

Water Heater



Thermo Top E Parking Heater


00 0003

Thermo Top C Parking Heater


00 0002

Installation documentation

Ford KA

1.2 Gasoline

from Model Year 2009

Left-hand drive vehicle

Manual air conditioning



WARNING!

Hazard warning:

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



Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems. Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

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

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

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

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Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Ford	KA	RU8	e3 * 2001 / 116 * 0280 * ...

Engine type	Engine model	Output in kW	Displacement in cm ³
AAA	Gasoline	51	1242

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.

Note:

During vehicle delivery, the fuel tank should only be half-filled, drain out fuel if necessary!

Heater/installation kit

Quantity	Description	Order No.:
1	Retail accessories <i>Thermo Top E / C</i>	See price list
1	Installation kit for Ford KA	1314609B
1	Control unit	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 Ford KA 1.2 Gasoline vehicles - 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, where this is the case the stipulations in this "installation documentation" and "operating and maintenance instructions" for the *Thermo Top C / E* should be observed.

The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

General instructions

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

Sharp edges must be provided with rub protection (cut-open fuel hose)!

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

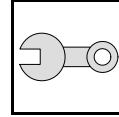
Special tools

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

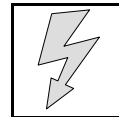
Explanatory notes on document

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

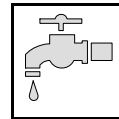
Mechanical system



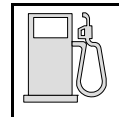
Electrical system



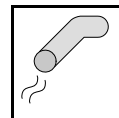
Coolant circuit



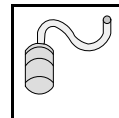
Fuel



Exhaust gas



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



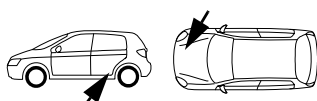
Specific risk of fire or explosion.



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



Reference to a special technical feature.



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

All dimensions are in mm!

Tightening torque of hose clamps = 2.0 + 0.5 Nm!

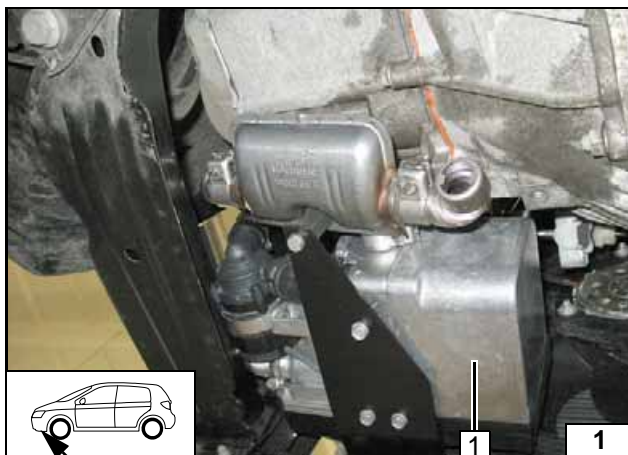
Tightening torque of Ejet screws, Ejet studs = 10 Nm!

Preliminary work

WARNING!

- Open the fuel tank cap and vent the fuel tank.
- Close the tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- 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 with carrier fully
- Remove air intake hose
- Detach the wheel well trim on the left
- Detach central electrical system of left engine compartment
- Remove fuel lines in the vehicle underbody
- Detach holder of fuel line / tank ventilation at right next to fuel tank
- Remove storage compartment at the left next to steering wheel

Remove page 19 "Operating instructions for end customer" and add to the vehicle operating instructions.



Heater installation location

1 Heater

Installation location



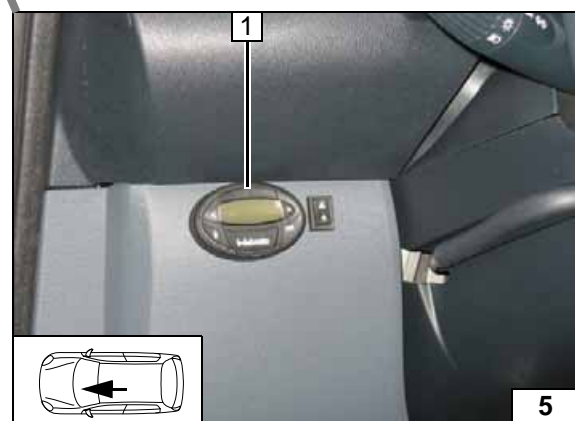
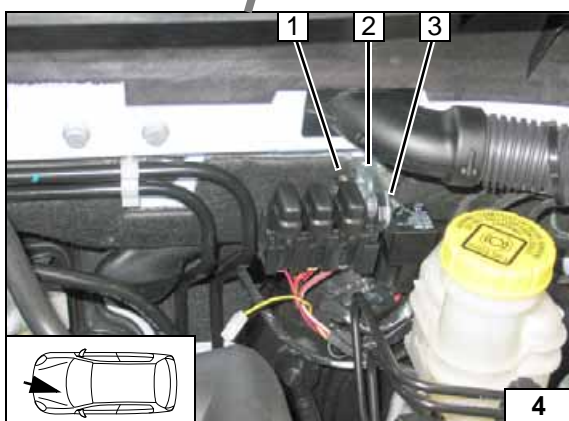
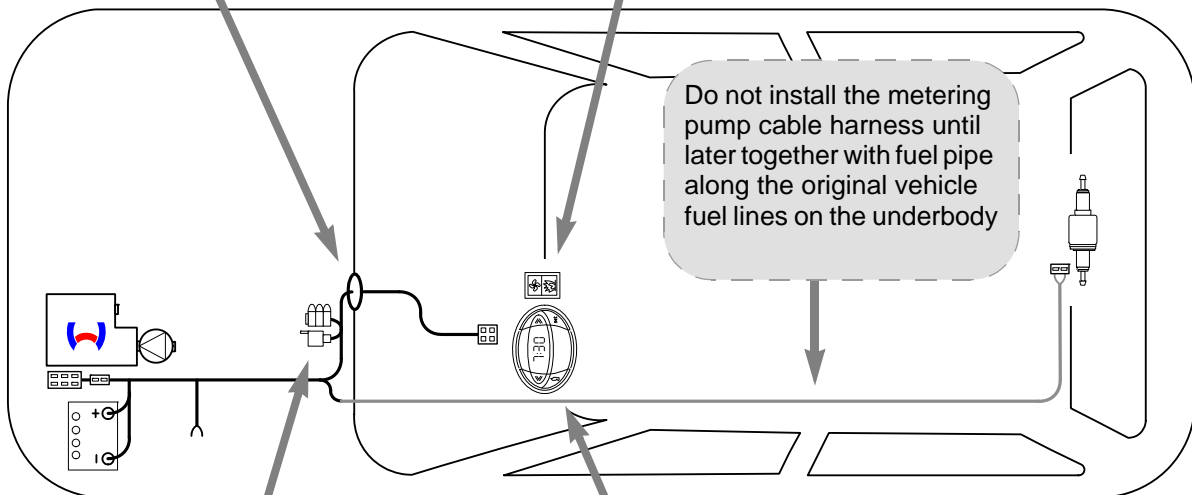
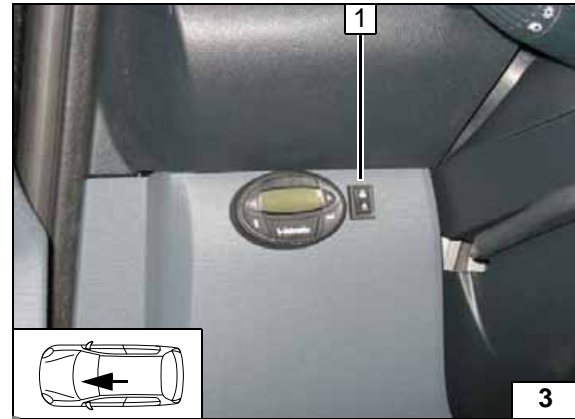
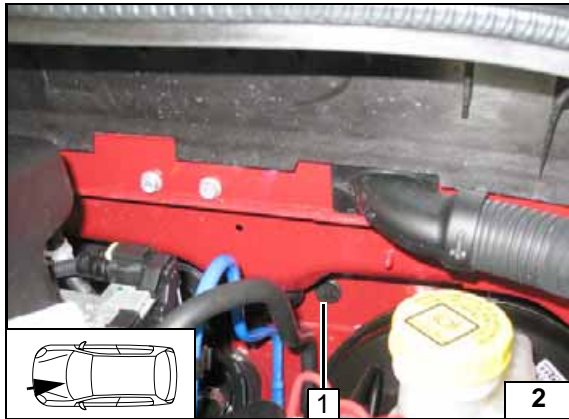
Electrical system

