

Water Heater



Thermo Top E Parking Heater


00 0003

Thermo Top C Parking Heater


00 0002

Thermo Top P Parking Heater


00 0104

Installation documentation

Mitsubishi Colt / Colt CZ3 / Colt CZC

Diesel

from Model Year 2005

Left-hand drive vehicle



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.

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Validity

Manufacturer	Model	Type	EG-BE No./ABE
Mitsubishi	Colt	Z30	e1*2001/116*0271...

Engine type	Engine model	Output in kW	Displacement in cm ³
M639	Diesel	70	1493
M639	Diesel	50	1493

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

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

Heater / Installation Kit

Quantity	Description	Order No.:
1	Retail accessories <i>Thermo Top E / C / P</i>	See Price list
1	Installation kit for Mitsubishi Colt 2005 Diesel	1303406B
1	Heater control	See Price list

Heater recommended for the respective vehicle class:

Vehicle	Heater
Compact car	Thermo Top E
Mid-size car, station wagon	Thermo Top C
Full-size car, van, offroader	Thermo Top P

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

This installation documentation applies to the vehicles Mitsubishi Colt with diesel engine - for validity, see page 2 - from model year 2005 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

However, the stipulations in this "installation documentation" and "operating and maintenance instructions" for the *Thermo Top E/C/P* 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 must be provided with rub protection (cut-open fuel hose)!

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

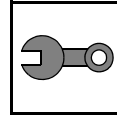
Special Tool

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Centre bit up to 42 mm dia.

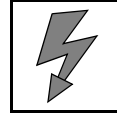
Explanatory Notes on Document

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.

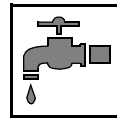
Mechanical system



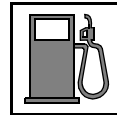
Electrical system



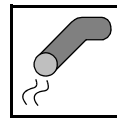
Coolant circuit



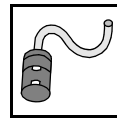
Fuel



Exhaust gas



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



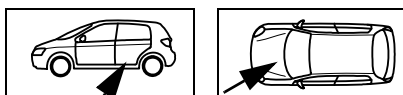
Specific risk of fire or explosion.



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



Reference to a special technical feature.

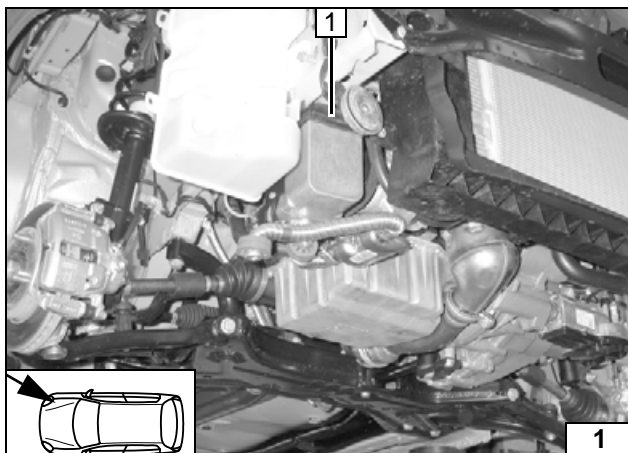


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

- Disconnect and remove the battery.
- 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.
- Open the fuel tank cap and vent the fuel tank.
- Close the tank cap again.
- Remove the front wheels.
- Remove the underride protection.
- Remove the right and left-hand wheel well trim.
- Remove the front bumper.
- Remove the right-hand headlight
- Remove the washer reservoir.
- Remove the footwell trim on the driver's side



Heater installation location

(1) Heater

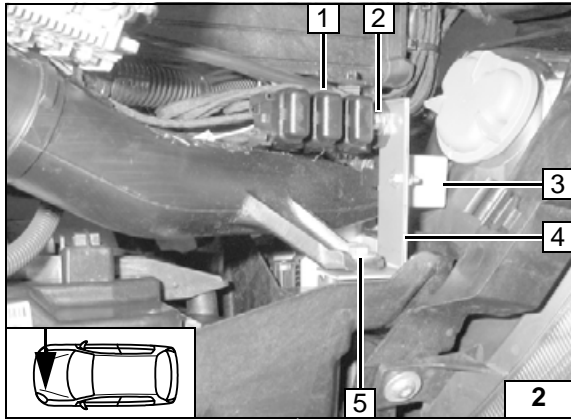
Installation location



Electrical system

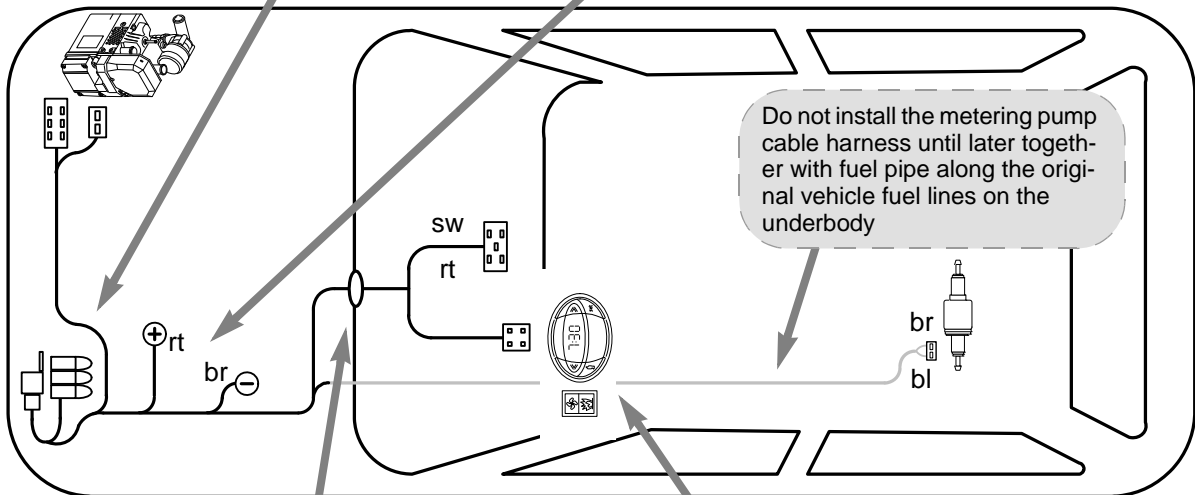
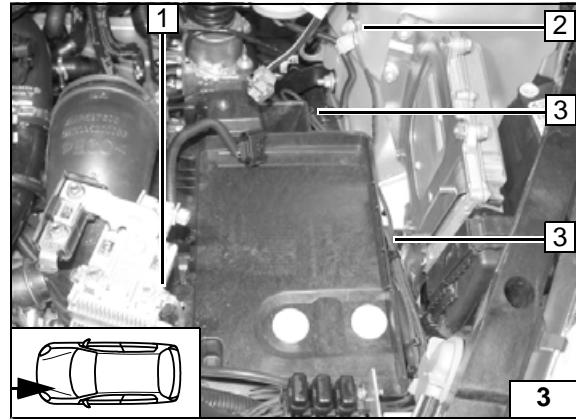
Fuse holder, K3 relay

- (1) Fuse holder
- (2) Retaining plate, M5x12 bolt, flanged nut
- (3) K3 relay, M4x12 bolt, washer, nut
- (4) Angle bracket
- (5) Original vehicle bolt

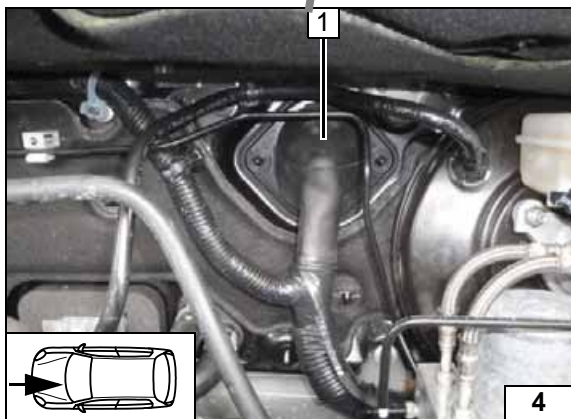


Wire routing, positive and ground connection

- (1) Red wire on positive support point
- (2) Brown wire on ground support point
- (3) Route metering-pump wiring harness to fire-wall and along original vehicle lines to underbody

