

Original BMW Accessories.

Installation Instructions.



Rear Transport System Retrofit

BMW X5 (F15)

BMW X6 (F16)

Retrofit kit number

82 71 2 349 499 Trailer tow hitch transverse pipe retrofit kit

Installation time

The installation time is **approx. 2.5 hours**. This may vary depending on the condition of the car and the equipment in it.

The installation time shown does not include any time spent on programming / coding.

The calculation of the total costs for the programming time must be factored into the calculation of retrofitting costs (no charges may be made through the warranty).

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, wiring diagrams, servicing manuals and work instructions, in a rational order, using the prescribed tools (special tools) and observing current health and safety regulations.

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

To avoid unnecessary extra work and/or costs, send an inquiry straight away to the technical parts support team via the Aftersales Assistance Portal (ASAP).

Quote the following information:

- Vehicle identification number,
- Retrofit kit part number,
- A detailed description of the problem,
- Any work already carried out.

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

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

Additional cables/wires 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.

On various engine versions, the heat guard must be installed as per ISTA (for instructions see EPC-HG 51).

After the installation work, the retrofit must be programmed / coded via the **–Conversions–** path.

Customer information

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

Ordering instructions

The following components are not included in the retrofit kit and must be ordered separately (see EPC for part numbers and further details):

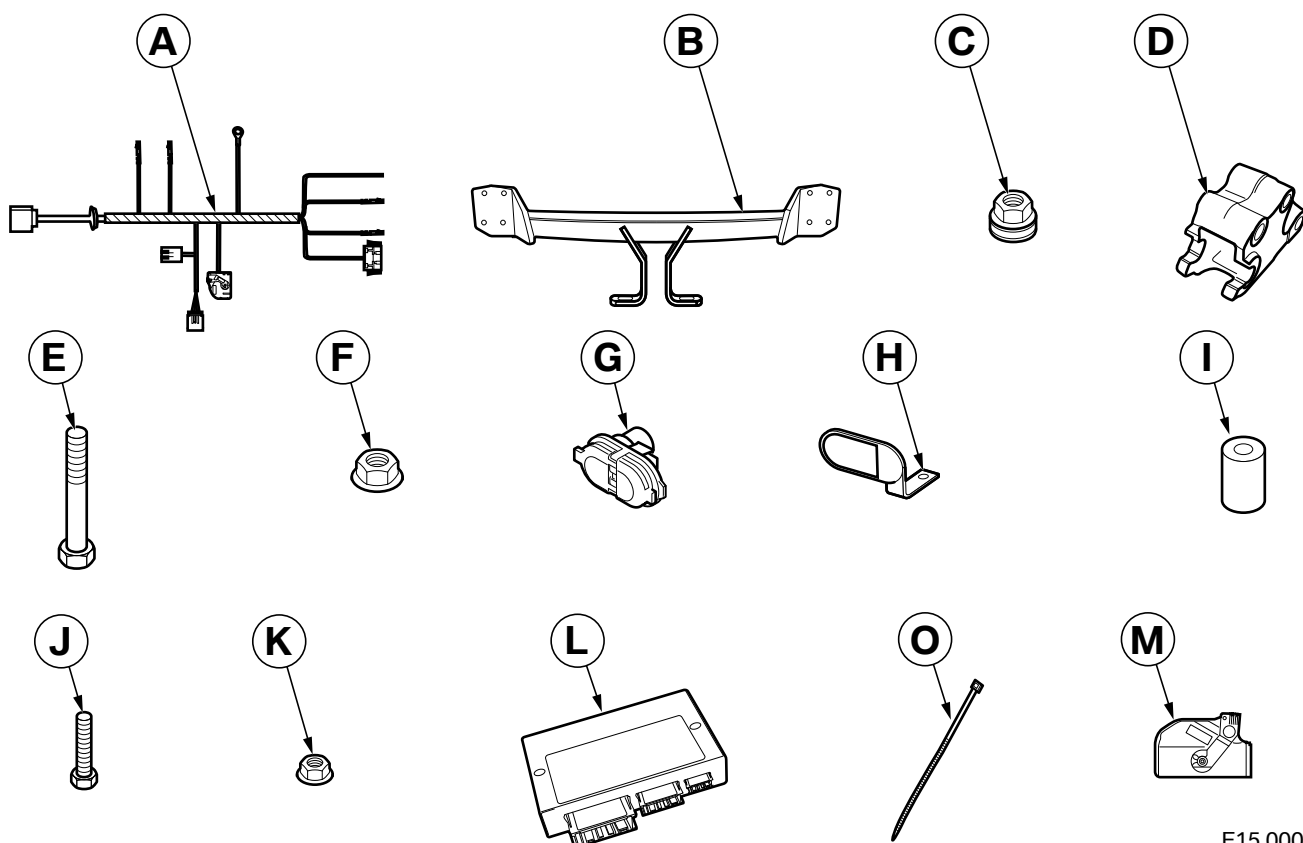
- Retrofit wiring harness **A** (includes retrofit cable, socket **G**, cable tie **O** and cover cap **M**)
- M12 hexagon nut **C** (8 x)
- AAG control unit **L**