Wiring harness pass through

Route wiring harness of digital timer through rubber plug 1 in the passenger compartment.

Summer/winter switch option

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



Fuse holder, K3 relay

- 1 Original vehicle stud bolt, plastic nut
- 2 Angle bracket
- 3 Retaining plate of fuse holder, M5x16 bolt, washers, K3 relay, M5 nut

Digital timer

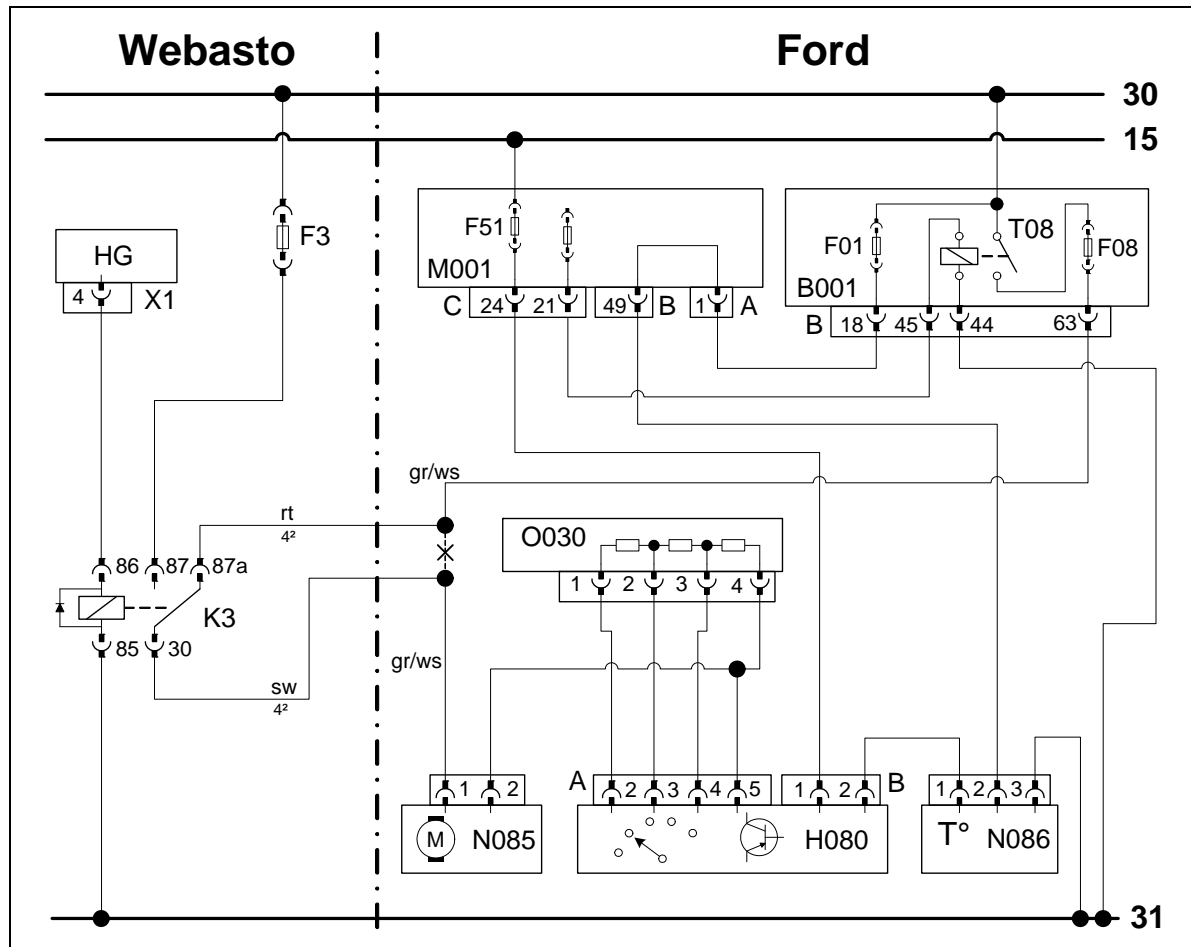
- 1 Digital timer



Wiring harness installation diagram



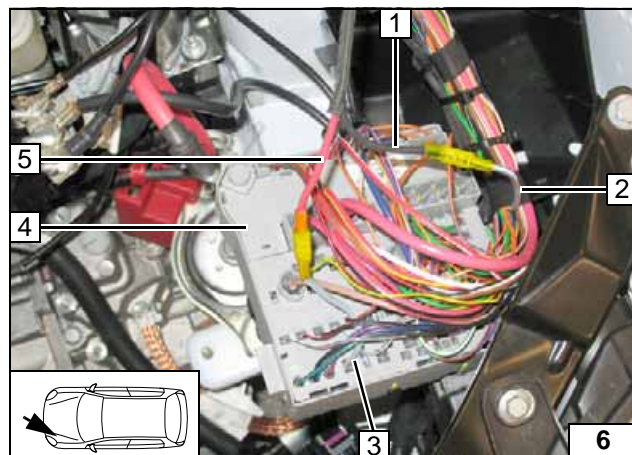
Fan controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	M001	Body computer	rt	red
X1	6-pin heater connector	B001	Central electrical system, engine compartment	ws	white
F3	Fuse 25A	O030	Resistor group	sw	black
K3	Fan relay	N085	Fan motor	gr	gray
		T08	Fan relay		
		N086	Electric thermostat		
		F51	Fuse 7.5A		
		F01	Fuse 60A		
		F08	Fuse 30A	X	Cutting point
		H080	Switch / A/C control panel		Wiring colours may vary.

