Water Heater

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

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

Installation documentation

Citroen C3

Gasoline
from Model Year 2010
Left-hand drive vehicle
Gear box

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.: 1315834A_EN Fee Euro 10.00

Table of Contents

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Citroen	C3	A51	e2 * 2007 / 46 * 0003 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
KFT0	Gasoline	54	1360
8FP0	Gasoline	70	1397
5FS0	Gasoline	88	1598

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

The installation location of the digital timer should be confirmed with the end customer before installation.

Heater/Installation Kit

Quantity	Description	Order No.:
1	Retail accessories *Thermo Top E / C*	See price list
1	Installation kit Citroen C3 2010 Gasoline	1315833A
1	Heater control	See price list

Also required with automatic air-conditioning:

Quantity	Description	Order No.:
1	Add-on kit for automatic A/C Citroen C3 2010	1315967A

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 vehicles Citroen C3 Gasoline - for validity, see page 2 - from model year 2010 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* 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 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).
When installing an IPCU, the corresponding settings must be checked or adjusted before the installation.

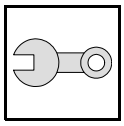
Special Tools

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

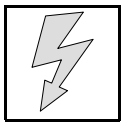
Explanatory Notes on Document

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

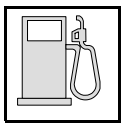


Electrical system

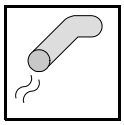


Coolant circuit

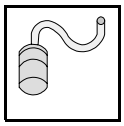
Fuel



Exhaust gas



Combustion air



Software

Special features are highlighted using the following symbols:

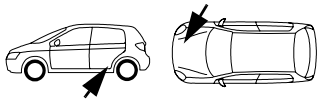
Specific risk of injury or fatal accidents.

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.

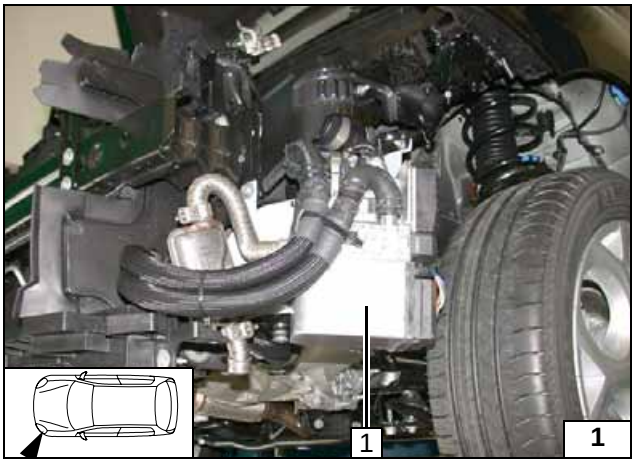
All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejot screws, Ejot studs = 10 Nm!

Preliminary Work

WARNING!

- Open the fuel tank cap and vent the fuel tank.
- Close the tank cap again.
- 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.
- Disconnect and completely remove the battery with carrier.
- Detach control unit and put it aside
- Remove the air filter together with the intake hose
- Remove air loading tube
- Detach the wheel well trim on the right and left.
- Remove bumper trim
- Remove the left-hand headlight
- Remove front underride protection
- Fold rear seat bench
- Open the right-hand fuel sender service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove instrument panel trim in the foot well on the driver's side
- Detach central switching unit (BSI) on the driver side and lay it aside
- Remove the instrument panel trim at the left (only with Telestart T100 HTM))
- Remove radio / A/C control panel according to manufacturer's specifications (only with automatic A/C)

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



Heater installation location

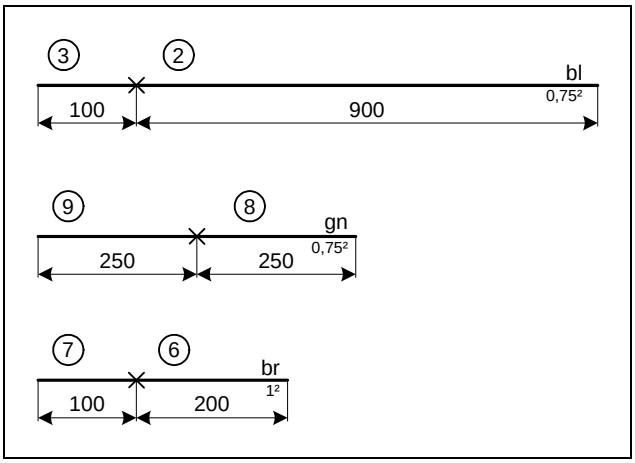
1 Heater

Installation location

Preparing electrical system

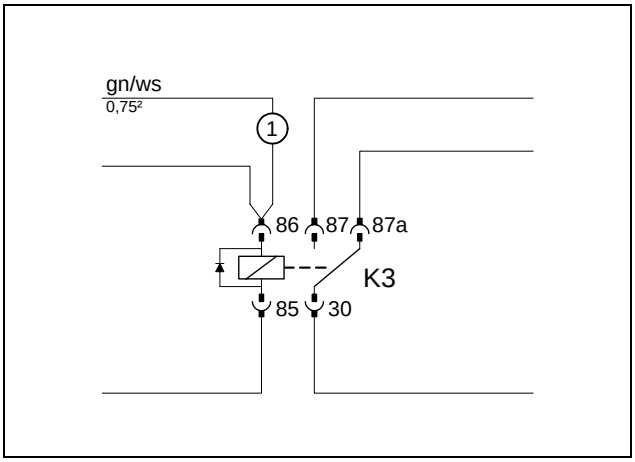
Only with automatic air-conditioning

Cutting wires to length



Preparing additional relay K3.1

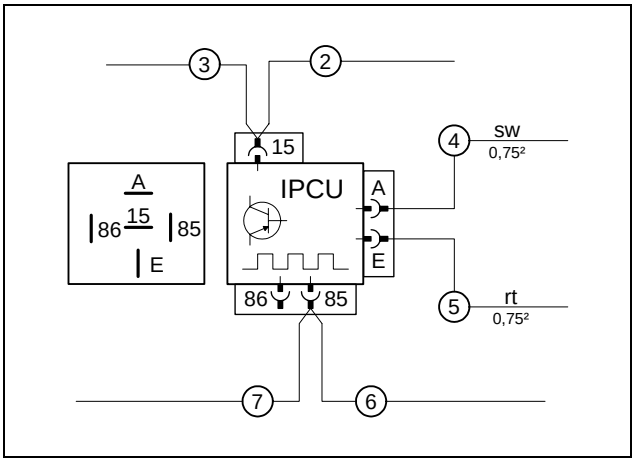
Produce connections as shown in wiring diagram. Cut out an end of 1700 mm from insulation hose. Pull through wire sections **1** in 1700 mm protective sleeving provided.



Preassembling IPCU

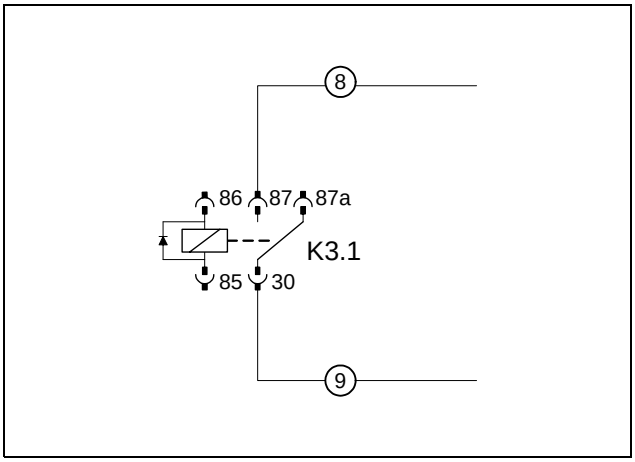
Connect wires to IPCU base.
IPCU view on contact side!
The pre-programmed settings of both function controls in vehicle must be checked and adjusted if necessary! Pull through wire section **2** in 800 mm protective sleeving.

Duty cycle: 27%
Frequency: 400 Hz
Voltage: 10 V
Function: High-side



Preparing additional relay K3.1

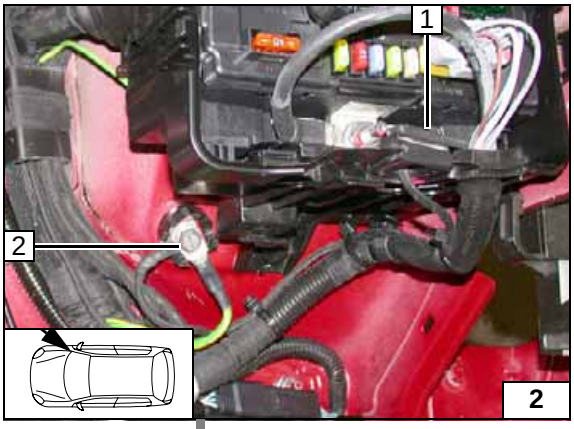
Produce connections as shown in wiring diagram.



Electrical system

Positive and ground connection

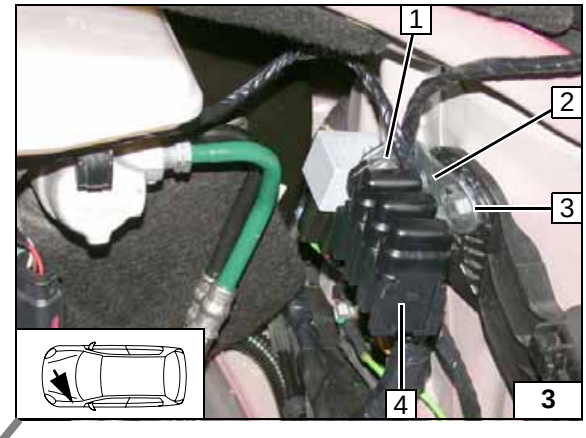
1 Positive wire on original vehicle positive support point
2 Ground wire on original vehicle ground support point

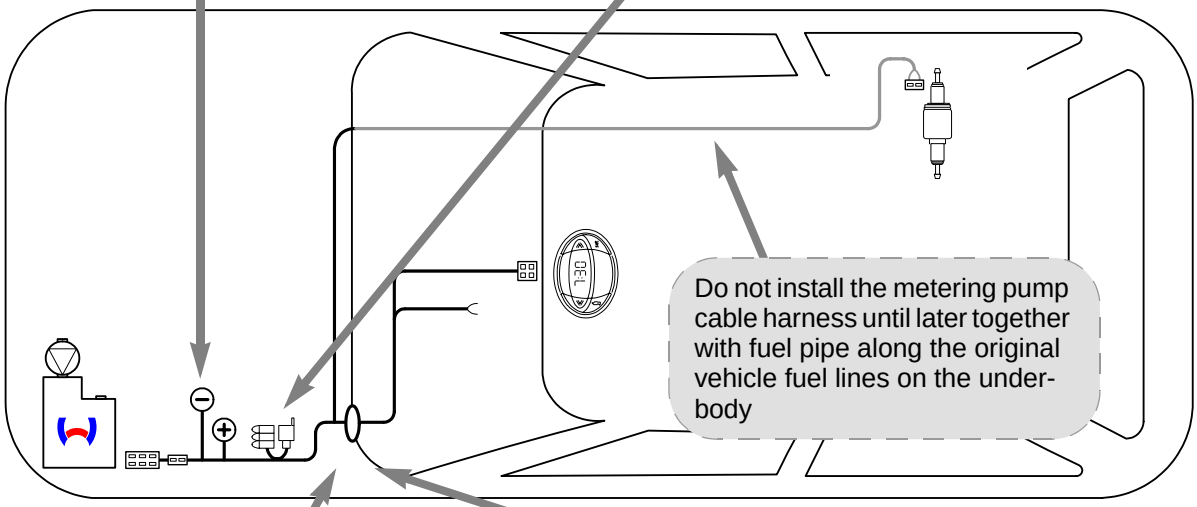


Fuse holder, K3 relay

Figure shows manual air conditioning system.

1 M5x16 bolt, washer, retaining plate or fuse holder, K3 relay, flanged nut
2 Angle bracket
3 Retaining clip removed, M6x20 bolt, flanged nut
4 Fuses mounted



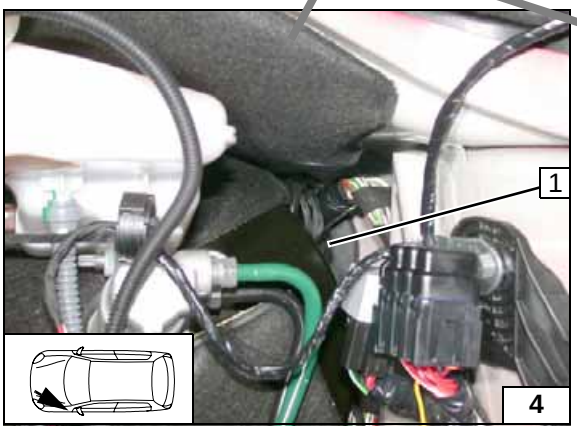


Wiring harness installation diagram

Wiring harness pass-through to engine compartment

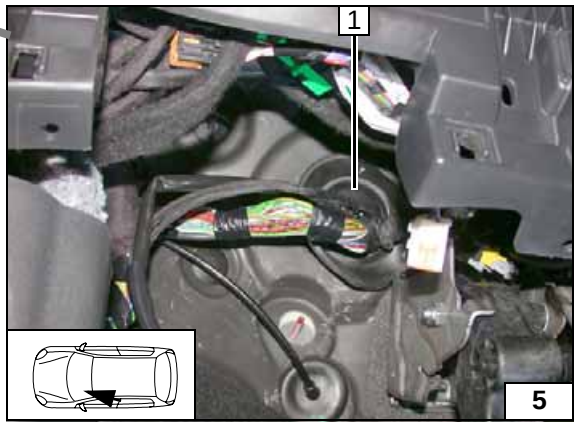
Figure shows manual air conditioning system.

