Parts and Accessories.
Installation Instructions.

Towing Hitch Retrofit (Removable Ball Head)
BMW 5 Series Saloon (E60)

Retrofit kit No.: 71 60 6 758 703
71 60 0 300 956

Installation time
The installation time is 4.0 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 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.

Before you install the retrofit system, test the control module status with the CIP (coding, customising, programming) test program. If the test detects incorrect statuses in one or more control modules, these must be updated first using the “Load software” function.

All the figures show LHD cars, proceed accordingly 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 caution 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.

Installation information
The cover **D** is to be painted subject to consultation with the customer.

After the installation work the retrofit kit must be programmed / coded using DISPlus or GT-1 via the **Retrofit** path.

Legal requirements
A type approval in accordance with EC Directive 94/20/EC Annex VII exists for the towing hitch, with EC homologation mark **e13 00-1171**.
If you comply with these regulations and the notes in these installation instructions, no special acceptance test pursuant to § 19 of the German Road Traffic Licensing Directive and no special entry in the vehicle registration document is necessary.

Give section 10 of these installation instructions to the car owner.

List of special equipment
The following special equipment must be taken into consideration when installing the retrofit kit:

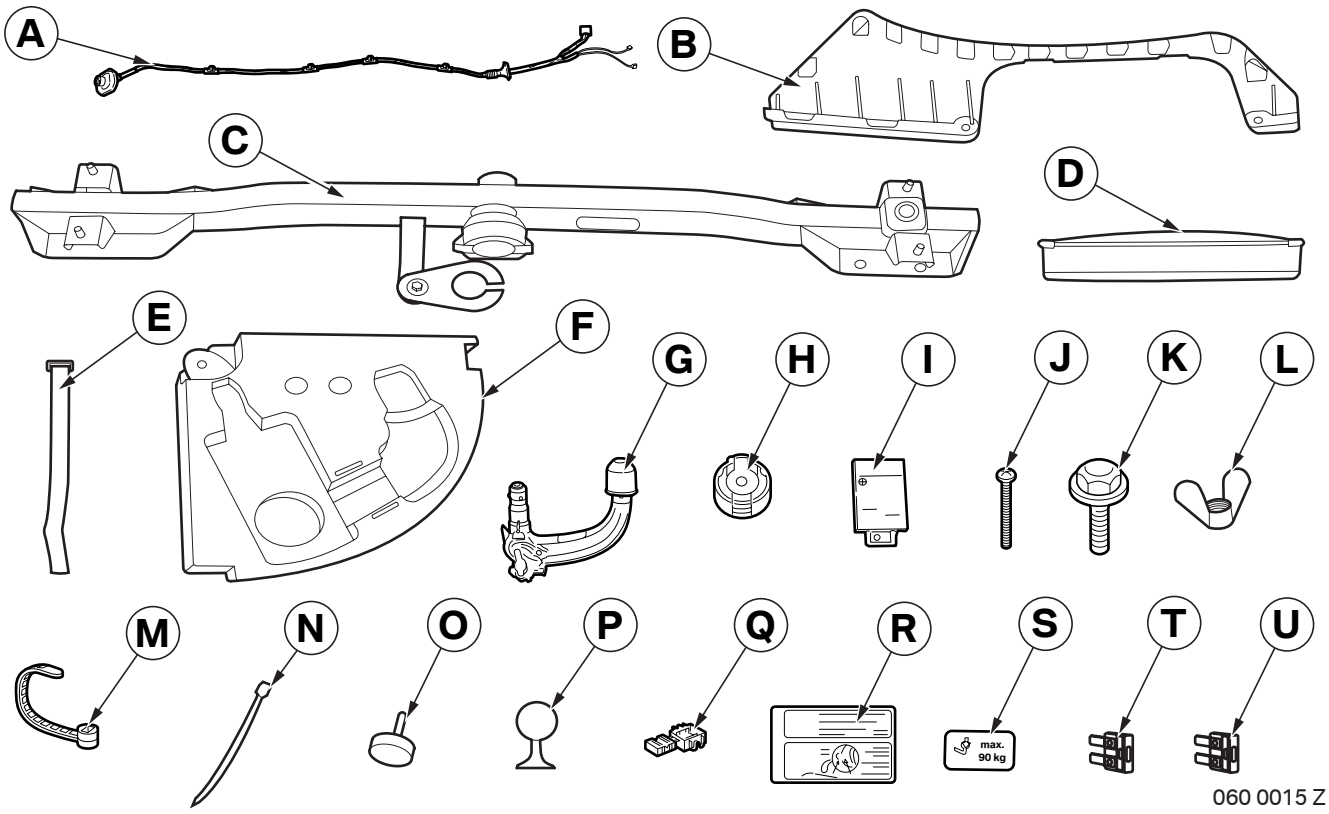
SA 465 Through-load system

SA 508 Park distance control (PDC)