Legends

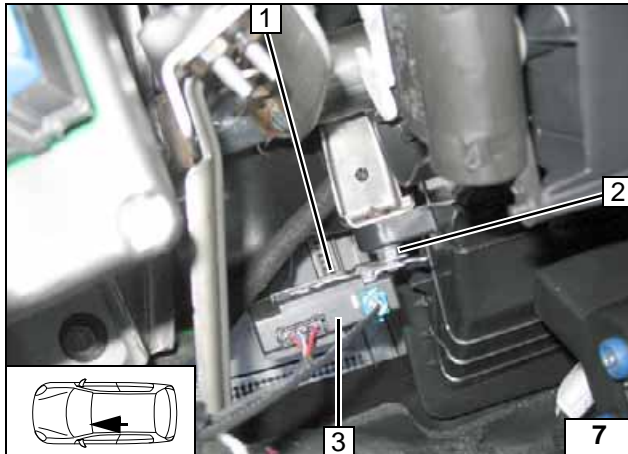


Connection to fan relay T08 central electrical system of engine compartment 4. Produce connections as shown in wiring diagram.

- 1 Black (sw) wire of K3/30
- 2 Gray/white (gr/ws) wire of fan motor N085 Pin 1
- 3 Gray/white (gr/ws) wire connector B of B001 Pin 63
- 5 Red (rt) wire from K3/87a



Fan relay connection



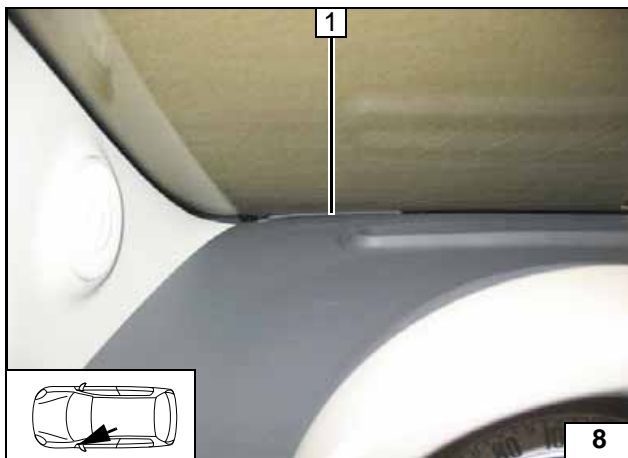
Remote option (Telestart)

Drill out bracket 1 at position 2 to to 6.5 mm dia.

- 2 M6 flange nut on original vehicle stud bolt
- 3 Receiver

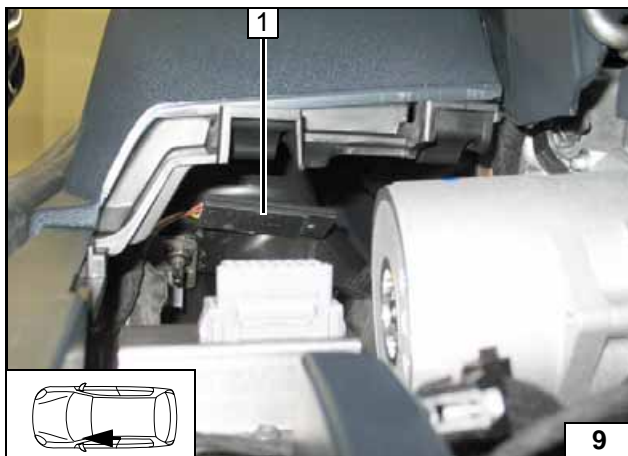


Installing receiver



1 Antenna

Installing antenna

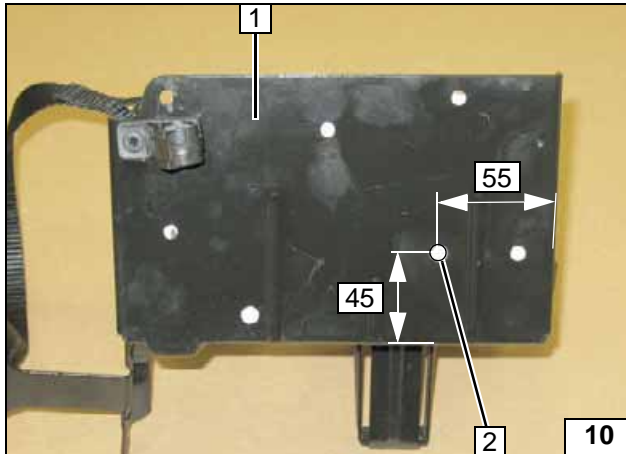
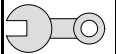


Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.



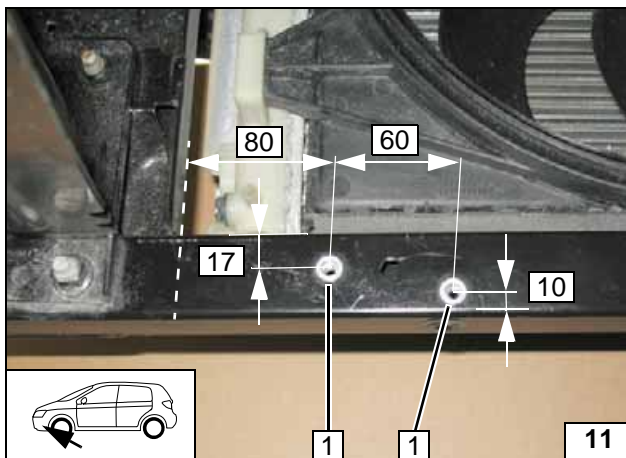
Installing temperature sensor



Preparing installation location

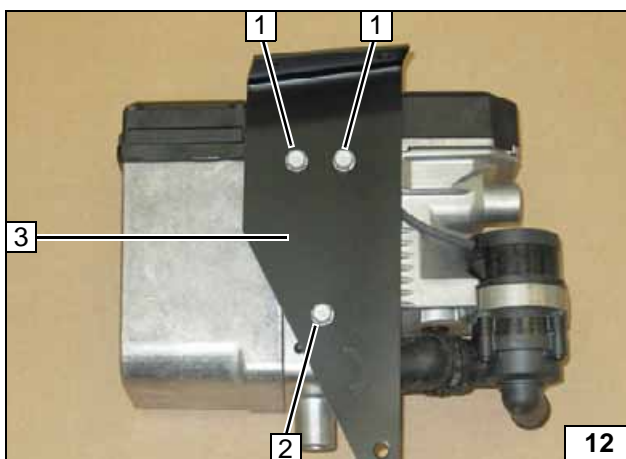
- 1 Battery carrier
- 2 7 mm dia. hole

Drilling hole in battery carrier



- 1 Drill 9.1 mm dia. hole; install rivet nut [2x each]

Installing rivet nut



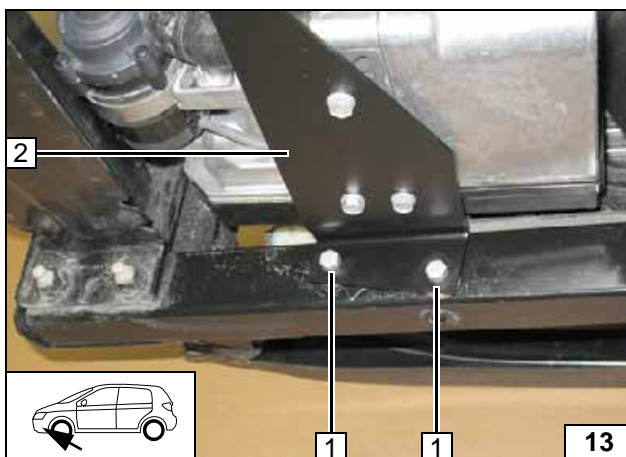
Preparing heater

Insert one plain washer each between bracket 3 and heater at position 1 and a 5mm shim at position 2.