1 Protective rubber plug

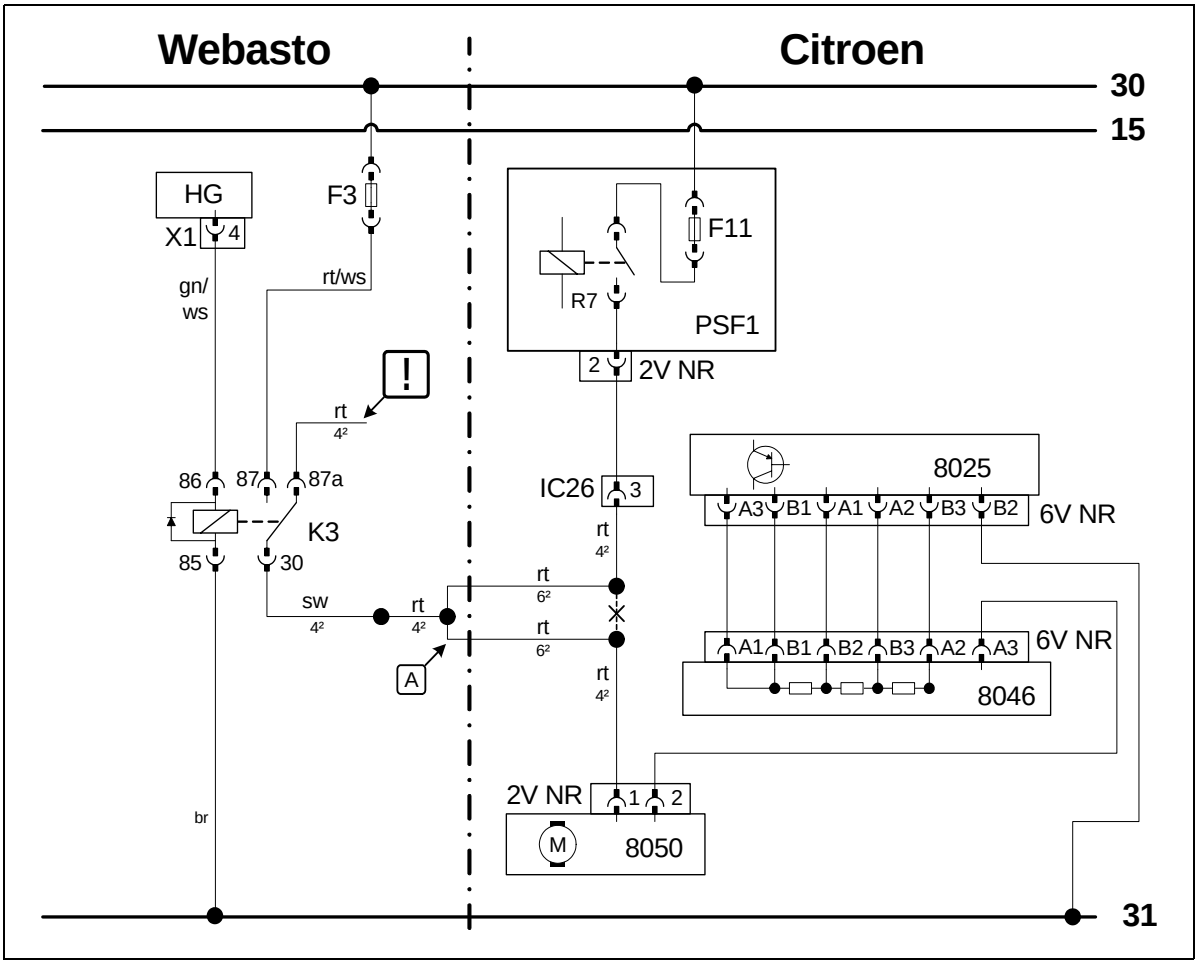


Wiring harness pass through of passenger compartment

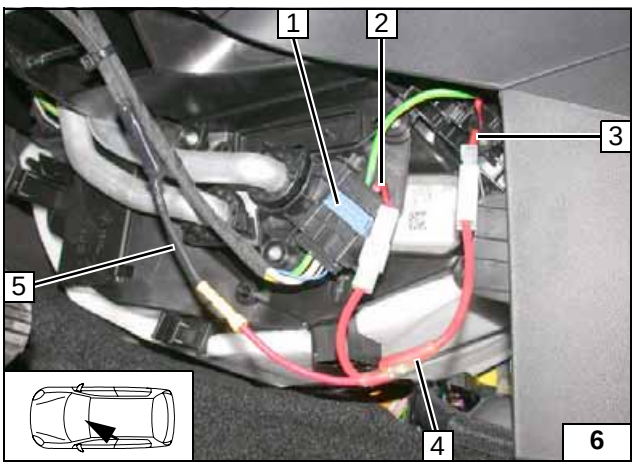
1 Protective rubber plug



Fan controller for manual air conditioning



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	8050	Fan motor	rt	red
X1	6-pin heater connector	PSF1	Operator PCB of engine compartment fuse box	ws	white
F3	25 A fuse			sw	black
K3	Fan relay	8025	A/C control panel	br	brown
a	Output adapter	8046	Fan switch	gn	green
		IC26	6-pin connector		
				!	Insulate wire end and tie back
				X	Cutting point
				Wiring colours may vary.	



Connection on 6-pin connector IC26 **1**.
Insulate red (rt) wire from K3/87a and tie back.
Produce connections as shown in wiring diagram.

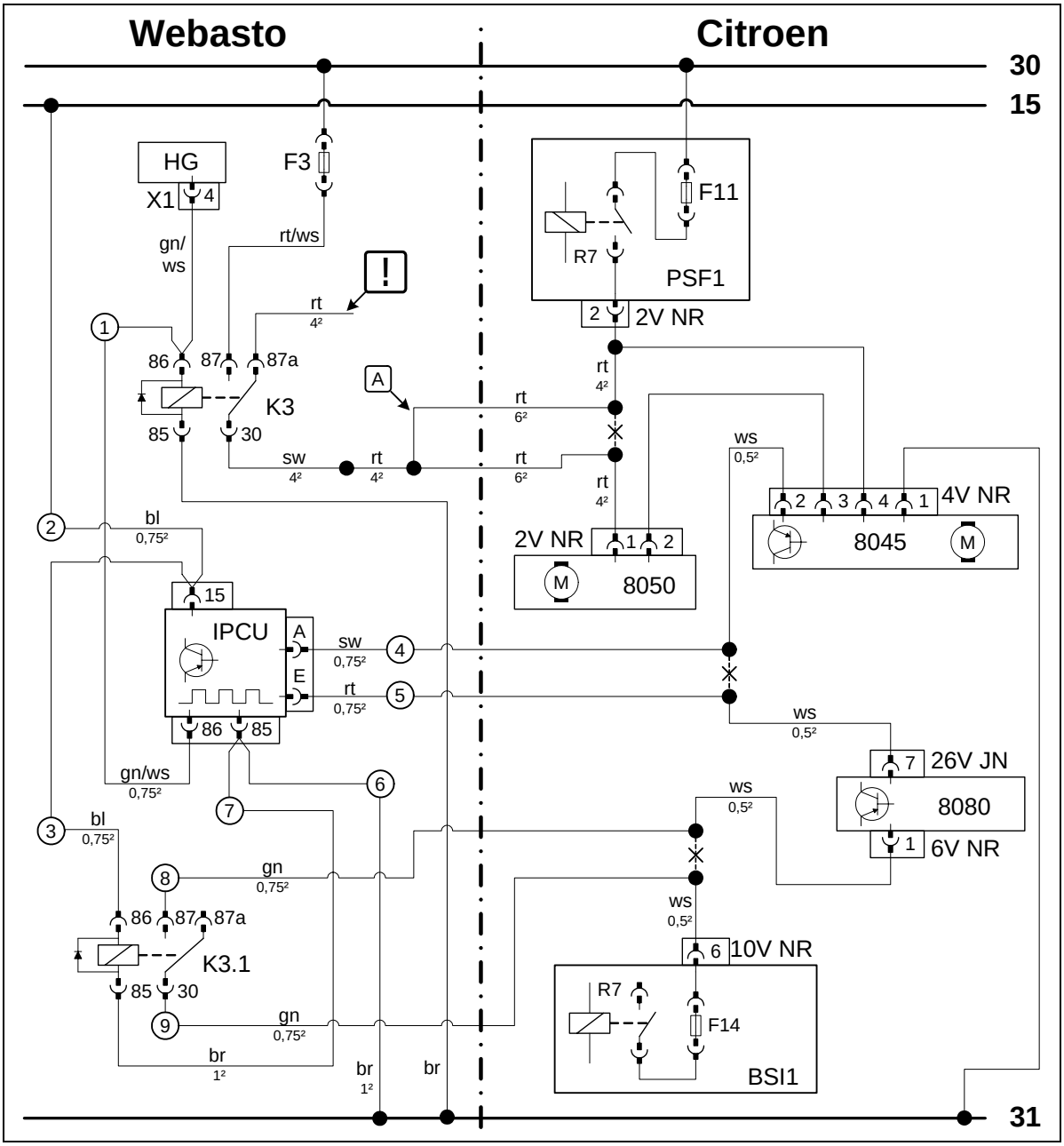
2 Red (rt) wire to connector of IC26 Pin 3
3 Red (rt) wire of fan motor
4 Output adapter
5 Black (sw) wire from K3/30

Wiring diagram

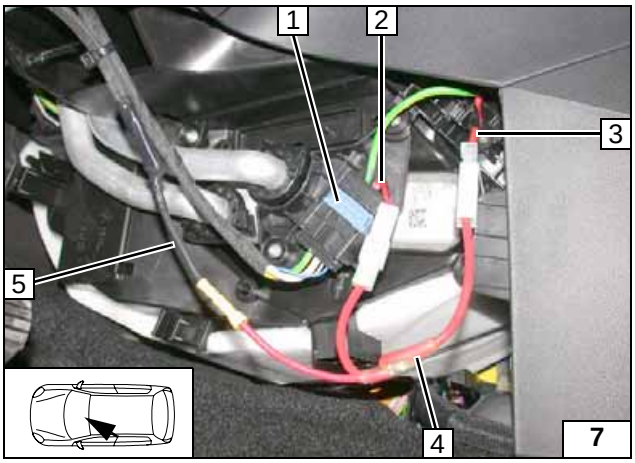
Legends

Connecting fan-motor

Automatic air-conditioning fan controller



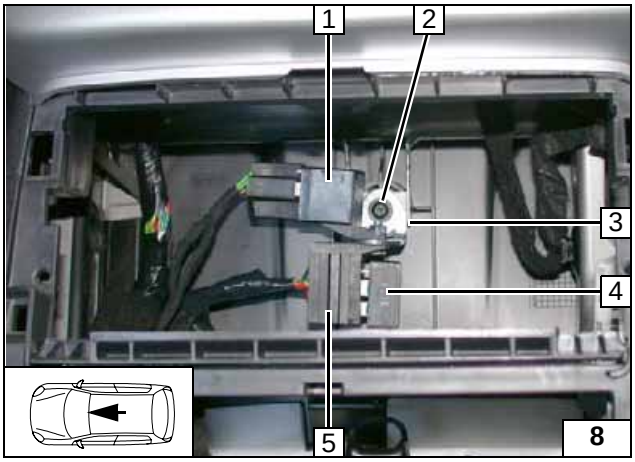
Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	8050	Fan motor	rt	red
X1	6-pin heater connector	8080	A/C control panel	ws	white
F3	25 A fuse	8045	Fan controller	sw	black
K3	Fan relay	PSF1	Operator PCB of engine compartment fuse box	br	brown
K3.1	Additional relay			bl	blue
a	Output adapter	BSI1	Central switching unit	gn	green
IPCU	Pulse width modulator				
IPCU adjustment values:					
Duty cycle:	27%			!	Insulate wire end and tie back
Frequency:	400 Hz				
Voltage:	10 V			**X**	Cutting point
Function:	High-side			Wiring colours may vary.	



Connection on 6-pin connector IC26 **1**.
Insulate red (rt) wire from K3/87a and tie back.
Produce connections as shown in wiring diagram.

