‘Webasto Comfort’ air-conditioning control

Installation documentation
Mercedes Benz
C-Class BR205 / GLC BR253 / E-Class BR213

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Mercedes Benz	C-Class	W205	from 2014	e1 * 2001 / 116 * 0431 * ...
Mercedes Benz	C-Class	S205	from 2014	e1 * 2001 / 116 * 0457 * ...
Mercedes Benz	GLC	X253	from 2016	e1 * 2001 / 116 * 0480 * ...
Mercedes Benz	E-Class	W213	from 2016	e1 * 2001 / 116 * 0501 * ...
Mercedes Benz	E-Class	S213	from 2016	e1 * 2007 / 45 * 1560 * ...

Ident. No.: 1324614G_EN Status: 21.11.2019

Mercedes Benz C-Class BR205 / GLC BR253 / E-Class BR213

Table of contents

Necessary components

- Additional ‘Webasto Comfort’ A/C control kit for Mercedes Benz C-Class / GLC / E-Class: **1324395F**

Information on validity

This installation documentation applies only in combination with:

- Installation kit for Mercedes Benz C-Class BR205 / GLC BR 253 petrol and diesel**: 1323143_** and installation documentation for Mercedes Benz C-Class BR205 / GLC BR 253: **1323144_**

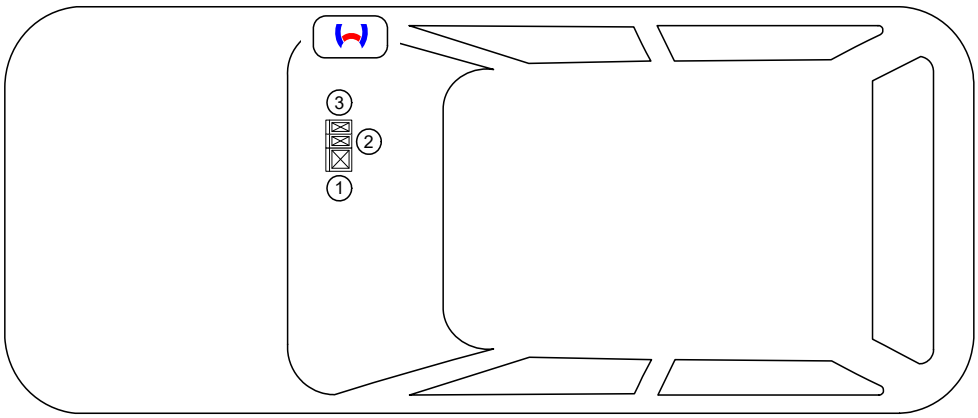
  or

- Installation kit for Mercedes Benz GLC BR253 / E-Class BR213 diesel 2016**: 1324966_** and installation documentation for Mercedes Benz GLC BR253 diesel 2016: **1324967_** or installation documentation for Mercedes Benz E-Class BR213 diesel 2016: **1325158_**

Installation overview

Legend:

1. CCL Gateway
2. Additional relay K2
3. Additional relay K3



Information on operating and installation instructions

1 Important information (not complete)

1.1 Installation and repair

The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.

Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 228).

The heater may not be cleaned with a high-pressure cleaner.

1.3 Please note

ALWAYS follow all Webasto installation and operating instructions and observe all warnings.

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

Important

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs, installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on electronic components must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components!

The initial start-up is to be executed with the Webasto Thermo Test Diagnosis.

When installing a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

Note

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

Note

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

2.1.1. Subject to paragraph 2.1.2. combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

Information on validity

This installation documentation applies to Mercedes Benz C-Class vehicles from model year 2014 and later, GLC from model year 2016 and later as well as E-Class from model year 2016 and later, Petrol and diesel - for validity, see page 1 -, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

Vehicle and engine types, equipment variants and other specifications not listed in this installation documentation have not been tested. However, installation according to this installation documentation may be possible.

Technical information

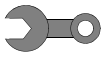
Special tools
- Automatic wire stripper, 0.2 - 6mm²
- Crimping pliers for male connector, 0.14 - 6mm²
- Crimping pliers for cable lug, 0.5 - 10mm²
- Crimping pliers for connector, 0.25 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Webasto Thermo Test Diagnosis with current software

Dimensions
- All dimensions are in mm.

Tightening torque values
Tighten bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Explanatory notes on document

You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Mechanical system 

Electrical system 

Software 

Special features are highlighted using the following symbols:

Specific risk of damage to components. 

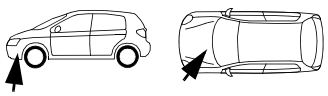
Specific risk due to electrical voltage. 

Specific risk of injury or fatal accidents. 

Specific risk of fire or explosion. 

Reference to the manufacturer's vehicle-specific documents or to the general installation instructions of Webasto components. 

Reference to a special technical feature. 

The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle. 

Tightening torque according to the manufacturer's vehicle-specific documents. 

Preliminary work

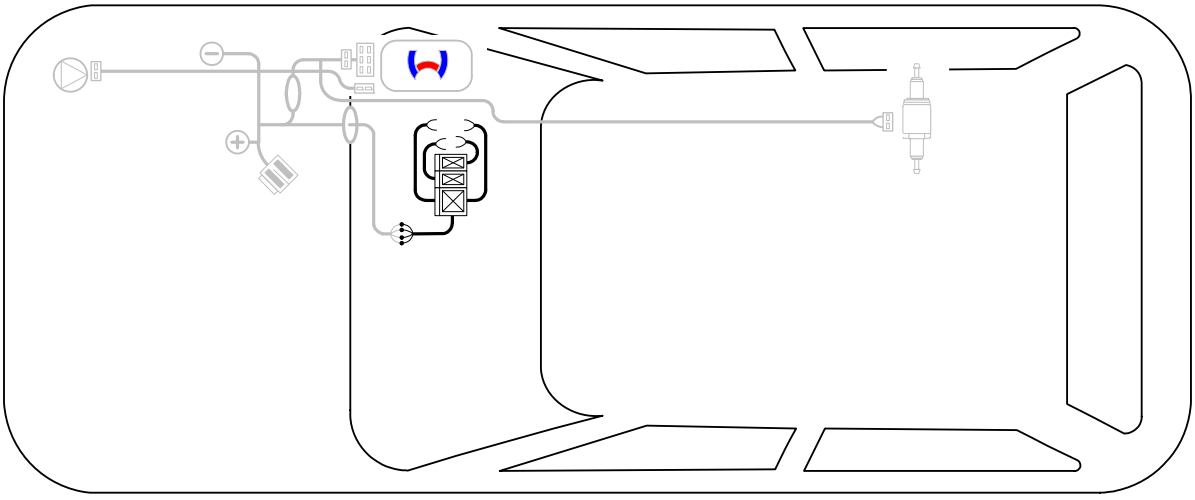
All vehicles

- Disconnect the battery.
- Remove the lateral instrument panel trim on the right.
- Remove the lower A-pillar trim, the door sill trim on the right.
- Remove the glove box.
- Remove the lower footwell trim on the front passenger's side.

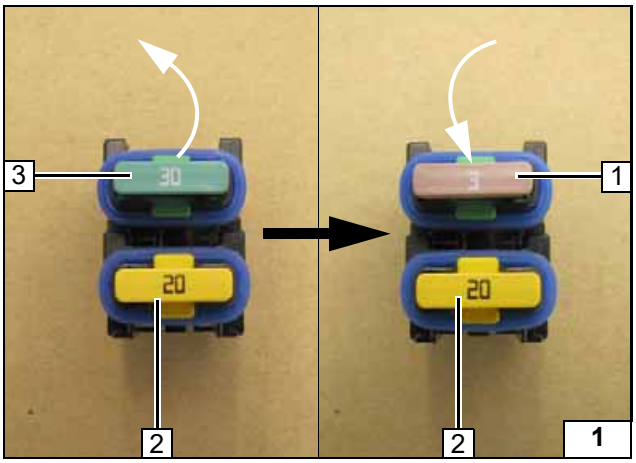
Additionally in case of C-Class

- Remove the floor trim (carpet) on the front passenger's side.
- Remove the footrest on the front passenger's side.

