Water heater

Thermo Top Evo parking heater ‘Island based circuit’

E1
00 0258

Installation documentation
Mercedes C-Class BR205 / GLC BR253

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Mercedes Benz	C-Class	W205	From model year 2014	e1 * 2001 / 116 * 0431 * ...
Mercedes Benz	C-Class	S205	From model year 2014	e1 * 2001 / 116 * 0457* ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm^3	Engine code
C 180	Petrol	Euro 5/6	AG	115	1595	M274
C 180	Petrol	Euro 6d-Temp	AG	115	1595	M274
C 200 EQ Boost	Petrol	Euro 6d-Temp	AG	135	1497	M264
C 200	Petrol	Euro 5/6	AG	135	1991	M274
C 200d	Diesel	Euro 6d-Temp	AG	110	1950	OM654
C 220d	Diesel	Euro 6d-Temp	AG	143	1950	OM654
C 220d BlueTec	Diesel / R4	Euro 5/6	AG	125	2143	OM651

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Mercedes Benz	GLC	253	From model year 2016	e1 * 2001 / 116 * 0481 * ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm^3	Engine code
GLC 220 d	Diesel	Euro 5/6	AG	125	2143	OM651
GLC 250 d	Diesel	Euro 5/6	AG	150	2143	OM651

AG = automatic transmission

Left-hand drive vehicle

Verified equipment variants: THERMATIC with 2-zone automatic air-conditioning (Code 580)
THERMOTRONIC with 3-zone automatic air-conditioning (Code 581)
Passenger compartment monitoring
Headlight washer system
LED headlight
Air-conditioning with refrigerant R134A or R-1234yf (Code 2U8, alternative refrigerant)
4Matic

Not verified: THERMATIC with 1-zone automatic air-conditioning (Code 579)

Total installation time: approx. 10.5 hours

Mercedes C-Class BR205 / GLC BR253

Table of contents

Necessary components

- Basic delivery scope of Thermo Top Evo according to price list
- Installation kit for Mercedes C-Class / GLC Petrol and diesel: **1323143D**
- Additional ‘Webasto Comfort’ A/C control kit for Mercedes C-Class / GLC: **1324395_**
- Control element in accordance with price list and upon consultation with end customer
- The installation location should be confirmed with the end customer in case of MultiControl.
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

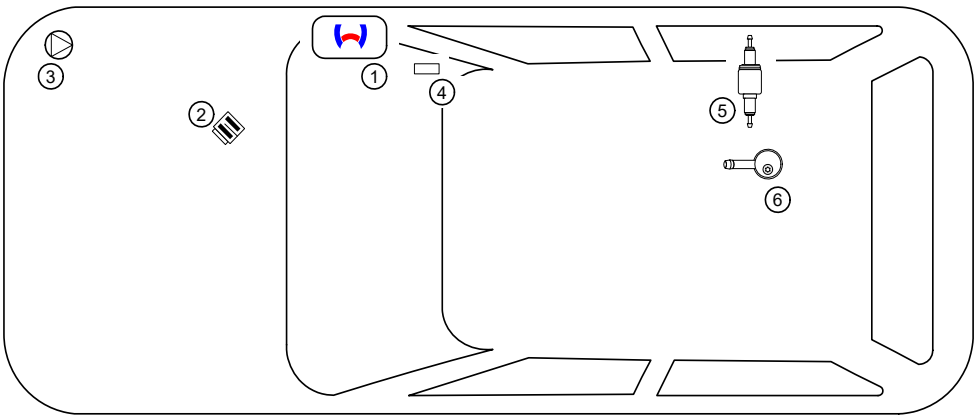
Installation instructions:

- The heater will be integrated into the ‘island’ coolant circuit and is used to heat up the passenger compartment. The engine is not pre-heated.
- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or ThermoCall should be confirmed with the end customer.

Installation overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Coolant pump
4. Receiver for Telestart option
5. Fuel pump
6. FuelFix



Information on total installation time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

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.

Mercedes C-Class BR205 / GLC BR253

Information on validity

This installation documentation applies to Mercedes C-Class BR205 / GLC BR253 Petrol and diesel vehicles - for validity, see page 1 - from model year 2014 and later, 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
- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- 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
- Hose clamping pliers
- Deep-hole marker
- Metric thread-setter kit
- Webasto Thermo Test Diagnosis with current software

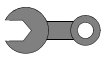
Dimensions
- All dimensions are in mm.

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque value of 5x15 water connection piece retaining plate bolt = 7Nm.
- Tighten other 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

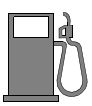


Electrical system

Coolant circuit

Combustion air

Fuel



Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of damage to components.

Specific risk due to electrical voltage.

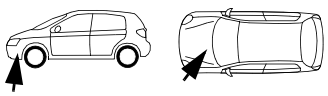
Specific risk of injury or fatal accidents.

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.

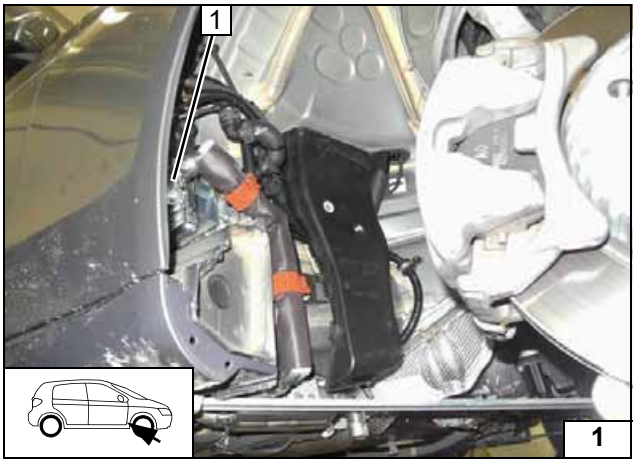
Preliminary work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Remove the right front wheel.
- Remove the wheel well trim on the right.
- Remove the lower engine cover.
- Remove the underbody trim on the right.
- Remove the cover in the engine compartment on the right and on the left.
- Remove the windscreen wiper arms.
- Remove the cover of the water drain chamber.
- Remove the stiffening braces in the engine compartment on the left.
- Remove the stiffening plate on the right side in the engine compartment (C 200 EQBoost only).
- Remove the windscreen wiper motor with linkage.
- Disconnect and remove the battery completely, together with the carrier (except for C 200 EQ-Boost).
- Disconnect the 12V battery in the boot (C 200 EQBoost only).
- Disconnect the 48V battery in the engine compartment. Then remove with the bracket in the water drain chamber (pull off the quick-release coupling of the condensation drain pipe) and place with the mounted coolant hoses at the appropriate position on the engine, without draining off the coolant of the battery circuit (C 200 EQ Boost only).
- Drain off the engine coolant and set aside.
- Remove the seat bench of the rear bench seat.
- Open the right-hand tank fitting service lid.

Heater

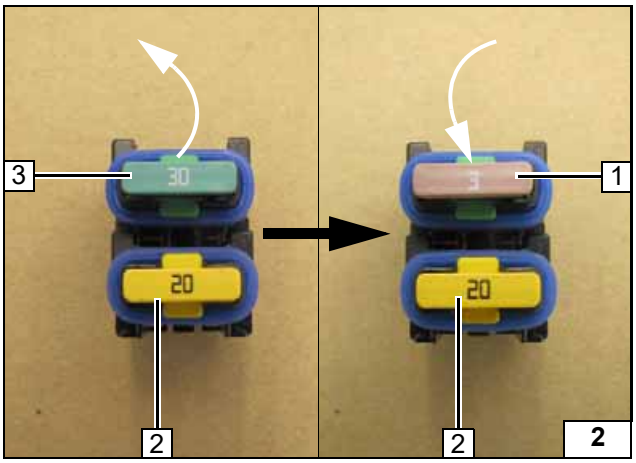
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



Heater installation location

1 Heater

Installation location



Preparing electrical system

Wire sections retain their numbering in the entire document.

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

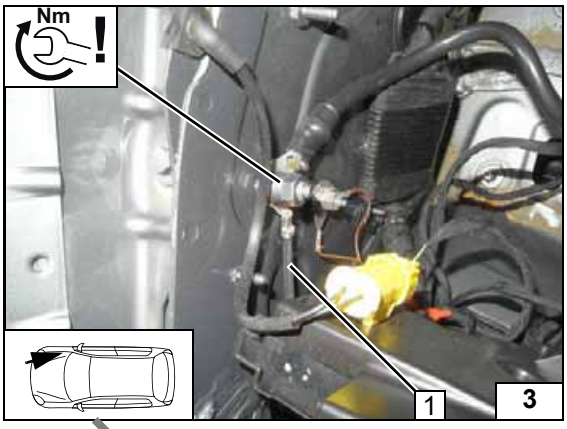
Replace 30A passenger compartment main fuse F2 **3** with 3A fuse **1**.

2 20A heater fuse F1

Electrical system

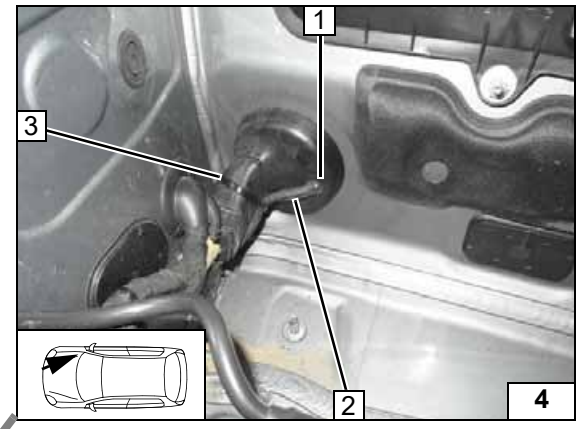
Earth wire

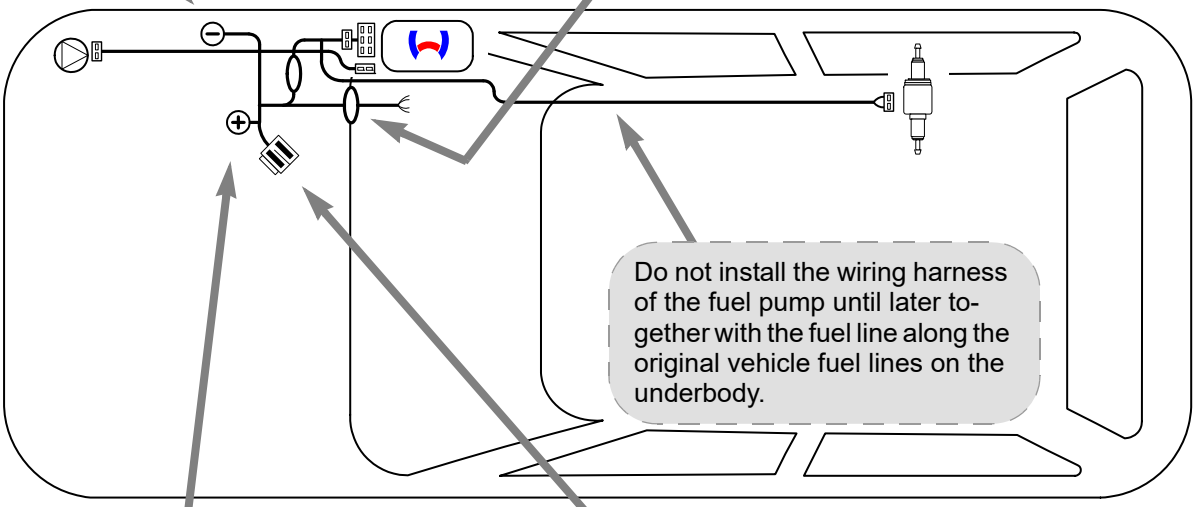
1 Ø8 cable lug, earth wire on original vehicle earth support point



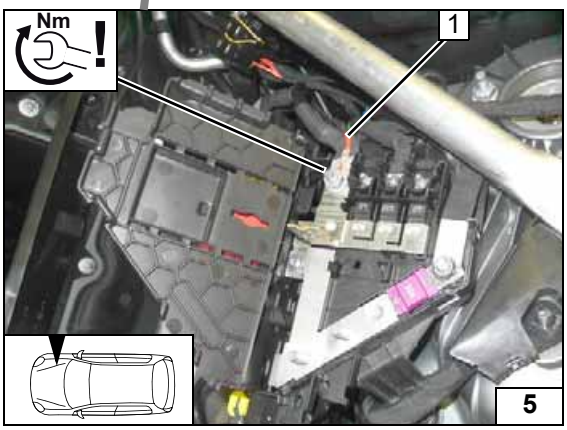
Wiring harness pass through

1 Protective rubber plug, use lower perforation
2 Wiring harnesses of heater, control element
3 Cable tie



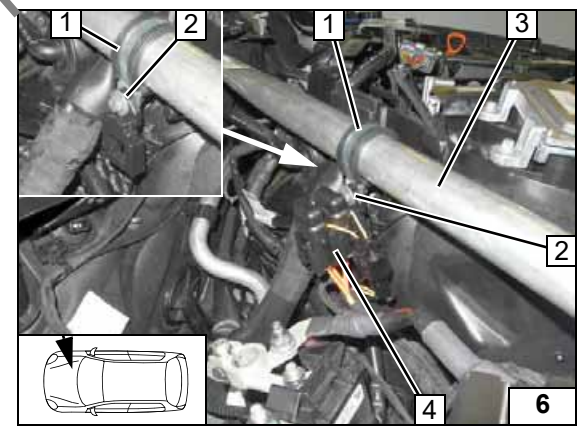


Wiring harness routing diagram



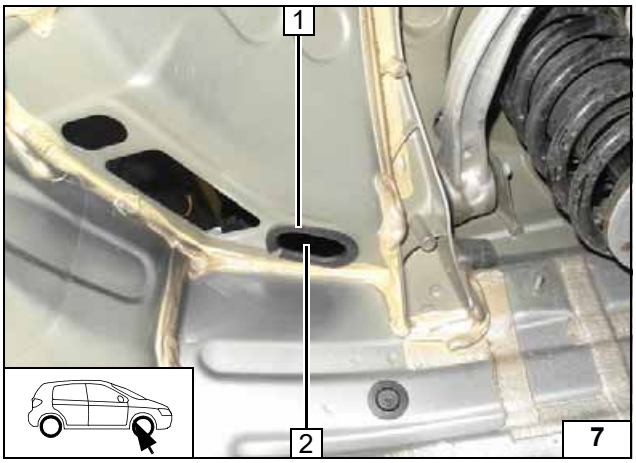
Positive wire

1 Ø8 cable lug, positive wire on original vehicle positive support point



Engine compartment fuse holder

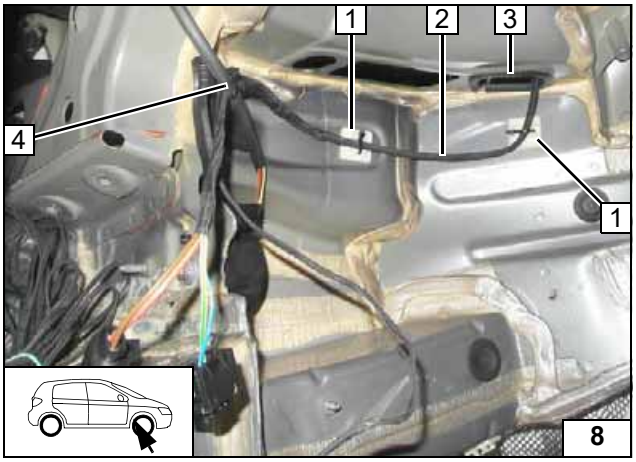
1 Ø29 rubber-coated p-clamp
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
3 Right engine compartment stiffening brace
4 Insert F1-2 fuses



Drain pipe removed for documentary purposes.
Remove sealing plug at position **2**.

1 Narrow edge protection (155)

Installing edge protection



Route heater wiring harness **2** through original vehicle pass through **3** in wheel well. Degrease bonding surfaces at position **1** [2x].

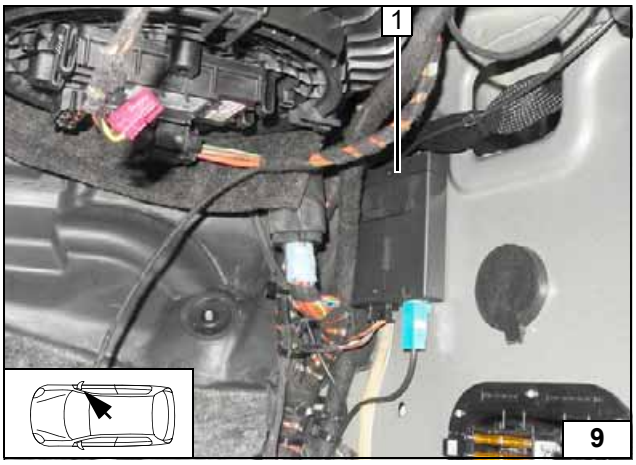
1 Adhesive base with cable tie [2x]
4 Cable tie (if original vehicle wire is present)

Routing heater wiring harness

Air-conditioning control

! Connect the A/C control in accordance with the separate installation documentation:

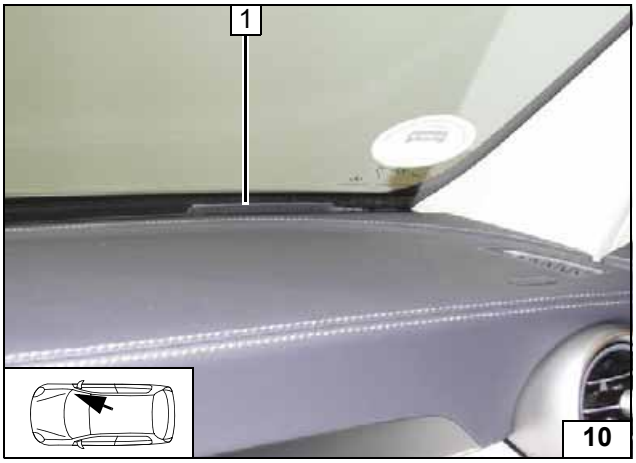
'Webasto Comfort' A/C control installation documentation for
Mercedes C-Class BR205 / GLC BR253



Remote option (Telestart)

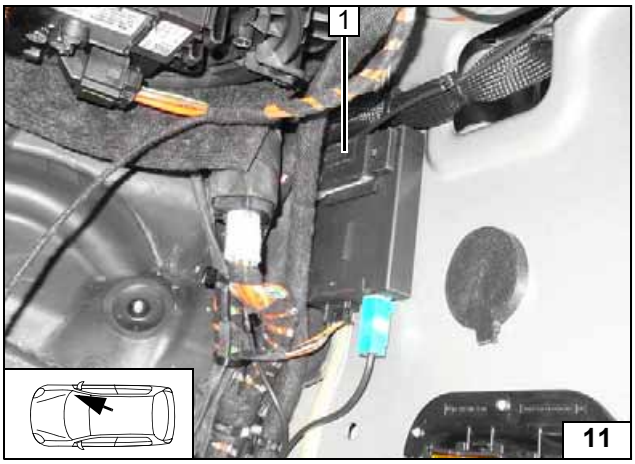
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Aerial

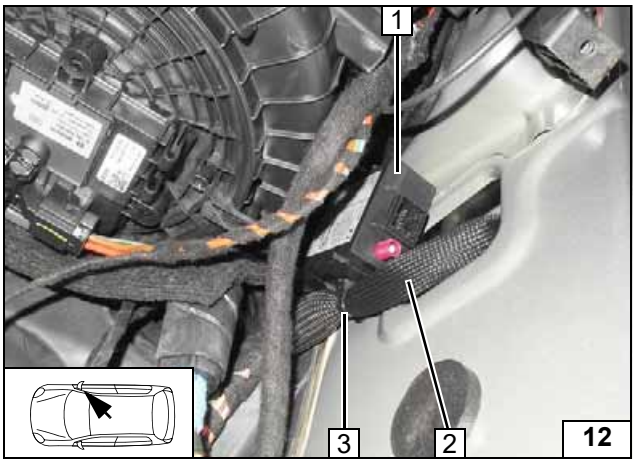
Installing aerial

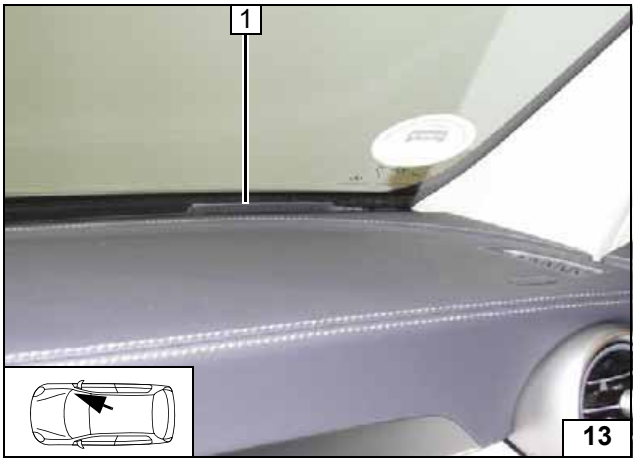


Temperature sensor T100 HTM

Fasten temperature sensor **1** with double-sided adhesive tape.

Installing temperature sensor





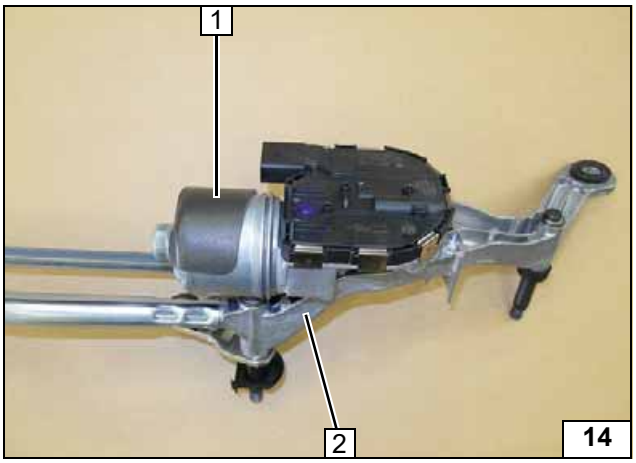
ThermoCall option

Fasten receiver **1** with double-sided adhesive tape and attach to original vehicle wiring harness **2** with cable tie **3**.

Installing receiver

1 Aerial (optional)

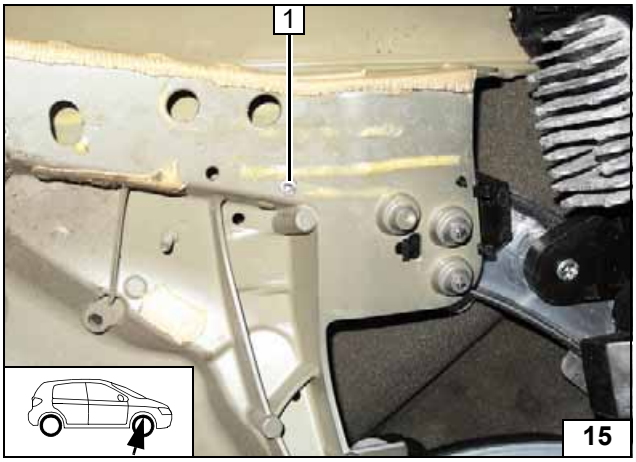
Installing aerial



Preparing installation location

1 Insulation protection strips
2 Wiper linkage

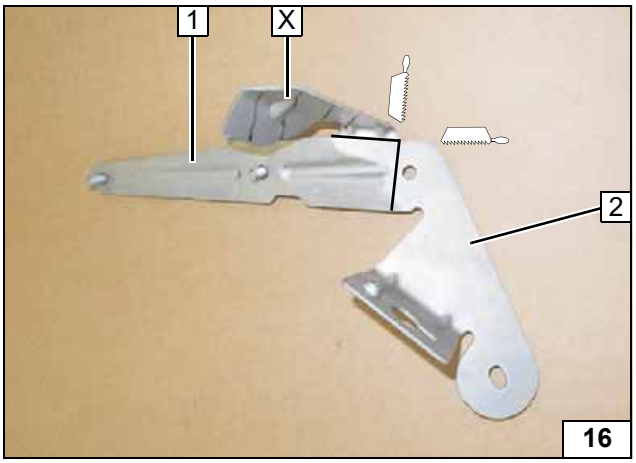
Sticking on insulation protection strips



C-Class

1 M4 rivet nut, existing hole

Installing rivet nut

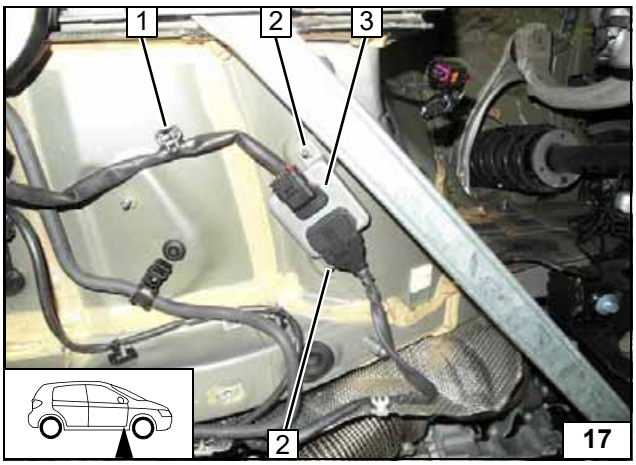


All vehicles

1 Bracket for control unit (only for vehicles with additional control unit, see next figure)
2 Bracket for exhaust silencer

X =

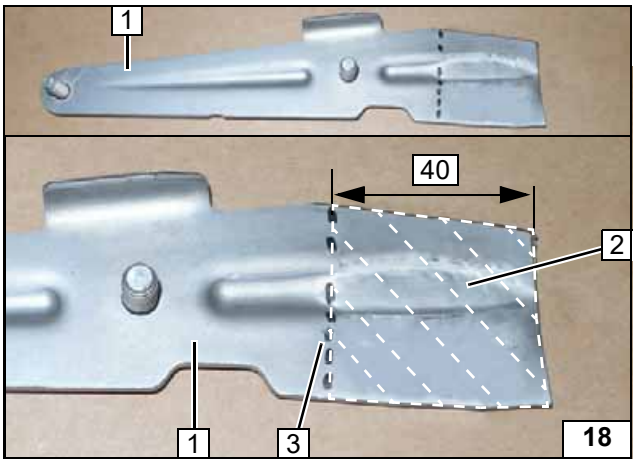
Adapting / assigning bracket



Vehicle with additional control unit

1 Detach retaining clip of stud bolt
2 Original vehicle nut [2x], will be reused
3 Control unit

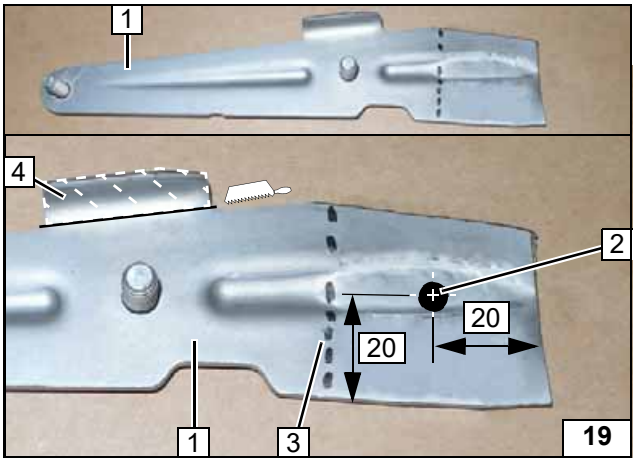
Removing control unit



Mark bending line **3** on bracket **1**.
Smooth surface **2** on the right side of the bending line.

