Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Volvo V40 / V40 CC

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Volvo	V40	525 / D2	e4 * 2001 / 116 *0076 * ...
Volvo	V40 / V40 CC	525 / D3	e4 * 2001 / 116 *0076 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.6	Diesel	6-speed SG	84	1560	D4162T
2.0	Diesel	AT	110	1984	D5204T6

SG = Manual transmission
AT = Automatic transmission

From Model Year 2013
Left-hand drive vehicle

Verified equipment variants:
Automatic air-conditioning

Front fog light
Headlight washer system
Daytime running lights
Start-Stop

Not verified:
Passenger compartment monitoring
Manual air-conditioning

Total installation time:
about 7 hours

Volvo V40

Table of Contents

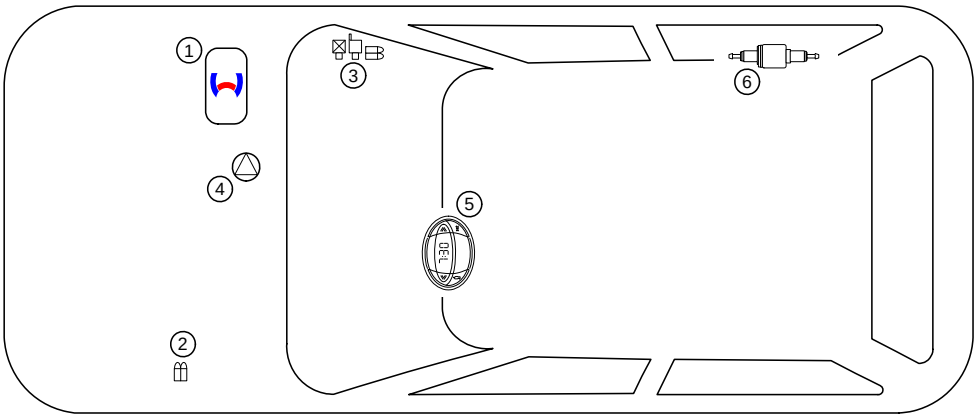
Necessary Components

- Basic delivery scope of *Thermo Top Evo*based on price list
- Installation kit for Volvo V40 2013 Diesel: **1319038B**
- Heater control in accordance with price list and upon consultation with final customer
- In case of Telestart, indicator lamp in accordance with price list and upon consultation with final customer

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Fuse holder of passenger compartment
4. Circulating pump
5. Digital timer
6. Metering pump



Notes on Total Installation Time

The total installation time includes the time needed for mounting and demounting of the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

Information on Operating and Installation Instructions

1 Important Information (not complete)

1.1 Installation and Repair

The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.

Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel Diesel (DIN EN 590) or petrol (DIN EN 227).

The heater may not be cleaned with a high-pressure cleaner.

1.3 Please note

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

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

Important

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs, installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

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. Insulate loose wire ends and tie back.

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).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components!

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

When installing an IPCU, the corresponding settings must be checked or adjusted before the installation.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 03 5627

Note

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

Note

For vehicles with an EU permit, no entry in accordance with § 19 Sub-Section 4 of Annex VIII b to the Road Traffic Act is required.

2.1 Excerpt from the directive 2001/56/EC Appendix VII for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

2.1.1. Subject to paragraph 2.1.2. combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

Notes on Validity

This installation documentation applies to Volvo V40 / V40 CC Diesel vehicles - for validity, see page 1 - from model year 2013 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.

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

Technical Instructions

Special Tools
- Hose clamp pliers for self-clamping hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Webasto Thermo Test diagnosis with current software

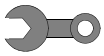
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values for 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque values of 5x15 retaining plate of water connection piece bolt = 7Nm.
- Tighten other screw connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Explanatory Notes on Document

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

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents

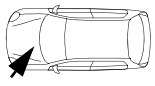
Specific risk of damage to components

Specific risk of fire and explosion

Reference to general installation instructions of the 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



Volvo V40

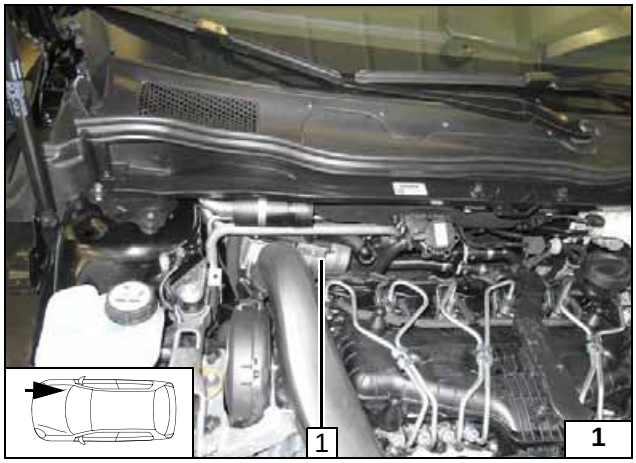
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Remove the engine cover.
- Remove the strut brace.
- Drain the coolant according to manufacturer's instructions.
- Remove the intake manifold.
- Remove the underride protection of the engine.
- Remove the underbody trim to the right of the fuel tank.
- Detach the heat protection trim of the exhaust system in the fuel tank area.
- Remove the footwell trim on the front passenger's side.
- Remove the glove compartment.
- Remove the shift lever trim.
- Remove the centre console trim.
- Remove the A/C control panel according to manufacturer's instructions.
- Remove the A-pillar trim in the footwell on the front passenger's side (only with Telestart).

Heater

- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

Image shows 2.0 D.

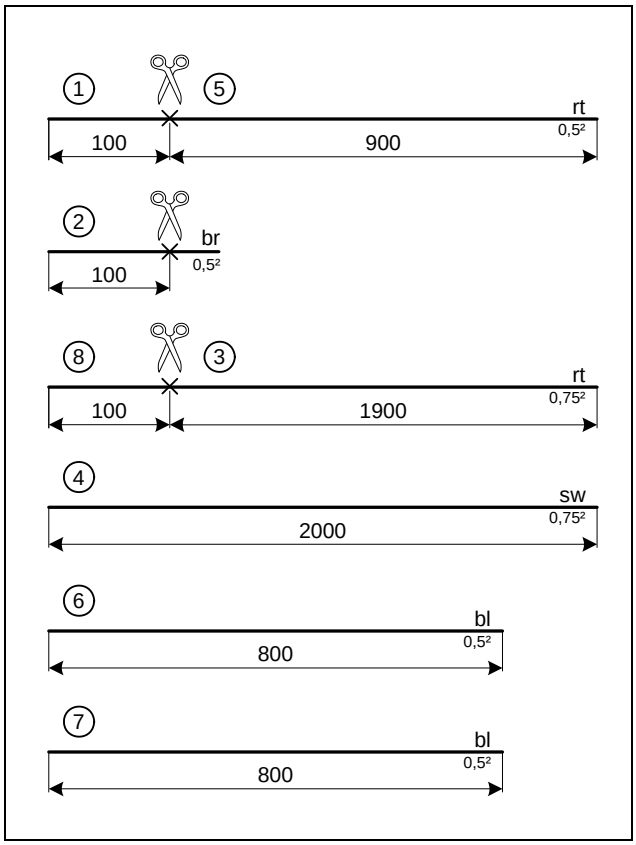
1 Heater

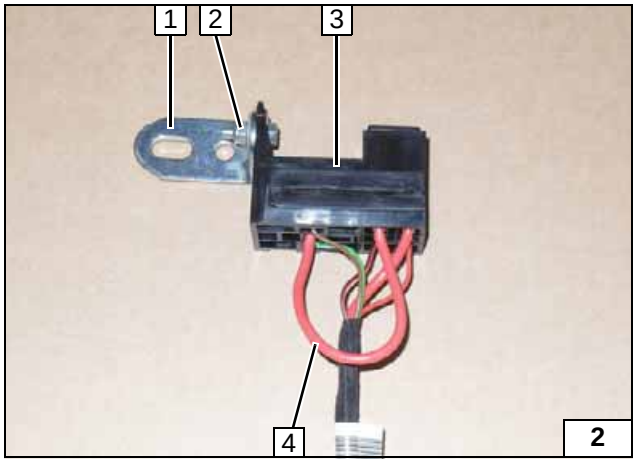
Installation location

Preparing Electrical System

Wire sections retain their numbering in the entire document.

Cutting wires to length

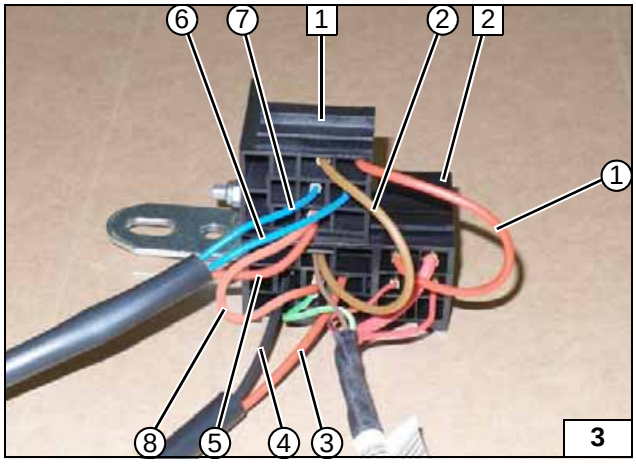




Fuse holder of passenger compartment

1 Angle bracket
2 M5x16 bolt, large diameter washer [2x], nut
3 Fuse holder of passenger compartment
4 Detach red (rt) 4² wire and discard

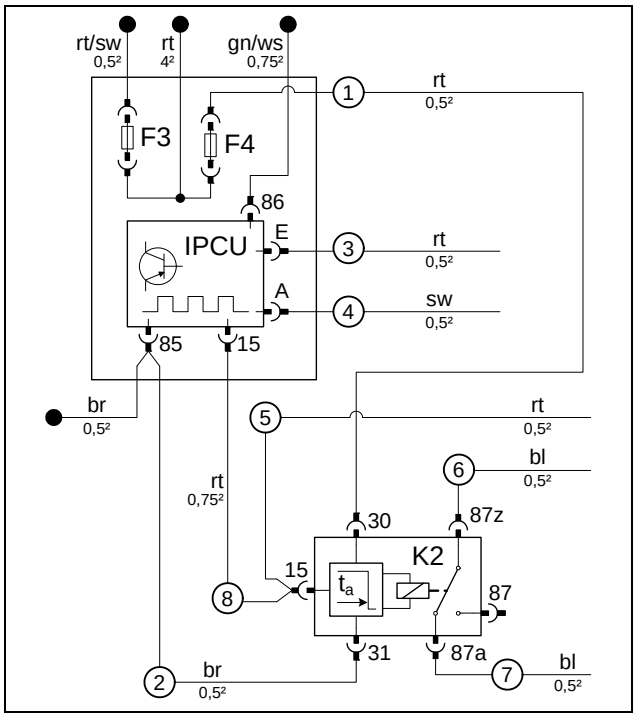
Preparing fuse holder of passenger compartment



Connect wires according to wiring diagram. Lock socket of impulse relay K2 **1** and socket of passenger compartment fuse holder **2** in place.
Pull wire sections ③ and ④ into provided protective sleeving, also pull wire sections ⑤, ⑥ and ⑦ into provided protective sleeving.

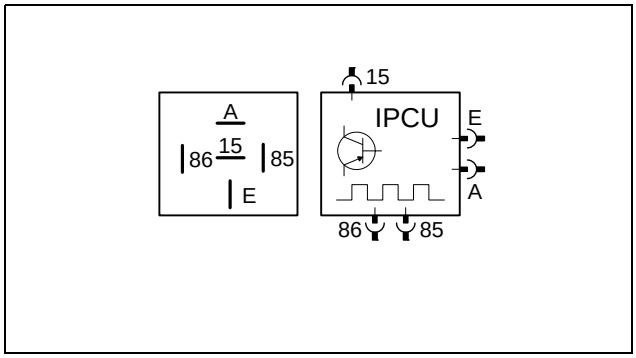
① Red (rt) wire of F4 and K2/30
② Brown (br) wire of IPCU/85 and K2/31
③ Red (rt) wire of IPCU/E
④ Black (sw) wire of IPCU/A
⑤ Red (rt) wire of K2/15
⑥ Blue (bl) wire of K2/87z
⑦ Blue (bl) wire of K2/87a
⑧ Red (rt) wire of IPCU/15 and K2/15

Preparing fuse holder of passenger compartment



Insert 3A fuse F4.

Connecting wires

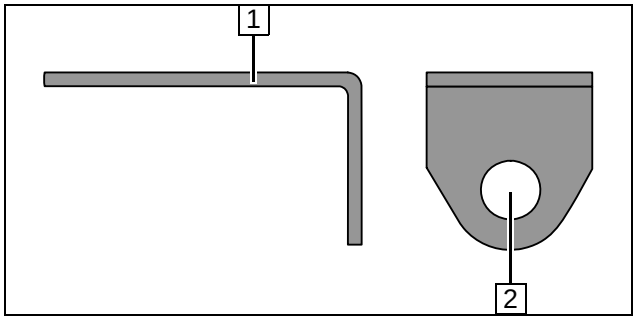


IPCU view on contact side.
The IPCU included in the kit is pre-programmed with the following adjustment values:

Duty cycle: 60%
Frequency: 400Hz
Voltage: 10V
Function: Low-side

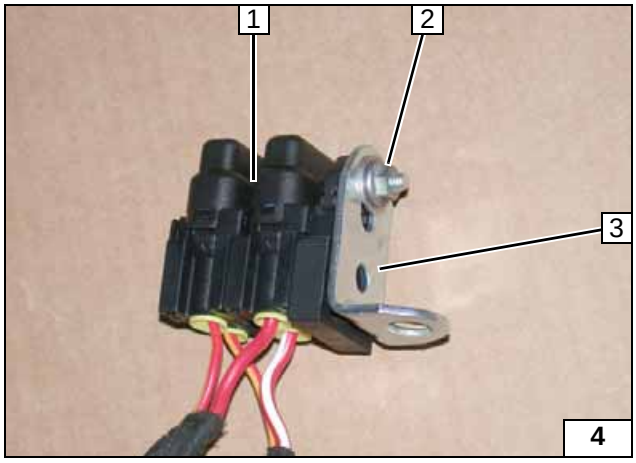
The settings must be checked during start-up of heater and adjusted if necessary.

