

## 00 – General, Technical Data

### 1 Safety Precautions

(Edition 01.2014)

⇒ [“1.1 High Voltage Vehicles Safety Precautions”, page 1](#)

⇒ [“1.2 Start/Stop System Safety Precautions”, page 7](#)

⇒ [“1.3 Road Test with Testing Equipment Safety Precautions”, page 7](#)

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#### 1.1 High Voltage Vehicles Safety Precautions

⇒ [“1.1.1 High Voltage Vehicles Safety Precautions”, page 1](#)

⇒ [“1.1.2 High Voltage Components and Cables, Checking for Damage”, page 5](#)

##### 1.1.1 High Voltage Vehicles Safety Precautions



#### WARNING

*Danger of unintended engine ignition*

*Turn off the ignition and remove the ignition key from the vehicle interior for all work performed on the high voltage vehicle.*



#### WARNING

*Working with high voltage cables:*

- *Do not support yourself or any tool on the high voltage cables or components. This could damage the insulation.*
- *Do not bend the high voltage cables excessively. This could damage the insulation.*
- *The round high voltage connectors are color-coded by an exterior color ring and are mechanically coded by the guide and code tabs. Always pay attention to the coding when connecting the round high voltage connectors to prevent mechanical damage to the high voltage connectors.*

**1 - Battery**

- In the luggage compartment in the spare wheel well
- Removing and installing, refer to ⇒ ["1.2 Battery, Removing and Installing", page 17](#)

**2 - Negative Terminal Cover**

- Equipment level
- Allocation, refer to the Parts Catalog.

**3 - Positive Terminal Cover**

**4 - Nut**

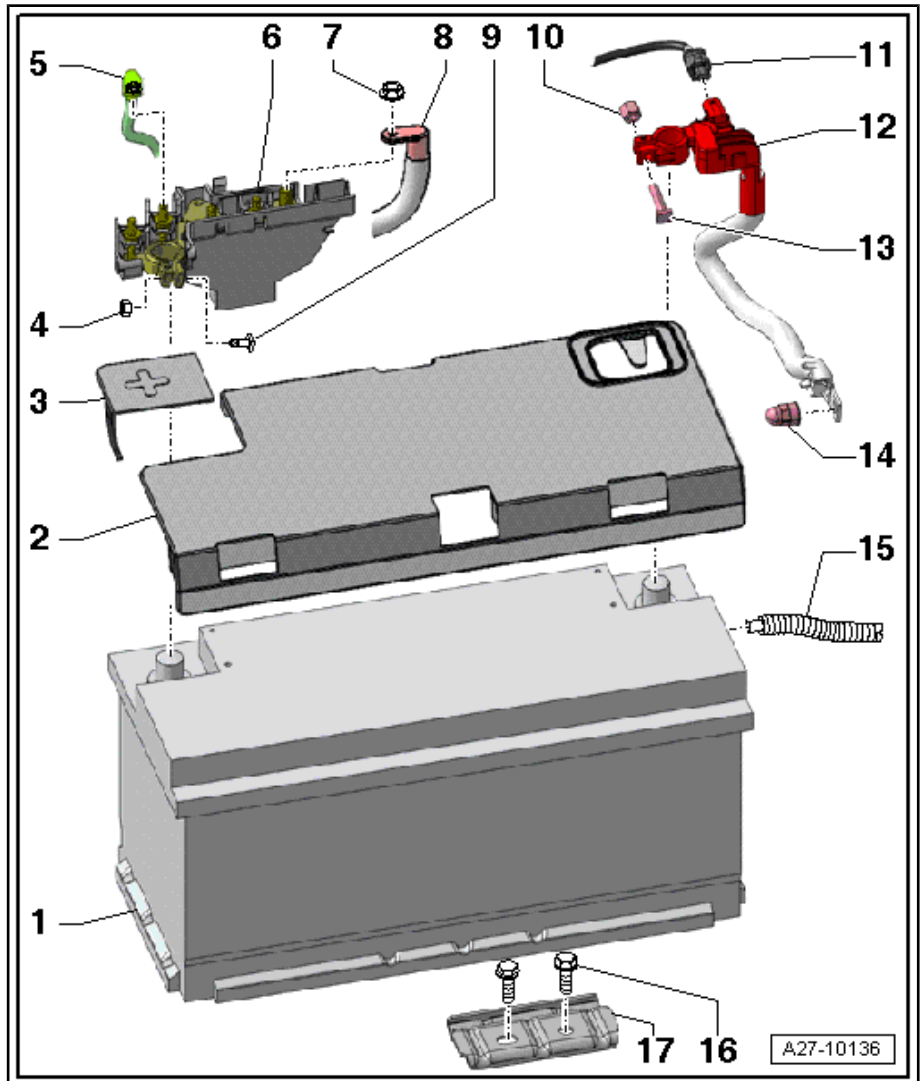
- 5 Nm

**5 - Electrical Wire**

- Tightening specification, refer to ⇒ [Fig. "Fuse Panel A - SA- tightening specification", page 356](#)
- For the relay/fuse panel, under the instrument panel on the left side

**6 - Fuse Panel A - SA-**

- Disconnecting and connecting, refer to ⇒ ["1.2 Battery, Removing and Installing", page 17](#).
- Removing and installing, refer to ⇒ ["1.9.1 Fuse Panel A SA in Luggage Compartment, Removing and Installing", page 377](#)



**7 - Nut**

- Tightening specification, refer to ⇒ [Fig. "Fuse Panel A -SA- tightening specification", page 356](#)

**8 - Positive Cable to Engine**

**9 - Bolt**

**10 - Nut**

- 5 Nm

**11 - Electrical Wire**

- For the Battery Monitoring Control Module - J367-
- Follow the sequence when connecting the ground cable, refer to ⇒ [page 29](#)

**12 - Ground Wire with Battery Monitoring Control Module - J367-**

- Disconnecting and connecting, refer to ⇒ ["1.3 Battery, Disconnecting and Connecting", page 27](#).
- Removing and installing, refer to ⇒ ["1.6 Ground Cable with Battery Monitoring Control Module J367, Removing and Installing", page 34](#)

