

Water Heater Unit



Feel the drive

Thermo Top E Additional Heater  00 0003

Thermo Top C Additional Heater  00 0002

Thermo Top P Additional Heater  00 0104

Installation Instructions

Fiat Grande Punto

Gasoline

from Model Year 2006

For left-hand drive vehicles only



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
Fiat	Grande Punto	199	e3 * 2001/116 *0217*

Engine type	Engine model	Output in kW	Displacement in cm ³
350A1000	Gasoline	57	1368
199A6000	Gasoline	70	1368

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 Fiat Grande Punto Gasoline	1310662A

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

The installation instructions apply to the Fiat Grande Punto vehicles with a Gasoline engine
 - For the 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
- 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



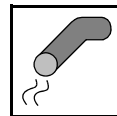
Coolant connection



Fuel connection



Exhaust system



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



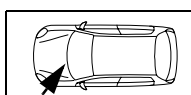
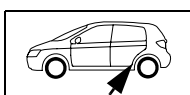
Specific risk of fire or explosion.



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



Reference to a special technical feature.

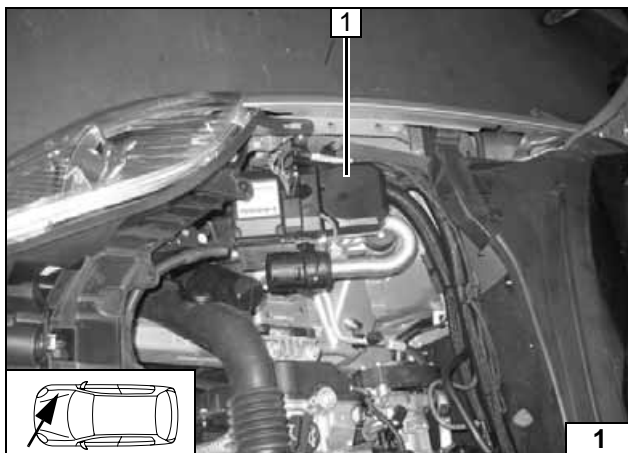


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

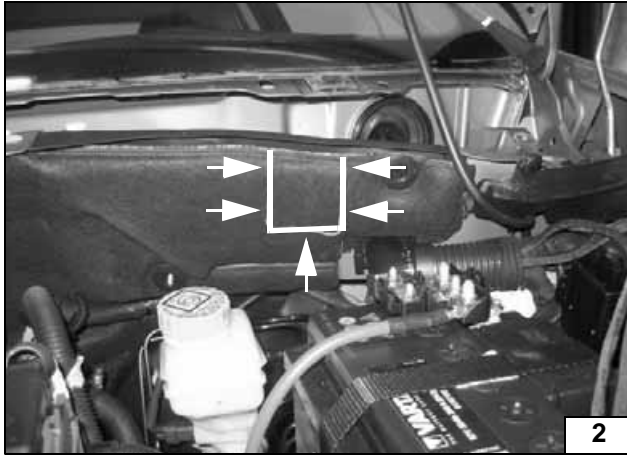
- Disconnect the battery "earth" or "ground" connection.
- Depressurize the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Completely remove the battery
- Remove the coolant reservoir cap.
- Remove the fuse and relay box.
- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- Fold over the rear seat surface.
- Open the right-hand fuel sender service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturers specifications.



Heater unit installation location

- 1 Heater unit

Installation
location

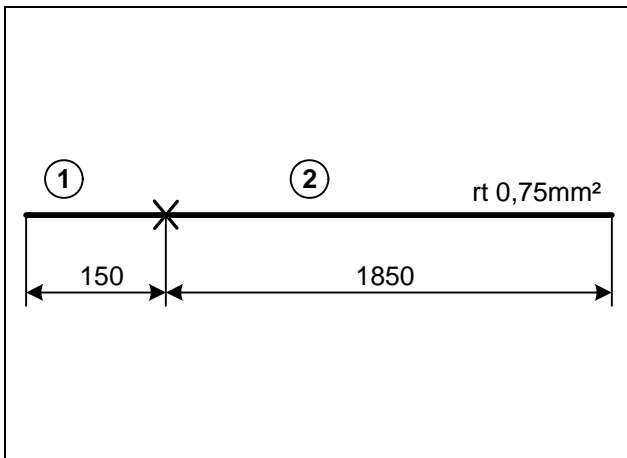


Preparing electrical system

Cut out insulation mat along marked line.



Cutting out insulation mat

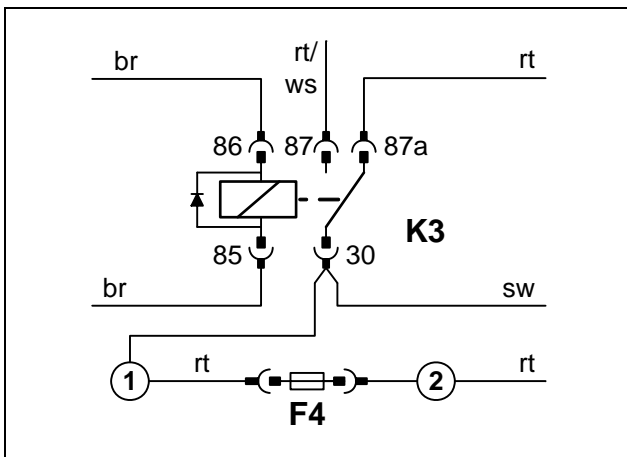


Only with automatic air-conditioning

Wire section 1 and 2 will be required later for connecting A/C control panel.



Cutting wires to length



Make connections as shown in the wiring diagram with the tab receptacles provided. Install wire section 2 in protective sleeving provided.



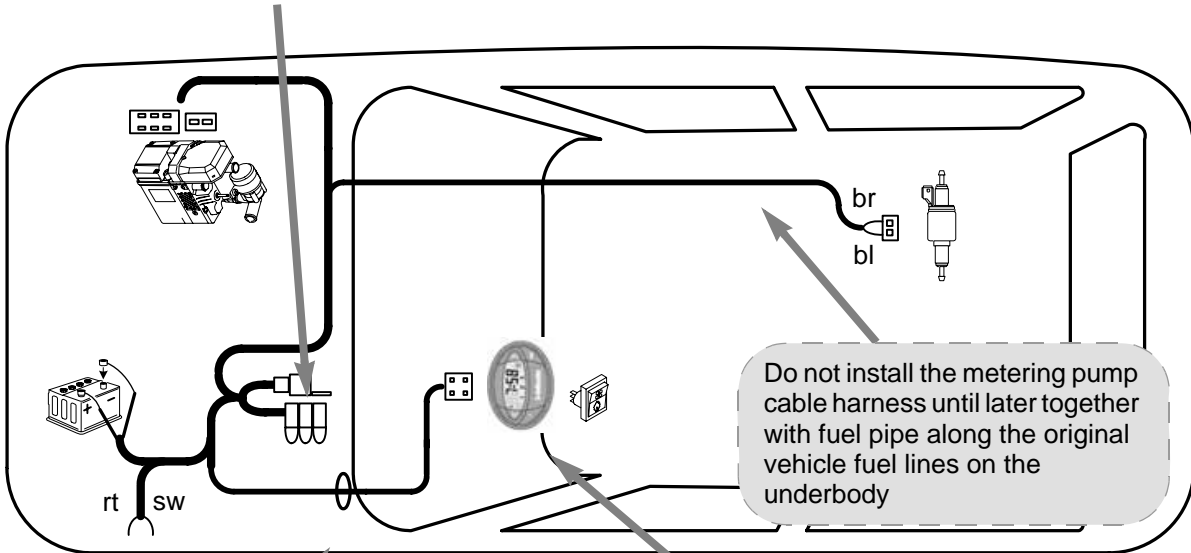
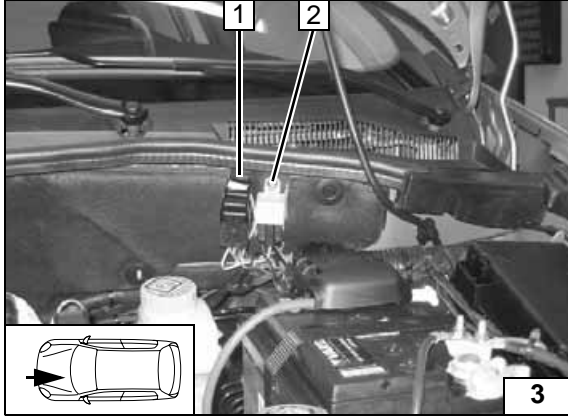
Pre-mounting K3 relay



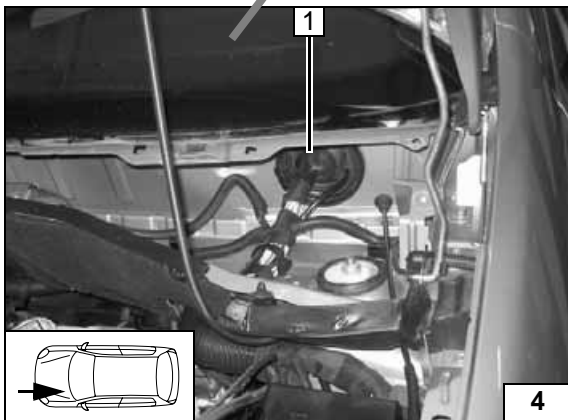
Electrical Connections

Fuse holder, relay K3

- 1 Retaining plate of fuse holder, M5.5x9.5 bolt
- 2 K3 relay, M5.5x9.5 bolt, washer

