

# Water Heater



**Thermo Top E Parking Heater**

  
00 0003

**Thermo Top C Parking Heater**

  
00 0002

## Installation instructions



### Subaru Impreza 2.0 Boxer Diesel

from Model Year 2009

Left-hand drive vehicle

Automatic 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.

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

## Table of Contents

Validity	2	Preparing installation location	11
Heater/Installation Kit	3	Preparing heater	12
Foreword	3	Installing heater	14
General Instructions	3	Fuel	15
Special Tools	3	Water	18
Explanatory Notes on Document	4	Combustion air	21
Preliminary Work	5	Final Work	22
Heater installation location	5	Template for Fuel Standpipe	23
Preparing electrical system	6	Operating Instructions for End Customer	24
Electrical system	7		
Fan controller	8		
Remote option (Telestart)	10		

## Validity

Manufacturer	Model	Type	EG-BE No./ABE
SUBARU	Impreza	G3	e1 * 2001/116 * 0438 * ...

Engine type	Engine model	Output in kW	Displacement in cm <sup>3</sup>
EE20	Diesel	110	1998

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.

# Subaru Impreza 2.0 Boxer Diesel

## Heater/Installation Kit

Quantity	Description	Order No.:
1	Retail accessories with desired heater control	See price list
1	Installation Kit for Subaru Impreza Legacy / Outback / Forester er 2.0 Boxer Diesel	1313756D

### 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 vehicles Subaru Impreza 2.0 Boxer Diesel - for validity, see page 2 - from model year 2009 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 edge protectors (split-open plastic hose).

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

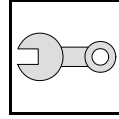
## Special Tools

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

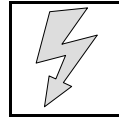
## Explanatory Notes on Document

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.

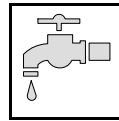
### Mechanical system



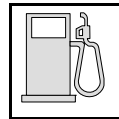
### Electrical system



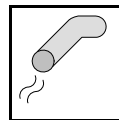
### Water



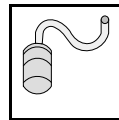
### Fuel



### 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.



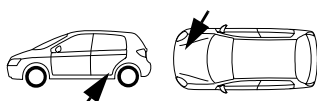
Specific risk of fire or explosion.



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!**

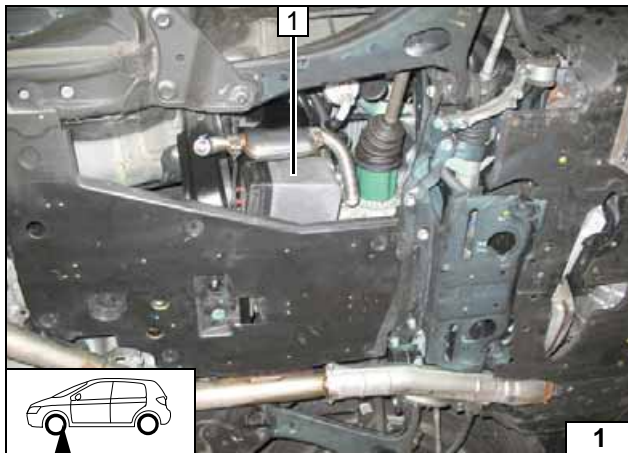
**Tightening torque of Ejet screws, Ejet studs = 10 Nm!**

## Preliminary Work

### WARNING!

- Open fuel tank cap, ventilate tank.
- Close the tank cap again.
- 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.
- Remove the rear bench seat.
- Open the tank-fitting service lid on the right and left.
- Remove the footwell trim on the driver's side.
- Remove the lower instrument panel trim on the driver's side.
- Remove the A-pillar trim in the footwell on the driver and front passenger side.
- Remove the lower B-pillar trim on the driver side.
- Remove the door sill cover on the driver side.
- Remove the right-hand fuel tank trim.

Remove page 24 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



### Heater installation location

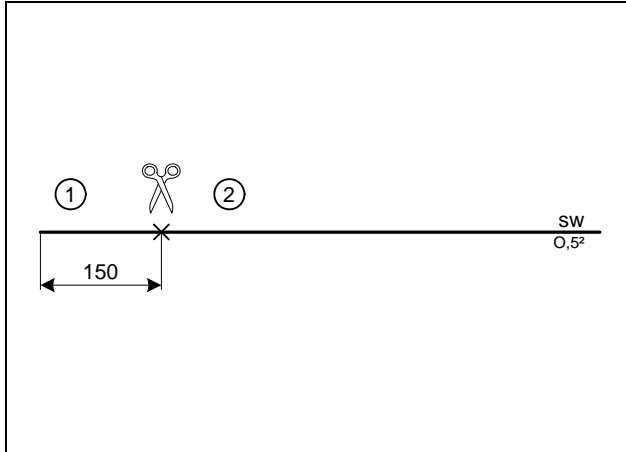
1 Heater

Installation location

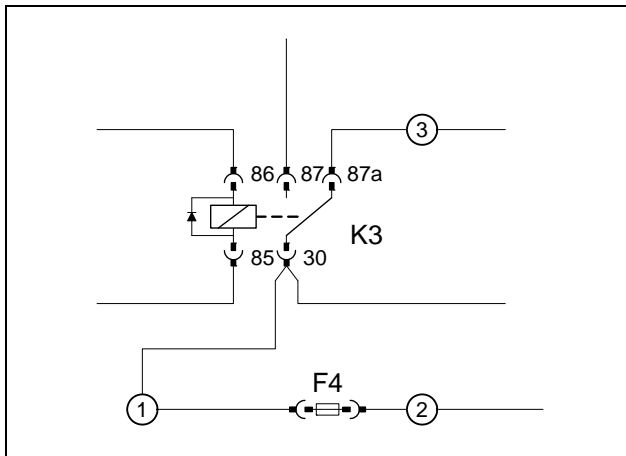


## Preparing electrical system

Wire section 2 will be required later for connection of A/C control panel.



**Cutting wires to length**



Produce connections as shown in wiring diagram. Install wire section 2 in the protective sleeving provided. Remove wire 3 from relay socket.

**Preparing fuse F4**



**Electrical system**

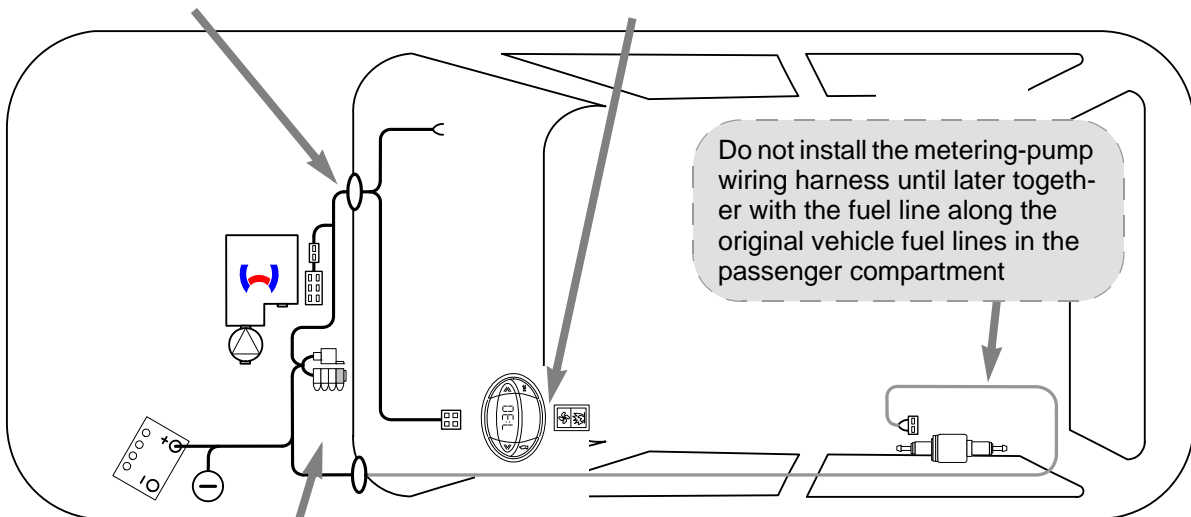
**Wiring harness push through of fan controller and heater control**