- 1 Ejot screw, washer [2x each]
- 2 Ejot screw, 5mm shim



Premounting heater



Installing heater

Plug in the wiring harness of the heater before installation. Insert one 5mm shim each between bracket 2 and cross beam. Ensure sufficient distance to neighbouring components.

- 1 M6x25 bolt, spring lockwasher, 5 mm shim, rivet nut



Installing heater



Fuel

CAUTION!

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

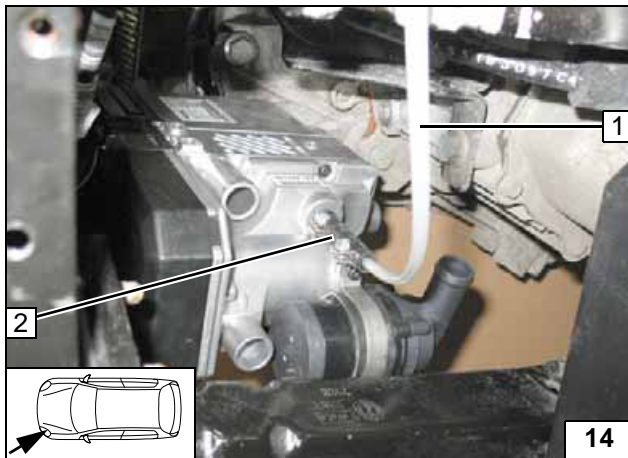
Catch any fuel running off with an appropriate container.

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.

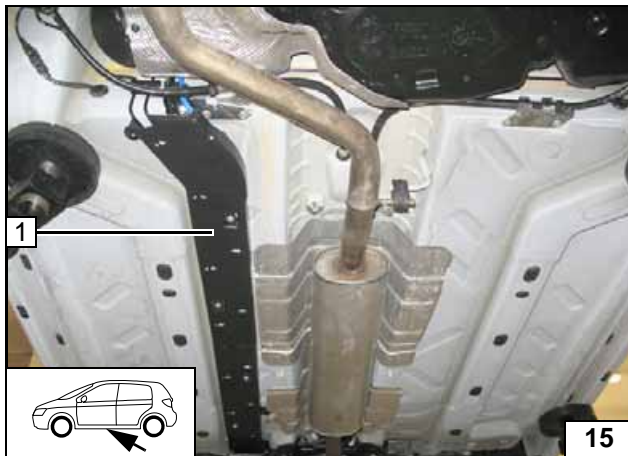
WARNING!

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



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

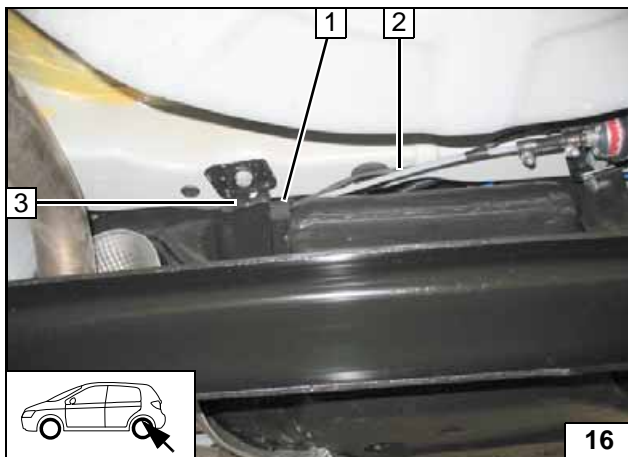
Connect-
ing heater



Route fuel line and wiring harness of metering pump behind cover 1 to original vehicle fuel lines at the installation location of the metering pump.



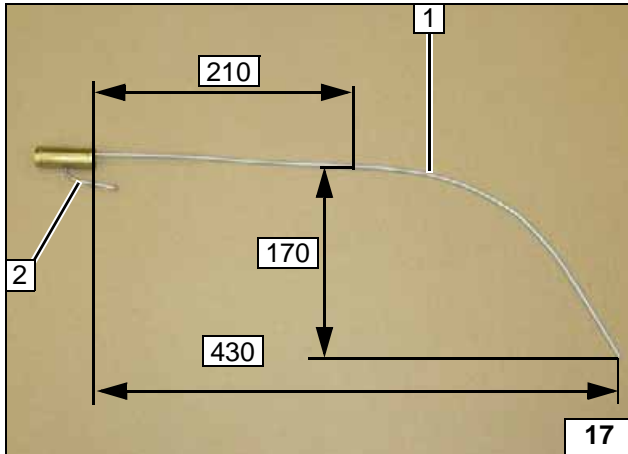
Routing
lines



Cut out fuel hose 1 longitudinally, slide on to fuel line and cable harness of metering pump 2 and fasten with cable tie 3 to the strut.



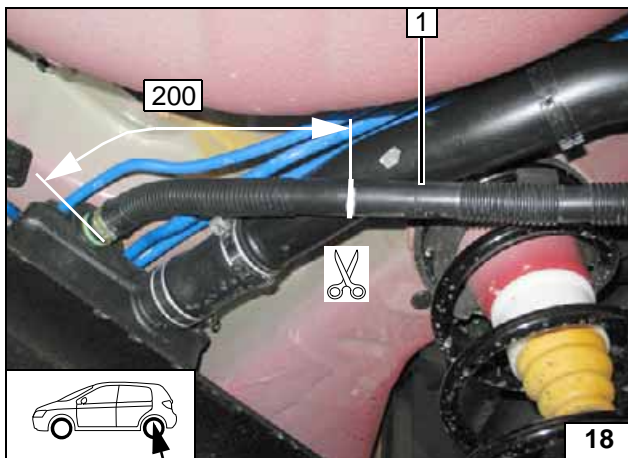
Routing
lines



Shorten standpipe 1 by 210mm and shape as shown. Bend connecting piece 2 by 90°.



