Water heater

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

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

Installation documentation

Toyota Yaris

Petrol
from Model Year 2006
For left-hand drive vehicles only
Manual transmission
Multi-mode transmission

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.

Ident. No.: 1310886C_EN Fee 10.00 Euro

Table of Contents

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Toyota	Yaris	XP9	e11 * 2001 / 116 * 0248 * ...
Toyota	Yaris	XP9F	e11 * 2001 / 116 * 0249 * ...
Toyota	Yaris	XP9F (a)	e11 * 2001 / 116 * 0249 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
1KR-FE	Petrol	51	998
2SZ-FE	Petrol	64	1298
1NR-FE	Petrol	74	1329

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

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

Heater/Installation Kit

Quantity	Description	Order No.:
1	*Thermo Top E / C* retail accessories	See price list
1	Installation kit for Toyota Yaris 2006 Petrol	1310882B
1	Heater control	See price list

Heater recommended for the respective vehicle class:

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

The selection of the heater is based on the passenger compartment size of the vehicle and the level of comfort required by the customer!

Foreword

This installation documentation applies to the Toyota Yaris vehicles with Petrol engine - for validity, see page 2 - from model year 2006 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.

In any case, please follow the specifications of this installation documentation and the installation instructions of the *Thermo Top C/E*.
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 rub protection (split-open plastic hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

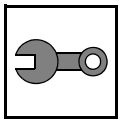
Special Tools

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

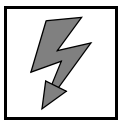
Explanatory Notes on Document

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

Mechanical system

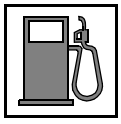


Electrical system

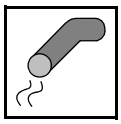


Coolant circuit

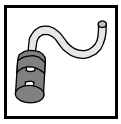
Fuel



Exhaust gas



Combustion air



Special features are highlighted using the following symbols:

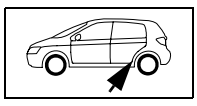
Specific risk of injury or fatal accidents.

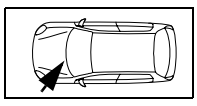
Specific risk of damage to components.

Specific risk of fire or explosion.

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

Reference to a special technical feature.





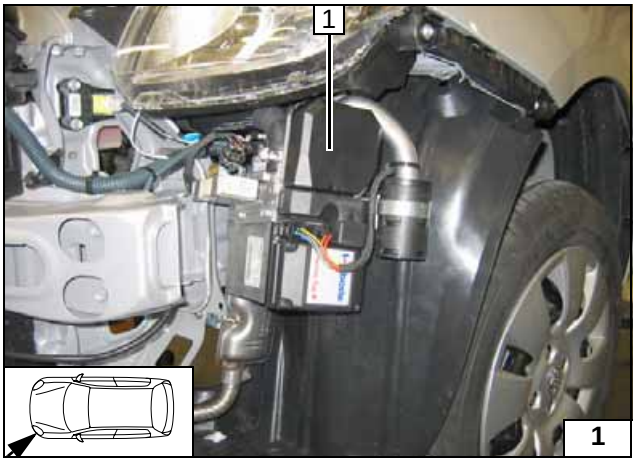
The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

- 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.
- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- Disconnect and remove battery.
- Detach the wheel well trim on the front right and left.
- Remove the bumper.
- Remove underbody trim on the left
- Fold the left rear bench seat up (detach 3 bolts)
- Open the right-hand fuel sender service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions
- Remove the footwell trim on the driver's and front passenger side.
- Detach the A/C-booster in the footwell on the driver's side (only for automatic A/C)
- Remove the glove compartment (only with Telestart)
- Detach centre console (only with digital timer)
- Remove the rack on the instrument panel (only with Telestart T100 HTM)

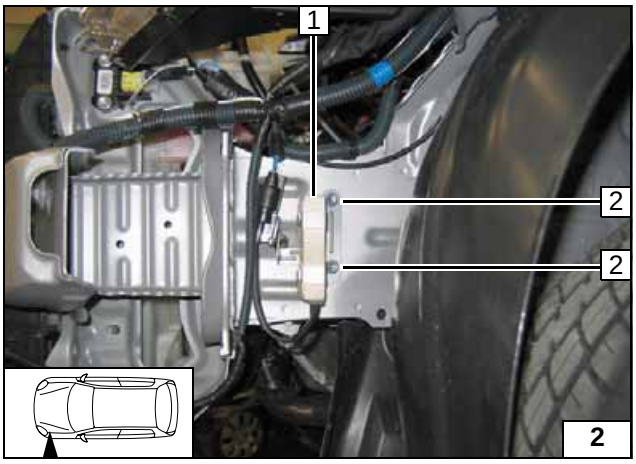
Remove page 25 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

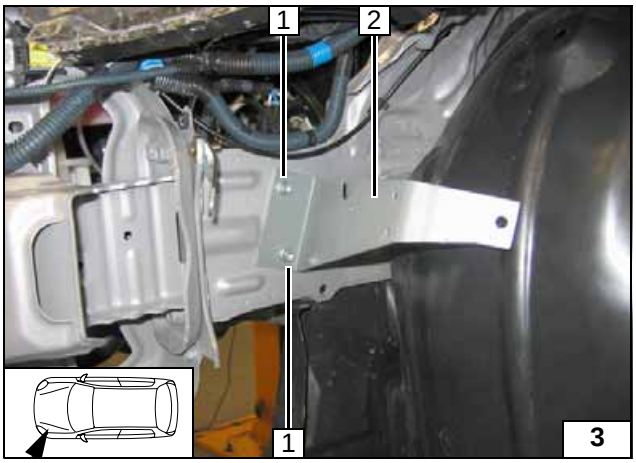
1 Heater

Preparing installation location



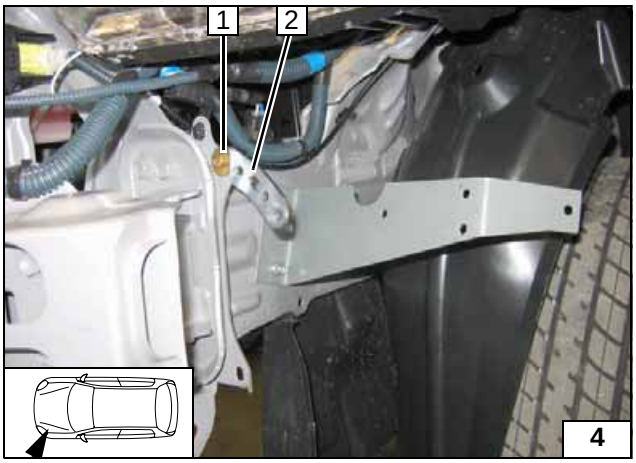
1 Resistor with bracket
2 Original vehicle bolts [2x] (will be reused)

Removing resistor



1 Original vehicle bolt [2x]
2 Bracket

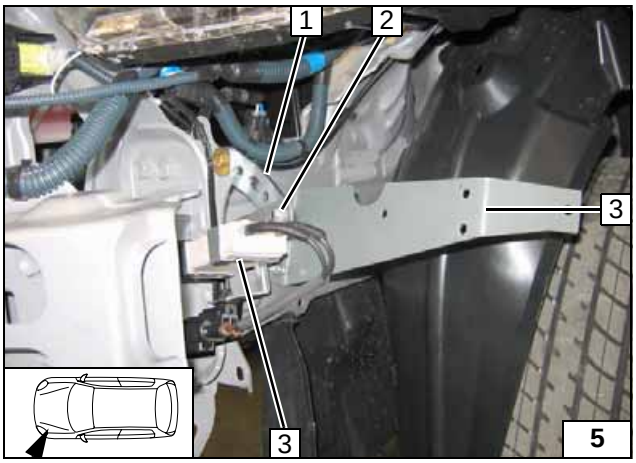
Installing bracket



Mould perforated bracket **2** according to template.