On various engine versions, a heat guard must be installed. The heat guard is not supplied with the retrofit kit and must be ordered separately (for part number and instructions, see EPC-HG 51). ◀

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	7
5. Installing the rear transport system	8
6. Concluding work and coding	12
7. Wiring diagram	13
8. Customer information	15

1. Parts list for retrofit kit



F15 0003 Z

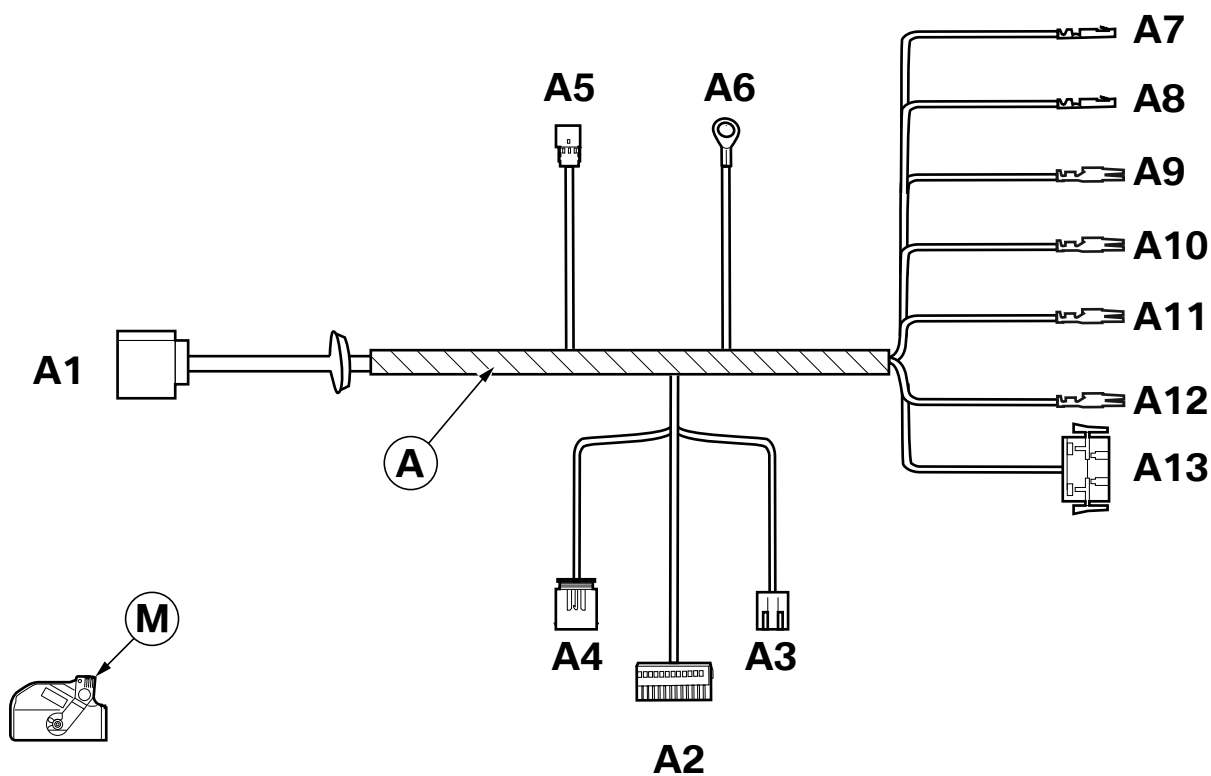
Legend

- A** Retrofit wiring harness (not supplied with the retrofit kit)
- B** Transverse pipe
- C** M12 hexagon nut (8 x, not supplied in the retrofit kit)
- D** Sleeve
- E** M6 hexagon screw (3 x)
- F** M12 hexagon nut (3 x)
- G** Socket (part of the retrofit wiring harness **A**)
- H** Socket holder
- I** Spacer bush (2 x)
- J** M6 hexagon screw (2 x)
- K** M6 hexagon nut (2 x)
- L** AAG control unit (not supplied in the retrofit kit)
- O** Cable tie (10 x, component of the retrofit wiring harness **A**)
- M** SW cover cap (component of the retrofit wiring harness **A**)

2. Preparatory work

	ISTA No.
Disconnect the negative terminal of the battery	61 20 ...
The following components must be removed first of all	
Rear bumper trim	51 12 156
Support for rear bumper trim (no longer required)	51 12 050
Flap in the luggage compartment trim on the right	51 47 ...
Storage compartment in the luggage compartment on the right	51 47 ...
Release the rear fuse holder	61 13 ...

