# Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

# Installation Documentation
# Citroen C5 / Peugeot 407

## Validity

| Manufacturer | Model | Type | EG-BE No./ ABE |
|---|---|---|---|
| Citroen | C5 | R.. | e2 * 2001/116 * 0360 *... |
| Peugeot | 407 | 6 | e2 * 2001/116 * 0328 *... |

| Motorisation | Fuel | Transmission type | Output in kW | Displacement in cm³ | Engine code |
|---|---|---|---|---|---|
| 2.7 | Diesel | AG | 150 | 2720 | UHZ |
| 3.0 | Diesel | AG | 177 | 2992 | DT 17TED4 |

AG = Automatic transmission

**From Model Year 2008**
**Left-hand drive vehicle**

**Verified equipment variants:** Automatic air-conditioning system
Front fog lights
Front fog lightsHeadlight washer system
Daytime running lights

**Not verified:** Passenger compartment monitoring
Xenon

**Total installation time:** approx. 8.5 hours

## Citroen C5 / Peugeot 407

## Table of Contents



## Necessary Components

- Delivery scope of *Thermo Top Evo* Citroen C5 / Peugeot 407 2008 Diesel: **1316732B**
- 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

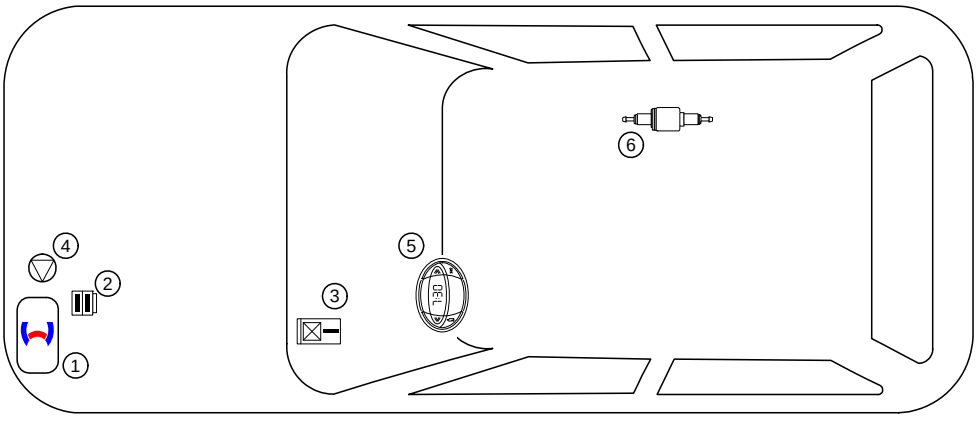
## Installation instructions:

- 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 available space and manufacturer's instructions, we recommend the use of a vehicle battery with more electrical capacity.

## Installation Overview

**Legend:**

**1**. Heater
**2**. Fuse holder of engine compartment
**3**. Passenger compartment relay and fuse holder
**4**. Circulating pump
**5**. Digital Timer
**6**. Metering pump




## 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.

# Information on Operating and Installation Instructions

## 1 Important notes (not complete)

### 1.1 Installation and Repair

The improper installation or repairing 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 | TT-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 indicator 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 neck must be clearly labelled

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the filler neck. 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.

## Information on Validity

This installation documentation applies to Citroen C5 / Peugeot 407 Diesel vehicles - for validity, see page 1 - from model year 2008 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 cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Webasto Thermo Test Diagnosis with current software

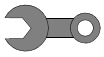
**Dimensions**
- All dimensions in mm.

**Tightening torque values**
- Tightening torque values for 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque values of 5x15 retaining plate of water connection piece bolts = 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 work steps.

**Mechanical System**



**Electrical System**

**Coolant Circuit**

**Combustion Air**

**Fuel**

**Exhaust Gas**

**Software**

Special features are highlighted using the following symbols:

**Specific risk of injury or fatal accidents**

**Specific risk due to electrical voltage**

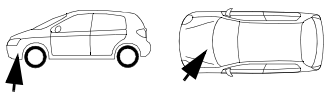
**Specific risk of damage to components**

**Specific risk of fire and explosion.**

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

**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**

## Citroen C5 / Peugeot 407

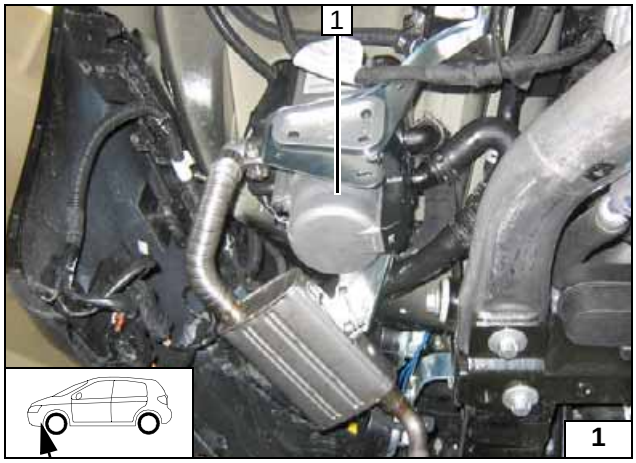
## Preliminary Work

### Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery.
- Remove the left-hand wheel well trim.
- Remove the left front wheel.
- Remove the front underride protection.
- Remove the right rear underride protection.
- Remove the right-hand underbody trim.
- Fold over the right-hand rear seat
- Open the right-hand tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the instrument panel trim on the driver's side (only with Telestart).
- Remove the footwell trim on the driver's side.
- Remove the driver's side storage compartment.
- Expose the passenger compartment central electrical box (BSI)

### Heater

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




## Heater Installation Location

**1** Heater

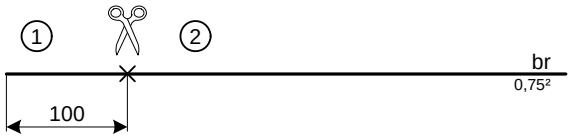
**Installation location**

## Preparing Electrical System

Wire sections retain their numbering throughout the entire document.

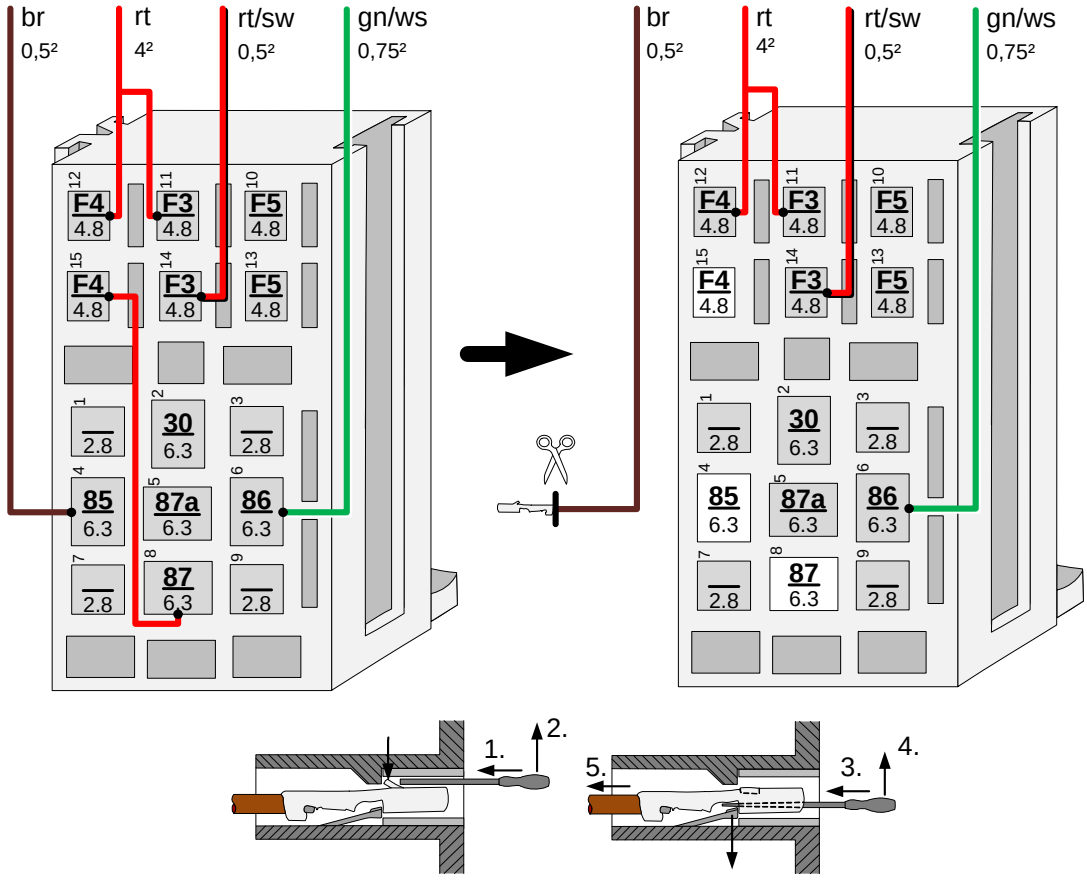
Produce all following electrical connections as shown in the wiring diagram.

