

# Water Heater



**Thermo Top E Parking Heater**

  
00 0003

**Thermo Top C Parking Heater**

  
00 0002

**Thermo Top P Parking Heater**

  
00 0104

## Installation documentation

### Citroen C4 Picasso

Gasoline and Diesel  
from Model Year 2006  
Left-hand drive vehicle



#### **WARNING!**

Hazard warning:

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



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

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

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

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

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## Validity

Manufacturer	Model	Type	EG-BE No./ABE
Citroen	C4 Picasso	U	e2 * 2001 / 116 * 0345 * ...

Engine type	Engine model	Output in kW	Displacement in cm <sup>3</sup>
5FW	Gasoline	88	1598
6FY	Gasoline	92	1749
9 Hz	Diesel	80	1560
RHJ	Diesel	100	1997

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 <i>Thermo Top E / C / P</i>	See price list
1	Heater control	See price list
1	Installation kit for Citroen C4 Picasso Gasoline	1311819E
or		
1	Installation kit for Citroen C4 Picasso Diesel	1311846C

### Heater recommended for the respective vehicle class:

Vehicle	Heater
Compact car	Thermo Top E
Mid-size car, station wagon	Thermo Top C
Full-size car, van, offroader	Thermo Top P

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 C4 Picasso Gasoline and Diesel - for validity, see page 2 - from model year 2006 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

However, the stipulations in this "installation documentation" and "operating and maintenance instructions" for the *Thermo Top C/P/E* 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 using an IPCU, the settings specified in this document must be checked on the vehicle and adjusted if necessary, before installation.

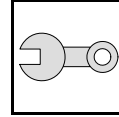
## Special Tools

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

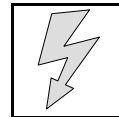
**Explanatory Notes on Document**

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.

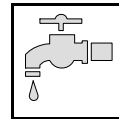
**Mechanical system**



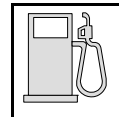
**Electrical system**



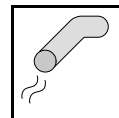
**Coolant circuit**



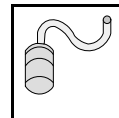
**Fuel**



**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.



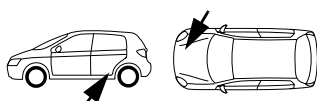
Specific risk of fire or explosion.



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!**

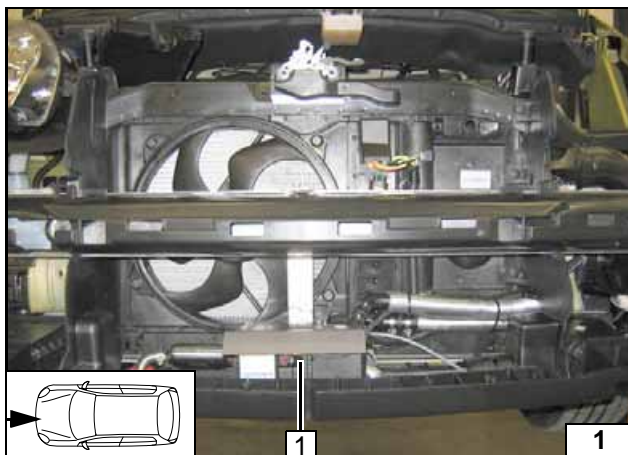
**Tightening torque of Ejet screws, Ejet studs = 10 Nm!**

**Preliminary Work**

**WARNING!**

- 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.
- Open the fuel tank cap and vent the fuel tank.
- Close the tank cap again.
- Remove the engine cover (depending on the vehicle equipment, if installed)
- Remove the air cleaner box with the intake hose and resonator (depending on the vehicle equipment, if installed)
- Completely remove the battery and the battery carrier.
- Remove the exhaust system (only on gasoline vehicles).
- Remove the tank according to the manufacturer's specifications (only on gasoline vehicles)
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Remove the underride protection
- Remove the lower instrument panel trim on the driver's and front passenger side
- Remove the glove compartment.

Remove page 36 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



**Heater installation location**

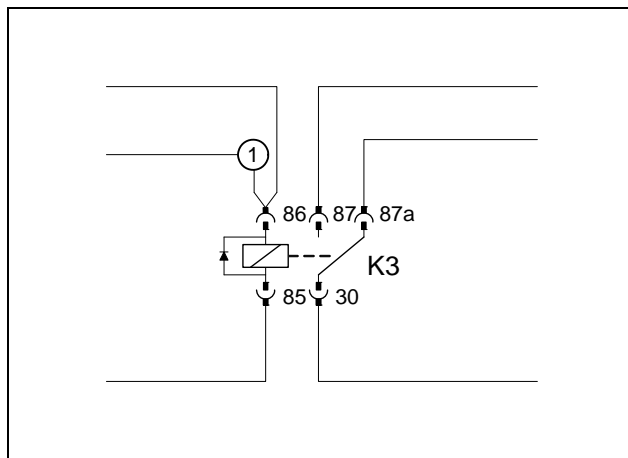
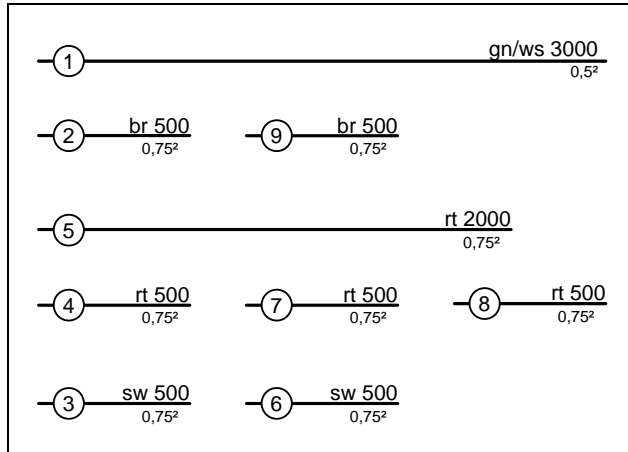
1 Heater

**Installation location**

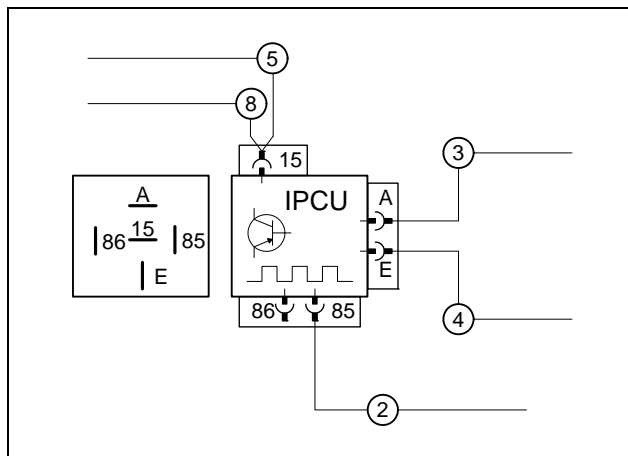


## Preparing electrical system

Wires **6** to **9** only with automatic air-conditioning



Produce connections as shown in wiring diagram. Pull wire section **1** into protective sleeving provided and route together with wiring harness of digital timer and fan controller into passenger compartment.



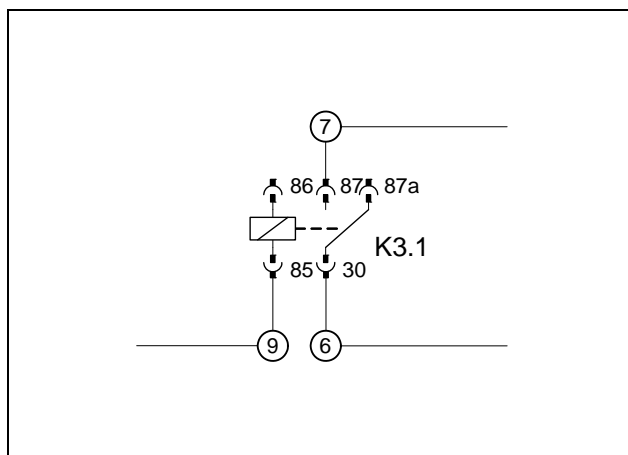
Connect wires to IPCU (IPCU view on contact side). Pull wire **5** into the protective sleeving provided and route to OBD socket outlet. Wire **8** only with automatic air-conditioning. The IPCU is pre-programmed with the following settings:

Duty cycle: 46%    Frequency: 400 Hz  
Voltage: 10 V    Function: Low-side

The fan level corresponding to 2 - 3 on the vehicle and the current intake of the fan motor is to be checked in the function control; correct the settings if necessary

## Automatic air-conditioning

Produce connections as shown in wiring diagram.



**Cutting wires to length**



**Preparing K3 relay**



**Preassembling IPCU**



**Preparing additional relay K3.1**

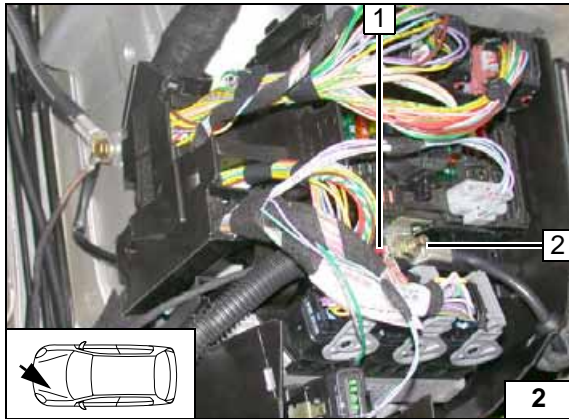


## Electrical system

### Connecting positive wire

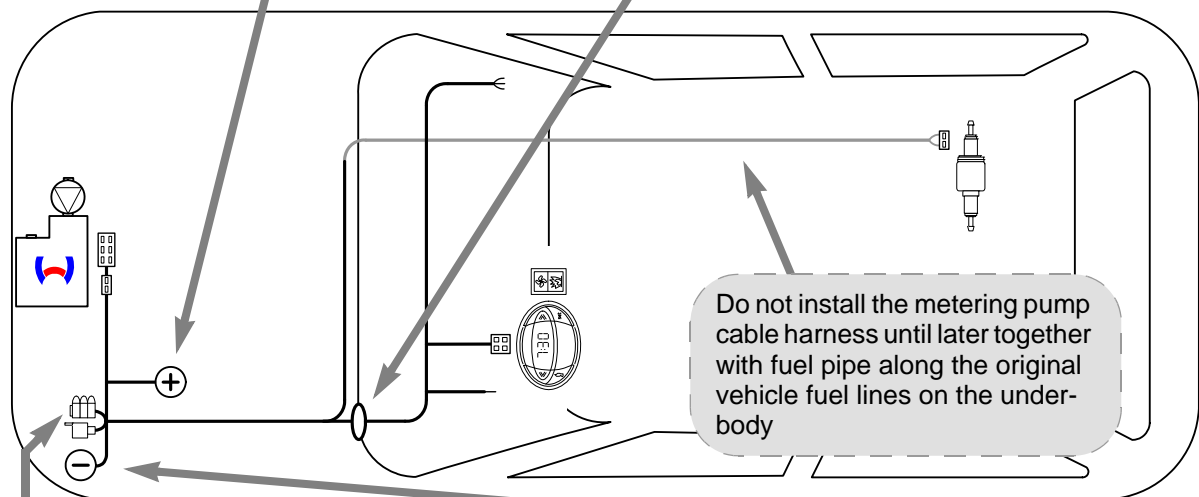
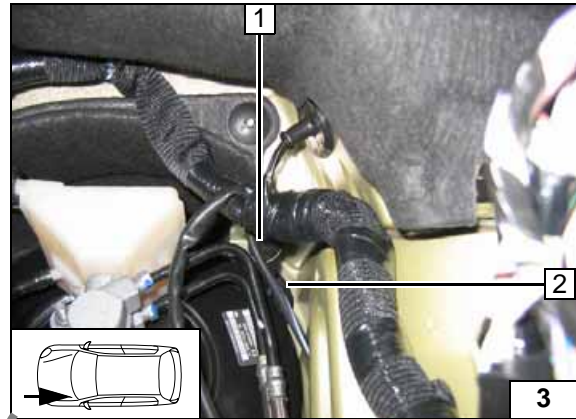
Before installing, crimp 8 mm dia. cable lug onto positive wire.

- 1 Red (rt) wire
- 2 Original vehicle positive support point

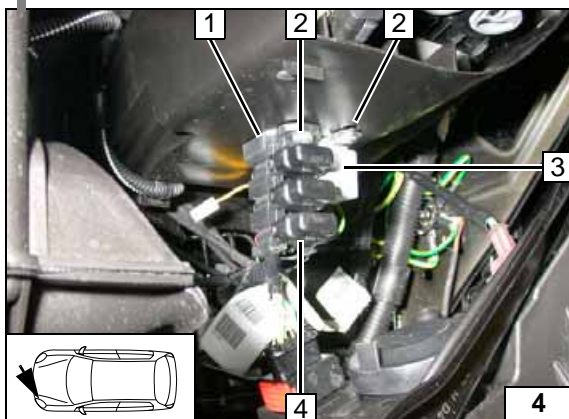


### Wiring harness pass through

Route wiring harnesses (digital timer, fan controller and green/white (gn/ws wire in protective sleeving) on original vehicle wiring harness 1 to protective rubber plug 2 and route into passenger compartment.

