Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

With FuelFix

Installation Documentation
Skoda Superb

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Skoda	Superb	3T	e11 * 2001 / 116 * 0326 * 32
Skoda	Superb	3V	e11 * 2001 / 116 * 0326 * 32

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.4 TSI	Petrol	6-speed SG	110	1395	CZEA
1.6 TDI	Diesel	DSG	88	1598	DCXA
2.0 TDI	Diesel	6-speed SG	110	1968	CRLB
2.0 TDI	Diesel	DSG	110	1968	CRLB
2.0 TDI	Diesel	DSG	140	1968	DFCA

SG = manual transmission
DSG = direct gear transmission

From model year 2015
Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning
Multi-zone automatic air-conditioning
Front fog lights
Start - Stop
Xenon headlights
Turning light
Headlight washer system
LED daytime running lights
4x4

Not verified: Manual air-conditioning
Passenger compartment monitoring

Total installation time: approx. 8.5 hours

Skoda Superb

Table of Contents

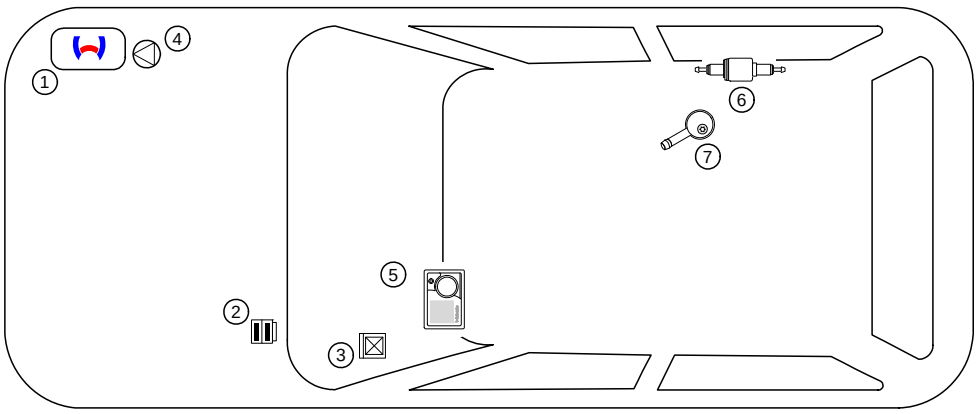
Necessary Components

- Basic delivery scope of Thermo Top Evo in accordance with price list
- Installation kit with FuelFix for Skoda Superb 2015 Petrol and diesel: **1324216B**
- 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 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
7. FuelFix

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 have to audibly click into place during installation.

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.

Skoda Superb

Information on Validity

This installation documentation applies to Skoda Superb 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

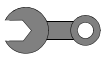
Dimensions
- All dimensions are in mm.

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

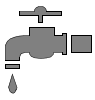
You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

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.

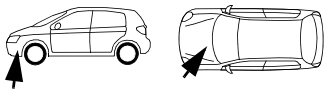
Specific risk of injury or fatal accidents.

Specific risk of fire or explosion.

Reference to 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

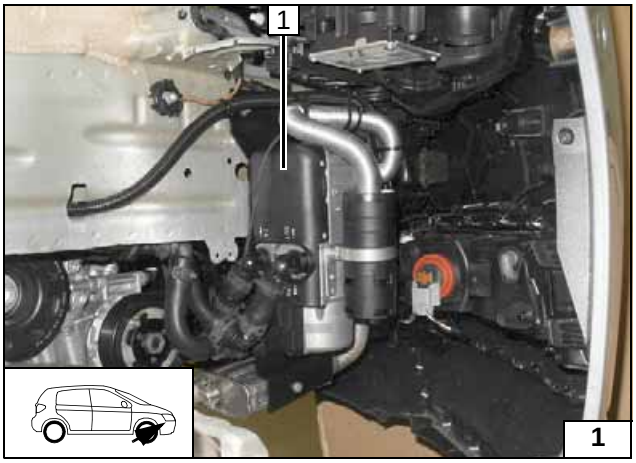
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Remove the air filter completely, together with the intake hose.
- Remove the underride protection of the engine.
- Remove the right underride protection.
- Remove the fuel tank underride protection, if present.
- Remove the right front wheel.
- Remove the right-hand front wheel well trim.
- Remove the storage compartment.
- Remove the instrument panel trim on the driver's side (only in case of Telestart).
- Remove the A-pillar trim on the driver's side (only in case of Telestart).
- Remove the lower A-pillar trim on the driver's side (only in case of Telestart from MY 2016).
- 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 almost identical for TSI and TDI. Deviations are documented, otherwise all figures show a 2.0 TDI.

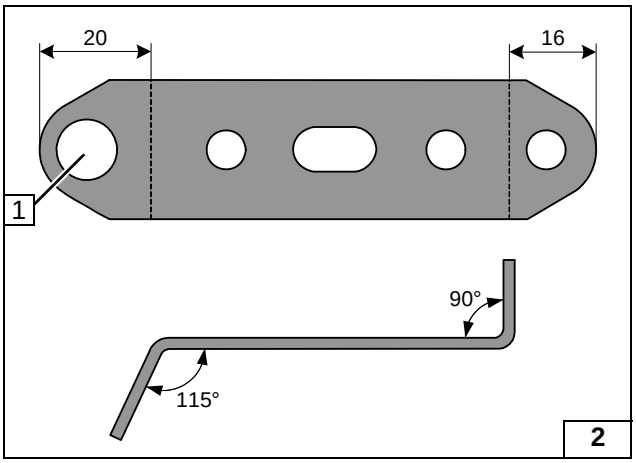


Heater Installation Location

1 Heater

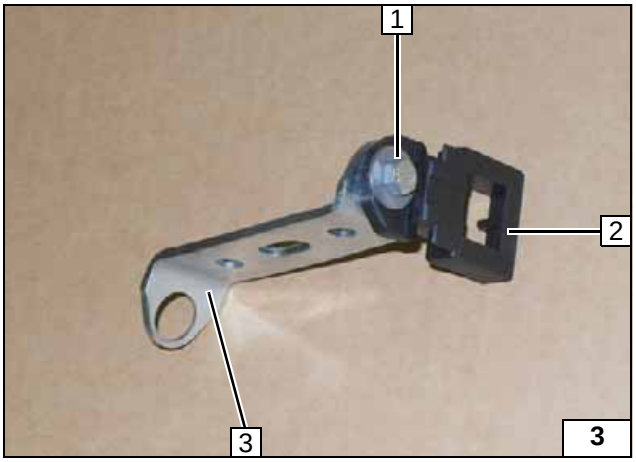
Installation location

Preparing Electrical System



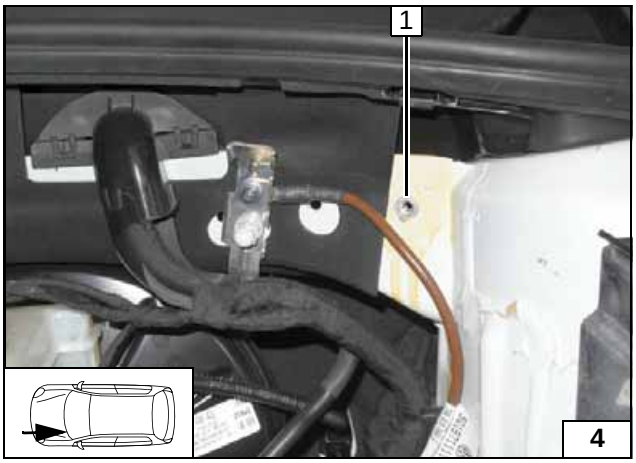
1 12.5 mm dia. hole

Preparing perforated bracket



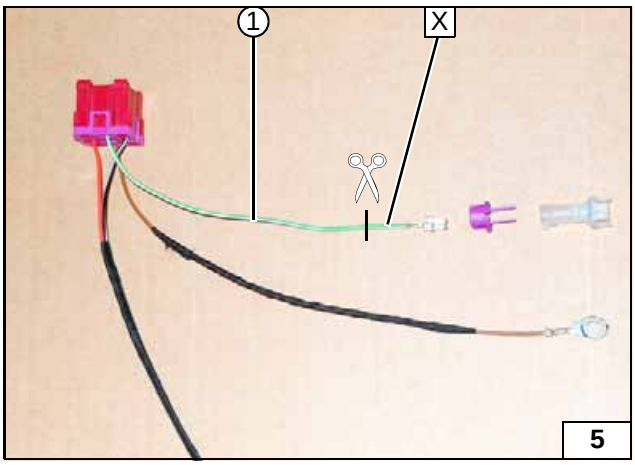
1 M5x16 bolt, washer [2x], nut
2 Retaining plate of fuse holder
3 Perforated bracket

Premounting fuse holder engine compartment



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.

Cut off green/white (gn/ws) wire of ① LIN-Gateway Pin SH socket at the marking (if connector premounted).

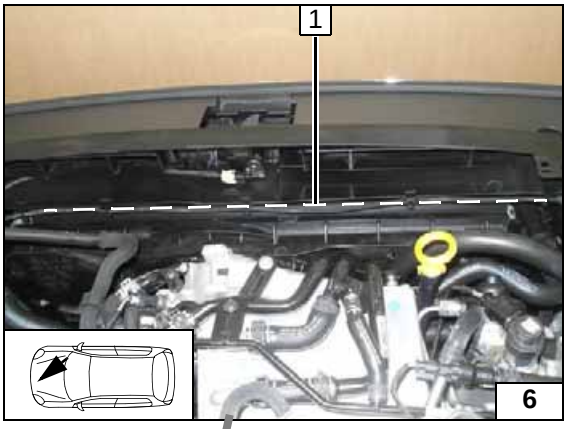
X =

Preparing wiring harness

Electrical System

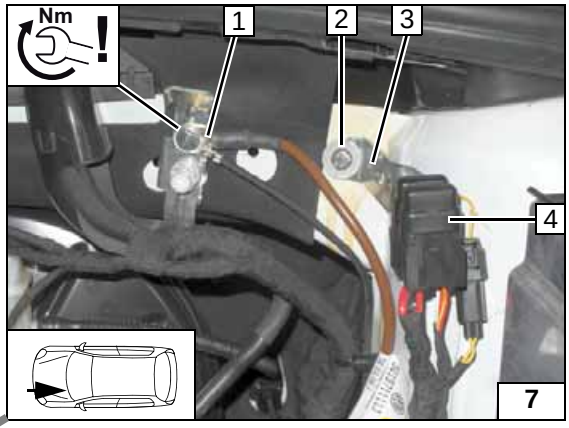
Wiring harness routing

Route the wiring harness of the heater below the cover at marking **1** to the installation location of the heater and fasten it using a clip-type cable tie.

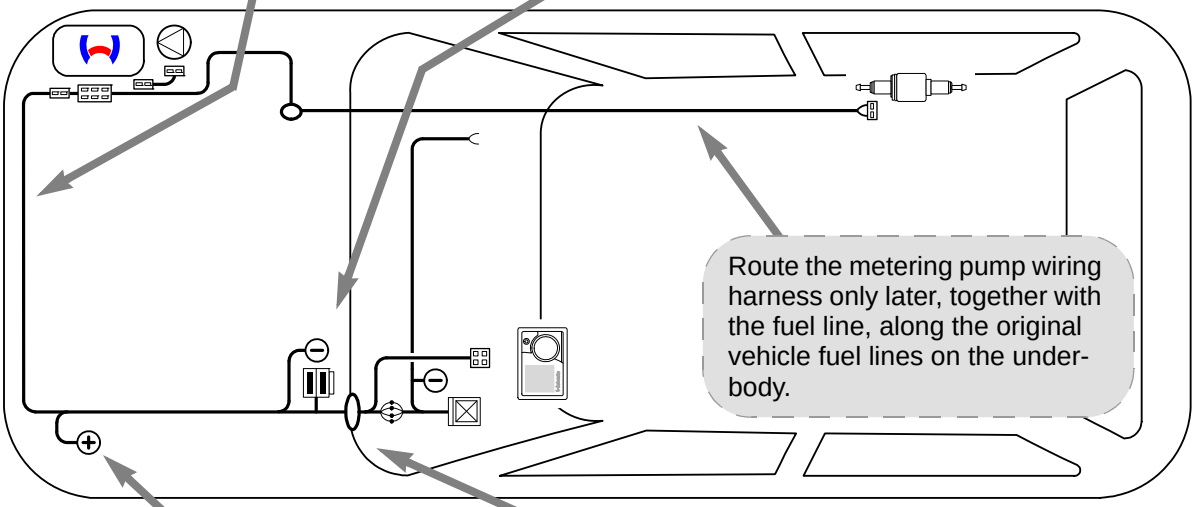


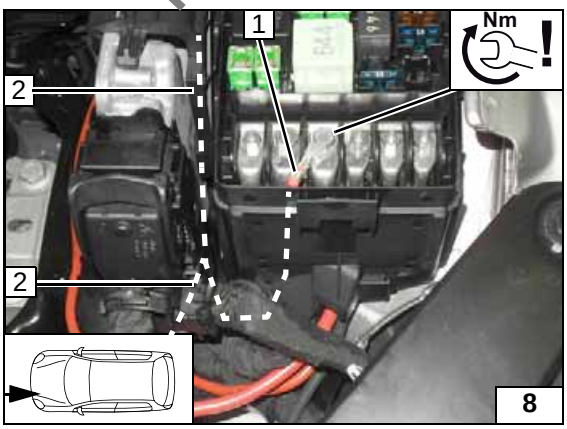
Fuse holder of engine compartment / earth wire

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



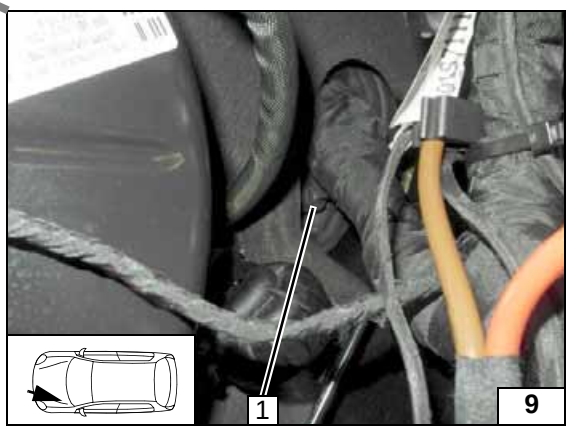
Wiring harness routing diagram





Positive wire

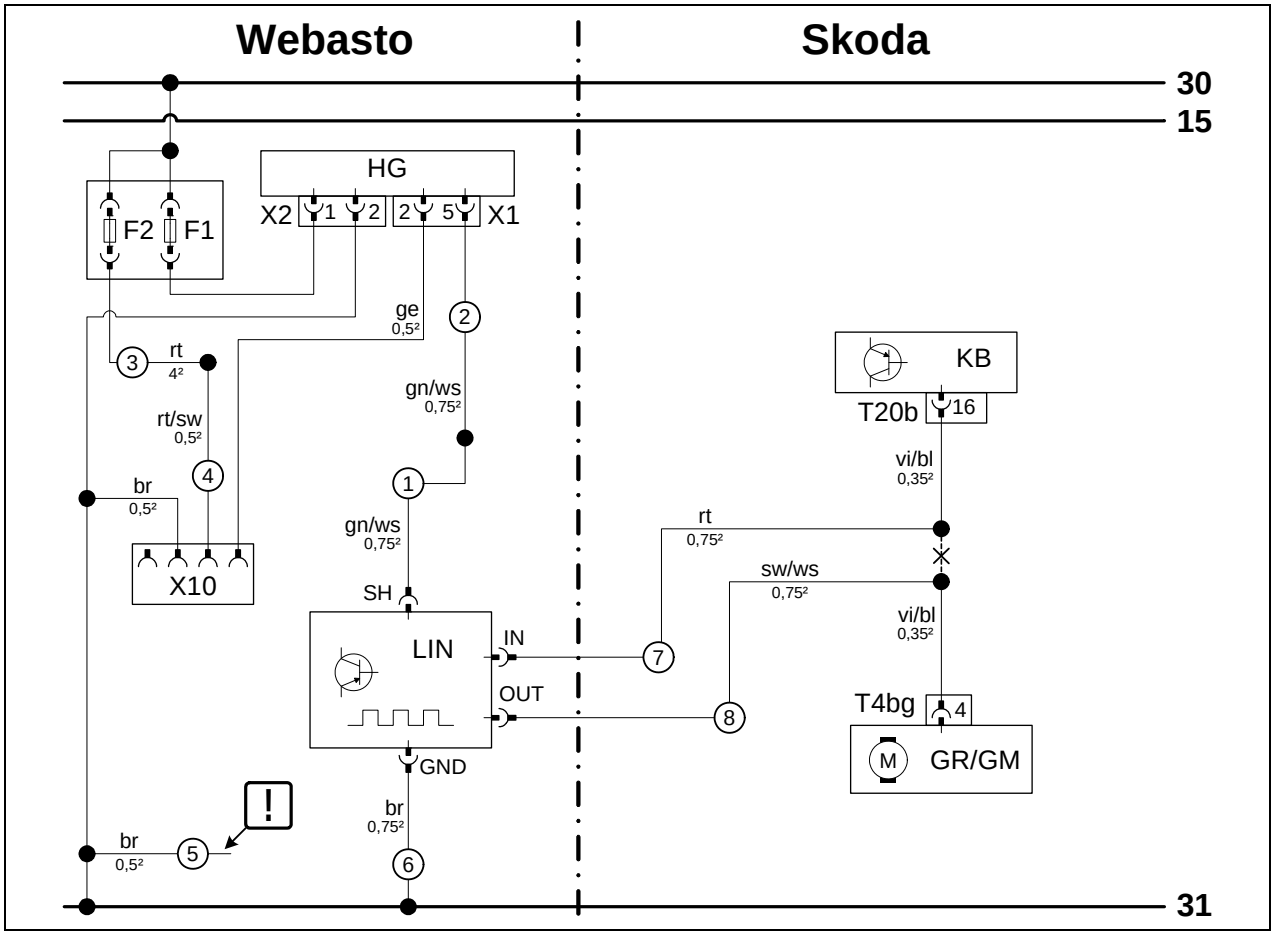
1 Positive wire on positive distributor
2 Route wiring harnesses under the engine control unit



Wiring harness pass through

Route wiring harnessses of heaer and heater control into the passenger compartment through protective rubber plug **1** .

