

Original BMW Accessories. Installation Instructions.



Retrofit BMW Accessory Menu (ACM)

BMW 1 Series (E87)

BMW 3 Series (E90, E91, E92)

BMW 5 Series (E60, E61)

BMW 6 Series (E63, E64)

Installation instructions only valid for cars with M-ASK or CCC.

Retrofit kit no.:

65 50 0 418 002

Retrofit kit BMW accessory menu ACM E90, E91, E92, E60, E61 and E63, E64

65 50 0 422 701

Retrofit kit BMW accessory menu ACM E87

Installation time

The installation time is approx 1.75 hours, but may vary depending on the condition of the car and the equipment in it.

Cars without auxiliary connection only

In general the car must be upgraded to the latest I stage status by flashing before starting the work. Depending on the production age of the car and the work already carried out on the car, the programming times will vary, which means that we cannot quote a specific time at this point.

The installation time does not include any time for programming/encoding, as this depends on the age 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.

To avoid unnecessary extra work and/or costs, if any installation or function problem occurs, after a brief troubleshooting session (approx. 0.5 hours), please contact the following:

1. Either your national subsidiary or your regional office, or

2. The Support team via the Aftersales Assistance Portal (ASAP) using the optional technical parts support application.

Specify the chassis number and the part number of the installed retrofit kit and give a precise description of the problem.

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

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.

Installation information

In countries in which image reproduction is permitted up to a particular speed, the red cable from PIN 2 must be disconnected at branch **A1**, insulated and tied back.

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

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 pictures show LHD cars; proceed accordingly on RHD cars.

In cars without an ancillary connection, the retrofit must be programmed / coded using SSS (software service station) via the **CIP, retrofit aux-in connection** path.

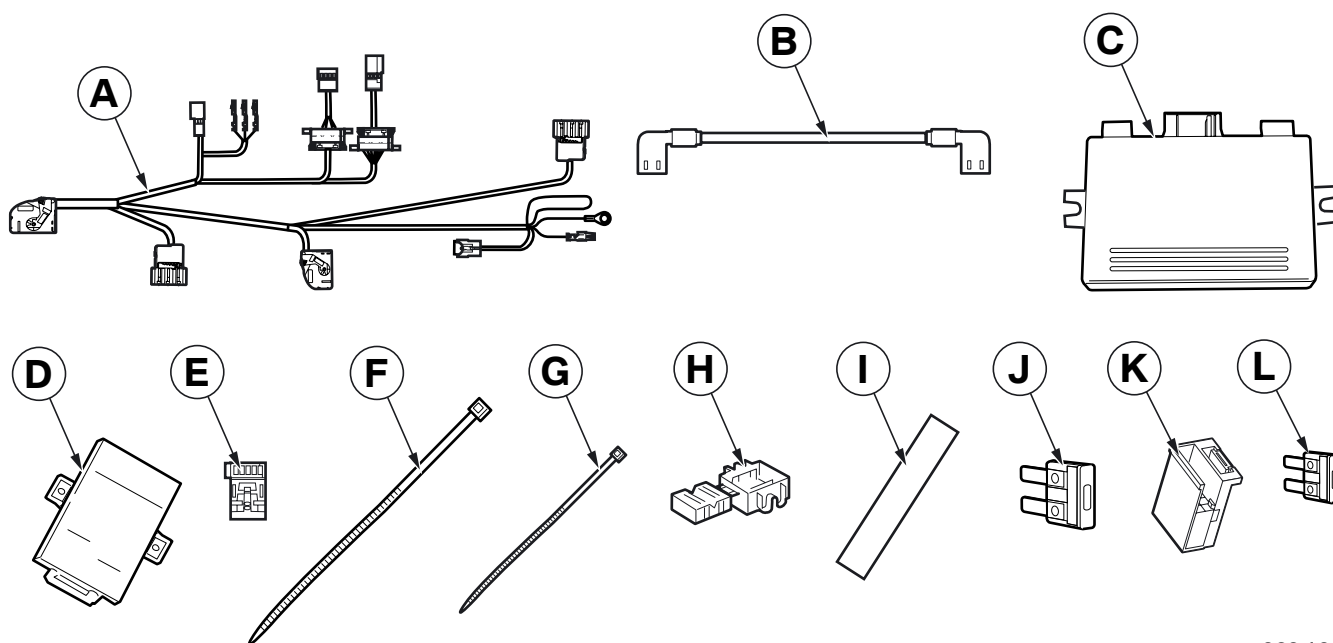
Special tools required

00 9 317, Trim wedge

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1. Parts list



060 1082 Z

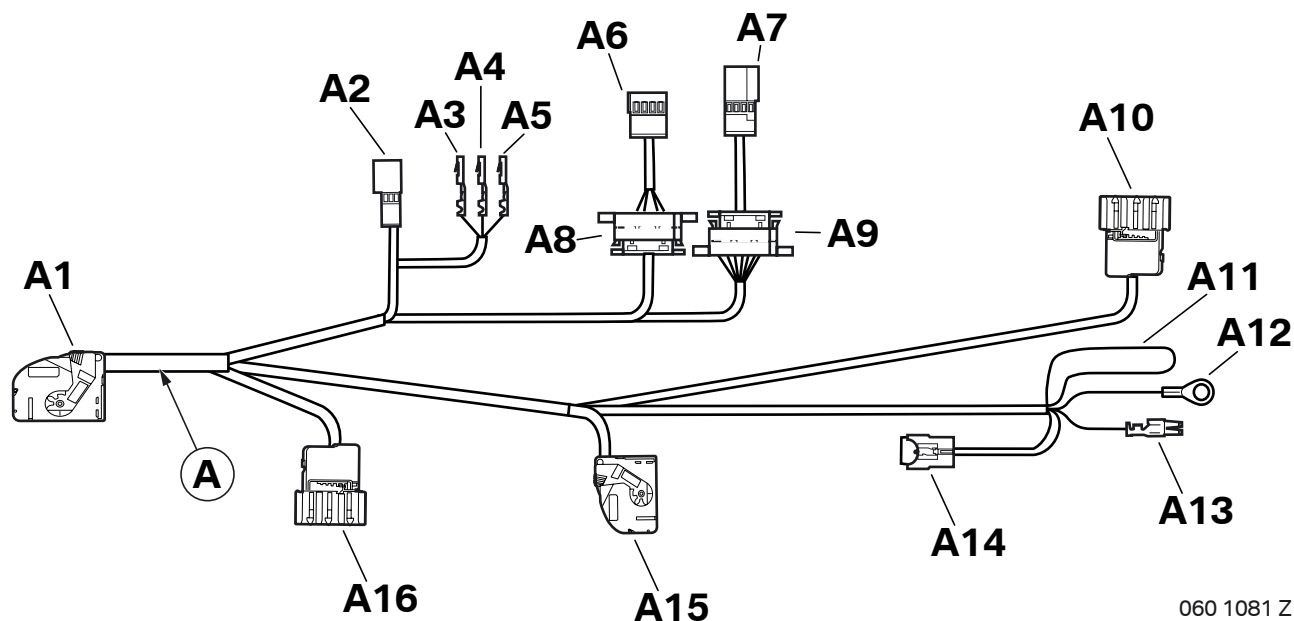
Legend

- A** Retrofit cable
- B** Connection cable
- C** ACM unit
- D** Universal CAN interface
- E** Black 3-pin socket casing
- F** Cable tie 445 x 4.8 mm (4x)
- G** Cable tie 200 x 3.6 mm (25x)
- H** Miniature connector (2x)
- I** Sealing strip (5x)
- J** Fusible link 7.5 A (large, for E60, E61, E63 and E64 cars)
- K** Black 12-pin socket casing
- L** Fusible link 7.5 A (small, for E87, E90, E91 and E92 cars)

2. Preparatory work

	TIS No.
Conduct a brief test	---
Disconnect negative pole of battery	12 00 ...
The following components must be removed first of all for E60, E61 and E63, E64 cars	
Side backrest section on the rear seat or seat back	52 ...
Wheel arch trim in luggage compartment on left	51 47 151
Door sill strip from the rear left (interior)	51 47 030
Door sill strip from the front left (interior)	51 47 000
A pillar trim at bottom left	51 43 070
Trim at the bottom left of the door pillar	51 43 150
Pedal trim	51 45 185
Control display	65 82 050
M-ASK/CCC	65 83 010
Release the oddments box	51 16 200
The following components must be removed first of all for E87, E90, E91 and E92 cars	
Backrest side section on the rear seat, left	52 ...
Wheel arch trim in luggage compartment on left	51 47 151
Door sill strip from the rear left (interior)	51 47 030
Door sill strip from the front left (interior)	51 47 000
A pillar trim at bottom left	51 43 070
Trim at the bottom left of the door pillar	51 43 150
Pedal trim	51 45 185
M-ASK/CCC	65 83 010
Unfasten the controller (E87 cars only)	61 31 195
Release cover for oddments box (E90 and E91 cars)	51 16 212
Trim at the bottom right of the dashboard	51 45 181
Glove box with casing	51 16 366
Undo the fuse holder on the right	---