**Cutting wire to length**



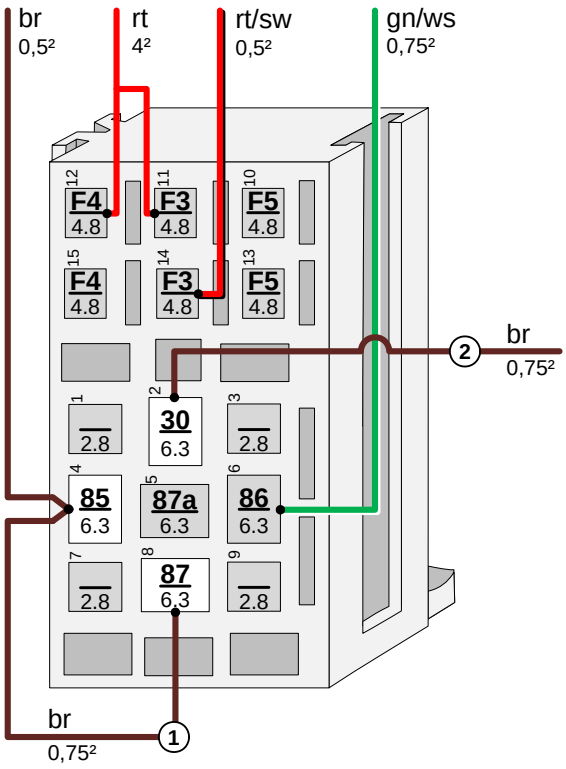

2

**Preparing passenger compartment relay and fuse holder**



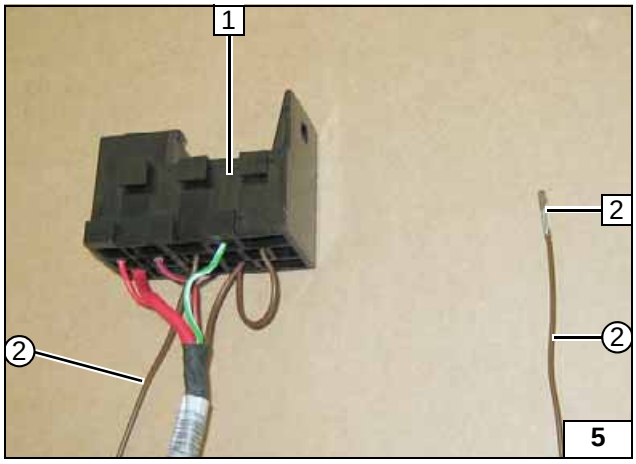

3

## Connecting wires to passenger compartment relay and fuse holder




4

## Preparing passenger compartment relay and fuse holder

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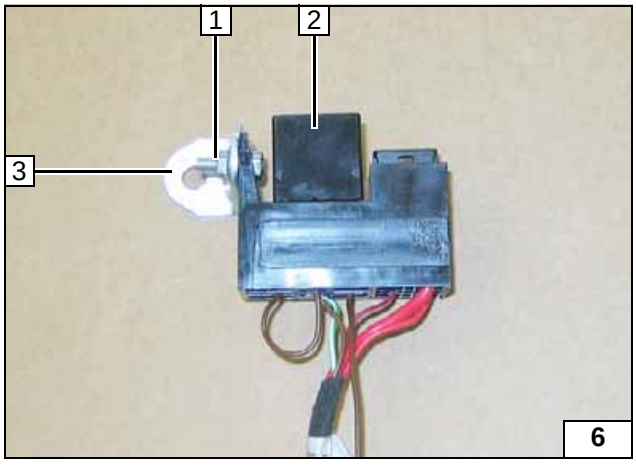
Crimp microtimer **2** onto brown (br) wire ② of K1/30.

**1** Relay and fuse holder of passenger compartment

## Preparing passenger compartment relay and fuse holder



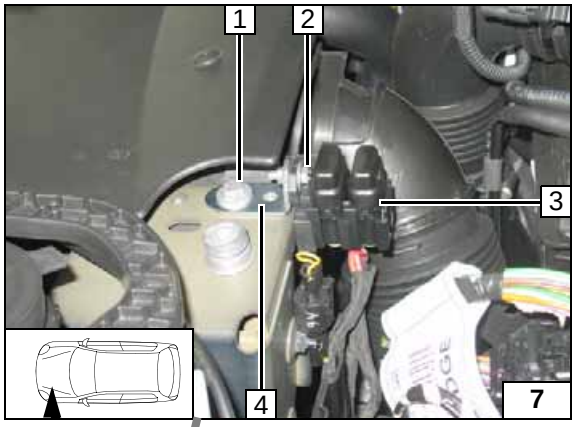

6

**1** M5x16 bolt, large diameter washer [2x], nut
**2** Relay mounted
**3** Angle bracket

## Electrical System

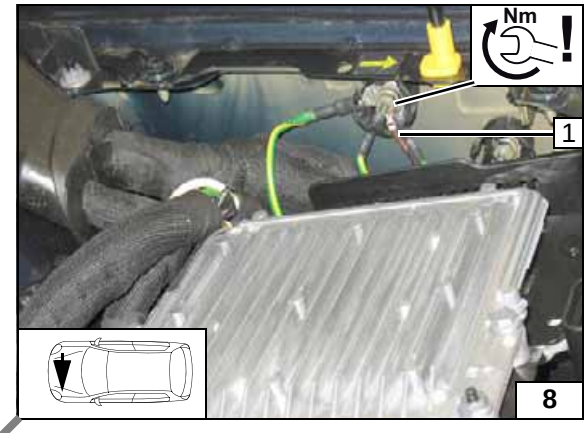
### Fuse holder of engine compartment

**1** Original vehicle bolt, large diameter washer
**2** M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
**3** F1-2 fuses mounted
**4** Angle bracket

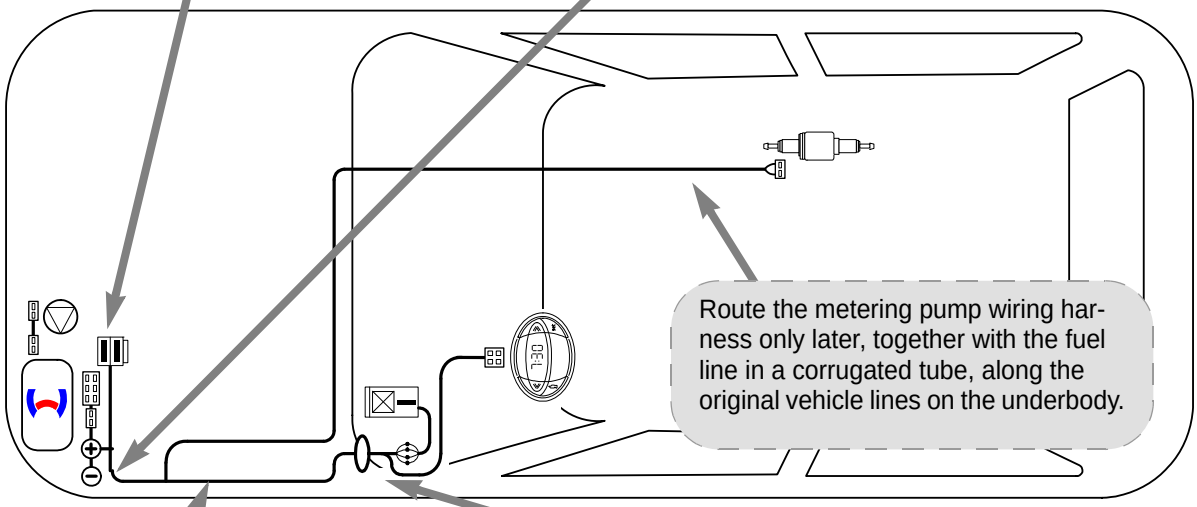


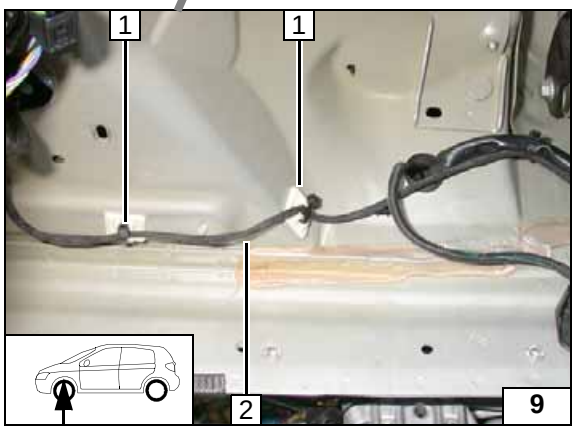

### Earth wire

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



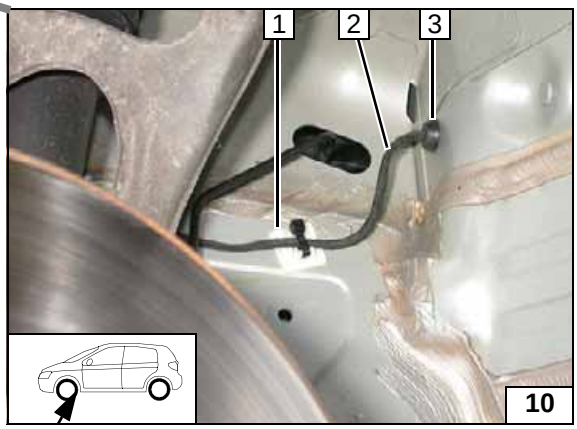

**Wiring harness routing diagram**




### Wiring harness routing

Fasten wiring harness of fuse holder in engine compartment **2** in wheel well with adhesive base **1** and cable tie [total of 4x each].



