

Water Heater Unit



Thermo Top E Additional Heater ^{e1} 00 0003

Thermo Top C Additional Heater ^{e1} 00 0002

Installation Instructions



SUBARU B9 Tribeca

Gasoline

from Model Year 2007

For left-hand drive vehicles only



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 warnings.

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	B9 Tribeca	WX	e13 * 2001 / 116 * 0190* ...

Engine type	Engine model	Output in kW	Displacement in cm ³
EZ 30	Gasoline	180	3000

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 Unit/Installation Kit

Quantity	Description	Order No.:
1	Retail accessories with desired heater control	See price list
1	Installation kit for SUBARU B9 Tribeca Gasoline	1311570A

Heater unit recommended for the respective vehicle class:

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

The selection of the heater unit 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 B9 Tribeca Gasoline vehicles - for validity, see page 2 - from model year 2007 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* 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).

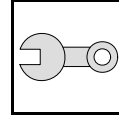
Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric Thread-Setter Kit
- Torx E 5 3/8" nut
- Flexible socket wrench, 7 mm
- Center bit, 36 mm dia

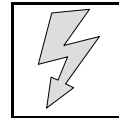
Explanatory Notes on Document

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.

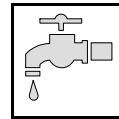
Mechanical system



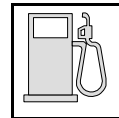
Electrical system



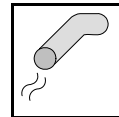
Coolant connection



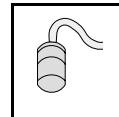
Fuel connection



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.



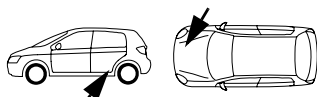
Specific risk of fire or explosion.



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!

- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- 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.
- Disconnect the battery "earth" or "ground" connection.
- Depressurize the cooling system!
- Pull off engine design cover
- Remove the air filter together with the intake hose.
- Remove the footwell trim and the lower instrument panel trim on the driver's side
- Detach the fuse and relay box (central electrical box) located behind the trim
- Remove right rear single seat
- Open the right-hand fuel sender service lid
- Remove the right-hand outer sill trim
- Remove the front bumper cover
- Remove the horn with the bracket on the right
- Remove the front right wheel well trim
- Remove the cover below the fuel tank at the rear right

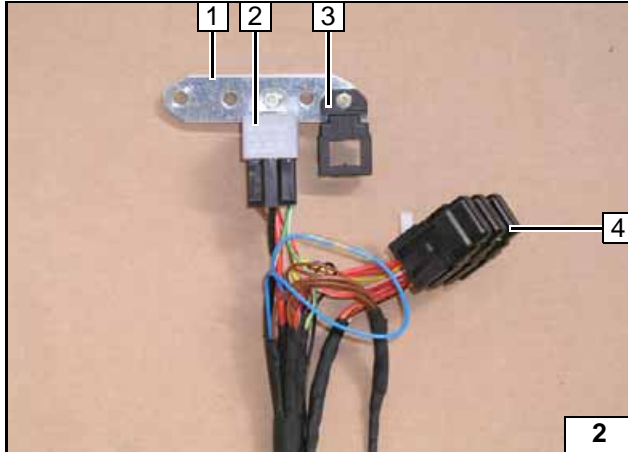
Remove page 23 "Operating Instructions for End Customer" and insert with vehicle operating instructions.



Heater unit installation location

1 Heater unit

Installation location



Preparing electrical system

Replace fuse F3 (25 A) with 7.5 A fuse!

- 1 Perforated bracket
- 2 K3 M5x12 bolt, washers, M5 nut
- 3 Fuse holder retaining plate, M5x12 bolt, washers, M5 nut
- 4 Fuse holder



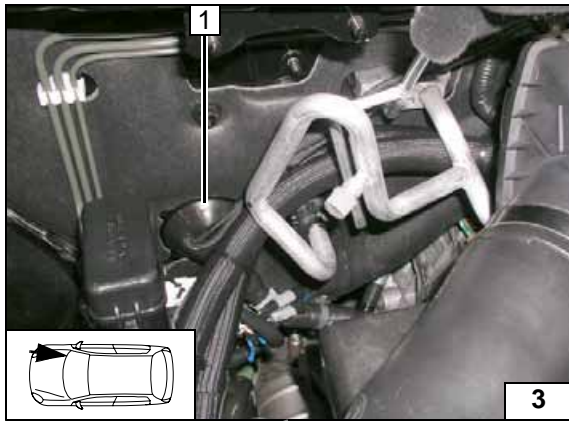
Preassembling relay and fuse holder



Electrical Connections

Wiring harness pass through

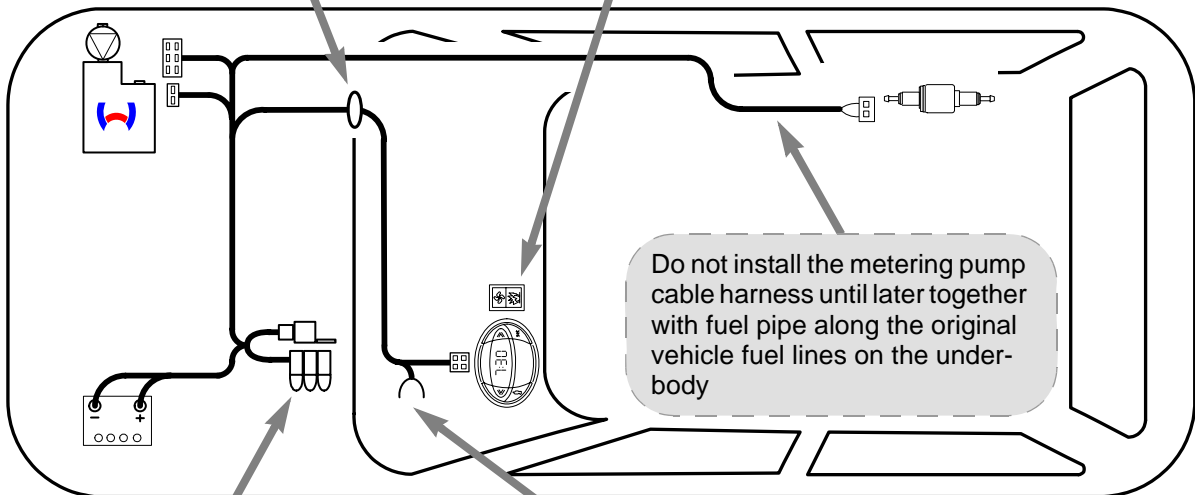
- 1 Protective rubber plug



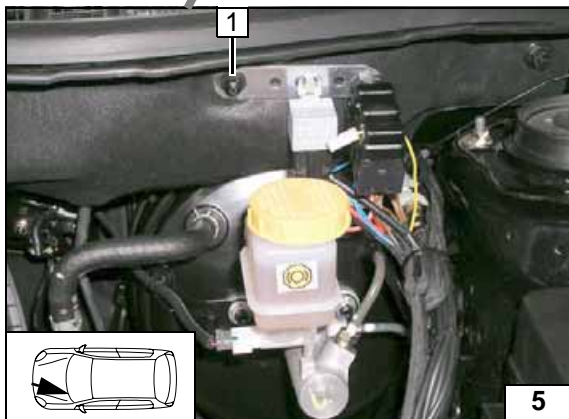
Digital timer

The installation location must be coordinated with the customer!

