# Water Heater

## Thermo Top Evo Parking Heater

E1
00 0258

### With FuelFix

# Installation Documentation
# Skoda Yeti

## Validity

| Manufacturer | Model | Type | EG-BE No. / ABE |
|---|---|---|---|
| Skoda | Yeti | 5L | e11 * 2007 / 46 * 0010 * ... |

| Motorisation | Fuel | Transmission type | Output in kW | Displacement in cm³ | Engine code |
|---|---|---|---|---|---|
| 1.2 TSI | Petrol | 6-gear SG | 77 | 1197 | CBZB |
| 1.2 TSI | Petrol | 6-gear DSG | 77 | 1197 | CBZB |
| 1.4 TSI | Petrol | 6-gear SG | 90 | 1395 | CAXA |
| 1.4 TSI | Petrol | 7-gear DSG | 90 | 1395 | CAXA |
| 1.8 TSI | Petrol | 7-gear DSG | 112 | 1798 | CDAB |
| 2.0 TDI | Diesel | 5-gear SG | 81 | 1968 | CFHA |
| 2.0 TDI | Diesel | 6-gear SG | 103 | 1968 | CFHC |
| 2.0 TDI | Diesel | 6-gear DSG | 103 | 1968 | CFHC |

SG = manual transmission
DSG = direct gear transmission

**from model year 2014**
**Left-hand drive vehicle**

**Verified equipment variants:** Climatic / Climatronic
Front fog lights
Headlight washer system
BI-Xenon
Underride protection for off-road
Front-wheel drive/4x4

**Not verified:** Passenger compartment monitoring

**Total installation time:** approx. 7.5 hours


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## Skoda Yeti

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## Necessary Components

- Basic delivery scope of Thermo Top Evo in accordance with price list
- Installation kit with FuelFix for Skoda Yeti 2014 Petrol and diesel: **1322926C**
- Also required with Climatronic - Climatronic kit: **1322928A**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

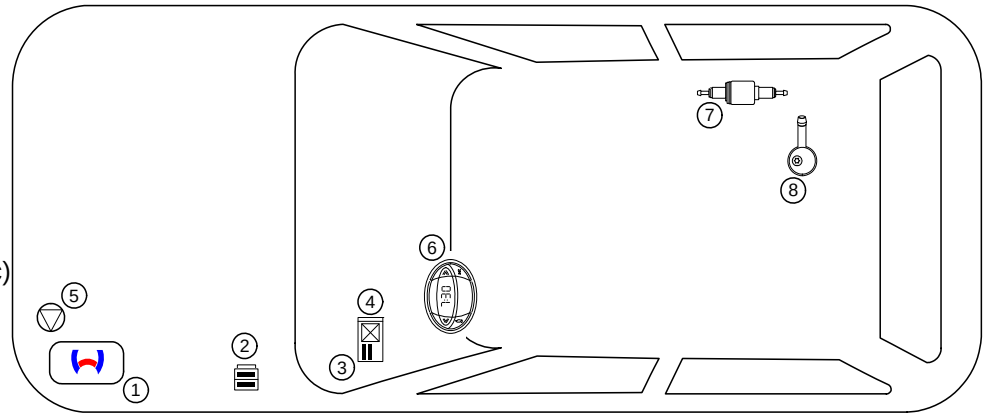
## Installation instructions:

- 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 Thermo Call should be confirmed with the end customer.
- Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

## Installation Overview

**Legend:**

**1**. Heater
**2**. Engine compartment fuse holder
**3**. Passenger compartment relay and fuse holder
**4**. - K1 relay (only in case of Climatic)
- PWM GW (only in case of Climatronic)
**5**. Circulating pump
**6**. Digital timer
**7**. Metering pump
**8**. FuelFix




## Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting of 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.

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# 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 have to audibly click into place during installation.**

**Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).**

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

**The initial startup 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 the directive 122 (heater) section 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 gas 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.

## Skoda Yeti

## Information on Validity

This installation instruction applies to vehicles Skoda Yeti Petrol and diesel - 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 self-clamping hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

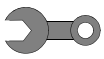
**Dimensions**
- All dimensions are in mm.

**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.**



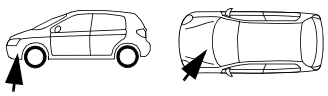
**Reference to manufacturer's vehicle-specific documents or to the general installation instructions of Webasto components.**



**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.**



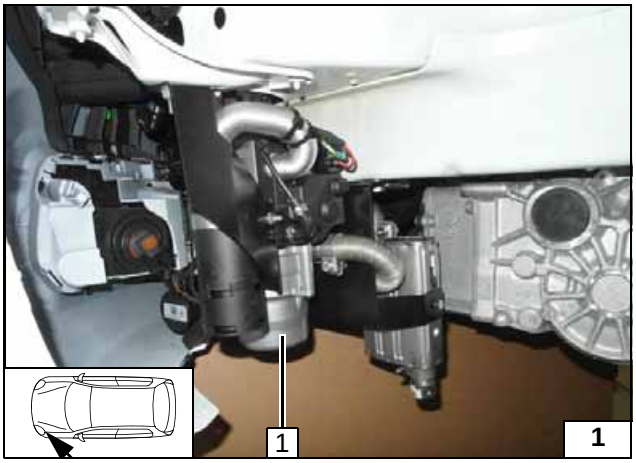
## Preliminary Work

### Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Remove the air filter together with the intake hose.
- Remove the left-hand wheel well trim.
- Remove the lower instrument panel trim on the front passenger's side (only with Climatronic).
- Remove the instrument panel trim beneath the steering wheel.
- Remove the back single seat.
- Remove the front retaining strut.
- Remove the floor trim below the rear single seat.
- Open the service opening of the fuel tank sending unit on the right.

### 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**

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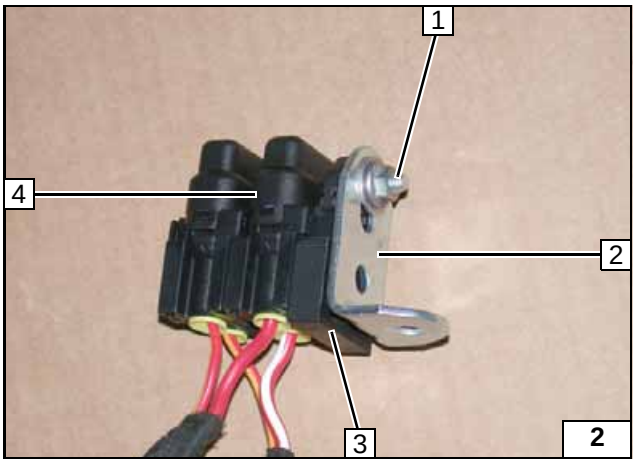
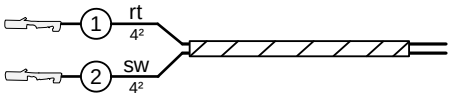



2

## Preparing Electrical System

**1** M5x16 bolt, large diameter washer [2x], nut
**2** Angle bracket
**3** Retaining plate of fuse holder
**4** Fuses F1 and F2 inserted

**Premounting fuse holder engine compartment**




3

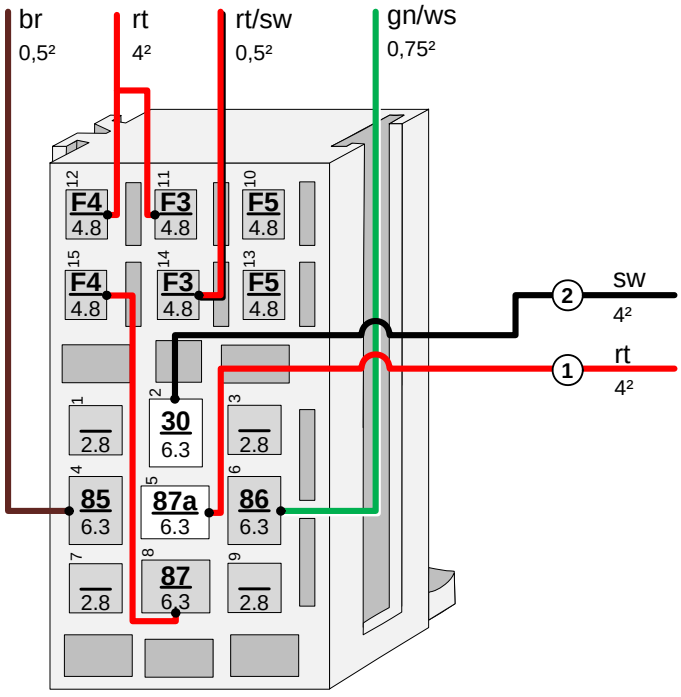
Wire sections retain their numbering throughout the entire document.

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

**Climatic**

① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness

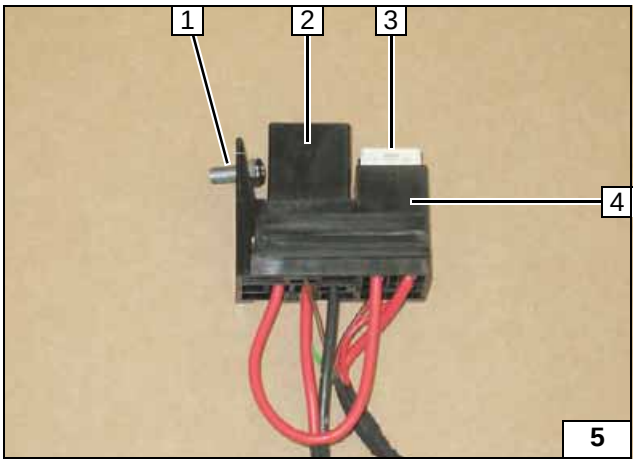
**Preparing wires**




4

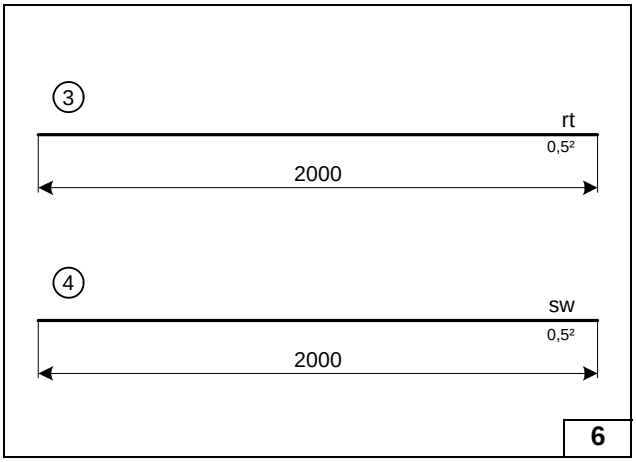
**Connecting wires to passenger compartment relay and fuse holder**

 © Webasto Thermo & Comfort SE 




1 Premount M5x16 bolt, large diameter washer
2 K1 relay mounted
3 Insert fuse F4 25A
4 Passenger compartment relay and fuse holder

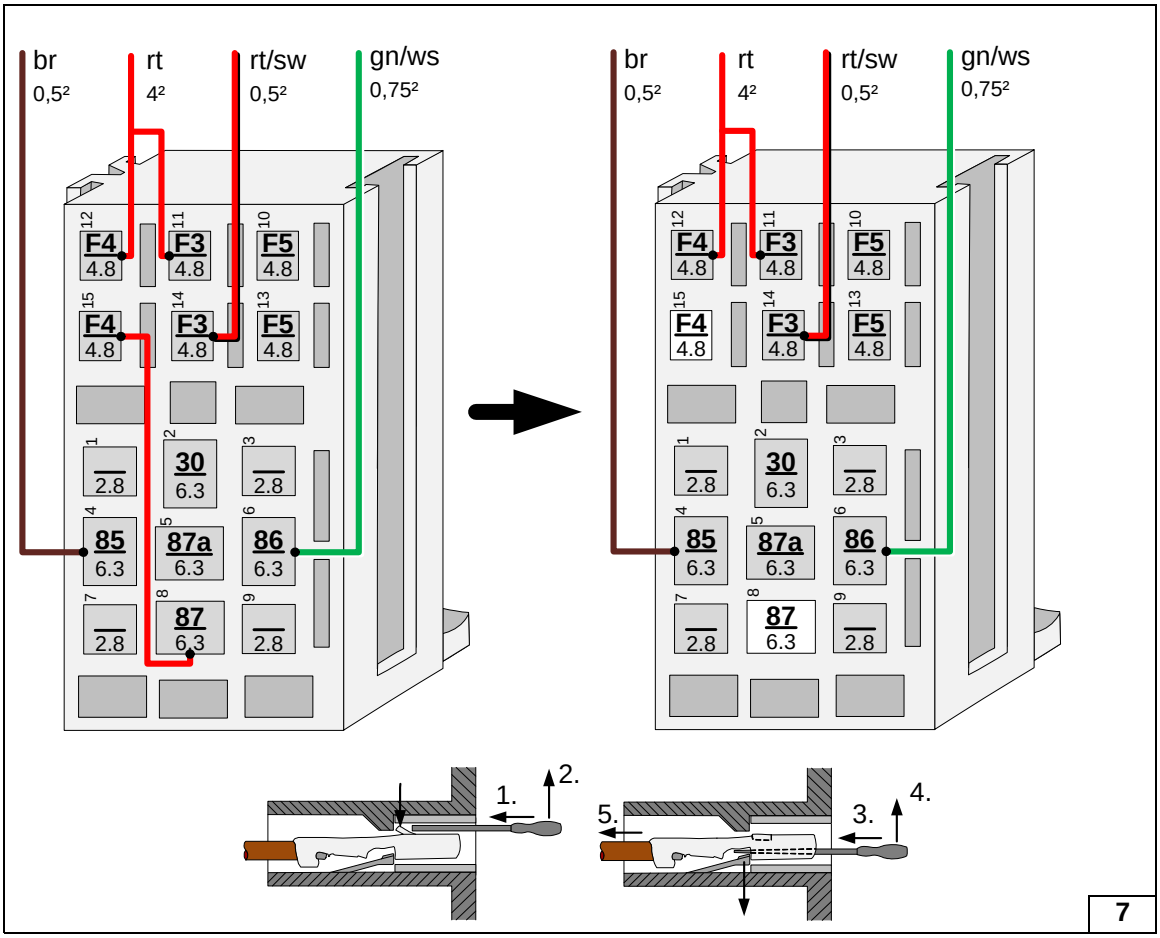
**Premounting passenger compartment relay and fuse holder**




**Climatronic**

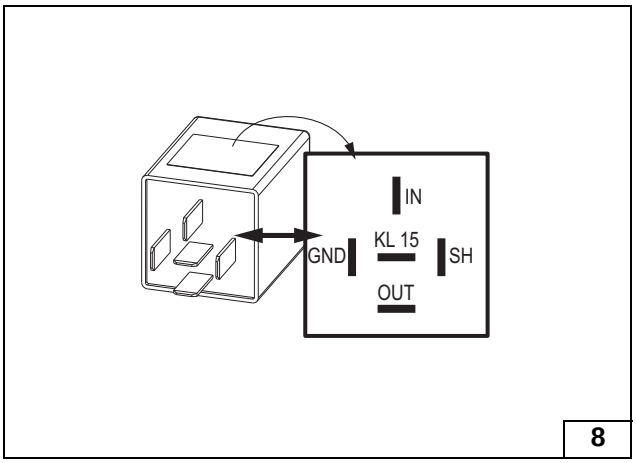
Pull wires ③ and ④ into protective sleeving.

**Assigning wires**




**Detaching red (rt) wire from passenger compartment relay and fuse holder**

 © Webasto Thermo & Comfort SE 



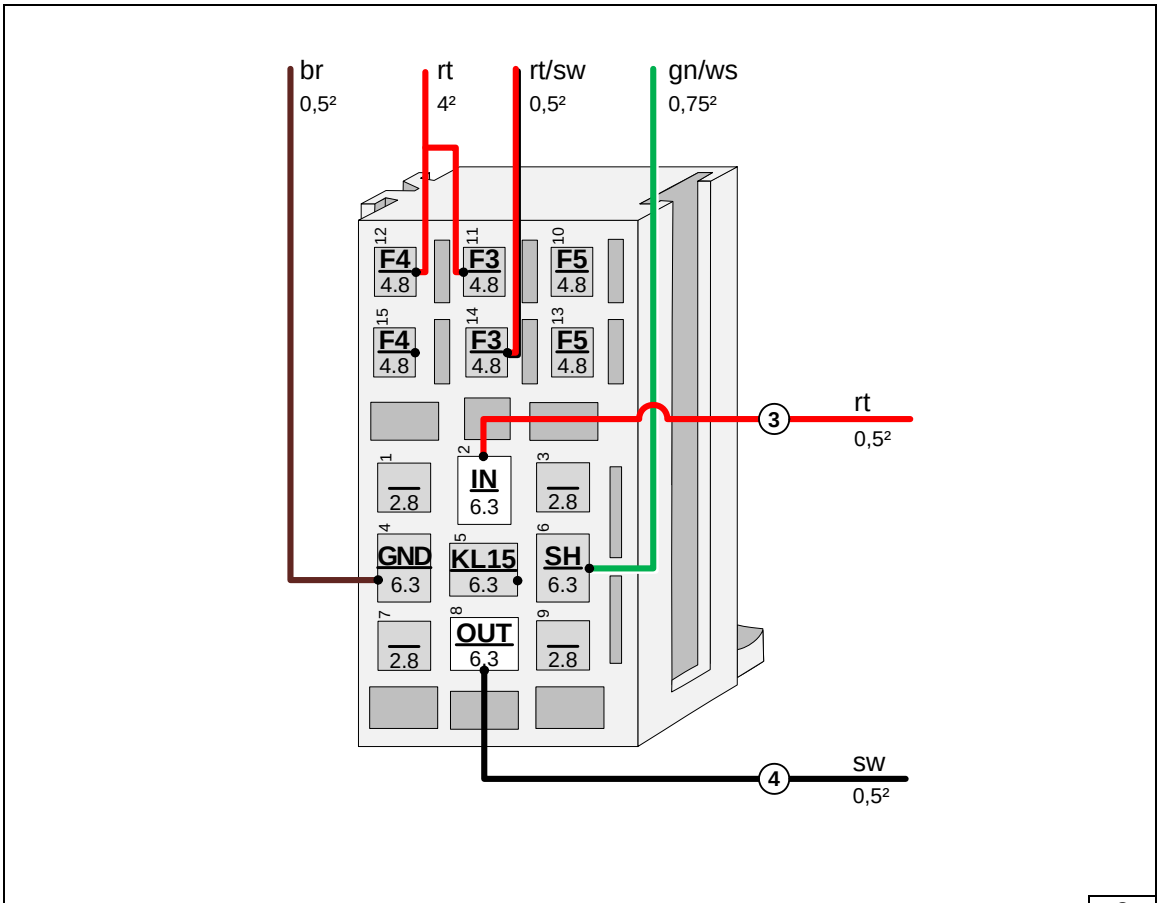

8

Check the PWM-Gateway settings when starting up the heater and adjust if necessary.

