Water Heater Unit

Webasto
Feel the drive

***Thermo Top E* Auxiliary Heating**

e1
00 0003

***Thermo Top C* Auxiliary Heating**

e1
00 0002

***Thermo Top P* Auxiliary Heating**

e1
00 0104

Installation Instructions

Audi A4 1.9 + 2.0 TDI

Diesel

From model year 2006

For left-hand drive vehicles only

Also for vehicles without diesel particle filters

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, specialized tools and equipment are required to install and repair Webasto heating and cooling systems.

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 warning instructions.

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

Ident. No.: 9015522A

€10 fee

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Validity

Manufacturer	**Model**	**Type**	**EG-BE No. / ABE**
Audi	A4	8E	e1 * 2001 / 116 * 0151 * ...

Engine type	**Engine**	**Power in kW**	**Engine capacity in cm³**
BKE	Diesel	85	1896
BRB	Diesel	85	1896
AWX	Diesel	96	1896
BLB	Diesel	103	1968
BPW	Diesel	103	1968
BRE	Diesel	103	1968

Vehicle and engine types, equipment variants as well as national specifications, which are not listed in these installation instructions, have not been tested. Installation according to these installation instructions may, however, be possible.
The installation location of a time switch and summer / winter switch should be confirmed with the end customer before installation.

Heater Unit / Installation Kit

Amount	Description	Order no.:
1	Commercial supply of required control	See price list
1	Installation kit for Audi A4 1.9 + 2.0 TDI Diesel	9015441A

Recommended heater unit for the relevant vehicle class:

Vehicle	Heater unit
Compact car	Thermo Top E
Mid-class, station wagon	Thermo Top C
Luxury, van, off-roader	Thermo Top P

Select the heater unit based on the size of the vehicle passenger compartment and the customer's comfort requirements.

Foreword

These installation instructions apply to vehicles Audi A4 1.9 + 2.0 TDI with Diesel engines.
– Re. validity, see page 2 – from model year 2006 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/P/E* are to be observed in any event.
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 cable harnesses to original vehicle lines and cable harnesses using cable clips.
Sharp edges should be fitted with edge protectors (split open plastic hose).
Spray unfinished body areas, such as for example bore holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329)!

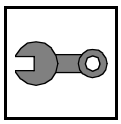
Special Tools

- Torque spanner for 2.0 - 10 Nm
- Vise-grip wrench
- Riveting nut tool

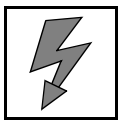
Explanatory Notes on the Document

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.

Mechanics

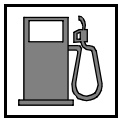


Electrics

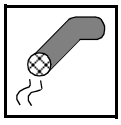


Water connection

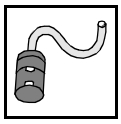
Fuel connection



Exhaust system



Combustion air



Special features are highlighted using the following symbols:

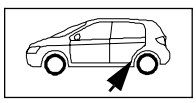
Specific risk of injury or fatal accidents.

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.

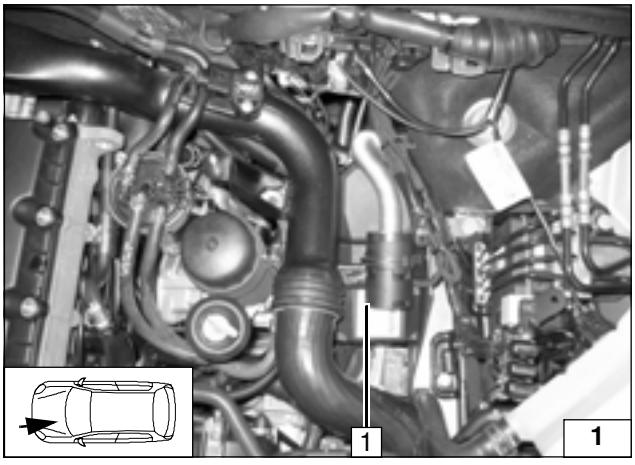


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

- Let off pressure in 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 cooling water reservoir cover
- Completely remove the battery.
- Completely remove the air filter with intake hose.
- Loosen the engine control unit in the cooling water reservoir.
- Open the tank cap, ventilate the tank.
- Close the tank cap again.
- Remove the underride protection
- Remove the right underbody panel.
- Remove the trunk cover (sedans only)
- Completely remove the lower plastic panel for the trunk floor (Avant only)
- Open the tank mounting service lid
- Remove tank mounting according to manufacturer's instructions.
- Remove air conditioning control according to manufacturer's instructions.
- Remove the dashboard panel on the driver's side.



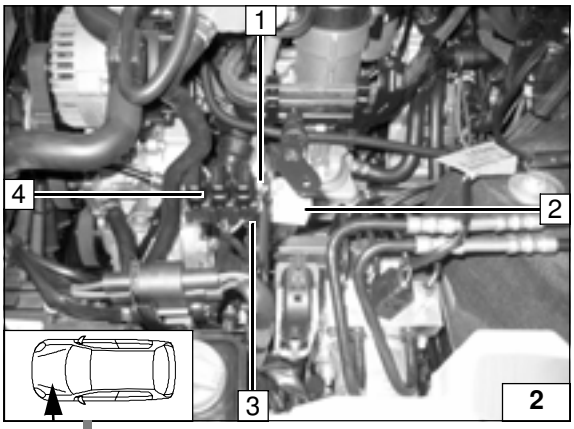
Heater Unit Installation Location

1 Heater unit

Electrical Connections

Fuse holder, K3 relay

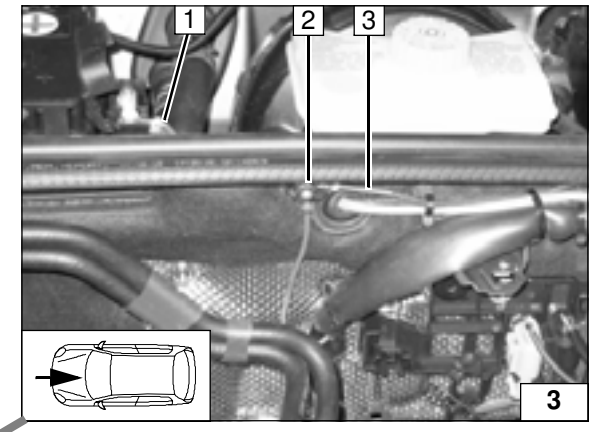
2 K3 relay
3 Fuse holder retaining plate
1 M5x12 bolt, washer, M5 nut
4 Fuse holder

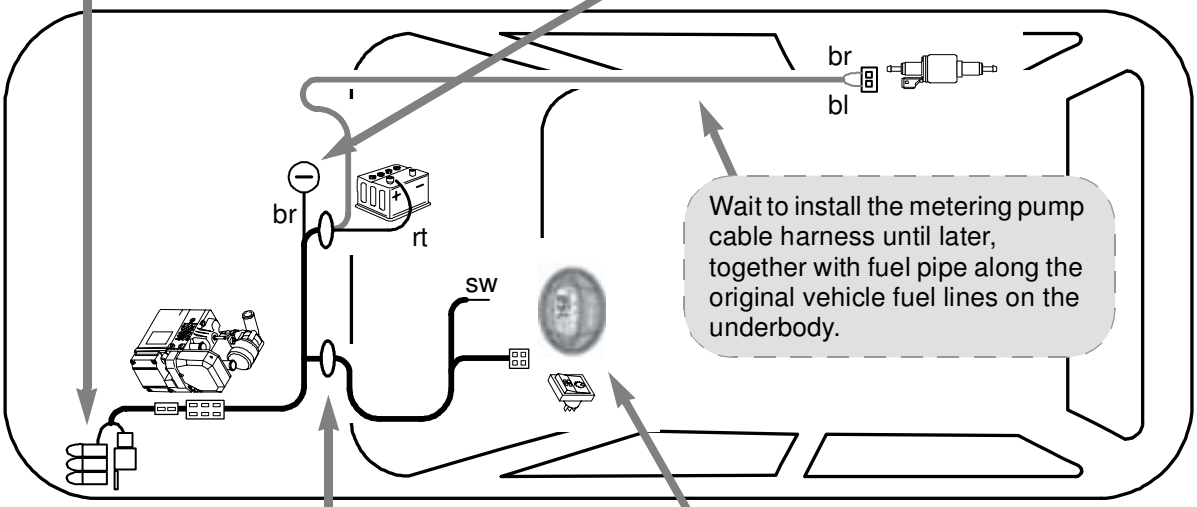


Positive and ground wire

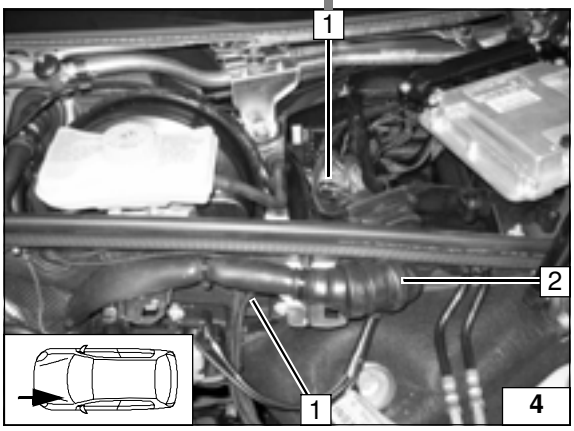
Run the positive wire **1** through the protective rubber sleeve to the battery.