- 1 Protective rubber plug

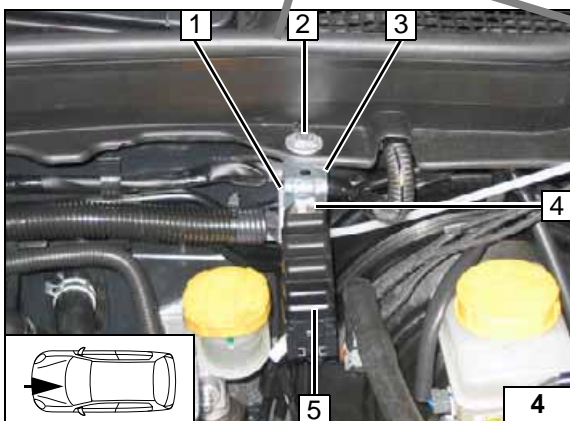


**Digital timer / summer/winter switch option**

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

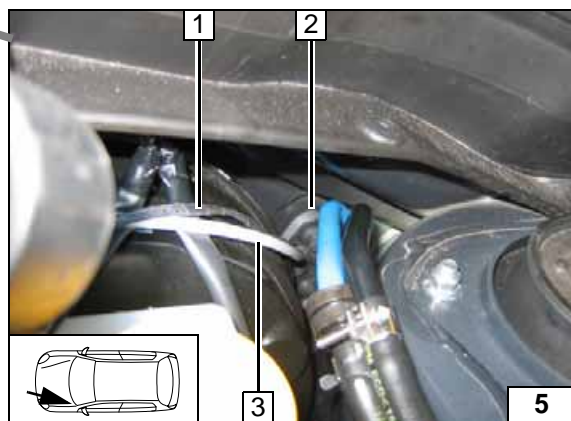


**Wiring harness installation routing**



**Fuse holder, K3 relay**

- 2 Remove plastic anchor, M6x20 bolt, large diameter washer, angle bracket
- 3, M6 flanged nut
- 4 Retaining plate of fuse holder, M5x16 bolt, washers, angle bracket, K3 relay
- 1, M5 nut
- 5 Fuse holder



**Wiring harness push through of fuel pipe**

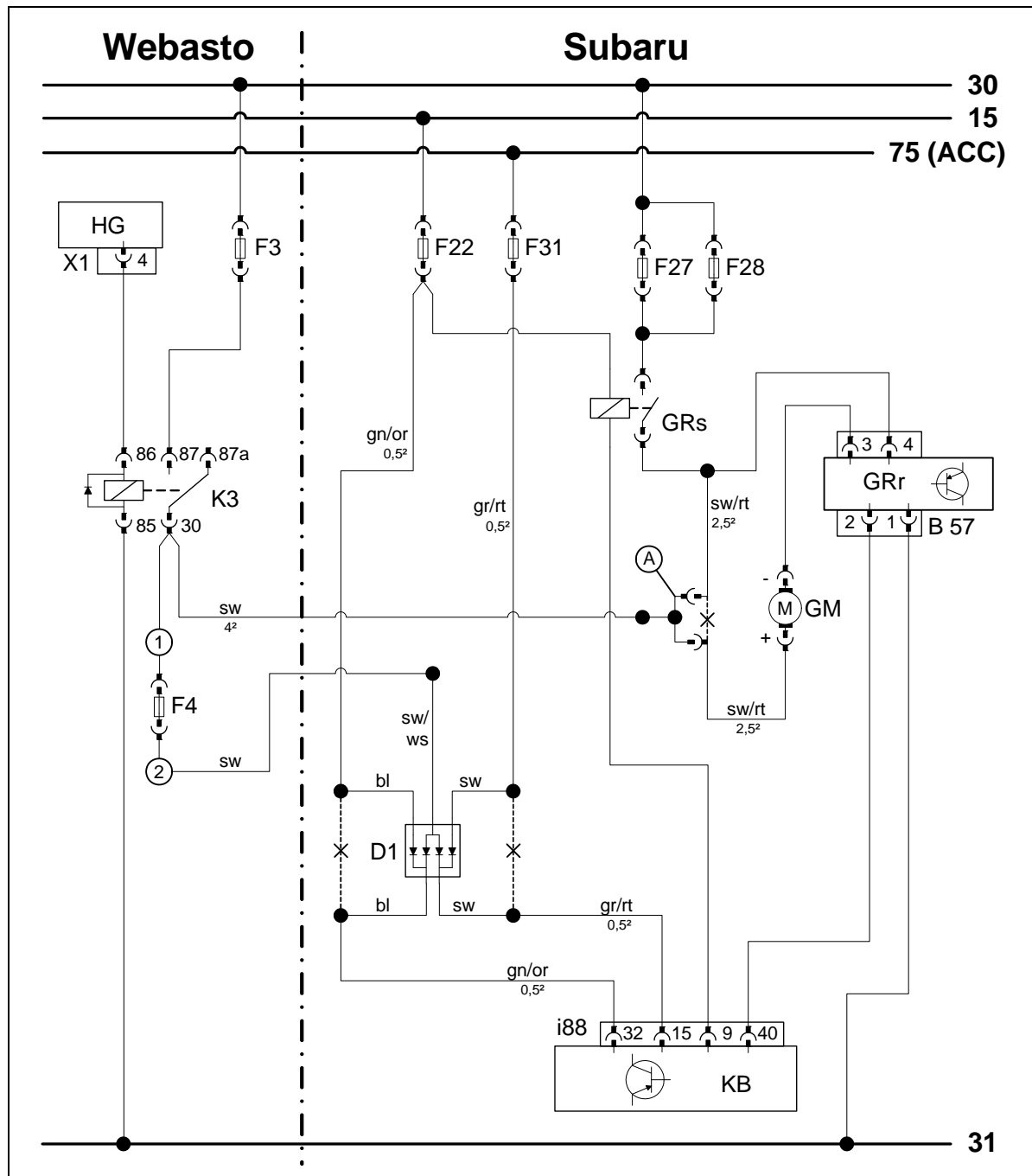
- 1 Metering pump wiring harness
- 2 Protective rubber plug
- 3 Fuel line



Fan controller



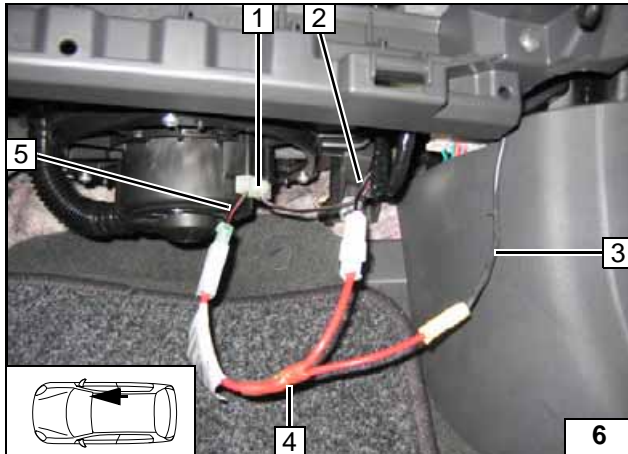
Wiring diagram for 09 model



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	GM	Fan motor	rt	red
X1	6-pin heater connector	GRs	Fan relay	sw	black
F3	Fuse, 25A	GRr	Fan controller	or	orange
K3	Fan relay	KB	A/C control panel	bl	blue
F4	Fuse, 5A	F22	Fuse	gn	green
A	Fan adapter	F27	Fuse	gr	gray
D1	Diode group	F28	Fuse		
		F31	Fuse		
		i88	40-pin connector KB	X	Cutting point
		B57	4-pin connector, GRr	Wire colours may vary, see wiring diagram of Impreza 2009.	

Legends



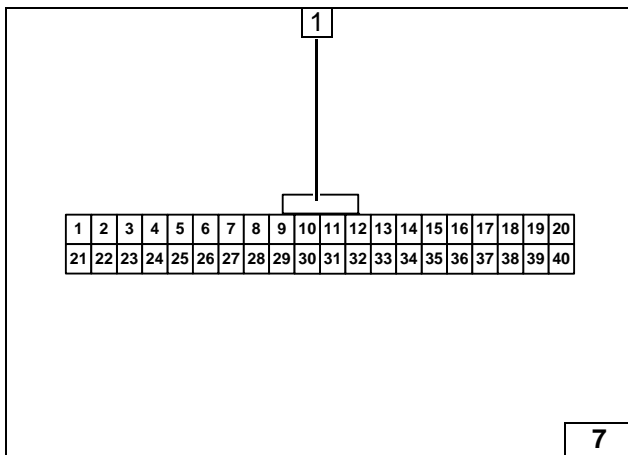


Connection to 2-pin connector 1 from the blower motor.  
Produce connections as shown in wiring diagram.