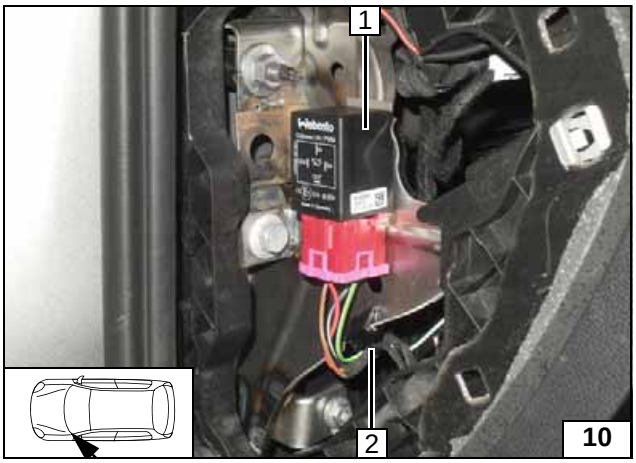
Fan Controller



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	KB	A/C control unit	rt	red
X1	6-pin heater connector	T20b	20-pin connector of KB	sw	black
X2	2-pin heater connector	GR/GM	Fan controller/fan module	ge	yellow
F1	20A fuse	T4bg	4-pin connector of GM	gn	green
F2	Replace 30A fuse with 1A fuse			vi	violet
				ws	white
X10	4-pin connector of heater control			br	brown
				bl	blue
LIN	LIN-Gateway				
				!	Insulate wire end and tie back
				X	Cutting point
				Wiring colours may vary.	

Wiring diagram

Legend

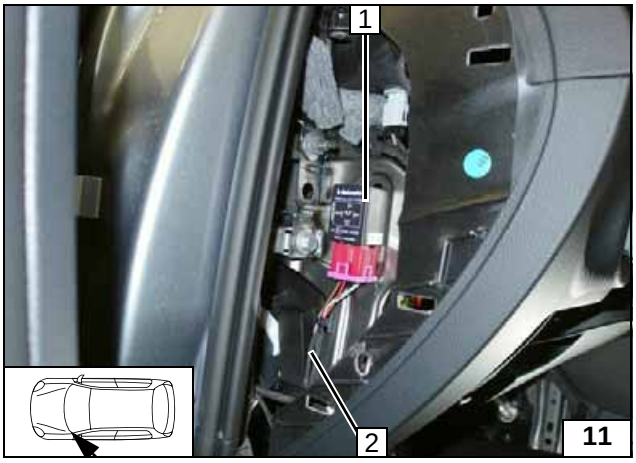


Up to model year 2015

Insert LIN- Gateway **1** in socket and fasten it using adhesive tape.

2 Clip-type cable tie

Installing LIN- GW

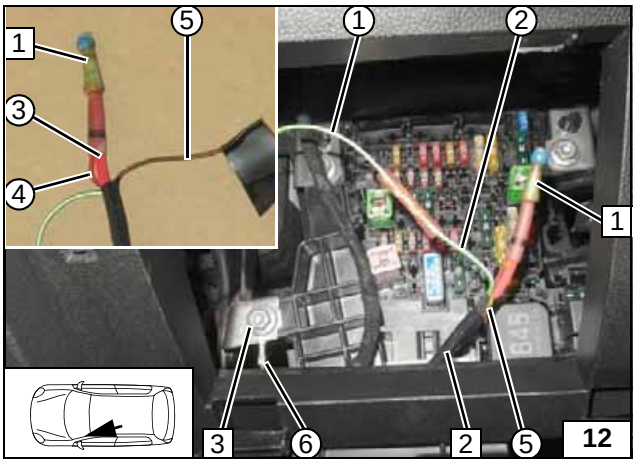


From model year 2016

Insert LIN- Gateway **1** in socket and fasten it using adhesive tape.

2 Clip-type cable tie

Installing LIN- GW

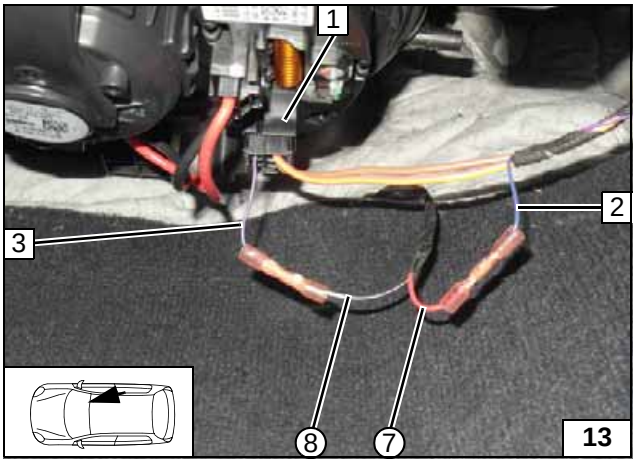


All vehicles

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

1 Solder wire terminator
2 Wiring harness of heater
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

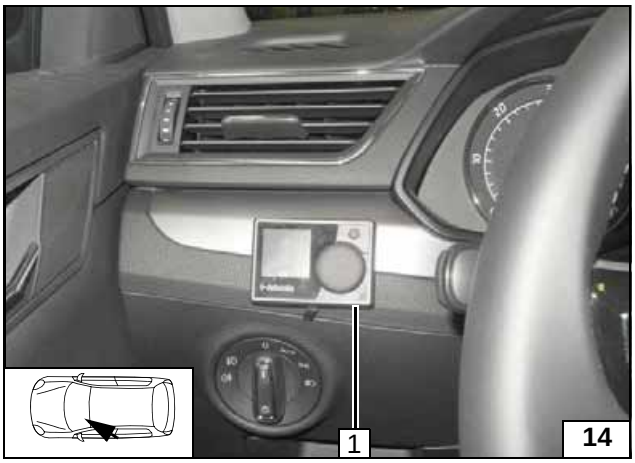
Connecting wiring harnesses



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

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

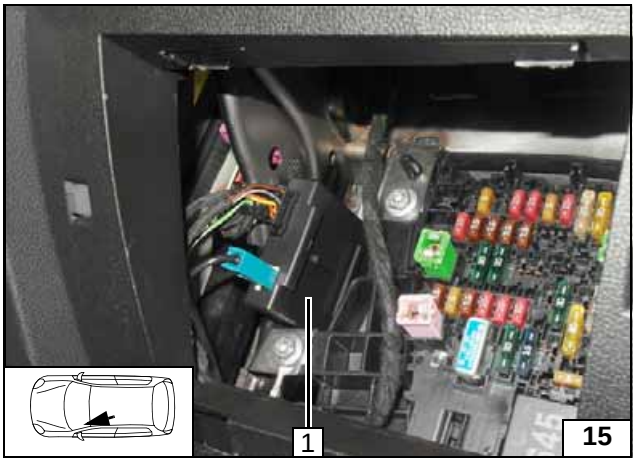
Connecting fan controller / fan module



MultiControl CAR Option

1 MultiControl CAR with installation frame

Installing MultiControl CAR

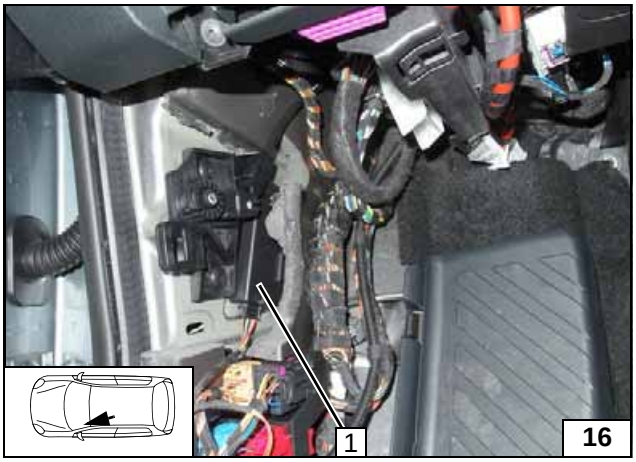


Remote Option (Telestart)

Up to model year 2015

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

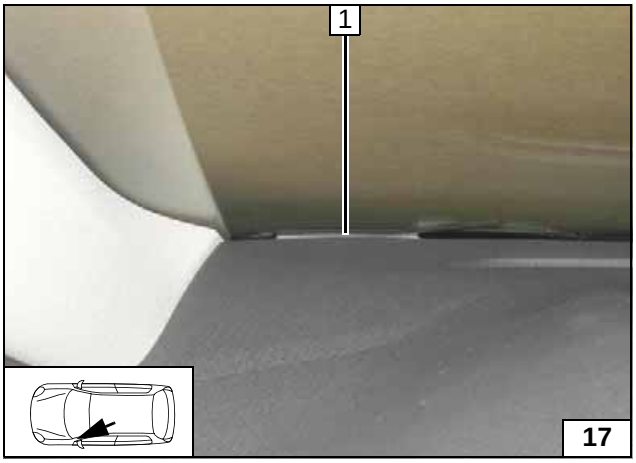
Installing receiver



From model year 2016

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

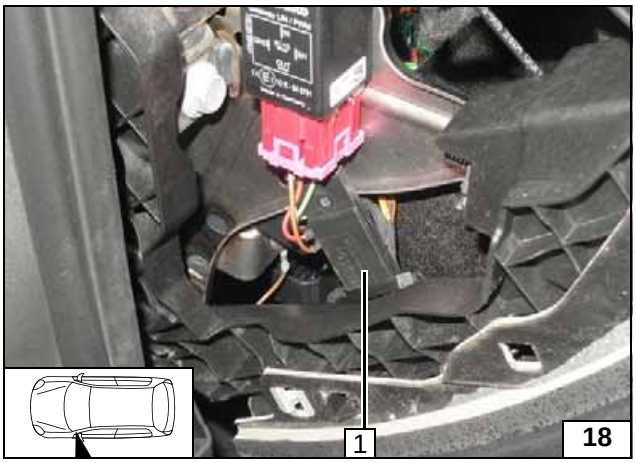
Installing receiver



All vehicles

1 Aerial

Installing aerial

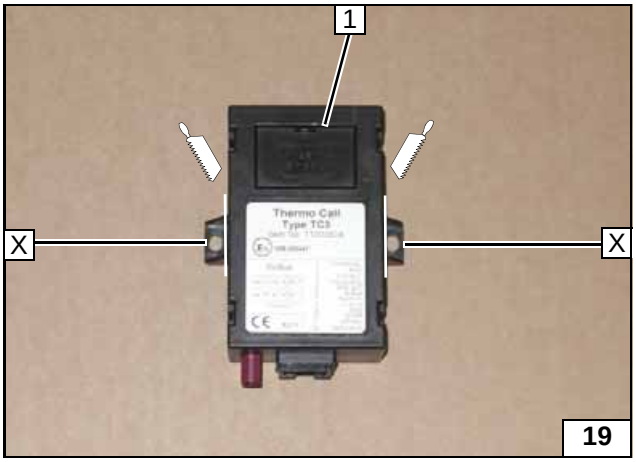


Temperature sensor T100 HTM

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

Installing temperature sensor

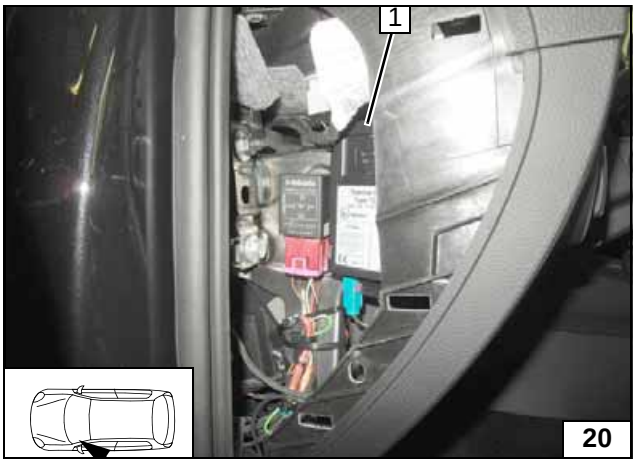
ThermoCall Option



1 Receiver

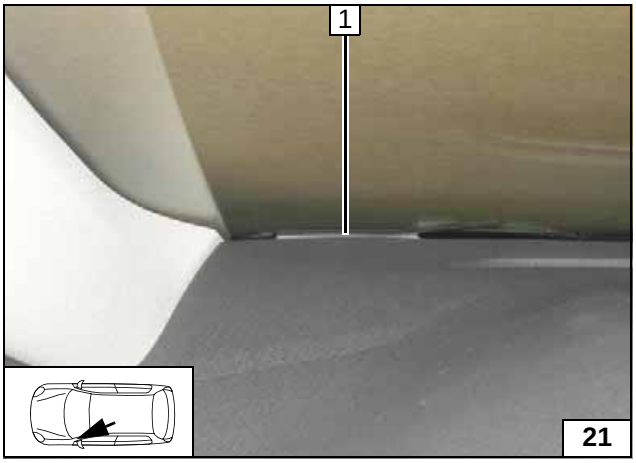
X = 

Removing lugs



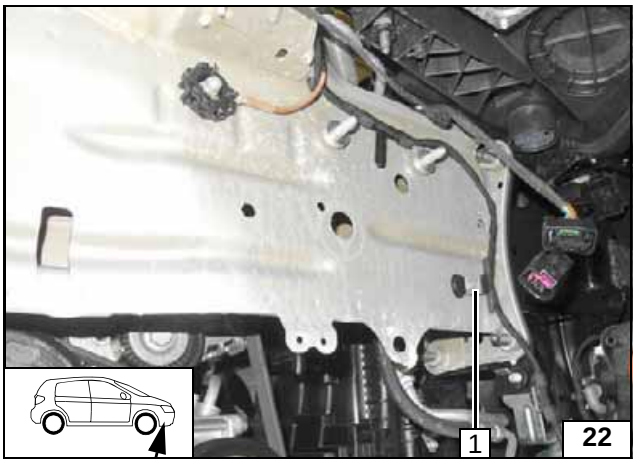
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Aerial (optional)

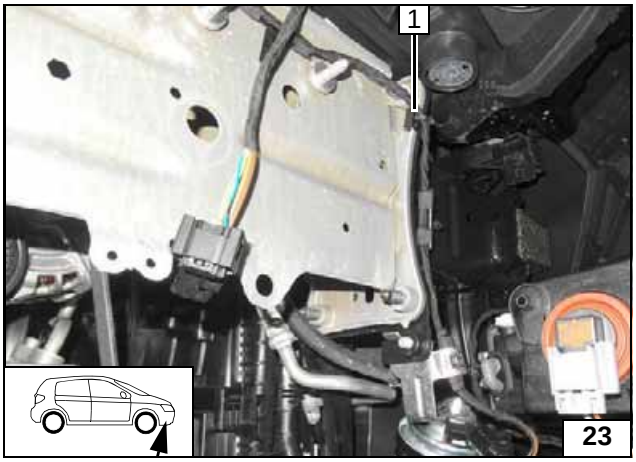
Installing aerial



Preparing Installation Location

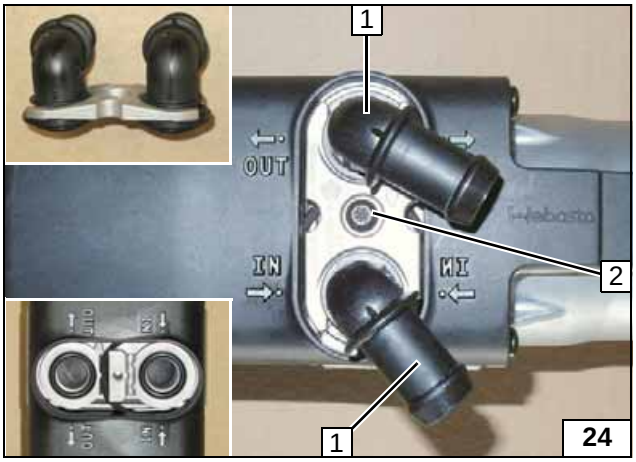
Detach retaining clip **1** from original vehicle wiring harness.