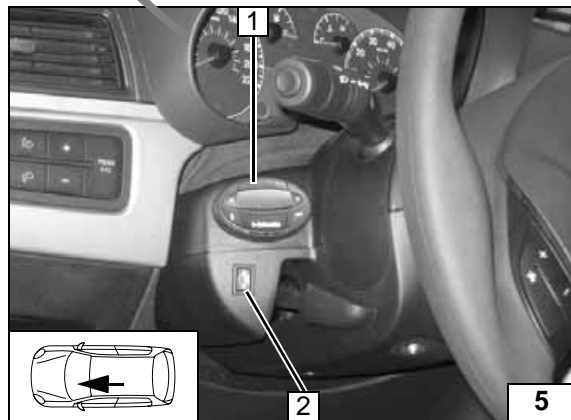


Wiring harness installation diagram



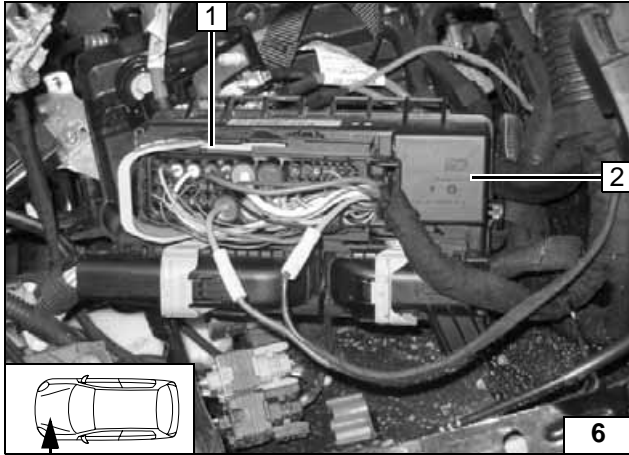
Wiring harness pass through

- 1 Protective rubber plug



Digital timer and summer/winter switch option

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



Fan controller for manual air conditioning

Integration on connector of fuse and relay box.
Make connections as shown in the wiring diagram with the connectors provided.

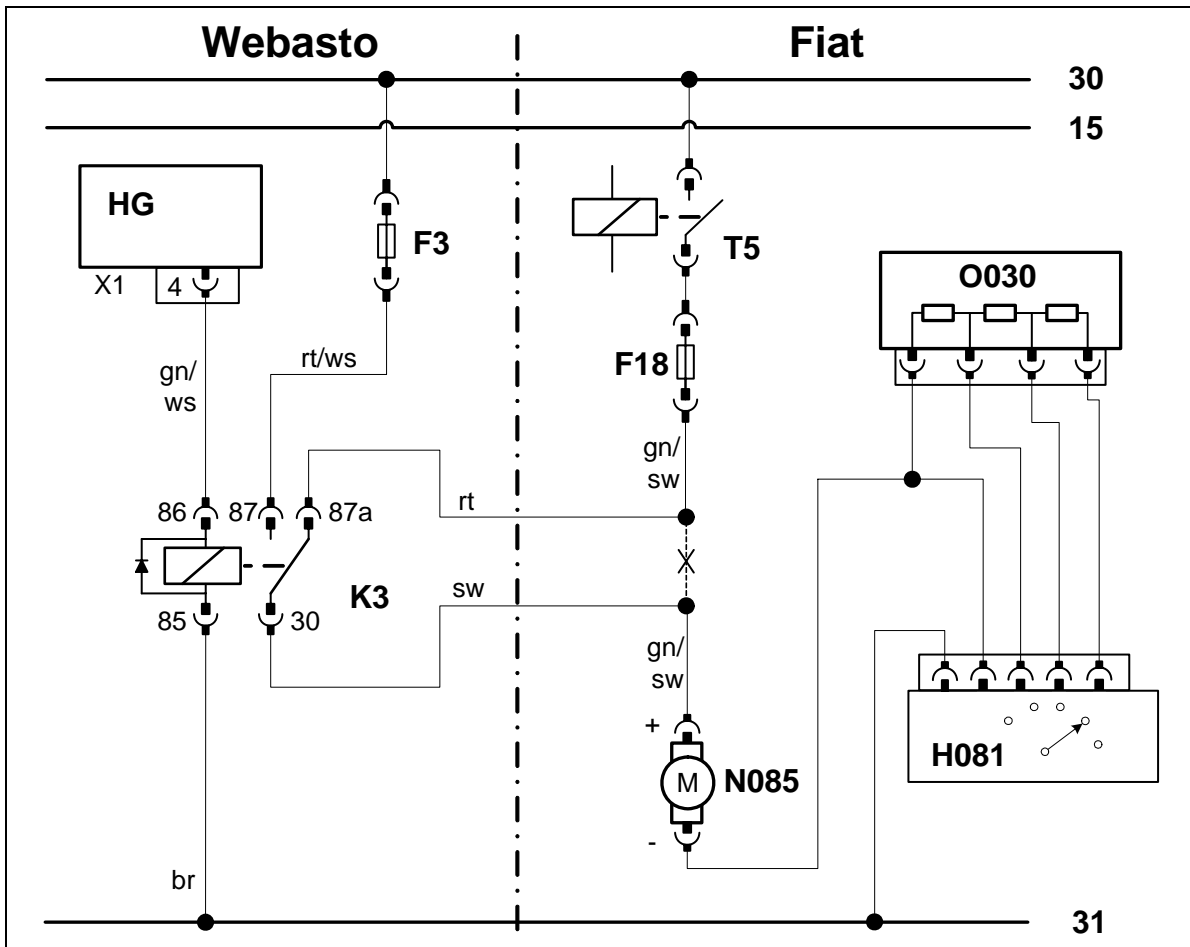
- 1 Connector
- 2 Fuse and relay box



Connecting fan motor

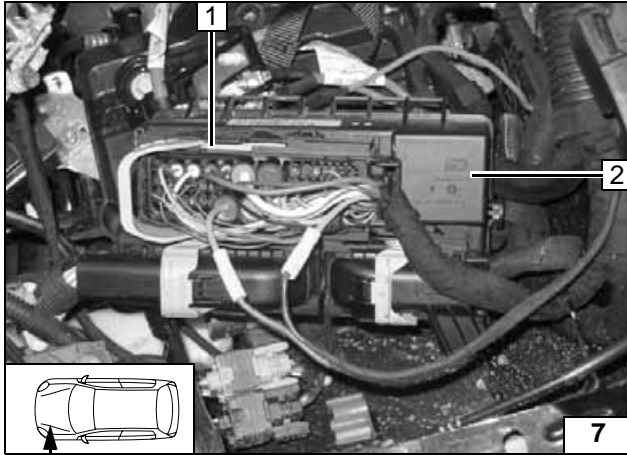


Wiring diagram for manual air conditioning



Webasto components		Fiat components		Colors and symbols	
HG	Heater unit TT-C/E	N085	Fan motor	rt	red
F3	Fuse	GR	Fan relay	ws	white
K3	Fan relay	O030	Fan resistor	sw	black
		H081	Fan switch	br	brown
		F18	Fuse 40A	gn	green
				bl	blue
				gr	gray
				or	orange
				vi	violet
				X	Cutting point

Legend



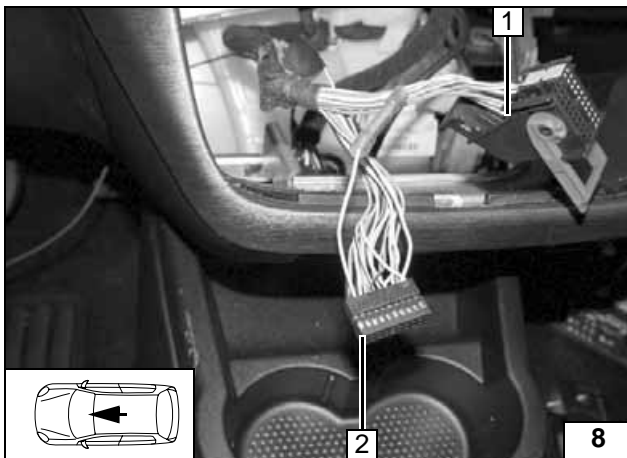
Automatic air-conditioning fan controller

Integration on connector of fuse and relay box.
Make connections as shown in the wiring diagram with the connectors provided.

