

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation

Skoda Octavia

Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Skoda	Octavia	1Z	e11 * 2001 / 116 * 0230 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
2.0 TDI	Diesel	DSG	103	1968	CFHC
2.0 TDI	Diesel	DSG	125	1968	CEGA

DSG = Direct gear transmission

From Model Year 2012
Left-hand drive vehicle

Verified equipment variants: Climatic / Climatronic
 Front fog light

Not verified: Passenger compartment monitoring

Total installation time: approx. 8 hours

Skoda Octavia

Table of Contents

Validity	1	Preparing Installation Location	14
Necessary Components	2	Preparing Heater	15
Installation Overview	2	Installing Heater	19
Information on Total Installation Time	2	Coolant Circuit, 103kW	20
Information on Operating and Installation Instructions	3	Coolant Circuit, 125kW	21
Information on Validity	4	Fuel	25
Technical Information	4	Final Work	28
Explanatory Notes on Document	4	Template for Fuel Standpipe	30
Preliminary Work	5	Operating Instructions for Climatic	31
Heater Installation Location	5	Operating Instructions for Climatronic	32
Preparing Electrical System	6		
Electrical System	8		
Climatic Fan Controller	9		
Climatronic Fan Controller	11		
Digital Timer	13		
Remote Option (Telestart)	13		

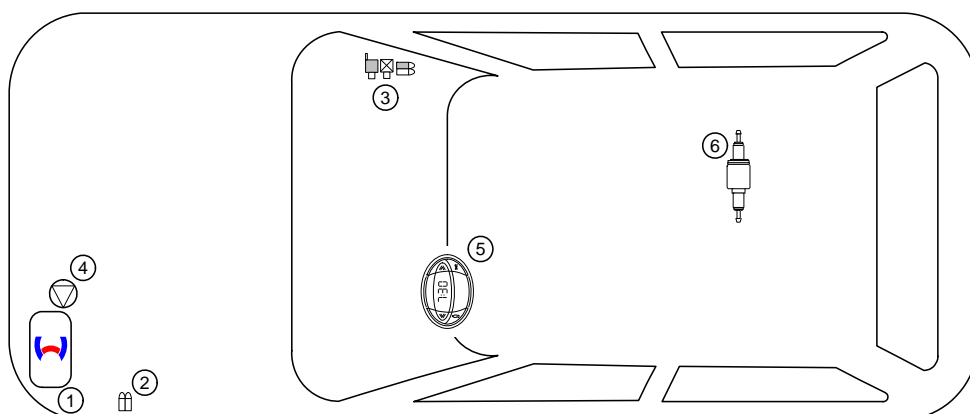
Necessary Components

- Basic delivery scope *Thermo Top Evo* in accordance with price list
- Installation kit for Skoda Octavia 2012 Diesel: **1318675B**
- To be ordered additionally for Climatronic: Installation kit for Climatronic **1317273A**
- Heater control in accordance with price list and upon consultation with end customer
- To be ordered additionally for installation of digital timer: Wiring harness extension **70813B**
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment fuse holder
4. Circulating pump
5. Digital timer
6. Metering pump



Information 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.

Information on Validity

This installation documentation applies to Skoda Octavia Diesel vehicles - for validity, see page 1 - from model year 2012 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 Information

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 of heater bolts and 5x13 heater stud bolts = 8Nm
- Tightening torque values of 5x15 retaining plate of water connection piece bolts = 7Nm.
- Tighten other bolt 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.

Special features are highlighted using the following symbols:

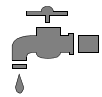
Mechanical system



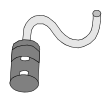
Electrical system



Coolant circuit



Combustion air



Fuel



Exhaust gas



Software



Specific risk of injury or fatal accidents



Specific risk of damage to components



Specific risk of fire and explosion



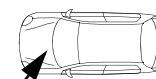
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature



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



Skoda Octavia

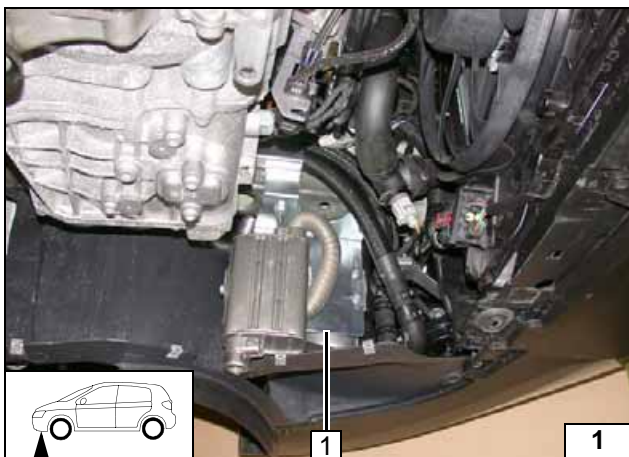
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Remove the air filter together with the intake hose.
- Remove the windscreen wiper.
- Remove the coolant reservoir cap.
- Remove the underride protection of the engine.
- Remove the right underride protection.
- Remove the lower wheel-well inner panel on the left.
- Remove the rear bench seat.
- Open the right-hand tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the footwell trim on the front passenger's side.
- Remove the glove compartment (only in case of Telestart).
- Remove the trim of the fuse holder in the passenger compartment on the front passenger's side.
- Remove the left-hand instrument panel trim.

Heater

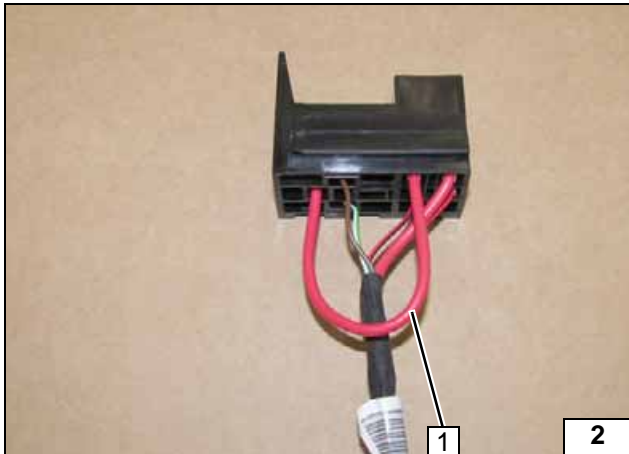
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place in the engine compartment.



Heater Installation Location

1 Heater

Installation location



Preparing Electrical System

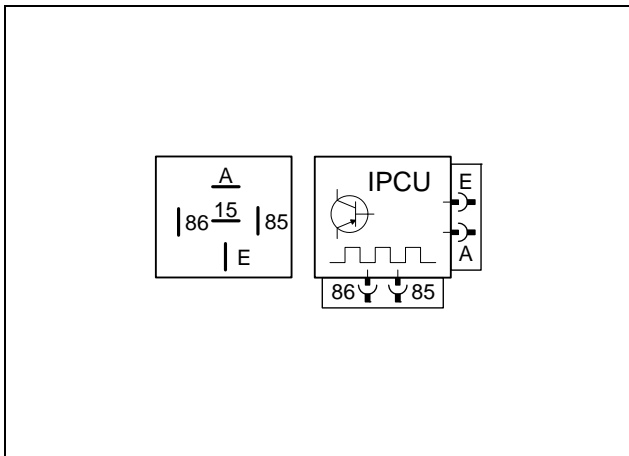
Wire sections retain their numbering throughout the entire document.

Climatronic

Detach red (rt) wire 1 from fuse F4 and discard.



Detaching wire



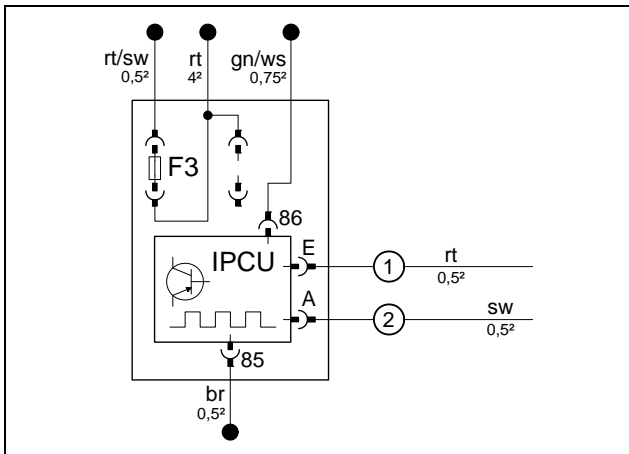
IPCUCircuit view from contact side. The IPCU supplied with the kit is pre-programmed with the following adjustment values:

- Duty cycle: 30%
- Frequency: 400Hz
- Voltage: 8V
- Function: High-side

The adjustment values are to be checked during function control of the vehicle and adapted if necessary.



Preparing IPCU

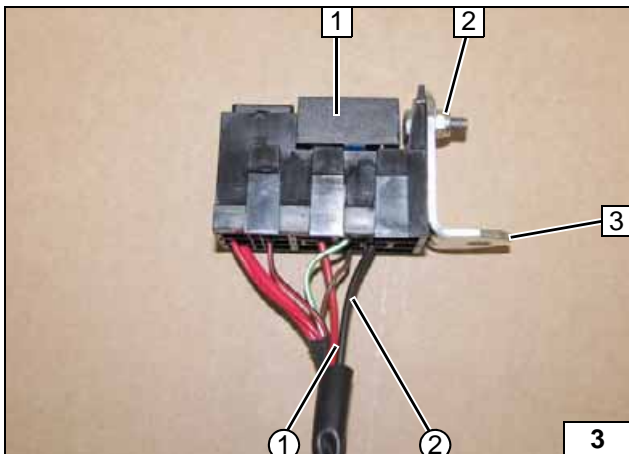


The IPCU will only be inserted after preinstallation of the fuse holder. Connect wires to IPCU socket. Pull wires ① and ② into protective sleeving.

- ① Red (rt) wire of IPCU/E
- ② Black (sw) wire of IPCU/A

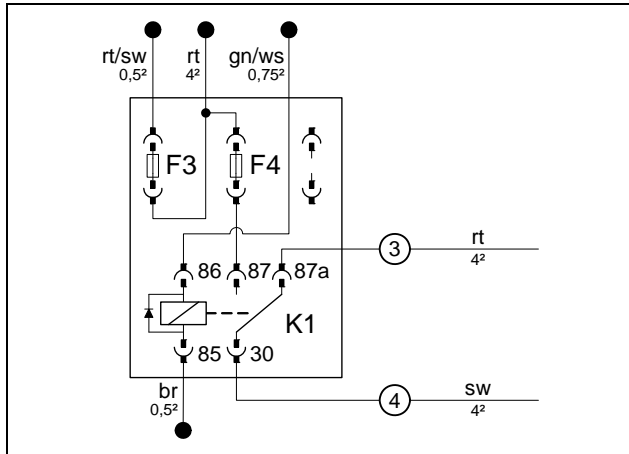


Preparing IPCU



- 1 IPCU
- 2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, self-retaining M5 flanged nut
- 3 Angle bracket
- ① Red (rt) wire of IPCU/E
- ② Black (sw) wire of IPCU/A

Premounting fuse holder of passenger compartment



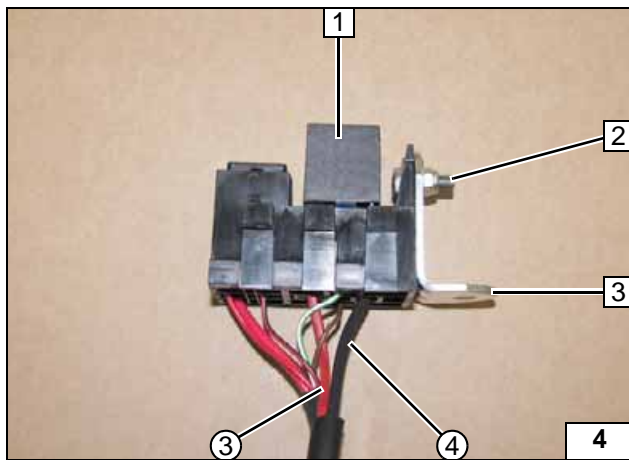
Climatic

Connect wires to K1 relay socket. Insert 25A fuse F4.

- ③ Red (rt) wire from K1/87a
- ④ Black (sw) wire from K1/30

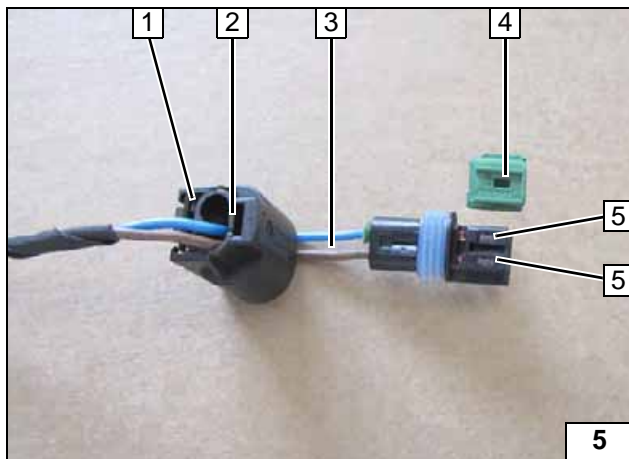


Preparing K1 relay



- 1 K1 relay
- 2 M5x16 bolt, large diameter washer, fuse holder
- 3 Angle bracket
- ③ Red (rt) wire from K1/87a
- ④ Black (sw) wire from K1/30

