

Water Heater

Thermo Top E Parking Heater



00 0002

Thermo Top C Parking Heater



00 0003

Installation Documentation

Audi A4 / A5

2.7 and 3.0 TDI

Model year 2008 up to 2011

Left-hand drive vehicle

Automatic transmission

Automatic air-conditioning



WARNING!

Hazard warning:

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.

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

NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.

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

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.

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Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Audi	A4	B8	e1 * 2001 / 116 * 0430 * ...
Audi	A5	B8	e1 * 2001 / 116 * 0430 * ...

Engine type	Engine model	Output in kW	Displacement in cm ³
CAMA	Diesel	140	2698
CLAB	Diesel	150	2967
CAPA	Diesel	176	2967
CDUC	Diesel	180	2967

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

The installation location of the digital timer should be confirmed with the end customer before installation.

Heater/Installation Kit

Quantity	Description	Order No.:
1	Basic delivery scope for <i>Thermo Top E / C</i>	See price list
1	Installation Kit for Audi A4 / A5 2.7 / 3.0 TDI with Automatic Transmission	1313526B
1	Heater control	See price list

Foreword

This installation documentation applies to the vehicles Audi A4 / A5 2.7 and 3.0 TDI - for validity, see page 2 - model year 2008 up to 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.

However, the stipulations in the "installation documentation", the "operating instructions" and "installation instructions" for the *Thermo Top E / C* must always be observed.

The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

General Instructions

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 wires 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).

When installing an IPCU, the appropriate settings must be checked and set prior to the installation.

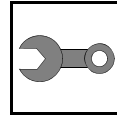
Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- VAS tester (adjustment of Climatronic control unit)

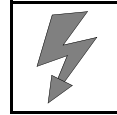
Explanatory Notes on Document

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.

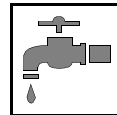
Mechanical system



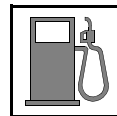
Electrical system



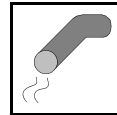
Coolant circuit



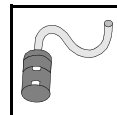
Fuel



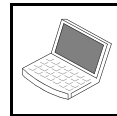
Exhaust gas



Combustion air



Software



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



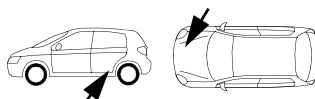
Specific risk of fire or explosion.



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

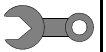


Reference to a special technical feature.



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

All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejet screws, Ejet studs = 10 Nm!

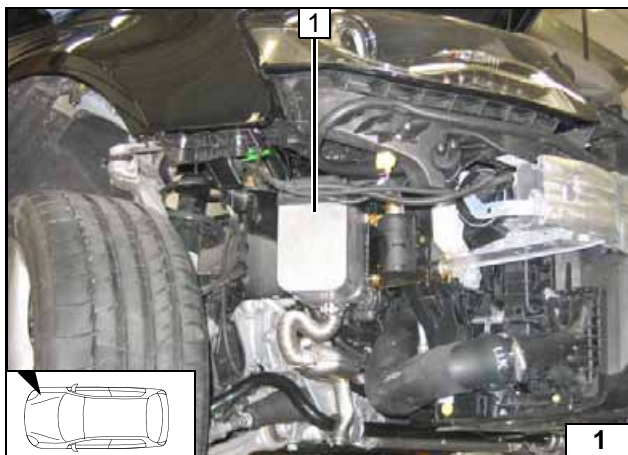


Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- Depressurise the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Remove the air filter together with the intake hose.
- Remove the coolant reservoir cap.
- Removing the filler neck of the washer fluid reservoir.
- Remove the cover of the fuse and relay box.
- Pull out the control unit and lay it aside.
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Remove the right-hand underride protection.
- Remove the 3-piece underbody cover.
- Remove the rear bench seat.
- Open the right-hand tank-fitting service lid.
- Remove the A/C control panel in accordance with the manufacturer's instructions.
- Remove the lower instrument panel trim on the driver's side.

Remove page 26 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater Installation Location

1 Heater

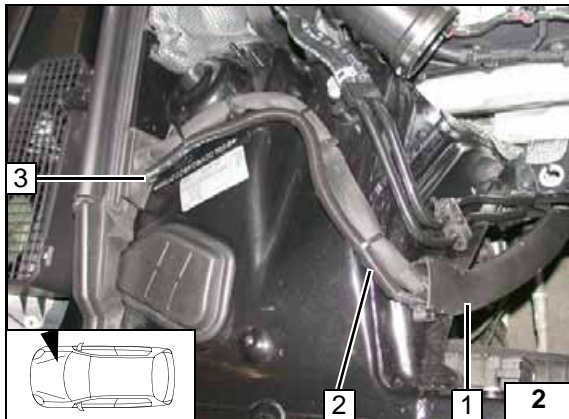
Installation location



Electrical System

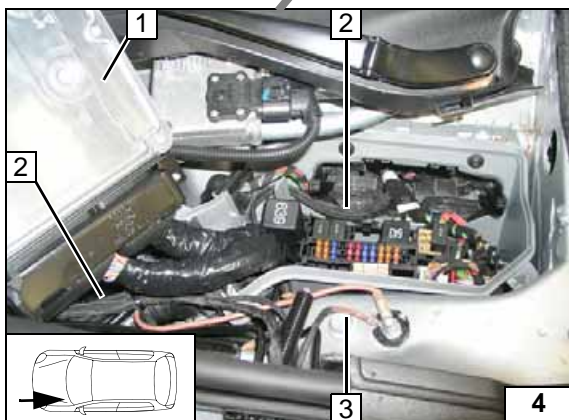
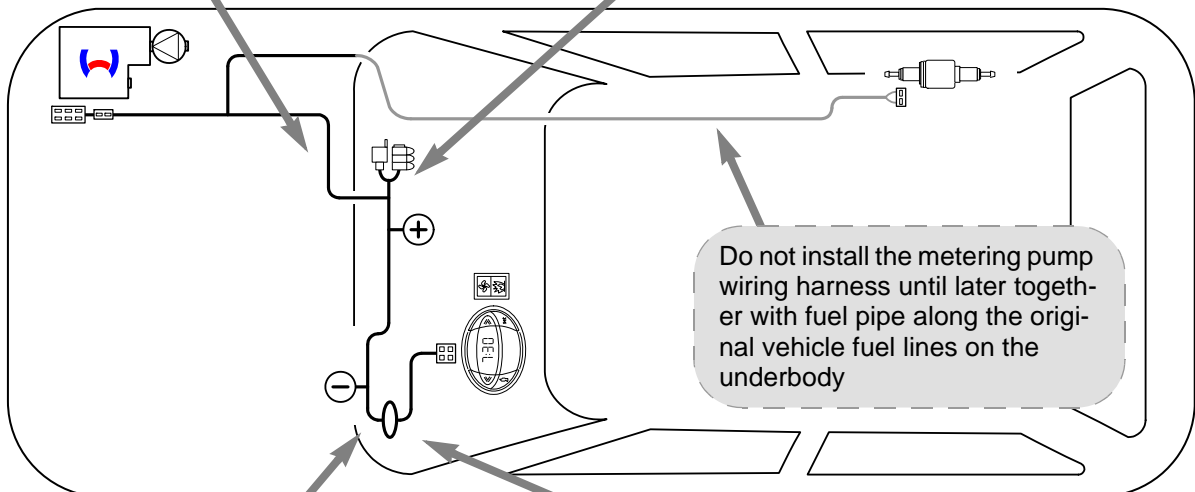
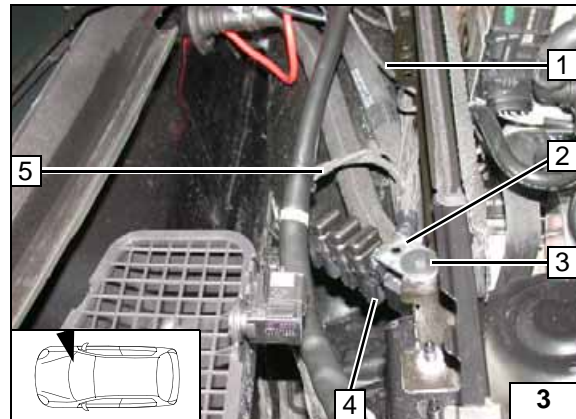
Wiring harness routing

- 1 Original vehicle line duct
- 2 Wiring harnesses of heater, metering pump in corrugated tube
- 3 Cut open original vehicle protective rubber plug



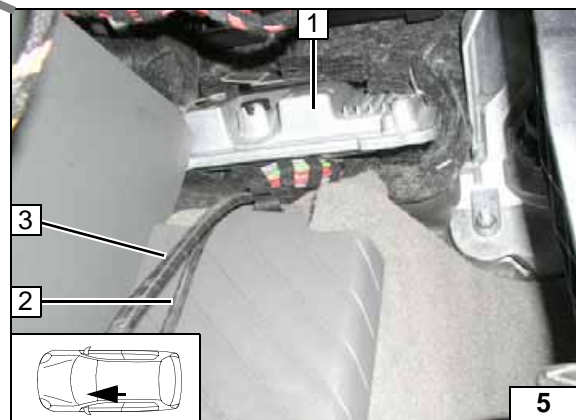
Fuse holder, K3 relay

- 1 Positive wire on positive support point
- 2 Angle bracket
- 3 Mount M6x20 bolt, large diameter washer, flanged nut in existing hole
- 4 M5x16 bolt, retaining plate for fuse holder, K3 relay, washer, flanged nut on angle bracket
- 5 Wiring harness of heater and metering pump



