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 documentation

Toyota Urban Cruiser

Diesel
from Model Year 2009
Left-hand drive vehicle
2WD / 4WD

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.: 1315036B_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
1ND-TV	Diesel	66	1364

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

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

Heater/Installation Kit

Quantity	Description	Order No.:
1	Retail accessories with desired heater control	See price list
1	Installation Kit for Toyota Urban Cruiser 2009 Diesel	1315035B

Foreword

This installation document applies to vehicles Toyota Urban Cruiser Diesel - 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 this installation documentation.

However, the stipulations in this "installation documentation" and "operating and maintenance instructions" for the *Thermo Top E/C/P* must always be observed.
The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

General Instructions

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties.
Sharp edges 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).

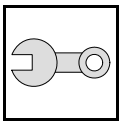
Special Tools

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

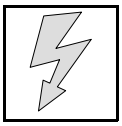
Explanatory Notes on Document

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.

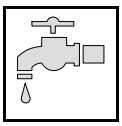
Mechanical system



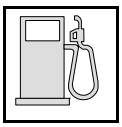
Electrical system



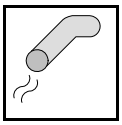
Coolant circuit



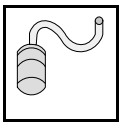
Fuel



Exhaust gas



Combustion air



Software

Special features are highlighted using the following symbols:

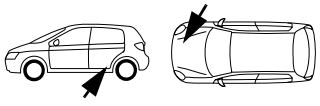
Specific risk of injury or fatal accidents.

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.

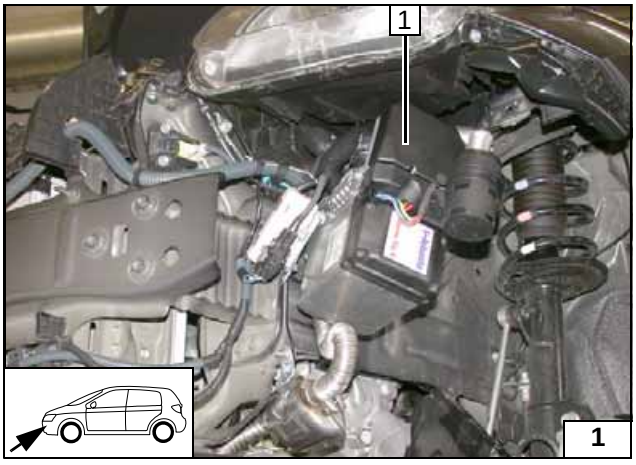
All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejot screws, Ejot studs = 10 Nm!

Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the 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 battery
- 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 glove compartment
- Remove the footwell trim on the front passenger side.

Remove page 23 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

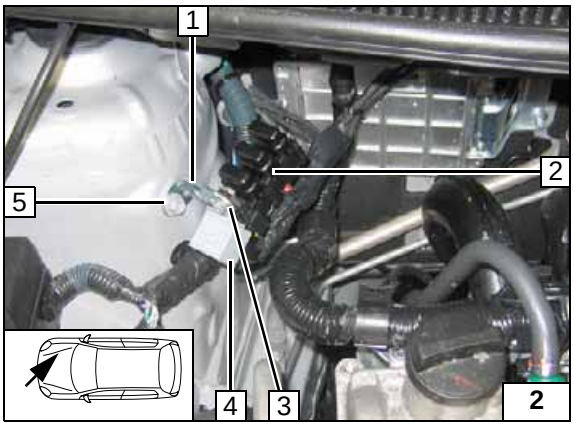
1 Heater

Installation location

Electrical system

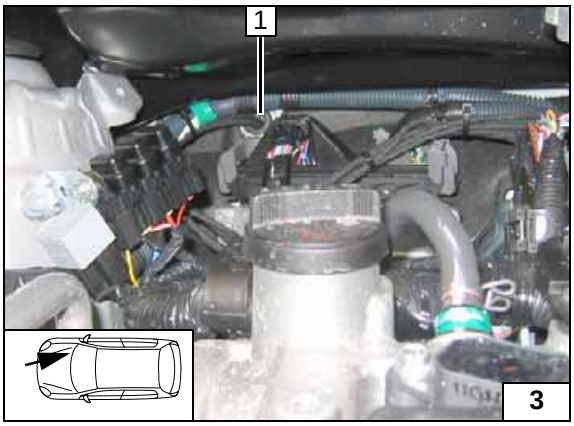
Fuse holder, K3 relay

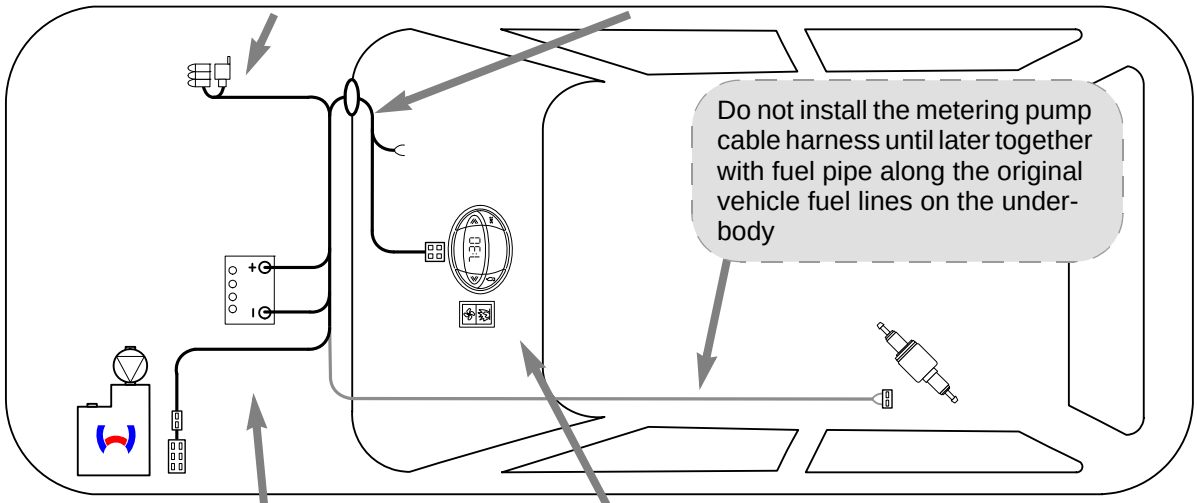
1 Angle bracket
2 Fuse F1-3 mounted
3 M5x16 bolt, washer, retaining plate of fuse holder, M5 nut
4 K3 relay
5 M6x20 bolt, existing threaded hole