- 2 Black/red (sw/rt) wire of fan relay
- 3 Black (sw) wire from K3/30
- 4 Fan adapter
- 5 Black/red (sw/rt) wire of connector



**Connect-  
ing fan-mo-  
tor**

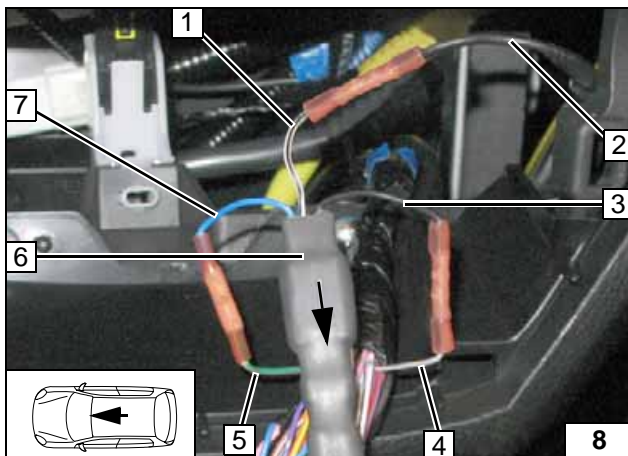


Connection on 40-pin connector i88 1, PIN 15 and 32 of A/C control panel.  
Produce connections as shown in wiring diagram.

- 1 Connector i88 on contact side



**Connect-  
ing A/C  
control  
panel**

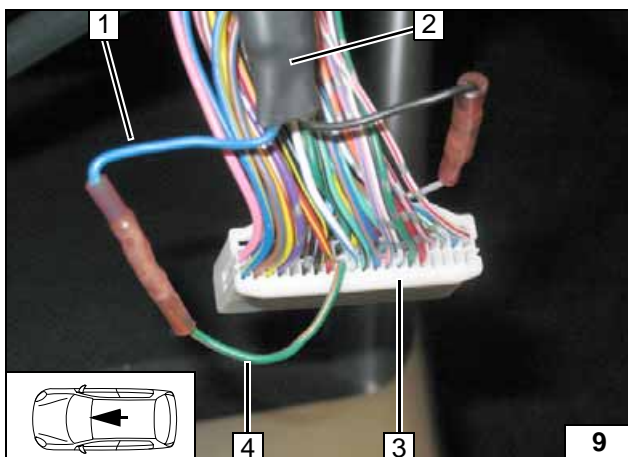


Watch direction of flow of diode group D1 6.

- 1 Black/white (sw/ws) wire of diode group
- 2 Black (sw) wire from F4
- 3 Black (sw) wire of diode group D1
- 4 Gray/red (gr/rt) wire of fuse F31!
- 5 Green/orange (gn/or) wire of fuse F22
- 7 Blue (bl) wire of diode group D1



**Connect-  
ing A/C  
control  
panel**

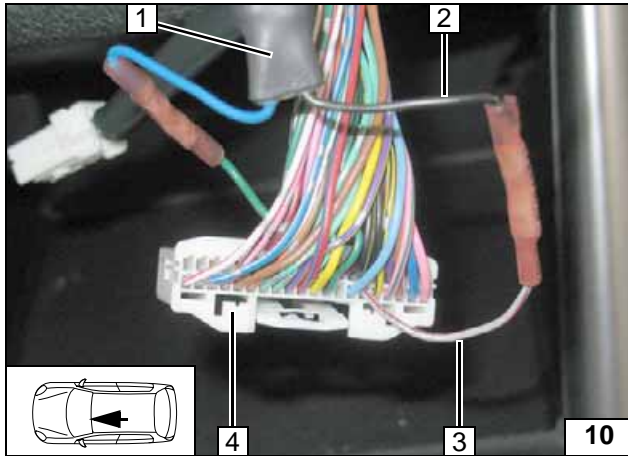


Connection on 40-pin connector i88 3, PIN 15 and 32 of A/C control panel. Watch direction of flow of diode group D1 2.  
Produce connections as shown in wiring diagram.

- 1 Blue (bl) wire of diode group D1
- 4 Green/orange (gn/or) wire of 40-pin connector i88, Pin 32

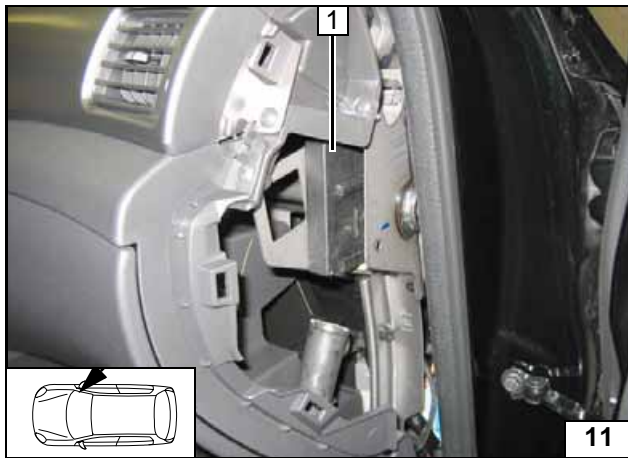


**Connect-  
ing A/C  
control  
panel**



- 1 Diode group D1
- 2 Black (sw) wire of diode group D1
- 3 Gray/red (gr/rt) wire of 40-pin connector i88, Pin 15
- 4 40-pin connector i88 KB

**Connect-  
ing A/C  
control  
panel**

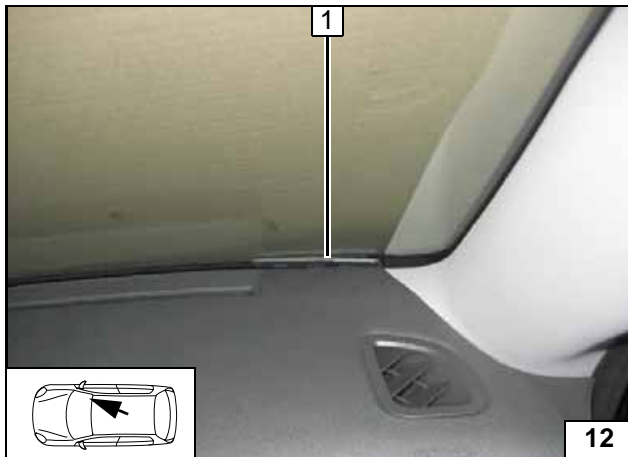


### Remote option (Telestart)

- 1 Install receiver with suitable means

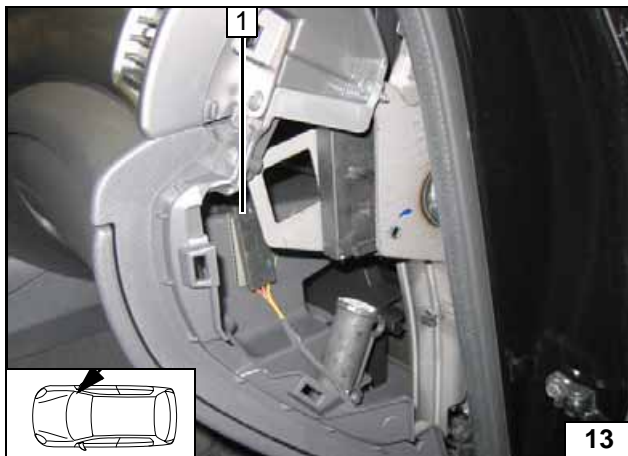


**Installing  
receiver**



- 1 Antenna

**Installing  
antenna**

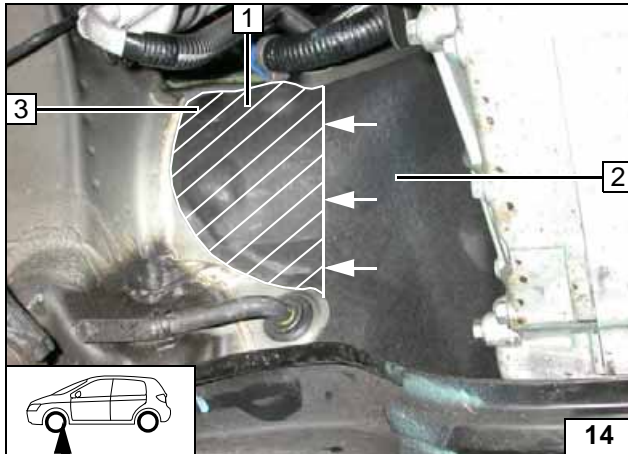
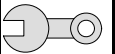


### Temperature sensor for HTM100 only

- 1 Fasten temperature sensor with double-sided adhesive tape



**Installing  
tempera-  
ture sensor**



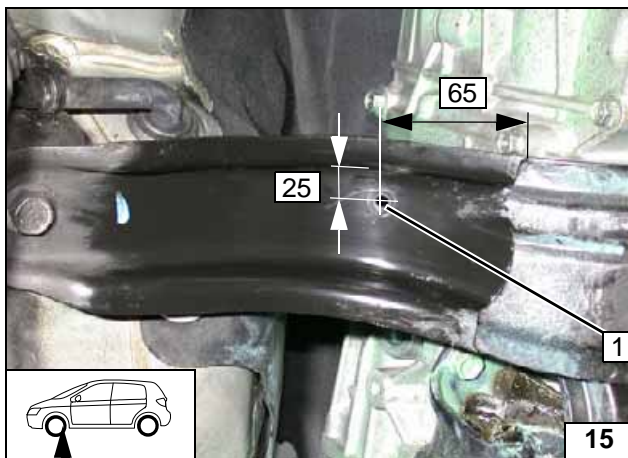
**Preparing installation location**

Cut insulation mat 2 at marking.