1 Install M6x20 bolt, large diameter washer, flanged nut on existing hole loosely

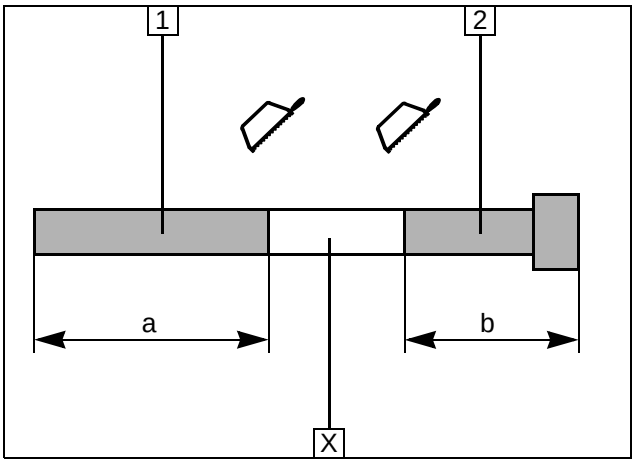
Mounting perforated bracket loosely



Install bolt from the rear through the perforated bracket **1**

2 Install M5x10 countersunk head screw, flanged nut on perforated bracket loosely
3 Resistor with bracket

Premounting resistor

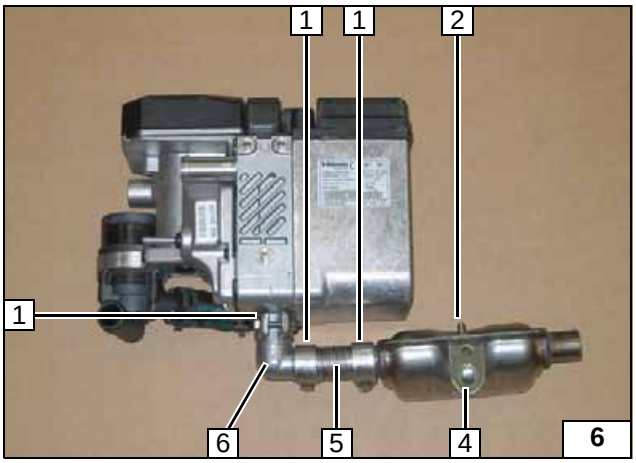


Preparing heater

1 Exhaust pipe
a = 60mm
2 Exhaust end section
b = 200mm

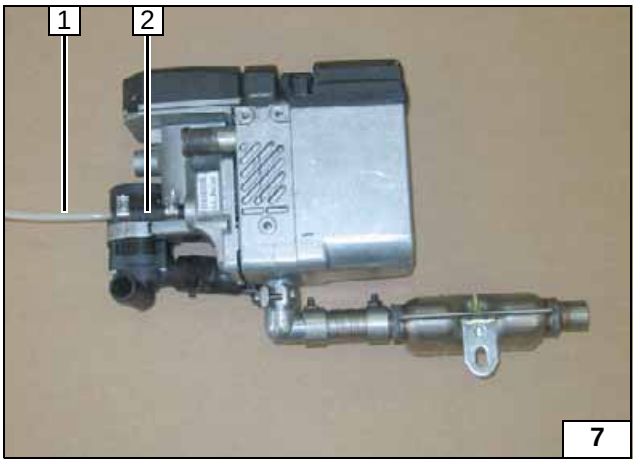
Discard section **X**

Preparing exhaust pipe



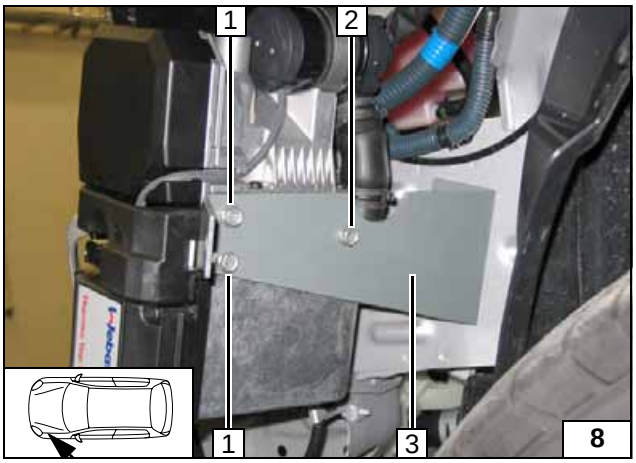
1 Hose clamp [3x]
2 M6x20 bolt, flanged nut
3 Exhaust silencer
4 Loosely mount angle bracket
5 Exhaust pipe
6 Exhaust manifold

Installing exhaust pipe and silencer



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

Premounting fuel hose on heater

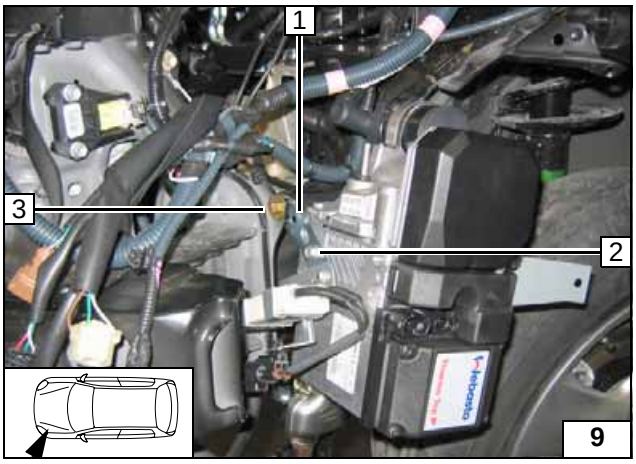


Installing heater

Route Mecanyl fuel line in the engine compartment during installation.
Ejot screws, tightening torque 10 Nm!
Insert two washers between heater and bracket **3** at position **2**.

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

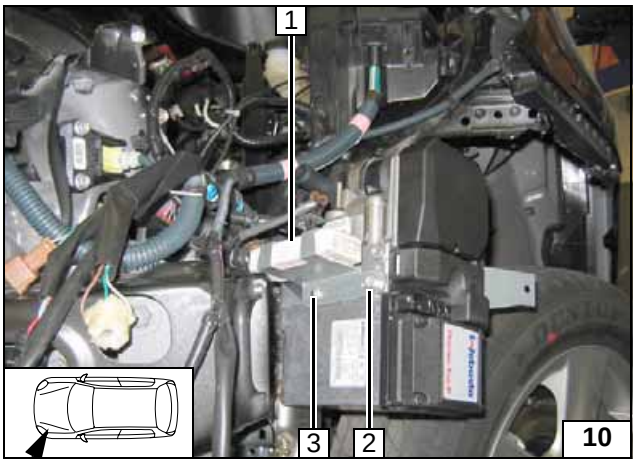
Installing heater



Ejot screw bolt, tightening torque 10 Nm!
Tighten bolt at position **3**.

1 Perforated bracket
2 Ejot screw

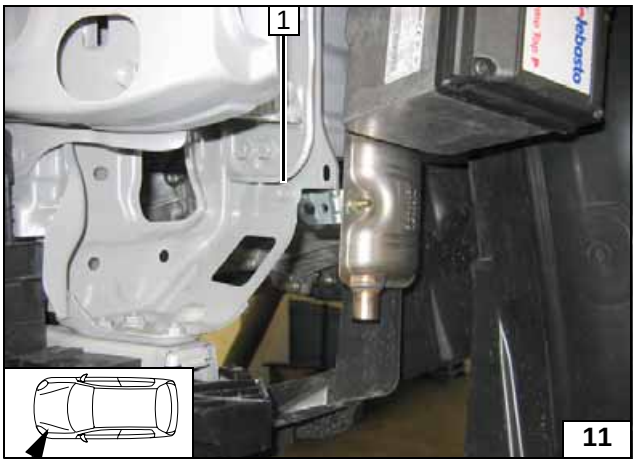
Installing heater



Ejot screw bolt, tightening torque 10 Nm!
Tighten bolt at position **3**.

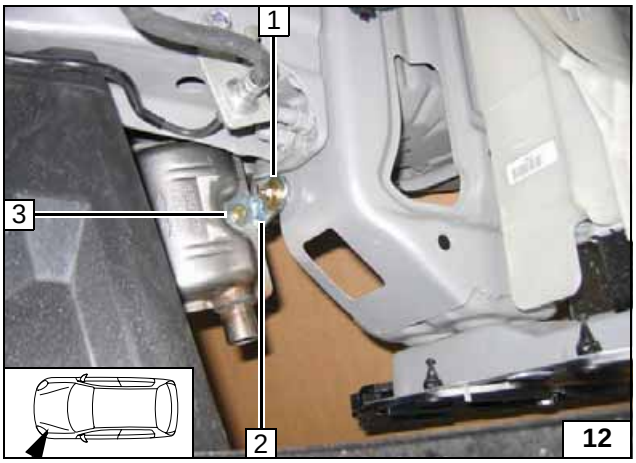
1 Resistor with bracket
2 Ejot screw

Installing resistance



Replace original vehicle bolt at position **1** with M6x20 bolt. (Original vehicle bolt at Position **1** is required for installing K3 relay).

Remove bolt



Tighten bolt at position **3**.

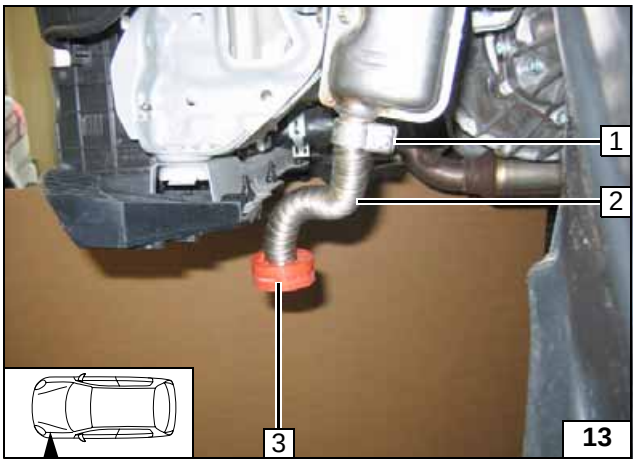
1 Large diameter washer, flanged nut on pre-mounted M6x20 bolt
2 Premounted angle bracket

Removing bolt

Exhaust gas

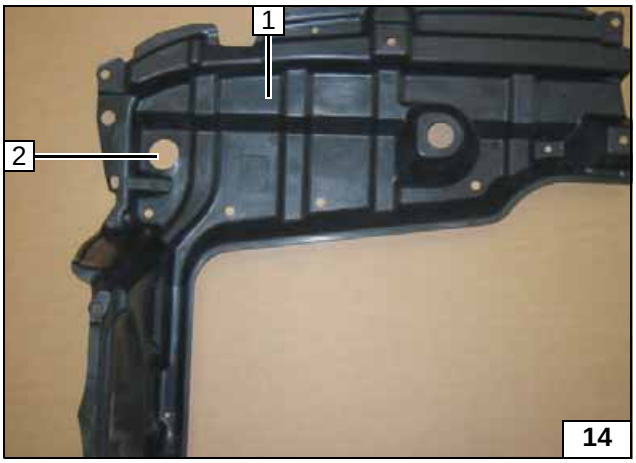
Ejot screw bolt, tightening torque 10 Nm!

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



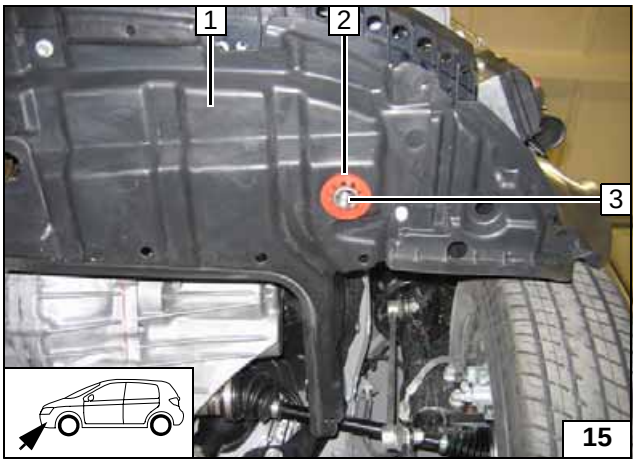
Installing exhaust end section

1 Underride protection
2 42mm dia. hole



Cutting out underride protection

Mount underride protection **1**. Align exhaust end section **3** flush on red rubber isolator **2**.