1 Bracket for control unit

Preparing bracket

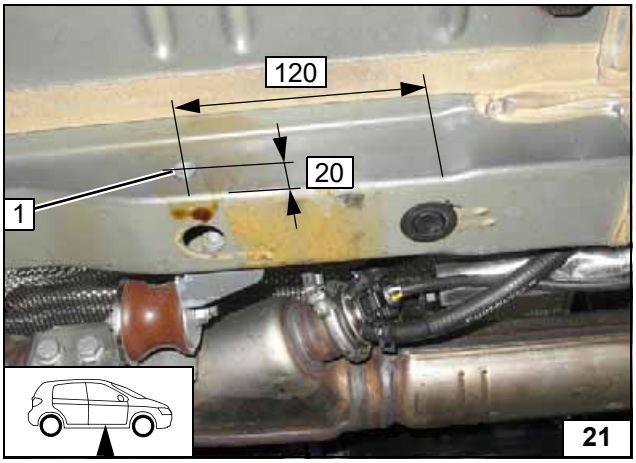


Cut off tab **4** and discard.
Bend bracket **1** upwards at bending line **3** by 90° (see next figure).

1 Bracket for control unit
2 Ø6.5 hole

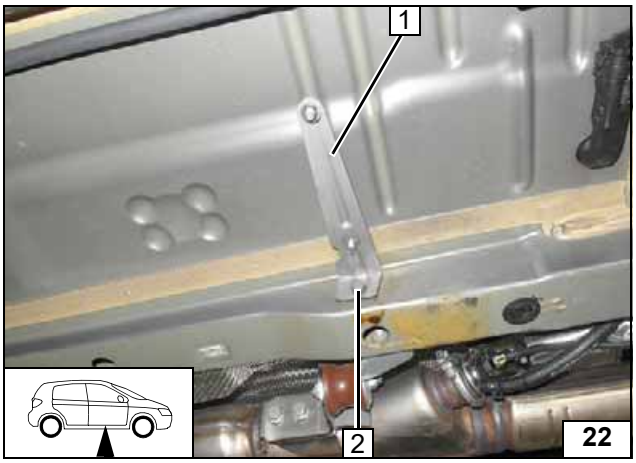
Preparing bracket

View of prepared bracket of control unit



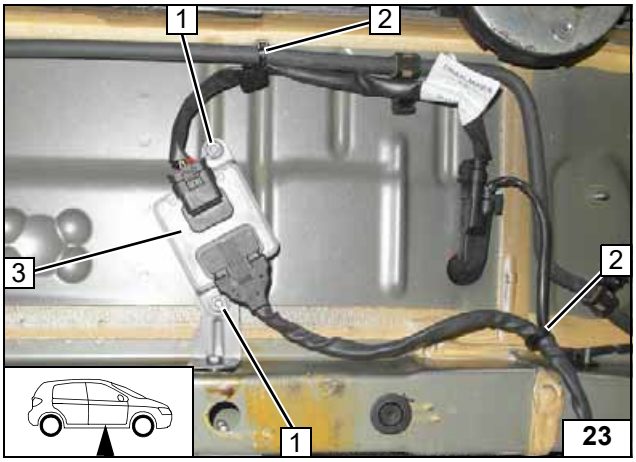
1 Ø9.1 hole, rivet nut

Installing rivet nut



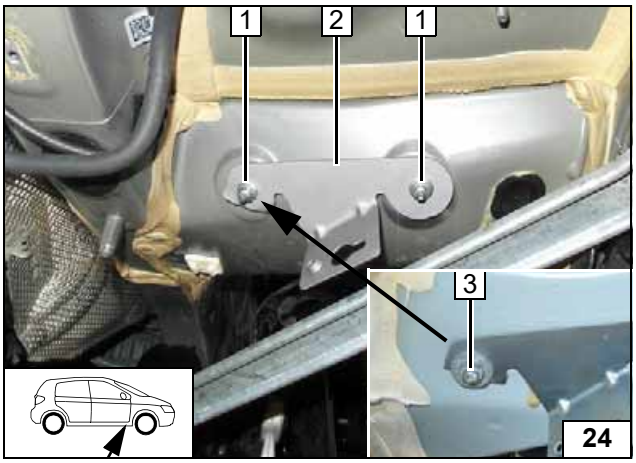
1 Bracket
2 M6x20 bolt, spring lock washer on rivet nut

Installing bracket



1 Original vehicle nut [2x], on stud bolt of bracket
2 Cable tie [2x]
3 Control unit

Installing control unit

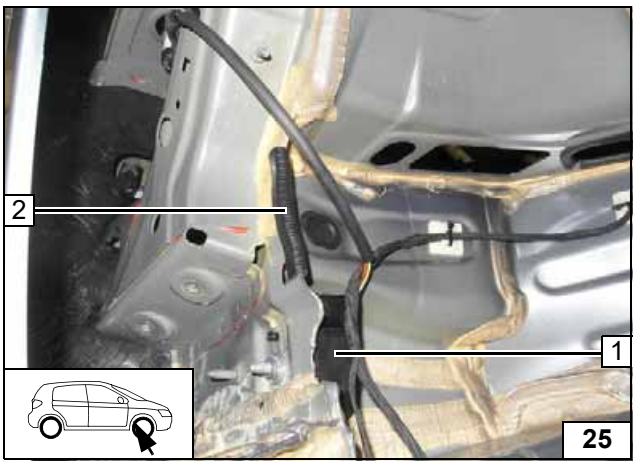


All vehicles

1 M6 flanged nut on original vehicle stud bolt [2x]
2 Bracket for exhaust silencer

Shorten stud bolt at position 3 as shown in case of GLC.

Installing bracket



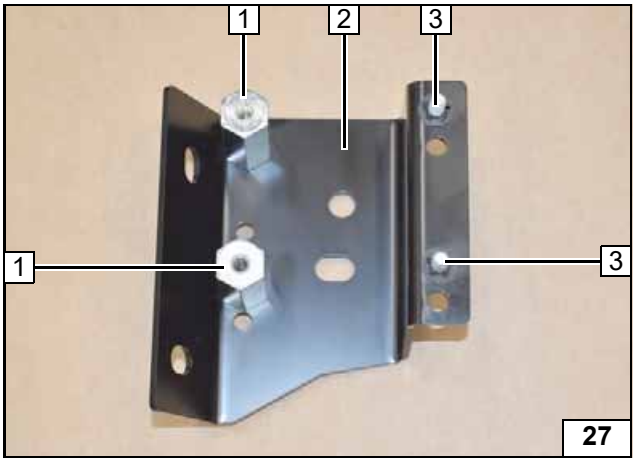
This and the following figures show a vehicle with control unit at position **1**, but the instructions apply to all models!

2 Broad edge protection (100)

Installing edge protection

1 Distance washer (5) on original vehicle stud bolt

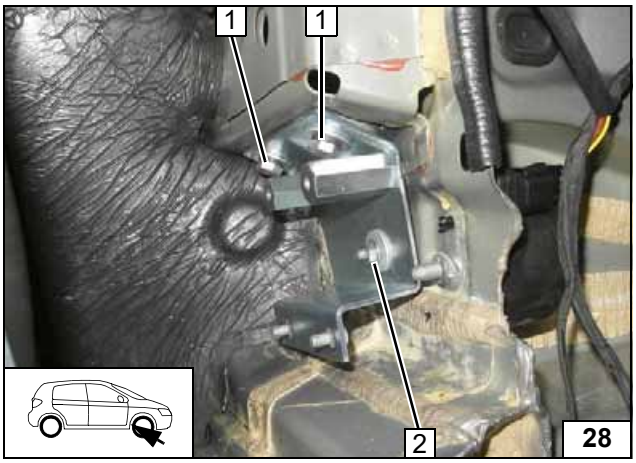
Installing distance washer



C-Class

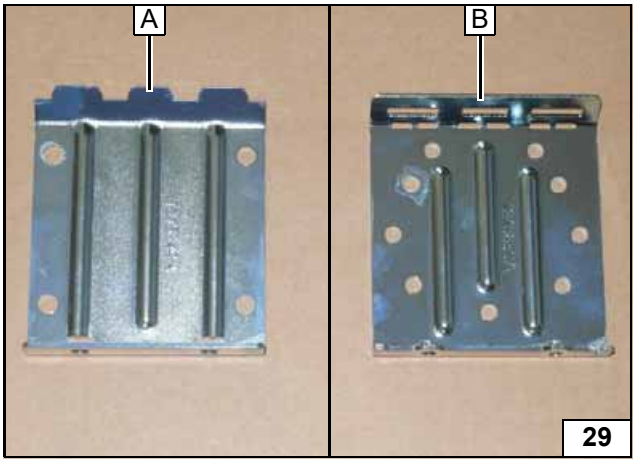
1 Spacer nut (40), M6x16 bolt, spring lock washer [2x each]
2 Basic holder
3 M6x12 bolt, lock washer [2x each]

Premounting basic holder

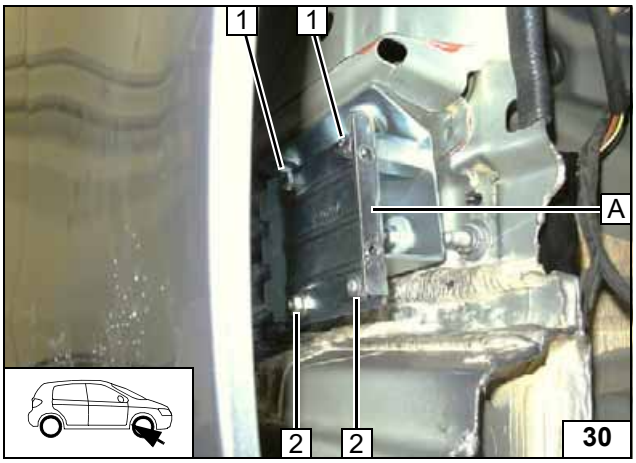


1 M8x20 bolt, spring lock washer, large diameter washer [2x each] at existing threaded hole
2 Large diameter washer, M6 flanged nut on original vehicle stud bolt

Installing basic holder

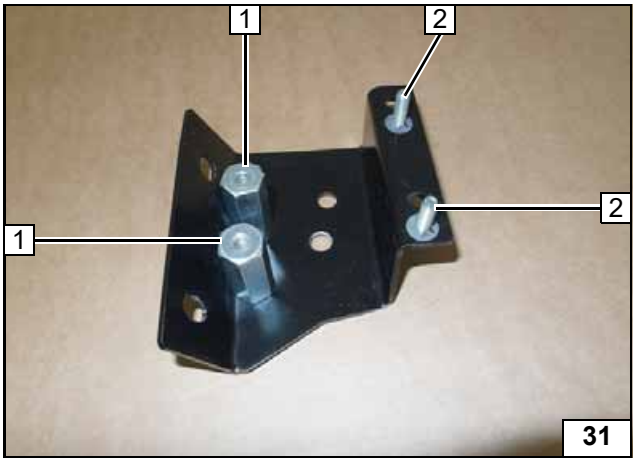


View of / assignment of two-part bracket



1 M6x16 bolt, spring lock washer [2x each] on M6x40 spacer nut
2 M6 flanged nut [2x] on M6x12 bolt

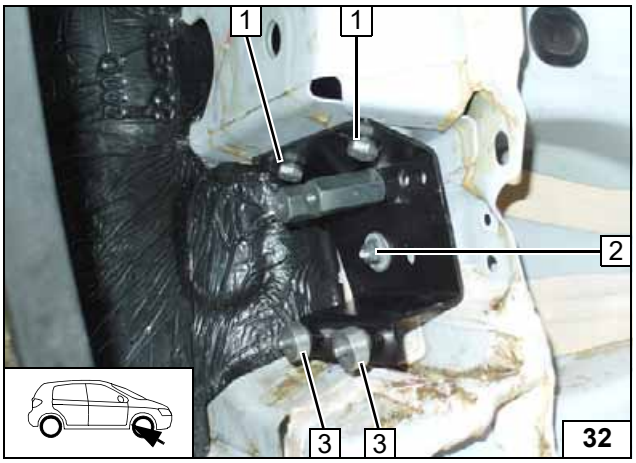
Installing bracket section A



GLC

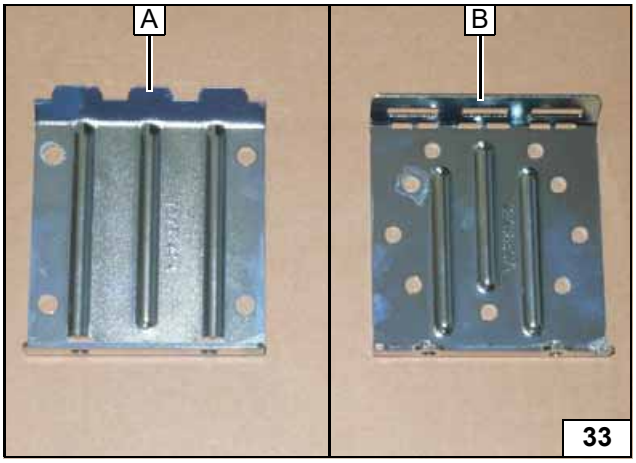
1 Spacer nut (40), M6x16 bolt, spring lock washer [2x each]
2 M6x20 bolt, lock washer [2x each]

Premounting basic holder

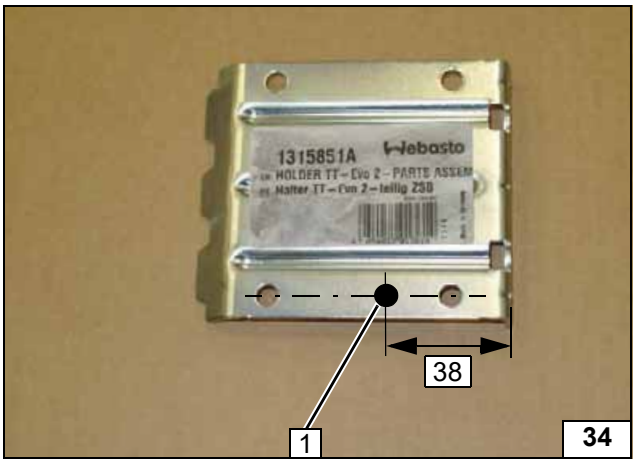


1 M8x20 bolt, spring lock washer, large diameter washer [2x each] at existing threaded hole
2 Large diameter washer, M6 flanged nut on original vehicle stud bolt
3 Distance washer (10) [2x]

Installing basic holder

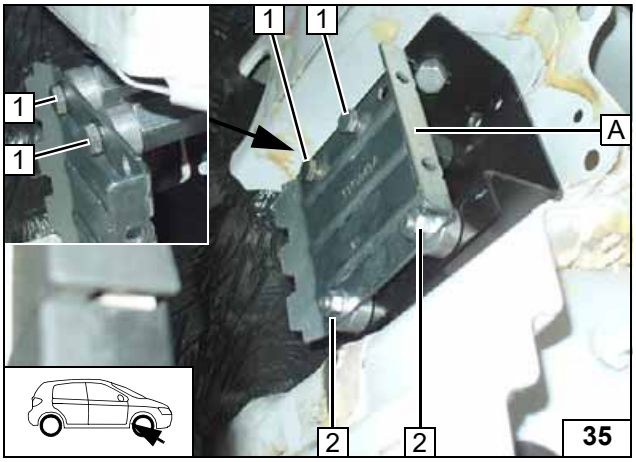


View of / assignment of two-part bracket



1 Ø7 hole

Hole in bracket A



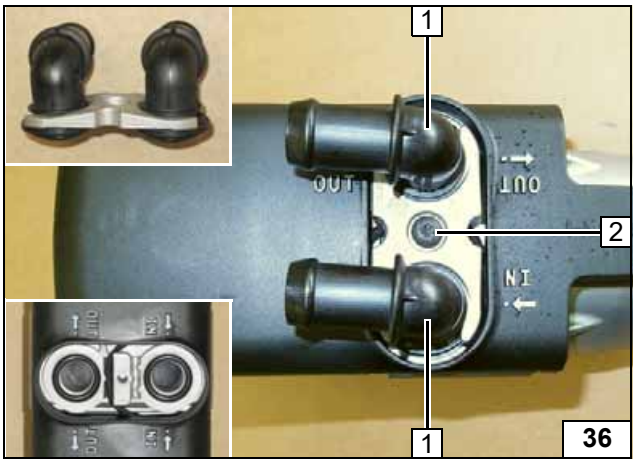
Install distance washer (10) [2x] at position **2** between basic holder and bracket **A**.

1 M6x20 bolt, spring lock washer, distance washer (10), spacer nut [2x each]
2 Flanged nut M6 [2x]

Installing bracket section A

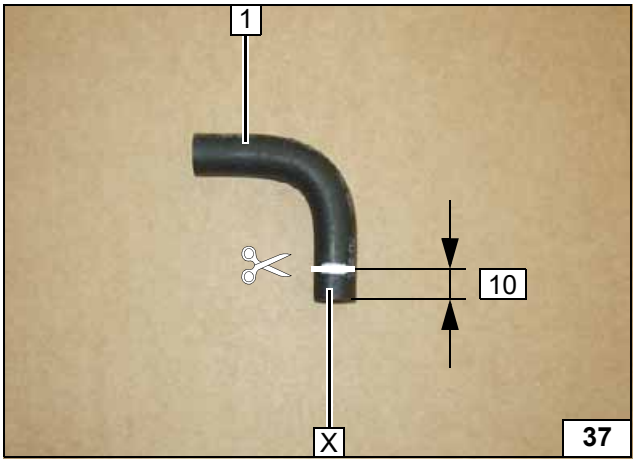
Preparing heater

All vehicles



1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

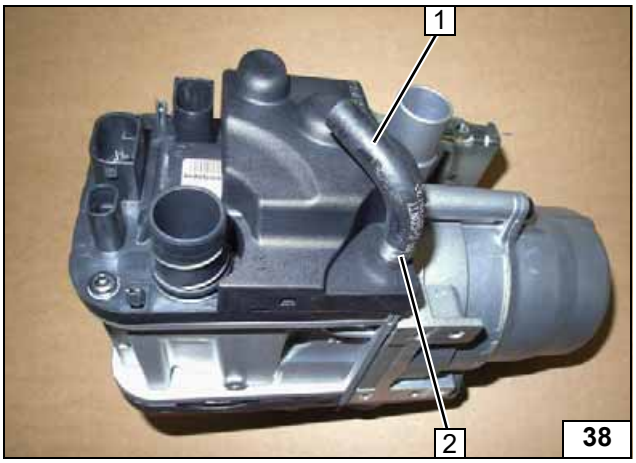
Installing water connection piece



1 90° moulded hose

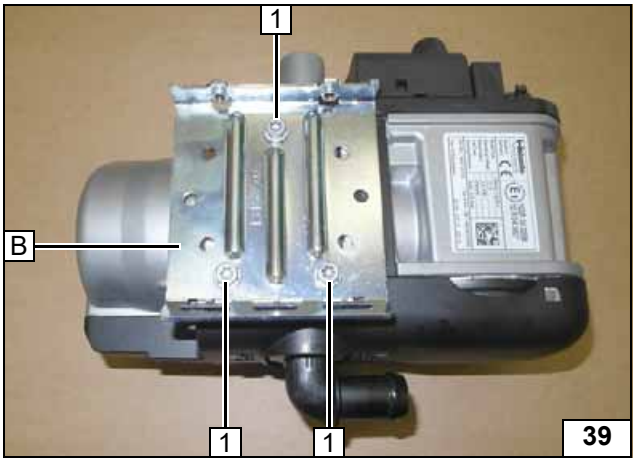
X =

Shortening moulded hose



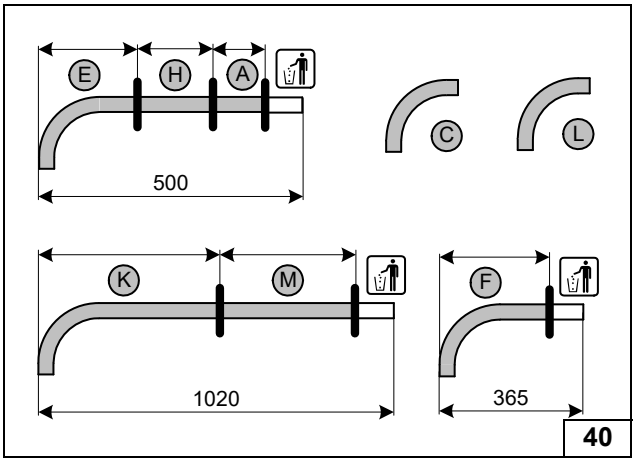
1 90° moulded hose (with shortened side on heater)
2 Ø10 clamp

Premounting moulded hose



1 5x13 self-tapping bolt [3x]

Mounting bracket section B

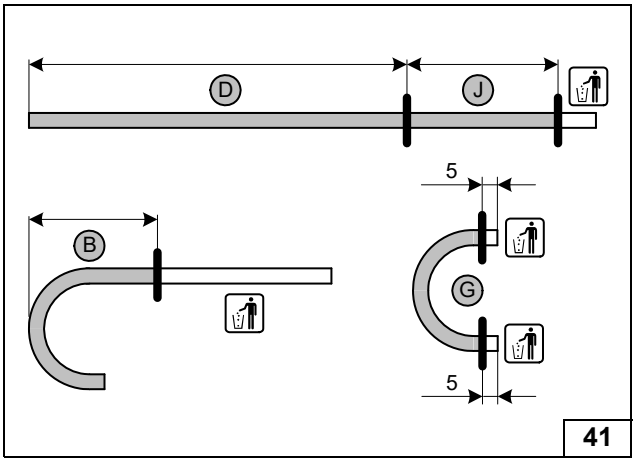


C-Class, vehicle with residual heat pump

All moulded hoses Ø18

	C200d only	Except for C200d
A	Not required	70
E	140	140
F	185	185
H	170	170
K	570	570
M	435	435

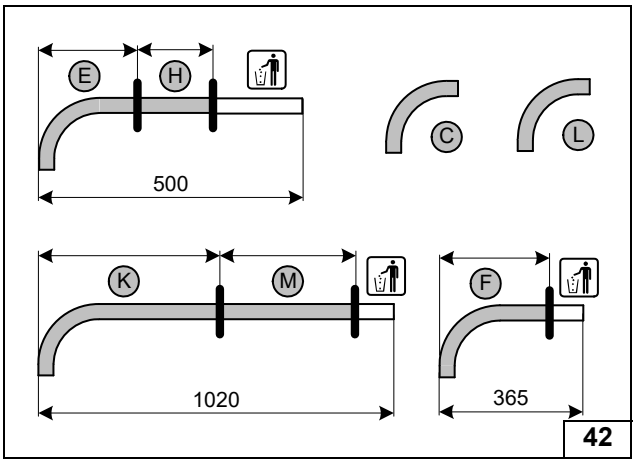
Cutting hoses to length



Hoses **B, G** = 180°, Ø18 moulded hoses
Hoses **D, J** = straight, Ø18 hoses

	C200d only	Except for C200d
B	130	220
D	1480	1480
J	560	560

Cutting hoses to length

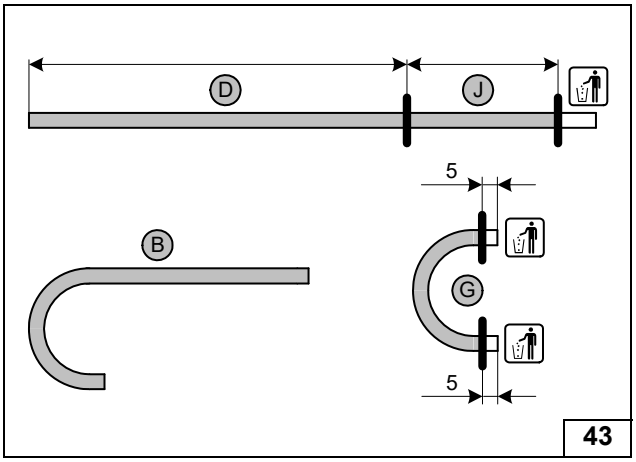


C-Class, vehicle without residual heat pump

All moulded hoses Ø18

E	140
F	185
H	170
K	570
M	435

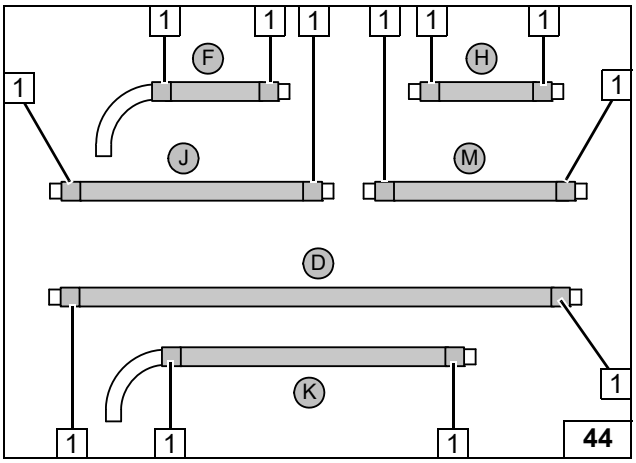
Cutting hoses to length



Hoses **B, G** = 180°, Ø18 moulded hoses
Hoses **D, J** = straight, Ø18 hoses

	Except for C 200 EQ Boost	C 200 EQ Boost only
D	1480	1480
J	560	600

Cutting hoses to length

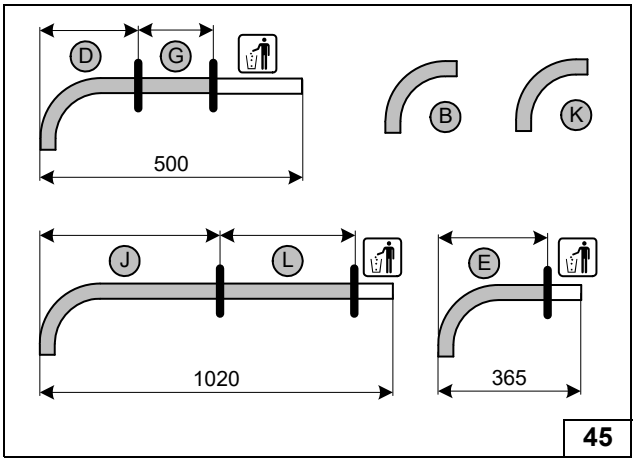


C-Class, all vehicles

Slide braided protection hoses onto hoses **D, F, H, J, M** and **K** and cut to length. Cut heat shrink plastic tubing to size.

