

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation

Peugeot 508

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Peugeot	508	8	e2 * 2007 / 46 * 0080 *...
Peugeot	508 SW	8	e2 * 2007 / 46 * 0080 *...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.6 THP	Petrol	SG	115	1598	5FV
2.0 HDI FAP	Diesel	SG	103	1997	RHF
2.2 HDI FAP	Diesel	AG	150	2179	4HL

SG = Manual transmission

AG = Automatic transmission

From Model Year 2011

Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning
 Front fog light
 Bi Xenon / Headlight washer system

Not verified: Manual air-conditioning
 Passenger compartment monitoring

Total installation time: approx. 7.5 hours

Peugeot 508

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Necessary Components

- Delivery scope of Peugeot 508 HDI *Thermo Top Evo Diesel*: **1317544C**
- Delivery scope of Peugeot 508 B *Thermo Top Evo Petrol*: **1317545C**
- 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

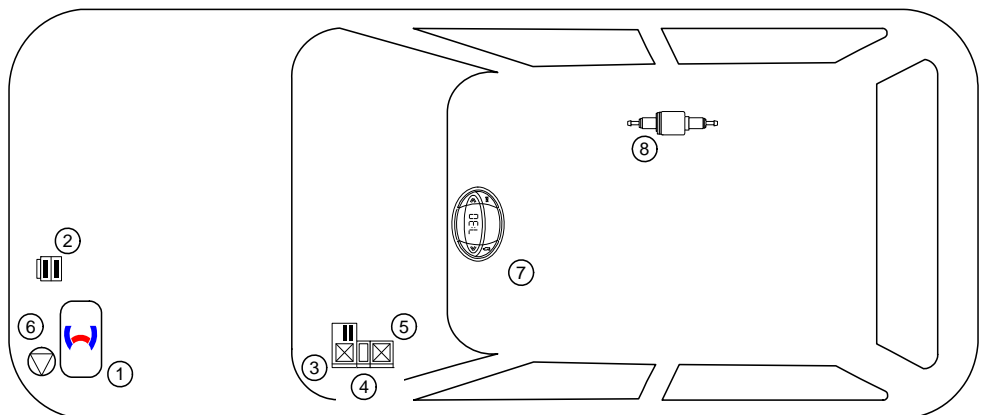
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full!
- The installation location of the push button in the 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. Engine compartment fuse holder
3. Relay and fuse holder of passenger compartment
4. K2 relay
5. PWM Gateway
6. Circulating pump
7. Digital timer
8. 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 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 227).

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.

Sharp edges should be fitted with rub protection (split-open fuel hose)! 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 an PWM-Gateway, the corresponding settings must be checked or adjusted before the installation.

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

For vehicles with an EU permit, no entry in accordance with § 19 Sub-Section 4 of Annex VIII b to the Road Traffic Act is required.

2.1 Excerpt from the directive 2001/56/EC Appendix VII for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

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

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

2.5. Combustion air inlet

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

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

2.6. Heating air inlet

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

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

2.7. Heating air outlet

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

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

End of excerpt.

In multilingual versions the German language is binding.

Peugeot 508

Information on Validity

This installation documentation applies to Peugeot 508 Petrol and diesel vehicles - for validity, see page 1 - from model year 2011 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
- 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 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 working steps.

Special features are highlighted using the following symbols:

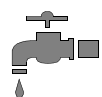
Mechanical system



Electrical system



Coolant circuit



Combustion air



Fuel



Exhaust gas



Software



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



Specific risk of fire and explosion



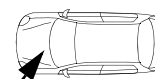
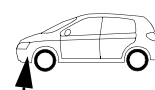
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature



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



Peugeot 508

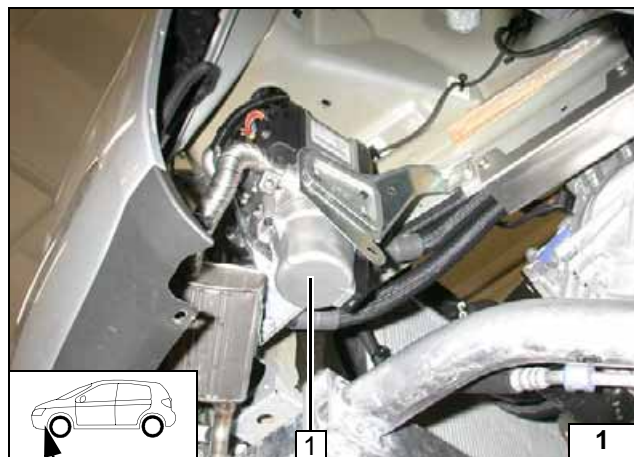
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery and remove it completely along with the carrier.
- Remove the air filter together with the intake hose.
- Remove the left front wheel.
- Remove the left-hand wheel well trim.
- Remove the front underride protection.
- Remove the right-hand underbody trim.
- Remove the right rear underride protection.
- Remove the rear bench seat.
- Open the right-hand tank-fitting service lid.
- Remove the lower instrument panel trim on the driver's side.
- 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.
- Remove the radio, CD unit and A/C control panel according to the manufacturer's instructions.
- Remove the A/C booster.

Heater

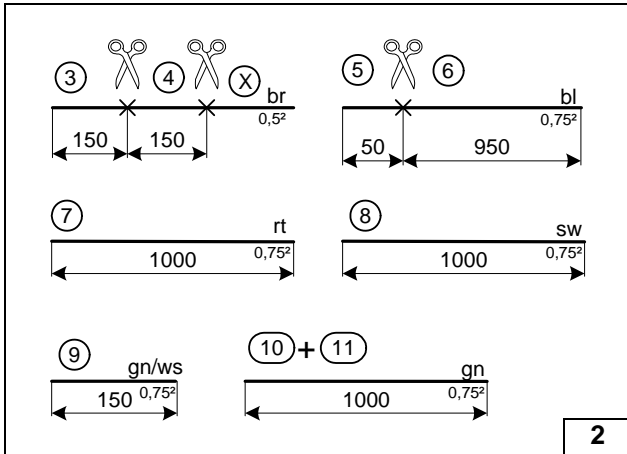
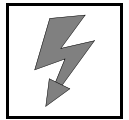
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place in the engine compartment.



Heater Installation Location

1 Heater

Installation location

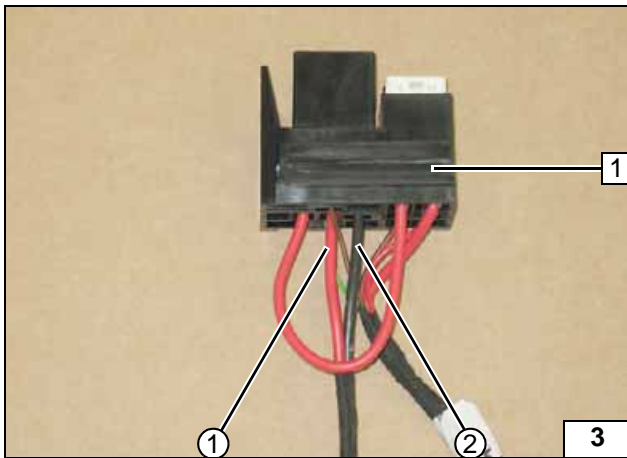


Preparing Electrical System

Wire sections retain their numbering in the entire document.



Cutting wires to length

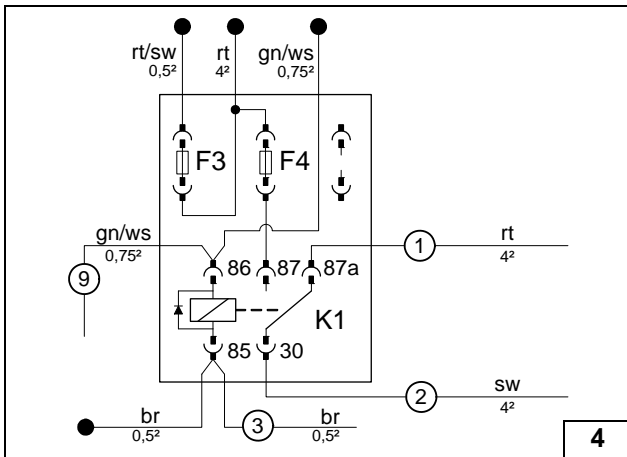


Remove and discard contacts K1/86 and K1/85. Install wires as shown in following wiring diagram with contacts supplied.



- 1 Relay and fuse holder of passenger compartment
- ① Red (rt) wire from K1/87a, fan wiring harness
- ② Black (sw) wire from K1/30, fan wiring harness

Preparing passenger compartment relay and fuse holder

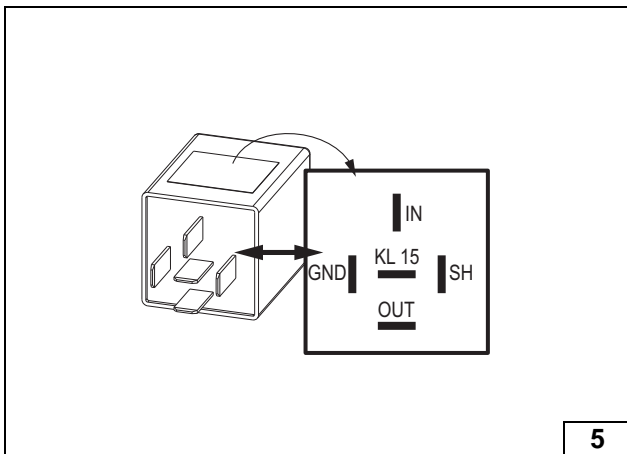


Insert 25A fuse F4 and K1 relay.



- ⑨ Green/white (gn/ws) wire of K1/86
- ③ Brown (br) wire of K1/85

Inserting F4 and preparing K1 relay



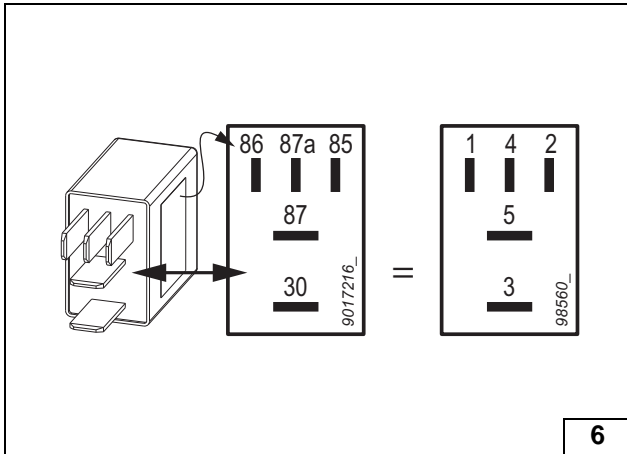
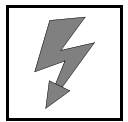
Check the PWM Gateway settings during start-up of the heater and adjust if necessary.



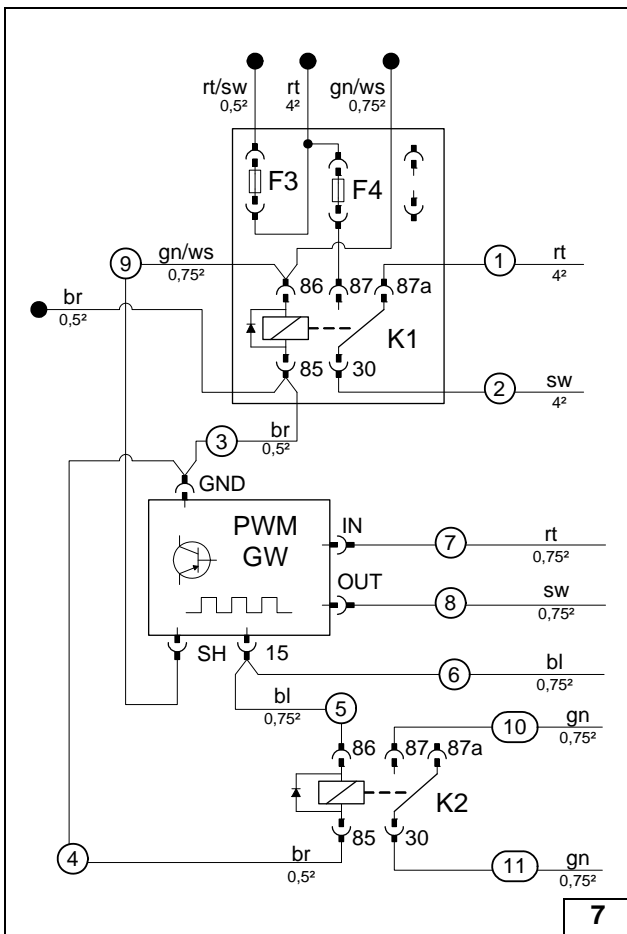
Settings:

- Duty cycle: 70%
- Frequency: 400Hz
- Voltage: not relevant
- Function: Low side

Preparing PWM Gateway



View of K2 relay



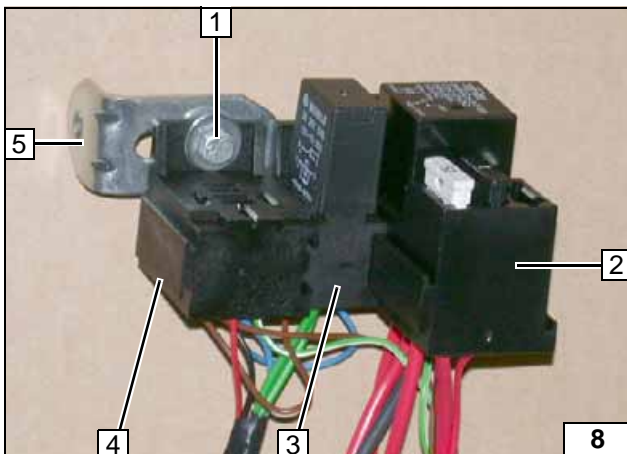
Connect wires to K2 relay socket and PWM Gateway socket.



