Water Heater

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

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

***Thermo Top P* Parking Heater** e1 00 0104

Installation instructions

Toyota Urban Cruiser

Gasoline
from Model Year 2009
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.

Ident. No.: 1314945B_EN Fee Euro 10.00

Table of Contents

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Toyota	Urban Cruiser	XP11	e11 * 2001 / 116 * 0263 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
1NR-FE	Gasoline	74	1329

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

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

Heater/Installation Kit

Quantity	Description	Order No.:
1	Retail accessories with desired heater control	See price list
1	Installation kit for Toyota Urban Cruiser 2009 Gasoline	1314944A

Foreword

These installation instructions apply to vehicles Toyota Urban Cruiser Gasoline - for validity, see page 2 - from model year 2009 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 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 should be fitted with edge protectors (split-open plastic hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

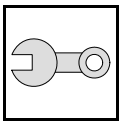
Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers

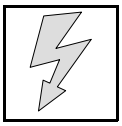
Explanatory Notes on Document

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

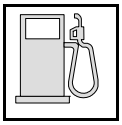


Electrical system

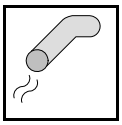


Water

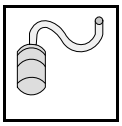
Fuel



Exhaust gas



Combustion air



Software

Special features are highlighted using the following symbols:

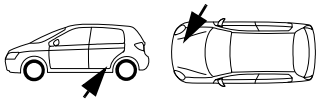
Specific risk of injury or fatal accidents.

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.

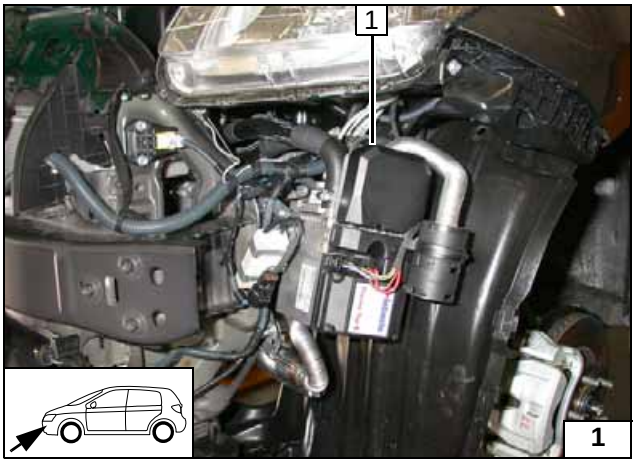
All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejot screws, Ejot studs = 10 Nm!

Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- 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.
- Remove the battery completely.
- Remove the entire coolant reservoir.
- Detach the wheel well trim on the right and left.
- Remove the front left underbody trim.
- Remove the bumper.
- Remove the left-hand rear bench seat.
- Open the right-hand fuel sender service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's specifications
- Remove the glove compartment
- Remove the footwell trim on the front passenger side.

Remove page 25 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

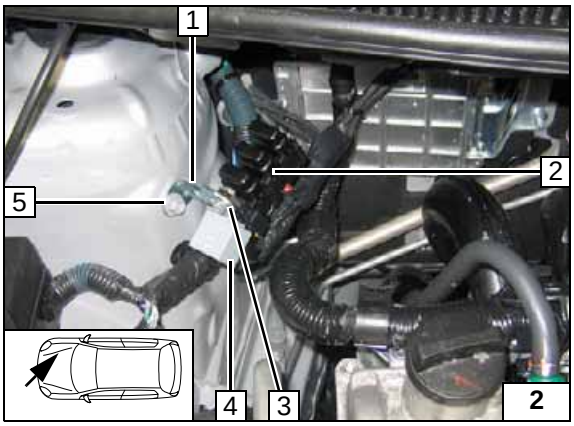
1 Heater

Installation location

Electrical system

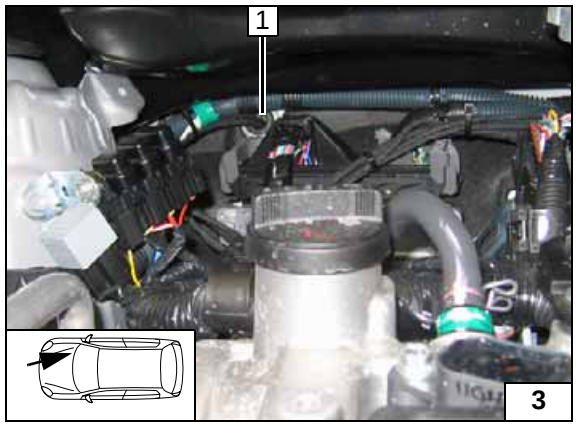
Fuse holder, K3 relay

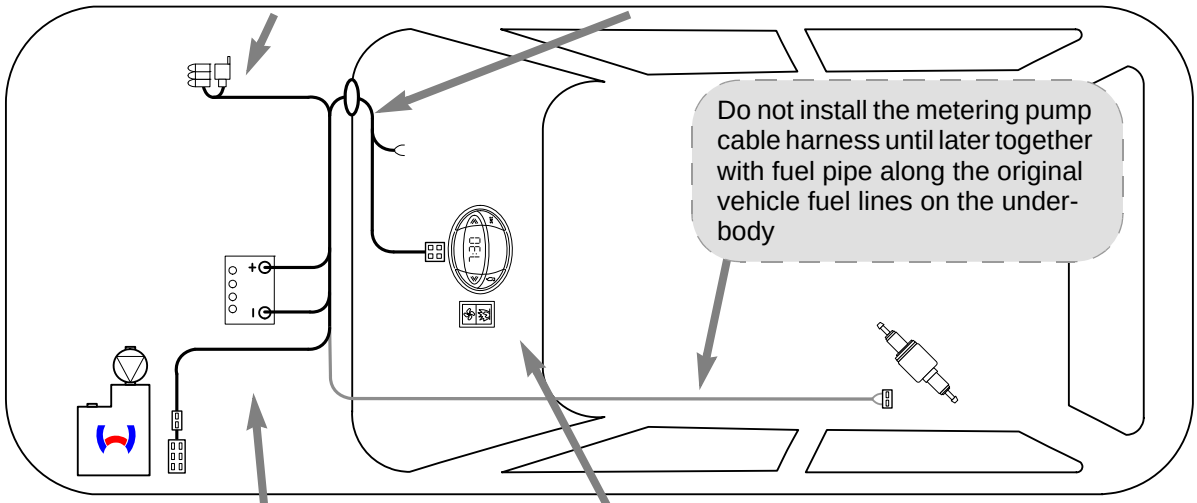
1 Angle bracket
2 Fuse F1-3 mounted
3 M5x16 bolt, washer, retaining plate of fuse holder, M5 nut
4 K3 relay
5 M6x20 bolt, existing threaded hole



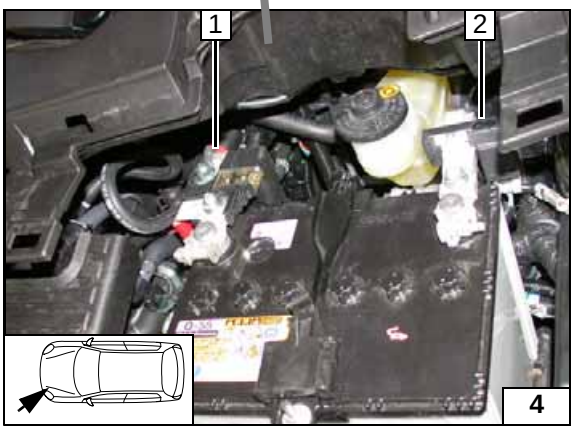
Wiring harness pass through

Remove sealing plug and replace with protective rubber plug **1**.