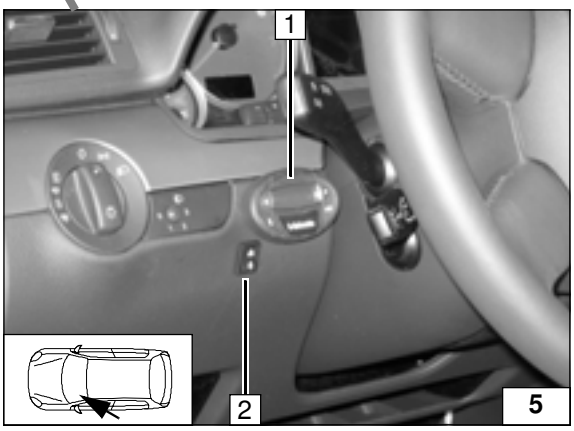
3 Ground wire
2 Original vehicle cable harness





Cable harness installation diagram



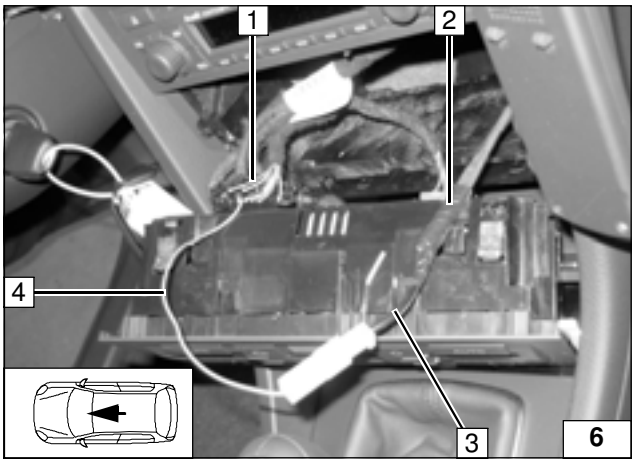


Cable harness installation

Run the cable harnesses for the time switch and blower control **1** through the protective rubber sleeve **2** in the control box and down under the engine control unit into the passenger compartment.

Time switch and summer / winter switch option

1 Time switch
2 Summer / winter switch, bore hole Ø 12 mm.

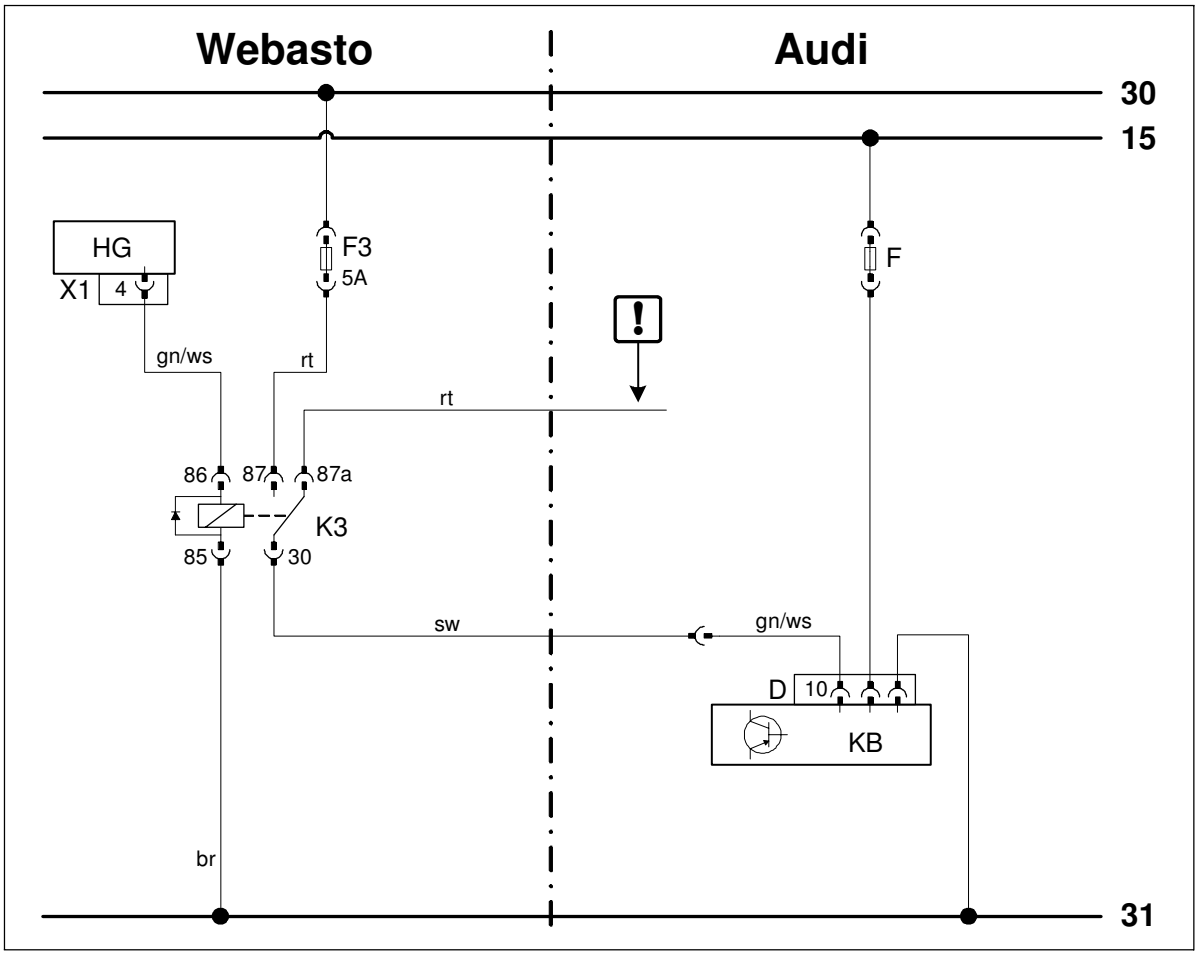


Blower Control

Connection the air conditioning control connector D
(use enclosed micro timer).
Connect according to the circuit diagram.

1 Connector D
2 Insulate the red (rt) wire to K3/87a and tie back
3 Black (sw) wire from K3/30
4 Green/white (gn/sw) wire to connector D pin 10

Connecting the air conditioning control

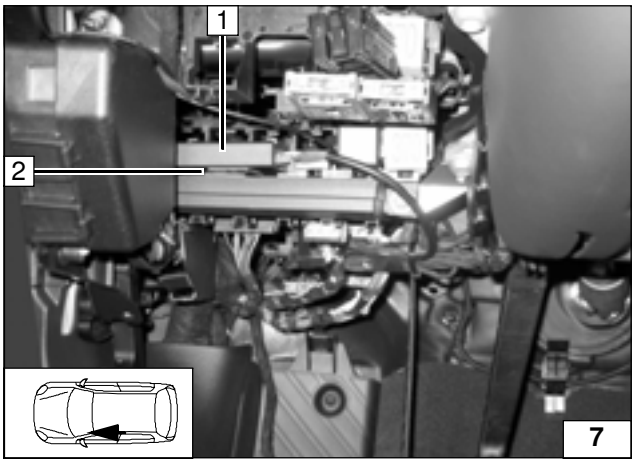


Automatic air conditioning circuit diagram

Webasto components		Components Audi A4 1.9 + 2.0 TDI		Colors and symbols	
HG	Heater unit TT-C/E	Fx	Fuse	rt	red
X1	6-pin heater unit connector	KB	Air conditioning control	ws	white
F3	Fuse	D	Connector KB	sw	black
K3	Blower relay			br	brown
				gn	green
				!	Insulate and tie back wire ends
				X	Splitting point
				Cable colors may vary.	

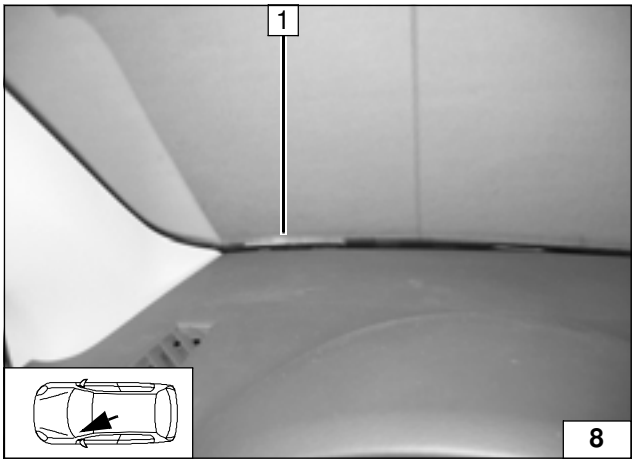
Legend

Remote Start Option



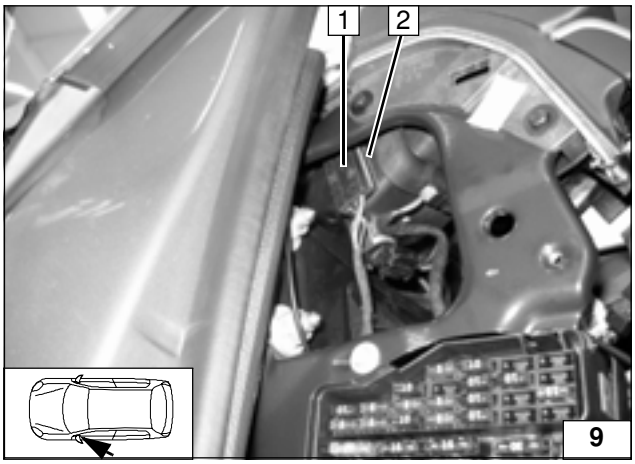
1 Receiver
2 Double-sided Velcro tape (self adhesive)

