Water Heater

Webasto
Feel the Drive

Thermo Top Evo Parking Heater

E1
00 0258

Installation Documentation
Seat Leon / Seat Leon 4Drive

Validity

Manufacturer	Model	Type	EG BE No. / ABE
Seat	Leon	5F	e9 * 2007 / 46 * 0094 * ...
Seat	Leon 4Drive	5F	e9 * 2007 / 46 * 0094 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 TSI	Petrol	5-speed SG	63	1197	CJZB
1.2 TSI	Petrol	6-speed SG	77	1197	CJZA
1.2 TSI	Petrol	DSG	77	1197	CJZA
1.4 TSI	Petrol	6-speed SG	90	1395	CMBA
1.4 TSI	Petrol	6-speed SG	103	1395	CPTA
1.8 TSI	Petrol	6-speed SG	132	1798	CJSA
1.8 TSI	Petrol	DSG	132	1798	CJSA
1.6 TDI	Diesel	5-speed SG	77	1598	CLHA
1.6 TDI	Diesel	DSG	77	1598	CLHA
1.6 TDI	Diesel	DSG	81	1598	CRKB
2.0 TDI	Diesel	6-speed SG	110	1968	CKFC
2.0 TDI	Diesel	6-speed SG	110	1968	CRMB
2.0 TDI	Diesel	6-speed SG	110	1968	CRLB
2.0 TDI	Diesel	DSG	110	1968	CKFC
2.0 TDI	Diesel	6-speed SG	135	1968	CUPA
2.0 TDI	Diesel	DSG	135	1968	CUPA

SG = manual transmission
DSG = direct gear transmission

From model year 2013
Left-hand drive vehicle

Verified equipment variants: Climatic / Climatronic
Front fog lights
Headlight washer system
LED Headlight
Full LED headlamps
Xenon
Start - Stop
4Drive

Not verified: Passenger compartment monitoring

Total installation time: approx. 8 hours

Seat Leon / Seat Leon 4Drive

Table of Contents

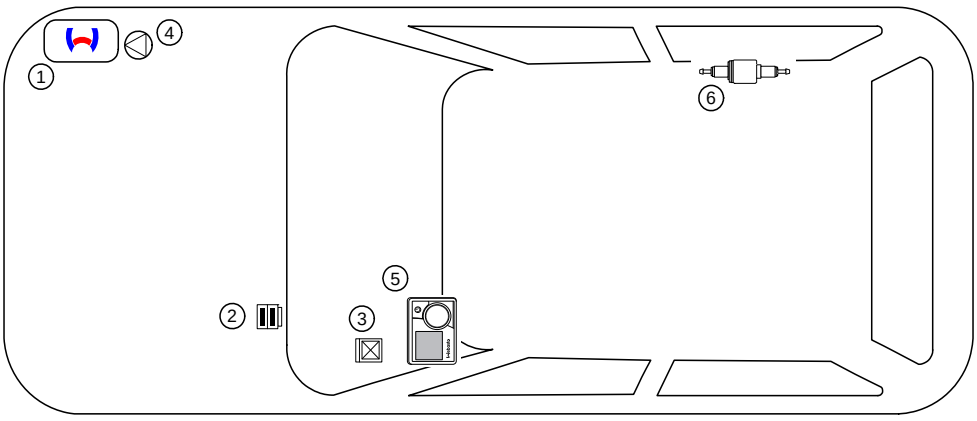
Necessary Components

- Basic delivery scope of *Thermo Top Evo* based on price list
- Installation kit for Seat Leon / Seat Leon 4Drive 2013 Petrol and diesel: **1319063B**
- To be ordered additionally in case of 1.8 TSI: Additional kit for exhaust system: **1321303A**
- 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 instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or Thermo Call should be confirmed with the end customer.
- Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

Installation Overview



Legend:

1. Heater
2. Engine compartment fuse holder
3. LIN- Gateway
4. Circulating pump
5. MultiControl CAR
6. Metering pump

Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting 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 228).

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).

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 a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 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

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 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.

Seat Leon / Seat Leon 4Drive

Information on Validity

This installation documentation applies to Seat Leon / Seat Leon 4Drive Petrol and diesel vehicles - for validity, see page 1 - from model year 2013 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this 'installation documentation'.

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

Technical Information

Special Tools
- Hose clamp pliers for auto-tightening 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

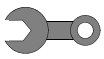
Dimensions
- All dimensions are in mm.

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque value of 5x15 water connection piece retaining plate bolt = 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

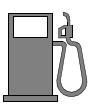


Electrical System

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 due to electrical voltage.

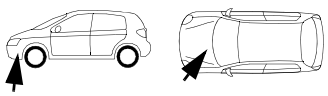
Specific risk of damage to components.

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.



Tightening torque according to the manufacturer's vehicle-specific documents.

Seat Leon / Seat Leon 4Drive

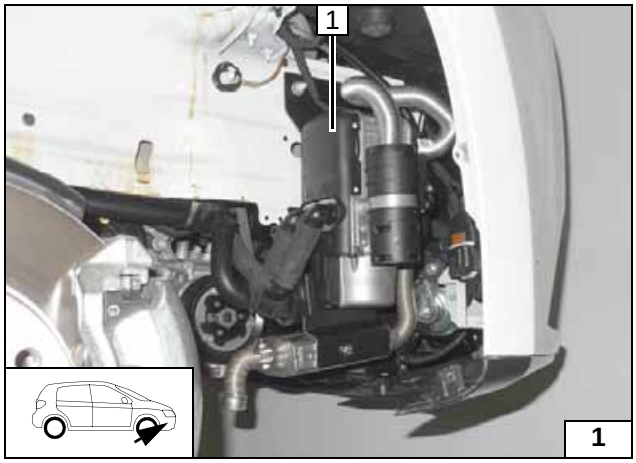
Preliminary Work

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.
- Completely remove the air filter box together with the intake hose of the radiator (TDI only).
- Remove the right underride protection.
- Remove the lower engine cover.
- Remove the fuel tank underride protection if present.
- Remove the right front wheel.
- Remove the front right wheel well trim.
- Completely remove the horns with the bracket (depending on equipment variant).
- Remove the lateral instrument panel trim on the driver's side.
- Remove the lower instrument panel trim on the driver's side.
- Remove the A-pillar trim on the driver's side.
- Remove the footwell trim on the front passenger's side.
- Remove the rear seats.
- Open the right-hand tank-fitting service lid.
- Remove the fuel tank sending unit in accordance with the manufacturer's instructions.

Heater

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



Heater Installation Location

1 Heater

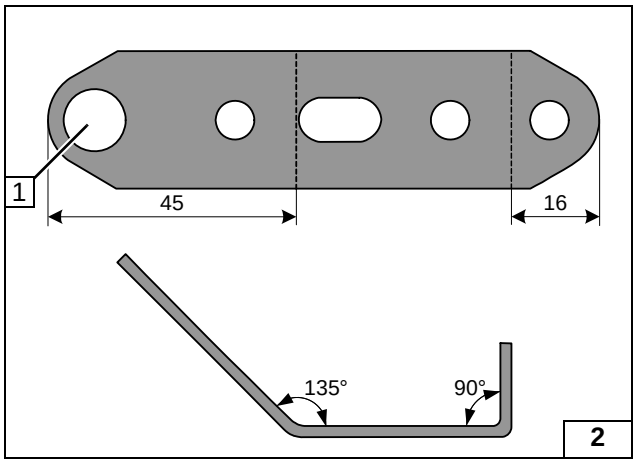
Installation location

Preparing Electrical System

Wire sections retain their numbering in the entire document.

Produce all following electrical connections as shown in the wiring diagram.

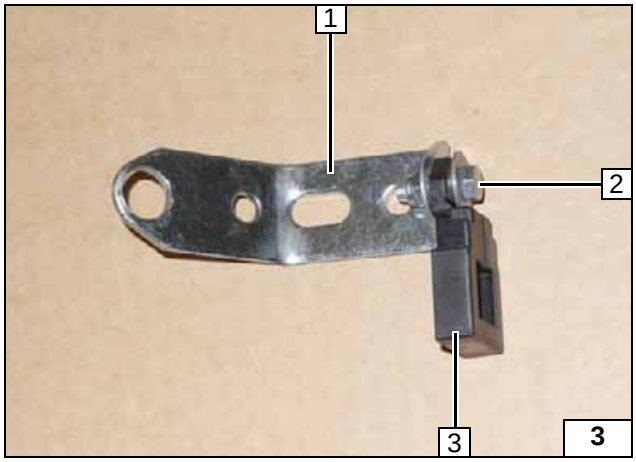
Preparing perforated bracket



1 12.5mm dia. hole

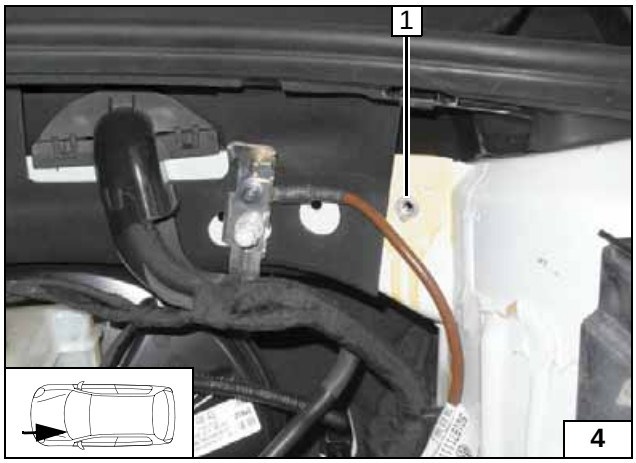
1 Perforated bracket
2 M5x16 bolt, washer [2x], nut
3 Fuse holder retaining plate

Premounting engine compartment fuse holder



1 Drill out existing hole to 9.1mm dia.; rivet nut

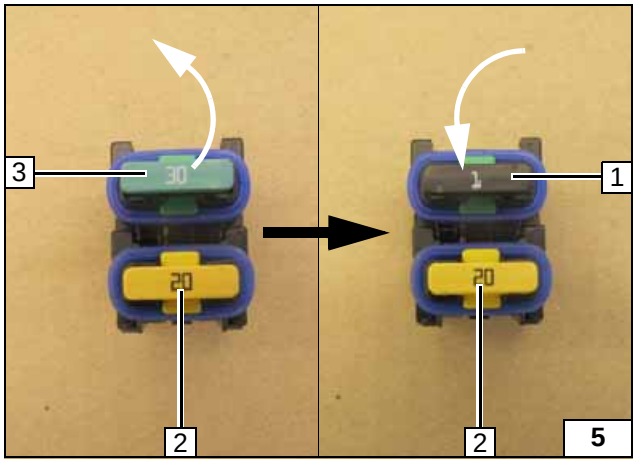
Installing rivet nut



Replace 30A passenger compartment main fuse F2 **3** with 1A **1**.

2 20A heater fuse F1

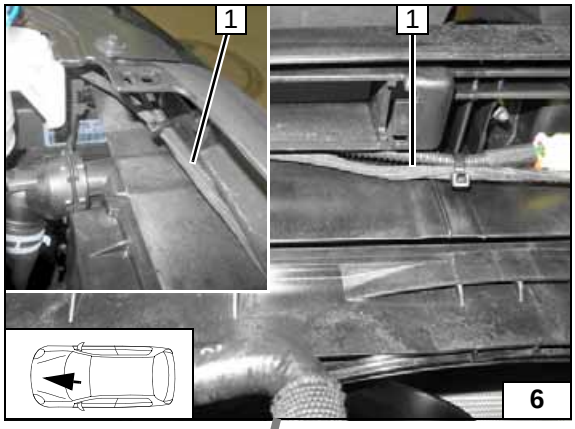
Preparing engine compartment fuses



Electrical System

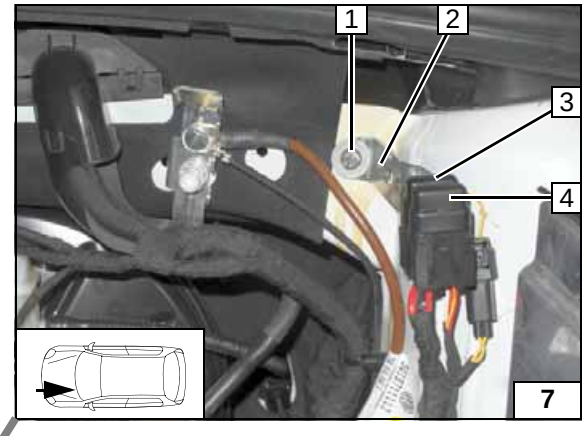
Wiring harness routing

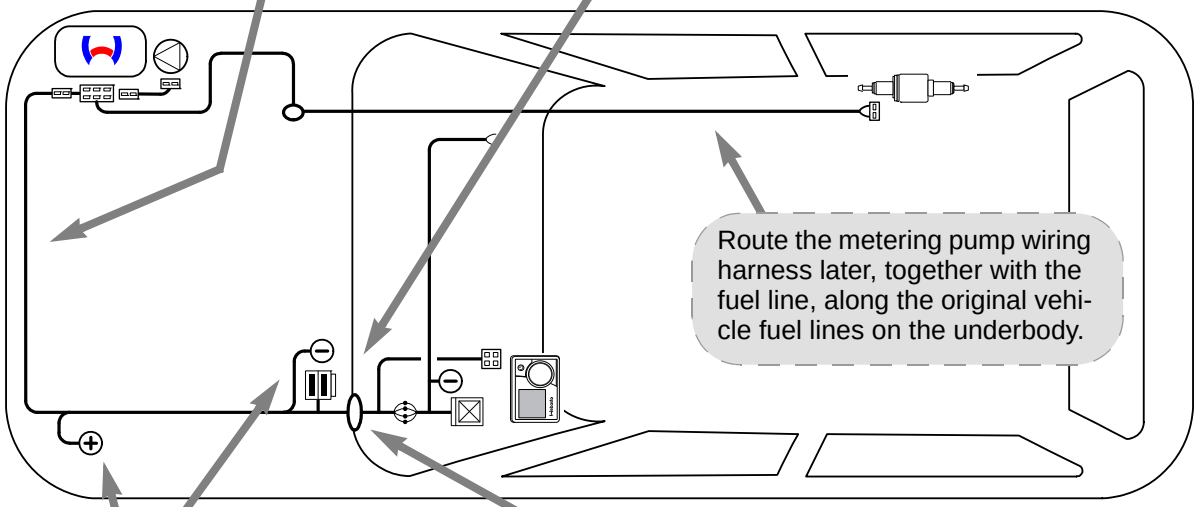
Route wiring harness of heater **1** along original vehicle wiring harness to the installation location of the heater and fasten it using cable ties.



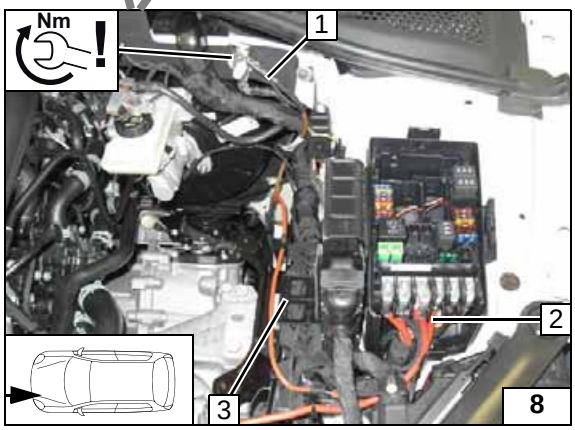
Engine compartment fuse holder

1 M6x20 bolt, large diameter washer
2 Perforated bracket
3 Replace 30A fuse F2 with 1A fuse.
4 Fuse F1



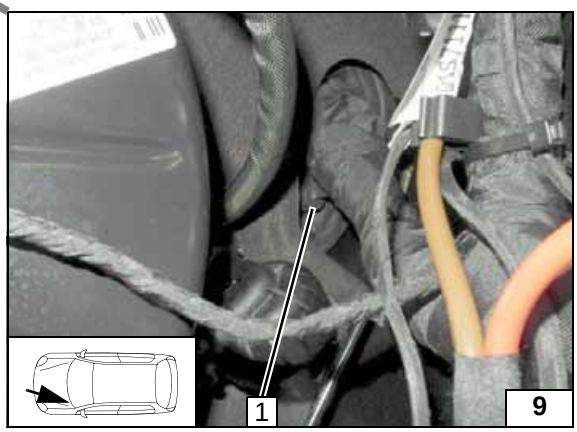


Wiring harness routing diagram



Positive and earth wire

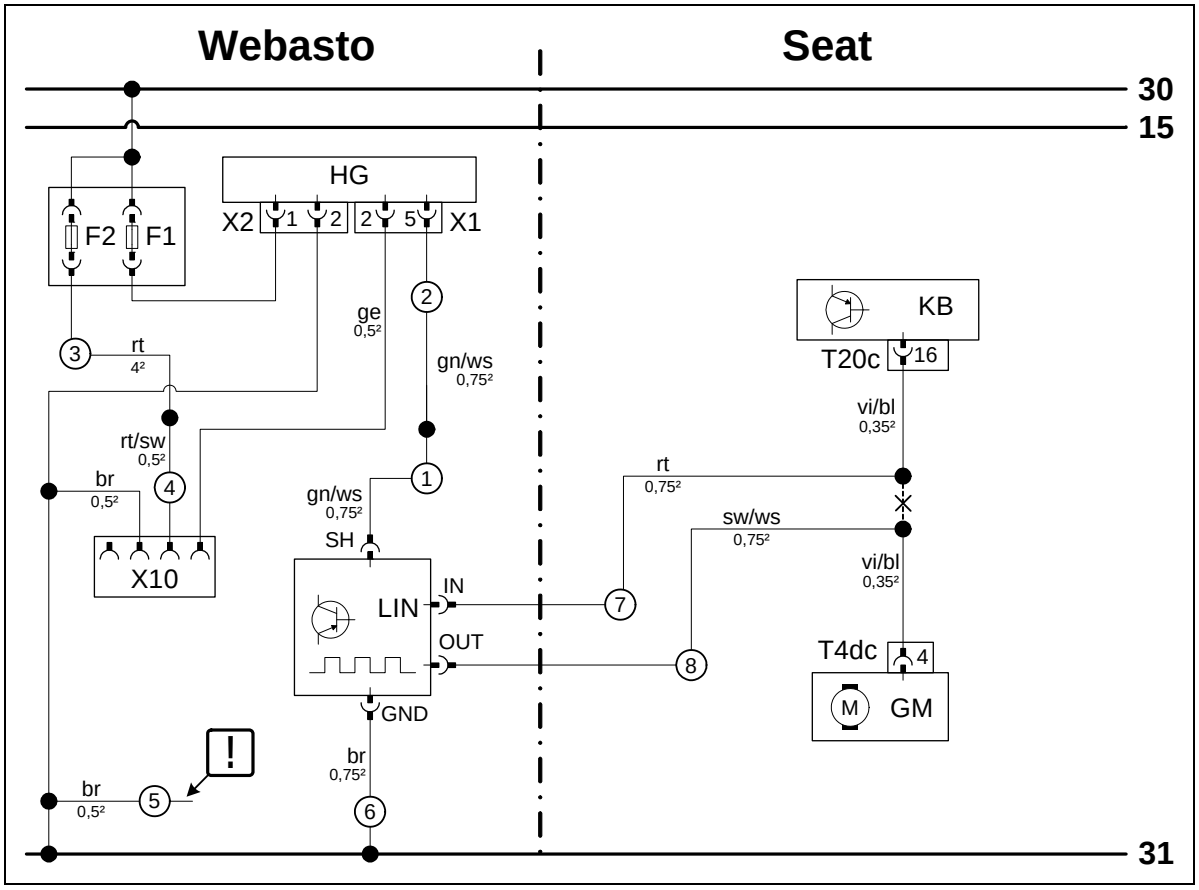
1 Earth wire on original vehicle earth point
2 Positive wire on positive distributor
3 Wiring harnesses in original vehicle line duct



Wiring harness pass through

Route heater wiring harnesses and heater control through protective rubber plug **1** to the passenger compartment.