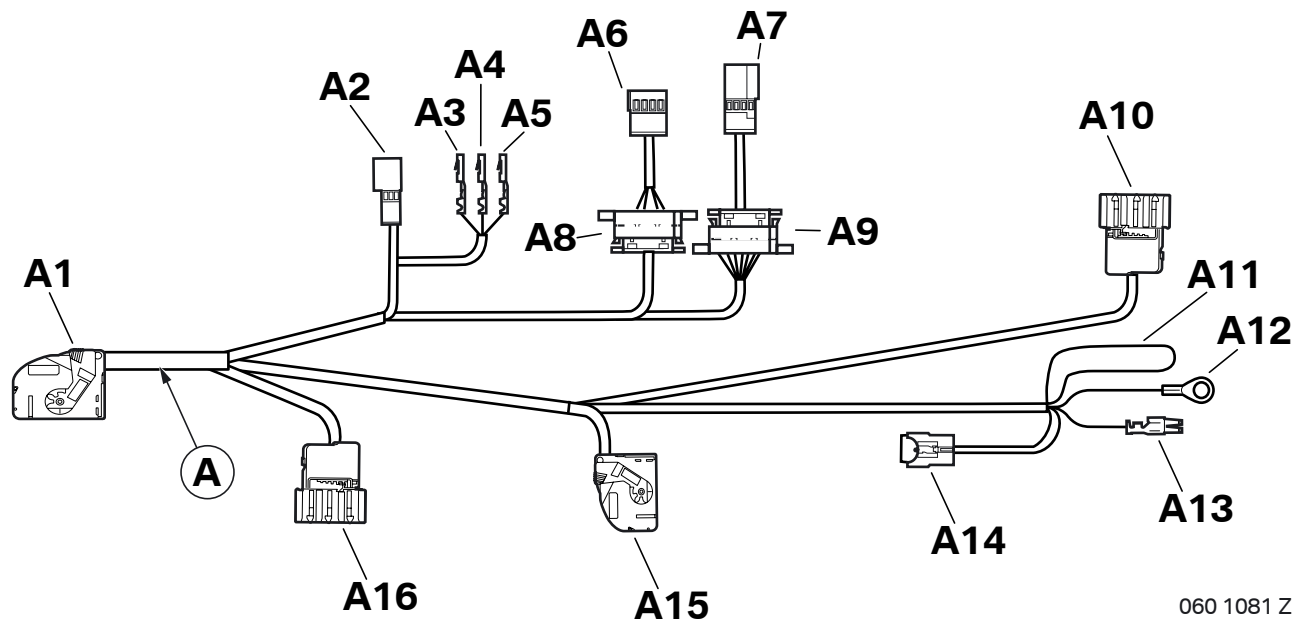
3. Retrofit cable connection diagram



060 1081 Z

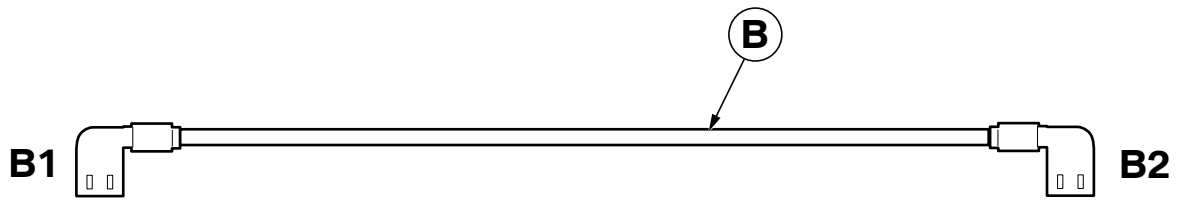
Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Retrofit cable	---	---	---	---
A1	Black 32-pin socket casing	---	---	On the universal CAN interface D	---
A2	Black 3-pin plug casing	---	---	Cars with AUX jack only With socket casing E on the cable of the AUX jack	---
A3	Socket contact	Audio L	SW 0.35 mm ²	On radio plug	X13813 PIN 2
A4	Socket contact	Audio R	GE 0.35 mm ²	On radio plug	X13813 PIN 7
A5	Socket contact	Audio GND	WS 0.35 mm ²	On radio plug	X13813 PIN 8
A6	Black 4-pin socket casing	---	---	E87, E90, E91 and E92 cars only On controller E60, E61 and E63, E64 cars only Not required	X10387
A7	Black 4-pin plug casing	---	---	E87, E90, E91 and E92 cars only On connector of cable to controller E60, E61 and E63, E64 cars only Not required	X10387
A8	Black 8-pin plug connector	---	---	E87, E90, E91 and E92 cars only Leave the plug connector plugged in E60, E61 and E63, E64 cars only Disconnect the plug connector and plug it into controller	X10387
A9	Black 8-pin plug connector	---	---	E87, E90, E91 and E92 cars only Leave the plug connector plugged in E60, E61 and E63, E64 cars only Disconnect the plug connector and plug it into connector of cable to controller	X10387
A10	Black 18-pin plug casing	---	---	In the luggage compartment on the left	---
A11	Cable loop	Terminal 31	GE/RT 0.5 mm ²	Cars with CCC only Tie back For cars with M-ASK only Cut through, insulate and tie back	---

3. Retrofit cable connection diagram



Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A12	Ring eyelet, 6 mm	Terminal 31	BR 1.0 mm ²	E87, E90, E91 and E92 cars only In footwell on the right E60, E61 and E63, E64 cars only Disconnect ring eyelet and connect with miniconnector H	X490 X13822 PIN 3
A13	Socket contact	Terminal 30g	RT 1.0 mm ²	E87, E90, E91 and E92 cars only On right of fuse holder E60, E61 and E63, E64 cars only Disconnect ring eyelet and connect with miniconnector H	X11003 PIN 3 X13822 PIN 1
A14	Fuse holder	---	---	Tie back on wiring harness	---
A15	Black 26-pin socket casing	---	---	To ACM unit C	---
A16	Black 18-pin plug casing	---	---	For camera system connection Tie back on wiring harness	---

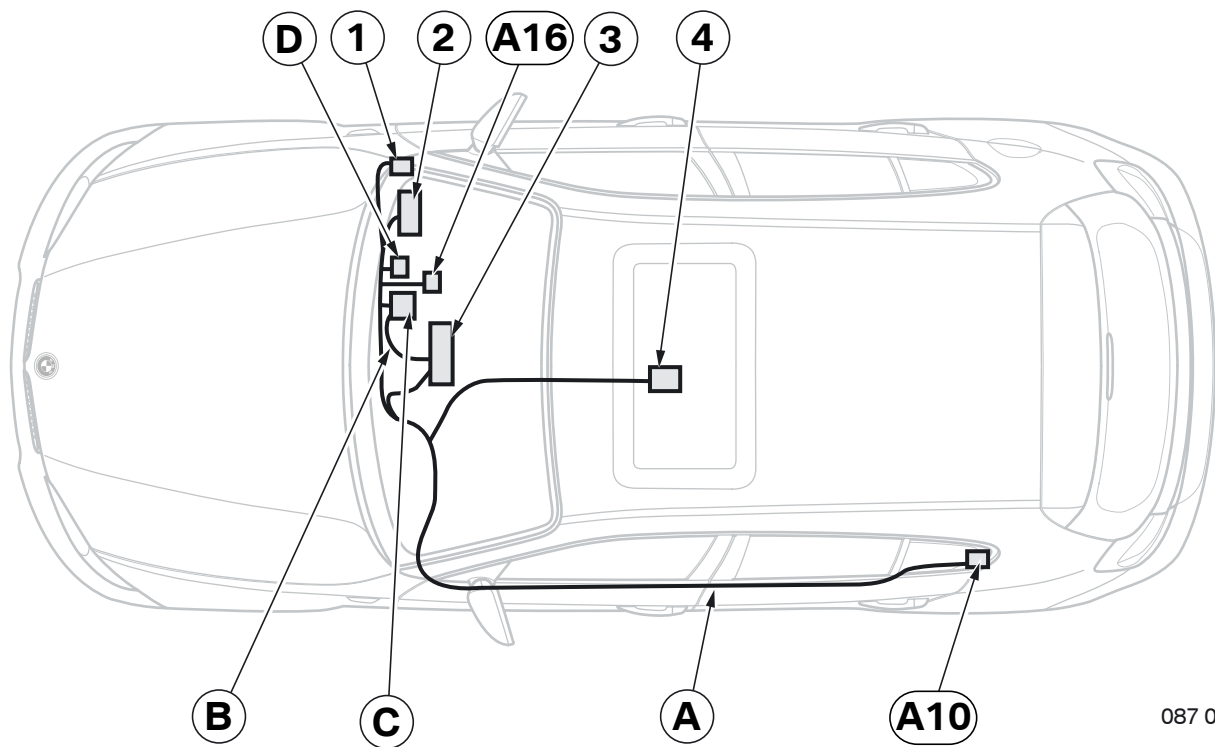
4. Connection cable connection diagram



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Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
B	Connection cable	---	---	---	---
B1	Violet 10-pin socket casing	---	---	E87, E90, E91 and E92 cars only To ACM unit C E60, E61 and E63, E64 cars only On control display	---
B2	White 10-pin socket casing	---	---	E87, E90, E91 and E92 cars with M-ASK only On M-ASK E87, E90, E91 and E92 cars with CCC only On CCC with coding removed E60, E61 and E63, E64 cars only To ACM unit C	X13823 X13820 X13820 ---

5. Installation and cabling diagram for E87 cars



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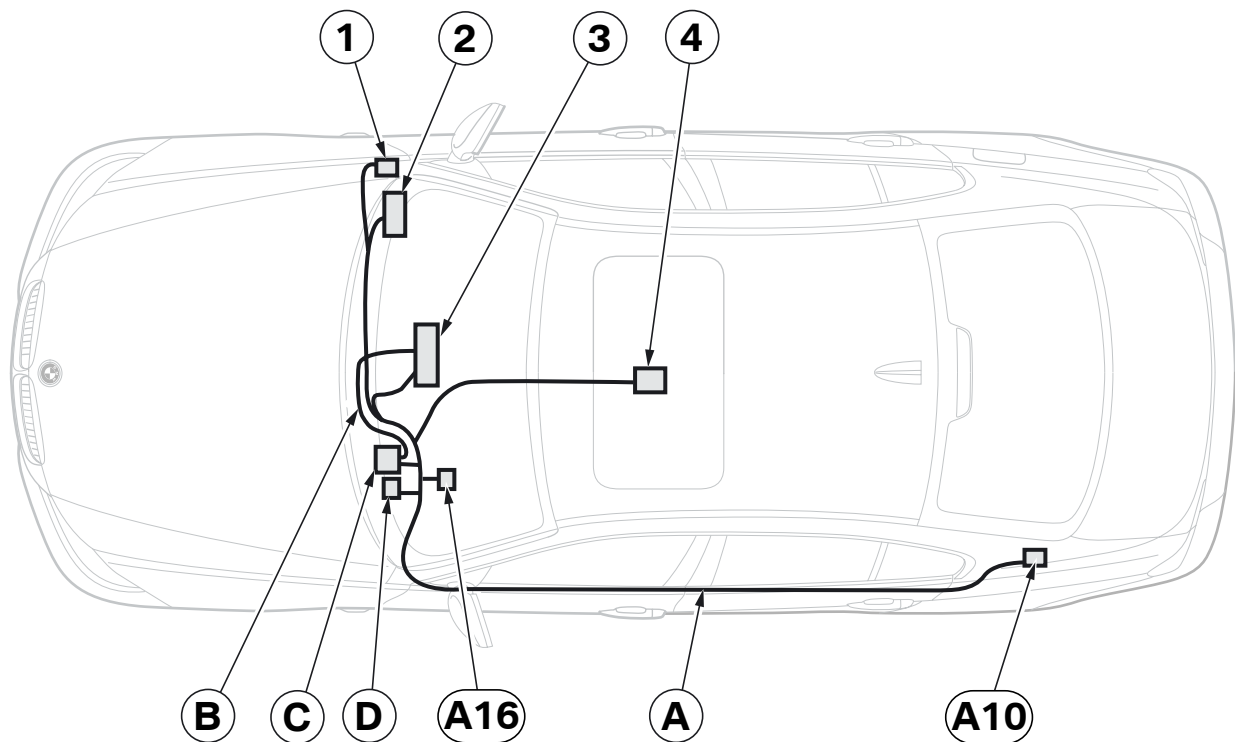
Legend