- 1 Digital timer
- 2 Instrument panel trim on driver's side

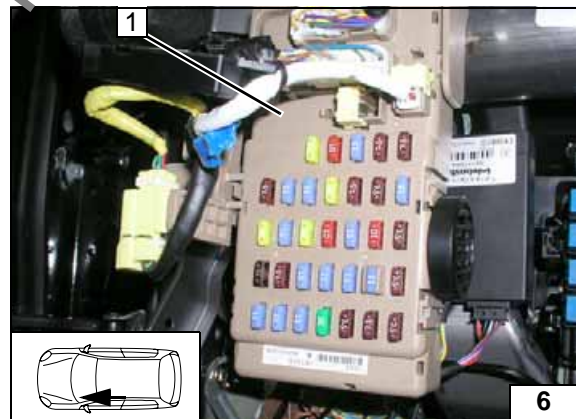


Wiring harness installation diagram



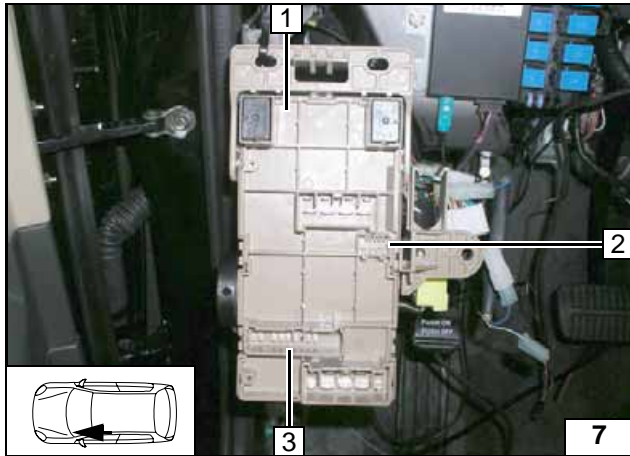
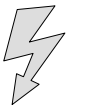
Fuse holder, K3 relay

- 1 Plastic nut



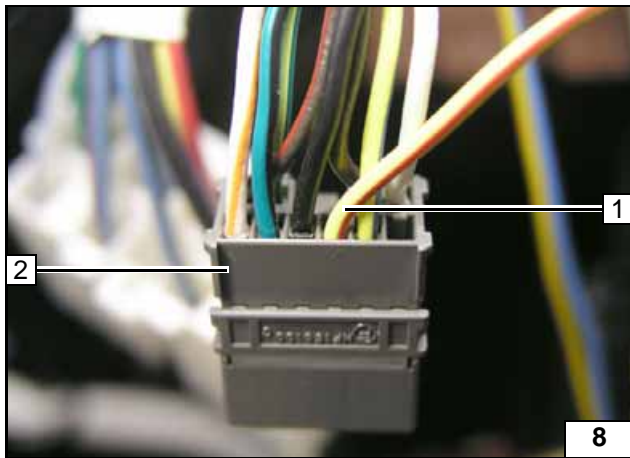
Fan connection in central electrical box

- 1 Fuse box



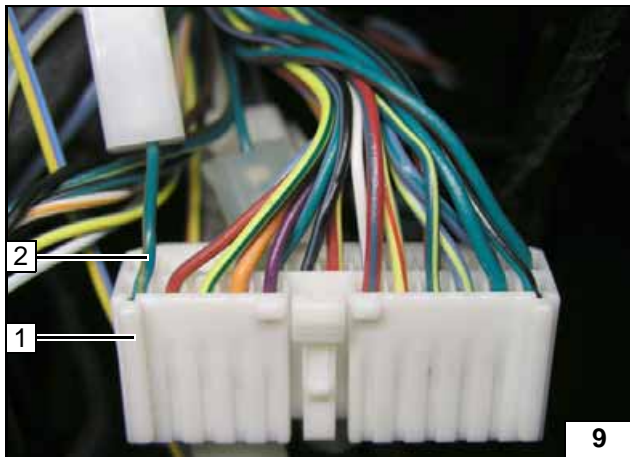
- 1 Central electrical box detached, turned
- 2 Socket for 10-pin connector (gray)
- 3 Socket for 24-pin connector (white)

Discon-necting connector from cen-tral electri-cal box



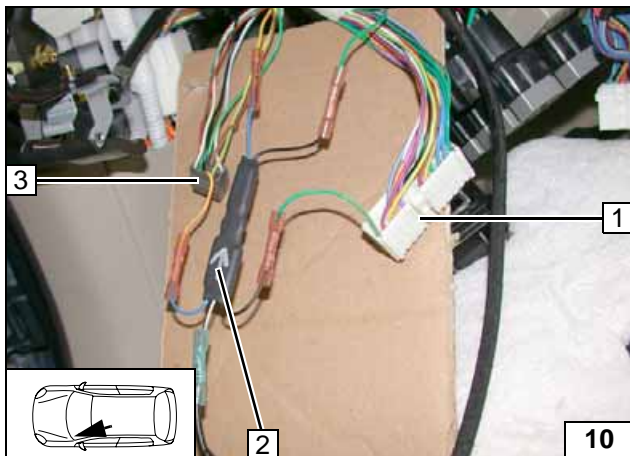
- 1 Ge/rn wire from PIN 7
- 2 10-pin connector (gray)

10-pin con-connector



- 1 24-pin connector (white)
- 2 Gn/or wire from PIN 1

24-pin con-connector



Produce connections as shown in wiring dia-gram.

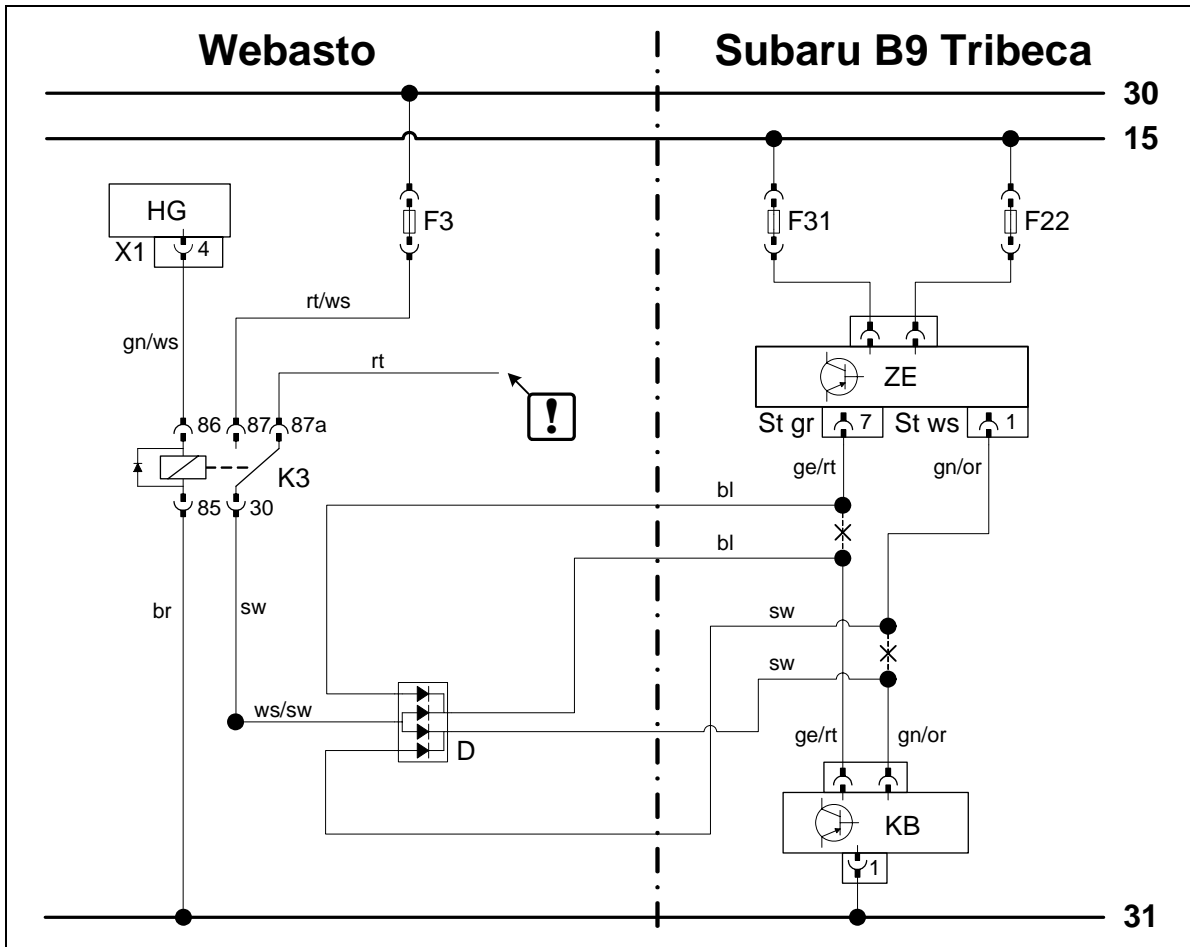
- 1 24-pin connector (white)
- 2 Diode group D
- 3 10-pin connector (gray)




Fan con-troller



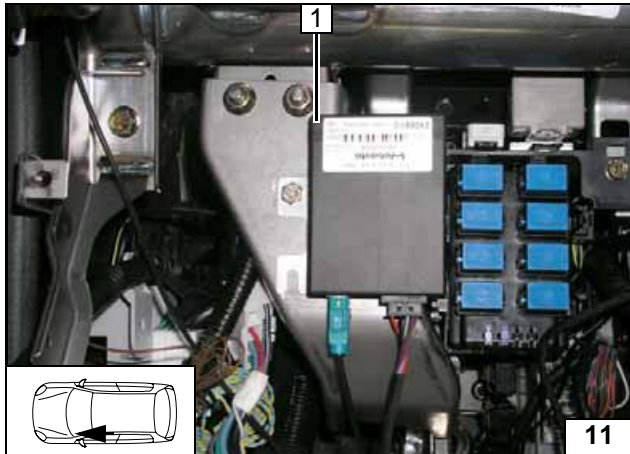
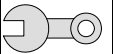
Automatic air-conditioning fan controller



Wiring diagram

Webasto components		Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	ZE	Central electrical box	rt	red
X1	6-pin connector	KB	Air-conditioning control element	ws	white
F3	Fuse, 7.5 A	F31	Fuse, 7.5 A	sw	black
K3	Fan relay	F22	Fuse, 15 A	br	brown
D	Diode group			gn	green
				bl	blue
				ge	yellow
				or	orange
					Insulate wire ends and tie back
				X	Cutting point
				Wiring colors may vary.	

