Water Heater

Webasto
Feel the Drive

Thermo Top Evo Parking Heater

E1
00 0258

Installation Documentation
VW Golf / Golf Plus / Jetta

Validity

Manufacturer	Model	Type	EG BE No. / ABE
VW	Golf	1K	e1 * 2001 / 116 * 0242 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 TSI	Petrol	5-speed SG	63	1197	CBZA
1.2 TSI	Petrol	6-speed SG	77	1197	CBZB
1.2 TSI	Petrol	7-speed DSG	77	1197	CBZB
1.4 TSI	Petrol	7-speed DSG	90	1390	CAXA
1.4 TSI	Petrol	7-speed DSG	118	1390	CAVD
2.0 TSI	Petrol	6-speed DSG	155	1984	CCZB
2.0 TDI	Diesel	SG / DSG	103	1968	CFFB

Manufacturer	Model	Type	EG BE No. / ABE
VW	Golf Plus	1KP	e1 * 2001 / 116 * 0304 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 TSI	Petrol	5-speed SG	63	1197	CBZA
1.2 TSI	Petrol	6-speed SG	77	1197	CBZB
1.2 TSI	Petrol	7-speed DSG	77	1197	CBZB
1.4 TSI	Petrol	7-speed DSG	90	1390	CAXA
1.4 TSI	Petrol	7-speed DSG	118	1390	CAVD / CNWA
2.0 TDI	Diesel	SG / DSG	103	1968	CFFB

Manufacturer	Model	Type	EG BE No. / ABE
VW	Jetta	16	e1 * 2007 / 46 * 0539 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 TSI	Petrol	6-speed SG	77	1197	CBZB
1.4 TSI	Petrol	7-speed DSG	90	1390	CAXA
1.4 TSI	Petrol	7-speed DSG	118	1390	CAVD
2.0 TSI	Petrol	6-speed DSG	147	1984	CCZA
2.0 TDI	Diesel	SG / DSG	103	1968	CFFB

SG = manual transmission
DSG = direct gear transmis-
sion

From Model Year 2011
Left-hand drive vehicle

Verified equipment variants:	Climatic / Climatronic
	Front fog light
	Passenger compartment monitoring
Not verified:	4Motion
Total installation time:	approx. 8.5 hours

VW Golf / Golf Plus / Jetta

Table of Contents

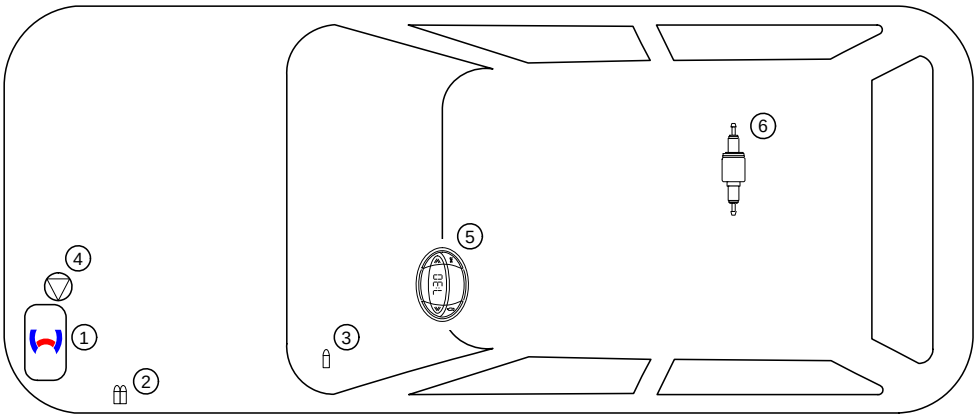
Necessary Components

- Basic delivery scope of *Thermo Top Evo* in accordance with price list
- Installation kit for VW Golf / Golf Plus / Jetta 2011 Petrol and diesel: **1317225B**
- Also required with Climatronic: **1317273A**
- Additionally required in case of 2.0TSI DSG (direct gear transmission) **1318072A**
- Heater control in accordance with price list and upon consultation with end customer
- 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. Connectors on electronic components must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. 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 VW Golf / Golf Plus / Jetta Petrol and diesel vehicles - for validity, see page 1 and 2 - from model year 2011 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

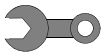
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 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.

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

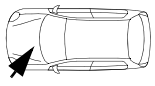
Specific risk of damage to components

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



VW Golf / Golf Plus / Jetta

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 completely together with the carrier.
- Remove the air filter completely.
- Remove the underride protection.
- Remove the wheel-wall inner panel.
- Fold up 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 side trim of A-pillar on the driver's side.
- Remove the driver/front passenger's side footwell trim.
- Remove the instrument panel trim at the left.

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

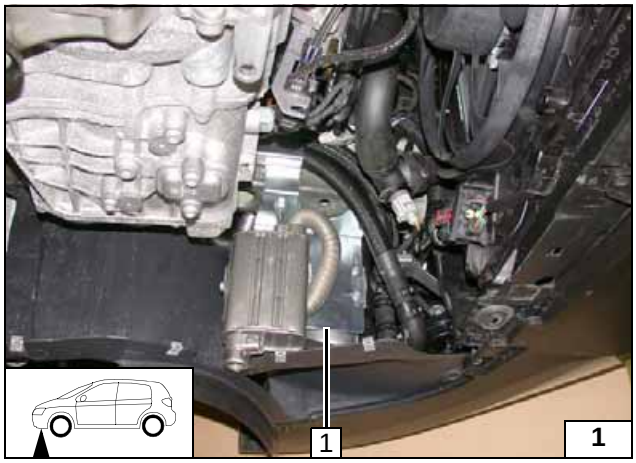


Image shows 1.2 TSI 90kW manual transmission (SG)

1 Heater

Installation location

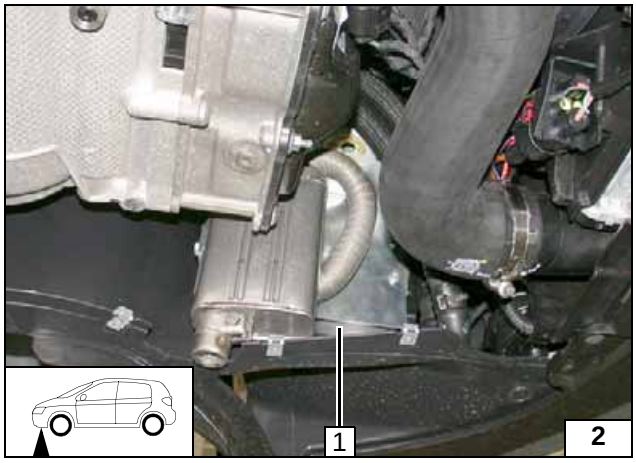
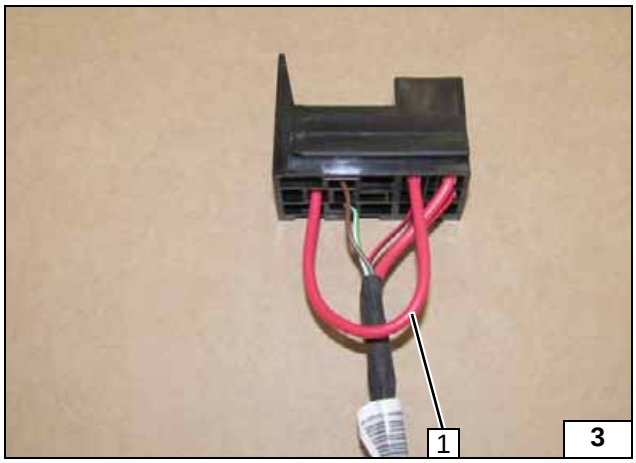


Image shows 1.4 TSI 118kW Direct gear transmission (DSG)

1 Heater

Installation location



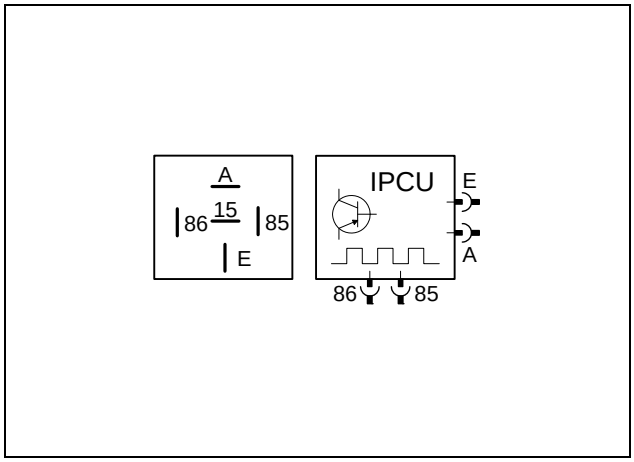
Preparing Electrical System

Climatronic

Line sections retain their numbering in the entire document.

Removing wire

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

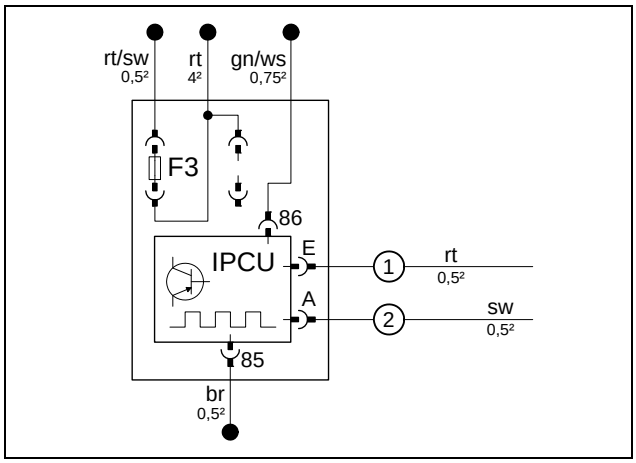


IPCU view on contact side.
The IPCU provided in the kit is pre-programmed with the following settings.

Preparing IPCU

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

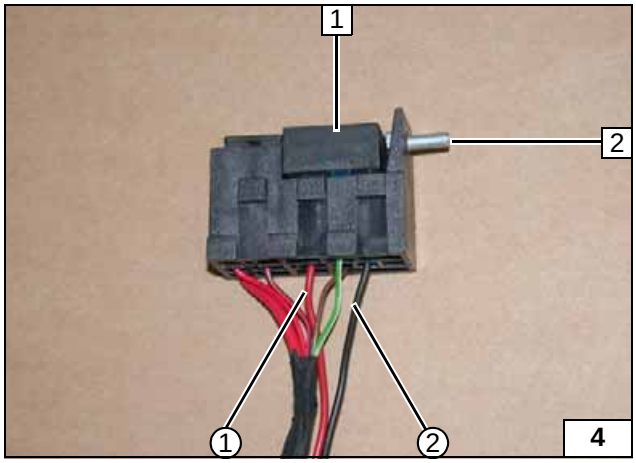
The adjustment values must be checked during the function check of the vehicle and adjusted, if necessary.



IPCU is to be inserted only after fuse holder has been premounted. Connect wires to socket IPCU. Draw wire ① and ② into the protective sleeving.

Preparing IPCU

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

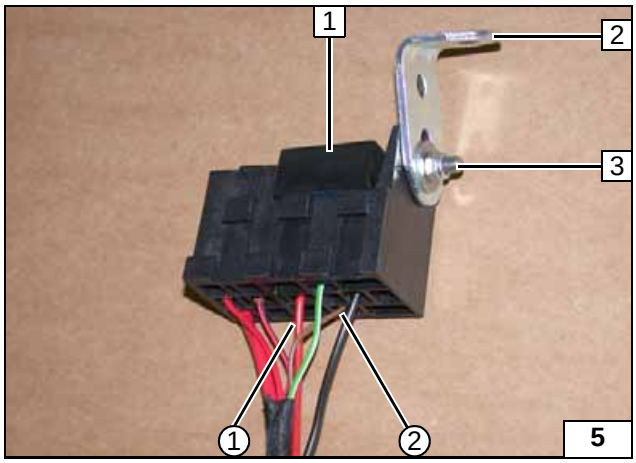


Golf / Jetta

Premounting passenger compartment fuse holder

1 IPCU
2 M5x16 bolt, large diameter washer, fuse holder

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

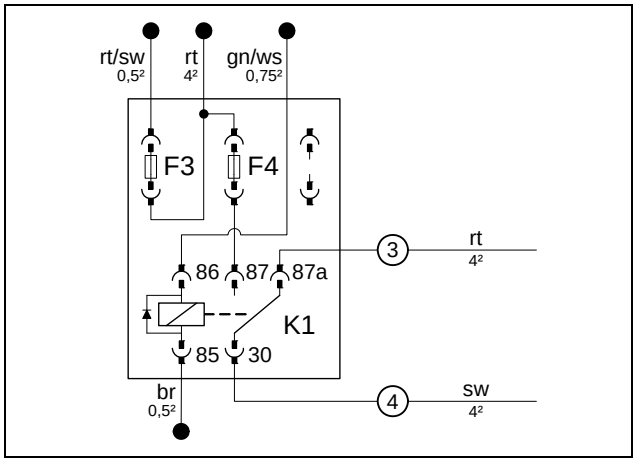


Golf Plus

1 IPCU
2 Angle bracket
3 M5x16 bolt, large diameter washer [2x], fuse holder, self-retaining nut

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

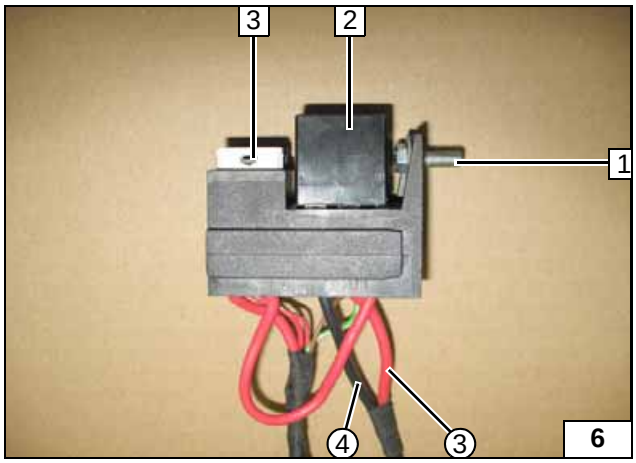
Premounting passenger compartment fuse holder



Climatic

Wire sections retain their numbering in the entire document.

Premounting passenger compartment fuse holder

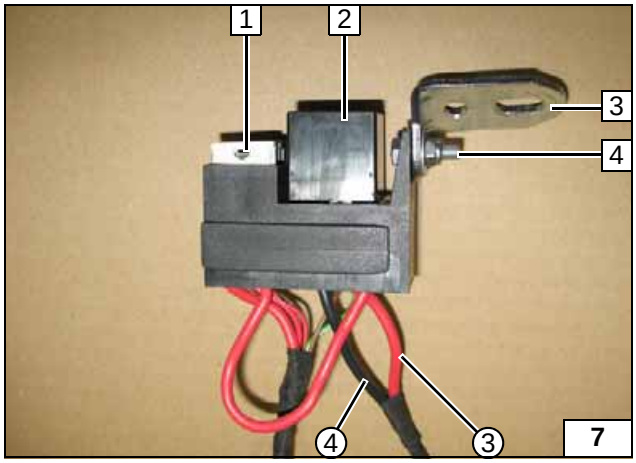


Jetta / Golf

1 Fuse F4 25A
2 K1 relay
3 M5x16 bolt, large diameter washer, fuse holder

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

Premounting passenger compartment fuse holder

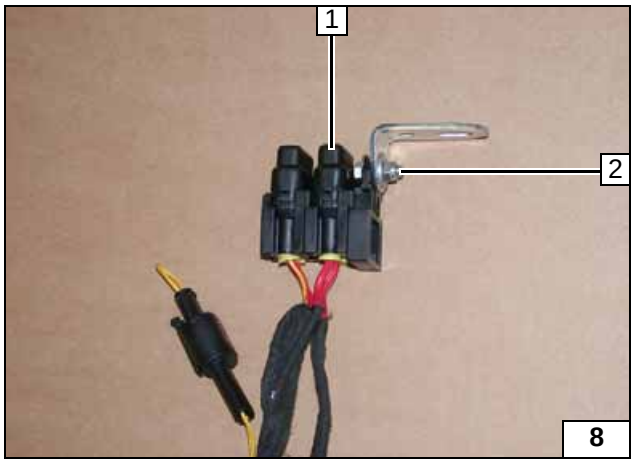


Golf Plus

1 Fuse F4 25A
2 K1 relay
3 Angle bracket
4 M5x16 bolt, large diameter washer [2x], fuse holder, self-retaining nut

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

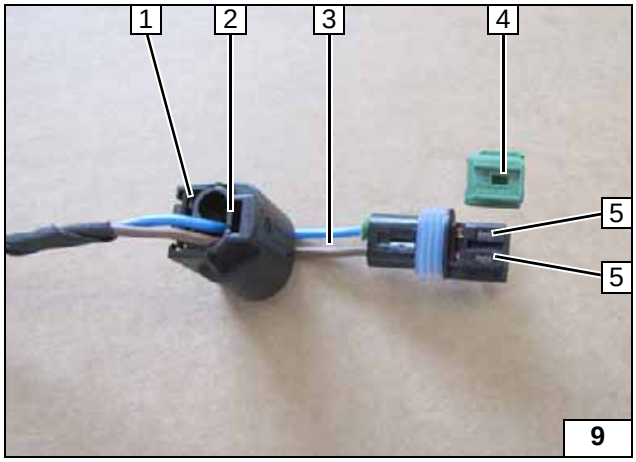
Premounting passenger compartment fuse holder



All vehicles

1 Fuses F1-2
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, angle bracket, self-locking nut

Premounting the fuse holder of the engine compartment



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

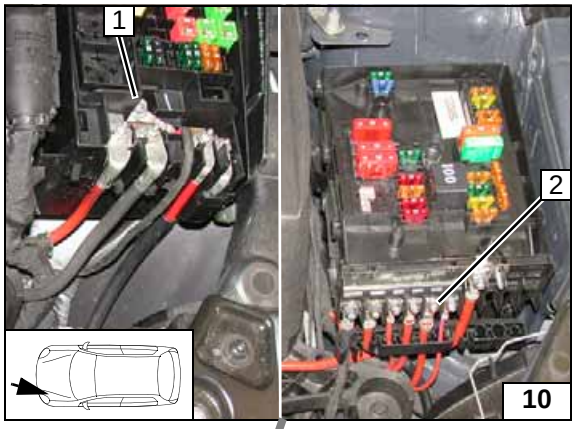
1 Connector housing
2 Lock
3 Blue / brown (bl / br) wires
4 Coding
5 Timer lock