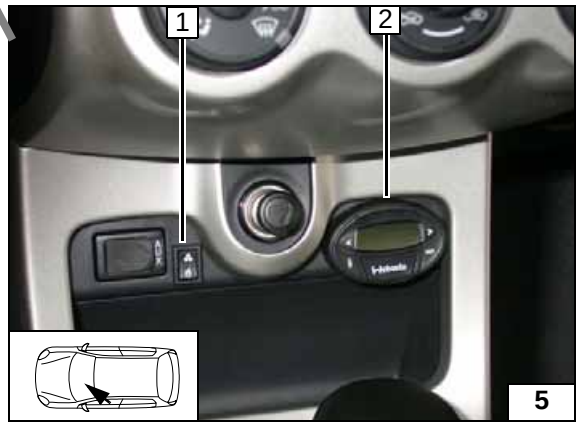


Wiring harness installation diagram



Positive and ground connection

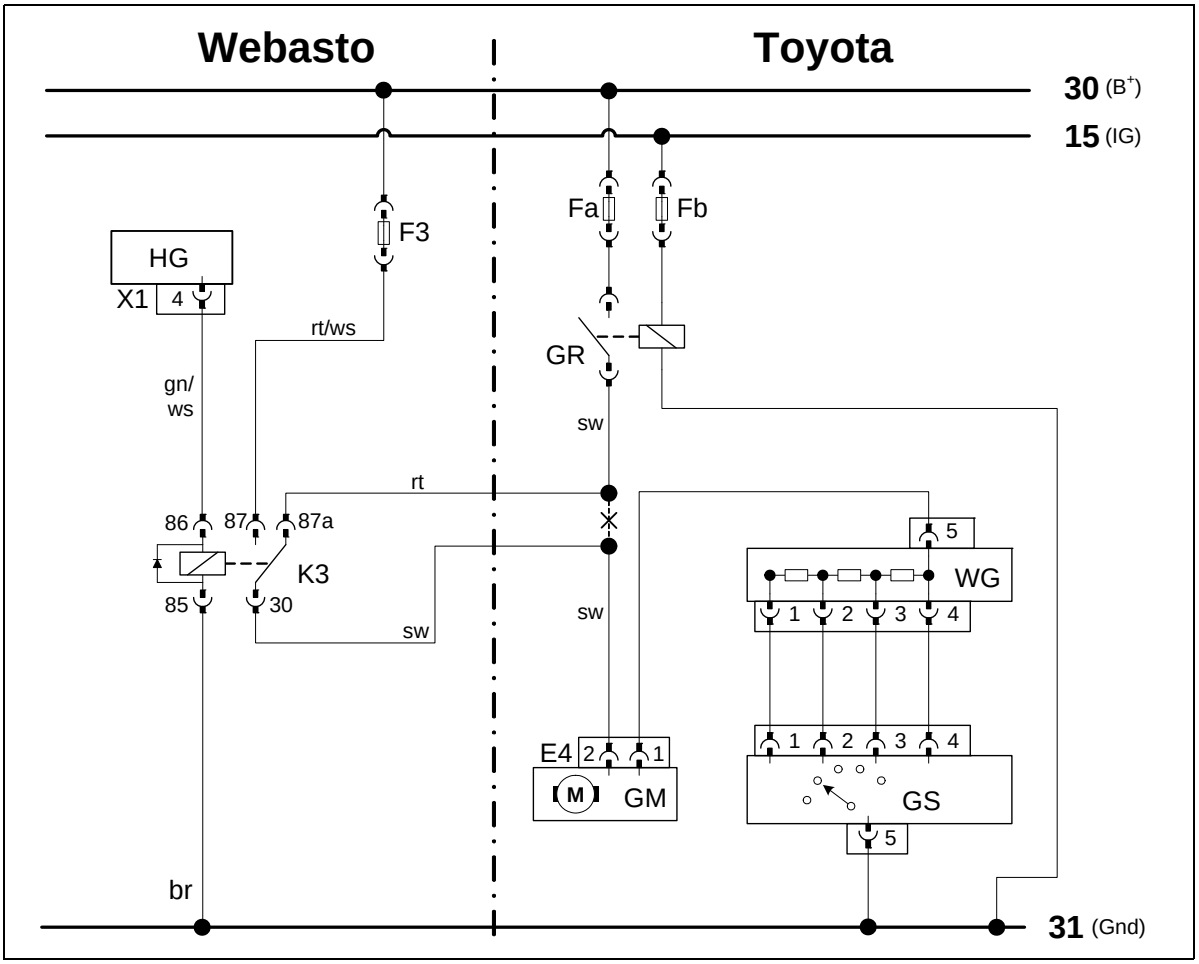
1 Positive wire on positive terminal
2 Ground wire on negative terminal



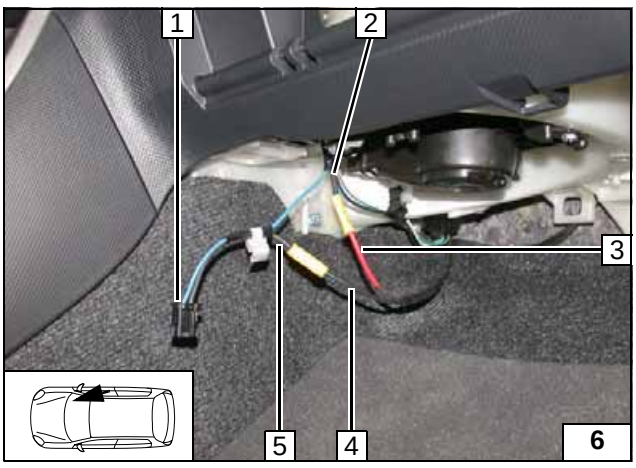
Digital timer and summer/winter switch option

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

Fan controller for manual air conditioning



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E/P	GM	Fan motor	rt	red
X1	6-pin heater connector	E4	2-pin connector GM	ws	white
F3	25 A fuse	GRs	Fan relay	sw	black
K3	Fan relay	GW	Fan resistor	br	brown
		GS	Fan switch	gn	green
		Fb	Gauge fuse		
		Fa	HTR 40 A fuse		
				X	Cutting point
				Wiring colours may vary.	



Connection to 2-pin connector **1** from the blower motor.
Produce connections as shown in wiring diagram.

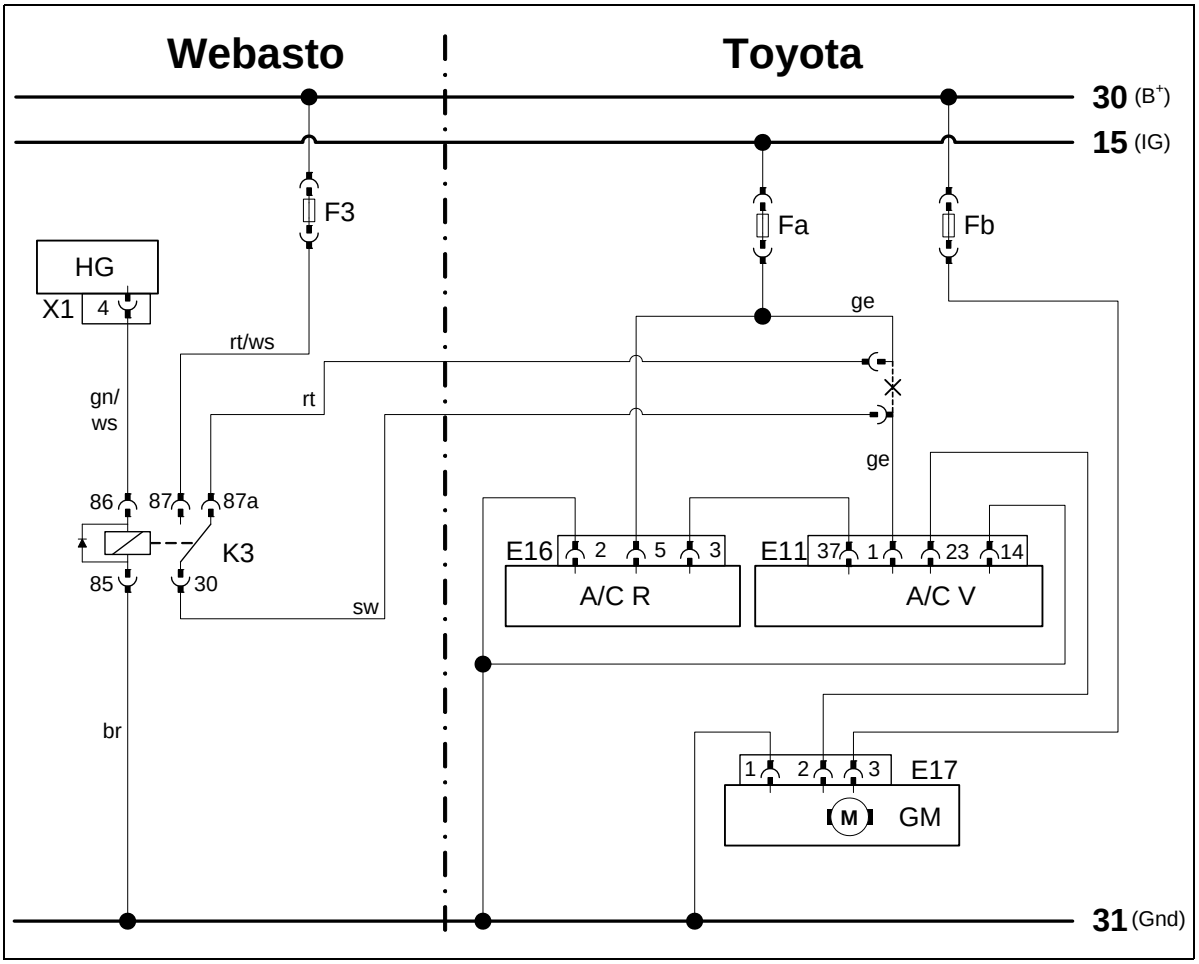
2 Black (sw) wire of fan relay
3 Red (rt) wire of K3/87a
4 Black (sw) wire of K3/30
5 Black (sw) connector E4

Wiring diagram

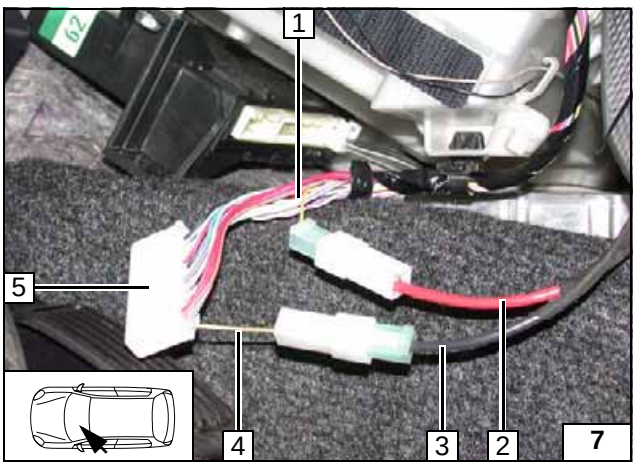
Legend

Connecting fan-motor

Automatic air-conditioning fan controller



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E/P	GM	Fan motor	rt	red
X1	6-pin heater connector	A/C V	A/C booster	ws	white
F3	Replace 25 A fuse with 7.5 A fuse	A/C R	A/C controller	sw	black
		E11	40-pin connector A/C V	br	brown
K3	Fan relay	E16	5-pin connector A/C R	gn	green
		E17	3-pin connector GM	ge	yellow
		Fa	7.5 A A/C fuse		
		Fb	HTR 40 A fuse		
				X	Cutting point
				Wiring colours may vary.	