Assembling the receiver



1 Antenna

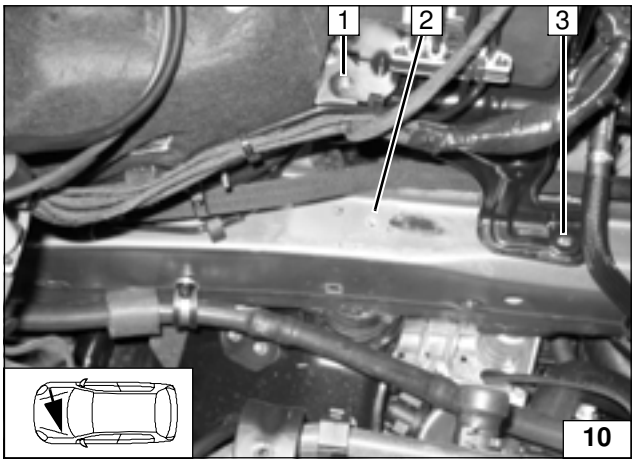
Assembling the antenna



Temperature sensor for HTM100 only

1 Temperature sensor
2 Double-sided Velcro tape (self adhesive)

Assembling the temperature sensor

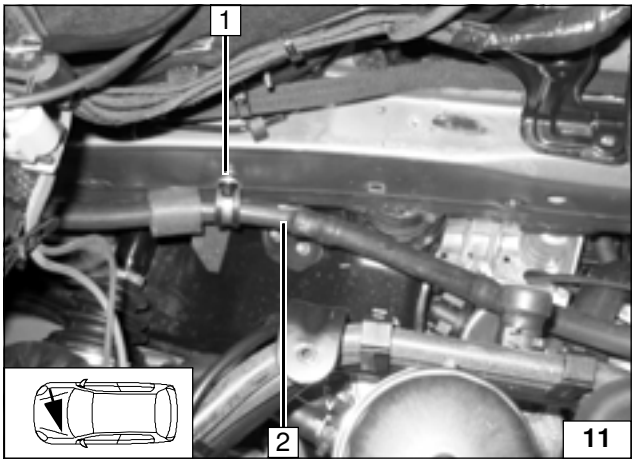


Preparing the Installation Location

Remove the original vehicle bolt at position **1** and **3** (will be used here again). Drill hole at position **2**.

2 Ø 9.1mm bore hole, insert rivet nut

Inserting rivet nut



2 Servo hose
1 Rubberised tube clamp, plastic nut on existing stay bolt

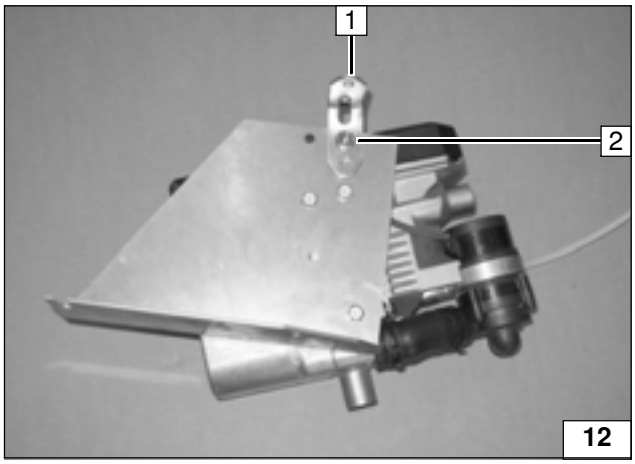
Tie back servo hose

Preparing the Heater Unit

Remove the enclosed bracket for the mounting, this will be replaced with the fastening strap.
Bend the fastening strap **1** to 90° according to the template and loosely pre-assemble.

2 M6x20 bolt, flanged nut

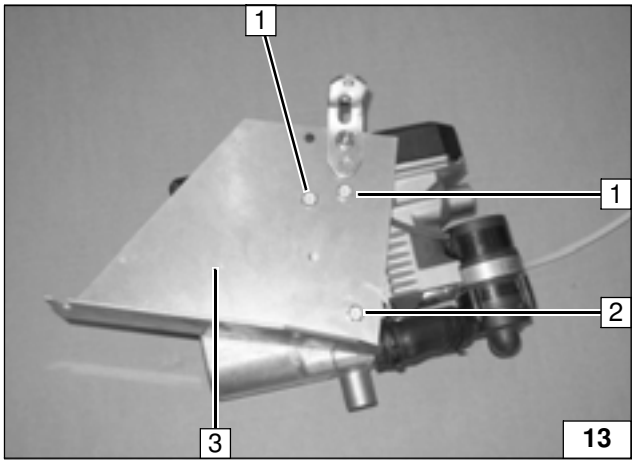
Loosely fitting the fastening strap on the bracket

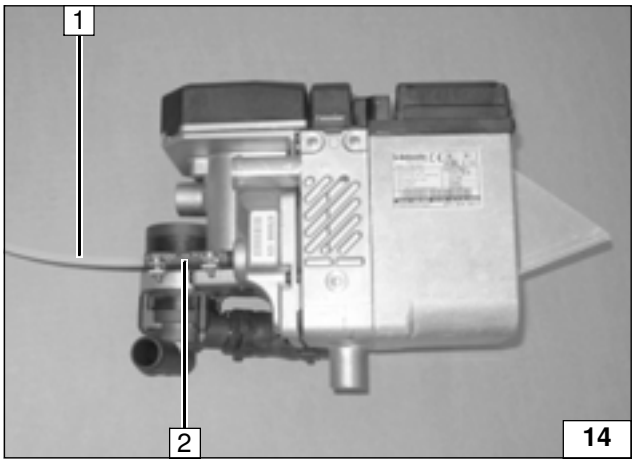


Insert two washers between the heater unit and the bracket **3** in position **2**.
Ejot screw bolts tightening torque 10 Nm!

1 Ejot screw bolt [2x]
2 Ejot screw bolt, washer [2x]

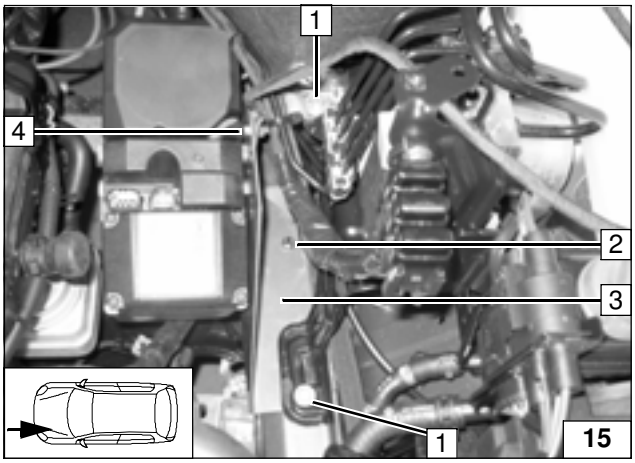
Assembling the bracket





1 Mecanyl fuel line
2 Hose section, Ø 10 mm hose clamps [2x]

Pre-assembling the fuel line



Installing the Heater Unit

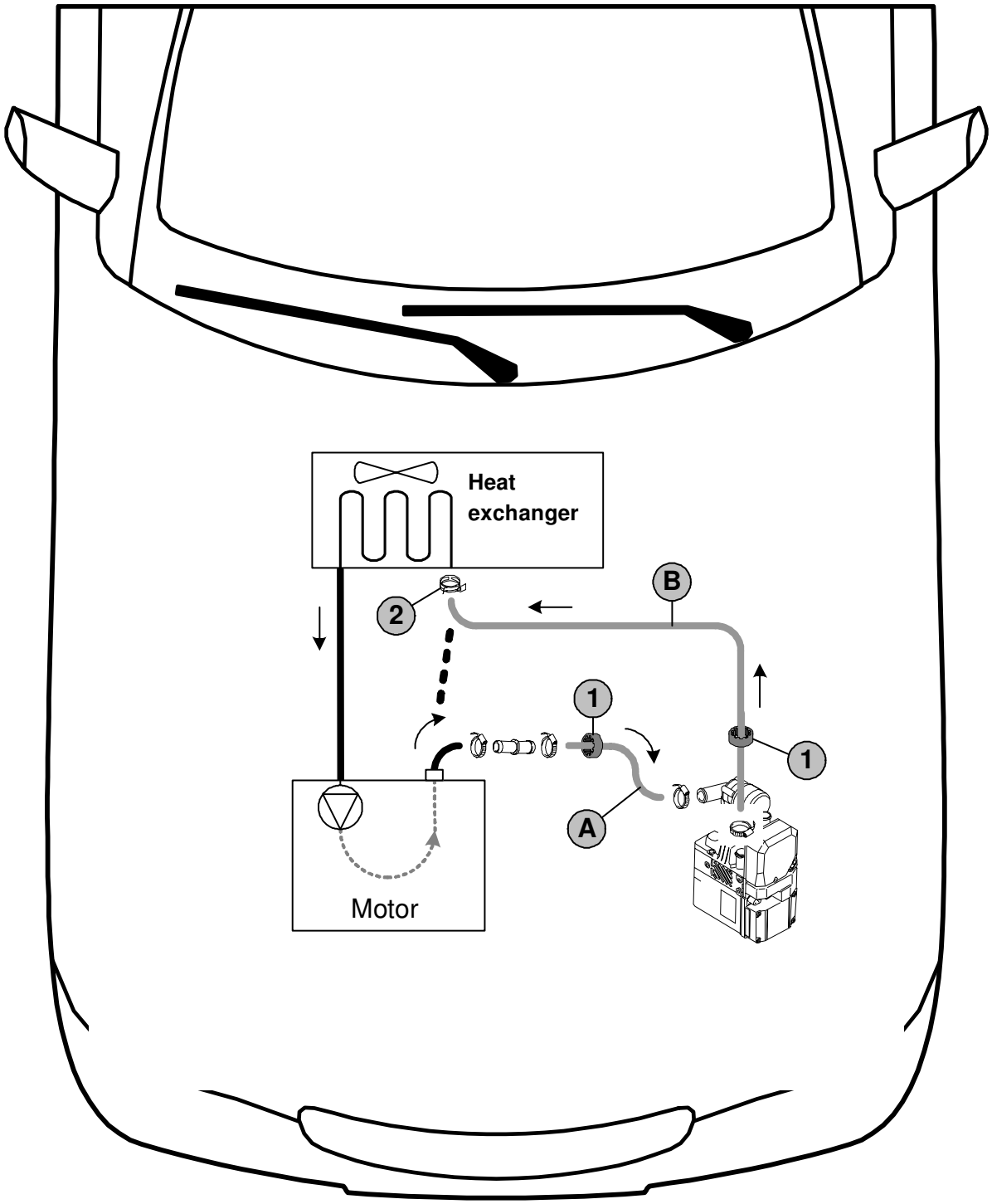
Insert the bracket **3** with the heater unit as shown in the figure.
Tighten bolt in position **4**.

