

# Original BMW Parts and Accessories.

## Installation Instructions.



### Illuminated Front Ornamental Grille Retrofit.

**BMW 3 Series Saloon (G20)**

**BMW 3 Series Touring (G21)**

**BMW 3 Series Saloon long version (G28)**

#### Retrofit kit number

63 17 2 466 703	Illuminated front ornamental grille
63 17 2 474 991	Electronics
63 17 5 A14 863	Matt transparent diffuser foil (for chrome and Cerium grey kidney grille frame)
63 17 5 A14 872	Matt black diffuser foil (for black kidney grille frame)

#### Installation time

The installation time is **approx. 1.5 hours**. This may vary depending on the condition of the car and its equipment package.

The installation time increases by **approx. 0.5 hours** for PHEV cars or a 48 V electrical system.

#### Important information

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

These installation instructions are intended for use by qualified specialist staff trained on BMW cars with the relevant expert knowledge.

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

If the ambient light is too bright, the illuminated front ornamental grill will not work; cover the light sensor on the instrument cluster to conduct a function test.

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

In the event of problems, check whether the external temperature sensor is working correctly.

To avoid unnecessary extra work and/or costs, please send an inquiry to the technical parts support team.

Quote the following information:

- VIN,
- retrofit kit part number,
- a detailed description of the problem,
- any work already carried out.

Please do not archive the printout of these installation instructions. The current version can be found in the EPC.

## 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 warning text.

## Installation information

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

Additional cables/wires that are installed must be secured with cable ties.

All illustrations show LHD (left-hand drive) cars; proceed similarly on RHD (right-hand drive) cars.

## Ordering instructions

The following parts are not supplied in the retrofit kit and must be ordered separately, see EPC for details:

**L** 63 17 5 A0C BD7 Extension cable (for PHEV cars or 48 V electrical system)

## Customer information

Print out the “Customer information” section at the end of the installation instructions and present it to the customer.

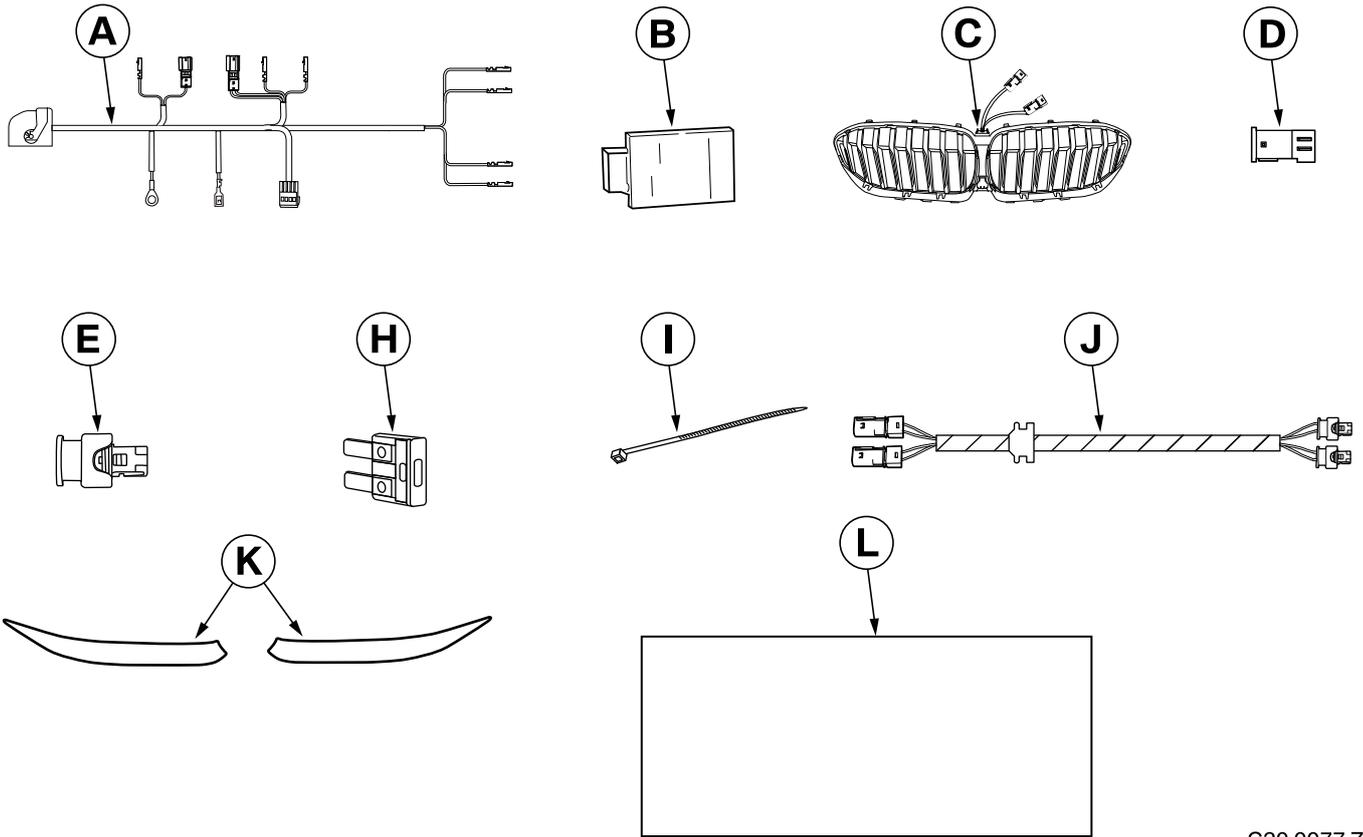
## Special tools required

Refer to the relevant ISTA/AIR repair manual for details of the special tool required.

## Table of contents

Section	Page
1. Parts list for retrofit kit .....	4
2. Preparatory work .....	5
3. Retrofit wiring harness connection diagram .....	6
4. Installation and cabling diagram (not for PHEV cars or 48 V electrical system) .....	7
5. Installation and cabling diagram (for PHEV cars or 48 V electrical system only) .....	8
6. Front ornamental grille modification .....	9
7. Route and connect the retrofit wiring harness .....	12
8. Concluding work and function test .....	21
9. Wiring diagram .....	22
10. Customer information .....	24

# 1. Parts list for retrofit kit



G20 0077 Z

## Legend

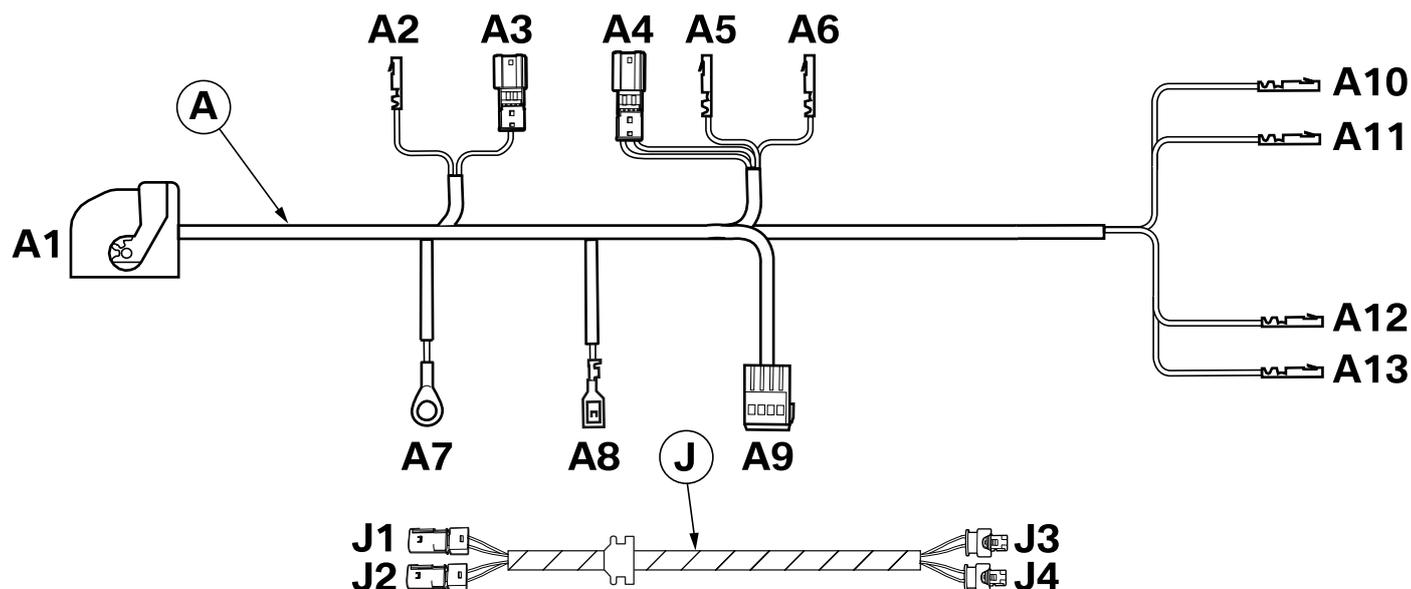
- A** Retrofit wiring harness\*
- B** CAN interface\*
- C** Illuminated front ornamental grille
- D** WB 2-pin socket housing (2 x)\*
- E** SW 2-pin socket housing (2 x)\*
- H** Blade terminal fuse 3 A\*
- I** 220 mm cable tie (15 x)\*
- J** Extension cable (for PHEV cars or 48 V electrical system)
- K** Diffuser foil
- L** Installation fleece