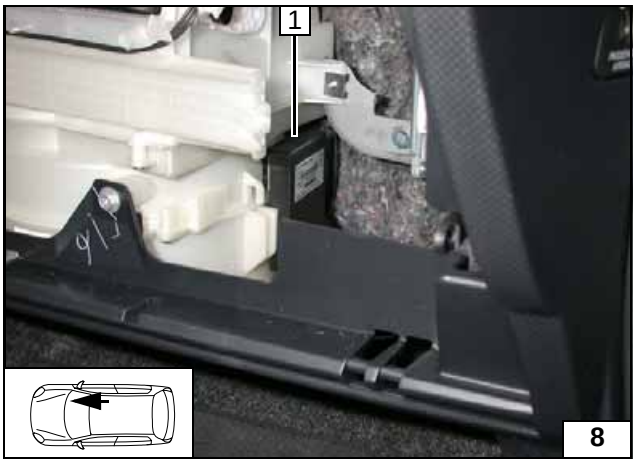
Connect to the 40-pin connector E11 **5** of the A/C booster.
Produce connections as shown in wiring diagram.

1 Yellow (ge) wire from 7.5 A fuse
2 Red (rt) wire of K3/87a
3 Black (sw) wire of K3/30
4 Yellow (ge) connector E11 Pin1

Wiring diagram

Legend

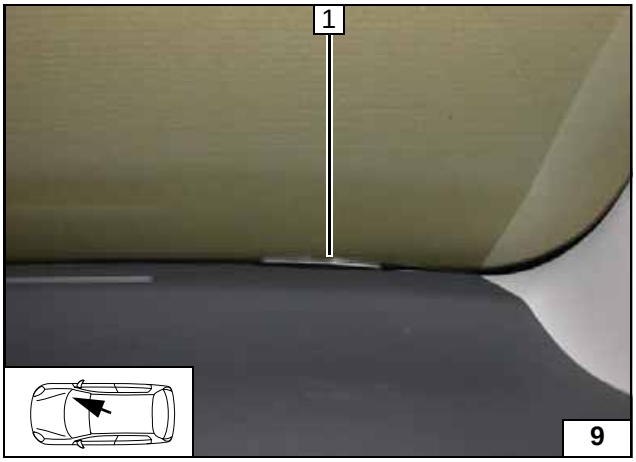
Connecting the A/C booster



Remote option (Telestart)

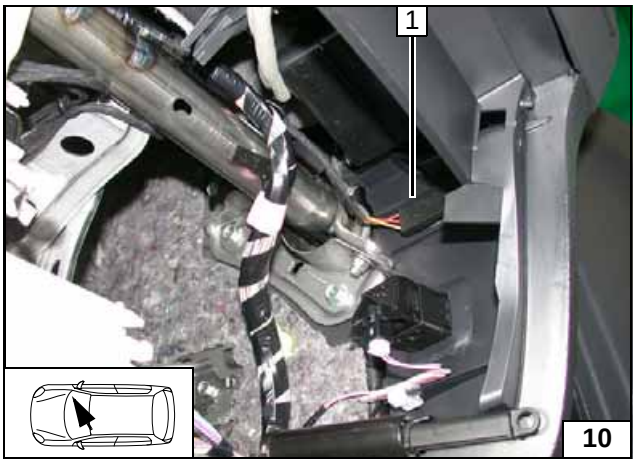
Fasten receiver **1** with double-sided adhesive tape

Installing receiver



1 Antenna

Installing antenna



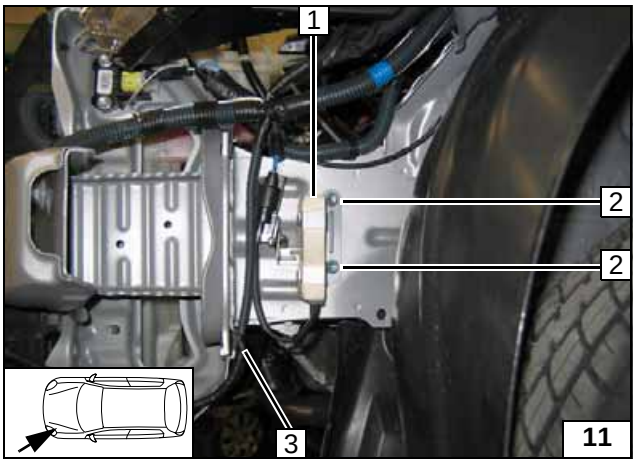
Temperature sensor HTM100

Fasten temperature sensor **1** with double-sided adhesive tape.

Installing temperature sensor

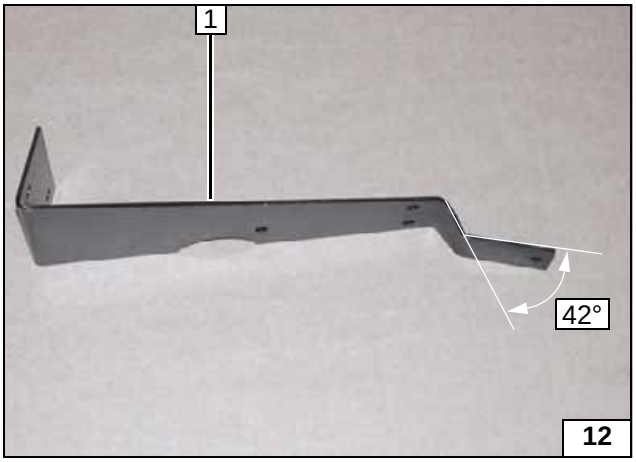
Preparing installation location

Removing resistor



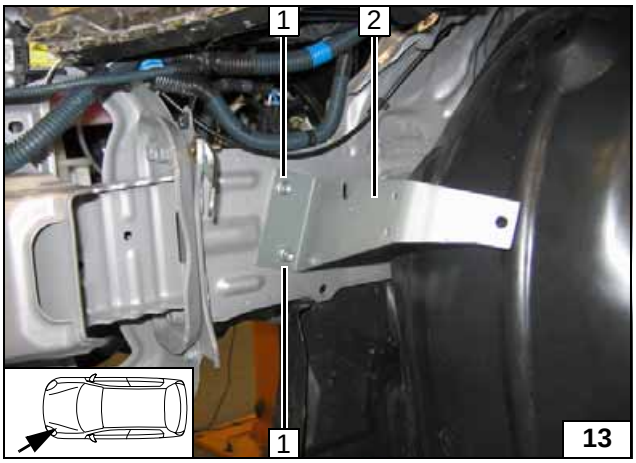
1 Resistor with bracket
2 Original vehicle bolts [2x] (will be reused)
3 Unclip original vehicle wiring harness

