

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

Mazda CX-9

Petrol

from Model Year 2008

Left-hand drive vehicle

Automatic air-conditioning



WARNING!

Hazard warning:

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



Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems.

Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.

ALWAYS follow all Webasto installation and repair instructions and observe all warnings.

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

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

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Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Mazda	CX-9	TB	e13 * KS07 / 46 * 0005 * ...

Engine type	Engine model	Output in kW	Displacement in cm ³
CA	Petrol	204	3726

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 the digital timer should be confirmed with the end customer before installation.

Heater/installation kit

Quantity	Description	Order No.:
1	Basic delivery scope <i>Thermo Top E / C / P</i>	See Mazda price list
1	Installation kit for Mazda CX-9 Petrol	1314312C
	Mazda Order No.:	4100-78-764A
1	Heater control	See Mazda 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

These installation instructions apply to vehicles Mazda CX-9 Petrol - for validity, see page 2 - from model year 2008 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to these installation instructions.

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

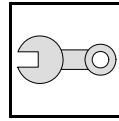
Special tools

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

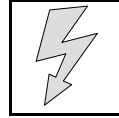
Explanatory notes on document

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

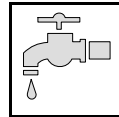
Mechanical system



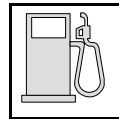
Electrical system



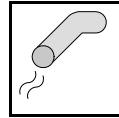
Coolant circuit



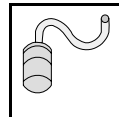
Fuel



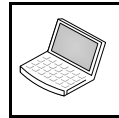
Exhaust gas



Combustion air



Software



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



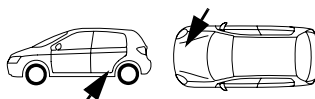
Specific risk of fire or explosion.



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



Reference to a special technical feature.



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

All dimensions are in mm!

Tightening torque of hose clamps = 2.0 + 0.5 Nm!

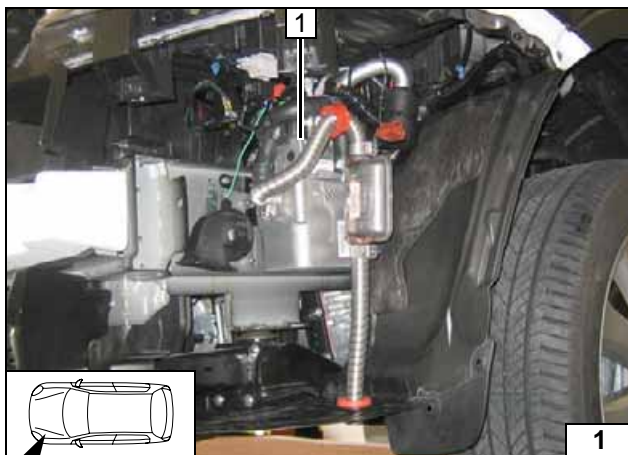
Tightening torque of Ejet screws, Ejet studs = 10 Nm!

Preliminary work

WARNING!

- Open the fuel tank cap and vent the fuel tank.
- Close the tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- Depressurise 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 battery
- Remove the air filter together with the intake hose
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Remove the underride protection
- Dismantle left underbody trim
- Remove left rear bench seat
- Open the fuel sender service lid.
- Remove glove compartment
- Detach fuse box behind the glove compartment
- Remove footwell trim on driver- and front passenger side
- Dismantle left door sill cover
- Remove the lower instrument panel trim on the driver's side.
- Remove the lower A-pillar trim in the driver's side footwell.
- Remove upper A-pillar trim on the driver's side (only for Telestart)

Remove page 26 "Operating Instructions for End Customer" and attach to vehicle operating instructions.



Heater installation location

1 Heater

Installation location



Electrical system

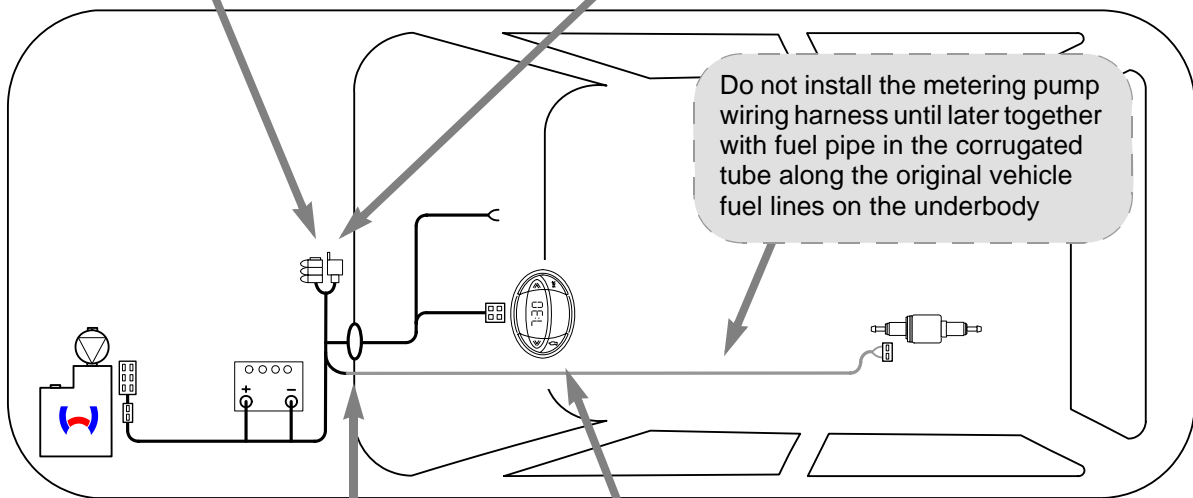
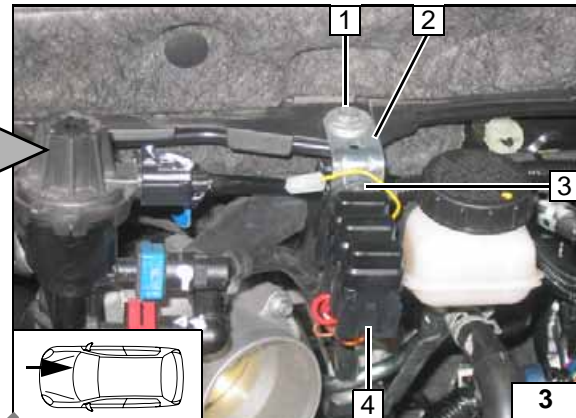
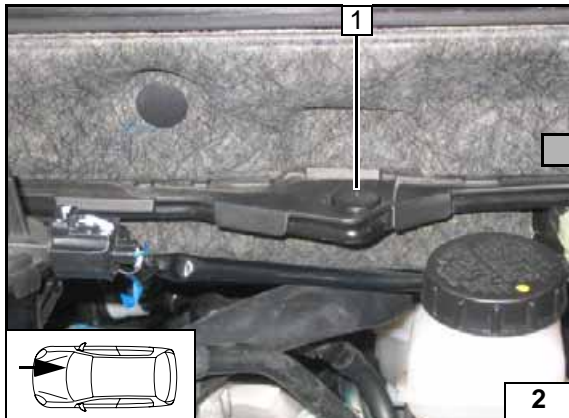
Fuse holder, K3 relay

Remove dowel 1.

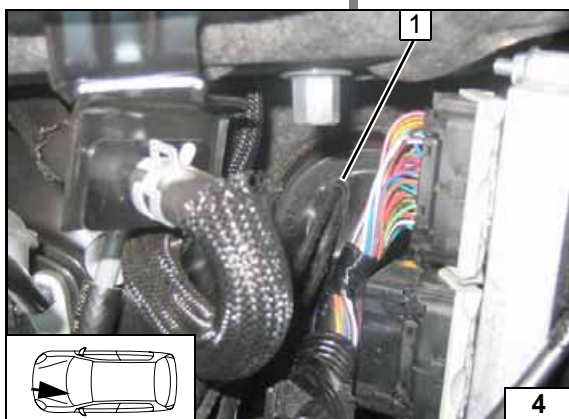
Fuse holder, K3 relay

Replace F3 with 7.5A fuse.

