

Water Heater Unit



Thermo Top E Additional Heater e1 00 0003

Thermo Top C Additional Heater e1 00 0002

Thermo Top P Additional Heater e1 00 0104

Installation Instructions

Citroen C4 Picasso

Gasoline

from Model Year 2006

Left-hand drive vehicle

Electr. 6-speed transmission (EGS6)



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, specialized tools and equipment are required to install and repair Webasto heating and cooling systems.

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 ³
RFJ	Gasoline	92	1749

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

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

Heater Unit/Installation Kit

Quantity	Description	Order No.:
1	Retail accessories with desired heater control	See price list
1	Installation Kit for Citroen C4 Picasso Gasoline EGS6	1311819C

Heater unit recommended for the respective vehicle class:

Vehicle	Heater unit
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 unit is based on the passenger compartment size of the vehicle and the level of comfort required by the customer!



Foreword

These installation instructions apply to Citroen C4 Picasso Gasoline vehicles - 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 these installation instructions.

However, the stipulations in the "installation instructions" 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 should be fitted with edge protectors (split-open plastic hose).

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

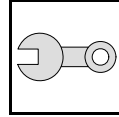
Special Tools

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

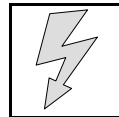
Explanatory Notes on Document

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

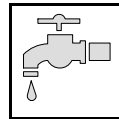
Mechanical system



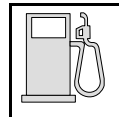
Electrical system



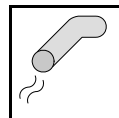
Water



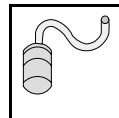
Fuel



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.



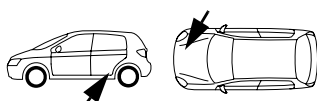
Specific risk of fire or explosion.



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!

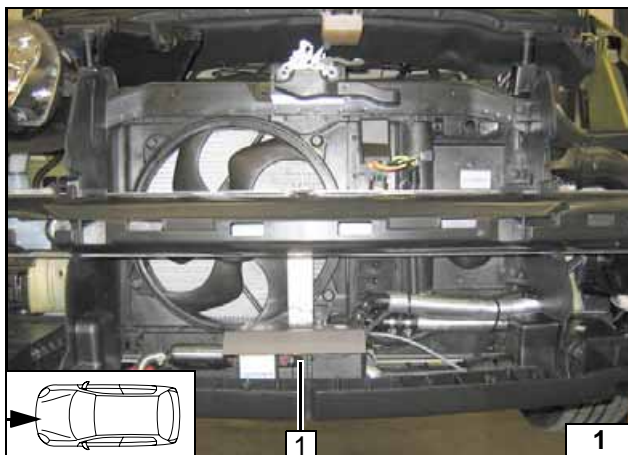
Tightening torque of Ejoy screws, Ejoy studs = 10 Nm!

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 fuel tank cap, ventilate 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.
- Remove the fuel tank according to the manufacturer's specifications.
- 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.

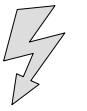
Remove page 27 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater unit installation location

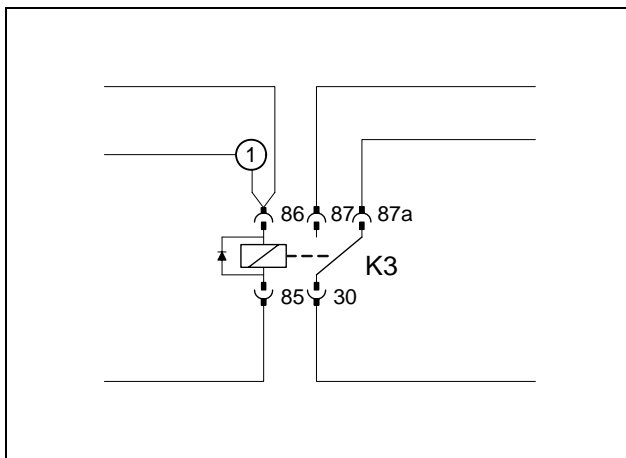
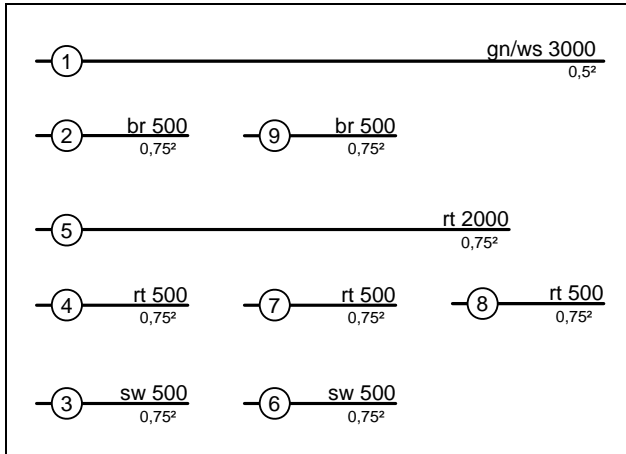
- 1 Heater unit

Installation location

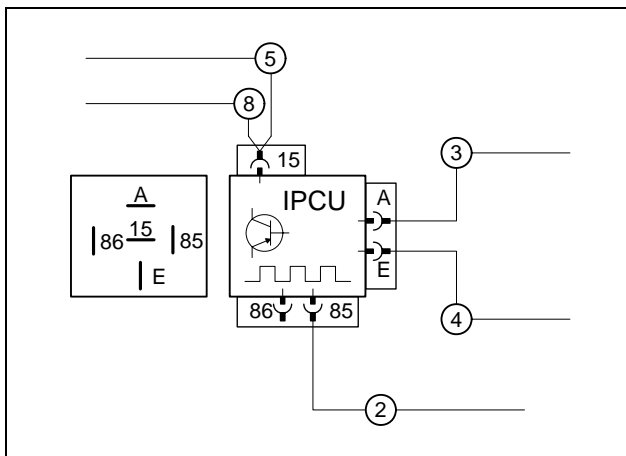


Preparing electrical system

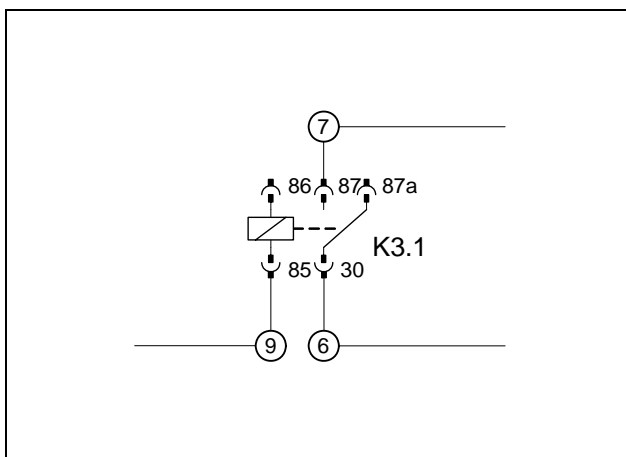
Wires **6** to **9** only with automatic air-conditioning



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 IPCUCU (IPCUCU 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



Automatic air-conditioning

Produce connections as shown in wiring diagram.



Cutting wires to length



Preparing K3 relay



Preassembling IPCUCU



Preparing additional relay K3.1

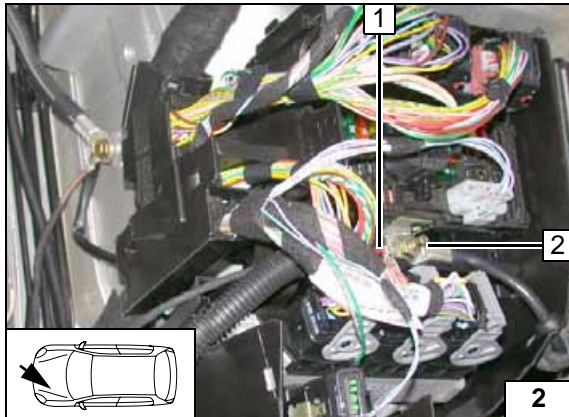


Electrical system

Connecting positive wire

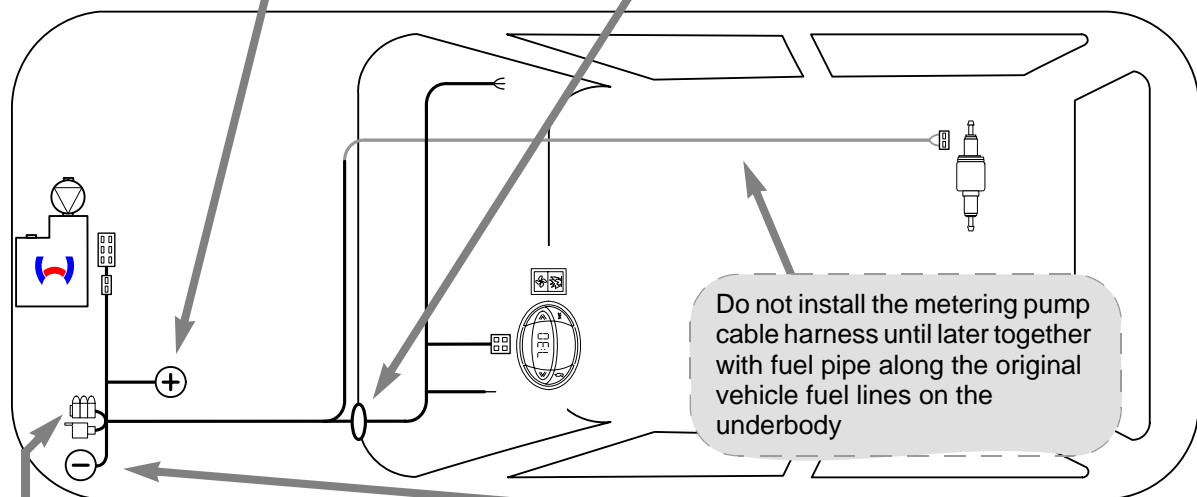
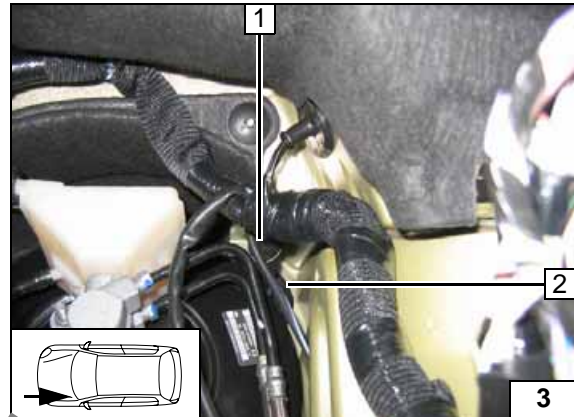
Before installing, crimp 8 mm dia. cable lug onto positive wire.

