

Water Heater



Thermo Top E Parking Heater

e1
00 0003

Thermo Top C Parking Heater

e1
00 0002

Installation documentation



Subaru Justy

Petrol
from Model Year 2008
Left-hand drive vehicle
Front wheel drive
Manual air conditioning



WARNING!

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.



Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems. Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

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
SUBARU	Justy	M3	e13 * 2003 / 97 * 0147 * ...

Engine type	Engine model	Output in kW	Displacement in cm ³
1KR-FE	Petrol	51	998

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

The installation location of a digital timer and summer/winter switch should be confirmed with the end customer before installation.

Heater/Installation Kit

Quantity	Designation	Order No.:
1	Retail accessories <i>Thermo Top E / C</i>	See price list
1	Installation kit for Subaru Justy 2008 Petrol	1303672B
1	Heater control	See price list

Heater recommended for the relevant vehicle class:

Vehicle	Heater
Compact car	Thermo Top E
Mid-size car, station wagon	Thermo Top C

The selection of the heater is based on the passenger compartment size of the vehicle and the level of comfort required by the customer.



Foreword

These installation instructions apply to Subaru Justy Petrol vehicles - for validity, see page 2 - 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 these installation instructions.

However, the stipulations in the "installation instructions" and "operating and maintenance instructions" for the *Thermo Top C/E* 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.

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).

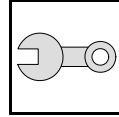
Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit

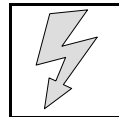
Explanatory Notes on Document

To provide you with a quick overview of the individual working steps, you will find an identification mark on the outside top right corner of the page in question.

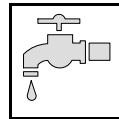
Mechanical system



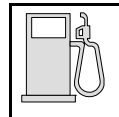
Electrical system



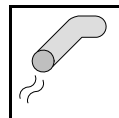
Coolant circuit



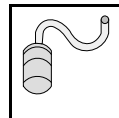
Fuel



Exhaust gas



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



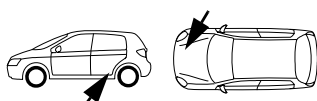
Specific risk of fire or explosion.



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!

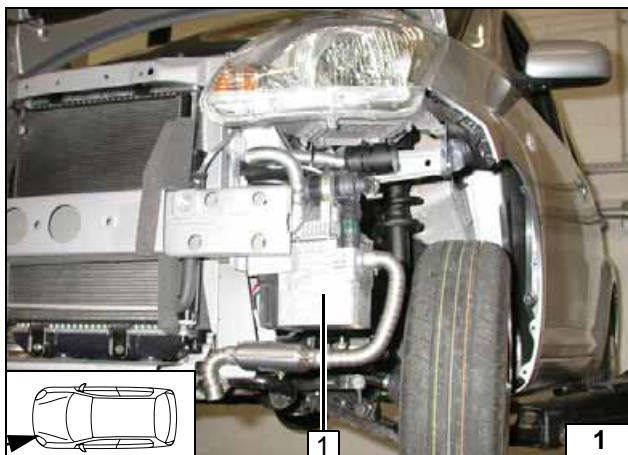
Tightening torque of Ejet screws, Ejet studs = 10 Nm!

Preliminary Work

WARNING!

- Disconnect the battery "earth" or "ground" connection.
- Depressurize 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.
- Completely remove the battery.
- Remove the air filter together with the intake hose.
- Remove the hand coolant reservoir cap on the left
- Remove the fuse and relay box.
- Open fuel tank cap, ventilate tank.
- Close the fuel tank cap again.
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Unclip the activated charcoal filter and lay it aside.
- Fold down the left rear seat.
- Open the tank-fitting service lid.
- Remove fuel-tank sending unit in accordance with manufacturer's instructions.
- Remove the cover in the front passenger side footwell

Remove page 21 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

1 Heater

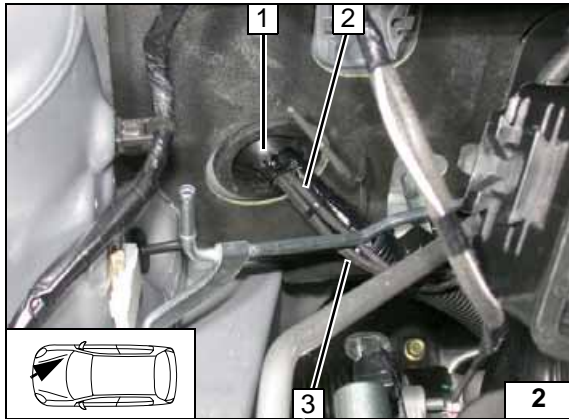
Installation location



Electrical system

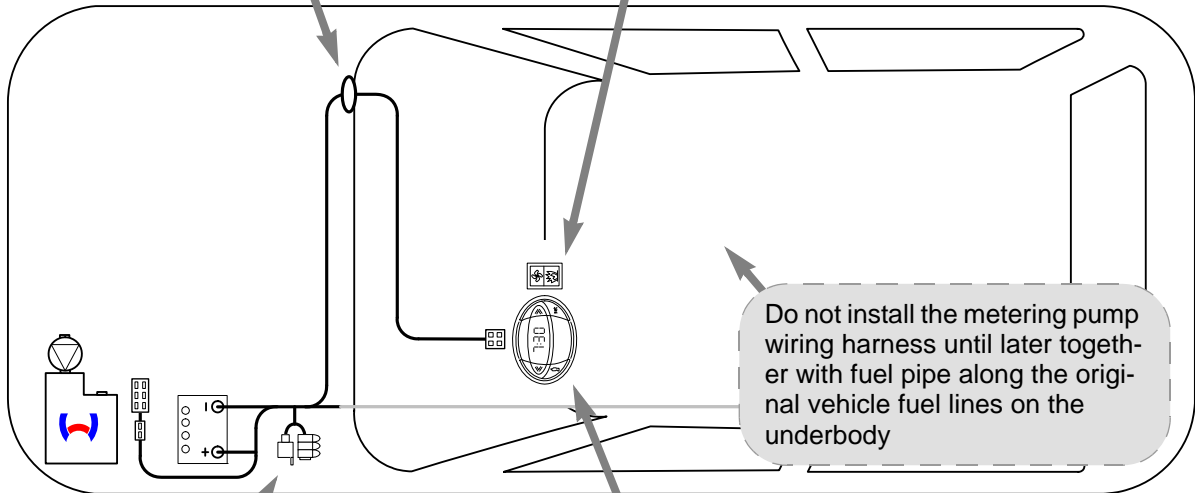
Wiring harness pass through

- 1 Protective rubber plug
- 2 Wiring harness of digital timer
- 3 Wiring harness of fan control