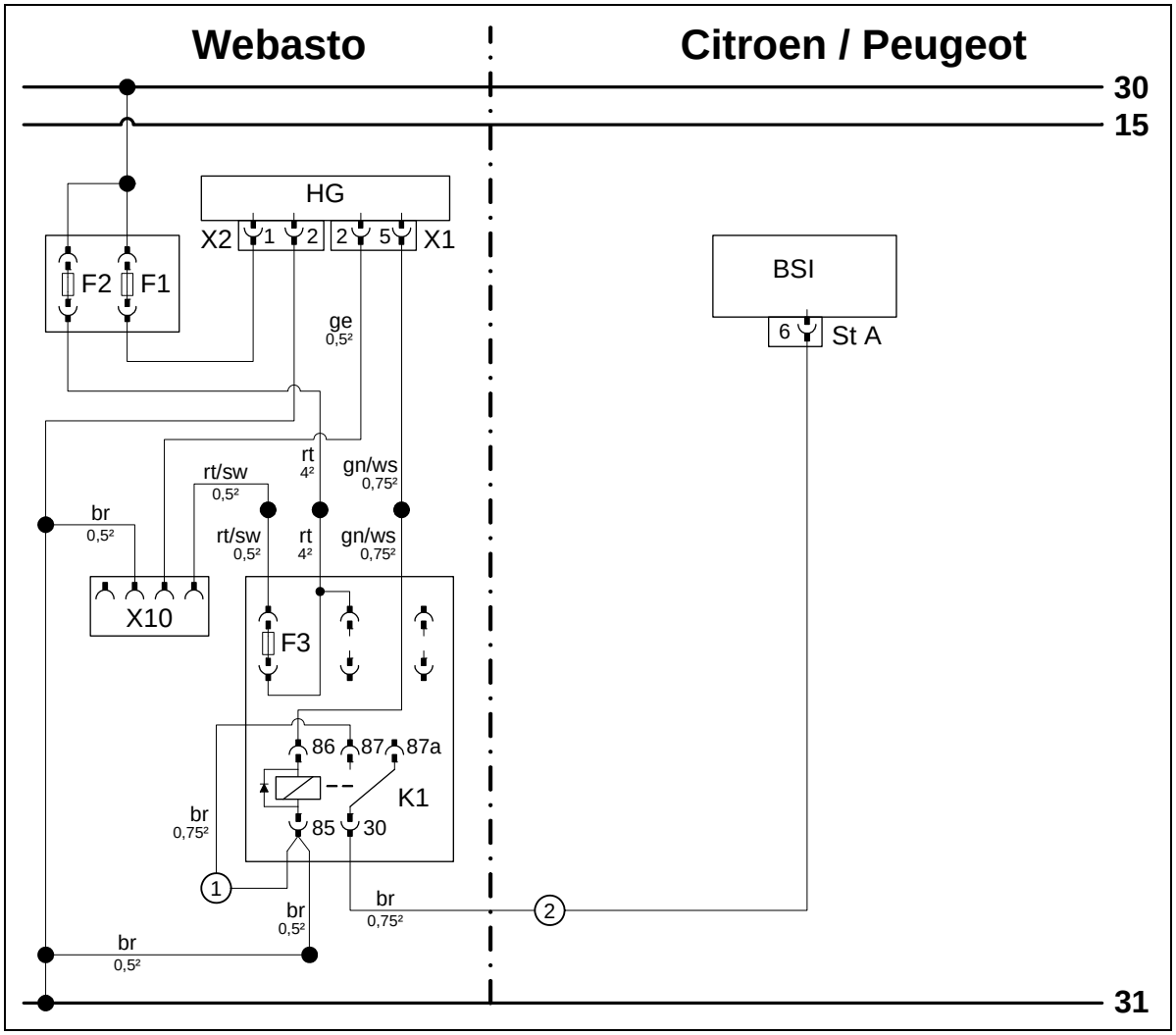

### Wiring harness pass through of passenger compartment

**1** Adhesive base, cable tie
**2** Wiring harness, fuse holder, engine compartment
**3** Drill out existing protective rubber plug

## Fan Controller

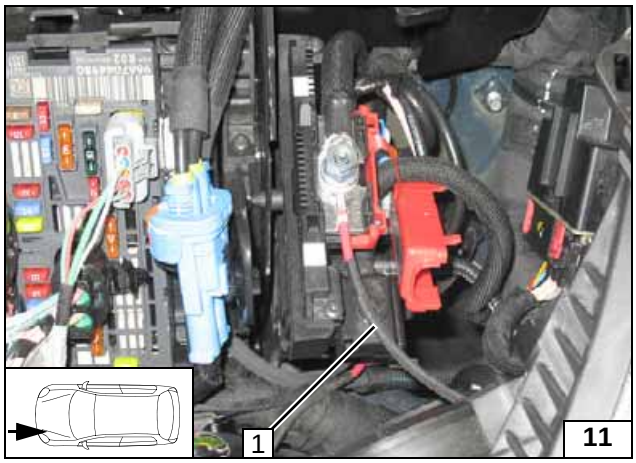
**Wiring diagram**




**Legend**

| Webasto components | | Vehicle components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | TT-Evo heater | BSI | Central electrical box for passenger compartment | gn | green |
| X1 | 6-pin heater connector | | | ws | white |
| X2 | 2-pin heater connector | St A | 20-pin connector BSI | rt | red |
| F1 | 20A fuse | | | br | brown |
| F2 | 30A fuse | | | sw | black |
| X10 | 4-pin connector of heater control | | | ge | yellow |
| | | | | | |
| F3 | 1A fuse | | | Cable and connector colours may vary. | |
| K1 | Fan relay | | | | |




The connection of the positive wire depends on the equipment.

**3.0 l HDI**
Positive distributor, front right

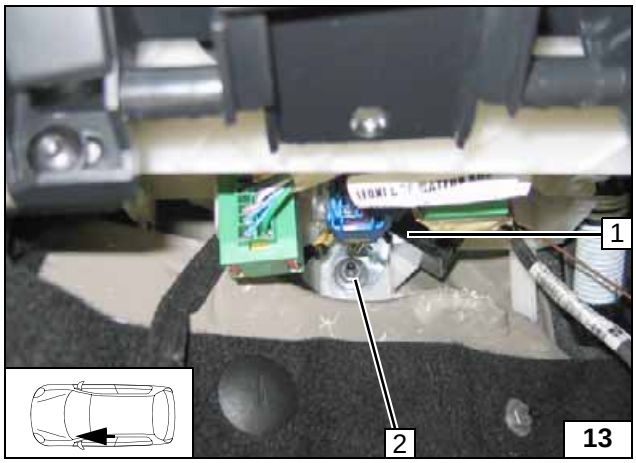
**1** Positive wire on positive distributor

**Positive wire**


**2.7 l HDI**
Battery, front right

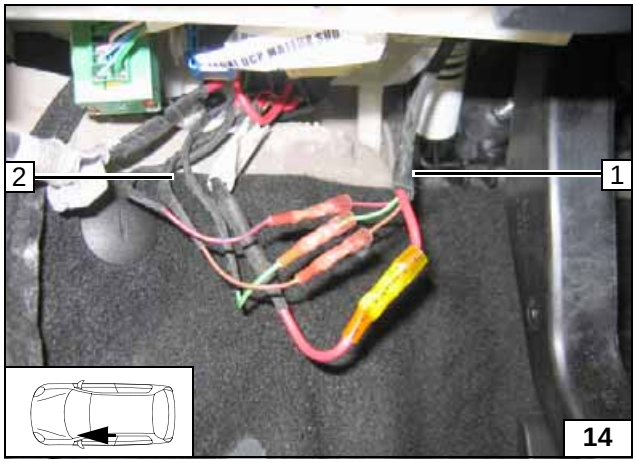
**1** Positive wire on positive battery terminal

**Positive wire**



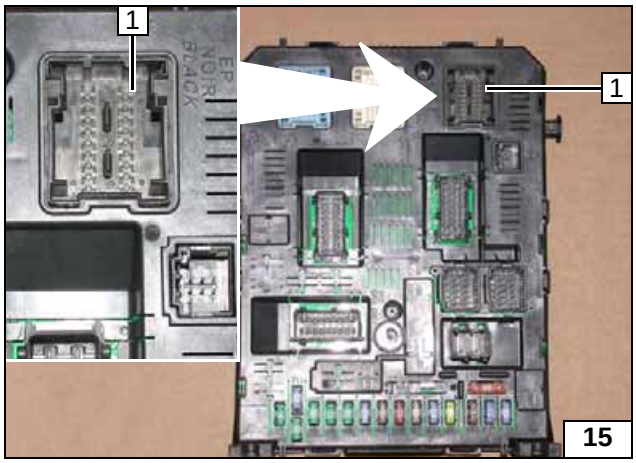

**1** Relay and fuse holder of passenger compartment
**2** Premounted angle bracket, original vehicle stud bolt, flanged nut

**Mounting passenger compartment relay and fuse holder**




Connect wiring harness of heater **1** to wiring harness of passenger compartment relay and fuse holder **2** according to wiring diagram, in such a way that the wires of the same colour are connected to each other.