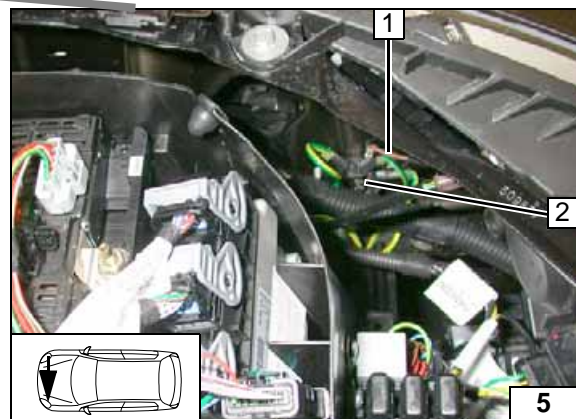


Wiring harness installation diagram



### Fuse holder, K3 relay

- 1 Retaining plate for fuse holder
- 2 4 mm dia. hole, 5.5x13 self-tapping screw; plastic nut [2x each]
- 3 K3 relay
- 4 Fuse holder

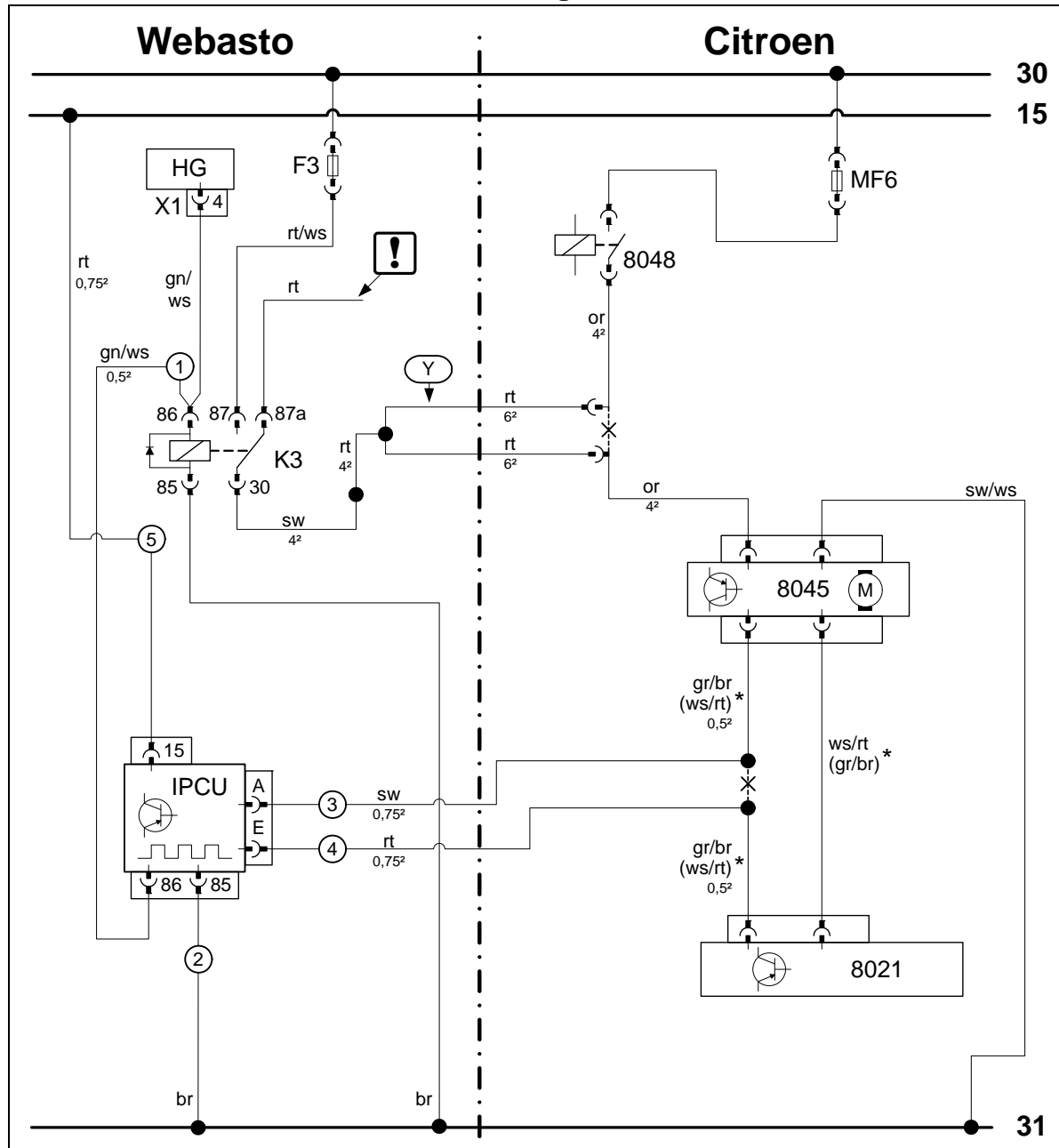


### Connecting ground wire

- 1 Brown (br) wire
- 2 Original vehicle ground support point



Fan controller for manual air conditioning

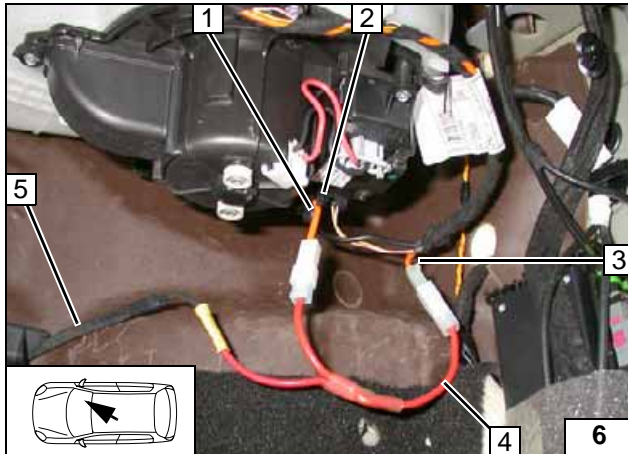
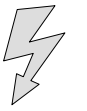


Wiring diagram for manual air conditioning

Webasto components		Vehicle components		Colours and symbols	
HG	TT-C/E/P heater	8021	Air-conditioning control unit	rt	red
X1	6-pin heater connector	8045	Fan module	ws	white
F3	25 A fuse	8048	Fan relay	sw	black
K3	Fan relay	MF6	Fuse	br	brown
IPCU	Pulse width modulator			gn	green
Y	Wiring adapter			bl	blue
				or	orange
				gr	gray
		*	The values specified in brackets are valid from Model Year 2010!	!	Press out wire end, insulate and tie back
				X	Cutting point
				Wiring colours may vary.	

Legends



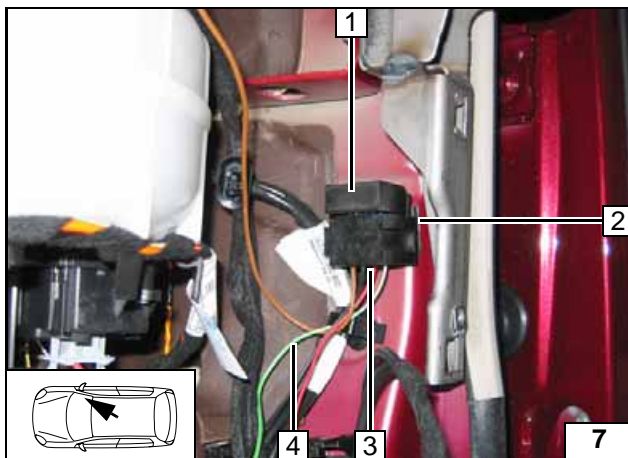


Produce connections as shown in wiring diagram.  
The control takes place on connector 2 from fan module - connector, depending on the vehicle

- 1 wire or connector of fan controller
- 3 Wire or fan relay
- 4 Y-adaptor
- 5 Black (sw) wire from K3/30



**Connection to fan module**

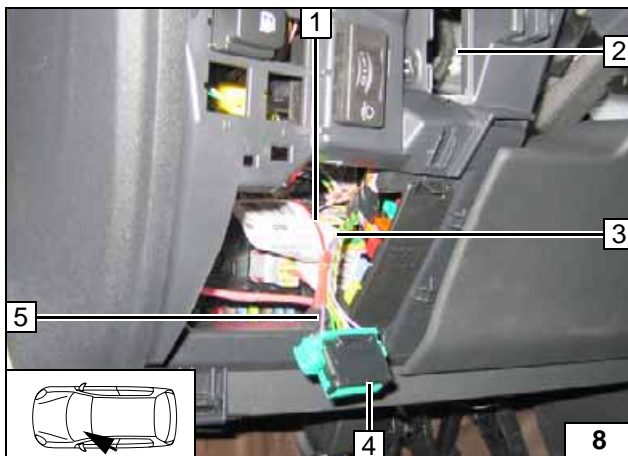


Before installing, connect green/white (gn/ws) wire 4 from K3/86 to base of IPCU 3 terminal 86.

- 1 IPCU
- 2 Double-sided adhesive tape



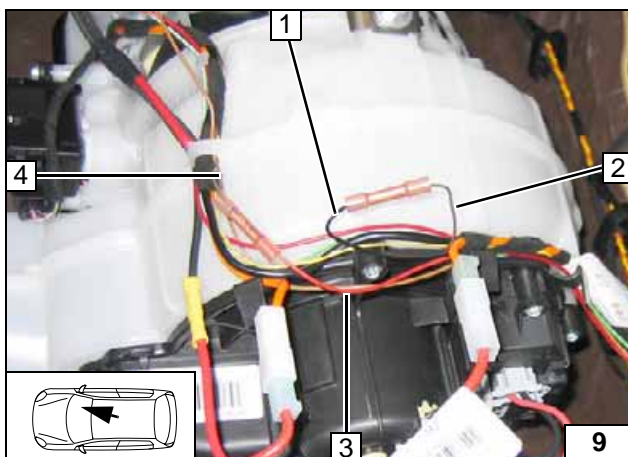
**Installing base from IPCU**



Control changeover of IPCU is carried out on 16-pin OBD socket outlet 4.  
Produce connections as shown in wiring diagram.

- 1 Red (rt) wire IPCU/15
- 2 Socket of OBD socket outlet
- 3 Pink (pk) wire (terminal 15)
- 5 Pink (pk) wire of OBD socket outlet, Pin 1

**Power supply of IPCU**



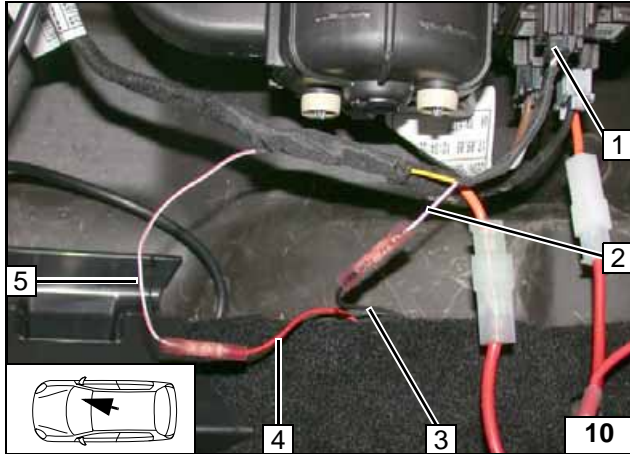
### Model year up to 2009

Produce connections as shown in wiring diagram.  
The control takes place before the fan controller connector.

- 1 Black (sw) wire of IPCU/A
- 2 Green/brown (gr/br) wire or connector of fan controller
- 3 Red (rt) wire of IPCU/E
- 4 Green/brown (gr/br) wire of connector of A/C control panel



**Connecting fan controller**



**Model year from 2010**

Produce connections as shown in wiring diagram.

The control takes place at connector 1 from fan controller.

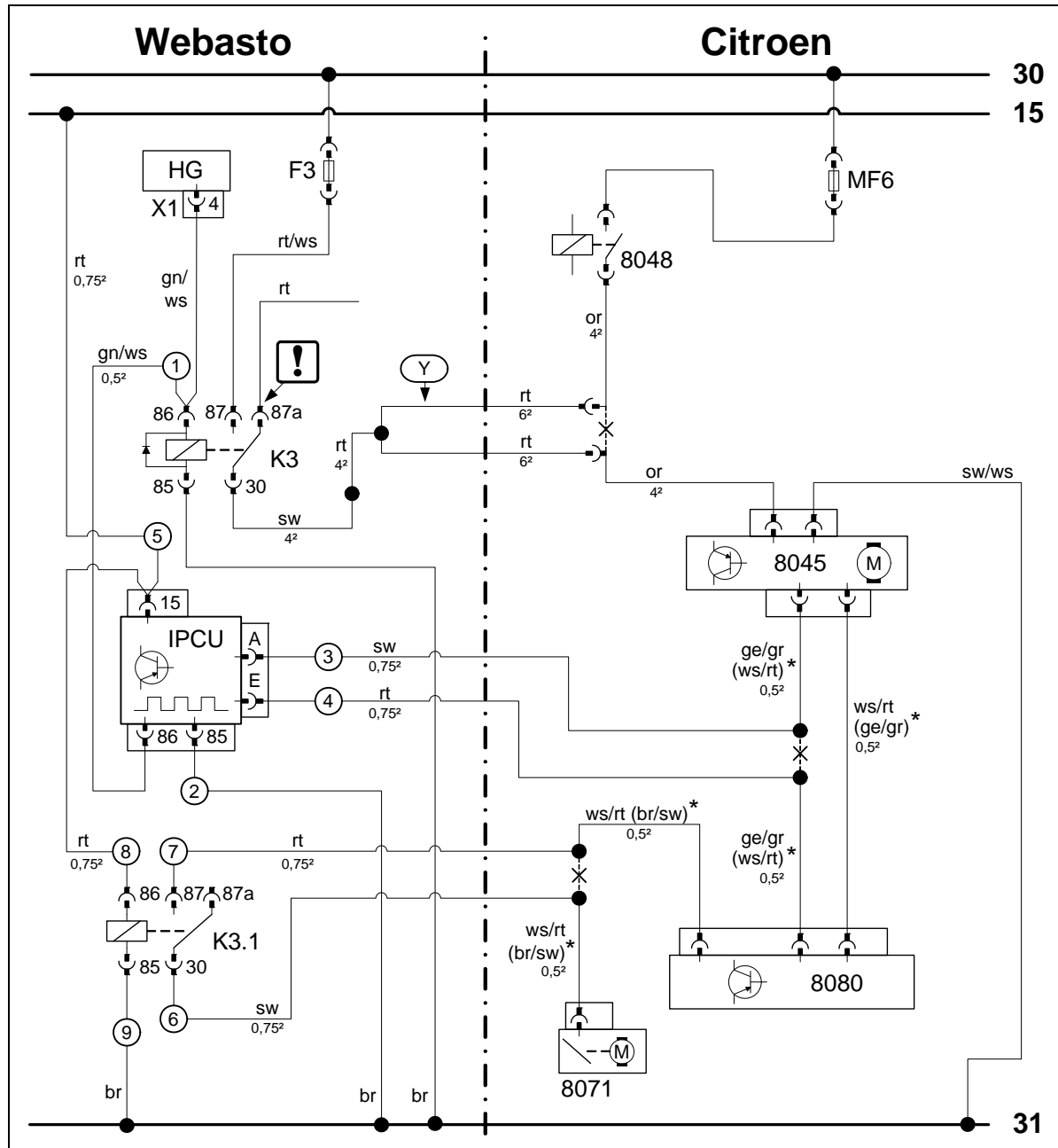
- 2 White-red (ws/rt) wire of fan motor connector
- 3 Black (sw) wire of IPCU/A
- 4 Red (rt) wire of IPCU/E
- 5 White-red (ws/rt) wire of A/C control panel



**Connecting fan controller**



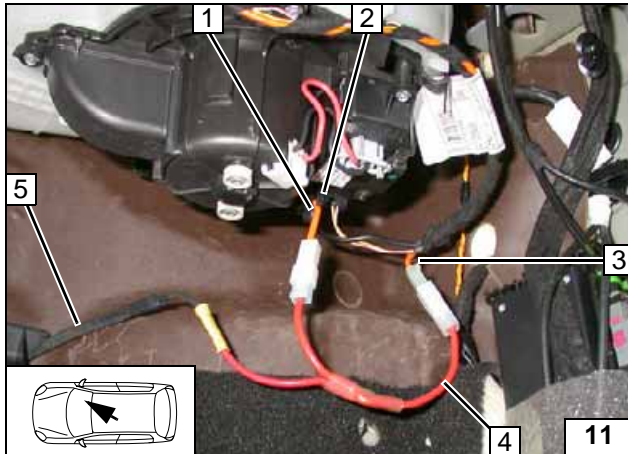
Automatic air-conditioning fan controller



Air-conditioning circuit diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-C/E/P heater	8080	Air-conditioning control unit	rt	red
X1	6-pin heater connector	8071	Air distribution	ws	white
F3	25 A fuse	8048	Fan relay	sw	black
K3	Fan relay	8045	Fan module	br	brown
IPCU	Pulse width modulator	MF6	Fuse	gn	green
Y	Wiring adapter			bl	blue
K3.1	Additional relay			ge	yellow
				gr	gray
				or	orange
		*	The values specified in brackets are valid from Model Year 2010!	!	Press out wire end, insulate and tie back
				X	Cutting point
					Wiring colours may vary.