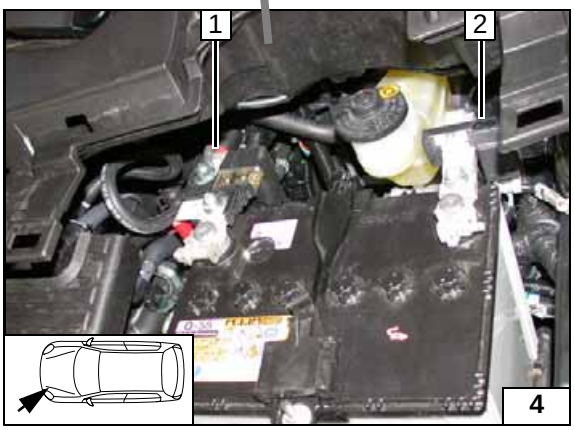
Wiring harness pass through

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



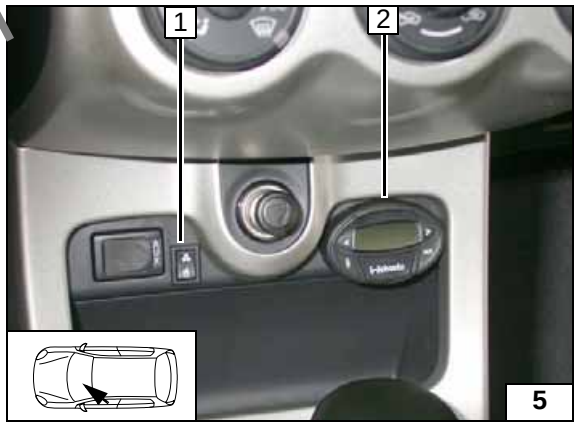


Wiring harness installation diagram



Positive and ground connection

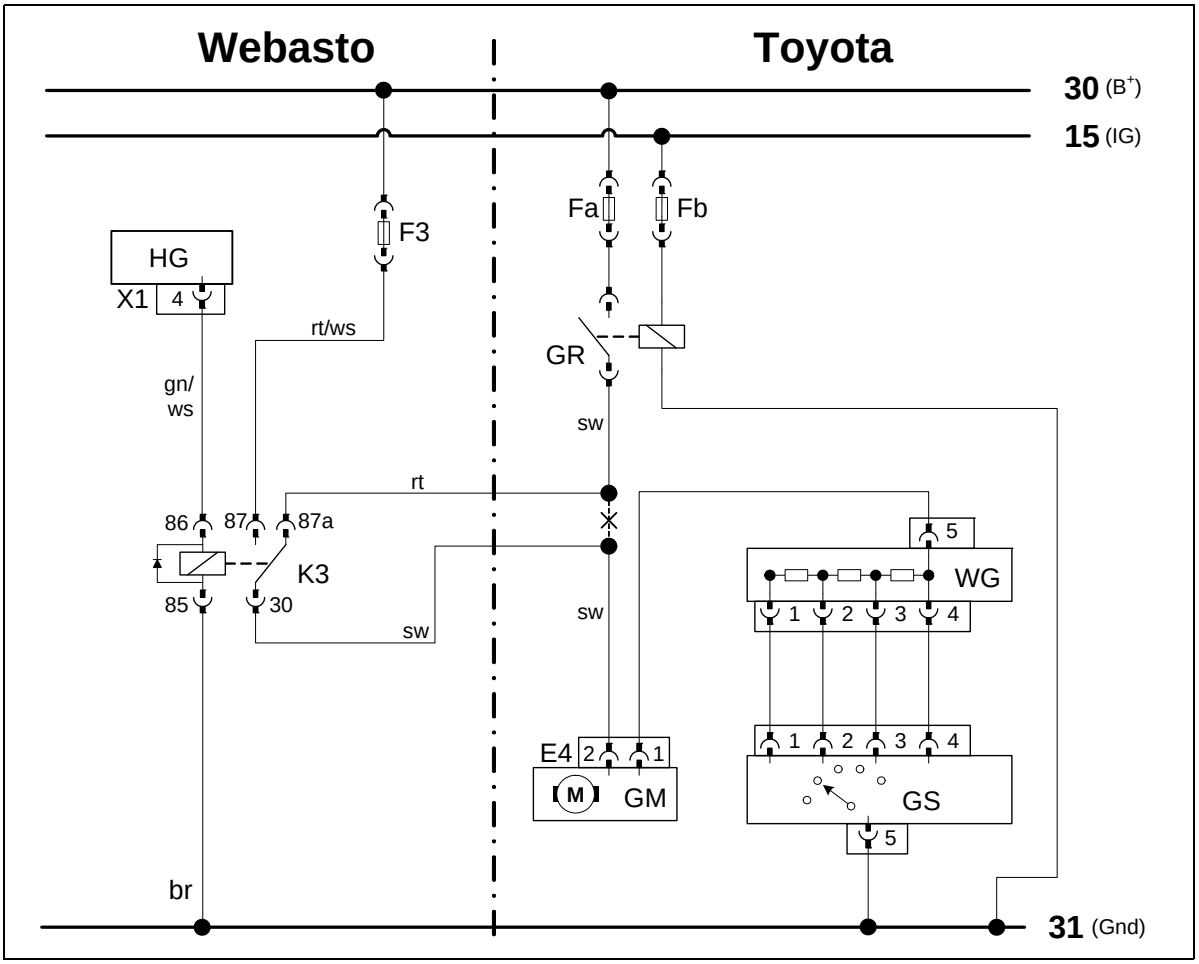
1 Positive wire on positive terminal
2 Ground wire on negative terminal



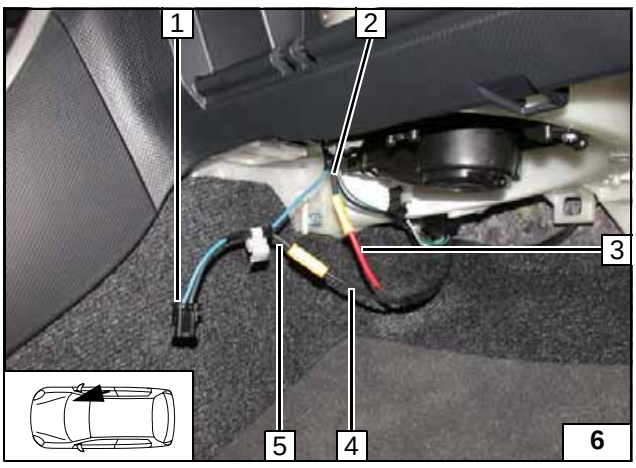
Digital timer and summer/winter switch option

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	25A fuse	gr	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.

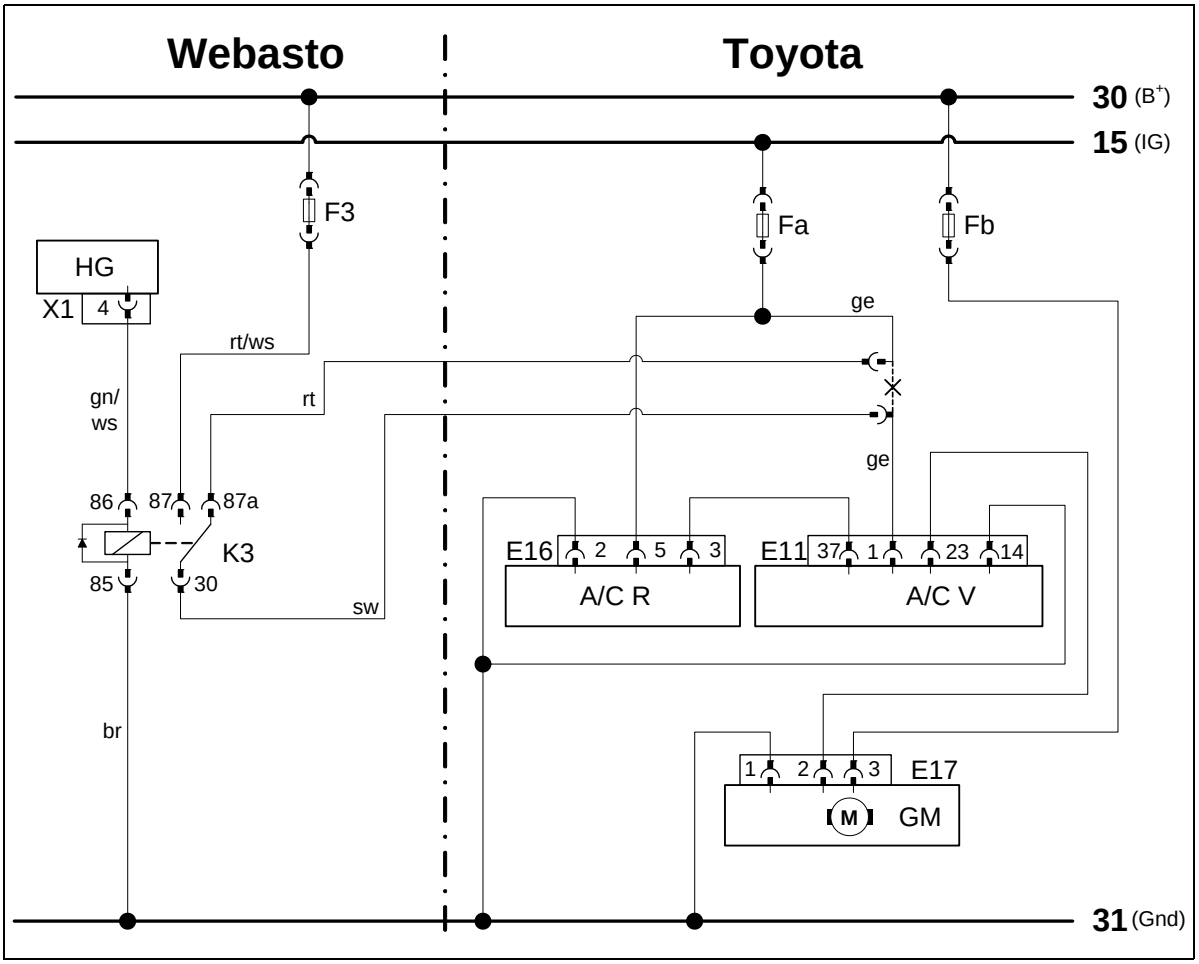
2 Black (sw) wire of fan relay
3 Red (rt) wire of K3/87a
4 Black (sw) wire of K3/30
5 Black (sw) connector E4

Wiring diagram

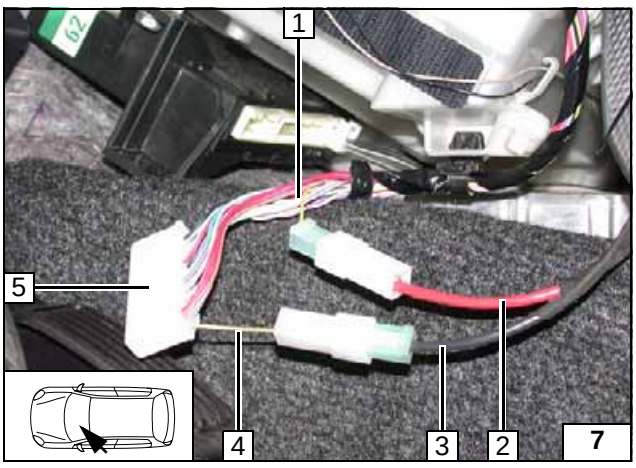
Legend

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.	



