

# Water Heater



**Thermo Top E Parking Heater**

e1  
00 0003

**Thermo Top C Parking Heater**

e1  
00 0002

## Installation documentation

### Kia cee`d

1.6 CRDI

from model year 2010

Left-hand drive vehicle

Manual transmission



#### **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.

**The initial startup is to be executed with the Webasto Thermo Test Diagnosis.**

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
Kia	cee`d	ED	e4 * 2001/116 * 0121 *

Engine type	Engine model	Output in kW	Displacement in cm <sup>3</sup>
D4FB	Diesel	85	1582

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

The installation location of the digital timer is to be coordinated with the end customer before installation.

**Heater/Installation Kit**

Quantity	Designation	Order No.:
1	Retail accessories <i>Thermo Top E / C</i>	See Price list
1	Heater control	See Price list
1	Installation Kit for Kia cee`d 2010 1.6 CRDI	1312744D

**Heater recommended for the respective vehicle class:**

Vehicle	Heater
Compact car	Thermo Top E
Mid-size car, estate car	Thermo Top C

The selection of the heater is based on the passenger compartment size of the vehicle and the level of comfort required by the customer.

**Foreword**

This installation documentation applies to Kia cee`d 1.6 CRDI vehicles - for validity, see page 2 - from model year 2010 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

However, the stipulations in the "installation documentation", the "operating instructions" and "installation instructions" for the *Thermo Top C/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 rub protection (split-open fuel hose).

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

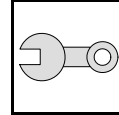
**Special Tools**

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

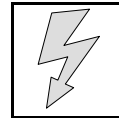
**Explanatory notes on document**

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

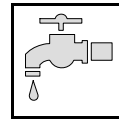
**Mechanical system**



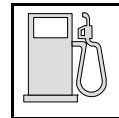
**Electrical system**



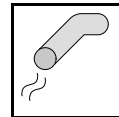
**Coolant circuit**



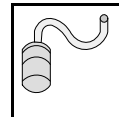
**Fuel**



**Exhaust gas**



**Combustion air**



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



Specific risk of fire or explosion.



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



Reference to a special technical feature.



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

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

## Preliminary work

### WARNING!

- Open the fuel tank cap and vent the fuel tank.
- Close the fuel tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- Depressurise the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Remove the door sill trim on the front passenger's side.
- Remove the A-pillar trim in the front passenger's side footwell.
- Remove the trim for radio/A/C control panel.
- Remove the lower instrument panel trim on the driver's side.
- Remove the rear bench seat.
- Open the tank-fitting service lid.
- Remove the air filter together with the intake hoses.
- Detach the trim of the cable pass through on the firewall.
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Remove the rear left tank trim.

Remove page 25 "Operating Instructions for the End Customer" and add to the vehicle operating instructions.



### Heater installation location

1 Heater

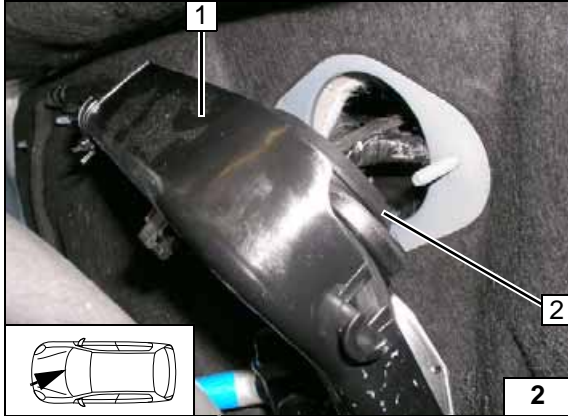
Installation location



## Electrical Connection

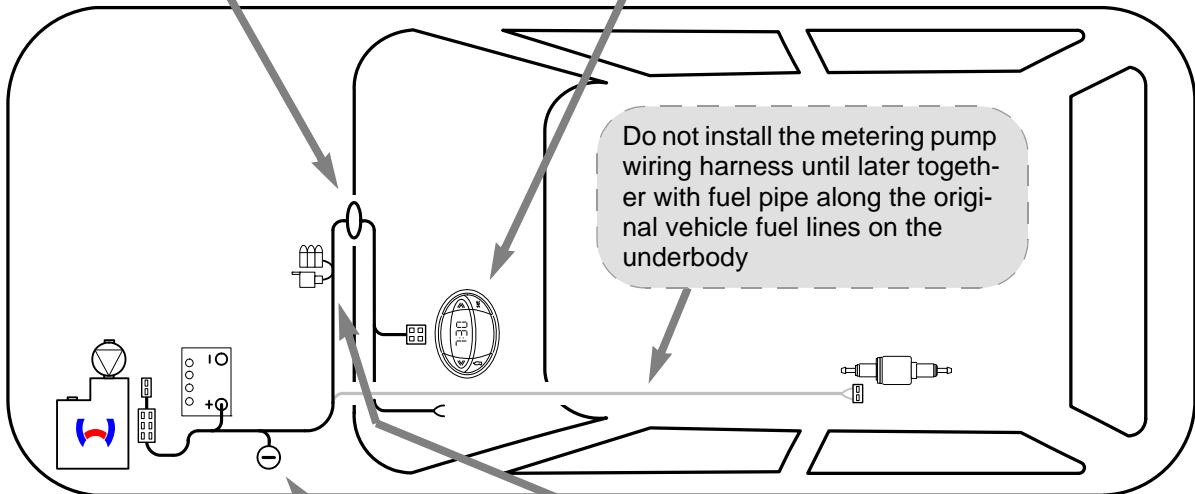
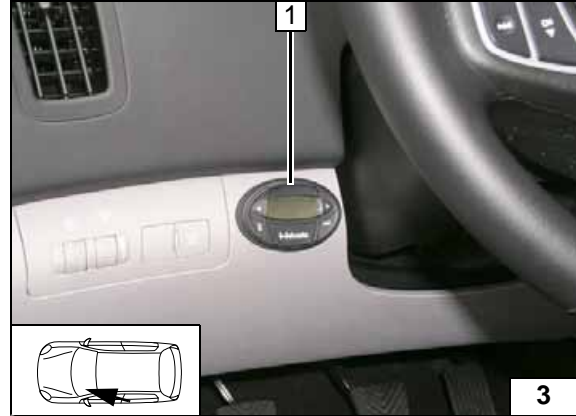
### Wiring harness pass through