Wiring harness pass through

- 1 Control unit pulled out
- 2 Wiring harness of fan controller, digital timer
- 3 Earth wire on earth support point



Wiring harness pass through

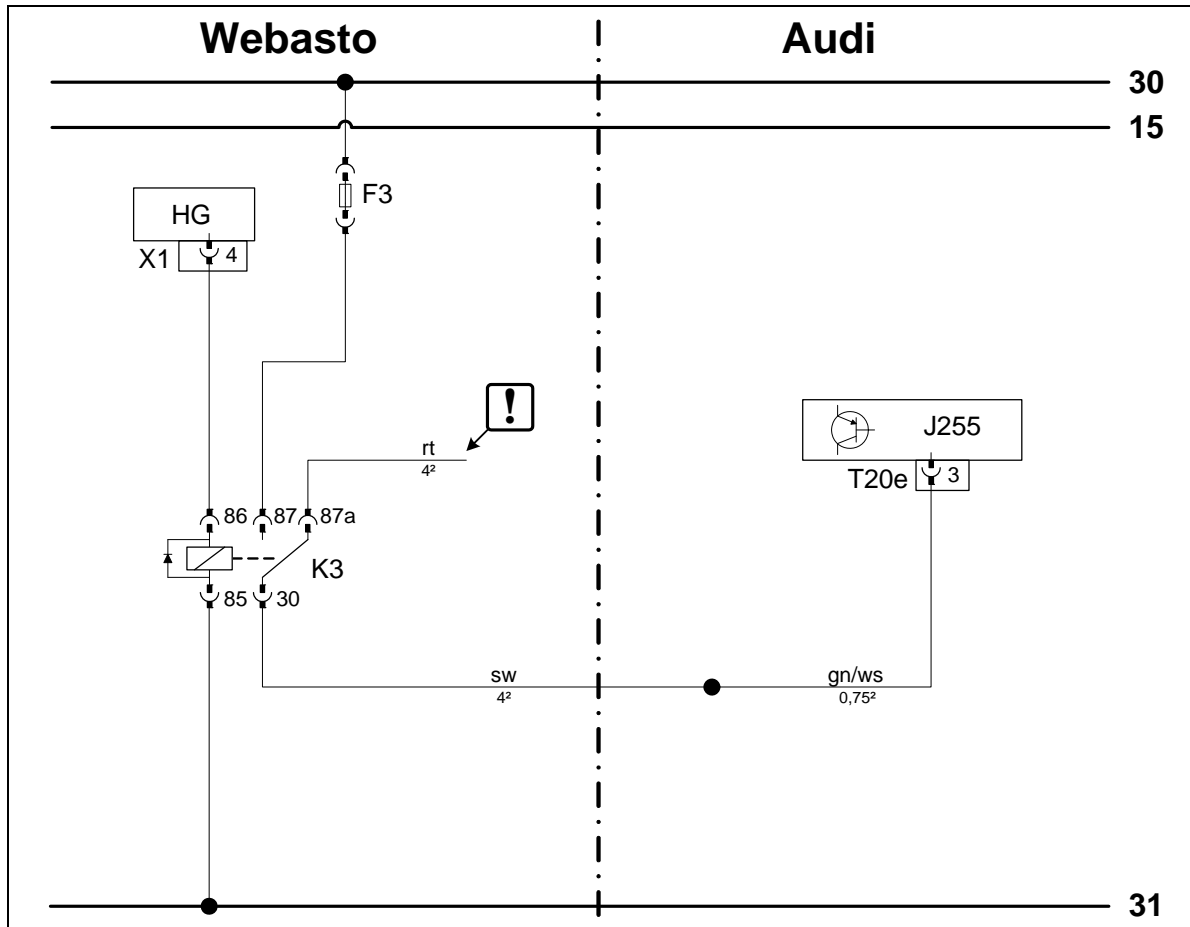
- 1 Control unit mounted again
- 2 Wiring harness of digital timer
- 3 Wiring harness of fan controller



Wiring harness routing diagram



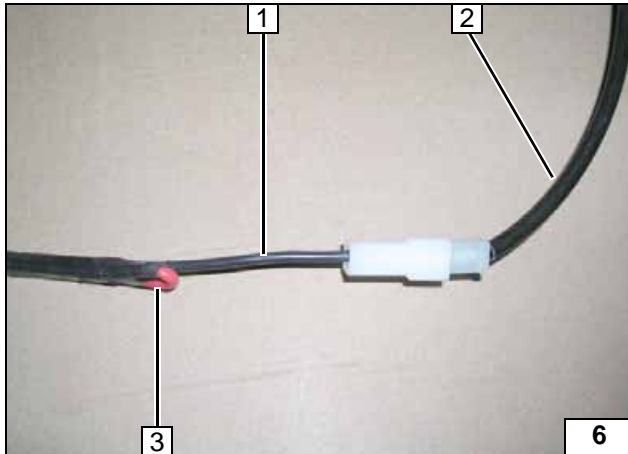
Fan Controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	J255	Air-conditioning control panel	rt	red
X1	6-pin heater connector	T20e	20-pin connector J255	ws	white
F3	Replace 25 A with 1 A fuse			sw	black
K3	Fan relay			gn	green
					Insulate wire ends and tie back
				X	Cutting point
					Wiring colours may vary.

Legend

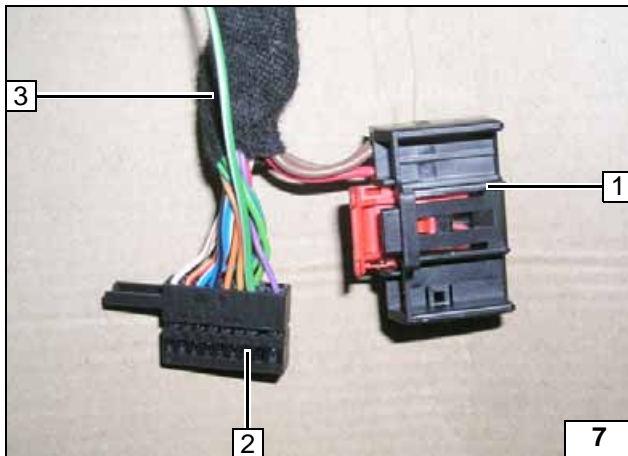


Produce connections as shown in wiring diagram.

- 1 Black (sw) wire from K3/30
- 2 Green/white (gn/ws) additional wire in protective sleeving
- 3 Insulate red (rt) wire K3/87a and tie back



Preparing fan wiring harness

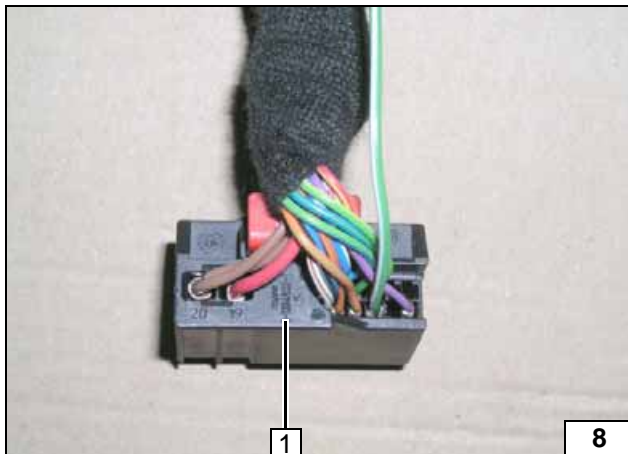


Connection to 20-pin connector T20e 1 from A/C control panel.
Produce connections as shown in wiring diagram.

