



# Parts and Accessories. Installation Instructions.

## Subwoofer module retrofit

**BMW 3 Series Coupé (E46/2)**

**BMW 3 Series Touring (E46/3)**

**BMW 3 Series Saloon (E46/4)**

<b>Retrofit kit No.</b>	82 83 0 027 822
	82 83 0 027 824
	82 83 0 300 937
	82 83 0 300 938

### Installation time

The installation time is approx 1,5 - 2,5 hours, but this may vary depending on the condition of the car and the equipment in it.

### 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 health and safety regulations.

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

Additional cables/lines that you install must be secured with cable ties.

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

All the figures show LHD cars, proceed in exactly the same way 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 other text.

See the EBA CD or Aftersales Portal for explanations of the pictograms.

Do not archive the hard copy of these installation instructions since daily updates are made by Aftersales Portal.

Subject to technical modifications.

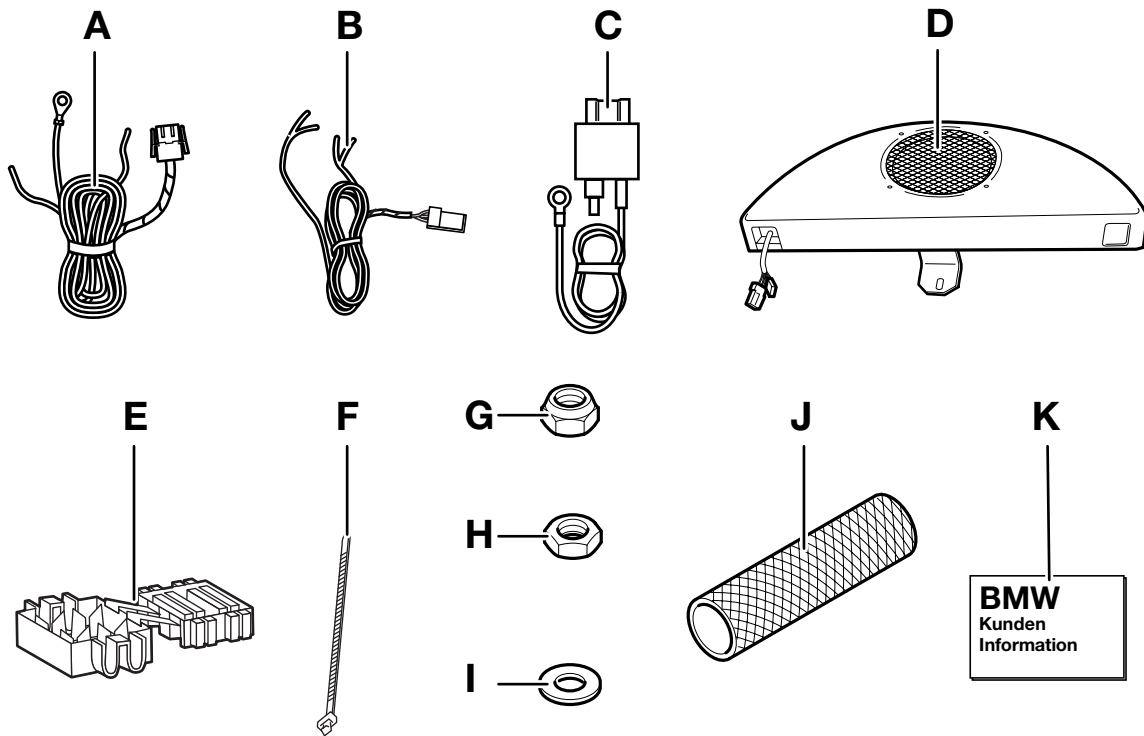
### Special tools required

None

## Contents

Section	Page
1. Parts list E46/2/4 .....	3
2. Parts list E46/3 .....	4
3. Preparations.....	5
4. Connection diagram.....	6
5. Installation and cabling diagram for cars with a battery in the engine compartment .....	7
6. Installation and cabling diagram for cars with a battery in the boot .....	8
7. To install wiring harness in cars with a battery in the engine compartment .....	9
8. To install wiring harness in cars with a battery in the boot .....	12
9. To install the subwoofer module E46/2/4 .....	14
10. To install the subwoofer module E46/3 .....	15
11. Concluding work and coding .....	17