1 Original vehicle nuts [4x] on the pre-assembled bolts
2 M6x20 bolt, spring washer on pre-assembled rivet nut

Assembling the heater unit

Water Connection

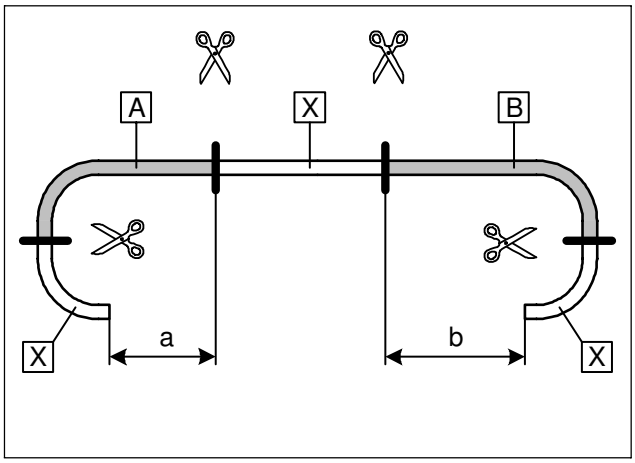
WARNING!
Tighten all hose clamps with 2.0 + 0.5 Nm.
Any coolant running off should be collected using an appropriate container.
Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable clips.
Position hose clamps and spring band clamps so that no other hose can be damaged.
The connection should be "inline" based on the following diagram:



Water installation diagram

All hose clamps Ø 20-27 mm. Connecting pipe = Ø 20x20.
Position **1** = black rubber profile. Position **2** = Original vehicle spring band clamp.

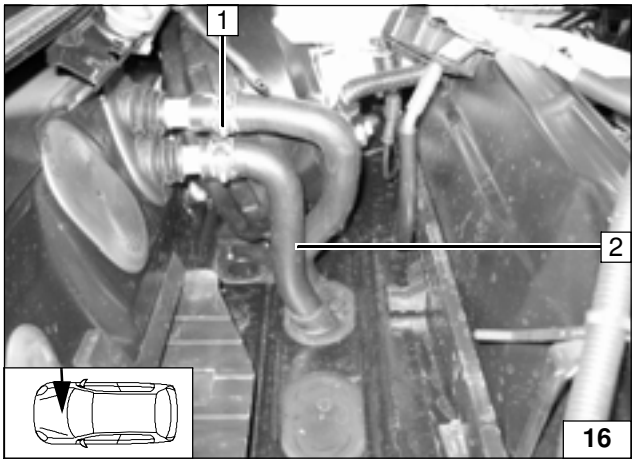
Cutting water hoses into sections



a = 270 mm
b = 530 mm

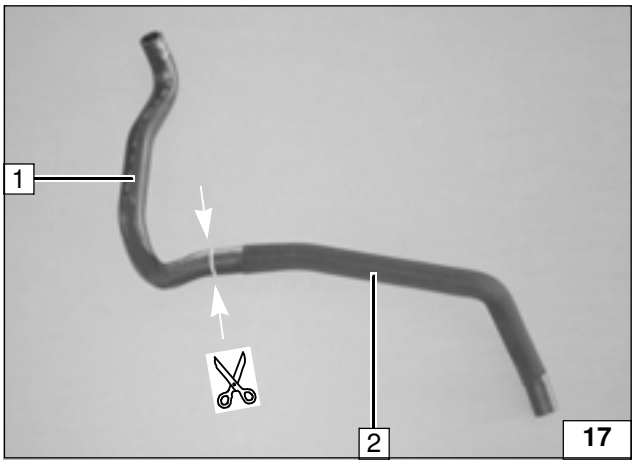
Dispose of sections **X**

Removing the water hose



Remove the original vehicle engine outlet hose to the heat exchanger inlet **2** (spring band clamp **1** will be used again).

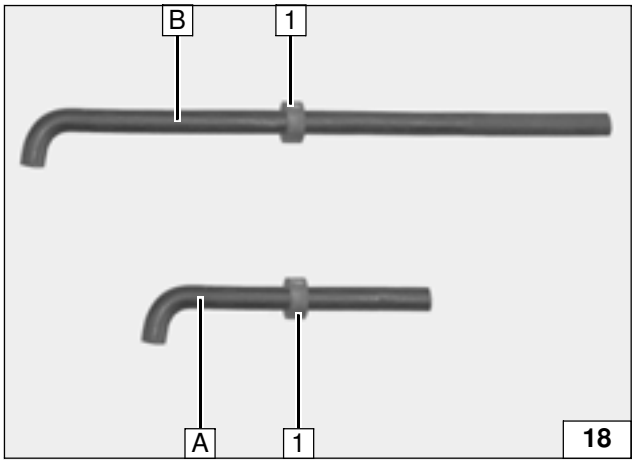
Separate the water hose



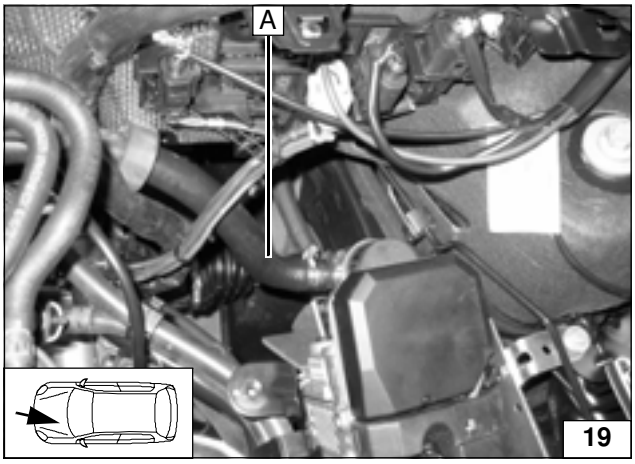
Cut off the protective hose **2** in the splitting point area.