- 1 Connector
- 2 Fuse and relay box



**Con-
necting fan
motor**

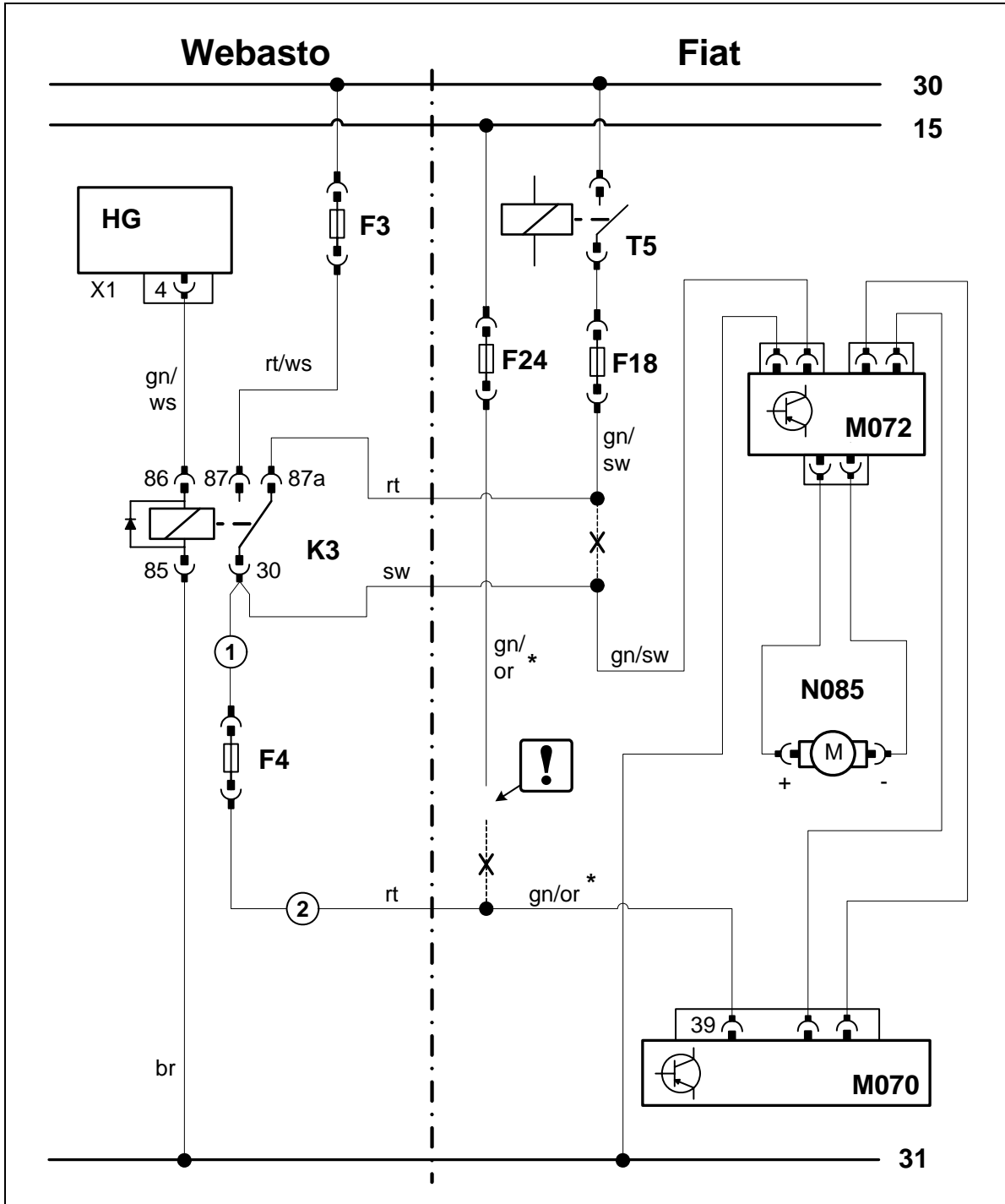


Integration on 40-pin connector, Pin 39 from A/C control panel (wire colors may vary). Remove connector half 2 from Pin 21 to Pin 40 from connector housing. Make connections as shown in wiring diagram with connectors provided.

- 1 40-pin connector (2-piece)



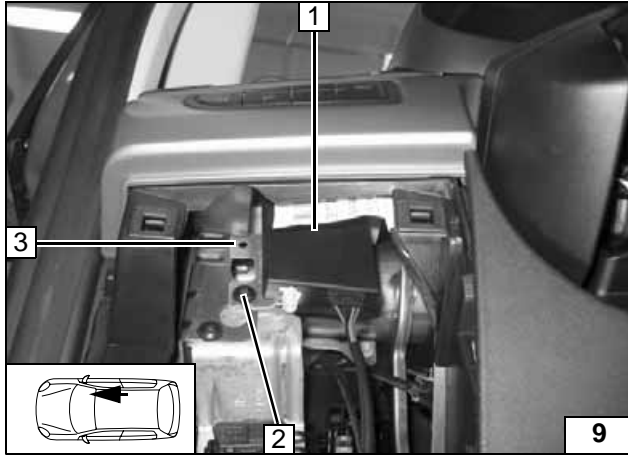
**Con-
necting air-
con-
ditioning
control
element**



Automatic air-conditioning circuit diagram

Webasto components		Fiat components		Colors and symbols	
HG	Heater unit TT-C/E	N085	Fan motor	rt	red
F3	Heater unit fuse	GR	Fan relay	ws	white
K3	Fan relay	M072	Fan controller	sw	black
F4	Fuse, 7.5 A	M070	Air-conditioning control panel	br	brown
		F24	Fuse, 7.5 A	gn	green
		F18	Fuse 40A	ro	pink
				or	orange
				*	Wiring colors may vary
				!	Insulate wire ends and tie back
				X	Cutting point

Legend

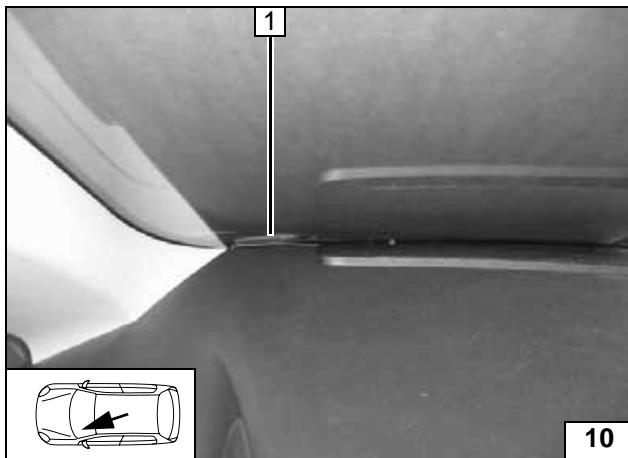


Remote option (Telestart)

- 1 Receiver
- 2 Original vehicle bolt
- 3 Telestart bracket

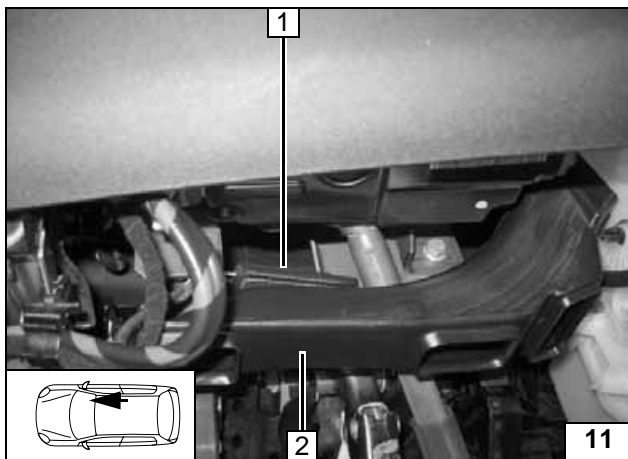


Installing receiver



- 1 Antenna

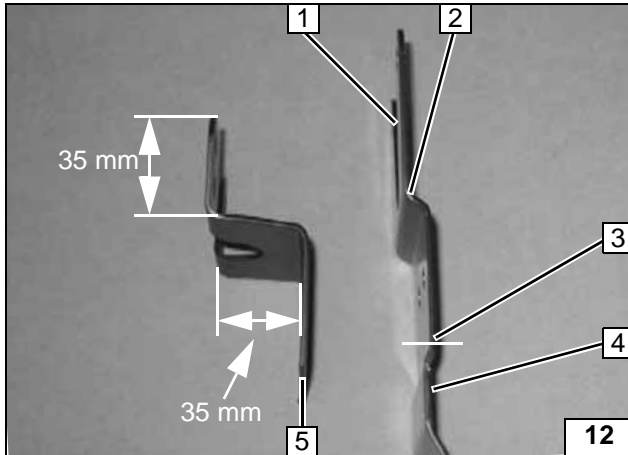
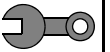
Installing antenna



Only with Telestart HTM 100

- 1 Temperature sensor with double-sided adhesive installation strap
- 2 Ventilation duct under instrument panel

Installing temperature sensor



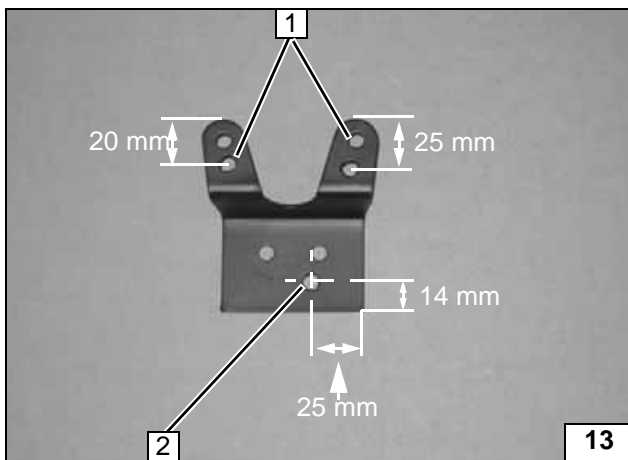
Preparing bracket and heater unit

Bend angle bracket **2** straight and shorten at cutting line **3**. Shape bracket as shown in drawing.