1 Long heat shrink plastic tubing (50) [12x]

Preparing hoses

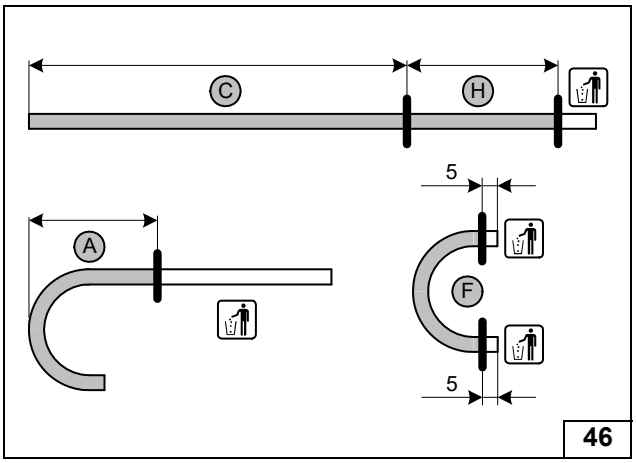


GLC

All moulded hoses Ø18

D = 140
E = 185
G = 170
J = 570
L = 435

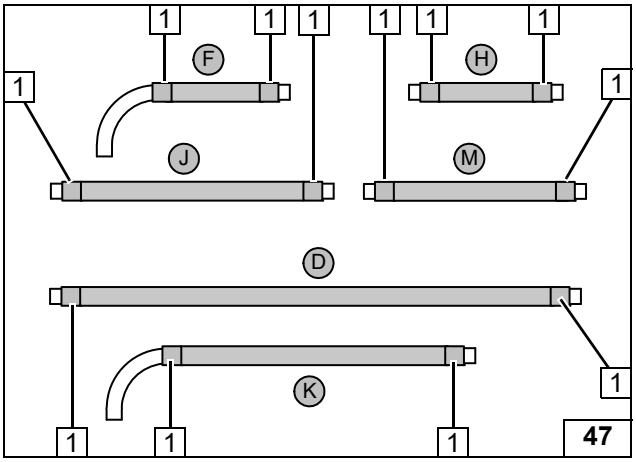
Cutting hoses to length



Hoses **A, F** = 180°, Ø18 moulded hose
Hoses **C, H** = Ø18 straight hose

A = 400
C = 1480
H = 560

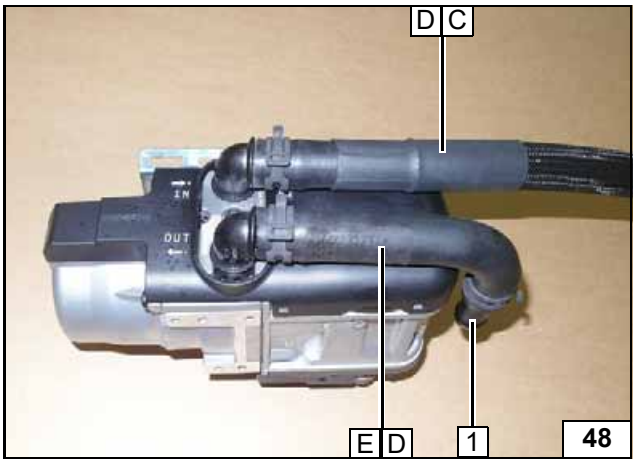
Cutting hoses to length



Slide braided protection hoses onto hoses **C, E, G, H, J** and **L** and cut to length. Cut heat shrink plastic tubing to size.

1 Long heat shrink plastic tubing (50) [12x]

Preparing hoses



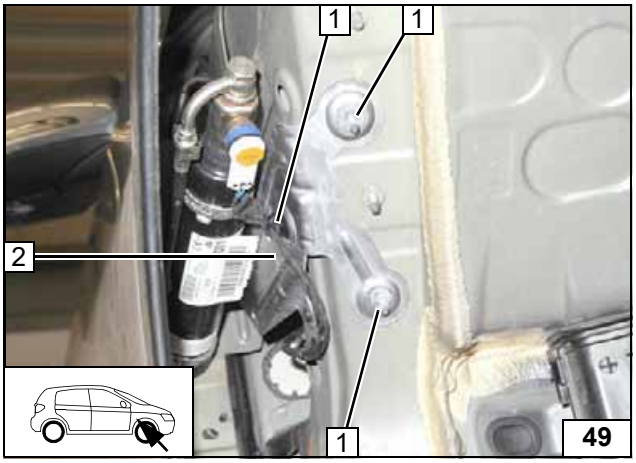
All vehicles

For hose designations see sections ‘Cutting hoses to length’ for C-Class with and without residual heat pump as well as GLC.

All spring clips = Ø25

1 Ø18x18 connecting pipe

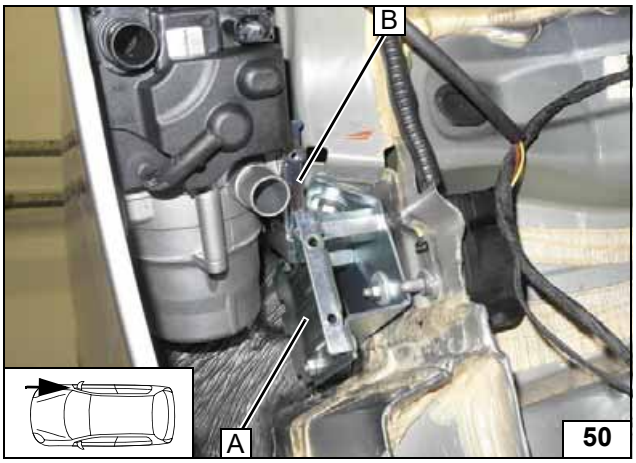
Installing hoses



Vehicles with fire extinguishing system

Loosen original vehicle screw fitting **1**.
For the subsequent heater integration, a second person should take the bracket off original vehicle fire extinguishing system **2** from the stud bolt and hold it (no dismantling).

Detaching bracket of fire extinguishing system

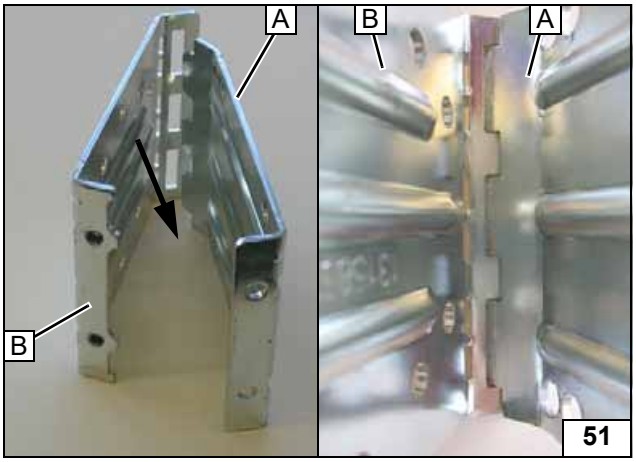


Installing heater

All vehicles

Install heater in installation location from above (see next figure).

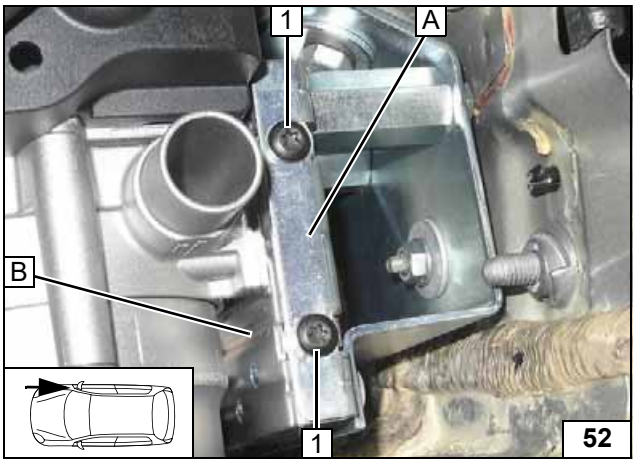
Installing heater



The recesses of bracket **B** must be guided over the tabs of bracket **A**.

A Bracket (installed on basic holder)
B Bracket (installed on heater)

View of bracket A and B assembly

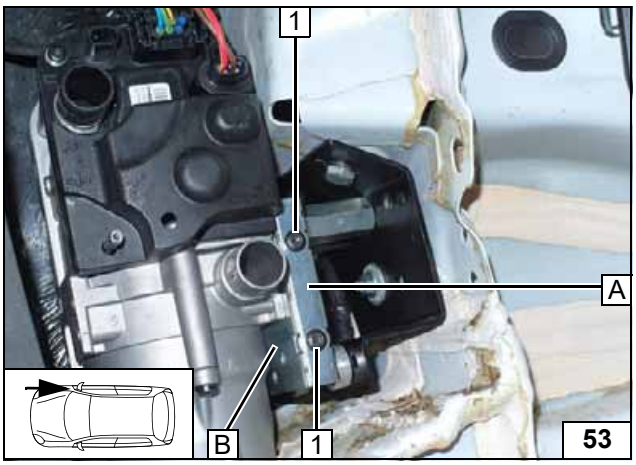


C-Class

Check the assembly of bracket **B** and bracket **A**, then screw them together.

1 M5x12 torx screw [2x]

Installing heater

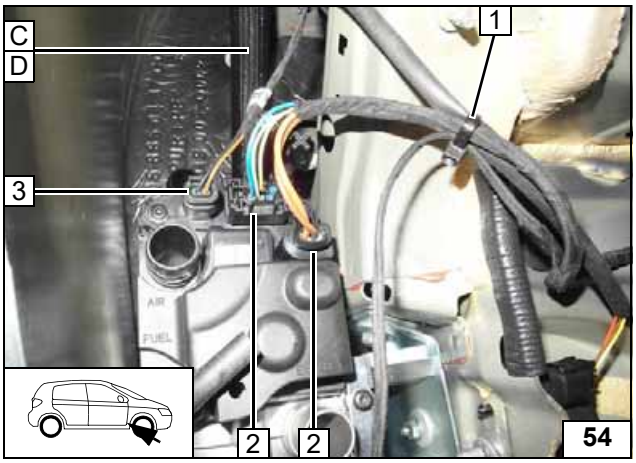


GLC

Check the assembly of bracket **B** and bracket **A**, then screw them together.

1 M5x12 torx screw [2x]

Installing heater

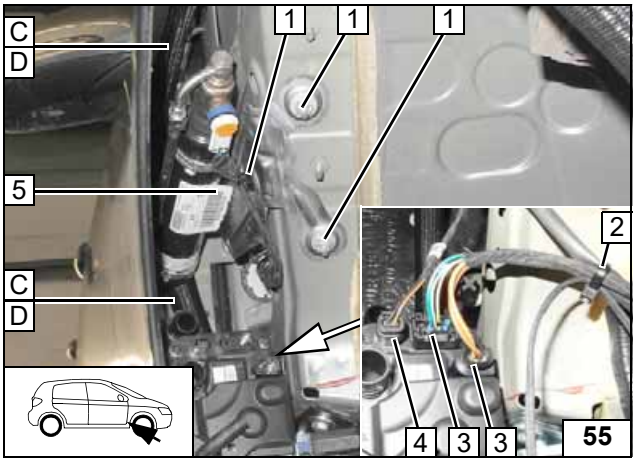


Vehicles without fire extinguishing system

Route hose**C/D** in wheel well upwards.

1 Cable tie
2 Heater wiring harness connector [2x]
3 Connector of coolant pump wiring harness

Installing heater



Vehicles with fire extinguishing system

Route hoses **C/D** in wheel well behind the fire extinguishing system **5** upwards. Then reinstall the fire extinguishing system according to the manufacturer's instructions and using original vehicle flanged nuts **1** [3x].

3 Heater wiring harness connector [2x]
4 Connector of coolant pump wiring harness

Installing heater

Fuel

Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

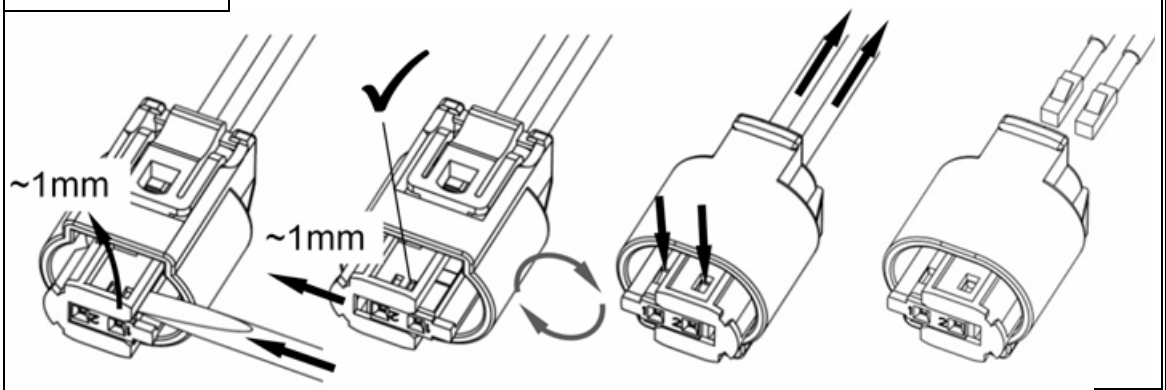
Catch any fuel running off in an appropriate container.

Route fuel line and fuel pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

The fuel line and wiring harness are routed to the fuel pump as shown in the wiring harness routing diagram.

Dismantling fuel pump connector

Connector X7



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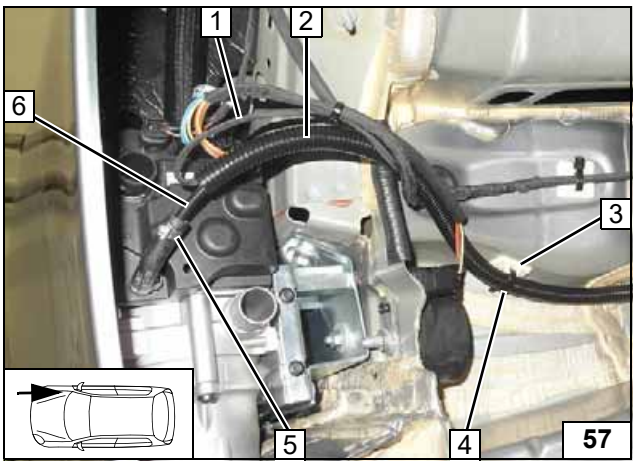

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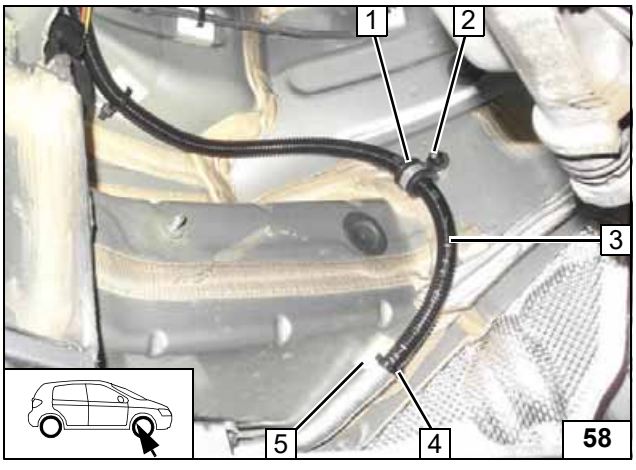
Connecting heater

Cut 1,200mm from fuel line, this will be required for the connection of the FuelFix. Draw fuel line **6** and fuel pump wiring harness **1** into Ø10 corrugated tube **2**. Degrease bonding surfaces at position **3**.

- **3** Adhesive base
- **4** Cable tie
- **5** Ø10 clamp



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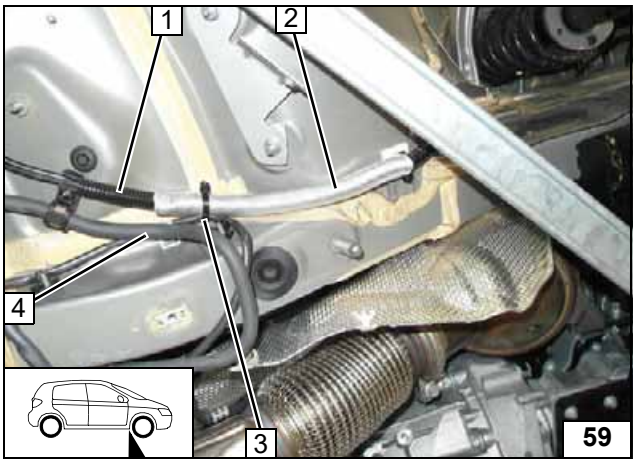
Routing lines

Degrease bonding surfaces at position **5**.

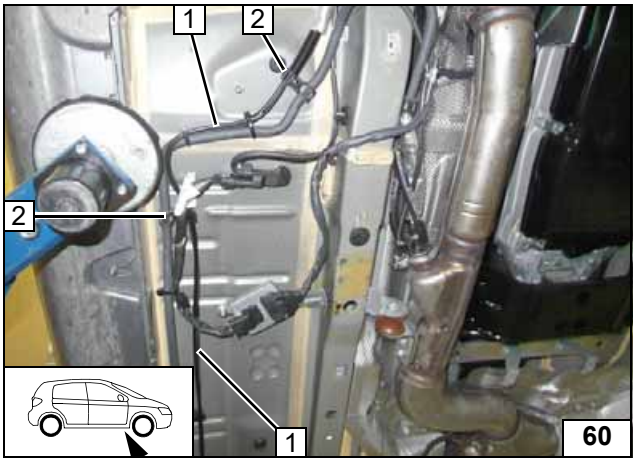
- **1** Ø15 rubber-coated p-clamp
- **2** Plastic nut on original vehicle stud bolt
- **3** Fuel line and fuel pump wiring harness in Ø10 corrugated tube
- **4** Cable tie
- **5** Adhesive base



Slide 300, Ø14.5 heat protection hose **2** onto Ø10 corrugated tube **1** and secure with cable tie **3**.

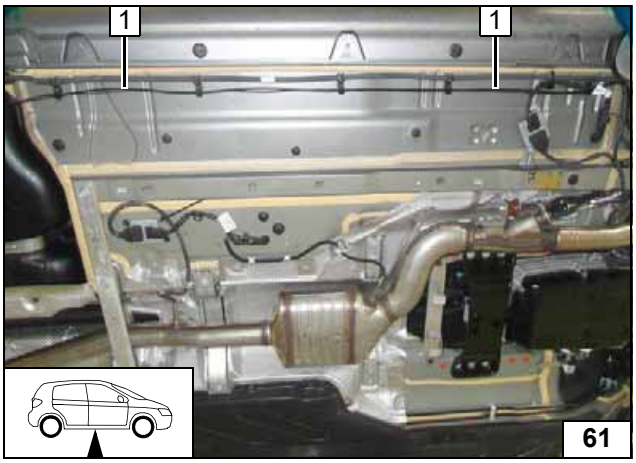
4 Additional line (depends on the equipment)

Routing lines



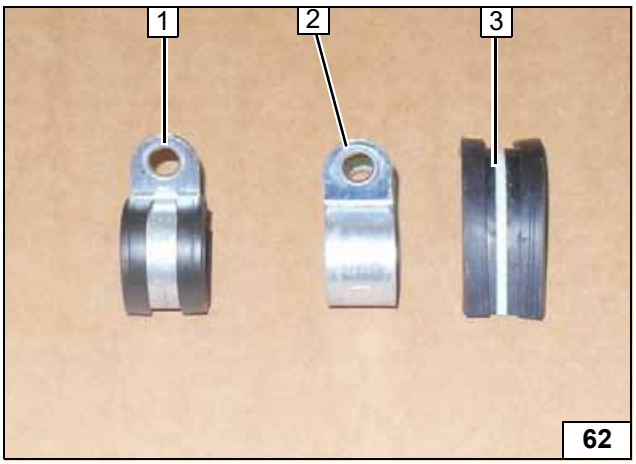
Insert fuel line and fuel pump wiring harness **1** in original vehicle line holder **2**.

Routing lines



Route fuel line and fuel pump wiring harness **1** on original vehicle line holder to the installation location of the fuel pump.

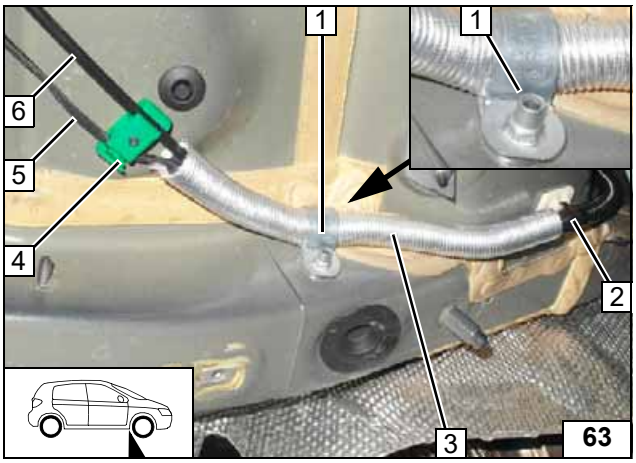
Routing lines



Vehicle without additional line (depends on the equipment)

Remove rubber coating **3** from Ø15 rubber-coated p-clamp **1**. Metal part **2** will be reused.

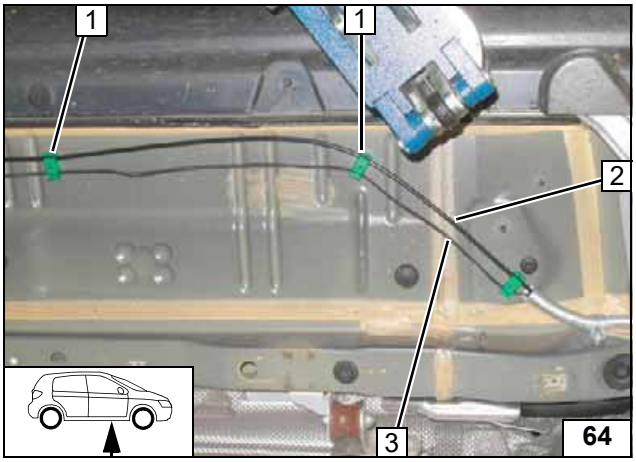
Removing rubber-coated p-clamp



Slide 300, Ø14.5 heat protection hose **3** onto Ø10 corrugated tube **2**.