Aligning wiring harness



1 Clip-type cable tie

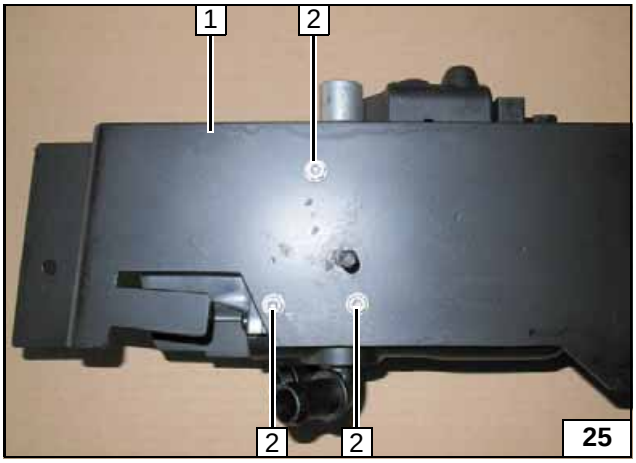
Fastening wiring harness



Preparing Heater

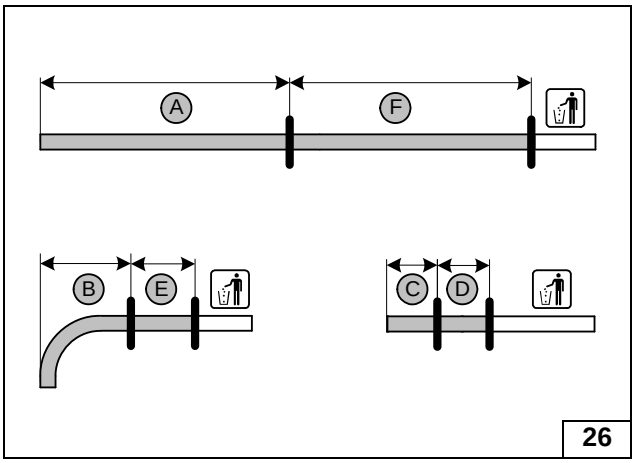
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



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

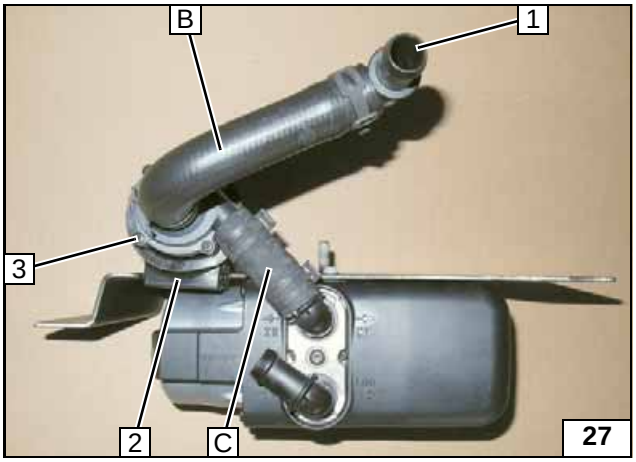
Installing bracket



TSI

A = 1070
B = 110
C = 60
D = 70
E = 110
F = 990

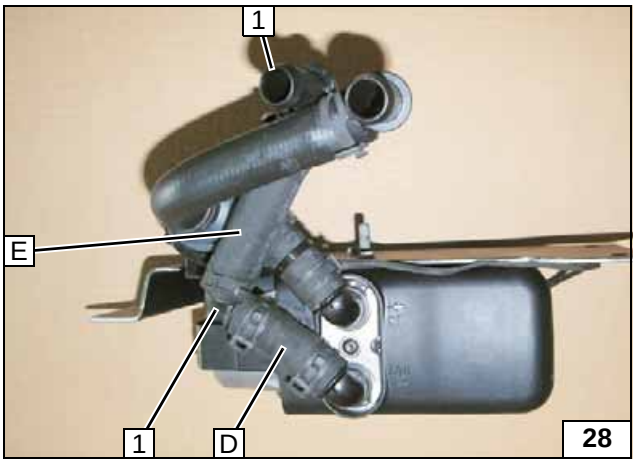
Cutting hoses to length



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

1 90° connecting pipe
3 Circulating pump

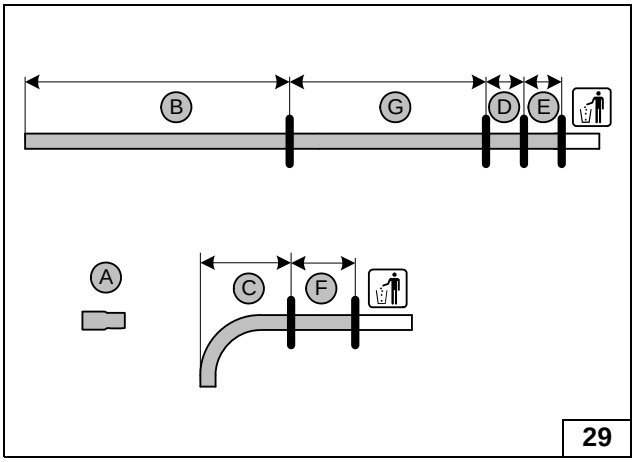
Premounting circulating pump



All spring clips = 25 mm dia.

1 90° connecting pipe [2x]

Premounting hoses

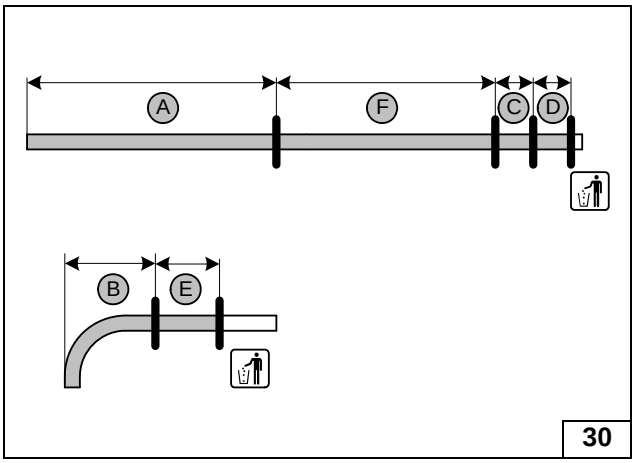


2.0 TDI front-wheel drive

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

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

Cutting hoses to length

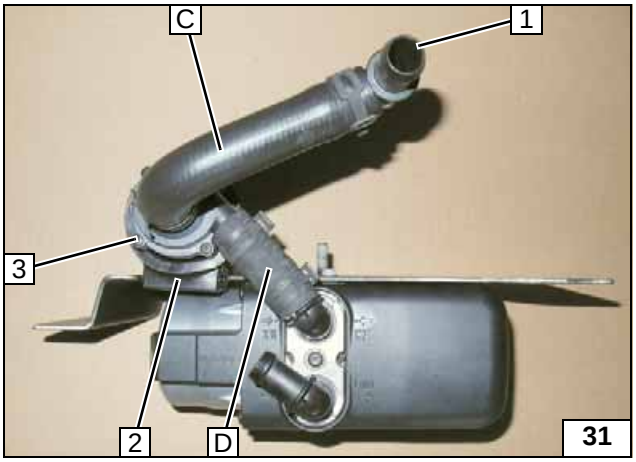


30

2.0 TDI 4x4 and 1.6 TDI

A = 920
B = 110
C = 60
D = 70
E = 110
F = 910

Cutting hoses to length



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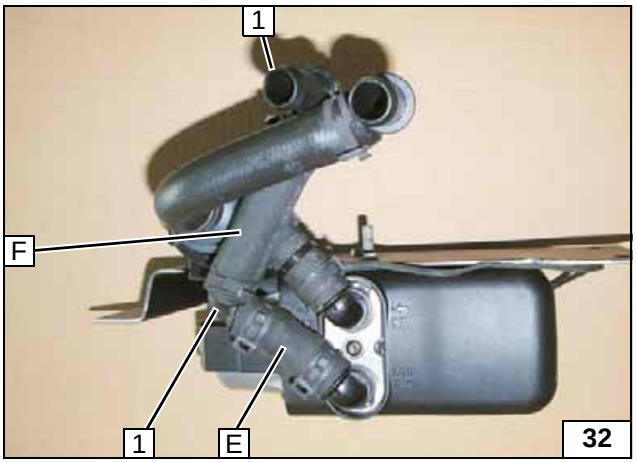
All spring clips = 25 mm dia.
Slide circulating pump mount **2** onto tab of bracket.

1 90° connecting pipe
3 Circulating pump

Premounting circulating pump

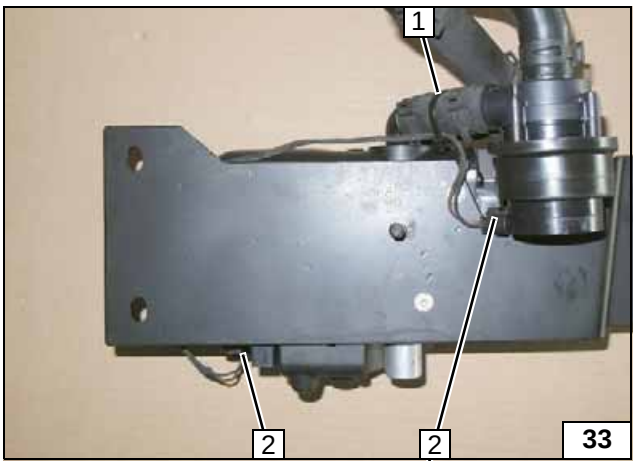


32

All spring clips = 25 mm dia.

1 90° connecting pipe [2x]

Premounting hoses



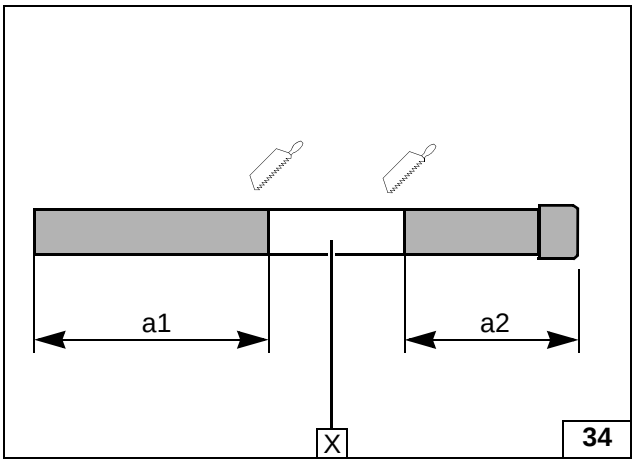
33

All vehicles

1 Cable tie
2 Connector of circulating pump wiring harness

Mounting wiring harness

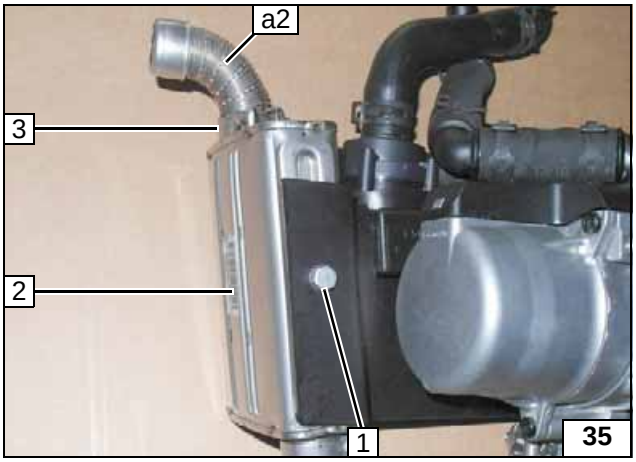
Preparing exhaust pipe



a1 = 215
a2 = 100

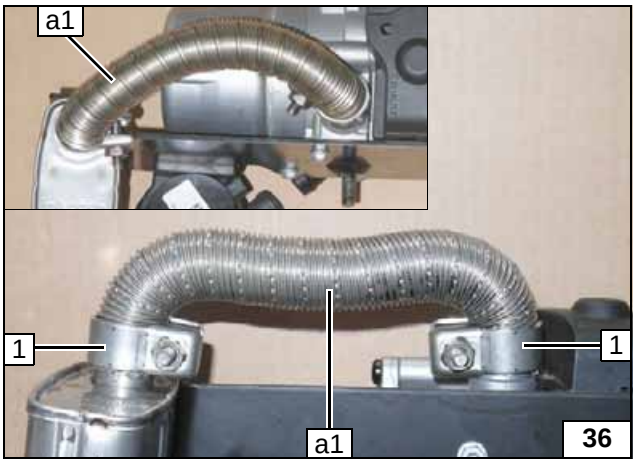
X =

Installing silencer and exhaust pipe a2



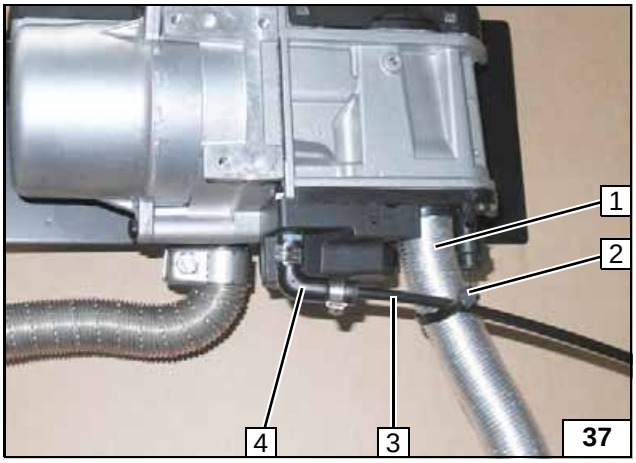
1 M6x16 bolt, spring lockwasher
2 Silencer
3 Hose clamp

Installing exhaust pipe a1

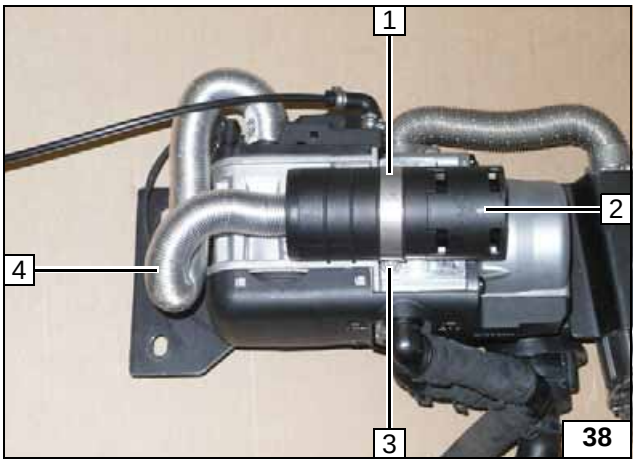


1 Hose clamp [2x]

Premounting combustion air pipe and fuel line



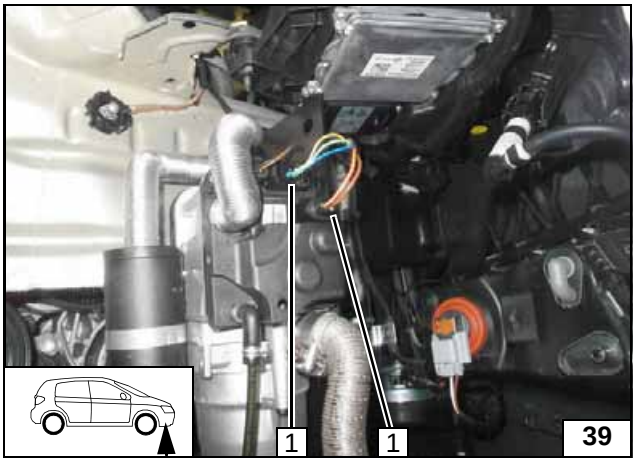
1 Combustion air pipe
2 Cable tie
3 Fuel line
4 90°, short moulded hose, 10 mm dia. clamp [2x]



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

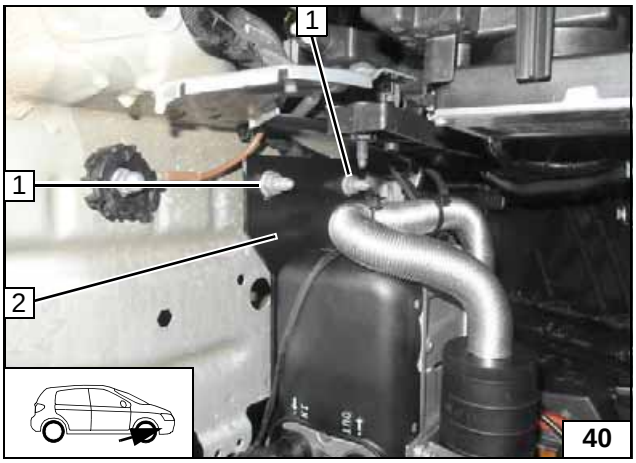
Premounting combustion air silencer

Installing Heater



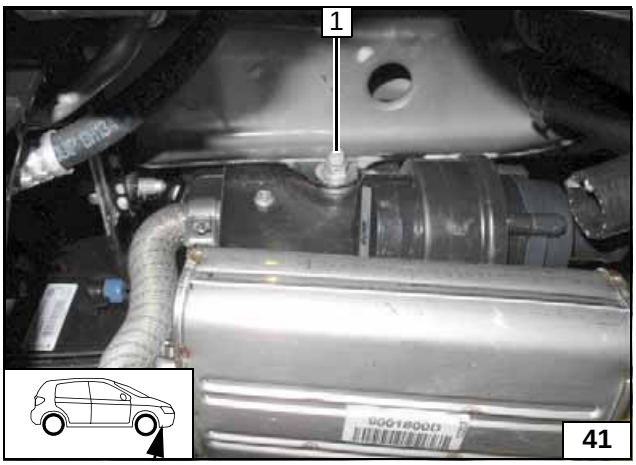
1 Connector of heater wiring harness [2x]

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

Fuel

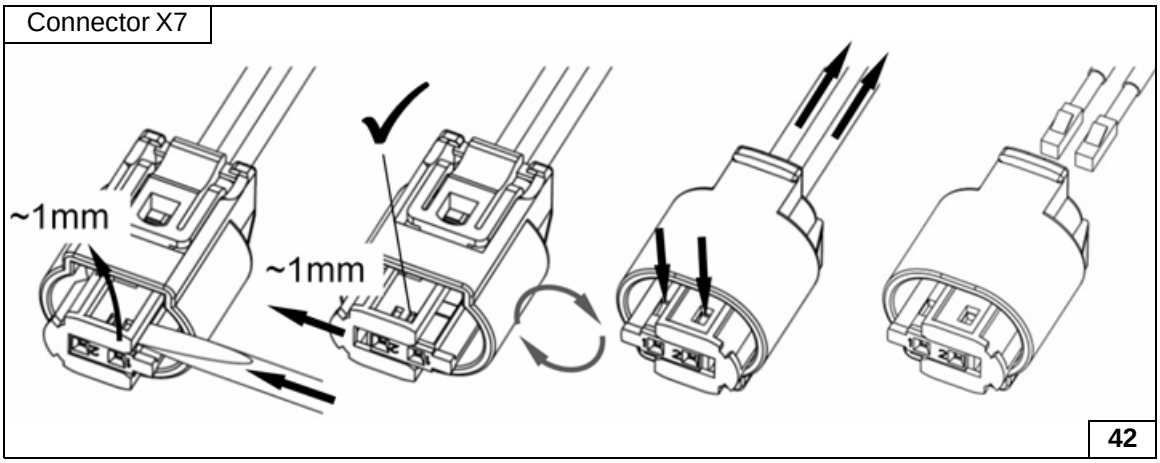
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off in an appropriate container.