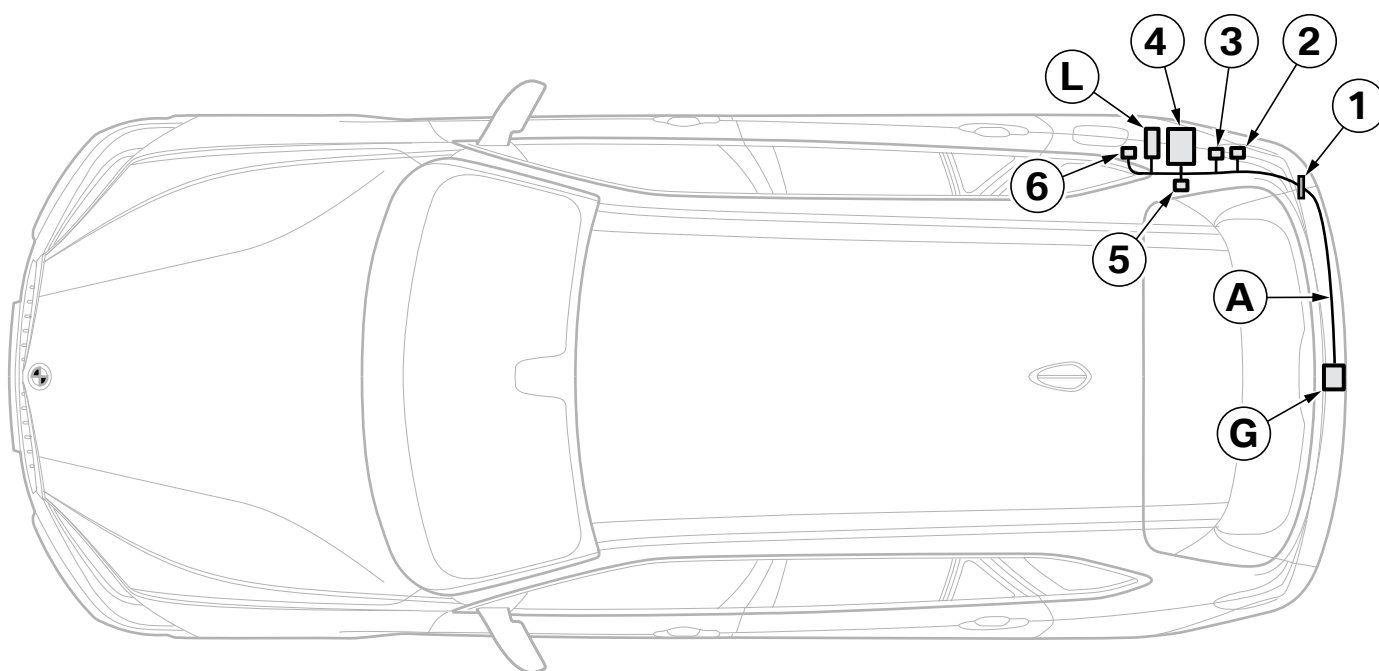
3. Retrofit wiring harness connection diagram



F15 0014 Z

Item	Designation	Signal	Cable colour/ cross-section	Connection location in the car	Abbreviation/ slot
A	Retrofit wiring harness	---	---	---	---
A1	SW 7-pin socket casing	---	---	To socket G	---
A2	SW 24-pin socket casing	---	---	To AAG control unit L	A255*1B
A3	SW 6-pin socket casing	---	---	To AAG control unit L	A255*2B
A4	SW 10-pin socket casing	---	---	To AAG control unit L	A255*3B
A5	SW 3-pin socket casing	---	---	To the BDC pin housing in the rear right wheel arch	X18*1B
A6	M6 ring eyelet	Terminal 31L	---	To ground support point in the rear right wheel arch	Z10*14B
A7	Socket contact	B-CAN_H	GE/RT 0.35 mm ²	Connect to CAN terminal R2 in the rear right wheel arch	R2*1B PIN 8
A8	Socket contact	B-CAN_L	GE/BR 0.35 mm ²	Connect to CAN terminal R2 in the rear right wheel arch	R2*1B PIN 21
A9	Socket contact	30F F114_HR	RT/GE 2.5 mm ²	To rear right fuse box Z2	Z2*13B PIN 4
A10	Socket contact	30F F113_HR	RT/VI 2.5 mm ²	To rear right fuse box Z2	Z2*13B PIN 5
A11	Socket contact	30F F163_HR	RT/BL 2.5 mm ²	To rear right fuse box Z2	Z2*11B PIN 4
A12	Socket contact	30B F139_HR	RT 2.5 mm ²	To rear right fuse box Z2	Z2*9B PIN 4
A13	SW 4-pin socket casing	---	---	Only cars without Electronic Trailer Break Control Insulate and tie back Only cars with Electronic Trailer Break Control Connect to the Electronic Trailer Break Control connecting cable	---
M	SW cover cap	---	---	Push onto branch A2	---