- 1 Remove connector T20e of A/C control panel
- 2 Free socket, PIN 3
- 3 Green/white (gn/ws) additional line



Connection of air-conditioning controls



- 1 Complete 20-pin connector of A/C control panel

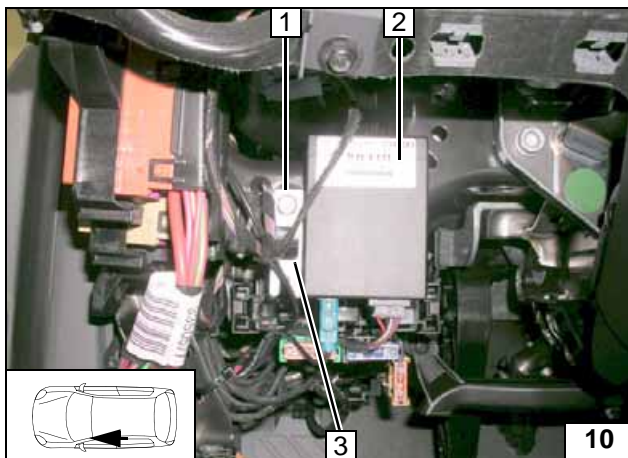
Reinserting connector



Digital Timer, Summer/Winter Switch Option

- 1 Summer/winter switch, drilled hole 12 mm dia.
- 2 Digital timer

Installing digital timer



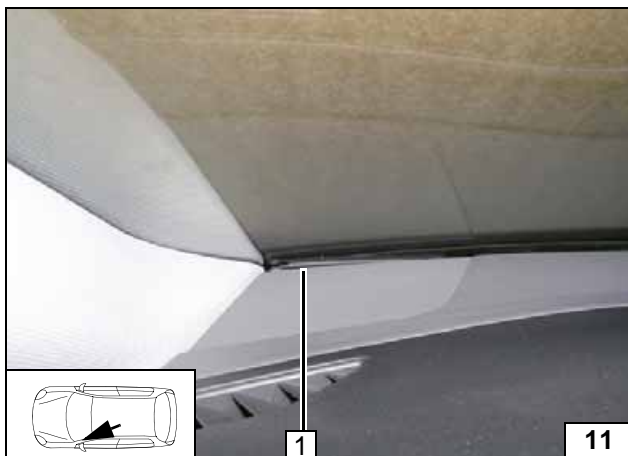
Remote Option (Telestart)

Drill out bracket 3 to 6.5mm dia. at position 1.

- 1 M6x16 bolt in existing threaded hole
- 2 Receiver

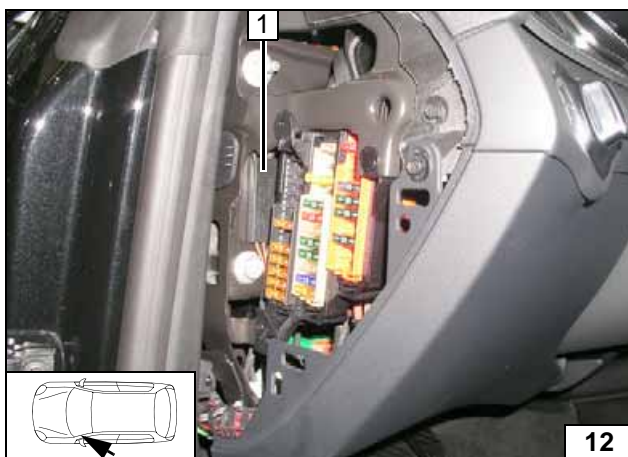


Installing receiver



- 1 Antenna

Installing antenna

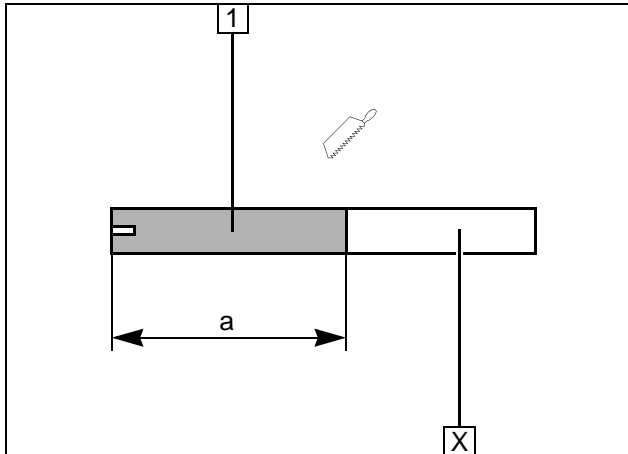
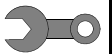


Temperature sensor only in case of T100 HTM

- 1 Fasten temperature sensor with adhesive tape



Installing temperature sensor

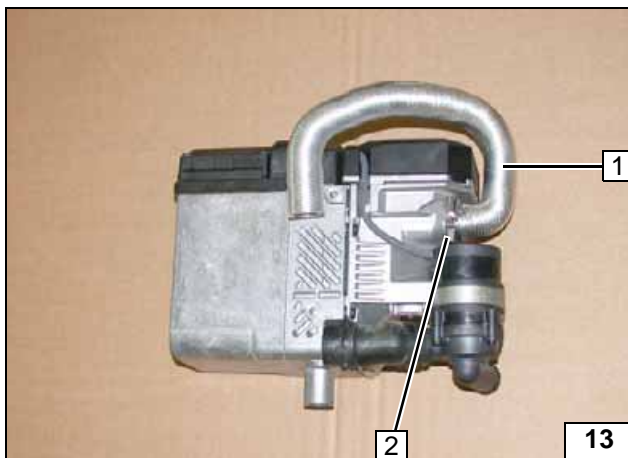


Preparing Heater

Discard section X

- 1 Combustion air pipe
a = 350

Cutting combustion air pipe to length



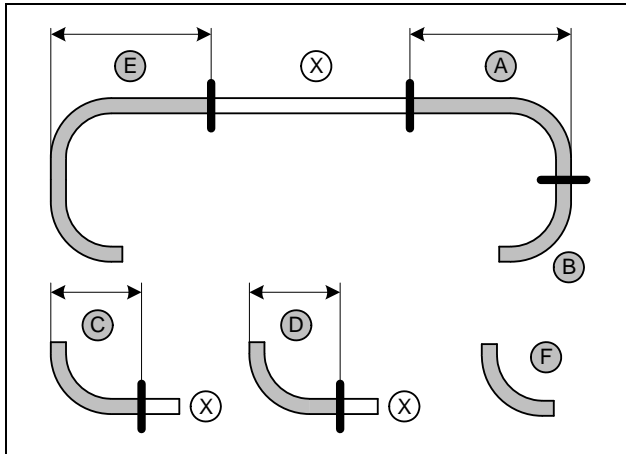
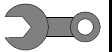
- 1 Combustion air pipe
- 2 Clamp

Premounting combustion air pipe



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

Premounting fuel line



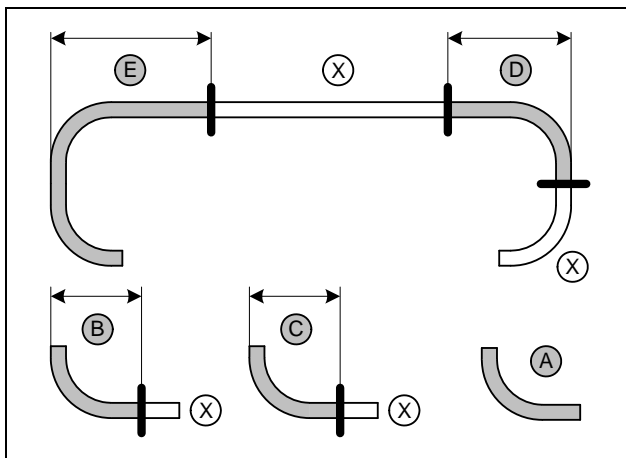
3.0I 150KW / 180 KW

Hose F = 90°, 20x20 mm dia. moulded hose
Discard section X

- A = 380
- B = 90° elbow
- C = 115
- D = 105
- E = 250



Cutting hoses to length



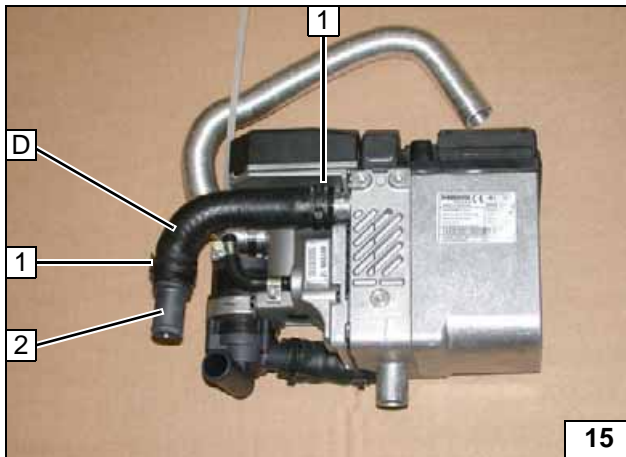
2.7I 140KW / 3.0I 176 KW

Hose A = 90° moulded hose, 15x18 mm
Discard section X

- B = 100
- C = 115
- D = 105
- E = 250



Cutting hoses to length

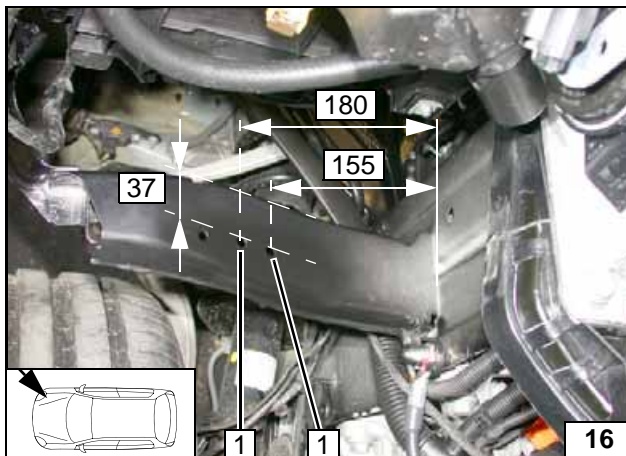


All vehicles

- 1 27 mm dia. spring clip [2x]
- 2 20x20 connecting pipe



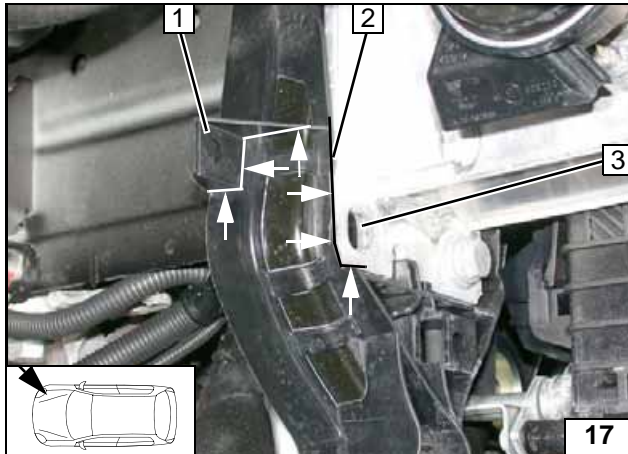
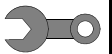
Premounting hose