Special tools required
None

Contents

1. Parts list



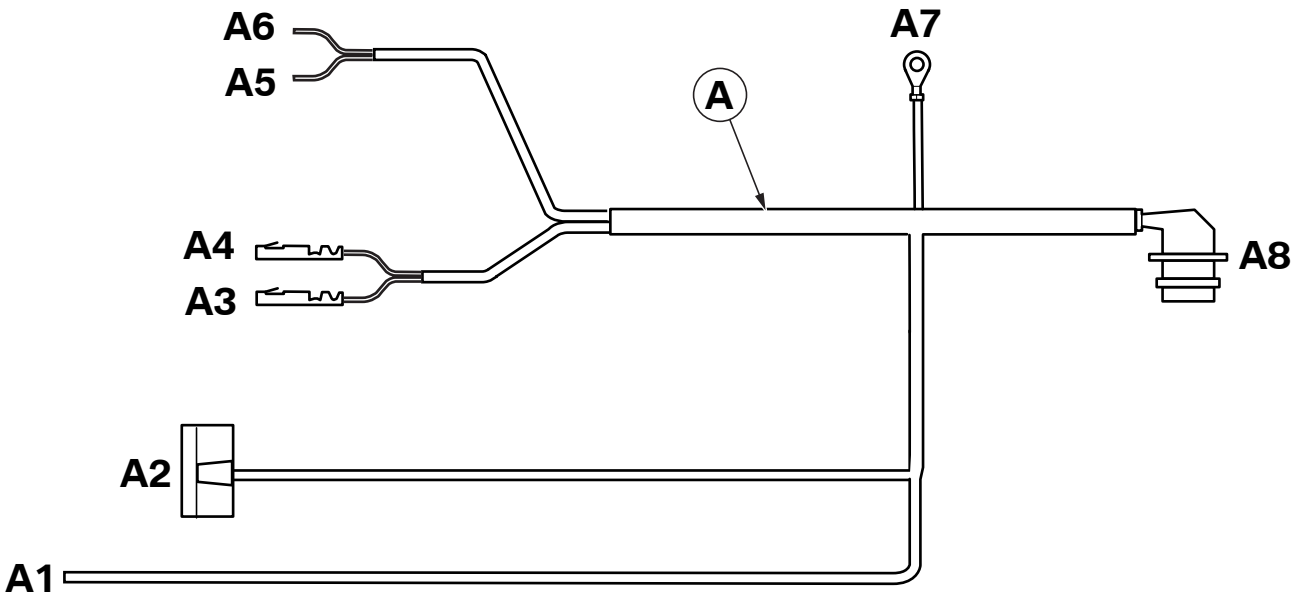
Legend

A Wiring harness
B Guide
C Coupling device
D Cover
E Velcro tape
F Storage fixture
G Ball head
H Socket
I Trailer module
J Philips screw M5 x 35 mm (3x)
K Hexagonal screw with washer M10 x 25 mm (8x)
L Wing nut M8
M Cable tie for coarse stud bolt (4x)
N Cable tie 200 x 3.6 mm (20x)
O Key (2x)
P Cover caps (2x)
Q Miniature connector (3x)
R Information label
S Nose weight label
T Fusible link 20 A
U Fusible link 30 A

2. Preparations

	TIS No.
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
The following components must be removed first of all	
Battery	---
Bumper trim	51 12 ...
Support for bumper trim	---
Impact absorbers on both sides (parts are no longer required)	51 12 ...
Boot floor trim	51 47 101
Control unit cover in the spare wheel trough	---
Trim for rear closing panel	51 46 050
Flap in the boot on the left	---
Left boot – wheel arch trim	51 47 151
Flap in the boot on the right	---
Right boot – wheel arch trim (cars without SA 508 only)	51 47 161
Cars with SA 465 only	
Side backrest section on rear seat right (cars without SA 508 only)	52 26 008
Side backrest section on rear seat left	52 26 008
Cars without SA 465 only	
Backrest for rear seat	52 24 010

3. Connection diagram



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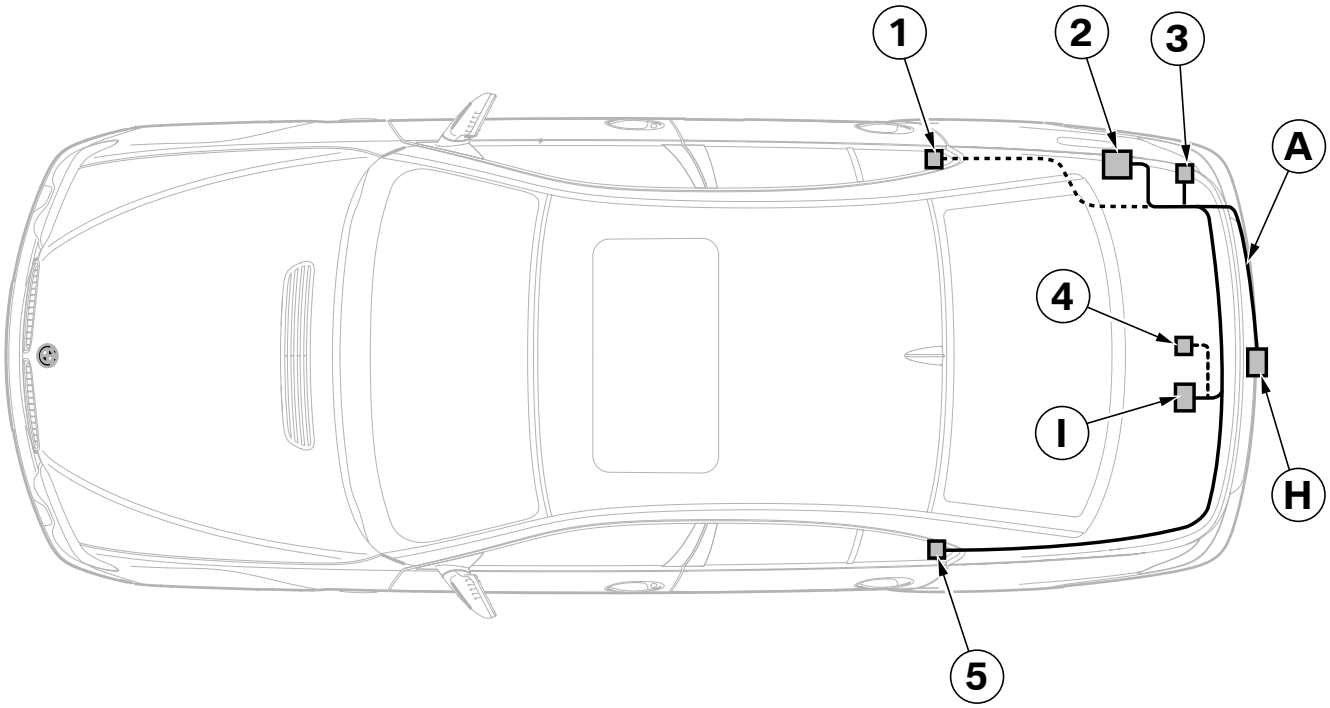
Item	Description	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Wiring harness	---	---	---	---
A1	Cable open	BL_M	SW/GE 0.50 mm²	In the area of the rear left door sill. With miniature connector to black/yellow cable of the standard wiring harness	---
A2	Black 16-pin socket casing	---	---	To trailer module **A6**	X609
A3	Socket contact	Terminal 30	RT/VI 2.50 mm²	To fuse holder **A46**, black 10-pin plug	X11010 PIN 8
A4	Socket contact	Terminal 30	RT/GN 2.50 mm²	To fuse holder **A46**, black 10-pin plug	X11010 PIN 7
A5	Cable open	K-CAN H	SW 0.50 mm²	**Cars without SA 508 only** In the area of the rear right door sill. With miniature connector to black cable of the standard wiring harness **Cars with SA 508 only** In the spare wheel trough. With miniature connector to black cable of the PDC control unit	---
A6	Cable open	K-CAN L	GE 0.50 mm²	**Cars without SA 508 only** In the area of the rear left door sill. With miniature connector to yellow cable of the standard wiring harness **Cars with SA 508 only** In the spare wheel trough. With miniature connector to yellow cable of the PDC control unit	---
A7	Eyelet M6	Terminal 31	BR 2.50 mm²	Below right rear lamp, to earth post connection	X13794
A8	Black 13-pin socket casing	---	---	To socket **H**	X630