2 Red (rt) wire to connector of IC26 Pin 3
3 Red (rt) wire of fan motor
4 Output adapter
5 Black (sw) wire from K3/30

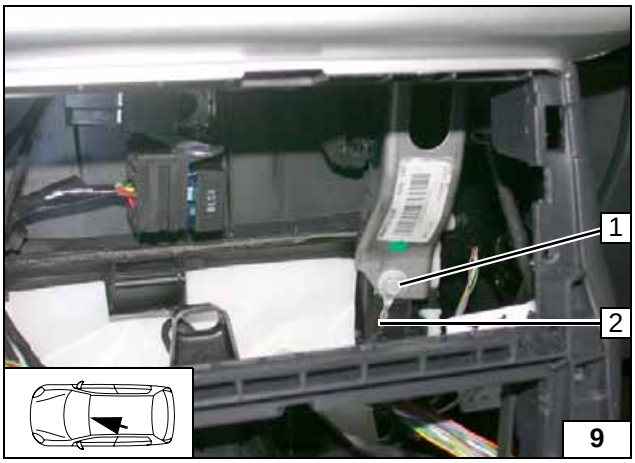
Connecting fan-motor



Insert green/white (gn/ws) wire ① in IPCU/86 base. Insert blue (bl) wire ③ in base of K3.1/86 and brown (br) wire ⑦ in base of K3.1/85.
Produce connections as shown in wiring diagram.

1 K3.1 relay
2 Original vehicle bolt
3 Angle bracket
4 IPCU mounted
5 IPCU base

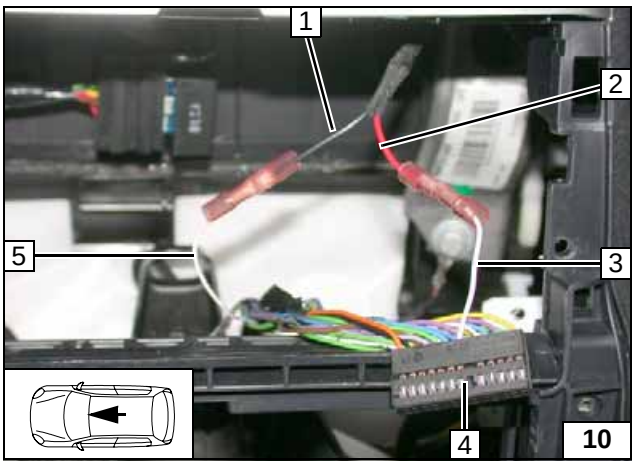
Installing additional relay K3.1 and IPCU



Produce connections as shown in wiring diagram.

1 Original vehicle bolt
2 Brown (br) wire ⑥ of IPCU/85

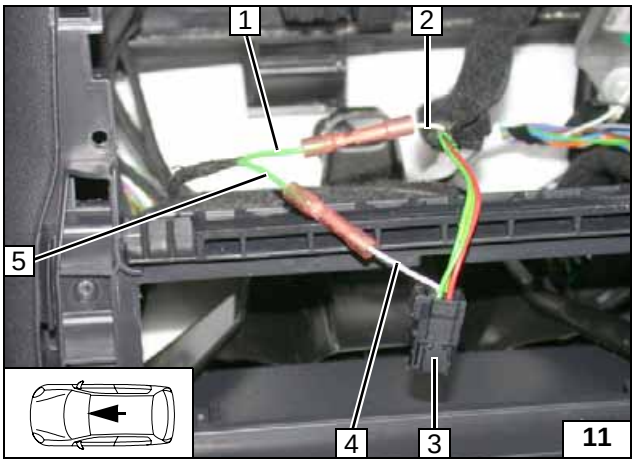
Ground connection of additional relay K3.1 and IPCU



Connection to 26-pin connector **4** from A/C control element.
Produce connections as shown in wiring diagram.

1 Black (sw) wire ④ of IPCU/A
2 Red (rt) wire ⑤ of IPCU/E
3 White (ws) wire to 26-pin connector Pin 7
5 White (ws) wire of fan relay

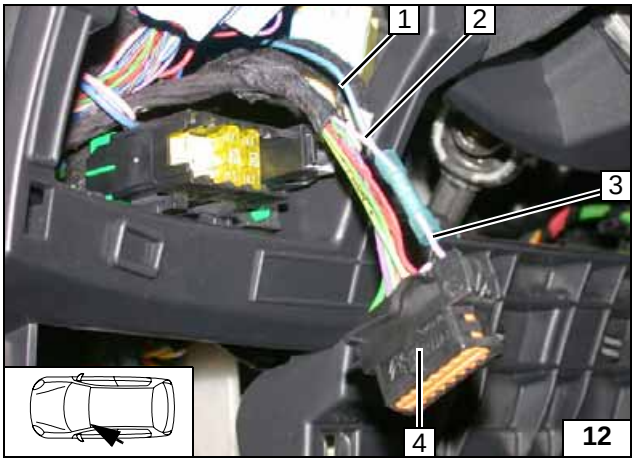
Connecting IPCU



Connection to 6-pin connector **3** from A/C control element.
Produce connections as shown in wiring diagram.

1 Green (gn) wire ⑧ of K3.1/87
2 White (ws) wire of BSI
4 White (ws) wire to 6-pin connector Pin 7
5 Green (gn) wire ⑨ of K3.1/30

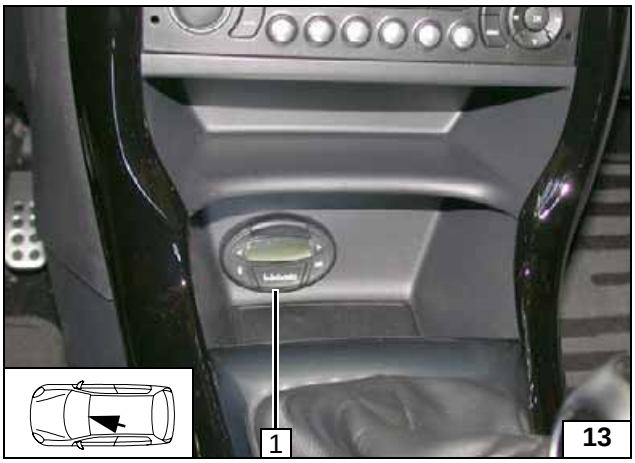
Connecting additional relay K3.1



Connection on 16-pin OBD connector **4**.
Produce connections as shown in wiring diagram.

1 Blue (bl) wire ② of IPCU/15
2 White (ws) wire of Terminal 15
3 White (ws) wire to 16-pin OBD connector Pin 1

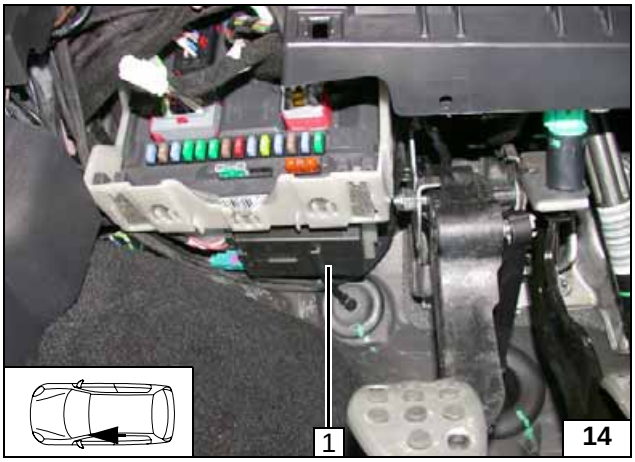
Connecting IPCU Terminal 15



Digital timer

1 Digital timer

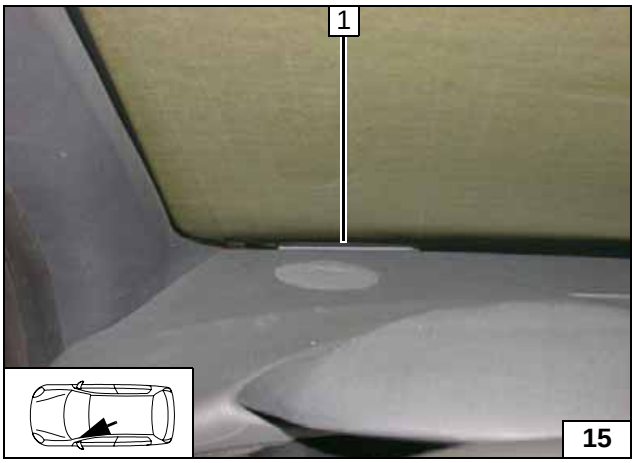
Installing digital timer



Remote option (Telestart)

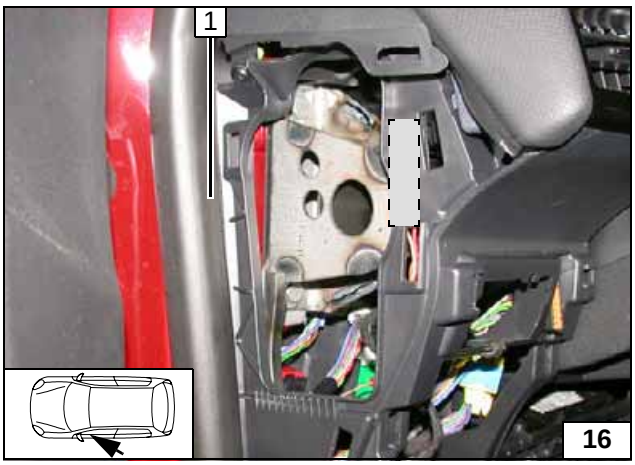
Fasten receiver **1** with adhesive tape.

Installing receiver



1 Antenna

Installing antenna

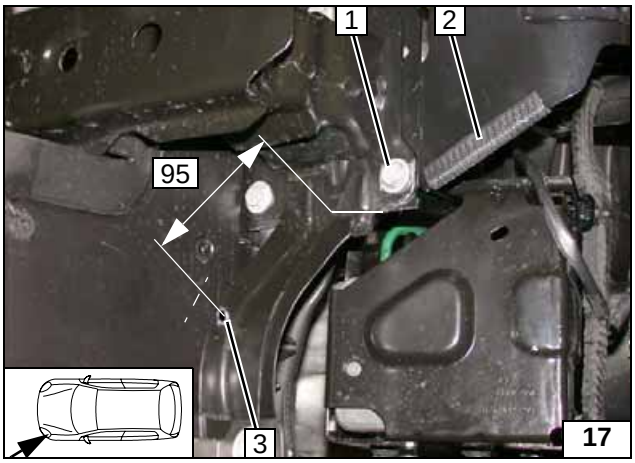


Temperature sensor T100 HTM

Fasten temperature sensor **1** behind instrument panel trim at left with adhesive tape.

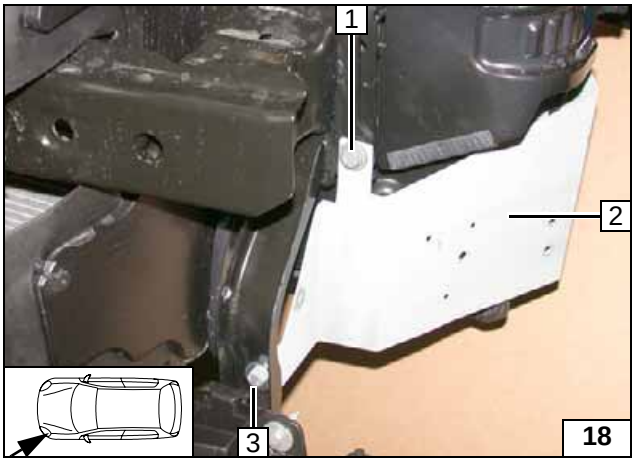
Installing temperature sensor

Preparing installation location



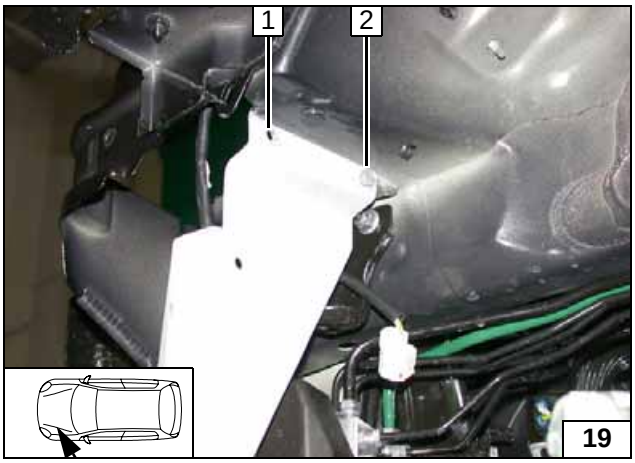
1 Detach original vehicle bolt
2 50 mm edge protection
3 7 mm dia. hole