Legends



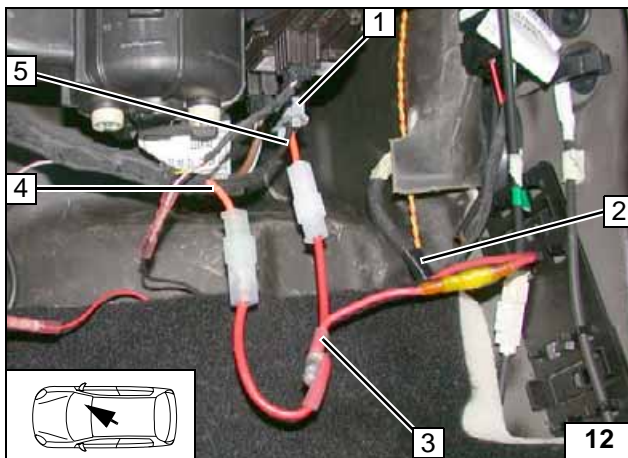
## Model year up to 2009

Produce connections as shown in wiring diagram.  
The control takes place at connector 2 from fan controller.

- 1 wire or connector of fan controller
- 3 Wire or fan relay
- 4 Y-adaptor
- 5 Black (sw) wire from K3/30



**Connec-  
tion to fan  
module**



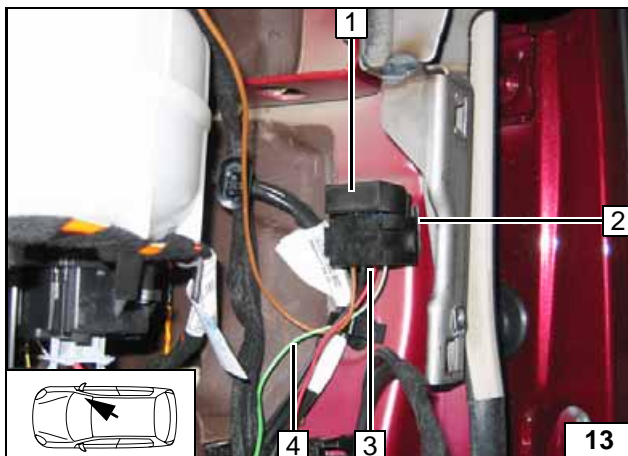
## Model year from 2010

The fan motor is controlled on connector 1 from fan controller.  
Produce connections as shown in wiring diagram.

- 2 Black (sw) wire from K3/30
- 3 Y-adaptor
- 4 Wire or fan relay
- 5 wire or connector of fan controller



**Connec-  
tion to fan  
controller**



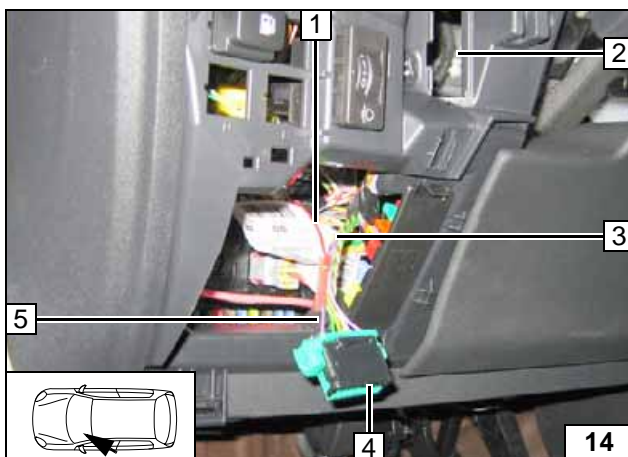
## All vehicles

Before installing, connect green/white (gn/ws) wire 4 from K3/86 to base of IPCU 3 terminal 86.

- 1 IPCU
- 2 Double-sided adhesive tape



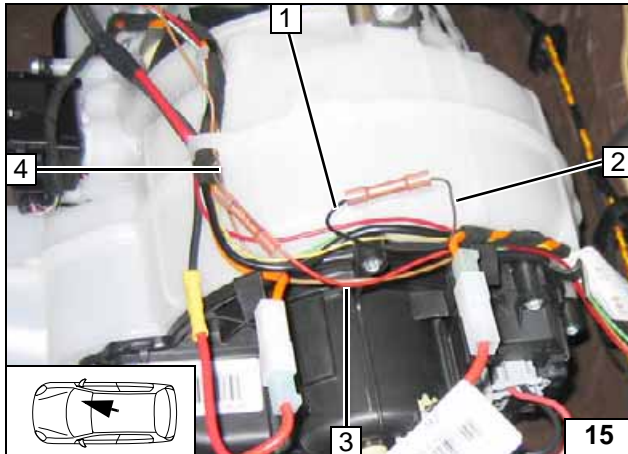
**Installing  
base from  
IPCU**



Control changeover of IPCU is carried out on 16-pin OBD socket outlet 4.  
Produce connections as shown in wiring diagram.

- 1 Red (rt) wire IPCU/15
- 2 Socket of OBD socket outlet
- 3 Pink (pk) wire (terminal 15)
- 5 Pink (pk) wire of OBD socket outlet, Pin 1

**Power sup-  
ply of IPCU**



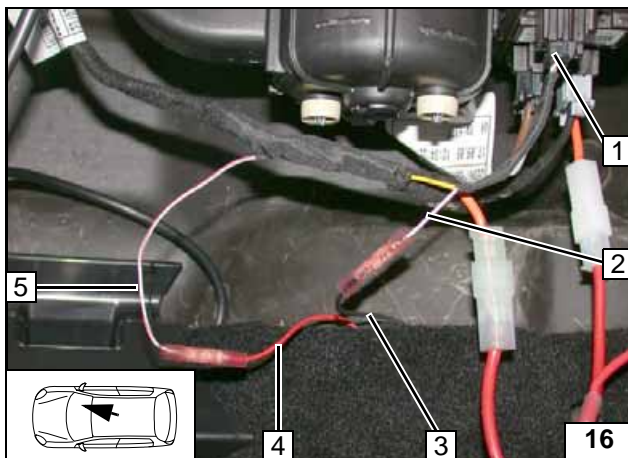
## Model year up to 2009

Produce connections as shown in wiring diagram.  
The control takes place before the fan controller connector.

- 1 Black (sw) wire of IPCU/A
- 2 Yellow/gray (ge/gr) wire on connector of fan controller
- 3 Red (rt) wire of IPCU/E
- 4 Yellow/gray (ge/gr) wire on connector of A/C control panel



**Connect-  
ing fan  
controller**



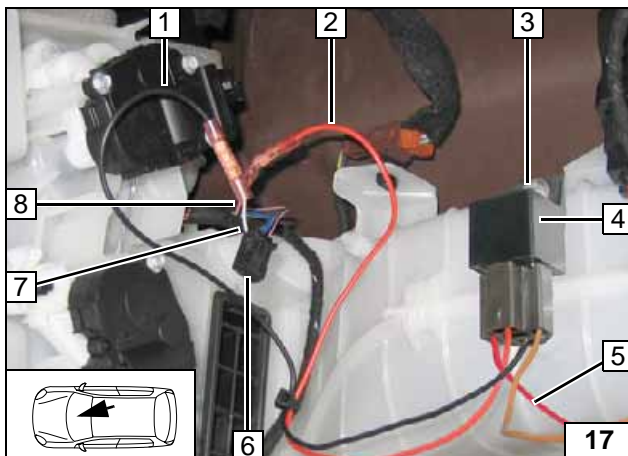
## Model year from 2010

The control takes place at connector 1 from fan controller.  
Produce connections as shown in wiring diagram.

- 2 White-red (ws/rt) wire of fan motor connector
- 3 Black (sw) wire of IPCU/A
- 4 Red (rt) wire of IPCU/E
- 5 White-red (ws/rt) wire of A/C control panel



**Connect-  
ing fan  
controller**



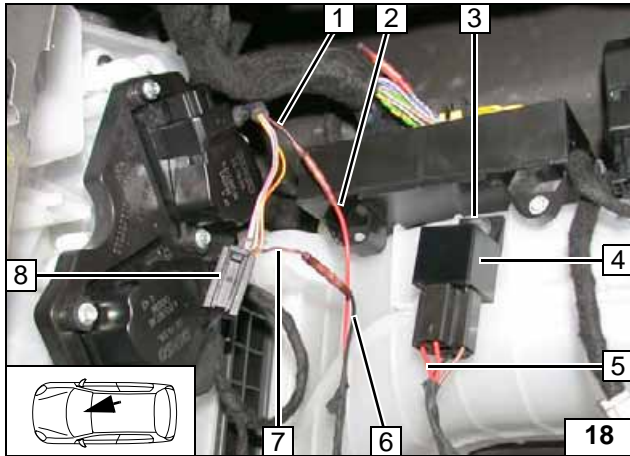
## Model year up to 2009

Connect red (rt) wire 5 of IPCU/15 to K3.1/86 according to wiring diagram.  
Control changeover of air distribution is carried out at connector 6 from flap motor.  
Produce connections as shown in wiring diagram.

- 1 Black (sw) wire K3.1/30
- 2 Red (rt) wire to K3.1/87
- 3 Self-tapping screw on existing hole
- 4 K3.1 relay
- 7 White-red (ws/rt) wire of flap motor connector
- 8 White-red (ws/rt) wire of A/C control panel



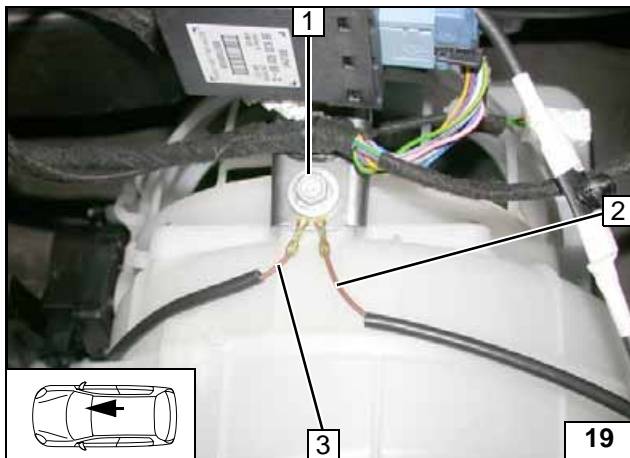
**Installing  
K3.1 relay,  
connect-  
ing air dis-  
tribution**



**Model year from 2010**

Connect red (rt) wire **5** of IPCU/15 to K3.1/86 according to wiring diagram. Control changeover of air distribution is carried out at connector **8** from flap motor. Produce connections as shown in wiring diagram.

- 1 Brown/black (br/sw) wire of A/C control panel connector
- 2 Red (rt) wire to K3.1/87
- 3 Self-tapping screw on existing hole
- 4 K3.1 relay
- 6 Black (sw) wire K3.1/30
- 7 Brown/black (br/sw) wire of A/C flap motor connector



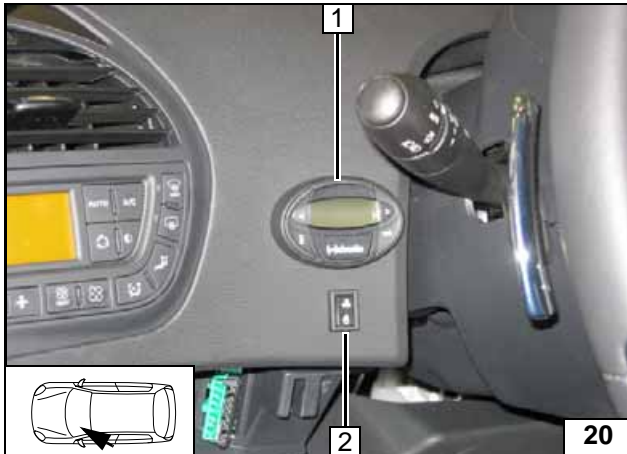
**All vehicles**

- 1 Original vehicle bolt
- 2 Brown (br) wire of IPCU/85, 6 mm dia cable lug
- 3 Brown (br) wire of K3.1/85, 6 mm dia cable lug



**Installing K3.1 relay, connecting air distribution**

**Ground connection K3.1 and IPCU**



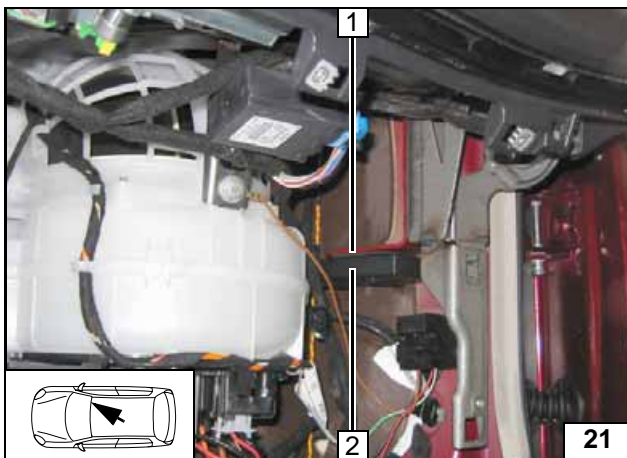
**Digital timer, summer/winter switch option**

Installation location shown is a recommendation. Agree upon with final customer before installing.