Premounting IPCU



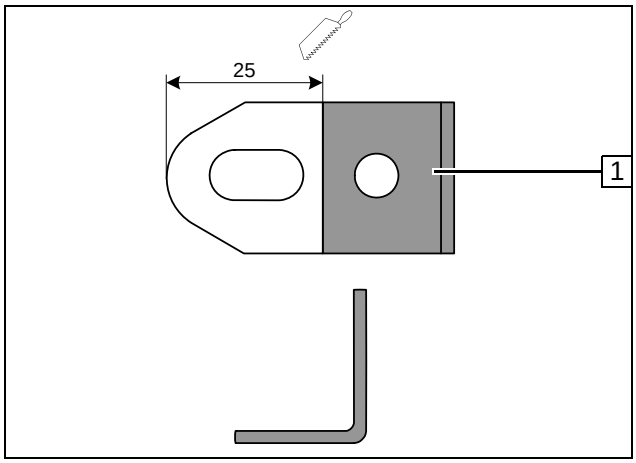
1 Angle bracket
2 Drill out 8.5mm dia. hole

Preparing angle bracket



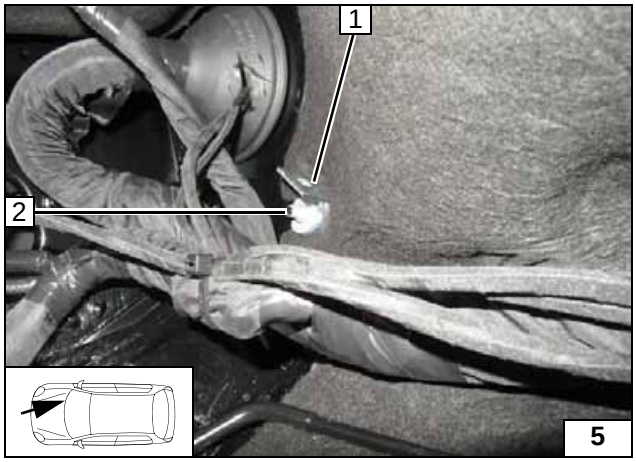
1 F1-2 fuses
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
3 Angle bracket

Preparing fuse holder of engine compartment



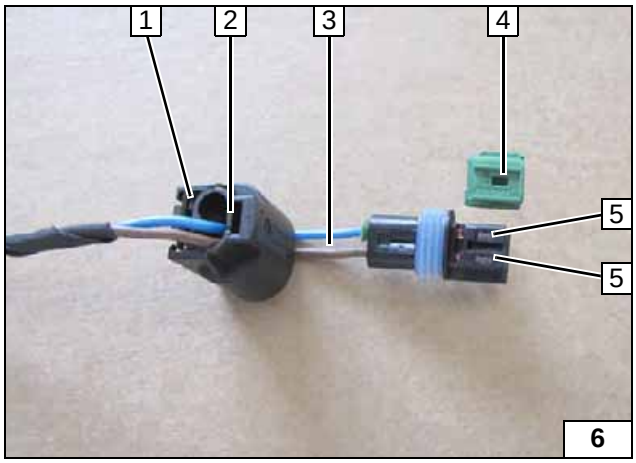
1 Angle bracket

Cutting angle bracket to length



1 Angle bracket
2 Original vehicle stud bolt, plate nut

Installing angle bracket



Complete connector of metering pump after routing. Pin assignment is not relevant.

1 Connector housing
2 Lock
3 Blue/brown (bl / br) wires
4 Coding
5 Timer lock

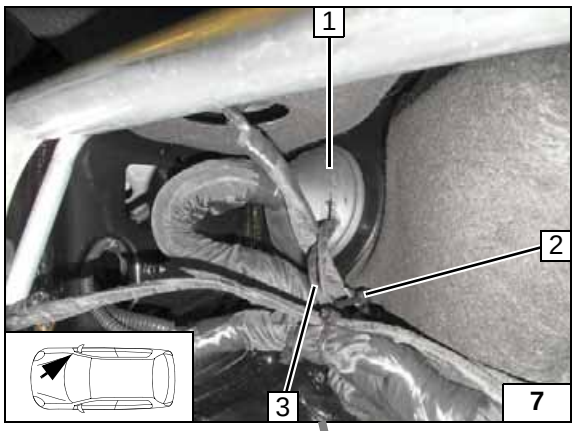
Disassembling connector

Electrical System

Wiring harness pass through

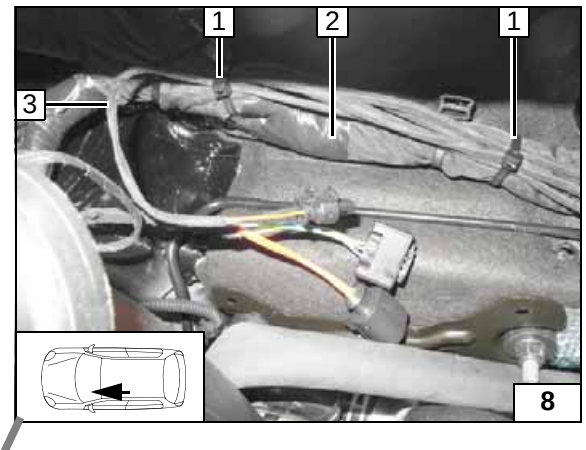
Fasten wiring harnesses of heater and heater control **3** to angle bracket using cable tie **2**.

1 Protective rubber plug



Wiring harness routing

Route wiring harness of circulating pump **3** to the centre of the firewall. Fasten wiring harnesses of heater, circulating pump and heater control to original vehicle wiring harness **2** using cable tie **1**.



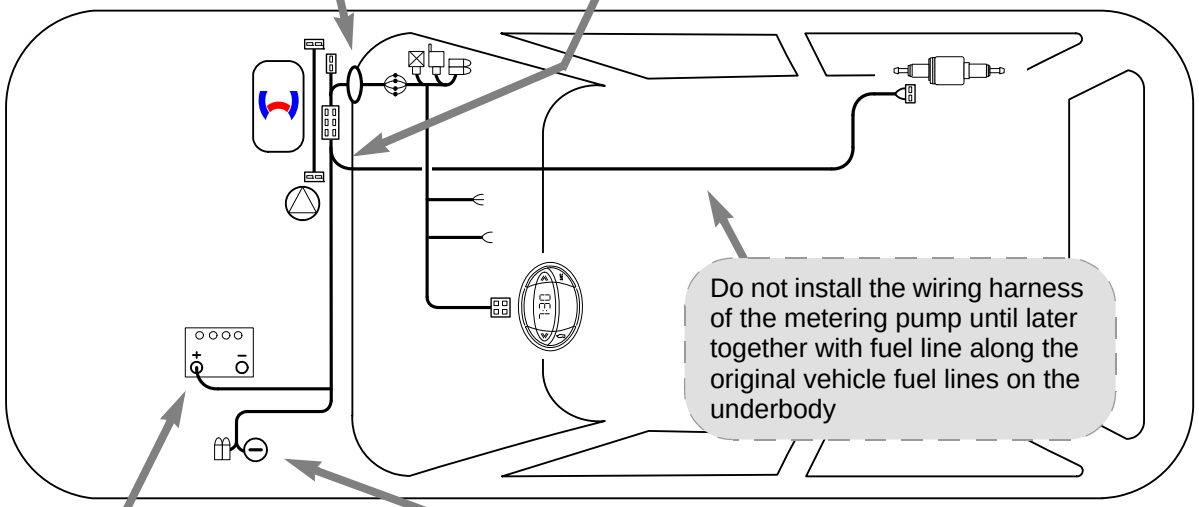
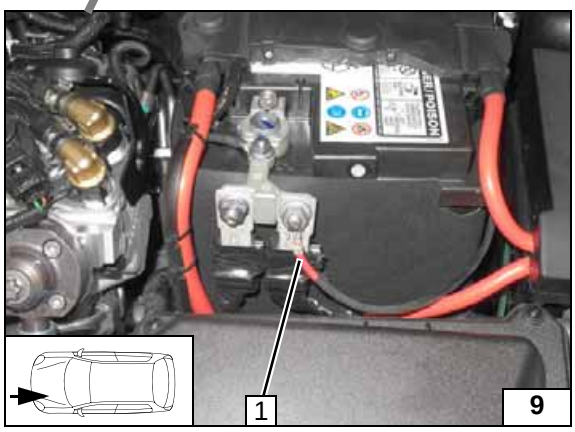
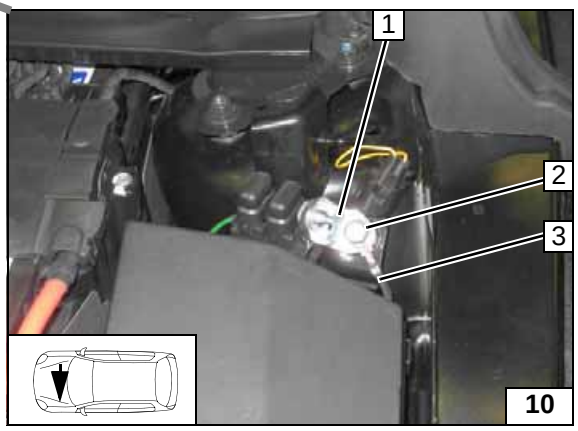