Bending bracket



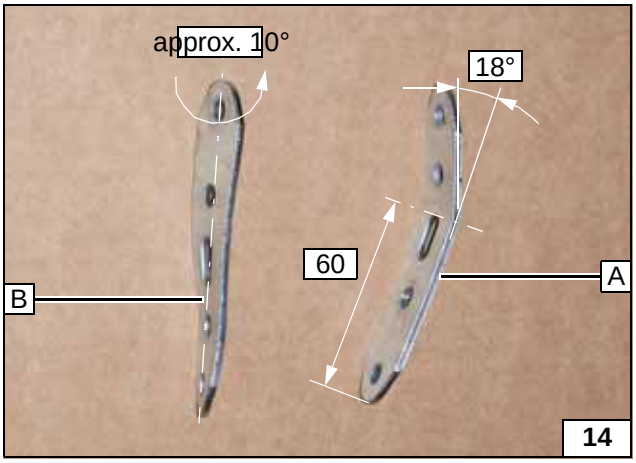
1 Bracket

Installing bracket

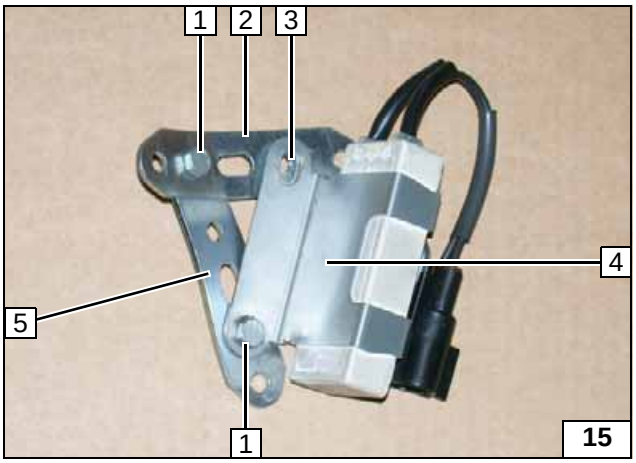


1 Bracket
2 Original vehicle bolts [2x]

Preparing perforated brackets



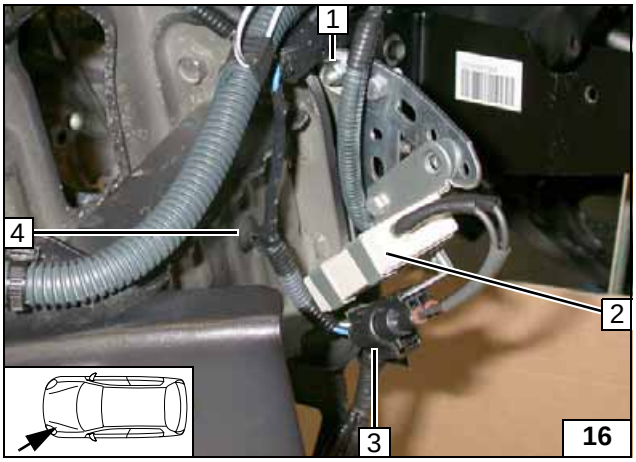
Angle down perforated bracket **A** by 18°.
Turn perforated bracket **B** by approx. 10° in longitudinal axis.



Align holes to each other at position **3**.

1 Loosely mount M6x12 bolt, flanged nut [2x each]
2 Perforated bracket **A**
4 Resistor bracket
5 Perforated bracket **B**

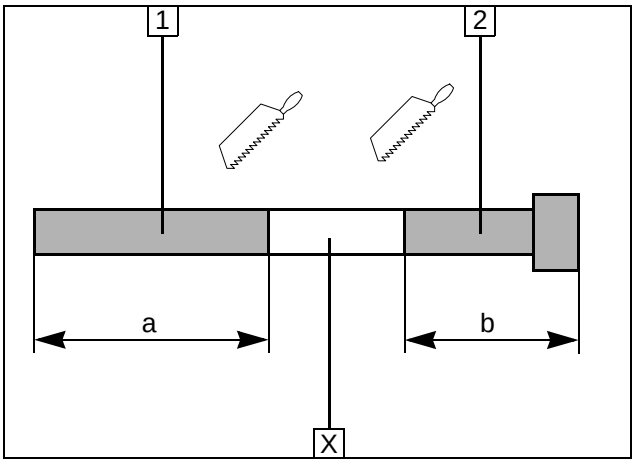
Loosely mounting perforated brackets



Mount original vehicle wiring harness at position **4** and connect connector **3**.

1 Loosely mount M6x12 bolt, flanged nut
2 Resistor

Loosely mounting perforated brackets

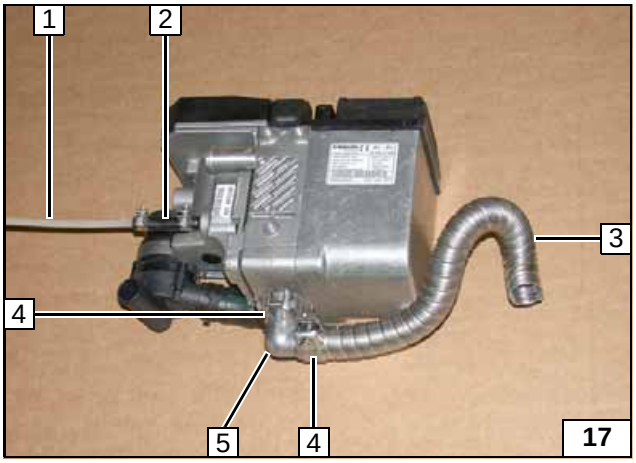


Preparing heater

1 Exhaust pipe
a = 290
2 Exhaust end section
b = 260

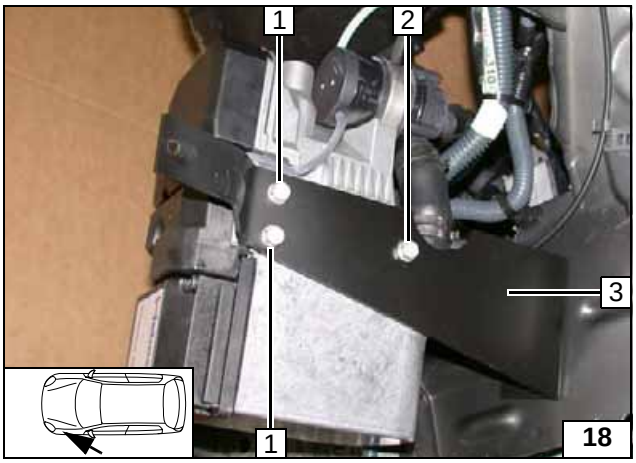
Discard section **X**

Preparing exhaust pipe



1 Fuel line
2 Hose section, 10 mm dia. clamp [2x]
3 Exhaust pipe
4 Hose clamp [2x]
5 Exhaust manifold

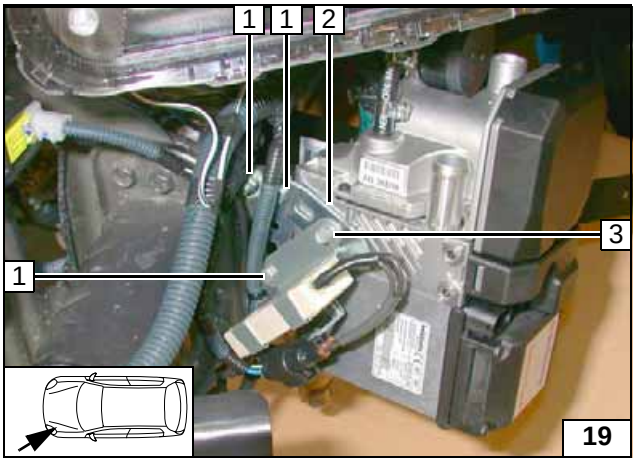
Preparing heater



Installing heater

Route fuel line in the engine compartment during installation.
Insert two washers between heater and bracket **3** at position **2**.

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



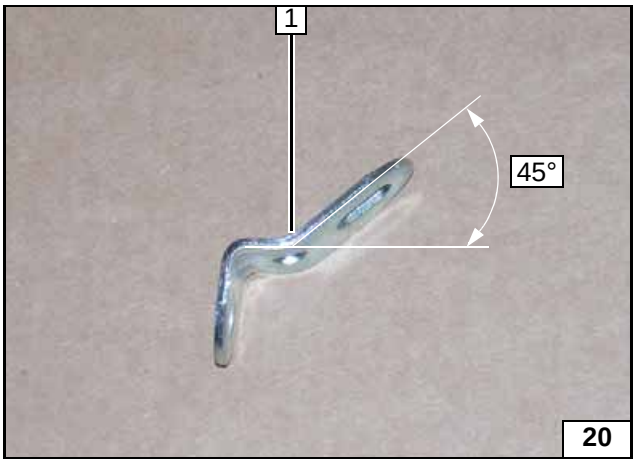
Tighten bolts at position **1** [3x].

2 Perforated bracket
3 Ejot screw, resistor bracket, perforated bracket

Exhaust gas

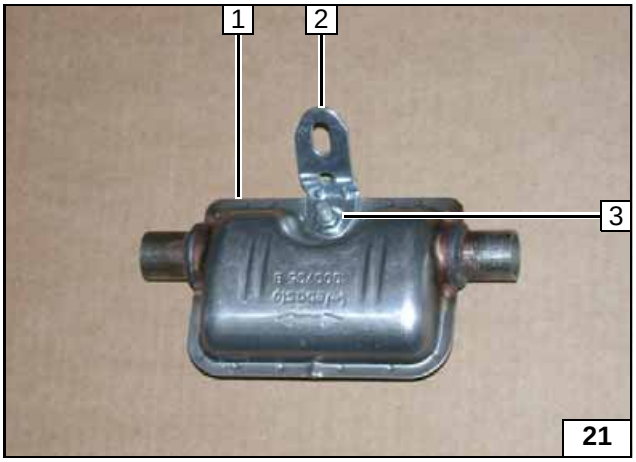
1 Angle bracket

Bending angle bracket



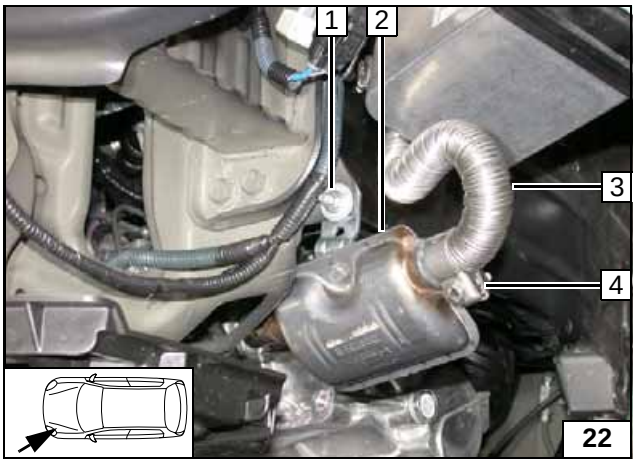
1 Muffler
2 Angle bracket
3 M6x20 bolt, flanged nut