Dismantling connector

Electrical System

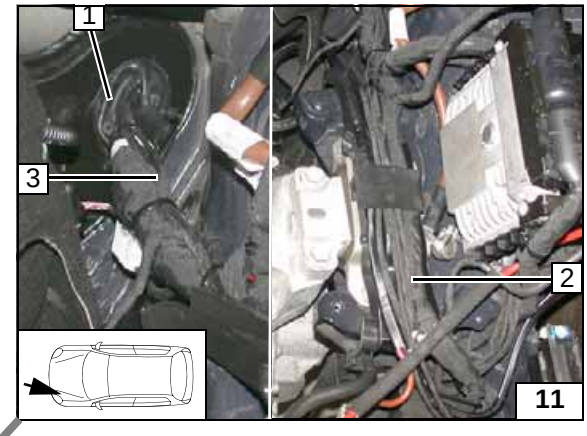
Positive wire

1 Jetta:
Positive wire to positive battery distributor
2 Golf, Golf Plus:
Positive wire to positive battery distributor

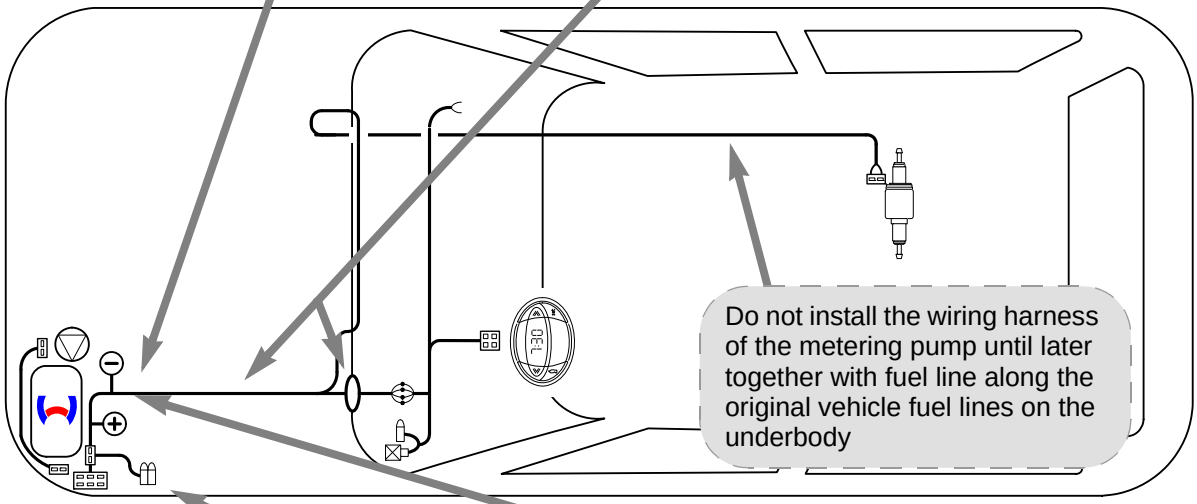


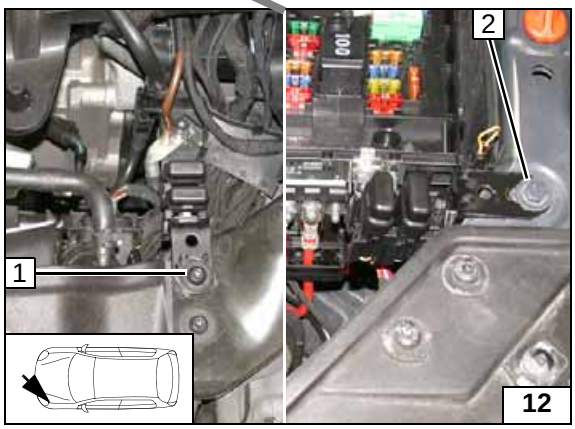
Wiring harness routing, wiring harness pass through

1 Use free protective rubber plug
2 Route wiring harnesses in original vehicle cable duct
3 Wiring harnesses of heater, heater control



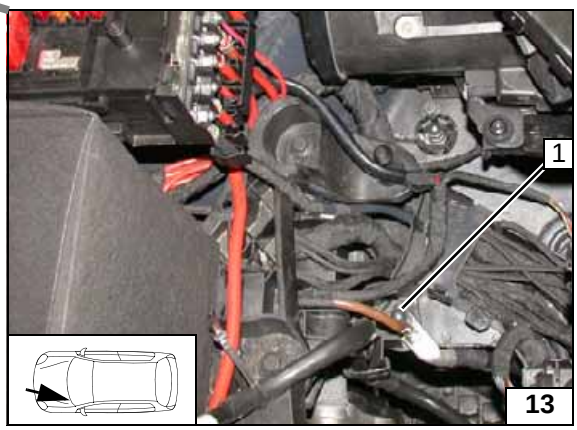
Wiring harness routing diagram





Fuse holder of engine compartment

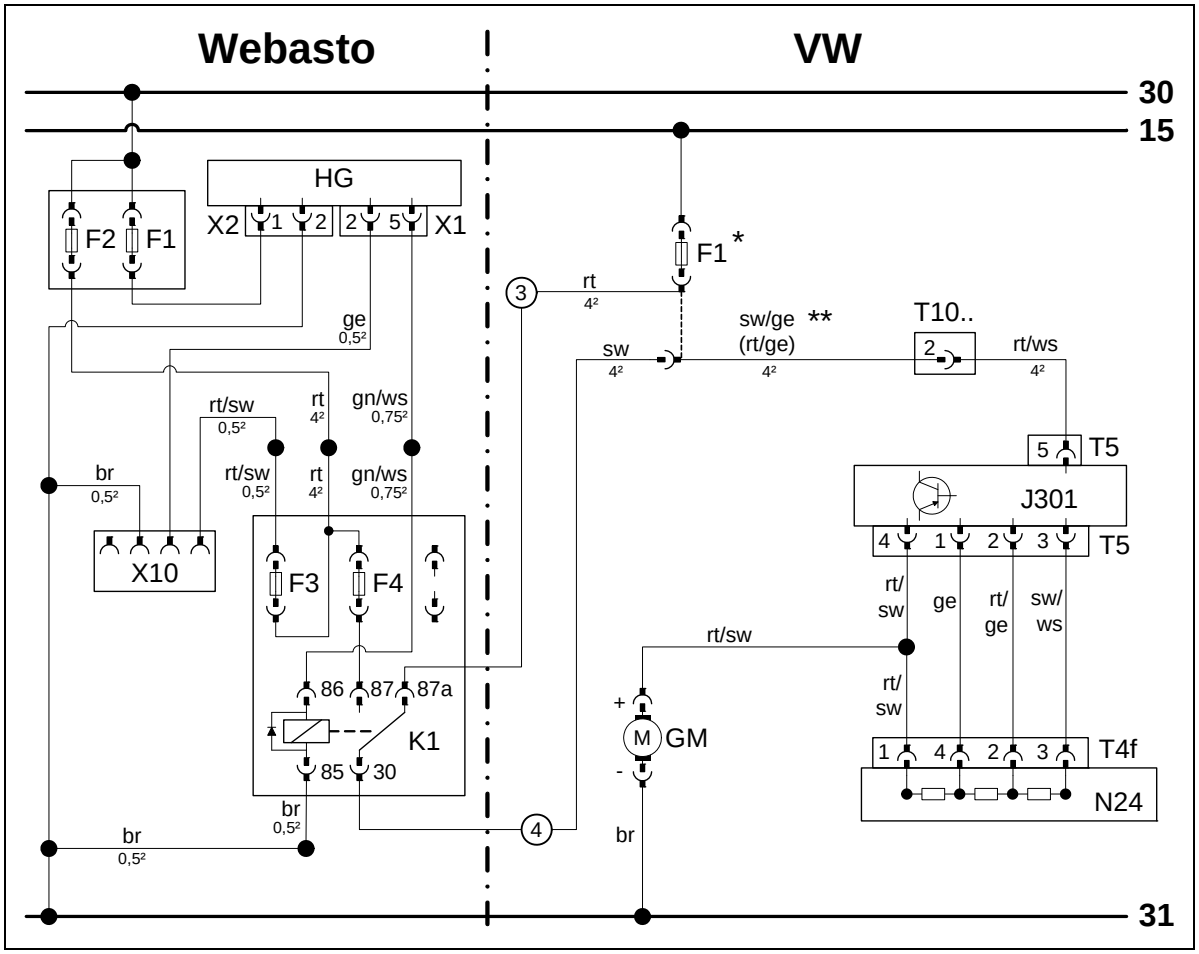
1 Golf, Jetta:
Original vehicle bolt, angle bracket, fuses
2 Golf Plus:
Original vehicle bolt, angle bracket, fuses



Earth wire

1 Earth on original vehicle earth support point

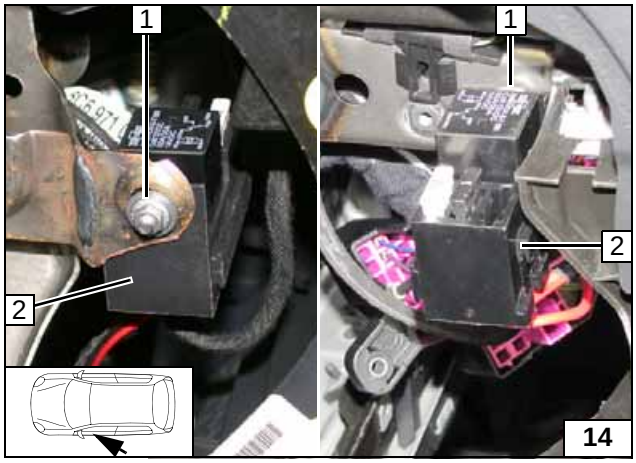
Climatic Fan Controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F1*	Fan fuse (assignment depends on vehicle and vehicle equipment variant)	rt	red
X1	6-pin heater connector			ge	yellow
X2	2-pin heater connector			sw	black
X10	4-pin connector Heater control	T10..	Connector	br	brown
		T5	5-pin connector J301	ws	white
K1	Fan relay	J301	Control unit of air-conditioning	gn	green
F1	20A fuse	T4f	4-pin connector N24	** Golf VI = black/yellow (sw/ge), Golf Plus and Jetta = red/yellow (rt/ge)	
F2	30A fuse	N24	Resistor group		
F3	1A fuse	GM	Fan motor	Wiring colours may vary.	
F4	25 A fuse				

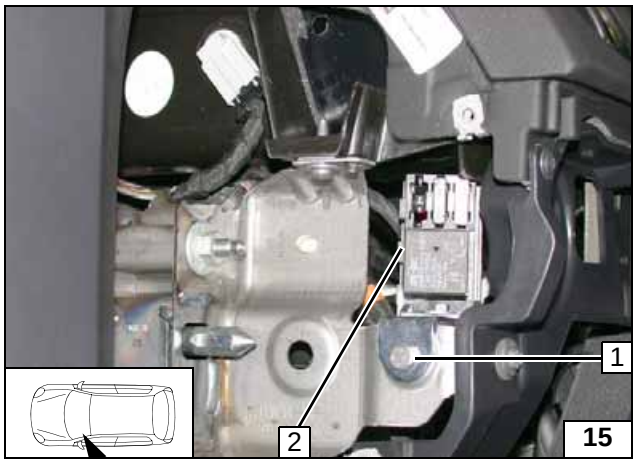
Legend



Jetta / Golf

1 Existing hole, large diameter washer, self-retaining nut
2 Fuse holder

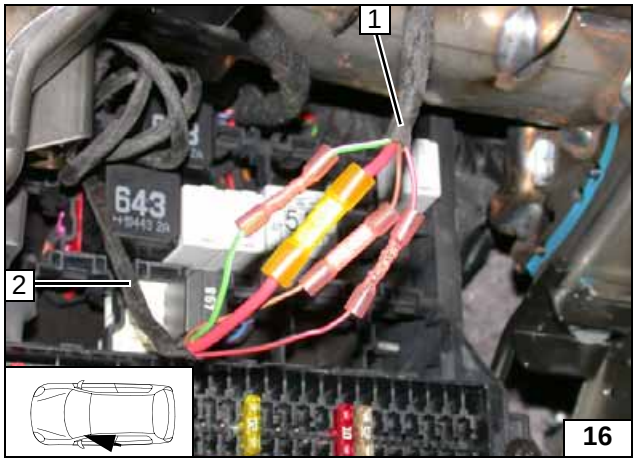
Mounting fuse holder in passenger compartment



Golf Plus

1 M6x20 bolt, angle bracket, existing hole, large diameter washer, M5 self-locking flanged nut
2 Fuse holder

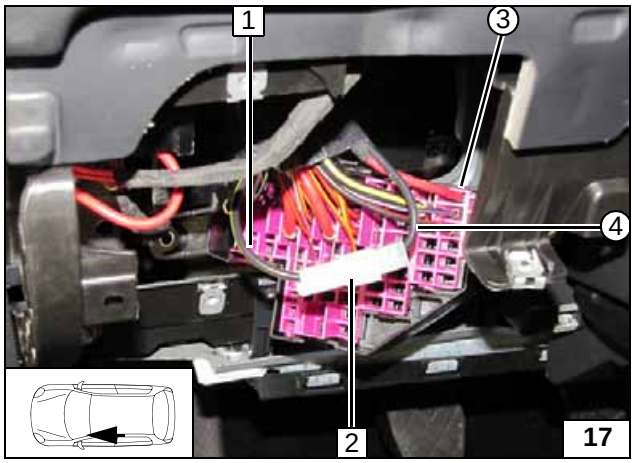
Mounting fuse holder in passenger compartment



All vehicles

Connect the wiring harness of the fuse holder in passenger compartment **1** to the wiring harness of heater **2** according to the wiring diagram, with same colour wires connected to each other.

Connecting wiring harnesses

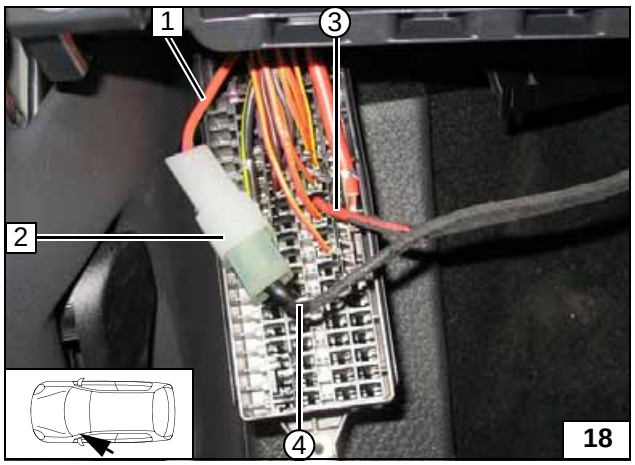


Golf

Fuse socket depends on vehicle equipment. Uncrimp black/yellow (sw/ge) wire **1** from socket of fan fuse. Engage red (rt) wire from K1/87a ③ into socket of fan fuse with crimped on Standard-Power-Timer. Produce connections as shown in wiring diagram.

2 Connector
④ Black (sw) wire of K1/30

Connecting wires



Jetta / Golf Plus

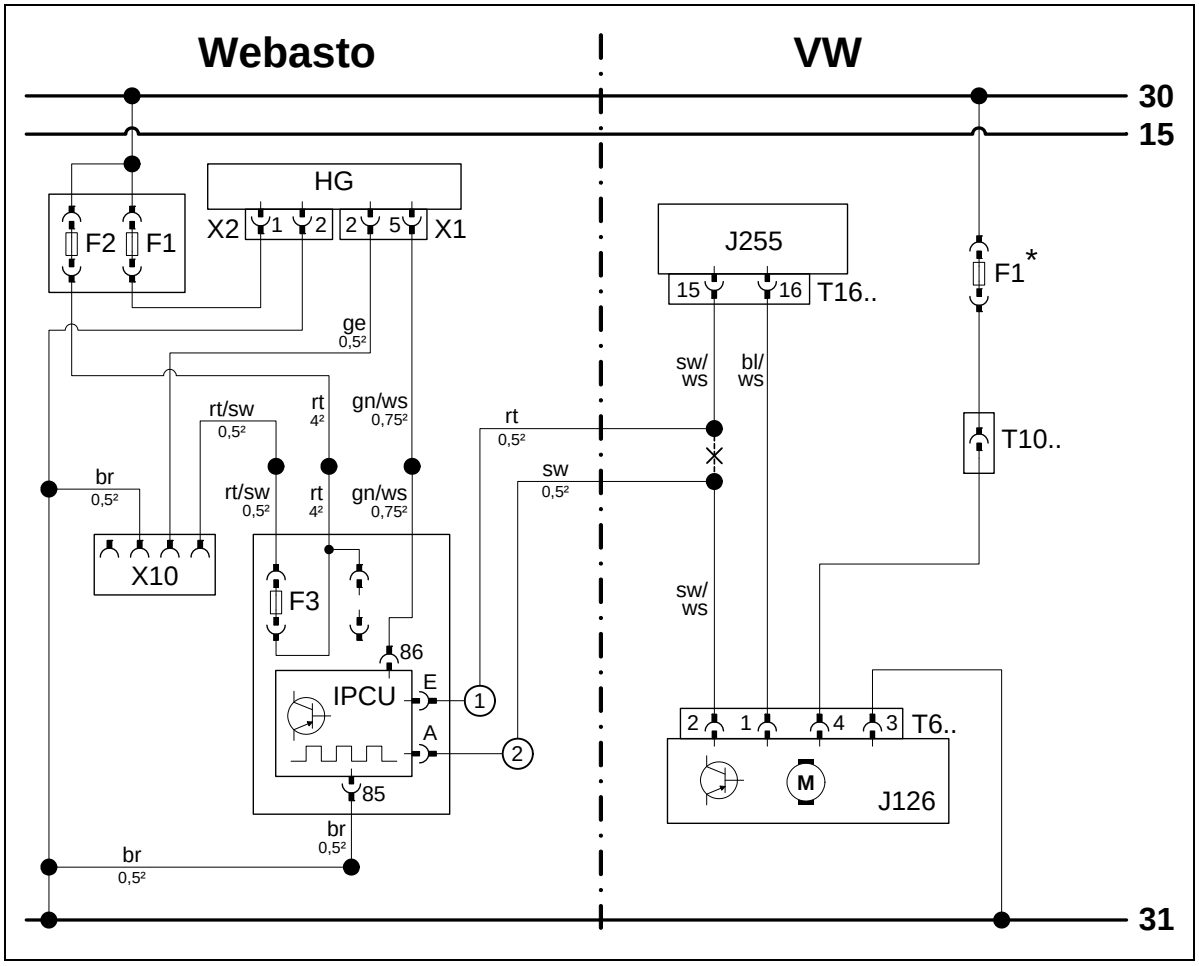
Fuse socket depends on vehicle equipment. Uncrimp red/yellow (rt/ge) wire **1** from socket of fan fuse. Engage red (rt) wire from K1/87a ③ into socket of fan fuse with crimped on Standard-Power-Timer. Produce connections as shown in wiring diagram.