Electrical system



Wiring harness routing diagram for passenger compartment



Preparing electrical system

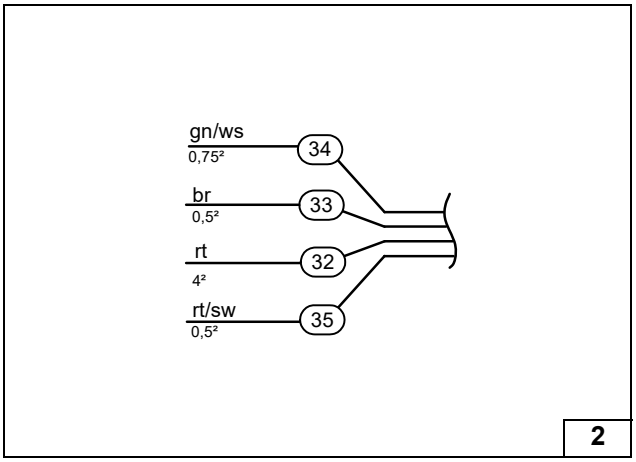
Wire sections retain their numbering in the entire document.

Produce all following electrical connections as shown in the system wiring diagram.

Replace 30A passenger compartment main fuse F2 **3** with 3A fuse **1**.

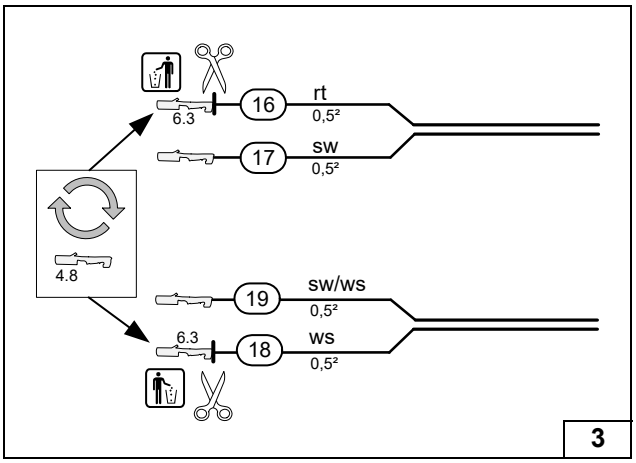
2 20A heater fuse F1

Preparing engine compartment fuses



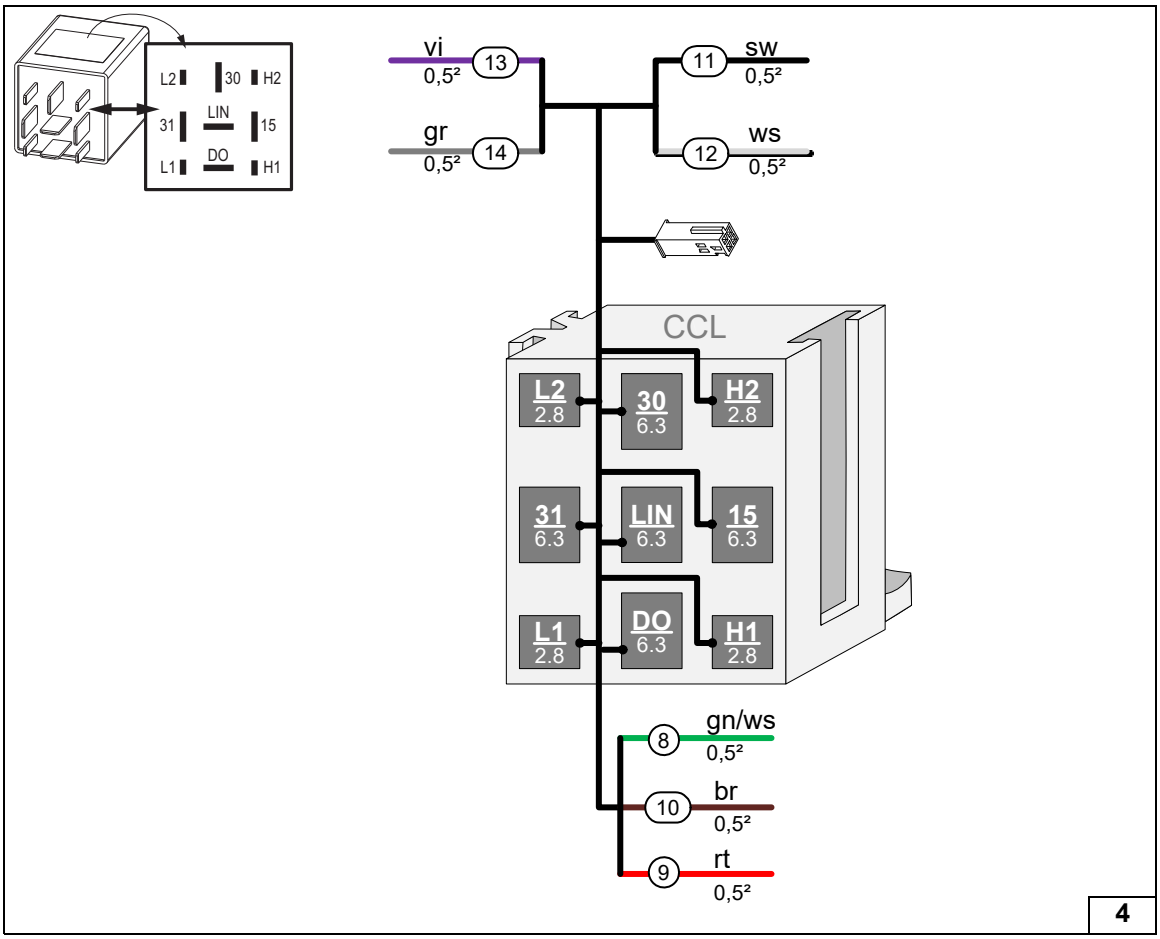
(32) Red (rt) wire of heater wiring harness, F2
(33) Brown (br) wire of heater wiring harness, earth 31
(34) Green/white (gn/ws) wire of heater wiring harness, X1/5
(35) Red/black (rt/sw) wire of heater wiring harness, X10

Assigning wires



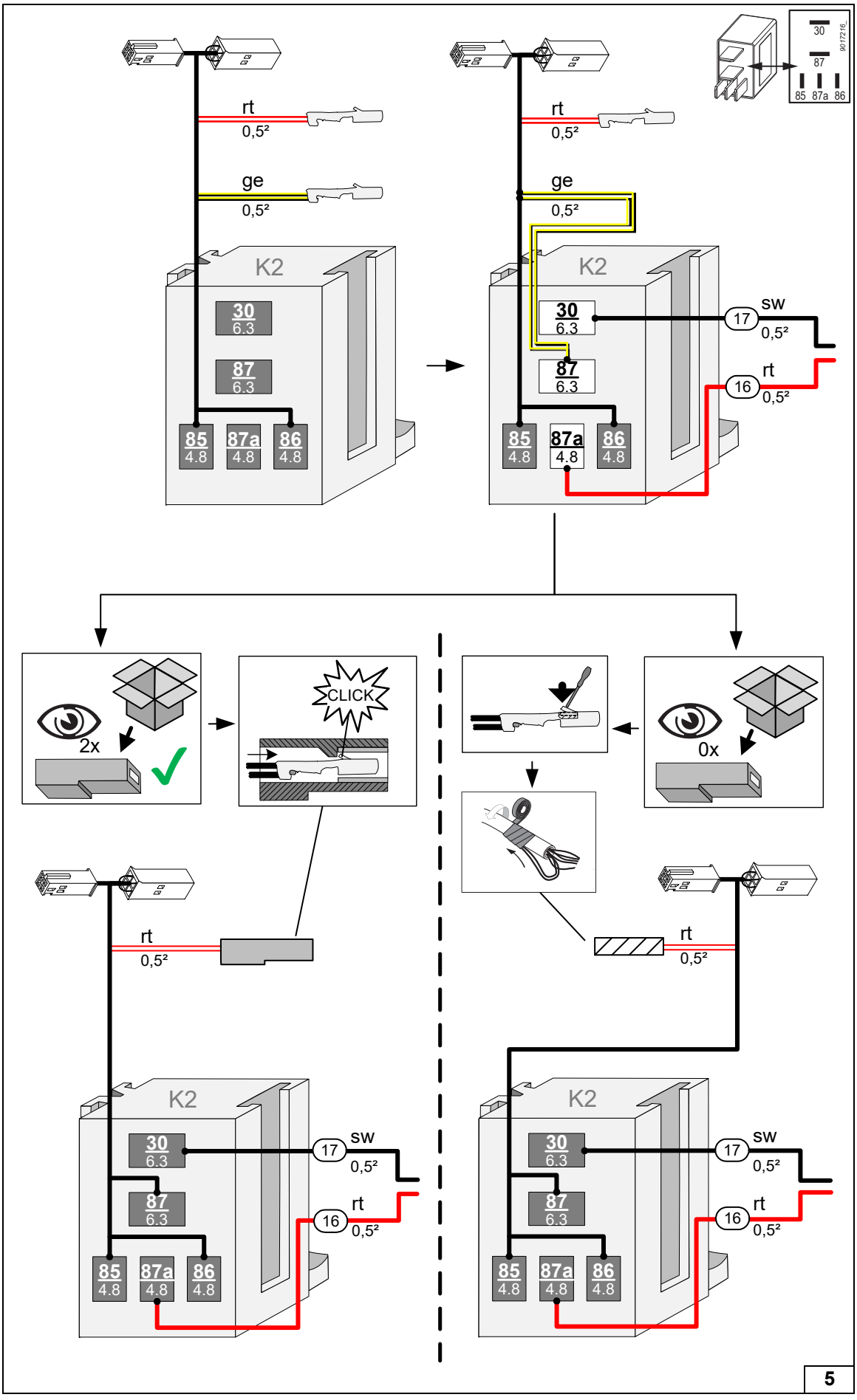
(16) Red (rt) wire of wiring harness for LIN control
(17) Black (sw) wire of wiring harness for LIN control
(18) White (ws) wire of additional coolant pump wiring harness
(19) Black/white (sw/ws) wire of additional coolant pump wiring harness