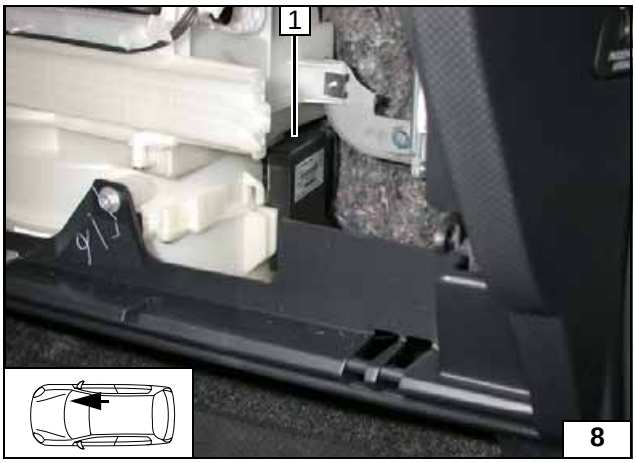
Connect to the 40-pin connector E11 **5** of the A/C booster.
Produce connections as shown in wiring diagram.

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

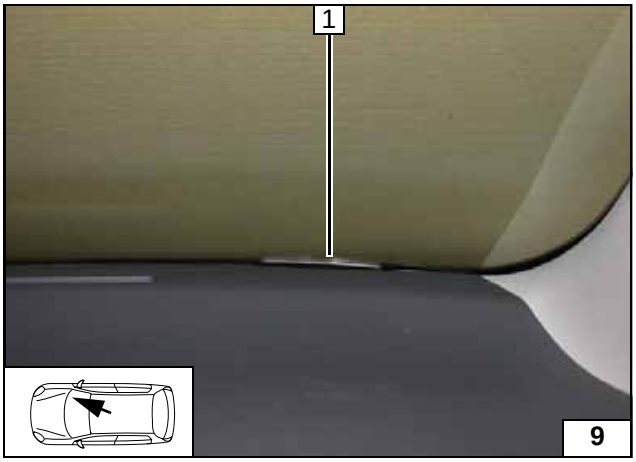
Connecting the A/C booster



Remote option (Telestart)

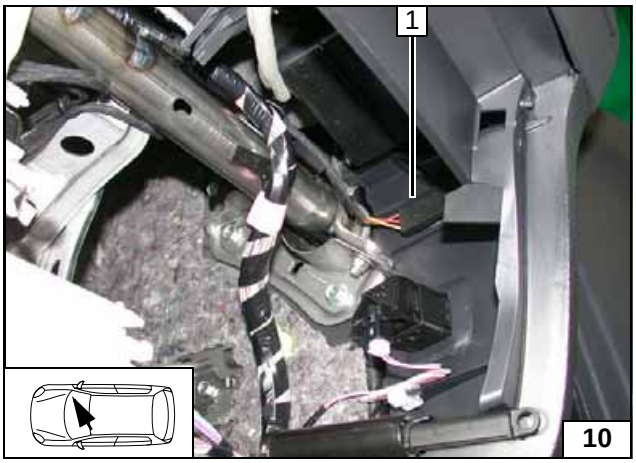
Fasten receiver **1** with double-sided adhesive tape

Installing receiver



1 Antenna

Installing antenna



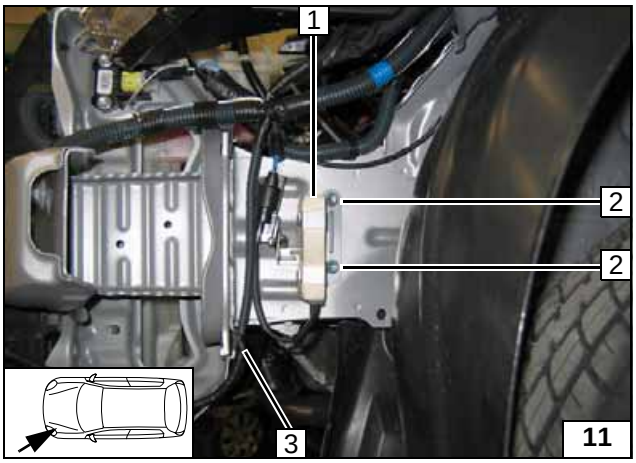
Temperature sensor HTM100

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

Installing temperature sensor

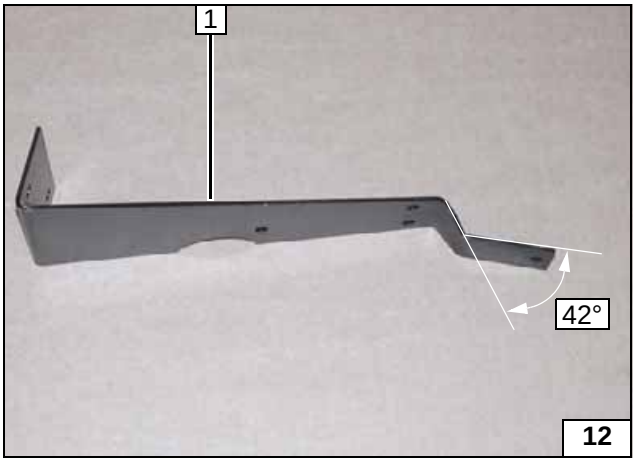
Preparing installation location

Removing resistor



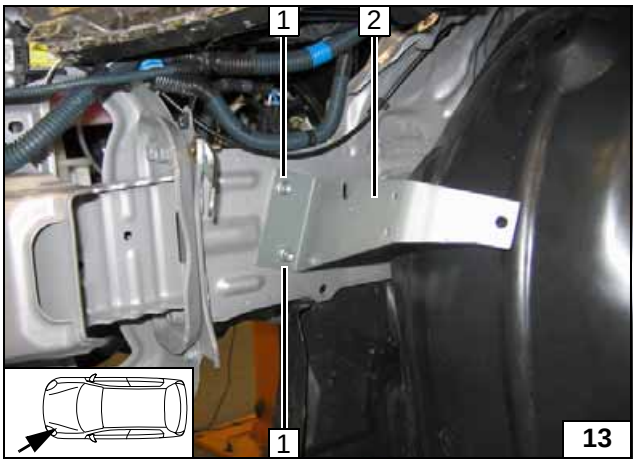
1 Resistor with bracket
2 Original vehicle bolts [2x] (will be reused)
3 Unclip original vehicle wiring harness