Pull following wires into one protective sleeving each:

- Blue (bl) wire ⑥
- Red (rt) wire ⑦ and black (sw) wire ⑧
- Green (gn) wire ⑩ and green (gn) wire ⑪

Connect-
ing wires



Interlock relay and fuse holder of passenger compartment 2 with K2 relay socket 3 and PWM Gateway socket 4. Mount K2 relay and PWM Gateway after installing angle bracket 5.



- 1 M5x16 bolt, large diameter washer [2x], nut

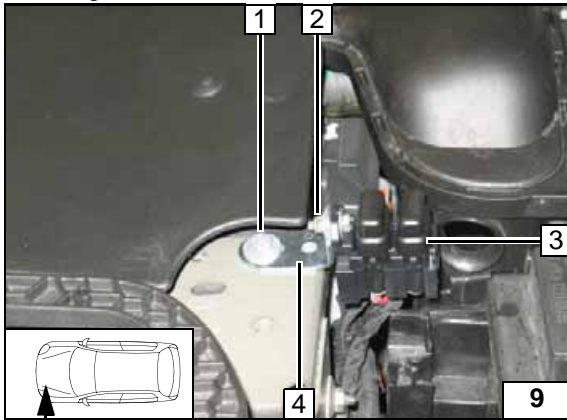
Assem-
bling relay
and fuse
holder of
passenger
compartment



Electrical System

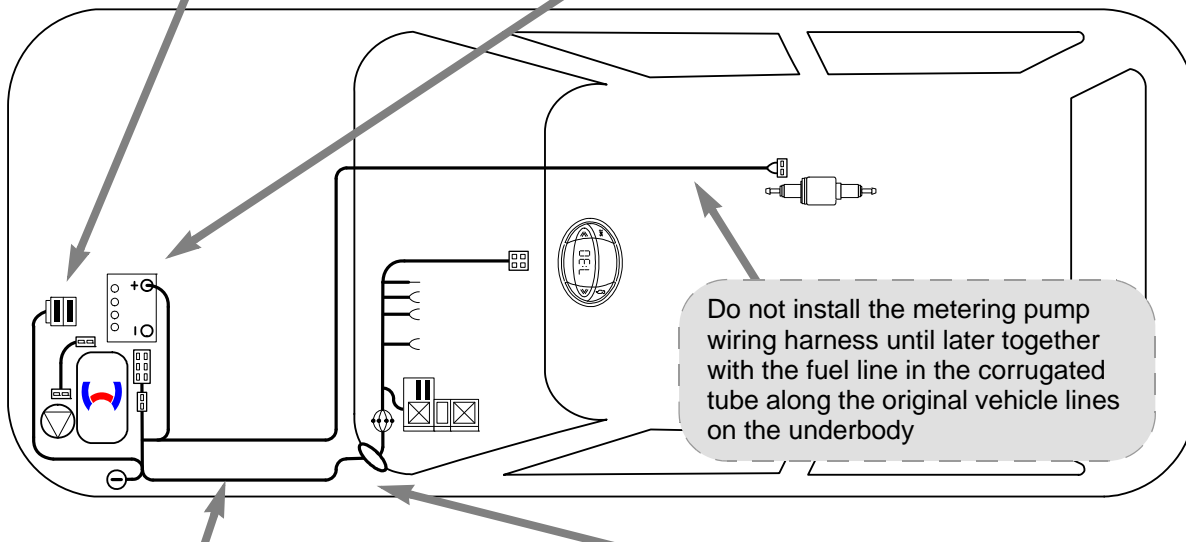
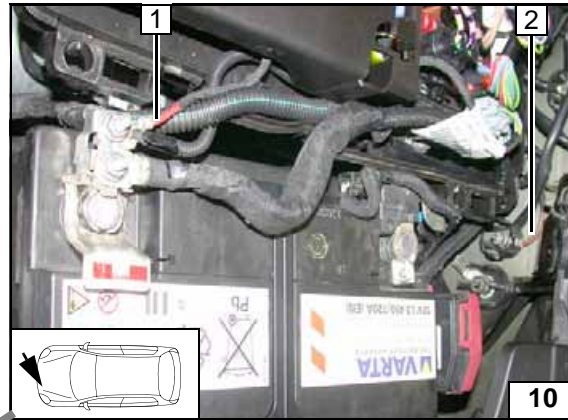
Fuse holder of engine compartment

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

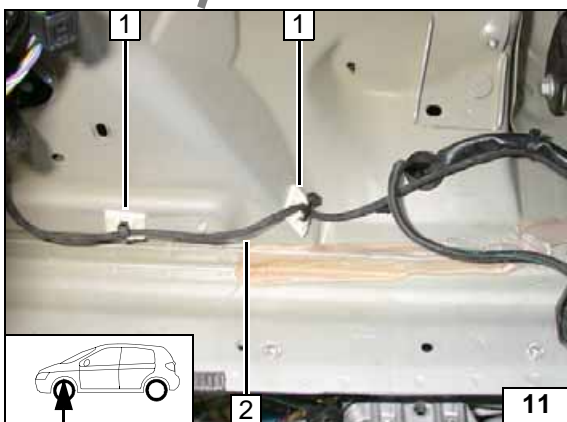


Positive and earth wire

- 1 Positive wire
- 2 Earth wire on original vehicle earth support point

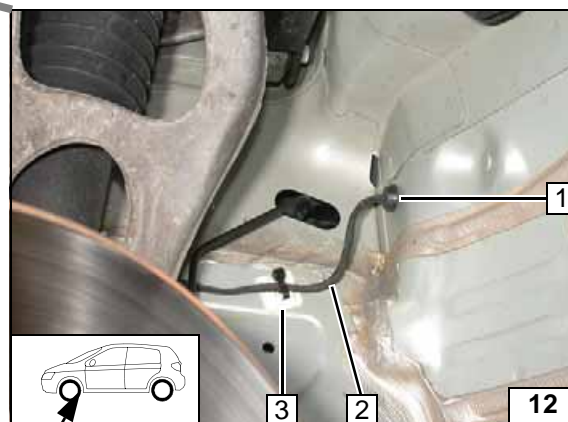


Wiring harness routing diagram



Wiring Harness Routing

- 1 Adhesive base, cable tie [2x each]
- 2 Wiring harnesses of heater and heater control



Wiring harness pass through of passenger compartment

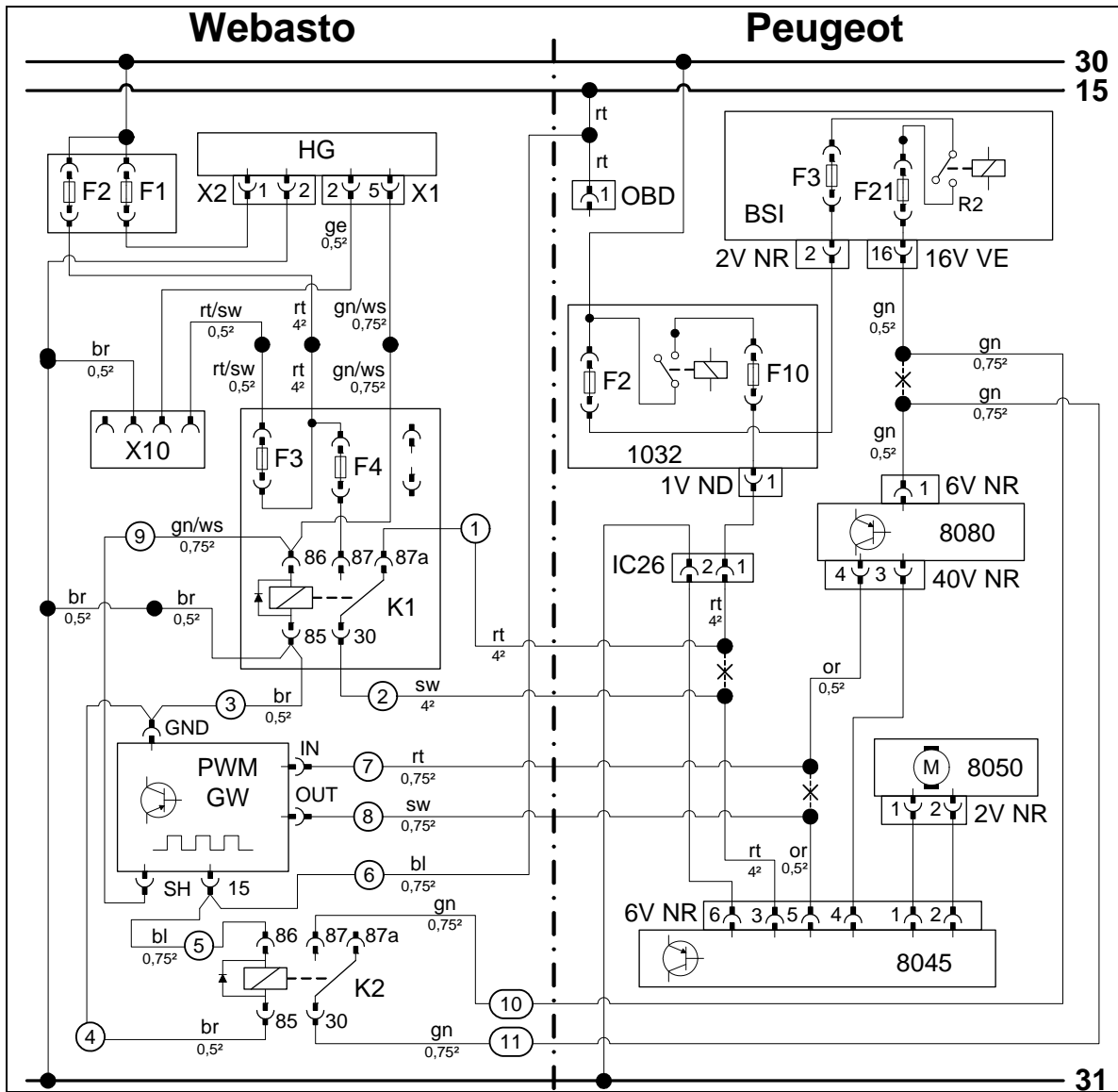
- 1 Insert protective rubber plug in hole
- 2 Wiring harnesses of heater and heater control
- 3 Adhesive base, cable tie



Fan Controller

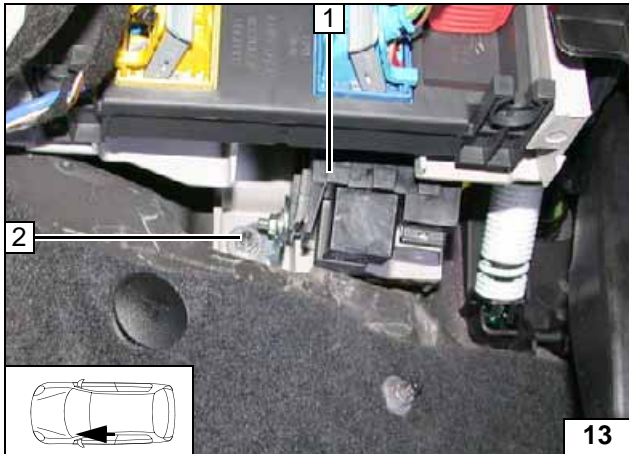


Wiring diagram



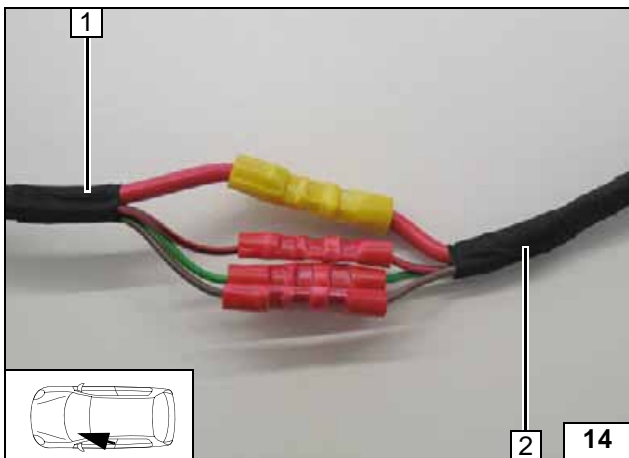
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	OBD	OBD connector	rt	red
X1	6-pin heater connector	BSI	Central electrical box for passenger compartment	sw	black
X2	2-pin heater connector	2V NR	BSI connector	ge	yellow
X10	4-pin connector of heater control	16V VE	BSI connector	gn	green
K1	Fan relay	1032	Main power supply	or	orange
F1	20A fuse	1V ND	Connector 1032	ws	white
F2	30A fuse	6V NR	6-pin connector 8080	br	brown
F3	1A fuse	8080	A/C control unit		
F4	25A fuse	40V NR	40-pin connector 8080		
K2	Additional relay	IC26	6-pin connector		
PWM GW	Pulse width modulator	8050	Fan motor		
PWM GW settings:		2V NR	2-pin connector 8050		
		6V NR	6-pin connector 8045		
Duty cycle: 70%		8045	Fan controller		
Frequency: 400Hz					
Voltage: not relevant				X	Cutting point
Function: Low side					Wiring colours may vary.