Settings:

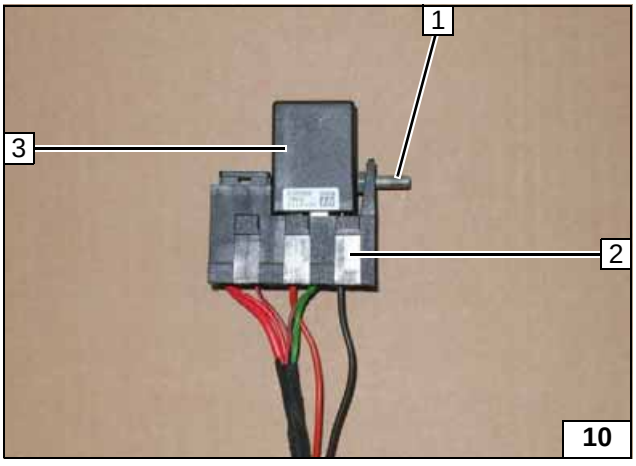
Duty cycle: 30%
Frequency: 400Hz
Voltage: 8V
Function: High side

**View of PWM-GW**




9

**Mounting wires on passenger compartment relay and fuse holder for PWM-GW connection**




10

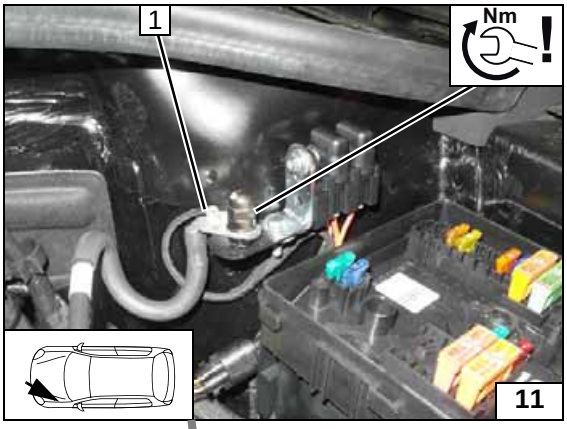
**1** Insert M5x16 bolt
**2** Passenger compartment relay and fuse holder
**3** PWM-GW inserted

**Premounting passenger compartment relay and fuse holder**

## Electrical System

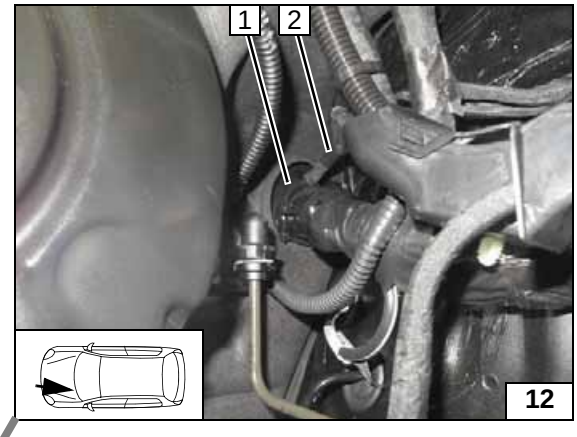
### Earth wire

**1** Earth wire on original vehicle earth support point

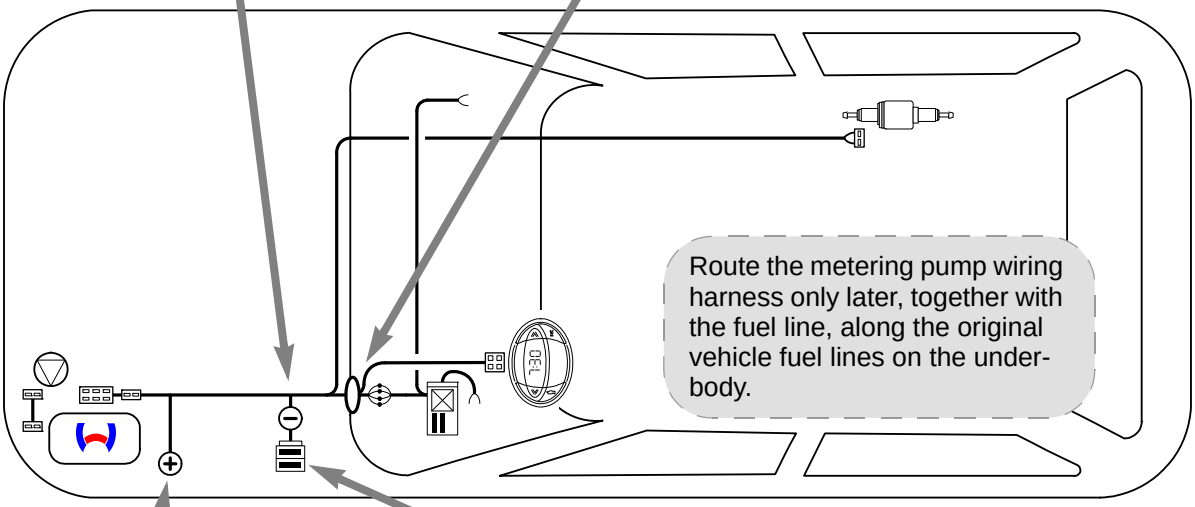



### Wiring harness pass through

**1** Protective rubber plug
**2** Wiring harnesses of heater, heater control

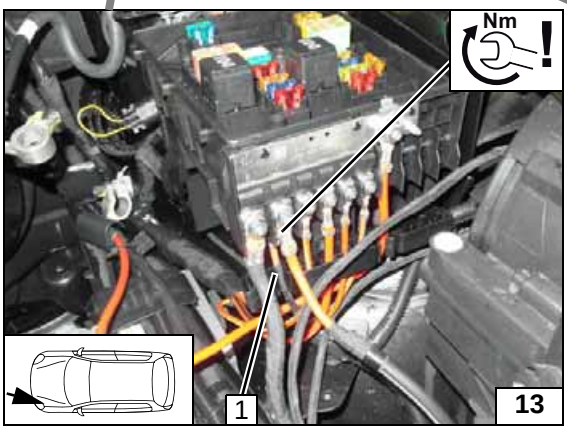



**Wiring harness routing diagram**



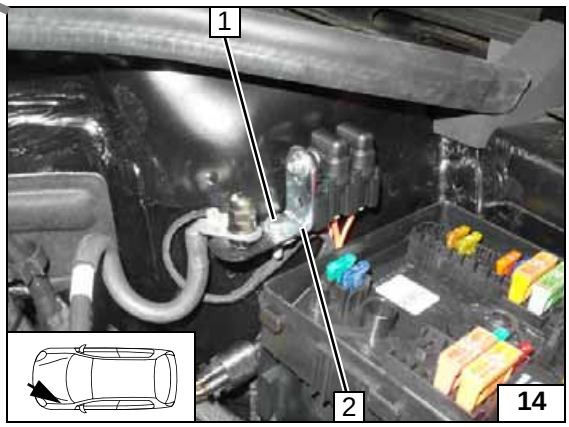

### Positive wire

**1** Positive wire on positive distributor of battery




### Engine compartment fuse holder

**1** M6x20 bolt, large diameter washer, flanged nut, existing hole
**2** Angle bracket

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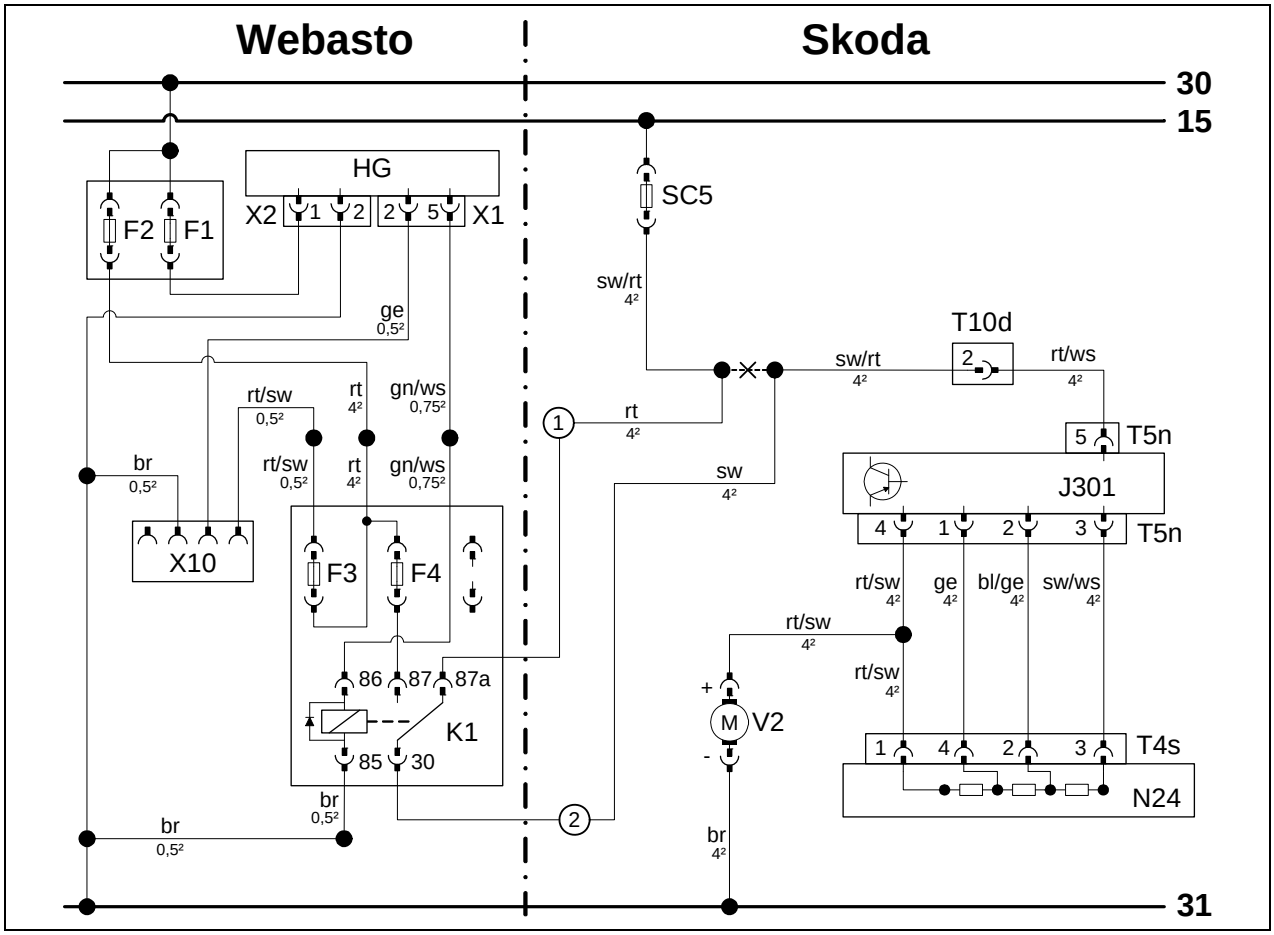
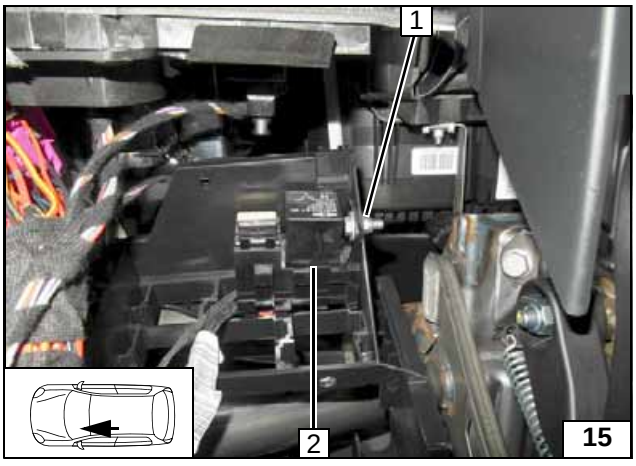
## Climatic Fan Controller




| Webasto components | | Vehicle components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | TT-Evo heater | SC5 | 40 A fan fuse | rt | red |
| X1 | 6-pin heater connector | T10d | Connector | ge | yellow |
| X2 | 2-pin heater connector | J301 | Control unit of air-conditioning | sw | black |
| F1 | 20A fuse | T5n | 5-pin connector J301 | br | brown |
| F2 | 30A fuse | V2 | Fan motor | ws | white |
| X10 | 4-pin connector of heater control | N24 | Resistor group | gn | green |
| | | T4s | 4-pin connector N24 | bl | blue |
| F3 | 1A fuse | | | | |
| F4 | 25A fuse | | | | |
| K1 | Fan relay | | | Wiring colours may vary. | |




5.5 mm dia. hole at position **1**.

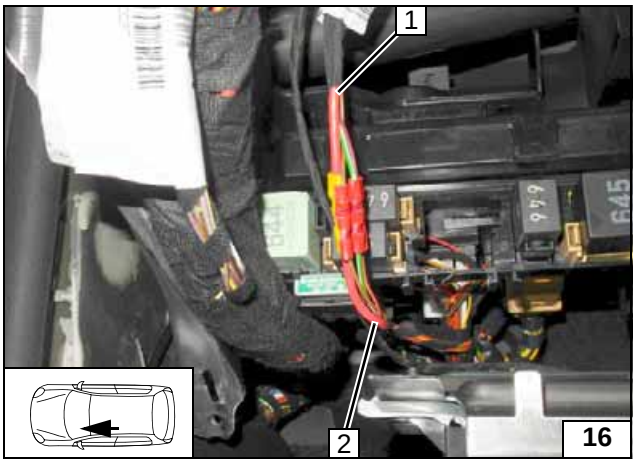
**1** Large diameter washer, M5 nut on M5x16 bolt
**2** Passenger compartment relay and fuse holder

**Wiring diagram**

**Legend**

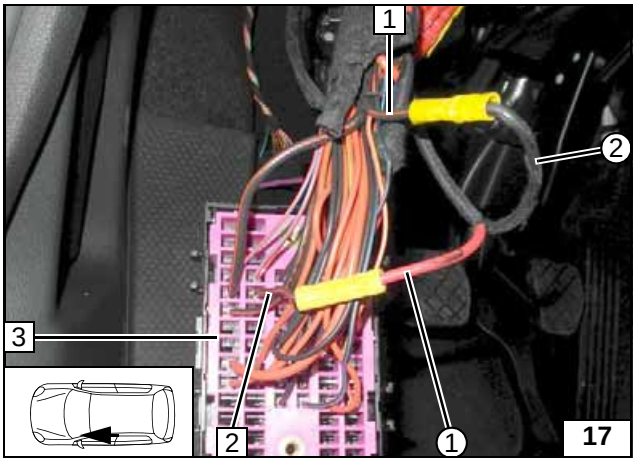
**Mounting passenger compartment relay and fuse holder**

 © Webasto Thermo & Comfort SE 




**1** Wiring harness of passenger compartment relay and fuse holder
**2** Wiring harness of heater

**Connecting same colour wires of wiring harnesses**



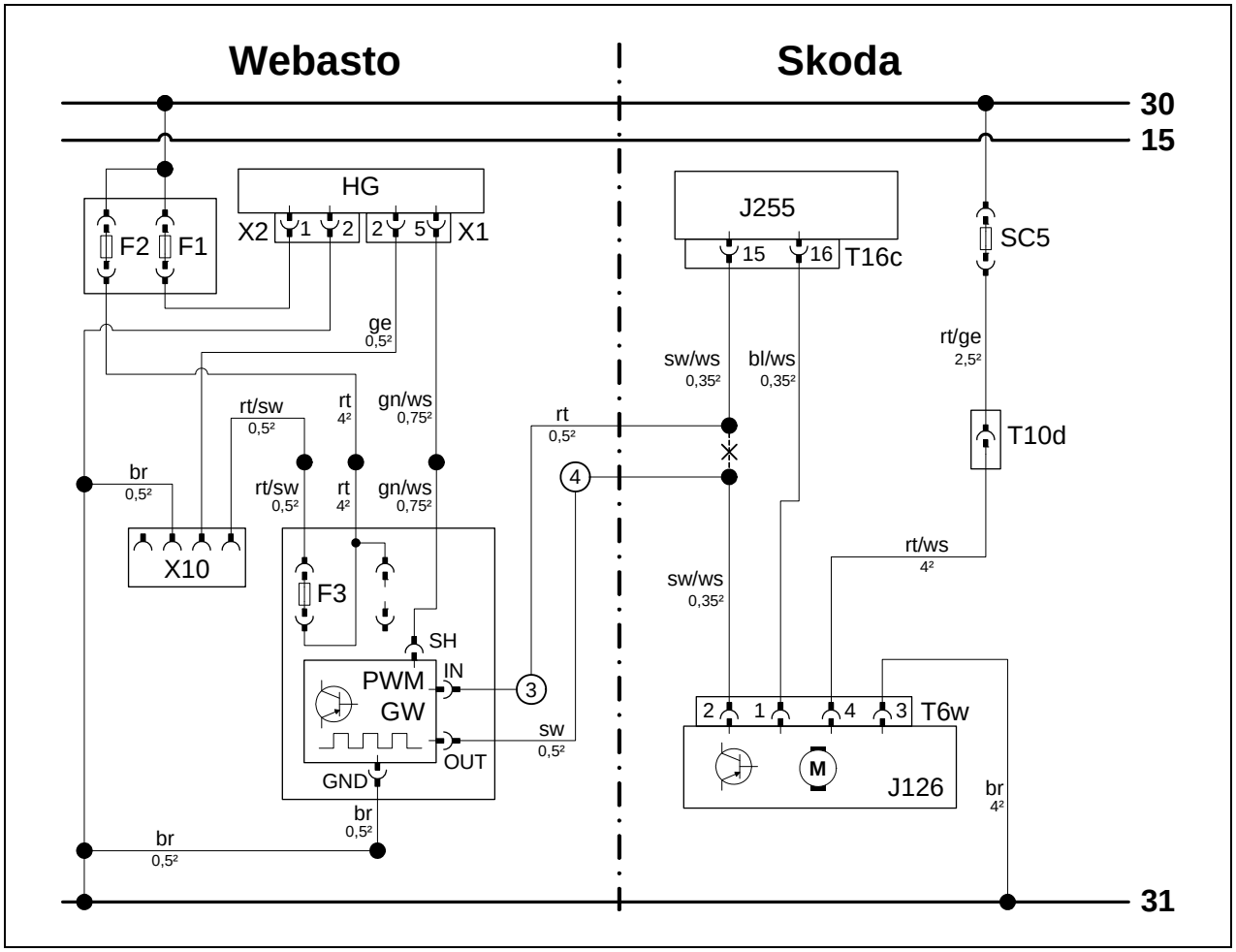

**1** Black/red (sw/rt) wire of A/C control unit
**2** Black/red (sw/rt) wire of fan fuse SC5
**3** Fuse holder
① Red (rt) wire from K1/87a, fan wiring harness
② Black (sw) wire from K1/30, fan wiring harness

**Connecting fan motor**

 © Webasto Thermo & Comfort SE 

## Climatronic Fan Controller

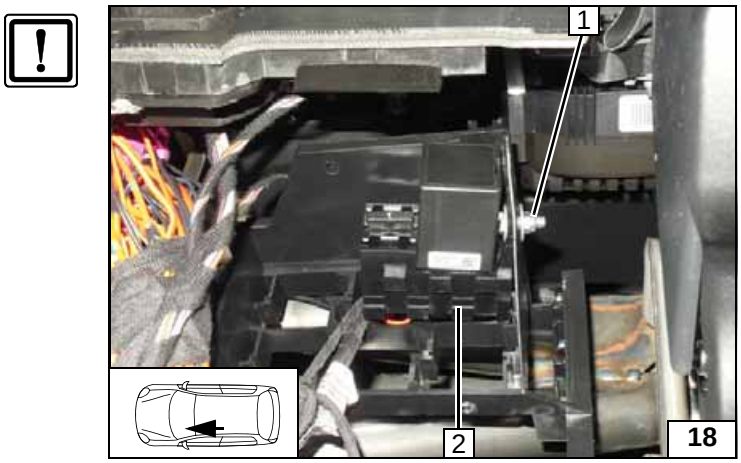
**Wiring diagram**




| Webasto components | | Vehicle components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | TT-Evo heater | J255 | A/C control unit | rt | red |
| X1 | 6-pin heater connector | T16c | 16-pin connector J255 | sw | black |
| X2 | 2-pin heater connector | SC5 | 40 A fan fuse | ge | yellow |
| F1 | 20A fuse | T10d | 10-pin plug connection | gn | green |
| F2 | 30A fuse | J126 | Fan unit | bl | blue |
| X10 | 4-pin connector of heater control | T6w | 6-pin connector J126 | ws | white |
| | | | | br | brown |
| F3 | 1A fuse | | | | |
| PWM GW | Pulse width modulator | | | | |
| **Settings of PWM-GW:** | | | | | |
| Duty cycle: | 30% | | | | |
| Frequency: | 400Hz | | | | |
| Voltage: | 8V | | | **X** | Cutting point |
| Function: | High side | | | Wiring colours may vary. | |

**Legend**

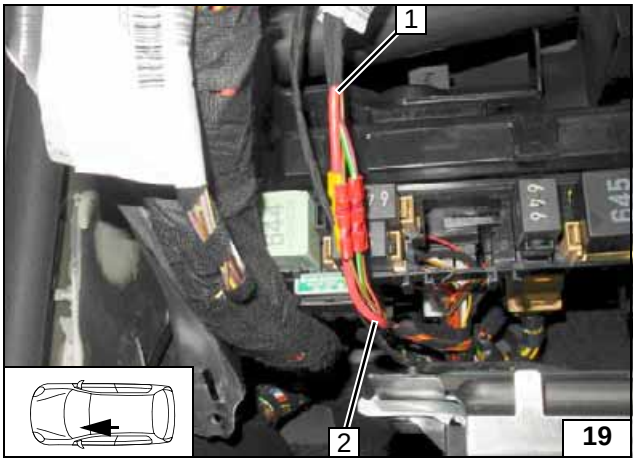
 © Webasto Thermo & Comfort SE 




5.5 mm dia. hole at position **1**.

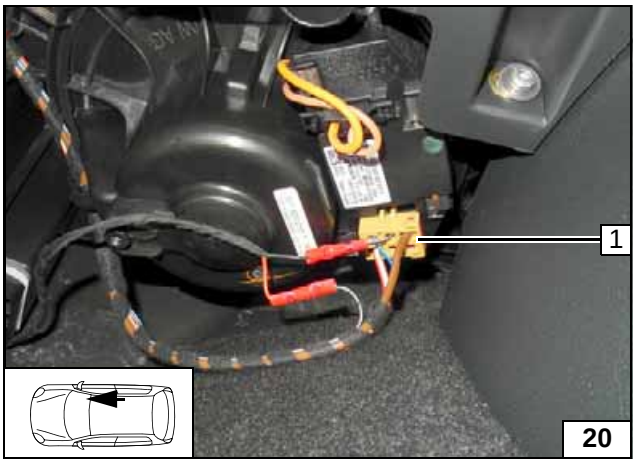
**1** Large diameter washer, M5 nut on M5x16 bolt
**2** Passenger compartment relay and fuse holder

**Mounting passenger compartment relay and fuse holder**



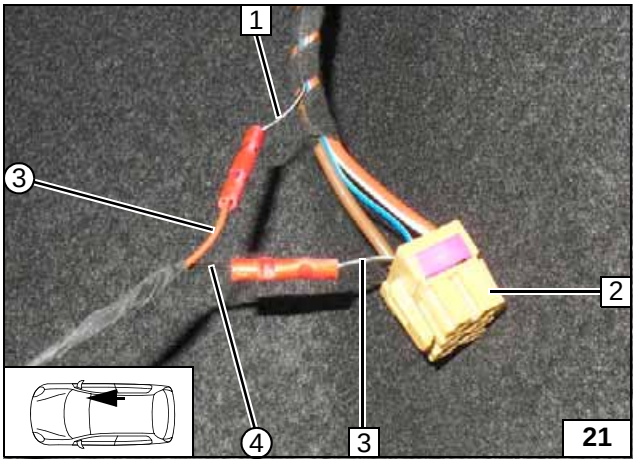

**1** Wiring harness of passenger compartment relay and fuse holder
**2** Wiring harness of heater

**Connecting same colour wires of wiring harnesses**




**1** Socket of connector T6w

**Connector of fan unit**

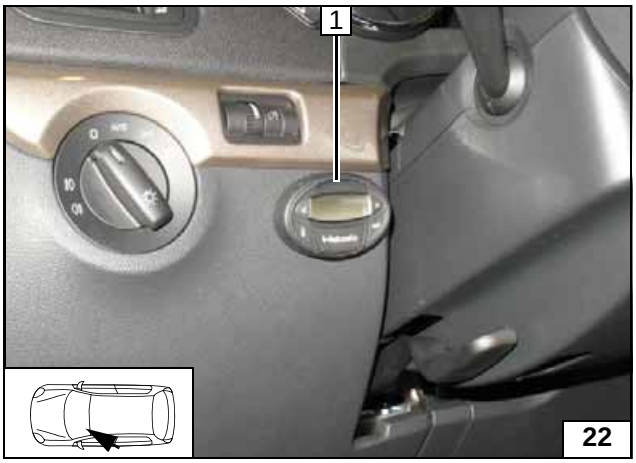



Connection to 6-pin connector T6w **2** (connector pulled off) of fan unit.