Diagram of wiring harness routing



Positive wire

1 Positive wire, 8mm dia. cable lug on positive battery distributor

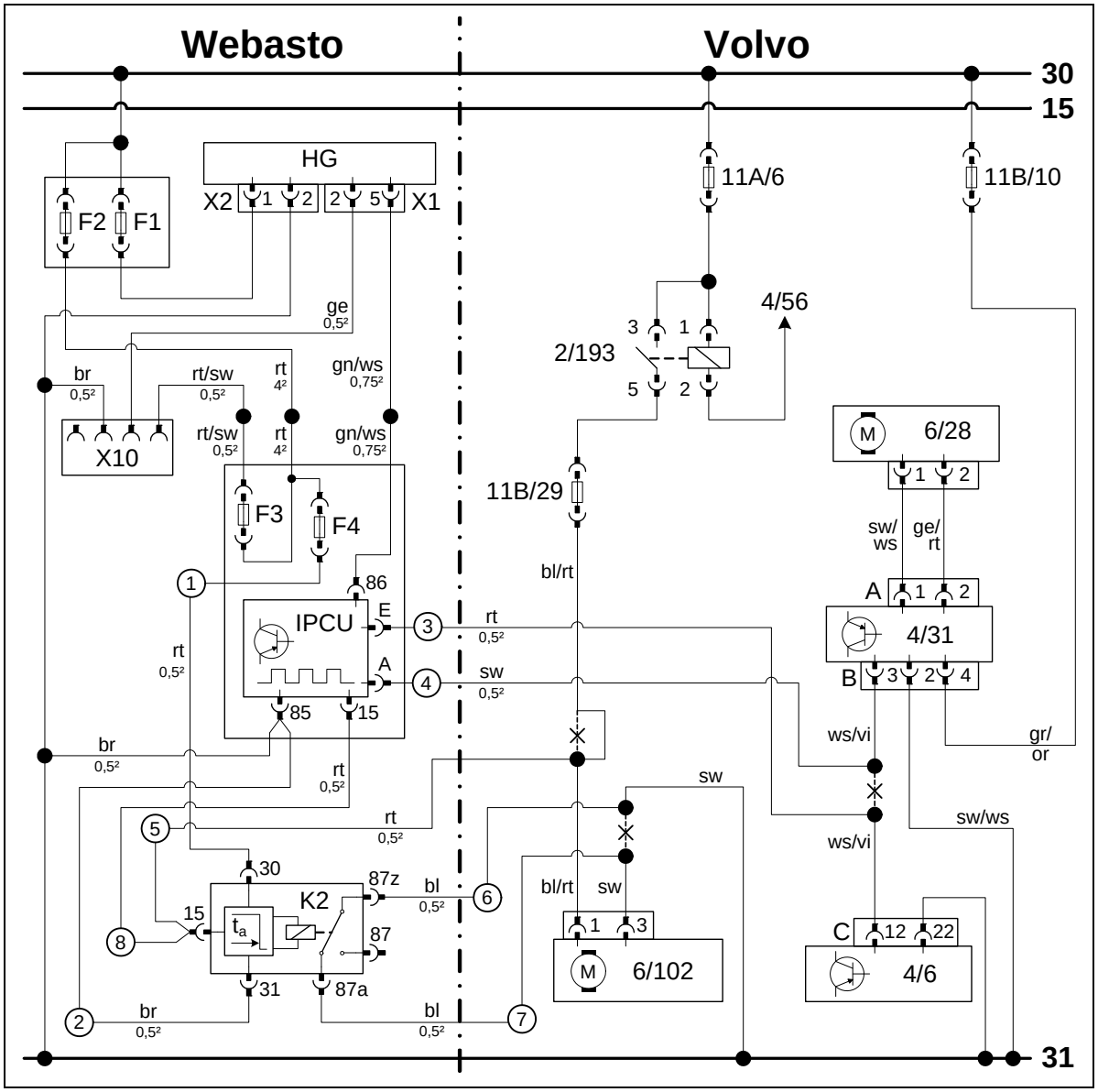


Fuse holder of engine compartment, earth wire

1 Angle bracket
2 Original vehicle bolt
3 Earth wire, 8mm dia. cable lug

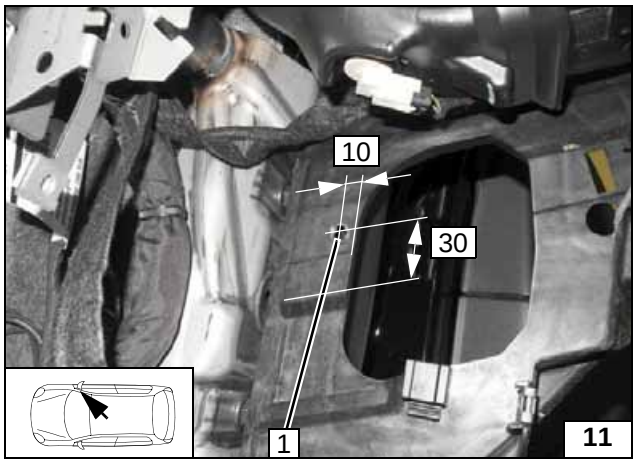
Fan Controller

Wiring diagram



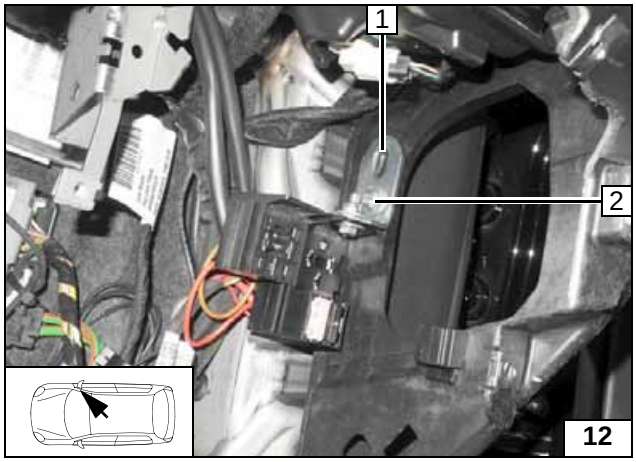
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	11A/6	Fuse	rt	red
X1	6-pin heater connector	11B/10	Fuse	sw	black
X2	2-pin heater connector	4/56	Central electrical box	ge	yellow
X10	4-pin connector of Heater control	2/193	Fan relay	gn	green
		6/28	Fan motor	or	orange
K1	Fan relay	11B/29	Fuse	ws	white
K2	Delayed pulse relay	A	2-pin connector 4/31 (C2)	ws	white
F1	20A fuse			br	brown
F2	30A fuse	4/31	Fan controller	gr	grey
F3	1 A fuse	B	4-pin connector 4/31 (C1)	vi	violet
F4	3A fuse			bl	blue
IPCU	Pulse width modulator	C	4-pin connector 4/6 (C1)		
IPCU settings:					
Duty cycle:	60%	4/6	A/C control unit		
Frequency:	400Hz	6/102	3-pin connector DMM, valve motor, defroster		
Voltage:	10V			**X**	Cutting point
Function:	Low-side			Wiring colours may vary.	

Legend



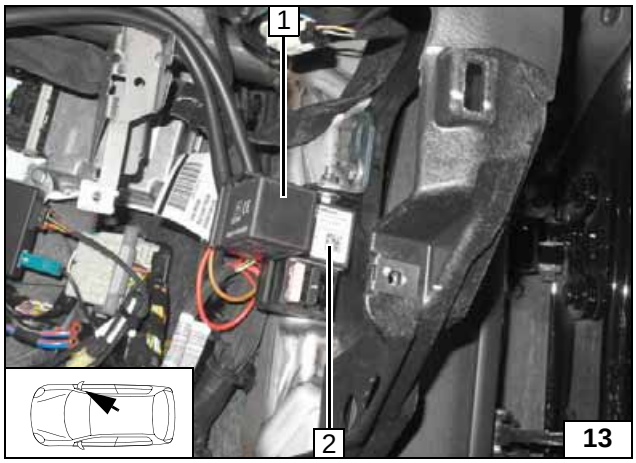
1 5.5mm dia. hole

Hole for fuse holder of passenger compartment



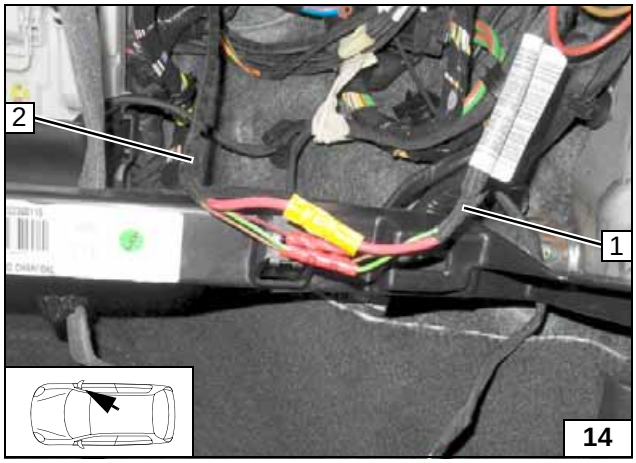
1 Angle bracket
2 M5x16 bolt, large diameter washer, flanged nut

Installing fuse holder of passenger compartment



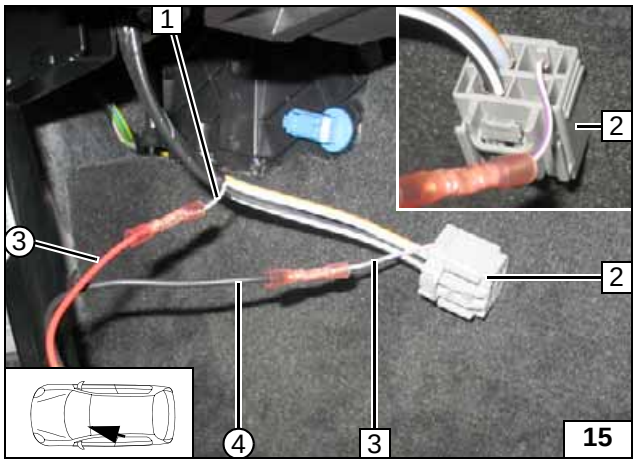
1 K2-relay
2 IPCU

Attaching K2 relay and IPCU



Connect same colour lines of wiring harness of passenger compartment fuse holder **1** with wiring harness of heater **2** according to wiring diagram.

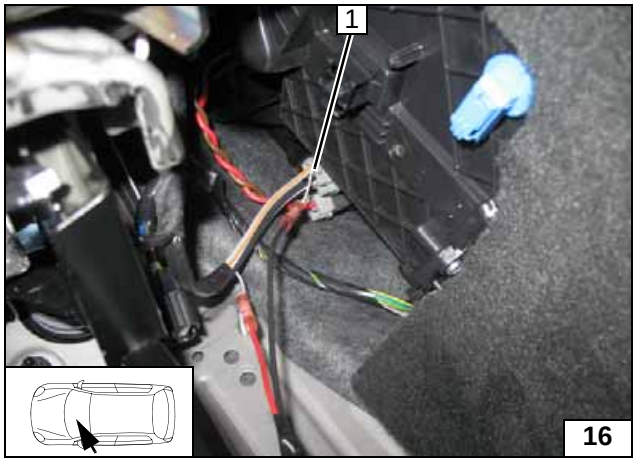
Connecting wiring harnesses



Connection to 4-pin connector **2**. Produce connections as shown in wiring diagram.

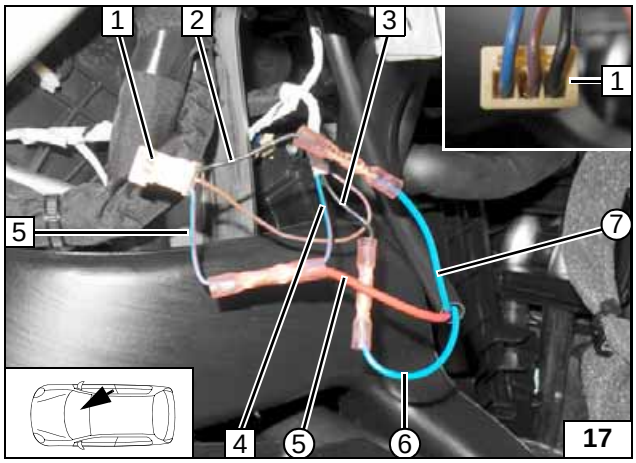
1 White/violet (ws/vi) wire of connector C, Pin 12
3 White/violet (ws/vi) wire of connector B, Pin 3
③ Red (rt) wire of IPCU/E
④ Black (sw) wire of IPCU/A

Connecting fan controller



1 Connector B

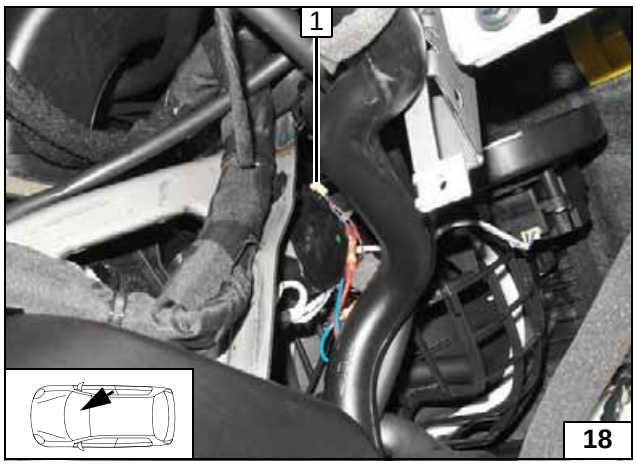
Inserting connector of fan controller



Connection to connector 6/102 **1** of flap positioning motor DMM. Produce connections as shown in wiring diagram.

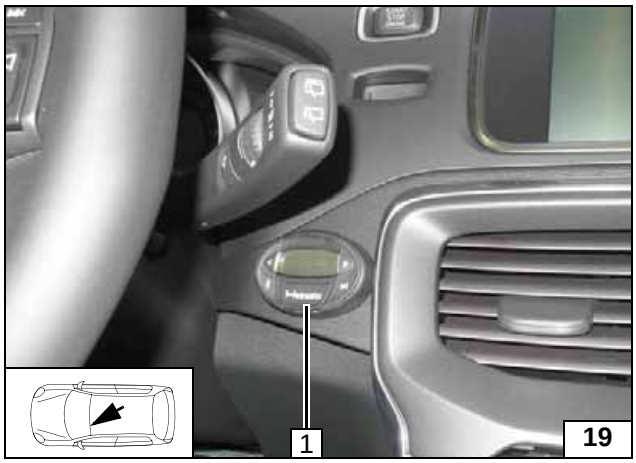
2 Black (sw) wire of connector 6/102 Pin 3
3 Black (sw) wire of earth connection
4 Blue/red (bl/rt) wire of fuse 11B/29
5 Blue/red (bl/rt) wire of connector 6/102 Pin 1
⑤ Red (rt) wire of K2/15
⑥ Blue (bl) wire of K2/87z
⑦ Red (rt) wire of K2/87a

Connection of flap positioning motor



1 Connector 6/102

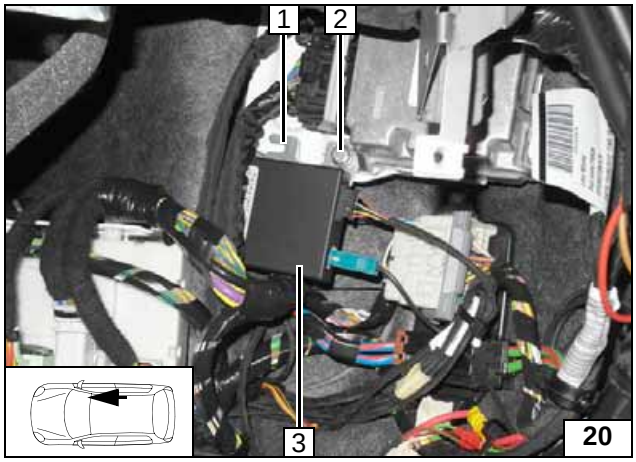
Inserting connector of flap positioning motor



Digital Timer

1 Digital timer

Installing digital timer

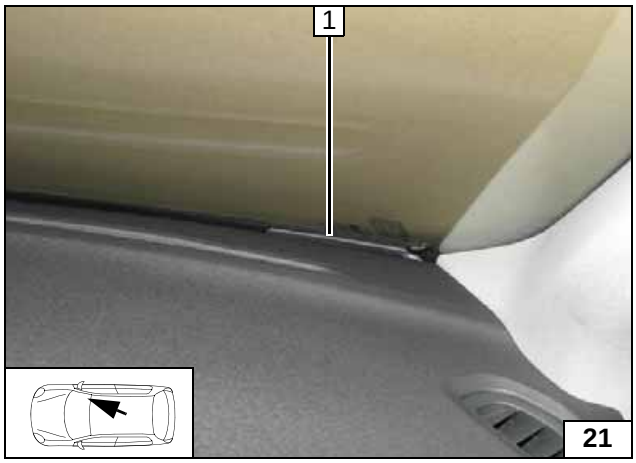


Remote Option (Telestart)

Drill out bracket of receiver **1** at position **2** to 6.5mm dia.

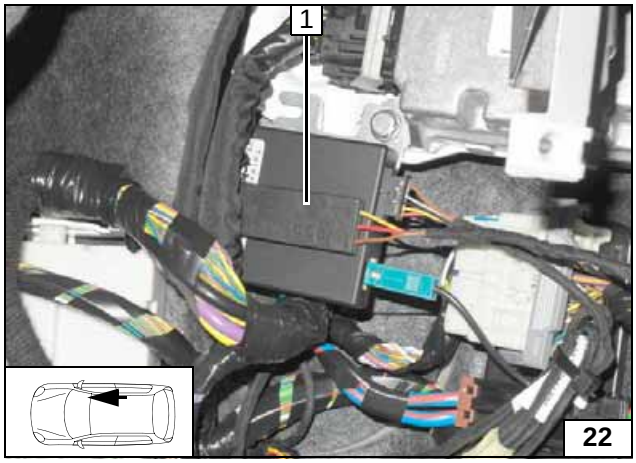
2 Original vehicle bolt
3 Receiver

Installing receiver



1 Antenna

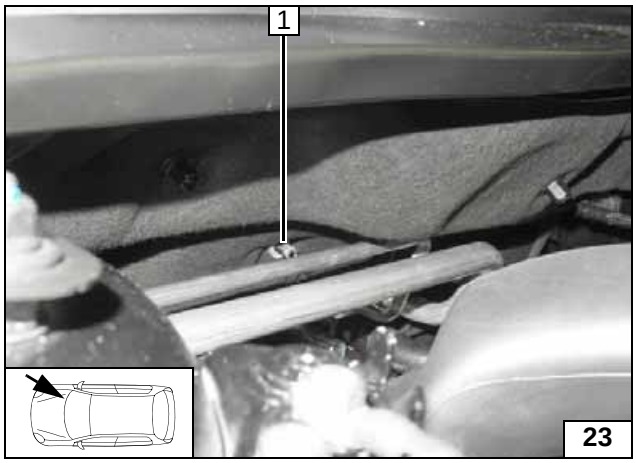
Installing antenna



Temperature sensor T100 HTM

Fasten temperature sensor **1** with adhesive tape.