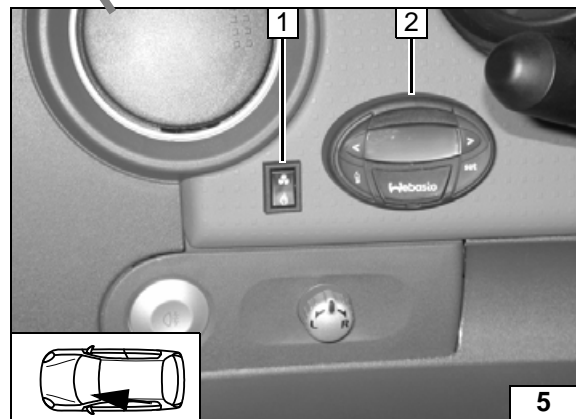


Electrical diagram



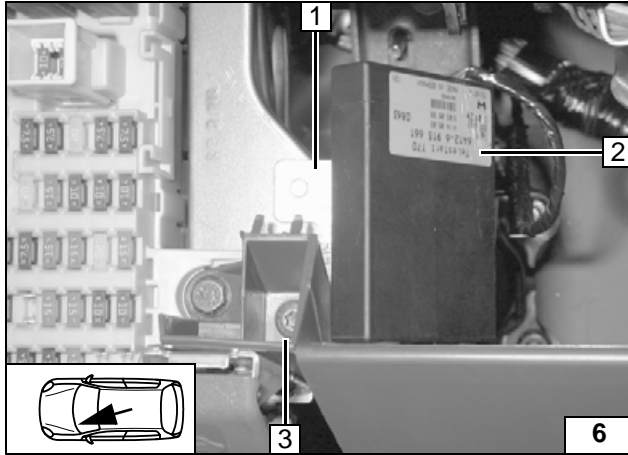
Wiring harness pass through

- (1) Existing rubber plug



Digital timer and summer/winter switch option

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

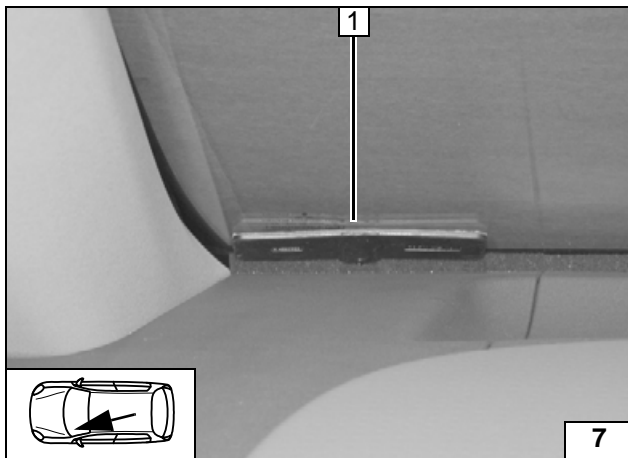


Telestart remote option

- 1 Bracket, bent as shown
- 2 Receiver
- 3 Original vehicle bolt

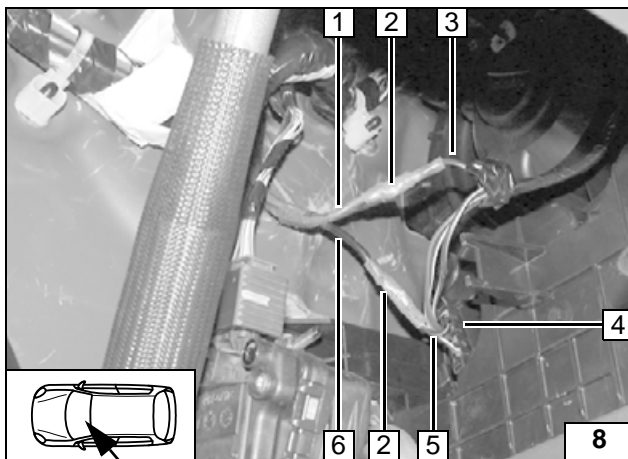


Installing receiver



- 1 Antenna

Gluing on antenna and connecting wires



Fan controller

Connection is carried out on connector B103 (4) of resistor group in driver's side footwell, on right.

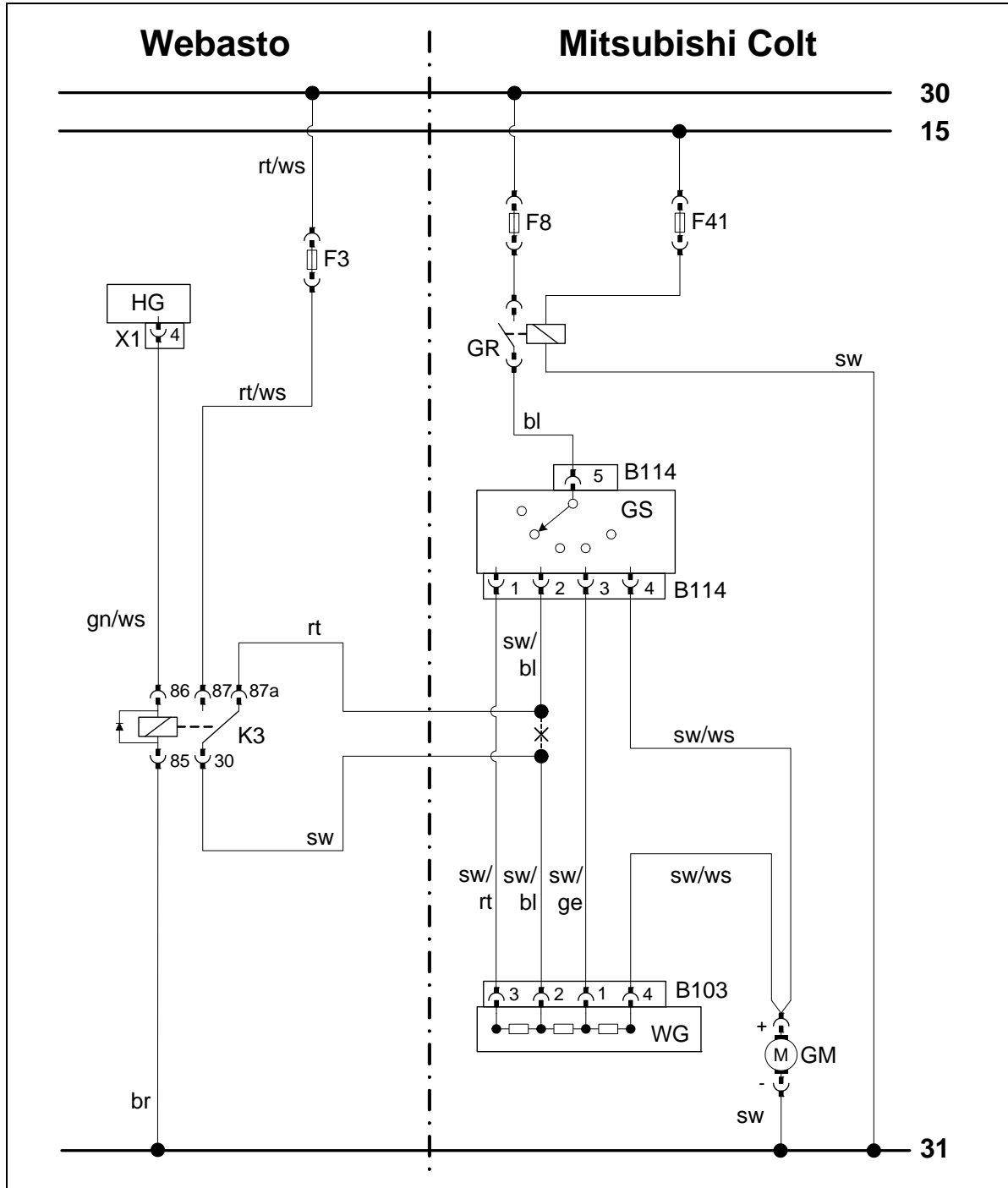
Disconnect black/blue (sw/bl) wire (3, 5) before connector B103, Pin 2.

Make connections as shown in wiring diagram with yellow (ge) connectors.

- (4) Connector B103 on resistor group
- (5) Black/blue (sw/bl) wire to connector B103/2
- (6) Black (sw) wire from K3/30
- (2) Yellow (ge) connector [2x]
- (1) Red (rt) wire from K3/87a
- (3) Black/blue (sw/bl) wire from fan switch



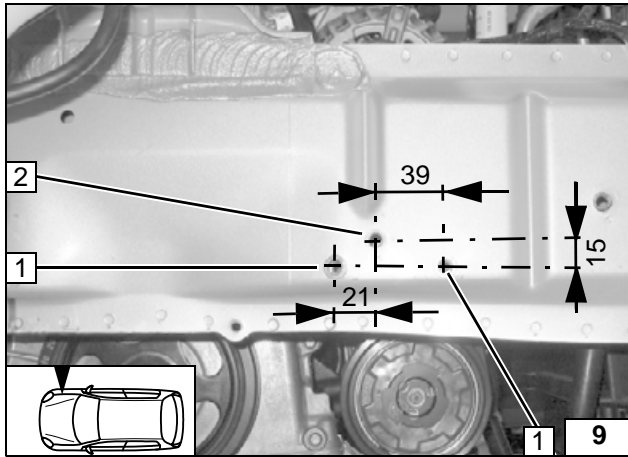
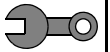
Fan controller



Wiring diagram

Webasto components		Mitsubishi components		Colours and symbols	
HG	TT-C/E Heater	F8	40A fan fuse	rt	red
X1	6-pin heater connector	F41	7.5A fuse	ws	white
F3	25A fuse	GR	Fan relay	sw	black
K3	Fan relay	GS	Fan switch	br	brown
		B114	GS connector	gn	green
		WG	Resistor group	bl	blue
		B103	Connector WG	ge	yellow
		GM	Fan motor		
				X	Cutting point