- A** Retrofit cable
- B** Connection cable
- C** ACM unit
- D** Universal CAN interface

- A10** Black 18-pin plug casing
- A16** Black 18-pin plug casing

- 1** Earth post connection **X490**
- 2** Fuse holder
- 3** Radio reception unit
- 4** Controller

6. Installation and cabling diagram for E90, E91 and E92 cars



090 1034 Z

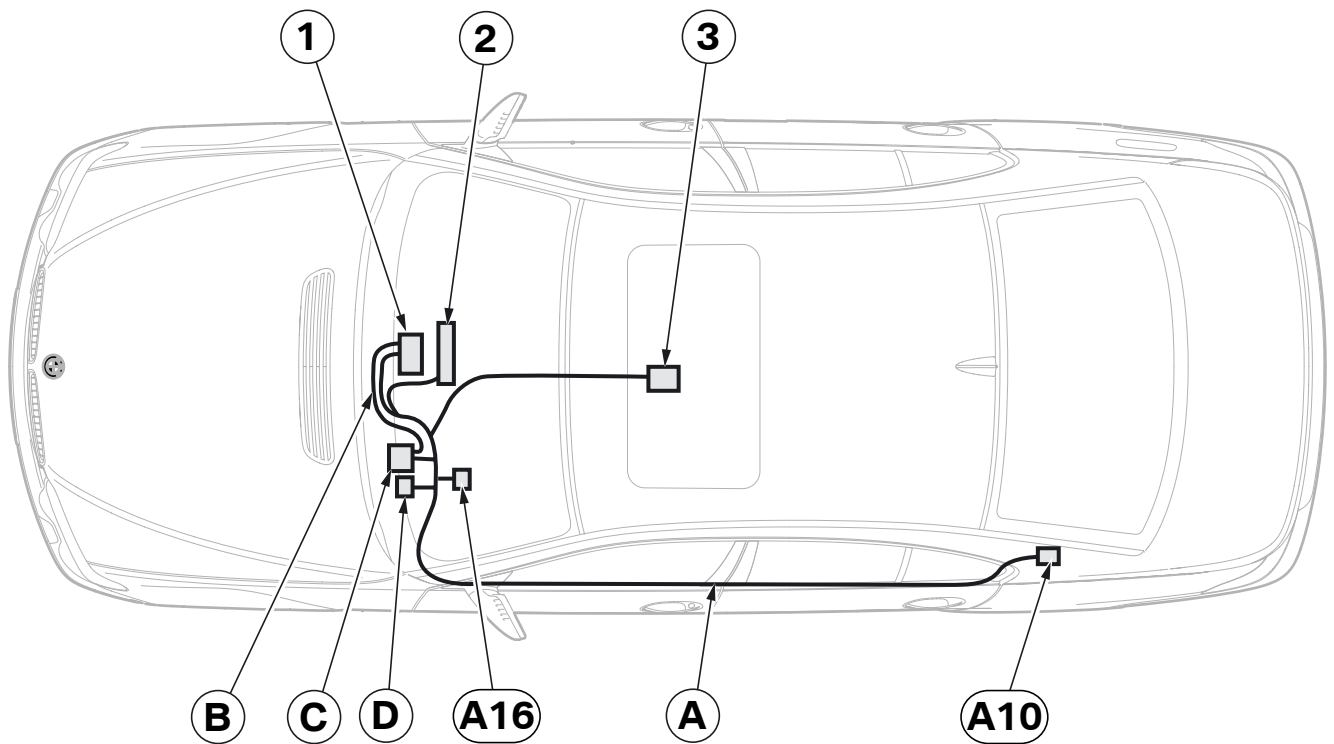
Legend

- A** Retrofit cable
- B** Connection cable
- C** ACM unit
- D** Universal CAN interface

- A10** Black 18-pin plug casing
- A16** Black 18-pin plug casing

- 1** Earth post connection **X490**
- 2** Fuse holder
- 3** Radio reception unit
- 4** Controller

7. Installation and cabling diagram for E60, E61 and E63, E64 cars



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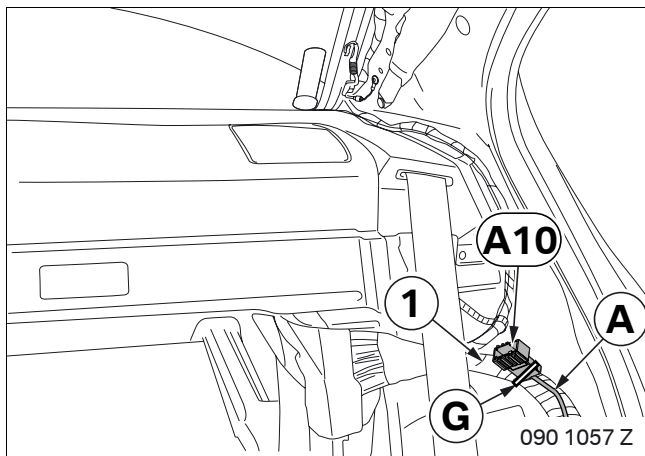
Legend

- A** Retrofit cable
- B** Connection cable
- C** ACM unit
- D** Universal CAN interface

- A10** Black 18-pin plug casing
- A16** Black 18-pin plug casing

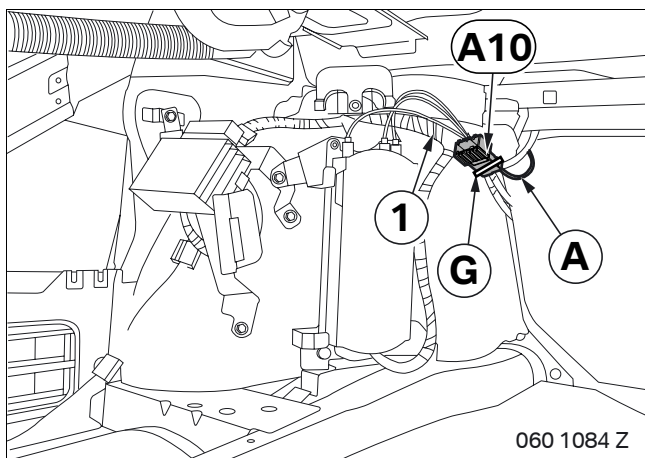
- 1** Control display
- 2** Radio reception unit
- 3** Controller

8. To install and connect the retrofit cable



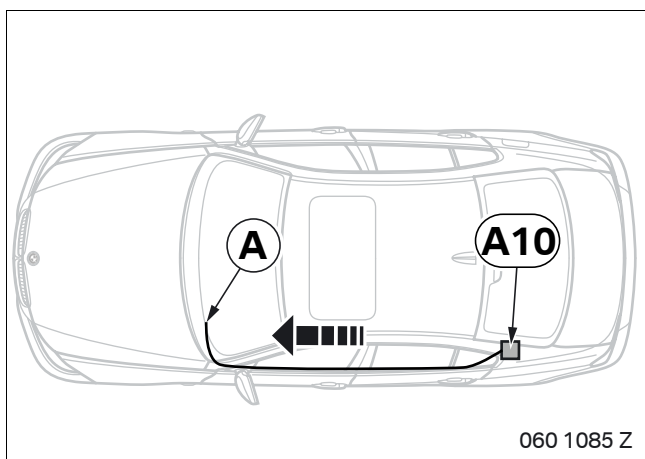
E87, E90 and E92 cars only

Attach branch **A10**, black 18-pin plug casing, of retrofit cable **A** to the standard wiring harness (1) behind the rear seat backrest to the left using cable tie **G**.



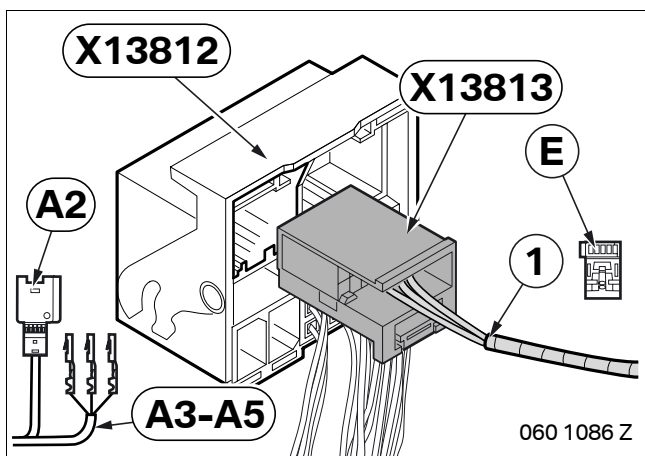
E91, E60, E61 and E63, E64 cars only

Attach branch **A10**, black 18-pin plug casing, of the retrofit cable **A** to the standard wiring harness (1) in the luggage compartment on the left using cable tie **G**.



All cars

Route all branches except branch **A10** of the retrofit cable **A** along the standard wiring harness into the footwell on the driver's side.