4. Installation and cabling diagram



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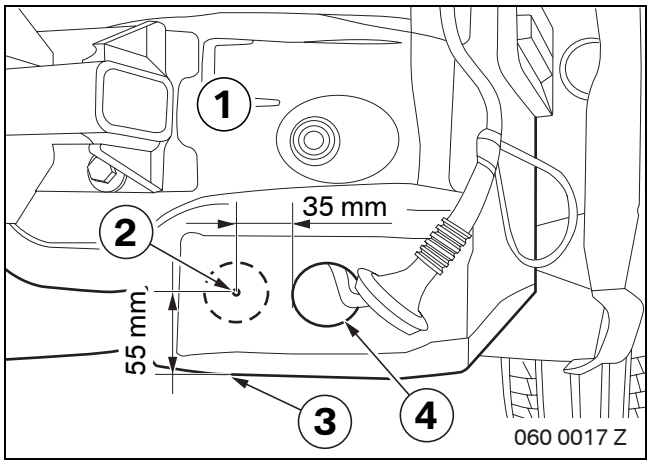
Legend

A Wiring harness
H Socket
I Trailer module

1 K-CAN H/L pick-up (cars without SA 508 only)
2 Fuse holder
3 Earth post
4 K-CAN H/L pick-up (cars with SA 508 only)
5 Centre brake light pick-up

5. To install the coupling device and socket

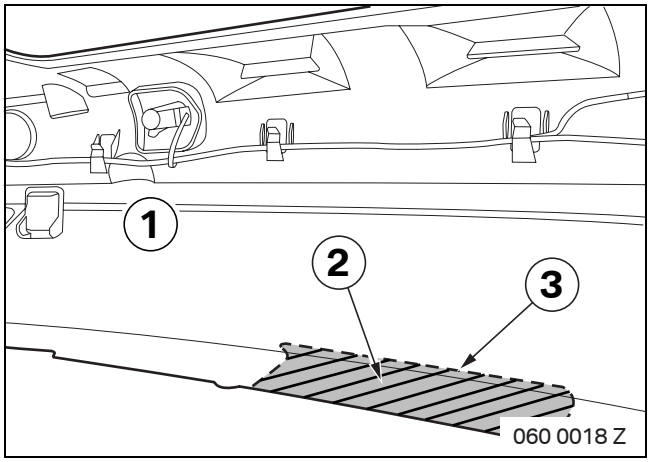


Mark dimensions on the rear closing panel (1) as follows and centrepunch at the drilling point (2):

- 35 mm from the outside of the cable passage (4)
- 55 mm from the bottom edge (3)

Drill through the rear closing panel (1) at the drilling point (2) and enlarge the hole using a 40 mm step drill bit.

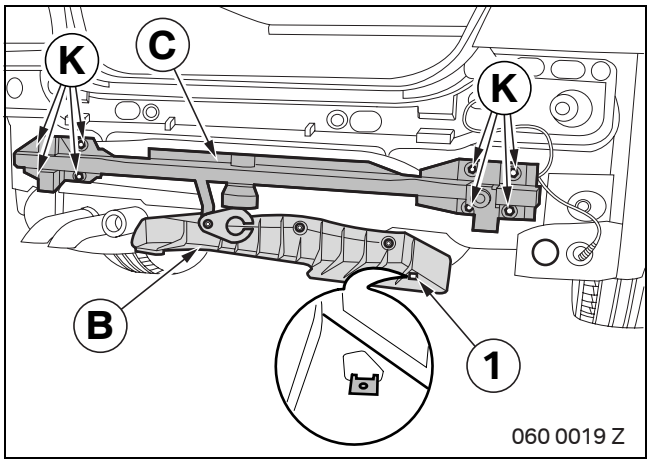
Deburr the hole and coat the bare surfaces with preservative.



Note the marking (3) on the bumper trim (1). ◂

Saw out the bumper trim (1) in the marked area (2).

Deburr the cut edges.