Bending bracket



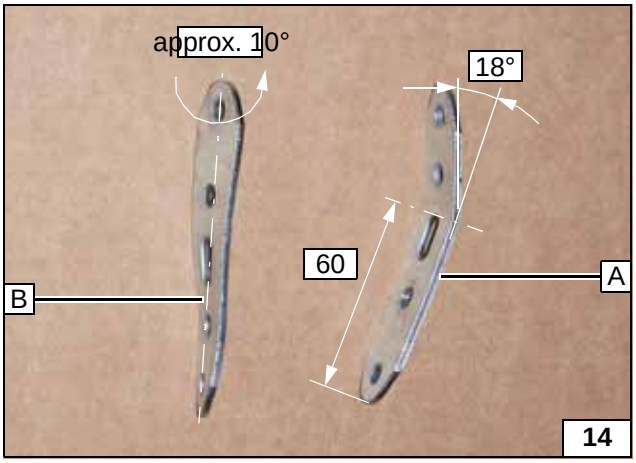
1 Bracket

Installing bracket

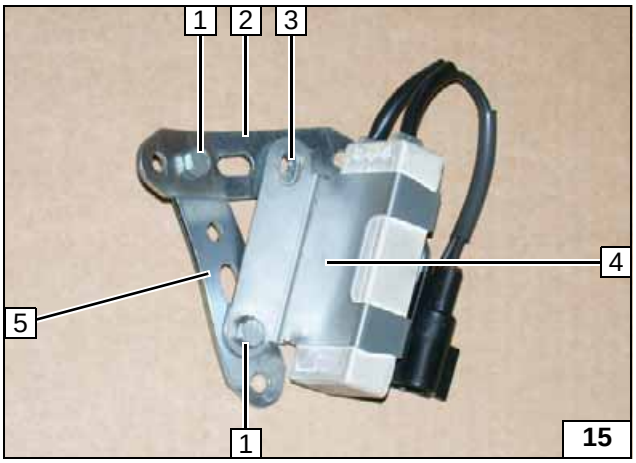


1 Original vehicle bolts [2x]
2 Bracket

Preparing perforated brackets



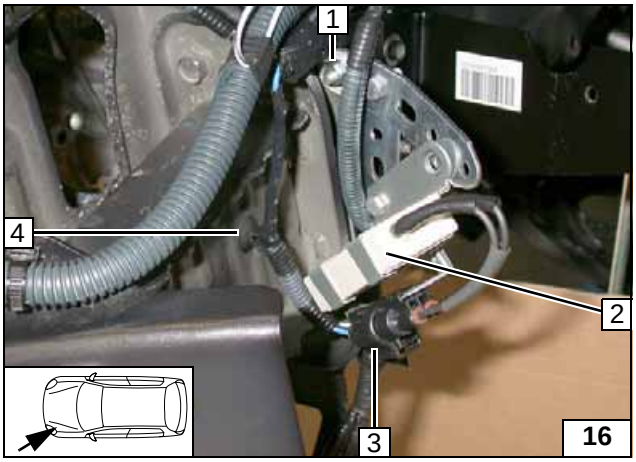
Angle down perforated bracket **A** by 18°.
Turn perforated bracket **B** by approx. 10° in longitudinal axis.



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**

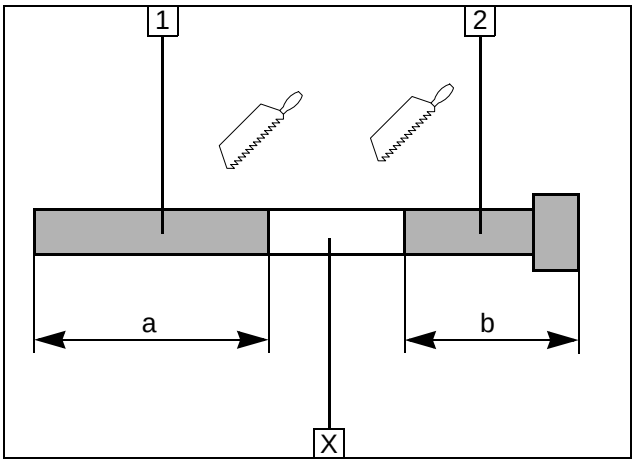
Loosely mounting perforated brackets



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

1 Loosely mount M6x12 bolt, flanged nut
2 Resistor

Installing resistor loosely

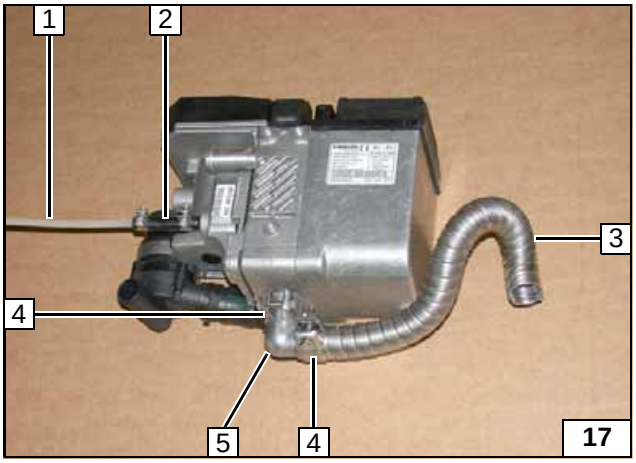


Preparing heater

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

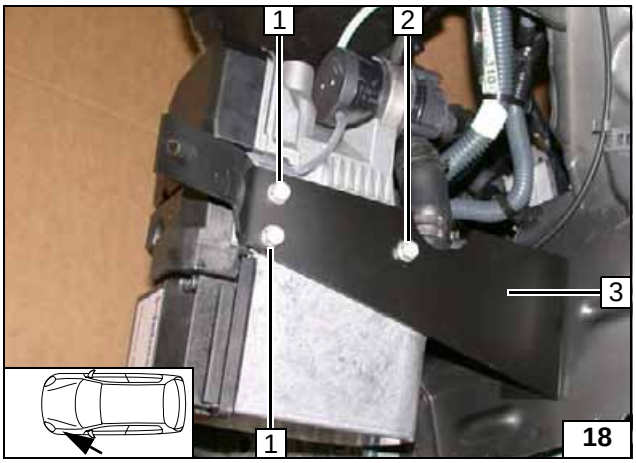
Discard section **X**

Preparing exhaust pipe



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

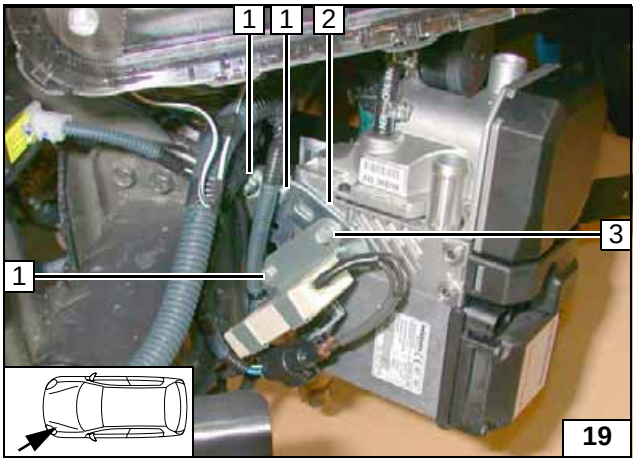
Preparing heater



Installing heater

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

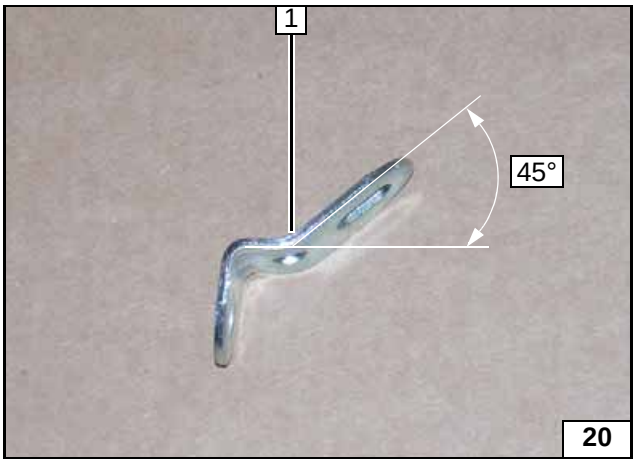
1 Ejot screw [2x]
2 Ejot screw, washer [2x]



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

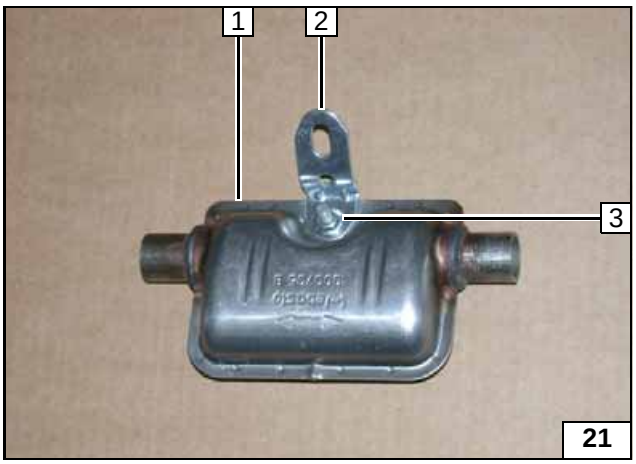
2 Perforated bracket
3 Ejot screw, resistor bracket, perforated bracket