- 1 M6x20 bolt, large diameter washer, flanged nut
- 2 Angle bracket
- 3 Retaining plate of fuse holder, M5x16 bolt, washer, K3 relay, flanged nut
- 4 Fuse holder

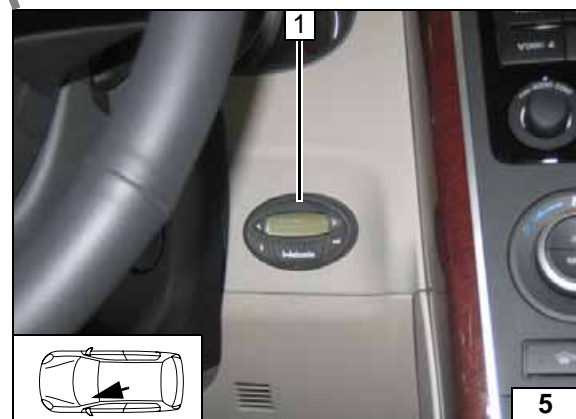


Wiring harness routing diagram



Wiring harness pass through

- 1 Protective rubber plug



Digital timer

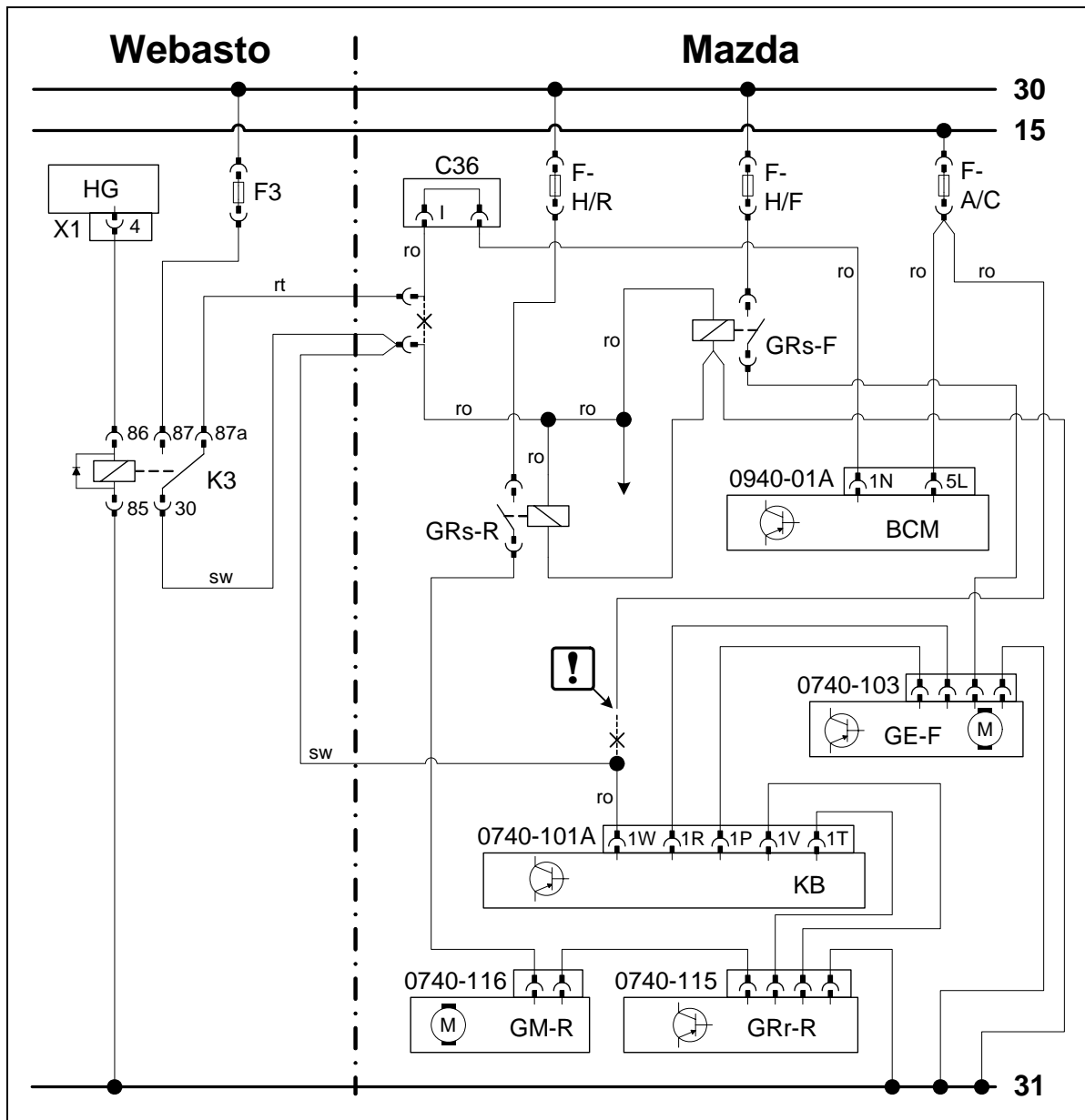
- 1 Digital timer



Fan control

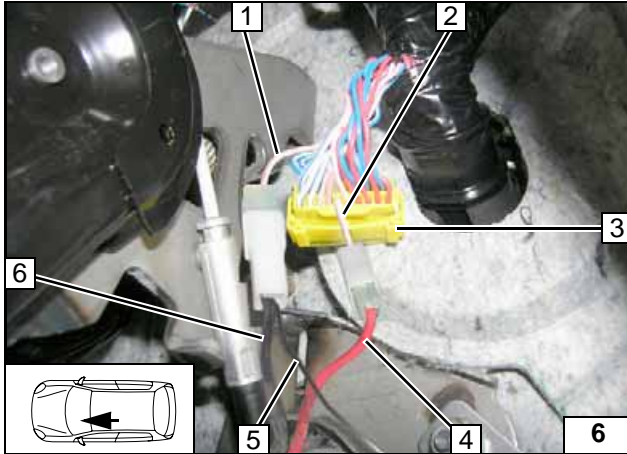
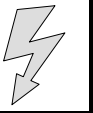


Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	BCM	Body Control Module	rt	red
X1	6-pin heater connector	C36	20-pin connector	sw	black
F3	Replace 25 A with 7,5A fuse.	GRs-F	Front fan relay	ro	pink
K3	Fan relay	GRs-R	Rear fan relay		
		GE-F	Front fan unit		
		GM-R	Rear fan motor		
		GRr-R	Rear fan controller		
		F-H/F	50A front fan fuse		
		F-H/R	40A rear fan fuse		
		F-A/C	7.5A fuse	!	Insulate wire end and tie back
		KB	A/C control panel	X	Cutting point
		0740-101A	24-pin KB connector		Cable colours may vary.

Legends

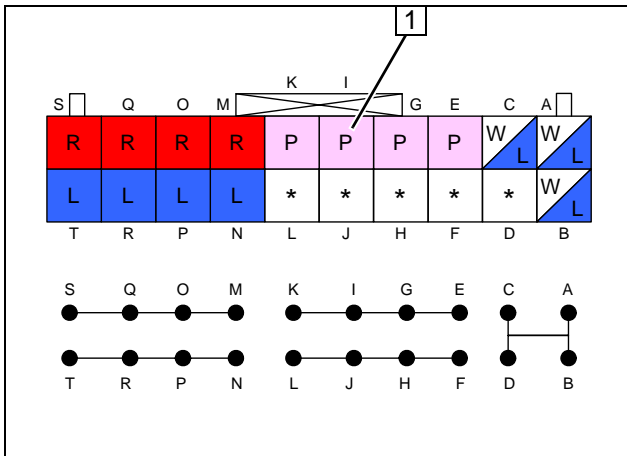


Connection on C-36 connector 3 Pin I.
Produce connections as shown in wiring diagram.

- 1 Pink (ro) wire of front / rear fan relay
- 2 Pink (ro) wire of connector C36 Pin I
- 4 Red (rt) wire of K3/87a
- 5 Additional black (sw) wire of A/C control panel
- 6 Black (sw) wire of K3/30



Connec-
tion of C36
connector

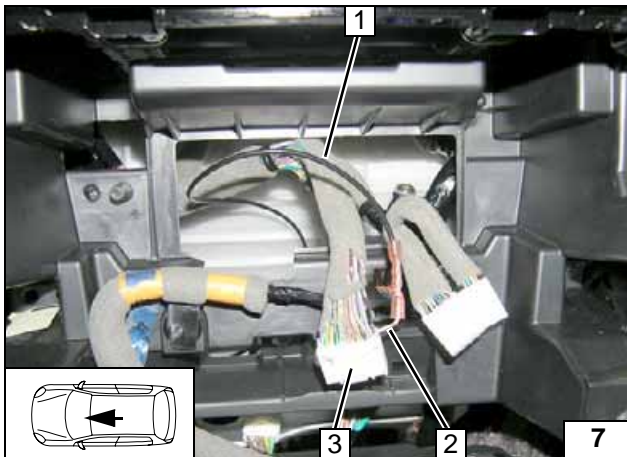


Wire-side view

- 1 C36 Connector Pin I



View of
C36 con-
nector

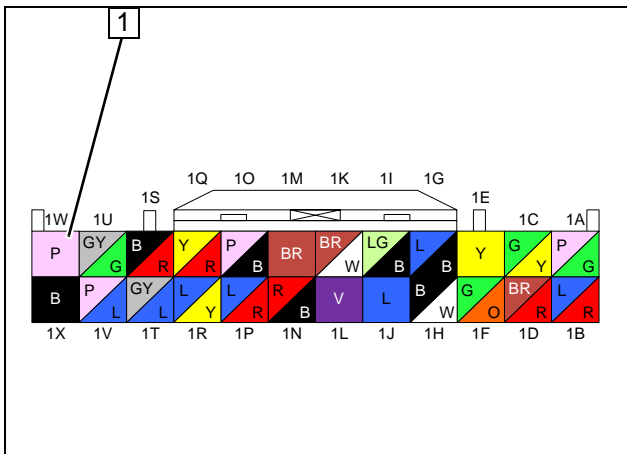


Connection to 24-pin connector
0740-101A 3 A/C control panel
Insulate and tie back pink (ro) wire of fuse F
A/C Produce connections as shown in wiring diagram.