2 Connector
④ Black (sw) wire of K1/30

Connecting wires

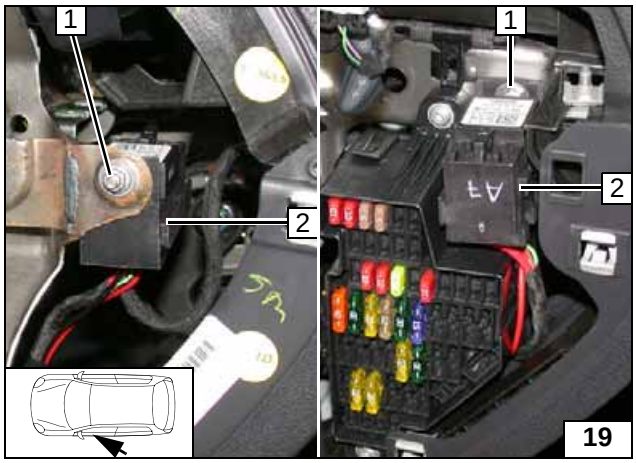
Climatronic Fan Controller

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	J255	A/C control unit	rt	red
X1	6-pin heater connector	T16..	16-pin connector J255	sw	black
X2	2-pin heater connector	F1*	Fan fuse (assignment depends on vehicle and vehicle equipment variant)	ge	yellow
X10	4-pin connector Heater control			gn	green
				bl	blue
K1	Fan relay			ws	white
F1	20A fuse	T10..	10-pin connection	br	brown
F2	30A fuse				
F3	1A fuse	T6..	6-pin connector J126		
IPCU	Pulse width modulator	J126	Fan unit		
IPCU adjustment values:					
Duty cycle:	30%				
Frequency:	400Hz				
Voltage:	8V			**X**	Cutting point
Function:	High side			Wiring colours may vary.	

Legend



Jetta / Golf

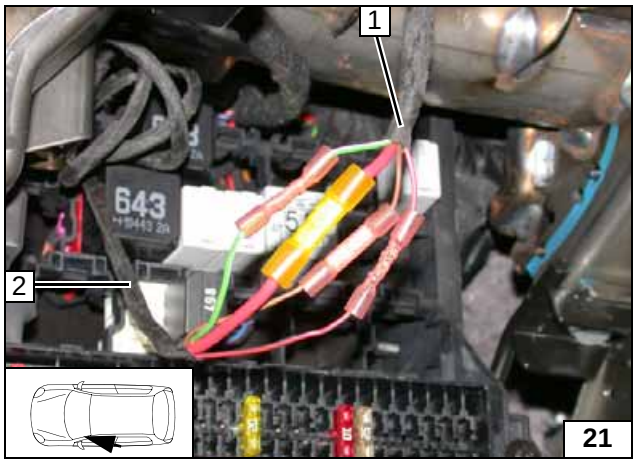
1 Existing hole, large diameter washer, M5 self-locking flanged nut
2 Fuse holder

Mounting fuse holder in passenger compartment

Golf Plus

1 M6x20 bolt, angle bracket, existing hole, large diameter washer, M5 self-locking flanged nut
2 Fuse holder

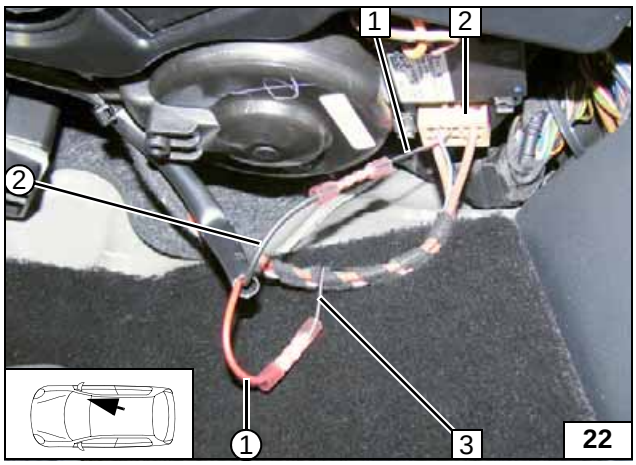
Mounting fuse holder in passenger compartment



All vehicles

Connect the wiring harness of the fuse holder in passenger compartment **1** to the wiring harness of heater **2** according to the wiring diagram, with same colour wires connected to each other.

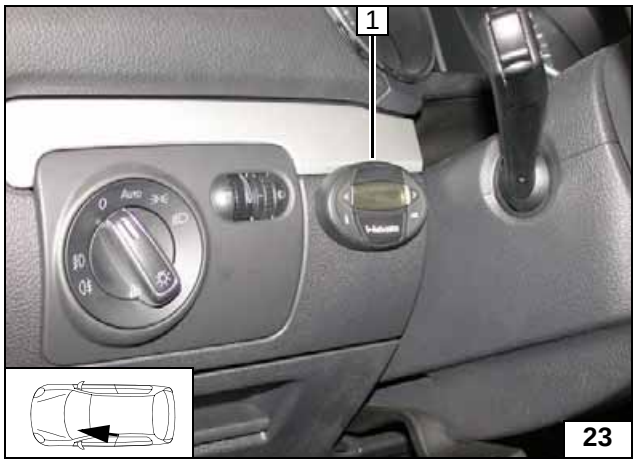
Connecting wiring harnesses



Connection to 6-pin connector T6.. **2** from the fan unit. Produce connections as shown in wiring diagram.

1 Black/white (sw/ws) wire from 6-pin connector T6.. Pin 2
3 Black/white (sw/ws) wire from A/C control unit
① Red (rt) wire of IPCU/E
②Black (sw) wire of IPCU/A

Connecting fan unit

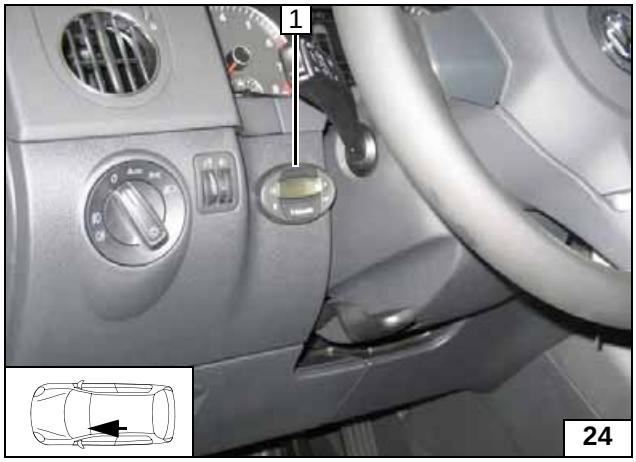


Digital Timer Option

Golf

1 Digital timer

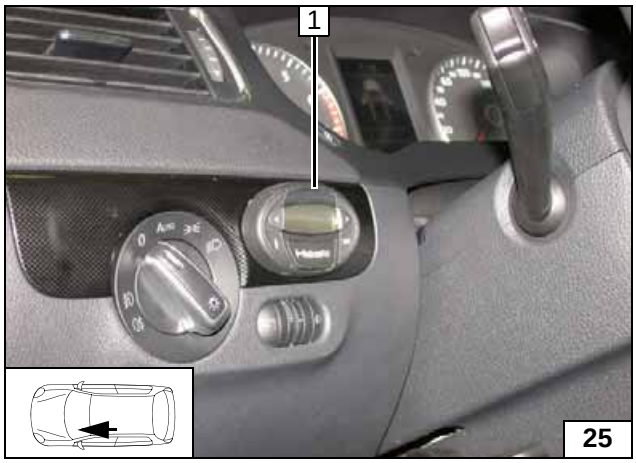
Mounting digital timer



Golf Plus

1 Digital timer

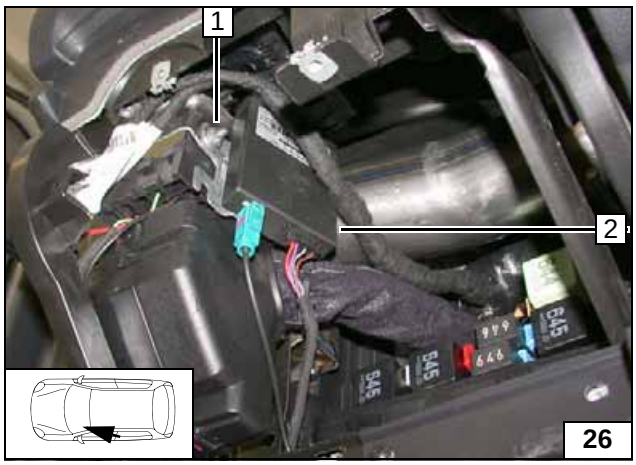
Mounting digital timer



Jetta

1 Digital timer

Mounting digital timer

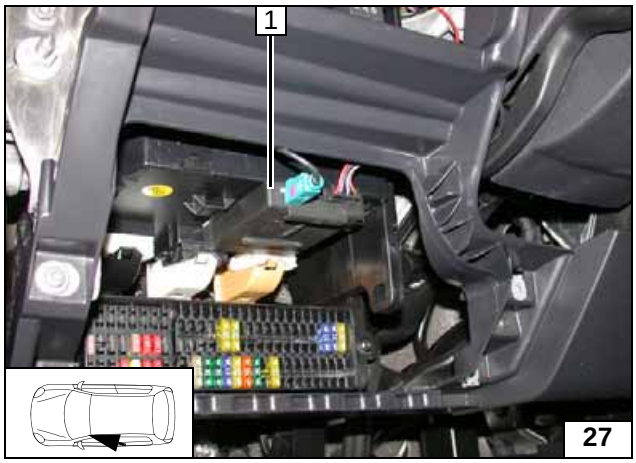


Remote Option (Telestart)

Golf

1 M5x16 bolt from fuse holder, large diameter washer, M5 self-locking flanged nut
2 Receiver

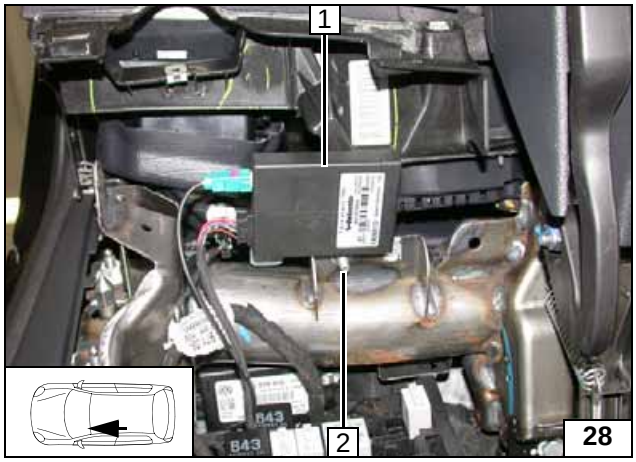
Mounting receiver



Golf Plus

1 Fasten receiver with adhesive tape.

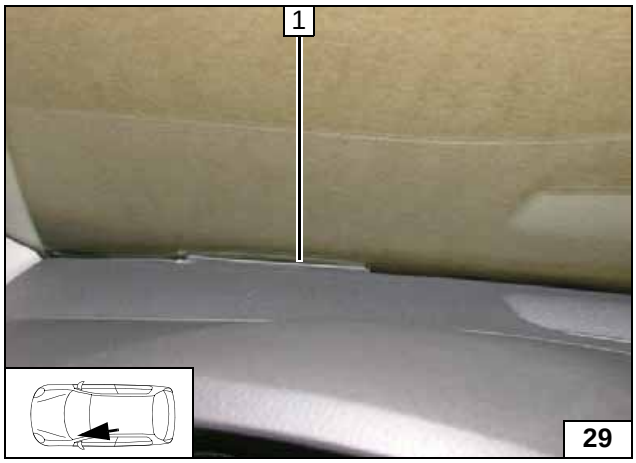
Mounting receiver



Jetta

1 Receiver
2 Mount M6x20 bolt, M6 flanged nut

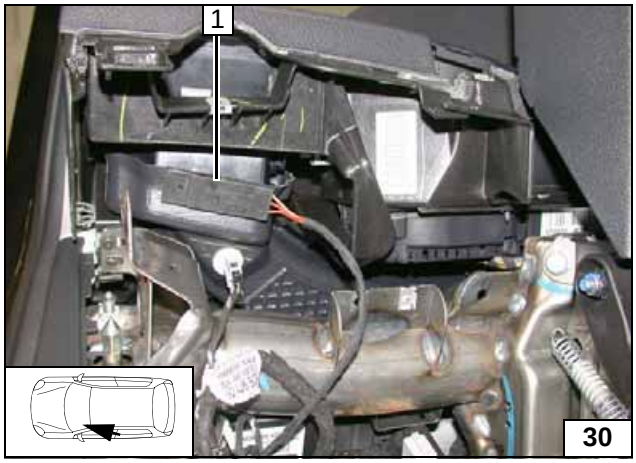
Mounting receiver



All vehicles

1 Antenna

Mounting antenna

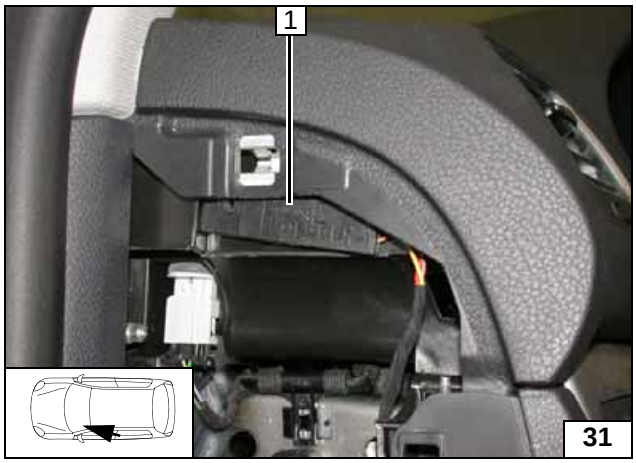


Temperature sensor T100 HTM

Jetta

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

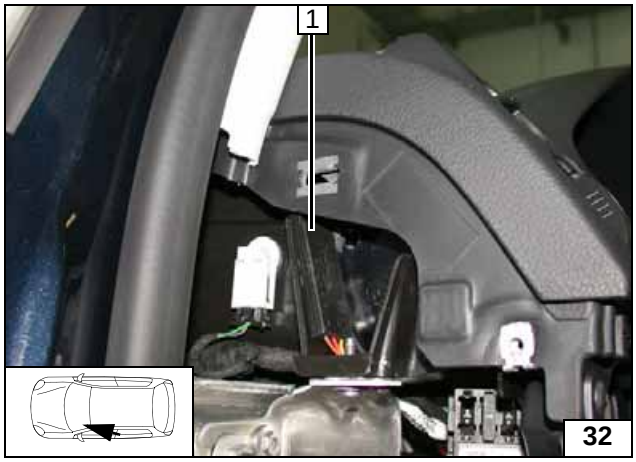
Installing temperature sensor



Golf

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

Installing temperature sensor

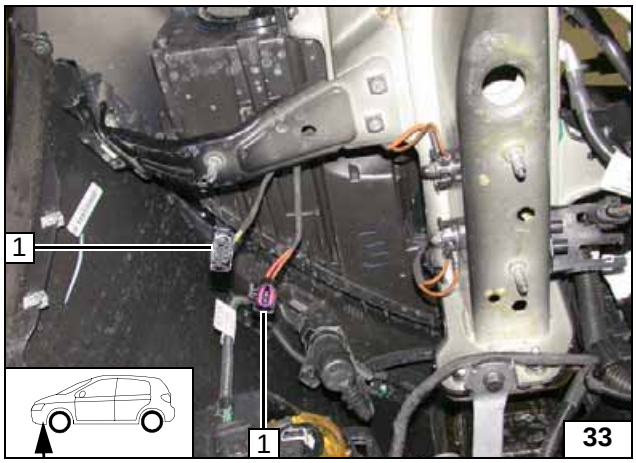


Golf Plus

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

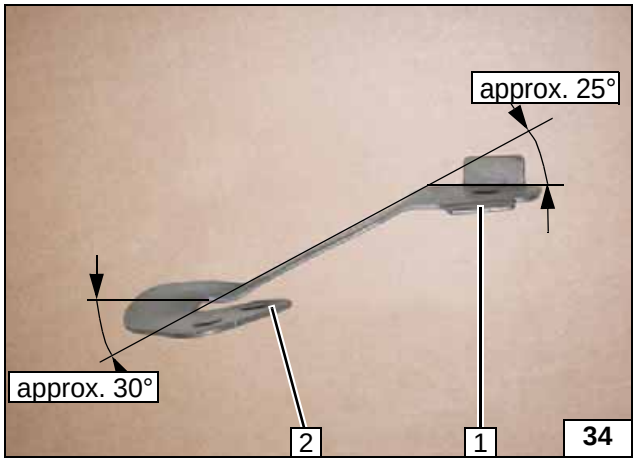
Installing temperature sensor

Preparing Installation Location



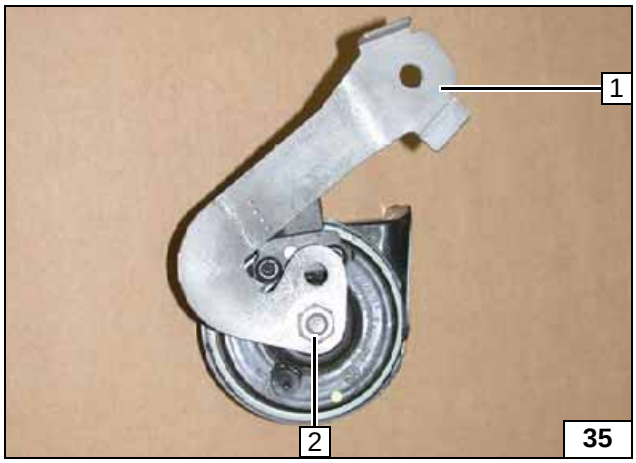
1 Wiring harness of heater

Routing wiring harness



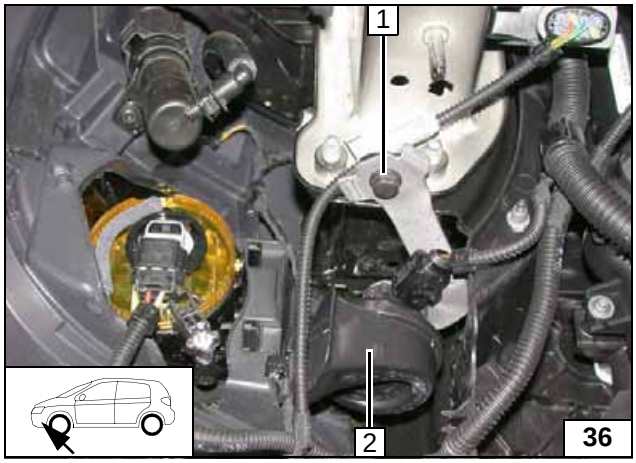
Remove bracket of horn **2** and bend as shown. Bend tab straight.

