Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

With FuelFix

Installation Documentation
VW Passat / Passat Variant

Validity

Manufacturer	Model	Type	EG BE No. / ABE
VW	Passat	3C / 3G	e1 * 2001 / 116 * 0307 * 37
VW	Passat Variant	3C / 3G	e1 * 2001 / 116 * 0307 * 37

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.4 TSI	Petrol	6-speed SG	92	1395	CZCA
1.4 TSI	Petrol	6-speed SG	110	1395	CZEA
1.6 TDI	Diesel	6-gear SG / DSG	88	1598	DCXA
2.0 TDI (Blue Motion)	Diesel	DSG	110	1968	CRLB
2.0 TDI (Blue Motion)	Diesel	DSG	140	1968	DDAA

SG = manual transmission
DSG = direct gear transmission

From model year 2015
Left-hand drive vehicle

Verified equipment variants:
Climatronic
Front fog lights
Start - Stop
Headlight washer system (diesel only)
Turning light
LED headlight
4WD
4WD 4Motion

Not verified:
Climatic
Passenger compartment monitoring
Headlight washer system (petrol only)

Total installation time: approx. 8.5 hours

VW Passat / Passat Variant

Table of Contents

Necessary Components

- Basic delivery scope of Thermo Top Evo in accordance with price list
- Installation kit with FuelFix for VW Passat / Passat Variant 2015 Petrol and diesel: **1323791B**
- To be ordered additionally in case of 4WD 4Motion:
  Additional kit for VW Passat Alltrack 2015: **1324479**_
- Heater control in accordance with price list and upon consultation with end customer
- For installation of MultiControl CAR: MultiControl installation frame: **9030077**_
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

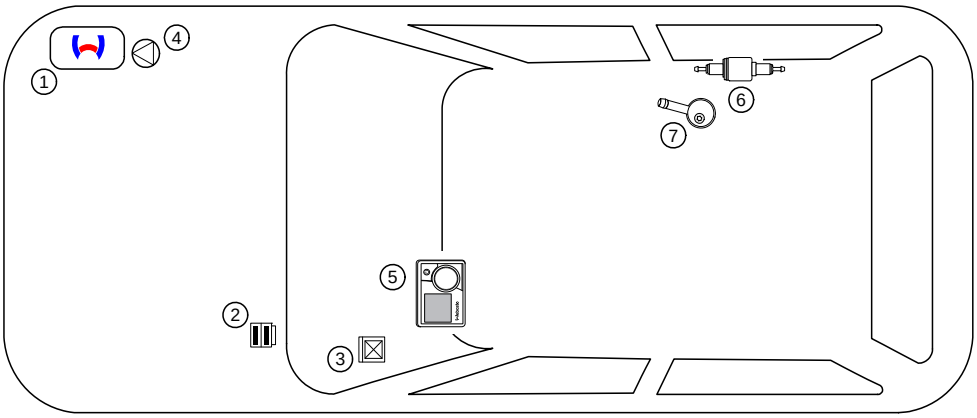
Installation instructions:

- 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 ThermoCall 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
7. FuelFix (Fig. shows petrol vehicle)



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.

VW Passat / Passat Variant

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.

VW Passat / Passat Variant

Information on Validity

This installation documentation applies to VW Passat / Passat Variant Petrol and diesel vehicles - for validity, see page 1 - from model year 2015 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
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

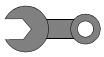
Dimensions
- All dimensions are in mm.

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

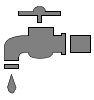
You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Mechanical System



Electrical System

Coolant Circuit



Combustion Air

Fuel

Exhaust Gas

Software

Special features are highlighted using the following symbols:

Specific risk of damage to components.

Specific risk due to electrical voltage.

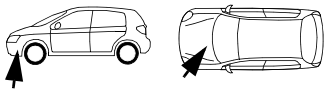
Specific risk of injury or fatal accidents.

Specific risk of fire or explosion.

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

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.

Preliminary Work

Vehicle

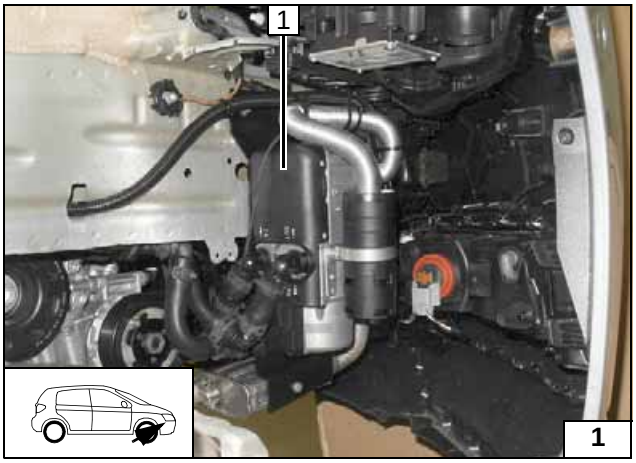
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery completely together with the carrier.
- Remove the air filter completely, together with the intake hose.
- Remove the engine underride protection.
- Remove the right underride protection.
- Remove the fuel tank underride protection, if present.
- Remove the right front wheel.
- Remove the front right wheel well trim.
- Remove the storage compartment.
- Remove the lateral instrument panel trim on the driver's side.
- Remove the A-pillar trim on the driver's side (only in case of Telestart).
- Remove the footwell trim on the front passenger's side.
- Remove the rear bench seat.
- Open the right-hand tank-fitting service lid.

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.

Note:

The installation steps are nearly identical for both TSI and TDI. Deviations have been documented, otherwise all images show a 2.0 TDI (2WD).



Heater Installation Location

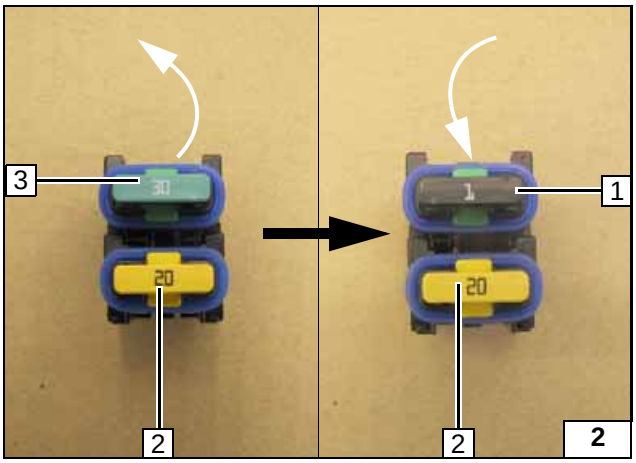
1 Heater

Installation location

Preparing Electrical System

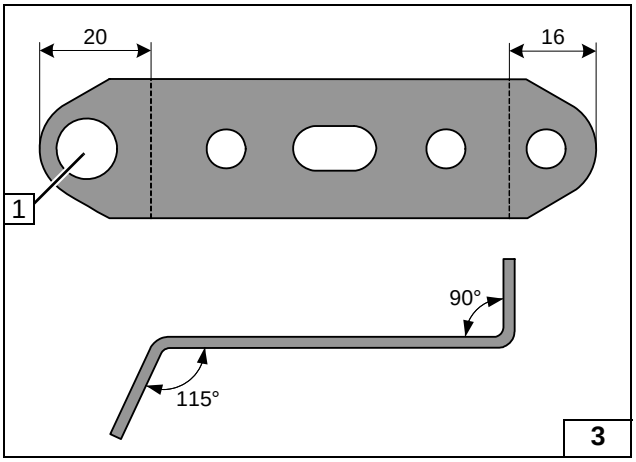
Replace passenger compartment 30A main fuse F2 **3** with 3A fuse **1**.

2 20A heater fuse F1



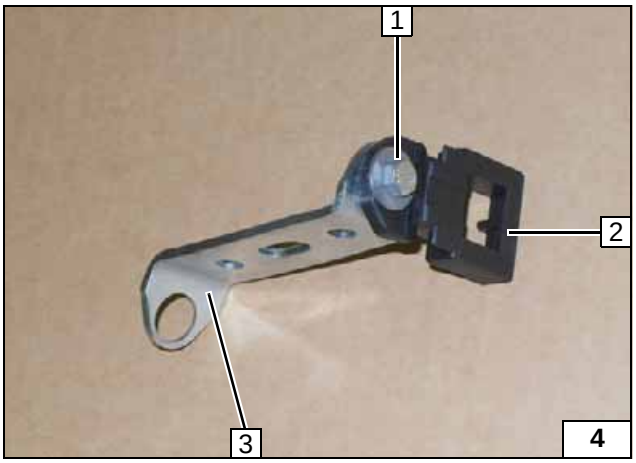
Preparing engine compartment fuses

1 12.5mm dia. hole



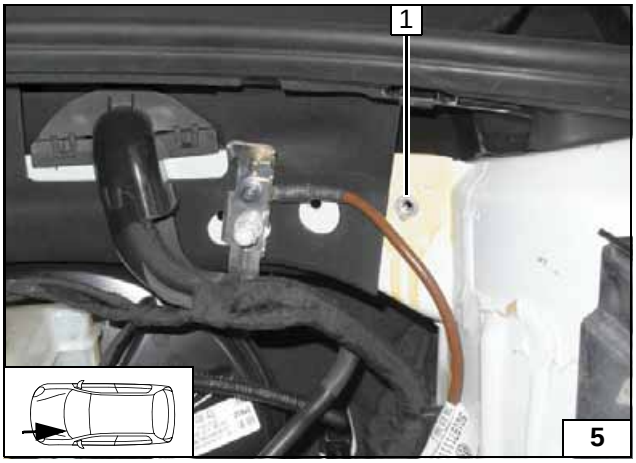
Preparing perforated bracket

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

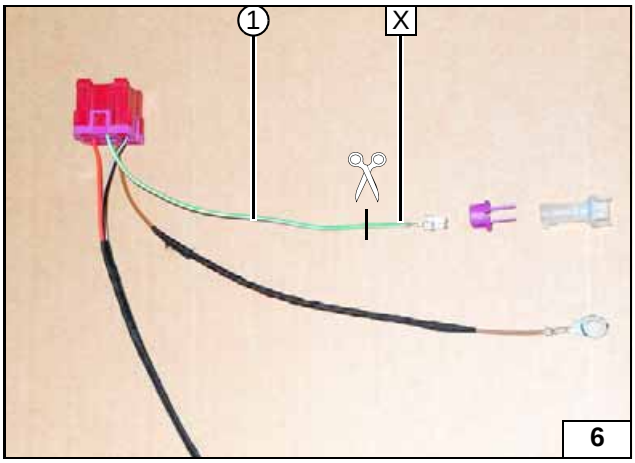


Premounting engine compartment fuse holder

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



Installing rivet nut



Wire sections retain their numbering in the entire document.

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

Separate green/white (gn/ws) wire of ① LIN Gateway socket, pin SH, at the marking (if connector premounted).

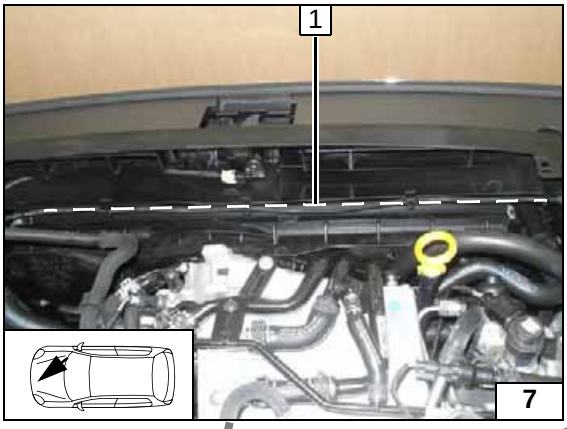
X = 

Preparing wiring harness

Electrical System

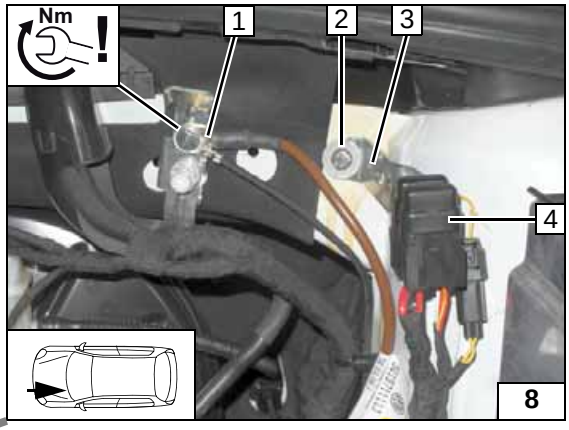
Wiring Harness Routing

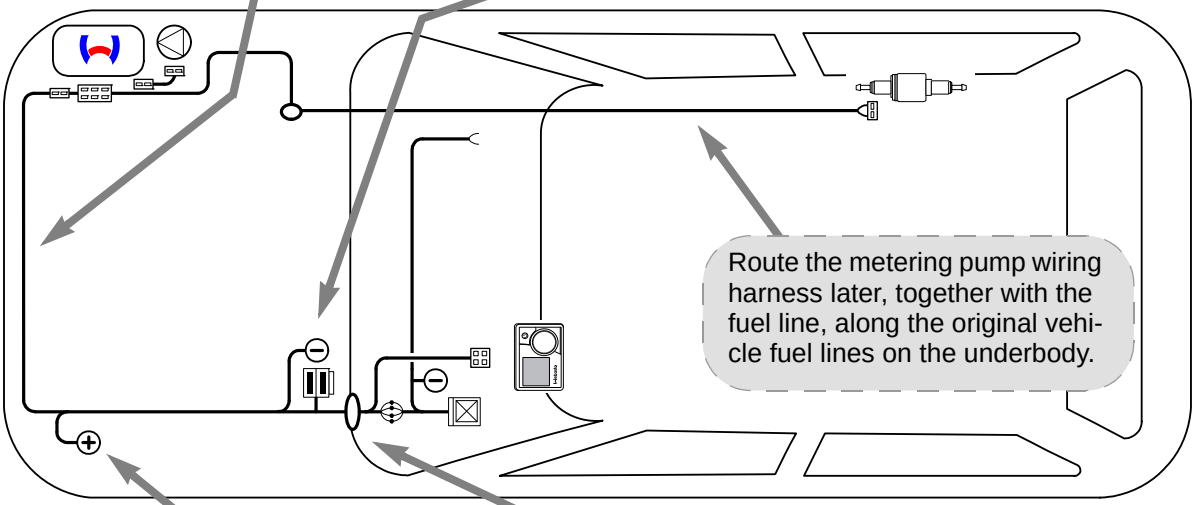
Route heater wiring harness below the cover along the marking **1** to the installation location of the heater and fasten using clip-type cable ties.



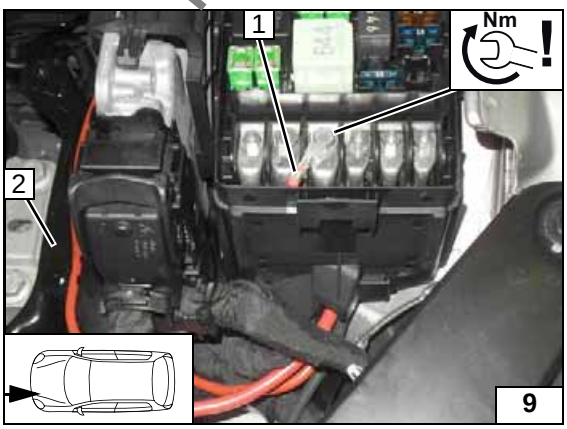
Fuse holder of engine compartment / earth wire

1 Earth wire on original vehicle earth point
2 M6x20 bolt, spring lockwasher, large diameter washer
3 Perforated bracket
4 Fuses F1-2



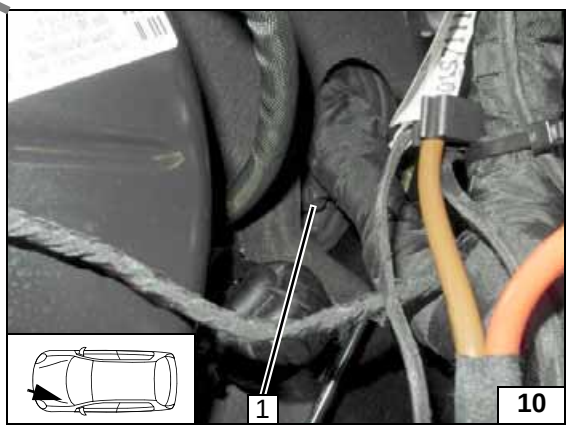


Wiring harness routing diagram



Positive wire

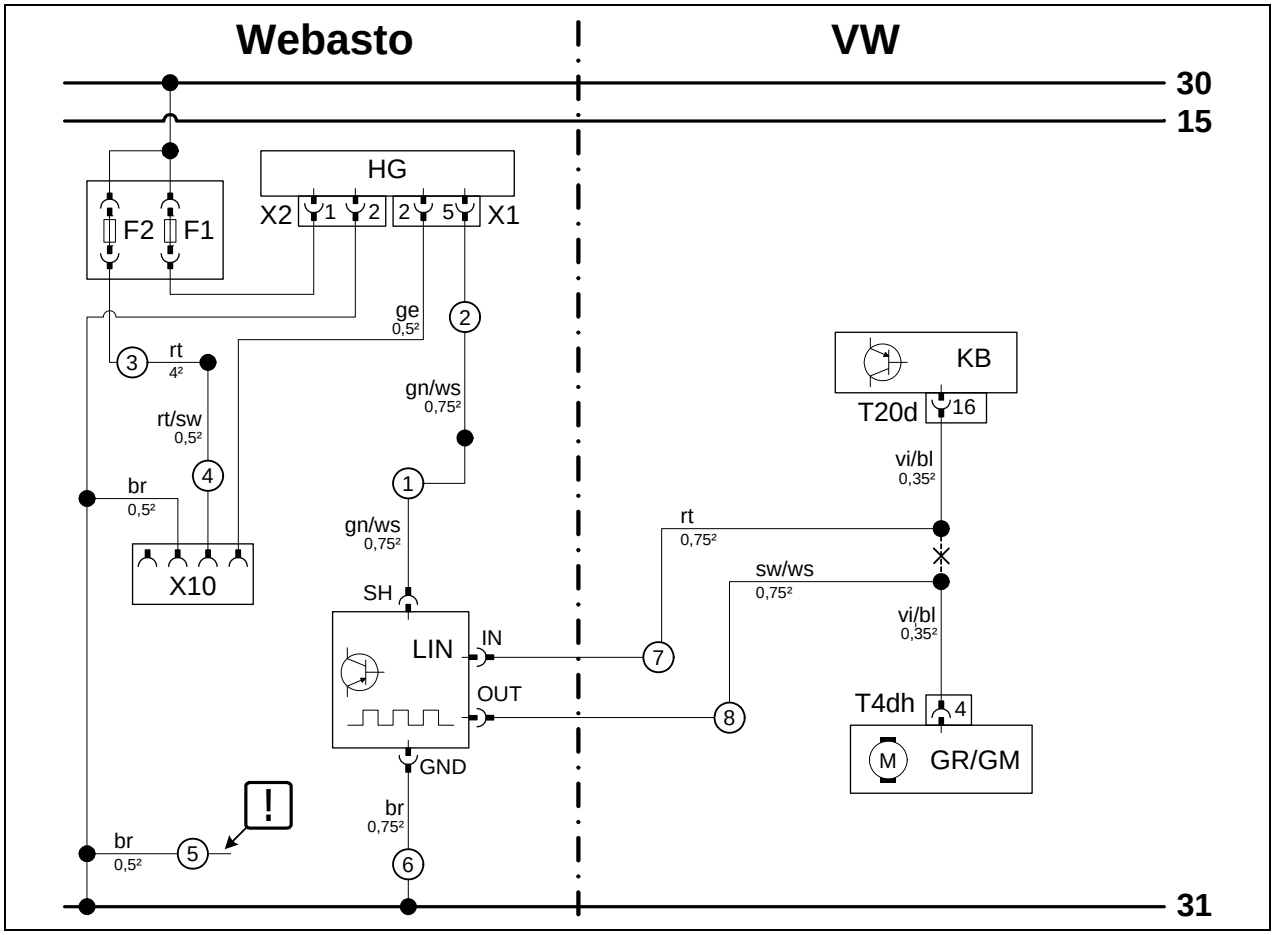
1 Positive wire on positive distributor
2 Wiring harnesses in original vehicle line duct



Wiring harness pass through

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

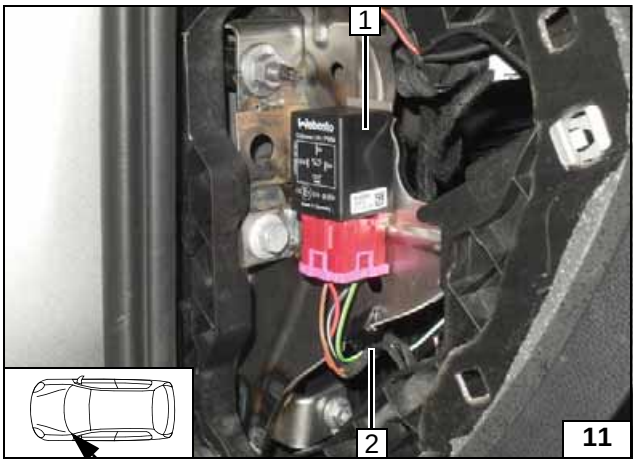
Fan Controller



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	T20d	20-pin connector of KB	sw	black
X2	2-pin heater connector	GR/GM	Fan controller/fan module	ge	yellow
F1	20A fuse	T4dh	4-pin connector of GM	gn	green
F2	**30A fuse replaced with 1A fuse**			vi	violet
				ws	white
X10	4-pin connector of heater control			br	brown
				bl	blue
LIN	LIN-Gateway				
LIN GW settings:				!	Insulate wire end and tie back
Duty cycle:	not relevant				
Frequency:	not relevant				
Voltage:	5.3V			**X**	Cutting point
Function:	LIN			Wiring colours may vary.	