**Connecting wiring harnesses**




View of BSI.

**1** Socket for 2-piece connector. 40-pin

**Detaching BSI and moving it downwards**

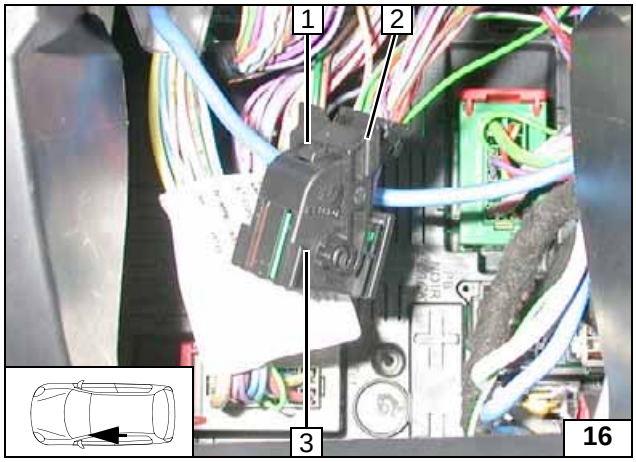



Figure shows Citroen C5.
Press in locking tab **1** and fold down bracket **2**.

**3** 2-piece connector

**Pulling connector off BSI and disman-tling**

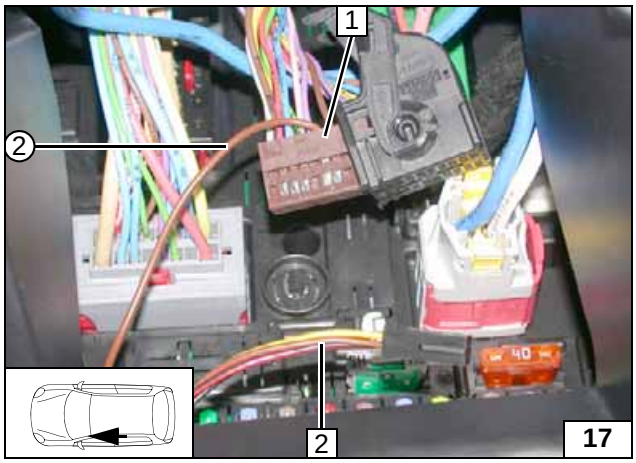
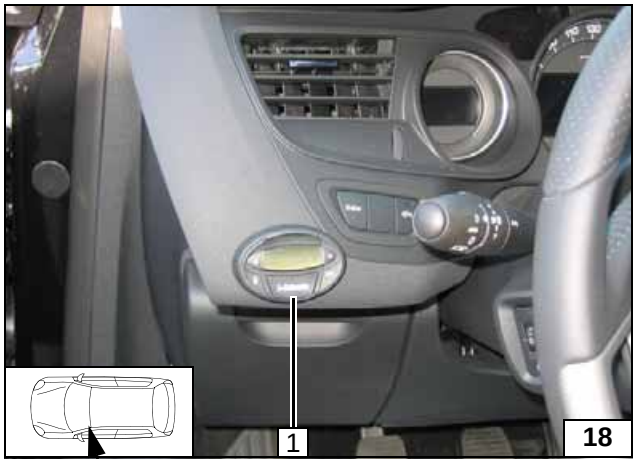



Figure shows Citroen C5.
Connection on 20-pin connector **1** from BSI (connector colour may vary).
Insert microtimer from brown (br) wire ② of K1/30 in PIN 6. Remove any existing wires on pin 6 and insulate. Route wiring harness of digital timer **2** upward to installation location of digital timer.

**Connect-ing BSI**

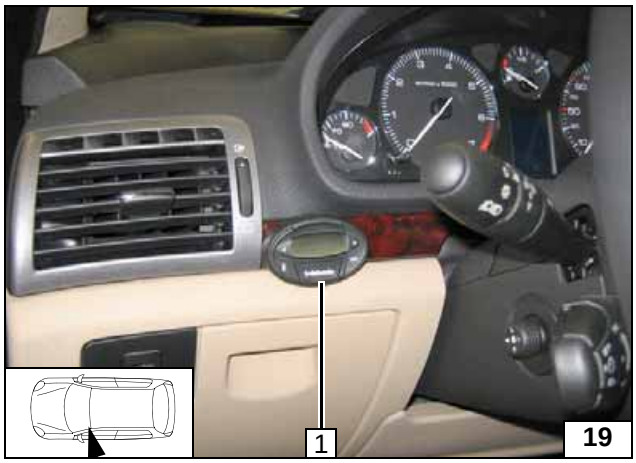



## Digital Timer Option

**Citroen C5**

**1** Digital timer

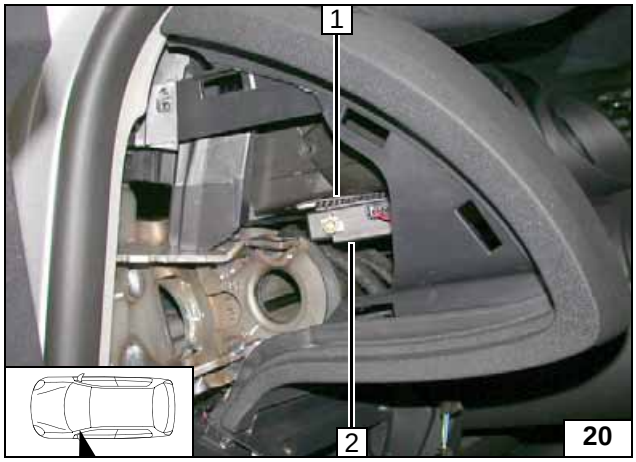
**Installing digital timer**




**Peugeot 407**

**1** Digital timer

**Installing digital timer**



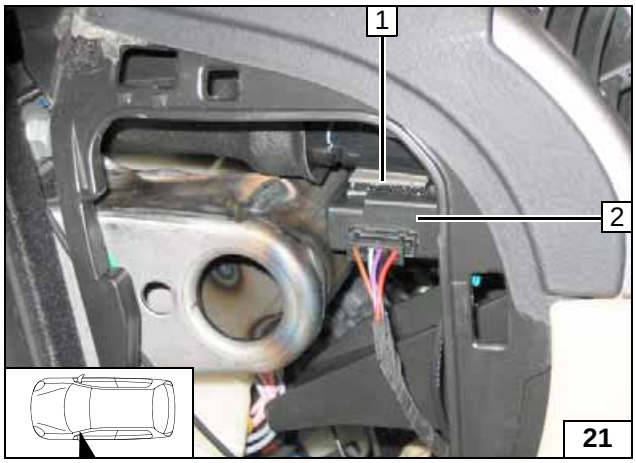

## Remote Option (Telestart)

**Citroen C5**

Mount connector (6-pin) from adapter wiring harness on receiver **2** .

**1** Double-sided adhesive tape

**Installing receiver**

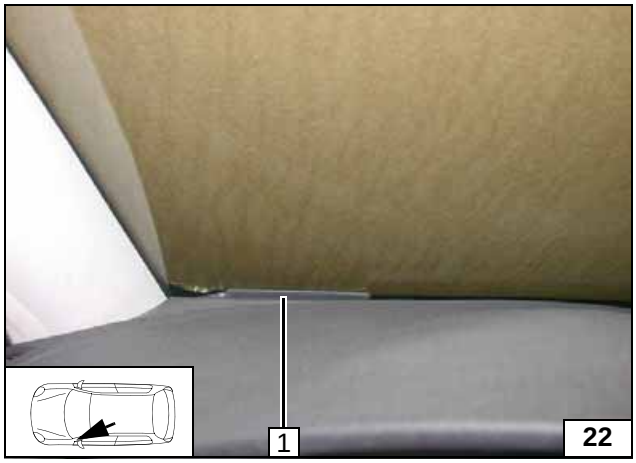



**Peugeot 407**

Mount connector (6-pin) from adapter wiring harness on receiver **2** .