- 1 Cover
- 2 Protective rubber plug

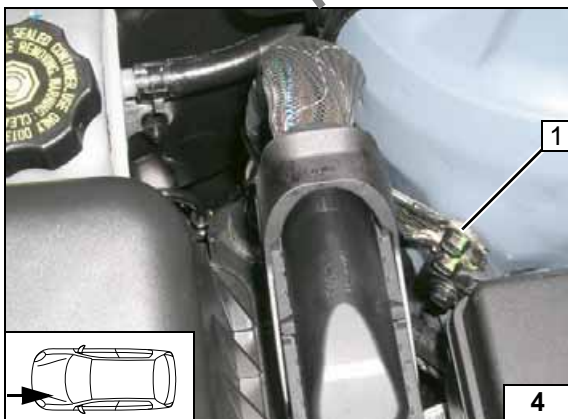


### Digital timer

- 1 Digital timer

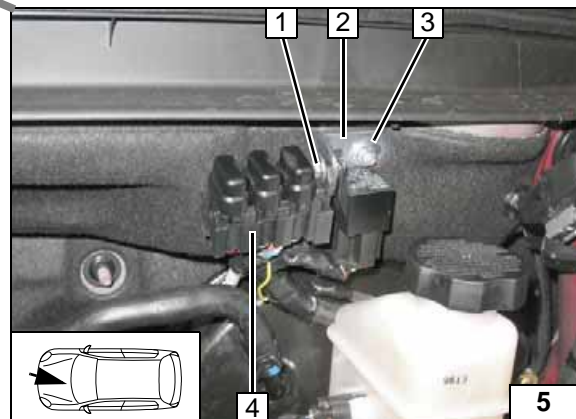


Wiring harness routing diagram



### Earth connection

- 1 Earth point on strut tower



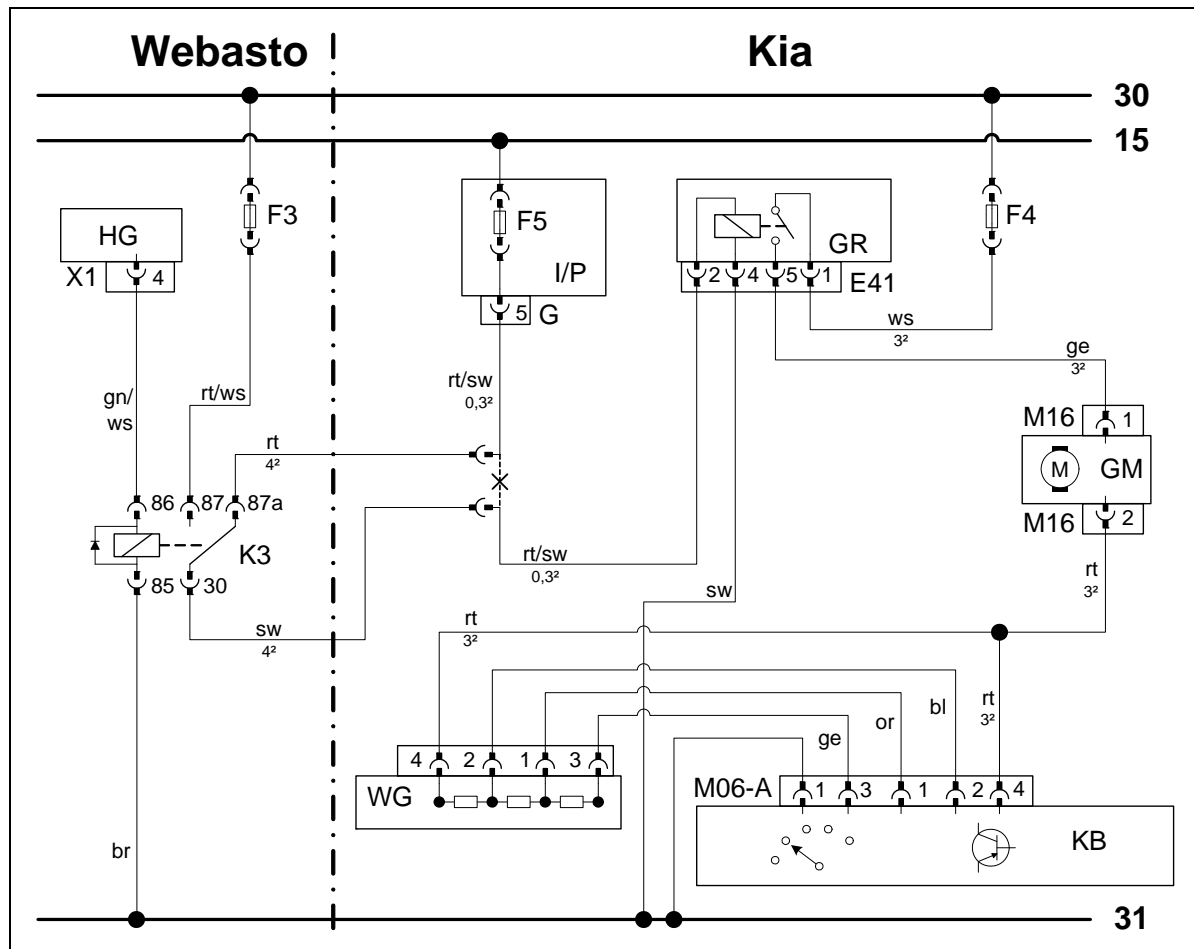
### Fuse holder, K3 relay

Remove plastic nut at position 3.

- 1 M5x16 bolt, washer, retaining plate for fuse holder, K3 relay, flanged nut
- 2 Angle bracket
- 3 Flanged nut, original vehicle stud bolt
- 4 Replace F3 25A fuse with 10A fuse, F1-3 fuses mounted.



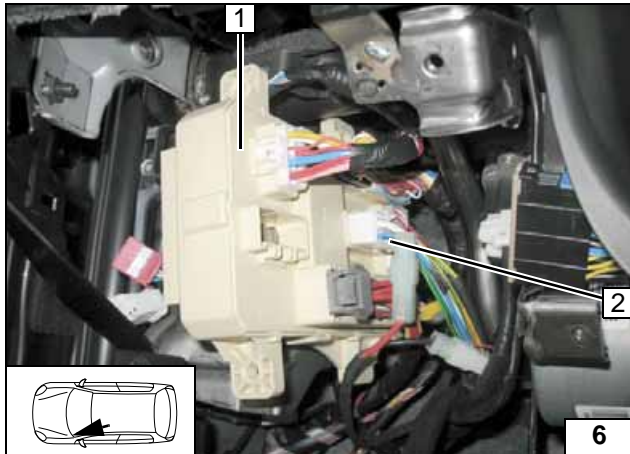
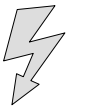
Fan controller for manual air conditioning



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-C/E Heater	GM	Fan motor	rt	red
X1	6-pin heater connector	M16	Connector GM	ws	white
F3	Replace 25 A with 10 A fuse.	KB	A/C control panel / Fan switch	sw	black
K3	Fan relay	M06-A	6-pin connector KB	br	brown
		GRs	Fan relay	gn	green
		E41	5-pin connector GRs	bl	blue
		F4	Fuse blower 40A	ge	yellow
		F5	Fuse A/CON 10 A	or	orange
		I/P	Branching box Passenger compartment	!	Insulate wire end and tie back
		G	21- pin I/P connector	X	Cutting point
		GRs	Fan relay		
		E41	5-pin connector GRs		Wiring colours may vary.

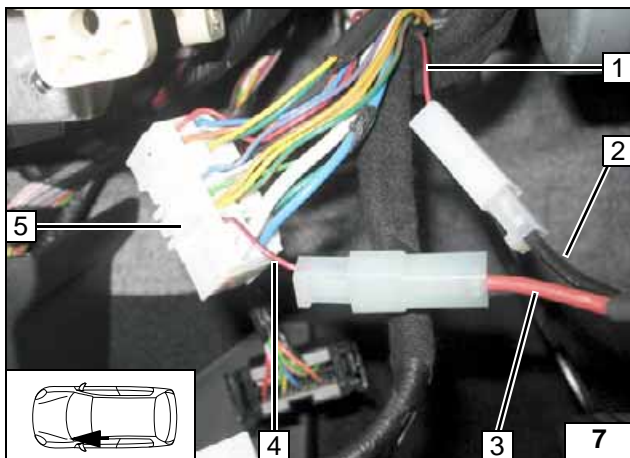
Legend



Connecting to E41 connector of central electrical box. Central electrical box 1 released for better display. Pull out I/P-G connector 2



**Connect-  
ing I/P cen-  
tral  
electrical  
box**

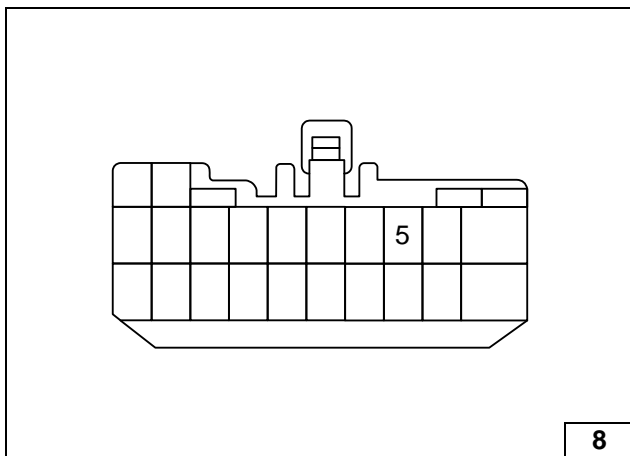


Produce connections as shown in wiring diagram.

- 1 Red/black (rt/sw) wire from fan relay
- 2 Black (sw) wire from K3/30
- 3 Red (rt) wire from K3/87a
- 4 Red/black (rt/sw) wire connector I/P-G, Pin 5
- 5 I/P-G connector