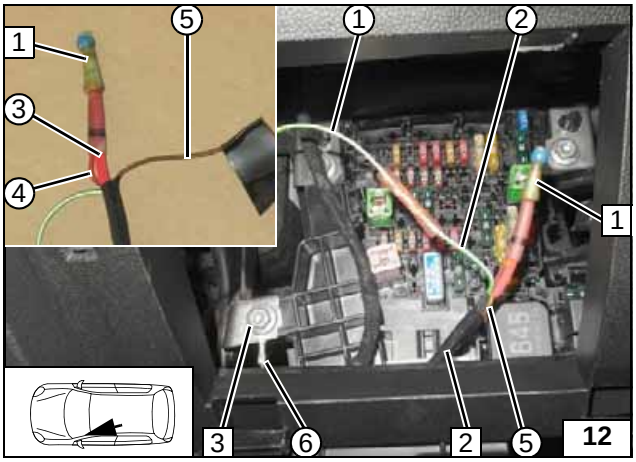
Legend



Mount LIN Gateway **1** on socket and fasten together with adhesive tape.

2 Clip-type cable tie

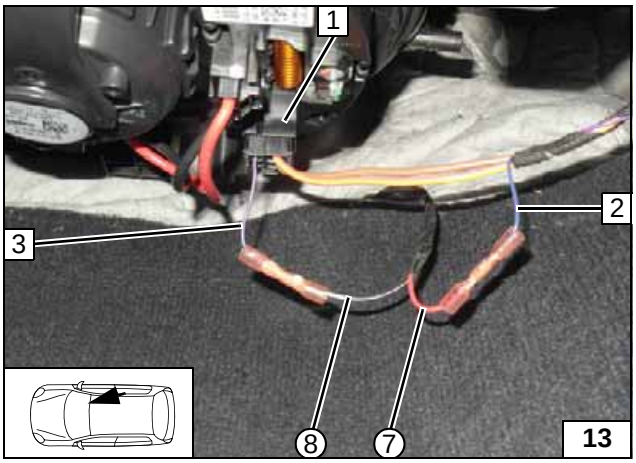
Installing LIN- GW



Connect red (rt) wire ③ and red/black (rt/sw) wire ④ according to wiring diagram. Insulate and tie back brown (br) wire ⑤.

1 Solder wire terminator
2 Heater wiring harness
3 Original vehicle bolt
① Green/white (gn/ws) wire of LIN-Gateway/SH
② Green/white (gn/ws) wire of heater X1/5
⑥ Brown (br) wire of LIN-Gateway/GND

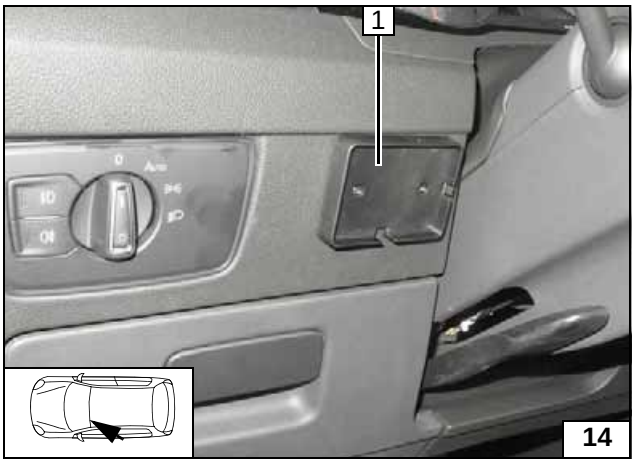
Connecting wiring harnesses



Connection to 4-pin connector T4bg **1** from fan controller/ fan module.

2 Violet/blue (vi/bl) wire of connector T20b, pin 16, A/C control unit
3 Violet/blue (vi/bl) wire of 4-pin connector T4bg, pin 4 GR/GM
⑦ Red (rt) wire of LIN-Gateway/IN
⑧ Black/white (sw/ws) wire of LIN-Gateway/OUT

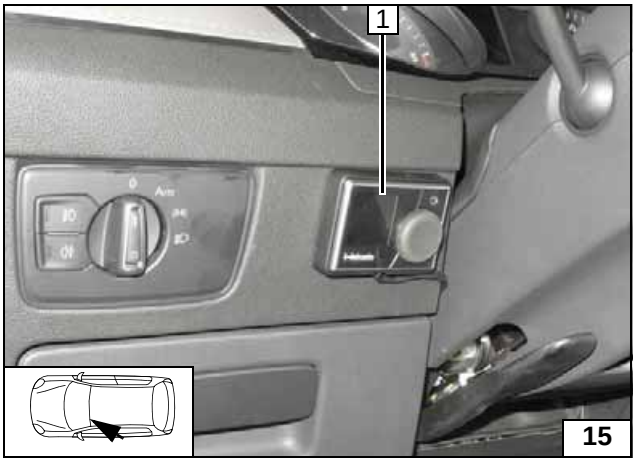
Connecting fan controller / fan module



MultiControl CAR Option

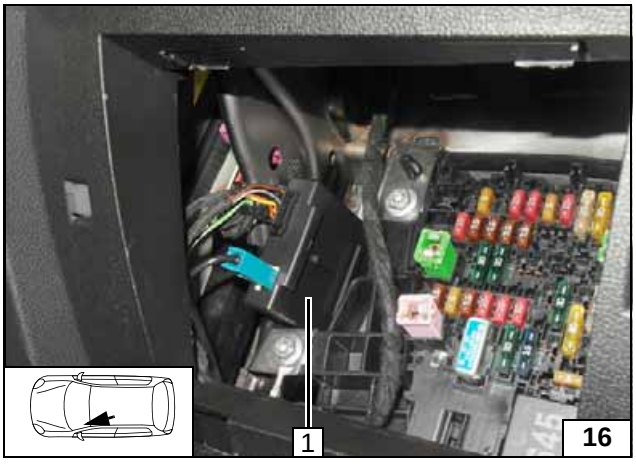
1 Installation frame

Mounting MultiControl CAR installation frame



1 MultiControl CAR

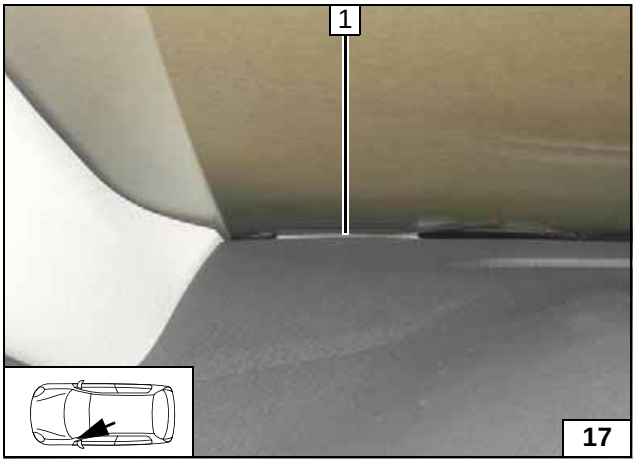
Installing MultiControl CAR



Remote Option (Telestart)

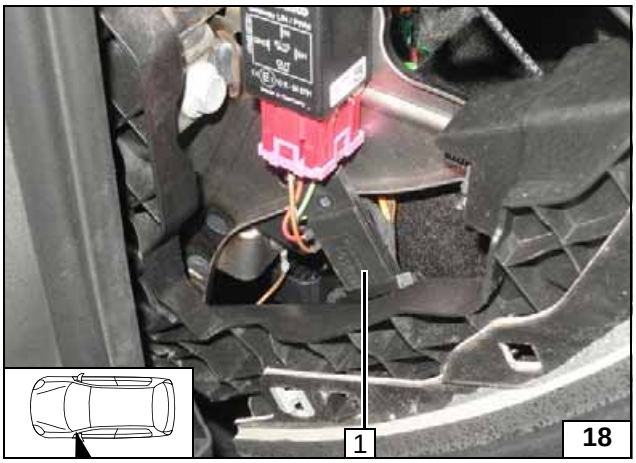
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Aerial

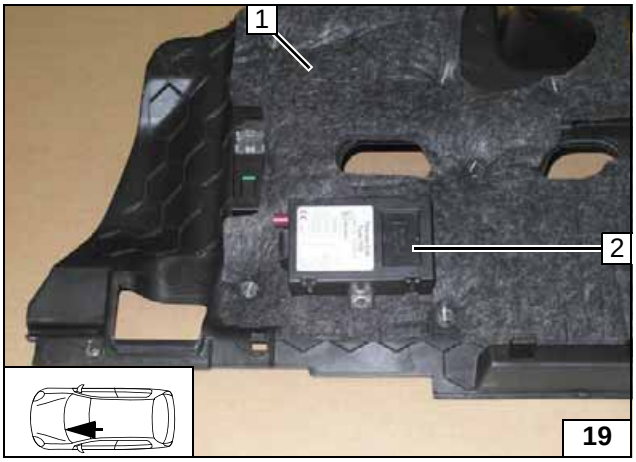
Installing aerial



Temperature sensor T100 HTM

Fasten temperature sensor **1** with cable tie.

Installing temperature sensor

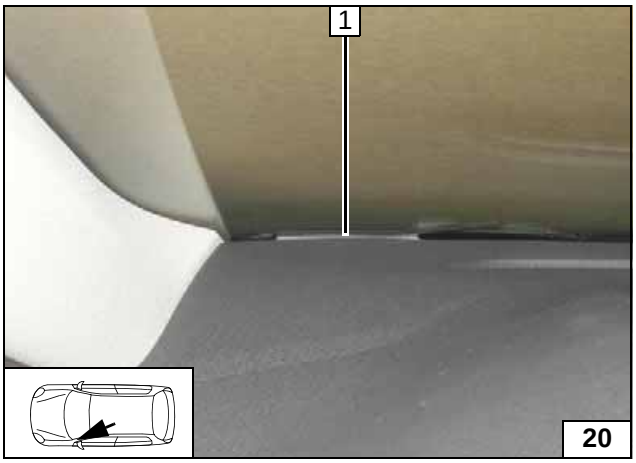


ThermoCall Option

Remove insulation mat in the area around receiver **2**.
Fasten receiver **2** with double-sided adhesive tape.

1 Footwell trim on the driver's side

Installing receiver



1 Aerial (optional)

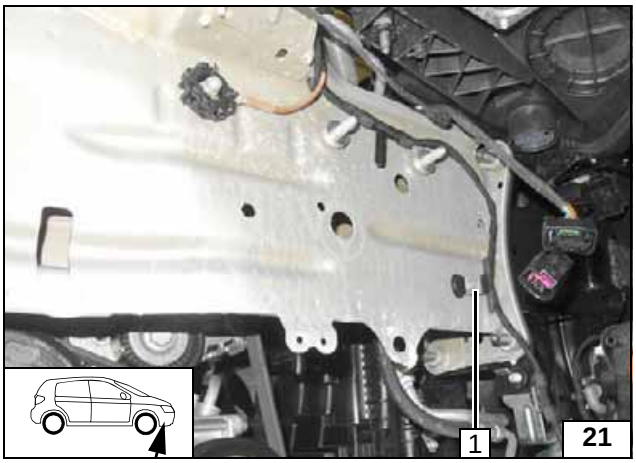
Installing aerial

Preparing Installation Location

Except 4Motion

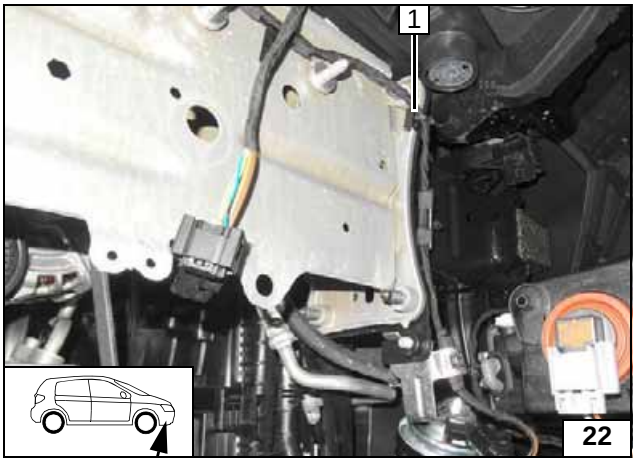
Detach retaining clip **1** with original vehicle wiring harness.

Aligning wiring harness



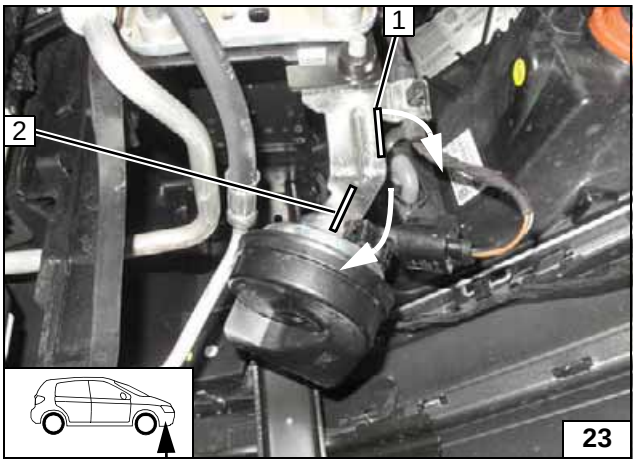
1 Clip-type cable tie

Fastening wiring harness



Angle down horn bracket at marking **1** by 90°.
Twist horn bracket at marking **2** by 20°.

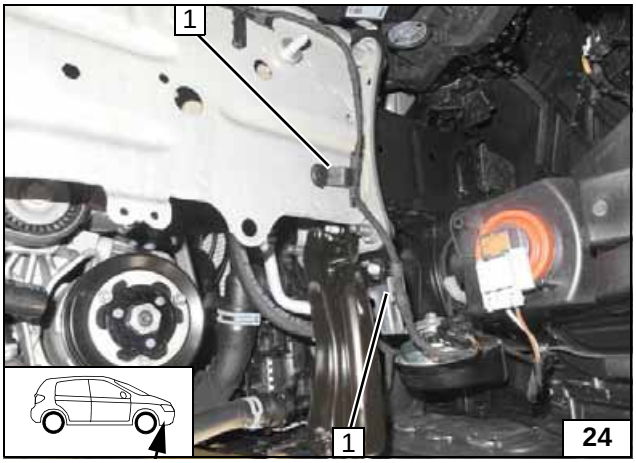
Aligning horn bracket

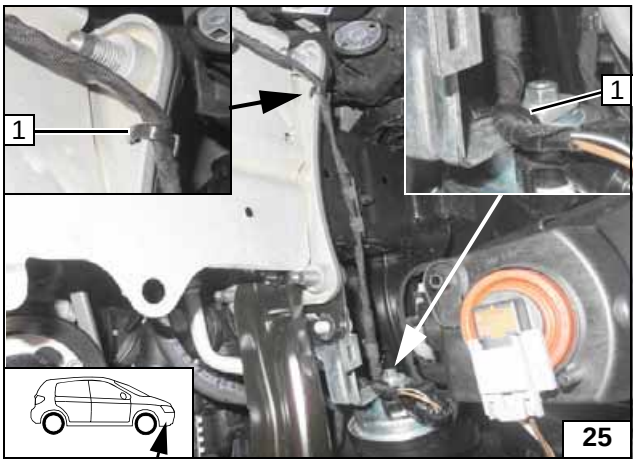


4Motion

Detach retaining clip **1** [2x] with original vehicle wiring harness.

Detaching wiring harness



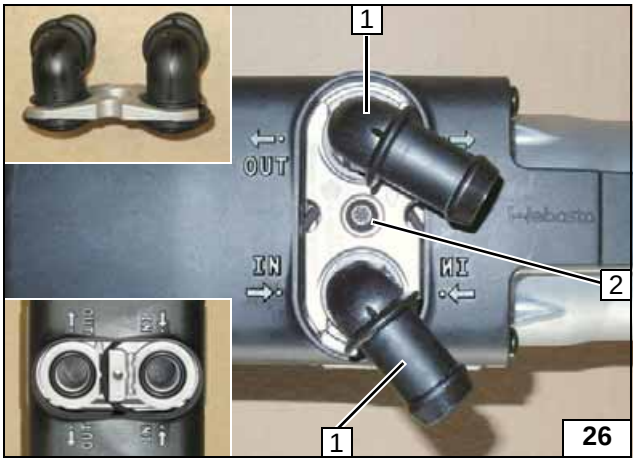


1 Cable tie [2x]

Fastening wiring harness

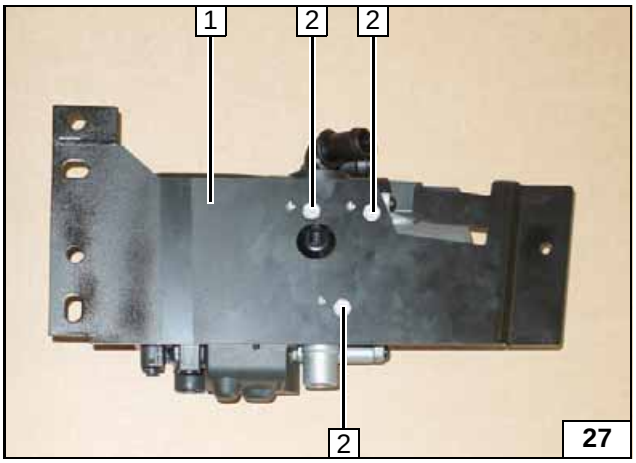
Preparing Heater

All vehicles



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

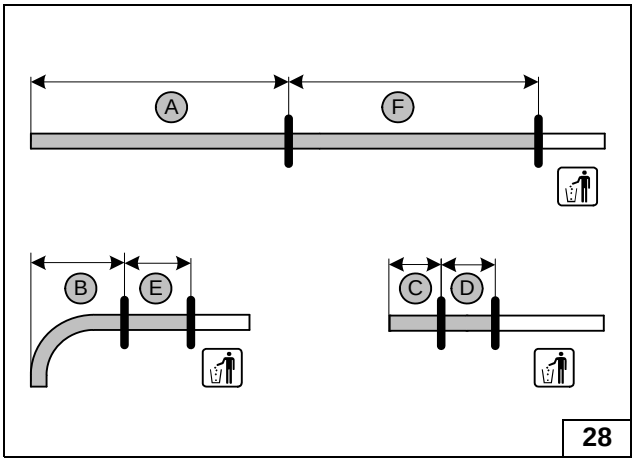
Installing water connection piece



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

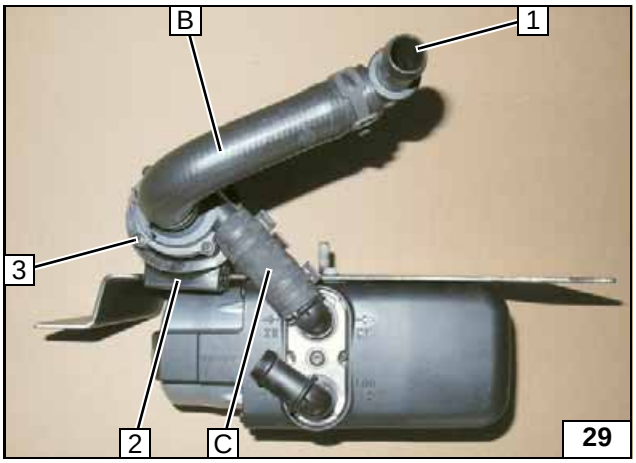
Installing bracket

TSI and TDI 4WD



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

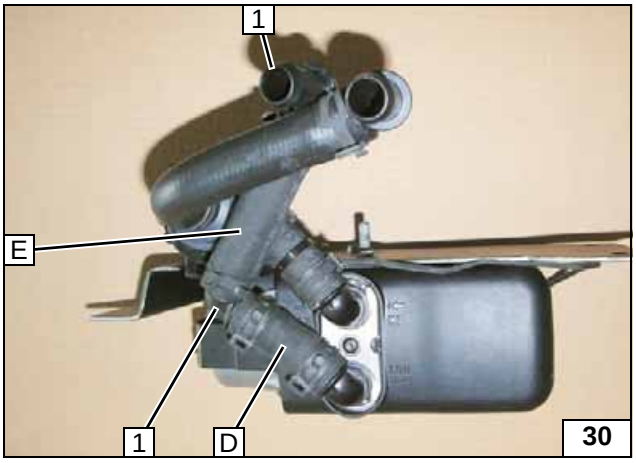
Cutting hoses to length



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

1 90° connecting pipe
3 Circulating pump

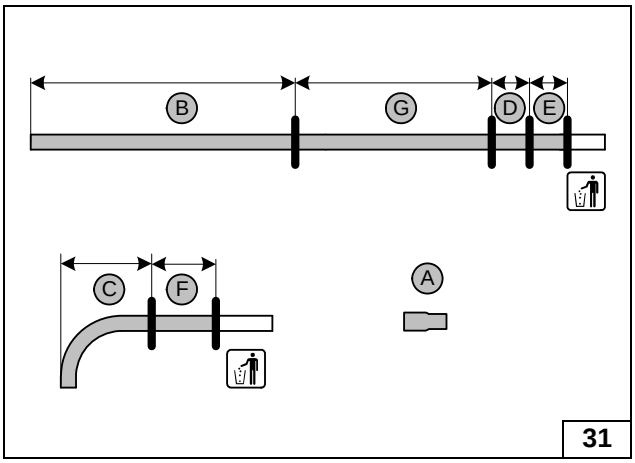
Premounting circulating pump



All spring clips = 25 mm dia.