\* Part of the “electronics” retrofit kit

## 2. Preparatory work

	ISTA/AIR No.
Disconnect all negative battery cables	61 20 900
Release and disconnect various plug connections	61 13 ...
Instructions for handling the documents: Repair manual, technical data, tightening torques	00 11 ...
Instructions for handling wiring harnesses and cables	61 00 ...
<b>The following components must be removed first of all</b>	
(Interior) door sill cover strip, passenger side	51 47 000
Footwell side trim on the A-pillar, passenger side	51 43 075
Pedal trim	51 45 186
Unfasten the front power distribution box	61 14 ...
Front ornamental grille, centre	51 13 000
Intake silencer housing	13 71 000
<b>For PHEV cars or 48 V electrical system</b>	
Cowl panel cover	51 13 116
Pedal trim	51 45 186

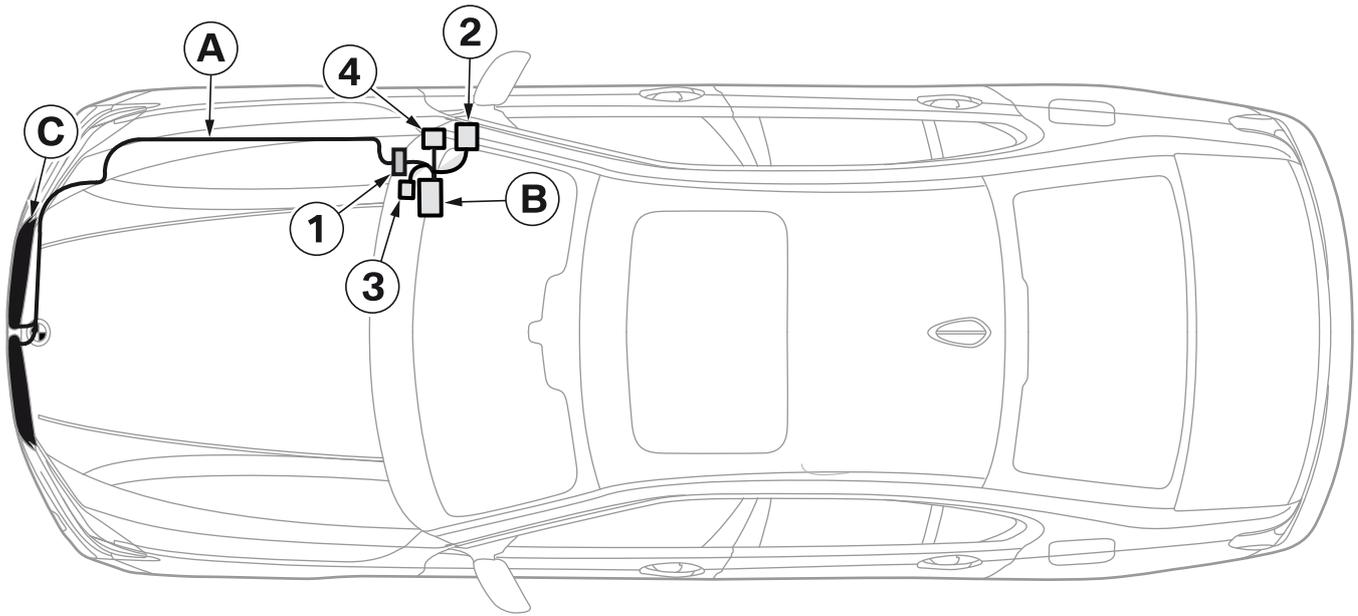
### 3. Retrofit wiring harness connection diagram



G20 0147 Z

Position	Designation	Signal	Cable colour/ cross-section	Connection location in the car	Abbreviation/ slot
A	Retrofit wiring harness	---	---	---	---
A1	SW 12-pin socket housing	---	---	To CAN interface <b>B</b>	---
A2	Socket contact	58g	RT 0.35 mm <sup>2</sup>	Insulate and tie back	---
A3	WB 2-pin plug housing	---	---	Insulate and tie back	---
A4	WB 2-pin plug housing	---	---	To socket housing <b>D</b>	---
A5	Socket contact	CAN high	BL/RT 0.35 mm <sup>2</sup>	To the plug from BDC <b>A258</b>	A258*7B PIN 36
A6	Socket contact	CAN low	RT 0.35 mm <sup>2</sup>	To the plug from BDC <b>A258</b>	A258*7B PIN 35
A7	M6 eyelet	Terminal 31	BR/SW 0.75 mm <sup>2</sup>	To ground support point <b>Z10</b>	Z10*32B
A8	Socket contact	Terminal 30B	RT 0.75 mm <sup>2</sup>	To power distributor <b>Z44</b>	Z44 PIN 7
A9	WB 4-pin socket housing	---	---	Insulate and tie back	---
A10	Socket contact	SGR (11-12V)	RT/BL 0.75 mm <sup>2</sup>	To socket housing <b>E1</b>	PIN 1
A11	Socket contact	Terminal 31	BR 0.75 mm <sup>2</sup>	To socket housing <b>E1</b>	PIN 2
A12	Socket contact	SGL (11-12V)	RT/BL 0.75 mm <sup>2</sup>	To socket housing <b>E2</b>	PIN 1
A13	Socket contact	Terminal 31	BR 0.75 mm <sup>2</sup>	To socket housing <b>E2</b>	PIN 2
J	Extension cable (for PHEV cars or 48 V electrical system only)	---	---	---	---
J1	Plug housing	---	---	To plug <b>E1</b>	---
J2	Plug housing	---	---	To plug <b>E2</b>	---
J3	Socket housing	---	---	To plug <b>1</b>	---
J4	Socket housing	---	---	To plug <b>1</b>	---

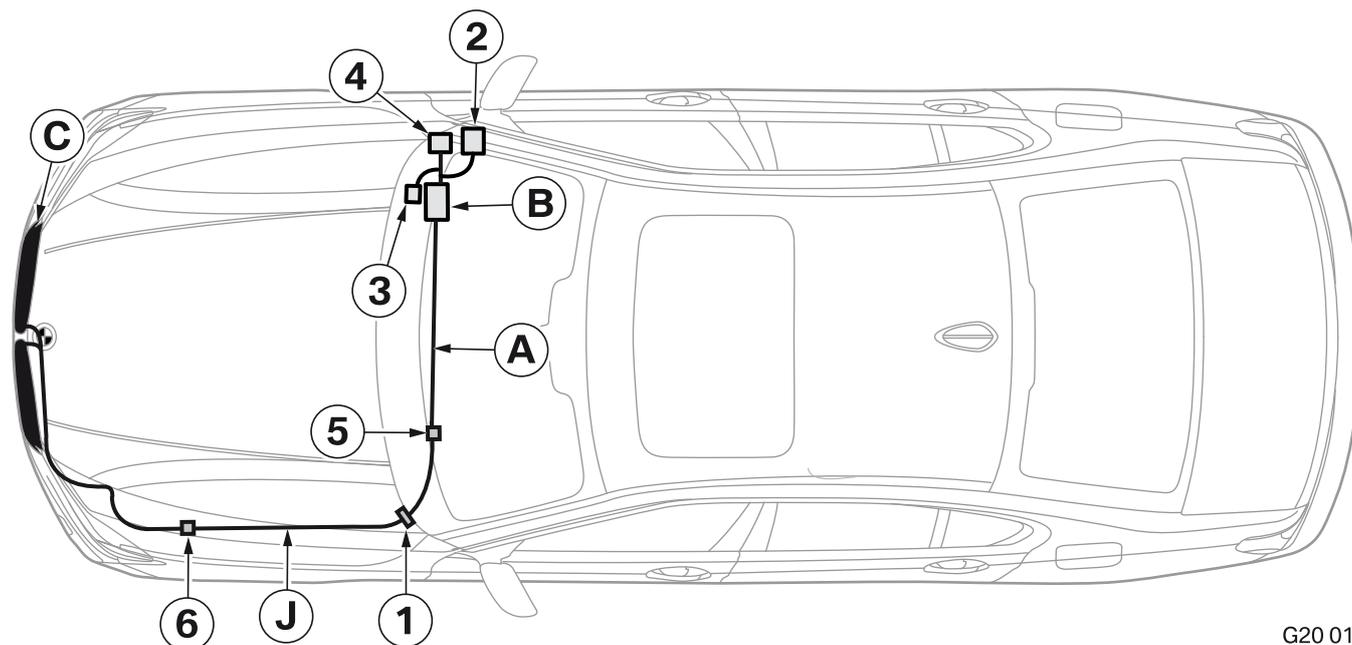
#### 4. Installation and cabling diagram (not for PHEV cars or 48 V electrical system)



G20 0079 Z

- A** Retrofit wiring harness
- B** CAN interface
- C** Illuminated front ornamental grille
  
- 1** Rubber grommet
- 2** Body Domain Controller (BDC) **A258**
- 3** Ground support point **Z10\*32B**
- 4** Front right power distributor **Z44**