- 1 Discard section
- 3 Remove clip and discard

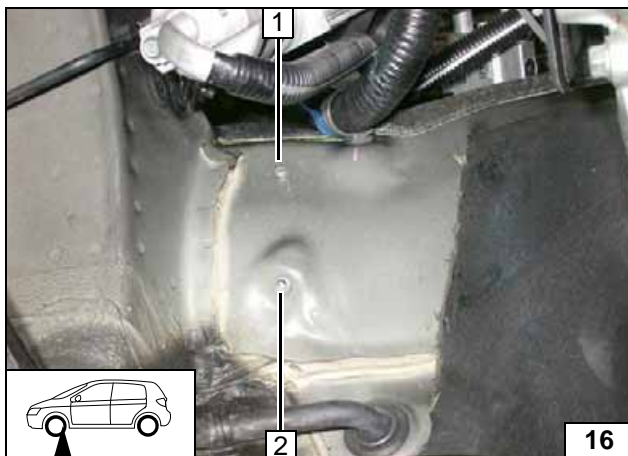


**Cutting out insulation mat**



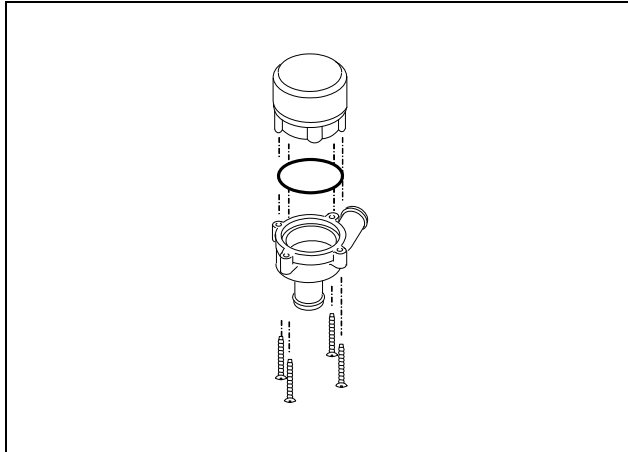
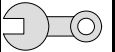
- 1 7 mm dia. hole

**Hole in transmission mounting**



- 1 Drill out 9.1 mm dia. hole; install rivet nut
- 2 Rivet nut in existing hole

**Installing rivet nut**

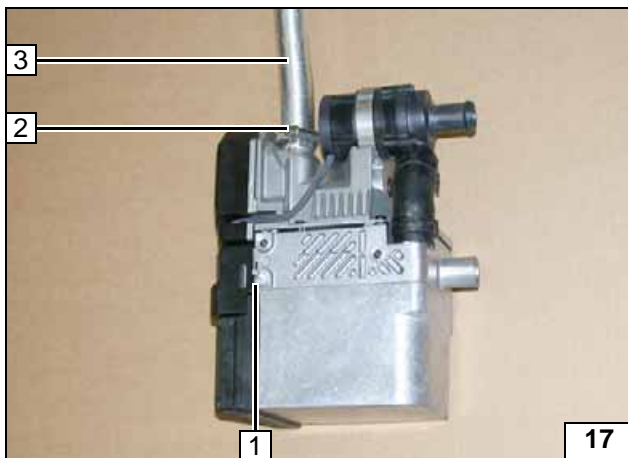


## Preparing heater

Replace 193° cover of circulating pump with axial cover.

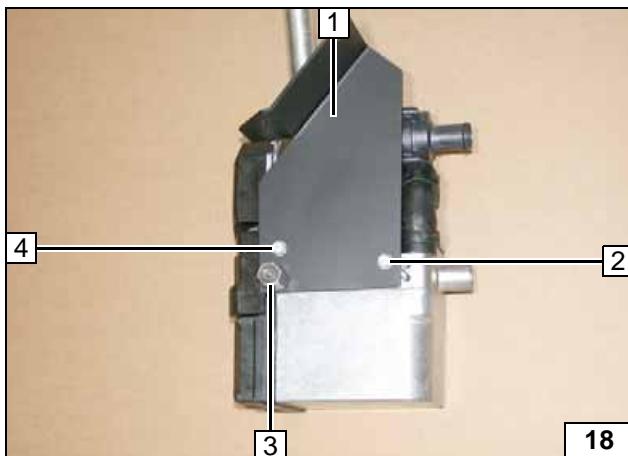


Replacing pump lid



- 1 Ejet stud
- 2 29 mm dia. clamp
- 3 Combustion air pipe

Preassembling heater

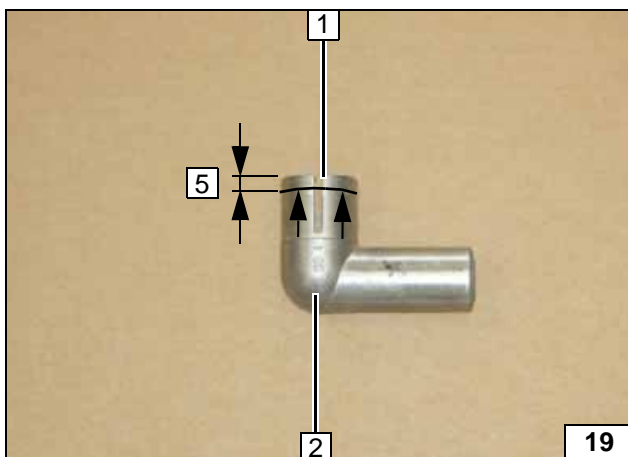


Insert three washers between heater and bracket **1** at Position **2** and one washer at Position **4**.



Preassembling bracket on heater

- 1 Bracket
- 2 Ejet screw, washer [3x]
- 3 M6x30 spacer nut
- 4 Ejet screw, washer

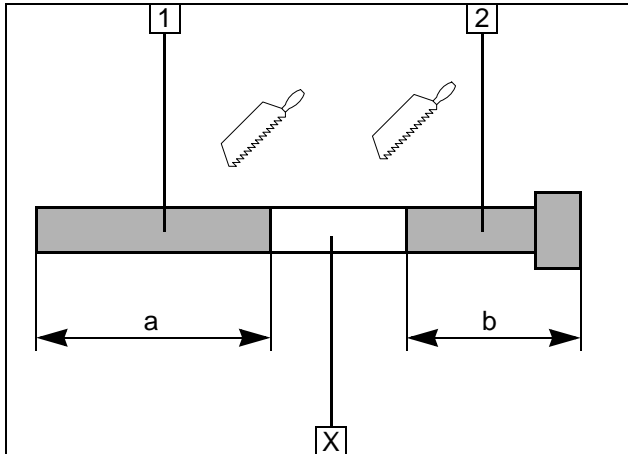


Shorten exhaust manifold **2** by 5 mm at marking.



