

K Installation documentation

for Thermo Top Evo water heater

'Inline' coolant circuit with engine preheating

Skoda Scala

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE		
Skoda	Scala	AW	from 2018	e1* 2007/46* 0349*...		
Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm ³]	Engine code
1.0	Petrol	Euro 6d Temp	SG	85	999	DKRF
1.5	Petrol	Euro 6d Temp	DKG	110	1498	DADA

Validity	Equipment variants	Model
		Scala
Verified equipment variants	2 zone automatic air-conditioning	X
	Part of LED main headlights	X
	Halogen front fog lights	X
	Automatic Start-Stop system	X
	Keyless lock system 'Kessy'	X
	Start button	X
Unverified equipment variants	Manual air-conditioning	X
	LED main headlights entirely	X
	Headlight washer system	X
	Passenger compartment monitoring	X
	Alarm system	X

Total installation time	Note
8.9 hours	

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1 List of abbreviations

AAC	Automatic air-conditioning
ASH	Spacer bracket
DKG	Dual clutch transmission
DP	Fuel pump
FF	FuelFix (tank extracting device)
HG	Heater
SG	Manual transmission
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump
Veh.	Vehicle

2 Installation notes

2.1 Information on Validity

This installation documentation applies to vehicles listed on page 1, 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.

2.2 Components used

Designation	Order number
Basic delivery scope of TT-Evo, petrol	In accordance with price list
Installation kit for Skoda Scala 2019, petrol	1327492A
The following must also be ordered in case of automatic air conditioning (AAC): Additional 'Webasto Standard' A/C control kit for VW / Skoda / Seat or Additional 'Webasto Comfort' A/C control kit for VW / Audi / Skoda / Seat	1325085_ 1325012_
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list

2.3 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.

2.4 Installation recommendations

Arrange for the vehicle to be delivered with the tank only about $\frac{1}{4}$ full.

For the MultiControl CAR option, the recommended installation locations for the Telestart or ThermoCall push button 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.

3 About this document

3.1 Purpose of the document

This installation documentation is part of the product and contains all the information required to ensure professional vehicle specific installation of the:

Thermo Top Evo heater

3.2 Warranty and liability

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 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.

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 start-up 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.

3.2.1 Statutory regulations governing installation

The Thermo Top Evo heater has been type-tested and approved in accordance with ECE-R 10 (EMC) and ECE-R 122 (heater). 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.

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

3.3 Safety

Qualifications of installation personnel

The installation personnel must have the following qualifications:

- Successful completion of Webasto training
- Corresponding qualification for working on technical systems

Regulations and legal requirements

The regulations from the heater's general installation and operating instructions must be observed.

3.3.1 Safety information on installation

Danger posed by live parts

- ▶ Prior to installation, disconnect the vehicle from the voltage supply.
- ▶ Make sure the electrical system is earthed correctly.
- ▶ Always comply with legal requirements.
- ▶ Observe data on type label.

Danger of fire and leaking toxic gases due to improper installation

- ▶ Vehicle parts in the vicinity of the heater must be protected against excessive heating by the following measures:
 - ⇒ Maintain minimum safety distances.
 - ⇒ Ensure adequate ventilation.
 - ⇒ Use fire-resistant materials or heat shields.

Danger due to sharp edges

- Lacerations
- Short circuit due to electrical wire damage
- ▶ Fit protectors on sharp edges.

3.4 Using this document

Before installing and operating the heater, read this installation documentation, the installation instructions of the heater, the operating instructions and supplementary sheets provided.

3.4.1 Explanatory Notes on the Document

There is an identification mark near the respective work step to allow you to quickly allocate the other applicable documents to the Webasto components to be installed:

Generally valid Webasto documentation	
Vehicle-specific installation documentation	
Vehicle-specific installation documentation of the cold start kit	
Webasto Comfort A/C control	
Webasto Standard A/C control	
Tank extracting device (e.g. FuelFix)	
Exhaust end fastener (EFIX)	
Combustion air intake silencer	
Spacer bracket (ASH)	

3.4.2 Use of symbols



DANGER

Type and source of the risk

Consequences: Failure to follow the instructions can result in death

► Actions to protect yourself against risks.



WARNING

Type and source of the risk

Consequences: Failure to follow the instructions can lead to serious or even fatal injuries

► Actions to protect yourself against risks.



CAUTION

Type and source of the risk

Consequences: Failure to follow the instructions can lead to minor injuries

► Actions to protect yourself against risks.



Type and source of the risk

Consequences: Failure to follow the instructions can lead to material damage

► Actions to protect yourself against risks.



Reference to the vehicle manufacturer's specific documents.



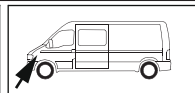
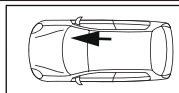
Note on a special technical feature

3.4.3 Work step identification marks

The ongoing work step is indicated on the outside top corner of the page:

Mechanical system	Electrical system	High-voltage	Coolant
Combustion air	Fuel	Exhaust	Software

3.4.4 Orientation aid



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

3.4.5 Use of highlighting

Highlight	Explanation
►	Necessary action
⇒	Result of an action
1 / 12 / a1	Position numbers for the image descriptions
① / ⑫ / Ⓐ	Position numbers for the image descriptions for electrical wires and coolant hose sections

4 Technical Information

Dimension specifications

- All dimensions specified in mm
- Perforated brackets and mounting angles are shown to scale
- Observe data regarding scale on the templates

Tightening torque specifications

- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm
- Tightening torque values of 5x15 retaining plate of water connection piece bolts = 7Nm
- 5x12 bolt tightening torque of 2-part heater bracket = 6Nm
- Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology

Temperature specification for heat shrink plastic tubings

- Fabric heat shrink tubing: shrink temperature max. 230°C
- Standard heat shrink plastic tubing: shrink temperature max. 300°C

Necessary special tools

- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Hose clamping pliers
- Hose cutter
- Automatic wire stripper 0.2 - 6 mm²
- Crimping pliers for cable lugs 0.5 – 10 mm²
- Crimping pliers for male connector 0.14 – 6 mm²
- Crimping pliers for connector 0.25 – 6 mm²
- Torque wrench for 2.0 - 10 Nm
- Deep-hole marker
- Metric thread-setter kit
- Webasto Thermo Test Diagnosis with current software

5 Preparations

5.1 Vehicle preparation



Further information can be found in the vehicle manufacturer's technical documentation.

Vehicle area	Components to be removed	Other applicable documents
General	<ul style="list-style-type: none"> ▶ Open the fuel tank cap ▶ Ventilate the fuel tank ▶ Close the fuel tank cap again ▶ Depressurise the cooling system 	
Engine compartment and body	<ul style="list-style-type: none"> ▶ Front wheel on the front passenger's side ▶ Front wheel well trim on the front passenger's side ▶ Engine design cover (if available) ▶ Battery ▶ Complete air filter box ▶ Windscreen wiper (only in case of SG) ▶ Water drain chamber cover (only in case of SG) ▶ Windscreen wiper motor (only in case of SG) ▶ Drain and store the engine coolant 	
Passenger compartment	<ul style="list-style-type: none"> ▶ Side instrument panel trim on the driver's side ▶ In case of Telestart option, footwell trim, lower instrument panel trim and A-pillar trim on the driver's side ▶ A/C control panel ▶ Rear bench seat ▶ Tank fitting service lid on the front passenger's side 	

5.2 Heater preparation

Engine compartment	<ul style="list-style-type: none"> ▶ Remove years that do not apply from the type and duplicate label ▶ Attach the duplicate label (type label) in the appropriate place in the engine compartment 	
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6 Installation overview

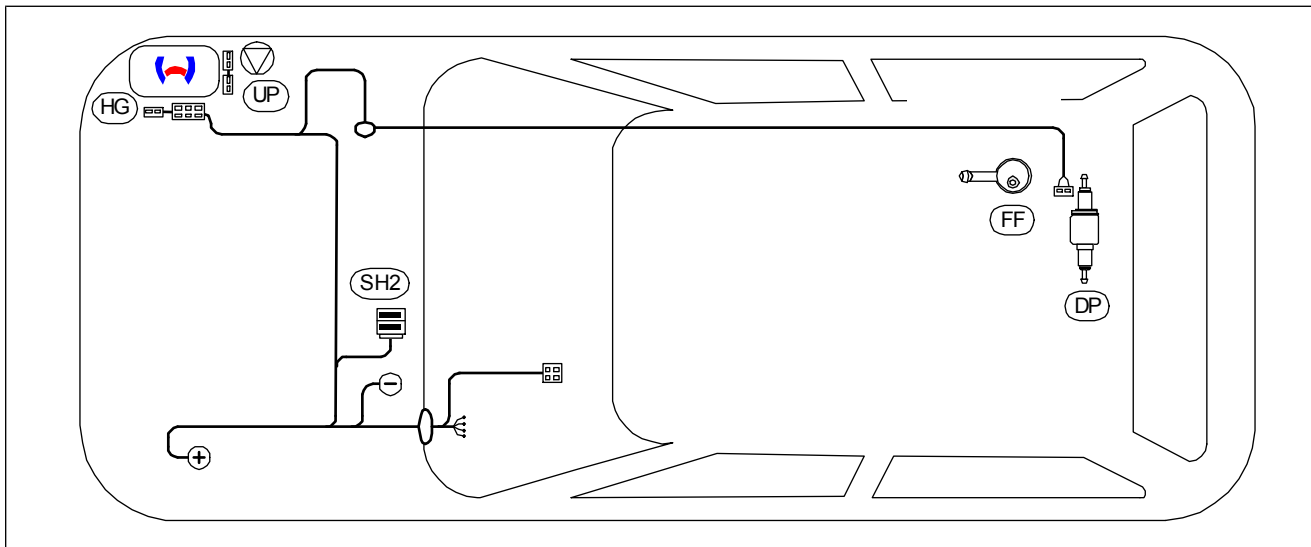
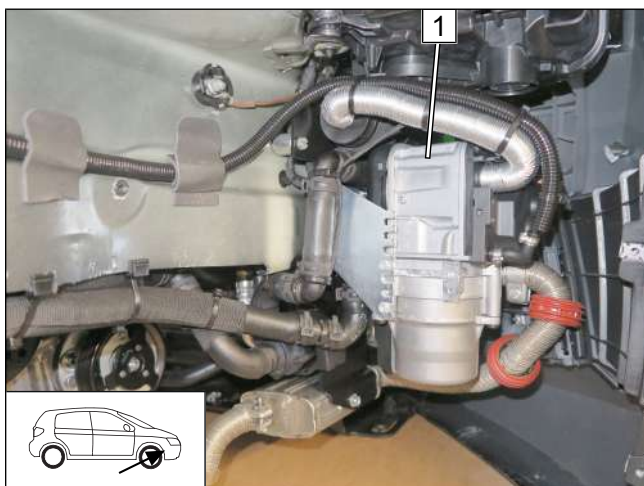


Fig. 1

Legend to installation overview

Abbreviation	Component
DP	Fuel pump
FF	FuelFix
HG	Heater
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump

Heater installation location



1 Heater

Fig. 2



7 Electrical system of engine compartment

Pre-assembling engine compartment fuses

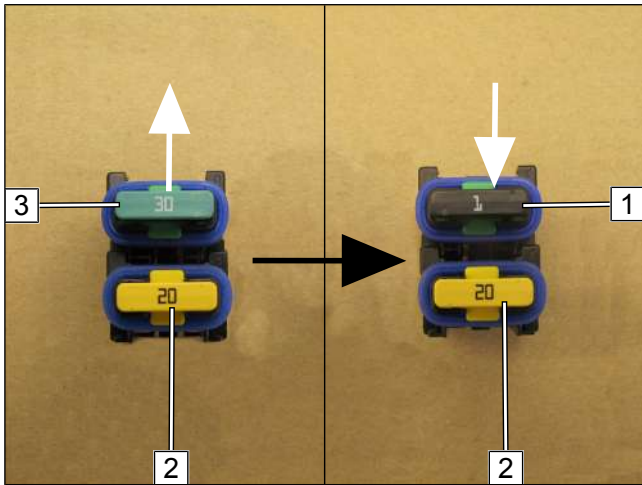


Fig. 3



Automatic air-conditioning only

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

2 Fuse F1: 20A

Premounting fuse holder

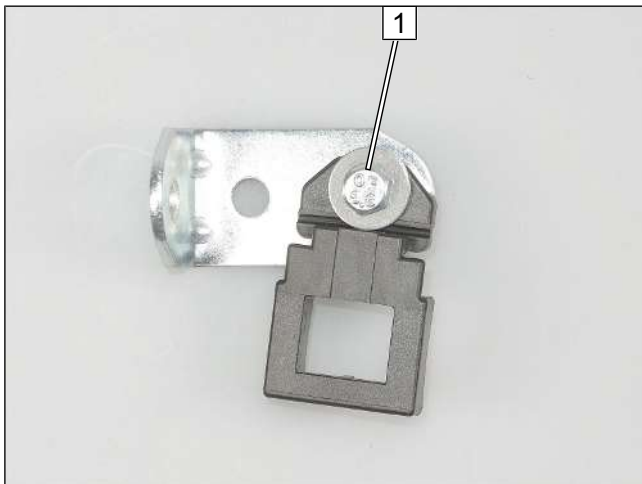


Fig. 4



all vehicles

- 1** M5x16 bolt, large diameter washer, retaining plate of SH2, angle bracket, large diameter washer, nut

Mounting angle bracket

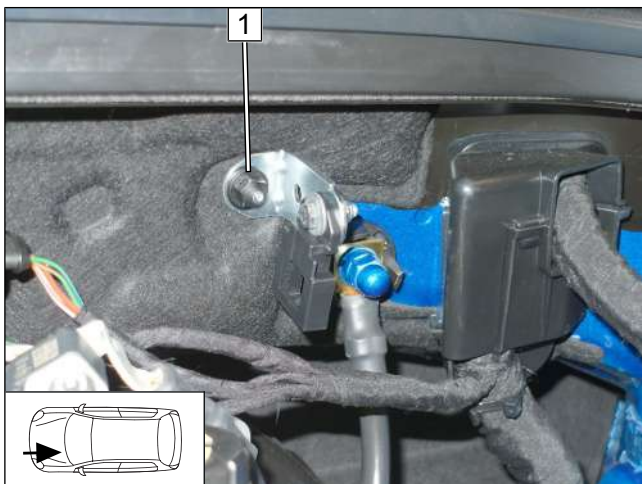


Fig. 5

- 1** Original vehicle stud bolt, premounted angle bracket, plastic nut



Mounting fuses F1 and F2

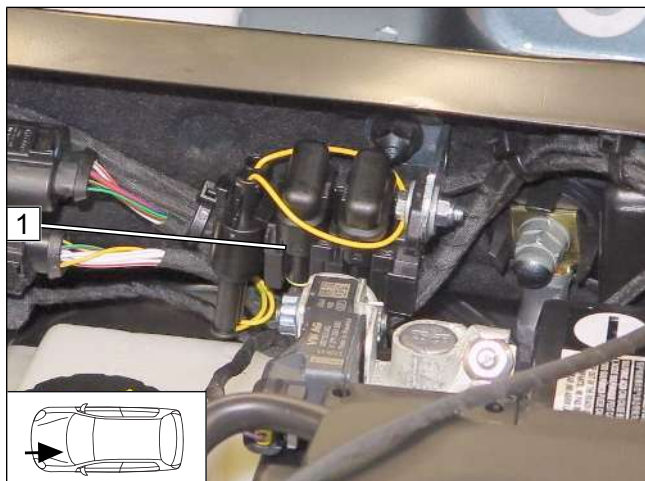


Fig. 6

- 1 Fuse F1/F2

Earth wire connection

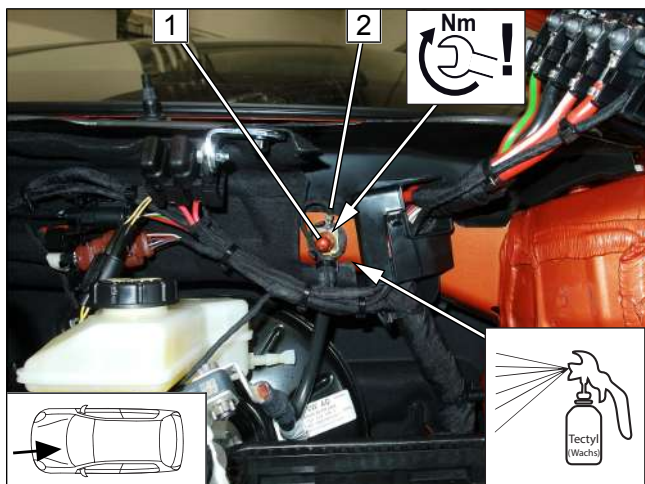


Fig. 7



DANGER

Fire hazard due to insufficient tightening torque

- Observe tightening torque

- 1 Original vehicle earth point
- 2 Earth wire

Positive wire connection

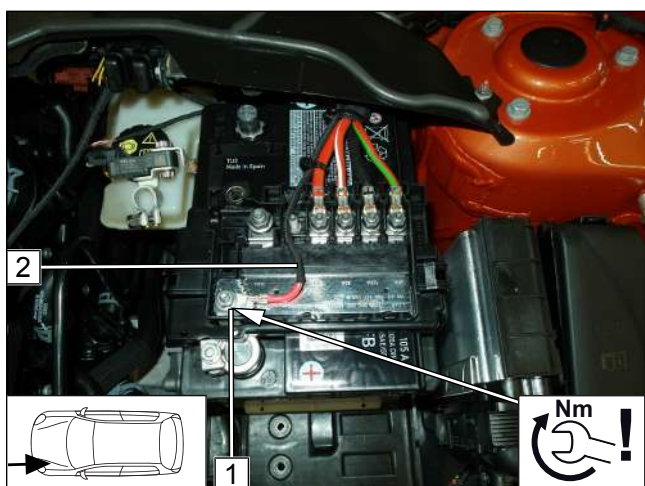


Fig. 8



DANGER

Fire hazard due to insufficient tightening torque

- Observe tightening torque

- 1 Original vehicle positive point
- 2 Positive wire



Passenger compartment wiring harness pass through

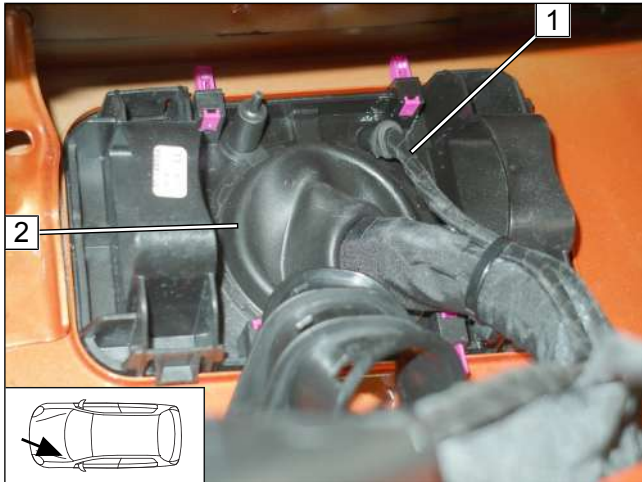


Fig. 9

- 1 Passenger compartment and control element wiring harnesses
- 2 Protective rubber plug

Routing heater wiring harness

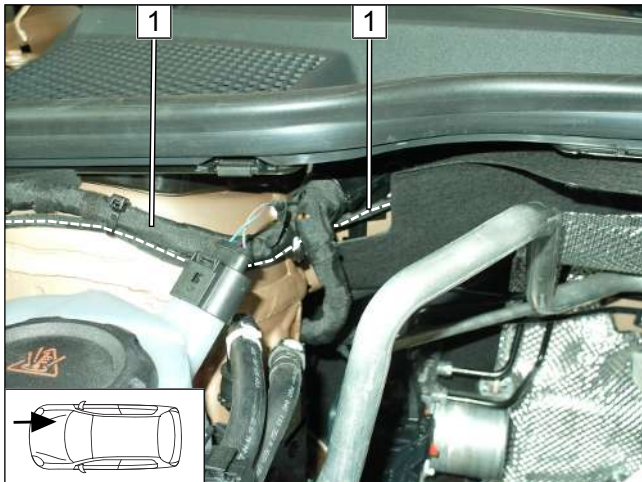



Fig. 10

 **Variant 1:** Veh. with insulation mat

- Route wiring harness **1** on the firewall behind the insulation mat, along the original vehicle wiring harness as shown and secure using cable ties.

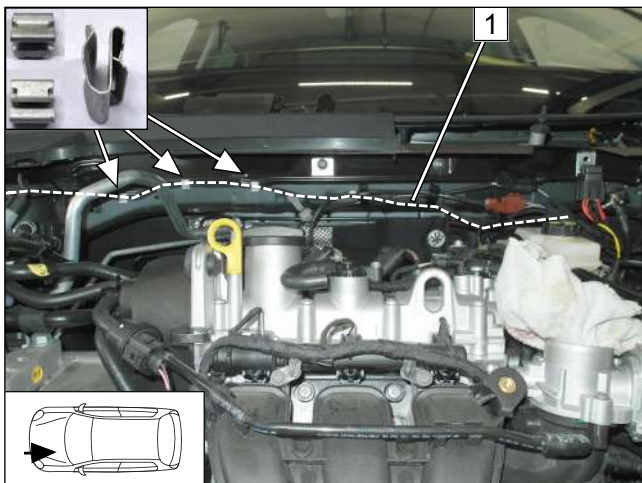

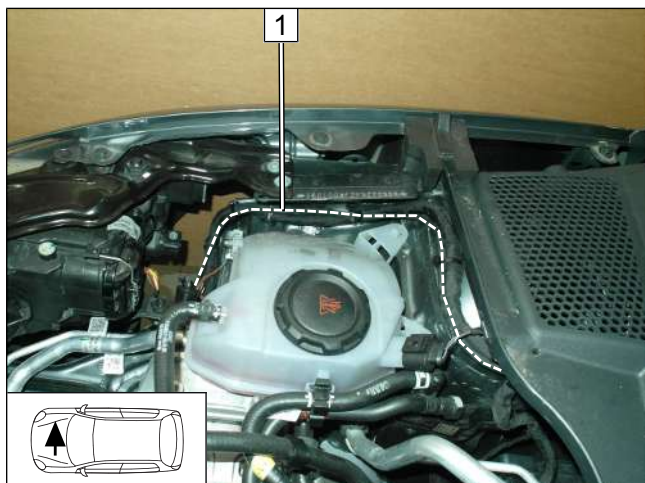


Fig. 11

 **Version 2:** Veh. without insulation mat

- Route wiring harness **1** on the firewall, along the original vehicle wiring harness as shown, fasten with clips [3x] and secure using cable ties.



all vehicles

- ▶ Route wiring harness **1** on the wing, along the original vehicle wiring harness as shown and secure using cable ties.