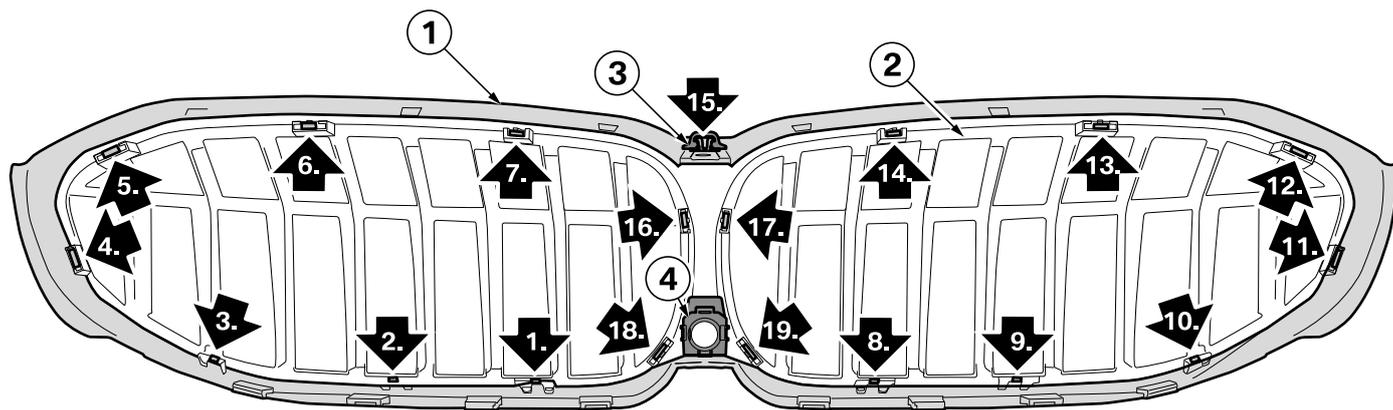
## 5. Installation and cabling diagram (for PHEV cars or 48 V electrical system only)



G20 0138 Z

- A** Retrofit wiring harness
- B** CAN interface
- C** Illuminated ornamental grille
- J** Extension cable
  
- 1** Rubber grommet
- 2** Body Domain Controller (BDC) **A258**
- 3** Ground support point **Z10\*32B**
- 4** Front right power distributor **Z44**
- 5** Interior connection plug
- 6** Engine bay connection plug

## 6. Front ornamental grille modification

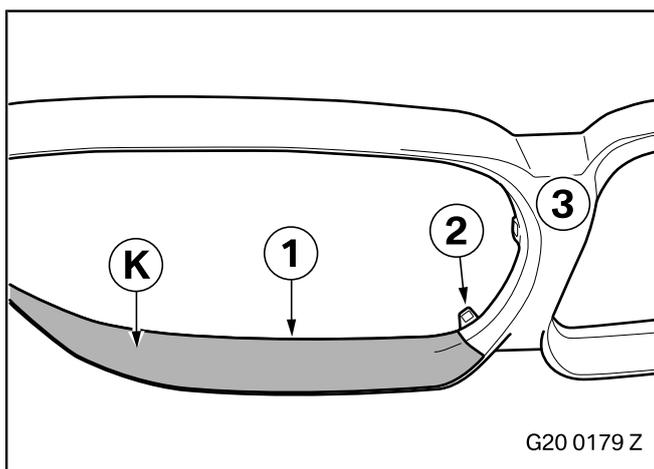


G20 0073 Z

Use the installation fleece **L** as a surface for modifying the front ornamental grille and foil application. ◀

Carefully release the interlocks (arrows) in the order shown, remove the Z locator (3) and take the frame (1) off the front ornamental grille (2).

Remove the I-Cam holder (4).



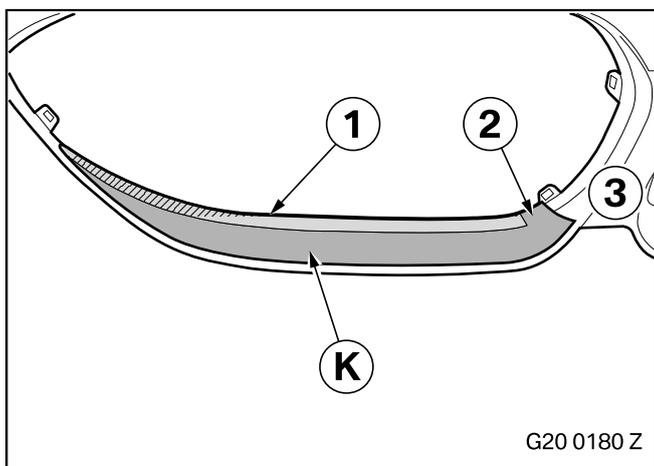
The bonding is only shown on the right-hand side. Proceed in the same way on the left-hand side.

The bonding surfaces must be completely dry, clean, and free from wax or grease.

The black diffuser file must be dry when being affixed.

The transparent diffuser file must be wet when being affixed. Only use water for this purpose.

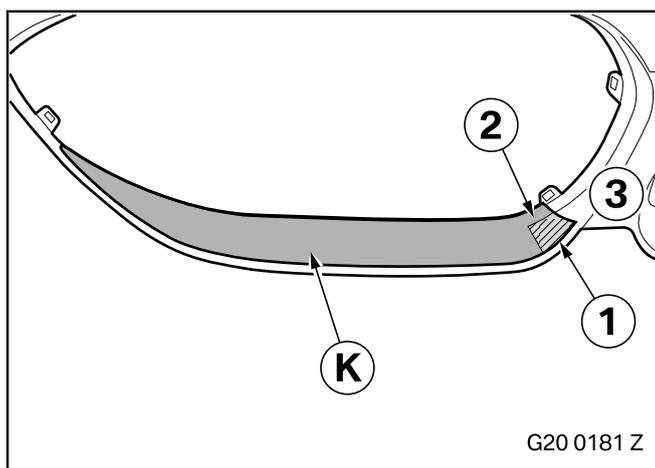
Position the diffuser foil **K** flush on the rear edge (1) and the lug (2) of the frame (3) as shown.



Do not affix the diffuser foil **K** in area (2) yet.

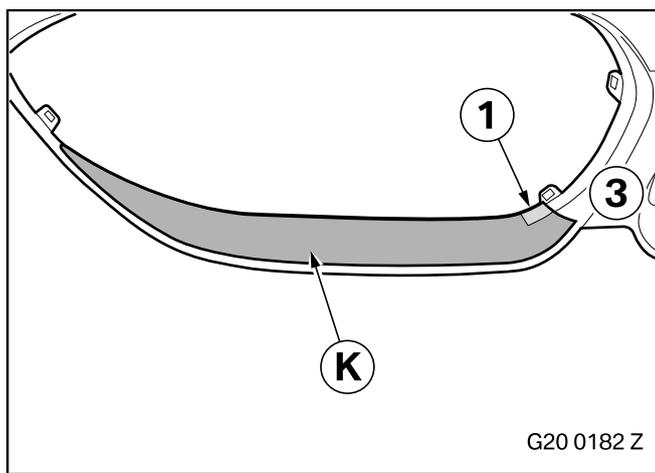
Remove the backing foil and affix the diffuser foil **K** on the rear web (hatched area) flush on the rear edge (1) of the frame (3) and run the blade over it.

## 6. Front ornamental grille modification

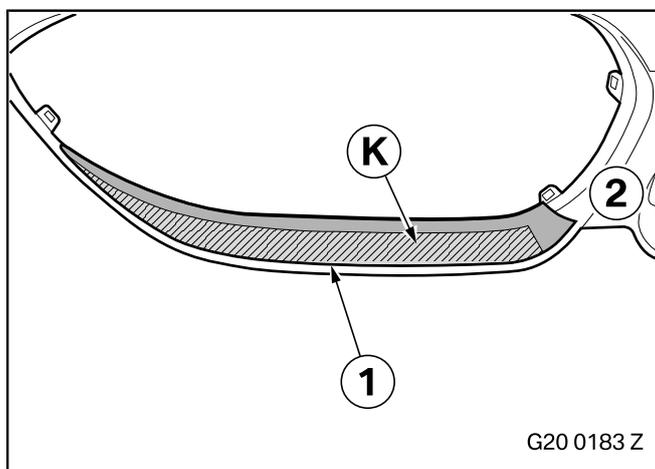


Do not affix the diffuser foil **K** in area (2) yet.

Pull the front inner section of the diffuser foil **K** (hatched area) up to the front edge (1) of the frame (3), affix it and run the blade over it.