Cars with AUX jack only

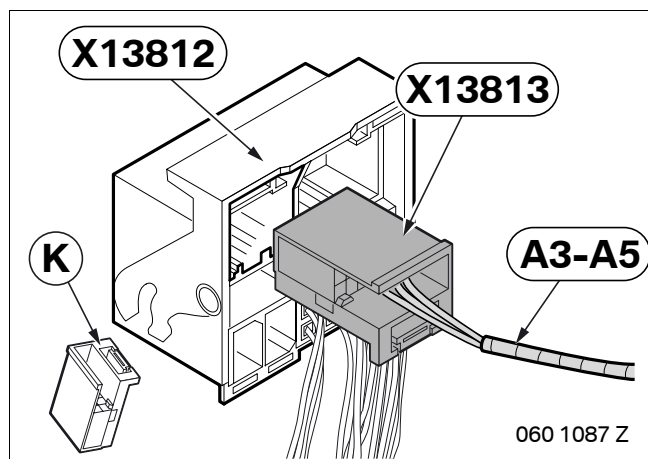
Route branches **A2-A5** to radio connector **X13812**.

Disconnect the AUX cable (1) from plug **X13813**, black 12-pin plug and connect them to black 3-pin socket casing **E** as follows:

- White/red or yellow cable from PIN 7 in PIN 1
- White/blue or black cable from PIN 2, in PIN 2
- White/brown or transparent cable from PIN 8 in PIN 3

Connect socket casing **E** to branch **A2**, black 3-pin plug casing.

8. To install and connect the retrofit cable



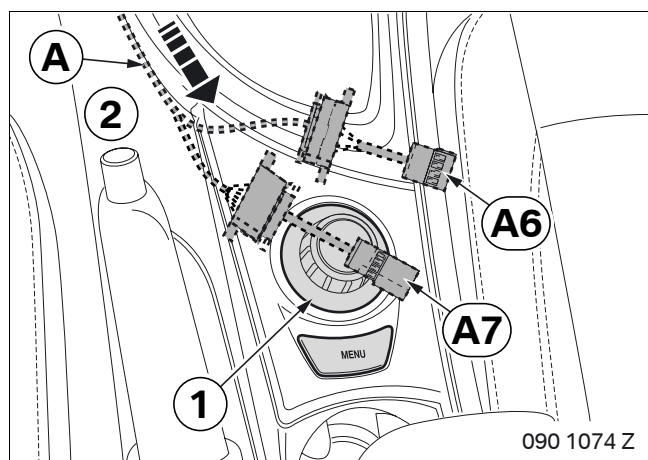
All cars

☐ If there is no plug **X13813**, connect branches **A3-A5** into socket casing **K** in the same way. ◀

Route branches **A3-A5** to radio plug **X13812** and connect to plug **X13813** as follows:

- Branch **A3**, black cable, in PIN 2
- Branch **A4**, yellow cable, in PIN 7
- Branch **A5**, white cable, in PIN 8

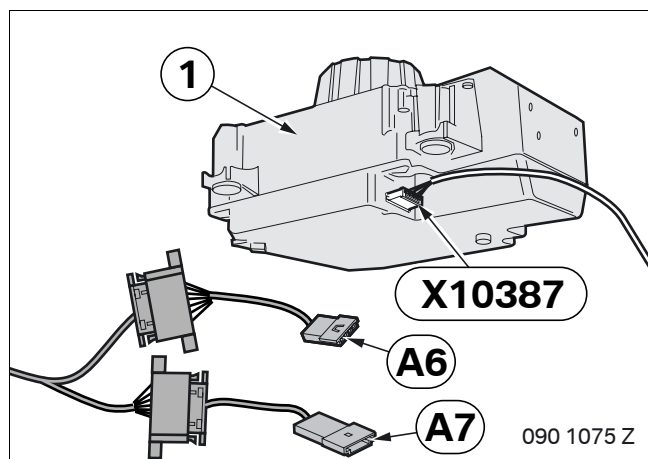
Lock plug **X13813** shut and insert into plug **X13812**.



E87, E90, E91 and E92 cars only

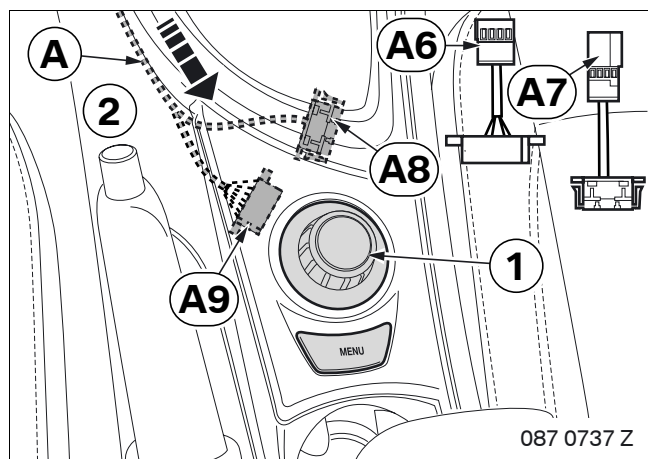
☐ Ensure that retrofit cable **A** cannot chafe on the gear lever or selector lever. ◀

Route branches **A6** and **A7** under the centre console (2) along the standard wiring harness to the controller (1).



Disconnect plug **X10387** from the controller (1) and connect to branch **A7**, black 4-pin plug casing.

Connect branch **A6**, black 4-pin socket casing, to the controller (1).



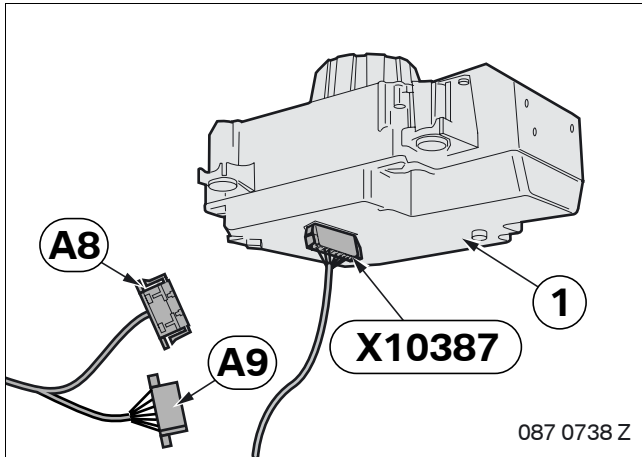
E60, E61 and E64, E64 cars only

☐ Ensure that retrofit cable **A** cannot chafe on the gear lever or selector lever. ◀

Disconnect branches **A6** and **A7** from branches **A8** and **A9** (not required).

Route branches **A8** and **A9** under the centre console (2) along the standard wiring harness to the controller (1).

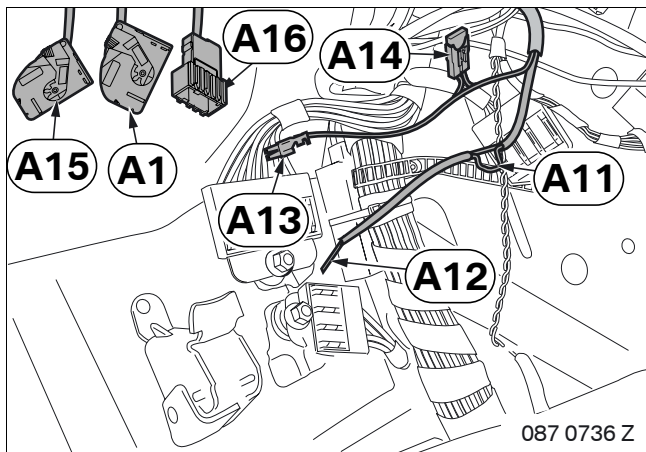
8. To install and connect the retrofit cable



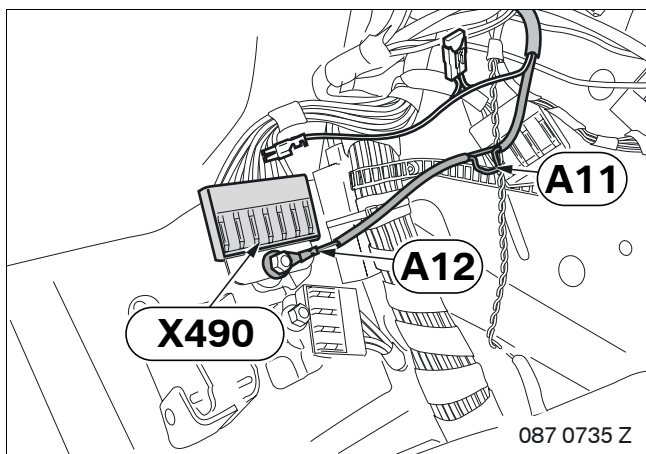
Disconnect plug **X10387** from the controller (1) and connect to branch **A9**, black 8-pin plug casing.

Connect branch **A8**, black 8-pin socket casing, to the controller (1).

9. To connect the electrical power supply and connection cable for E87 cars



Route branches **A11-A16** and branch **A1** underneath the M-ASK/CCC over the centre tunnel into the passenger footwell.



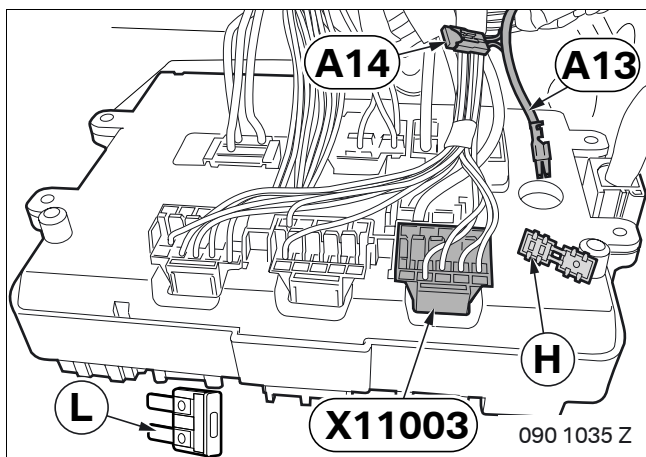
Screw branch **A12**, brown cable, to earth post connection **X490**.

For cars with M-ASK only

Cut cable loop **A11**, insulate and tie back to retrofit cable.

Cars with CCC only

Tie back cable loop **A11** to retrofit cable.



