

Original BMW Accessories. Installation Instructions.



BMW Performance suspension cross-brace retrofit

BMW 1 Series (E81, E87)

BMW 3 Series (E46)

BMW 3 Series (E90, E91, E92, E93)

Retrofit kit no.	51 71 0 429 378	BMW Performance suspension cross-brace retrofit (E46)
	51 71 0 429 377	BMW Performance suspension cross-brace retrofit

Installation time

The installation time is **approx. 1.0 hour**. This may vary depending on the condition of the car and the equipment in it.

The vehicle must be updated to the latest I-level status by flashing before installing the retrofit.

Differing programming times may be necessary depending on the production age of the vehicle and on work previously performed on the vehicle.

The installation time given does not include time needed for programming/encoding.

The total costs for the programming time should be taken into account when calculating retrofitting costs (reimbursement through warranty is not permissible).

Important information

These installation instructions are primarily designed for use within the BMW dealership organisation and by authorised BMW service companies.

In any event, the target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.

All work must be completed using the latest BMW repair manuals, circuit diagrams, servicing manuals and work instructions, in a rational order, using the prescribed tools (special tools) and observing current safety regulations.

If the suspension cross-brace is removed as part of service work, the nuts and bolts must be renewed (see EPC for part number and details).

If you experience installation or function problems, restrict troubleshooting to approx. 0.5 hours for mechanical work and 1.0 hour for electrical work.

In order to reduce costs and avoid any additional expense, send a query immediately to the Technical Parts Support via the Aftersales Assistance Portal (ASAP).

Specify the following information:

- Chassis number,
- Part number of the retrofit kit,
- A precise description of the problem,
- Work steps already carried out.

Do not archive the hard copy of these installation instructions since daily updates are provided via ASAP!

All pictures show LHD cars; proceed accordingly on RHD cars.

Pictograms

 Denotes instructions that draw your attention to dangers.

 Denotes instructions that draw your attention to special features.

◀ Denotes the end of the instruction or important text.

Installation information

Some of the installation is shown only on the left-hand side of the car, proceed in the same way on the right-hand side of the car.

When the suspension cross-brace is being installed, the car must be standing on level ground.

Ensure that the cables and/or lines are not kinked or damaged as you install them in the car. The costs incurred as a result will not be reimbursed by BMW AG.

Ordering instructions

Shrink hoses **E** and butt-joint connectors **F** are not supplied in the retrofit kit and must therefore be ordered separately (see EPC for part number and details).

List of special equipment

The following special equipment must be taken into consideration when installing the retrofit kit:

S301A Anti-theft alarm system

S210A Dynamic stability control.