Shortening exhaust manifold

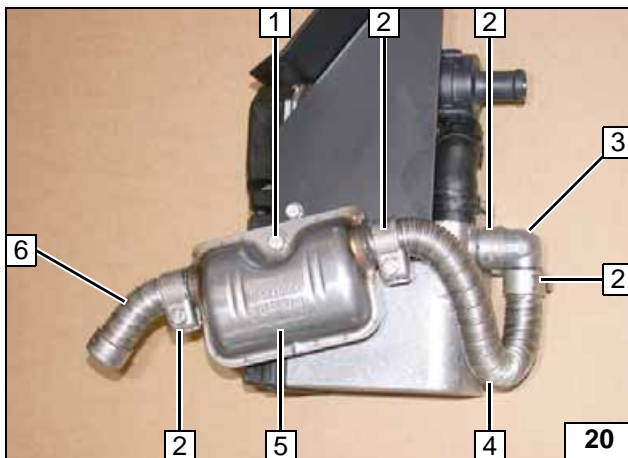
- 1 Discard section



- 1 Exhaust pipe  
a = 240
- 2 Exhaust end section  
b = 80

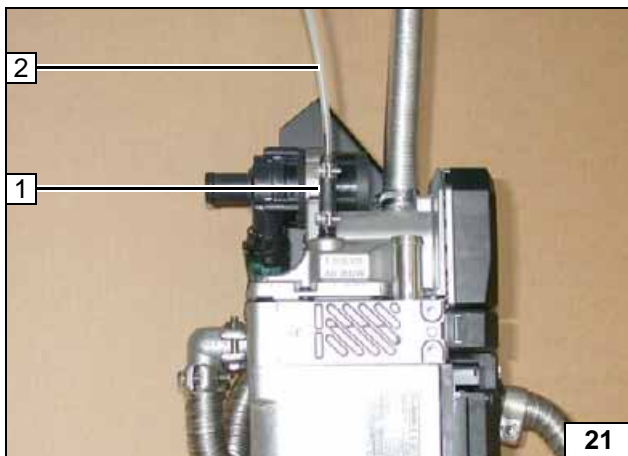
Discard section X

**Preparing exhaust pipe**



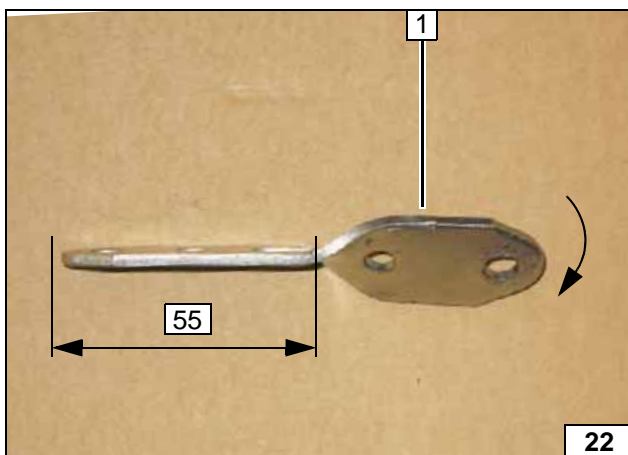
- 1 M6x16 bolt, spring lockwasher
- 2 Hose clamp [4x]
- 3 Exhaust manifold
- 4 Exhaust pipe
- 5 Exhaust muffler
- 6 Tail pipe

**Preassembling exhaust system**



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

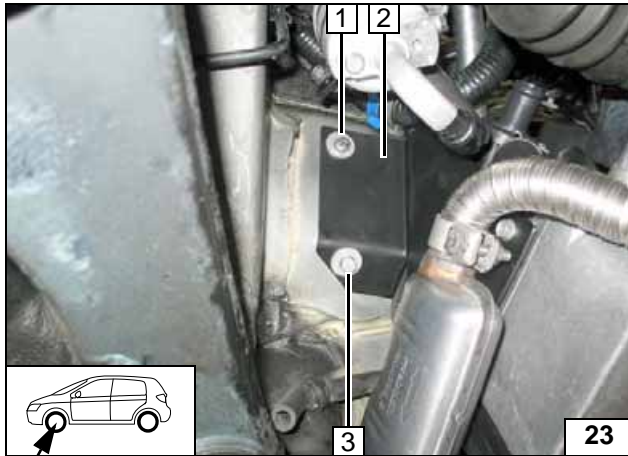
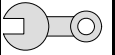
**Premounting fuel hose on heater**



Twist perforated bracket 1 by approx. 45°.



**Preparing perforated bracket**

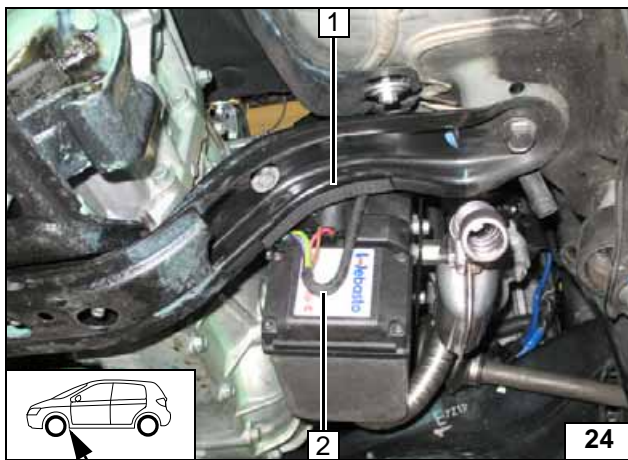


## Installing heater

Insert 5 mm shim between bracket of heater 2 and body at Position 3.

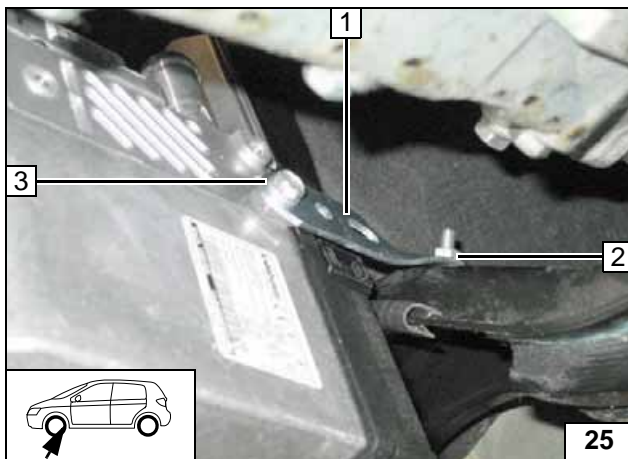
- 1 M6x20 bolt, spring lockwasher, large diameter washer
- 3 M6x25 bolt, spring lockwasher, large diameter washer, 5 mm shim

**Installing heater**



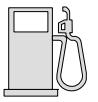
- 1 Edge protection 100
- 2 Mount wiring harness of heater

**Installing heater**



- 1 Perforated bracket
- 2 M6x20 bolt, large diameter washer, flanged nut
- 3 E-jot screw

**Installing heater**



## Fuel

### CAUTION!

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

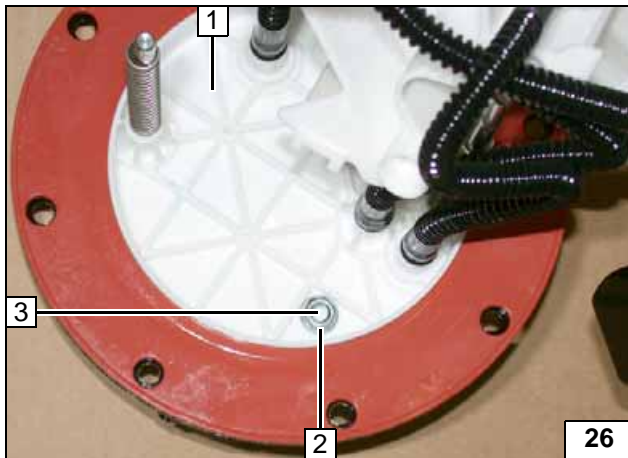
Catch any fuel running off with an appropriate container.

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.

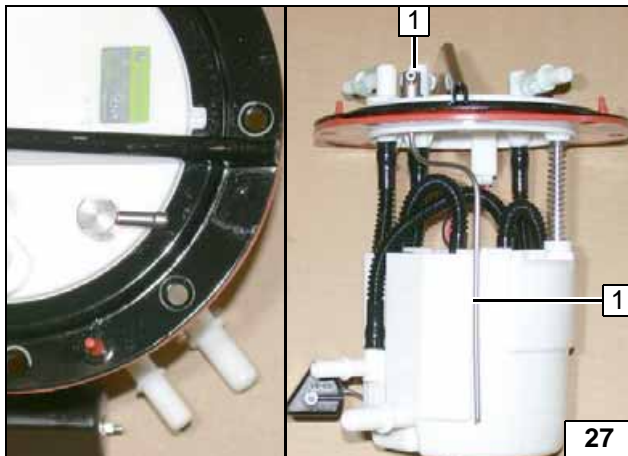
### WARNING!

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

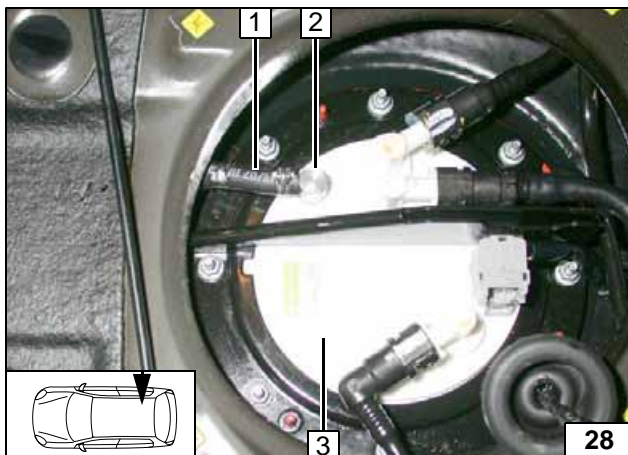


Remove and dismantle fuel-tank sending unit 1 according to manufacturer's instructions.