Legend



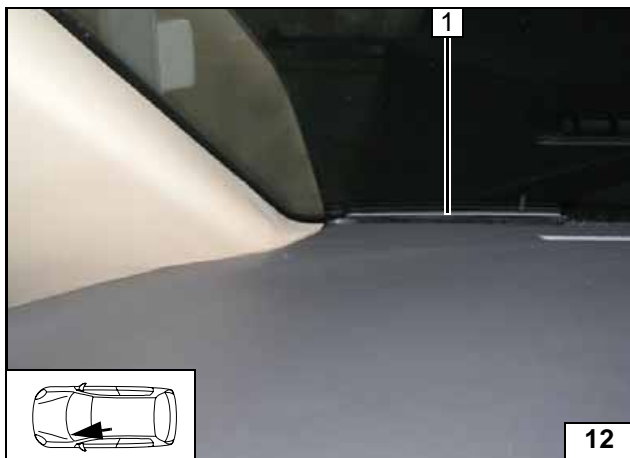
Remote option (Telestart)

Drill out bracket hole to 6.5 mm dia.

- 1 Receiver, M6x20 bolt, M6 flanged nut

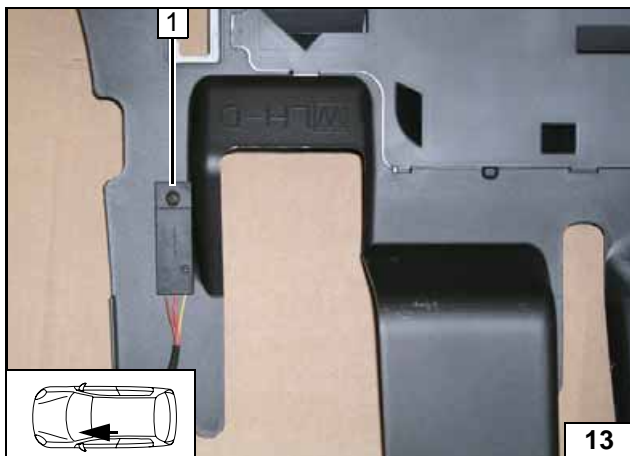


Installing receiver



- 1 Antenna

Installing antenna

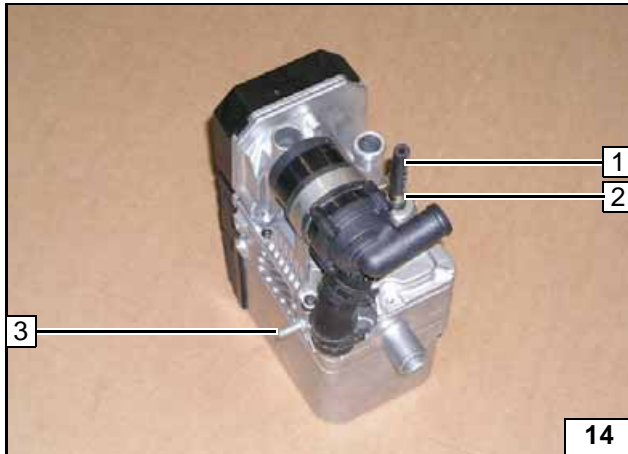
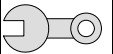


Temperature sensor for HTM100 only

Mount temperature sensor 1 on footwell cover on driver's side with suitable means



Installing temperature sensor



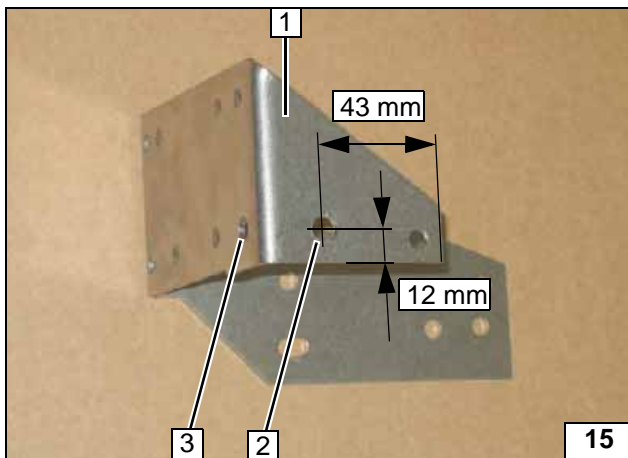
Preparing heater unit

Screw in Eject screw **3**, remove Torx wrench surface.

- 1 Hose section
- 2 10 mm dia. hose clamp



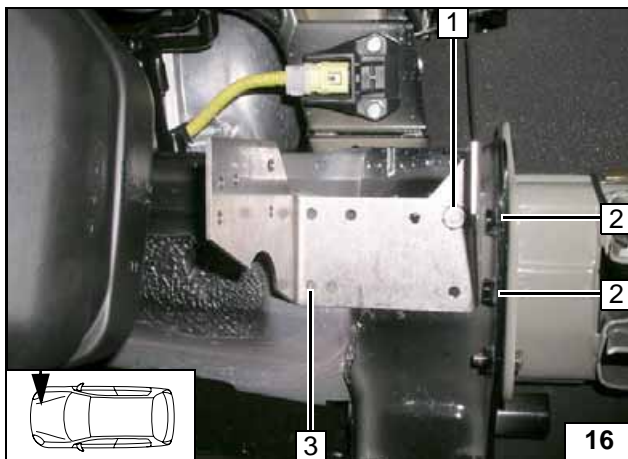
Preparing heater unit



Preparing installation location

- 1 Bracket
- 2 9 mm dia. hole
- 3 Drill out 9 mm dia. hole

Drilling out bracket hole

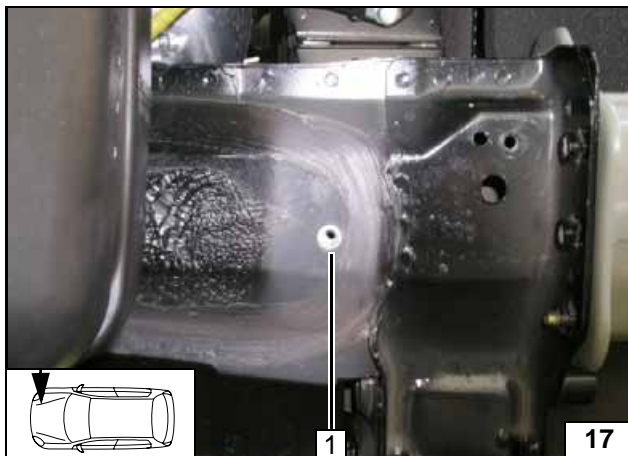


Remove vehicle screws at position **2** [2x]. Loosely premount bracket at position **1**. Copy hole pattern at position **3** to frame side member. Remove bracket.