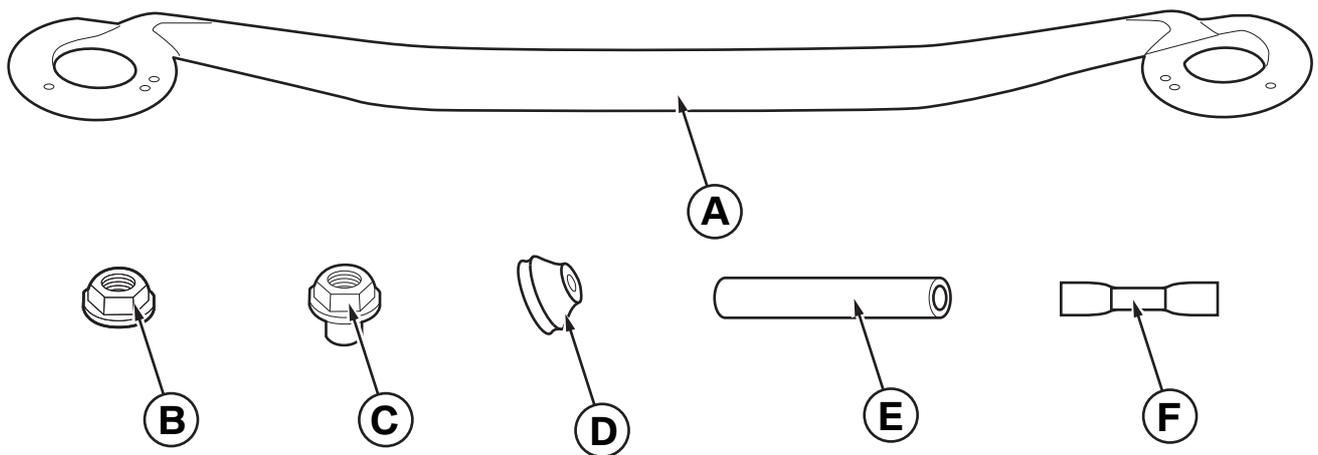
Special tools required

None

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1. BMW 3 Series (E46) parts list



046 1301 V

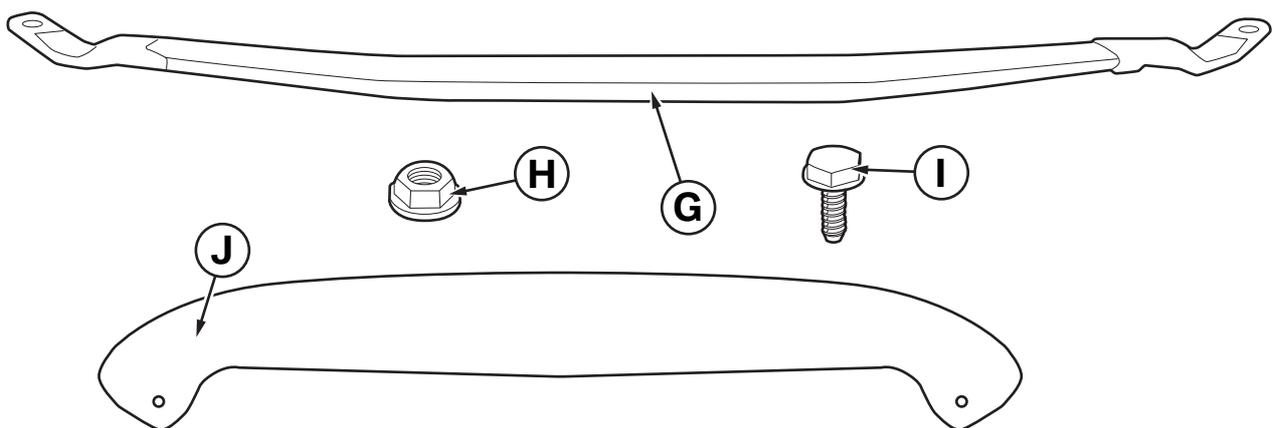
Legend

- A** Suspension cross-brace
- B** Hexagonal nut (2x)
- C** Hexagonal nut (4x)
- D** Grommet

Not included in parts kit:

- E** Shrink hose (4x)
- F** Butt-joint connector (4x)

2. Parts list BMW 1 Series (E81, E87), 3 Series (E90, E91, E92, E93)



090 0634 V

Legend

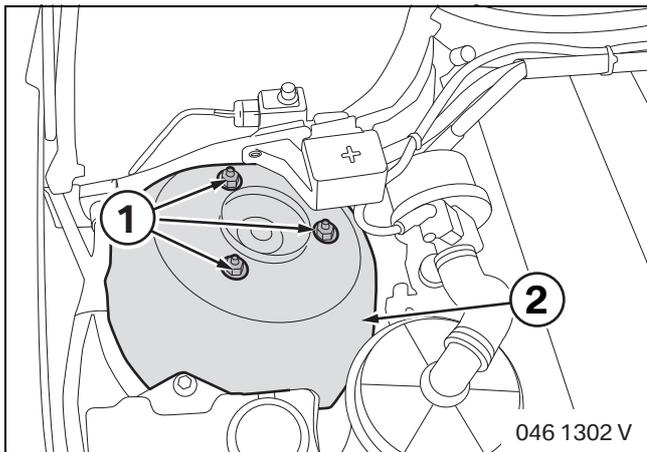
- G** Suspension cross-brace
- H** Hexagonal nut (2x)
- I** Hexagonal bolt (2x)