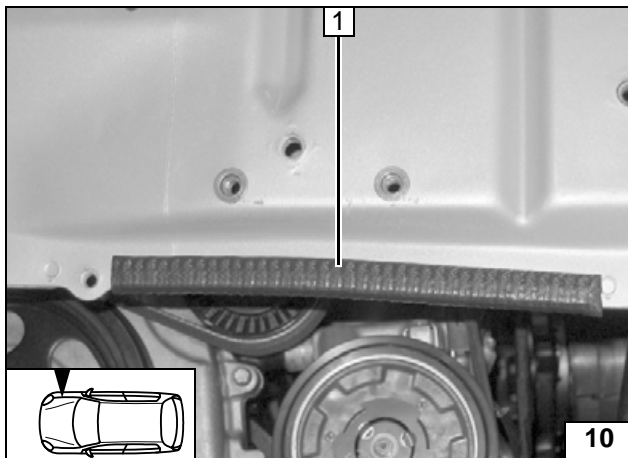
Legends



Preparing installation location

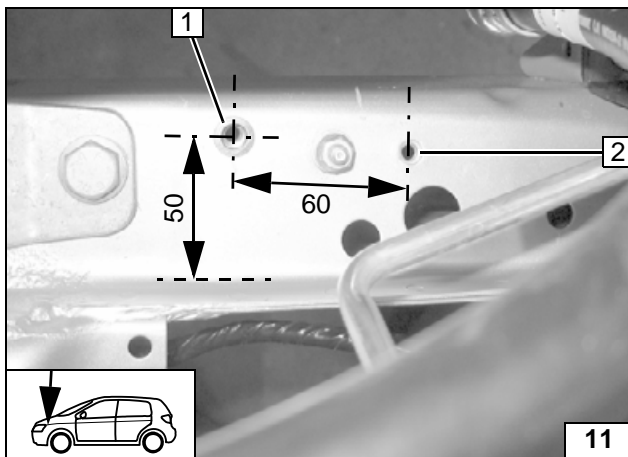
- 2 Existing hole
- 1 9.1 mm dia. hole, rivet nut [2x]

Installing rivet nut



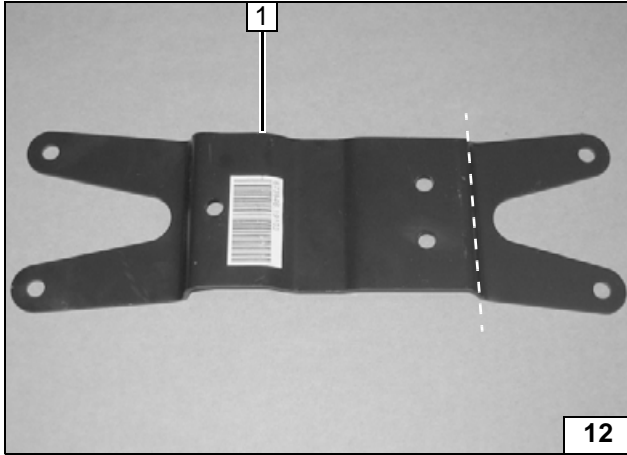
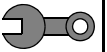
- 1 Edge protection

Installing edge protection



- 2 Existing hole
- 1 Drill 9.1 mm dia. hole; install rivet nut

Installing rivet nut



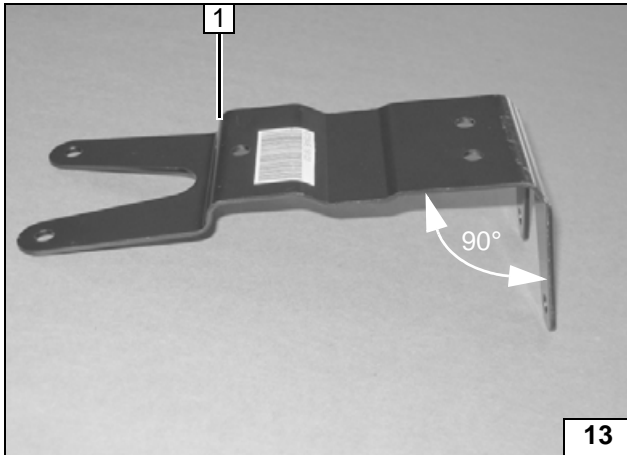
Premounting heater

Bend bracket according to the following figures!

(1) Bracket

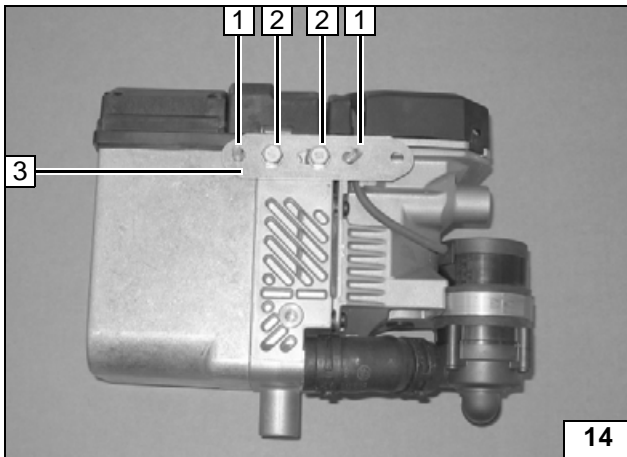


Preparing bracket



(1) Bracket

Preparing bracket

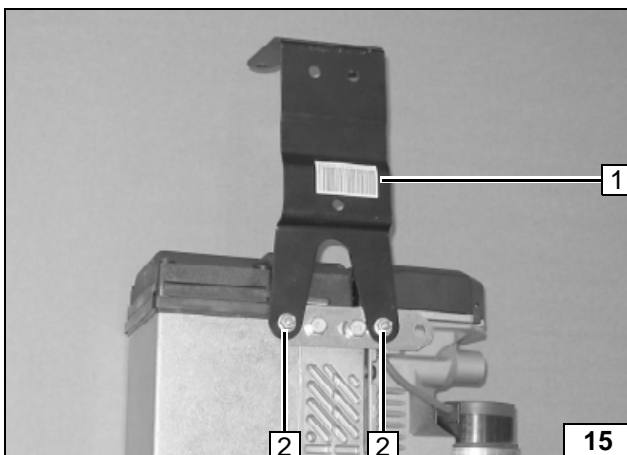


Eject screws, tightening torque 10 Nm!
First guide bolts (1) through perforated bracket from below.
Long hole spacing faces toward right!

(3) Perforated bracket
(1) M5x12 bolt [2x]
(2) Eject screw [2x]



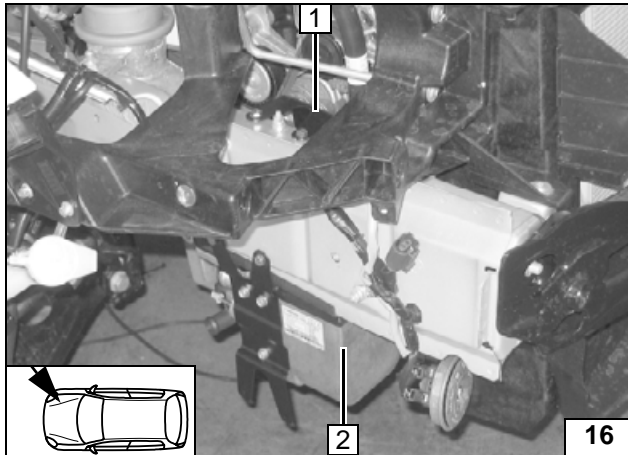
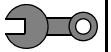
Installing perforated bracket



(1) Bracket
(2) M5x12 bolt (premounted), flanged nut [2x each]



Installing bracket



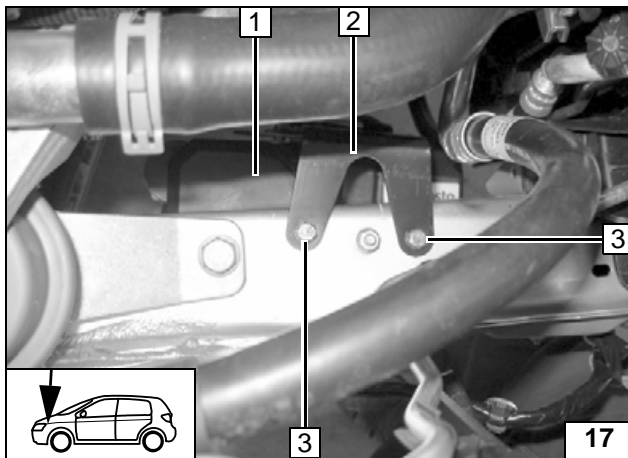
Installing heater

Guide heater to installation location and connect wiring harness.

