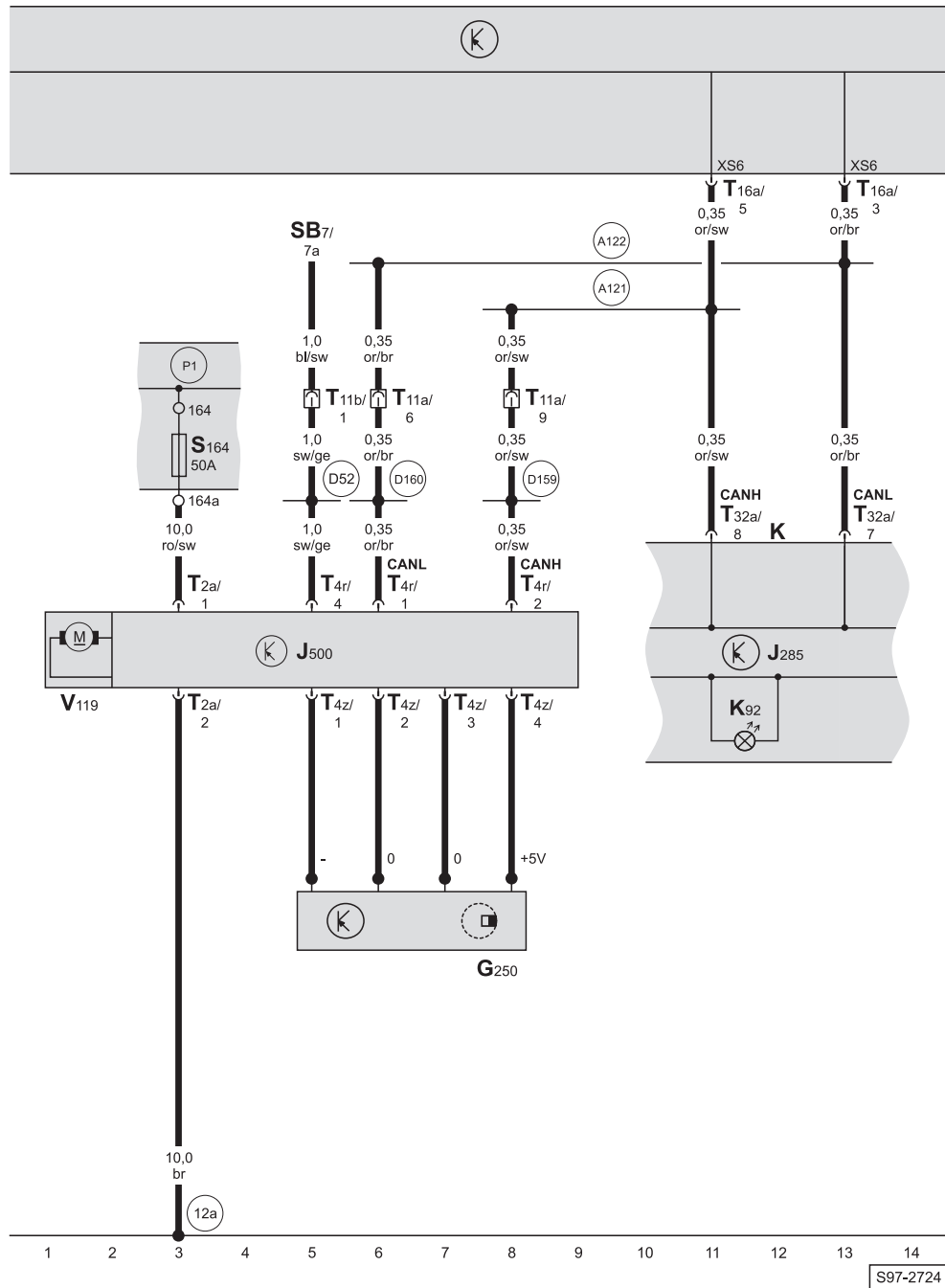
Fuse holder on battery:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

Power-assisted steering



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

- G250 - Power-assisted steering sender
- J285 - Control unit in dash panel insert
- J500 - Power-assisted steering control unit
- K - Dash panel insert
- K92 - Servotronic warning lamp
- S164 - Fuse -3- (30), in fuse holder on battery
- SB7 - Fuse, in fuse holder
- T2a - Plug connection, 2-pin, at power-assisted steering control unit
- T4r - Plug connection, 4-pin, at power-assisted steering control unit
- T4z - Connector, 4-pin, at power-assisted steering control unit
- T11a - 11-pin connector, at left of bulkhead (white)
- T11b - 11-pin connector, at left of bulkhead (red)
- T16a - 16-pin connector, at electrical system control unit (black)
- T32a - 32-pin connector, at dash panel insert
- V119 - Power-assisted steering hydraulics pump

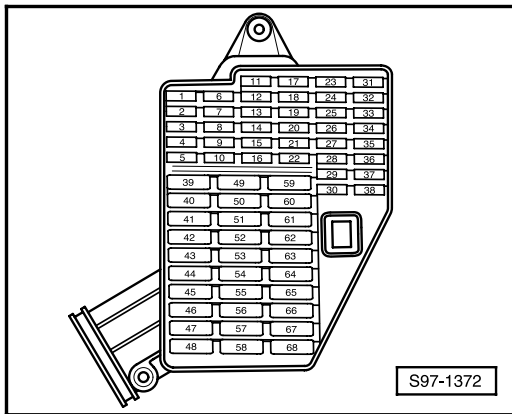
- 12a - Earth point -2-, in engine compartment, on left below battery (at side member)
- A121 - Connection (CAN-H), in wiring loom behind dash panel on
- A122 - Connection (CAN-L), in wiring loom behind dash panel
- D52 - Positive connection (15a), in engine compartment wiring loom
- D159 - Connection (CAN-H), in engine compartment wiring loom
- D160 - Connection (CAN-L), in engine compartment wiring loom
- P1 - Positive connection (30), in fuse holder on battery

S97-2724

1.4-ltr. - 4MV/55 kW, engine code BBY, as of May 2002

1.4-ltr. - 4MV/74 kW, engine code BBZ, as of May 2002

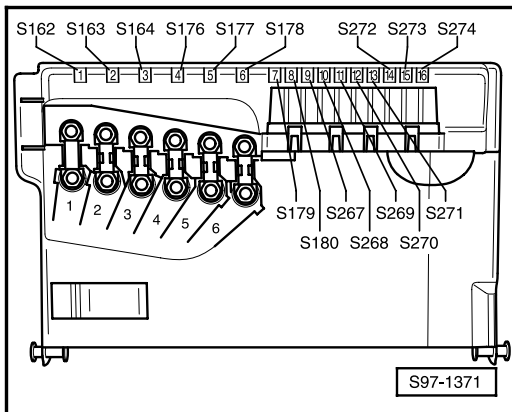
Fuse holder:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

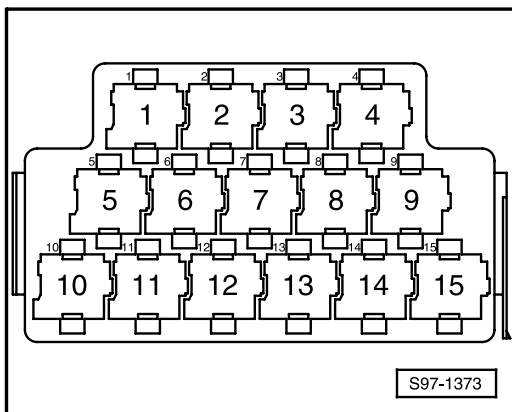
Fuse holder on battery:



Fuse colours

- 30A - green
- 25A - white
- 20A - yellow
- 15A - blue
- 10A - red
- 7.5A - brown
- 5A - beige

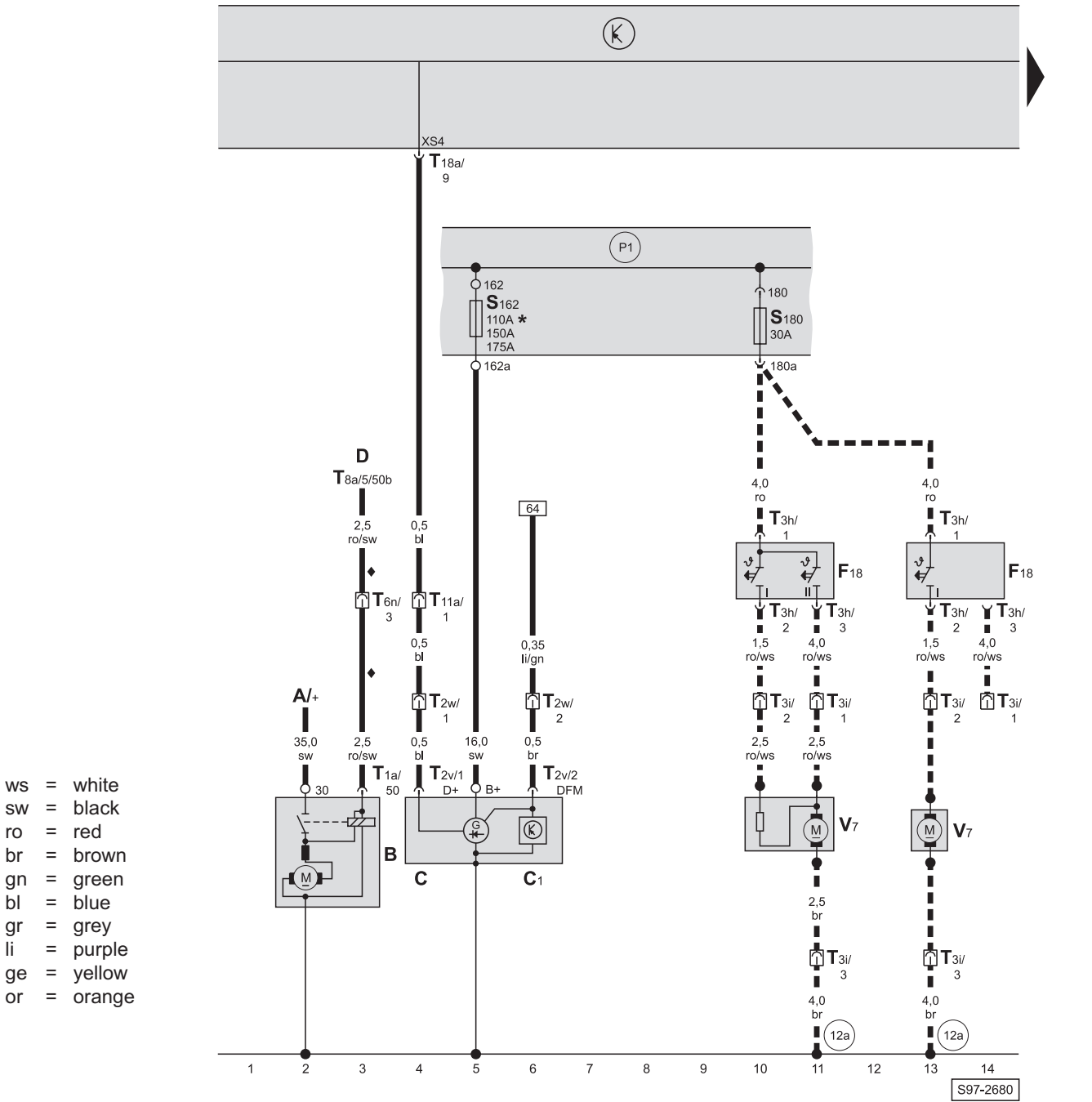
Relay holder:



Relay position assignment

- 4** - Fuel pump relay
- 9** - Fuel feed relay

Starter, alternator, radiator fan, fuse holder on battery

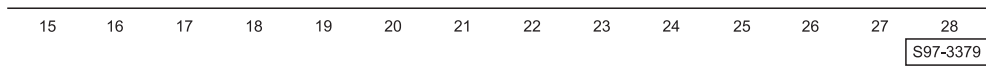
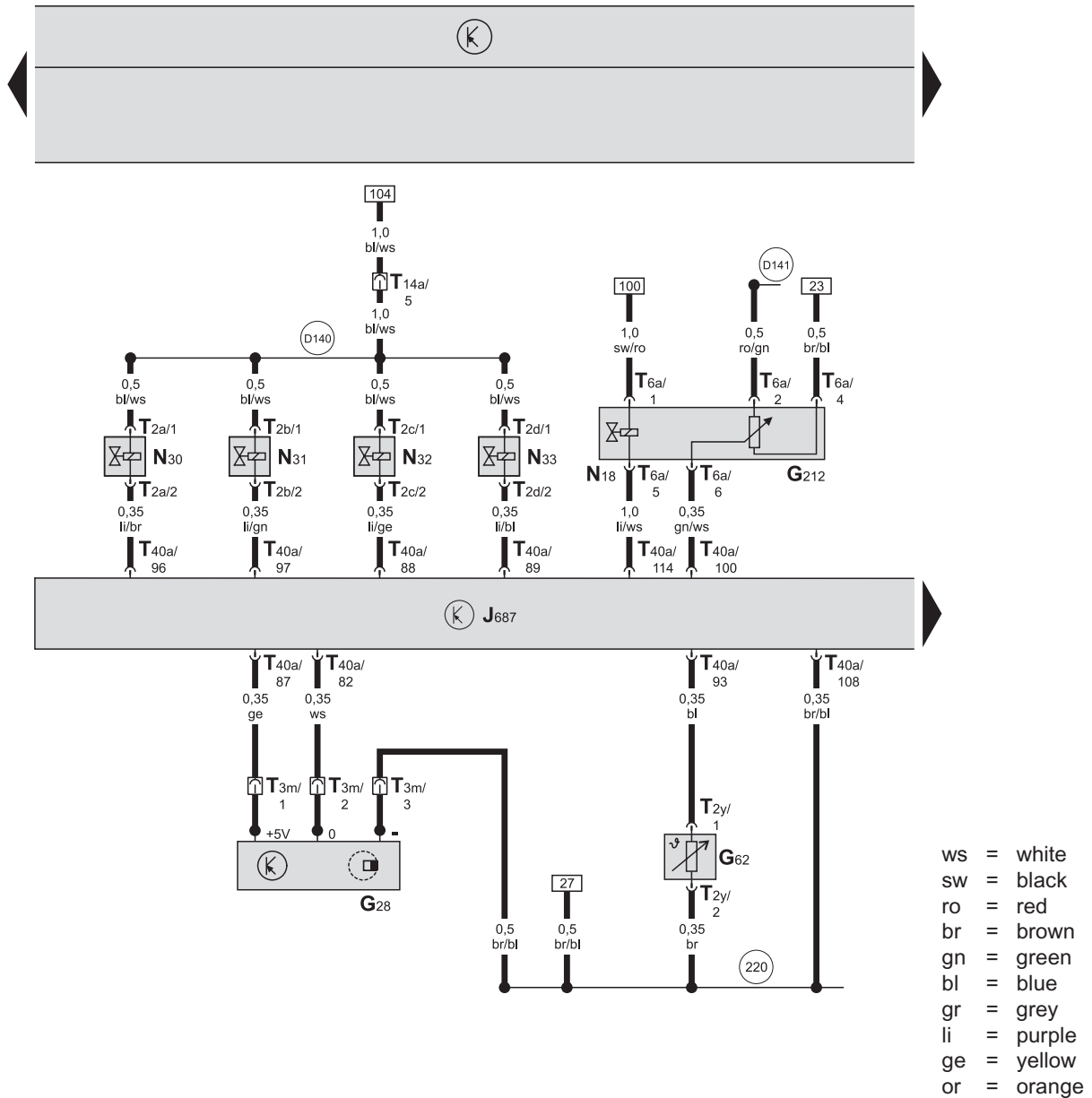


- A - Battery
- B - Starter
- C - Alternator
- C1 - Voltage regulator
- D - Ignition/starter switch
- F18 - Radiator fan thermostwitch
- S162 - Fuse -1- (30), in fuse holder on battery
- S180 - Fuse -8- (30), in fuse holder on battery
- T1a - 1-pin connector, at starter
- T2v - 2-pin connector, at alternator
- T2w - 2-pin connector, in bracket at gearbox
- T3h - 3-pin connector, at radiator fan thermostwitch
- T3i - 3-pin connector, in bracket on left of radiator
- T6n - 6-pin connector, at left of bulkhead (blue)
- T8a - 8-pin connector, at ignition/starter switch
- T11a - 11-pin connector, at left of bulkhead (white)
- T18a - 18-pin connector, at electrical system control unit (brown)
- V7 - Radiator fan

- 12a - Earth point -2-, in engine compartment, on left below battery (at side member)
- P1 - Positive connection (30), in fuse holder on battery
- * - Varies according to optional equipment
- ♦ - Does not apply to models with automatic gearbox
- - Thermoswitch and radiator fan vary according to optional equipment (does not apply to models with air conditioning)

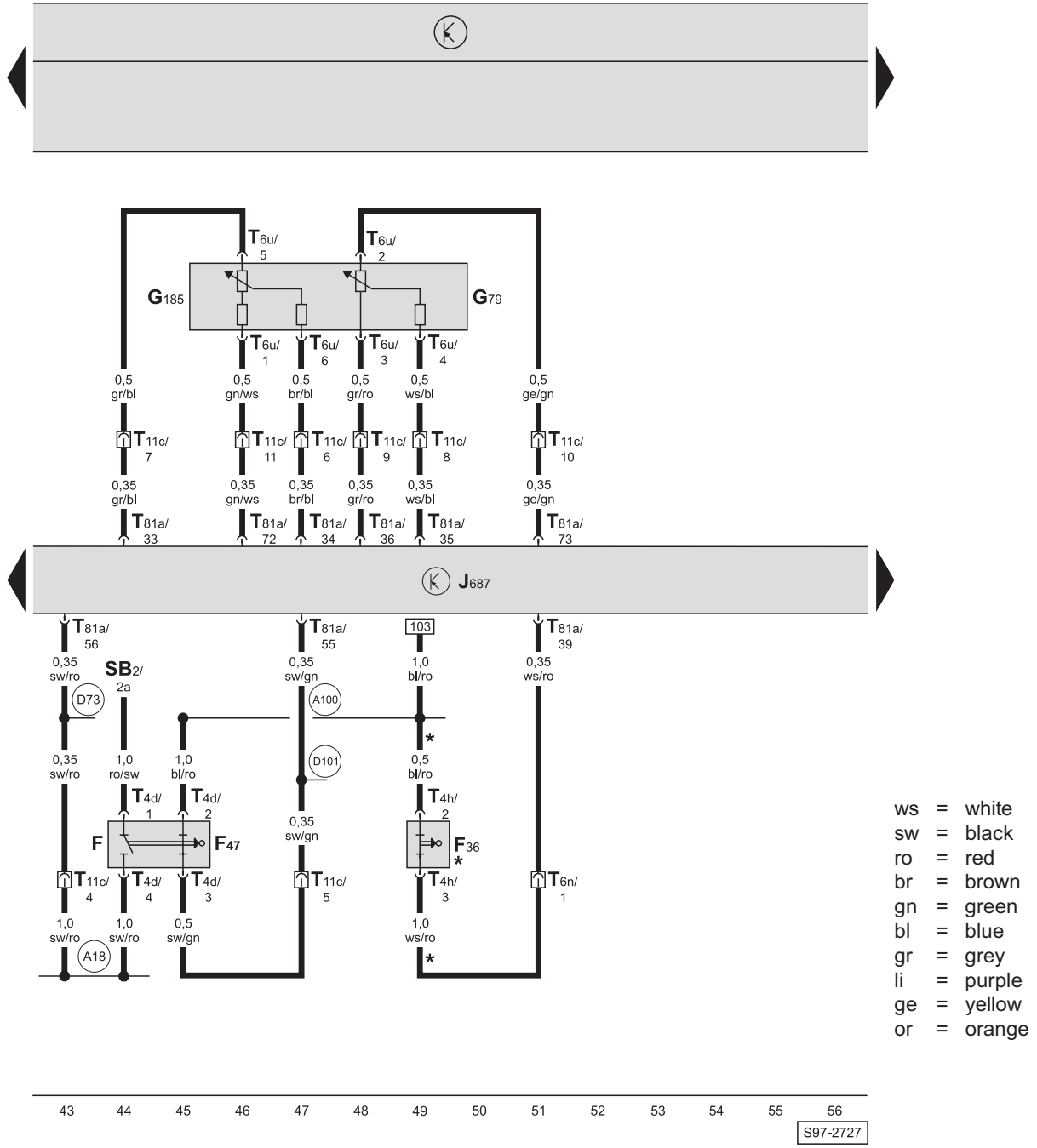
S97-2680

4MV control unit, injectors, engine speed sender, coolant temperature sender, exhaust gas recirculation valve, exhaust gas valve recirculation potentiometer



- G28 - Engine speed sender
- G62 - Coolant temperature sender
- G212 - Exhaust gas recirculation potentiometer
- J687 - 4MV control unit
- N18 - EGR valve
- N30 - Injector cylinder 1
- N31 - Injector cylinder 2
- N32 - Injector cylinder 3
- N33 - Injector cylinder 4
- T2a - 2-pin connector, at injector cylinder 1
- T2b - 2-pin connector, at injector cylinder 2
- T2c - 2-pin connector, at injector cylinder 3
- T2d - 2-pin connector, at injector cylinder 4
- T2y - 2-pin connector, at coolant temperature sender
- T3m - 3-pin connector, at engine speed sender
- T6a - Connector, 6-pin, at EGR valve
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)
- T40a - 40-pin connector, at engine control unit
- (220) - Earth connection (sender earth), in engine pre-wiring wiring harness
- (D140) - Connection (injectors), in engine assembly wiring loom
- (D141) - Connection (5V), in engine assembly wiring loom

4MV control unit, accelerator pedal position sender, brake pedal switch, clutch pedal switch

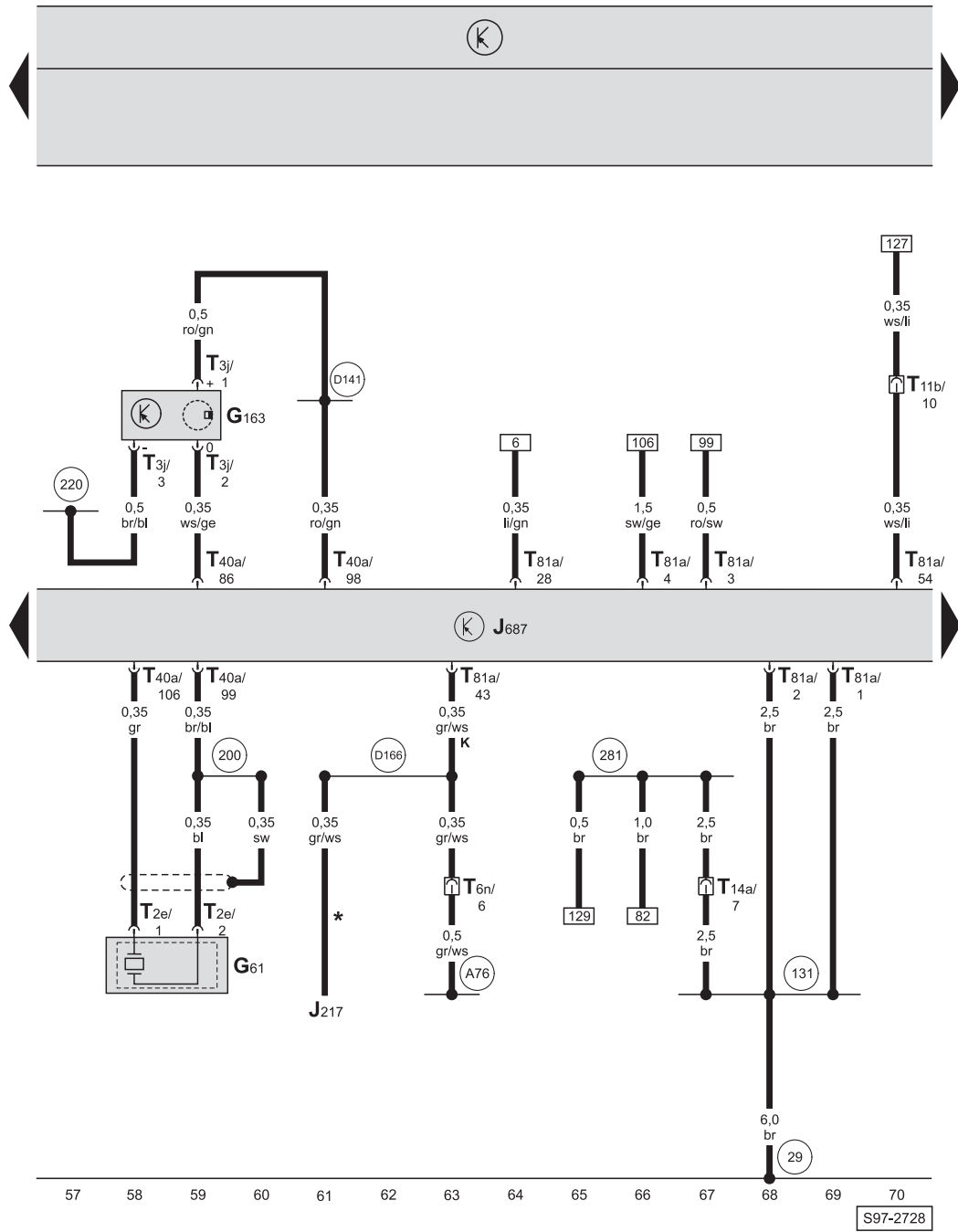


- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- F - Brake light switch
- F36 - Clutch pedal switch
- F47 - Brake pedal switch
- G79 - Accelerator position sender
- G185 - Accelerator pedal position sender -2-
- J687 - 4MV control unit
- SB2 - Fuse, in fuse holder
- T4d - 4-pin connector, at brake pedal switch
- T4h - 4-pin connector, at clutch pedal switch
- T6n - 6-pin connector, at left of bulkhead (blue)
- T6u - 6-pin connector, at accelerator pedal position sender
- T11c - 11-pin connector, at left of bulkhead (blue)
- T81a - 81-pin connector, at engine control unit

- (A18) - Connection (54), in wiring loom behind dash panel
- (A100) - Connection (87a), in wiring loom behind dash panel
- (D73) - Connection (54), in left of engine compartment wiring loom
- (D101) - Connection (brake pedal switch), in engine compartment wiring loom
- * - Does not apply to models with automatic gearbox