- 1 M8x20 bolt, spring lockwasher in existing threaded hole



Copying hole pattern

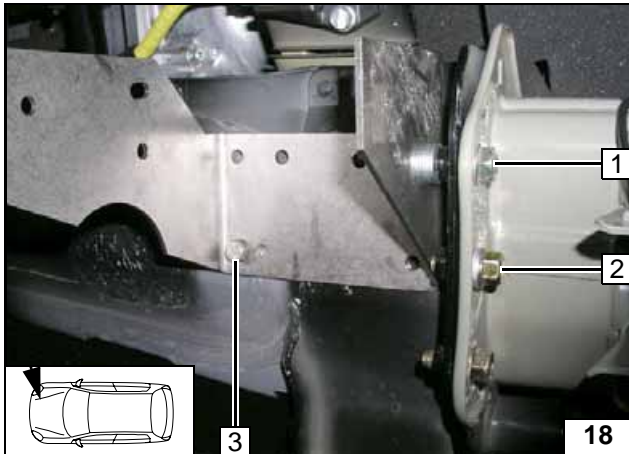
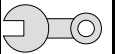


Coat hole with anti-corrosion agent.

- 1 Install rivet nut in 9.1 mm dia. hole

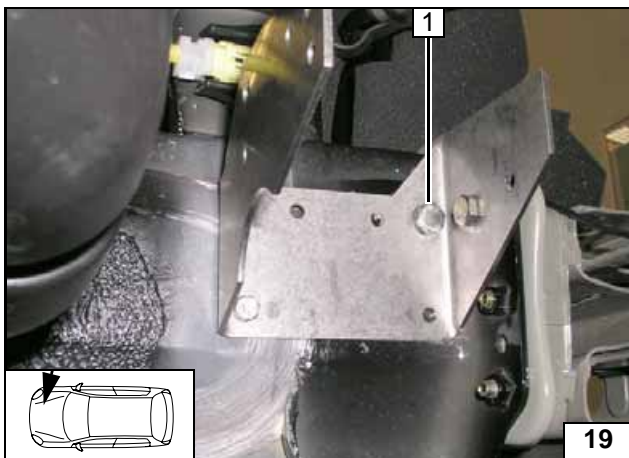


Installing rivet nut



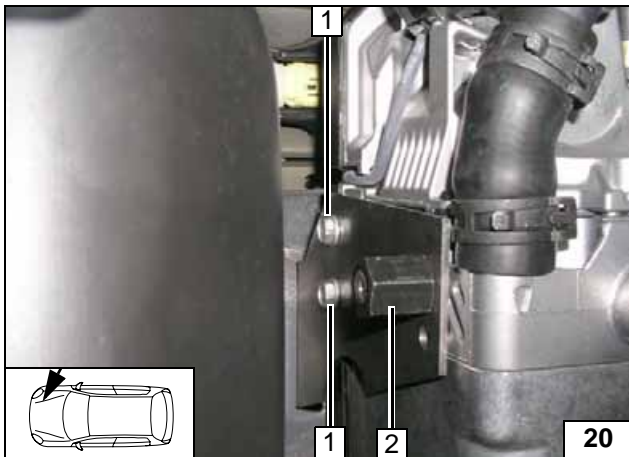
- 1 M8x30 bolt, washer [3x] between bracket and weld-on nut, M8 nut.
- 2 Vehicle M8 bolt, washer [2x] between bolt head and flange.
- 3 M6x20 bolt, spring lockwasher

Installing bracket



- 1 M8x20 bolt, spring lockwasher

Installing bracket



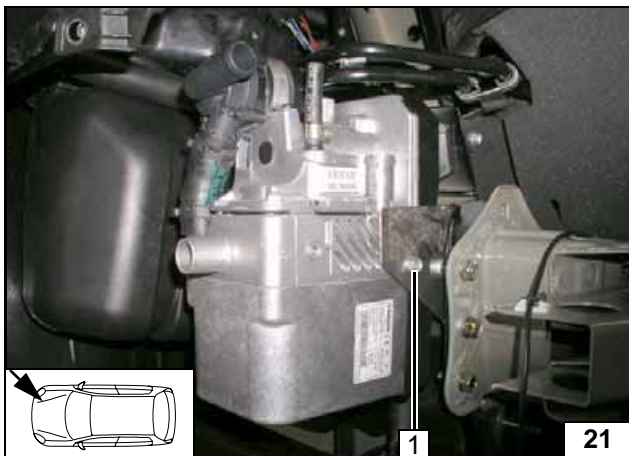
Installing heater unit

Connect wiring harness before installation. Eject screw bolt, tightening torque 10 Nm!

- 1 Eject screw [2x]
- 2 20 mm spacer nut on stud bolt



Installing heater unit

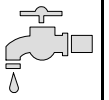


Eject screw bolt, tightening torque 10 Nm!

- 1 Eject screw



Installing heater unit



Coolant connection

WARNING!

Tighten all hose clamps to 2.0 + 0.5 Nm.

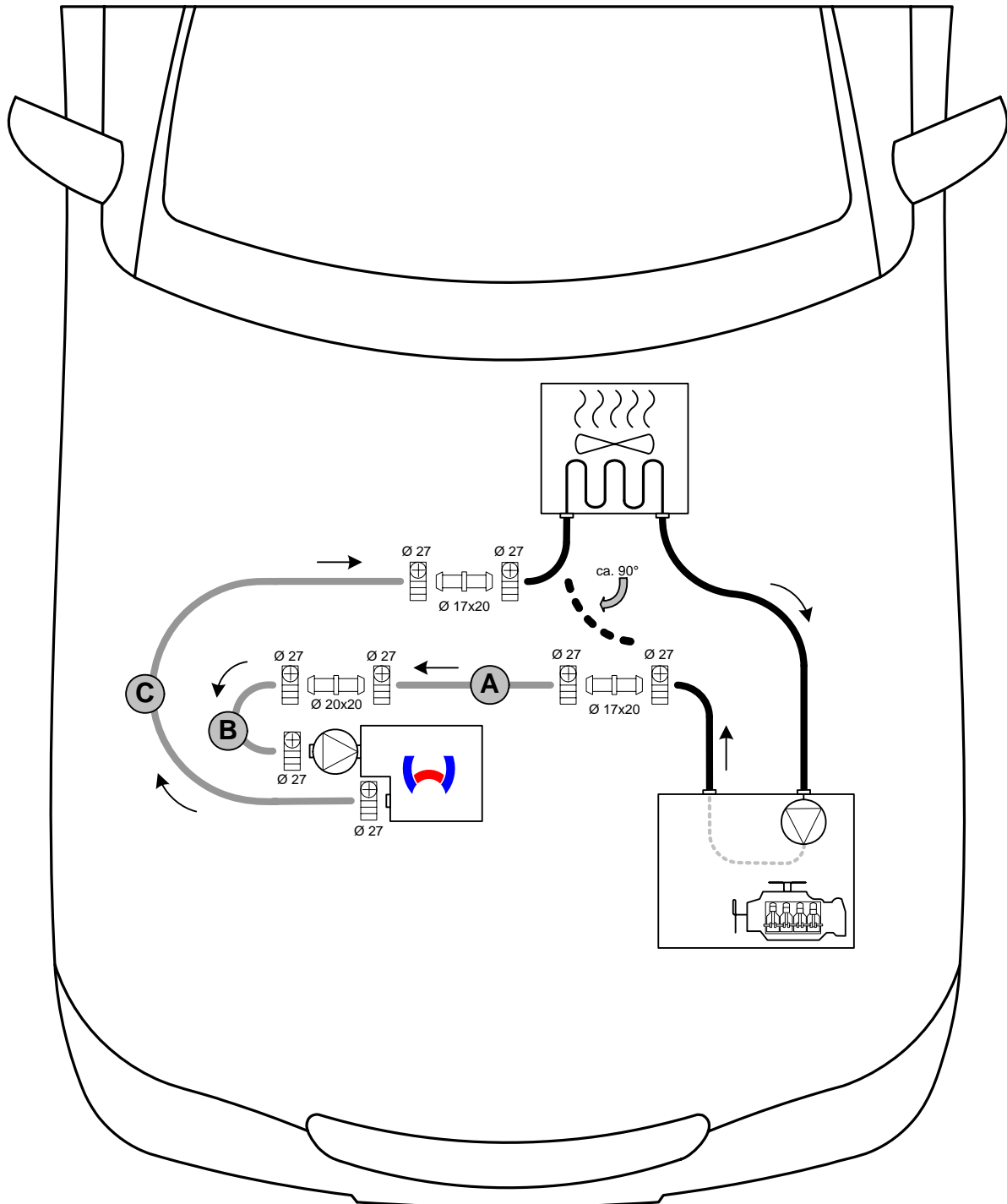
Any coolant running off should be collected using an appropriate container!