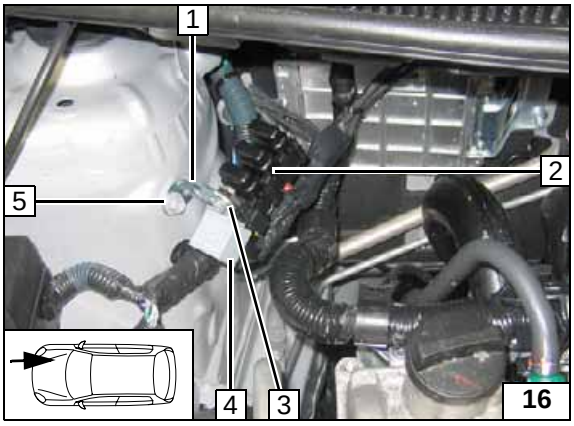


Mounting rubber isolator

Electrical system

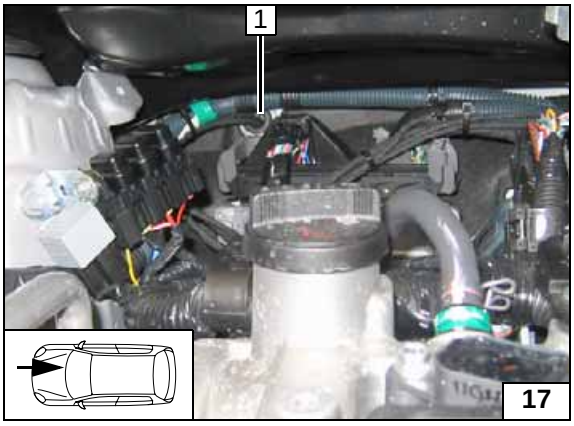
Fuse holder, K3 relay

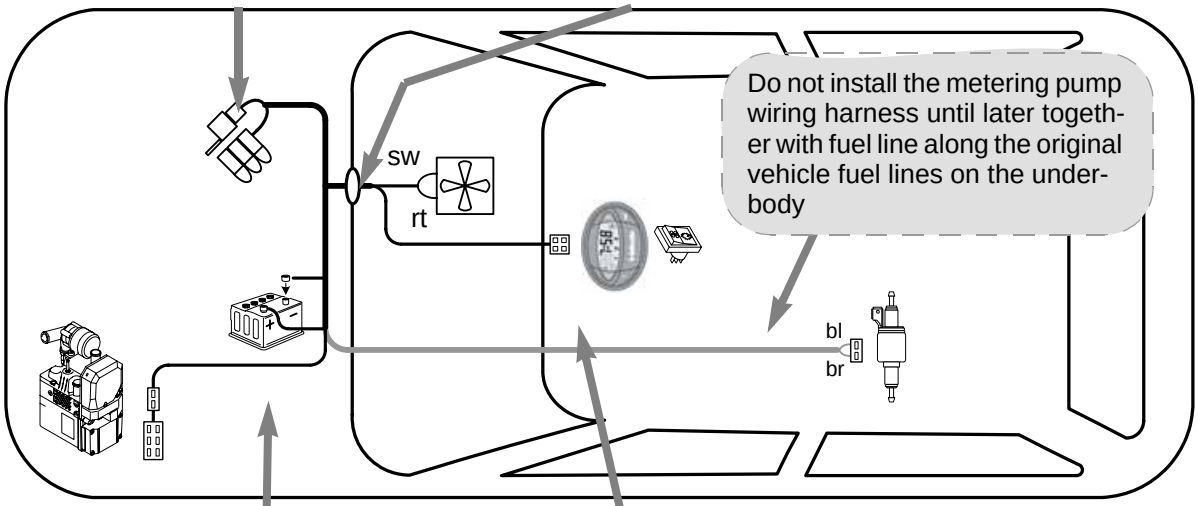
1 Angle bracket
2 Fuses F1-3
3 M5x16 bolt, washer [2x], retaining plate for fuse holder, nut
4 K3 relay
5 Original vehicle bolt on existing threaded hole



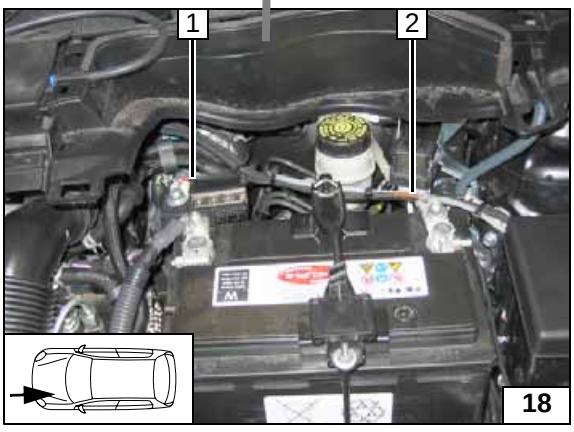
Wiring harness pass through

1 Remove sealing plug and replace with protective rubber plug



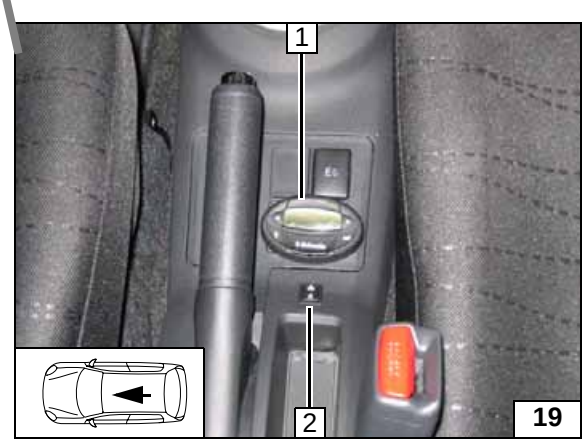


Wiring harness routing diagram



Positive and earth connection

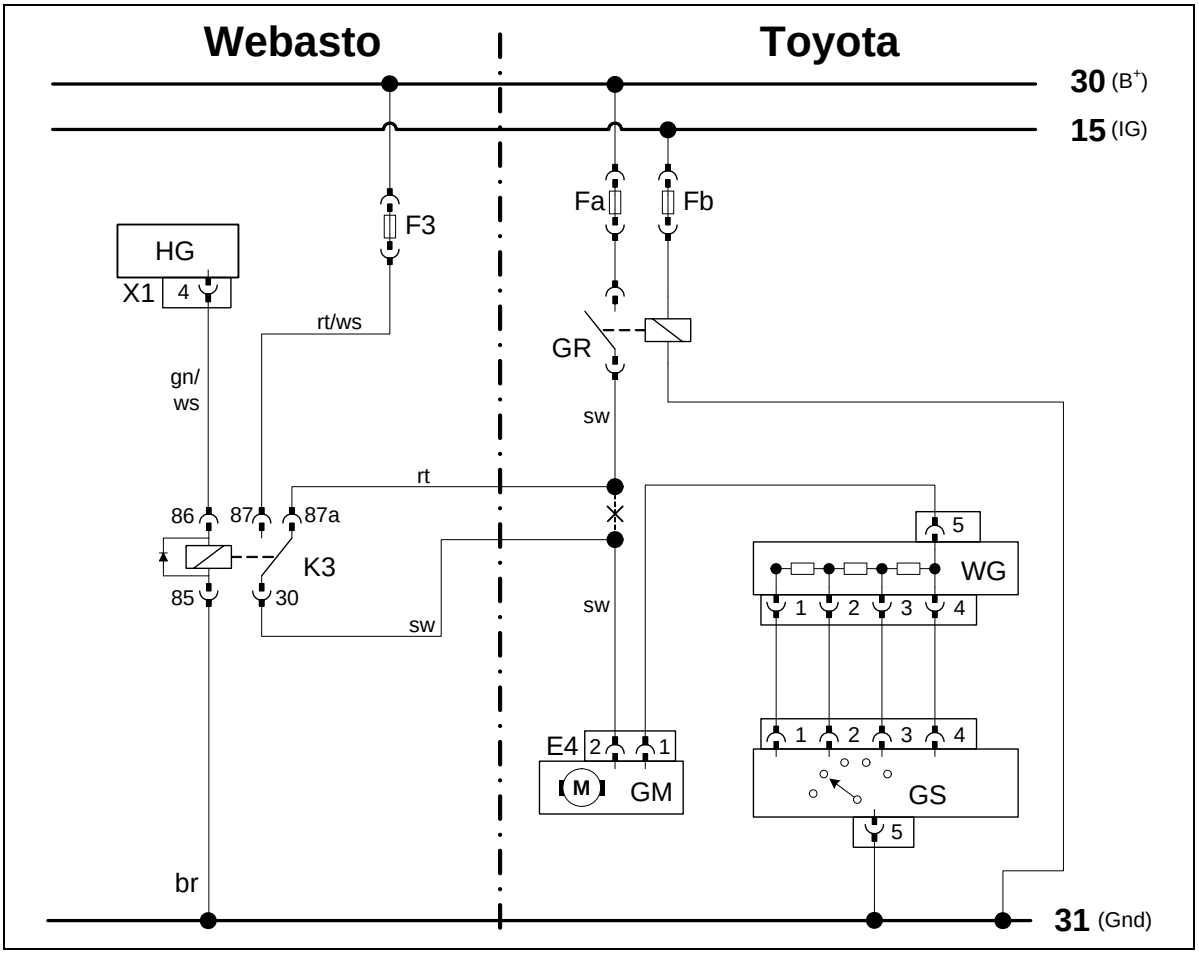
1 Positive wire on positive terminal
2 Earth wire on negative terminal