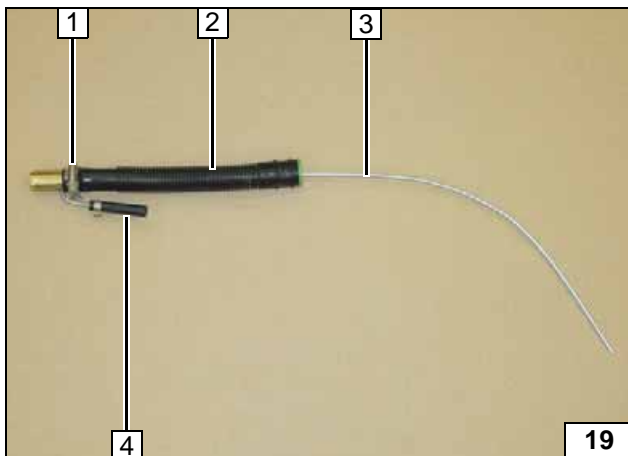
Removing fuel



Detach fuel tank ventilation pipe 1 from the holder and cut about 200 mm in front of the fuel tank connection piece. Remove section on connection piece.

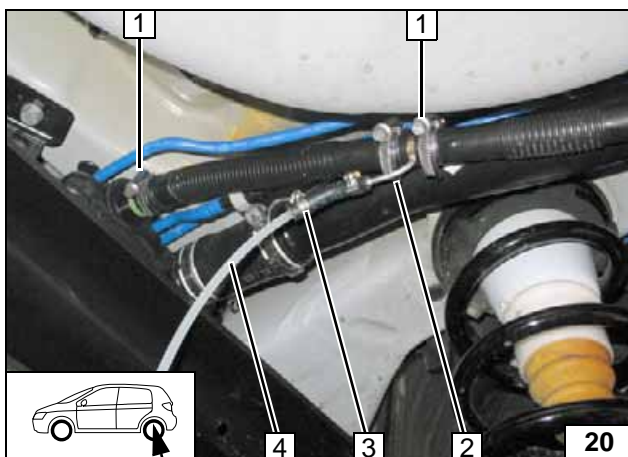


Cutting point



- 1 16-24 mm dia. clamp
- 2 Tank ventilation pipe
- 3 Fuel standpipe
- 4 Hose section, 10 mm dia. clamp

Preinstalling fuel tank pipe

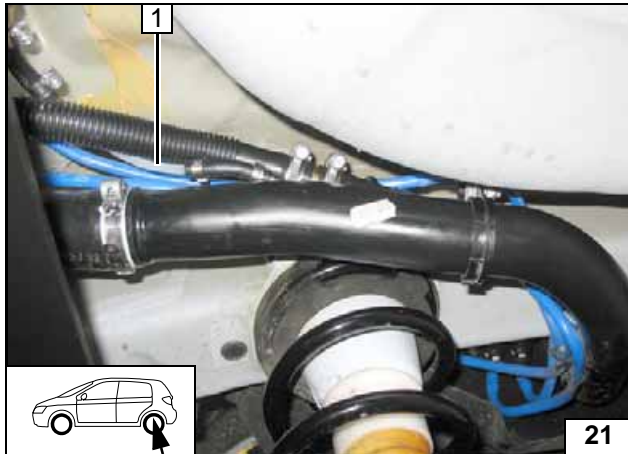


During installation, align the standpipe of the fuel standpipe 2 to the tank floor.



- 1 16-24 mm dia. clamp [2x]
- 2 Fuel standpipe
- 3 10 mm dia. clamp
- 4 Fuel line

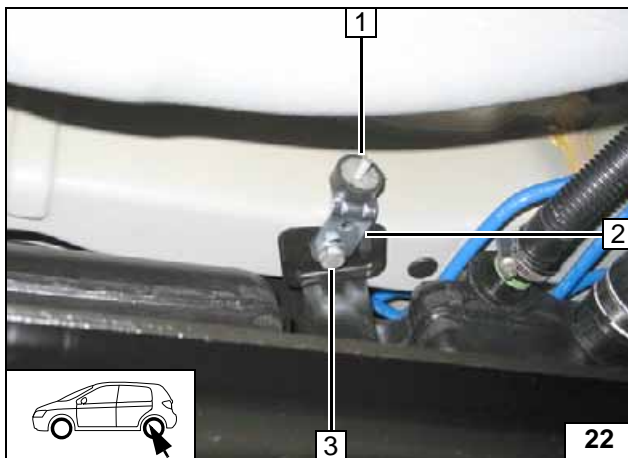
Installing fuel standpipe



Reinsert tank ventilation pipe in the bracket. Route fuel line 1 to the metering pump.