2 Engine outlet hose section
1 Dispose of hose section

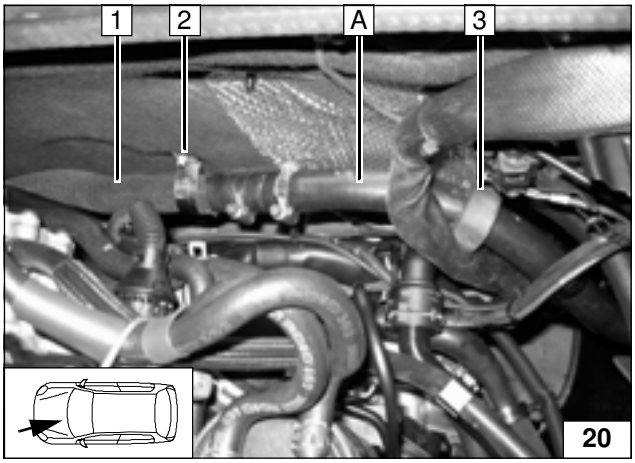
Preparing the hoses



1 Slide on the black (sw) rubber profile [2x]
2 Engine outlet hose section



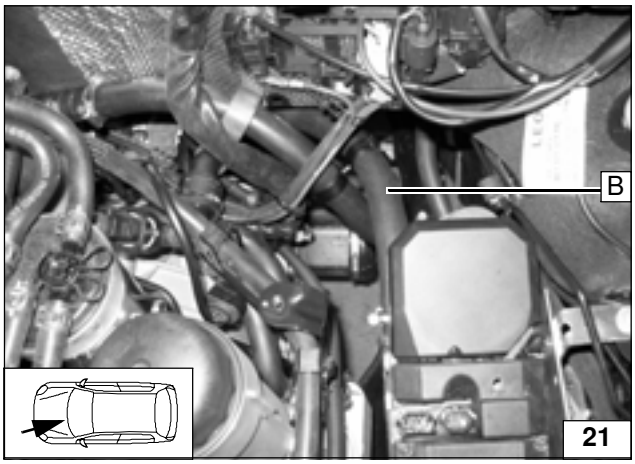
Connecting the heater unit inlet



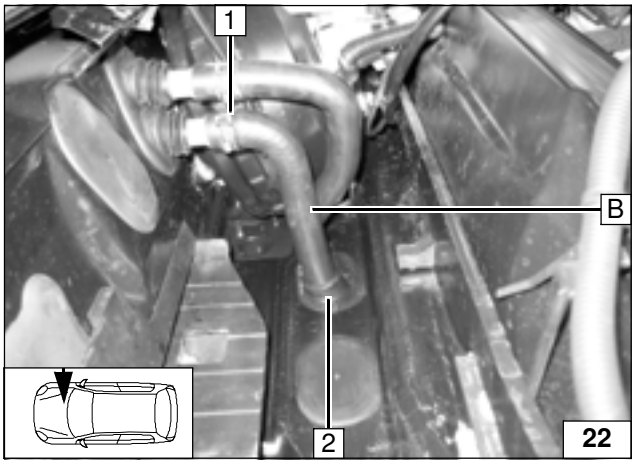
Fasten the hose **A** to the engine outlet.
Refasten the hose **A** to the stay bolt **2** with original vehicle hose clamps.

3 Align the black (sw) rubber profile on the cable harness.

Connecting the heater unit inlet



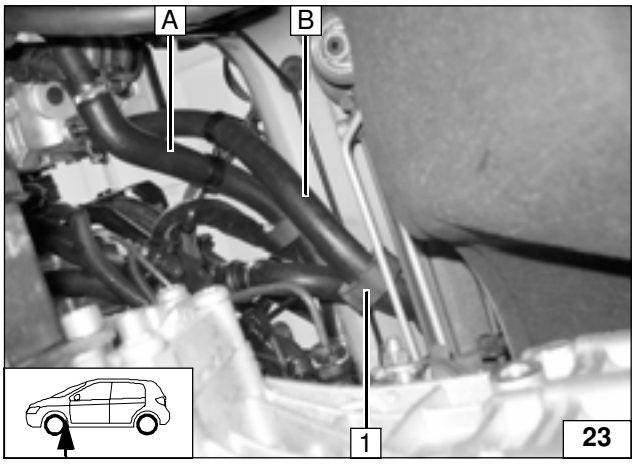
Connecting the heater unit outlet



Run the hose **B** through the original vehicle rubber sleeve **2** into the cooling water reservoir.
Before connecting, fill the water hoses with coolant.

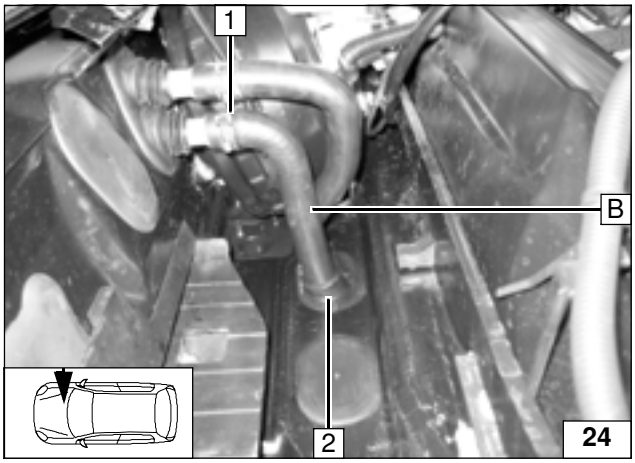
1 Original vehicle spring band clamp.

Connecting the heat exchanger inlet



1 Align the black (sw) rubber profile according to the figure.

Connecting the heater unit outlet



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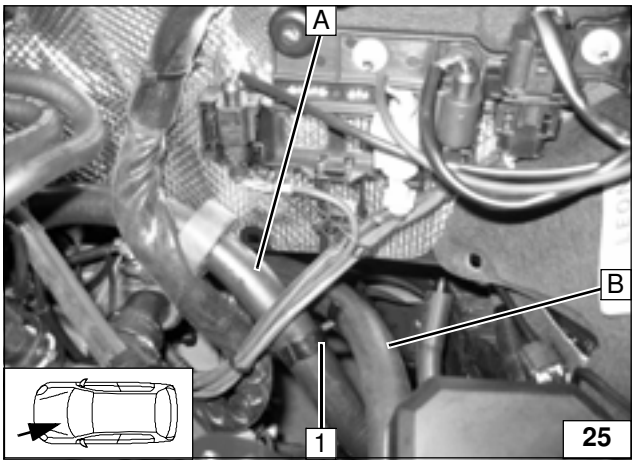
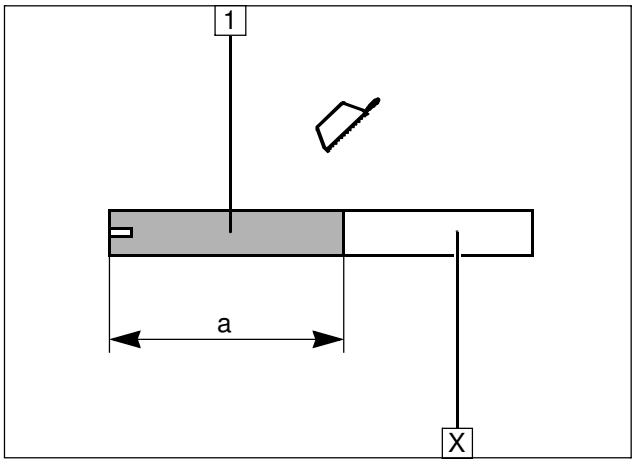
Connecting the heat exchanger inlet



1 Spacer bracket

Inserting spacer bracket

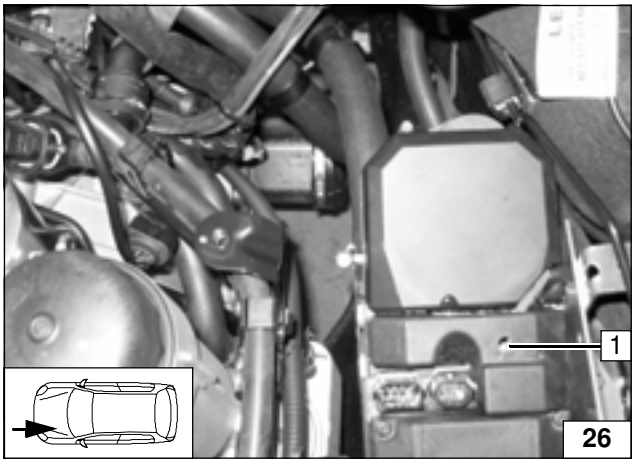


Combustion Air

1 Combustion air pipe
a = 250 mm

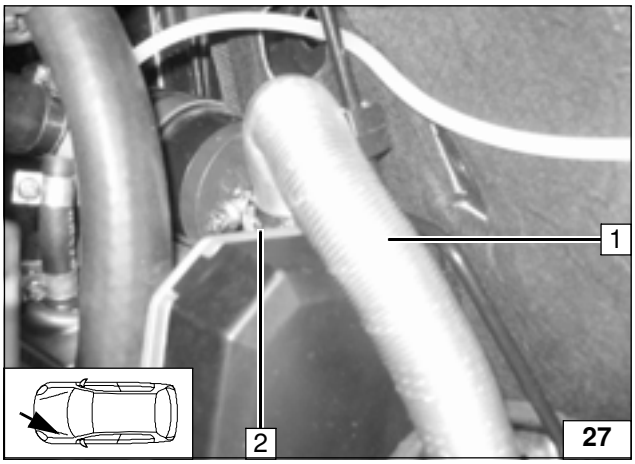
Dispose of section **X**

Cutting the combustion air pipe into sections



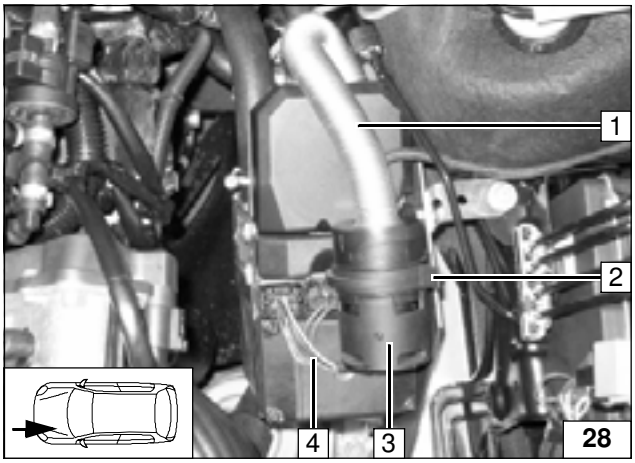
Punch out the perforation in the header unit cover at position **1** and insert the retaining clip.

Inserting retaining clip



1 Combustion air intake pipe
2 Ø 27 mm hose clamp

Assembling the vacuum line



Place the cable harness **4** on the heater unit.