- J** Self-adhesive template

3. Preparatory work

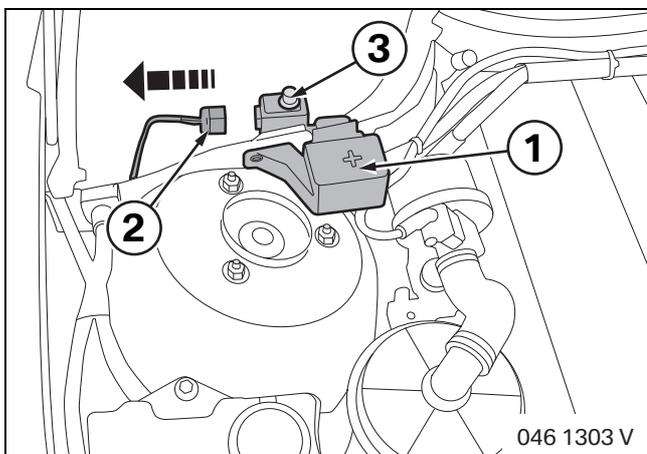
	ISTA No.
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
First, the following components must be removed.	
None	

4. To install the suspension cross-brace in the 3 Series (E46)



Remove the nuts (1) of the dome (2) on both sides.

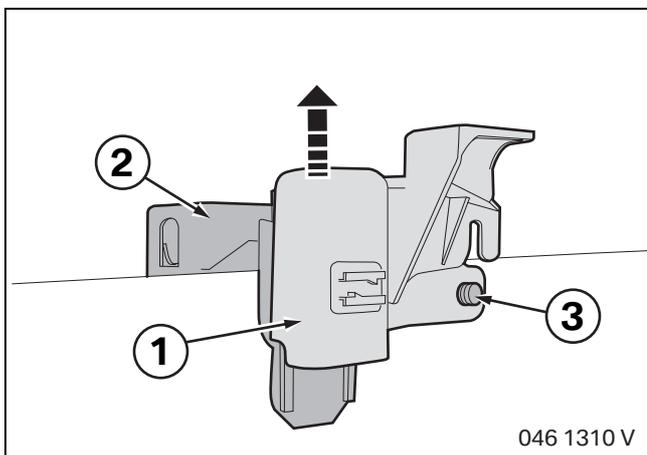
 The nuts must not be re-used. ◀



Unscrew the two positive cables from the positive terminal bracket (1).

Cars with S301A only:

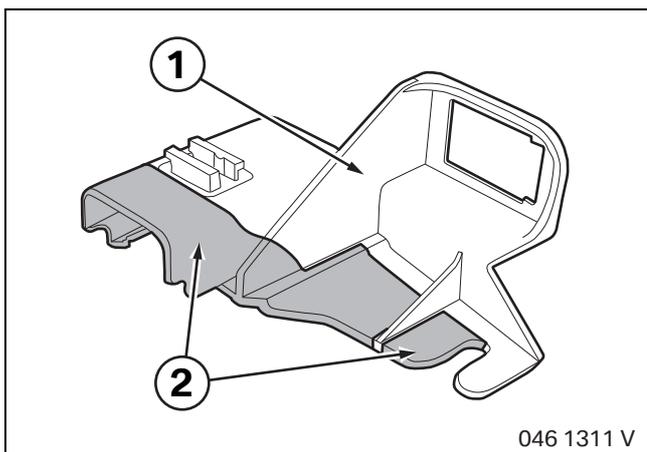
Disconnect the plug (2) for the anti-theft alarm system (3).