**1** Black/white (sw/ws) wire of A/C control unit, pin 15
**3** Black/white (sw/ws) wire of 6-pin connector T6w, pin 2
③ Red (rt) wire of PWM-GW/IN
④Black (sw) wire of PWM-GW/OUT

**Connection to fan unit**

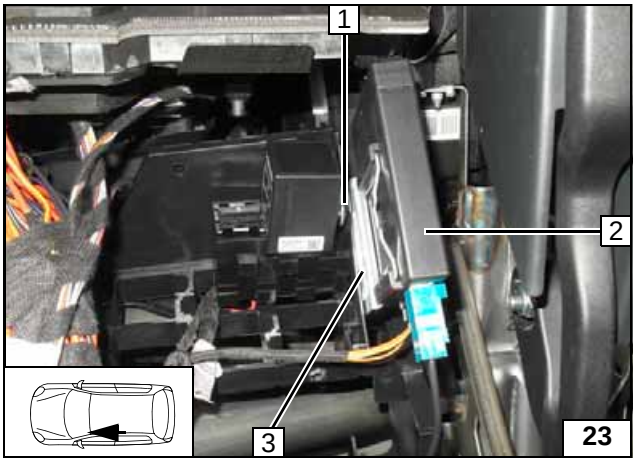
 © Webasto Thermo & Comfort SE 




## Digital Timer

**1** Digital timer

**Installing digital timer**

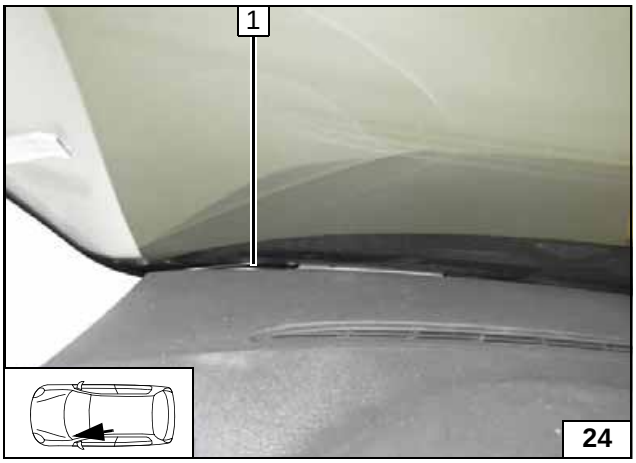



## Remote Option (Telestart)

Install bracket of receiver **3** at position **1** (bolt of passenger compartment relay and fuse holder).

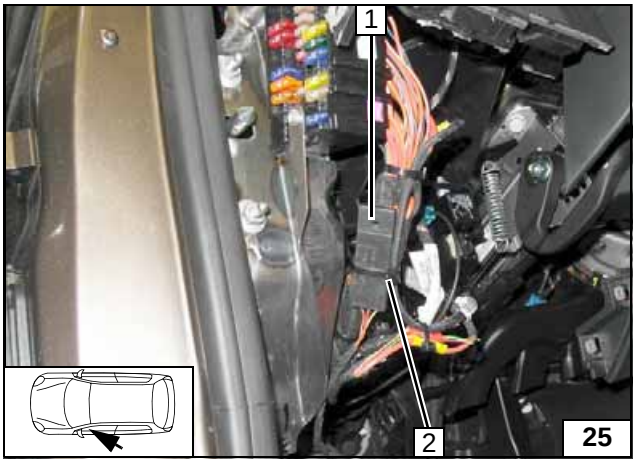
**2** Receiver

**Installing receiver**




**1** Aerial

**Installing aerial**

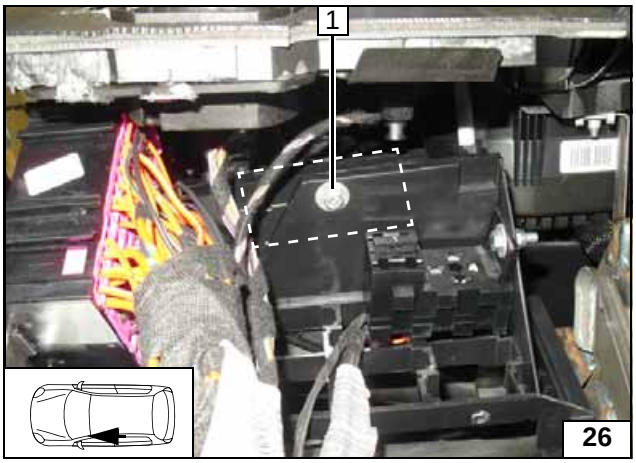


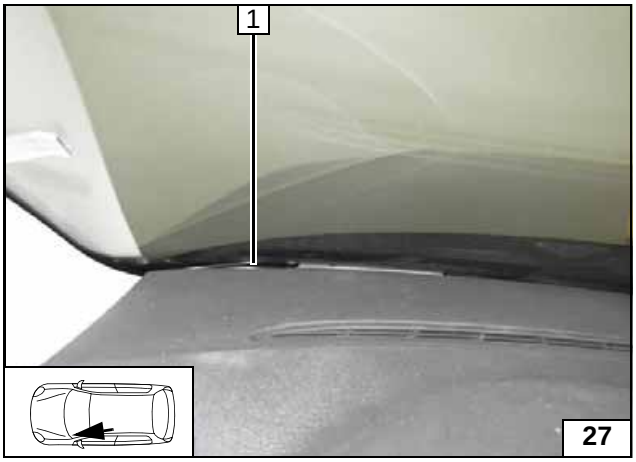

**Temperature sensor T100 HTM**

Fasten temperature sensor **1** with cable ties **2** to original vehicle wiring harness.

**Installing temperature sensor**

 © Webasto Thermo & Comfort SE 




## Thermo Call Option

Mount receiver above fuse holder at the markings.

**Installing receiver**

**1** M5x16 bolt, large diameter washer, flanged nut, existing hole

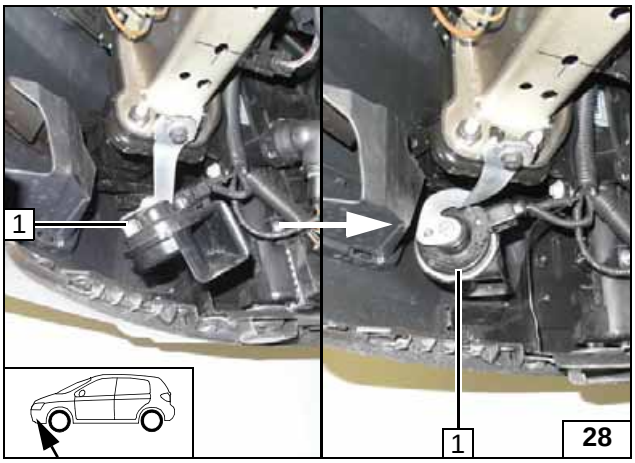
**Installing aerial**

**1** Aerial

 © Webasto Thermo & Comfort SE 

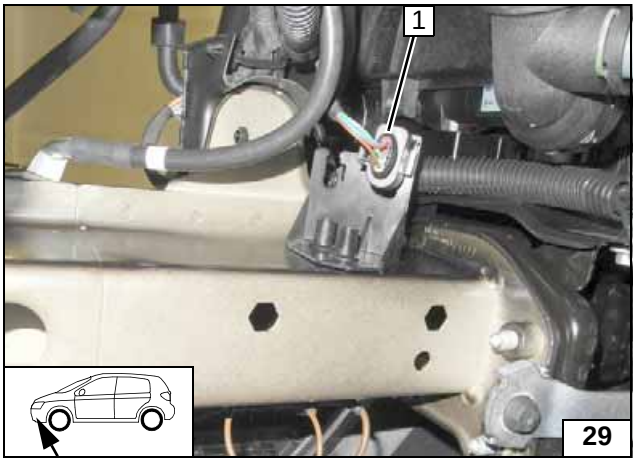
## Preparing Installation Location

Aligning horn



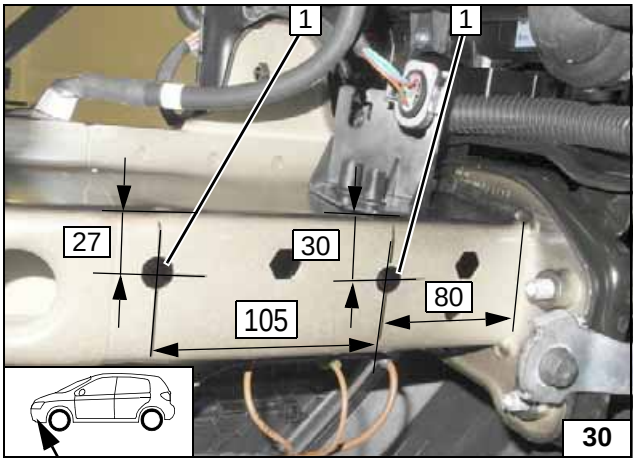

Align horn **1** as shown.

Moving connector



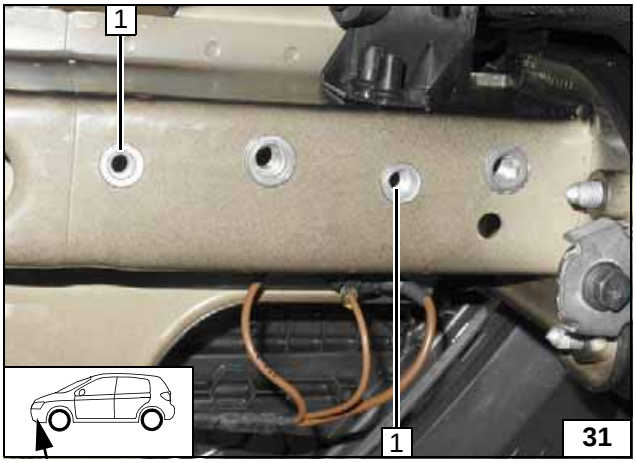

Check position of connector **1** , adapt if necessary. Figure shows possible new plug-in location.

Holes in frame side member



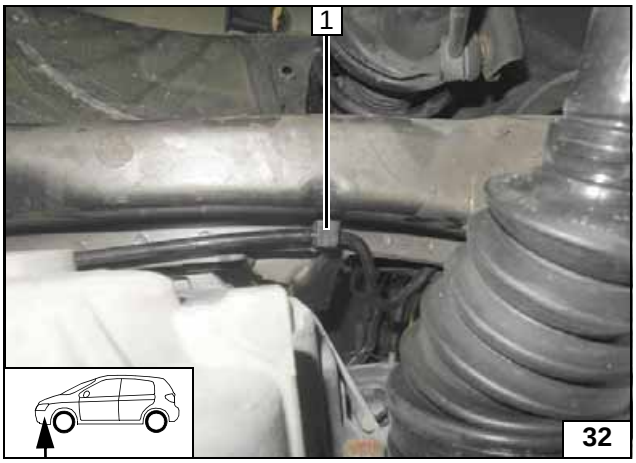

**1** Copy hole pattern, 12.5 mm dia. hole [2x]

Installing rivet nuts



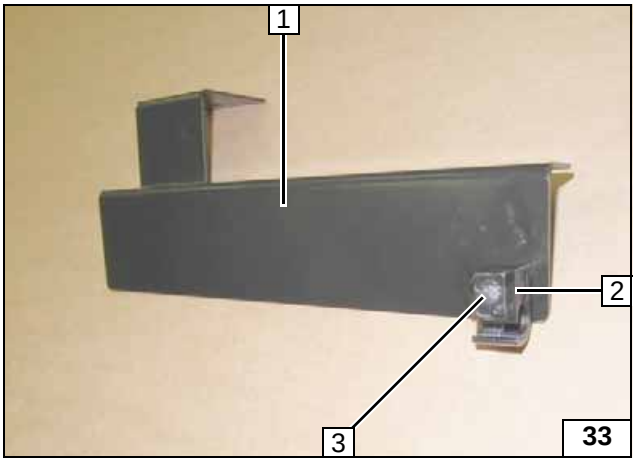

**1** M8 rivet nut [2x]

 © Webasto Thermo & Comfort SE 



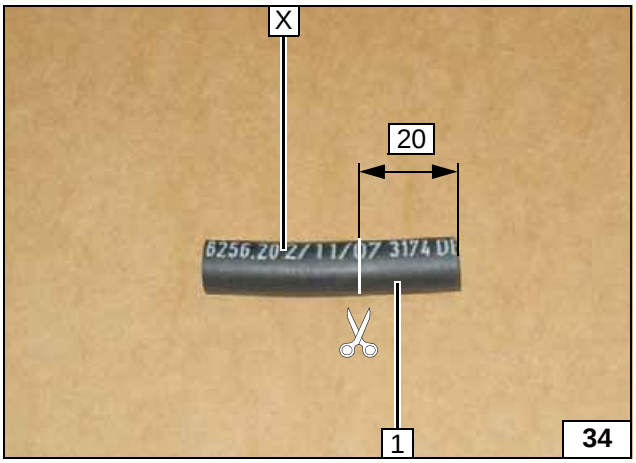

Remove retaining clip of coupling line **1** (if present).

**Removing retaining clip**




**1** Hose guide
**2** Retaining clip of coupling line (if present)
**3** M6x12 countersunk head screw

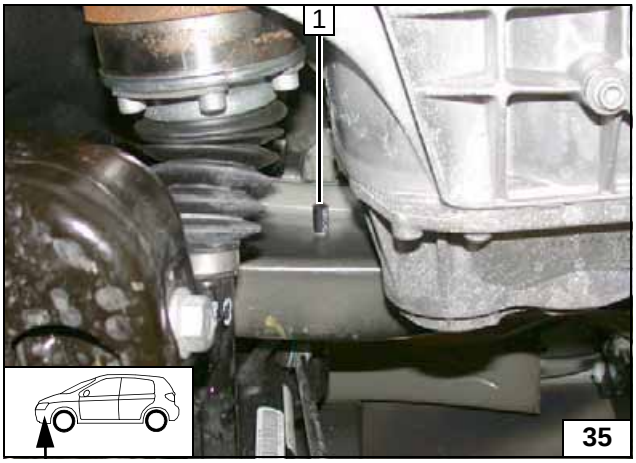
**Installing retaining clip**




Discard section **X**.

**1** Hose section

**Shortening hose section**

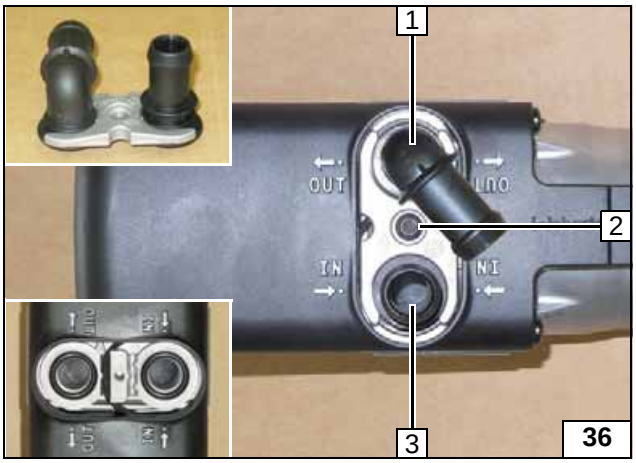



Slide 20 mm hose section **1** onto original vehicle stud bolt.

**Installing hose section**

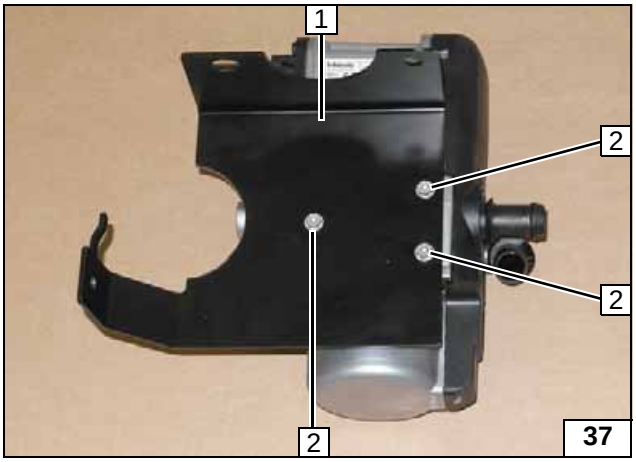
 © Webasto Thermo & Comfort SE 

## Preparing Heater



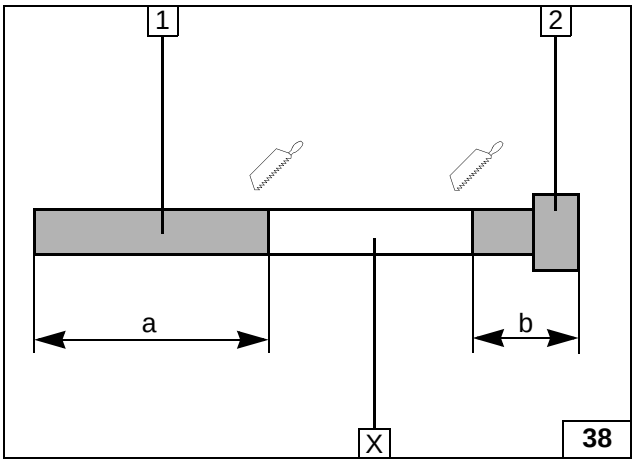

**1** 90° water connection piece, sealing ring
**2** 5x15 self-tapping bolt, retaining plate of water connection piece
**3** Axial water connection piece, sealing ring

**Installing water connection piece**




**1** Bracket part A
**2** 5x13 self-tapping bolts [3x]

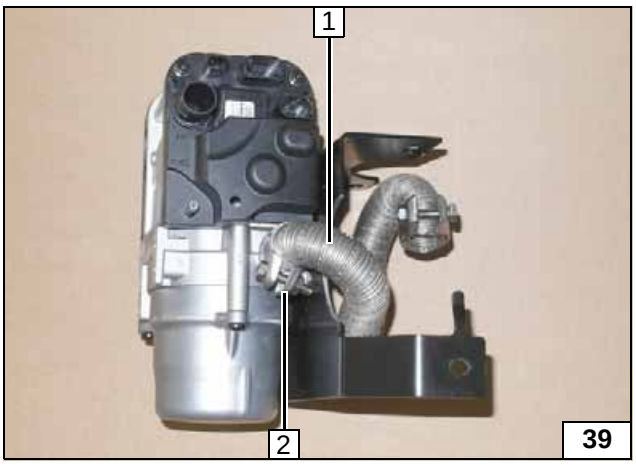
**Installing bracket**




Discard section **X**.

**1** Exhaust pipe
a = 330
**2** Exhaust end section
b = 35

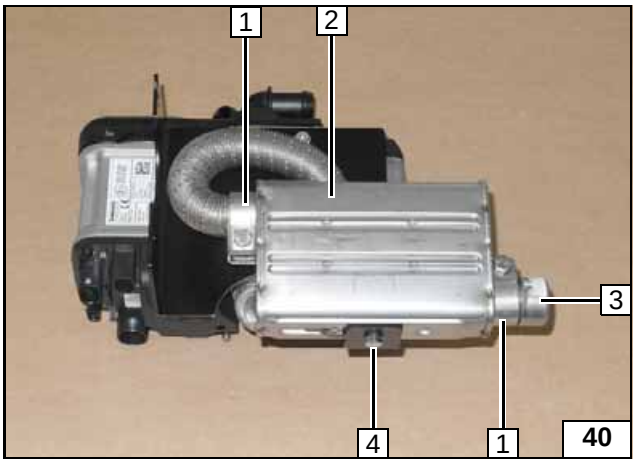
**Preparing exhaust pipe**




**1** Exhaust pipe
**2** Hose clamp

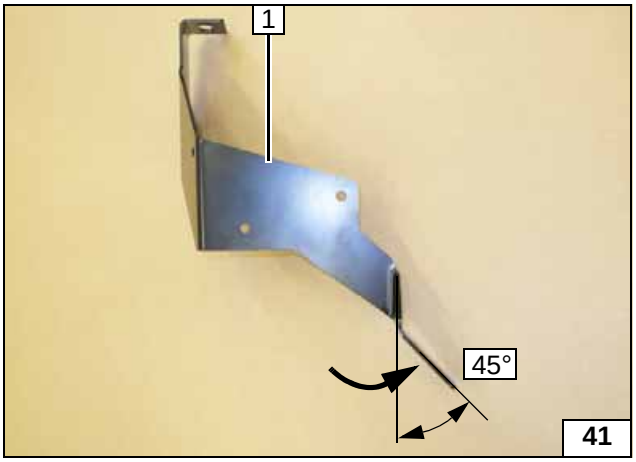
**Installing exhaust pipe**

 © Webasto Thermo & Comfort SE 




**1** Hose clamp [2x]
**2** Silencer
**3** Exhaust end section
**4** M6x16 bolt, spring lockwasher

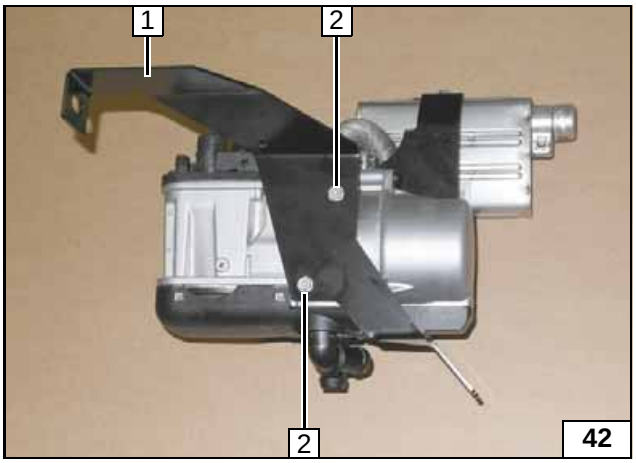
**Installing silencer / exhaust end section**




Apply car body protection after adaptation.