Preparing / assigning wires



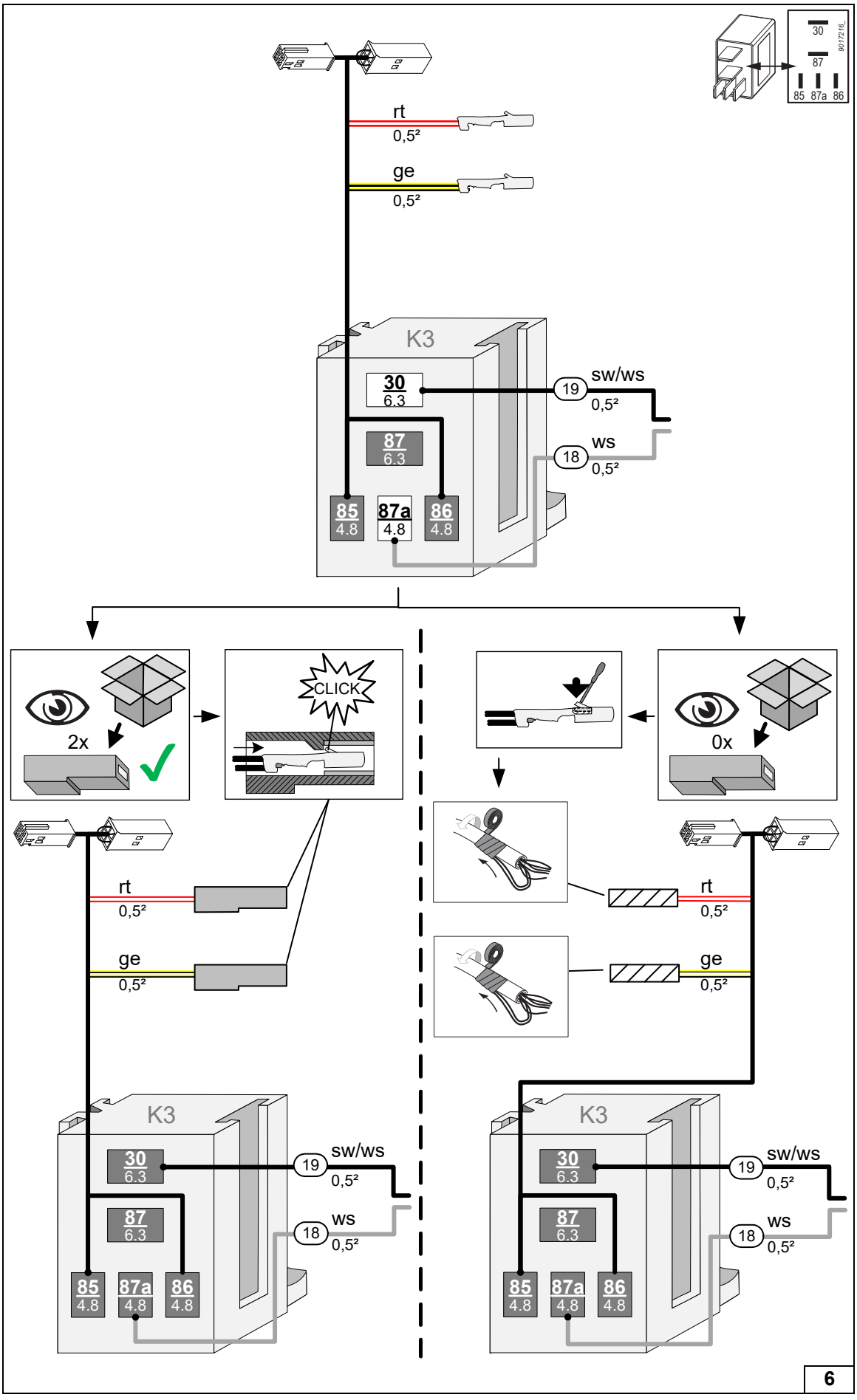
4

View of CCL Gateway wiring harness / assignment of wires to be used



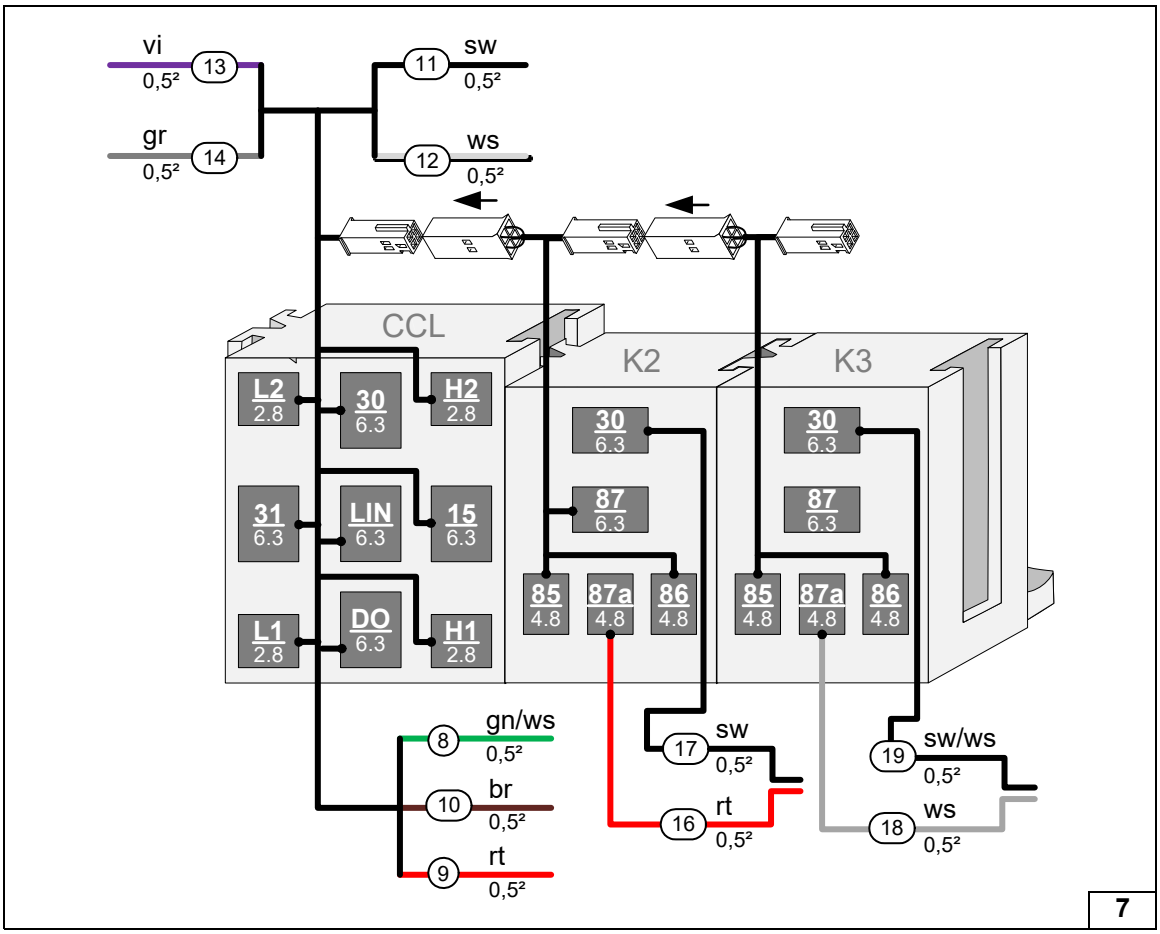
Connecting wires to relay K2

Insulating open female connector