Install hoses so that they are kink-free! Unless specified otherwise, always fasten using cable ties. Position hose clamps so that no other hose can be damaged!

The connection should be "inline" based on the following diagram:



Coolant routing diagram

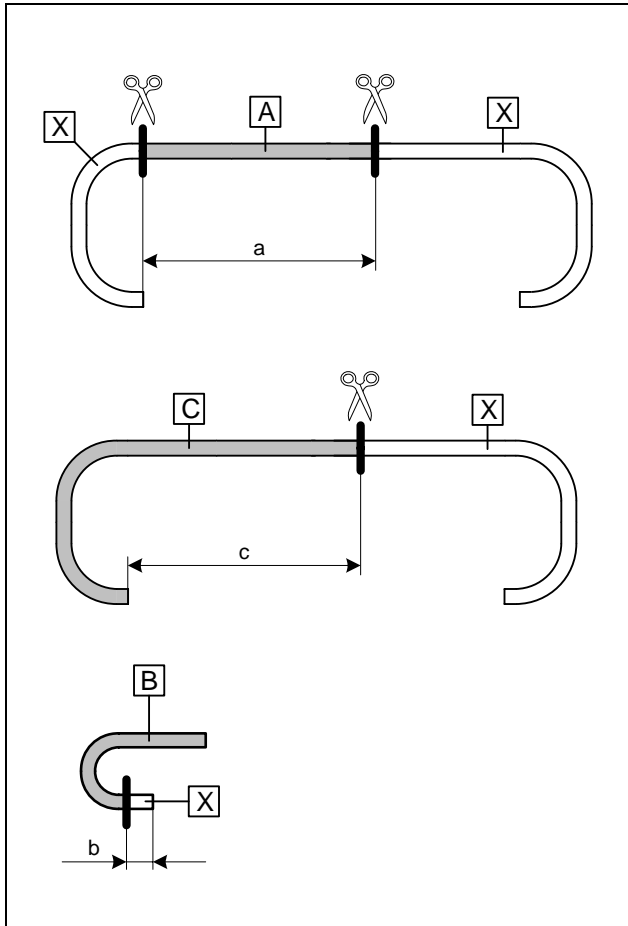


Symbol	Description
	Connecting pipe

Symbol	Description
	Hose clamp

Symbol	Description
	Spring clip

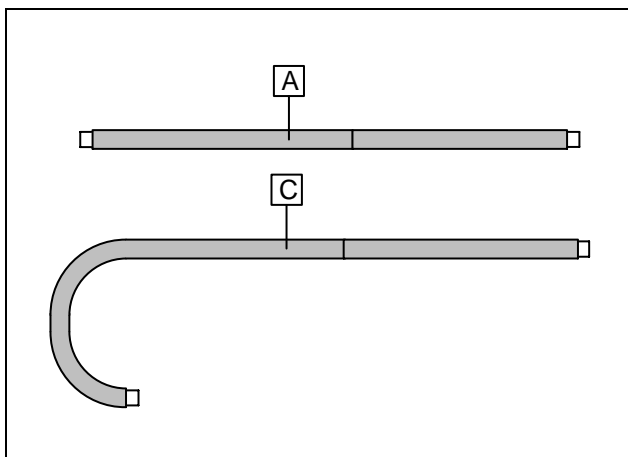




a = 1420 mm
 c = 1230 mm
 b = 20 mm
 B = 180° molded hose

Discard section X

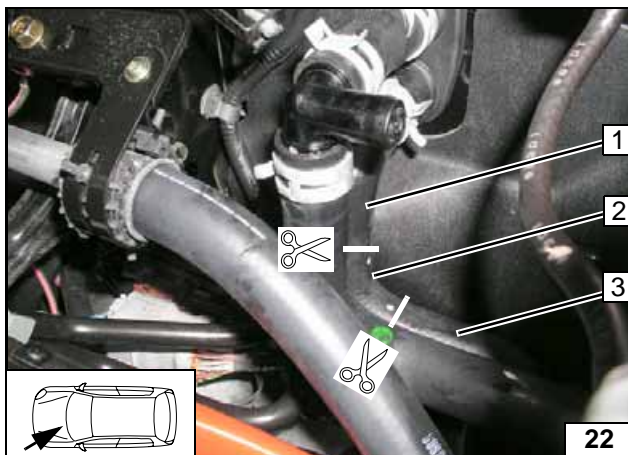
Cutting coolant hoses to length



Push braided protection hoses onto hose A and C and cut to length.



Pushing on braided protection hoses

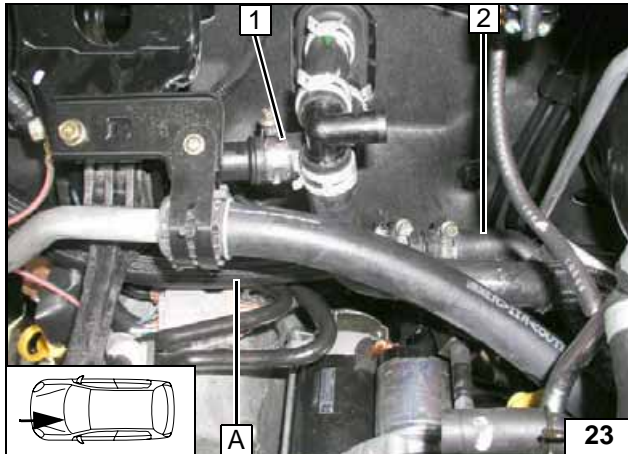
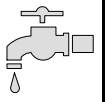


Cut out 90° elbow 2 at markings and discard!

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



Cutting point

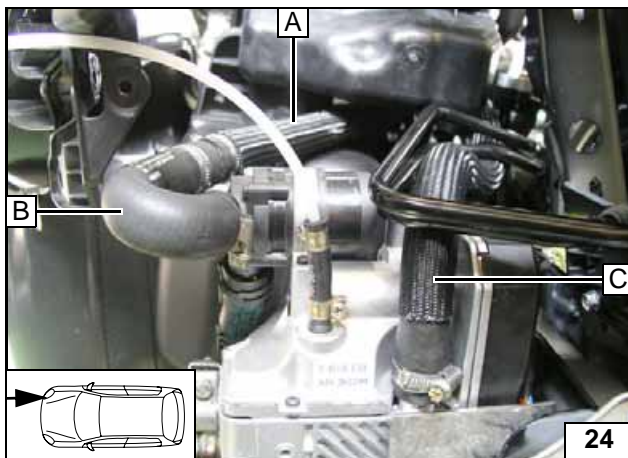


90° elbow 1 on connection piece of heat exchanger inlet turned approx. 90° to right!

2 Engine outlet hose section



**Con-
nec-
tion to en-
gine outlet**

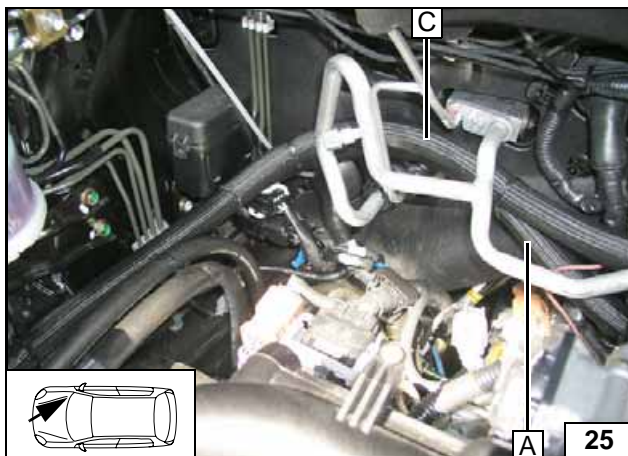


Hose B with shortened leg on heater unit inlet!

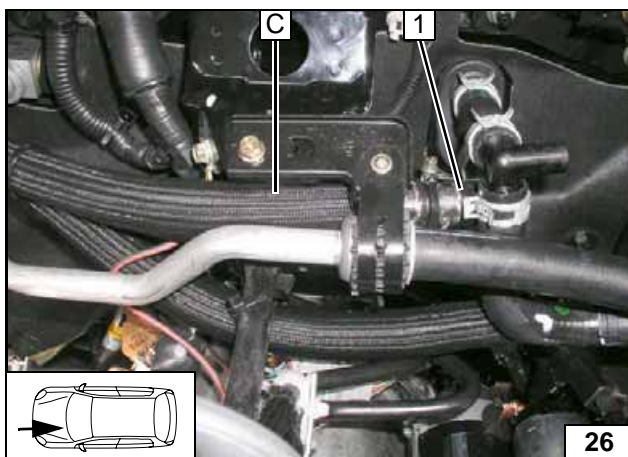
Hose C with 180° elbow on heater unit outlet!