**1** Double-sided adhesive tape

**Installing receiver**

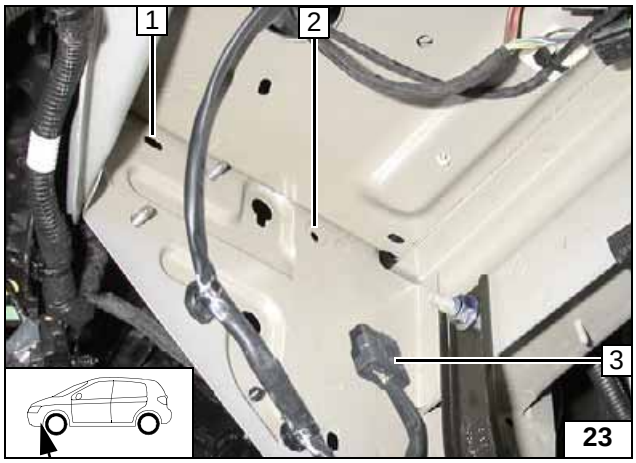



**All vehicles**

**1** Antenna

**Installing antenna**




## Preparing Installation Location

Move connector from position **2** (if present) to position **3**.

**1** Fastening point for heater (existing hole)
**2** Fastening point for heater (existing hole)

**Repositioning connector**

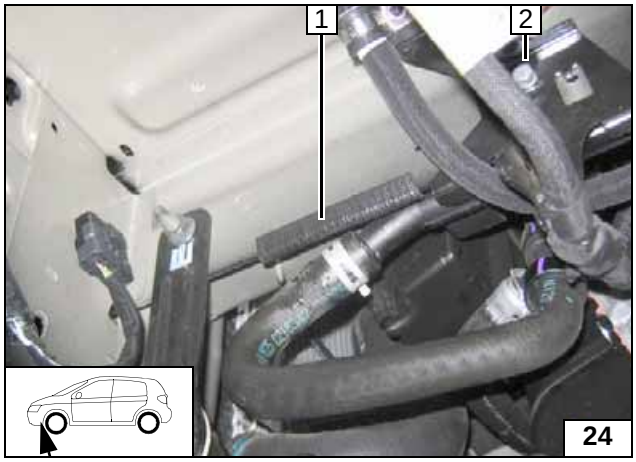
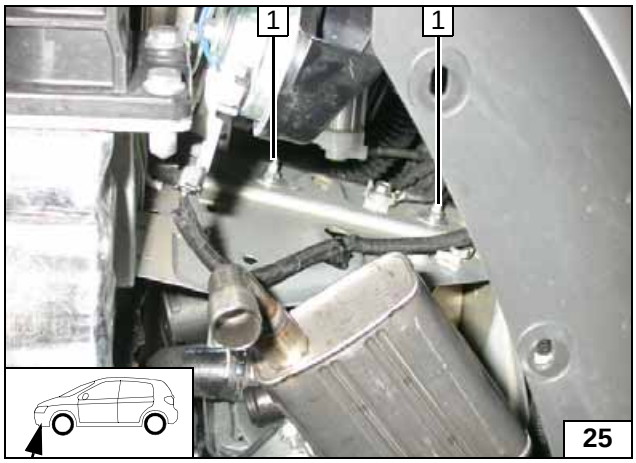



Figure shows 2.7 HDI.
Loosen bolt at position **2** (fastening point for heater).

**1** 100 mm edge protection

**Installing edge protection**

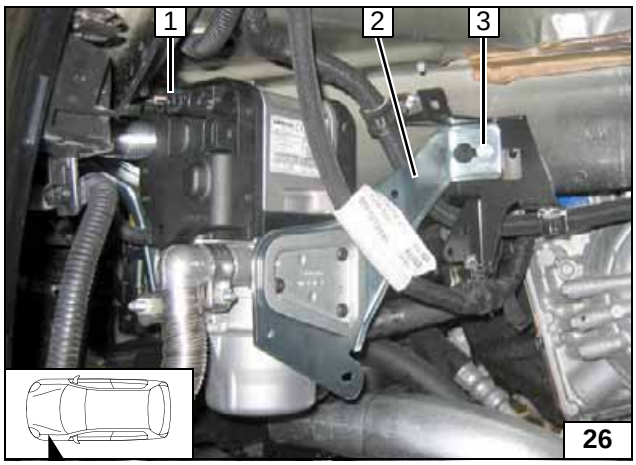



## Installing Heater

Mount stud bolts from bracket in existing holes.

**1** Stud bolt, large diameter washer, flanged nut [2x each]

**Mounting heater**



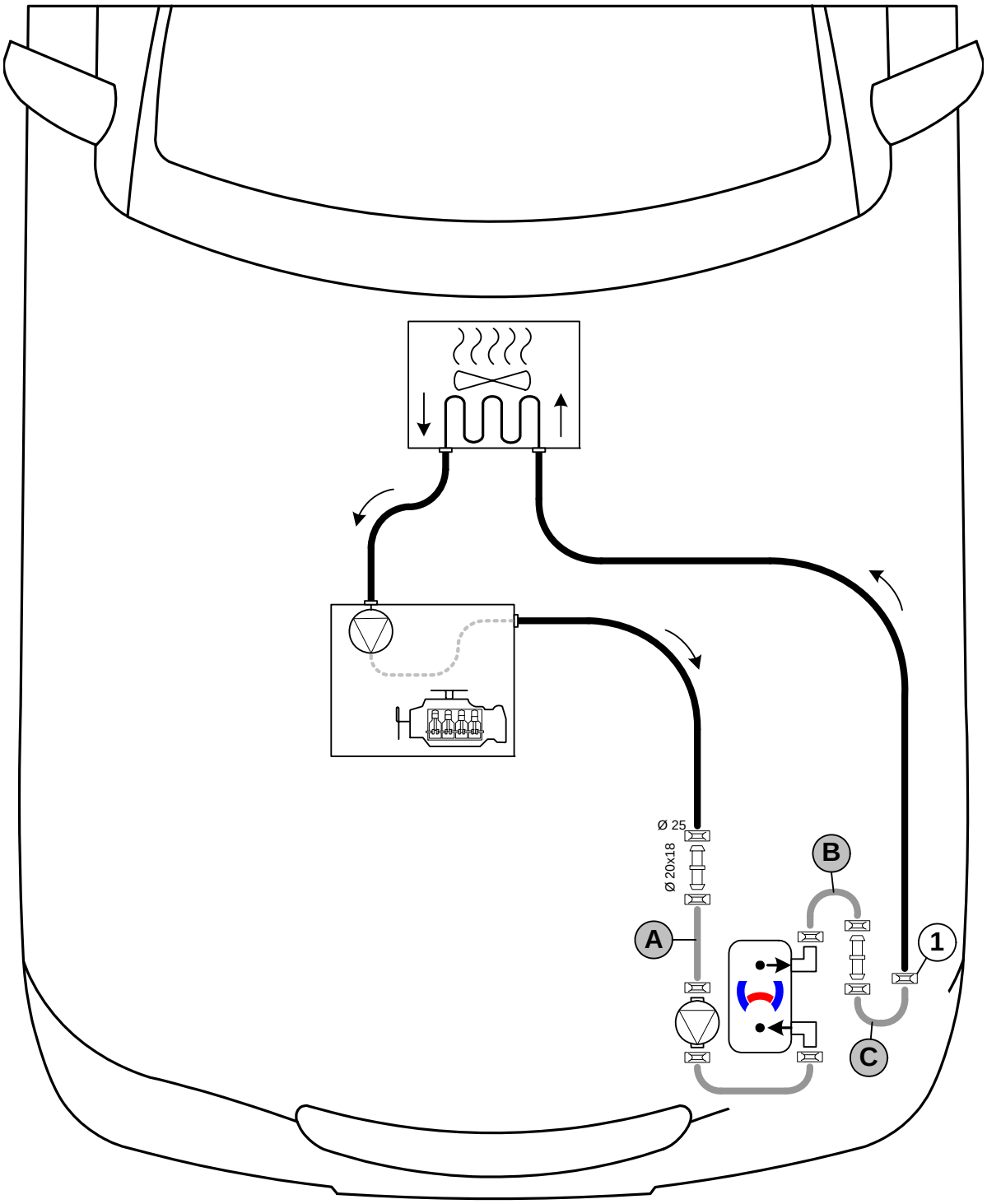

**1** Mount wiring harness of heater
**2** Bracket of heater
**3** Original vehicle bolt or flanged nut on original vehicle stud bolt

**Installing bracket**

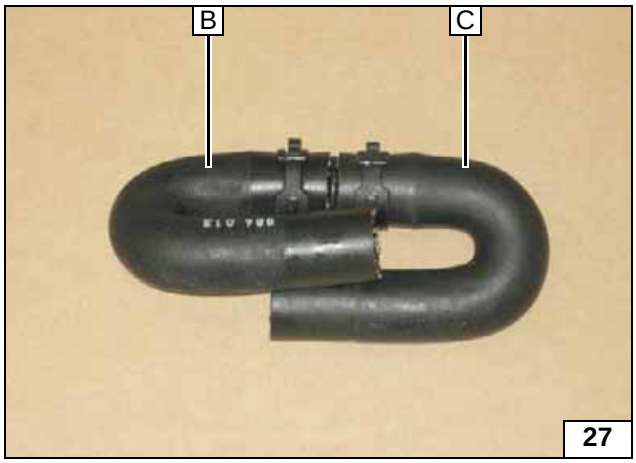
## Coolant Circuit

**WARNING!**
Any coolant running off should be collected in 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. When installing the hoses, the heater must be filled with coolant.
The connection should be modelled on an "inline" circuit and based on the following diagram:

**Hose routing diagram**

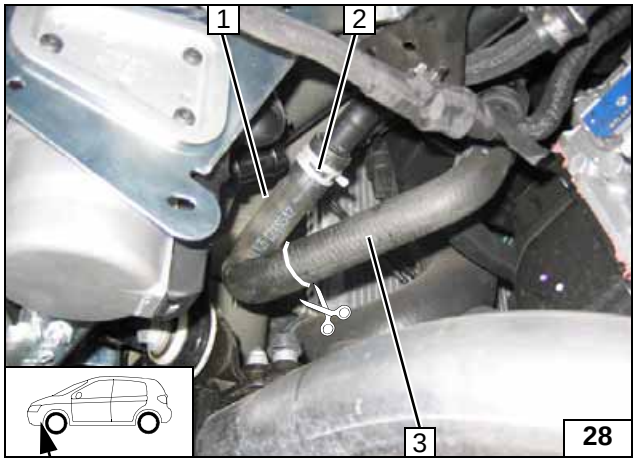



All connecting pipes without a specific designation = 27mm dia. **1** = Original vehicle spring clip .
All connecting pipes without a specific designation = 20x20mm dia.




