

Parts and Accessories.

Installation instructions.



Retrofit - Navigation system BMW 7 Series (E65 and E66)

Retrofit kit No.: 65 50 0 154 587
65 50 0 300 267
65 90 0 303 364
65 90 0 404 949

Installation time

The installation time of approx. 6.5 hours can vary depending on the condition and equipment of the vehicle.

The car must be flash-upgraded with the latest I stage status before starting the conversion work. The required programming time depends on the production date of the car and the work that has already been carried out on it, which means that we cannot give a specific time for this work.

The time for the programming/encoding is not included in the installation time as it depends on the age of the car and the equipment in it.

Important information

If the vehicle is not equipped with a BMW Professional radio, the antenna tuner must be ordered separately according to the electronic parts catalogue (EPC).

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

- 1. Either your national sales company or your regional office or**
- 2. The Support team via the Aftersales Assistance Portal (ASAP) using the optional technical parts support application.**

Quote the VIN and the part number of the retrofit kit and provide a detailed description of the problem.

These installation instructions are mainly intended for use in the BMW dealership network as well as by authorised BMW Service Centres.

The target group of these installation instructions are technical personnel trained on BMW vehicles with corresponding technical know-how.

All work is to be carried out with the aid of currently valid BMW repair instructions, schematic diagrams, maintenance manuals and working instructions in rational order with the specified tools (special tools) while paying particular attention to valid safety regulations.

Do not archive the printout of these Installation Instructions as daily updates are conducted through ASAP!

All illustrations show LHD vehicles. Carry out the same procedure analogously on RHD vehicles.

Pictographs:

identifies information that draws attention to specific requirements.

◀ identifies the end of a warning or information text.

Subject to technical modifications.

When installing cables/lines, particular attention must be paid to ensure that they are not bent, kinked or damaged. The costs incurred will not be reimbursed by BMW AG.

The fibre optics conductors must not be bent through a radius of less than 25 mm during installation.

Installation information

If the vehicle is equipped with a 90 Ah battery, it should be replaced by a more powerful 110 Ah battery.