Exhaust gas



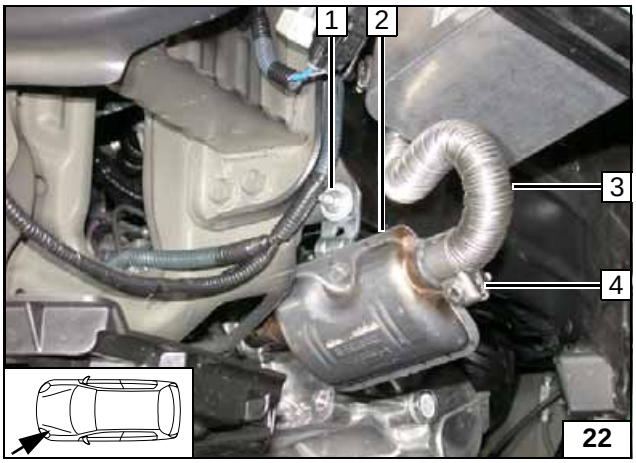
1 Angle bracket

Bending angle bracket



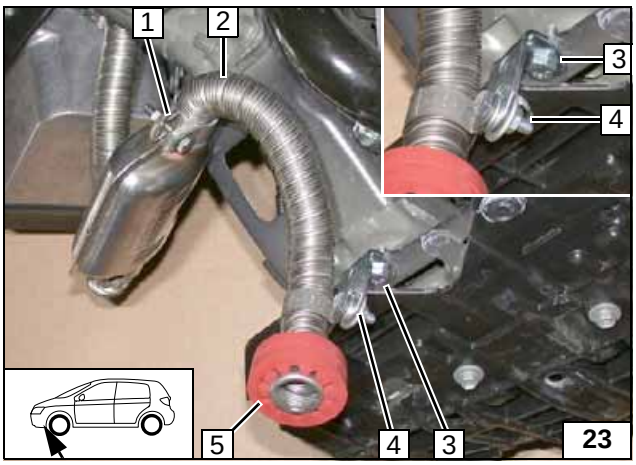
1 Muffler
2 Angle bracket
3 M6x20 bolt, flanged nut

Preparing muffler



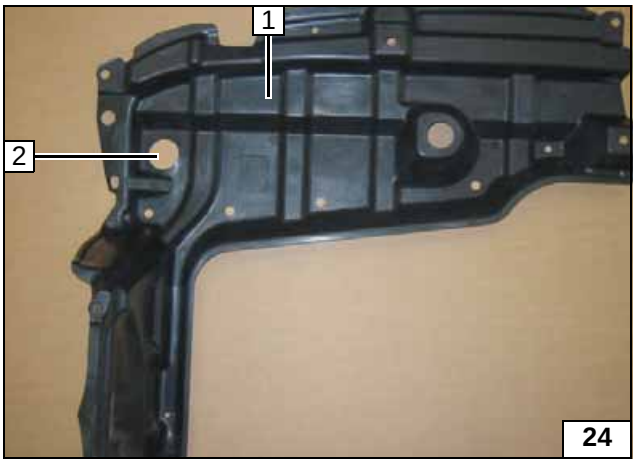
1 M6x20 bolt, large diameter washer, flanged nut, existing hole
2 Muffler
3 Exhaust pipe
4 Hose clamp

Installing exhaust pipe and muffler



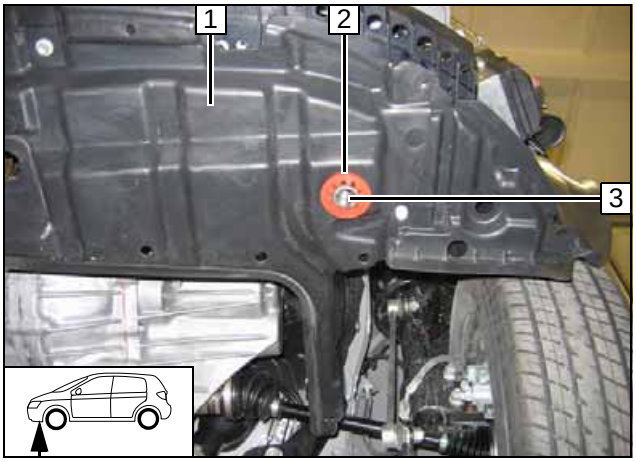
1 Hose clamp
2 Exhaust end section
3 M6x20 bolt, angle bracket, large diameter washer, flanged nut, existing hole
4 M6x20 bolt, p-clamp, angle bracket, large diameter washer, flanged nut
5 Push on red (rt) rubber isolator with groove

Installing exhaust end section



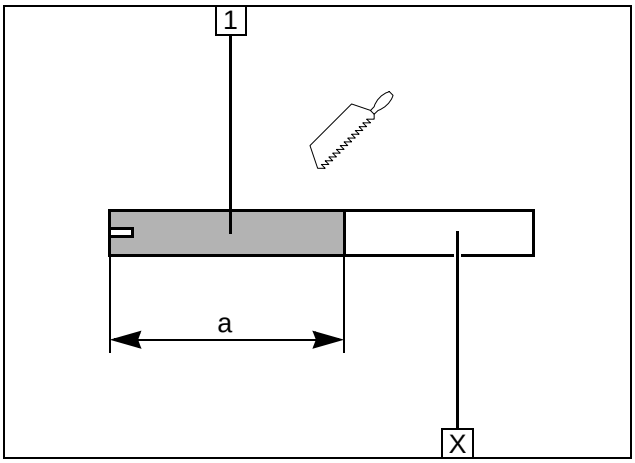
1 Underride protection
2 42 mm dia. hole

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

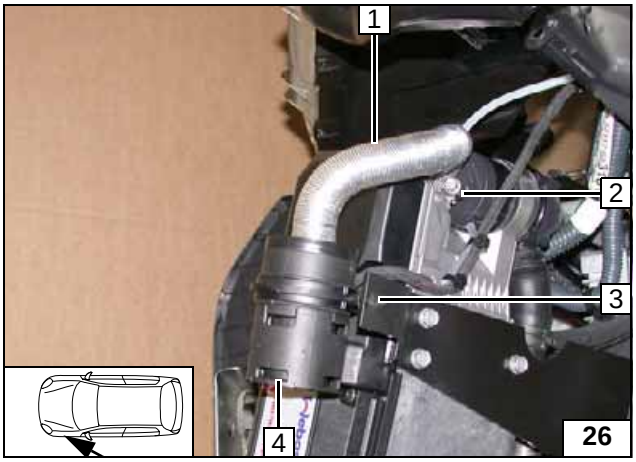


Combustion air

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

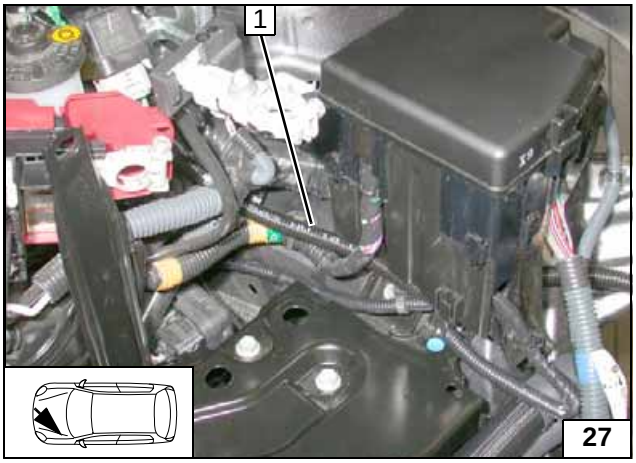
Fuel

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.