**13 - Bolt**

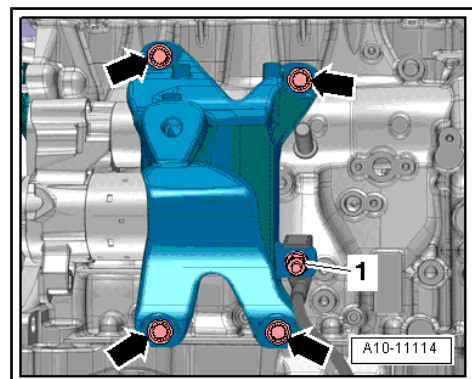
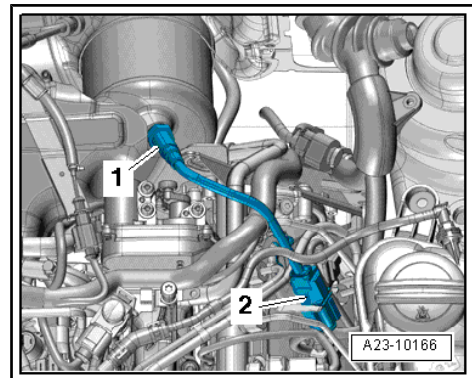
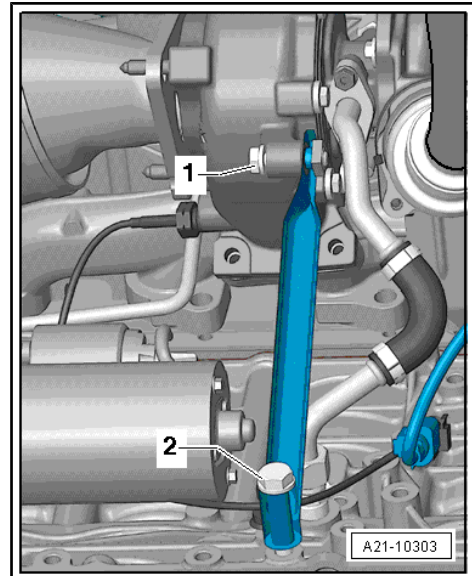
**14 - Nut**

- 18 Nm

### 3.2.3 Starter, Removing and Installing, Vehicles with 2.0L TDI Engine and Manual Transmission

#### Removing

- With the ignition switched off, disconnect the battery ground cable, refer to ⇒ "1.3 Battery, Disconnecting and Connecting", page 27 .
- Remove the tower brace, refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40 ; Suspension Strut and Upper Control Arm; Tower Brace, Removing and Installing .
- Remove the right engine mount, refer to ⇒ Rep. Gr. 10 ; Sub-frame Mount; Overview - Subframe Mount .
- Remove the bolts -1- and -2- and remove the turbocharger support.
- Remove the front exhaust pipe, refer to ⇒ Rep. Gr. 26 ; Exhaust Pipes/Mufflers; Front Exhaust Pipe, Removing and Installing .
- Remove the particulate filter and set aside, refer to ⇒ Rep. Gr. 26 ; Emissions Control; Particulate Filter, Removing and Installing .
- Remove the nut -1- and free up the ground cable on the engine support.
- Remove the bolts -arrows- and the right engine support.



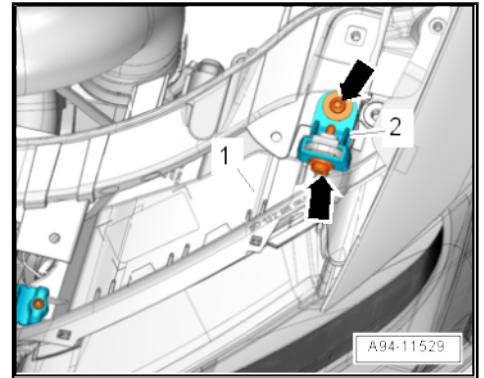
## Removing

- Remove the bolts -arrows-.
- Remove the bracket -2- upward from the headlamp housing -1-.

## Installing

- Tightening specification, refer to [⇒ "1.1.4 Overview - Headlamp, Halogen Headlamps, from MY 2013", page 136](#).

Install in reverse order of removal.



## 1.7 Headlamp, Adjusting

⇒ ["1.7.3 Halogen Headlamp, Adjusting", page 162](#)

⇒ ["1.7.4 HID Headlamp, Adjusting", page 165](#)

### 1.7.1 Halogen Headlamp, Adjusting, Rest-of-World Vehicles

- ◆ The following test and adjustment description applies to all countries.
- ◆ However, national guidelines or regulations of the country should be observed.

#### Checking and adjusting conditions

- Tire pressure is OK.
- Headlamp lenses must be clean and dry.
- Headlamps lenses must not be damaged.
- Headlamp reflectors and bulbs are OK.
- Vehicle load must be created.

Vehicle load on driver's seat in otherwise unloaded vehicle (curb weight).

- One person or 75 kg.

The curb weight is the weight of the operational vehicle with completely full fuel tank, including the weight of all equipment carried in operation.

- Fuel tank: at least 90% full.
- Equipment: for example, spare wheel, tools, vehicle jack, fire extinguisher, etc.

If the fuel tank is not at least 90% full, the load must be created as follows.

- Check fuel tank fill lever in instrument cluster tank gauge and compare with the following table. Place additional weight in the luggage compartment, if necessary.

Fuel gauge	Additional weight in kg
1/4	55
1/2	37
3/4	18
full	0

Example: if the fuel tank is half full, an additional 37 kg must be placed in the luggage compartment.