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



Shape fuel standpipe 1 according to template, cut to length and install.



Install fuel-tank sending unit 3 in accordance with manufacturer's instructions. Route fuel line from right of fuel tank sending unit over the tank to the installation location of the metering pump on the left vehicle side!

- 1 Fuel line, hose section, 10 mm dia. clamp [2x]
- 2 Fuel standpipe



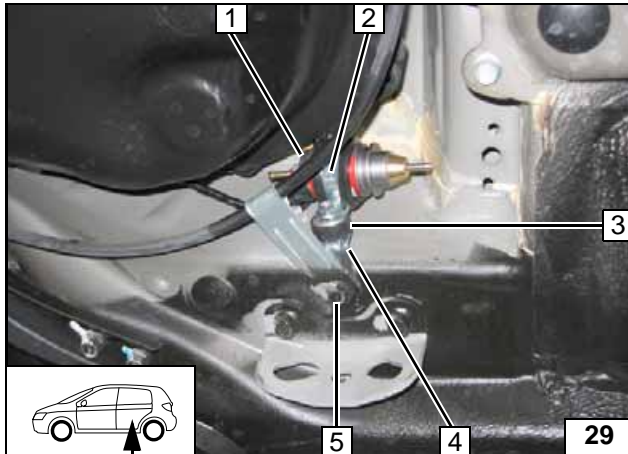
Removing fuel



Installing fuel standpipe



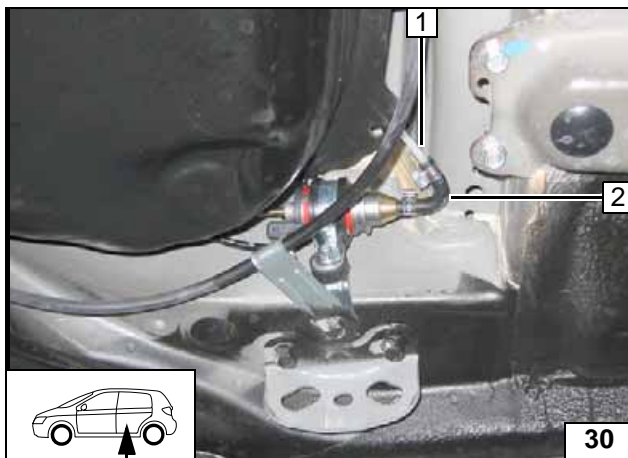
Connecting fuel line



- 1 Metering pump
- 2 Rubber-coated pipe clamp
- 3 Silent block, flanged nut [2x]
- 4 Angle bracket
- 5 Original vehicle bolt



**Installation location of metering pump**

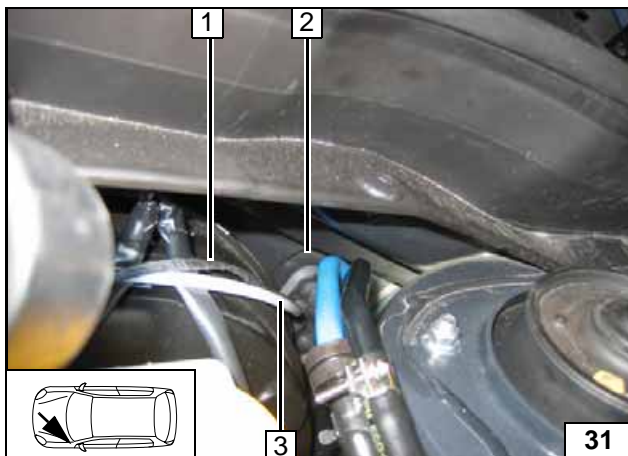


Cut fuel line 1 to length. Check the position of the components; adjust if necessary. Check that they have free clearance.

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



**Connecting metering pump**



Route fuel line 3 from heater to original vehicle wires at the top left of the firewall. Route fuel line 3 together with wiring harness of metering pump 1 through protective rubber plug 2 into passenger compartment.



**Installing lines**

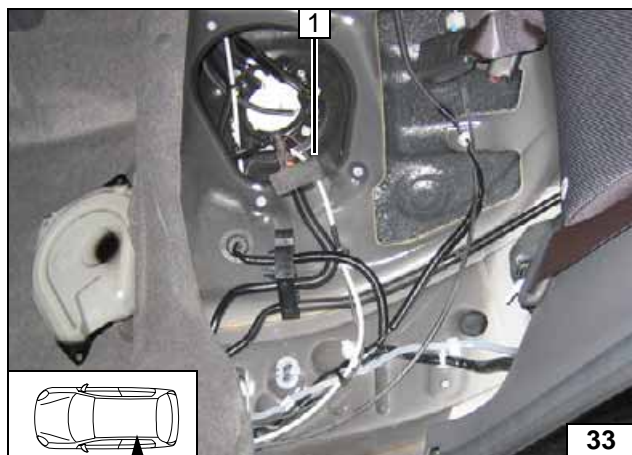


Install fuel line and wiring harness of metering pump in line duct 1 on door sill



**Installing lines**

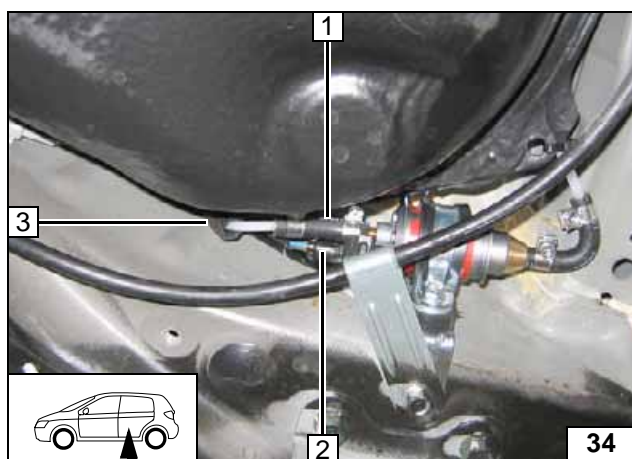




Punch through seal 1 and route fuel line with wiring harness of metering pump to installation location of metering pump.



## Installing lines



Check the position of the components; adjust if necessary. Check that they have free clearance.



## Connecting metering pump

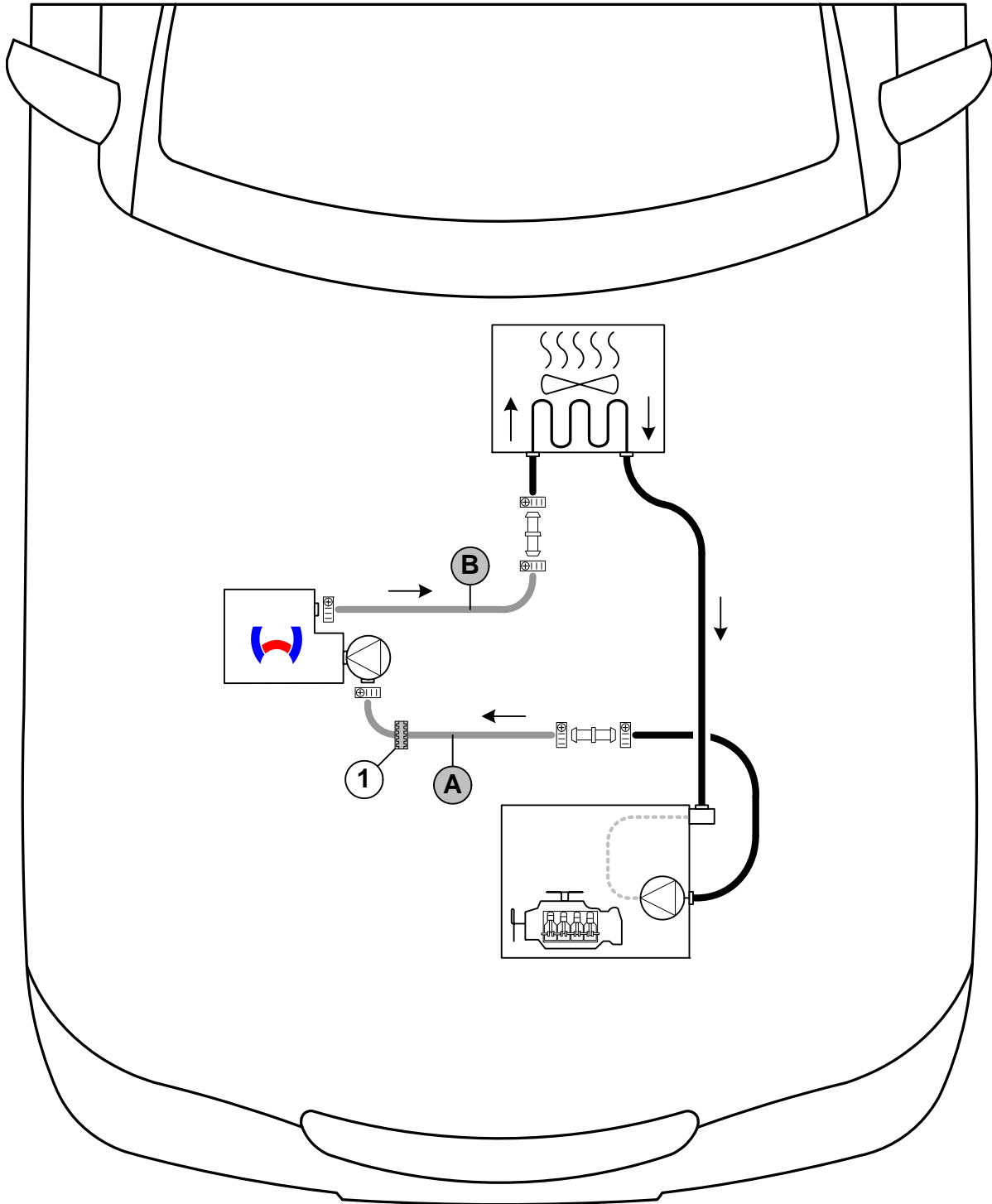
- 1 Hose section, 10 mm dia. clamp [2x]
- 2 Wiring harness of metering pump, connector mounted
- 3 Fuel hose [2x] as rub protection