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

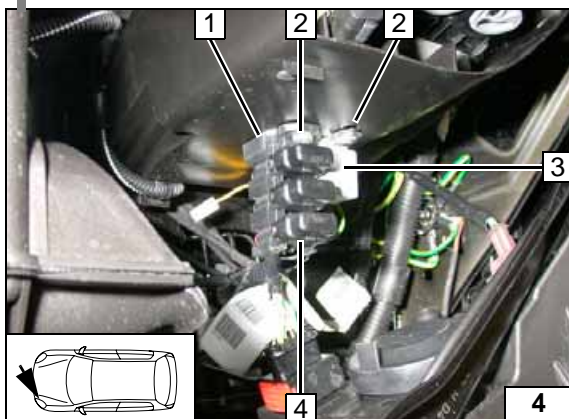


Wiring harness pass through

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.

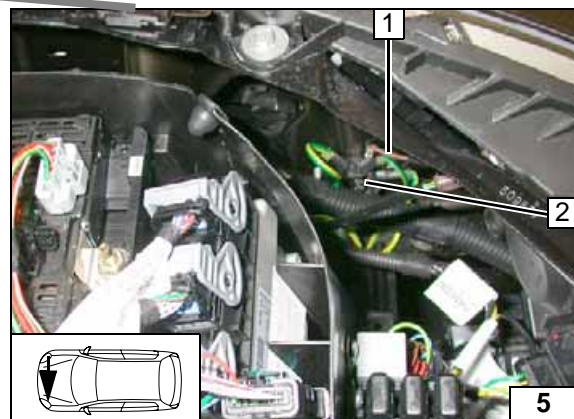


Wiring harness installation diagram



Fuse holder, relay K3

- 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

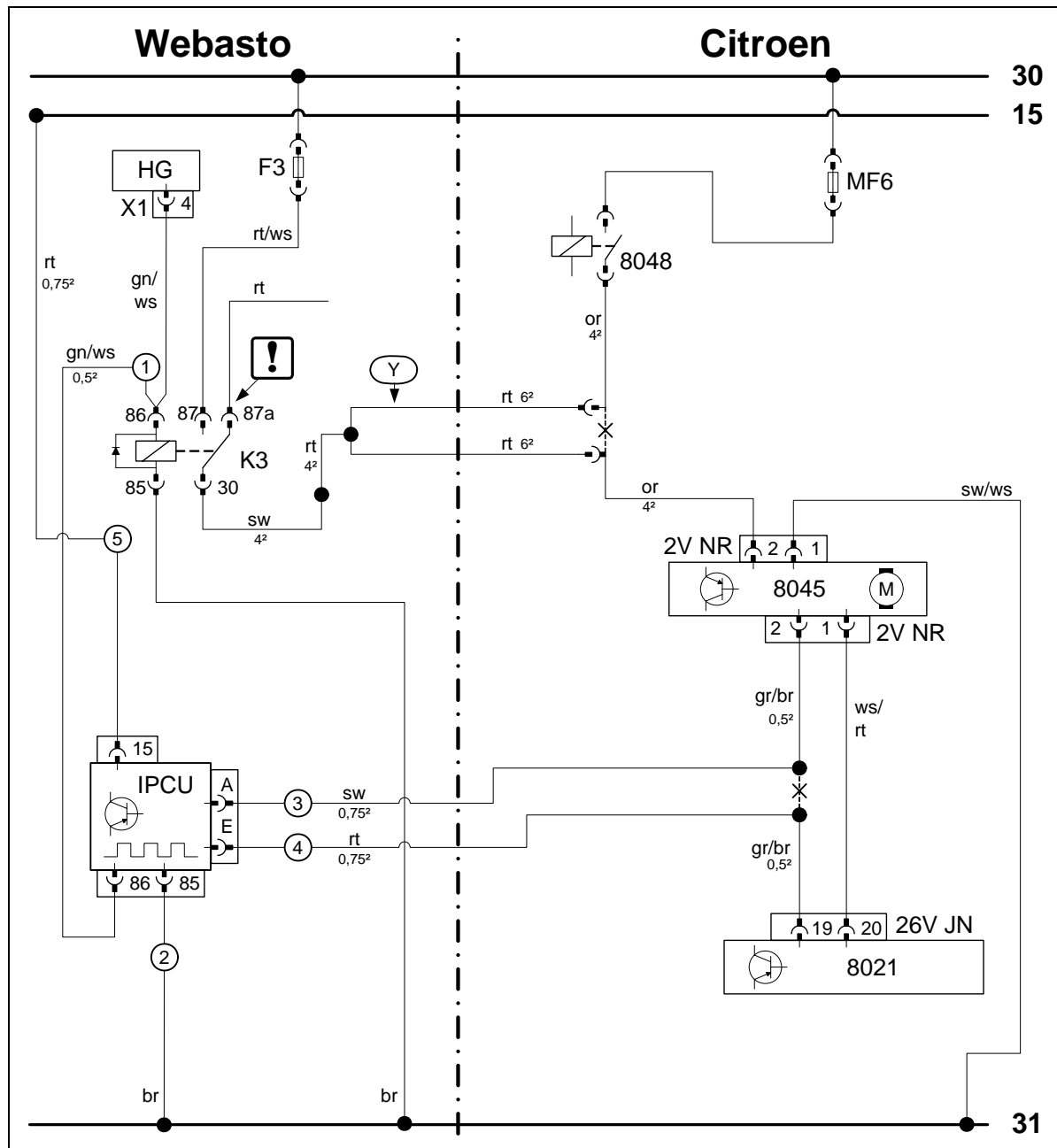


Connecting ground wire

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



Fan controller for manual air conditioning



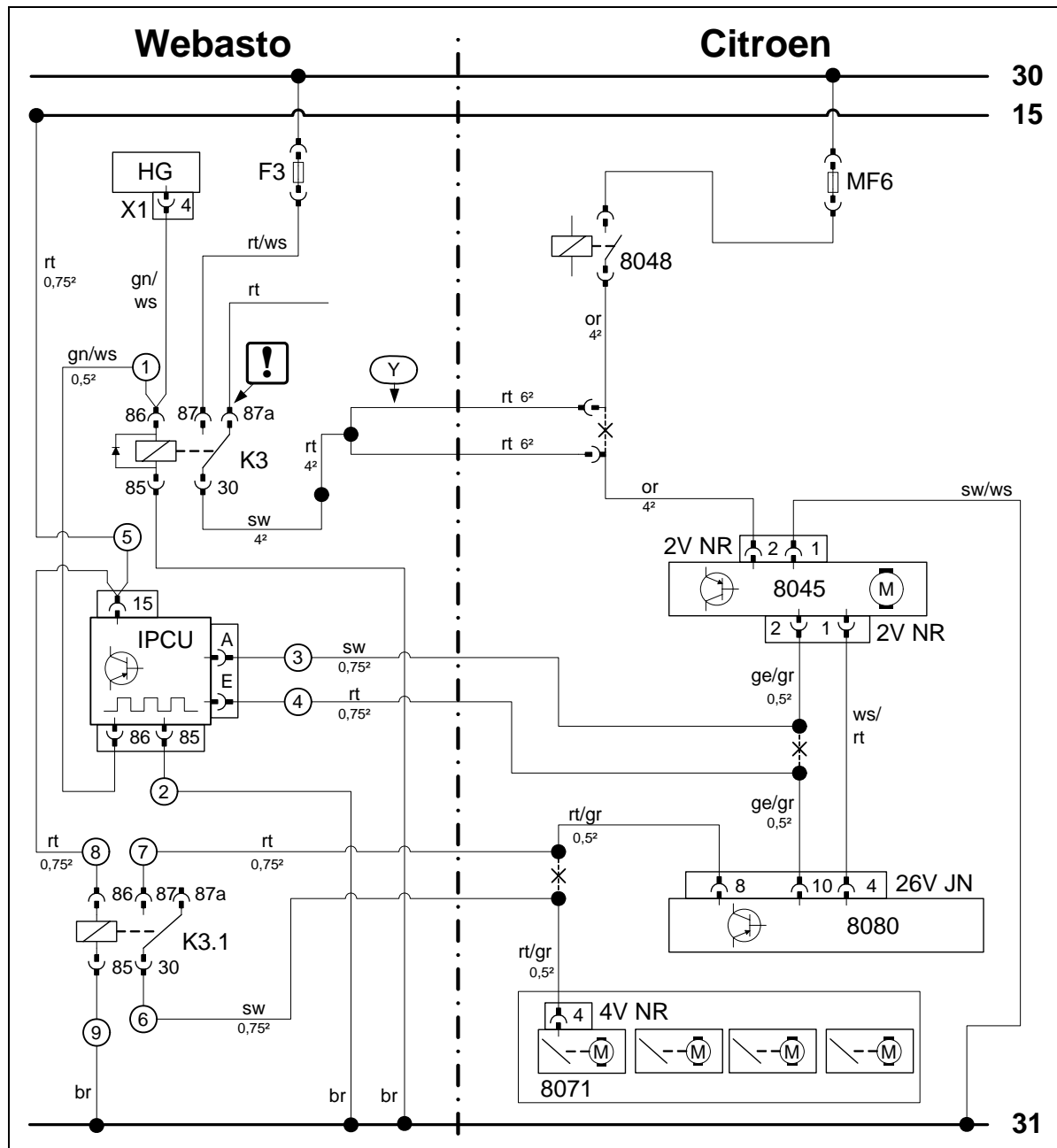
Wiring diagram

Webasto components		Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	8021	Air-conditioning control unit	rt	red
X1	6-pin heater unit 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	2V NR	2-pin connector	gn	green
Y	Wiring adapter	4V NR	4-pin connector	bl	blue
		26V JN	26-pin connector	or	orange
		MF6	Fuse	gr	gray
IPCU adjustment values:					Press out wire end, insulate and tie back
Duty cycle: 42 %					
Frequency: 1000 Hz					
Voltage: 5 V					
Function: High-side					
				X	Cutting point
				Wiring colors may vary.	