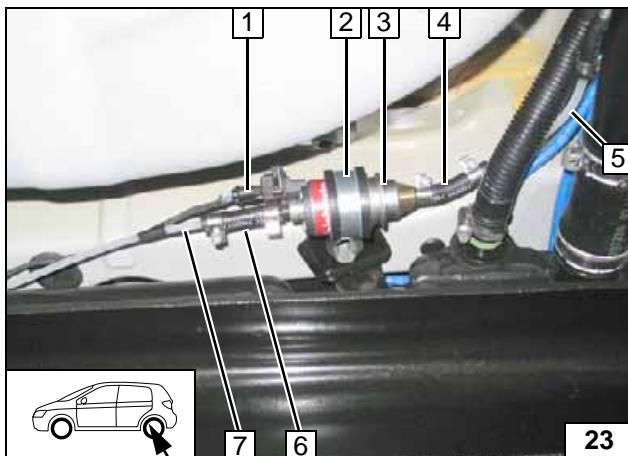


Aligning tank ventilation pipe



- 1 Silent block, flanged nut
- 2 Angle bracket
- 3 Original vehicle bolt

Installation location of metering pump



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



Connecting metering pump

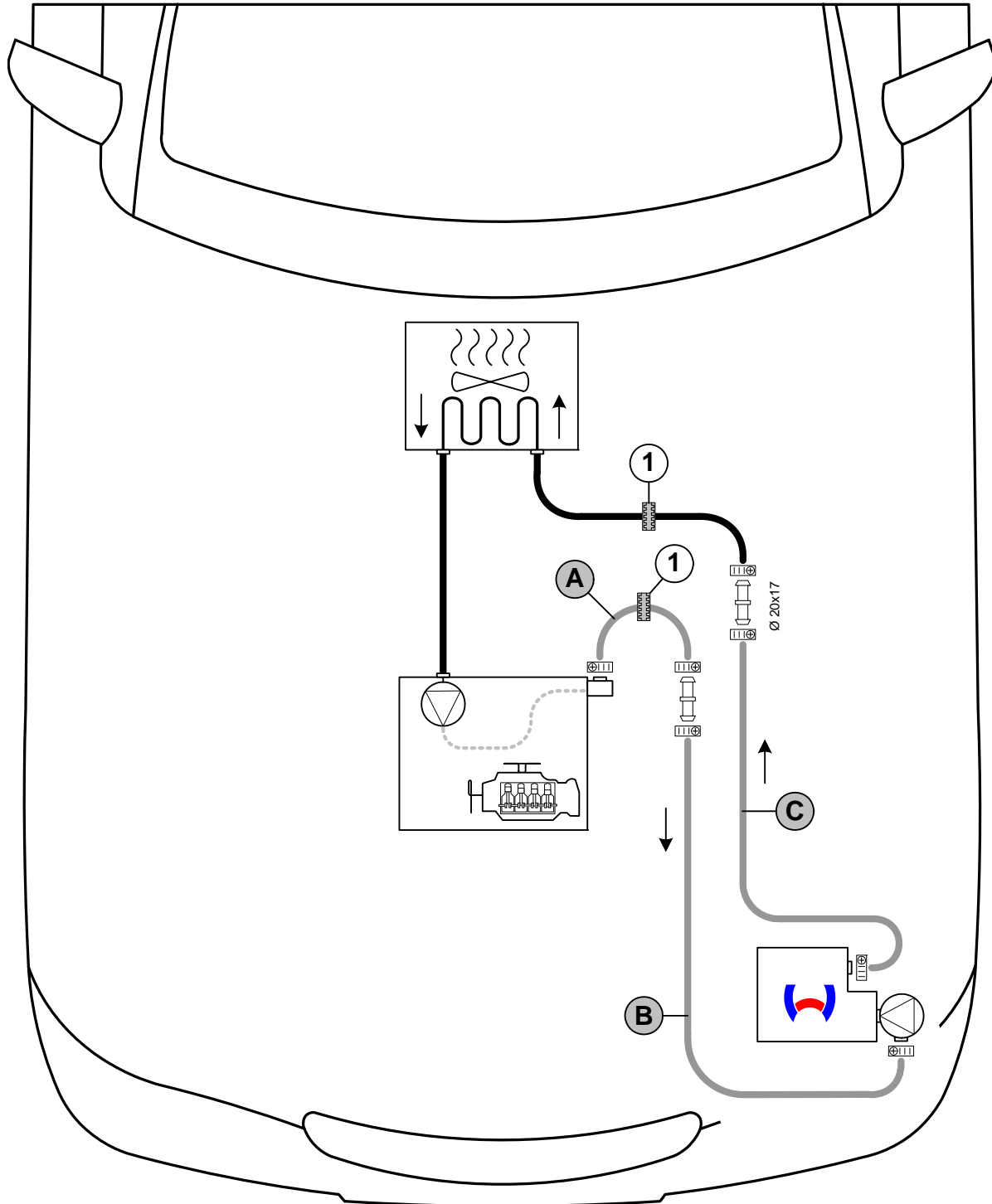
- 1 Wiring harness of metering pump, connector mounted
- 2 Rubber-coated p-clamp, flanged nut on silent block
- 3 Metering pump
- 4 Hose section, 10 mm dia. clamp [2x]
- 5 Fuel line from fuel standpipe
- 6 Hose section, 10 mm dia. clamp [2x]
- 7 Fuel line from heater






Coolant circuit

WARNING!

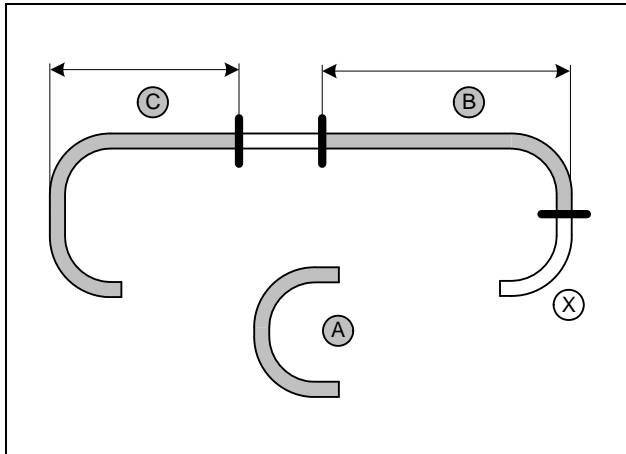
Any coolant running off should be collected using an appropriate container! Route hoses kink-free! Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant. The connection should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



Hose routing diagram

All hose clamps  = 20-27 mm dia.!
 Note designated connecting pipe  = 20x20mm dia.
 1 = Black (sw) rubber isolator  [2x]



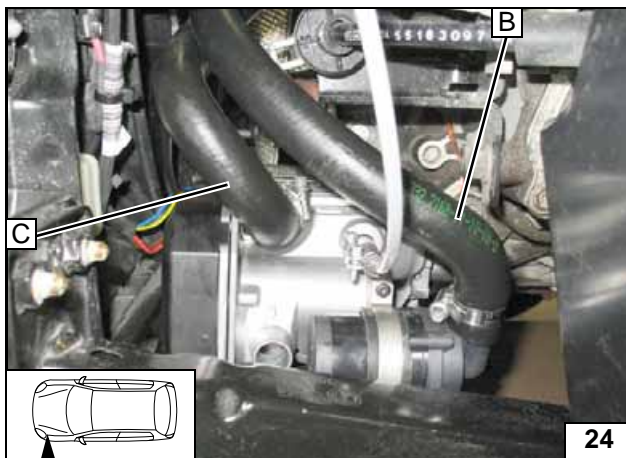


Hose **A** = 180°, 17x20mm moulded hose.
Discard section **X**.

b = 600
c = 430

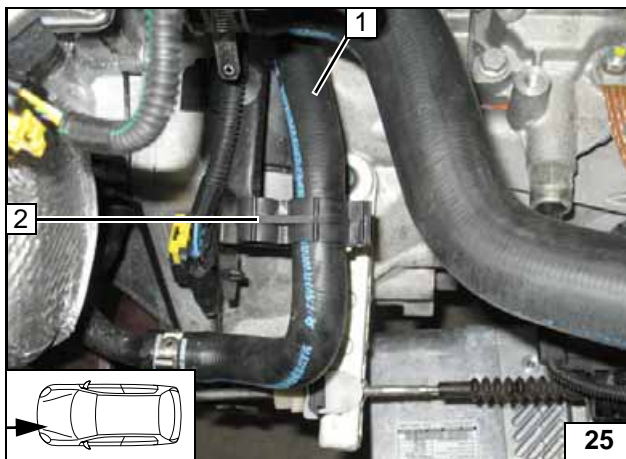


Cutting coolant hoses to length



24

**Connect-
ing heater**



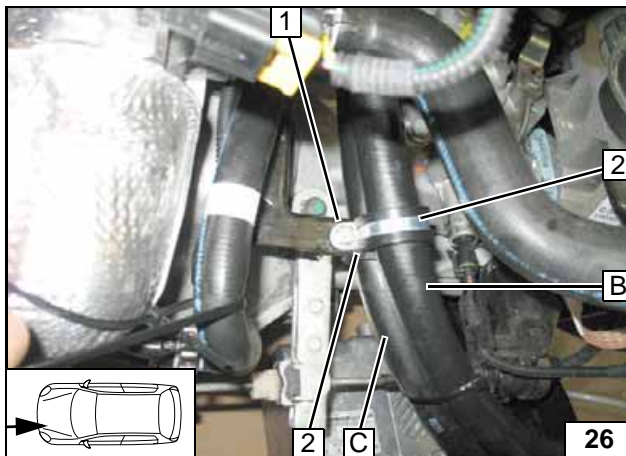
25

Remove spacer bracket **2** and discard. Hole of spacer bracket is used to fasten the coolant hoses with 29mm dia. rubber-coated pipe clamps.