Hole in side member



1 Original vehicle bolt
2 Loosely mount bracket
3 M8x20 bolt, washer, flanged nut, existing hole

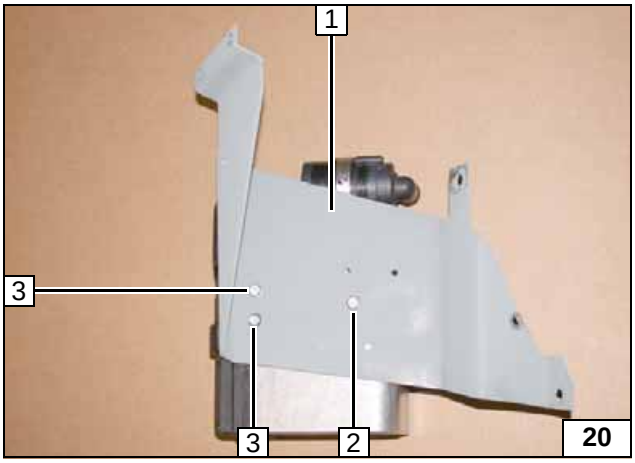
Installing bracket loosely



1 Copy hole pattern, 7 mm dia. hole
2 M6x20 bolt, flanged nut, existing hole

Copying hole pattern

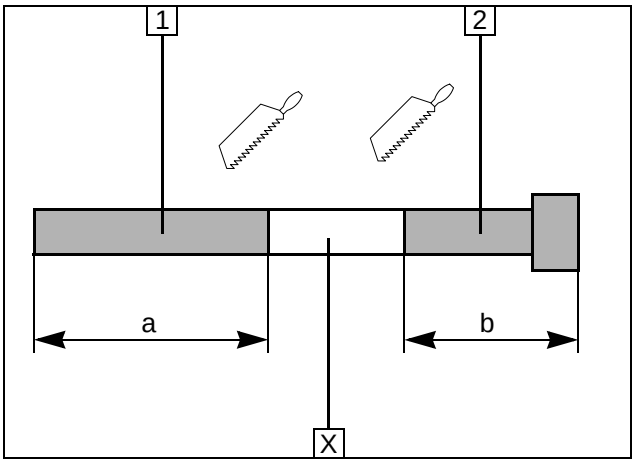
Preparing heater



Remove bracket**1**. Insert two washers between heater and bracket **1** at Position **2**.

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

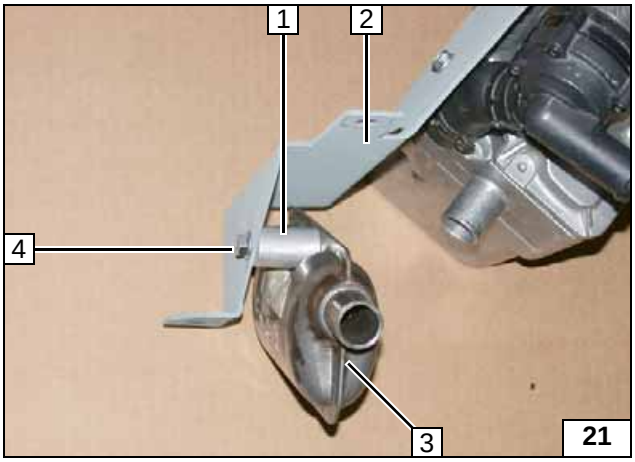
Installing bracket



Discard section **X**

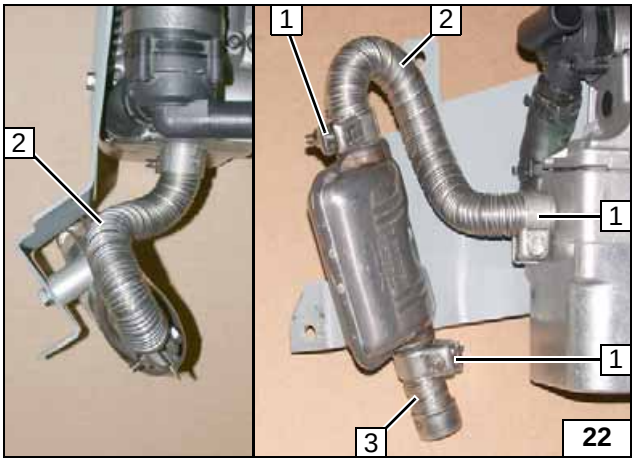
1 Exhaust pipe
a = 230
2 Exhaust end section
b = 50

Preparing exhaust pipe



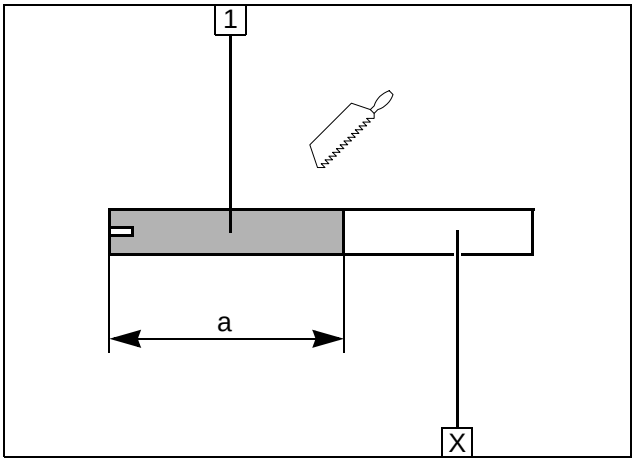
1 Shim 30
2 Bracket
3 Exhaust muffler
4 M6x45 bolt, spring lockwasher, flanged nut

Installing muffler



1 Hose clamp [3x]
2 Exhaust pipe
3 End section

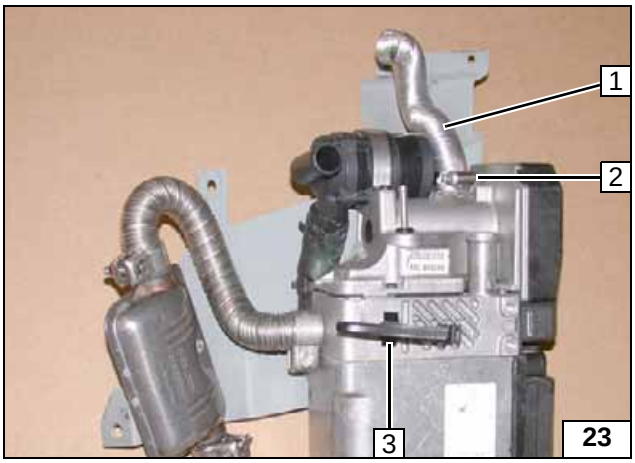
Installing exhaust pipe and end section



Discard section **X**.

1 Combustion air pipe
a = 180

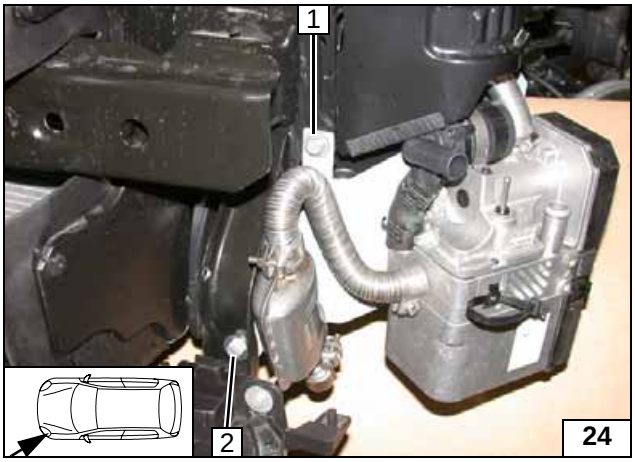
Cutting combustion air pipe to length



1 Combustion air pipe
2 27 mm dia. clamp
3 Clip-type cable tie in hole

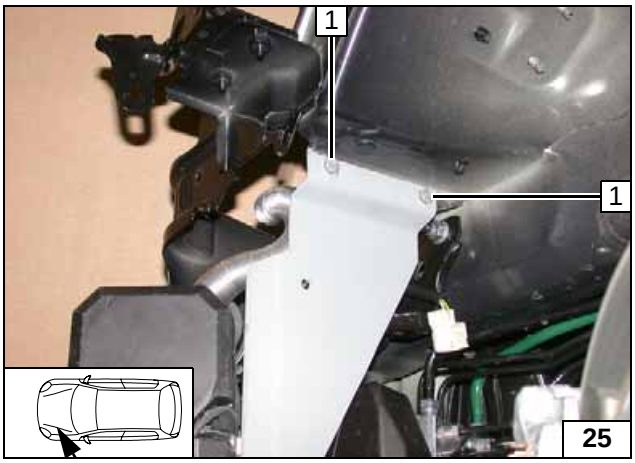
Pre-assembling combustion air pipe

Installing heater



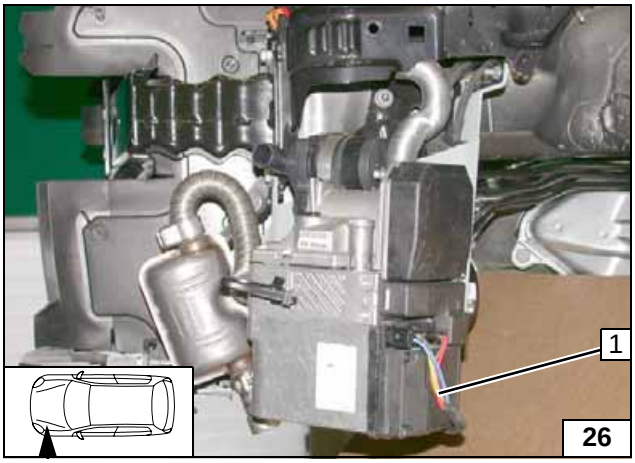
1 Original vehicle bolt
2 M8x20 bolt, washer, flanged nut, existing hole

Installing heater



1 M6x20 bolt, flanged nut [2x each]

Installing heater

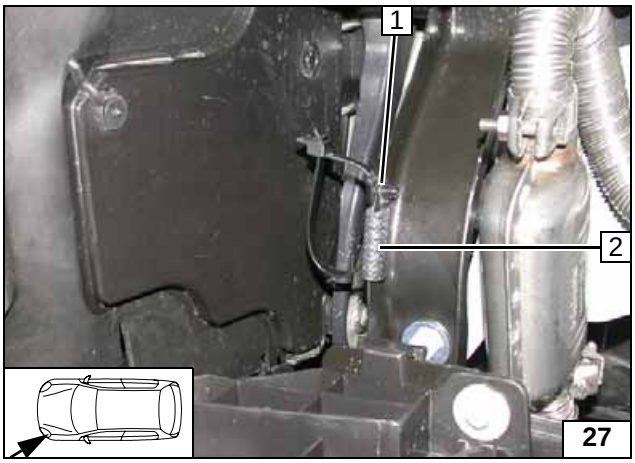


Check the position of the components; adjust if necessary. Check that they have free clearance.

1 Wiring harness of heater

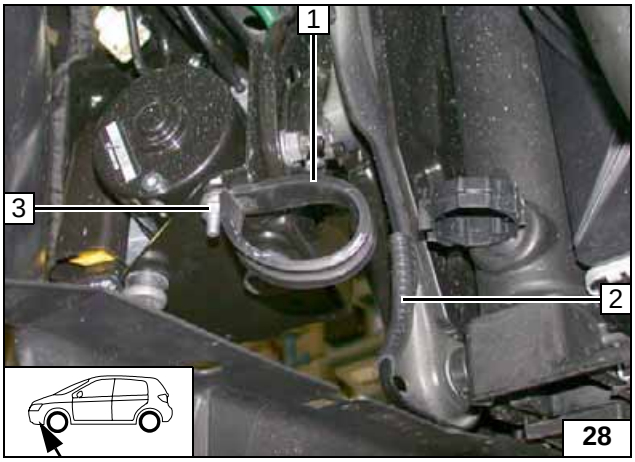
Mounting wiring harness

Preparing coolant circuit



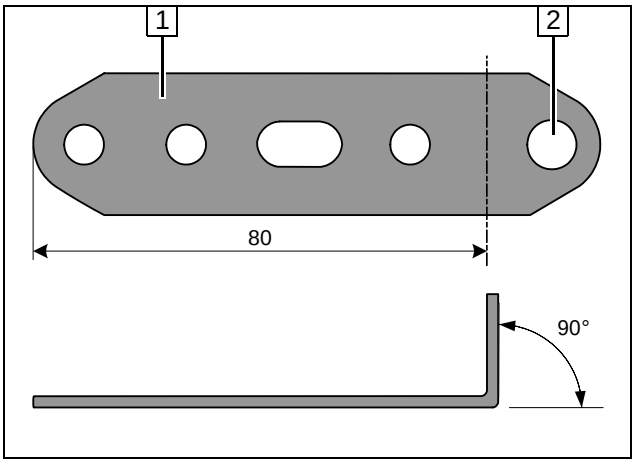
1 Clip-type cable tie, prepared hole
2 50 mm edge protection