- 1 Digital timer
- 2 12 mm dia. hole, summer/winter switch



**Installing digital timer**

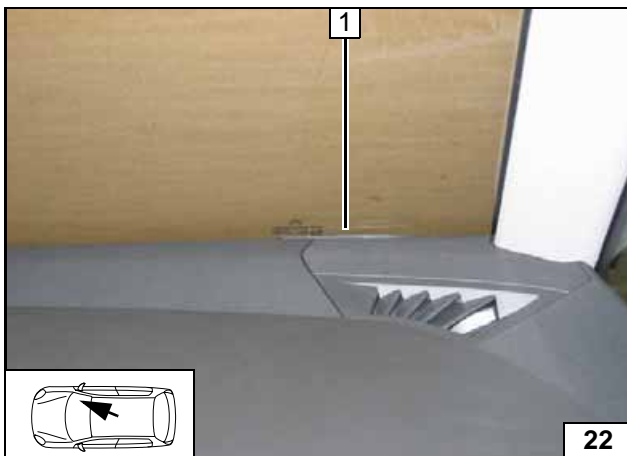


**Remote option (Telestart)**

- 1 Double-sided adhesive tape
- 2 Receiver

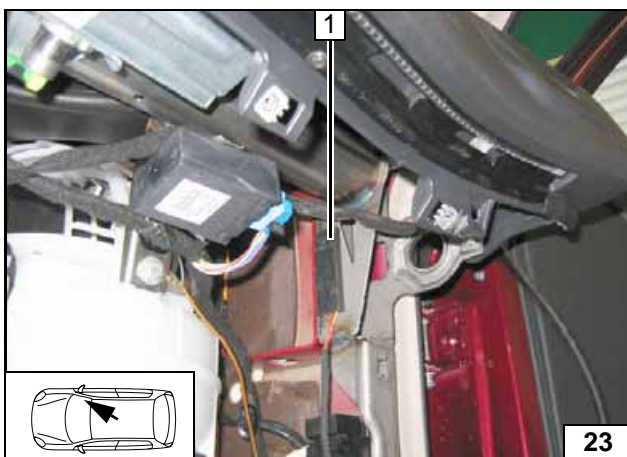


**Installing receiver**



- 1 Antenna

**Installing antenna**

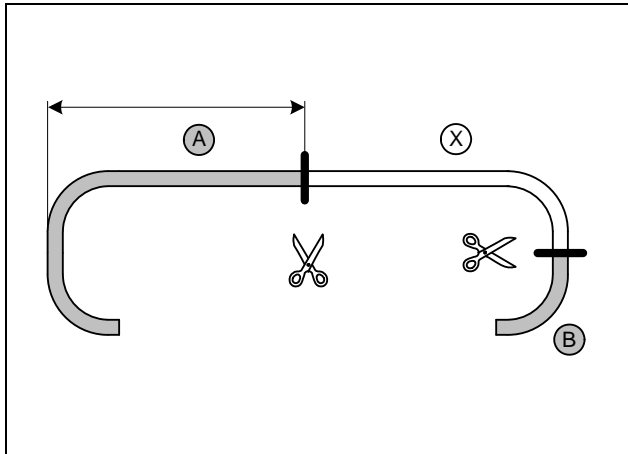
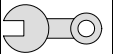


**Temperature sensor only for T100 HTM**

- 1 Fasten temperature sensor with adhesive tape



**Installing temperature sensor**



**Preparing heater**

**Gasoline**  
a = 1,240 mm

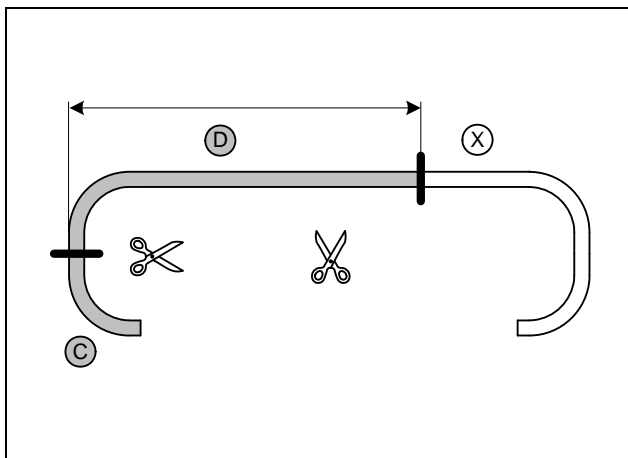
**1.6l diesel**  
a = 1,100 mm

**2.0l diesel**  
a = 1,200 mm

Discard section **X**



**Cutting hoses to length**



**Gasoline**  
d = 1,240 mm

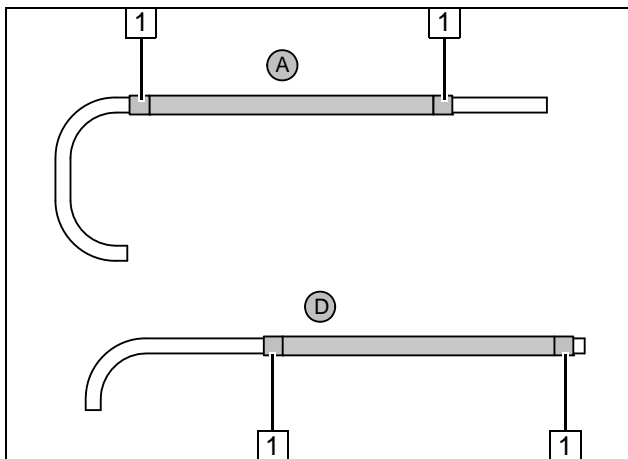
**1.6l diesel**  
d = 1,180 mm

**2.0l diesel**  
d = 1200 mm

Discard section **X**



**Cutting hoses to length**

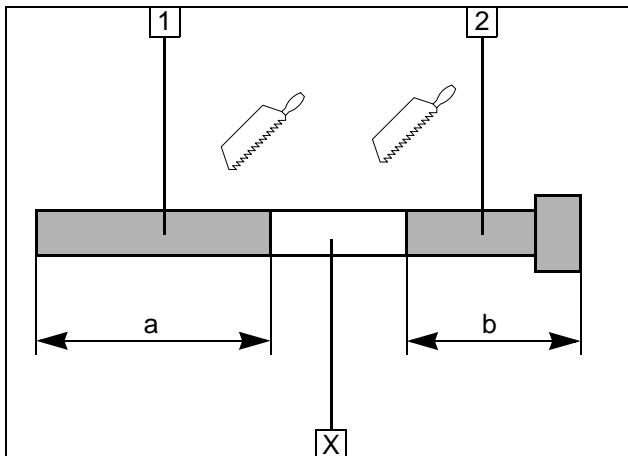


Push braided protection hoses onto hose **A** and **D** and cut to length.  
Cut heat shrink plastic tubing to length and shrink to size.

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



**Preparing hoses**



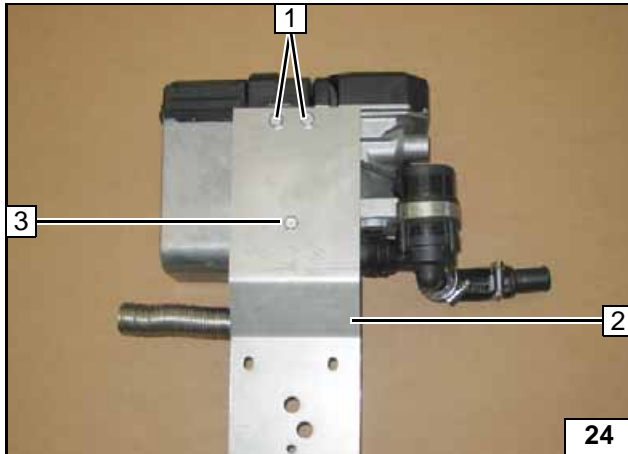
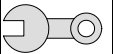
**1** Exhaust pipe  
a = 120

**2** Exhaust end section  
b = 110

Discard section **X**

**Preparing exhaust pipe**



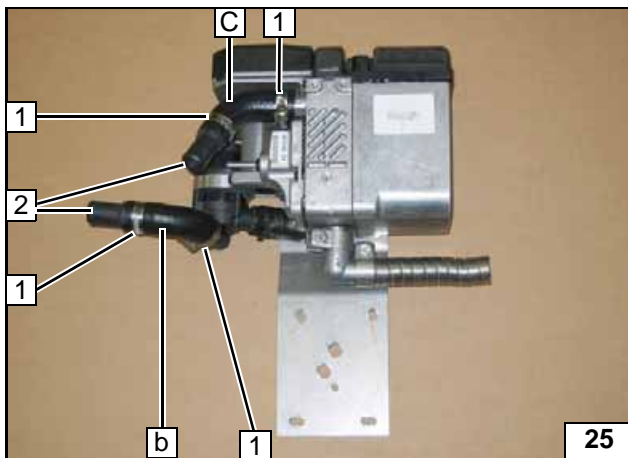


Insert two washers at position 3 between bracket 2 and heater 1.

- 1 E-jot screw [2x]
- 3 E-jot screw, washer [2x]

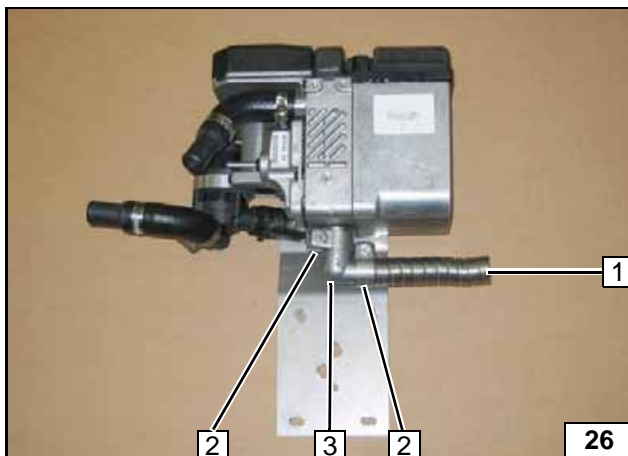


**Preassembling bracket**



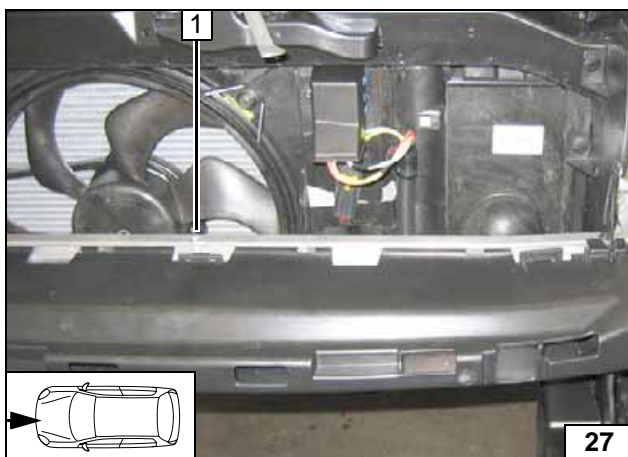
- 1 Hose clamp [4x]
- 2 20x20 connecting pipe [2x]

**Premounting coolant hoses**



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

**Premounting exhaust system**



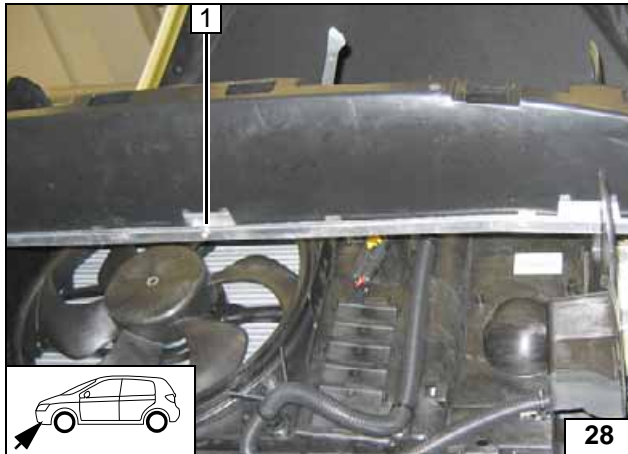
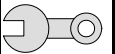
**Preparing installation location**

Hole at the centre of the bumper.

- 1 Drill 9.1 mm dia. hole; rivet nut



**Mounting rivet nut**

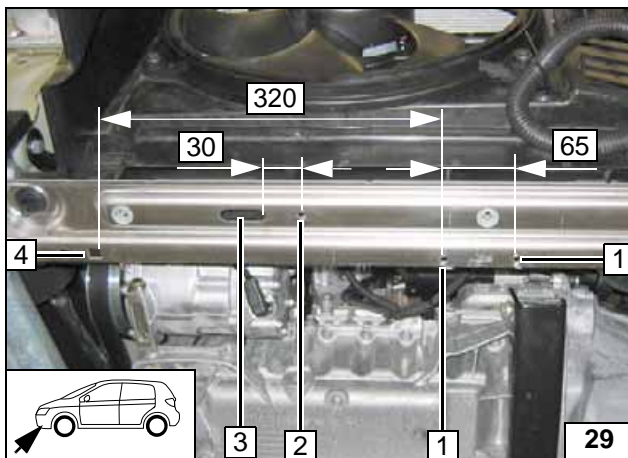


Hole at the centre of the bumper.

- 1 Drill 9.1 mm dia. hole; rivet nut



**Mounting rivet nut**

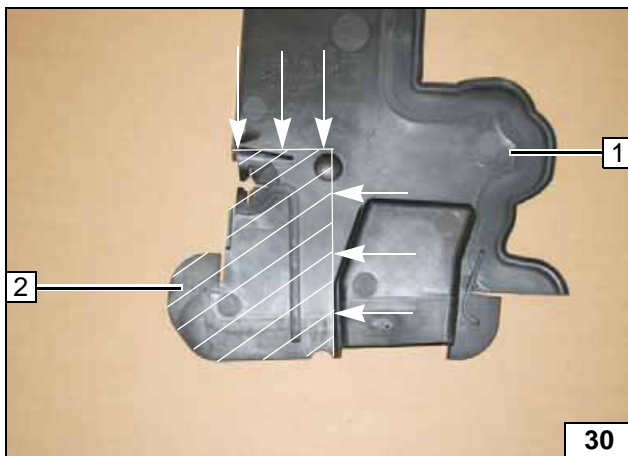


Rectangular recess at Position 4, recess for oblong hole at Position 3!

- 1 7 mm dia. hole [2x] (centered from bar)
- 2 7 mm dia. hole



**Holes in the radiator cross member**

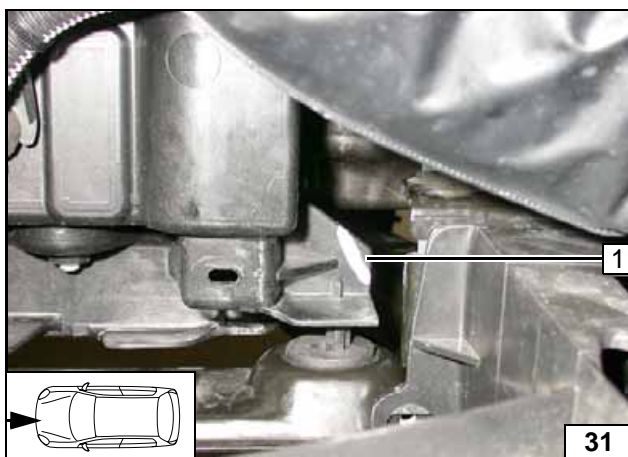


Cut away left partition wall 1 at markings.