Legend



- 1 Relay and fuse holder of passenger compartment
- 2 Original vehicle stud bolt, flanged nut

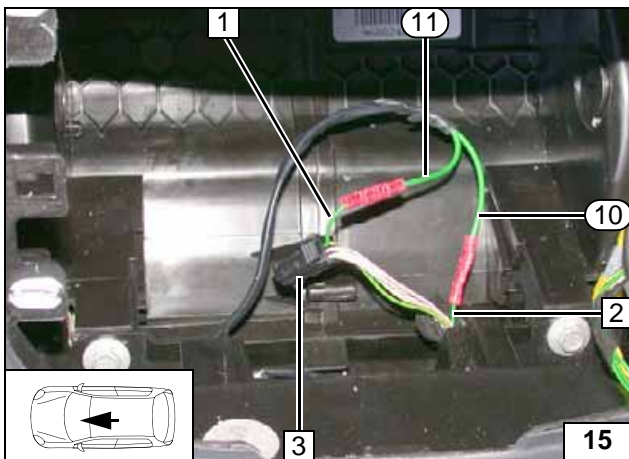
Mounting Passenger Compartment Relay and Fuse Holder



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



Connecting same colour wiring harnesses

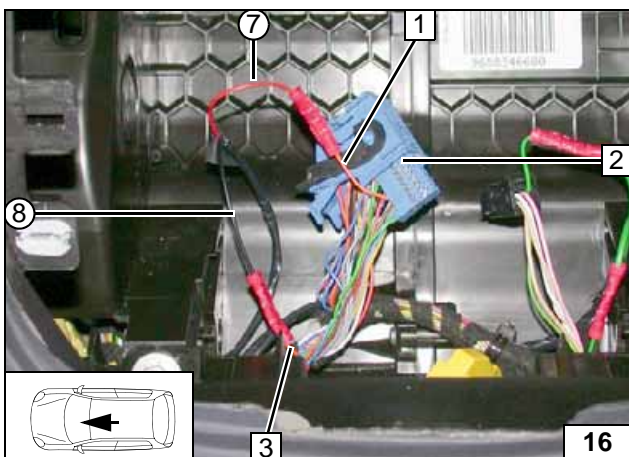


Connection to 6-pin connector 3 of A/C control unit. Produce connections as shown in wiring diagram.

- 1 Green (gn) wire of 6-pin connector, Pin1
- 2 Green (gn) wire of BSI fuse F21
- ⑩ Green (gn) wire of K2/87
- ⑪ Green (gn) wire of K2/30



Connection of K2 relay

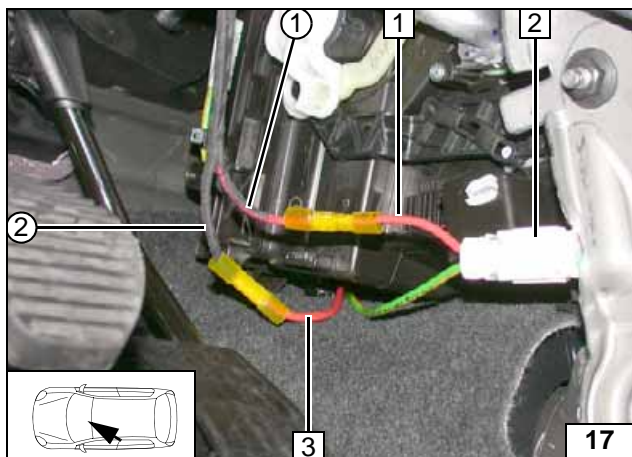


Connection to 40-pin connector 2 of A/C control unit. Produce connections as shown in wiring diagram.

- 1 Orange (or) wire of 40-pin connector, Pin 4
- 3 Orange (or) wire of fan controller, Pin 5
- ⑦ Red (rt) wire of PWM Gateway/IN
- ⑧ Black (sw) wire of PWM Gateway/OUT



Connection of PWM Gateway

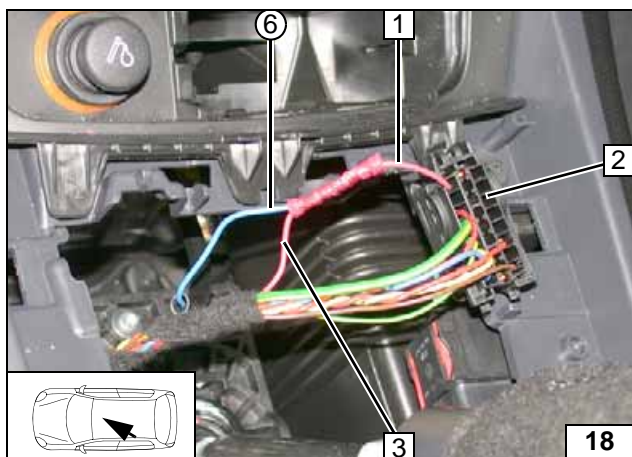


Connection after intermediate connector IC26
2. Produce connections as shown in wiring diagram.



- 1 Red (rt) wire of 2-pin connector IC26, Pin1
- 3 Red (rt) wire of fan controller, Pin 3
- ① Red (rt) wire from K1/87a, fan wiring harness
- ② Black (sw) wire from K1/30, fan wiring harness

**Connect-
ing K1 re-
lay**

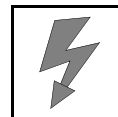


Connection to OBD connector **2.** Produce connections as shown in wiring diagram.



- 1 Red (rt) wire of OBD connector, Pin 1
- 3 Red (rt) wire of terminal 15
- ⑥ Blue (bl) wire of PWM Gateway/15

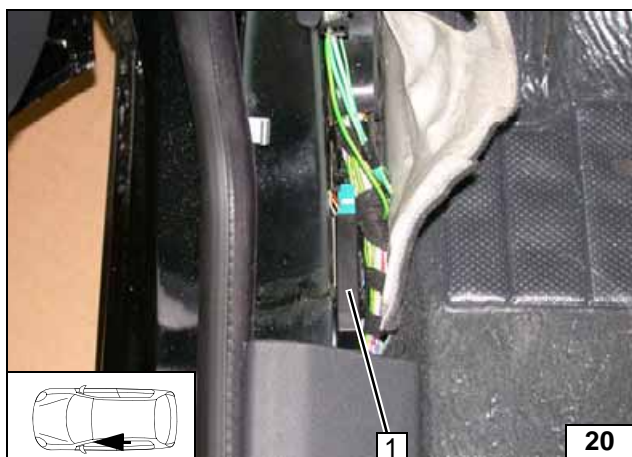
**Connec-
tion of ter-
minal 15**



Digital Timer

- 1 Digital timer

Installing digital timer

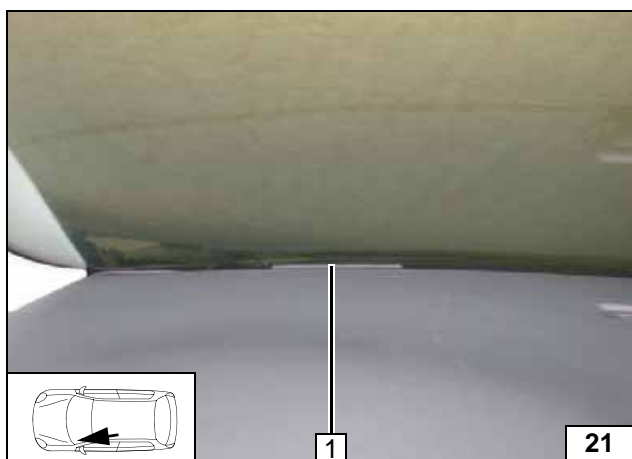


Remote Option Telestart

Push back foot mat on the driver's side. Fasten receiver 1 with adhesive tape.

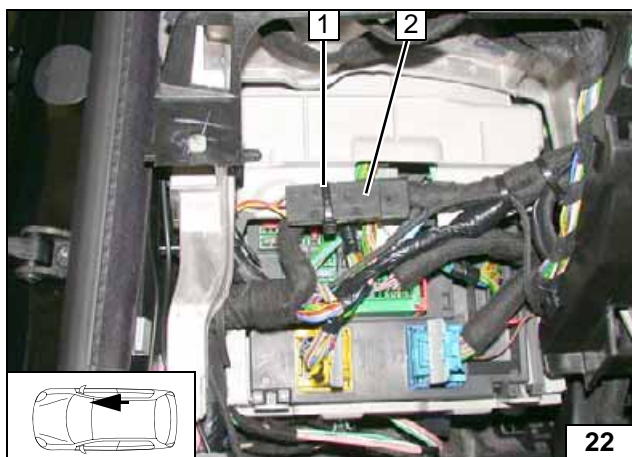


Installing receiver



- 1 Antenna

Installing antenna

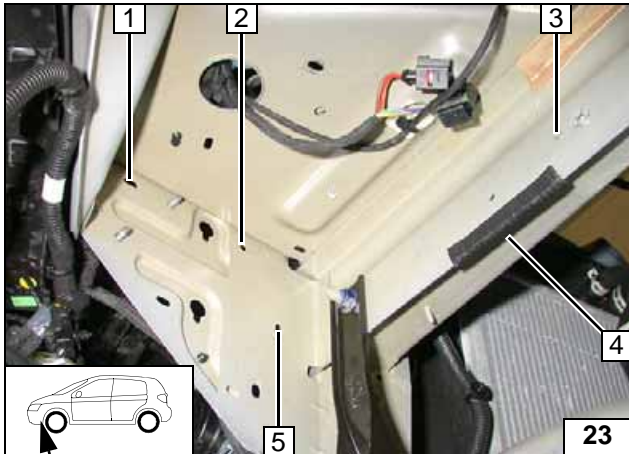


Temperature sensor T100 HTM

Fasten temperature sensor 2 with cable tie 1 on original vehicle wiring harness.



Mounting temperature sensor



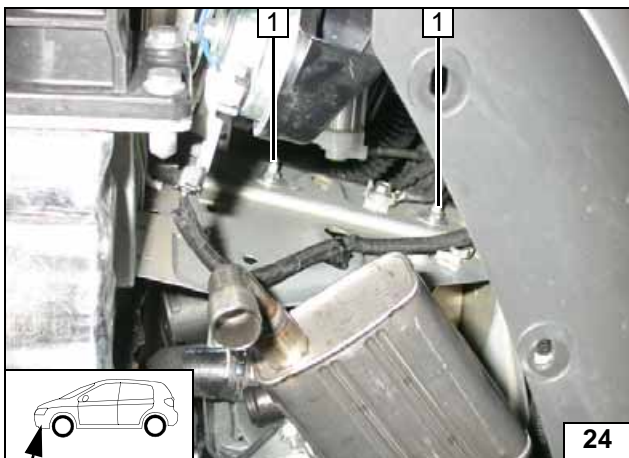
Preparing Installation Location



Move connector from position 2 (if available) to position 5.

- 1 Fastening point for heater (existing holes)
- 2 Fastening point for heater (existing holes)
- 3 Fastening point for heater (existing threaded hole or stud bolt)
- 4 100 mm edge protection

Copying hole pattern



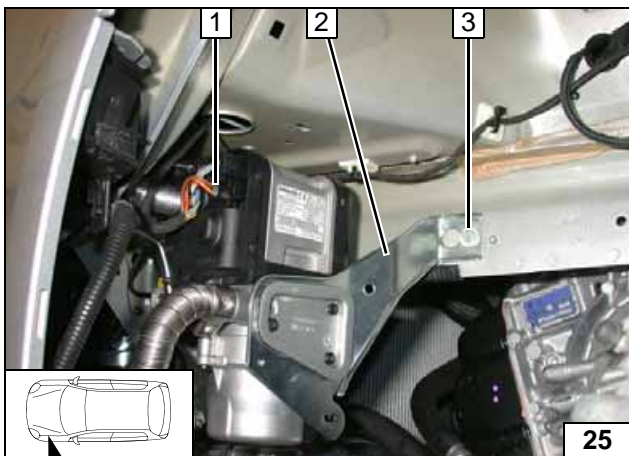
Installing Heater



Mount stud bolts from bracket in existing holes.