1 Combustion air intake pipe
3 Combustion air intake silencer
2 Retaining clip in bore hole

Assembling the silencer

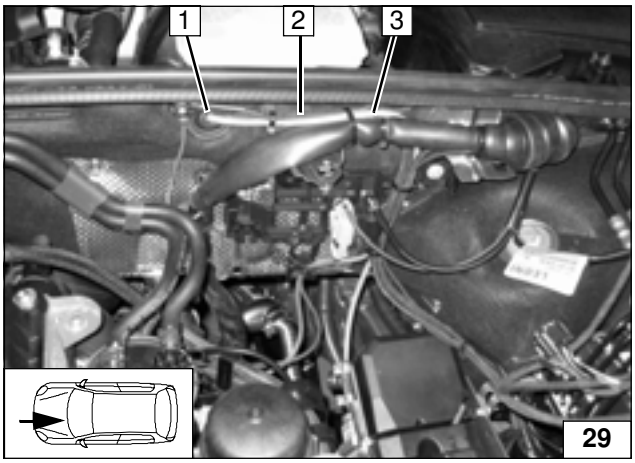
Fuel Connection

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

Catch any fuel running off with an appropriate container.

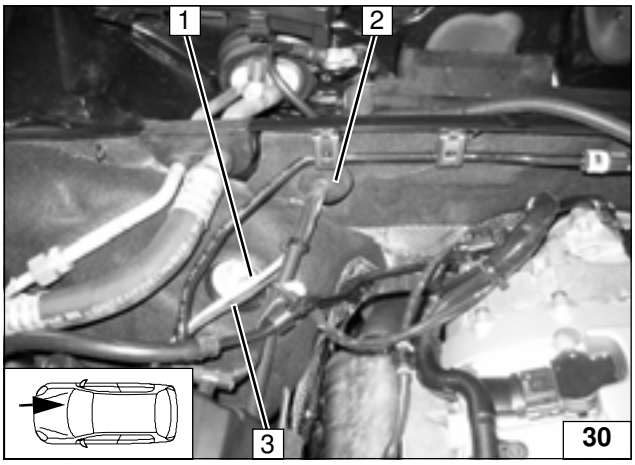
Install fuel line and metering pump cable harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable clips.
Fit the fuel line and cable harness with edge protectors around sharp edges.

WARNING!
The fuel line and cable harness to the metering pump should be installed based on the cable harness installation diagram.



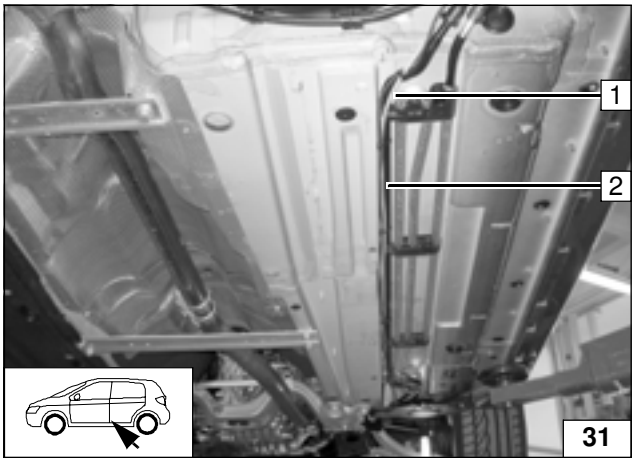
Run the metering pump cable harness **2** and the Mecanyl fuel line **3** through the protective rubber sleeve **1** in the cooling water reservoir to the right side of the vehicle.

Installing lines



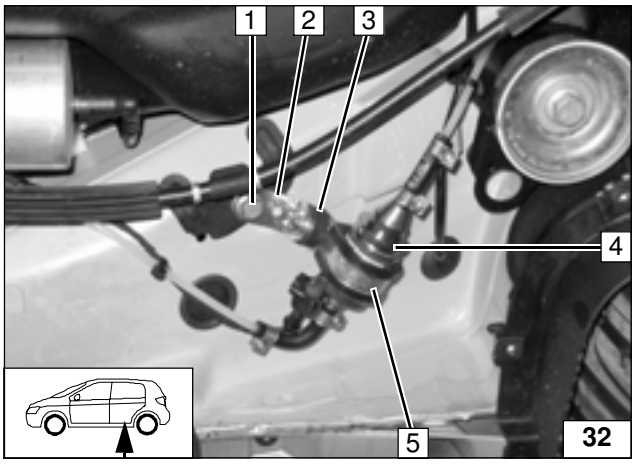
Run the metering pump cable harness **3** and the Mecanyl fuel line **1** from the cooling water reservoir through the protective rubber sleeve **2** along the original vehicle fuel lines to the underbody.

Installing lines



Run the metering pump cable harness **2** and the Mecanyl fuel pipe **1** along the original vehicle fuel lines to the metering pump installation location.

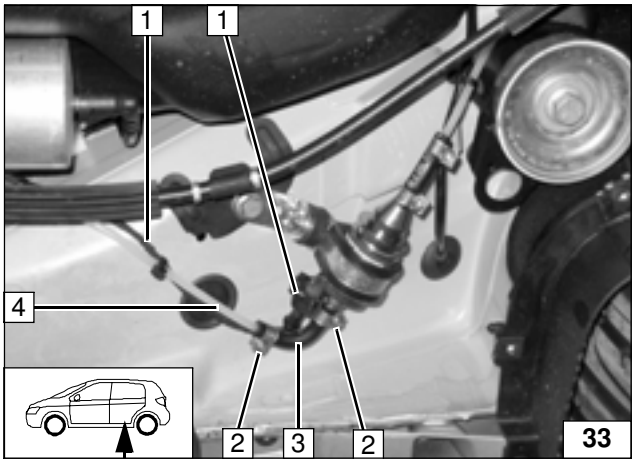
Installing lines



Note the installation position of the metering pump **4**, see the “Installation Instructions”. Installation location is to the right next to the vehicle tank.

2 Angle bracket
1 Original vehicle bolt
5 Rubberized tube clamp
3 Silentblock, flanged nut [2x] on the angle bracket

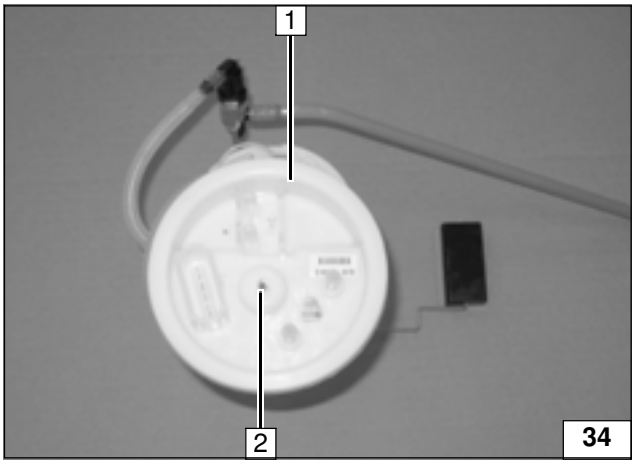
Metering pump installation location



Fuel line from the heater unit **4** on the pressure side of the metering pump [side with connector].

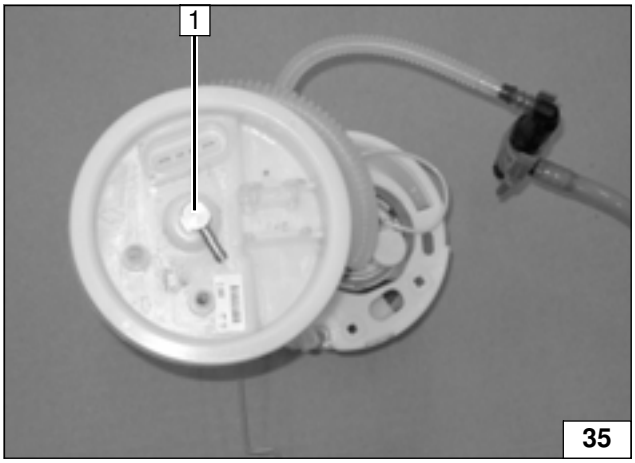
3 90° moulded hose, hose clamps Ø 10 mm [2x]
2 Ø 10mm hose clamps [2x]
1 Metering pump cable harness, wire seals, flat connector, connector housing

Connecting the metering pump



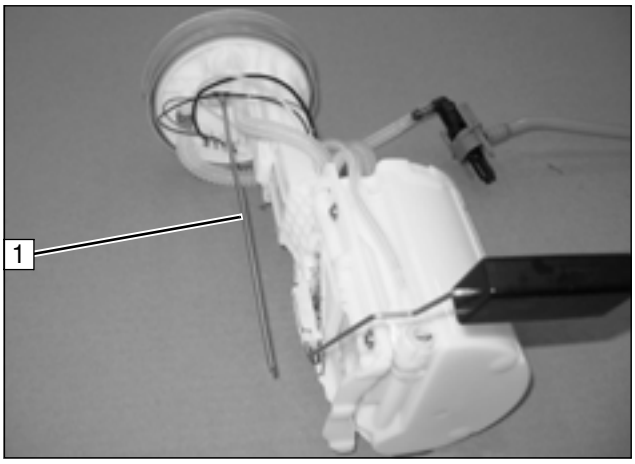
Remove the tank mounting**1** according to the manufacturer's instructions.
Drill Ø 6mm bore hole at position **2** in the middle of the cutout.