Preparing Installation Location

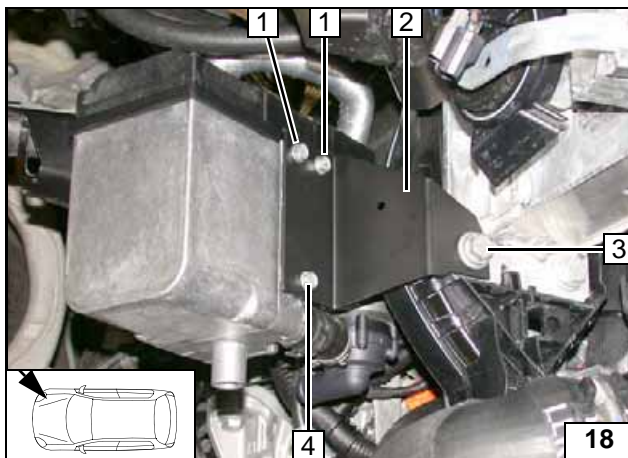
- 1 7 mm dia. hole [2x]

Drilling hole in cross member



- 1 Cut away tab at marking
- 2 Cut away bar at marking
- 3 Remove original vehicle bolt (will be re-used)

Preparing installation location



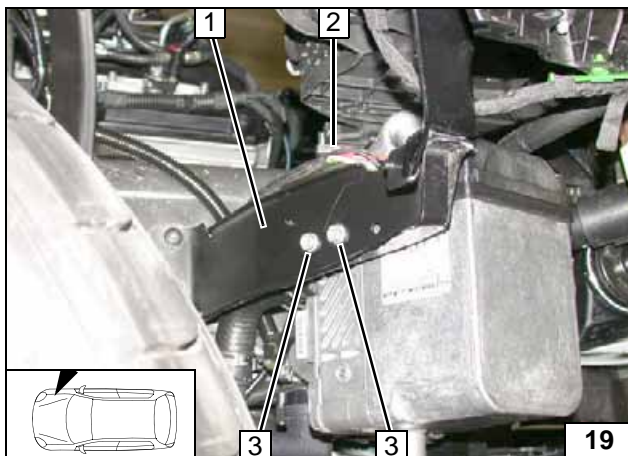
Installing Heater

Insert two washers between bracket 2 and heater at position 4.

- 1 E-jot screw [2x]
- 3 Original vehicle bolt
- 4 E-jot screw, washer [2x]



Installing heater

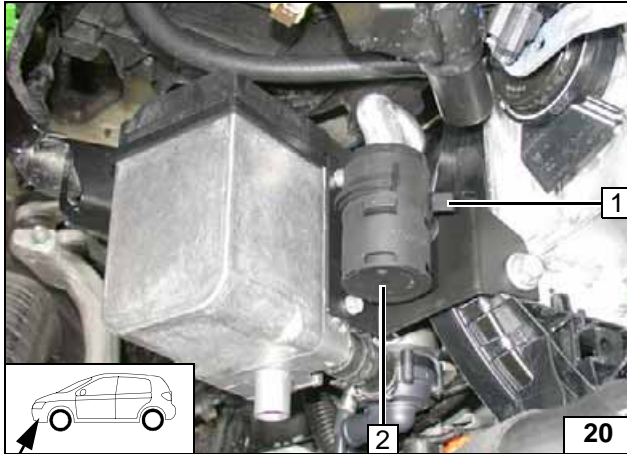
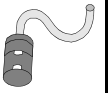


Insert two 5 mm shims between heater and cross member 1 at position 3.

- 2 Mount wiring harness of heater
- 3 E-jot screw, 5 mm shim [2x each]



Installing heater



Combustion Air

- 1 Retaining clip in hole of bracket
- 2 Silencer



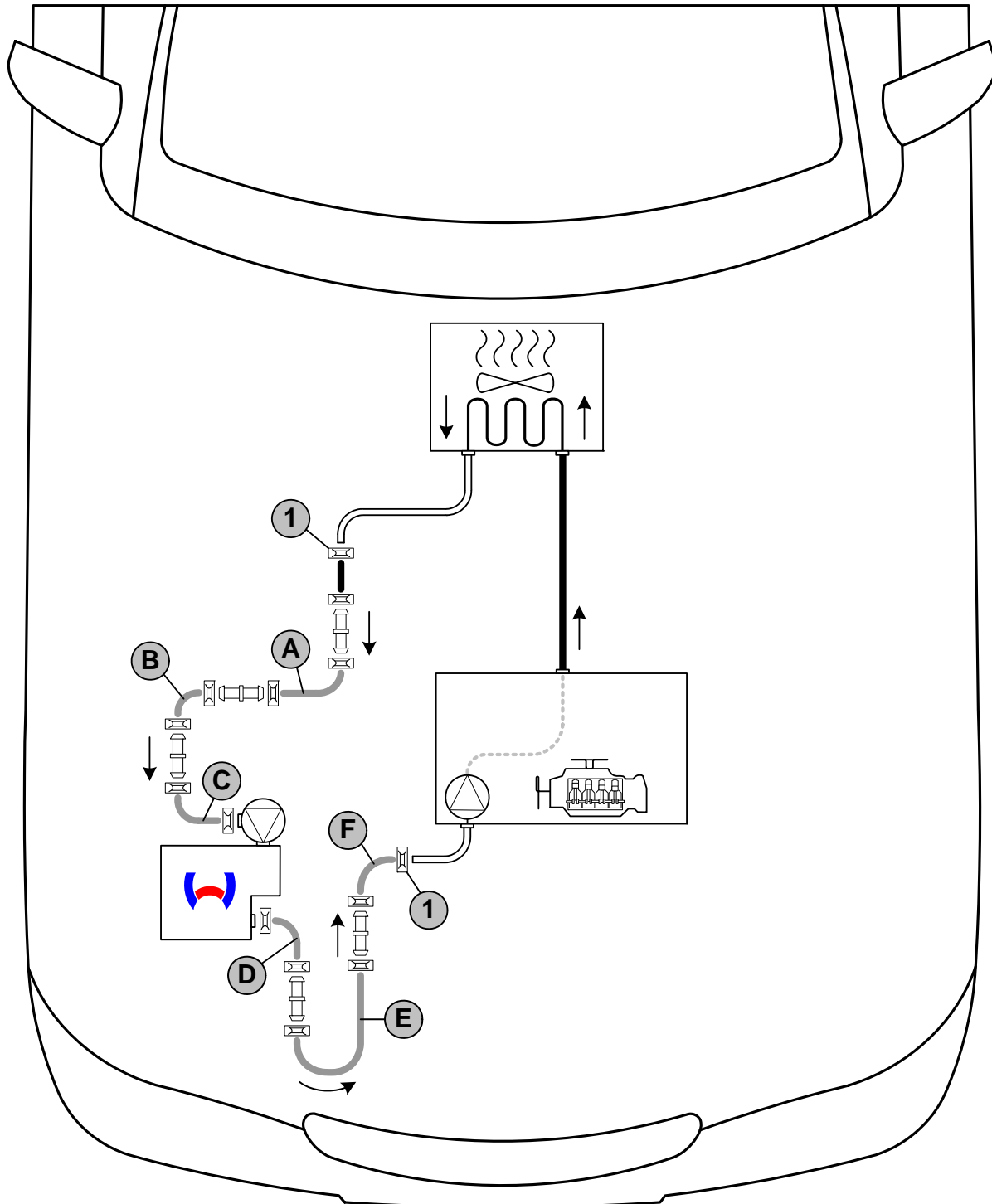
**Installing
silencer**






Coolant Circuit 3.0l 150KW / 180KW

WARNING!