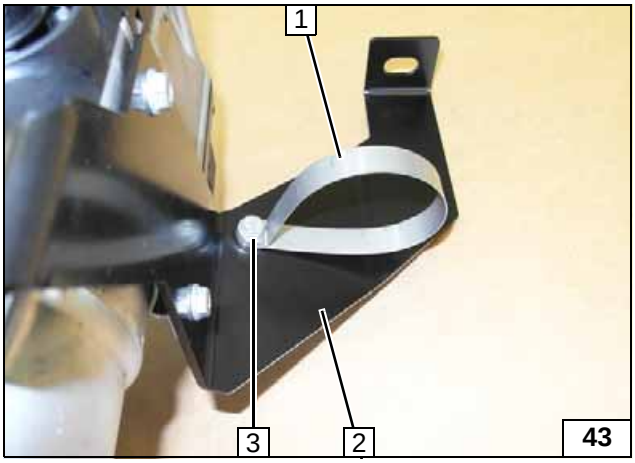
**1** Bracket part B

**Angling down bracket part B**




**1** Bracket part B
**2** 5x13 self-tapping bolts [2x]

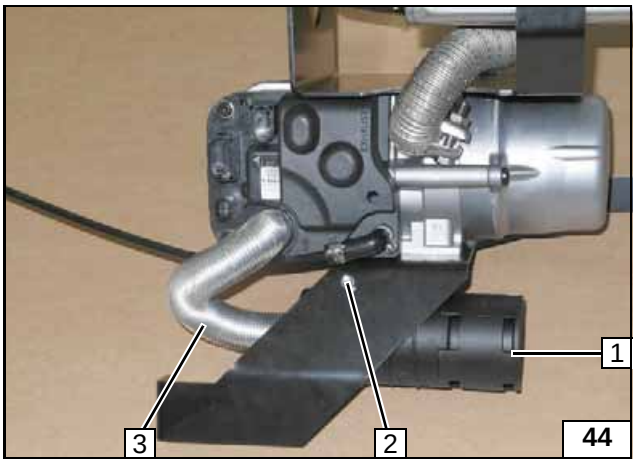
**Installing bracket part B**




**1** 51 mm dia. clamp
**2** Bracket part B
**3** M5x16 bolt, flanged nut, mount loosely

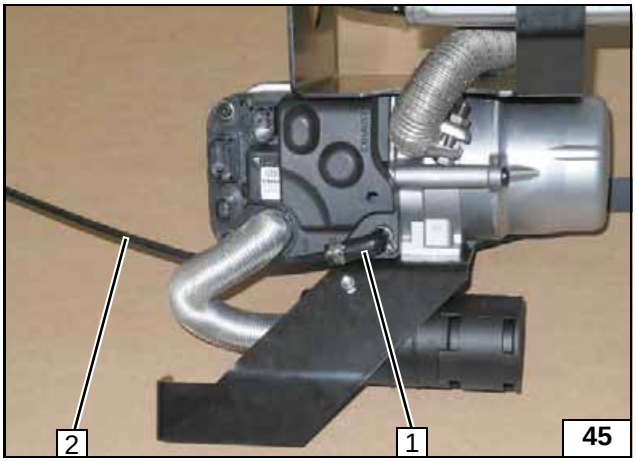
**Installing clamp**

**Installing silencer / combustion air pipe**



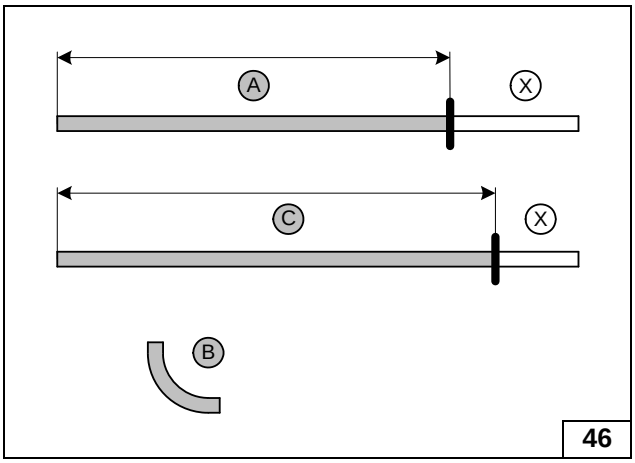

**1** Silencer
**2** M5x16 bolt, tighten flanged nut
**3** Combustion air pipe

**Premounting fuel line**




**1** 90° moulded hose, 10 mm dia. clamp [2x]
**2** Fuel line

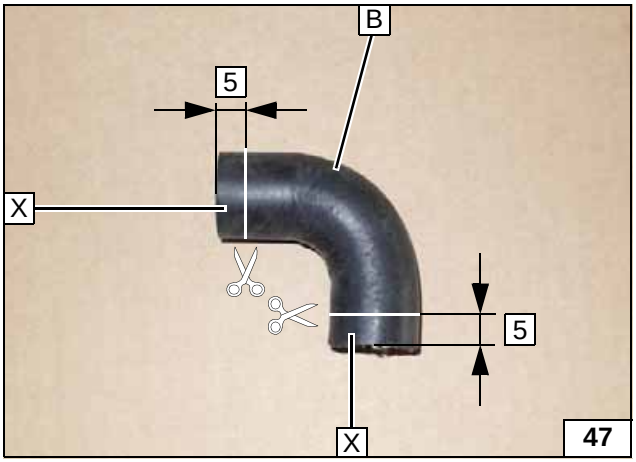
**Cutting hoses to length**




Discard section **X**.
Hose **B** = 90°, 18x18 mm dia. moulded hose

| | 1.2 / 1.4 TSI 2.0 TDI | 1.8 TSI |
|---|---|---|
| **A** = | 1230 | 1100 |
| **C** = | 1250 | 1180 |

**Cutting to length hose B on both sides**




Discard sections **X** .

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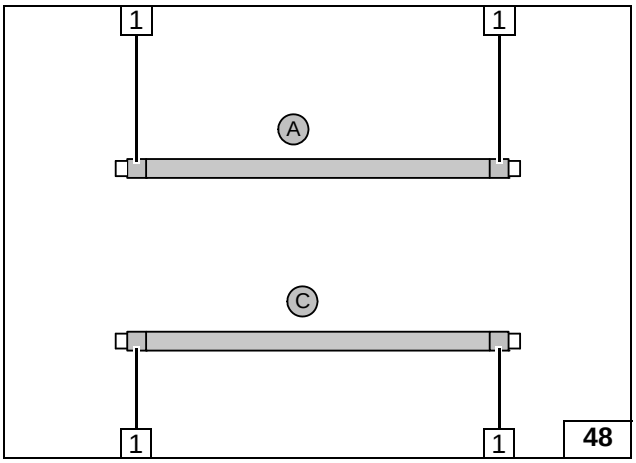
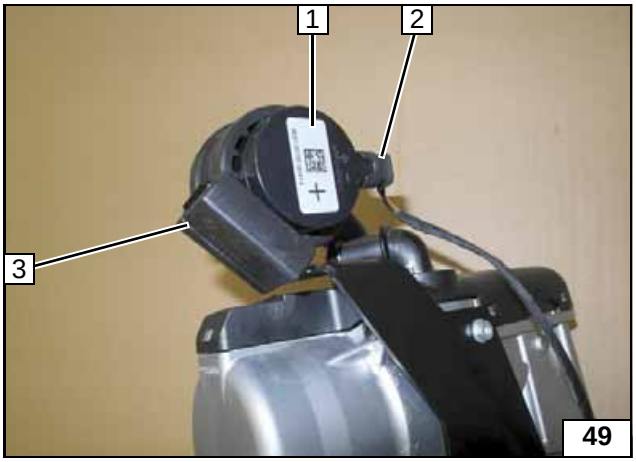



Slide braided protection hoses onto hoses **A** and **C** and cut to length. Cut heat shrink plastic tubing to length.

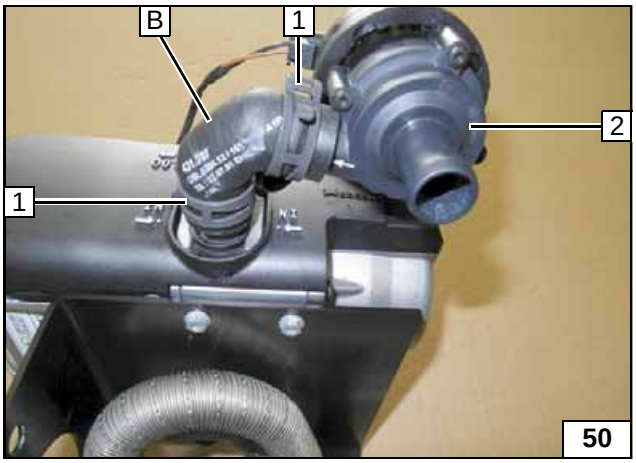
**1** 50 mm long heat shrink plastic tubing [4x]

**Preparing hoses**



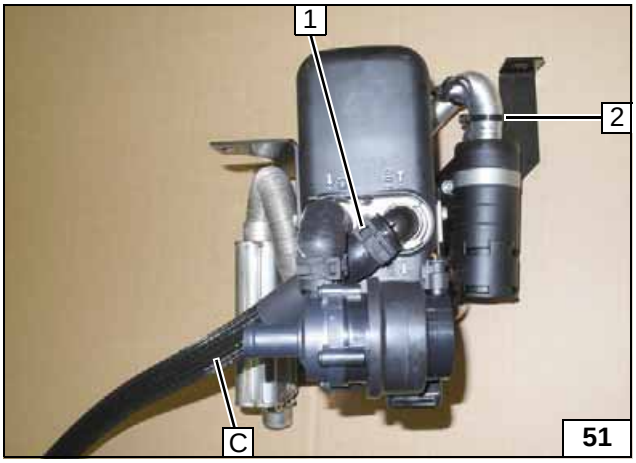

**1** Circulating pump
**2** Mount wiring harness of circulating pump
**3** Mount of circulating pump (push onto tab)

**Installing circulating pump**




**1** 25 mm dia. spring clip [2x]
**2** Circulating pump

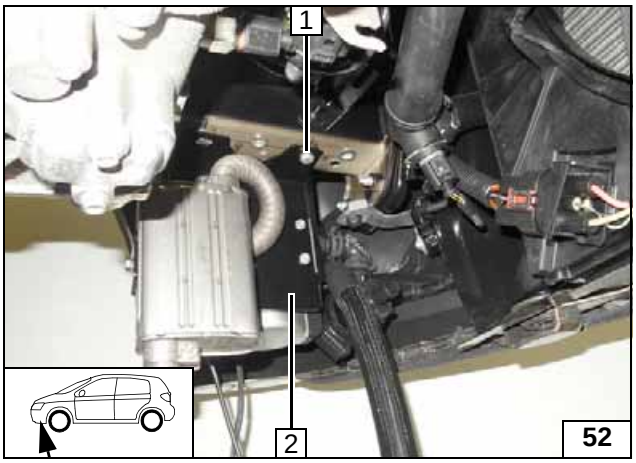
**Connecting circulating pump / heater inlet**




**1** 25 mm dia. spring clip
**2** Cable tie

**Connecting heater outlet**

 © Webasto Thermo & Comfort SE 




## Installing Heater

**1** M8x30 bolt, spring lockwasher
**2** Bracket part A

**Installing heater**

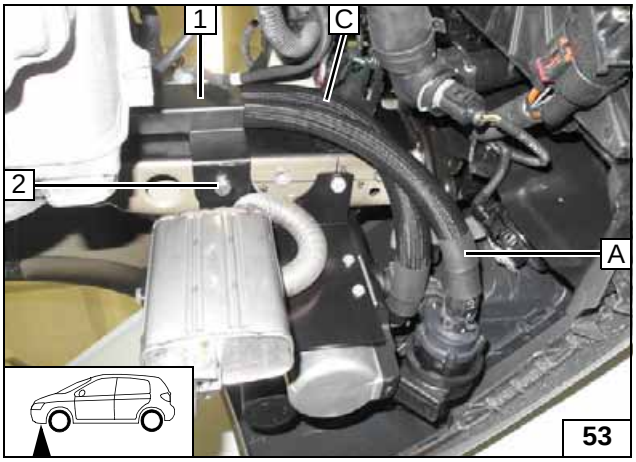



Figure shows 1.2 TSI.
Install hose **A**.
Route hoses **A** and **C** behind hose guide **1** to brake booster and align. Ensure sufficient distance from neighbouring components.

**2** M8x30 bolt, spring lockwasher

**Installing heater / hose guide**

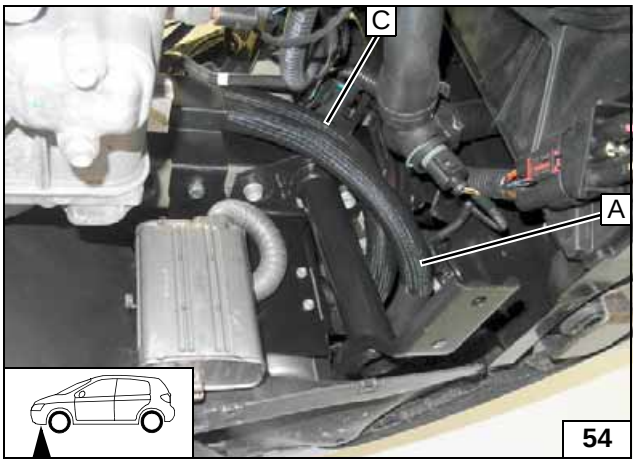



Figure shows routing of hoses **A** and **C** for vehicles equipped with a Rough Road Package.

**Installing heater**

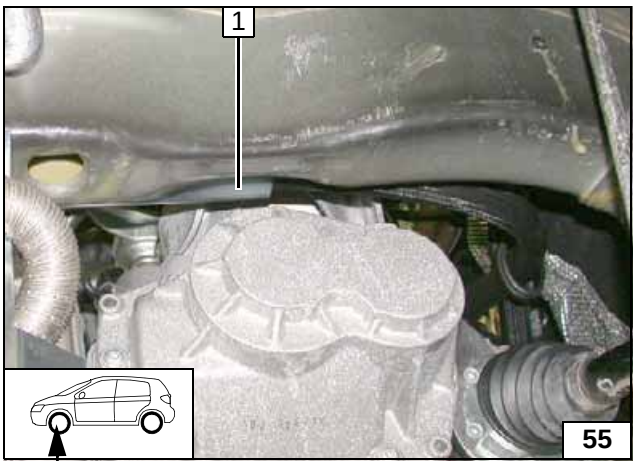



Figure shows 1.2 TSI.
Ensure sufficient distance between hose guide **1** and transmission.

**Routing over the transmission**

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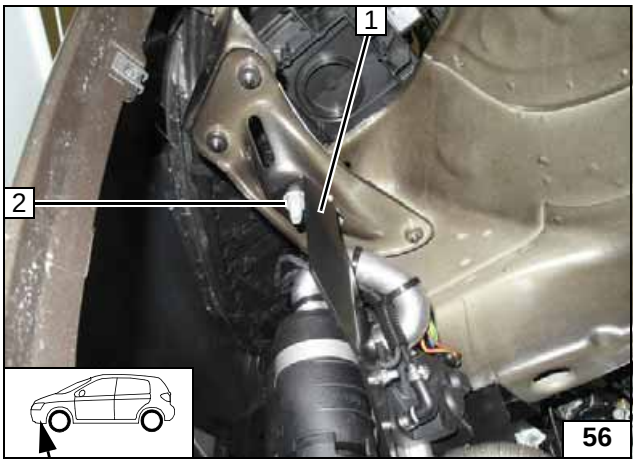
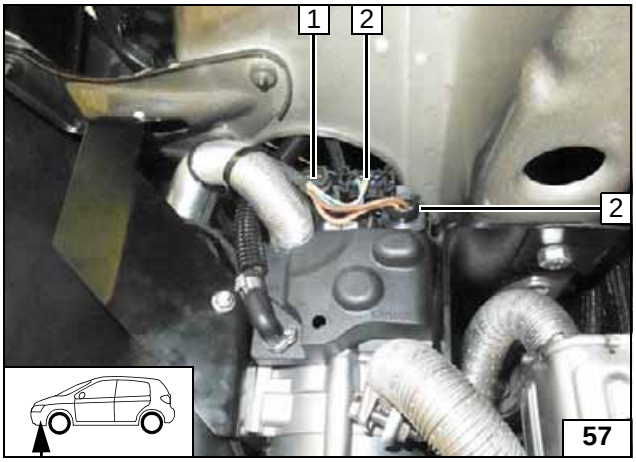


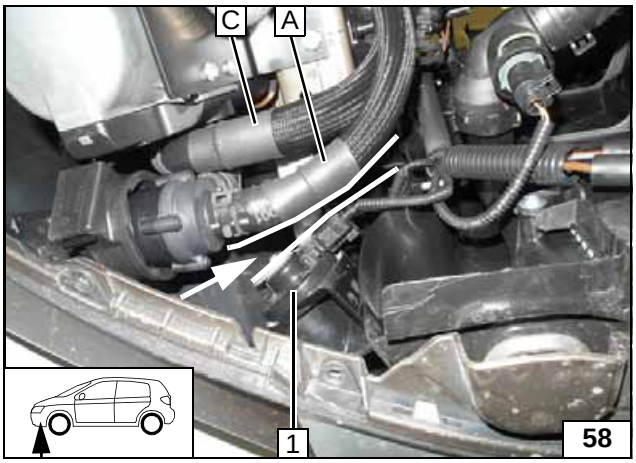

**1** Bracket part B
**2** M8x30 bolt, flanged nut, existing hole

**Installing heater**




**1** Connector of circulating pump wiring harness
**2** Connector of heater wiring harness [2x]

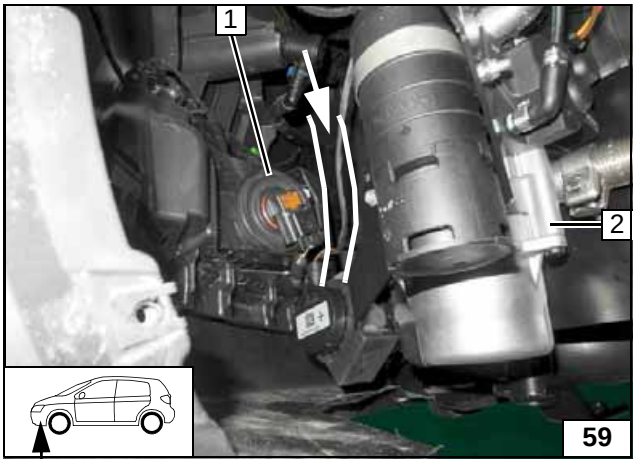
**Installing wiring harnesses**




>10

**1** Horn

**Distance check**

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**1** Front fog lights
**2** Heater

**Distance check**

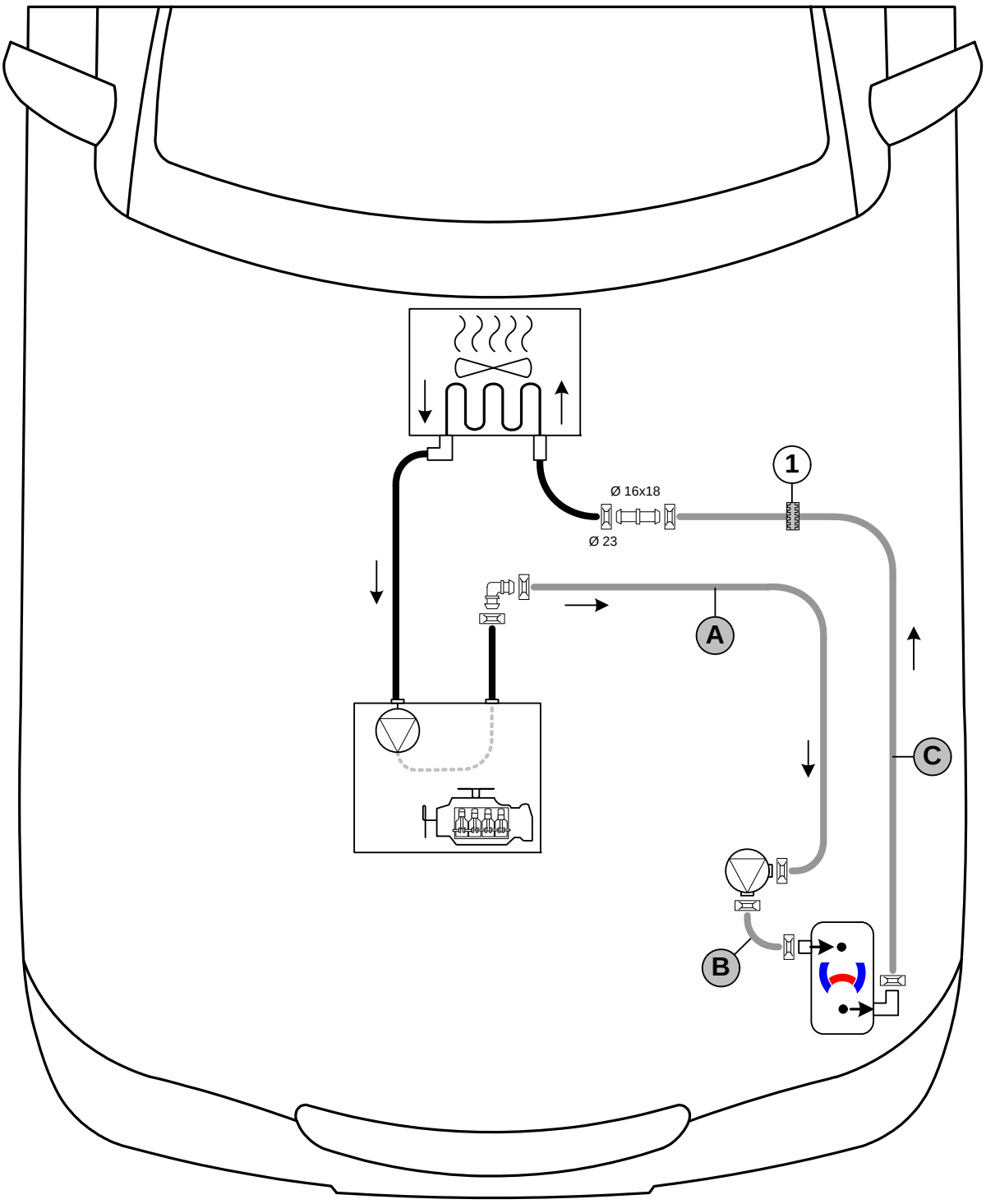
 © Webasto Thermo & Comfort SE 

## Coolant Circuit for 1.2 TSI

Any coolant running off should be collected using an appropriate container. Route hoses so that they are 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 "inline" circuit and based on the following diagram:

**Hose routing diagram**




All spring clips without a specific designation = 25 mm dia. **1** = Black (sw) rubber isolator .
Connecting pipe = 18x18mm dia.