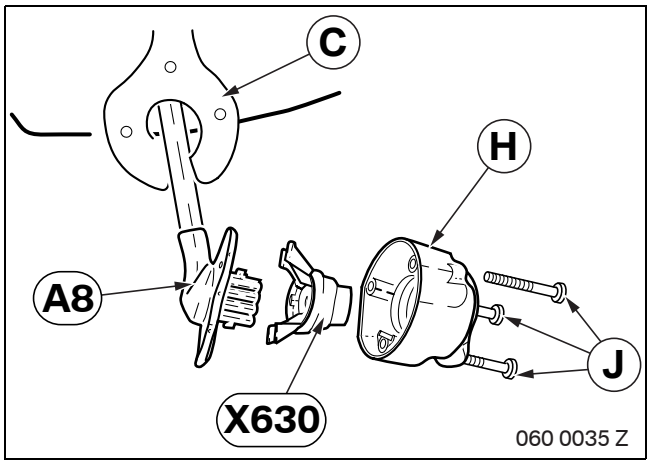


Note the tightening torque value: 50 Nm + turn through 90° (+/- 30°). ◂

Screw the coupling device **C** on using hexagonal screws **K**.

Replace the existing guide by guide **B**.

Clip the speed nut (1) into guide **B**.

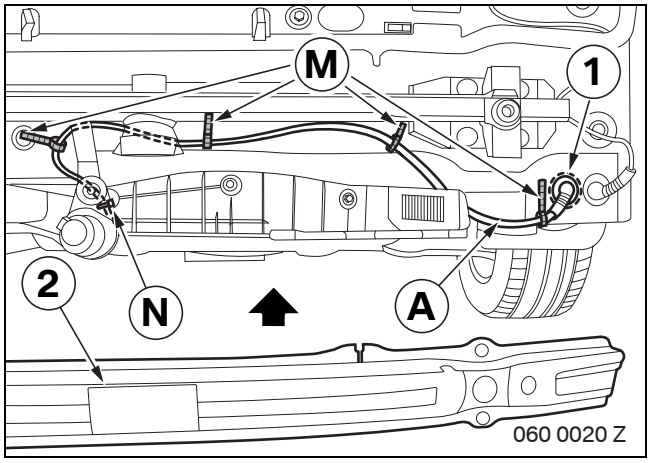


Connect branch **A8** to plug **X630** of socket **H**.

The socket cover must open to the left. ◂

Use Philips screws **J** to screw socket **H** onto coupling device **C**.

5. To install the coupling device and socket

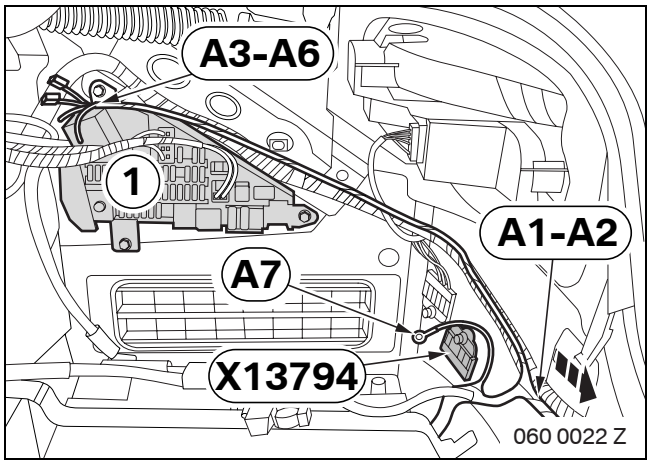


Use cable tie **N** and cable ties for coarse stud bolts **M** to attach wiring harness **A**.

Thread wiring harness **A** through the hole (1) into the boot.

Fit the holder for the bumper trim (2).

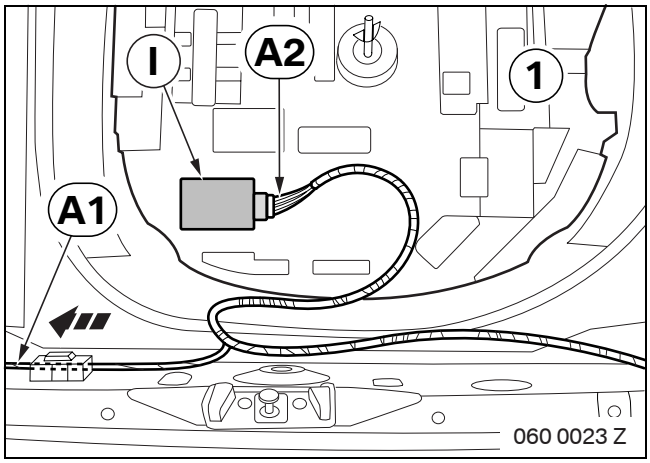
6. To install and connect the wiring harness



Screw branch **A7** to earth post **X13794**.

Route branches **A1** and **A2** to the left-hand side of the car.

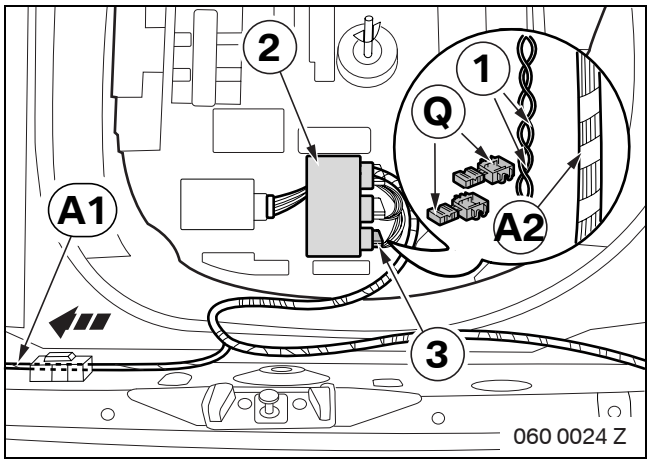
Route branches **A3 – A6** to the fuse holder (1).



Connect branch **A2** to trailer module **I**.

Plug trailer module **I** into a free slot in the control unit holder (1).

Route branch **A1** to the left-hand side of the car.