## 2.3 Overview - Rear Door Controls

⇒ [“2.3.1 Overview - Left Rear Door Controls”, page 297](#)

⇒ [“2.3.2 Overview - Right Rear Door Controls”, page 298](#)

### 2.3.1 Overview - Left Rear Door Controls

#### 1 - Left Rear Door Contact Switch - F10-

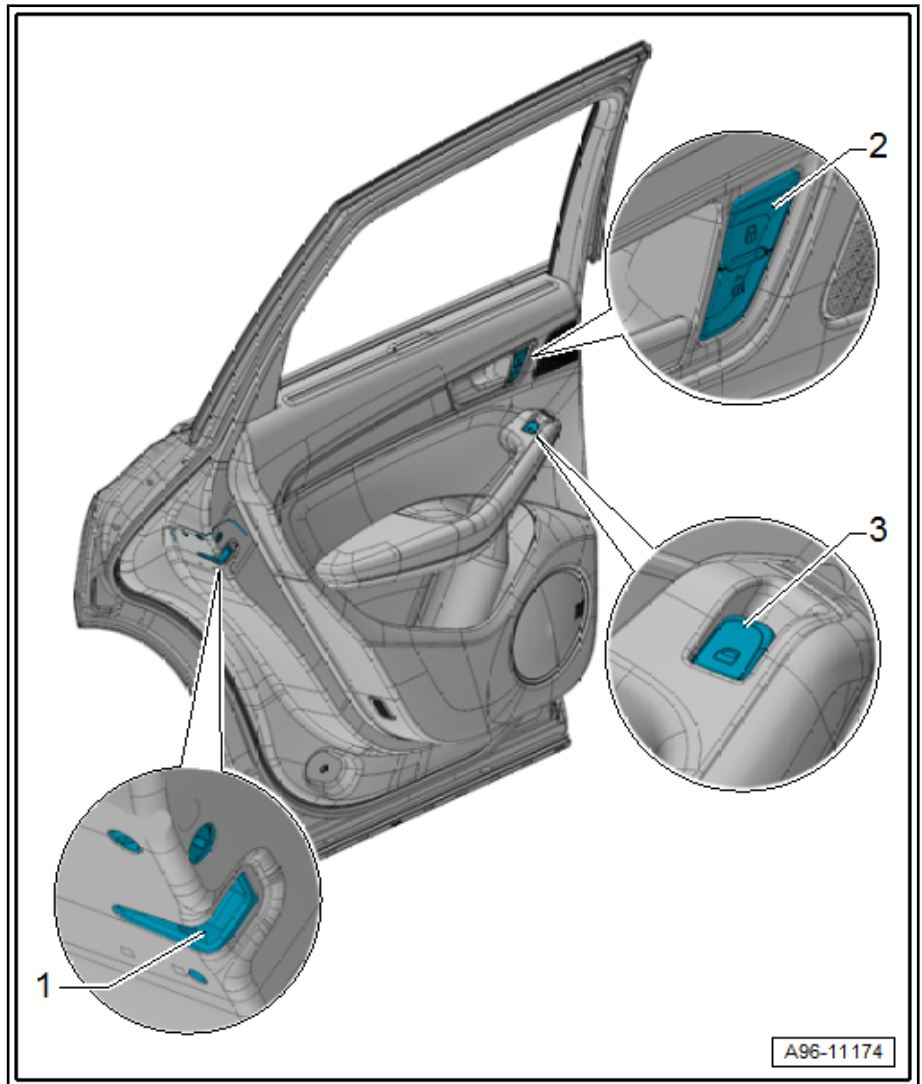
- ❑ Integrated in the door lock. Cannot be replaced separately if faulty.
- ❑ Door lock, removing and installing, refer to ⇒ [Body Exterior; Rep. Gr. 58 ; Door Components; Door Lock, Removing and Installing](#) .


#### 2 - Left Rear Interior Locking Switch - E273-

- ❑ Removing and installing, refer to ⇒ [“2.28 Left/Right Rear Interior Locking Switch E273 / E274 , Removing and Installing”, page 312](#)

#### 3 - Left Rear Power Window Switch in Left Rear Door - E52-

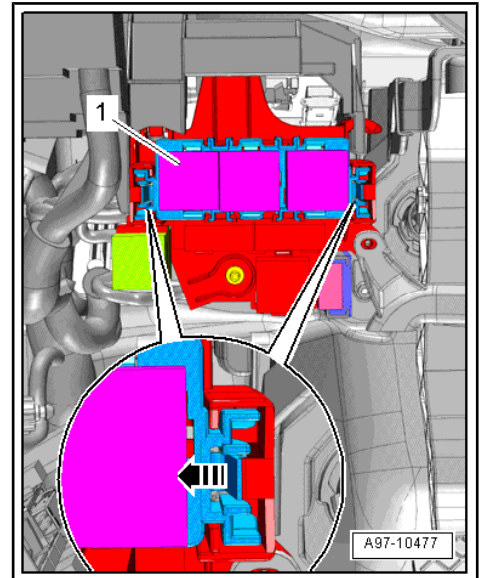
- ❑ Removing and installing, refer to ⇒ [“2.27 Left/Right Rear Power Window Switch in Left Rear Door E52 / E54 , Removing and Installing”, page 312](#)



 **WARNING**  
*Danger of unintended engine ignition*  
*Turn off the ignition and remove the ignition key from the vehicle interior for all work performed on the high voltage vehicle.*

**Removing**

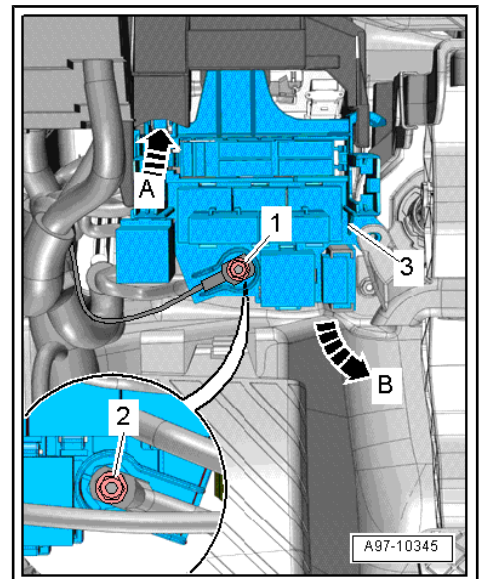
- Turn off the ignition and remove the key.
- Remove the driver side instrument panel cover, refer to ⇒ Body Interior; Rep. Gr. 68 ; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing .
- Disengage the 3-pin relay/fuse carrier by pressing the retaining springs in the direction of the -arrow- and remove the relay/ fuse carrier -1-.



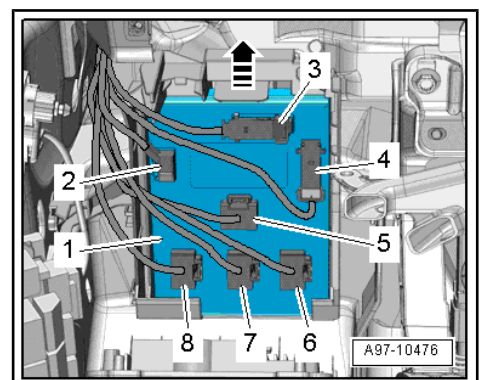
- Remove the wire -1-.
- Release the retaining spring -arrow A- and tilt the 4-pin relay/ fuse carrier -3- out of the mount -arrow B-.