Fig. 12



8 Mechanical system

8.1 Installation location preparation

Removing original vehicle bolt

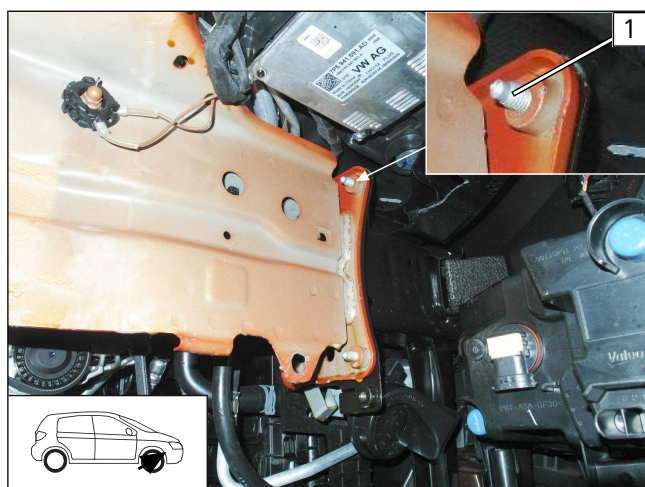


Fig. 13

- 1 Remove and discard original vehicle M8 bolt

Fixing original vehicle wiring harness, bending horn bracket and removing blind rivet

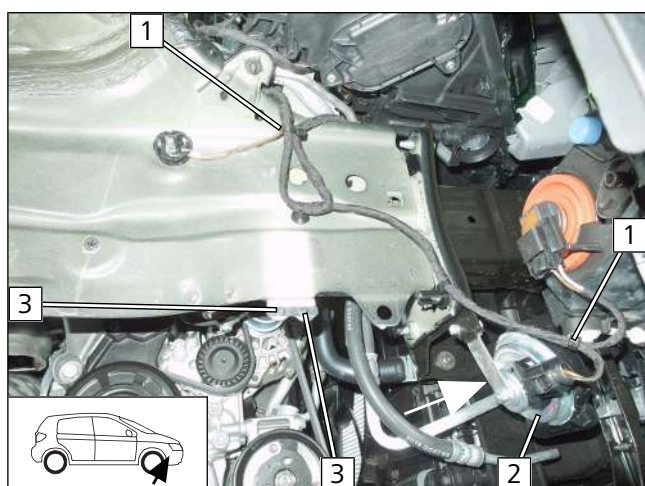


Fig. 14

- Fix original vehicle wiring harness at positions 1 using cable ties.
- Bend horn with bracket 2 in the direction of the arrow as shown.
- Remove blind rivets at position 3.

Mounting bolt

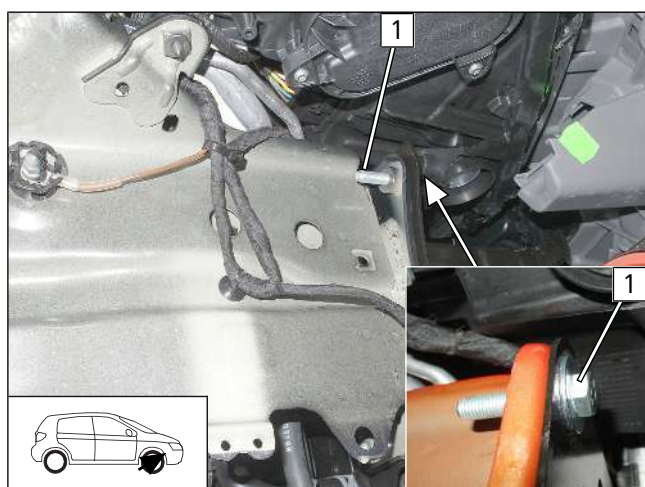


Fig. 15

- 1 M8x40 bolt, spring lockwasher, large diameter washer, original vehicle thread



Adapting body

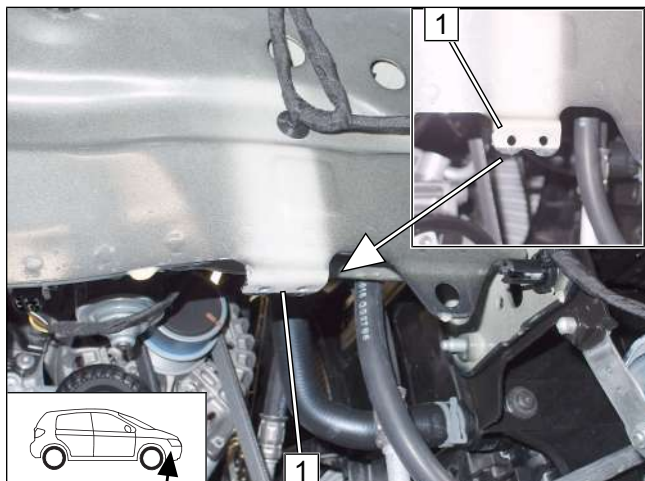


Fig. 16

► Bend tab on frame side member **1** by 90° inward.

Mounting basic holder

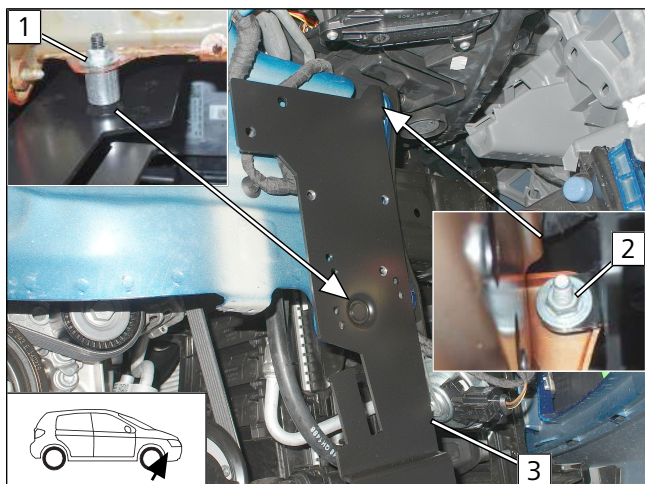


Fig. 17

- 1** Basic holder stud bolt, spacer (20), original vehicle hole, large diameter washer, M8 flanged nut
- 2** Pre-mounted M8x40 bolt, basic holder, large diameter washer, M8 flanged nut
- 3** Basic holder

Copy hole pattern

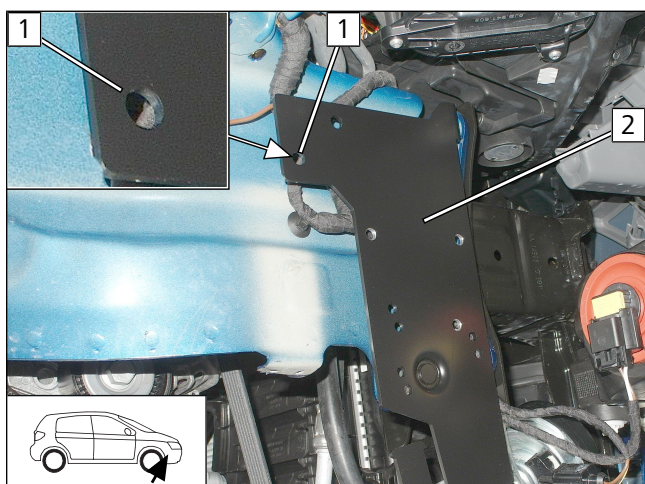


Fig. 18

- Copy hole pattern **1**.
- Remove basic holder of heater **2**.



Drilling hole, inserting rivet nut

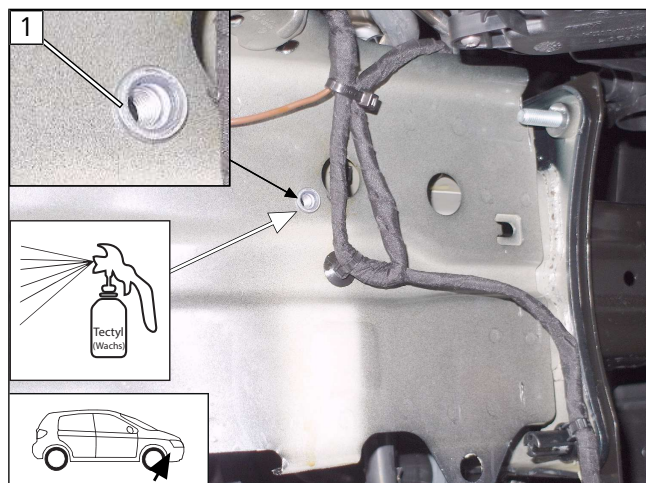


Fig. 19

1 Ø9 hole, M6 rivet nut

8.2 Premounting bracket

Copy hole pattern

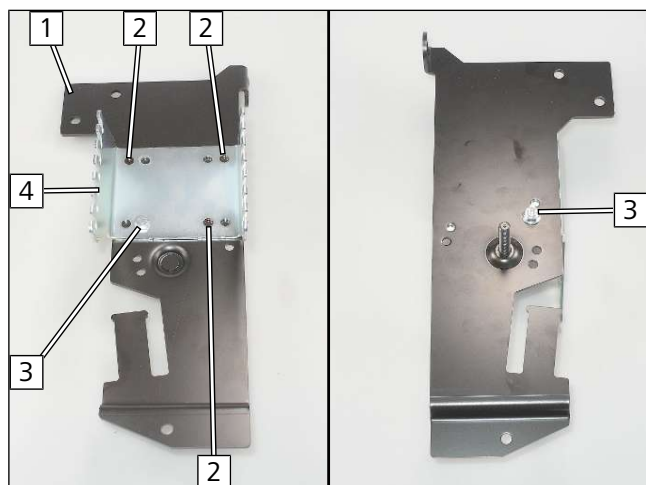


Fig. 20

- ▶ Mount heater bracket **4** on basic holder **1** loosely using a M6x16 bolt and flanged nut at available hole **3**.
- ▶ Align heater bracket parallel to basic holder.
- ▶ Copy hole pattern **2** and remove heater bracket again.

Drilling holes

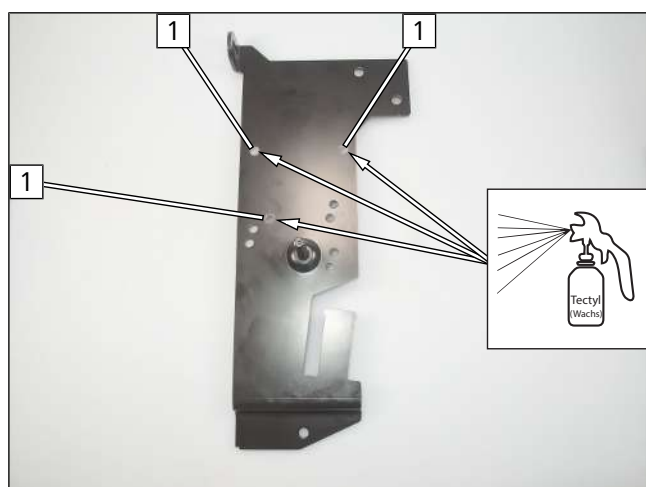


Fig. 21

1 Ø7 hole



Mounting bracket

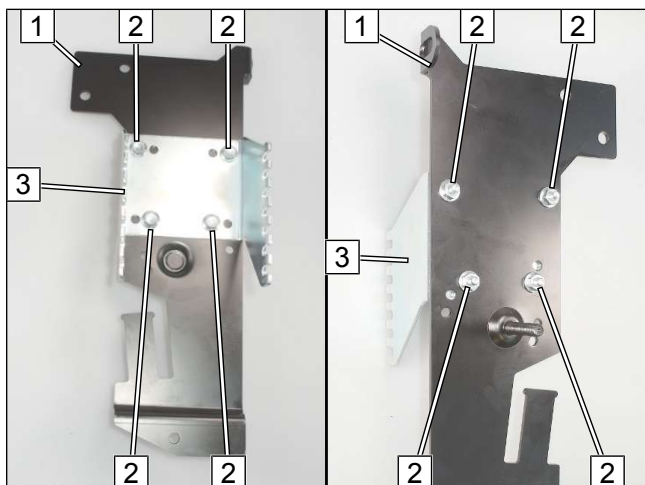


Fig. 22

► Align basic holder **1** parallel to heater bracket **3** before fixing.