Preparing muffler



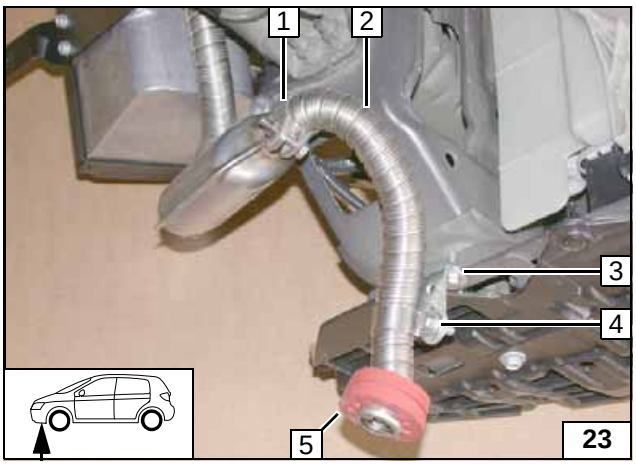
1 M6x20 bolt, large diameter washer, flanged nut, existing hole
2 Muffler
3 Exhaust pipe
4 Hose clamp

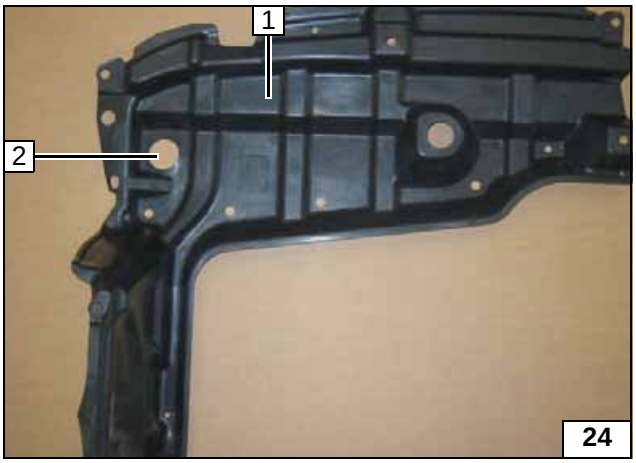
Installing exhaust pipe and muffler



1 Hose clamp
2 Exhaust end section
3 M6x20 bolt, angle bracket, large diameter washer, flanged nut, existing hole
4 P-clamp, M6x20 bolt, angle bracket, large diameter washer, flanged nut
5 Red (rt) rubber isolator with groove must be positioned

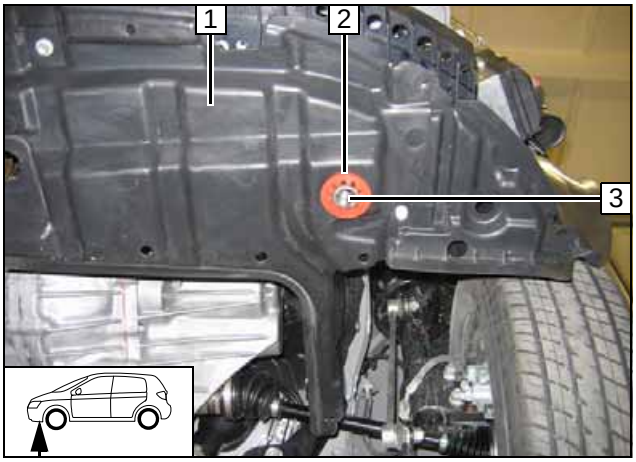
Installing exhaust end section





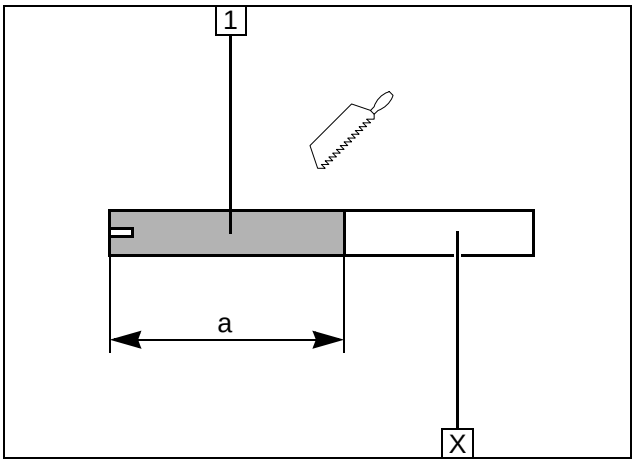
1 Underride protection
2 42 mm dia. hole

Cutting out underride protection



Mount underride protection **1**. Align exhaust end section **3** flush on red rubber isolator **2**. Check the position of the components; adjust if necessary. Check that they have free clearance.

Mounting rubber isolator

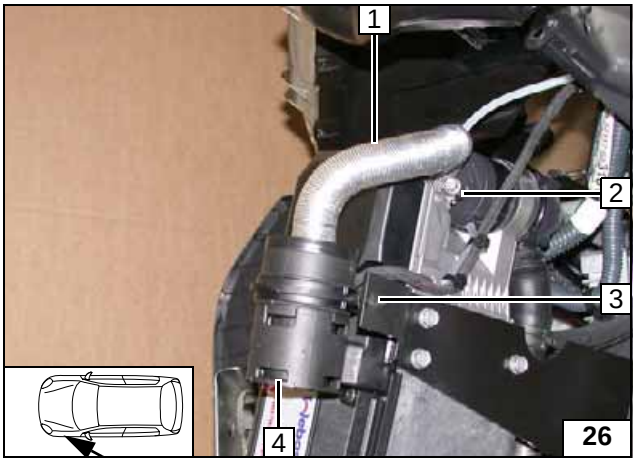


Combustion air

1 Combustion air pipe
a = 210

Discard section **X**

Cutting combustion air pipe to length



1 Combustion air pipe
2 27 mm dia. clamp
3 Retaining clip in hole
4 Muffler

Installing combustion air pipe

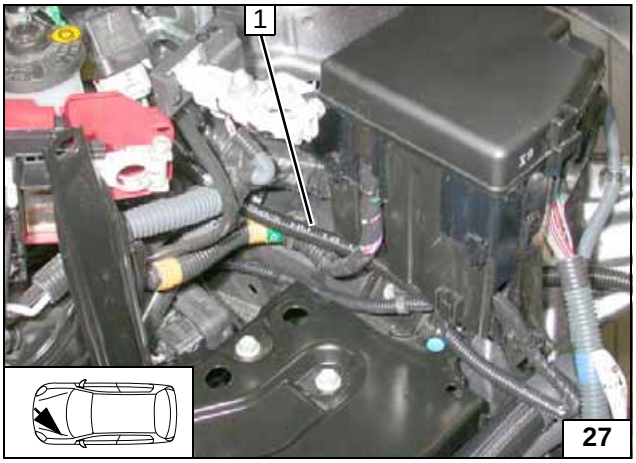
Fuel

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.

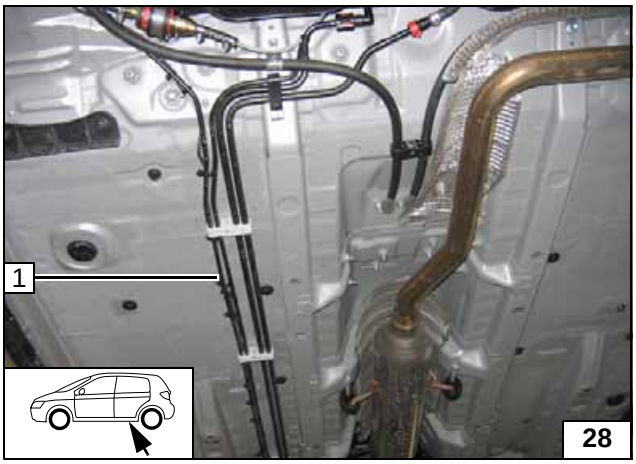
Install fuel line and metering-pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

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



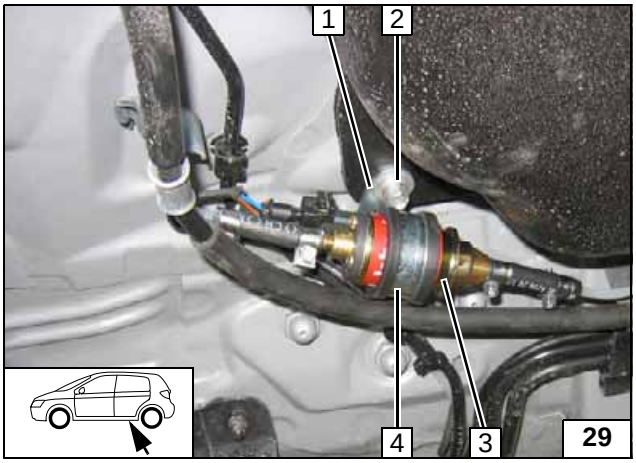
Route corrugated tube with fuel line **1** to firewall.

