Water Heater

Feel the Drive

***Thermo Top E* Parking Heater** e1 00 0002

***Thermo Top C* Parking Heater** e1 00 0003

Installation documentation

Nissan Qashqai / Qashqai +2

Petrol
from model year 2007
Left-hand drive vehicle
Manual transmission
Automatic transmission (CVT)

WARNING!

Hazard warning:

The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.
Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

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.

Table of Contents

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Nissan	Qashqai	J10	e11 * 2001/116 * 0295 *
Nissan	Qashqai +2	J10	e11 * 2001/116 * 0295 *

Engine type	Engine model	Output in kW	Displacement in cm³
HR16	Petrol	84	1598
HR16	Petrol	86	1598
MR20	Petrol	104	1997

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 the digital timer is to be coordinated with the end customer before installation.

Heater/Installation Kit

Quantity	Designation	Order No.:
1	Retail accessories *Thermo Top E / C*	See Nissan price list
1	Installation kit for Nissan Qashqai / Qashqai +2 Petrol	1311968B
1	Heater control	See Price list

Foreword

This installation documentation applies to Nissan Qashqai / Qashqai +2 Petrol 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 this installation documentation.

However, the stipulations in this "installation documentation", the "operating instructions and "Installation instructions" for the *Thermo Top E / C* should be observed under all circumstances.
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. Insulate loose wires and tie back.
Sharp edges should be fitted with rub protection (cut-open fuel hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).
Check or adjust the corresponding settings before installation when installing an IPCU.

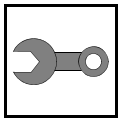
Special Tools

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

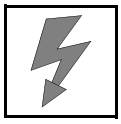
Explanatory Notes on Document

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

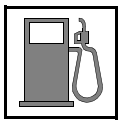


Electrical system

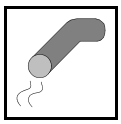


Coolant circuit

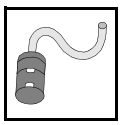
Fuel



Exhaust gas



Combustion air



Software

Special features are highlighted using the following symbols:

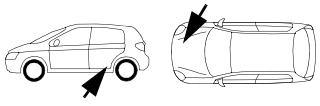
Specific risk of injury or fatal accidents.

Specific risk of damage to components.

Specific risk of fire or explosion.

Reference to general installation instructions of Webas-to 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.

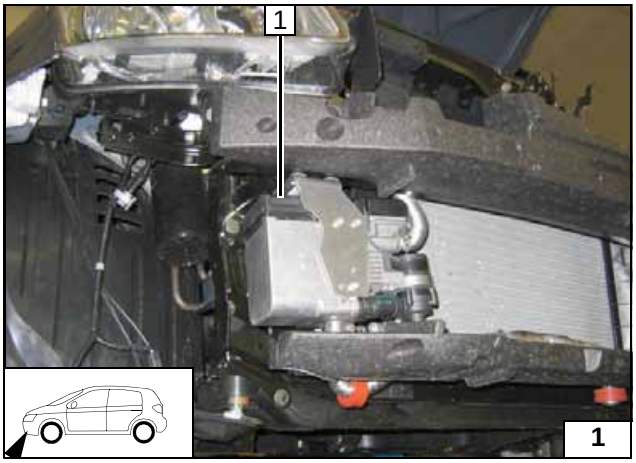
All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejot screws, Ejot studs = 10 Nm!

Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Disconnect the battery.
- 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 the air filter together with the intake hose.
- Remove the bumper.
- Remove the trim of the right-hand air ducting.
- Remove the left-hand underride protection.
- Remove the rear seat bench.
- Open the right-hand tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the A/C control panel (only with automatic air-conditioning).
- Remove the trim in the driver's side footwell.
- Detach the fuse box in the passenger compartment.

Remove page 32 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater Installation Location

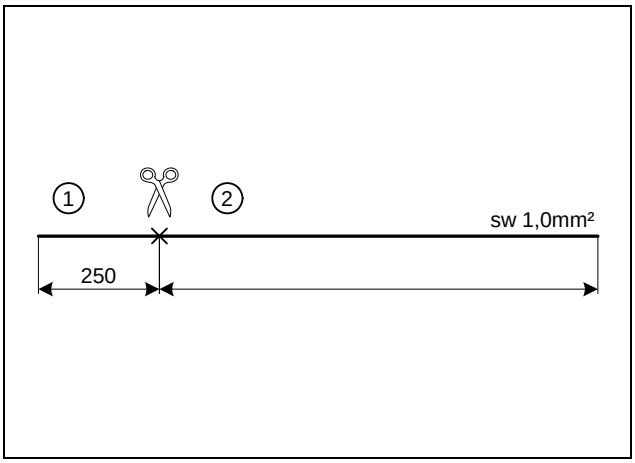
1 Heater

Installation location

Preparing Electrical System

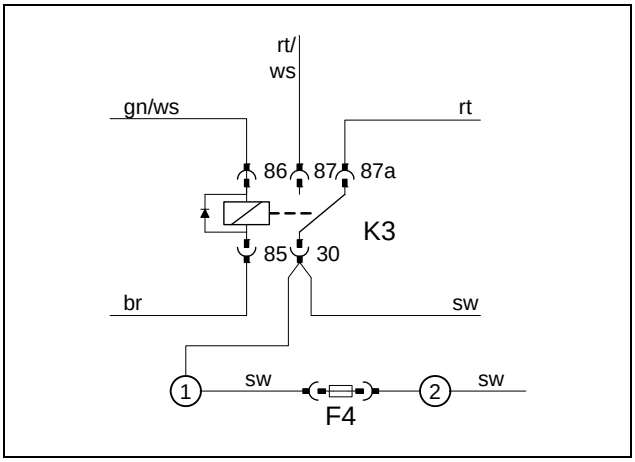
Only with automatic air-conditioning

Cutting wires to length



Preparing fuse F4

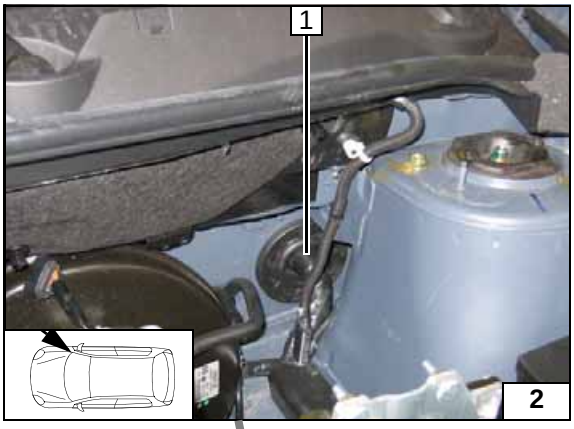
Produce connections as shown in wiring diagram. Install wire section **2** in the protective sleeving provided.