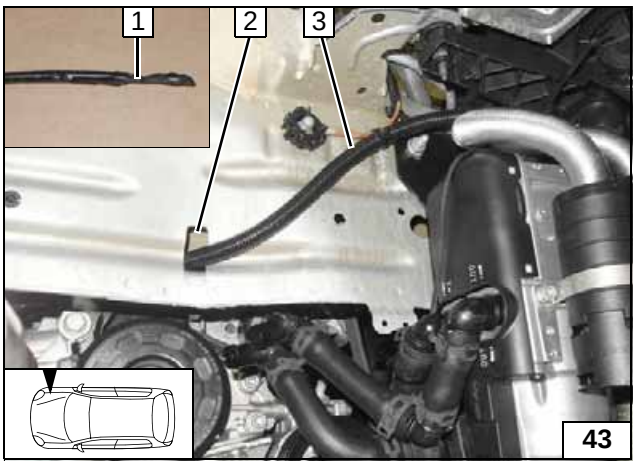
Route fuel line and metering pump wiring harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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

Dismantling metering pump connector

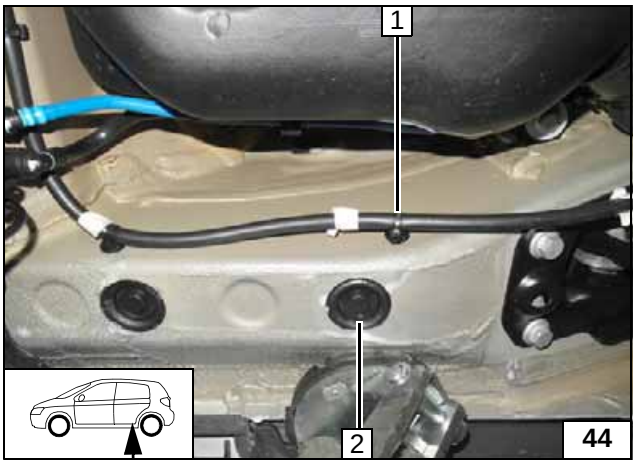


Routing lines

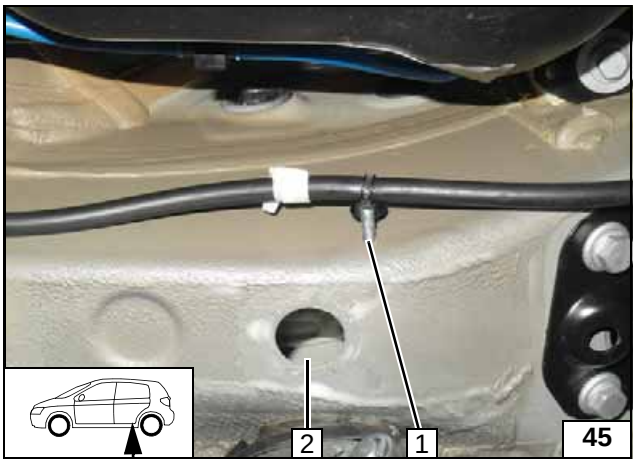


Close the opening in fuel line **1** with insulating tape.
Pull fuel line and wiring harness of metering pump into 10mm dia. corrugated tube **3** and through original vehicle pass through **2** to the underbody.

Preparing installation location of metering pump

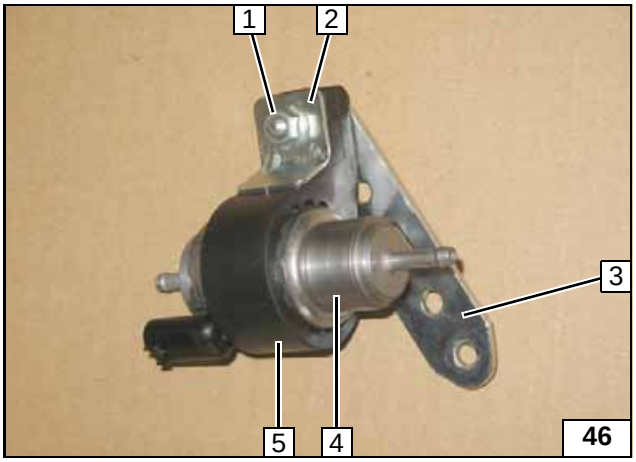


1 Remove retaining clip from hole (if present)
2 Remove cover cap (will be re-inserted later)



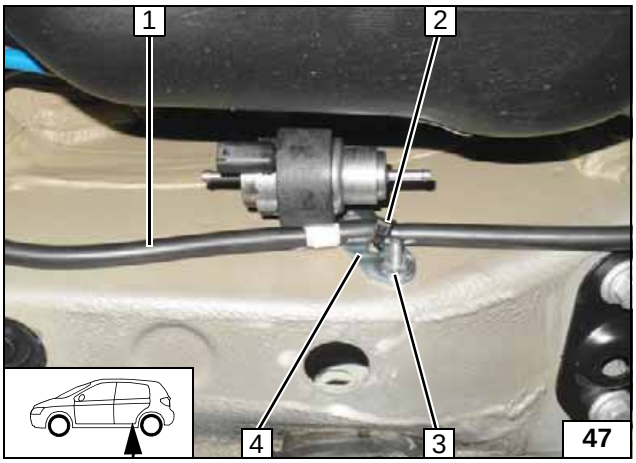
Insert M6x20 bolt **1** through opening **2** into hole.

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

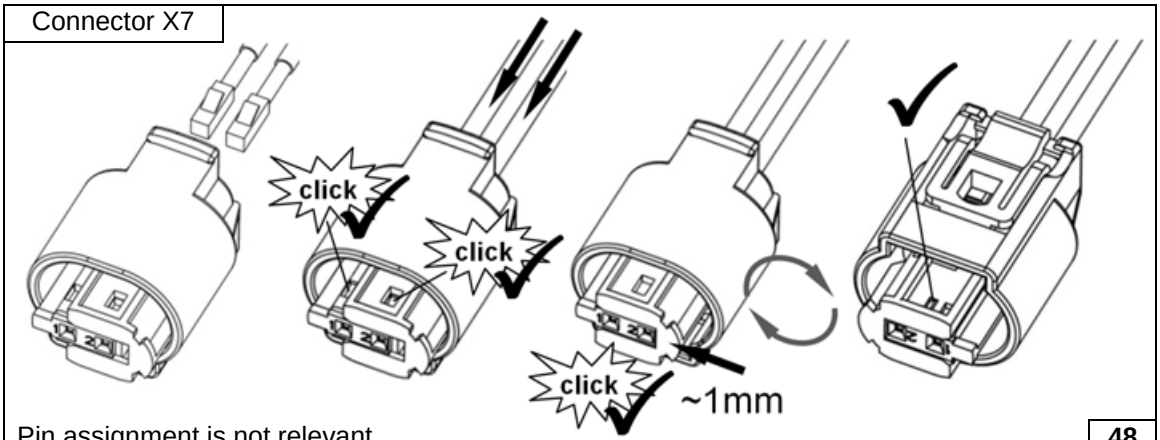


Fasten original vehicle wiring harness **1** using cable tie **2** to perforated bracket **4**.

3 M6 flanged nut

Installing metering pump

Connector X7



Pin assignment is not relevant.

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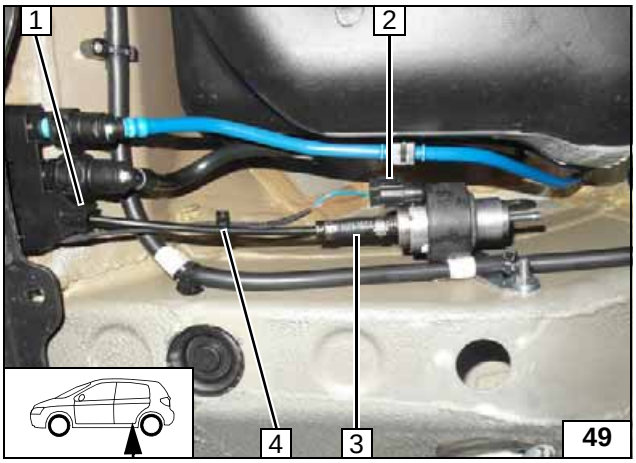
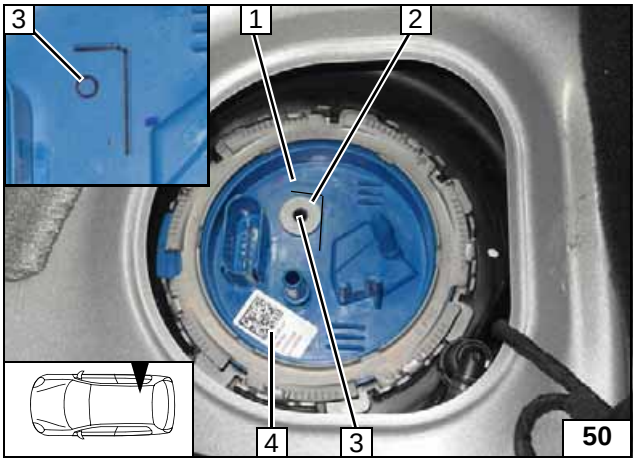
Completing metering pump connector



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



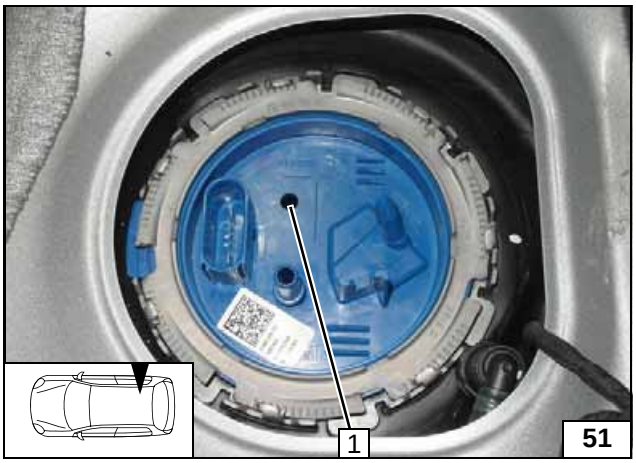
Installing FuelFix

TSI

Work steps F1 and F2.

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

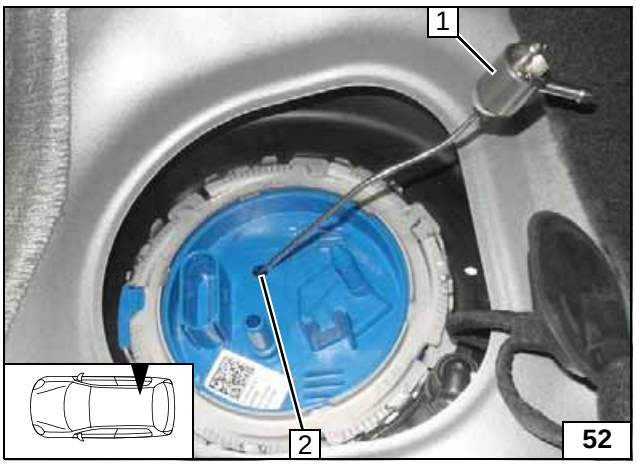
Copying hole pattern



Work step F3.

1 Hole made with provided drill

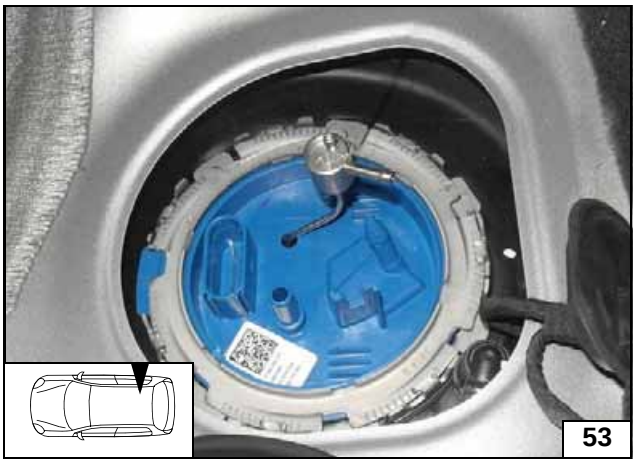
Hole for FuelFix



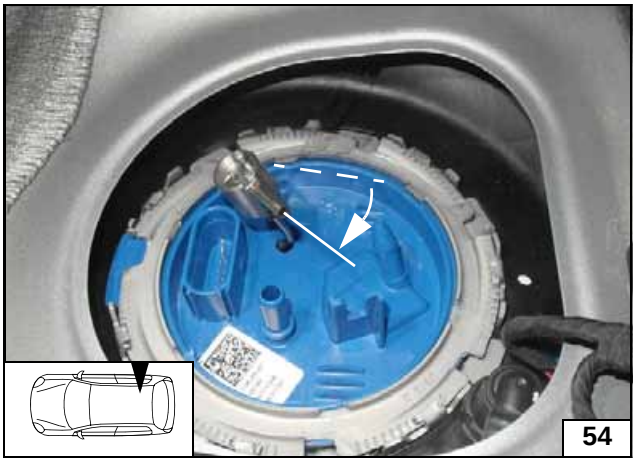
Work steps F4 and F5.

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

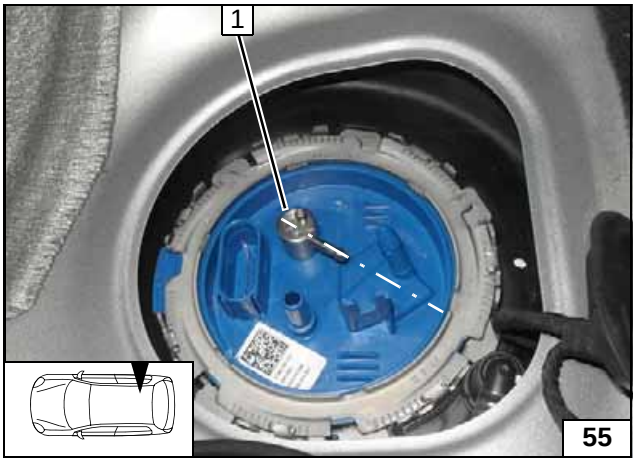
Inserting FuelFix



Inserting FuelFix



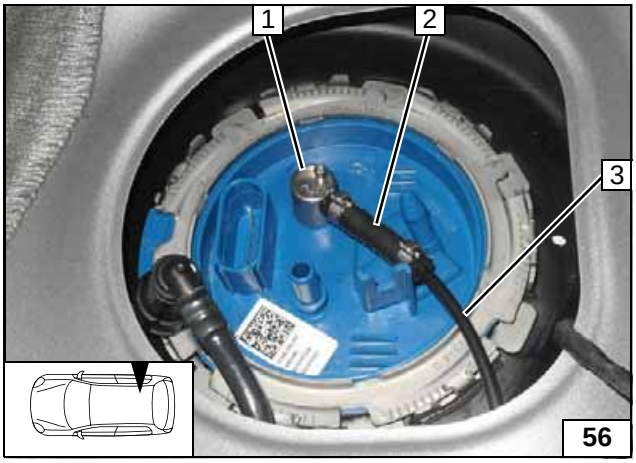
Inserting FuelFix



Work steps F5.3 and F5.4.

Position FuelFix **1** as shown.

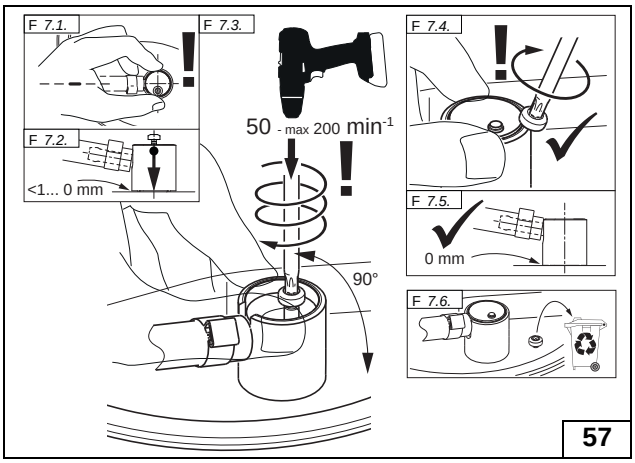
Aligning FuelFix



Work step F6.

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

Connecting fuel line

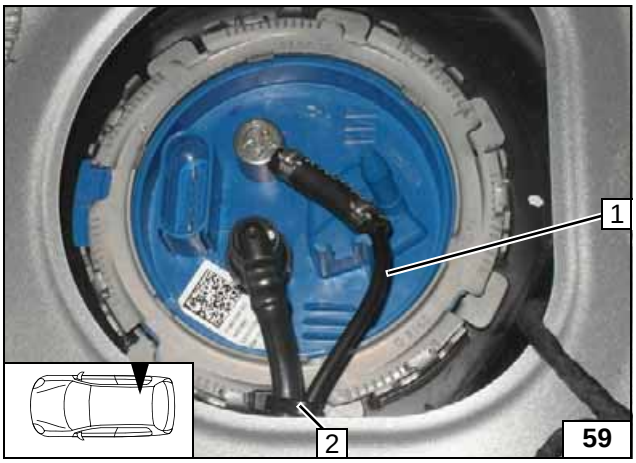


Work step F7.

Installing FuelFix

Work step 8.

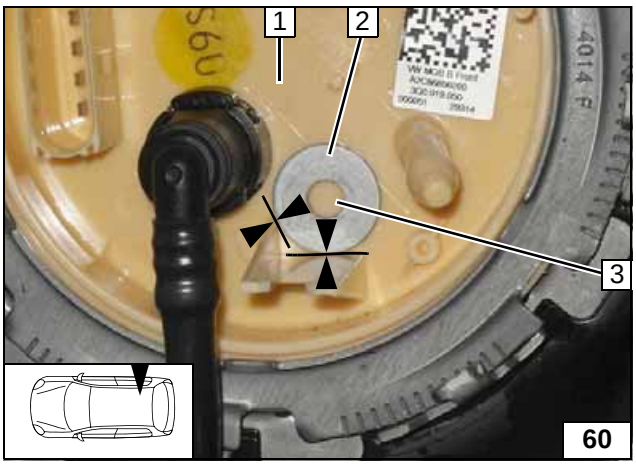
Ensuring firm seating of FuelFix



Install original vehicle fuel line.