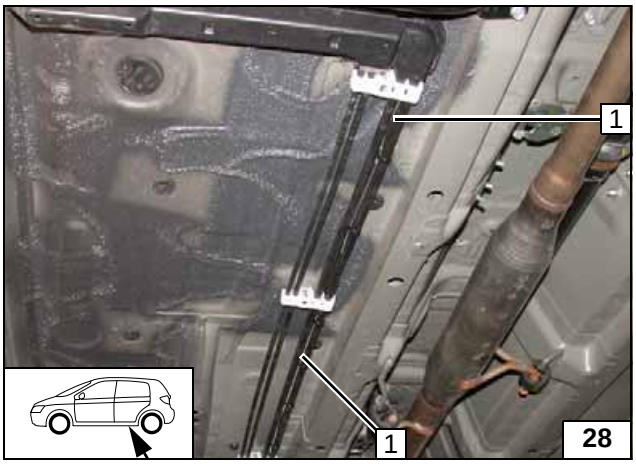
Install fuel line and metering-pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

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



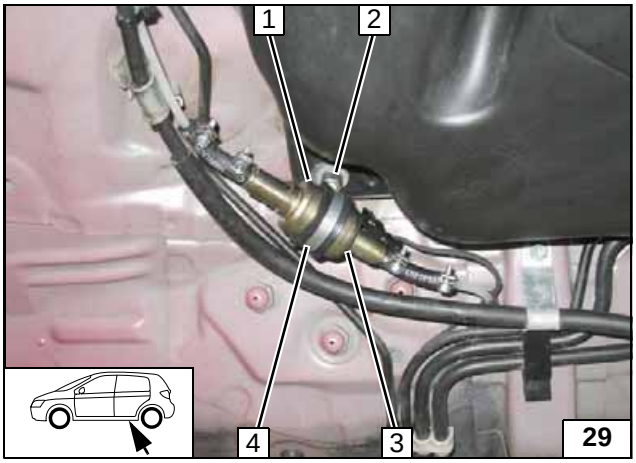
Route corrugated tube with fuel line **1** to firewall.

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

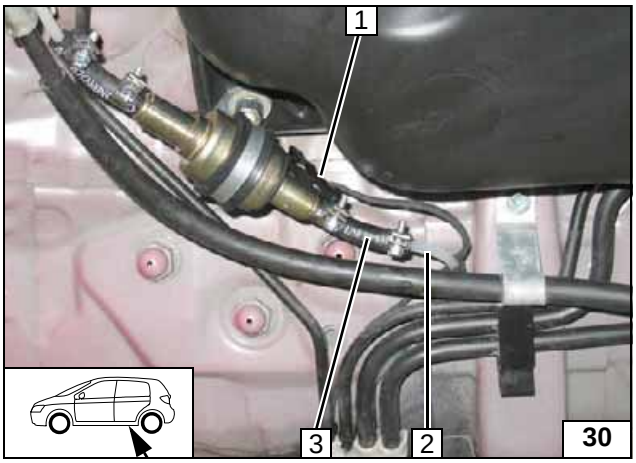


2WD

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

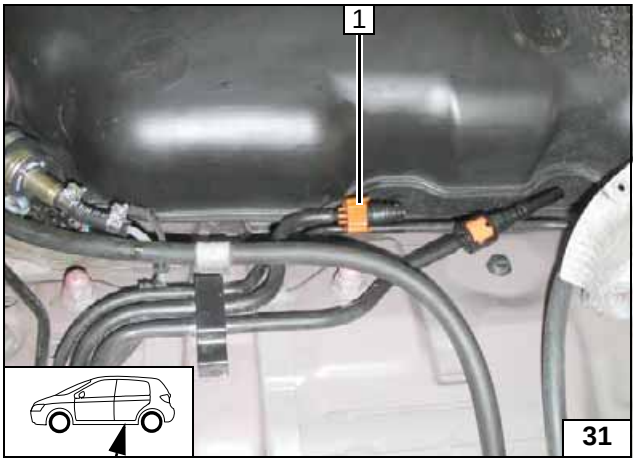
2 Original vehicle bolt

Installation location of metering pump



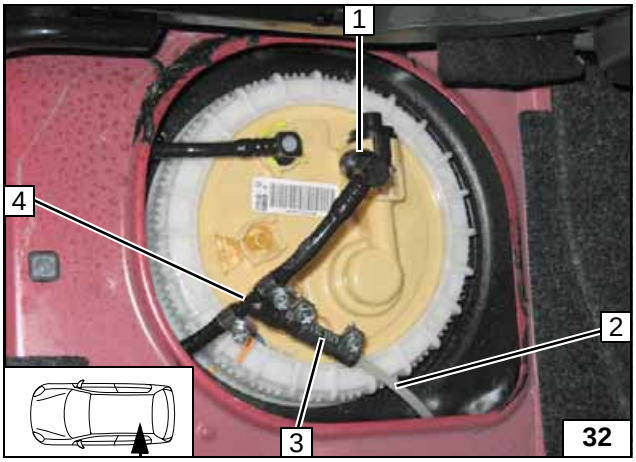
1 Wiring harness of metering pump, connector mounted
2 Fuel line of heater
3 Hose section, 10 mm dia. clamp [2x]

Connecting metering pump



Detach fuel supply line at position **1**.

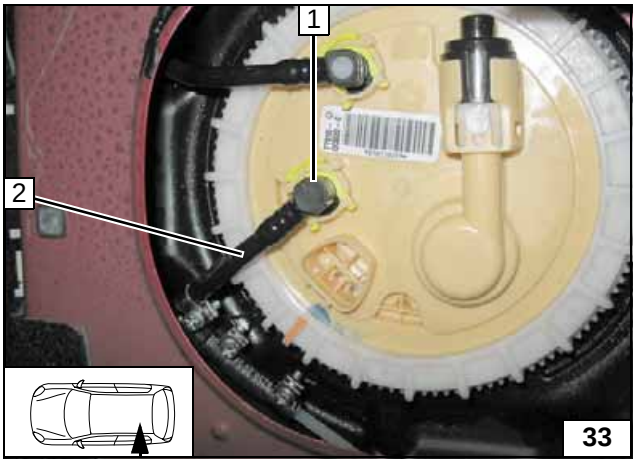
Removing fuel



Disengage coupling **1** from fuel supply line and pull upward. Cut off fuel supply line approx. 50 mm before coupling.

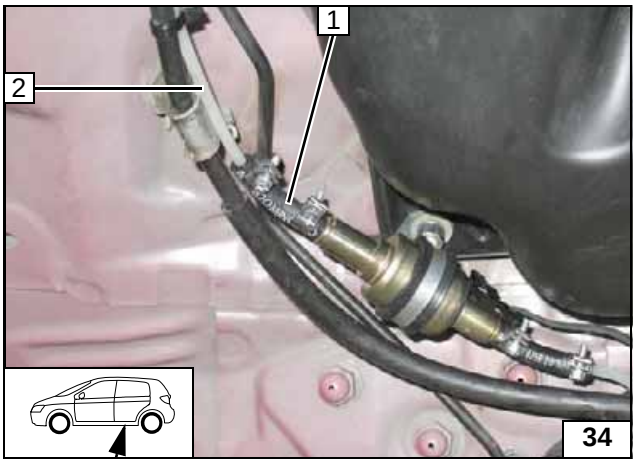
2 Fuel line
3 Hose section, 10 mm dia. clamp [2x]
4 6x5x6 T-piece, 8 mm dia. hose clamp [2x]

Removing fuel



Reinstall coupling **1**. Align fuel supply line **2**!

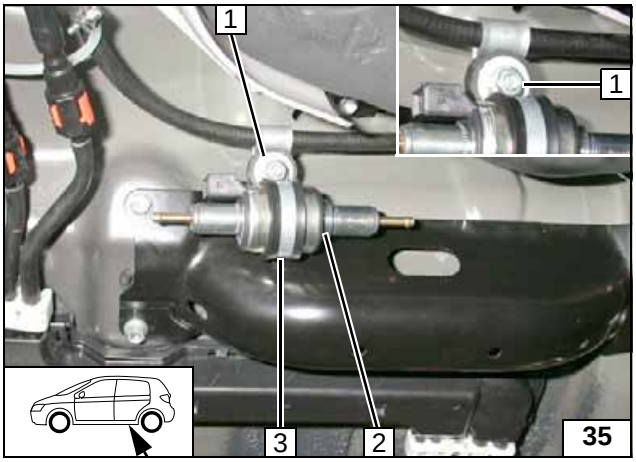
Removing fuel



Reconnect fuel supply 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 T-piece

Connecting metering pump

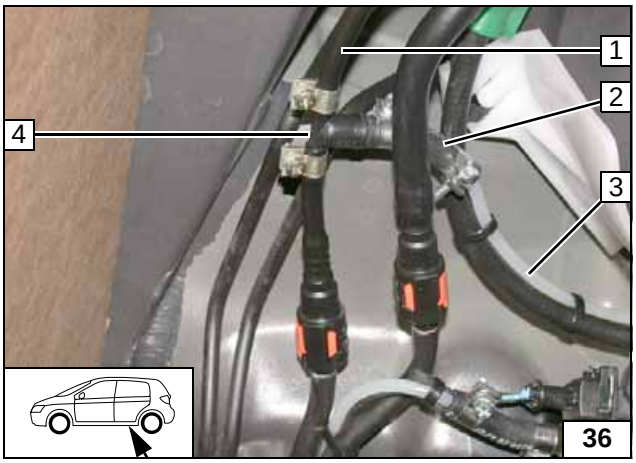


4WD

Remove original vehicle bolt at Position **1** and replace with silent block.