- 1 Large diameter washer, flanged nut [2x each], stud bolts

Mounting heater



- 1 Mount wiring harness of heater
- 2 Bracket of heater
- 3 M6x20 bolt, large diameter washer, threaded hole or flanged nut on original vehicle stud bolt

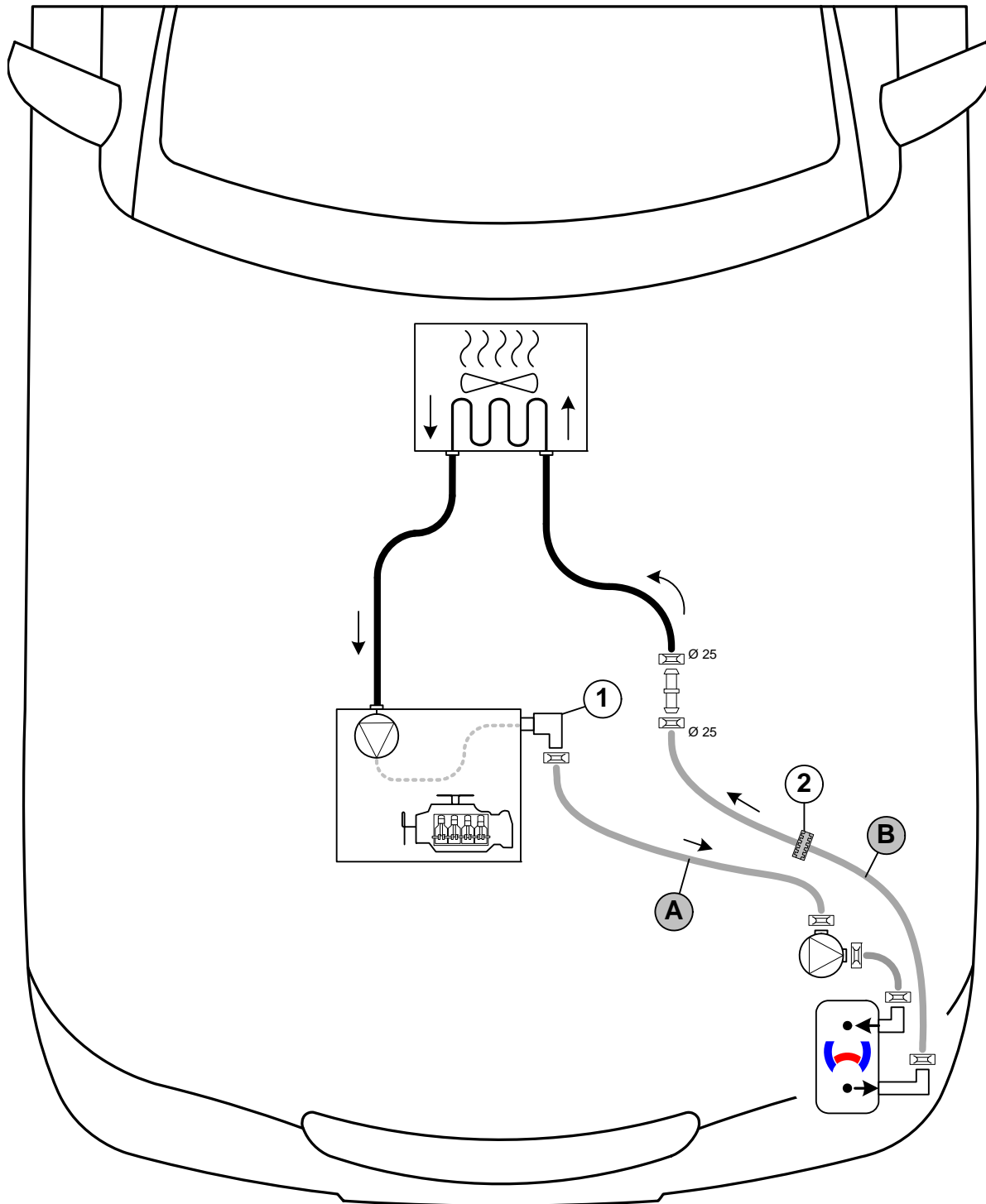
Mounting bracket






Coolant Circuit 2.0 D

WARNING!

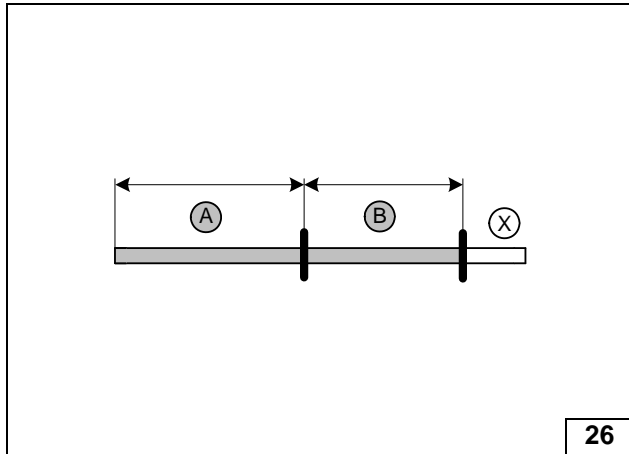
Any coolant running off should be collected using an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



Hose routing diagram

All spring clips without a specific designation  = 27 mm dia. **1** = Original vehicle coupling. Connecting pipe  = 18x18 dia. **2** = Black (sw) rubber isolator .





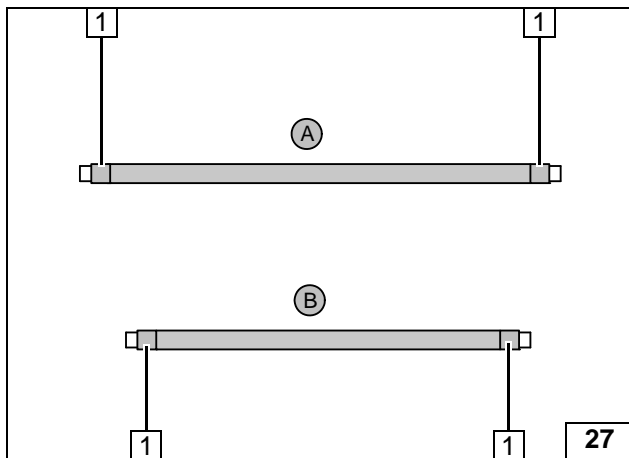
Discard section X

A = 740

B = 640



Cutting hoses to length

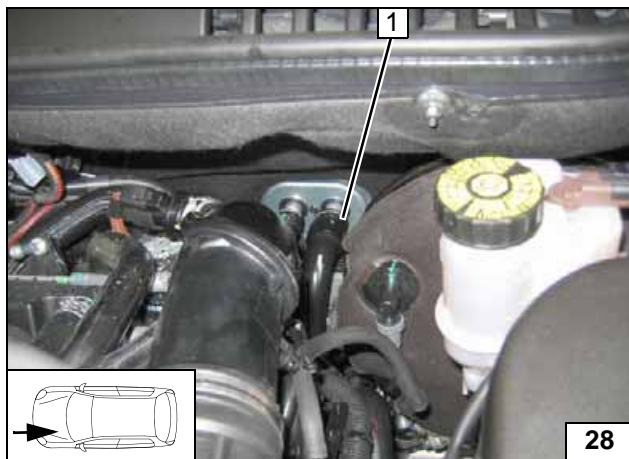


Push braided protection hoses onto hose A and B and cut to length.
Cut heat shrink plastic tubing to size.

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



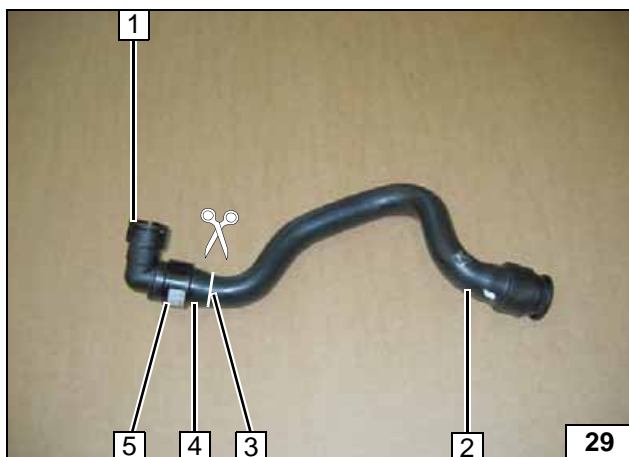
Preparing hoses



Remove original vehicle hose 1. Remove and discard braided protection hose.



Removing hose

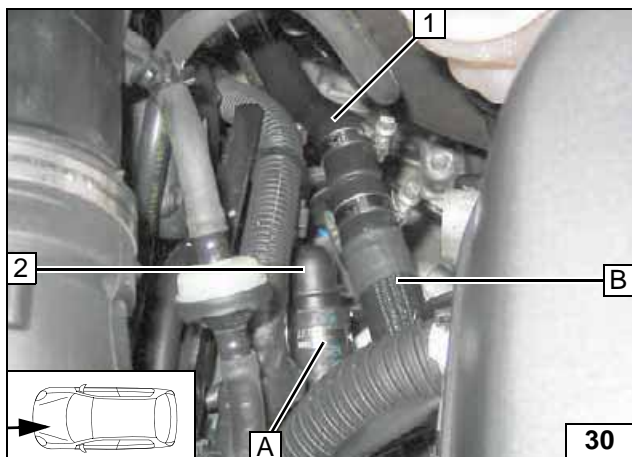


Cut off plastic clamp 5 and dismantle engine outlet coupling 1. Discard plastic clamp and hose section 4. Mount coupling on engine outlet, twisted by 180°.

2 Hose of heat exchanger inlet
3 Cutting point

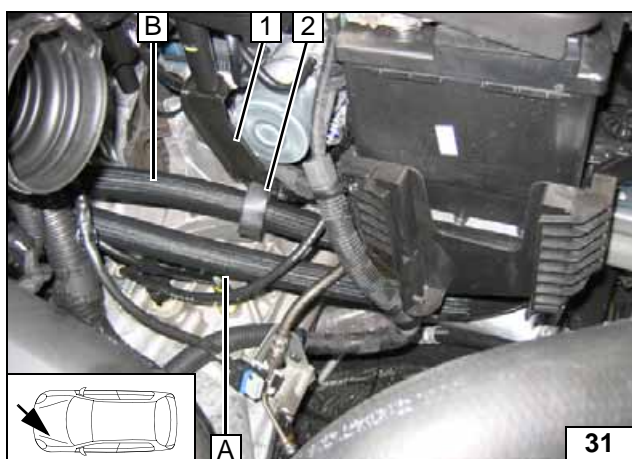


Processing hose



- 1 Hose section of heat exchanger inlet
- 2 Coupling of engine outlet turned by 180°

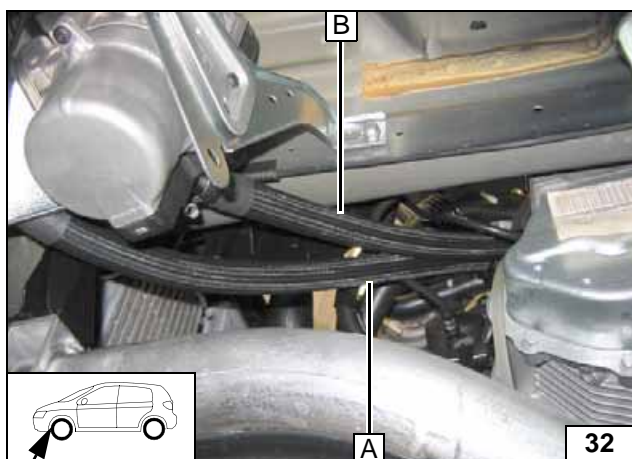
Connect-
ing engine
outlet and
heat ex-
changer in-
let



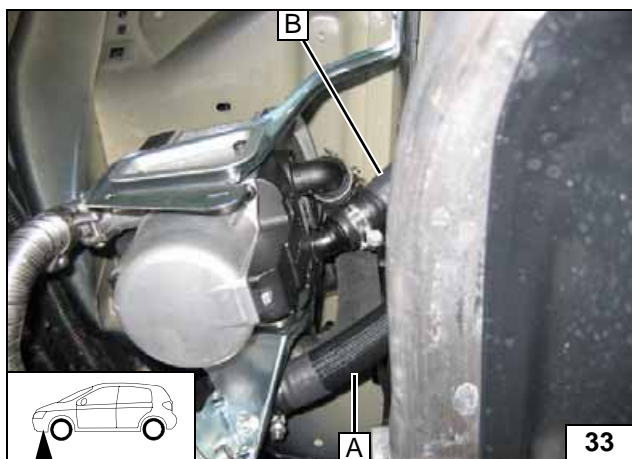
Fasten black (sw) rubber isolator 2 with cable tie to strut 1.



