

Model: X5 sDrive40i

Development code: G05

Model code: CR43

Lead type: CR43

[Removing and installing/sealing or replacing the transmission oil pan](#) »

## Deactivating the 48 V electrical system

REP-TAT-P-6124-18-B47\_48V

Further information is available.

### Precondition

Ignition is switched off.

#### WARNING

**Deactivate the 12-V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that there is **no battery charger** connected to the jump start terminal in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), this absolutely must be deactivated **before** the vehicle battery is disconnected.

#### WARNING

**Deactivate the 48-V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that there is **no charger** connected to the jump start terminal in the engine compartment.

#### RISK OF DAMAGE

**Damage to the 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is**

**activated, the battery electronics will be damaged.**

- Only ever activate the 48 V electrical system when the 48 V battery is fully connected up.

## **i** TECHNICAL INFORMATION

Observe notes on the 48-V battery. See additional information 6120 ... Notes on the 48-V battery.



- Deactivate the 48 V electrical system by opening the hood.

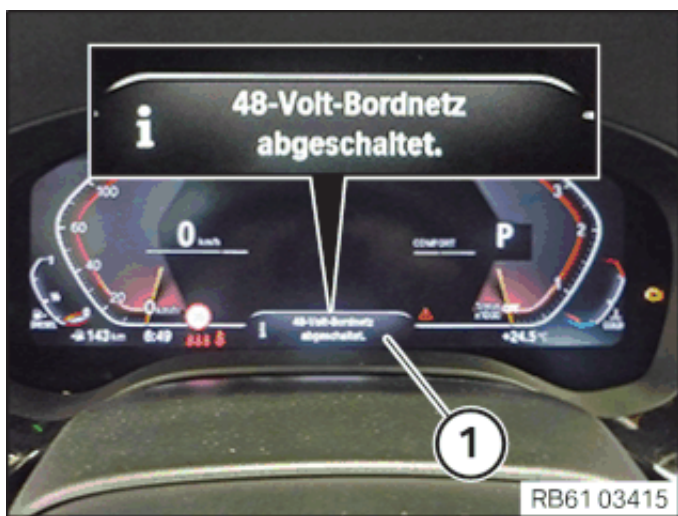
Deactivation is automatic.

## Check

### **i** TECHNICAL INFORMATION

Zero voltage (48 V electrical system switched-off) is only displayed in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check the de-energized state in the instrument cluster (KOMBI) in the PAD mode.



## Desired state

- The Check Control message "48 V electrical system." switched off (1) is displayed.

## Result

- » **Absence of voltage** cannot be specified with the Check Control message "48 V electrical system switched off." (1). Work start is not permitted.

## Measure

- Repeat the “deactivate 48 V electrical system” service function.
  - Vehicle management > service function > voltage supply > deactivate 48 V electrical system

Only if the Check Control message "48 V electrical system switched off." (1) is displayed in the instrument cluster (KOMBI), the 12V battery may be disconnected.

**Contact the technical support if the absence of voltage is not clearly given.**

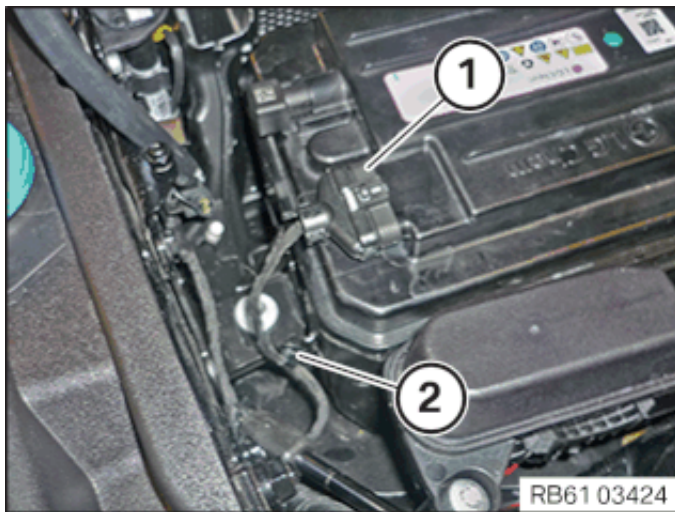
## Result

» The Check Control message reports that 48 V electrical system is switched off.