**Connect-  
ing fan re-  
lay**



Pull out I/P-D connector on contact side

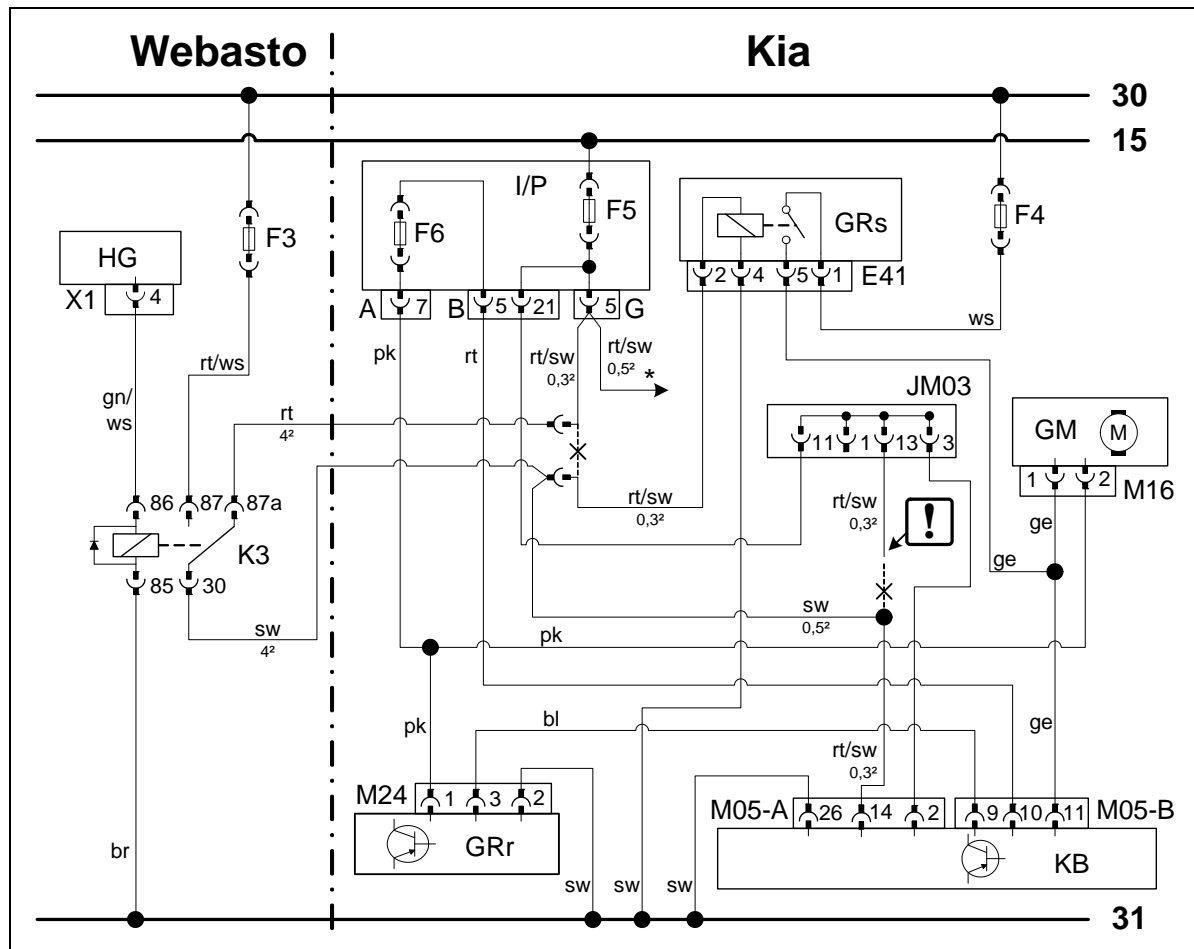


**Connector  
I/P-G**





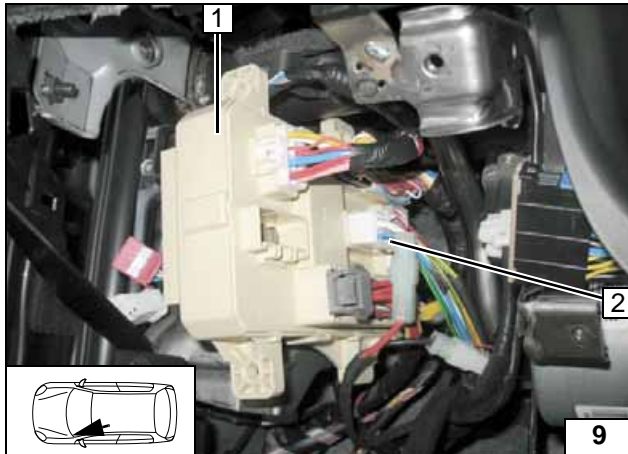
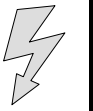
Automatic air-conditioning fan controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-C/E Heater	GM	Fan motor	rt	red
X1	6-pin heater connector	M16	Connector GM	ws	white
F3	25 A replaced with 10 A fuse.	KB	A/C control panel	sw	black
K3	Fan relay	M05-A	26-pin connector KB	or	orange
		M05-B	22-pin connector KB	gn	green
		F4	Fuse, 40A	bl	blue
		F5	Fuse, 10A	ge	yellow
		F6	Fuse, 10A	pk	pink
		GRs	Fan relay		
		E41	5-pin connector GRs	*	Control Wire PTC Heater Relay
		JM03	Connector	!	Insulate wire end and tie back
		GRr	Fan controller	X	Cutting point
		M24	3-pin connector, GRr		Wiring colours may vary.
		I/P	Central electrical box		
		G	22-pin I/P connector		

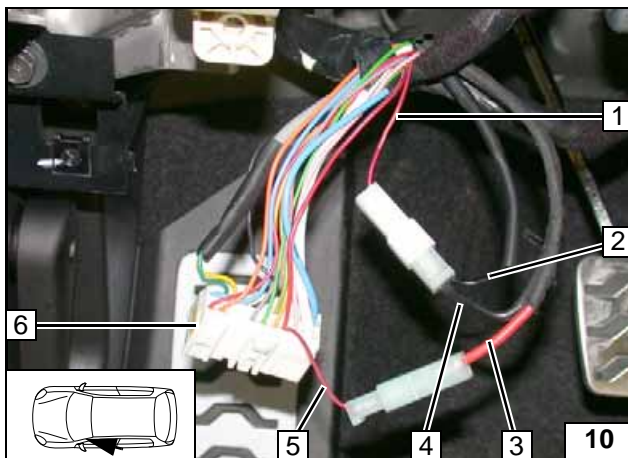
Legend



Central electrical box **1** released for better display. Pull out I/P-G connector **2**.



**Connect-  
ing I/P cen-  
tral  
electrical  
box**

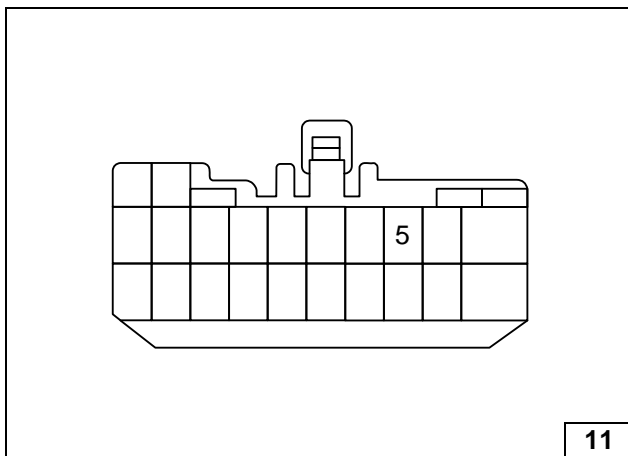


Connection with I/P-G connector **6** from central electrical box. Pull out I/P-G connector. Measure out red/black wire **5** from fan relay in the engine compartment, if necessary. Produce connections as shown in wiring diagram.



**Connect-  
ing I/P cen-  
tral  
electrical  
box**

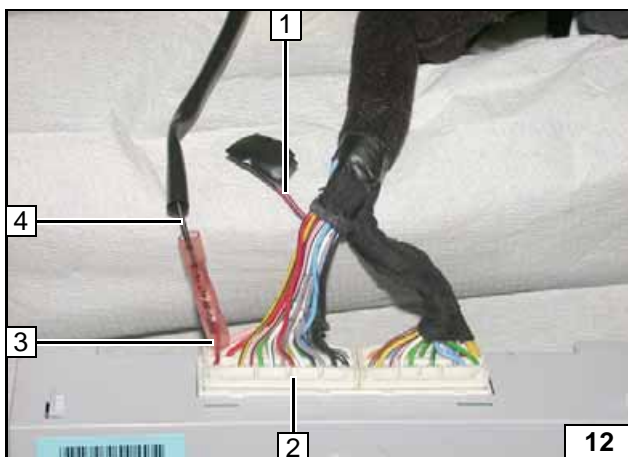
- 1** Red/black (rt/sw) wire from fan relay
- 2** Black (sw) additional 0.5<sup>2</sup> wire from A/C control panel
- 3** Red (rt) wire from K3/87a
- 4** Black (sw) wire from K3/30
- 5** Red/black (rt/sw) wire connector I/P-G, Pin 5



Pull out I/P-D connector on contact side



**Connector  
I/P-G**

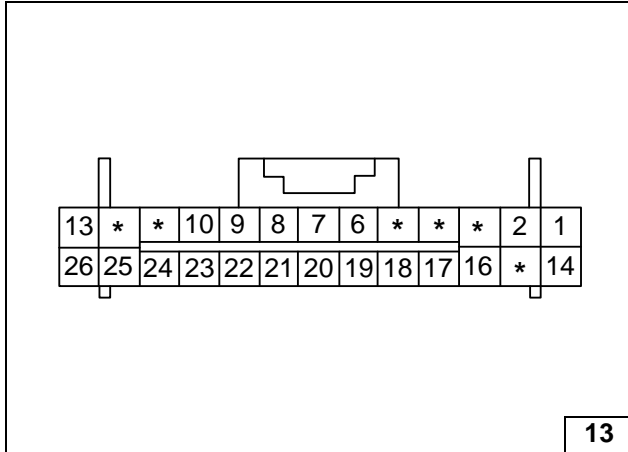


Connection on M05-A connector **2** A/C control panel. Insulate and tie back red/black (rt/sw) wire **1** from JM03 PIN 13 connector. Produce connections as shown in wiring diagram.



**Connect-  
ing A/C  
control  
panel**

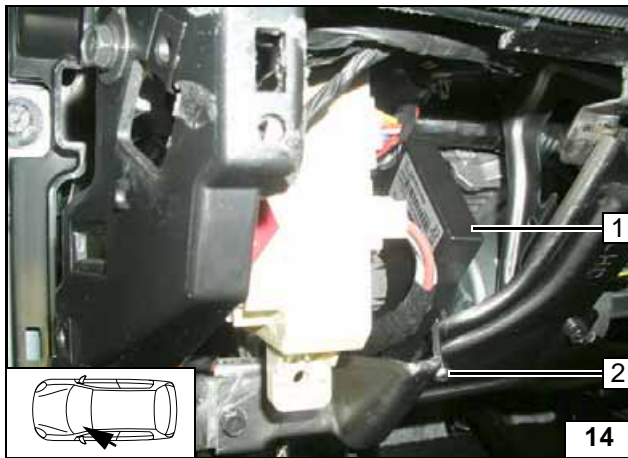
- 3** Red/black (rt/sw) wire from M05-A connector PIN 14
- 4** Black (sw) additional 0.5<sup>2</sup> wire from K3/30