Routing in
engine
compart-
ment



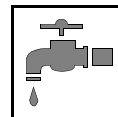
Routing in
engine
compart-
ment



Align hoses. Ensure sufficient distance from neighbouring components.



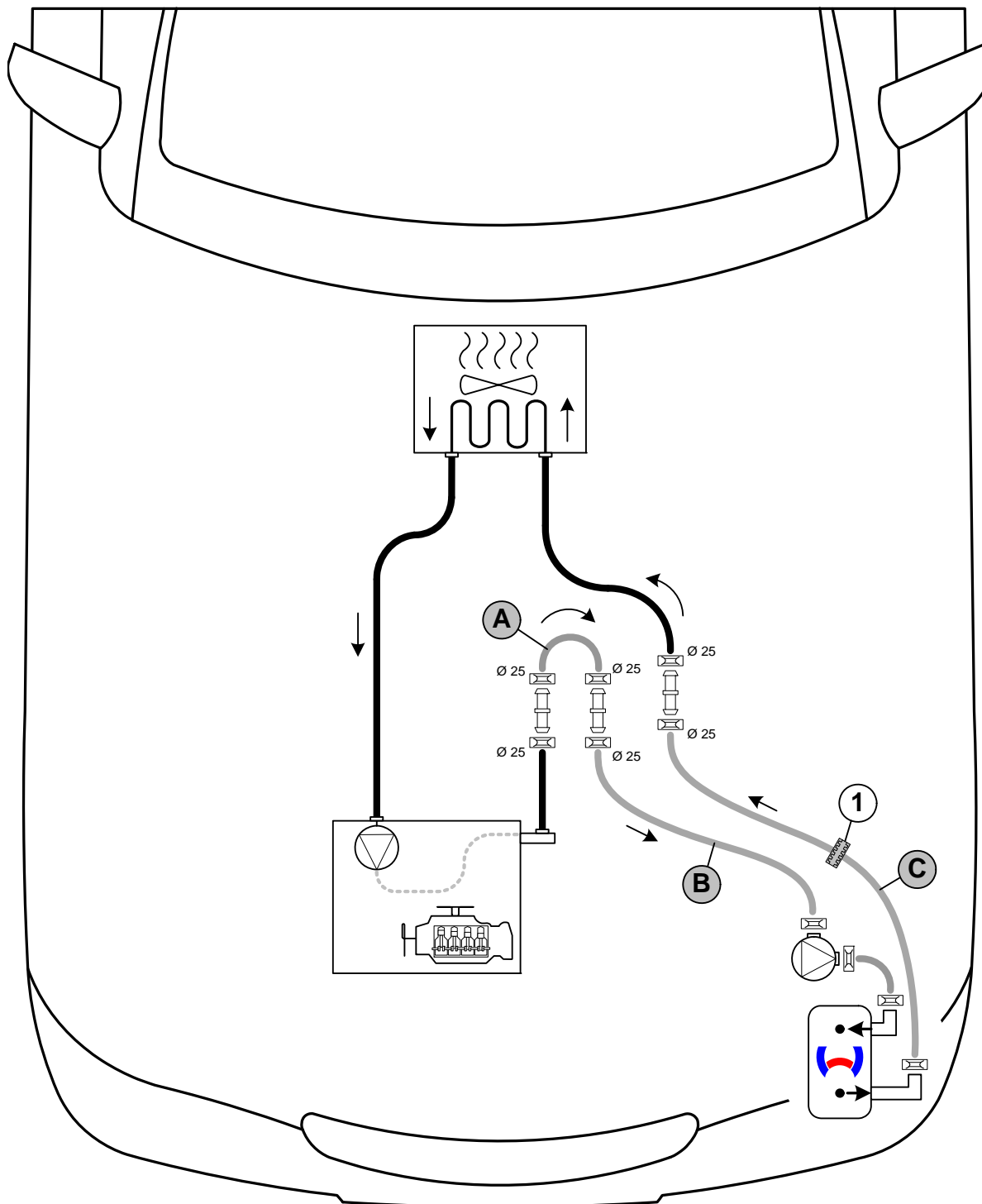
Connect-
ing heater






Coolant Circuit 1.6 B and 2.2 D

WARNING!

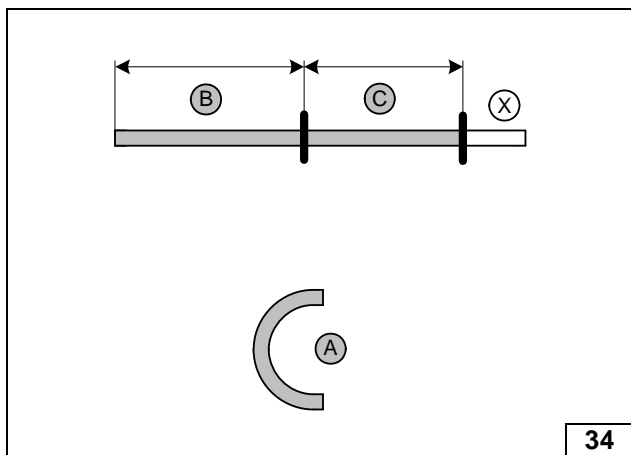
Any coolant running off should be collected using an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



Hose routing diagram

All spring clips without a specific designation  = 27 mm dia.
 1 = black (sw) rubber isolator  (only with 2.2 D)!
 All connecting pipes  = 18x18mm dia.





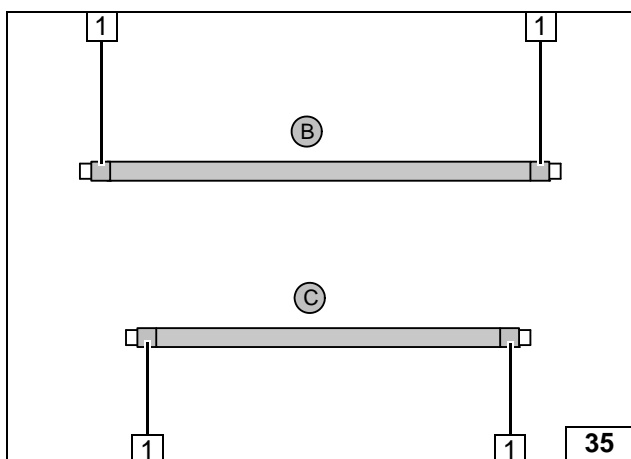
Discard section X.
Hose A = 180° elbow

1.6 petrol
B = 890
C = 800

2.2 Diesel
B = 750
C = 630



Cutting hoses to length



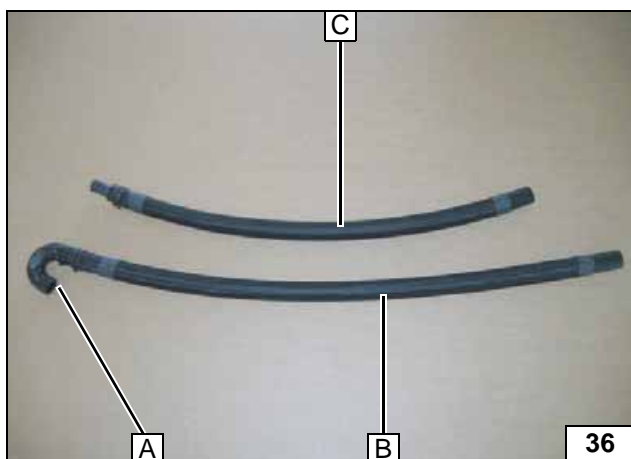
All vehicles

Push braided protection hoses onto hose B and C and cut to length.
Cut heat shrink plastic tubing to size.

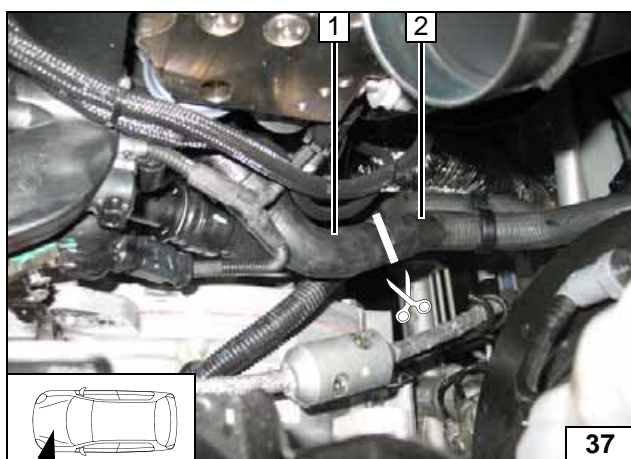
- 1 50 mm long heat shrink plastic tubing [4x]



Preparing hoses



Premounting hoses



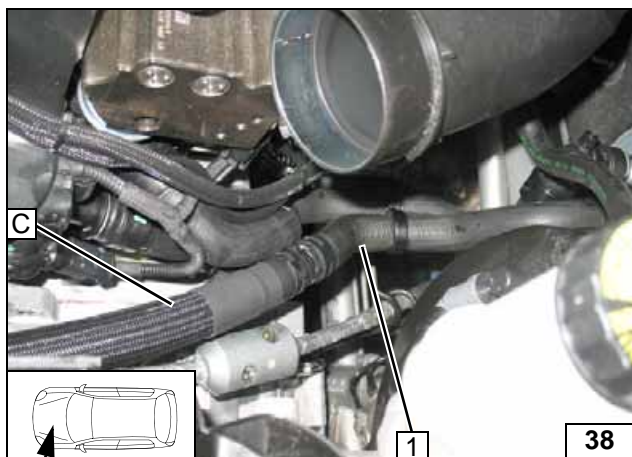
1.6 petrol

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

- 1 Hose section of engine outlet
- 2 Hose section of heat exchanger inlet

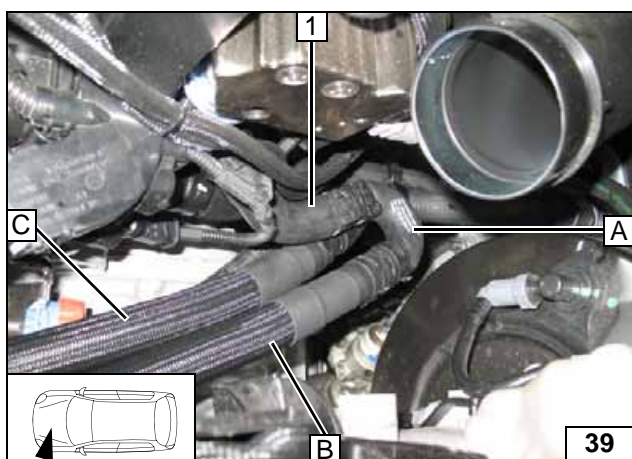


Cutting point



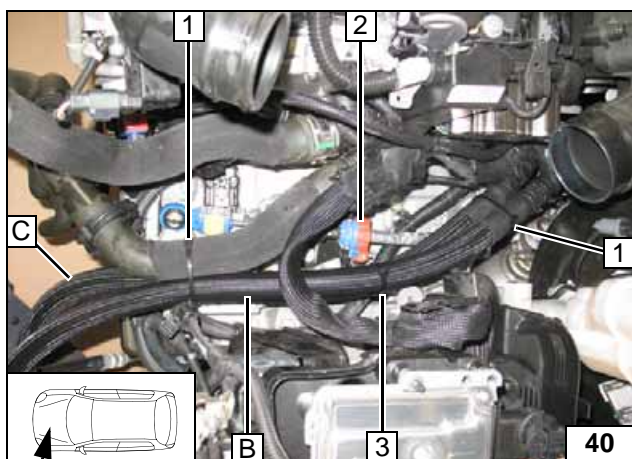
1 Hose of heat exchanger inlet

Connect-
ing heat ex-
changer
inlet



1 Hose of engine outlet

Connect-
ing engine
outlet

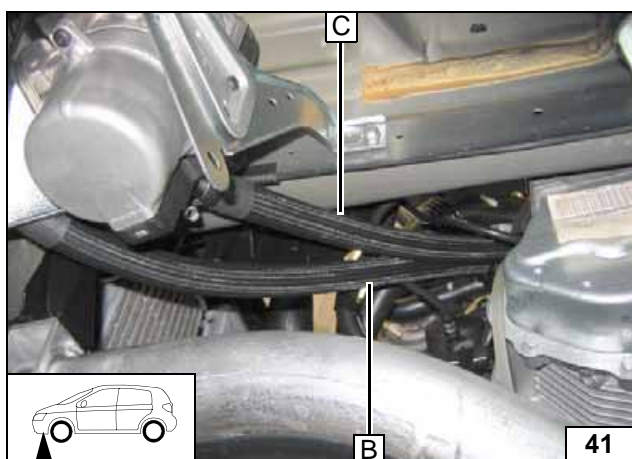


Fasten cable tie at position **3** to bracket of actuating cable and hoses **B** and **C**.