Hose **B** = 20mm dia., 180° moulded hose
Hose **C** = 20mm dia., 180° moulded hose

**Premounting hoses**

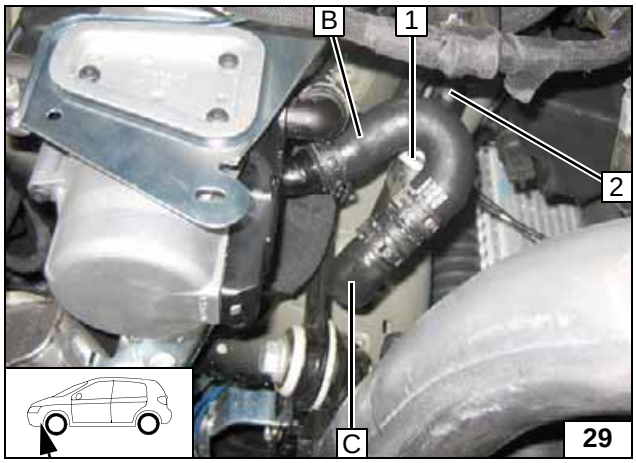



**2.7 HDI**

Remove hose section of heat exchanger inlet **1** and discard. Original vehicle spring clip **2** will be reused.

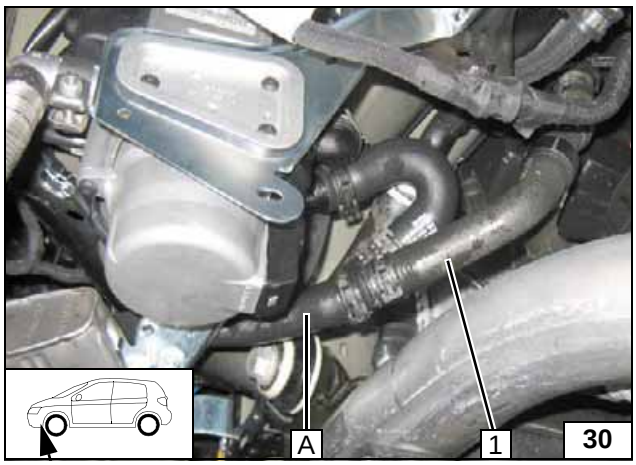
**3** Hose section of engine outlet

**Cutting point**



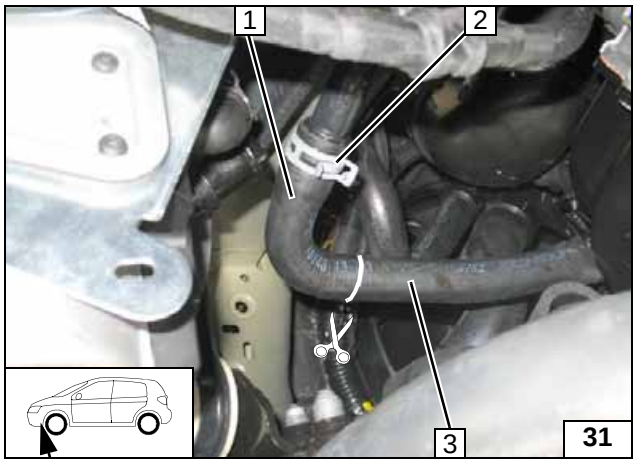

**1** Original vehicle spring clip
**2** Pipe of heat exchanger inlet

**Connecting heat exchanger inlet**




Connect hose **A** on circulating pump inlet. Cut hose **A** accordingly to length and connect with hose of engine outlet **1**. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

**Connecting engine outlet**

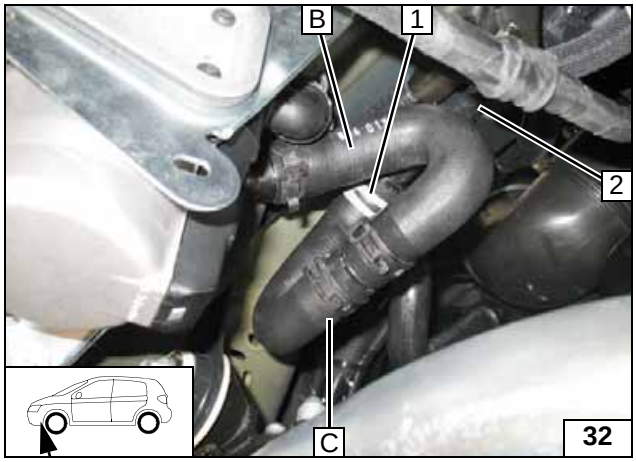



**3.0 HDI**

Remove hose section of heat exchanger inlet **1** and discard. Original vehicle spring clip **2** will be reused.

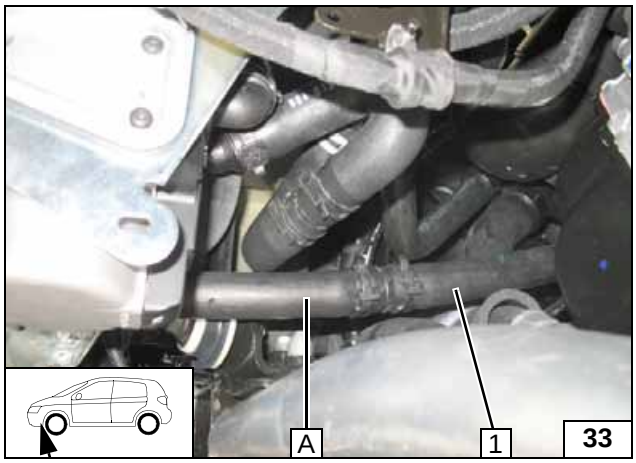
**3** Hose of engine outlet

**Cutting point**




**1** Original vehicle spring clip
**2** Pipe of heat exchanger inlet

**Connecting heat exchanger inlet**




Connect hose **A** on circulating pump inlet. Cut hose **A** accordingly to length and connect with hose of engine outlet **1**. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

**Connecting engine outlet**

## Fuel

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

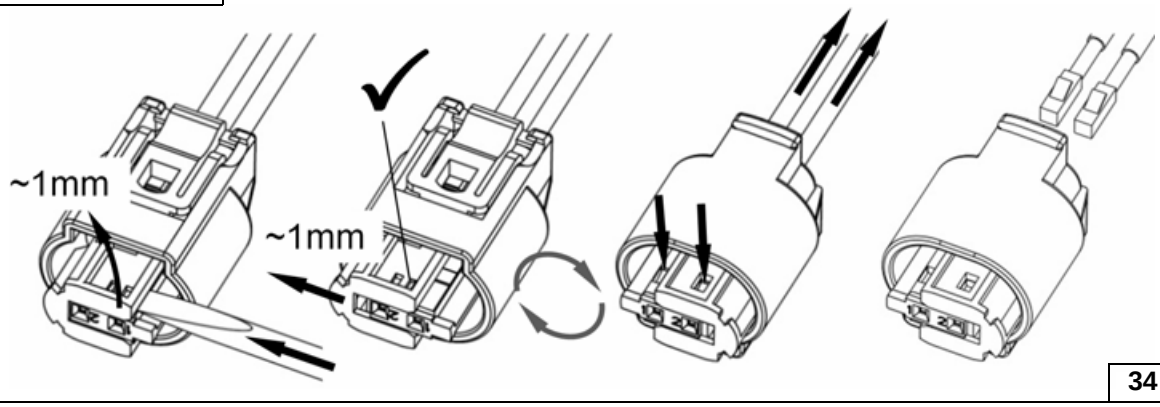
Catch any fuel running off in an appropriate container.

Install 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.