1 90° connecting pipe [2x]

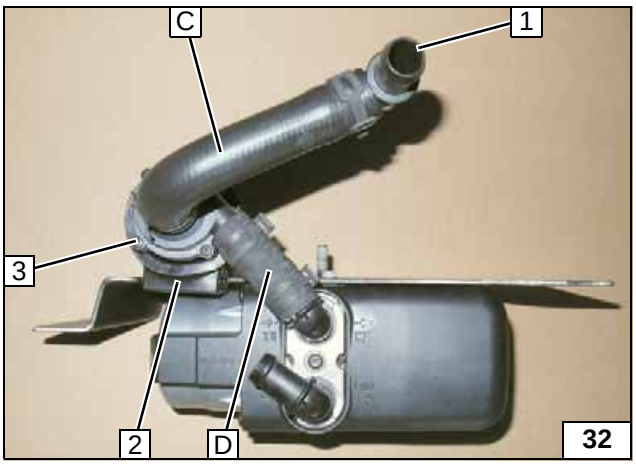
Premounting hoses



TDI 2WD

	TDI 2WD
A	18x20mm dia.
B	1020
C	110
D	60
E	70
F	110
G	980

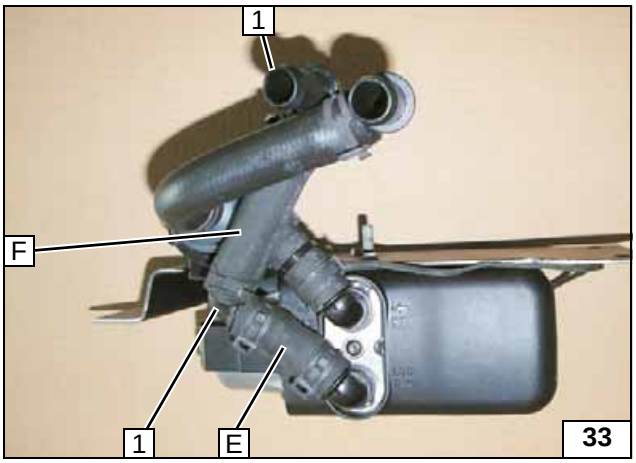
Cutting hoses to length



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

1 90° connecting pipe
3 Circulating pump

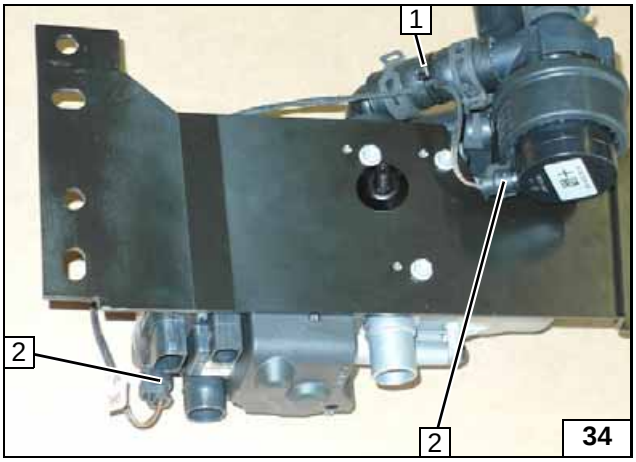
Premounting circulating pump



All spring clips = 25 mm dia.

1 90° connecting pipe [2x]

Premounting hoses

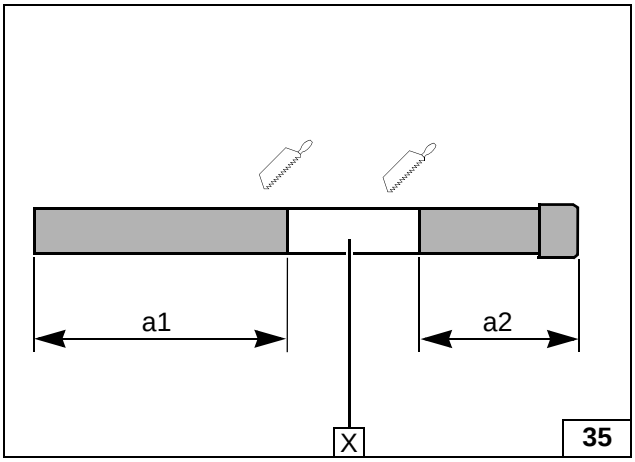


All vehicles

Except 4Motion

1 Cable tie
2 Connector of circulating pump wiring harness

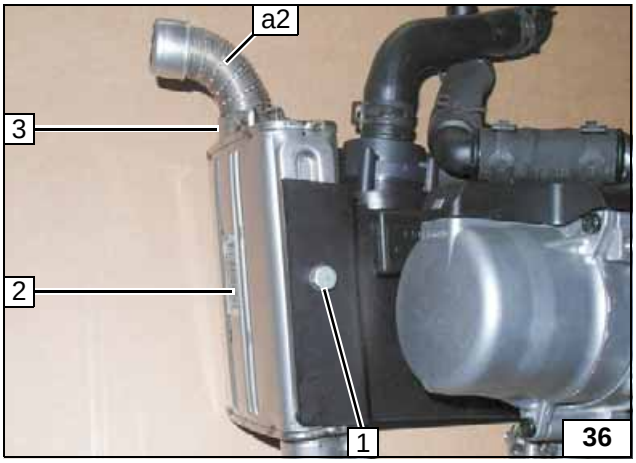
Connecting wiring harness



a1 = 215
a2 = 100

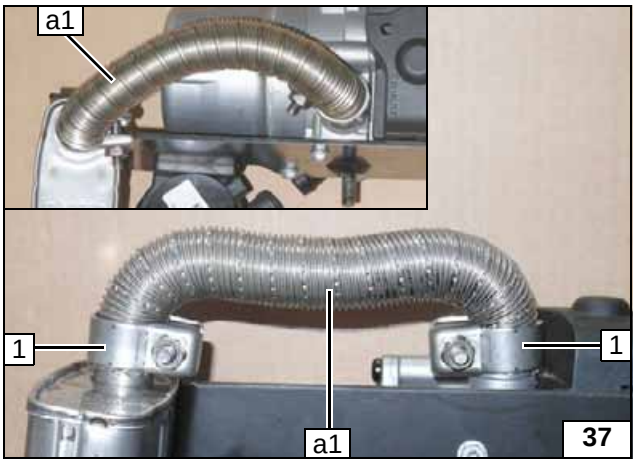
X =

Preparing exhaust pipe



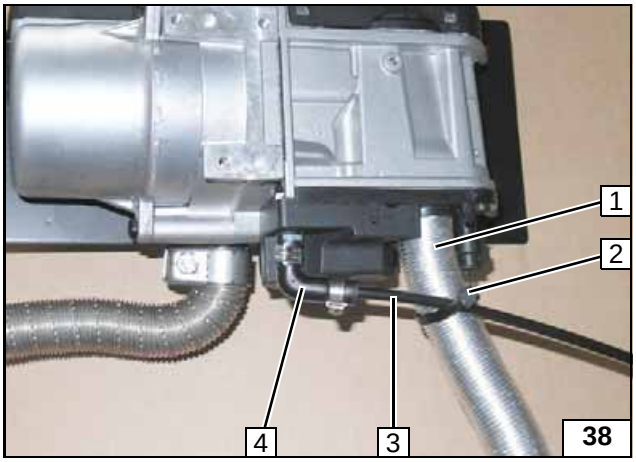
1 M6x16 bolt, spring lockwasher
2 Silencer
3 Hose clamp

Installing silencer and exhaust pipe a2



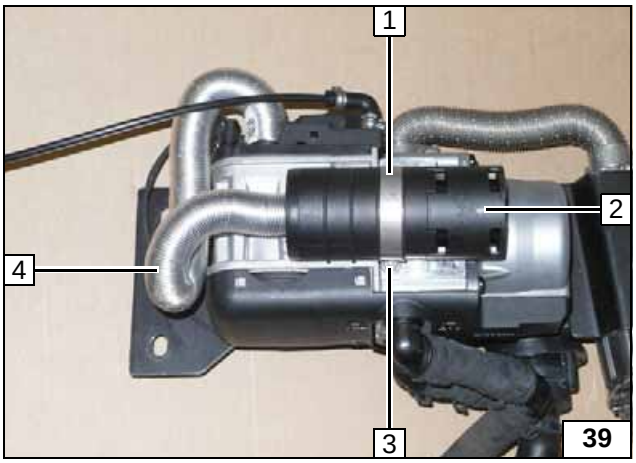
1 Hose clamp [2x]

Installing exhaust pipe a1



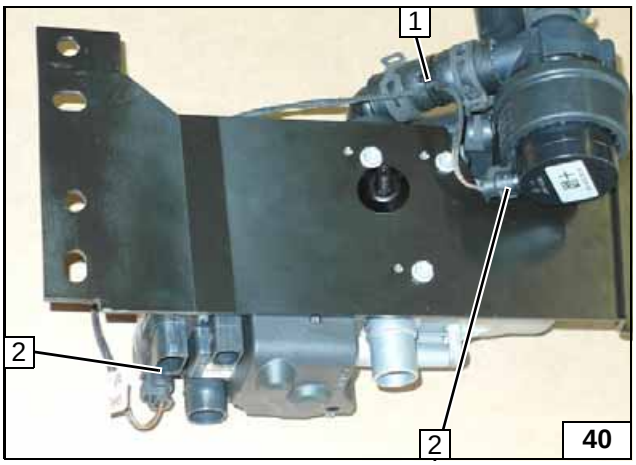
1 Combustion air pipe
2 Cable tie
3 Fuel line
4 90° short moulded hose, 10 mm dia. clamp [2x]

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

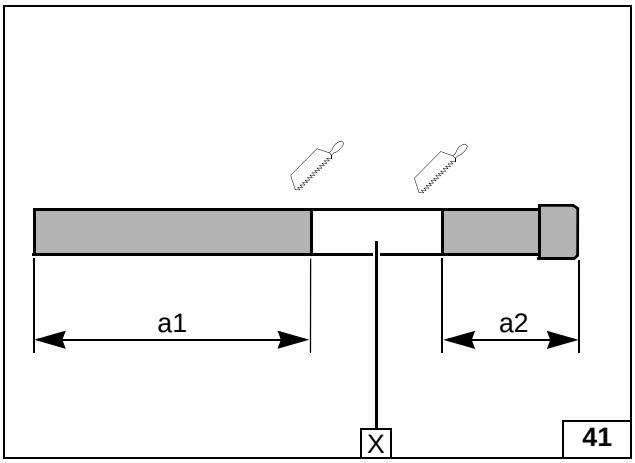


4Motion

1 Cable tie
2 Connector of circulating pump wiring harness

Connecting wiring harness

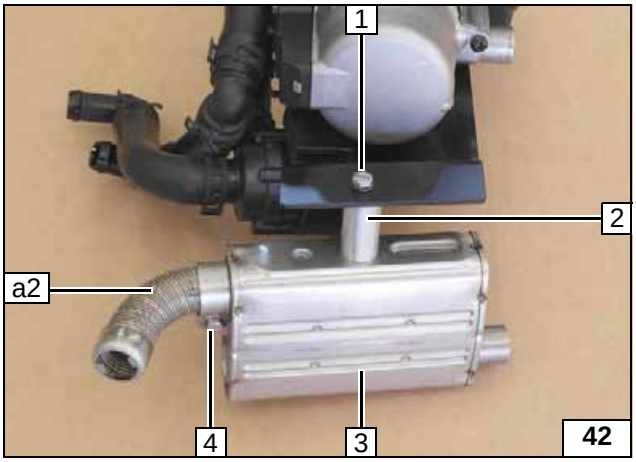
Preparing exhaust pipe



a1 = 320
a2 = 80

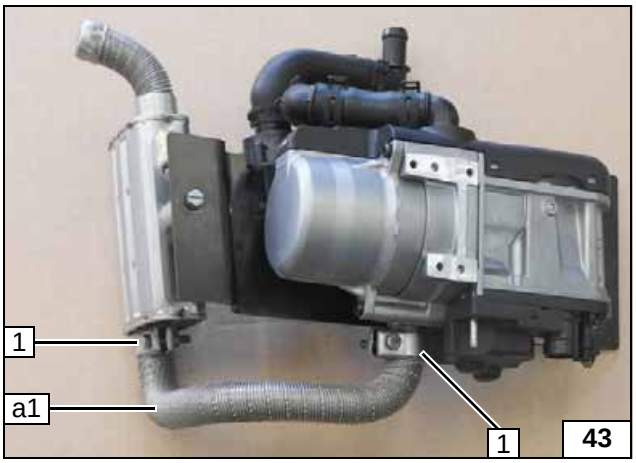
X = 

Installing silencer and exhaust pipe a2



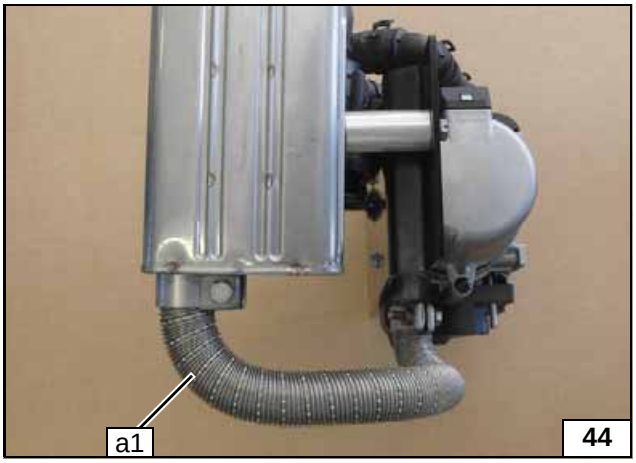
1 M6x55 bolt, spring lockwasher
2 40mm dia. shim
3 Silencer
4 Hose clamp

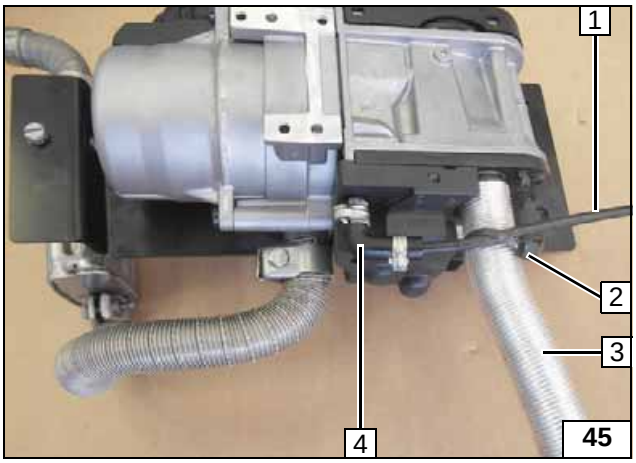
Installing exhaust pipe a1



1 Hose clamp [2x]

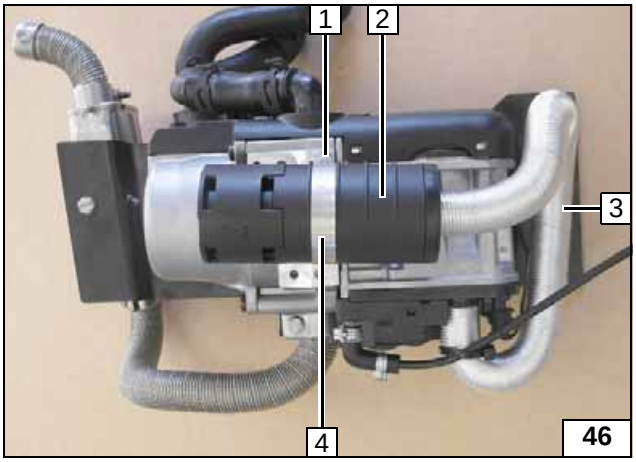
Aligning exhaust pipe a1





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

Premounting combustion air pipe and fuel line

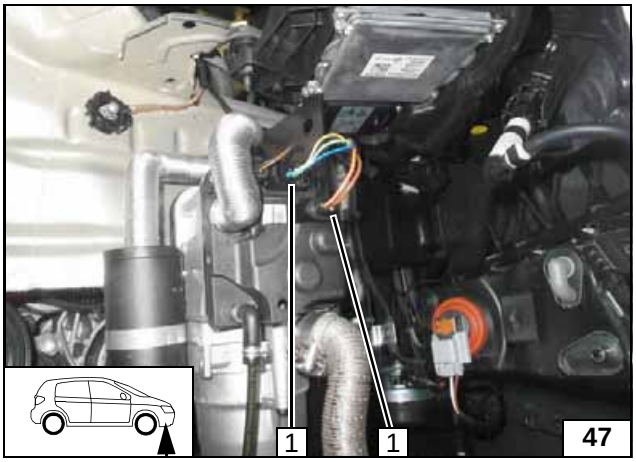


1 5x13 self-tapping bolt
2 Combustion air silencer
3 Combustion air pipe
4 51mm dia. clamp

Premounting combustion air silencer

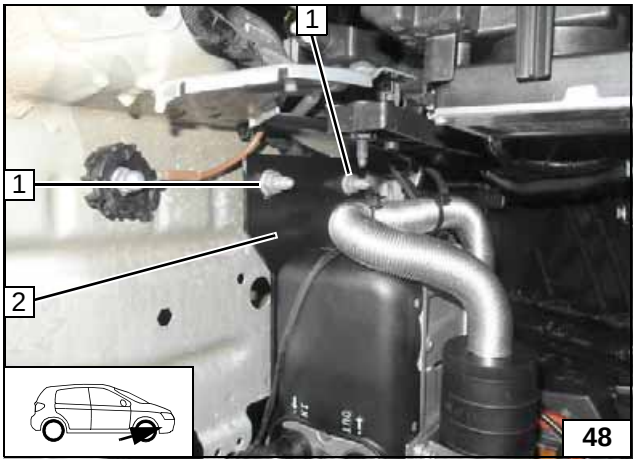
Installing Heater

All vehicles



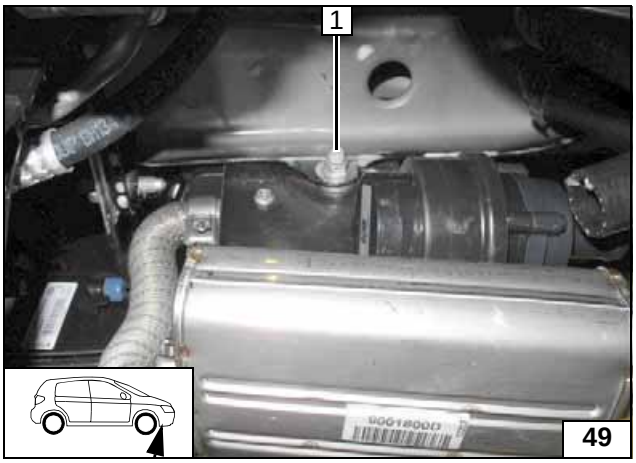
1 Heater wiring harness connector [2x]

Installing wiring harness



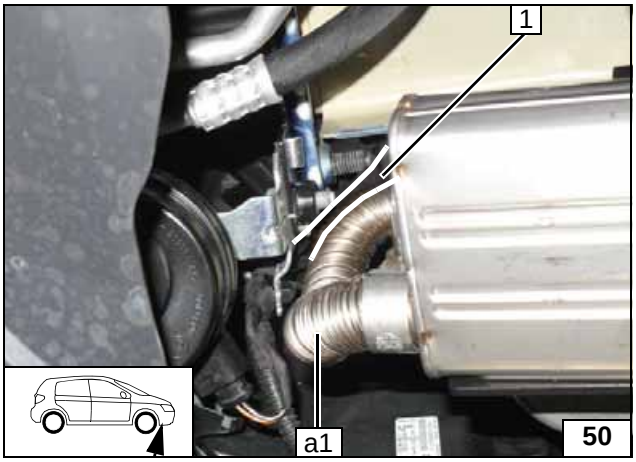
1 Original vehicle stud bolt, 5mm shim, bracket, M8 flanged nut [2x each]
2 Bracket

Installing heater



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

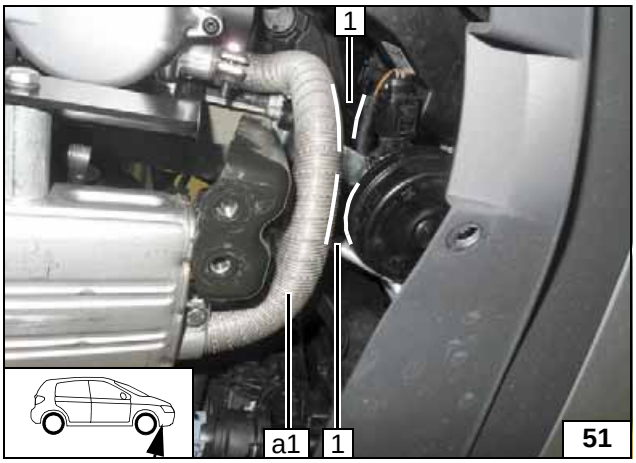
Installing heater



Except 4Motion

Ensure sufficient distance between exhaust pipe **a1** and bolts of horn bracket at position **1**, correct if necessary.