1 Silent block, flanged nut
2 Metering pump
3 Rubber-coated pipe clamp

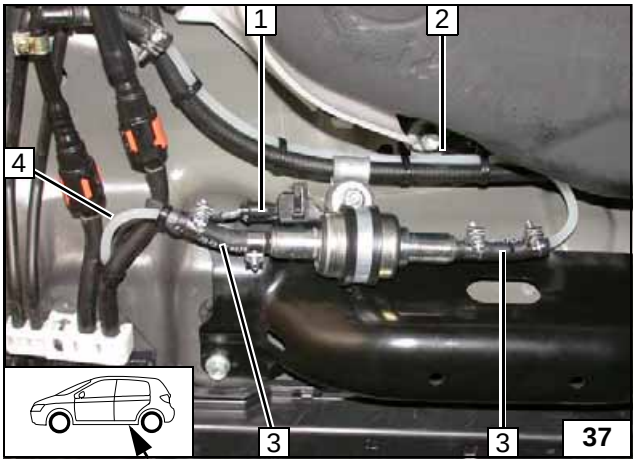
Installation location of metering pump



Cut off fuel supply line **1** at position **4** and install fuel standpipe.

2 Hose section, 10 mm dia. clamp [2x]
3 Fuel line
4 6x5x6 fuel standpipe, 8 mm dia. clamp [2x]

Removing fuel



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

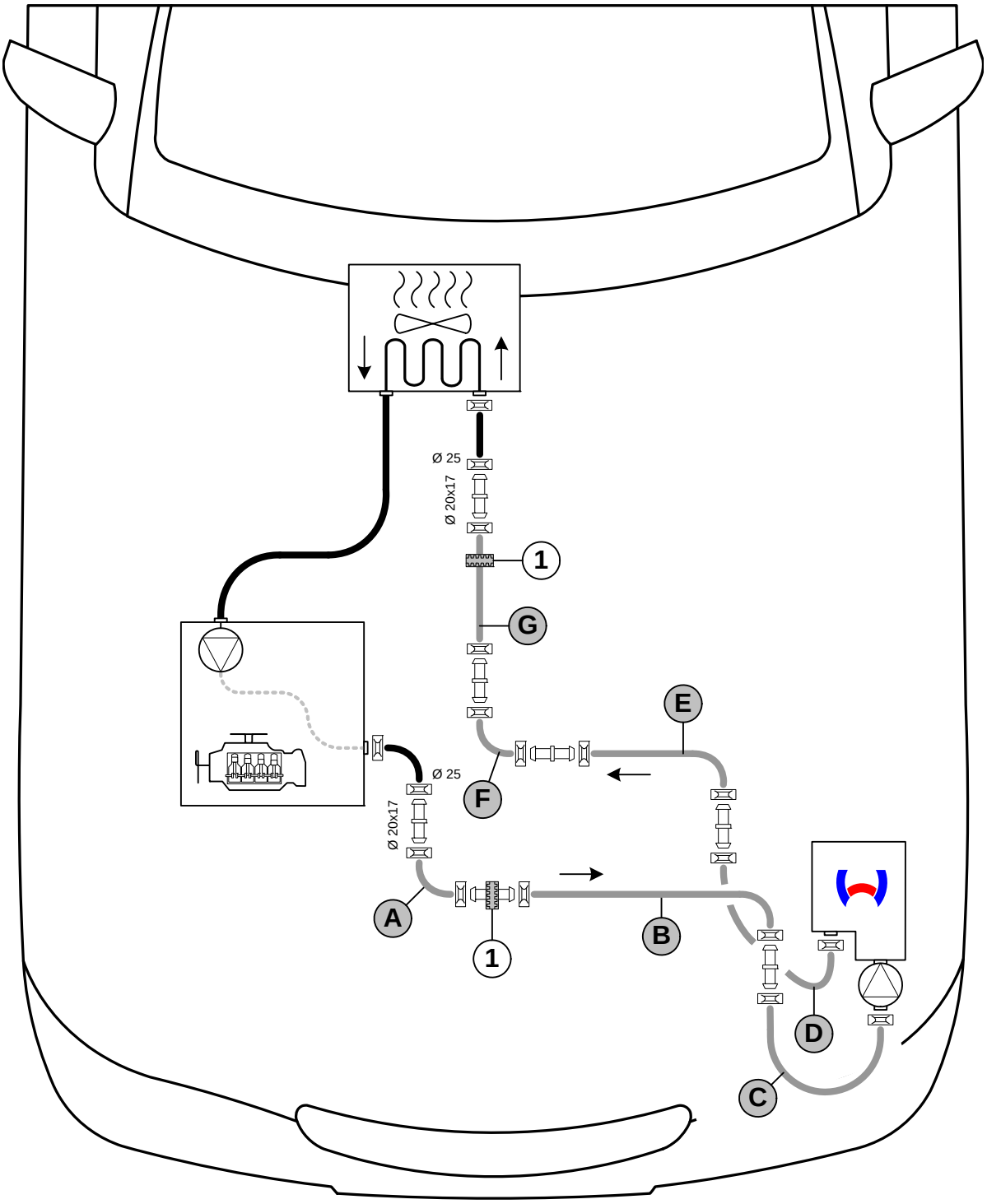
1 Wiring harness of metering pump, connector mounted
2 Fuel line, fuel standpipe
3 Hose section [2x], 10 mm dia. clamp [4x]
4 Fuel line of heater

Connecting metering pump

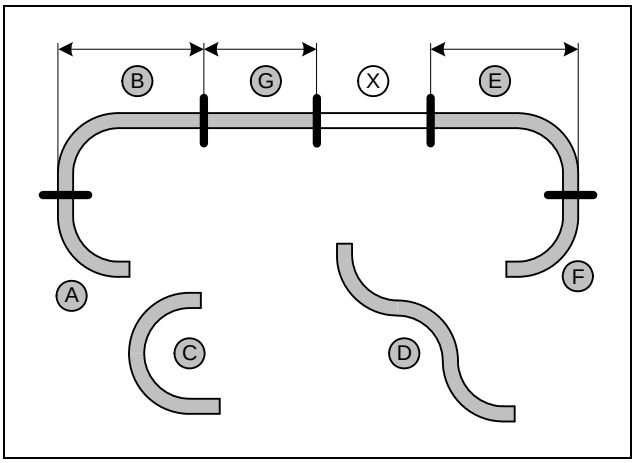
Coolant circuit

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



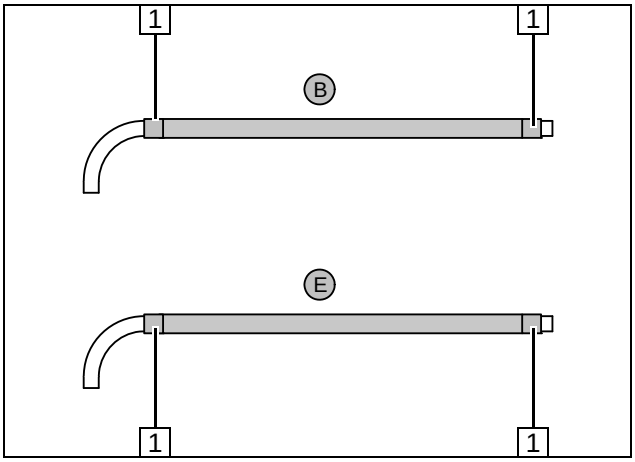
All connecting pipes without a specific designation = dia. 20x20.
All spring clips without a specific designation = 27 mm dia.
1 = Black (sw) rubber isolator.