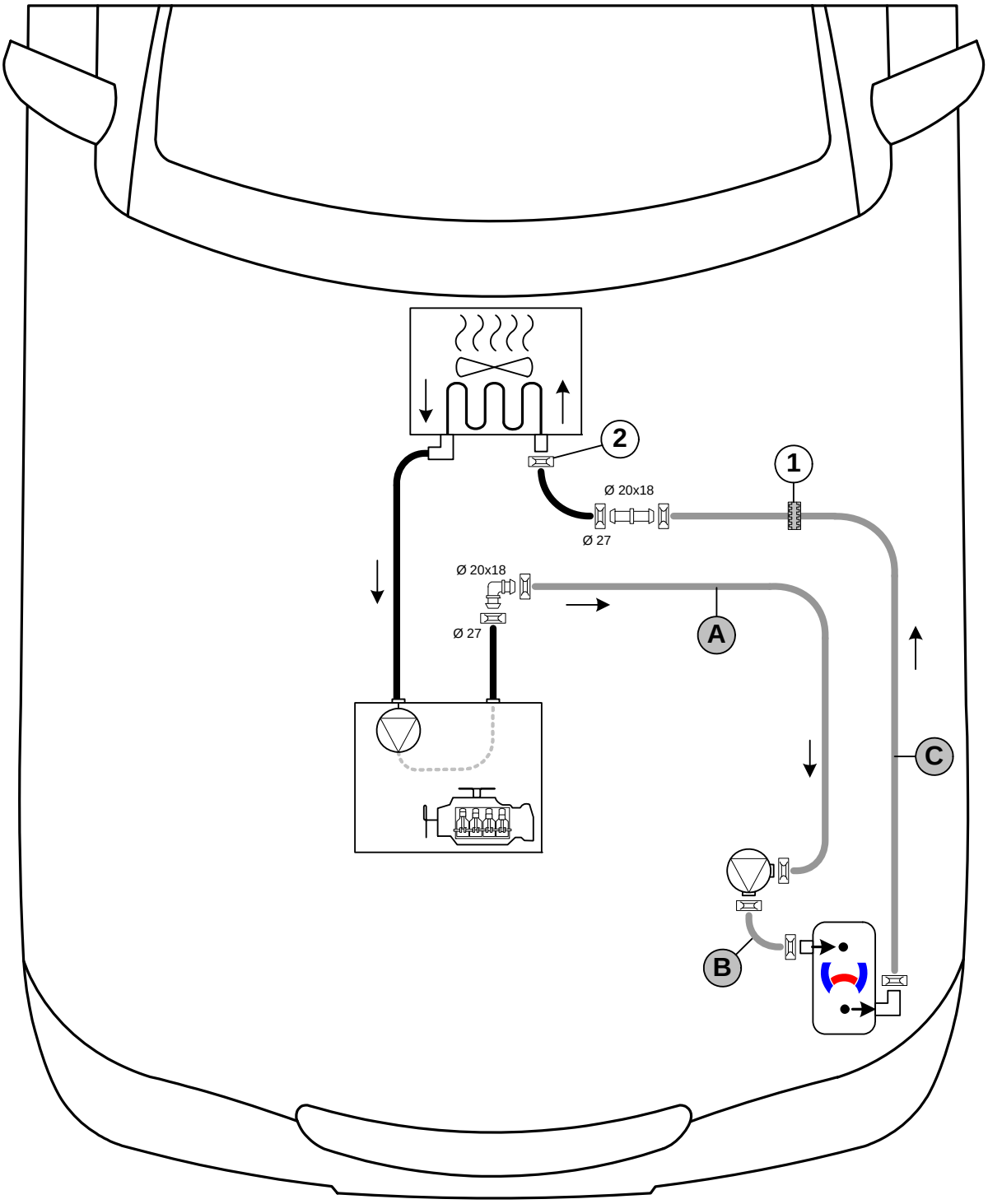
 © Webasto Thermo & Comfort SE 

## Coolant Circuit for 1.8 TSI

Any coolant running off should be collected using an appropriate container. Route hoses so that they are 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 "inline" circuit and based on the following diagram:

**Hose routing diagram**




All spring clips without a specific designation = 25 mm dia. **1** = Black (sw) rubber isolator.
**2** Original vehicle spring clip.

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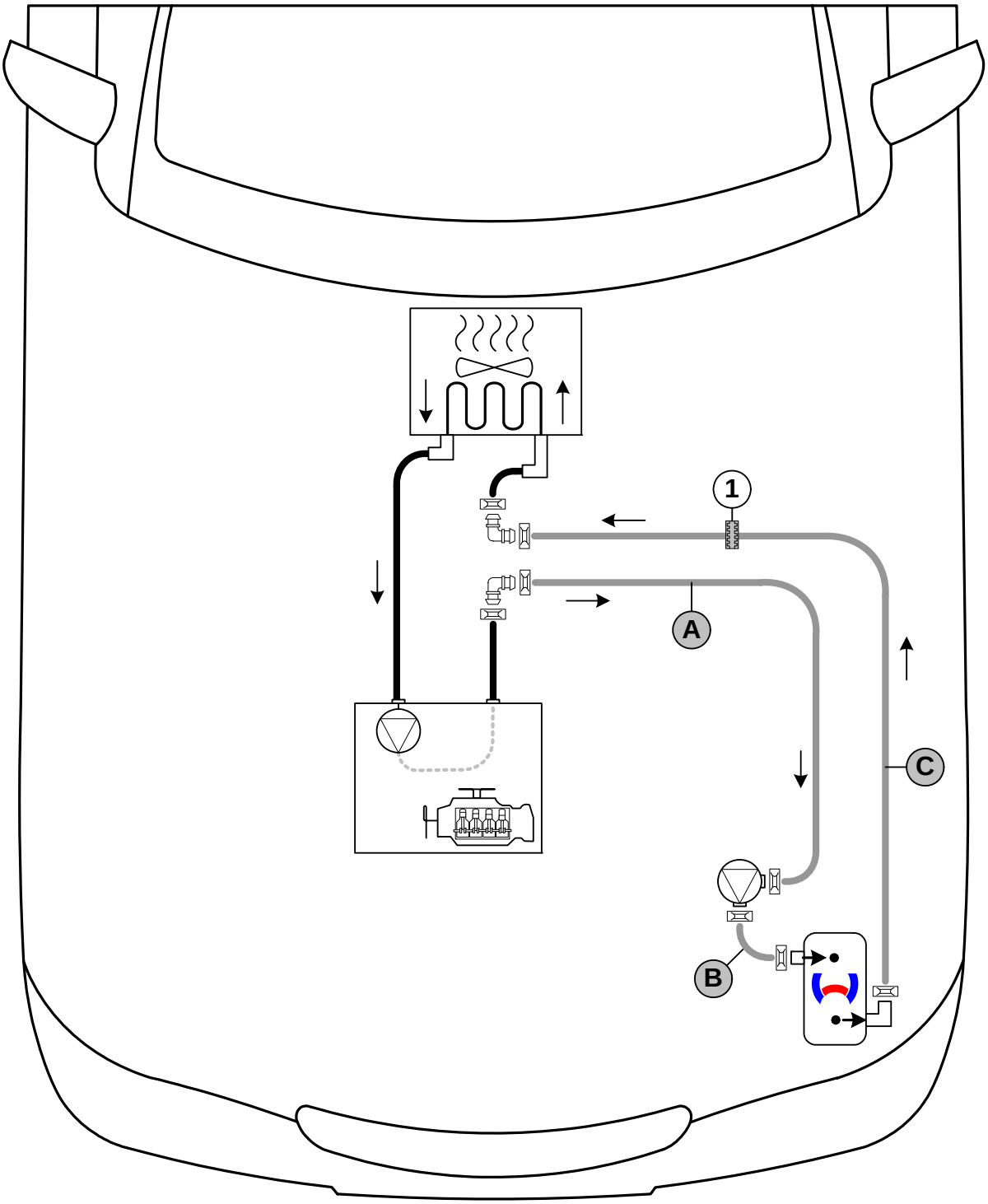
## Coolant Circuit for 1.4 TSI and 2.0 TDI

Any coolant running off should be collected using an appropriate container. Route hoses so that they are 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 "inline" circuit and based on the following diagram:

**Hose routing diagram**




All spring clips = 25 mm dia. **1** = Black (sw) rubber isolator.
All connecting pipes = 18x18 mm dia.

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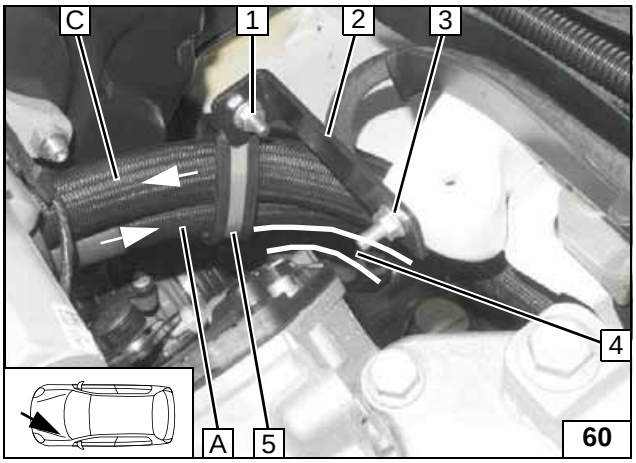


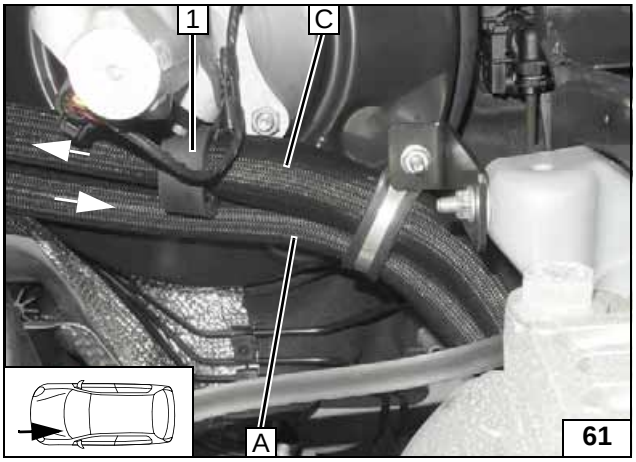

**All vehicles**

Route hose **A** and **C** through rubber-coated p-clamp **5**. Align bracket **2** as shown. Ensure sufficient distance at position **4** and to coupling line (if present).

**1** M6x20 bolt, flanged nut
**3** M6x20 bolt, large diameter washer (between body and bracket), flanged nut, existing hole



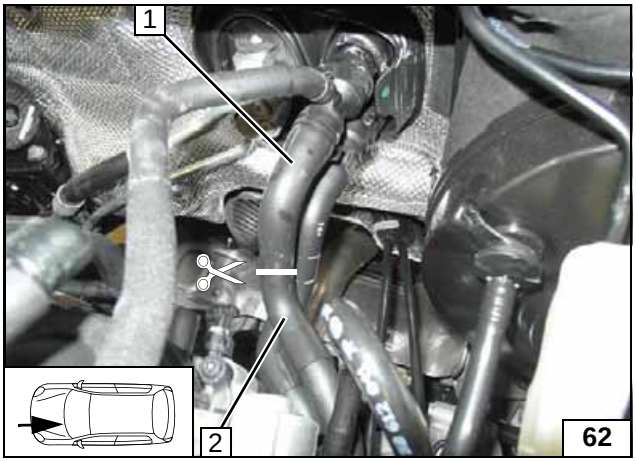
**Routing in engine compartment**




Slide black (sw) rubber isolator **1** onto hose **C**.



**Routing in engine compartment**



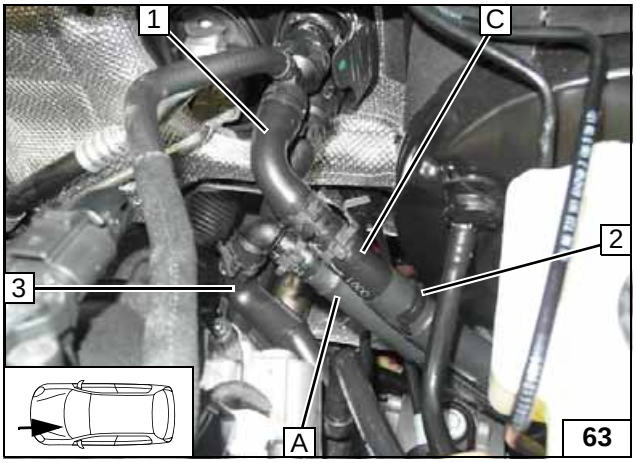

**1.2 TSI**

Cut off hose on engine outlet/heat exchanger inlet at marking.

**1** Heat exchanger inlet hose section
**2** Engine outlet hose section



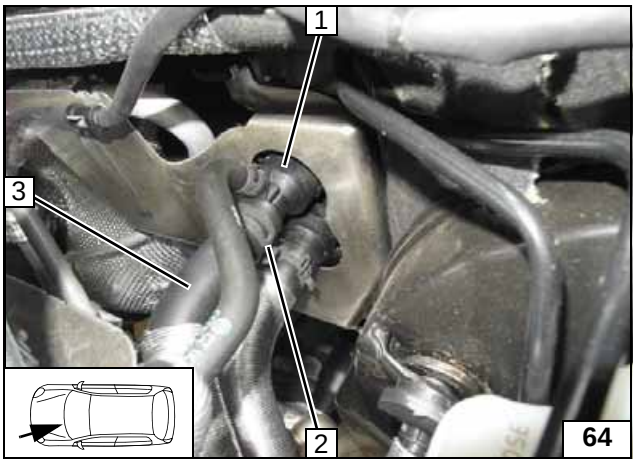
**Cutting point**




**1** Heat exchanger inlet hose section, turned left in the driving direction
**2** 23x23 hose bracket between hose **A** and hose **C**
**3** Engine outlet hose section

**Connection of engine outlet / heat exchanger inlet**

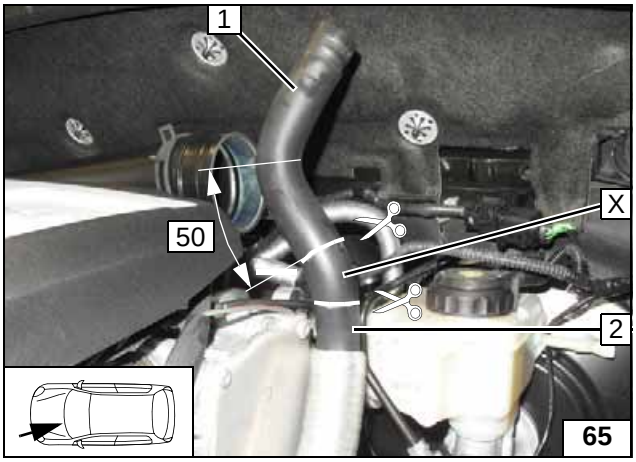
 © Webasto Thermo & Comfort SE 




**1.8 TSI**

Pull hose of engine outlet / heat exchanger inlet **3** from coupling piece of heat exchanger inlet **1**. Spring clip **2** will be reused.

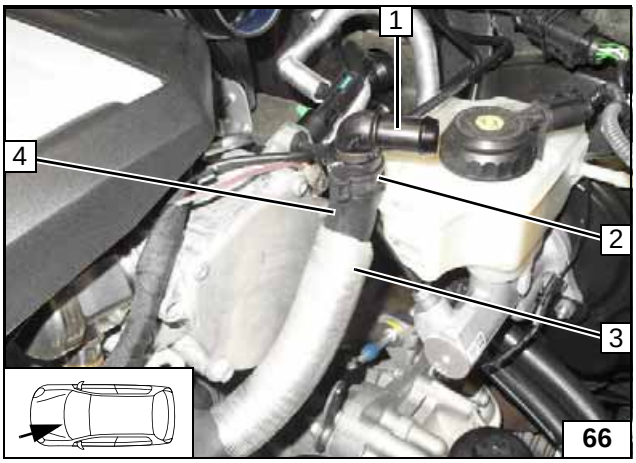
**Cutting point**




Cut hose on engine outlet / heat exchanger inlet at the markings.
Discard section **X**.

**1** Heat exchanger inlet hose section
**2** Engine outlet hose section

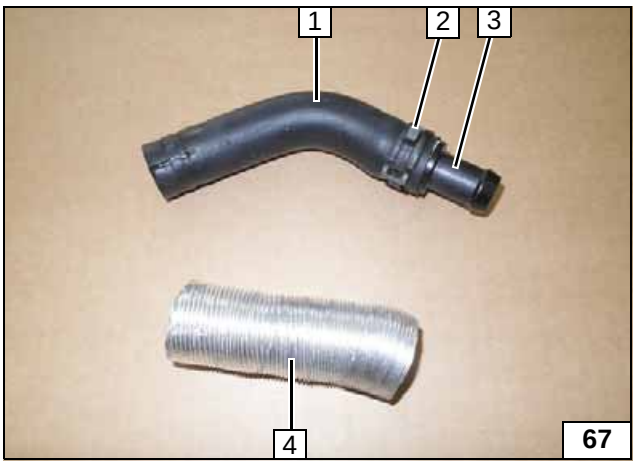
**Cutting point**




Cut off 90mm from heat protection hose **3** before installation, will be reused.

**1** 20x18 mm dia. connecting pipe
**2** 27 mm dia. spring clip
**4** Engine outlet hose section

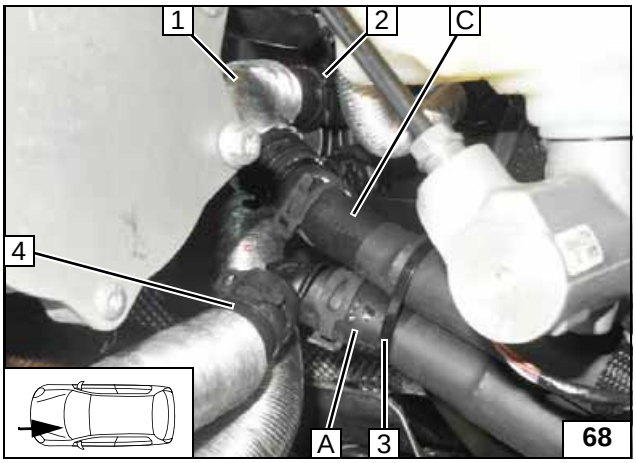
**Preparing hose section of engine outlet**




Slide 90 mm heat protection hose **4** onto hose section of heat exchanger inlet **1**. Install hose section of heat exchanger inlet **1** onto connection piece of heat exchanger inlet using original vehicle spring clip (see following figure)!

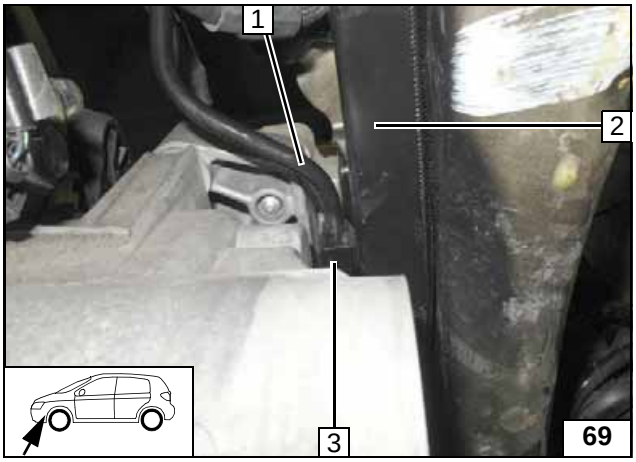
**2** 27 mm dia. spring clip
**3** 20x18 mm dia. connecting pipe

**Preparing hose section of heat exchanger inlet**



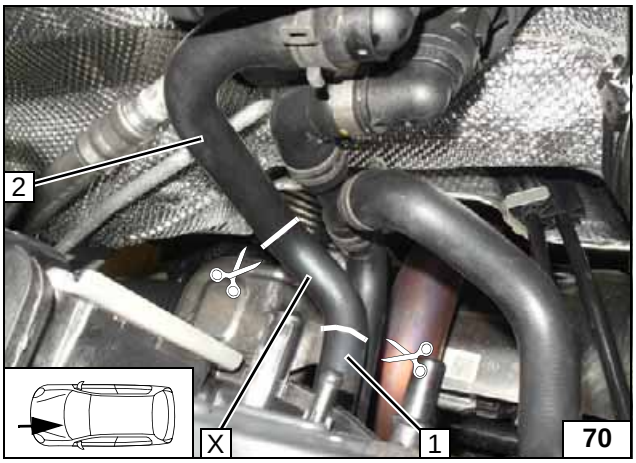

**1** Heat exchanger inlet hose section
**2** Original vehicle spring clip
**3** Cable tie
**4** Engine outlet hose section

**Connection of engine outlet / heat exchanger inlet**




**1** Coupling line (if present)
**2** Hose guide
**3** Retaining clip of coupling line

**Installing coupling line**

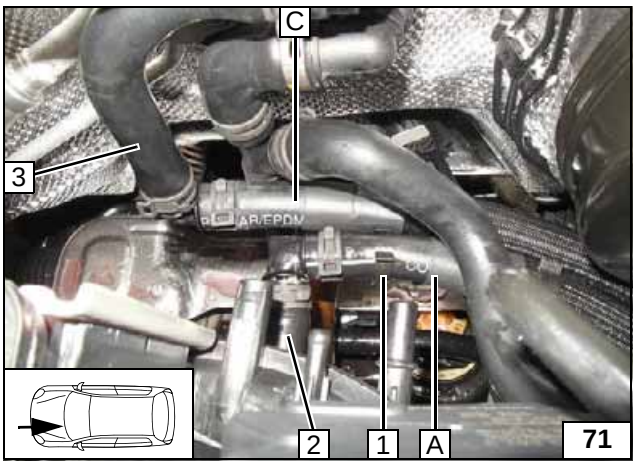



**1.4 TSI**

Cut hose on engine outlet / heat exchanger inlet at the markings.
Discard section **X**.