Aligning exhaust pipe a1



4Motion

Ensure sufficient distance between exhaust pipe **a1** and horn as well as wiring harness at position **1**, correct if necessary.

Aligning exhaust pipe a1

Fuel

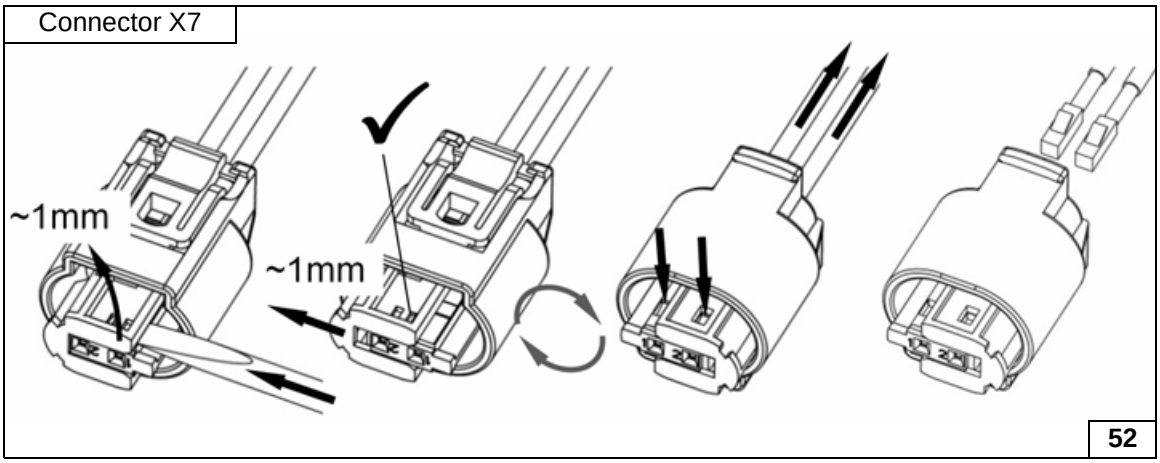
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off in an appropriate container.

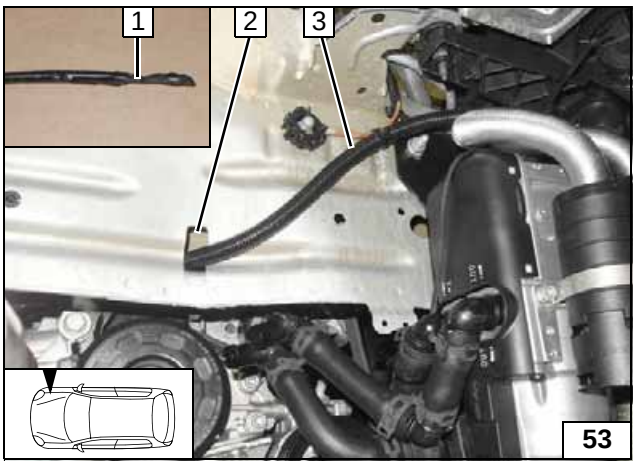
Route fuel line and metering pump wiring harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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

Dismantling metering pump connector

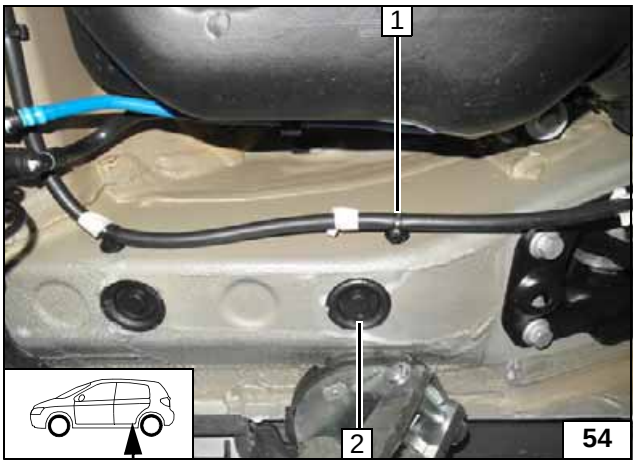


Routing lines

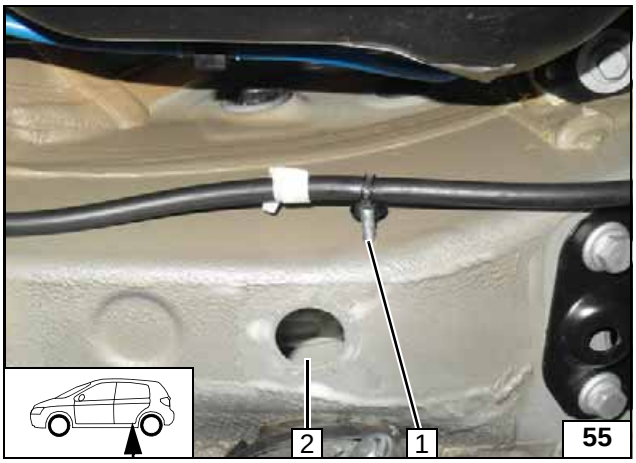


Close the opening of the fuel line **1** with insulating tape.
Pull fuel line and metering pump wiring harness into 10 mm dia. corrugated tube **3** and route to the underbody through original vehicle pass through **2**.

Preparing installation location of metering pump

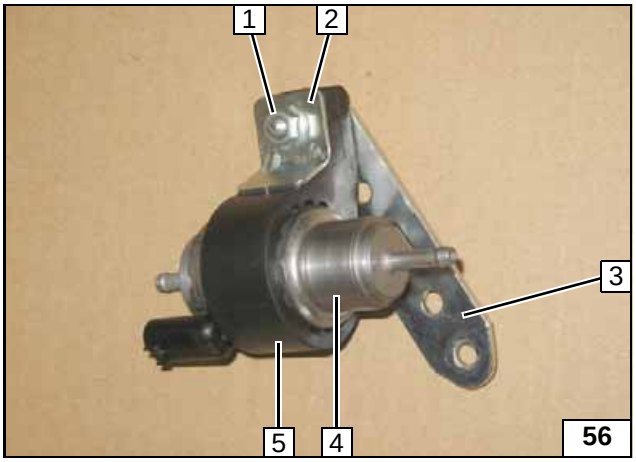


1 Detach retaining clip from hole (if present)
2 Remove cover cap (will be remounted later)



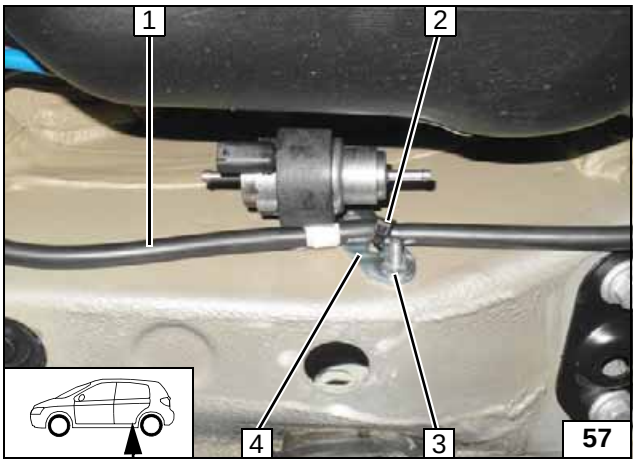
Insert M6x20 bolt **1** through opening **2** into hole.

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

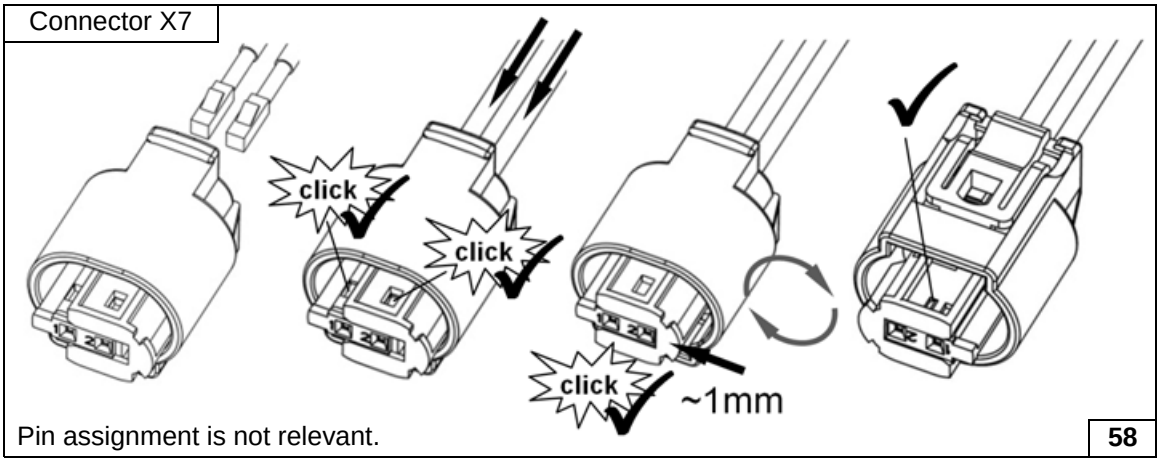
Premounting metering pump



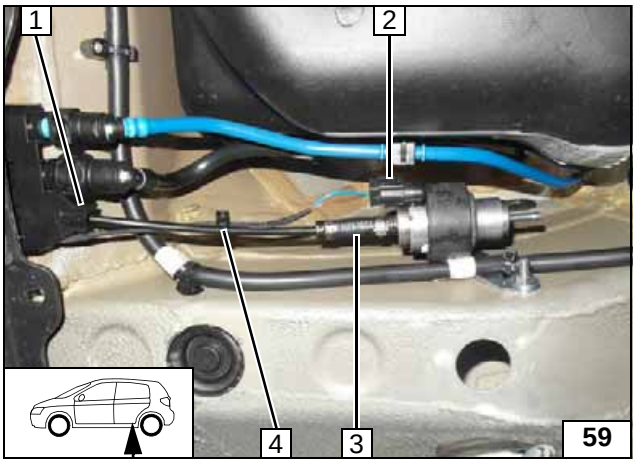
Fasten original vehicle wiring harness **1** with cable tie **2** on perforated bracket **4**.

3 M6 flanged nut

Installing metering pump



Completing metering pump connector



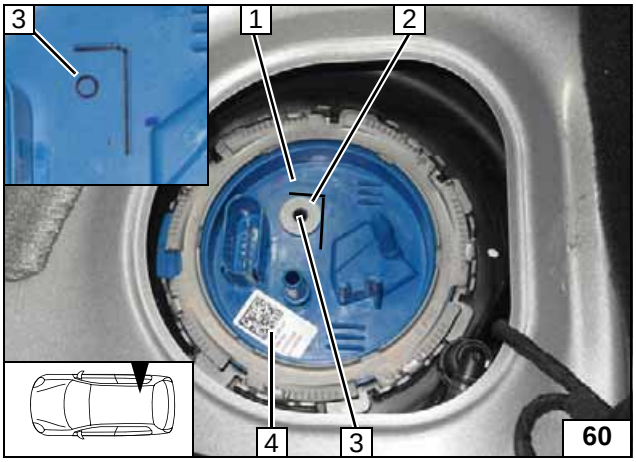
1 Original vehicle pass through
2 Metering pump wiring harness, connector X7 mounted
3 Fuel line of heater, hose section, 10 mm dia. clamp [2x]
4 Cable tie

Connecting metering pump

Installing FuelFix

TSI

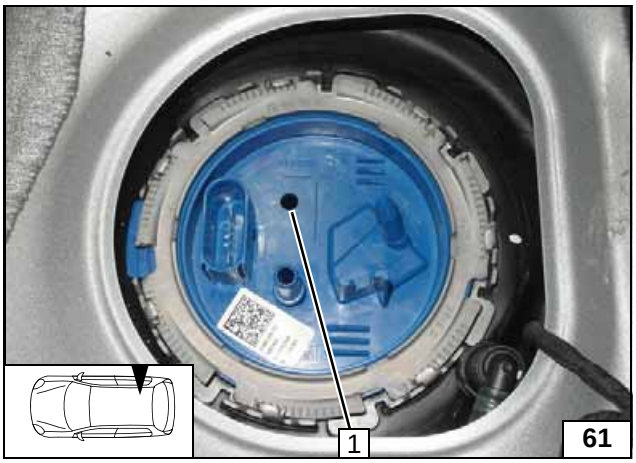
Work steps F1 and F2.



1 Fuel tank sending unit
2 Position washer with outer dia. d_a = 21.6 mm as template against the ribs.
3 Hole pattern
4 Barcode sticker, moved

Copying hole pattern

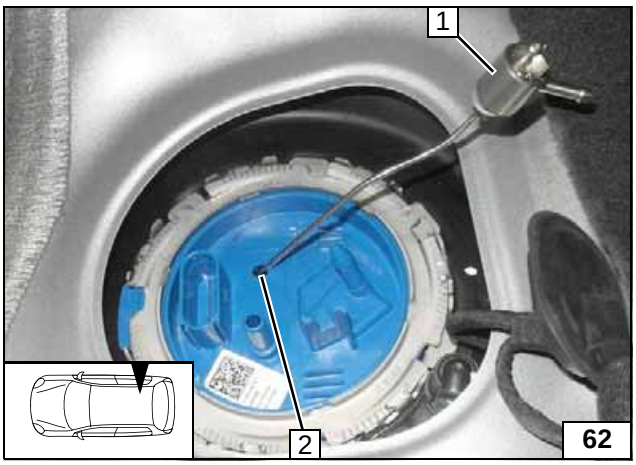
Work step F3.



1 Hole made with provided drill

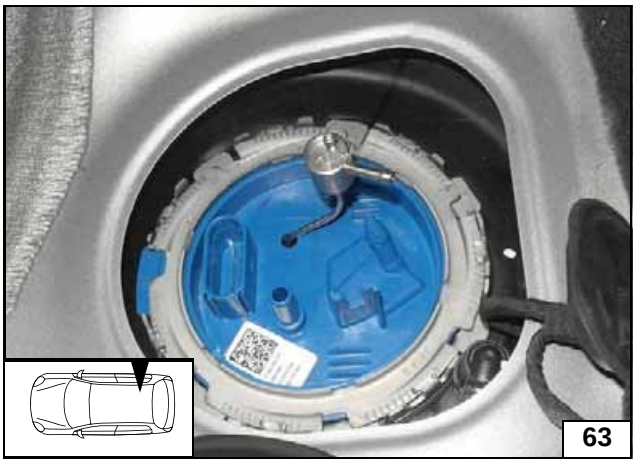
Hole for FuelFix

Work steps F4 and F5.

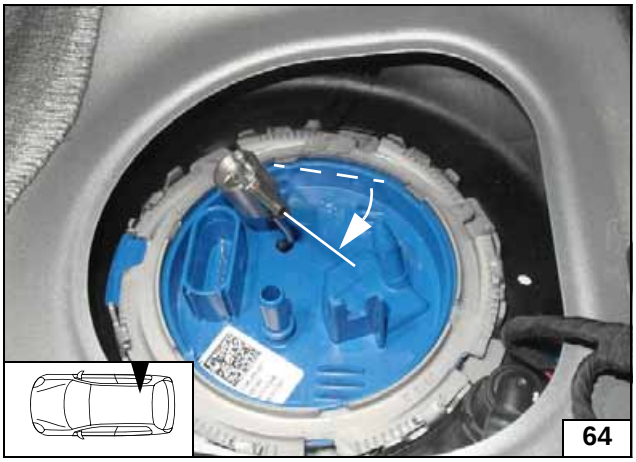


Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

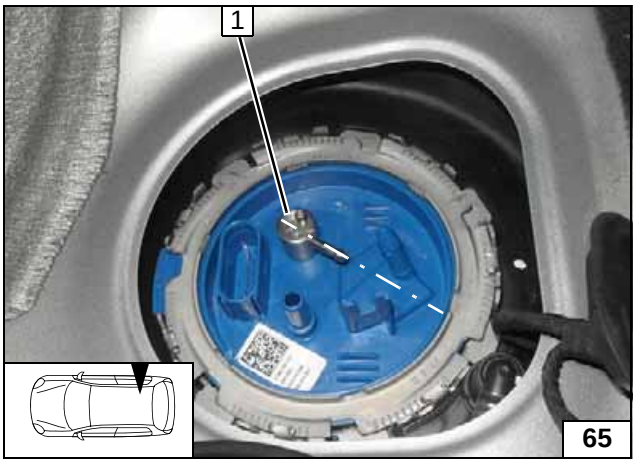
Inserting FuelFix



Inserting FuelFix



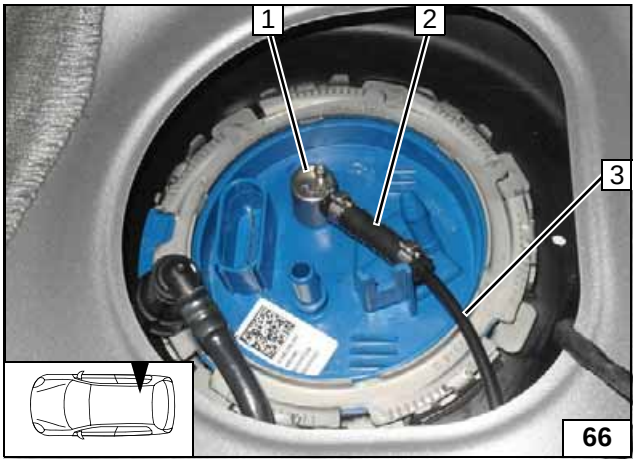
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

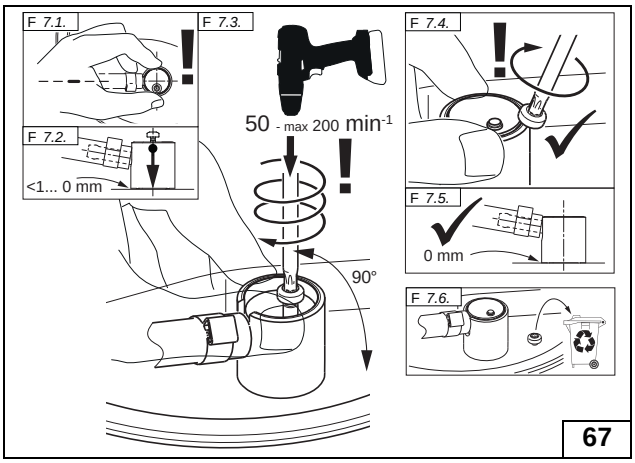
Aligning FuelFix



Work step F6.