Required special tools

00 9 317 Trim panel wedge

00 9 321 Blade

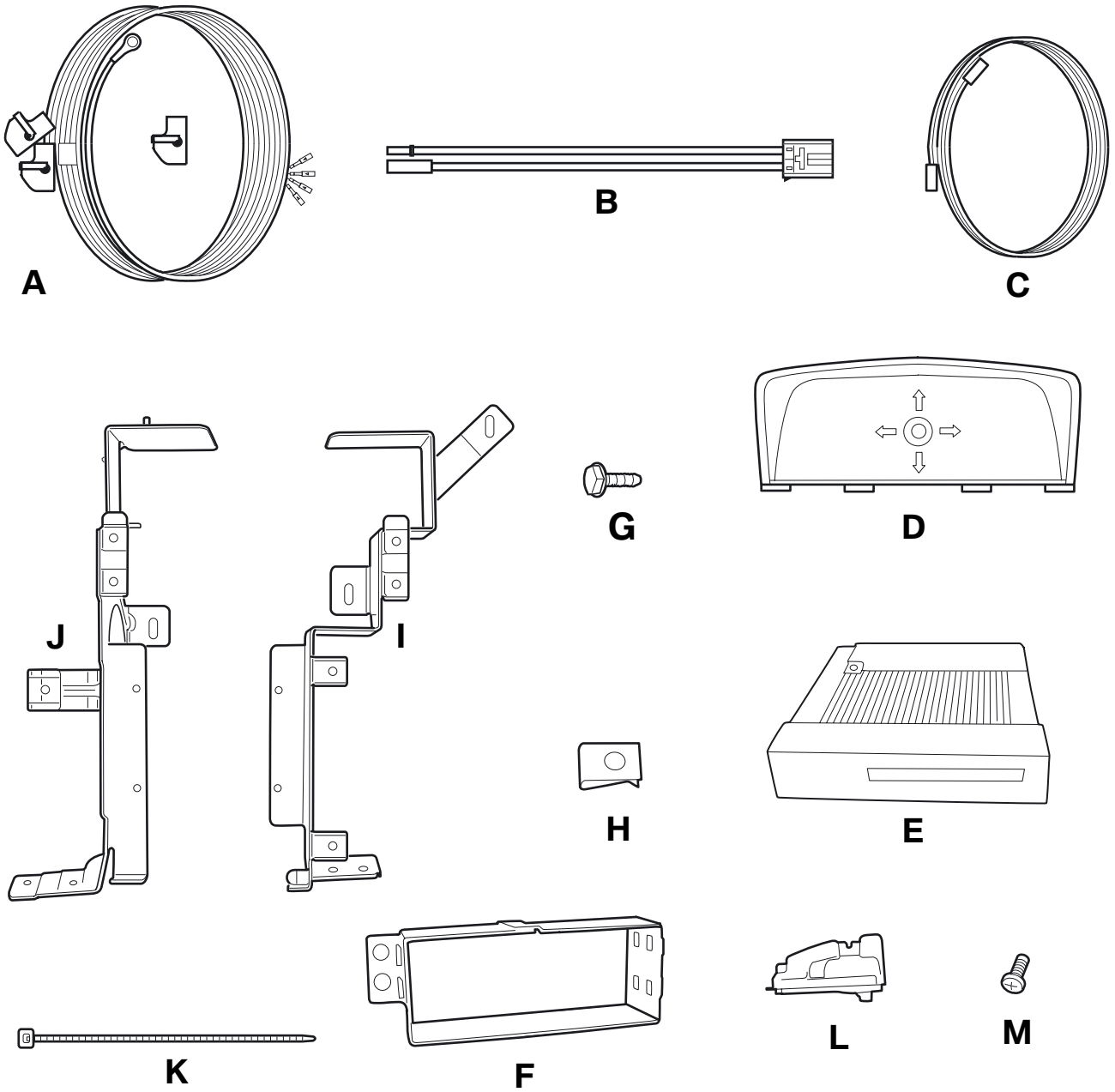
00 9 341 Removal aid

65 2 010 Set of drawing knives

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1. Parts kit



065 0164 V

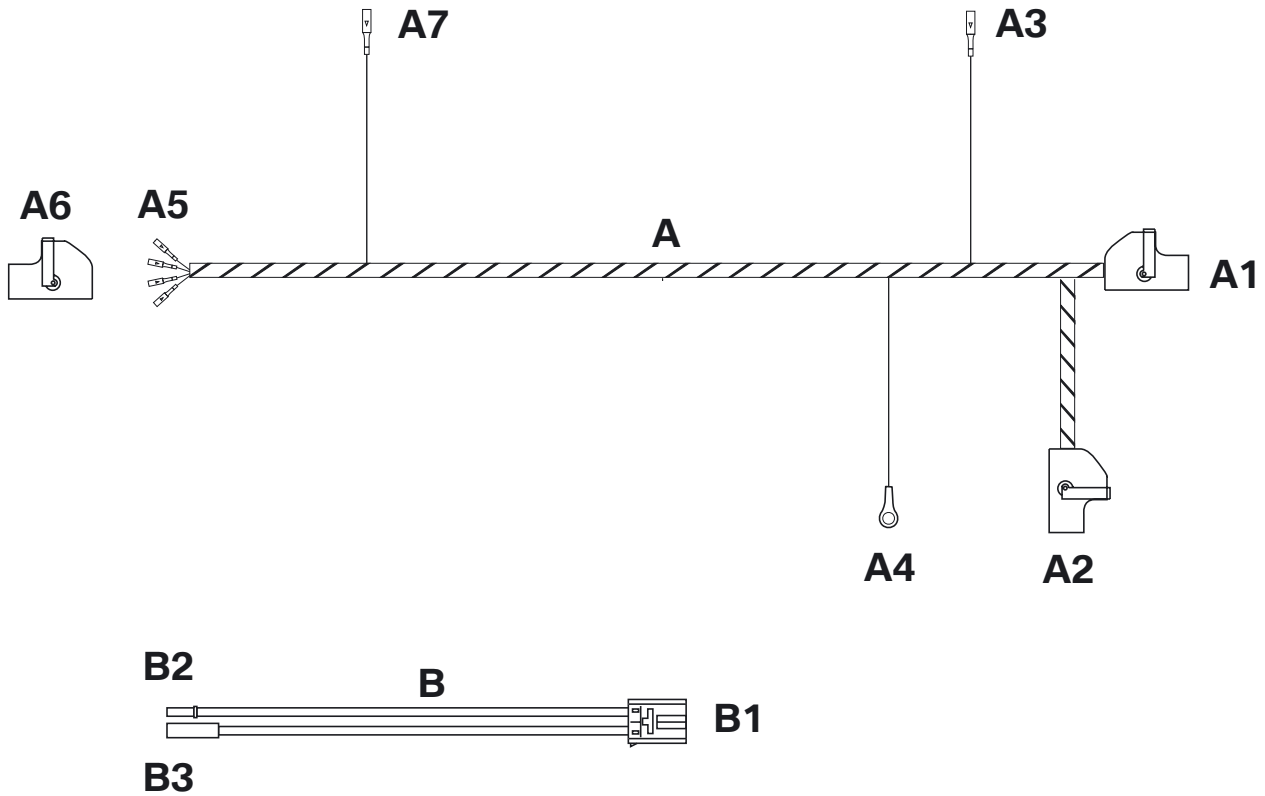
Key

- | | | | |
|---|-------------------------------------|---|--|
| A | Wiring harness | H | Speed nut M5 (9x) |
| B | Fibre optics cable | I | Basic bracket, front |
| C | Antenna cable | J | Basic bracket, rear |
| D | Control display | K | Cable tie (15x) |
| E | Navigation computer | L | GPS antenna (not included in parts kit for vehicles built after 09/05) |
| F | Bracket for navigation computer | M | Screw (not included in parts kit for vehicles built after 09/05) |
| G | Hexagon head screw with washer (9x) | | |