- 2** M6x16 bolt, heater bracket, basic holder, flanged nut

Preparing edge clip cable tie

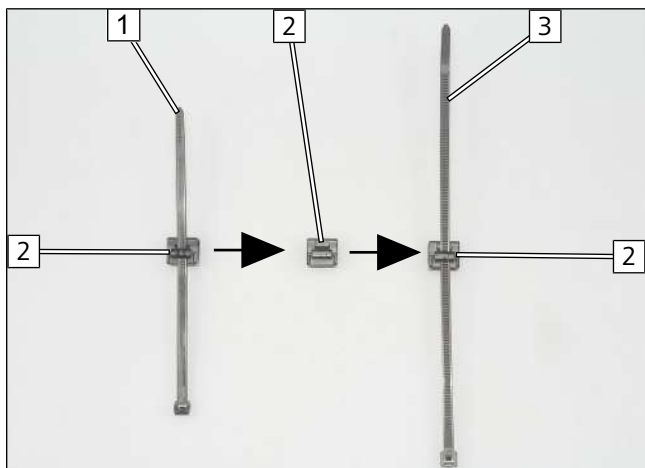


Fig. 23

- 1** Remove original cable tie
- 2** Clip
- 3** Reinstall cable tie

Mounting edge clip cable tie

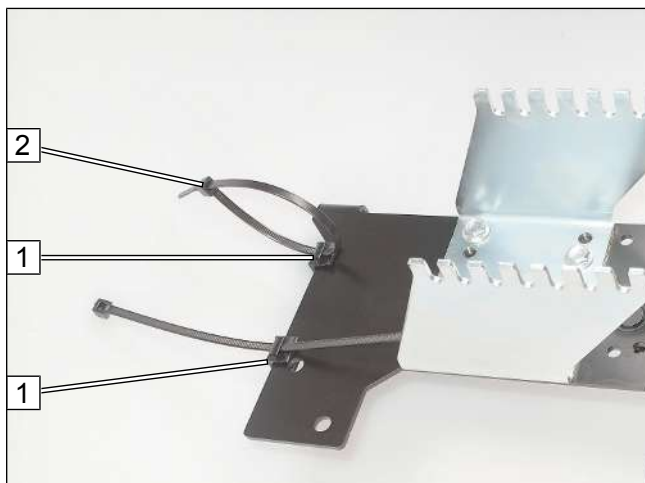
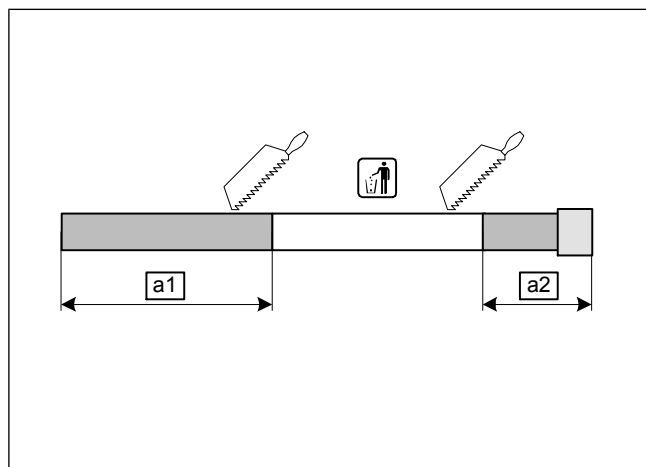


Fig. 24

- 1** Edge clip cable tie
- 2** Premount cable tie as shown



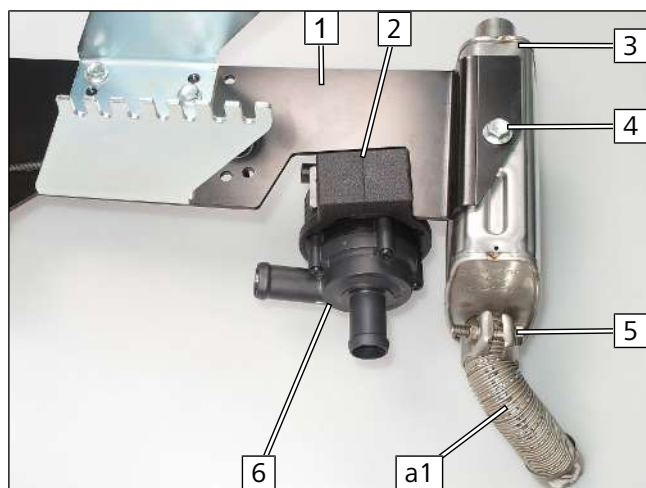
Cutting exhaust pipe to length



a1	400
a2	100

Fig. 25

Mounting exhaust silencer and coolant pump

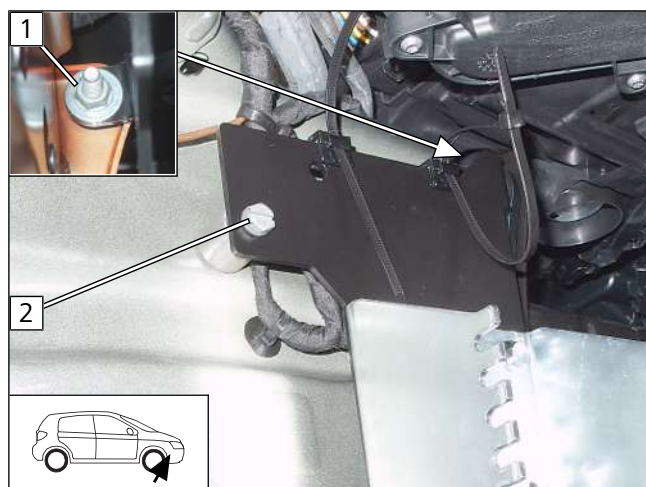


- 1 Basic holder
- 2 Coolant pump mount
- 3 Exhaust silencer
- 4 M6x16 bolt, basic holder, exhaust silencer
- 5 Hose clamp
- 6 Coolant pump

Fig. 26

8.3 Mounting bracket

Mounting heater bracket



- 1 Mounted M8x40 bolt, basic holder, large diameter washer, M8 flanged nut
- 2 M6x50 bolt, spring lock washer, large diameter washer, bracket, spacer (20), rivet nut

Fig. 27

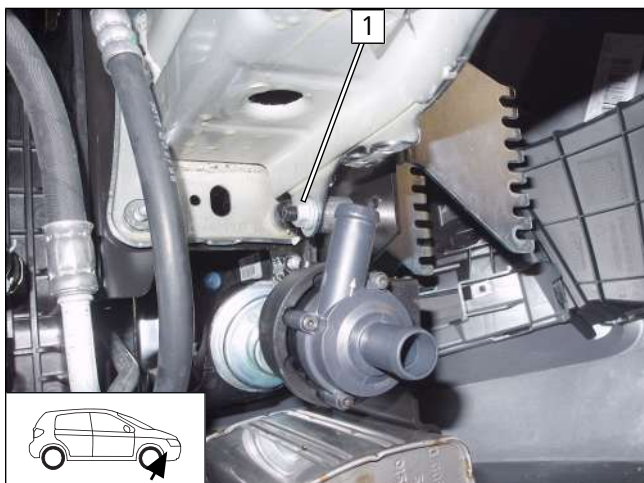


Fig. 28

- 1 Stud bolt from basic holder, distance washer (20), original vehicle hole, large diameter washer, M8 flanged nut

8.4 Premounting heater

Cutting hoses to length

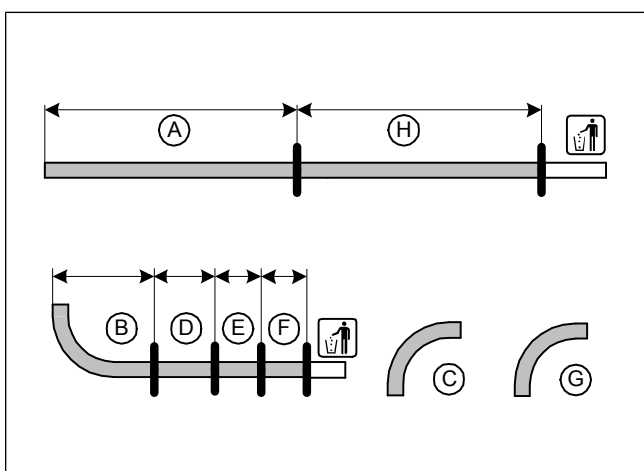


Fig. 29

	1.0P	1.5P
A	940	890
B	110 90°	110 90°
C	90°	90°
D	95	95
E	70	70
F	65	65
G	90°	90°
H	1060	1010

Mounting water connection piece

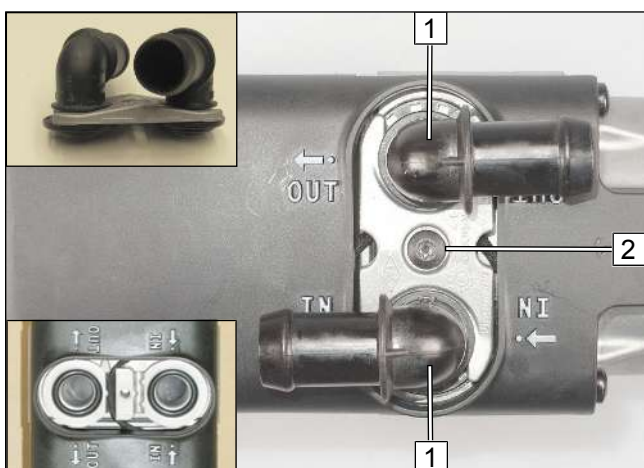


Fig. 30



Observe the general installation instructions of the heater.

- 1 Water connection piece, seal
- 2 5x15 self-tapping bolt, water connection piece retaining plate



Premounting bolts

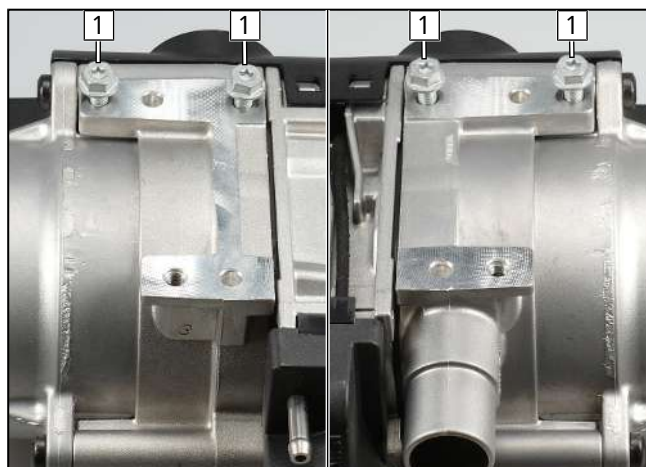
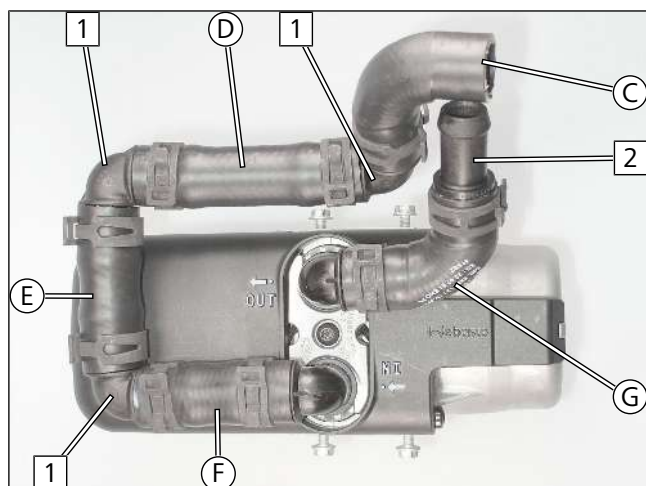


Fig. 31

- ▶ Screw 5x13 self-tapping bolts **1** into existing holes by a maximum of 3 thread turns.