Legend



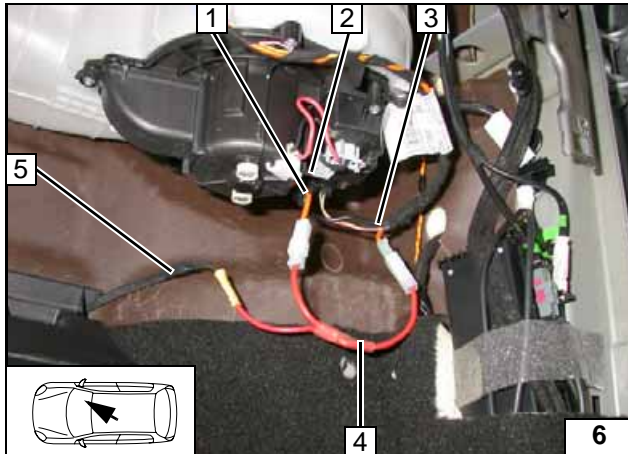
Automatic air-conditioning fan controller



Wiring diagram

Webasto components		Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	8080	Air-conditioning control unit	rt	red
X1	6-pin heater unit 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	2V NR	2-pin connector	gn	green
Y	Wiring adapter	4V NR	4-pin connector	bl	blue
K3.1	Additional relay	26V JN	26-pin connector	ge	yellow
		MF6	Fuse	gr	gray
				or	orange
IPCU adjustment values:					Press out wire end, insulate and tie back
Duty cycle: 42 %					
Frequency: 1000 Hz					
Voltage: 5 V					
Function: High-side					
				X	Cutting point
				Wiring colors may vary.	

Legend



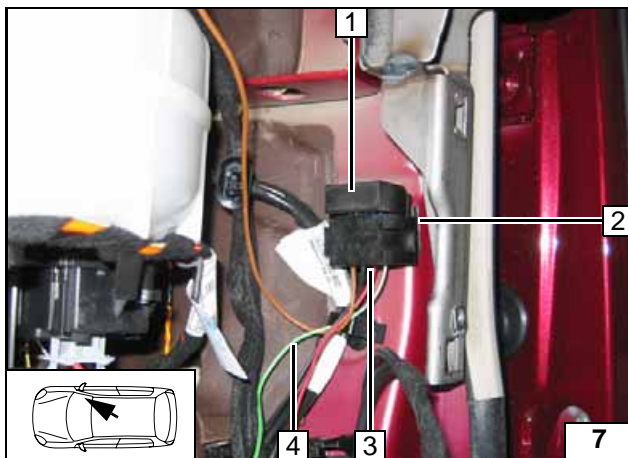
Fan controller on all vehicles

Fan motor is controlled on 2-pin connector 2 of fan module.
Produce connections as shown in wiring diagram.

- 1 Orange (or) wire connector 2V NR, Pin 2
- 3 Orange (or) wire of fan relay 8048
- 4 Y-adaptor
- 5 Black (sw) wire from K3/30



**Connec-
tion to fan
module**

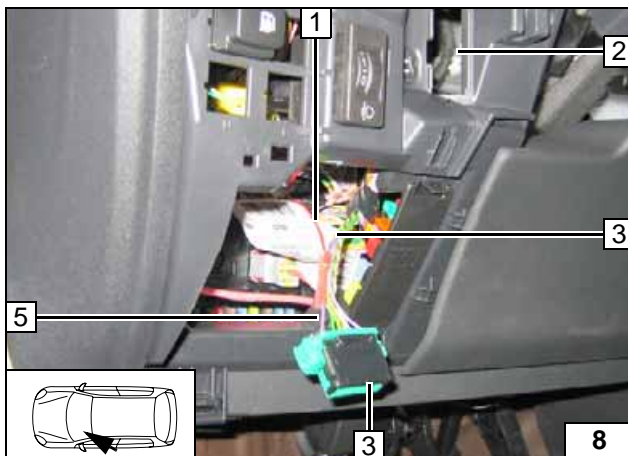


Before installing, connect green/white (gn/ws) wire 4 from K3/86 to socket of IPCU terminal 86.

- 1 IPCU
- 2 Double-sided adhesive tape



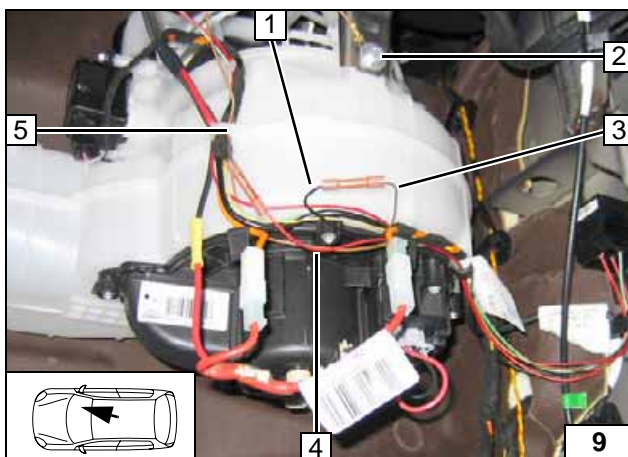
**Installing
socket
from IPCU**



Control changeover of IPCU is carried out on 16-pin OBD socket outlet 3.
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 16-pin OBD socket outlet, Pin 1

**Power
supply of
IPCU**

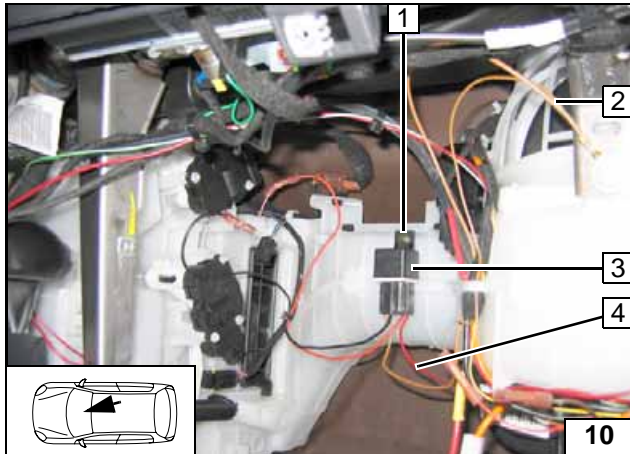


Fan controller is controlled before 2-pin connector from fan module.
Brown (br) wire of IPCU/85 with 6 mm dia. cable lug on original vehicle bolt 2.
Produce connections as shown in wiring diagram.

- 1 Black (sw) wire of IPCU/A
- 3 Yellow/gray (ge/gr) (gray/brown (gr/br)) wire of connector 2V NR, Pin 2
- 4 Red (rt) wire of IPCU/E
- 5 Yellow/gray (ge/gr) (gray/brown (gr/br)) wire of A/C control panel connector 26V JN



**Connect-
ing fan
controller**



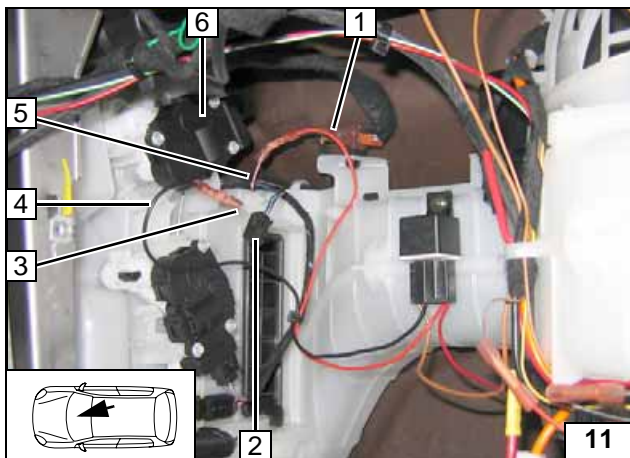
Also with automatic air-conditioning

Brown (br) wire 2 with 6 mm dia. cable lug on original vehicle bolt. Connect red (rt) wire 4 from IPCU/15 to K3.1/86 according to wiring diagram.

- 1 Self-tapping screw on existing hole
- 3 K3.1 relay



Installing K3.1 relay



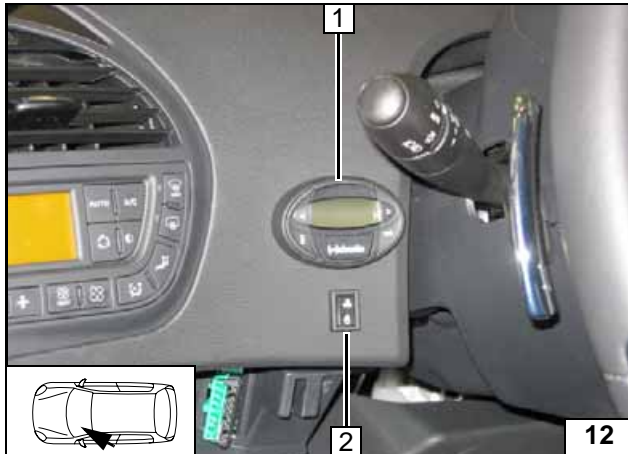
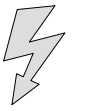
Control changeover of air distribution is carried out on 4-pin connector 4V NR 2 from flap motor 6.

Produce connections as shown in wiring diagram.