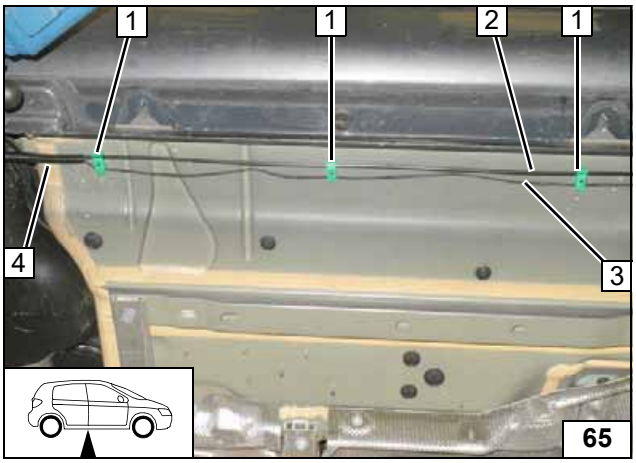
1 P-clamp, original vehicle stud bolt, plate nut
4 Line holder, original vehicle stud bolt
5 Fuel pump wiring harness
6 Fuel line

Routing lines



1 Line holder, original vehicle stud bolt [2x each]
2 Fuel line
3 Fuel pump wiring harness

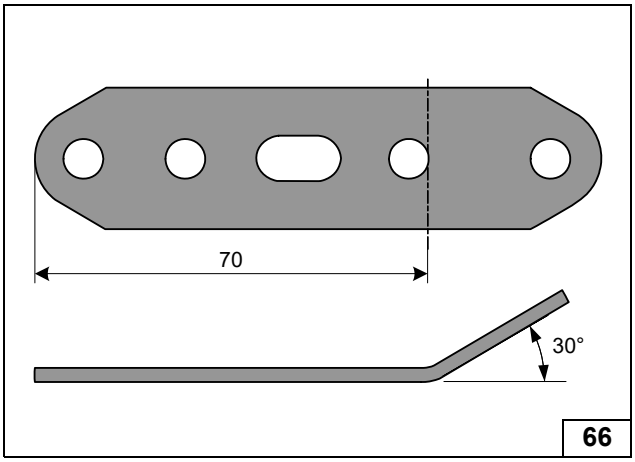
Routing lines



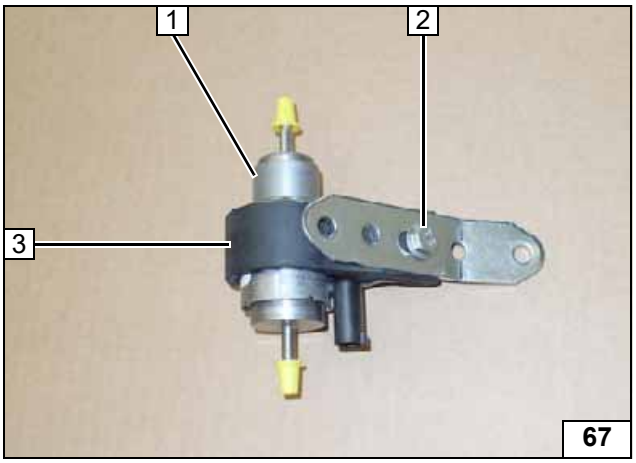
Route fuel line **2** and fuel pump wiring harness **3** to the fuel pump installation location, at the end draw into Ø10 corrugated tube **4**.

1 Line holder, original vehicle stud bolt [3x each]
2 Fuel line
3 Fuel pump wiring harness

Routing lines

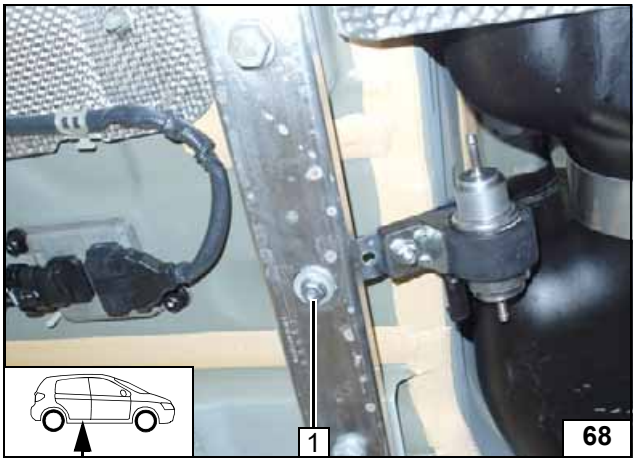


Angling down perforated bracket



1 Fuel pump
2 M6x25 bolt, support angle bracket, flanged nut
3 Fuel pump mount

Premounting fuel pump



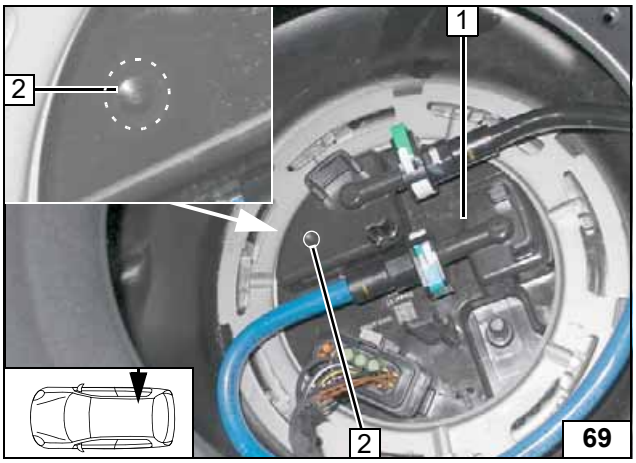
1 M6x30 bolt, original vehicle hole, large diameter washer [2x], flanged nut

Mounting fuel pump

Installing FuelFix

Tank fitting variant 1

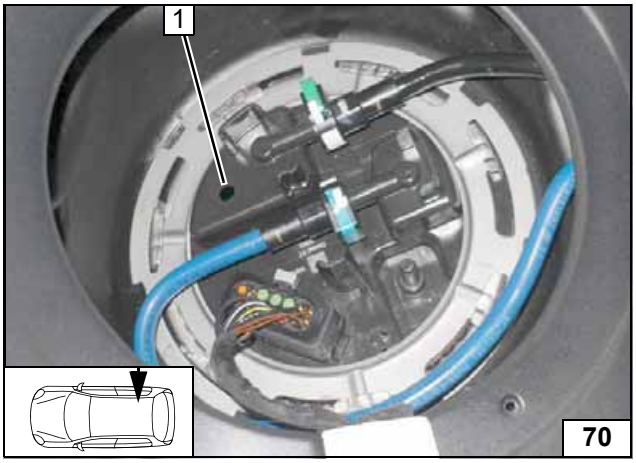
Work steps F1 and F2.



1 Tank fitting
2 Hole pattern corresponds to existing embossing

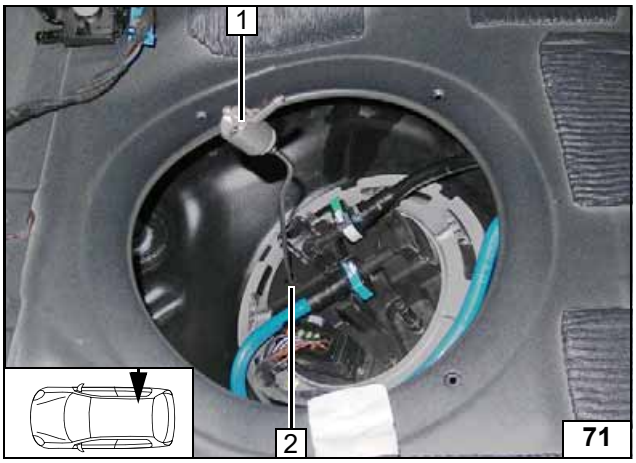
Copying hole pattern

Work step F3.



1 Hole made with provided drill

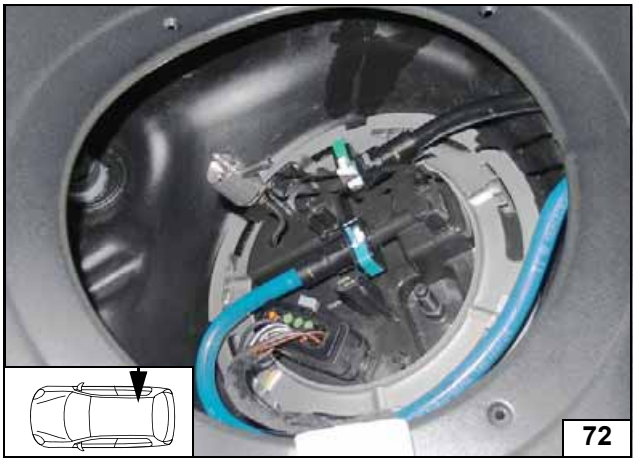
Hole for FuelFix



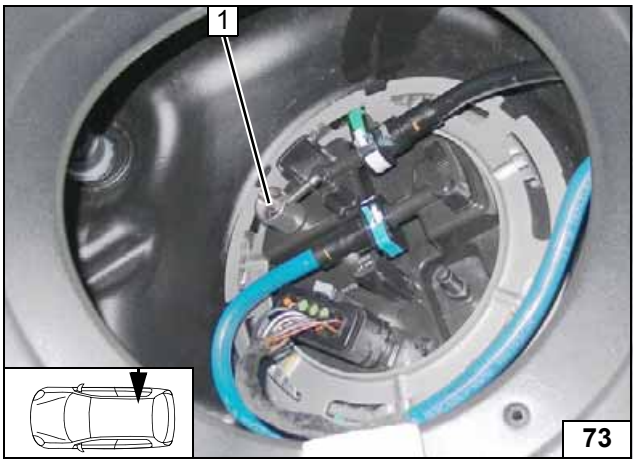
Work steps F4 and F5.

Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

Inserting FuelFix



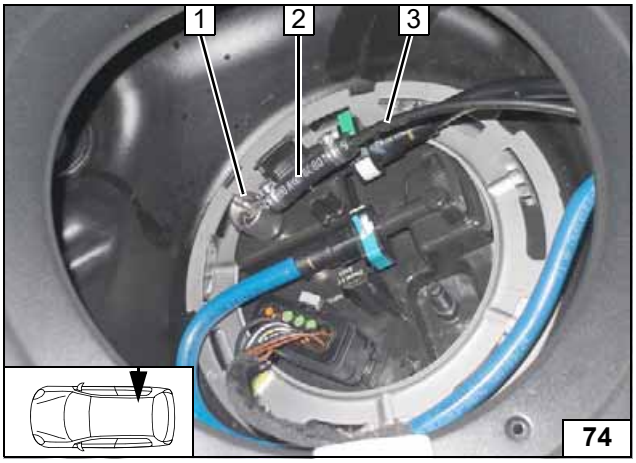
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

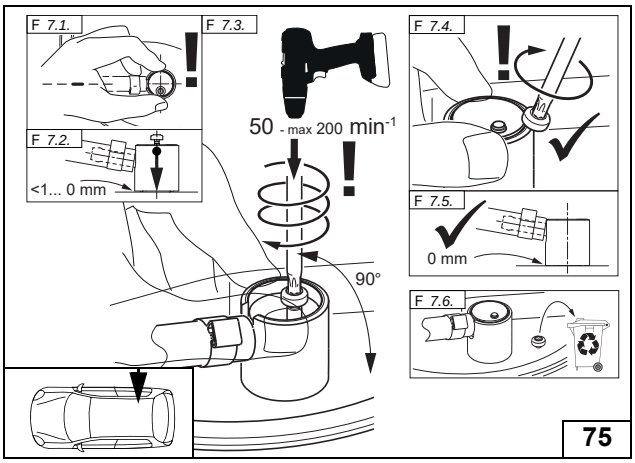
Aligning FuelFix



Work step F6.

1 FuelFix
2 Hose section, Ø10 clamp [2x]
3 Fuel line

Connecting fuel line

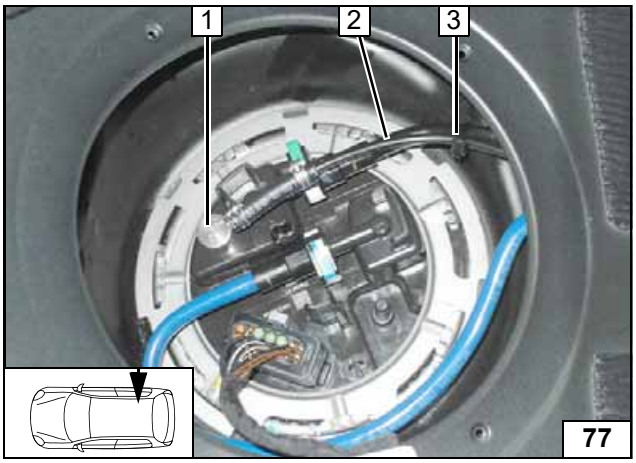


Work step F7.

Installing FuelFix

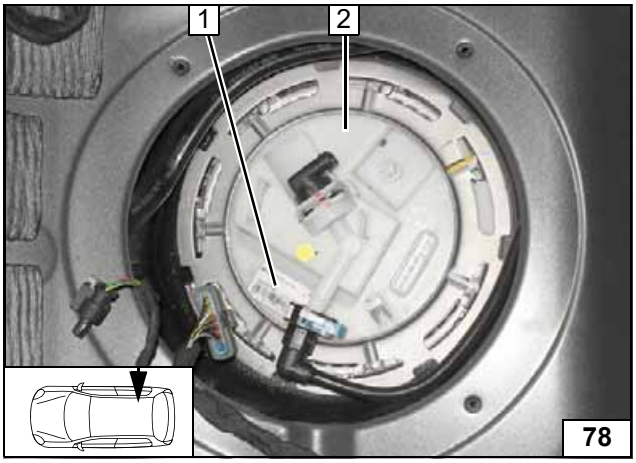
Work step F8.

Checking firm seating of FuelFix



1 FuelFix installed
2 Fuel line of FuelFix
3 Cable tie as tension relief

Securing fuel line

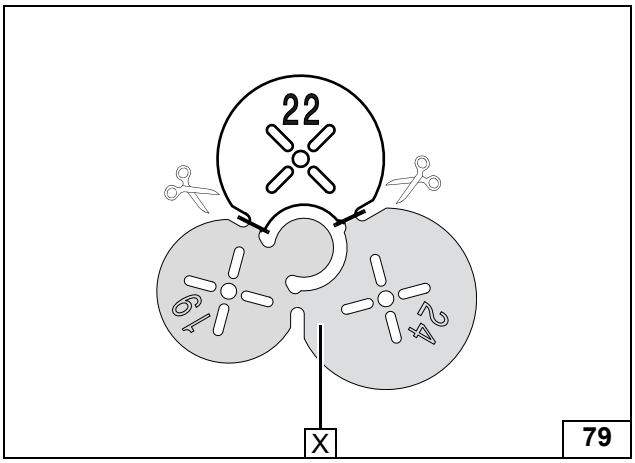


Tank fitting variant 2

Remove sticker **1**.

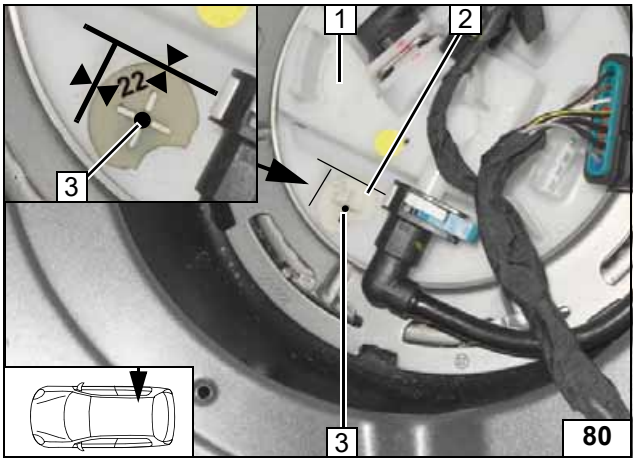
2 Tank fitting

Copying hole pattern



X = 

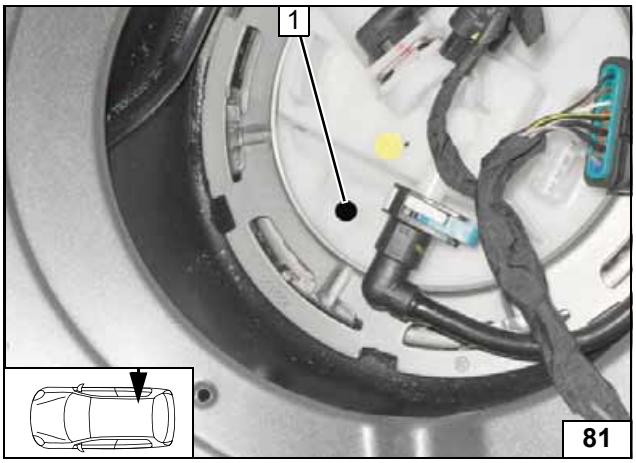
Preparing drilling template



Work steps F1 and F2.

1 Tank fitting
2 Position Ø22 drilling template as shown
3 Copy hole pattern

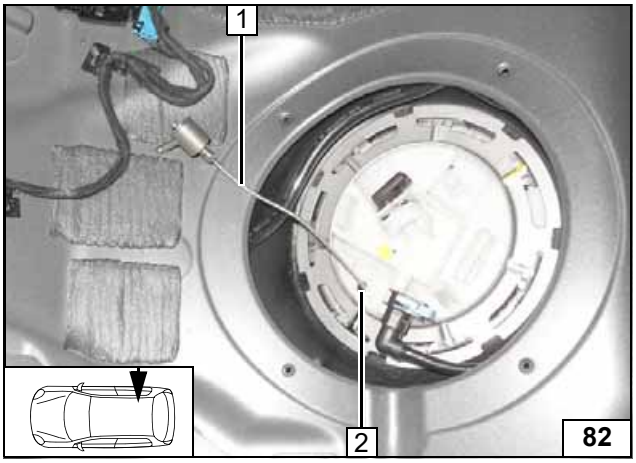
Copying hole pattern



Work step F3.

1 Hole made with provided drill

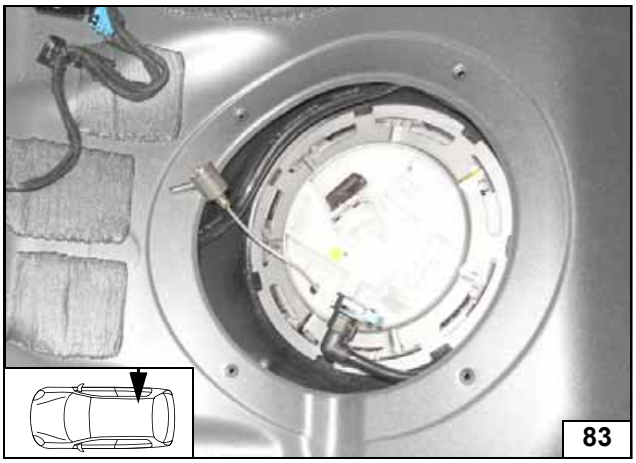
Hole for FuelFix



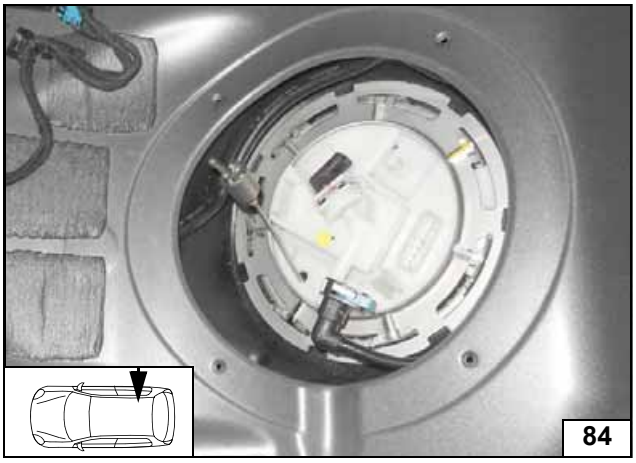
Work steps F4 and F5.

Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

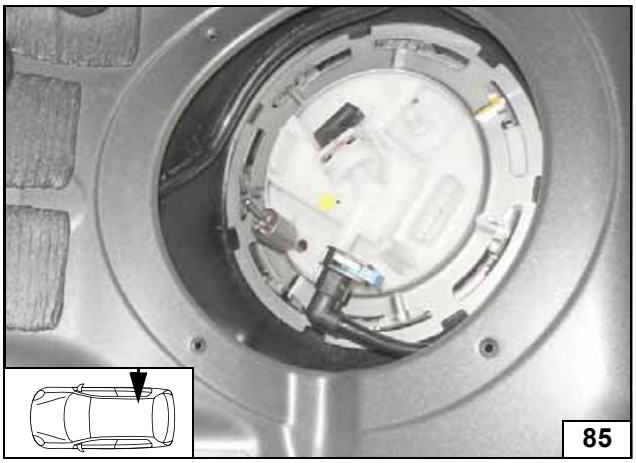
Inserting FuelFix



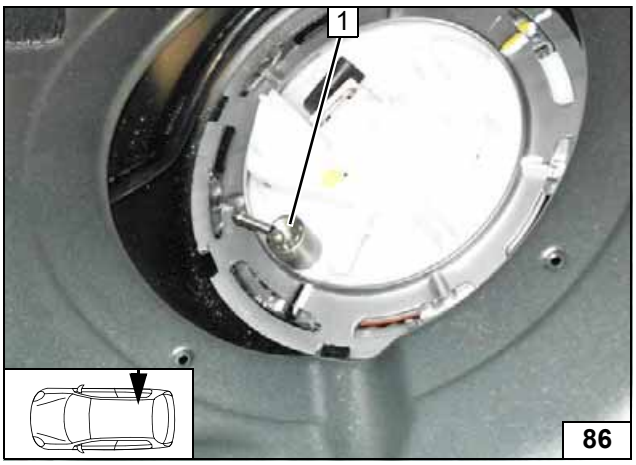
Inserting FuelFix



Inserting FuelFix



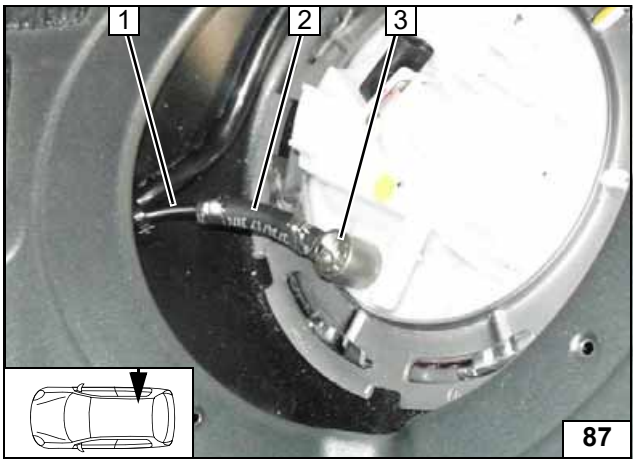
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

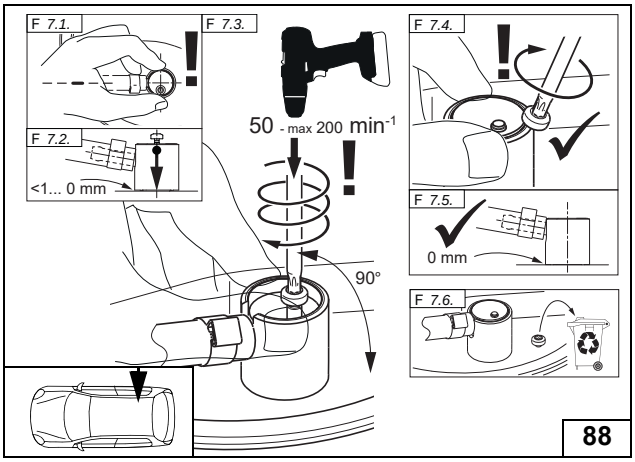
Aligning FuelFix



Work step F6.

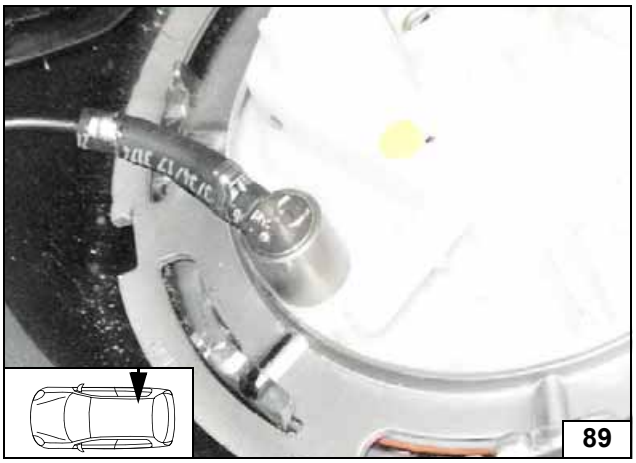
1 Fuel line
2 Hose section, Ø10 clamp [2x]
3 FuelFix

Connecting fuel line



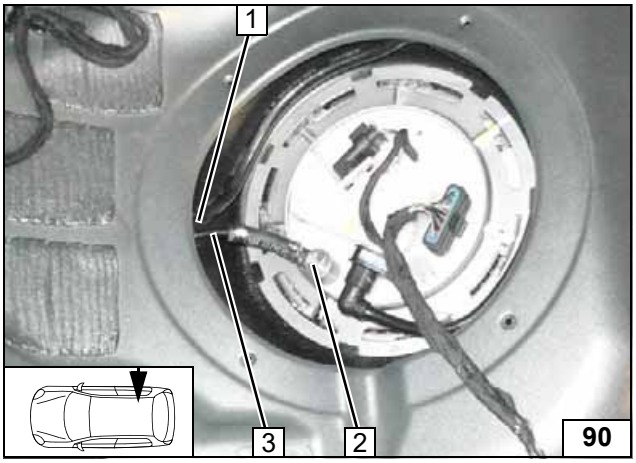
Work step F7.

Installing FuelFix



Work step F8.

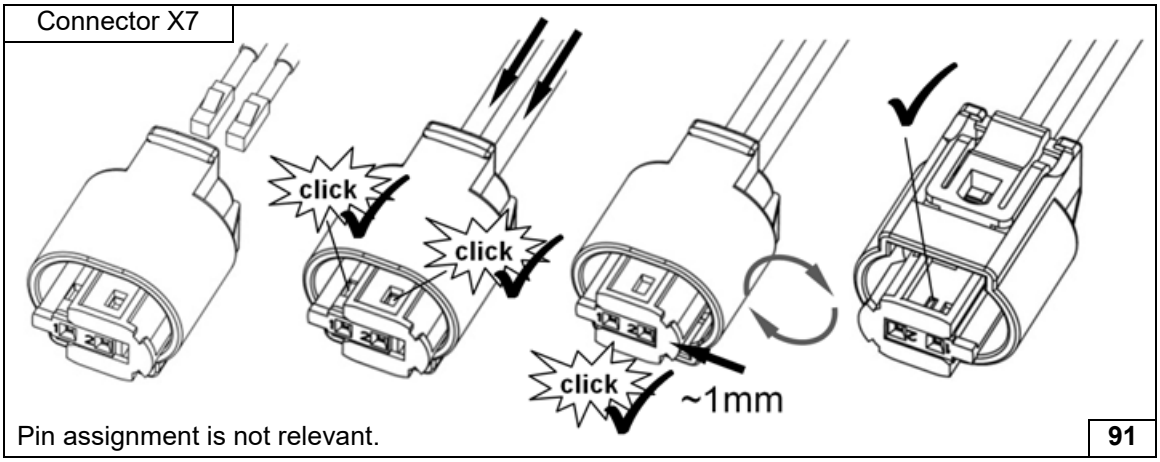
Checking firm seating of FuelFix



1 Cable tie as tension relief
2 FuelFix installed
3 Fuel line of FuelFix

Securing fuel line

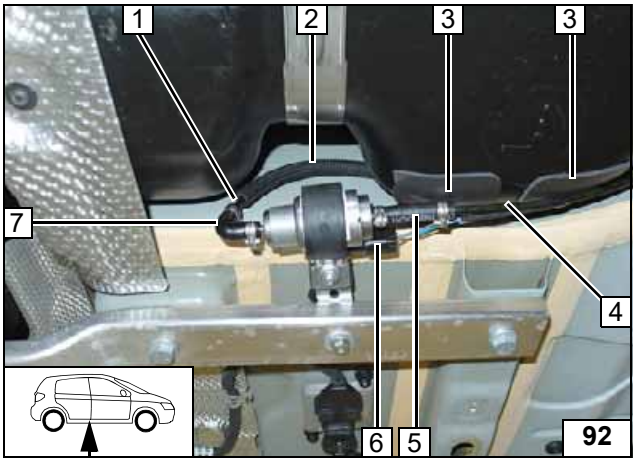
Connector X7



Pin assignment is not relevant.