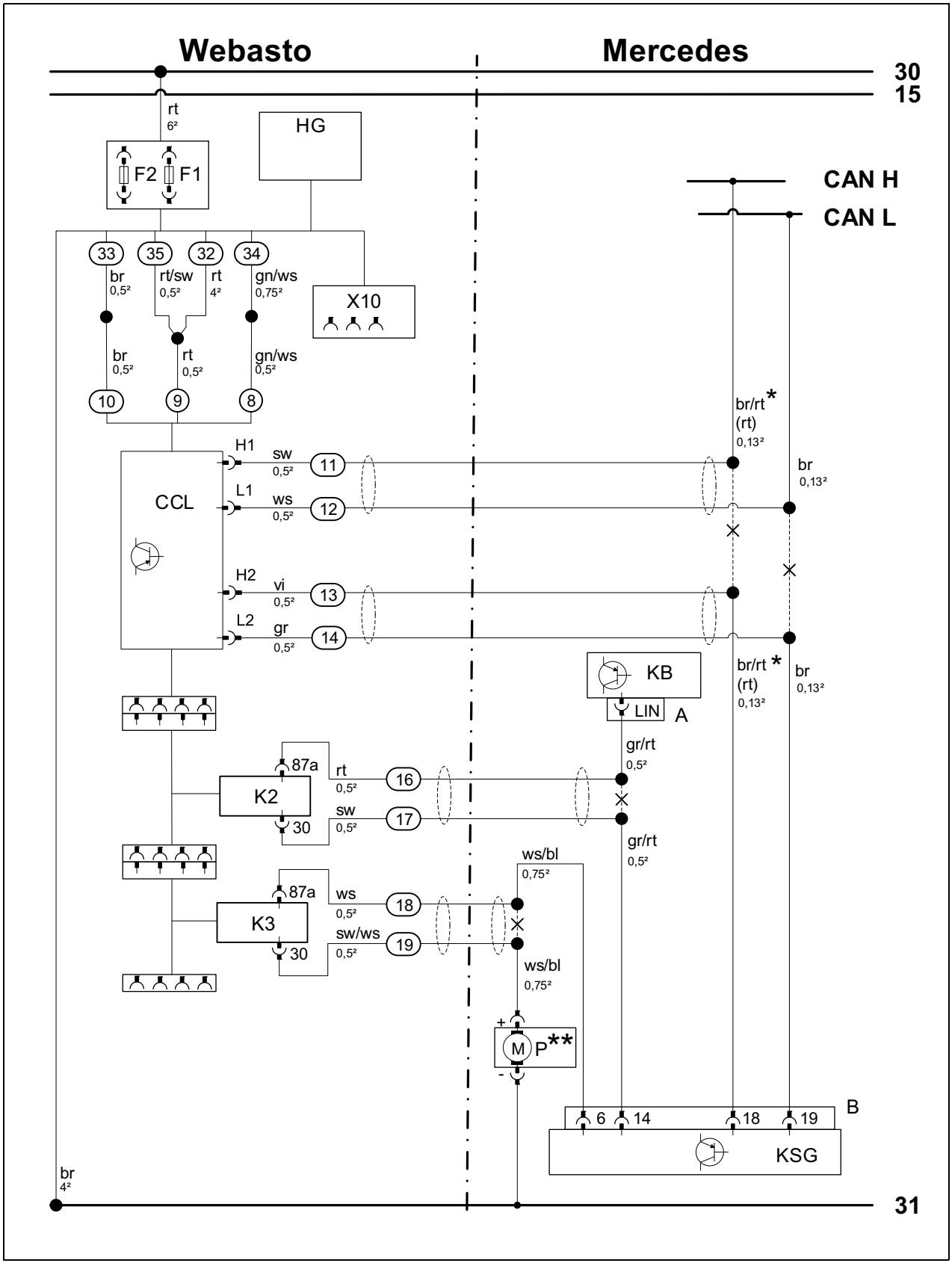
Connecting wires to relay K3

Insulating open female connector



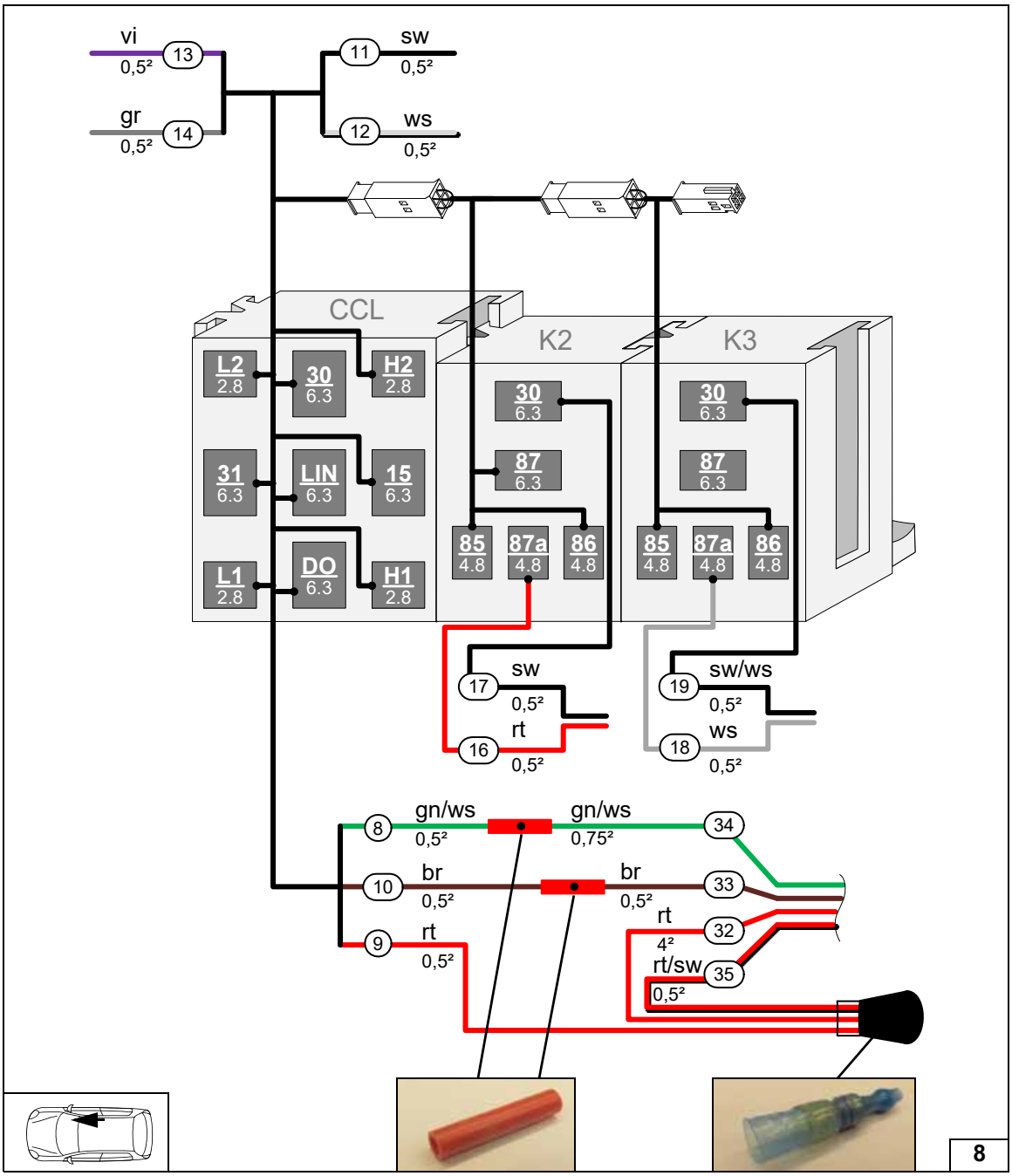
Assembling sockets of CCL Gateway, relay K2 and relay K3, inserting male connectors in female connectors