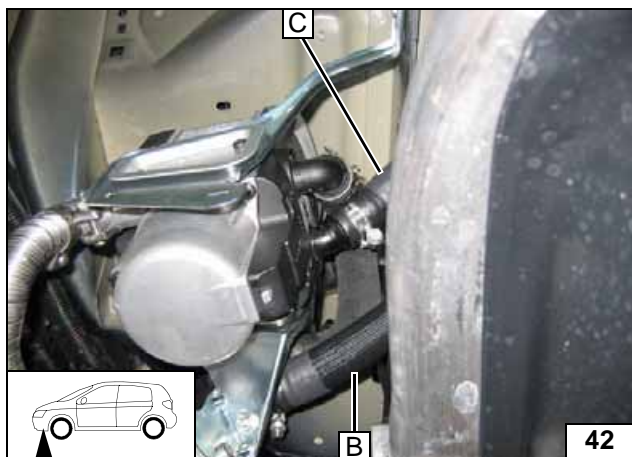


- 1 Cable tie [2x]
- 2 Bracket of actuating cable

Routing in
engine
compartment



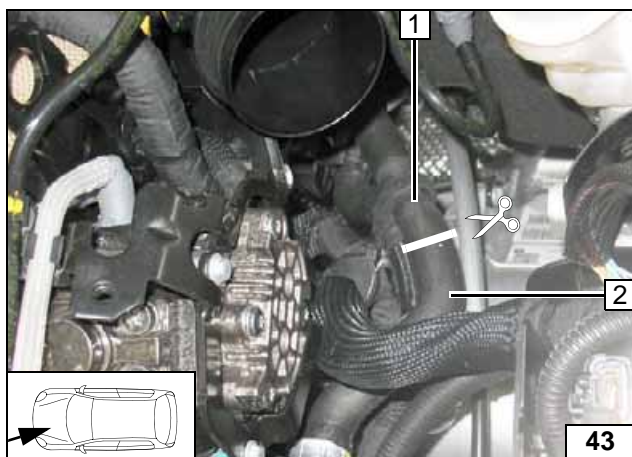
Routing in
engine
compartment



Align hoses. Ensure sufficient distance from neighbouring components.



Connect-
ing heater



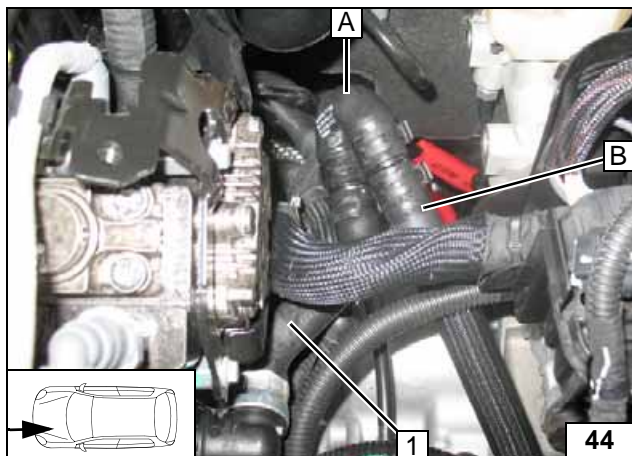
2.2 Diesel

Cut off original vehicle hose on engine outlet/heat exchanger inlet at marking. Remove braided protection hose (if available) in the area of the cutting point.



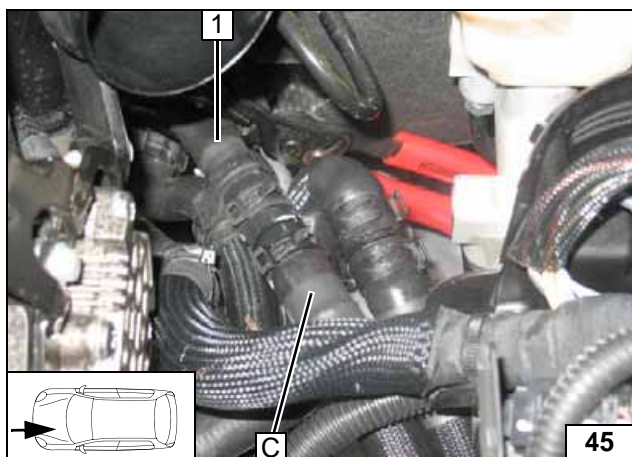
Cutting
point

- 1 Hose section of heat exchanger inlet
- 2 Hose section of engine outlet



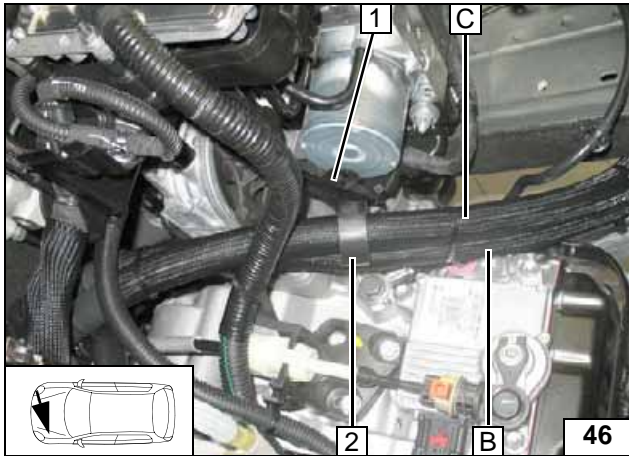
- 1 Hose of engine outlet

Connect-
ing engine
outlet



- 1 Hose of heat exchanger inlet

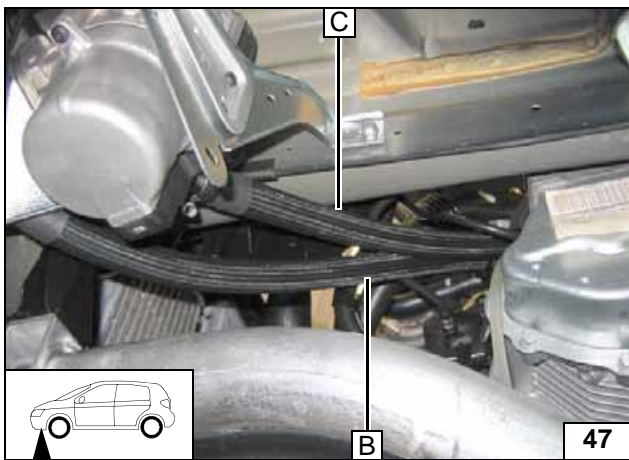
Connect-
ing heat ex-
changer
inlet



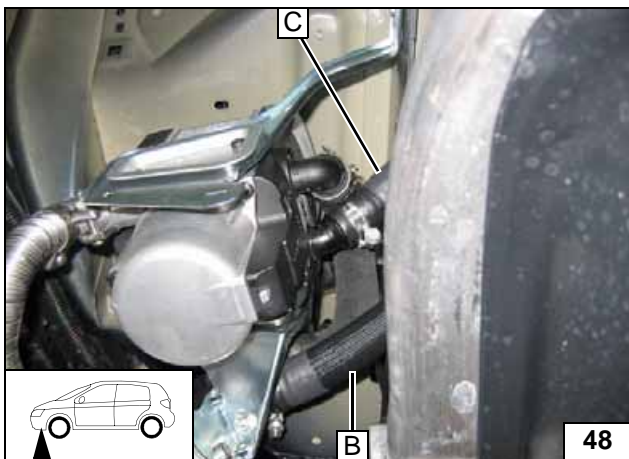
Slide on black (sw) rubber isolator 2 and fasten to strut 1 with cable tie.



Routing in engine compartment



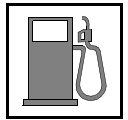
Routing in engine compartment



Ensure sufficient distance from neighbouring components.



Connecting heater



Fuel

CAUTION!

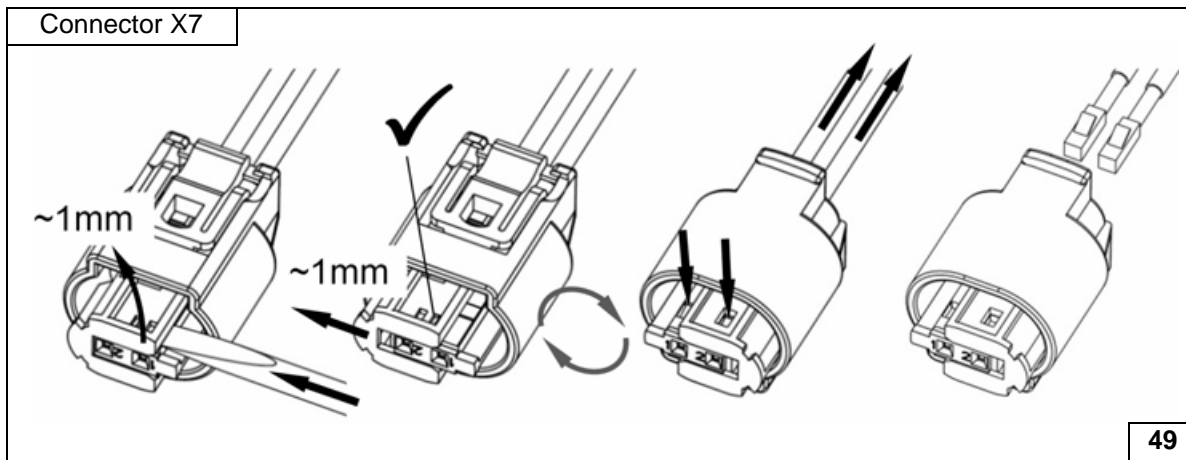
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off in an appropriate container.

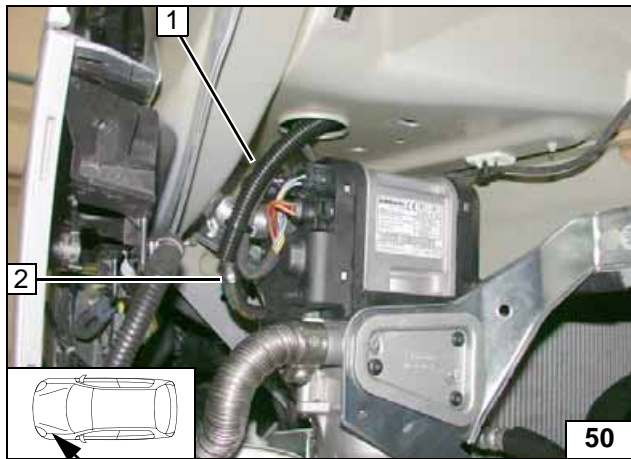
Route fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties. Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

WARNING!

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



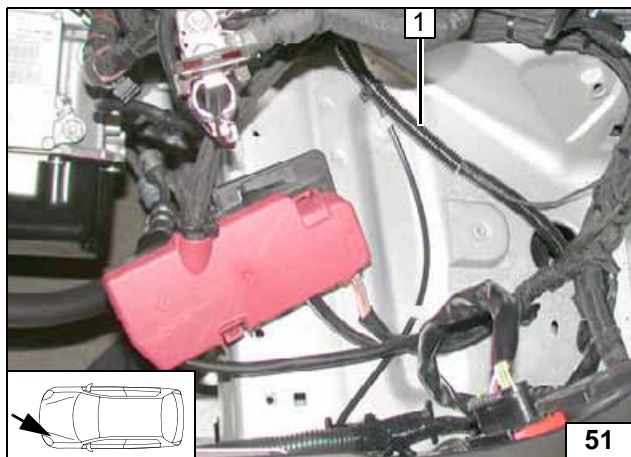
Dismantling connector of metering pump



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

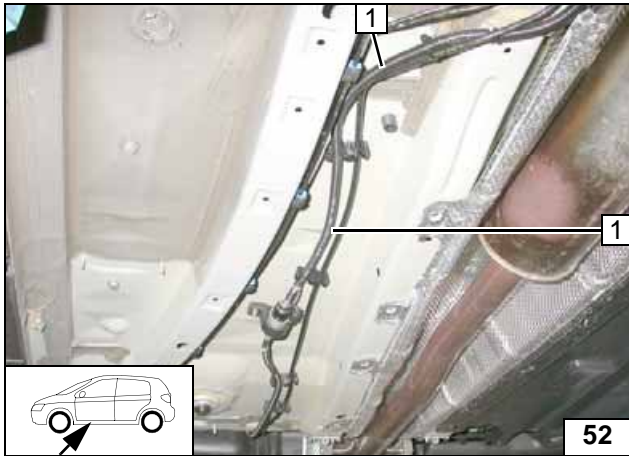
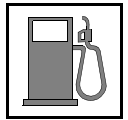