- 1** Included bracket
- 4** Discard section
- 5** Bracket reshaped

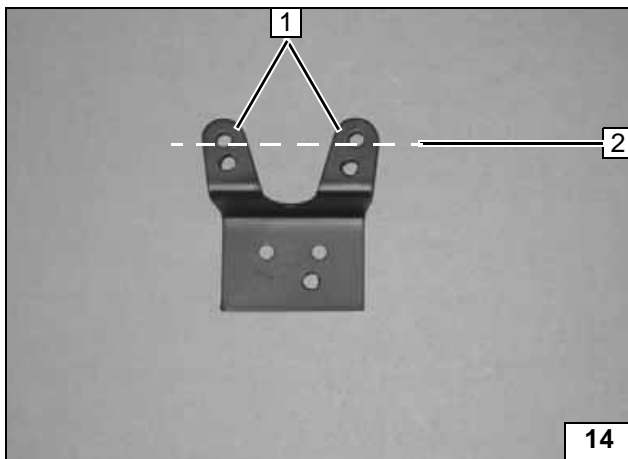


Shaping bracket



- 1** Centered 7.0 mm dia. hole [2x]
- 2** 7.0 mm dia. hole

Preparing bracket

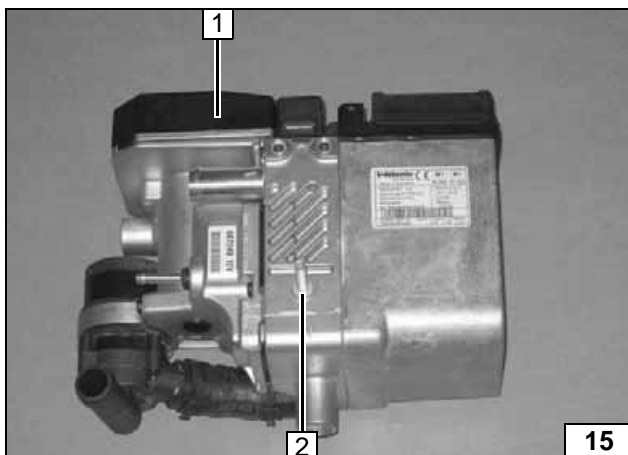


Shorten bracket at cutting line **2**.

- 1** Discard cut-off section [2x]



Preparing bracket

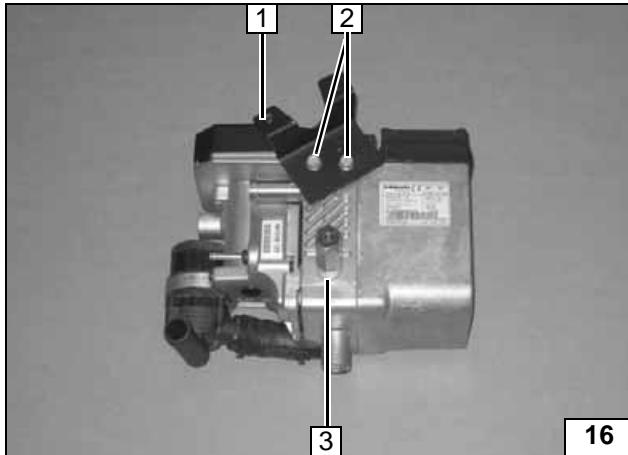
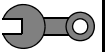


Tighten E-JOT screws to 10 Nm!

- 1** Heater unit
- 2** Included E-jot stud



Pre-mounting heater unit

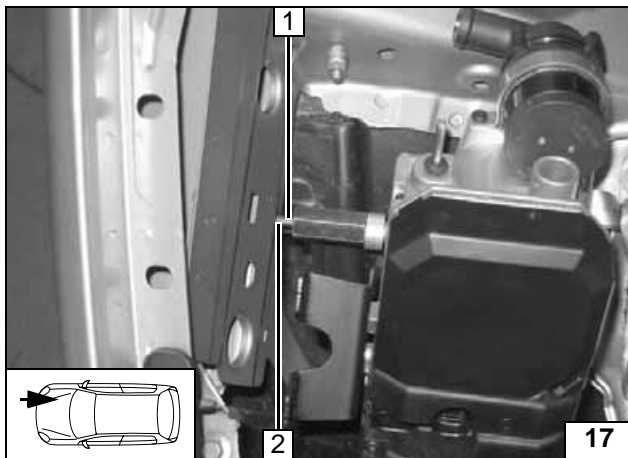


Tighten EJOT screws to 10 Nm!

- 1 Prepared bracket
- 2 Ejot screw [2x]
- 3 10 mm shim, M6x40 spacer nut



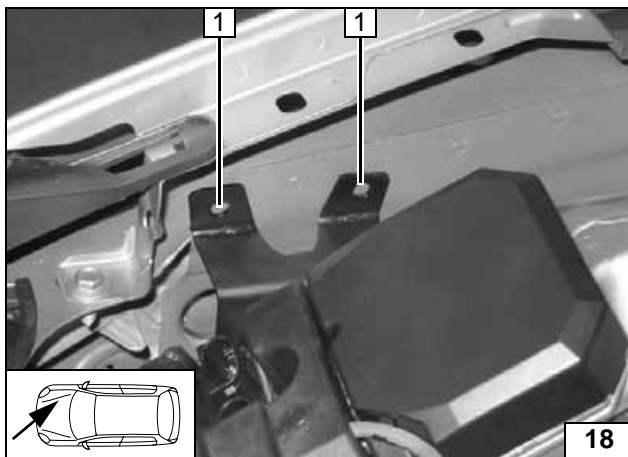
Installing bracket on heater unit



Installing heater unit

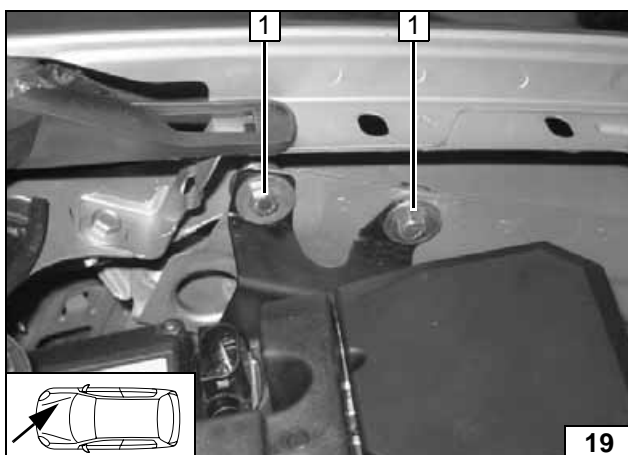
- 1 M6x20 bolt, spring lockwasher, large diameter washer,
- 2 Existing hole

Installing heater unit



- 1 Copy hole pattern, drill 7.0 mm hole [2x]

Copying hole pattern



- 1 M6x20 bolt [2x], large diameter washer [4x], M6 flanged nut [2x]

Installing heater unit



Coolant connection

WARNING!

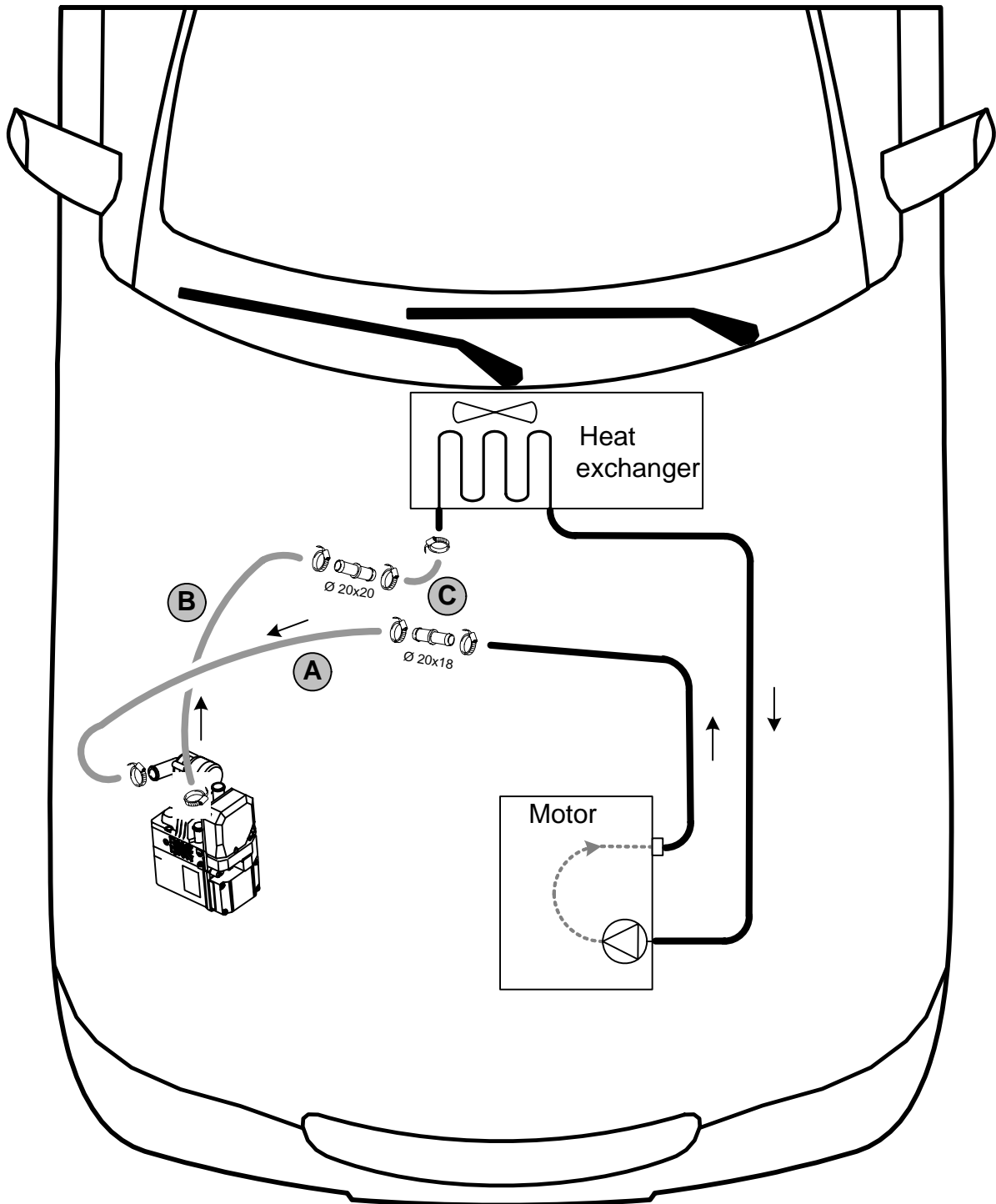
Tighten all hose clamps to 2.0 + 0.5 Nm.