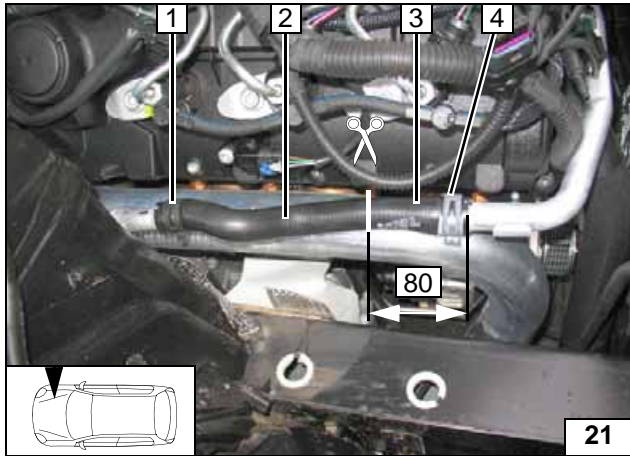
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



Hose installation diagram

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

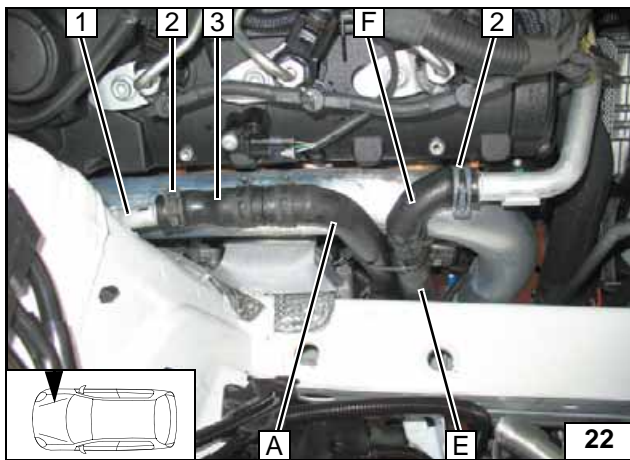




Remove hose section on heat exchanger outlet 2 and discard. Spring clip 1 will be reinserted. Hose section of engine inlet 3 and spring clip 4 will be remounted.



Cutting point

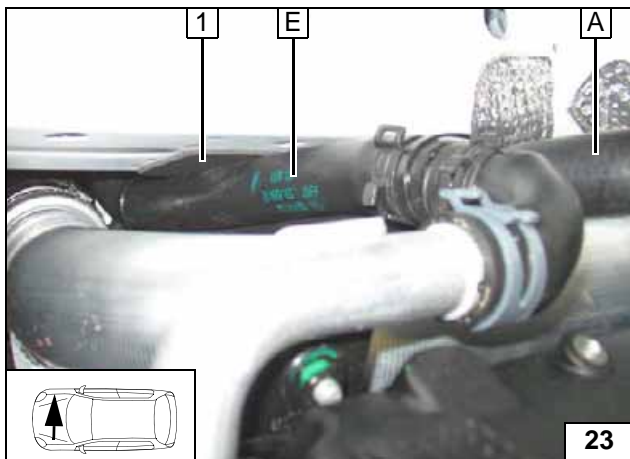


Install hose section of engine inlet 3 with 16mm dia. onto pipe of heat exchanger outlet 1.

2 Original vehicle spring clip [2x]



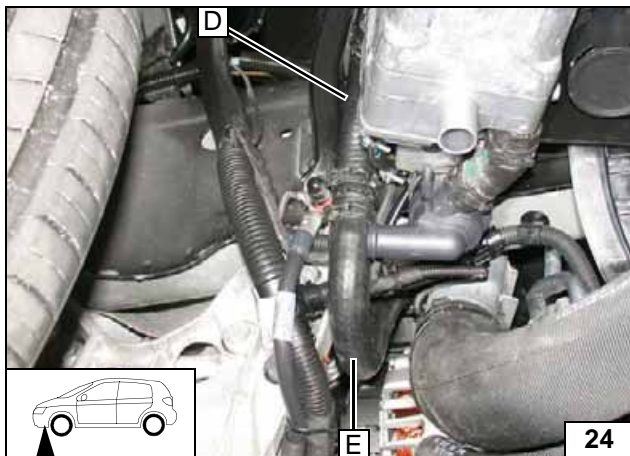
Connecting to engine inlet and heat exchanger outlet



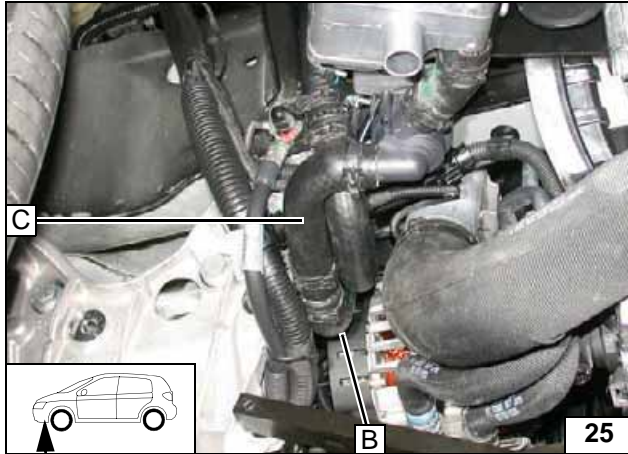
Insert insulation protection strips 1 between hoses and frame side member.



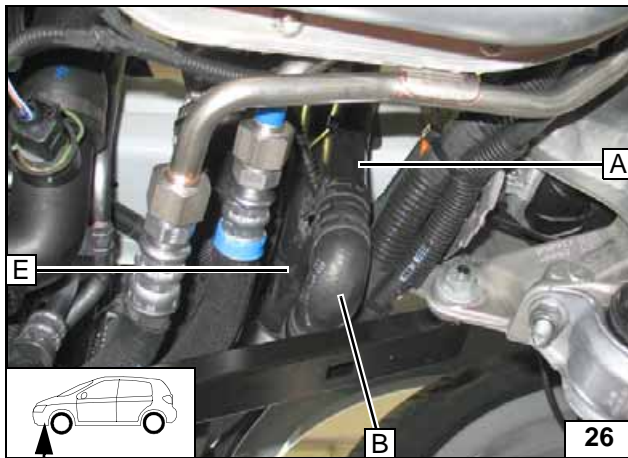
Routing in engine compartment



Connecting heater outlet



Connect-
ing heater
inlet



Align hoses. Ensure sufficient distance to neighbouring components, adjust, if necessary.



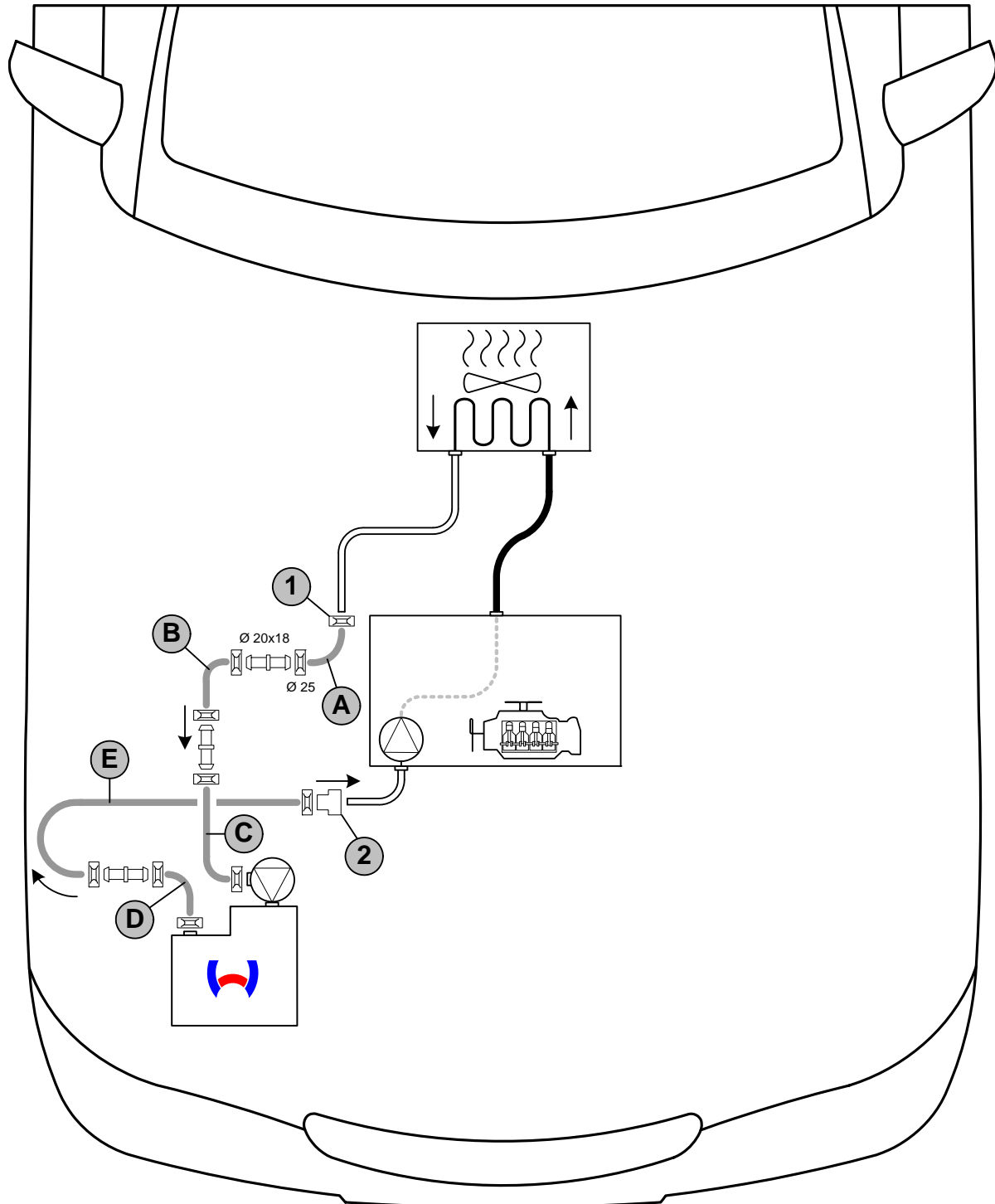
Routing in
engine
compartment






Coolant Circuit 2.7l 140KW / 3.0l 176KW

WARNING!