Fan controller

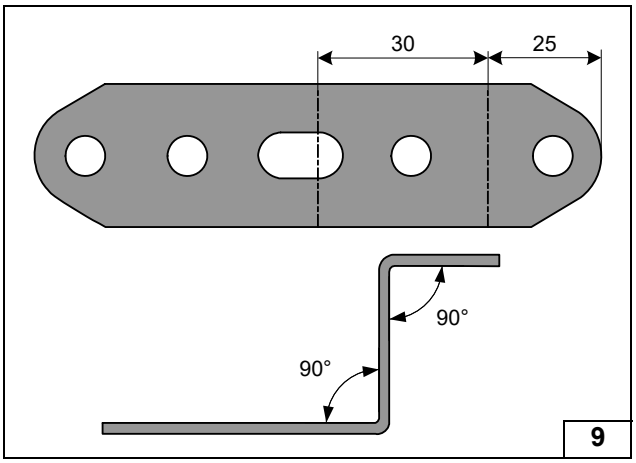


Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	KB	A/C control panel	rt	red
F1	20A fuse	A	Connector of KB	sw	black
F2	3A fuse	P	Additional coolant pump	gn	green
X10	4-pin female connector of control element	KSG	Control unit of A/C system	ws	white
				br	brown
CCL	CCL Gateway	B	Connector of KSG	vi	violet
K2	Additional relay			gr	grey
K3	Additional relay			bl	blue
				*	May vary depending on the equipment
		**	Available depending on equipment	X	Cutting point
				Wiring colours may vary.	

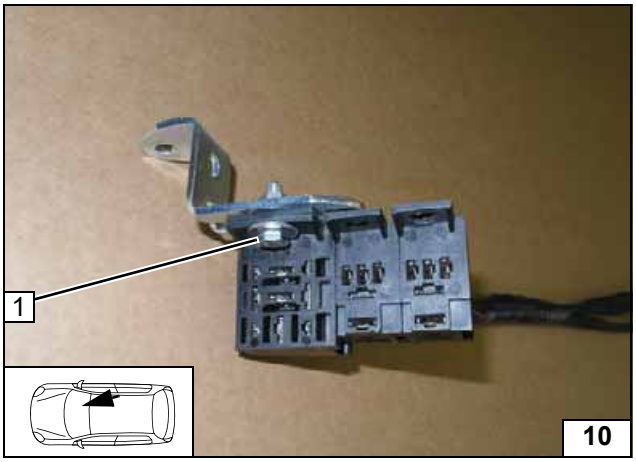


Connecting wires of heater wiring harness with wires of CCL Gateway wiring harness in passenger compartment



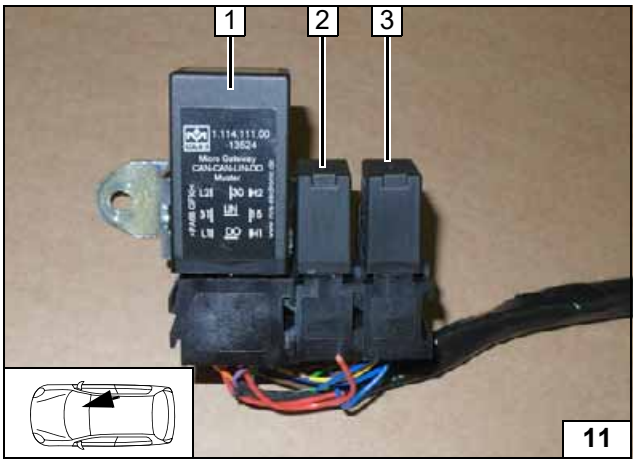
C-Class up to MY 2017 and E-Class

Preparing perforated bracket



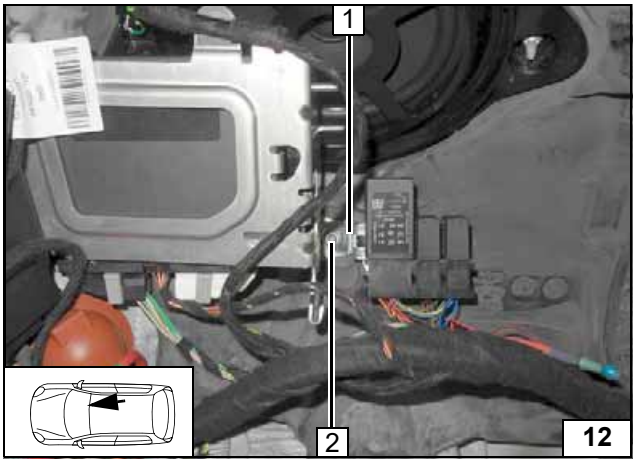
1 M5x16 bolt, large diameter washer, CCL GW socket, perforated bracket, large diameter washer, nut

Installing perforated bracket



1 CCL GW
2 Relay K2
3 Relay K3

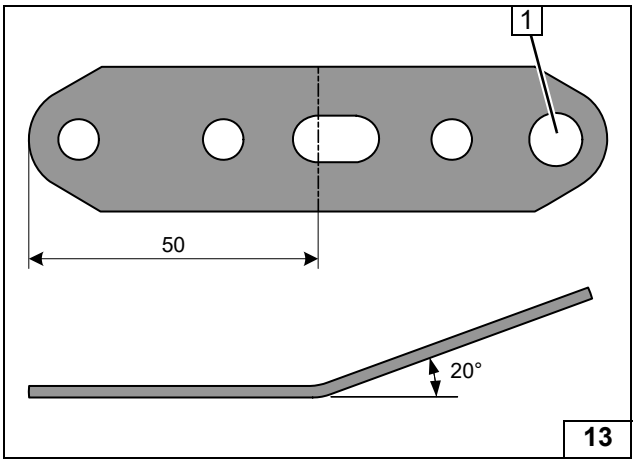
Inserting CCL Gateway, relay K2 and relay K3



Secure wiring harness of heater using cable ties.

1 Perforated bracket
2 Original vehicle nut on original vehicle stud bolt

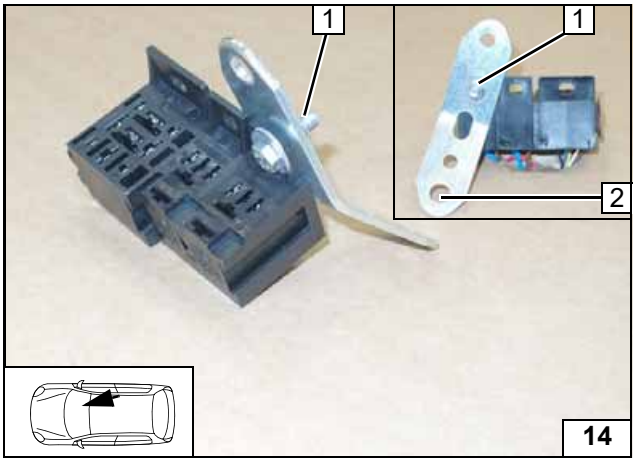
Installing CCL Gateway, relay K2 and relay K3