Premounting fuse holder of passenger compartment



All vehicles

Reassemble 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



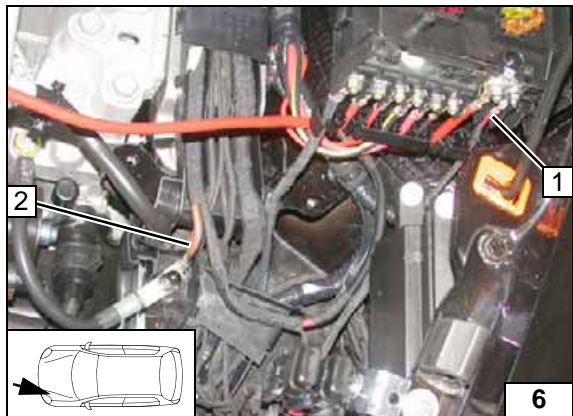
Removing connector



Electrical System

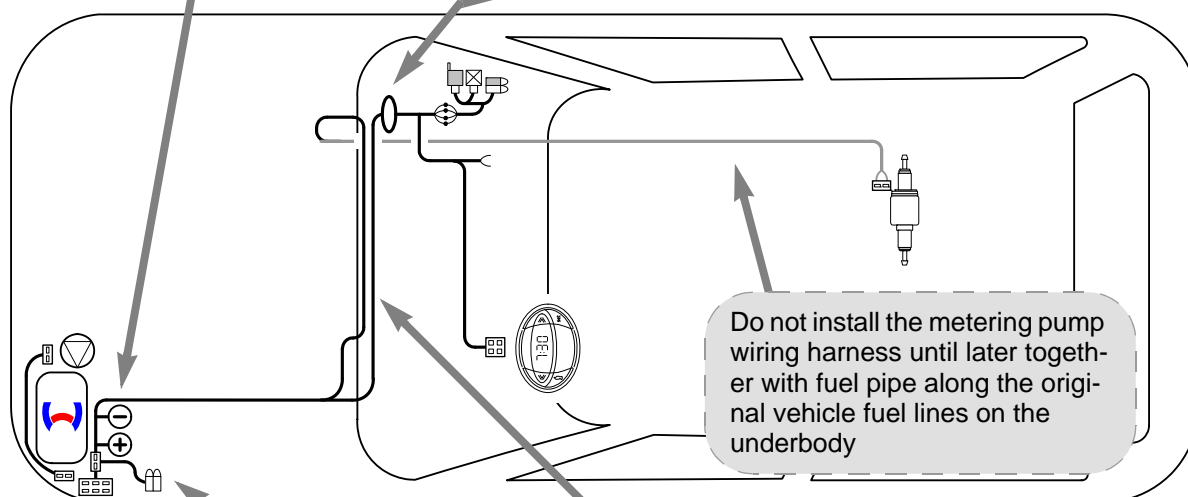
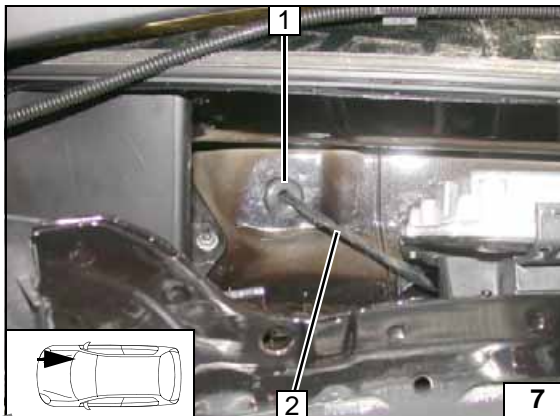
Positive and earth wire

- 1 Positive wire on positive distributor of battery
- 2 Earth wire on original vehicle earth support point

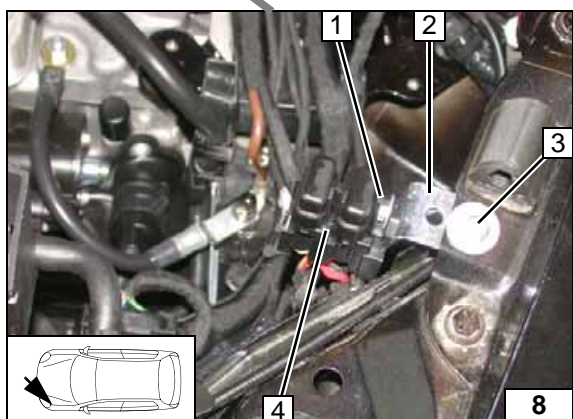


Wiring harness pass through

- 1 Original vehicle protective rubber plug of coolant reservoir
- 2 Wiring harnesses of heater, heater control

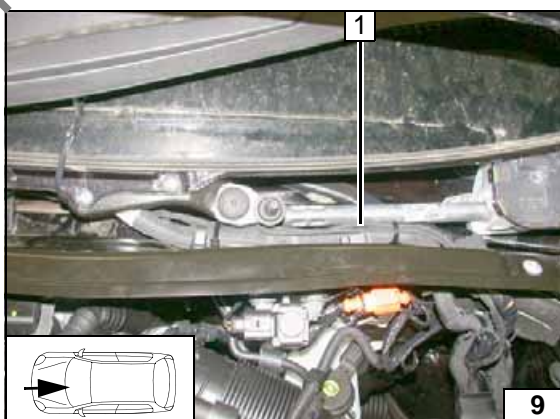


Wiring harness routing diagram



Fuse holder of engine compartment

- 1 M5x16 bolt, washer [2x], retaining plate of fuse holder, self-retaining M5 nut
- 2 Angle bracket
- 3 M6x20 bolt, flanged nut, existing hole
- 4 Fuses F1-2

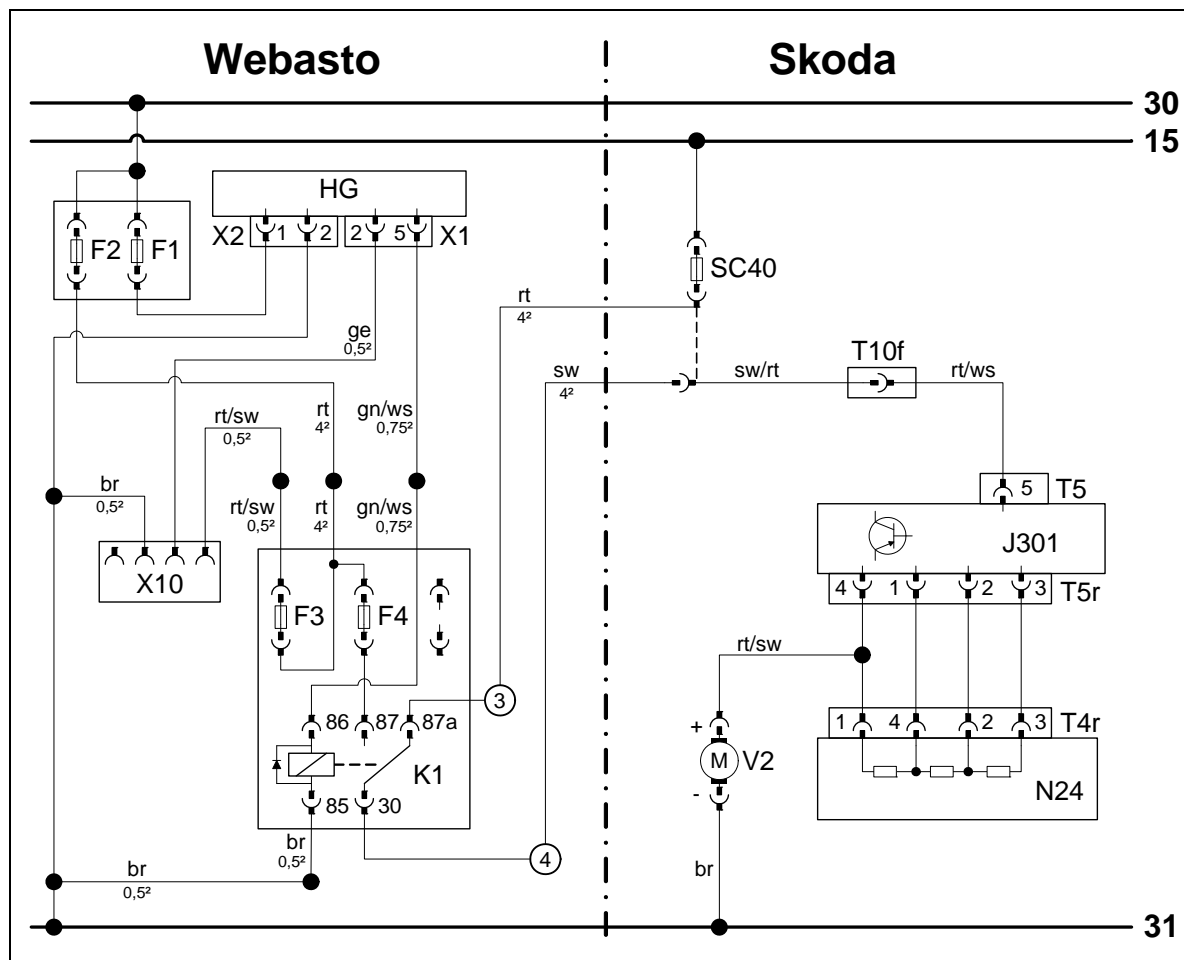


Wiring harness routing

Route wiring harnesses 1 into coolant reservoir and secure using cable ties.



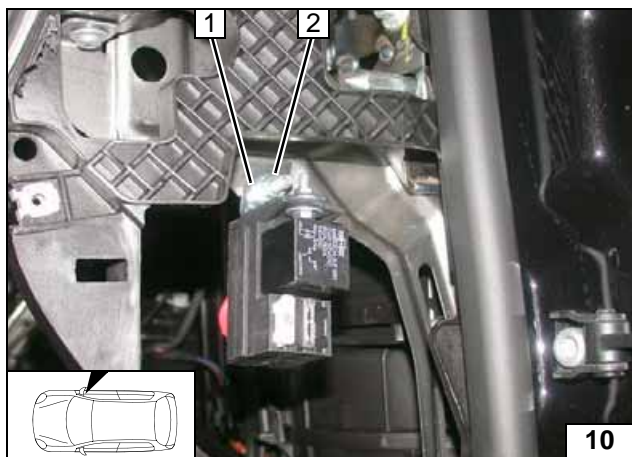
Climatic Fan Controller



Wiring diagram

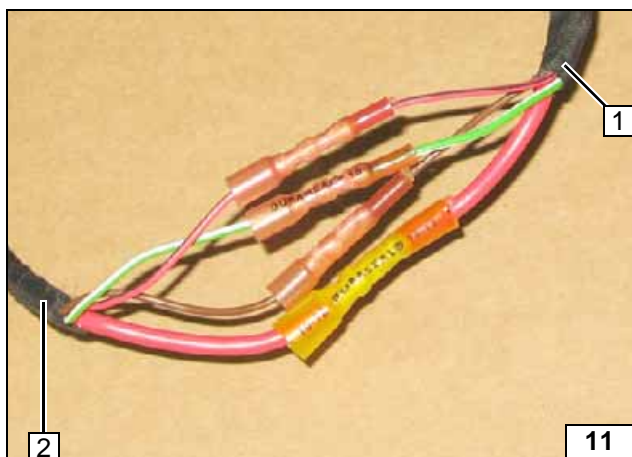
Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	N24	Resistor group	rt	red
X1	6-pin heater connector	T4r	4-pin connector N24	sw	black
X2	2-pin heater connector	J301	Air-conditioning control unit	ge	yellow
X10	4-pin connector Heater control	T5	16-pin connector J301	gn	green
K1	Fan relay	SC40	40 A fan fuse	bl	blue
F1	Fuse, 20A	T10f	10-pin plug connection	ws	white
F2	Fuse, 30A			br	brown
F3	Fuse, 1A				
F4	Fuse, 25 A				
				X	Cutting point
					Wiring colours may vary.

Legend



- 1 Angle bracket
- 2 M6x20 bolt, flanged nut, existing hole

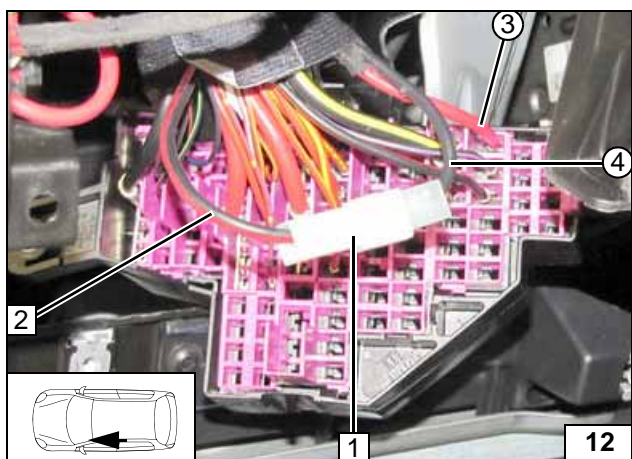
Installing fuse holder of passenger compartment



Connect same colour wires of passenger compartment fuse holder wiring harness 1 and wiring harness of heater 2 according to wiring diagram.



Connecting wiring harnesses



Fuse socket dependent on vehicle equipment. Uncrimp black/red (sw/rt) wire 2 from socket of fan fuse. Engage red (rt) wire of K1/87a ③ with Standard-Power-Timer crimped on into socket of fan fuse. Produce connections as shown in wiring diagram.