 **Note**

*Disregard item-2-.*



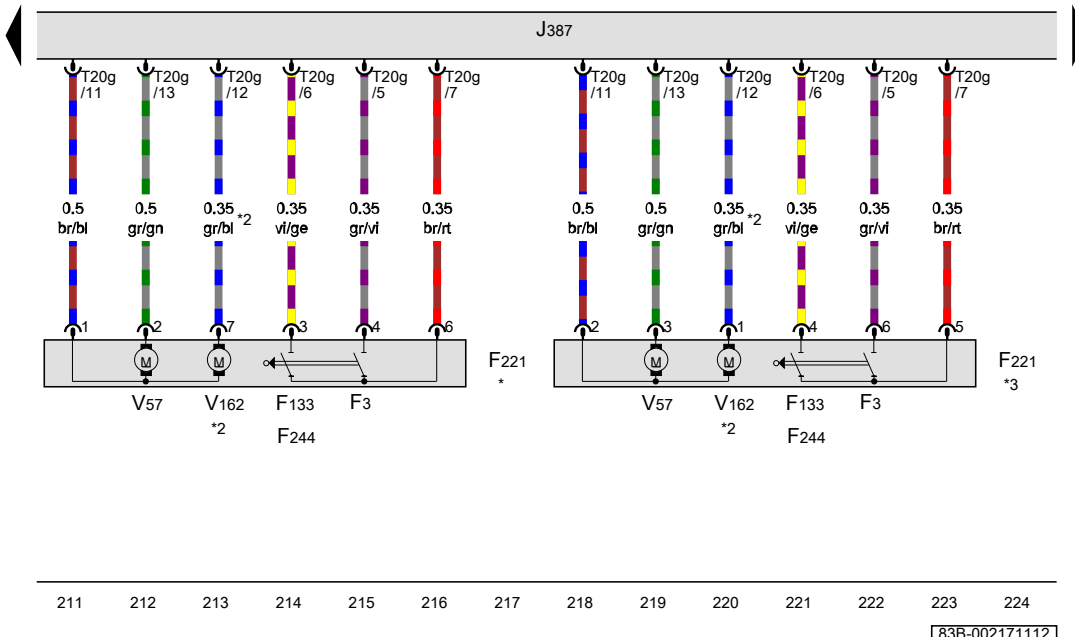
- Release the spring -arrow- and remove the Vehicle Electrical System Control Module - J519- -1- downward from the mount.
- Disconnect the connectors -2, 5, 6, 7 and 8-.
- Disconnect the connectors -3- and -4-.



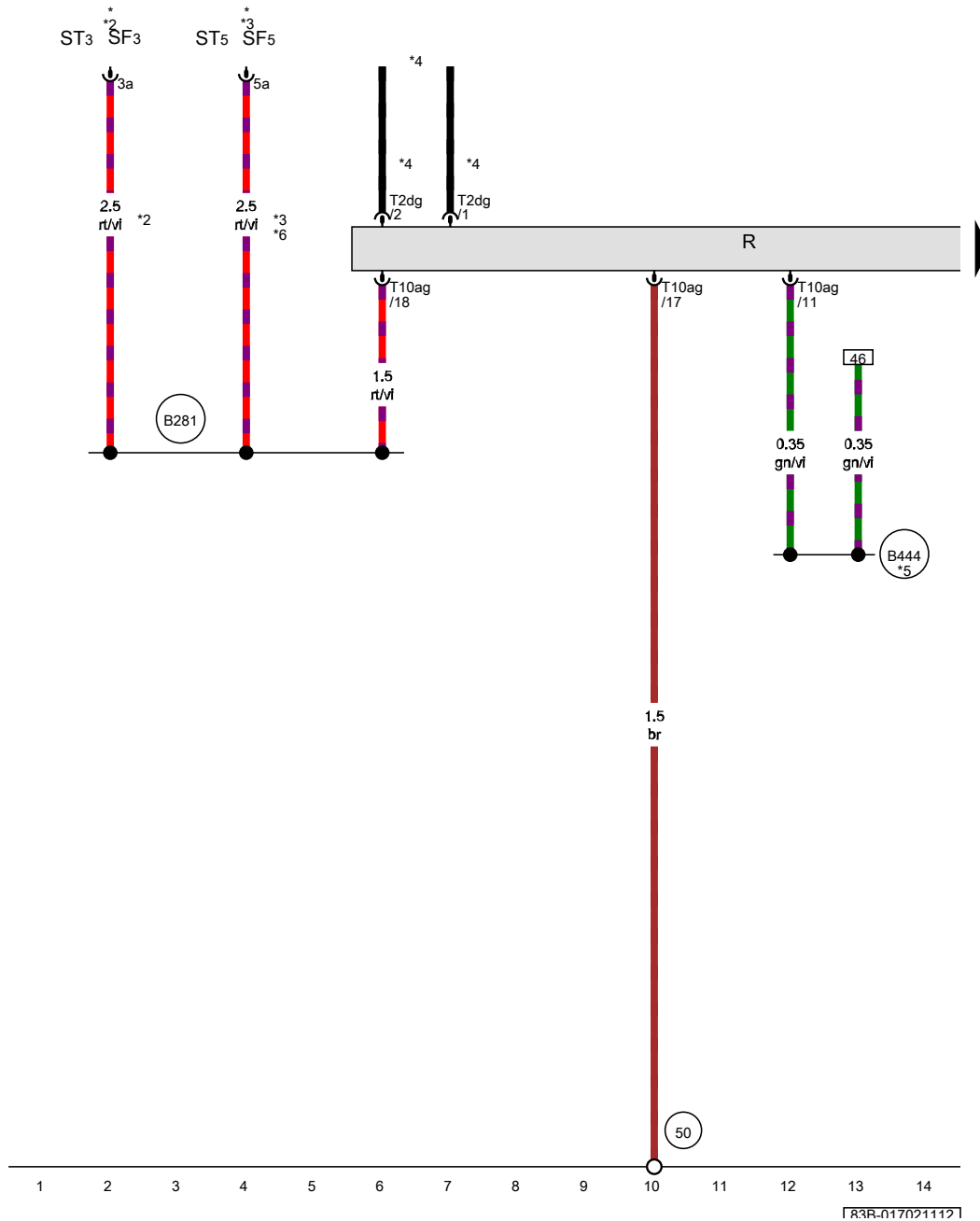
Front passenger central locking lock unit, Front passenger door control module