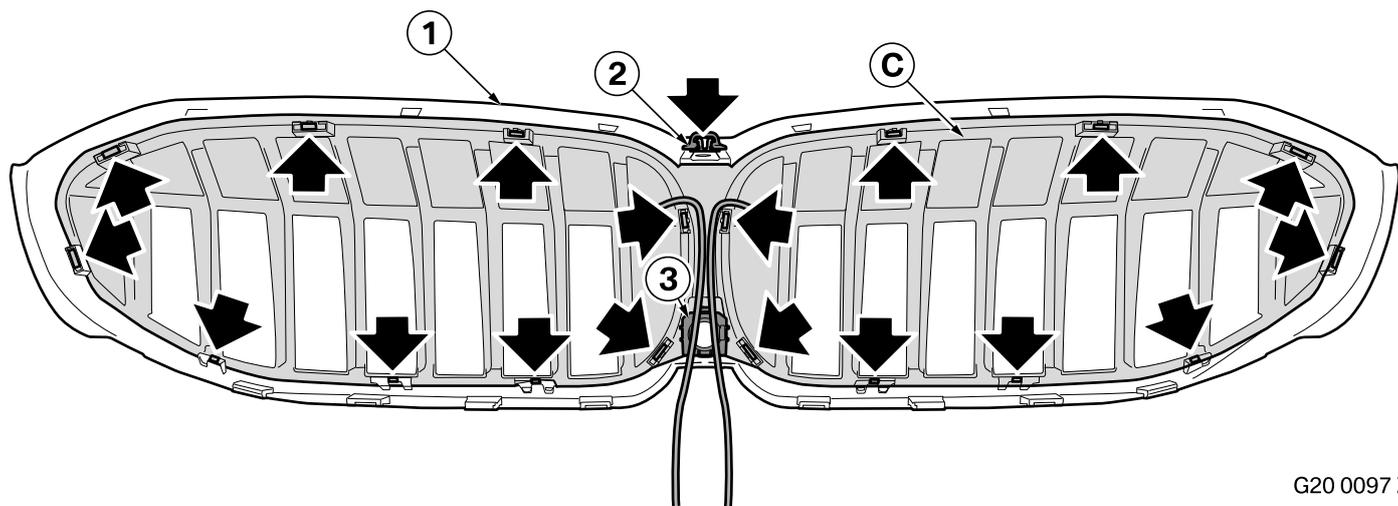


Pull the rear inner section of the diffuser foil **K** (hatched area) up to the rear edge (1) of the frame (3), affix it and run the blade over it.



Pull the front section of the diffuser foil **K** (hatched area) up to the front edge (1) of the frame (2), affix it and run the blade over it.

## 6. Front ornamental grille modification



G20 0097 Z

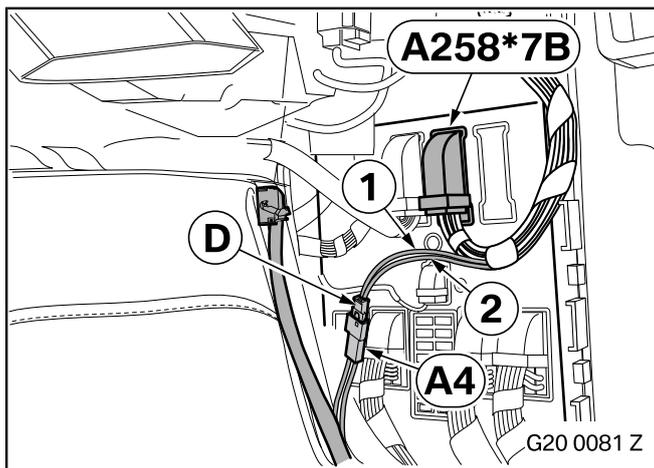
 The interlocks must not be damaged. ◀

Install the I-Cam holder (3) in the frame (1).

Insert the front ornamental grille **C** into the frame (1) and clip in the interlocks (arrows).

Install the Z locator (2) in the front ornamental grille **C**.

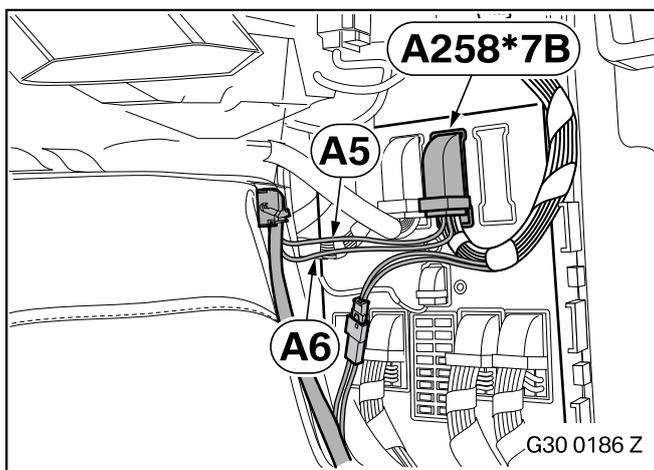
## 7. Route and connect the retrofit wiring harness



Disconnect the cables as follows from plug **A258\*7B**, WS 54-pin socket housing, and connect them to WB 2-pin socket housing **D**:

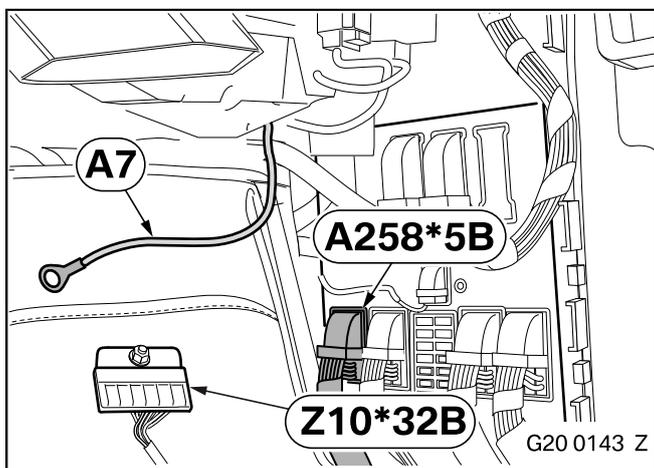
- GE/WS cable (1) from PIN 36 to PIN 1
- GE/SW cable (2) from PIN 35 to PIN 2

Connect branch **A4**, WB 2-pin plug housing, to socket housing **D**.



Connect branches **A5-A6** to plug **A258\*7B** as follows:

- Branch **A5**, BL/RT cable, to PIN 36
- Branch **A6**, RT cable, to PIN 35



### For LHD (left-hand drive) cars

Disconnect, insulate and tie back the right light carpet cable, VI/BL cable, from PIN 31 of plug **A258\*5B**.

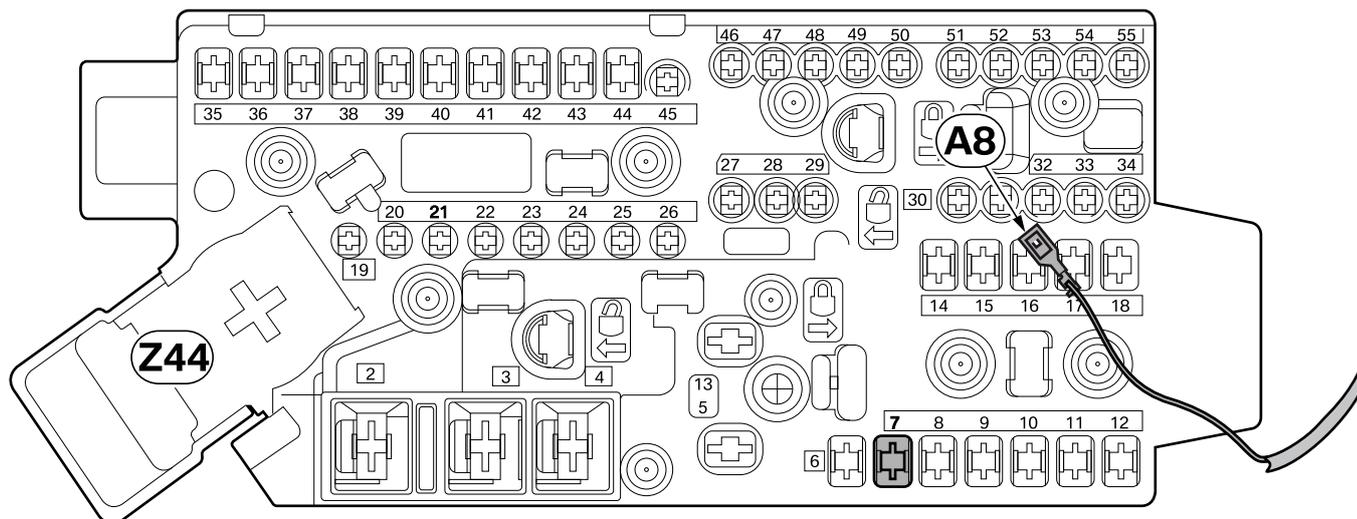
### For RHD (right-hand drive) cars

Disconnect, insulate and tie back the left light carpet cable, VI/GN cable, from PIN 30 of plug **A258\*5B**.