All cars

▶ If PIN 3 on plug **X11003** is already occupied, cut the socket contact off branch **A13** and connect branch **A13** with miniature connector **H** to the red/white cable from plug **X11003** (PIN 3). ◀

Connect branch **A13** to plug **X11003**, blue 15-pin socket casing, PIN 3.

If slot 13 contains no fusible link or a fusible link with less than 7.5 A, this must be replaced by fusible link **L**.

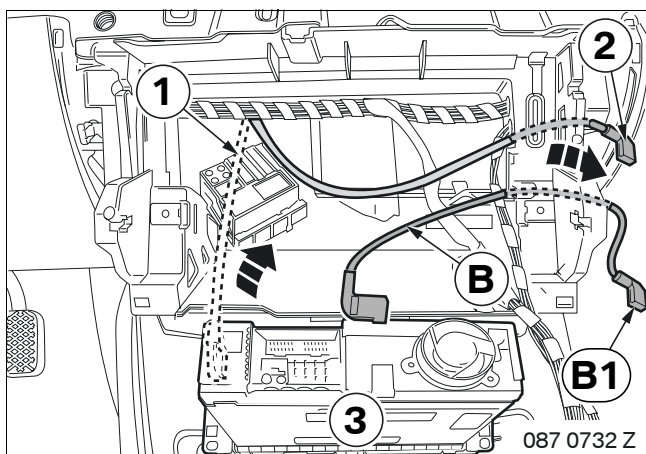
Tie back fuse holder **A14** to retrofit cable.

For cars with M-ASK only

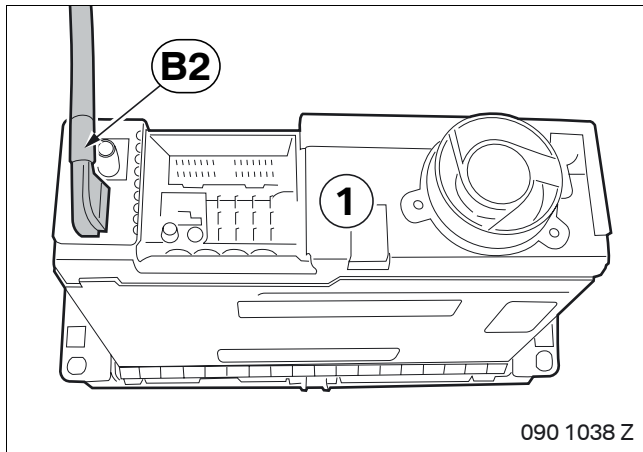
Disconnect the existing signal cable (1) from the M-ASK (3).

Route the plug (2) on the existing signal cable (1) to the installation site of the ACM unit.

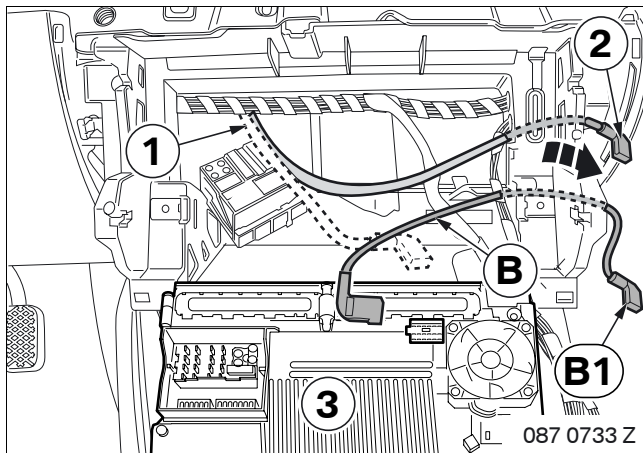
Connect branch **B1** (violet 10-pin plug) on connection cable **B** to the installation site of the ACM unit.



9. To connect the electrical power supply and connection cable for E87 cars



Connect branch **B2** (white 10-pin plug) to the M-ASK (**1**).

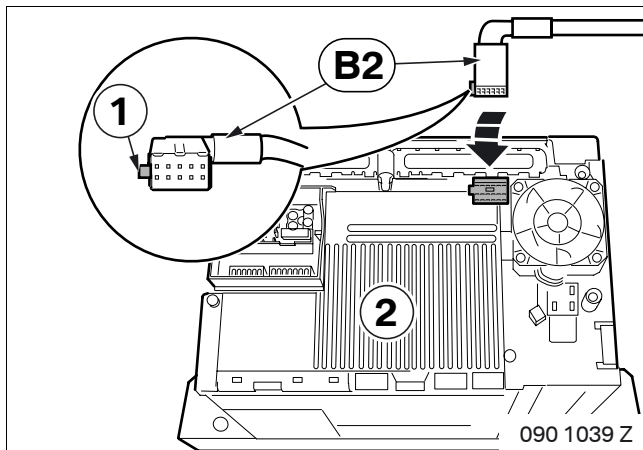


Cars with CCC only

Disconnect the existing signal cable (**1**) from the CCC (**3**).

Route the plug (**2**) on the existing signal cable (**1**) to the installation site of the ACM unit.

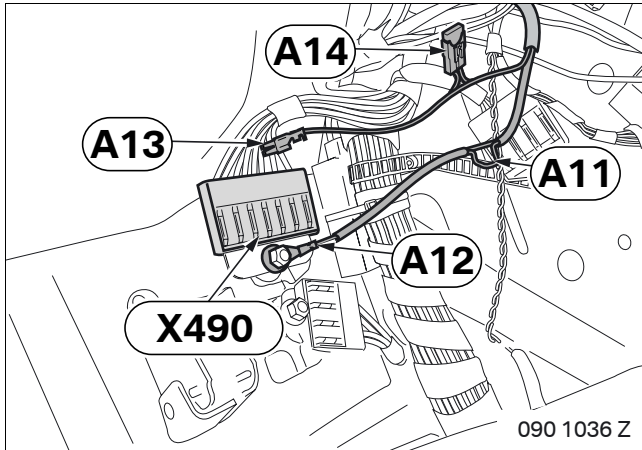
Connect branch **B1** (violet 10-pin plug) on connection cable **B** to the installation site of the ACM unit.



Remove coding (**1**) from branch **B2** (white 10-pin plug).

Connect branch **B2** to the CCC (**2**) as shown.

10. To connect the electrical power supply and connection cable for E90, E91 and E92 cars



Route branches **A11-A14** to the passenger footwell.

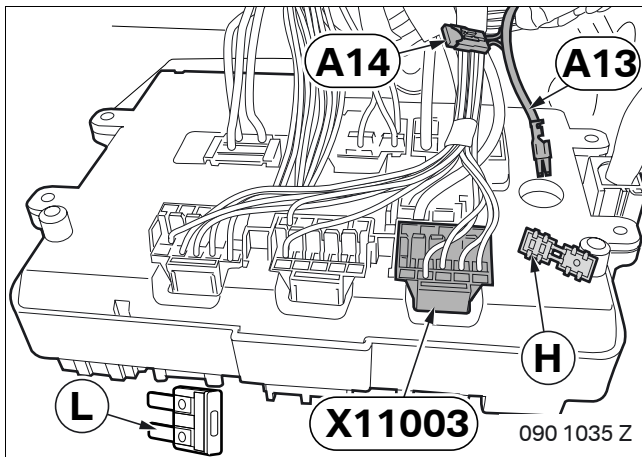
Screw branch **A12**, brown cable, to earth post connection **X490**.

For cars with M-ASK only

Cut cable loop **A11**, insulate and tie back to retrofit cable.

Cars with CCC only

Tie back cable loop **A11** to retrofit cable.



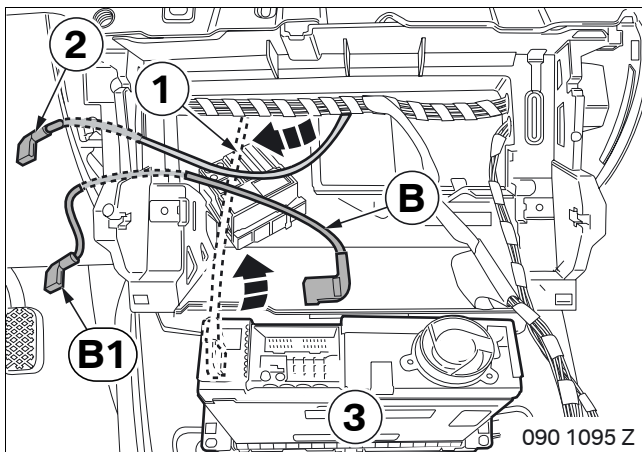
All cars

▶ If PIN 3 on plug **X11003** is already occupied, cut the socket contact off branch **A13** and connect branch **A13** with miniature connector **H** to the red/white cable from plug **X11003** (PIN 3). ◀

Connect branch **A13**, red cable, to plug **X11003**, blue 15-pin socket casing, PIN 3.

Tie back fuse holder **A14** to retrofit cable.

If a fusible element of less than 7.5 A is present in slot 13, fusible element **L** must be used.

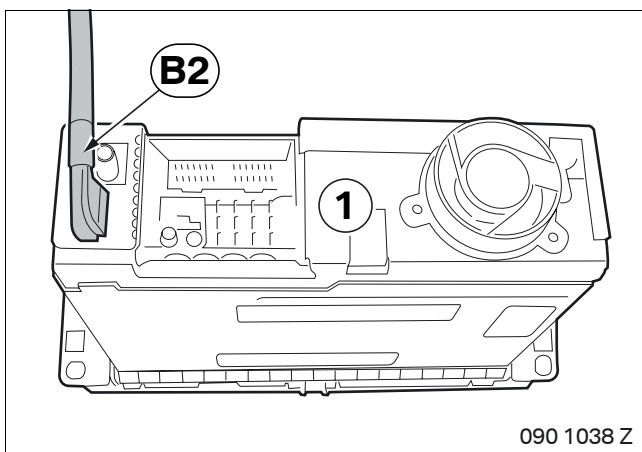


For cars with M-ASK only

Disconnect the existing signal cable (1) from the M-ASK (3).