- 1 Additional black (sw) wire
- 2 Pink (ro) wire of connector 0740-101A Pin 1W



Connect-
ing A/C
control
panel

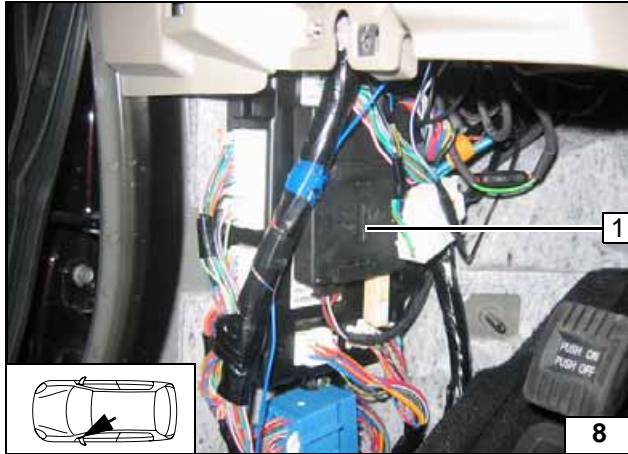


Wire-side view

- 1 Connector 0740-101A Pin 1W



View of
connector
0740-101A

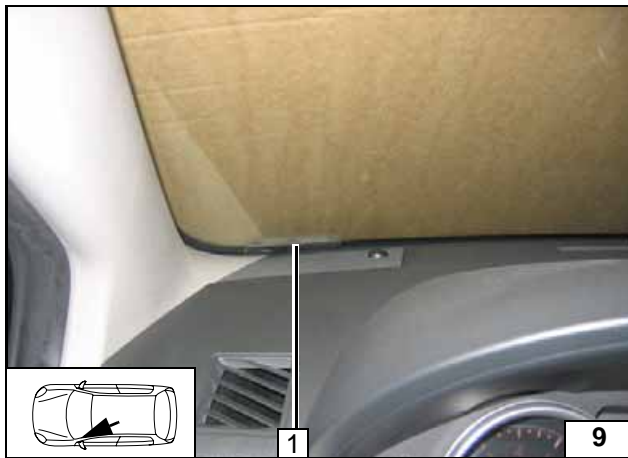


Remote option (Telestart)

Fasten receiver 1 with adhesive tape.

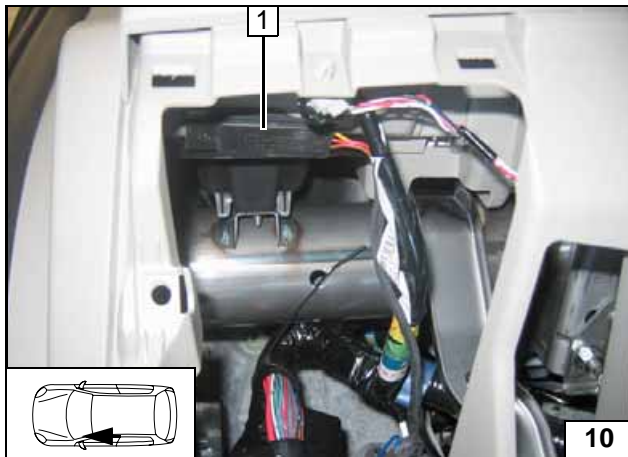


Installing receiver



1 Antenna

Installing antenna

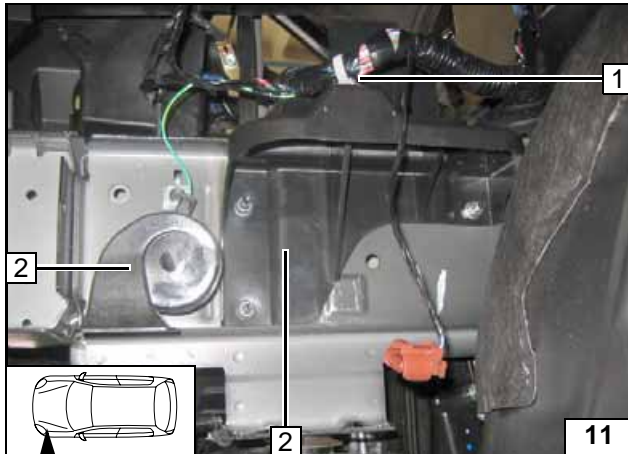
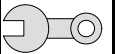


Temperature sensor only for T 100 HTM

Fasten temperature sensor 1 with adhesive tape.



Installing temperature sensor

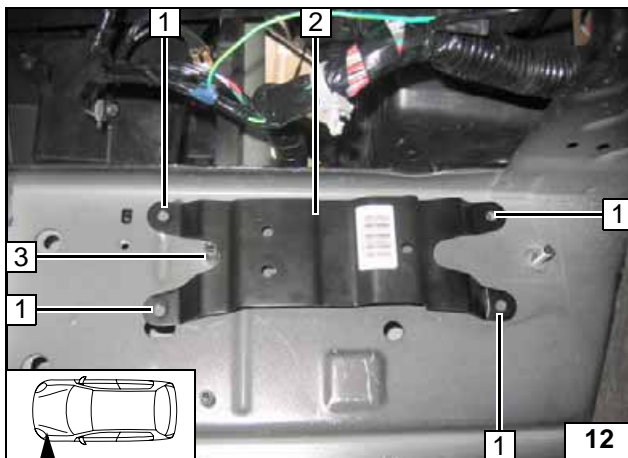


Preparing installation location

Unclip original vehicle wiring harness 1. Remove and discard plastic bracket 2. Remove Horn 2.



Dismantle original vehicle parts

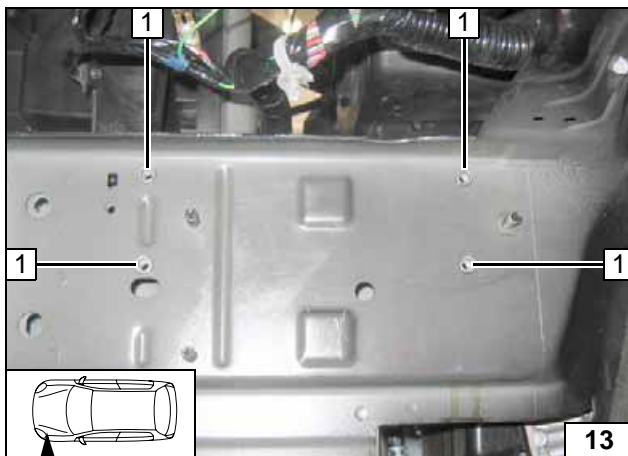


Bend bracket 2 according to template and attach to original vehicle stud bolt 3.

1 Copy hole pattern [4x]

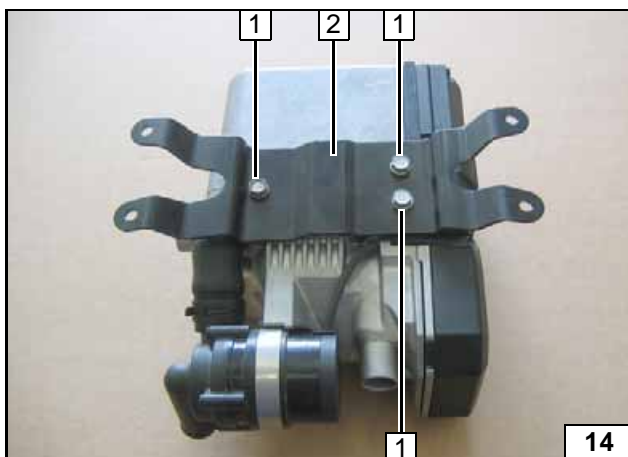


Copying hole pattern



1 9.1 mm dia. hole; rivet nut [4x each]

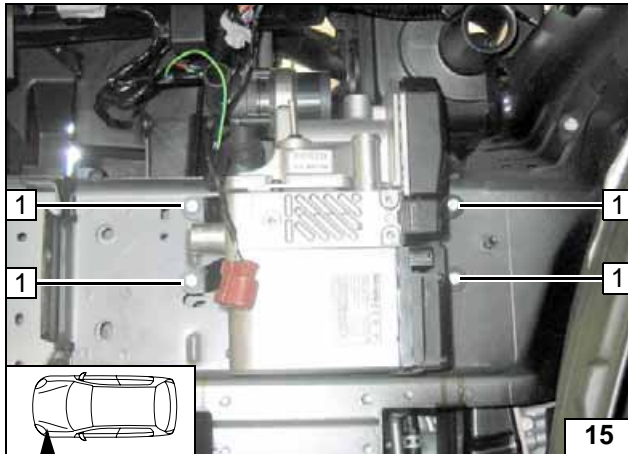
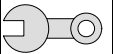
Installing rivet nut