Premounting hoses

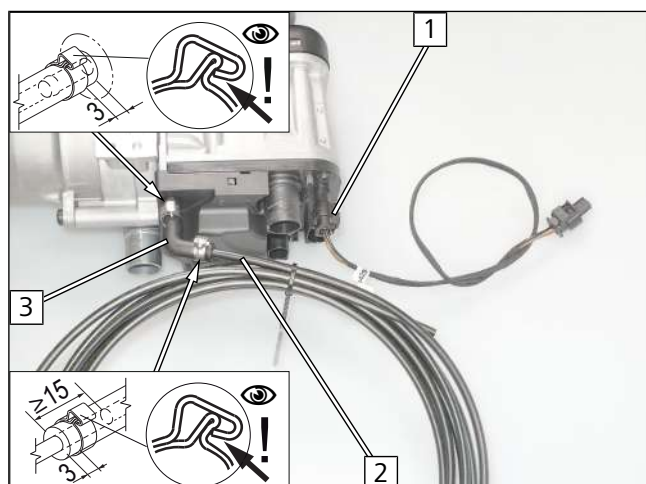


All spring clips Ø25

- 1** Ø18x18 90° connecting pipe
- 2** Ø18x18 connecting pipe

Fig. 32

Mounting fuel line and coolant pump wiring harness



- 1** Coolant pump wiring harness connector
- 2** Fuel line
- 3** 90° moulded hose, Ø10 clamp [2x]

Fig. 33



8.5 Mounting heater

Mounting heater

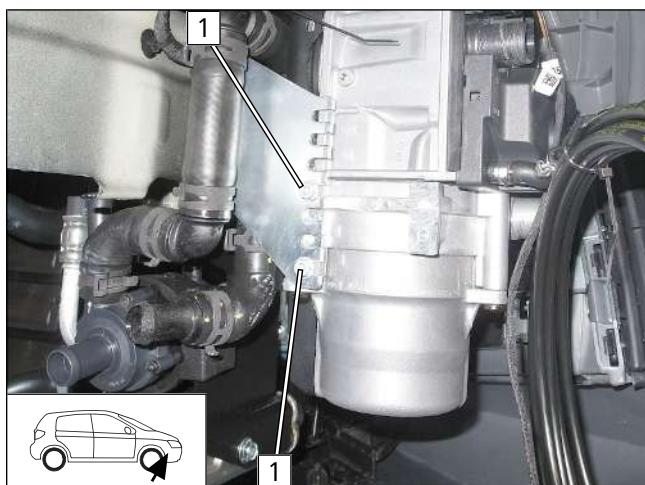


Fig. 34

- 1 Tighten 5x13 self-tapping bolt

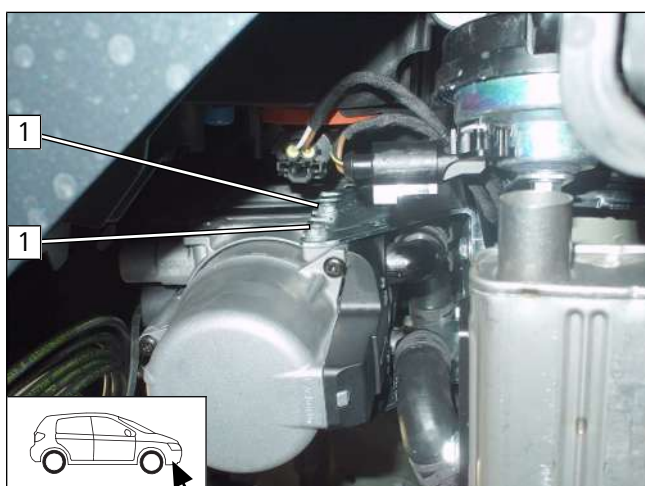


Fig. 35

- 1 Tighten 5x13 self-tapping bolt

Mounting hose **C**

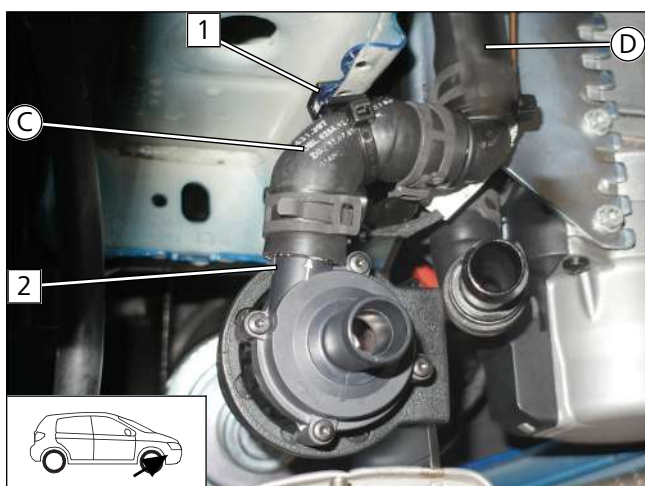


Fig. 36

- Fasten hose **C** with edge clip cable tie **1**.
- 2** Coolant pump outlet connection piece



9 Combustion air

Cutting combustion air intake pipe to length

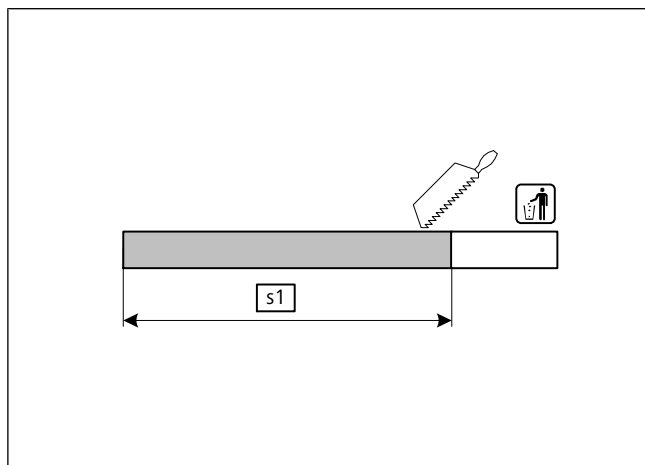


Fig. 37

s1 260

Premounting combustion air intake pipe s1 and combustion air intake silencer

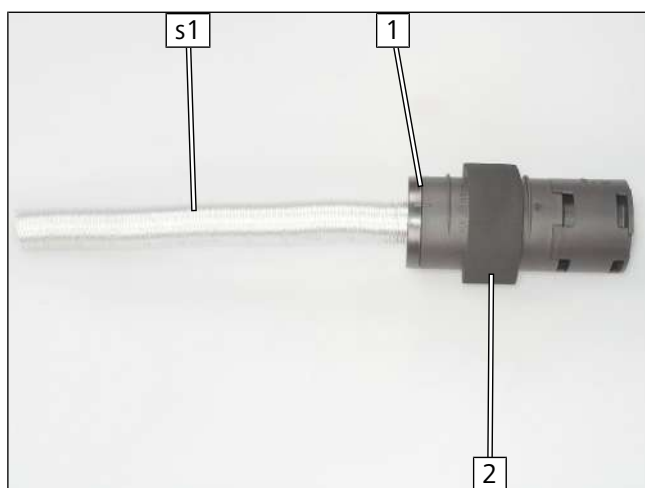



Fig. 38

 Observe the installation instructions of the combustion air intake silencer.

- 1 Combustion air intake silencer
- 2 Self-adhesive foam

Mounting combustion air intake pipe s1

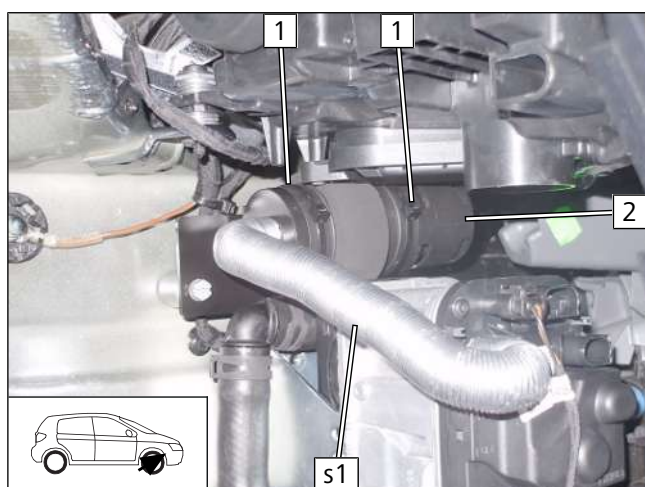


Fig. 39

- 1 Cable tie, premounted
- 2 Combustion air intake silencer



Mounting heater and coolant pump wiring harnesses

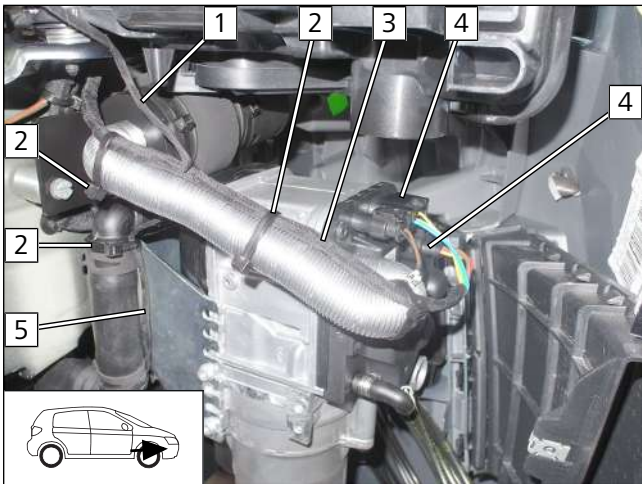


Fig. 40

- 1 Fuel pump wiring harness
- 2 Cable tie
- 3 Heater and coolant pump wiring harnesses
- 4 Mount heater wiring harness connector
- 5 Coolant pump wiring harness

Mounting coolant pump wiring harness

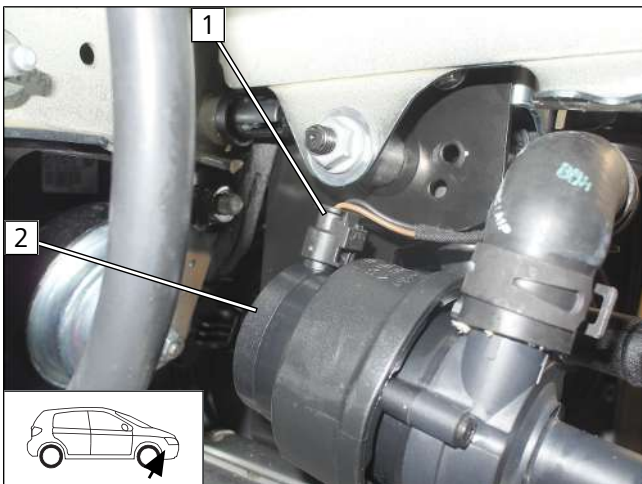


Fig. 41

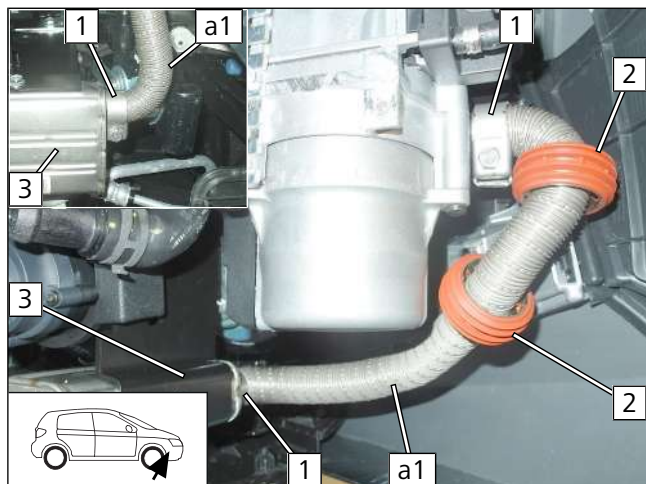
- 1 Coolant pump wiring harness connector
- 2 Coolant pump



10 Exhaust

10.1 Mounting exhaust pipe

Mounting exhaust pipe **a1**



Danger of damage to components

► Ensure sufficient distance from neighbouring components, correct if necessary.