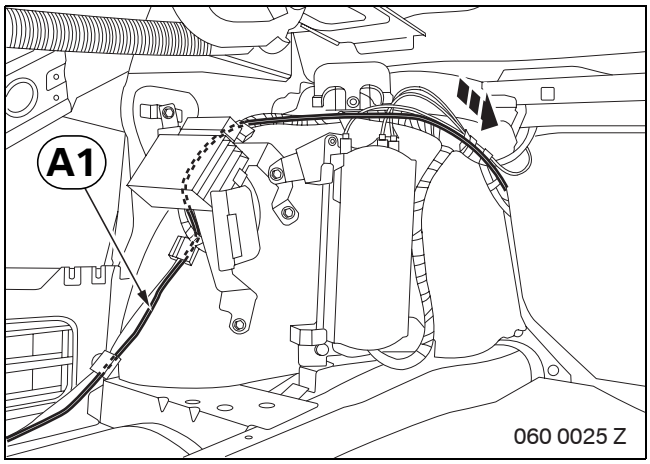


Cars with SA 508 only

Connect twisted black and yellow cables (1) from branch **A2** to the PDC control unit (2) as follows:

- Undo the sheath and connect the twisted cables (1) to the same coloured twisted cables of the black 12-pin plug (3) using miniature connectors **Q**.

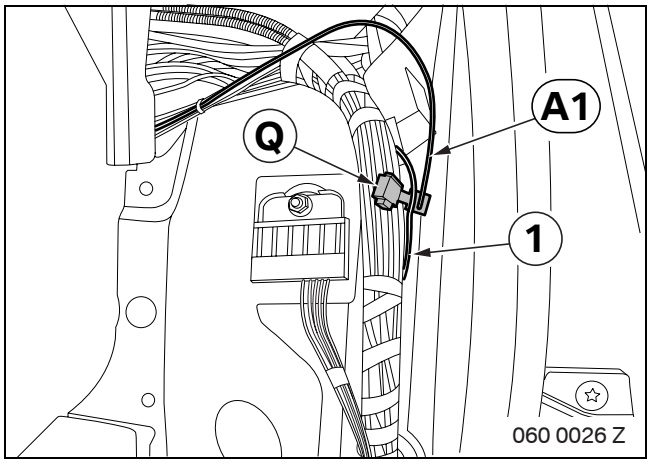
Route branch **A1** to the left-hand side of the car.



All cars

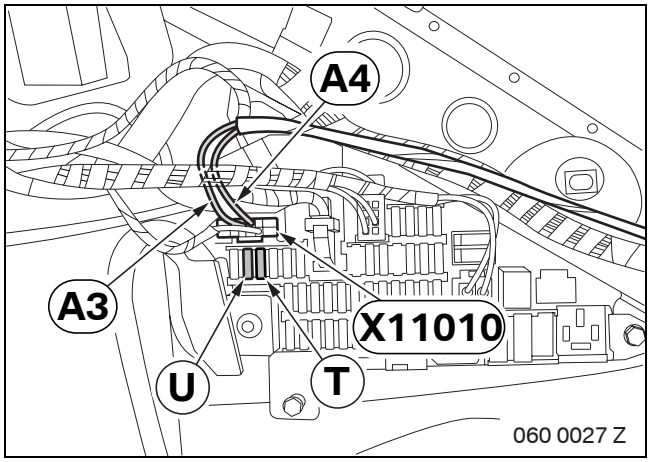
Route branch **A1** to the area of the rear left door sill.

6. To install and connect the wiring harness



Check whether the centre brake light signal is present on the black/yellow cable of the standard wiring harness (1). ◂

Use miniature connector **Q** to connect branch **A1** to the black/yellow cable of the standard wiring harness (1).

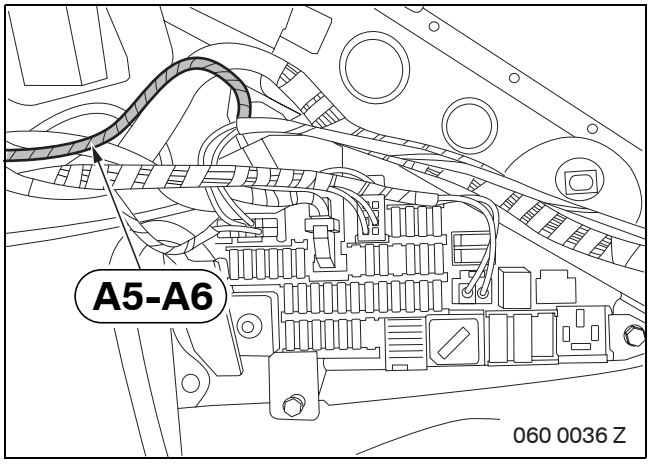


Connect branches **A3** and **A4** into the black 10-pin plug **X11010** as follows:

- Branch **A3**, red/violet cable, in PIN 8
- Branch **A4**, red/green cable, in PIN 7

Insert 20 A fusible insert **T** into slot 74.

Insert 30 A fusible insert **U** into slot 73.

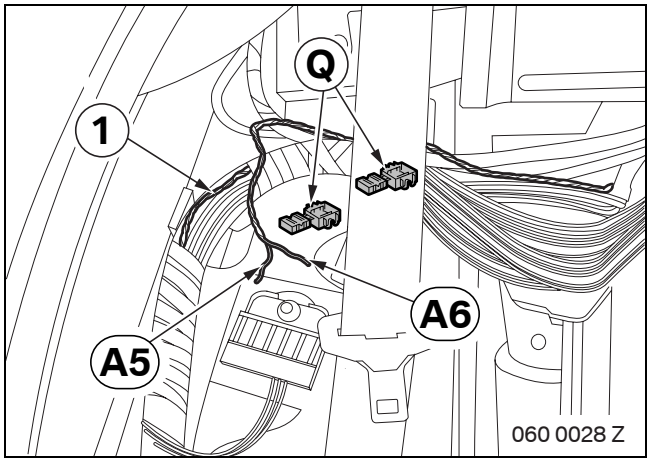


Cars with SA 508 only

Insulate branches **A5** and **A6** and tie them back.