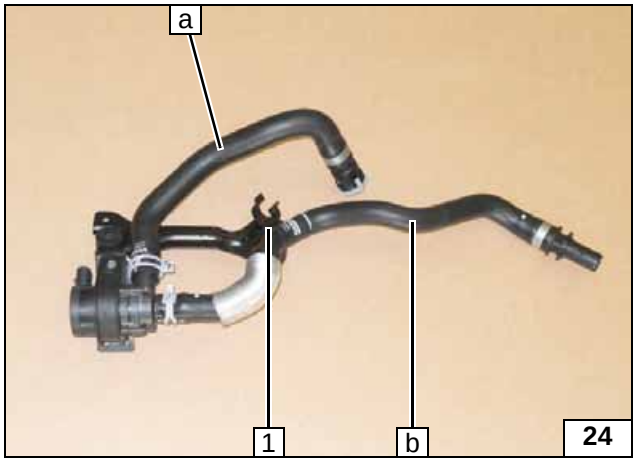
Installing temperature sensor



Preparing Installation Location

Screw M8 flanged nut **1** onto original vehicle stud bolt by about 25mm.

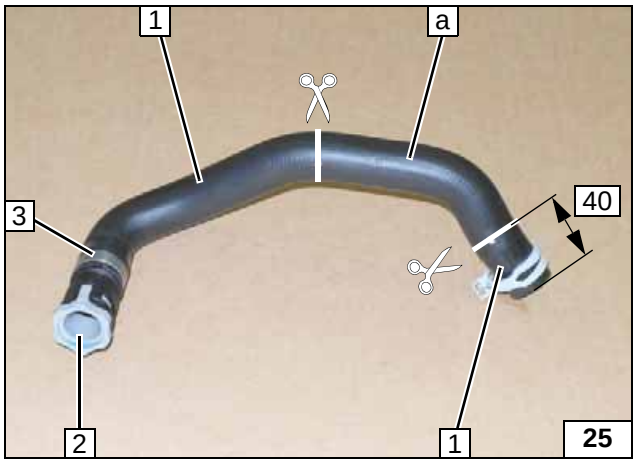
Installing flanged nut



Remove original vehicle circulating pump with bracket and hoses. Remove hoses **a** and **b**.

1 Remove retaining clip, will be re-used

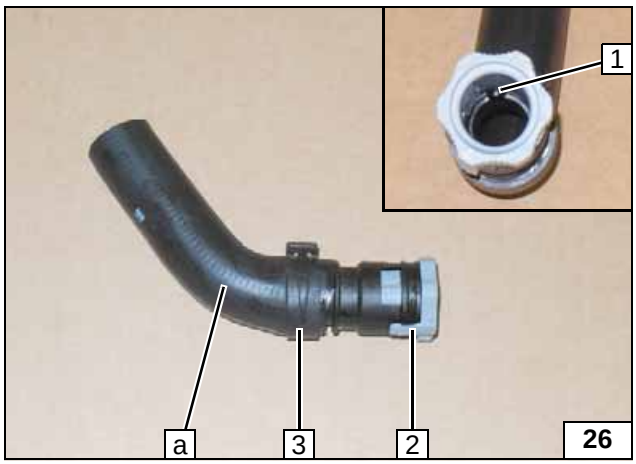
Removing hoses



Open up clamp **3** with a saw. Remove coupling **2**, will be re-used on heat exchanger inlet connection piece.

1 Discard cut-off section [2x] and spring clip.

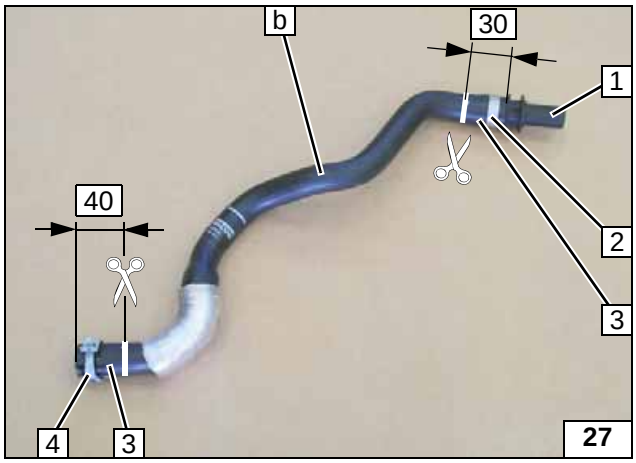
Separating hose a



Check the correct seating of the locking catch at position **1**. Hose **a** will later be mounted on the connection piece of the heat exchanger inlet.

2 Coupling piece
3 27mm dia. spring clip

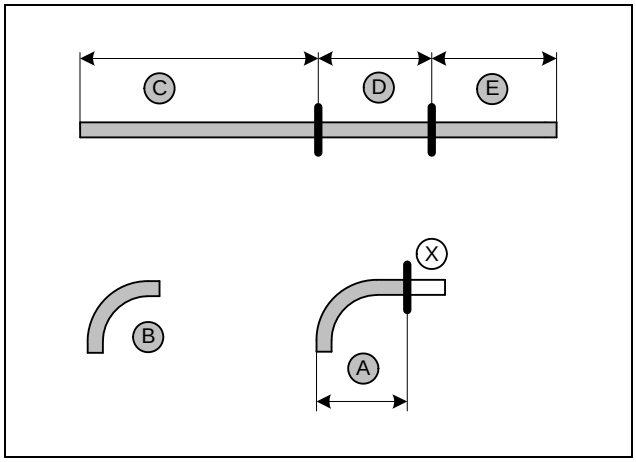
Preparing hose a



Open up clamp **2** with a saw. Remove coupling **1**, will be re-used on connection to engine outlet.

3 Discard cut-off section [2x]
Spring clip **4** will be reused.

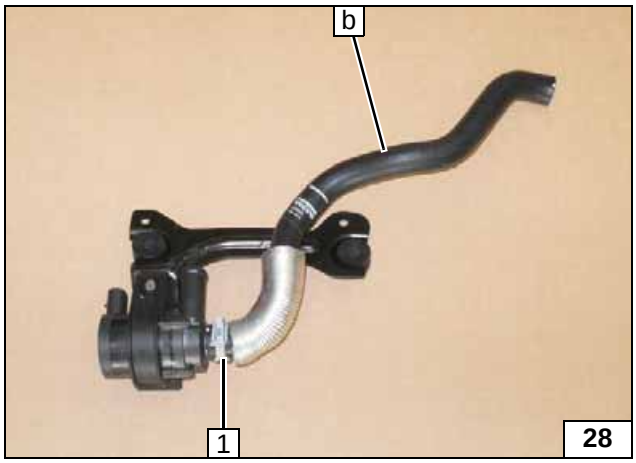
Separating hose b



Discard section **X**.
Hose **A** = 90°, 20mm dia. moulded hose
Hose **B** = 90°, 18 mm dia. moulded hose

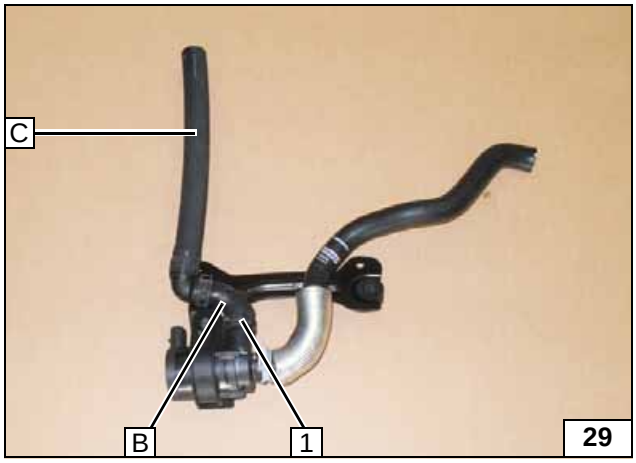
A = 80
C = 280
D = 120
E = 120

Cutting hoses to length



1 Original vehicle spring clip

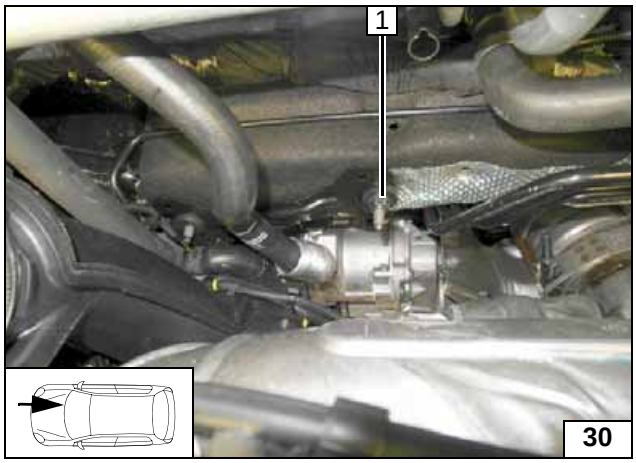
Premounting hose b



All spring clips without designation = 25mm dia.

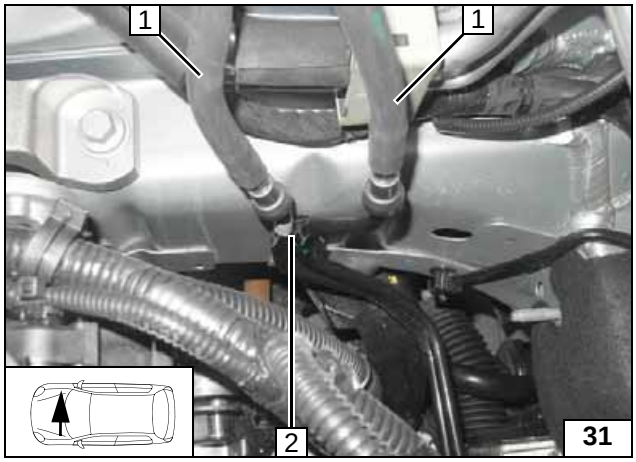
1 27mm dia. spring clip

Premounting hoses



Attach original vehicle circulating pump onto stud bolt and fasten using original vehicle M8 flanged nut **1**.

Installing original vehicle circulating pump

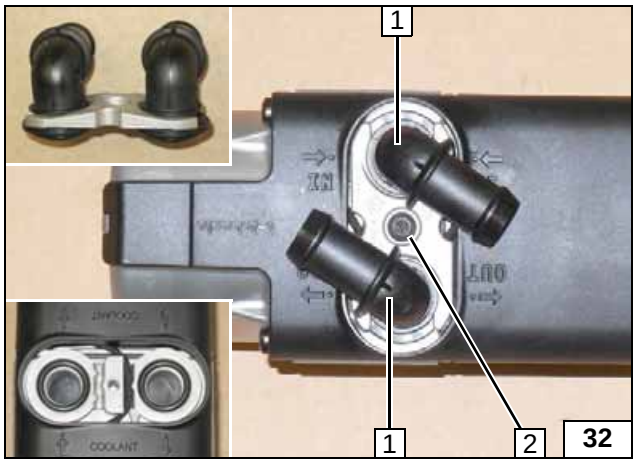


1.6 D

Detach fuel lines **1** [2x] from bracket **2**, will be re-inserted there later.

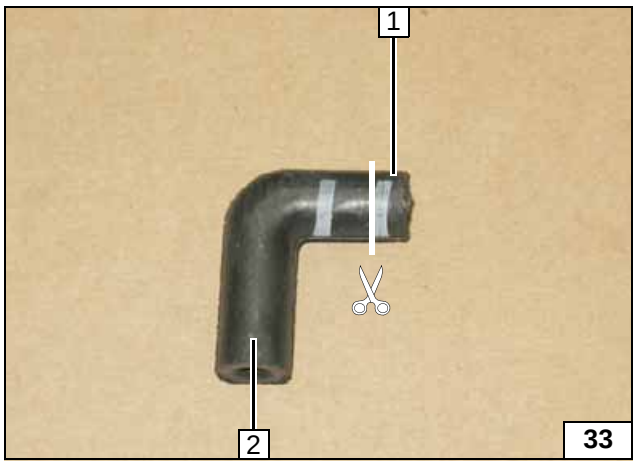
Detaching fuel lines

Preparing Heater



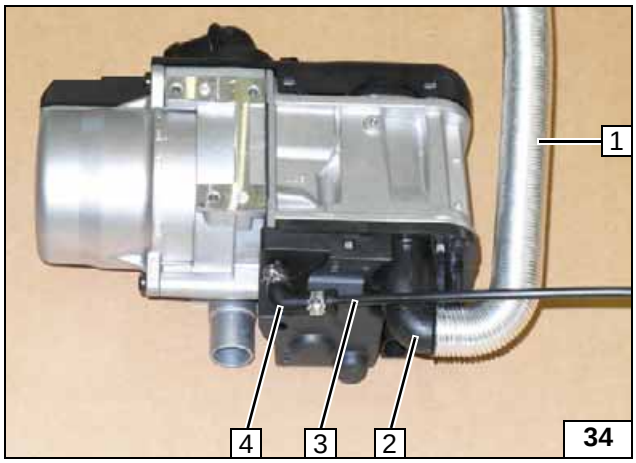
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