**1** Engine outlet hose section
**2** Heat exchanger inlet hose section

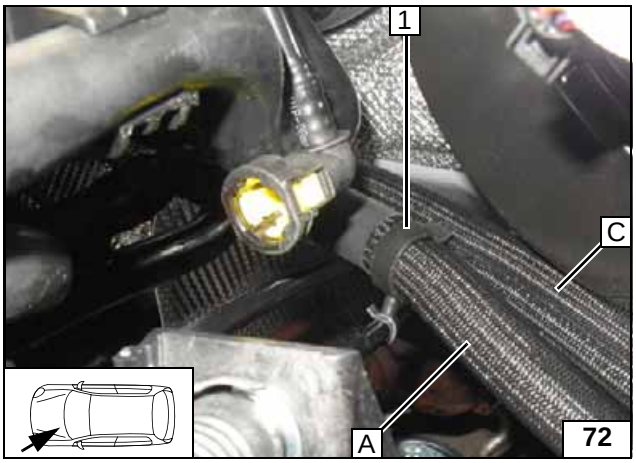
**Cutting point**




**1** 23x23 hose bracket between hose **A** and hose **C**
**2** Engine outlet hose section
**3** Heat exchanger inlet hose section

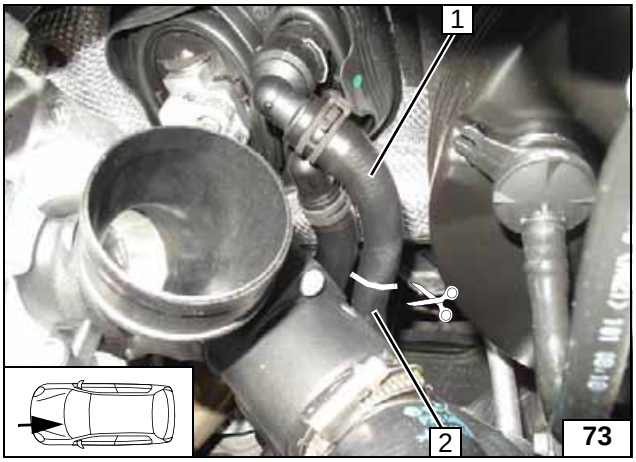
**Connection of engine outlet / heat exchanger inlet**

 © Webasto Thermo & Comfort SE 




**1** 22x8 hose bracket between hose **A** and gearshift cable

**Mounting hose bracket**

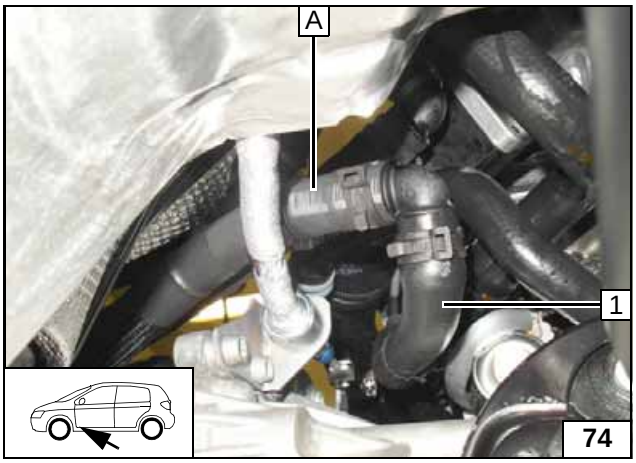



**2.0 TDI**

Cut off hose on engine outlet/heat exchanger inlet at marking.

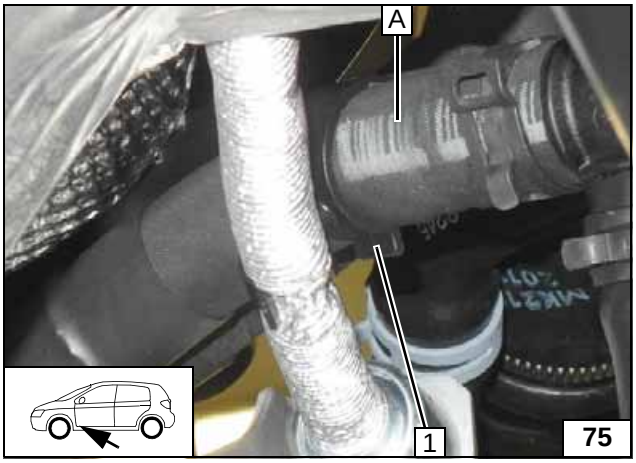
**1** Heat exchanger inlet hose section
**2** Engine outlet hose section

**Cutting point**



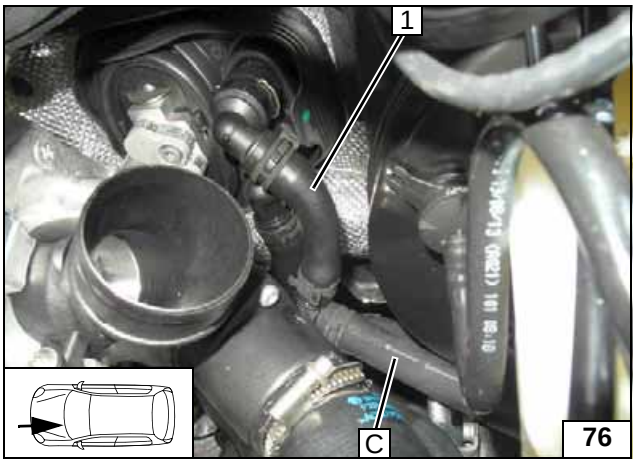

**1** Engine outlet hose section

**Connecting engine outlet**



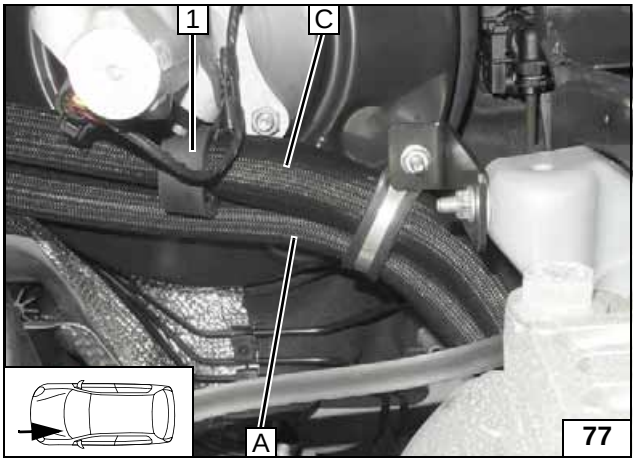

**1** 22x10 hose bracket between hose **A** and gearshift cable

**Mounting hose bracket**




**1** Heat exchanger inlet hose section

**Connecting heat exchanger inlet**

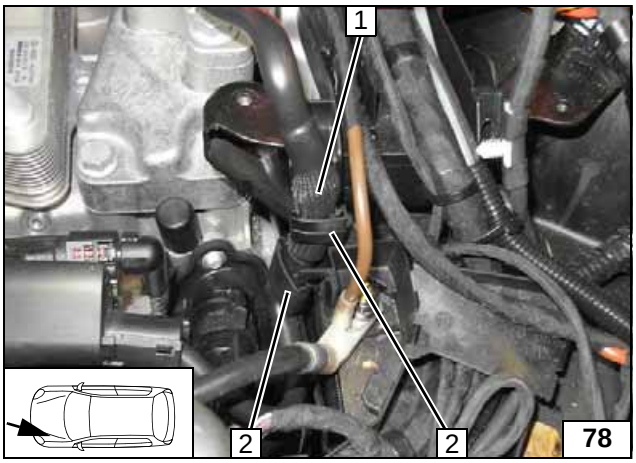



**All vehicles**

Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

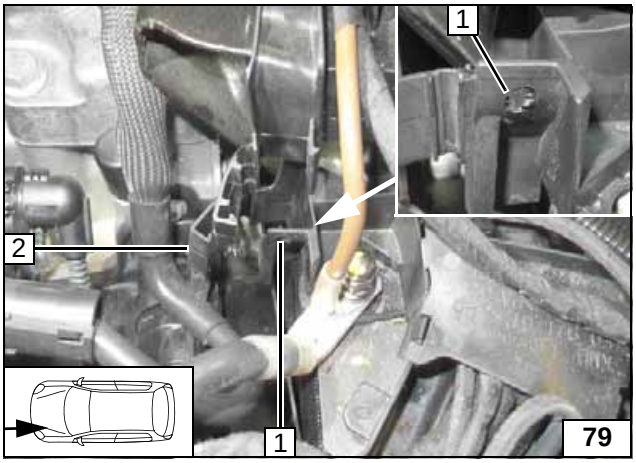
**1** Align black (sw) rubber isolator with brake booster

**Aligning rubber isolator**




Detach original vehicle wiring harness **1** from bracket **2** [2x] and set aside.

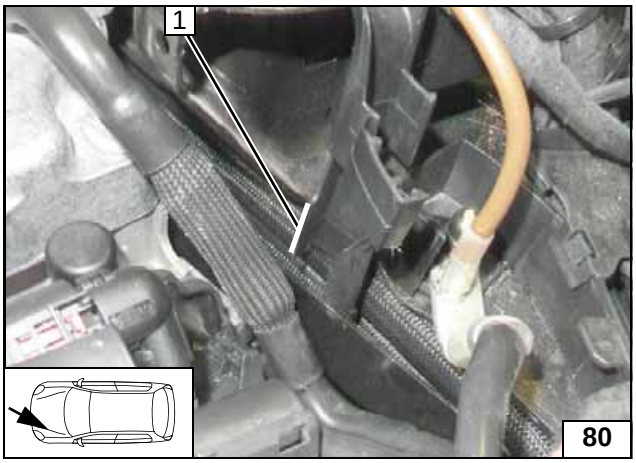
**Moving wiring harness**




When drilling, watch components located behind!
Remove lower locking device **2** (see nex figure).

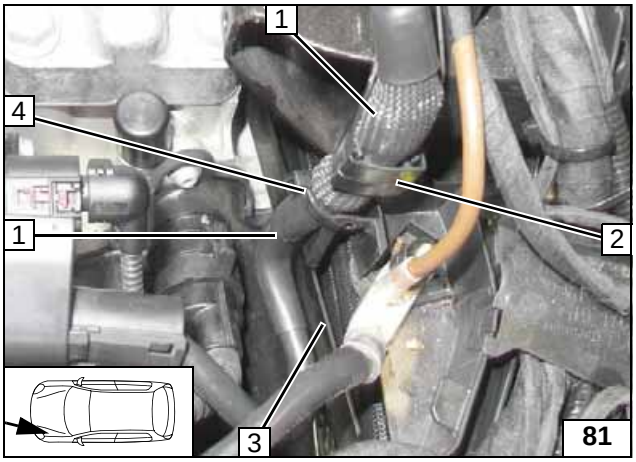
**1** 5 mm dia. hole in original vehicle bracket

**Adapting bracket**




**1** Cutting edge

**View of cutting edge**




Ensure sufficient distance to hose guide **3** , correct if necessary.

**1** Original vehicle wiring harness
**2** Lock
**4** Cable tie

**Securing original vehicle wiring harness**

## Fuel

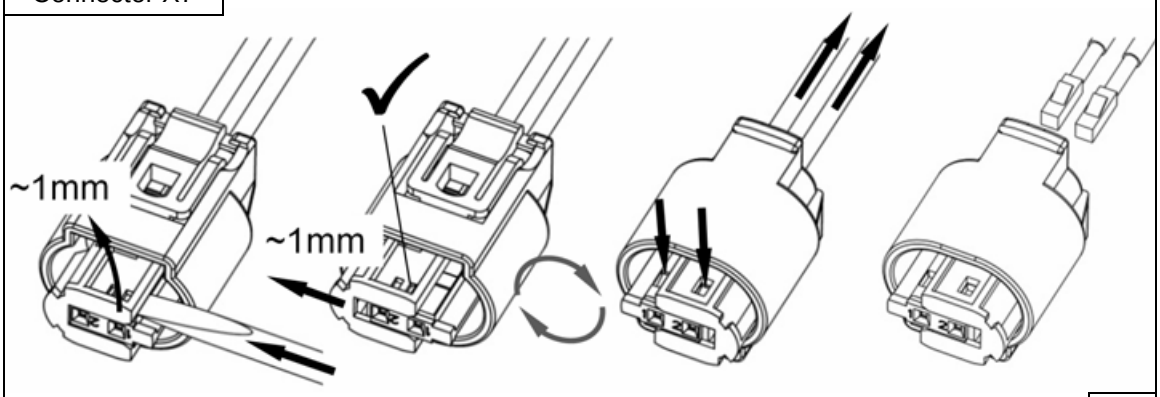
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off with an appropriate container.

Route fuel line and metering 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.

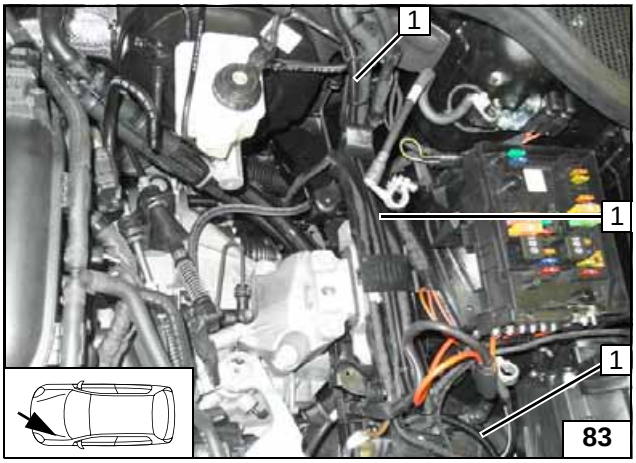
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.

Connector X7




82

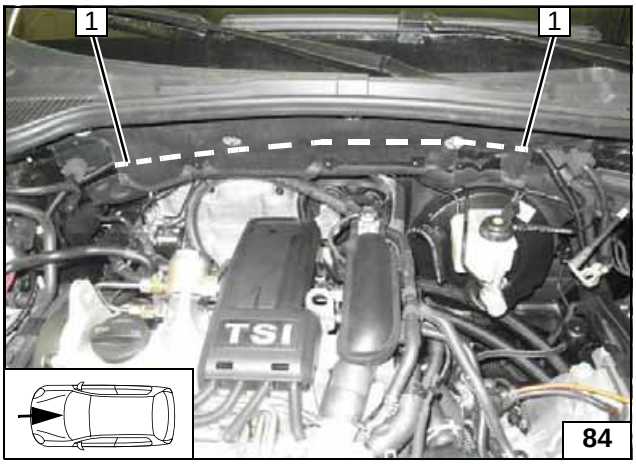
**Dismantling connector of metering pump**




83

Route fuel line and wiring harness of metering pump in 10mm dia. 1130mm long corrugated tube **1** in original vehicle line duct to firewall.

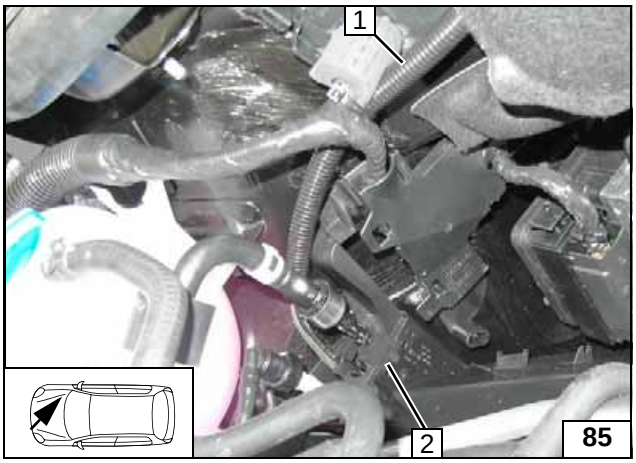
**Routing lines**




84

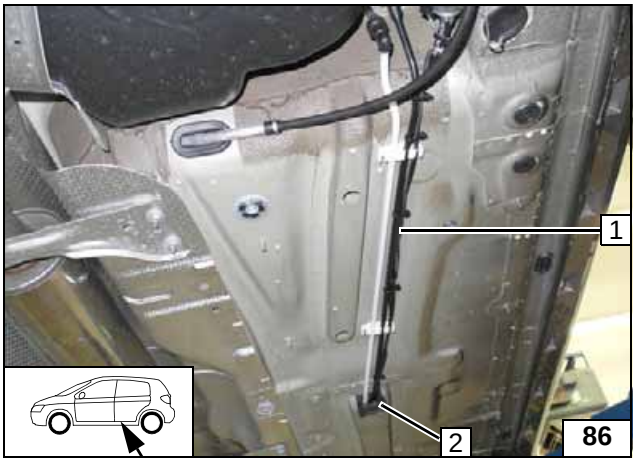
Route fuel line and metering pump wiring harness **1** to the right side of the vehicle along the firewall and behind the insulation mat .

**Routing lines**



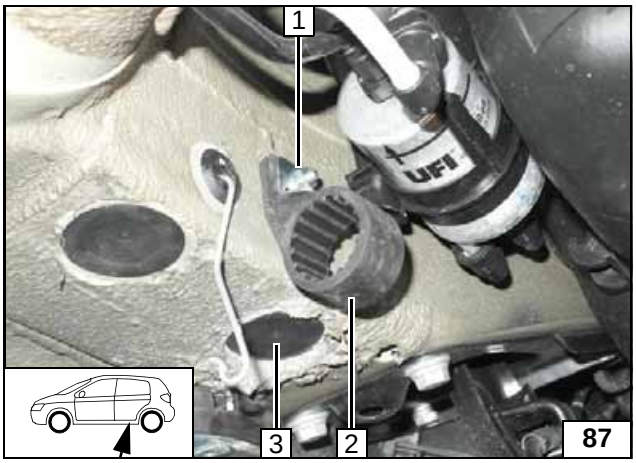

Cut approx. 300 mm from 10 mm dia. corrugated tube **1** and push onto fuel line and wiring harness of metering pump. Lead fuel line and metering pump wiring harness into original vehicle line duct **2** and route to underbody.

**Routing lines**




**1** Fuel line and metering pump wiring harness
**2** Original vehicle line duct

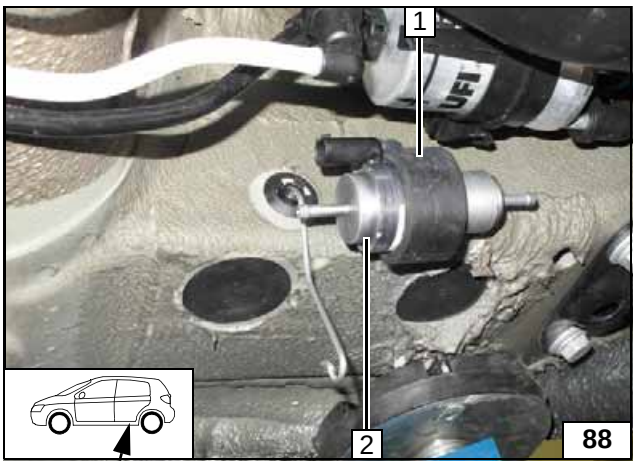
**Routing lines**




Mount bolt **1** through hole in frame side member **3**.

**1** M6x25 bolt, support angle bracket, flanged nut, existing hole
**2** Metering pump mount

**Installing metering pump mount**




**1** Metering pump mount
**2** Metering pump

**Installing metering pump**

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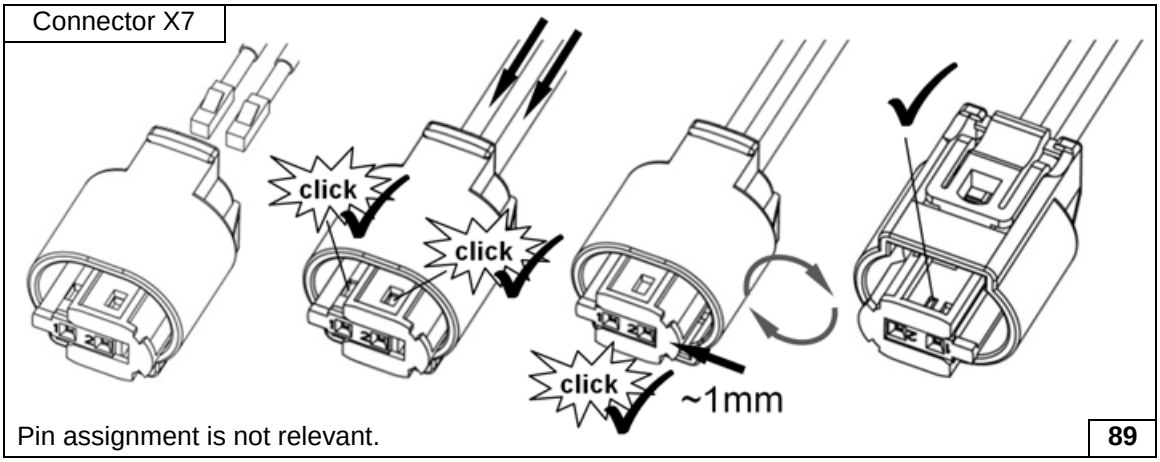
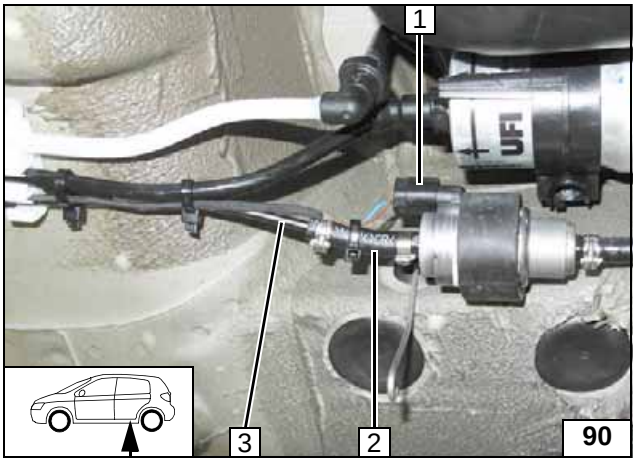
Connector X7




Pin assignment is not relevant.