All cars:

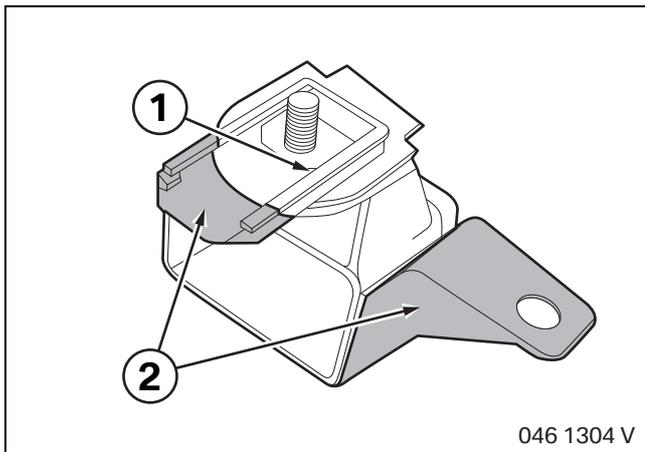
Pull the cover (1) of the positive terminal bracket (2) upwards. Remove the pin (3) and separate the positive terminal bracket (2) from the partition.

 The pin (3) is no longer required. ◀

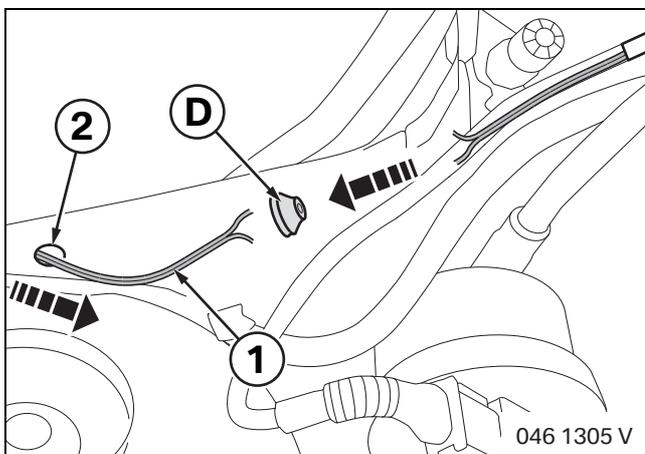


Cut out the areas marked (2) on the cover (1) using a suitable tool.

4. To install the suspension cross-brace in the BMW 3 Series (E46)



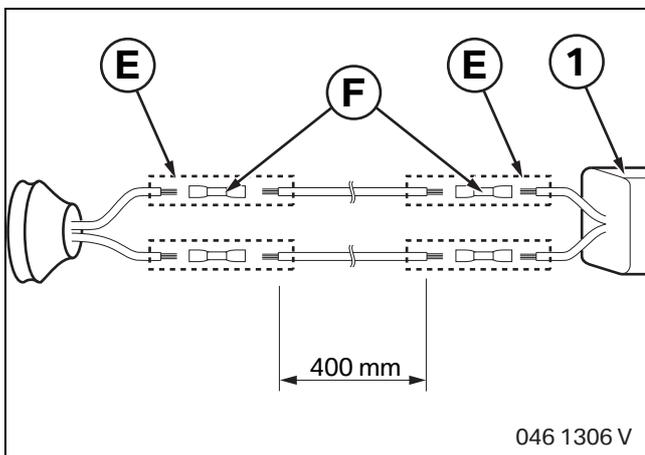
Cut out the areas marked (2) on the positive terminal bracket (1) using a suitable tool.



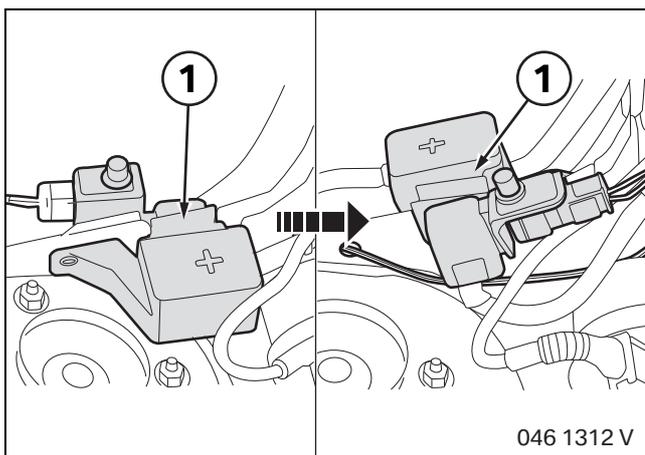
Cars with S301A only:

Cut the cable for the anti-theft alarm system sensor (1) and thread it through the hole (2) in the partition as shown.