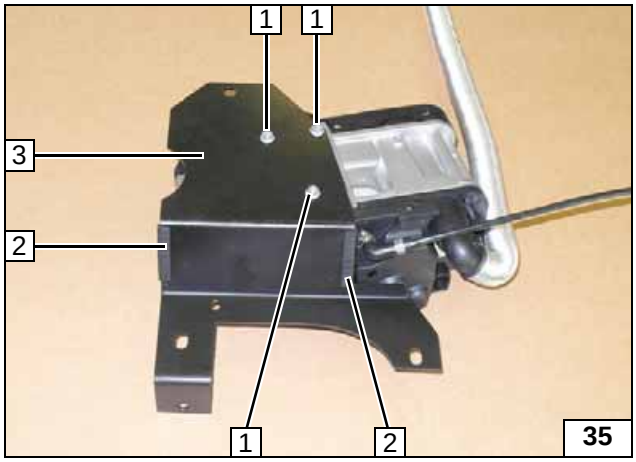
1 Discard section
2 90° moulded hose

Cutting 90° moulded hose to length



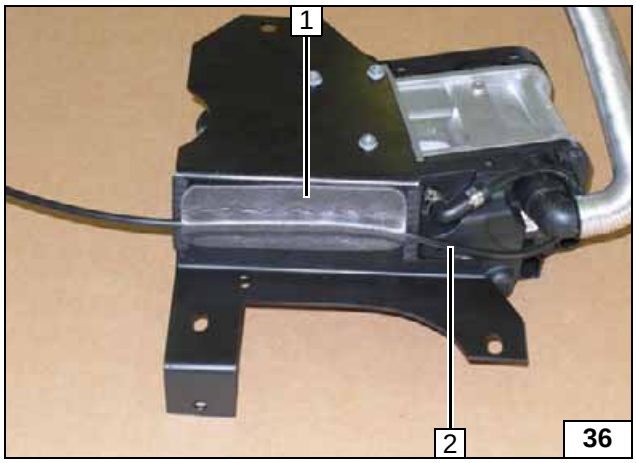
1 Combustion air pipe
2 Air intake manifold
3 Fuel line
4 90° moulded hose, 10 mm dia. clamp [2x]

Premounting heater



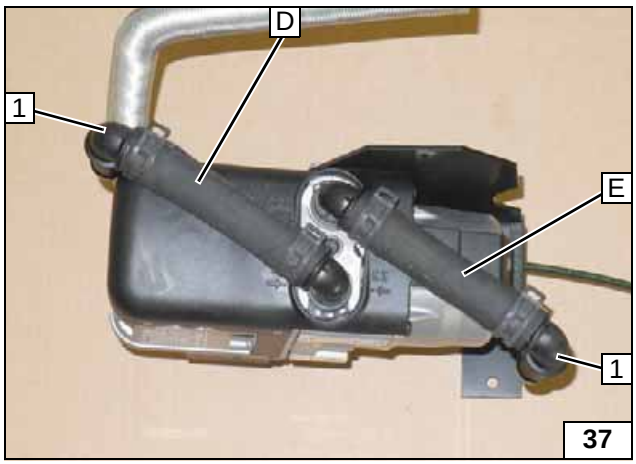
1 5x13 self-tapping bolt [3x]
2 Centrally separate 50mm edge protection [2x]
3 Bracket

Installing bracket



Fasten fuel line **2** to bracket with insulation strip **1**.

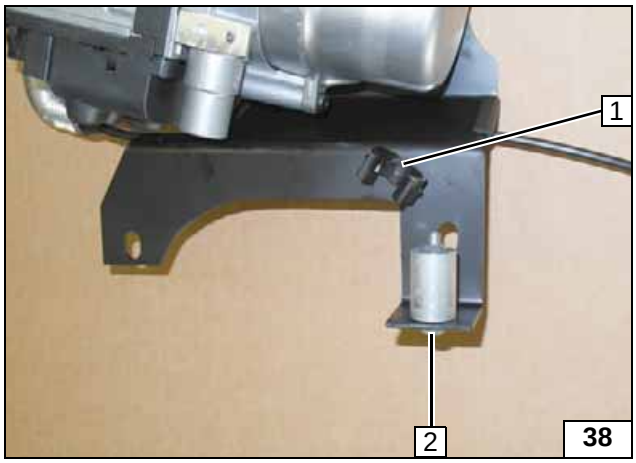
Fastening fuel line



All spring clips = 25mm dia.

1 90° connecting pipe [2x]

Premounting hoses



1 Original vehicle hose bracket, existing hole
2 M6x50 bolt, 30mm shim, pin lock

Inserting hose bracket

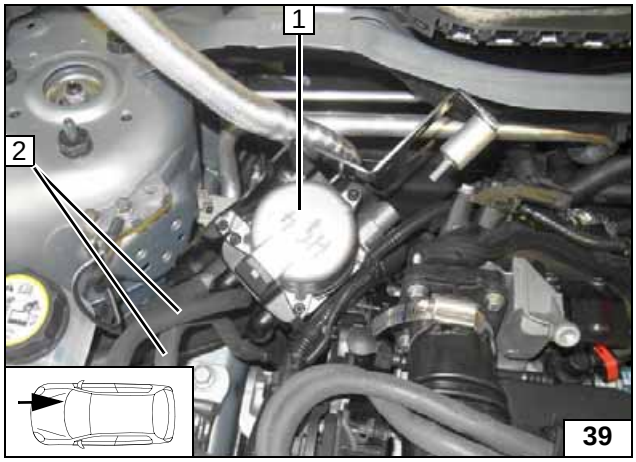
Installing Heater

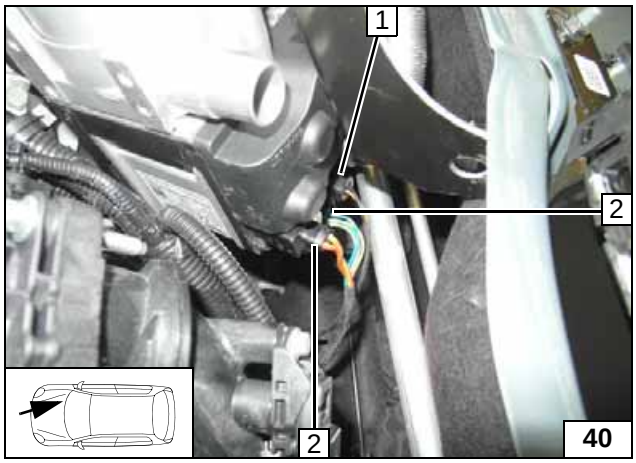
1.6 D

Mind the dismantled fuel lines **2** when inserting the heater.

Inserting heater

1 Heater





1 Wiring harness of circulating pump
2 Wiring harness of heater [2x]

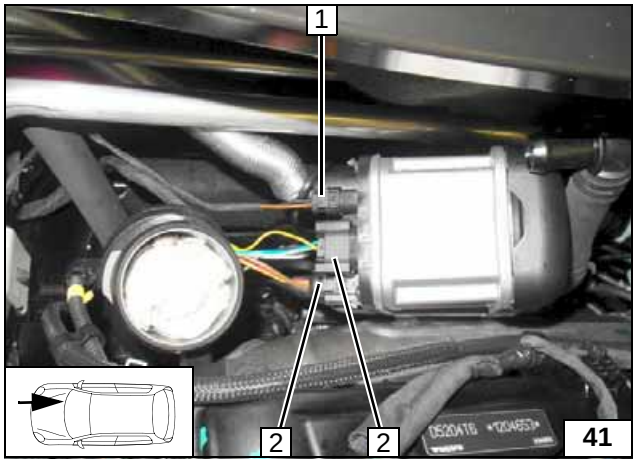
Installing wiring harnesses

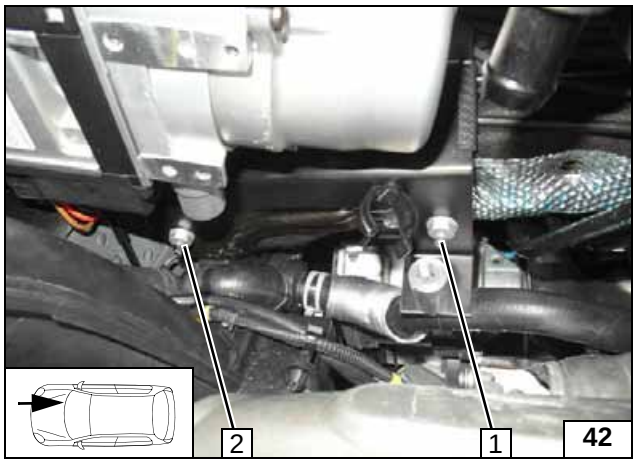
2.0 D

Insert heater on firewall.

1 Wiring harness of circulating pump
2 Wiring harness of heater [2x]

Attaching wiring harnesses



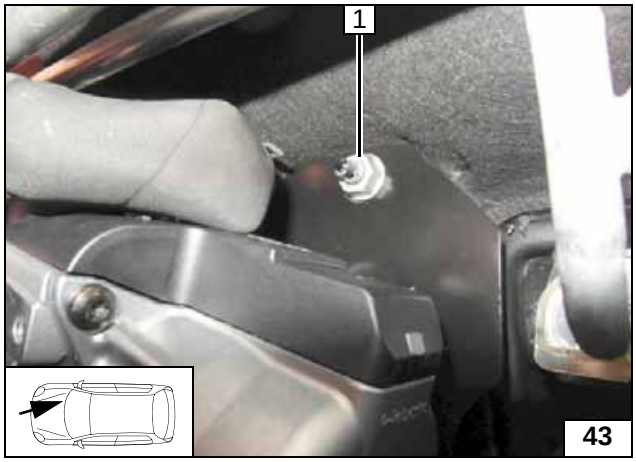


All vehicles

Images show 2.0 D.
Mount heater on original vehicle stud bolts [3x]. Insert large diameter washer between original vehicle nut and bracket at position **1** .

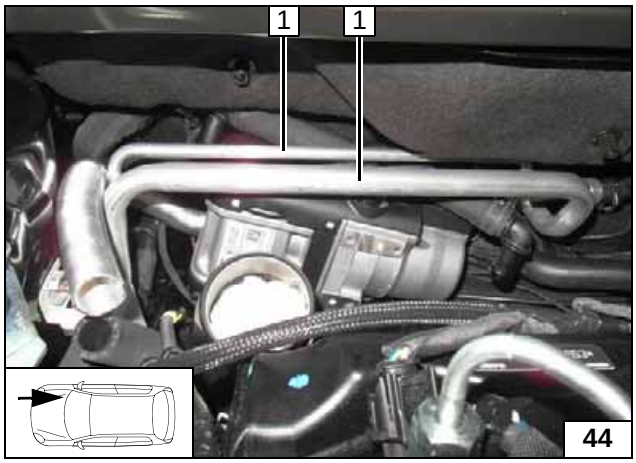
1 M8 flanged nut, large diameter washer
2 M8 flanged nut

Installing heater



1 M8 flanged nut

Installing heater



Align heater as shown. Ensure sufficient distance to neighbouring components, especially to A/C lines **1**, correct if necessary.

Installing heater

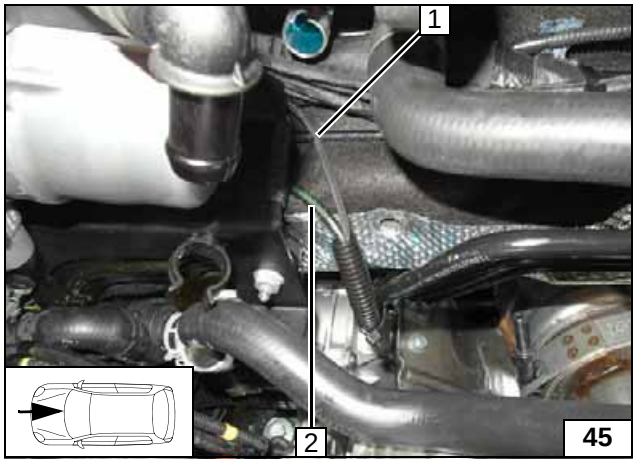
Fuel

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.

Route 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.

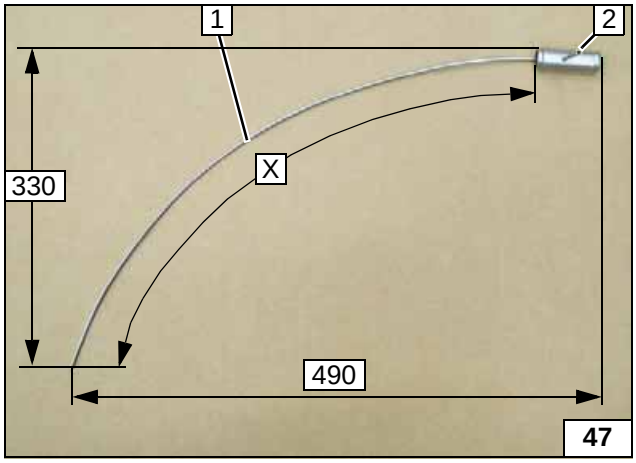


Pull fuel line **2** and wiring harness of metering pump **1** into 10mm dia., 1130mm long corrugated tube and route to the underbody on original vehicle fuel lines.

Installing lines

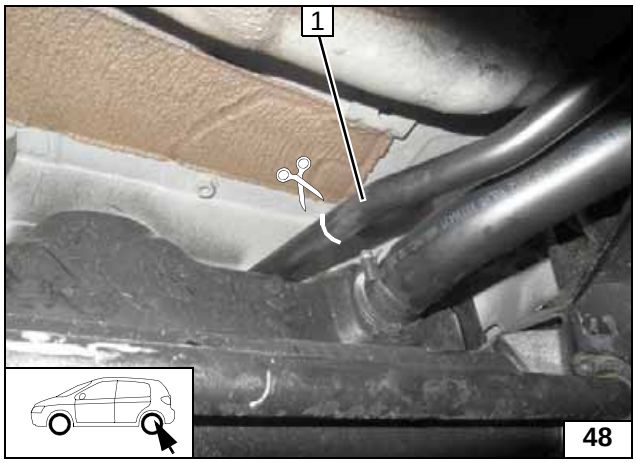
Route fuel line and wiring harness of metering pump **1** to the installation location of the metering pump on original vehicle fuel lines.

Installing lines



Cut fuel standpipe **1** to length (stretched length X = 570) and shape as shown. Check the position of standpipe **2**.