Electrical Connections

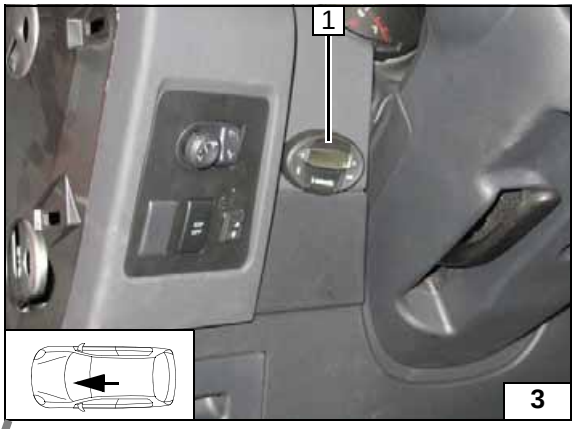
Wiring harness pass through

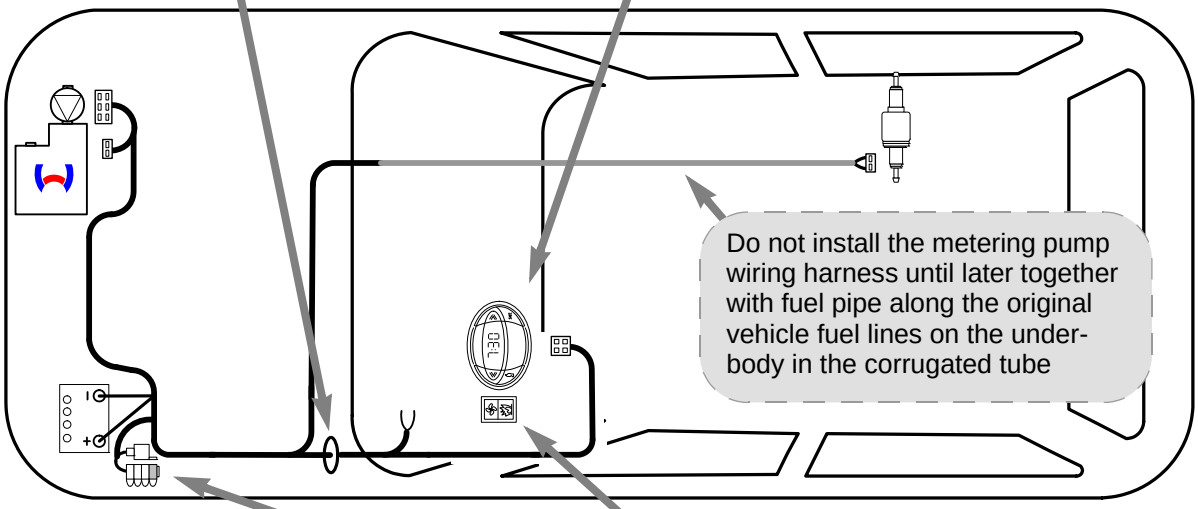
1 Protective rubber plug



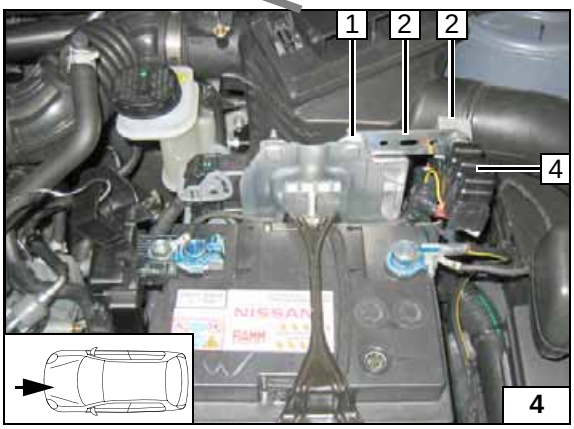
Digital timer

1 Digital timer



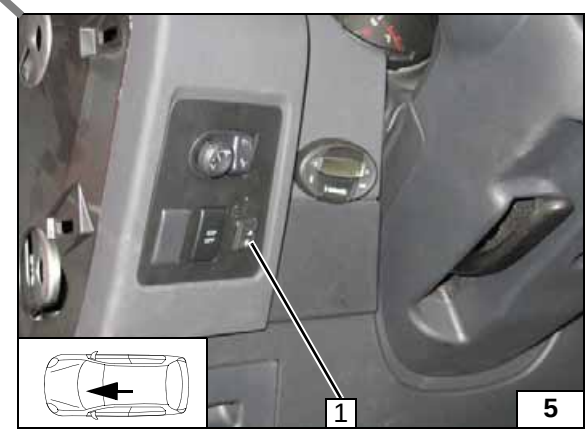


Wiring harness routing installation diagram



Fuse holder, K3 relay

1 Original vehicle bolt, flanged nut
2 Perforated bracket
3 Fan relay K3
4 Fuse holder, M5x20 bolt, washer, flanged nut

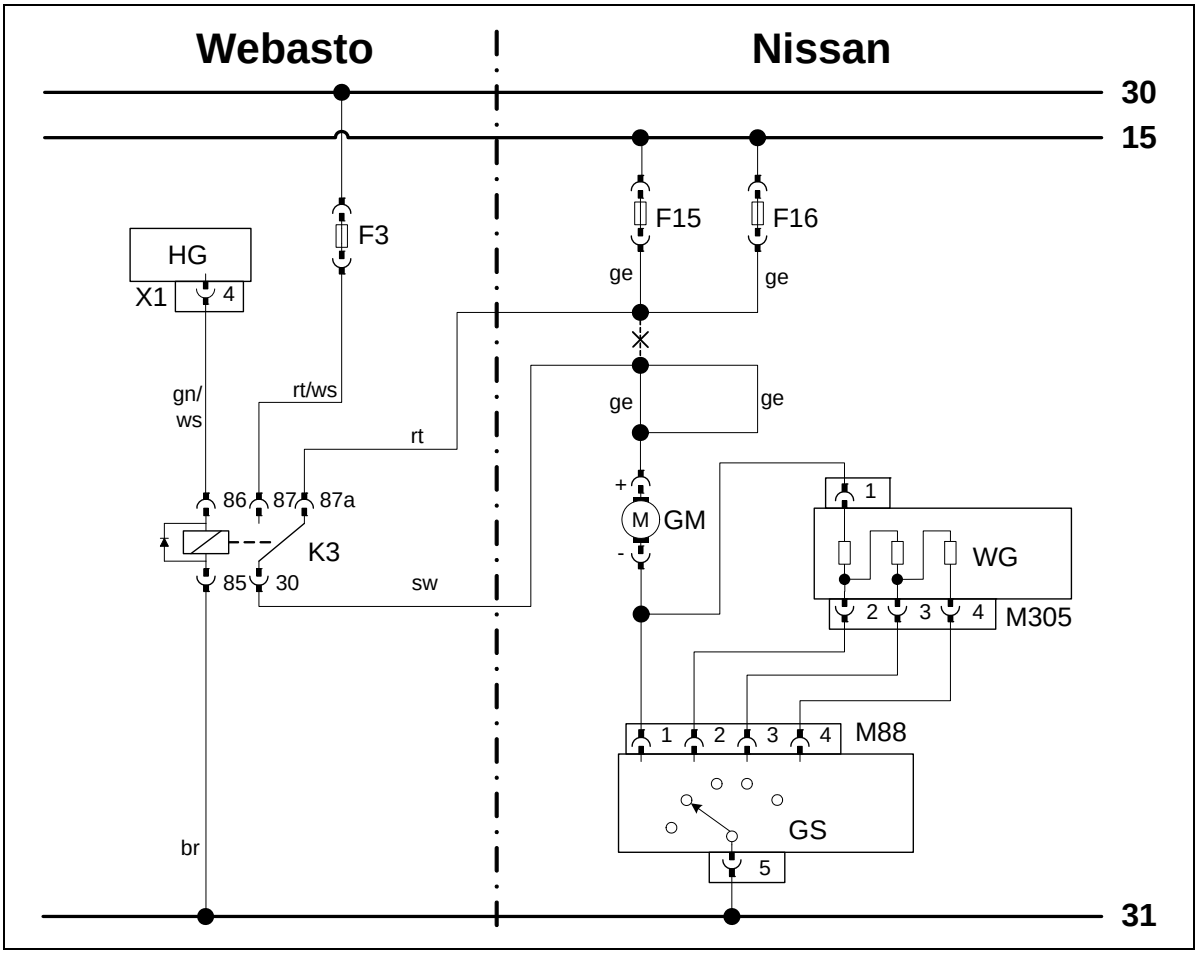


Summer/winter switch option

1 Summer/winter switch, drilled hole 12 mm dia.

Fan Control for Manual Air Conditioning

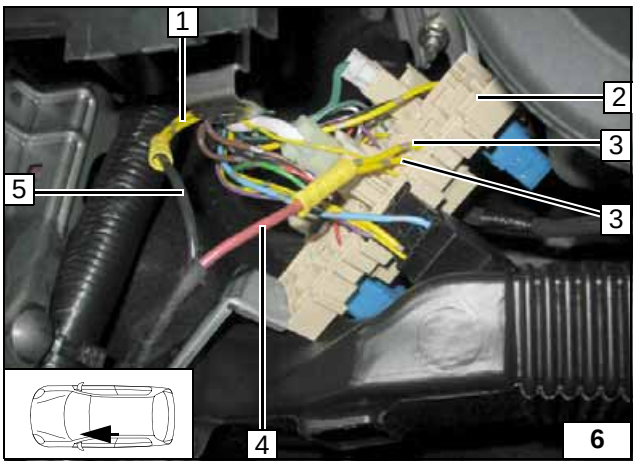
Wiring diagram



Legend

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	GM	Fan motor	rt	red
X1	6-pin connector	GS	Fan switch	ws	white
F3	25 A fuse	WG	Resistor group	sw	black
K3	Fan relay	F15	15A fuse	gn	green
		F16	15A fuse	ge	yellow
		M 88	8-pin connector		
		M305	4-pin connector	**X**	Cutting point
				Wiring colours may vary.	

Connection for fan motor

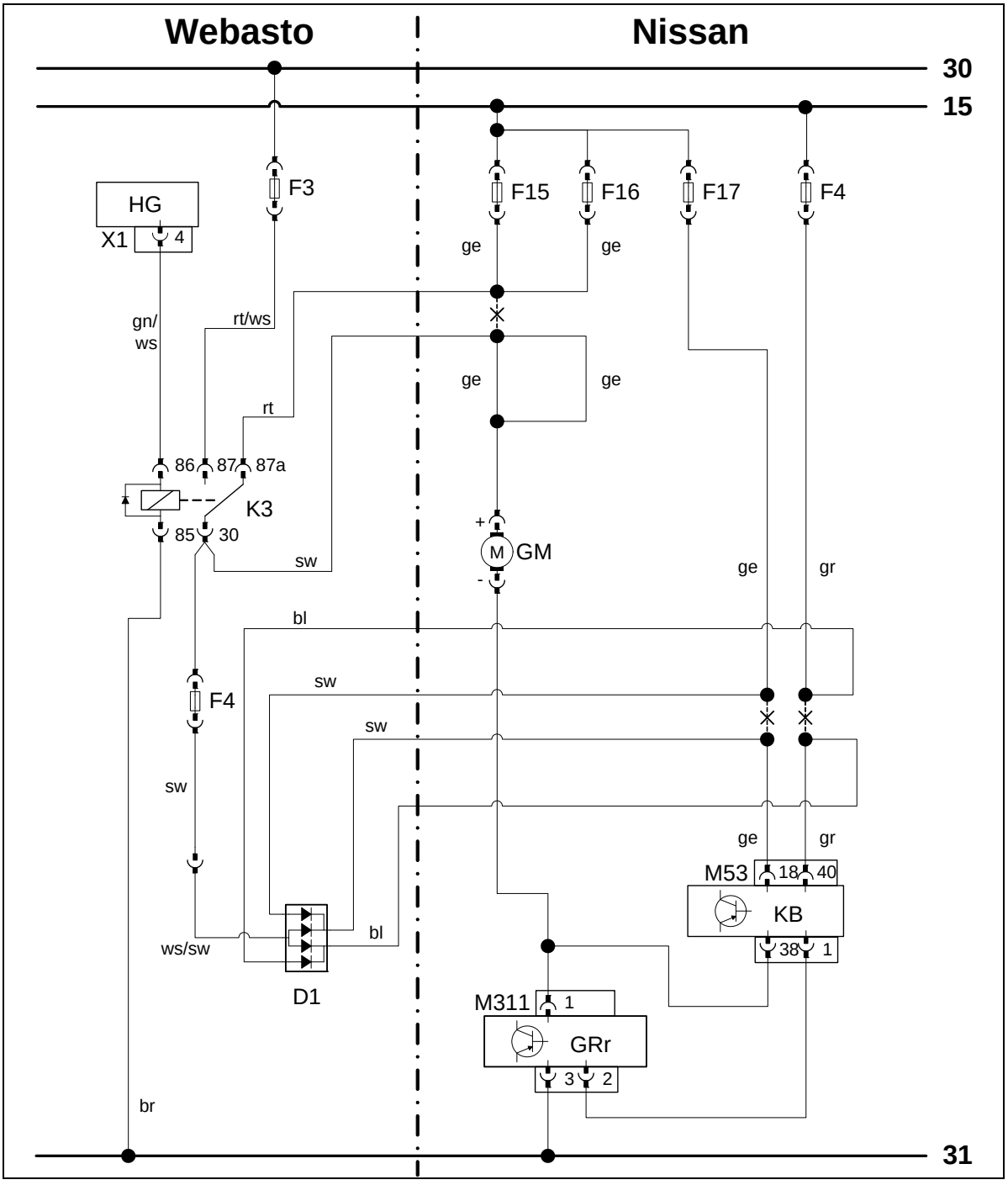


Connection on central electrical box **2** on driver's side.
Produce connections as shown in wiring diagram.

1 Yellow (ge) wire [2x] to fan motor
3 Yellow (ge) wire [2x] for fuse F15 and F16
4 Red (rt) wire from K3/87a
5 Black (sw) wire from K3/30

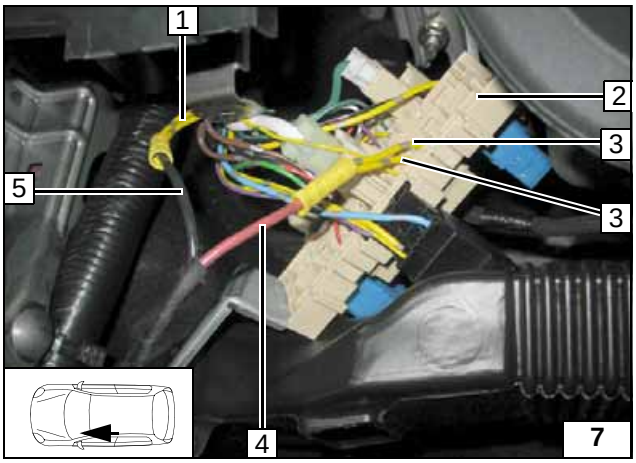
Automatic Air-Conditioning Fan Control

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	GM	Fan motor	rt	red
X1	6-pin connector	KB	A/C control panel	ws	white
F3	Fuse	GRr	Fan controller	sw	black
K3	Fan relay	F4	10A fuse	br	brown
D1	Diode group	F15	15A fuse	gn	green
F4	1A fuse	F16	15A fuse	bl	blue
		F17	10A fuse	ge	yellow
		M53	40-pin connector	gr	grey
		M311	4-pin connector		
				X	Cutting point
				Wiring colours may vary.	

Legend



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Produce connections as shown in wiring diagram.

1 Yellow (ge) wire [2x] to fan motor
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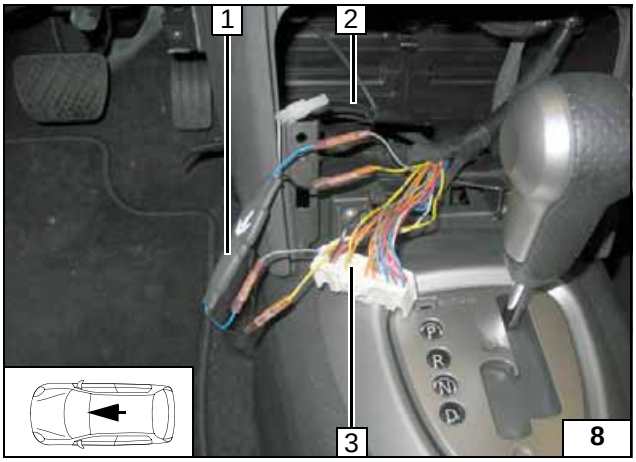
4 Red (rt) wire to K3/87a
5 Black (sw) wire from K3/30

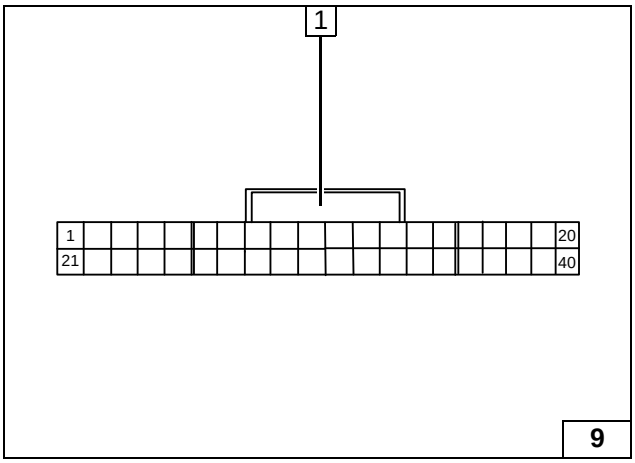
Connection for fan motor



Connection to 40-pin connector M53 **3** from A/C control panel.
Produce connections as shown in wiring diagram.