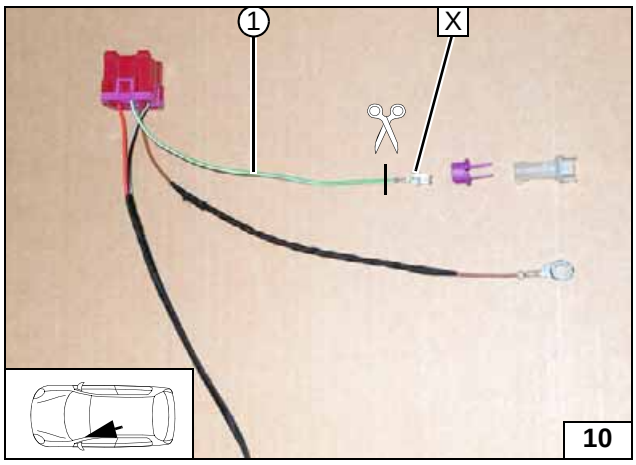
Fan Controller



Wiring diagram

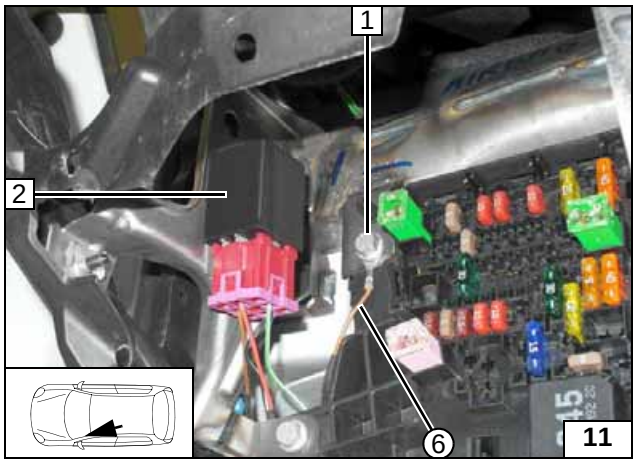
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	KB	A/C control unit	rt	red
X1	6-pin heater connector	T20c	20-pin connector of KB	sw	black
X2	2-pin heater connector	GM	Fan motor	ge	yellow
F1	20A fuse	T4dc	4-pin connector of GM	gn	green
F2	1A fuse			vi	violet
X10	4-pin connector of heater control			ws	white
				br	brown
LIN	LIN- Gateway			bl	blue
				!	Insulate wire end and tie back
				X	Cutting point
				Wiring colours may vary.	

Legend



Cut green/white (gn/ws) wire of ① LIN Gateway socket, pin SH, at the marking (if connector premounted).
Discard section **X** and connector.

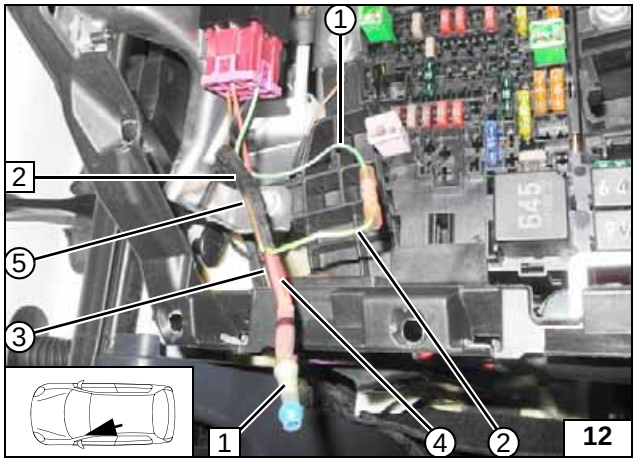
Preparing wiring harness



Mount LIN Gateway **2** on socket and fasten together with adhesive tape. Ensure freedom of movement with respect to storage compartment.

1 Original vehicle bolt
⑥ Brown (br) wire of LIN-Gateway/GND

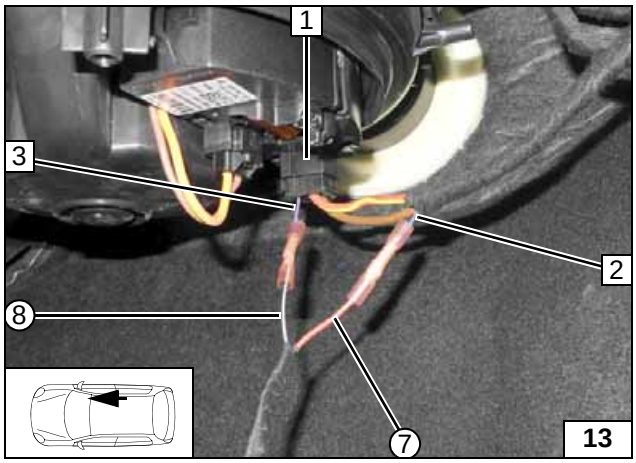
Installing LIN-Gateway



Connect red (rt) wire ③ and red/black (rt/sw) wire ④ using solder wire terminator **1**. Insulate brown (br) wire ⑤ and tie back.

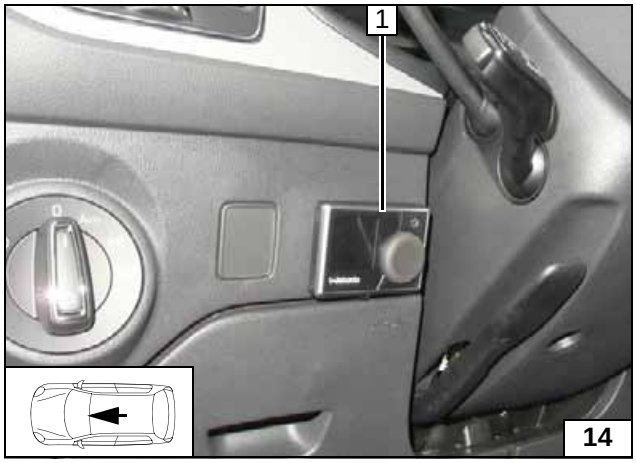
2 Heater wiring harness
① Green/white (gn/ws) wire of LIN-Gateway/SH
② Green/white (gn/ws) wire of heater X1/5

Connecting wiring harnesses



1 4-pin connector T4dc
2 Violet/blue (vi/bl) wire of connector T20c, Pin 16 A/C control unit
3 Violet/blue (vi/bl) wire of 4-pin connector T4dc, Pin 4
⑦ Red (rt) wire of LIN-Gateway/IN
⑧ Black/white (sw/ws) wire of LIN-Gateway/OUT

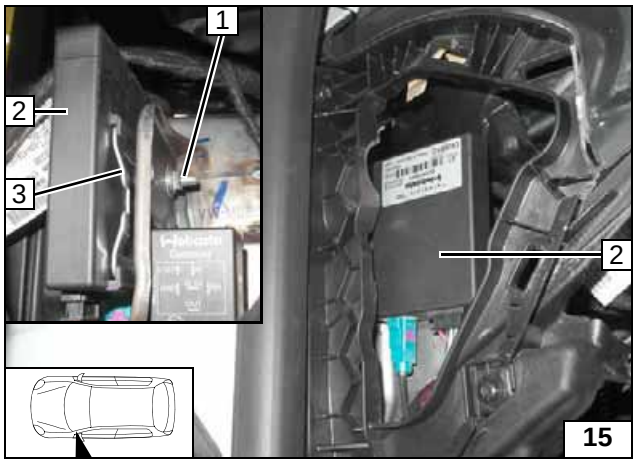
Connecting fan motor



MultiControl CAR Option

1 MultiControl CAR with installation frame

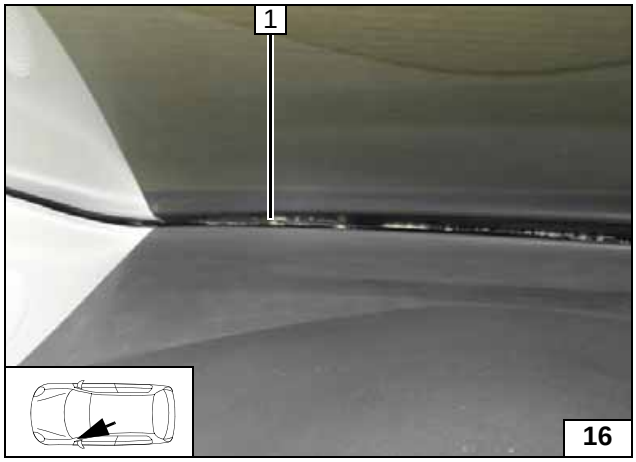
Installing MultiControl CAR



Remote Option (Telestart)

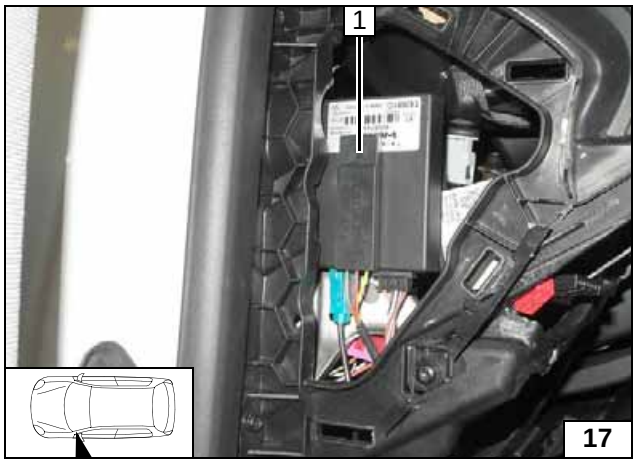
1 M5x16 bolt, washer, nut, existing hole
2 Receiver
3 Receiver bracket

Installing receiver



1 Aerial

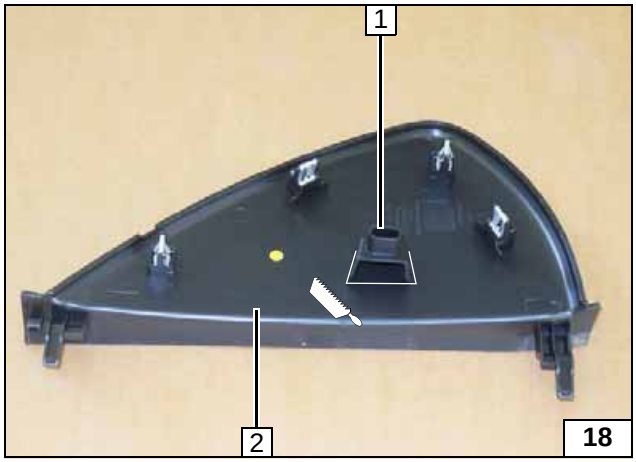
Installing aerial



Temperature sensor T100 HTM

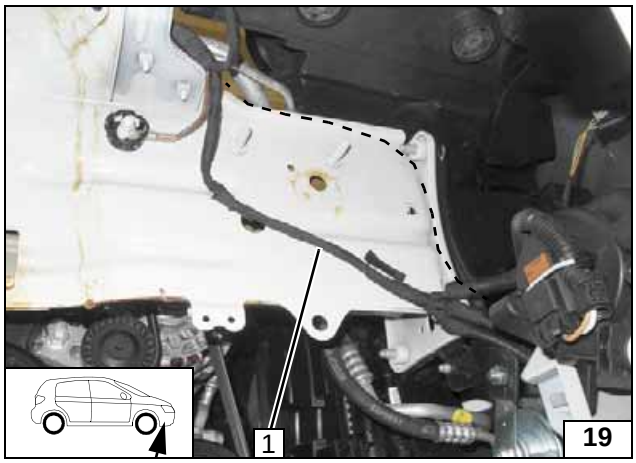
Fasten temperature sensor **1** with adhesive tape.

Installing temperature sensor



Cut blind nut **1** flush off lateral instrument panel trim **2**.

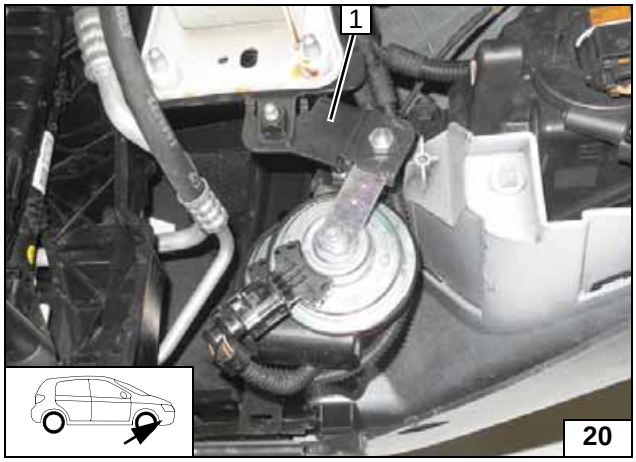
Preparing lateral instrument panel trim



Preparing Installation Location

Detach original vehicle wiring harness **1** and route it along the marking (dotted line).

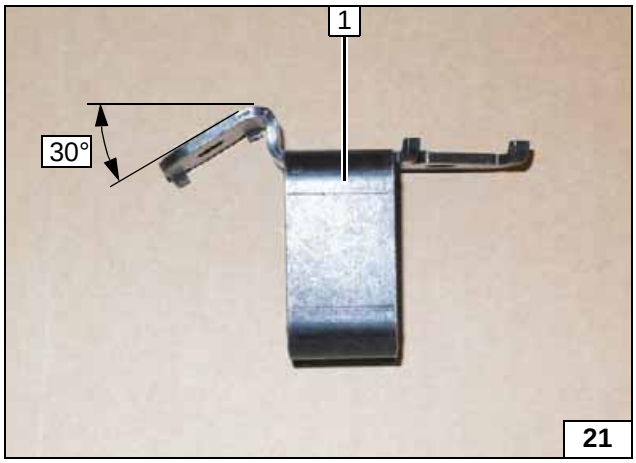
Aligning wiring harness



Version 1

Remove horns with bracket **1**.

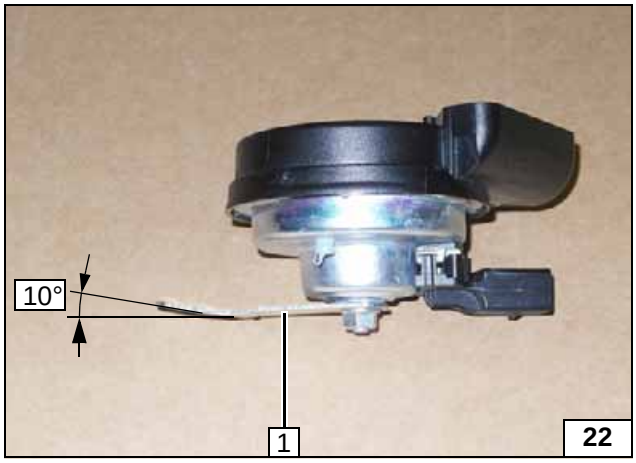
Removing horns



Bend tab down at an angle of 30°.

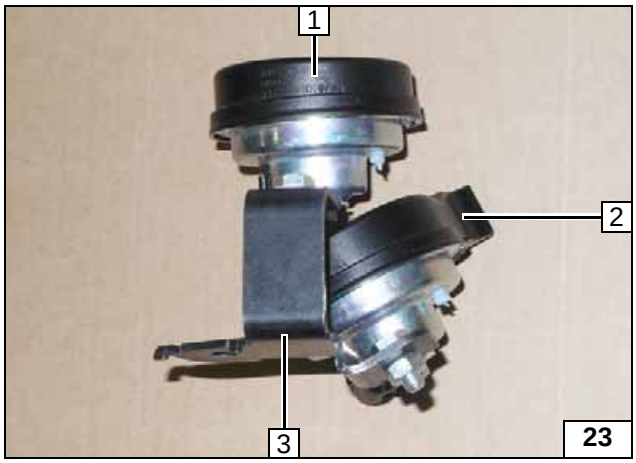
1 Bracket of horns

Bending bracket at an angle



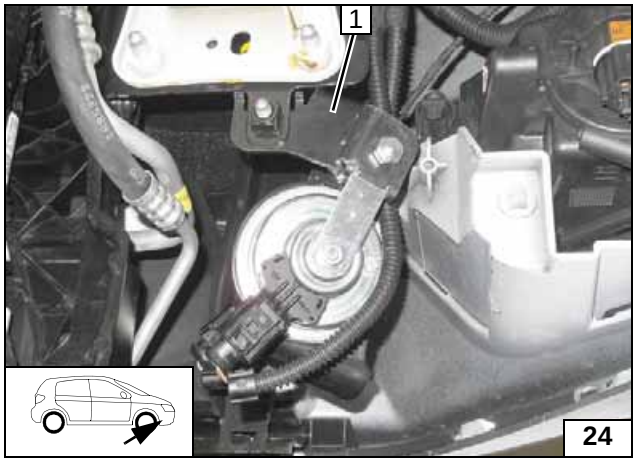
Angle bracket of horn b **1** by 10°.