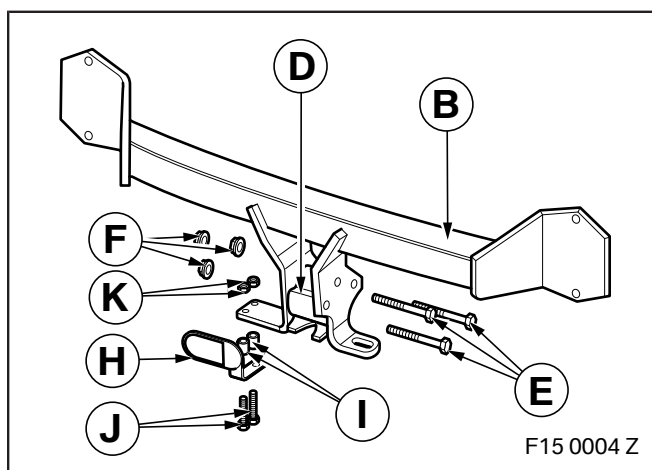
4. Installation and cabling diagram



F15 0018 Z

- A** Retrofit wiring harness
- G** Socket
- L** AAG control unit
- 1** Rubber grommet
- 2** Branch **A13**
- 3** BDC pick-up **X18*1B**
- 4** Rear right fuse box **Z2**, plugs **Z2*9B**, **Z2*11B**, **Z2*13B**
- 5** B-CAN pick-up **R2*1B**
- 6** Ground support point **Z10*14B**

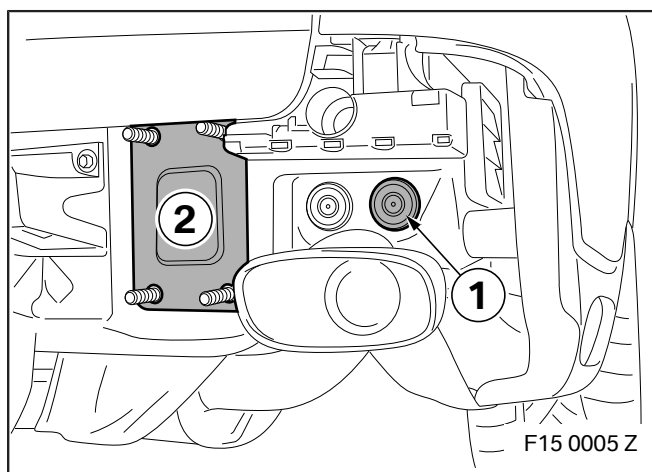
5. Installing the rear transport system



▶ When using hexagon screws **E** and hexagon nuts **F**, observe the tightening torque: 120 Nm. ◀

Assemble the rear transport system as follows:

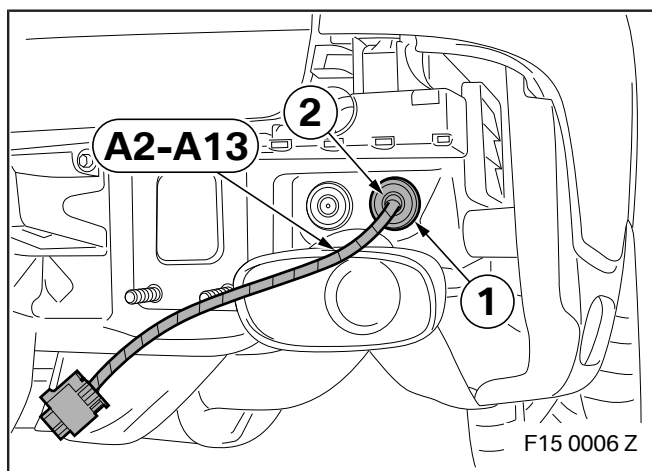
- Screw sleeve **D** with hexagon screws **E** and hexagon nuts **F** onto transverse pipe **B**
- Screw socket mount **H** with hexagon screws **J**, spacer bushes **I** and hexagon nuts **K** onto transverse pipe **B**



▶ Removal of the existing seal (2) is only shown on the right-hand side of the car; proceed in the same way on the left-hand side of the car. ◀

Remove the sealing cover (1).