## 1. Parts list E46/2/4

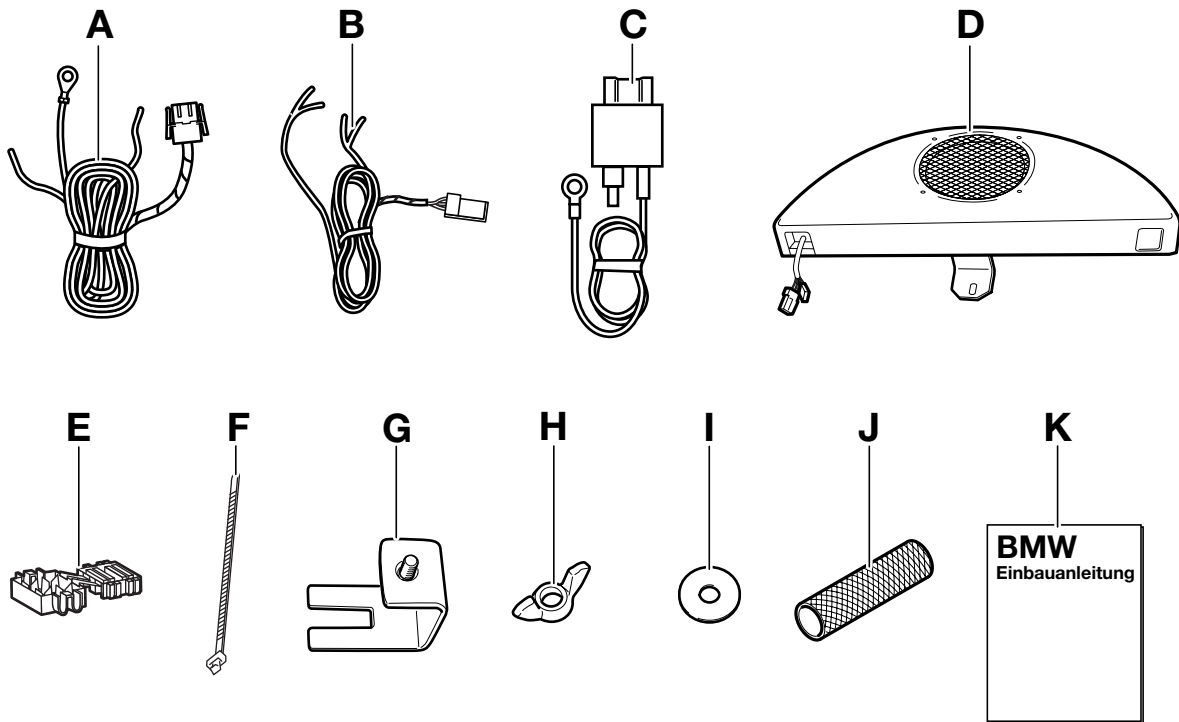


046 1397 Z

### Legend

- A Power supply cable
- B Speaker cable
- C Power cable with fuse and blade terminal
- D Subwoofer
- E Insulation-piercing connection (5x)
- F Cable tie (15x)
- G Nut M8 (self-locking)
- H Nut M8
- I Washer 8.4 mm (2x)
- J Foam tube
- K Customer information

## 2. Parts list E46/3



046 1398 Z

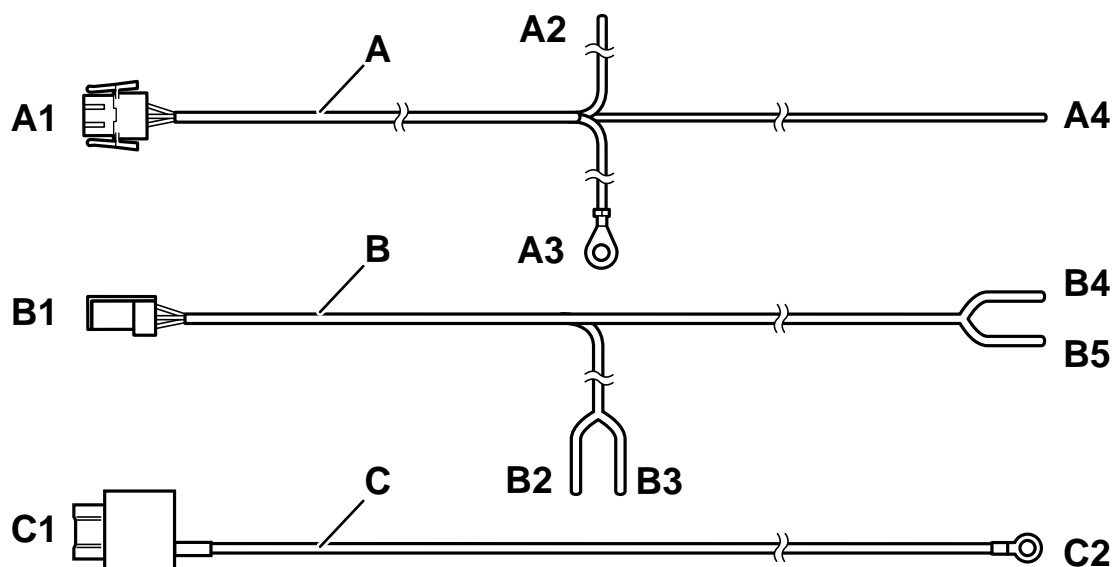
### Legend

- A Power supply cable
- B Speaker cable
- C Power cable with fuse and blade terminal
- D Subwoofer
- E Insulation-piercing connection (5x)
- F Cable tie (15x)
- G Subwoofer holder
- H Wing nut M8
- I Washer 8.4 mm in diameter
- J Foam tube
- K Customer information

### 3. Preparations

	<b>TIS No.</b>
Conduct a brief test	---
Disconnect the batteries	12 00 ...
<b>The following components must be removed first of all in the E46/2/4</b>	
Remove the rear seat bench	52 24 000
Remove the rear seat backrest and left side pad	52 26 008
Remove the left side trim in the boot	51 47 151
Remove the side trim in the boot on the right (cars with a battery in the boot only)	51 47 161
<b>The following components must be removed first of all in the E46/3</b>	
Fold down the rear backrest	---
Remove the boot floor trim	51 47 102
Remove the front boot floor trim	51 47 131
Remove the trim for the D pillar	51 37 261
<b>Additional work for cars with the battery in the engine compartment</b>	
Remove the rear left door sill trim	51 47 030
Remove the front left door sill trim	51 47 000
Remove the B pillar trim at the bottom left	51 43 150
Remove the A pillar trim at the bottom left	51 43 070
Remove the trim for the pedals	51 45 185
Remove the oddments box on the left of the steering column	51 16 200
Open the control module box in the engine compartment	12 14 550