1 Fuel line of FuelFix
2 Cable tie as tension relief

Securing fuel line

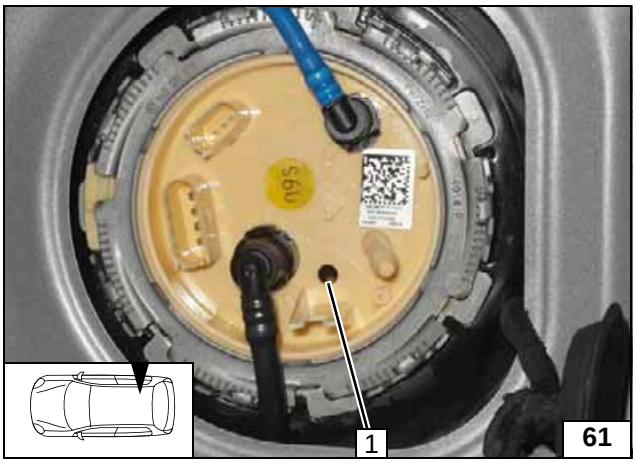


TDI front-wheel drive

Work steps F1 and F2.

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

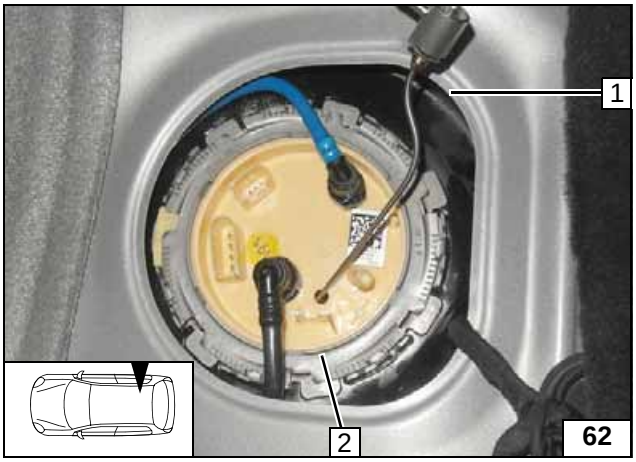
Copying hole pattern



Work step F3.

1 Hole made with provided drill

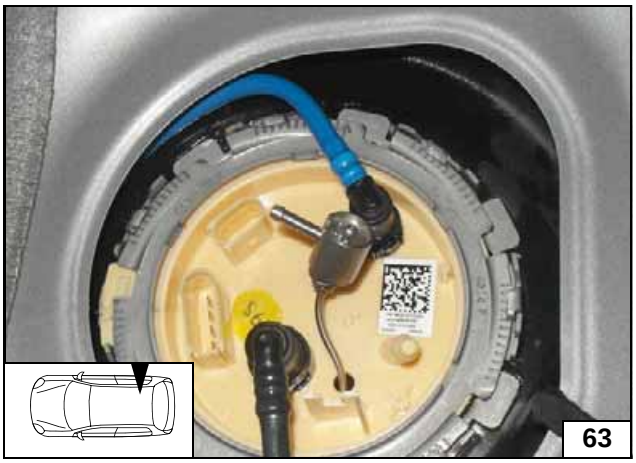
Hole for FuelFix



Work steps F4 and F5.

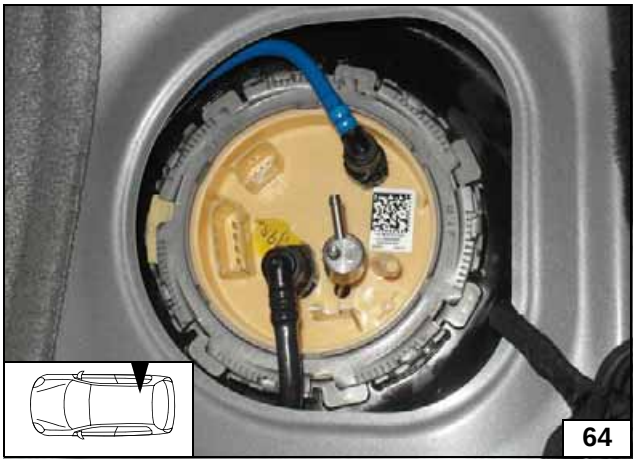
Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

Inserting FuelFix



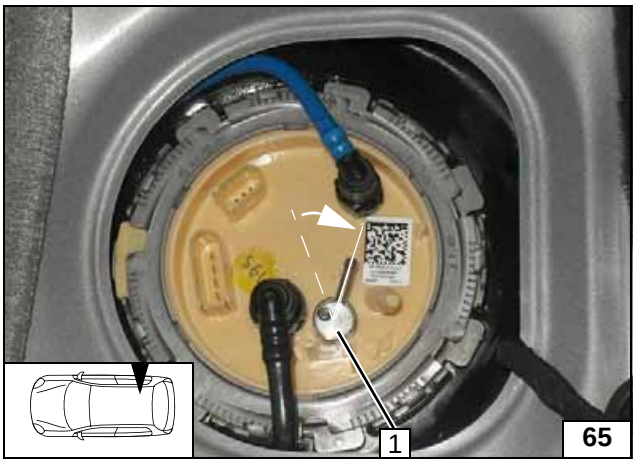
Work step F5.

Inserting FuelFix



Work step F5.

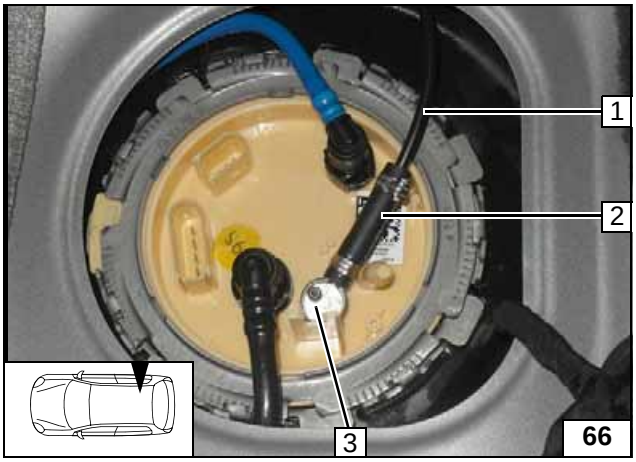
Inserting FuelFix



Work steps F5.3 and F5.4.

Position FuelFix **1** as shown.

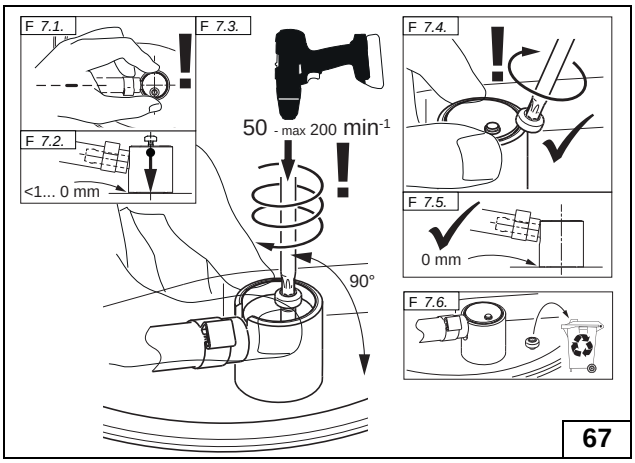
Aligning FuelFix



Work step F6.

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

Connecting fuel line

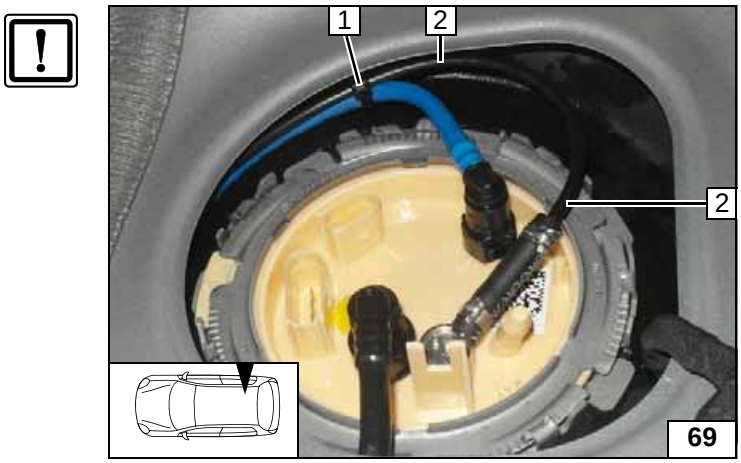


Work step F7.

Installing FuelFix

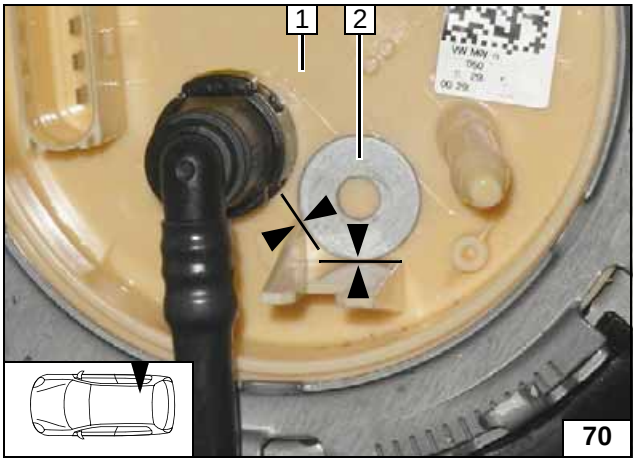
Work step F8.

Ensuring firm seating of FuelFix



1 Cable tie as tension relief
2 Fuel line of FuelFix

Securing fuel line

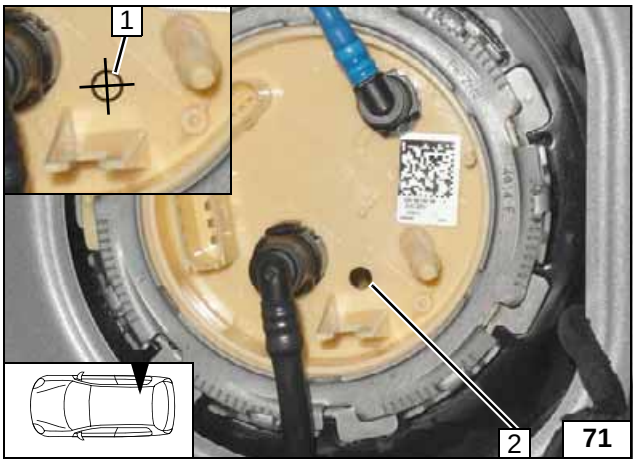


TDI 4x4

Work steps F1 and F2.

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

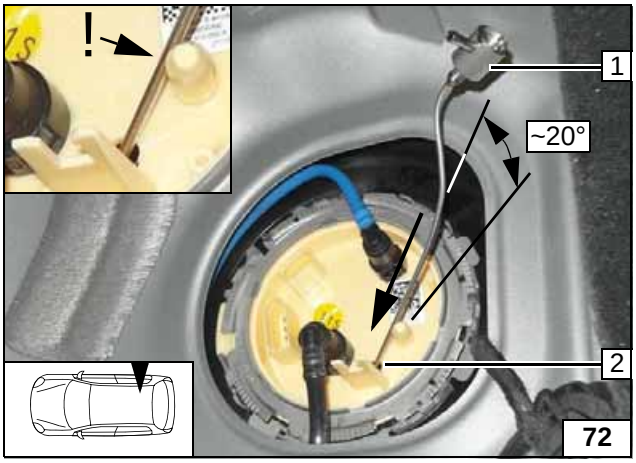
Copying hole pattern



Work step F3.

1 Hole pattern
2 Hole made with provided drill

Hole for FuelFix



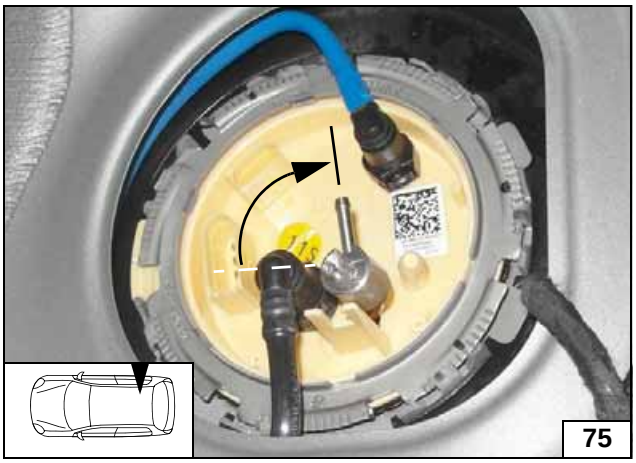
Work steps F4 and F5.

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

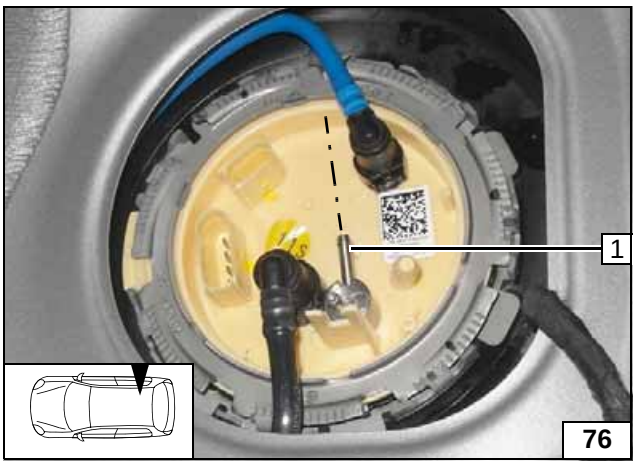
Inserting FuelFix

Inserting FuelFix

Inserting FuelFix



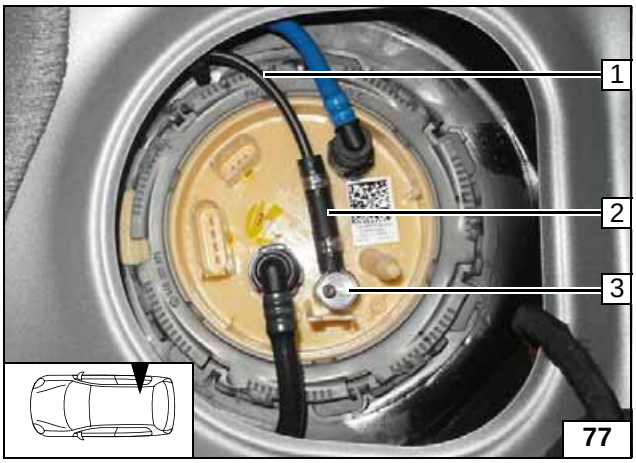
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

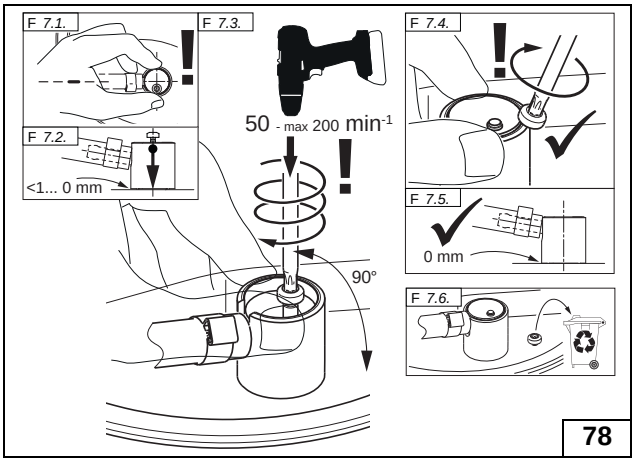
Aligning FuelFix



Work step F6.

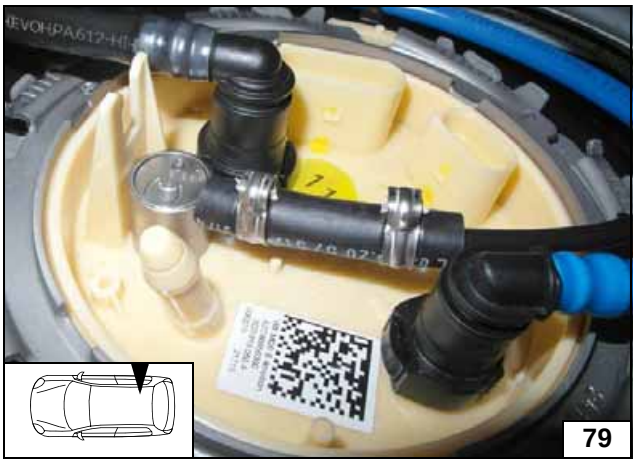
1 Fuel line
2 Hose section, 10 mm dia. clamp [2x]
3 FuelFix

Connecting fuel line



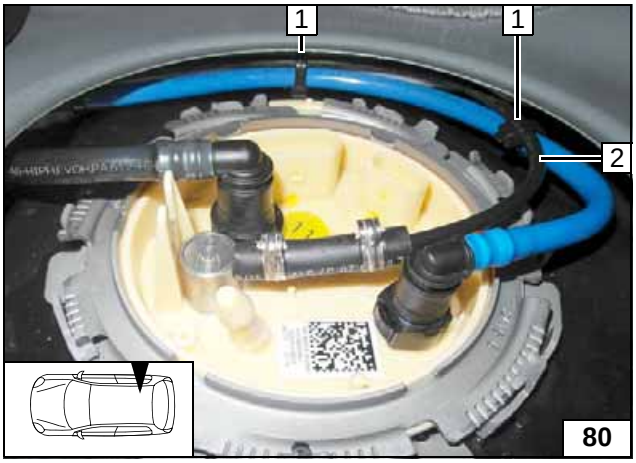
Work step F7.

Installing FuelFix



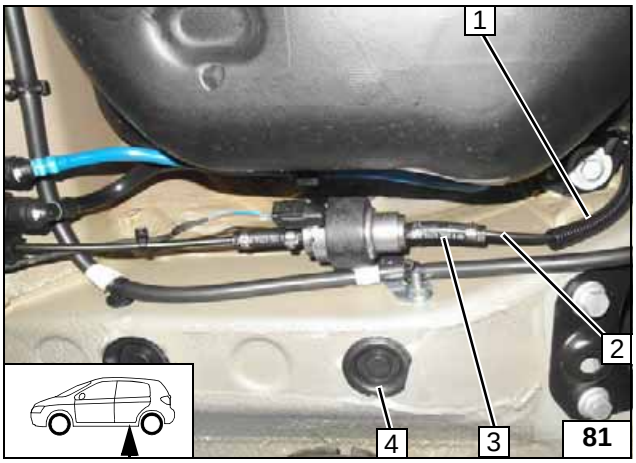
Work step F8.