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

Connecting fuel line

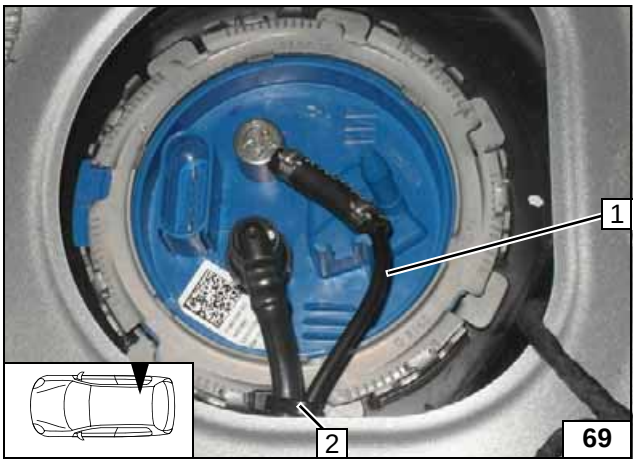


Work step F7.

Installing FuelFix

Work step F8.

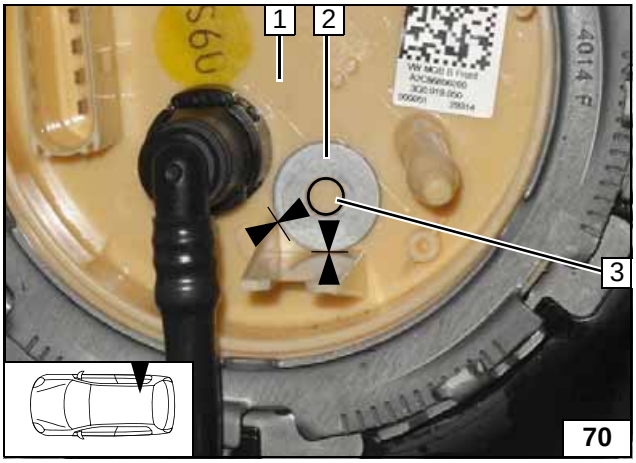
Ensuring firm seating of FuelFix



Install original vehicle fuel line.

1 Fuel line of FuelFix
2 Cable tie as tension relief

Securing fuel line

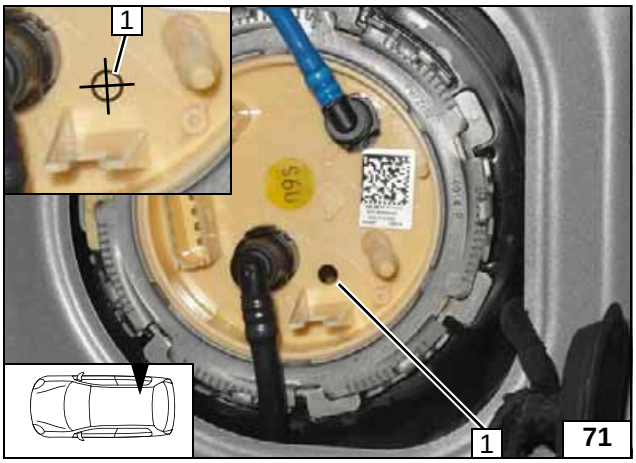


TDI 2WD

Work steps F1 and F2.

1 Fuel tank sending unit
2 Position washer with outer dia. d_a = 21.6 mm as template against the ribs.
3 Hole pattern

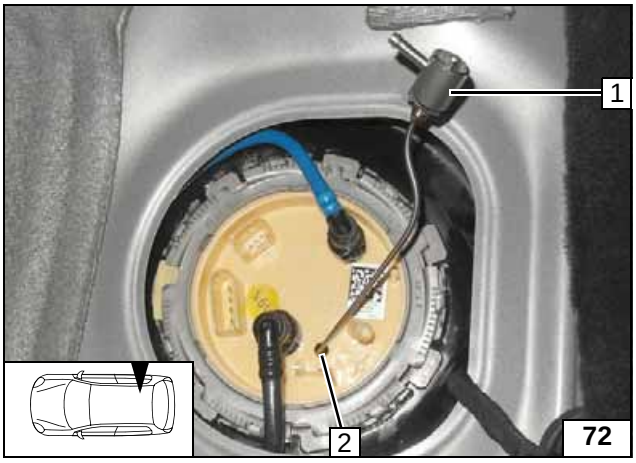
Copying hole pattern



Work step F3.

1 Hole made with provided drill

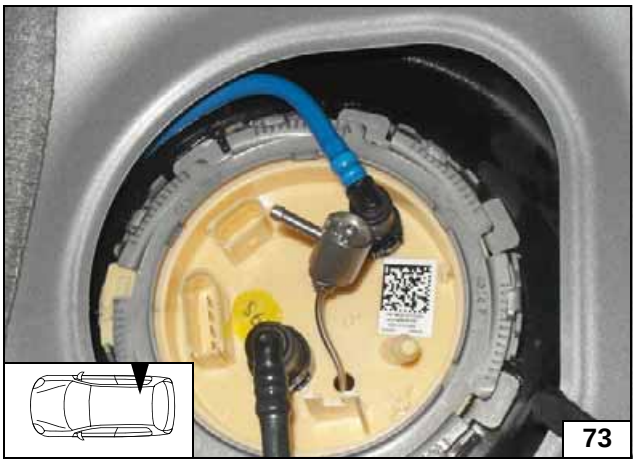
Hole for FuelFix



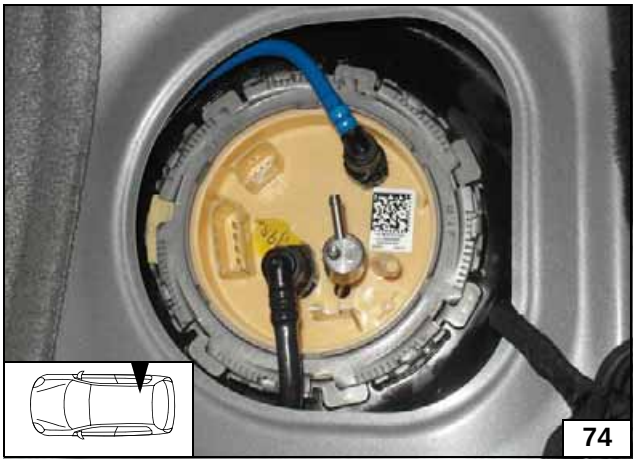
Work steps F4 and F5.

Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

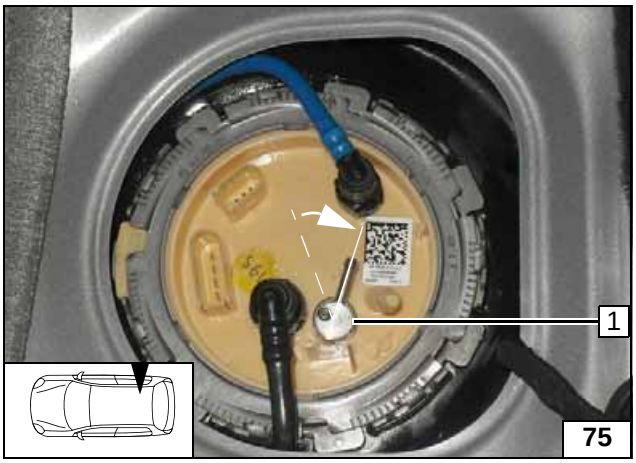
Inserting FuelFix



Inserting FuelFix



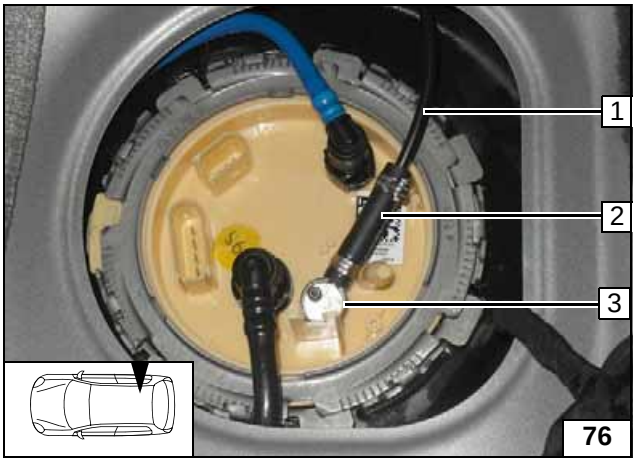
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

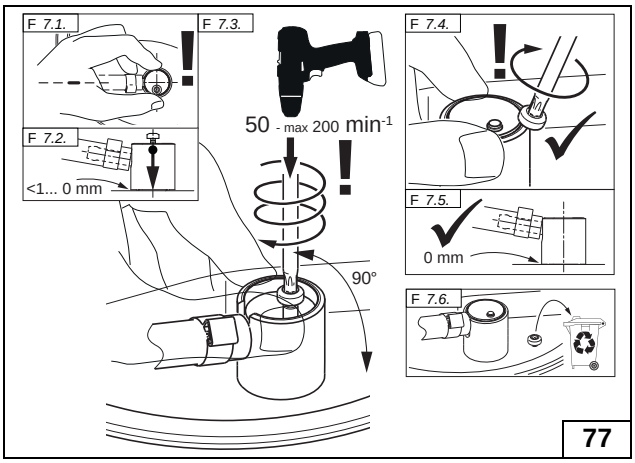
Aligning FuelFix



Work step F6.

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

Connecting fuel line

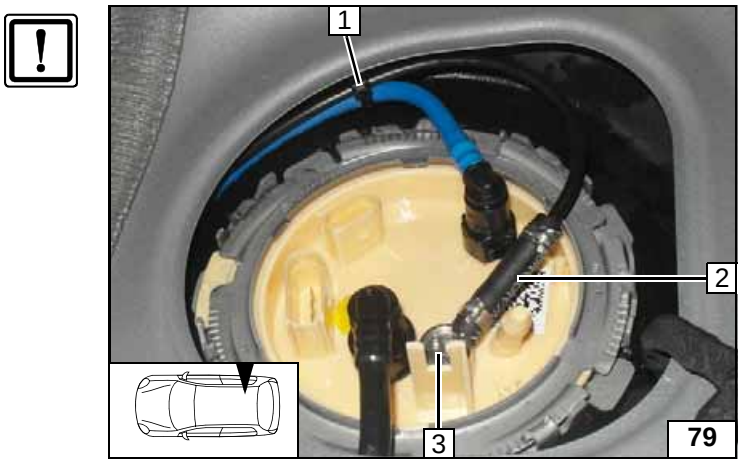


Work step F7.

Installing FuelFix

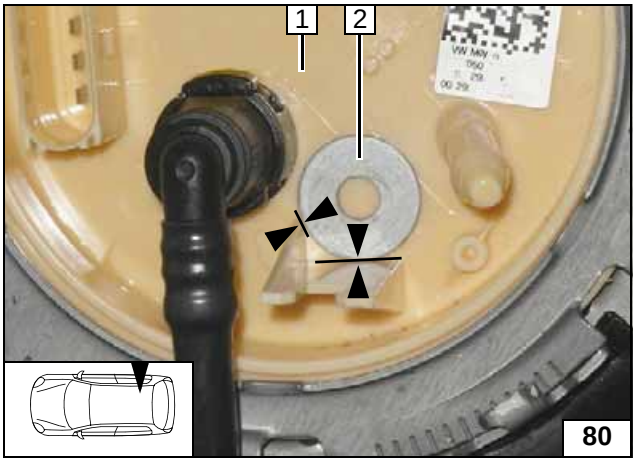
Work step F8.

Ensuring firm seating of FuelFix



1 Cable tie as tension relief
2 Fuel line of FuelFix

Securing fuel line

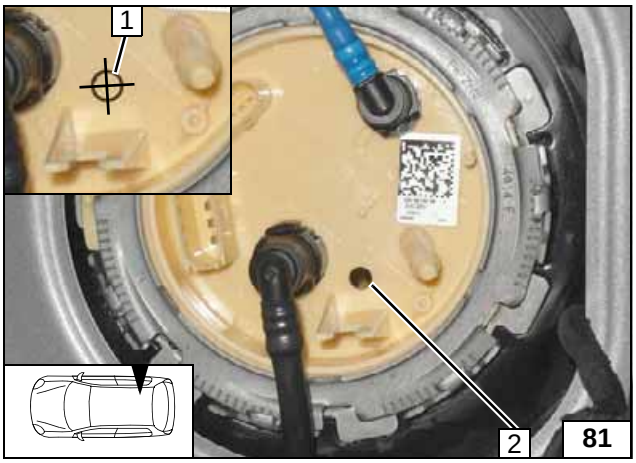


TDI 4WD

Work steps F1 and F2.

1 Fuel tank sending unit
2 Position washer with outer dia. d_a = 21.6 mm as template against the ribs.

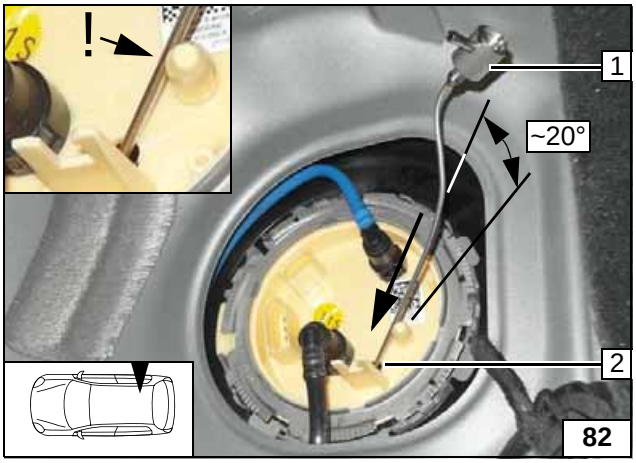
Copying hole pattern



Work step F3.

1 Hole pattern
2 Hole made with provided drill

Hole for FuelFix



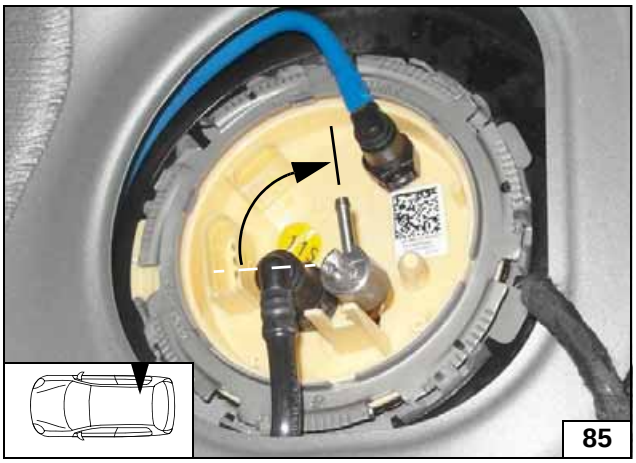
Work steps F4 and F5.

Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

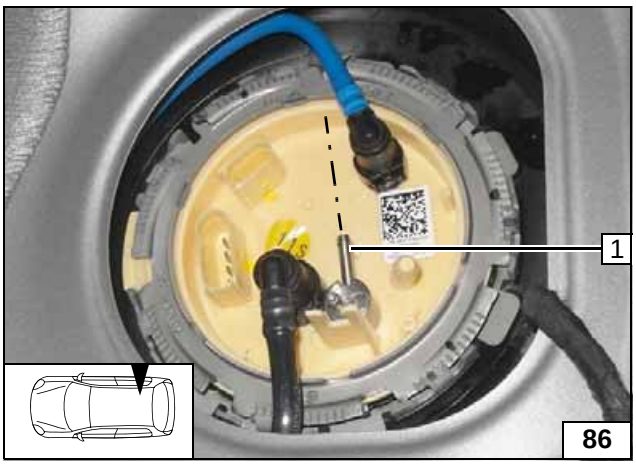
Inserting FuelFix

Inserting FuelFix

Inserting FuelFix



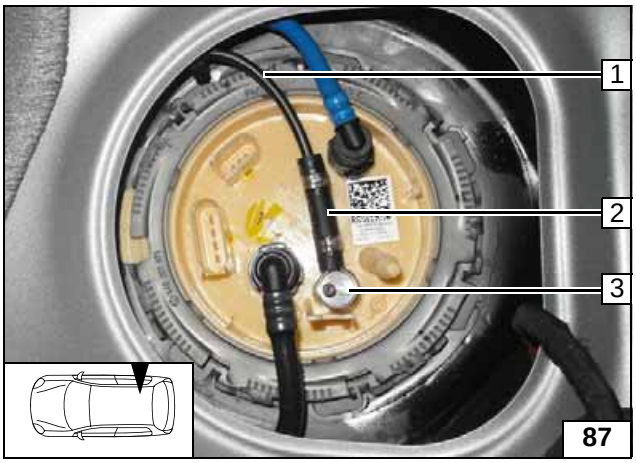
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

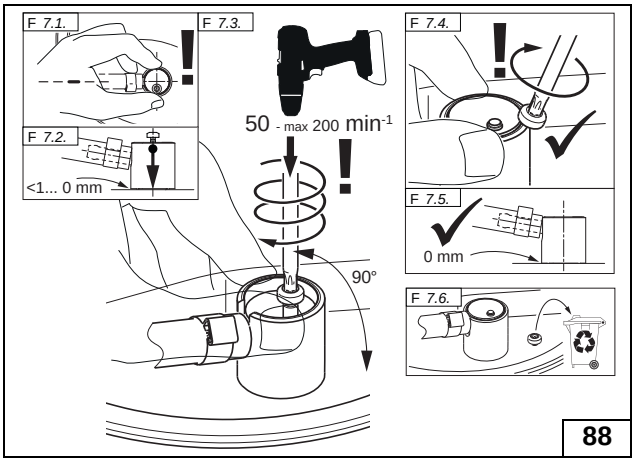
Aligning FuelFix



Work step F6.

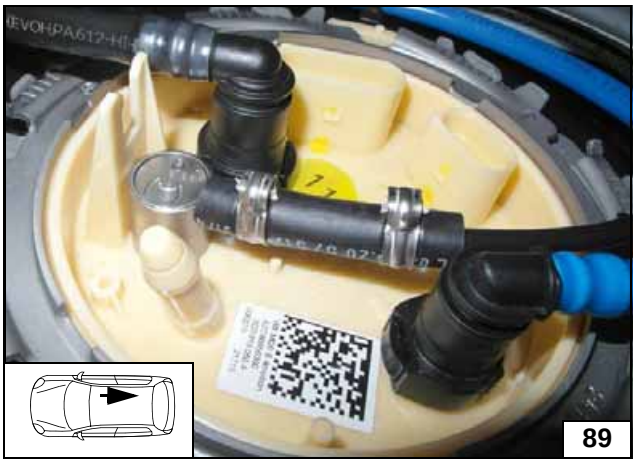
1 Fuel line
2 Hose section, 10mm dia. clamp [2x]
3 FuelFix

Connecting fuel line



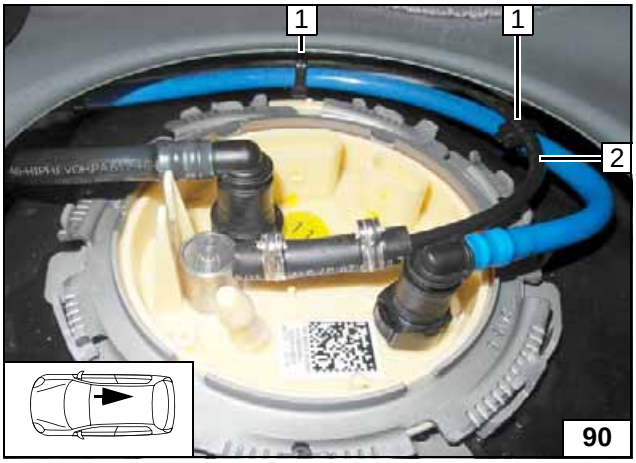
Work step F7.

Installing FuelFix



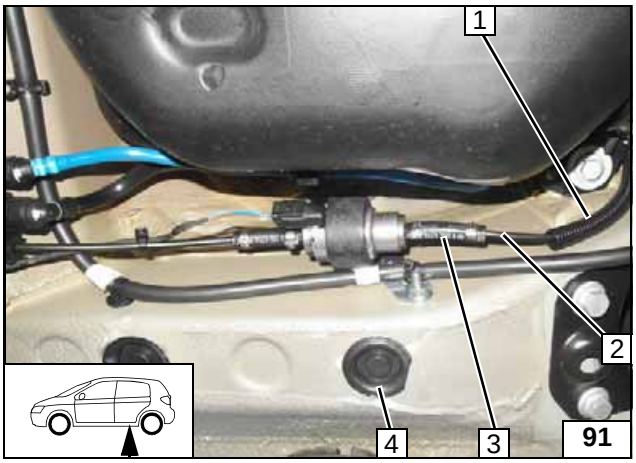
Work step F8.