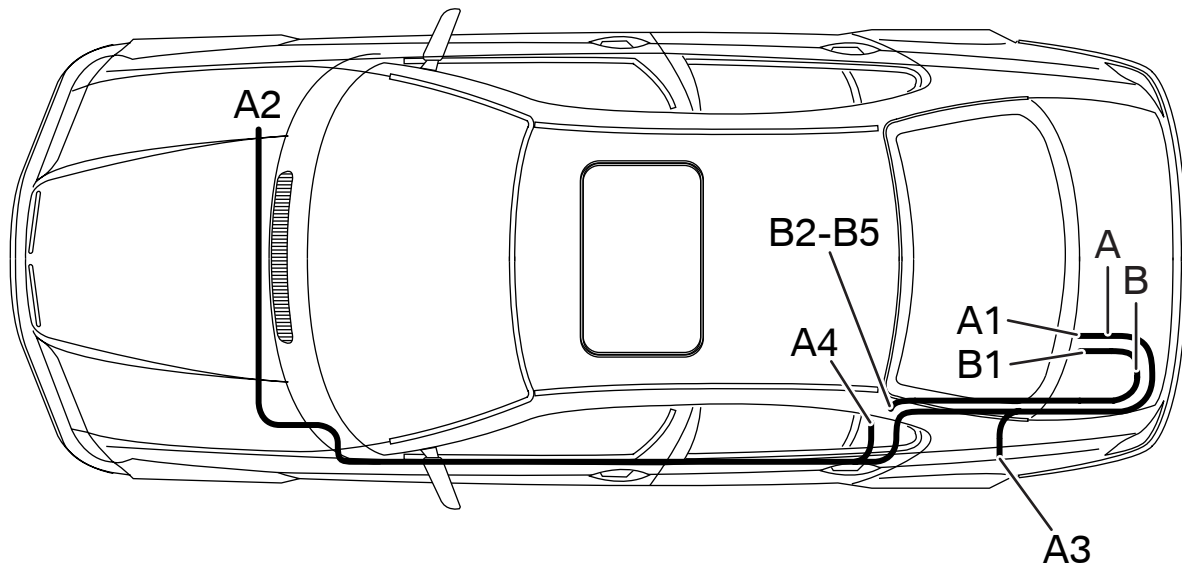
## 4. Connection diagram



046 1419 Z

Item	Description	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Power supply cable	---	---	---	---
A1	WS 3-pin socket casing	---	---	To subwoofer <b>D</b>	---
A2	1-pin cable	---	RT	With blade terminal contact to fuse holder <b>C1</b>	---
A3	Cable eyelet	---	BR	To earth post	X13016
A4	1-pin cable	---	WS	To audio wiring harness on the C pillar, WS cable, 0,5 mm <sup>2</sup>	---
B	Speaker cable	---	---	---	---
B1	SW 4-pin socket casing	---	---	To subwoofer <b>D</b>	---
B2	1-pin speaker cable	---	GE/GR	To audio wiring harness on the left C pillar, BR cable (twisted with GE)	---
B3	1-pin speaker cable	---	GE/VI	To audio wiring harness on the left C pillar, GE cable (twisted with BR)	---
B4	1-pin speaker cable	---	BL/GR	To audio wiring harness on the left C pillar, BR cable (twisted with BL)	---
B5	1-pin speaker cable	---	BL/VI	To audio wiring harness on the left C pillar, BL cable (twisted with BR)	---
C	Power cable with fuse	---	---	---	---
C1	Fuse holder with blade terminal	---	---	To branch <b>A2</b> on the power supply cable <b>A</b>	---
C2	Cable eyelet	---	RT	To battery positive pole	---

## 5. Installation and cabling diagram for cars with a battery in the engine compartment



F 46 1303 B

### Legend

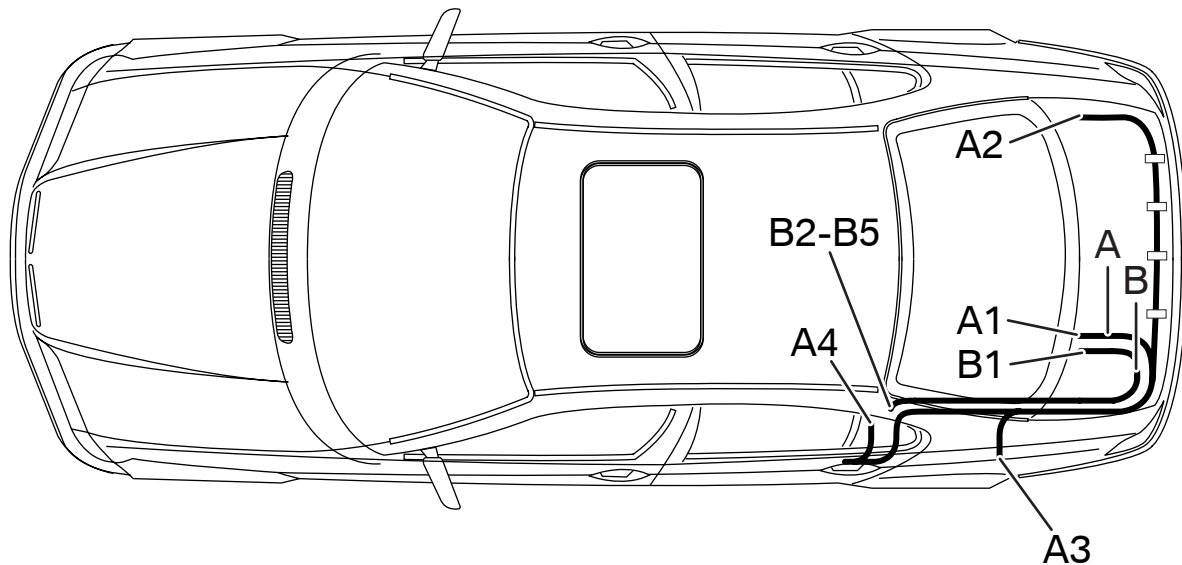
- A** Power supply cable
- A1** In spare wheel trough
- A2** To battery installation site
- A3** To earth post **X13016** in the boot on the left
- A4** To audio wiring harness on the C pillar
  
- B** Speaker cable
- B1** In spare wheel trough
- B2** To audio wiring harness on the C pillar
- B3** To audio wiring harness on the C pillar
- B4** To audio wiring harness on the C pillar
- B5** To audio wiring harness on the C pillar



Tie back any excess lengths on branch **A3**.

Excess lengths on branches **A2**, **A4** and **B2 - B5** must be cut at the connection site. ◀

## 6. Installation and cabling diagram for cars with a battery in the boot



F 46 1304 B

### Legend

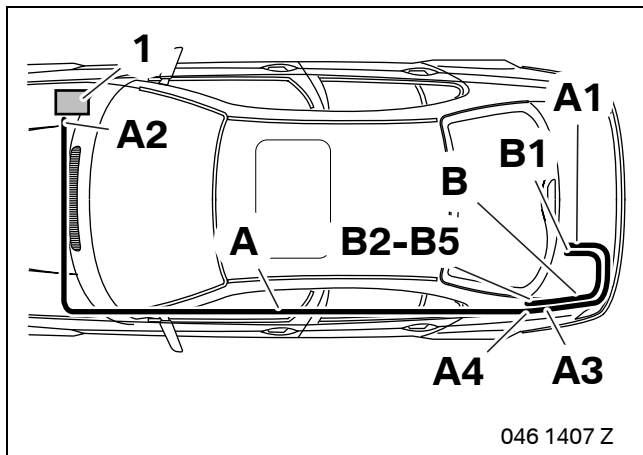
- A** Power supply cable
- A1** In spare wheel trough
- A2** To battery installation site
- A3** To earth post **X13016** in the boot on the left
- A4** To audio wiring harness on the C pillar
  
- B** Speaker cable
- B1** In spare wheel trough
- B2** To audio wiring harness on the C pillar
- B3** To audio wiring harness on the C pillar
- B4** To audio wiring harness on the C pillar
- B5** To audio wiring harness on the C pillar



Tie back any excess lengths on branch **A3**.