4MV control unit, knock sensor I, camshaft position sender

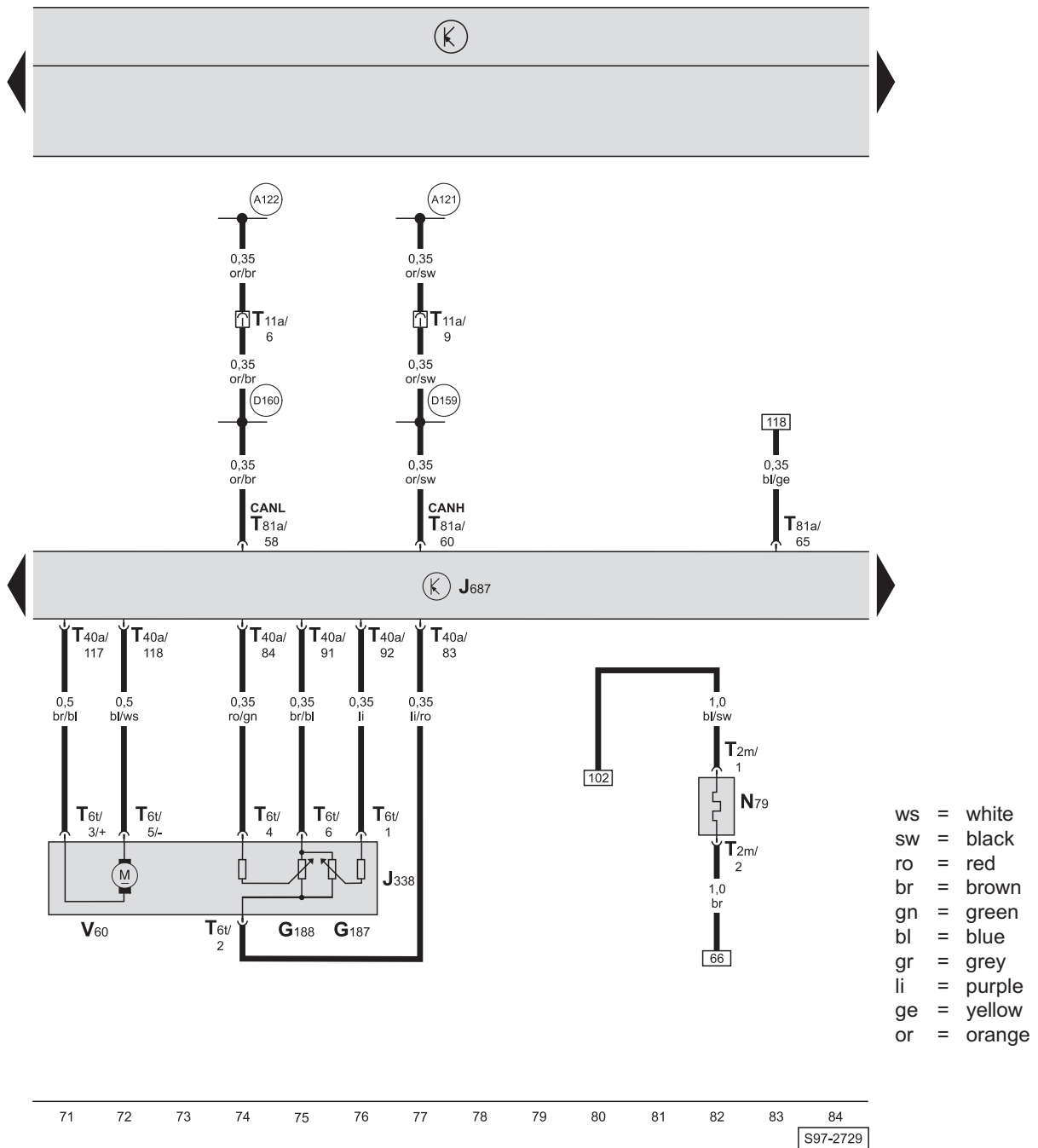


- G61 - Knock sensor I
- G163 - Camshaft position sender
- J217 - Automatic gearbox control unit
- J687 - 4MV control unit
- T2e - 2-pin connector, at knock sensor I
- T3j - 3-pin connector, at camshaft position sender
- T6n - 6-pin connector, at left of bulkhead (blue)
- T11b - 11-pin connector, at left of bulkhead (red)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)
- T40a - 40-pin connector, at engine control unit
- T81a - 81-pin connector, at engine control unit

- 29 - Earth point, in left of engine compartment, behind battery (at suspension strut mounting)
- 131 - Earth connection -2-, in engine compartment wiring harness
- 200 - Earth connection (screening), in engine pre-wiring wiring harness
- 220 - Earth connection (sender earth), in engine pre-wiring wiring harness
- 281 - Earth connection -1-, in engine pre-assembly wiring loom
- A76 - Connection (K diagnosis wire), in wiring loom behind dash panel on left
- D141 - Connection (5V), in engine assembly wiring loom
- D166 - Connection (K diagnosis wire), in engine compartment wiring loom

* - Applies only to models with automatic gearbox

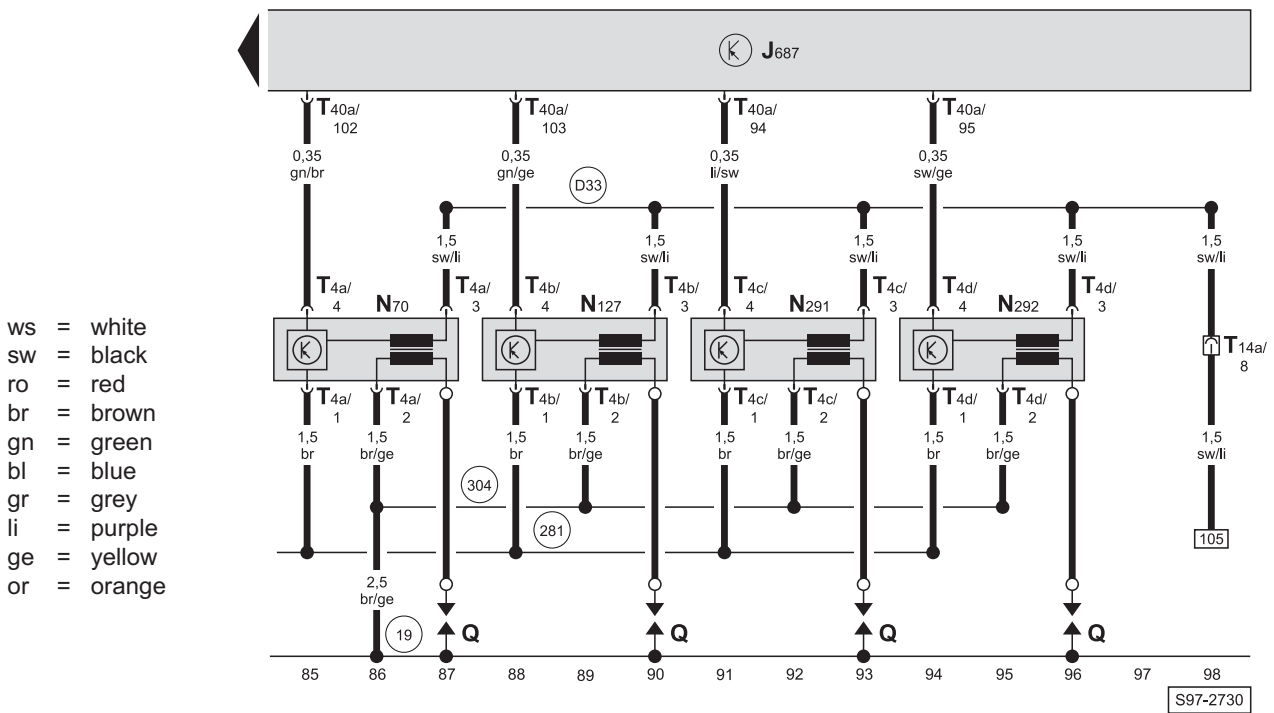
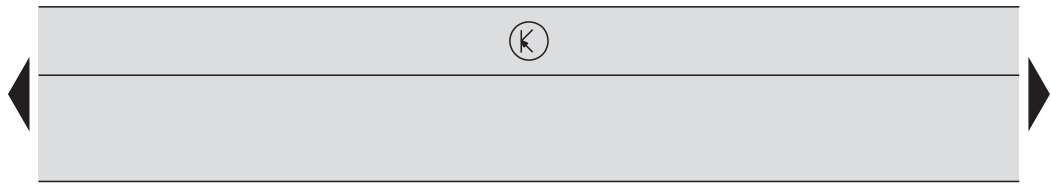
4MV control unit, throttle valve control unit



- G187 - Angle sender -1- for throttle valve drive (electric throttle operation)
- G188 - Angle sender -2- for throttle valve drive (electric throttle operation)
- J338 - Throttle valve control unit
- J687 - 4MV control unit
- N79 - Crankcase breather heater element
- T2m - 2-pin connector, at crankcase breather heater element
- T6t - 6-pin connector, at throttle valve control unit
- T11a - 11-pin connector, at left of bulkhead (white)
- T40a - 40-pin connector, at engine control unit
- T81a - 81-pin connector, at engine control unit
- V60 - Throttle valve positioner

- (A121) - Connection (CAN-H), in wiring loom behind dash panel on
- (A122) - Connection (CAN-L), in wiring loom behind dash panel
- (D159) - Connection (CAN-H), in engine compartment wiring loom
- (D160) - Connection (CAN-L), in engine compartment wiring loom

4MV control unit, ignition system

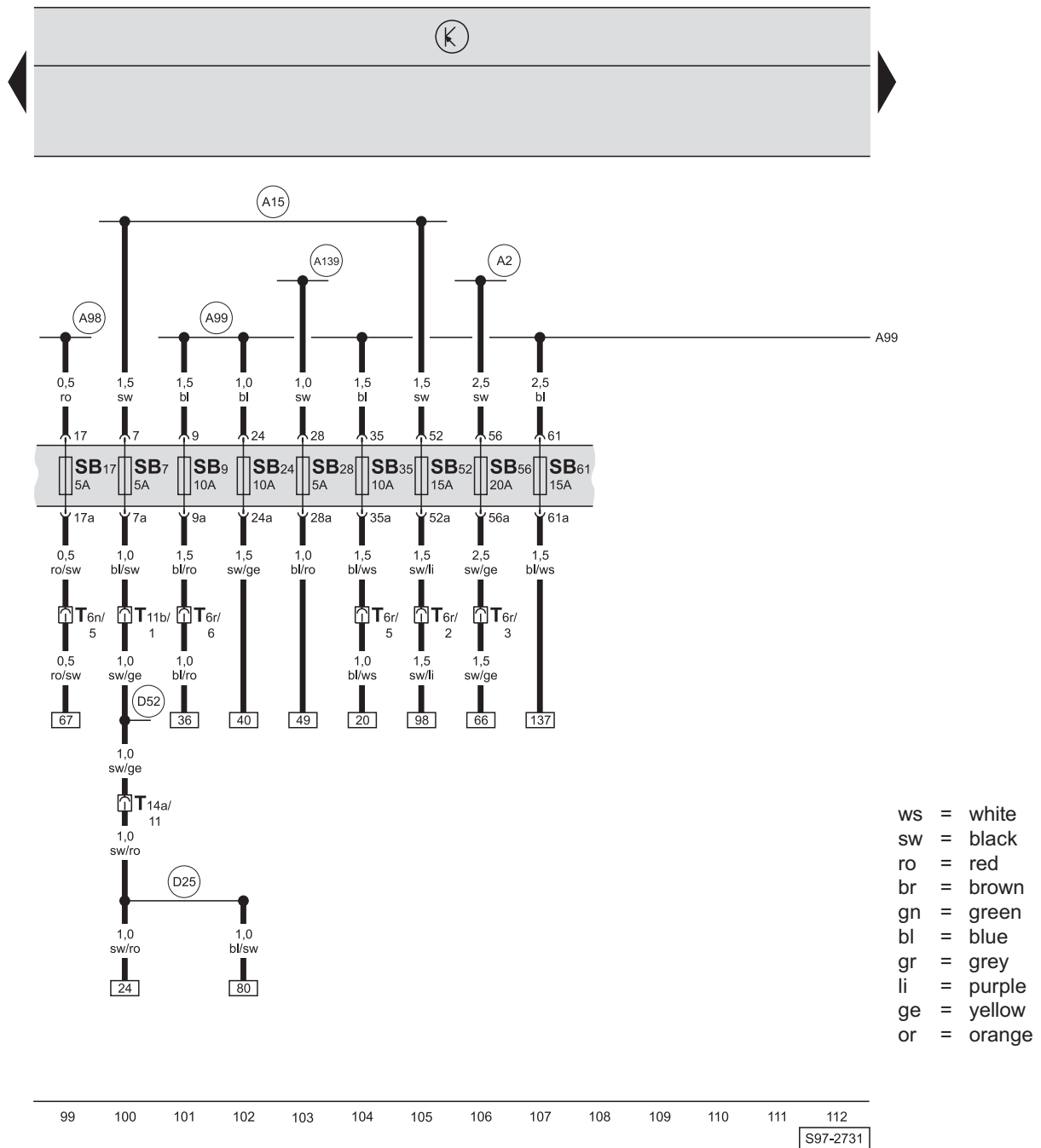


- ws = white
- sw = black
- ro = red
- br = brown
- gn = green
- bl = blue
- gr = grey
- li = purple
- ge = yellow
- or = orange

- J687 - 4MV control unit
- 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
- Q - Spark plugs
- T4a - Connector, 4-pin, at ignition coil 1
- T4b - Connector, 4-pin, at ignition coil 2
- T4c - Connector, 4-pin, at ignition coil 3
- T4d - Connector, 4-pin, at ignition coil 4
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)
- T40a - 40-pin connector, at engine control unit

- (19) - Earth point, near coil
- (281) - Earth connection -1-, in engine pre-assembly wiring loom
- (304) - Earth connection (ignition coils), in engine pre-assembly wiring loom
- (D33) - Connection -2- (15a), in engine pre-assembly wiring loom

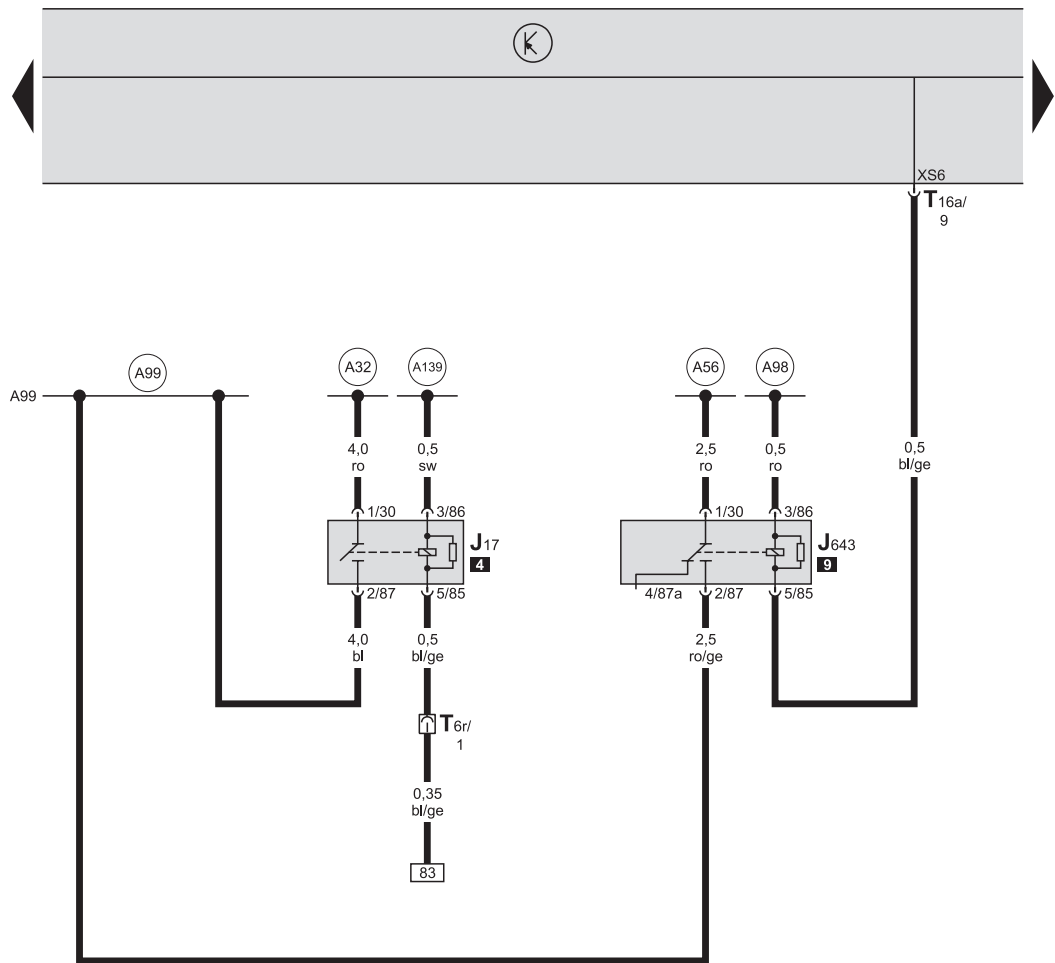
Fuse holder



- T6n - 6-pin connector, at left of bulkhead (blue)
- T6r - 6-pin connector, at left of bulkhead (brown)
- T11b - 11-pin connector, at left of bulkhead (red)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/ engine compartment wiring loom)

- (A2) - Positive connection (15), in wiring loom behind dash panel
- (A15) - Positive connection (15), in wiring loom behind dash panel
- (A98) - Positive connection (30a), in wiring loom behind dash panel (applies only to models with telephone system)
- (A99) - Connection (87), in wiring loom behind dash panel
- (A139) - Positive connection (15), in wiring loom behind dash panel
- (D25) - Connection (15a), in engine pre-assembly wiring loom
- (D52) - Positive connection (15a), in engine compartment wiring loom

Fuel pump relay, fuel feed relay



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

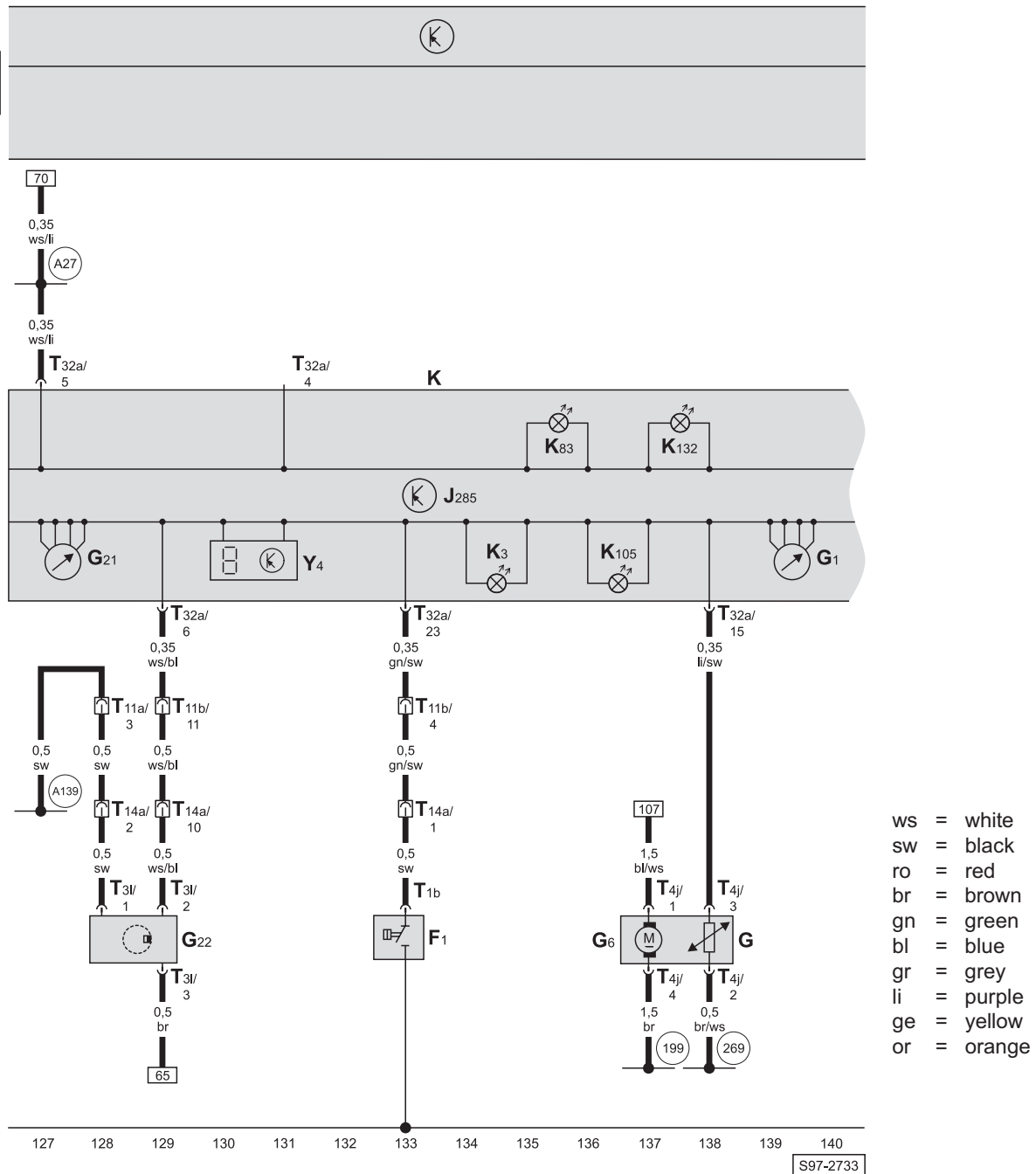
113 114 115 116 117 118 119 120 121 122 123 124 125 126

S97-2732

- J17 - Fuel pump relay
- J643 - Fuel feed relay
- T6r - 6-pin connector, at left of bulkhead (brown)
- T16a - 16-pin connector, at electrical system control unit (black)

- A32 - Positive connection (30a), in wiring loom behind dash panel on left
- A56 - Positive connection (30a), in wiring loom behind dash panel
- A98 - Positive connection (30a), in wiring loom behind dash panel (applies only to models with telephone system)
- A99 - Connection (87), in wiring loom behind dash panel
- A139 - Positive connection (15), in wiring loom behind dash panel

Dash panel insert, control unit in dash panel insert, warning lights, oil pressure switch, fuel gauge sender, fuel pump, speedometer sender, fuel gauge, speedometer, odometer display



- F1 - Oil pressure switch
- G - Fuel gauge sender
- G1 - Fuel gauge
- G6 - Fuel pump
- G21 - Speedometer
- G22 - Speedometer sender
- J285 - Control unit in dash panel insert
- K - Dash panel insert
- K3 - Oil pressure warning lamp
- K83 - Exhaust gas warning lamp
- K105 - Reserve fuel warning lamp
- K132 - Electric throttle control fault lamp
- T1b - 1-pin connector, at oil pressure switch
- T3l - 3-pin connector, at speedometer sender
- T4j - 4-pin connector, at fuel pump
- T11a - 11-pin connector, at left of bulkhead (white)
- T11b - 11-pin connector, at left of bulkhead (red)
- T14a - Connector, 14-pin, in left of engine compartment (connection of the engine pre-assembly wiring loom/engine compartment wiring loom)
- T32a - 32-pin connector, at dash panel insert

- Y4 - Odometer display
- (199) - Earth connection, in wiring harness behind dash panel
- (269) - Earth connection (sender earth) -1-, in wiring harness behind dash panel
- (A27) - Connection (vehicle speed signal), in wiring loom behind dash panel
- (A139) - Positive connection (15), in wiring loom behind dash panel

Battery discharges by itself

Test requirements:

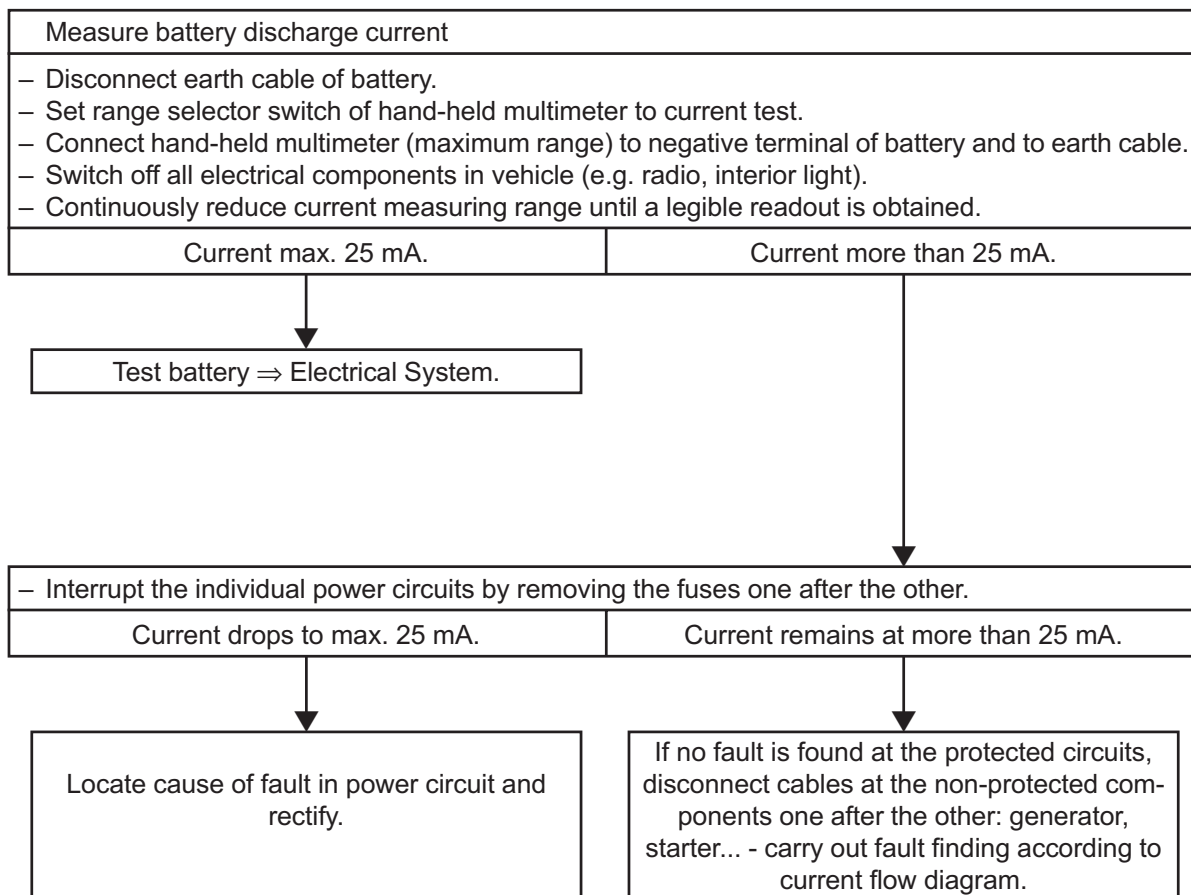
- ◆ Battery o.k.
- ◆ Interior light and all systems are switched off