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 hose clamps and spring band clamps so that no other hose can be damaged.

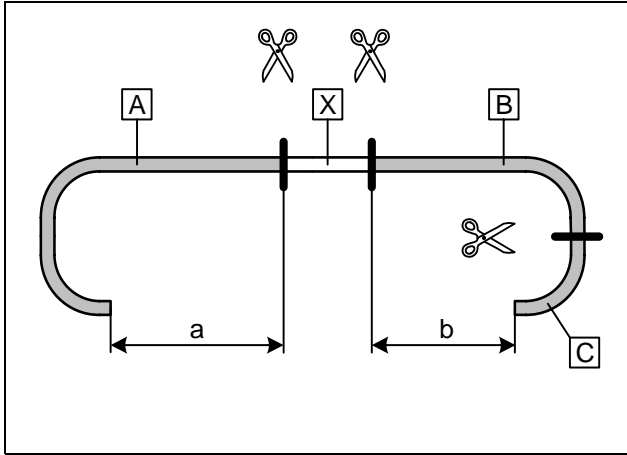
The connection should be "inline" based on the following diagram:



Coolant routing diagram

All clamps without a specific designation are 20-27 mm dia. hose clamps

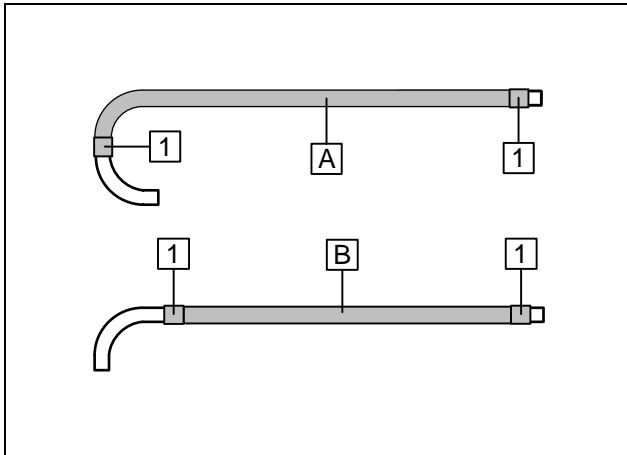




a = 810 mm
b = 870 mm

Discard section **X**
Cut braided protection hoses to length and push onto hose **A** and **B**.

Cutting coolant hoses to length

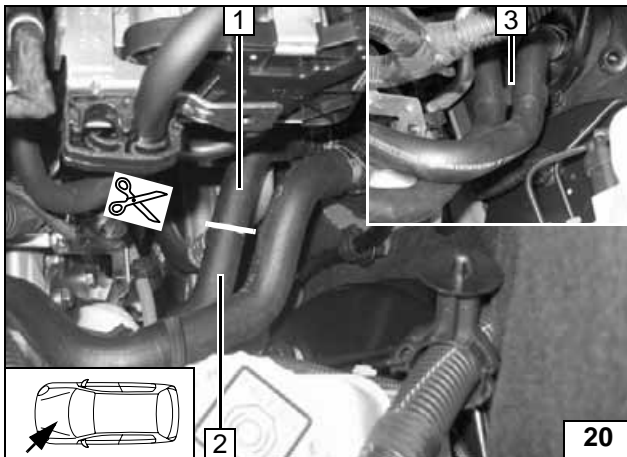


Push braided protection hoses onto hose **A** and **B** and cut to length. Cut included heat shrink plastic tubing in half, push on and shrink.

1 Heat shrink plastic tubing cut in half [4x]



Preparing coolant hoses

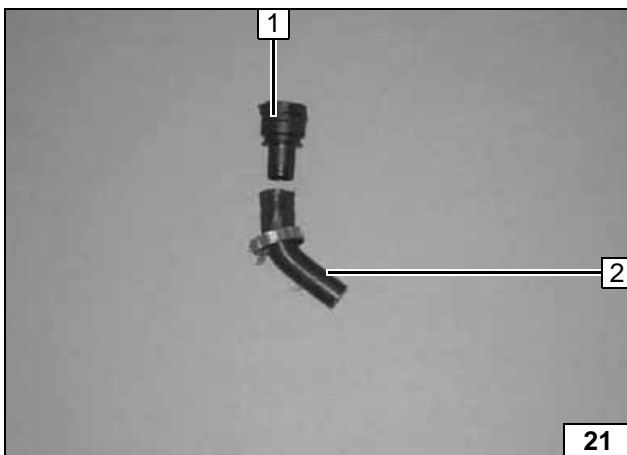


Pull hose **1** on heat exchanger inlet off heat exchanger after disconnecting. On 70 kW engine, cut off vulcanized-on connecting piece **3**.

2 Hose of engine outlet

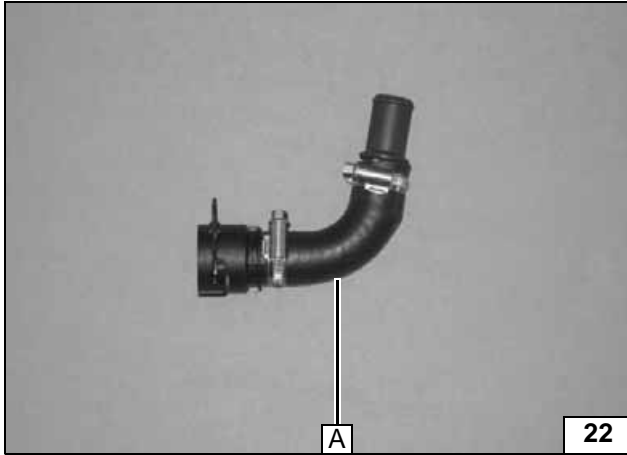


Cutting point



1 Original vehicle connection piece on heater exchanger inlet
2 Discard hose section and clamp

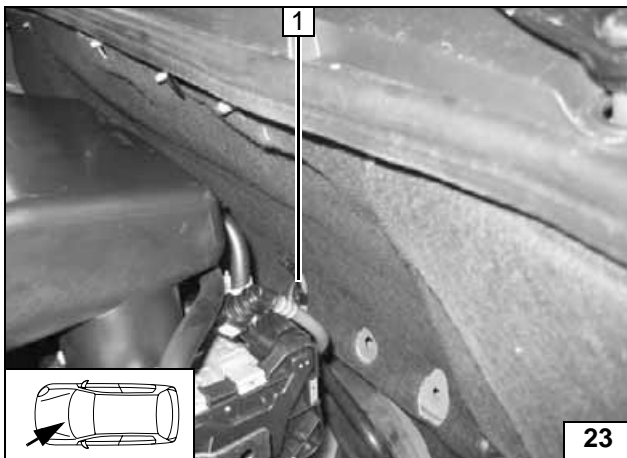
Preparing heat exchanger inlet



Premount connection piece for heat exchanger inlet and mount on heat exchanger inlet.