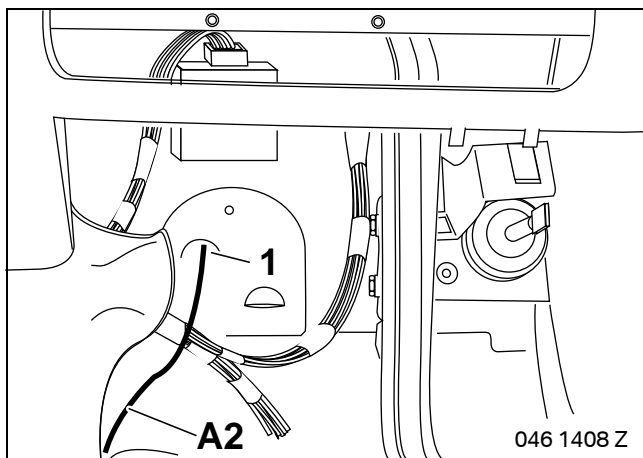
Excess lengths on branches **A2**, **A4** and **B2 - B5** must be cut at the connection site. ◀

## 7. To install wiring harness in cars with a battery in the engine compartment



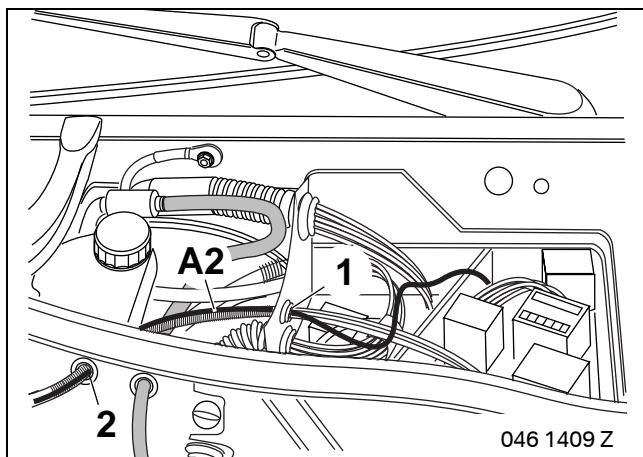
Install the power supply cable **A** and speaker cable **B** as follows:

- Branch **A1** to the spare wheel trough
- Branch **A2** to the installation site of the battery (1)
- Branch **A3** to the boot on the left
- Branch **A4** to the left C pillar.
- Branch **B1** to the spare wheel trough
- Branches **B2 - B5** to the left C pillar



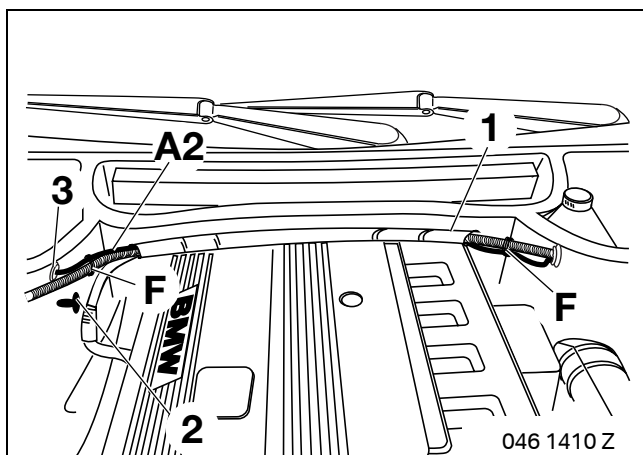
The figure shows the footwell on the driver's side.

Lay branch **A2**, RT cable, through the opening (1) into the control module box on the left of the engine compartment.



Seal the rubber grommet (1) at the engine side with sealing compound. ◀

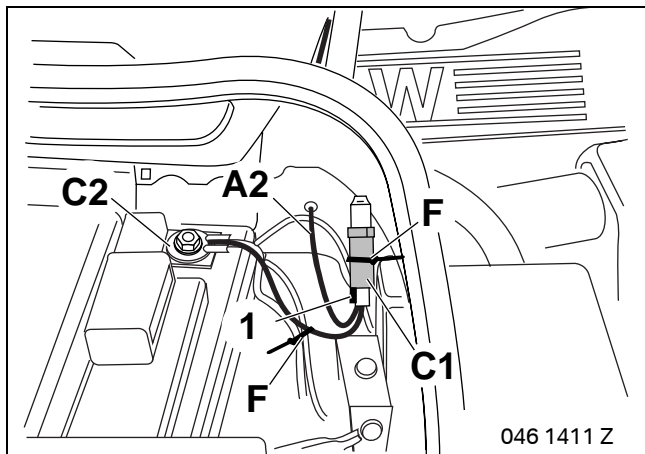
Then push branch **A2**, RT cable, through the rubber grommet (1) and then through the rubber grommet (2).



Lay branch **A2**, RT cable, under the cable guide (1) and secure it with cable ties **F**.

Remove the protective plug (2) from the plastic expanding rivet (3) and insert branch **A2**, RT cable.

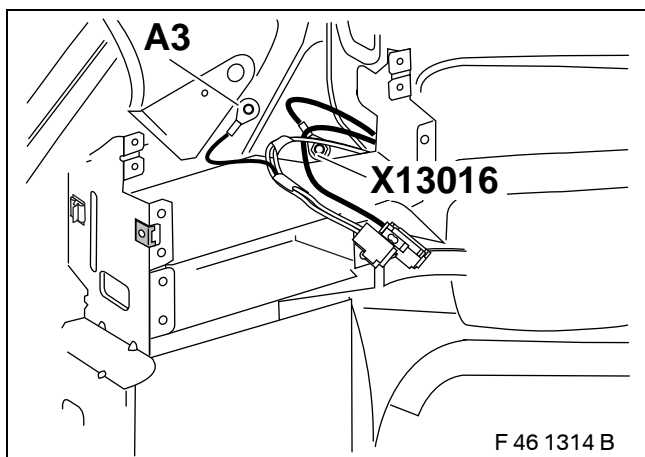
7. To install wiring harness in cars with a battery in the engine compartment



Crimp a blade terminal contact (1) on to branch **A2** and connect it to fuse holder **C1**.