- 1** Hose clamp
- 2** ASH
- 3** Exhaust silencer

Fig. 42



11 Fuel



DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

The incorrect installation of the fuel extractor can cause damage and fire.

- ▶ Avoid electrostatic discharges and open fire
- ▶ When working on the fuel system, ensure sufficient ventilation and bleeding
- ▶ Open the fuel tank cap of the vehicle
- ▶ Ventilate the fuel tank
- ▶ Re-close the tank lock
- ▶ Catch any fuel running off with an appropriate container



Danger of damage to components

- ▶ Install fuel line and fuel pump wiring harness so that they are protected against stone impact
- ▶ Provide rub protection for fuel line and wiring harness in areas where there are sharp edges

Dismantling fuel pump connector X7

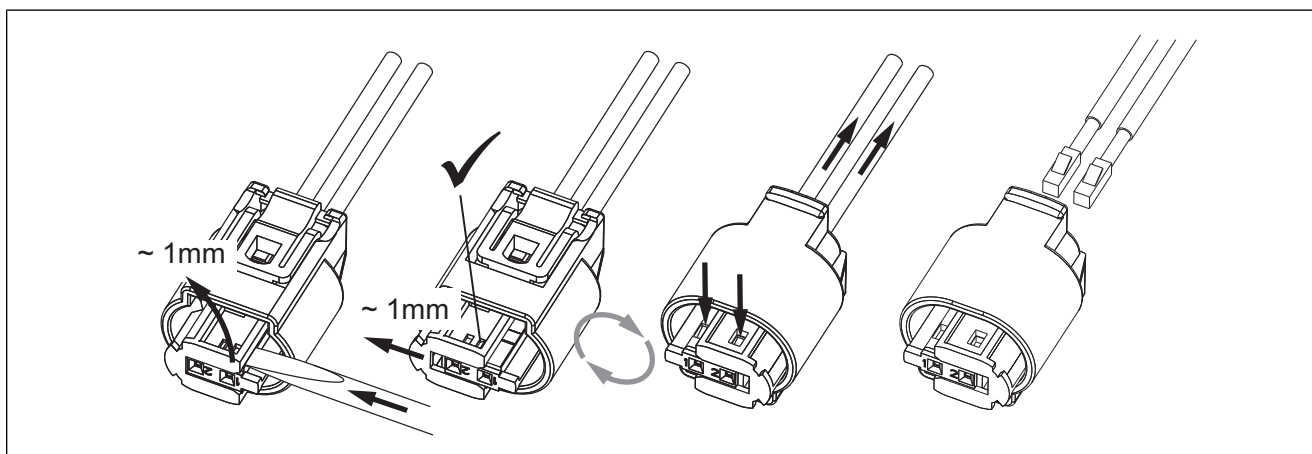


Fig. 43

11.1 Routing fuel line

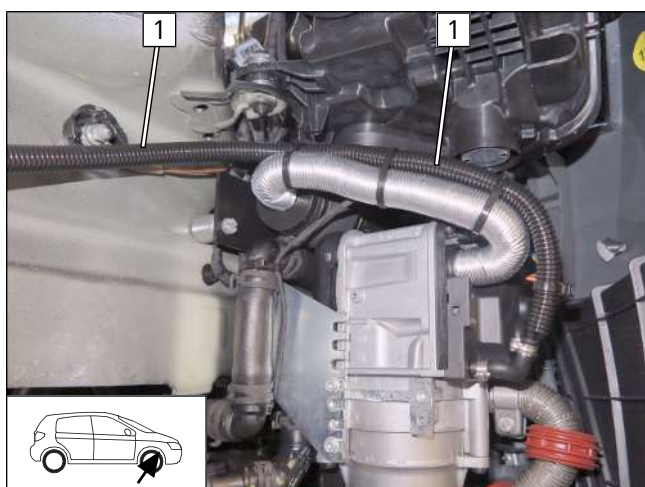


Fig. 44

- ▶ Draw fuel line and fuel pump wiring harness into Ø10 800 long corrugated tube **1** and fasten using cable ties.



Adapting pass through

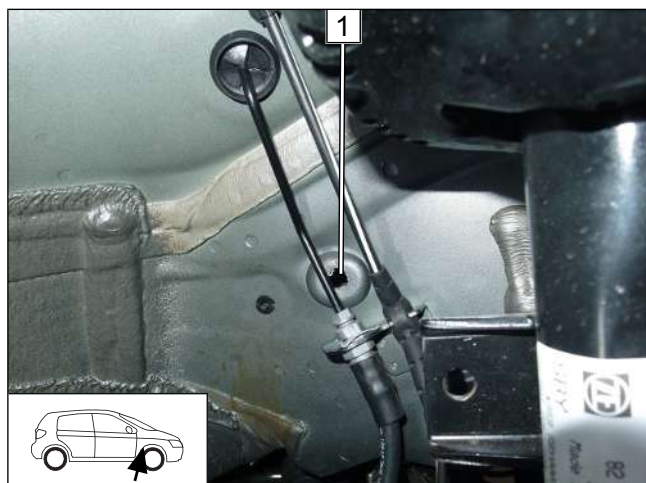


Fig. 45

- ▶ Pierce original vehicle pass through **1** as shown.

Cutting two foam strips in half

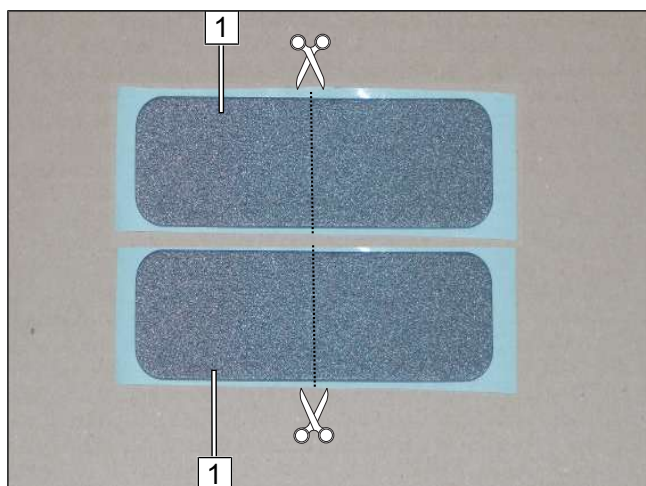


Fig. 46

- ▶ Cut self-adhesive foam **1** in half as shown.

Routing in wheel well

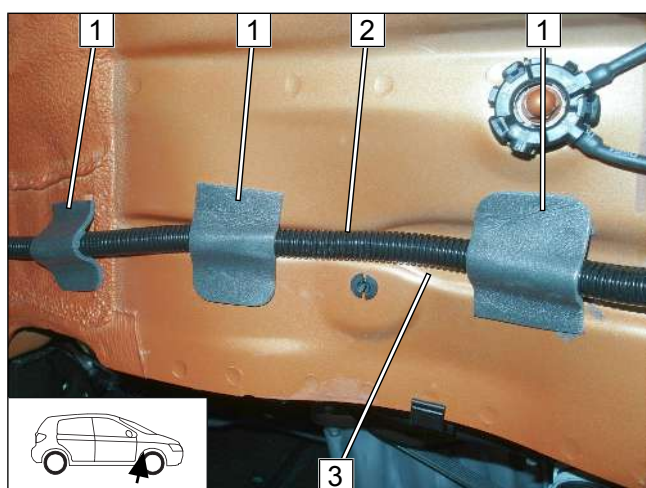


Fig. 47

- ▶ Route corrugated tube with fuel line and fuel pump wiring harness **2** in original vehicle bead **3**.

1 Self-adhesive foam



Routing in wheel well and through original vehicle pass through to underbody

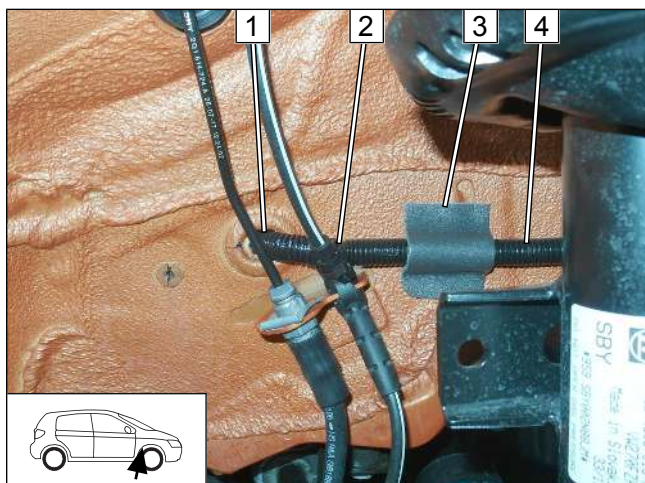


Fig. 48

- 1 Original vehicle pass through
- 2 Cable tie
- 3 Self-adhesive foam
- 4 Fuel line and fuel pump wiring harness in corrugated tube

Routing on underbody

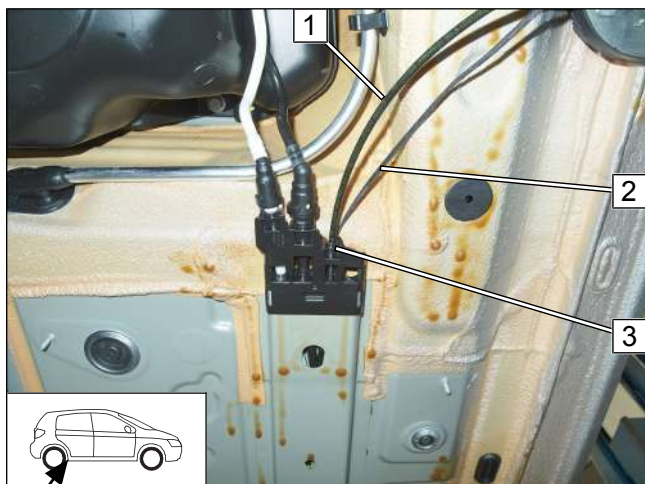


Fig. 49

- 1 Fuel line
- 2 Fuel pump wiring harness
- 3 Original vehicle pass through

Preparing perforated bracket

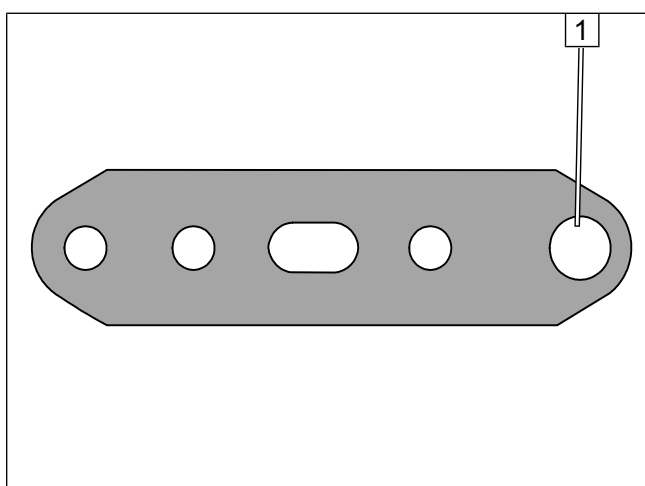


Fig. 50

- 1 Drill out hole to $\text{Ø}8.5$



Premounting fuel pump

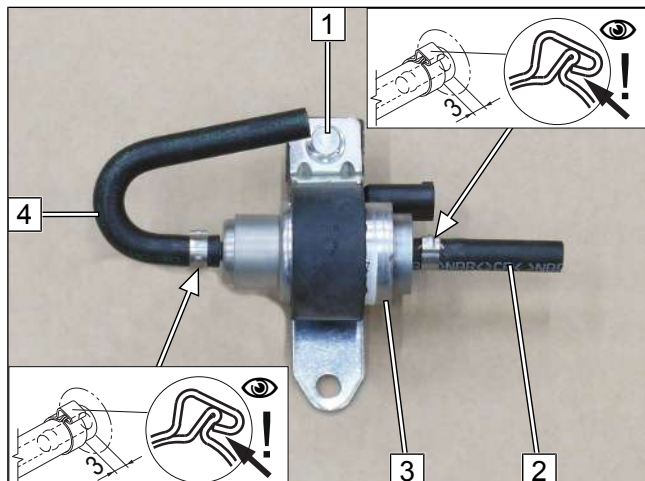


Fig. 51

- 1 M6x25 bolt, support angle bracket, fuel pump mount, perforated bracket, flanged nut
- 2 Hose section, Ø10 clamp
- 3 Fuel pump
- 4 180° moulded hose, Ø10 clamp