2. Preparatory work

	TIS FRU No.
Perform quick test	
Disconnect negative terminal of battery	12 00 ...
The following components must be removed beforehand:	
Wood trim finisher on instrument panel, right	51 45 366
Control display	65 82 010
Glove compartment, right	51 16 367
Pedal assembly cover	51 45 185
Sill cover panel, front left	51 47 000
Side trim panel on A-pillar in left footwell	51 43 070
Trim panel for door pillar, (bottom) left	51 43 150
Sill cover panel, rear left	51 47 030
Additional C-pillar trim cover, bottom left	51 43 240
Trim panel for roof pillar, rear left (front)	51 43 255
Trim panel for roof pillar, rear left (rear)	51 43 251
C-pillar trim cover, bottom left	51 43 230
Luggage compartment - wheel arch trim panel, left	51 47 151
Roof light and console element, rear	51 44 180

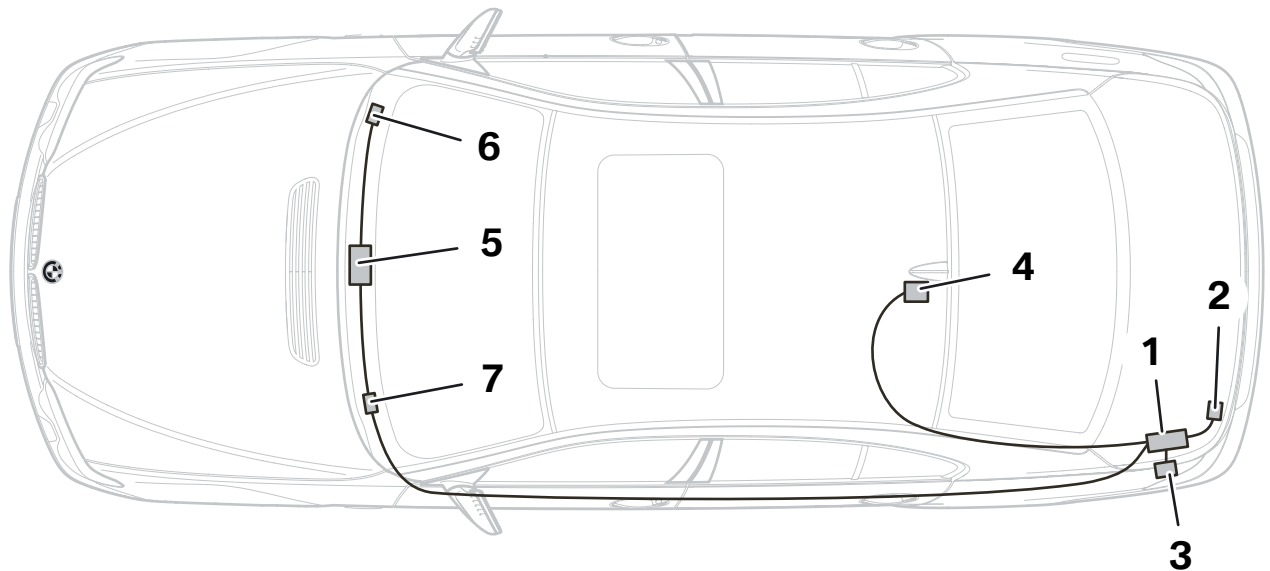
3. Overview of connections



065 0109 V

Item	Description	Signal	Wire colour / cross section	Connection location in vehicle	Designation/ plug-in location
A	Wiring harness	---	---	---	---
A1	SW 20-pin socket housing	---	RT/GN/BL/ SW/RTWS/ BRSW	At navigation computer A112	X1312
A2	GN 18-pin socket housing	---	GERT	At navigation computer A112	X1313
A3	Strip connector contact	Kl. 30	RTWS	At strip connector behind navigation computer A112	X1889
A4	Ring cable lug A6	Kl. 31	BRSW	At ground terminal under left tail light	X13094
A5	Socket contact	---	RT/GN/BL/SW	In 12-pin socket housing A6	PINS 1/2/3/6
A6	12-pin socket housing	---	---	At control display A165	X10613
A7	Strip connector contact	DFAVL	GERT	At strip connector behind glove compartment	X10183
B	Fibre optics cable	---	---	---	---
B1	SW 2-pin housing	MOST-bus	---	In connector X1312 at navigation computer	X10635
B2	Fibre optics cable	MOST-bus	GN	In 12-pin connector X547 of telephone transceiver	X10634 PIN 1
B3	Fibre optics cable with connector housing	MOST-bus	GN	At unplugged fibre optics cable of telephone transceiver	---