Digital timer and summer/winter switch option

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

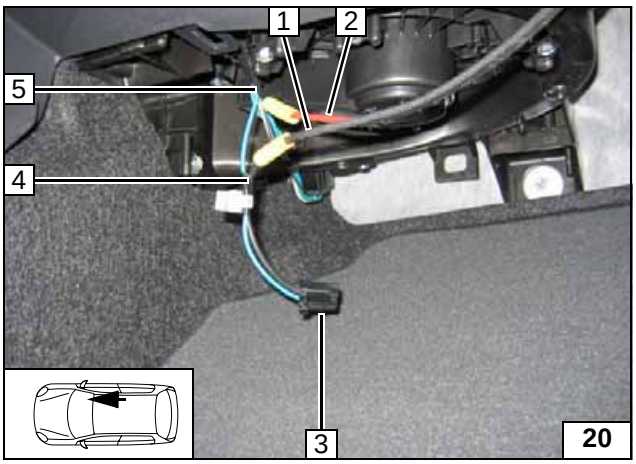
Fan control for manual air conditioning



Wiring diagram for manual air conditioning

Webasto components		Components Toyota Yaris		Colours and symbols	
HG	Heater TT-C/E	GM	Fan motor	rt	red
X1	6-pin connector	E4	2-pin connector GM	ws	white
F3	Fuse	GR	Fan relay	sw	black
K3	Fan relay	GW	Fan resistor	br	brown
		GS	Fan switch	gn	green
		Fa	HTR 40 A fuse		
		Fb	7.5A Fuse gauge		
				X	Cutting point

Legend

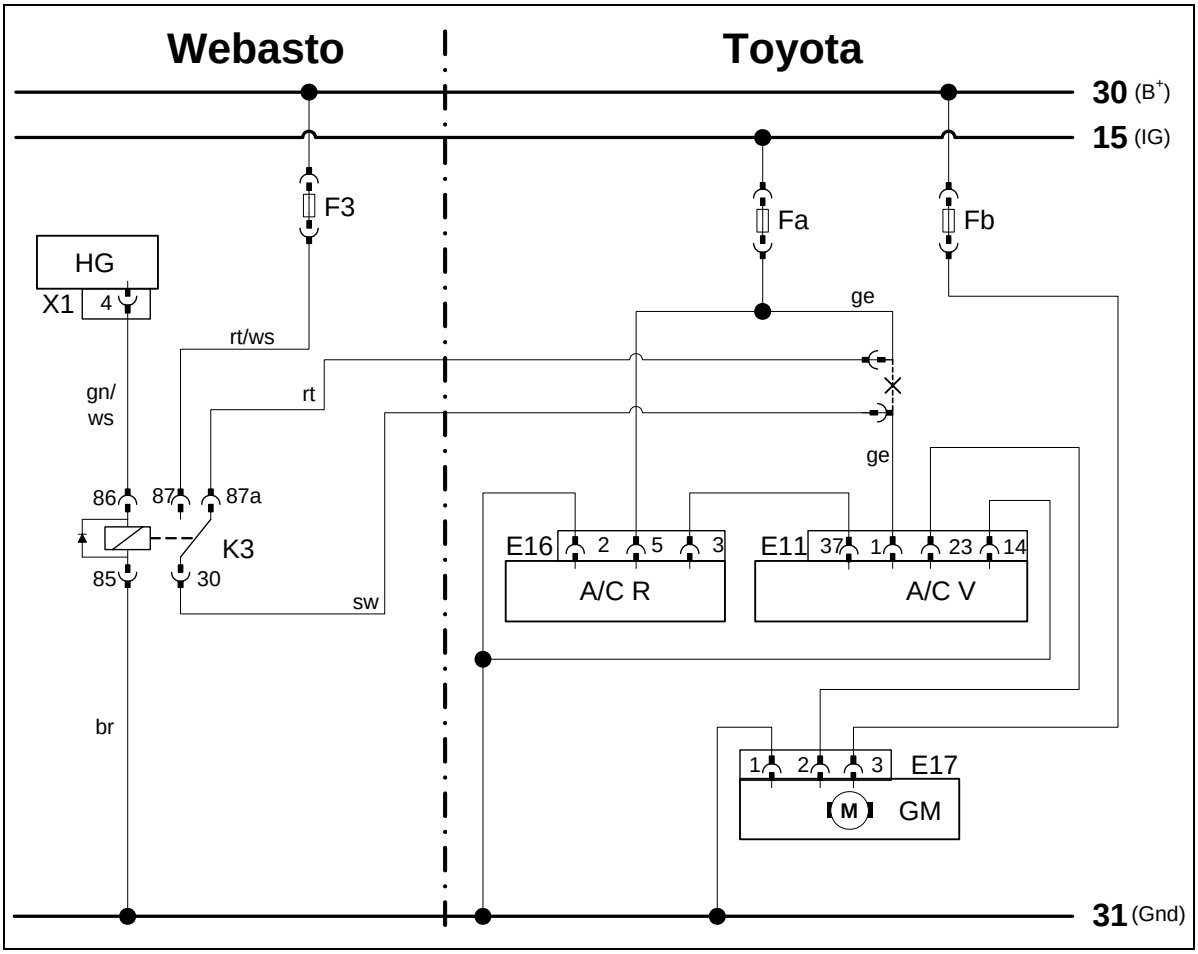


Connection to 2-pin E4 connector **3** Pin 2 from fan motor.
Make connections as shown in wiring diagram with connectors provided.

1 Black (sw) wire from K3/30
2 Red (rt) wire to K3/87a
4 Black (sw) wire to E4 connector Pin2
5 Black (sw) wire of original vehicle fan relay

Connecting fan motor

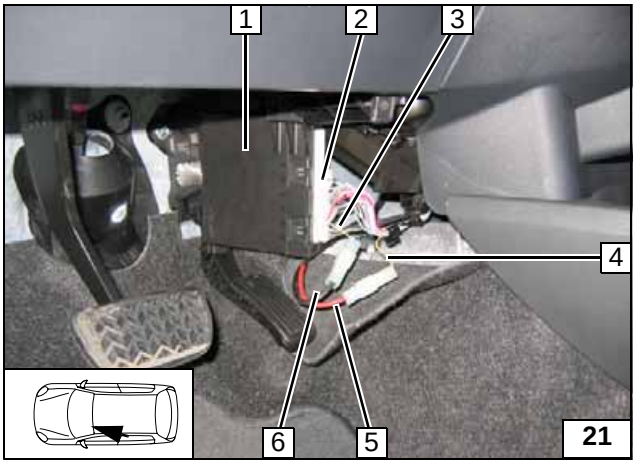
Automatic air-conditioning fan control



Automatic air-conditioning wiring diagram

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

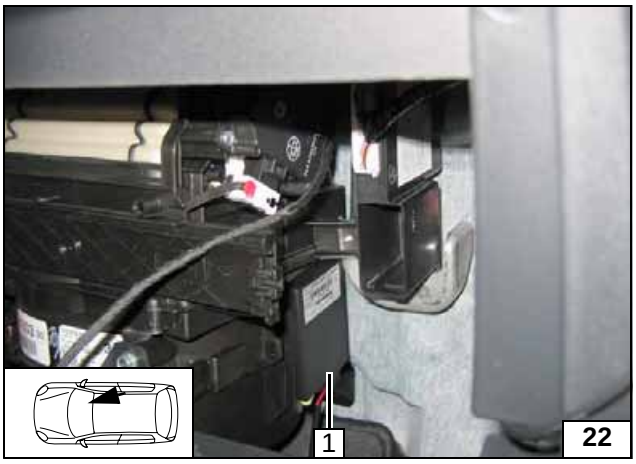
Legend



Connect to the 40-pin connector E11 **2** of the A/C booster **1**.
Make connections as shown in the wiring diagram with the tab receptacles provided.

3 Yellow (ge) wire to connector E11 Pin 1
4 Yellow (ge) wire from 7.5A fuse
5 Red (rt) wire to K3/87a
6 Black (sw) wire from K3/30

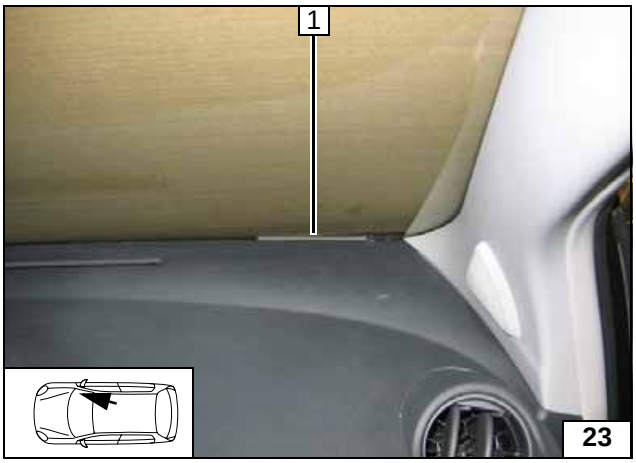
Connecting the A/C booster



Remote option (Telestart)

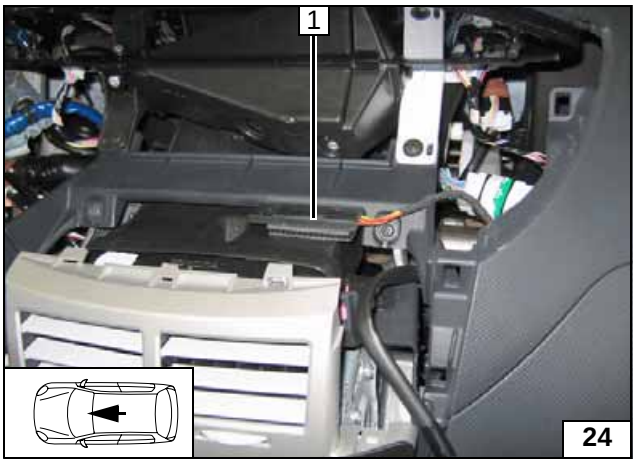
Fasten receiver **1** with adhesive tape.