Ensuring firm seating of FuelFix



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

Securing fuel line



All vehicles

Slide 10 mm 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, 10 mm dia. clamp [2x]
4 Cover cap inserted

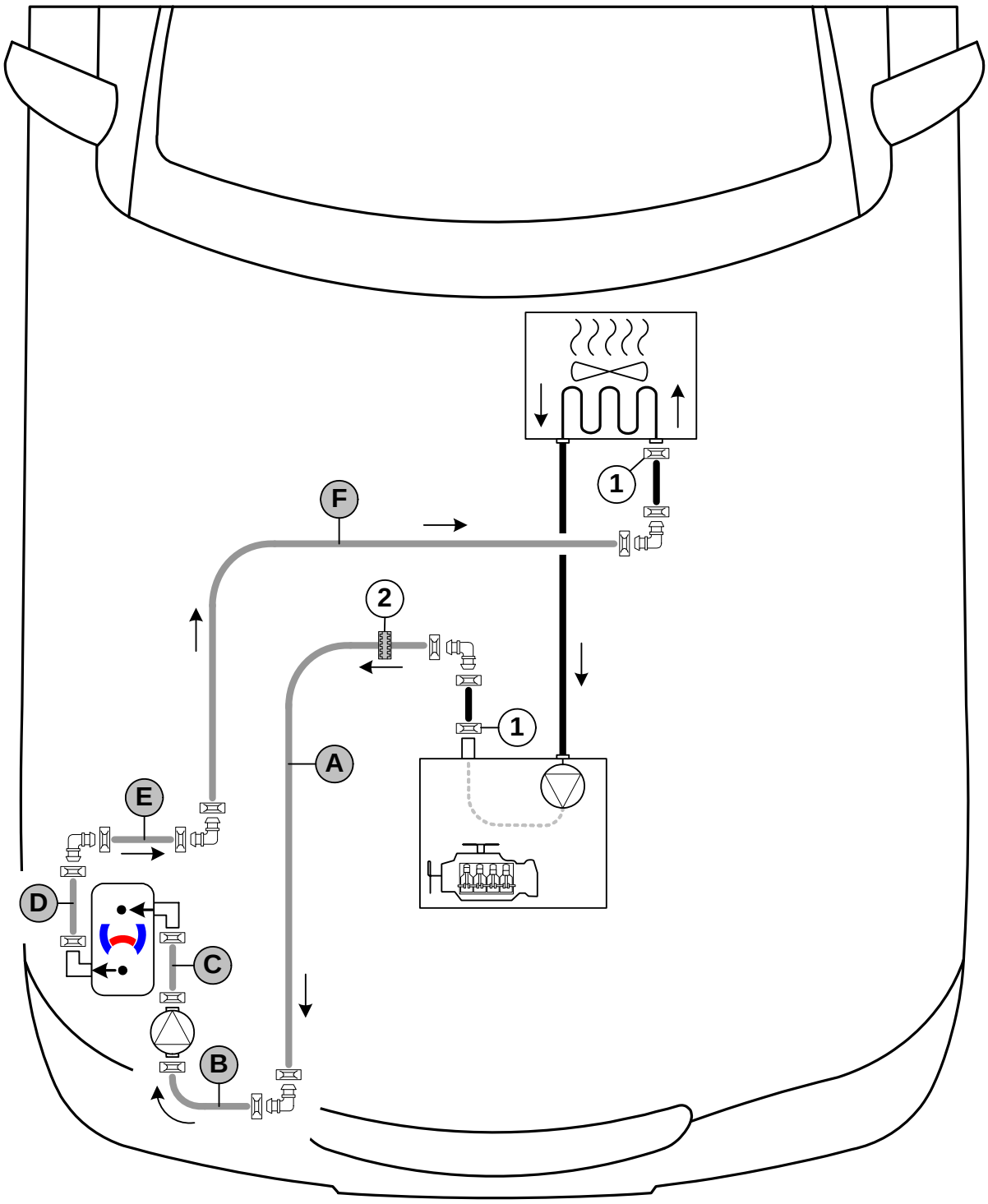
Connecting metering pump

Coolant Circuit for TSI

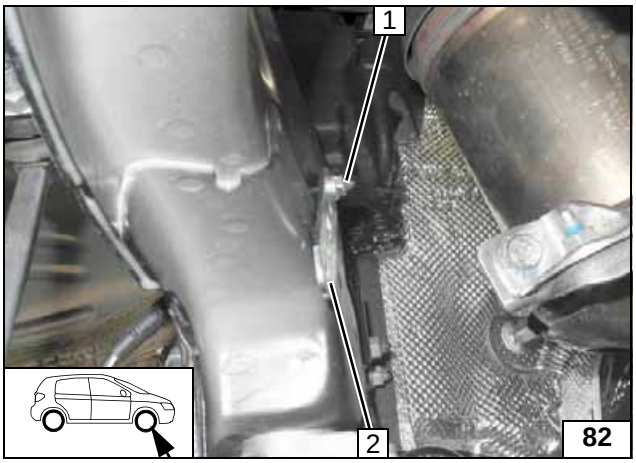
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram

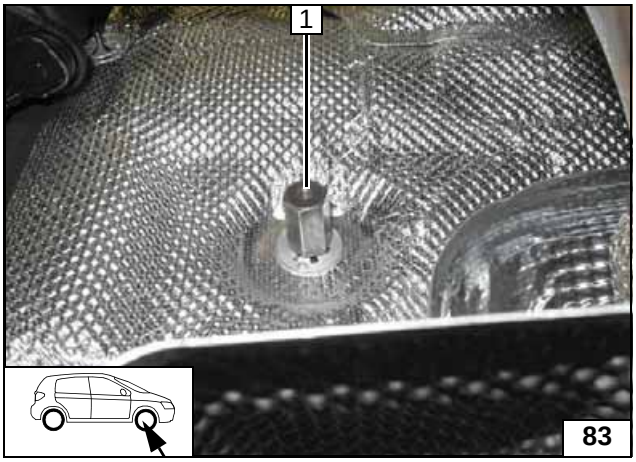


All spring clips without a specific designation = 25 mm dia. All connecting pipes and = 18x18mm dia.
1 = Original vehicle spring clip .
2 = Black (sw) rubber isolator .



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

Installing perforated bracket

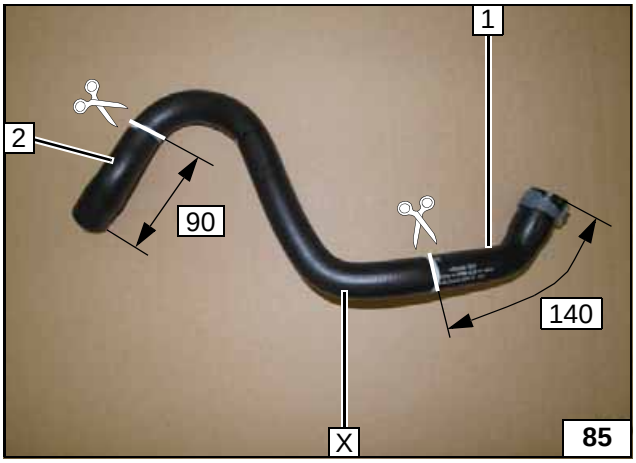


1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut

Remove hose on engine outlet / heat exchanger inlet **1**. Spring clips will be re-used.

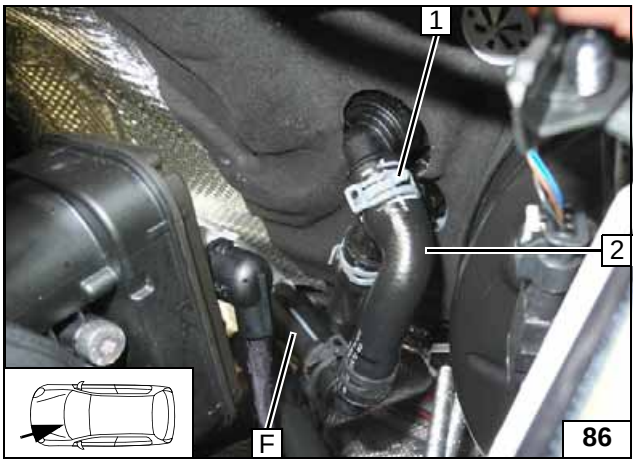
Cutting point



1 Engine outlet hose section
2 Heat exchanger inlet hose section

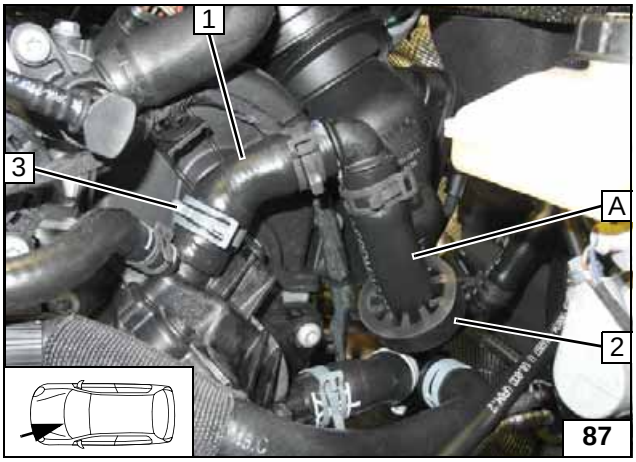
X =

Cutting point



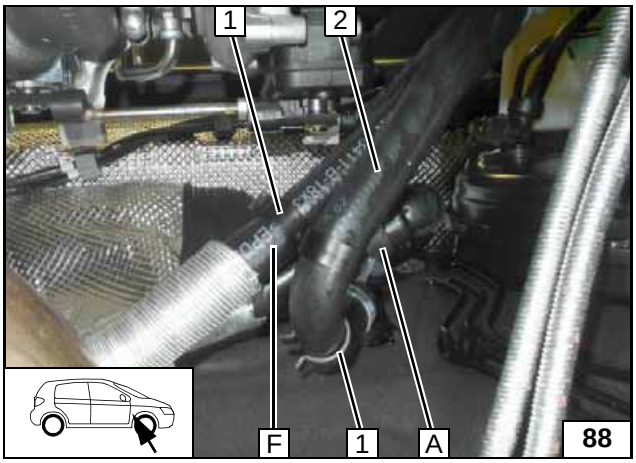
1 Original vehicle spring clip
2 Heat exchanger inlet hose section

Connecting heat exchanger inlet



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

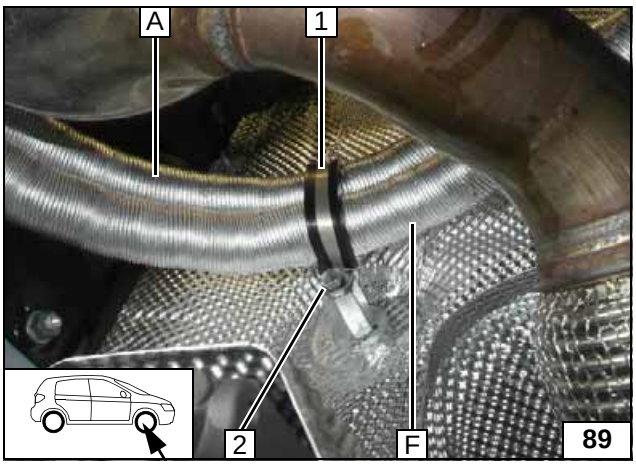
Connecting engine outlet



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

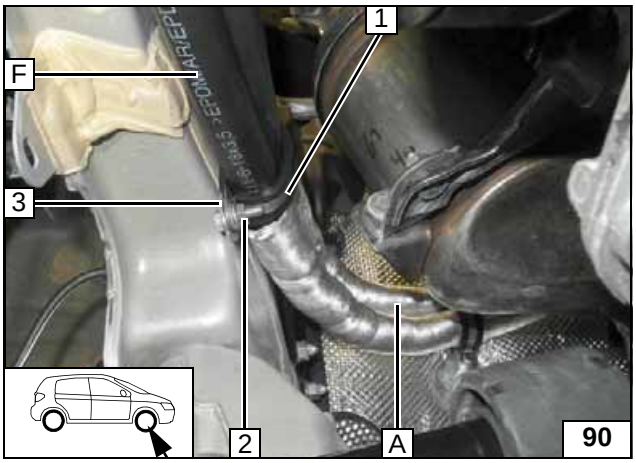
1 Spacer bracket, twistable [2x]
2 Hose on heat exchanger outlet

Routing on firewall



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

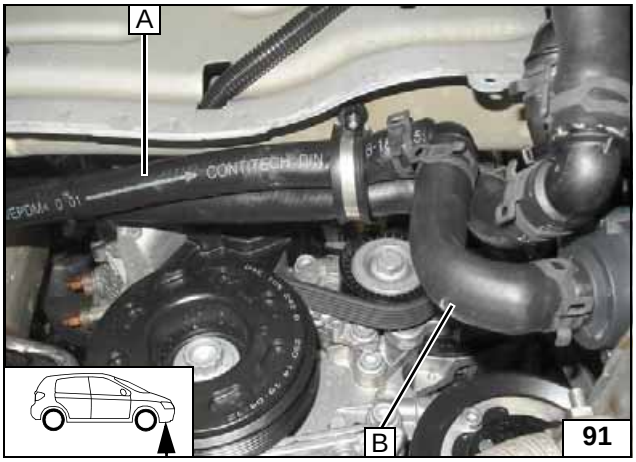
Fastening on firewall



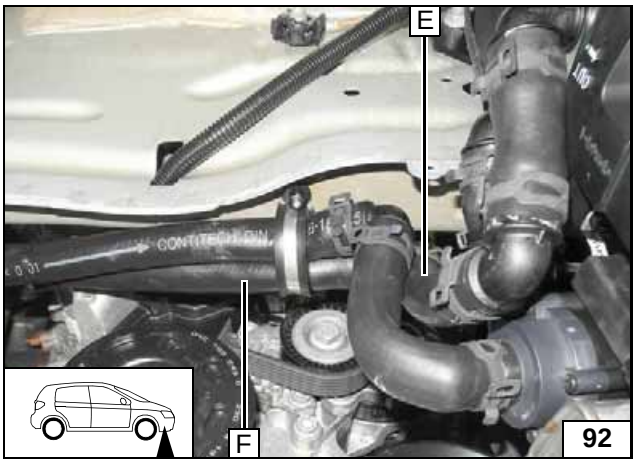
Align hoses. Ensure sufficient distance to catalytic converter, correct if necessary.

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

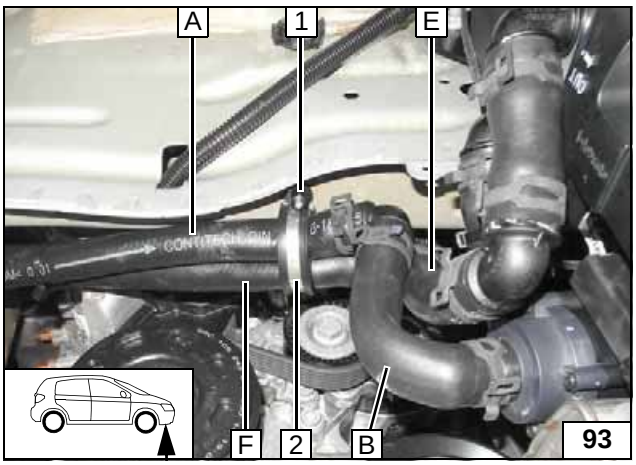
Routing on frame side member



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

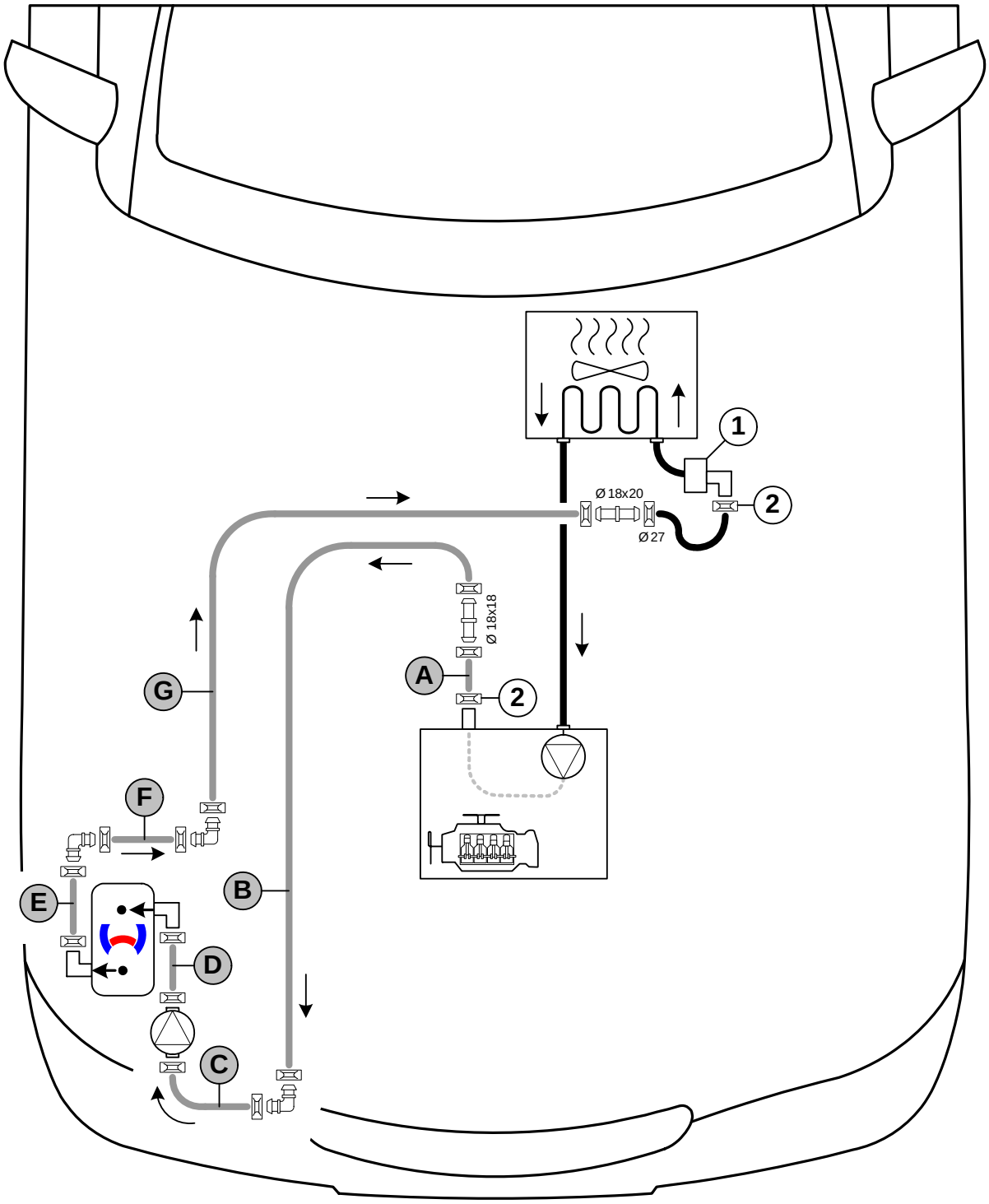
Aligning hoses

Coolant Circuit of 2.0 TDI Front-Wheel Drive

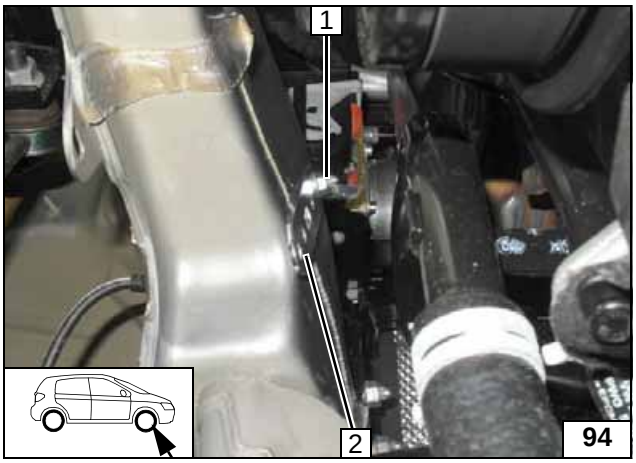
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram

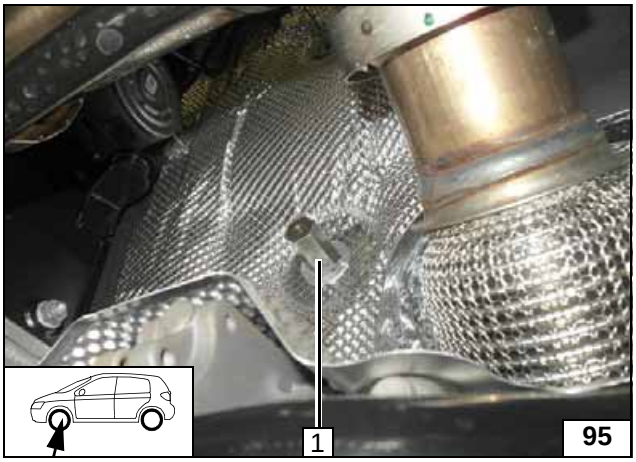


All spring clips without a specific designation = 25 mm dia. All connecting pipes = 18x18 mm dia.
1 = EGR.
2 = Original vehicle spring clip .



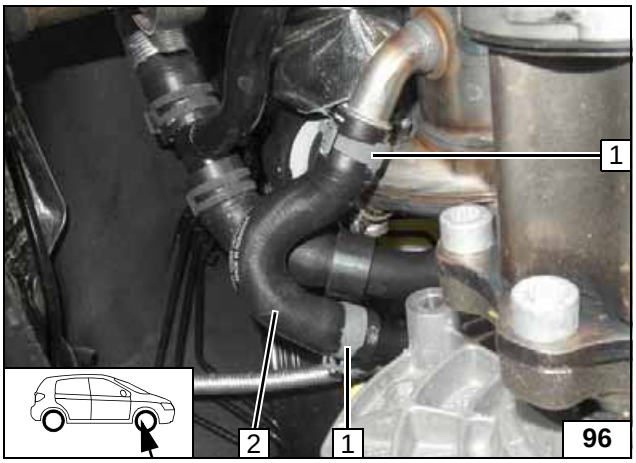
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



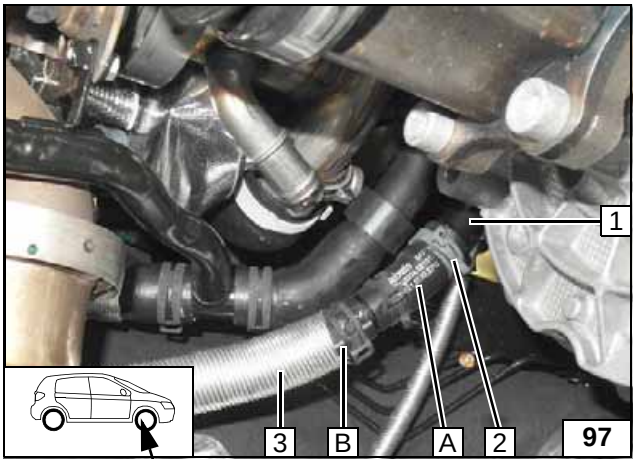
1 M6x30 spacer nut, original vehicle stud bolt

Installing spacer nut



Remove hose on engine outlet / EGR-inlet **2**. Spring clips **1** [2x] will be re-used.

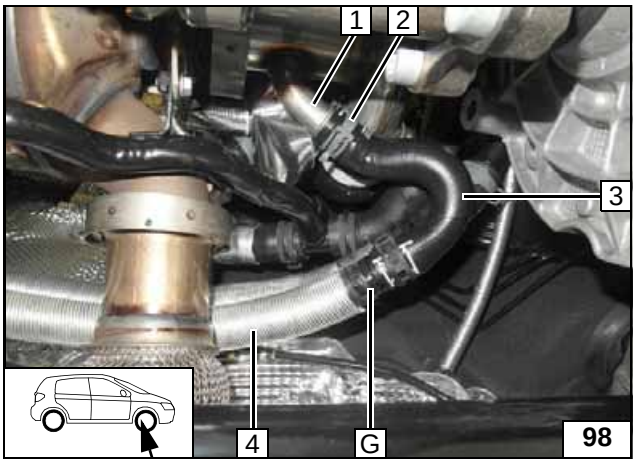
Cutting point



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

1 Pipe of engine outlet
2 Original vehicle spring clip

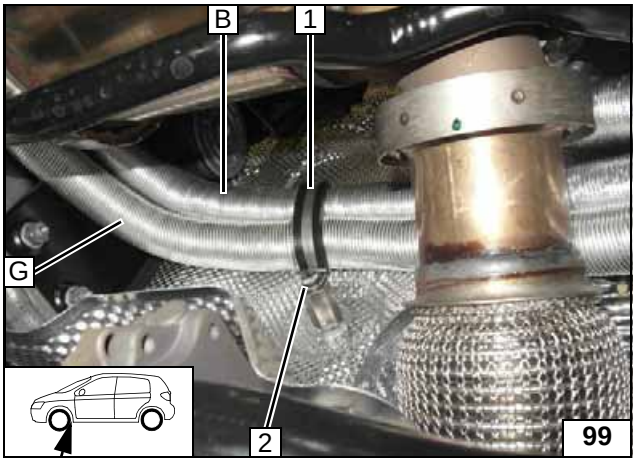
Connecting engine outlet



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

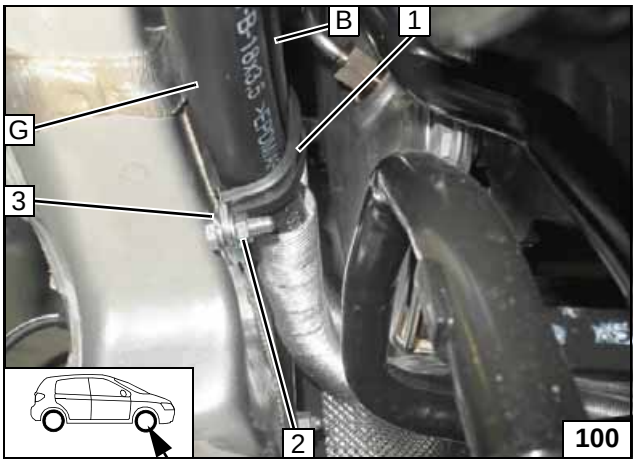
1 Pipe of EGR
2 Original vehicle spring clip
3 Original vehicle hose

Connecting heat exchanger inlet



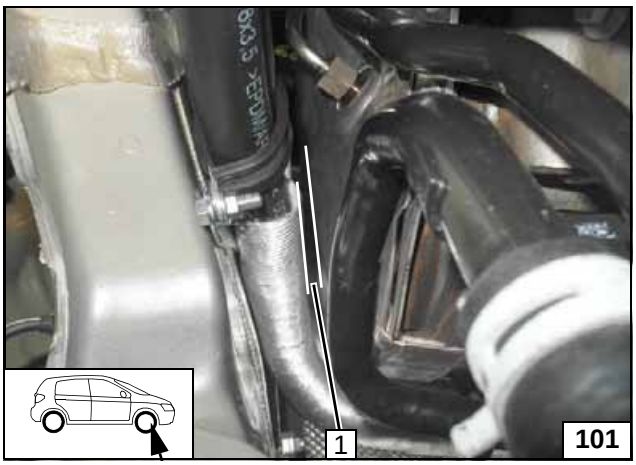
1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

Fastening on firewall



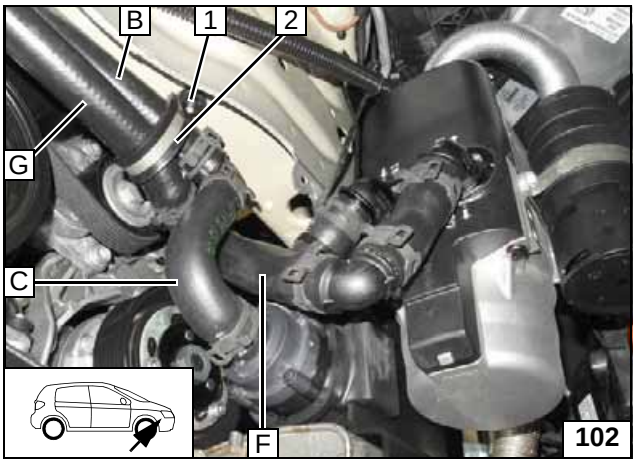
1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

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

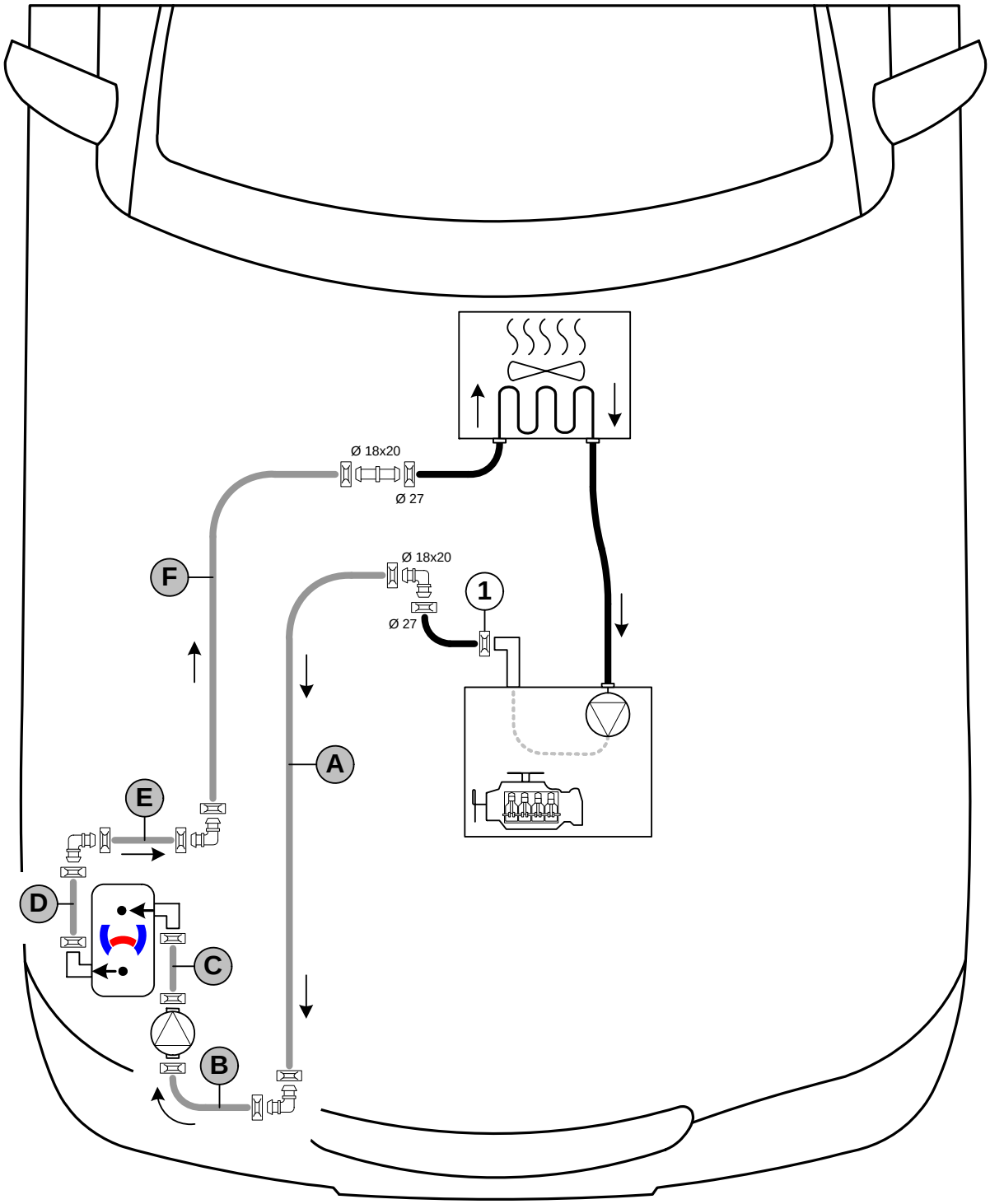
Connecting heater outlet and inlet

Coolant Circuit of 2.0 TDI 4x4 and 1.6 TDI

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.

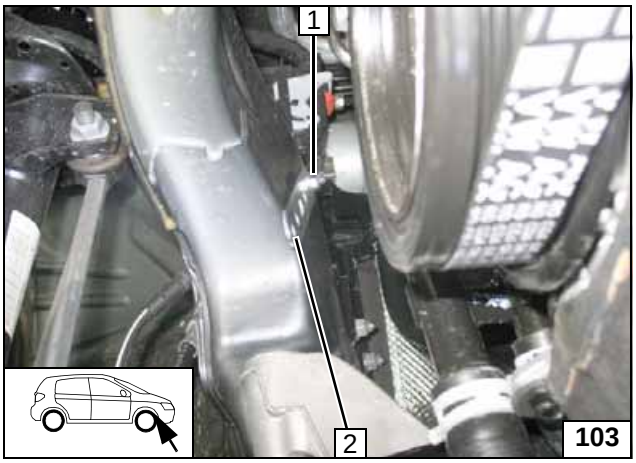
The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram



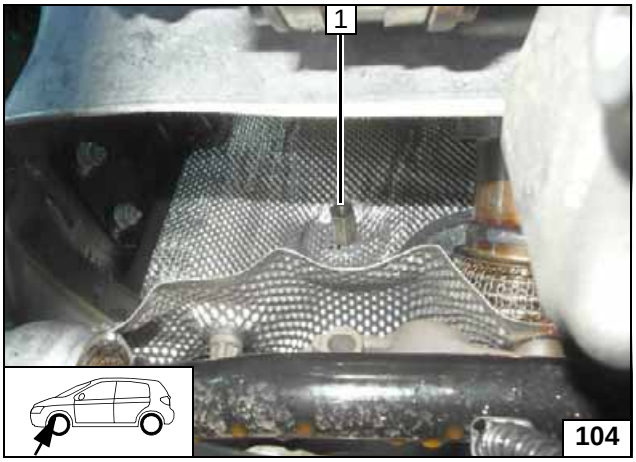
All spring clips without a specific designation = 25 mm dia.
All connecting pipes without a specific designation = 18x18 mm dia.

1 = Original vehicle spring clip .