- 1 Red (rt) wire to K3.1/87
- 3 Red/gray (rt/gr) wire of connector 8071 4V NR, Pin 4
- 4 Black (sw) wire K3.1/30
- 5 Red/gray (rt/gr) wire of A/C control unit



Connection to air distribution



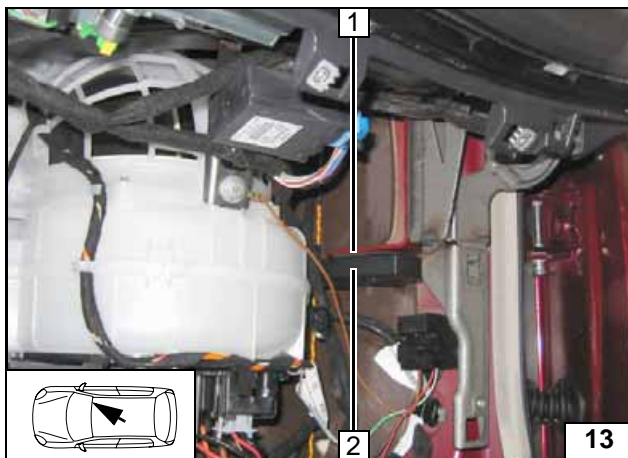
Digital timer, summer/winter switch option

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

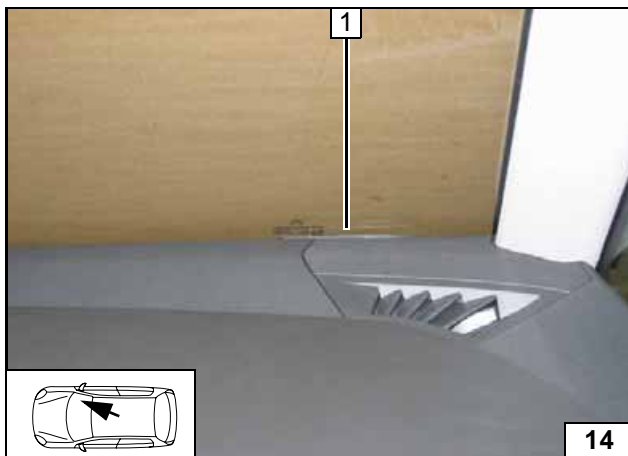


Remote option (Telestart)

- 1 Double-sided adhesive tape
- 2 Receiver

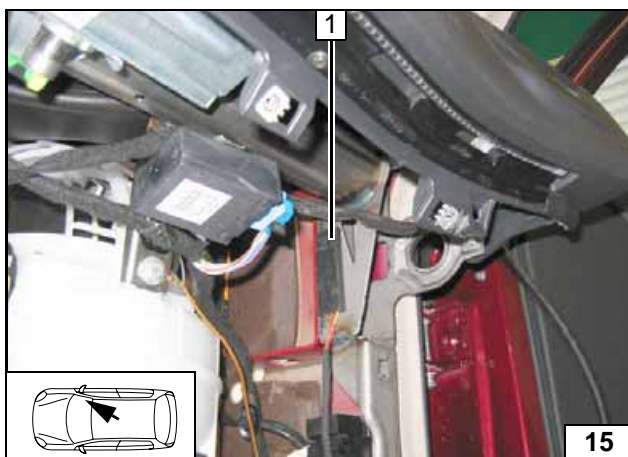


Installing receiver



- 1 Antenna

Installing antenna

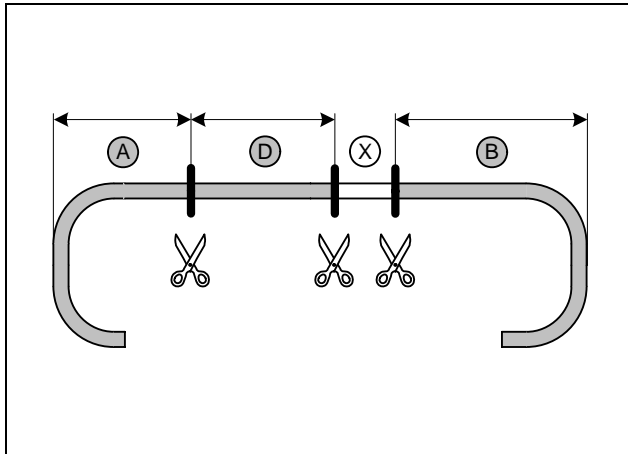
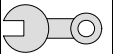


Temperature sensor for HTM100 only

- 1 Fasten temperature sensor with adhesive tape



Installing temperature sensor

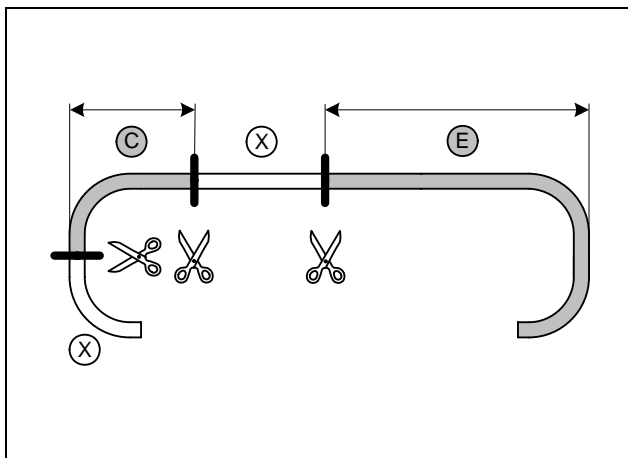


Preparing heater unit

a = 330
b = 630
d = 350

Discard section X

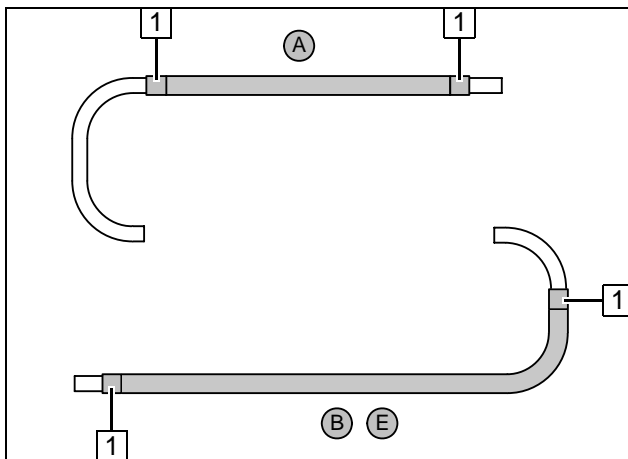
Cutting coolant hose 1 to length



c = 240
e = 930

Discard section X

Cutting coolant hose 2 to length

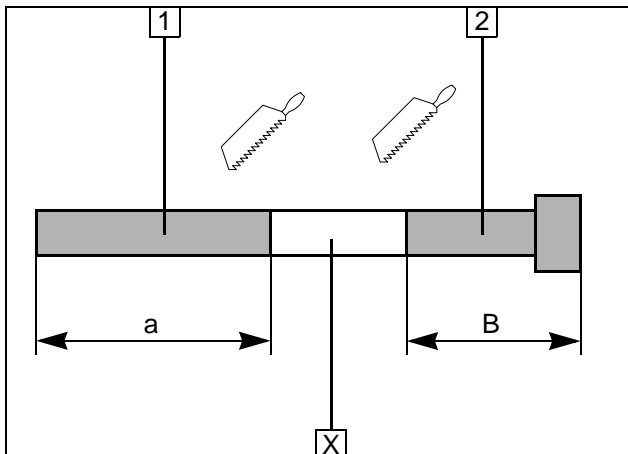


Push braided protection hoses onto hose **A - B** and **E** and cut to length.
Cut heat shrink plastic tubing to length and shrink on.

1 25 mm long heat shrink plastic tubing [6x]



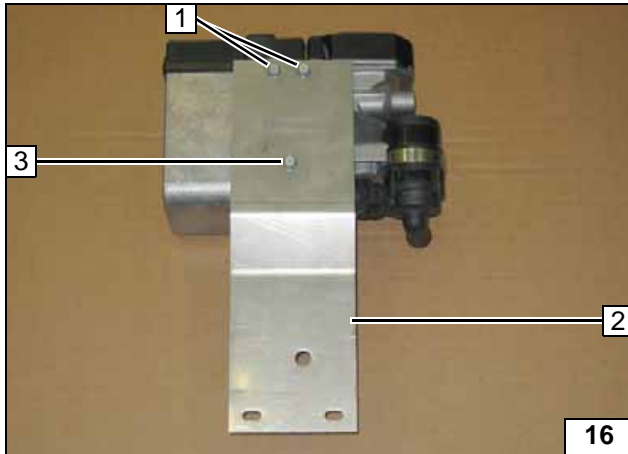
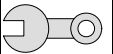
Preparing coolant hoses



1 Exhaust pipe
a = 120
2 Exhaust end section
b = 110

Discard section X

Preparing exhaust pipe

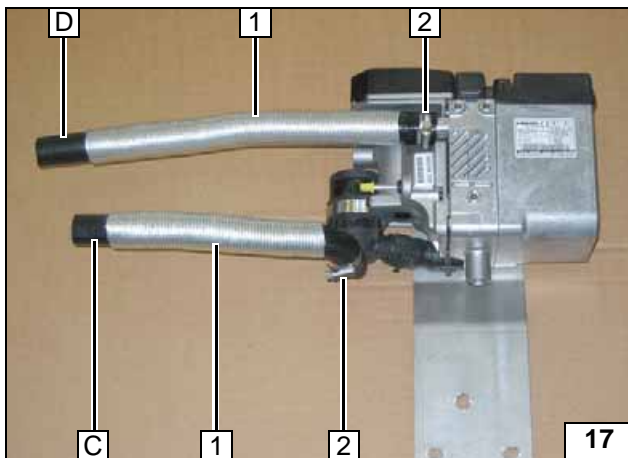


Insert two washers between bracket 2 and heater unit at position 3.

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



Installing bracket

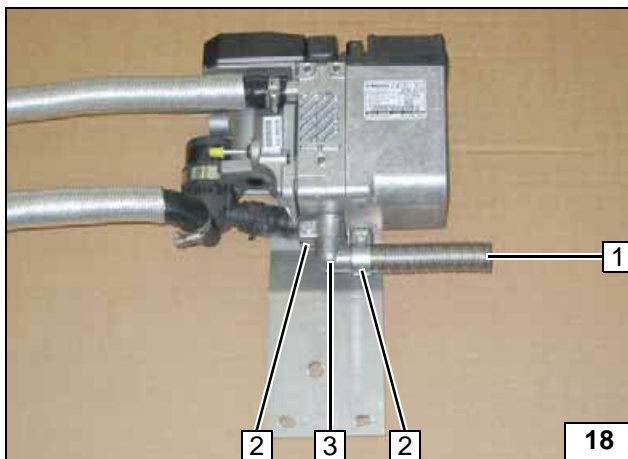


Slide heat protection hose 1 [2x] onto hose C and D and cut to length.