- 2 Discard section



**Cutting out partition wall**

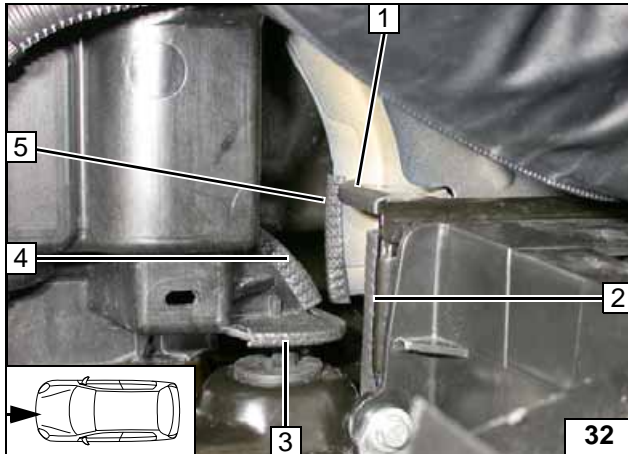
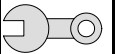


2.0l gasoline

Cut away edge 1 at marking and discard.



**Cutting away edge on radiator cross member**

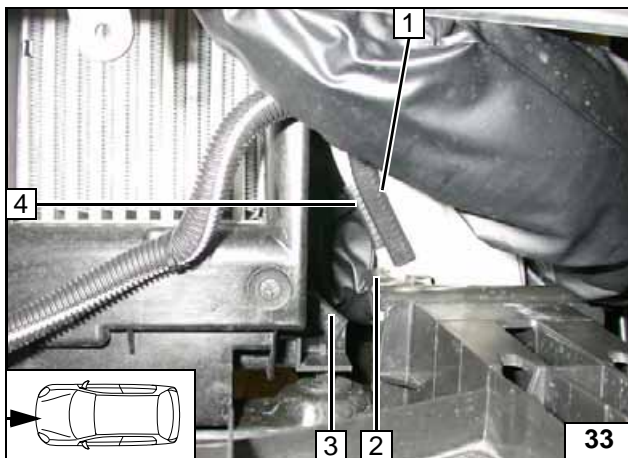


Cut 5 consecutive 500 mm ends from edge protection provided and install.

- 1 50 mm edge protection
- 2 70 mm edge protection
- 3 130 mm edge protection
- 4 60 mm edge protection
- 5 60 mm edge protection



**Installing edge protection**



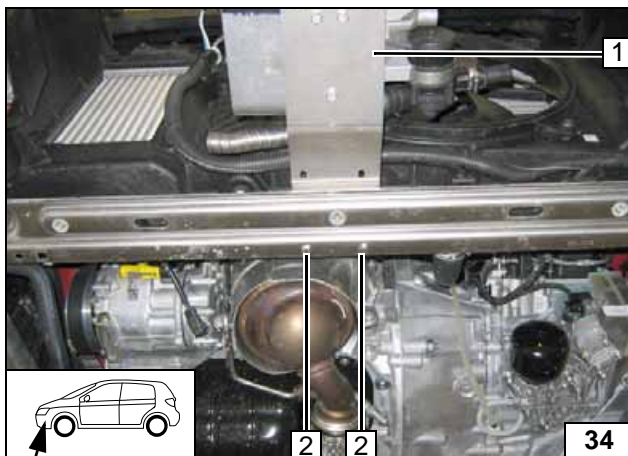
**All vehicles except 2.0l Gasoline**

Cut 4 consecutive 500 mm ends from edge protection provided and install.

- 1 60 mm edge protection
- 2 40 mm edge protection
- 3 40 mm edge protection
- 4 40 mm edge protection



**Installing edge protection**



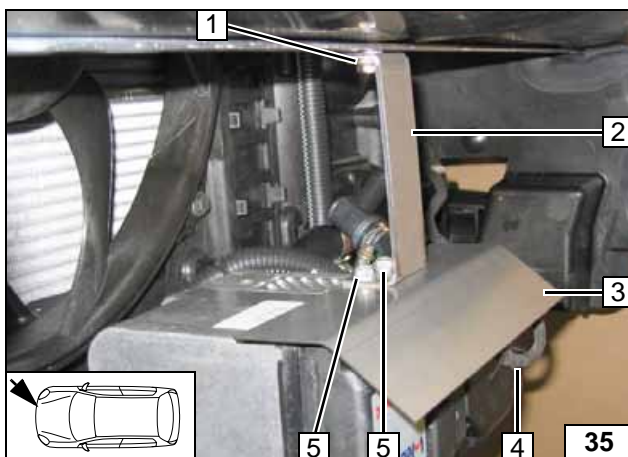
**Installing heater**

Install one shim 10 each at position 2 between bracket and radiator cross member.

- 1 Preassembled heater
- 2 M6x25 bolt, flanged nut [2x each]



**Installing heater**

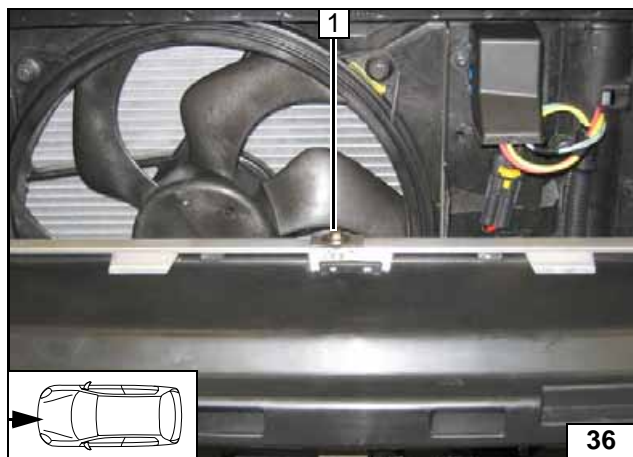
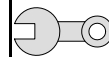


Before installing wind deflector plate 3, mount wiring harness of heater 4.

- 1 Loosely mount M6x20 bolt, spring lock-washer and large diameter washer
- 2 Strut
- 5 Loosely mount E-jot screw [2x]



**Installing strut**



Tighten all connections following installation.

- 1 M6x20 bolt, spring lockwasher, large diameter washer



**Installing  
strut**



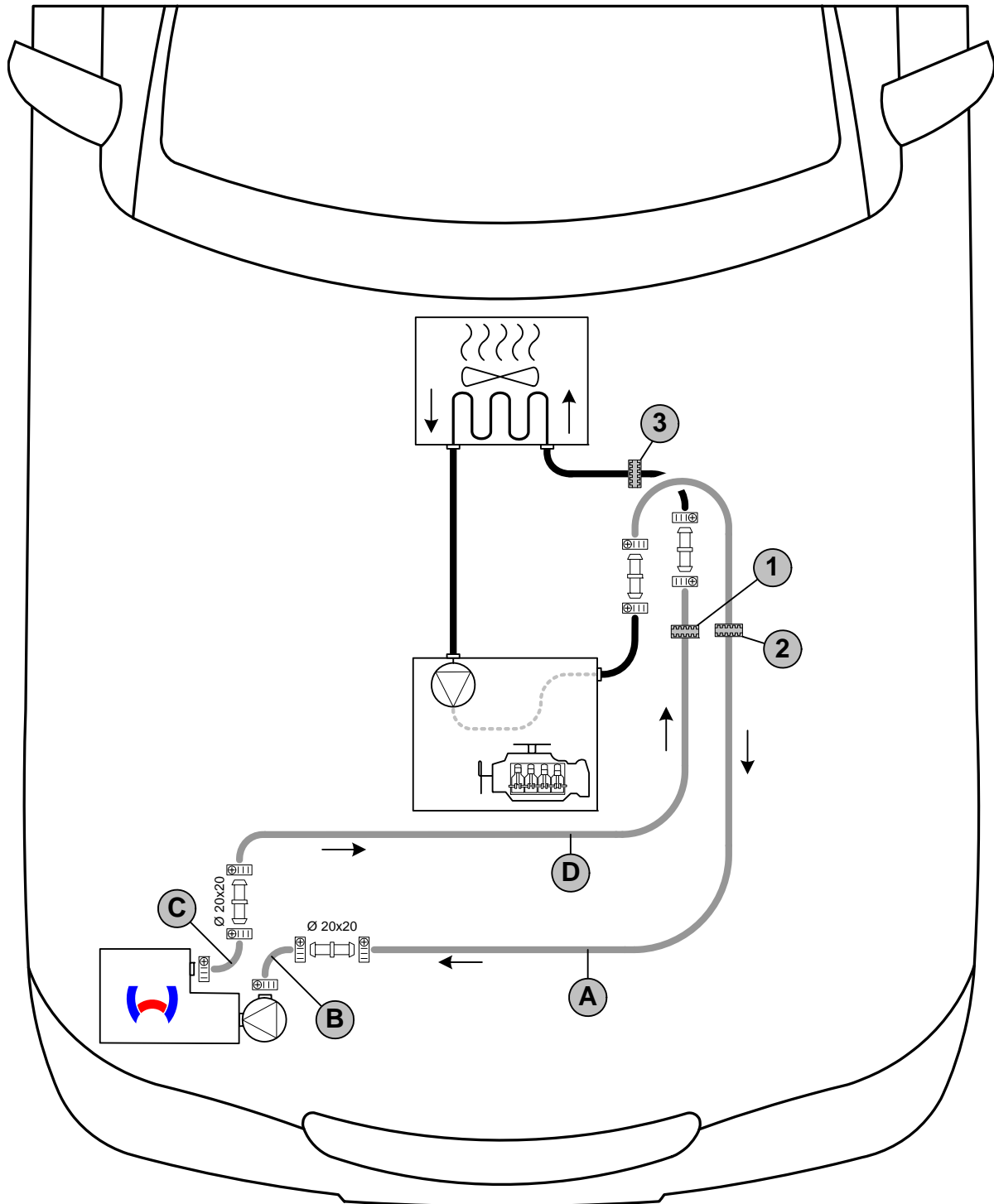
**Coolant circuit**

**CAUTION!**

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:

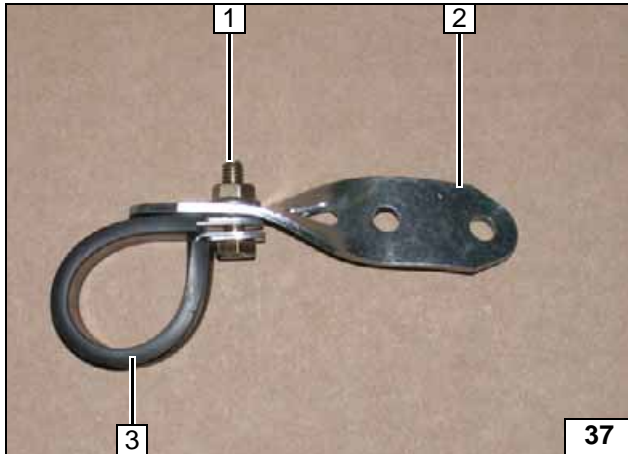


Hose routing diagram



All hose clamps = 20-27 mm dia.! All not designated connecting pipes as follows:  
**1.6l gasoline** = dia. 18x20! **1.8l gasoline** = dia. 18x20! **1.6l diesel** = dia. 18x20! **2.0l diesel** = dia. 20x20  
**1** = Black (sw) rubber isolator (Gasoline). **2** = Black (sw) rubber isolator (Diesel).  
**3** = Black (sw) rubber isolator (2.0l diesel).



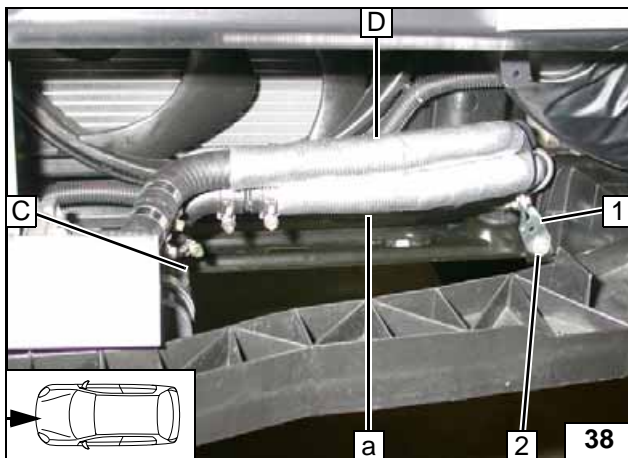


Turn perforated bracket 2 by approx. 75° on longitudinal axis.

- 1 M6x20 bolt, flanged nut
- 2 Perforated bracket
- 3 Rubber-coated pipe clamp



**Preparing perforated bracket**

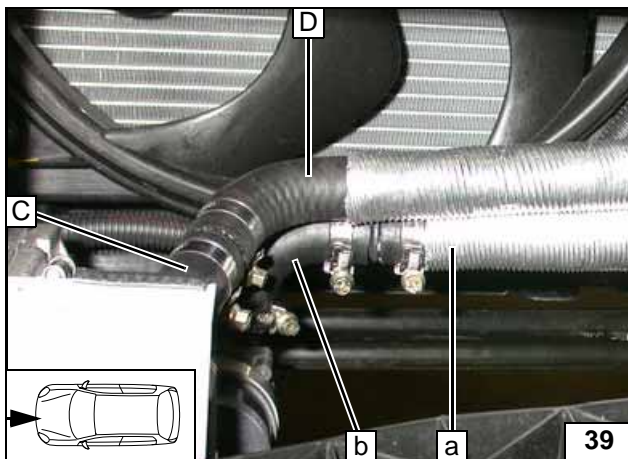


Sliding on heat protection hoses. Route hoses A and D through pass-through in the cooler at the left of the heater. When doing so, guide hose A through rubber-coated p-clamp.