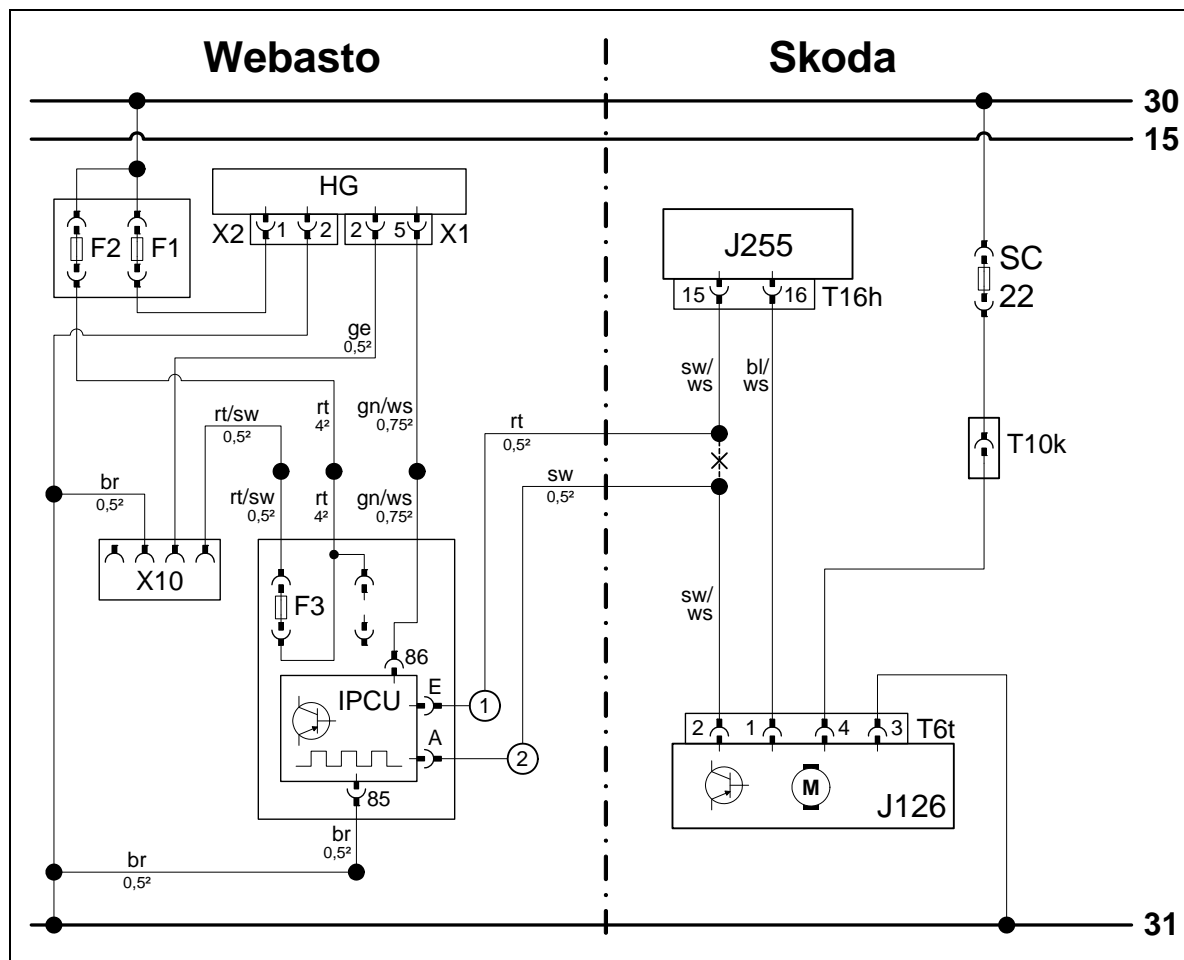
- 1 Plug connection
- ④ Black (sw) wire from K1/30



Connecting wires



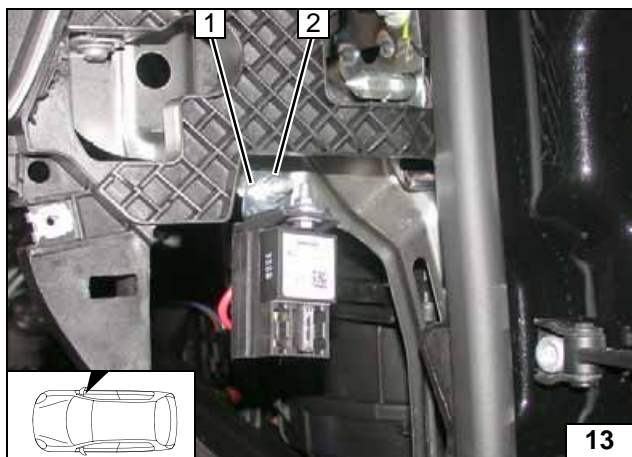
Climatronic Fan Controller



Wiring diagram

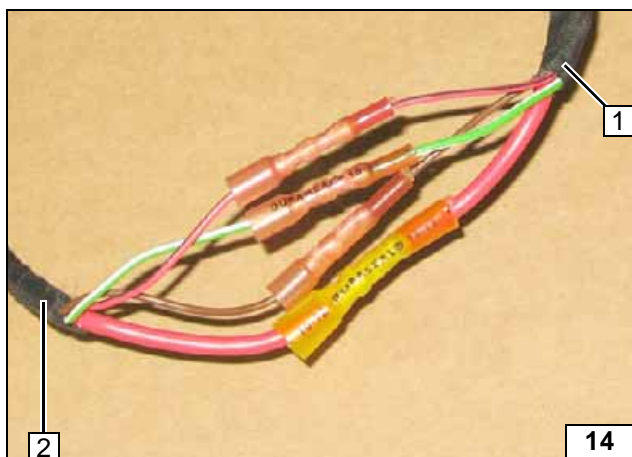
Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	J126	Fan unit	rt	red
X1	6-pin heater connector	T6t	6-pin connector J126	sw	black
X2	2-pin heater connector	J255	Air-conditioning control unit	ge	yellow
X10	4-pin connector Heater control	T16h	16-pin connector J255	gn	green
K1	Fan relay	SC22	Fuse, 40A	bl	blue
F1	Fuse, 20A	T10k	10-pin plug connection	ws	white
F2	Fuse, 30A			br	brown
F3	Fuse, 1A				
IPCU	Pulse width modulator				
IPCU adjustment values:					
Duty cycle: 30%					
Frequency: 400Hz					
Voltage: 8V				X	Cutting point
Function: High-side				Wiring colours may vary.	

Legend



- 1 Angle bracket
- 2 M6x20 bolt, flanged nut, existing hole

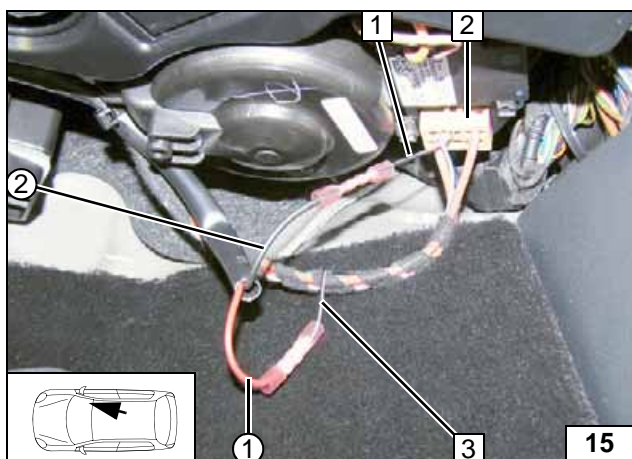
Installing fuse holder of passenger compartment



Connect same colour wires of passenger compartment fuse holder wiring harness 1 and wiring harness of heater 2 according to wiring diagram.



Connecting wiring harnesses

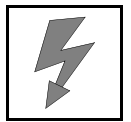


Connection to 6-pin connector T6t 2 of fan unit. Produce connections as shown in wiring diagram.

- 1 Black/white (sw/ws) wire of 6-pin connector T6t, Pin 2
- 3 Black/white (sw/ws) wire of A/C control unit
- ① Red (rt) wire of IPCU/E
- ② Black (sw) wire of IPCU/A



Connecting fan unit



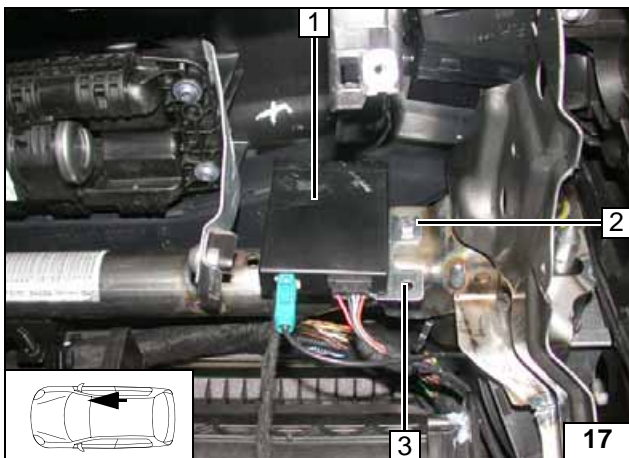
Digital Timer

Use wiring harness extension.

- 1 Digital timer



Installing digital timer

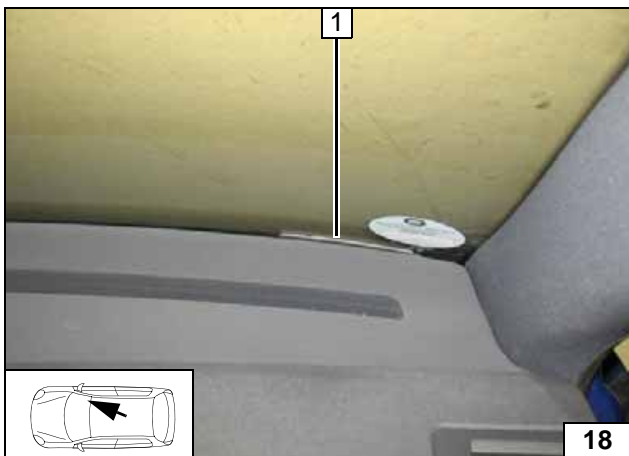


Remote Option (Telestart)

- 1 Receiver
- 2 M6x20 bolt, existing threaded hole
- 3 Bracket

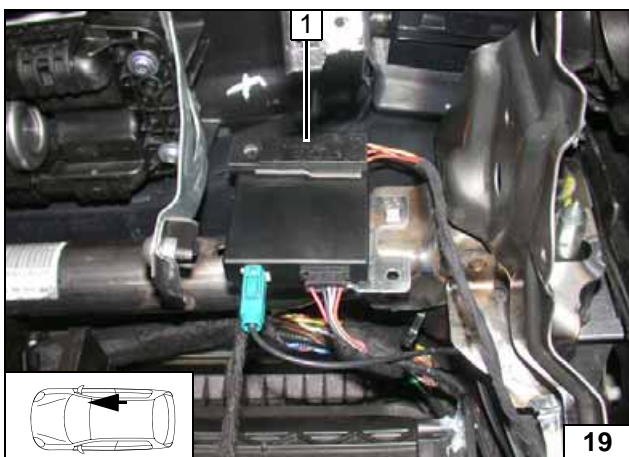


Installing receiver



- 1 Antenna

Installing antenna

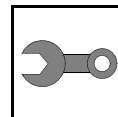


Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.



Installing temperature sensor

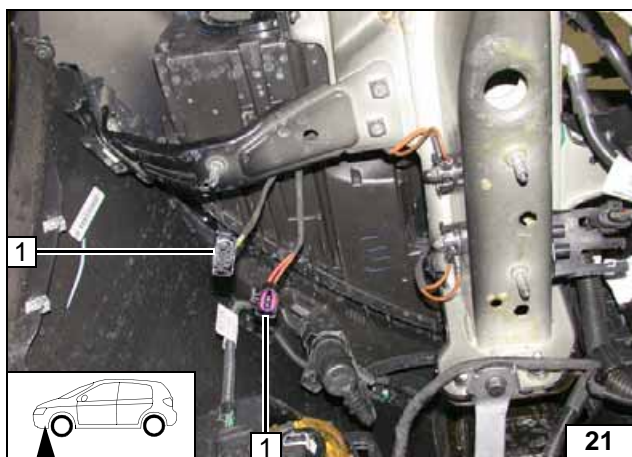


Preparing Installation Location

Remove connector and put it aside. Remove retaining plate 1 (if available), will be reinstalled later.

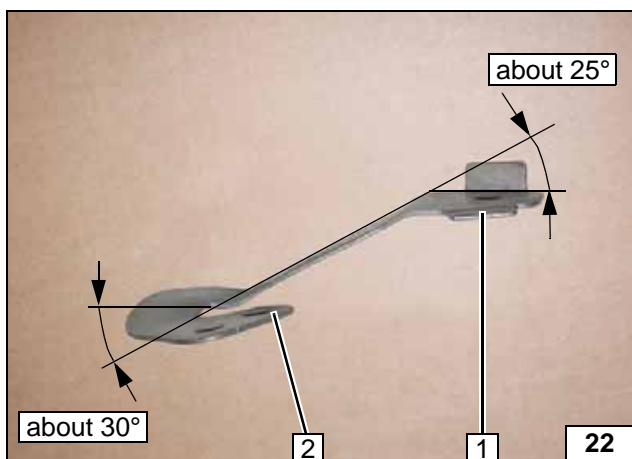


Removing retaining plate



1 Wiring harness of heater

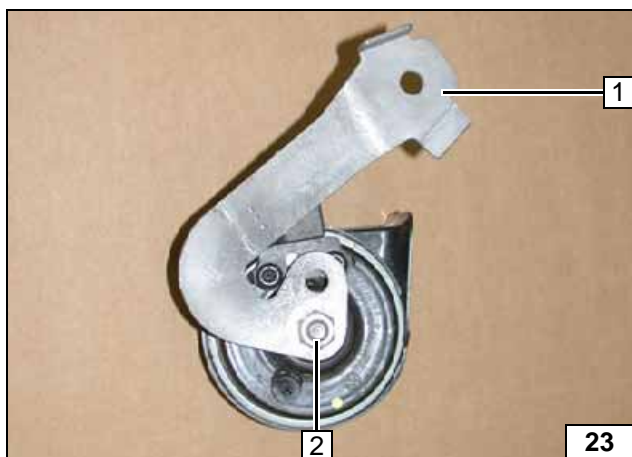
Routing wiring harness



Remove bracket of horn 2 and bend as shown. Bend the tab straight.



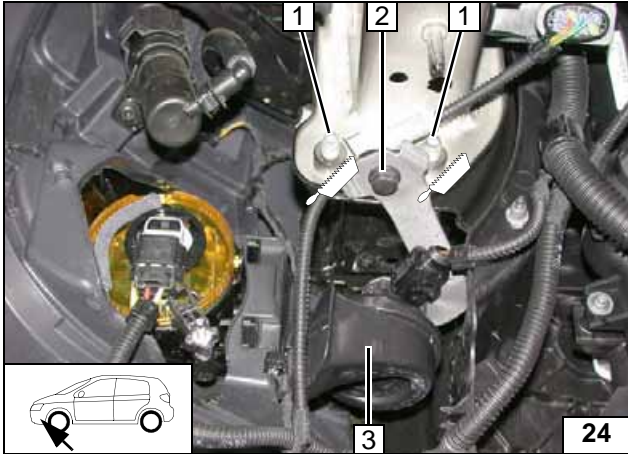
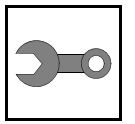
Processing bracket of horn



Mount horn with original vehicle nut 2 on bracket 1.