- F3 Front passenger door contact switch
- F133 Right front central locking system actuator
- F221 Front passenger central locking lock unit
- F244 Front passenger door central locking -SAFE- function actuator
- J387 Front passenger door control module
- T20g 20-pin connector
- V57 Front passenger door central locking system motor
- V162 Front passenger central locking -SAFE- motor
- B398 Comfort system CAN bus high connection 2 (in main wiring harness)
- B407 Comfort system CAN bus low connection 2 (in main wiring harness)
- \* Omitted as a running change
- \*2 Only for vehicles with SAFE function
- \*3 Running change



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



Radio

- R Radio
- ST3 Fuse panel 3
- SF3 Fuse 3 (on fuse panel F)
- SF5 Fuse 5 (on fuse panel F)
- ST5 Fuse panel 5
- T2dg Double connector
- T10ag 10-pin connector

- 50 Ground connection in luggage compartment, left
- B281 Positive connection 5 (15a) (in main wiring harness)
- B444 OBD connection 1 (in main wiring harness)

- \* Refer to applicable wiring diagram for fuse positions
- \*2 through April 2009
- \*3 from May 2009
- \*4 Fiber optic cable
- \*5 Refer to applicable wiring diagram for ring break diagnosis
- \*6 Diameter depends on equipment

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Defroster door motor, Right center vent motor

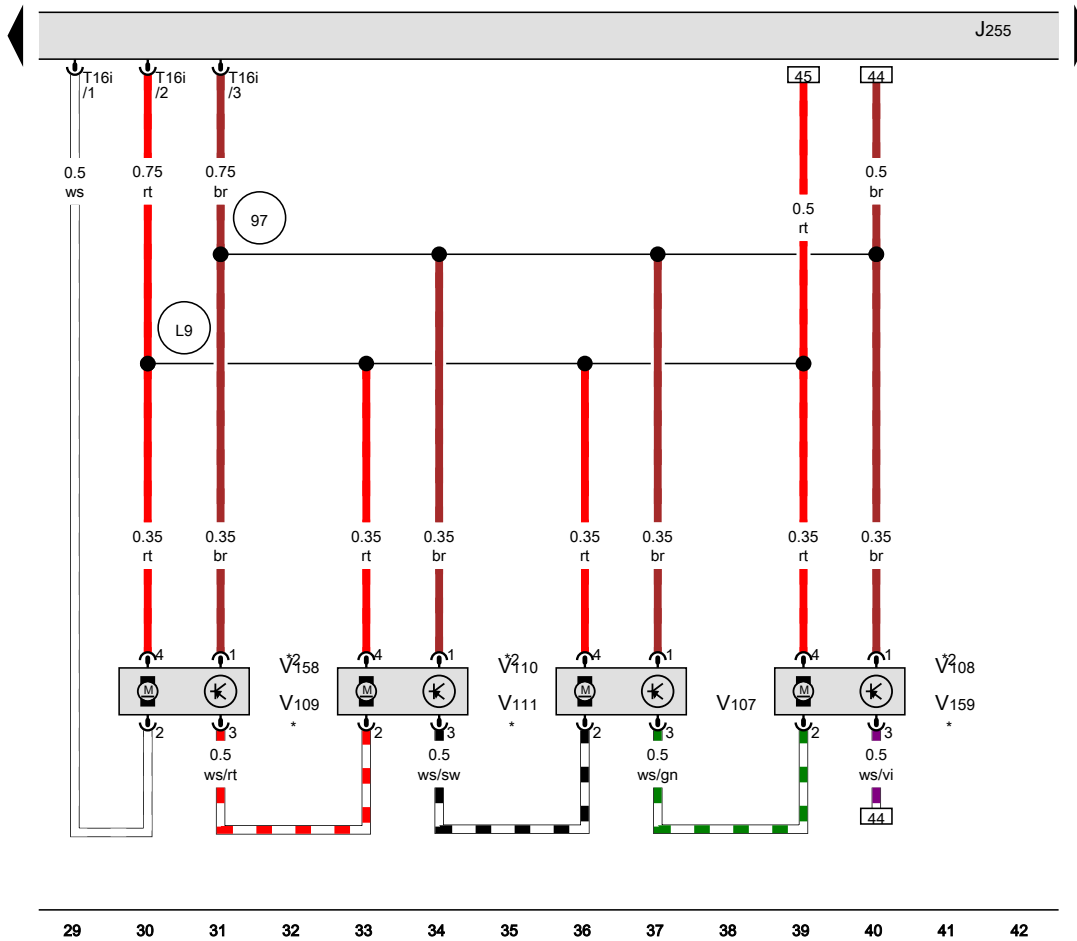
- J255 Climatronic control module
- T16i 16-pin connector
- V107 Defroster door motor
- V108 Left footwell door motor
- V109 Right footwell door motor
- V110 Left center vent motor
- V111 Right center vent motor
- V158 Left temperature door motor
- V159 Right temperature door motor

97 Ground connection 1 (in A/C wiring harness)

L9 Connection 1 (in A/C system wiring harness)