### All cars

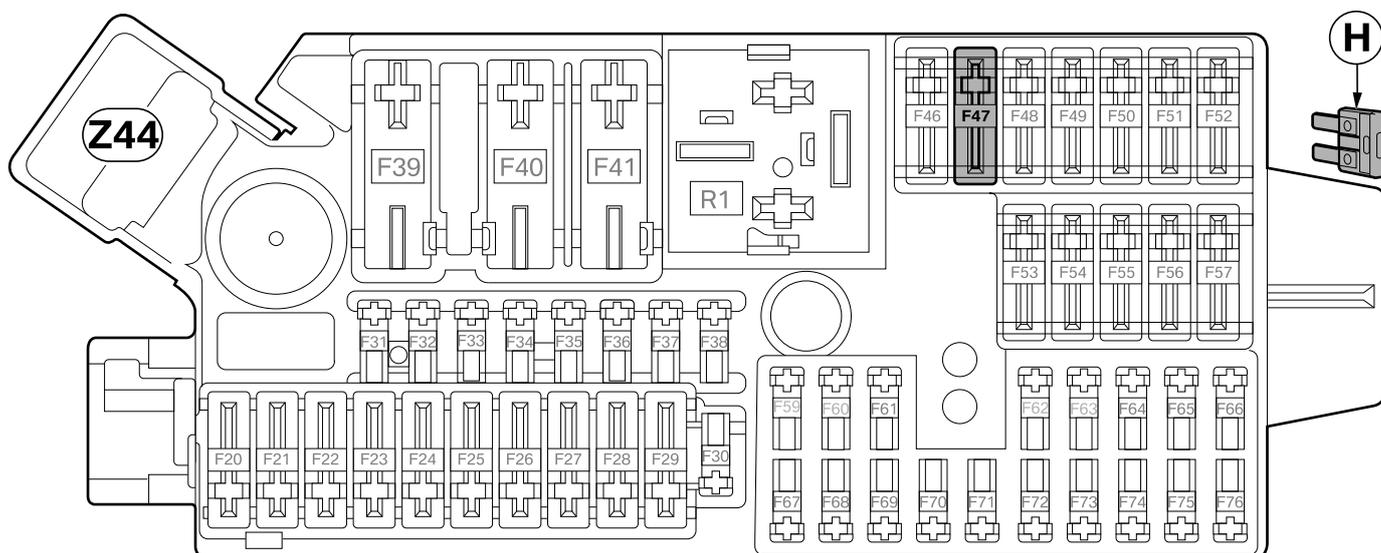
Secure branch **A7**, BR/SW cable, to ground support point **Z10\*32B**.

## 7. Route and connect the retrofit wiring harness



G20 0087 Z

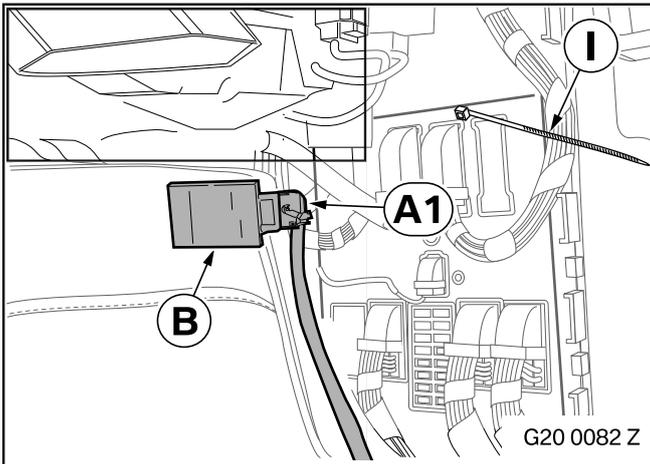
Connect branch **A8**, RT cable, to power distributor **Z44** PIN 7.



G20 0086 Z

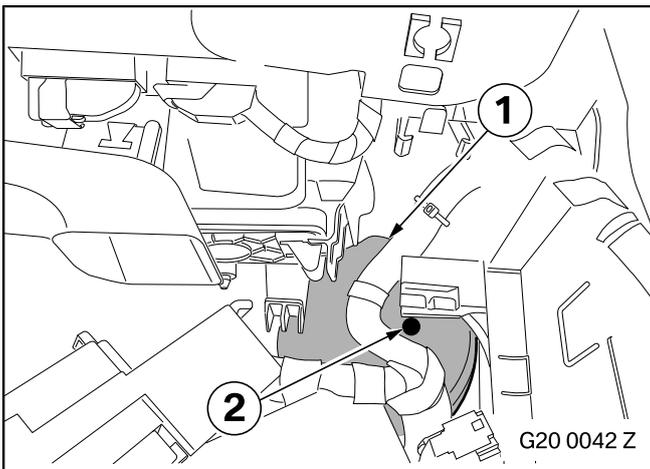
Place blade terminal fuse 3 A **H** into slot **F47** of power distributor **Z44**.

## 7. Route and connect the retrofit wiring harness



Connect branch **A1**, SW 12-pin socket housing, to CAN interface **B**.

Secure CAN interface **B** to a suitable point in the passenger footwell using cable tie **I**.

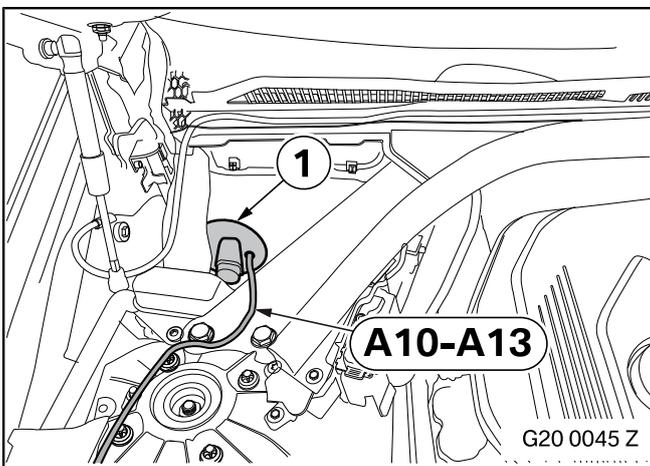


### Not for PHEV cars or 48 V electrical system

**!** Ensure that when you drill you do not damage any cables in the car. ◀

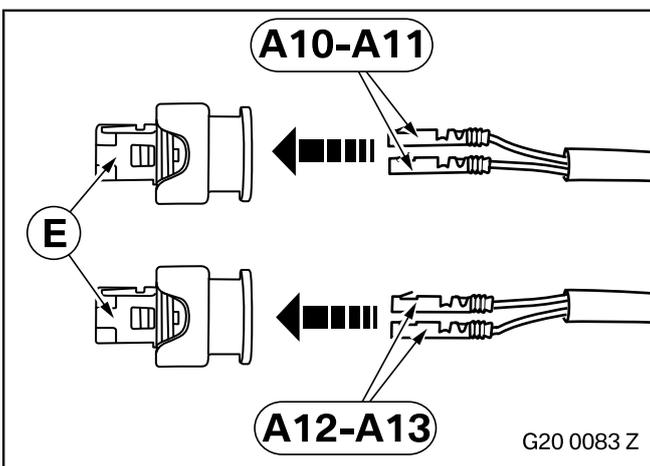
Move the passenger side footwell mat to one side.

Drill a hole in the rubber grommet (1) at the mark (2) with a 8 mm drill bit.



Route branches **A10-A13** from the passenger footwell into the engine bay.

Seal the rubber grommet (1) so that it is watertight using standard workshop products.

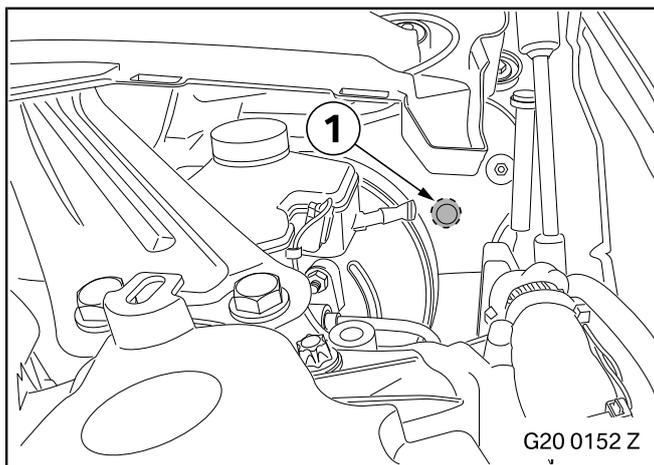


### All cars

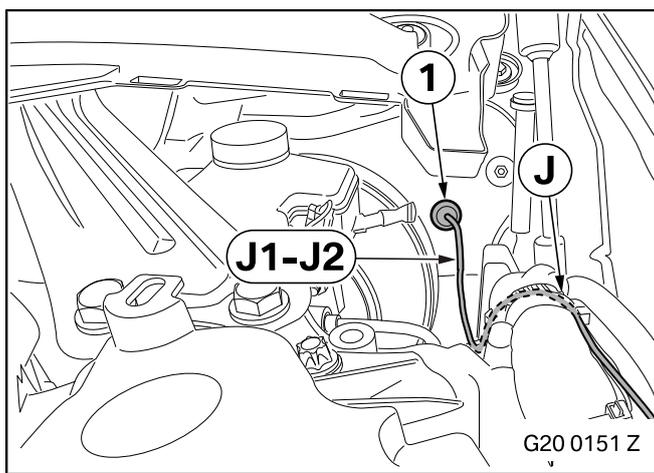
Connect branches **A10-A13** as follows to socket housing **E**:

- Branch **A10**, RT/BL cable, to PIN 1
- Branch **A11**, BR cable, to PIN 2
- Branch **A12**, RT/BL cable, to PIN 1
- Branch **A13**, BR cable, to PIN 2

## 7. Route and connect the retrofit wiring harness

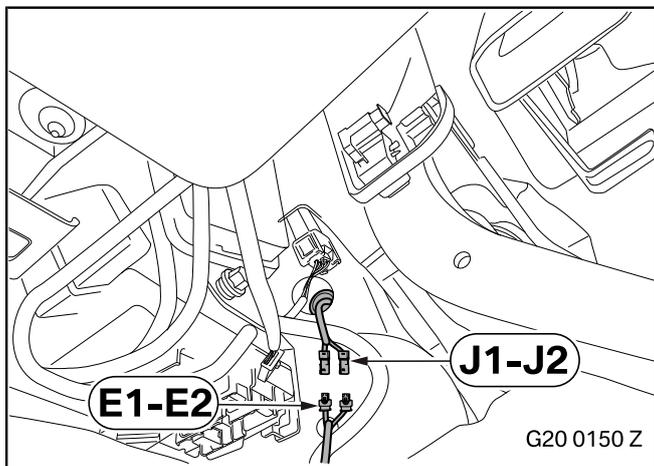


**For PHEV cars or 48 V electrical system only**  
Remove the recess (1) at the perforation using standard workshop equipment.