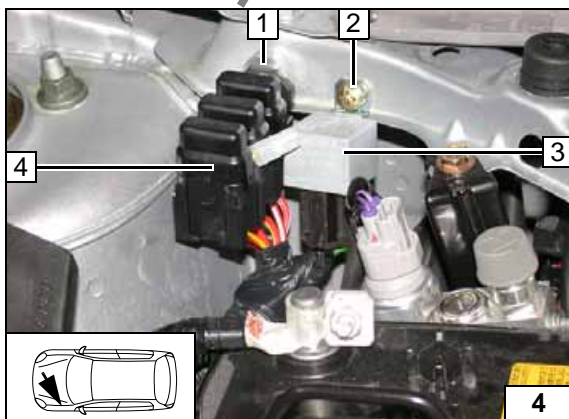


Summer/winter switch option

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



Wiring harness routing diagram



Fuse holder, K3 relay

- 1 Retaining plate of fuse holder, 4 mm dia. hole, 5.5x13 self-tapping screw
- 2 4 mm dia. hole, 5.5x13 self-tapping screw
- 3 K3 relay
- 4 Fuse holder

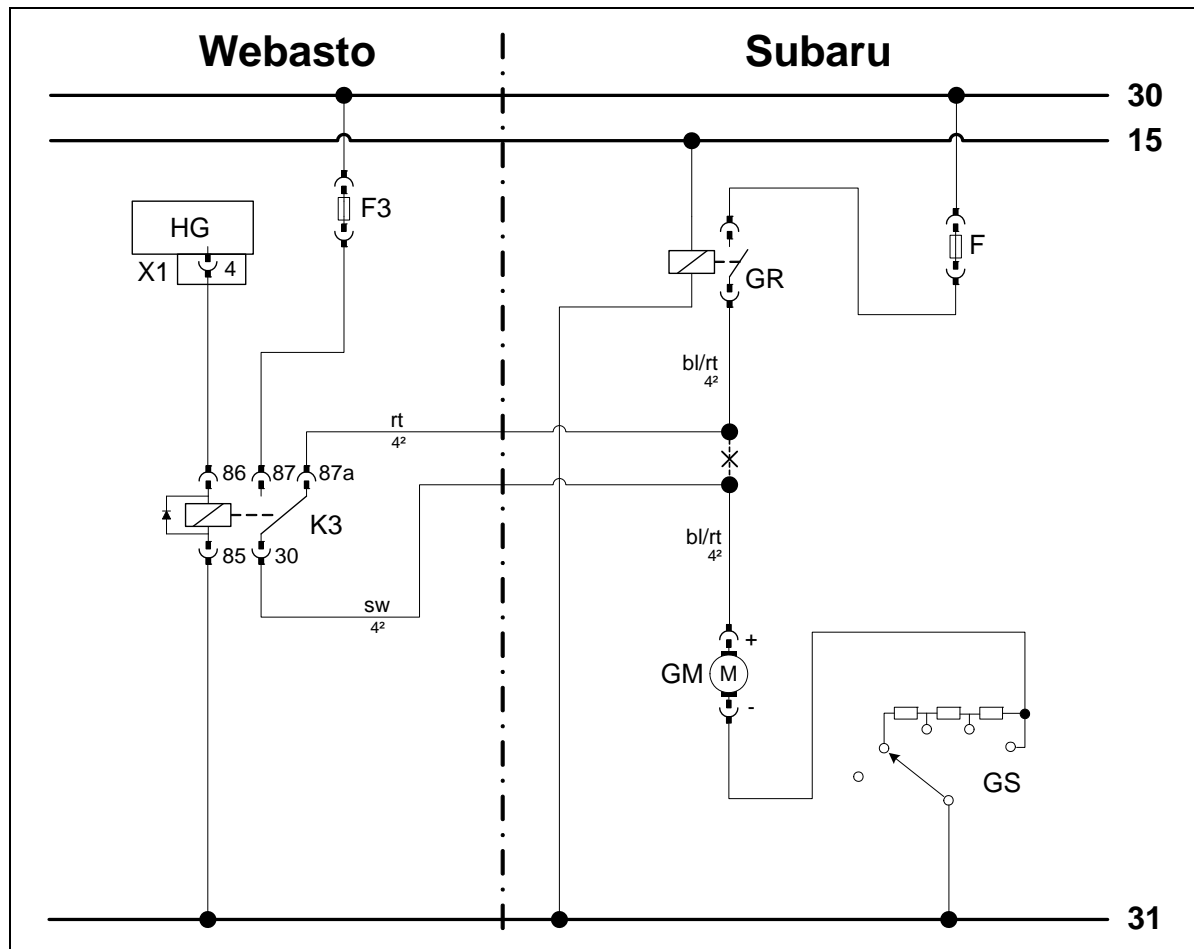


Digital timer

- 1 Digital timer



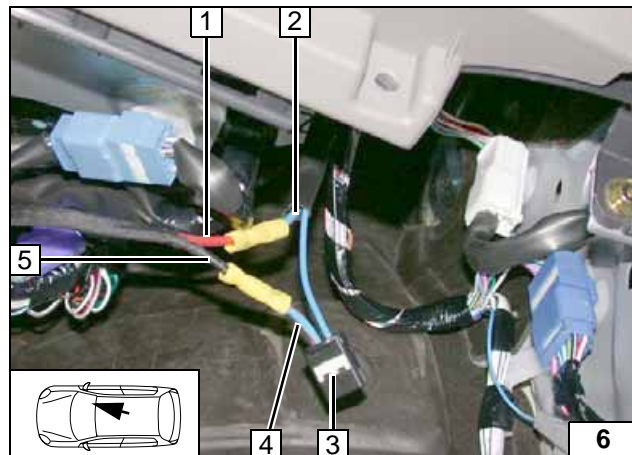
Fan control



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	GM	Fan motor	rt	red
X1	6-pin heater connector	GR	Fan relay	bl	blue
F3	Fuse	GS	Fan switch	sw	black
K3	Fan relay	F	Fuse		
				X	Cutting point
				Wiring colours may vary.	

Legend

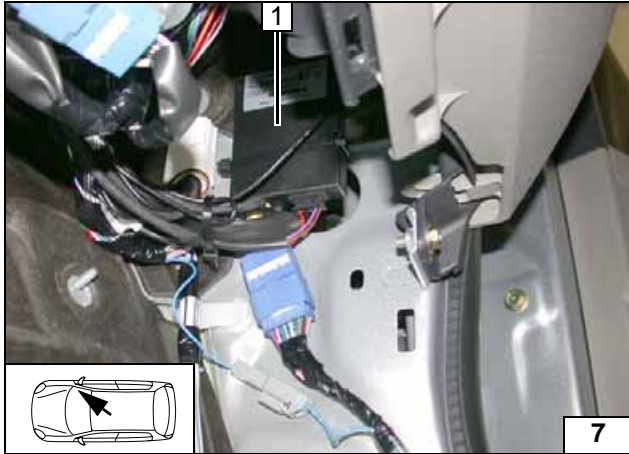


Integration on 2-pin connector 3 from fan motor. Produce connections as shown in wiring diagram.