4. Installation and layout diagram

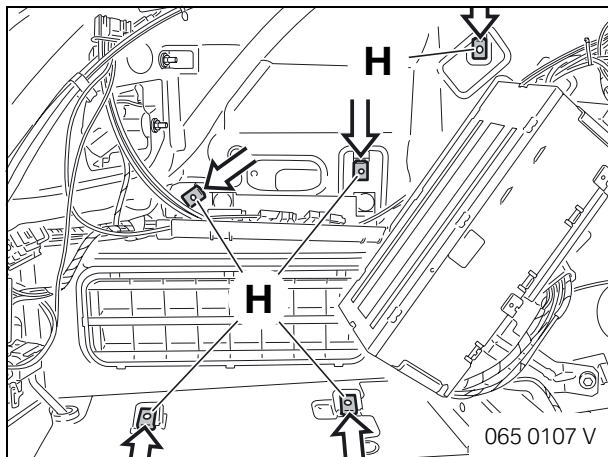


065 0096 V

Key

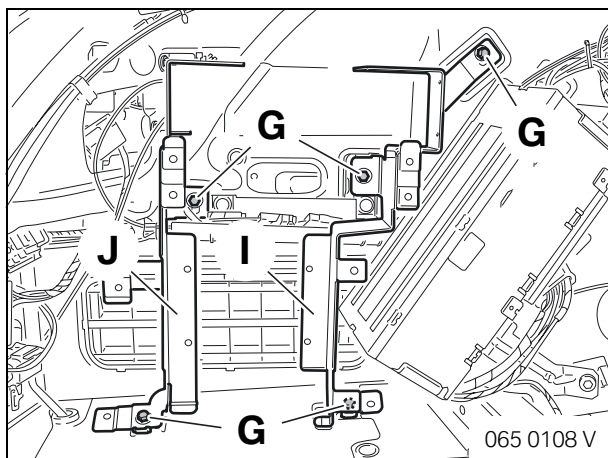
- 1 Navigation computer
- 2 Ground terminal
- 3 Strip connector
- 4 GPS aerial
- 5 Control display
- 6 Strip connector behind glove compartment on LHD vehicles
- 7 Strip connector behind glove compartment on RHD vehicles

5. Installing retrofit kit

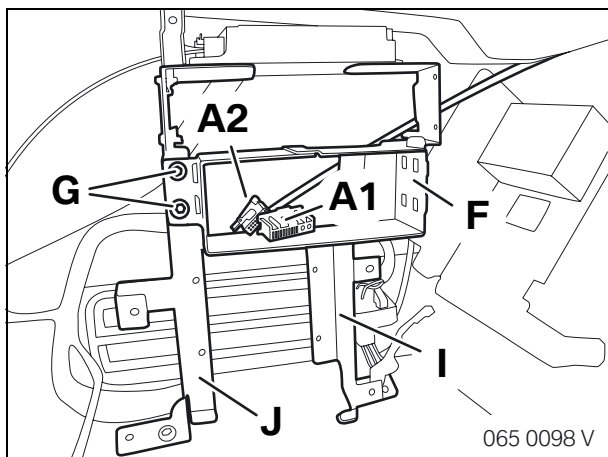


Only vehicles with no basic bracket

Fit speed nuts **H** in left side panel.



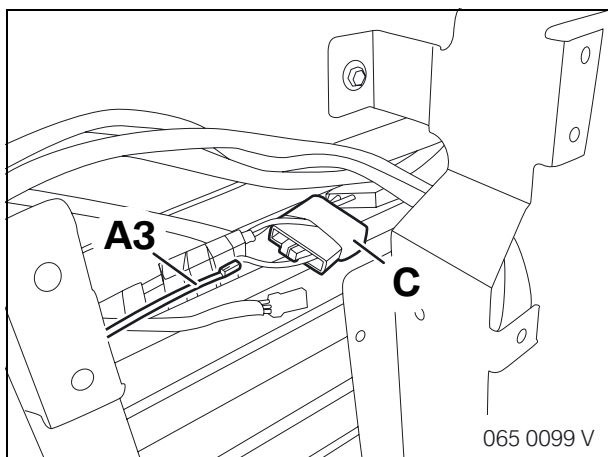
Screw down front basic bracket **I** and rear basic bracket **J** with hexagon head screws **G** on left side panel.