1 Original vehicle hose



**Connect-
ing heater**

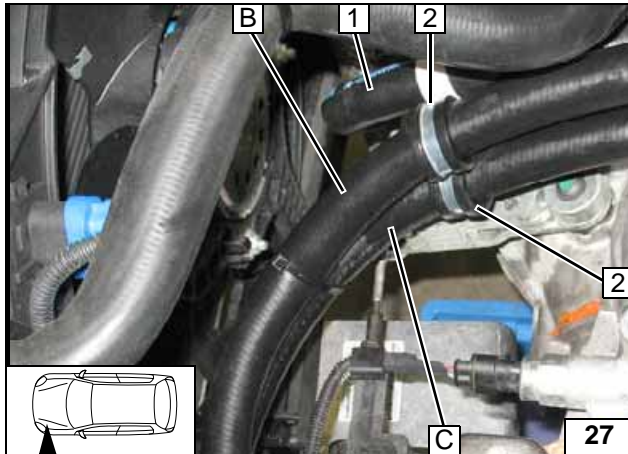


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Fasten the two rubber-coated pipe clamps **2** (one upward and the other downward) with M6x20 bolt **1** and flanged nut at the hole of the spacer bracket.



**Installing
p-clamps**

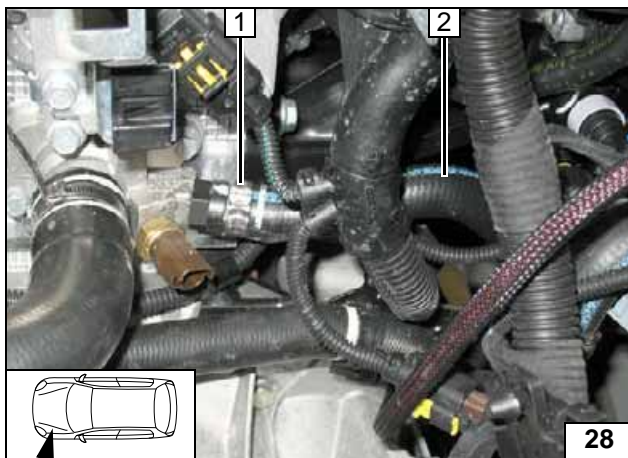


Route hoses **B** and **C** through the rubber-coated pipe clamps **2** to the cutting point.

1 Original vehicle hose



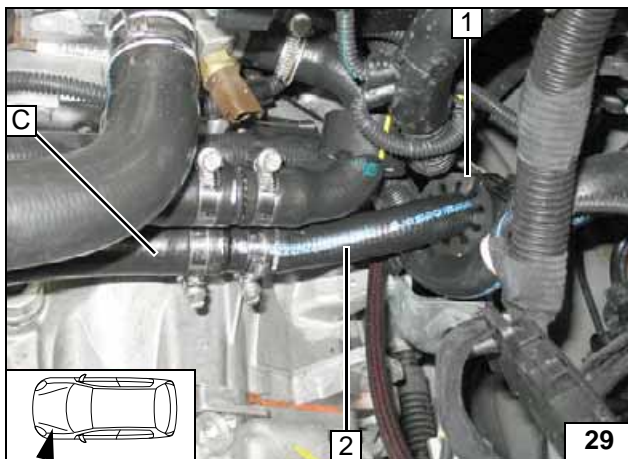
Routing in engine compartment



Pull out hose of engine outlet / heat exchanger inlet **2** from the connection piece of the engine outlet. Discard clamp **1**.



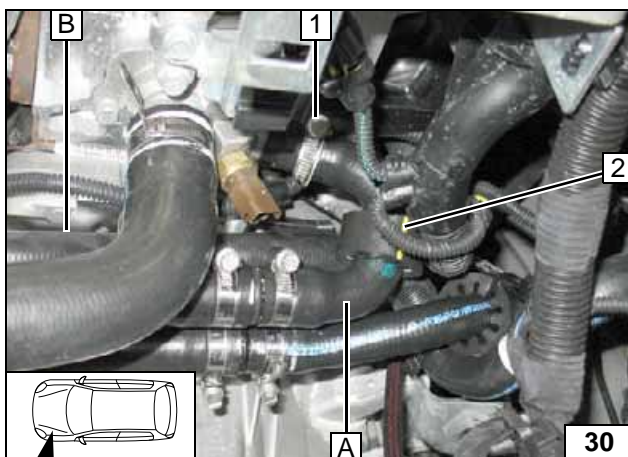
Cutting point



Slide on black (sw) rubber isolator **1** on the hose of the heat exchanger inlet **2** and fasten with cable tie.



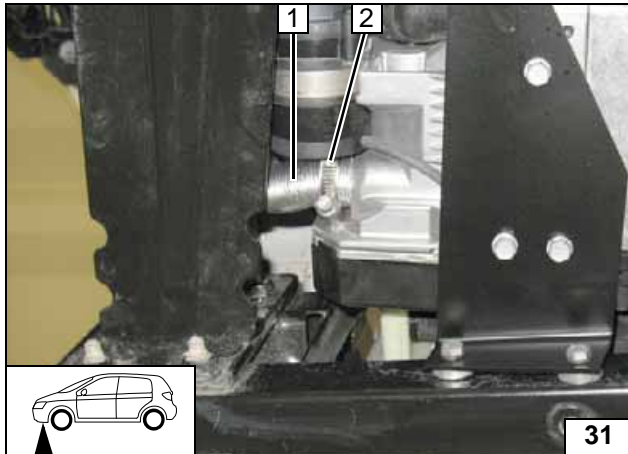
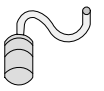
Connecting heat exchanger inlet



Slide on black (sw) rubber isolator **2** on to hose **A**. Fasten hose **A** to the connection piece of engine outlet with clamp **1**. Ensure sufficient distance to neighbouring components.



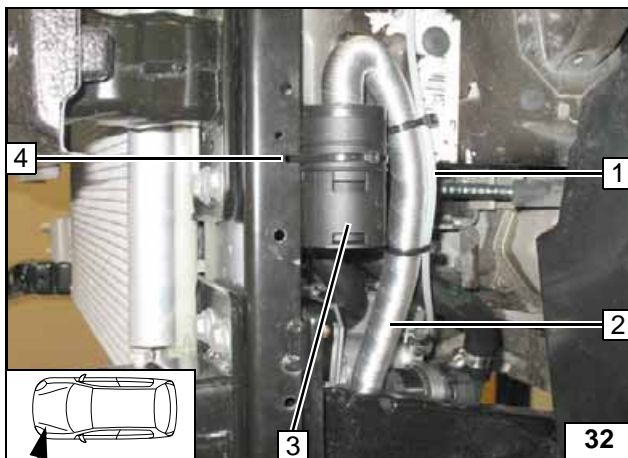
Connecting engine outlet



Combustion air

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

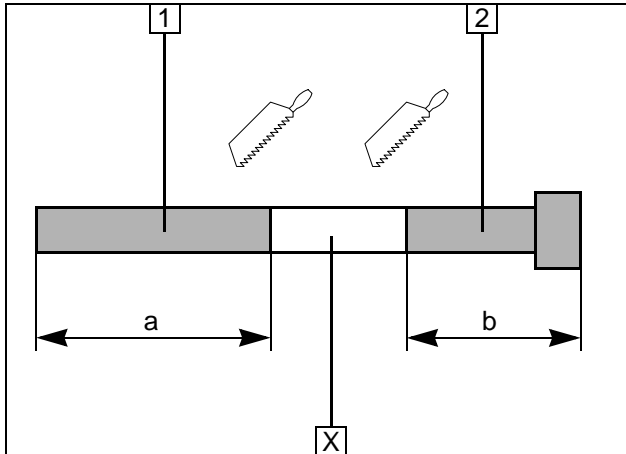
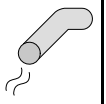
Installing combustion air pipe



Fasten muffler **3** with cable tie in existing hole **4**.
Fasten fuel line **1** to combustion air pipe **2** with cable tie.