Preparing heater

1 E-jot screw [3x]
2 Bracket

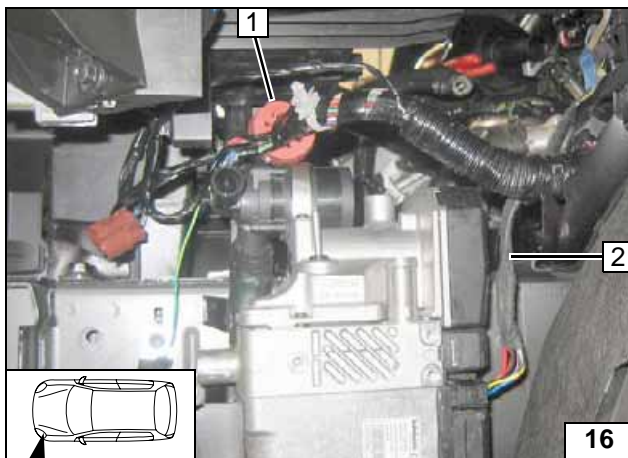
Premounting bracket on heater



Installing heater

- 1 M6x20 bolt, spring lock washer [4x each]

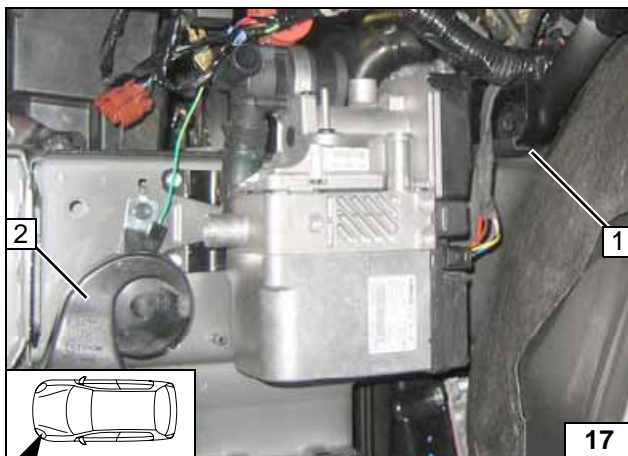
Installing heater



Cut red (rt) rubber isolator (with groove) 1, mount on original vehicle wiring harness and fasten in the groove with cable tie. Mount wiring harness 2 on heater.

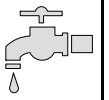


Installing heater



- 1 50 mm edge protection
- 2 Reinstall horn

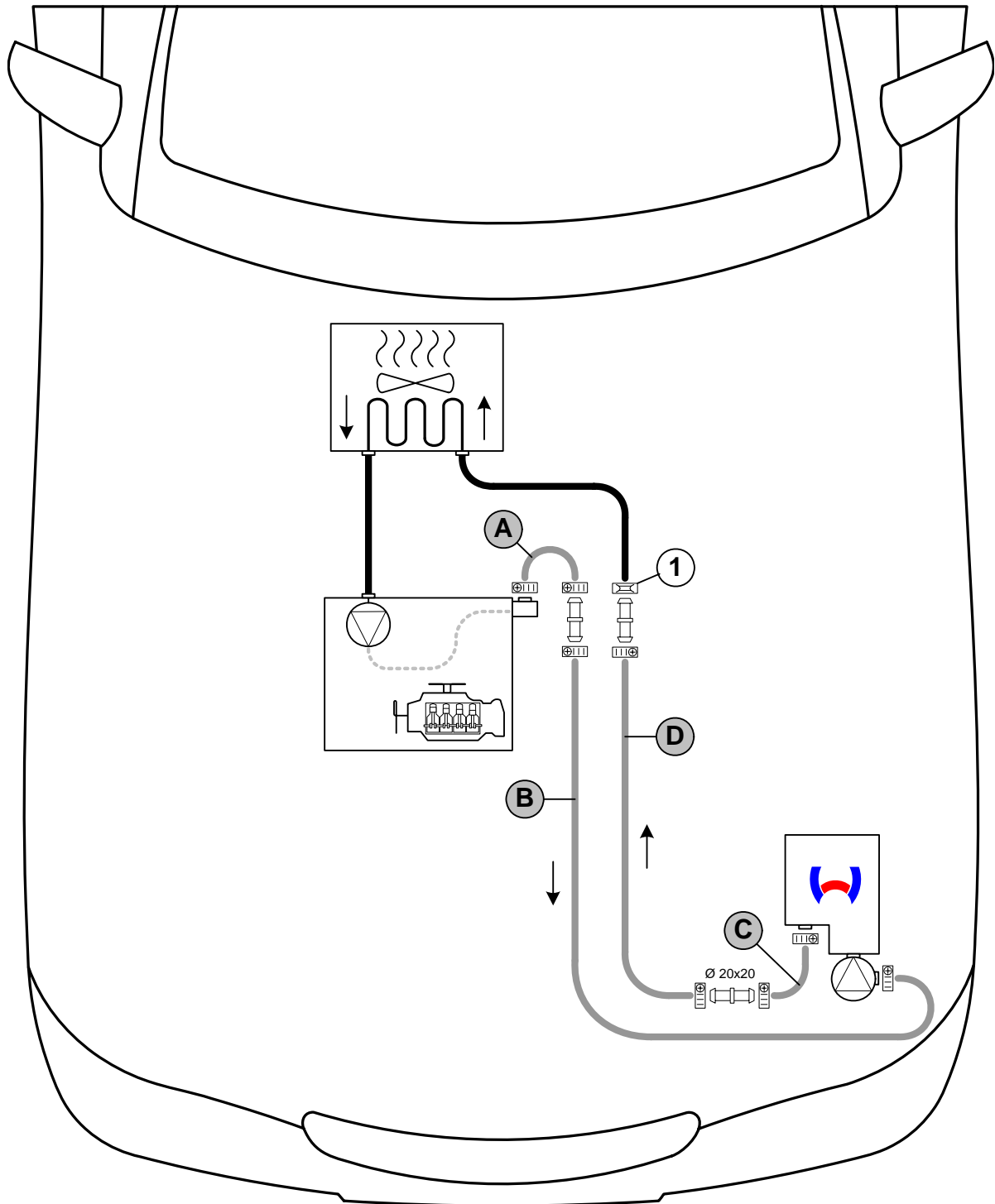
Installing horn






Coolant circuit

WARNING!

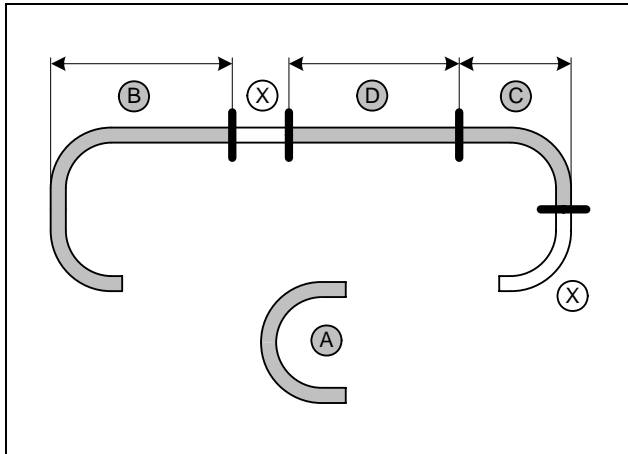
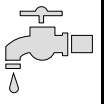
Any coolant running off should be collected using an appropriate container! Route hoses kink-free! Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant. The connection should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



Hose routing diagram

All connecting pipes without a specific designation  = dia. 18x20.
 All hose clamps  = 20-27 mm dia.
 1 = Original vehicle spring clip 



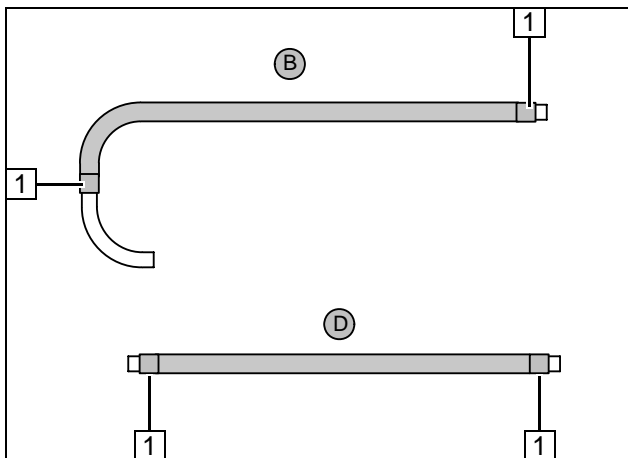


Hose **A** = 180° elbow, 18x18
Discard section **X**

B = 870
C = 140
D = 820



Cutting coolant hoses to length

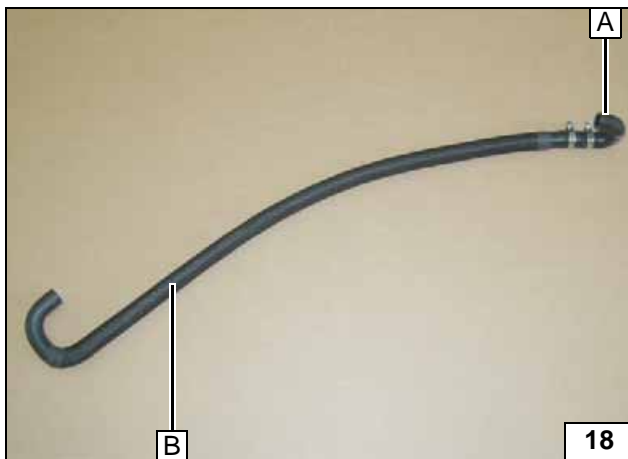


Slide one braided protection hose each onto hose **B** and **D**.
Cut heat shrink plastic tubing to length.