Installing lines



Route fuel line and wiring harness of metering pump **1** along original vehicle fuel lines to installation location of metering pump.

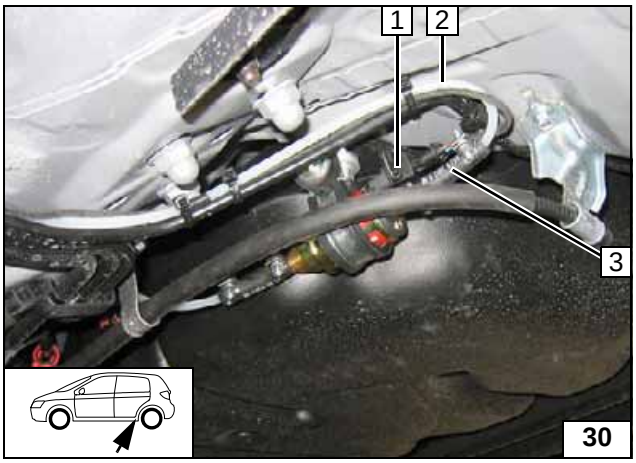
Installing lines



Fasten metering pump **3** with rubber-coated p-clamp **4**, silent block and flanged nut [2x] on angle bracket **1**.

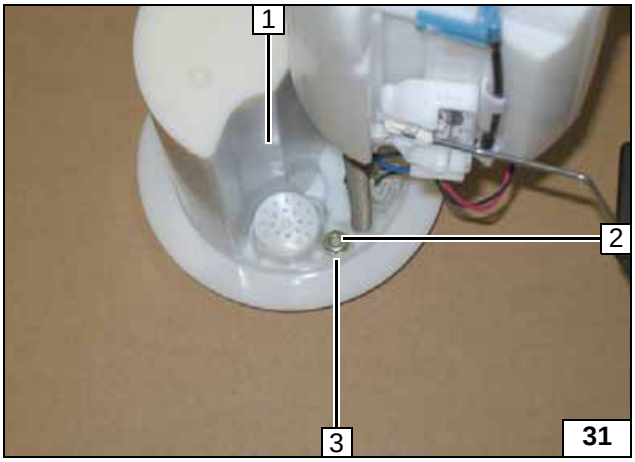
2 Original vehicle bolt

Installation location of metering pump



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

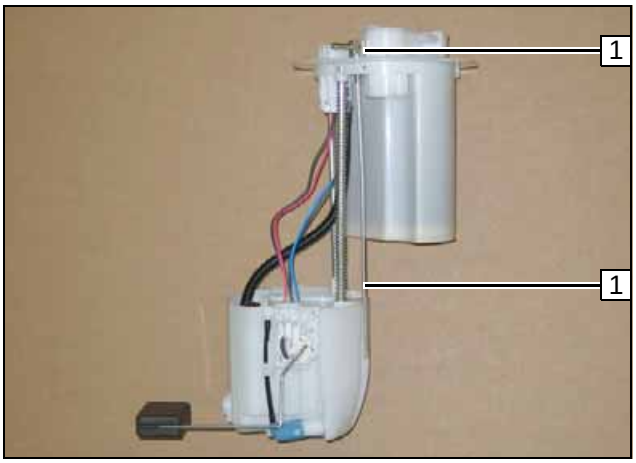
Connecting metering pump



Remove the fuel-tank sending unit in accordance with the manufacturer's specifications

1 Fuel sender
2 Flanged nut
3 Copy hole pattern, 6 mm dia. hole

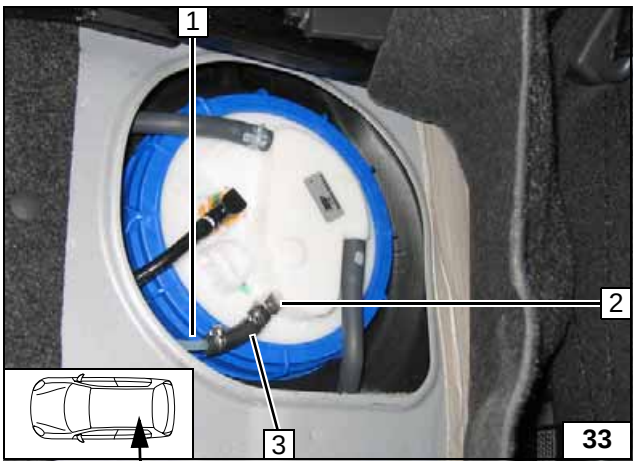
Removing fuel



Cut fuel standpipe to length according to template and install.

1 Fuel standpipe

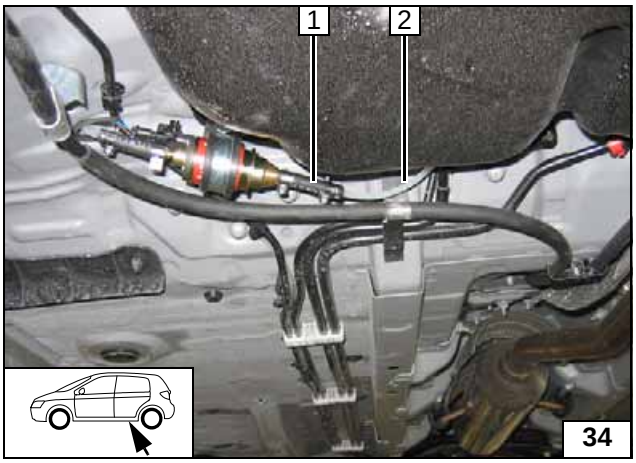
Removing fuel



Install fuel-tank sending unit in accordance with manufacturer's instructions.

1 Fuel line
2 Fuel standpipe
3 Moulded hose, 10mm dia Caillau clamp [2x]

Connecting fuel line



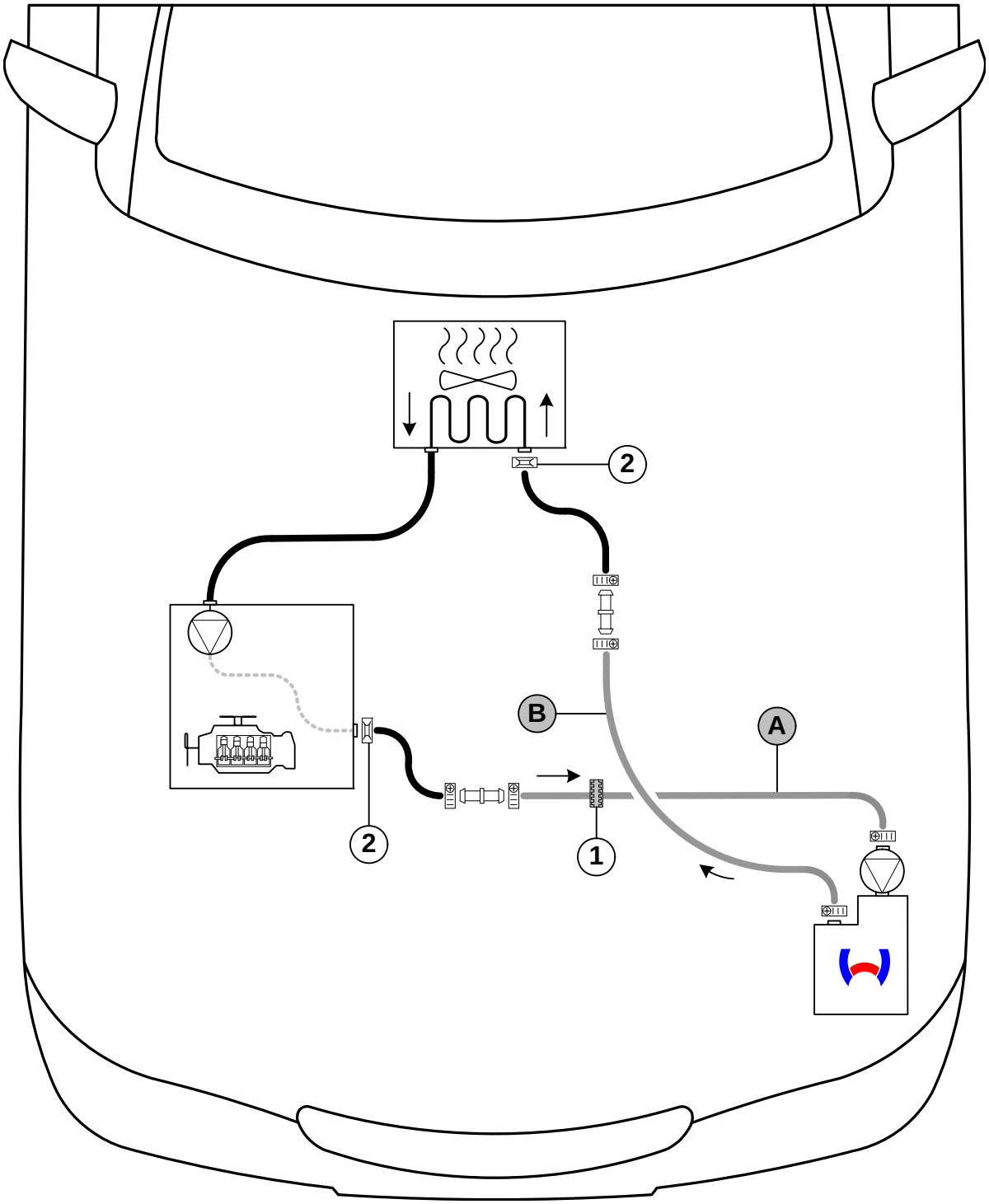
Check the position of the components; adjust if necessary. Check that they have free clearance.