- 2 Hose clamp [2x]

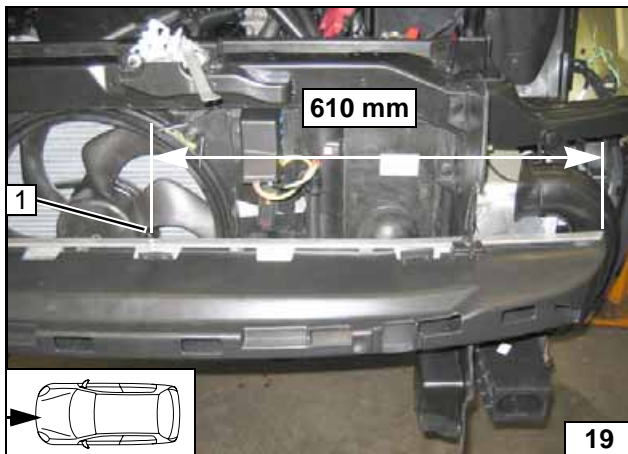


Premounting coolant hoses



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

Premounting exhaust system



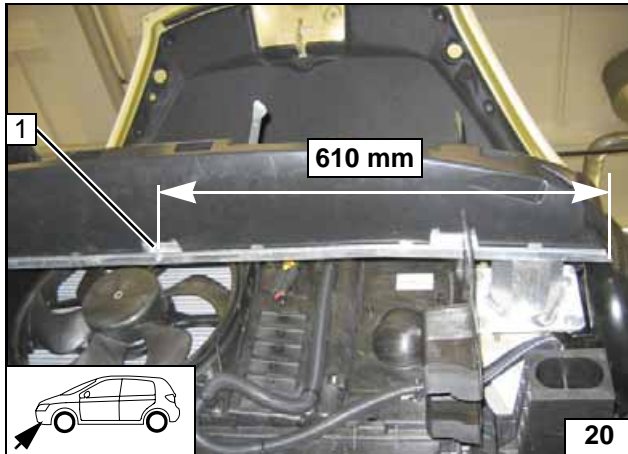
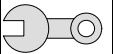
Preparing installation location

Copy hole pattern as shown.

- 1 Drill 9.1 mm dia. hole; install rivet nut



Mounting rivet nut

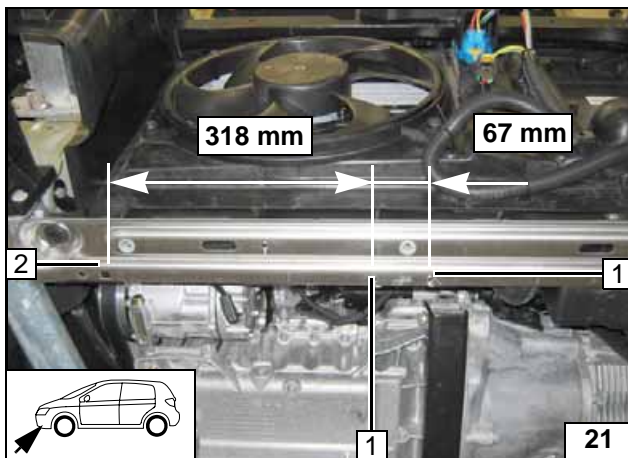


Copy hole pattern as shown.

1 Drill 9.1 mm dia. hole; install rivet nut



Mounting rivet nut

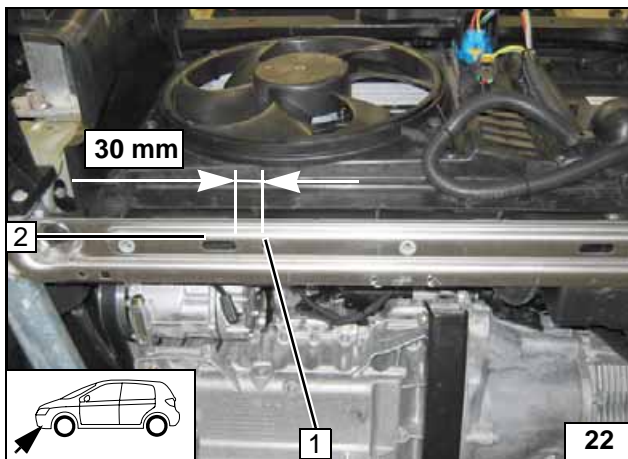


Square cut-out at position 2.

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



Holes for bracket in radiator cross member

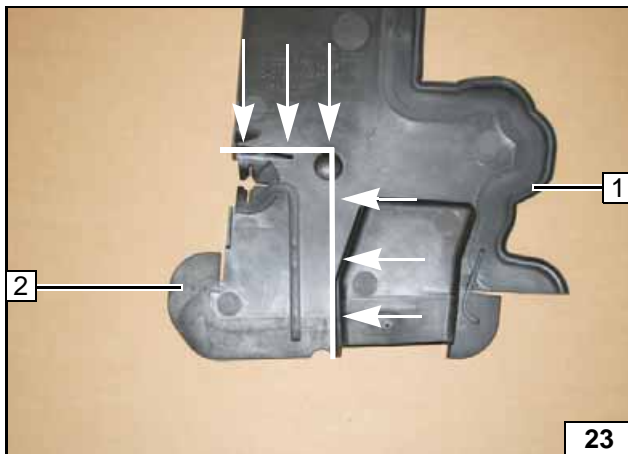


Cut-out of oblong hole at position 2.

1 7 mm dia. hole (centered from bar)



Hole for exhaust muffler in radiator cross member

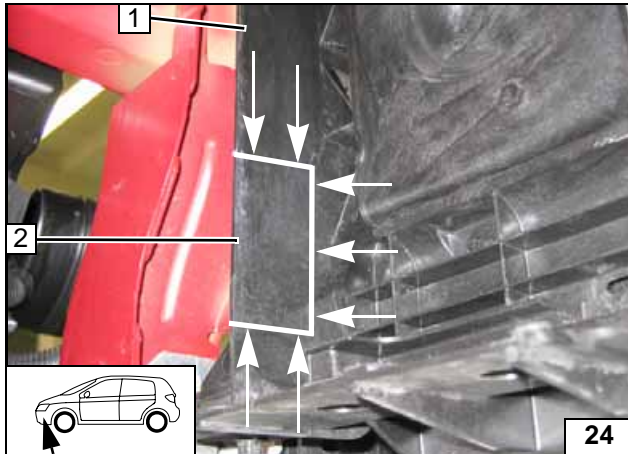
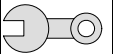


Cut away partition wall 1 at markings.

2 Discard remaining piece



Cutting out partition wall

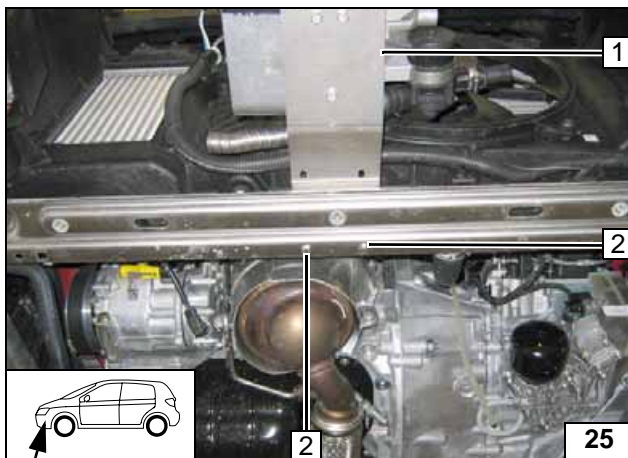


Cut away side section of radiator carrier 1 at markings.

2 Discard remaining piece



Cutting out radiator carrier



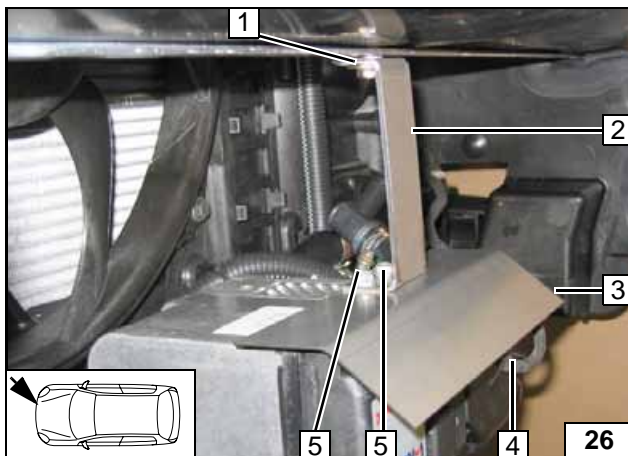
Installing heater unit

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

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



Installing heater unit

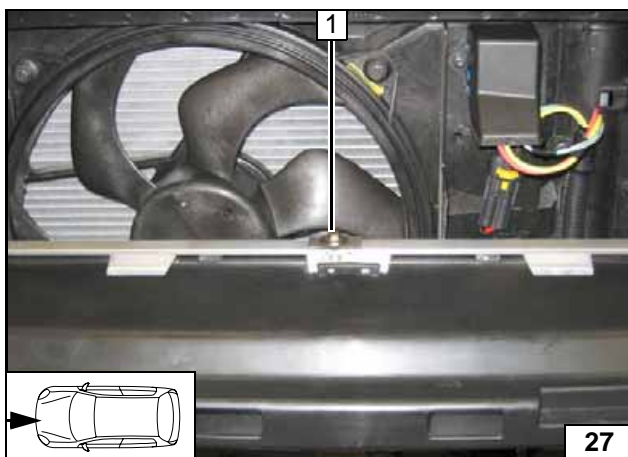


Before installing wind deflector plate 3, mount wiring harness for heater unit 4.

- 1 Loosely mount M6x20 bolt, spring lockwasher and large diameter washer
- 2 Strut
- 5 Loosely mount Eject screw [2x]



Installing strut

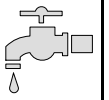


Tighten all connections following installation.