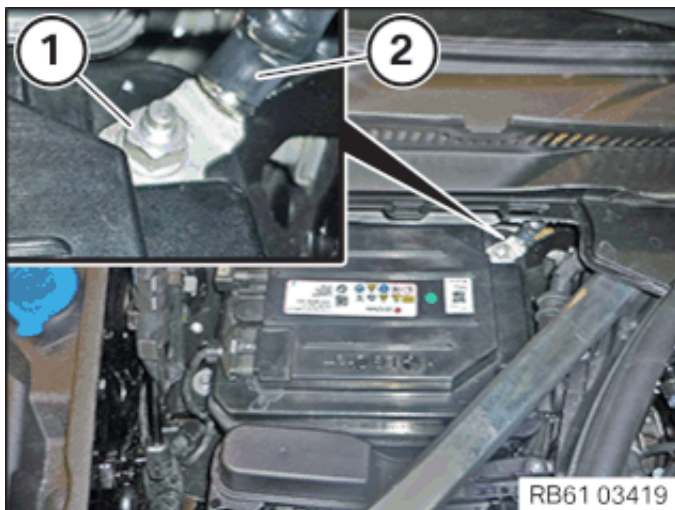
## Measure

- Exit PAD mode by pressing the START-STOP button once without stepping on the brake pedal.

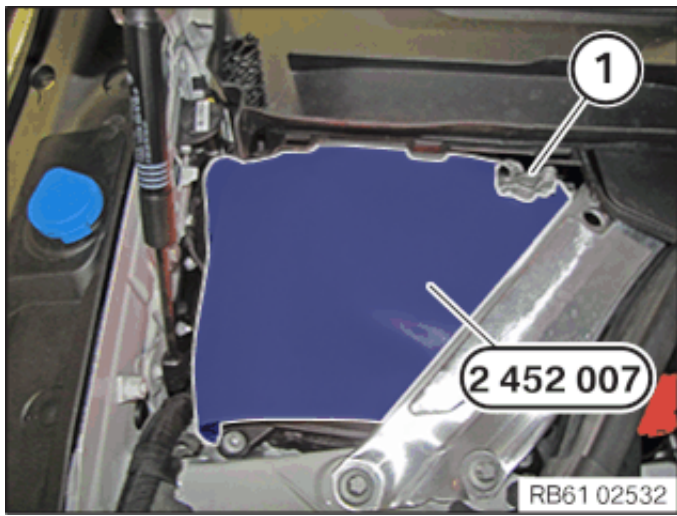
"Disconnect the negative battery cable of the 48-V battery" work can be started.



- Unlock and disconnect the CAN bus plug connection (1) of the gear sensor.
- Release the clip (2).



- Loosen nut (1).
- Detach the negative battery cable (2) of the 48-V battery from the negative battery terminal, set to one side and secure.



**⚠ WARNING**

**Unprotected battery terminals.  
Risk of short circuits! Risk of fire!**

- Cover the vehicle battery.
- Cover the vehicle battery with the special tool **2 452 007** as shown.
- Position the battery ground lead (1) as shown.

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## Disconnecting all battery ground leads

REP-TAT-P-6120-18-VERWEIS\_1

Further information is available.



- See additional information.

RB61 04141

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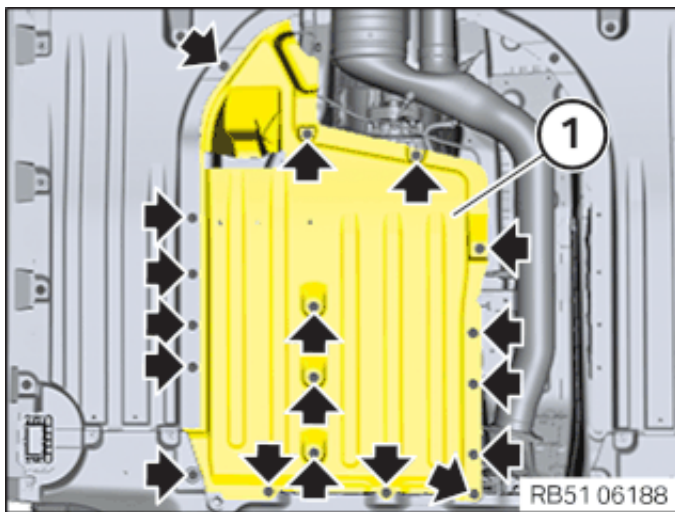
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## Removing rear underbody protection