Push grommet **D** onto the cable and place it in the hole (2).



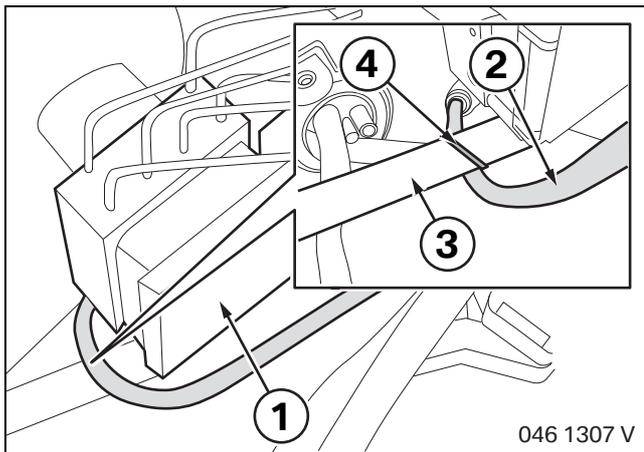
Extend the cable of the plug (1) for the anti-theft alarm system sensor by 400 mm using butt-joint connectors **F** and shrink hoses **E** as shown in the figure.



All cars:

▶ The positive terminal bracket (1) must be placed rotated on the partition when the suspension cross-brace is being installed. ◀

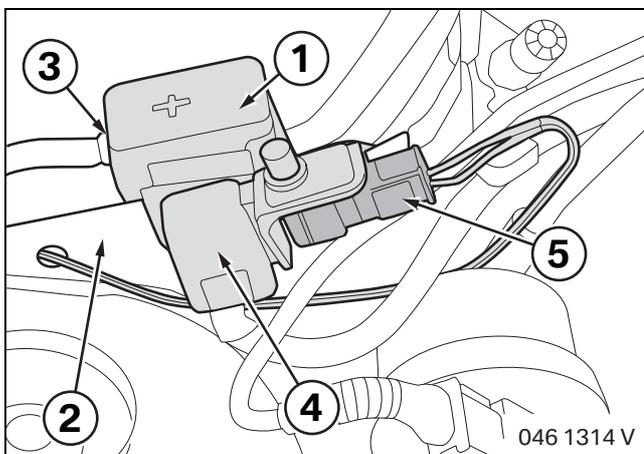
4. To install the suspension cross-brace in the BMW 3 Series (E46)



Cars with S210A only:

For cars with a DSC control unit (**S210A**) (1) in the space in front of the right-hand engine bulkhead, the route of the positive cable (2) must be adapted.

☐ A chafing guard must without fail be attached to the DSC bracket (3) and the positive cable (2). The positive cable (2) must be secured in place with cable ties (4) on the DSC bracket (3). ◀



All cars:

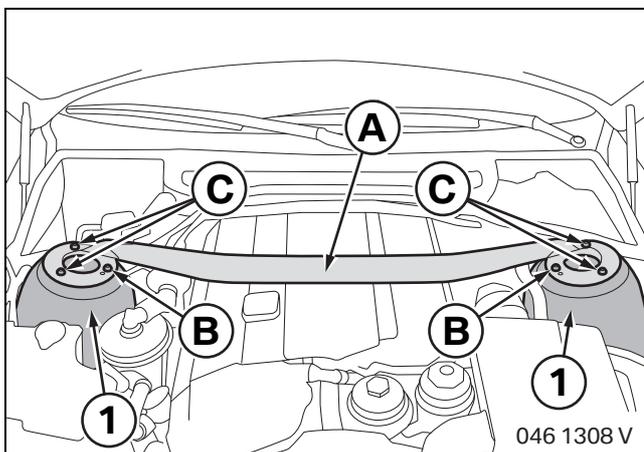
Push the positive terminal bracket (1) back onto the partition (2).

Also insulate the positive cable on the cover (3) of the positive cable bracket (1) with the chafing guard. Screw the positive cables back on.

Replace the cover (4) on the positive terminal bracket (1).

Cars with S301A only:

Connect the plug (5) for the anti-theft alarm system sensor.