For all vehicles

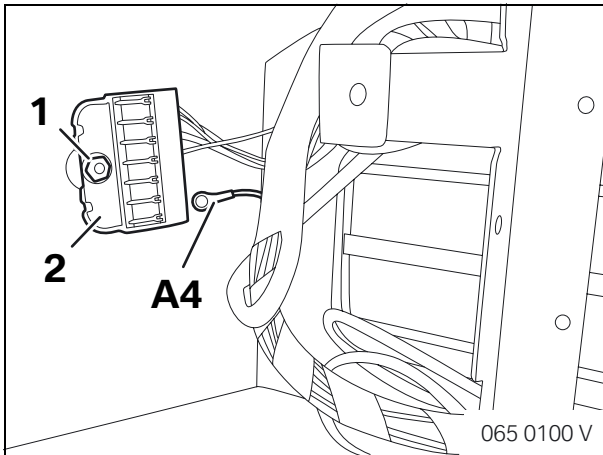
Secure bracket for navigation computer **F** with speed nuts **H** and hexagon head screws **G** on front basic bracket **I** and rear basic bracket **J** (illustrated here only for rear basic bracket **J**).

Install branches **A1** and **A2** as illustrated. Run wiring loom **A** forward.

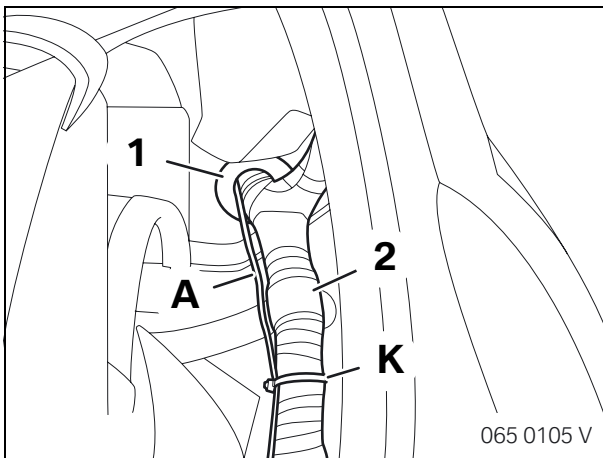


Plug in branch **A3** at strip connector **X1889 (1)** (red/white).

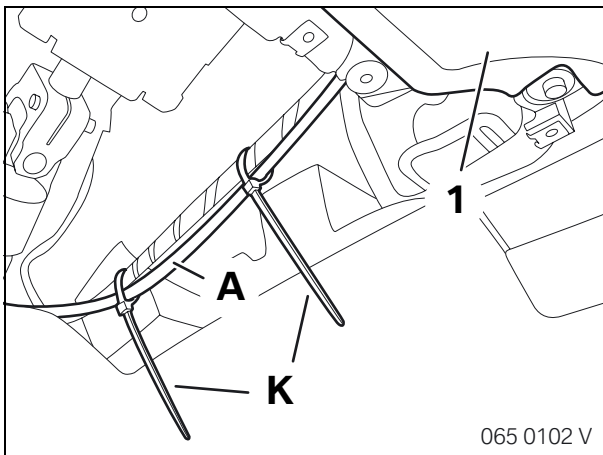
5. Installing retrofit kit



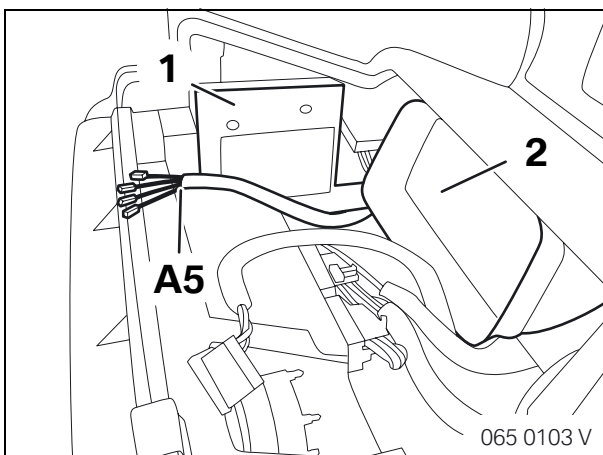
Undo screw (1) from strip connector **X13094** (2) and secure branch **A4**.



Pass wiring loom **A** through grommet (1) from luggage compartment into vehicle interior. Run wiring loom **A** along main wiring harness (2) to the front left A-pillar. Use cable straps **K**.

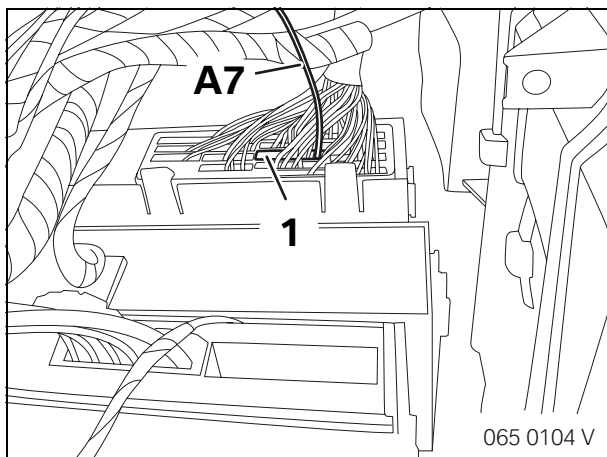


Run wiring loom **A** out of driver's footwell behind active knee guard (1) to where the control display is installed. Use cable straps **K**.