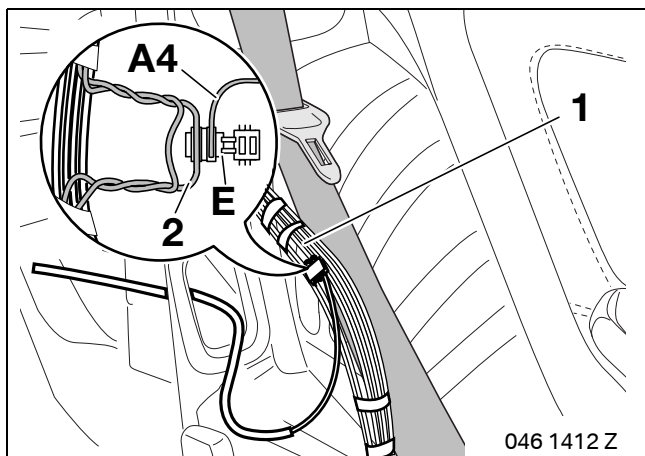
Connect branch **C2** to the battery positive pole.

Secure the fuse holder **C1** to the standard wiring harness with cable ties **F**.



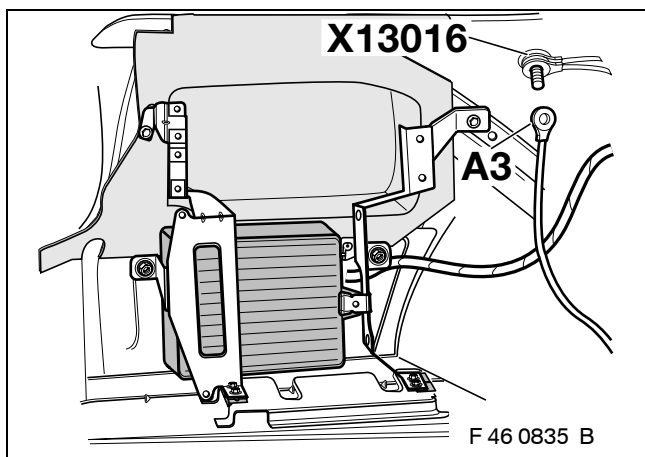
**E46/2/4 only**

Screw branch **A3**, BR cable, to the earth post **X13016** on the left-hand side of the boot.



Lay branch **A4**, WS cable, to the audio wiring harness (1) on the wheel arch at the rear left.

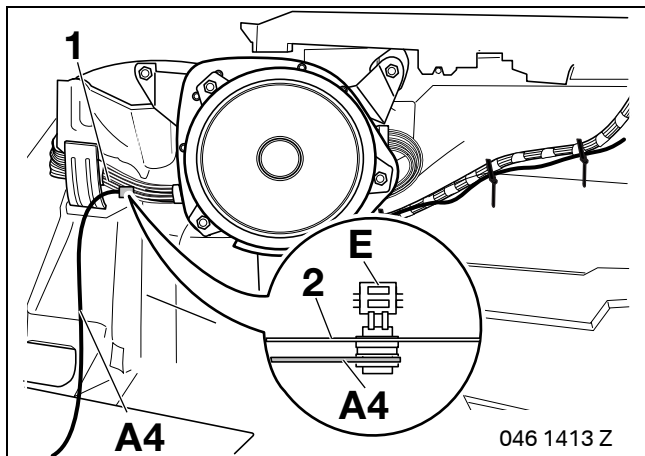
Connect branch **A4** to the WS power supply cable (2), 0.5 mm<sup>2</sup> in diameter on the aerial splitter using an insulation-piercing connector **E**.



**E46/3 only**

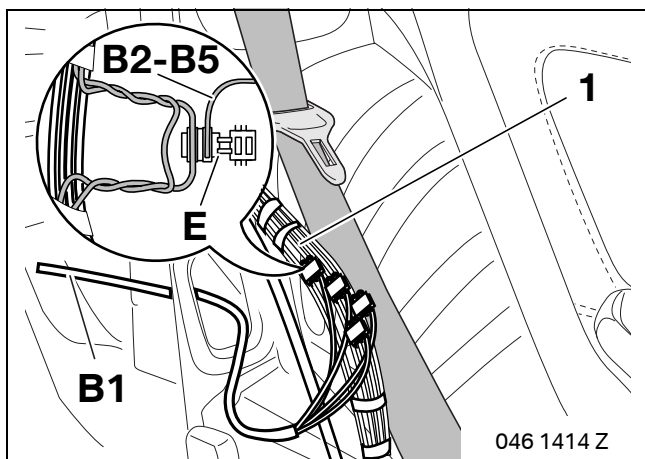
Screw branch **A3**, BR cable, to the earth post **X13016** on the left-hand side of the boot.

7. To install wiring harness in cars with a battery in the engine compartment



Lay branch **A4**, WS cable, to the main wiring harness (1) on the right.

Connect branch **A4** to the VI/WS cable (2), 0.35 mm<sup>2</sup> in diameter, using an insulation-piercing connector **E**.



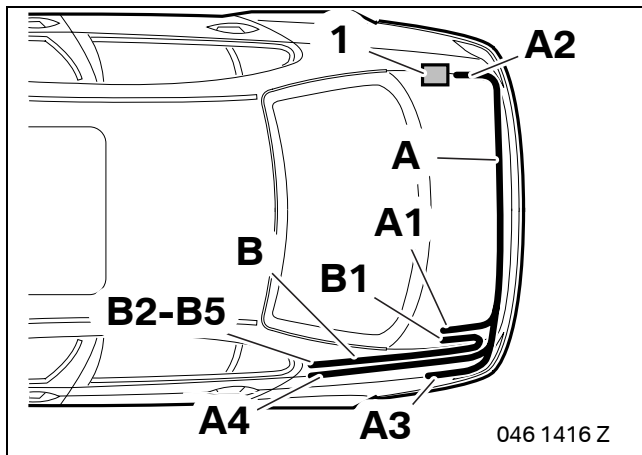
**All cars**

Lay branches **B2 - B5** to the audio wiring harness (1) on the C pillar and connect them as follows using two insulation-piercing connectors **E**:

- **B2** to the BR cable (twisted with GE)
- **B3** to the GE cable (twisted with BR)
- **B4** to the BR cable (twisted with BL)
- **B5** to the BL cable (twisted with BR)

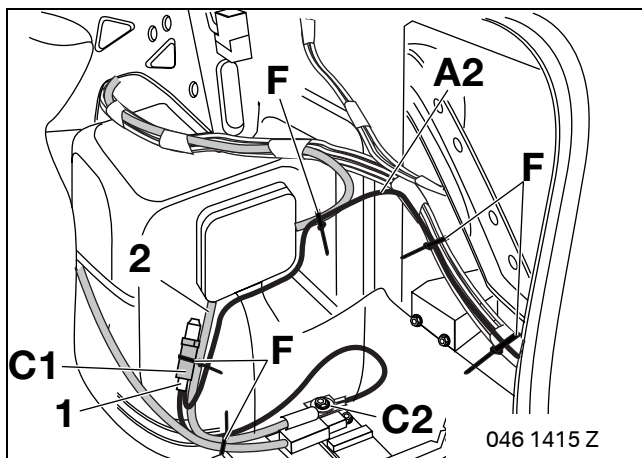
Lay branch **B1** to the spare wheel trough.