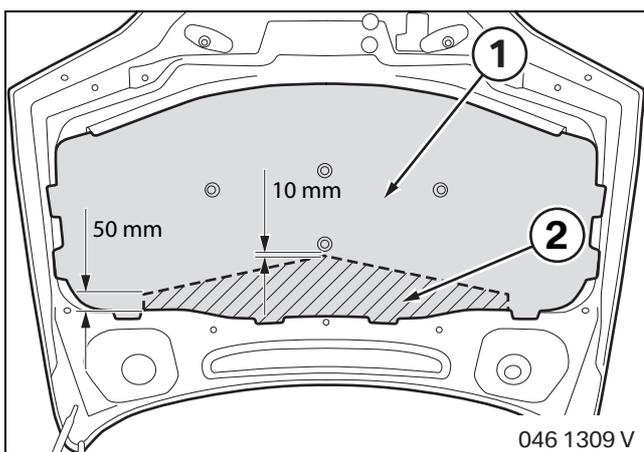


All cars:

⚠ Use nuts **B** and **C** from the parts kit. ◀

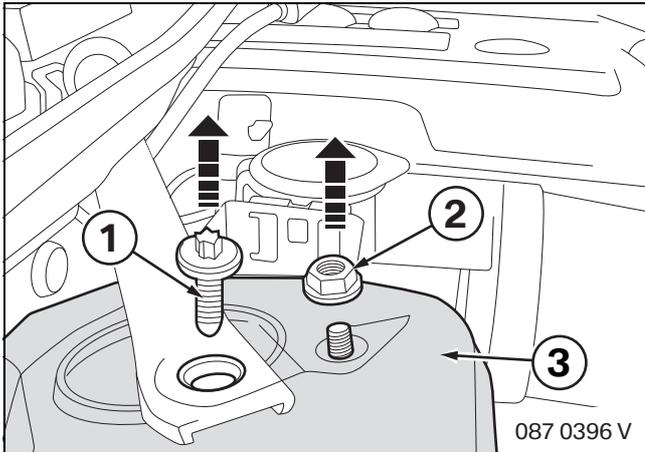
Place suspension cross-brace **A** on the dome (1) and screw loosely into place using nuts **B** and **C**.

Align suspension cross-brace **A** with the centre and screw into place with a torque of 34 Nm.



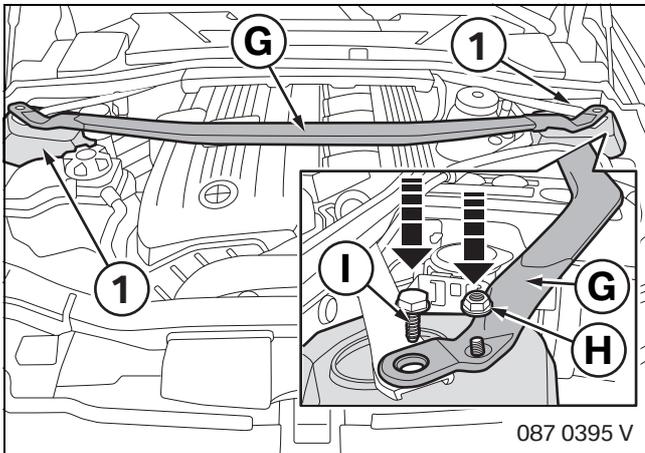
Cut out the area marked (2) from the noise insulation (1) on the bonnet using a suitable tool.

5. To install the suspension cross-brace in the 1 Series (E81, E87) and 3 Series (E90, E91, E92, E93)



Remove the bolts (1) and nuts (2) of the dome (3) on both sides.