- 1 Red (rt) wire from K3/87a
- 2 Blue/red (bl/rt) wire of fan relay
- 4 Blue/red (bl/rt) wire of fan motor connector
- 5 Black (sw) wire from K3/30



Connecting fan-motor

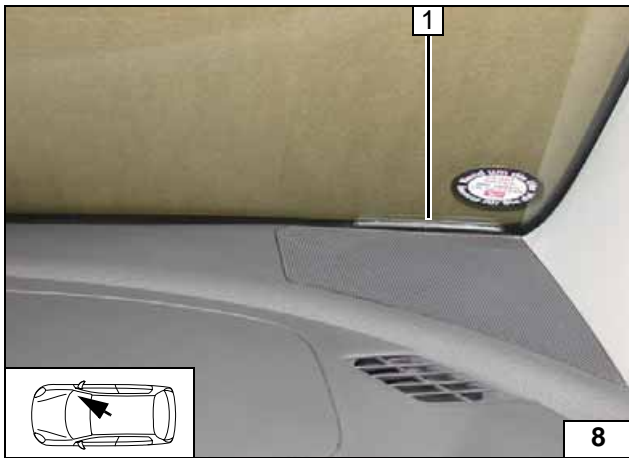


Remote option (Telestart)

Fasten receiver 1 to existing hole with cable tie.

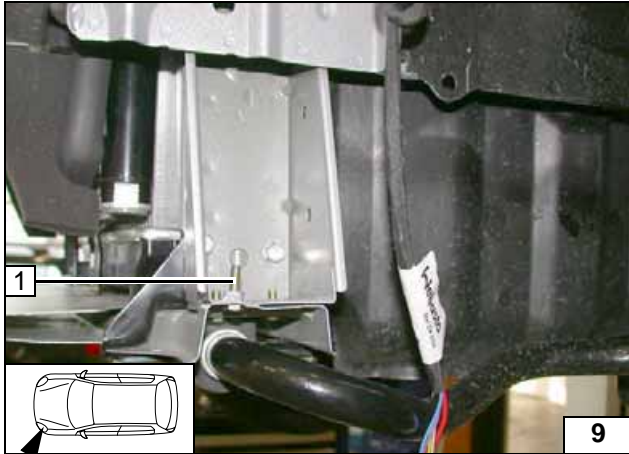
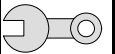


Installing receiver



1 Antenna

Installing antenna

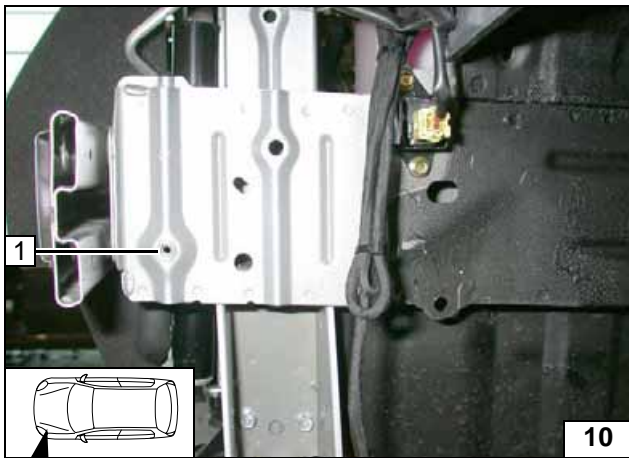


Preparing installation location

Replace original vehicle bolt at position 1 with M6x20 bolt.



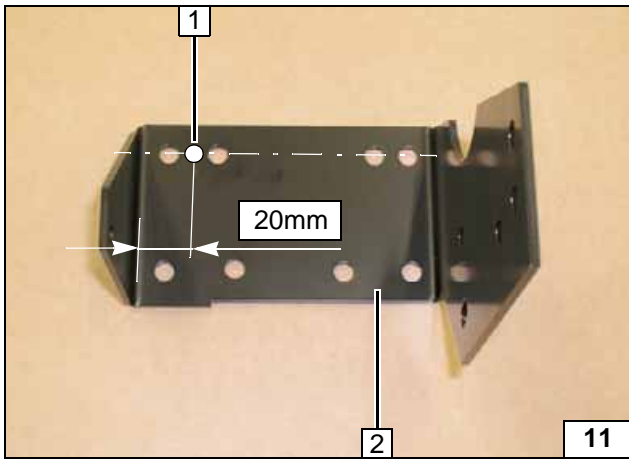
Replacing bolt



Drill out original vehicle hole at position 1 to 9.1 mm dia. and mount rivet nut.



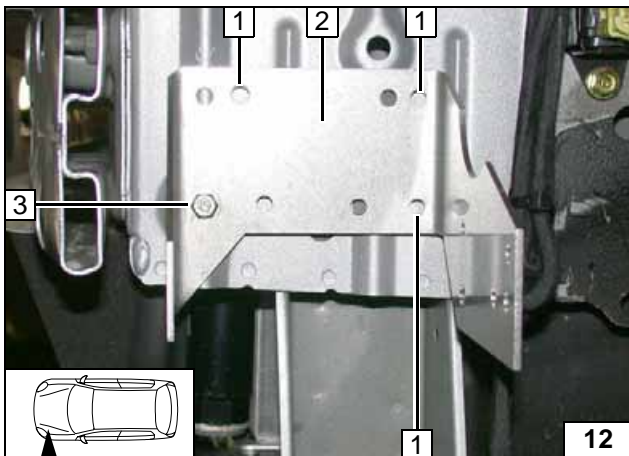
Installing rivet nut



7 mm dia. hole at position 1 in bracket 2.



Preparing bracket

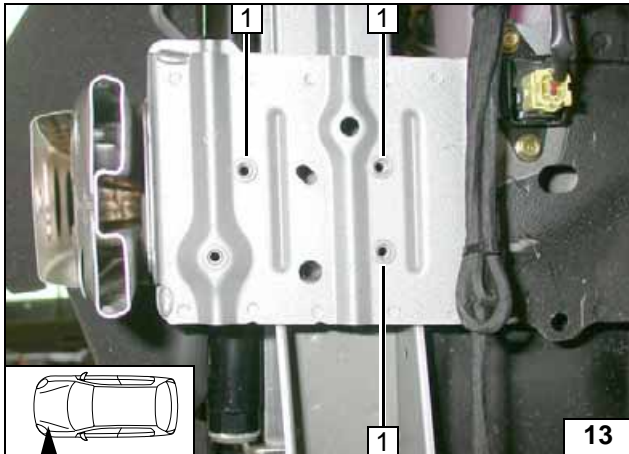
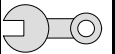


Following installation, copy hole pattern to frame side member at position 1 [3x] and remove bracket.