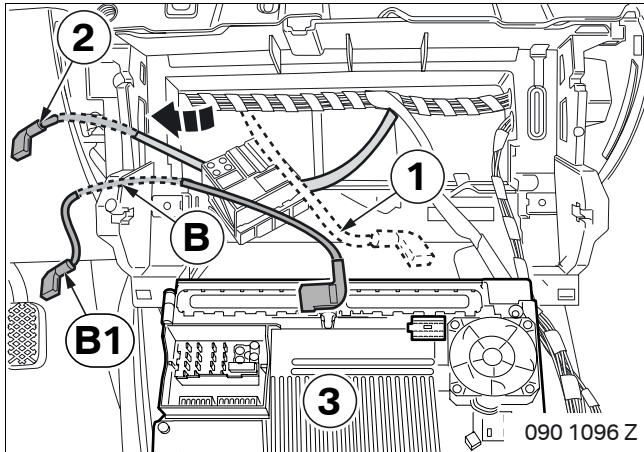
Route the plug (2) on the existing signal cable (1) to the installation site of the ACM unit.

Connect branch **B1** (violet 10-pin plug) on connection cable **B** to the installation site of the ACM unit.



Connect branch **B2** (white 10-pin plug) to the M-ASK (1).

10. To connect the electrical power supply and connection cable for E90, E91 and E92 cars

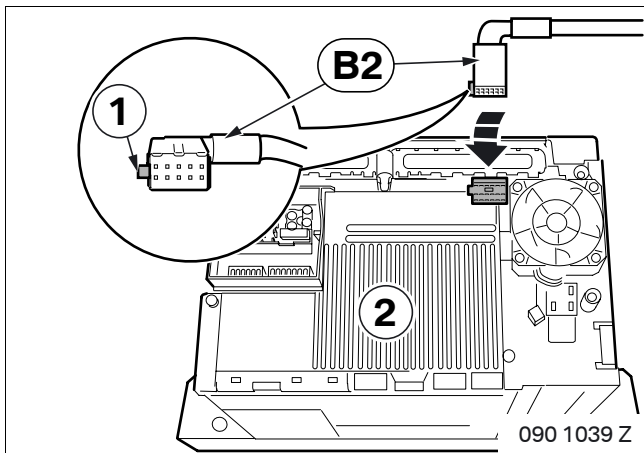


Cars with CCC only

Disconnect the existing signal cable (1) from the CCC (3).

Route the plug (2) on the existing signal cable (1) to the installation site of the ACM unit.

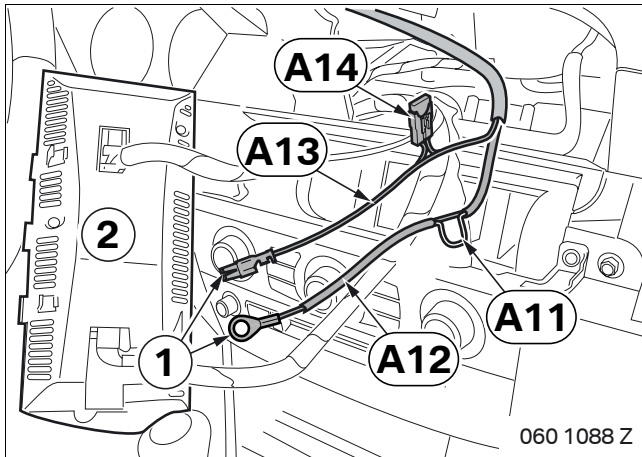
Connect branch **B1** (violet 10-pin plug) on connection cable **B** to the installation site of the ACM unit.



Remove coding (1) from branch **B2** (white 10-pin plug).

Connect branch **B2** (white 10-pin plug) to the CCC (2) as shown.

11. To connect the electrical power supply and connection cable for E60, E61 and E63, E64 cars



Route branches **A11-A14** to the control display (2).

Tie back fuse holder **A14** to retrofit cable.

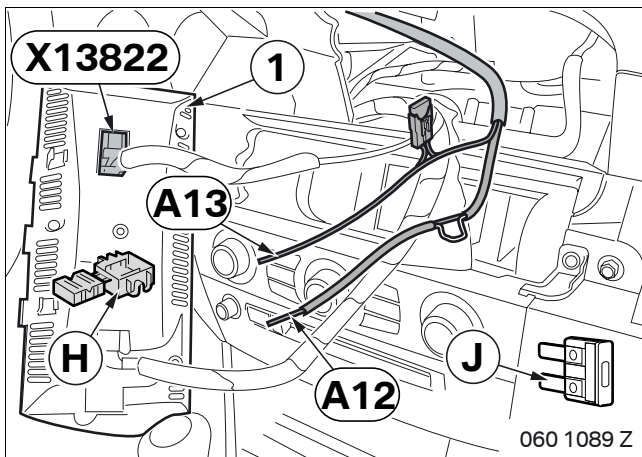
Detach contacts (1) from branches **A12** and **A13**.

For cars with M-ASK only

Cut cable loop **A11**, insulate and tie back to retrofit cable.

Cars with CCC only

Tie back cable loop **A11** to retrofit cable.

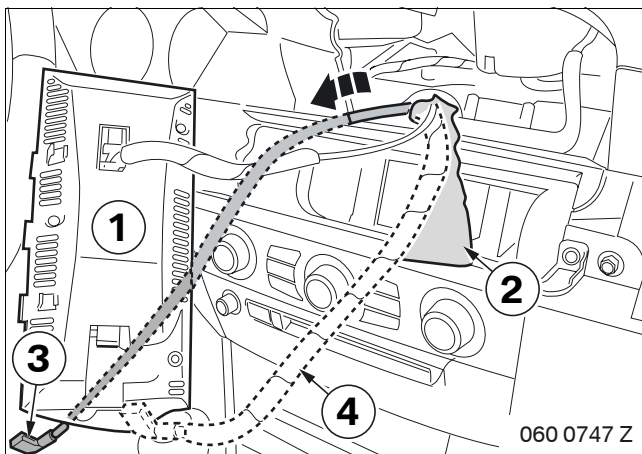


All cars

☐ If slot 79 of the fuse holder in the luggage compartment contains a fusible link with less than 7.5 A, this must be replaced by fusible link **J**. ◀

Connect branches **A12** and **A13** as follows to black 12-pin plug **X13822** on the control display (1) using miniature connector **H**:

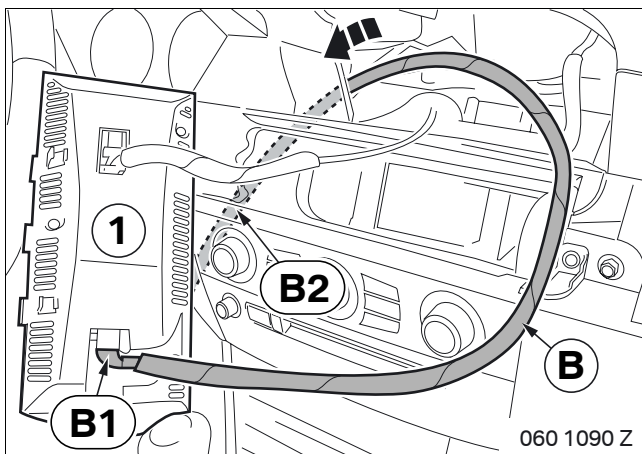
- Branch **A12**, brown cable, to brown/black cable from PIN 3
- Branch **A13**, red cable, to red/violet cable from PIN 1



Disconnect the existing signal cable (4) from the control display (1).

Remove the sheath (2) from the existing signal cable (4) as far as possible.

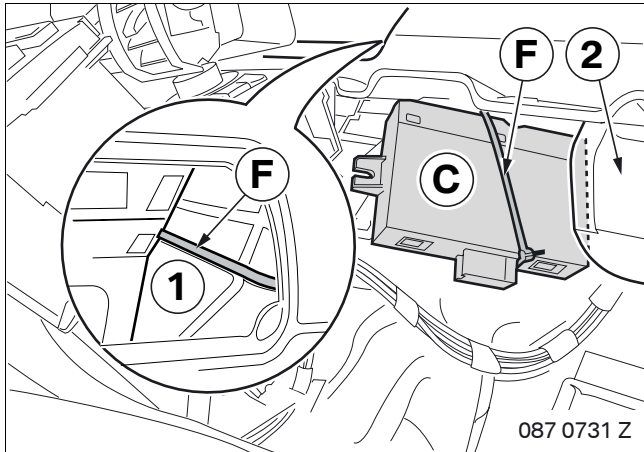
Route the plug (3) on the existing signal cable (4) into the footwell on the driver's side.




Connect branch **B1**, violet 10-pin plug, of connection cable **B** on the control display (1).

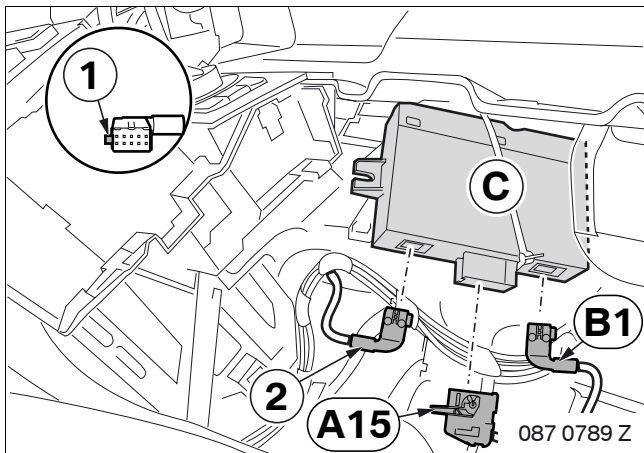
Route branch **B2**, white 10-pin plug, to the footwell on the driver's side.

12. To install the ACM unit and universal CAN interface for E87 cars




Use cable tie **F** to attach ACM unit **C** to the heating duct (1) behind the glove compartment.