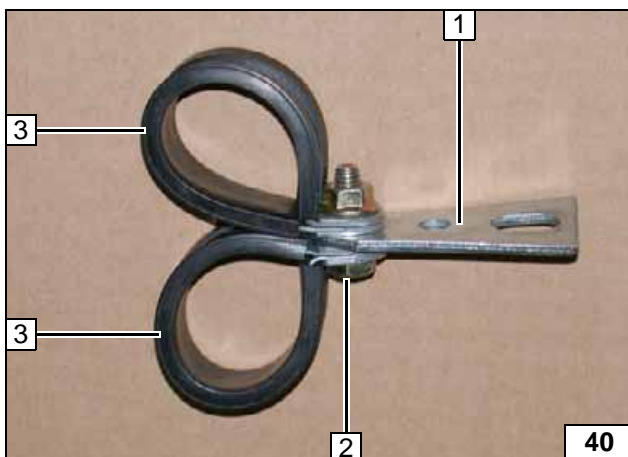
- 1 Prepared perforated bracket
- 2 Original vehicle bolt



**Installing coolant hoses**



**Connection to heater**

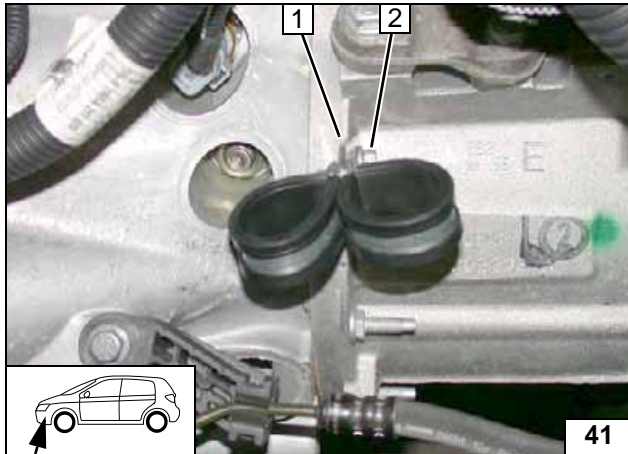
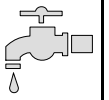


Cut perforated bracket to approx. 58 mm.

- 1 Perforated bracket
- 2 M6x20 bolt, flanged nut
- 3 Rubber-coated p-clamp [2x]



**Preparing perforated bracket**

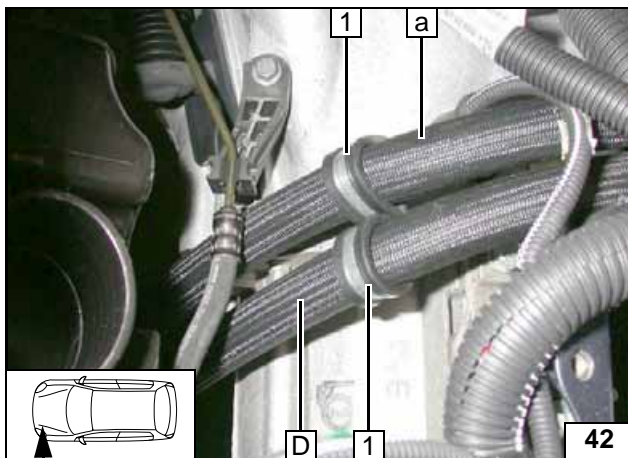


Fasten perforated bracket on transmission block.

- 1 Prepared perforated bracket
- 2 Original vehicle bolt



**Installing perforated bracket**



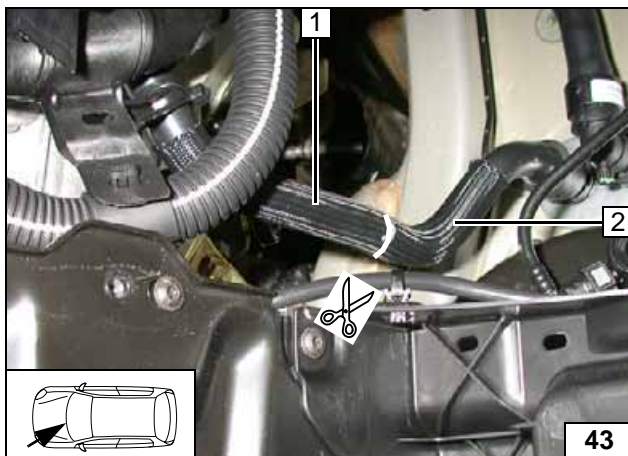
### Gasoline

Route hose **A** and **D** through rubber-coated p-clamps.

- 1 Rubber-coated p-clamp [2x]



**Routing to cutting point**



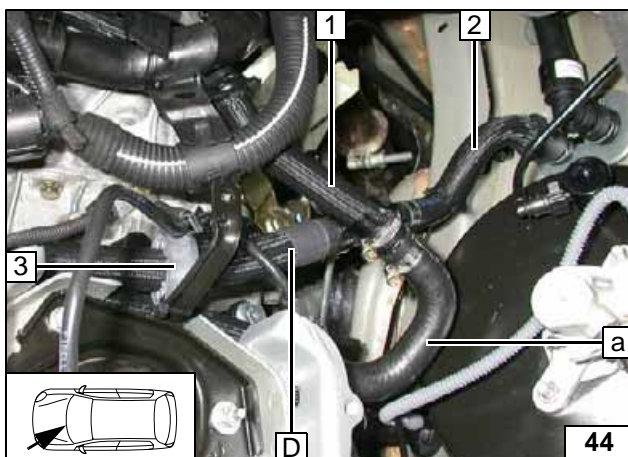
### 1.6l gasoline

Remove braided protection hose in area of cutting point. Disconnect hose from engine outlet to heat exchanger inlet with hose clamping pliers.

- 1 Engine-outlet hose section
- 2 Hose section of heat exchanger inlet



**Cutting point**

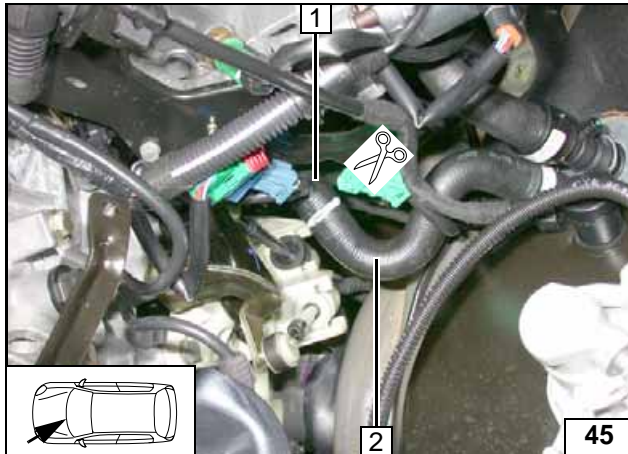


Before installation, push black (sw) rubber isolator **3** onto hose **D**.

- 1 Engine-outlet hose section
- 2 Hose section of heat exchanger inlet



**Connecting heat exchanger inlet and engine outlet**

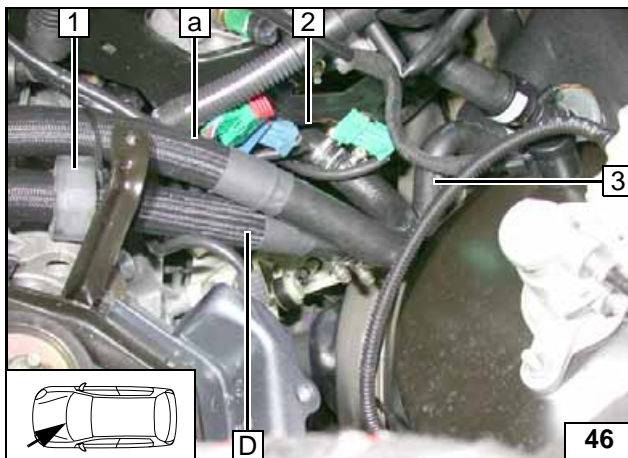


**1.8l gasoline**

Disconnect hose from engine outlet to heat exchanger inlet with hose clamping pliers.

- 1 Engine-outlet hose section
- 2 Hose section of heat exchanger inlet

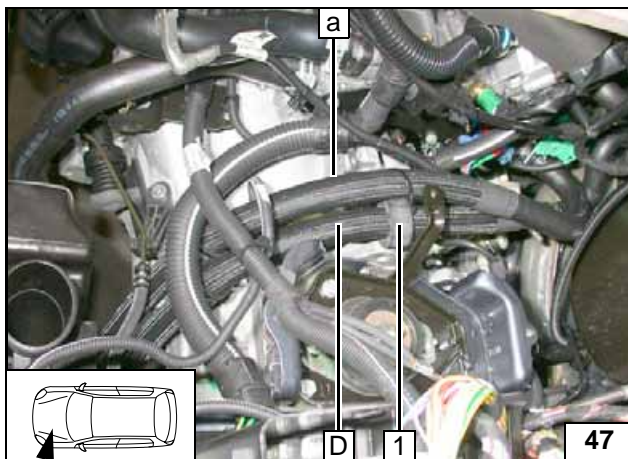
**Cutting point**



Before installation, push black (sw) rubber isolator 1 onto hose D.

- 2 Engine-outlet hose section
- 3 Hose section of heat exchanger inlet

**Connect-  
ing heat  
exchanger  
inlet and  
engine out-  
let**

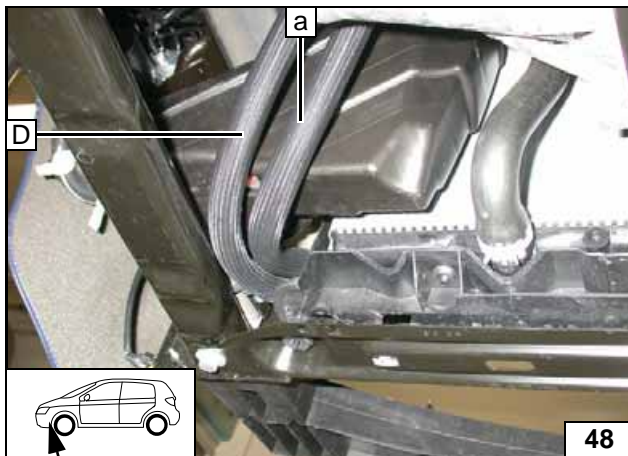


**Gasoline**

Fasten rubber isolator on hose A with cable tie.

- 1 Black (sw) rubber isolator

**Routing in  
engine  
compart-  
ment**

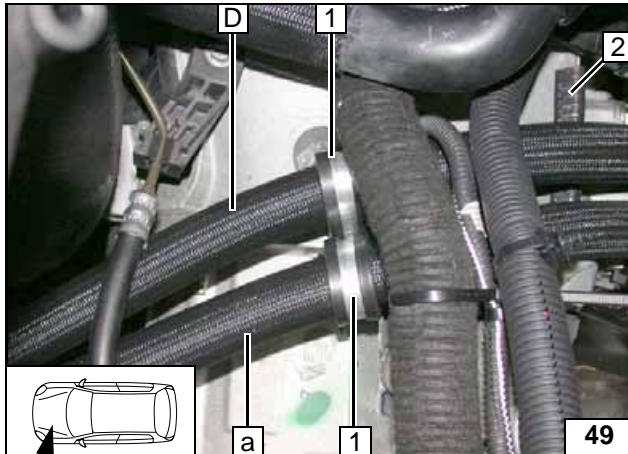
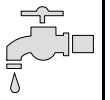


Check the position of the components; adjust if necessary. Check that they have free clearance.

**Position-  
ing hose A  
and D**







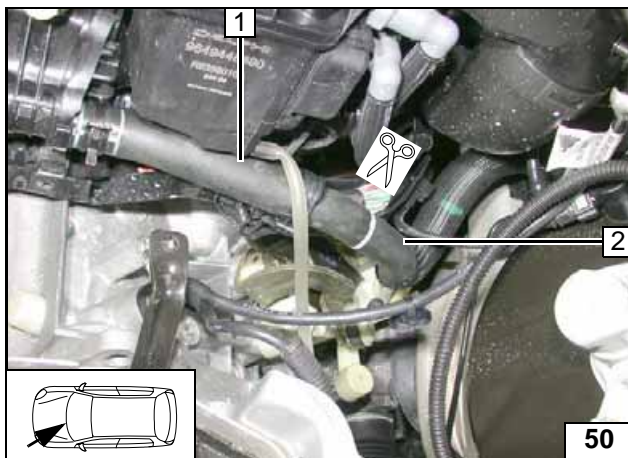
**1.6l diesel**

Route hose **A** and **D** through rubber-coated p-clamps.

- 1 Rubber-coated p-clamp [2x]
- 2 100 mm edge protection



**Routing to cutting point**

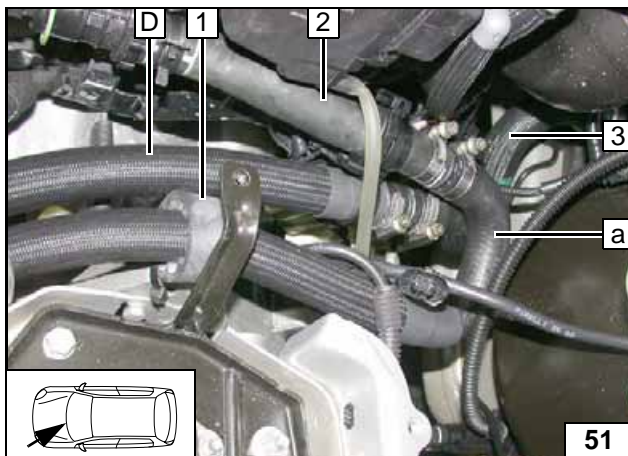


Disconnect hose from engine outlet to heat exchanger inlet with hose clamping pliers.

- 1 Engine-outlet hose section
- 2 Hose section of heat exchanger inlet



**Cutting point**

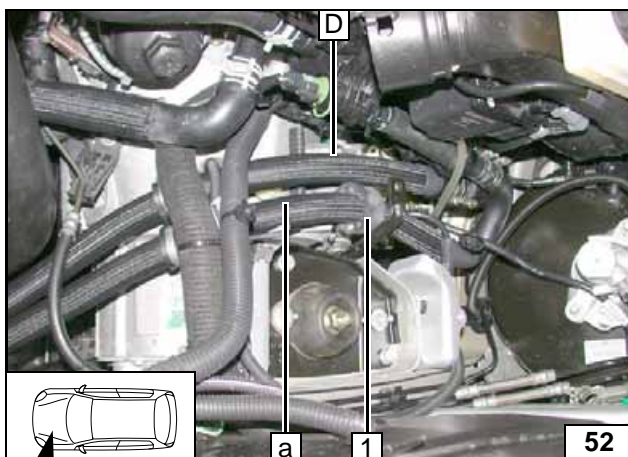


Before installation, push black (sw) rubber isolator **1** onto hose **A**.