Installing receiver



1 Antenna

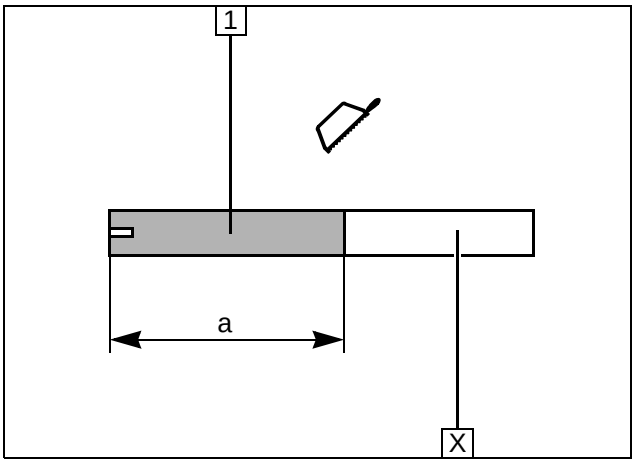
Installing antenna



Temperature sensor only with T100 HTM

Fasten temperature sensor **1** with adhesive tape.

Installing temperature sensor

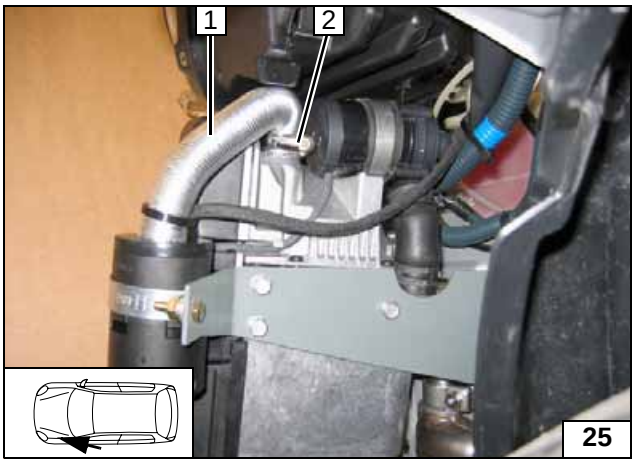


Combustion air

1 Combustion air pipe
a = 160mm

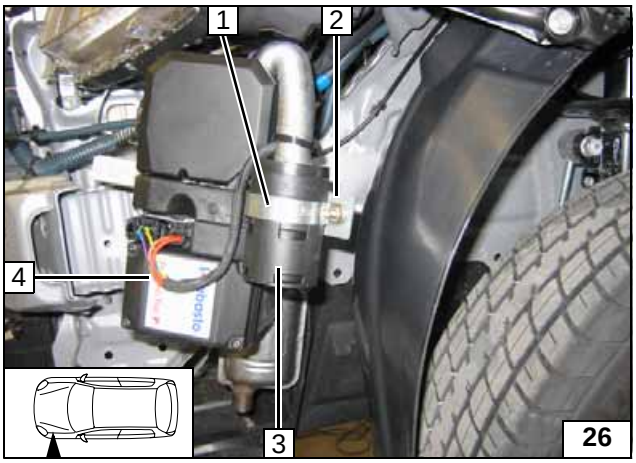
Discard section **X**

Cutting combustion air pipe to length



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

Installing intake pipe



Remove rubber coating from p-clamp.
Connect wiring harness of heater **4**.

1 P-clamp
2 M6x20 bolt, flanged nut on bracket
3 Combustion-air intake silencer

Installing silencer

Fuel

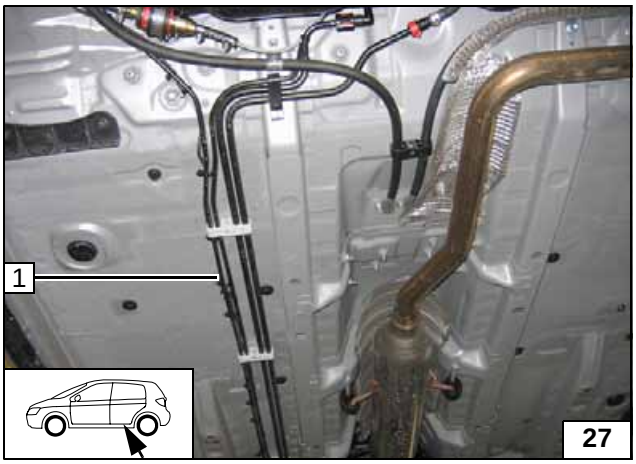
CAUTION!
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

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.

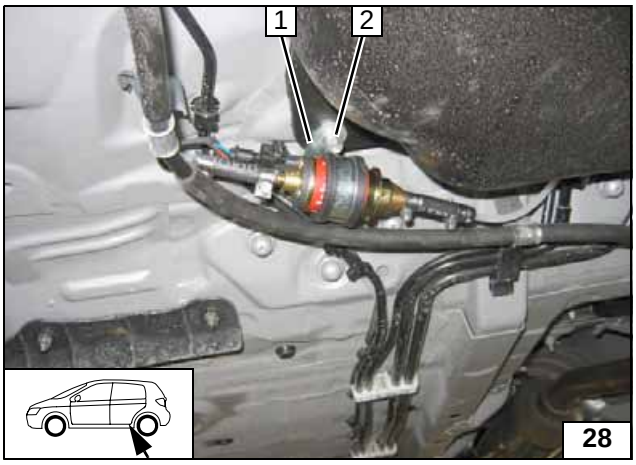
WARNING!
The fuel line and wiring harness are routed to the metering pump in as shown in the wiring harness routing diagram.

Installing lines



1 Mecanyl fuel line, metering pump wiring harness

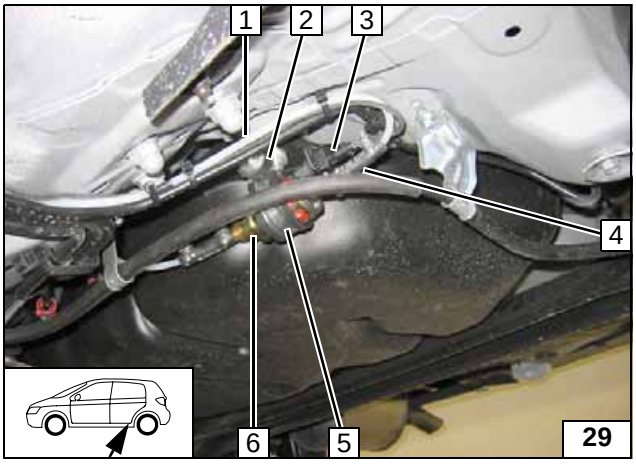
Installation location of metering pump



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

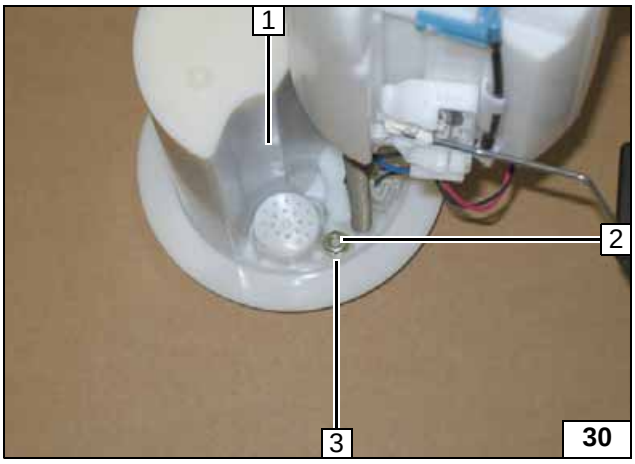
1 Angle bracket
2 Original vehicle bolt

Installing metering pump



Fuel line from heater on pressure side of metering pump [side with connector].

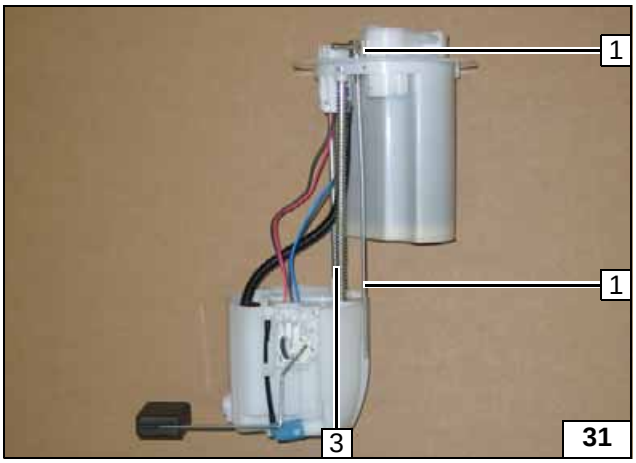
1 Fuel line
2 Silent block, flanged nut [2x] on angle bracket
3 Wiring harness of metering pump, connector mounted
4 Hose section, 10 mm dia. hose clamps [2x]
5 Rubber-coated pipe clamp
6 Metering pump



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

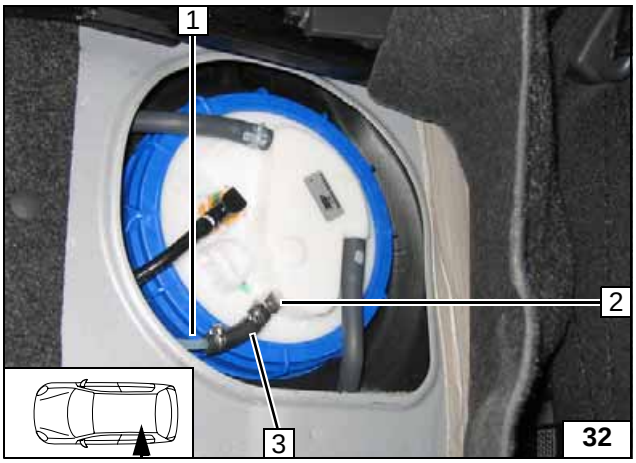
1 Fuel-tank sending unit
2 Copy hole pattern, 6 mm dia. hole
3 Flanged nut

Removing fuel



Mould fuel standpipe **1** according to template, cut to length and install, see "Installation instructions".