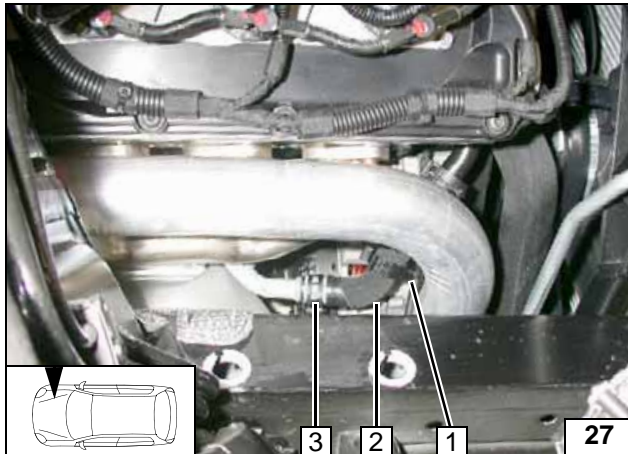
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



Hose installation diagram

All spring clips without a specific designation  = 27 mm dia. **1** = original vehicle spring clip 
2 = Coupling piece on engine inlet! All connecting pipes without a specific designation  = dia. 20x20 mm.





Remove hose on heat exchanger outlet/engine inlet 2. Spacer bracket 1 and spring clip 3 will be remounted.



Cutting point

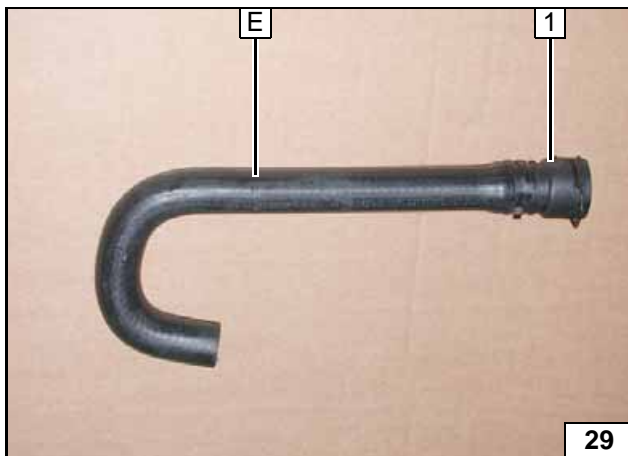


Do not damage coupling piece 3 when cutting open clamp 2!

1 Discard hose section with protective hose

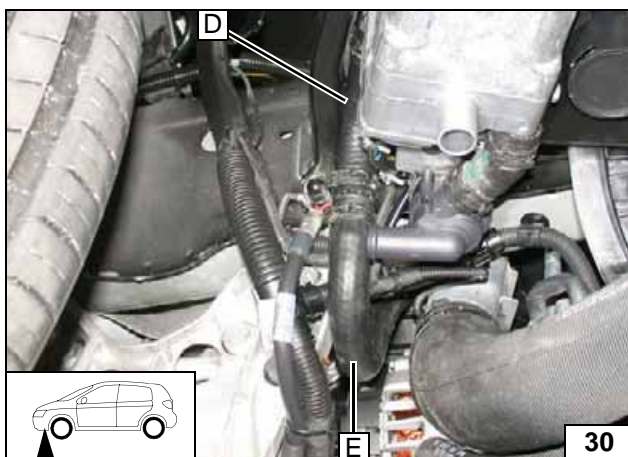


Removing coupling piece

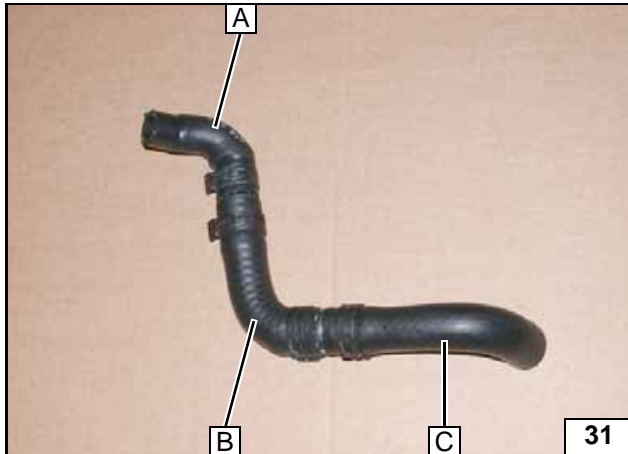


1 Coupling piece on engine inlet

Preparing hose E



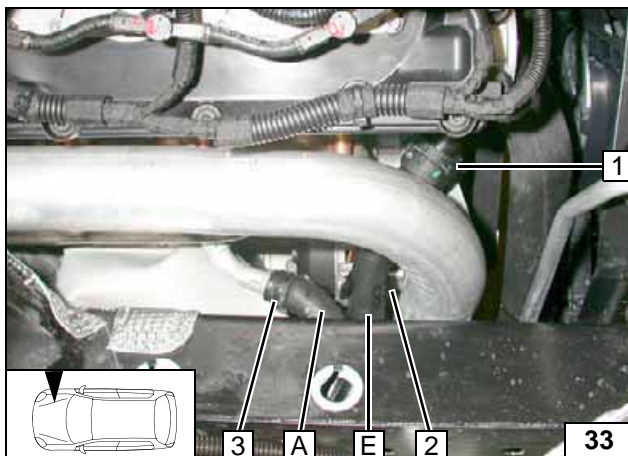
Connecting heater outlet



Preparing hoses A, B and C



Connecting heater inlet



Align hoses. Ensure sufficient distance to neighbouring components, adjust, if necessary.



- 1 Coupling piece on engine inlet
- 2 Spacer bracket
- 3 Original vehicle spring clip

Connecting to engine inlet and heat exchanger outlet



Fuel

CAUTION!

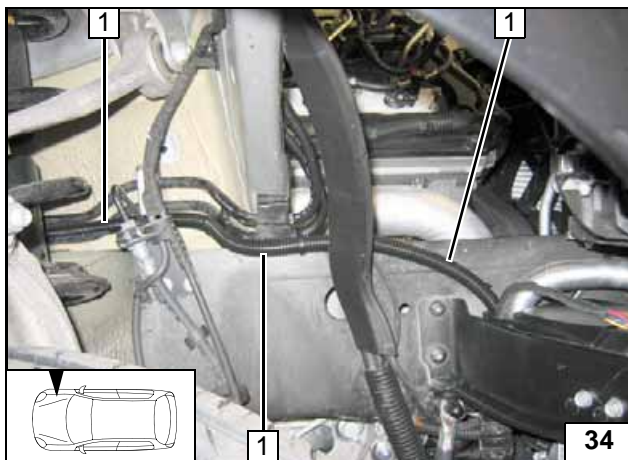
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off with 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. Mount the fuel line and wiring harness with rub protection on sharp edges.

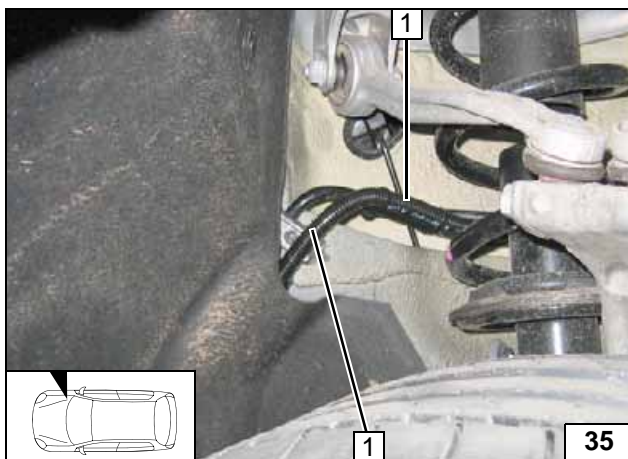
WARNING!