91

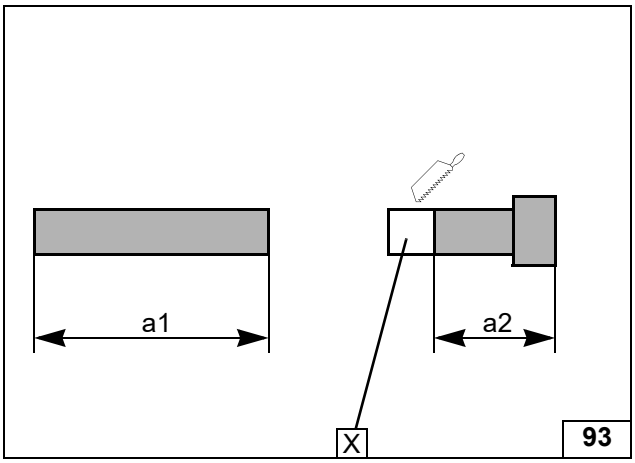
Completing fuel pump connector



Ensure sufficient distance from neighbouring components, correct if necessary. Slide 6x11 fabric protective hose **2** onto fuel line of FuelFix **1**.

3 Insulation protection strips [2x]
4 Heater fuel line
5 Hose section, Ø10 clamp [2x]
6 Fuel pump wiring harness, connector X7 mounted
7 90° moulded hose, Ø10 clamp [2x]

Fuel pump connection

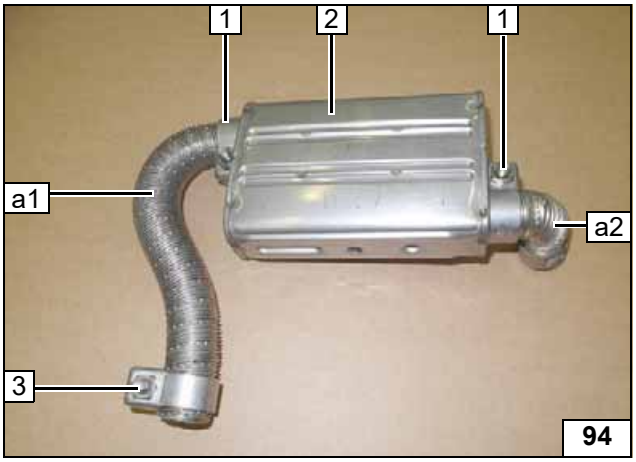


Exhaust gas

a1 = 230
a2 = 90

X = 

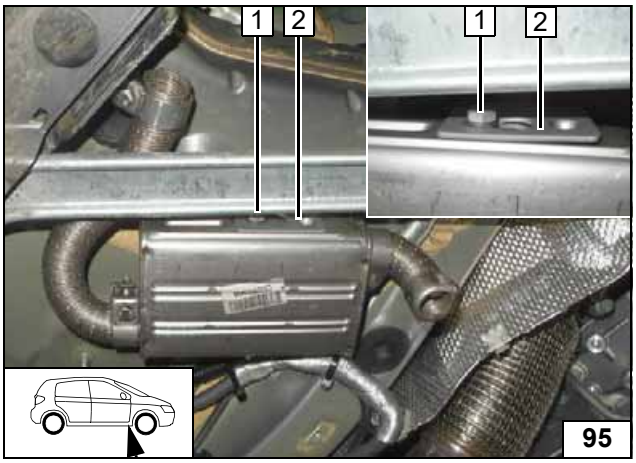
Preparing exhaust pipe



Shape exhaust pipe **a1** and **a2** as shown.

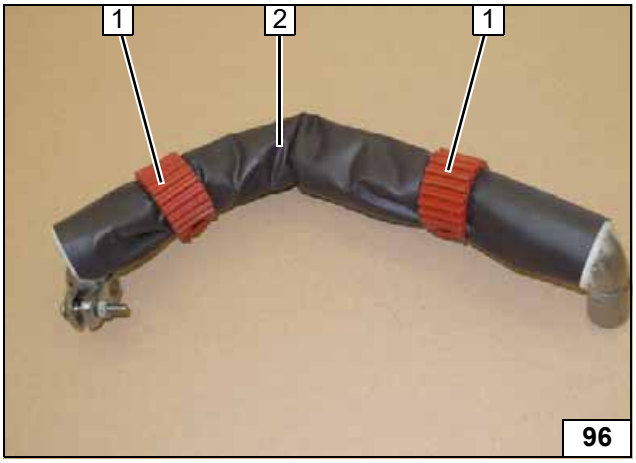
1 Hose clamp [2x]
2 Exhaust silencer
3 Hose clamp, loosely installed

Premounting exhaust silencer



1 M6x16 bolt, spring lock washer
2 Bracket of exhaust system

Mounting exhaust silencer



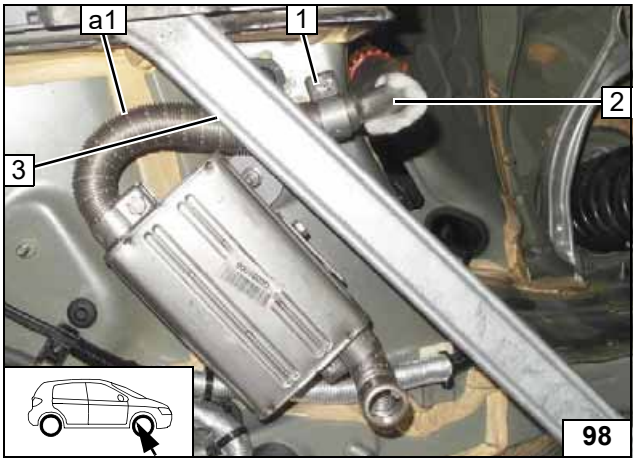
Turn locking device of silicone band **1** [2x] as shown.

2 Complete exhaust tube

Checking exhaust tube

1 Tighten hose clamp

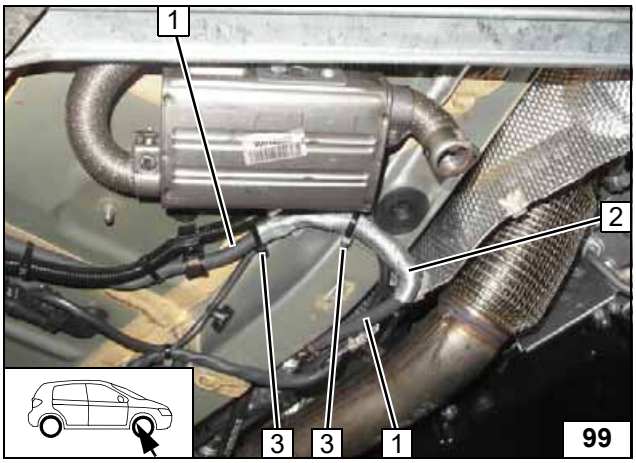
Installing exhaust tube



Check that there is freedom of movement between exhaust pipe **a1** and cross member at position **3** , correct if necessary.

1 Tighten hose clamp
2 Exhaust tube

Connecting exhaust tube and exhaust pipe a1



Only for vehicles with additional line (depends on the equipment) **1!**

Slit 300, Ø14.5 heat protection hose **2** lengthwise, slide it over original vehicle line **1** and secure with cable tie **3** [2x].

Installing heat protection hose

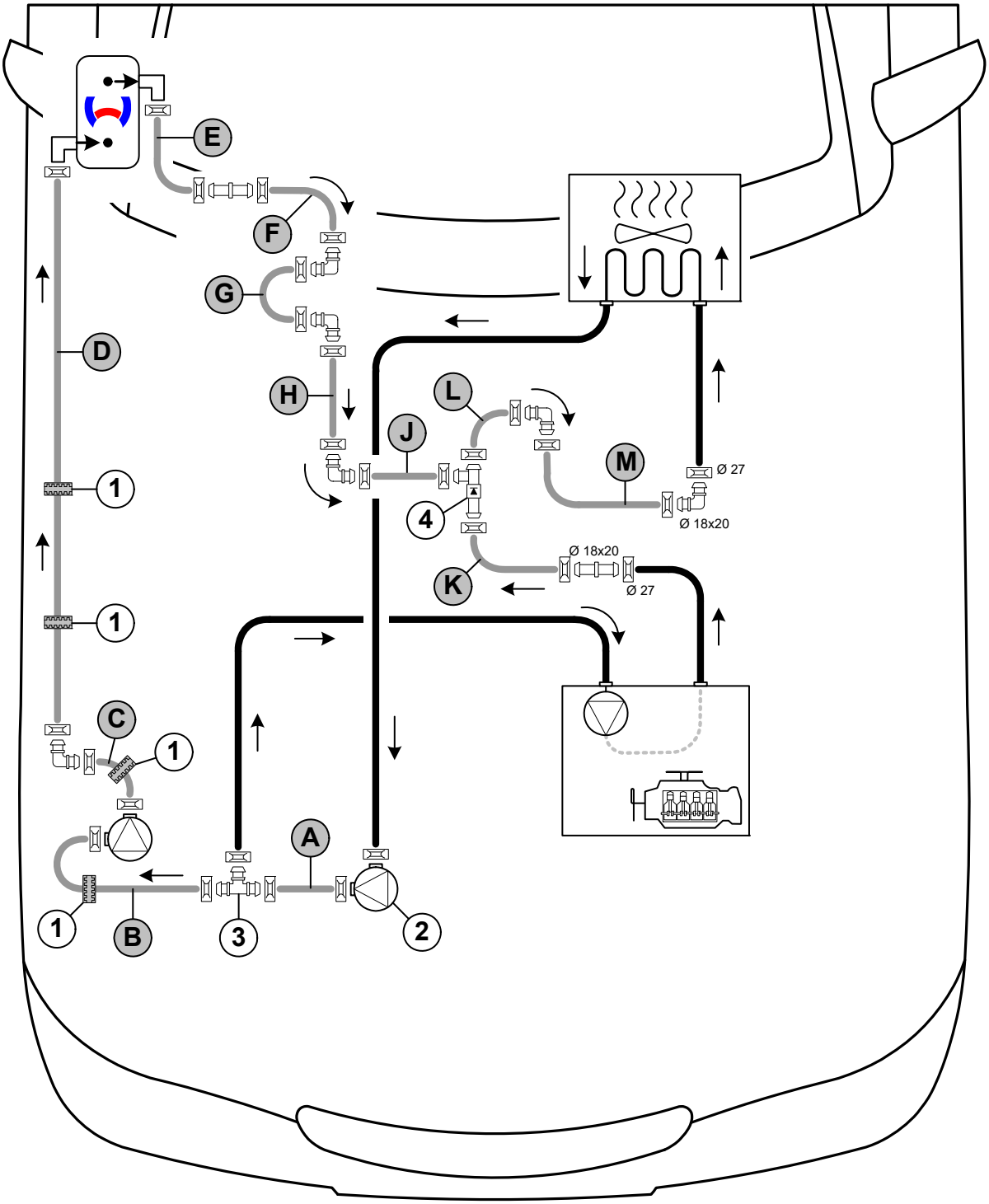
Coolant circuit for C-Class

C-Class, with residual heat pump, except for C200d

Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘island’ circuit and based on the following diagram:

Hose routing diagram



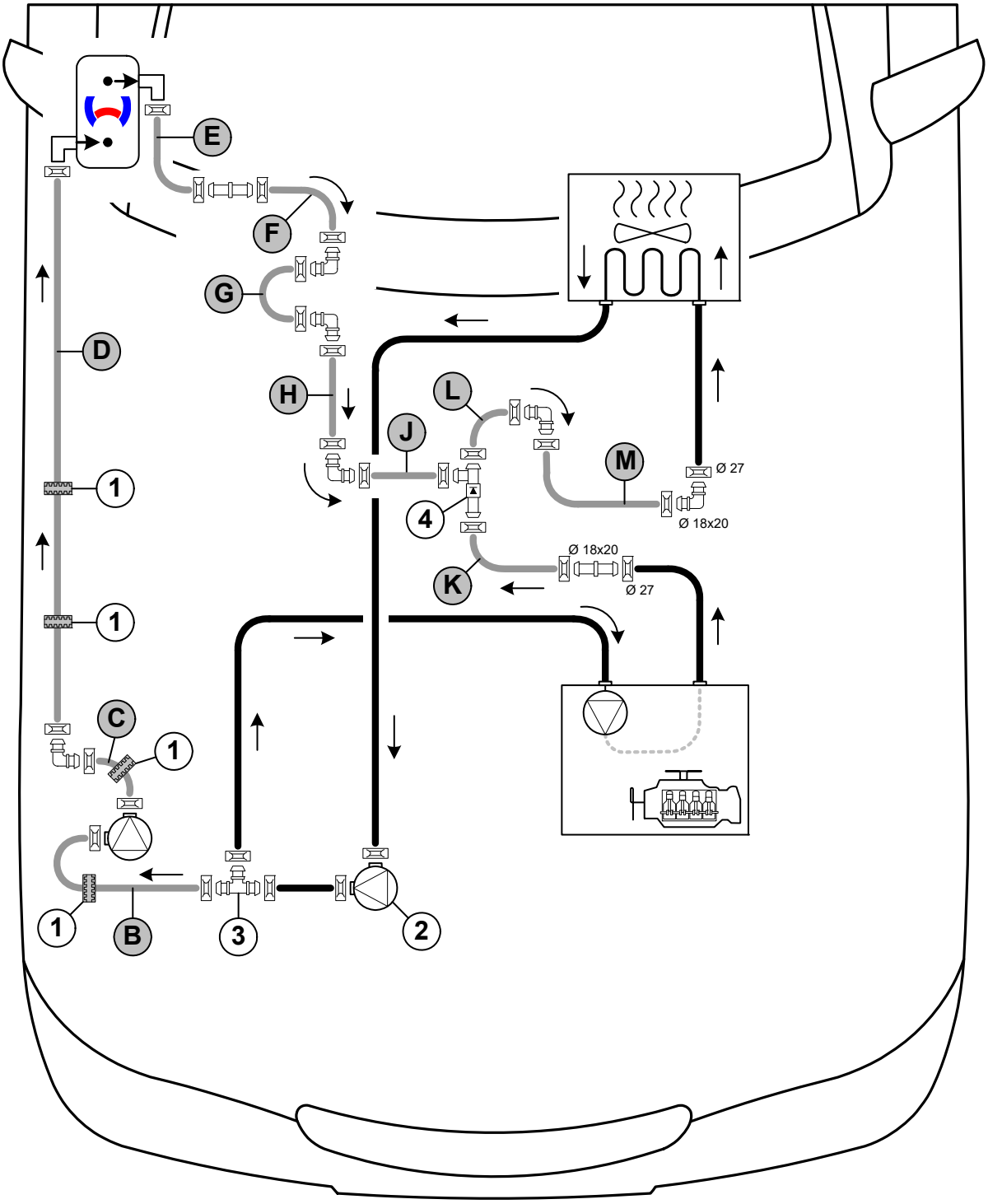
1 = Black (sw) rubber isolator . **2** = Original vehicle residual heat pump **3** = T-piece **4** = Non-return valve .
All spring clips without a specific designation = Ø25.
All connecting pipes without a specific designation and = Ø18x18.

C-Class, with residual heat pump, C200d only

Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘island’ circuit and based on the following diagram:

Hose routing diagram



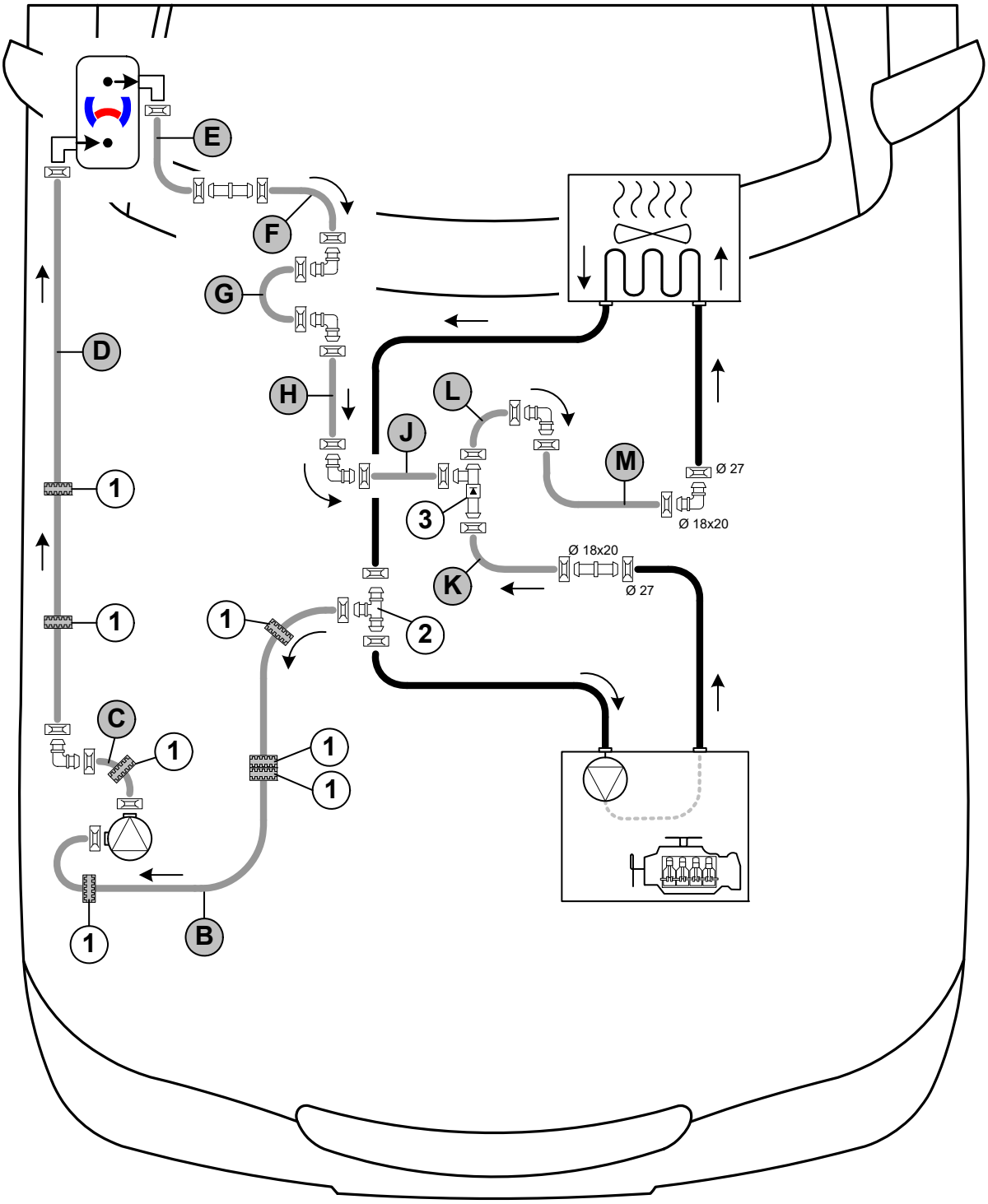
1 = Black (sw) rubber isolator . **2** = Original vehicle residual heat pump **3** = T-piece **4** = Non-return valve .
All spring clips without a specific designation = Ø25.
All connecting pipes without a specific designation and = Ø18x18.

C-Class, without residual heat pump

Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘island’ circuit and based on the following diagram:

Hose routing diagram

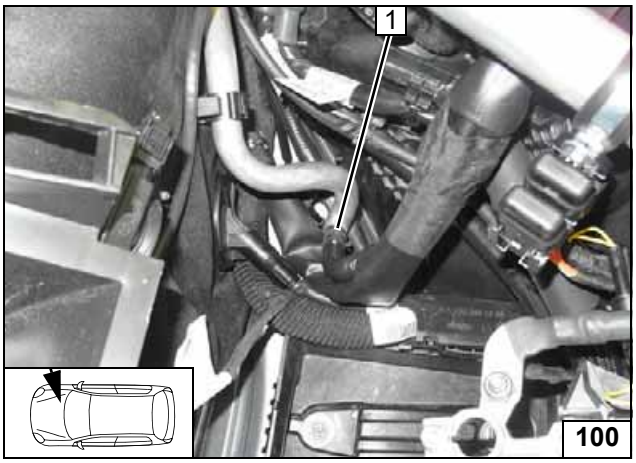


1 = Black (sw) rubber isolator . **2** = T-piece **3** = Non-return valve .

All spring clips without a specific designation = Ø25.
All connecting pipes without a specific designation and = Ø18x18.

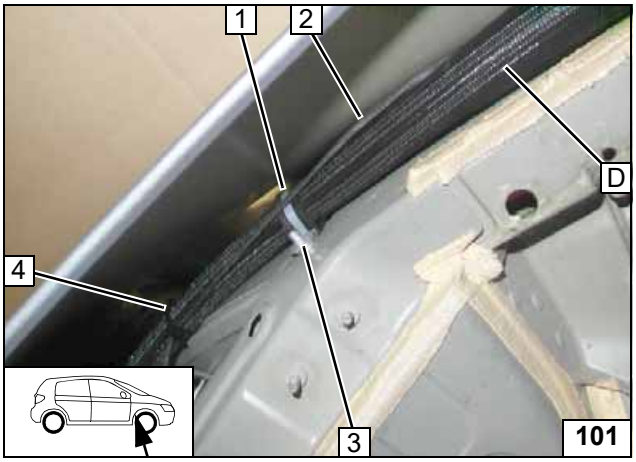
Coolant system integration for C-Class

All vehicles



Align clamp **1** (if present) as shown (turn locking device downwards).

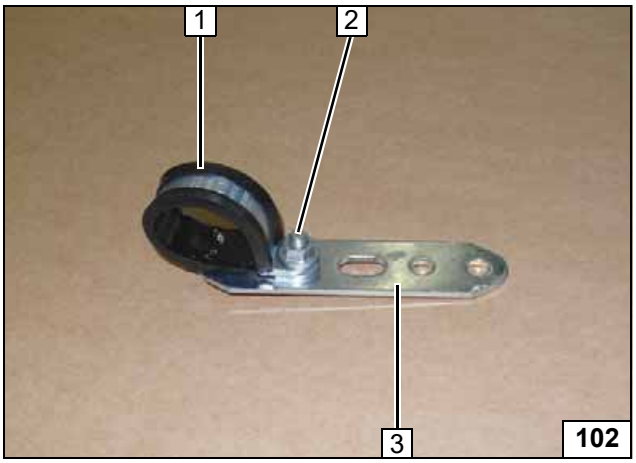
Aligning clamp



Secure hose **D** using Ø29 rubber-coated p-clamp **1**.

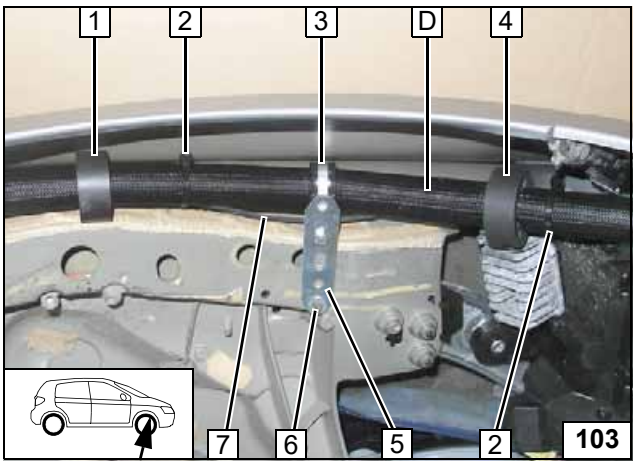
2 Coolant pump wiring harness
3 Original vehicle stud bolt, plate nut
4 Cable tie

Routing wheel well



1 Ø29 rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

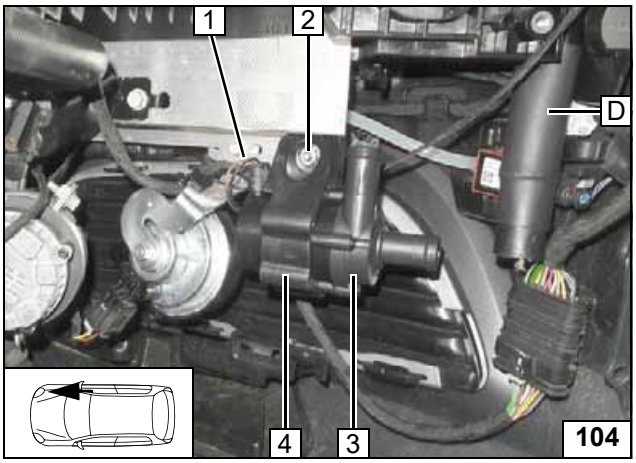
Premounting perforated bracket



Route hose **D** through Ø29 rubber-coated p-clamp **3**.