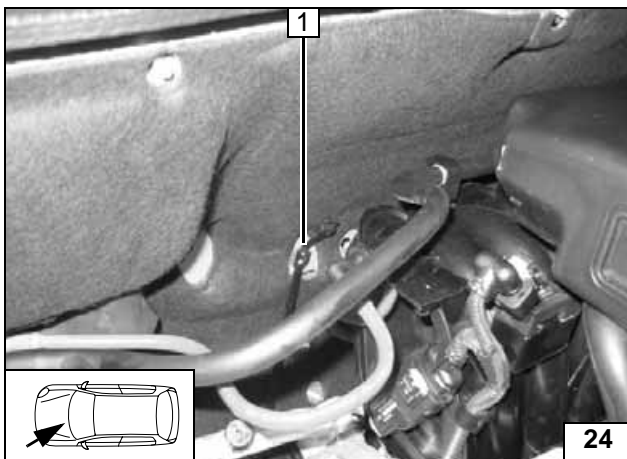


Premounting connection piece for heat exchanger inlet



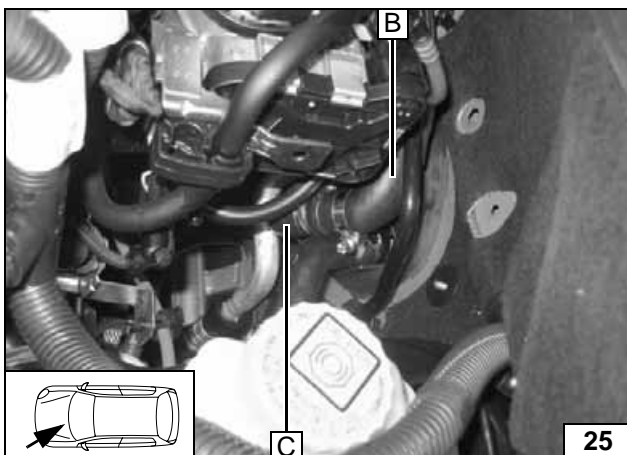
1 Included clip 1 with cable tie in existing hole

Preparing installation in engine compartment

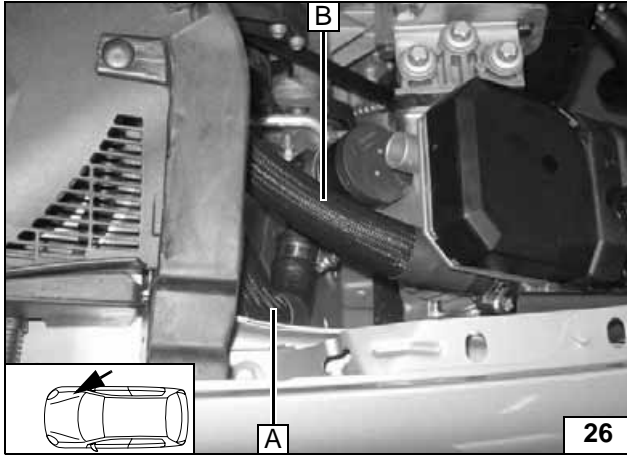


1 Included clip 2 with cable tie in existing hole

Preparing installation in engine compartment

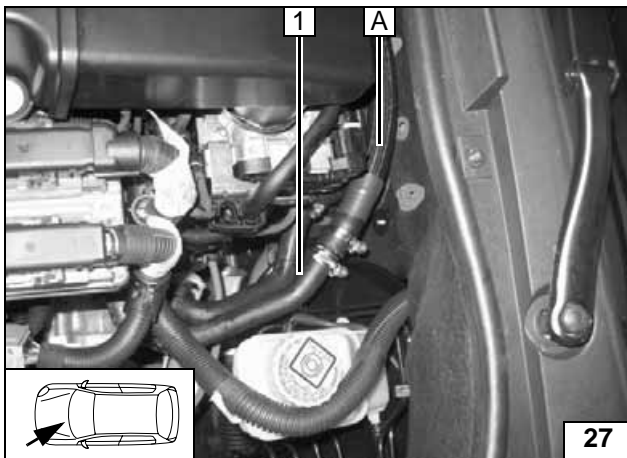


Connection on heat exchanger inlet



26

Conne-
ction to
heater unit



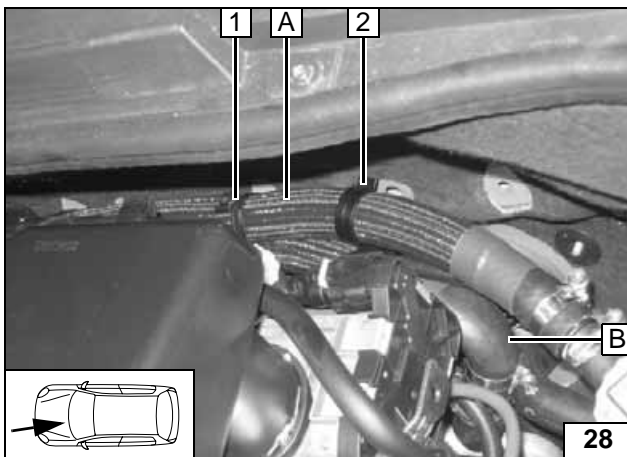
27

Before connecting, fill the coolant hoses with coolant.



1 Hose of engine outlet

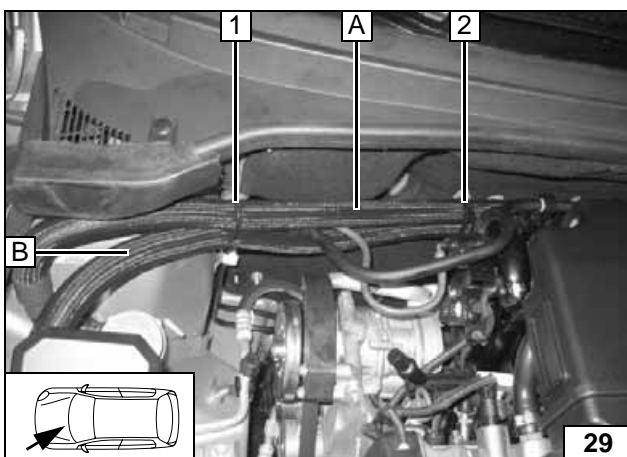
Conne-
ction to en-
gine outlet



28

1 Coolant hoses **A** and **B** in premounted clip 1 with cable tie
2 Included spacer bracket

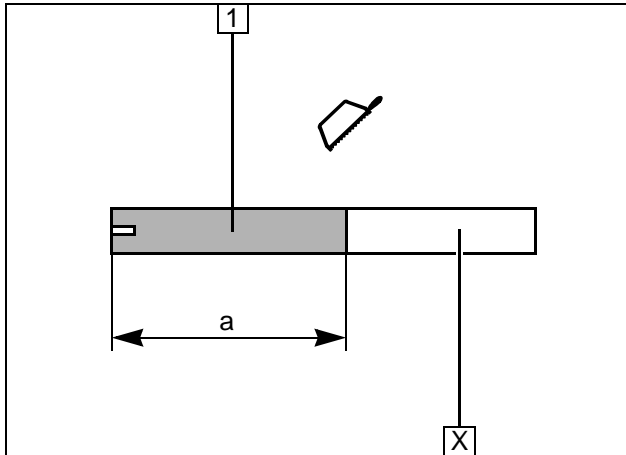
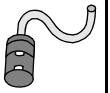
Routing in
engine
compartment



29

1 Cable tie
2 Coolant hoses **A** and **B** in premounted clip 2 with cable tie

Routing in
engine
compartment

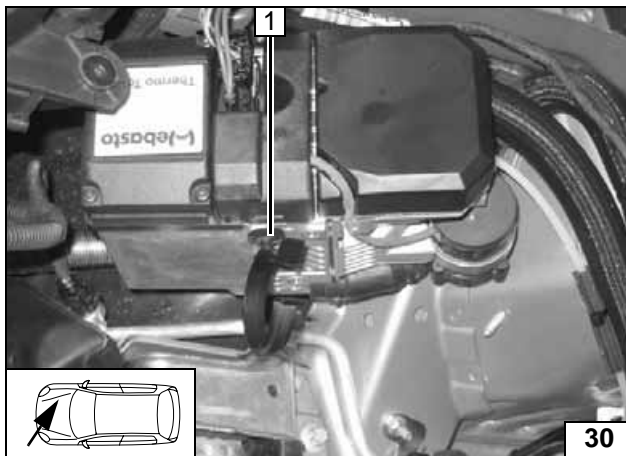


Combustion air

- 1 Combustion air pipe
a = 260 mm

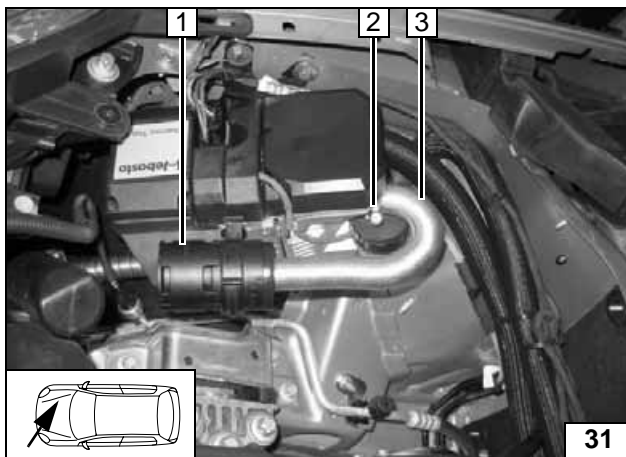
Discard section X

Cutting combustion air pipe to length



- 1 Retaining clip in hole of heater unit

Installing retaining clip



- 1 Combustion-air intake muffler
- 2 27 mm dia. hose clamp
- 3 Combustion-air intake pipe



Installing muffler



Fuel Connection

CAUTION!

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

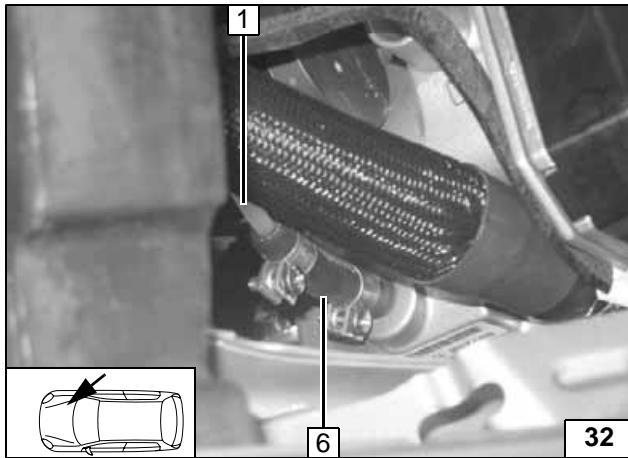
Catch any fuel running off with an appropriate container.