M05-A connector on contact side



Connector M05-A

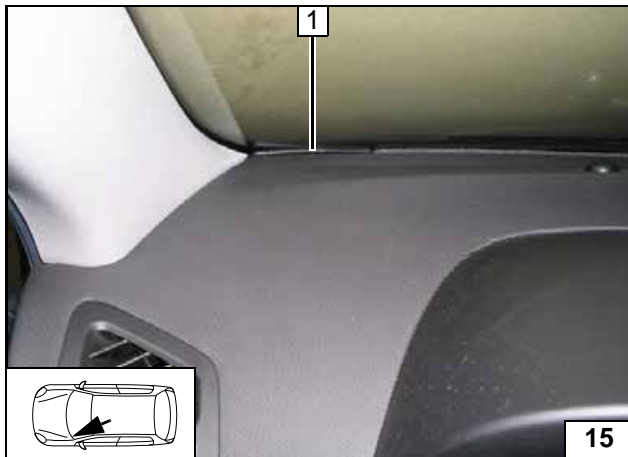


**Remote option (Telestart)**

- 1 Receiver, bracket angled down
- 2 5.5 mm dia. hole, M5x16 bolt, flanged nut

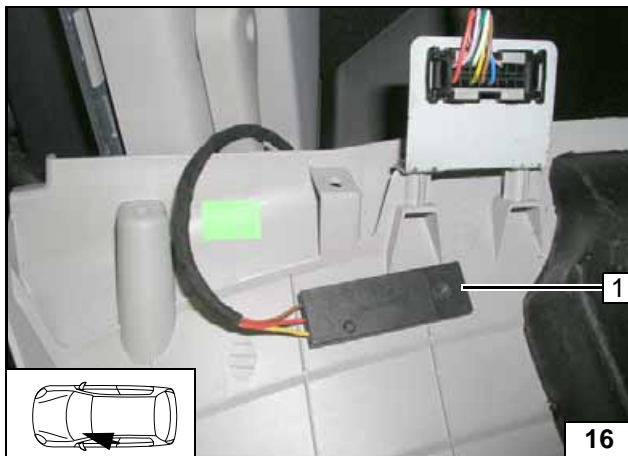


Mounting receiver



- 1 Antenna

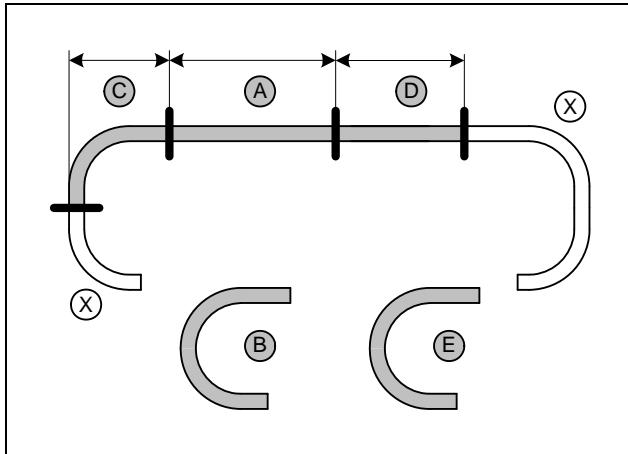
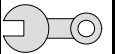
Mounting antenna



**Temperature sensor only for T100 HTM**

- 1 Temperature sensor, fasten with suitable means

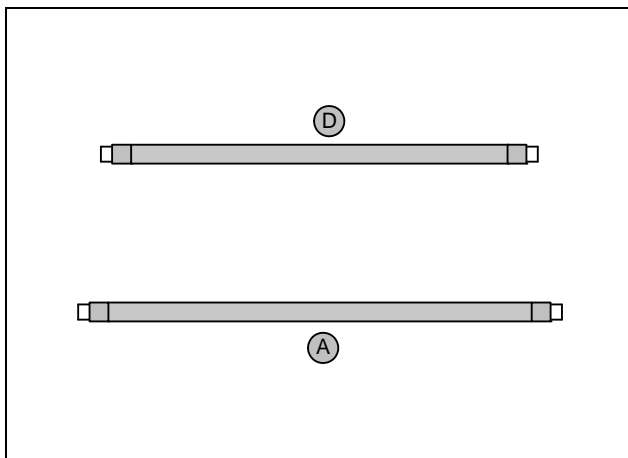
Mounting temperature sensor



**Preparing heater**

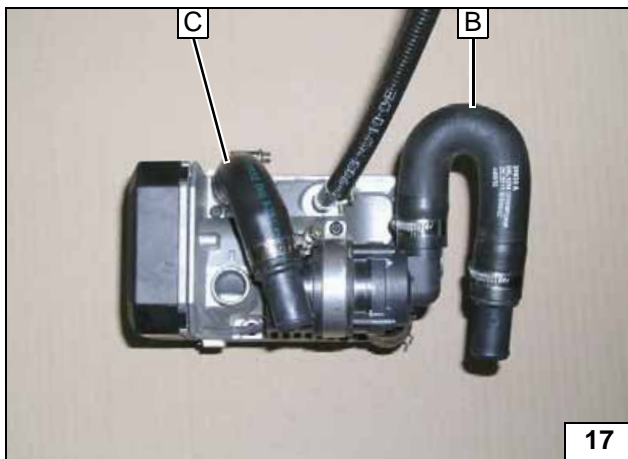
Hose **B / E** =180° moulded hose  
Discard section **X**

- A** = 820
- C** = 130
- D** = 640



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

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



- C** Hose section, connecting pipe  
20x20mm dia., 27mm dia. clamp [2x]
- B** 180° moulded hose, connecting pipe  
20x20mm dia., 27mm dia. clamp [2x]



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



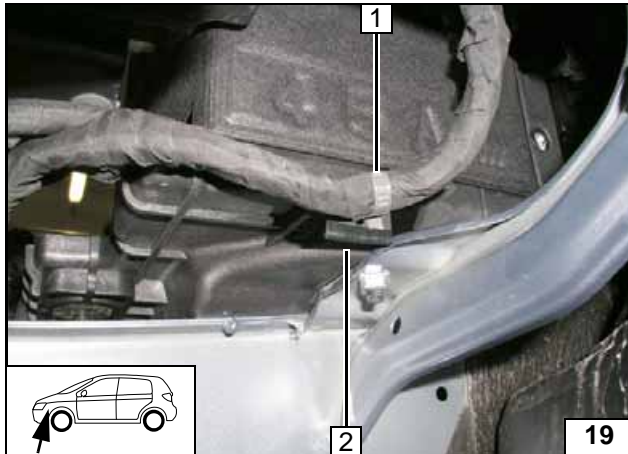
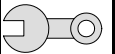
**Cutting hoses to length**



**Preparing hoses**

**Premounting hoses**

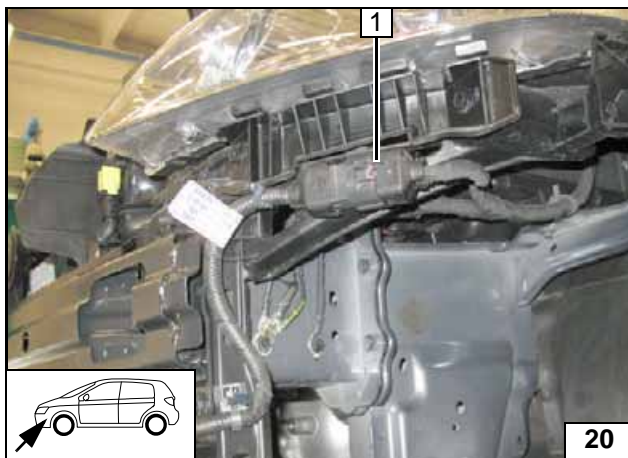
**Preinstalling fuel line**



**Preparing installation location**

- 1 Original vehicle retaining clip released
- 2 Insert 30 mm edge protection

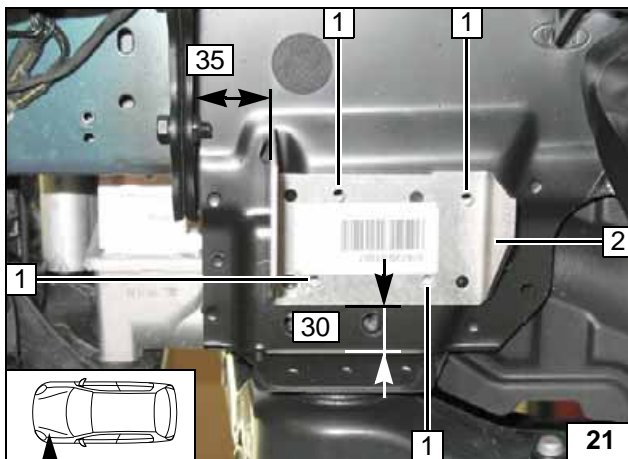
**Moving wiring harness**



Fasten connector of front sensors 1 with double-sided adhesive tape.