## Water

### WARNING!

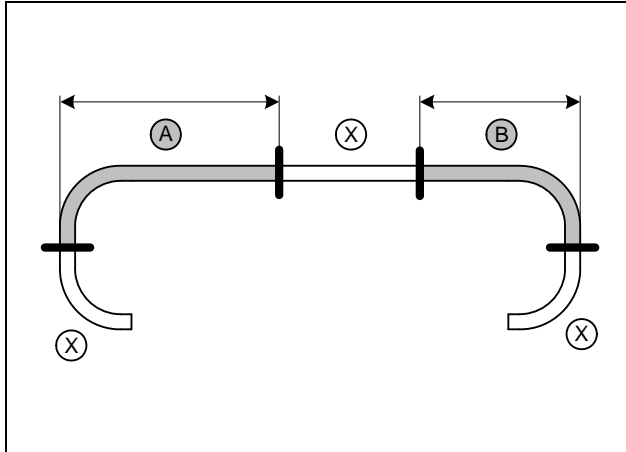
Any coolant running off should be collected using an appropriate container. Install coolant hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the coolant hose, the heater must be filled with coolant. The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



Coolant routing diagram

All connecting pipes  = 15x20 dia. All hose clamps  = 20-27 mm dia.!  
 1 = Black (sw) rubber isolator .

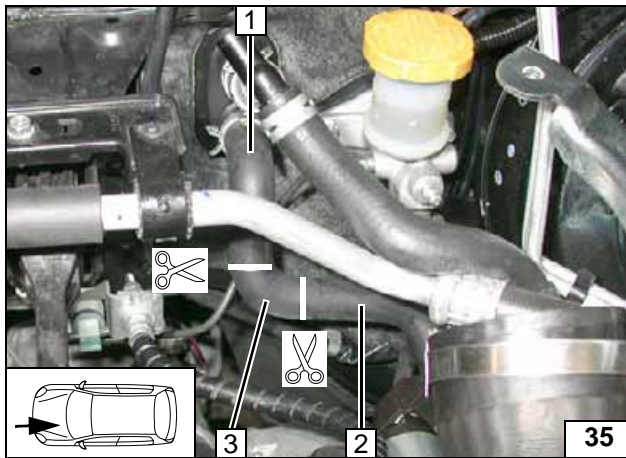




a = 430  
b = 490

Discard section X

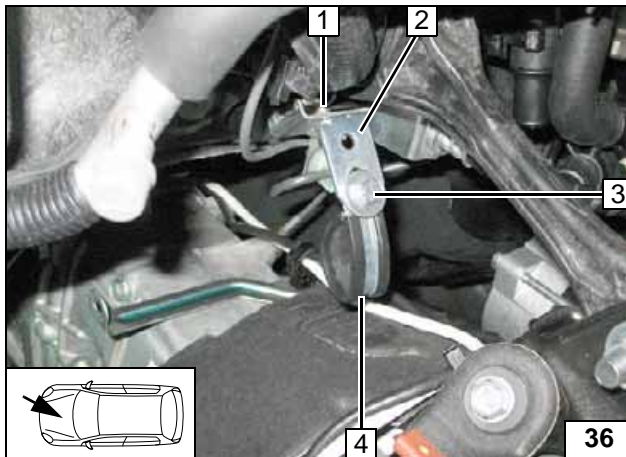
**Cutting coolant hoses to length**



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

- 1 Hose section of heat exchanger inlet
- 2 Engine outlet hose section
- 3 Discard hose section

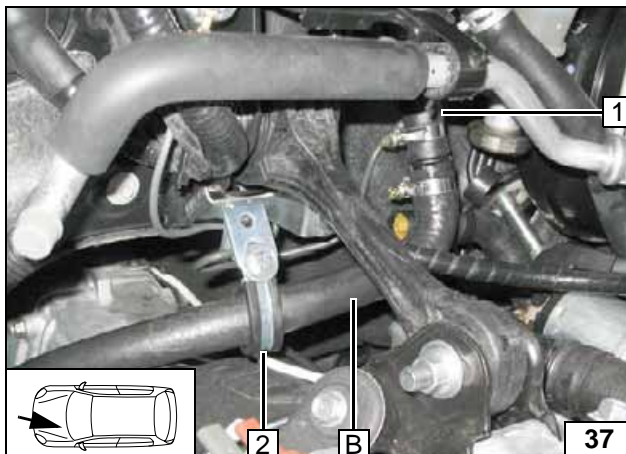
**Cutting point**



Drill out angle bracket 2 to 8.5 mm dia. at position 1.

- 1 Original vehicle bolt
- 3 M6x20 bolt, large diameter washer, flanged nut
- 4 29 mm dia. rubber-coated p-clamp

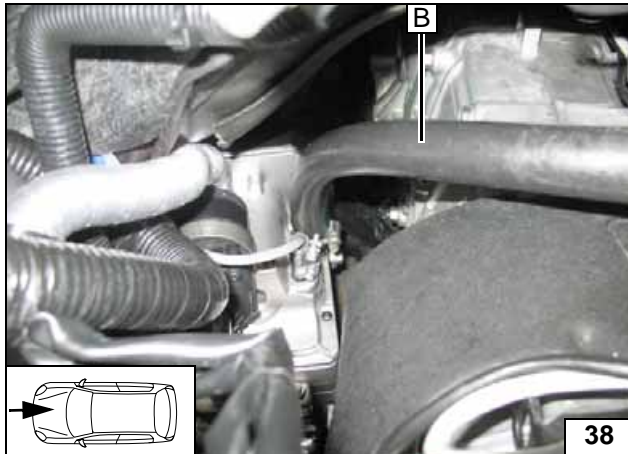
**Installing angle bracket**



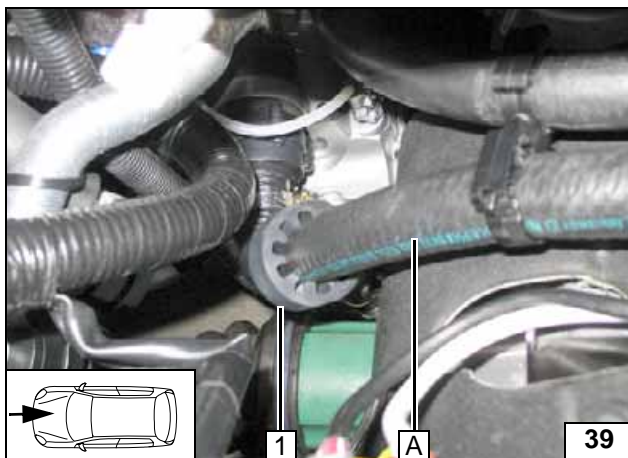
Route hose B through rubber-coated p-clamp 2.