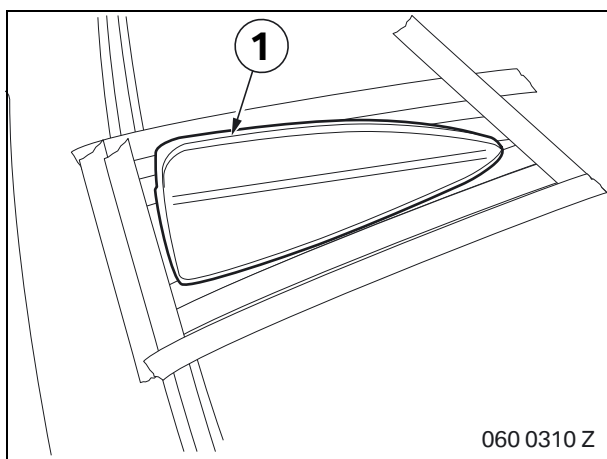


Route branch **A5** between CAS control unit (1) and ventilation duct (2). Plug in socket contacts at socket housing **A6** as shown in the connection overview. Connect control display **D** and install as described under TIS No. 65 82 010.

5. Installing retrofit kit



Route branch **A7** to strip connector **X10183 (1)** (yellow/red) behind the glove compartment and plug in at free slot.

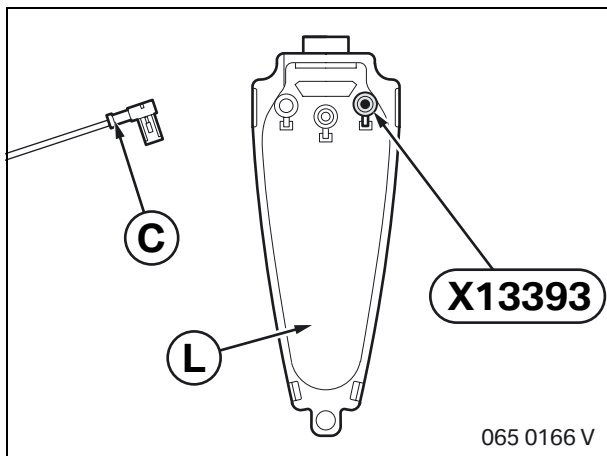


For vehicles after 09/05:

▶ Mask off the area about the roof antenna to avoid damaging the paintwork. ◀

Use special tool to carefully detach the empty housing (1) 65 2 010 of the roof antenna from the roof.

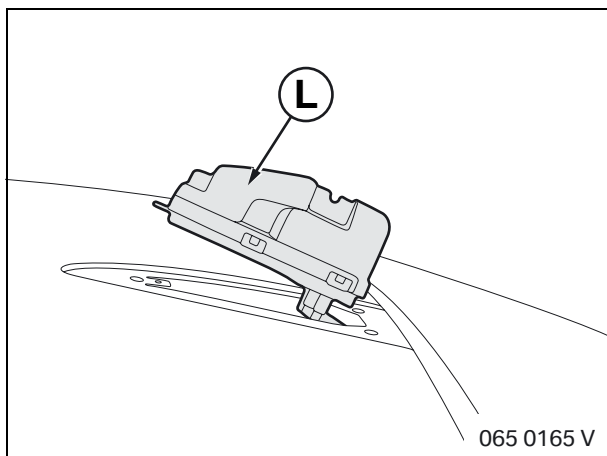
Clean surfaces in adhesion area of empty housing (1) and roof.



▶ If the vehicle is equipped with a car telephone, the existing antenna must be replaced by the GPS antenna **L**.

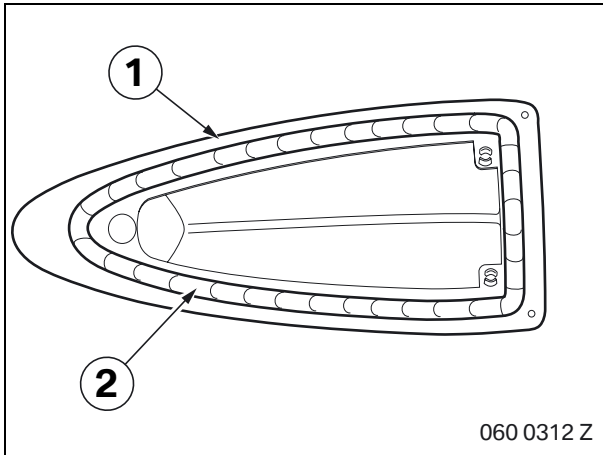
The antenna cable of the car telephone must then be connected to the GPS antenna **L**. ◀

Connect antenna cable **C** to connector **X13393** of GPS antenna **L**.