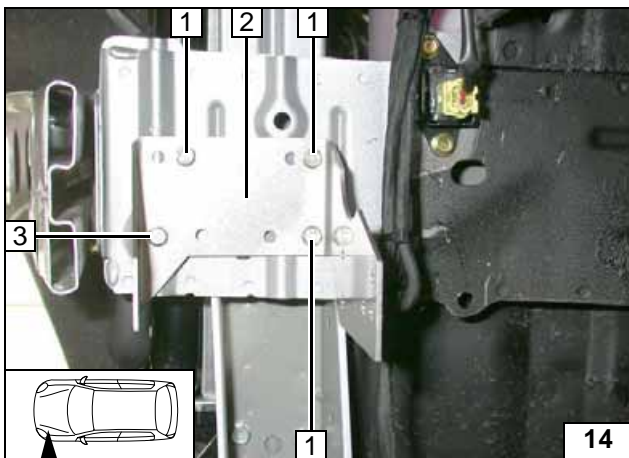
- 2 Bracket, loosely mounted
- 3 M6x20 bolt on rivet nut

Copying hole pattern



1 9.1 mm dia. hole; rivet nut [3x each]

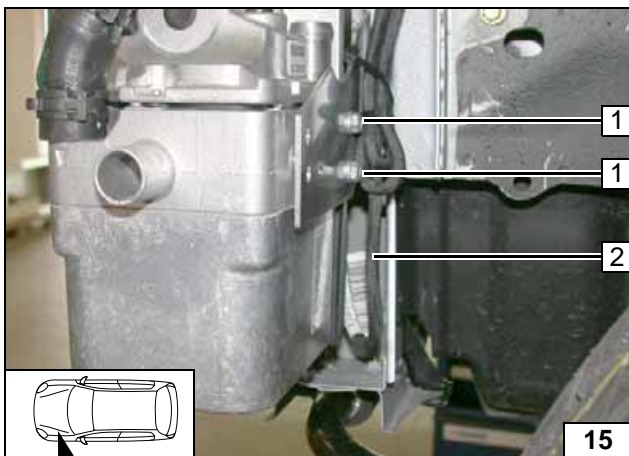
Installing rivet nut



Insert 5 mm spacer sleeve [3x] between bracket 2 and frame side member at position 1.

- 1 M6x30 bolt, spring lockwasher, spacer sleeve on rivet nut [3x each]
- 3 M6x20 bolt, spring lockwasher on rivet nut

Installing bracket

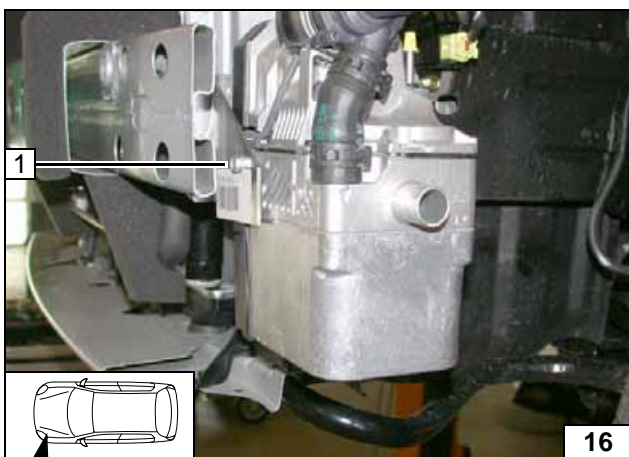


Installing heater

Connect wiring harness of heater 2 prior to installation.

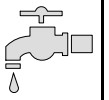
- 1 E-jot screw [2x]

Installing heater



- 1 E-jot screw

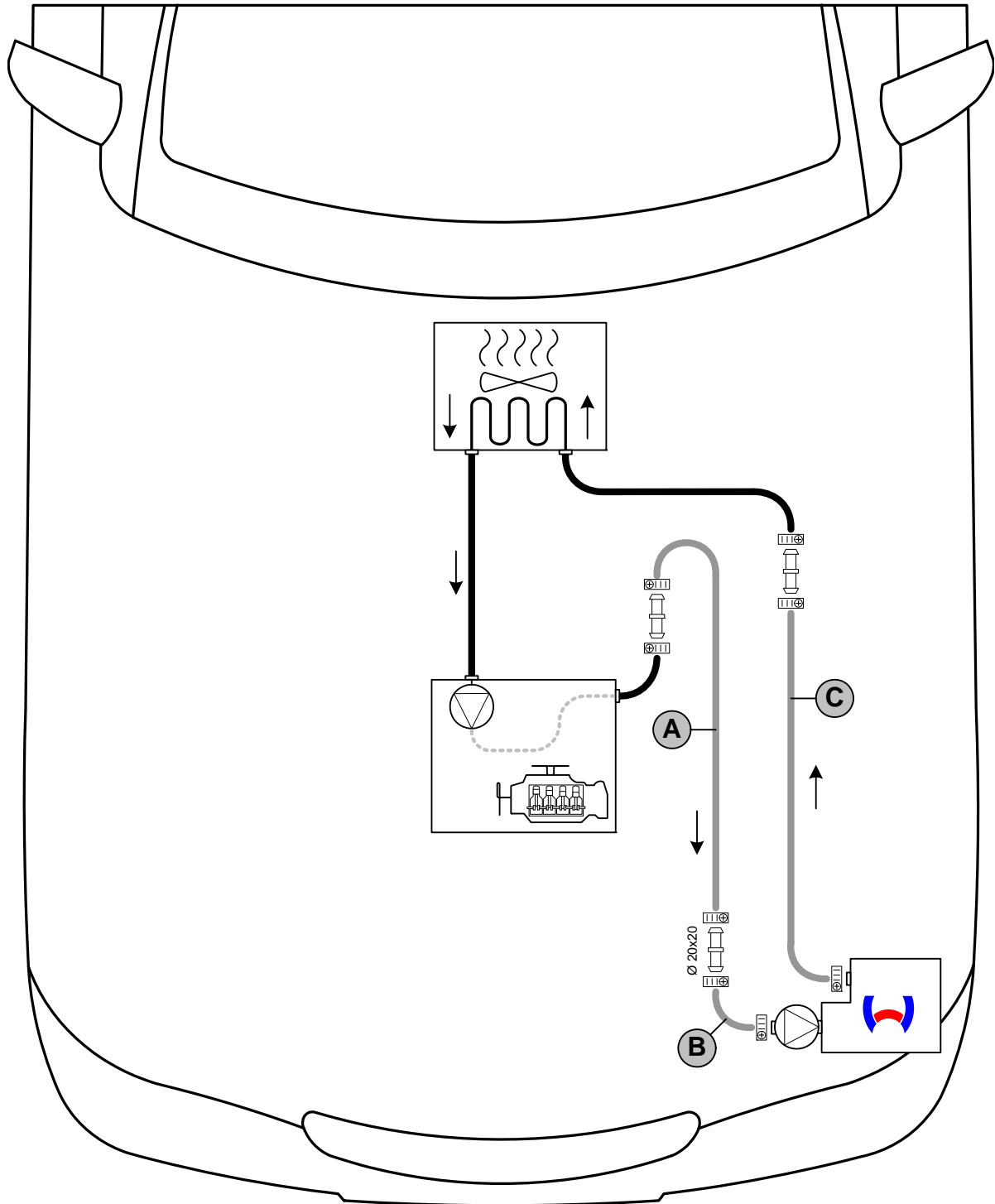
Installing heater





Coolant circuit

WARNING!