- (2) Heater
- (1) Bracket (premounted)

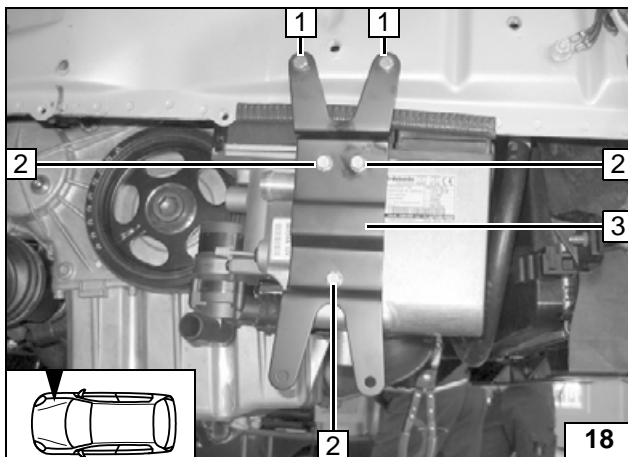


Installing heater



- (1) Heater
- (2) Bracket (premounted)
- (3) M6x20 bolt, spring lockwasher [2x]

Installing heater



Ejot screws, tightening torque 10 Nm!
Ensure minimum spacing of 20 mm between heater and engine.

- (2) E-jot screw [3x]
- (3) Bracket
- (1) M6x20 bolt, spring lockwasher [2x]



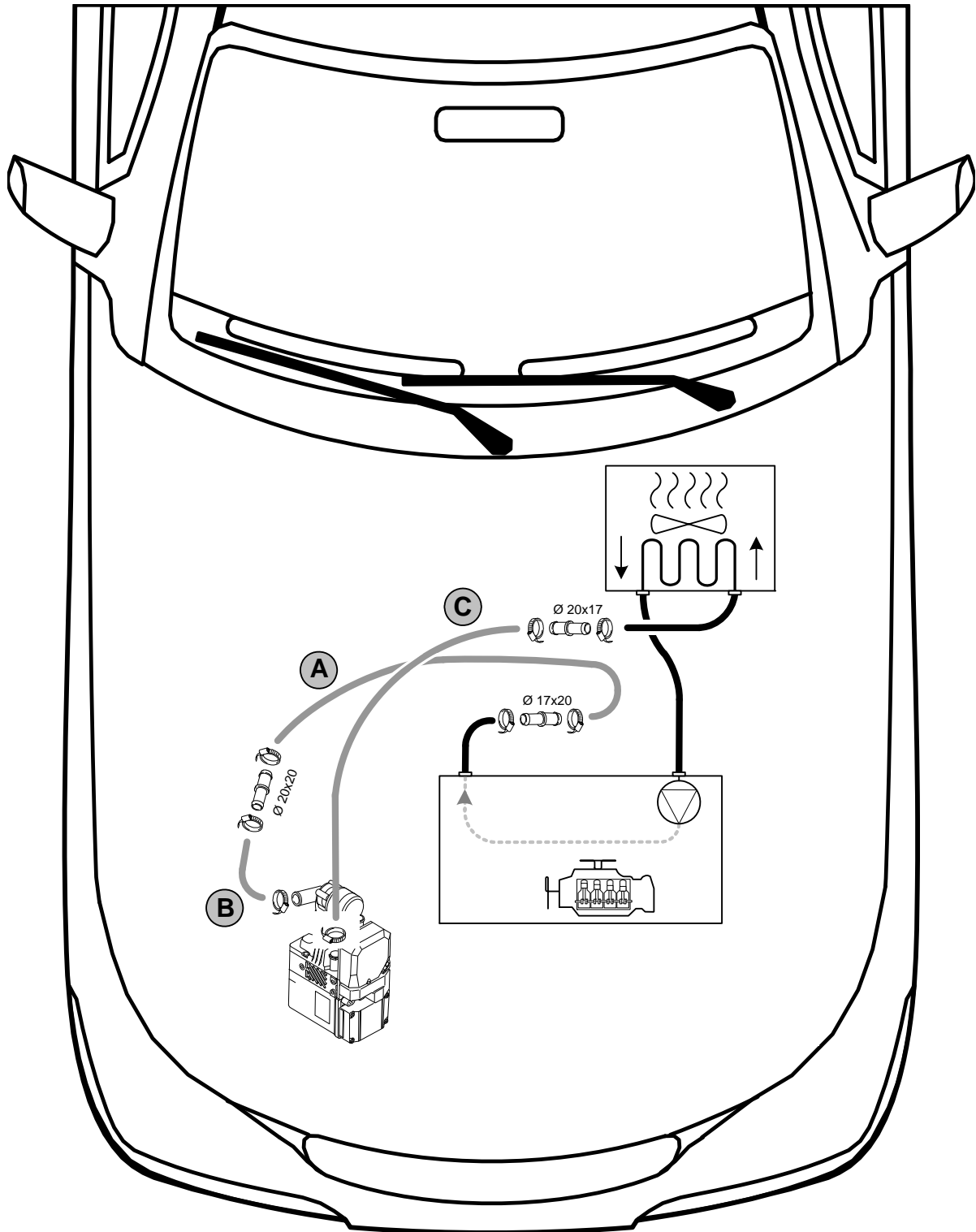
Installing heater



Coolant circulation

WARNING!

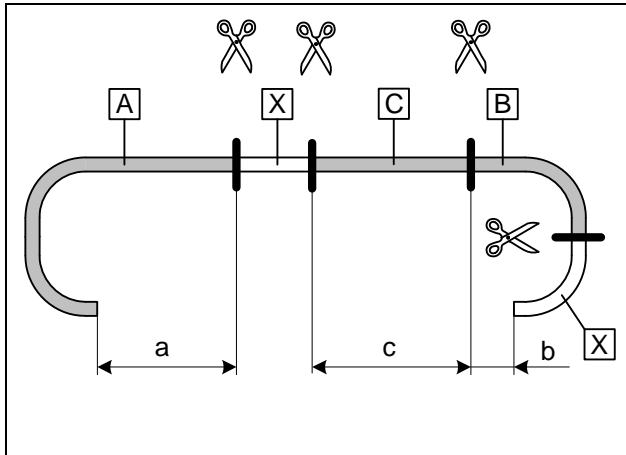
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant. The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



Hose installation diagram

All clamps = 20-27 mm dia. hose clamps!

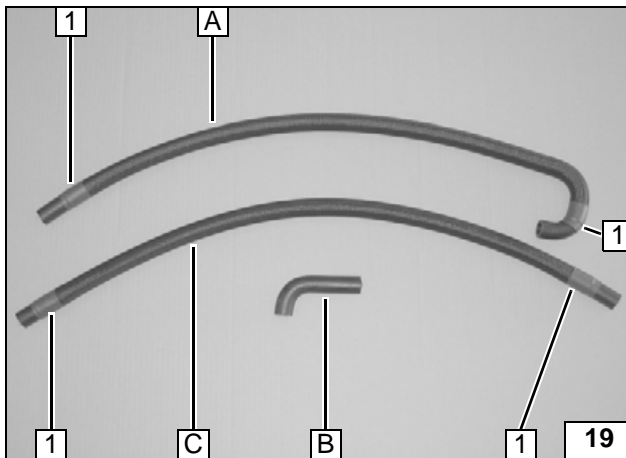




a = 800mm
b = 60mm
c = 950mm

Discard section X

Cutting hoses to size

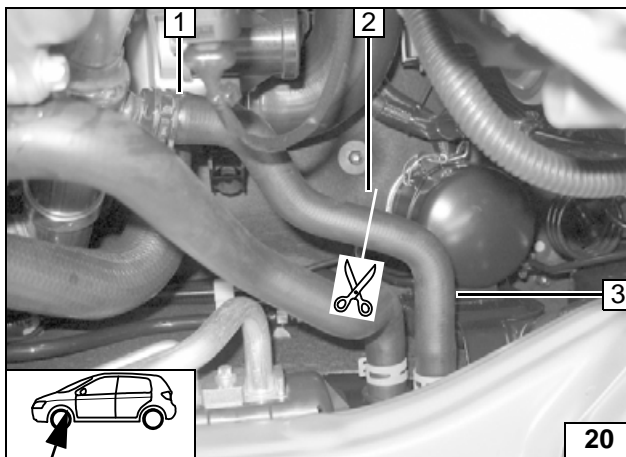


Push braided protection hoses onto **A** and **C**.