## 8. To install wiring harness in cars with a battery in the boot



Install the power supply cable **A** and speaker cable **B** as follows:

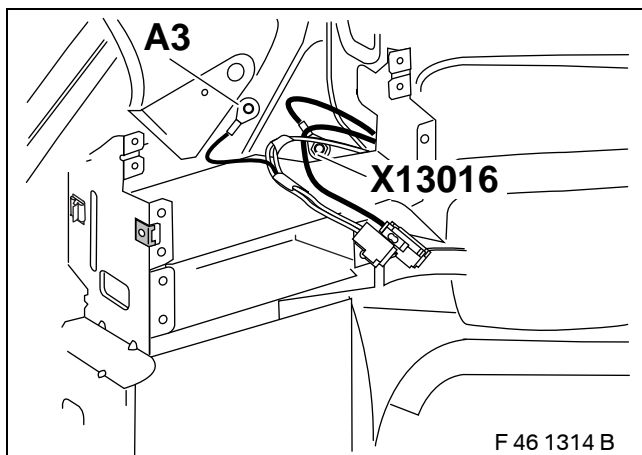
- Branch **A1** to the spare wheel trough
- Branch **A2** to the installation site of the battery (1)
- Branch **A3** to the boot on the left
- Branch **A4** to the left C pillar.
- Branch **B1** to the spare wheel trough
- Branches **B2 - B5** to the left C pillar



Crimp a blade terminal contact (1) on to branch **A2** and connect it to fuse holder **C1**.

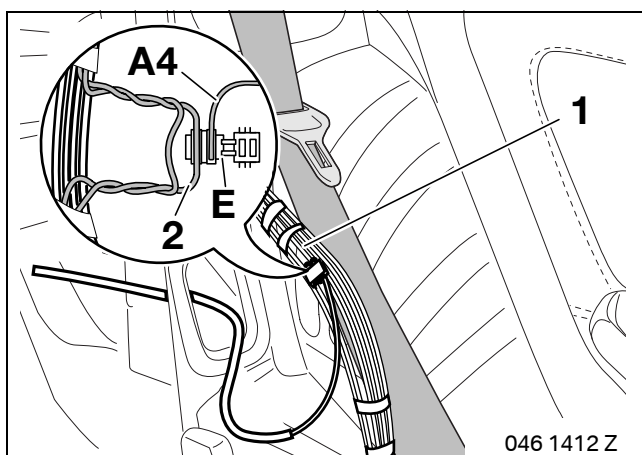
Connect branch **C2** to the battery positive pole.

Secure the fuse holder **C1** to the positive cable (2) with cable ties **F**.



### E46/2/4 only

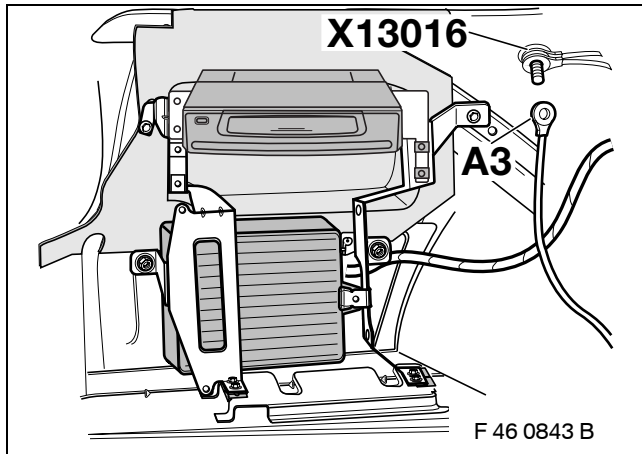
Screw branch **A3**, BR cable, to the earth post **X13016** on the left-hand side of the boot.



Lay branch **A4**, WS cable, to the audio wiring harness (1) on the wheel arch at the rear left.

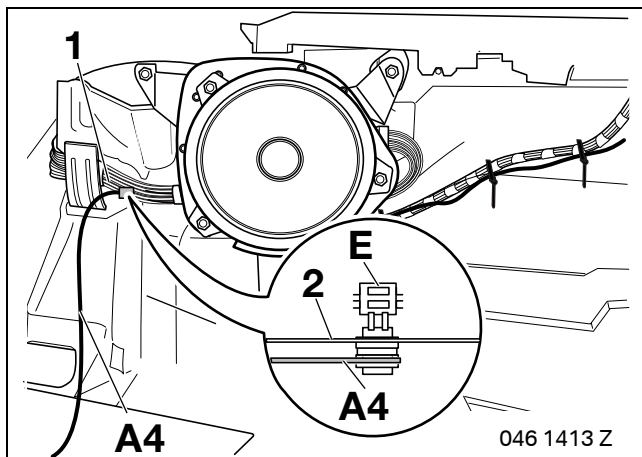
Connect branch **A4** to the WS power supply cable (2), 0.5 mm<sup>2</sup> in diameter on the aerial splitter using an insulation-piercing connector **E**.

8. To install wiring harness in cars with a battery in the boot



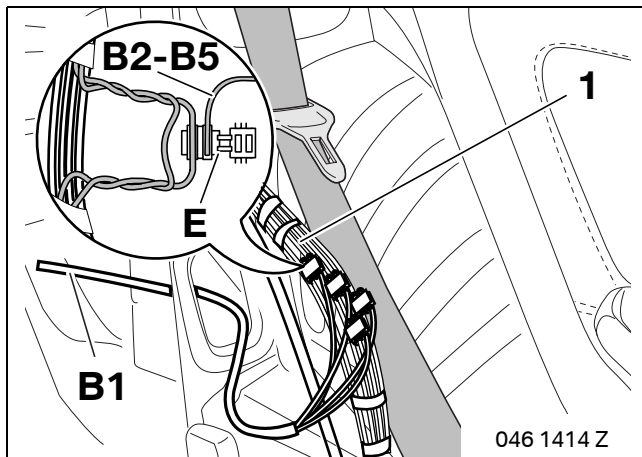
**E46/3 only**

Screw branch **A3**, BR cable, to the earth post **X13016** on the left-hand side of the boot.