Processing horn bracket



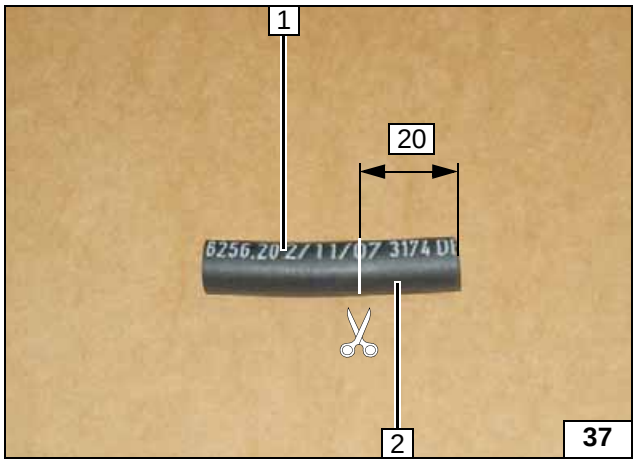
Install horn with original vehicle nut **2** on horn bracket **1**.

Premounting horn



1 Original vehicle bolt
2 Horn

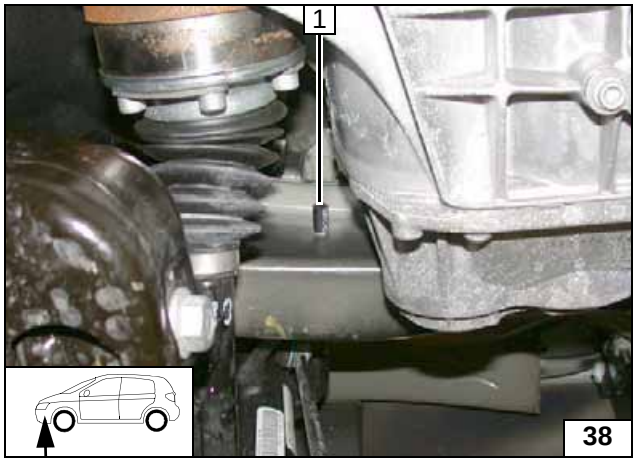
Installing horn



All vehicles

1 Discard section
2 Hose section

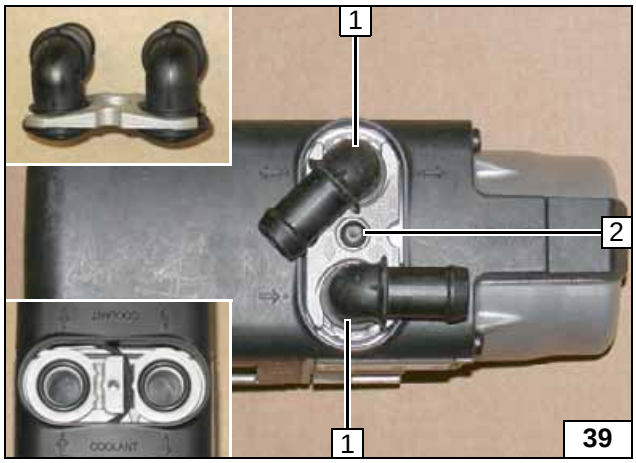
Shortening hose section



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

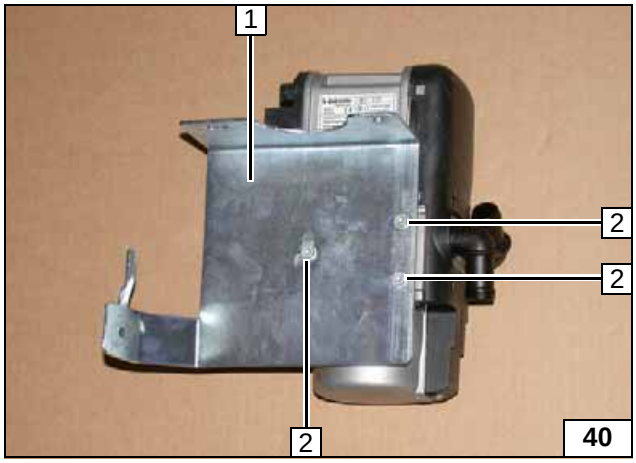
Mounting hose section

Preparing Heater



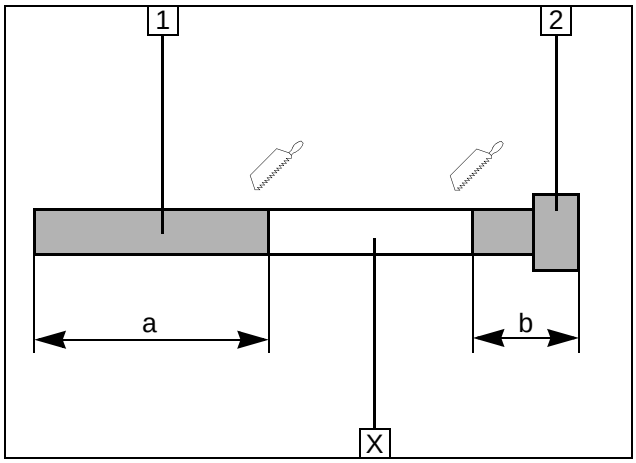
1 Water connection piece, sealing ring [2x each]
2 5x15mm self-tapping bolt, retaining plate of water connection piece

Mounting water connection pieces



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

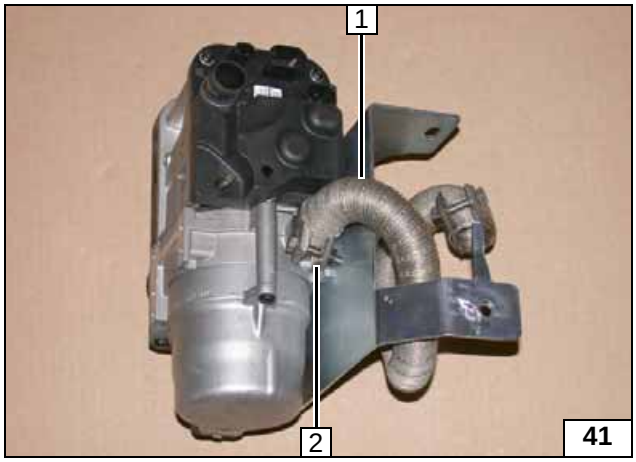
Mounting bracket section A



Discard section **X**.

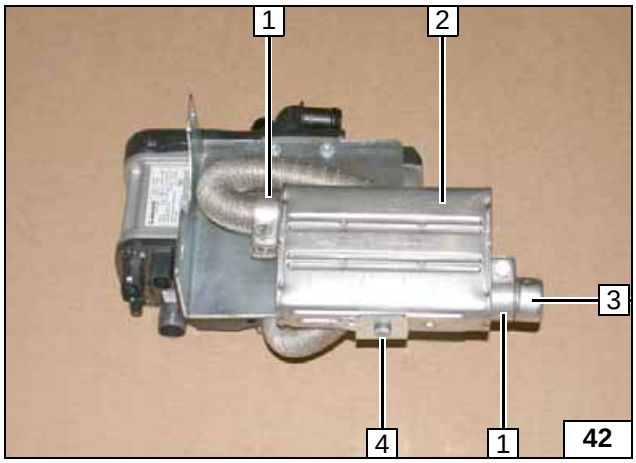
1 Exhaust pipe
a = 470
2 Exhaust end section
b = 35

Preparing exhaust pipe



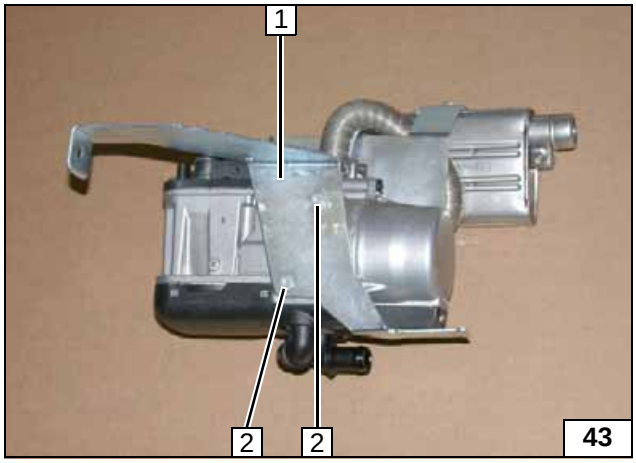
1 Exhaust pipe
2 Hose clamp

Mounting exhaust gas pipe



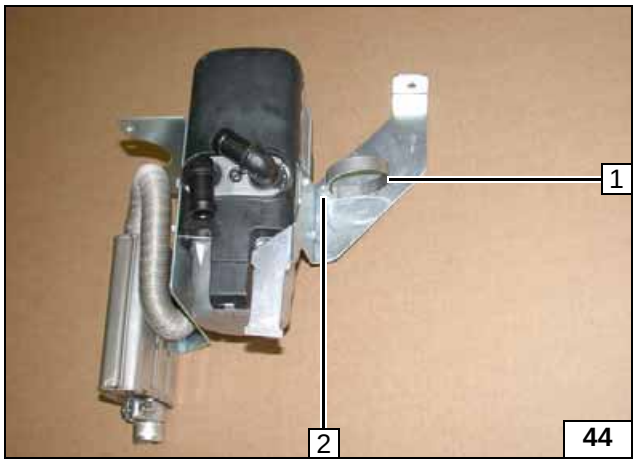
1 Hose clamp [2x]
2 Silencer
3 Exhaust end section
4 M6x16 bolt, spring lockwasher

Installing silencer and exhaust end section



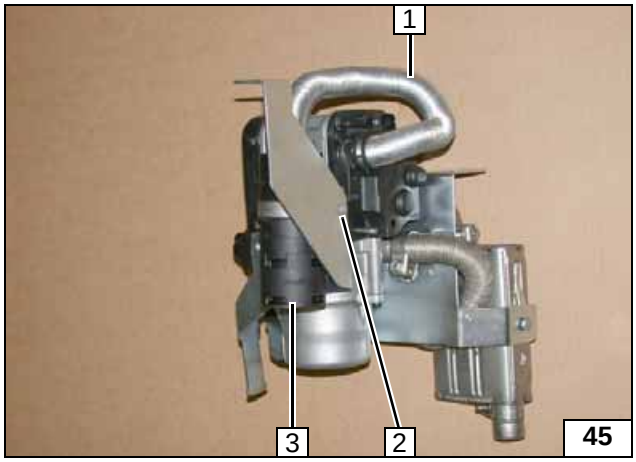
1 Bracket section **B**
2 5x13 self-tapping bolt [2x]

Mounting bracket section B



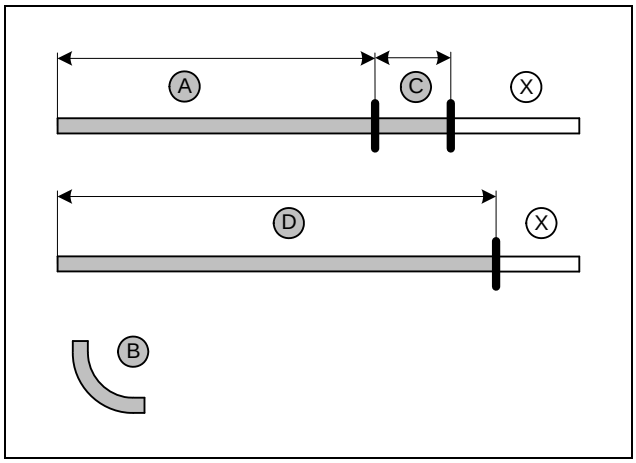
1 51mm dia. clamp
2 Mount M5x16 bolt, flanged nut loosely

Installing clamp



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

Mounting combustion air pipe

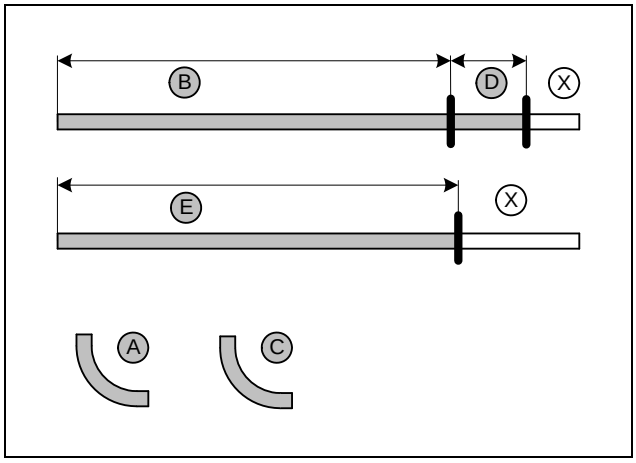


1.2 TSI , 2.0D and 1.4 TSI

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

1.2 TSI / 2.0 D	**1.4 TSI**
A = 1050	**A** = 1170
C = 65	**C** = 65
D = 1130	**D** = 1250

Cutting hoses to length

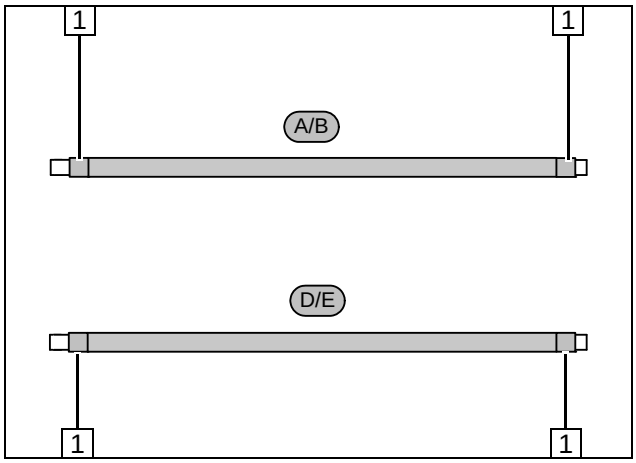


2.0 TSI

Discard section **X**.
Hose **A** = 18mm dia. 90° moulded hose
Hose **C** = 18mm dia. 90° moulded hose

B = 1020
D = 65
E = 1050

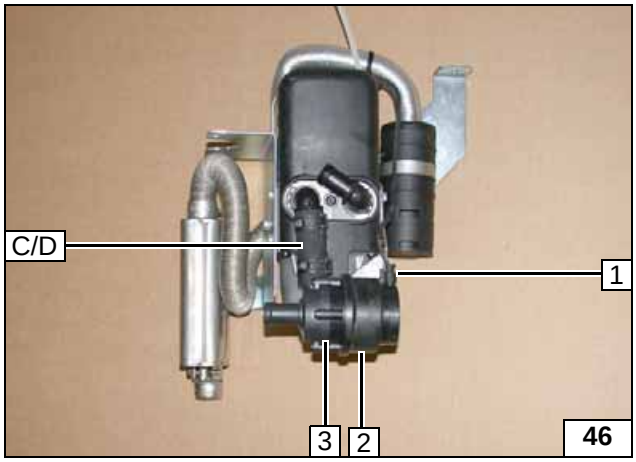
Cutting hoses to length



Hose **A**/**D** = 1.2 TSI, 2.0 D and 1.4 TSI
Hose **B**/**E** = 2.0 TSI
Slide on braided protection hoses and cut to length. Cut heat shrink plastic tubing to length.

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

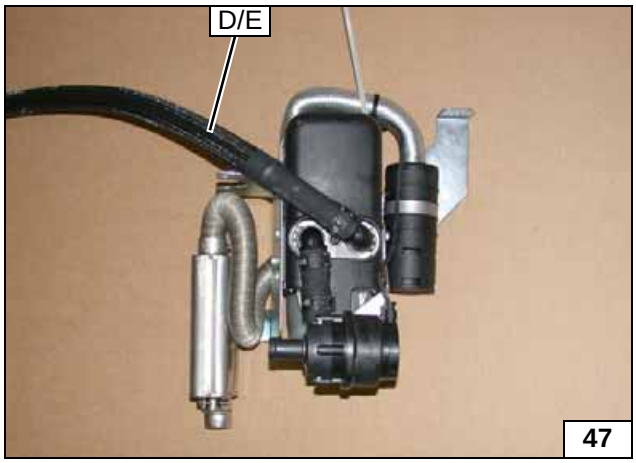
Preparing hoses



Hose **C** = 1.2 TSI, 2.0 D and 1.4 TSI
Hose **D** = 2.0 TSI
All spring clips = 25mm dia.

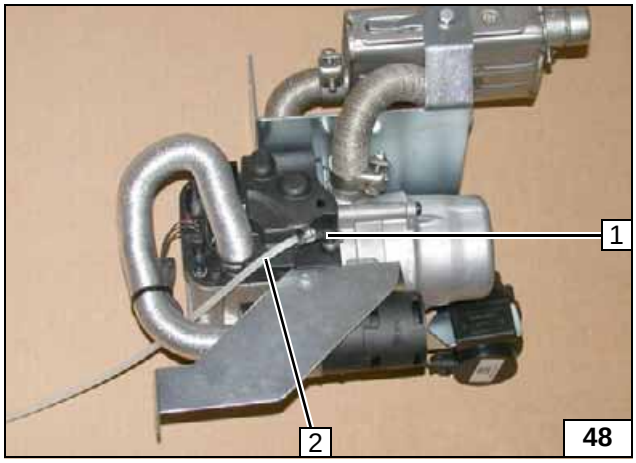
1 Mount wiring harness of circulating pump
2 Mounting of circulating pump
3 Circulating pump

Installing hose and circulating pump



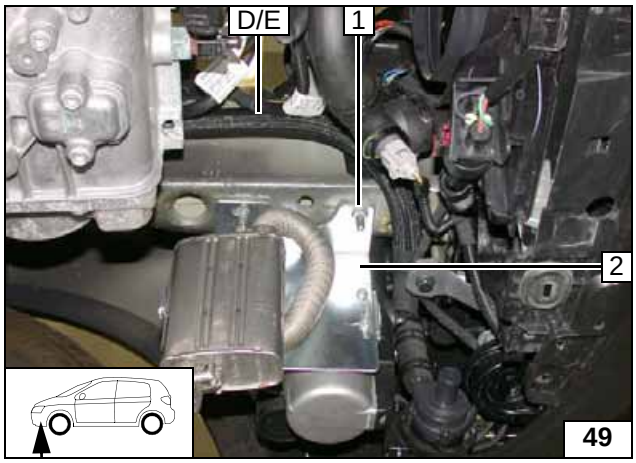
Hose **D** = 1.2 TSI, 2.0 D and 1.4 TSI
Hose **E** = 2.0 TSI
All spring clips = 25mm dia.