\* Only for right-hand drive vehicles

\*2 Only for left-hand drive vehicles



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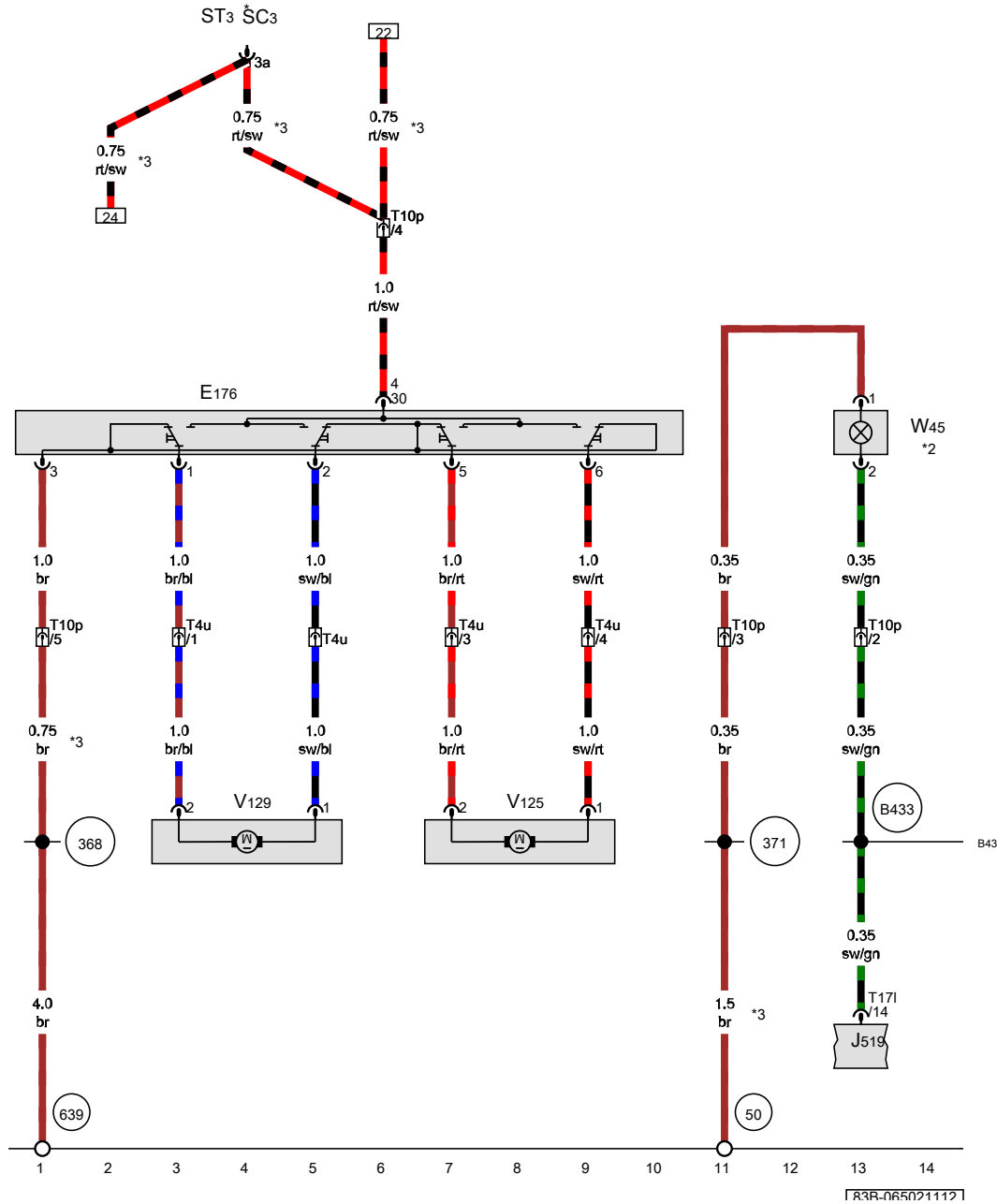
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Driver seat lumbar support curvature adjustment motor,  
Driver seat lumbar support height adjustment motor, Left  
rear footwell lamp

- E176 Driver seat lumbar support adjustment switch
- J519 Vehicle electrical system control module
- ST3 Fuse panel 3
- SC3 Fuse 3 (on fuse panel C)
- T4u 4-pin connector, in the driver seat
- T10p 10-pin connector, red
- T171 17-pin connector
- V125 Driver seat lumbar support curvature adjustment motor
- V129 Driver seat lumbar support height adjustment motor
- W45 Left rear footwell lamp

- 50 Ground connection in luggage compartment, left
- 368 Ground connection 3 (in main wiring harness)
- 371 Ground connection 6 (in main wiring harness)
- 639 Ground connection on left A-pillar
- B433 Footwell illumination connection (in main wiring harness)

- \* Refer to applicable wiring diagram for fuse positions
- \*2 Only for vehicles with footwell lamp
- \*3 Diameter depends on equipment

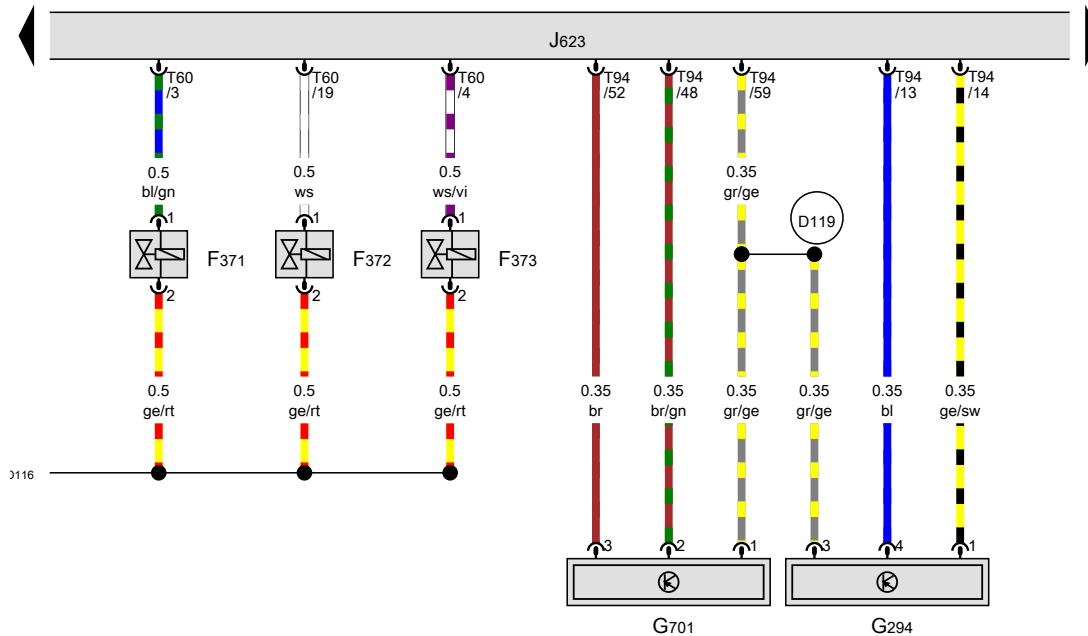


Cam adjustment actuator 6, Cam adjustment actuator 7, Cam adjustment actuator 8, Transmission neutral position sensor