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



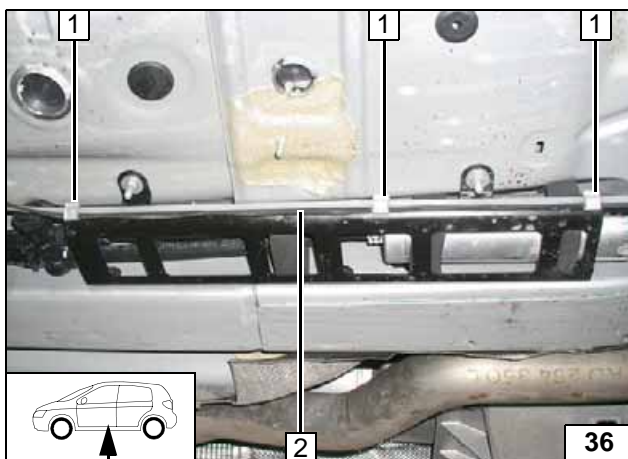
1 Wiring harness of metering pump and fuel line in corrugated tube

Installing lines



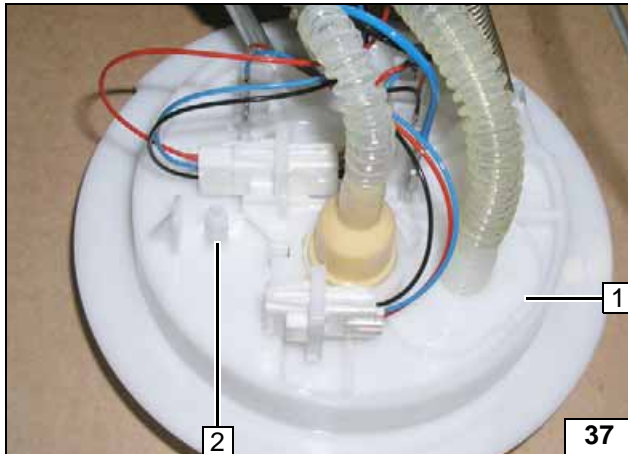
1 Wiring harness of metering pump and fuel line in corrugated tube

Installing lines



1 Clamping bracket [3x]
2 Fuel line, wiring harness of metering pump

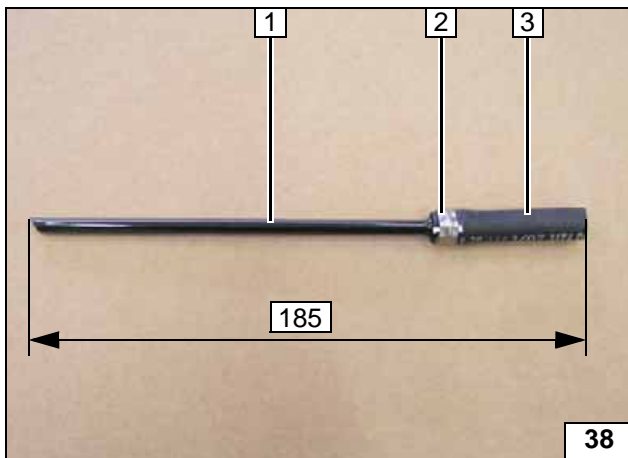
Installing lines



Remove fuel-tank sending unit **1** according to manufacturer's instructions. Drill out connection piece **2** in centre to 2.0mm dia.



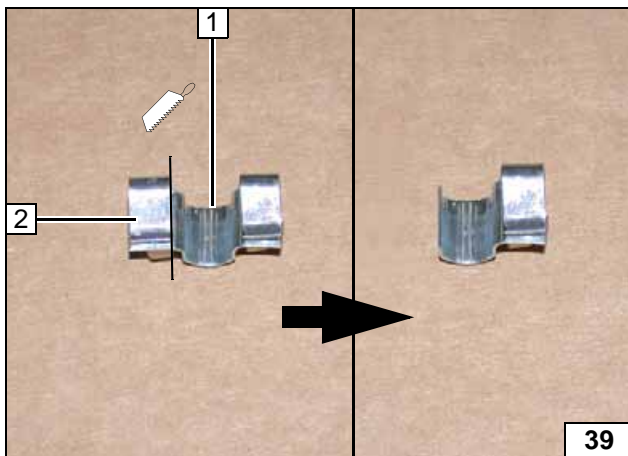
Fuel ex-
traction



Mount standpipe **1** in hose section **3** and fasten with 10 mm Caillau clamp **1** (between beads).
Cut standpipe **1** to length at the end at an angle.



Preparing
fuel stand-
pipe

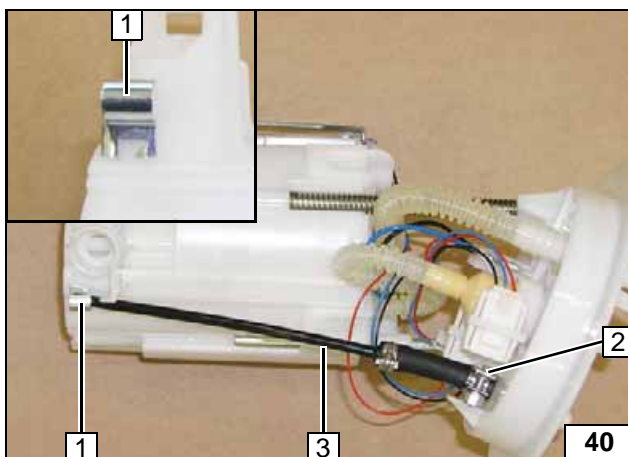


Cut off retaining clamp **1** at marking.

2 Discard section



Cutting re-
taining
clamp to
length



Note

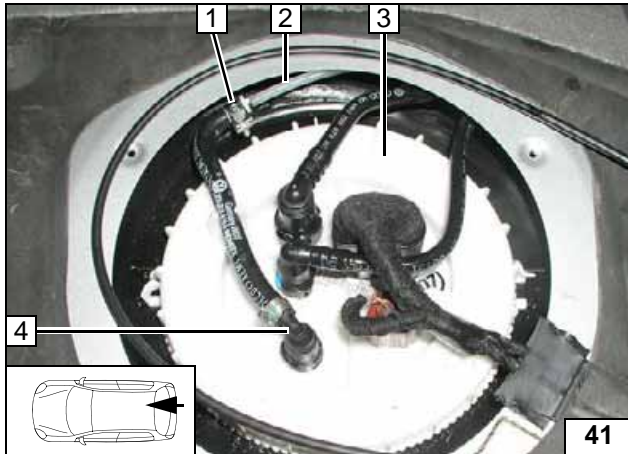
The installation of the retaining clamp depends on the equipment and is not possible with all fuel-tank sending units.

Mount retaining clamp **1** on fuel-tank sending unit.

- 2** 10 mm dia. clamp
- 3** Prepared fuel standpipe



Installing
fuel stand-
pipe

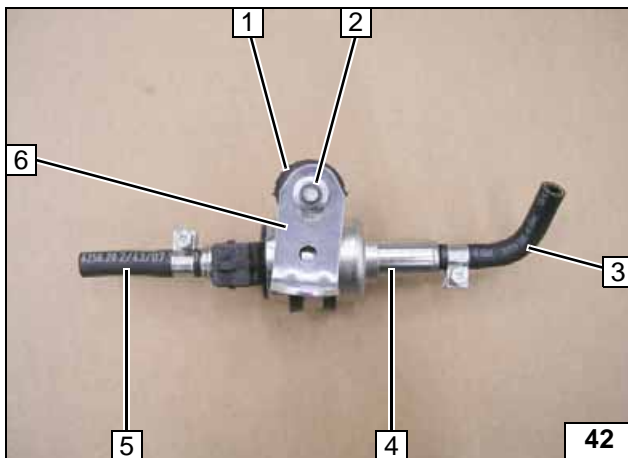


Install fuel-tank sending unit **3** in accordance with manufacturer's instructions. Mount quick-release coupling **4** on connection piece.

- 1 10 mm dia. clamp
- 2 Fuel line

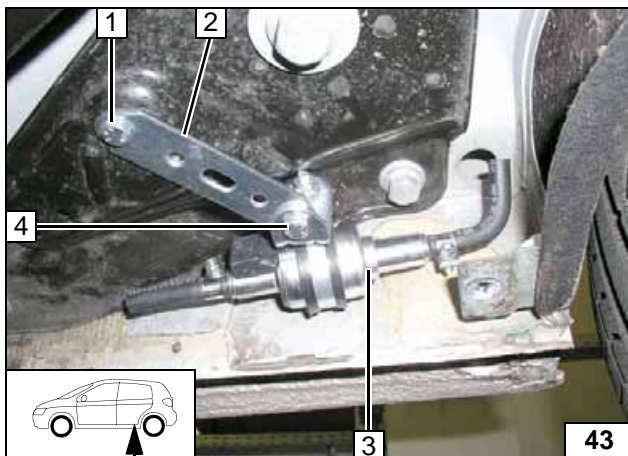


**Connect-
ing fuel
line**



- 1 Silent block
- 2 Flanged nut
- 3 90° moulded hose, 10 mm dia. clamp
- 4 Metering pump
- 5 Hose section, 10 mm dia. clamp
- 6 Angle bracket