REP-TAT-P-5147-01-G05\_7



- Remove screws (arrows).
- Feed out and remove the underbody protection (1).

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## Removing the transmission oil pan (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)

REP-TAT-P-2411-01-1\_G11

### CAUTION

**Materials harmful to health.**

**Contact with fluids harmful to health!**

- Note and follow safety instructions on containers.
- Conduct all work in appropriate personal protective equipment only.

### RISK OF DAMAGE

**Damage to the transmission oil pan.**

**Non-observance of the transmission oil specifications may lead to severe damage to the automatic transmission.**

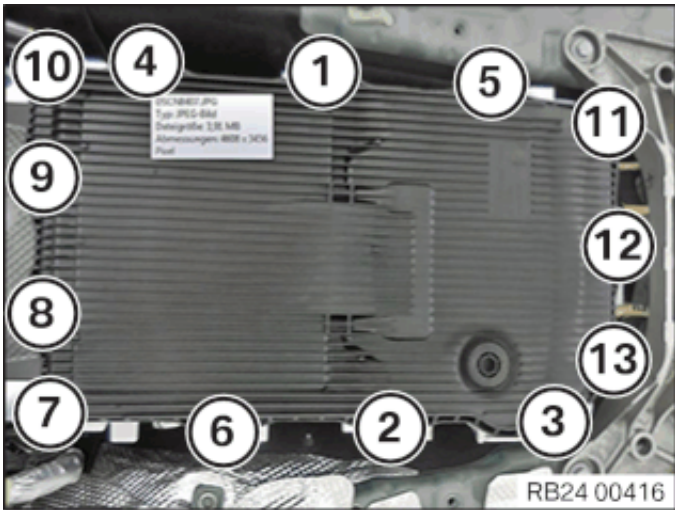
- Remove transmission oil pan only after it has cooled down.
- Use only the approved transmission oil.
- After completion of repair work, check transmission oil level.

### TECHNICAL INFORMATION

Collect and dispose of emerging fluids. Observe country-specific waste disposal regulations.



- Release oil drain plug (1).
- Drain automatic transmission oil.



- Loosen screws (1) to (13).
- Remove transmission oil pan.

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## Installing the transmission oil pan (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)

REP-TAT-P-2411-02-1\_G11

### **i** TECHNICAL INFORMATION

The transmission oil pan and seal must be renewed each time after loosening.

- Clean the contact surface of the transmission oil pan on the transmission.

- Renew screws (1) to (13).

**Parts:** Screws

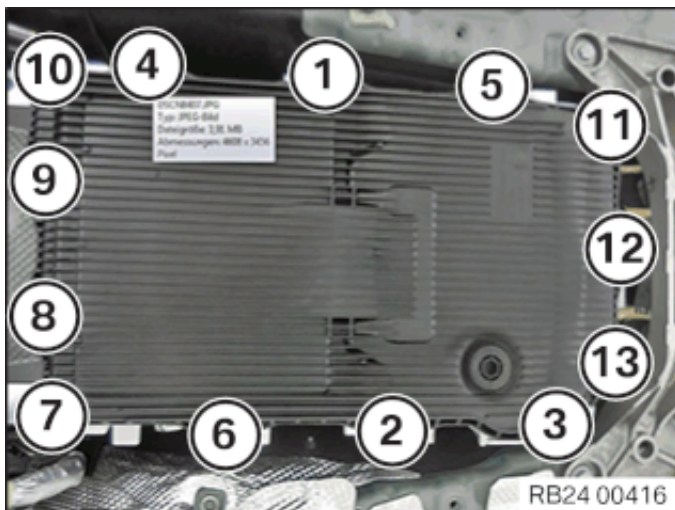
- Position the transmission oil pan.
- Hand-tighten the bolts .
- Tighten the screws in order from (1) to (13).