(1) Slide on heat shrink plastic tubing and shrink [4x]

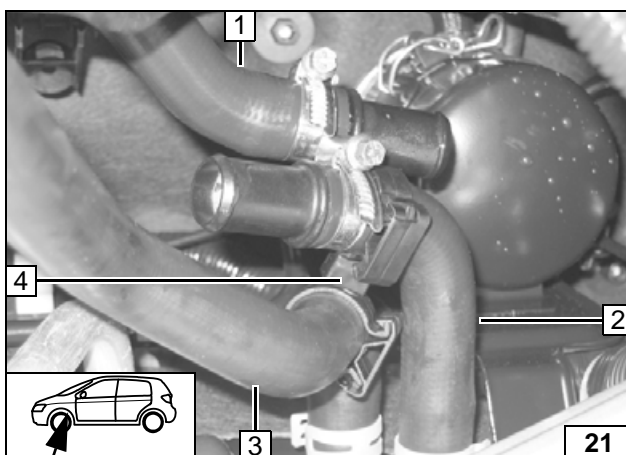


Premounting hoses



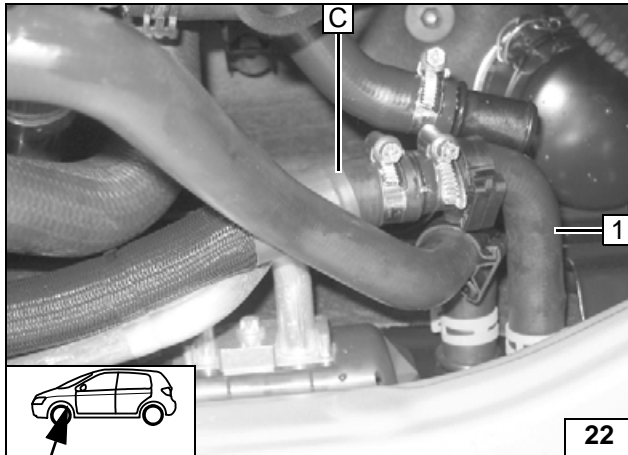
(1) Engine-outlet hose section
(3) Hose section on heat exchanger inlet
(2) Cutting point

Cutting point



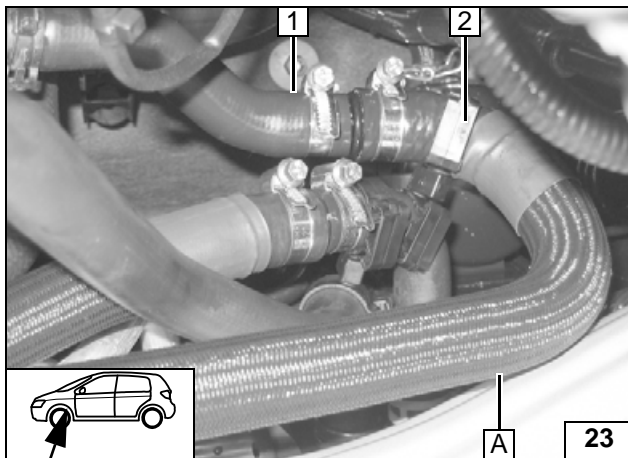
(1) Engine-outlet hose section
(2) Hose section on heat exchanger inlet
(3) Hose section on heat exchanger outlet
(4) 27x27 double clip

Installing connecting pipes



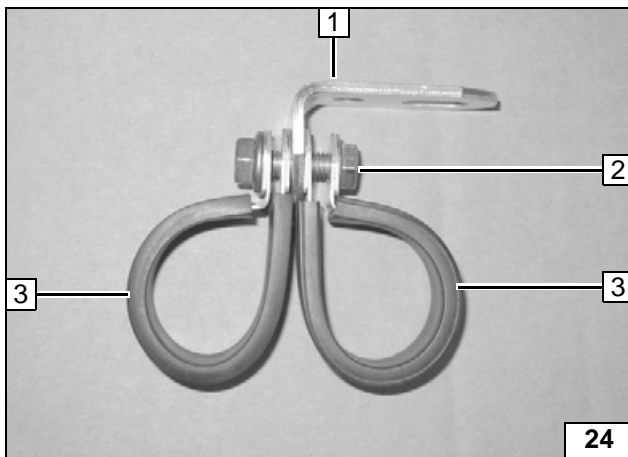
(1) Hose on heat exchanger inlet

Conne-
ction to
heat ex-
changer
inlet



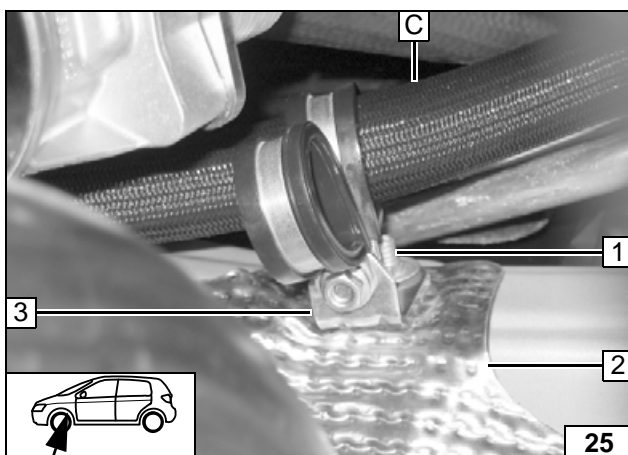
(1) Hose of engine outlet
(2) 27x27 double clip

Conne-
ction to en-
gine outlet



(1) Angle bracket
(3) 29 mm dia. rubber-coated p-clamp [2x]
(2) M6x20 bolt, flanged nut (loosely mount)

Premount-
ing brack-
et

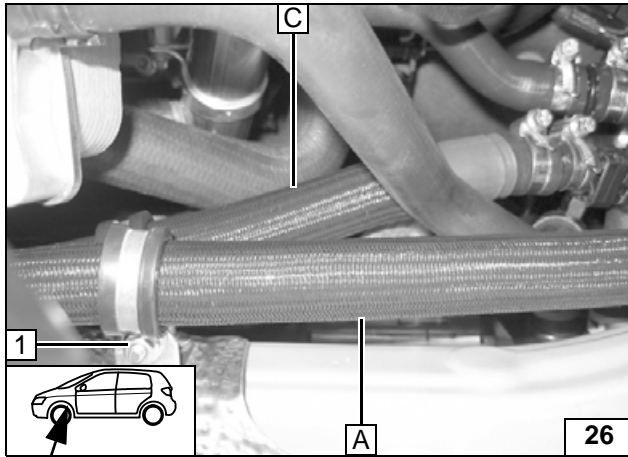


Fasten angle bracket with oblong hole on existing stud bolt together with heat-conducting plate!
Installation location is in centre of firewall!

(3) Angle bracket (premounted)
(1) Original vehicle stud bolt
(2) Heat-conducting plate

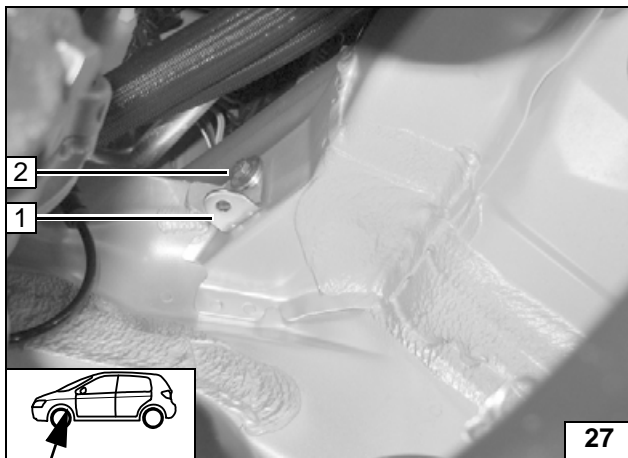
Instal-
ling cool-
ant
hoses





(1) Tighten bolt

Routing hoses

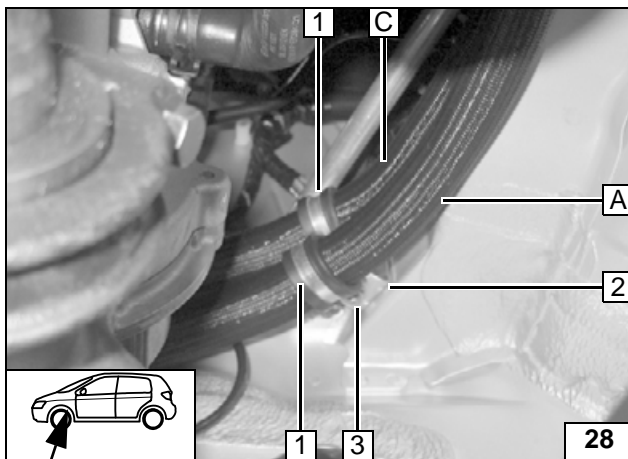


Fasten angle bracket with oblong hole on existing threaded hole.
Installation location is on right on firewall!



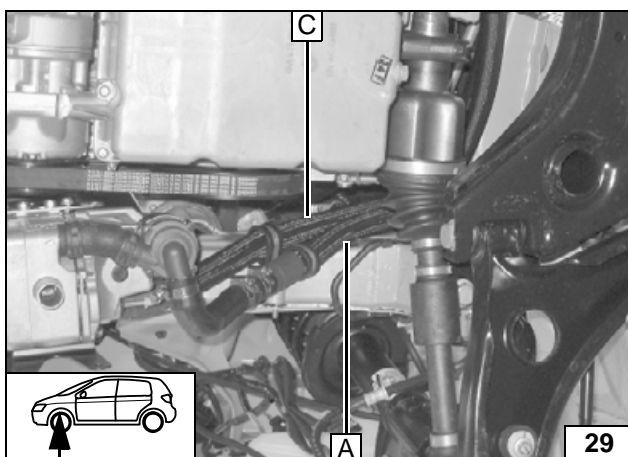
(1) Angle bracket
(2) M6x20 bolt, spring lockwasher, large diameter washer