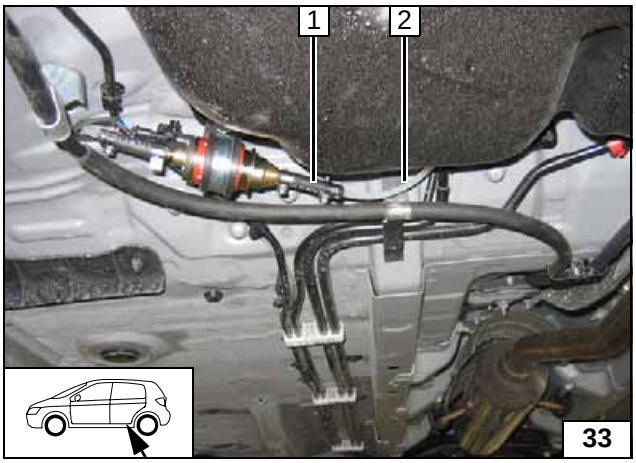
Installing fuel standpipe



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

1 Remaining end of Mecanyl fuel line
2 Fuel standpipe
3 Moulded hose, 10mm dia. Caillau clamp

Connecting fuel line



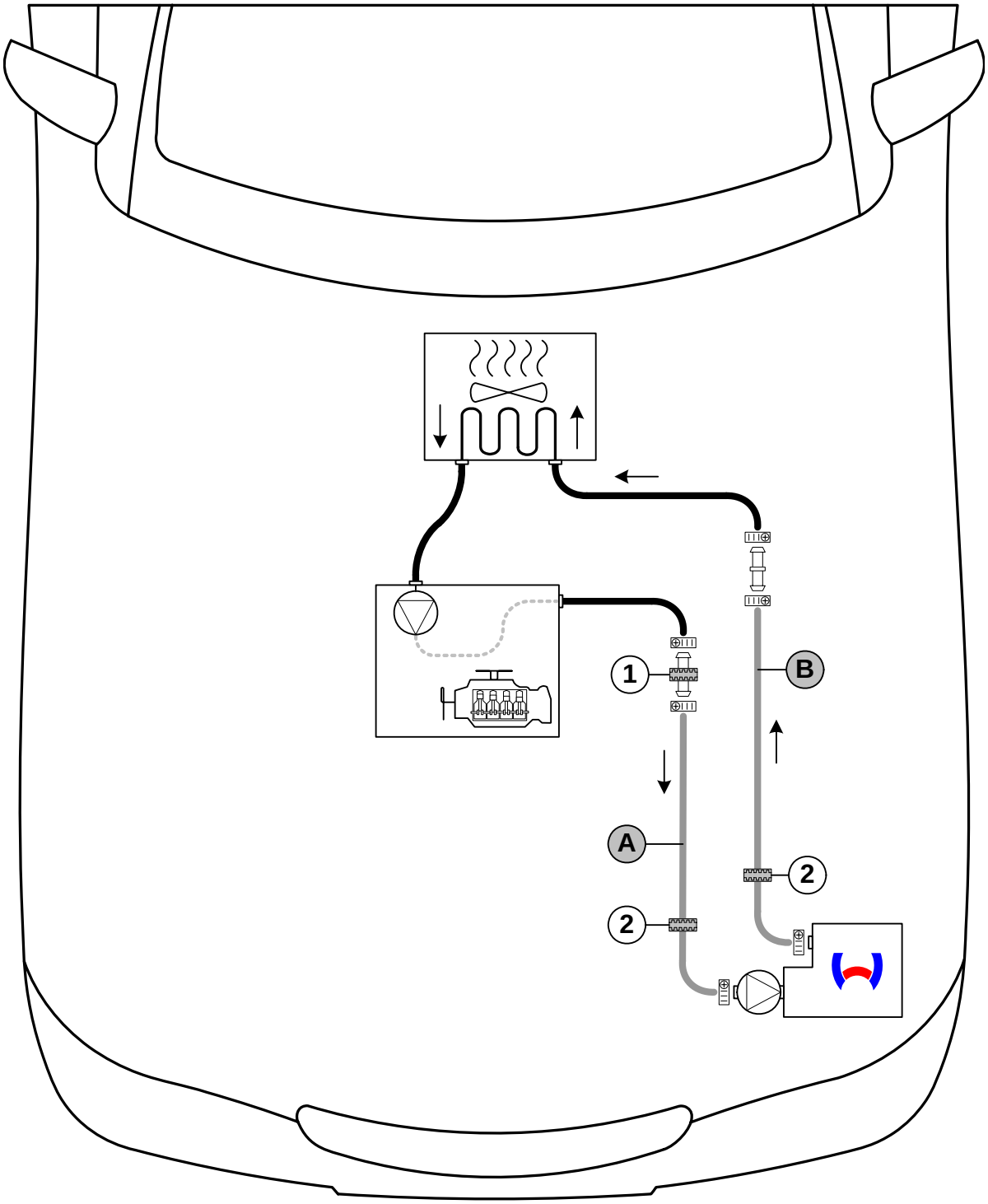
Fuel line from fuel standpipe on intake side of metering pump [side without connector]. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

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

Connecting metering pump

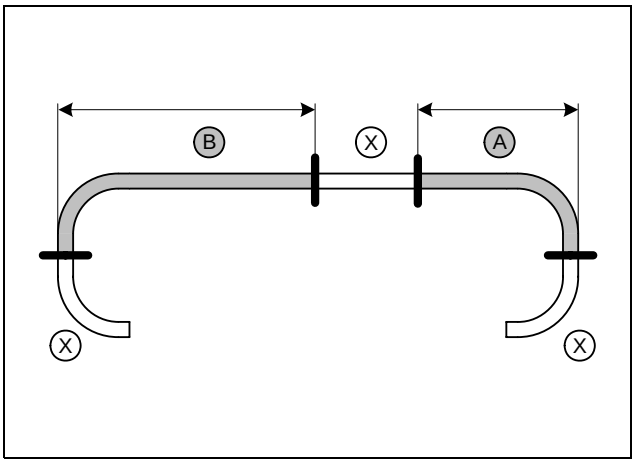
Coolant circuit

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



Hose routing diagram

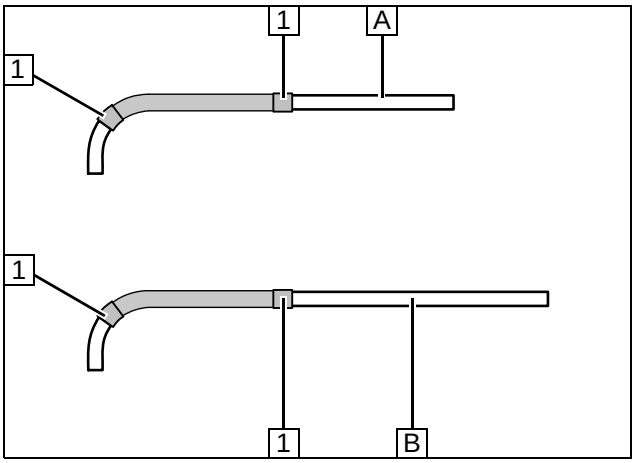
All clamps without a specific designation are 20-27 mm dia. hose clamps!
All connecting pipes = 17x20 dia.
1 = Black (sw) rubber isolator [1x] only for 1.0 and 1.3
2 = Black (sw) rubber isolator [2x] only for 1.33



Discard Section **X**.

1.0 B	1.3 B	1.33 B
A = 400mm **B** = 550mm	**A** = 330mm **B** = 560mm	**A** = 380mm **B** = 600mm

Cutting hoses to length

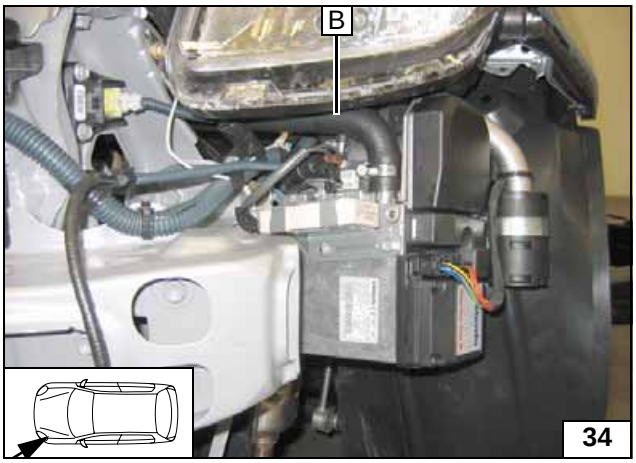


All vehicles

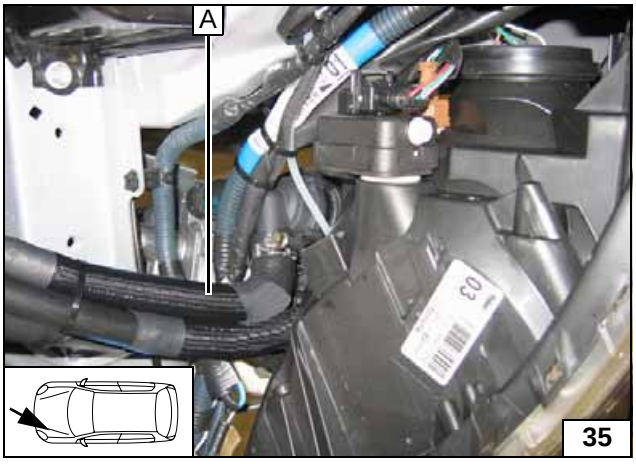
Push braided protection hoses onto hose **A** and **B** and cut to length.
Cut heat shrink plastic tubing to length.