- 2 Engine-outlet hose section
- 3 Hose section of heat exchanger inlet



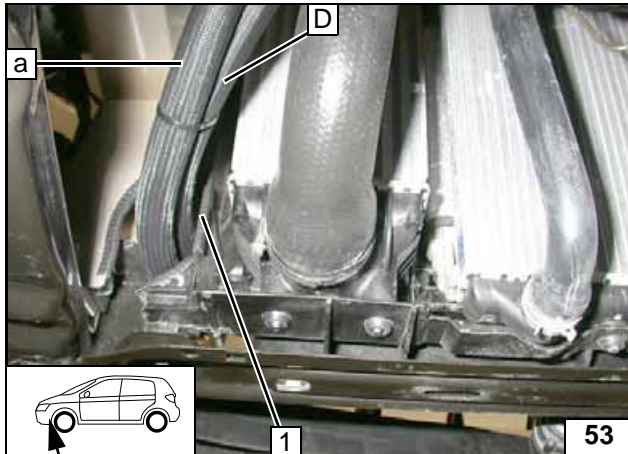
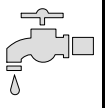
**Connecting heat exchanger inlet and engine outlet**



Fasten black (sw) rubber isolator **1** on hole of transmission block with cable tie.



**Routing in engine compartment**

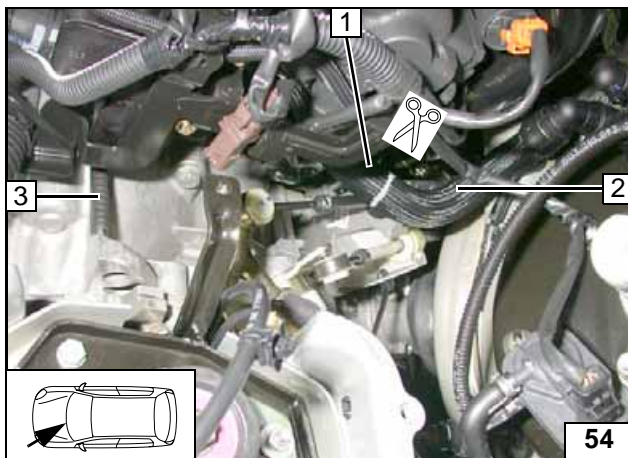


Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1 50 mm edge protection



Positioning hose A and D



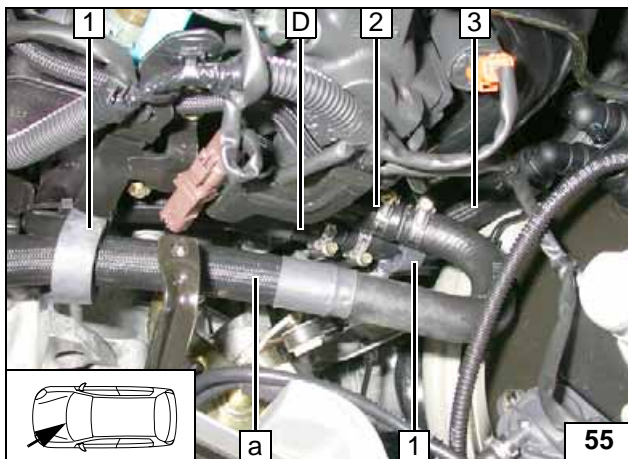
**2.0l diesel**

Remove braided protection hose in area of cutting point.

- 1 Engine-outlet hose section
- 2 Hose section of heat exchanger inlet
- 3 50 mm edge protection



Cutting point

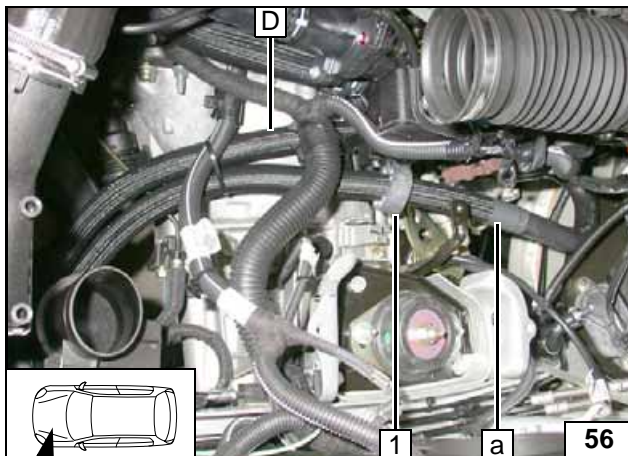


Before installing, push black (sw) rubber isolator 1 onto hose A and onto hose section of heat exchanger inlet 3.

- 2 Engine-outlet hose section



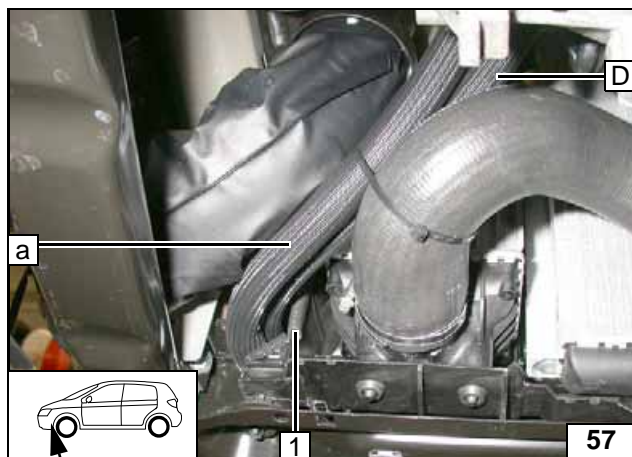
Connecting heat exchanger inlet and engine outlet



Fasten black (sw) rubber isolator 1 on original vehicle wiring harness bracket with cable tie.



Positioning hose A and D

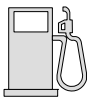


Check the position of the components; adjust if necessary. Check that they have free clearance.

1 50 mm edge protection



**Positioning hose A and D**



**Fuel**

**CAUTION!**

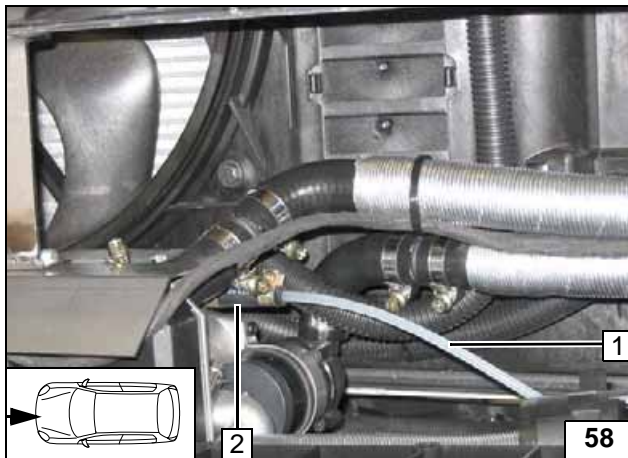
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

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!**

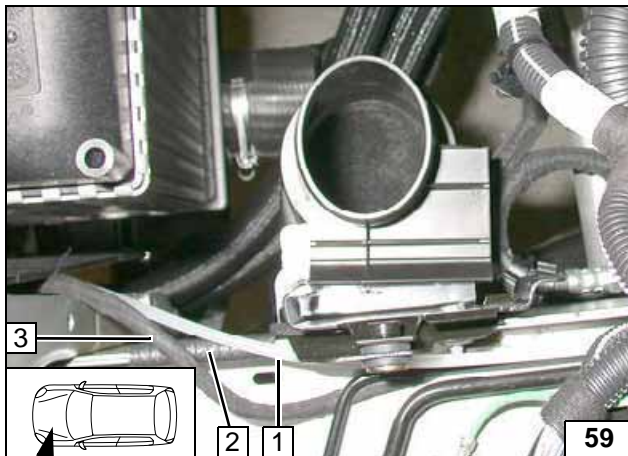
The fuel line and wiring harness are routed to the metering pump in as shown in the wiring harness routing diagram.



**Gasoline**

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

**Connect-  
ing heater**

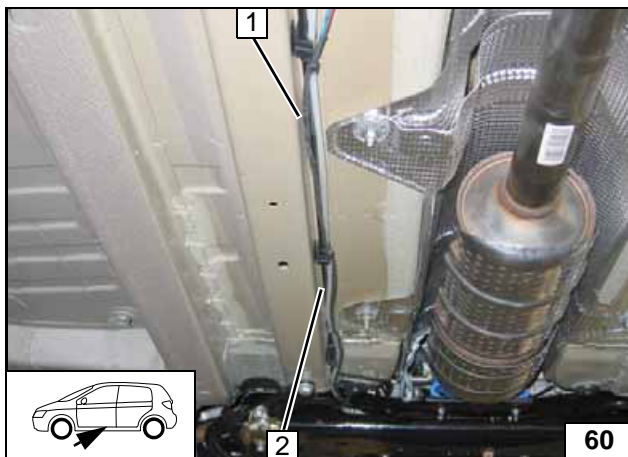


Route wiring harness of metering pump **3** and fuel line **1** on the side member to the firewall and further to the underbody.

- 2 70 mm edge protection

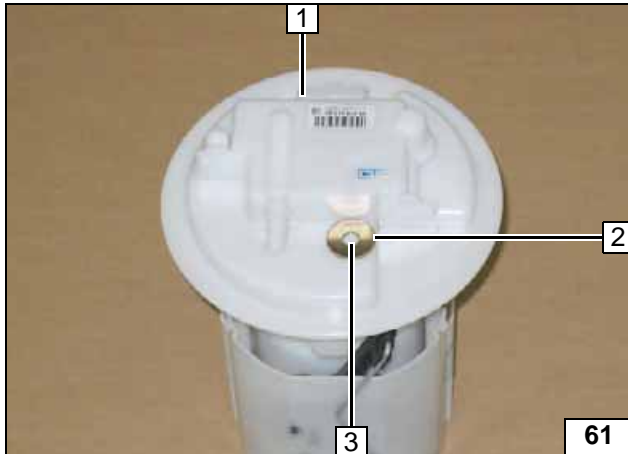
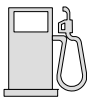


**Installing  
lines**



- 1 Metering pump wiring harness
- 2 Fuel line from heater

**Installing  
lines**

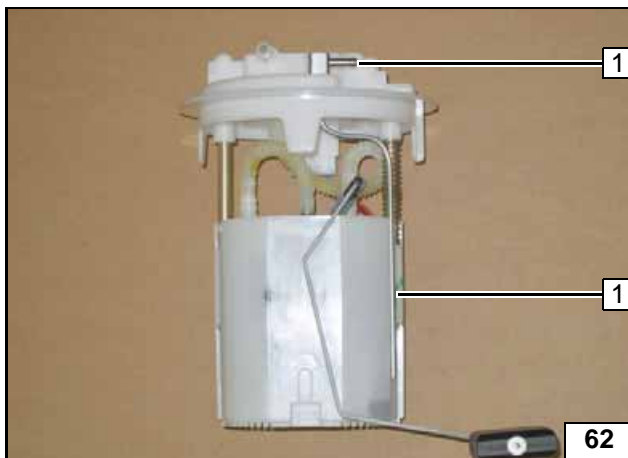


Remove fuel tank and fuel-tank sending unit **1** according to manufacturer's information.

- 2** Large diameter washer
- 3** Copy hole pattern, 6 mm dia. hole



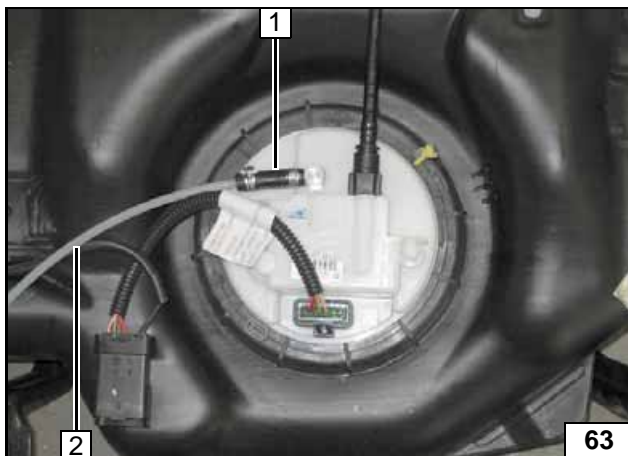
**Removing fuel**



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



**Installing fuel standpipe**

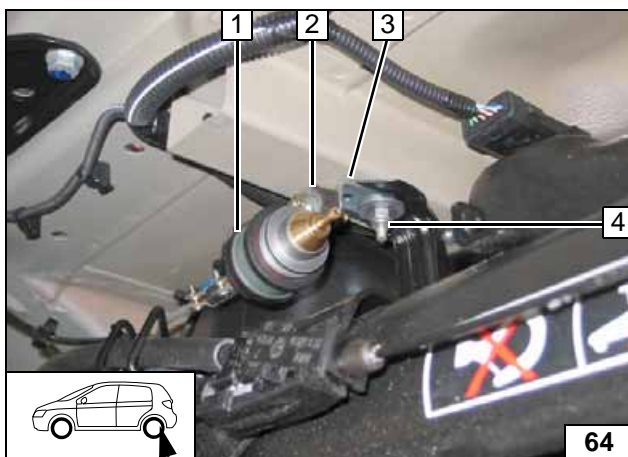


Install fuel-tank sending unit according to manufacturer's specifications.  
Install fuel tank in accordance with manufacturer's specifications.