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

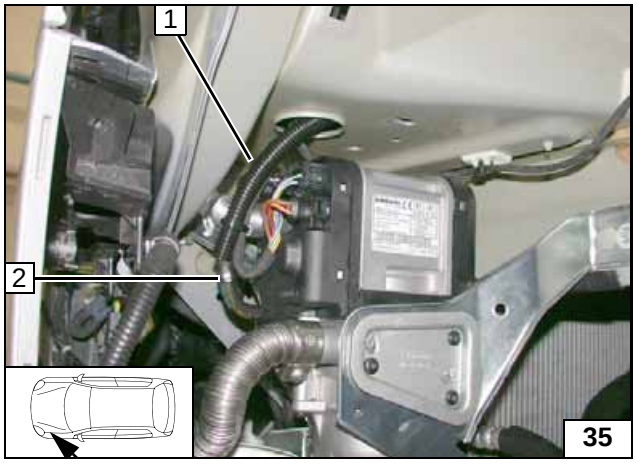
**Dismantling connector of metering pump**

Connector X7




34

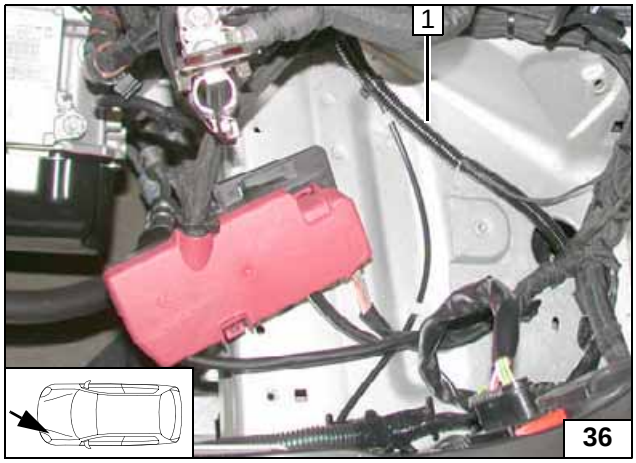
**Connecting heater**




35

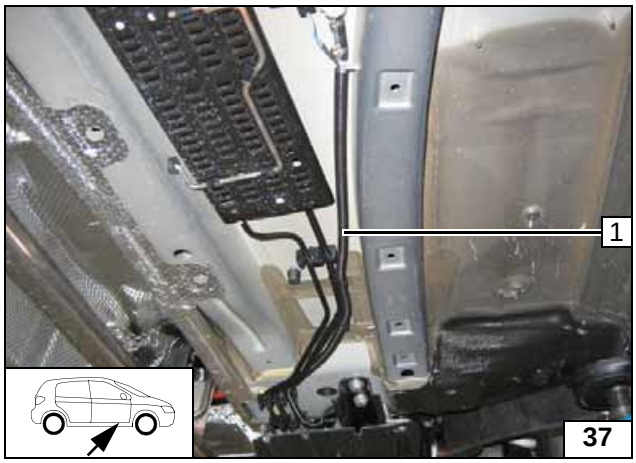
**1** Fuel line and wiring harness of metering pump in corrugated tube
**2** 10mm dia. Caillau clamp, 90° moulded hose

**Routing line**



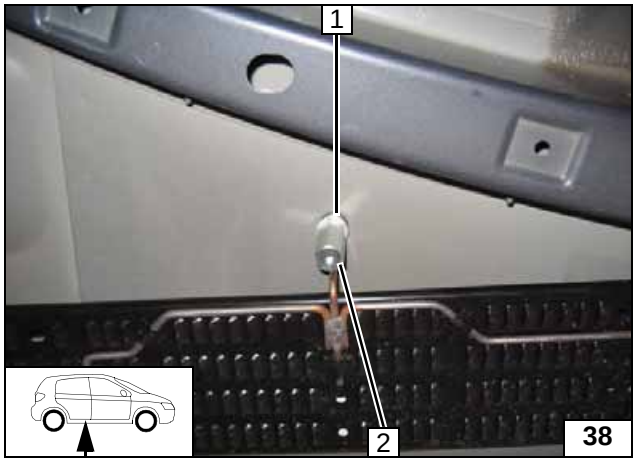

36

**1** Fuel line and wiring harness of metering pump in corrugated tube




**1** Fuel line and wiring harness of metering pump in corrugated tube

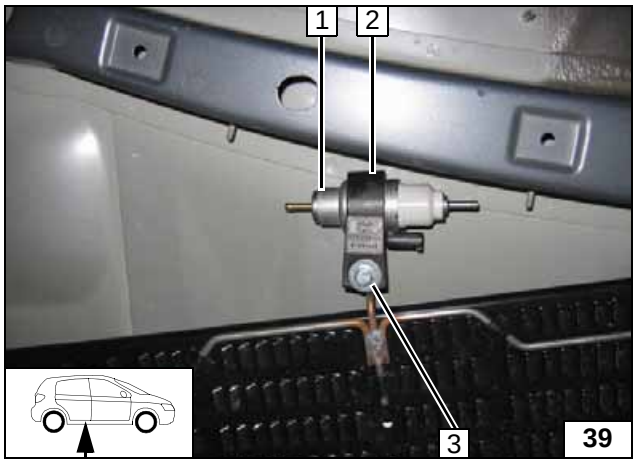
**Routing lines**




Remove original vehicle nut at position **1** and discard.

**2** Large diameter washer, 30mm spacer nut

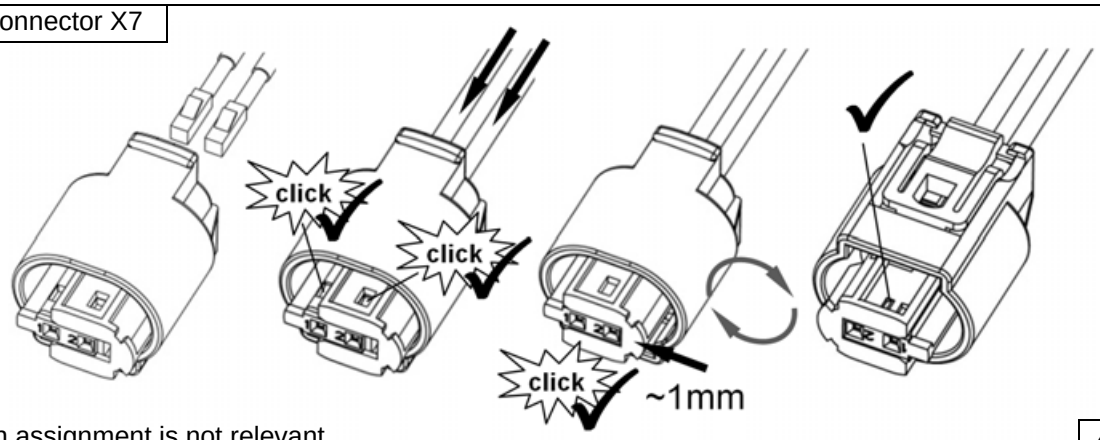
**Installing metering pump**




**1** Metering pump
**2** Bracket of metering pump
**3** M6x25 bolt, support angle bracket, large diameter washer

**Installing metering pump**

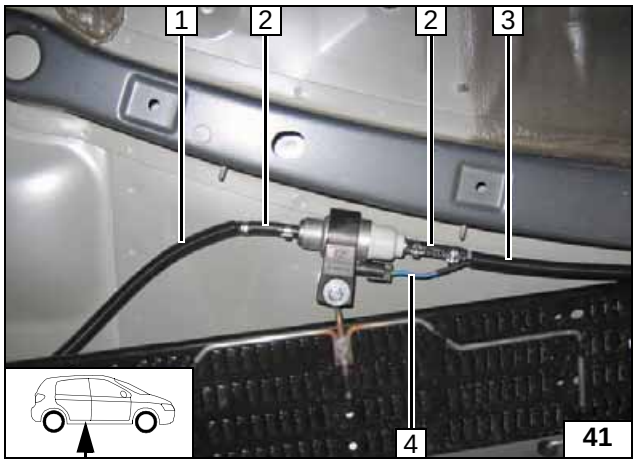
Connector X7




Pin assignment is not relevant.