Installing hose D



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

Premounting fuel line

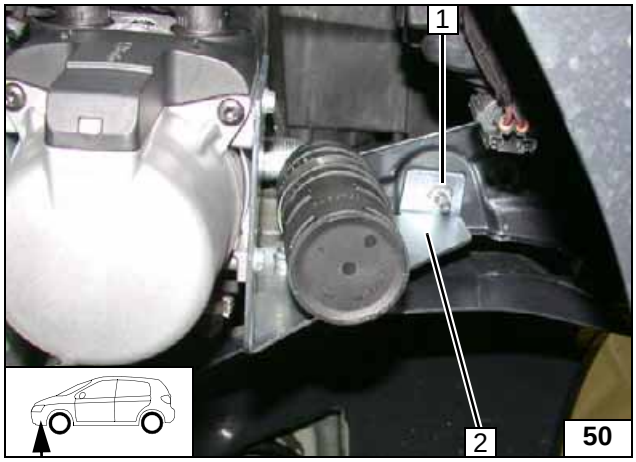


Installing Heater

Route hose **D**/**E** to brake booster.

1 Original vehicle stud bolt, M8 flanged nut
2 Bracket section **A**

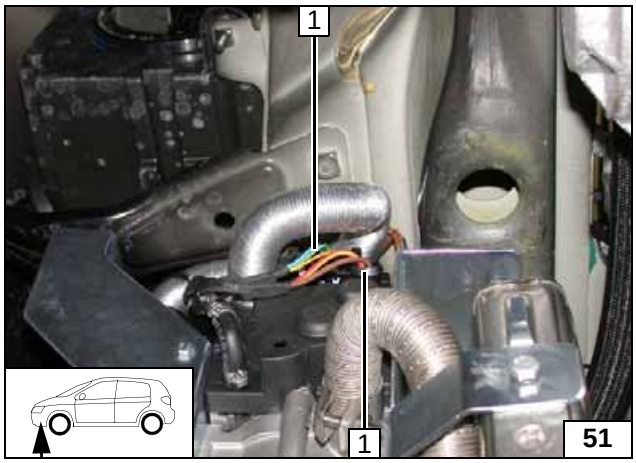
Mounting heater



In case of vehicles without stud bolt, produce 8.5mm hole through bracket in cross member and fasten bracket using M8x20 bolt and flanged nut. When drilling, watch for components located behind.

1 Original vehicle stud bolt, M8 flanged nut
2 Bracket section **B**

Mounting heater



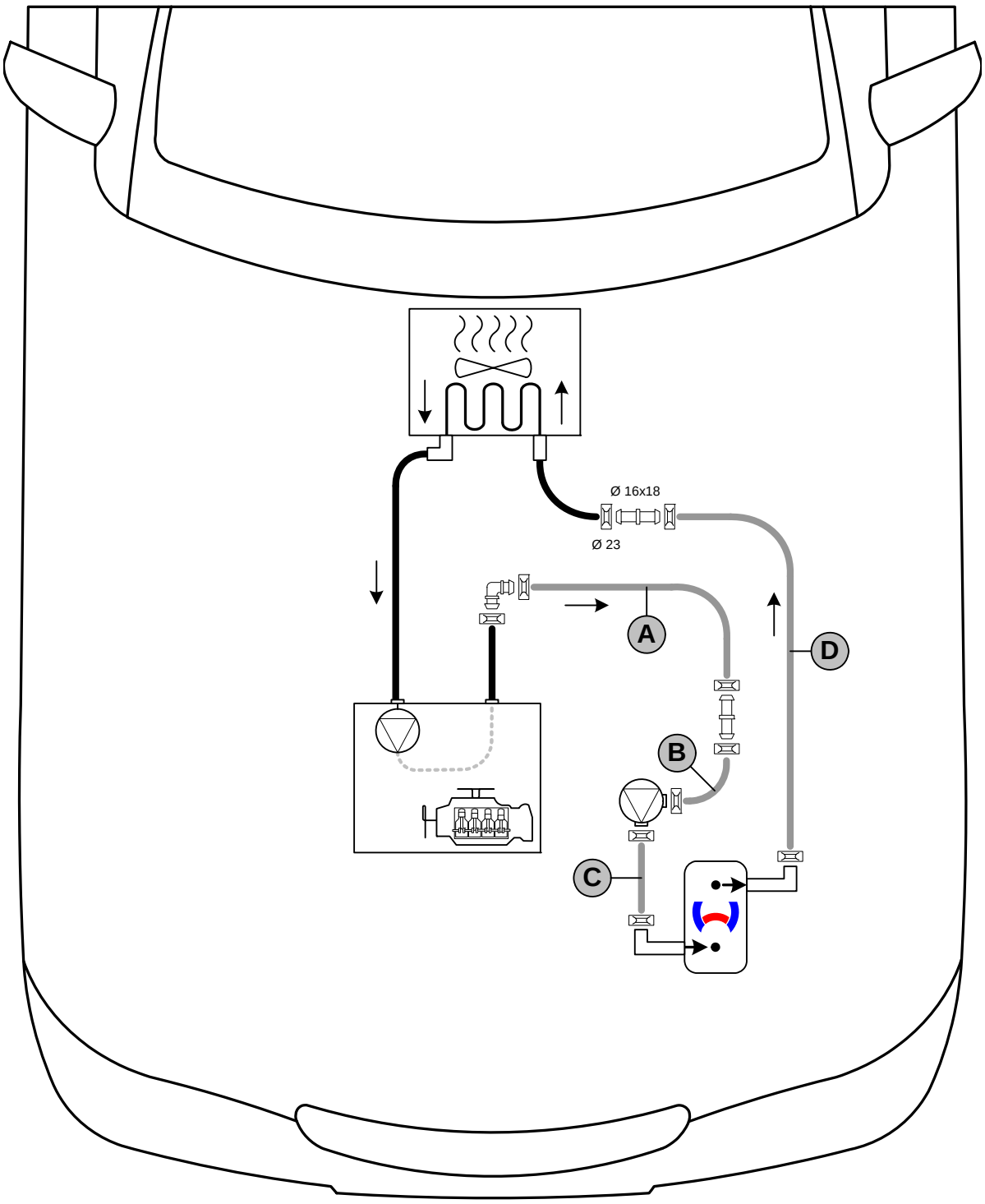
1 Wiring harness of heater [2x]

Connecting wiring harness

Coolant Circuit 1.2 TSI

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

Hose installation diagram

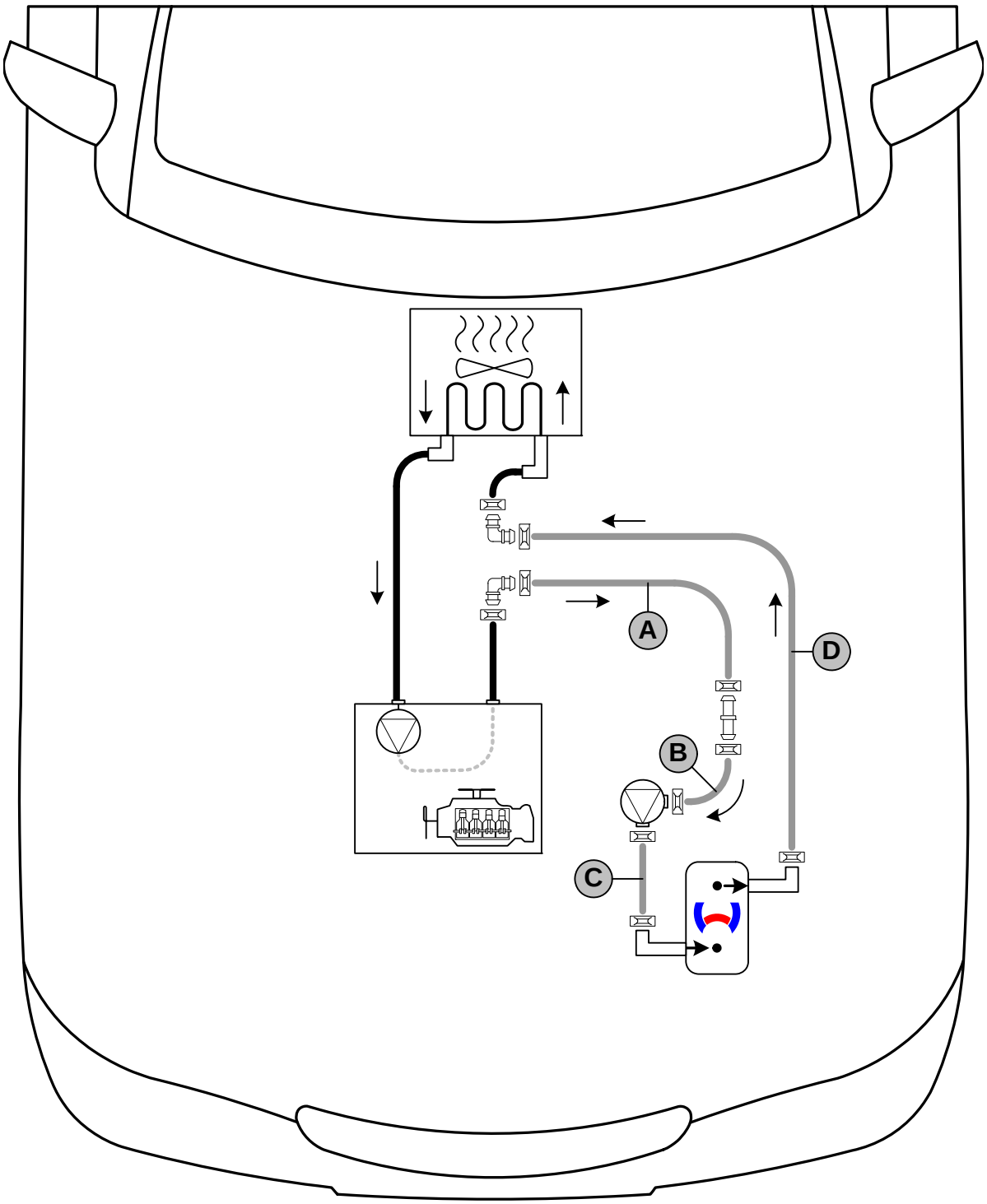


All spring clips without a specific designation = 25mm dia.
All connecting pipes without a specific designation and = 18x18mm dia.

Coolant Circuit of 1.4 TSI and 2.0 D

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

Hose installation diagram

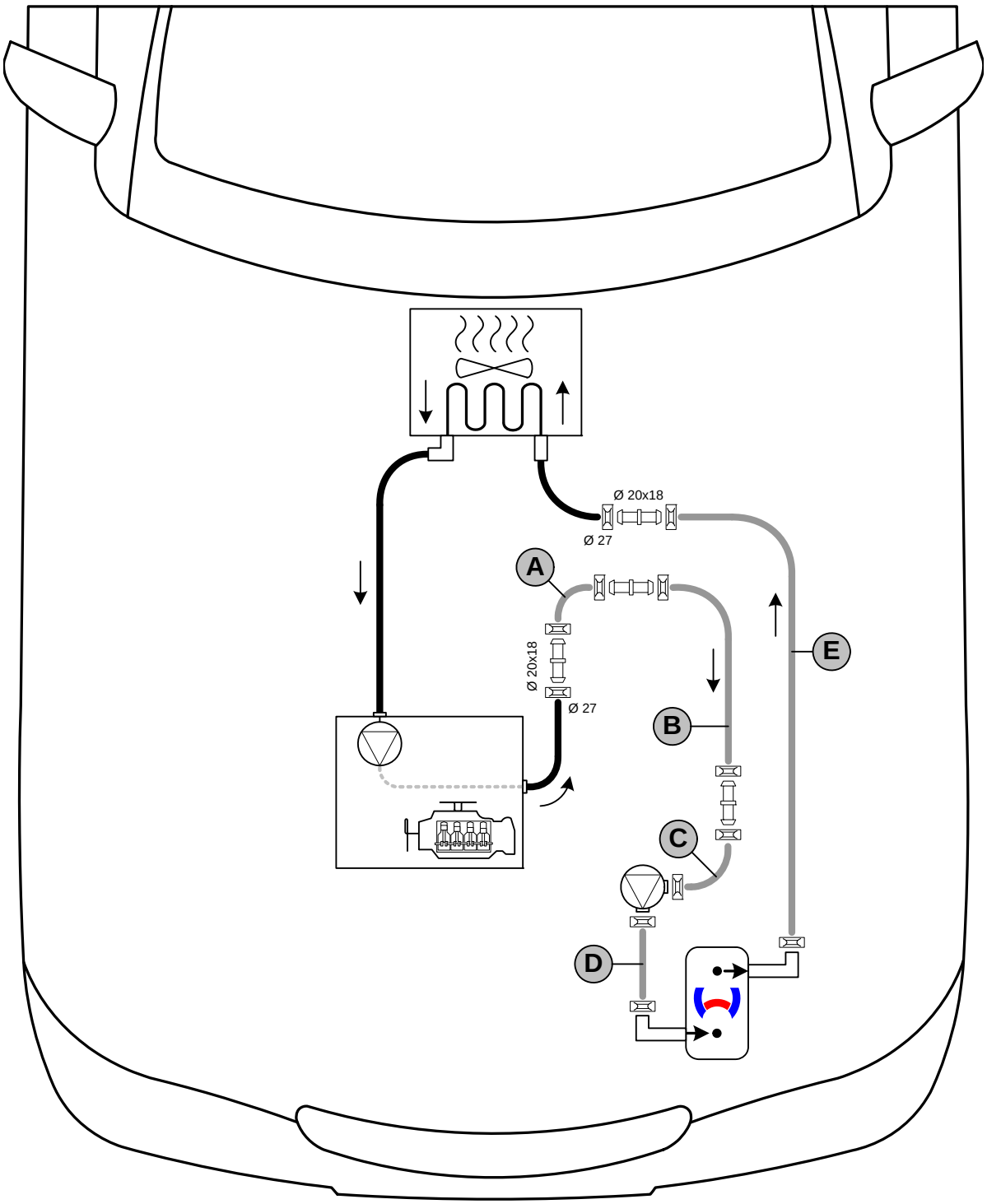


All spring clips = 25 mm dia.
All connecting pipes and = 18x18mm dia.

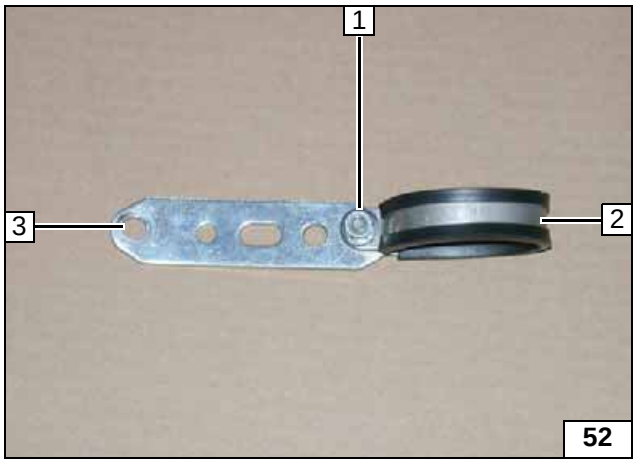
Coolant Circuit 2.0 TSI

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

Hose installation diagram



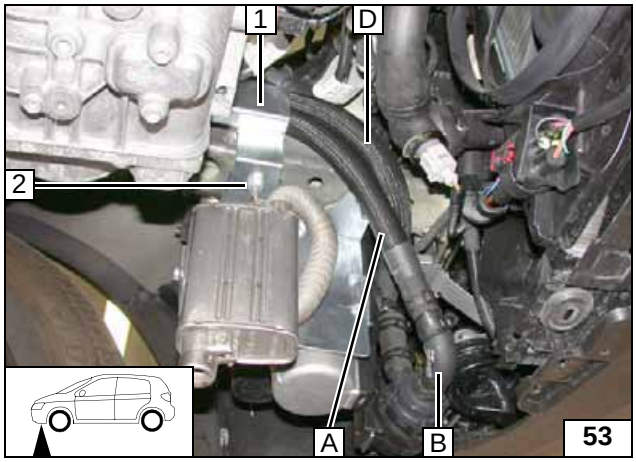
All spring clips without a specific designation = 25mm dia.
All connecting pipes without a specific designation and = 18x18mm dia.



All vehicles

1 Mount M6x20 bolt, M6 flanged nut loosely
2 38mm dia. rubber-coated p-clamp
3 8.0mm dia. hole

Preparing perforated bracket



All petrol vehicles

Image shows 1.2 TSI.
Route hose **A** to brake booster. Align hoses **A** and **D** behind hose bracket **1**. Ensure sufficient distance from neighbouring components.

2 Original vehicle stud bolt, M8 flanged nut

Routing to frame side member

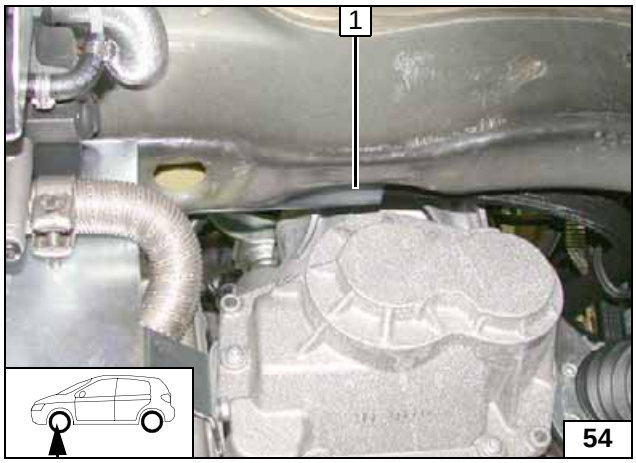


Image shows 1.2 TSI.
Ensure sufficient spacing between hose bracket **1** and transmission.

Routing to frame side member

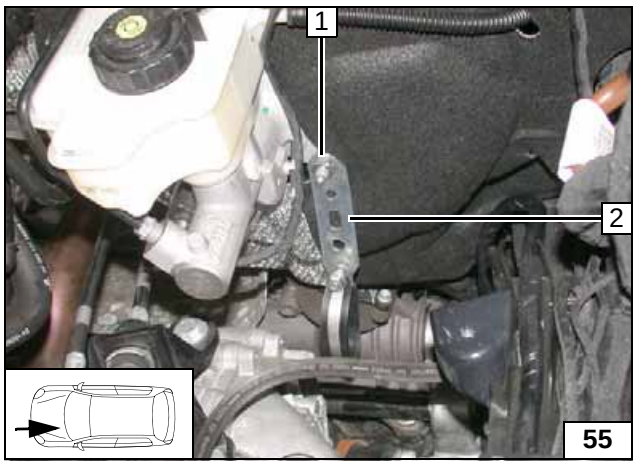
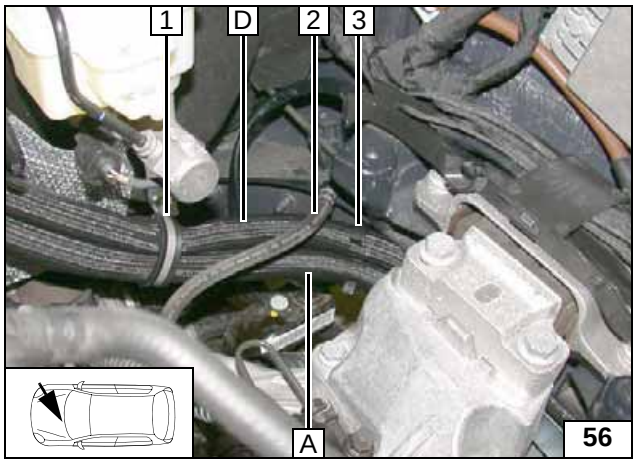


Image shows 1.2 TSI.