Premounting horn

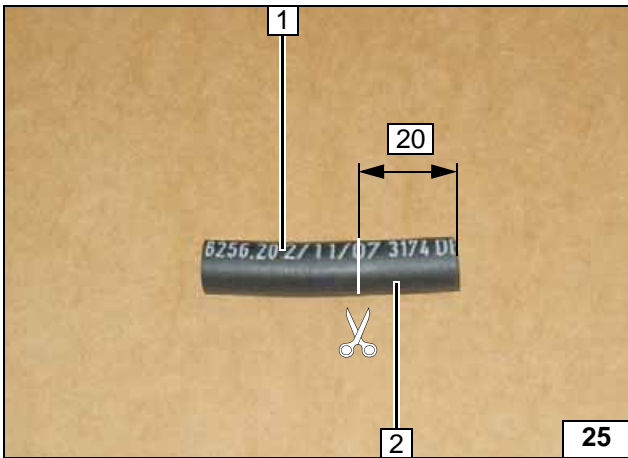


Shorten bolts at position **1** if necessary (distance to hose D)!

- 2** Original vehicle bolt
- 3** Horn

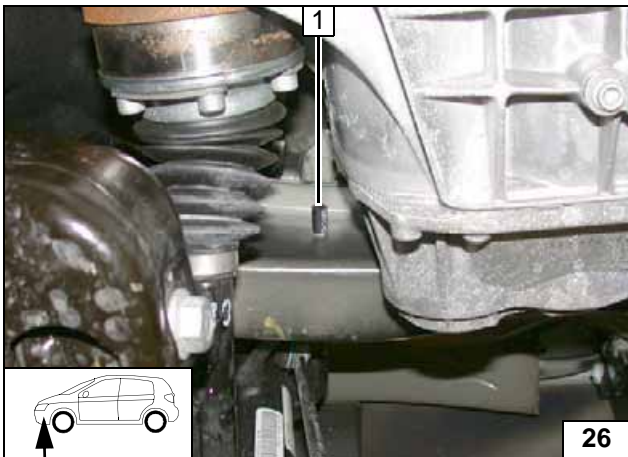


Installing horn



- 1** Discard section
- 2** Hose section

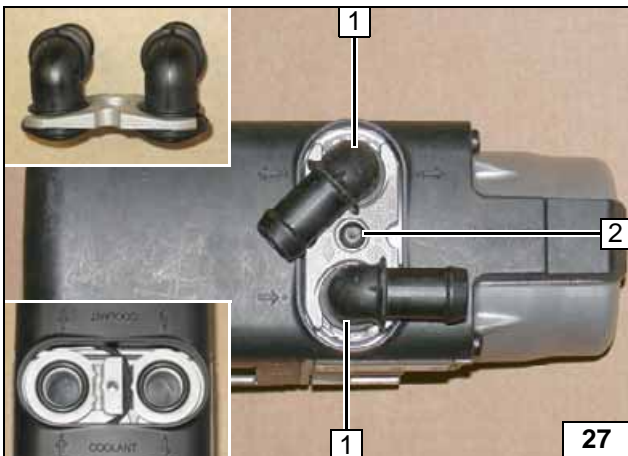
Shortening hose section



Push 20mm moulded hose **1** onto original vehicle stud bolt.



Installing hose section

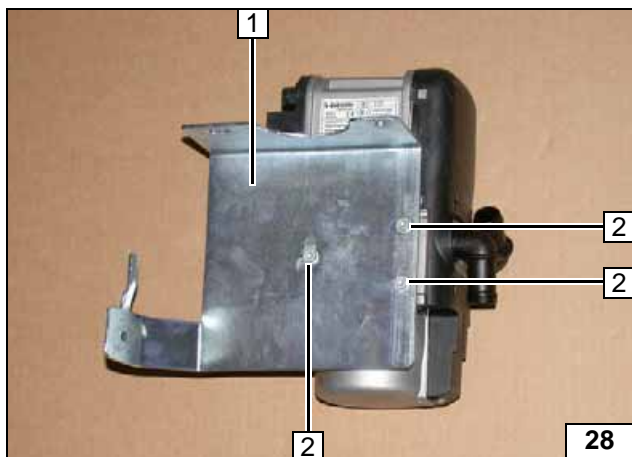
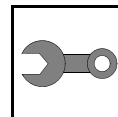


Preparing Heater

- 1** Water connection piece, sealing ring [2x each]
- 2** 5x15mm self-tapping bolt, retaining plate of water connection piece

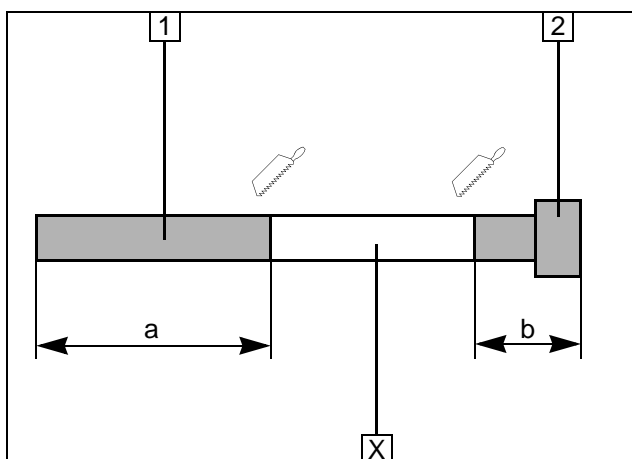


Installing water connection piece



- 1 Bracket part A
- 2 5x13 self-tapping bolt [3x]

Installing bracket part A

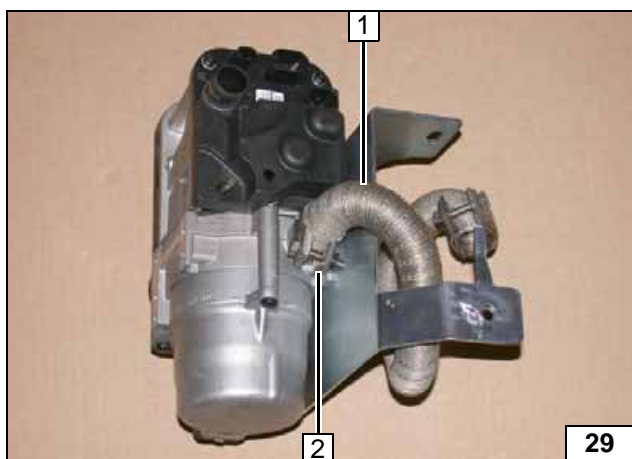


Discard section X

- 1 Exhaust pipe
a = 470
- 2 Exhaust end section
b = 35

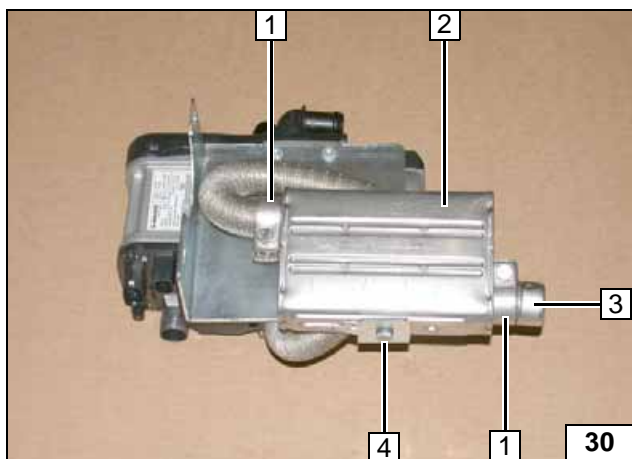


Preparing exhaust pipe



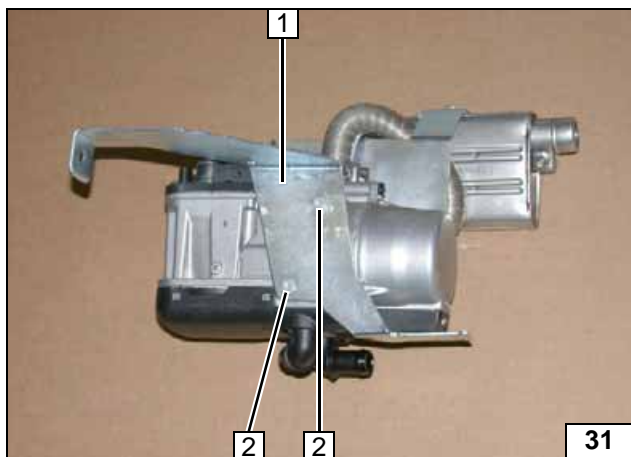
- 1 Exhaust pipe
- 2 Hose clamp

Installing exhaust pipe



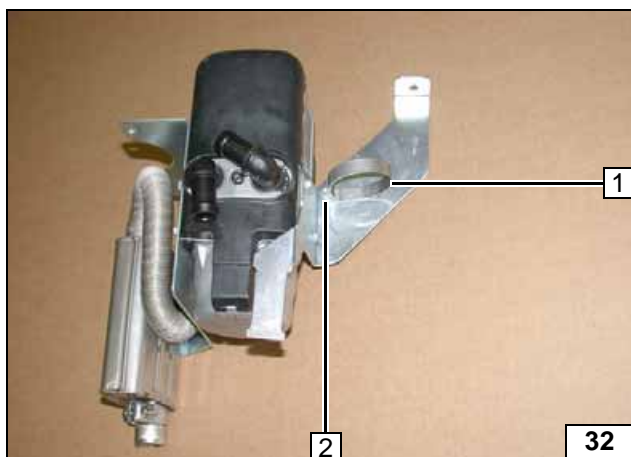
- 1 Hose clamp [2x]
- 2 Silencer
- 3 Exhaust end section
- 4 M6x16 bolt, spring lockwasher

Installing silencer and exhaust end section



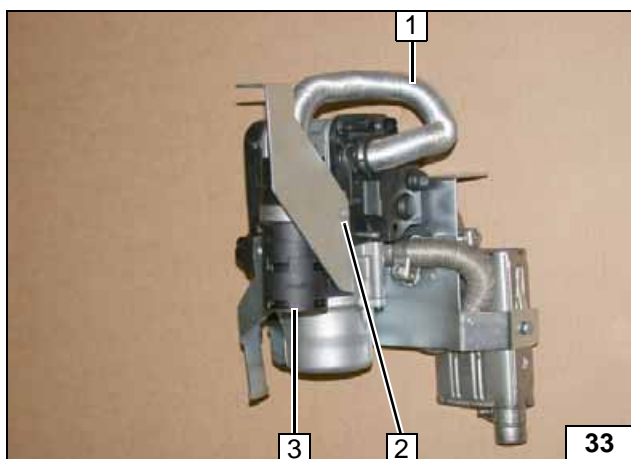
- 1 Bracket part **B**
- 2 5x13 self-tapping bolt [2x]

Installing bracket part **B**



- 1 51mm dia. clamp
- 2 M5x16 bolt, flanged nut, mount loosely

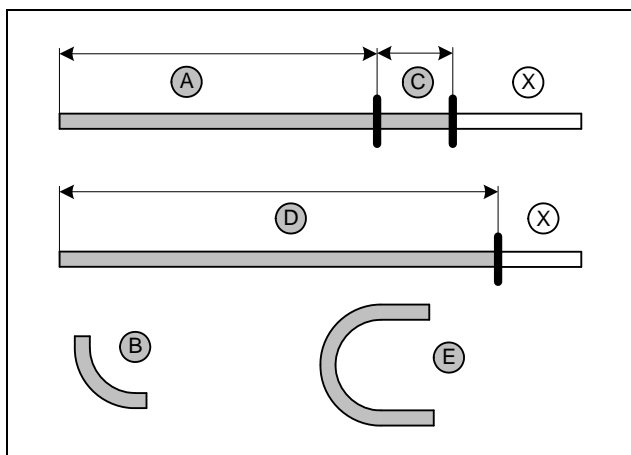
Installing clamp



- 1 Combustion air pipe
- 2 M5x16 bolt, flanged nut, tighten
- 3 Intake silencer



Installing combustion air pipe

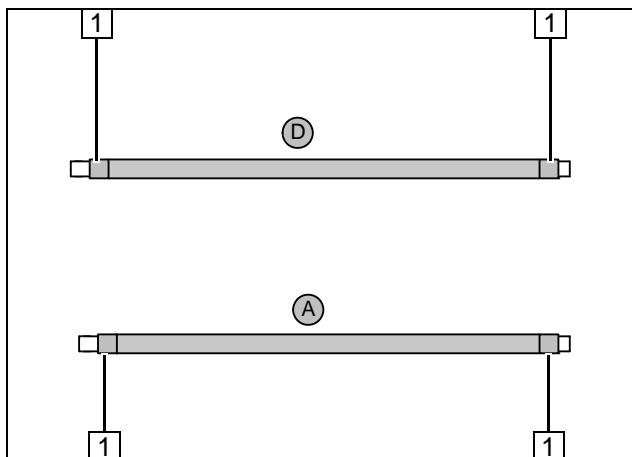


Discard section **X**.
 Hose **B** = 90° moulded hose, 18mm dia.
 Hose **E** = 180°, 18mm dia. moulded hose, only used for 125kW.

103 kW	125 kW
A = 1050	A = 1100
C = 65	C = 65
D = 1130	D = 1170



Cutting hoses to length

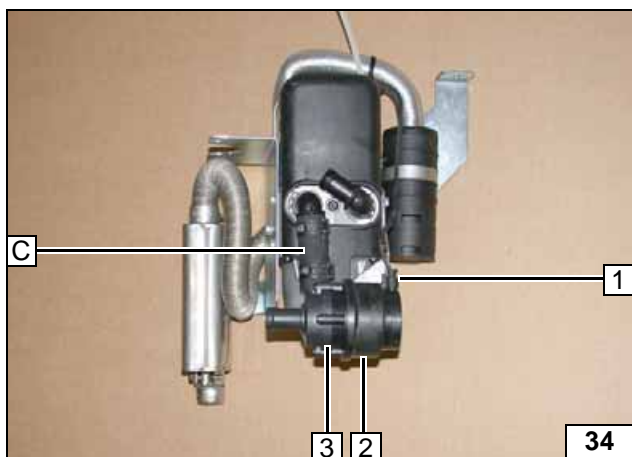


Push braided protection hoses onto hose **A** and **D** and cut to length. Cut heat shrink plastic tubing to length.