- F371 Cam adjustment actuator 6
- F372 Cam adjustment actuator 7
- F373 Cam adjustment actuator 8
- G294 Brake booster pressure sensor
- G701 Transmission neutral position sensor
- J623 Engine control module
- T60 60-pin connector
- T94 94-pin connector

D116 Connection 14 (in engine compartment wiring harness)

D119 Connection 17 (in engine compartment wiring harness)



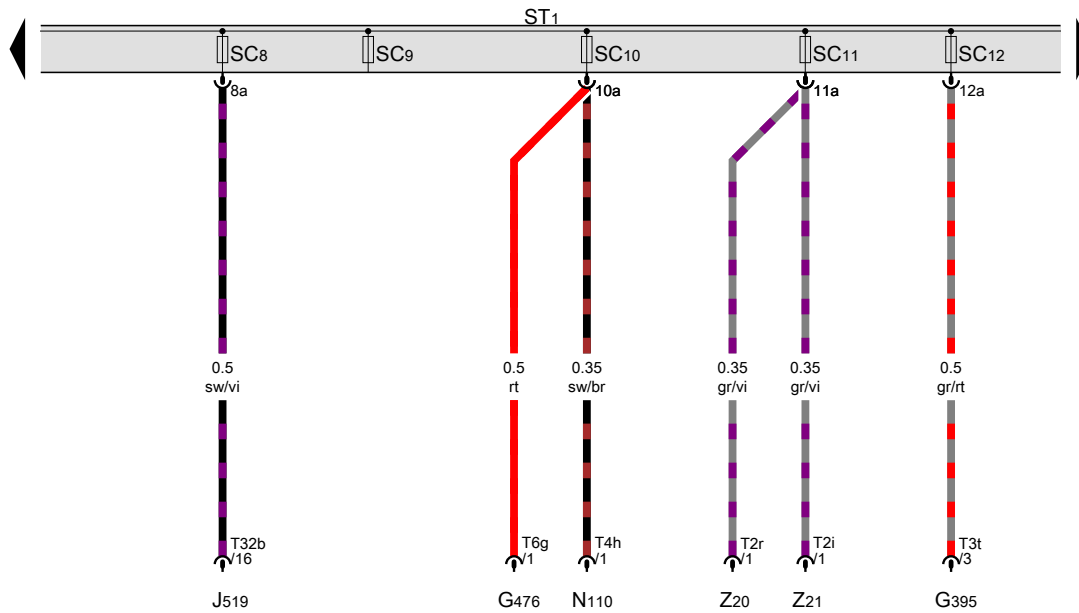
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Fuse panel 1

- G395 A/C pressure/temperature sensor
- G476 Clutch position sensor
- J519 Vehicle electrical system control module
- N110 Shift lock solenoid
- ST1 Fuse panel 1
- SC8 Fuse 8 (on fuse panel C)
- SC9 Fuse 9 (on fuse panel C)
- SC10 Fuse 10 (on fuse panel C)
- SC11 Fuse 11 (on fuse panel C)
- SC12 Fuse 12 (on fuse panel C)
- T2i Double connector
- T2r Double connector
- T3t 3-pin connector
- T4h 4-pin connector
- T6g 6-pin connector
- T32b 32-pin connector
- Z20 Left washer nozzle heater
- Z21 Right washer nozzle heater



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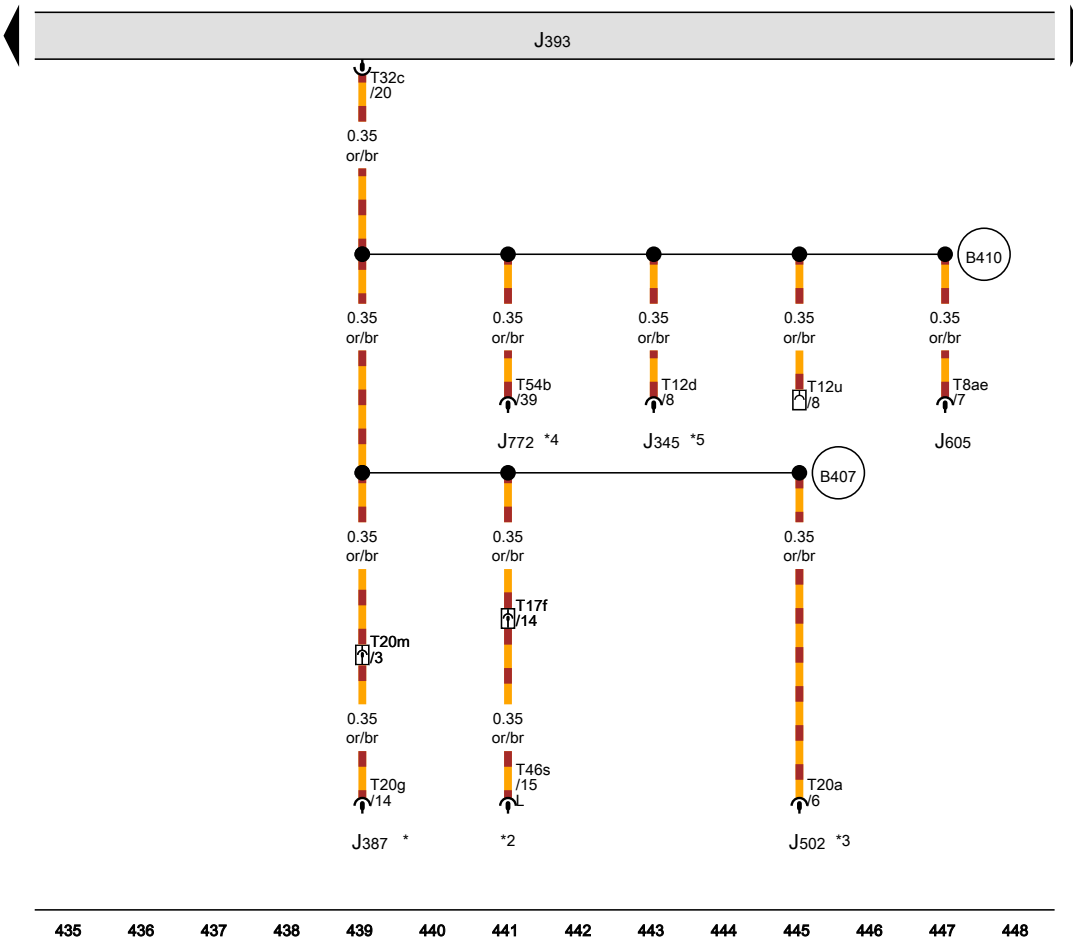
Comfort system central control module