 The bolts (1) and nuts (2) must not be reused. ◀

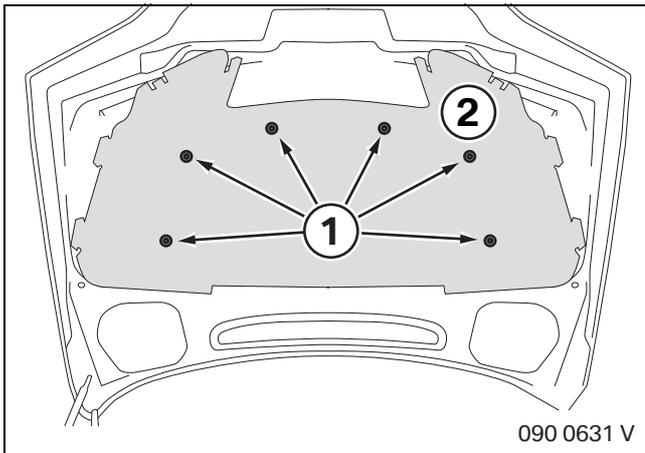


 Use nuts **H** and bolts **I** from the spares kit. ◀

Place suspension cross-brace **G** on the dome (1) and secure loosely in place with nuts **H** and bolts **I**.

Align suspension cross-brace **G** with the centre and secure bolts **I** with 40 Nm + 60° and nuts **H** with 35 Nm.

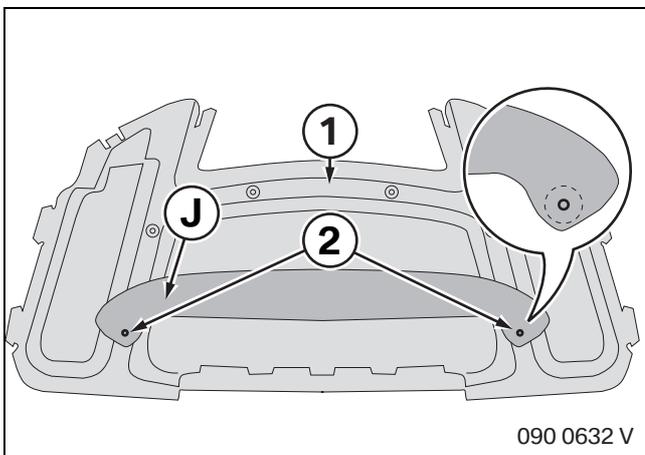
6. Additional work for E90/E91 after 09/08 and E92/E93 after 03/10



Only for E90/E91 after 09/08:

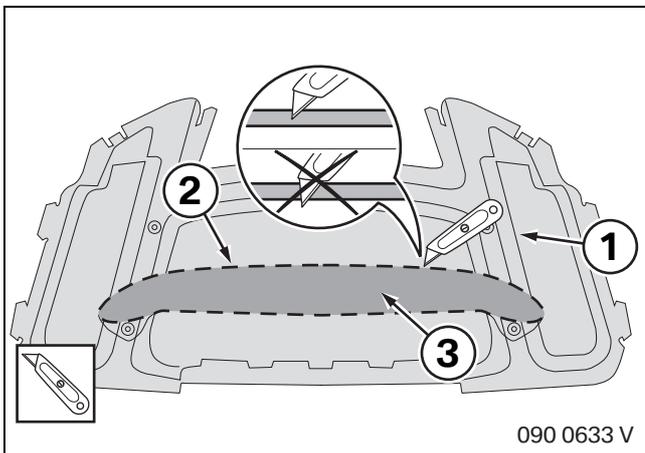
Only for E92/E93 after 03/10:

Remove the expanding rivets (1) from the bonnet insulation and remove the bonnet insulation (2).



⚠ This work must be performed on the side of the bonnet insulation (1) that cannot be seen in the installation condition (rear side). ◀

Line up self-adhesive template **J** on both sides with the holes (2) in the bonnet insulation (1) and affix in place.



⚠ This work must be performed on the side of the bonnet insulation (1) that cannot be seen in the installation condition (rear side).

Only cut into the surface of the bonnet insulation (1). Never cut through the full bonnet insulation (1). ◀

Cut into the bonnet insulation (1) along the dashed line (2).

Remove the cut-through fabric (3) and remove all of the insulating material from the cut-out area.

Then mount the bonnet insulation (1) with the cut-out area facing the bonnet, so that the cut-out is not visible.

7. Concluding work and coding

This retrofit system does not require coding.

- Connect the battery
- Conduct a brief test