Lay branch **A4**, WS cable, to the audio wiring harness (1) on the wheel arch at the rear left.

Connect branch **A4** to the WS power supply cable (2), 0.5 mm<sup>2</sup> in diameter on the aerial splitter using an insulation-piercing connector **E**.



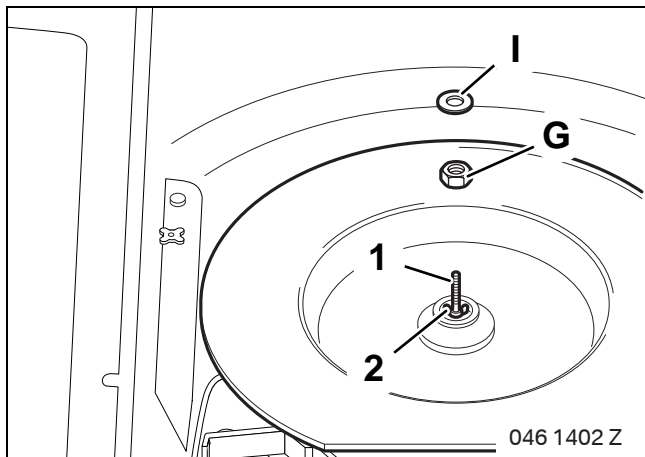
**All cars**

Lay branches **B2 - B5** to the audio wiring harness (1) on the C pillar and connect them as follows using two insulation-piercing connectors **E**:

- **B2** to the BR cable (twisted with GE)
- **B3** to the GE cable (twisted with BR)
- **B4** to the BR cable (twisted with BL)
- **B5** to the BL cable (twisted with BR)

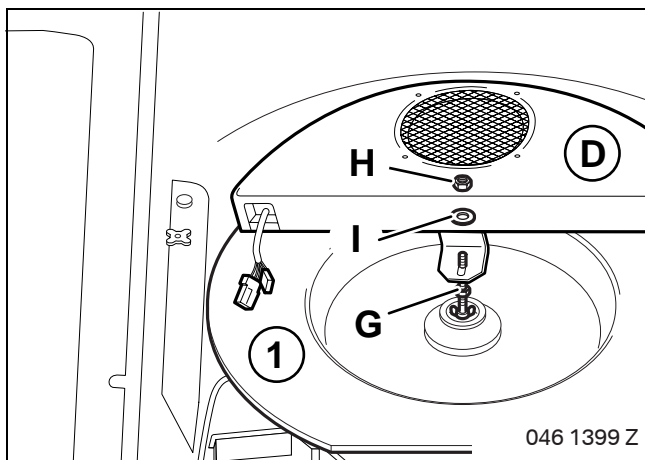
Lay branch **B1** to the spare wheel trough.

## 9. To install the subwoofer module E46/2/4



Screw the nut **G** on to the stud bolt (1) at a distance of 10 mm from the wing nut (2).

Install the washer **I**.

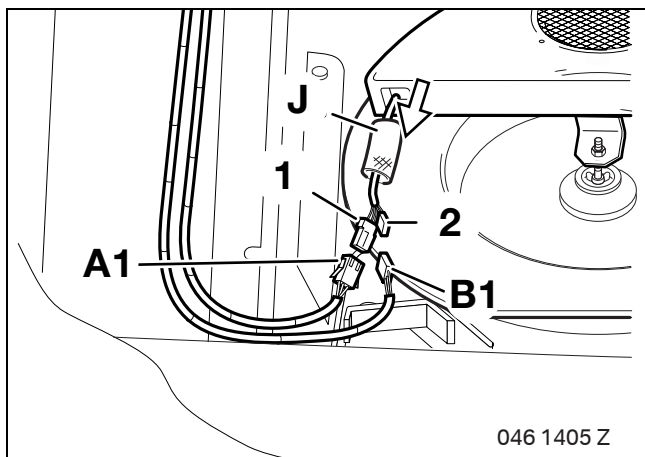


☐ The subwoofer **D** must not be able to move on the cover (1). ◀

Place the subwoofer **D** on the cover (1).

Screw the nut **G** loosely against the subwoofer holder.

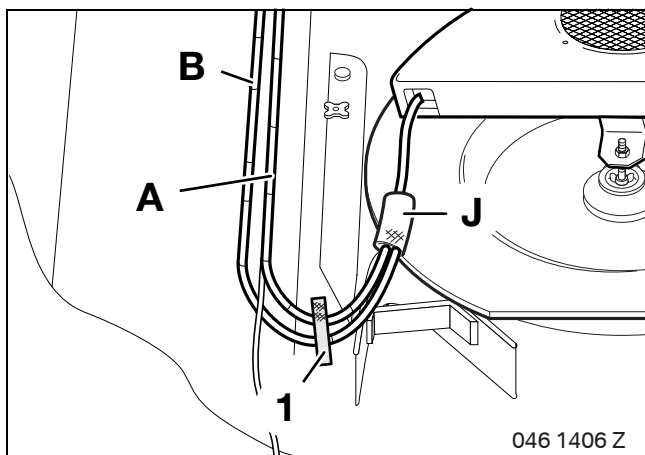
Install the washer **I** and secure the subwoofer **D** with the nut **H**.



Push the foam tube **J** over the subwoofer connection plug.

Connect the 3-pin WS plug casing (1) to branch **A1**.

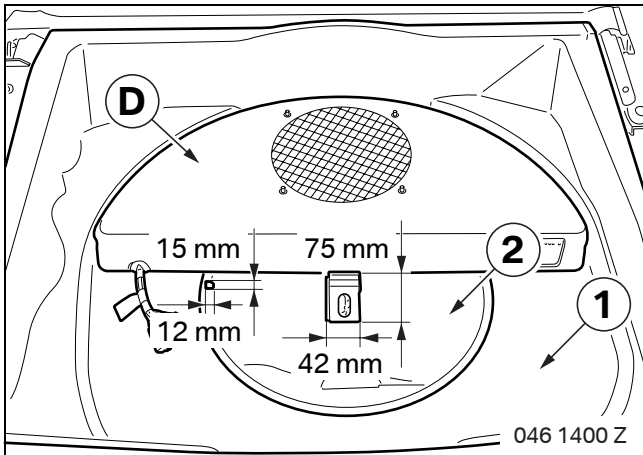
Connect the 4-pin WS plug casing (2) to branch **B1**.