1 25 mm heat shrink plastic tubing [4x]

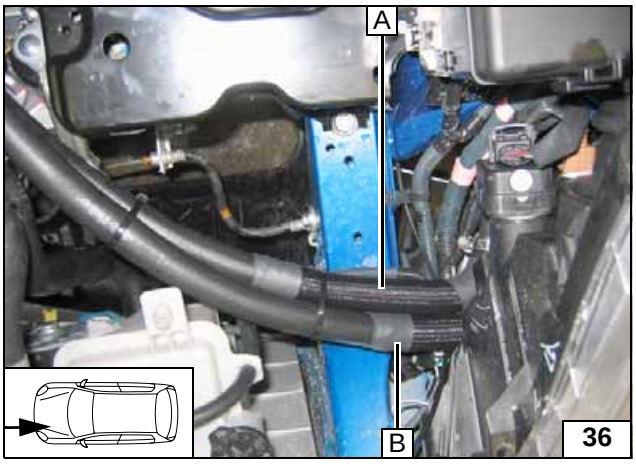
Preparing hoses



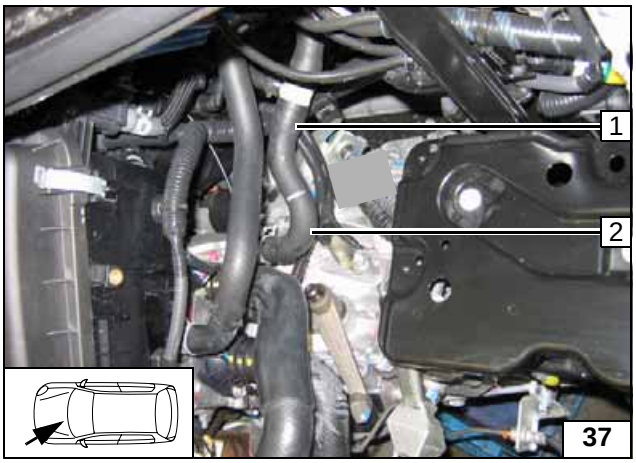
Connecting heater outlet



Connecting heater inlet



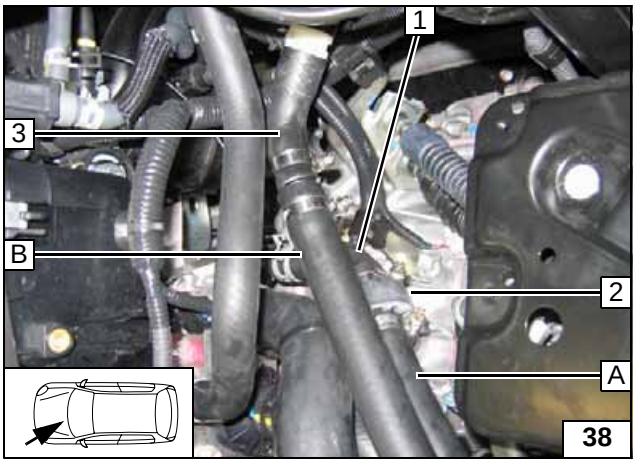
Routing in engine compartment



1.0 B

1 Hose on heat exchanger inlet
2 Hose of engine outlet

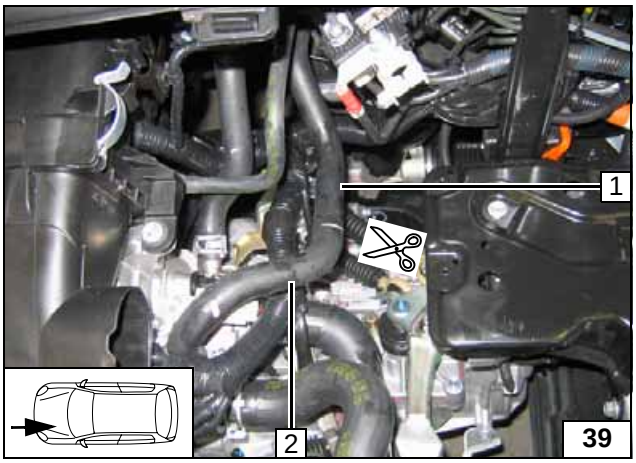
Cutting point



Before connecting, fill the coolant hoses with coolant.

1 Hose of engine outlet turned
2 Black (sw) rubber isolator
3 Hose on heat exchanger inlet

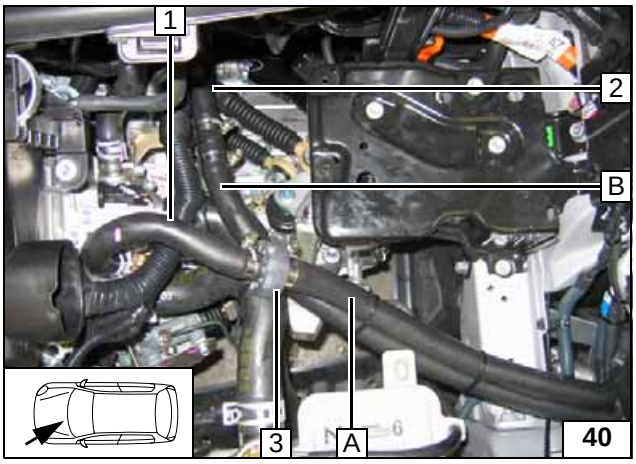
Connection on engine outlet and heat exchanger inlet



1.3 B

1 Hose on heat exchanger inlet
2 Hose of engine outlet

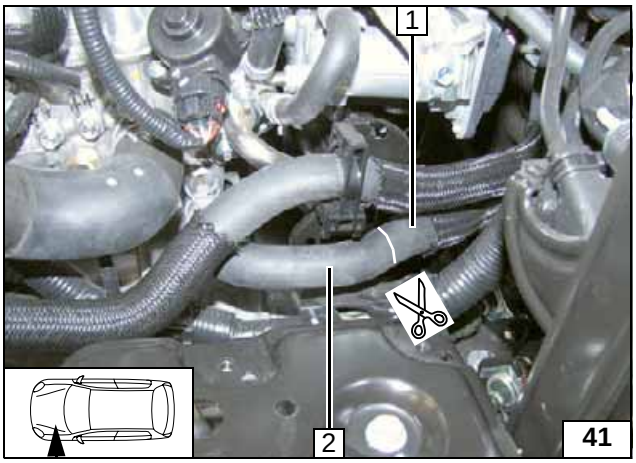
Cutting point



Before connecting, fill the coolant hoses with coolant.

1 Hose of engine outlet turned
2 Hose on heat exchanger inlet
3 Black (sw) rubber isolator

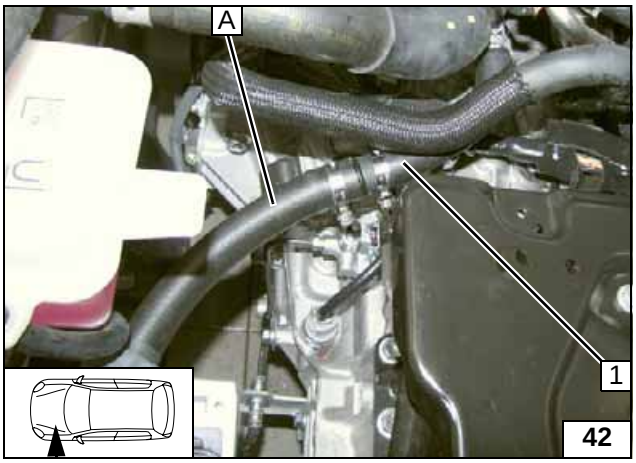
Connection on engine outlet and heat exchanger inlet



1.33 B
Hose bracket at position **2** removed (will be reused). Braided protection hose in the area of the cutting point removed.

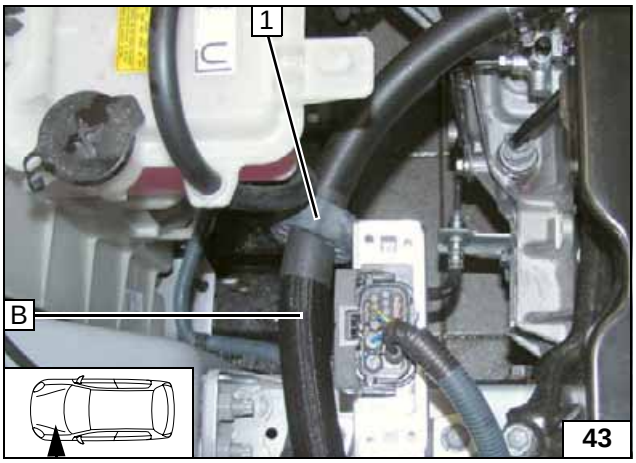
1 Hose on heat exchanger inlet
2 Hose of engine outlet

Cutting point



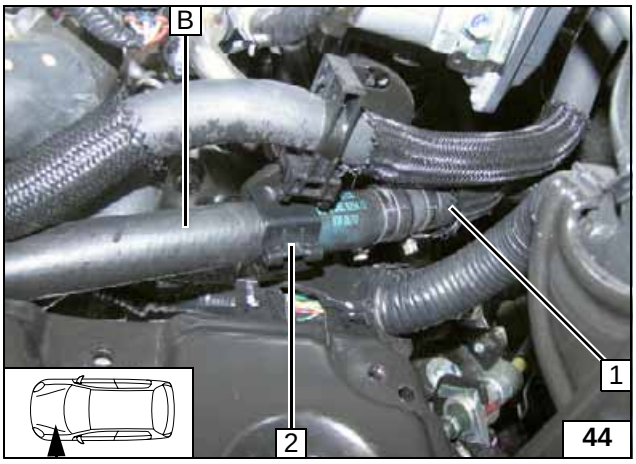
1 Hose of engine outlet turned

Connecting engine outlet



1 Black (sw) rubber isolator

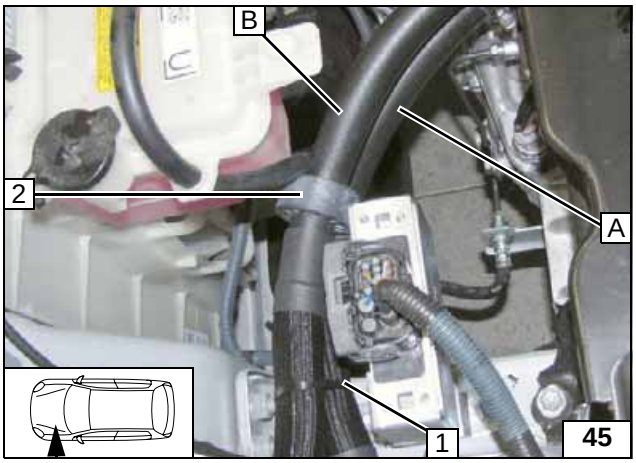
Aligning rubber isolator



Before connecting, fill the coolant hoses with coolant.