Ensuring firm seating of FuelFix



1 Cable tie as tension relief [2x]
2 Fuel line of FuelFix

Securing fuel line



All vehicles

Slide 10mm dia. corrugated tube **1** onto fuel line of FuelFix **2**. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

3 Hose section, 10mm dia. clamp [2x]
4 Cover cap inserted

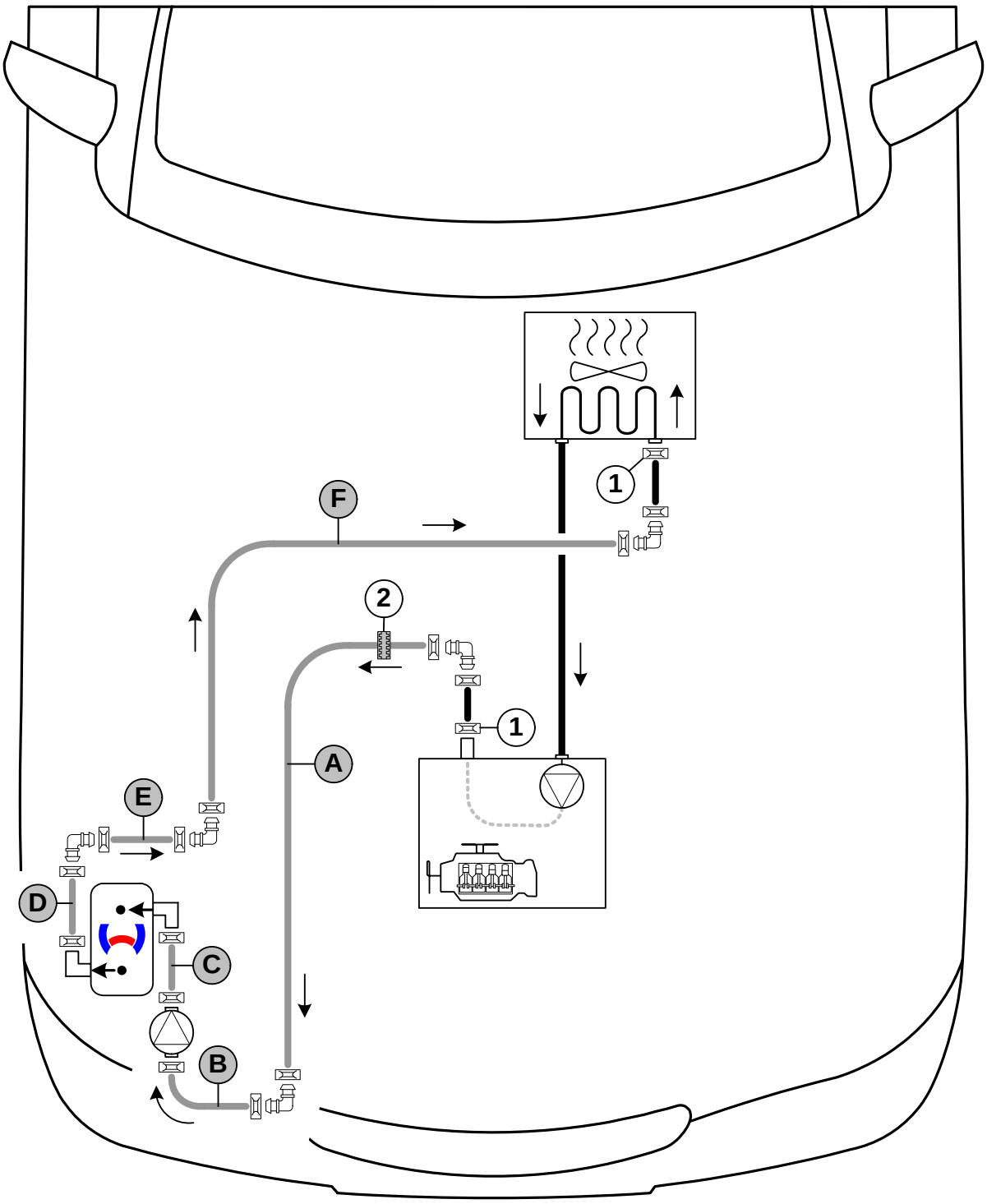
Connecting metering pump

TSI Coolant Circuit

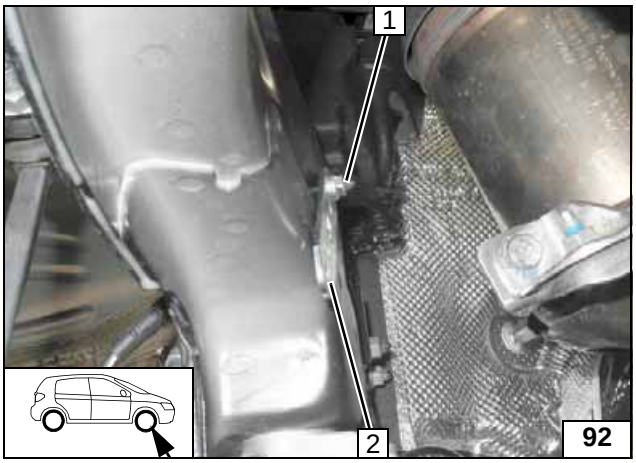
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram

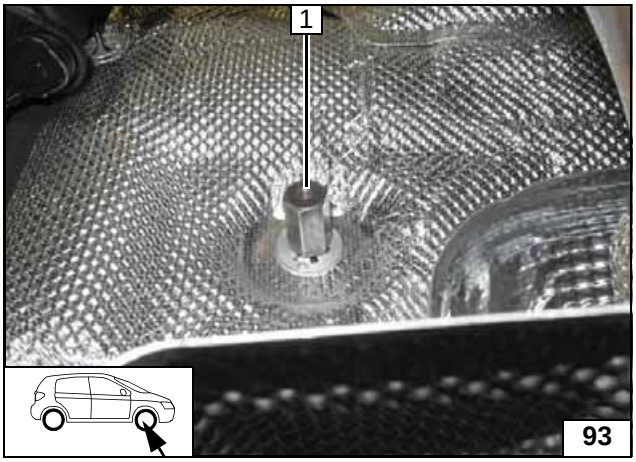


All spring clips without a specific designation = 25 mm dia. All connecting pipes and = 18x18 mm dia.
1 = Original vehicle spring clip .
2 = Black (sw) rubber isolator



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

Installing perforated bracket

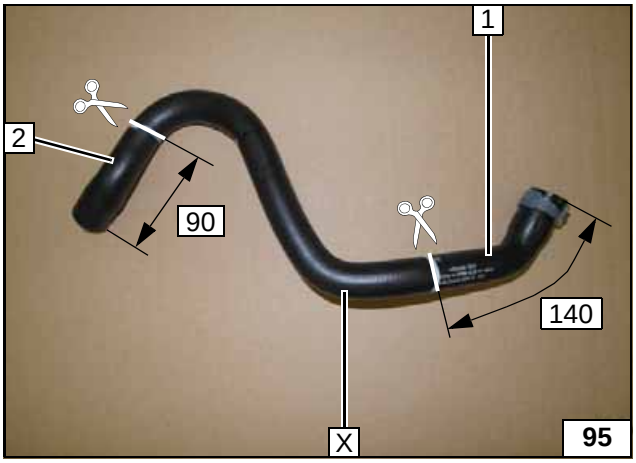


1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut

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

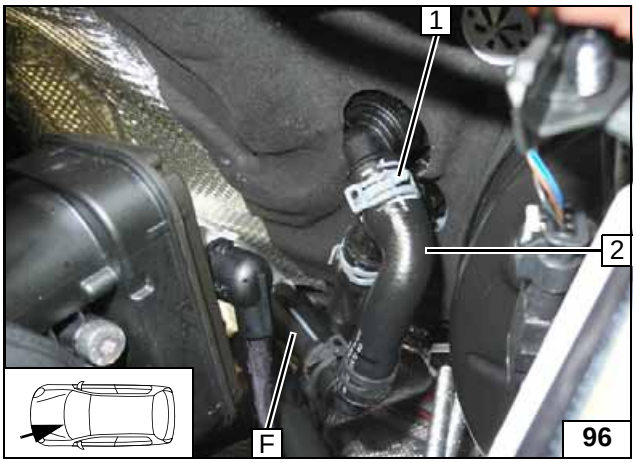
Cutting point



1 Engine outlet hose section
2 Heat exchanger inlet hose section

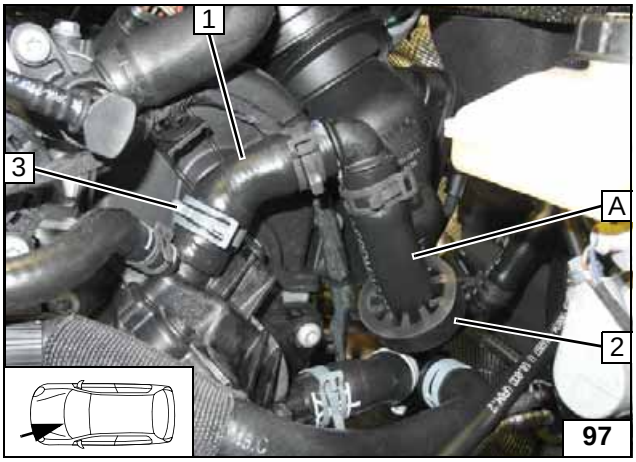
X =

Cutting point



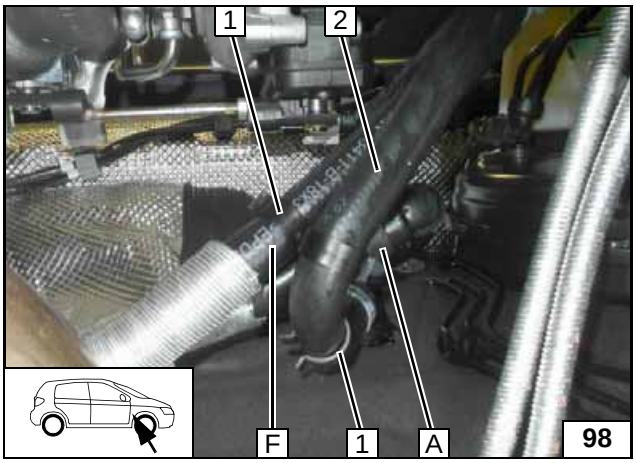
1 Original vehicle spring clip
2 Heat exchanger inlet hose section

Connecting heat exchanger inlet



1 Engine outlet hose section
2 Rubber profile
3 Original vehicle spring clip

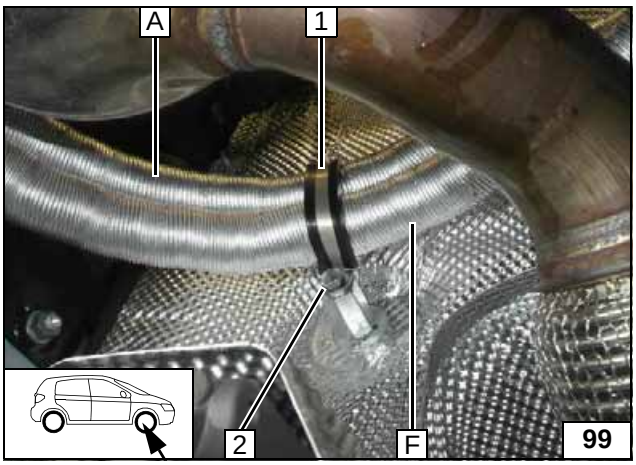
Connecting engine outlet



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

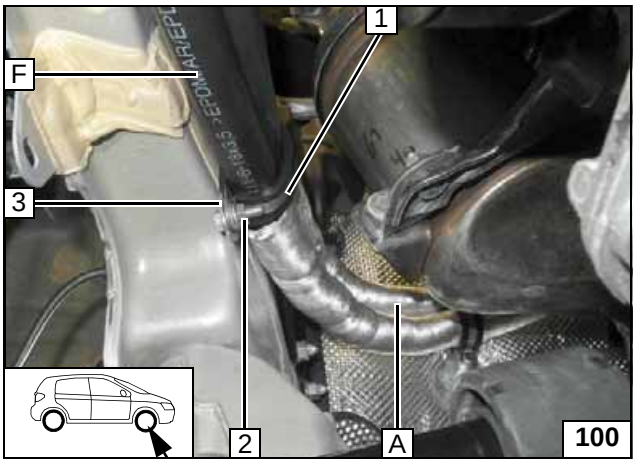
1 Twistable spacer bracket [2x]
2 Hose of heat exchanger outlet

Routing on firewall



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

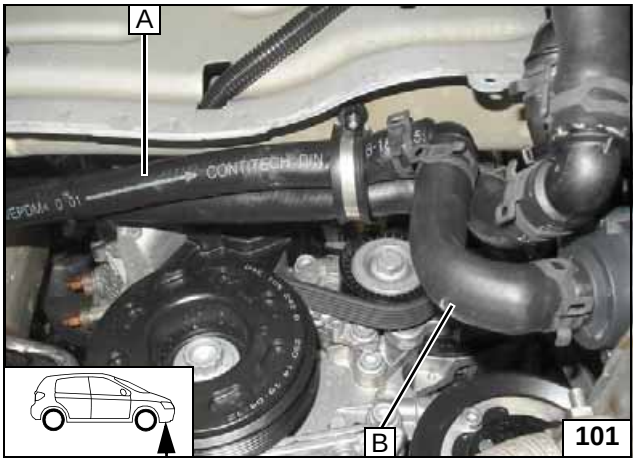
Fastening on firewall



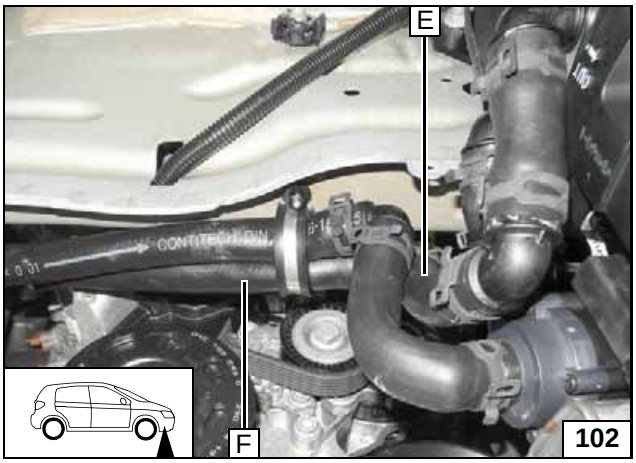
Align hoses. Ensure sufficient distance to catalytic converter, correct if necessary.

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

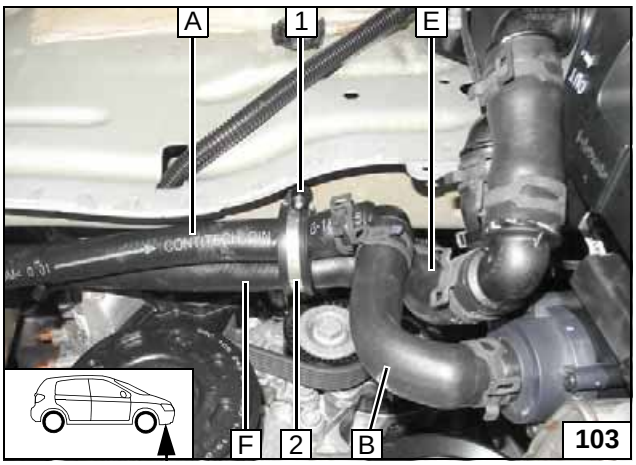
Routing on frame side member



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

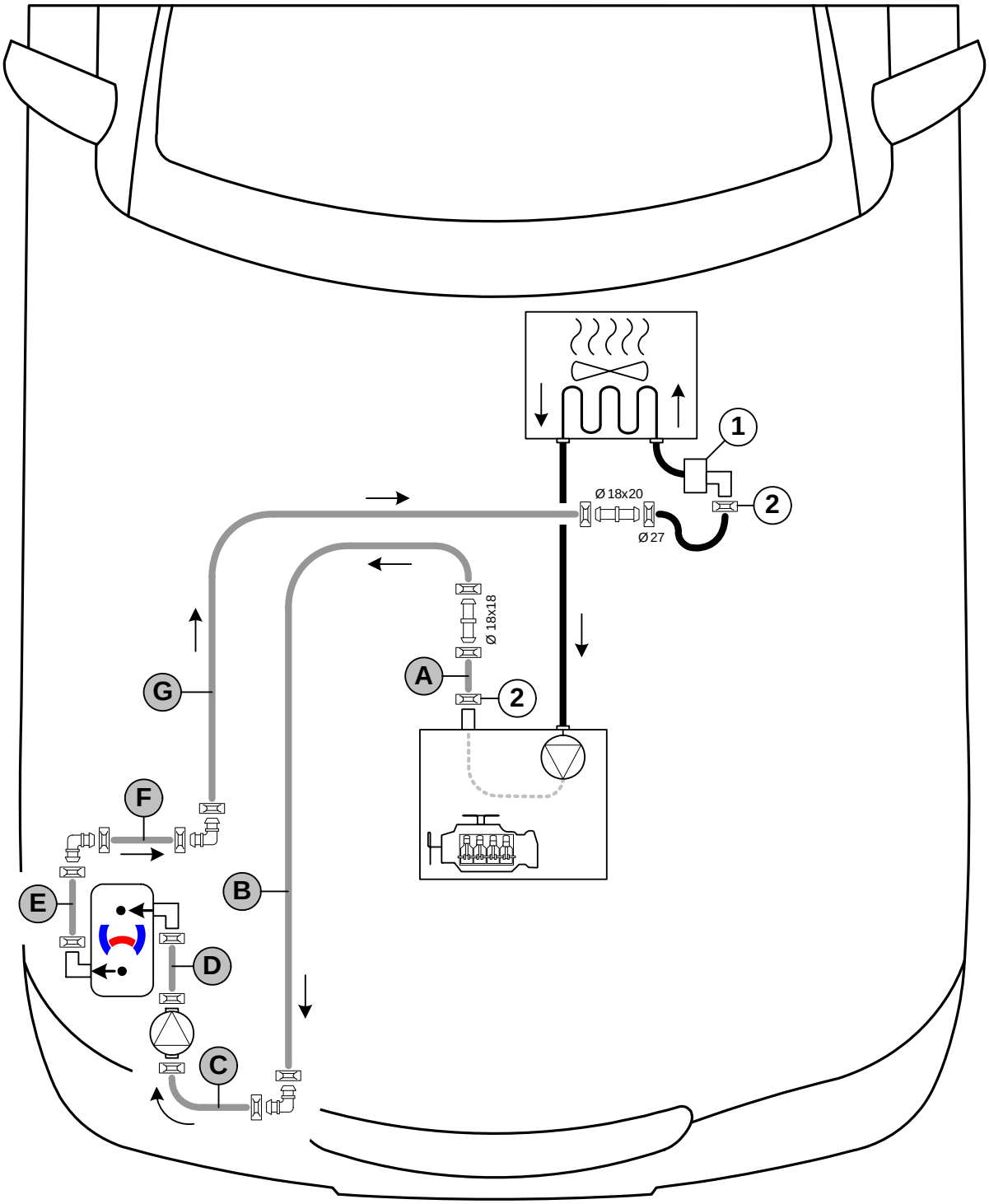
Aligning hoses

Coolant Circuit for TDI 2WD

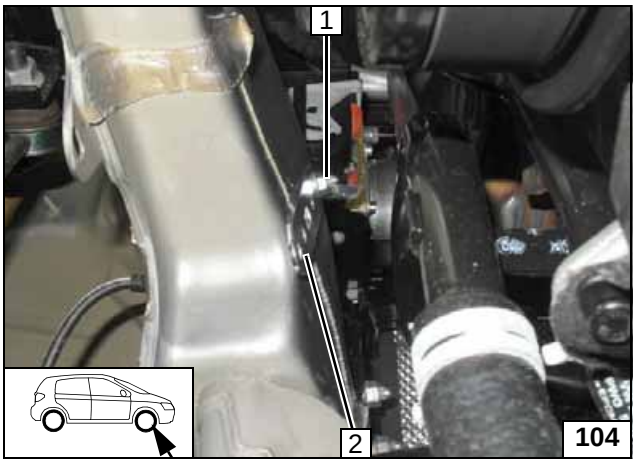
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram

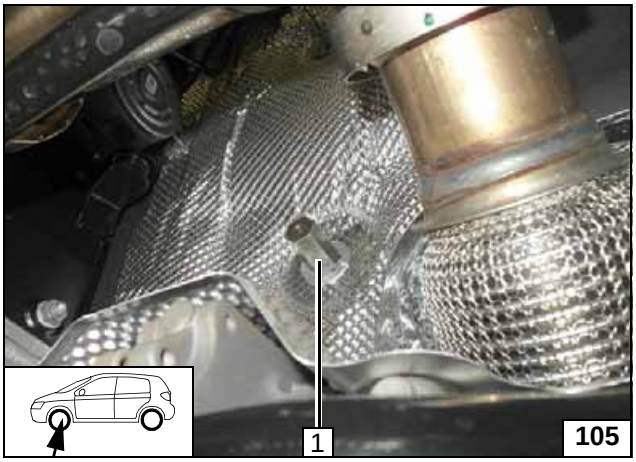


All spring clips without a specific designation = 25 mm dia. All connecting pipes = 18x18 mm dia.
1 = EGR!
2 = Original vehicle spring clip .