 The deployment of the airbag (2) must not be impaired by ACM unit **C**. ◀

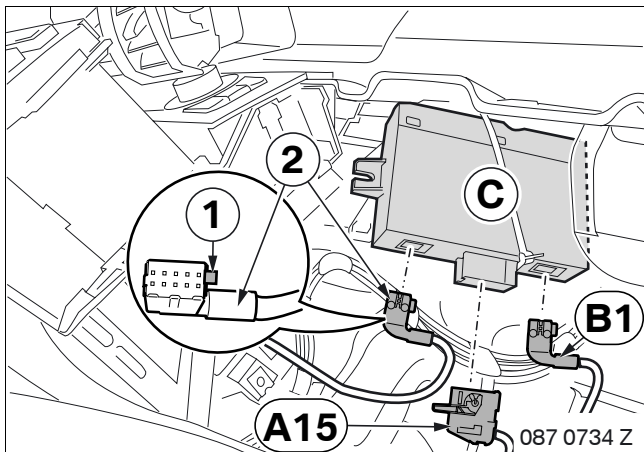


For cars with M-ASK only

 Use the coding (1) on the plugs to connect them correctly. ◀

Connect plugs to ACM unit **C** as shown:

- Plug (2) on the existing signal cable (white 10-pin)
- Branch **A15** (blue 18-pin plug)
- Branch **B1** (violet 10-pin plug)

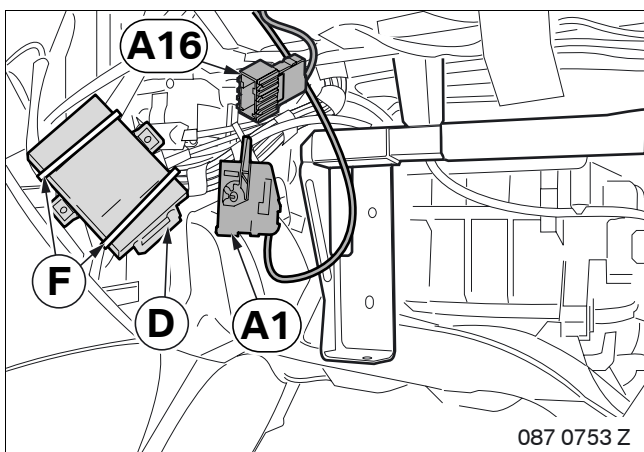


Cars with CCC only


Remove coding (1) from plug (2) on the existing signal cable (blue 10-pin).

Connect plugs to ACM unit **C** as shown:

- Plug (2) on the existing signal cable (blue 10-pin)
- Branch **A15** (blue 18-pin plug)
- Branch **B1** (violet 10-pin plug)



All cars

 In countries in which image reproduction is permitted up to a particular speed, the red cable from PIN 2 must be disconnected at branch **A1**, insulated and tied back. ◀

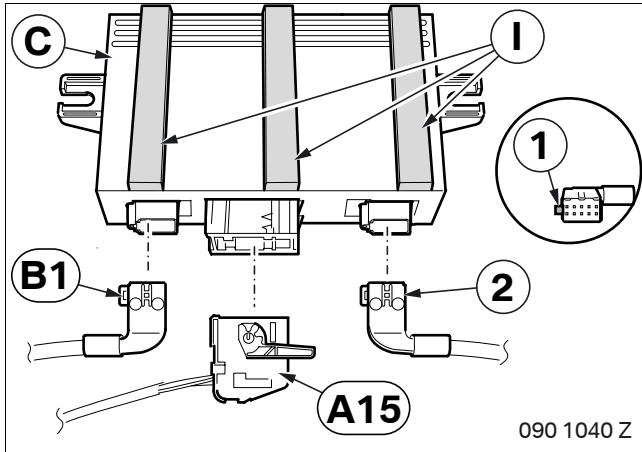
Use cable ties **F** to attach universal CAN interface **D** to the standard wiring harness.

Connect branch **A1** to the universal CAN interface **D**.

Tie back any excess cable to the standard wiring harness.

Tie back branch **A16**.

13. To install the ACM unit and universal CAN interface for E90, E91 and E92 cars



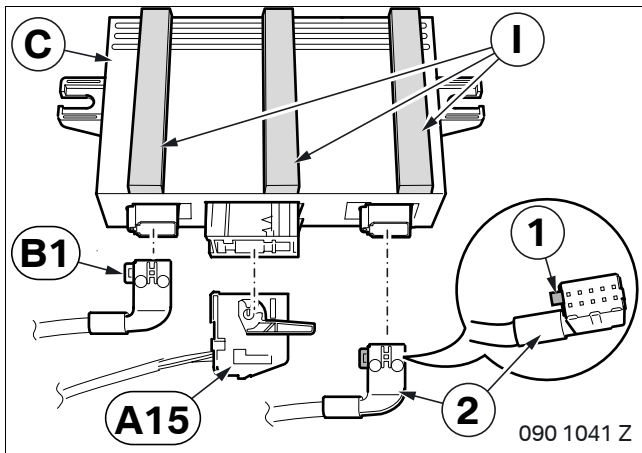
For cars with M-ASK only

▶ Use the coding (1) on the plugs to connect them correctly. ◀

Connect plugs to ACM unit **C** as follows:

- Plug (2) on the existing signal cable (white 10-pin)
- Branch **A15** (black 26-pin socket casing)
- Branch **B1** (violet 10-pin plug)

Stick sealing strip **I** to ACM unit **C**.



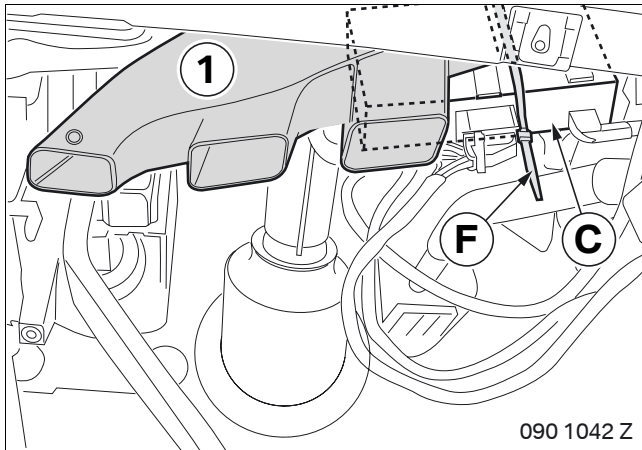
Cars with CCC only

Remove coding (1) from plug (2) on the existing signal cable (blue 10-pin).

Connect plugs to ACM unit **C** as shown:

- Plug (2) on the existing signal cable (blue 10-pin)
- Branch **A15** (black 26-pin socket casing)
- Branch **B1** (violet 10-pin plug)

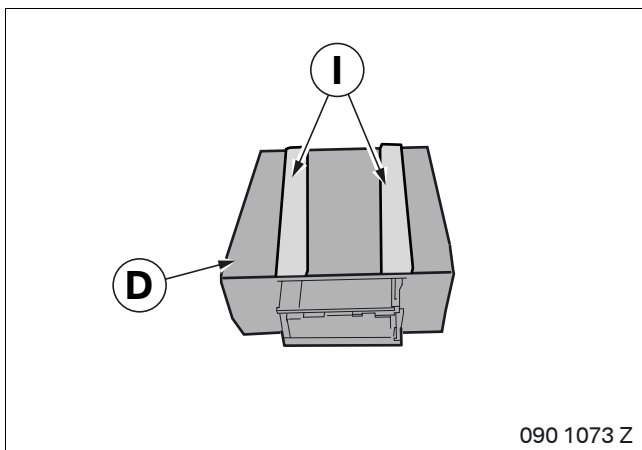
Stick sealing strip **I** to ACM unit **C**.



All cars

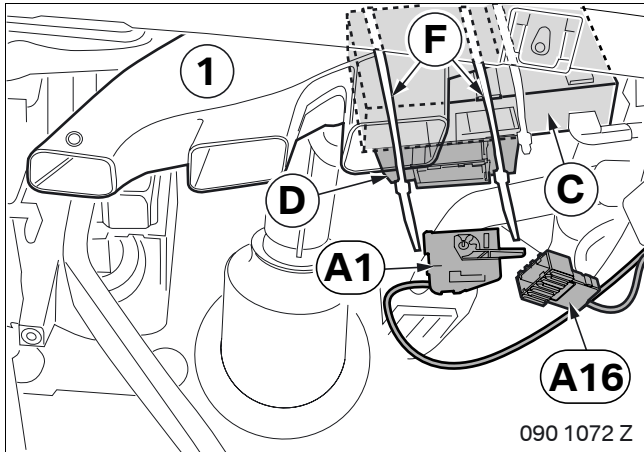
Secure ACM unit **C** to the rear of the heating duct (1) using cable ties **F**.

▶ Ensure that the steering column can still move freely as required. ◀



Affix the sealing strip **I** to universal CAN interface **D**.

13. To install the ACM unit and universal CAN interface for E90, E91 and E92 cars



▶ In countries in which image reproduction is permitted up to a particular speed, the red cable from PIN 2 must be disconnected at branch **A1**, insulated and tied back. ◀

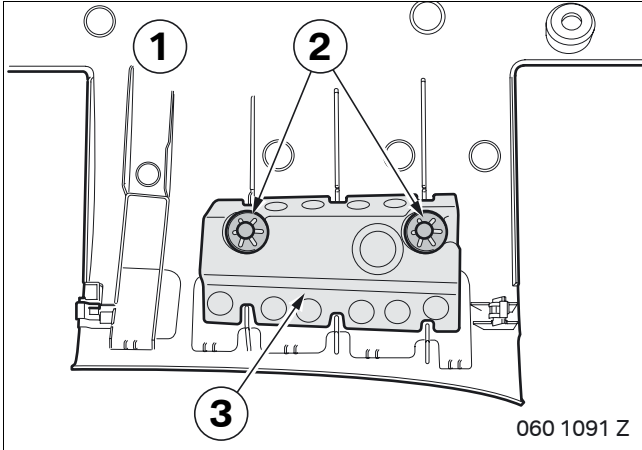
Attach universal CAN interface **D** to the ventilation duct (1) behind ACM unit **C** using cable ties **F**.

Connect branch **A1** (black 32-pin socket casing) to universal CAN interface **D**.

Tie back branch **A16**, black 18-pin plug casing, at a suitable location.