### Tightening torques

#### Transmission oil pan

M6  
Renew screws.

**tightening torque**  
10Nm





- If necessary, tighten the oil drain plug (1).

## Tightening torques

### Oil drain plug

M18  
Renew screw.

**tightening torque**  
8Nm

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## Checking/topping up the oil level in the automatic transmission

REP-TAT-P-0011-05-1

Further information is available.

### Precondition

Vehicle in horizontal position.

The vehicle is secured against rolling away.

### CAUTION

**Materials harmful to health.**

**Contact with fluids harmful to health!**

- Note and follow safety instructions on containers.
- Conduct all work in appropriate personal protective equipment only.

### TECHNICAL INFORMATION

To set the correct oil level, it is mandatory that the service function "Transmission control unit: Oil-level adjustment" is carried out with the diagnostic system.

### TECHNICAL INFORMATION

Carry out an oil-level adjustment:

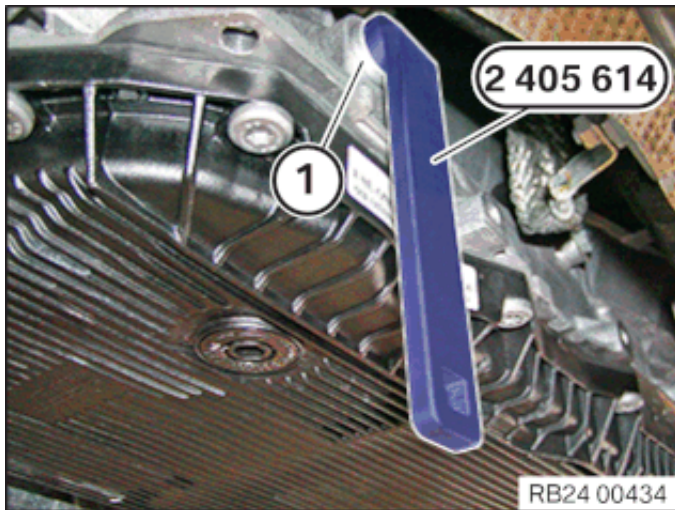
An oil-level adjustment is required when there are certain fault memory entries in the automatic transmission and after a repair has been carried out (e.g. replacement of the mechatronics, replacement of the converter, replacement of the transmission, automatic transmission fluid service).

## **i** TECHNICAL INFORMATION

The automatic transmission fluid specified by BMW must be used for the automatic transmission.

For additional information see: SBS-ANL-SBS1996-240596143\_A14 (automatic transmission fluid for ZF transmissions, etc.)

- Connect diagnostic system.
- Observe the predefined transmission oil temperatures for the oil-level adjustment with the diagnostic system:
  - Initial condition: Transmission oil temperature 30 °C to 40 °C.
  - End condition: Transmission oil temperature 40 °C to 50 °C.
- Call up service function (drive).
- Carry out oil-level adjustment in accordance with instructions.
- Loosen the oil filler plug (1) using the special tool **2 405 614**.
- Top up automatic transmission fluid according to the instructions in the diagnostic system.