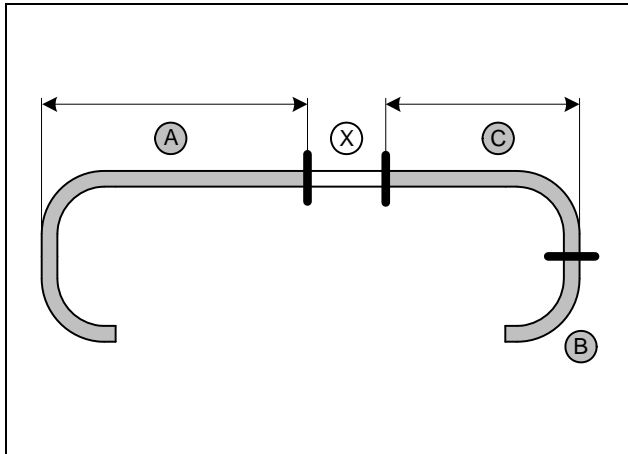
Any coolant running off should be collected in an appropriate container. Install coolant hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hose cannot be damaged. When installing the hoses, the heater must be filled with coolant. The connection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



Hose-rout-
ing dia-
gram

All connecting pipes without a specific designation  = dia. 14x20.
All hose clamps  = 20-27 mm dia.

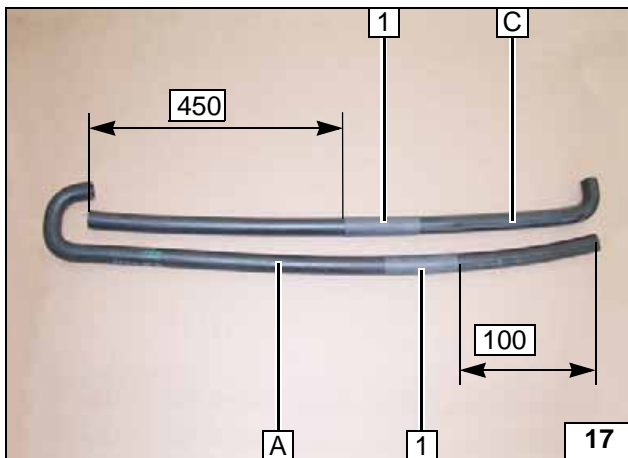




A = 740
C = 700

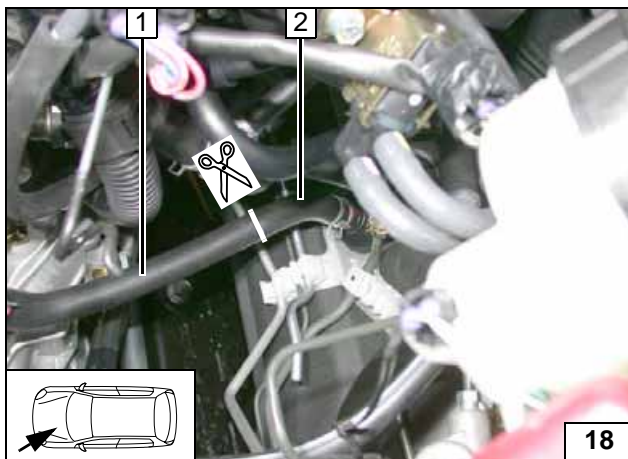
Discard section X

Cutting coolant hoses to length



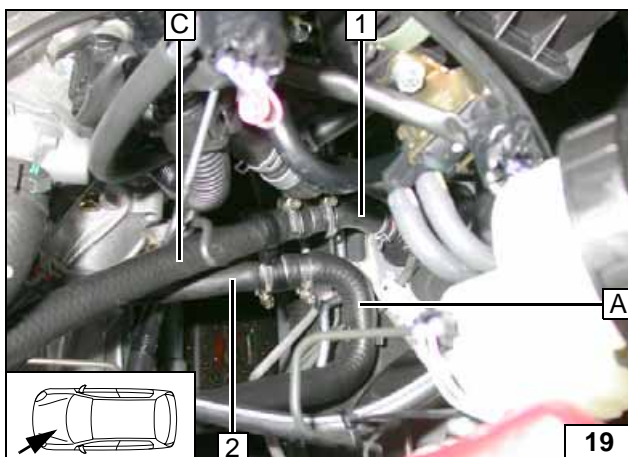
1 Slide on 100 mm heat shrink plastic tubing, shrink down [2x]

Preparing coolant hoses



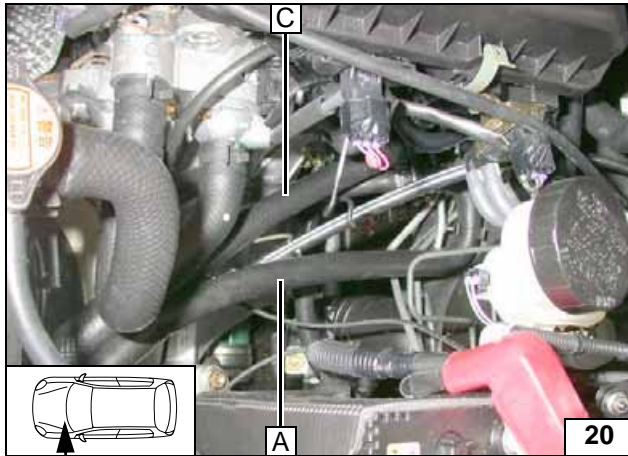
1 Engine outlet hose section
2 Hose section of heat exchanger inlet

Cutting point



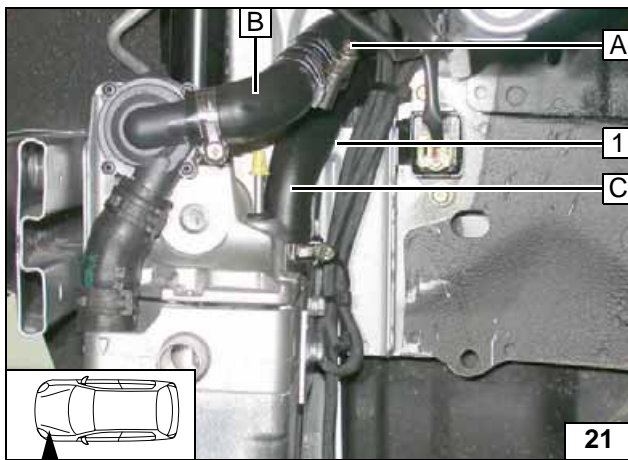
1 Hose section of heat exchanger inlet
2 Engine outlet hose section