1 Mount original vehicle bolt, M8 nut loosely
2 Premounted perforated bracket

Mounting perforated bracket

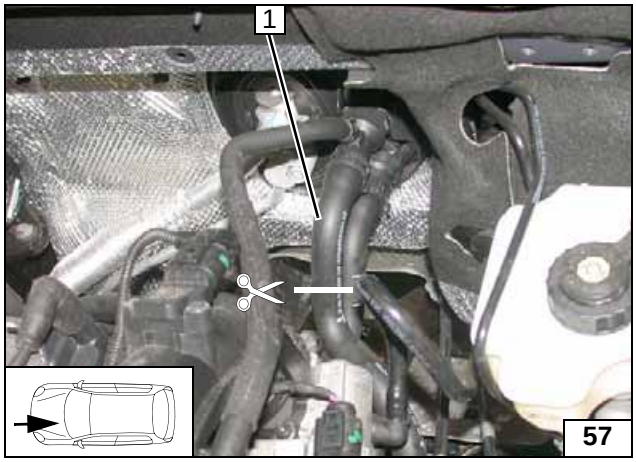


1.2 TSI

Documented using the 1.2 TSI 77kW manual transmission (SG).
Route hoses **A** and **D** through rubber-coated p-clamp **1**. Ensure sufficient distance from coupling hose **2**.

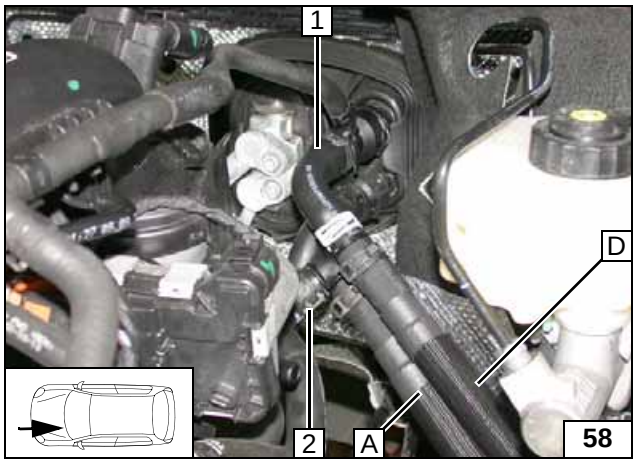
3 Spacer bracket

Routing in engine compartment



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

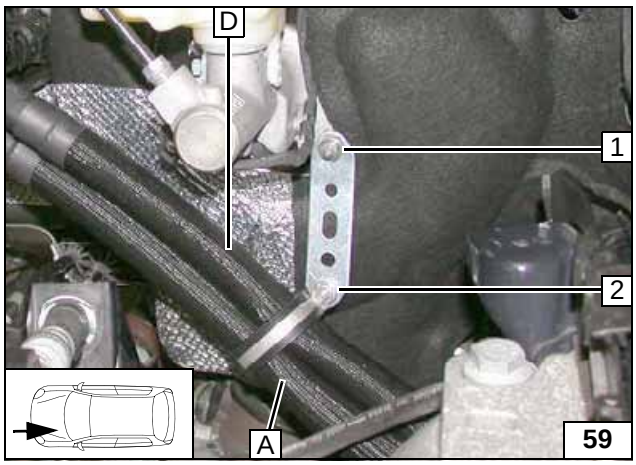
Cutting point



Align hoses. Ensure sufficient distance from neighbouring components.

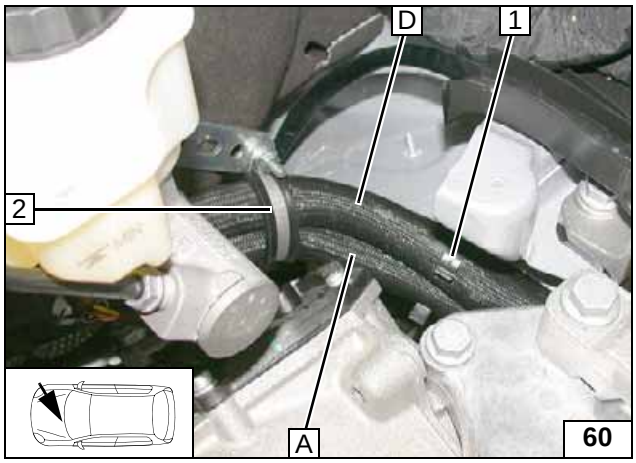
1 Hose on heat exchanger inlet turned to left
2 Hose of engine outlet

Connecting engine outlet and heat exchanger inlet



Align hoses **A** and **D**. Tighten M8 nut **1** and M6 flanged nut **2**.

Routing in engine compartment

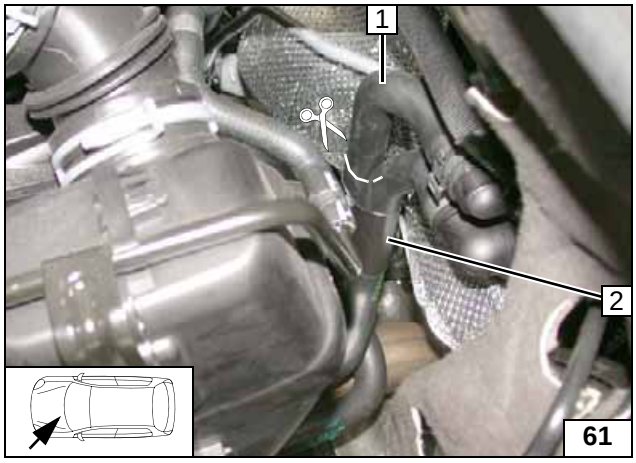


1.4 TSI

Documented using the 1.4 TSI 118kW.
Route hoses **A** and **D** through rubber-coated p-clamp **2**.

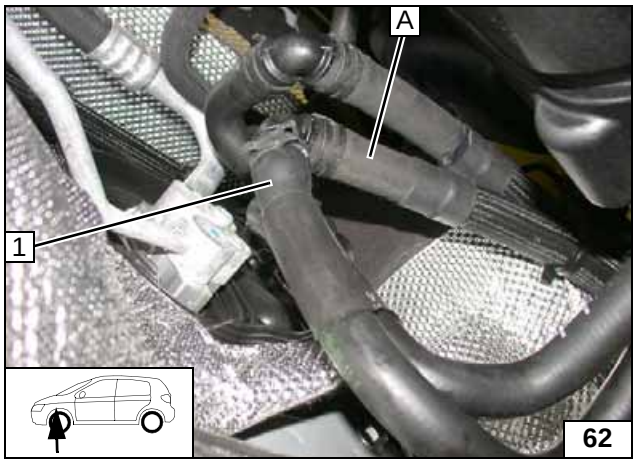
1 Spacer bracket

Routing in engine compartment



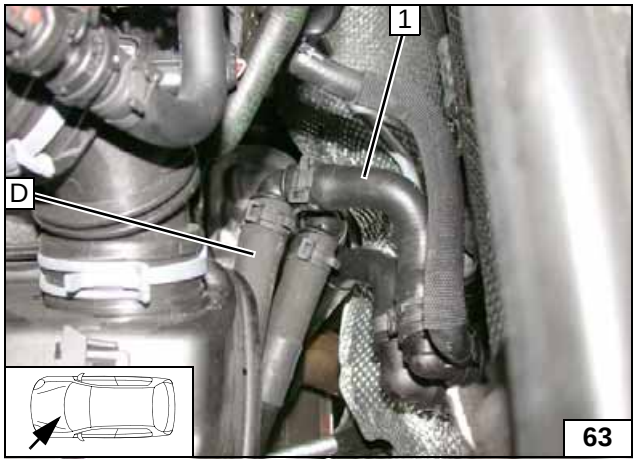
Push protective hose **2** down by about 30mm.
Cut off hose on engine outlet/heat exchanger inlet **1** at marking.

Cutting point



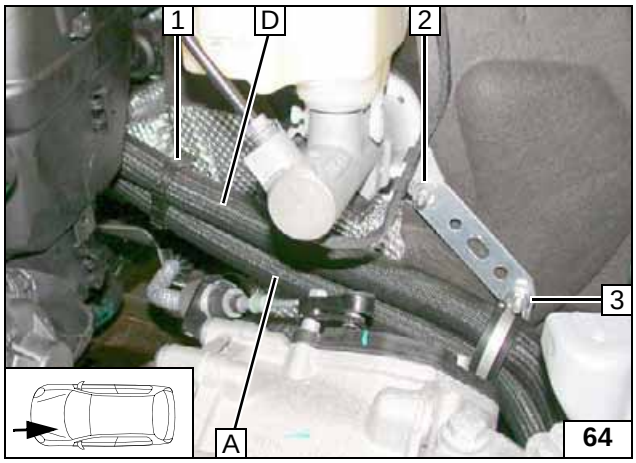
1 Hose of engine outlet

Connecting engine outlet



1 Hose on heat exchanger inlet

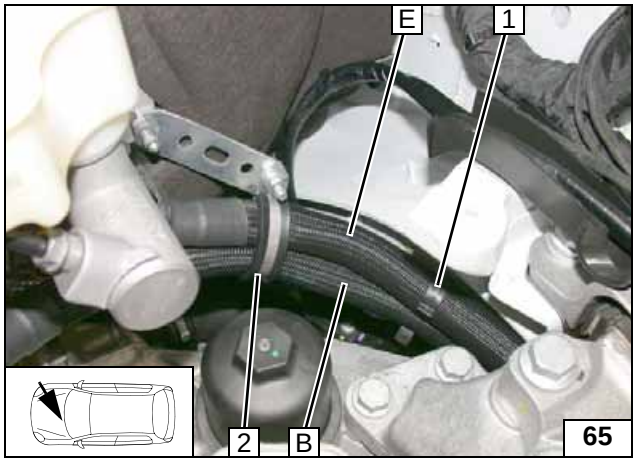
Connection of heat exchanger inlet



Align hoses **A** and **D**. Tighten M8 nut **2** and M6 flanged nut **3**. Ensure sufficient distance from neighbouring components.

1 Spacer bracket

Routing in engine compart-ment

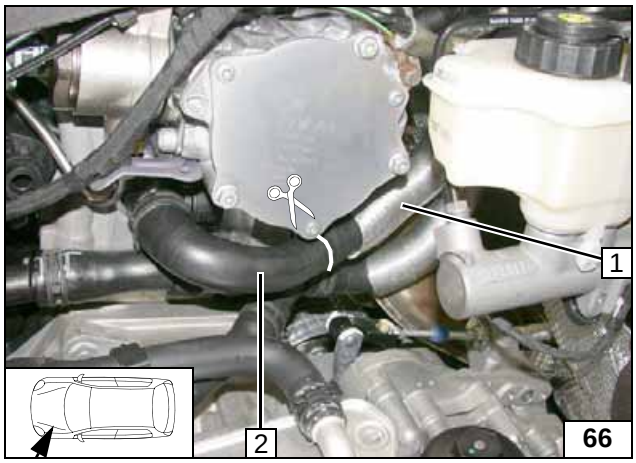


2.0 TSI

Documented using the 2.0 TSI 147kW.
Route hoses **B** and **E** through rubber-coated p-clamp **2**.

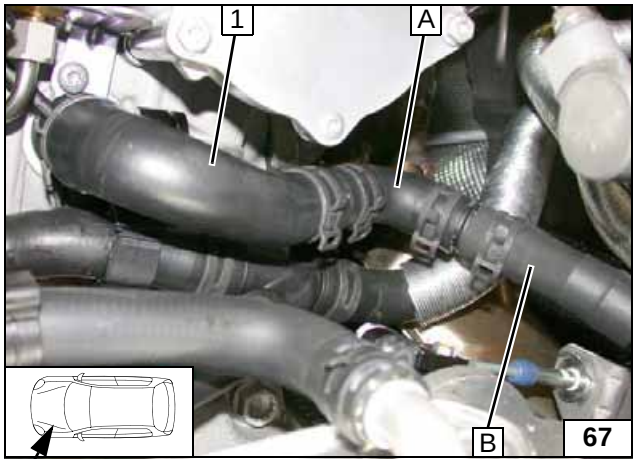
1 Spacer bracket

Routing in engine compart-ment



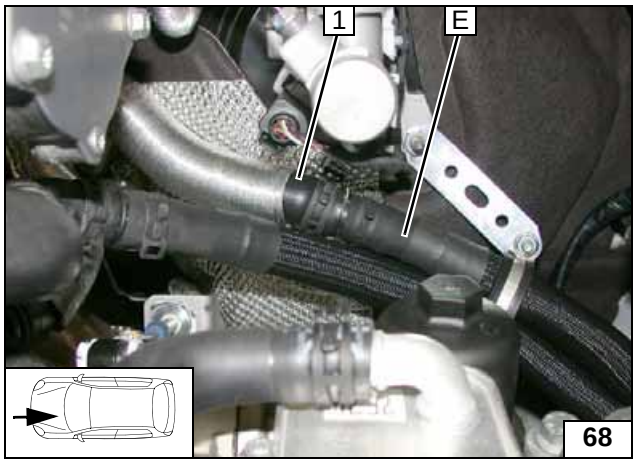
Push heat protection hose **1** to rear. Cut off hose on engine outlet/heat exchanger inlet **2** at marking.

Cutting point



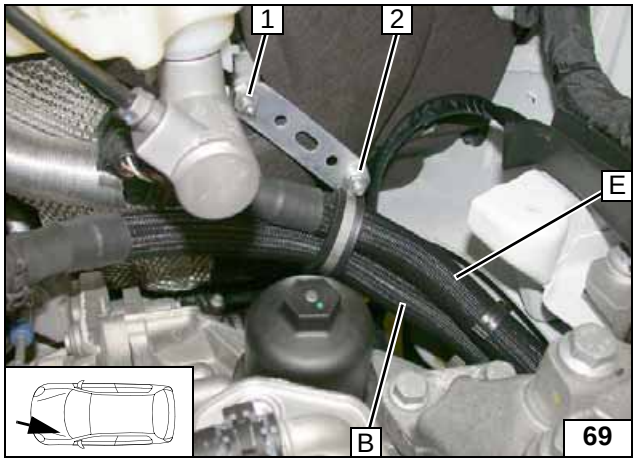
1 Hose of engine outlet

Connect-ing engine outlet



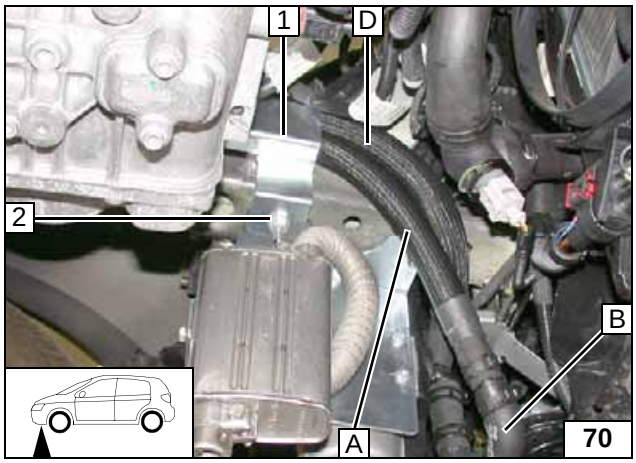
1 Hose on heat exchanger inlet

Connection of heat exchanger inlet



Align hose **B** and **E**. Tighten M8 nut **1** and M6 flanged nut **2**.
Align hoses. Ensure sufficient distance from neighbouring components.

Routing in engine compartment



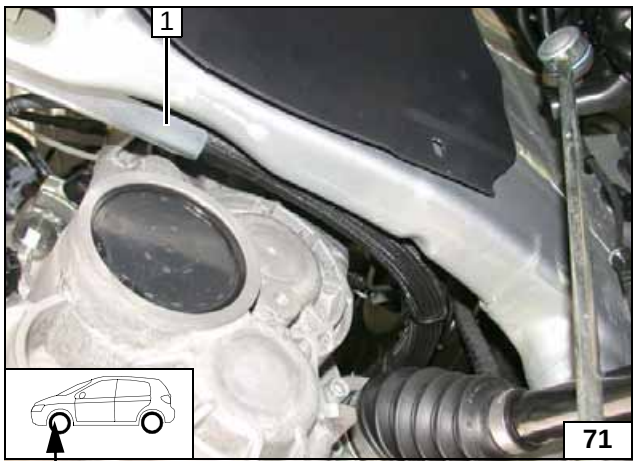
All Diesel vehicles

SG

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

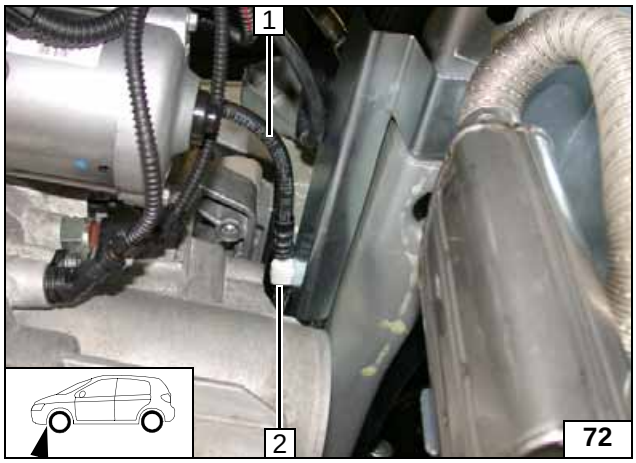
2 Original vehicle stud bolt, M8 flanged nut

Routing on frame side member



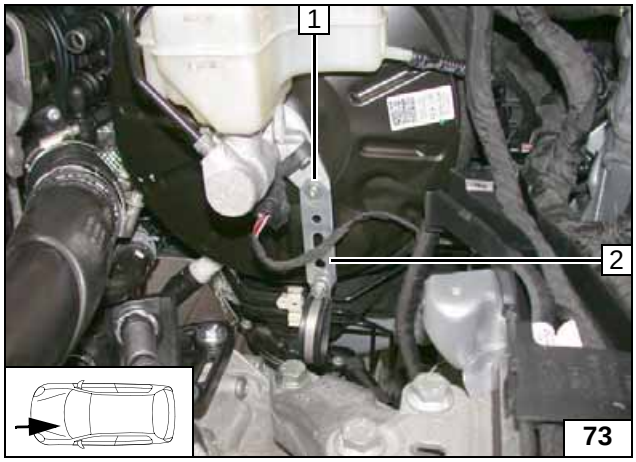
Ensure sufficient spacing between hose bracket **1** and transmission.