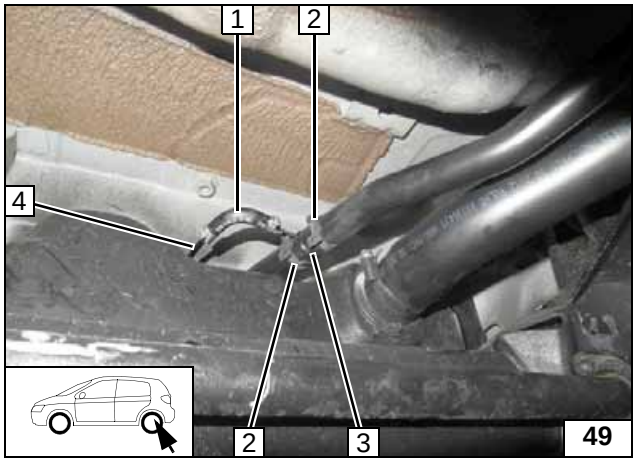
Fuel extraction



Following images show 1.6l Diesel.

Cut out fuel tank vent line **1** on marking.

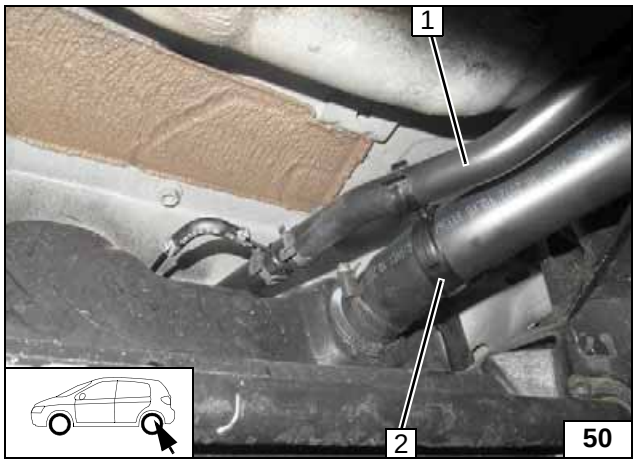
Fuel extraction



When inserting the fuel standpipe **3** into the ventilation line, route it to the left side of the fuel tank and turn it towards the fuel tank floor in a clockwise direction, then align.

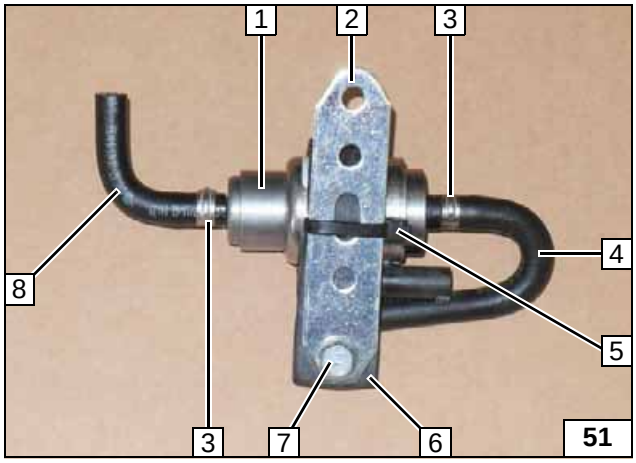
1 90° moulded hose, 10 mm dia. clamp [2x]
2 25mm dia. clamp [2x]
4 Fuel line

Installing fuel standpipe



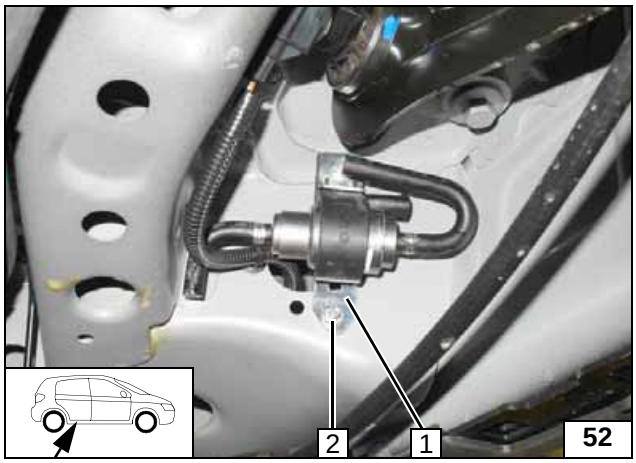
1 Fuel-tank vent line
2 25x37 hose bracket

Inserting hose bracket



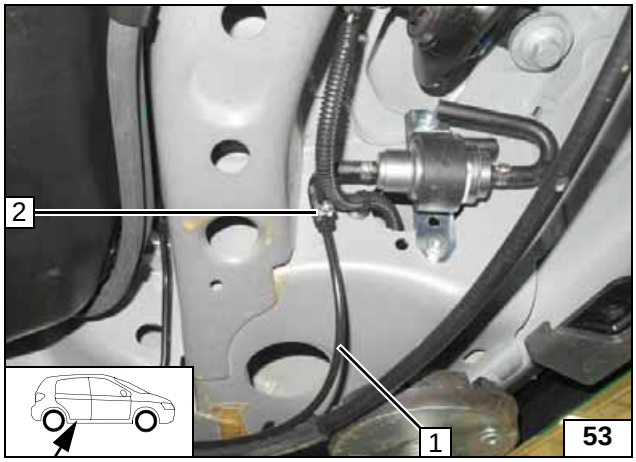
1 Metering pump
2 Perforated bracket
3 10mm dia. clamp [2x]
4 180° moulded hose
5 Cable tie
6 Metering pump support
7 M6x25 bolt, support angle, flanged nut
8 90° moulded hose

Premounting metering pump



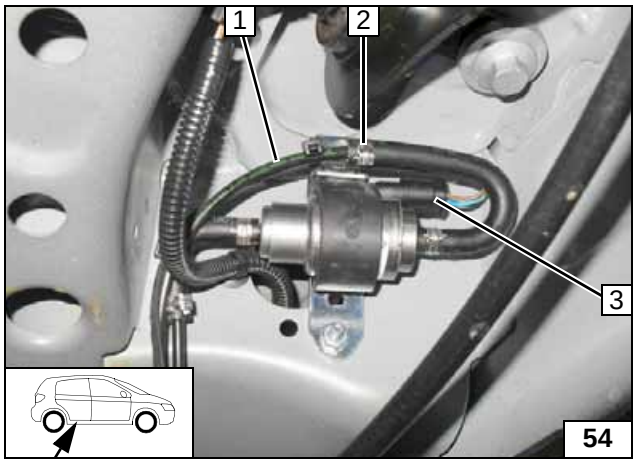
1 Perforated bracket
2 M6x20 bolt, large diameter washer, flanged nut, existing hole

Installing metering pump



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

Connection of metering pump



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

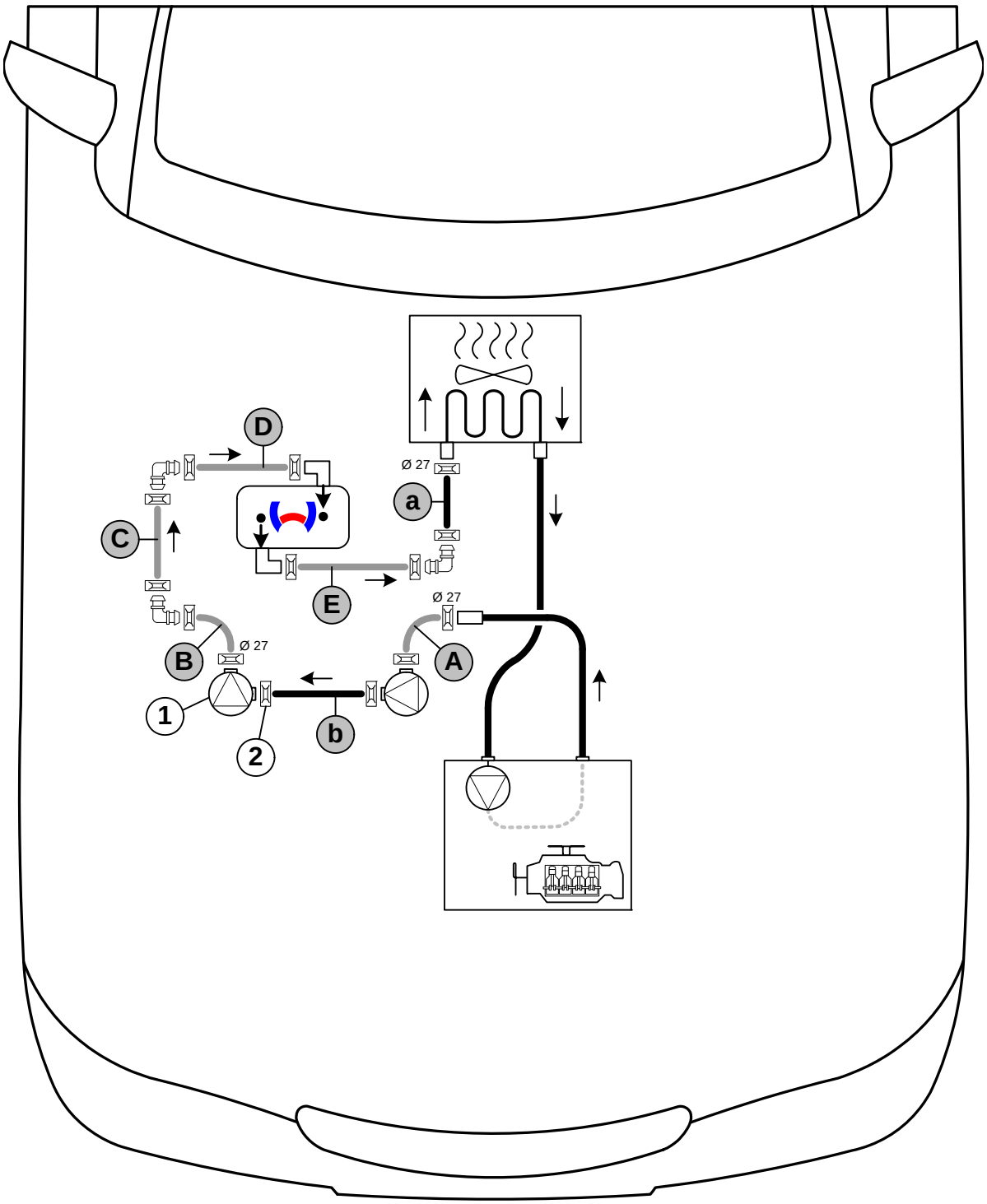
1 Fuel line of Heater
2 10 mm dia. clamp
3 Wiring harness of metering pump, connector mounted

Connection of metering pump

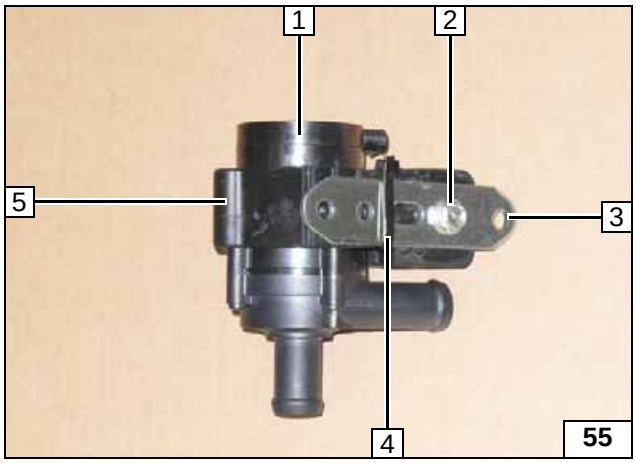
Coolant Circuit

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 hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram

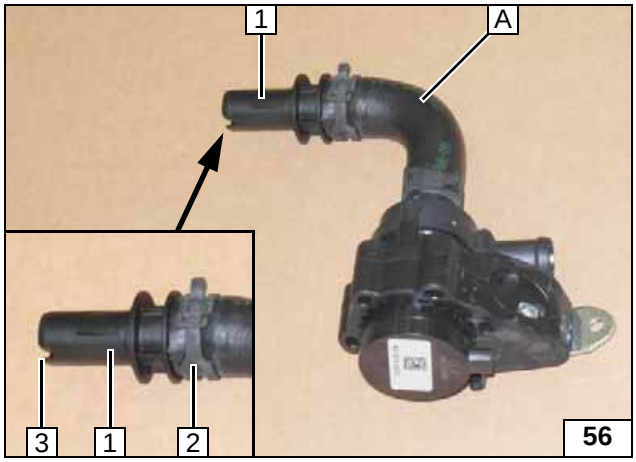


All spring clips without a specific designation = 25 mm dia.
1 = Original vehicle circulating pump. **2** = Original vehicle spring clip .
All connecting pipes = 18x18 mm dia.



1 Circulating pump
2 M6x25 bolt, flanged nut
3 Perforated bracket
4 Cable tie
5 Circulating pump support

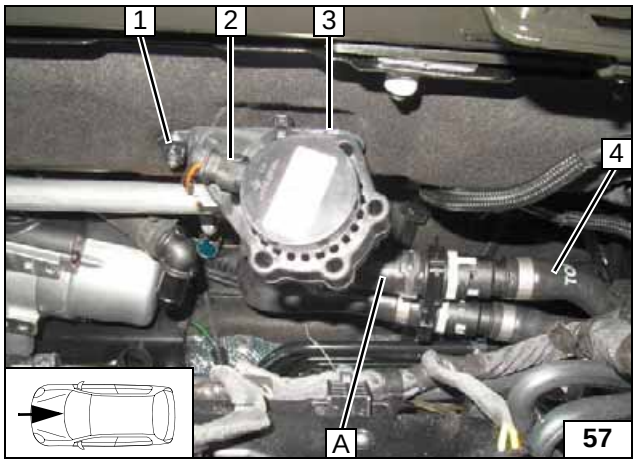
Premounting circulating pump



Check the correct seating of coding at position **3**.