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

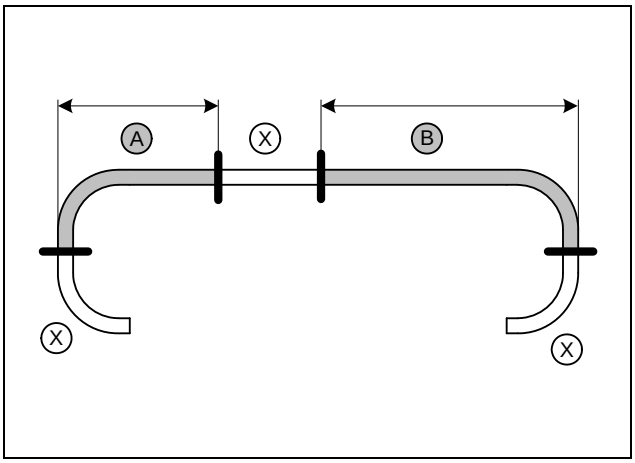
Water

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 coolant hose, the heater must be filled with coolant. The connection should be "inline" based on the following diagram:

Coolant routing diagram



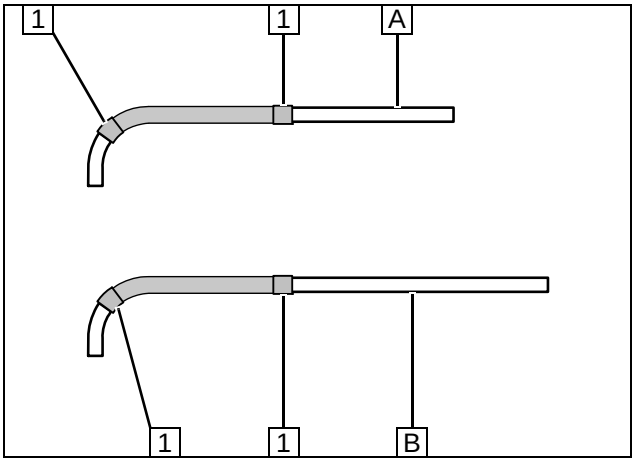
All connecting pipes = 17x20 dia.
All hose clamps without a specific designation = 20-27 mm dia. **2** = Original vehicle spring clip .
1 = Black (sw) rubber isolator .



a = 400
b = 760

Discard section **X**

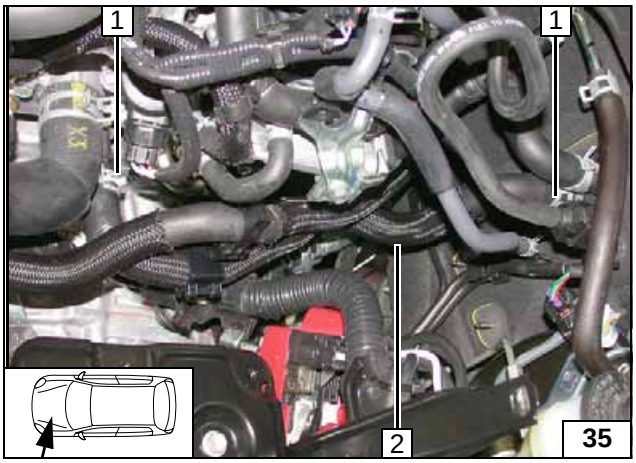
Cutting coolant hoses to length



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

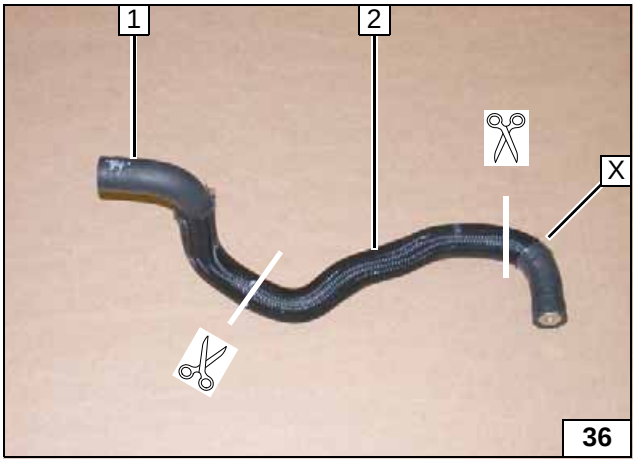
1 25 mm long heat shrink plastic tubing [4x]

Preparing coolant hoses



Remove original vehicle hose on engine outlet/heat exchanger inlet **2**. Spring clips **1** [2x] will be reused.

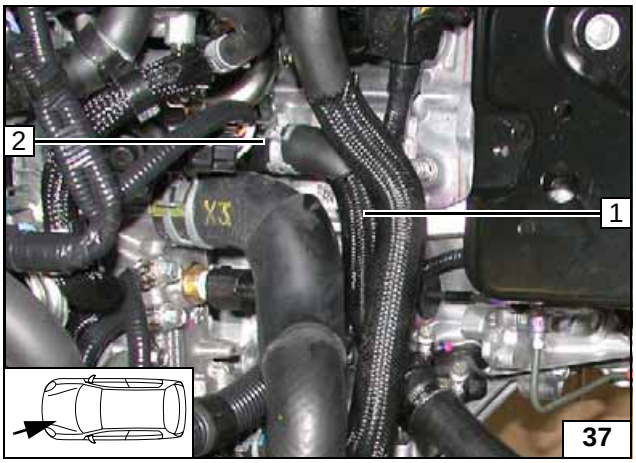
Removing hose



Discard section **X**.

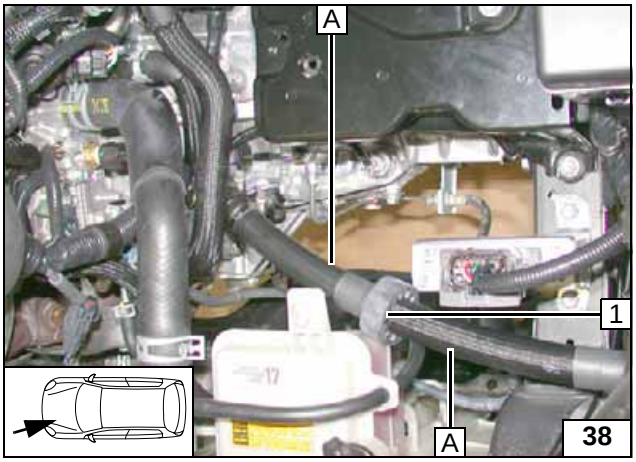
1 Hose section for engine outlet
2 Hose section for heat exchanger inlet

Cutting point



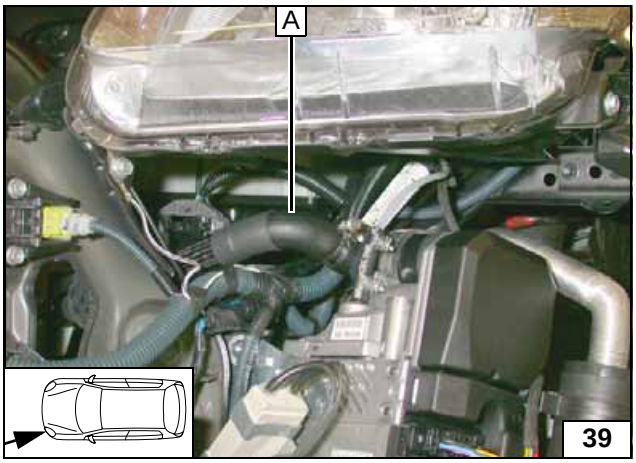
Install hose section **1** on connection piece on engine outlet with original vehicle spring clip **2**.

Connecting engine outlet

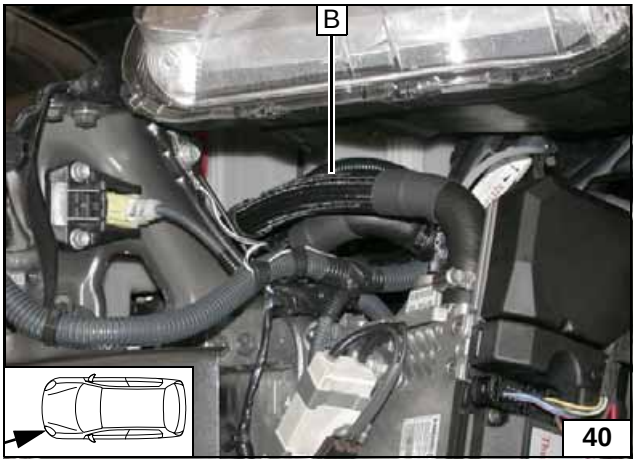


Slide on black (sw) rubber isolator **1** onto hose **A** and align before connecting.