Routing on frame side member



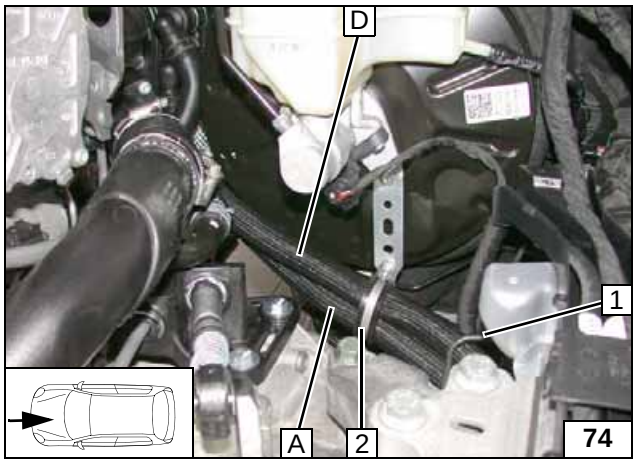
Latch coupling line **1** in clip **2** and align. Ensure sufficient distance from neighbouring components.

Routing of coupling line



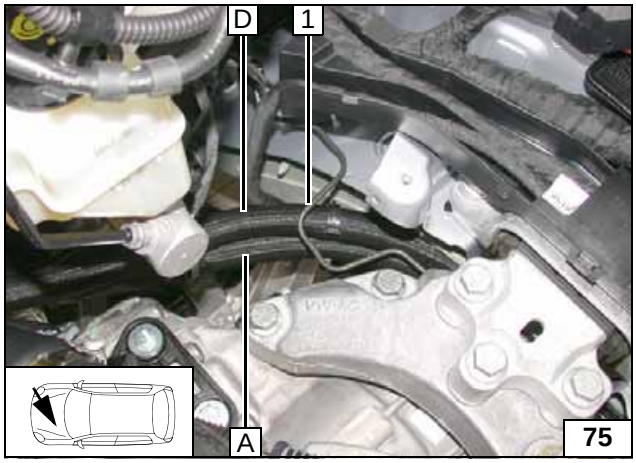
1 Mount original vehicle bolt, M8 nut loosely
2 Premounted perforated bracket

Mounting perforated bracket



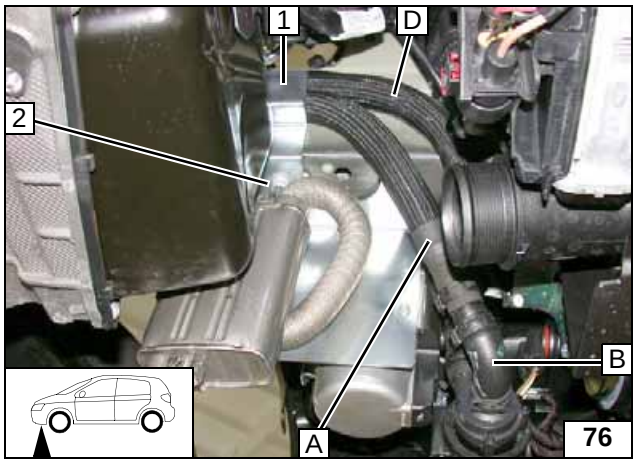
Route hoses **A** and **D** behind the coupling line **1** and through rubber-coated p-clamp **1**.

Routing in engine compartment



Ensure sufficient distance from coupling line **1**.

Routing in engine compartment

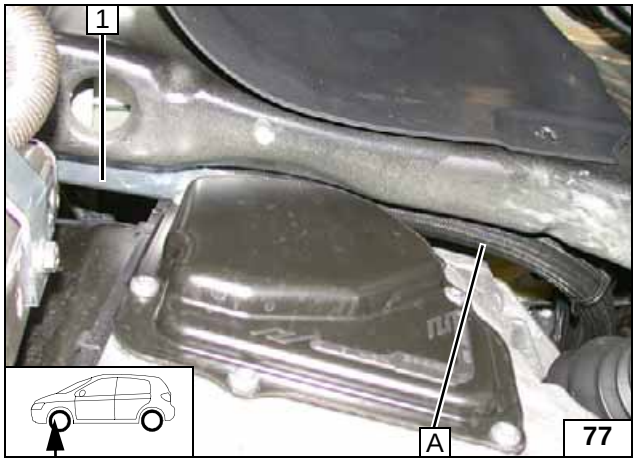


DSG

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

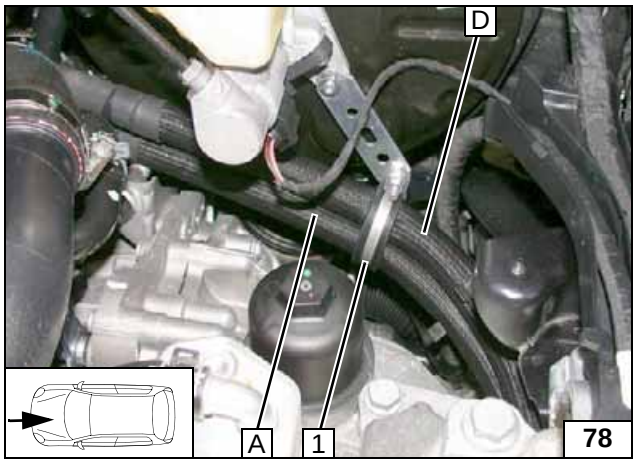
2 Original vehicle stud bolt, M8 flanged nut

Routing on frame side member



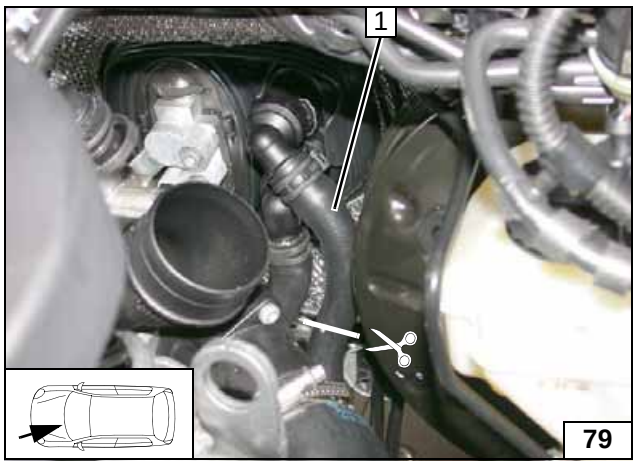
Ensure sufficient spacing between hose bracket **1** and transmission.

Routing to frame side member



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

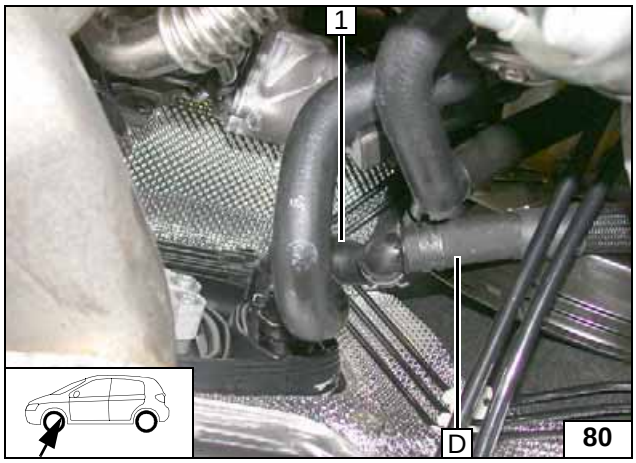
Routing in engine compartment



All Diesel vehicles

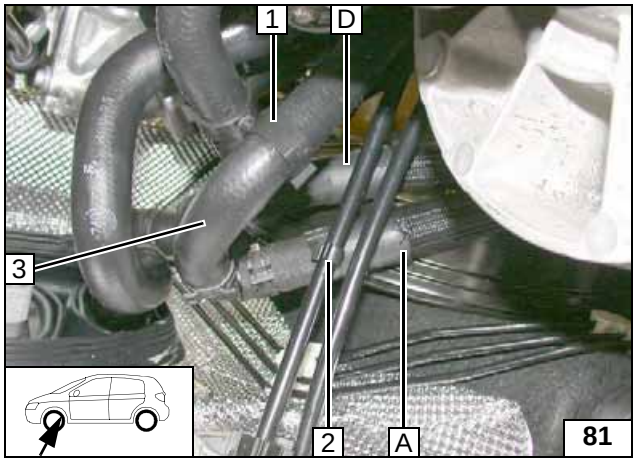
Cut off hose on engine outlet/heat exchanger inlet **1** at marking.

Cutting point



1 Hose on heat exchanger inlet

Connection of heat exchanger inlet



1 Spacer bracket
2 22x8 spacer bracket
3 Hose of engine outlet

Connecting engine outlet

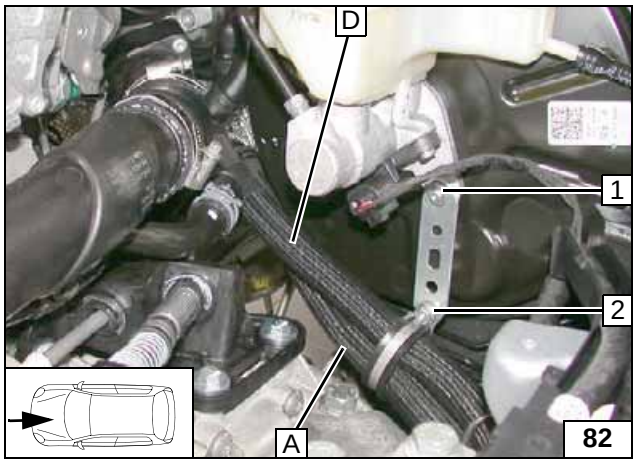


Figure shows manual transmission (SG). Align hoses **A** and **D**. Tighten M8 nut **1** and M6 flanged nut **2**.

Routing in engine compartment

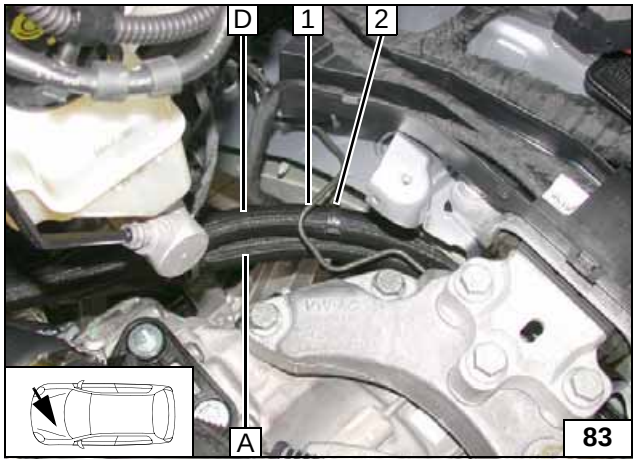


Figure shows manual transmission (SG). Ensure sufficient distance from coupling line **1**.

2 23x23mm hose bracket (retaining clip removed)

Routing in engine compartment

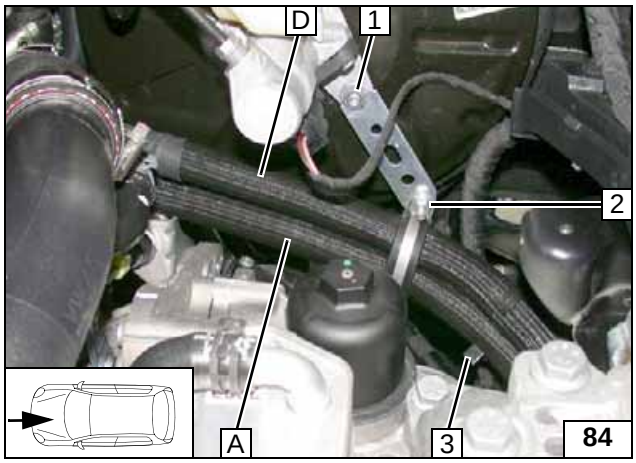


Figure shows direct gear transmission (DSG).
Align hoses **A** and **D**. Tighten M8 nut **1** and M6 flanged nut **2**.

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 in 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.

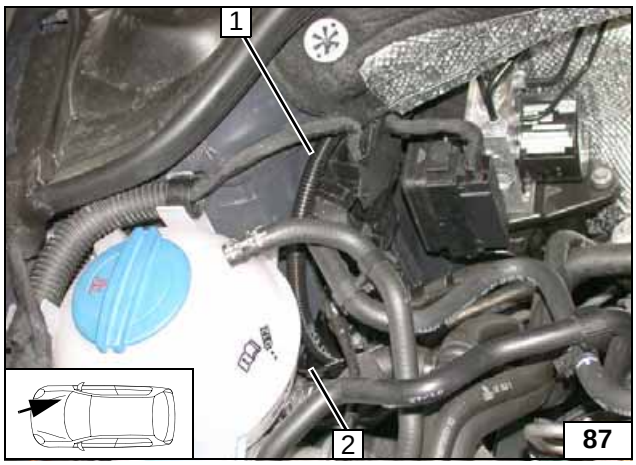
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.

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

Routing lines

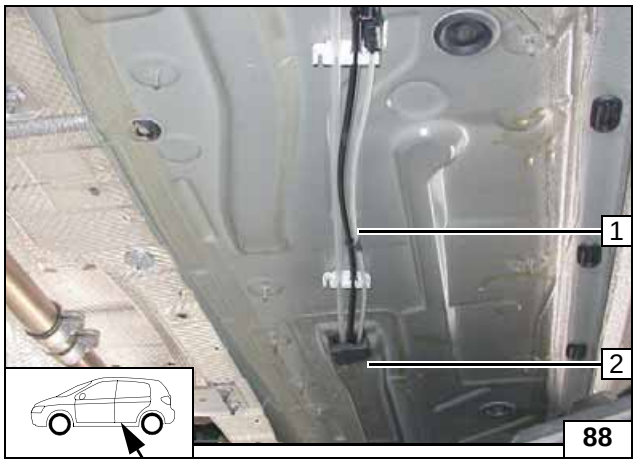
Route fuel line and wiring harness of metering pump **1** to the firewall behind the insulation mat on the right vehicle side.

Routing lines



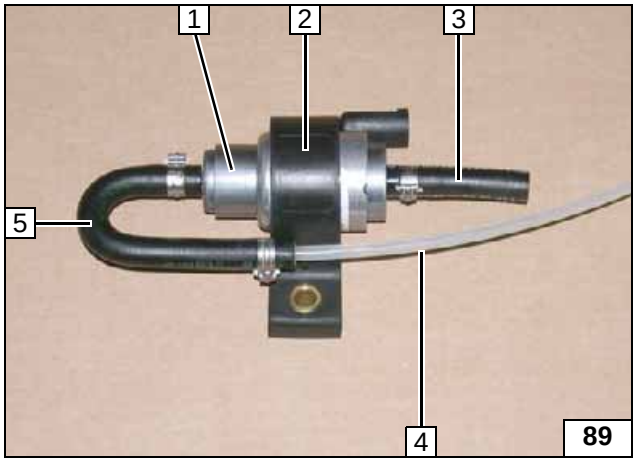
Cut off approx. 300mm from the 10mm dia. corrugated tube and slide on to fuel line and wiring harness of metering pump. Guide fuel line and wiring harness of metering pump **1** into original vehicle line duct **2** and route to underbody.

Routing lines



1 Fuel line and wiring harness of metering pump
2 Original vehicle line duct

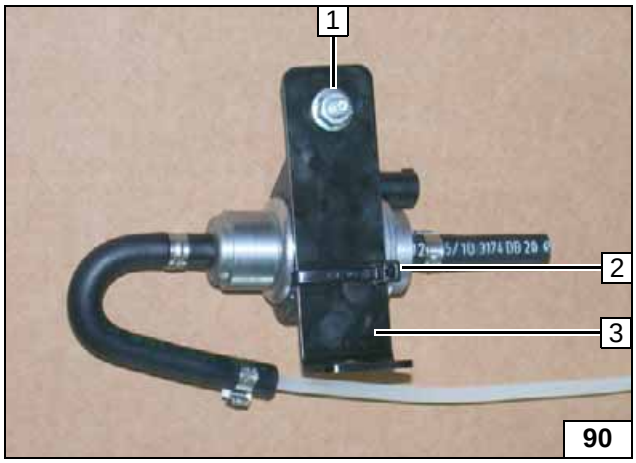
Routing lines



Cut off approx. 600mm from fuel line.

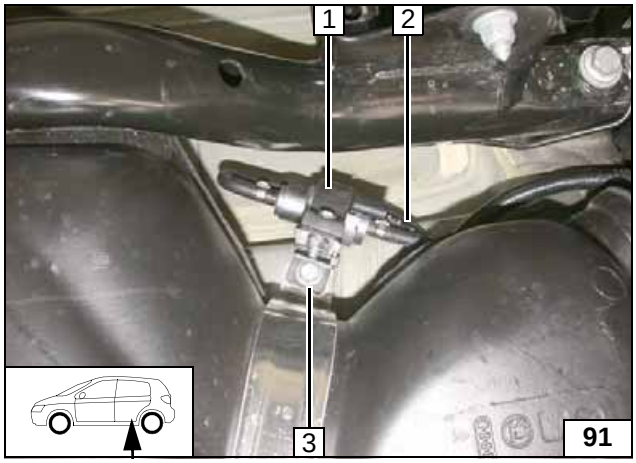
1 Metering pump
2 Mounting of metering pump
3 Hose section, 10mm dia. clamp
4 600mm fuel line
5 180° moulded hose, 10mm dia. clamp [2x]

Premounting metering pump



1 M6x25 bolt, flanged nut
2 Cable tie
3 Bracket of metering pump

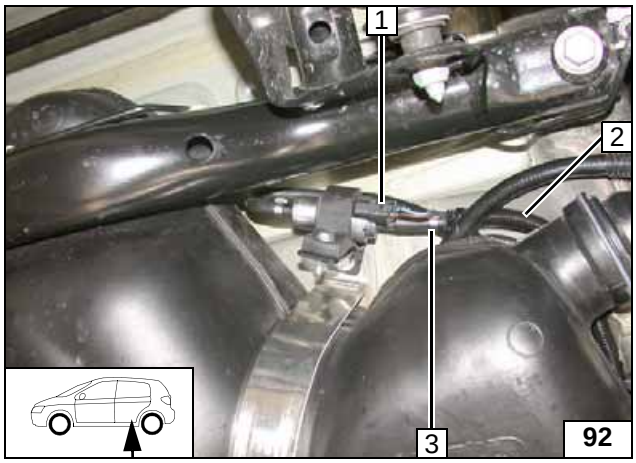
Premounting metering pump



Slide approx 500mm of 10mm dia. corrugated tube **2** onto fuel line of fuel standpipe and route to the fuel-tank sending unit.