**Con-
nec-
tion to
heater unit**



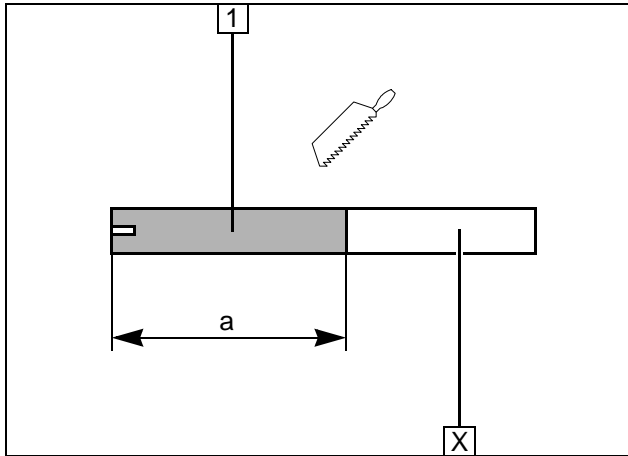
**Routing in
engine
compart-
ment**



Before connecting, fill the coolant hoses with coolant.



**Con-
nec-
tion to heat
exchanger
inlet**

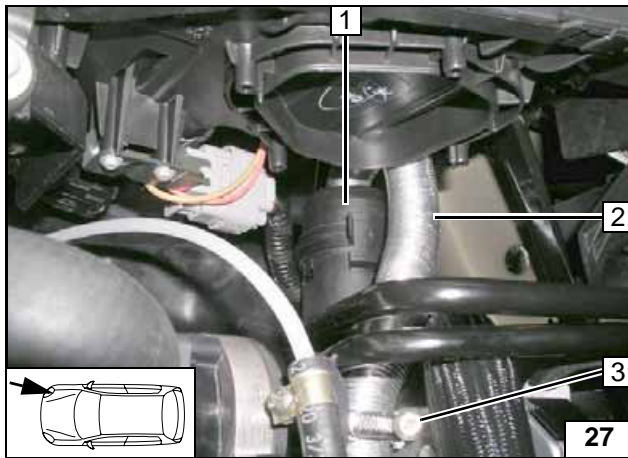


Combustion air

- 1 Combustion air pipe
a = 320 mm

Discard section X

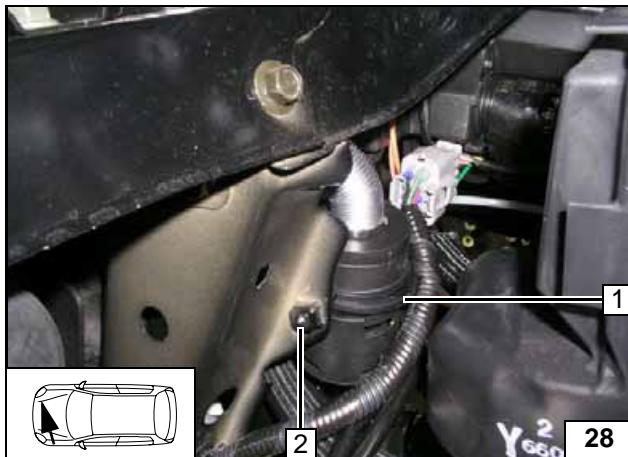
Cutting combustion air pipe to length



- 1 Combustion-air intake muffler
- 2 Combustion-air intake pipe
- 3 27 mm dia. hose clamp



Installing intake pipe



- 1 Retaining clip in hole
- 2 Hole



Installing muffler



Fuel Connection

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.

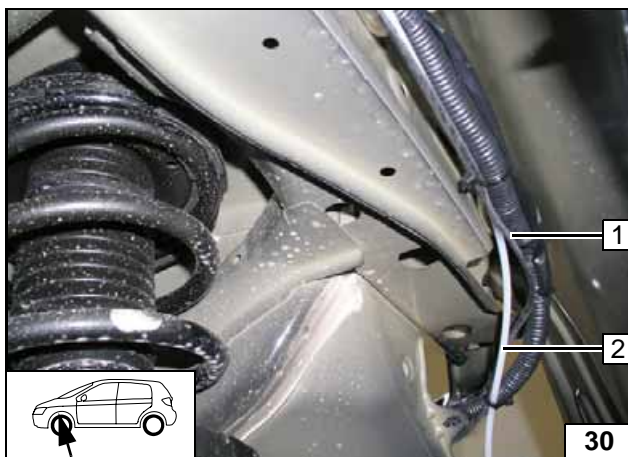
WARNING!

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



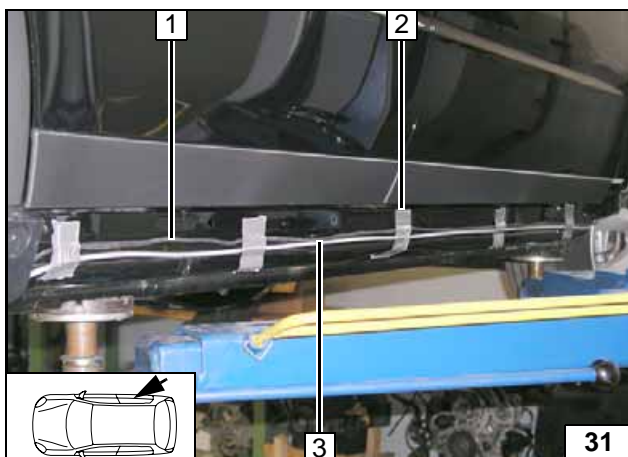
- 1 10 mm dia. hose clamp
- 2 Mecanyl fuel line

Con-
nec-
tion to
heater unit



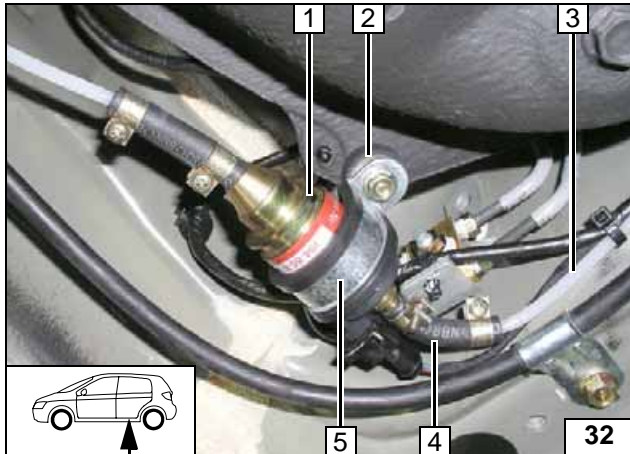
- 1 Metering pump wiring harness
- 2 Mecanyl fuel line

Routing in
wheel well



- 1 Metering pump wiring harness
- 2 Cloth tape
- 3 Mecanyl fuel line

Routing in
door sill

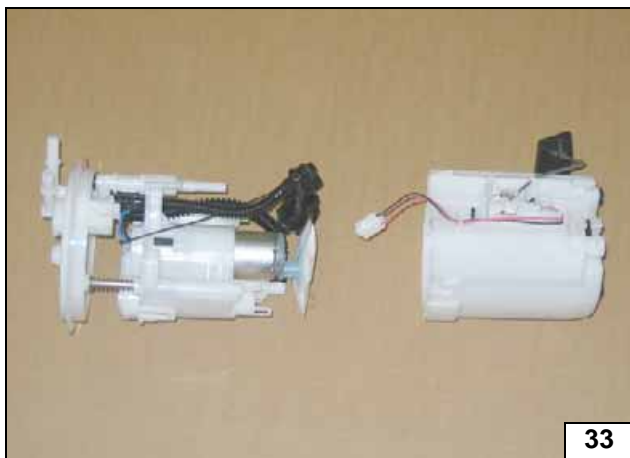


Ensure proper installation position of metering pump **1**, see "Installation Instructions". Installation location in front of vehicle fuel tank! Fuel line from heater unit **3** on pressure side of metering pump [side with connector].