89

**Completing metering pump connector**




90

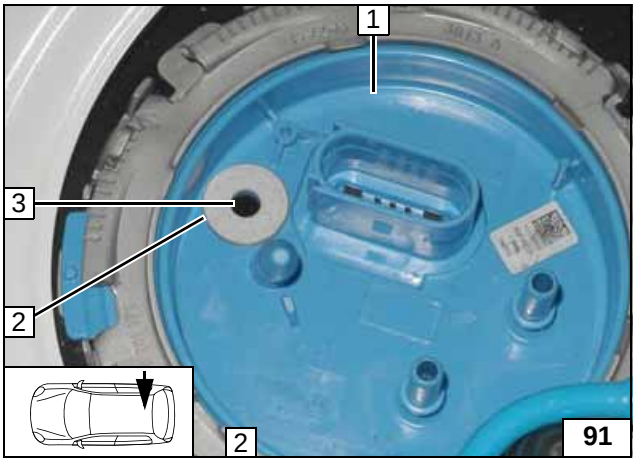
1 Metering pump wiring harness, connector X7 mounted
2 Hose section, 10 mm dia. clamp [2x]
3 Fuel line of heater

**Connecting metering pump**

## Installing FuelFix

**1.2 and 1.4 TSI**

Work steps F1 and F2.

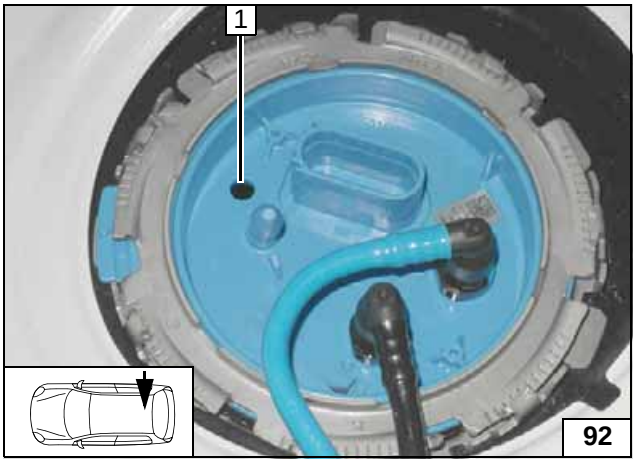



91

1 Fuel tank sending unit
2 Position washer with dia. $d_a$ = 21.6 mm as template centrally between the connector socket, raised moulding and the rim of the fuel tank sending unit
3 Hole pattern

**Copying hole pattern**

Work step F3.




92

1 Hole made with provided drill

**Hole for FuelFix**

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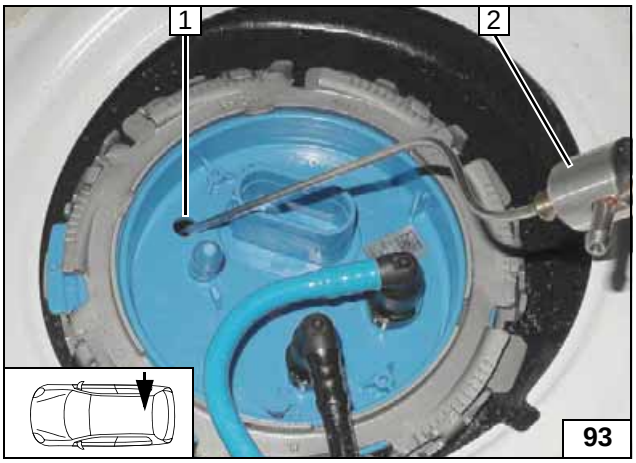
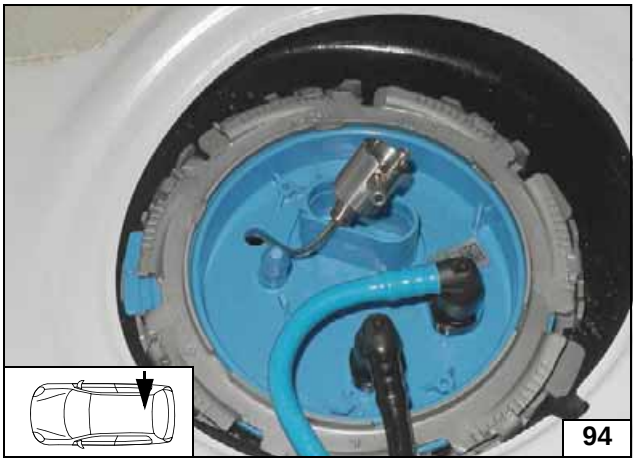


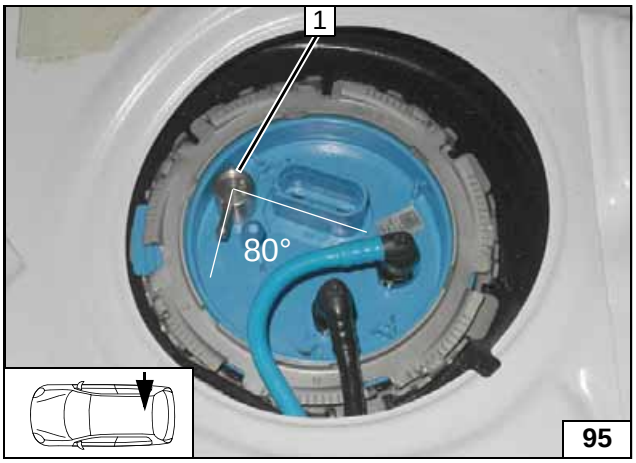

Work steps F4 and F5.

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

**Inserting FuelFix**



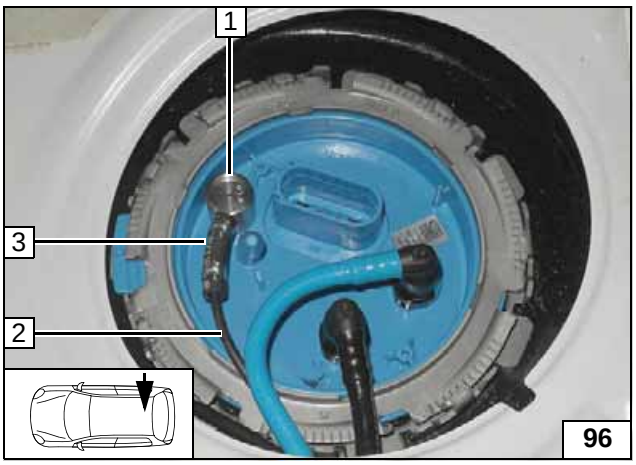

**Inserting FuelFix**




Work steps F5.3 and F5.4.

Turn FuelFix **1** in position as shown.

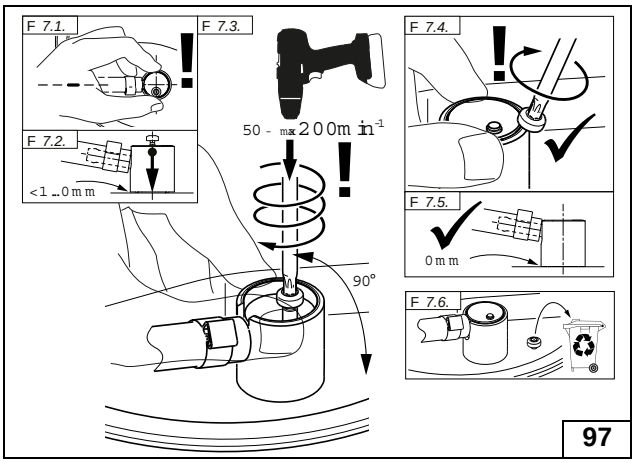
**Position-ing FuelFix**




Work step F6.

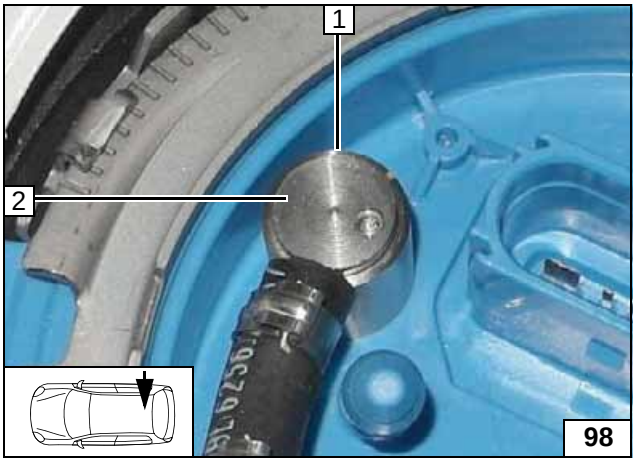
**1** FuelFix
**2** Hose section, 10 mm dia. clamp [2x]
**3** Fuel line

**Connect-ing fuel line**




Work step F7.

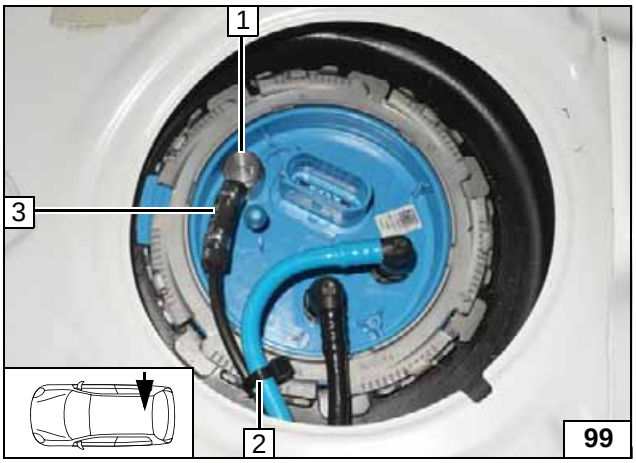
**Installing FuelFix**




Work step F8.

Ensure firm seating of the FuelFix and check the positioning of clamping piece **2** with respect to upper edge **1** of the housing.

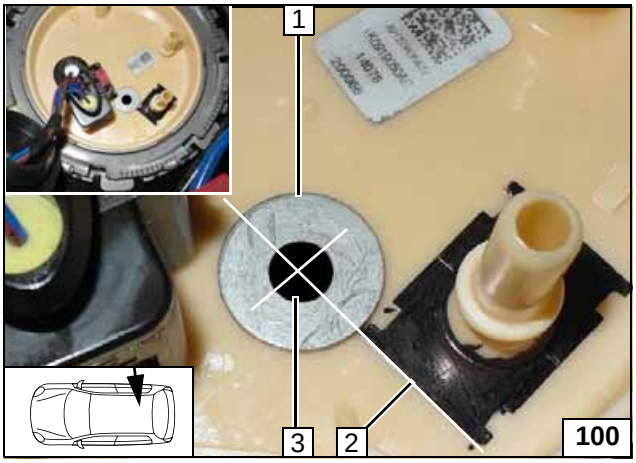
**Checking final position**




Work step F8.

**1** FuelFix mounted
**2** Cable tie for strain relief
**3** Fuel line of FuelFix

**Securing fuel line**

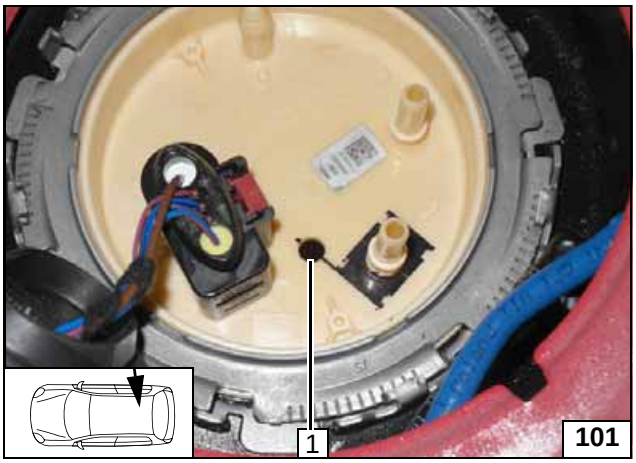



**1.8 TSI / 2.0 TDI**

Work steps F1 and F2.

**1** Position washer with outer dia. $d_a$ = 21.6mm, will be used as a template
**2** Position and align with connection piece socket
**3** Copy hole pattern

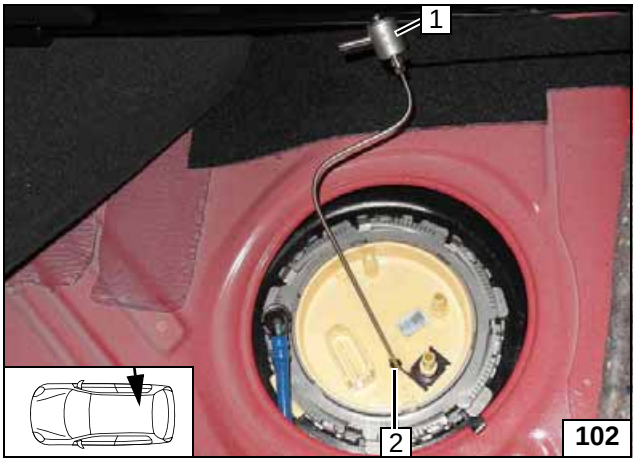
**Copying hole pattern**




Work step F3.

**1** Hole made with provided drill

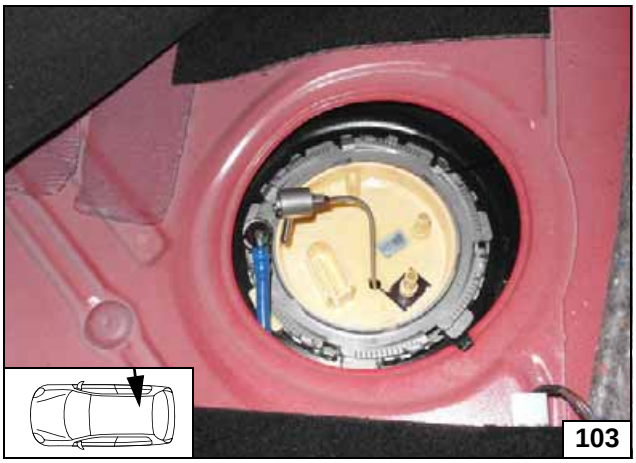
**Hole for FuelFix**



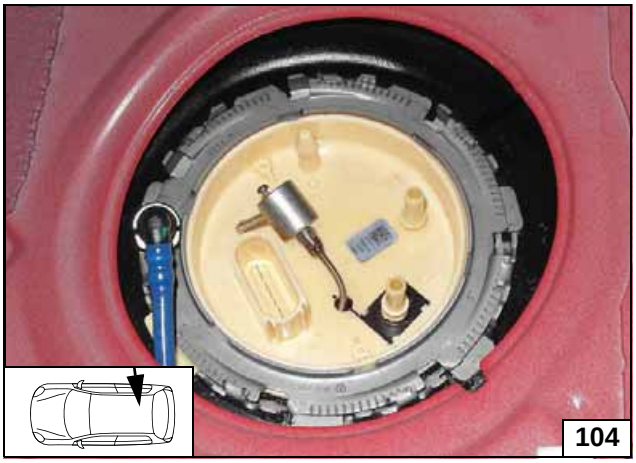

Work steps F4 and F5.

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

**Inserting FuelFix**



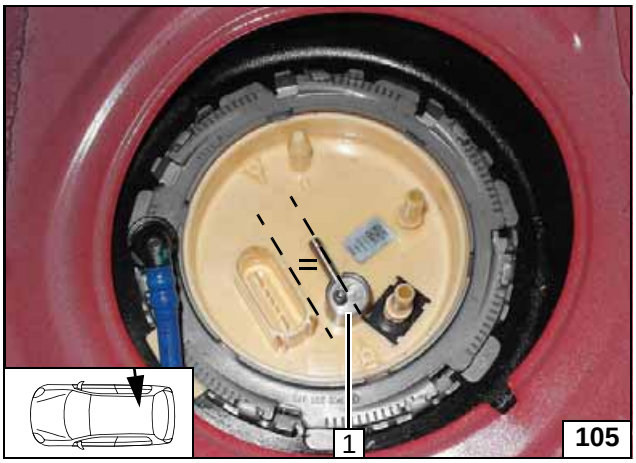

**Inserting FuelFix**




**Inserting FuelFix**

 © Webasto Thermo & Comfort SE 





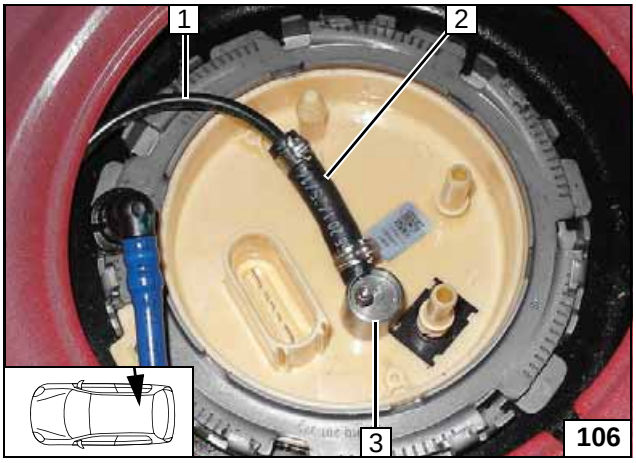

Work steps F5.3 and F5.4.

Turn FuelFix **1** in position as shown.



**Positioning FuelFix**





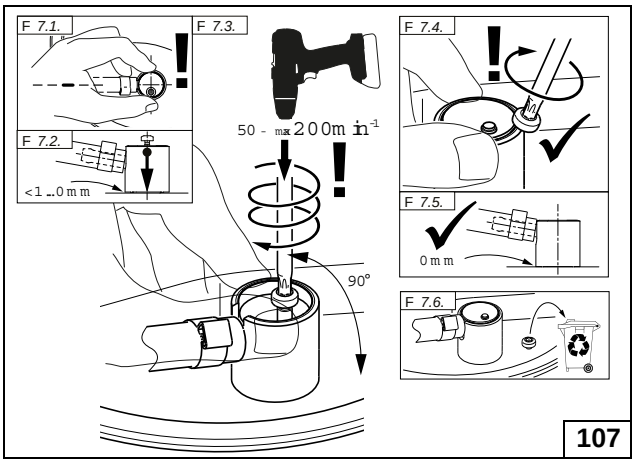

Work step F6.

**1** Fuel line
**2** Hose section, 10 mm dia. clamp [2x]
**3** FuelFix



**Connecting fuel line**



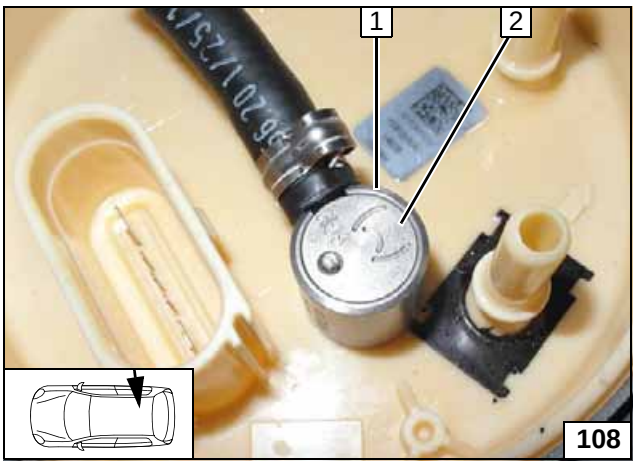



Work step F7.



**Installing FuelFix**






Work step F8.

Ensure firm seating of the FuelFix and check the positioning of clamping piece **2** with respect to upper edge **1** of the housing.



**Checking final position**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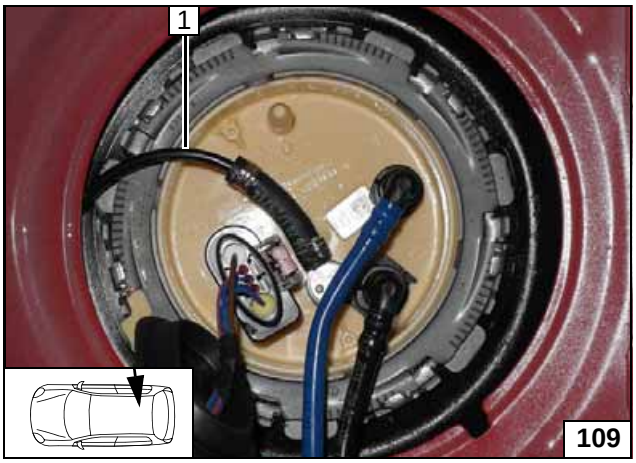
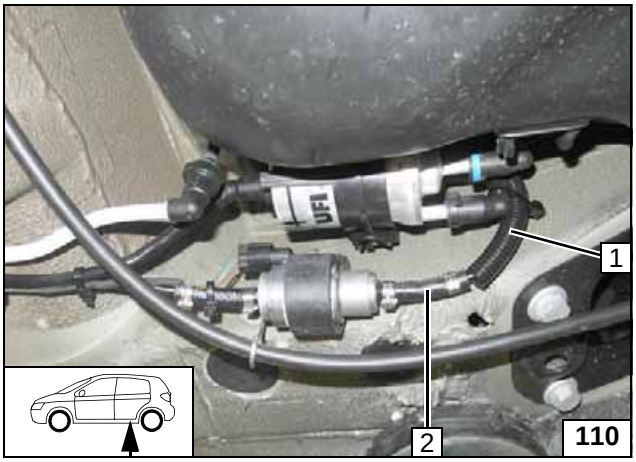



Work step F8.