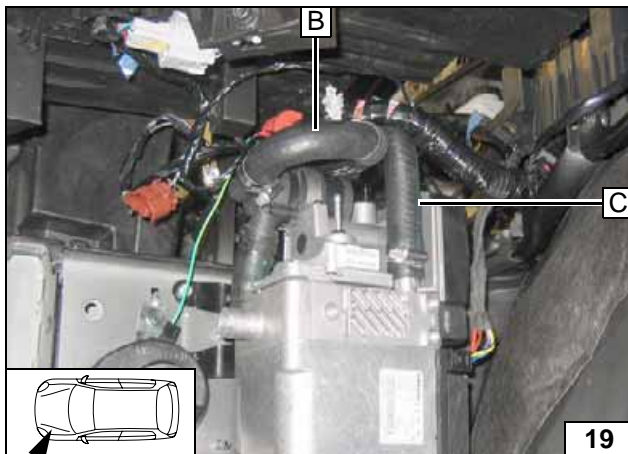
1 25 mm long heat shrink plastic tubing [4x]



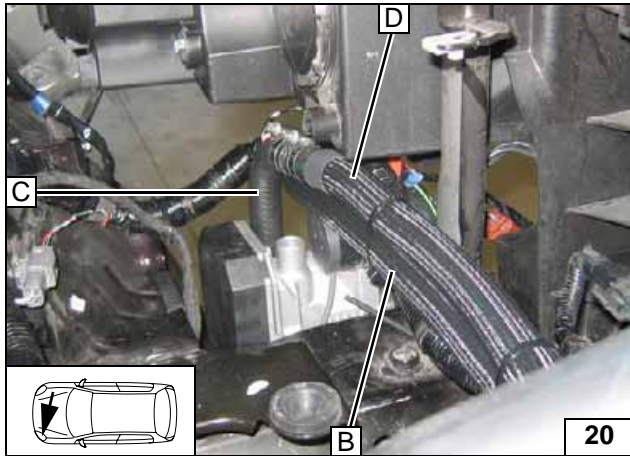
Preparing coolant hoses



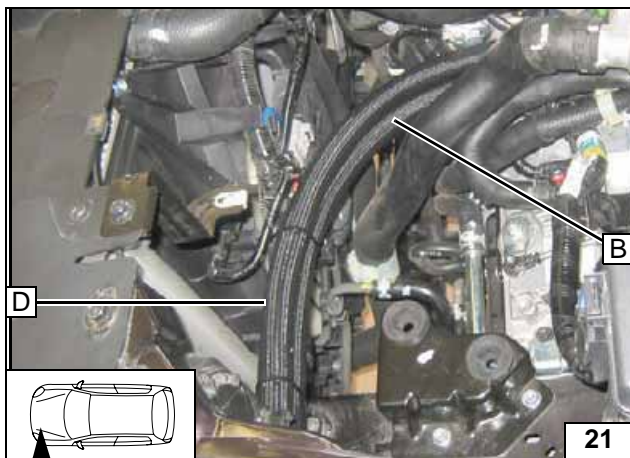
Premounting hoses A and B



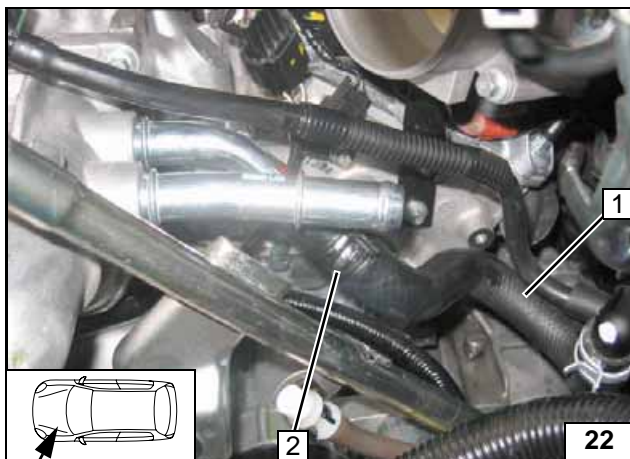
Connection of heater



Routing in engine compartment



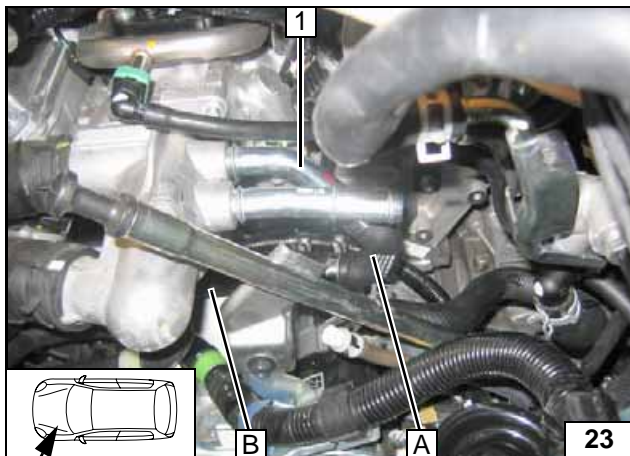
Routing in engine compartment



Disconnect hose to engine outlet/heat exchanger inlet 1 at connection piece of engine outlet. Original vehicle spring clip 2 will be re-used. Hose of engine inlet / heat exchanger outlet removed for demonstration purposes.

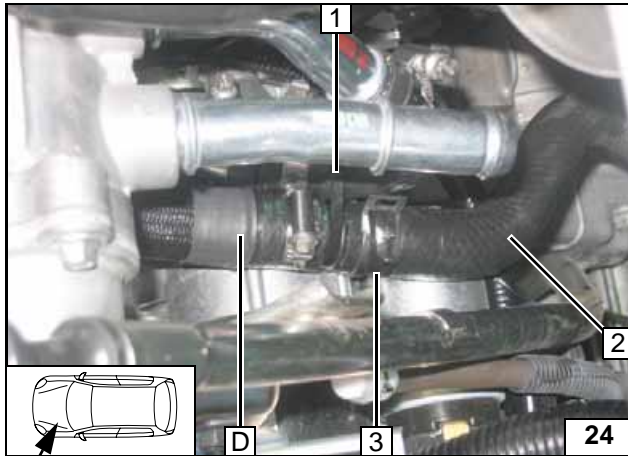


Cutting point



1 Connection piece for engine outlet

Connecting engine outlet

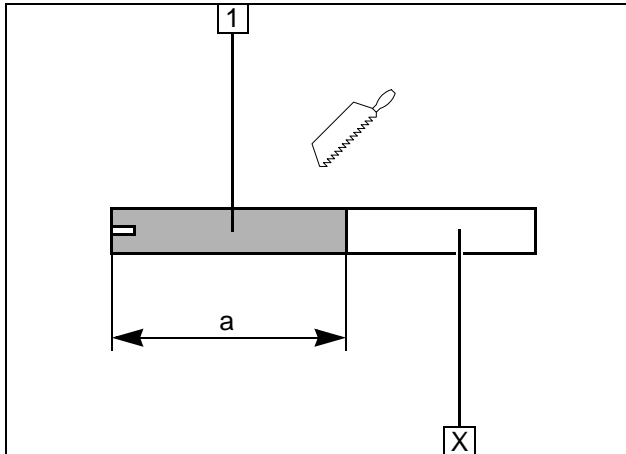
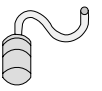


Ensure sufficient distance to neighbouring components.