- 1 M6x20 bolt, spring lockwasher, large diameter washer



Installing strut



Coolant

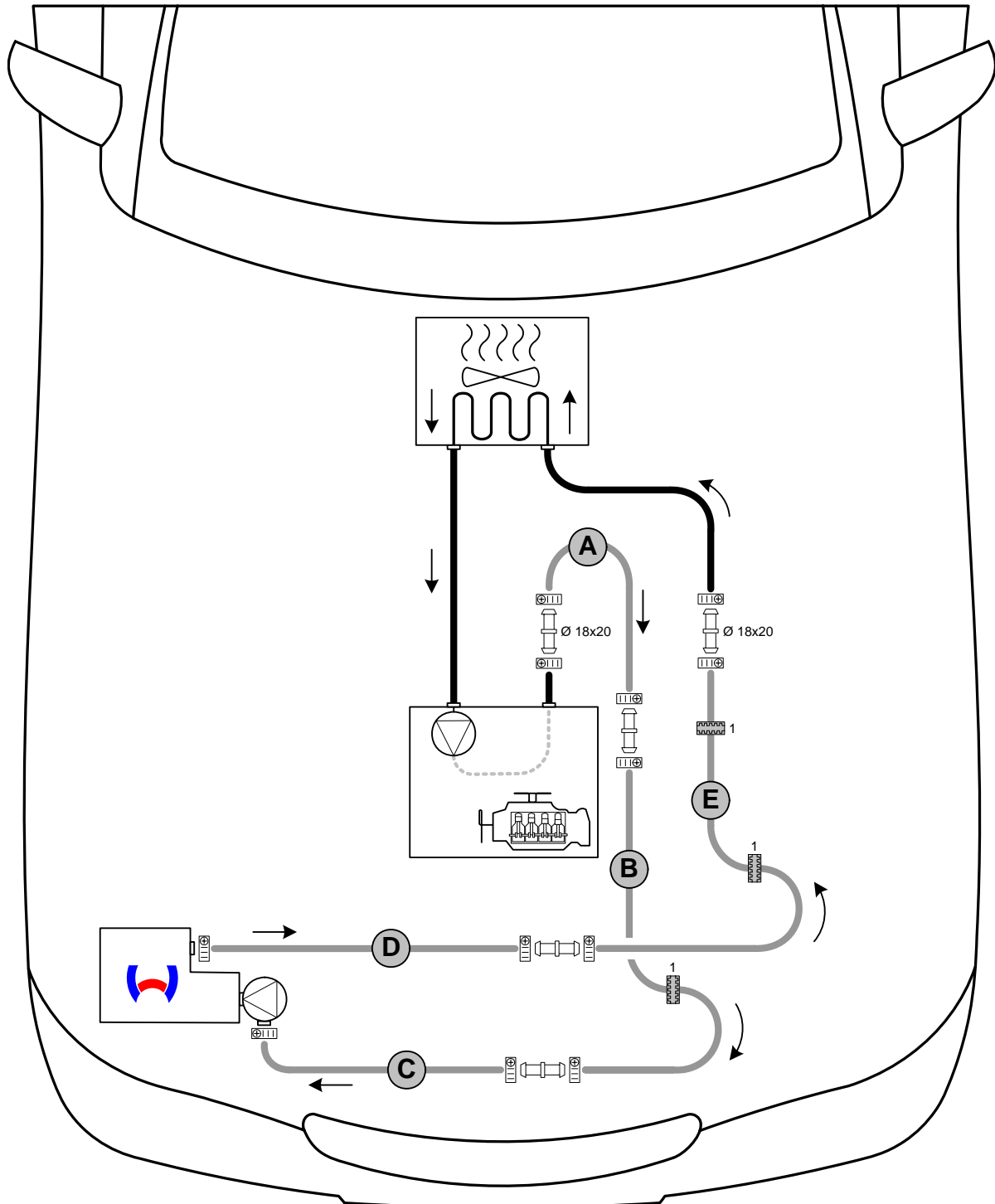
WARNING!

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


The connection should be "inline" based on the following diagram:




Coolant routing diagram

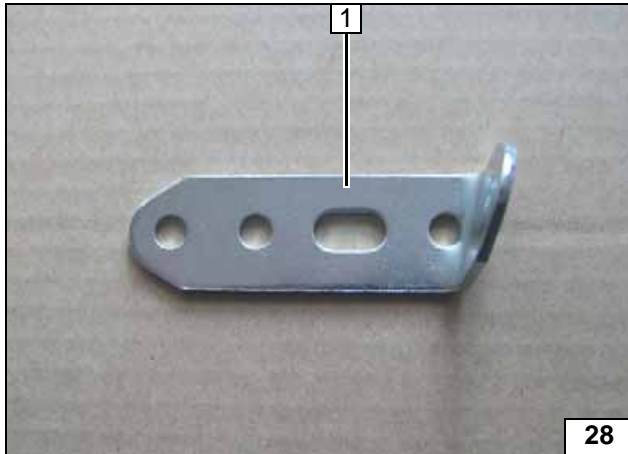


All hose clamps  = 20-27 mm dia.!

All connecting pipes without a specific designation  = dia. 20x20.

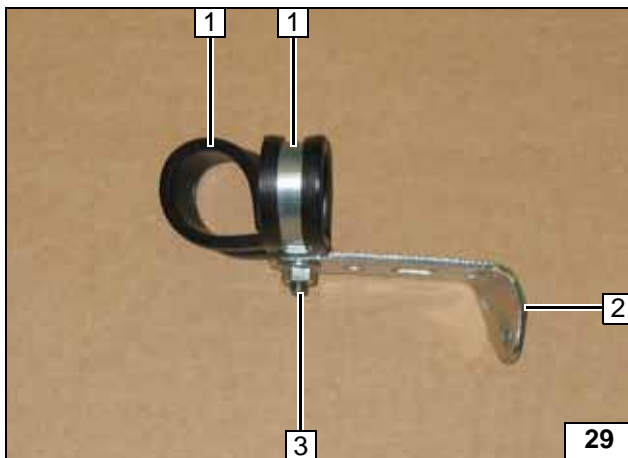
1= Black (sw) rubber isolator .





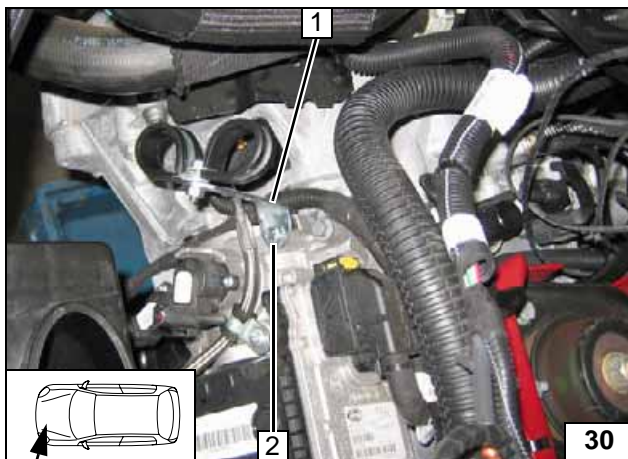
1 Perforated bracket

Angling down perforated bracket



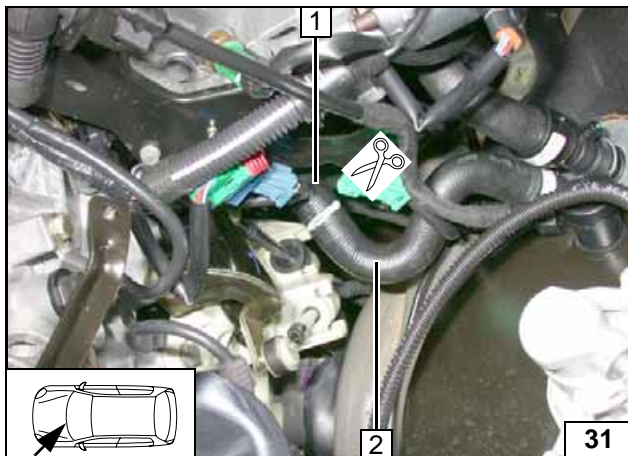
1 28 mm dia. rubber-coated p-clamp [2x]
2 Perforated bracket
3 M6x20 bolt, flanged nut

Installing pipe clamps



1 Perforated bracket on hole of transmission
2 M6x20 bolt, spring lockwasher

Installing perforated bracket



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

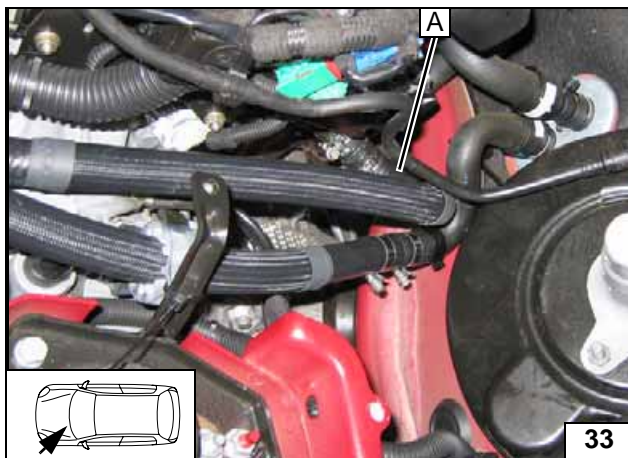


Before installation, push black (sw) rubber isolator **1** onto hose **E**.

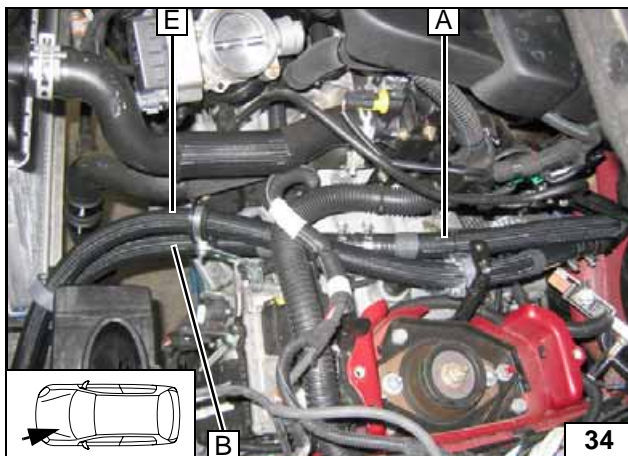
1 Black (sw) rubber isolator with cable tie on metal lug



Connecting heat exchanger inlet



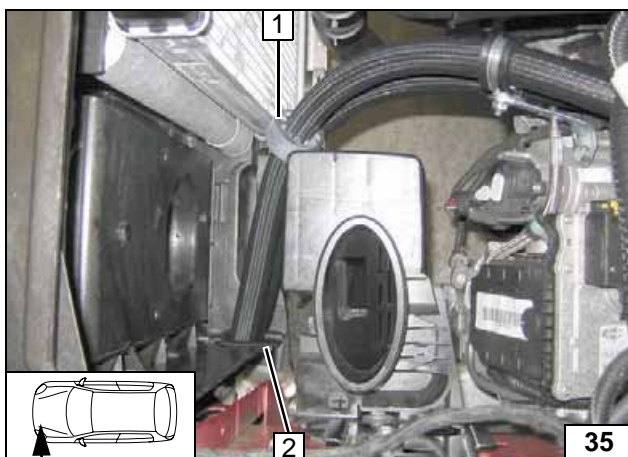
Connecting engine outlet



Route hose **B** and **E** through rubber-coated p-clamps. Only loosely preassemble connecting point from hose **A** and **B** (hose clamps will be tightened later).