Inserting clip-type cable tie



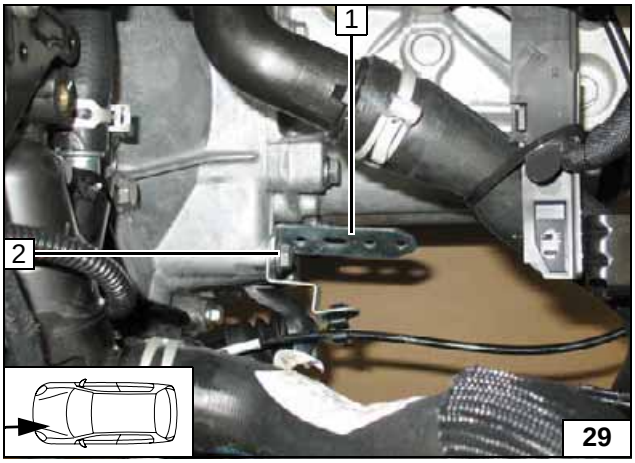
1 48 mm dia. rubber-coated p-clamp
2 100 mm edge protection
3 M6x20 bolt, flanged nut, ABS bracket

Installing rubber-coated p-clamp



1 Angle down perforated bracket
2 Expand hole to 8.5 mm dia.

Preparing perforated bracket



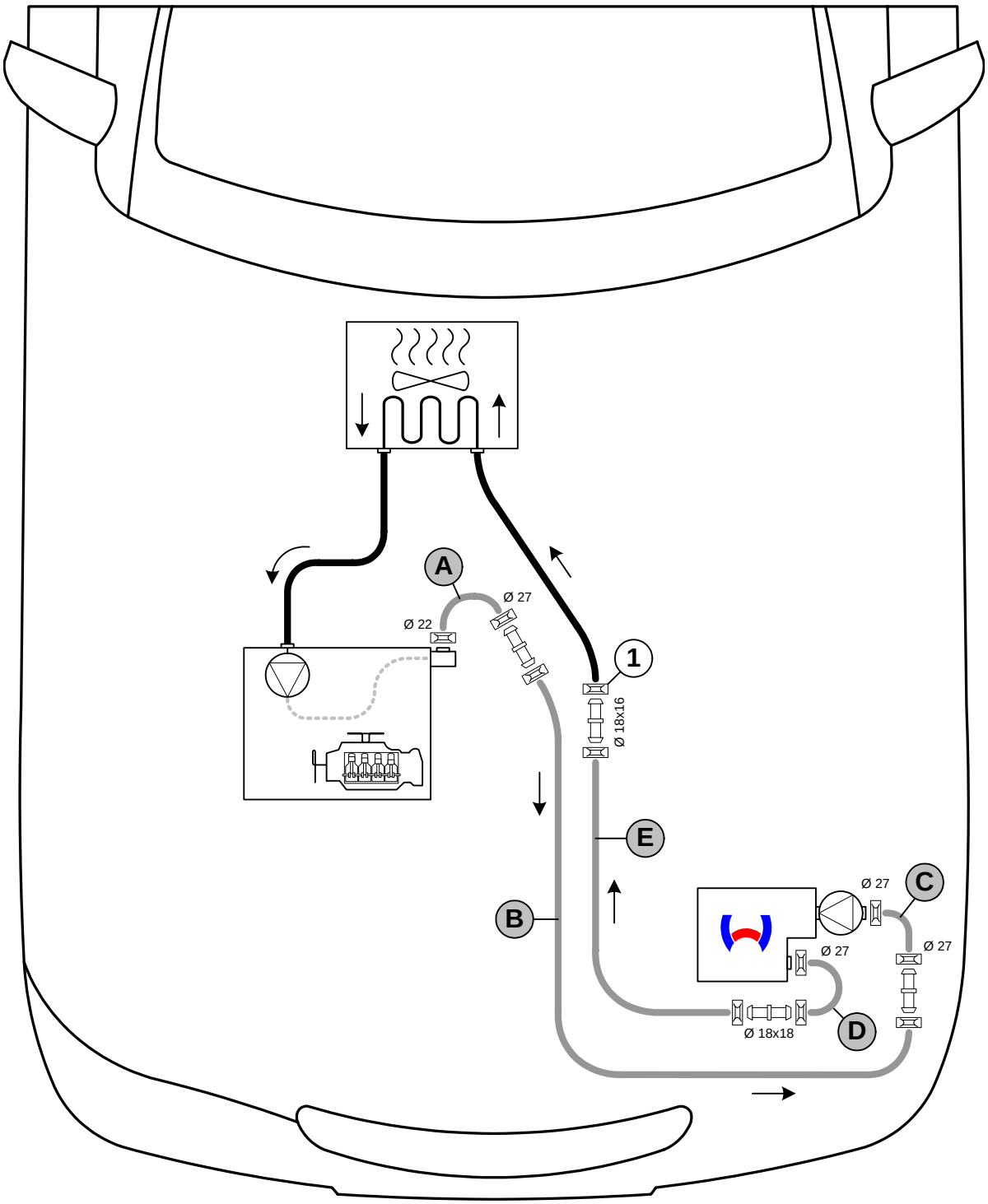
1 Perforated bracket
2 Original vehicle bolt, bracket of coupling line

Installing perforated bracket

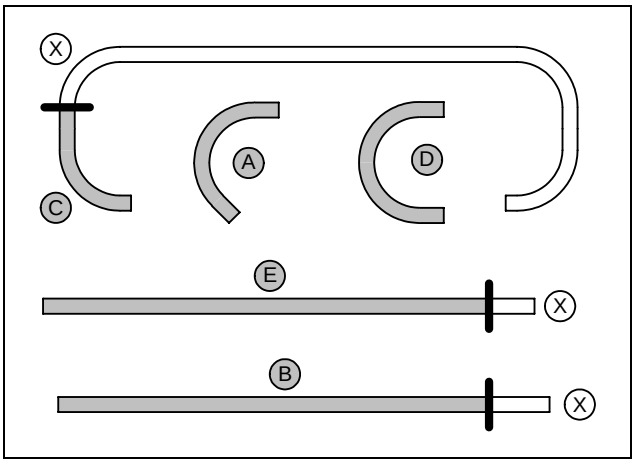
Coolant circuit KFT0

WARNING!
Any coolant running off should be collected using an appropriate container! Route coolant 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



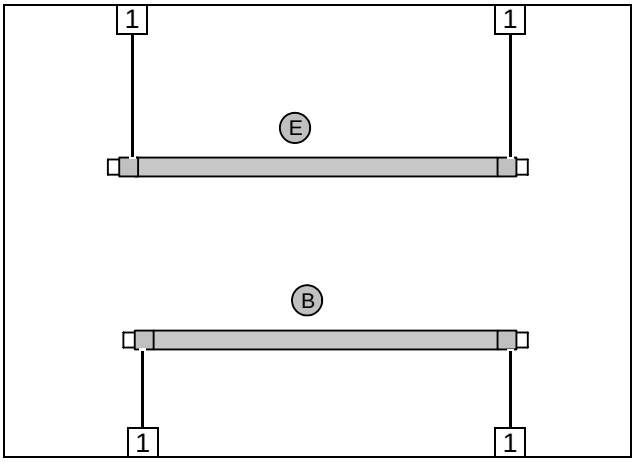
All spring clips without a specific designation = 25 mm dia. **1** = Original vehicle spring clip .
All connecting pipes without a specific designation = dia. 18x20.



Discard section **X**.
Hose **A** = Moulded hose 15 mm dia. x20
Hose **D** = 180°, 18 mm dia. x 18 moulded hose
Hose **B / E** = 18 mm dia. hose
Hose **C** = 20 mm dia. hose with long 90° elbow.

B = 1080
E = 1100

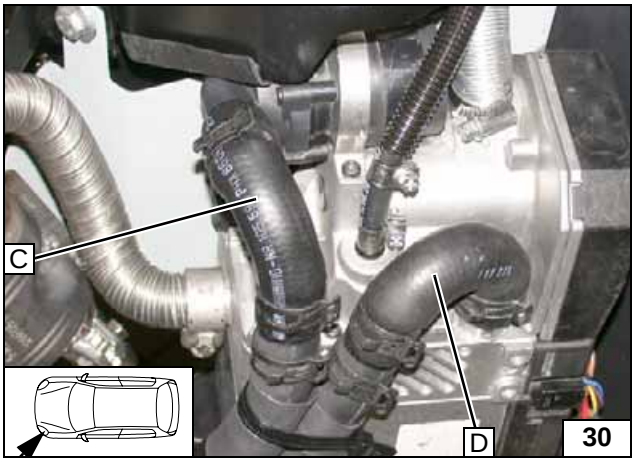
Cutting hoses to length



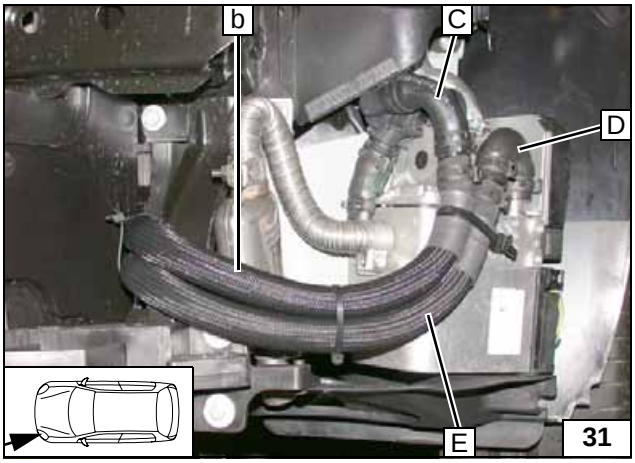
Push braided protection hoses onto hose **B** and **E** and cut to length.
Cut heat shrink plastic tubing to length.

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

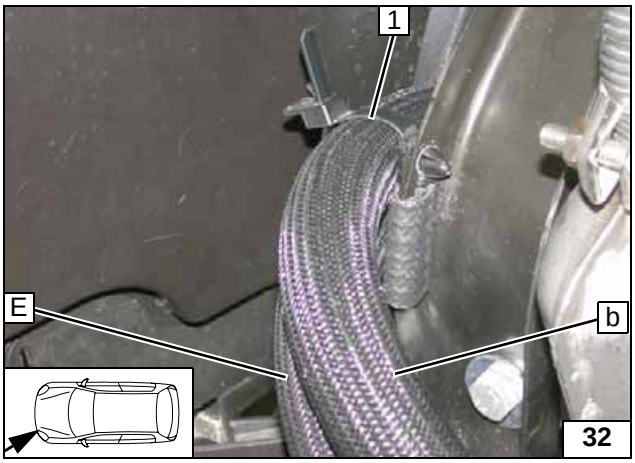
Preparing hoses



Connecting heater

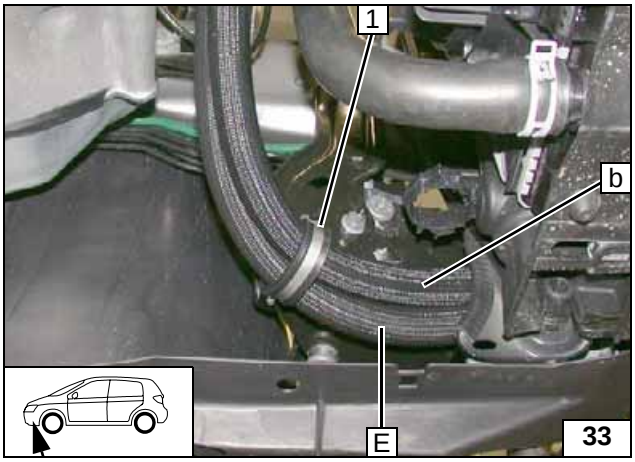


Routing in the engine compartment



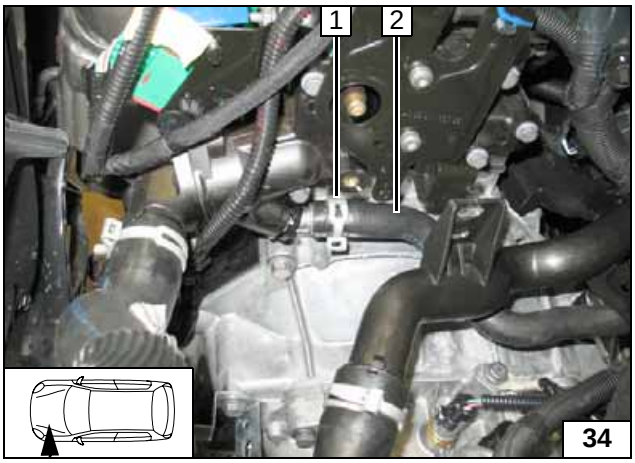
1 Close clip-type cable tie

Routing in the engine compartment



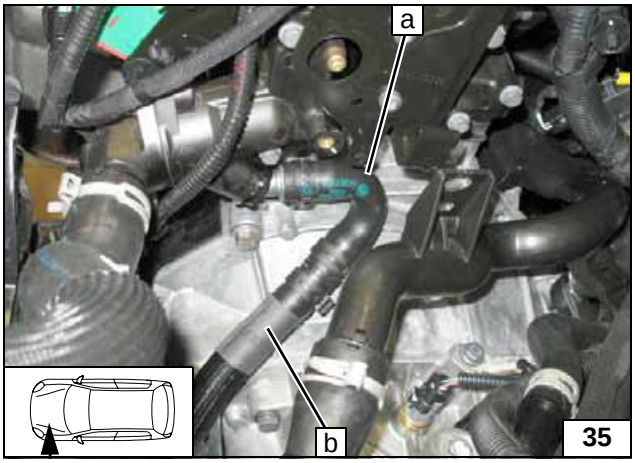
Route hose **B** and **E** through rubber-coated p-clamp **1**.