- 1 50 mm long heat shrink plastic tubing [4x]



Preparing hoses

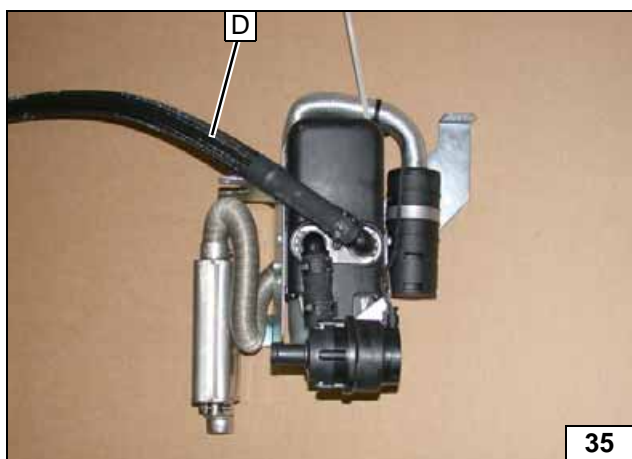


All spring clips = 25mm dia.

- 1 Mount wiring harness of circulating pump
- 2 Circulating pump mounting
- 3 Circulating pump



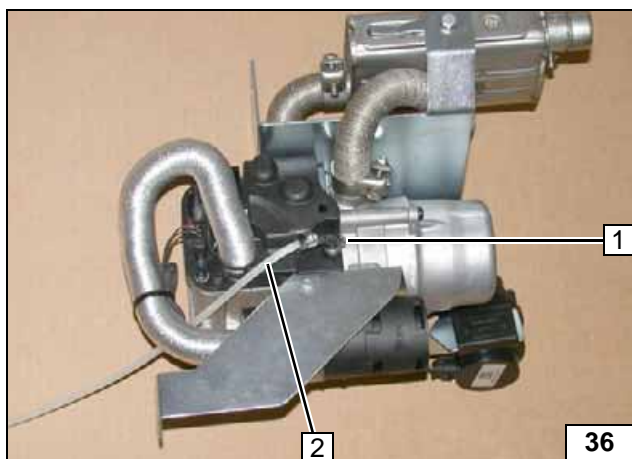
Installing hose and circulating pump



All spring clips = 25mm dia.

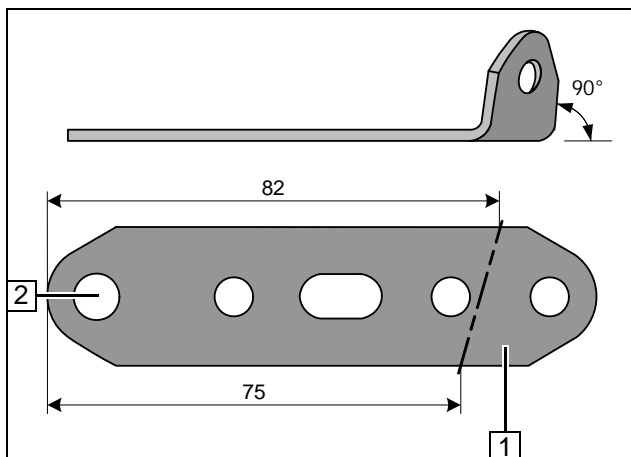


Installing hose D



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

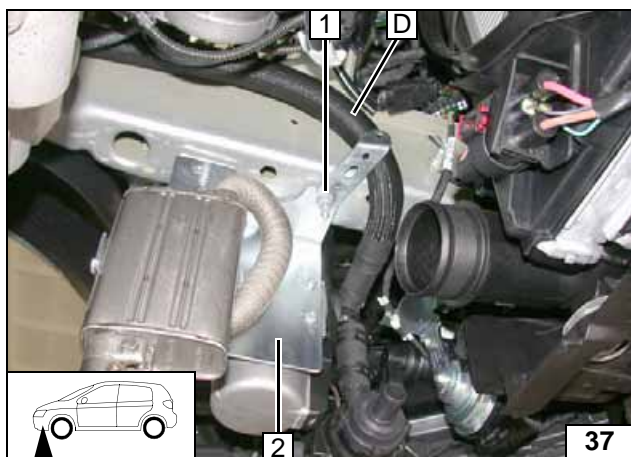
Premounting fuel line



Installing Heater

- 1 Angle down perforated bracket
- 2 Drill hole to 8.5mm dia.

Preparing perforated bracket

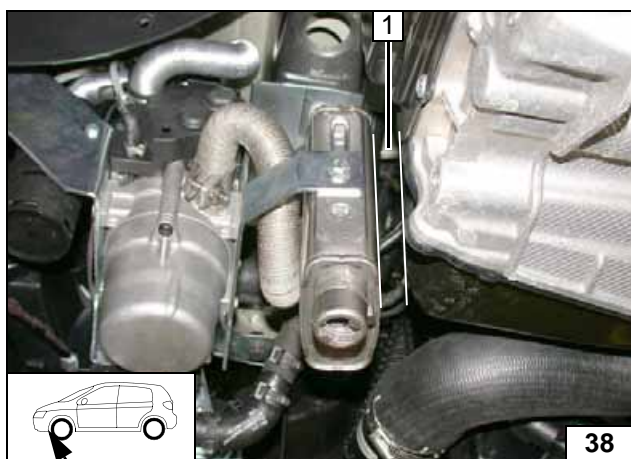


Route hose D to brake booster.

- 1 Original vehicle stud bolt, perforated bracket angled down, M8 flanged nut
- 2 Bracket part A



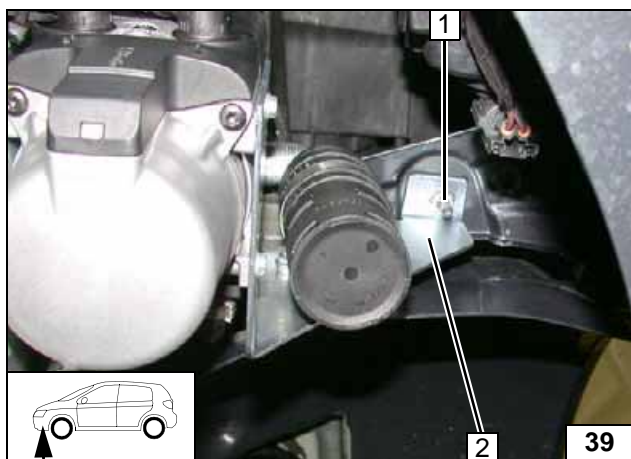
Installing heater



Ensure sufficient distance to neighbouring components, especially between exhaust silencer and DSG at position 1 (25mm), correct if necessary.



Installing heater



If stud bolt is not present at position 1, copy hole pattern from bracket, drill 8.5mm dia. hole in cross member and fasten bracket with M8x20 bolt and flanged nut.

- 1 Original vehicle stud bolt, M8 flanged nut
- 2 Bracket part B



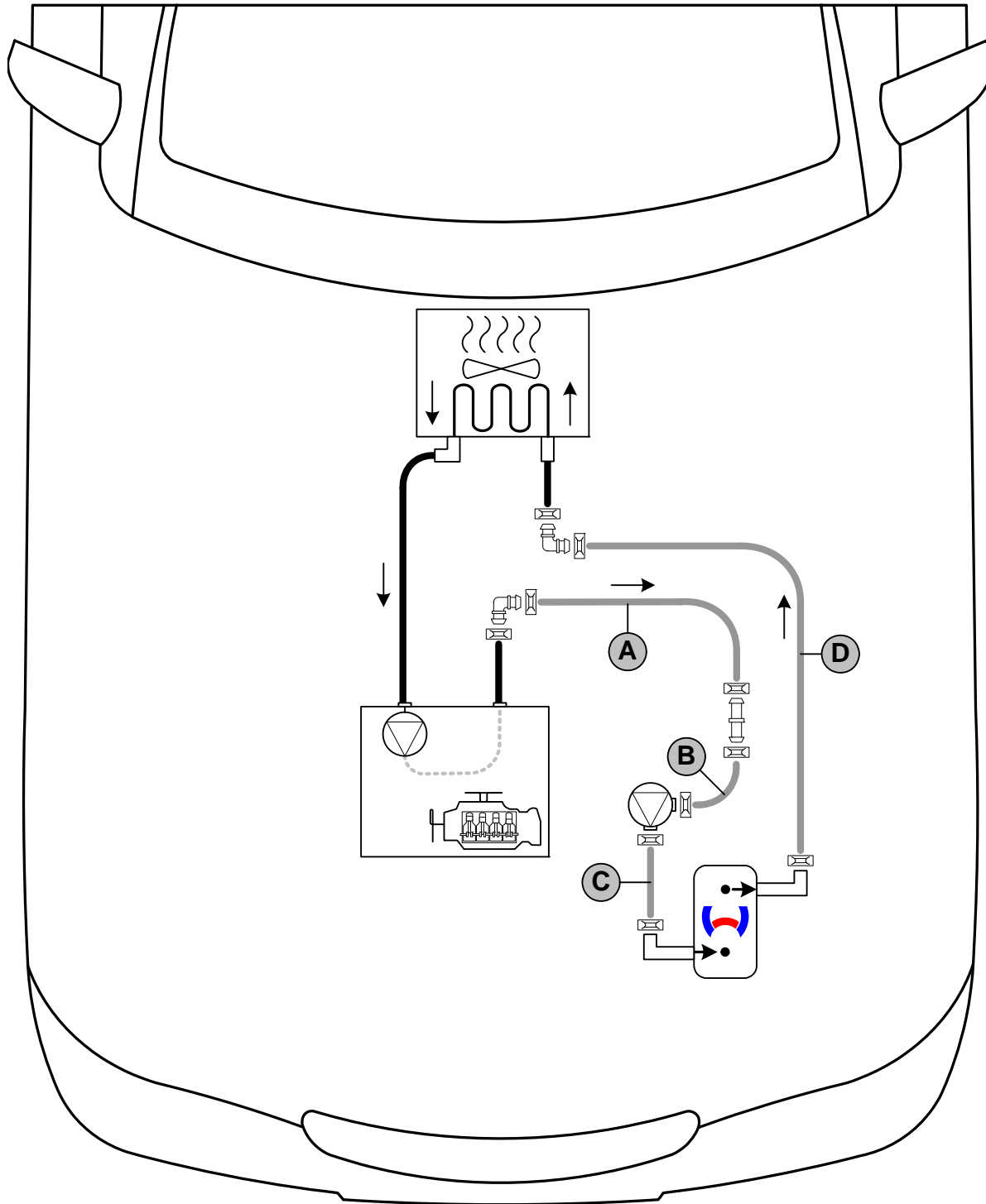
Installing heater



Coolant Circuit, 103kW

WARNING!

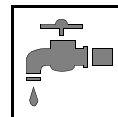
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant. The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



Hose routing diagram

All spring clips  = 25mm dia.
 All connecting pipes  and  = 18x18mm dia.



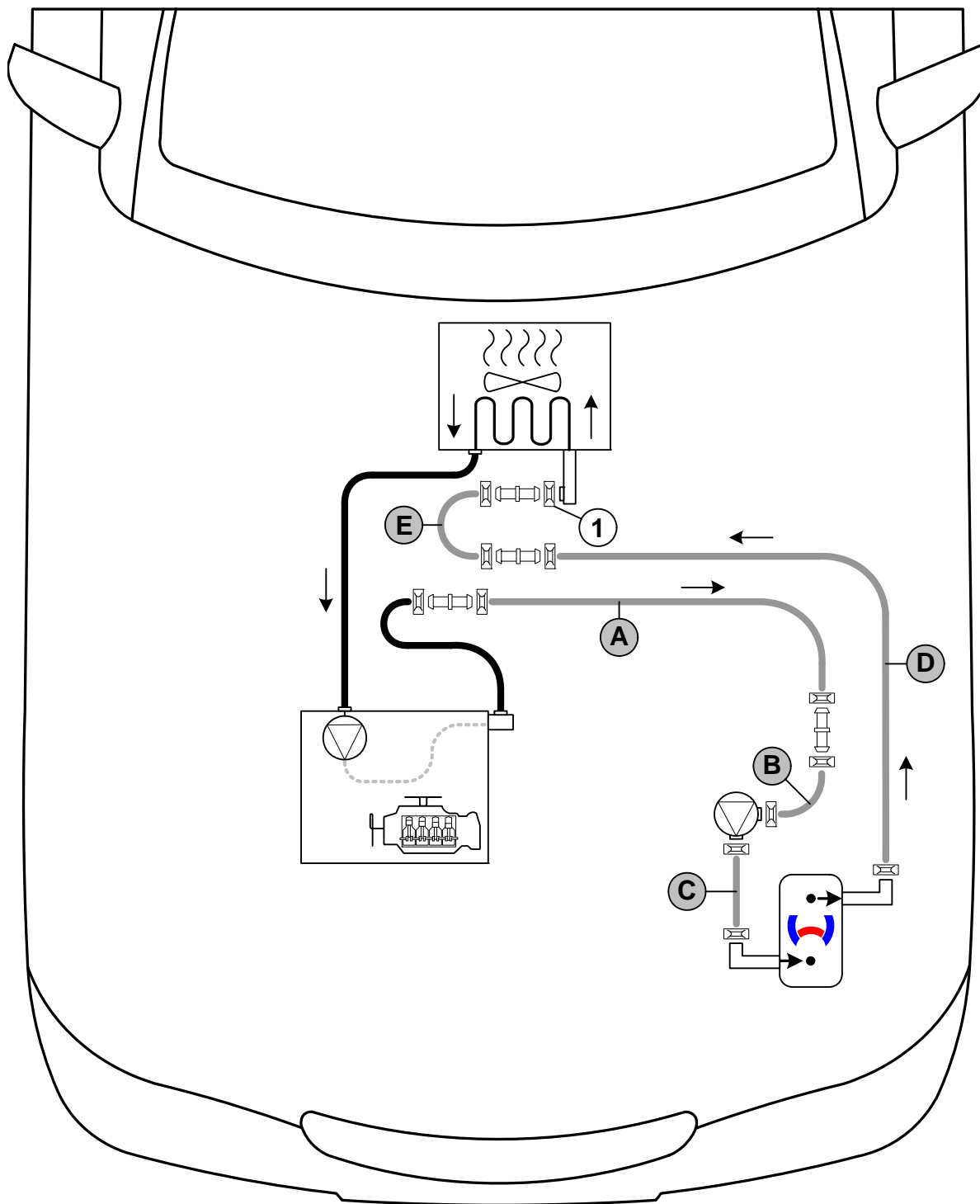


Coolant Circuit, 125kW






WARNING!