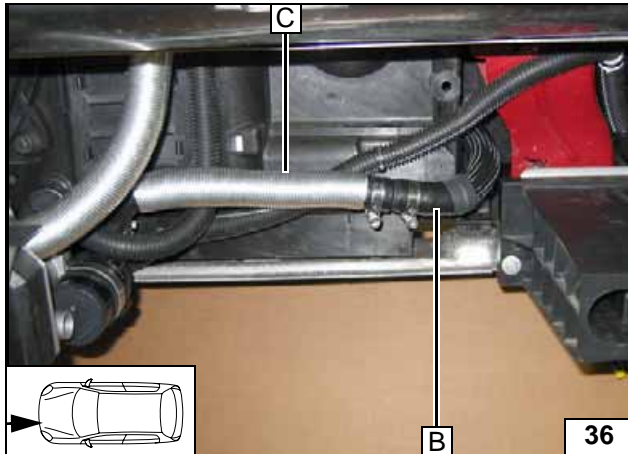
Routing in engine compartment



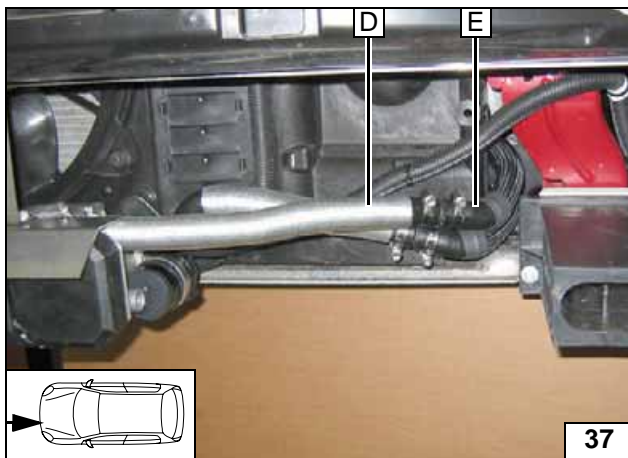
Before installation, slide black (sw) rubber isolator **1** [2x] onto hose **B** and **E**. Provide cut-out in radiator carrier with edge protection **2**.



Routing in engine compartment



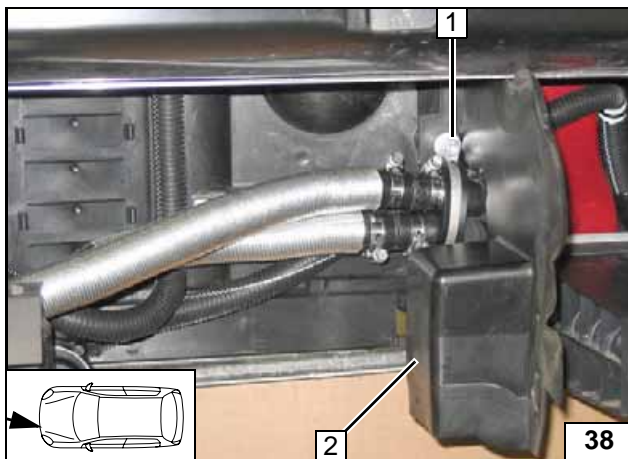
Connect-
ing heater
unit inlet



Align hoses and tighten hose clamps at connecting point of hose **A** and **B**.
Check the position of the components; adjust if necessary. Check that they have free clearance.



Conne-
ction on
heater unit
outlet



Fasten hose **B** and **E** with rubber-coated p-clamp together with partition wall **2**.



1 48 mm dia. rubber-coated p-clamp, 20 mm shim, M6x40 bolt, flanged nut on original vehicle hole for clip

Fastening
hoses



Fuel

CAUTION!

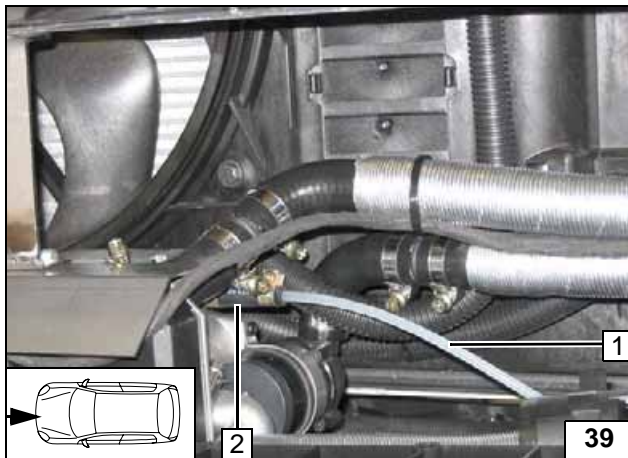
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

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.

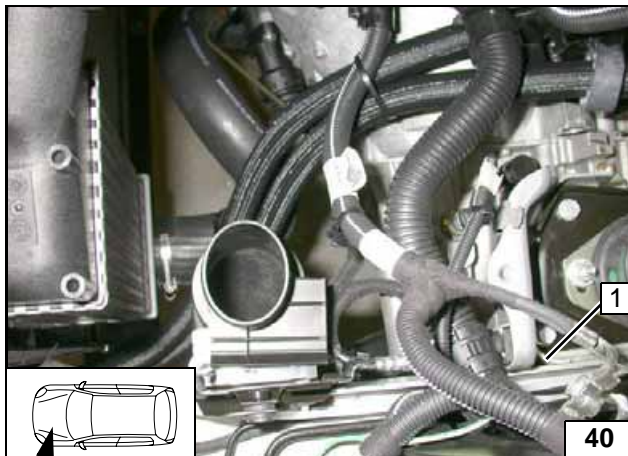
WARNING!

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



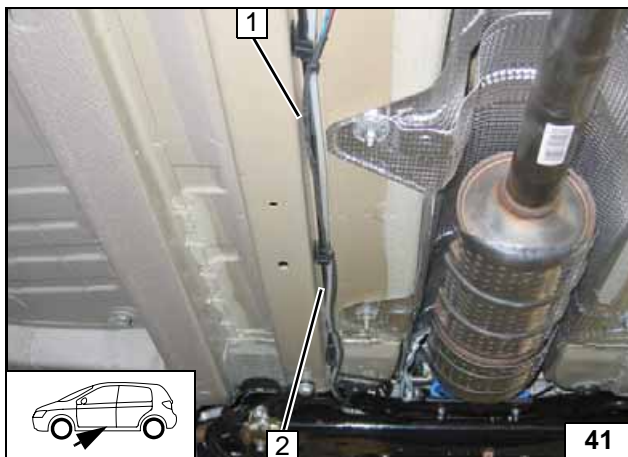
- 1 Fuel line
- 2 Hose section, 10 mm dia. clamp [2x]

Conne-
ction on
heater unit



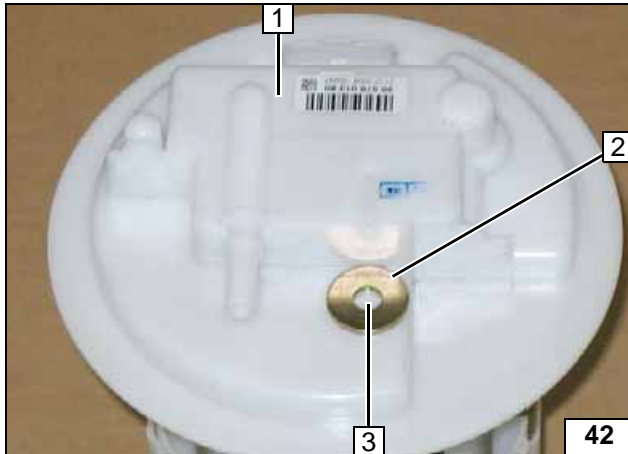
- 1 Fuel line
- 2 Edge protection 70

Installing
lines



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

Installing
lines

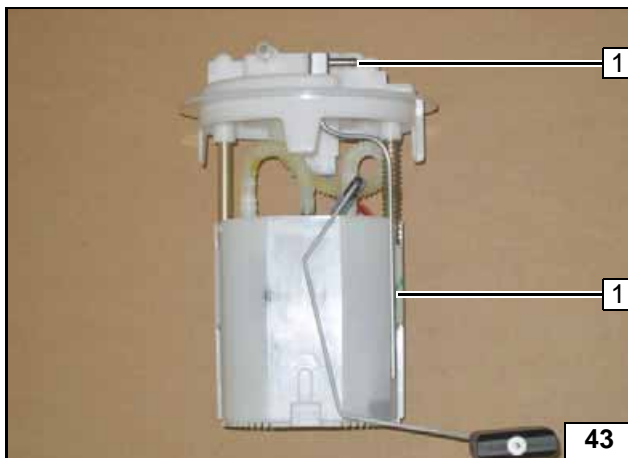


Remove fuel tank and fuel-tank sending unit **1** according to manufacturer's information.