1 Diode group
2 Black (sw) wire from F4

Connecting A/C control panel



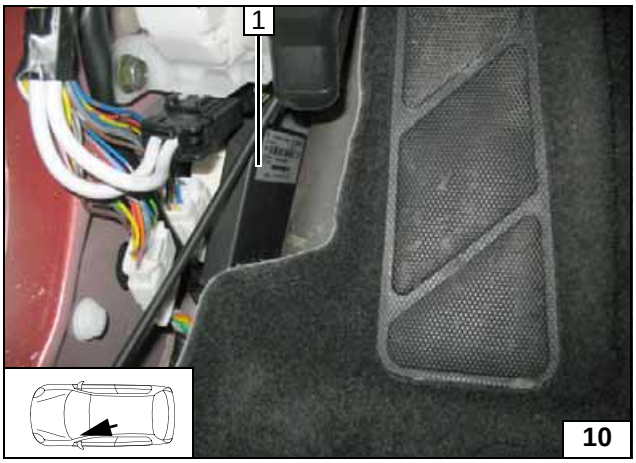
1 Connector M53 on cable side

View of connector M53

Remote Option (Telestart)

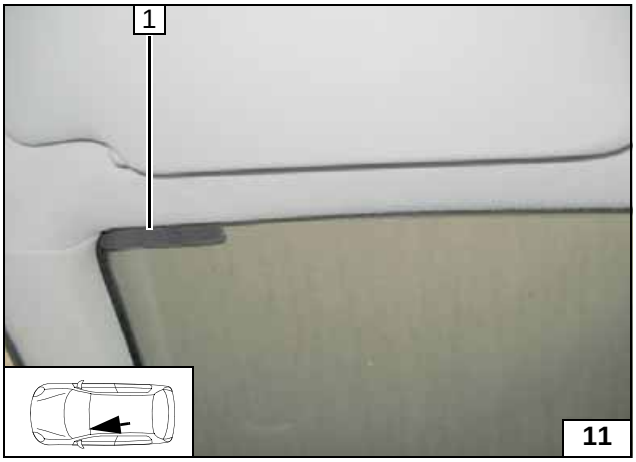
Mounting receiver

Fasten receiver **1** with suitable means.



Mounting antenna

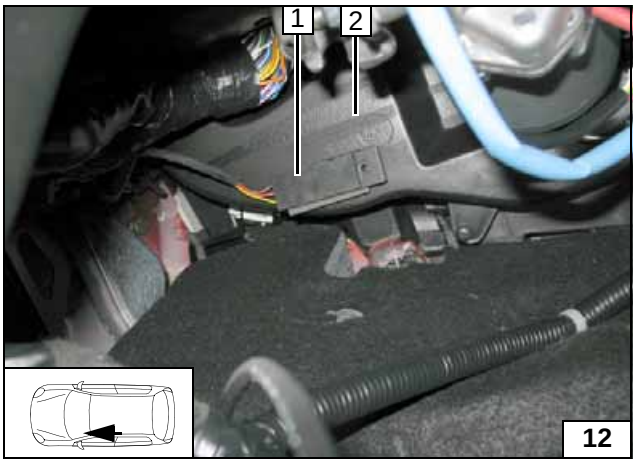
1 Antenna



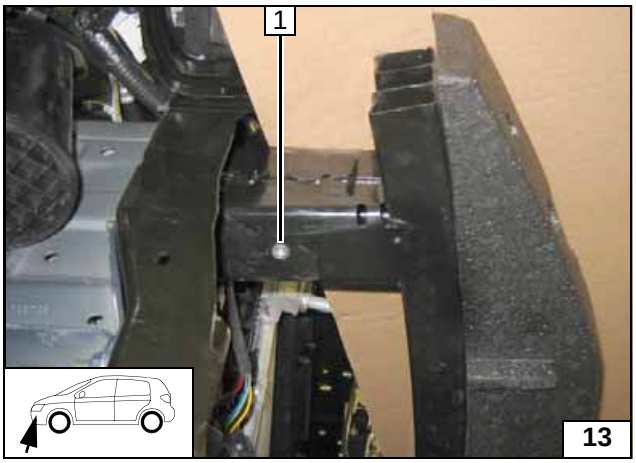
Mounting temperature sensor

Temperature sensor T100 HTM

1 Fasten temperature sensor with suitable means
2 Air duct on driver's side

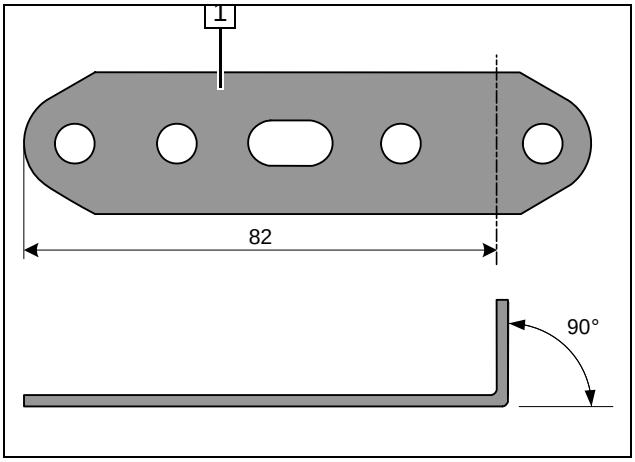


Preparing Installation Location



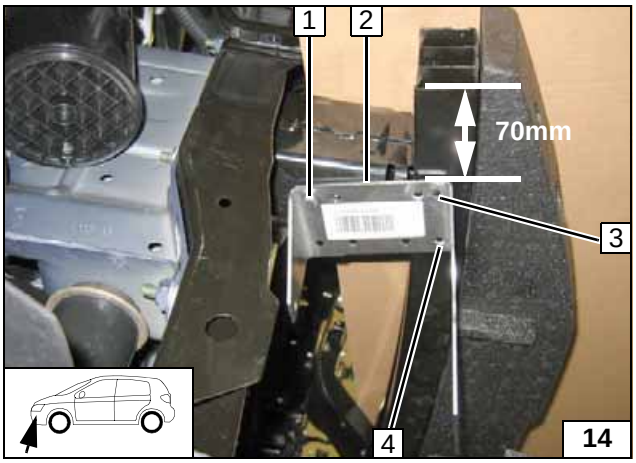
1 M6 rivet nut in existing hole

Installing rivet nut



1 Perforated bracket

Bending perforated bracket

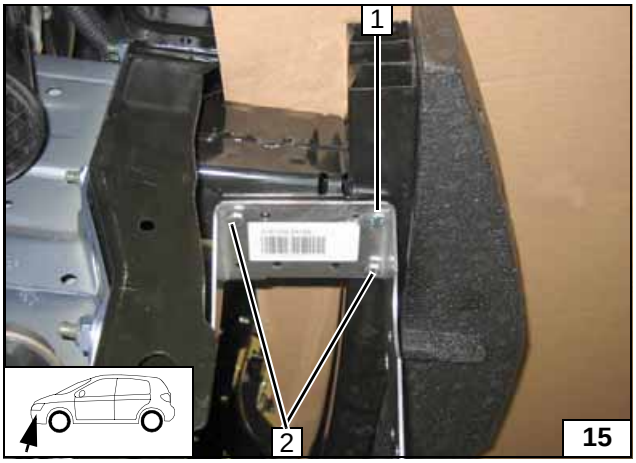


Align bracket **2** as shown and install at position **1**. Copy holepattern on position **3** and **4**.

1 M6x20 bolt, spring lockwasher
3 7 mm dia. hole
4 Drill 9.1 mm dia. hole; install M6 rivet nut

Copying hole pattern

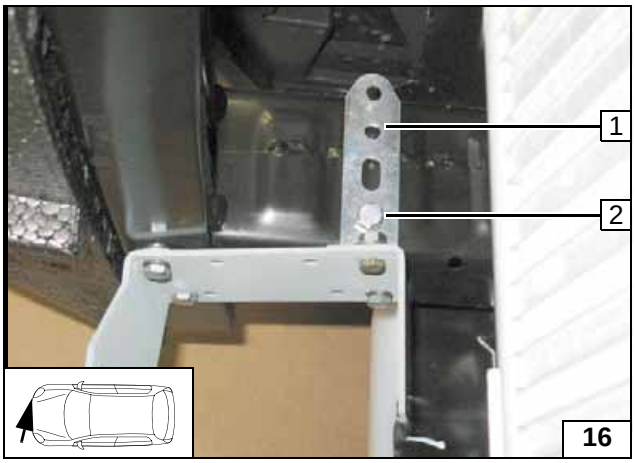
Installing Bracket



Insert one large diameter washer between bracket and vehicle at position **1** and two large diameter washers at position **2**.

1 M6x20 bolt, large diameter washer [2x], flanged nut
2 Rivet nut, M6x20 bolt, spring lockwasher, large diameter washer [2x each]

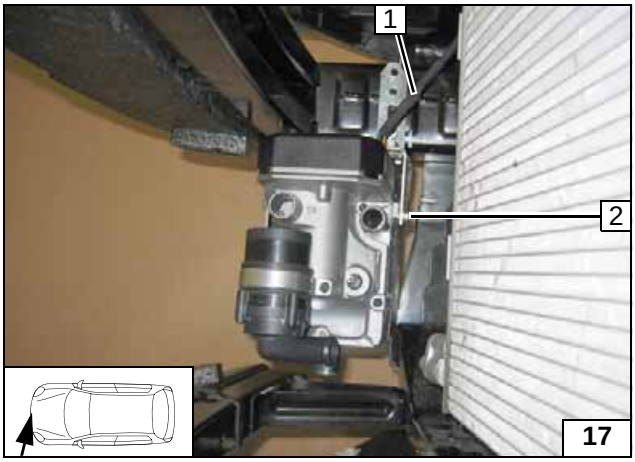
Installing bracket



Mount perforated bracket **1**. Copy hole pattern on position **2**.

2 Rivet nut, M6x20 bolt, spring lockwasher

Installing bracket

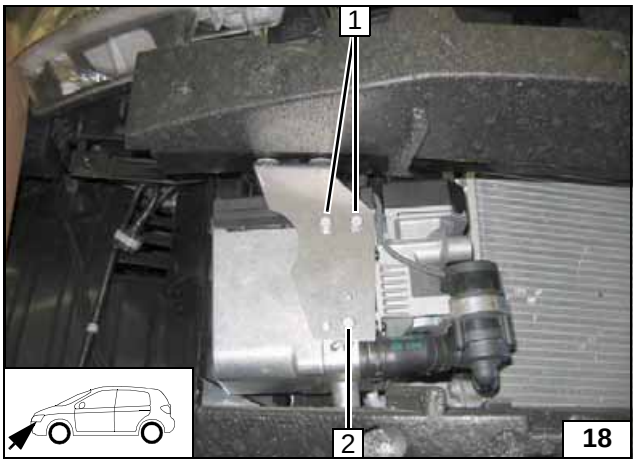


Installing Heater

Ejot screw bolt, tightening torque 10 Nm! Before installing heater, wiring harness **1** must be connected.

2 Ejot screw

Mounting heater



Insert two washers between heater and bracket at Position **2**.
Ejot screws, tightening torque 10 Nm.