Route branches **J1-J2** from the engine bay into the footwell on the driver's side through the opening.

Insert the rubber grommet (1) on the extension cable **J** and seal it using standard workshop equipment so that it is watertight.

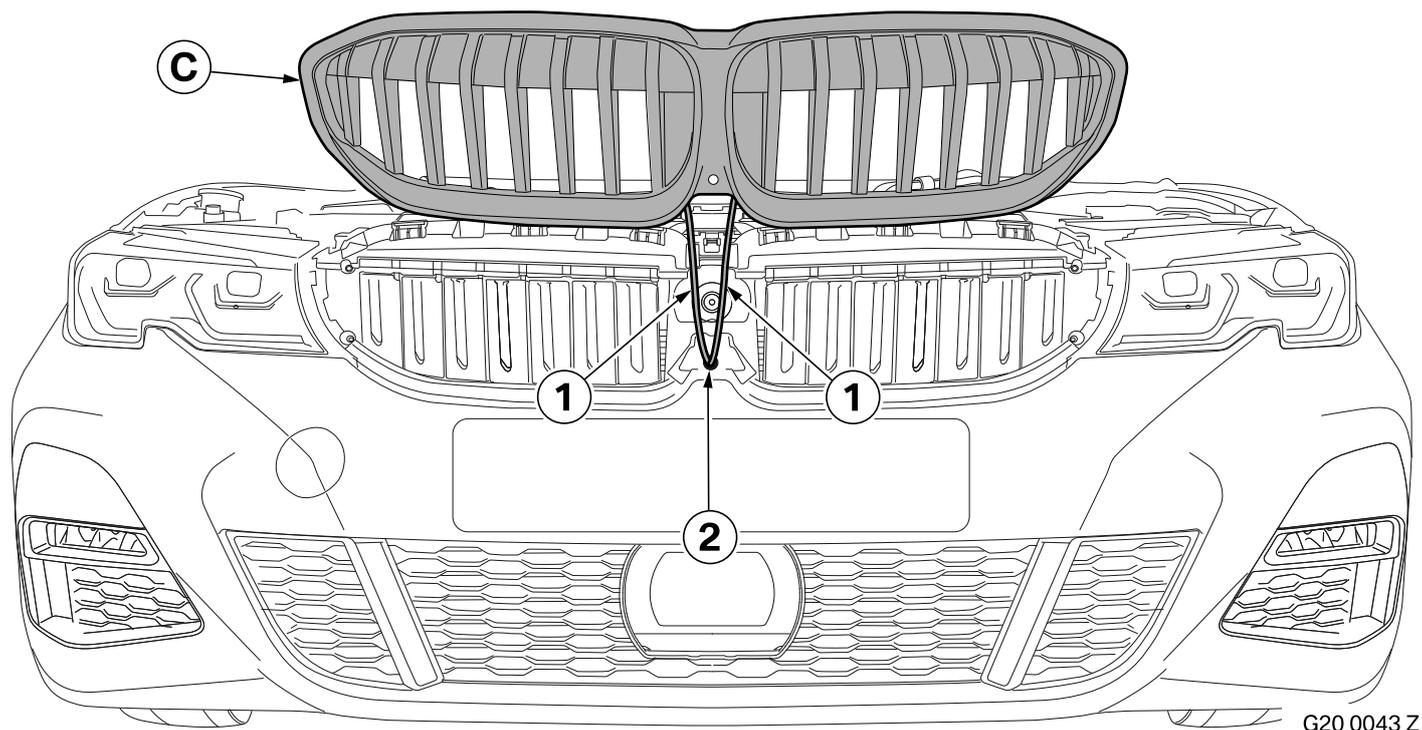


**!** It must be ensured that the cables are not near movable parts while being routed. ◀

Route plugs **E1-E2** to the footwell on the driver's side.

Connect plugs **E1-E2** on the retrofit wiring harness to plugs **J1-J2** on the extension cable.

## 7. Route and connect the retrofit wiring harness



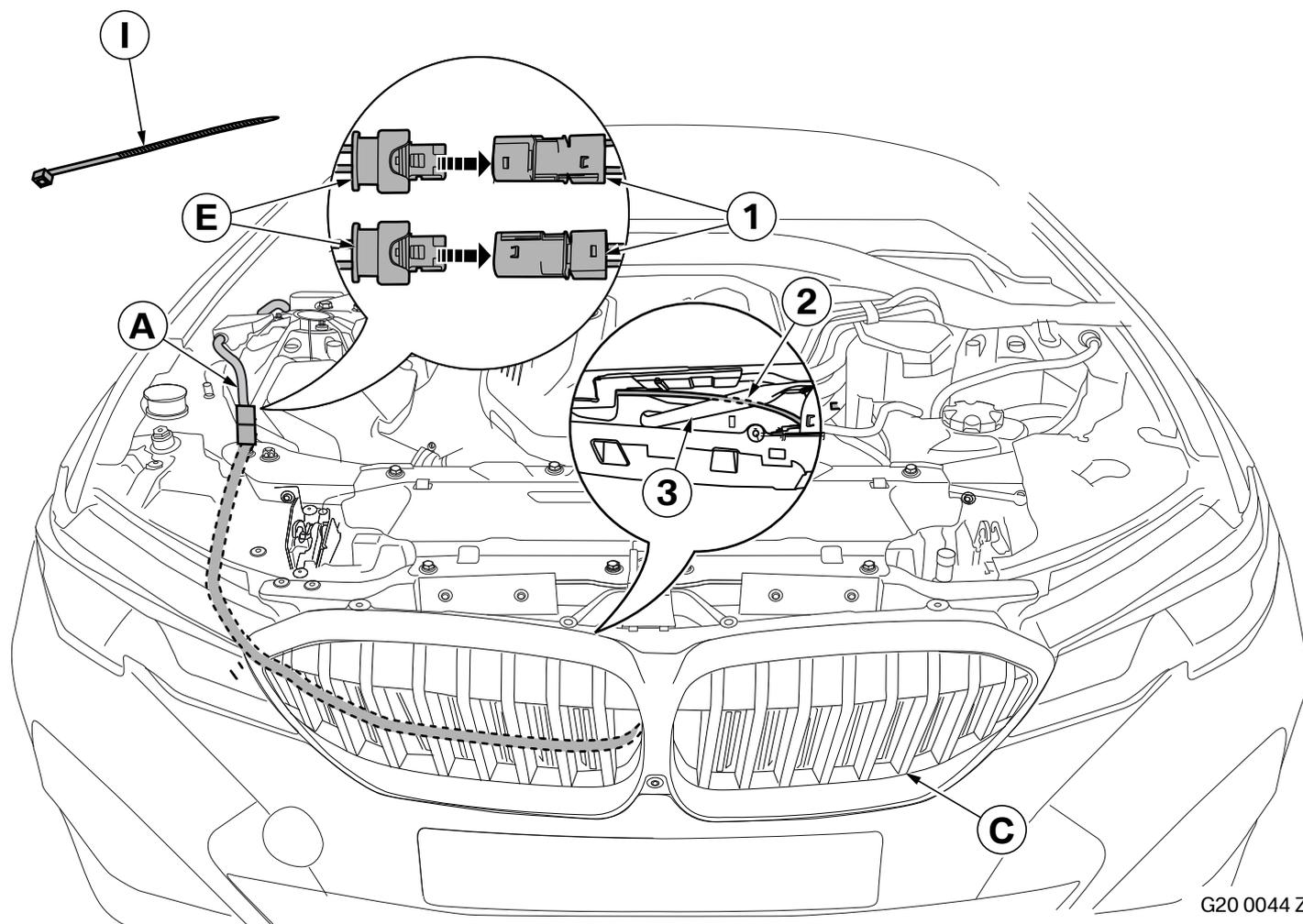
 When routing the cables (1), ensure that they are not damaged. ◀

Thread the cables (1) from the front ornamental grille **C** through the openings (2) in the radiator louvre as shown above.

Install the front ornamental grille **C** in the front bumper trim.