Bending bracket at an angle



1 Horn b
2 Horn a
3 Bracket of horns

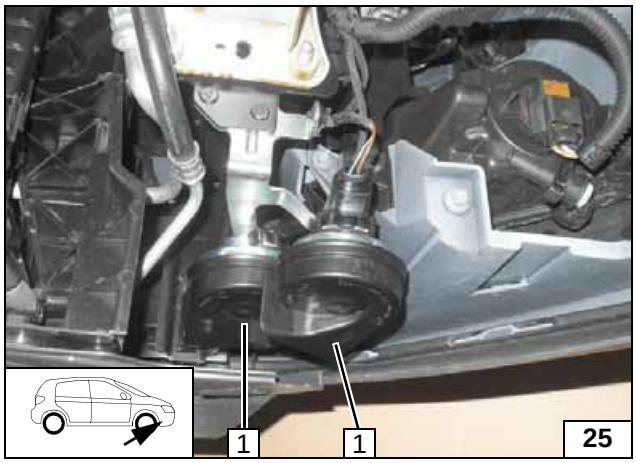
Completing bracket with horns



Install horns with bracket **1**.

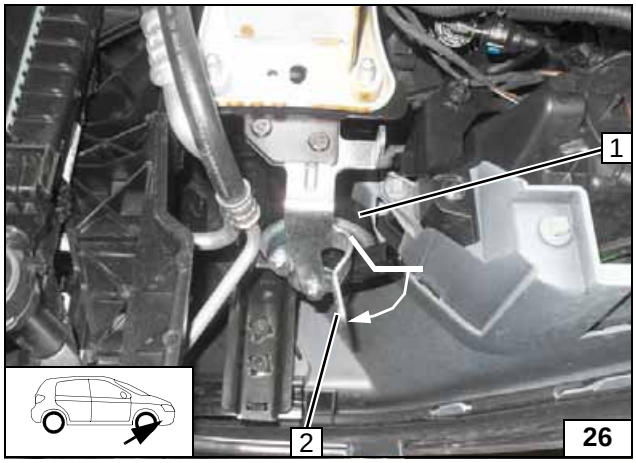
Installing horns

Version 2



1 Remove horns [2x]

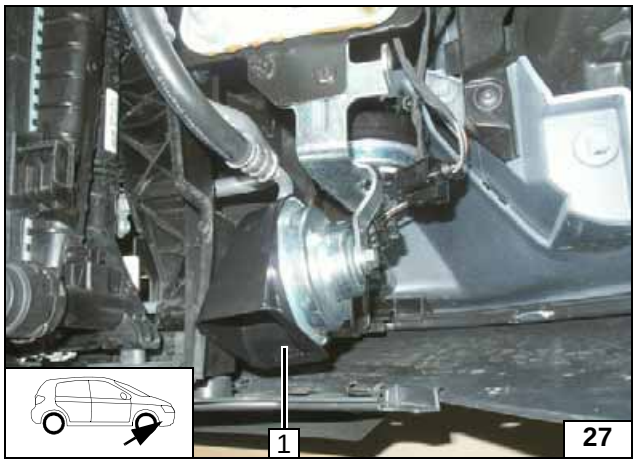
Removing horns



Bend tab **2** of bracket downwards as shown.

1 Install horn a

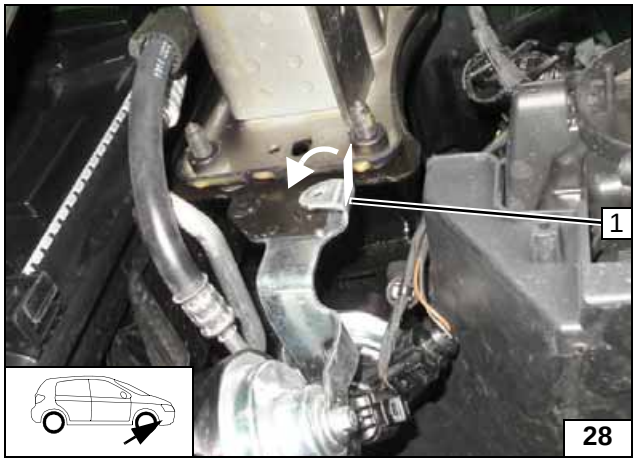
Bending bracket, installing horn



Ensure freedom of movement, correct if necessary.

1 Install horn b

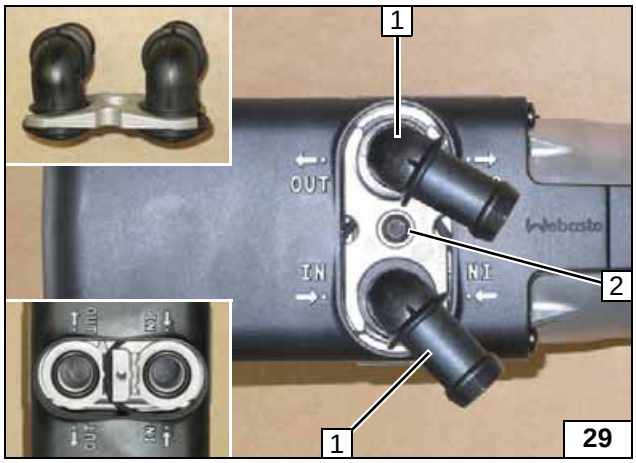
Installing horn



Bend tab **1** of bracket to the left as shown.

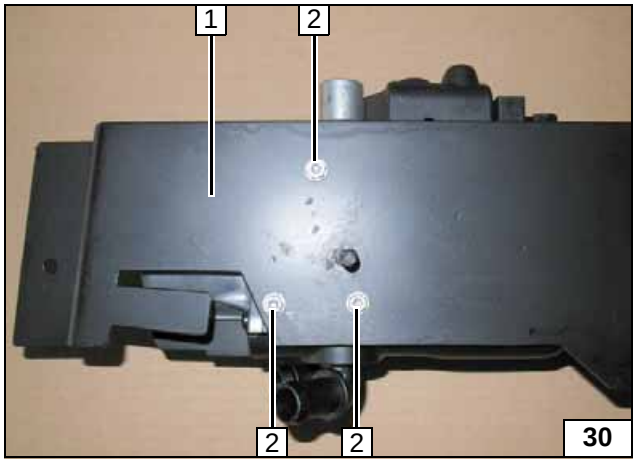
Bending tab

Preparing Heater



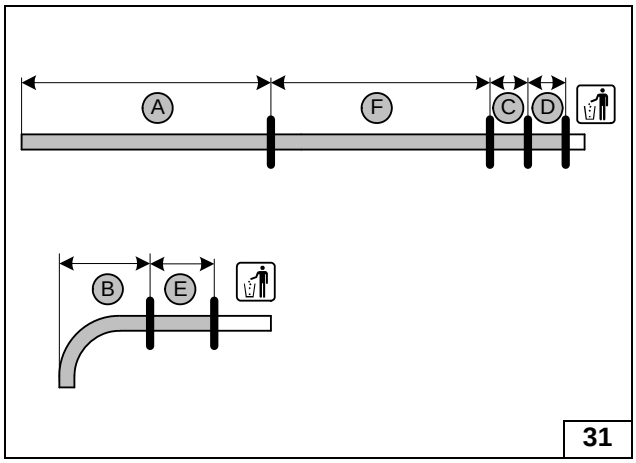
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



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

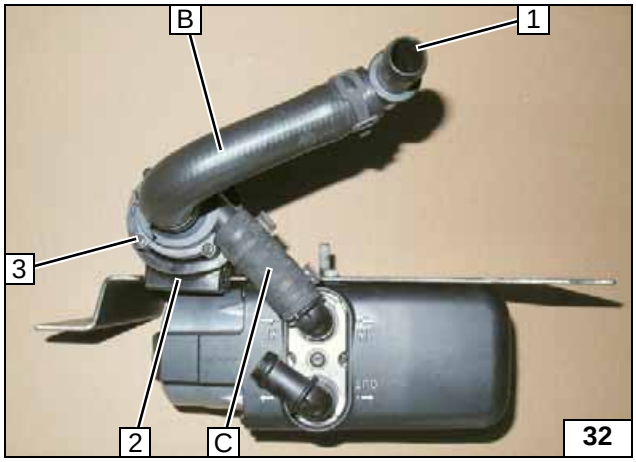
Installing bracket



TSI and TDI 4Drive

	TSI	TDI 4Drive
A	1070	920
B	110	110
C	60	60
D	70	70
E	110	110
F	990	910

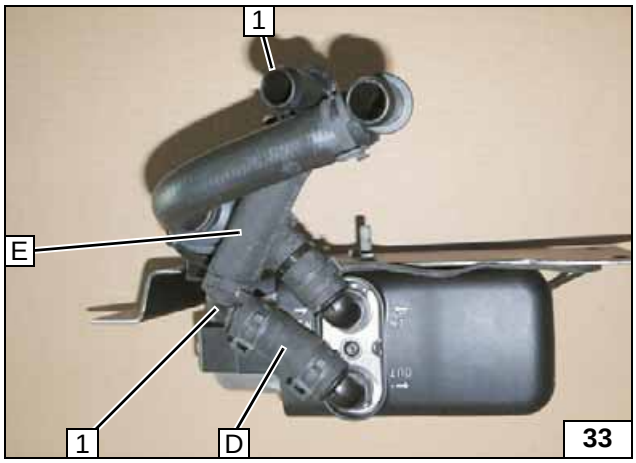
Cutting hoses to length



All spring clips = 25 mm dia.
Push circulating pump mount **2** onto tab of bracket.

1 90° connecting pipe
3 Circulating pump

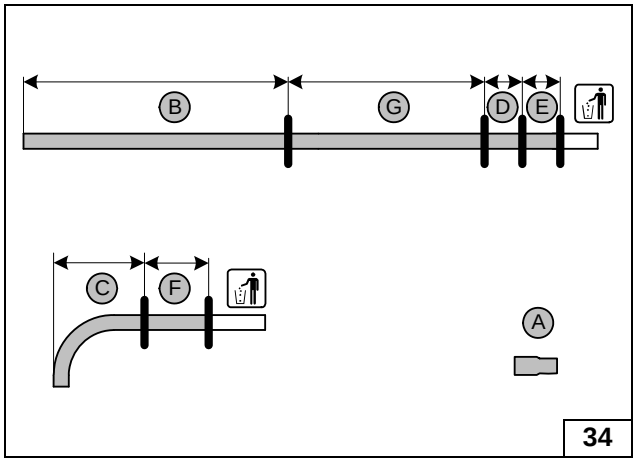
Premounting hoses



All spring clips = 25mm dia.

1 90° connecting pipe [2x]

Premounting hoses

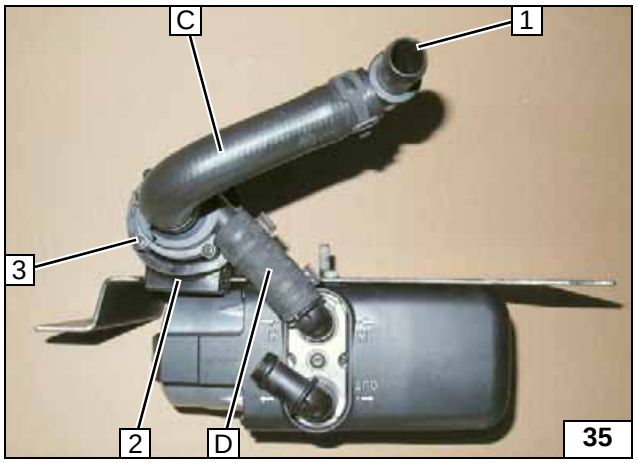


TDI 2WD

Hose **A** = 18x20 mm dia., straight moulded hose

B = 1020
C = 110
D = 60
E = 70
F = 110
G = 980

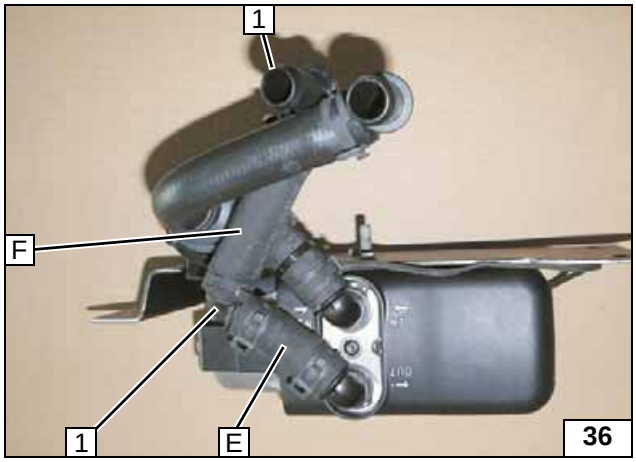
Cutting hoses to length



All spring clips = 25 mm dia.
Push circulating pump mount **2** onto tab of bracket.

1 90° connecting pipe
3 Circulating pump

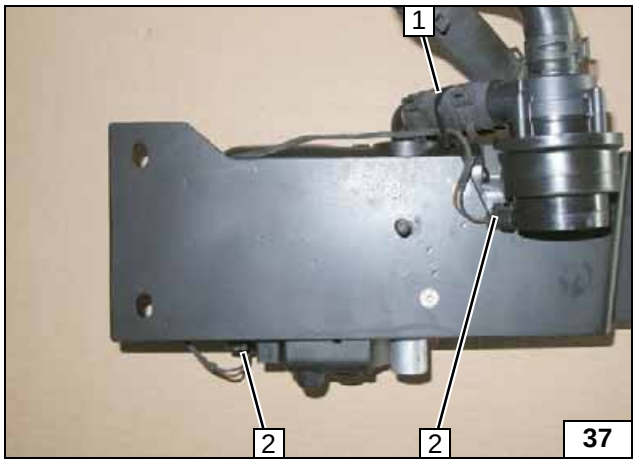
Premounting hoses



All spring clips = 25mm dia.

1 90° connecting pipe [2x]

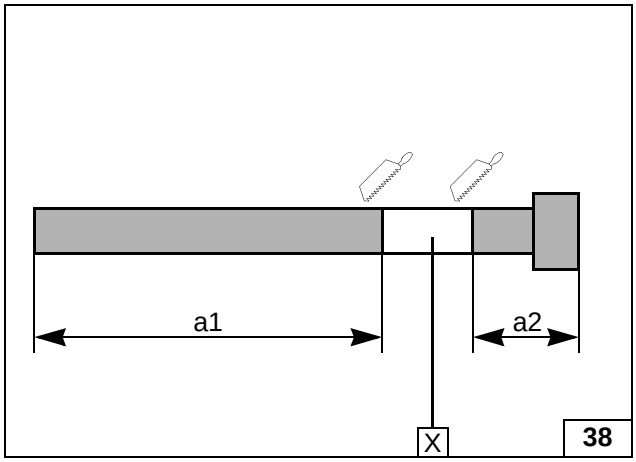
Premounting hoses



All vehicles

1 Cable tie
2 Connector of circulating pump wiring harness [2x]

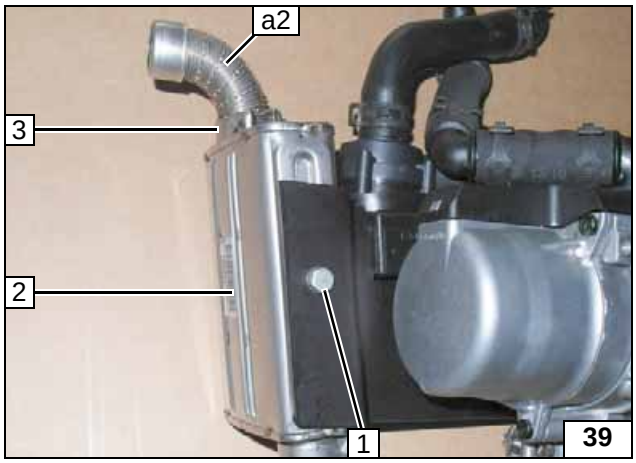
Installing wiring harness



	1.2 TSI / 1.4 TSI / TDI	1.8 TSI
a1	195	210
a2	80	90

X = 

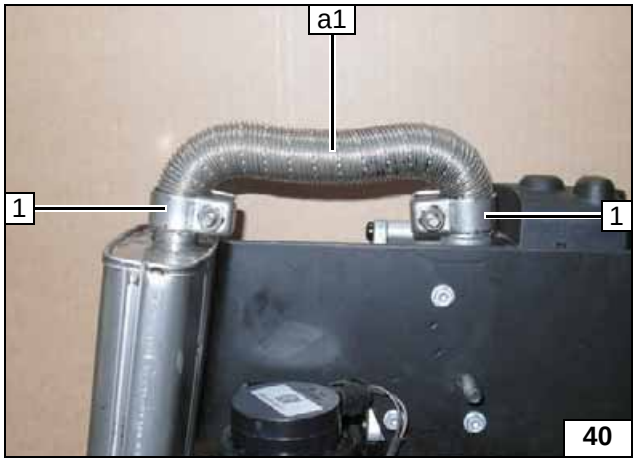
Preparing exhaust pipe



Only for 1.2 TSI / 1.4 TSI / TDI

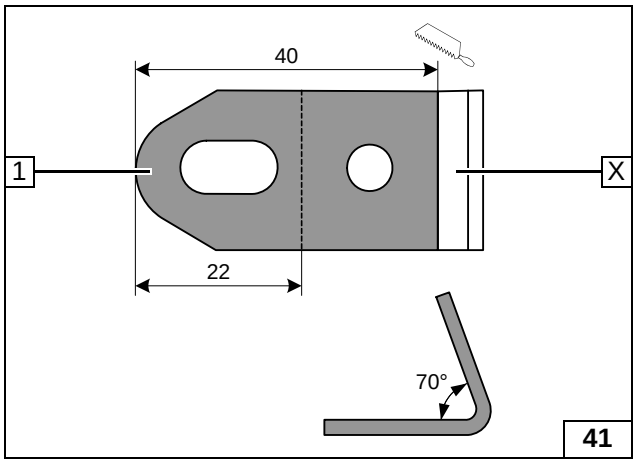
1 M6x16 bolt, spring lockwasher
2 Silencer
3 Hose clamp