Connecting heater



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

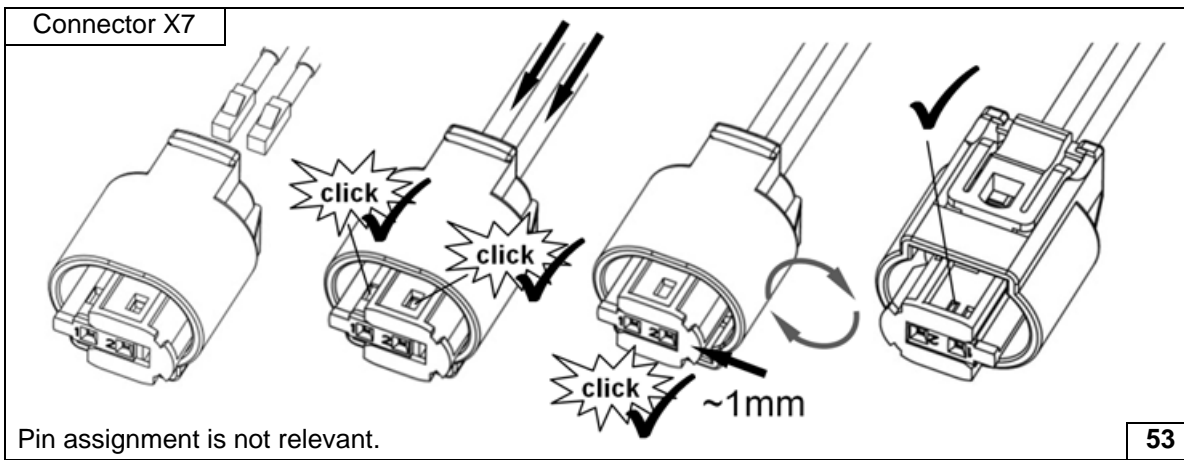
Routing line



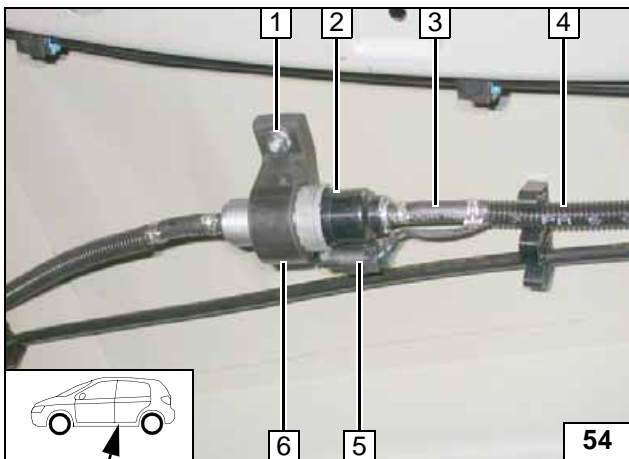
Petrol

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

Routing line



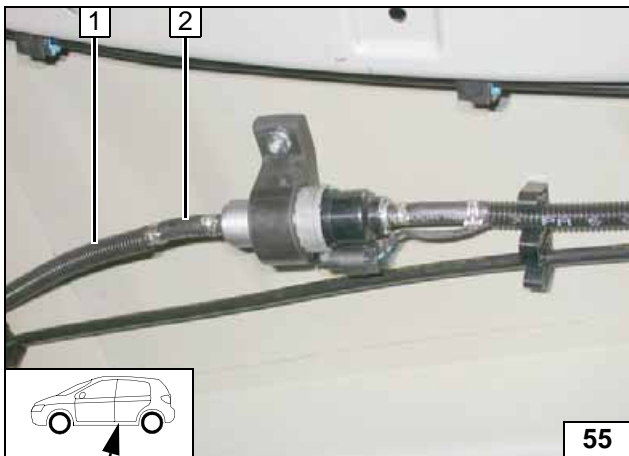
Completing connector of metering pump



- 1 Original vehicle stud bolt, support angle bracket, flanged nut
- 2 Metering pump
- 3 Hose section, 10 mm dia. Caillau clamp [2x]
- 4 Fuel line and wiring harness of metering pump in corrugated tube
- 5 Wiring harness of metering pump, connector mounted
- 6 Bracket of metering pump

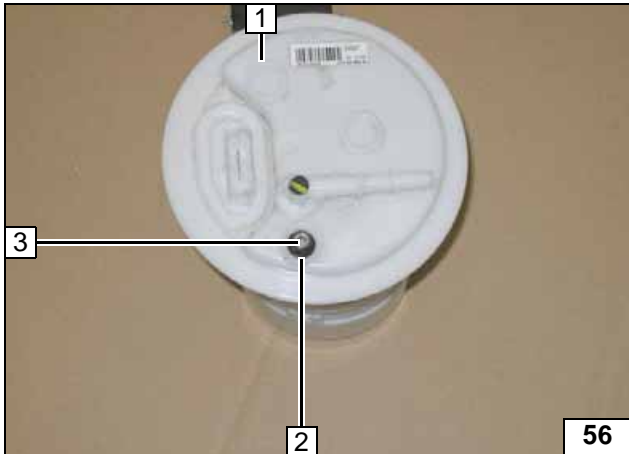
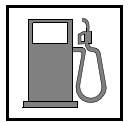


Mounting metering pump



- 1 Fuel line in corrugated tube
- 2 Hose section, 10 mm dia. Caillau clamp [2x]

Connection of metering pump



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

- 2** Flanged nut
- 3** Copy hole pattern, 6mm dia. hole



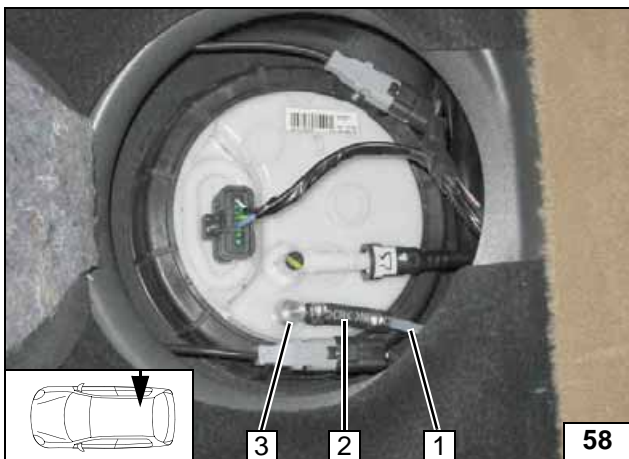
Fuel extraction



Cut fuel standpipe **1** to length according to template.



Mounting fuel standpipe

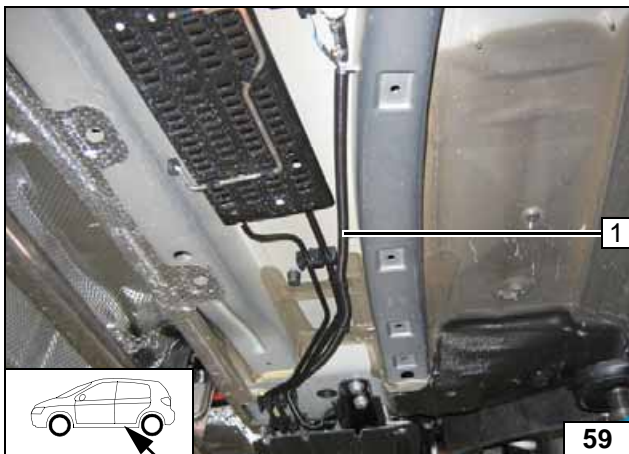


Check the position of the components; correct if necessary. Check that they have freedom of movement.
Install fuel-tank sending unit according to manufacturer's instructions.

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



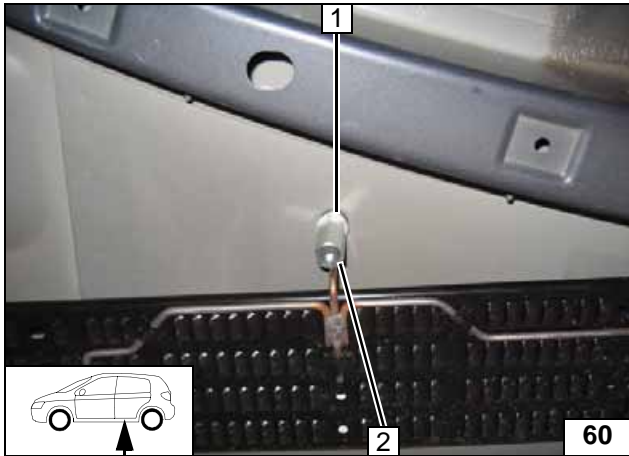
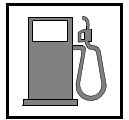
Connecting fuel line



Diesel

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

Routing lines

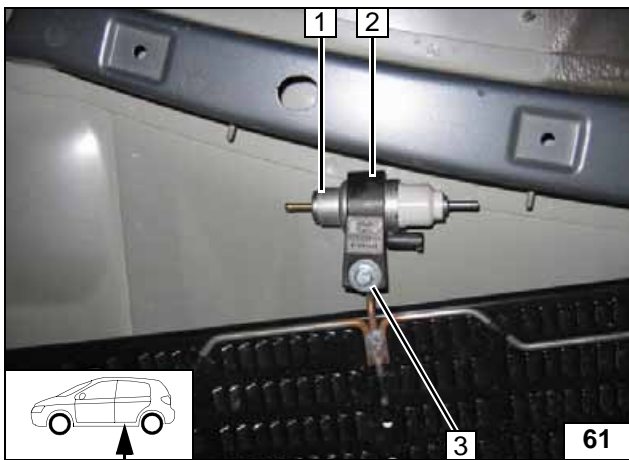


Remove original vehicle nut at position 1 and discard.

- 2 Large diameter washer, 30 mm spacer nut



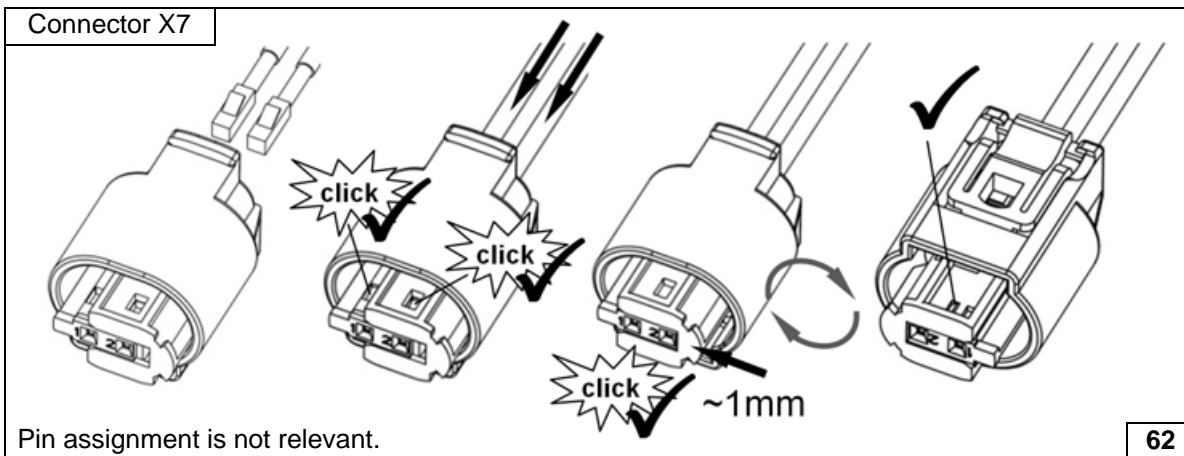
Mounting metering pump



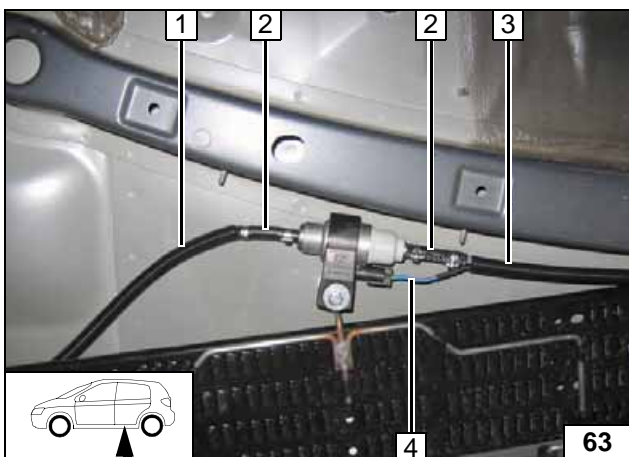
- 1 Metering pump
- 2 Bracket of metering pump
- 3 M6x25 bolt, support angle bracket, large diameter washer



Mounting metering pump

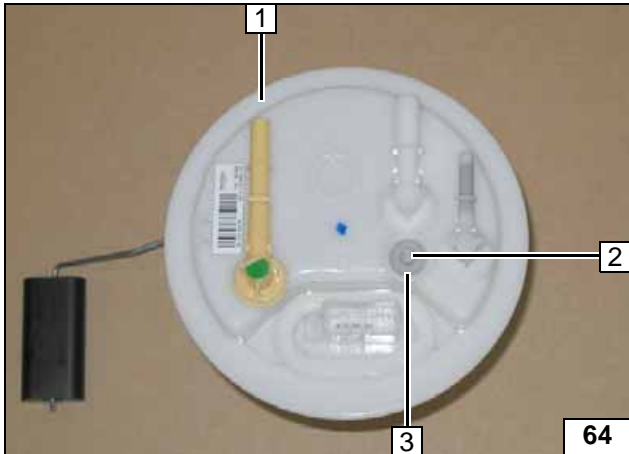
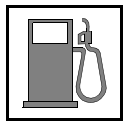


Completing connector of metering pump



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

Connection of metering pump

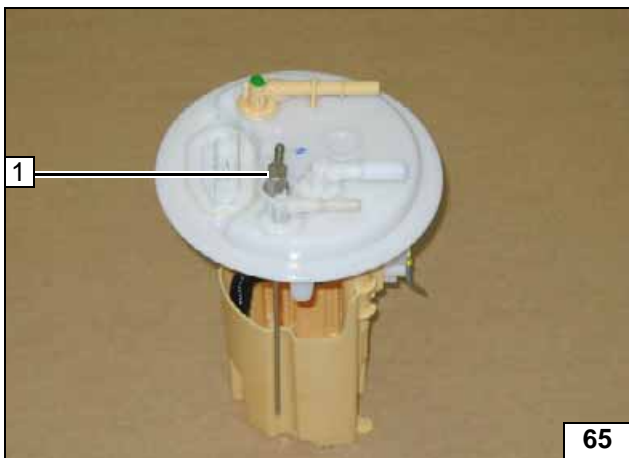


Remove fuel-tank sending unit **1** in accordance with the manufacturer's instructions.