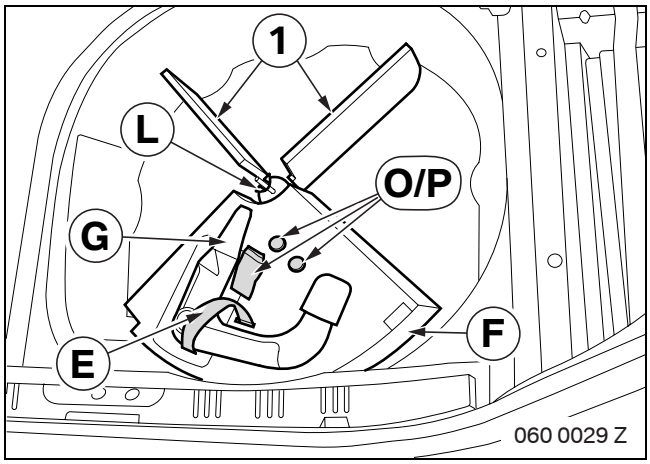
Cars without SA 508 only

Route branches **A5** and **A6** to the area of the rear right door sill.



Use miniature connectors **Q** to connect branches **A5** and **A6** to the same colour twisted cables of the standard wiring harness (1).

7. To fit the storage fixture, to affix the nose weight label and information label

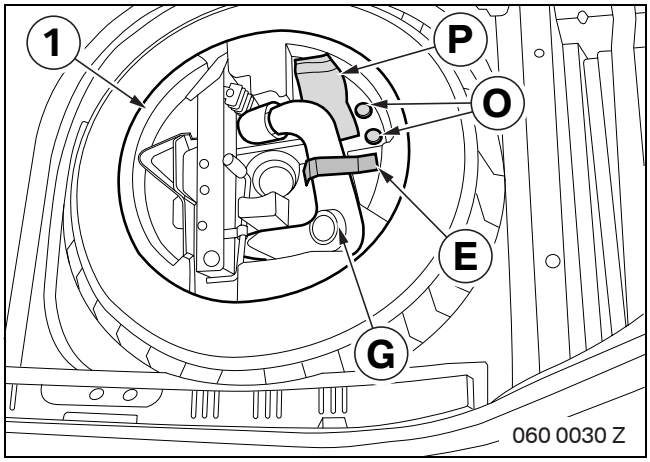


Cars without an emergency wheel only

Thread Velcro strip **E** into storage fixture **F**.

Remove two of the ribs (1) and use wing nuts **L** to screw storage fixture **F** into the spare wheel trough.

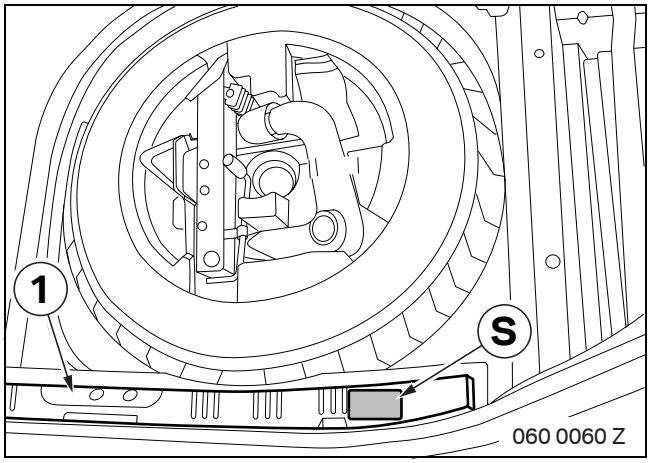
Secure ball head **G** using Velcro strip **E**, put in keys **O** and cover caps **P**.



Cars with an emergency wheel only

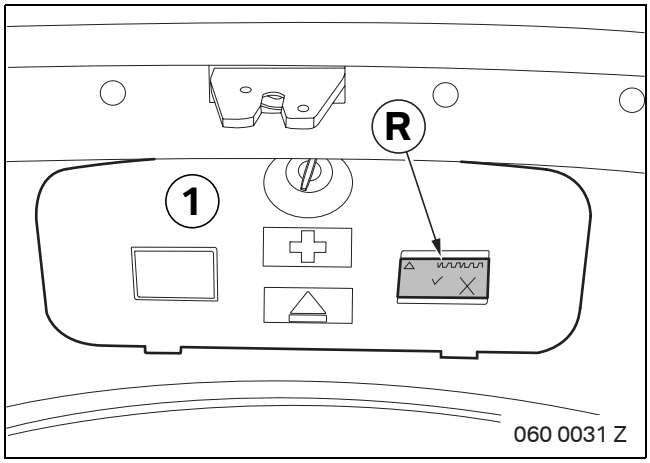
Thread Velcro strip **E** into the existing storage fixture (1).

Secure ball head **G** using Velcro strip **E**, put in keys **O** and cover caps **P**.



All cars

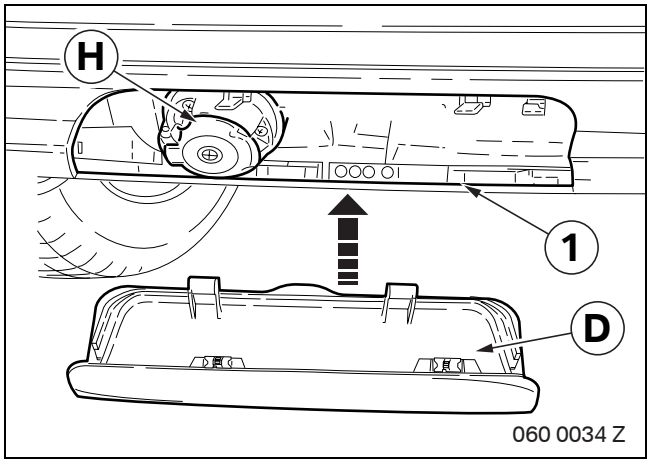
Stick nose weight label **S** to the cover for the rear closing panel (1).



Stick information label **R** onto the tool compartment (1).