- 2** Silent block, flanged nut [2x]
- 4** Hose section, 10 mm dia. hose clamp [2x]
- 5** Rubber-coated pipe clamp



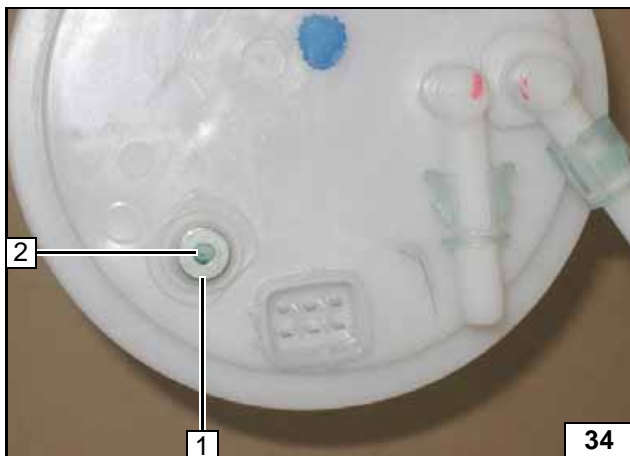
Installing metering pump



Remove and dismantle right-hand fuel-tank sending unit according to manufacturer's specifications!



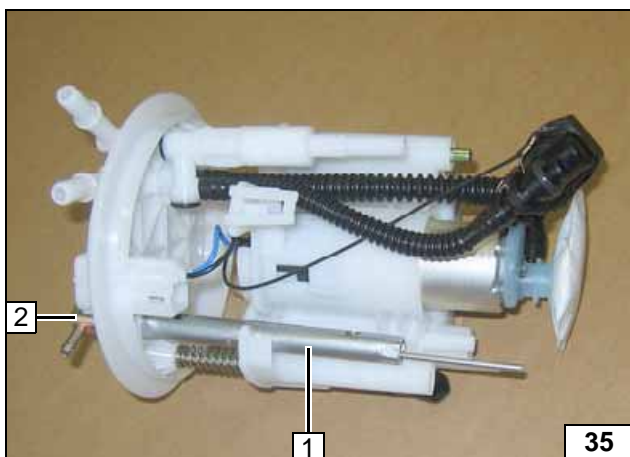
Removing fuel



- 1** 4 mm dia. large diameter washer centered on blind connection piece
- 2** Copy hole pattern and drill 6 mm dia. hole exactly vertically!



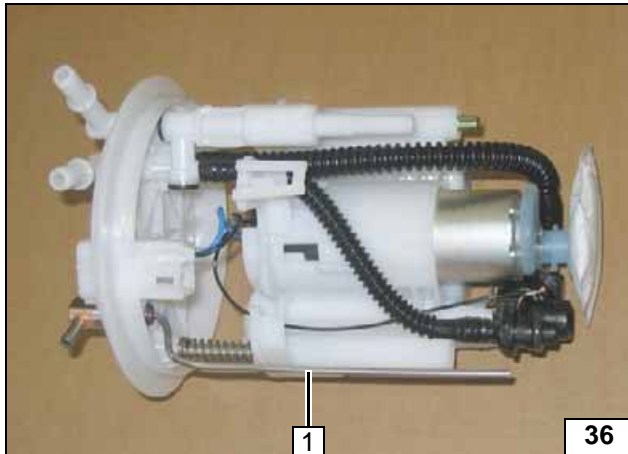
Drilling hole in fuel-tank sending unit



Insert fuel standpipe **2** and secure with tubular box wrench **1**.



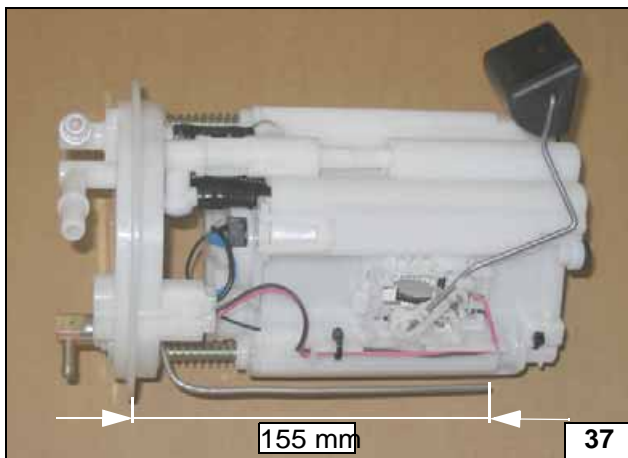
Installing fuel standpipe



Bend fuel standpipe 1 to shape and completely assemble fuel-tank sending unit.



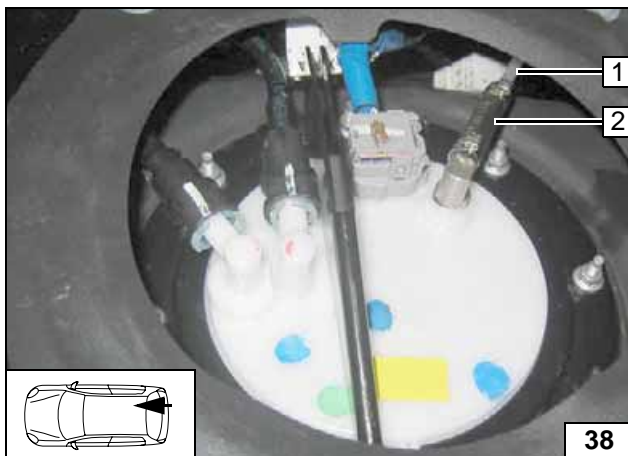
Aligning fuel standpipe



Correct bending of fuel standpipe if necessary. Ensure freedom of movement for fuel-tank sending unit pushed together to installation height. Cut fuel standpipe to length.



Aligning fuel standpipe



1 Remaining section of Mecanyl fuel line
2 Hose section, 10 mm dia. hose clamp [2x]

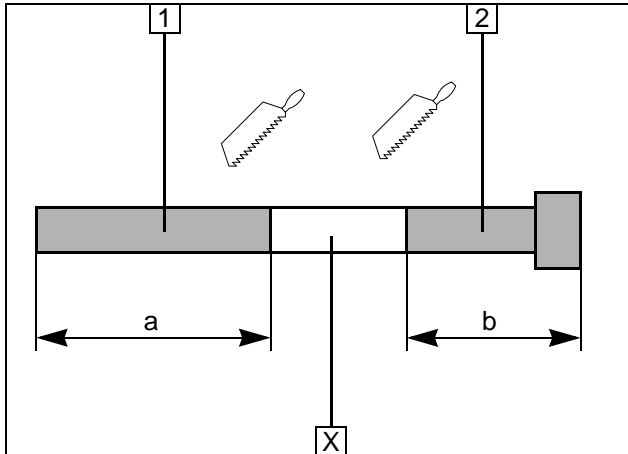
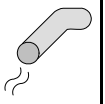
Connection on fuel standpipe



Fuel line from fuel standpipe on intake side of metering pump [side without connector]. Check the position of the components; adjust if necessary. Check that they have free clearance.