Connection on engine outlet and heat exchanger inlet

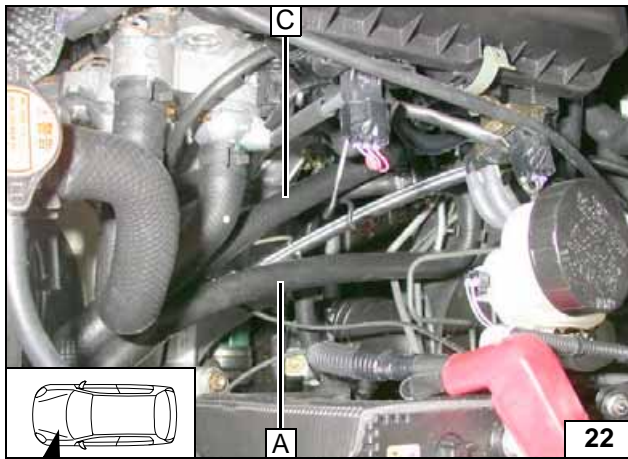


Routing in engine compartment

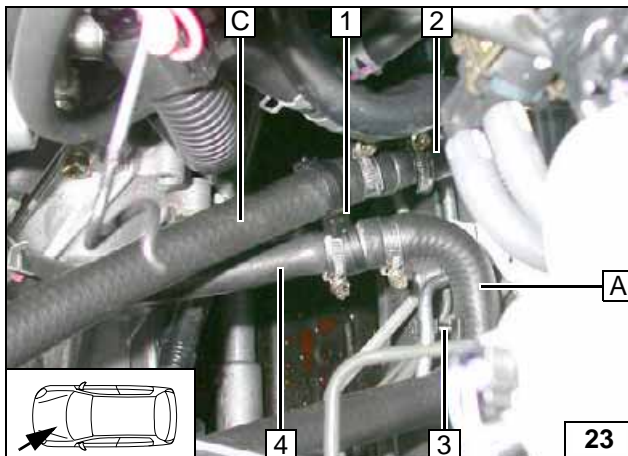
Mount 50 mm edge protection at position 1.



Connecting heater

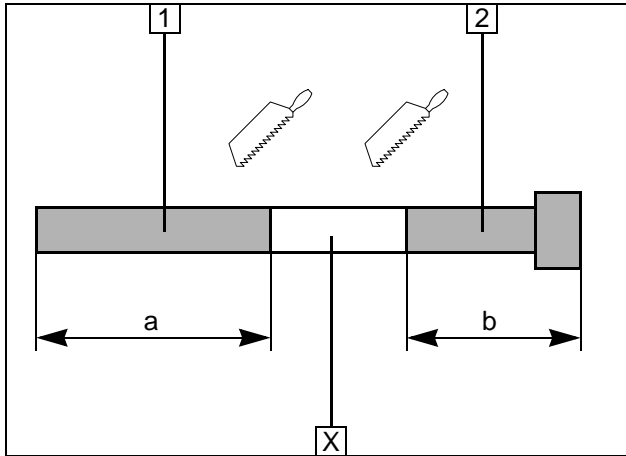
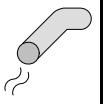


Aligning hoses



- 1 20x20 mm spacer bracket
- 2 Hose section of heat exchanger inlet
- 3 10x20 mm spacer bracket
- 4 Engine outlet hose section

Installing spacer bracket



Exhaust gas

- 1 Exhaust pipe
a = 290
- 2 Exhaust end section
b = 110

Discard section X

Preparing exhaust pipe

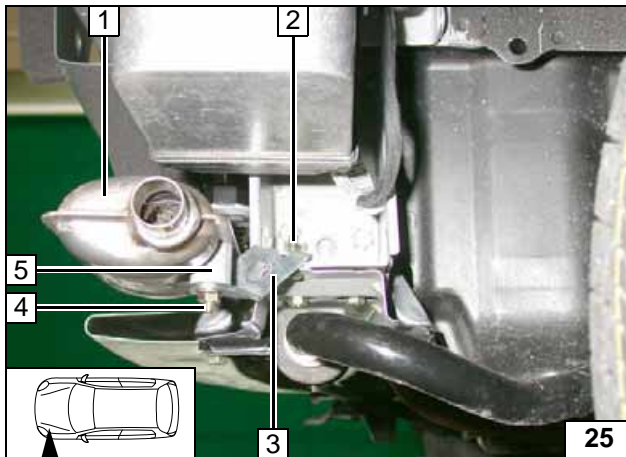


Bending line approx. 45° [2x] in holes of perforated bracket.



Preparing perforated bracket

Bend down perforated bracket approx. 45° [2x].

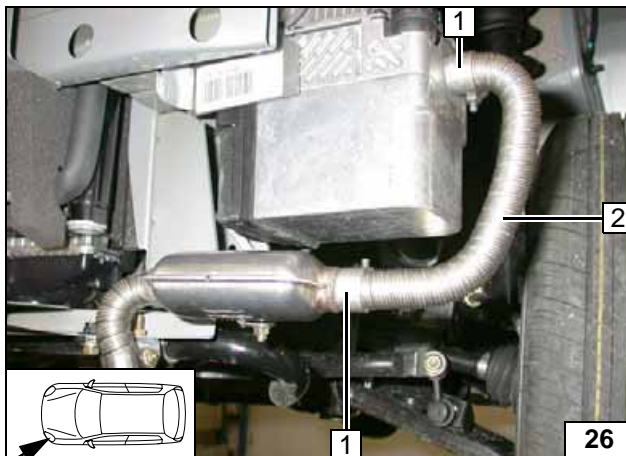


Silencer 1 is installed on short leg of perforated bracket 3.

- 2 Prepared M6x20 bolt, flanged nut
- 4 M6x30 bolt, flanged nut
- 5 Spacer sleeve

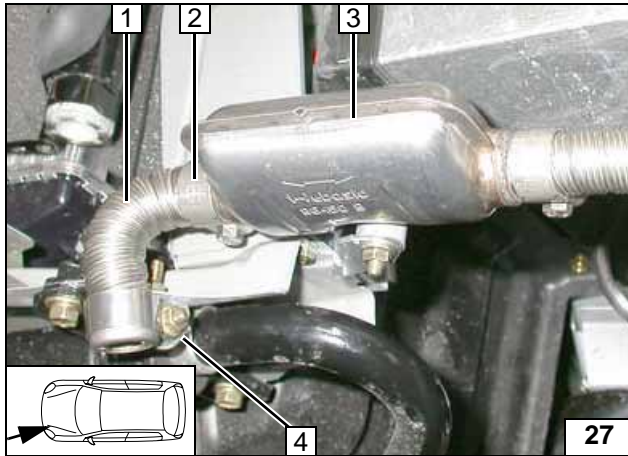
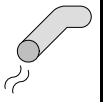


Installing silencer



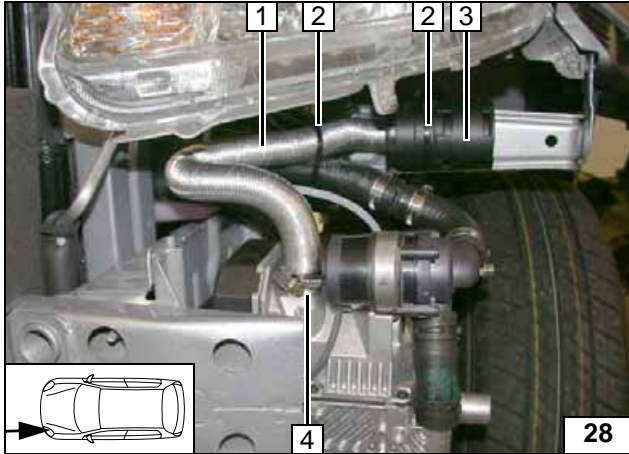
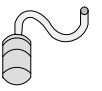
- 1 Hose clamp [2x]
- 2 Exhaust pipe

Installing exhaust pipe



- 1 Exhaust end section
- 2 Hose clamp
- 3 Silencer
- 4 Angle bracket, M6x20 bolt [2x], flanged nut [2x] on p-clamp

**Installing
exhaust
end sec-
tion**

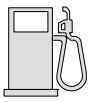


Combustion air

- 1 Combustion air pipe
- 2 Cable tie [2x]
- 3 Intake silencer
- 4 27 mm dia. clamp



**Installing
silencer**



Fuel

CAUTION!