8. Concluding work and coding

- Connect the battery
- Code the retrofit using DISPlus or GT-1 via path **Retrofit**
- Conduct a brief test
- Fit the ball head as set out in the instructions for use and ensure that the head moves easily and is secure



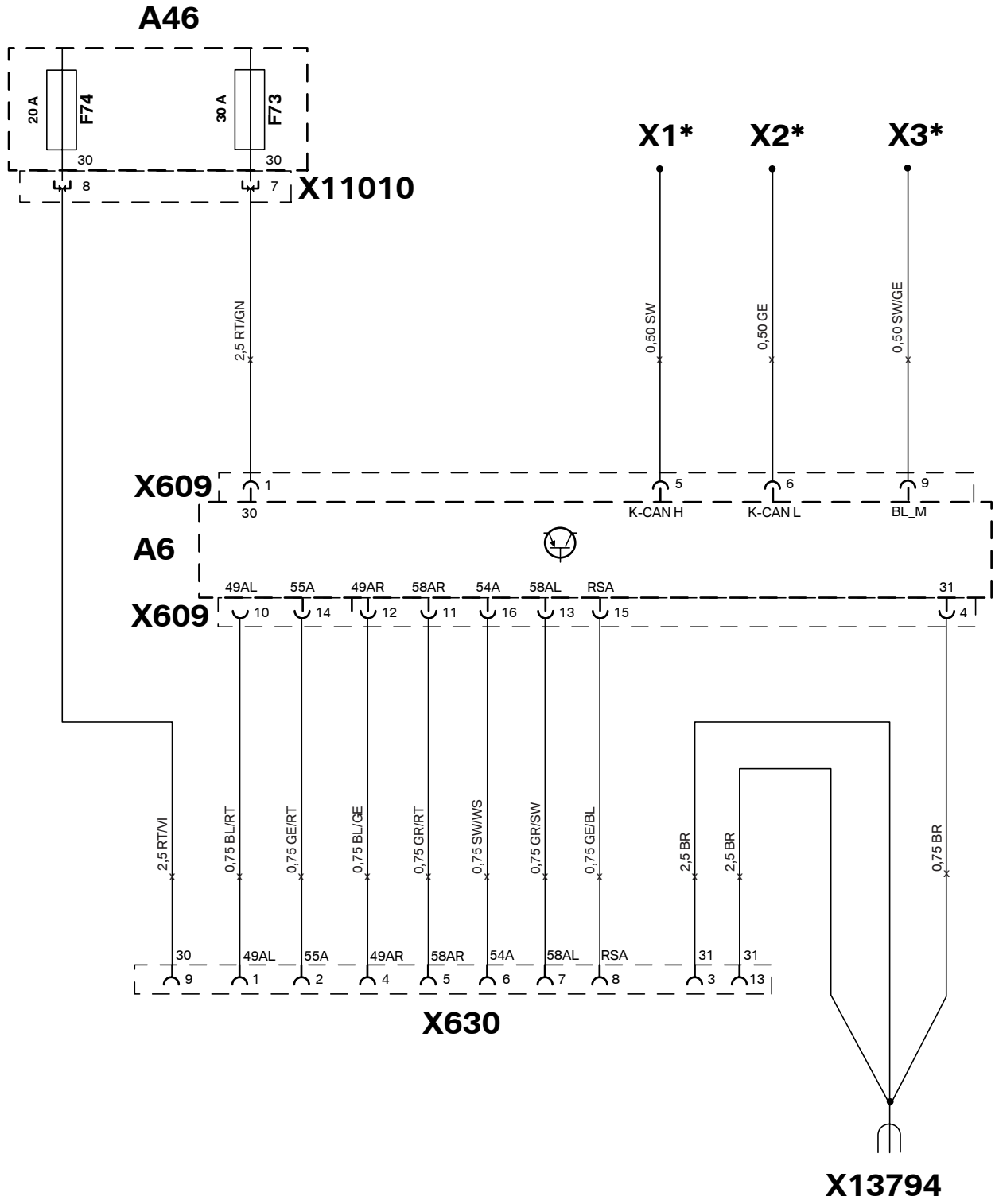
Check the light signals on trailer socket **H**.

Close the opening in the bumper trim (1) using cover **D**.

- Re-assemble the car

Give the customer section 10 of these installation instructions, "Statutory regulations pursuant to EC Directive 94/20/EC". ◂

9. Circuit diagram



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9. Circuit diagram

Legend

A6	Trailer module
A46	Fuse holder
X1*	K-CAN H pick-up, connected to standard wiring harness using miniature connector
X2*	K-CAN L pick-up, connected to standard wiring harness using miniature connector
X3*	Centre brake light pick-up, connected to standard wiring harness using miniature connector
X609	Black 16-pin socket casing, on trailer module
X630	Black 13-pin socket casing, on socket
X11010	Black 10-pin socket casing, on fuse holder
X13794	Earth post connection below the right tail light

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

Cable colours

BL	Blue
BR	Brown
GE	Yellow
GN	Green
RT	Red
SW	Black
VI	Violet
WS	White

10. Statutory regulations pursuant to EC Directive 94/20/EC

Annex VII

Regulations for the type approval of a vehicle type with regard to the optional attachment of mechanical connecting devices (coupling devices)

1. General regulations

1.1
The vehicle manufacturer determines which types and classes of connecting devices can be fitted onto the vehicle type, and specifies the values D, V [1], S or U (if applicable) which are based on the design of the vehicle type in combination with the planned type of connecting devices. The code values D, V, S, or U of the connecting devices approved in accordance with this directive must be greater than or equal to those specified for the vehicle type in question.

1.2.
The connecting device must be mounted onto the vehicle type in accordance with the installation instructions specified by the vehicle manufacturer in agreement with the manufacturer of the connecting device and the technical service. The vehicle manufacturer defines the permitted points where the connecting devices are allowed to be attached to the vehicle type and, if appropriate, the towing brackets, mounting plates, etc. which have to be fitted to this particular vehicle type.