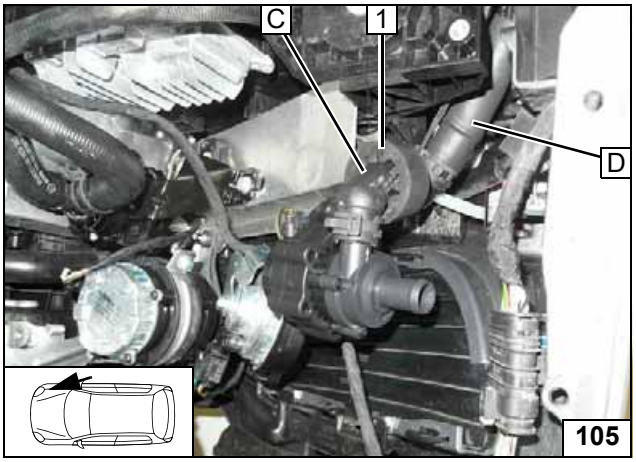
1 Slide on black (sw) rubber isolator and align
2 Cable tie
4 Slide on black (sw) rubber isolator and align with control unit
5 Perforated bracket
6 M4x16 bolt, spring lock washer, large diameter washer on M4 rivet nut
7 Coolant pump wiring harness

Routing wheel well



1 Coolant pump wiring harness
2 M6x25 bolt, flanged nut, existing hole
3 Coolant pump
4 Coolant pump mount

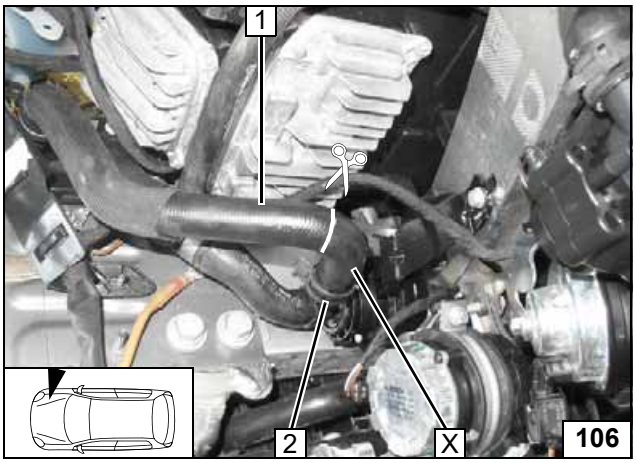
Mounting coolant pump



C-Class, with residual heat pump

1 Slide on black (sw) rubber isolator

Coolant pump connection



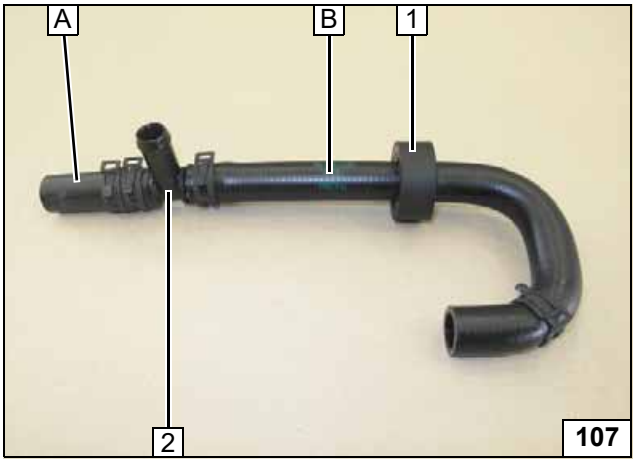
Except C200d

Cut original vehicle hose of engine inlet / residual heat pump **1** at the marking.

2 Discard original vehicle spring clip

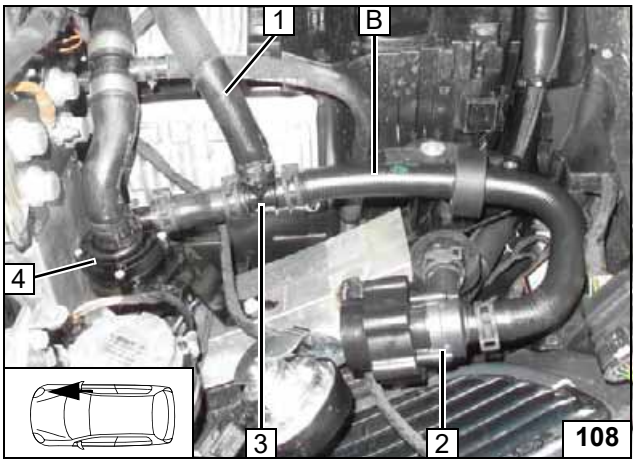
X =

Cutting point



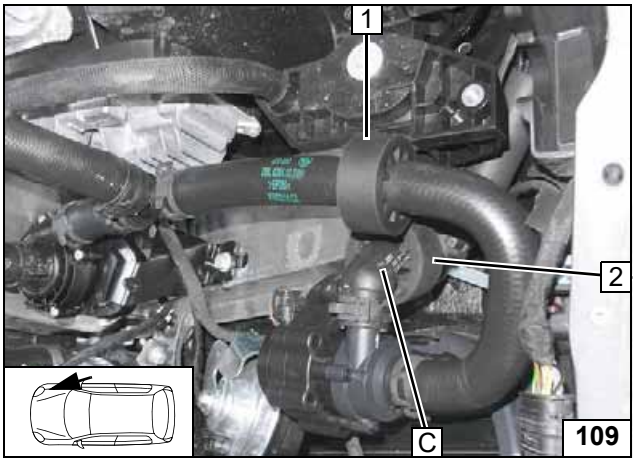
1 Slide on black (sw) rubber isolator
2 T-piece

Premounting hose group



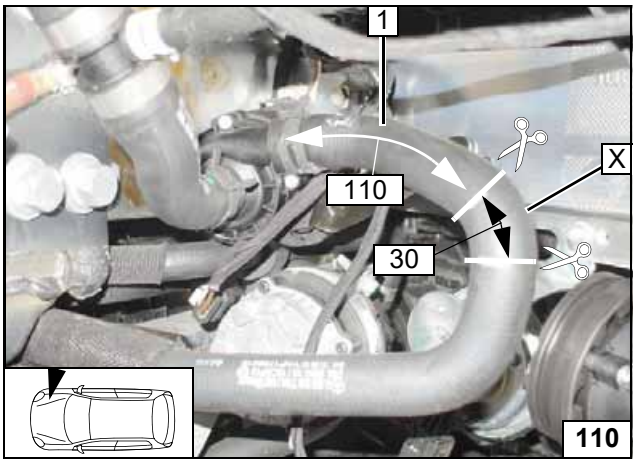
1 Hose section of engine inlet
2 Coolant pump
3 T-piece
4 Residual heat pump

Mounting hose group



Align black (sw) rubber isolator **1** with black (sw) rubber isolator **2** of hose **C**.

Aligning rubber isolator

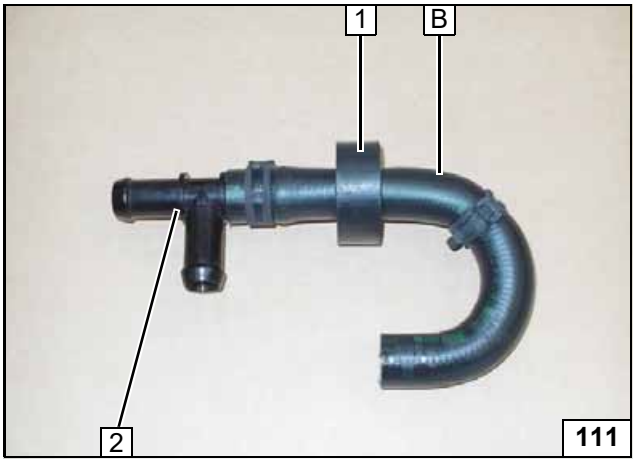


C200d only

Cut original vehicle hose of engine inlet / residual heat pump **1** at the markings.

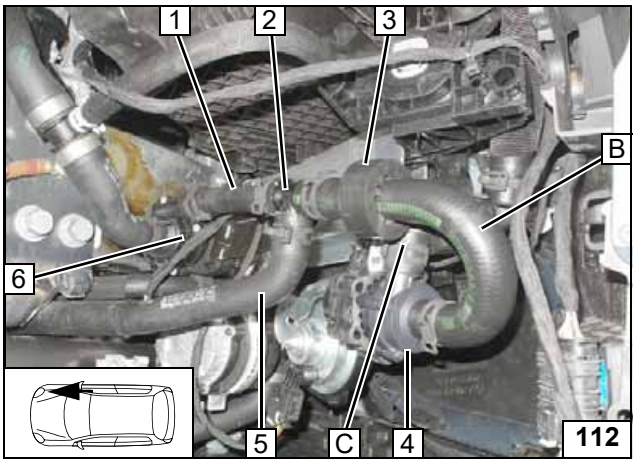
X =

Cutting point



1 Slide on black (sw) rubber isolator
2 T-piece

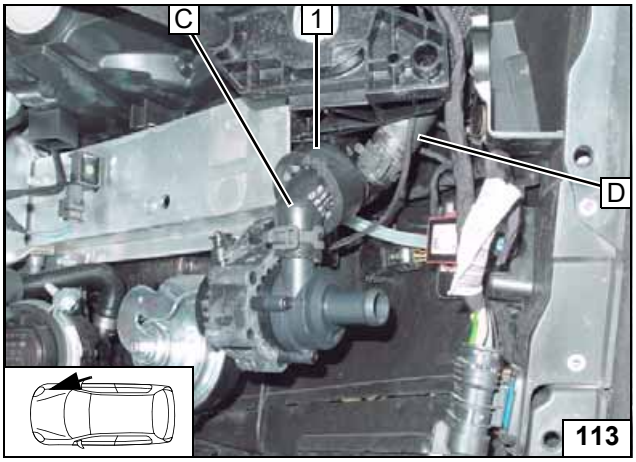
Premounting hose B



Align black (sw) rubber isolator **3** with hose **C**.

1 Hose section of residual heat pump inlet
2 T-piece
4 Coolant pump
5 Hose section of engine inlet
6 Residual heat pump

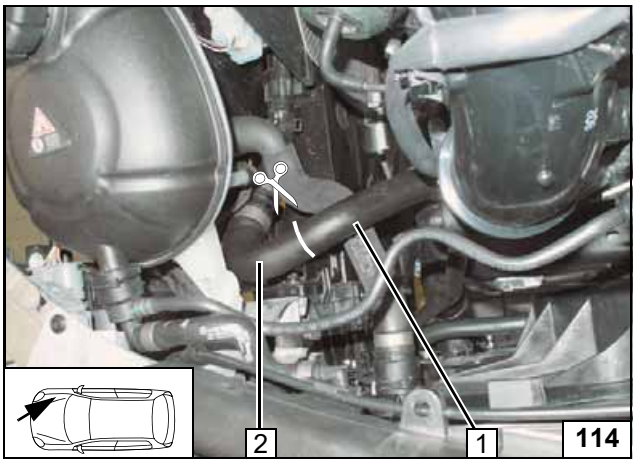
Mounting hose B



C-Class, without residual heat pump

1 Slide on black (sw) rubber isolator

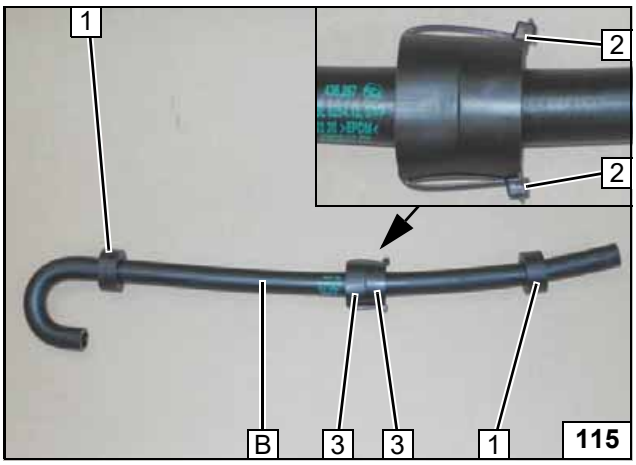
Coolant pump connection



Cut original vehicle engine inlet / heat exchanger outlet hose at the marking.

1 Hose section of engine inlet
2 Heat exchanger outlet hose section

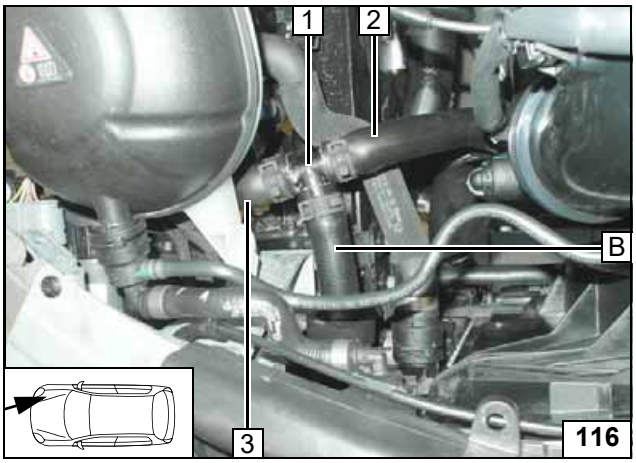
Cutting point



Connect black (sw) rubber isolators [2x] **3** using cable ties **2** [2x] as shown.

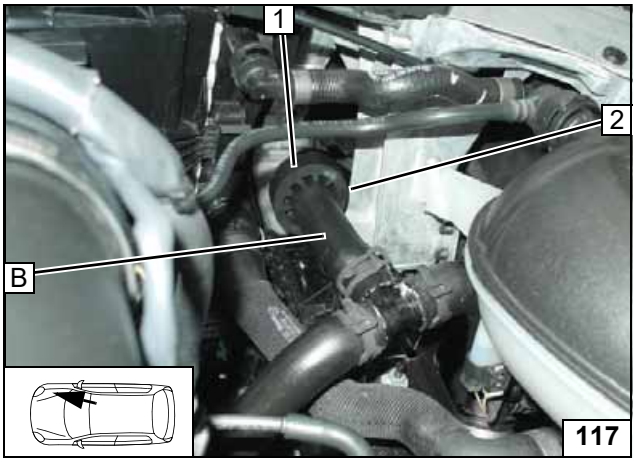
1 Black (sw) rubber isolator [2x]

Premounting hose B



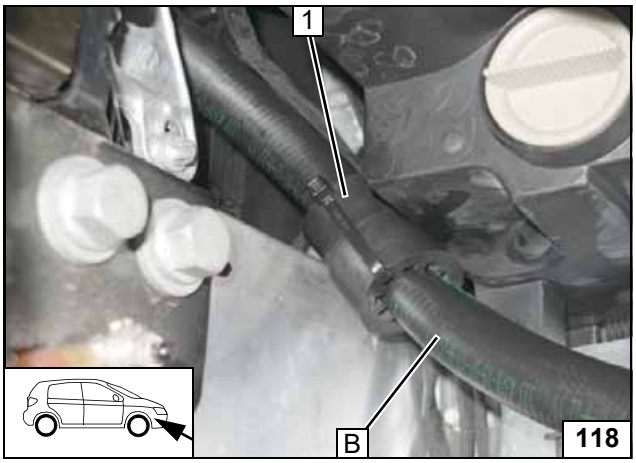
1 T-piece
2 Hose section of engine inlet
3 Heat exchanger outlet hose section

Installing hoses B and T-piece



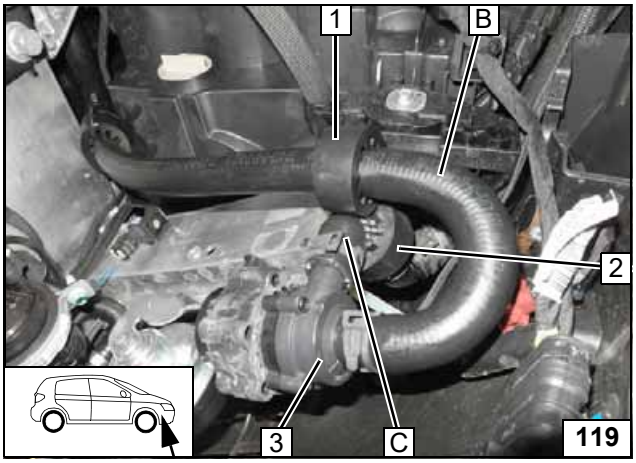
Align black (sw) rubber isolator **1** with original vehicle bracket at position **2**.

Aligning rubber isolator



Align black (sw) rubber isolator [2x] **1** as shown between frame side member and headlight housing.

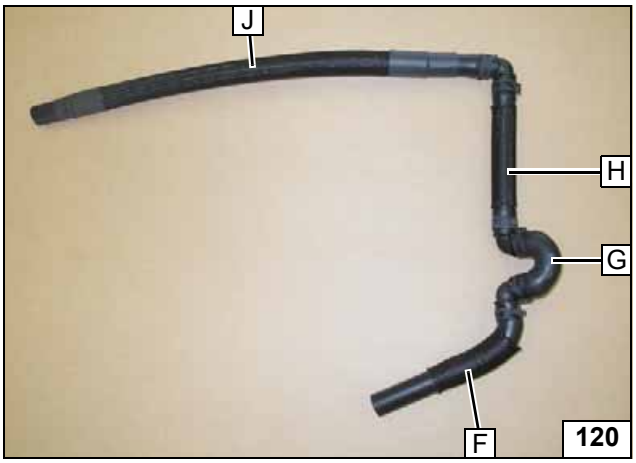
Aligning rubber isolator



Align black (sw) rubber isolator **1** with black (sw) rubber isolator **2** of hose **C**.

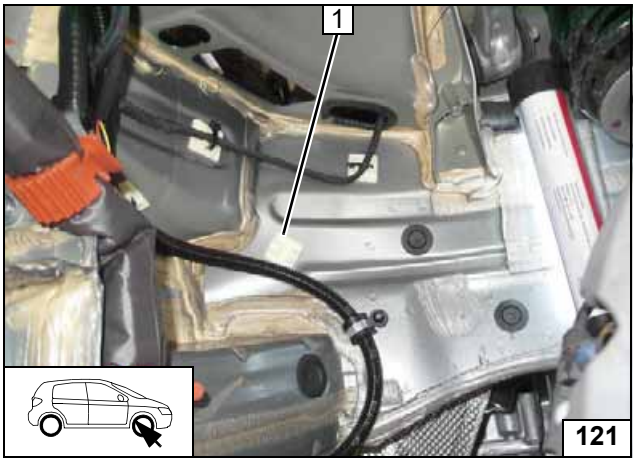
3 Coolant pump

Connection to coolant pump



C-Class, all vehicles

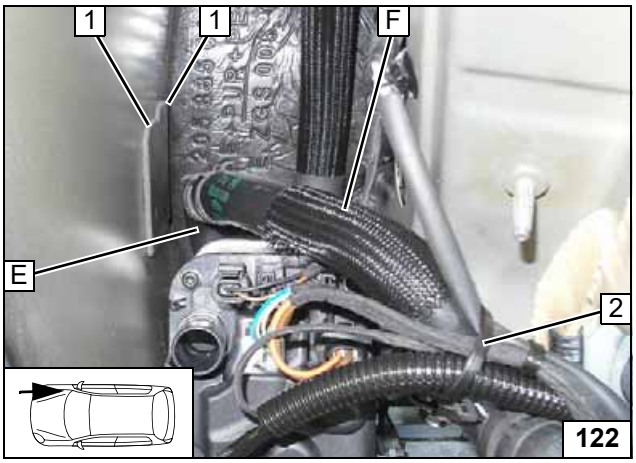
Premounting hose group



Degrease bonding surfaces.

1 Socket for fastening hose **J**

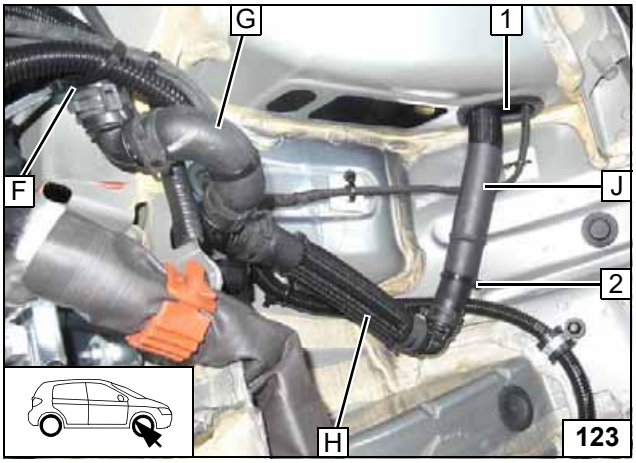
Sticking on socket



Cut insulation protection strip in half and stick the parts side by side in position **1** [2x].

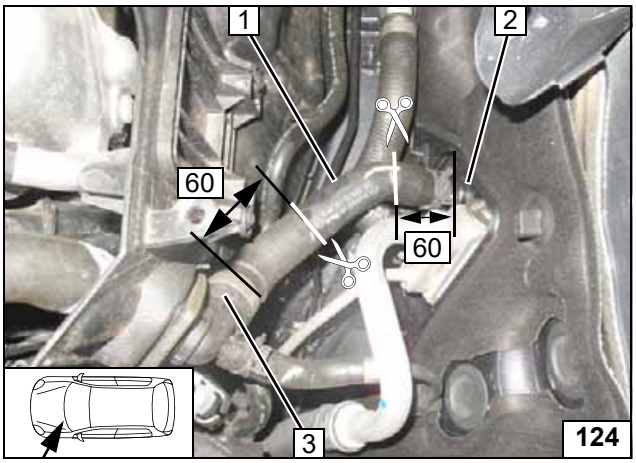
2 Cable tie

Connecting heater outlet



Route hose **J** through original vehicle pass through **1** in the water drain chamber and fasten to socket using cable tie **2**. Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

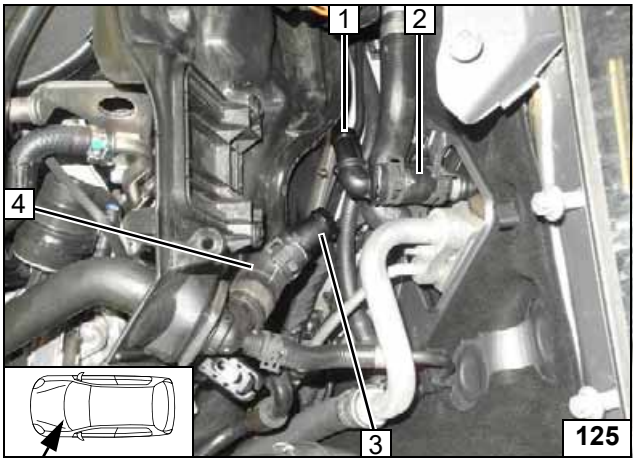
Routing hose group



Cut hose of engine outlet / heat exchanger inlet at the markings.

1 Discard hose section
2 Connection piece of heat exchanger inlet
3 Connection piece of engine outlet

Cutting point

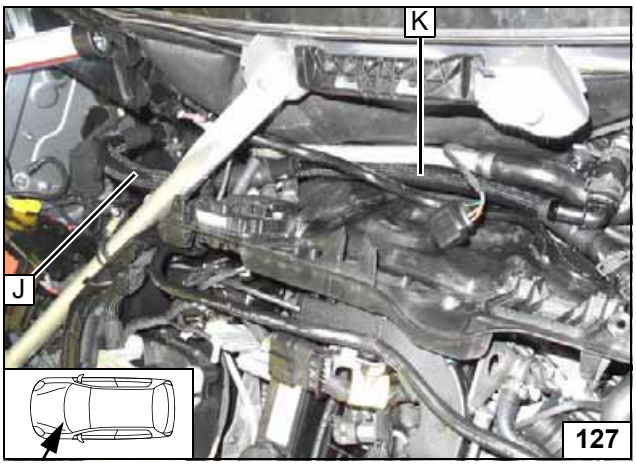


1 90°, Ø18x20 connecting pipe, Ø27 spring clip
2 Heat exchanger inlet hose section
3 Ø18x20 connecting pipe, Ø27 spring clip
4 Engine outlet hose section

Premounting connecting pipes

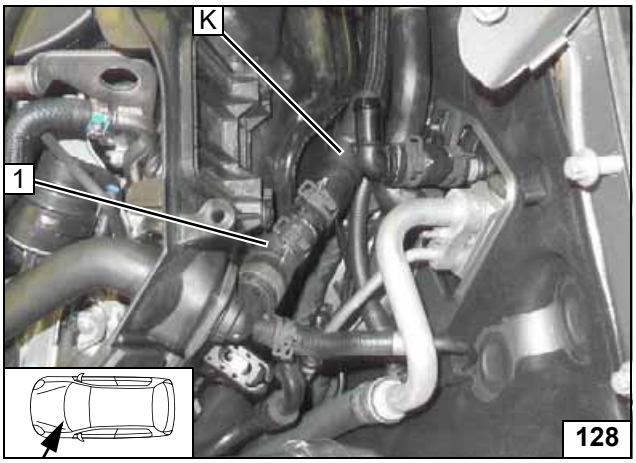
Check the direction of flow of non-return valve **1**!

Premounting hose group



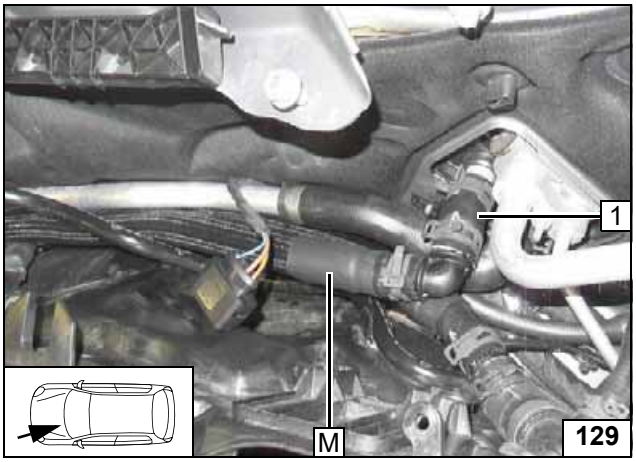
Position the hose group with non-return valve in the water drain chamber!