### **Technical data**

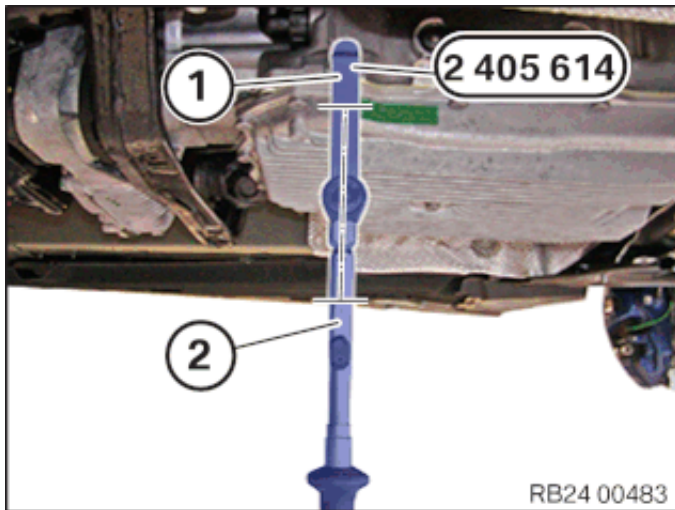
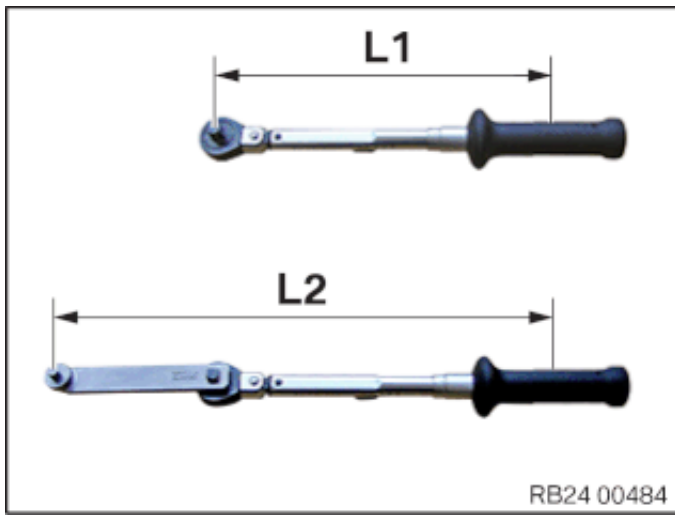
#### **GA8HP51Z transmission capacity**

min. 9.28 l

### **Technical data**

#### **GA8HP76Z transmission capacity**

min. 9.35 l



## i TECHNICAL INFORMATION

The setpoint torque deviates from the adjustable torque when using special tool 2 405 614.

- Convert setpoint torque into adjustable torque:

(setpoint torque x L1) : L2 = adjustable torque

L1 = length from the center of the grip to the reversible ratchet head

L2 = length from the center of the grip up to the insertion of the special tool in the screw

- Renew the oil filler plug (1) and the sealing ring.

**Parts:** Oil filler plug, sealing ring

- Make sure that the special tool **2 405 614** and the torque wrench (2) align while tightening the oil filler plug (1).
- Tighten the oil filler plug (1) with the special tool **2 405 614** and the torque wrench (2).

### Tightening torques

#### Oil filler plug

M18x1.5

**tightening torque**

35Nm

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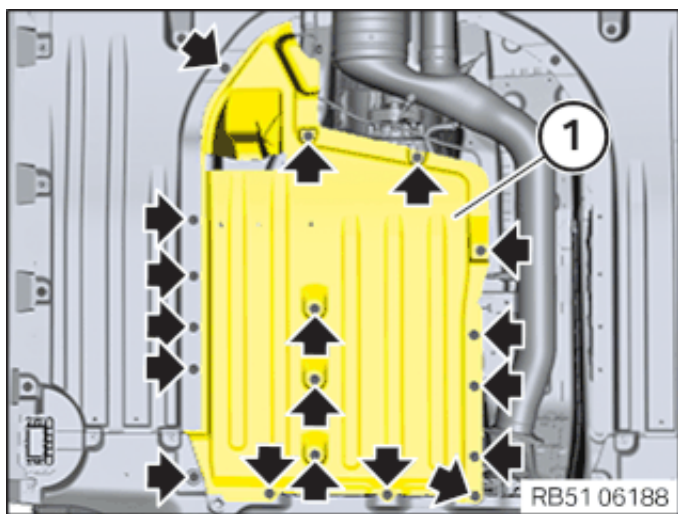
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## Installing underbody protection at rear

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- Insert underbody protection (1) and position correctly.
- Tighten screws (arrows).

### Tightening torques

#### Undershield/frame

Hexagon screw

**tightening torque**  
3Nm

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## Activating the 48 V electrical system

REP-TAT-P-6124-19-B47\_V48

Further information is available.

### Precondition

Ignition is switched off.