Plug in GPS antenna **L** at rear and secure at the front with screw **M** from the parts kit.

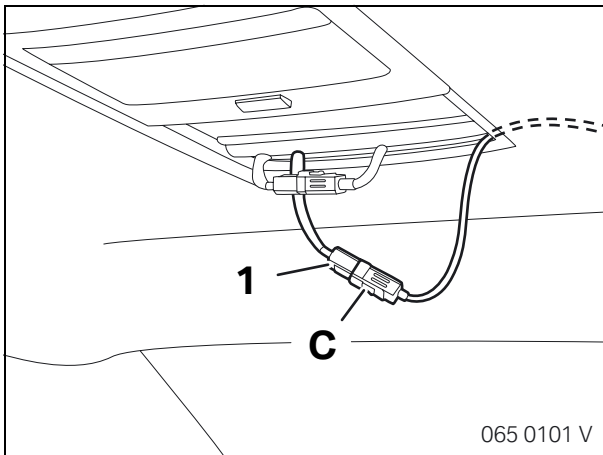
5. Installing retrofit kit



▶ The adhesion surfaces must be clean and free of oil and grease. Minimum processing temperature of adhesive 20 °C. Minimum hardening time of adhesive 4 hours. ◀

Apply an approx. 8 mm wide and 8 mm high bead of adhesive (2) on the empty housing (1).

Carefully place empty housing (1) in its original position, press lightly and secure with adhesive tape.



▶ The antenna cable **C** must not restrict the effective area of the head airbag. ◀

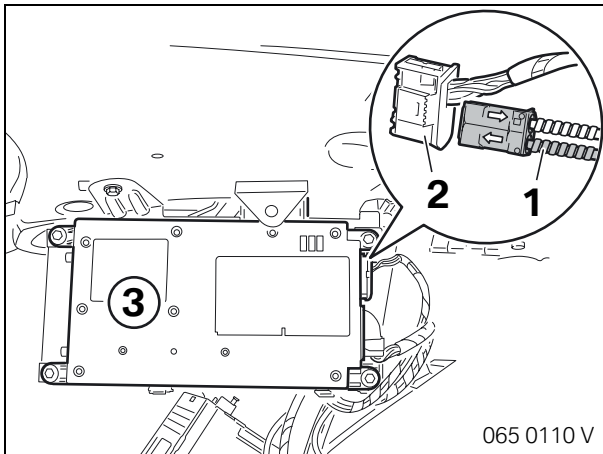
Connect antenna cable **C** at connection terminal of GPS antenna (1).

Run antenna cable **C** under the headliner to the left pillar and further through the grommet (see figure 065 0105 V) into the luggage compartment.

Run antenna cable **C** further to branches **A1** and **A2** (see figure 065 0098 V).

For vehicles built between 03/03 and 03/05:

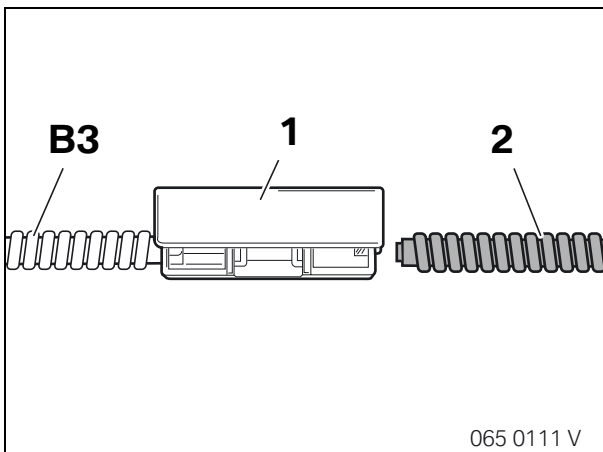
First disconnect adapter cable (1) at the antenna.



For all vehicles:

Unplug incoming fibre optics cable (1) from 12-pin connector **X547** (2) of the telephone transceiver (3) and plug in branch **B2** at this location.


▶ If the vehicle is not equipped with a telephone, the fibre optics conductor loop tied back ahead of the front basic bracket **I** must be untied and the fibre optics cable **B** looped through accordingly. With the battery connected, the incoming fibre optics cable can be identified by the red light spot. ◀



Release connector for fibre optics cable (1) of branch **B3** and plug in previously unplugged fibre optics cable (2).