Fuel take-off



1 Tank extracting device

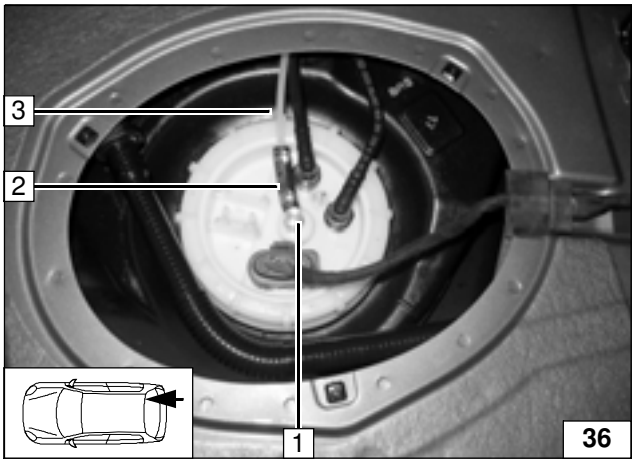
Inserting tank extracting device



Cut the tank extracting device to size according to the template.

1 Tank extracting device

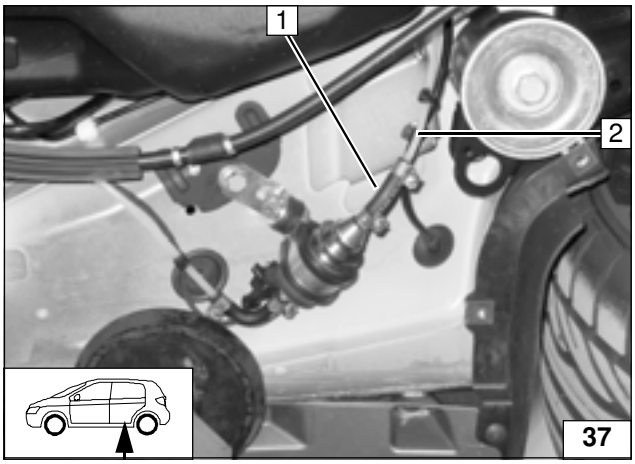
Inserting tank extracting device



Install the tank mounting according to manufacturer's instructions. Check that the fuel injector can be freely accessed.

1 Tank extracting device
3 Additional Mecanyl pipe
2 Hose section, Ø 10 mm hose clamps [2x]

Connecting the fuel line

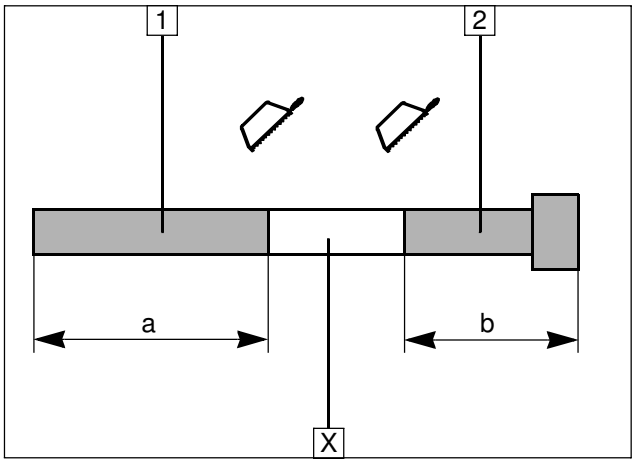


Fuel line from the tank extracting device **2** on the intake side of the metering pump [side without connector].
Check the position of the components; adjust if necessary. Check that these rotate freely.

1 Hose section, Ø 10 mm hose clamps [2x]

Connecting to the metering pump

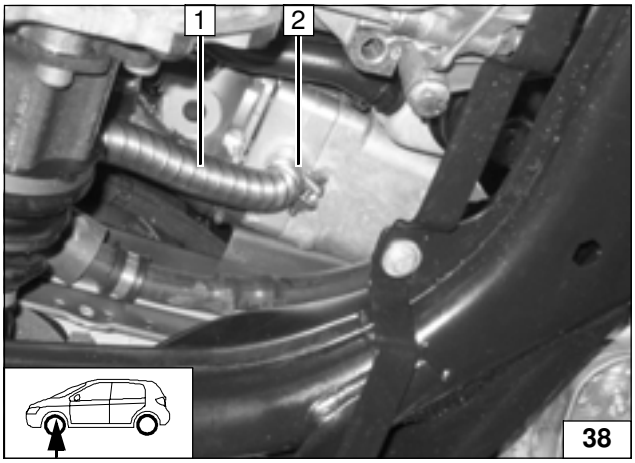
Exhaust System



1 Exhaust pipe
a = 380 mm
2 Exhaust end section
b = 140 mm

Dispose of section **X**

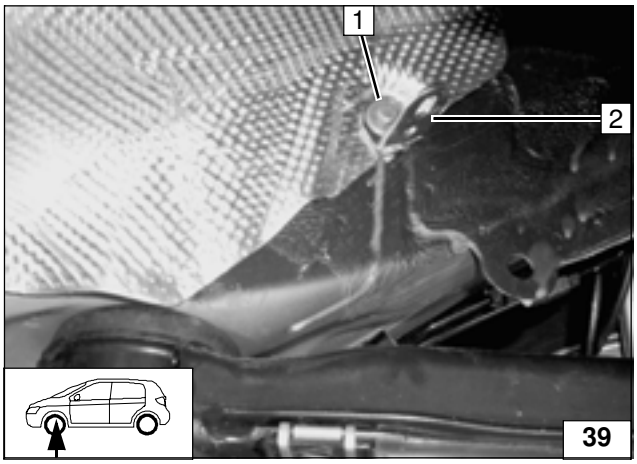
Preparing the exhaust pipe



The illustration shows a standard gear shift vehicle.

1 Exhaust pipe
2 Hose clamp

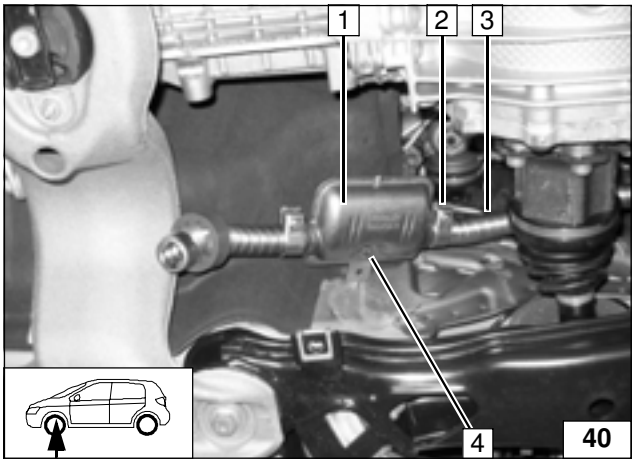
Assembling the exhaust pipe



The illustration shows a standard gear shift vehicle.

2 Angle bracket
1 Original vehicle bolt

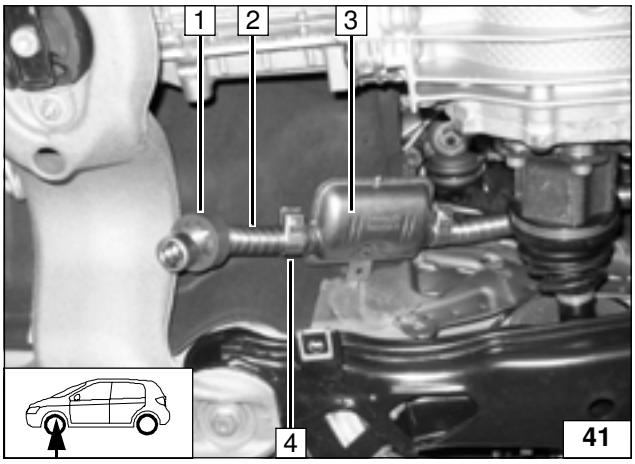
Assembling the angle bracket



The illustration shows a standard gear shift vehicle.

2 Exhaust pipe
1 Exhaust silencer
2 Hose clamp
4 M6x20 bolt, body washer, flanged nut on bracket

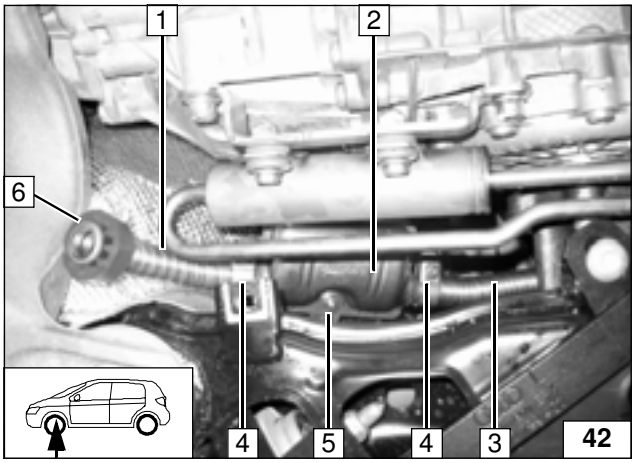
Assembling the silencer



The illustration shows a standard gear shift vehicle.