- J345 Towing recognition control module
- J387 Front passenger door control module
- J393 Comfort system central control module
- J502 Tire pressure monitoring control module
- J605 Rear lid control module
- J772 Rearview camera system control module
- T8ae 8-pin connector
- T12d 12-pin connector
- T12u 12-pin connector, brown
- T17f 17-pin connector, brown
- T20a 20-pin connector
- T20g 20-pin connector
- T20m 20-pin connector, on the right A-pillar
- T32c 32-pin connector
- T46s 46-pin connector
- T54b 54-pin connector

**B407** Comfort system CAN bus low connection 2 (in main wiring harness)

**B410** Comfort system CAN bus low connection 5 (in main wiring harness)

- \* Refer to applicable convenience system wiring diagram
- \*2 Front passenger connection bridge, brown
- \*3 Only for vehicles with tire pressure monitoring
- \*4 Only for vehicles with a rearview camera system
- \*5 Only for vehicles with trailer socket



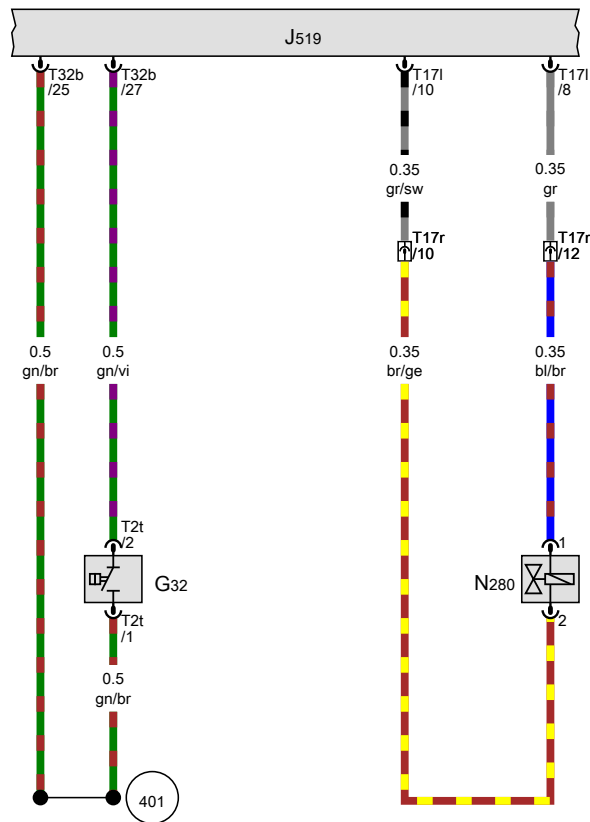
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Engine coolant level sensor, Vehicle electrical system control module

- G32 Engine coolant level sensor
- J519 Vehicle electrical system control module
- N280 A/C compressor regulator valve
- T2t 2-pin connector
- T17l 17-pin connector
- T17r 17-pin connector, white
- T32b 32-pin connector

401 Sensor ground connection (in interior wiring harness)



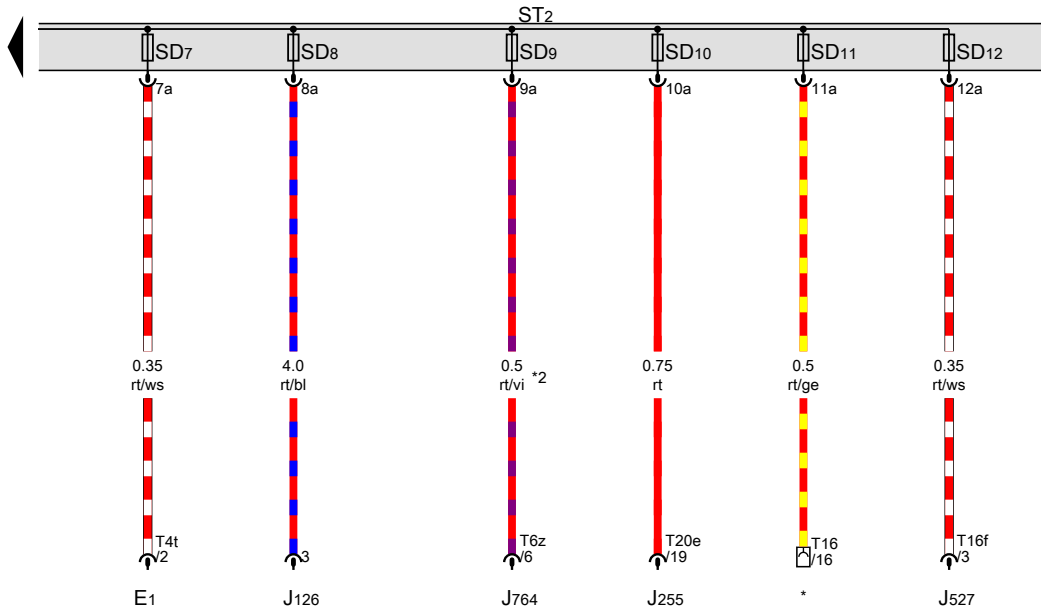
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Fuse panel 2

- E1 Light switch
- J126 Fresh air blower control module
- J255 Climatronic control module
- J527 Steering column electronics control module
- J764 Electronic steering column lock control module
- ST2 Fuse panel 2
- SD7 Fuse 7 (on fuse panel D)
- SD8 Fuse 8 (on fuse panel D)
- SD9 Fuse 9 (on fuse panel D)
- SD10 Fuse 10 (on fuse panel D)
- SD11 Fuse 11 (on fuse panel D)
- SD12 Fuse 12 (on fuse panel D)
- T4t 4-pin connector
- T6z 6-pin connector
- T16 16-pin connector
- T16f 16-pin connector
- T20e 20-pin connector
- \* Diagnostic connector
- \*2 Diameter depends on equipment



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