Installing silencer and exhaust pipe a2



1 Hose clamp [2x]

Installing exhaust pipe a1

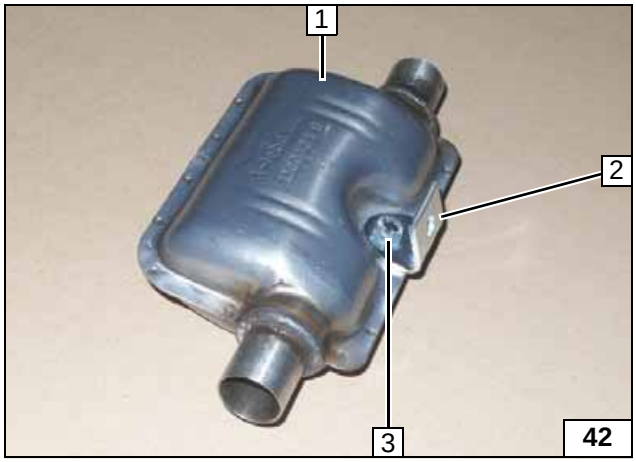


Only for 1.8 TSI

1 Angle bracket

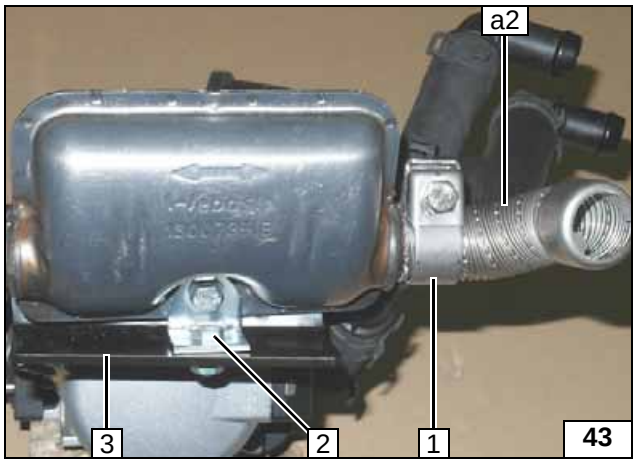
X = 

Preparing angle bracket



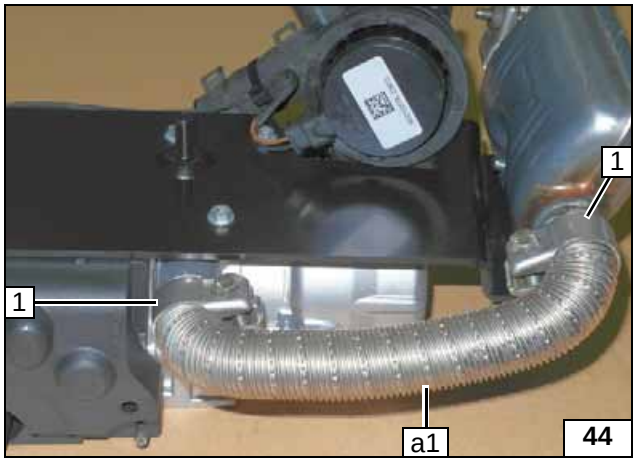
1 Silencer
2 Angle bracket
3 M6x16 bolt, flanged nut

Premounting silencer



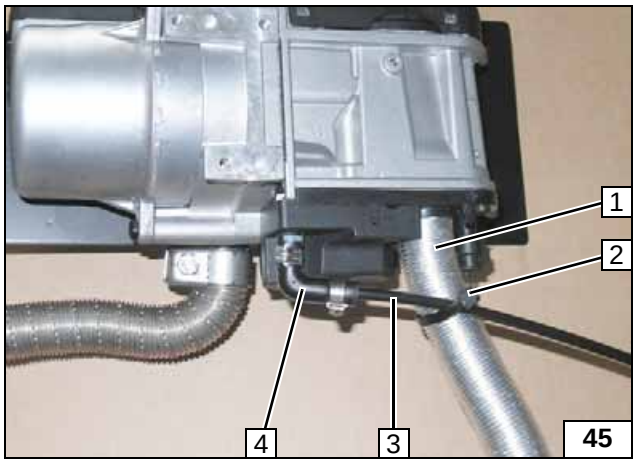
1 Hose clamp
2 M6x12 bolt, flanged nut
3 Heater bracket

Installing silencer / exhaust pipe a2



1 Hose clamp [2x]

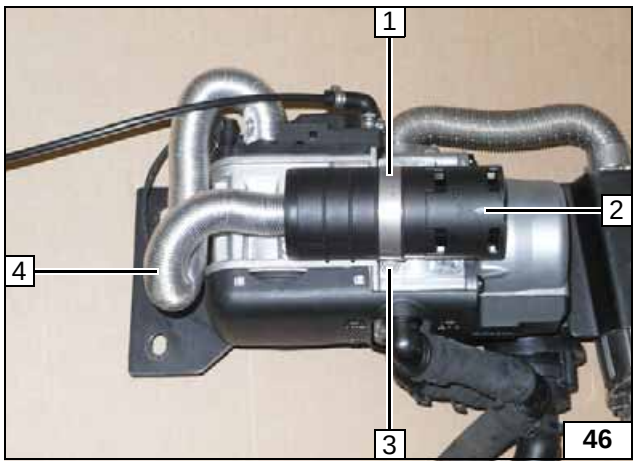
Installing exhaust pipe a1



All vehicles

1 Combustion air pipe
2 Cable tie
3 Fuel line
4 90° short moulded hose, 10 mm dia. clamp [2x]

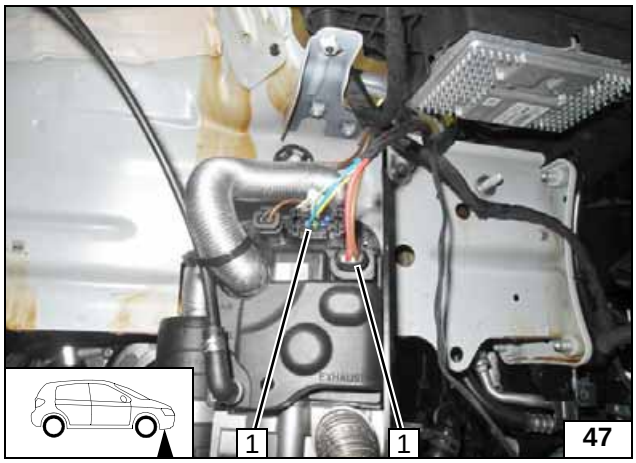
Premounting combustion air pipe and fuel line



1 51mm dia. clamp
2 Combustion air silencer
3 5x13 self-tapping bolt
4 Combustion air pipe

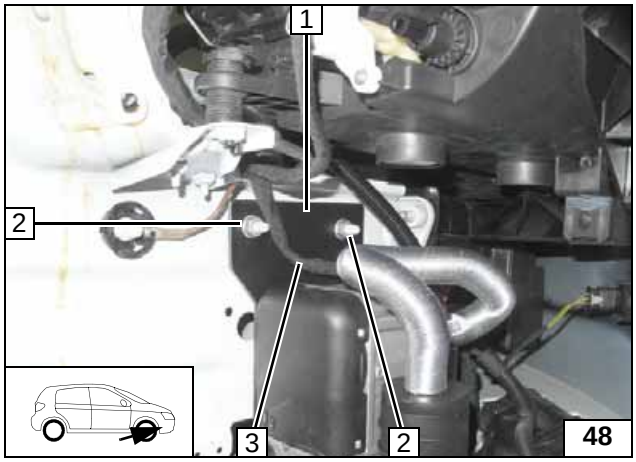
Premounting combustion air silencer

Installing Heater



1 Heater wiring harness connector [2x]

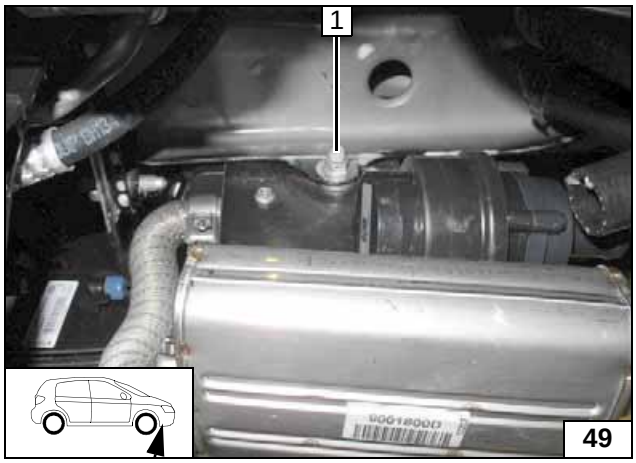
Installing wiring harness



Insert one 5 mm shim each between bracket **1** and frame side member. Route original vehicle wiring harness **3** in front of the bracket as shown.

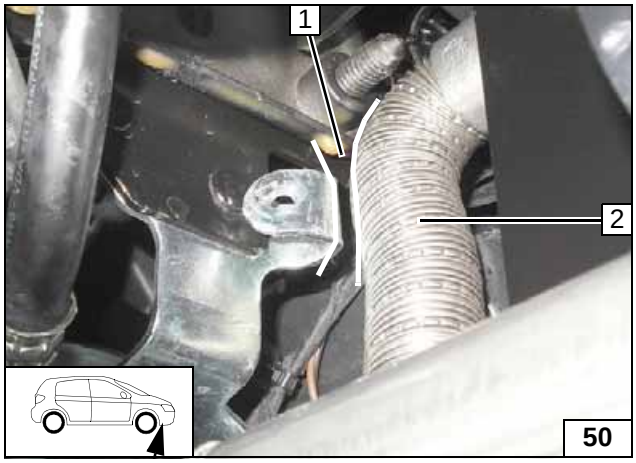
2 Original vehicle stud bolt, 5 mm shim, M8 flanged nut [2x each]

Installing heater



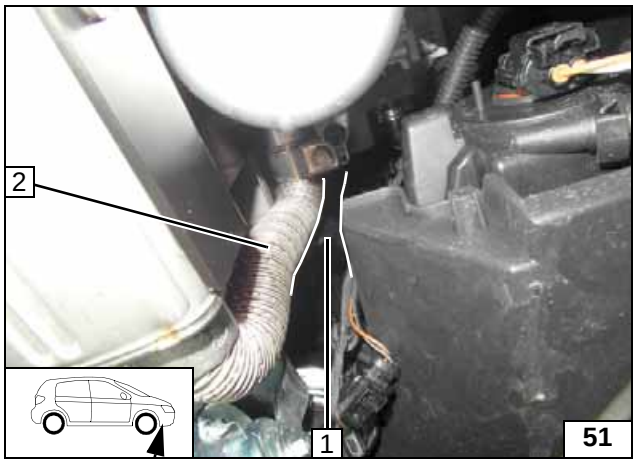
1 Stud bolt of bracket, large diameter washer, M8 flanged nut

Installing heater



Ensure sufficient distance between exhaust pipe **2** and horn bracket at position **1**, correct if necessary.

Aligning exhaust pipe



Ensure sufficient distance between exhaust pipe **2** and front fog lights trim at position **1**, correct if necessary.

Aligning exhaust pipe

Fuel

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

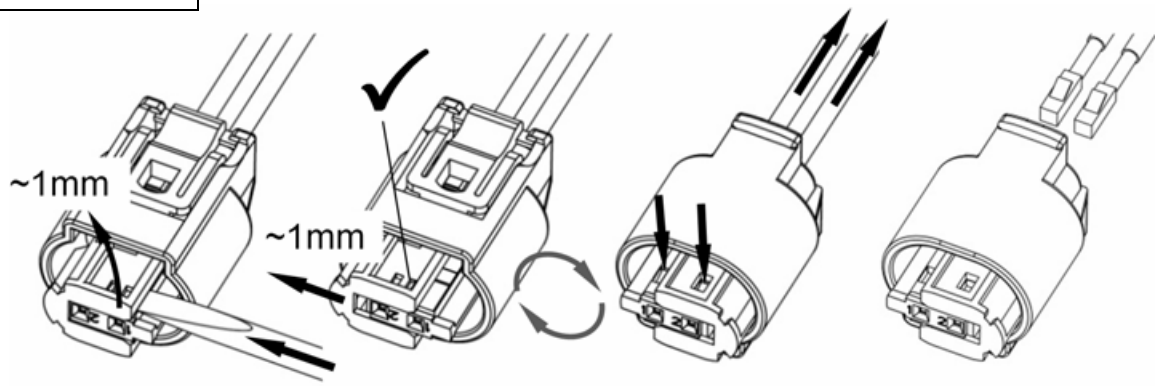
Catch any fuel running off in an appropriate container.

Route fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

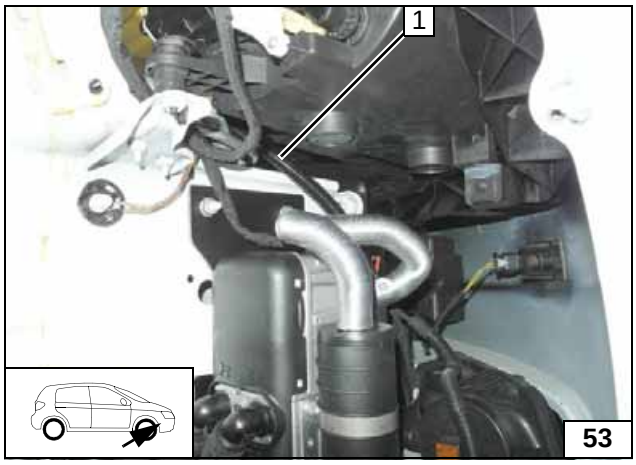
WARNING!
The fuel line and wiring harness are routed to the metering pump in as shown in the wiring harness routing diagram.

Dismantling metering pump connector

Connector X7



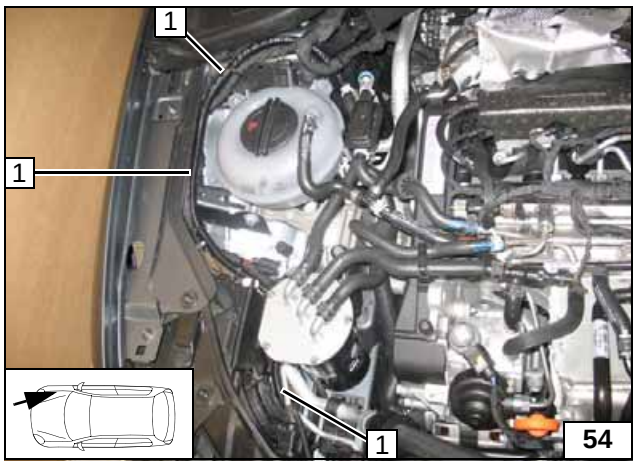
52



53

Cut off 1200mm of 10mm dia. corrugated tube. Pull fuel line and wiring harness of metering pump into 10mm dia. corrugated tube **1** and route in the engine compartment.

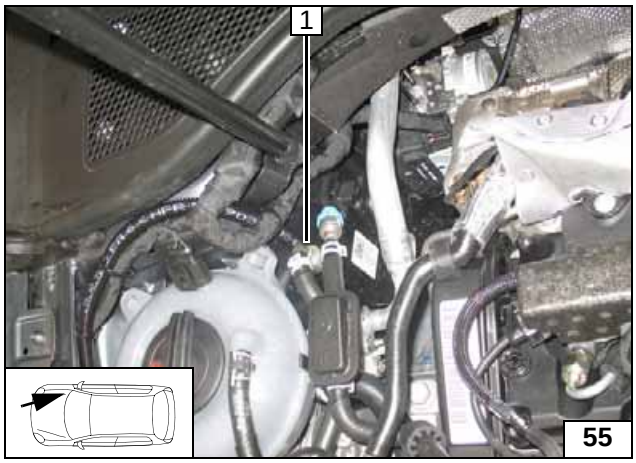
Routing lines



54

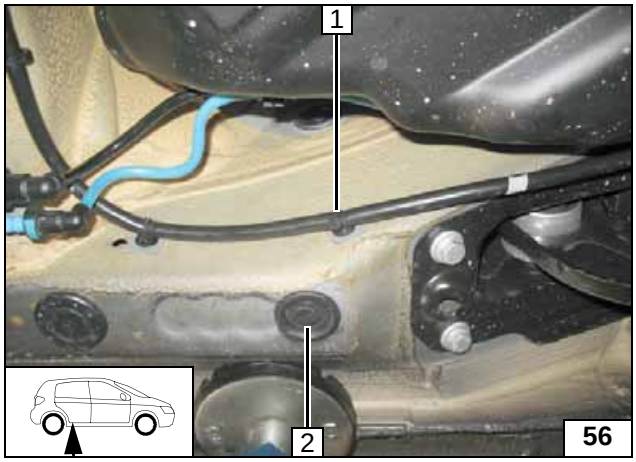
Route fuel line and wiring harness of metering pump in corrugated tube **1** to the firewall along original vehicle lines.