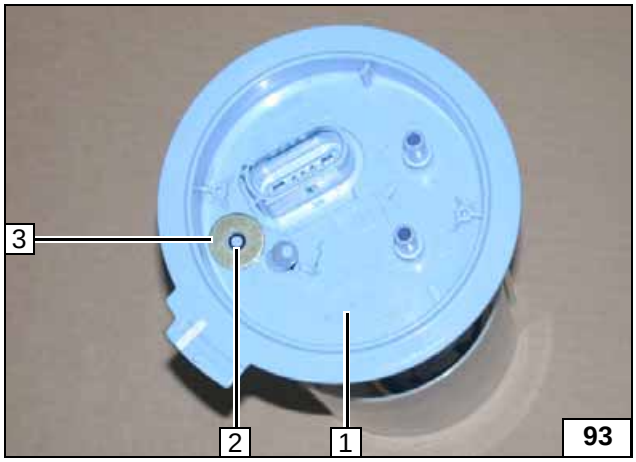
1 Preassembled metering pump
3 Original vehicle bolt

Mounting metering pump



1 Wiring harness of metering pump, connector mounted
2 Fuel line and wiring harness of metering pump in corrugated tube
3 10 mm dia. clamp

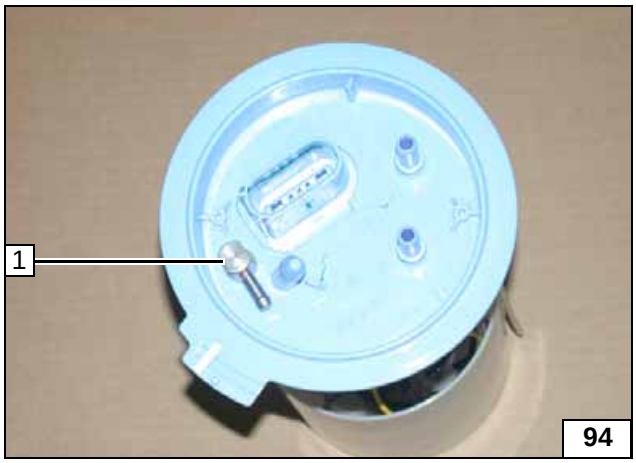
Connecting metering pump



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

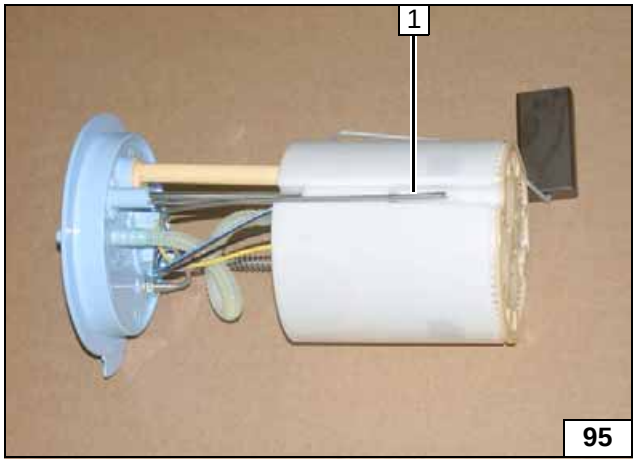
2 6 mm dia. hole

Fuel extraction



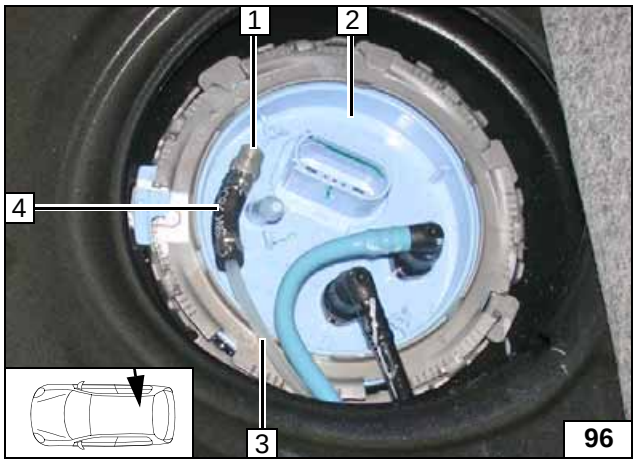
Shape fuel standpipe **1** according to template and cut to length.

Installing fuel standpipe



Align fuel standpipe **1** as shown.

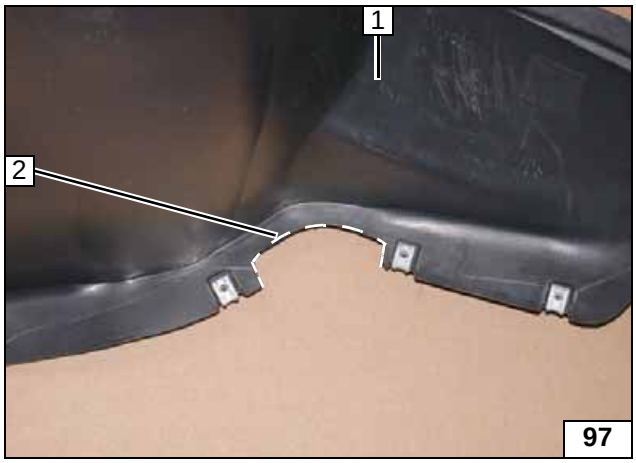
Installing fuel standpipe



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

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

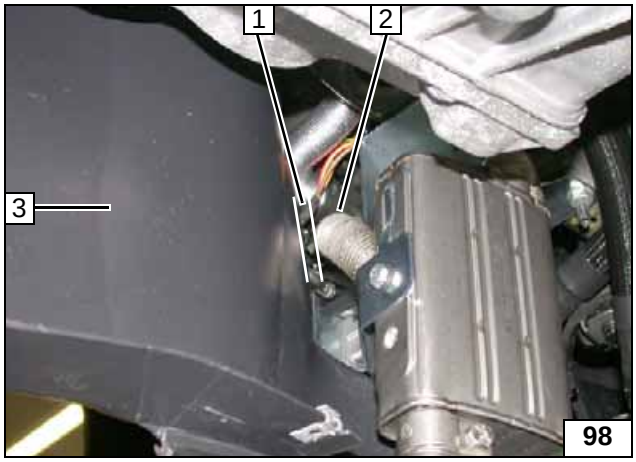
Mounting fuel-tank sending unit



Wheel-Well Inner Panel / Underride Protection

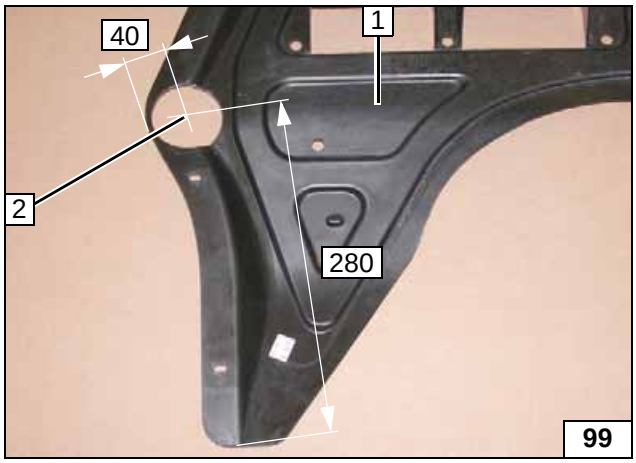
Cut out wheel-well inner panel **1** at the marking **2**.

Cutting out wheel-well inner panel



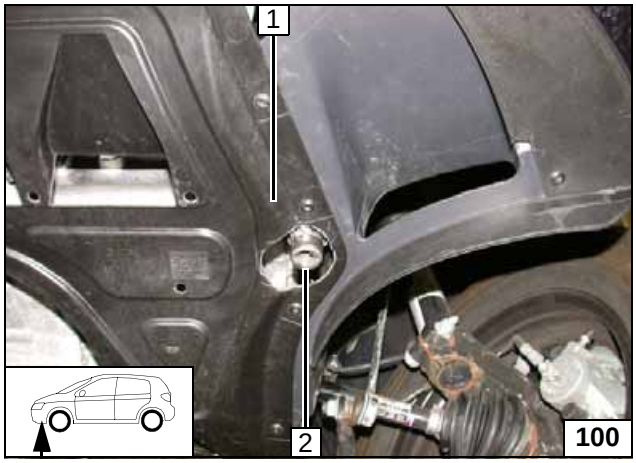
Ensure sufficient distance between wheel-well inner panel **3** and exhaust pipe **2** at position **1** (at least 10mm).

Mounting wheel-well inner panel



1 Underride protection
2 60mm dia. hole

Cutting out underride protection



Align exhaust end section **2** in centre of hole and flush with underride protection **1**.

Aligning exhaust end section

Final Work

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

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

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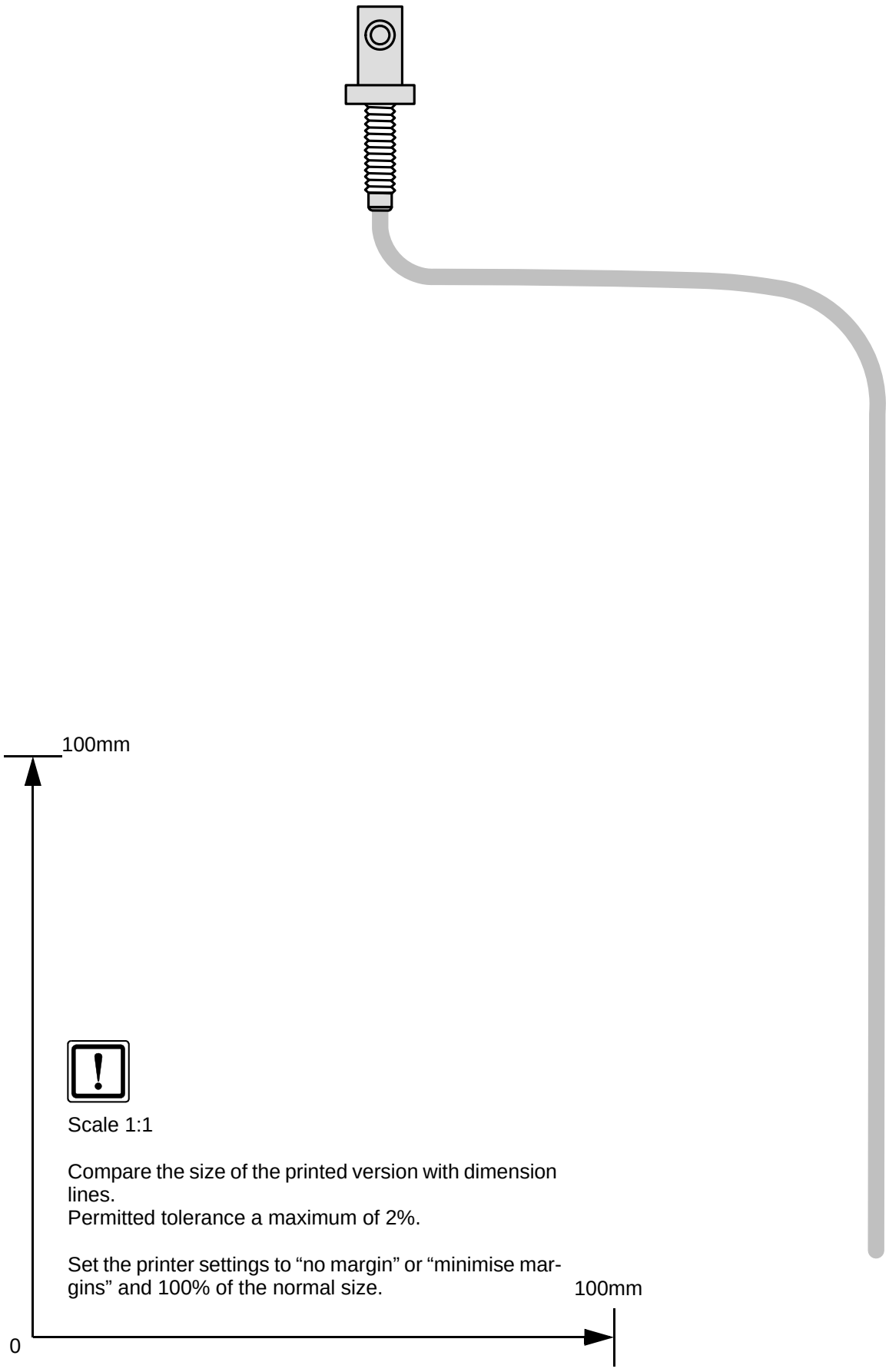
http://dealers.webasto.com

Template for Fuel Standpipe



Operating Instructions for Climatic

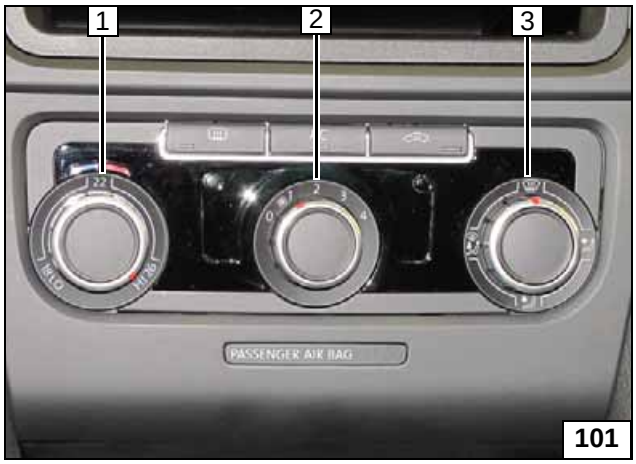
Please remove this page in case of Climatic and add it to the vehicle operating instructions.

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 vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

A/C control panel



1 Set temperature to "max."
2 Fan level 1 or 2
3 Air outlet to windscreen

Fuses of engine compartment

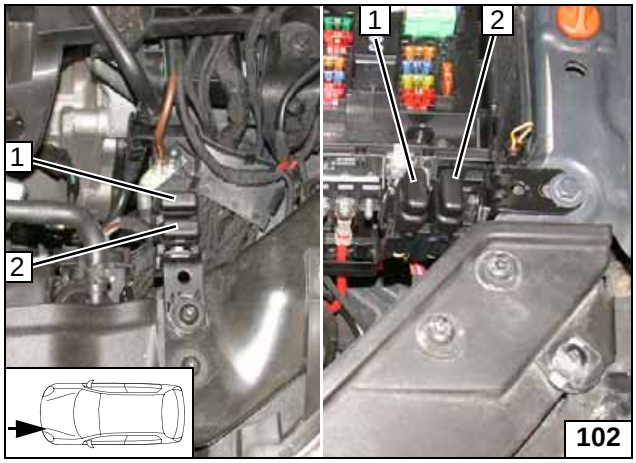


Image on the left shows Jetta / Golf
Image on the right shows Golf Plus

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

Fuses of passenger compartment

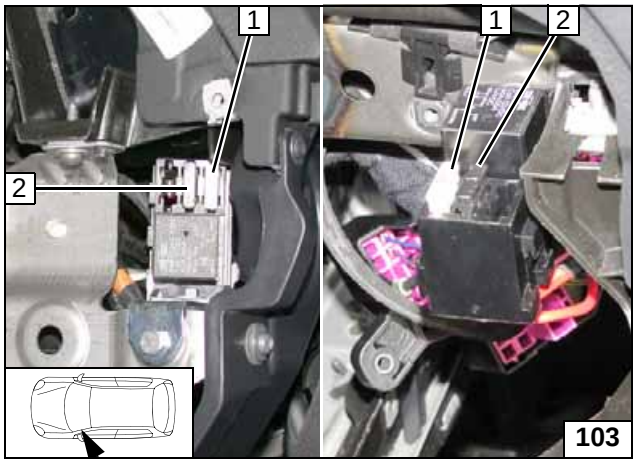


Image on the left shows Golf Plus
Image on the right shows Jetta / Golf

1 25A fuse F4 of heater control
2 1A fuse F3 of heater control

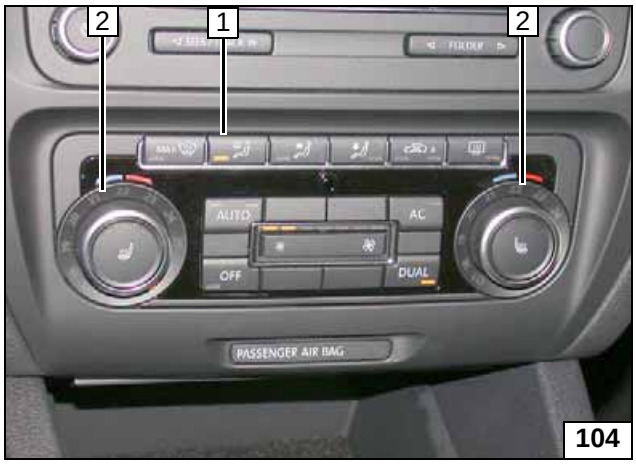
Operating Instructions for Climatronic

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 unit, if installed, must be deactivated in addition to vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



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

A/C control panel

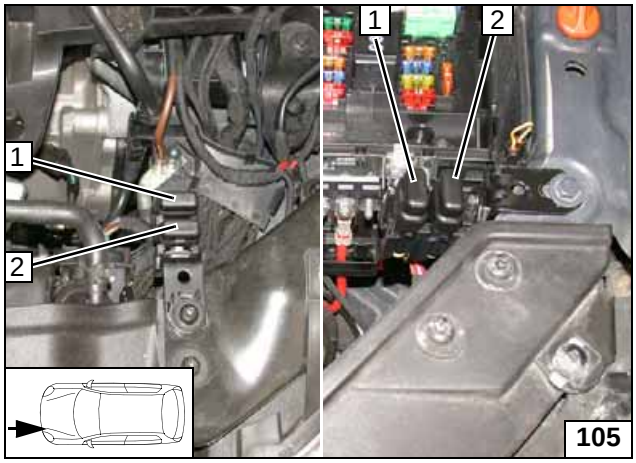


Image on the left shows Jetta / Golf
Image on the right shows Golf Plus

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

Fuses of engine compartment

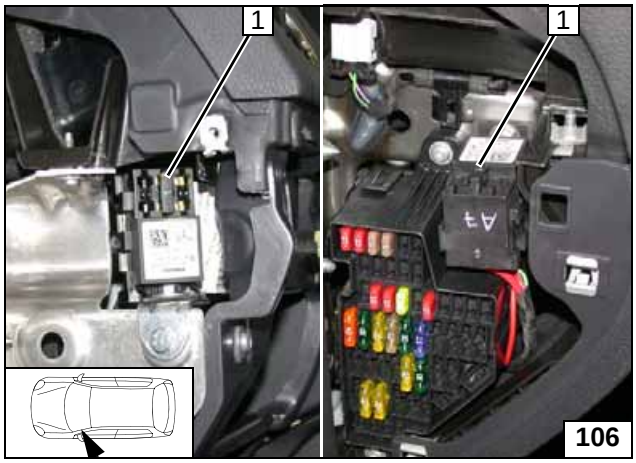


Image on the left shows Golf Plus
Image on the right shows Jetta / Golf

1 1A fuse F3 of heater control

Fuses of passenger compartment