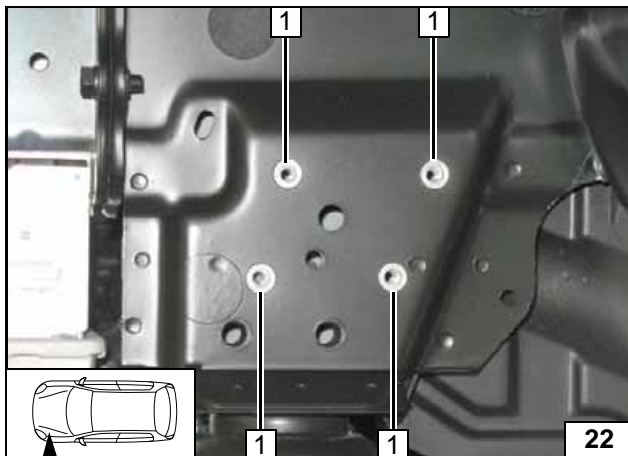
**Repositioning connector**



Align bracket 2, copy hole pattern 1 [4x]

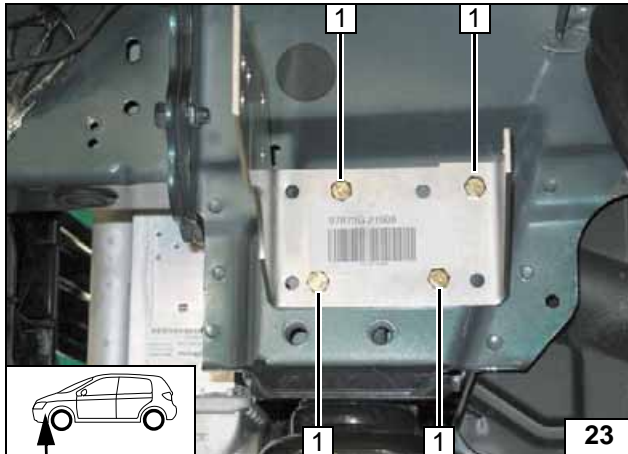
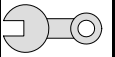


**Copying hole pattern**



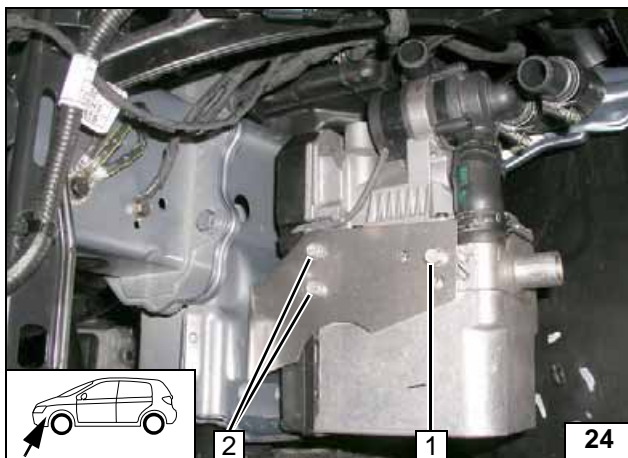
1 9.1 mm dia. hole; rivet nuts [4x each]

**Installing rivet nuts**



1 M6x25 bolt, spring lockwasher [4x each]

Installing bracket

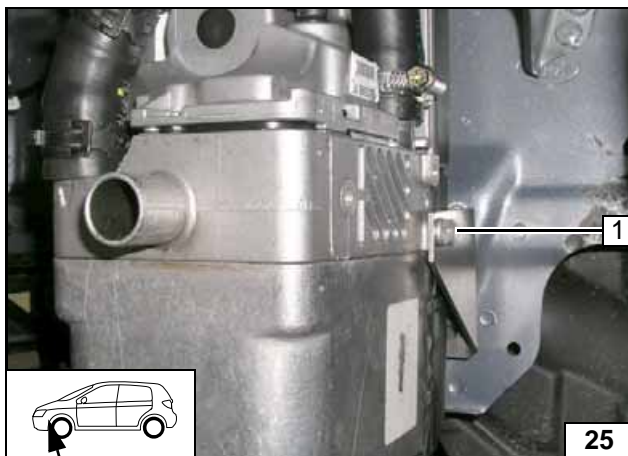


**Installing heater**

Insert two washers between heater and bracket at position 1.

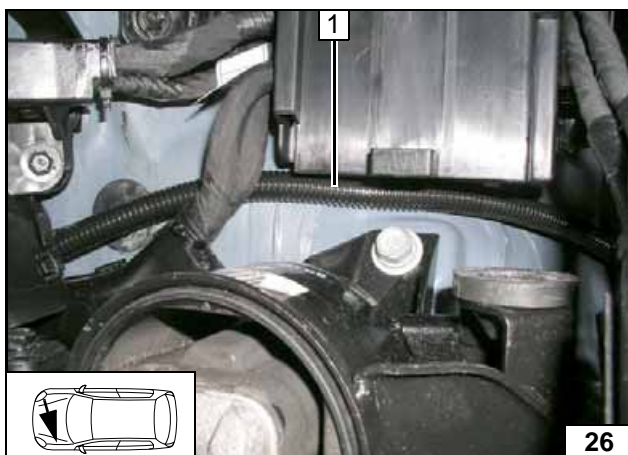
- 1 E-jot screw, washer [2x]
- 2 E-jot screw [2x]

Mounting heater



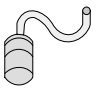
1 E-jot screw

Mounting heater

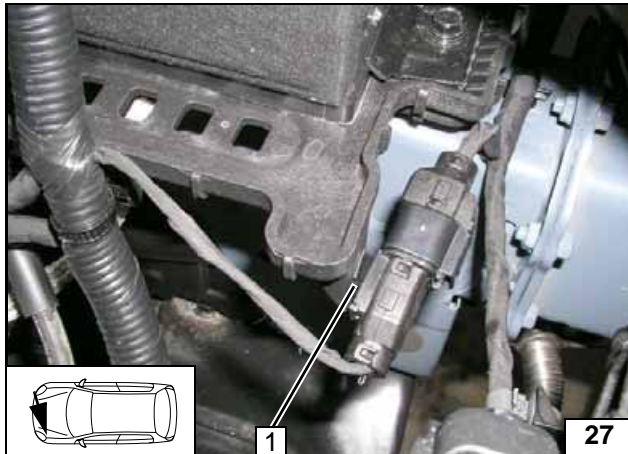


Route fuel line and wiring harness of metering pump in corrugated tube 1 to firewall and along original vehicle fuel lines to underbody.

Routing fuel line and wiring harness

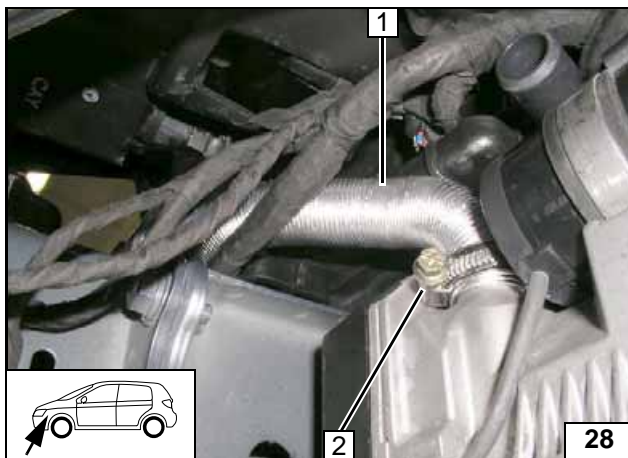


**Combustion air**



- 1 Retaining clip

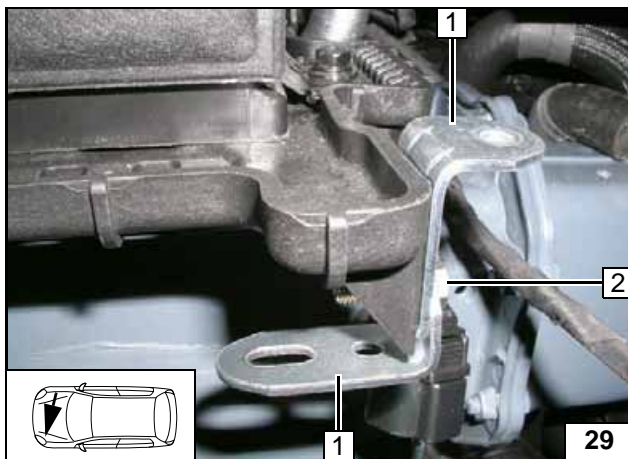
Releasing retaining clip of connector



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

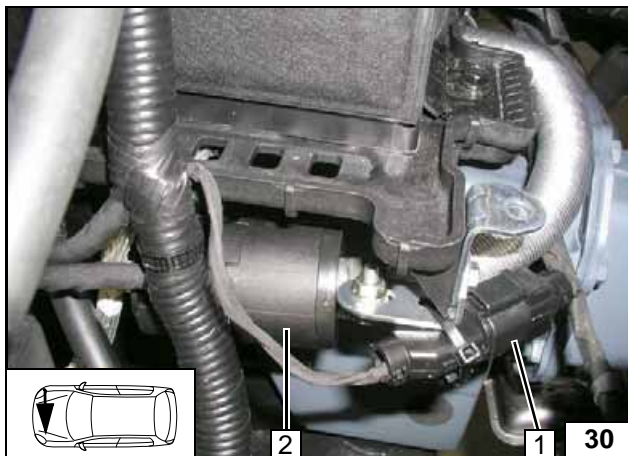


Installing intake pipe



- 1 Angle bracket [2x]
- 2 M6x20 bolt, flanged nut

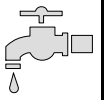
Installing angle bracket



- 1 Original vehicle connector, cable tie on angle bracket
- 2 Silencer, 25 mm dia. p-clamp, M6x20 bolt, flanged nut