Remove the existing seal (2) on the left and right.

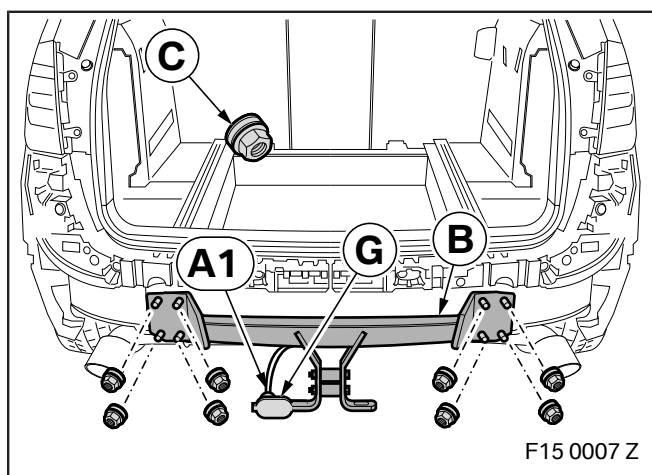


⚠ Route the cable of branches **A2-A13** so that they are never able to touch parts of the exhaust system.

Route branches **A2-A13** through the opening (1) into the interior of the car.

Insert a rubber grommet (2) to make the opening water-tight.

5. Installing the rear transport system

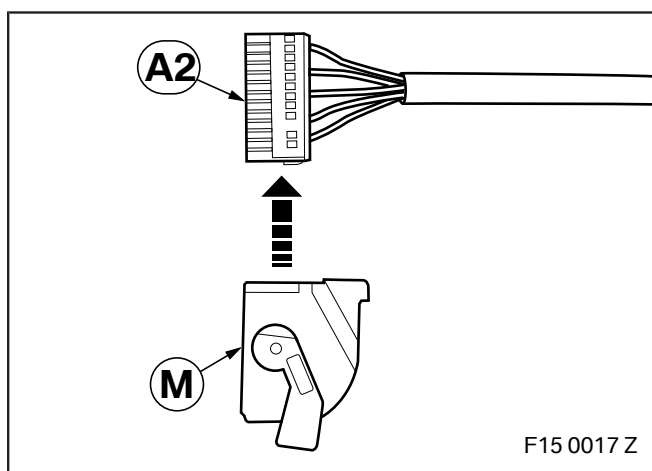


▶ Note the tightening torque value: 108 Nm. ◀

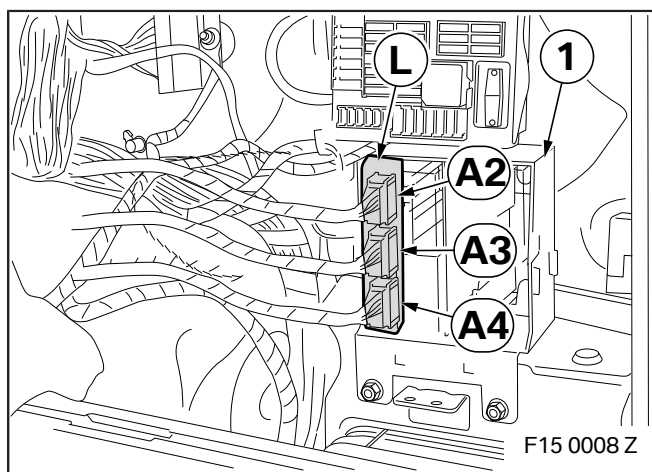
Secure transverse pipe **B** with hexagon nuts **C**.

Clip socket **G** onto the socket mount.

Connect branch **A1** to socket **G**.