Possible causes of the fault are:

- ◆ Contacts corroded and dirty
- ◆ Cables chafed through
- ◆ Internal short in components

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



End of fault finding programme

Starter does not rotate

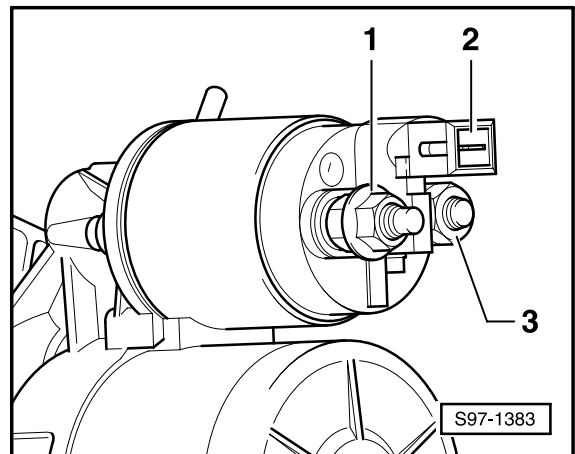
Test requirements:

- ◆ Battery o.k.
- ◆ Cable connections at solenoid switch and earth cable between battery and body and also between body and gearbox must be tight and must not be oxidised

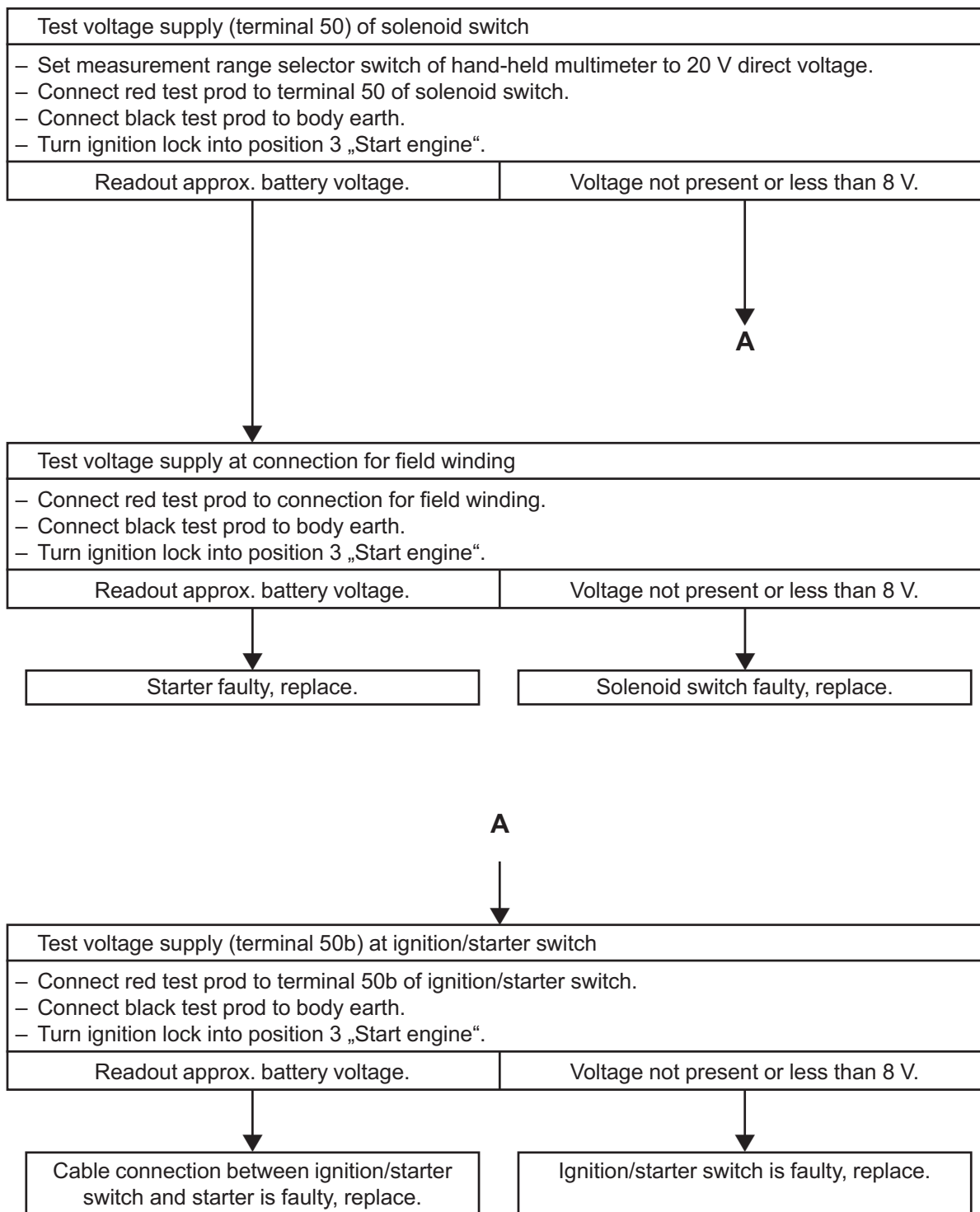
The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram

- 1 – Terminal 30, from battery
- 2 – Terminal 50, from ignition/starter switch
- 3 – Connection for field winding



Continued on next page!



End of fault finding programme

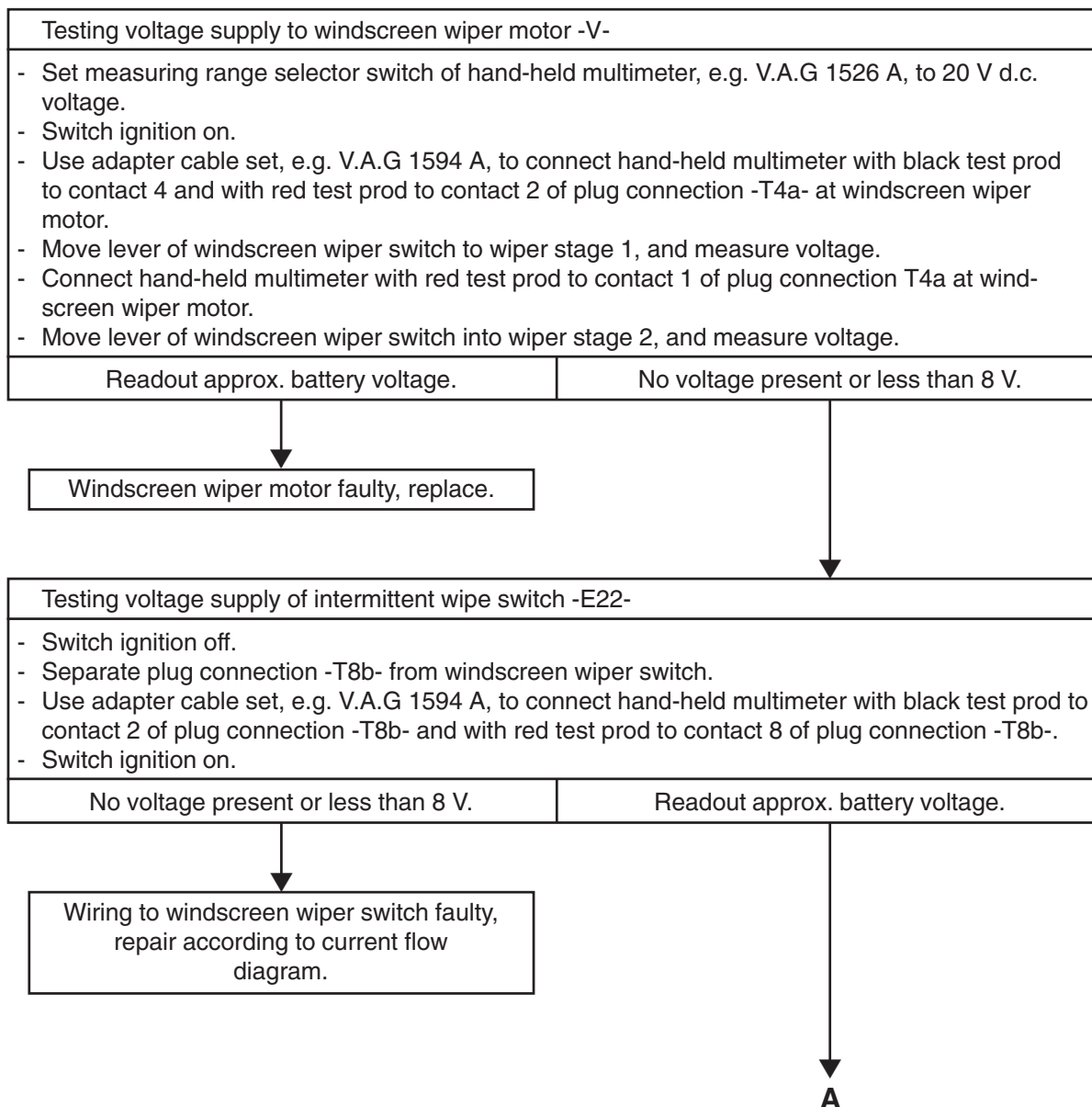
Windscreen wiper system faulty

Test requirements:

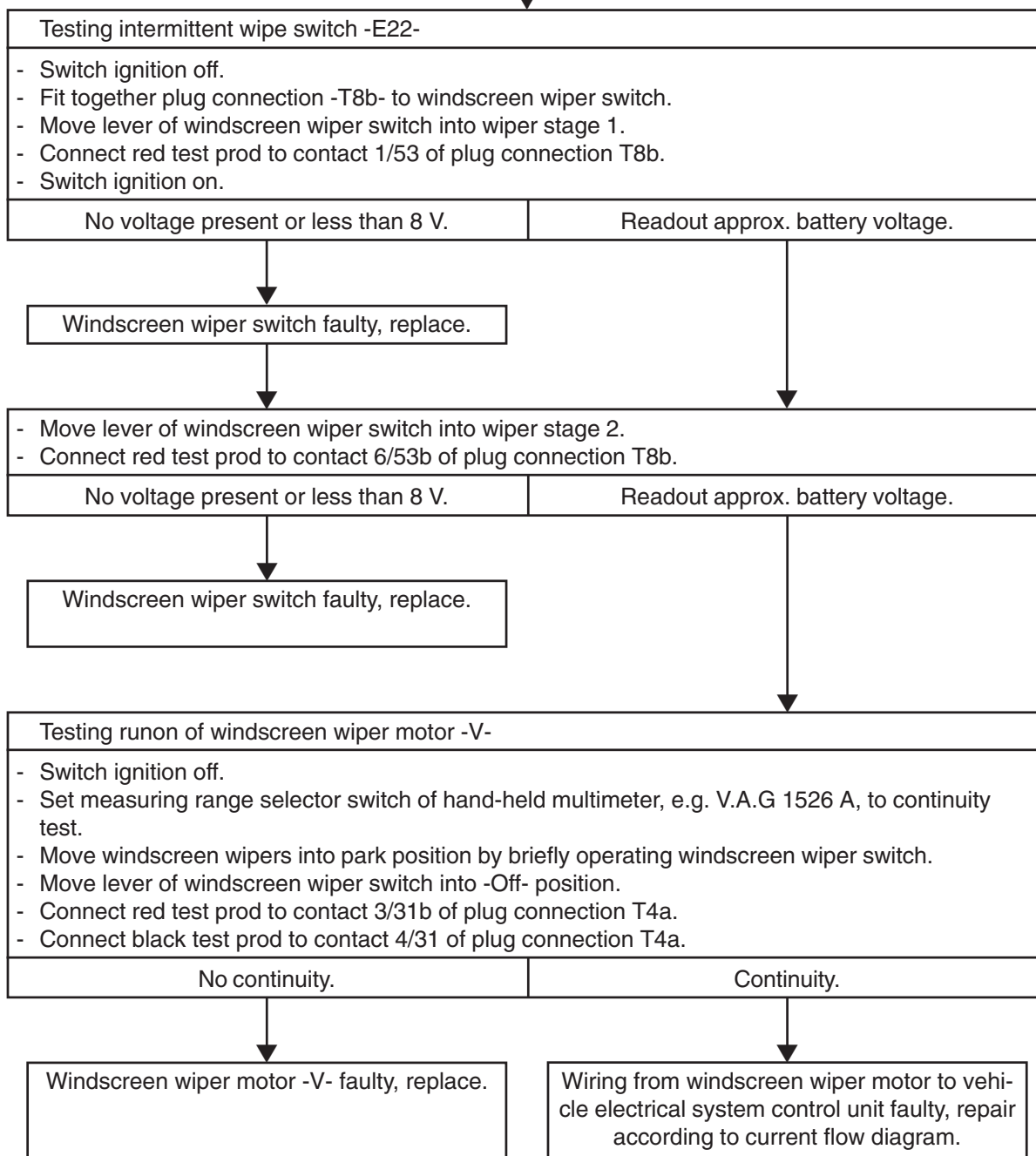
- ◆ Fuse SB 15 (5 A) and SB 41 (20 A) o.k.
- ◆ Battery voltage o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



A



END

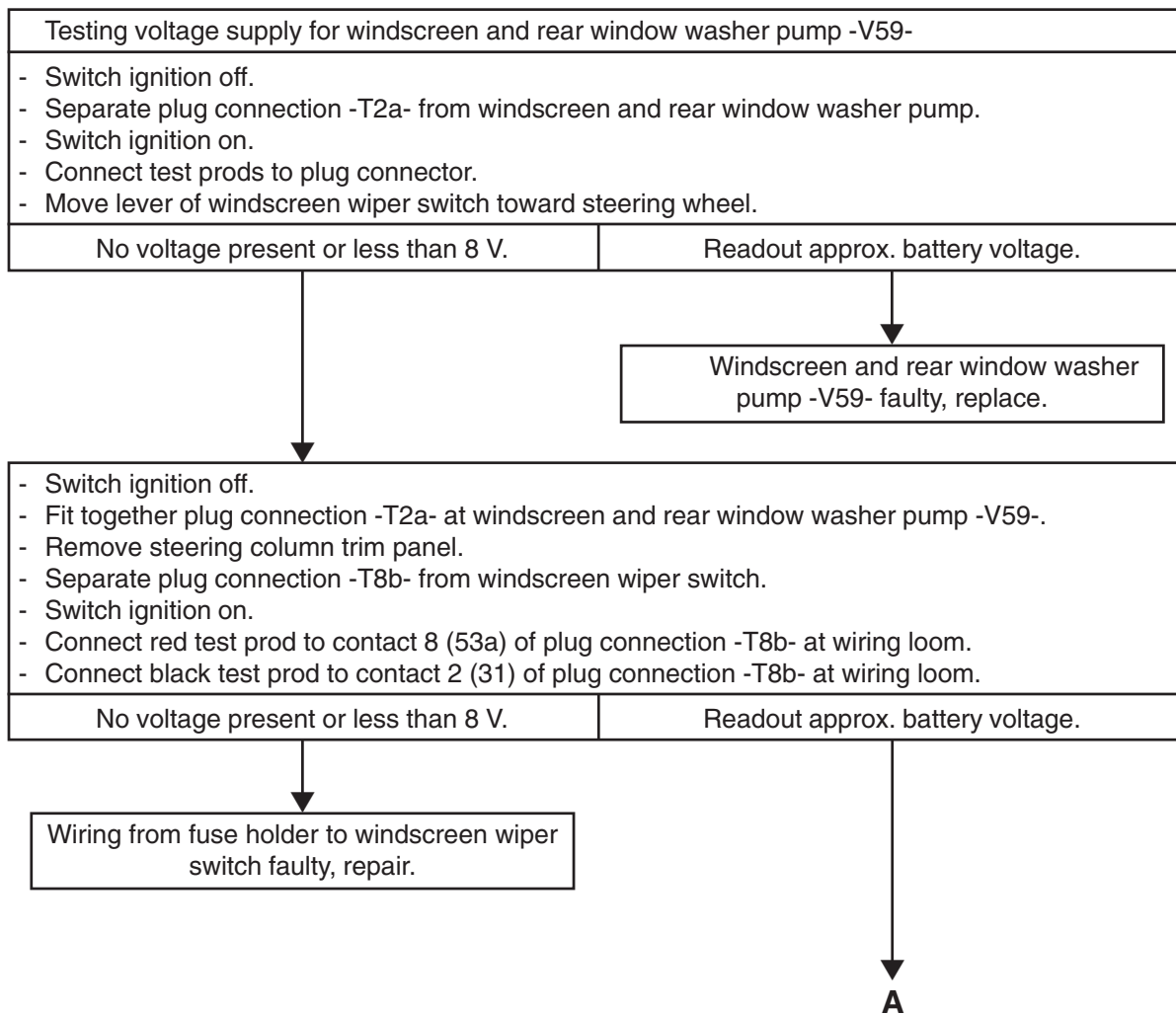
Windscreen washer system faulty

Test requirements:

- ◆ Fuse SB 15 (5 A) o.k.
- ◆ Battery voltage o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



A



Testing windscreen washer function	
<ul style="list-style-type: none"> - Switch ignition off. - Fit together plug connection -T8b- at windscreen wiper switch. - Switch ignition on. - Connect red test prod to contact 4 (53c) of plug connection -T8b- of windscreen wiper switch. - Connect black test prod to contact 5 (HW) of plug connection -T8b- of windscreen wiper switch. - Move lever of windscreen wiper switch toward steering wheel. 	
No voltage present or less than 8 V.	Readout approx. battery voltage.



Windscreen wiper switch faulty, replace.



Testing rear window washer function	
<ul style="list-style-type: none"> - Switch ignition off. - Connect red test prod to contact 4 (53c) of plug connection -T8b- of windscreen wiper switch. - Connect black test prod to contact 5 (HW) of plug connection -T8b- of windscreen wiper switch. - Switch ignition on. - Move lever of windscreen wiper switch into second position away from steering wheel and hold. 	
No voltage present or less than 8 V.	Readout approx. battery voltage.



Windscreen wiper switch faulty, replace.



Cable connections of -T8b/4- and -T8b/5- to windscreen and rear window washer pump faulty, repair.

END

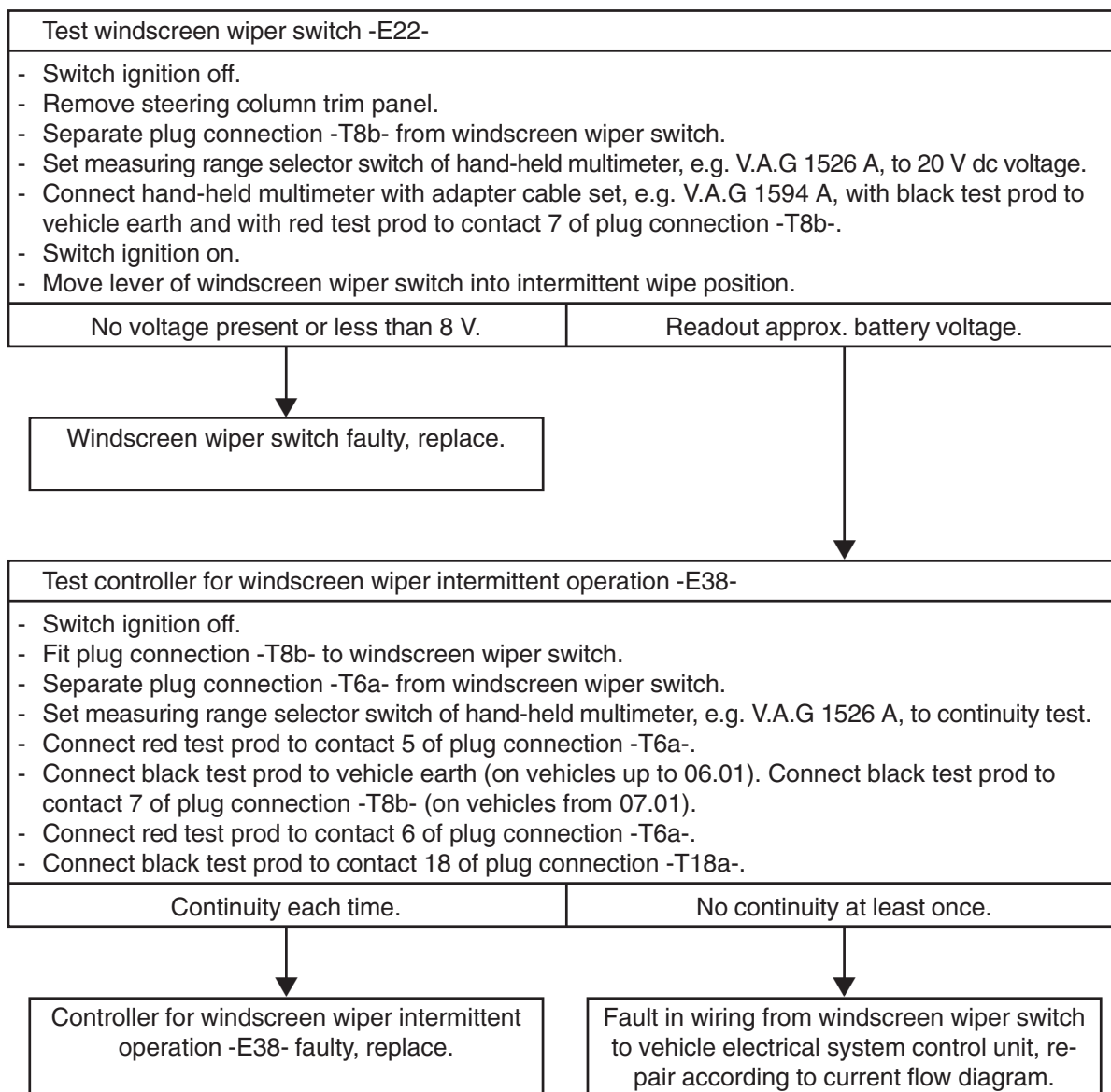
Windshield wiper intermittent operation faulty

Test requirements:

- ◆ Test voltage supply of windscreen wiper motor -V- and windscreen wiper switch -E22- as specified in Fault Finding Programme No. 3.
- ◆ On vehicles fitted with alarm system, the bonnet must be closed.
- ◆ Battery voltage o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



END

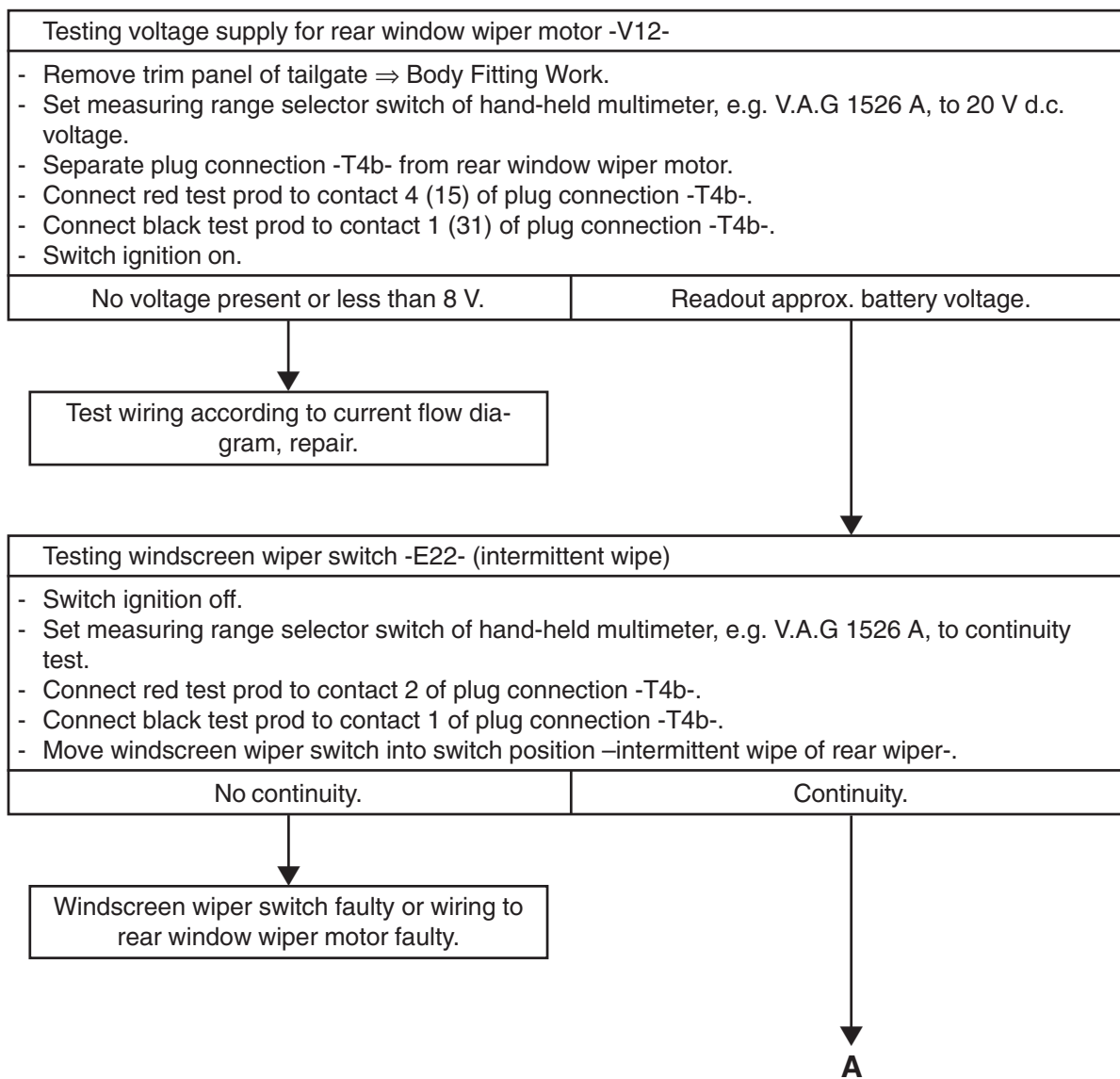
Testing rear window wiper

Test requirements:

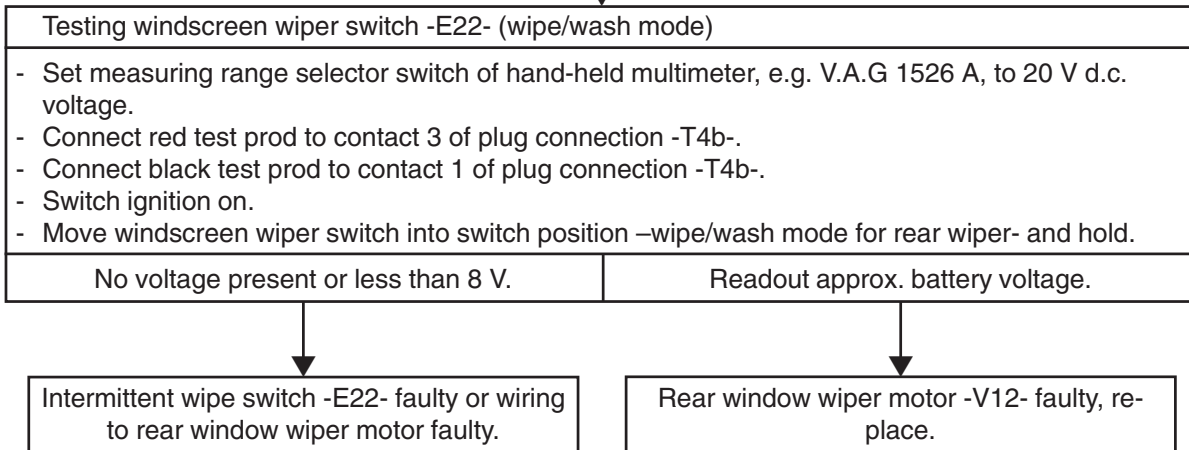
- ◆ Test voltage supply for windscreen wiper switch -E22- as specified in Fault Finding Programme No. 3.
- ◆ Fuses SB 15 (5 A), SB 32 (10 A) and SB 41 (20 A) o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



A



END

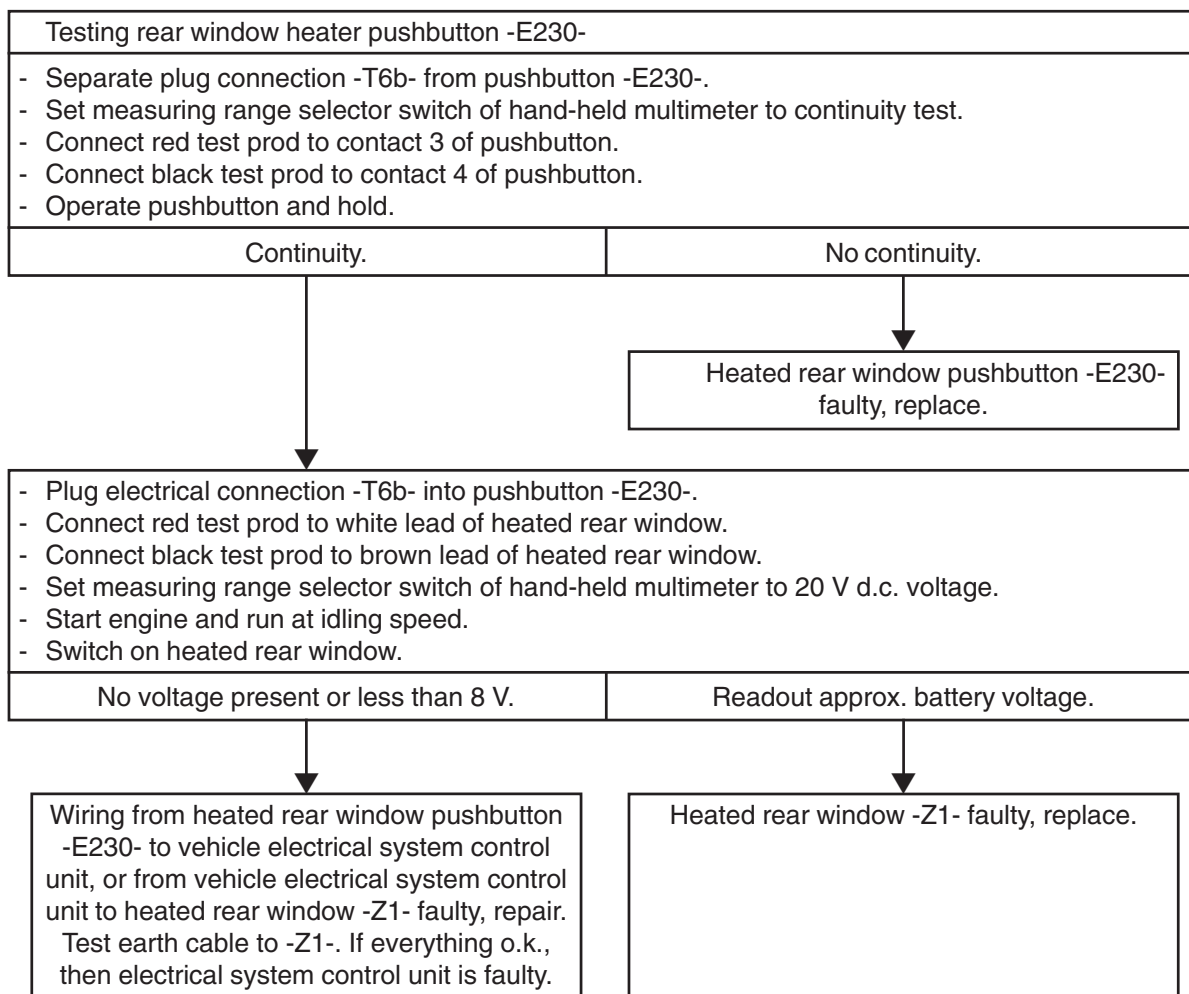
Heated rear window not operating

Test requirements:

- ◆ Fuse SB 39 (20 A) o.k.
- ◆ Battery voltage o.k.
- ◆ No other electrical components such as heating element for additional heater or seat heater switched on.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



END

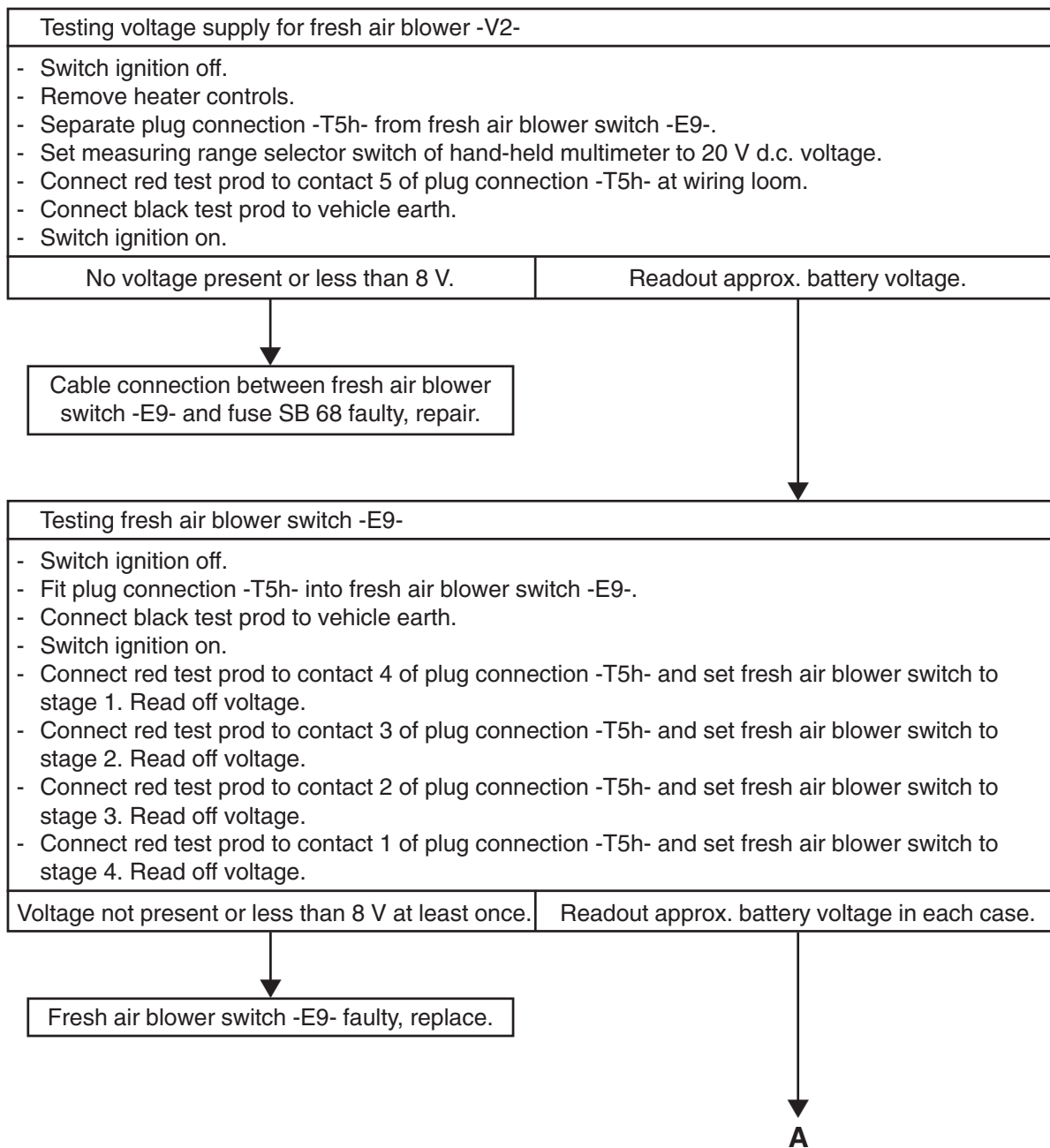
Testing fresh air blower

Test requirements:

- ◆ Fuse SB 68 (25 A) o.k.
- ◆ Battery voltage o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



A



Testing fresh air blower motor -V2-

- Separate plug connection -T2u- from fresh air blower motor -V2-.
- Connect red test prod to contact 1 of plug connection -T2u-.
- Connect black test prod to contact 2 of plug connection -T2u-.
- Move fresh air blower switch in turn into all four positions. Read off result of measurement in each case.

Different voltages present each time.

Voltage not present at least once.



Fresh air blower motor -V2- faulty, replace.



Test wiring to series resistor of fresh air blower -N24-, or series resistor of fresh air blower -N24- faulty, replace.

END

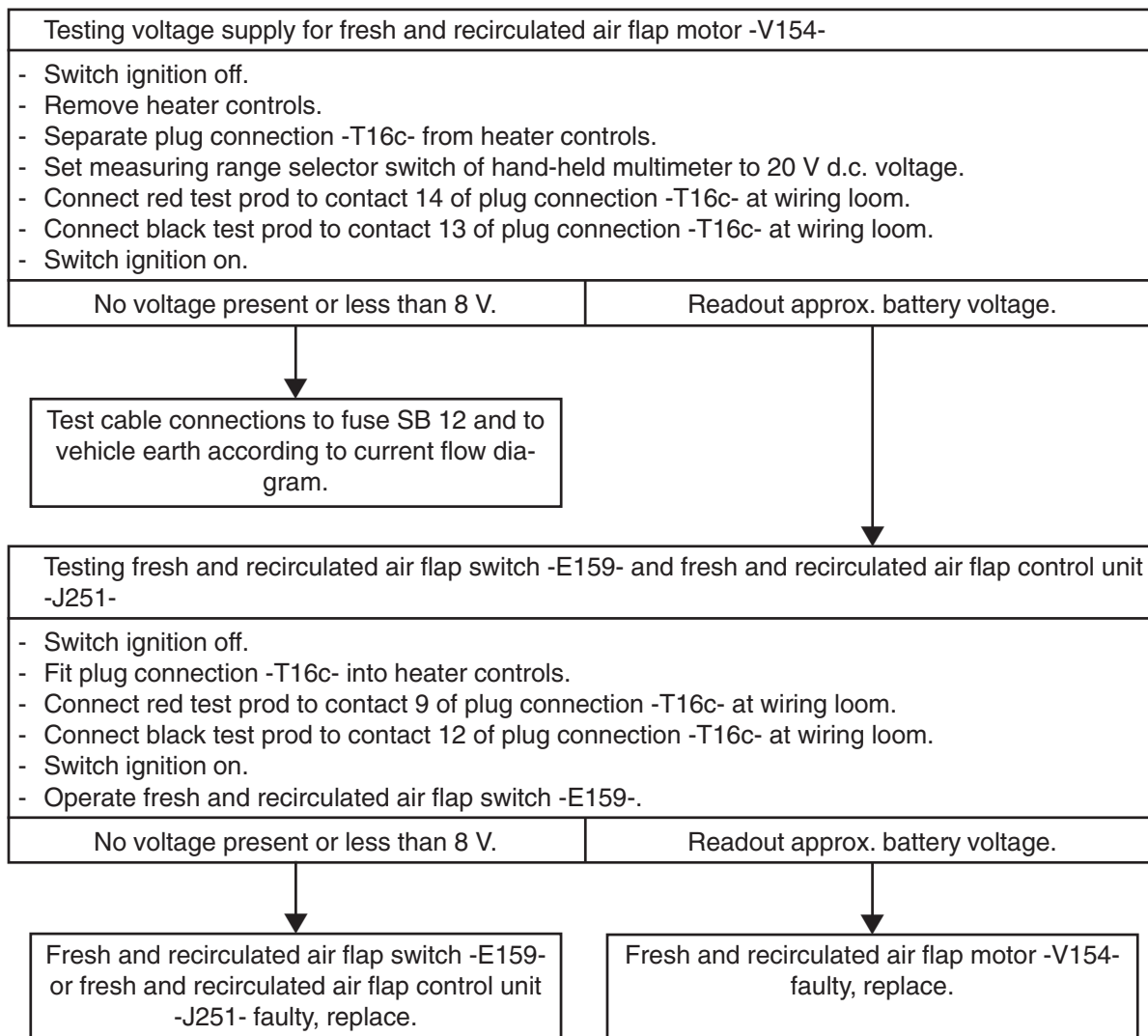
Testing fresh and recirculated air flap motor

Test requirements:

- ◆ Fuse SB 12 (5 A) o.k.
- ◆ Battery voltage o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram



END

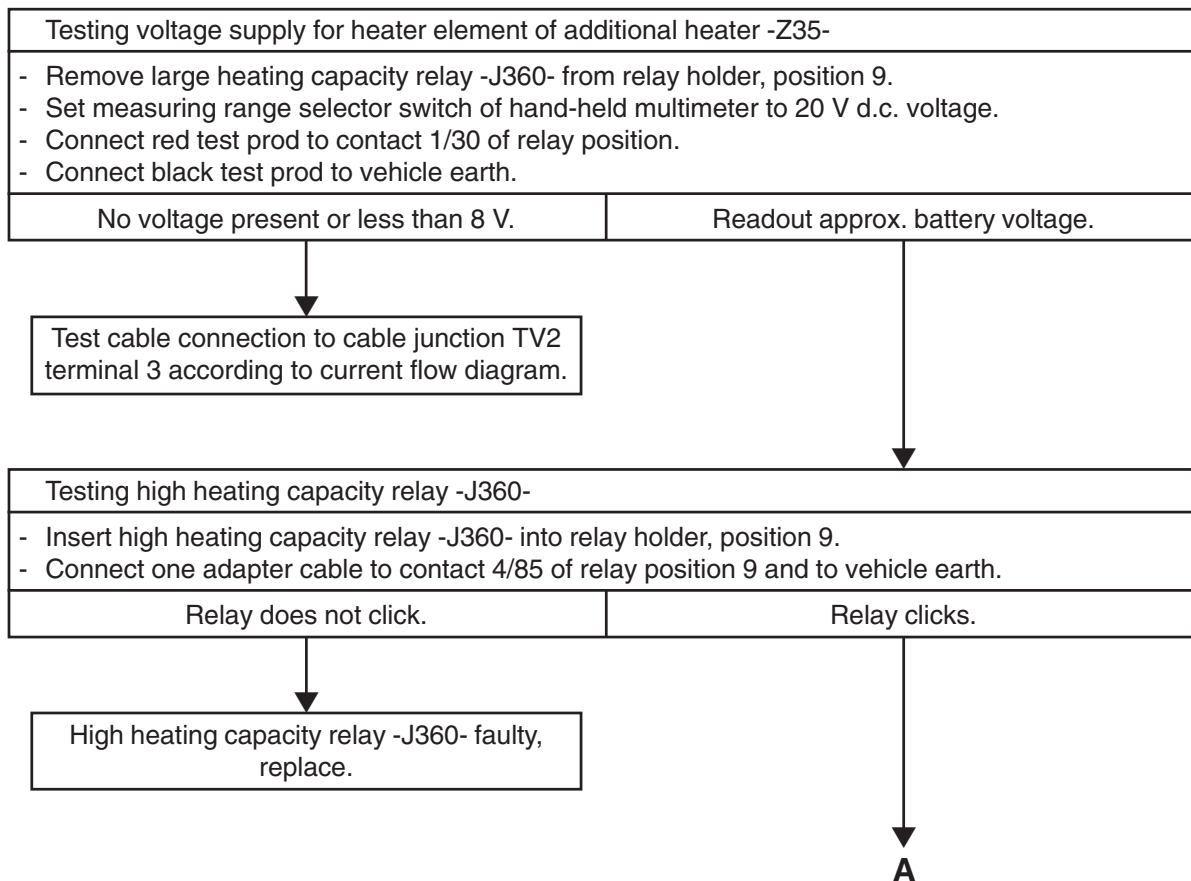
Testing heater element for additional heater (PTC) -Z35-

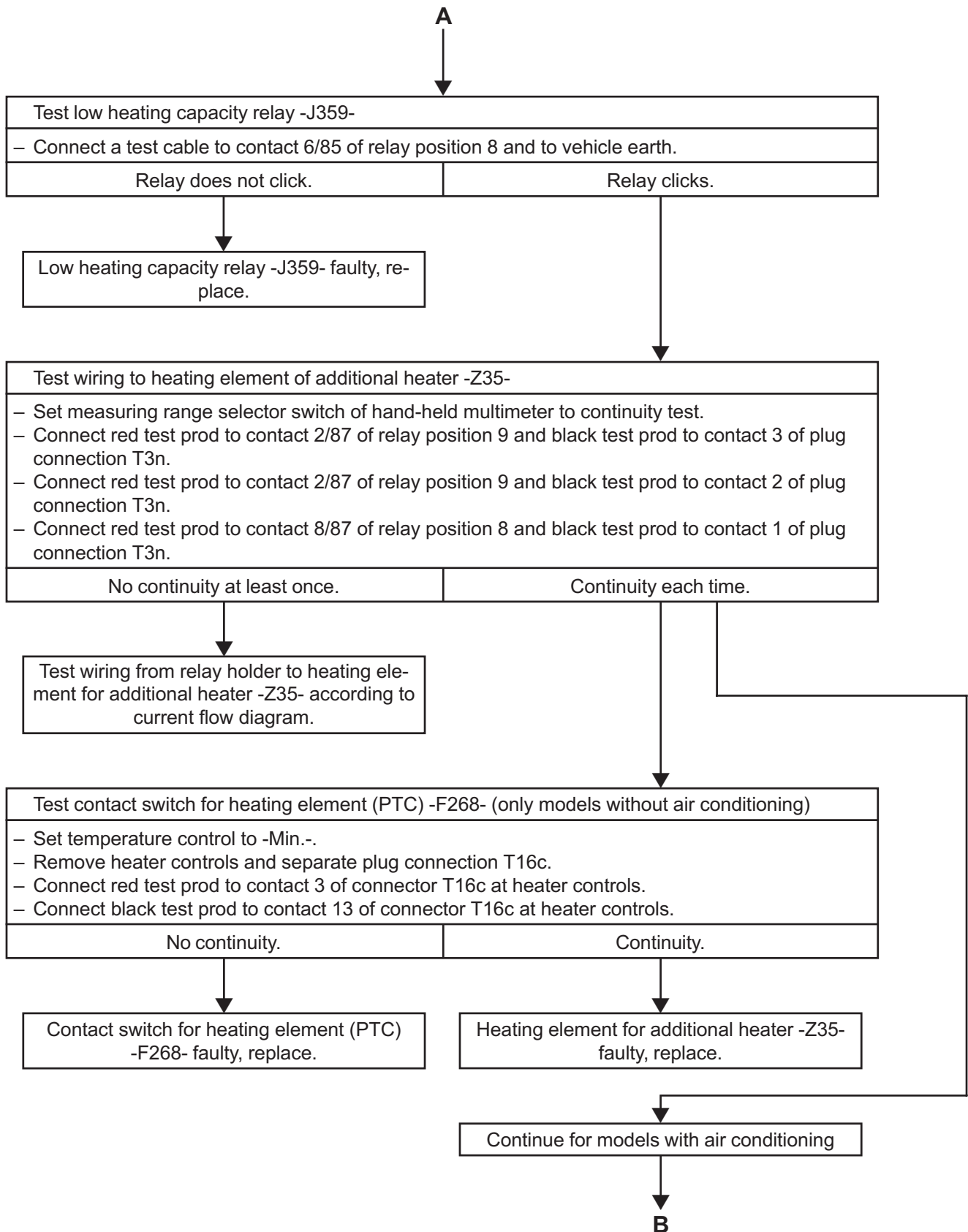
Test requirements:

- ◆ Fuses S276, S277, S278 (40 A) o.k.
- ◆ Battery voltage o.k.
- ◆ All other electrical components such as heated rear window, lights or seat heaters, switched off.
- ◆ Coolant temperature less than 70 °C.
- ◆ Temperature control set to Max.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram





B



Test potentiometer, temperature rotary selector -G267- (only on models with air conditioning)	
<ul style="list-style-type: none"> - Set temperature control to -Max.-. - Initiate self-diagnosis for AC, read measured value block, heating element for PTC. - Heating element for PTC must be switched on. 	
Readout in display: off.	Readout in display: on.



AC control unit -J301- faulty, replace.



Heating element for additional heater -Z35- faulty, replace, or engine control unit faulty, replace.

END

Electrically adjustable and heated exterior mirrors (without power windows)

Test requirements:

- ◆ Battery o.k.
- ◆ Fuses SB 11 and SB 38 o.k.
- ◆ Remove mirror adjustment switches
- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A

Note:

If the specifications are not achieved, rectify open circuit in wiring according to CFD or replace mirror.

Test step	Test of	Test conditions	Specification	Fault finding
1	Power supply at switch	Ignition on – red test prod to switch connector -T10f, contact 5 – black test prod to switch connector -T10f, contact 3	approx. 12 V	Open circuit in wiring
2	Switch functions for left mirror	– Switch position left Ignition on		
	– up	– red test prod to -T10f-, contact 2 – black test prod to -T10f-, contact 10	approx. 12 V	Switch faulty
	– down	– red test prod to -T10f-, contact 10 – black test prod to -T10f-, contact 2	approx. 12 V	Switch faulty
	– to left	– red test prod to -T10f-, contact 10 – black test prod to -T10f-, contact 7	approx. 12 V	Switch faulty
	– to right	– red test prod to -T10f-, contact 7 – black test prod to -T10f-, contact 10	approx. 12 V	Switch faulty

Test step	Test of	Test conditions	Specification	Fault finding
3	Switch functions for right mirror – up – down – to left – to right	– Switch position right Ignition on – red test prod to -T10f-, contact 2 – black test prod to -T10f-, contact 6 – red test prod to -T10f-, contact 6 – black test prod to -T10f-, contact 2 – red test prod to -T10f-, contact 9 – black test prod to -T10f-, contact 6 – red test prod to -T10f-, contact 6 – black test prod to -T10f-, contact 9	approx. 12 V approx. 12 V approx. 12 V approx. 12 V	Switch faulty Switch faulty Switch faulty Switch faulty
4	Power supply for mirror heater	– Ignition on – Switch for mirror adjustment in position -Heat- – Remove mirror lens – Unplug both connectors – Connect red clamp to a connection cable – Connect black clamp to other connection cable	approx. 12 V	– Switch for mirror adjustment faulty – Open circuit in wiring, mirror heater faulty
5	Mirror heater (when cold)	– Set measuring range selector switch of hand-held multimeter to resistance measurement – Mirror lens removed – Connect red clamp to one connection cable – Connect black clamp to other connector at mirror lens	3 - 6 Ω	Mirror heater faulty, replace mirror lens

Testing electrical sliding roof

Test requirements:

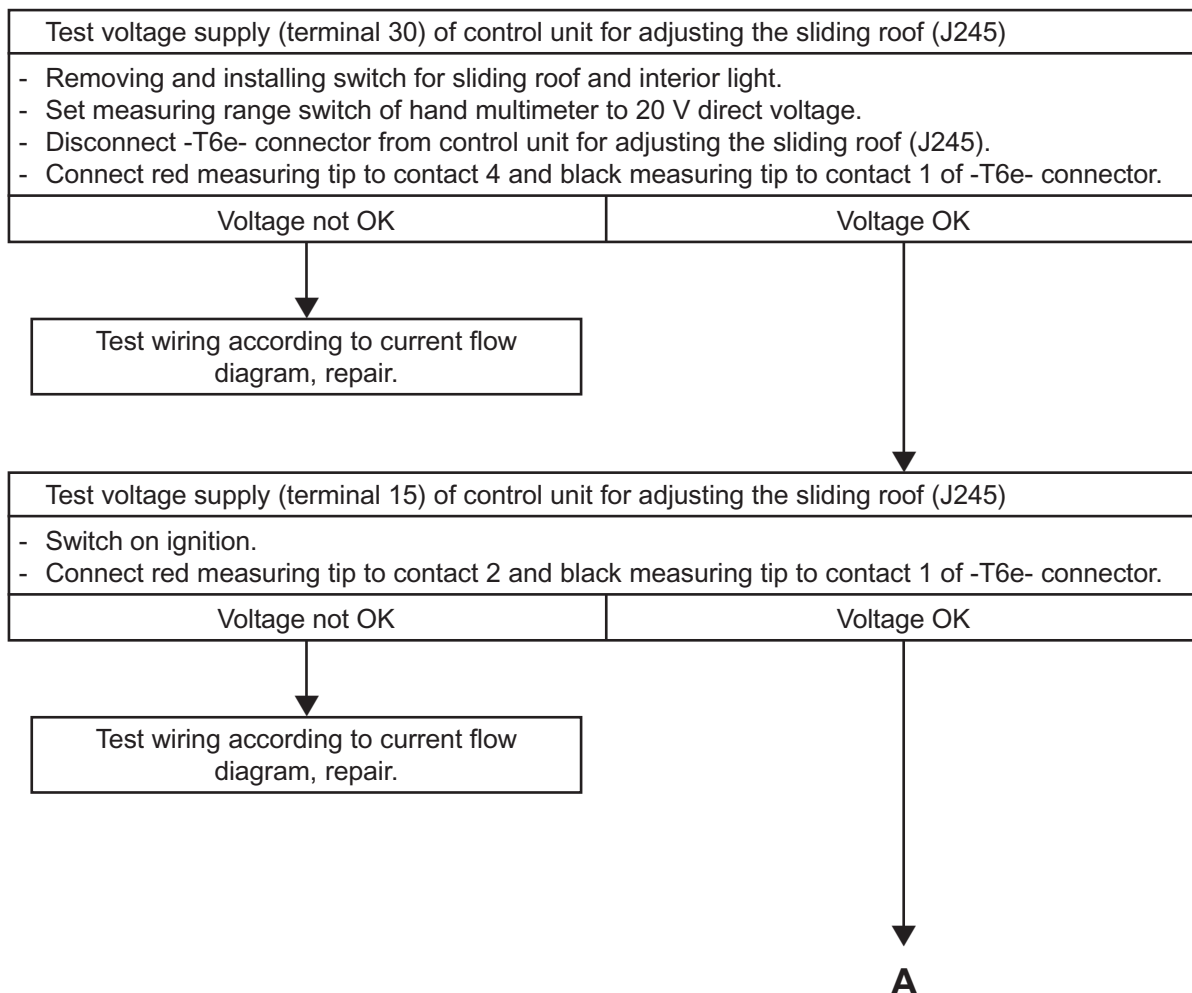
- ◆ Battery voltage OK!
- ◆ Fuses SB 62 OK!
- ◆ Electrical sliding roof mechanically OK!