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



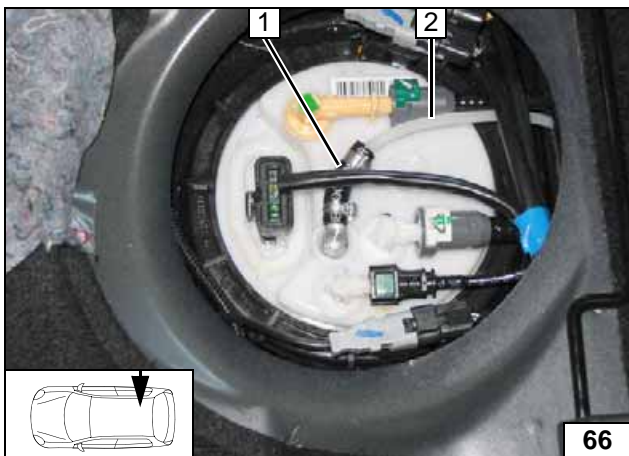
Fuel extraction



Shape fuel standpipe **1** as shown in the template and cut it to length.



Mounting fuel standpipe

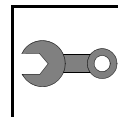


Check the position of the components; correct if necessary. Check that they have freedom of movement.
Install fuel-tank sending unit according to manufacturer's instructions.

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



Connecting fuel line



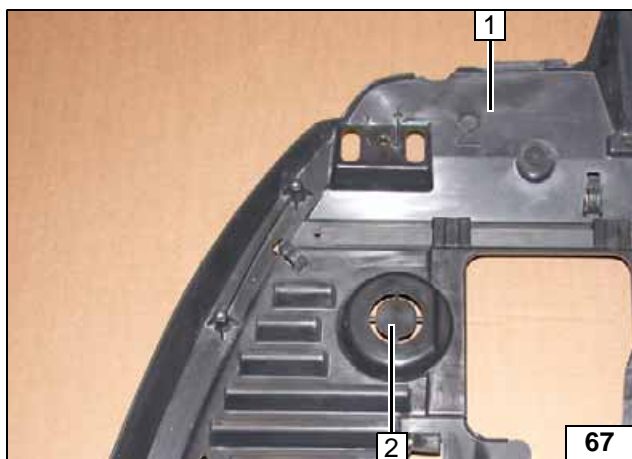
Final Work

WARNING!

Reassemble the disassembled components 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).

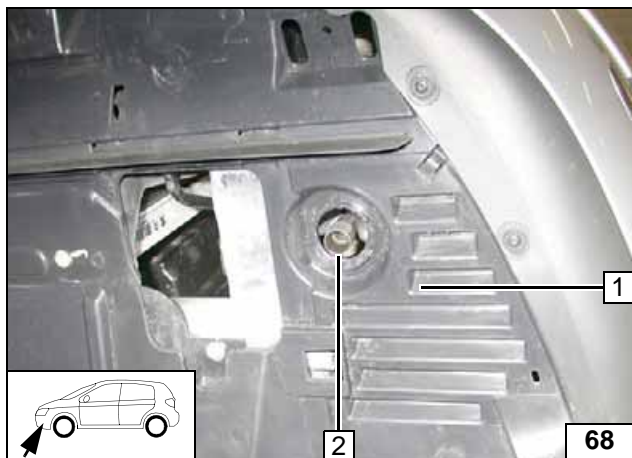


- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Adjust digital timer, teach Telestart transmitter.**
- **Place caution label "Switch off parking heater before refuelling" in the area of the filler neck.**
- **For initial startup and function check, please see installation instructions.**



- 1 Underride protection
- 2 Cut out exhaust outlet along perforation

**Cutting out
underride
protection**



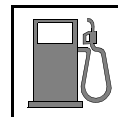
Mount underride protection 1 (exhaust end section centred in recess).

- 2 Exhaust end section

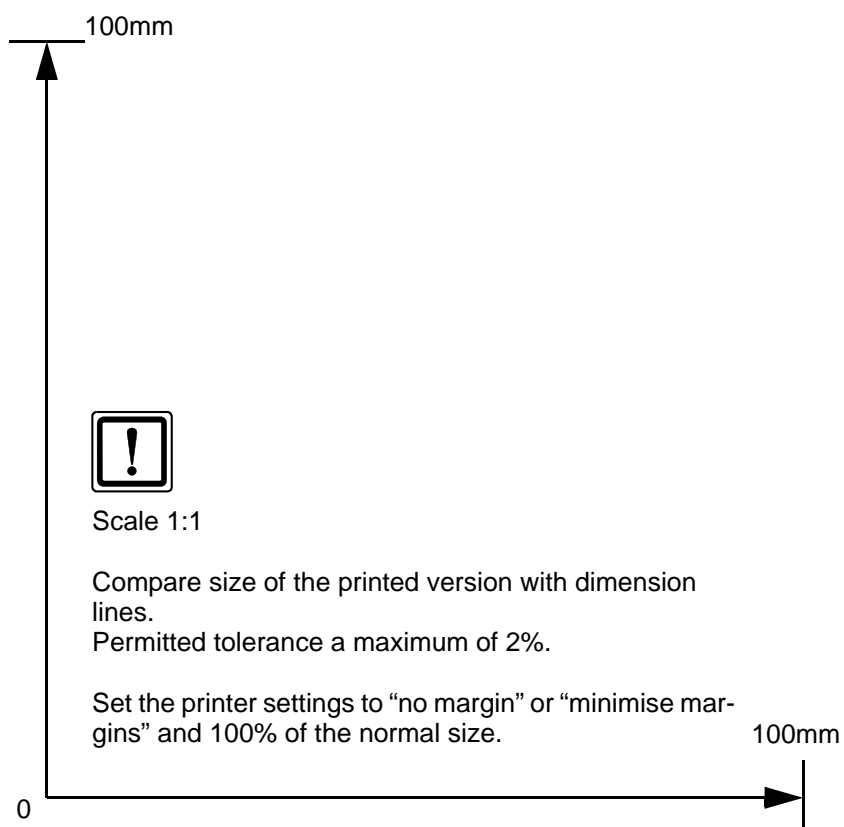


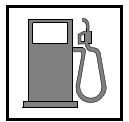
**Mounting
underride
protection**

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

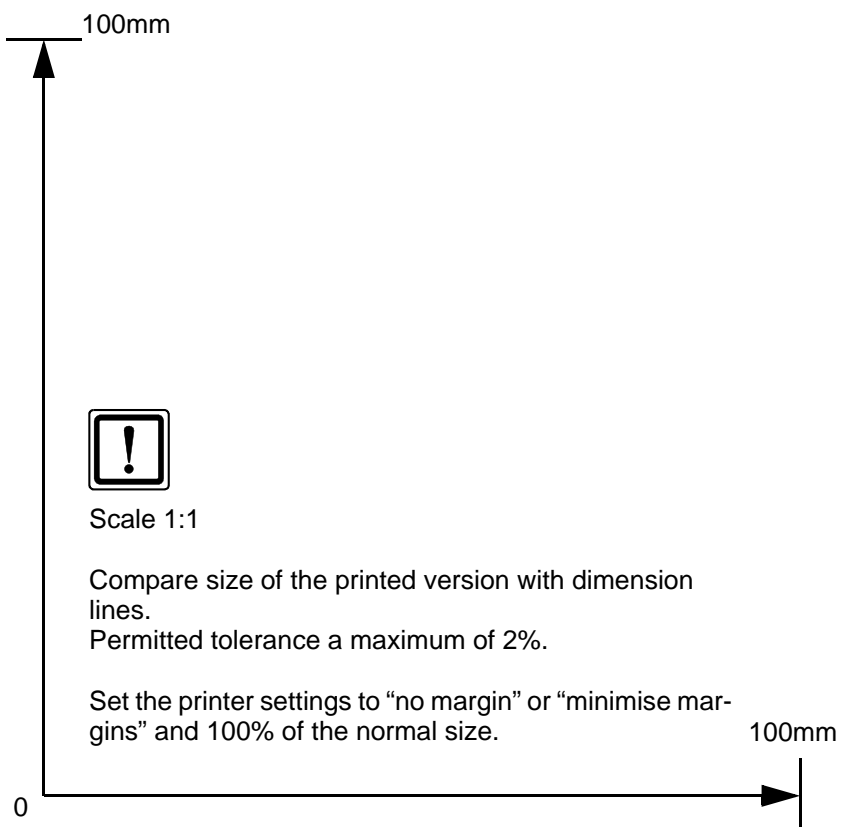


Template for Petrol Fuel Standpipe





Template for Diesel Fuel Standpipe



Operating Instructions for End Customer

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

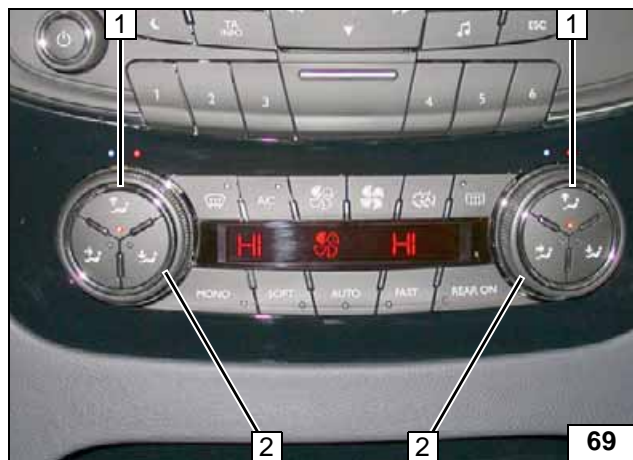
Example:

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.

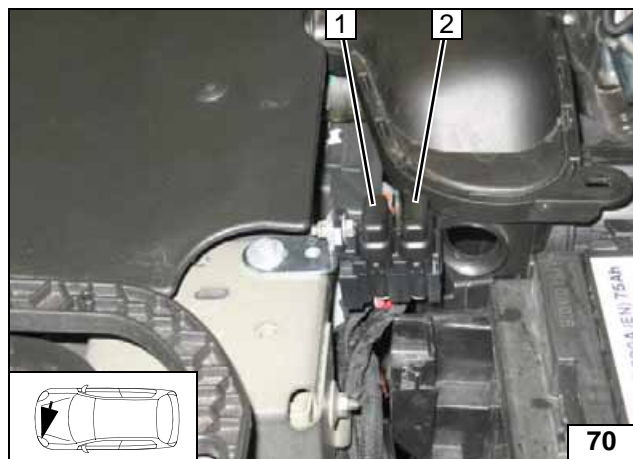
Before parking the vehicle, make the following settings:



- 1 Air outlet on both sides "upward"
- 2 Set temperature on both sides to "Hi"

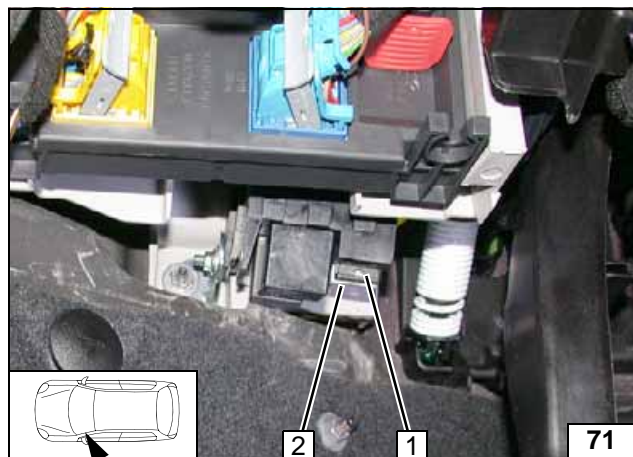


A/C control panel



- 1 30A fan fuse F2
- 2 20A heater fuse F1

Engine compartment fuses



- 1 1A heater control fuse F3
- 2 25A fan fuse F4

Passenger compartment fuses