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.

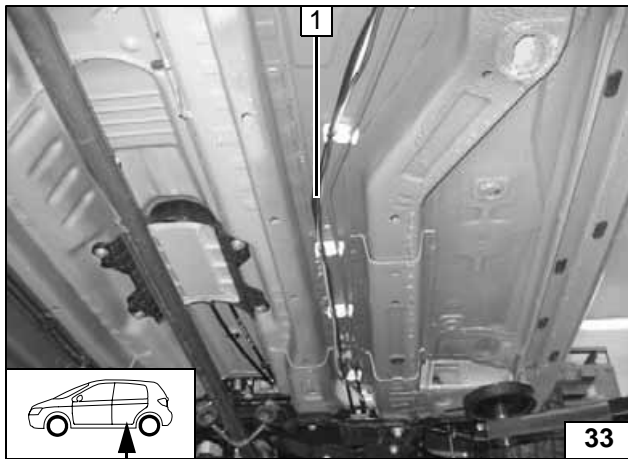
WARNING!

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



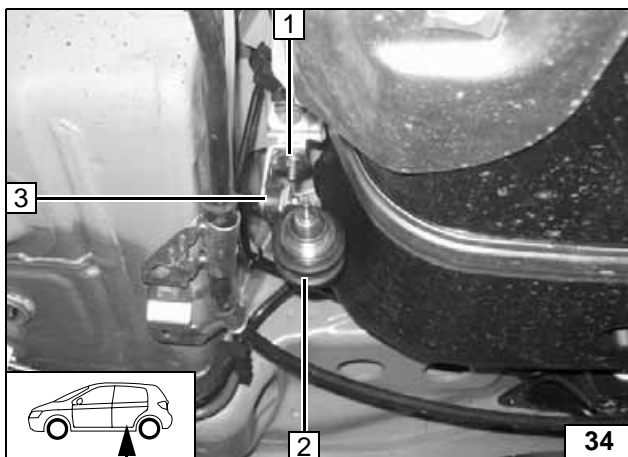
- 1 Mecanyl fuel line
- 2 Hose section, 10 mm dia. hose clamp [2x]

Conne-
tion on
heater unit



- 1 Mecanyl fuel line, wiring harness of metering pump on original vehicle line

Installing
lines

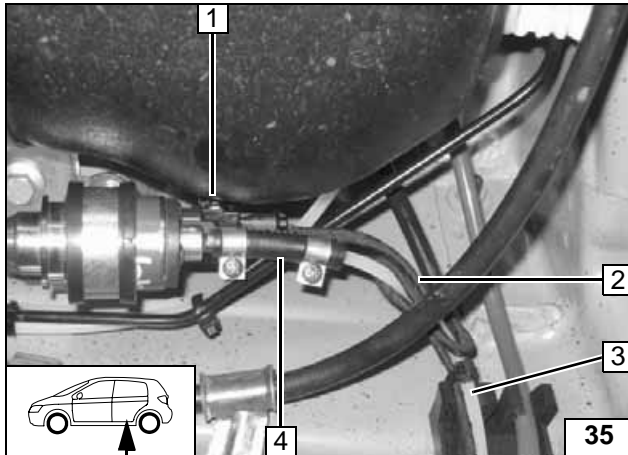


Ensure proper installation position of metering pump, see "Installation Instructions".
Installation location in front of vehicle fuel tank!

- 1 Angle bracket, original vehicle hole, M6x20 bolt, large diameter washer, M6 flanged nut
- 2 Metering pump, rubber-coated p-clamp
- 3 Silent block, flanged nut [2x]



Installing
metering
pump

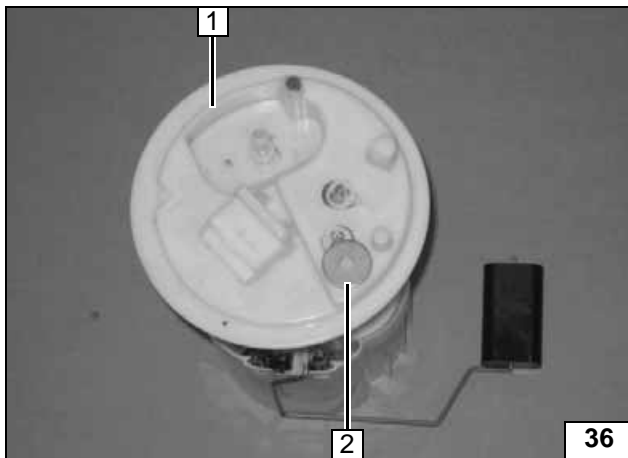


Fuel line from heater unit on pressure side of metering pump [side with connector].

- 1 Tab connector, connector housing
- 2 Wiring harness of metering pump,
- 3 Fuel line
- 4 Hose section, 10 mm dia. hose clamps [2x]



Installing metering pump

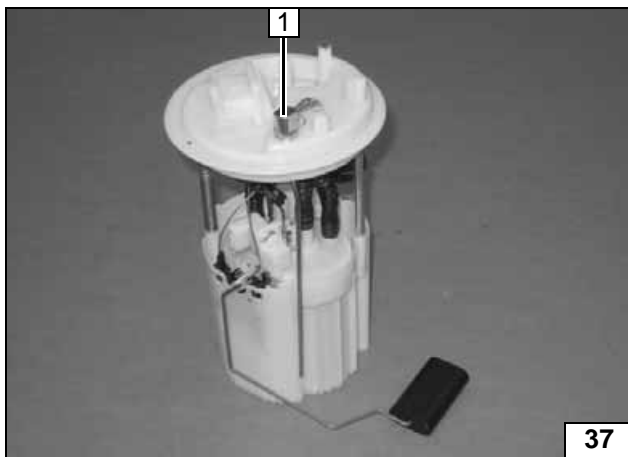


Remove fuel-tank sending unit in accordance with manufacturer's instructions.

- 1 Fuel-tank sending unit
- 2 Large diameter washer, copy hole pattern, 6 mm dia. hole



Removing fuel

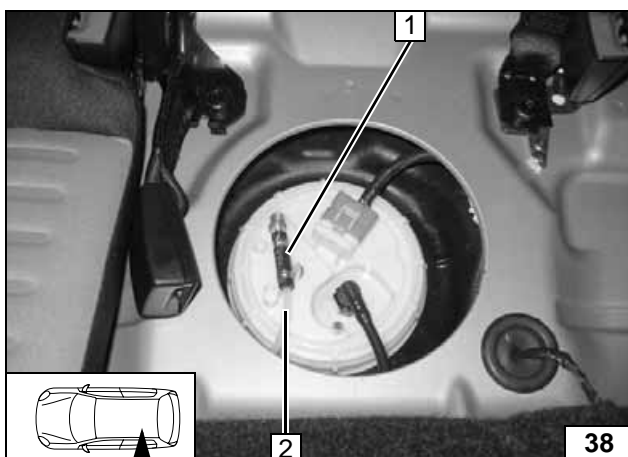


Shape fuel standpipe according to template, cut to length and install, see "installation instructions".

- 1 Fuel standpipe



Installing fuel standpipe

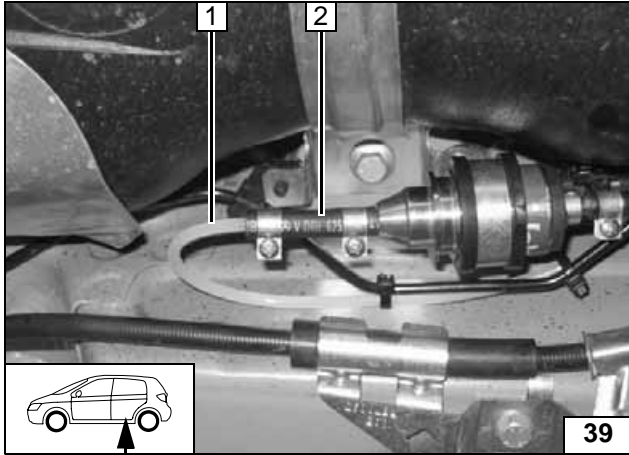


Install fuel-tank sending unit according to manufacturer's specifications.

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



Connecting fuel line

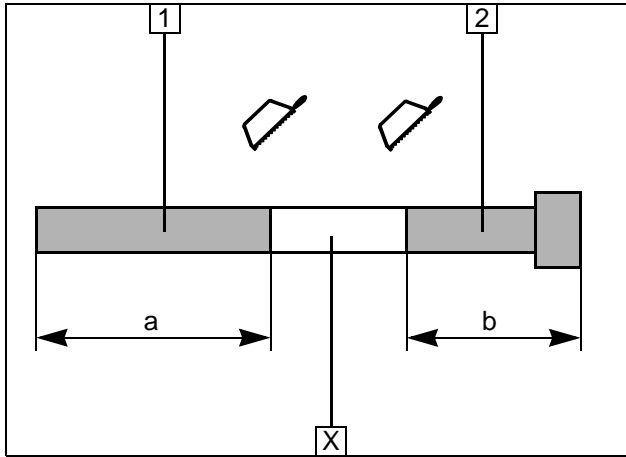
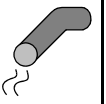


Fuel line from fuel standpipe on intake side of metering pump [side without connector]. Check the position of the components; adjust if necessary. Check that they have free clearance.