Routing lines



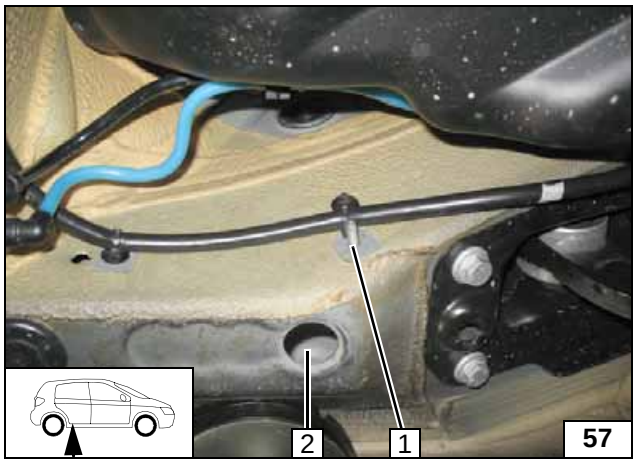
Route fuel line and wiring harness of metering pump in original vehicle line duct **1** to the underbody.

Routing lines



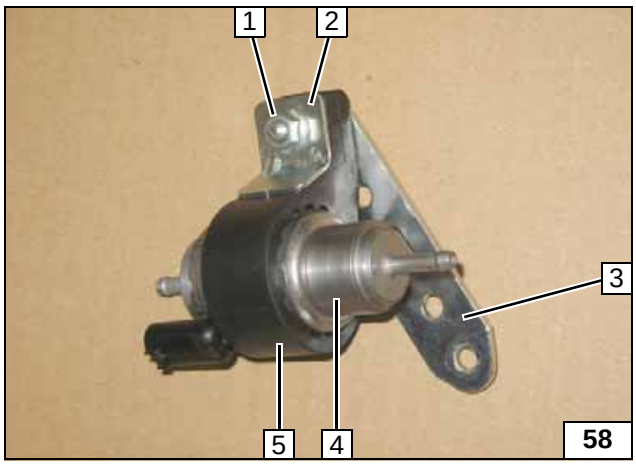
1 Detach retaining clip of original vehicle wiring harness (if present) from hole.
2 Remove cover cap (will be re-inserted later)

Preparing installation location of metering pump



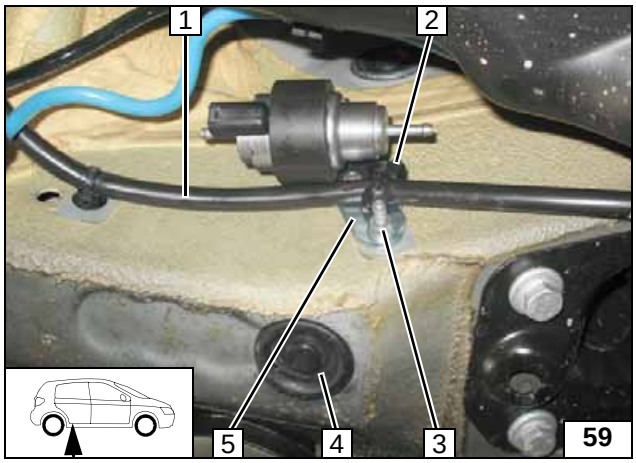
Insert M6x20 bolt **1** through opening **2** into hole.

Preparing installation location of metering pump



1 M6x25 bolt, flanged nut
2 Support angle bracket
3 Perforated bracket
4 Metering pump
5 Metering pump mount

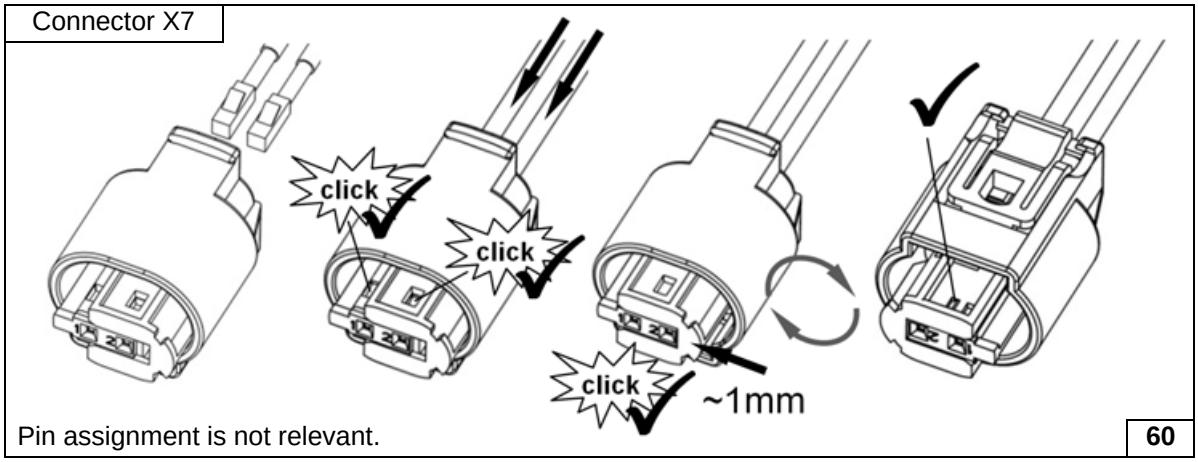
Premounting metering pump



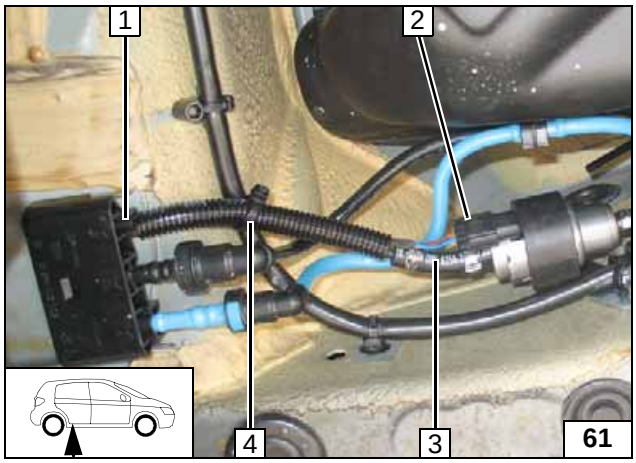
Fasten original vehicle wiring harness 1 (if present) with cable tie **2** to perforated bracket **5**.

3 M6 flanged nut
4 Cover cap inserted

Installing metering pump



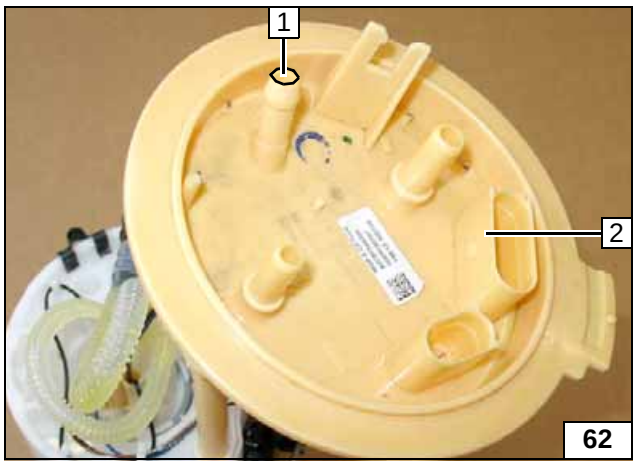
Completing metering pump connector



Cut off 130mm of 10mm dia. corrugated tube. Route fuel line and wiring harness of metering pump out of original vehicle pass through **1** and pull them into 130mm long corrugated tube.

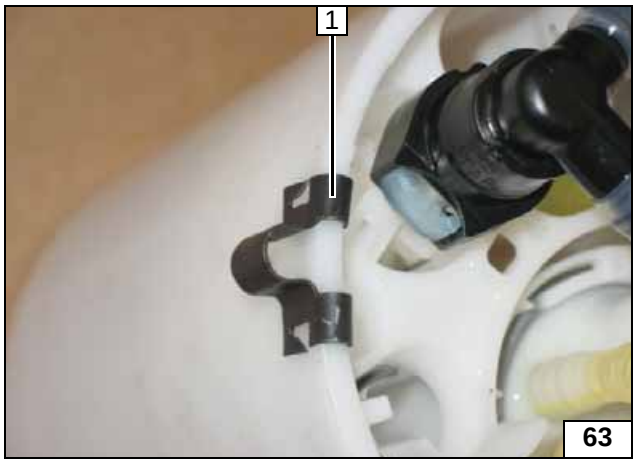
2 Metering pump wiring harness, connector X7 mounted
3 Fuel line of heater, hose section, 10 mm dia. clamp [2x]
4 Cable tie

Connecting metering pump



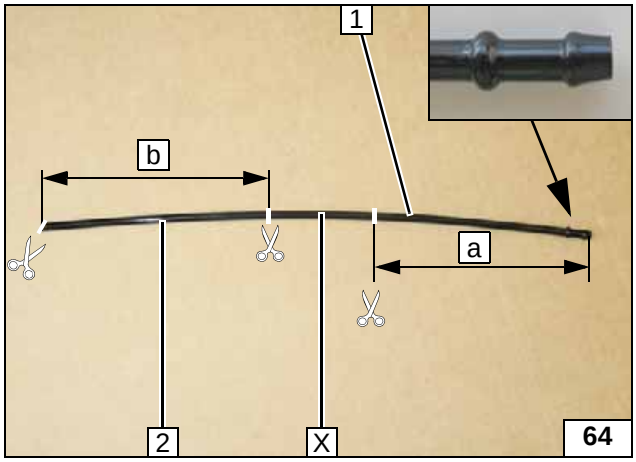
Images show TDI, TSI installation is conducted in an analogous manner. Remove fuel tank sending unit **2** according to manufacturer's instructions. Cut off top from connection piece **1**.

Fuel extraction



Slightly bend open retaining clamp **1** and install onto fuel tank sending unit.

Inserting retaining clamp



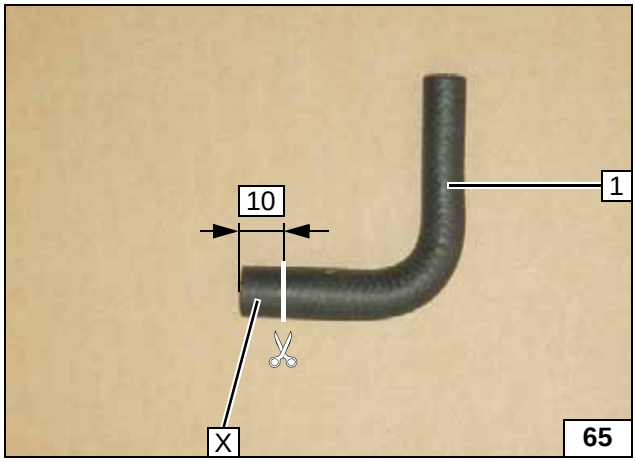
Obliquely cut off standpipe B **2** at the end.

1 Standpipe A

	TSI	TDI
a	120	140
b	130	140

Cutting standpipes to length

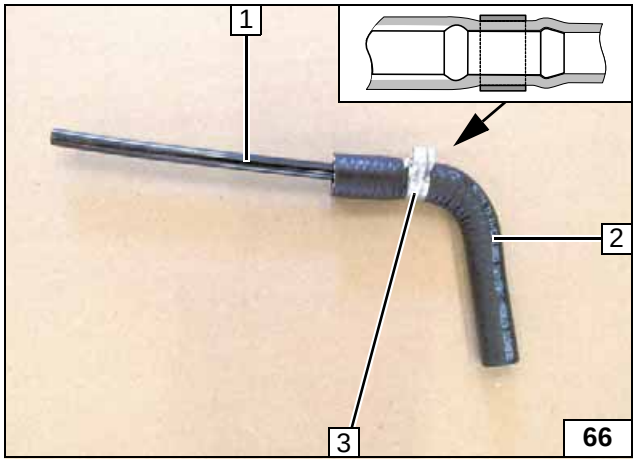
X = 



1 90°, 4.5x10.5mm dia. moulded hose

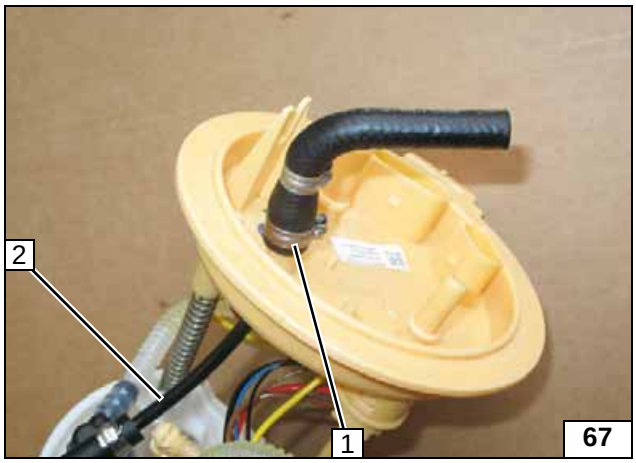
X = 

Cutting moulded hose to length



1 Standpipe A
2 90°, 4.5x10.5mm dia. moulded hose
3 10 mm dia. clamp

Premounting moulded hose



1 13.5 mm dia. clamp
2 Standpipe A

Installing standpipe A

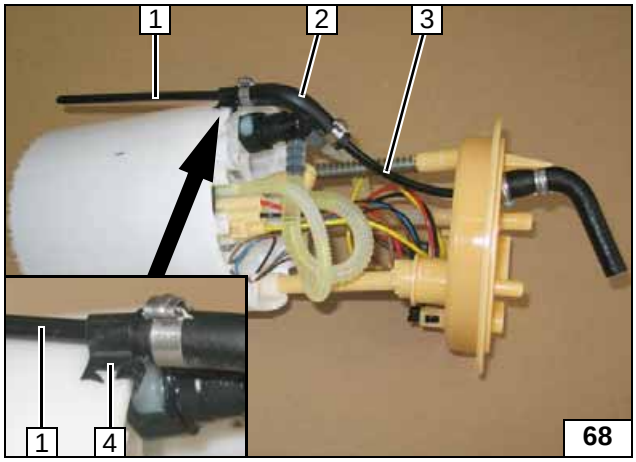


Figure shows TDI 2WD. Insert standpipe B **1** through retaining clamp **4**.

2 90° moulded hose, 10mm dia. clamp [2x]
3 Standpipe A

Installing standpipe B

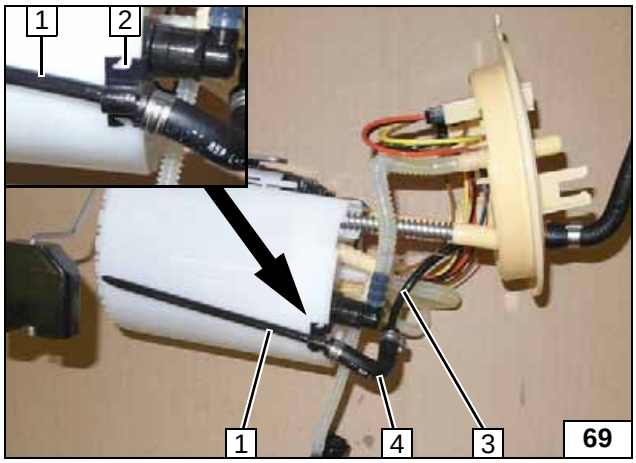


Figure shows TDI 4Drive. Insert standpipe B **1** through retaining clamp **2**.

3 Standpipe A
4 90° moulded hose, 10mm dia. clamp [2x]

Installing standpipe B

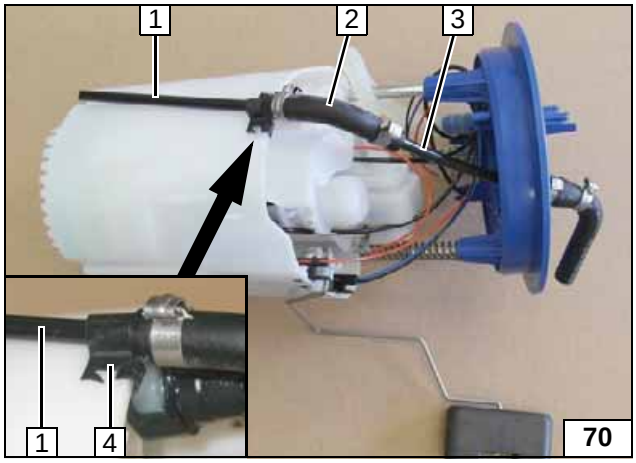
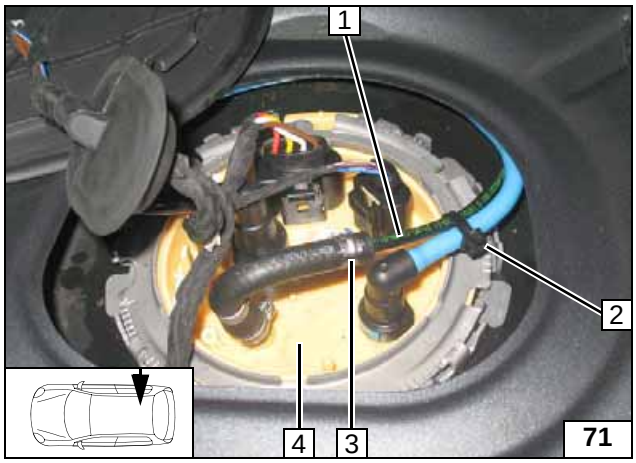


Figure shows TSI. Insert standpipe B **1** through retaining clamp **4**.

2 90° moulded hose, 10mm dia. clamp [2x]
3 Standpipe A

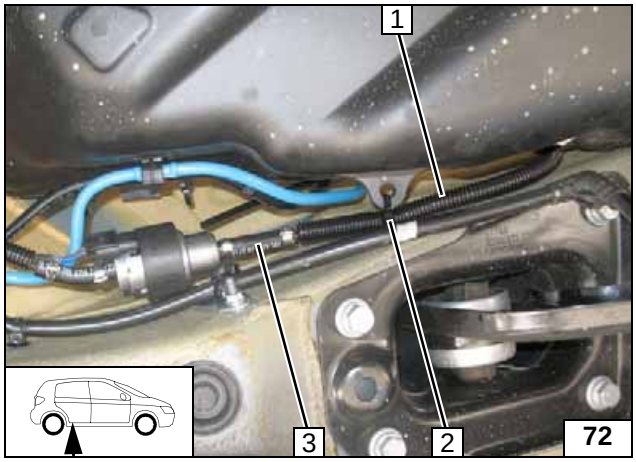
Installing standpipe B



Install fuel tank sending unit **4** in accordance with manufacturer's instructions.