For fault finding, the following is required:

- ◆ Hand multimeter e.g. V.A.G 1526 A
- ◆ Measuring aid set e.g. V.A.G 1594 A
- ◆ Valid current flow diagram

Note:

The control unit for adjusting the sliding roof (J245) and the motor for the sliding roof (V1) are combined in one component and cannot be replaced individually.



A



Test voltage supply of regulator for adjusting the sliding roof (E139)	
<ul style="list-style-type: none"> - Connect -T6e- connector at control unit for adjusting the sliding roof (J245). - Disconnect -T6f- connector from regulator for adjusting the sliding roof (E139). - Connect red measuring tip to contact 1 and black measuring tip to vehicle mass. Specified value: approx. 5 V.	
Voltage not OK	Voltage OK

Control unit for adjusting the sliding roof (J245) defective, replace.

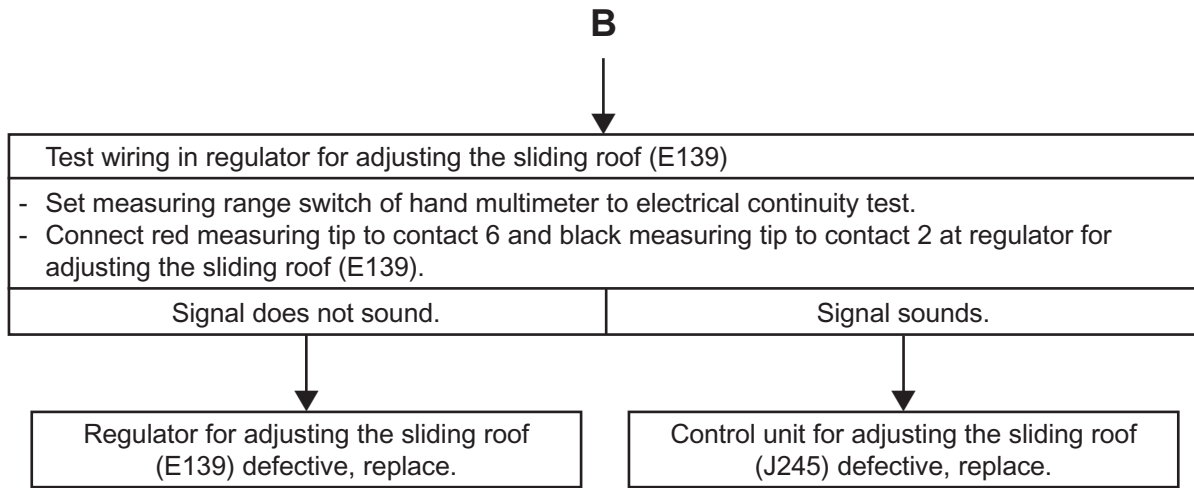
Test regulator for adjusting the sliding roof (E139).	
<ul style="list-style-type: none"> - Switch off ignition. - Set measuring range switch of hand multimeter to resistance measurement - Connect red measuring tip to contact 3 and black measuring tip to contact 1 at regulator for adjusting the sliding roof (E139). - Set regulator for adjusting the sliding roof to the -maximum open position of the sliding roof- Specified value: 200 Ω - Set regulator for adjusting the sliding roof to the -maximum lifting position of the sliding roof- Specified value: The resistance must increase equally. When reaching the maximum lifting position of the sliding roof: 2600 Ω 	
Specified values not O.K.	Specified values O.K.

Regulator for adjusting the sliding roof (E139) defective, replace.

<ul style="list-style-type: none"> - Connect red measuring tip to contact 3 and black measuring tip to contact 2 at regulator for adjusting the sliding roof (E139). - Set regulator for adjusting the sliding roof to the -maximum open position of the sliding roof- Specified value: 2600 Ω - Set regulator for adjusting the sliding roof in stages to the -maximum lifting position of the sliding roof- Specified value: The resistance must decrease equally. When reaching the -maximum lifting position of the sliding roof-: 200 Ω 	
Specified values not OK	Specified values OK

Regulator for adjusting the sliding roof (E139) defective, replace.

B



END

Testing seat heater

Test requirements:

- ◆ Fuse SB 63 (15 A) o.k.

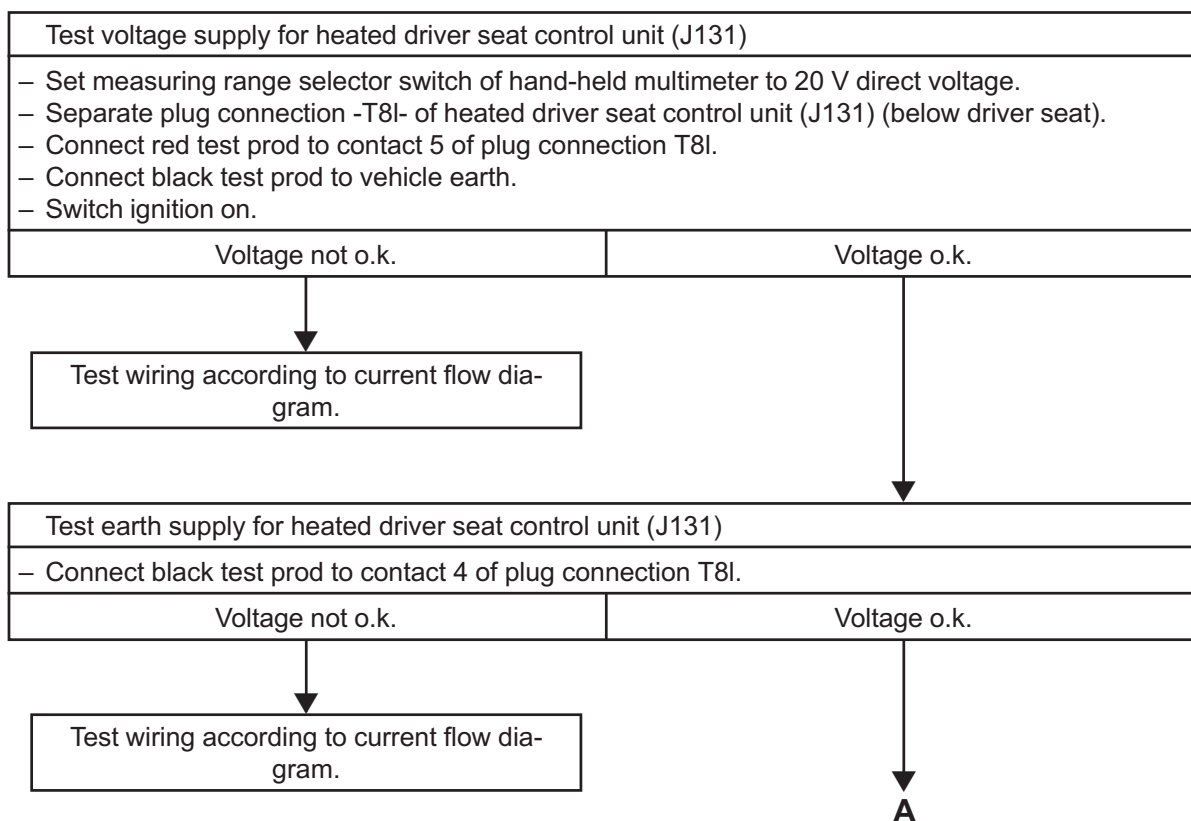
The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram

Note:

The following fault finding programme describes fault finding for the driver side. If the heater of the front passenger seat is faulty, proceed in a similar way.

Driver seat heater not operating or faulty



A
↓

Test voltage supply for driver electric seat heater adjuster (E94)	
<ul style="list-style-type: none"> - Switch ignition off. - Fit together plug connection T8l at driver heated seat control unit (J131). - Remove adjuster of electric seat heater ⇒ Electrical System. - Separate plug connection T6h of electric seat heater adjuster. - Connect red test prod to contact 6 of plug connection T6h. - Connect black test prod to vehicle earth. - Switch ignition on. 	
Voltage not o.k.	Voltage o.k.

↓
Test wiring according to current flow diagram, repair.

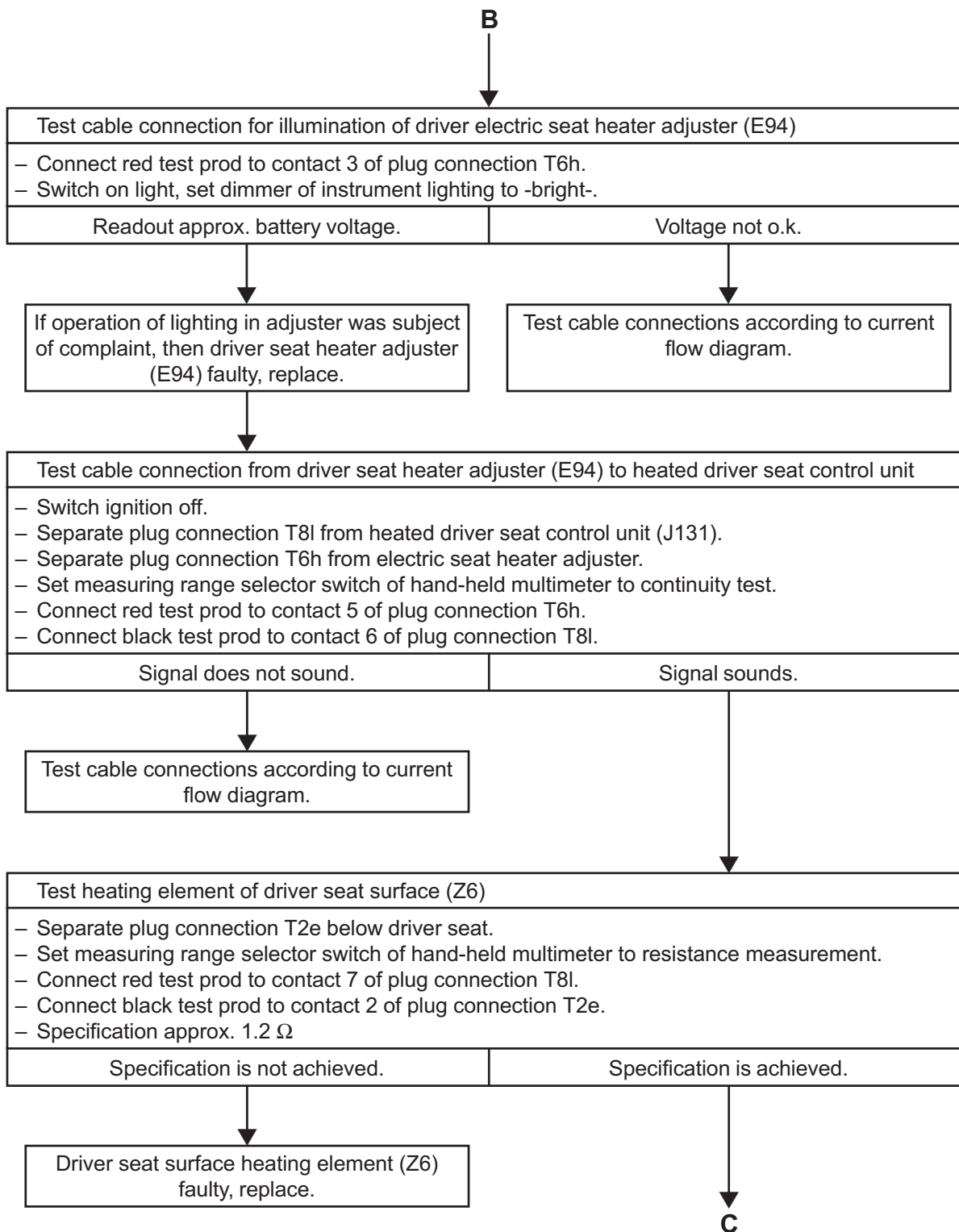
Test earth supply for driver electric seat heater adjuster (E94)	
- Connect black test prod to contact 4 of plug connection T6h.	
Voltage not o.k.	Voltage o.k.

↓
Test wiring according to current flow diagram, repair.

Test driver electric seat heater adjuster (E94)	
<ul style="list-style-type: none"> - Fit electric seat heater adjuster into plug connection T6h. - Connect red test prod to contact 5 of plug connection T6h. - Conduct voltage test as specified in table: 	
Driver seat heater adjuster in switch position:	Result of test:
lowest heating capacity	readout approx. battery voltage
full heating capacity	readout approx. 9 V
seat heater off	readout no voltage
Results of measurements not o.k.	Results of measurements o.k.

↓
Driver electric seat heater adjuster (E94) faulty, replace.

↓
B



C
↓

Test driver seat backrest heating element (Z7)	
<ul style="list-style-type: none"> – Connect red test prod to contact 2 of plug connection T2e. – Connect black test prod to contact 1 of plug connection T2e. – Specification approx. 1.2 Ω 	
Specification is not achieved.	Specification is achieved.

↓

Driver seat backrest heating element (Z7) faulty, replace.
--

Test cable connection of heating elements to vehicle earth	
<ul style="list-style-type: none"> – Set measuring range selector switch of hand-held multimeter to continuity test. – Connect red test prod to contact 1 of plug connection T2e. – Connect black test prod to vehicle earth. 	
Signal does not sound.	Signal sounds.

↓

Test cable connections according to current flow diagram.

Test driver seat heater temperature sensor (G59)	
<ul style="list-style-type: none"> – Set measuring range selector switch of hand-held multimeter to resistance measurement. – Connect red test prod to contact 4 of plug connection T8l. – Connect black test prod to contact 2 of plug connection T6g. – Specification approx. 10 kΩ at 20 °C interior temperature. 	
Specification is not achieved.	Specification is achieved.

↓

Driver seat heater temperature sensor (G59) faulty, replace together with driver seat surface heating element (Z6).

Test cable connection from driver seat heater temperature sensor (G59) to vehicle earth	
<ul style="list-style-type: none"> – Set measuring range selector switch of hand-held multimeter to continuity test. – Connect red test prod to contact 4 of plug connection T8l. – Connect black test prod to vehicle earth. 	
Signal does not sound.	Signal sounds.

↓

Test cable connections according to current flow diagram.

↓

Heated driver seat control unit faulty, replace.
--

END

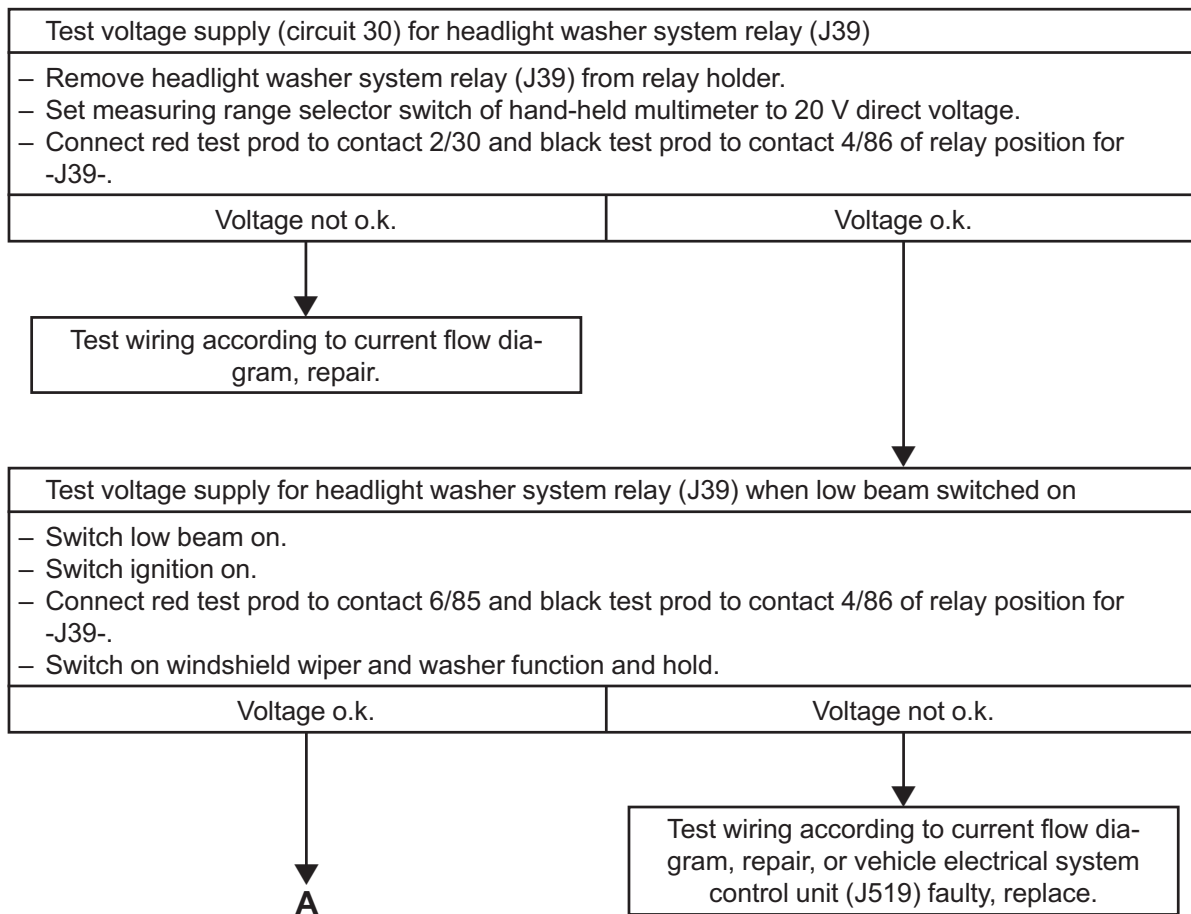
Testing headlight washer system

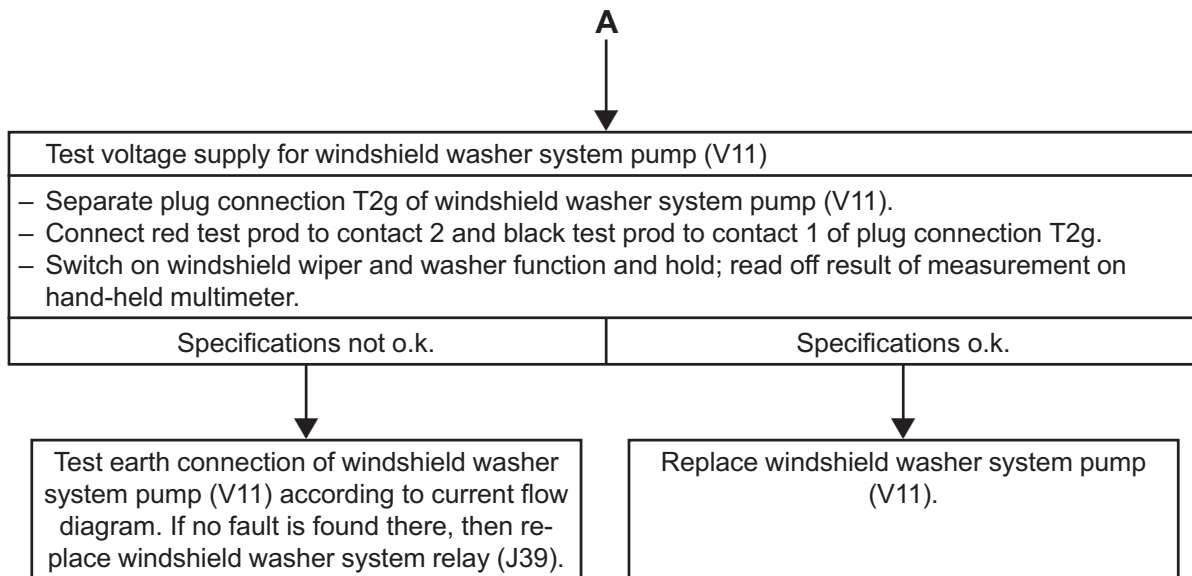
Test requirements:

- ◆ Battery voltage o.k.
- ◆ Fuse SB 64 o.k.
- ◆ Low beam operating properly
- ◆ Windscreen wiper and washer system operating properly

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram





END

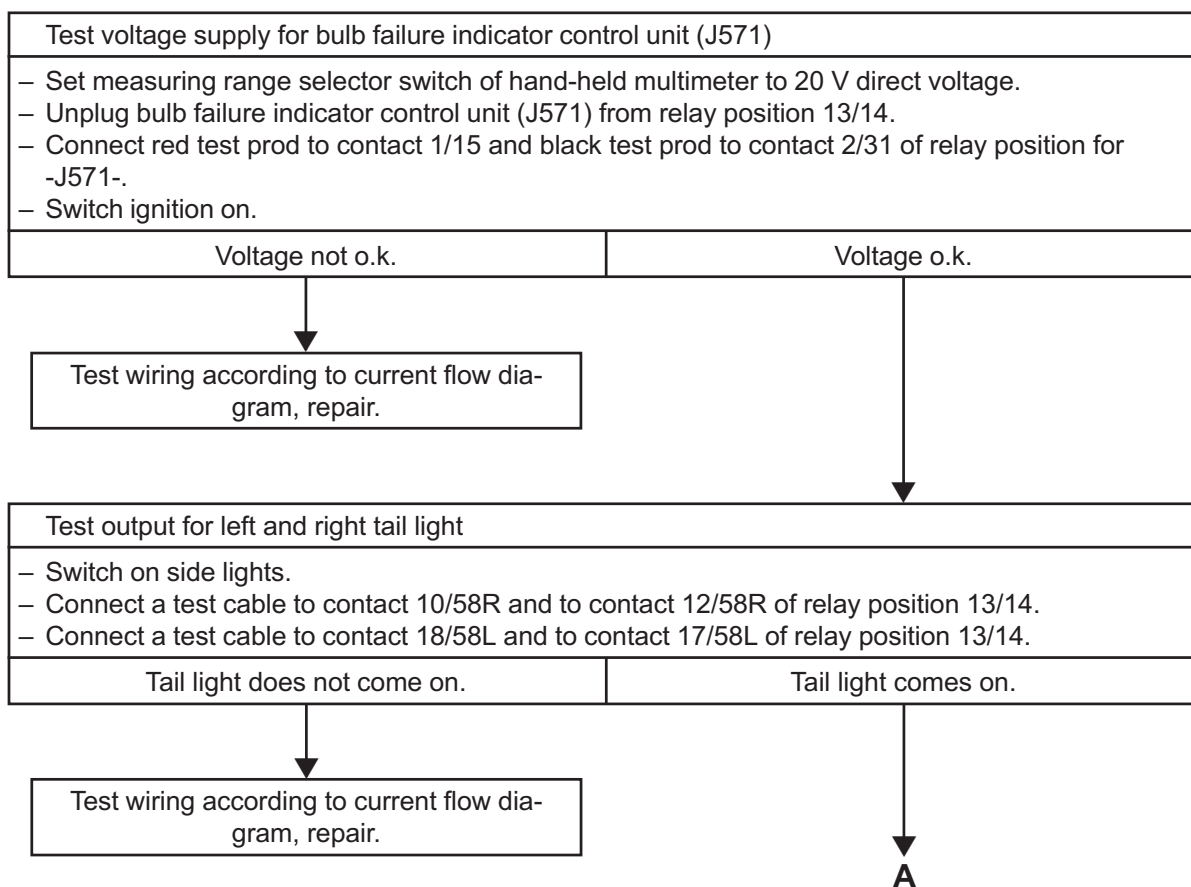
Testing bulb failure indicator

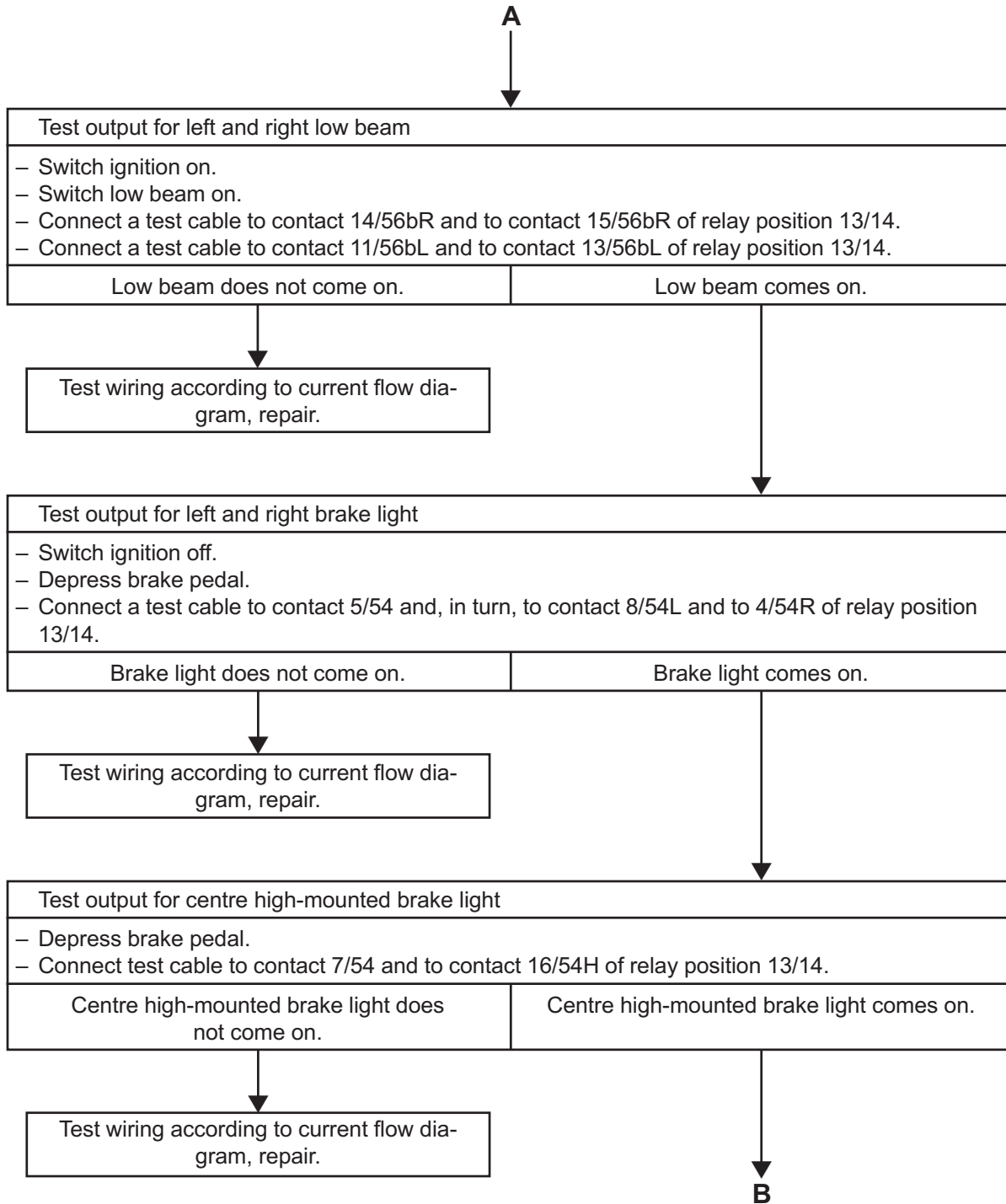
Test requirements:

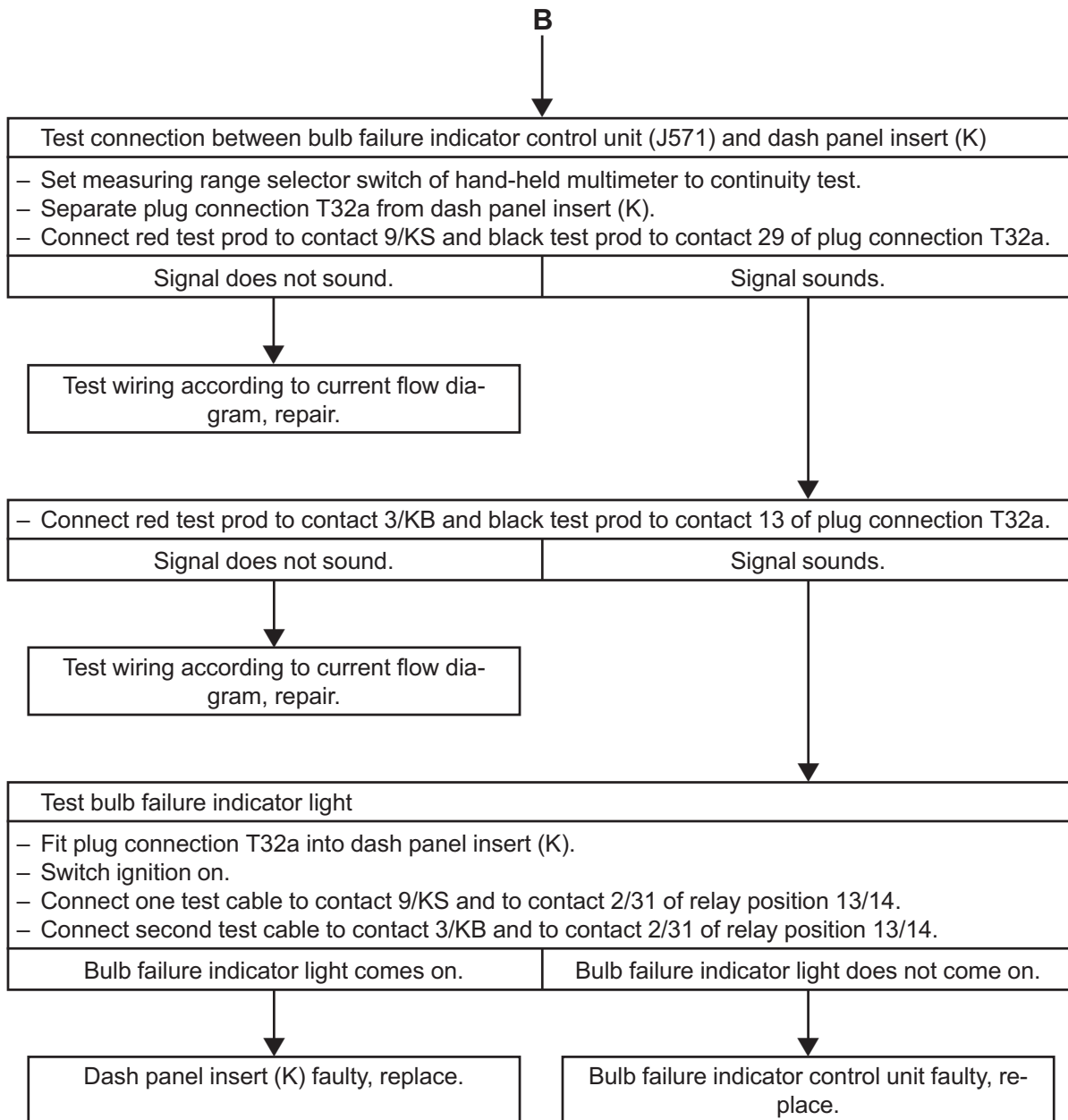
- ◆ Battery voltage o.k.
- ◆ Fuses according to current flow diagram o.k.
- ◆ Bulbs for low beam, tail light and brake light o.k.

The following are required for fault finding:

- ◆ Hand-held multimeter, e.g. V.A.G 1526 A
- ◆ Adapter cable set, e.g. V.A.G 1594 A
- ◆ Valid current flow diagram





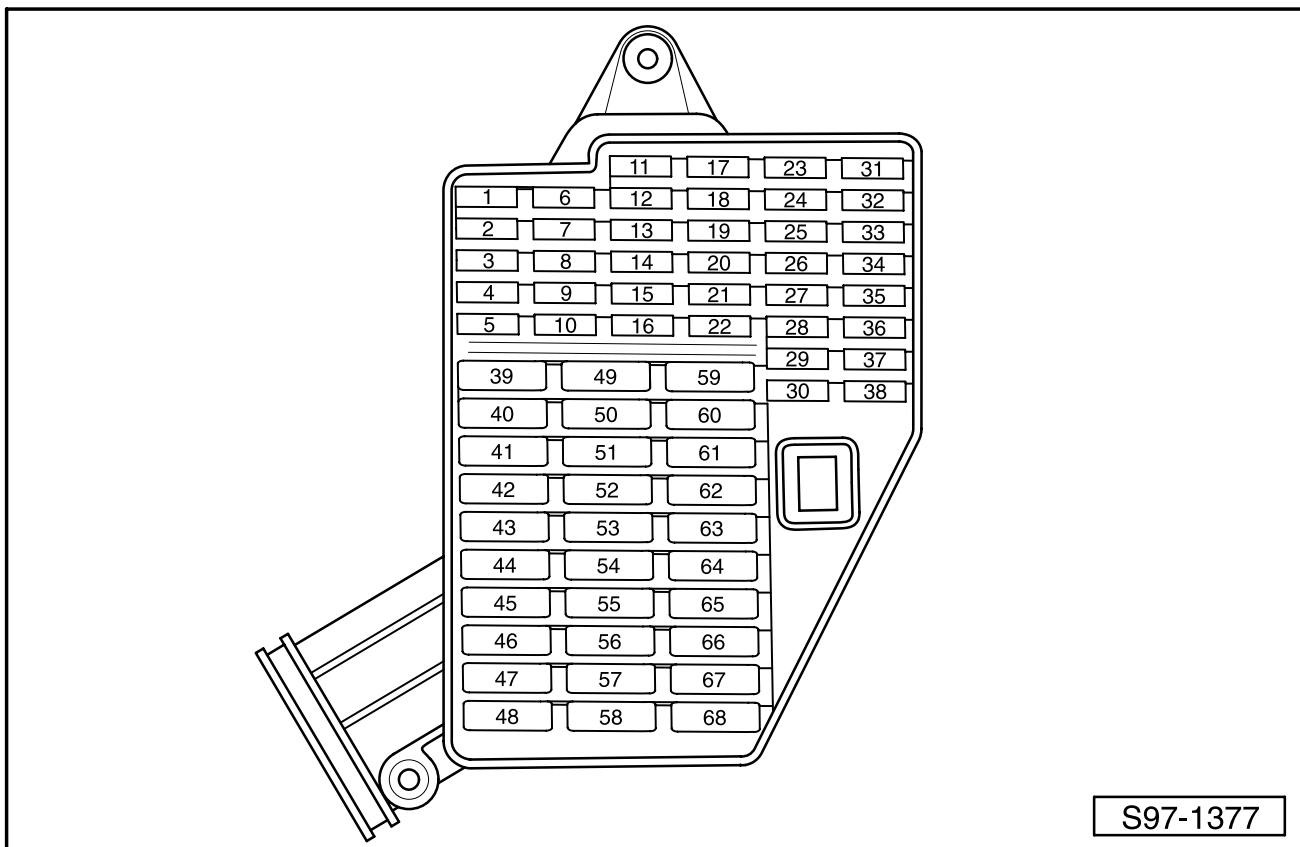


END

Fuse Holder, Fuse holder on battery, Relay holder, Additional fuse holder**Table of contents**

- Fuse holder	1/2
- Fuse holder on battery 08.99 ► 07.00	1/4
- Fuse holder on battery 08.00 ►	1/5
- Relay holder 08.99 ► 07.00	1/6
- Relay holder 08.00 ► 06.01	1/7
- Relay holder 07.01 ►	1/8
- Additional fuse holder	1/9

Fuse holder - Fuse assignment



Refer to the corresponding current flow diagrams for the fuse protection of optional equipment not listed.

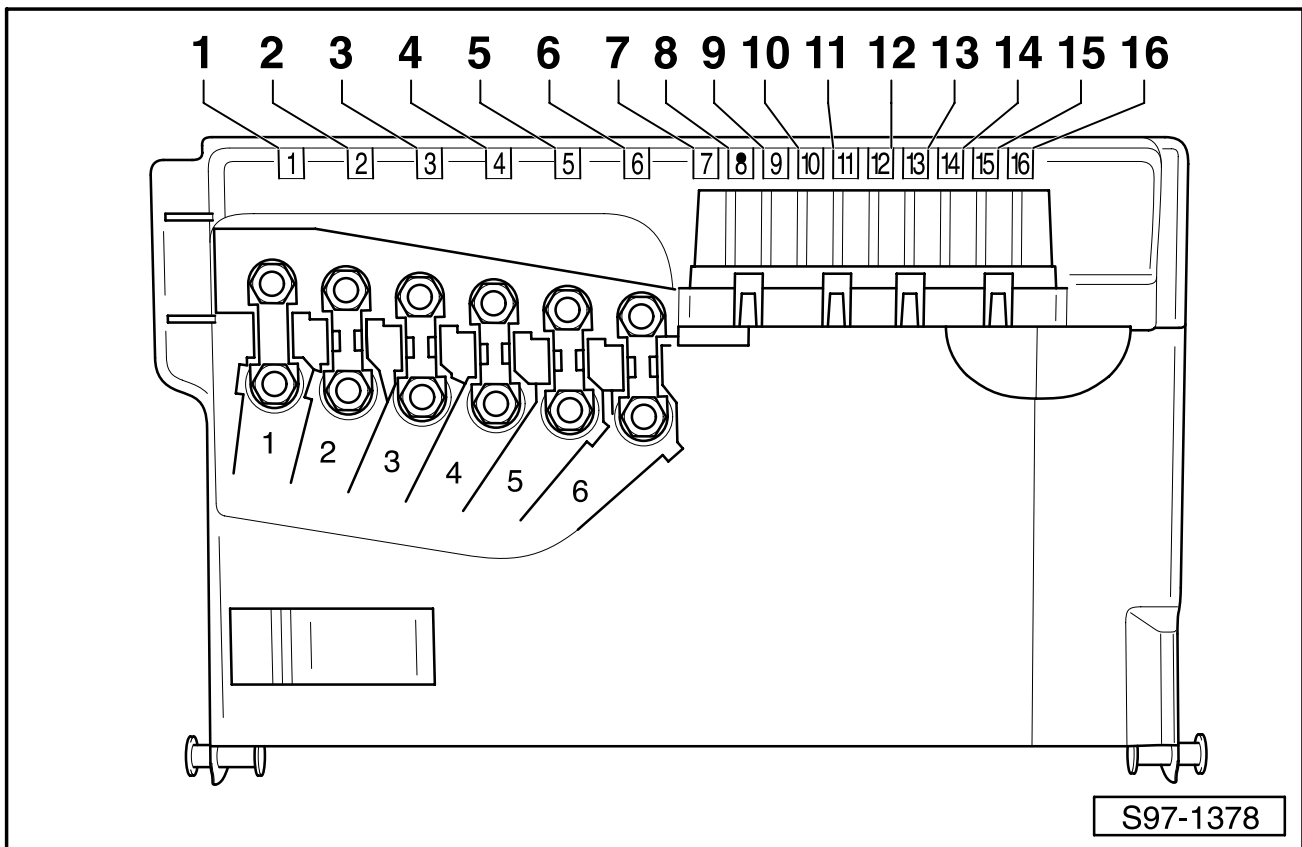
1 - Dash panel insert, ESP	5 A	13 - Reversing lights	10 A
2 - Brake lights	10 A	14 - Engine control unit	10 A
3 - Voltage supply diagnosis, Air conditioning	5 A	15 - Wipe/wash system	10 A
4 - Interior light, glove box light, luggage compartment light	10 A	16 - Dash panel insert	5 A
5 - Door warning light	5 A	17 - Engine control unit	5 A
6 - Headlight beam Adjustment	5 A	- Engine control unit for 1.2/40 kW	15 A
7 - Engine electronics, power steering	5 A	18 - Mobile phone	5 A
8 - Not Assigned		19 - Automatic gearbox	10 A
9 - Lambda probe	10 A	20 - Bulb failure indicator	5 A
10 - S contact (86s)	5 A	21 - Heated washer nozzles	5 A
11 - Heated And Adjustable exterior mirror	5 A	22 - Not Assigned	
12 - Fresh And recirculated Air flap, Air conditioning, navigation system, mobile phone, gas discharge bulbs	5 A	23 - Right main beam	10 A
		24 - Engine electronics	10 A

25 - ABS/TCS control unit	5 A	47 - Not Assigned	
ABS/ESP control unit	10 A		
26 - Not Assigned		48 - Engine control unit	30 A
27 - Not Assigned		49 - Central locking	15 A
28 - Brake pedal switch, clutch pedal switch, engine electronics	5 A	50 - Right low beam/right gas discharge bulb, right headlamp beam Adjustment	15 A
29 - Not Assigned		51 - Socket in luggage compartment	15 A
30 - Left main beam, main beam indicator light	10 A	52 - Petrol engine/ignition system	15 A
31 - Boot lid/tailgate central locking	10 A	53 - Power windows	25 A
32 - Rear window wiper	10 A	54 - Left low beam/left gas discharge bulb/left headlamp beam Adjustment	15 A
33 - Right parking light	5 A	55 - Not Assigned	
34 - Left parking light	5 A	56 - Engine control unit	20 A
35 - Petrol engine - injectors	10 A	57 - Trailer coupling	25 A
36 - Licence plate light	5 A	58 - Power windows	25 A
37 - Rear fog light, rear fog light indicator lamp (up to 06.01)	5 A	59 - Not Assigned	
- Rear fog light, rear fog light indicator lamp (from 07.01)	7.5 A		
38 - Heated And Adjustable exterior mirror	5 A	60 - Anti-theft Alarm	15 A
39 - Rear window heater	20 A	61 - Fuel pump	15 A
40 - Horn	20 A	62 - Sliding roof	25 A
41 - Windscreen wipers	20 A	63 - Seat heaters	15 A
42 - Socket	15 A	64 - Headlight washer system	20 A
43 - Vehicle electrical system control unit, selector lever lock	20 A	65 - Fog lights	15 A
44 - Turn signal lights	15 A	66 - Power windows	25 A
45 - Radio, navigation system	20 A	67 - Not Assigned	
46 - Power windows	25 A	68 - Fresh Air blower	25 A

Fuse colours

30 A	-	green	10 A	-	red
25 A	-	white	7.5 A	-	brown
20 A	-	yellow	5 A	-	beige
15 A	-	blue			

Battery fuse holder 08.99 through 07.00

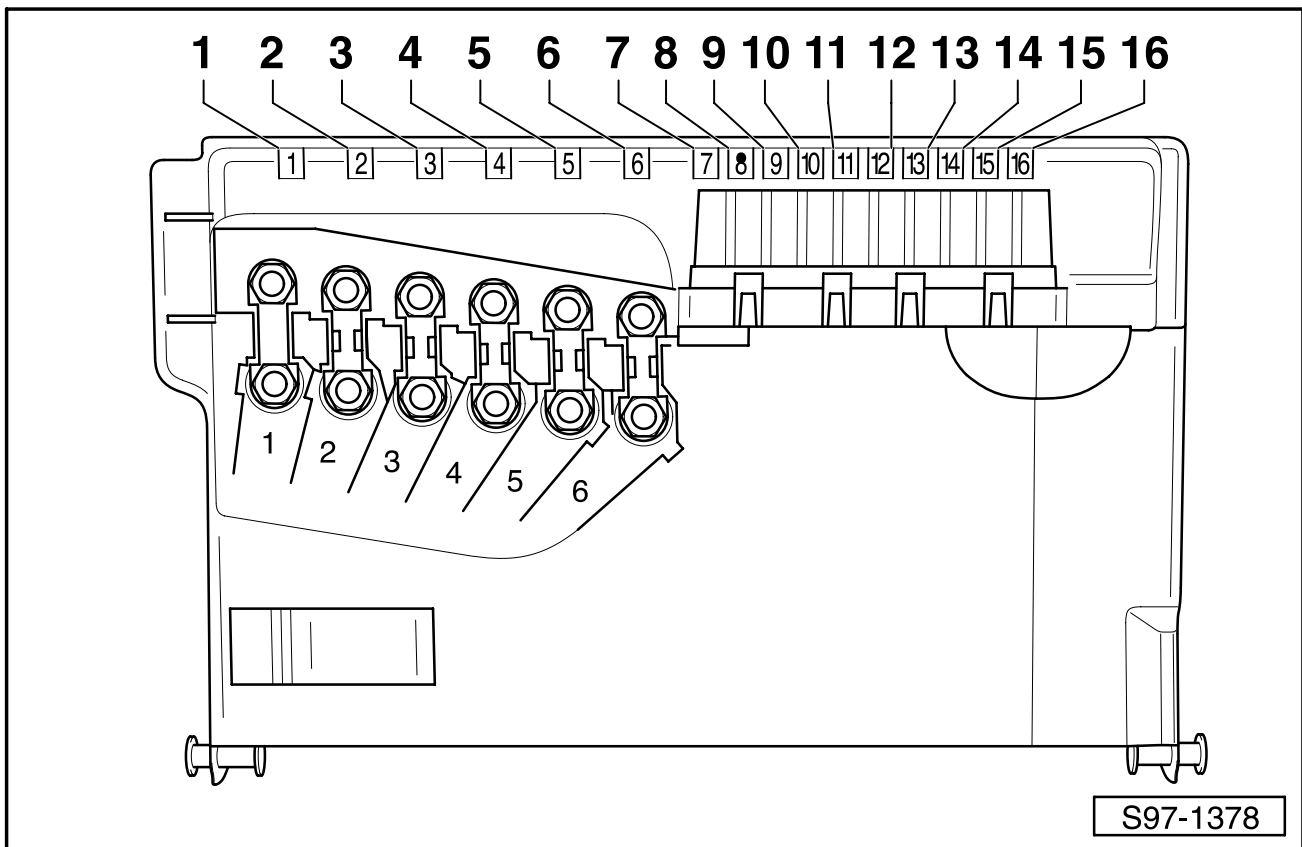


Fuse assignment in battery fuse holder

1 - AC generator	110 A ¹⁾	9 - not assigned	
	150 A ¹⁾	10 - Vehicle voltage control unit	5 A
	175 A ¹⁾	11 - Air conditioning	5 A
2 - Interior	110 A	12 - not assigned	
3 - Power steering-	50 A	13 - automatic gearbox	5 A
4 - Glow plugs / secondary air pump	50 A	14 - not assigned	
5 - Fan for coolant	40 A	15 - not assigned	
6 - ABS/TCS	40 A	16 - not assigned	
7 - ABS/TCS	25 A		
8 - Fan for coolant	30 A		

¹⁾ Fuse capacity dependent on engine or special equipment

Fuse holder on battery 08.00 ➤

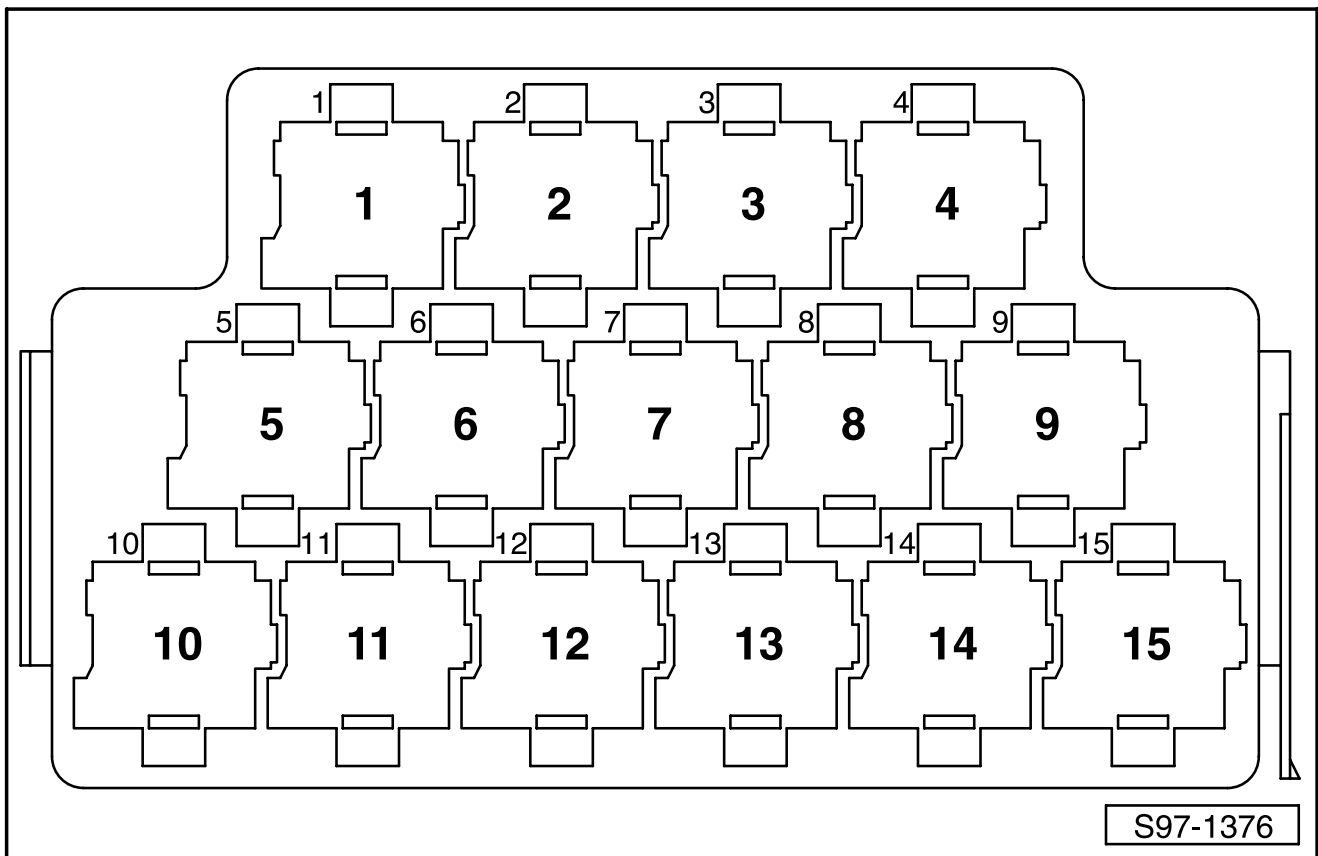


Fuse assignment in fuse holder on battery

1 - Alternator	110 A ¹⁾ 150 A ¹⁾ 175 A ¹⁾	9 - Not Assigned	
2 - Interior	110 A	10 - Vehicle electrical system control unit	5 A
3 - Power steering	50 A	11 - Air conditioning	5 A
4 - Glow plug / secondary Air pump	40 A	12 - Not Assigned	
5 - Radiator fan	40 A	13 - Automatic gearbox	5 A
6 - ABS/TCS/ESP	40 A	14 - Wiper motor changeover relay	20 A
7 - ABS/TCS/ESP	25 A	15 - Not Assigned	
8 - Radiator fan	30 A	16 - Not Assigned	

1) Fuse rating depends on engine or optional equipment.