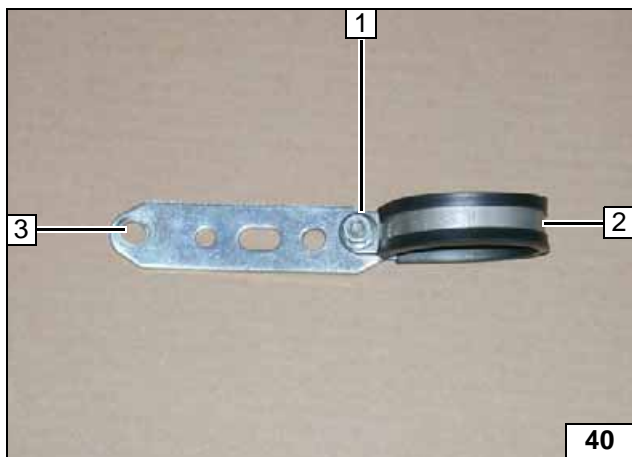
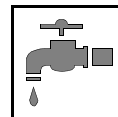
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant. The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



Hose routing diagram

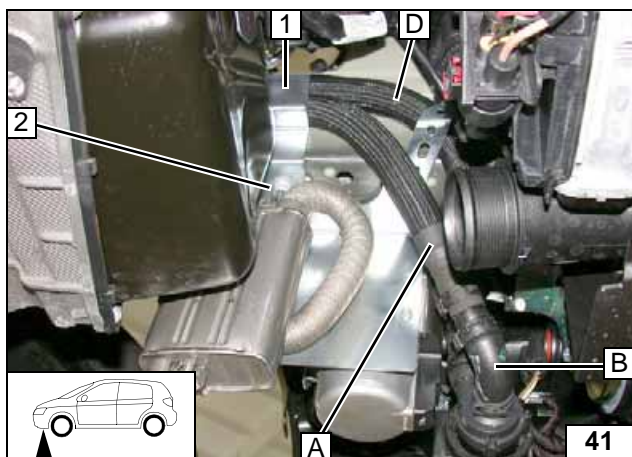
All spring clips without a specific designation  = 25 mm dia. **1** = Original vehicle spring clip .
All connecting pipes  = 20x20 mm dia.





- 1 Mount loosely M6x20 bolt, M6 flanged nut
- 2 38mm dia. rubber-coated p-clamp
- 3 8.5mm dia. hole

Preparing perforated bracket

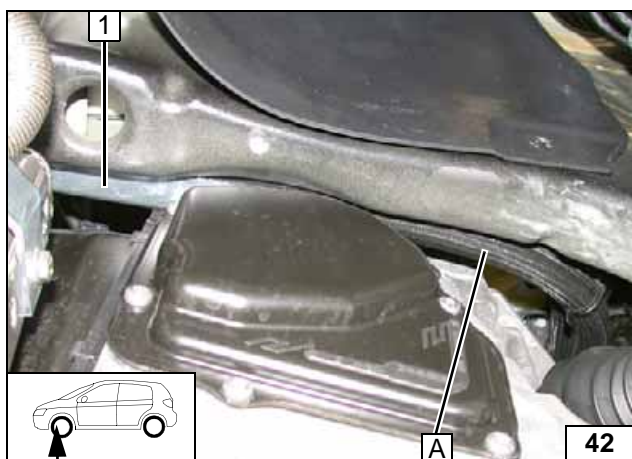


Route hose **A** to brake booster. Align hoses **A** and **D** behind hose bracket **1**. Ensure sufficient distance to neighbouring components.



- 2 Original vehicle stud bolt, M8 flanged nut

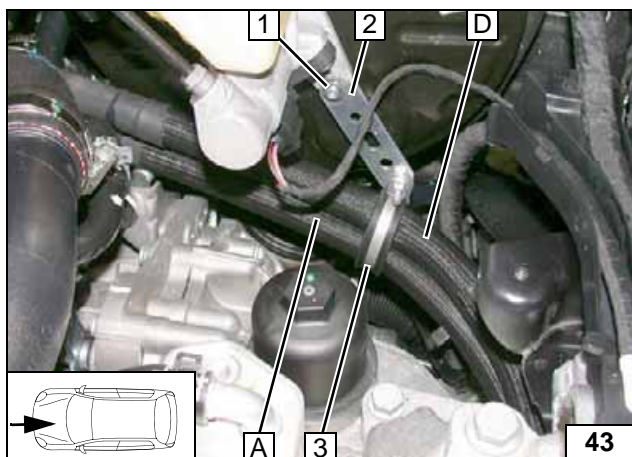
Routing on frame side member



Ensure sufficient distance between hose bracket **1** and transmission.



Routing on frame side member

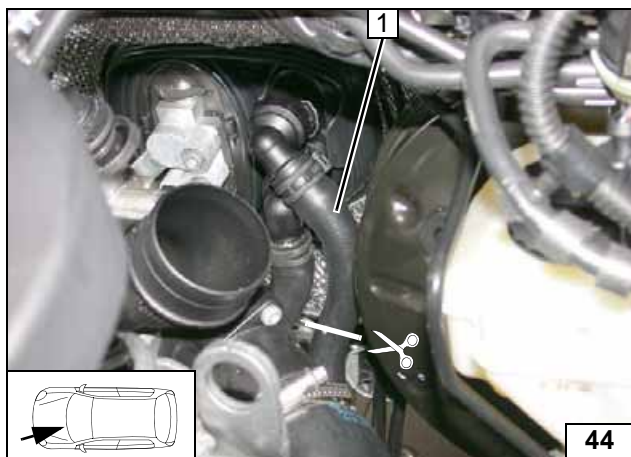
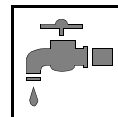


Route hoses **A** and **D** through rubber-coated p-clamp **3**.



- 1 Mount loosely original vehicle bolt, M8 nut
- 2 Perforated bracket

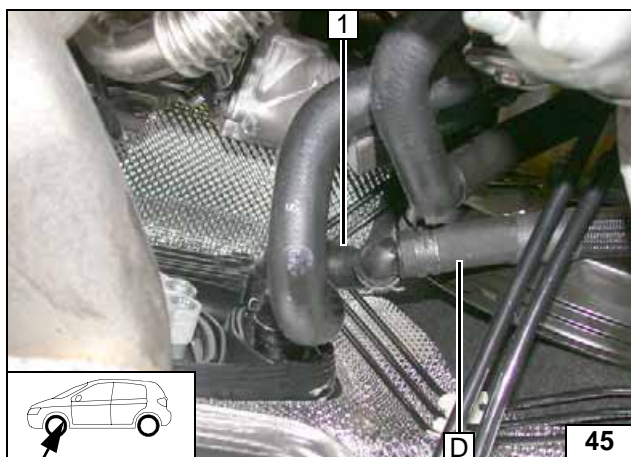
Routing in engine compartment



103 kW

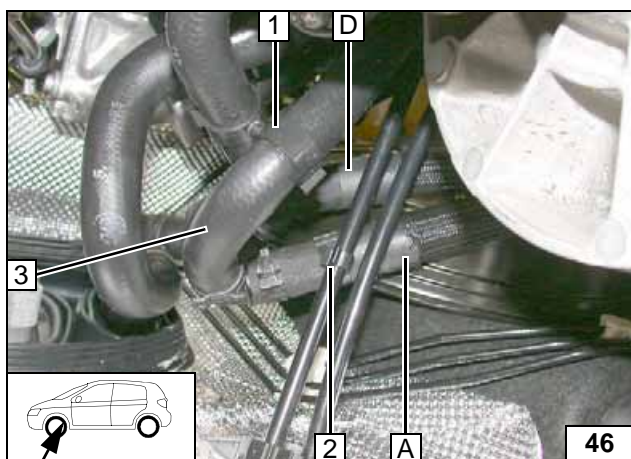
Cut off hose on engine outlet/heat exchanger inlet 1 at marking.

Cutting point



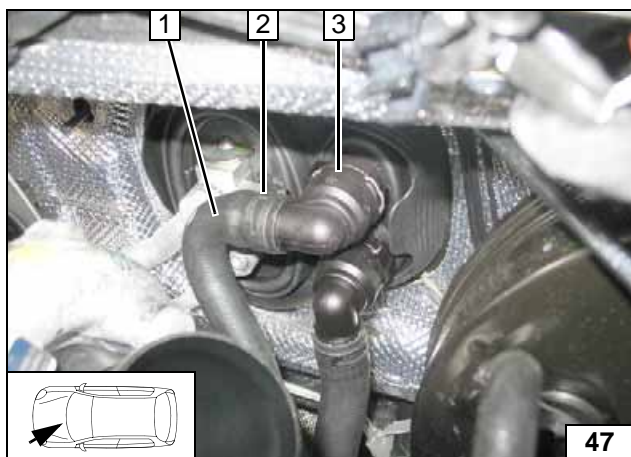
1 Hose on heat exchanger inlet

Connect-
ing heat ex-
changer
inlet



1 Spacer bracket
2 22x8mm spacer bracket
3 Hose of engine outlet

Connect-
ing engine
outlet

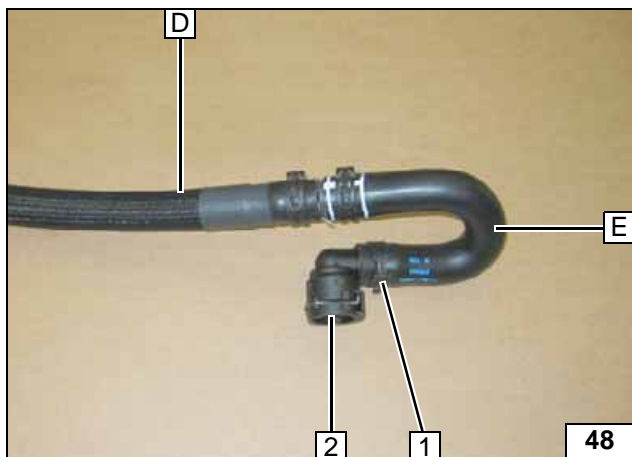
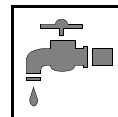


125 kW

Pull out hose from engine outlet 1. Remove coupling 3 of heat exchanger inlet. Spring clip 2 will be reused.

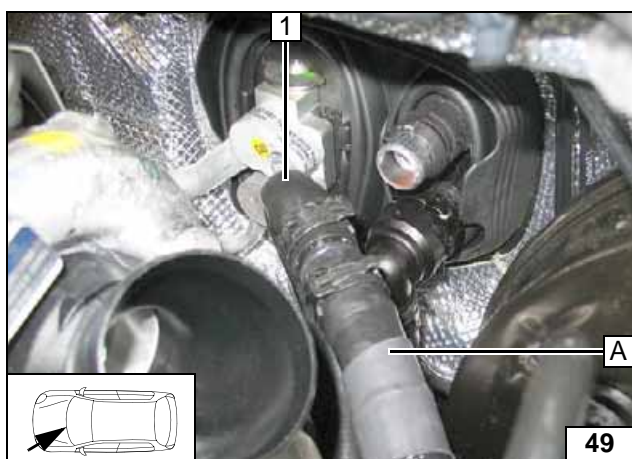
Cutting point





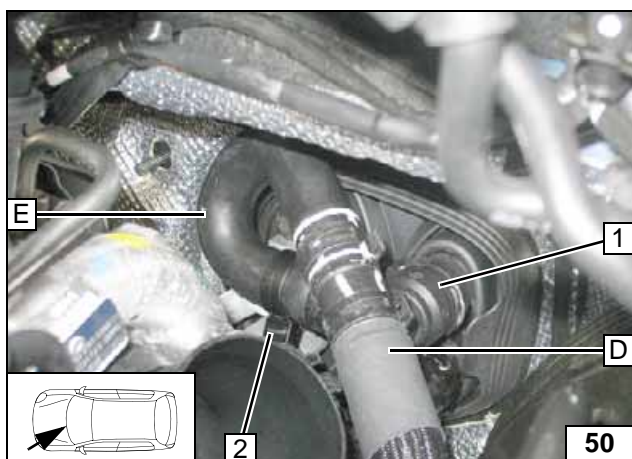
- 1 Original vehicle spring clip
- 2 Coupling of heat exchanger inlet

Premounting hose C and D



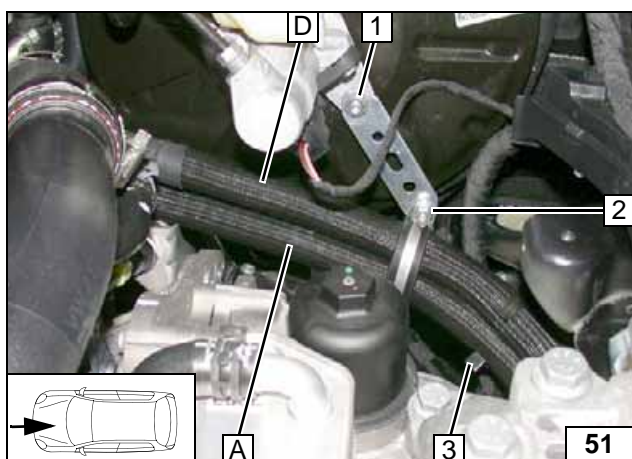
- 1 Hose of engine outlet

Connecting engine outlet



- 1 Coupling of heat exchanger inlet attached
- 2 Hose bracket

Connection of heat exchanger inlet



All vehicles

Tighten M8 nut 1 and M6 flanged nut 2. Align hoses A and D. Ensure sufficient distance to neighbouring components, correct if necessary.

- 3 23x23mm hose bracket (retaining clip removed)

Routing in engine compartment





Fuel

CAUTION!

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

Catch any fuel running off with an appropriate container.

Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.

Mount the fuel line and wiring harness with rub protection on sharp edges.

WARNING!

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



Routing lines



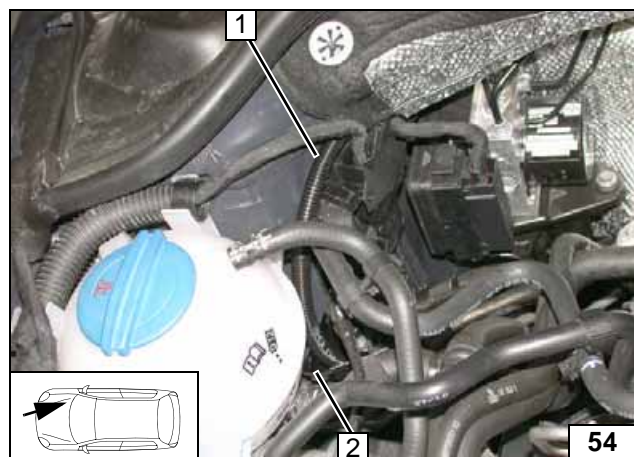
Route fuel line and wiring harness of metering pump in 1130mm long corrugated tube 1 to the firewall.