## 7. Route and connect the retrofit wiring harness

Not for PHEV cars or 48 V electrical system



G20 0044 Z

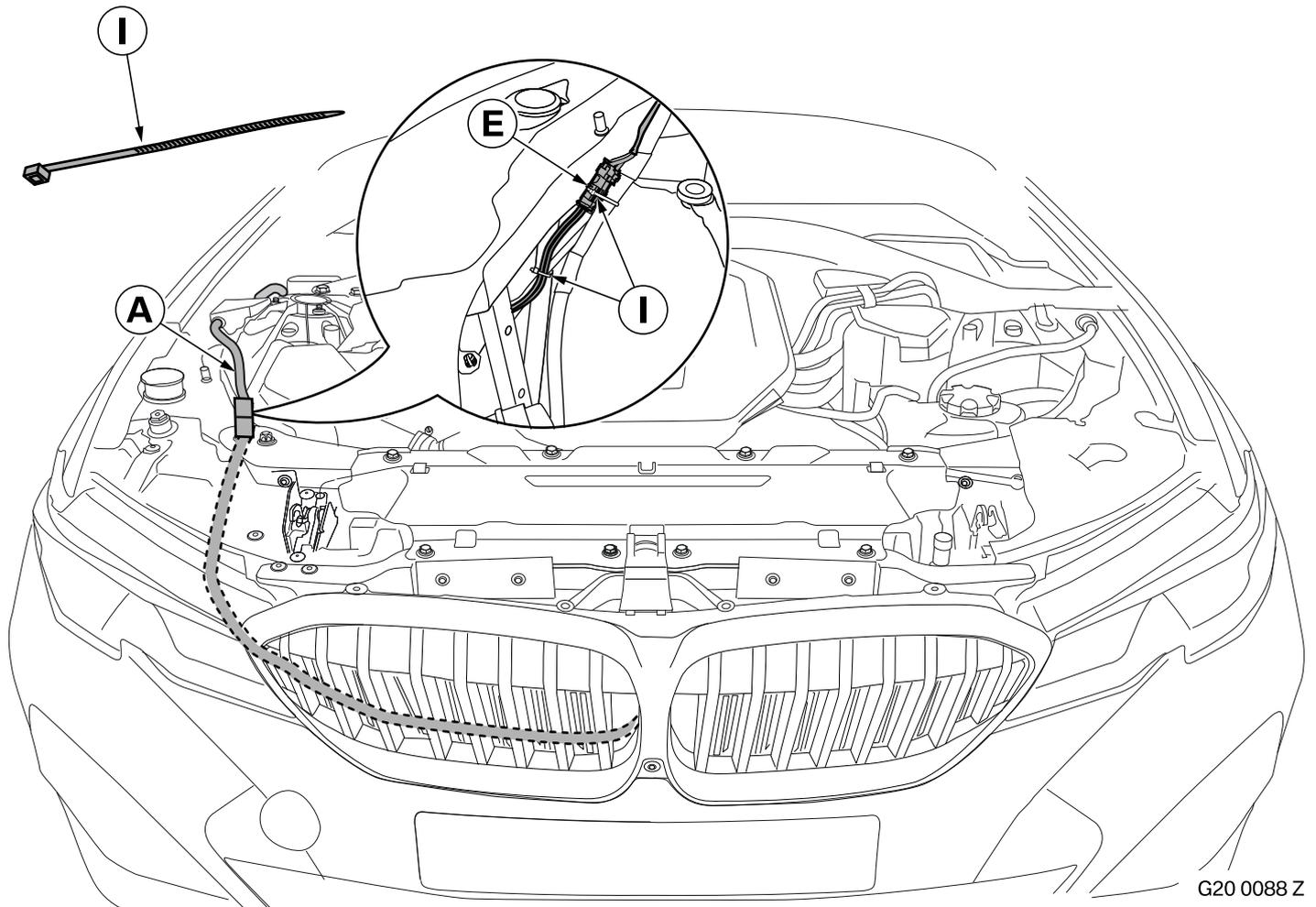
 Route the retrofit wiring harness **A** along the standard wiring harness as far as possible and secure it with cable tie **I**. ◀

Route the cables (2) along the front ornamental grille **C** to the standard wiring harness below the V strut (3) and secure it with cable tie **I**.

Route the cables for the front ornamental grille **C** to the location of plug **E** on the retrofit wiring harness **A**.

Connect plug **E** to plug (1) on the front ornamental grille **C**.

## 7. Route and connect the retrofit wiring harness

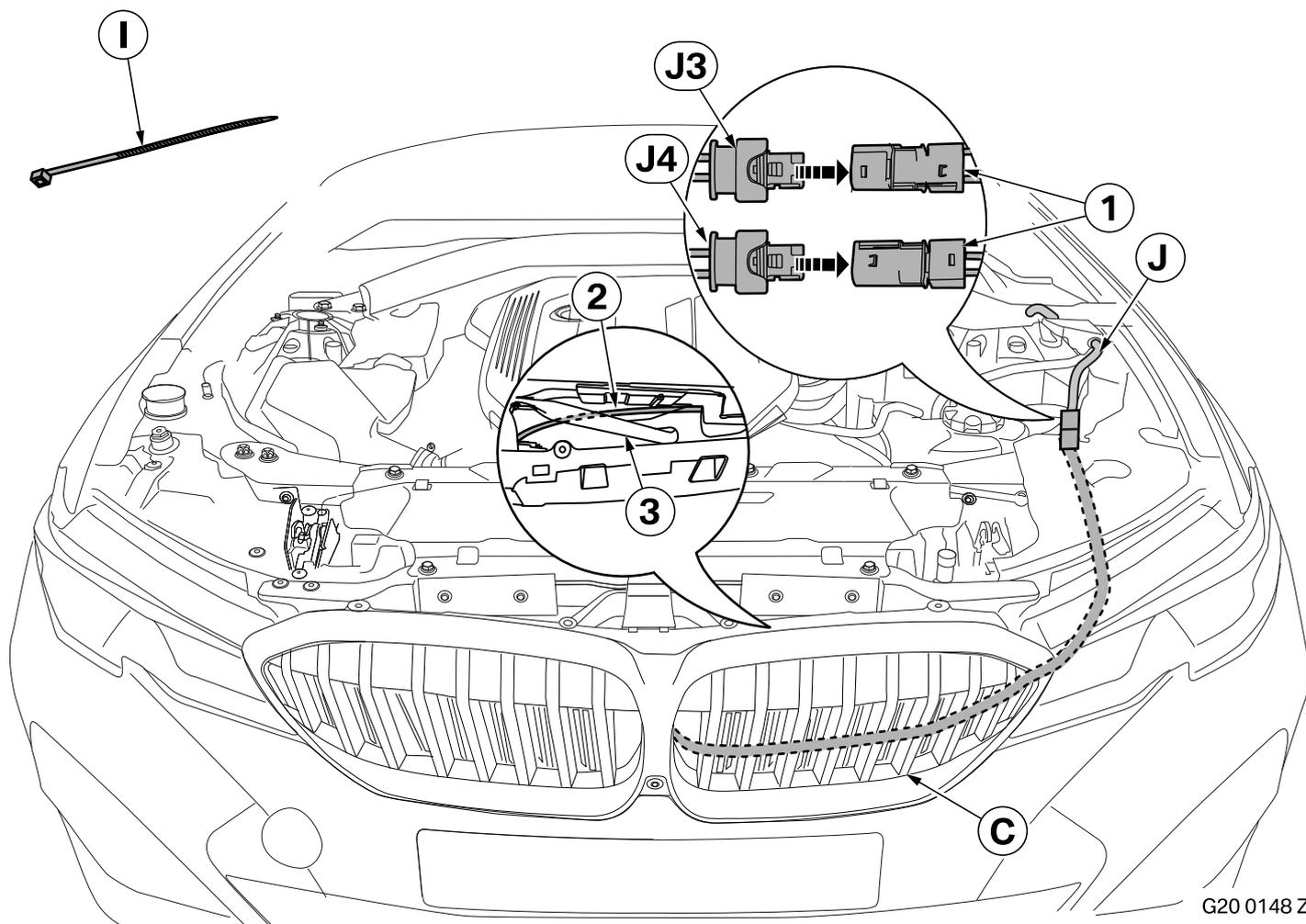


G20 0088 Z

Secure plug **E** to the standard wiring harness near the air filter as shown above using cable tie **I**.