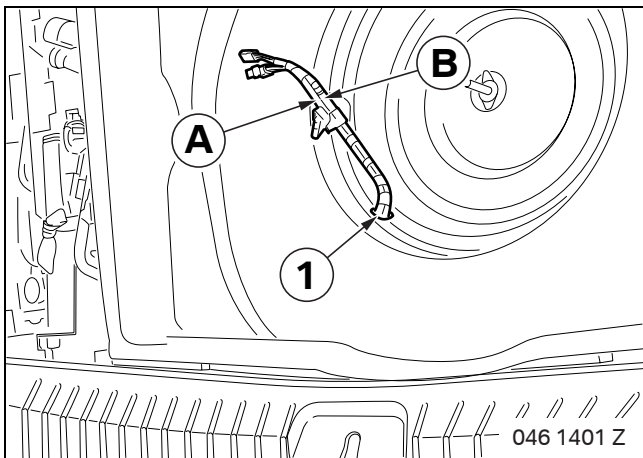
Push the foam tube **J** over the plug connection (rattle guard).

Install the power supply cable **A** and speaker cable **B** and secure them with textile adhesive tape (1).

## 10. To install the subwoofer module E46/3

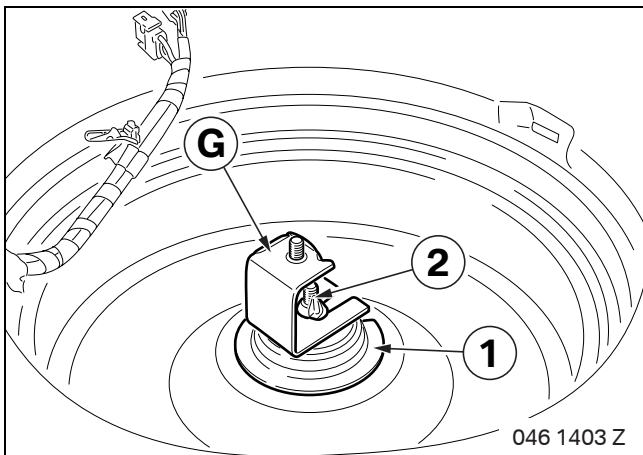


Place the subwoofer **D** on the boot floor trim (1), mark the dimensions on the floor cover (2) and cut it out.

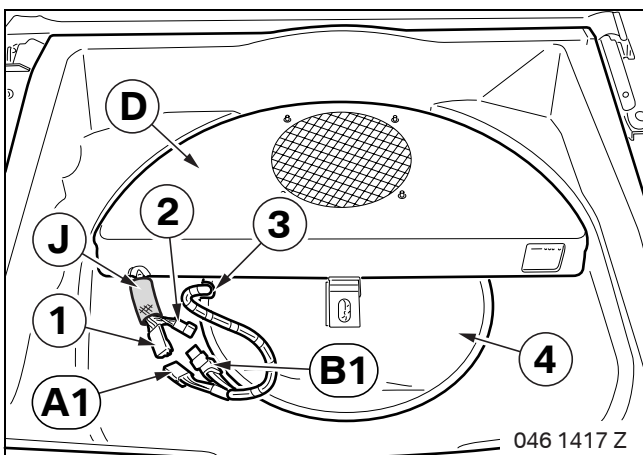


Cut the passage hole (1), 28 mm in diameter, out of the boot floor trim.

Thread the power supply cable **A** and speaker cable **B** through the passage hole in the boot floor trim.



Secure the fastening plate (1) and subwoofer holder **G** with the wing nut (2).



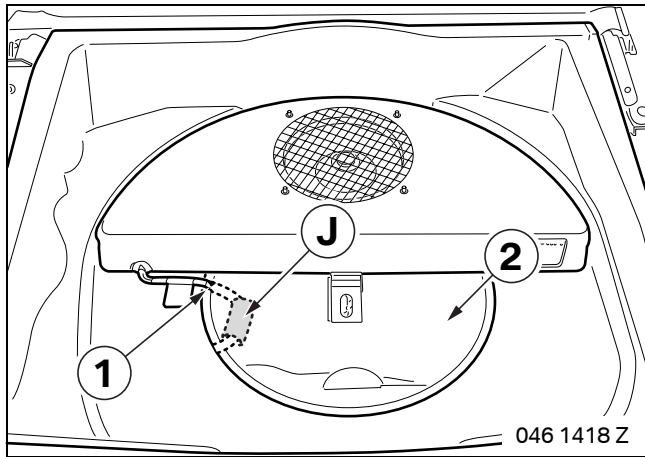
Push the foam tube **J** over the subwoofer connection plug **D**.

Thread branches **A1** and **B1** through the opening (3) in the floor cover (4).

Connect the 3-pin WS plug casing (1) to branch **A1**.

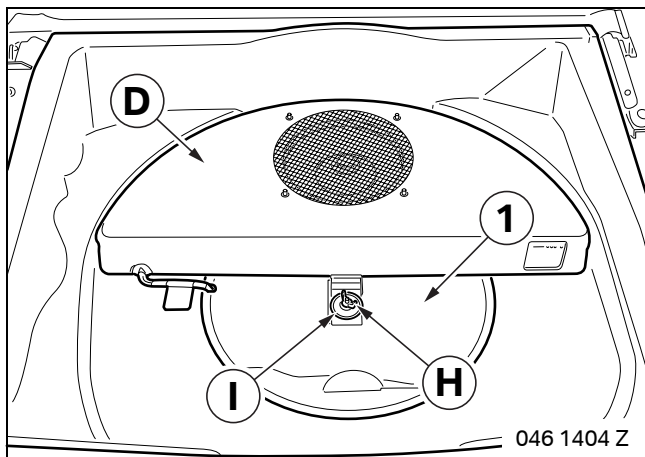
Connect the 4-pin WS plug casing (2) to branch **B1**.

10. To install the subwoofer module E46/3



Push the foam tube **J** over the plug connection (rattle guard).

Thread the connections through the cut-out opening (1) and place them under the floor cover (2) as shown.



Align the subwoofer **D** on the floor cover (1) and secure it with the washer **I** and wing nut **H**.

## **11. Concluding work and coding**

This retrofit system does not require coding.

- Connect the battery
- Conduct a brief test
- Conduct a function test
- Re-assemble the car.