Routing hose group



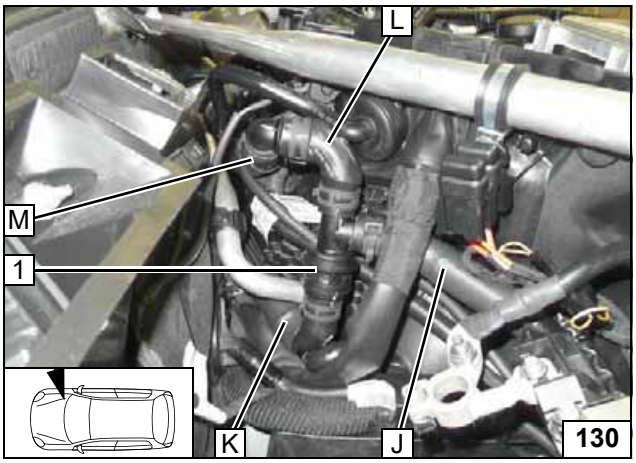
1 Engine outlet hose section

Connecting engine outlet



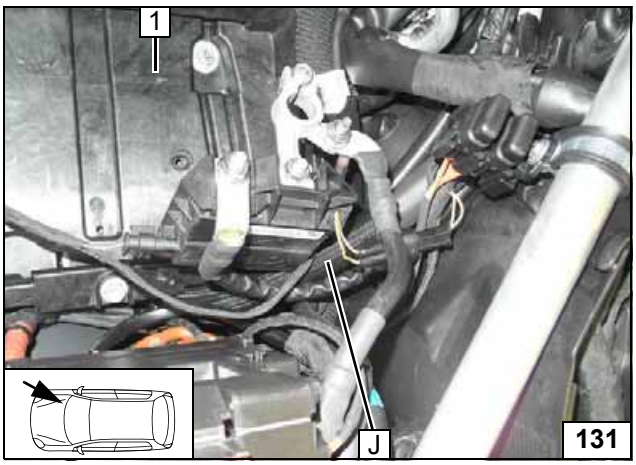
1 Heat exchanger inlet hose section

Heat exchanger inlet connection



1 Non-return valve

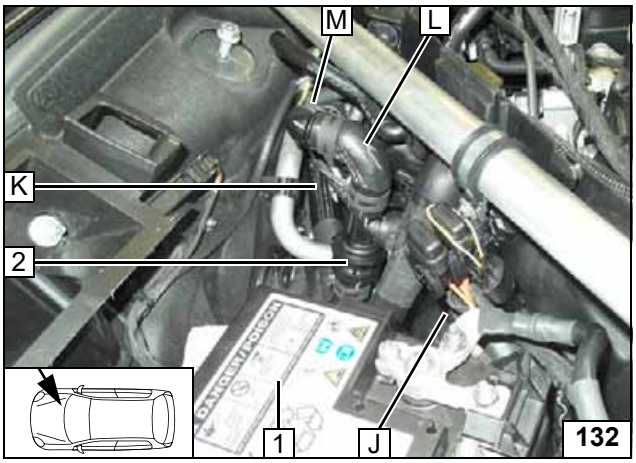
Connecting non-return valve



All vehicles except for C 200 EQ Boost

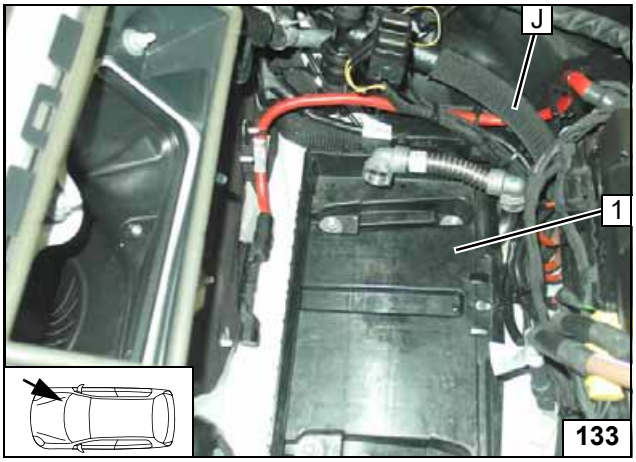
Install battery carrier of 12V battery **1**. Align hose **J** as shown, ensure sufficient distance, correct if necessary.

Checking distance



Install 12V battery **1**.
Align hoses and non-return valve **2**, ensure sufficient distance, correct if necessary.

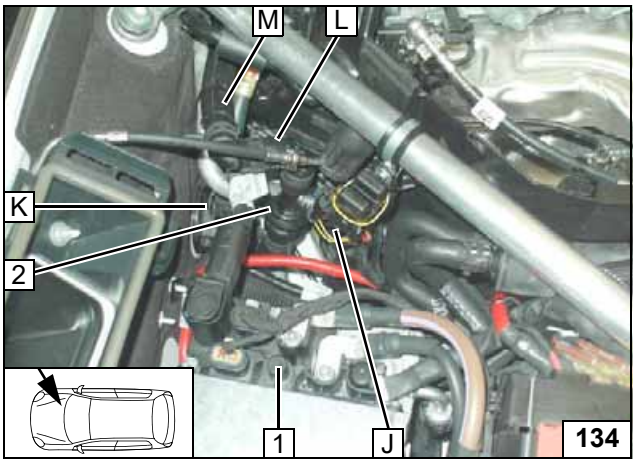
Checking distance



C 200 EQ Boost only

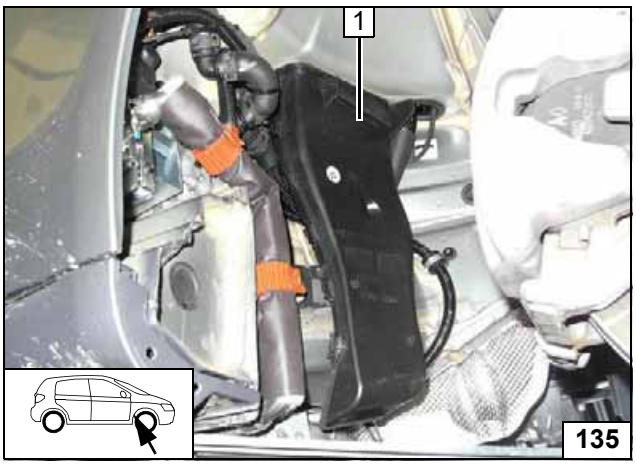
Install battery carrier of 48V battery **1**.
Align hose **J** as shown, ensure sufficient distance, correct if necessary.

Checking distance



Install 48V battery **1**.
Align hoses and non-return valve **2**, ensure sufficient distance, correct if necessary.

Checking distance



All vehicles

Install water drain chamber outlet **1**. Ensure sufficient distance from neighbouring components, correct if necessary.

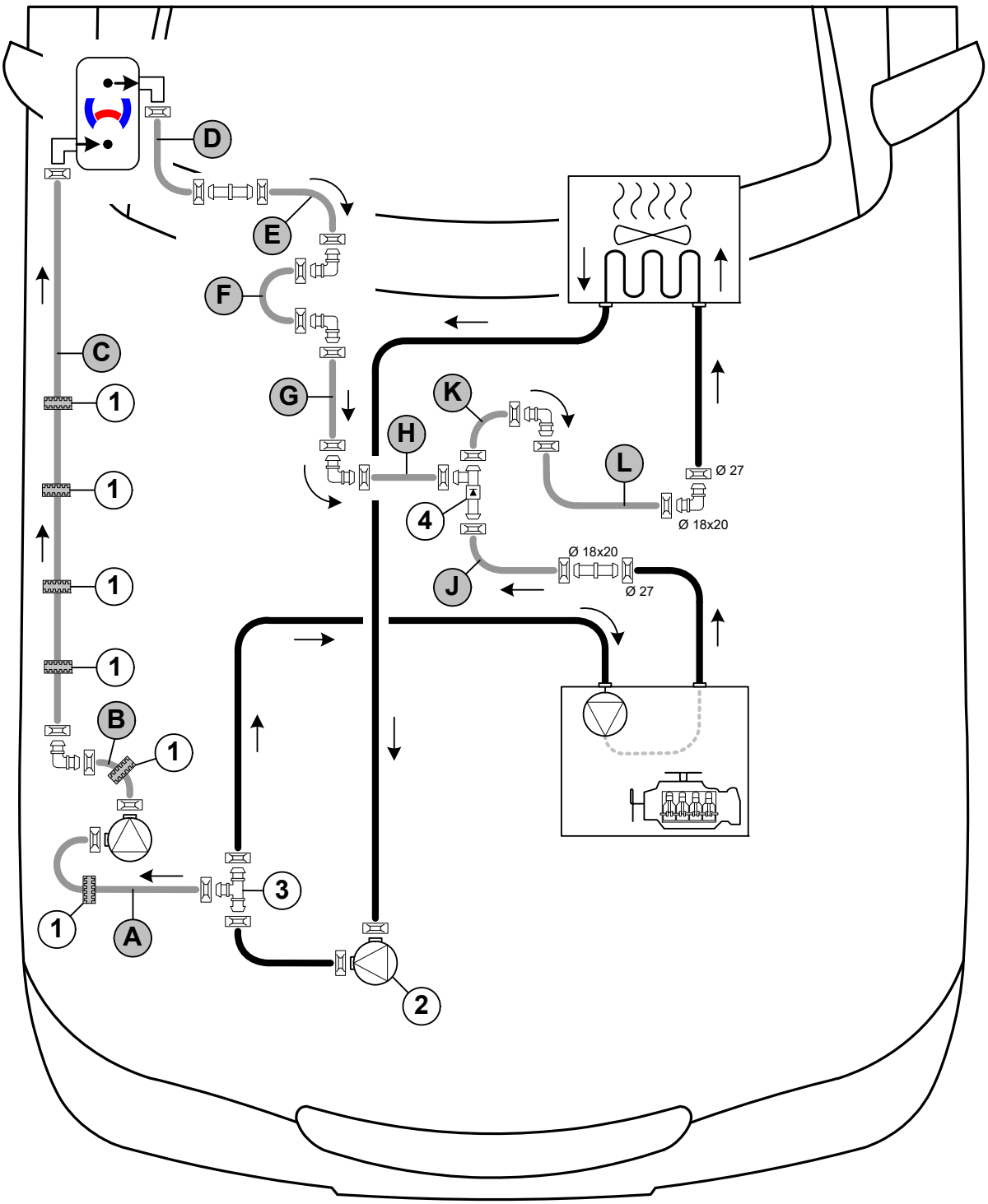
Installing water drain chamber outlet

Coolant circuit for GLC

Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

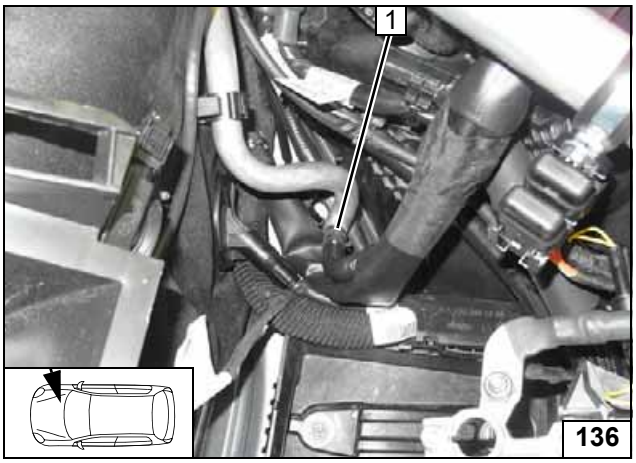
The connection should be modelled on an ‘island’ circuit and based on the following diagram:

Hose routing diagram



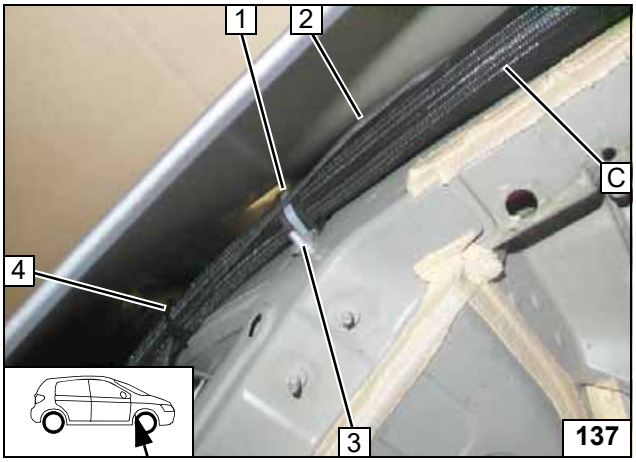
All spring clips without a specific designation = Ø25.
All connecting pipes without a specific designation and = Ø18x18.
1 = Black (sw) rubber isolator.
2 = Original vehicle residual heat pump **3** = T-piece **4** = Non-return valve.

Coolant system integration for GLC



Aligning clamp

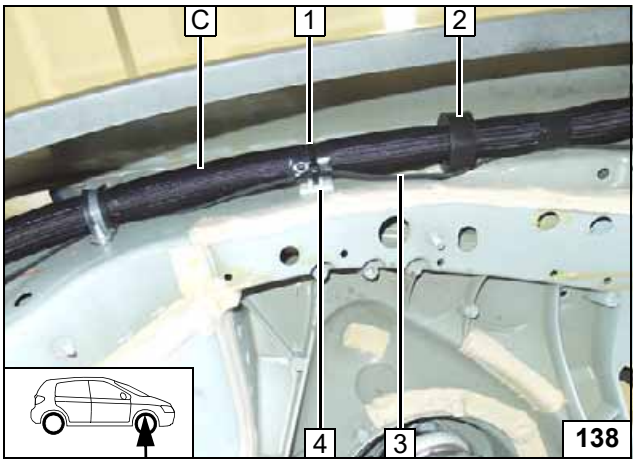
Align clamp **1** as shown (turn locking device downwards).



Routing wheel well

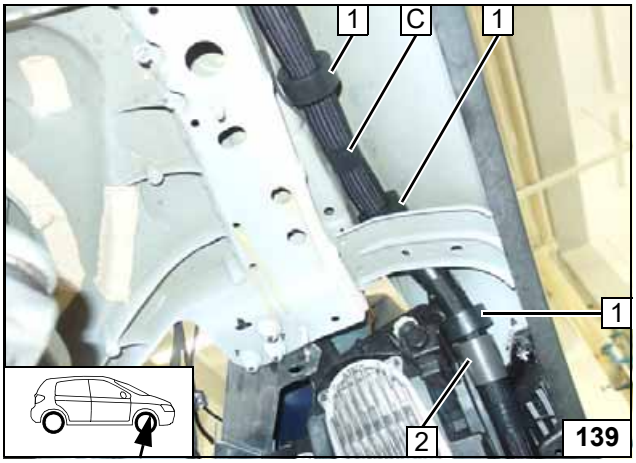
Secure hose **C** using Ø29 rubber-coated p-clamp **1**.

2 Coolant pump wiring harness
3 Original vehicle stud bolt, plate nut
4 Cable tie



Routing wheel well

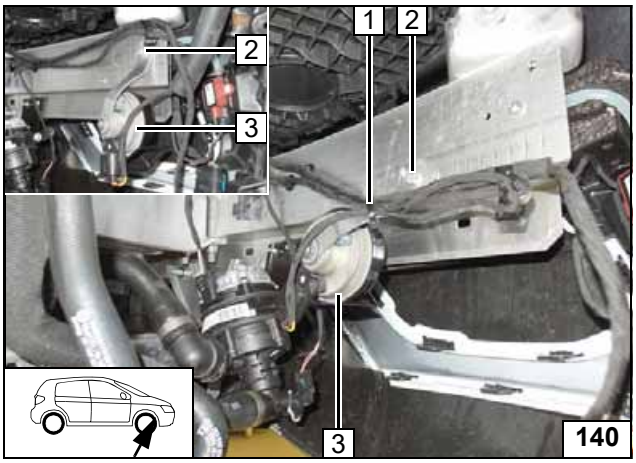
1 Cable tie
2 Slide on black (sw) rubber isolator and align
3 Coolant pump wiring harness
4 Self-adhesive socket



Routing wheel well

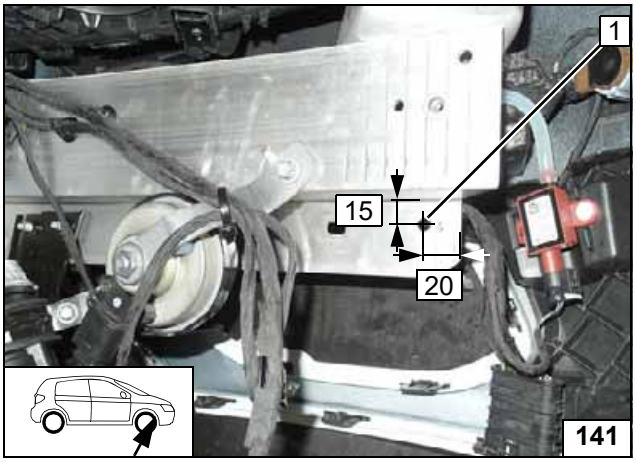
Stick self-adhesive foam rubber **2** as rub protection around hose **C**.

1 Slide on black (sw) rubber isolator and align [3x]



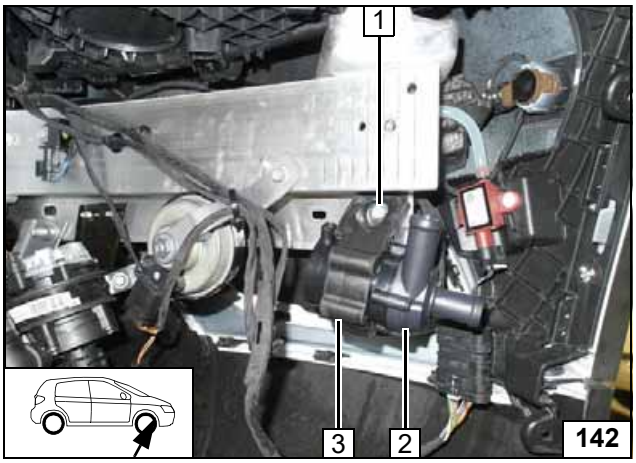
1 Cable tie
2 Original vehicle bolt on original vehicle threaded hole
3 Horn

Moving horn



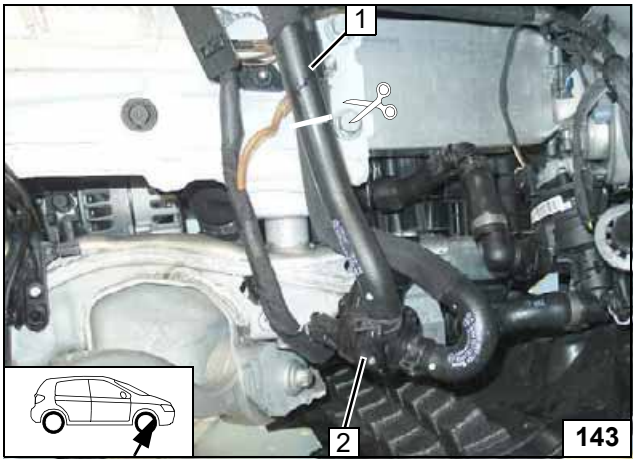
1 Ø7 hole

Copying hole pattern



1 M6x25 bolt, flanged nut
2 Coolant pump
3 Coolant pump mount

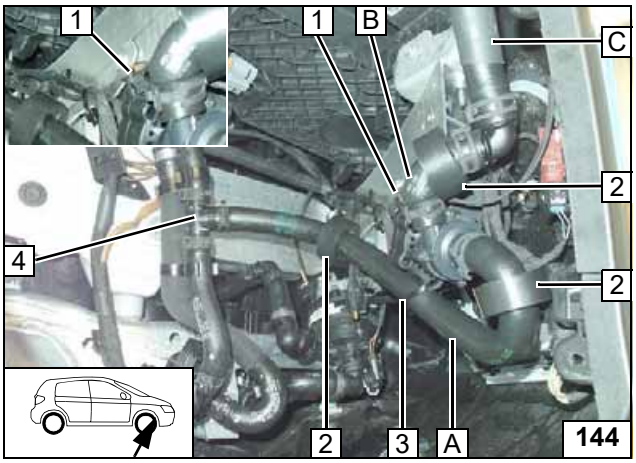
Mounting coolant pump



Cut original vehicle hose of engine inlet / residual heat pump **1** at the marking.

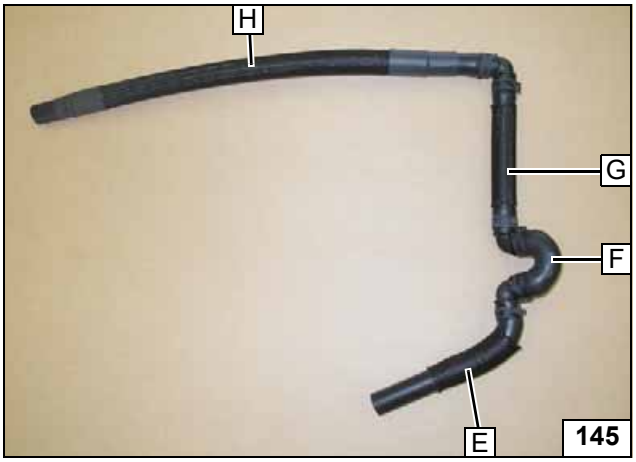
2 Residual heat pump

Cutting point

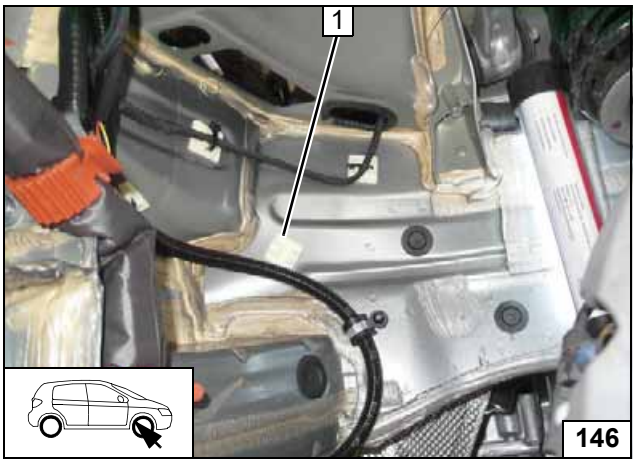


1 Connector of coolant pump wiring harness
2 Slide on black (sw) rubber isolator and align [3x]
3 Cable tie
4 T-piece

Connecting coolant pump



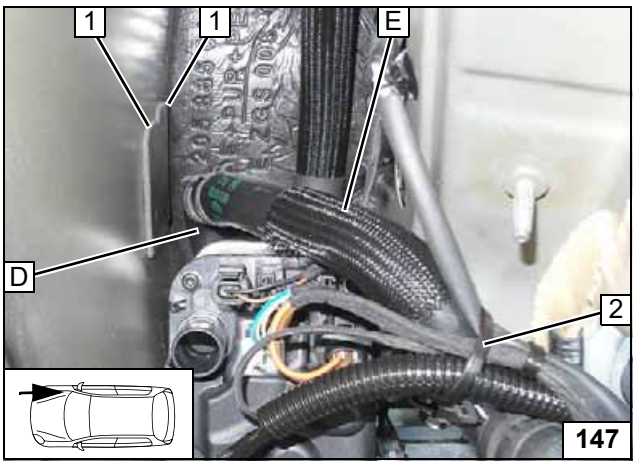
Premounting hose group



Degrease bonding surfaces.

1 Socket for fastening hose **J**

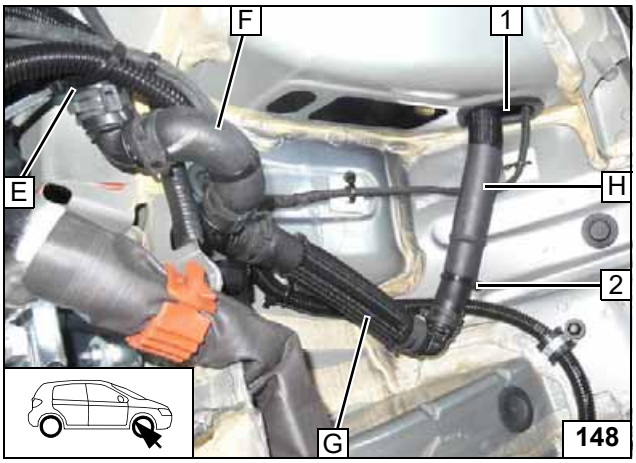
Sticking on socket



Cut insulation protection strip in half and stick the parts side by side in position **1** [2x].

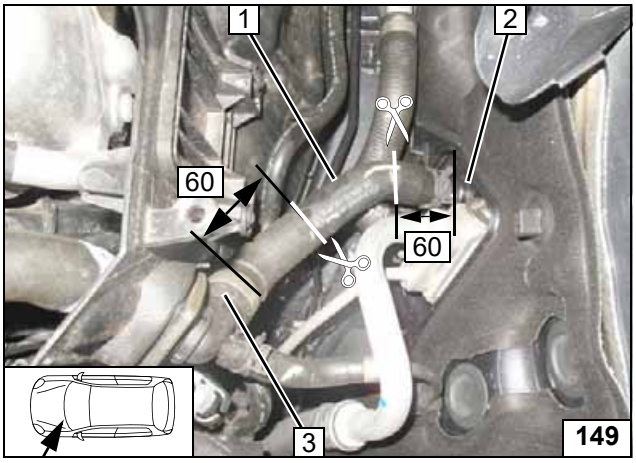
2 Cable tie

Connecting heater outlet



Route hose **H** through original vehicle pass through **1** in the water drain chamber and fasten to socket using cable tie **2**. Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

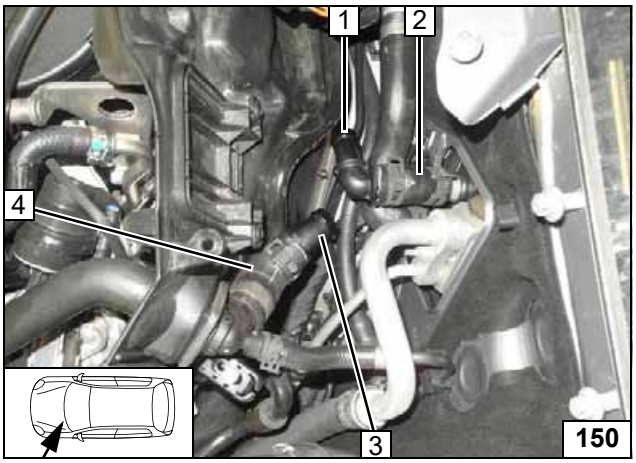
Routing hose group



Cut hose of engine outlet / heat exchanger inlet at the markings.