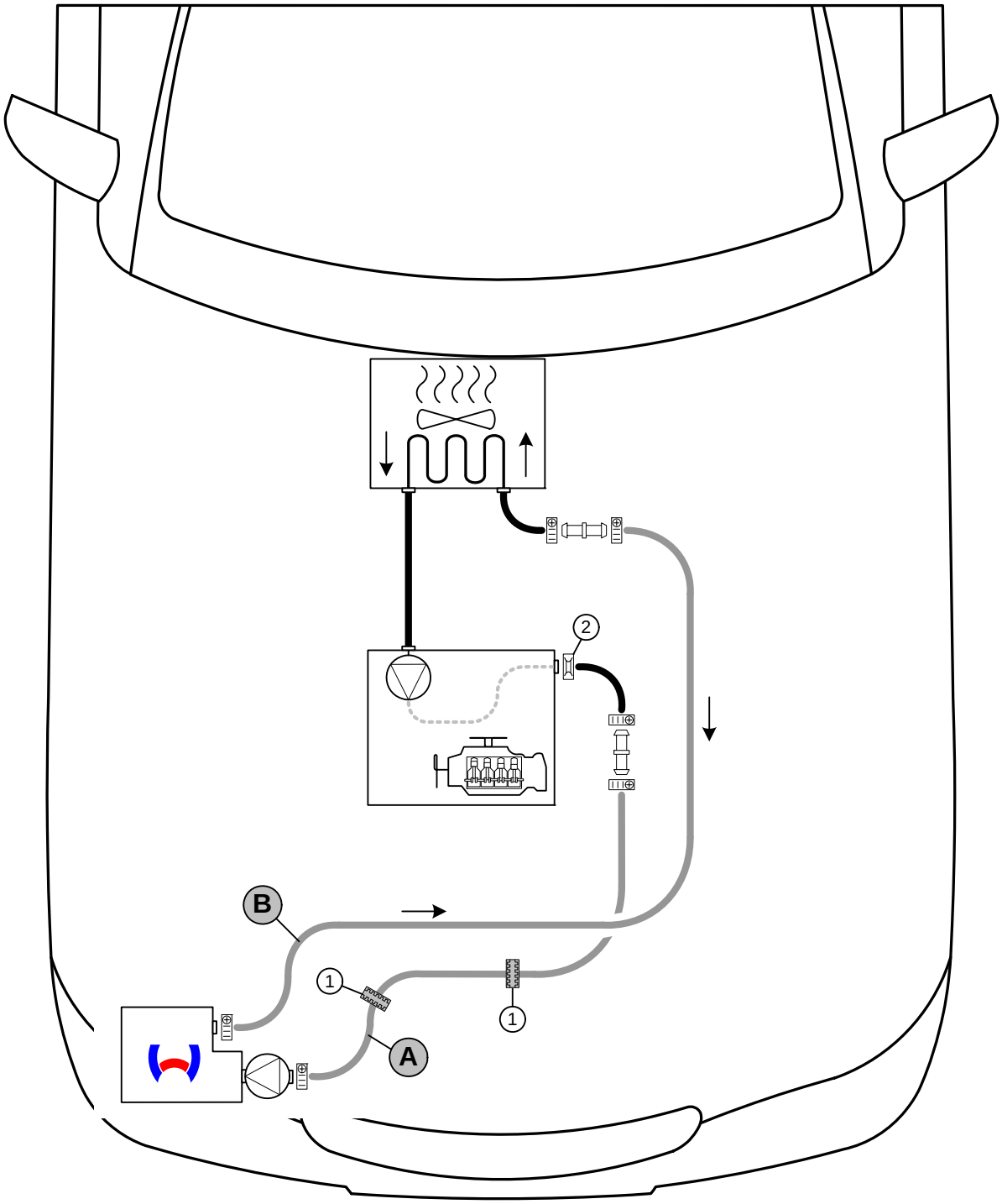
1 Ejot screw [2x]
2 Ejot screw

Mounting heater

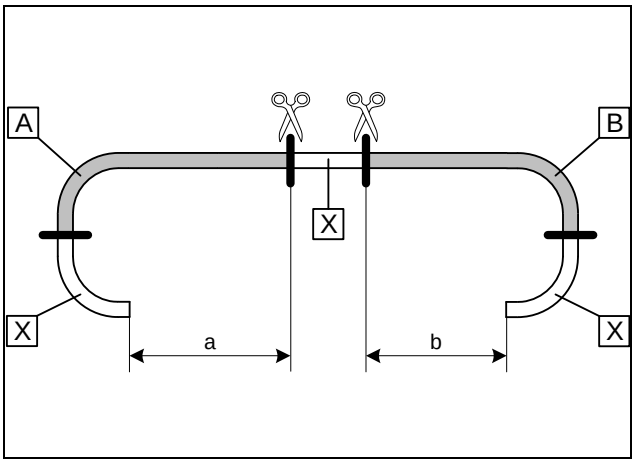
Coolant Circuit 1.6 B

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

Hose routing diagram



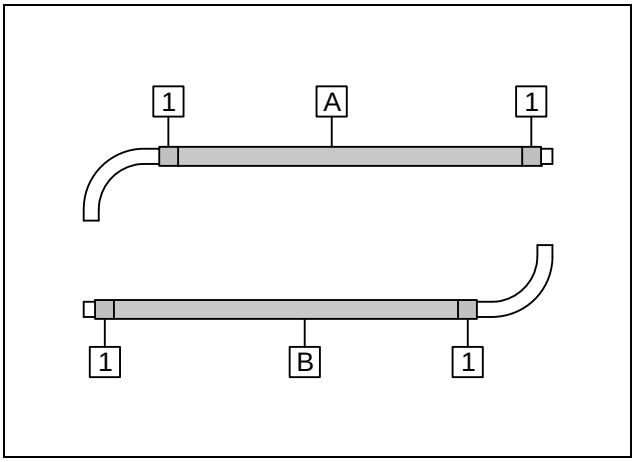
All connecting pipes = 18x20 mm dia. All hose clamps = 20-27 mm dia.!
1 = Black (sw) rubber isolator [2x]! **2** = Original vehicle spring clip .



a = 930
b = 1030

Discard section **X**.

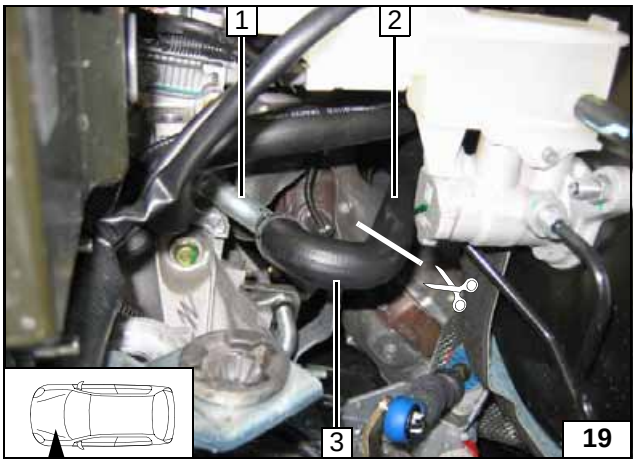
Cutting hoses to length



Push braided protection hoses onto hose **A** and **B** and cut to length.
Cut heat shrink plastic tubing to length.

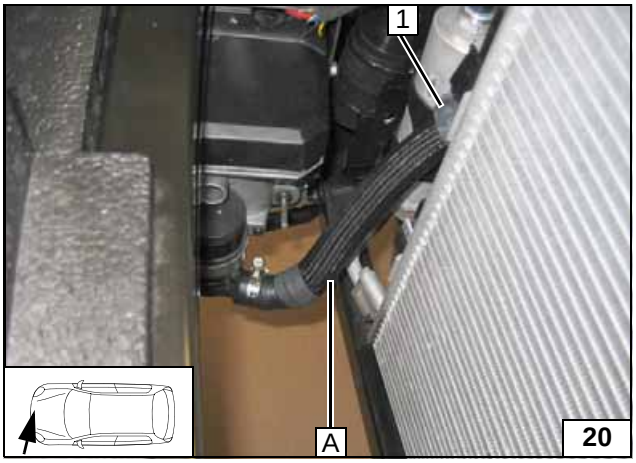
1 25 mm heat shrink plastic tubing [4x]

Preparing hoses



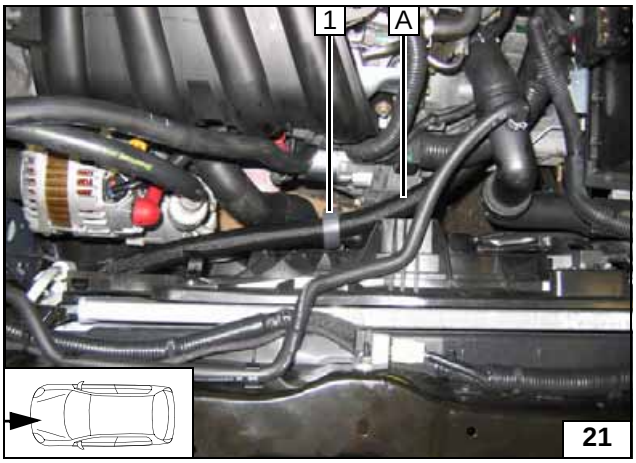
Disconnect original vehicle coolant hose **2** as shown and turn hose section **3** on connection piece of engine outlet **1** by ca. 180°.

Cutting point



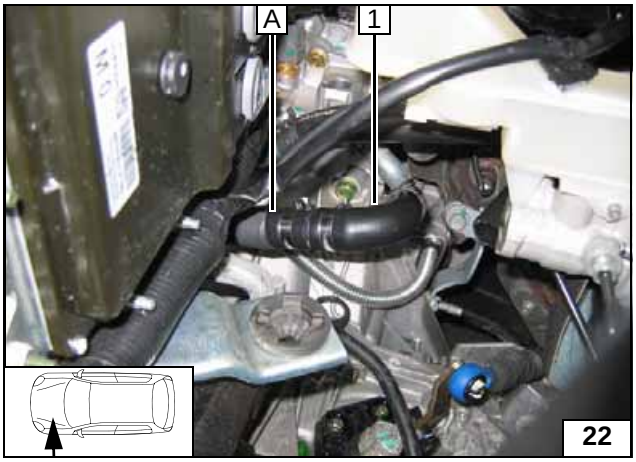
1 Black (sw) rubber isolator

Connection of hose A on heater



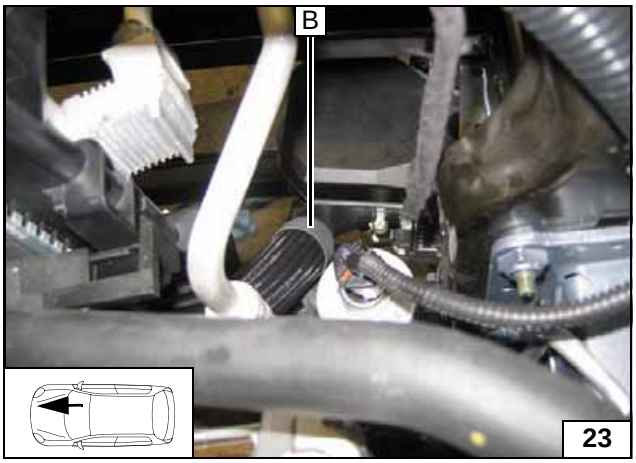
Align black (sw) rubber isolator **1** and fasten on strut of radiator trim with cable ties.

Routing in engine compartment

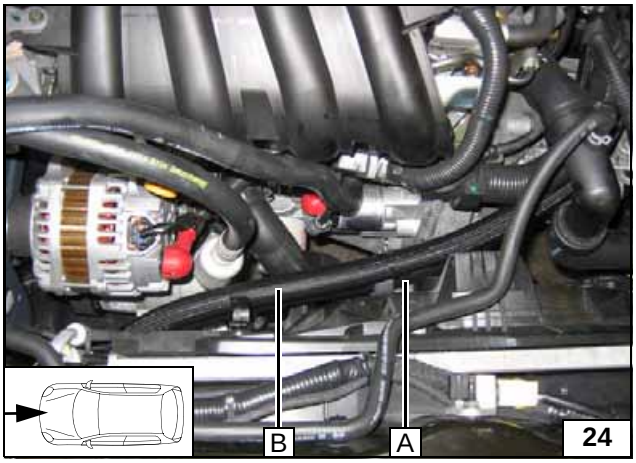


1 Hose section of engine outlet turned

Connecting on engine outlet

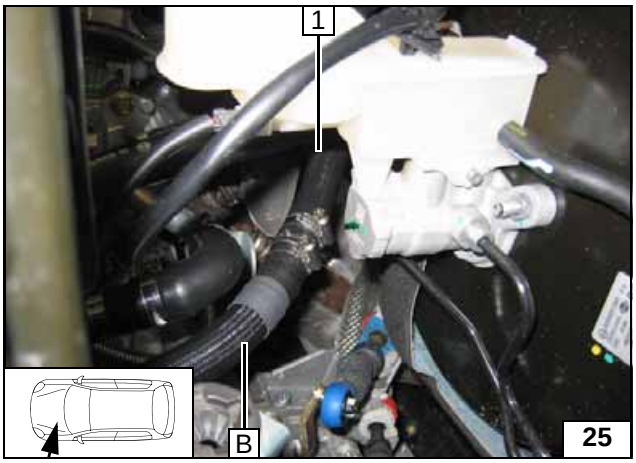


Connection hose B on heater



Align hose B and fasten on hose **A** with cable ties.