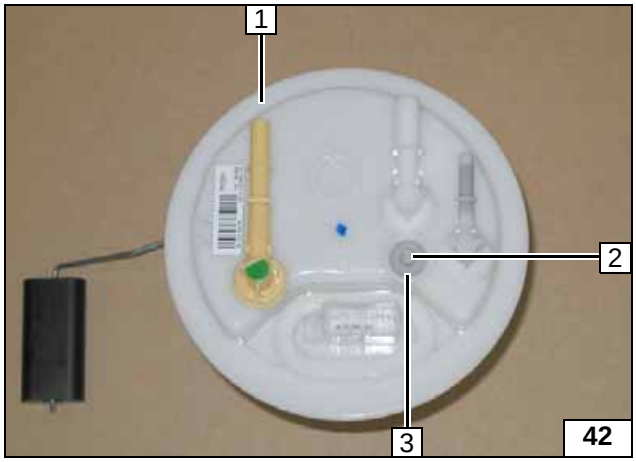
40

**Completing connector of metering pump**




**1** Fuel line in corrugated tube
**2** Hose section [2x], 10mm dia. Caillau clamp [4x]
**3** Fuel line and wiring harness of metering pump in corrugated tube
**4** Wiring harness of metering pump, connector mounted

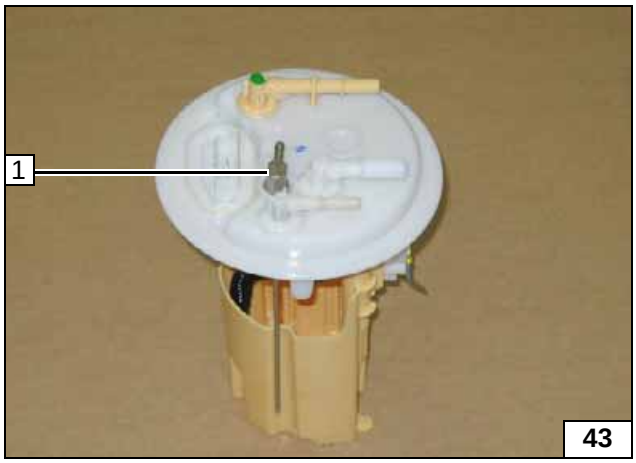
**Connecting metering pump**




Remove fuel-tank sending unit **1** in accordance with the manufacturer's instructions.

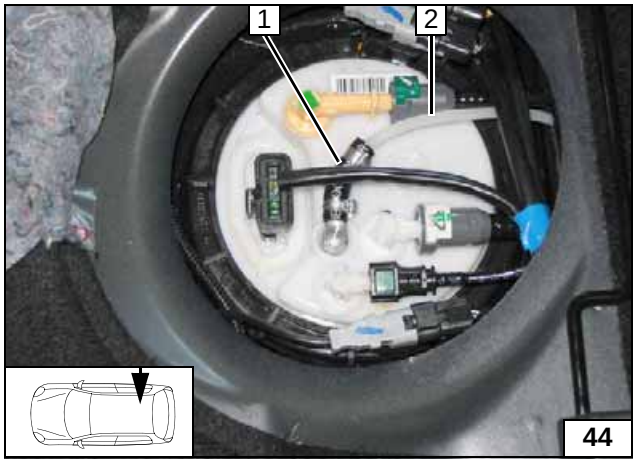
**2** Copy hole pattern, 6mm dia. hole
**3** 5mm dia. large diameter washer

**Fuel extraction**




Shape fuel standpipe **1** according to template and cut it to length.

**Installing fuel standpipe**




Check the position of the components; adjust if necessary. Check that they have freedom of movement.
Install fuel-tank sending unit according to manufacturer's instructions.

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

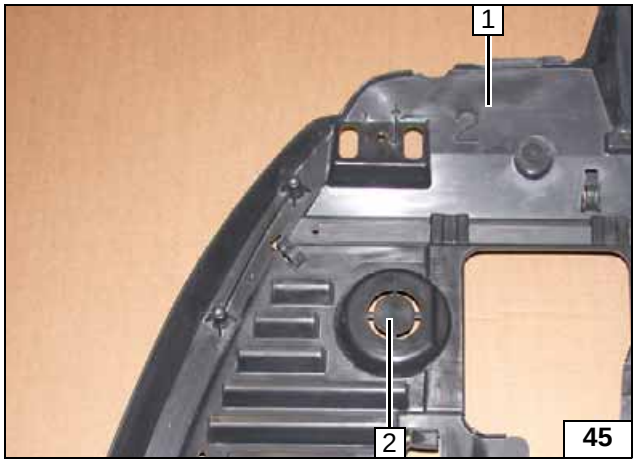
**Connecting fuel line**

## Final Work

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

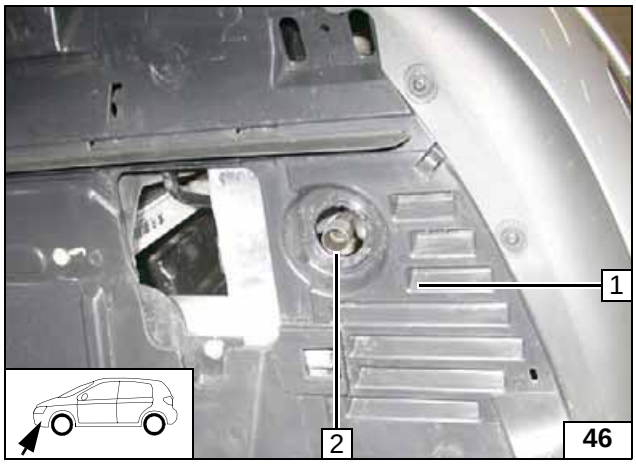
**Encode the BSI to use the " external heater (parking heater)" according to the manufacturer's instructions using Diag-Box.**

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **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 in the area of the filler neck.**
- **For initial startup and function check, please see installation instructions.**




**1** Underride protection
**2** Cut out exhaust outlet at the perforation

**Cutting out underride protection**




Align underride protection **1** (exhaust end section centred in cut-out).

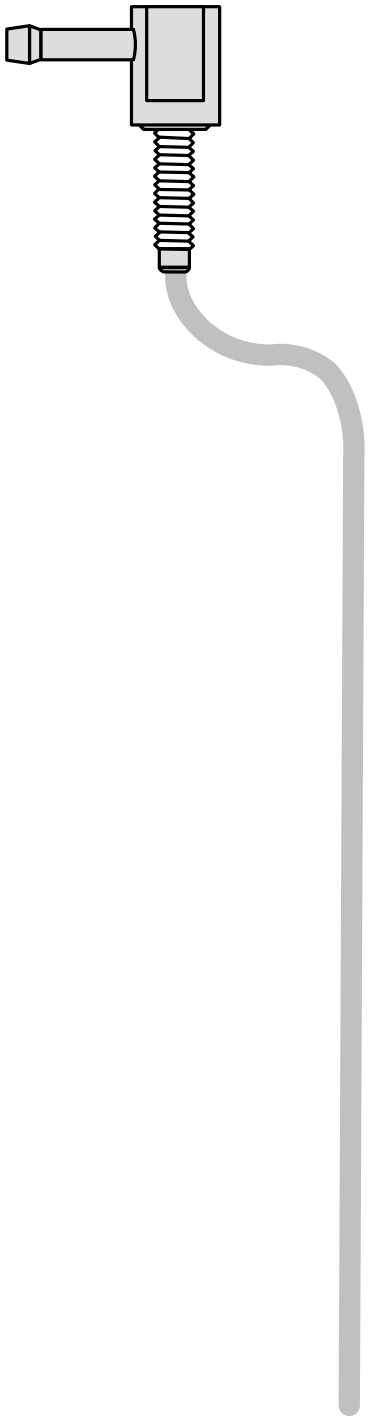
**2** Exhaust end section

**Mounting underride protection**

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

## Template for Fuel Standpipe



100mm

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.

100mm

0

Webasto
Feel the Drive

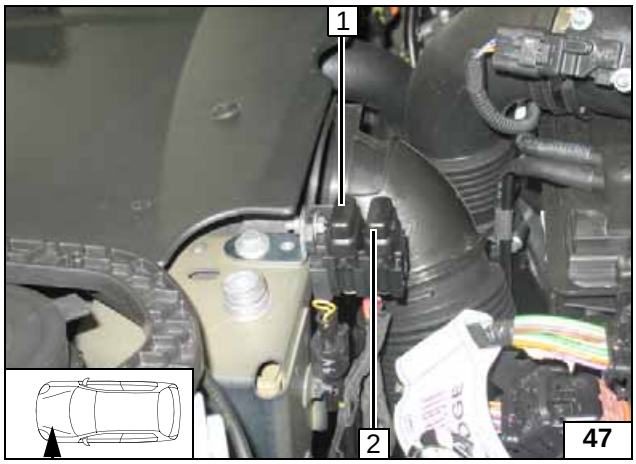
## Operating Instructions for Automatic Air-Conditioning

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.

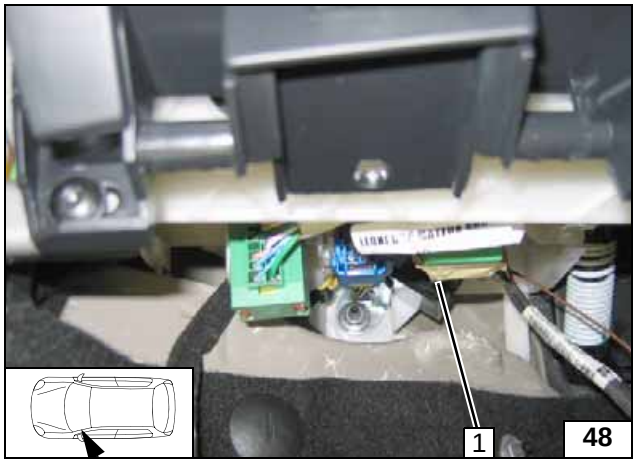
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

No further settings are required on the A/C control panel.




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

**Fuses of engine compartment**




**1** 1A fuse of heater control F3 (hidden)

**Fuses of passenger compartment**