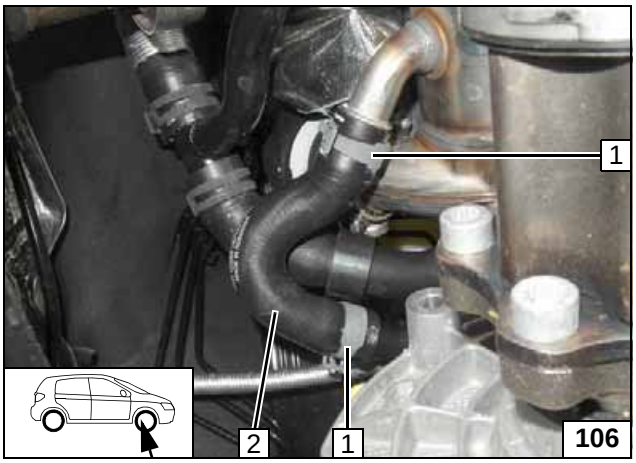
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



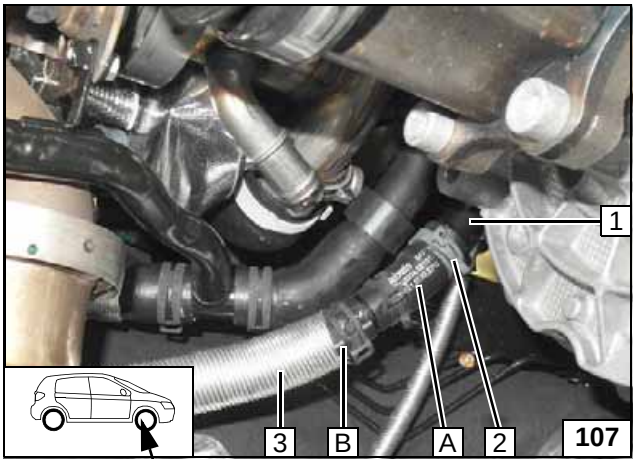
1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut



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

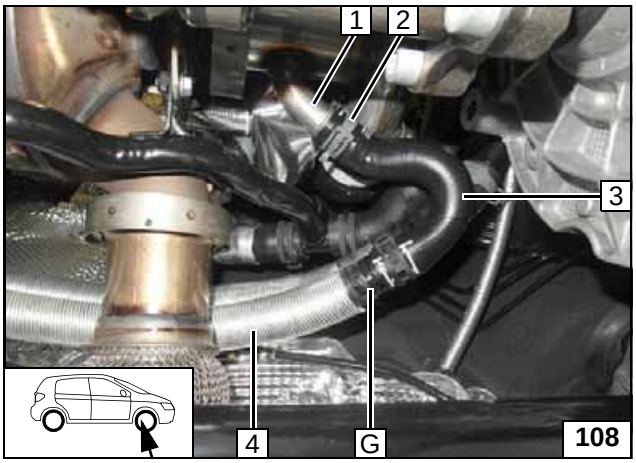
Cutting point



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

1 Pipe of engine outlet
2 Original vehicle spring clip

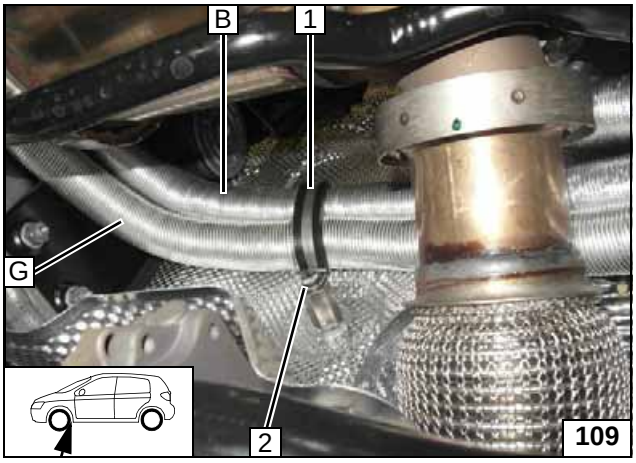
Connecting engine outlet



Slide 600mm long heat protection hose **4** onto hose **B**.

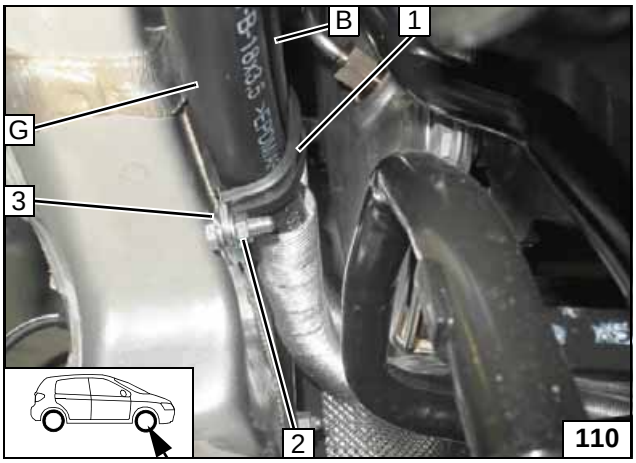
1 Pipe of EGR
2 Original vehicle spring clip
3 Original vehicle hose

Connecting heat exchanger inlet



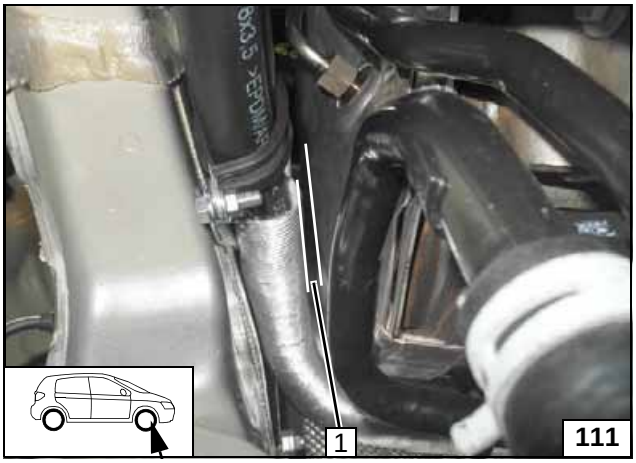
1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

Fastening on firewall



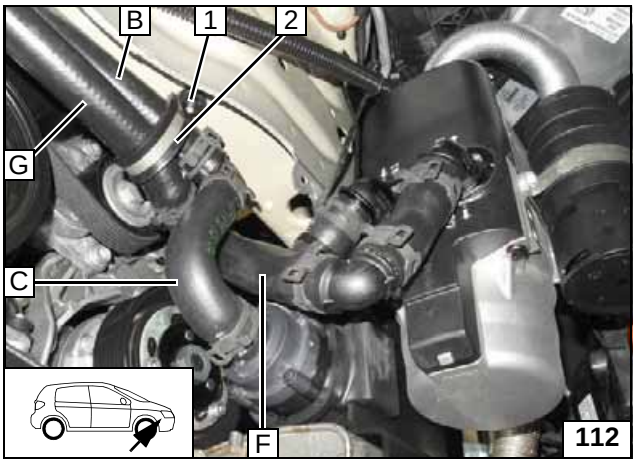
1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

Routing on frame side member



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

Routing in engine compartment



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

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

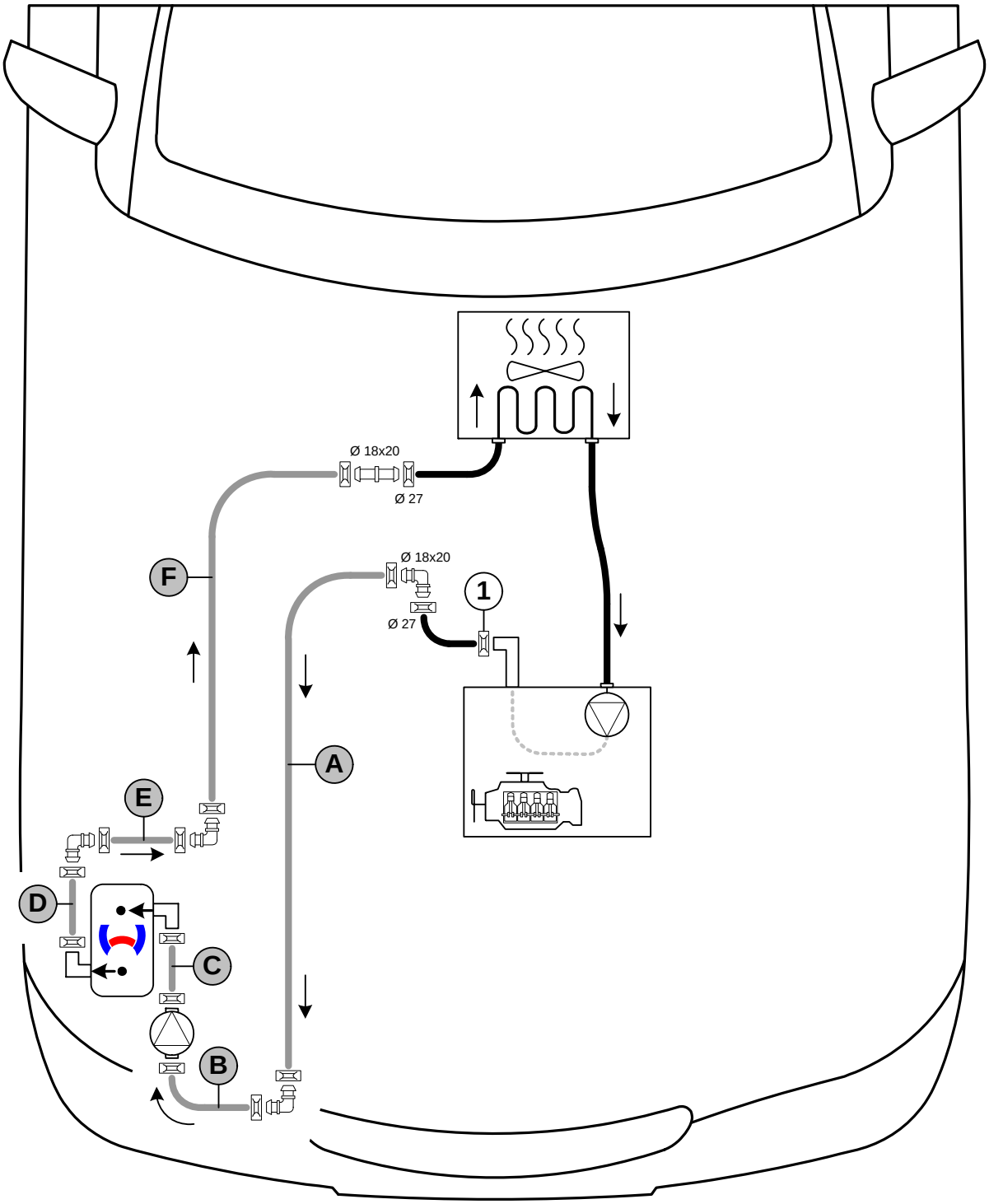
Connecting heater outlet and inlet

Coolant Circuit for TDI 4WD

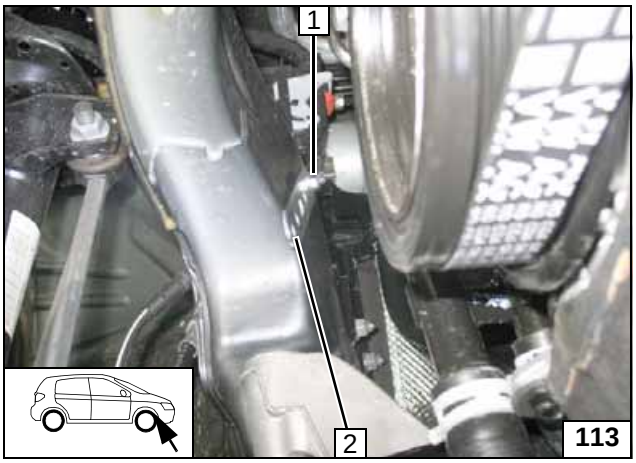
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram

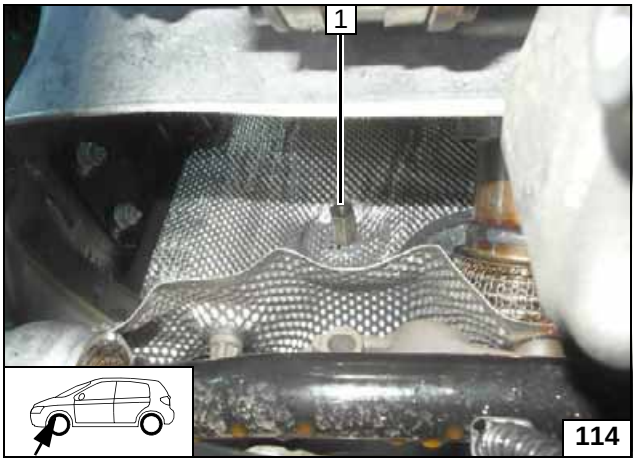


All spring clips without a specific designation = 25 mm dia.
All connecting pipes without a specific designation = 18x18 mm dia.
1 = Original vehicle spring clip .



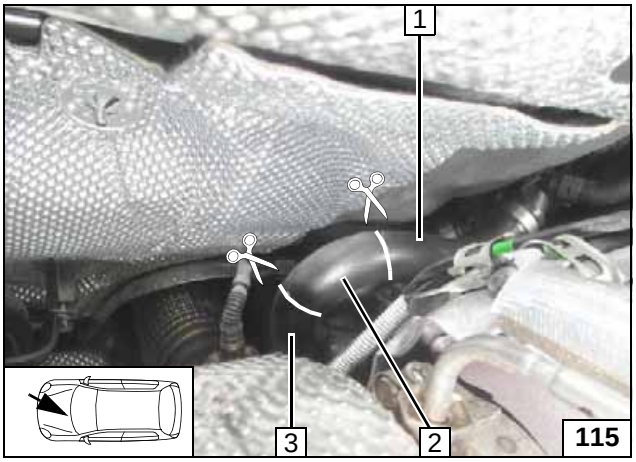
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



1 M6x30 spacer nut, original vehicle stud bolt

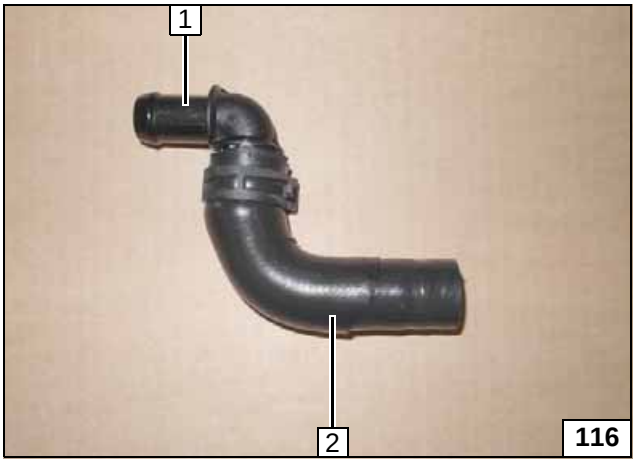
Installing spacer nut



Cut off hose of engine outlet / heat exchanger inlet at the markings. Remove hose section of engine outlet **3**. The spring clip of the engine outlet connection piece will be reused!

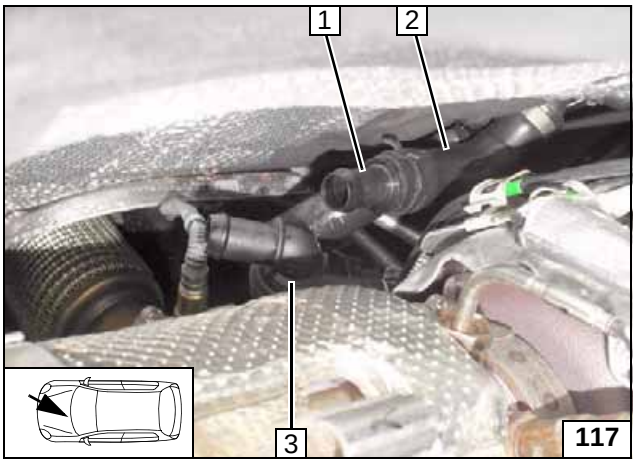
1 Heat exchanger inlet hose section
2 Section (90° elbow)

Cutting point



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

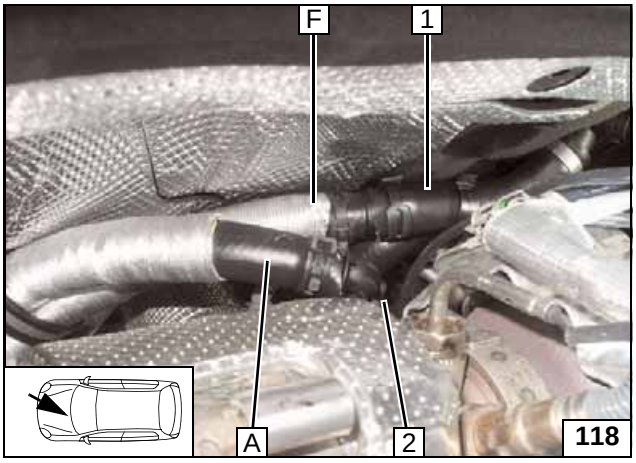
Preparing engine outlet hose section



Install hose section of engine outlet **3** with original vehicle spring clip on engine outlet.

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

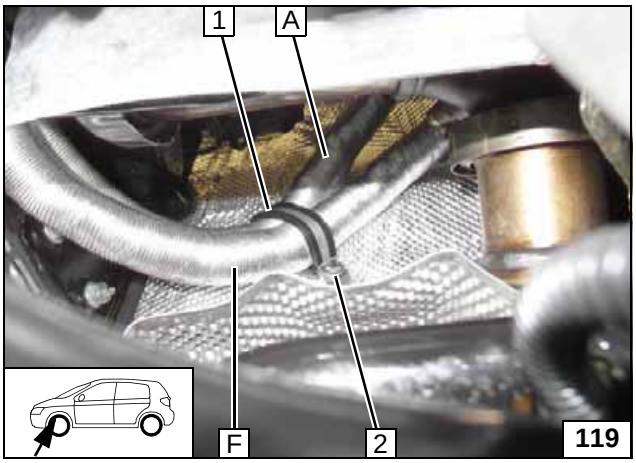
Installing engine outlet hose section



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

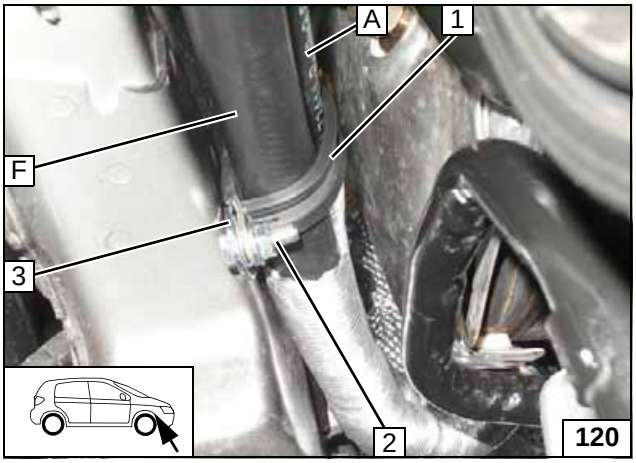
1 Heat exchanger inlet hose section
2 Original vehicle spring clip

Connecting engine outlet / heat exchanger inlet



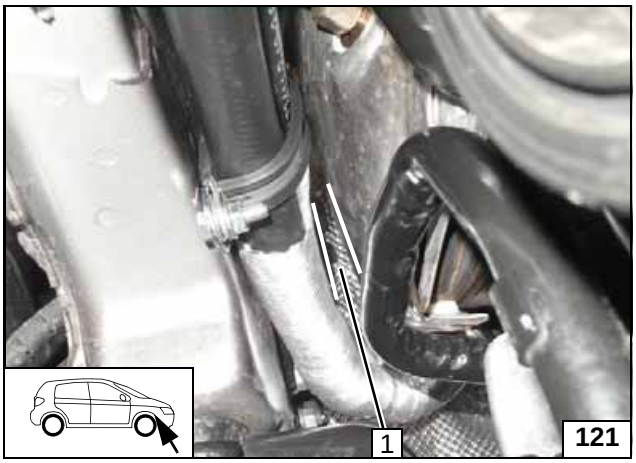
1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

Fastening on firewall



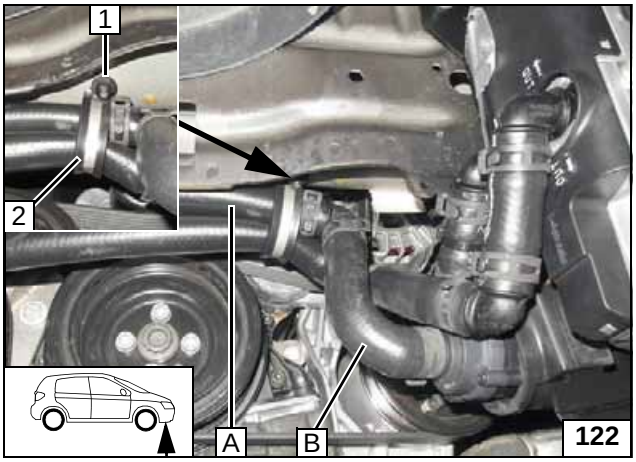
1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

Routing on frame side member



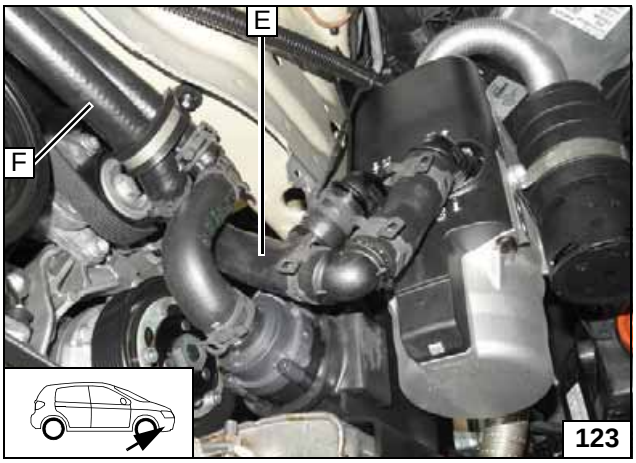
Align hoses. Ensure sufficient distance to catalytic converter at position **1**, correct if necessary.