Fuel pump installation

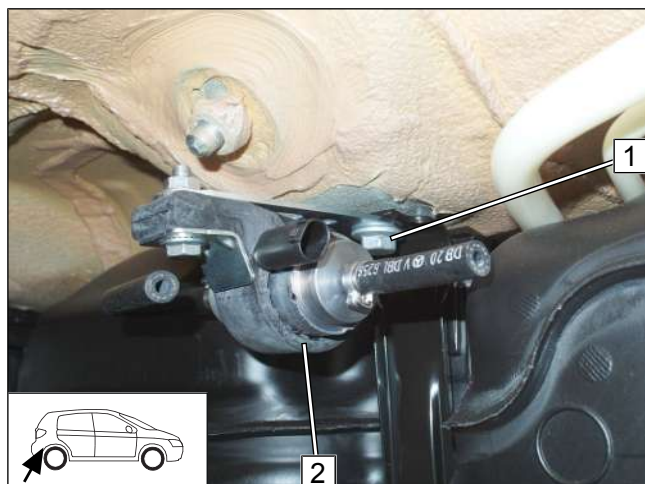


Fig. 52

- 1 Original vehicle bolt, large diameter washer
- 2 Premounted fuel pump

Routing to fuel pump



Fig. 53

- Cut corrugated tube 1 to length as shown before the installation. Draw fuel line and fuel pump wiring harness into corrugated tube and route as shown.



Assembling fuel pump connector X7

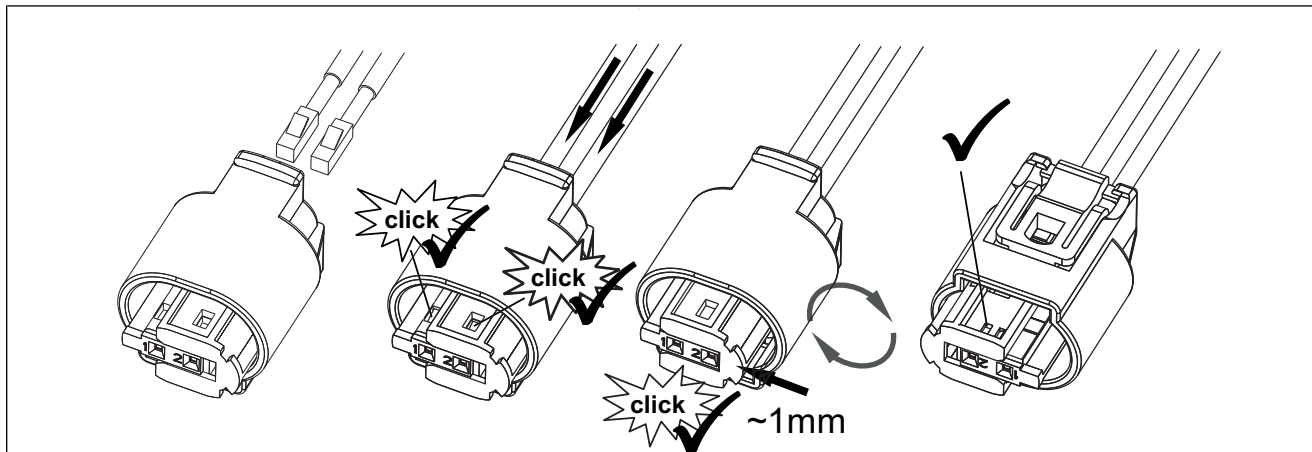


Fig. 54

Fuel pump connection

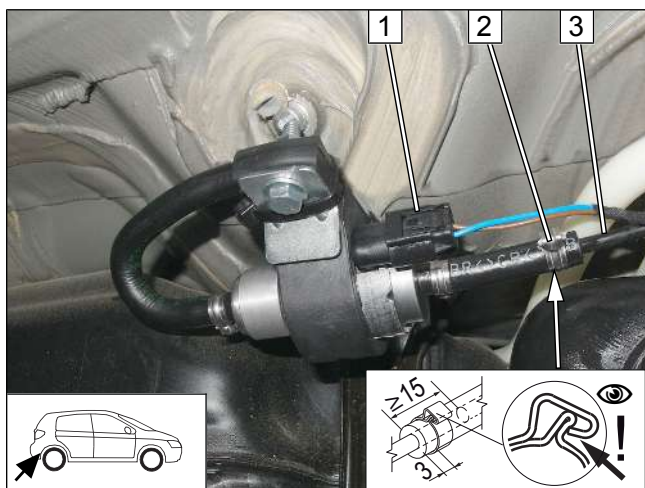


Fig. 55

- 1 Fuel pump wiring harness, connector X7 mounted
- 2 Ø10 clamp
- 3 Heater fuel line

11.2 Installing FuelFix

Preparing drilling template

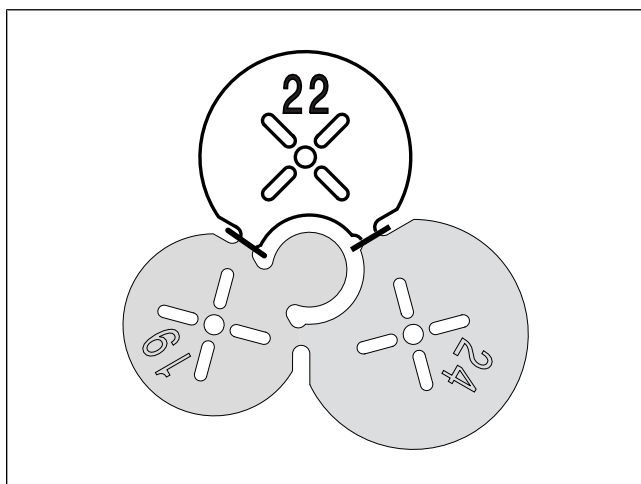


Fig. 56

- Bend Ø19 and Ø24 up by 90°.



Copying hole pattern

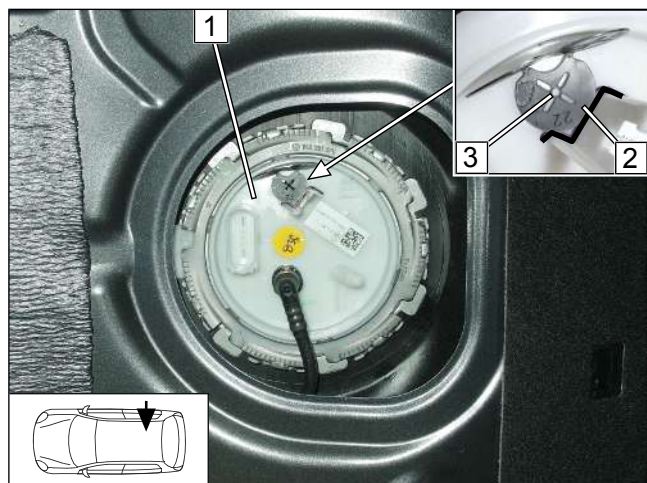


Fig. 57

► Work steps F1, F2



Observe the installation instructions of the tank extracting device.



The colour of the tank fitting may vary.

- 1 Tank fitting
- 2 Position Ø22 drilling template as shown
- 3 Hole pattern

Hole for FuelFix

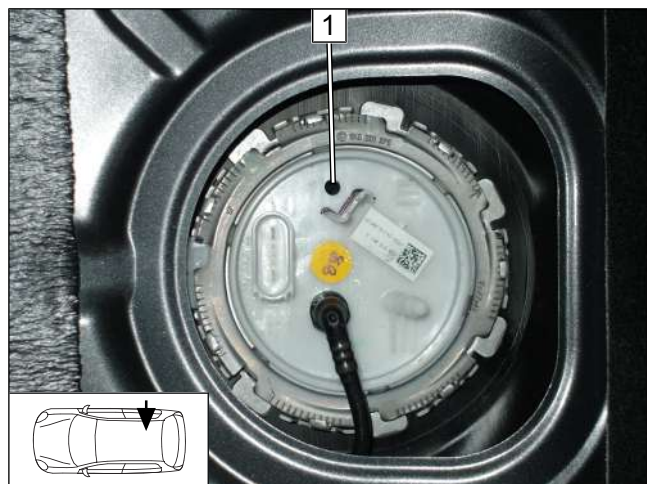


Fig. 58



DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

► Work step F3

- 1 Hole made with provided drill

Preparing FuelFix

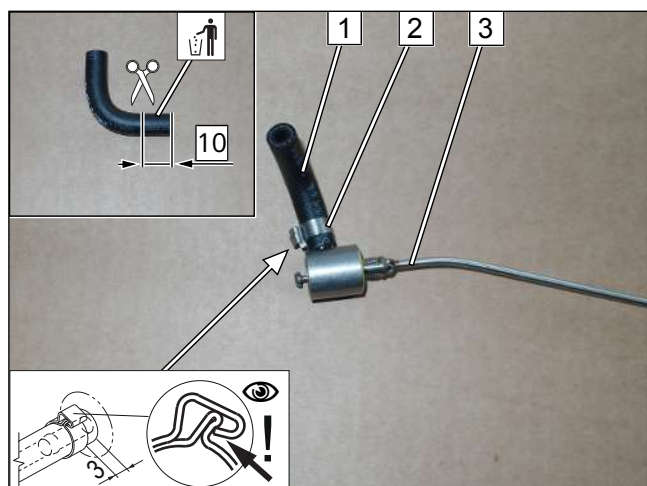


Fig. 59

► Work steps F4, F6.1

► Bend FuelFix 3 as shown in template and cut to length.

- 1 90° moulded hose, shortened hose end on FuelFix
- 2 Ø10 clamp



Inserting FuelFix

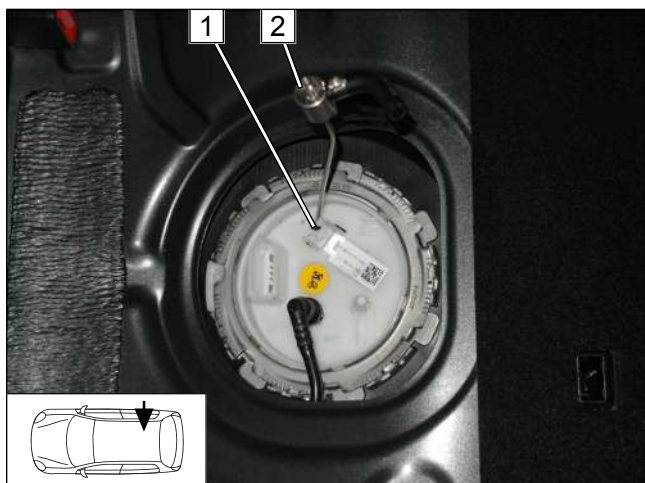


Fig. 60

- ▶ Work step F5
- ▶ Insert FuelFix **2** in hole **1**.