Routing in engine compartment

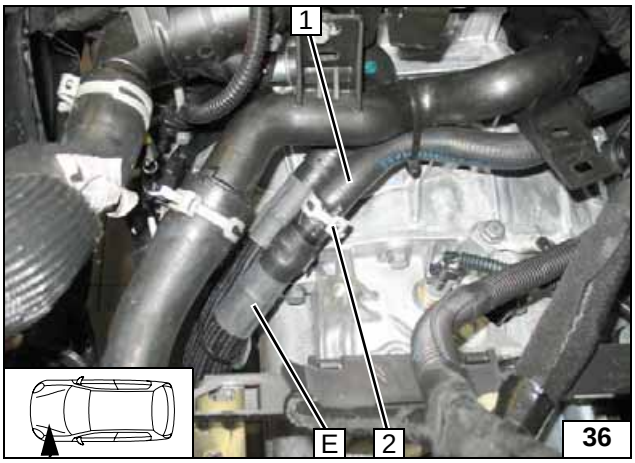


Pull out hose of engine outlet / heat exchanger inlet **2** from the neck of engine outlet! Spring clip **1** will be reused.

Cutting point

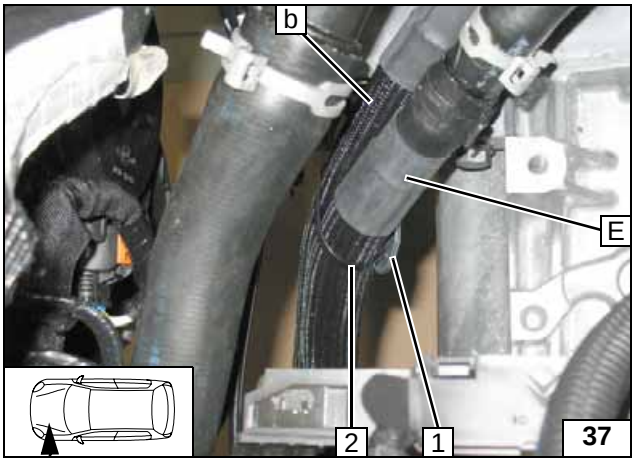


Connecting engine outlet



1 Hose on heat exchanger inlet
2 Original vehicle spring clip

Connecting heat exchanger inlet



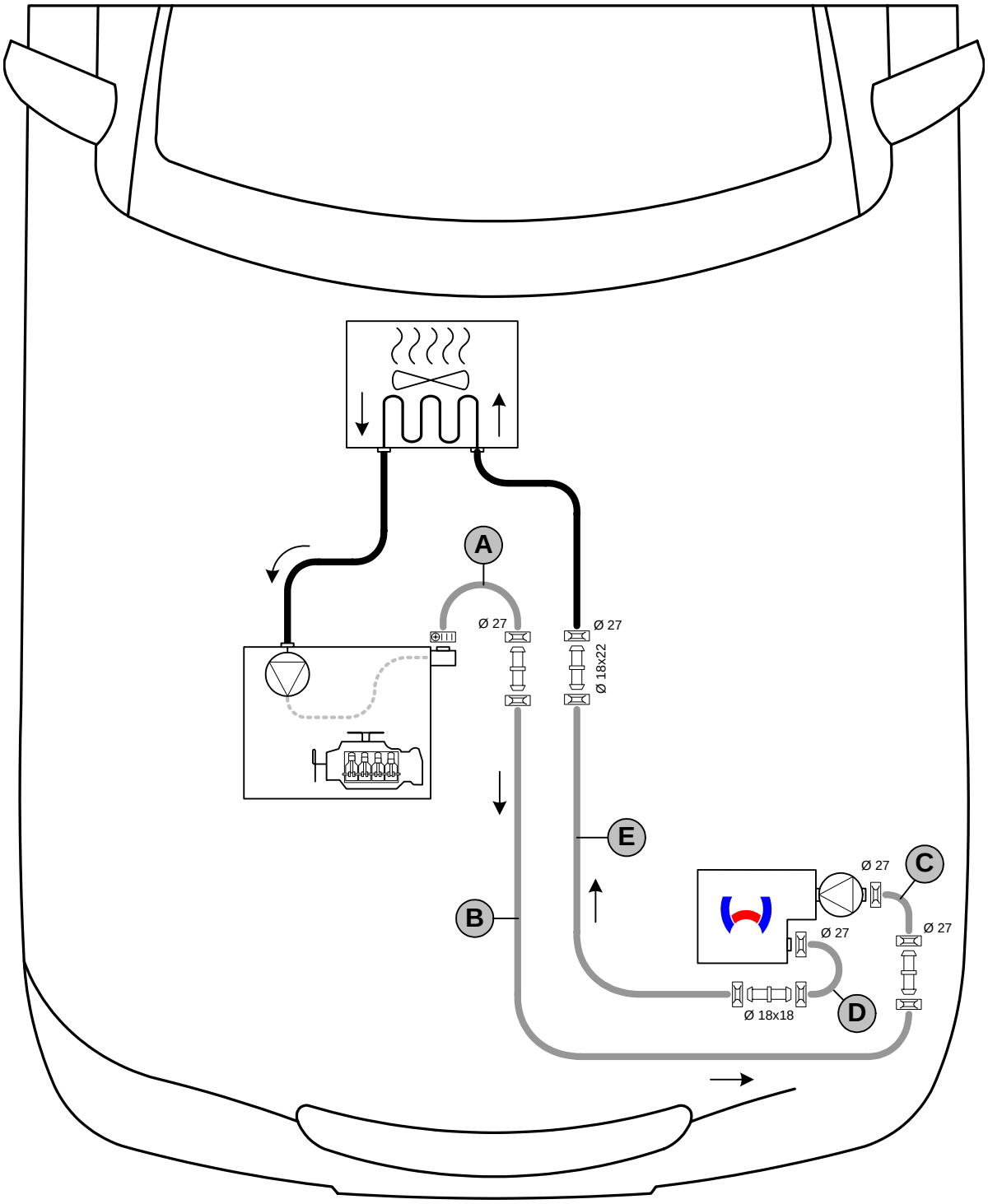
Aligning hoses. Fasten hoses **B** and **E** with cable tile **2** to perforated bracket **1**.
Ensure sufficient distance to neighbouring components.

Fastening hoses

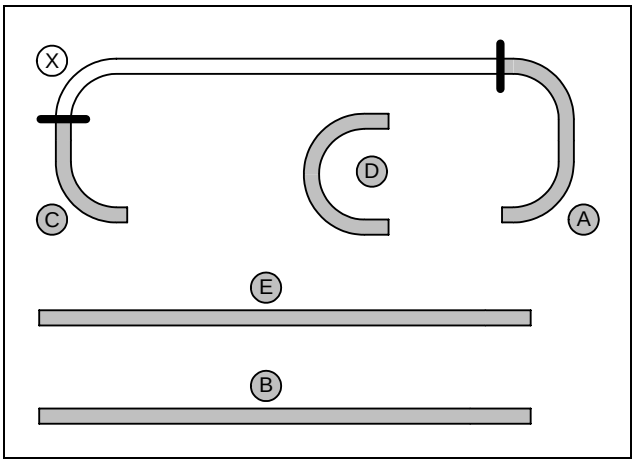
Coolant circuit 8FP0 / 5FS0

WARNING!
Any coolant running off should be collected using an appropriate container! Route coolant 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



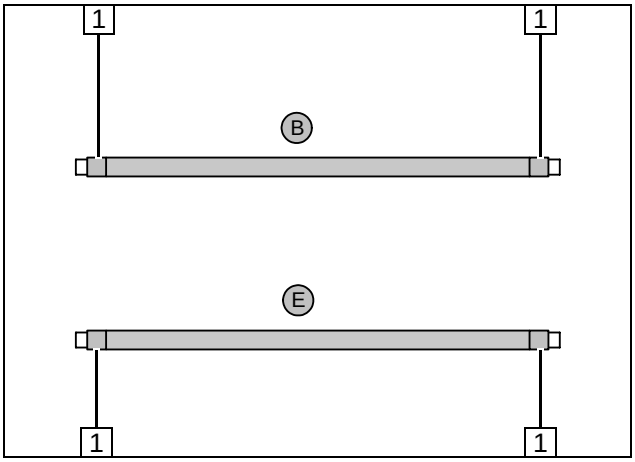
All spring clips without a specific designation = 25 mm dia. Hose clamps = 20-27 mm dia.
All connecting pipes without a specific designation = dia. 18x20.



Discard section **X**.
Hose **D** = 180°, 18 mm dia. x 18 moulded hose
Hose **B / E** = 18 mm dia. hose
Hose **A** = 20 mm dia. hose
Hose **C** = 20 mm dia. hose with long 90° elbow.

B = 1200
E = 1200

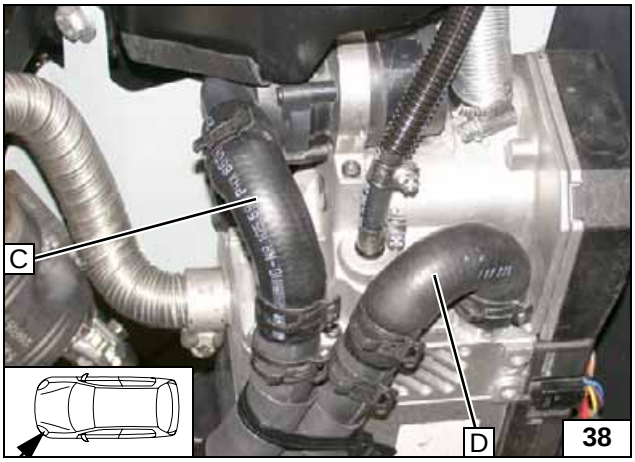
Cutting hoses to length



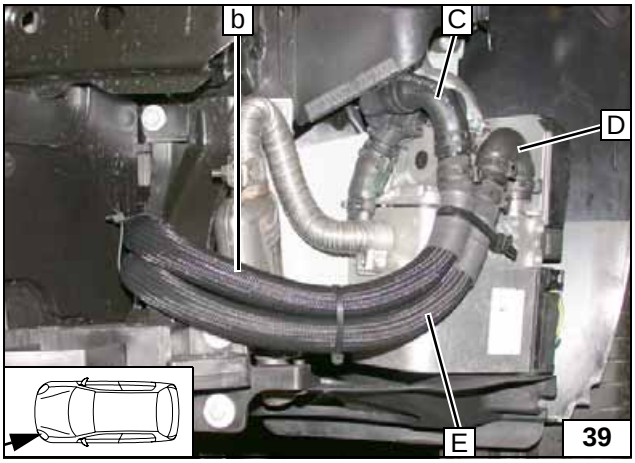
Push braided protection hoses onto hose **B** and **E** and cut to length.
Cut heat shrink plastic tubing to length.