Routing in engine compartment



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

Connecting heater inlet



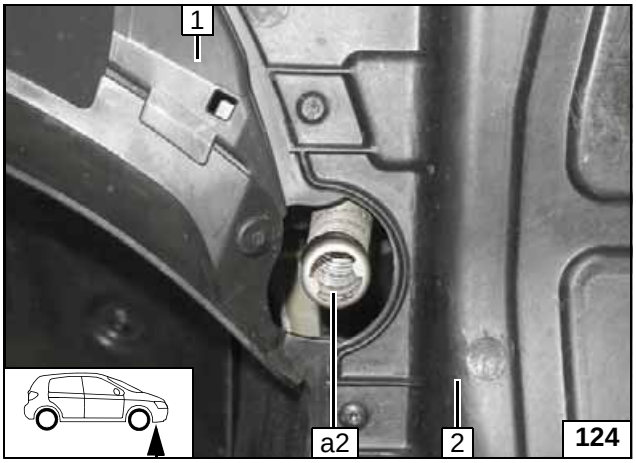
Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

Connecting heater outlet

Final Work

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).

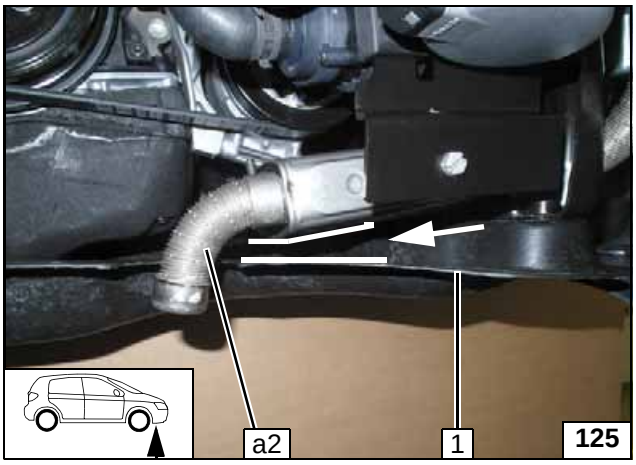
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the 'Operating Instructions for Climatronic'.**
- **Place the 'Switch 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 Wheel well trim installed
2 Underride protection installed

Aligning exhaust pipe a2



4Motion

Ensure sufficient distance from underride protection, align exhaust silencer if necessary.

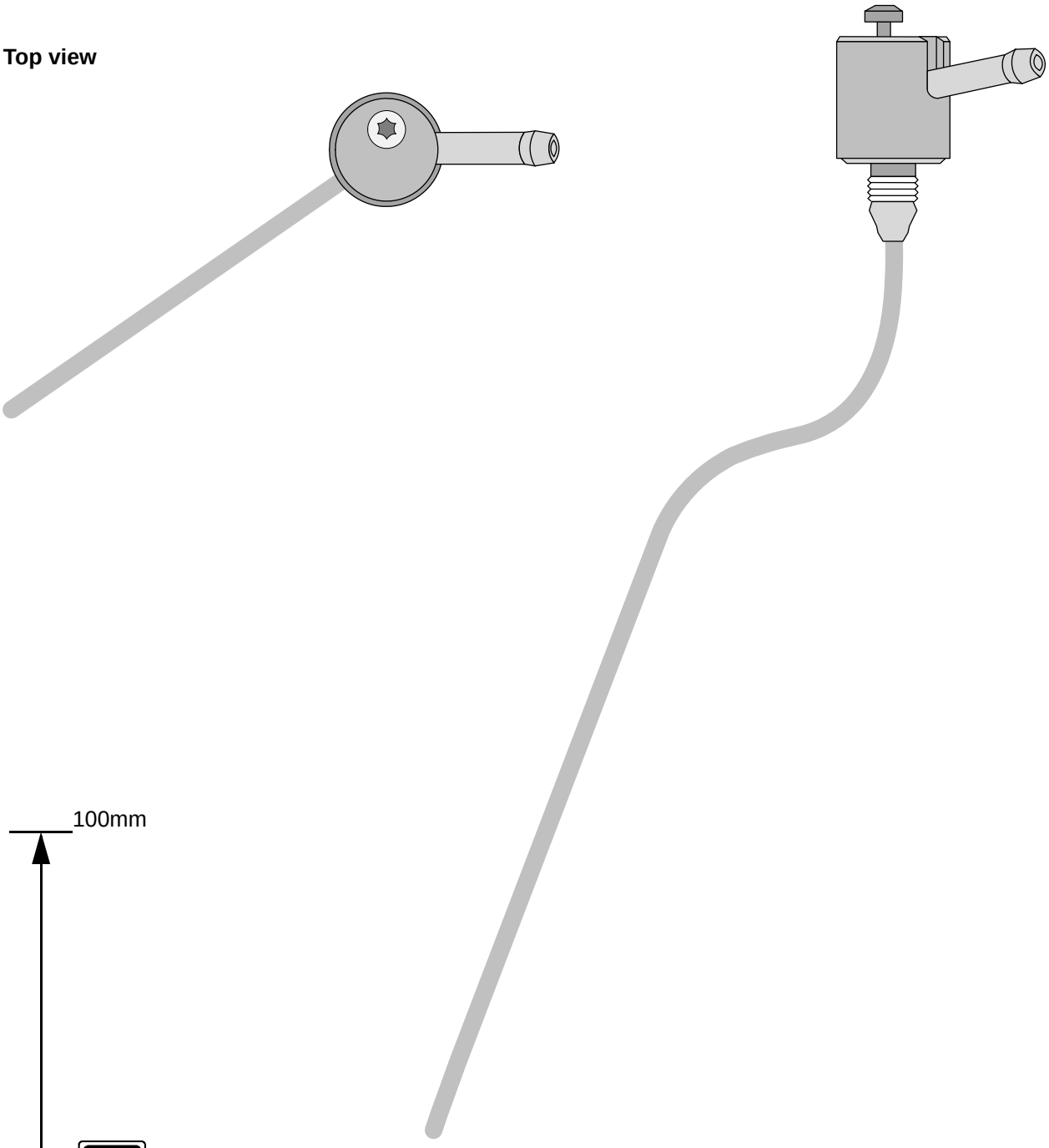
1 Underride protection installed

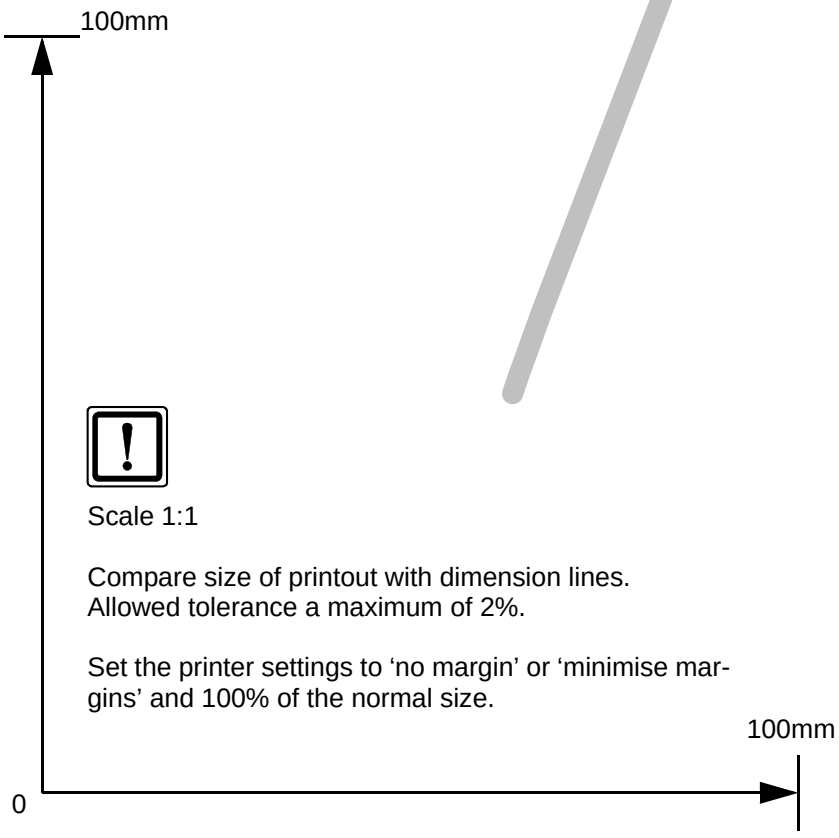
Aligning exhaust pipe a2

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

FuelFix Template for TSI

Top view





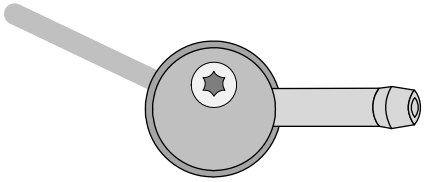
Scale 1:1

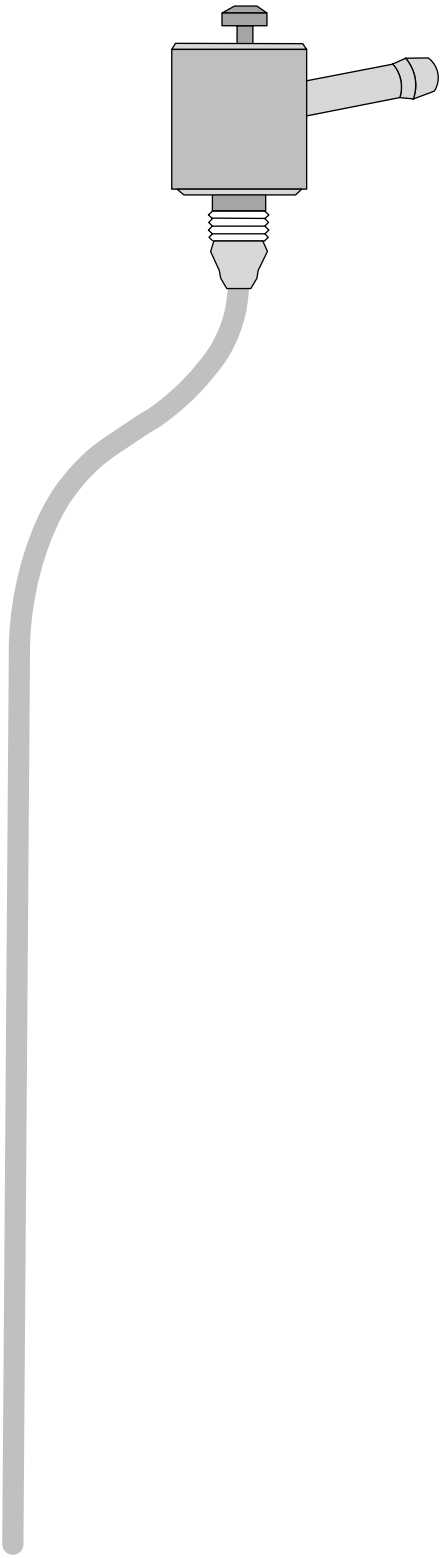
Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

FuelFix Template for TDI 2WD

Top view





100mm

Scale 1:1

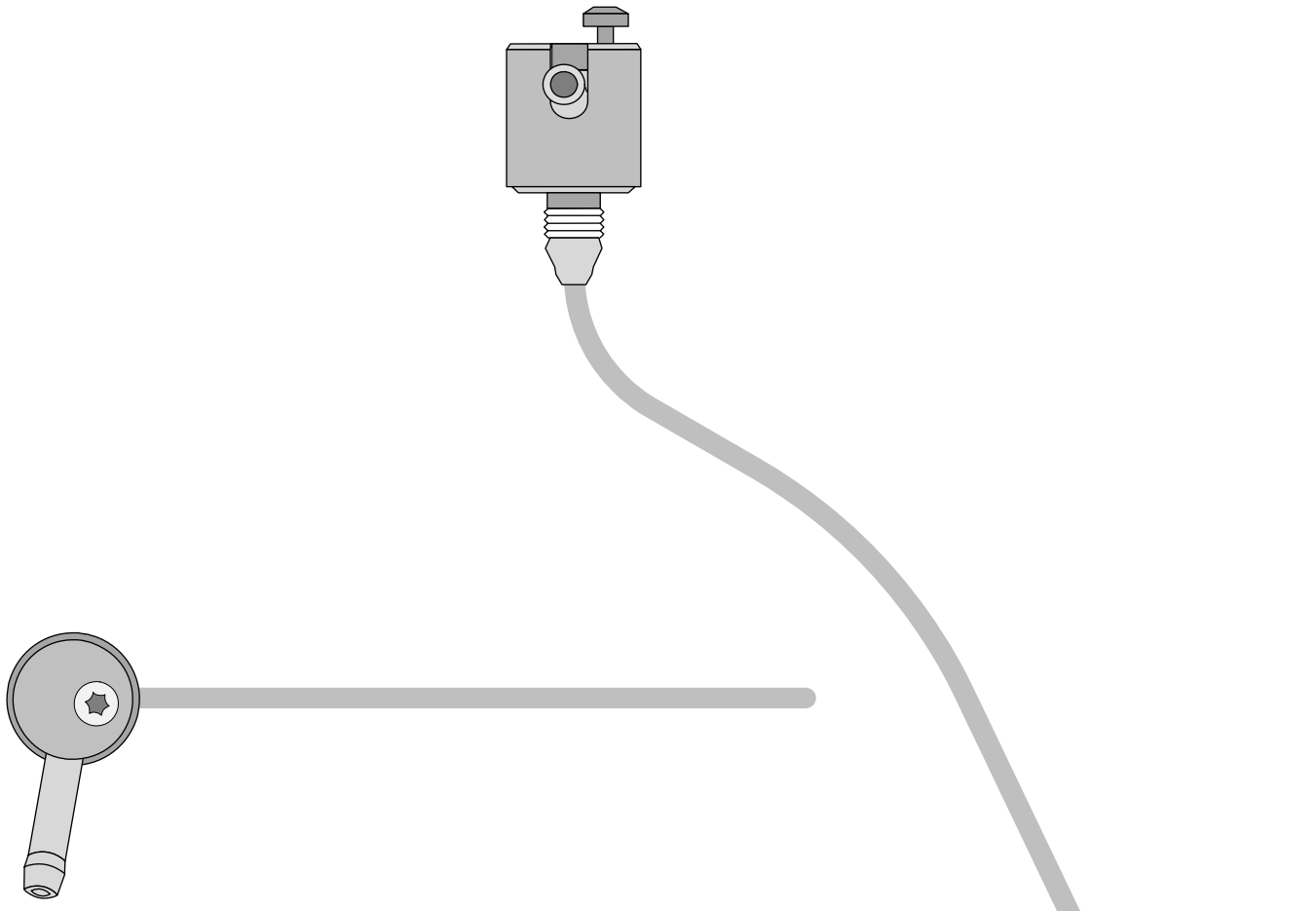
Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

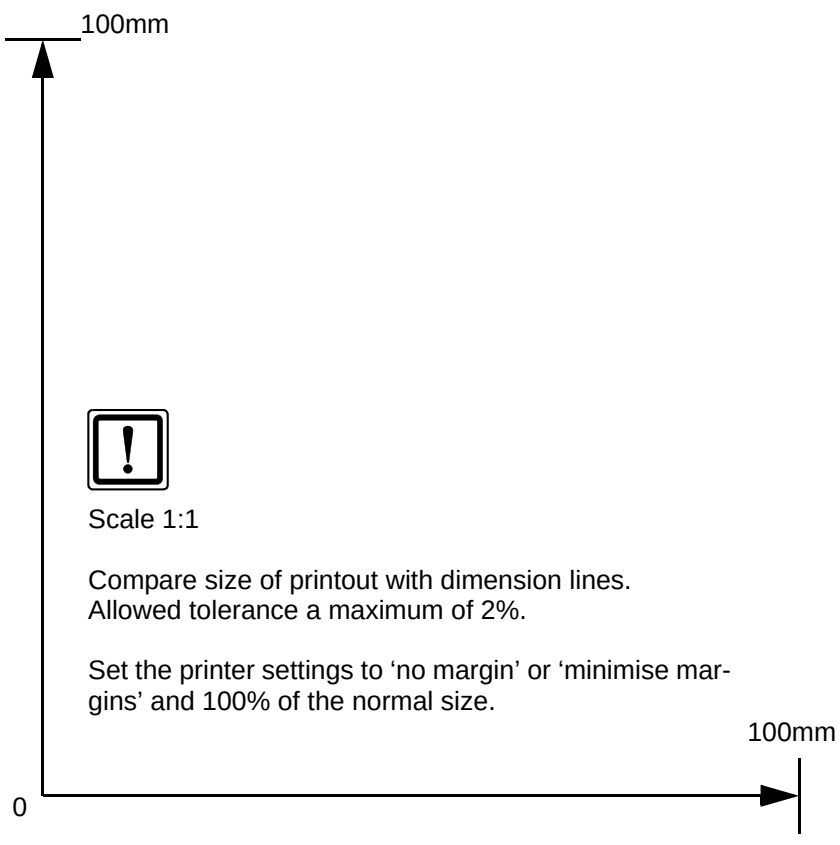
Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

100mm

0

FuelFix template for TDI 4WD





Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

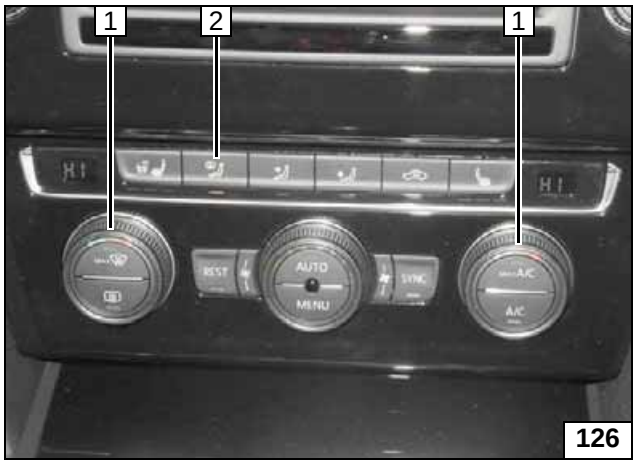
Operating Instructions for Climatronic

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.

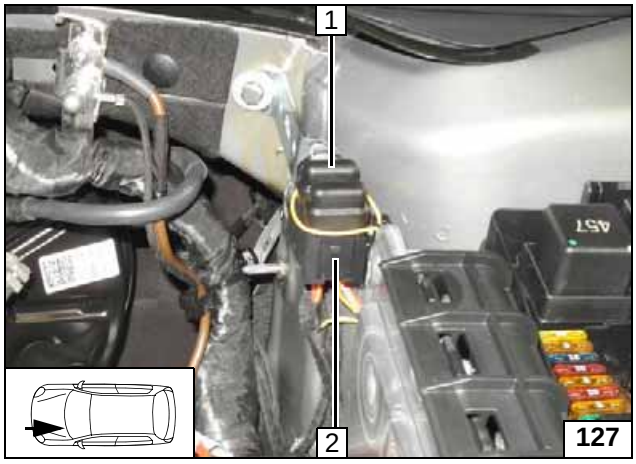
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



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

A/C control panel



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

Engine compartment fuses