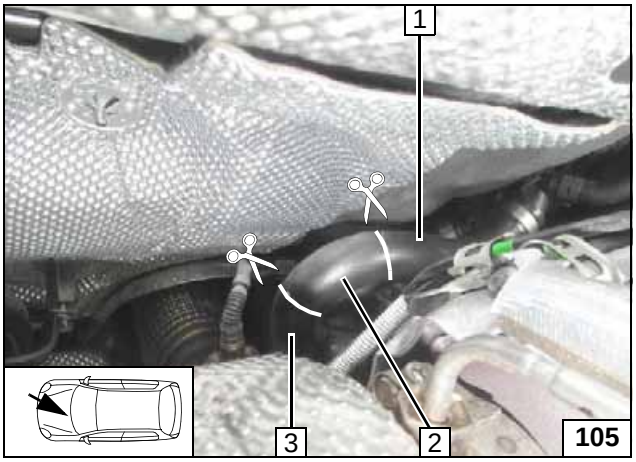
1 M6 flanged nut, original vehicle stud bolt
2 Perforated bracket

Installing perforated bracket



1 M6x30 spacer nut, original vehicle stud bolt

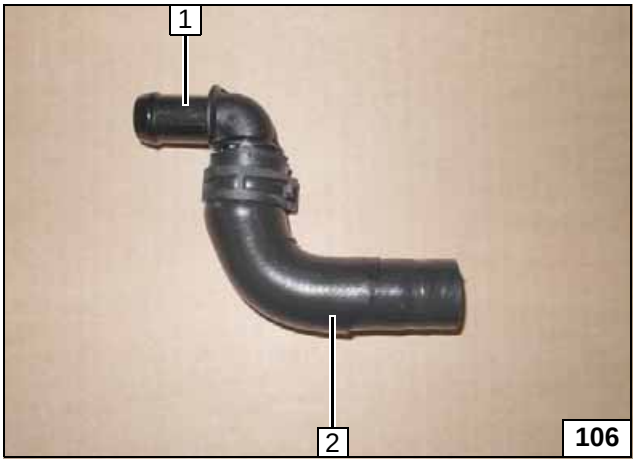
Installing spacer nut



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

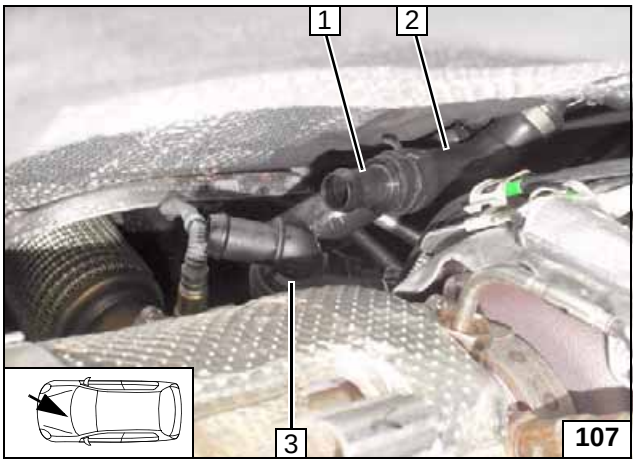
1 Heat exchanger inlet hose section
2 Section (90° elbow)

Cutting point



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

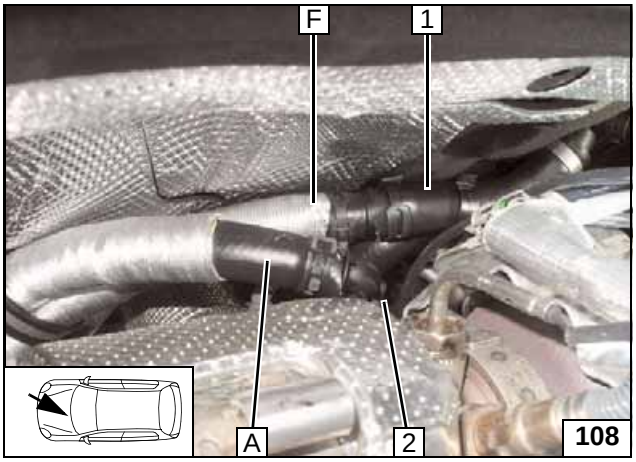
Preparing hose on engine outlet



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

1 18x20mm dia. connecting pipe, 27mm dia. spring clip
2 Hose on heat exchanger inlet

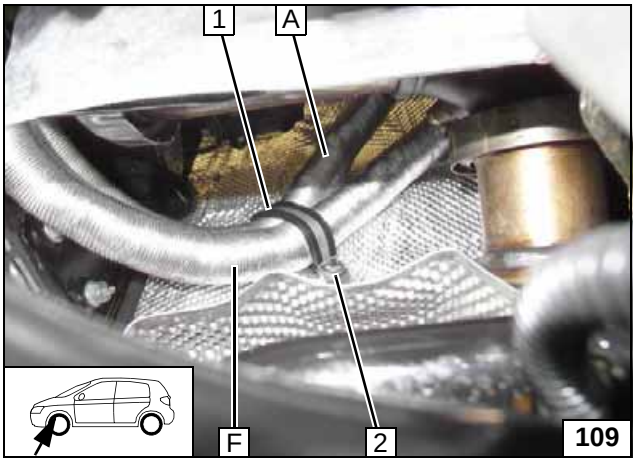
Installing hose on engine outlet



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

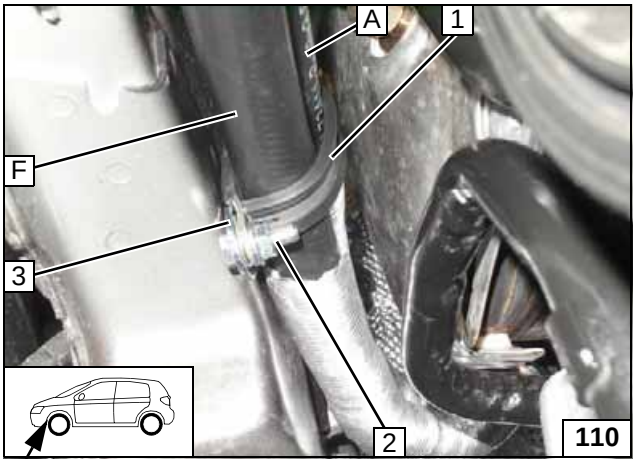
1 Hose on heat exchanger inlet
2 Original vehicle spring clip

Connecting engine outlet / heat exchanger inlet



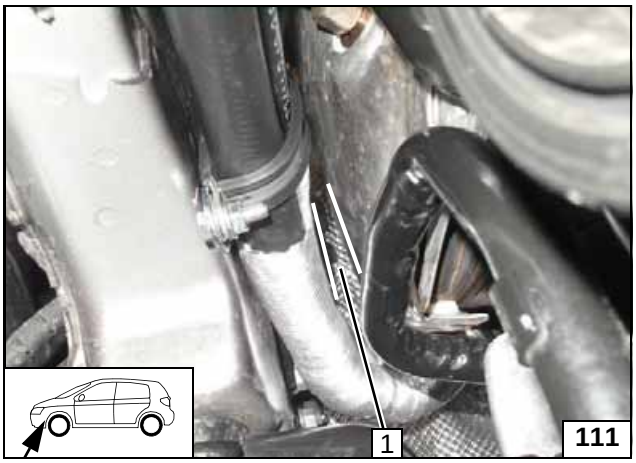
1 48 mm dia. rubber-coated p-clamp
2 M6x20 bolt, spring lockwasher

Fastening on firewall



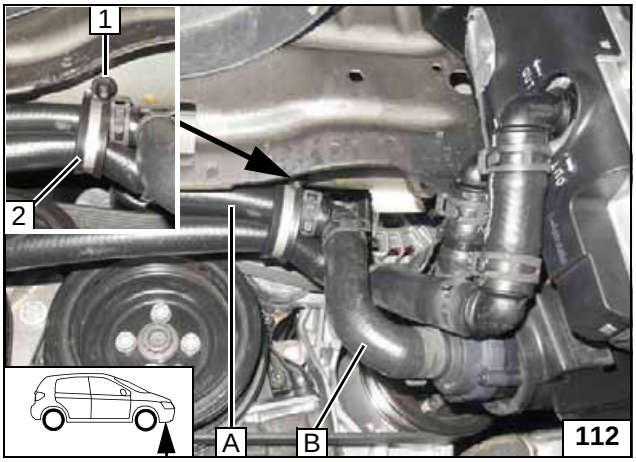
1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut
3 Perforated bracket

Routing on frame side member



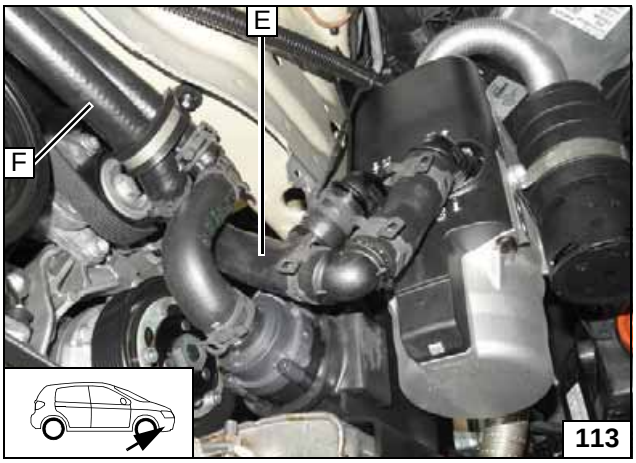
Align hoses. Ensure sufficient distance to catalytic converter at position **1**, correct if necessary.

Routing in engine compartment



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

Connecting heater inlet



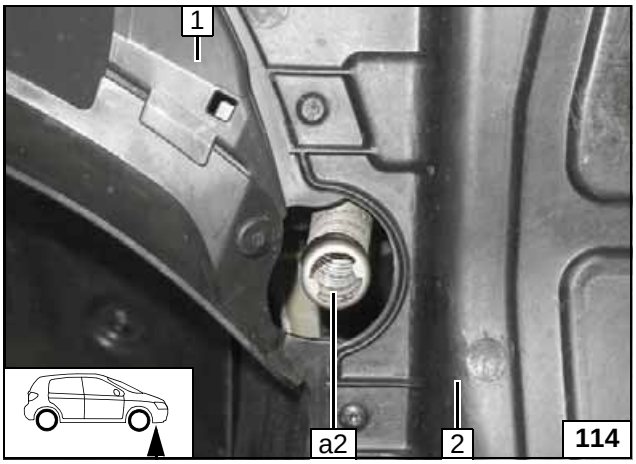
Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

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 all 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.

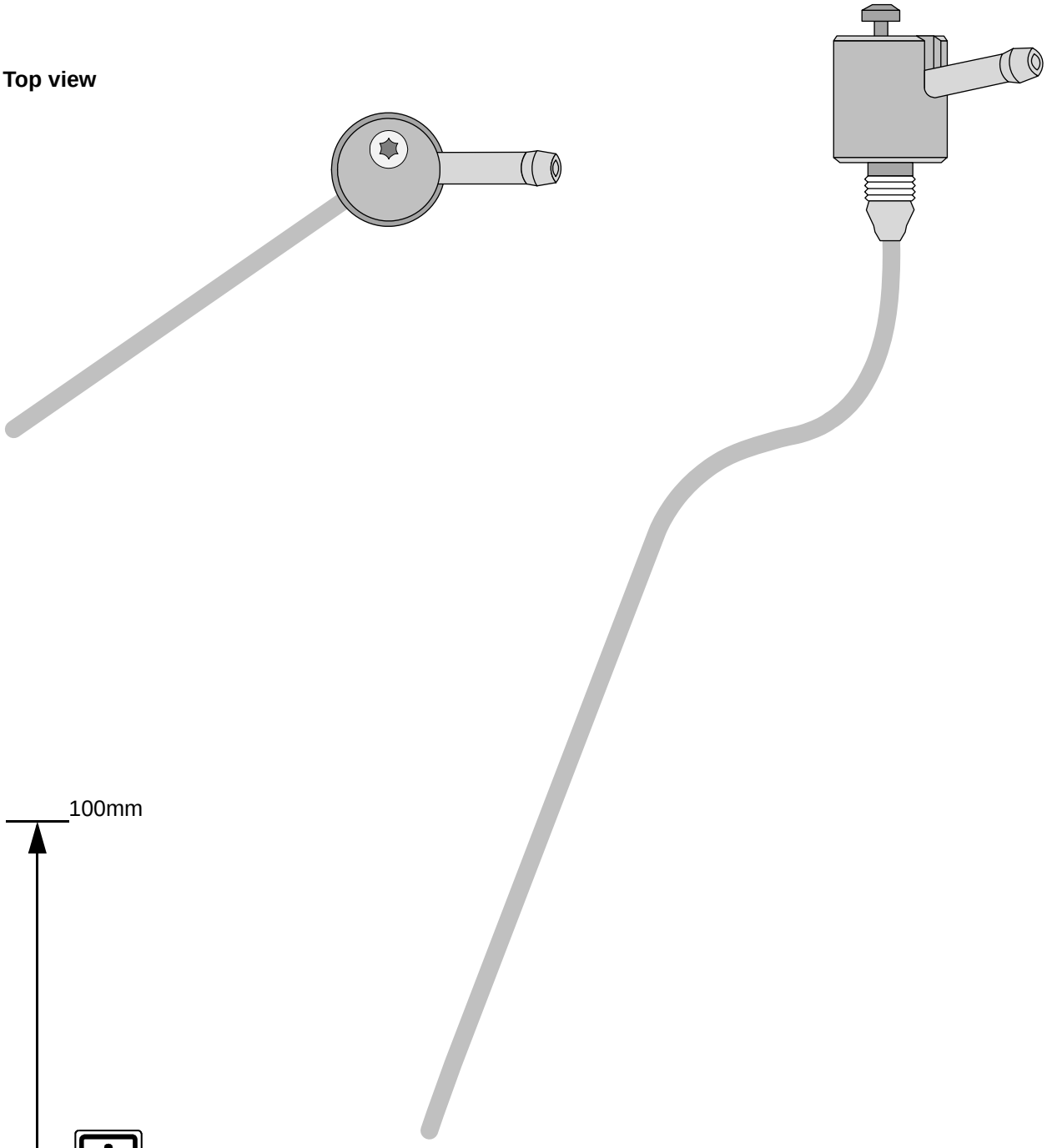
1 Wheel well trim mounted
2 Underride protection mounted

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 Petrol Vehicles

Top view



100mm

Scale 1:1

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

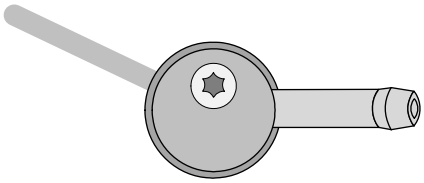
Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

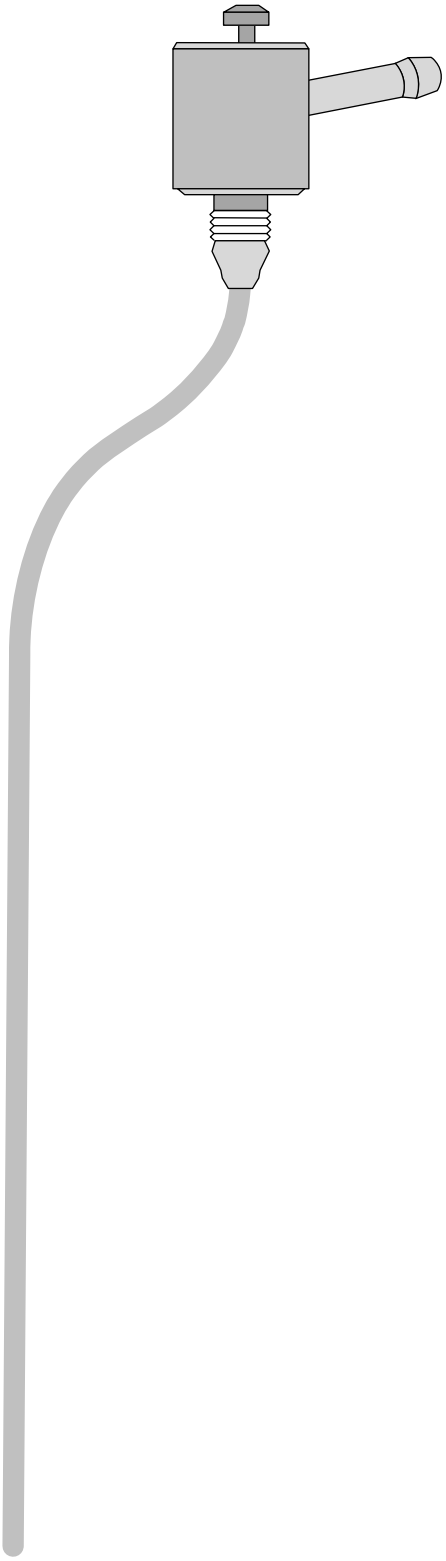
100mm

0

FuelFix Template for Front-Wheel Drive Diesel Vehicle

Top view





100mm

Scale 1:1

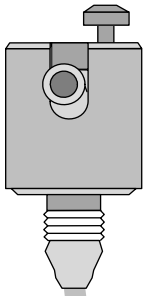
Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

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

100mm

0

FuelFix Template for 4x4 Diesel Vehicle



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

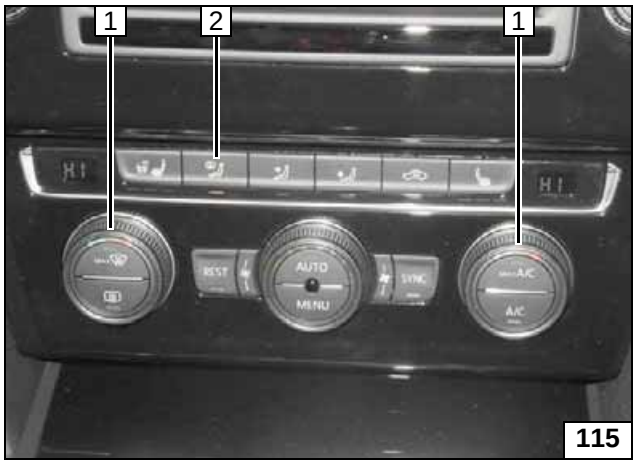
Operating Instructions for Automatic Air-Conditioning

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.

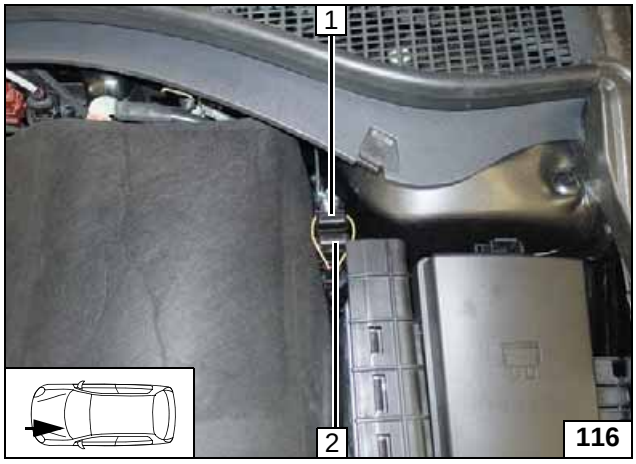
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

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 fuse of passenger compartment F2
2 20A heater fuse F1

Engine compartment fuses