1 Original vehicle coupling piece
2 27mm dia. spring clip

Premounting hose A

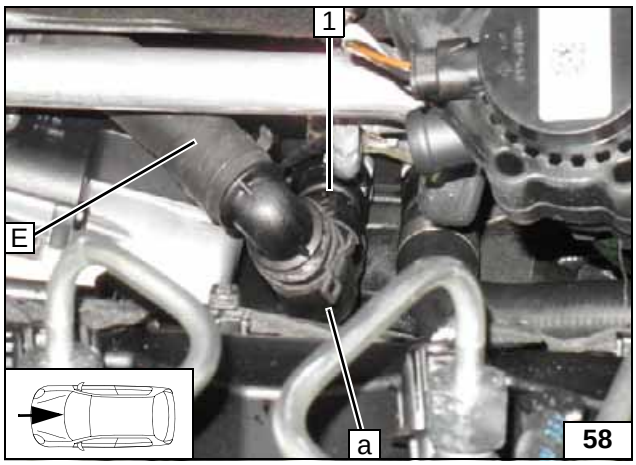


This image and the following images show the 2.0 D. Installation for 1.6 D can be carried out in an analogous manner.

Remove original vehicle plastic nut at position **1**. Connect coupling pieces of hose **A** and hose of engine outlet **4**.

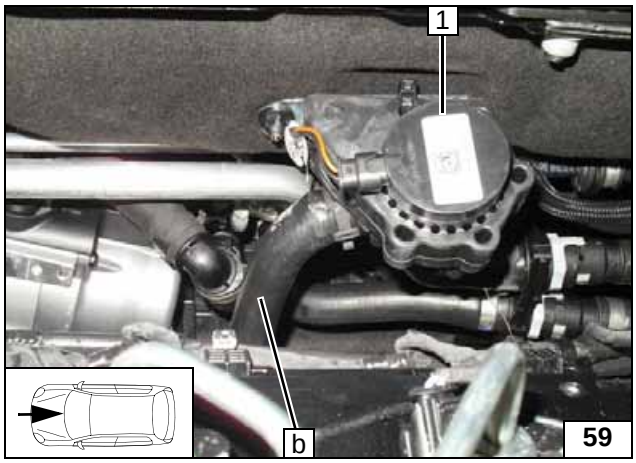
1 Plastic nut, original vehicle stud bolt
2 Wiring harness of circulating pump mounted
3 Perforated bracket

Installing circulating pump



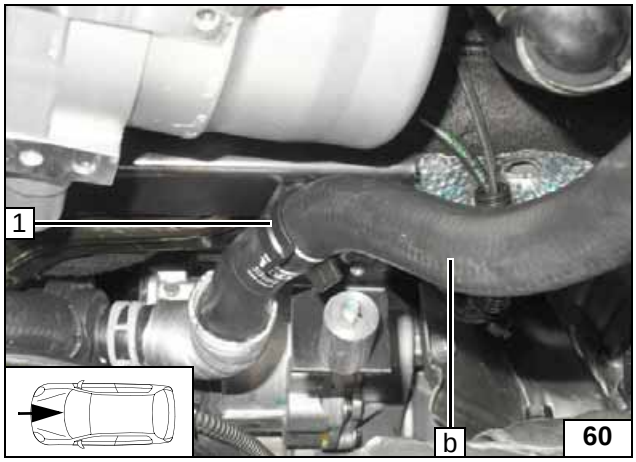
Set coupling piece **1** of hose **a** to "locked" prior to installation.

Connection of heat exchanger inlet



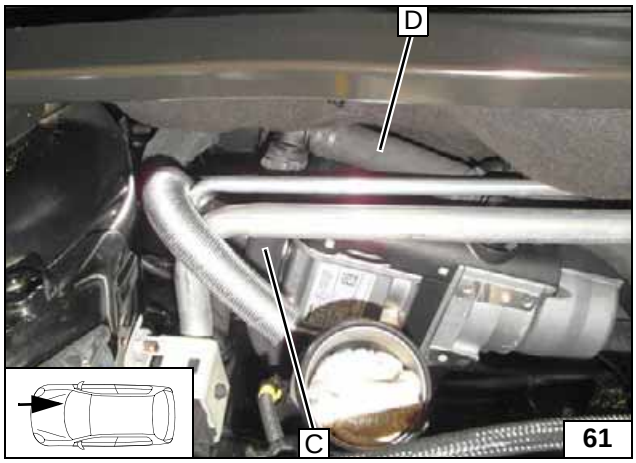
1 Circulating pump

Connection of circulating pump



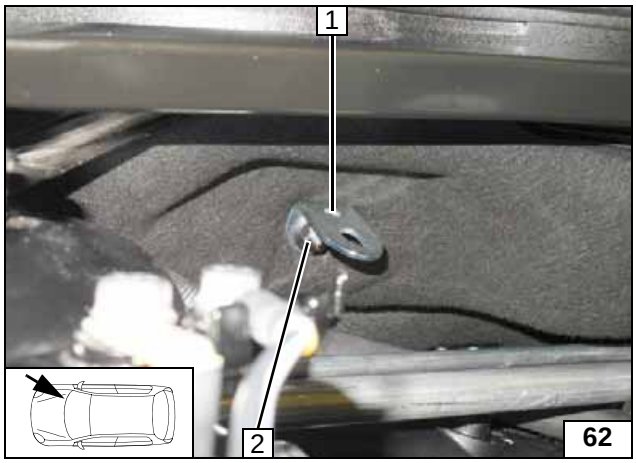
Insert hose **b** into hose bracket **1**.

Routing hose b



Align hoses. Ensure sufficient distance to neighbouring components, adjust if necessary.

Connection of heater inlet

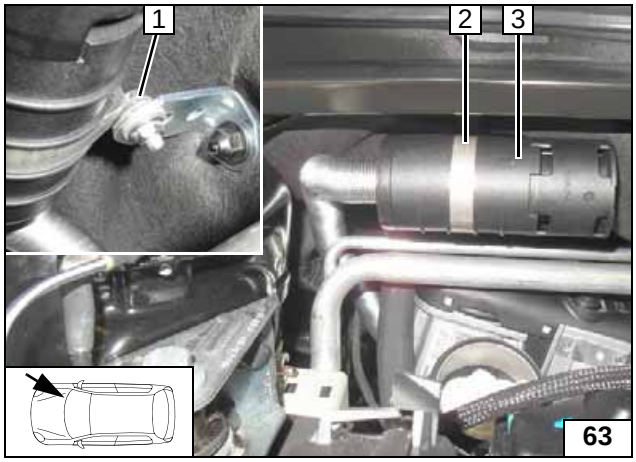


Combustion Air

Remove original vehicle plastic nut at position **2**.

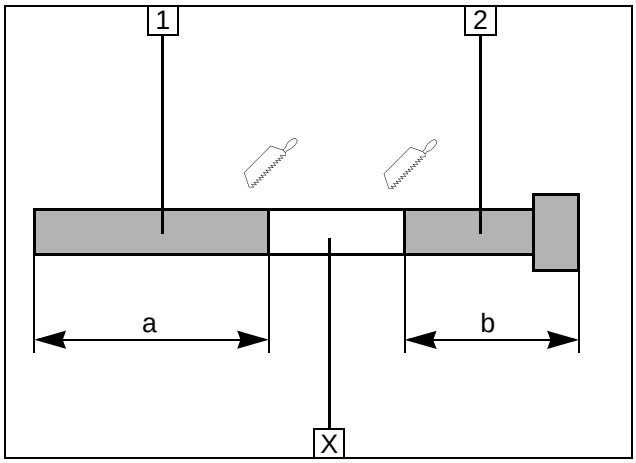
1 Angle bracket
2 Plastic nut, original vehicle stud bolt

Installing angle bracket



1 M5x16 bolt, large diameter washer [2x], flanged nut
2 51mm dia. clamp
3 Silencer

Installing silencer



Exhaust gas

Discard section **X**.

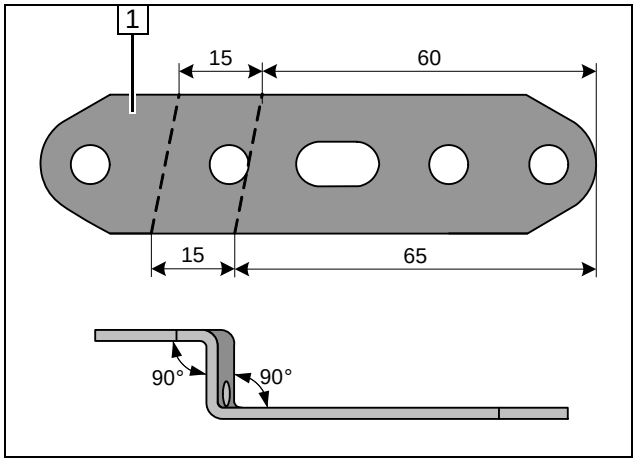
1.6 D

1 Exhaust pipe a = 630
2 Exhaust end section b = 110

2.0 D

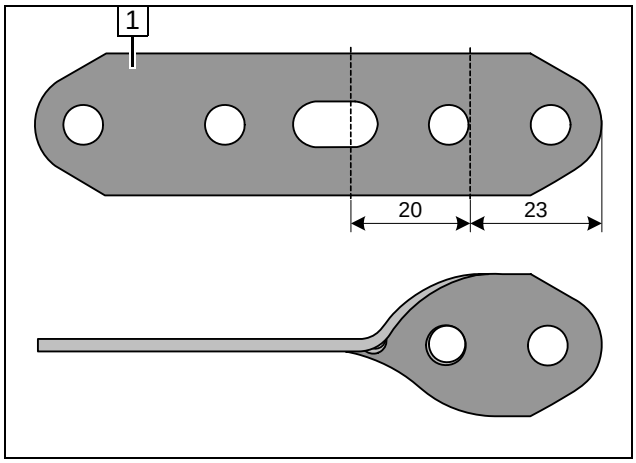
1 Exhaust pipe a = 670
2 Exhaust end section b = 70

Preparing exhaust pipe



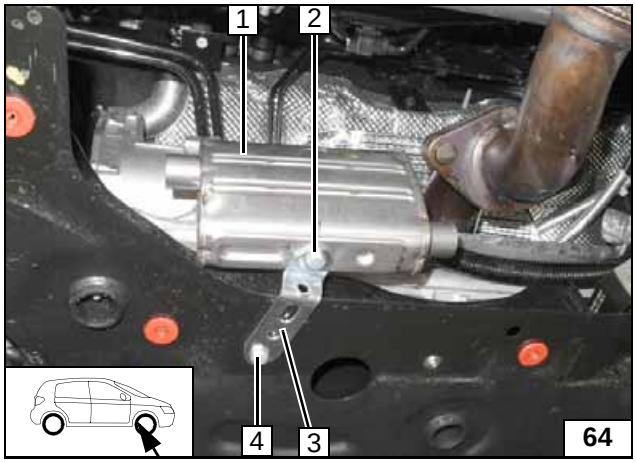
1 Perforated bracket

Preparing perforated bracket of silencer



1 Twist perforated bracket by 90° in longitudinal axis

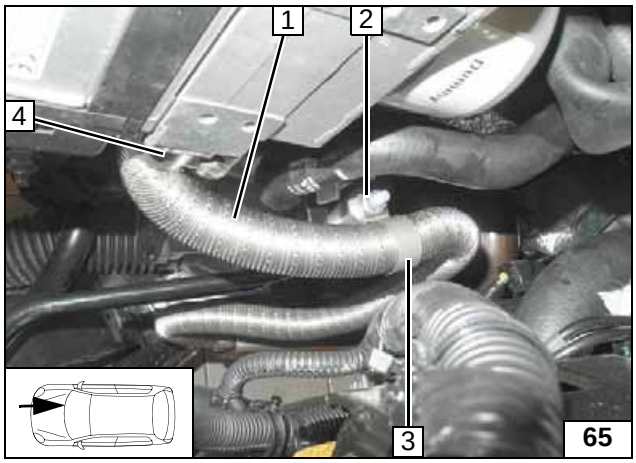
Preparing perforated bracket of exhaust end section



1.6 D

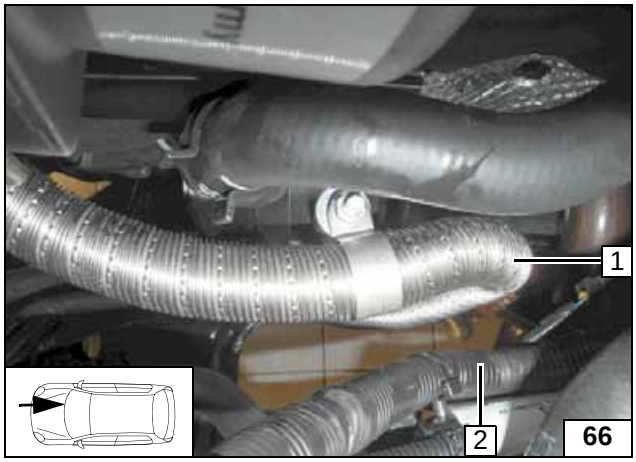
1 Silencer
2 M6x16 bolt, spring lockwasher
3 Perforated bracket
4 M6x20 bolt, large diameter washer, flanged nut, existing hole

Installing silencer



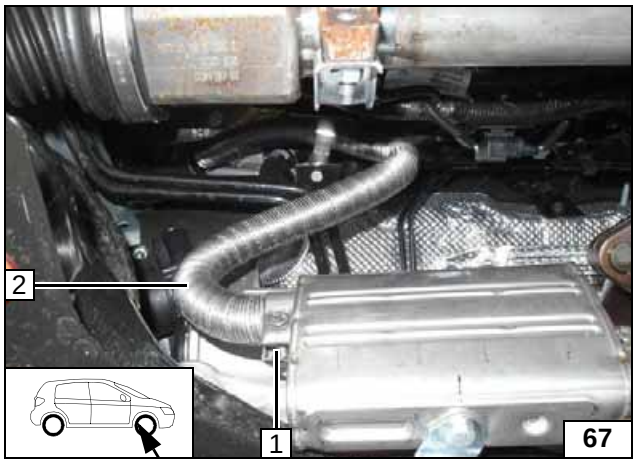
1 Exhaust pipe
2 Flanged nut, premounted bolt
3 P-clamp
4 Hose clamp

Installing exhaust pipe



Ensure sufficient distance of exhaust pipe **1** from original vehicle wiring harness **2** , correct if necessary.