Premounting bracket

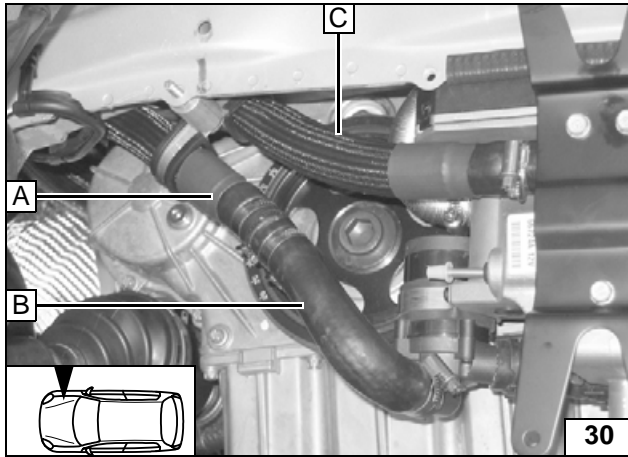


(2) Angle bracket (premounted)
(1) 29 mm dia. rubber-coated p-clamp [2x]
(3) M6x20 bolt, flanged nut

Routing hoses



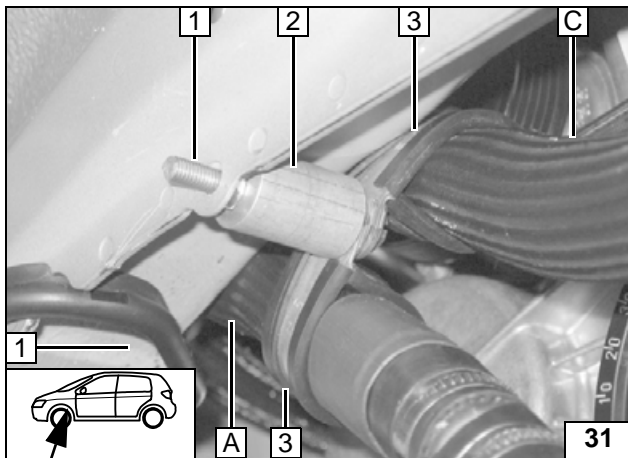
Installing coolant hoses



Before connecting, fill the coolant hoses with coolant.



**Conne-
ction to
heater**



Fasten bolt from inside to outside on existing threaded hole.

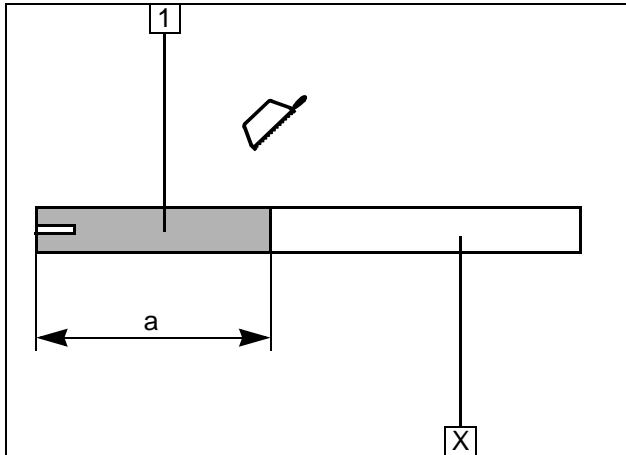
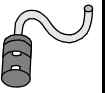


- (3) 29 mm dia. rubber-coated p-clamp [2x]
- (1) M6x60 bolt
- (2) 40 mm spacer sleeve

**Fastening
hoses**

Align hoses A, B and C over entire length and secure with cable ties.



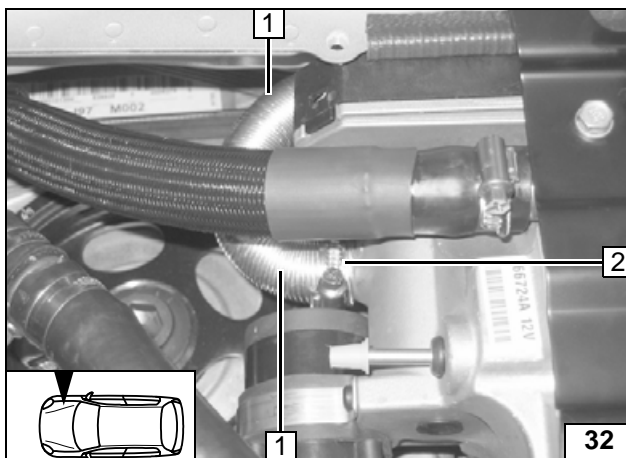


Combustion air

- (1) Combustion air pipe
a = 200 mm

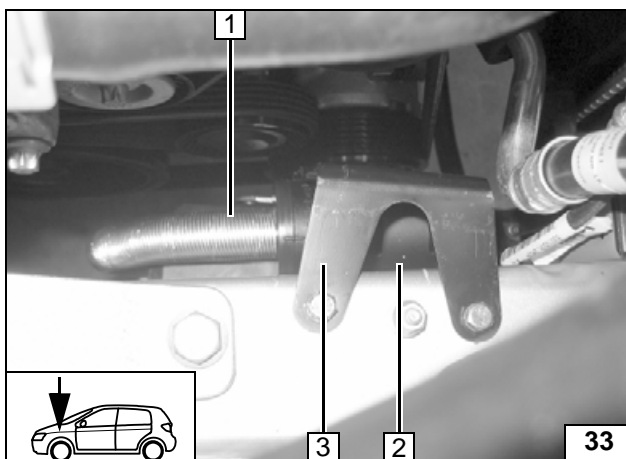
Discard section X

Cutting combustion air pipe to length



- (1) Combustion-air pipe (slotted side on heater)
- (2) 27 mm dia. hose clamp

Installing combustion air pipe



Ensure proper installation position of air intake muffler, see "Installation Instructions". Fasten intake muffler on bracket with cable ties.

- (1) Combustion air pipe
- (2) Muffler
- (3) Bracket



Installing muffler



Fuel

CAUTION!

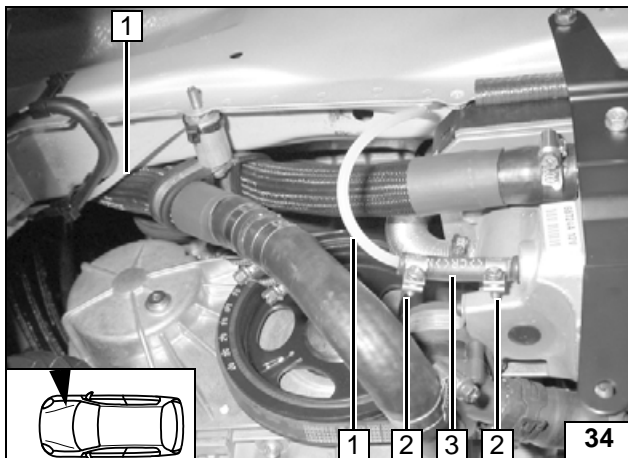
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off with an appropriate container.

Install fuel line and wiring harness so that they are protected against stone impact. Mount the fuel line and wiring harness with rub protection on sharp edges.

WARNING!

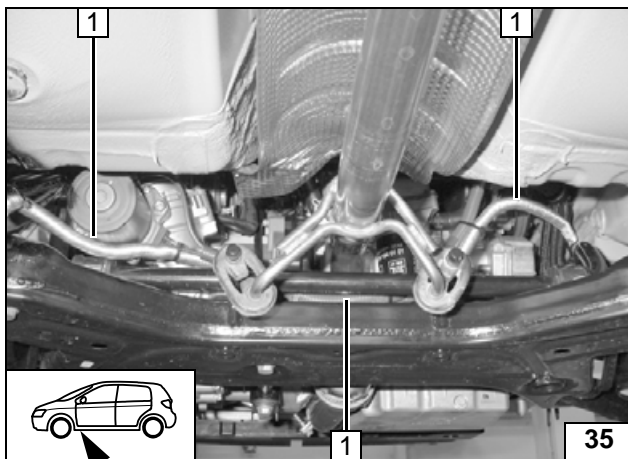
The fuel line and wiring harness are routed to the metering pump in as shown in the electrical diagram.



- (1) Mecanyl line
- (3) Hose section
- (2) 10 mm dia. hose clamp [2x]

**Connec-
tion to
heater**

Route Mecanyl line along coolant hose to fire-wall.

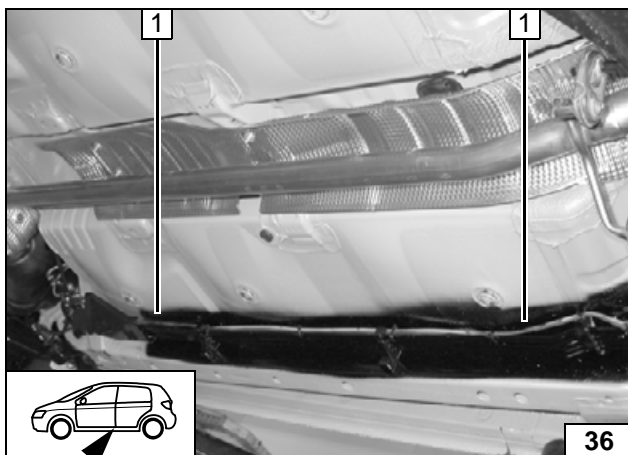


Guide Mecanyl line into protective hose provided and route to left as shown. Particularly ensure sufficient spacing between the original vehicle exhaust system and moving parts!