C-Class from MY 2018

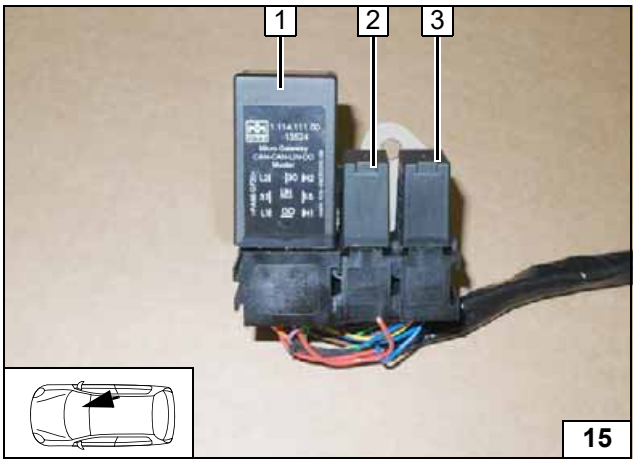
1 Enlarge hole to Ø8.5

Preparing perforated bracket



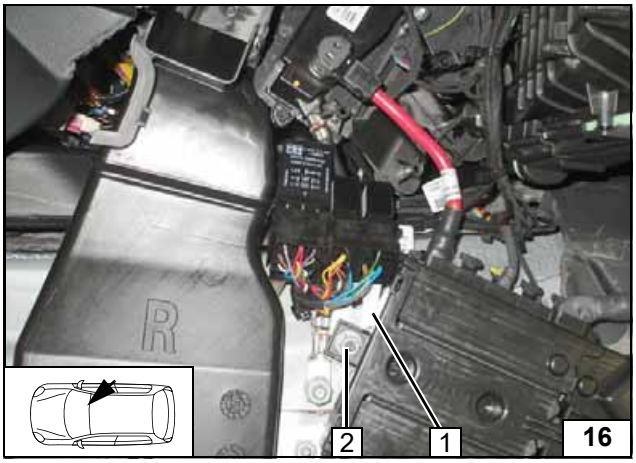
1 M5x16 bolt, large diameter washer, relay K3 socket, perforated bracket, large diameter washer, nut
2 Ø8.5 hole

Installing perforated bracket



1 CCL GW
2 Relay K2
3 Relay K3

Inserting CCL Gateway, relay K2 and relay K3

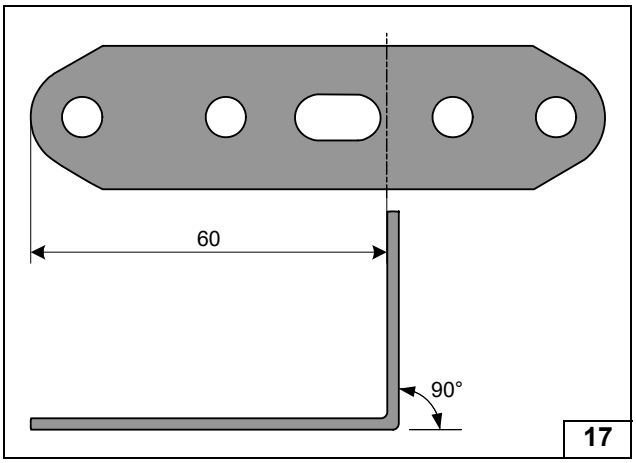


Secure wiring harness of heater using cable ties.

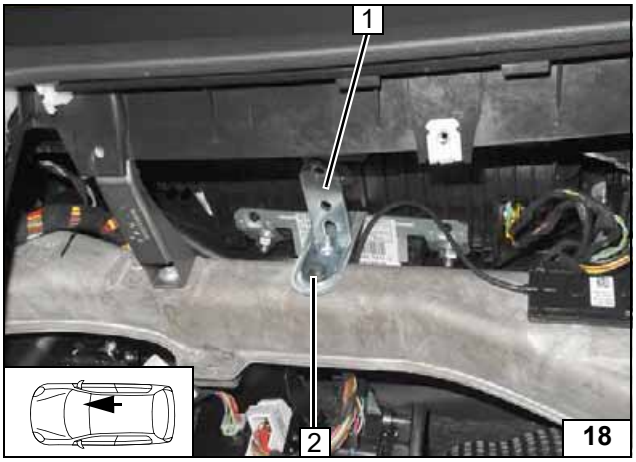
1 Perforated bracket
2 Original vehicle nut on original vehicle stud bolt

Installing CCL Gateway, relay K2 and relay K3

GLC

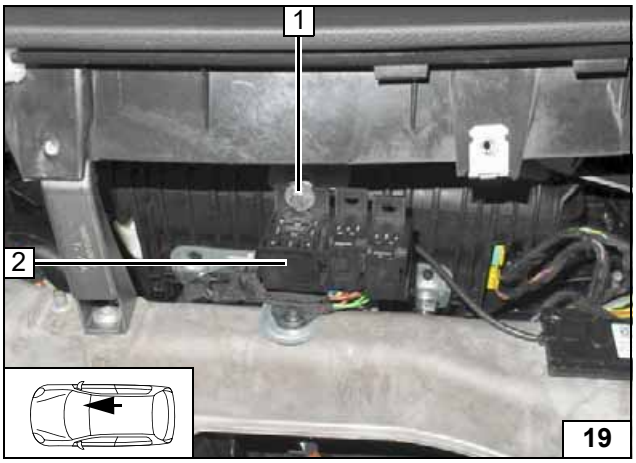


Preparing perforated bracket



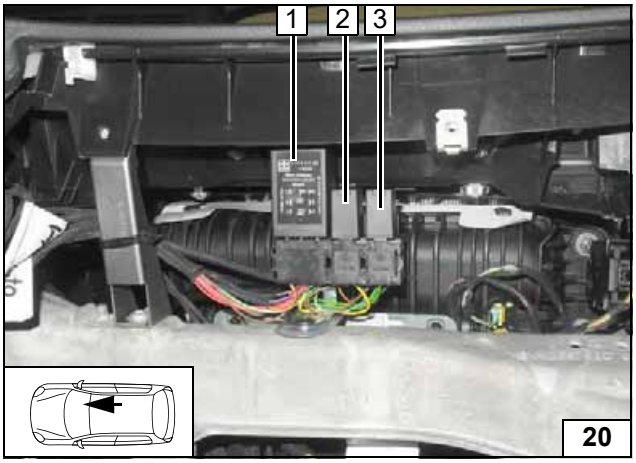
1 Perforated bracket
2 Original vehicle bolt

Installing perforated bracket



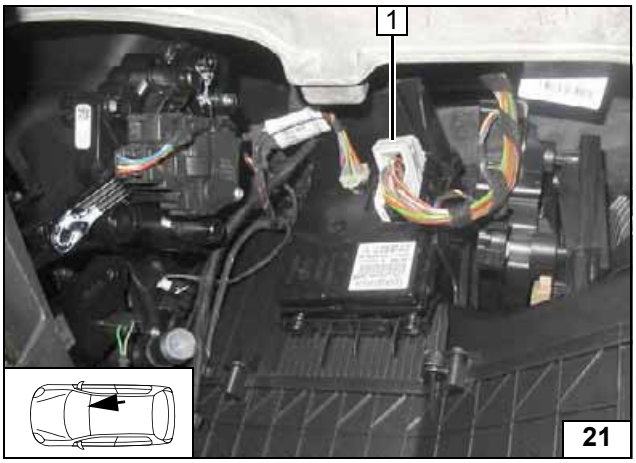
1 M5x16 bolt, large diameter washer [2x], nut
2 CCL GW socket

Installing CCL Gateway socket



1 CCL Gateway
2 Relay K2
3 Relay K3

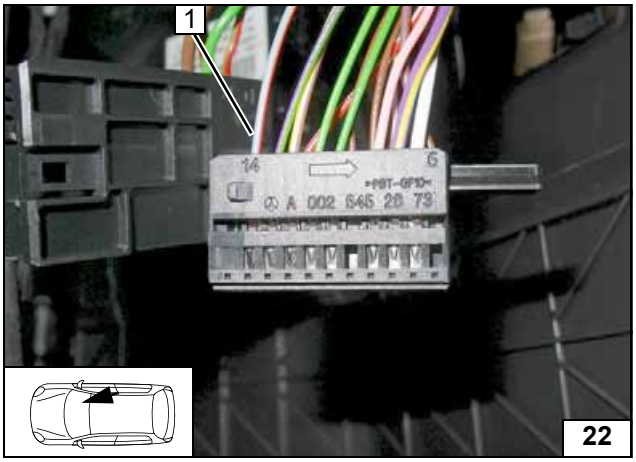
Installing CCL Gateway, relay K2 and relay K3



All vehicles

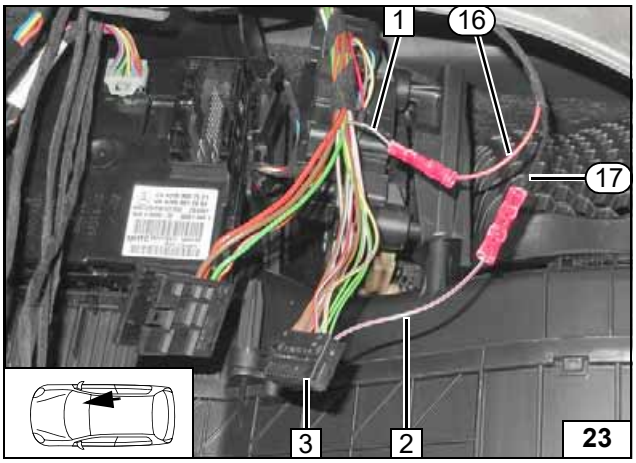
1 Connector B of climate control unit (KSG)