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



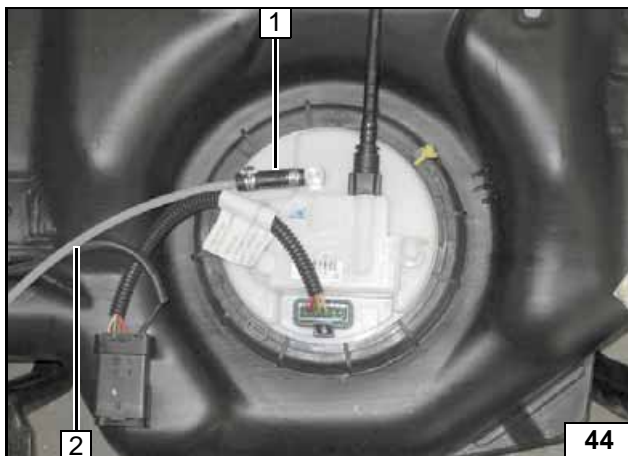
Removing fuel



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



Installing fuel standpipe

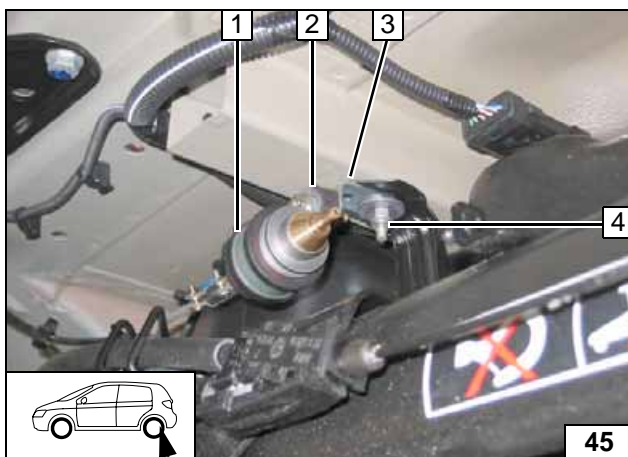


Install fuel-tank sending unit according to manufacturer's specifications.
Install fuel tank in accordance with manufacturer's specifications.

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



Connecting fuel line



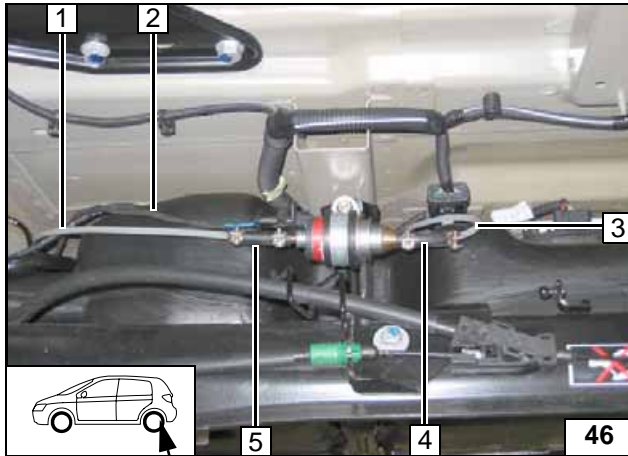
Ensure proper installation position of metering pump, see "Installation Instructions".
Installation location behind vehicle fuel tank!

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



Installing metering pump



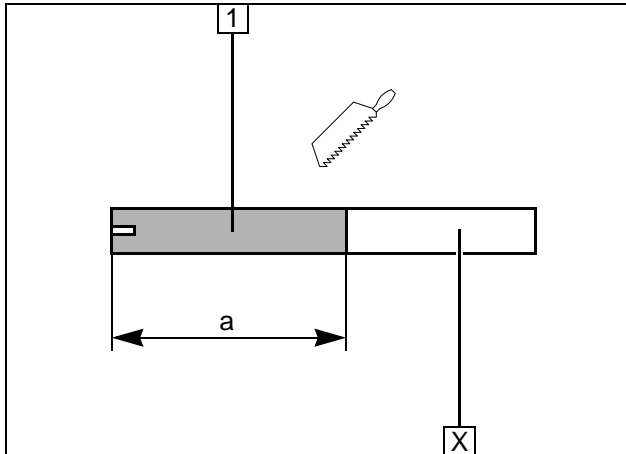
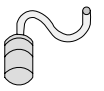


Connect fuel line from heater unit **1** to pressure side and fuel line from fuel standpipe **3** to intake side of metering pump.

- 2** Wiring harness of metering pump, connector mounted
- 4** Hose section, 10 mm dia. clamps [2x]
- 5** Hose section, 10 mm dia. clamps [2x]



**Connect-
ing meter-
ing pump**

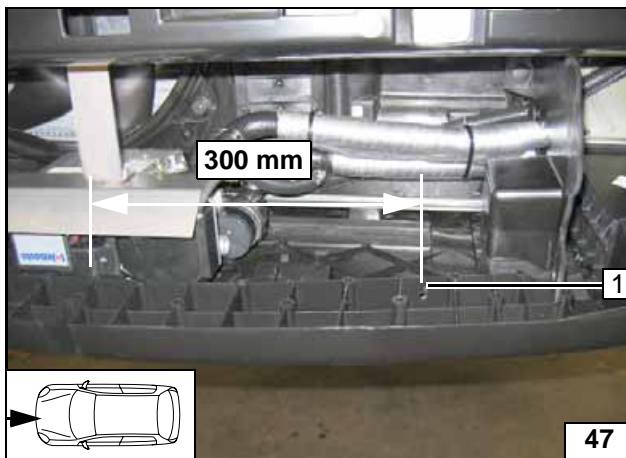


Combustion air

- 1 Combustion air pipe
a = 250

Discard section X

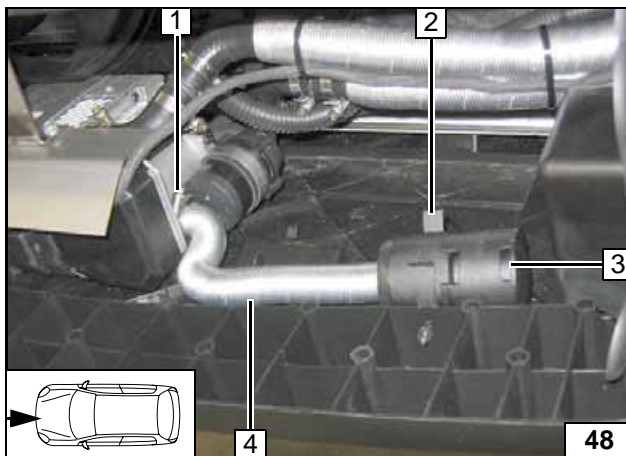
Cutting combustion air pipe to length



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



Hole for muffler

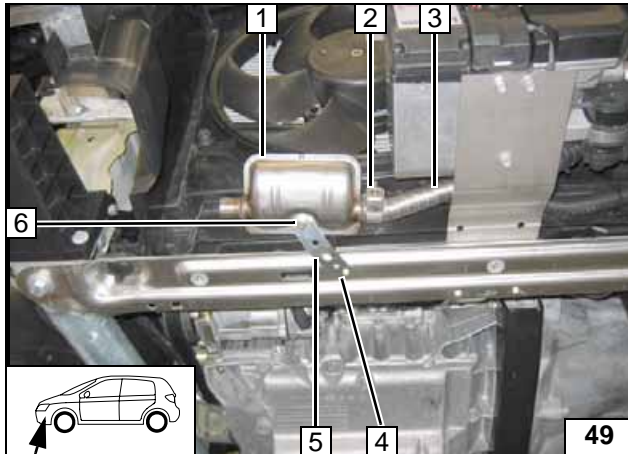
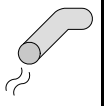


Ensure proper installation position of air intake muffler, see "Installation Instructions". Check the position of the components; adjust if necessary. Check that they have free clearance.

- 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



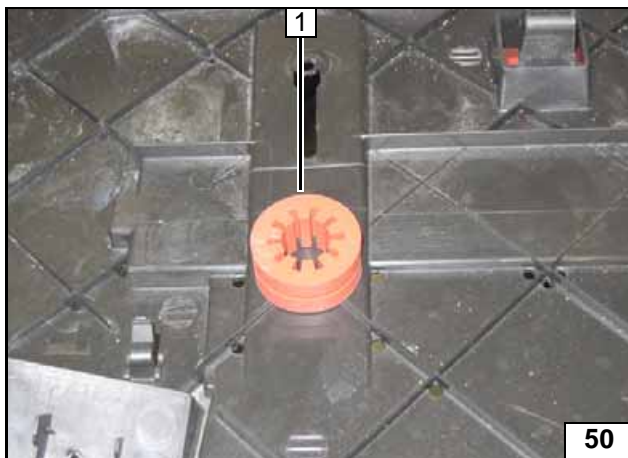
Exhaust gas

Following installation, align muffler upward approx. 30°.

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



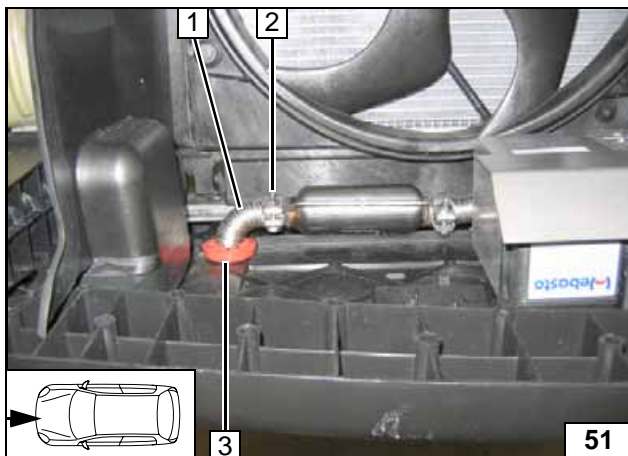
Installing exhaust system



Lay on red (rt) rubber isolator at position 1, copy hole pattern and drill 42 mm dia. hole in underride protection.



Cutting out underride protection

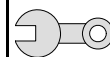


Insert rubber isolator 3 in 42 mm dia. hole. Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1 Exhaust end section
- 2 Hose clamp



Mounting underride protection



Final Work

WARNING!

Reassemble the disassembled components in reverse order.

Check all hoses, clamps and all electrical connections for firm seating.

Secure all loose cables using cable ties.

Only use manufacturer-approved coolant.

Spray the heater unit 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 additional heater, see the operating instructions/installation instructions.
- Attach the "Switch off additional heater before refueling" sticker to the left-hand B-pillar.



Webasto AG
Postfach 80 - 82132 Stockdorf
Hotline 01805 / 932278 - Hotfax 0395 / 5592-353
<http://www.webasto.de>

Operating Instructions for End Customer



Please remove page and add to the vehicle operating instructions.

Note:

We recommend matching the heating time to the driving time.

Heating time = driving time

Example:

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

If the summer/winter switch option has been installed, this must be switched in accordance with the time of year. The heater unit 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:



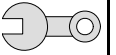
1 Air outlet to windshield



1 Air outlet to windshield

Manual air conditioning

Automatic air-conditioning



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 "minimize margins" and 100% of the normal size.

100 mm

0