Connecting intake line to metering pump

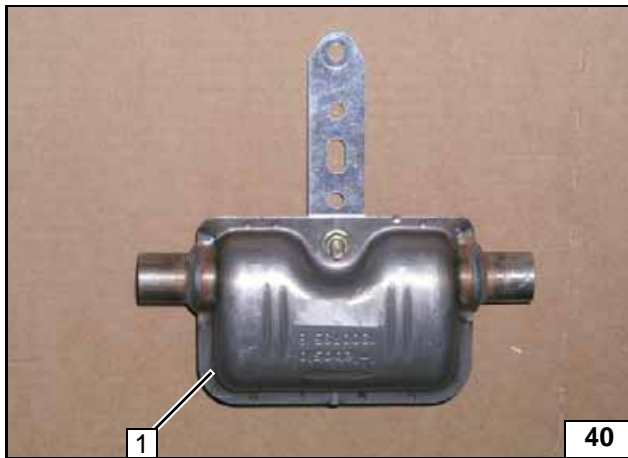


Exhaust system

- 1 Exhaust pipe
a = 200 mm
- 2 Exhaust end section
b = 290 mm

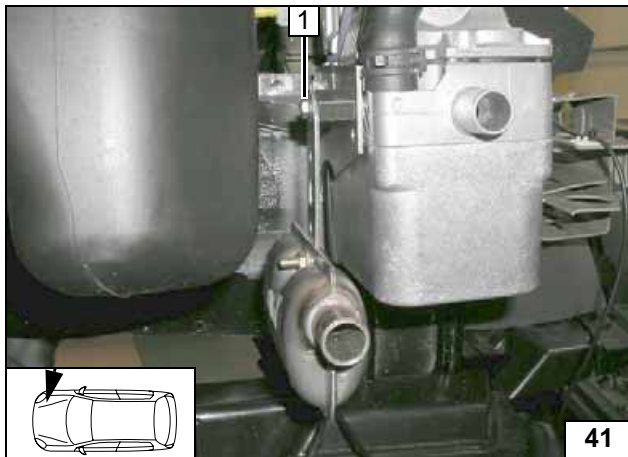
Discard section X

Preparing exhaust pipe



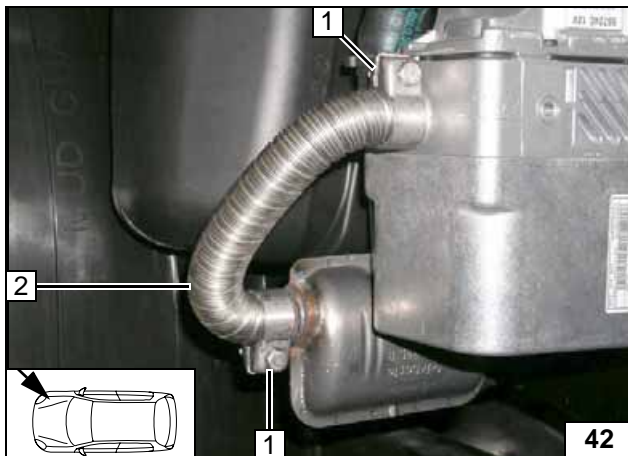
- 1 Exhaust muffler, perforated bracket,
M6x20 bolt, M6 flanged nut

Preassembling exhaust muffler



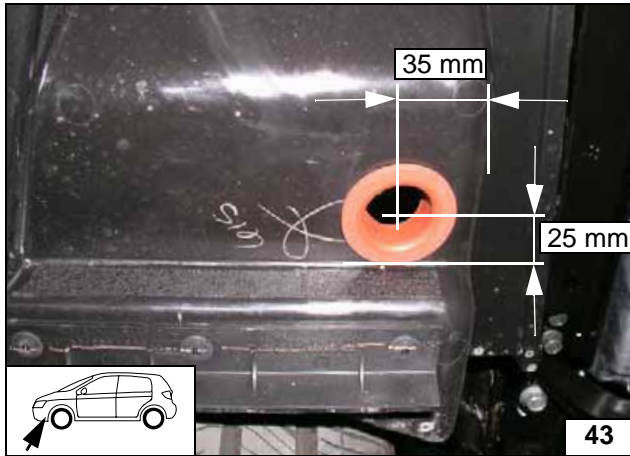
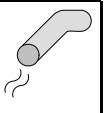
- 1 M6x12 bolt, spring lockwasher

Installing exhaust muffler



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

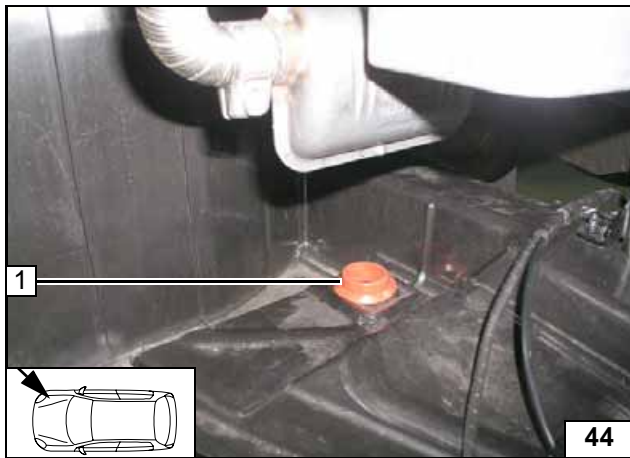
Installing exhaust pipe



Drill 36 mm dia. hole in under-ride protection at point shown.

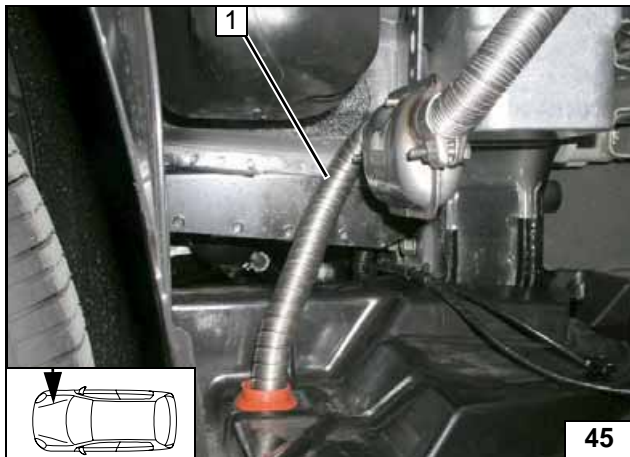


Drilling hole for exhaust-gas pass through



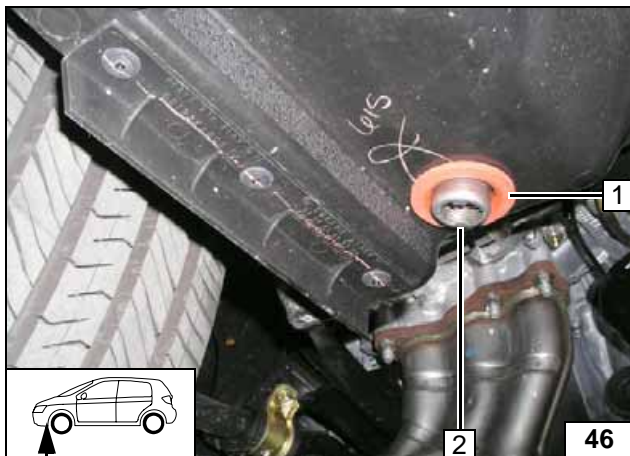
1 Rubber isolator

Mounting rubber isolator



1 Exhaust end section, hose clamp

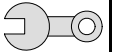
Installing exhaust end section



Align exhaust end section 2 on red rubber isolator 1 as shown.



Aligning exhaust end section



Final Work

WARNING!

Reassemble disassembled components in reverse order.

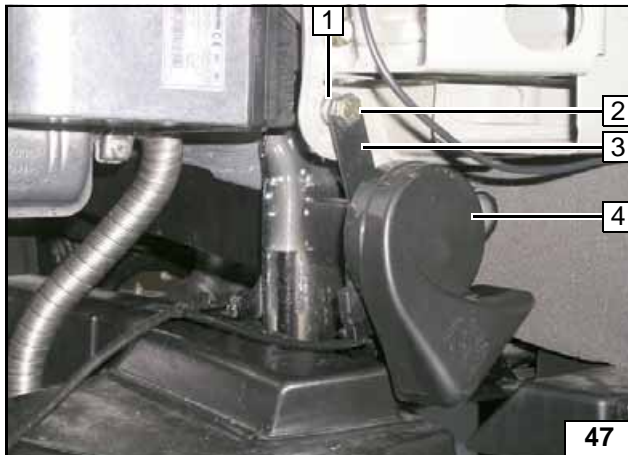
Check all hoses, clamps and all electrical connections for firm seating.

Secure all loose cables using cable ties.

Only use manufacturer-approved coolant.

Spray heater unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect battery
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Set the digital timer.
- Make the settings for the automatic air-conditioning in accordance with "Operating Instructions for End Customer"
- Check the proper operation of the additional heater, see the operating instructions/installation instructions.
- Attach the "Switch off additional heater before refueling" sticker to the left-hand B-pillar.



- 1 M8 washer [2x]
- 2 M8x30 bolt
- 3 Horn bracket
- 4 Horn

Relocating
horn


Webasto
Feel the drive

Webasto AG
Postfach 80 - 82132 Stockdorf
Hotline 01805 / 932278 - Hotfax 0395 / 5592-353
<http://www.webasto.de>

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.



Before parking the vehicle, make the following settings:



- 1 Press "Defrost" button (air outlet at windshield)
- 2 Set temperature on both sides to 29° (max.)
- 3 Set fan to level "1" (1 bar) or possibly "2"

For vehicles with automatic air conditioning

When operating over short distances, it is recommended that additional electrical consumers not be used!

Rule of thumb for operating additional heater: driving time = heating time!