Mounting silencer



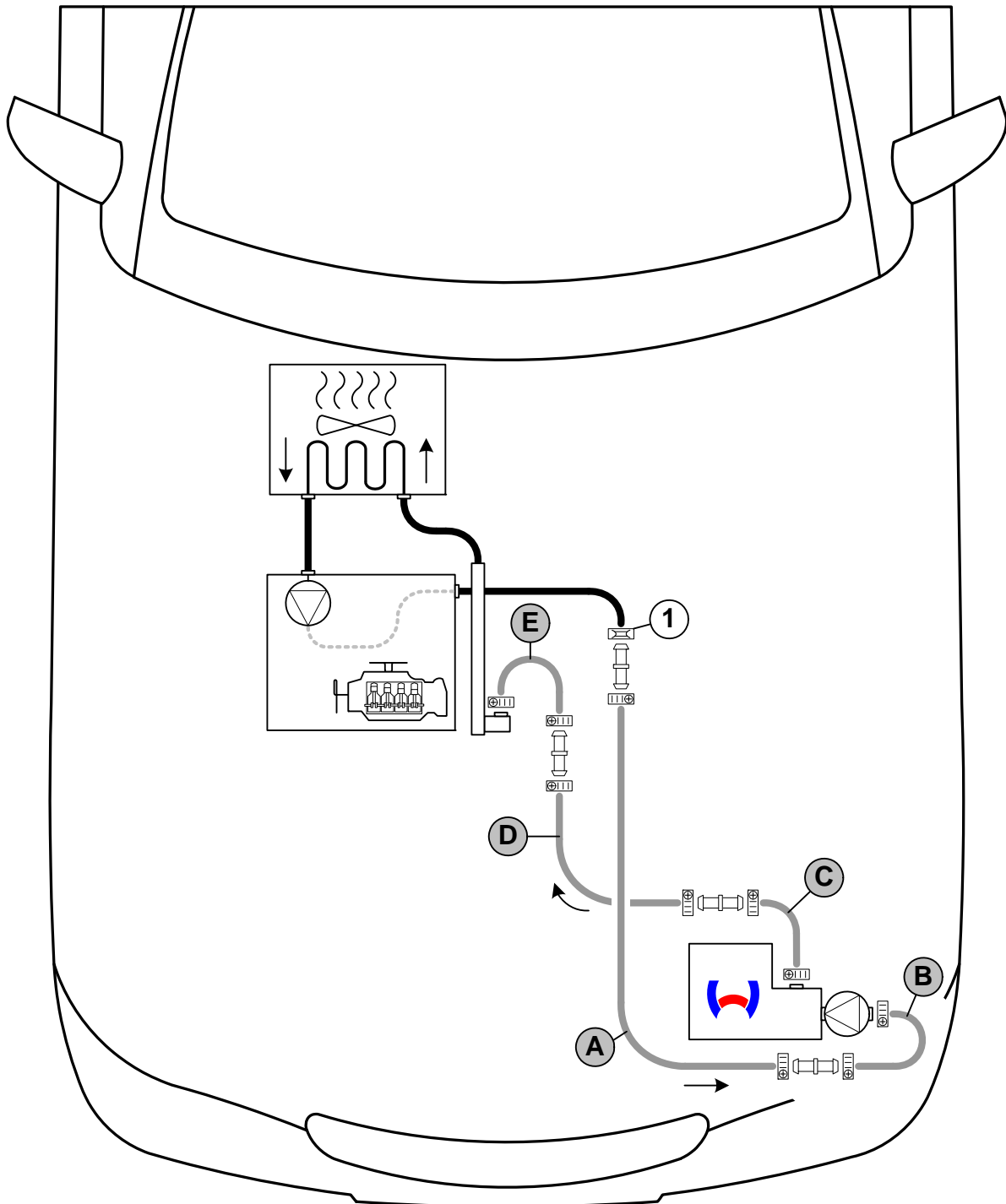
### Coolant circuit




**WARNING!**

Any coolant running off should be collected in a suitable container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



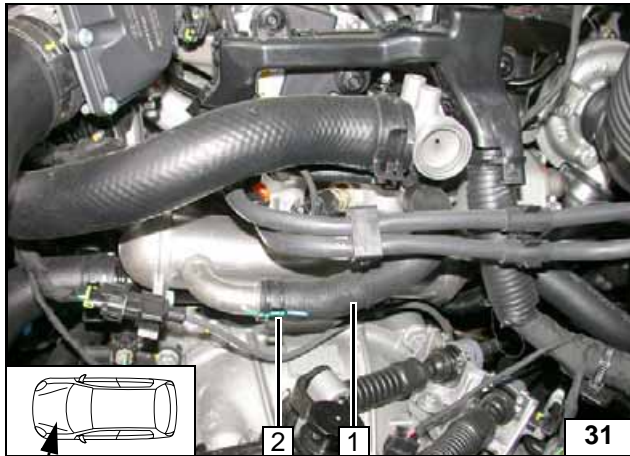
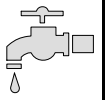
Hose installation diagram



All hose clamps  = 20-27 mm dia. All connecting pipes  = 20x20 mm  
 1 = Original vehicle spring clip .



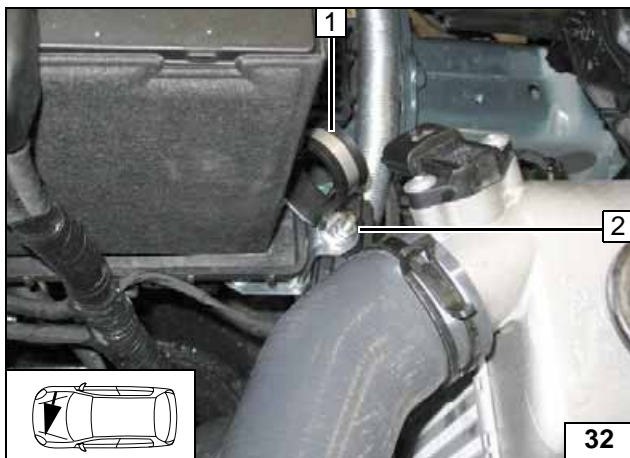




Pull out engine outlet / heat exchanger inlet hose 1 off heat exchanger inlet connection piece. Original vehicle spring clip 2 will be re-used.

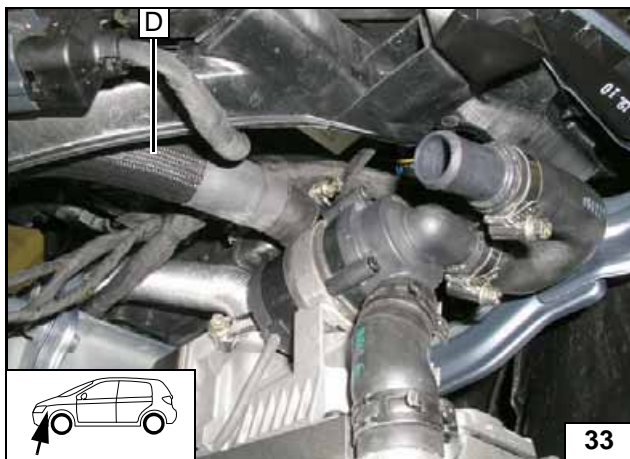


**Cutting point**

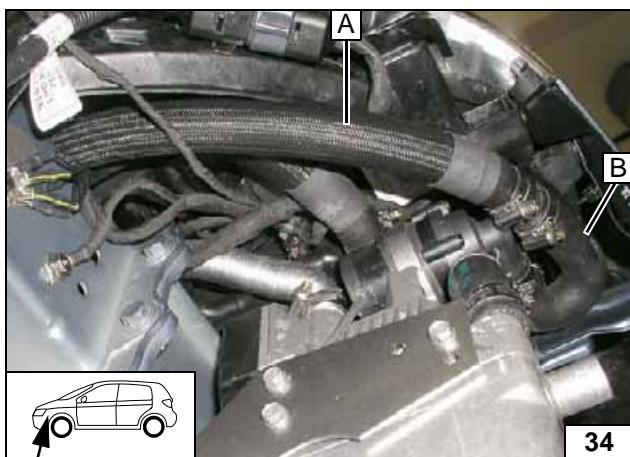


- 1 Rubber-coated pipe clamp, 48 mm dia.
- 2 M6x20 bolt, flanged nut

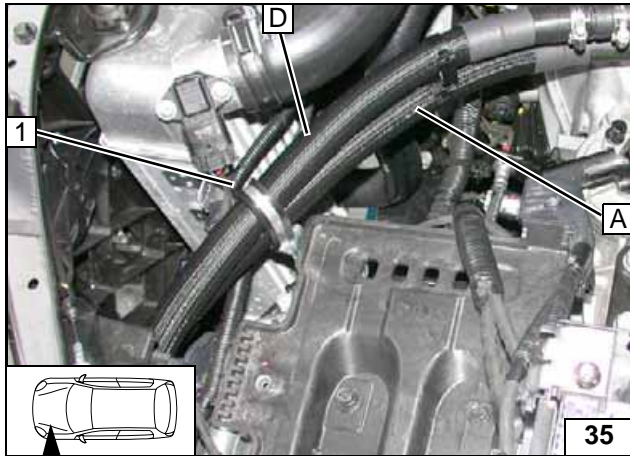
**Installing p-clamp**



**Connect-  
ing heater  
outlet**



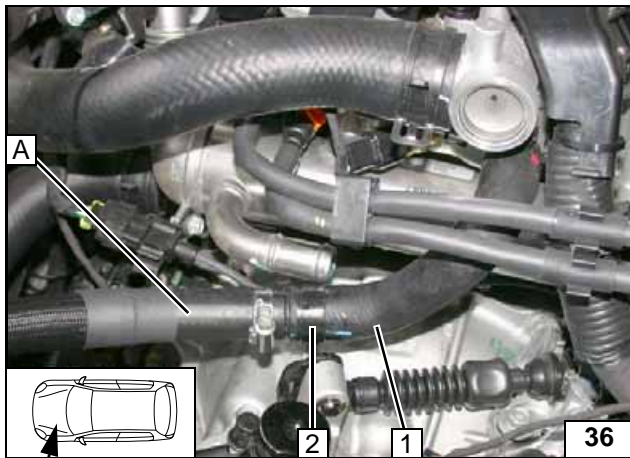
**Connect-  
ing heater  
inlet**



Route hose **A** and **D** through rubber-coated p-clamp **1**.