1 Hose on heat exchanger inlet
2 Original vehicle hose bracket installed

Connecting heat exchanger inlet



1 Cable tie
2 Black (sw) rubber isolator

Aligning rubber isolator

Final Work

WARNING!
Reassemble the disassembled components 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 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 digital timer, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Mount sticker "Switch off parking heater before refueling" in area of filler neck.**
- **For initial startup and function check, see installation instructions**

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Feel the drive

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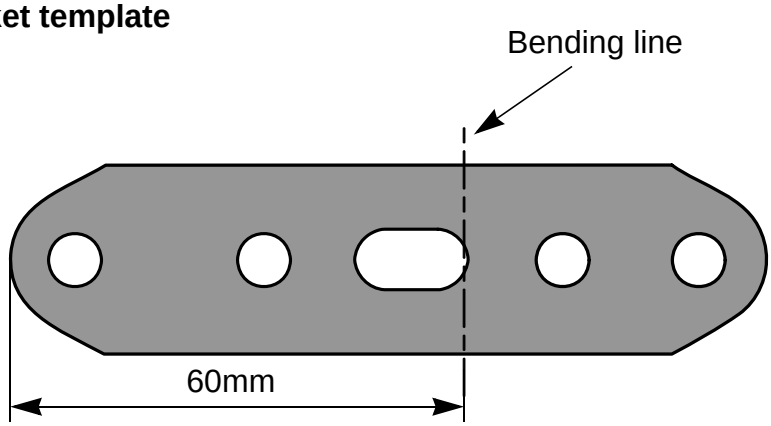
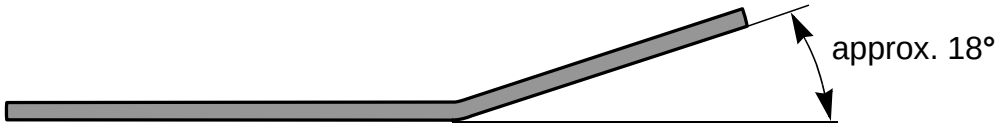
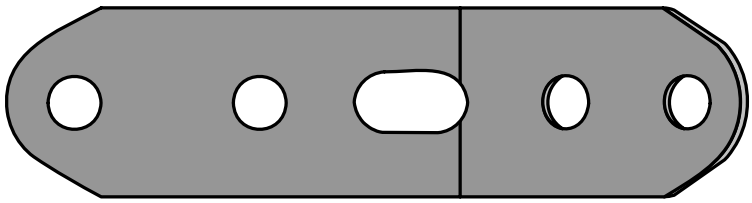
Perforated bracket template







100 mm

Scale 1:1

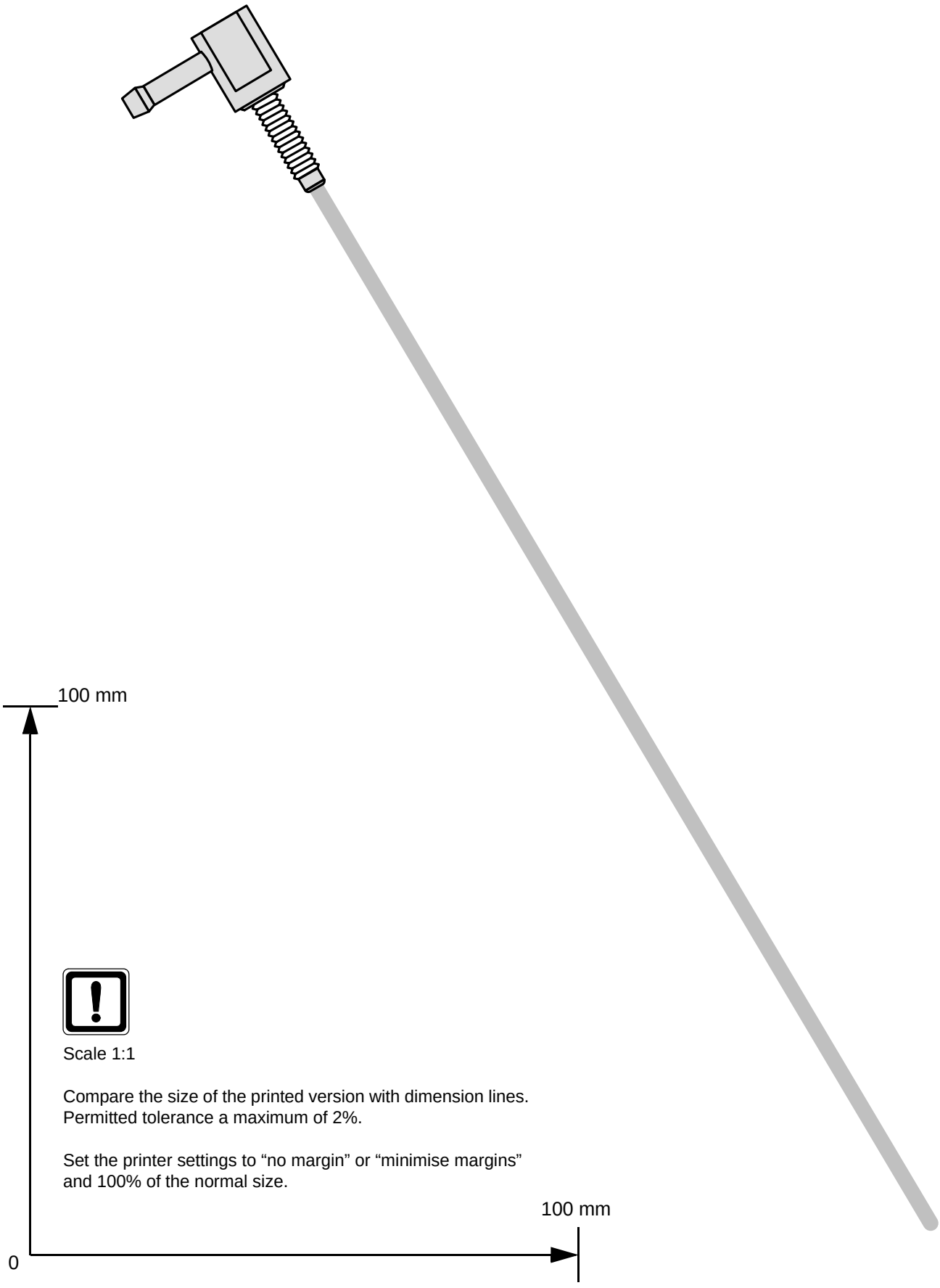
Compare the size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

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

100 mm

0

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.

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

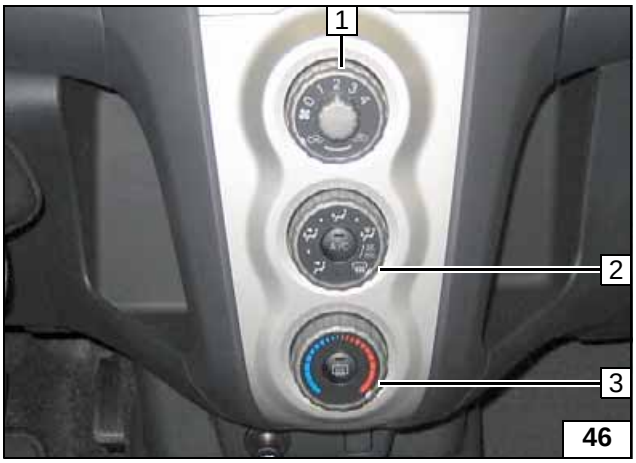
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

For vehicles with a passenger compartment monitoring unit, deactivate it in addition to vehicle settings for the heating cycle.
Please refer to the operating manual of the vehicle for instructions regarding deactivation.

If the summer/winter switch option has been installed, 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.

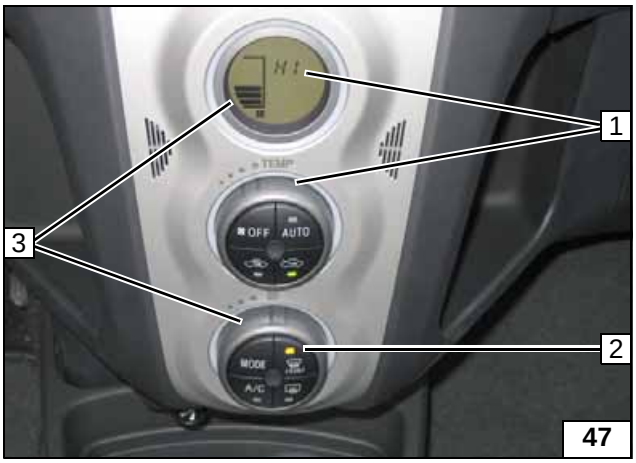
Before parking the vehicle, make the following settings:

Manual air conditioning



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

Automatic air-conditioning



2 Air outlet to windscreen
3 Set fan to level "2", or possibly "3"
1 Set temperature to "HI"