Attach fuel line **1** for strain relief at an appropriate place using a cable tie.

**Securing fuel line**




**All vehicles**

Slide 10 mm dia. corrugated tube **1** onto fuel line of FuelFix. Ensure sufficient distance from neighbouring components, correct if necessary.

**2** Fuel line, hose section, 10 mm dia. clamp [2x]

**Connecting metering pump**

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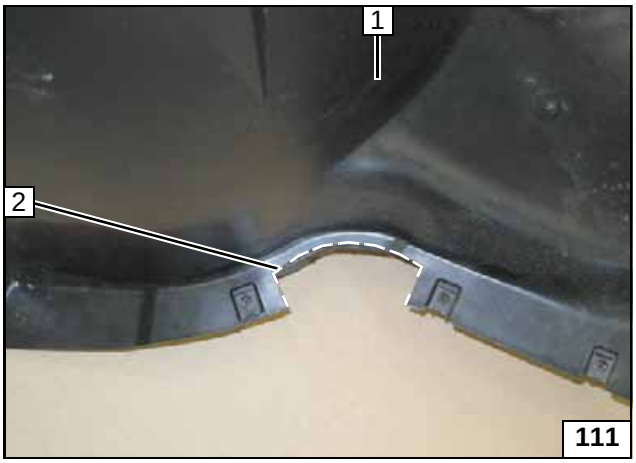
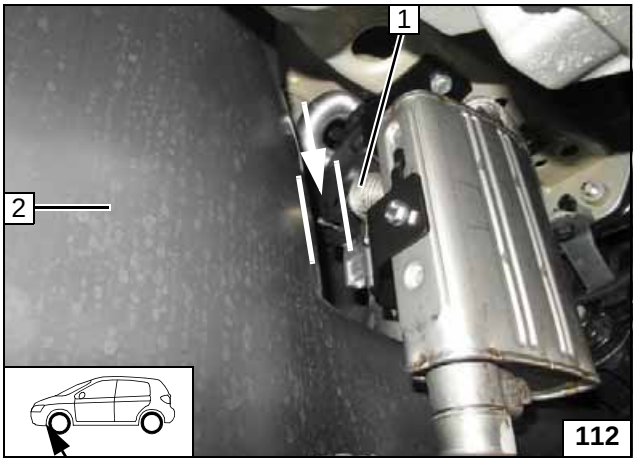
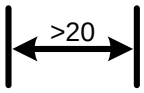
## Wheel-Well Inner Panel / Underride Protection

Cut out wheel-well inner panel **1** at marking **2**.

**Cutting out wheel-well inner panel**



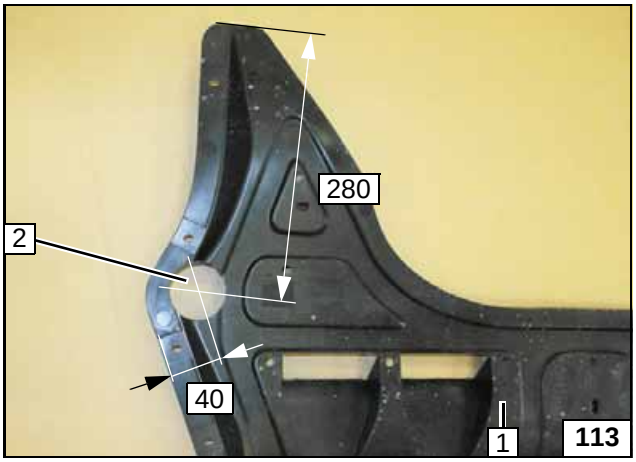




**Installing wheel-well inner panel**

**1** Exhaust pipe
**2** Wheel-well inner panel

**Underride protection version 1**

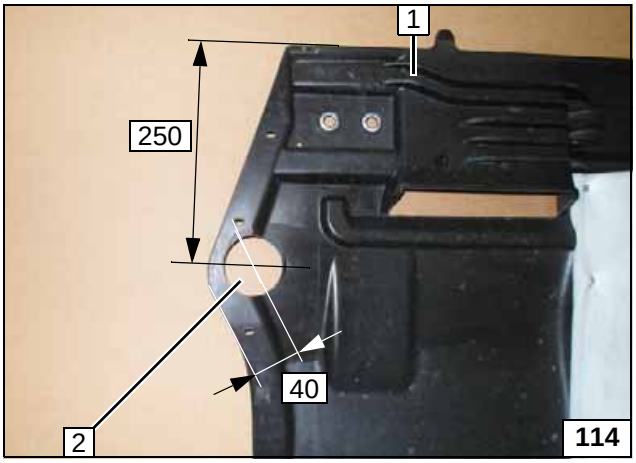
**Cutting out underride protection**




**1** Underride protection
**2** 60 mm dia. hole

**Underride protection version 2**

**Cutting out underride protection**



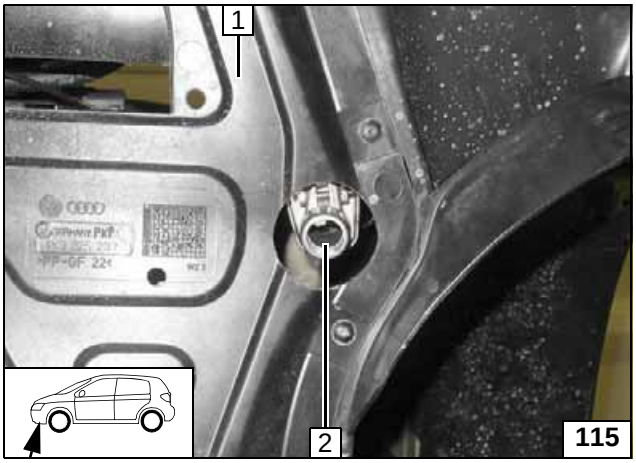

**1** Underride protection (rough road package)
**2** 60 mm dia. hole

 © Webasto Thermo & Comfort SE 

## Final Work

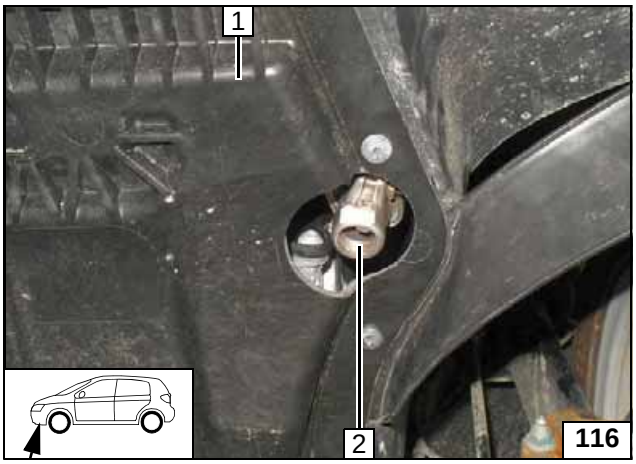
Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refuelling" caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**




Install underride protection **1** (version 1). Centrally align exhaust end section **2** in hole and flush with underride protection **1**.

**Aligning exhaust end section**




Install underride protection **1** (version 2 - rough road package). Centrally align exhaust end section **2** in hole and flush with underride protection **1**.

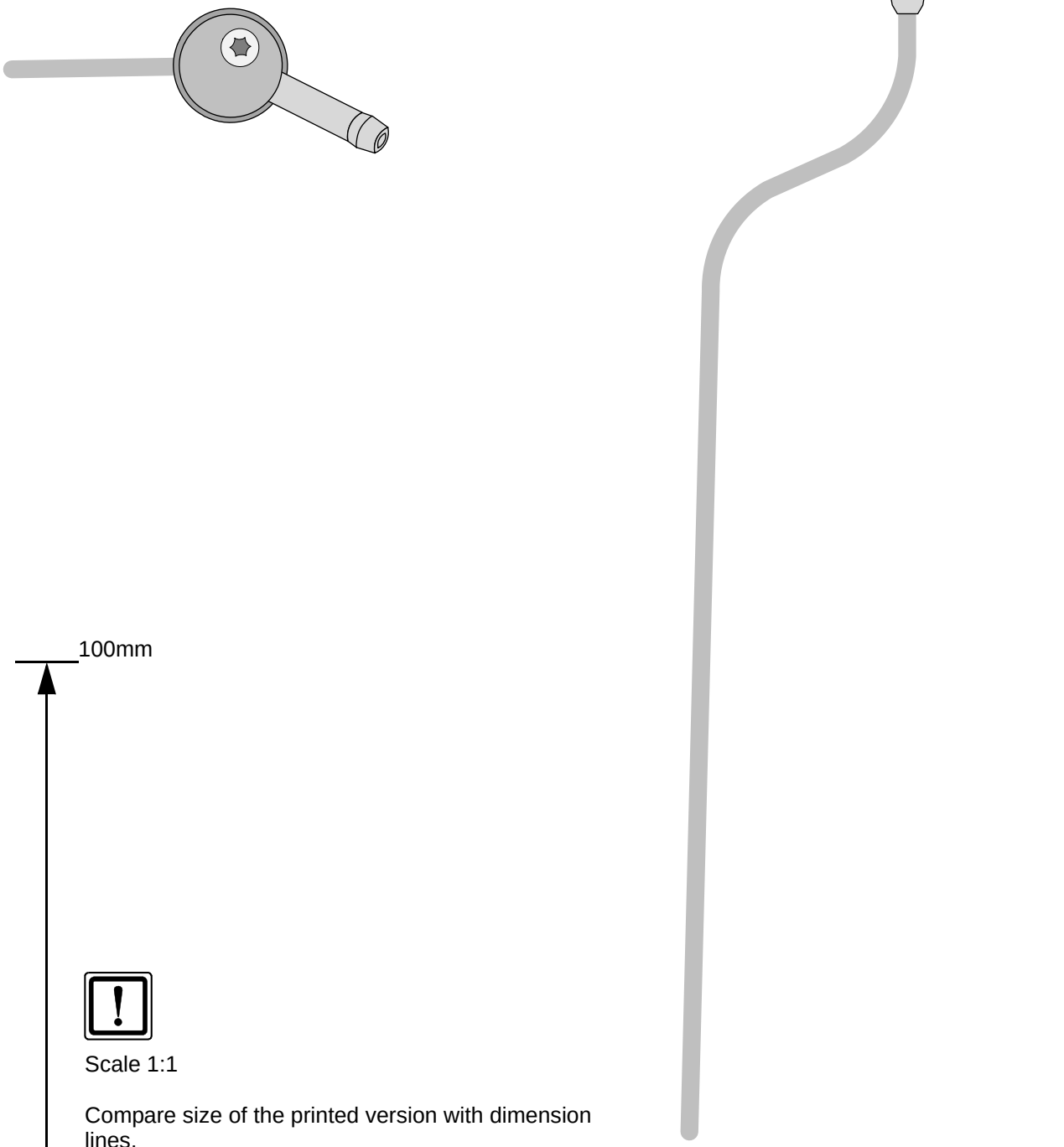
**Aligning exhaust end section**

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
German
Internet:
Technical Extranet:

 © Webasto Thermo & Comfort SE 

## FuelFix 1.2 and 1.4 TSI Template

**Top view**






Scale 1:1

Compare size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

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

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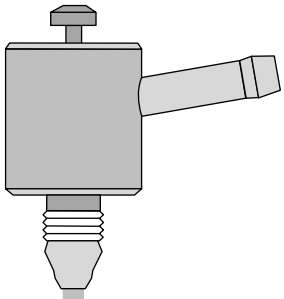
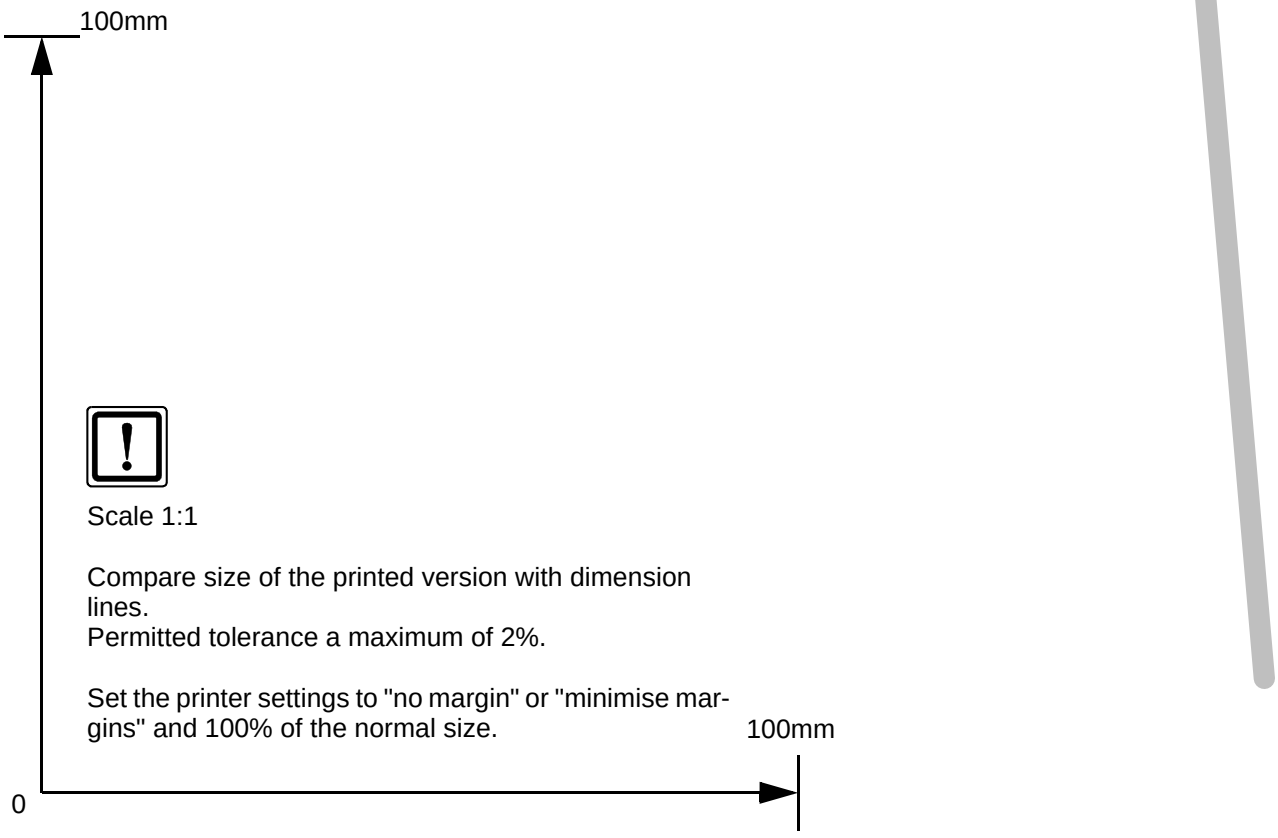
## FuelFix 1.8 and 2.0 TSI Template



**Top view**






 © Webasto Thermo & Comfort SE 

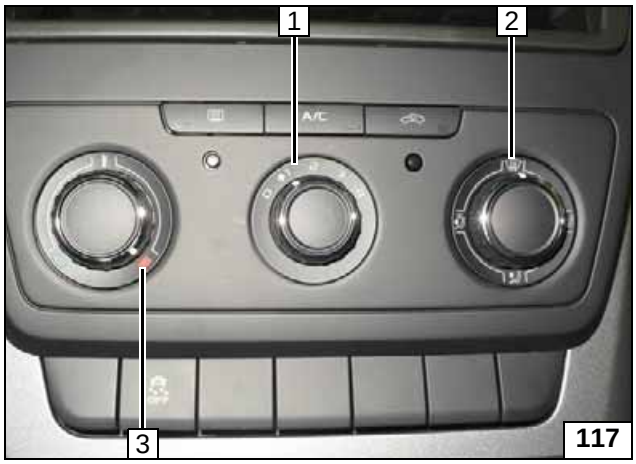
## Operating Instructions for Climatic

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.

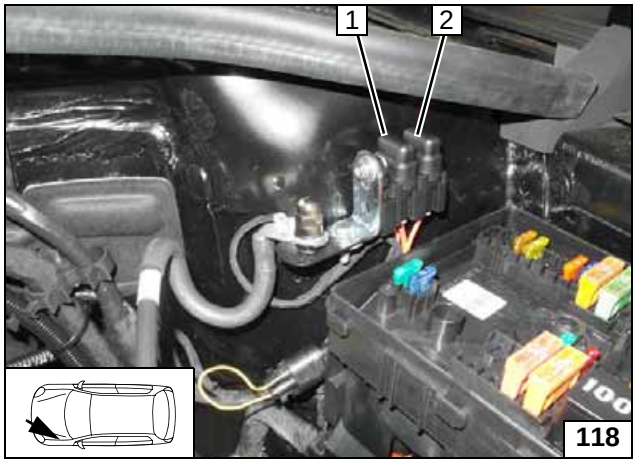
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



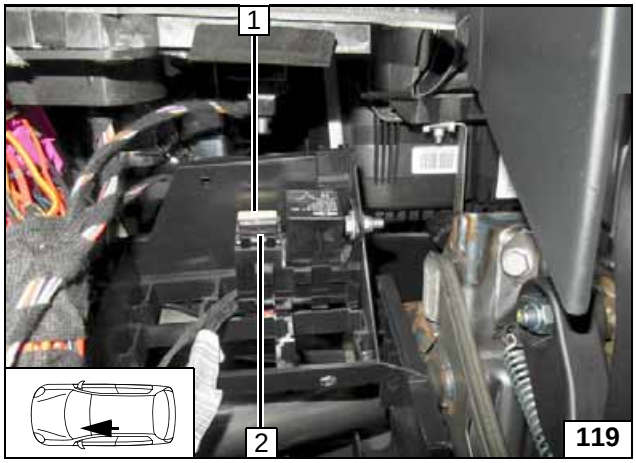

**1** Set fan to level "1", max. "2"
**2** Direct air outlet toward windscreen
**3** Set temperature to "max."

**A/C control panel**




**1** 30A main fuse F2 of passenger compartment
**2** 20A heater fuse F1

**Engine compartment fuses**




**1** 25A fan fuse F4
**2** 1A fuse F3 of heater control

**Passenger compartment fuses**

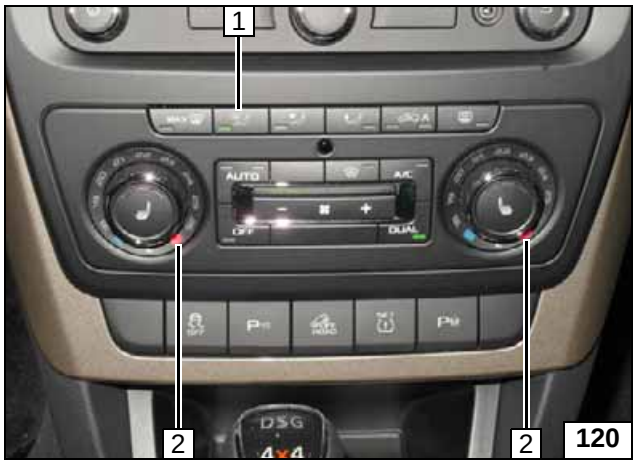
## Operating Instructions for Climatronic

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.

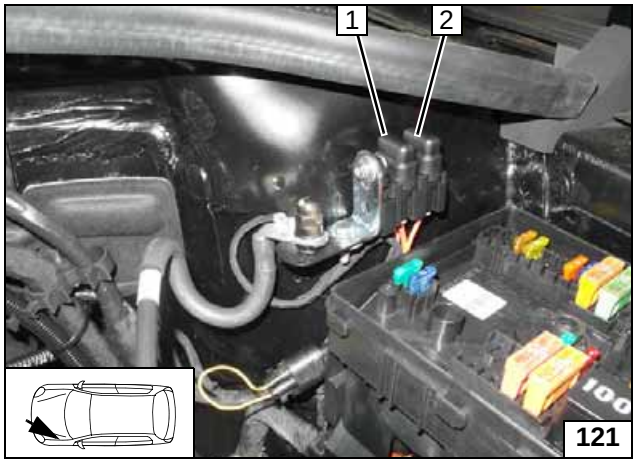
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



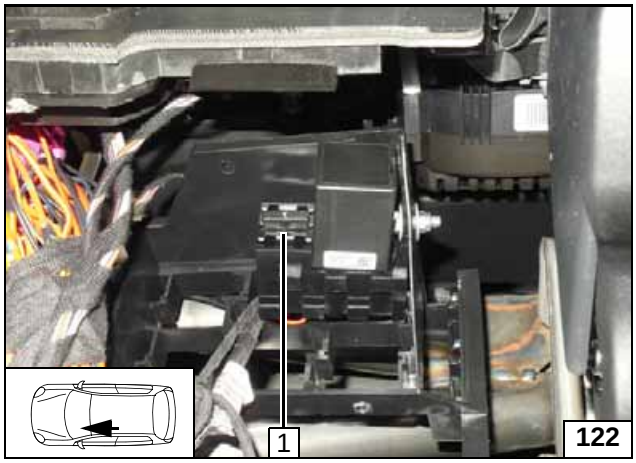

**1** Direct air outlet toward windscreen
**2** Set temperature on both sides to "HI"

**A/C control panel**




**1** 30A main fuse F2 of passenger compartment
**2** 20A heater fuse F1

**Engine compartment fuses**




**1** 1A fuse F3 of heater control

**Passenger compartment fuses**