1 Fuel line
2 Cable tie
3 10 mm dia. clamp

Connecting fuel line



Slide 10 mm dia. corrugated tube **1** onto fuel line. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

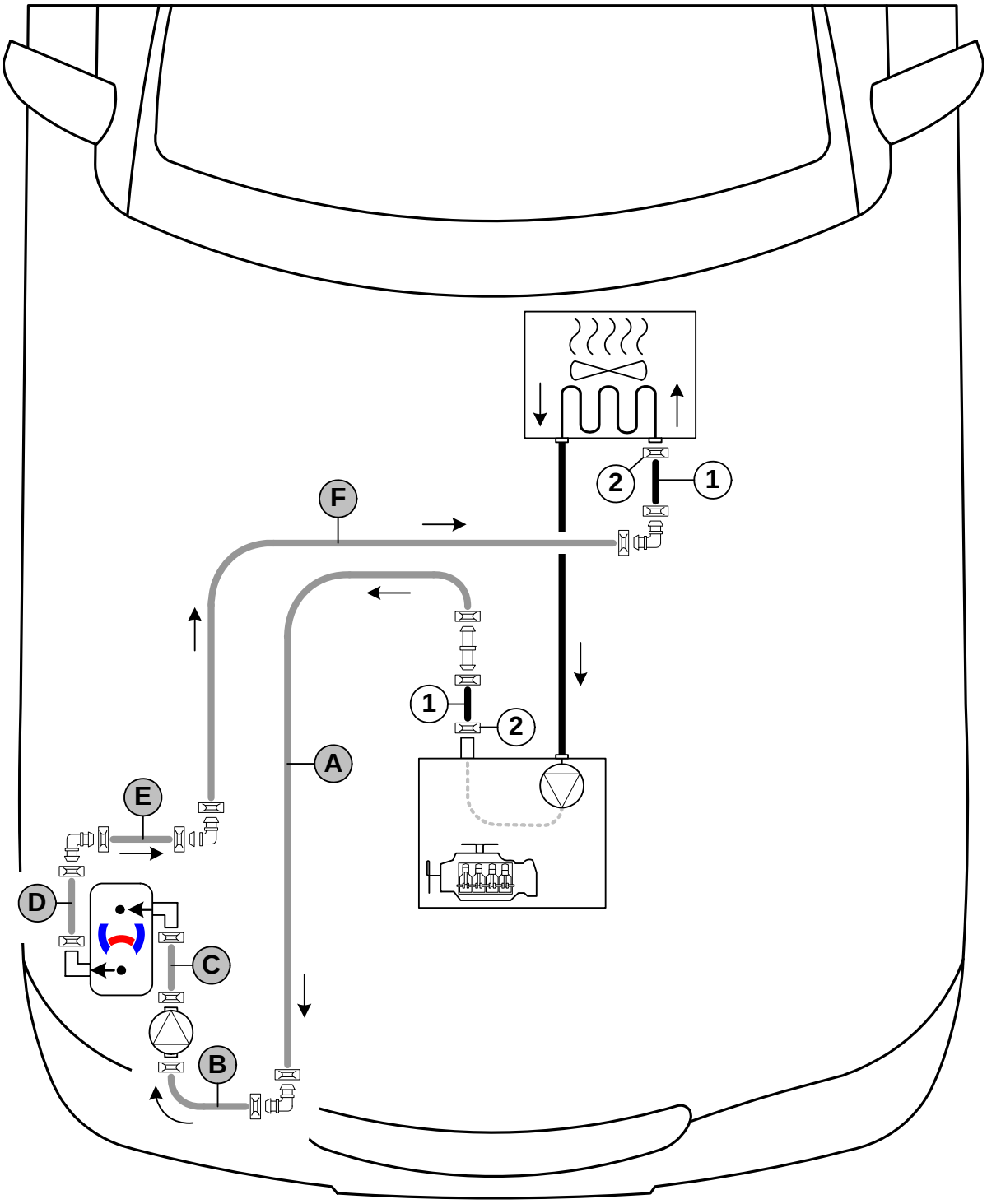
2 Cable tie
3 Fuel line, hose section, 10 mm dia. clamp [2x]

Connecting metering pump

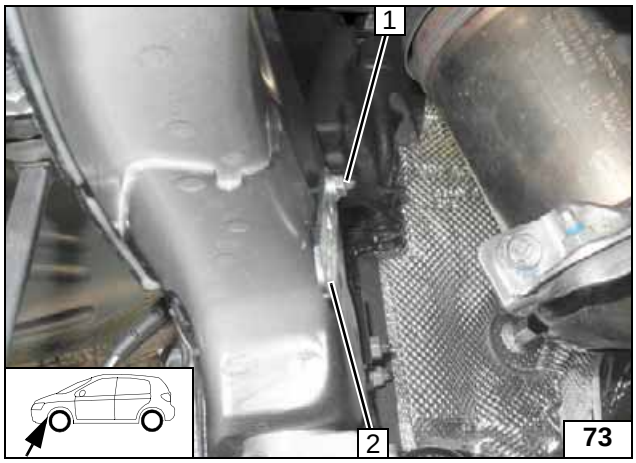
Coolant Circuit of TSI

WARNING!
Any coolant running off should be collected in an appropriate container. Route hoses 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 modelled on an 'inline' circuit and based on the following diagram:

Hose routing diagram

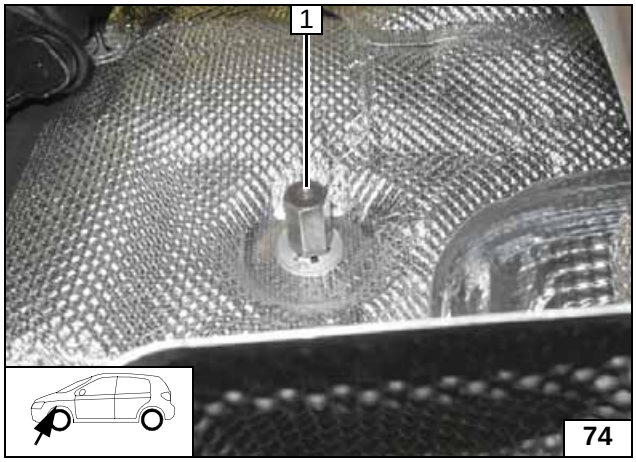


All spring clips without a specific designation = 25 mm dia. **2** = Original vehicle spring clip .
1 = Original vehicle hose All connecting pipes and = 18x18 mm dia.



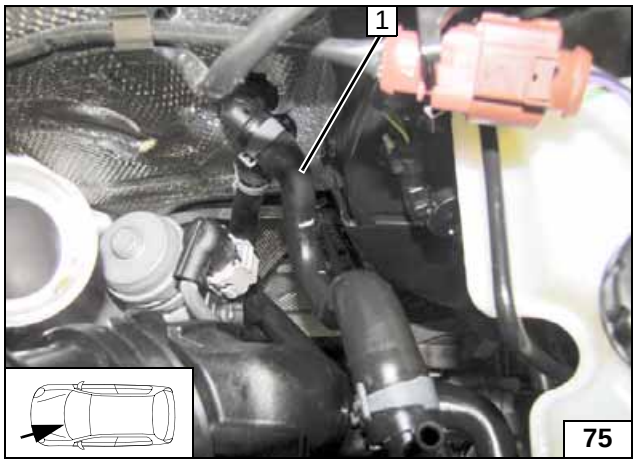
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



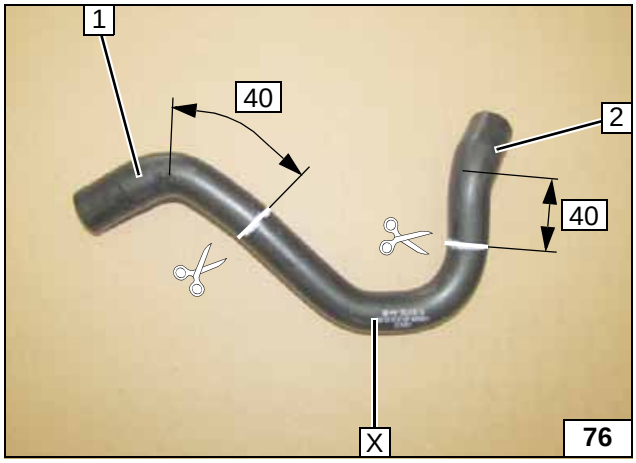
1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut



Remove engine outlet / heat exchanger inlet hose **1**. Spring clips will be reused!

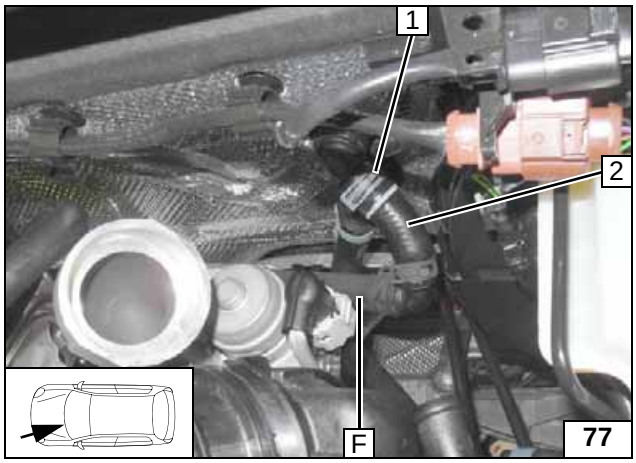
Cutting point



1 Engine outlet hose section
2 Heat exchanger inlet hose section

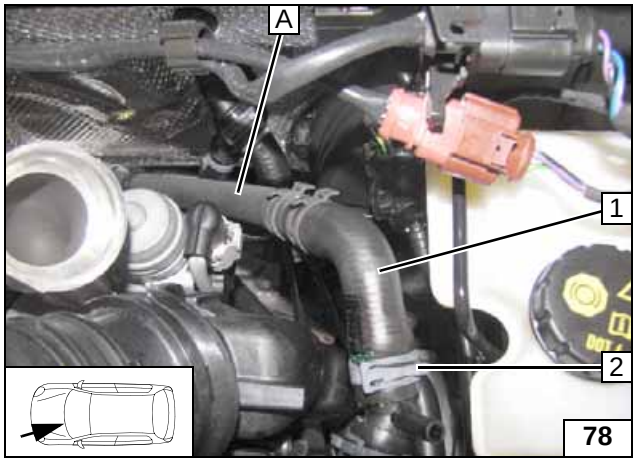
X =

Cutting point



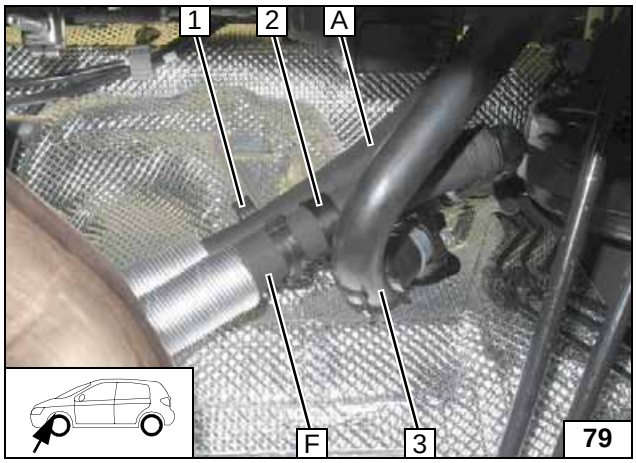
1 Original vehicle spring clip
2 Heat exchanger inlet hose

Connecting heat exchanger inlet



1 Engine outlet hose
2 Original vehicle spring clip

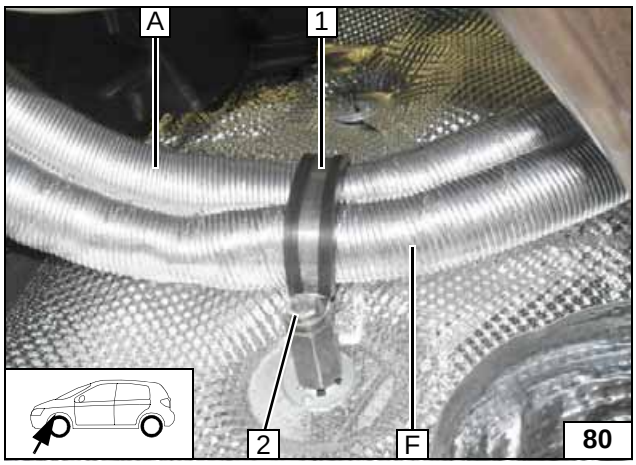
Connecting engine outlet



Push one 600 mm long heat protection hose each onto hoses **A** and **F**.

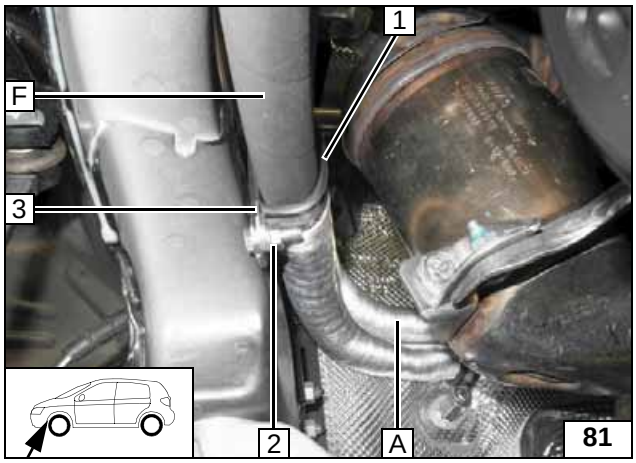
1 Spacer bracket
2 Twistable spacer bracket
3 Hose of heat exchanger outlet

Routing on firewall



1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

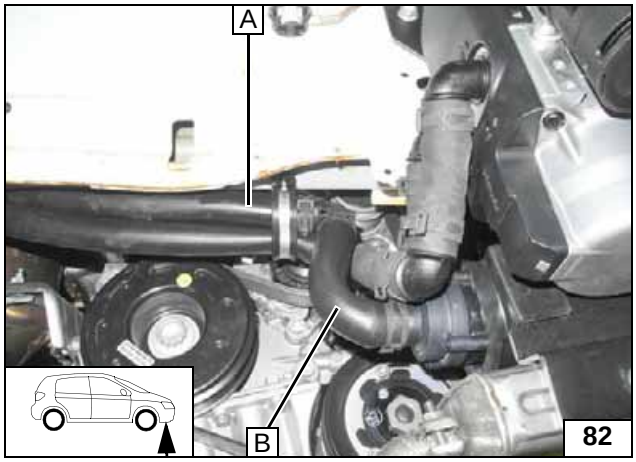
Fastening on firewall



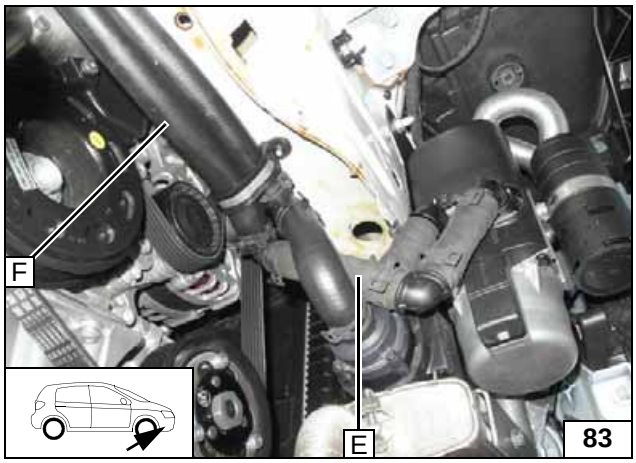
Align hoses. Ensure sufficient distance from catalytic converter; correct if necessary.

1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

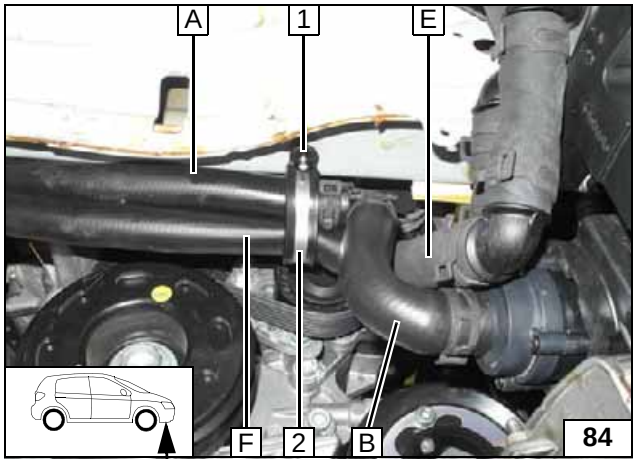
Routing on frame side member



Connecting heater inlet



Connecting heater outlet



Ensure sufficient distance from neighbouring components, correct if necessary.