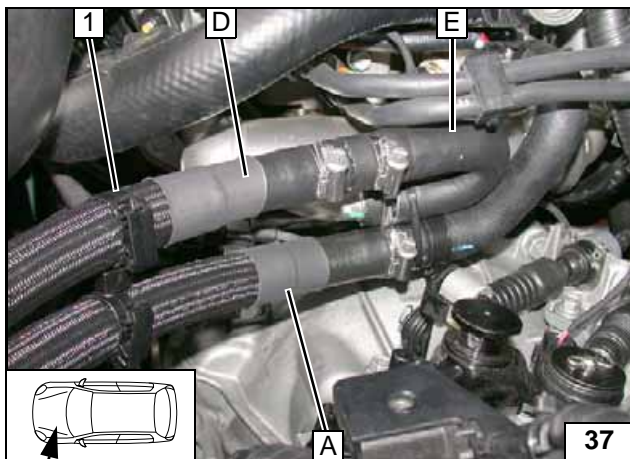


**Routing in engine compartment**



**1** Hose of engine outlet  
**2** Original vehicle spring clip

**Connect-  
ing engine  
outlet**

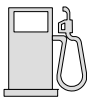


Ensure sufficient distance from neighbouring components.

**1** Spacer bracket



**Connect-  
ing heat  
exchanger  
inlet**



**Fuel**

**CAUTION!**

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

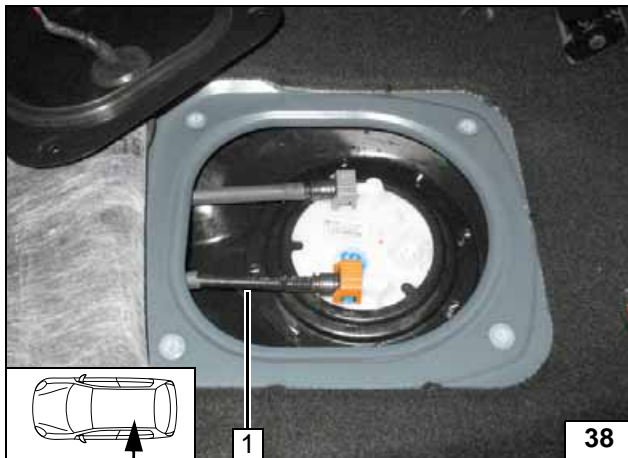
Catch any fuel running off in a suitable container.

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.

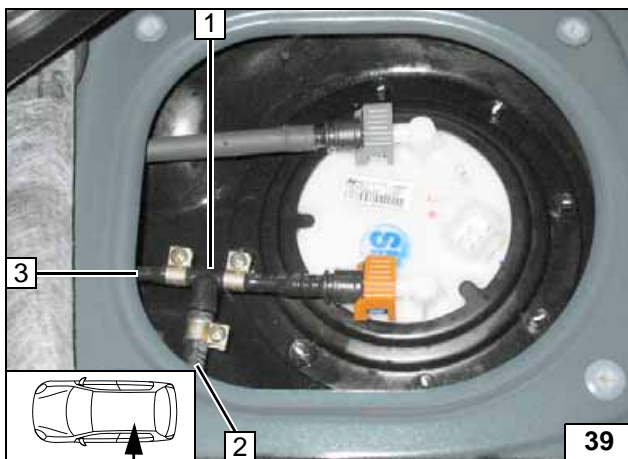
**WARNING!**

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



- 1 Remove protective sleeving on fuel supply line

Removing protective sleeving



Cut off fuel supply line **3** approx. 50 mm before coupling and insert fuel standpipe.

- 1 6x5x6 mm fuel standpipe, 8 mm dia. clamp[2x]
- 2 Fuel line, hose section, 10 mm dia. clamp [2x]

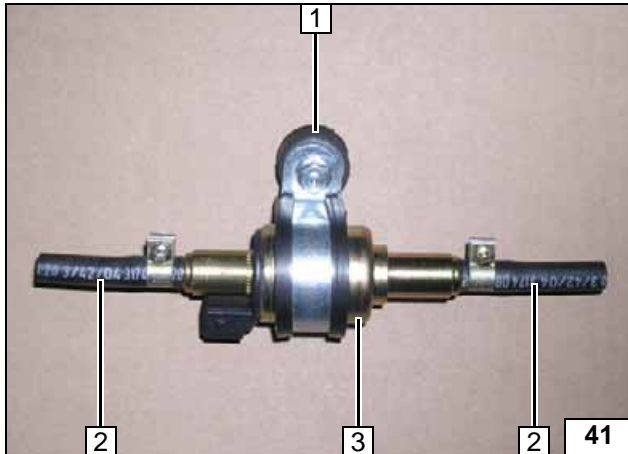


Mounting fuel standpipe



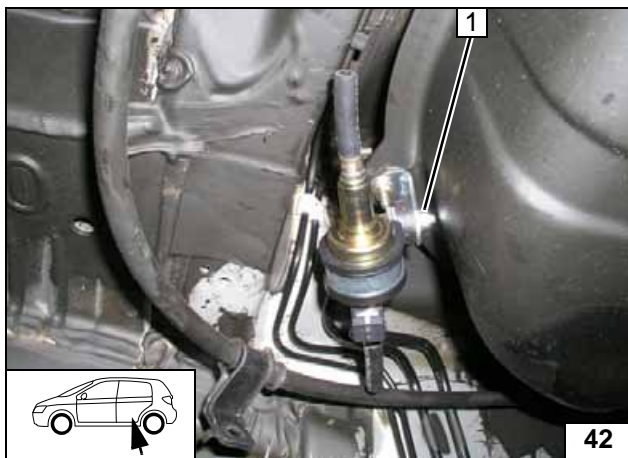
- 1 Angle bracket, M6x20 bolt, large diameter washer, flanged nut, existing hole
- 2 Fuel line from fuel standpipe

Installing angle bracket



- 1 Silent block, rubber-coated p-clamp, flanged nut
- 2 Hose section, 10 mm dia. clamp [2x each]
- 3 Metering pump

Premounting metering pump



- 1 Flanged nut



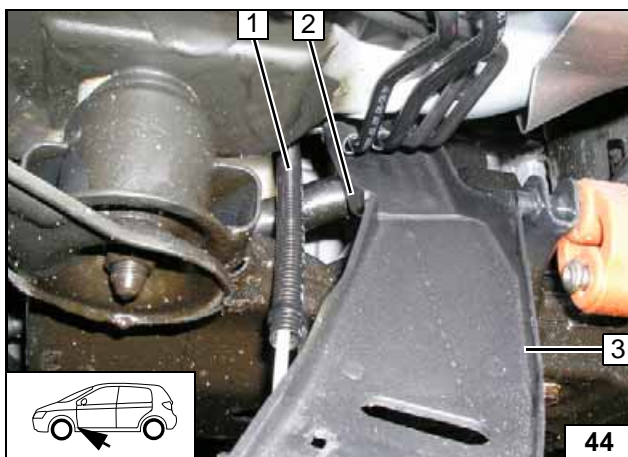
Mounting metering pump



- 1 Hose section (rub protection), cable tie [2x]
- 2 10 mm dia. clamp



Connecting fuel line

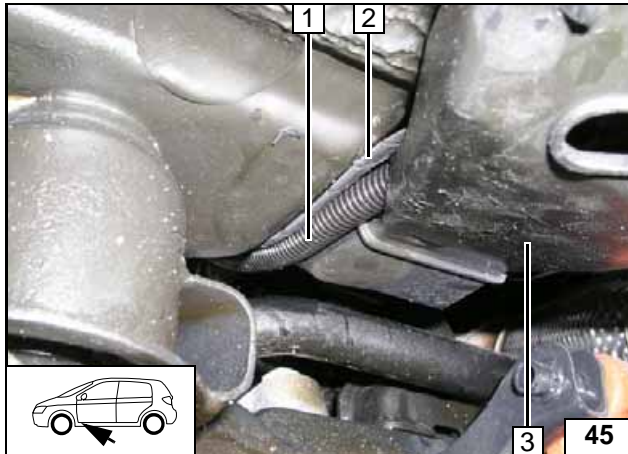


Detach line duct 3 and fold down, cut out edge at Position 2 for corrugated tube.