Routing in engine compartment



Fill the coolant hoses with coolant before connecting.

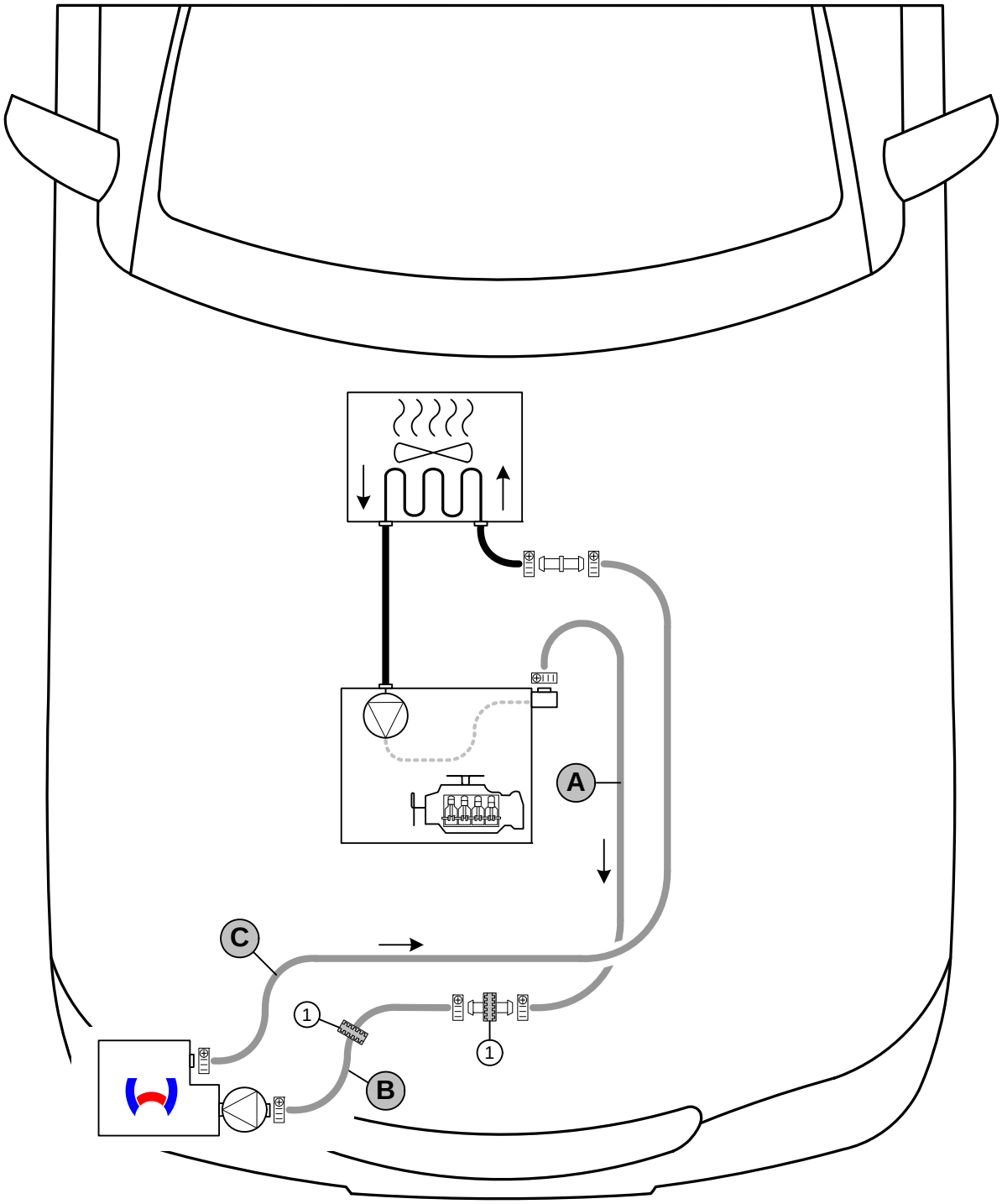
1 Hose on heat exchanger inlet

Connection on heat exchanger inlet

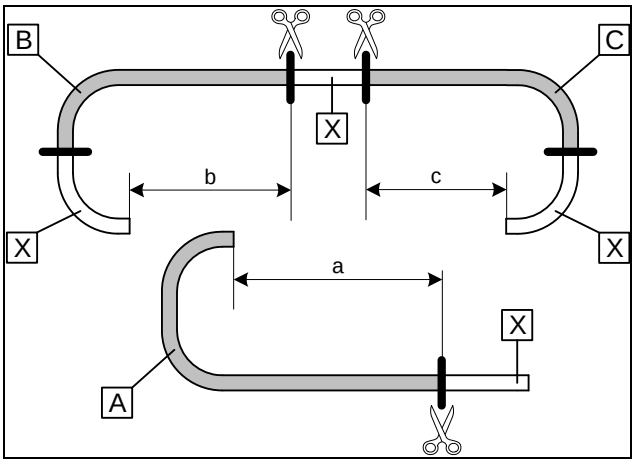
Coolant Circuit 2.0 B

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

Hose routing diagram



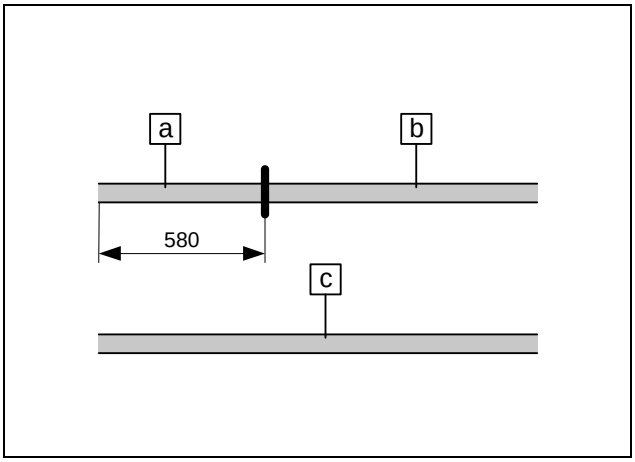
All connecting pipes = 18x20 mm dia. All hose clamps = 20-27 mm dia.!
1 = Black (sw) rubber isolator [2x]



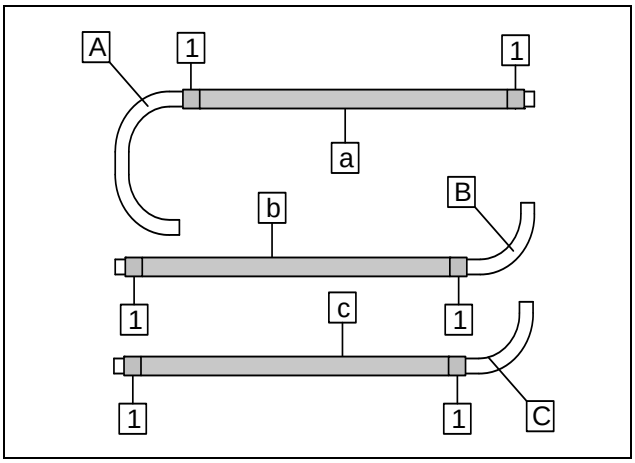
18 mm dia. hose **A**
Discard section **X**

a = 530
b = 610
c = 1100

Cutting hoses to length



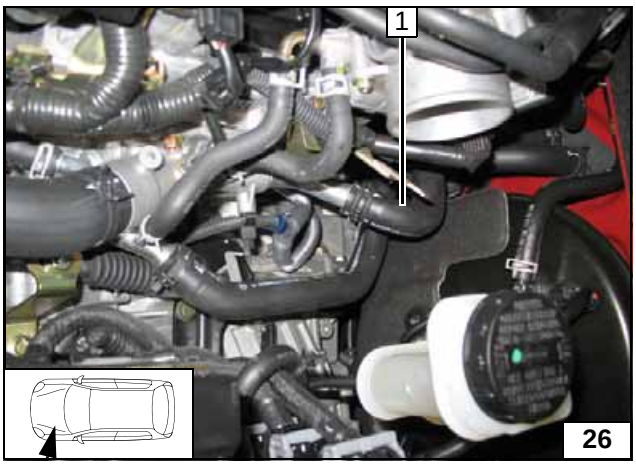
Cutting braided protection hoses to length



Push braided protection hoses onto hose **A**, **B** and **C** and cut to length.
Cut 100 mm long heat shrink plastic tubing and 50 mm long heat shrink plastic tubing to size.

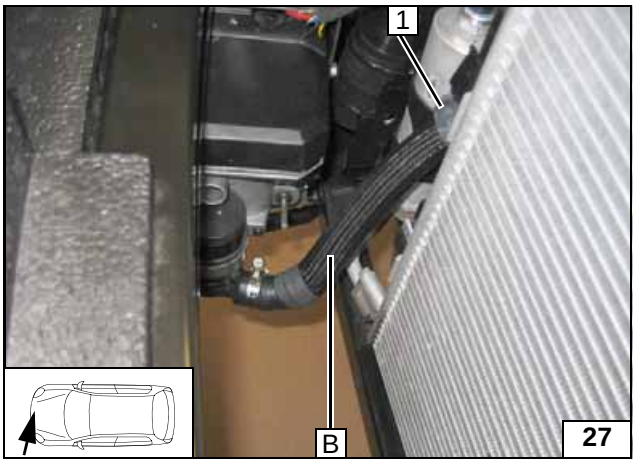
1 25 mm heat shrink plastic tubing [6x]

Preparing hoses



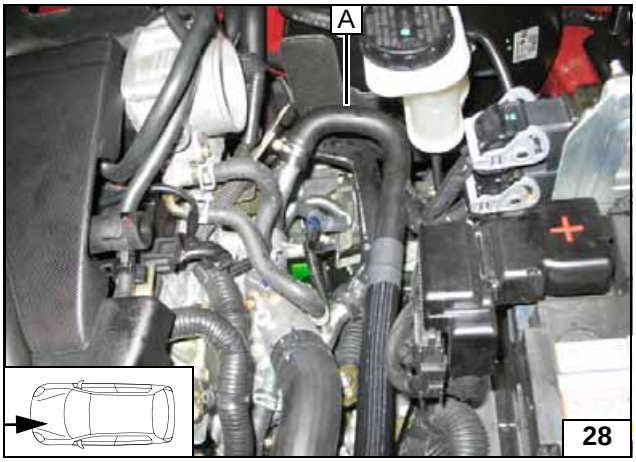
Pull original vehicle coolant hose **1** off engine outlet. Discard clamp.