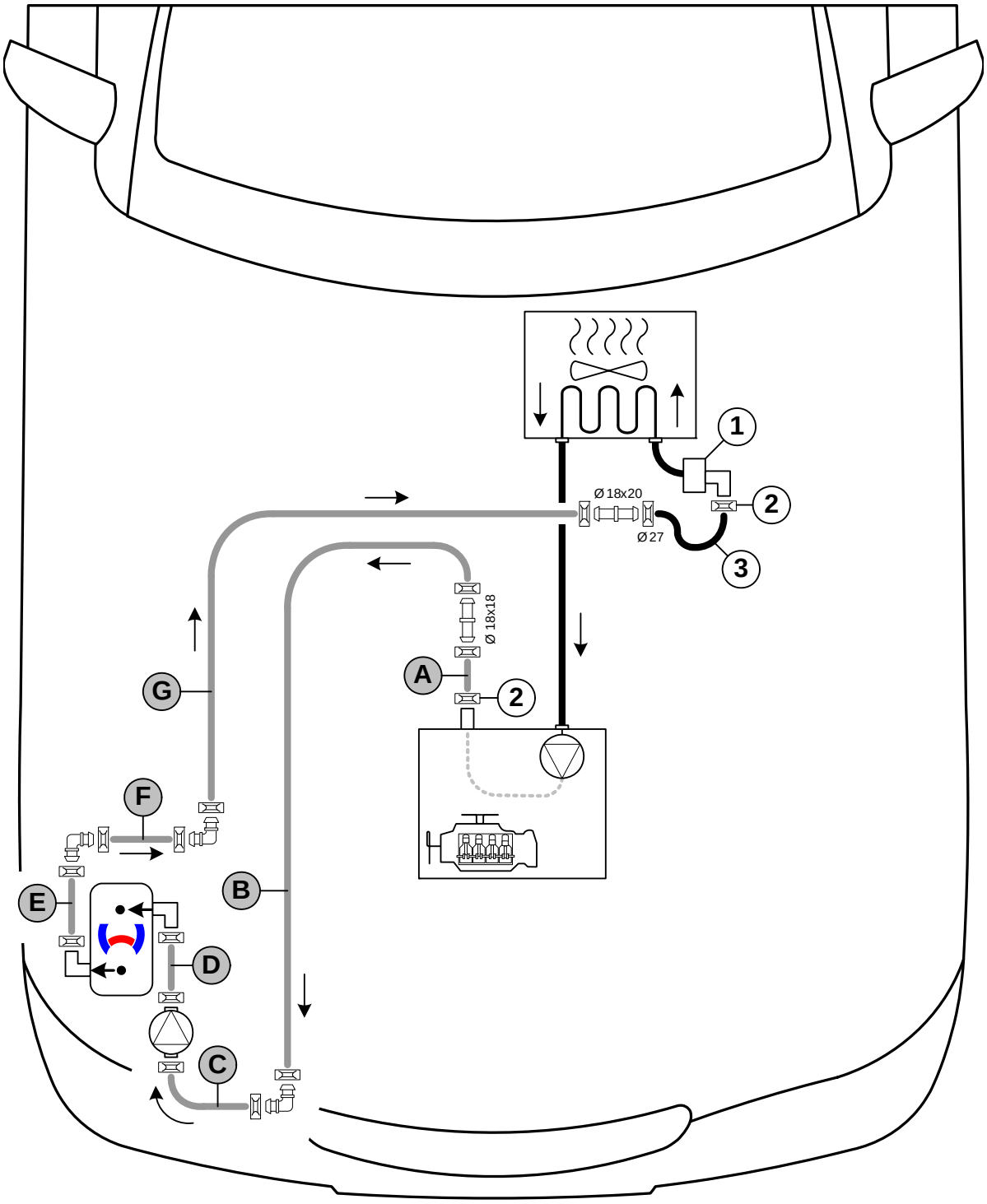
1 Original vehicle stud bolt, plastic nut
2 38 mm dia. rubber-coated p-clamp

Aligning and fastening hoses

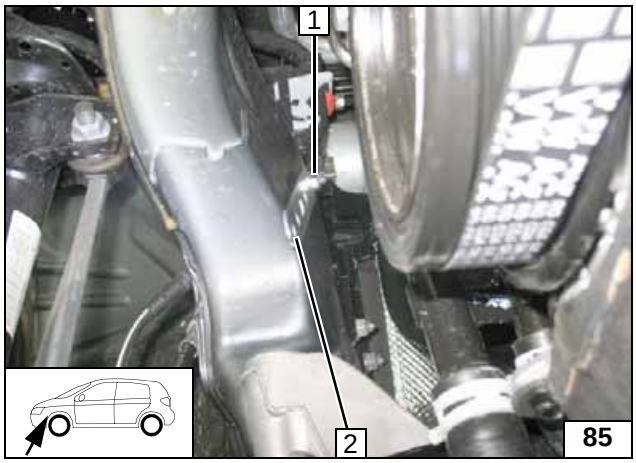
Coolant Circuit of TDI 2WD

WARNING!
Any coolant running off should be collected in an appropriate container. Route hoses 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 modelled on an 'inline' circuit and based on the following diagram:

Hose routing diagram

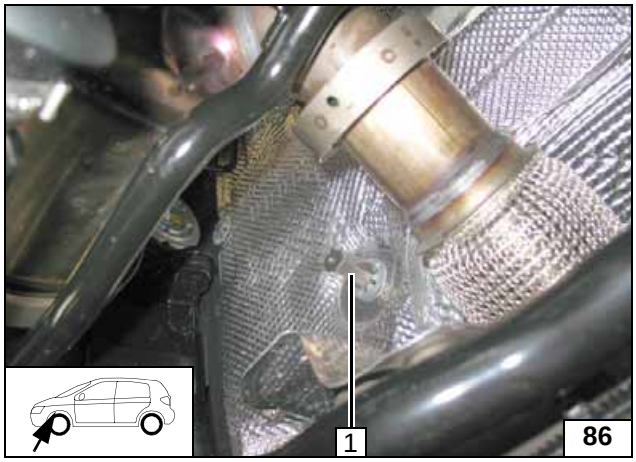


All spring clips without a specific designation = 25 mm dia. **2** = Original vehicle spring clip .
1 = EGR **3** = Original vehicle hose
All connecting pipes = 18x18 mm dia.



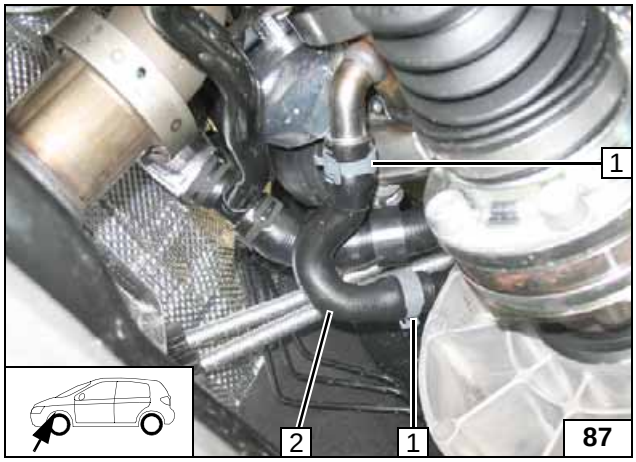
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



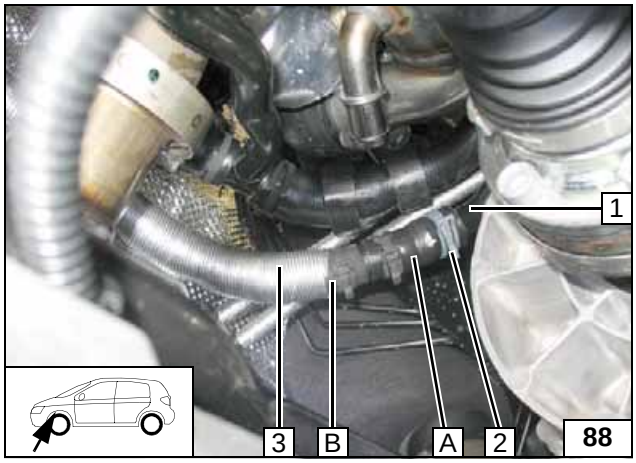
1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut



Remove hose from engine outlet/ EGR inlet **2**. Spring clips **1** will be reused.

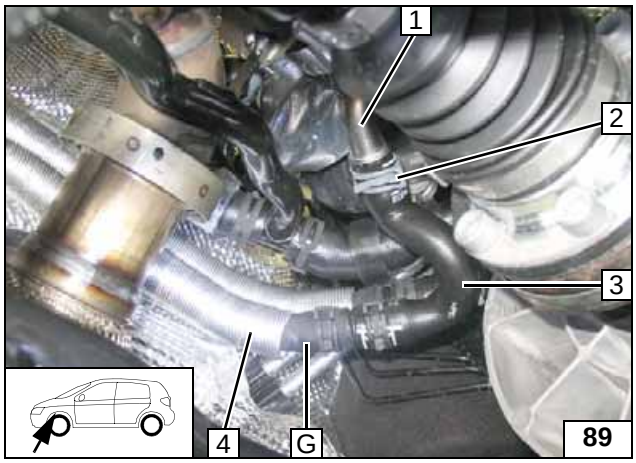
Cutting point



Slide 600mm long heat protection hose **3** onto hose **B**

1 Engine outlet pipe
2 Original vehicle spring clip

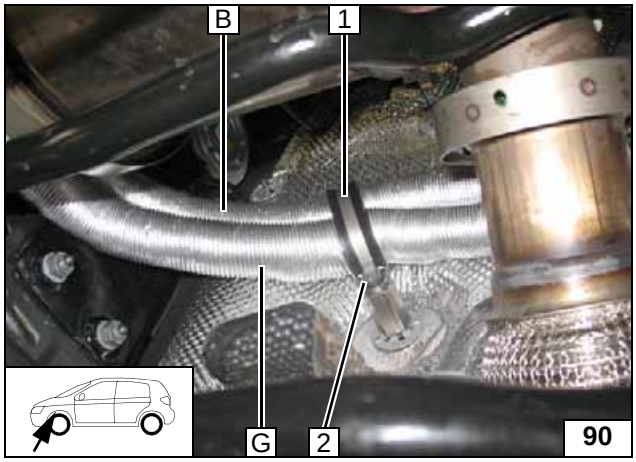
Connecting engine outlet



Slide 600mm long heat protection hose **4** onto hose **G**

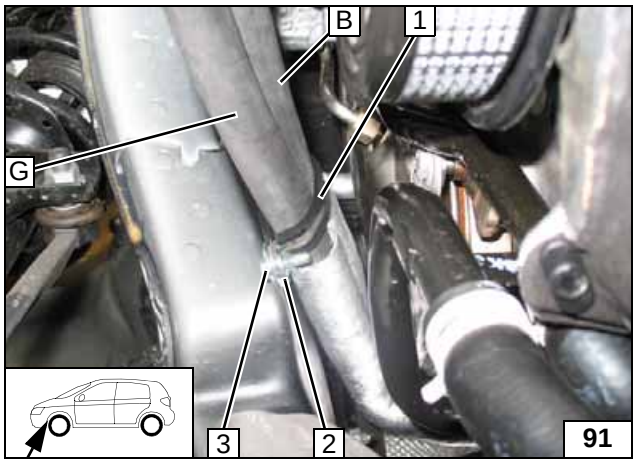
1 EGR pipe
2 Original vehicle spring clip
3 Original vehicle hose, mounted oppositely

Connecting heat exchanger inlet



1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

Fastening on firewall

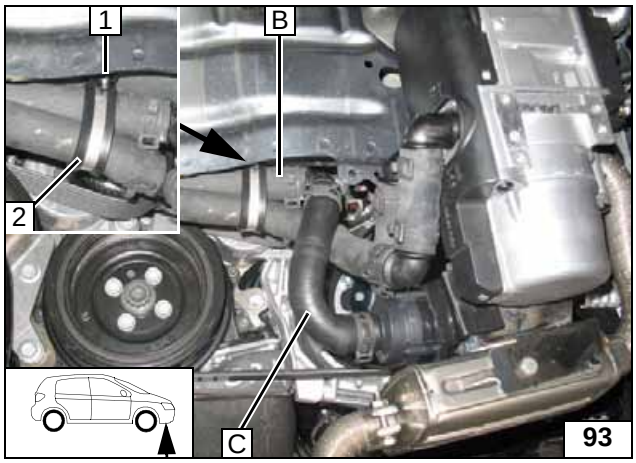


1 38 mm dia. rubber-coated p-clamp
2 Perforated bracket
3 M6x20 bolt, flanged nut

Routing on frame side member

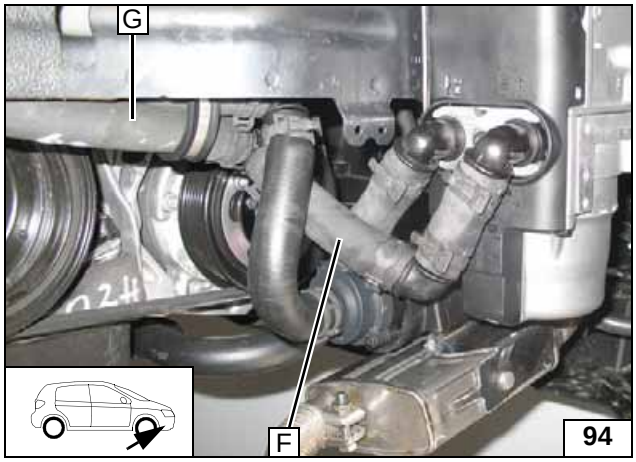
Align hoses. Ensure sufficient distance from catalytic converter at position **1**, correct if necessary.

Routing in engine compartment



1 Original vehicle stud bolt, plastic nut
2 38 mm dia. rubber-coated p-clamp

Connecting heater inlet



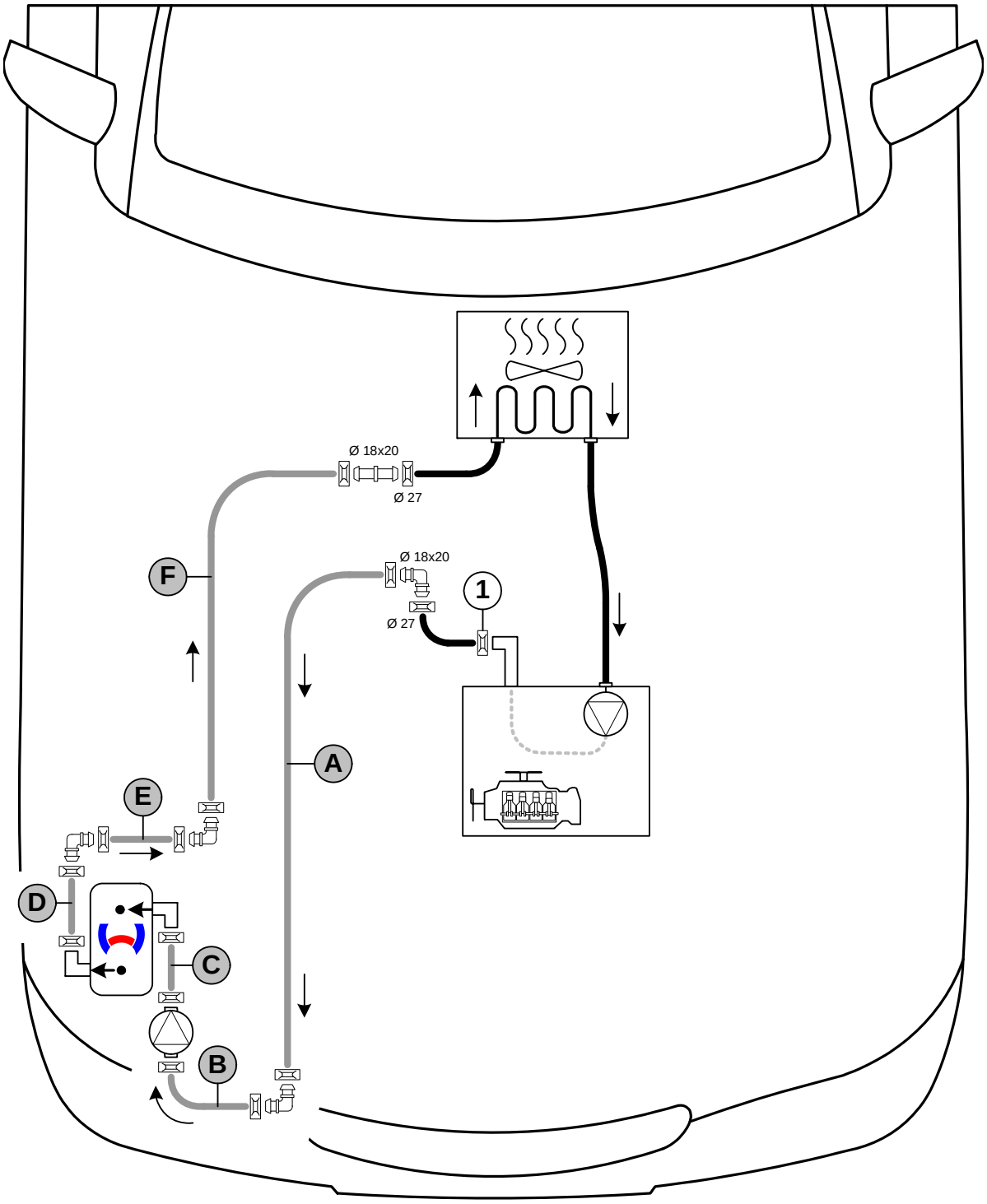
Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

Connecting heater outlet

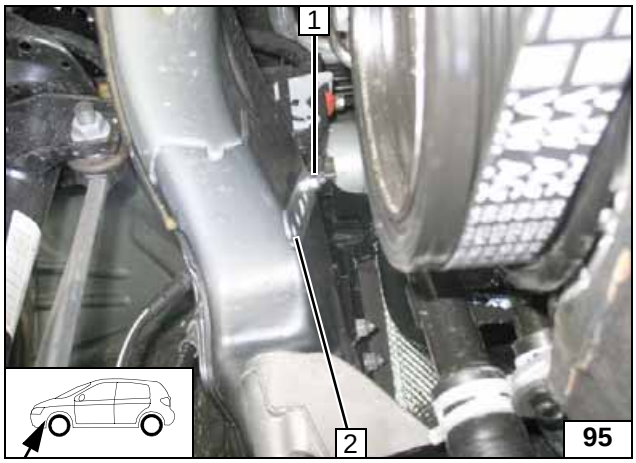
Coolant Circuit of TDI 4Drive

WARNING!
Any coolant running off should be collected in an appropriate container. Route hoses 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 modelled on an 'inline' circuit and based on the following diagram:

Hose routing diagram

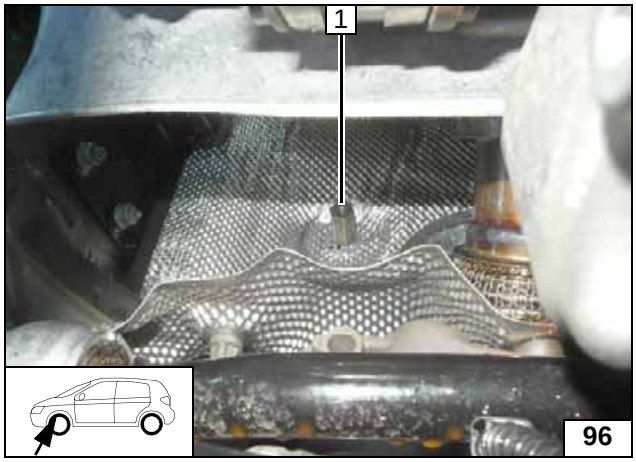


All spring clips without a specific designation = 25 mm dia. **1** = Original vehicle spring clip.
All connecting pipes without a specific designation = 18x18mm dia.