- 1 Cable tie
- 2 Hose on heat exchanger inlet
- 3 Original vehicle spring clip



**Connect-
ing heat
exchanger
inlet**

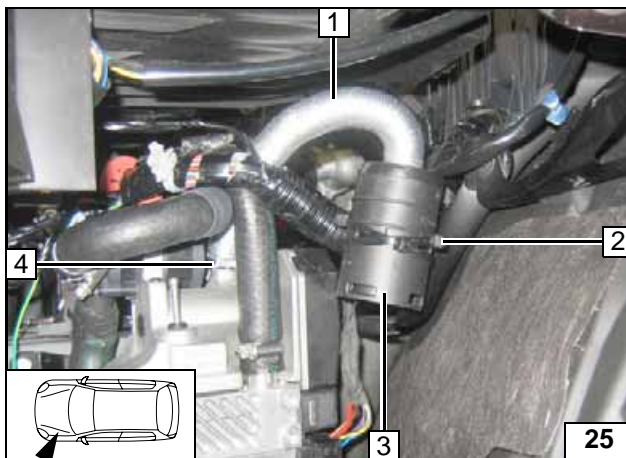


Combustion air

- 1 Combustion air pipe
a = 250

Discard section X

Cutting combustion air pipe to length

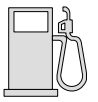


Fasten silencer 3 with cable tie [4x] 2 on original vehicle wiring harness!

- 1 Combustion air pipe
- 4 27 mm dia. clamp



Installing silencer



Fuel

CAUTION!

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

Catch any fuel running off with an appropriate container.

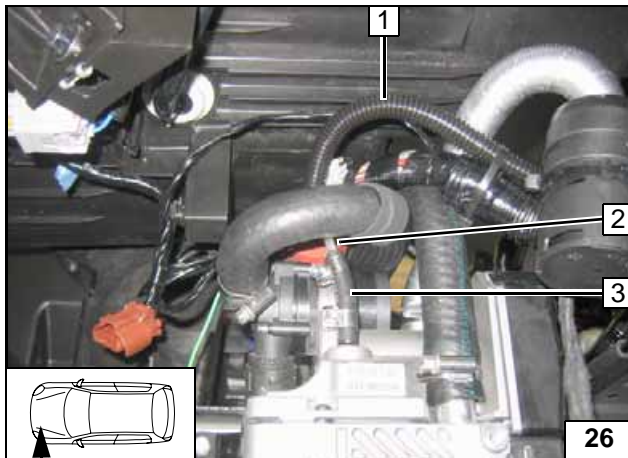
Install fuel line and metering-pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties. Mount the fuel line and wiring harness with rub protection on sharp edges.

WARNING!

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



Connection of heater



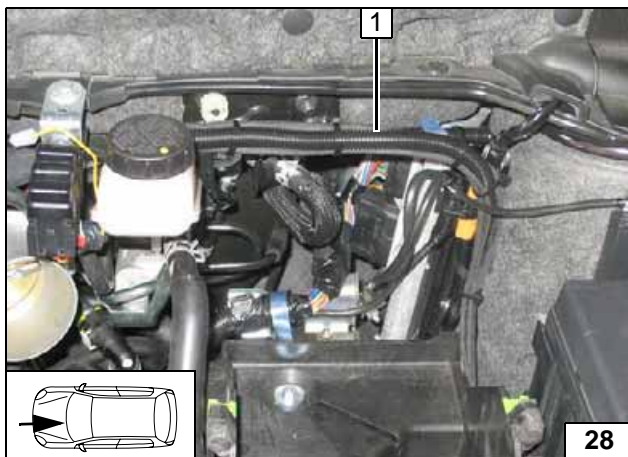
Route fuel line 2 into corrugated tube 1.

3 Hose section, 10 mm dia. clamp [2x]



1 Fuel line in corrugated tube

Installing lines

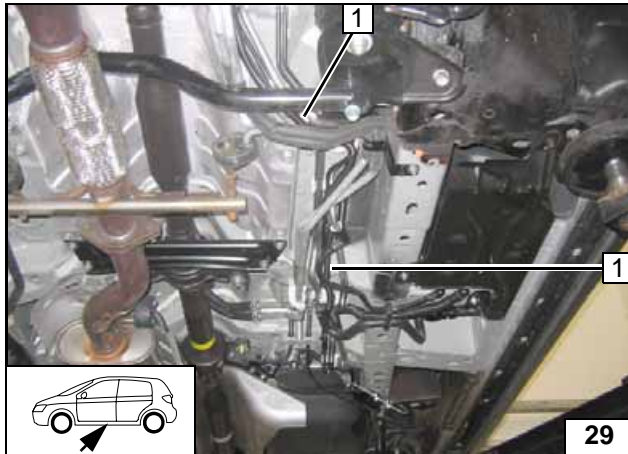
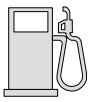


Route wiring harness of metering pump and fuel line in the second corrugated tube on the firewall of the underbody.

1 Corrugated tube



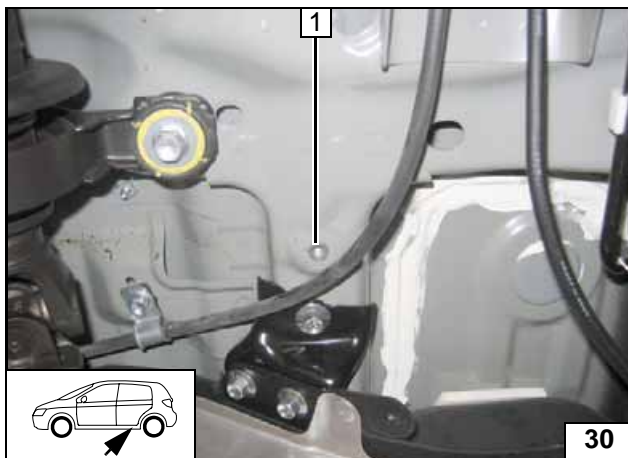
Installing lines



Route wiring harness of metering pump and fuel line in third corrugated tube 1 to the installation location of the metering pump.

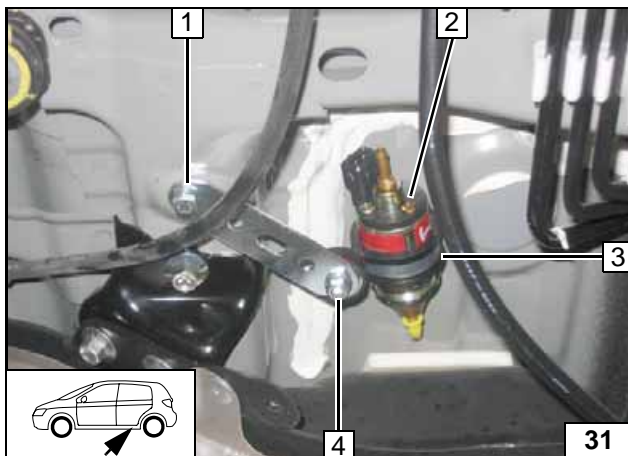


Installing lines



1 Existing hole, install rivet nut

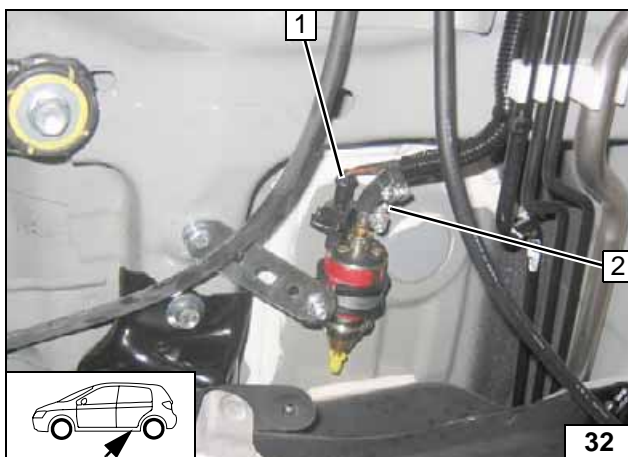
Installing rivet nut



1 M6x20 bolt, spring lockwasher, perforated bracket
 2 Metering pump
 3 Rubber-coated pipe clamp
 4 Silent block, flanged nut [2x]



Installing metering pump

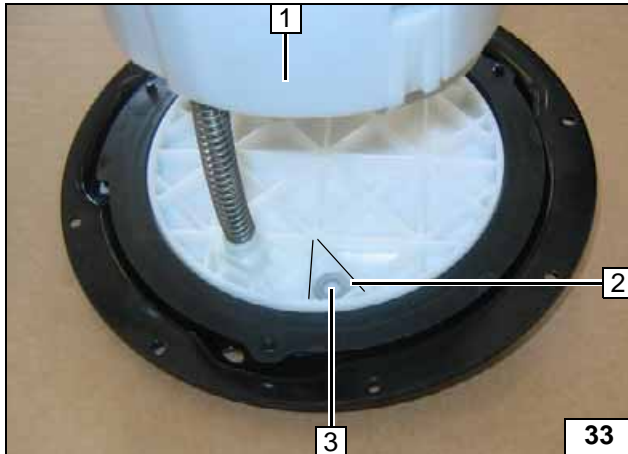


Cut corrugated tube on the metering pump to length

1 Wiring harness of metering pump, connector mounted
 2 Fuel line, hose section, 10 mm dia. clamp [2x]



Connecting metering pump

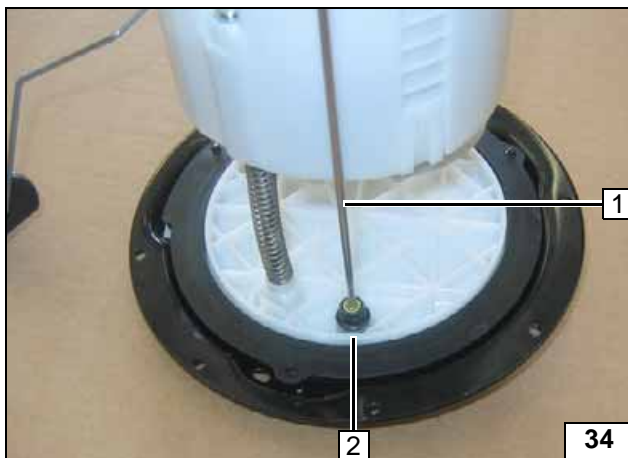


Remove fuel-tank sending unit **1** according to manufacturer's instructions.