Cutting point

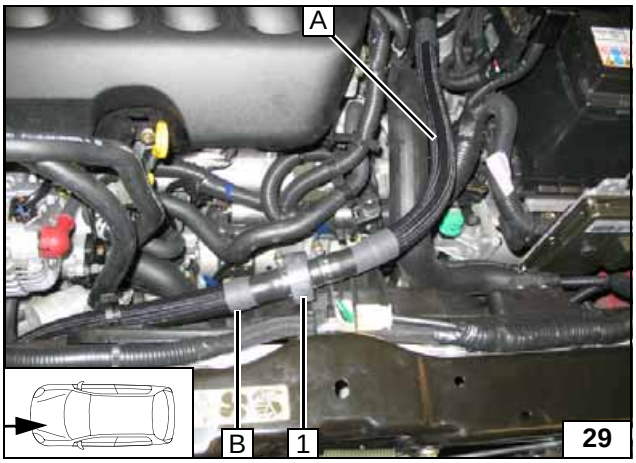


1 Black (sw) rubber isolator

Connection hose B on heater

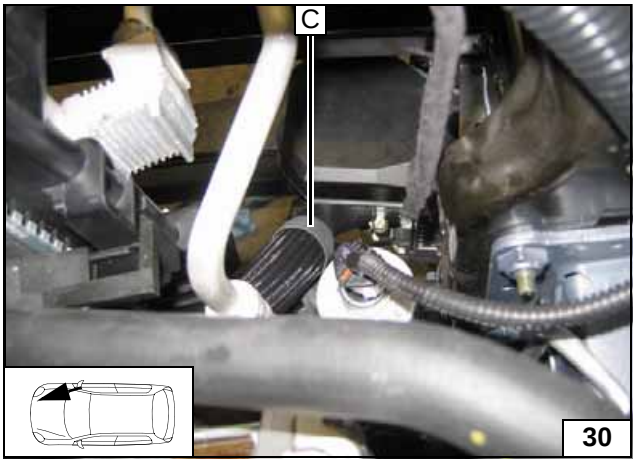


Connection hose A on engine outlet

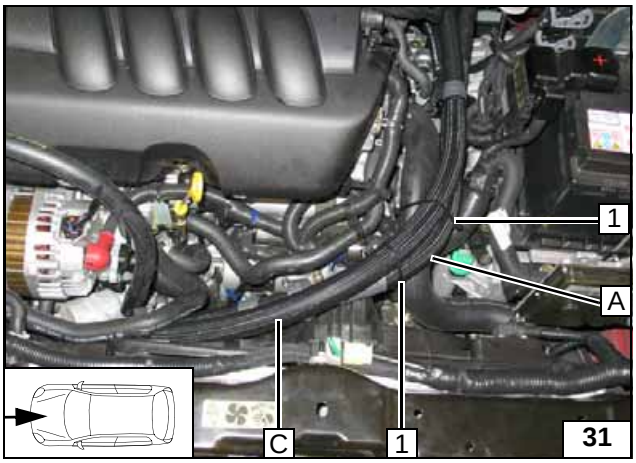


1 Position black (sw) rubber isolator on connecting pipe

Routing in engine compartment



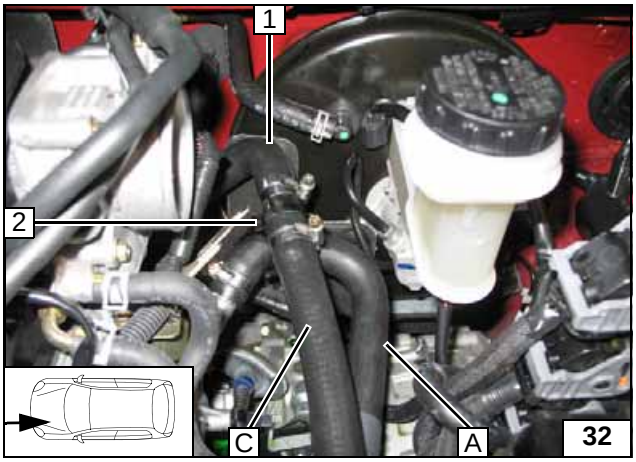
Connection hose C on heater



Fill the coolant hoses with coolant before connecting.

1 Cable tie [2x]

Routing in engine compartment



Fill the coolant hoses with coolant before connecting.

1 Hose on heat exchanger inlet
2 Hose bracket

Connection on heat exchanger inlet

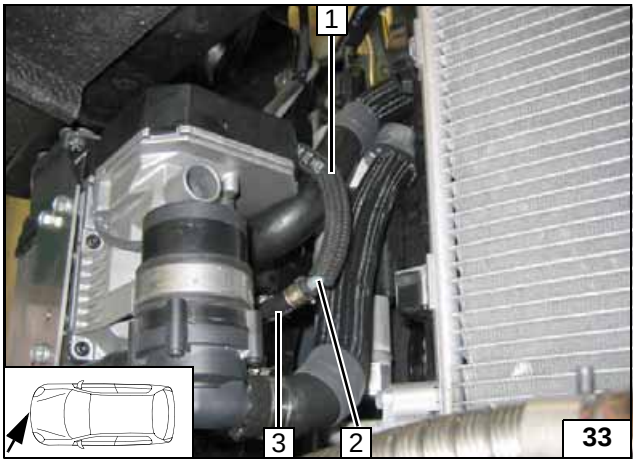
Fuel

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

Catch any fuel running off in 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.

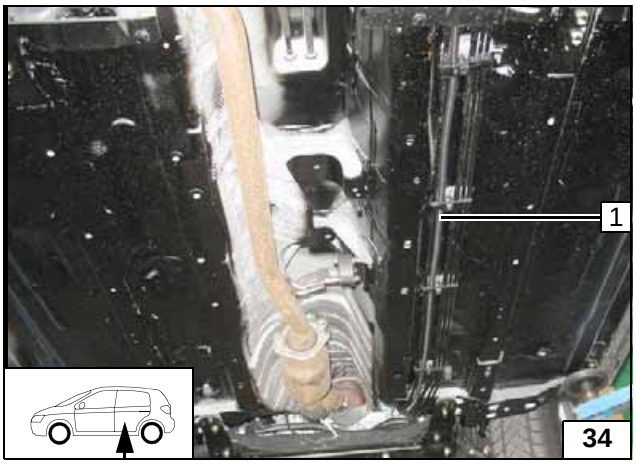
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Push 2x 8 mm fuel hose, 70 long **1** onto fuel line **2** as rub protection and then route fuel line to firewall.

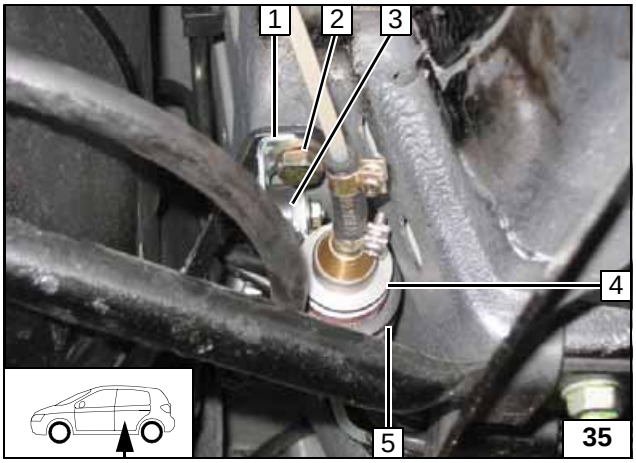
3 Hose section, 10 mm dia. hose clamp [2x]

Connection to heater



From firewall, pull fuel line together with wiring harness of metering pump into 2x corrugated tube **1** and route along original vehicle fuel lines to installation location of metering pump.

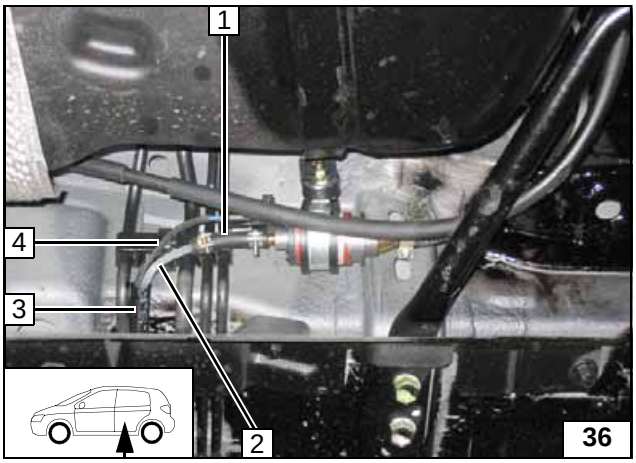
Routing lines



Ensure proper installation position of metering pump, see "Installation Instructions". Installation location in front of vehicle fuel tank!

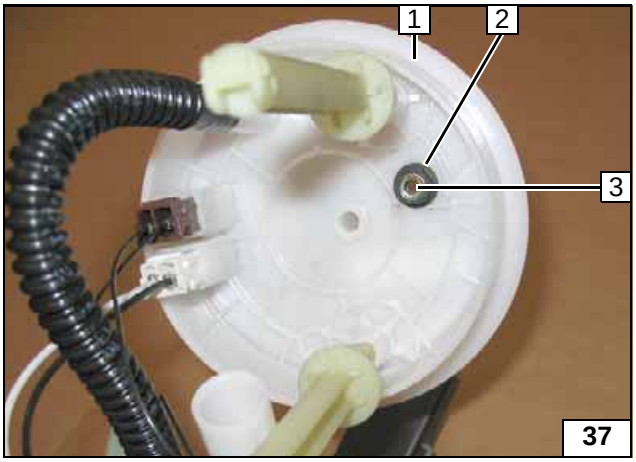
1 Angle bracket, drilled out to 10.5 mm dia.
2 Original vehicle bolt
3 Silent block, flanged nut [2x]
4 Metering pump
5 Rubber-coated pipe clamp

Installing metering pump



1 Hose section, 10 mm dia. hose clamps [2x]
2 Fuel line
3 Corrugated tube
4 Wiring harness of metering pump, connector mounted

Connecting metering pump



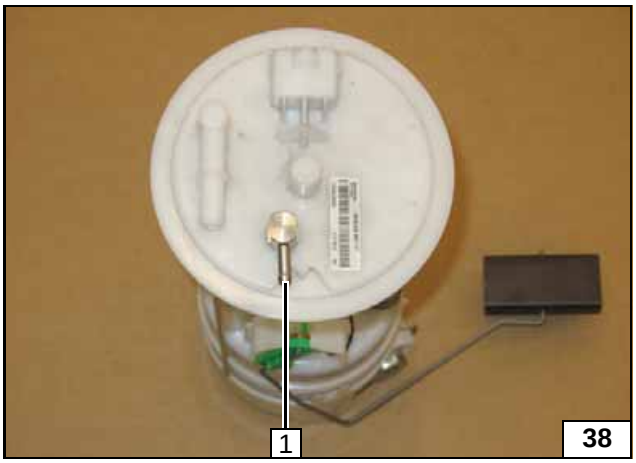
The fuel-tank sending unit depends on equipment and is distinguished according to 2 versions.