## 7. Route and connect the retrofit wiring harness

For PHEV cars or 48 V electrical system only

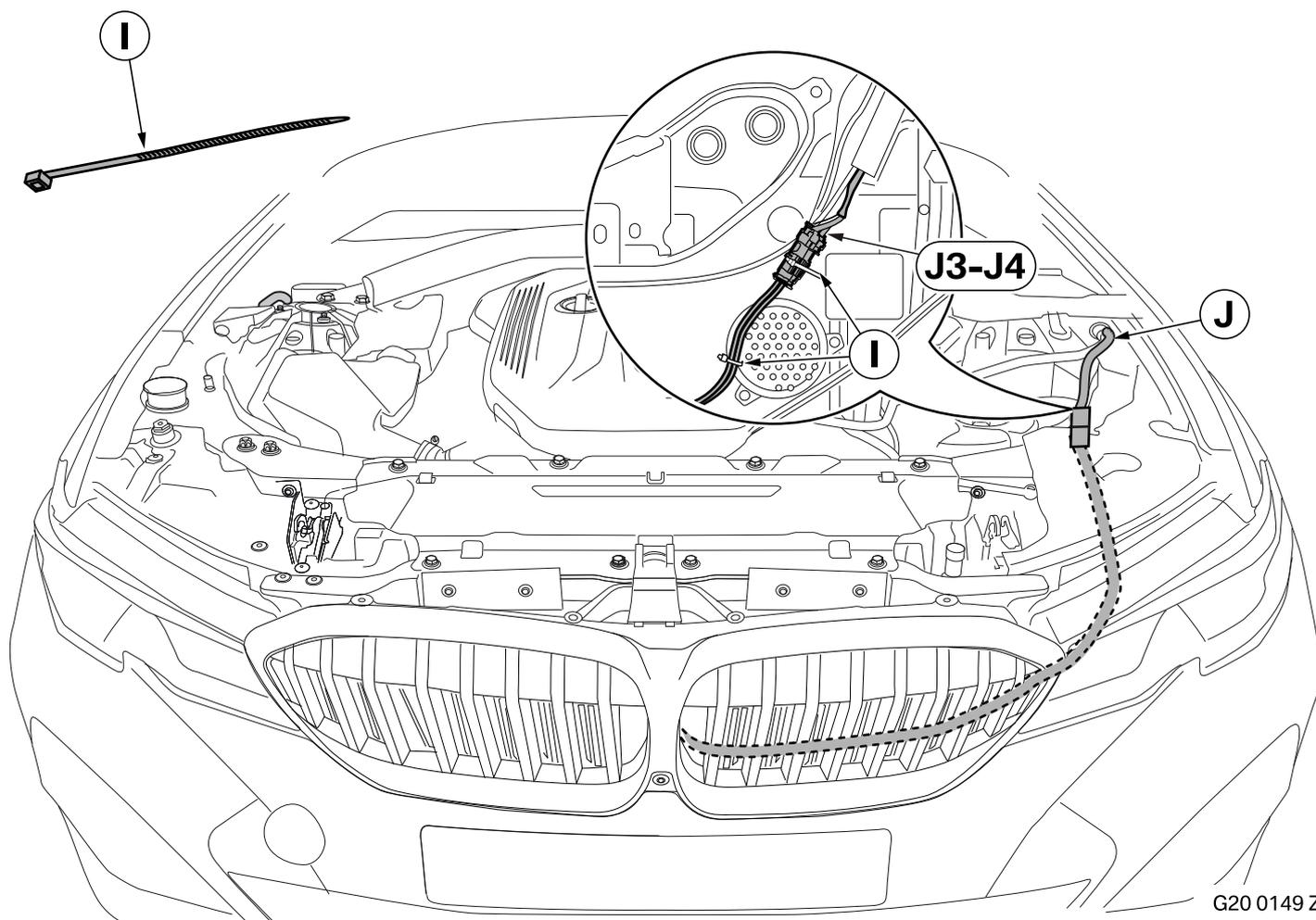


Route the cables (2) along the front ornamental grille **C** to the standard wiring harness below the V strut (3) and secure it with cable tie **I**.

Route the cables for the front ornamental grille **C** to the location of extension cable **J**.

Connect plugs **J3-J4** to the plug (1) on the front ornamental grille **C**.

## 7. Route and connect the retrofit wiring harness



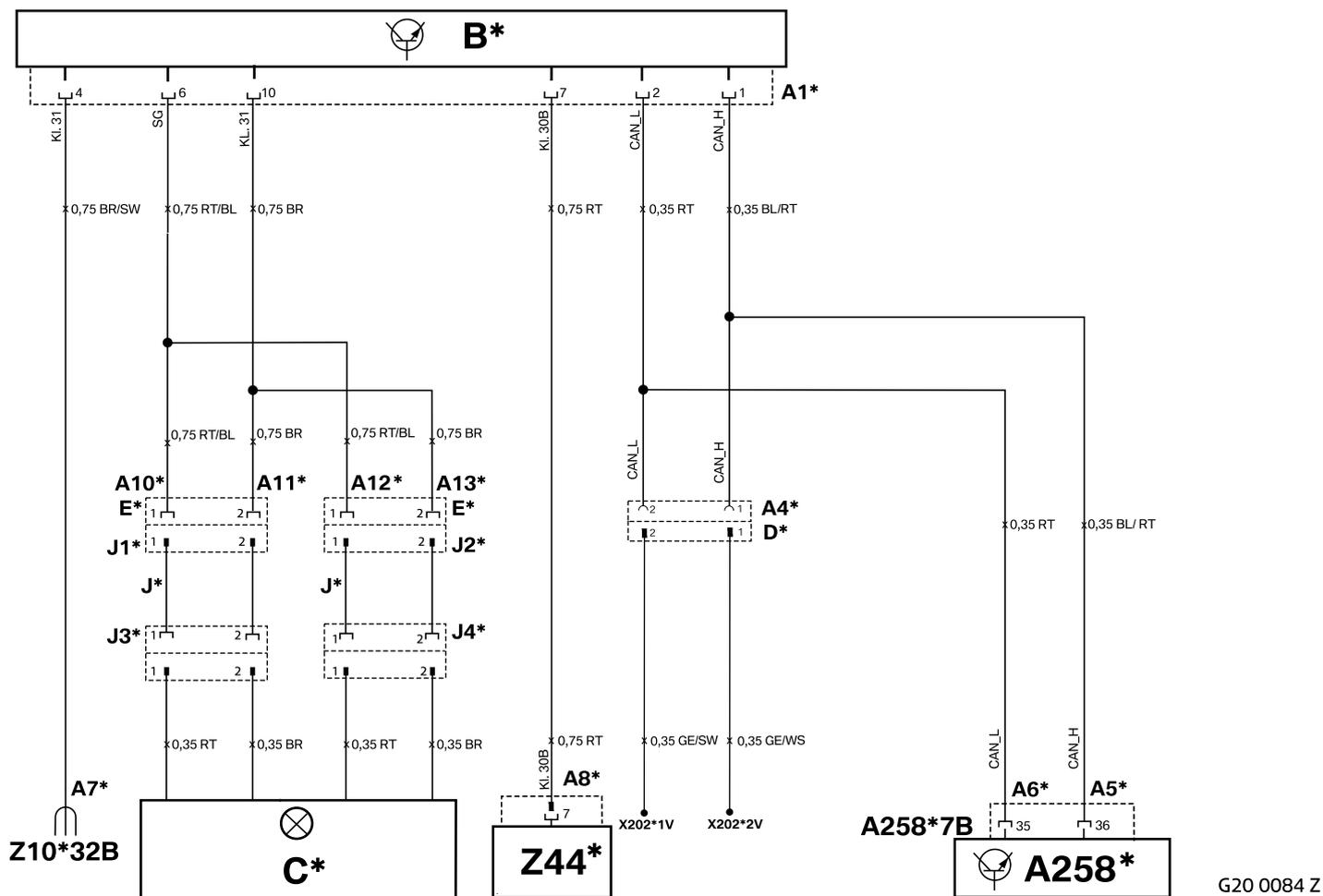
Secure plugs **J3-J4** to the standard wiring harness near the expansion tank as shown above using cable tie **I**.

## 8. Concluding work and function test

The retrofit system does not require programming/coding.

- Connect the battery
- Connect the battery charger to the car
- Carry out a vehicle test using the ISTA system and note or work through any entered errors in the memory
  - ▶ The error entry for the front ornamental grille retrofit **Light carpet defective** can be ignored. ◀
- Conduct a function test
- If the ambient light is too bright, the illuminated front ornamental grill will not work; cover the light sensor on the instrument cluster to conduct a function test
- Re-assemble the car
- Give the customer the customer information

## 9. Wiring diagram



G20 0084 Z

### Legend

- A1\*** SW 12-pin socket housing
- A4\*** WB 2-pin plug housing
- A5\*** Socket contact, BL/RT cable
- A6\*** Socket contact, RT cable
- A7\*** M6 eyelet
- A8\*** Socket contact, RT/BL cable
- A10\*** Socket contact, RT/BL cable
- A11\*** Socket contact, BR cable
- A12\*** Socket contact, RT/BL cable
- A13\*** BR 2-pin socket housing
- J1\*** SW 2-pin plug housing
- J2\*** SW 2-pin plug housing
- J3\*** SW 2-pin socket housing
- J4\*** SW 2-pin socket housing
- B\*** CAN interface
- C\*** Illuminated front ornamental grille
- D\*** SW 2-pin socket housing
- E\*** SW 2-pin socket housing
- J\*** Extension cable (for PHEV cars or 48 V electrical system only)

- A258** Body Domain Controller BDC
- A258\*7B** SW 54-pin socket housing
- Z44** Front right power distributor
- Z10\*32B** Ground support point in the interior

## 9. Wiring diagram

All of the designations marked with \* apply only to these installation instructions or this wiring diagram.

### Cable colours

BL	Blue	GR	Grey	RT	Red
BO	Bordeaux	L-GN	Light green	SW	Black
BR	Brown	NT	Natural	VI	Violet
GE	Yellow	OR	Orange	WB	Sea blue
GN	Green	RO	Pink	WS	White

## 10. Customer information

### Operation

**The lights on the front ornamental grilles will be switched on automatically if one of the following conditions is satisfied:**

- After unlocking the car (max. illumination time one minute)
- After opening a door, the boot/tailgate or the bonnet (max. illumination time three minutes)
- After switching off the engine (max. illumination time three minutes)
- After closing a door, the boot/tailgate or the bonnet (max. illumination time one minute)
- After locking the car (maximum illumination time nine seconds)

**The lights on the front ornamental grilles will be switched off automatically or will not be switched on automatically if one of the following conditions is satisfied:**

- In very bright daylight
- If the engine is started with the doors closed
- In extremely high outdoor temperatures

 The right light carpet is disabled after the modification. ◀

 Diffuser foils are required in the bottom section of the front ornamental grilles to prevent reflections and for licensing purposes. ◀