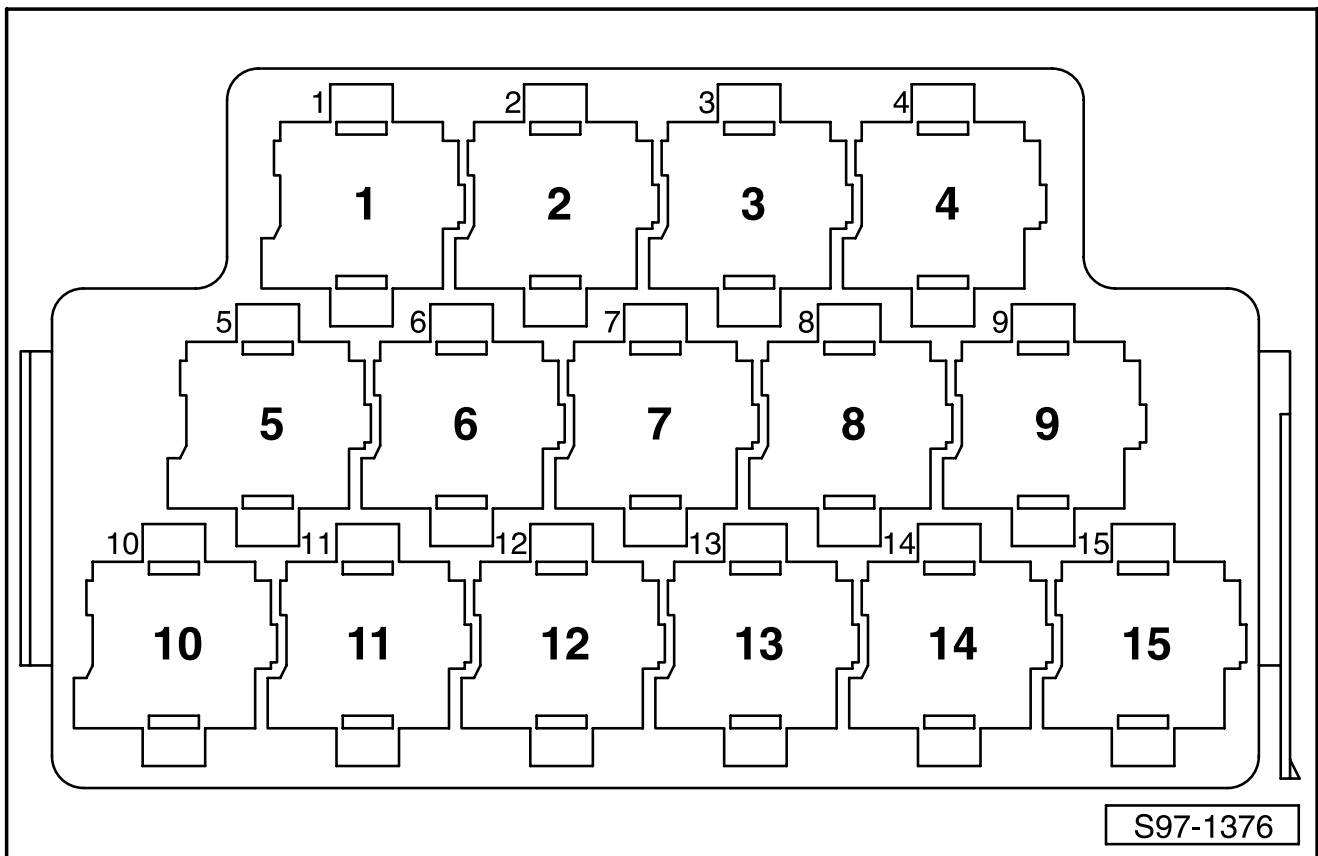
Relay Holder 08.99 through 07.00



Relay assignment on relay holder

- 1** - Fuel pump relay (only on 1.9/74 kW)
- 2** - Not assigned
- 3** - Glow plug relay
- 4** - not assigned (until 01.00)
- fuel pump relay (as from 02.00)
- 5** - Relay for hazard lights, doors
- 6** - Relay for headlight washer system
- 7** - Relay for starter interlock system
- 8** - Relay for small heater performance
- 9** - Relay for large heater performance
- 10** - not assigned
- 11** - X contact relief relay
- 12** - Diesel direct injection system relay
- 13** - Control unit for lamp failure
- 14** - Control unit for lamp failure
- 15** - Fuel pump relay (through 01.00)
- not assigned (after 02.00)

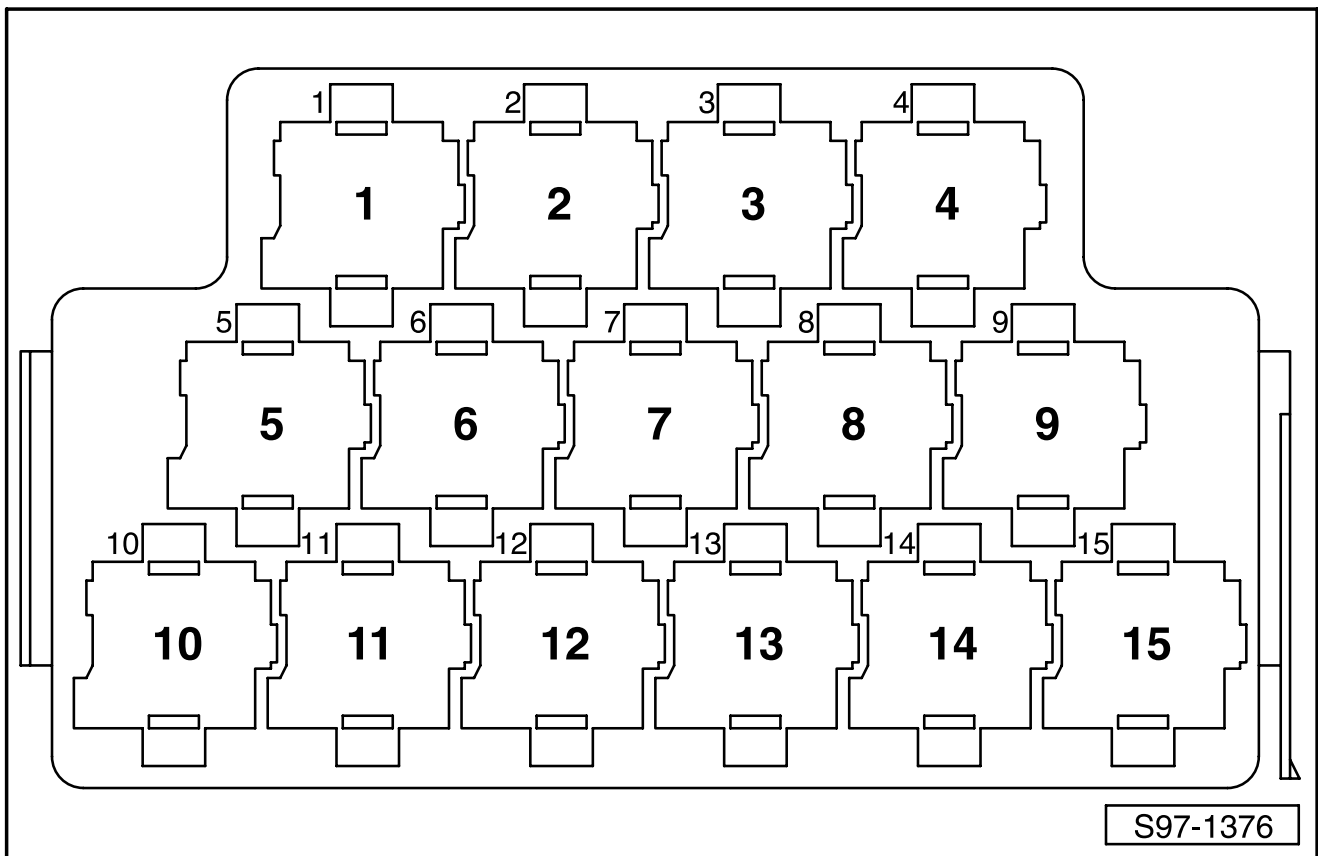
Relay holder 08.00 ► 06.01



Relay position assignment on relay holder

- 1** - Secondary air pump relay
- 2** - Motronic power supply relay
- 3** - Glow plug relay
- 4** - Fuel pump relay (only 1.0/37 kW, 1.4/44 kW, 1.4/50 kW, 1.2/40 kW, 1.9/74 kW engines)
- 5** - Door warning light relay
- 6** - Headlight washer system relay
- 7** - Starter lockout relay
- 8** - Low heating capacity relay
- 9** - High heating capacity relay
- 10** - Not assigned
- 11** - Relief relay for X contact
- 12** - Fuel pump relay (only 1.4/55 kW, 1.4/74 kW, 2.0/85 kW engines)
- Power supply relay for Simos control unit (only 1.2/40 kW)
- 13** - Bulb failure control unit
- 14** - Bulb failure control unit
- 15** - Diesel direct injection system relay

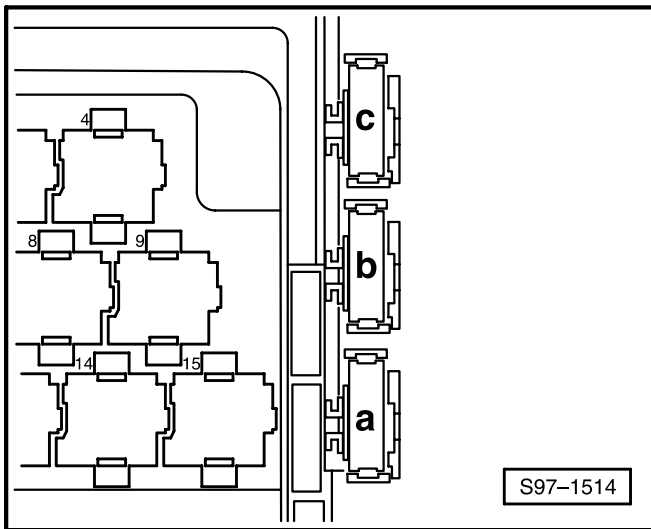
Relay holder 07.01 ►



Relay position assignment on relay holder

- 1** - Secondary air pump relay
- 2** - Motronic power supply relay
- 3** - Glow plug relay
- 4** - Fuel pump relay
- 5** - Door warning light relay
- 6** - Headlight washer system relay
- 7** - Starter lockout relay
- 8** - Low heating capacity relay
- 9** - High heating capacity relay
 - Fuel feed relay (only 1.4/55 kW, 1.4/74 kW, 2.0/85 kW engines)
- 10** - Not assigned
- 11** - Relief relay for X contact
- 12** - Power supply relay for Simos control unit (only 1.2/40 kW engine)
- 13** - Bulb failure control unit
- 14** - Bulb failure control unit
- 15** - Diesel direct injection system relay

Additional fuse holder



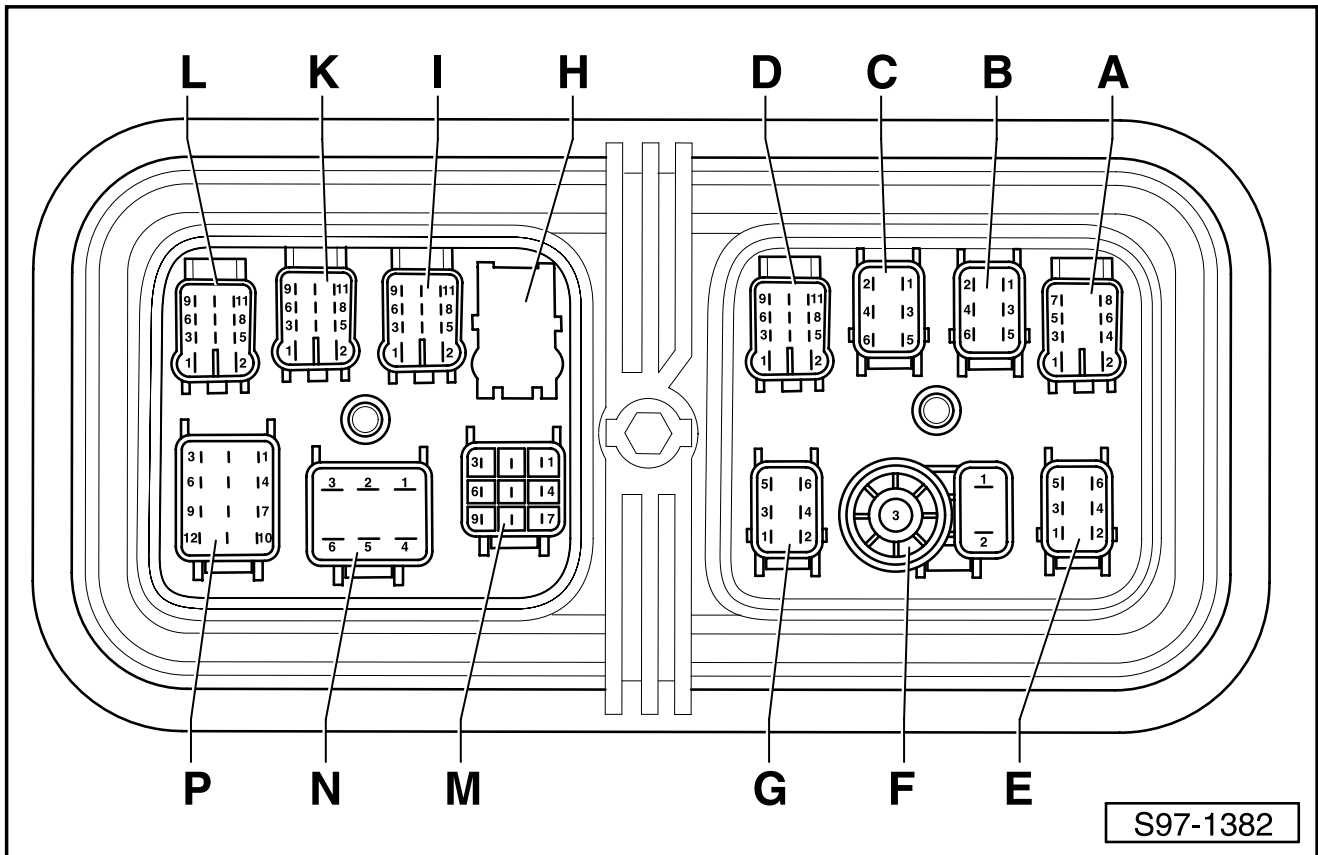
- a - S276 Fuse -1- for heating element
- b - S277 Fuse -2- for heating element
- c - S278 Fuse -3- for heating element

Multipin connectors

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- Connector location and contact assignment of multipin connector on the left front wall	2/2
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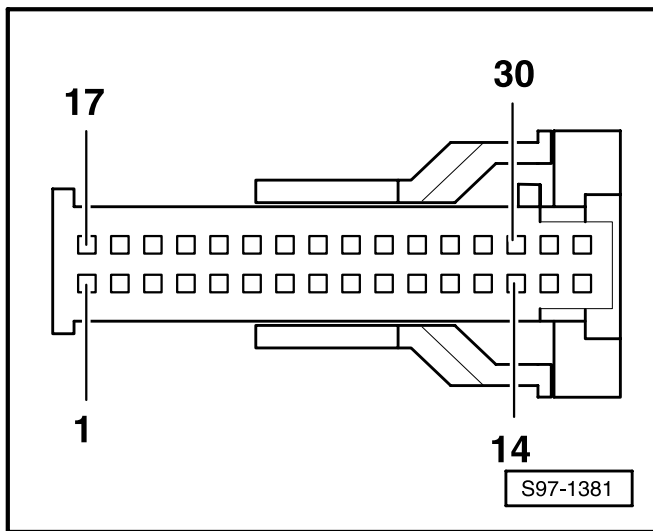
Location of plug connection and contact assignment of multi-pin connector at left of bulkhead



- A – T8e 8-pin connector (orange)
- B – T6n 6-pin connector (blue)
- C – T6r 6-pin connector (brown)
- D – T11a 11-pin connector (white)
- E – T6v 6-pin connector (green)
- F – T3a 3-pin connector (grey)
- G – T6p 6-pin connector (red)

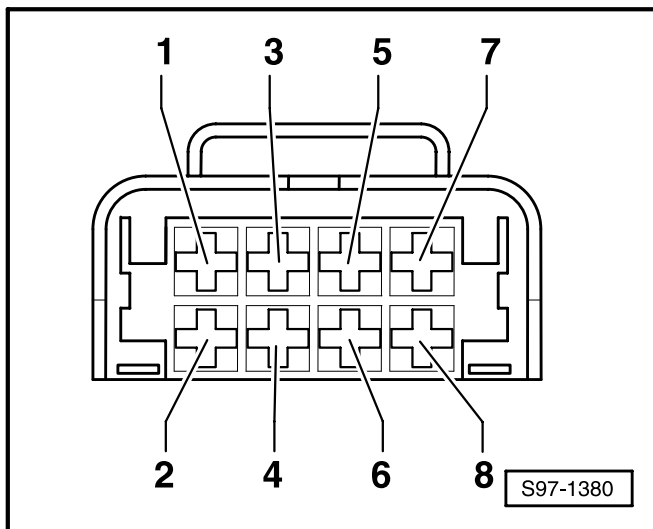
- H – not assigned
- I – T11c 11-pin connector (blue)
- K – T11b 11-pin connector (red)
- L – T11d 11-pin connector (brown)
- M – T9a 9-pin connector (yellow)
- N – T6w 6-pin connector (grey)
- P – T12a 12-pin connector (white)

Contact assignment of multi-pin connectors on dash-panel insert



- | | | | |
|--------------|----------------------------------|--------------|---|
| 1 - T32a/1 | Reading coil for immobiliser | 13 - T32a/13 | Control for brake light failure |
| 2 - T32a/2 | Control lamp for main beam | 14 - T32a/14 | not assigned |
| 3 - T32a/3 | Control lamp form dipped beam | 15 - T32a/15 | Sender for fuel level indication |
| 4 - T32a/4 | Sender for oil level/temperature | 16 - T32a/16 | Sender for coolant low-level indication |
| 5 - T32a/5 | Speed signal – outlet | 17 - T32a/17 | Reading coil for immobiliser |
| 6 - T32a/6 | Speed signal – inlet | 18 - T32a/18 | Control lamp for rear fog light |
| 7 - T32a/7 | CAN L (Motor) | 19 - T32a/19 | Control lamp for fog lights |
| 8 - T32a/8 | CAN H (Motor) | 20 - T32a/20 | Control lamp for seat belt warning system |
| 9 - T32a/9 | CAN H (Convenience) | 21 - T32a/21 | Switch for handbrake control |
| 10 - T32a/10 | CAN L (Convenience) | 22 - T32a/22 | Warning contact for brake fluid level |
| 11 - T32a/11 | Multi-function display | 23 - T32a/23 | Oil pressure switch |
| 12 - T32a/12 | Multi-function display | 24 - T32a/24 | Wake up (Wake up line) |
| | | 25 - T32a/25 | Not assigned |
| | | 26 - T32a/26 | Not assigned |
| | | 27 - T32a/27 | Multi-function display |
| | | 28 - T32a/28 | Not assigned |
| | | 29 - T32a/29 | Control for headlamp failure |
| | | 30 - T32a/30 | Sender for headlight washing water level |
| | | 31 - T32a/31 | Outside temperature sensor |
| | | 32 - T32a/32 | Terminal 31 for sender - outlet |

Contact assignment of multi-pin connector at dash panel insert



1 – T8c/1	Brake wear warning light
2 – T8c/2	Not assigned
3 – T8c/3	Not assigned
4 – T8c/4	Right parking light
5 – T8c/5	Terminal 15 - input
6 – T8c/6	Left parking light
7 – T8c/7	Terminal 30 - input
8 – T8c/8	Terminal 31 - input

Control of warning lights in dash panel insert

Warning light	Signal source
Main beam warning light (K1)	T32a/2
Alternator warning light (K2)	CAN BUS (electrical system control unit)
Oil pressure warning light (K3)	T32a/23
Brake fluid level warning light (K7)	T32a/22, CAN BUS (ABS control unit)
Handbrake warning light (K7)	T32a/21
Rear fog light warning light (K13)	T32a/18
Fog light warning light (K17)	T32a/19
Trailer operation warning light (K18)	CAN BUS (electrical system control unit)
Seat belt warning system warning light (K19)	T32a/20, CAN BUS (airbag control unit)
Coolant temperature warning light (K28)	CAN BUS (engine control unit)
Low coolant level warning light (K28)	T32a/16
Glow period warning light (K29)	CAN BUS (engine control unit)
Brake wear warning light (K32)	T8c/1
ABS warning light (K47)	CAN BUS (ABS control unit)

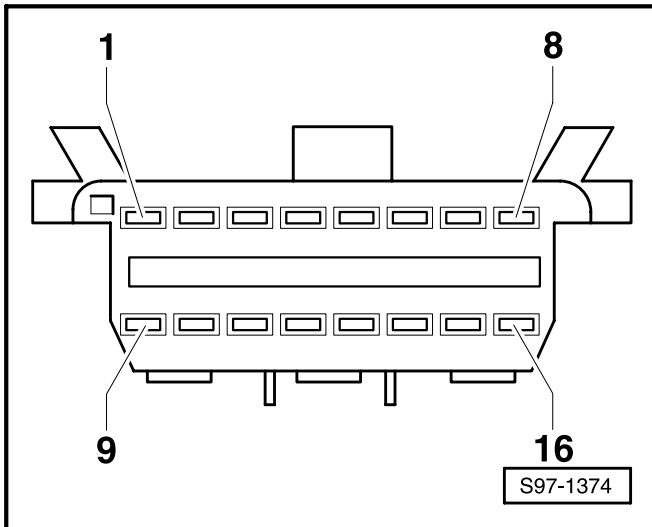
Actuation of warning lights in dash panel insert

Warning light	Signal source
Low beam warning light (K60)	T32a/3
Left turn signal warning light (K65)	CAN databus (vehicle electrical system control unit)
Airbag warning light (K75)	CAN databus (airbag control unit)
Exhaust warning light (K83)	CAN databus (engine control unit)
TCS warning light (K86)/ESP warning light (K155)	CAN databus (ABS/TCS/ESP control unit)
Power steering warning light (K92)	CAN databus (vehicle electrical system control unit)
Right turn signal warning light (K94)	CAN databus (vehicle electrical system control unit)
Fuel reserve warning light (K105)	T32a/15
Low washer fluid level warning light (K106)	T32a/30
Immobiliser warning light (K117)	Immobiliser control unit
Electronic power control fault lamp (K132)	CAN databus (engine control unit)
Door open warning light (K166)	CAN databus (vehicle electrical system control unit)
Tailgate unlocked warning light (K116)	CAN databus (vehicle electrical system control unit)
Bulb failure warning light (K170)	T32a/13, 29

Control of gauges/instruments in dash panel insert

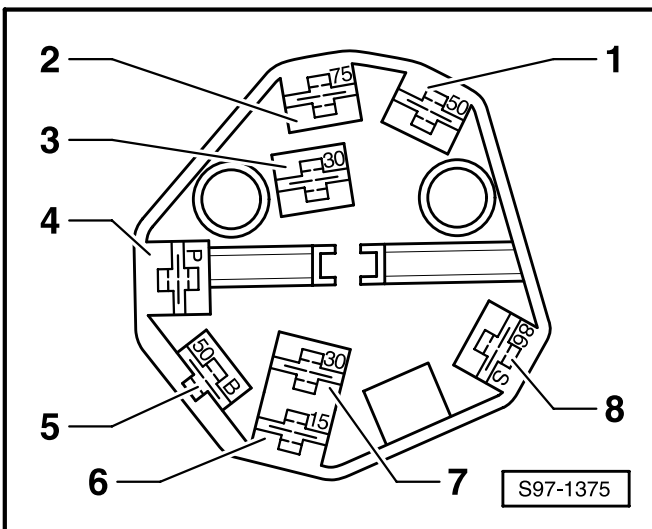
Gauge/Instrument	Signal source
Fuel gauge (G1)	T32a/15
Coolant temperature gauge (G3)	CAN databus (engine control unit)
Rev counter (G5)	CAN databus (engine control unit)
Speedometer (G21)	T32a/6
Buzzer/Gong (H3)	Control unit in dash panel insert
Digital clock (Y2)	Control unit in dash panel insert
Odometer display (Y4)	Control unit in dash panel insert
Multifunction display (J119)	T32a/11, 12, 27, 31, CAN databus (engine control unit), control unit in dash panel insert
Selector lever position display (Y6)	CAN databus (automatic gearbox control unit)