Version 1

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

2 Position flanged nut of fuel standpipe
3 Copy hole pattern, 6 mm dia. hole

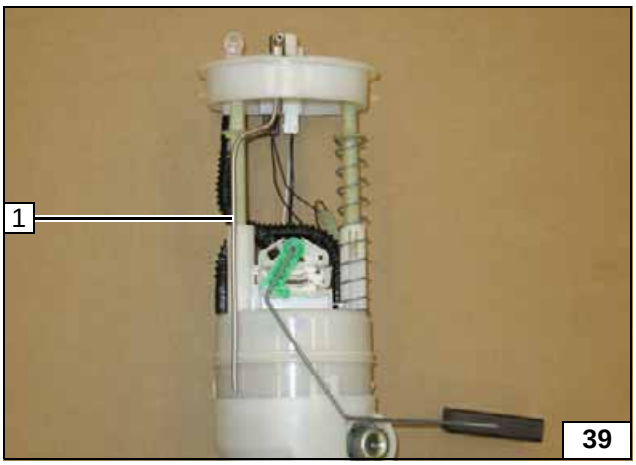
Fuel extraction



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

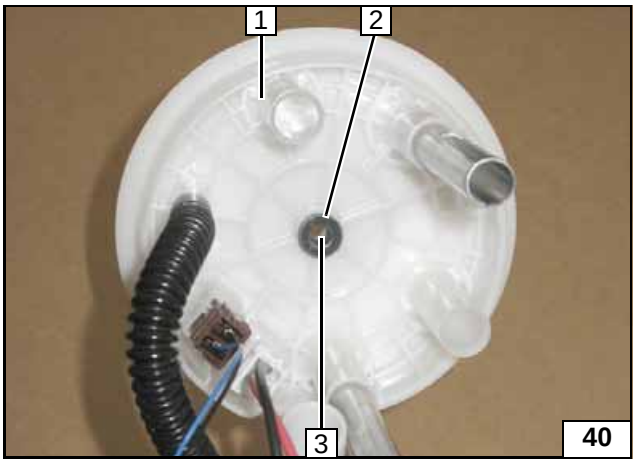
1 Fuel standpipe

Installing fuel standpipe



1 Fuel standpipe

Installing fuel standpipe

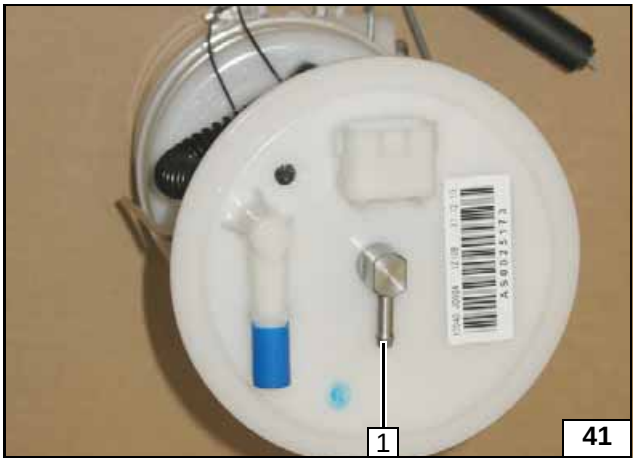


Version 2

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

2 Position flanged nut of fuel standpipe
3 Copy hole pattern, 6 mm dia. hole

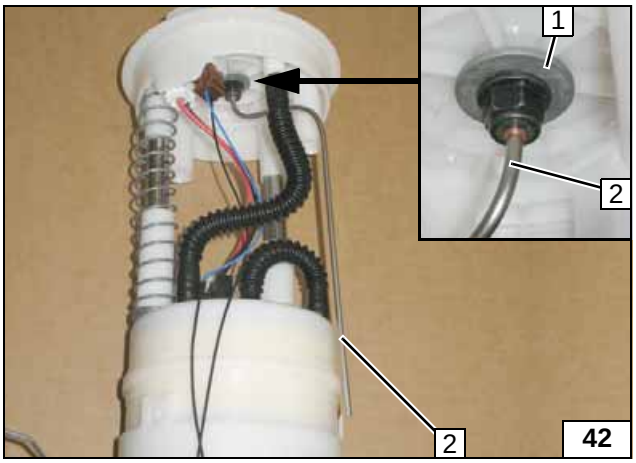
Fuel extraction



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

1 Fuel standpipe

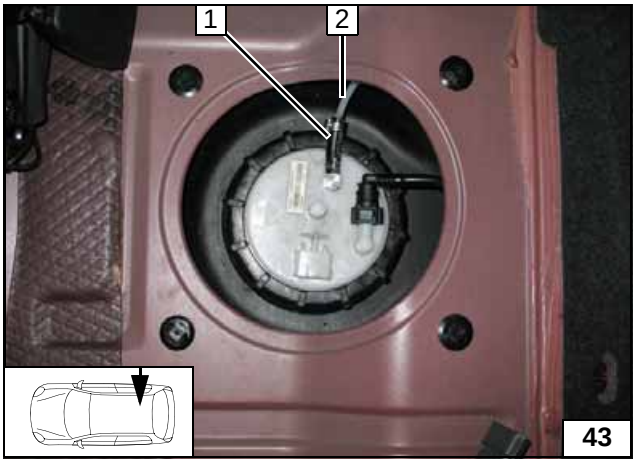
Installing fuel standpipe



Insert provided large diameter washer outer dia. d_a = 18mm **1** between cover of fuel-tank sending unit and flanged nut of fuel standpipe.

2 Fuel standpipe

Installing fuel standpipe

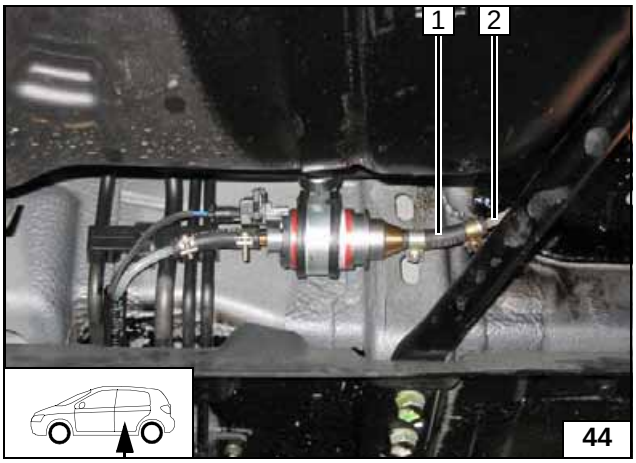


All vehicles

Figure shows version 1.

1 Hose section, Hose clamp 10mm dia.
2 Remaining end of fuel line

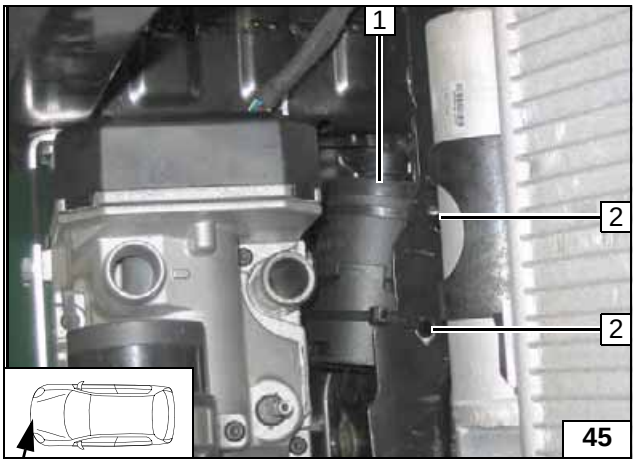
Connecting fuel line



Fuel line from fuel standpipe on intake side of metering pump.
Check the position of the components; adjust if necessary. Check that they have freedom of movement.

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

Connecting metering pump

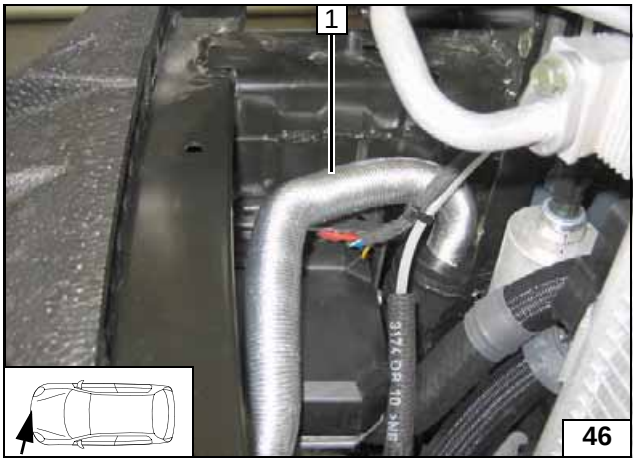


Combustion Air

Fuel line and coolant hoses removed for better illustration!

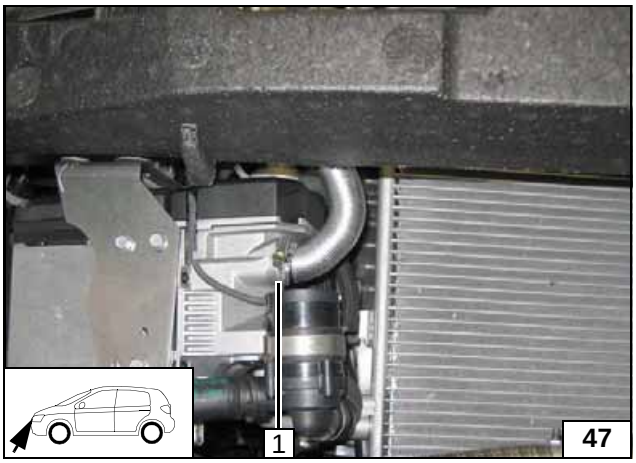
1 Silencer
2 Cable tie in existing hole [2x]

Mounting silencer



Mount combustion air pipe **1** on silencer and route it into the heater as shown.

Installing combustion air pipe



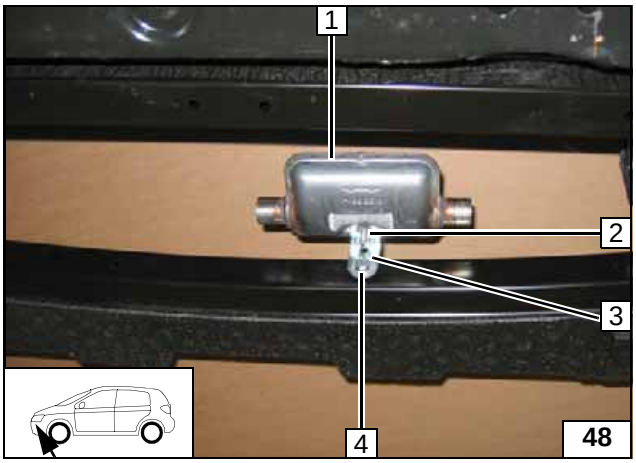
1 27 mm dia. hose clamp

Installing intake pipe

Exhaust Gas

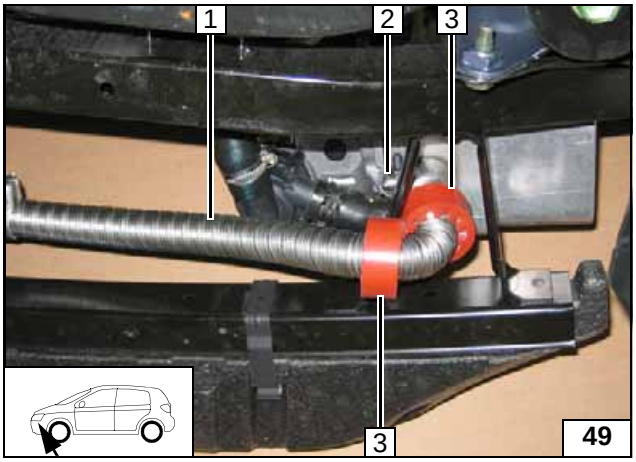
Drill out existing hole to 9.1 mm dia. at position **4** and mount rivet nut.

Mounting silencer



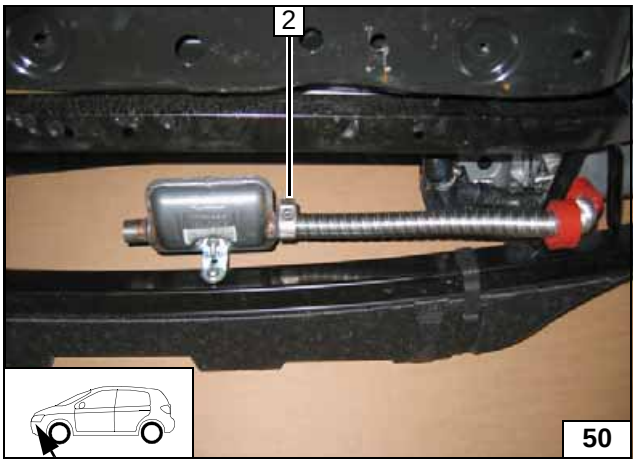
1 Silencer
2 M6x20 bolt, flanged nut
3 Angle bracket
4 M6x20 bolt, spring lockwasher

Mounting exhaust pipe



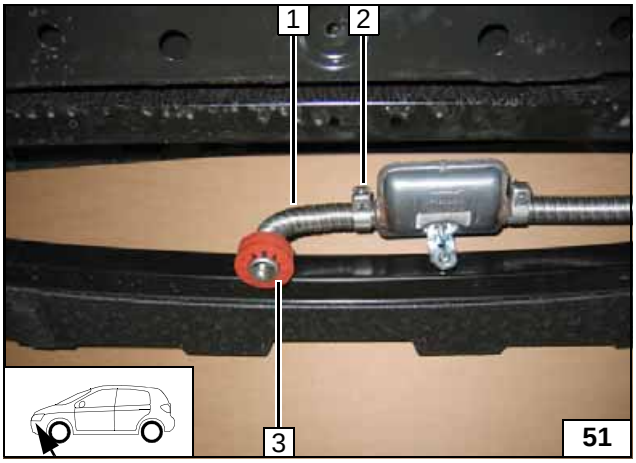
1 Exhaust pipe
2 Hose clamp
3 Red (rt) rubber profile [2x]

Mounting exhaust pipe

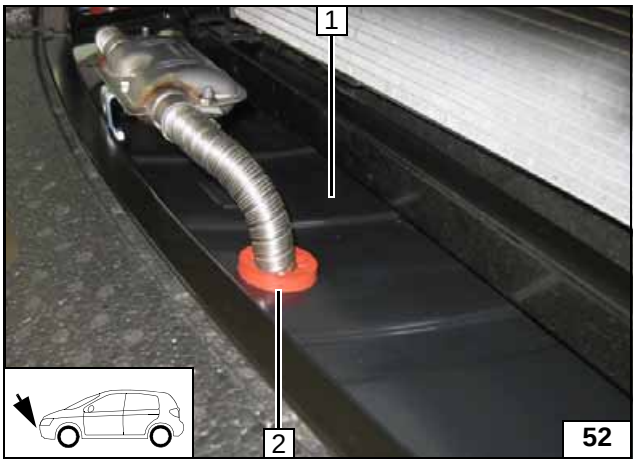


1 Hose clamp

Mounting exhaust end section



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



Mount underride protection.