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



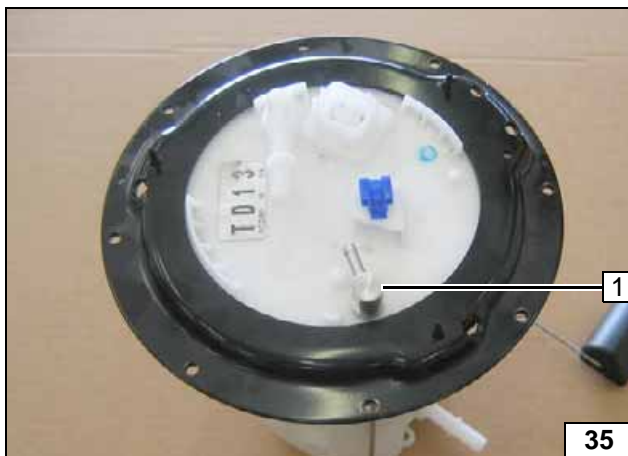
Removing fuel



Mould fuel standpipe **1** according to template, cut to length and insert. Insert five 6 mm dia. washers **2** between fuel tank sending unit and flanged nut (height compensation).



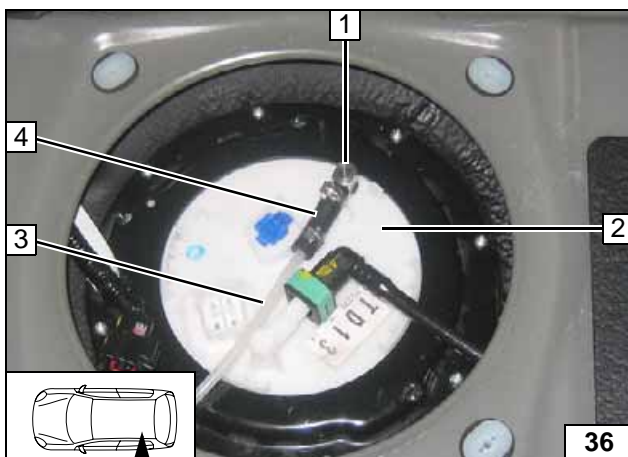
Installing fuel standpipe



1 Fuel standpipe



Installing fuel standpipe



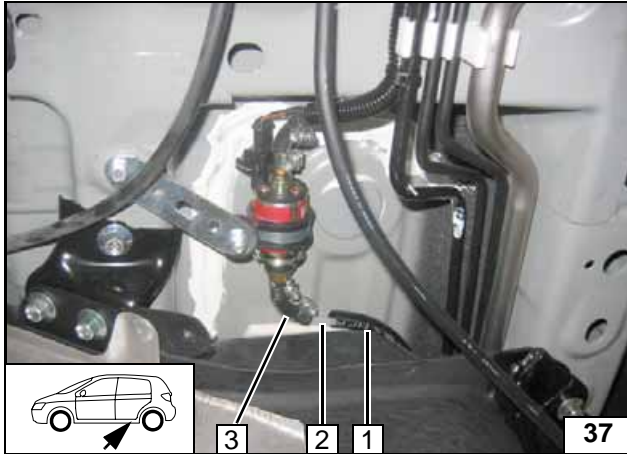
Install fuel-tank sending unit **2** according to manufacturer's instructions.

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



Connecting fuel line



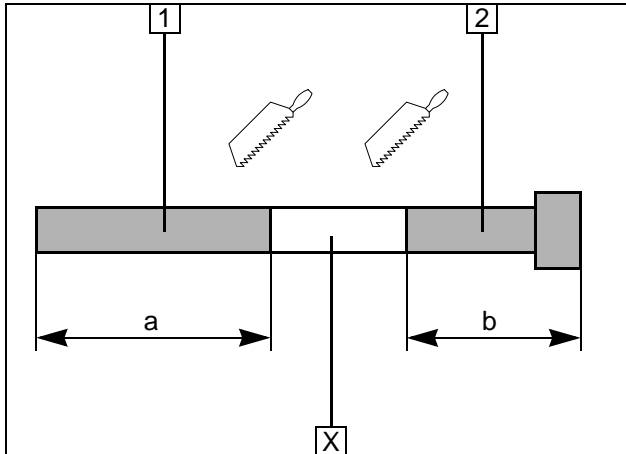
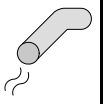


Slide corrugated tube **1** on to fuel line **2**.
Check the position of the components; adjust if necessary. Check that they have freedom of movement.

3 Hose section, 10 mm dia. clamp [2x]



**Connect-
ing meter-
ing pump**



Exhaust gas

- 1 Exhaust pipe
a = 320
- 2 Exhaust end section
b = 250

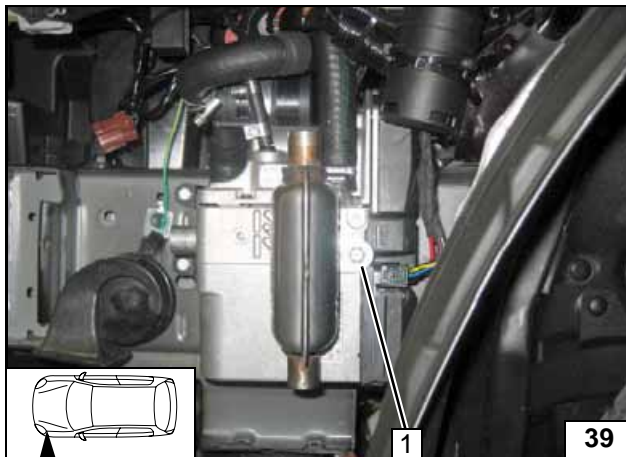
Discard section X

Preparing exhaust pipe



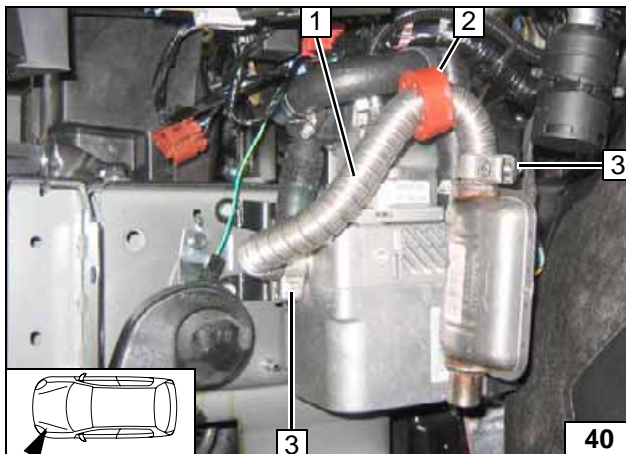
- 1 Silencer
- 2 M6x20 bolt, flanged nut
- 3 Angle bracket

Premounting silencer



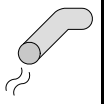
- 1 Eject screw, large diameter washer

Installing silencer



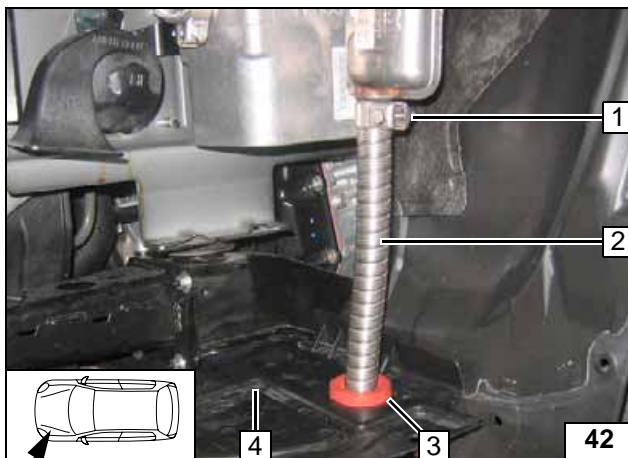
- 1 Exhaust pipe
- 2 Red (rt) rubber isolator
- 3 Hose clamp [2x]

Installing exhaust pipe



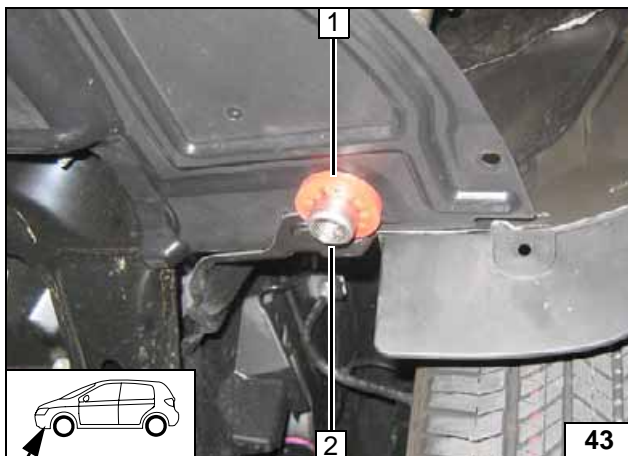
- 1 Underride protection
- 2 42 mm dia. hole

**Cutting out
underride
protection**



- 1 Hose clamp
- 2 Exhaust end section
- 3 Red (rt) rubber isolator with groove
- 4 Underride protection

**Installing
exhaust
end sec-
tion**

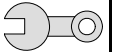


Ensure sufficient distance to neighbouring components.