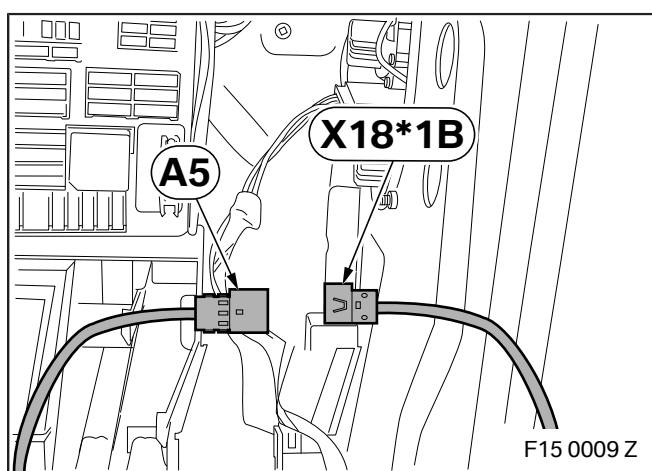


Push cover cap **M** onto branch **A2**.



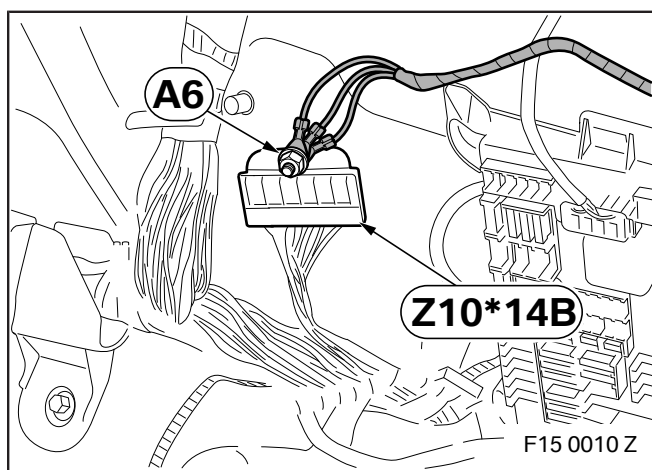
Insert AAG control unit **L** in the control unit holder (1).

Connect branches **A2-A4** to AAG control unit **L**.

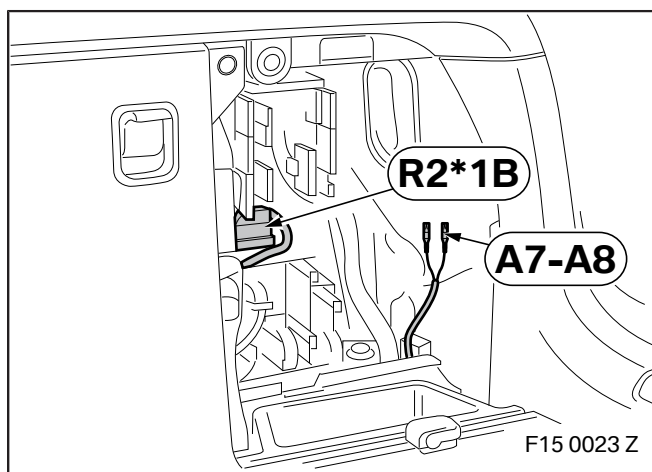


Connect branch **A5**, SW 3-pin socket casing, to plug **X18*1B**, SW 3-pin pin housing.

5. Installing the rear transport system

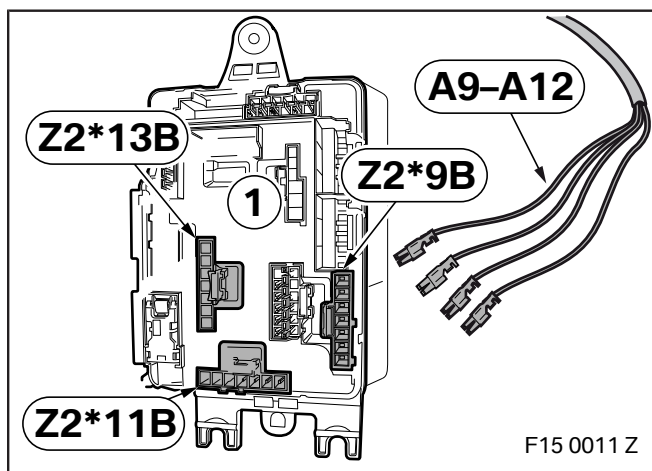


Screw branch **A6**, M6 ring eyelet, onto ground support point **Z10*14B**.