1 Underride protection
2 42 mm dia. hole

Cutting out underride protection

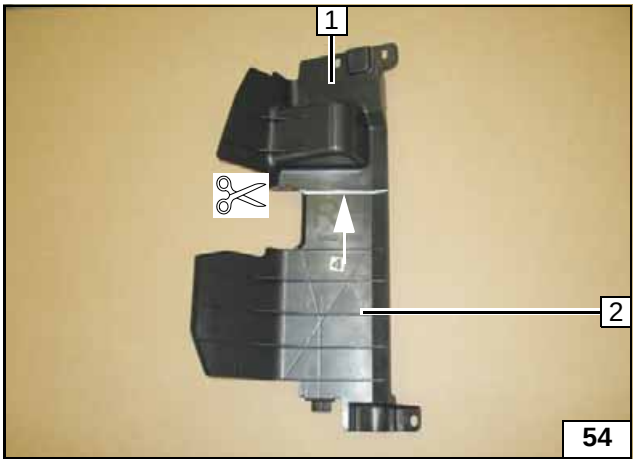
Mounting rubber isolator

Final Work

WARNING!
Mount removed parts 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 the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect the battery.
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Set the digital timer.
- Set the manual air conditioning or automatic air conditioning according to the "operating instructions for the end customer".
- Check the proper operation of the parking heater, see the operating instructions/installation instructions.
- Attach the "Switch off parking heater before refueling" sticker to the left-hand B-pillar.

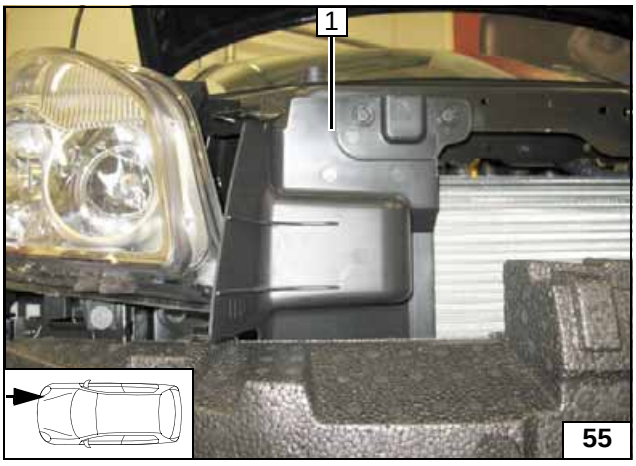
Cutting out air ducting



Cut off trim of air ducting **1** at marking.

2 Discard section

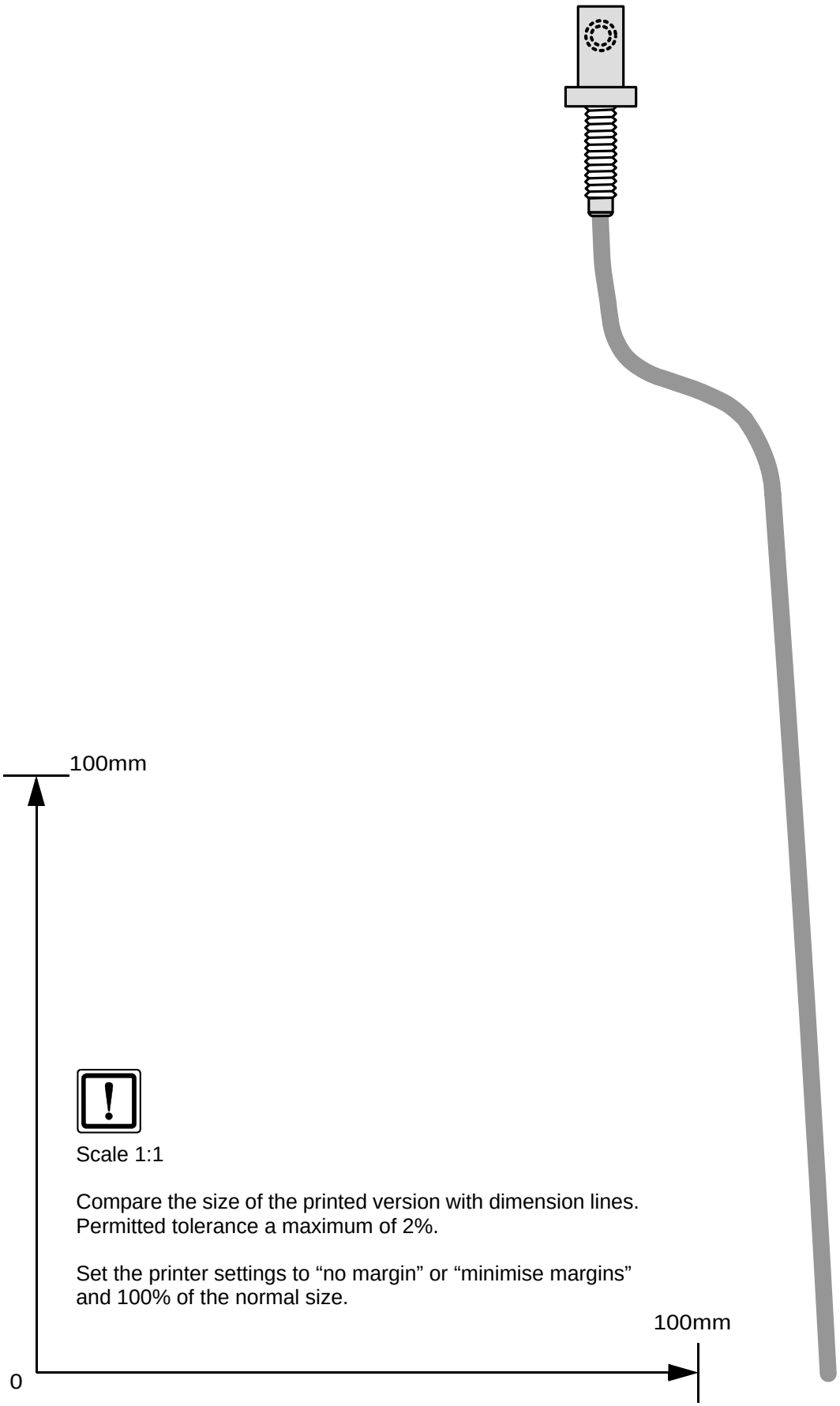
Installing air ducting



1 Trim of air ducting

Webasto
Feel the Drive
Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Template for Fuel Standpipe
Version 1

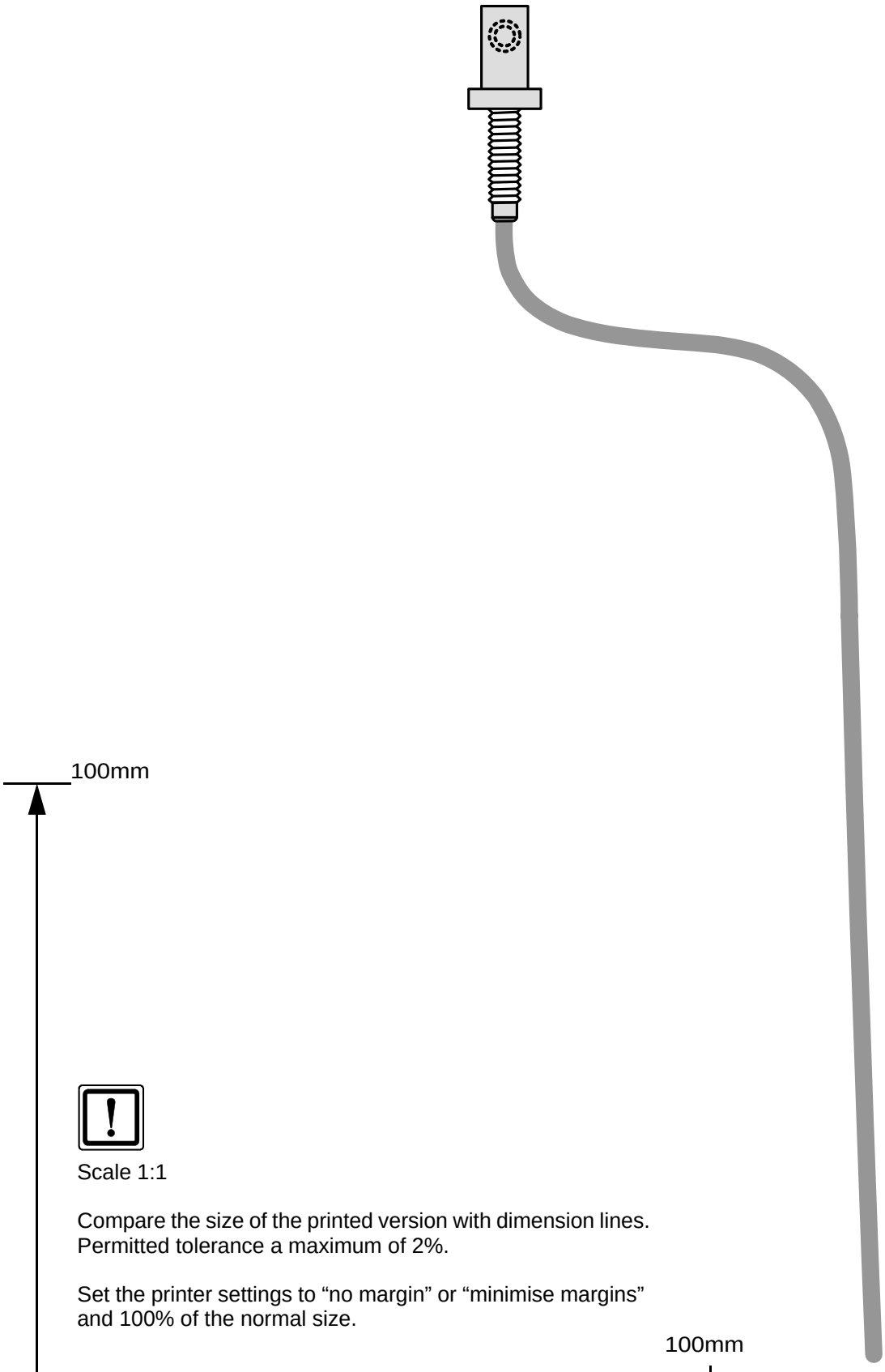


Scale 1:1

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

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

Fuel standpipe template
Version 2



Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

If the summer/winter switch option has been installed on the heater, this must be switched in accordance with the time of year. The heater will then heat in the position Winter and in the position Summer it will only switch on the vehicle fan to ventilate the vehicle interior.

Before parking the vehicle, make the following settings:

Manual air conditioning

1 Air outlet to windscreen
2 Set temperature to "max."
3 Set fan to level "1" or max. "2"

Automatic air-conditioning

1 Air outlet in windscreen
2 Set temperature on both sides to "HI".
3 Set fan to level "1", or possibly "2"