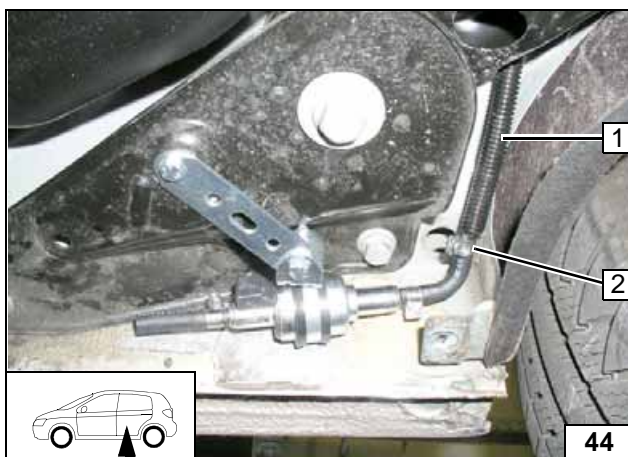
**Premount-
ing meter-
ing pump**



- 1 Mount M6x20 bolt, flanged nut in existing hole
- 2 Perforated bracket
- 3 Premounted metering pump
- 4 M6x20 bolt, flanged nut on angle bracket



**Install-
ing meter-
ing pump**

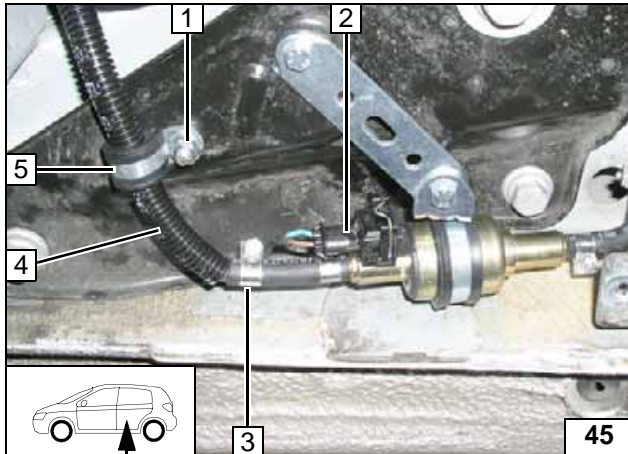


Cut corrugated tube in middle. Slide one end onto the fuel line to the fuel standpipe and the other end onto the fuel line to the heater and the wiring harness of the metering pump.

- 1 Fuel line in corrugated tube
- 2 10 mm dia. clamp



**Connect-
ing meter-
ing pump**

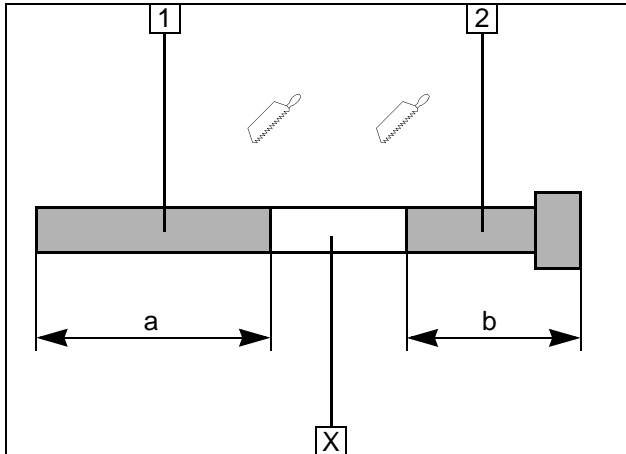


Check the position of the components; adjust if necessary. Check that they have freedom of movement.

- 1 Mount M6x20 bolt, flanged nut in existing hole
- 2 Wiring harness of metering pump, connector mounted
- 3 10 mm dia. clamp
- 4 Fuel line and wiring harness for metering pump in corrugated tube
- 5 15 mm dia. rubber-coated p-clamp



**Connect-
ing meter-
ing pump**

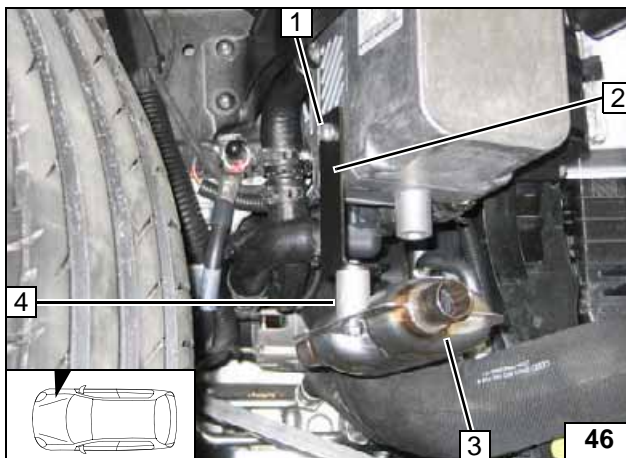


Exhaust Gas

Discard section X

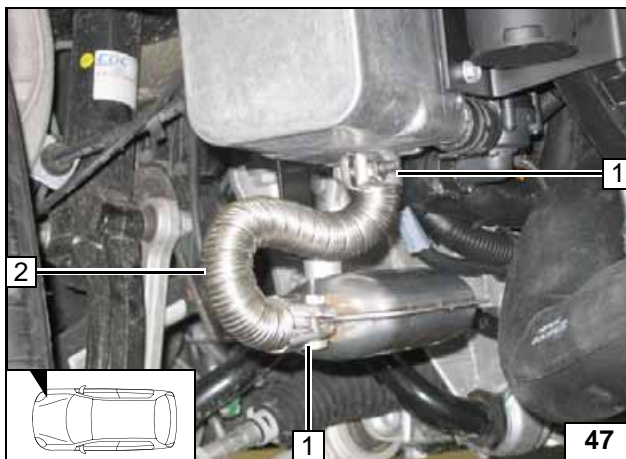
- 1 Exhaust pipe
a = 210
- 2 Exhaust end section
b = 260

Preparing exhaust pipe



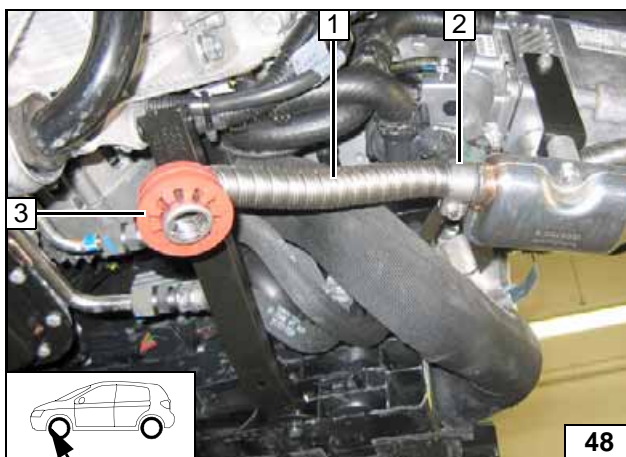
- 1 E-jot screw
- 2 Bracket
- 3 Silencer
- 4 M6x40 bolt, 30 mm spacer sleeve, flanged nut

Installing silencer



- 1 Hose clamp [2x]
- 2 Exhaust pipe

Installing exhaust pipe



- 1 Exhaust end section
- 2 Hose clamp
- 3 Red (rt) rubber isolator with groove

Installing exhaust end section

Final Work

WARNING!

Reassemble the disassembled components in reverse order.

Check all hoses, clamps and all electrical connections for firm seating.

Secure all loose lines using cable ties.

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.**
- **Set the digital timer.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Check the proper function of the parking heater, see the operating instructions/installation instructions.**
- **Attach the "Switch off parking heater before refueling" sticker to the left-hand B-pillar.**

Adaptation of Climatronic J255 Control Unit

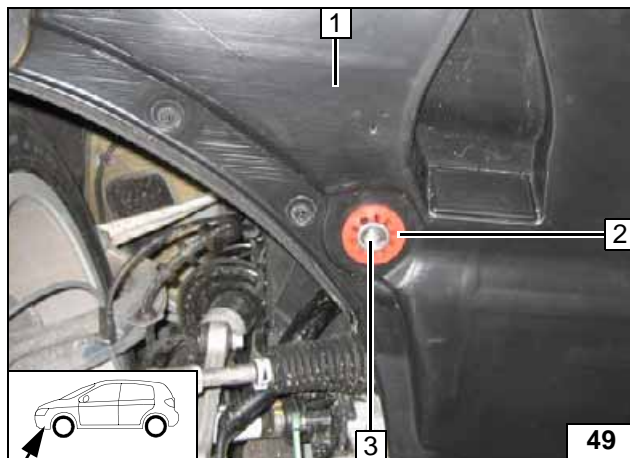
in "Guided functions" mode with VAS 5051/52

Function:

- **08** Heating / Air Conditioning
- **10** Adaptation

Code channel **17** - from "0" to "1"

Save



Mount underside protection **1**. Insert red (rt) rubber isolator **2** in existing hole of underside protection **1**. Align exhaust end section **3** flush on red rubber isolator **2**.

Inserting
rubber iso-
lator

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

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.

If the summer/winter switch option has been installed on the heater, it must be switched in accordance with the time of year. The heater will then heat in the position Winter  and in the position Summer  it will only switch on the vehicle fan to ventilate the vehicle interior.



Before parking the vehicle, make the following settings:



- 1 Air outlet to windscreen
- 2 Set temperature on both sides to "HI".

2 Zone A/C control panel



- 1 Air outlet to windscreen
- 2 Set temperature to "HI"

1 Zone A/C control panel