1.3
Only automatic hitches are allowed to be used for hitching up trailers with a total mass of more than 3.5 tonnes to motor vehicles; these automatic hitches must permit an automatic hitching procedure.

1.4
When connecting devices of class B, D, E and H are fitted to trailers, it is always necessary to assume a value of 32 tonnes for the total mass T of the towing vehicle in order to calculate the D value. If the D value of the connecting device is insufficient for T = 32 tonnes, the resulting restriction on the mass T of the towing vehicle or the mass of the vehicle combination (towing vehicle and trailer) must be specified in the trailer's approval document.

[1]) The V value is only to be specified for vehicles with a technically permitted gross mass of more than 3.5 tonnes.

10. Statutory regulations pursuant to EC Directive 94/20/EC

2. Special regulations

2.1
Fitting coupling balls and towing brackets (ball head with coupling device)

2.1.1
When coupling balls and towing brackets are fitted to a vehicle type of class M1, class M2 below 3.5 tonnes and class N1, the clearance and height dimensions shown in the figure **1** and **2** must be maintained. This requirement does not apply to off-road vehicles as defined in Annex II of Directive 92/53/EEC. Unspecified details are to be selected in accordance with the intended purpose.
The dimensions and angles must be checked using suitable measuring instruments.

2.1.2
The vehicle manufacturer must supply installation instructions for coupling balls and towing brackets. These installation instructions must specify whether the attachment area requires reinforcing.

2.1.3
It must also be possible to couple and uncouple coupling heads when the longitudinal axis of the coupling head in relation to the centre line of the coupling ball and towing bracket:

a) is horizontally b = 60° right or left (see figure **2**)

b) is vertically a = 10° up or down (see figure **1**)

c) is axially rotated by 10° right or left.

2.1.4
The mounted coupling ball must not obscure the rear registration plate or the space provided for the rear registration plate; otherwise, a ball that can be removed without requiring special tools must be used.

2.2 Mounting coupling heads

2.2.1
Class B coupling heads are permitted to be used with trailers of a gross mass up to 3.5 tonnes. Coupling heads must be fitted so the connection point of the trailer is 430 mm ±35 mm above the horizontal plane of tyre contact when the trailer body is horizontal and the axle subject to its permitted load (see figure **3**). In the case of caravan trailers and goods trailers, the horizontal position is to be taken as the position in which the floor or the load bed is horizontal. In the case of trailers without such a reference plane (e.g. boat trailers and the like), the manufacturer must specify a suitable reference line for defining the horizontal position. The required height only applies to trailers which are to be attached to the vehicles listed in 2.1.1.

2.2.2
It must be possible to operate coupling heads safely within the clearance of the coupling ball as shown in figures **1** and **2**.

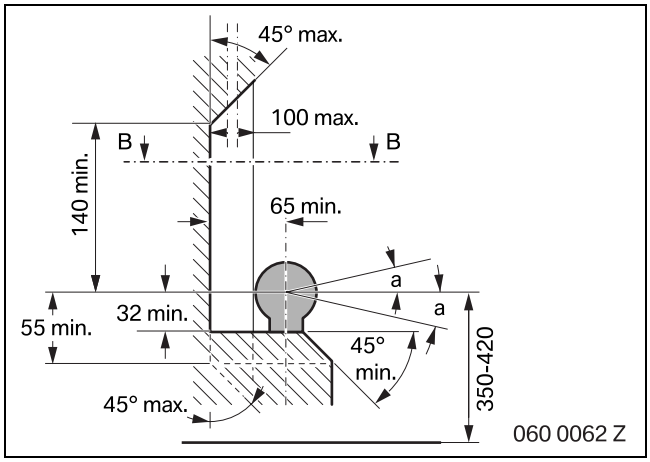

Figure **1**

Clearance for coupling ball, side view.

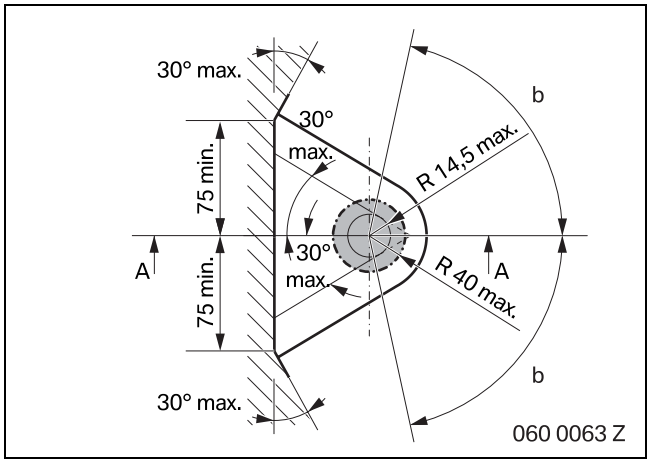

Figure **2**

Clearance for coupling ball, plan view.

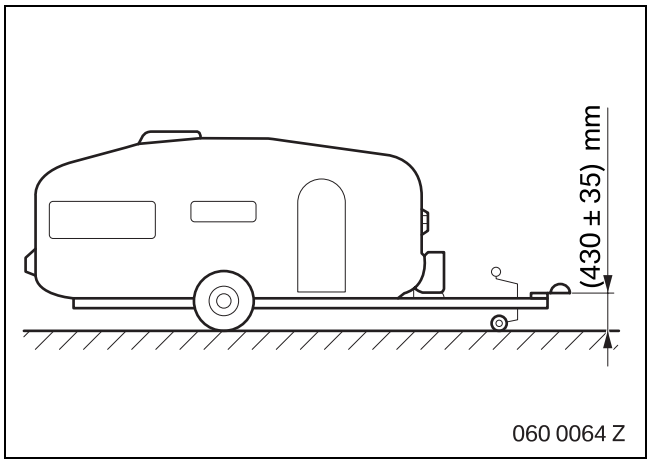

Figure **3**

Mounting height of the coupling head