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

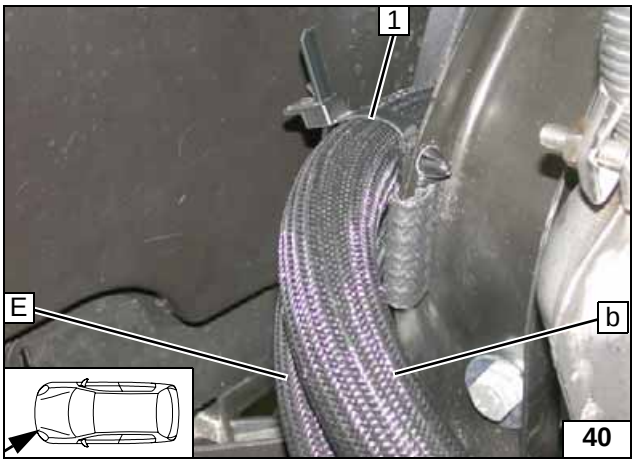
Preparing hoses



Connecting heater

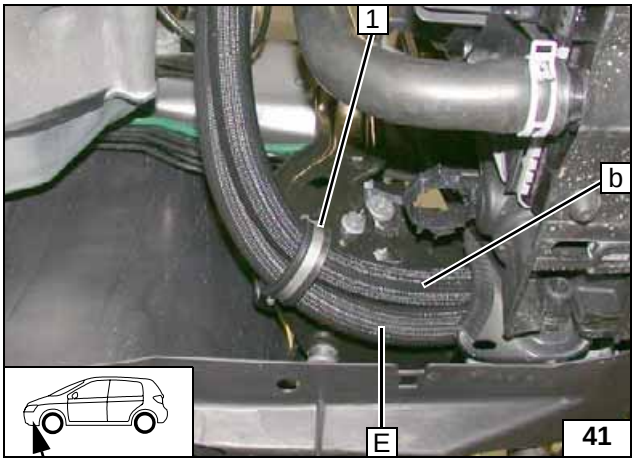


Routing in the engine compartment



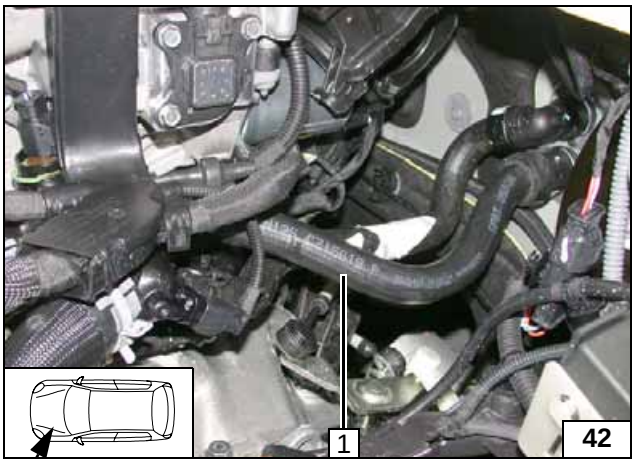
1 Close clip-type cable tie

Routing in the engine compartment



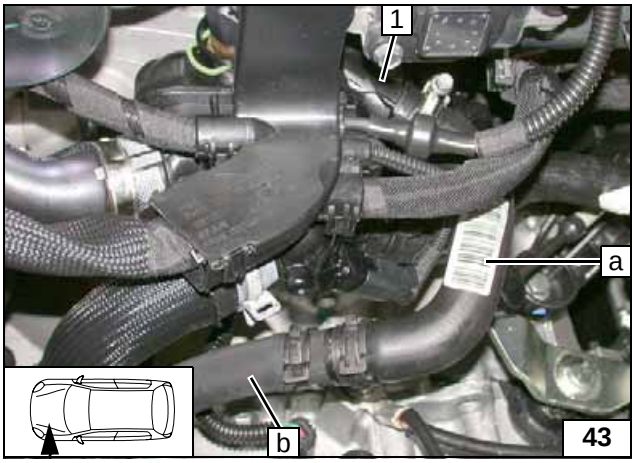
Route hose **B** and **E** through rubber-coated p-clamp **1**.

Routing in engine compartment



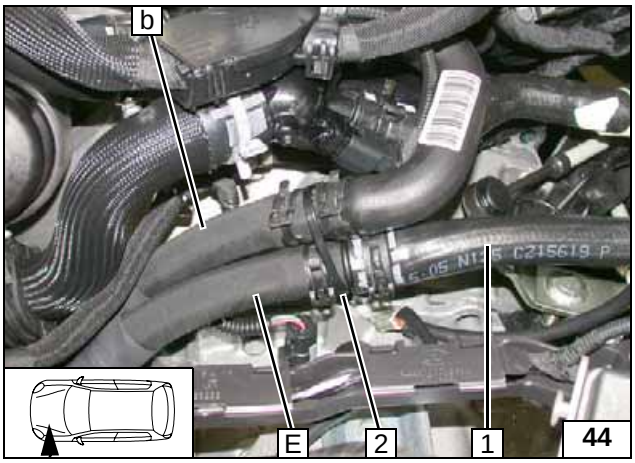
Pull out hose of engine outlet / heat exchanger inlet **1** from the neck of engine outlet! Spring clip will not be reused.

Cutting point



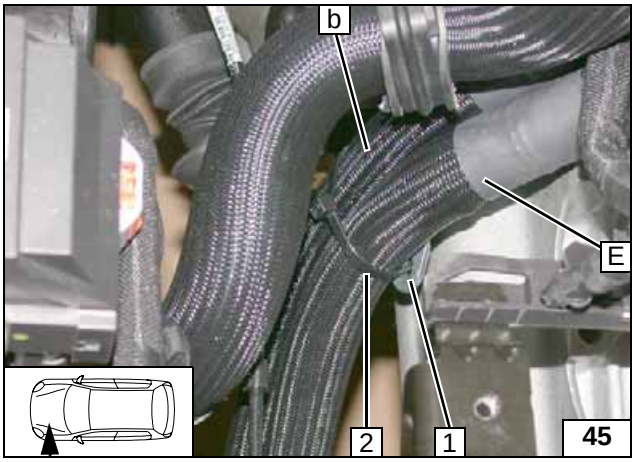
1 Connection piece for engine outlet

Connecting engine outlet



1 Hose on heat exchanger inlet
2 Cable tie

Connecting heat exchanger inlet



Aligning hoses. Fasten hoses **B** and **E** with cable tile **2** to perforated bracket **1**.
Ensure sufficient distance to neighbouring components.

Fastening hoses

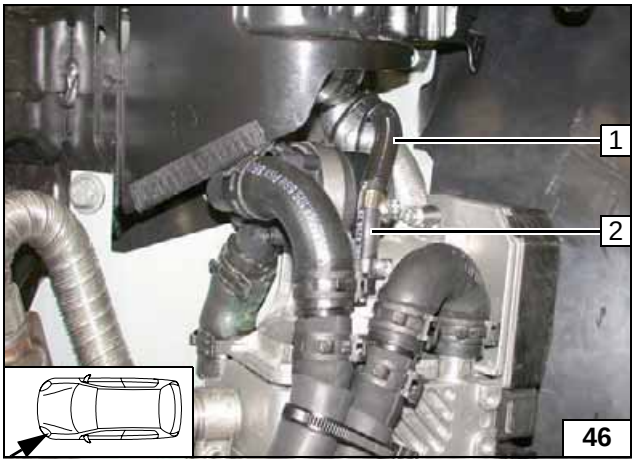
Fuel

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.

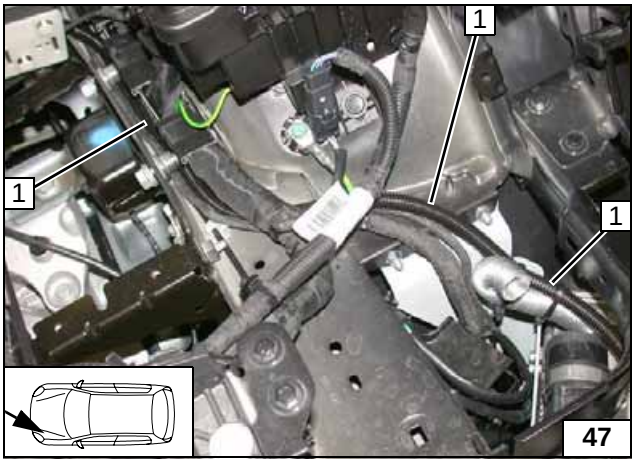
WARNING!
The fuel line and wiring harness are routed to the metering pump in as shown in the wiring harness routing diagram.



Pull fuel line into corrugated tube **1** and route to the engine compartment.

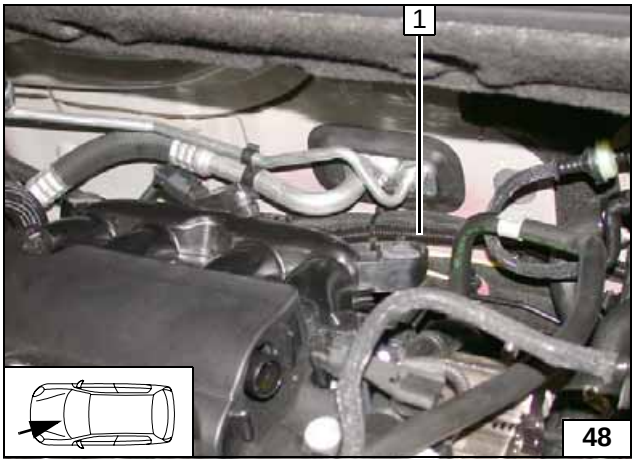
2 Hose section, 10 mm dia. clamp [2x]

Connecting heater



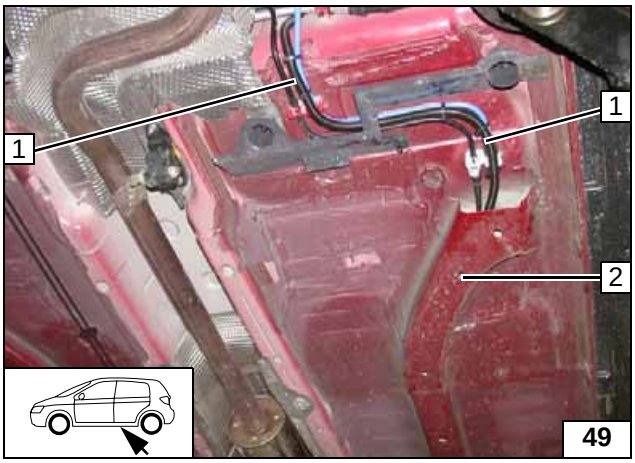
Route fuel line in corrugated tube **1** to the firewall

Routing line



Route fuel line and wiring harness of metering pump in corrugated tube **1** on the right vehicle side and further to the underbody!

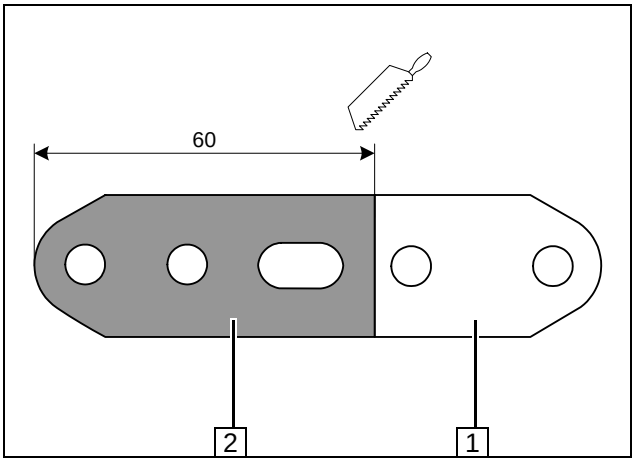
Installing lines



Route fuel line and wiring harness of metering pump in cable channel **2** along original vehicle lines to installation location of metering pump.

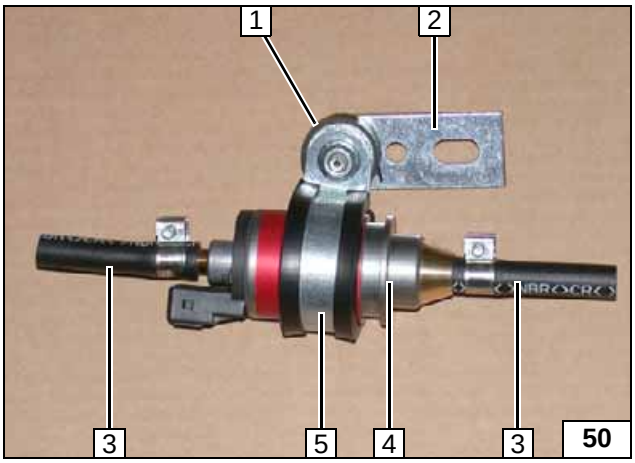
1 Fuel line and wiring harness of metering pump in corrugated tube

Installing lines



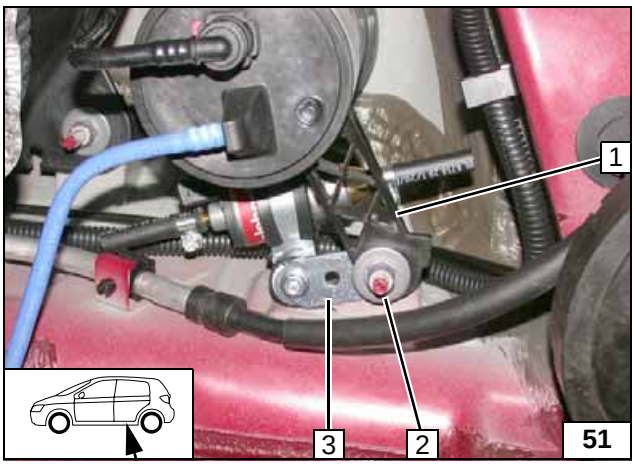
1 Discard section
2 Perforated bracket

Cutting perforated bracket to size



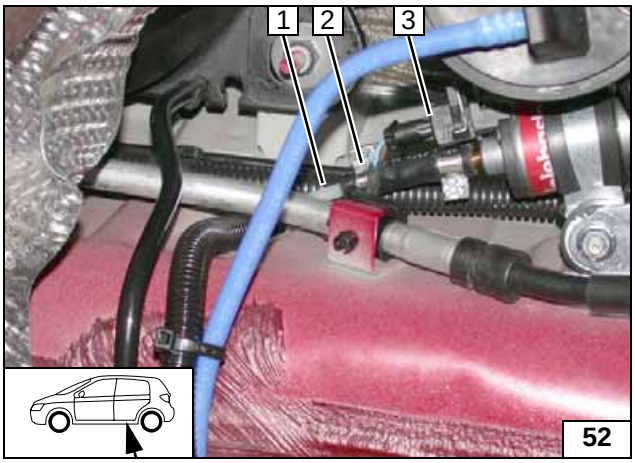
1 Silent block, flanged nut [2x]
2 Perforated bracket
3 Hose section, 10 mm dia. clamp [2x each]
4 Metering pump
5 Rubber-coated pipe clamp

Premounting metering pump



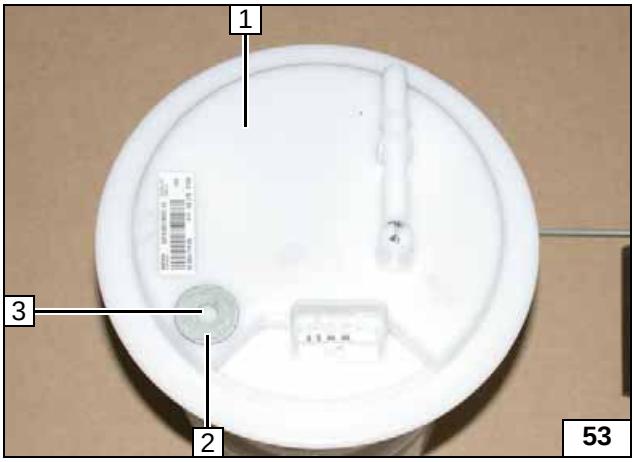
Remove original vehicle flanged nut **2**. Pull out bracket of activated charcoal filter **1** on one side. Mount perforated bracket **3** with pre-installed metering pump on original vehicle stud bolt. Reinstall all components.