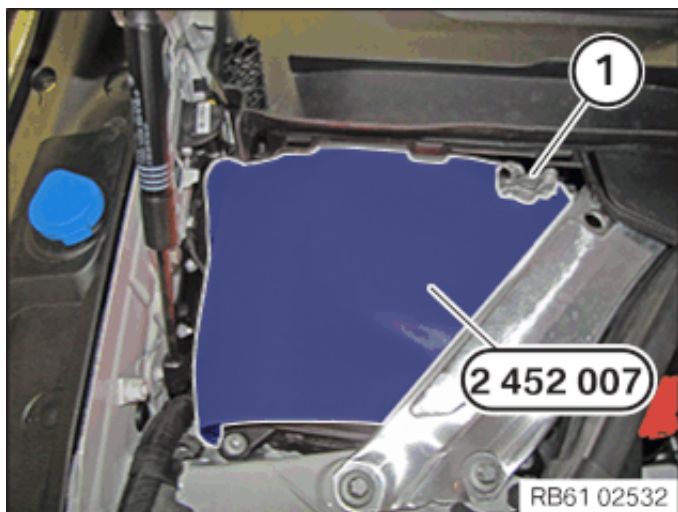


### RISK OF DAMAGE

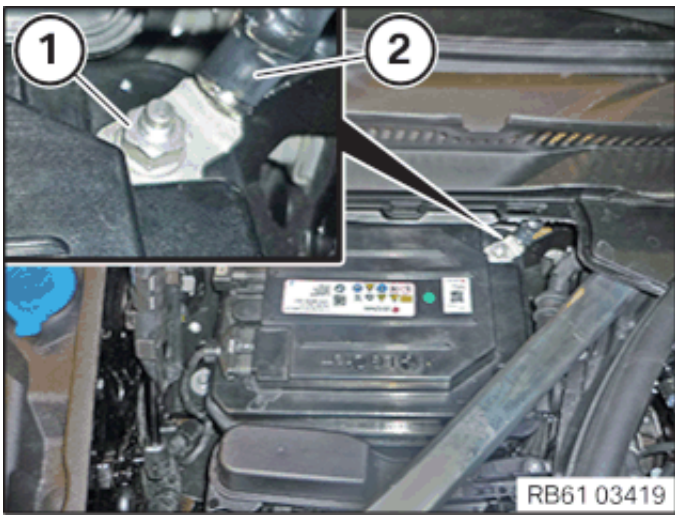
#### Damage to the 48-V battery

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only ever activate the 48 V electrical system when the 48 V battery is fully connected up.



- Raise the battery ground cable (1).
- Remove special tool **2 452 007** .



- Release the negative battery cable (2) of the 48-V battery from the attachment.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten the nut (1).

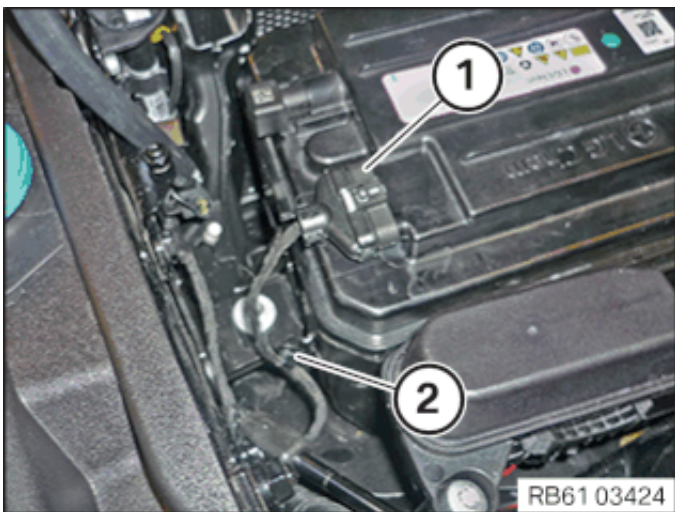
### Tightening torques

#### Negative battery cable to 48-V battery

Nut M8

**tightening torque**

19Nm



- Connect the connector (1) of the CAN bus and lock it.
- Clip in the clip (2).



- Activate the 48 V electrical system by closing the hood.

The activation takes place automatically.