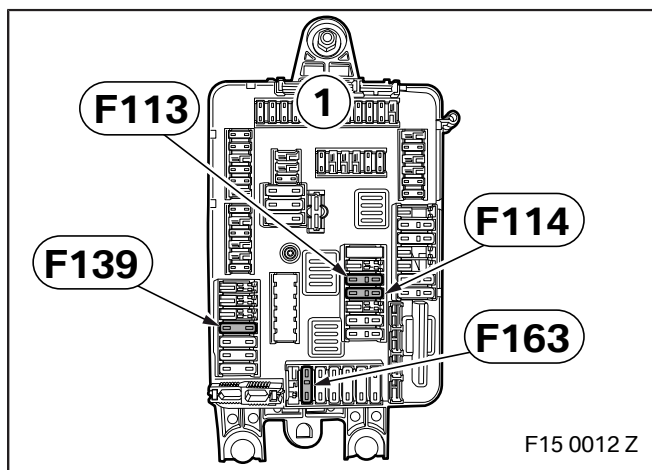
Connect branches **A7–A8** as follows to plug **R2*1B** SW 24-pin socket casing:

- Branch **A7**, GE/RT cable, to PIN 8
- Branch **A8**, GE/BR cable, to PIN 21



Route branches **A9–A12** to rear right fuse box (1) and connect as follows:

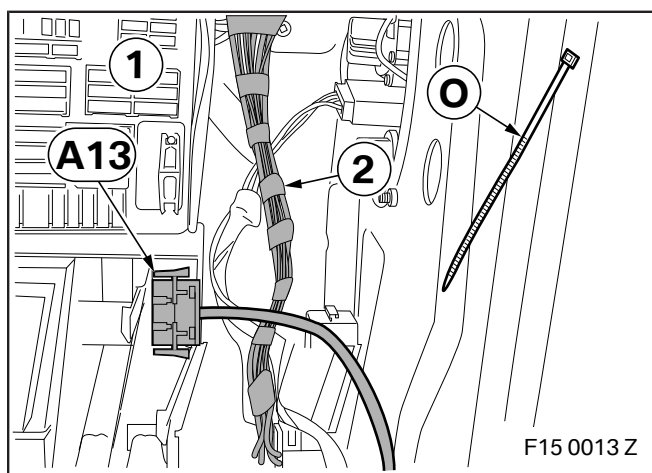
- Connect branch **A9**, RT/GE cable, to plug **Z2*13B**, VI 7-pin socket casing, PIN 4
- Connect branch **A10**, RT/VI cable, to plug **Z2*13B**, VI 7-pin socket casing, PIN 5
- Connect branch **A11**, RT/BL cable, to plug **Z2*11B**, BL 7-pin socket casing, PIN 4
- Connect branch **A12**, RT cable, to plug **Z2*9B**, SW 7-pin socket casing, PIN 4



Check that 30 A fuses are inserted into slots **F113**, **F114**, **F163** and a 20 A fuse is inserted into slot **F139** of the rear right fuse box (1).

If any fuses are missing, replace them with suitable fuses (for part numbers and instructions, see EPC).

5. Installing the rear transport system



Only cars without Electronic Trailer Break Control

Tie back branch **A13** in the area of the rear right fuse box (1) on the standard vehicle wiring harness (2) using cable tie **O**.

Only cars with Electronic Trailer Break Control

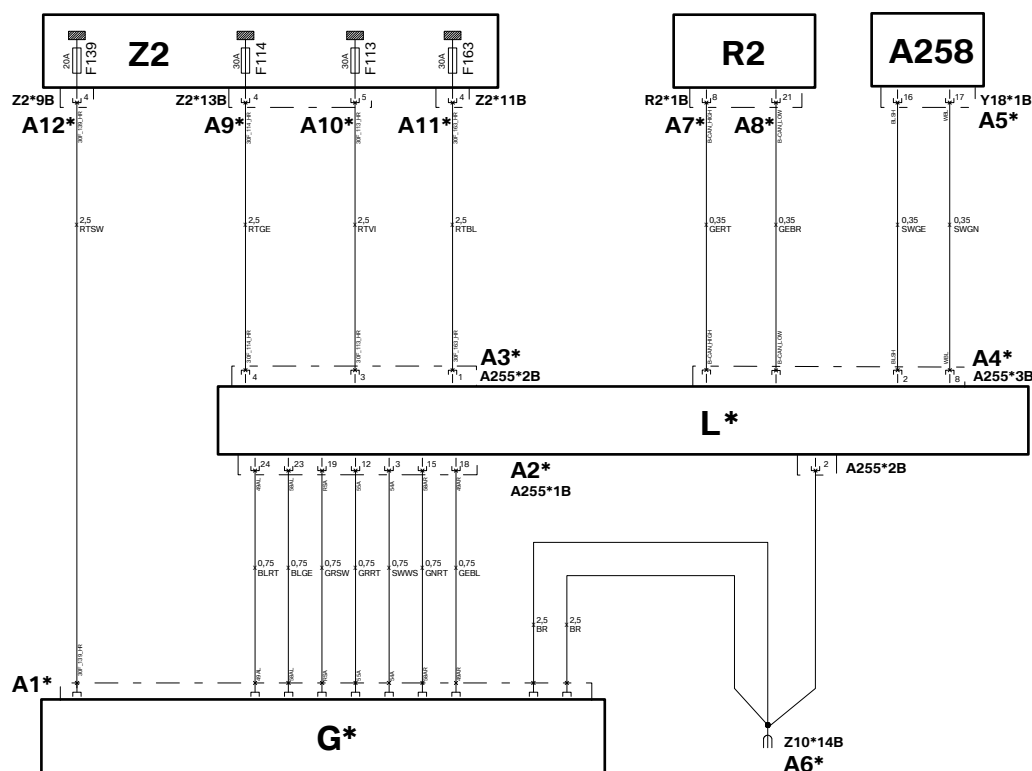
Connect branch **A13** to the Electronic Trailer Break Control connecting cable