Installing metering pump



1 Fule line of Heater
2 10 mm dia. clamp
3 Wiring harness of metering pump, connector mounted

Connecting metering pump



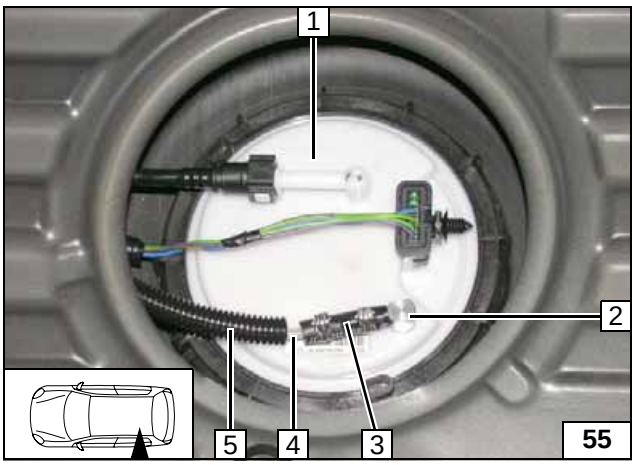
Remove fuel-tank sending unit **1** in accordance with manufacturer's specifications.

2 Large diameter washer dia. d_a = 21.6
3 Copy hole pattern, 6 mm dia. hole

Removing fuel

Shape fuel standpipe **1** according to template, cut to length and install.

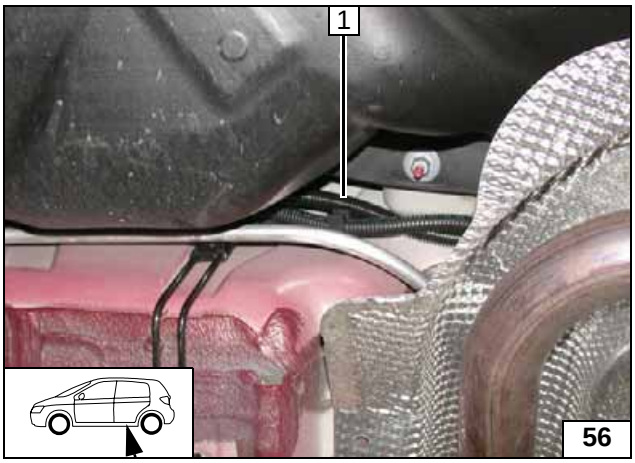
Installing fuel standpipe



Install fuel-tank sending unit **1** in accordance with manufacturer's specifications. Slide on corrugated tube **5** on to fuel line **4**.

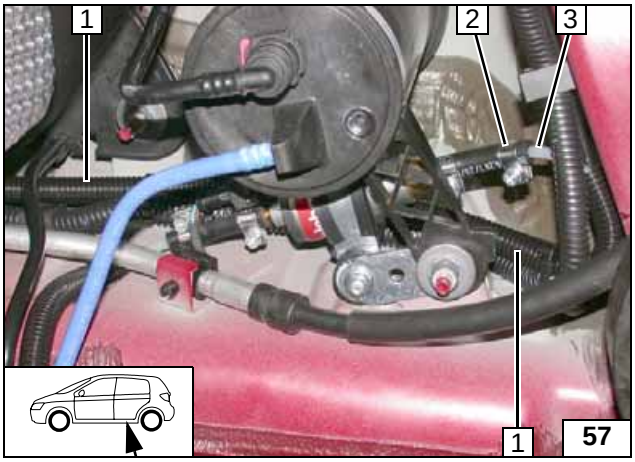
2 Fuel standpipe
3 Hose section, Caillau clamp 10 mm dia. [2x]

Connecting fuel line



Route fuel line of fuel tank standpipe in corrugated tube **1** to installation location of metering pump.

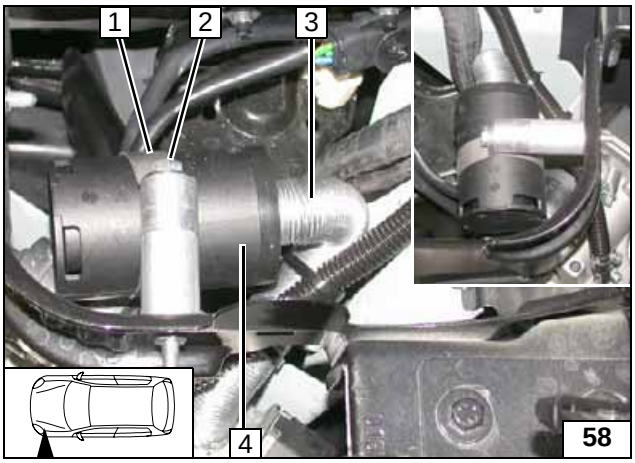
Routing line



Route fuel line of fuel tank standpipe in corrugated tube **1** to installation location of metering pump.
Check the position of the components; adjust if necessary. Check that they have free clearance.

2 10 mm dia. clamp
3 Fuel line of fuel standpipe

Connecting metering pump



Combustion air

Remove rubber coating of 48 mm dia. pipe clamp **1**.

2 M6x20 bolt, 20 mm shim, 30 mm shim, flanged nut, existing hole
3 Combustion air pipe
4 Muffler

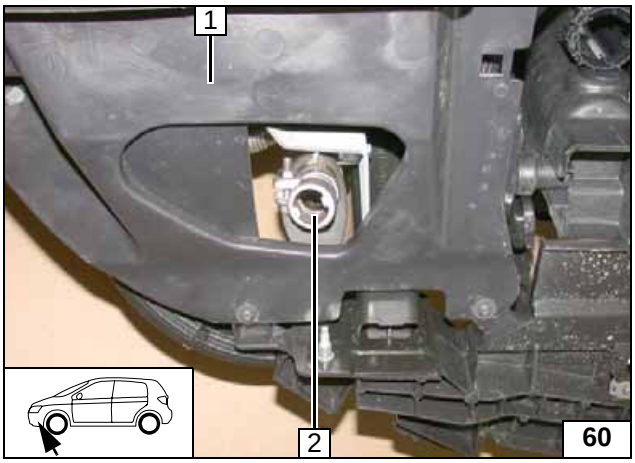
Final Work

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

Ensure sufficient distance to adjacent components; especially to fog light If necessary, shorten the tip of the adjusting screw of the fog light **1** !

Aligning components

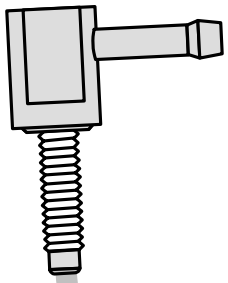


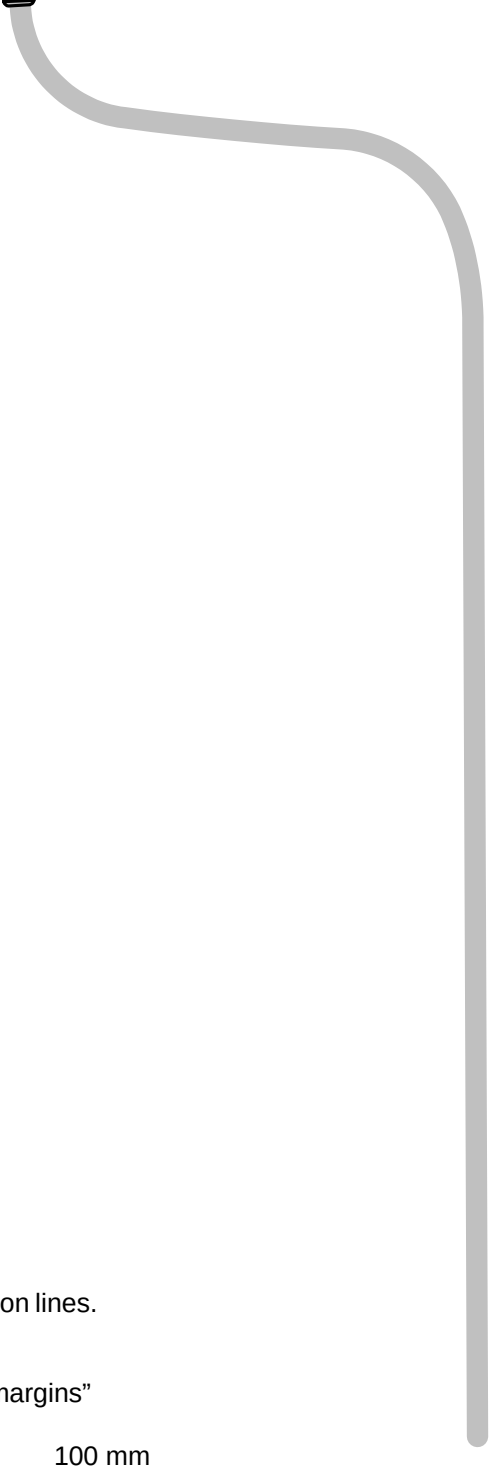
Align exhaust end section **2** flush on wheel well trim **1**.

Aligning exhaust end section

Webasto AG
Postfach 80
D-82132 Stockdorf / Germany
National Hotline: 01805 93 22 78
(14 Cent aus dem deutschen Festnetz)
Hotfax: 0395 5592 353
Hotmail: technikcenter@webasto.com
http://www.webasto.de

Template for Fuel Standpipe





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

Operating Instructions for End Customer

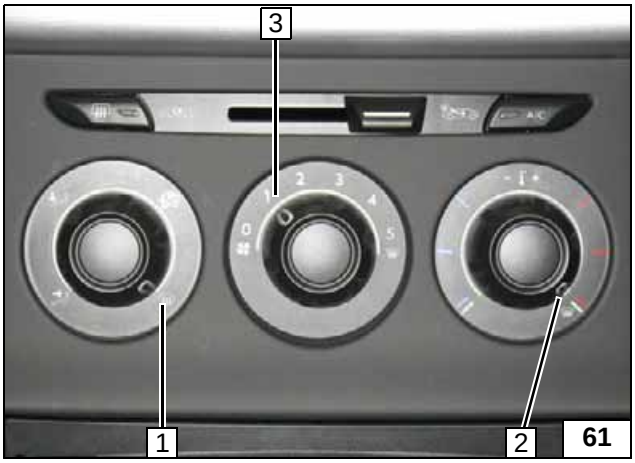
Please remove page and add to the vehicle operating instructions.

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.

In vehicles with passenger compartment monitoring this must be deactivated in addition to the vehicle settings for the heating operation .
Deactivation instructions can be taken from the operating instructions of the vehicle!

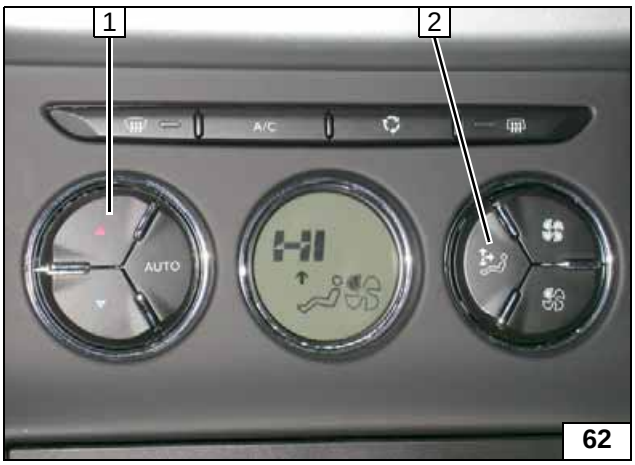
Before parking the vehicle, make the following settings:

Manual air conditioning



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

Automatic air-conditioning



1 Set temperature to "HI“
2 Air outlet on "upward"