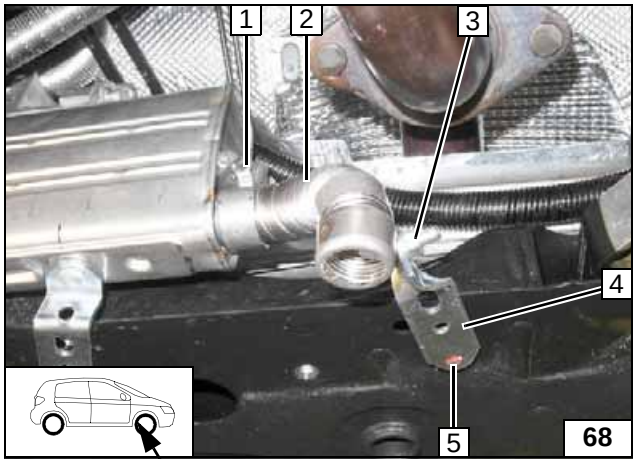
Routing exhaust pipe



Ensure sufficient distance of exhaust pipe **2** from steering gear, correct if necessary.

1 Hose clamp

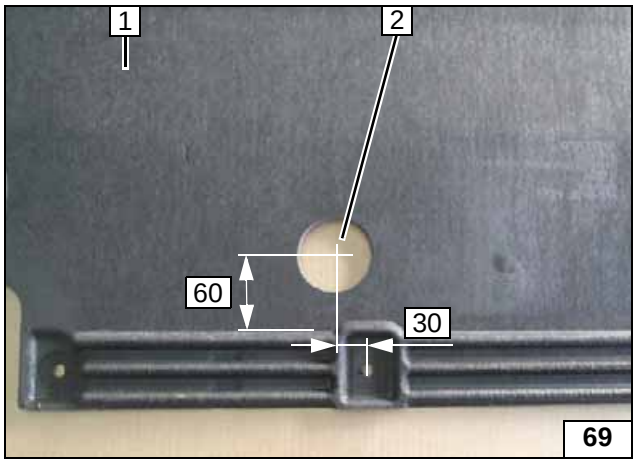
Routing exhaust pipe



Align hole **5** from perforated bracket **4** on plastic nut. Align exhaust system. Ensure sufficient distance to neighbouring components, adjust if necessary.

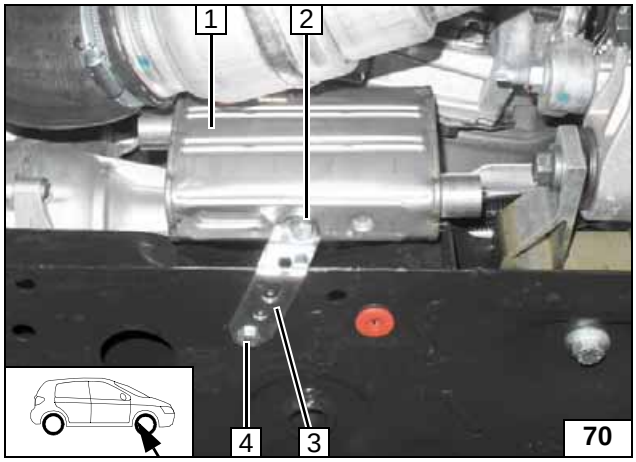
1 Hose clamp
2 Exhaust end section
3 M6x20 bolt, p-clamp, flanged nut

Installing exhaust end section



1 Underride protection
2 60 mm dia. hole

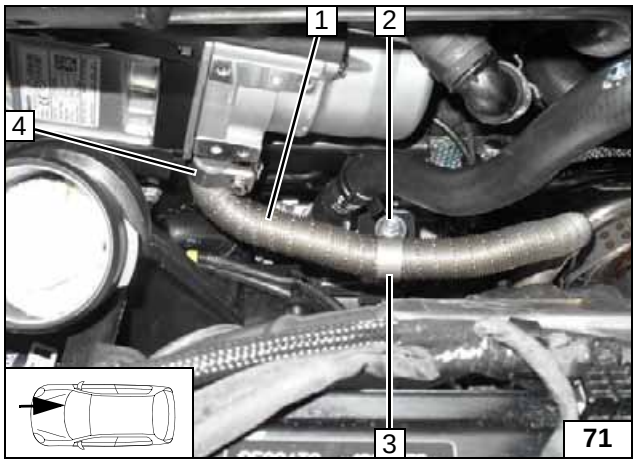
Hole in underride protection



2.0 D

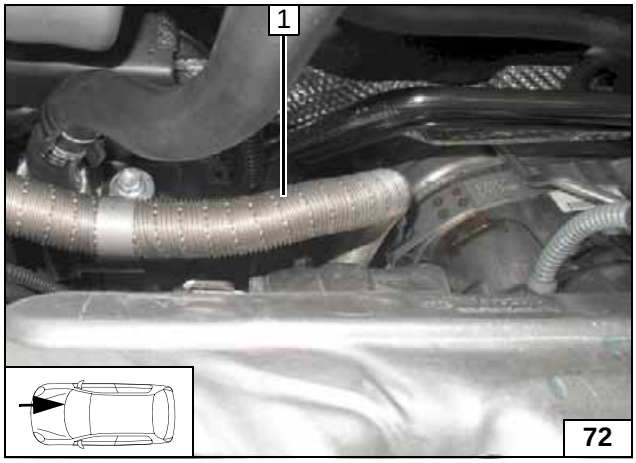
1 Silencer
2 M6x16 bolt, spring lockwasher
3 Perforated bracket
4 M6x20 bolt, large diameter washer, flanged nut, existing hole

Installing silencer



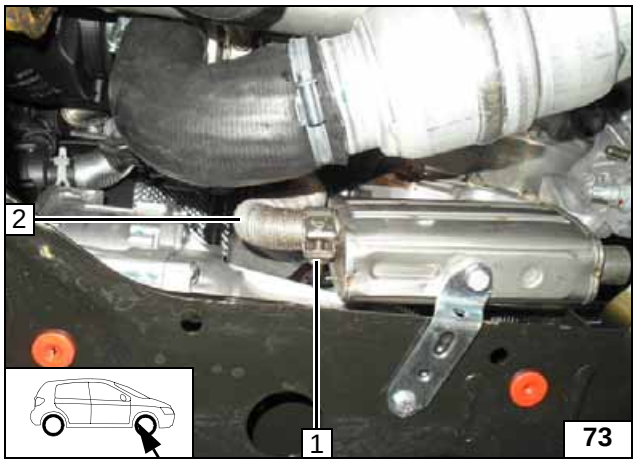
1 Exhaust pipe
2 Flanged nut, premounted bolt
3 P-clamp
4 Hose clamp

Installing exhaust pipe



Ensure sufficient distance of exhaust pipe **1** from fuel lines and turbocharger, correct if necessary.

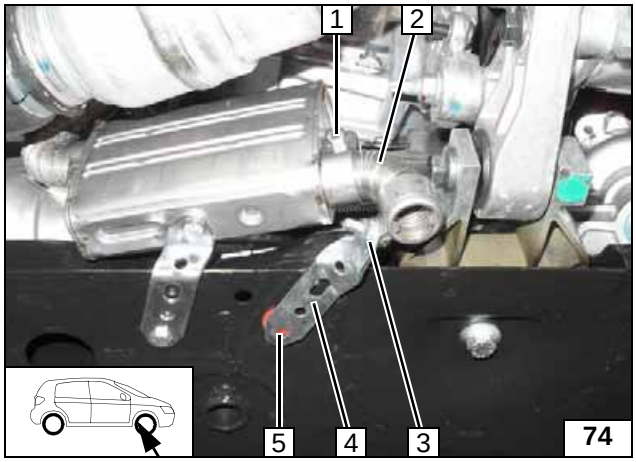
Routing exhaust pipe



Ensure sufficient distance of exhaust pipe **2** from steering gear and turbocharger, correct if necessary.

1 Hose clamp

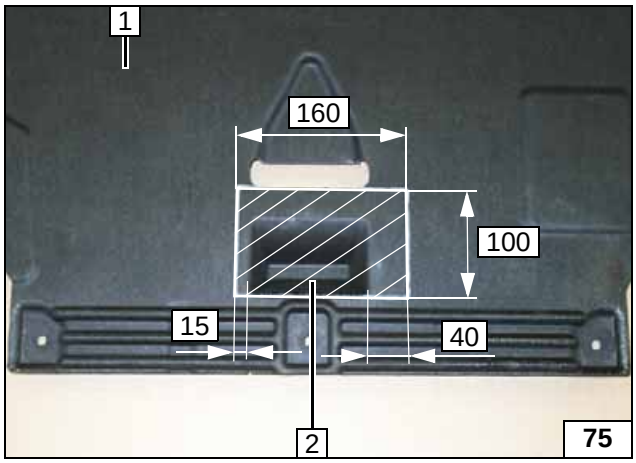
Routing exhaust pipe



Align hole **5** from perforated bracket **4** on plastic nut. Align exhaust system. Ensure sufficient distance to neighbouring components, adjust if necessary.

1 Hose clamp
2 Exhaust end section
3 M6x20 bolt, p-clamp, flanged nut

Installing exhaust end section



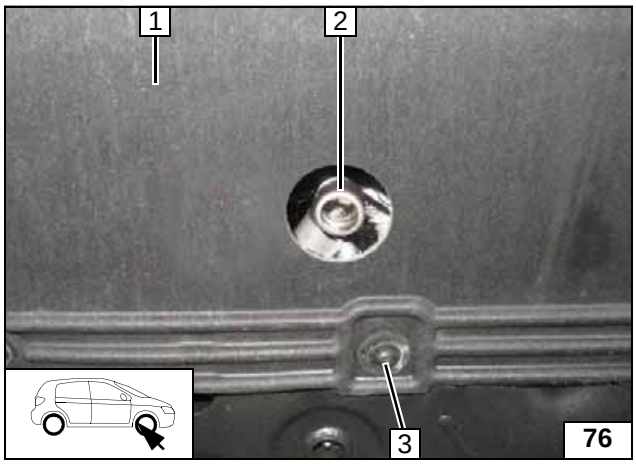
Cut out underride protection **1** at marking **2** .

Cutting out underride protection

Final Work

WARNING!
Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.
Only use manufacturer-approved coolant. Spray heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

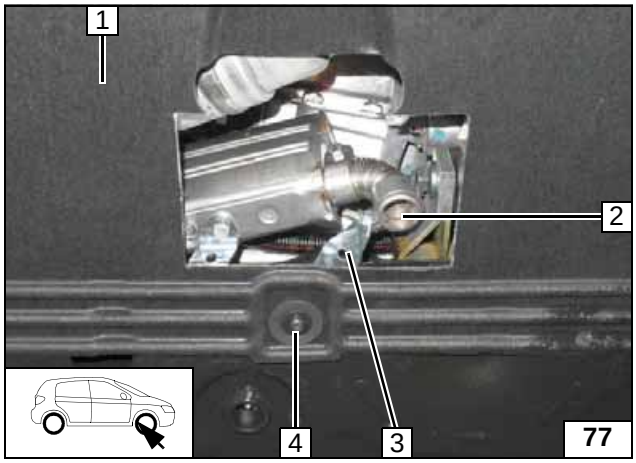
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Adjust digital timer, teach remote Telestart transmitter.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place signboard "Switch off parking heater before refuelling" in the area of the filler neck.**
- **For initial start-up and function check, see installation instructions**



1.6 D

Install underride protection **1** and perforated bracket with original vehicle bolt **3**. Align exhaust end section **2** so that it is flush with underride protection **1**. Ensure sufficient distance to neighbouring components, adjust if necessary.

Aligning exhaust end section



2.0 D

Install underride protection **1** and perforated bracket **3** with original vehicle bolt **4**. Align exhaust end section **2** so that it is flush with underride protection **1**. Ensure sufficient distance to neighbouring components, adjust if necessary.

Aligning exhaust end section

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Operating Instructions for End Customer

Please remove page in case of automatic air-conditioning and add it to the vehicle operating instructions.

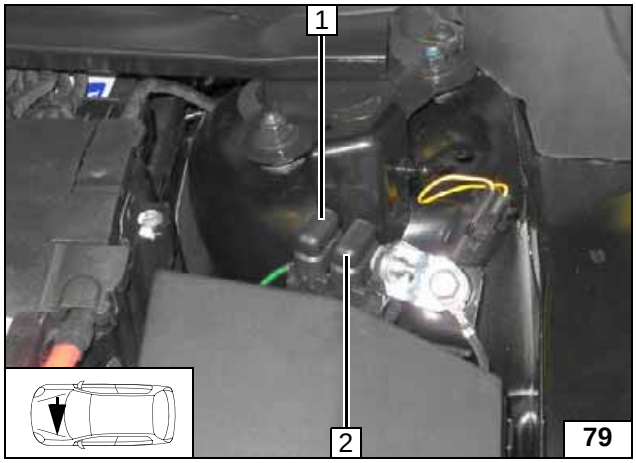
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

If vehicles have passenger compartment monitoring, this must be deactivated in addition to vehicle settings for the heating operation.
Deactivation instructions can be found in the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

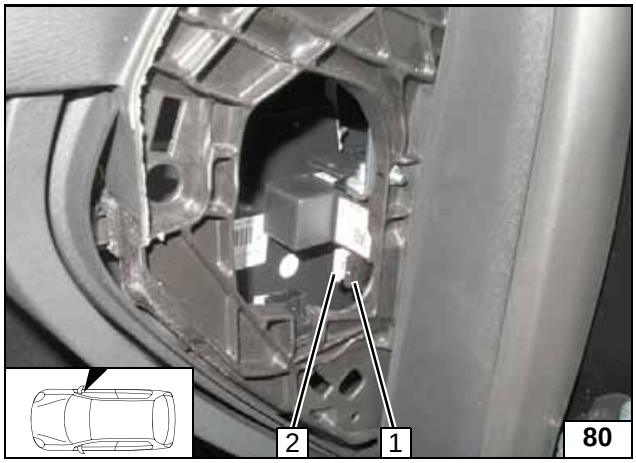
1 Set temperature on both sides to "HI"
2 Air outlet faces "upwards"

A/C control panel



1 20A heater fuse F1
2 30A main fuse F2 of passenger compartment

Fuses of engine compartment



1 1A fuse F3 of heater control
2 3A fan fuse F4

Fuses of passenger compartment