Route fuel line and wiring harness of metering pump 1 to the right side of the vehicle along the firewall and behind the insulation mat.



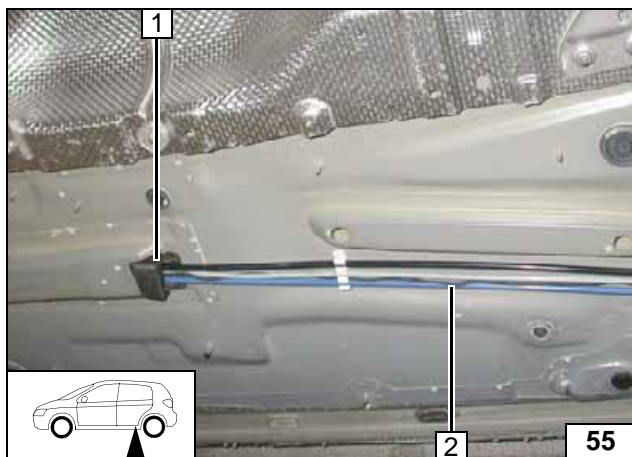
Routing lines



Cut 300mm long, 10mm dia. corrugated tube to length and push onto fuel line and wiring harness of metering pump. Lead fuel line and wiring harness of metering pump 1 into original vehicle line duct 2 and route to underbody.



Routing lines

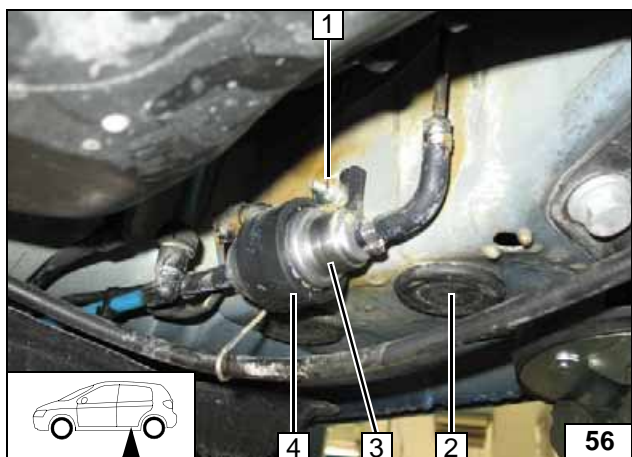


Route fuel line and wiring harness of metering pump along original vehicle fuel lines 2 to fuel tank.

- 1 Line duct



Routing lines

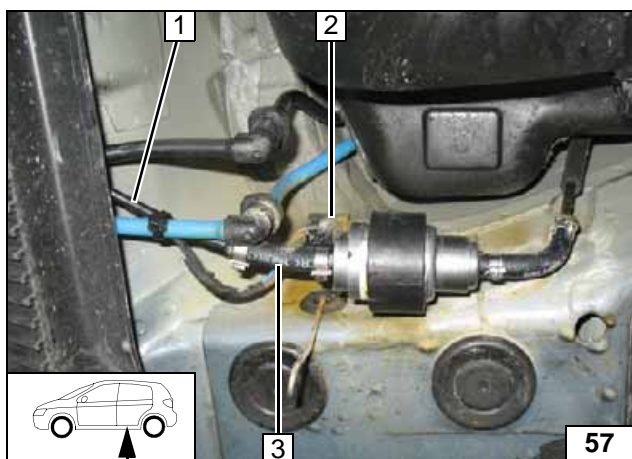


Mount bolt 1 through sealing plug 2 .

- 1 M6x25 bolt, support angle, flanged nut
- 3 Metering pump
- 4 Metering pump mount

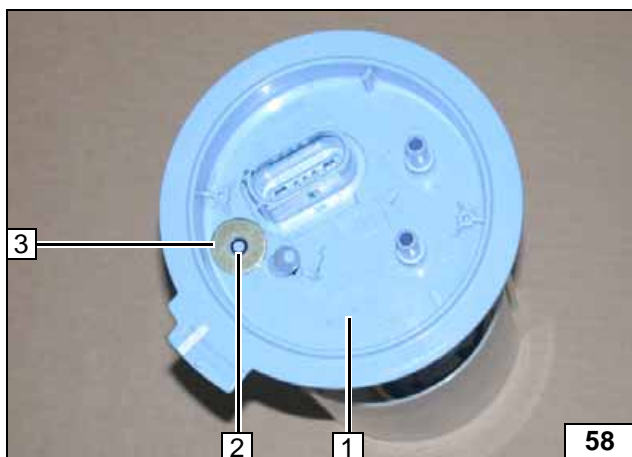


Installing metering pump



- 1 Fuel line of heater
- 2 Wiring harness of metering pump, connector mounted
- 3 Hose section, 10 mm dia. clamp [2x]

Installing metering pump

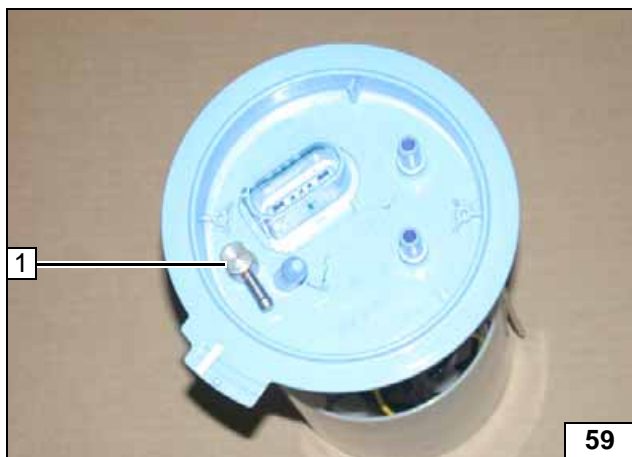


Remove fuel-tank sending unit 1 in accordance with manufacturer's instructions. Position large diameter washer 3 as shown.

- 2 6mm dia. hole



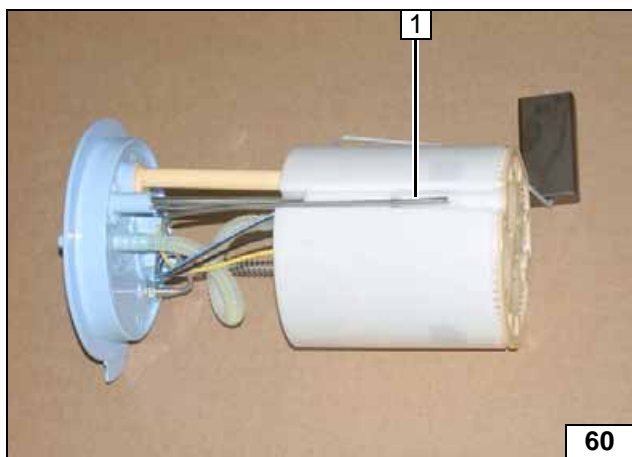
Fuel extraction



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



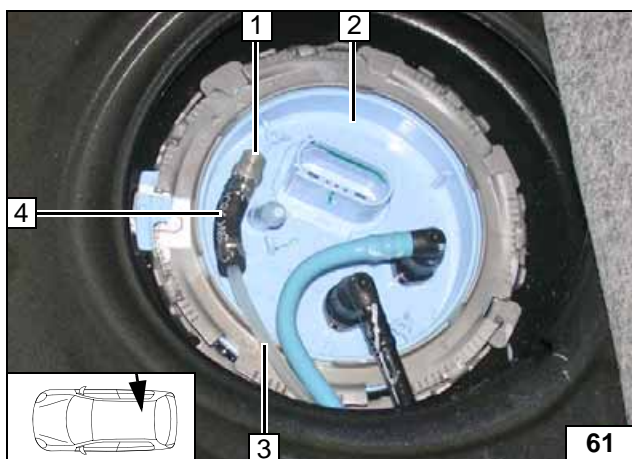
Installing fuel stand-pipe



Align fuel standpipe **1** as shown.



Installing fuel stand-pipe

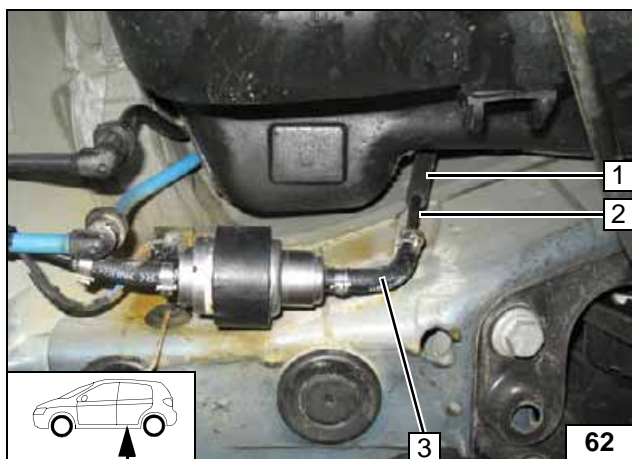


Install fuel-tank sending unit **2** in accordance with manufacturer's instructions. Ensure sufficient distance between hose section **4** and edge of locking ring.



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

Installing fuel-tank sending unit

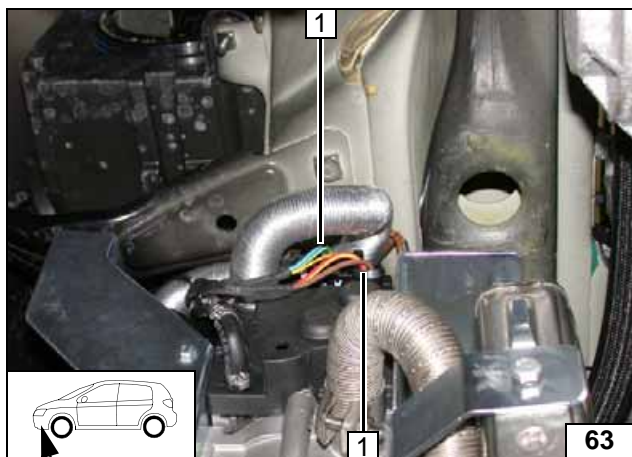


Push fabric protective hose **1** onto fuel line of fuel standpipe **2**. Check the position of the components; adjust if necessary. Check that they have freedom of movement.



- 3** 90° moulded hose, 10mm dia. clamp [2x]

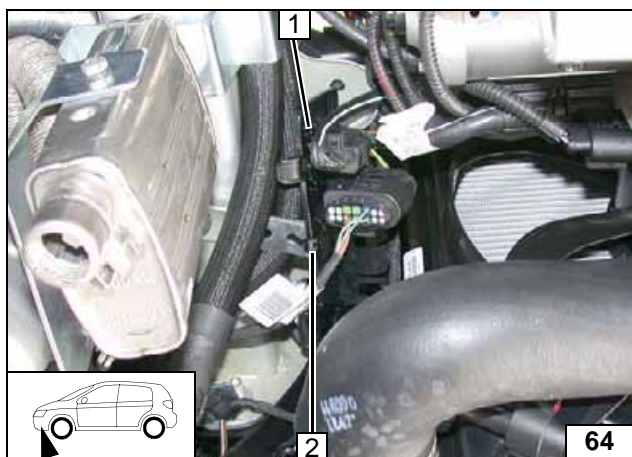
Connecting metering pump



Final Work

- 1 Wiring harness of heater [2x]

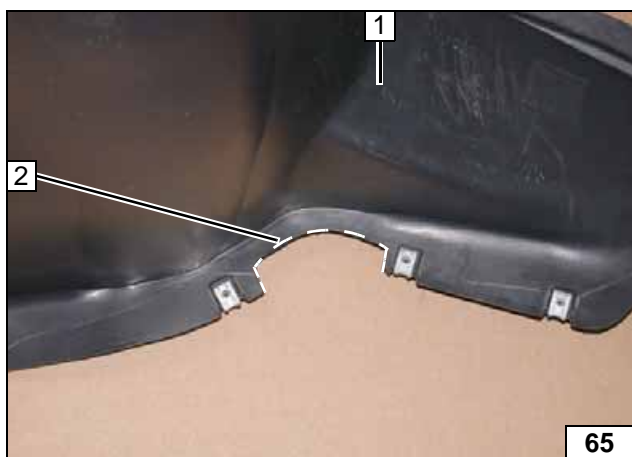
Mounting wiring harness



Insert retaining plate 1 (if present) into hole of perforated bracket and fasten using cable tie 2. Re-install connector.



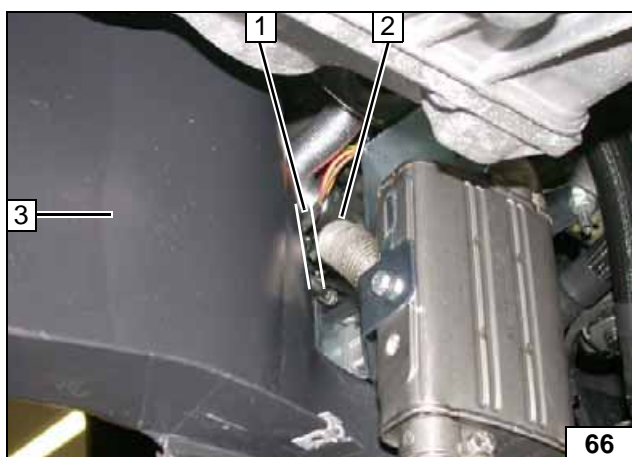
Installing retaining plate



Cut out wheel-well inner panel 1 at marking 2.