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

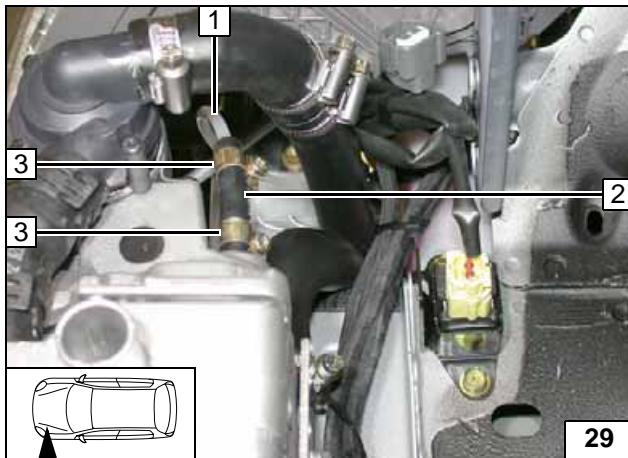
Catch any fuel running off with an appropriate container.

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.

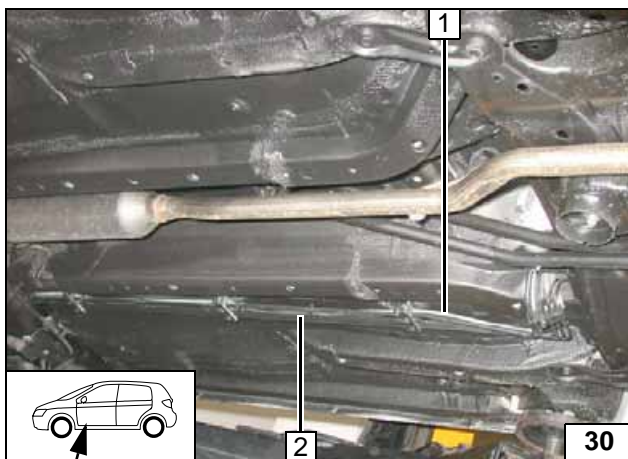
WARNING!

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



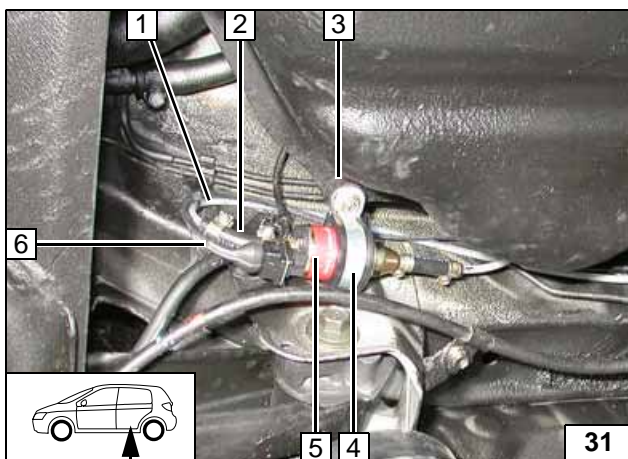
- 1 Fuel line
- 2 Hose section
- 3 10 mm dia. clamp [2x]

Connect-
ing heater



- 1 Fuel line
- 2 Metering pump wiring harness

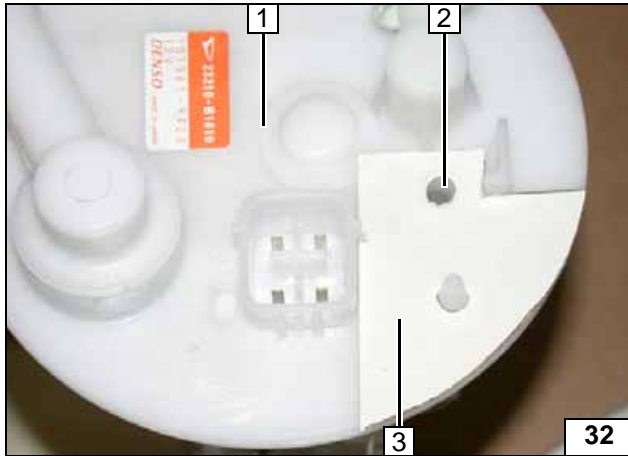
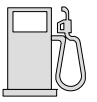
Installing
lines



- 1 Fuel line
- 2 Hose section, 10 mm dia. clamp [2x]
- 3 Silent block, large diameter washer, flanged nut [2x] on original hole
- 4 Rubber-coated p-clamp
- 5 Metering pump
- 6 Wiring harness of metering pump, connector mounted



Installation
and
Conne-
ction of Me-
tering
Pump

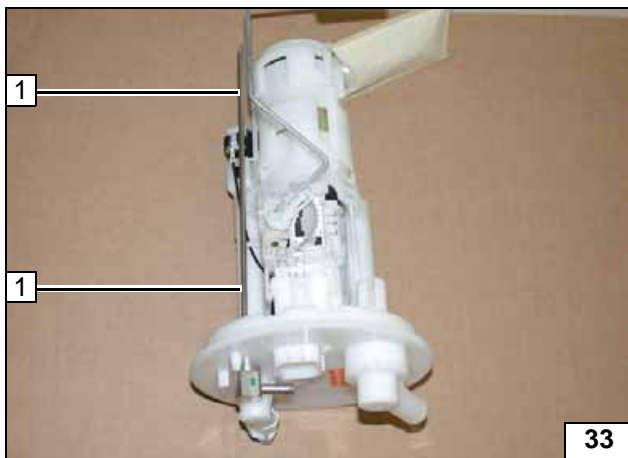


Remove fuel-tank sending unit **1** in accordance with manufacturer's instructions.