3 Exhaust silencer
2 Exhaust end section
4 Hose clamp
1 Red (rt) rubber profile

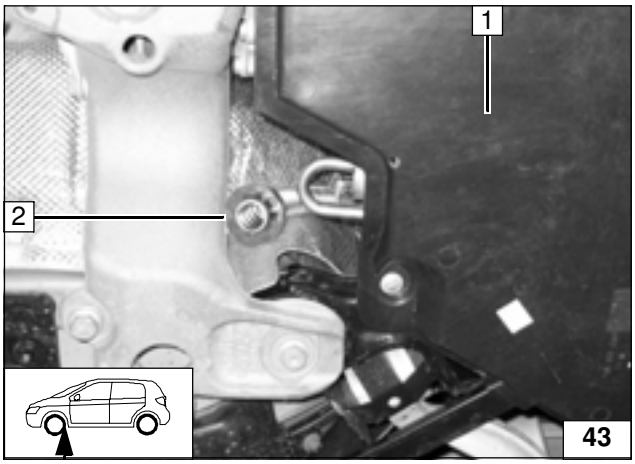
Assembling the exhaust end section



Informative illustration shows a vehicle with an automatic transmission.

2 Exhaust silencer
5 M6x20 bolt, flanged nut on bracket
3 Exhaust pipe
1 Exhaust end section
4 Hose clamp [2x]
6 Slide on the red (rt) rubber profile

Assembling the exhaust system



Assembling the underride protection **1**.

2 Position red (rt) rubber profile

Assembling the underride protection

Final Work

WARNING!
Reassemble disassembled components in reverse order.
Check that all hose lines, hose, spring band clamps and universal clips, and all electrical connections are securely fastened.
Secure all loose lines using cable clip.
Only use manufacturer-approved coolant.
Spray heating unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect battery.
- Start engine, bleed coolant circuit according to the vehicle manufacturer's specifications, top up with coolant.
- Set the time switch.
- Set the manual air conditioning or automatic air conditioning according to the "operating instructions for the end customer".
- Check that the auxiliary heating operates properly, see operating instructions / installation instructions.
- Attach the "Switch off auxiliary heating before re-fuelling" sticker onto the left side of the B-pillar.

Webasto
Feel the drive

Webasto AG
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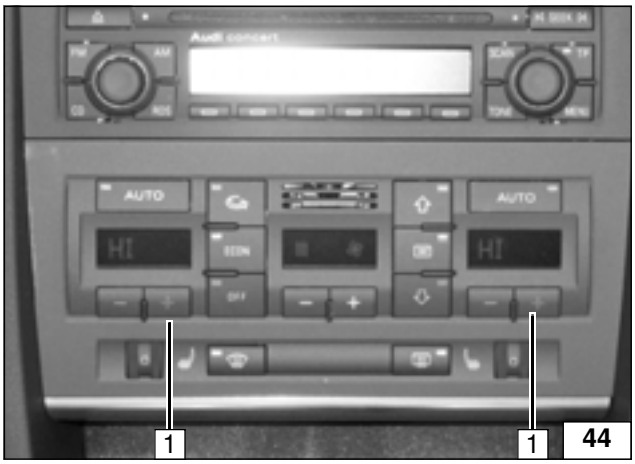
Operating instructions for the end customer

Please remove page and add to the vehicle operating instructions.

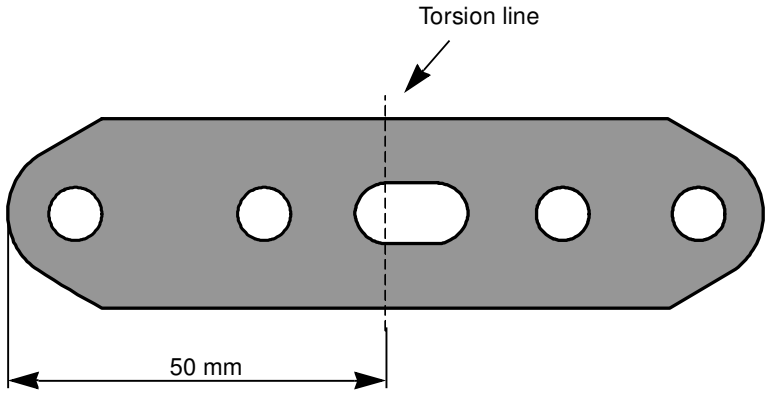
Before parking the vehicle, make the following settings:

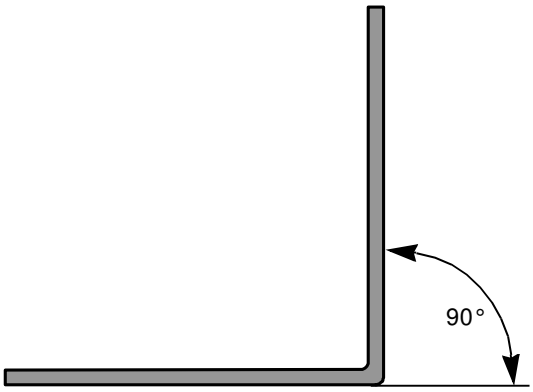


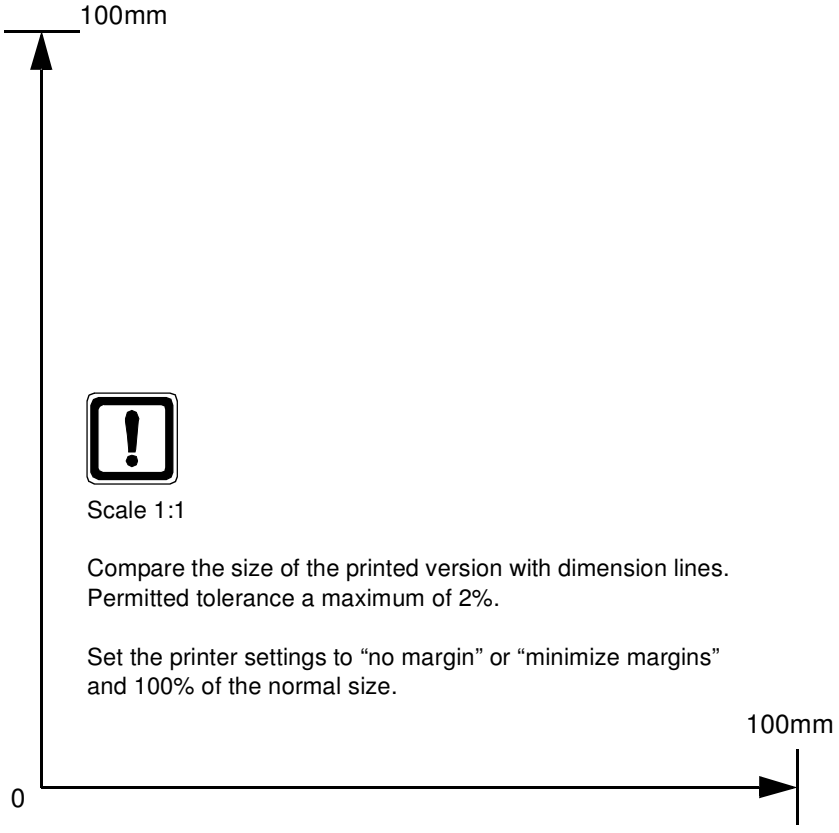
1 Temperature to "HI"

For vehicles with automatic air conditio-ning

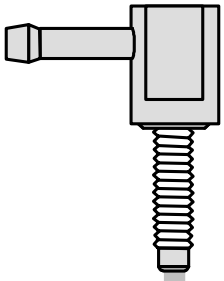
Fastening Strap Template

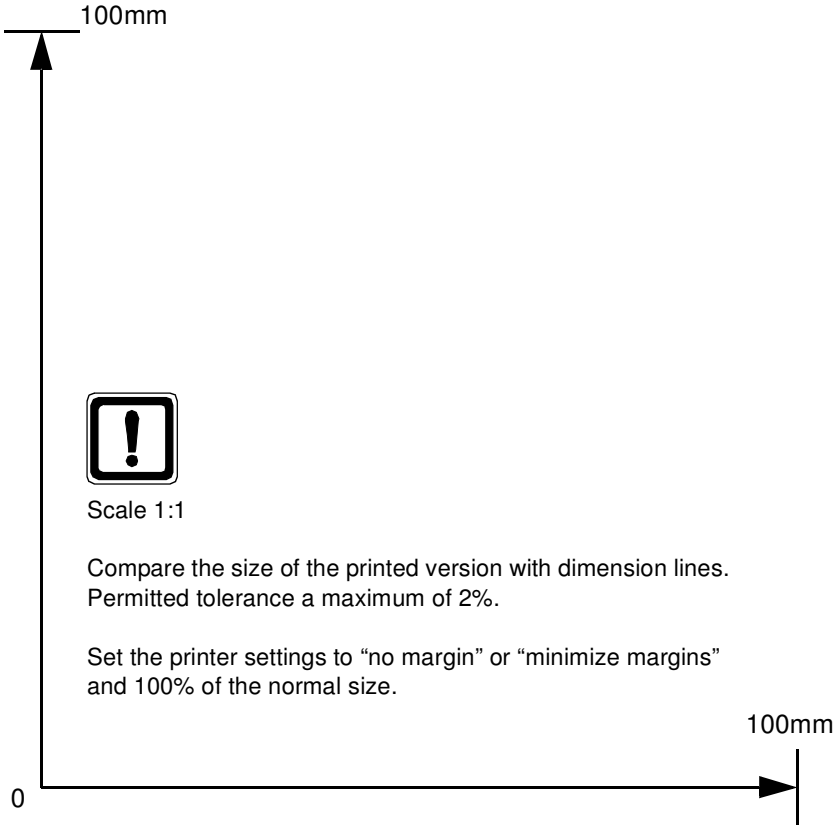






Tank Extracting Device Template





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 “minimize margins” and 100% of the normal size.