- 1 Hose on heat exchanger inlet

**Connecting heat exchanger inlet**



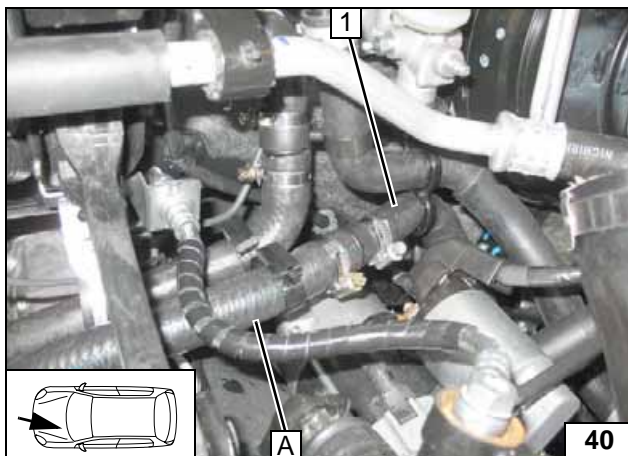
Connect-  
ing heater  
outlet



Slide black (sw) rubber isolator 1 onto hose A.

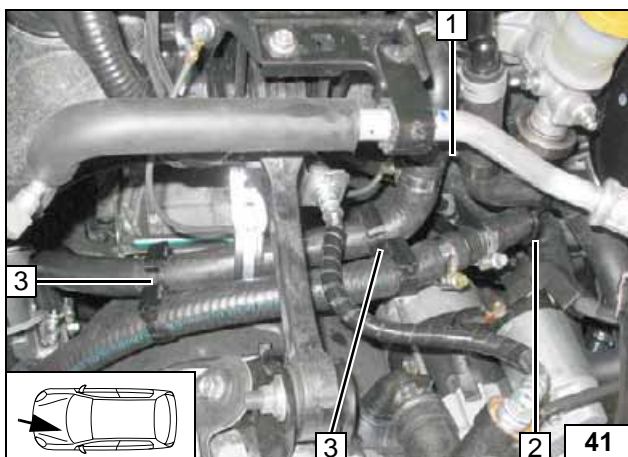


Connect-  
ing heater  
inlet



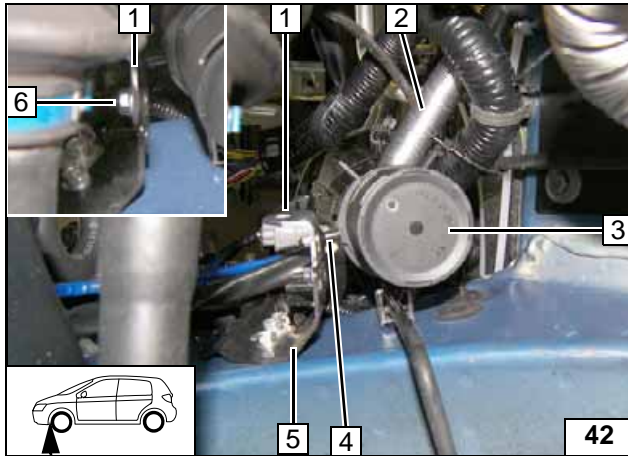
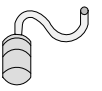
1 Hose of engine outlet

Connect-  
ing engine  
outlet



- 1 20x20 mm spacer bracket
- 2 Original vehicle spacer bracket
- 3 Lockable spacer bracket [2x]

Install-  
ing  
spacer  
bracket

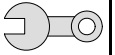


## Combustion air

- 1 Angle bracket
- 2 Combustion air pipe
- 3 Muffler
- 4 Retaining clip
- 5 Original vehicle bracket, side member
- 6 Flanged nut, original vehicle stud bolt



**Installing  
muffler**



## Final Work

### WARNING!

Reassemble the disassembled components in reverse order.

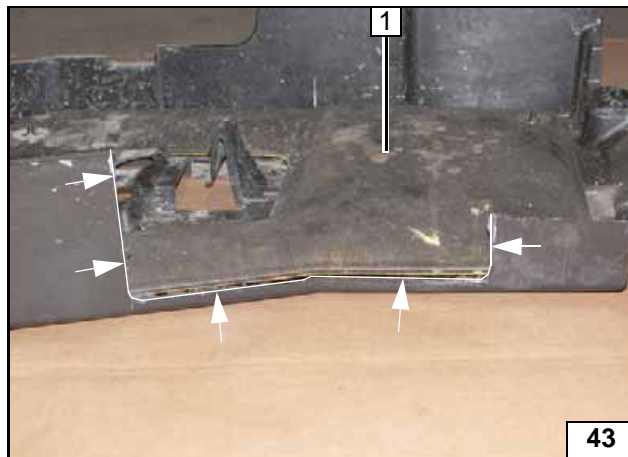
Check all hoses, clamps and all electrical connections for firm seating.

Secure all loose cables using cable ties.

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 the digital timer.
- Make settings on A/C control panel according to the "Operating Instructions for End Customer".
- Check the proper operation of the parking heater, see the operating instructions/installation instructions.
- Place the instruction plate "Switch off parking heater before refuelling" in the area of the filling neck

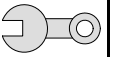


The underdrive protection depends on the equipment. If underdrive protection 1 according to the figure is available, cut out in the area of the markings.

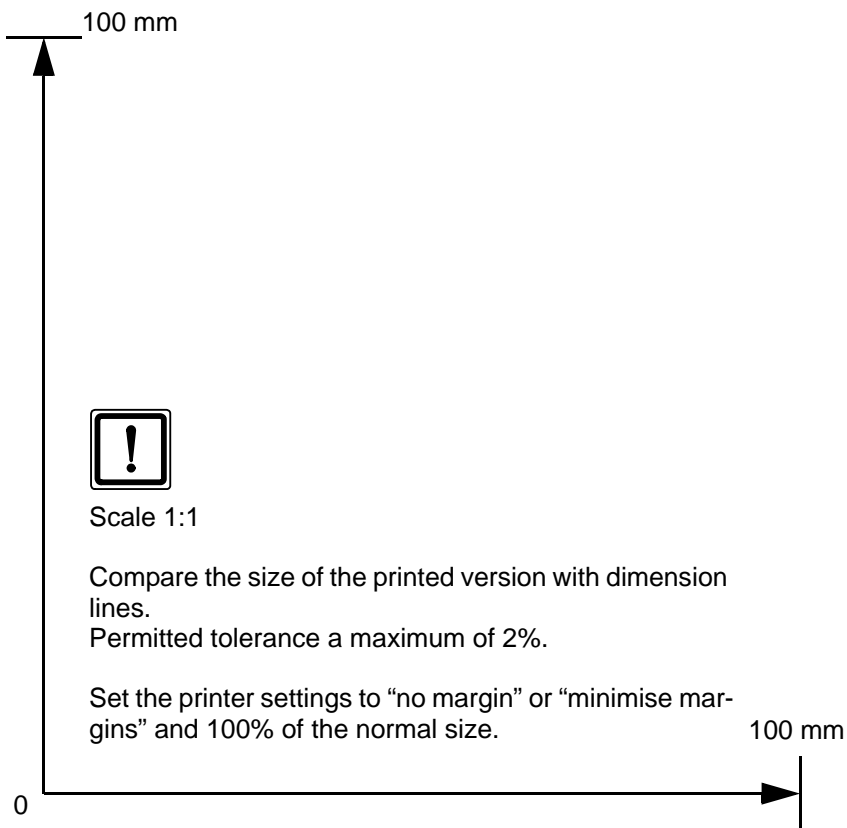
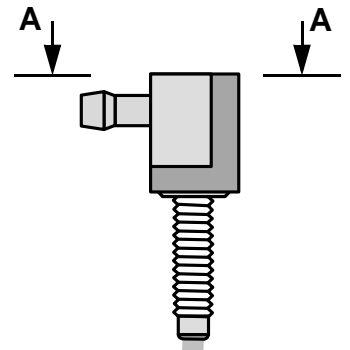
**Cutting out  
underdrive  
protection**

**Webasto**  
*Feel the drive*

Webasto AG  
Postfach 80  
D-82131 Stockdorf / Germany  
National Hotline: 01805 93 22 78  
(14 Cent aus dem deutschen Festnetz)  
Hotfax: 0395 5592 353  
Hotmail: hotline@webasto.de  
<http://www.webasto.de>



Template for Fuel Standpipe

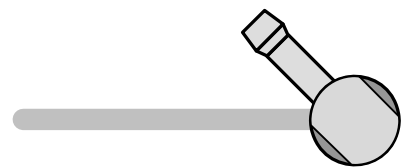


Scale 1:1

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

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

Section A-A



## 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 only switch on the vehicle fan to ventilate the vehicle interior in the position Winter  heat and in the position Summer .

Before parking the vehicle, make the following settings:



3 Air outlet to windshield

1 Set fan to level "2", or possibly "3"

2 Set temperature to "max."

Automatic  
air-conditioning