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



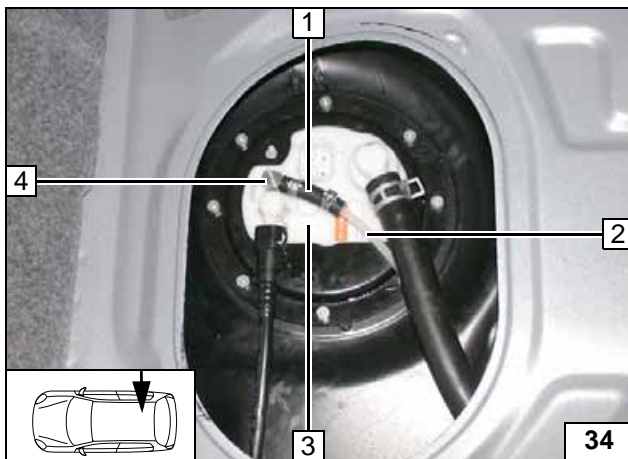
Removing fuel



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



Installing fuel standpipe

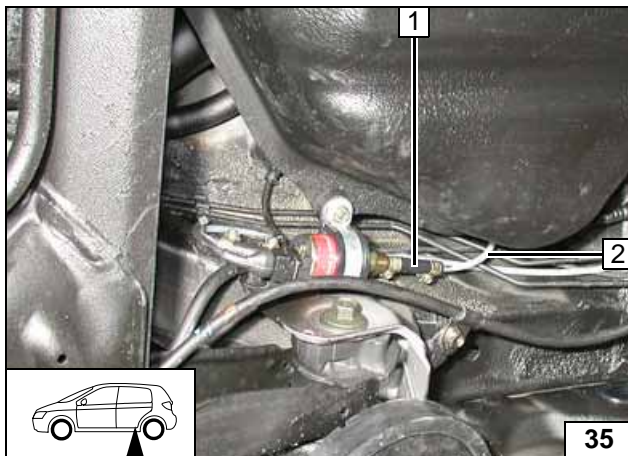


Install fuel-tank sending unit **3** in accordance with manufacturer's instructions.

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



Connecting fuel line

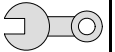


Check the position of the components; adjust if necessary. Check that they have freedom of movement.

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



Connecting metering pump



Final Work

WARNING!

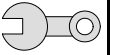
Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose lines.

Only use manufacturer-approved coolant. Spray heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

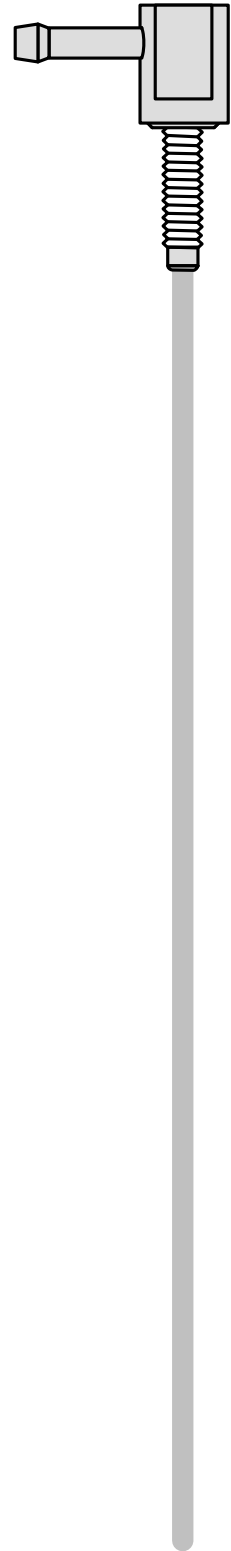
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Set digital timer, teach telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the signboard "Switch off parking heater before refuelling" in the area of the filler neck**
- **See installation instructions for initial start-up and function test**



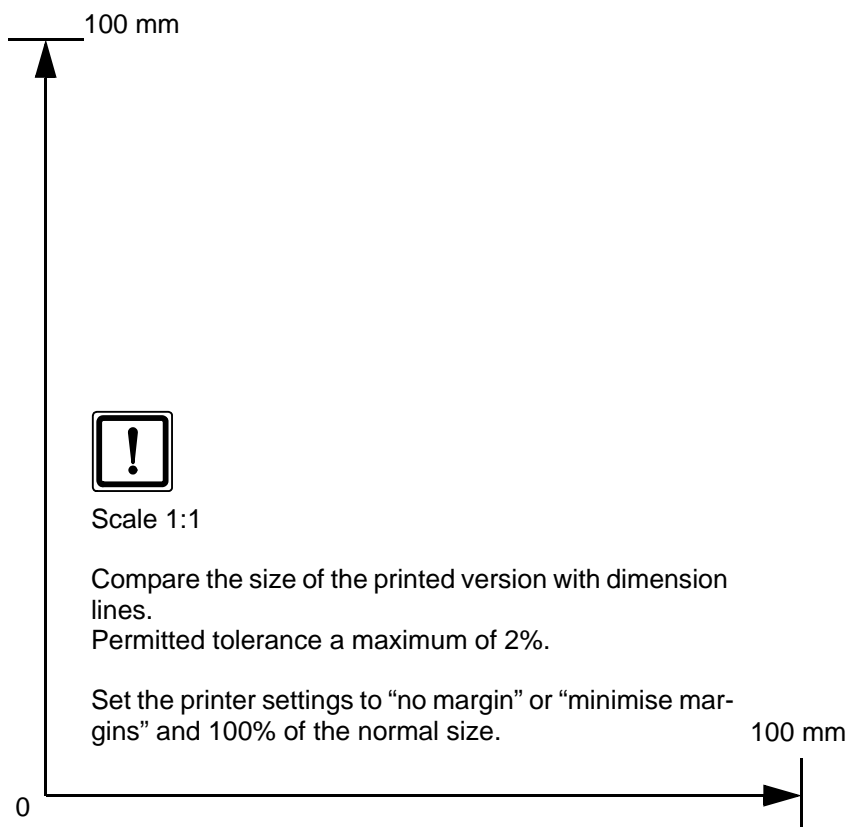
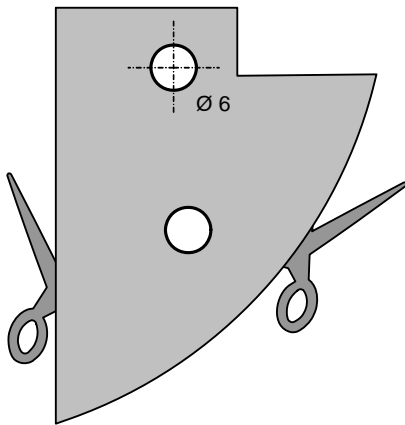
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Template for Fuel Standpipe



Template for fuel-tank sending unit



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.

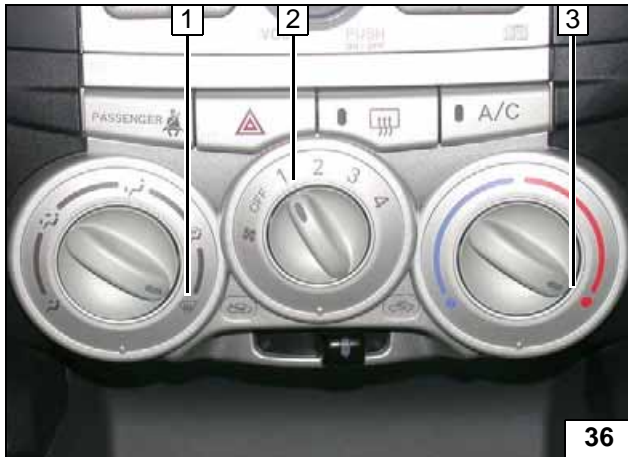
Heating time = driving time

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, this 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 fan to level "1", or possibly "2"
- 3 Set temperature to "max."

Manual air conditioning