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



**Connec-
tion to me-
tering
pump**

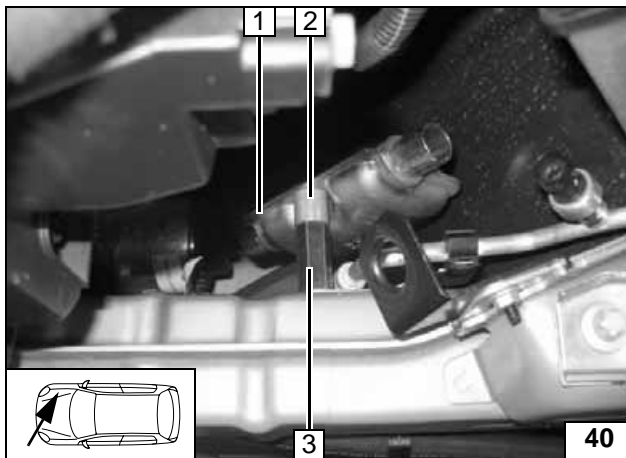


Exhaust system

- 1 Exhaust pipe
a = 260 mm
- 2 Exhaust end section
b = 470 mm

Discard section X

Preparing
exhaust
pipe

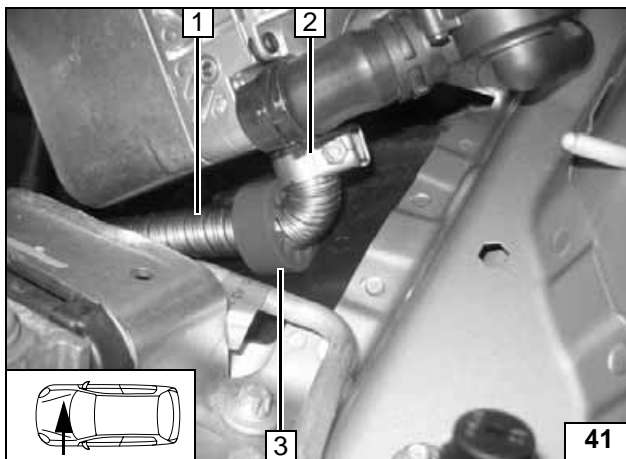


Remove original vehicle M6 nut at Pos. 3

- 3 M6x40 spacer nut on existing stud bolt
- 1 Muffler
- 2 M6x30 bolt, spring lockwasher, 20 mm spacer sleeve

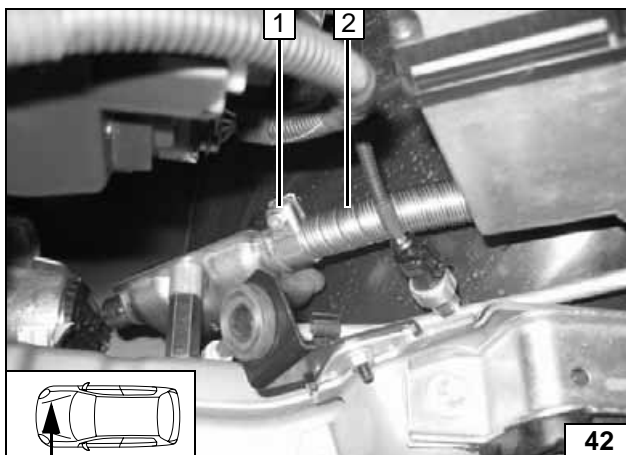


Installing
muffler



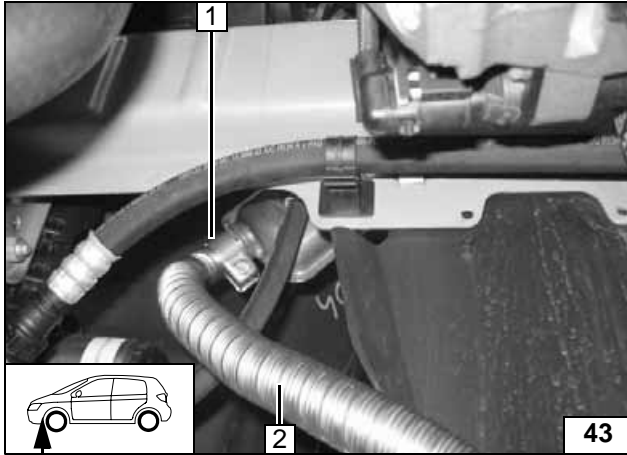
- 1 Exhaust pipe
- 2 Hose clamp
- 3 Red (rt) rubber isolator

Installing
exhaust
pipe



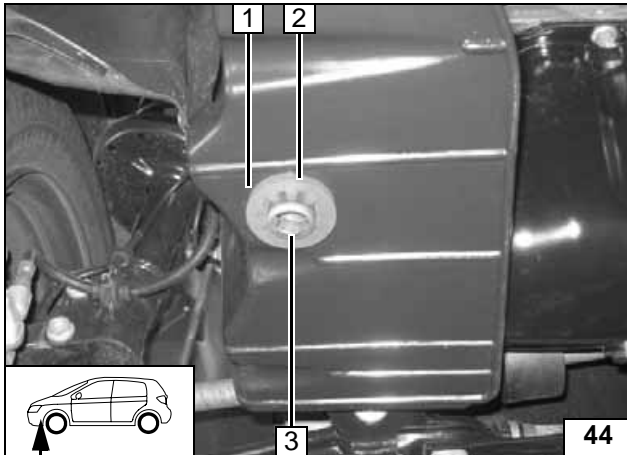
- 1 Hose clamp
- 2 Exhaust pipe

Installing
exhaust
pipe



- 1 Hose clamp
- 2 Exhaust end section

**Installing
exhaust
end
section**

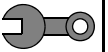


Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1 Underride protection, 42 mm dia. hole,
- 2 Red (rt) rubber isolator with groove
- 3 Exhaust end section



**Mounting
rubber
isolator**



Final Work

WARNING!

Reassemble the disassembled components in reverse order.

Check all hoses, hose, spring and Caillau clamps, as well as all electrical connections for firm seating. Secure all loose cables using cable ties.

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

- Connect the battery.
- Start the engine, bleed the coolant circuit according to the vehicle manufacturer's instructions and top up the coolant.
- Set the digital timer.
- Adjust the vehicle heater with automatic air-conditioning or without automatic air-conditioning according to "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

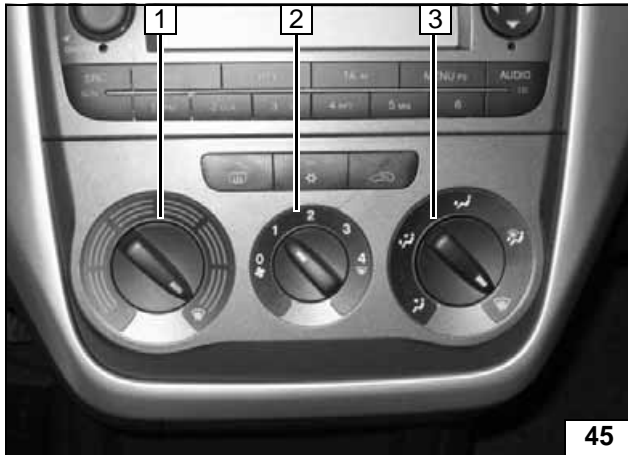
Feel the drive

Operating Instructions for End Customer

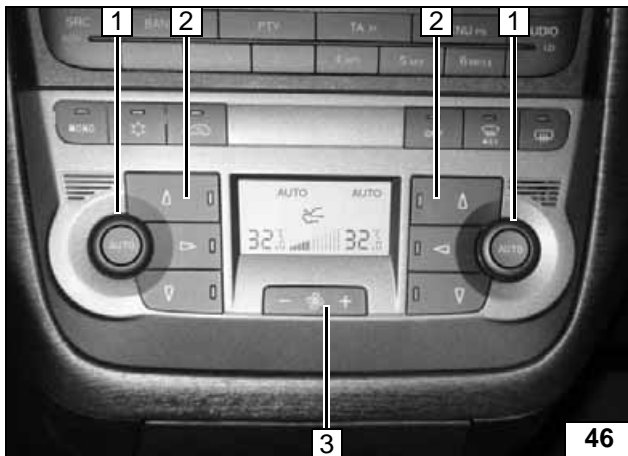
Please remove page and add to the vehicle operating instructions.



Before parking the vehicle, make the following settings:



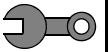
- 1 Set temperature to "max."
- 2 Set fan to level "1", or possibly "2"
- 3 Direct air outlet toward windshield



- 1 Temperature to "max." [2x]
- 2 Air outlet at windshield [2x]
- 3 Adjust fan as shown

For vehicles without automatic air-conditioning

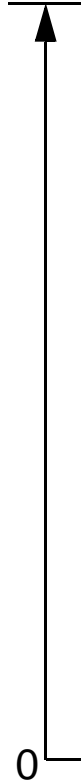
For vehicles with automatic air conditioning



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%.

Correct major differences in the printer settings or request an original printout.

100 mm



0