- 1 Red (rt) rubber isolator with groove
- 2 Exhaust end section



**Position-
ing rubber
isolator**



Final Work

WARNING!

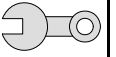
Mount removed parts in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.

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

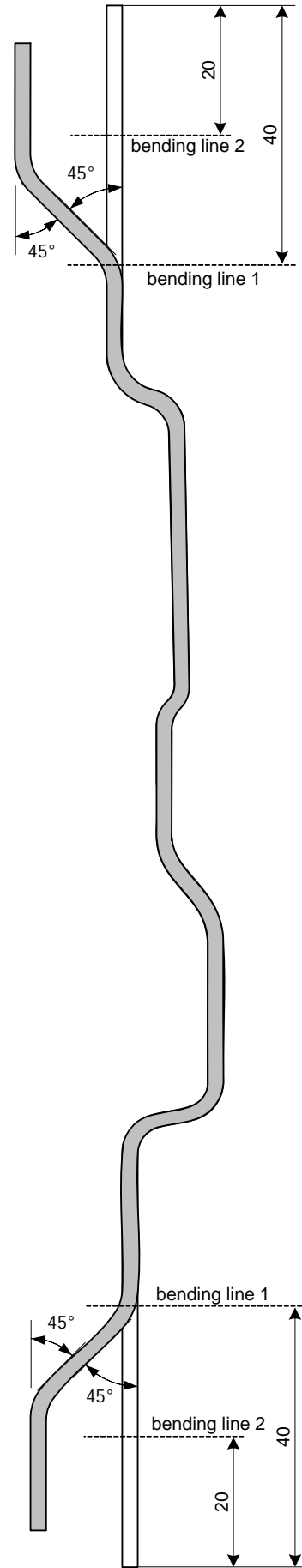
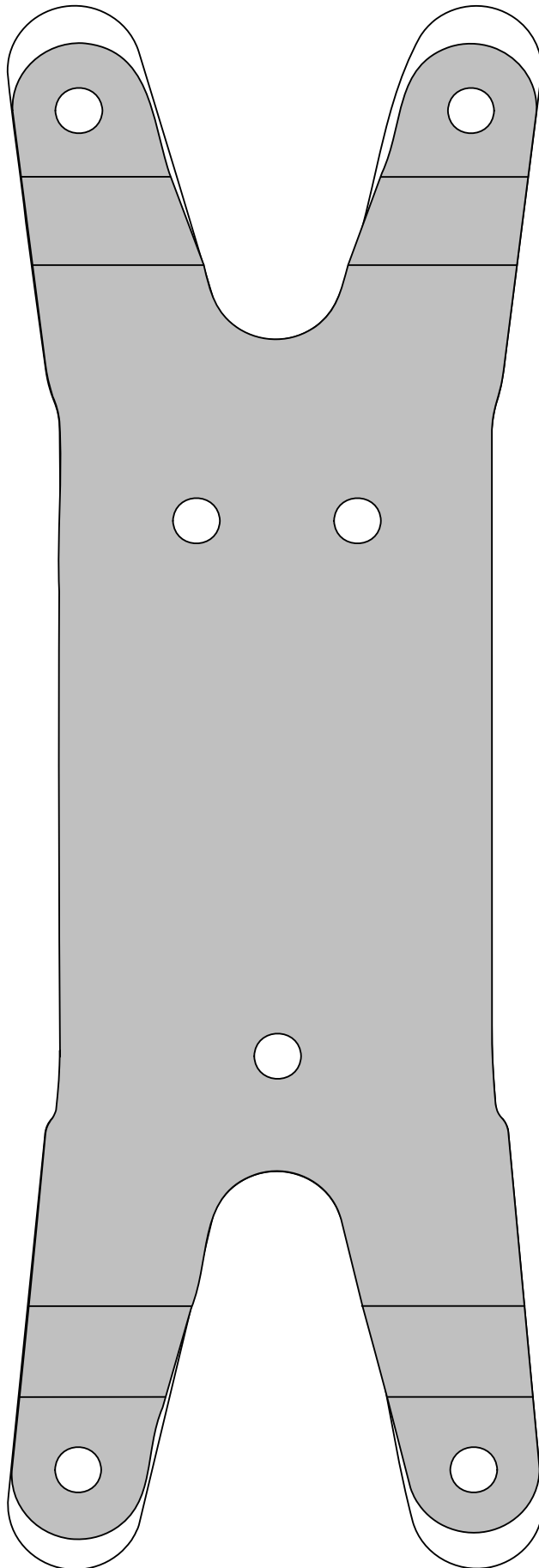
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach telestart remote option**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the sticker "Switch off parking heater before re-fuelling" in the area of the filler neck**
- **For initial startup and function test, see installation instructions**

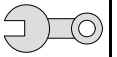


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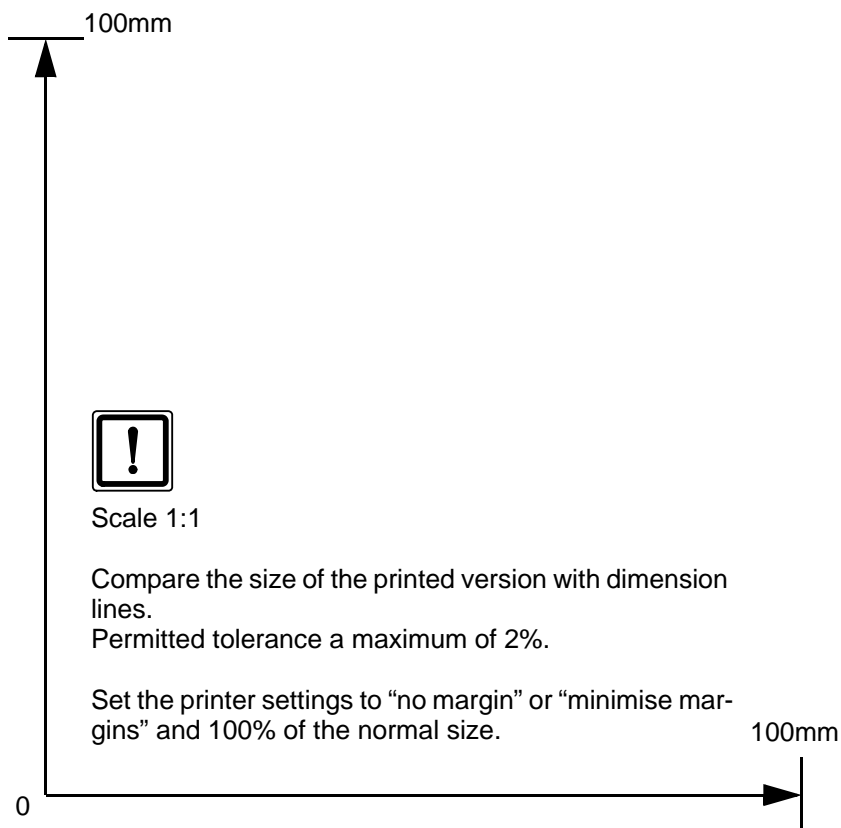


Template for bracket





Template for Fuel Standpipe



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.

In vehicles with passenger compartment monitoring it is to be deactivated additionally, over and above the vehicle settings for the heating operation.

For information on deactivation, please see the vehicle owner's manual.

Before parking the vehicle, make the following settings:



Automatic air-conditioning settings:



A/C control panel up to VIN 300000!

- 1 Air outlet to windscreen
- 2 Set temperature on both sides to "32° C"
- 3 Fan "front" to level "2"
- 4 Activate rear fan



- 1 Set rear fan to "OFF"



A/C control panel from VIN 300001.

- 1 Air outlet to windscreen
- 2 Set temperature on both sides to "32° C"
- 3 Fan "front" to level "2"
- 4 Deactivate rear fan



Automatic air-conditioning

Rear A/C control panel



Automatic air-conditioning