Installing muffler



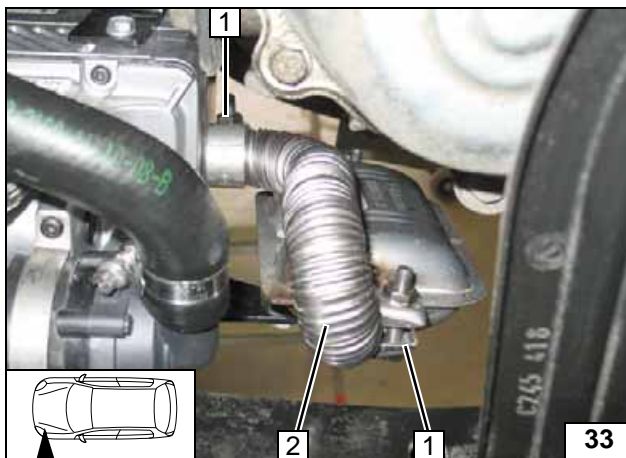
Exhaust gas

Discard section X.

- 1 Exhaust pipe
a = 220
- 2 Exhaust end section
b = 80

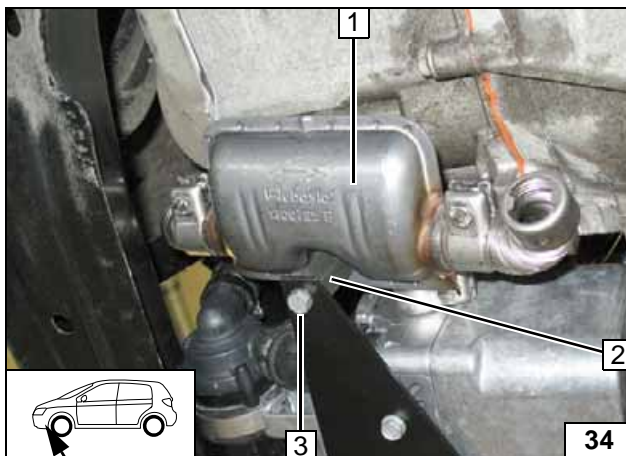


Preparing exhaust pipe



- 1 Hose clamp [2x]
- 2 Exhaust pipe

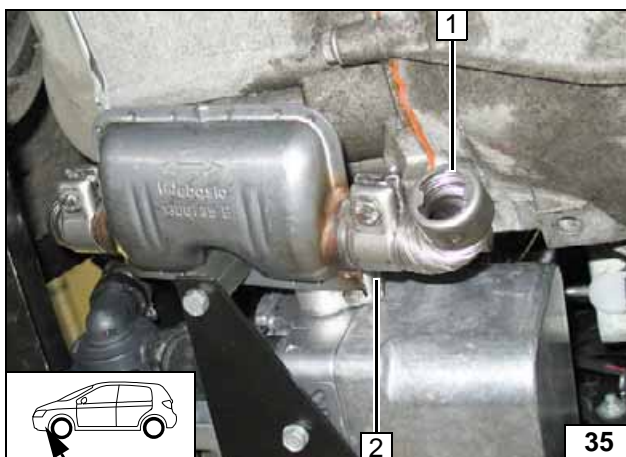
Installing exhaust pipe



Install M6x30 spacer nut 2 with M6x12 bolt 3 and spring lockwasher on bracket. Fasten muffler 1 with M6x12 bolt and spring lock washer to spacer nut 2.



Installing muffler

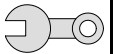


Ensure sufficient distance to neighbouring components.

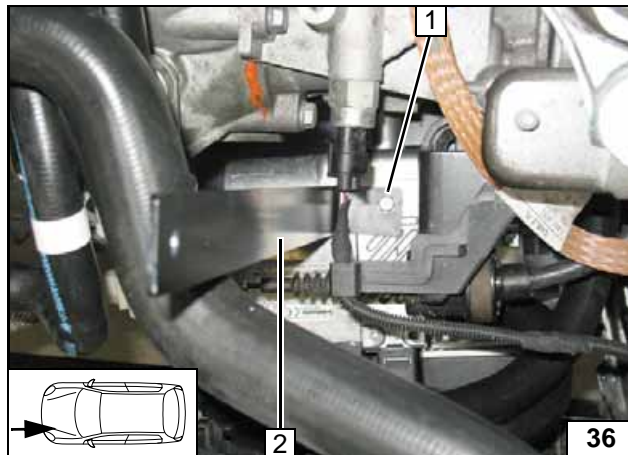
- 1 Exhaust end section
- 2 Hose clamp



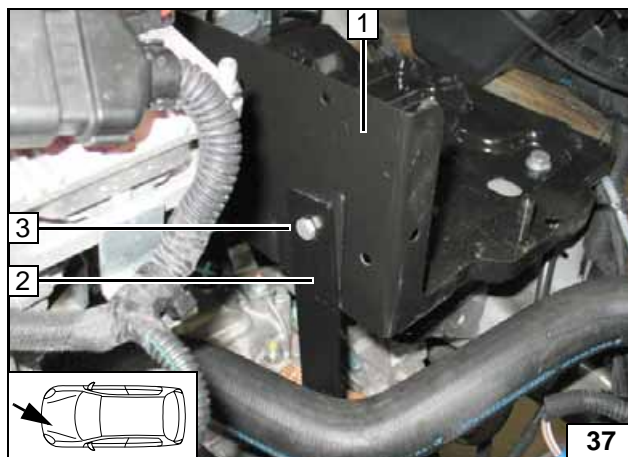
Installing exhaust end section



Final Work



- 1 Eject screw
- 2 Strut

Installing
strut

Installing battery carrier 1. Check position of all components and adjust if necessary. Check that they have free clearance.

- 2 Strut
- 3 M6x12 bolt, flanged nut

Fastening
heater**WARNING!**

Mount removed parts in reverse order.
Check all hoses, clamps and all electrical connections for firm seating.
Secure all loose cables using cable ties.
Only use manufacturer-approved coolant.
Spray 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.
- Place signboard "Switch off parking heater before refuelling" in the area of the filling connecting piece



Webasto
Feel the drive

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Operating instructions for end customer

Please remove page and add to the vehicle operating instructions.



Note:

We recommend matching the heating time to the driving time.

Heating time = driving time

Example:

For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

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



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

Manual air
condition-
ing