- (1) Protective hose with Mecanyl line



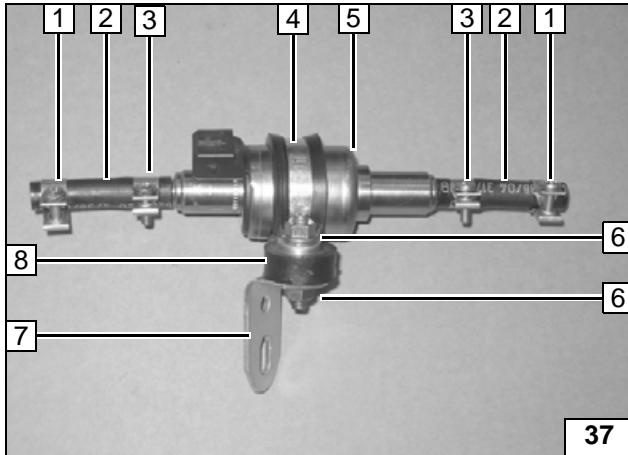
**Routing
Mecanyl
line**



Route Mecanyl line and metering-pump wiring harness along original vehicle fuel lines to fuel tank

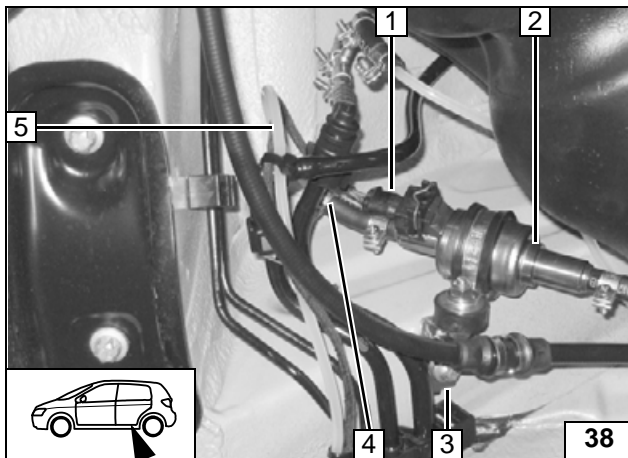
- (1) Original vehicle fuel lines

**Routing
Mecanyl
line and
wiring har-
ness of
metering
pump**



- (5) Metering pump
- (4) Rubber-coated pipe clamp
- (8) Silent block
- (6) M6 flanged nut [2x]
- (7) Angle bracket
- (2) Hose section [2x]
- (1) 10 mm dia. hose clamp [2x] loosely mounted
- (3) 10 mm dia. hose clamp [4x] [2x]

Pre-assembling metering pump

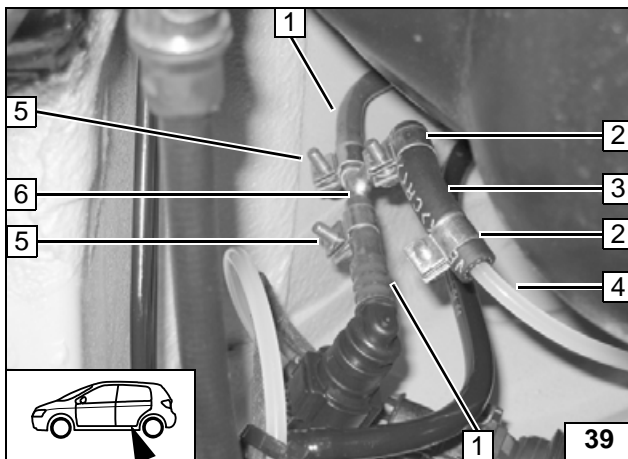


Ensure proper installation position of metering pump, see "Installation Instructions". Installation location on left in front of vehicle fuel tank!
Fuel line from heater on pressure side of metering pump [side with connector].

- (2) Premounted metering pump
- (3) Original vehicle bolt
- (1) Metering-pump wiring harness, connector housing, plug-in contacts, single wire seals
- (5) Mecanyl line
- (4) 10 mm dia. hose clamp tightened



Installing metering pump

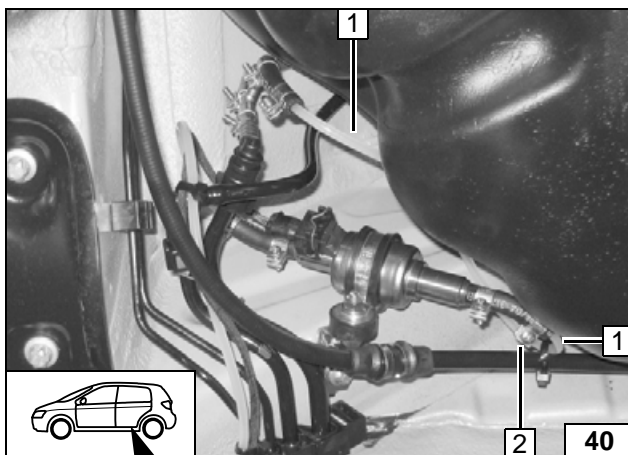


Fuel is removed from return line!
Cut off return line as shown.

- (1) Return line to vehicle fuel tank
- (6) Metal 6x5x6 T-piece
- (5) 8 mm dia. hose clamps [2x]
- (3) Hose section
- (4) Remaining section of Mecanyl fuel line
- (2) 10 mm dia. hose clamps [2x]



Fuel removal

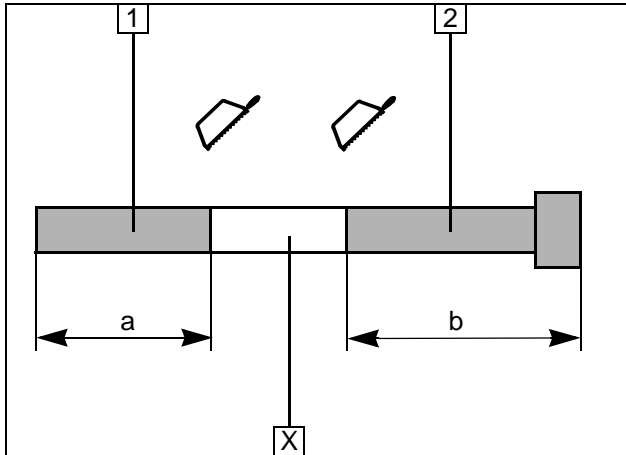
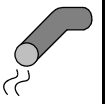


Fuel line from T-piece on intake side of metering pump [side without connector]. Align Mecanyl line and wiring harness of metering pump over entire length and fasten with cable ties. Check the position of the components; adjust if necessary. Check that they have free clearance.

- (1) Mecanyl line from T-piece
- (2) 10 mm dia. hose clamp tightened



Connection of metering pump

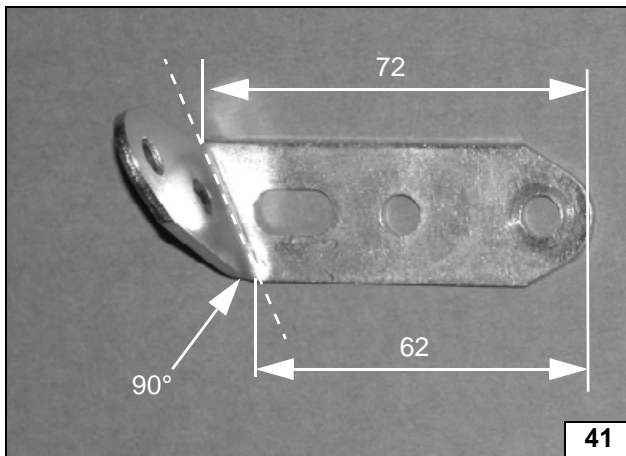


Exhaust gas

- (1) Exhaust pipe
a = 160 mm
- (2) Exhaust end section
b = 300 mm

Discard section X

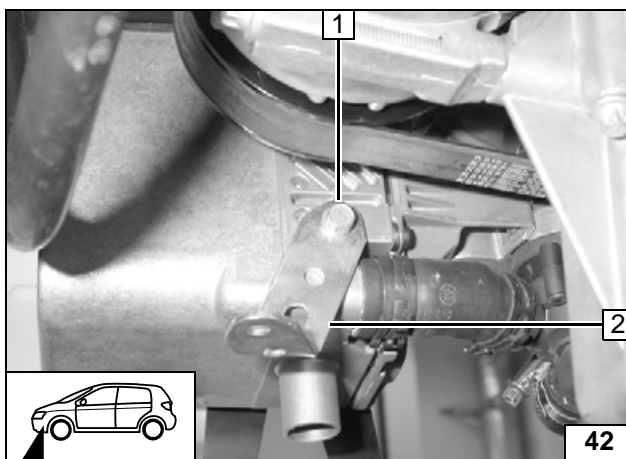
Preparing exhaust pipe



Bend perforated bracket as shown!