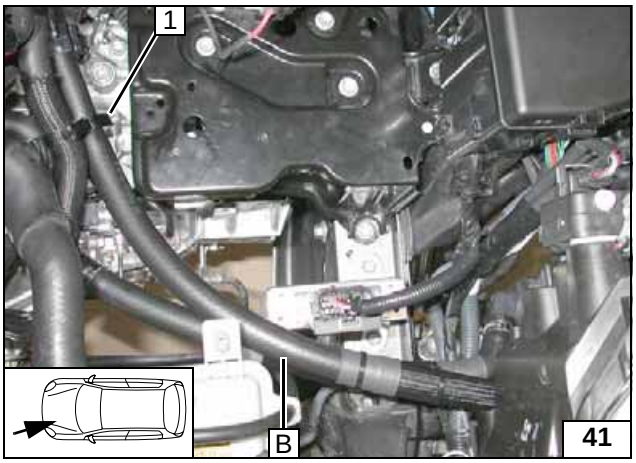
Routing in engine compartment



Connecting heater inlet

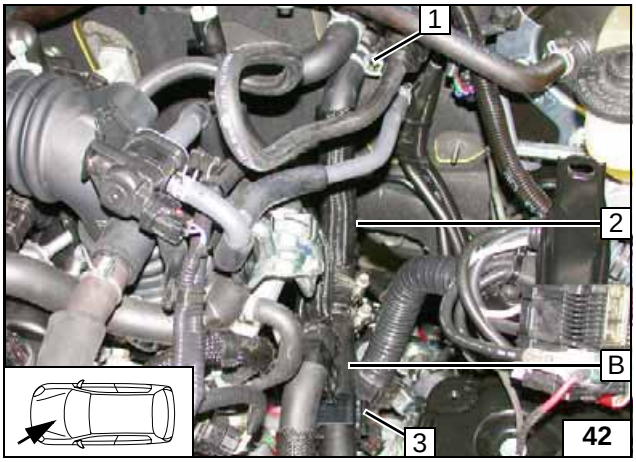


Connecting heater outlet



1 Lockable spacer bracket

Routing in engine compartment



Install hose section **2** on connection piece on heat exchanger inlet with original vehicle spring clip **1**.
Ensure sufficient distance to neighbouring components.

3 Original vehicle hose bracket

Connecting heat exchanger inlet

Final Work

WARNING!
Reassemble the disassembled components in reverse order.
Check all hoses, clamps and all electrical connections for firm seating.
Secure all loose cables using cable ties.
Only use manufacturer-approved coolant.
Spray 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.
- Make settings on A/C control panel according to the "Operating Instructions for End Customer".
- Check the proper operation of the parking heater, see the operating instructions/installation instructions.
- Mount adhesive label "Switch off parking heater before refueling" in area of filler neck.

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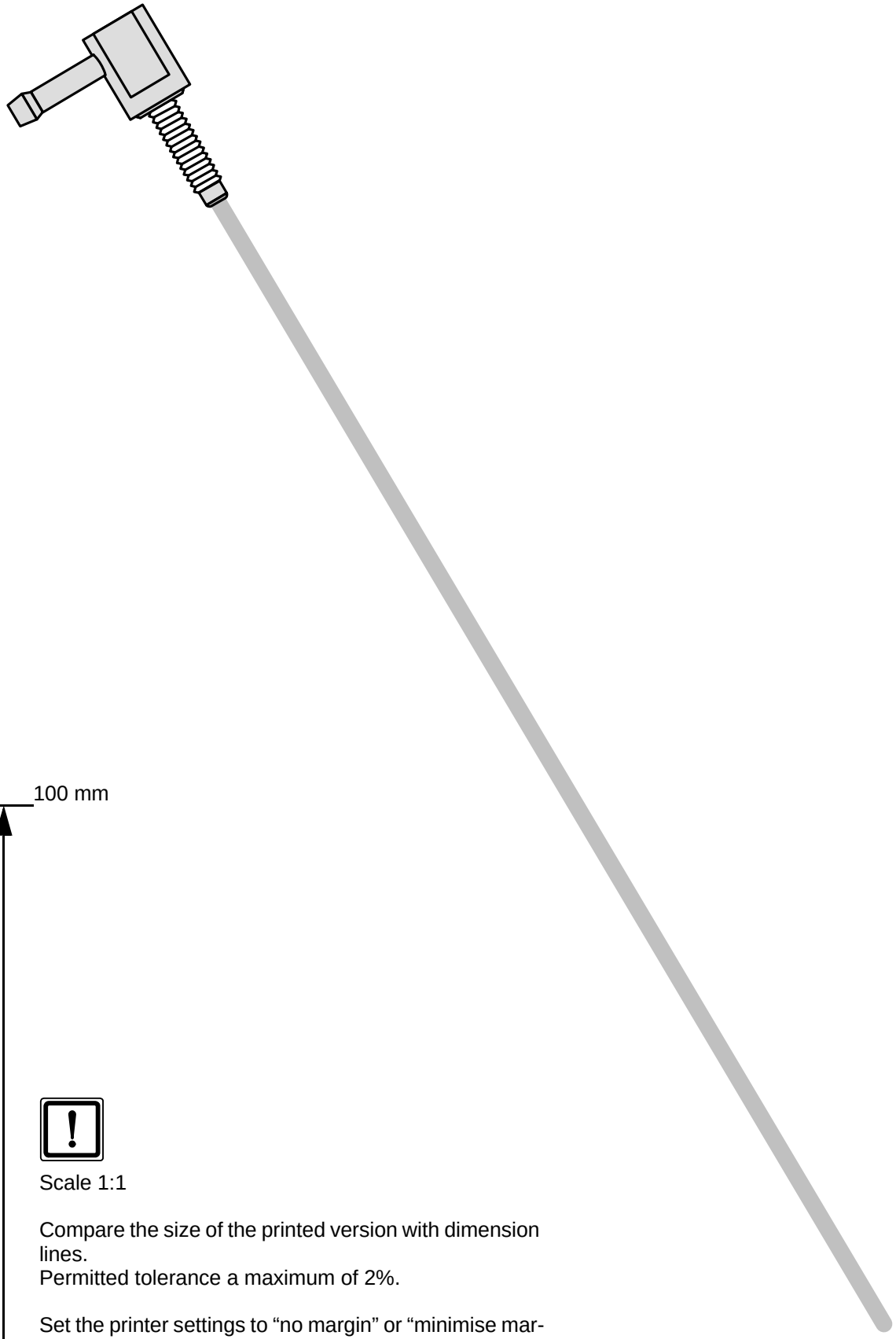
Template for fuel standpipe



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.

1314945B_EN

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

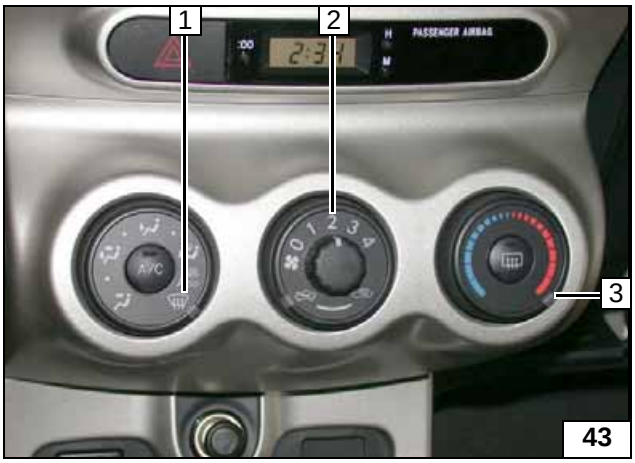
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

On vehicles with passenger compartment monitoring, this must be deactivated during heating!

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 .

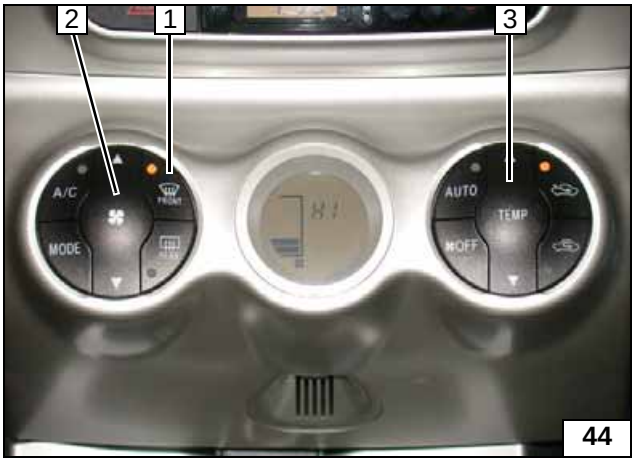
Before parking the vehicle, make the following settings:

Manual air conditioning



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

Automatic air-conditioning



1 Air outlet to windshield
2 Set fan to level "1“ or max. "2"
3 Set temperature to "HI“