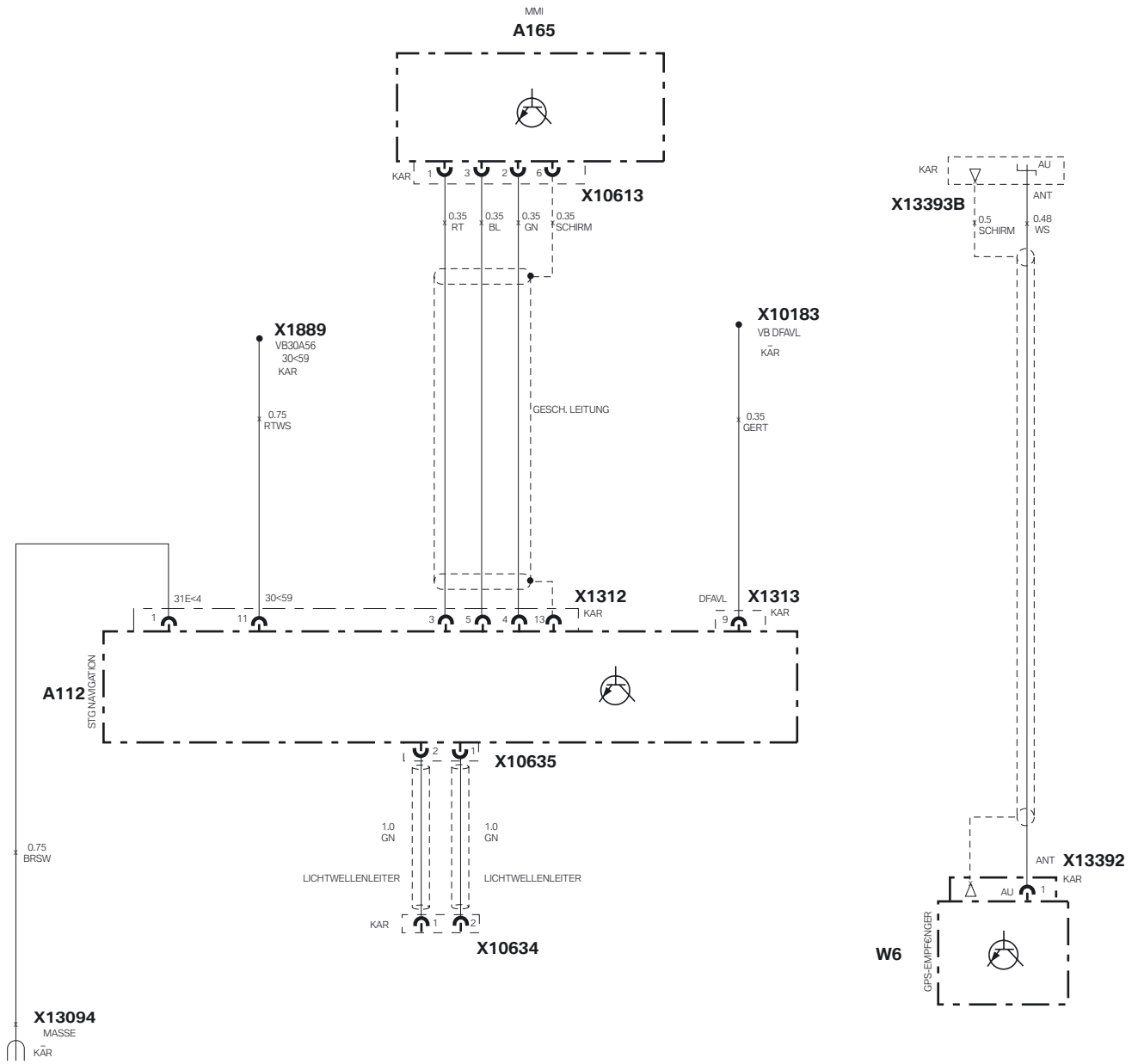
Plug branch **B1** into socket **X10635** at branch **A1**. Connect branches **A1**, **A2** and antenna cable **C** at navigation computer **E** (not illustrated). Install navigation computer **E** as described under TIS instructions 65 90 511.

6. Finishing off and encoding

 The navigation system retrofit requires encoding. ◀

- Connect battery, install glove compartment and connect charger
- Program/encode navigation system retrofit with DISplus, GT-1 or SSS with CIP application and follow the user prompt.
- Check functions
- Reassemble vehicle in reverse order of removal.

7. Circuit diagram



065 0097 V

7. Circuit diagram

Key

A112 Navigation computer

A165 Control display (MMI)

W6 GPS antenna

X1312 Black 20-pin socket housing at navigation computer

X1313 Green 18-pin socket housing at navigation computer

X1889 Strip connector, terminal 30

X10183 Connector for dynamic driving signal, front left

X10613 12-pin socket housing at control display

X10635 2-pin fibre optics conductor housing in X1312 at navigation computer

X13094 Strip connector, ground

X13392 Pin housing at navigation computer

X13393 Socket housing at connection cable of GPS antenna

X10634 Connector for fibre optics cable

Wire colours

RT Red

BL Blue

GN Green

WS White

GE Yellow

BR Brown

SW Black