- 1 Fuel line from heater in corrugated tube

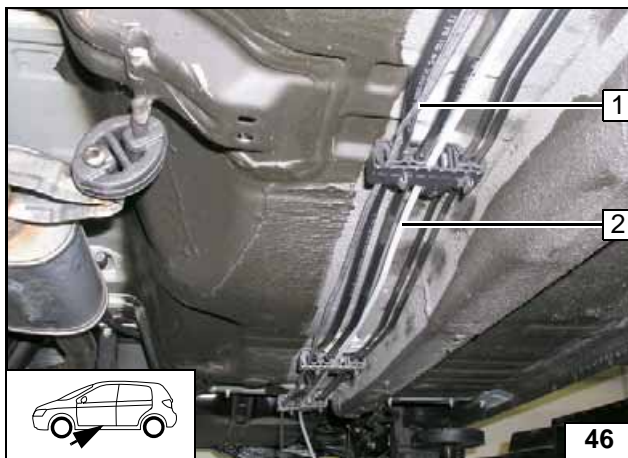


Cutting out line duct



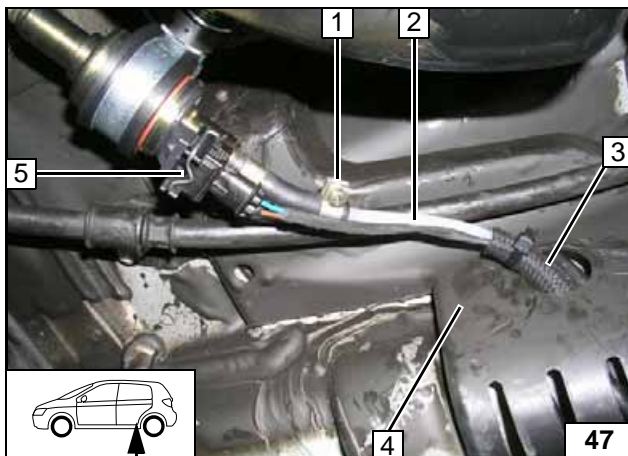
- 1 Fuel line in corrugated tube
- 2 Metering pump wiring harness
- 3 Line duct

**Routing lines into cover**



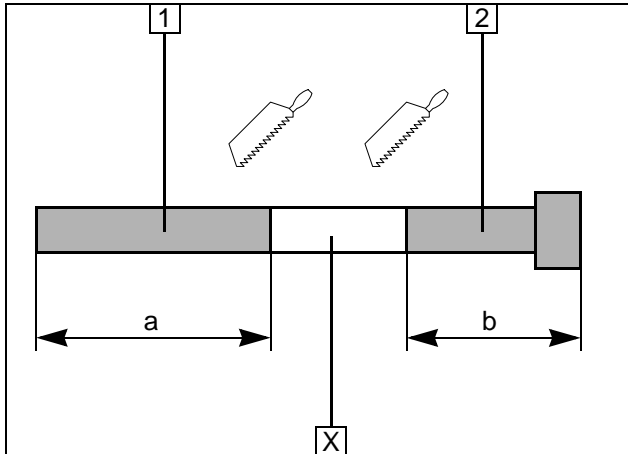
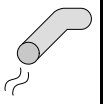
- 1 Metering pump wiring harness
- 2 Fuel line

**Routing lines on underbody**



- 1 10 mm dia. clamp
- 2 Fuel line
- 3 Hose section (rub protection), cable tie [2x]
- 4 Installed line duct
- 5 Wiring harness of metering pump, connector mounted

**Connecting metering pump**

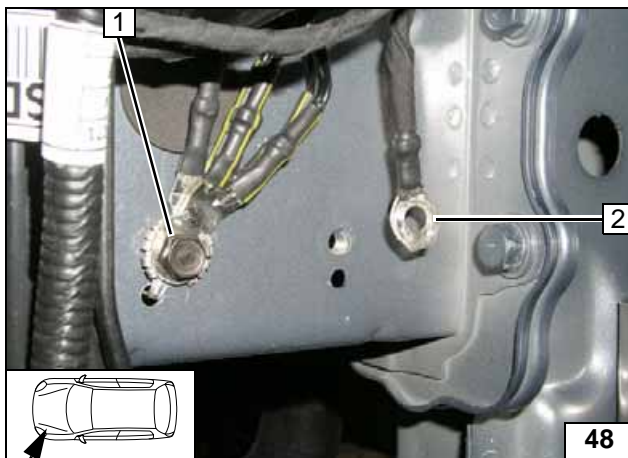


**Exhaust gas**

- 1 Exhaust pipe  
a = 340
- 2 Exhaust end section  
b = 190

Discard section X

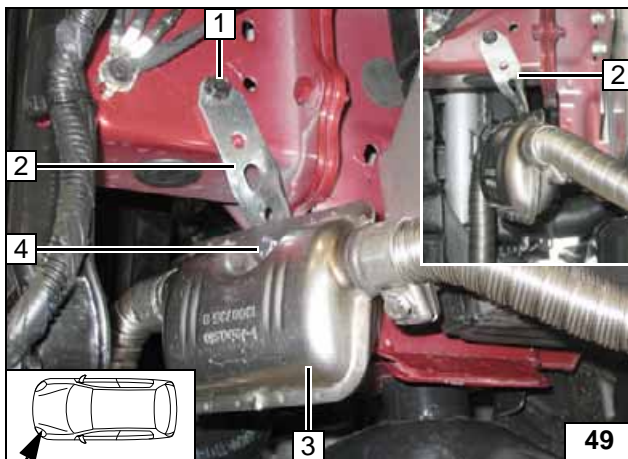
**Preparing exhaust pipe**



Detach earth cable 2 (bolt will be reused) and fasten to adjacent earth point 1.



**Moving earth wire**

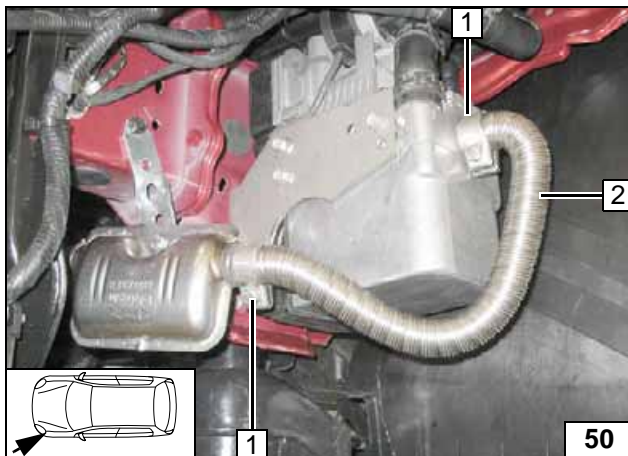


Twist perforated bracket 2 at the centre along the longitudinal axis by approx. 70°. Align exhaust silencer 3 correct, if necessary.

- 1 Original vehicle bolt
- 4 M6x20 bolt, flanged nut

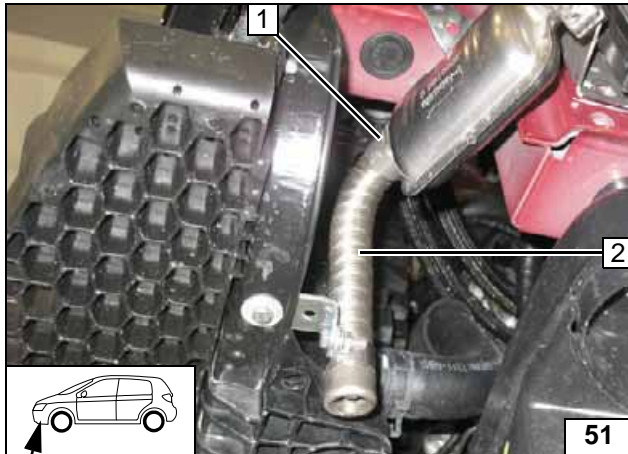
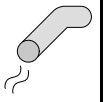


**Mounting silencer**



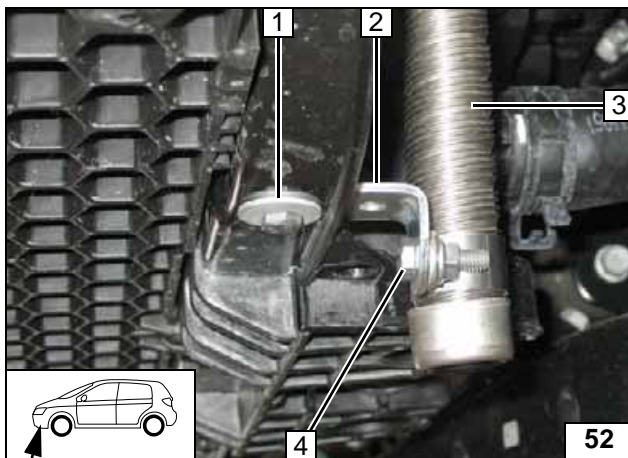
- 1 Hose clamp [2x]
- 2 Exhaust pipe

**Installing exhaust pipe**



- 1 Hose clamp
- 2 Exhaust end section
- 3 P-clamp, M6x20 bolt, flanged nut on angle bracket

**Installing exhaust end section**

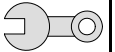


Check the position of the components; adjust if necessary. Check that they have freedom of movement.



- 1 M6x20 bolt, large diameter washer, flanged nut, existing hole
- 2 Angle bracket
- 3 Exhaust end section
- 4 M6x20 bolt, pipe clamp, flanged nut

**Fastening exhaust end section**



## Final Work

### WARNING!

Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose lines and tie back.

Only use manufacturer-approved coolant. Spray the 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, teach telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place signboard "Switch off parking heater before refuelling" in the area of the filler neck**
- **See installation instructions for initial start-up and function test**



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## Operating Instructions for the 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.

The passenger compartment monitoring is to be disabled for vehicles with burglar alarm. For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



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

Manual air conditioning



- 1 Air outlet faces "upward"
- 2 Set fan to level "1", or possibly "2"
- 3 Set temperature to "HI"

Automatic air-conditioning