Discard section **X**.
Hose C = 180° moulded hose
Hose D = 3 x 90° moulded hose

B = 370
E = 390
G = 100

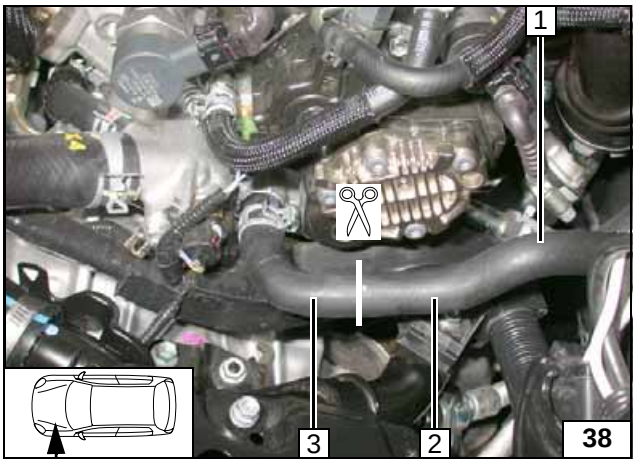
Cutting coolant hoses to length



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

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

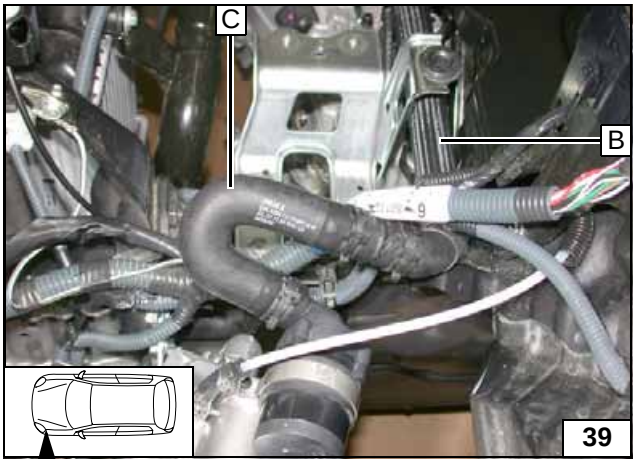
Preparing coolant hoses



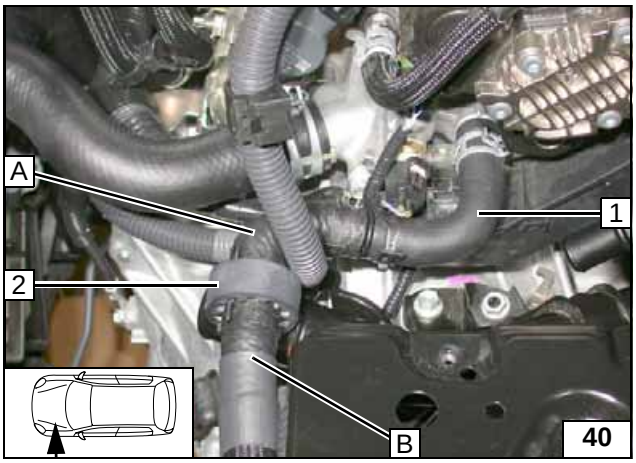
Remove flow reducer of heat exchanger input **1** at Position **2**.

3 Engine-outlet hose section

Cutting point

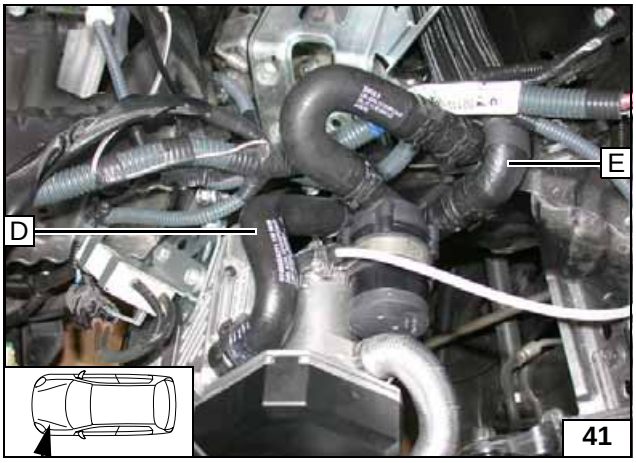


Connecting heater inlet

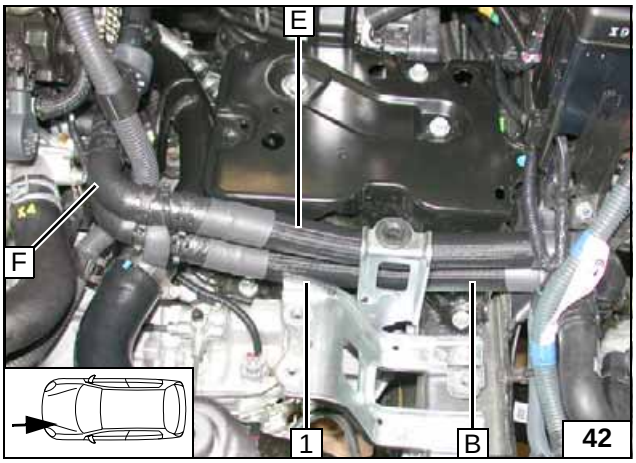


Turn hose section **1** at neck of engine outlet by approx. 180° in the forward direction. Install black (sw) rubber isolater **2** at connecting point of hose **A** and **B**.

Connecting engine outlet

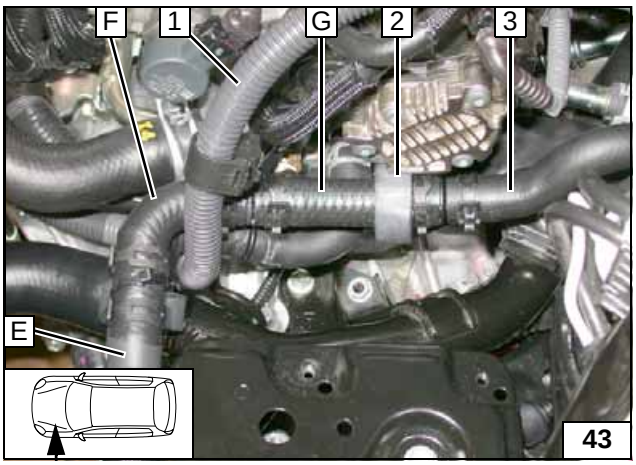


Connecting heater outlet



1 Install edge protection

Routing in engine compartment



Align original vehicle wiring harness **1**! Ensure sufficient distance to neighbouring components.

2 Black (sw) rubber isolator
3 Hose on heat exchanger inlet

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.
- Adjust digital timer, try out Telestart
- Make settings on A/C control panel according to the "Operating Instructions for End Customer".
- Mount information label "Switch off parking heater before refueling" in area of filler neck.
- Check the proper operation of the parking heater, see the operating instructions/installation instructions.

Webasto
Feel the drive

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http://www.webasto.de

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

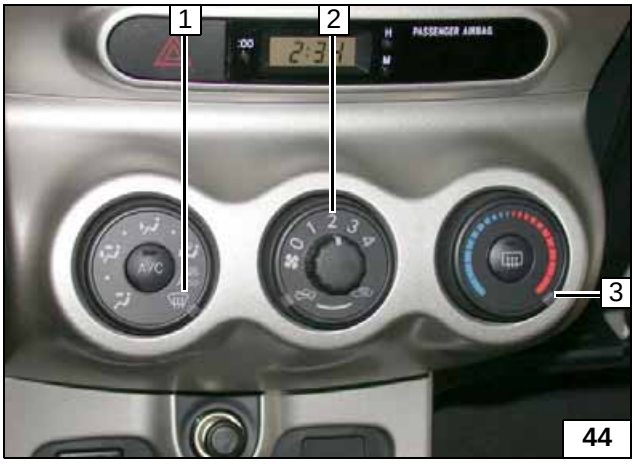
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

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 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



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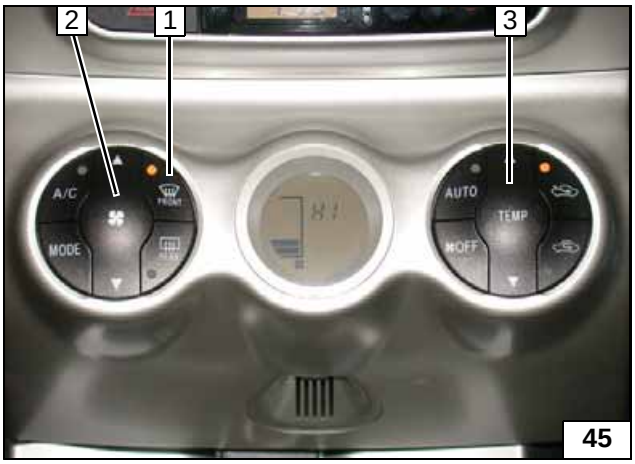
1 Air outlet to windshield
2 Set fan to level "1“ or max. "2"
3 Set temperature to "max."

Automatic air-conditioning



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