Disconnecting connector B of KSG



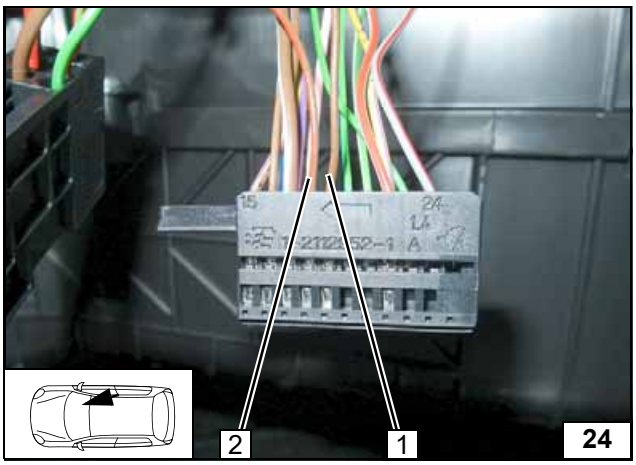
1 Grey/red (gr/rt) wire of connector B in pin 14

View of connector B of KSG



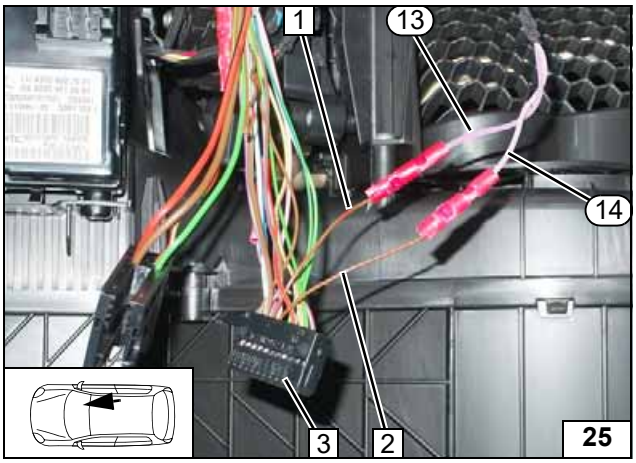
1 Grey/red (gr/rt) wire of LIN connection on connector A of KB
2 Grey/red (gr/rt) wire of connector B of KSG/ pin 14
3 Connector B of KSG
(16) Red (rt) wire of K2/ 87a from wiring harness for LIN control
(17) Black (sw) wire of K2/ 30 from wiring harness for LIN control

Connecting LIN



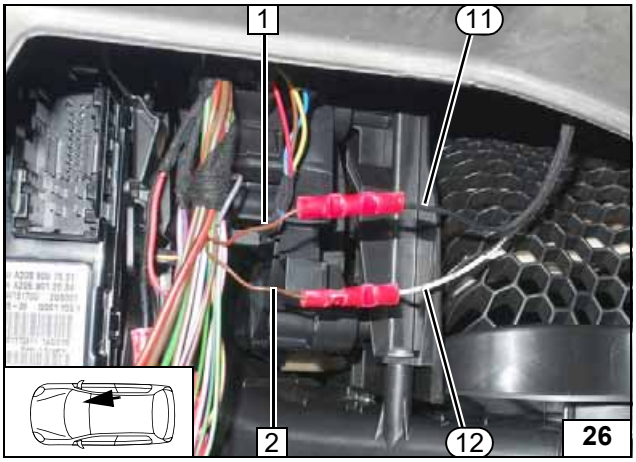
1 Brown (br) wire of connector B in pin 19
2 Brown/red (br/rt) or red (rt) wire of connector B in pin 18

View of connector B of KSG



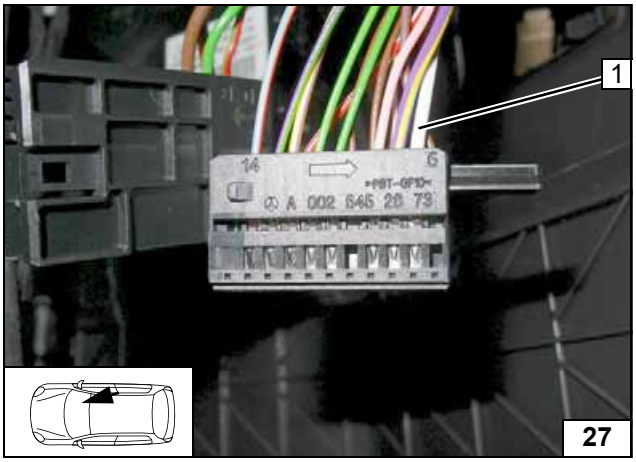
1 Brown/red (br/rt) or red (rt) wire of connector B / pin 18
2 Brown (br) wire of connector B / pin 19
3 Connector B of KSG
(13) Violet (vi) wire of CCL-Gateway/H2, wiring harness from CCL Gateway
(14) Grey (gr) wire of CCL-Gateway/L2, wiring harness from CCL Gateway

Connecting CCL Gateway CAN wiring harness



1 Brown/red (br/rt) or red (rt) wire of CAN **H**
2 Brown (br) wire of CAN **L**
(11) Black (sw) wire of CCL Gateway/H1, wiring harness from CCL Gateway
(12) White (ws) wire of CCL Gateway/L1, wiring harness from CCL Gateway

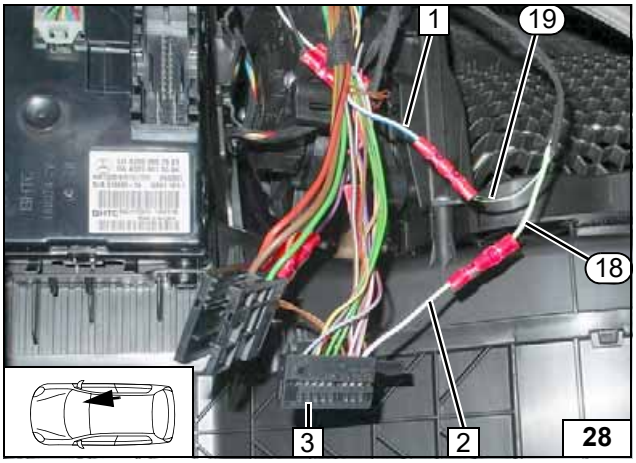
Connecting CCL Gateway CAN wiring harness



Variant 1:
If white/blue (ws/bl) wire **1** is connected to connector B, pin 6, then make the connection as shown in the next figure.

Variant 2:
If white/blue (ws/bl) wire **1** is not connected to connector B, pin 6, then insulate and tie back wires **(18)** and **(19)** of additional coolant pump wiring harness individually.

View of connector B of KSG



Only if white/blue (ws/bl) wire is connected to connector B, pin 6!

1 White/blue (ws/bl) wire of additional coolant pump
2 White/blue (ws/bl) wire of connector B / pin 6
3 Connector B of KSG
(18) White (ws) wire of relay K3/ 87a from additional coolant pump wiring harness
(19) Black/white (sw/ws) wire of relay K3/ 30 from additional coolant pump wiring harness

Additional coolant pump connection

Final work

Warning:
Final work is not carried out until the installation of the heater in the vehicle has been completed. Check all electrical connections for firm seating. Insulate and tie back loose lines.