6. Concluding work and coding

The retrofit system requires programming / coding.

- Connect the battery
- Connect the battery charger to the car
- Connect the car to the ISTA workshop system
- Call up the ISTA/P car programming facility
- If using ISTA/P, please note the instructions provided in the ISTA/P application documentation
- Select the "K235" retrofit via the - **Conversions** - path and work through the created action plan
- If necessary, carry out a car test using the ISTA system and note or work through any entered error memory
- Conduct a function test
- Re-assemble the car in a logical manner

7. Wiring diagram



F15 0019 Z

Legend

- A1*** SW 7-pin socket casing, to socket **G***
- A2*** SW 24-pin socket casing, to AAG control unit **L*/A255*1B**
- A3*** SW 6-pin socket casing, to AAG control unit **L*/A255*2B**
- A4*** SW 10-pin socket casing, to AAG control unit **L*/A255*3B**
- A5*** SW 3-pin socket casing, to BDC pick-up **X18*1B**
- A6*** M6 ring eyelet, to ground connection point **Z10*14B**
- A7*** Socket contact, to plug **R2*1B**
- A8*** Socket contact, to plug **R2*1B**
- A9*** Socket contact, to plug **Z2*13B** of rear right power distribution box **Z2**
- A10*** Socket contact, to plug **Z2*13B** of rear right power distribution box **Z2**
- A11*** Socket contact, to plug **Z2*11B** of rear right power distribution box **Z2**
- A12*** Socket contact, to plug **Z2*9B** of rear right power distribution box **Z2**
- A13*** SW 6-pin socket casing, to the Electronic Trailer Break Control connection

- G*** Socket
L* AAG control unit

- | | |
|----------------|---|
| X18*1B | BDC pick-up in the rear right wheel arch |
| R2*1B | CAN terminal in the rear right wheel arch |
| Z2 | Rear right fuse box |
| Z2*9B | VI 7-pin socket casing of the rear right fuse box |
| Z2*11B | BL 7-pin socket casing of the rear right fuse box |
| Z2*13B | SW 7-pin socket casing of the rear right fuse box |
| Z10*14B | Ground support point in the rear right wheel arch |

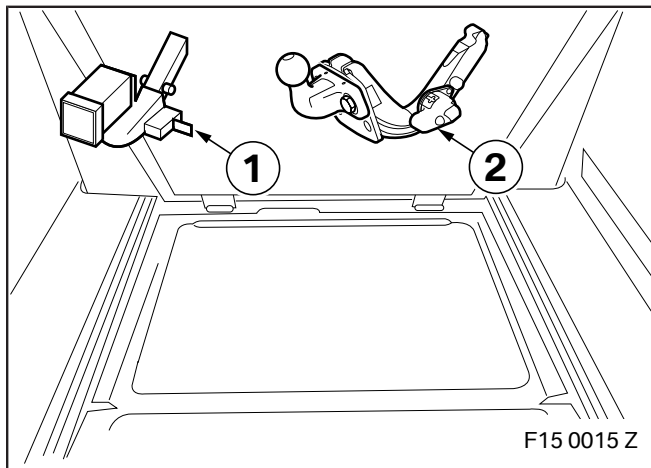
All the designations marked with an asterisk (*) apply only to these installation instructions or this wiring diagram.

7. Wiring diagram

Cable colours

BL	Blue	GR	Grey	RT	Red
BO	Bordeaux (Burgundy)	L-GN	Light green	SW	Black
BR	Brown	NT	Natural	TR	Transparent
GE	Yellow	OR	Orange	VI	Violet
GN	Green	RO	Pink	WS	White

8. Customer information



Stowing the adapter



The adapter (1) or (2) must be stowed when not in use in the underfloor space in the luggage compartment so that it cannot move around while the car is in motion.