Contact assignment of multi-pin connector for diagnosis socket



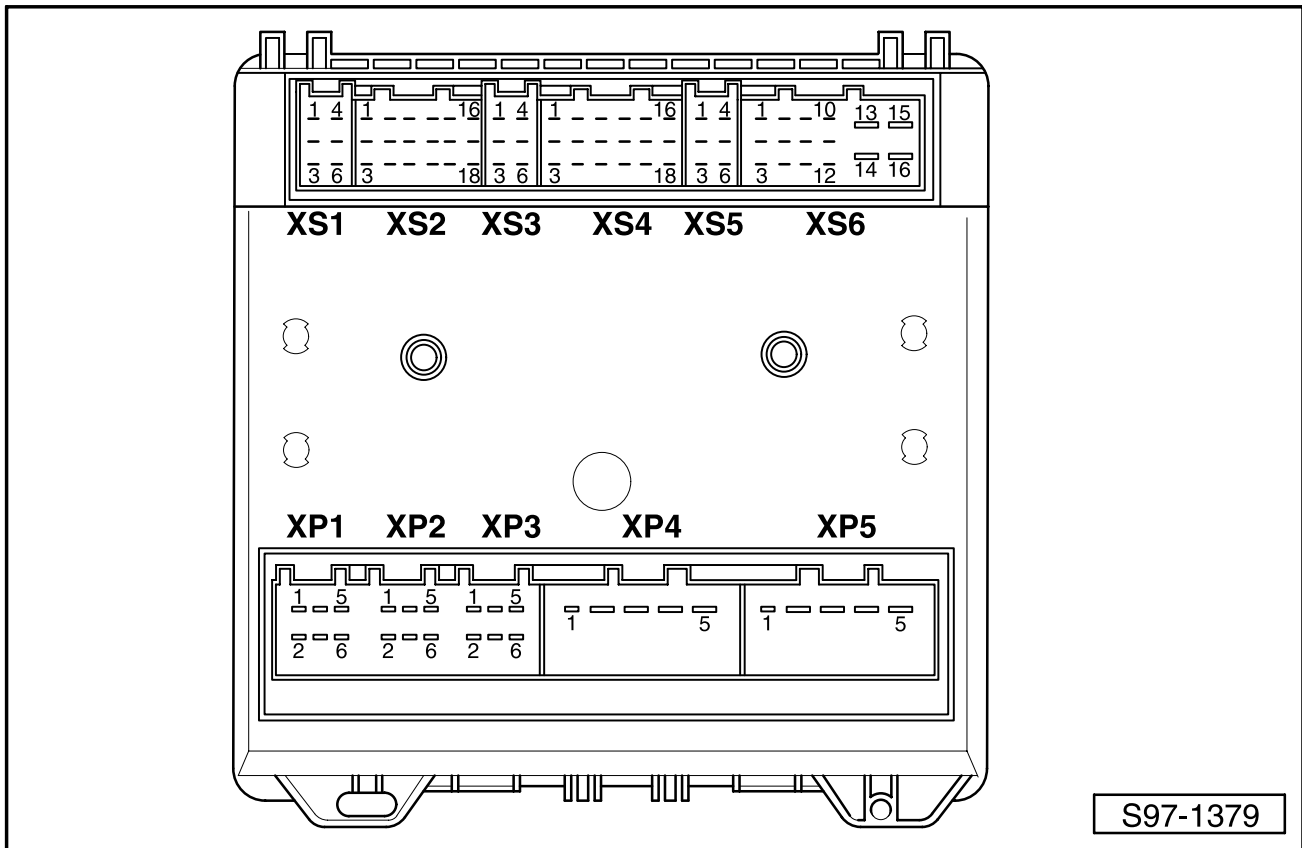
- 4 – T16b/4 Terminal 31
- 6 – T16b/6 CAN H (engine, switched)
- 7 – T16b/7 K diagnosis line
- 14 – T16b/14 CAN L (engine, switched)
- 16 – T16b/16 Terminal 30

Contact assignment of multi-pin connector at ignition/starter switch



- 1 – T8a/50
- 2 – T8a/75
- 3 – T8a/30
- 4 – T8a/P
- 5 – T8a/50b
- 6 – T8a/15
- 7 – T8a/30
- 8 – T8a/86s

Connector positions and contact assignment of the multi-pin connectors on the vehicle voltage control unit



- XS1 - T6c Connector, 6-pin (black)
- XS2 - T18b Connector, 18-pin (black)
- XS3 - T6y Connector, 6-pin (brown)
- XS4 - T18a Connector, 18-pin (brown)
- XS5 - T6k Connector, 6-pin (red)
- XS6 - T16a Connector, 16-pin (black)

- XP1 - T6o Connector, 6-pin (black)
- XP2 - T6j Connector, 6-pin (brown)
- XP3 - T6x Connector, 6-pin (red)
- XP4 - T5a Connector, 5-pin (black)
- XP5 - T5c Connector, 5-pin (brown)

Signal description on vehicle voltage control unit

Connector		Signal
XS1	T6c/1	Input of light switch (for headlight washer system)
	T6c/2	Input of regulator for lighting - switches and instruments (58b)
	T6c/3	Output of warning lamp + lighting for hazard warning light push-button
	T6c/4	Input of heated rear window push-button (31)
	T6c/5	Output of heated rear window warning lamp
	T6c/6	Input of hazard warning light push-button (31)
XS2	T18b/1	Output for selector lever lock
	T18b/2	Output (release) for control unit for adjusting the sliding roof (15)
	T18b/3	Output (block) for heated driver seat control unit
	T18b/4	
	T18b/5	
	T18b/6	
	T18b/7	
	T18b/8	
	T18b/9	CAN-L, convenience
	T18b/10	Output (block) for heated front passenger seat control unit
	T18b/11	
	T18b/12	CAN-H, convenience
	T18b/13	Input of multi-function switch for automatic transmission (31)
	T18b/14	Output of relay for headlight washer system
	T18b/15	
	T18b/16	
	T18b/17	Output of relay for starter interlock switch
	T18b/18	
XS3	T6Y/1	
	T6Y/2	Input of CCS switch (Off)
	T6Y/3	Input of CCS switch (On/Off)
	T6Y/4	
	T6Y/5	Input of CCS switch (support/accelerate)
	T6Y/6	Input of CCS switch (set)

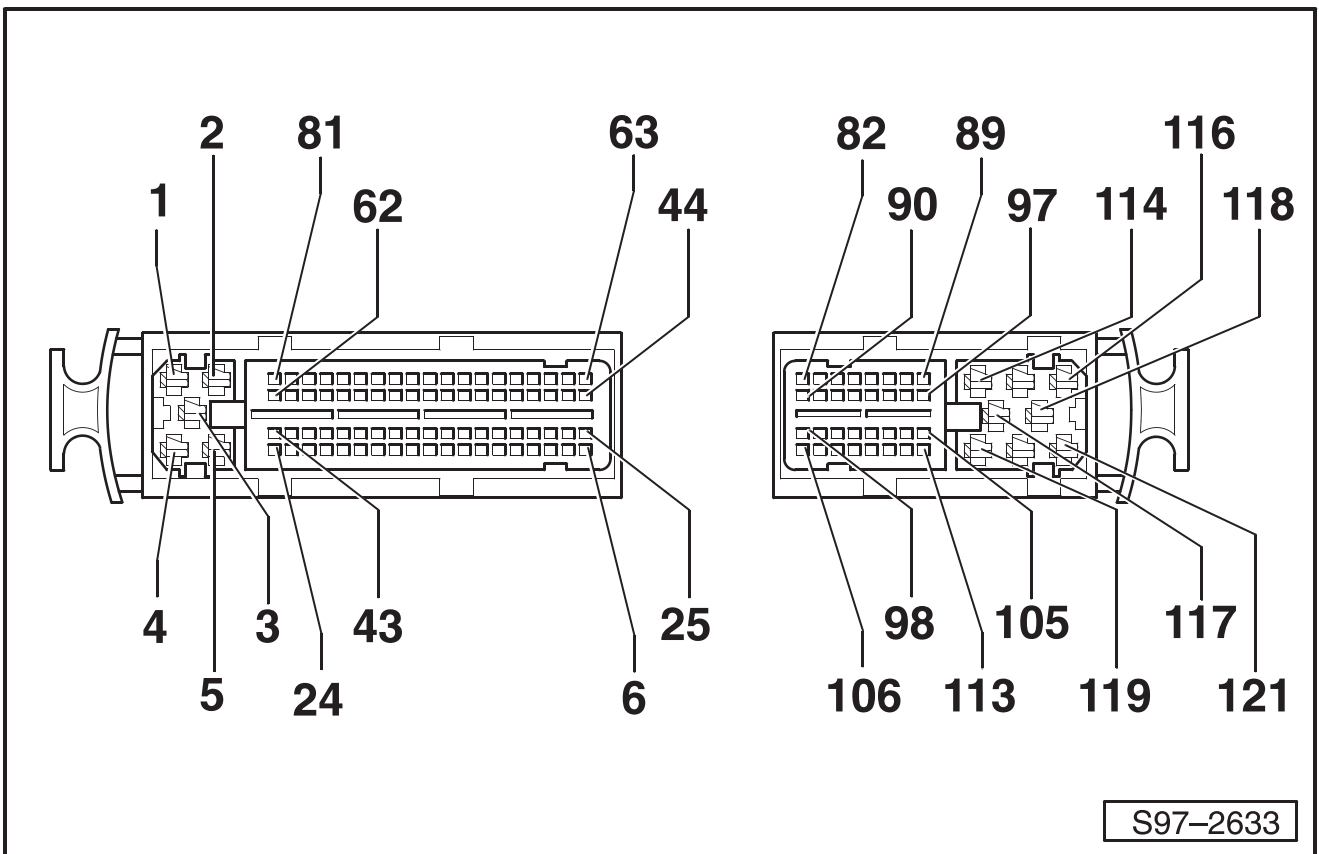
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Connector		Signal
XS4	T18a/1	K-wire
	T18a/2	Input of ignition starter switch (86s)
	T18a/3	Input of door contact switch rear right (31)
	T18a/4	Input of door contact switch front right (31)
	T18a/5	Input of fuse in fuse holder on battery (30 analogous)
	T18a/6	Input of door contact switch front left (31)
	T18a/7	
	T18a/8	Input (31 analogous)
	T18a/9	Input of AC generator (D+)
	T18a/10	
	T18a/11	Input of ignition starter switch (75)
	T18a/12	Input of ignition starter switch (15)
	T18a/13	Input of door contact switch left right (31)
	T18a/14	Input of ignition starter switch (50)
	T18a/15	Input of windscreen wiper switch, output for rear window wiper motor
	T18a/16	Input of castor contact of windscreen wiper motor
	T18a/17	Input for actuating the horn (31)
	T18a/18	Input of regulator for the windscreen wiper interval switching
XS5	T6k/1	
	T6k/2	
	T6k/3	Input of central locking switch, in tailgate lock (31)
	T6k/4	Input of luggage compartment lighting switch, in tailgate lock
	T6k/5	
	T6k/6	Input of press-button for unlocking the tailgate flap grip (31)
XS6	T16a/1	
	T16a/2	CAN-L, switched
	T16a/3	CAN-L
	T16a/4	
	T16a/5	CAN-H
	T16a/6	CAN-H, switched
	T16a/7	Input of windscreen wiper switch (1st stage)
	T16a/8	Input of windscreen wiper switch (2nd stage)
	T16a/9	Input of windscreen wiper switch (Intermittent wiping) (up to 06.01) Output for fuel feed relay (31) (as of 07.01)
	T16a/10	Input of turn signal switch (left turn signal) (31)

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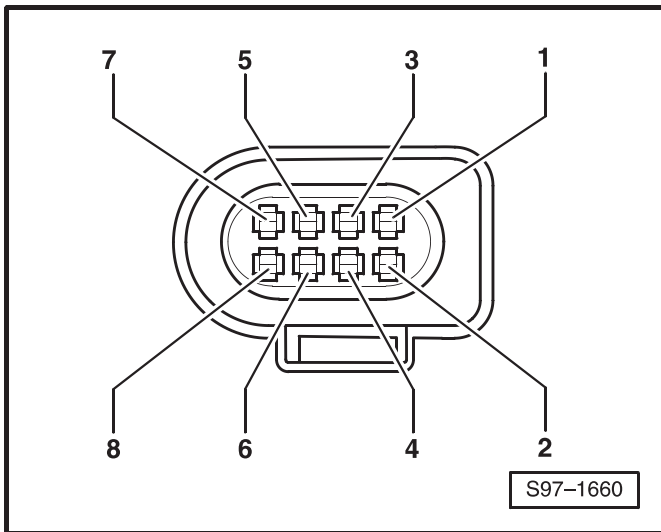
Plug connection		Signal
XS6	T16a/11	Output for dash panel insert (wake up)
	T16a/12	Input from turn signal switch (right turn signal) (31)
	T16a/13	Input from bonnet contact switch (31)
	T16a/14	Output for right turn signal light
	T16a/15	Input from fuse 44a (30)
	T16a/16	Output for left turn signal light
XP1	T6o/1	Input from fuse 13a (15) (only models with automatic gearbox)
	T6o/2	Input from reversing lights switch (does not apply to models with automatic gearbox), output for reversing lights (only on models with automatic gearbox)
	T6o/3	
	T6o/4	
	T6o/5	Output for tailgate central locking motor
	T6o/6	Input from fuse 31a (30)
XP2	T6j/1	Input from fuse 43a (30)
	T6j/2	
	T6j/3	
	T6j/4	Input from fuse 4a (30)
	T6j/5	
	T6j/6	Output for interior light, luggage compartment light, glove box light (30a)
XP3	T6x/1	Input from exterior mirror heater pushbutton
	T6x/2	Output for left heated exterior mirror
	T6x/3	
	T6x/4	Output for right heated exterior mirror
	T6x/5	
	T6x/6	Input from fuse 38a (30)
XP4	T5a/1	Output for front interior light (31)
	T5a/2	Input (31)
	T5a/3	Input from fuse 41a (30)
	T5a/4	Output for windshield wiper motor (stage 1)
	T5a/5	Output for windshield wiper motor (stage 2)
XP5	T5c/1	Input from windshield wiper motor (31) (brake application)
	T5c/2	Output for horn
	T5c/3	Input from fuse 40a (30)
	T5c/4	Output for heated rear window
	T5c/5	Input from fuse 39a (30)

Contact assignment of multipin connector on the engine control units



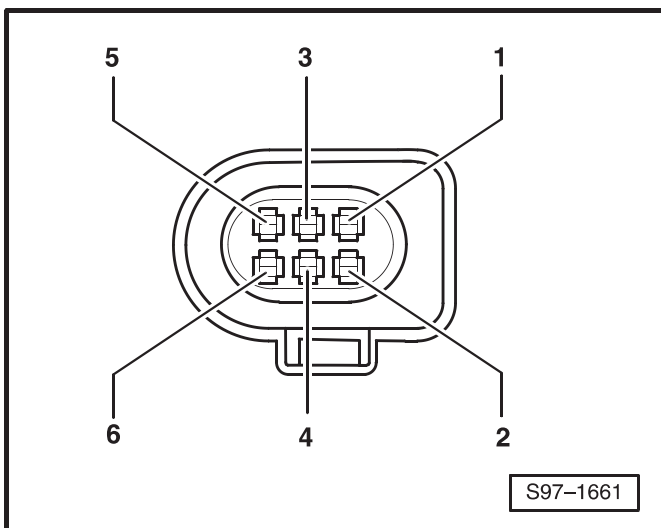
Note: Exact contact assignment see corresponding Current Flow Diagram.

Contact assignment of connector of central locking locking unit, driver side T8f and passenger side T8g



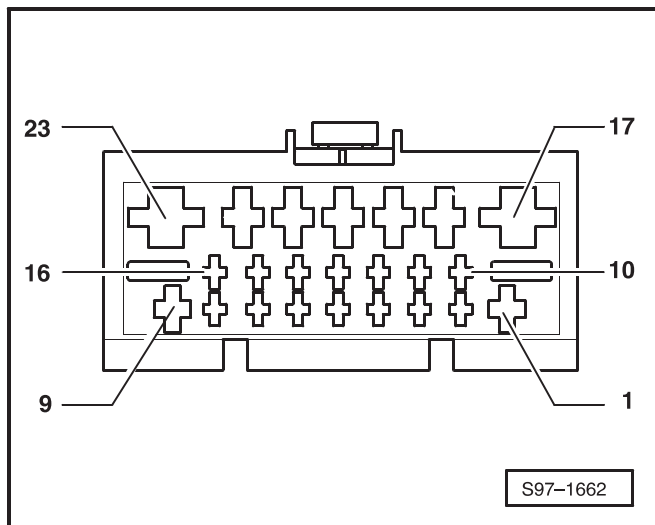
- | | | |
|---|-------------------------|---|
| 1 | - T8f/1
and
T8g/1 | Central locking motor |
| 2 | - T8f/2
and
T8g/2 | Central locking motor |
| 3 | - T8f/3
and
T8g/3 | vacant |
| 4 | - T8f/4
and
T8g/4 | Closing (no resistance),
opening (resistance 180 Ω) |
| 5 | - T8f/5
and
T8g/5 | Feedback for -closed- (no
resistance), feedback for -closed
with Safe- (resistance 180 Ω) |
| 6 | - T8f/6
and
T8g/6 | vacant |
| 7 | - T8f/7
and
T8g/7 | Earth |
| 8 | - T8f/8
and
T8g/8 | Door contact switch earth |

Contact assignment of connector for central locking locking unit, rear left T6c and rear right T6d



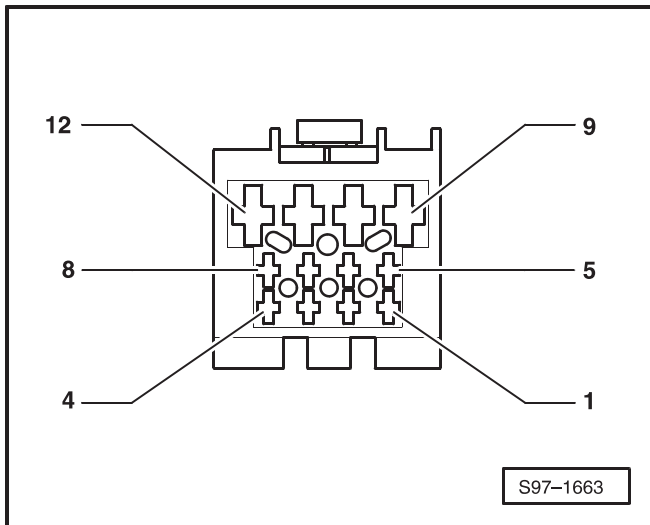
- | | | |
|---|-------------------------|---|
| 1 | - T6c/1
and
T6d/1 | Central locking motor |
| 2 | - T6c/2
and
T6d/2 | Central locking motor |
| 3 | - T6c/3
and
T6d/3 | Feedback for -closed- (no
resistance), feedback for -closed
with Safe- (resistance 180 Ω) |
| 4 | - T6c/4
and
T6d/4 | vacant |
| 5 | - T6c/5
and
T6d/5 | Earth |
| 6 | - T6c/6
and
T6d/6 | Door contact switch earth |

Contact assignment of connector for convenience system central control unit J393, 23-pin connector



- | | |
|--------------|---|
| 1 - T23a/1 | Central locking motor, driver side |
| 2 - T23a/2 | Confirmation for -closed- (without resistor), confirmation for -closed with Safe- (with 180 Ω resistor), passenger side |
| 3 - T23a/3 | Relay for warning lights, doors (only on models with door warning lights) |
| 4 - T23a/4 | Central locking indicator light in driver door |
| 5 - T23a/5 | Closing (without resistor), opening (with 180 Ω resistor), passenger side |
| 6 - T23a/6 | Closing (without resistor), opening (with 180 Ω resistor), driver side |
| 9 - T23a/9 | Confirmation for -closed- (without resistor), confirmation for -closed with Safe- (with 180 Ω resistor), driver side |
| 10 - T23a/10 | Convenience databus CAN Low |
| 11 - T23a/11 | Convenience databus CAN High |
| 12 - T23a/12 | Sliding roof adjustment control unit (actuation) |
| 13 - T23a/13 | K diagnosis cable connection |
| 17 - T23a/17 | Earth |
| 19 - T23a/19 | Central locking motor, passenger side |
| 21 - T23a/21 | Central locking motor, passenger side |
| 22 - T23a/22 | Central locking motor, driver side |
| 23 - T23a/23 | Positive connection 30a, through fuse SB49 |

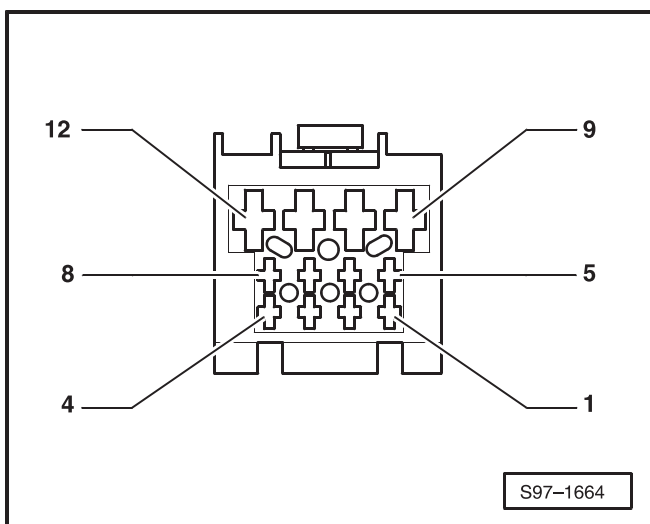
Contact assignment of connector of convenience system central control unit J393, 12-pin connector (black)



- 1 – T12c/1 Feedback for -closed- (no resistance), feedback for -closed with Safe- (resistance 180 Ω), rear right
- 3 – T12c/3 Feedback for -closed- (no resistance), feedback for -closed with Safe- (resistance 180 Ω), rear left
- 9 – T12c/9 Central locking motor, rear right
- 10 – T12c/10 Central locking motor, rear left
- 11 – T12c/11 Central locking motor, rear right
- 12 – T12c/12 Central locking motor, rear left

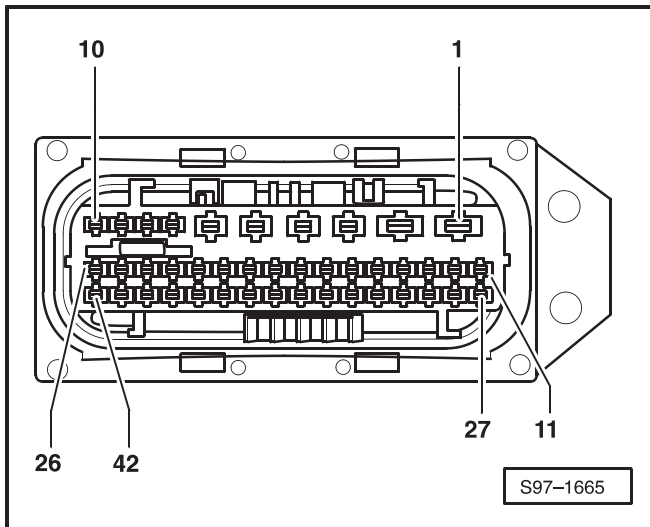
Contact assignment of connector of convenience system central control unit J393, 12-pin connector, only on models with remote control for central locking or with anti-theft alarm (brown)

No connector is plugged in on models not fitted with anti-theft alarm.



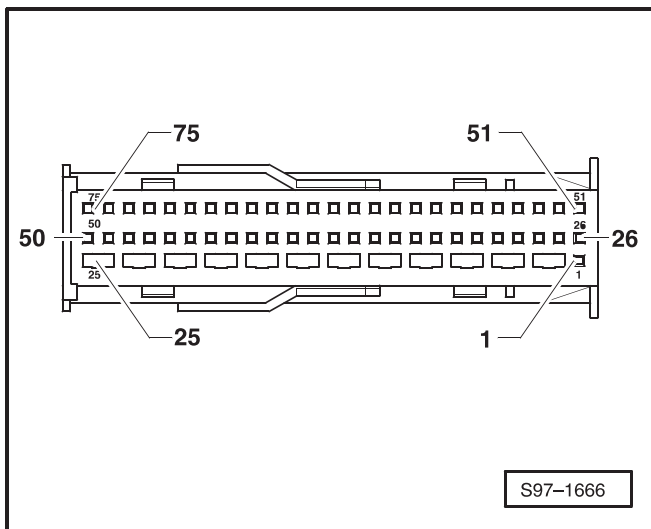
- 1 – T12i/1 Interior motion sensor
- 2 – T12i/2 Interior motion sensor
- 6 – T12i/6 Alarm horn
- 8 – T12i/8 Interior motion sensor
- 10 – T12i/10 Positive connection 30a, through fuse SB60
- 11 – T12i/11 Plug connection T6v/4, at left of bulkhead

Contact assignment of connector of control unit for ABS/ABS with EDL and TCS/ESP



- | | | | |
|--------------|---|--------------|---|
| 1 - T42a/1 | Earth | 14 - T42a/14 | Left rear wheel speed sensor |
| 2 - T42a/2 | Positive connection 30, through fuse S178 | 15 - T42a/15 | Right front wheel speed sensor |
| 5 - T42a/5 | Earth | 16 - T42a/16 | Right front wheel speed sensor |
| 6 - T42a/6 | Positive connection 30, through fuse S179 | 19 - T42a/19 | Signal for navigation system control unit |
| 8 - T42a/8 | Lateral acceleration and yaw rate sender | 21 - T42a/21 | Lateral acceleration and yaw rate sender, steering angle sender |
| 9 - T42a/9 | Lateral acceleration and yaw rate sender | 23 - T42a/23 | Positive connection 15a, through fuse SB25 |
| 10 - T42a/10 | Lateral acceleration and yaw rate sender | 24 - T42a/24 | CAN databus High |
| 12 - T42a/12 | Left front wheel speed sensor | 25 - T42a/25 | Brake pressure sender -1- |
| 13 - T42a/13 | Left rear wheel speed sensor | 26 - T42a/26 | Brake pressure sender -1- |
| | | 27 - T42a/27 | TCS/ESP switch |
| | | 28 - T42a/28 | Left front wheel speed sensor |
| | | 30 - T42a/30 | Right rear wheel speed sensor |
| | | 31 - T42a/31 | Right rear wheel speed sensor |
| | | 32 - T42a/32 | Brake light switch |
| | | 34 - T42a/34 | Signal for navigation system control unit |
| | | 37 - T42a/37 | Brake pedal switch |
| | | 38 - T42a/38 | Handbrake indicator switch |
| | | 39 - T42a/39 | Lateral acceleration and yaw rate sender, steering angle sender |
| | | 40 - T42a/40 | CAN databus Low |
| | | 41 - T42a/41 | Lateral acceleration and yaw rate sender |
| | | 42 - T42a/42 | Brake pressure sender -1- |

Contact assignment of connector of airbag control unit



- 26 – T75a/26 Positive connection 15
- 27 – T75a/27 Side airbag igniter, passenger side
- 28 – T75a/28 Side airbag igniter, passenger side
- 29 – T75a/29 Side airbag igniter, driver side
- 30 – T75a/30 Side airbag igniter, driver side
- 31 – T75a/31 Airbag igniter, passenger side
- 32 – T75a/32 Airbag igniter, passenger side
- 33 – T75a/33 Airbag igniter, driver side, through coil spring contact in steering wheel
- 34 – T75a/34 Airbag igniter, driver side, through coil spring contact in steering wheel
- 41 – T75a/41 Belt tensioner igniter, driver side
- 42 – T75a/42 Belt tensioner igniter, driver side
- 43 – T75a/43 Belt tensioner igniter, passenger side
- 44 – T75a/44 Belt tensioner igniter, passenger side
- 51 – T75a/51 Earth
- 70 – T75a/70 Crash sensor for side airbag, driver side
- 71 – T75a/71 Crash sensor for side airbag, passenger side
- 74 – T75a/74 CAN-High databus
- 75 – T75a/75 CAN-Low databus