Bending perforated bracket

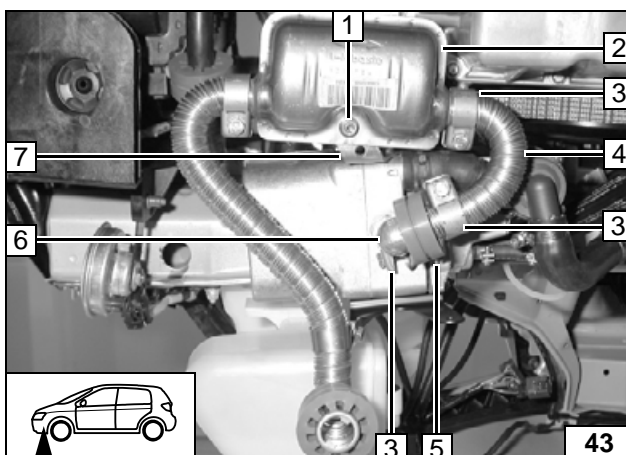


Eject screw bolt, tightening torque 10 Nm!
Align perforated bracket as shown!

- (1) Eject screw
- (2) Perforated bracket



Installing perforated bracket

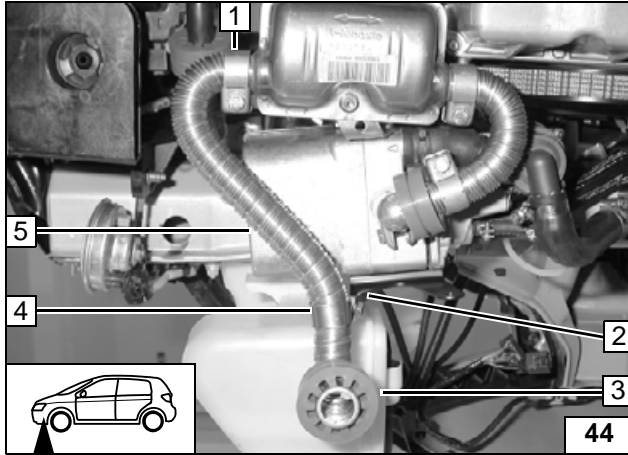
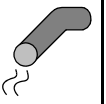


Shape exhaust pipe as shown in picture.

- (2) Muffler
- (1) M6x20 bolt, flanged nut
- (7) Perforated bracket, premounted
- (4) Exhaust pipe
- (5) Red (rt) rubber isolator
- (3) Hose clamp [3x]
- (6) Exhaust elbow



Installing exhaust pipe and muffler

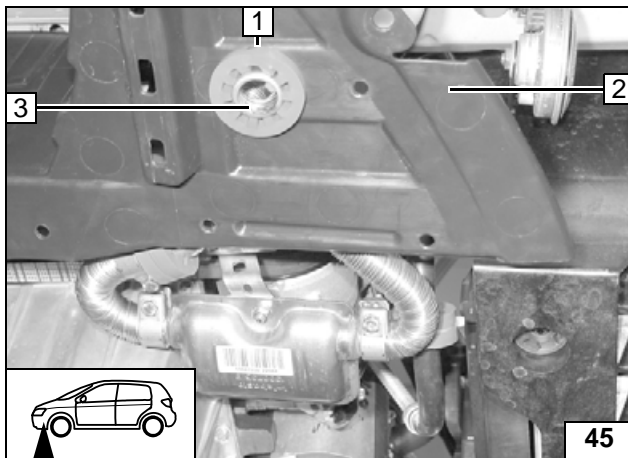


Shape exhaust end section as shown.
Form bracket as shown at position (2).

- (1) Hose clamp
- (5) Exhaust end section
- (4) P-clamp, M6x20 bolt, flanged nut
- (2) Bracket
- (3) Red (rt) rubber isolator



Installing exhaust end section

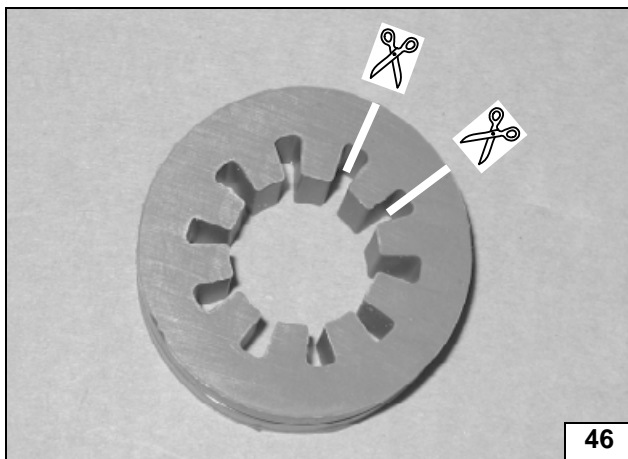


Drill 42 mm dia. hole in wheel well trim as shown.
Install red (rt) rubber isolator with groove in trim.

- (1) Red (rt) rubber isolator
- (2) Wheel well trim
- (3) Exhaust end section



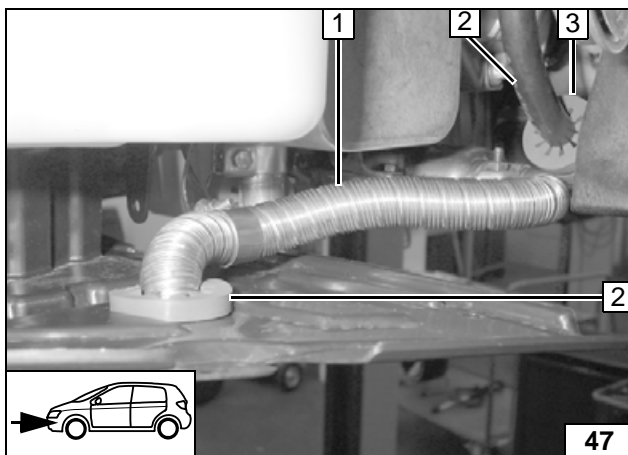
Installing wheel well trim



Cut segment out of red (rt) rubber profile



Cutting rubber profile to size



Slide cut-open red (rt) rubber isolator (3) onto A/C line and position in area of exhaust end section. Insert narrow cable tie in groove and secure.

Check position of exhaust pipe, muffler and exhaust end section and correct if necessary. Ensure sufficient spacing to original vehicle components and lines.

- (1) Exhaust end section
- (2) A/C line



Installing exhaust end section

Final Work

WARNING!

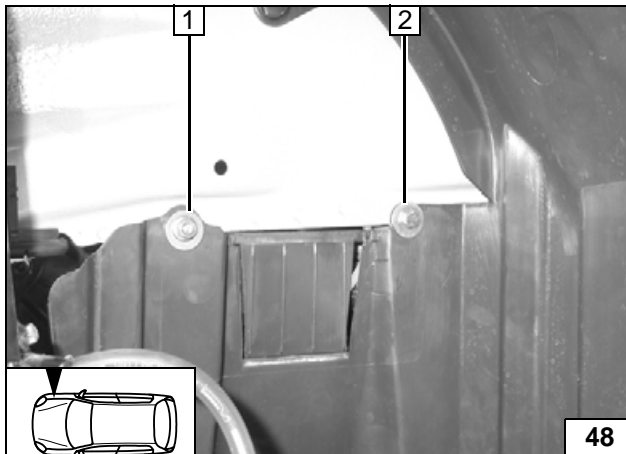
Reassemble the disassembled components in reverse order.

Check all hoses, spring and Caillau clamps, as well as all electrical connections for firm seating.

Secure all loose cables using cable ties.

Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111,329).

- Connect the battery
- Start the engine, bleed the coolant circuit according to the instructions of the vehicle manufacturer and add coolant
- Set the digital timer.
- Adjust vehicle heater in accordance with "Operating Instructions for End Customer".
- Check the proper operation of the additional heater, see the operating instructions/installation instructions.
- Place the "Switch off additional heater before refuelling" signboard in the area of the filling connecting piece



A large diameter washer is inserted between wheel well trim and frame side member at position **(2)**. Ensure sufficient distance between bolt **(2)** and heater.

- 1** M6x60 bolt (premounted), large diameter washer, flanged nut
- 2** M6x16 bolt, spring lockwasher, 2 large diameter washers



**Installing
wheel well
trim**

Webasto
Feel the drive

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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:

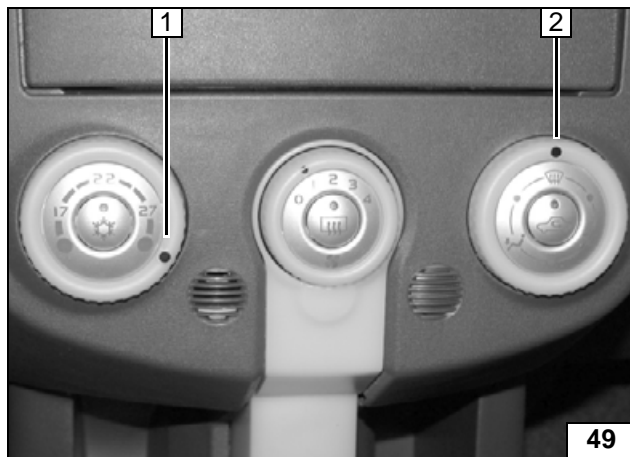
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

For vehicles with passenger compartment monitoring, it must be deactivated additionally, besides making the vehicle settings for the heating operation .

Instructions on deactivation can be taken from the operating instructions of the vehicle!

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:



- (1) Set temperature to "max."
- (2) Direct air outlet toward windshield



Settings