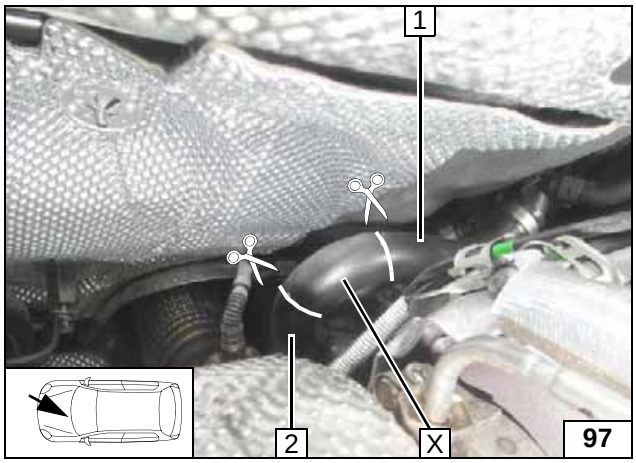
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut

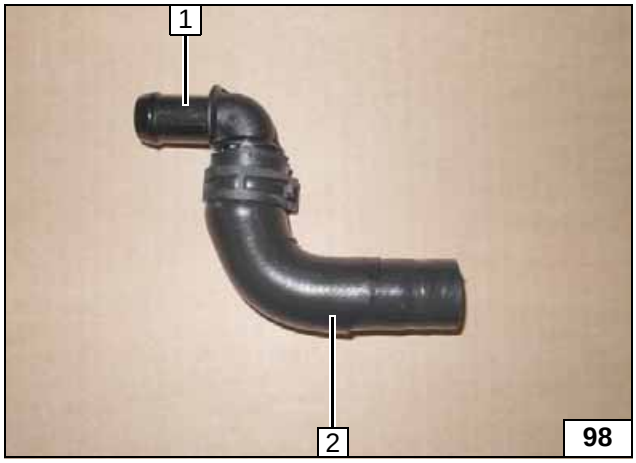


Cut hose of engine outlet / heat exchanger inlet at the markings. Remove engine outlet hose section **2**. The spring clip of the engine outlet connection piece will be reused!

1 Heat exchanger inlet hose section

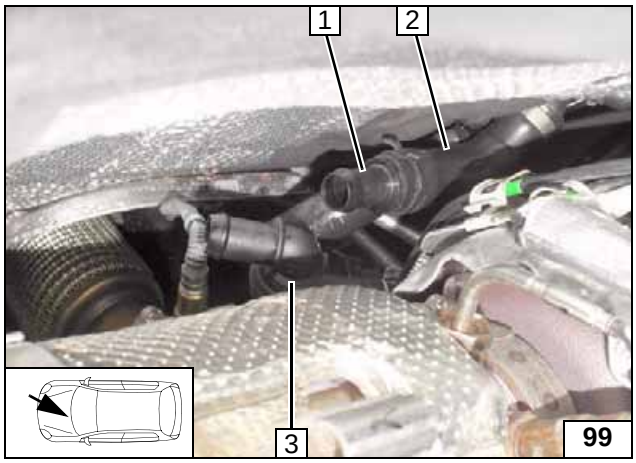
X 90° elbow

Cutting point



1 90°, 18x20mm dia. connecting pipe, 27mm dia. spring clip
2 Engine outlet hose section

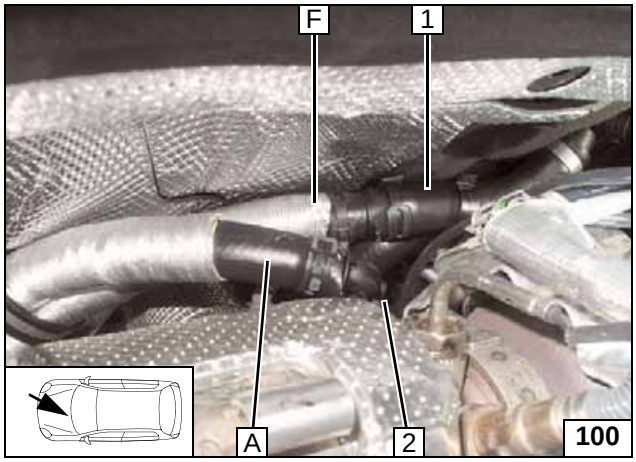
Preparing engine outlet hose



Install engine outlet hose **3** on engine outlet using original vehicle spring clip.

1 18x20mm dia. connecting pipe, 27mm dia. spring clip
2 Heat exchanger inlet hose

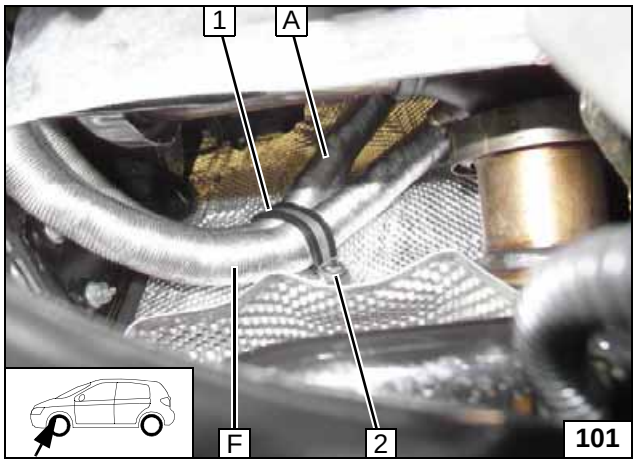
Installing engine outlet hose



Push one 600 mm long heat protection hose each onto hoses **A** and **F**.

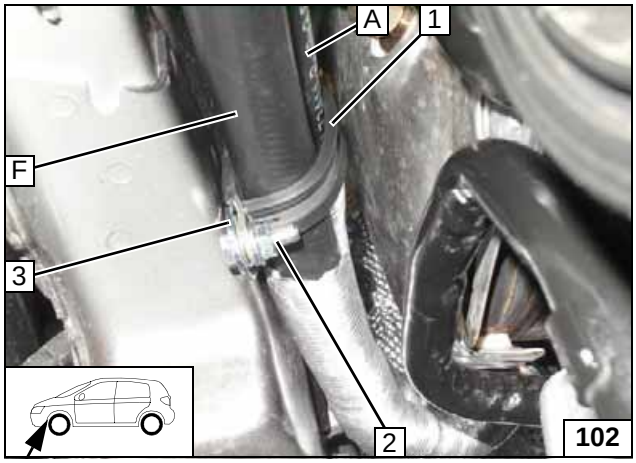
1 Heat exchanger inlet hose
2 Original vehicle spring clip

Connecting engine outlet / heat exchanger inlet



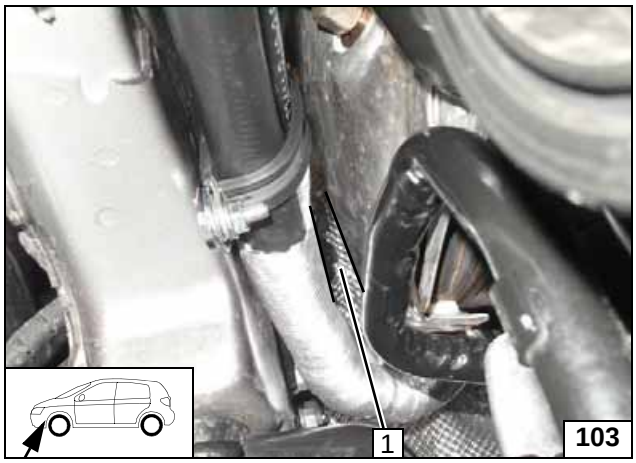
1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

Fastening on firewall



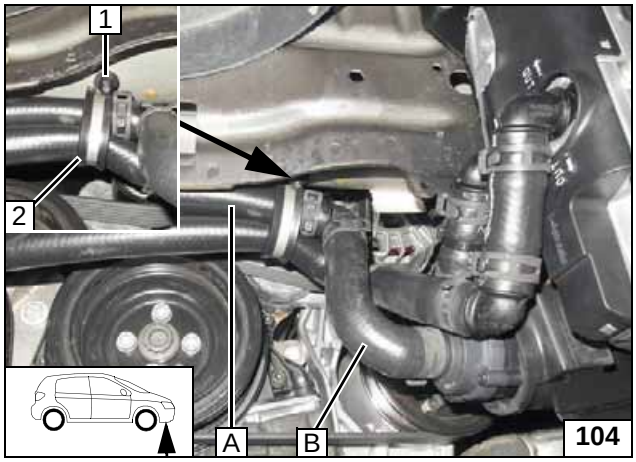
1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

Routing on frame side member



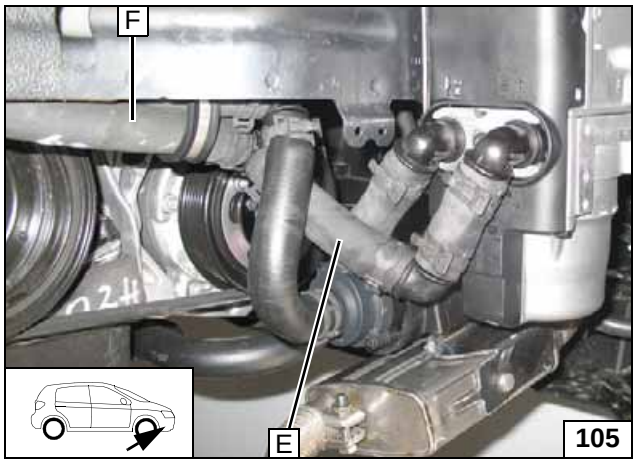
Align hoses. Ensure sufficient distance from catalytic converter at position **1**, correct if necessary.

Routing in engine compartment



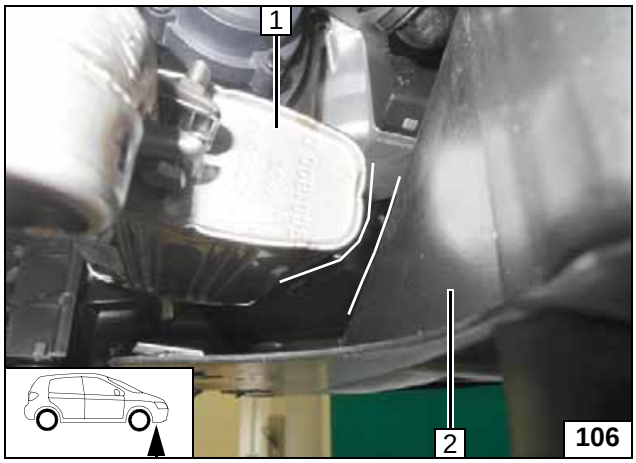
1 Original vehicle stud bolt, plastic nut
2 38 mm dia. rubber-coated p-clamp

Connecting heater inlet



Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

Connecting heater outlet

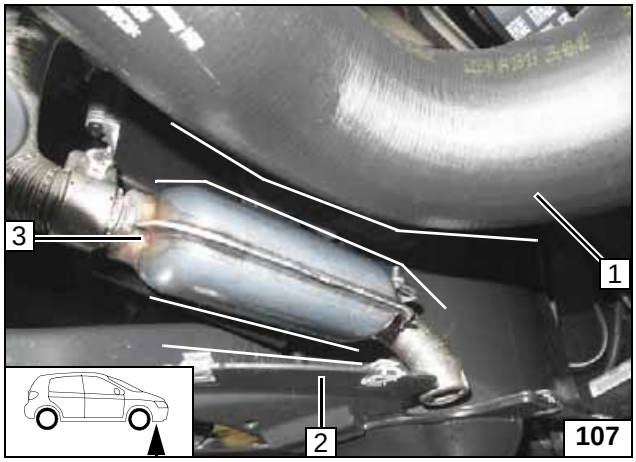


Aligning Exhaust Silencer

1.2 TSI / 1.4 TSI / TDI

Ensure sufficient distance between wheel well trim **2** and silencer **1**, correct if necessary.

Aligning exhaust silencer



1.8 TSI

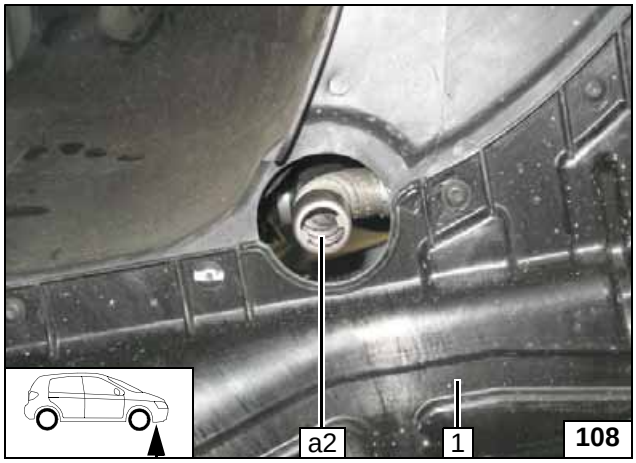
Ensure sufficient distance between wheel well trim **2** as well as charge-air hose **1** and silencer **3**, correct if necessary.

Aligning exhaust silencer

Final Work

WARNING!
Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back loose lines.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **Make settings on the A/C control panel according to the 'Operating Instructions'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**



Align exhaust pipe **a2** with centre of pass through.

1 Underride protection installed

Aligning exhaust pipe a2

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

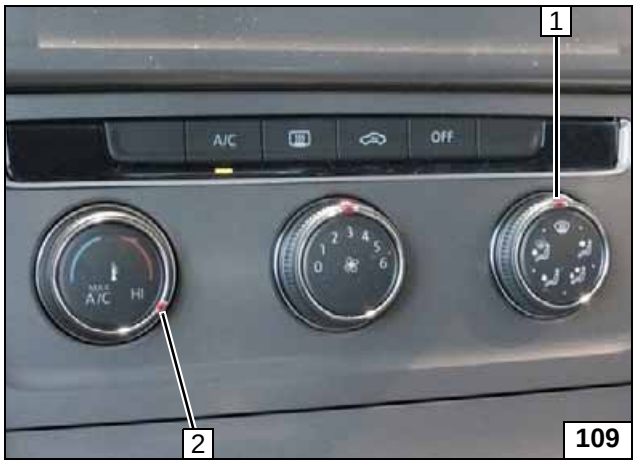
Operating instructions for Climatic

Please remove page and add to the vehicle operating instructions.

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

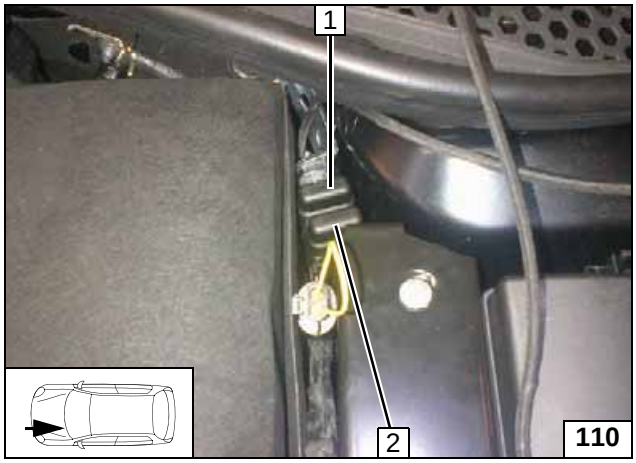
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



1 Air outlet to windscreen
2 Set temperature to ‘max.’

Air-conditioning control panel



1 1A passenger compartment fuse F2
2 20A heater fuse F1

Engine compartment fuses

Webasto
Feel the Drive

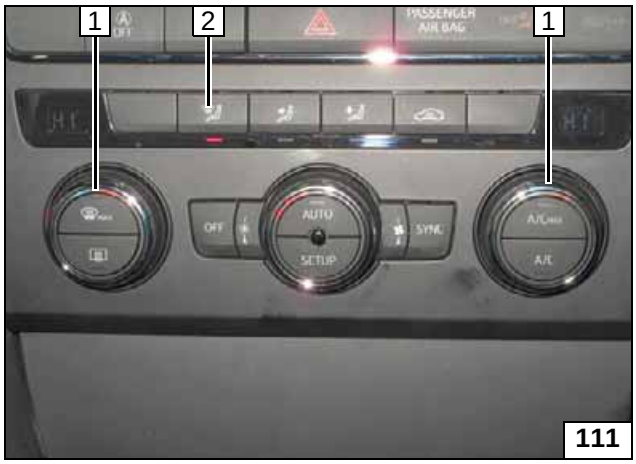
Operating instructions for Climatronic

Please remove page and add to the vehicle operating instructions.

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

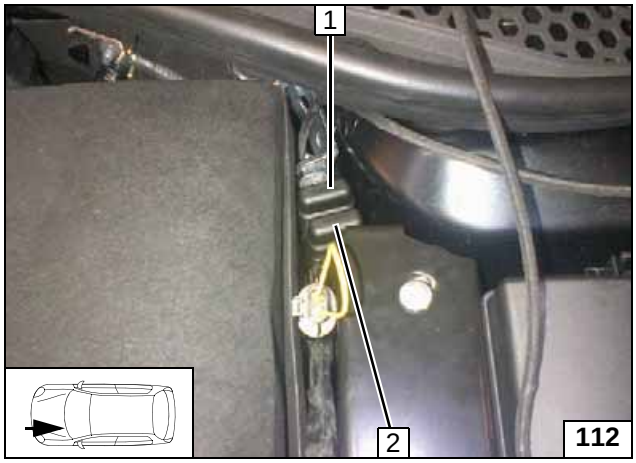
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



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

Air-conditioning control panel



1 1A passenger compartment fuse F2
2 20A heater fuse F1

Engine compartment fuses