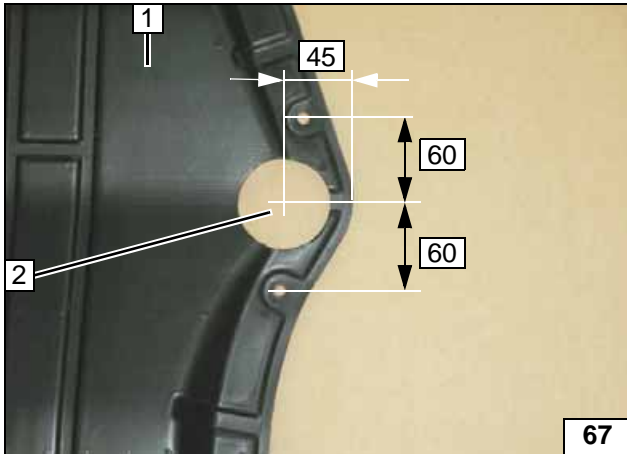
Cutting out wheel-well inner panel



Ensure sufficient distance between wheel-well inner panel 3 and exhaust pipe 2 at position 1 (min. 10mm).



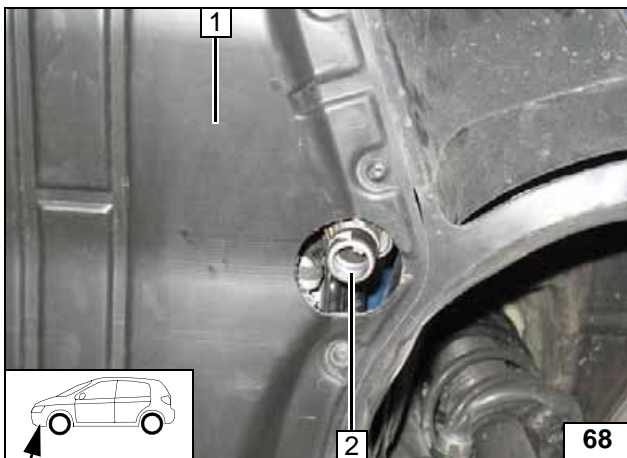
Installing wheel-well inner panel



- 1 Underride protection
- 2 60mm dia. hole



**Cutting out
underride
protection**



Centrally align exhaust end section 2 in hole and flush on underdrive protection 1.



**Aligning
exhaust
end section**

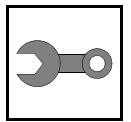
WARNING!

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

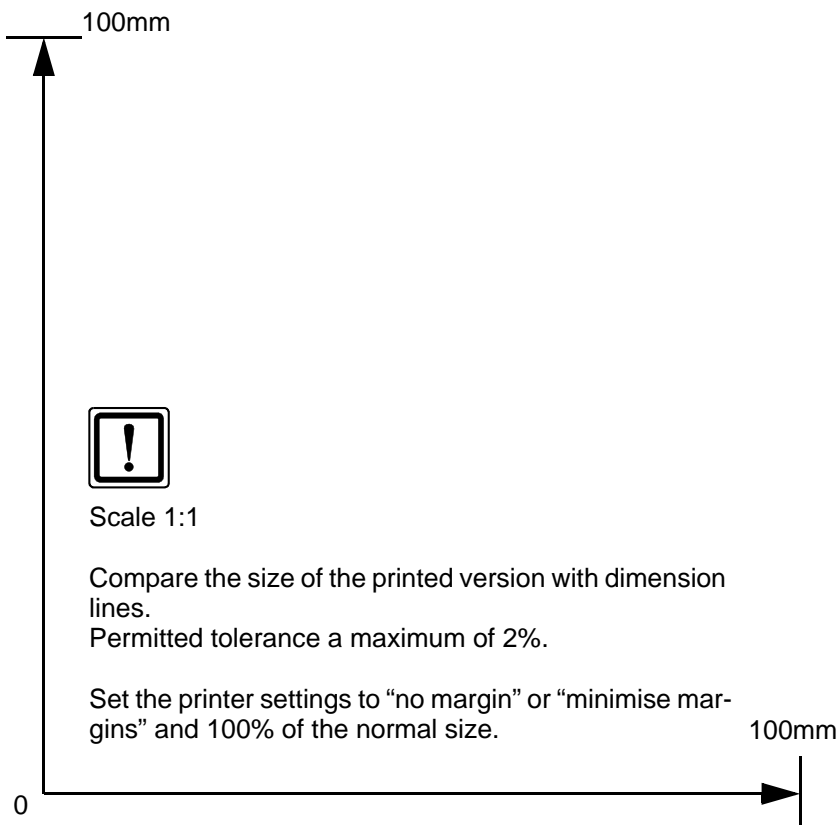
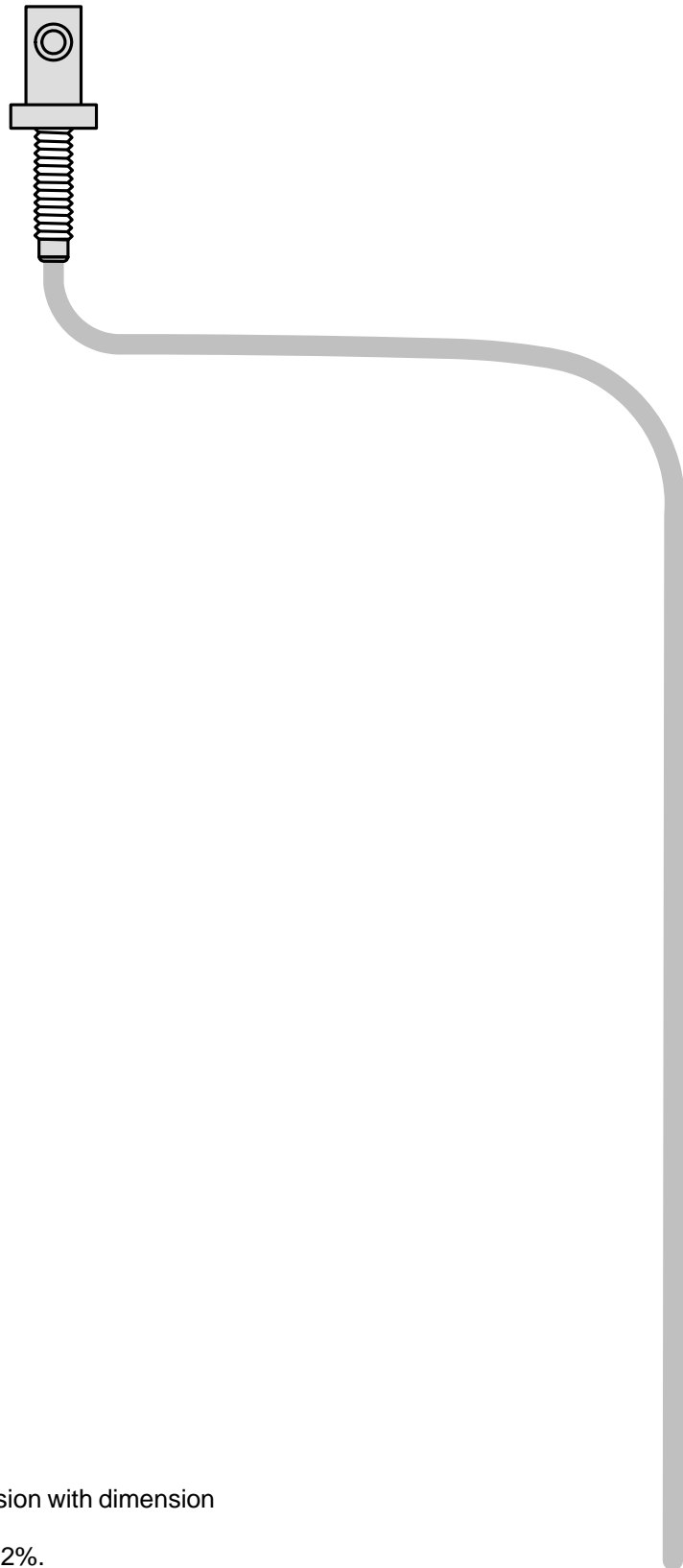


- **Connect the battery**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place instruction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

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



Template for Fuel Standpipe



Operating Instructions for Climatic

Please remove this page in case of Climatic and add it to the vehicle operating instructions.

Note:

We recommend matching the heating time to the driving time.

Heating time = driving time

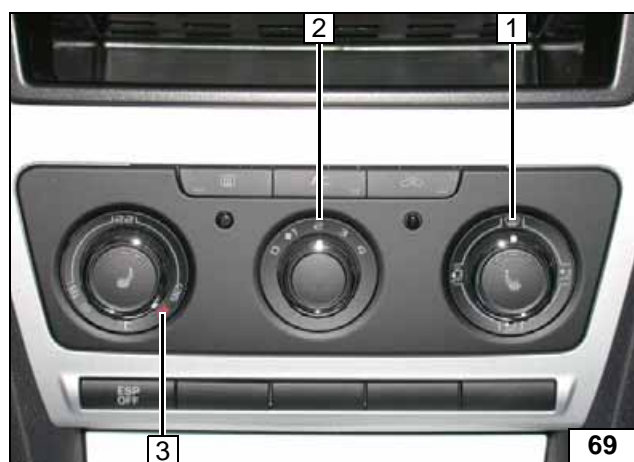
Example:

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

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.

For information on deactivation, please see the vehicle owner's manual.

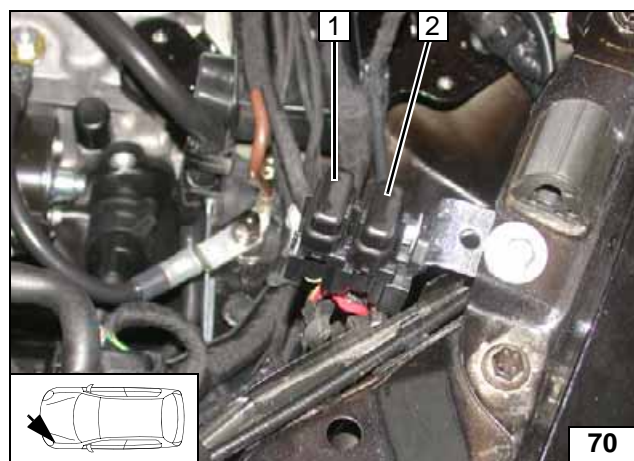
Before parking the vehicle, make the following settings:



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

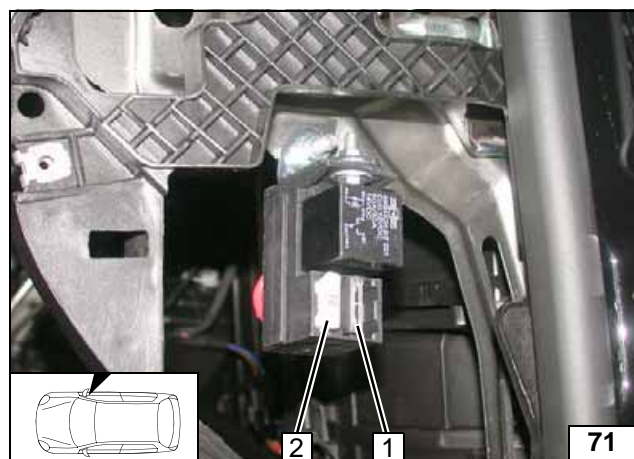


A/C control panel



- 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 25A fan fuse F4

Fuses of passenger compartment



Operating Instructions for Climatronic

Please remove this page in case of Climatronic and add it to the vehicle operating instructions.

Note:

We recommend matching the heating time to the driving time.

Heating time = driving time

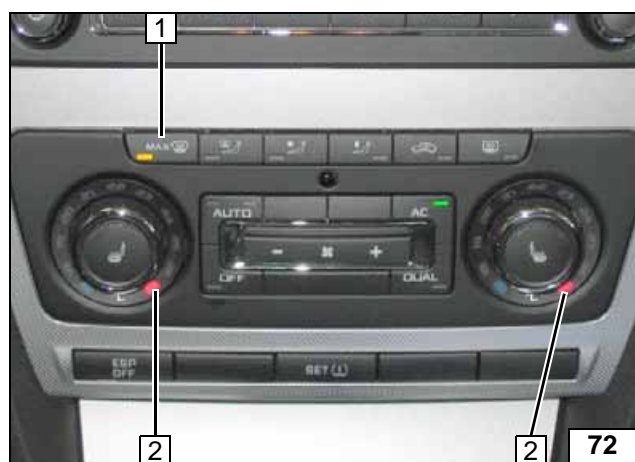
Example:

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

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.

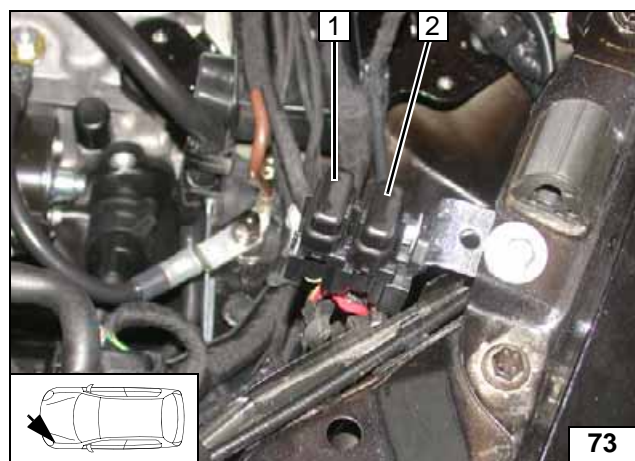
For information on deactivation, please see the vehicle owner's manual.

Before parking the vehicle, make the following settings:



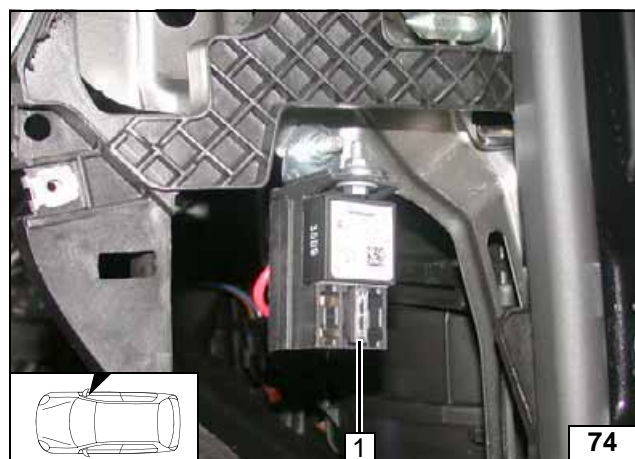
- 1 Direct air outlet towards windscreen
- 2 Set temperature on both sides to "HI".

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

Fuses of passenger compartment