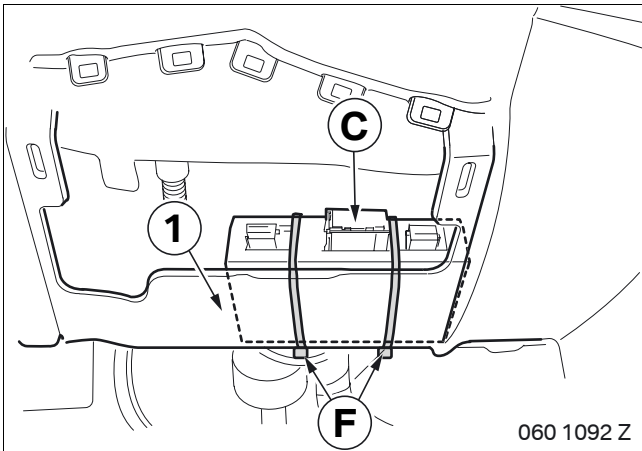
Tie back any excess cable to the standard wiring harness.

14. To install the ACM unit and universal CAN interface for E60, E61 and E63, E64 cars



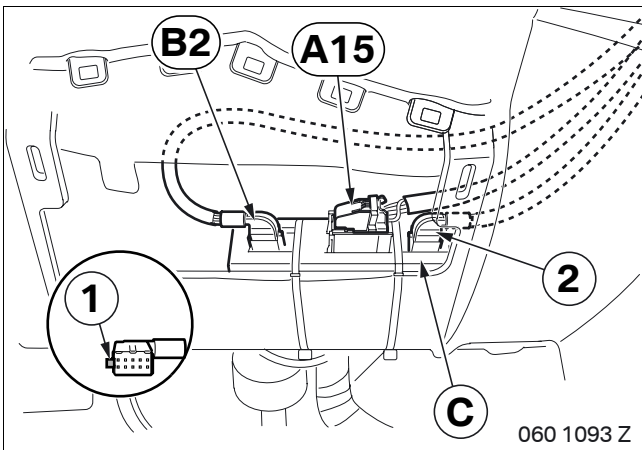
Prepare the pedal trim (1) as follows:

- Remove the sheet metal clips (2)
- Remove the polystyrene (3)



☐ Ensure that the steering column can still move freely as required. ◀

Secure the ACM unit **C** to the trim (1) below the steering column using cable ties **F**.

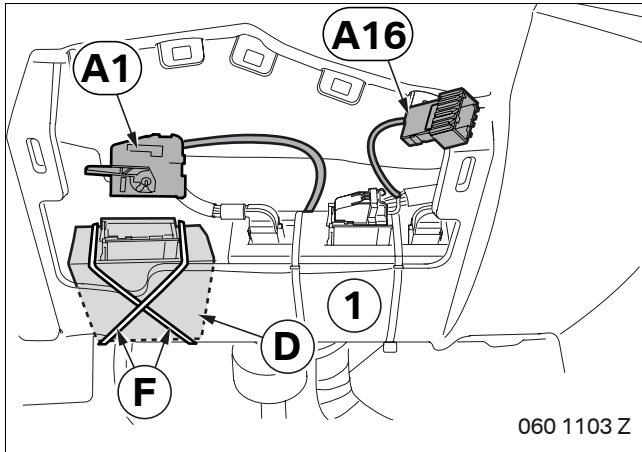



☐ Use the coding (1) on the plugs to connect them correctly. ◀

Connect plugs to ACM unit **C** as follows:

- Plug (2) of the existing signal cable (violet 10-pin)
- Branch **A15** (black 26-pin socket casing)
- Branch **B2** (white 10-pin plug)

14. To install the ACM unit and universal CAN interface for E60, E61 and E63, E64 cars



 In countries in which image reproduction is permitted up to a particular speed, the red cable from PIN 2 must be disconnected at branch **A1**, insulated and tied back.

Ensure that the steering column can still move freely as required. ◀

Secure universal CAN interface **D** to the trim (1) below the steering column using cable ties **F**.

Connect branch **A1**, black 32-pin socket casing, to universal CAN interface **D**.

Tie back branch **A16**, black 18-pin plug casing, at a suitable location.

Tie back any excess cable to the standard wiring harness.

15. Concluding work and coding

Cars without auxiliary connection only

This retrofit system requires coding

- Connect the battery
- Conduct a brief test
- Encode/program the retrofit with SSS (software service station) via the **CIP, retrofit aux-in connection** path

Cars with auxiliary connection only

This retrofit system does not require coding.

- Connect the battery
- Conduct a brief test

Perform settings in the Service Menu

The systems installed in the car must be selected in the Service Menu.

Systems that are not selected are skipped during scrolling or are not visible to the customer.

In order to call up the Service Menu:

- Press and hold the "Menu" button to bring up the accessory menu
- Move the controller to the right once
- Move the controller 3 times to the left
- Press the controller once

The Service Menu is displayed on the control display.

By turning and pressing the controller, you can now select or disable systems that have or have not been installed. Selected and non-selectable systems are shown in black.

Selectable systems are shown in white.

- Exit the Service Menu
- Conduct a function test
- Re-assemble the car

16. Initialisation of the ACM unit

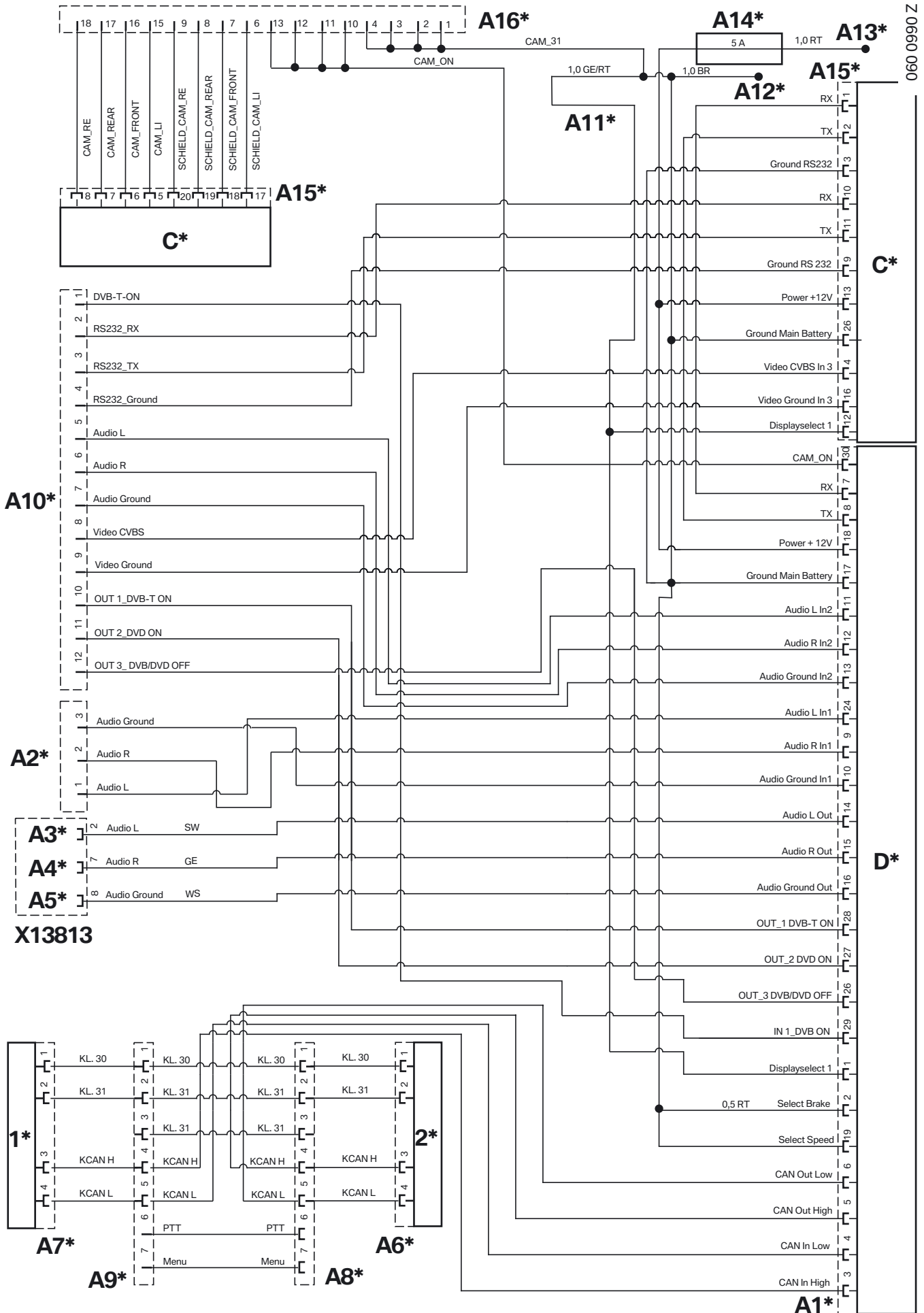
In cars with CCC, it may be necessary to initialise ACM unit **C** after an upload to the flash memory or after uploading a new software status into the car.

Proceed as follows if the screen flashes:

- Disconnect branch **A15**, blue 26-pin, at ACM unit **C** and disconnect the cable from pin 12
- Reconnect branch **A15** and switch on the ignition, the display now no longer flashes but has a screen offset of approx. 1/3 of a screen
- Switch off the ignition
- Disconnect branch **A15** and connect the previously disconnected cable back into pin 12
- Connect branch **A15** to ACM unit **C** and switch on the ignition

Initialisation has been performed.

17. Circuit diagram



060 0990 Z

17. Circuit diagram

Legend

A1*	Black 32-pin socket casing
A2*	Black 3-pin plug casing
A3*	Socket contact
A4*	Socket contact
A5*	Socket contact
A6*	Black 4-pin socket casing
A7*	Black 4-pin plug casing
A8*	Black 8-pin plug connector
A9*	Black 8-pin plug connector
A10*	Black 18-pin plug casing
A11*	Cable loop
A12*	Ring eyelet, 6 mm
A13*	Socket contact
A14*	Fuse holder
A15*	Black 26-pin socket casing
A16*	Black 18-pin plug casing

C* ACM unit

D* Universal CAN interface

1* Plug **X10387**

2* Controller

X13813 Black 12-pin socket casing

All the designations marked with an asterisk (*) apply only to these installation instructions or this circuit diagram.

Cable colours

BR	Brown
GE	Yellow
RT	Red
SW	Black
TR	Transparent