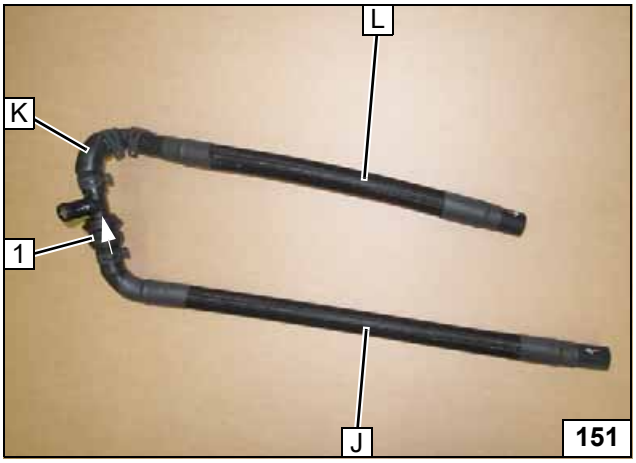
1 Discard hose section
2 Connection piece of heat exchanger inlet
3 Connection piece of engine outlet

Cutting point



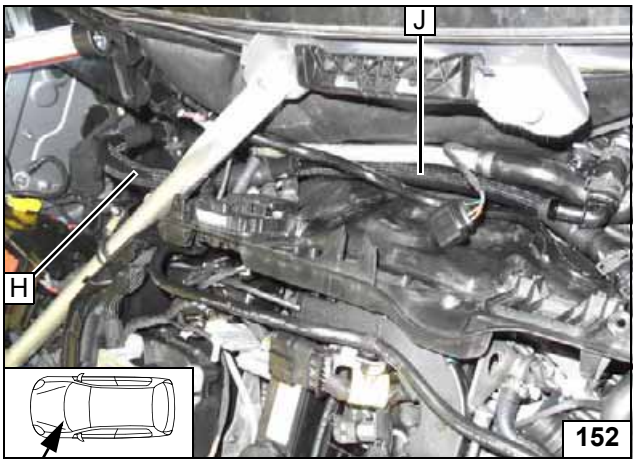
1 90°, Ø18x20 connecting pipe, Ø27 spring clip
2 Heat exchanger inlet hose section
3 Ø18x20 connecting pipe, Ø27 spring clip
4 Engine outlet hose section

Premounting connecting pipes



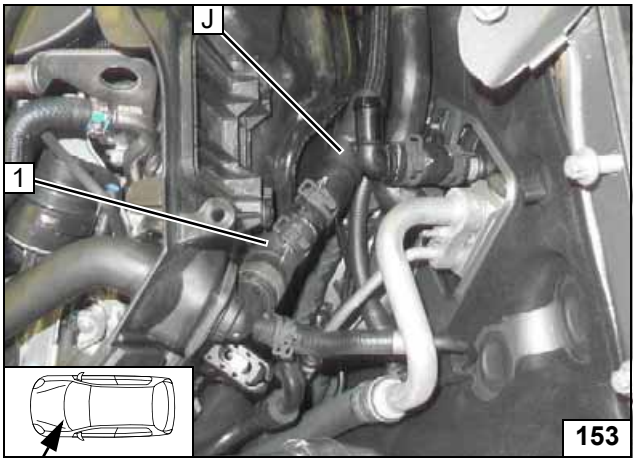
Check the direction of flow of non-return valve **1**!

Premounting hose group



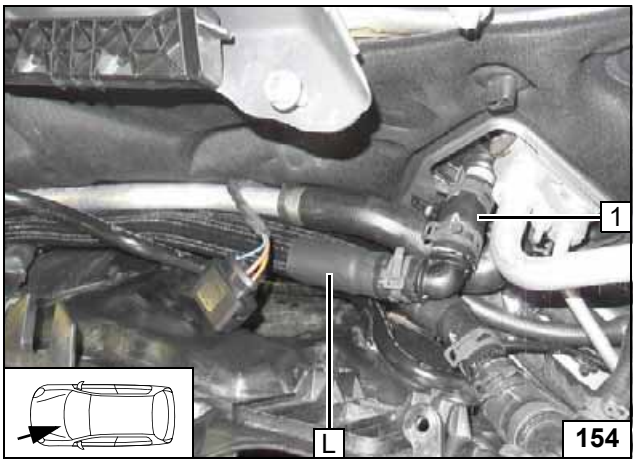
Position the hose group with non-return valve in the water drain chamber!

Routing hose group



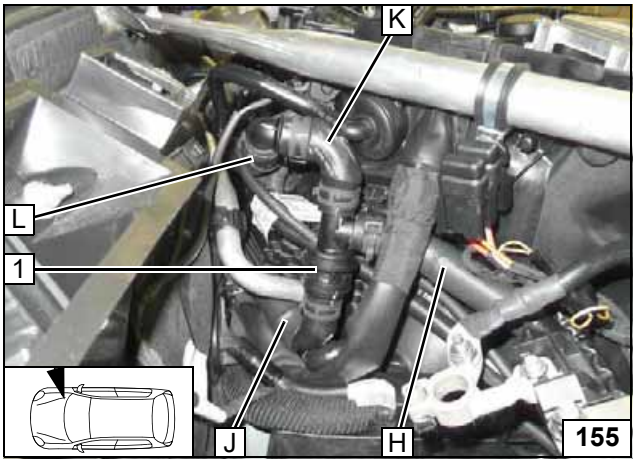
1 Engine outlet hose section

Connecting engine outlet



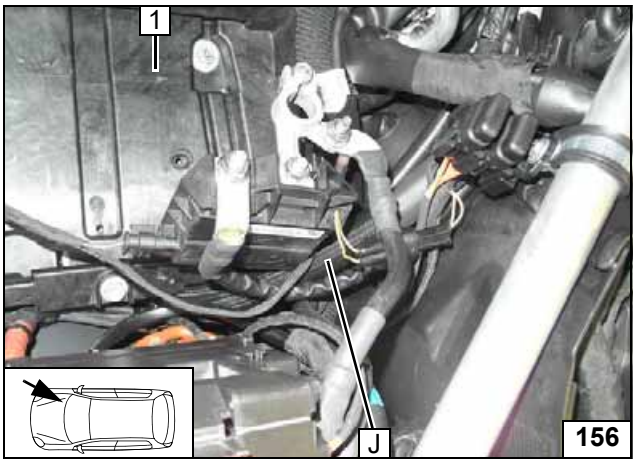
1 Heat exchanger inlet hose section

Heat exchanger inlet connection



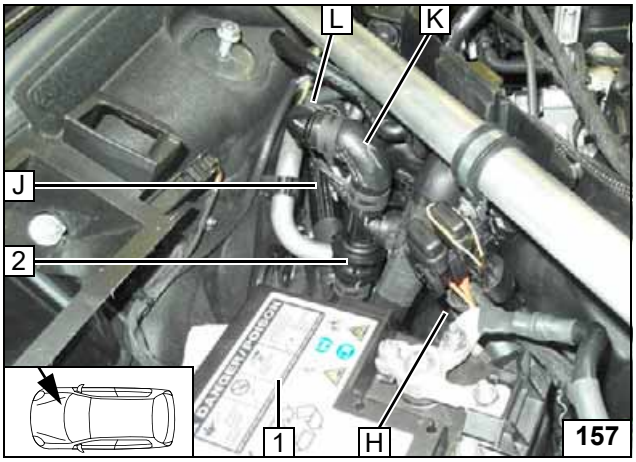
1 Non-return valve

Connecting non-return valve



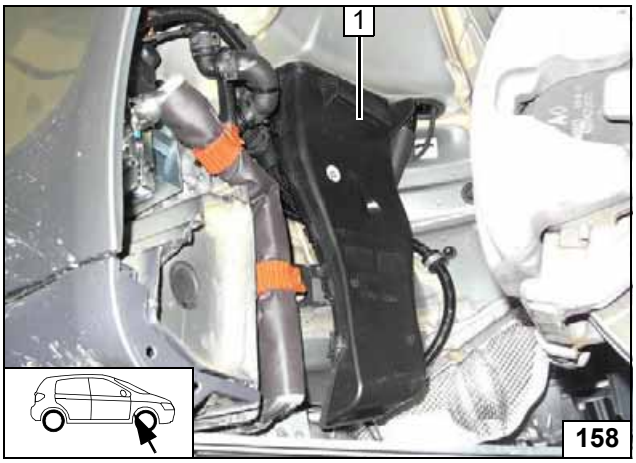
Install battery carrier **1**. Align hose **J** as shown, ensure sufficient distance, correct if necessary.

Checking distance



Install battery **1**. Align hoses and non-return valve **2**, ensure sufficient distance, correct if necessary.

Checking distance

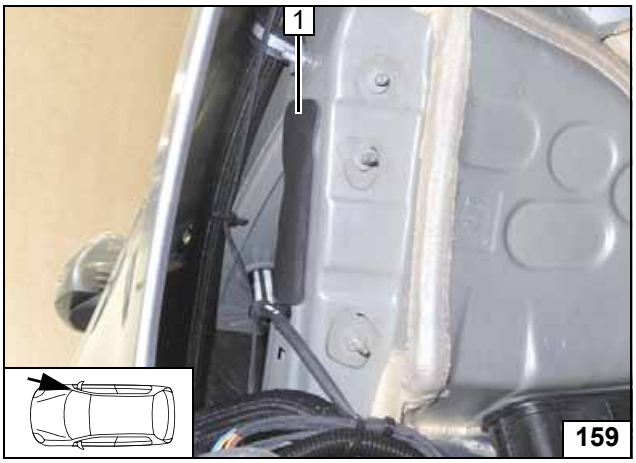


Install water drain chamber outlet **1**. Ensure sufficient distance from neighbouring components, correct if necessary.

Installing water drain chamber outlet

Combustion air

Vehicles without fire extinguishing system

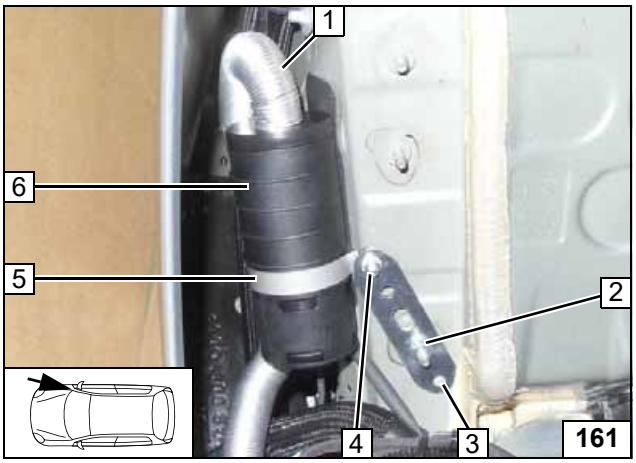


1 Insulation protection strips

Sticking on insulation protection strips

1 Combustion air pipe

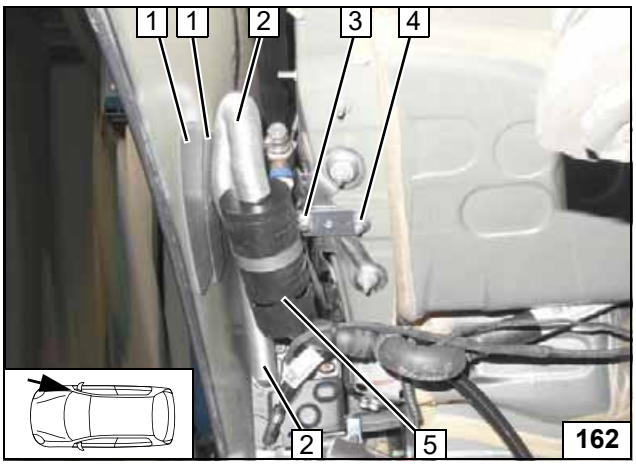
Installing combustion air pipe



1 Combustion air pipe
2 M6 flanged nut on original vehicle stud bolt
3 Perforated bracket
4 M5x16 bolt, flanged nut
5 Ø51 clamp
6 Combustion-air intake silencer

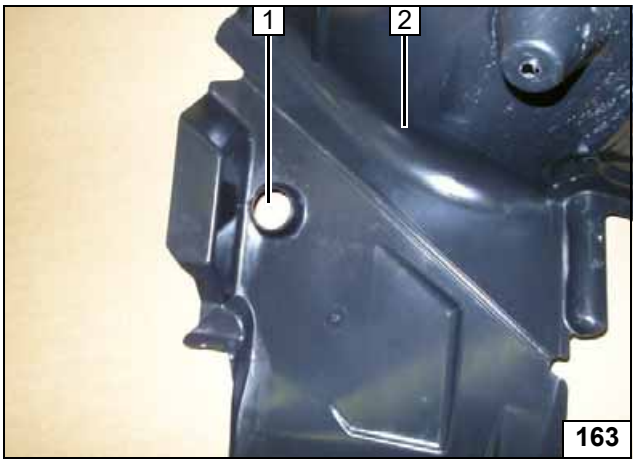
Mounting combustion air intake silencer

Vehicles with fire extinguishing system



1 Stick on insulation protection strips [2x]
2 Combustion air pipe
3 M5x16 bolt, perforated bracket, Ø51 clamp, flanged nut
4 Original vehicle stud bolt, perforated bracket, M6 flanged nut
5 Combustion-air intake silencer

Mounting combustion air intake silencer and combustion air pipe



Final work

Enlarge existing opening at position **1** to Ø60.

2 Rear section of the wheel well trim

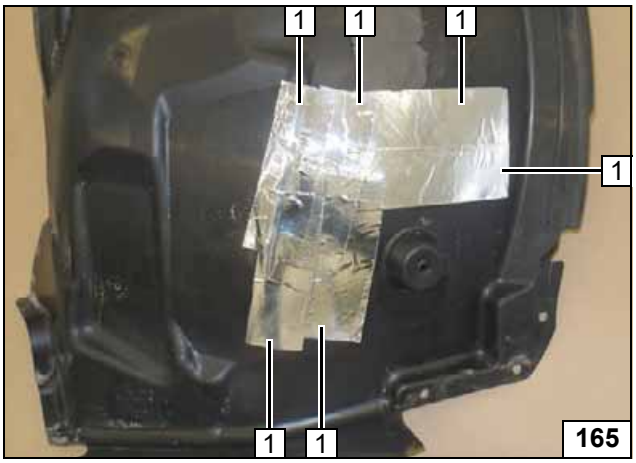
Hole for exhaust pipe a2

C-Class

Cut insulation protection strip in half. Stick both ends side by side in position **2** [2x].

1 Wheel well trim

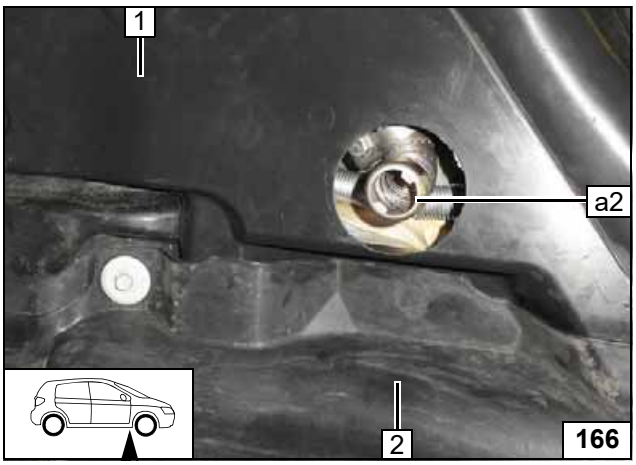
Sticking on insulation protection strips



GLC

Cut heat protection strip **1** in half and stick on as shown.

Sticking on heat protection strip

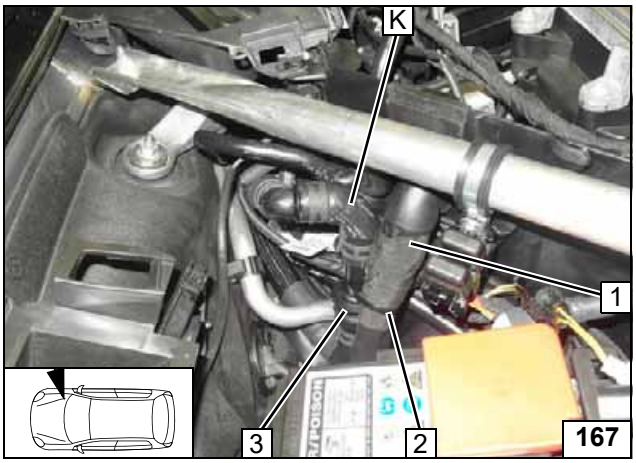


All vehicles

Ensure sufficient distance from neighbouring components, correct if necessary. Install wheel well trim **1**. Align exhaust pipe **a2** with the centre of the hole and flush with wheel well trim **1**.

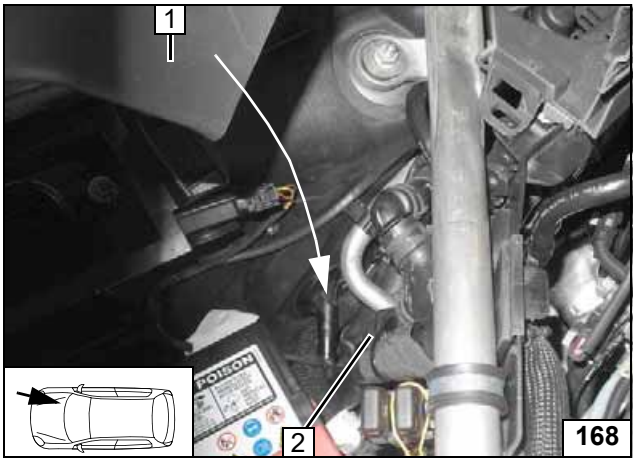
2 Underride protection

Installing underride protection



Attach non-return valve **3** using cable tie **2** to original vehicle wiring harness **(if present) 1** as shown.

Securing non-return valve



C-Class

Ensure sufficient distance from non-return valve **2** when installing cover of water drain chamber **1**, correct position of non-return valve **2** if necessary.

Checking distance from non-return valve

All vehicles

Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back loose lines.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Teach Telestart transmitter**
- **For initial start-up and function check, please see installation instructions.**
- **For the settings of the A/C control panel see the installation documentation in the additional 'Webasto Comfort' A/C control kit section 'Final Work'**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler point.**

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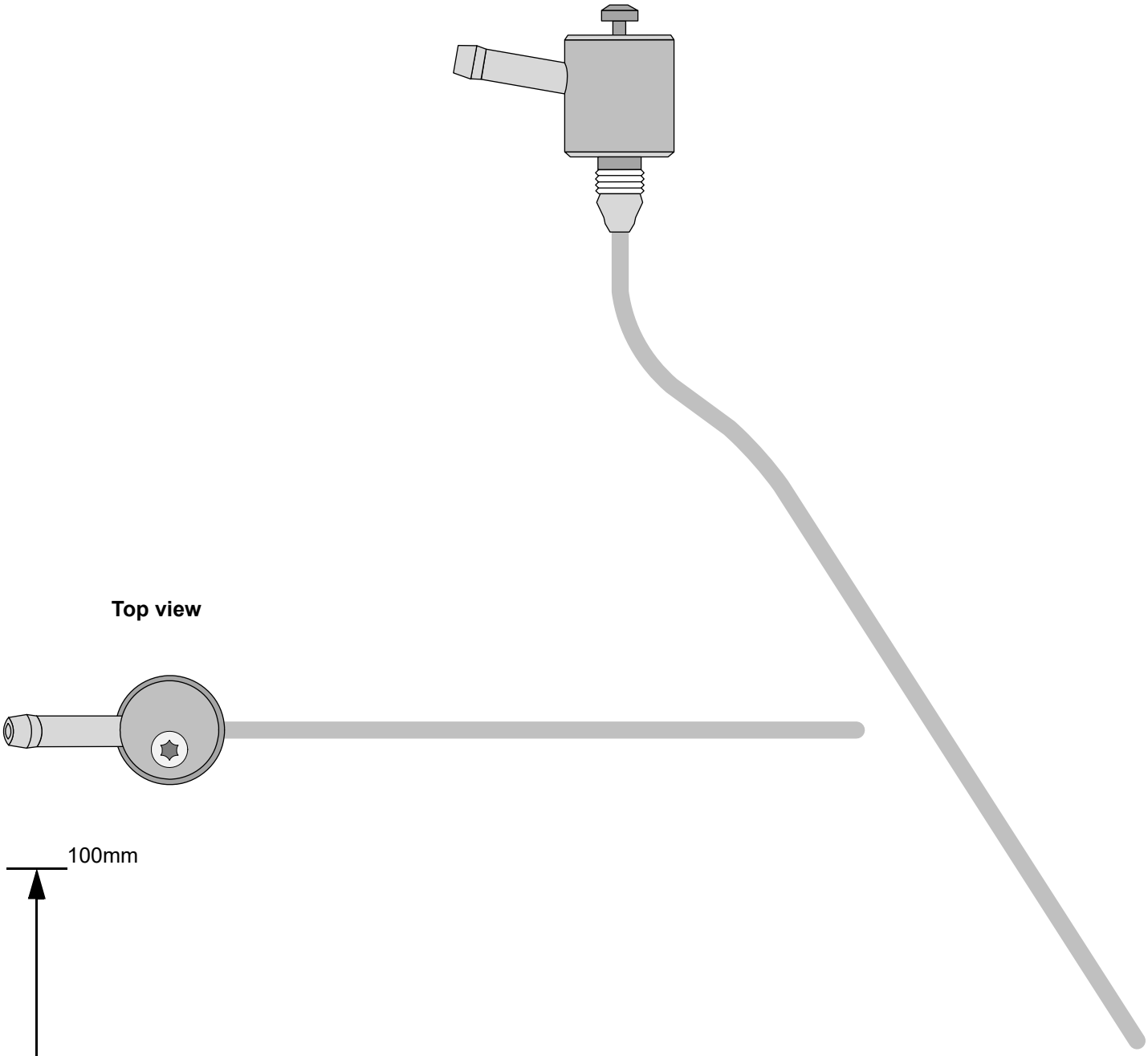
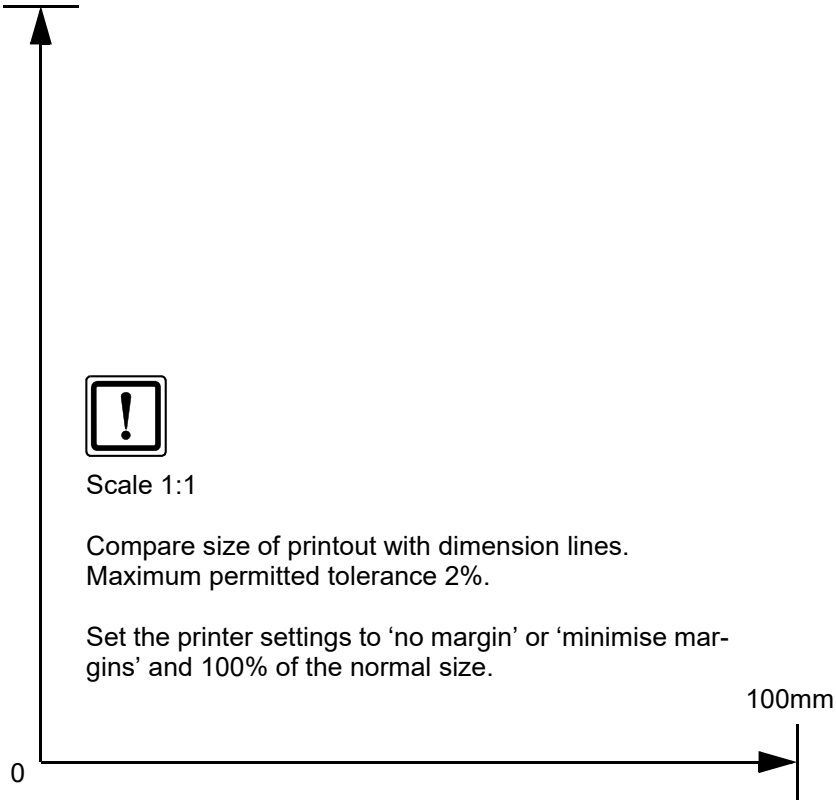
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

FuelFix template for tank fitting variant 1



Top view



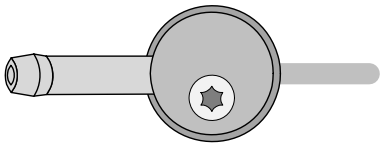
Scale 1:1

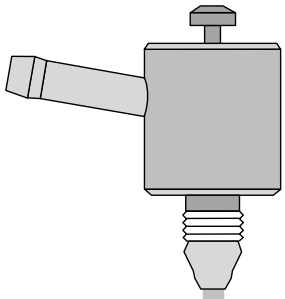
Compare size of printout with dimension lines.
Maximum permitted tolerance 2%.

Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

FuelFix template for tank fitting variant 2

Top view





100mm

Scale 1:1

Compare size of printout with dimension lines.
Maximum permitted tolerance 2%.

Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

100mm

0