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



**Connecting fuel line**

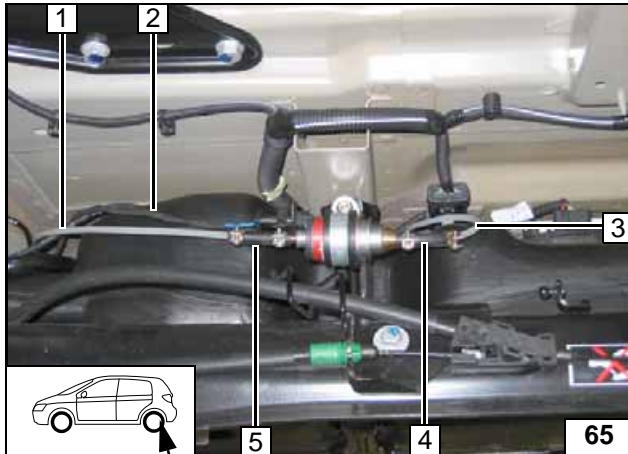
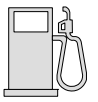


- 1** Rubber-coated pipe clamp
- 2** Silent block, flanged nut [2x]
- 3** Angle bracket
- 4** Original vehicle nut, washer



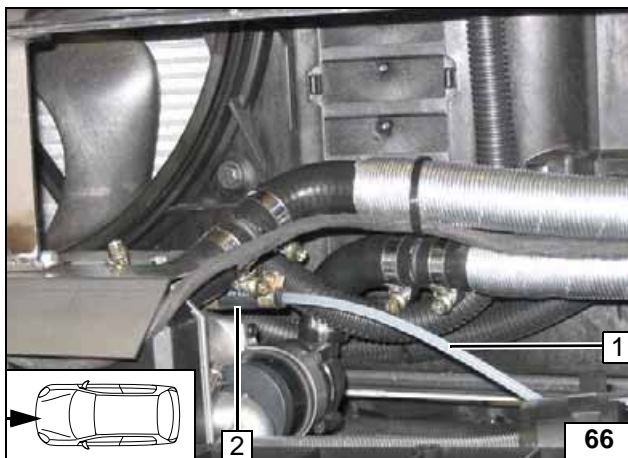
**Installing metering pump**





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

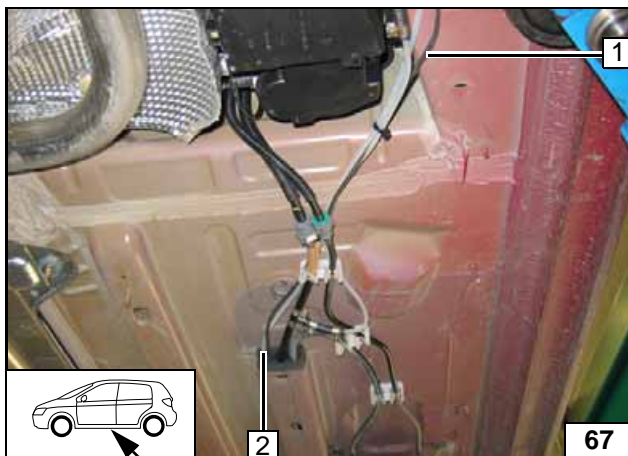
Connect-  
ing meter-  
ing pump



**Diesel**

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

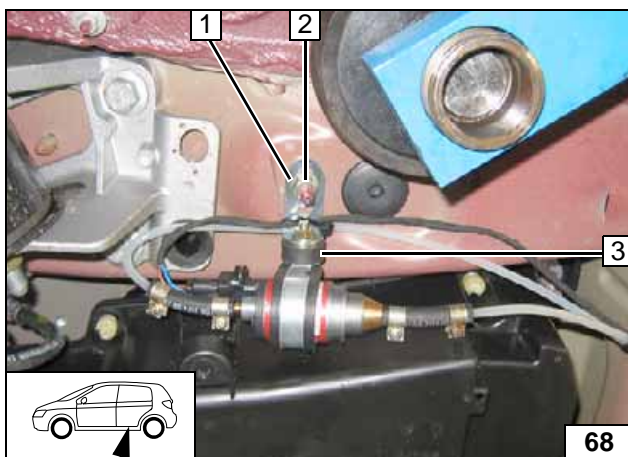
Connect-  
ing heater



Route wiring harness of metering pump 1 together with fuel line 2 along original vehicle fuel lines to installation location of metering pump.



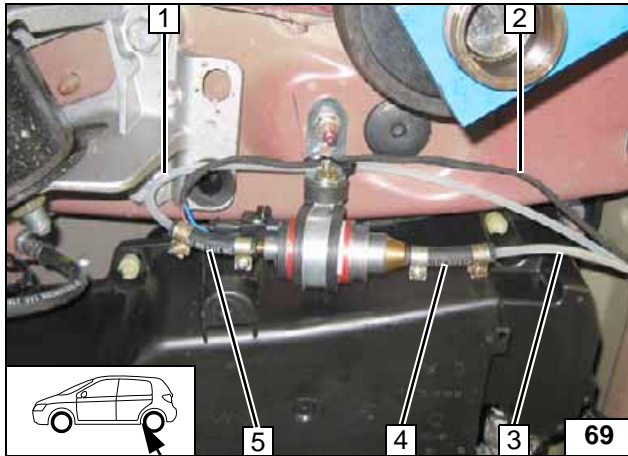
Installing  
lines



- 1 Original vehicle stud bolt; M8 flanged nut
- 2 Angle bracket
- 3 Rubber-coated p-clamp, silent block, flanged nut [2x]

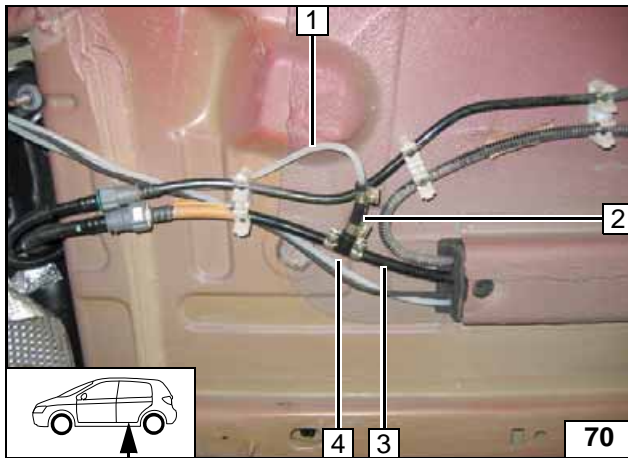


Installing  
metering  
pump



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

## Connecting metering pump

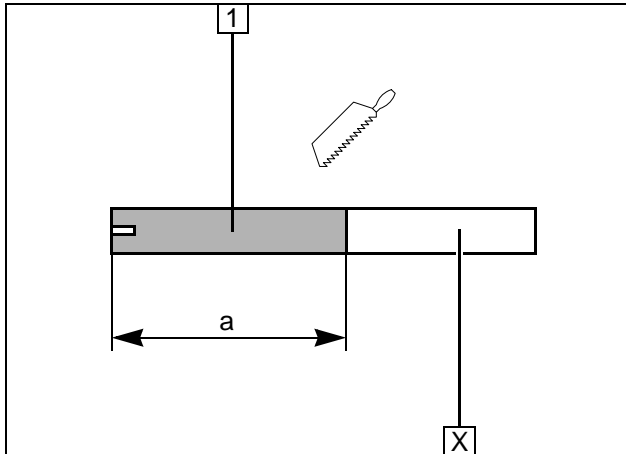
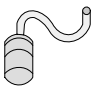


Fuel is removed from original vehicle fuel supply line 3.

- 1 Fuel line from metering pump
- 2 Hose section, 10 mm dia. clamps [2x]
- 4 8x5x8 fuel standpipe, clamps 10 mm dia [2x]



## Removing fuel

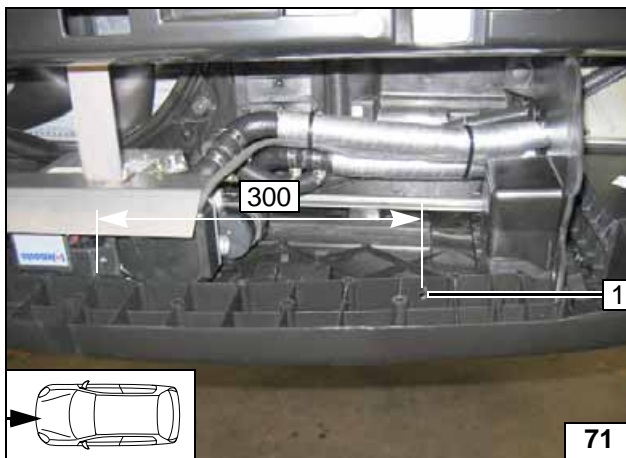


**Combustion air**

- 1 Combustion air pipe  
a = 250

Discard section X

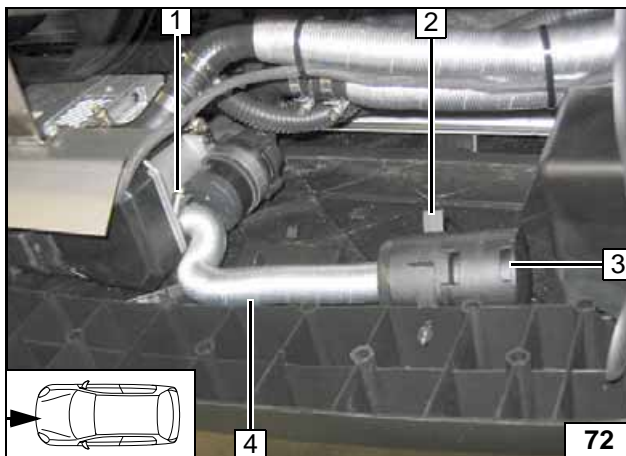
**Cutting combustion air pipe to length**



Drill 6.2 mm dia. hole 1 in centre of grid as shown in figure.



**Hole for muffler**



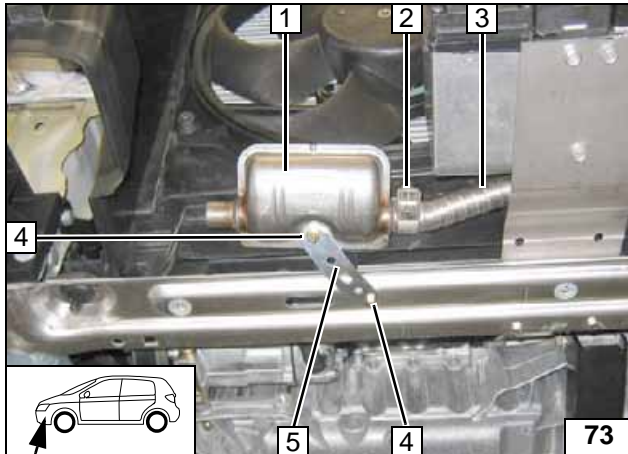
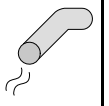
Ensure proper installation position of air intake muffler, see "Installation Instructions". Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1 27 mm dia. hose clamp
- 2 Retaining clip in hole
- 3 Combustion-air intake muffler
- 4 Combustion-air intake pipe



**Installing combustion air pipe**





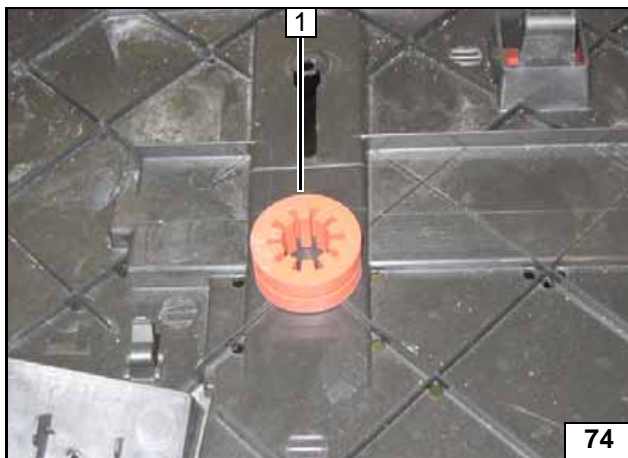
**Exhaust gas**

Following installation, bend muffler upward approx. 30°.

- 1 Muffler
- 2 Hose clamp
- 3 Exhaust pipe
- 4 M6x20 bolt, flanged nut
- 5 Perforated bracket



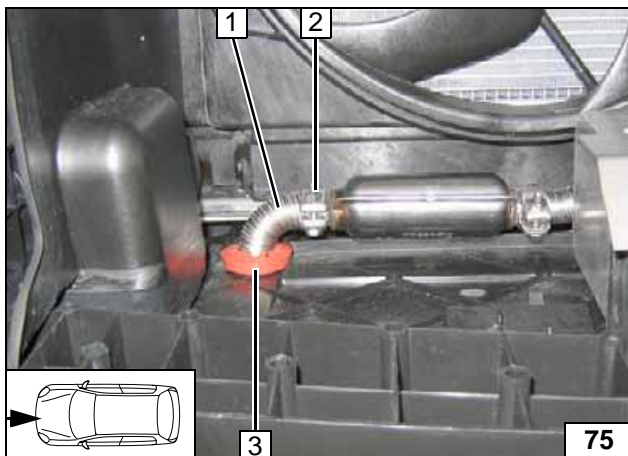
**Installing exhaust system**



Lay on red (rt) rubber isolator at position 1, copy hole pattern and drill 106.68 cm dia. hole in underide protection.



**Cutting out underide protection**

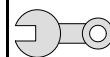


Insert rubber isolator 3 in 42 mm dia. hole. Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1 Exhaust end section
- 2 Hose clamp



**Mounting underide protection**



## 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.

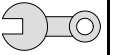
Spray heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect the battery.
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- 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.
- Attach instruction label "Switch off parking heater before refueling" in the area of the filling neck

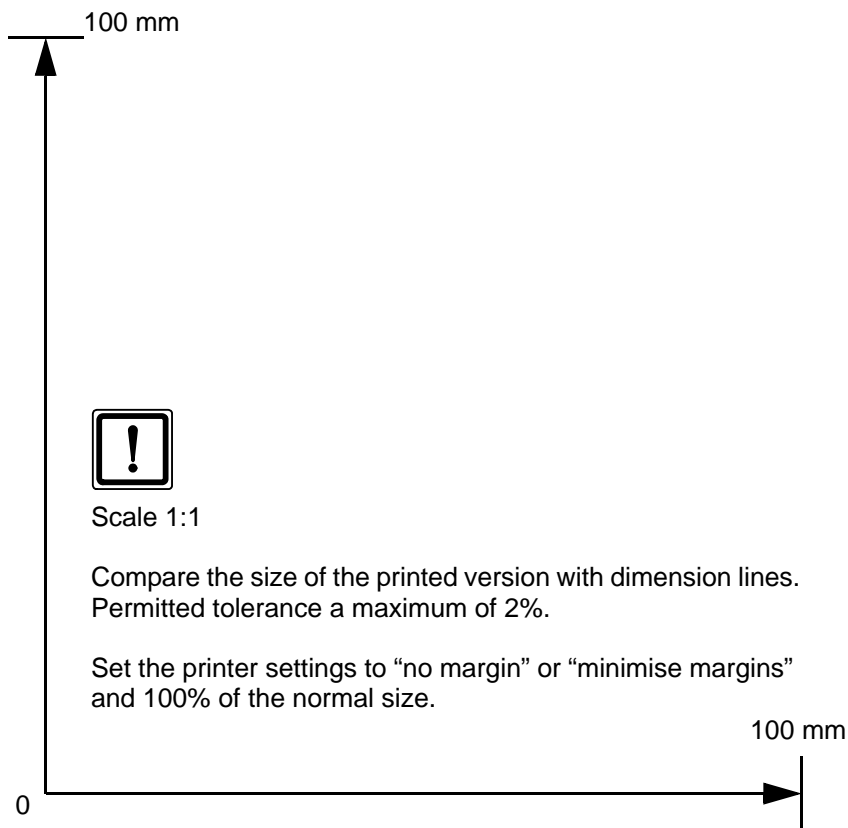
### Note:

Check current intake of fan motor during first startup and adjust to approx. 4.5 A; correct if necessary (Change duty cycle)!





Template for Gasoline Fuel Standpipe



Scale 1:1

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

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

**Operating Instructions for End Customer**



Please remove page and add to the vehicle operating instructions.

**Note:**

We recommend matching the heating time to the driving time.

Heating time = driving time

**Example:**

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

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 shutting off the engine, make the following settings:



1 Air outlet to windshield

**Manual air conditioning**



1 Air outlet to windshield

**Automatic air-conditioning**