- **Make settings on the A/C control panel as per the ‘Operating Instructions’ section.**

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Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Webasto
Feel the Drive

Operating instructions for E-Class

Please remove page and add to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

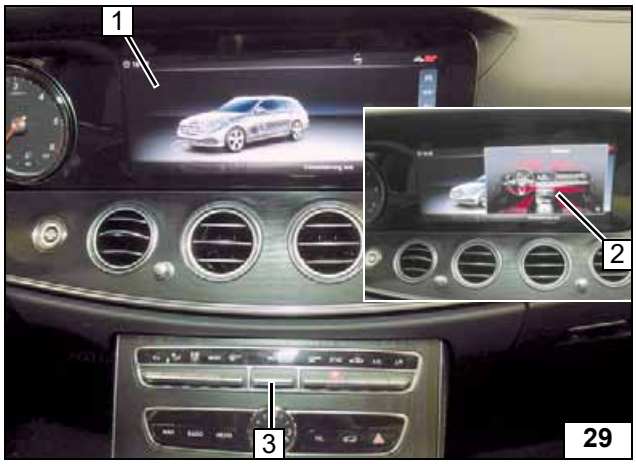
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Operating instructions:
No settings on the A/C control panel are needed before parking the vehicle!
The following settings will **automatically** be called up during the parking heating mode:

- Air outlet on 'windscreen'
- Set temperature to 'HI'
- Fan speed on '1/3 ventilation capacity'

Information on active parking heating mode
The fan controller is deactivated when the vehicle is opened.
It will be activated again when the ignition is switched on.
After re-closing the vehicle it may take several minutes before it becomes active again.

If you stay in your vehicle when the parking heating mode is active, there is a possibility, after turning the ignition off and a waiting period of approx. 70 sec., to individually change the settings on the A/C control panel:



Press menu button **3** .

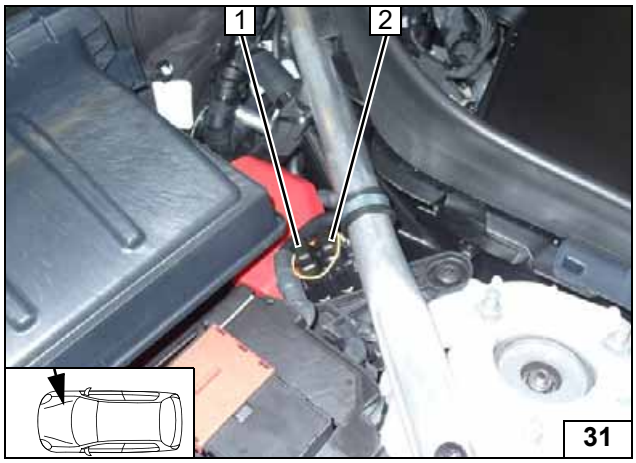
1 Information display, active
2 Display, climate control overview

Calling up climate control overview

For further information, please see the vehicle's manual.

1 Display, climate control overview
2 Temperature setting button, both sides
3 Airflow button
4 Air distribution button

Adapting climate control



1 20A heater fuse F1
2 3A fuse of passenger compartment F2

Engine compartment fuses

Operating instructions for C-Class up to MY 2017 / GLC

Please remove page and add to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Operating instructions:
No settings on the A/C control panel are needed before parking the vehicle!
The following settings will **automatically** be called up during the parking heating mode:

- Air outlet on 'windscreen'
- Set temperature to 'HI'
- Fan speed on '1/3 ventilation capacity'

Information on active parking heating mode
The fan controller is deactivated when the vehicle is opened.
It will be activated again when the ignition is switched on.
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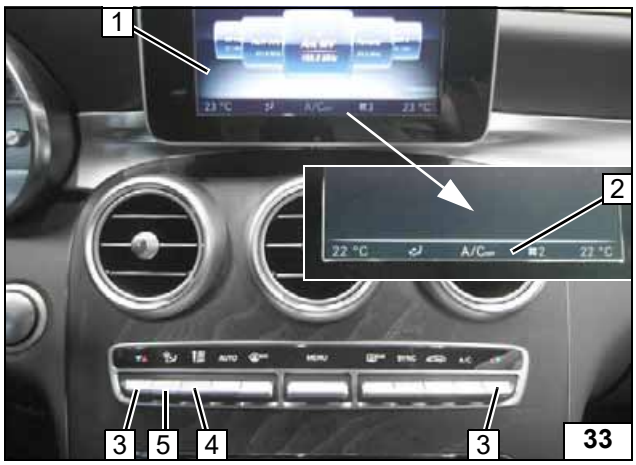
If you stay in your vehicle when the parking heating mode is active, there is a possibility, after turning the ignition off and a waiting period of approx. 70 sec., to individually change the settings on the A/C control panel:

Press menu button **3** .

1 Information display, active
2 Menu bar, climate control overview

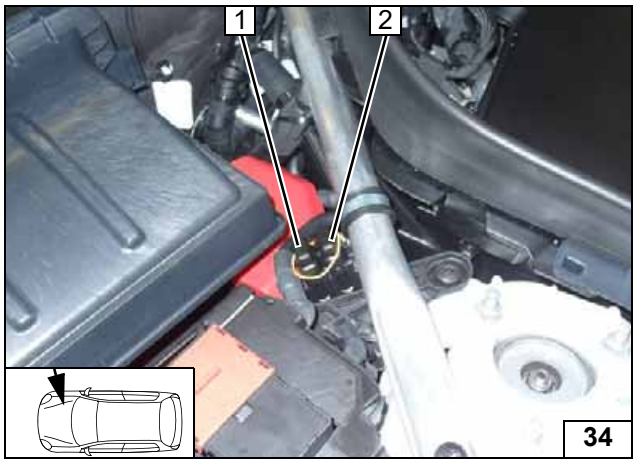
Calling up climate control overview



For further information, please see the vehicle's manual.

1 Information display
2 Menu bar, climate control overview
3 Temperature setting button, both sides
4 Airflow button
5 Air distribution button

Adapting climate control



1 20A heater fuse F1
2 3A fuse of passenger compartment F2

Engine compartment fuses

Webasto
Feel the Drive

Operating instructions for C-Class from MY 2018

Please remove page and add to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Operating instructions:
No settings on the A/C control panel are needed before parking the vehicle!
The following settings will **automatically** be called up during the parking heating mode:

- Air outlet on 'windscreen'
- Set temperature to 'HI'
- Fan speed on '1/3 ventilation capacity'

Information on active parking heating mode
The fan controller is deactivated when the vehicle is opened.
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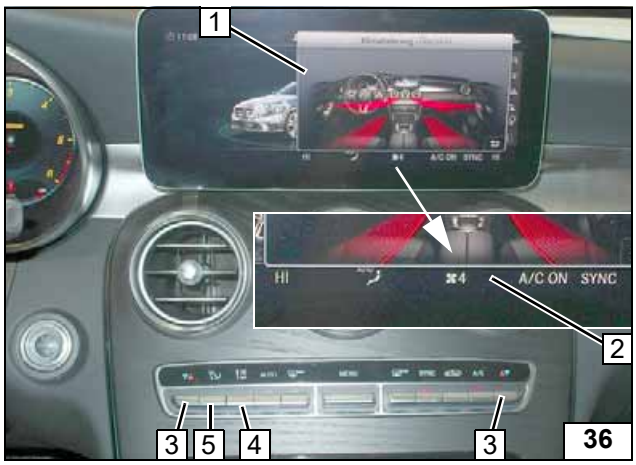
If you stay in your vehicle when the parking heating mode is active, there is a possibility, after turning the ignition off and a waiting period of approx. 70 sec., to individually change the settings on the A/C control panel:

Press menu button **3** .

1 Information display, active
2 Menu bar, climate control overview

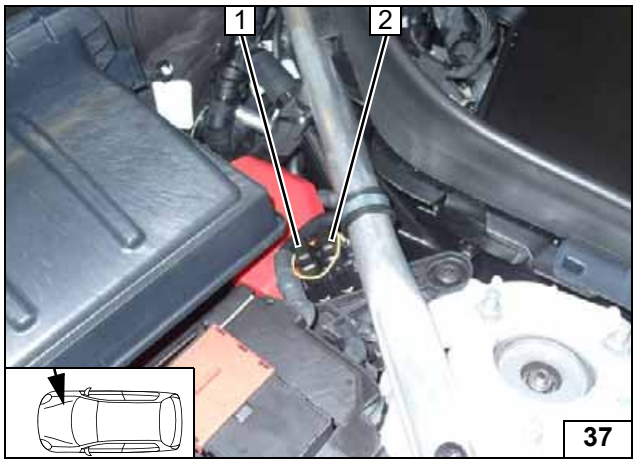
Calling up climate control overview



For further information, please see the vehicle's manual.

1 Information display
2 Menu bar, climate control overview
3 Temperature setting button, both sides
4 Airflow button
5 Air distribution button

Adapting climate control



1 20A heater fuse F1
2 3A fuse of passenger compartment F2

Engine compartment fuses