Fig. 61

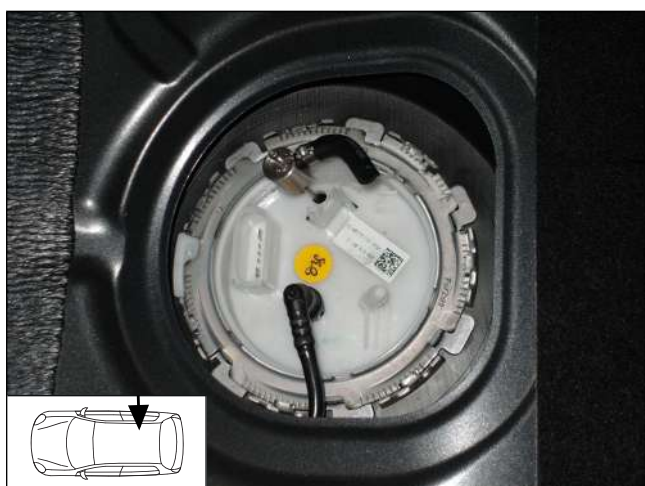


Fig. 62



Aligning FuelFix

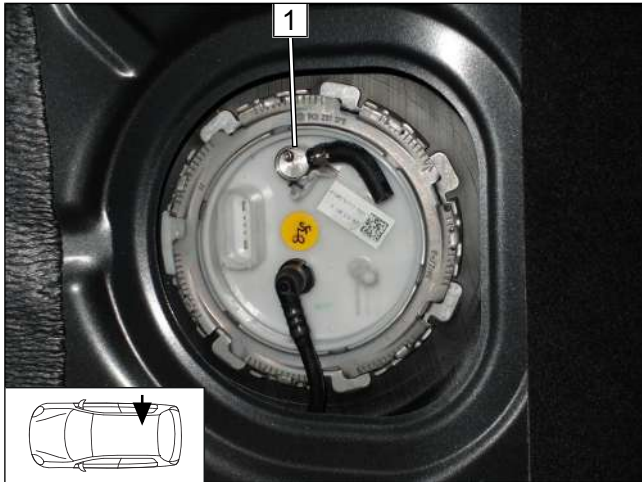


Fig. 63

- ▶ Work steps F5.3, F5.4
- ▶ Align FuelFix **1** as shown.

Connecting fuel line and routing it to fuel pump installation location

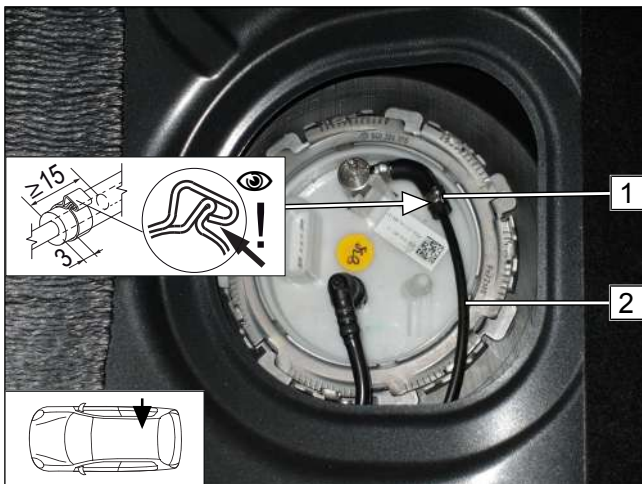


Fig. 64

- ▶ Work step F6.2
- 1** Ø10 clamp
- 2** Fuel line

Mounting FuelFix

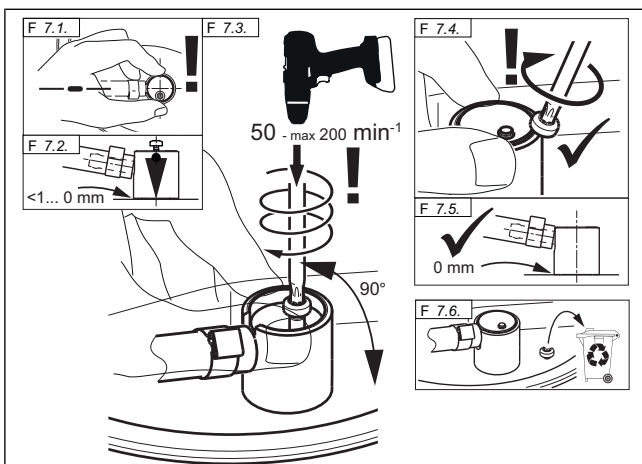


Fig. 65



DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours

- ▶ Work step F7



Checking firm seating of FuelFix

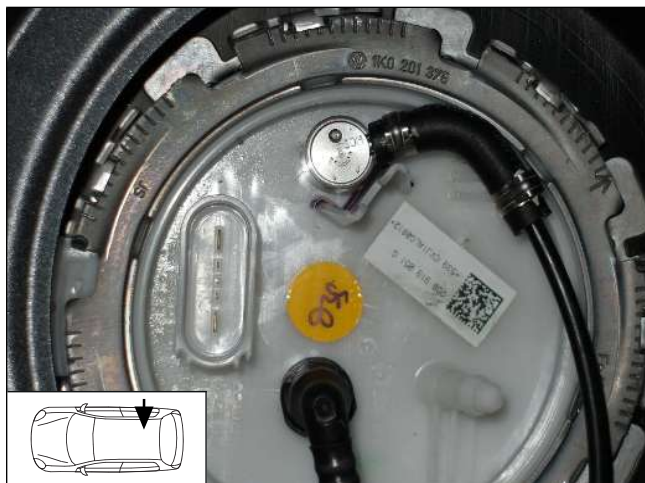


Fig. 66

► Work step F8

Securing fuel line

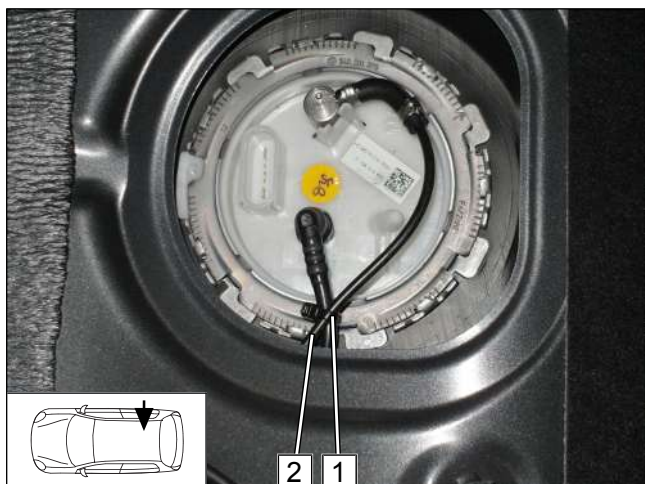


Fig. 67

- 1 Cable tie for tension relief
- 2 Fuel line of FuelFix

11.3 Fuel pump connection

Connecting fuel line of FuelFix

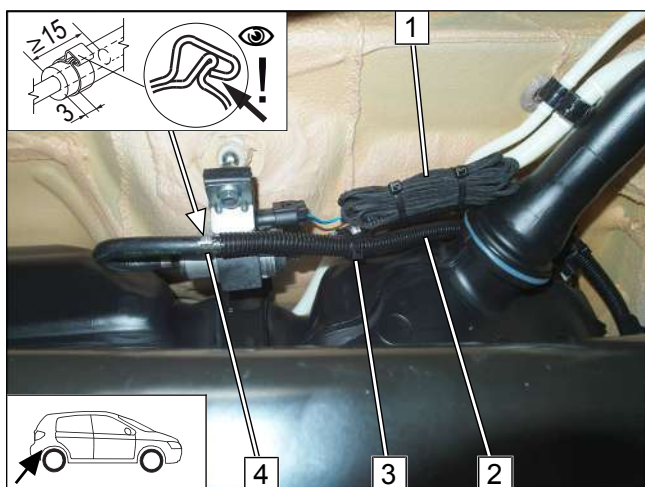


Fig. 68

► Fasten rest of fuel pump wiring harness **1** with heater fuel line to original vehicle line as shown.

- 2 Corrugated tube with fuel line of FuelFix
- 3 Cable tie
- 4 Ø10 clamp



12 Coolant

12.1 Hose routing diagram

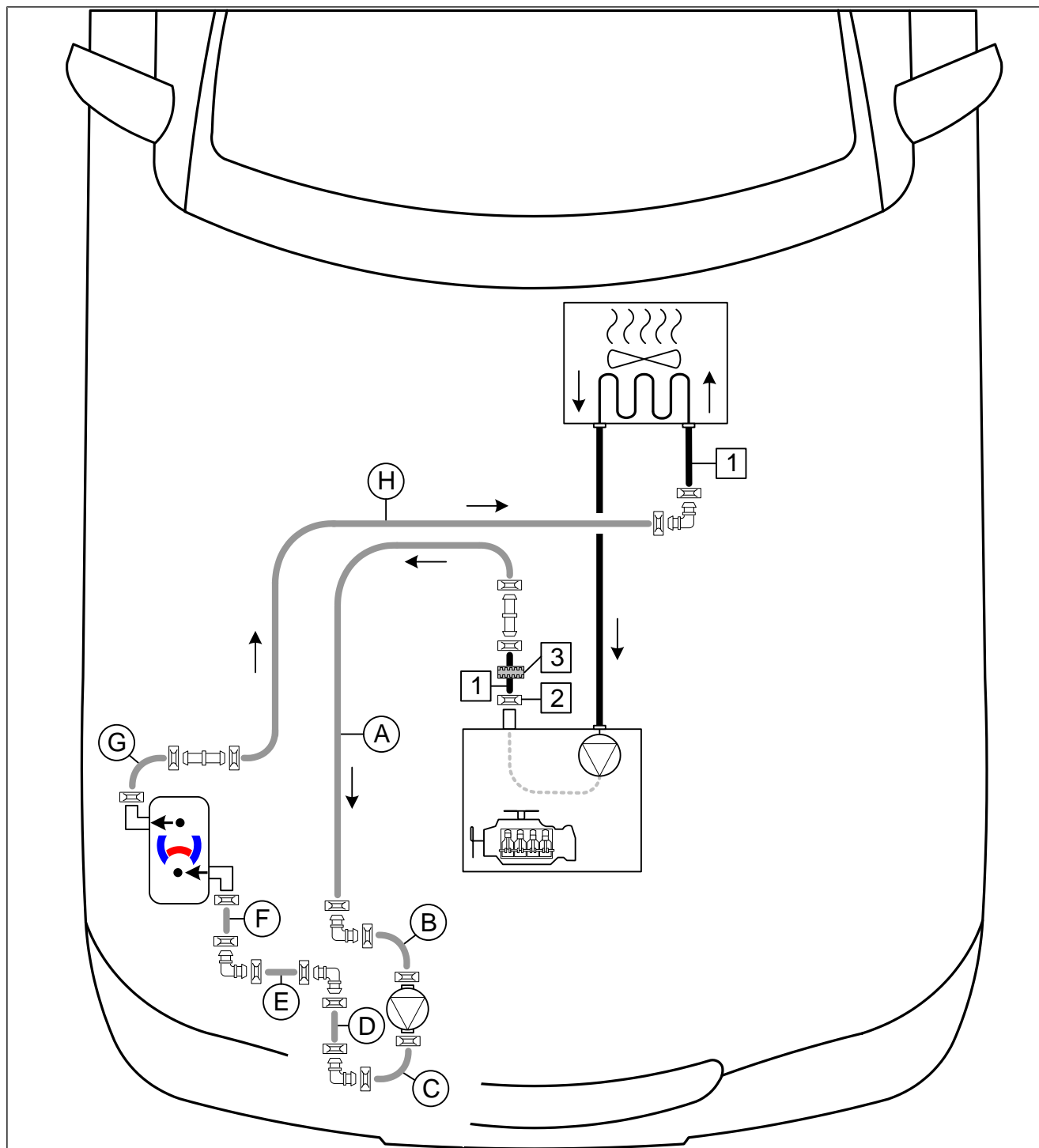


Fig. 69

All spring clips without a specific designation  = Ø25

All connecting pipe  or  = Ø18x18

1 Original vehicle coolant hose; **2** Original vehicle spring clip; **3** Black (sw) rubber isolator



12.2 Preliminary work

Preparing hoses

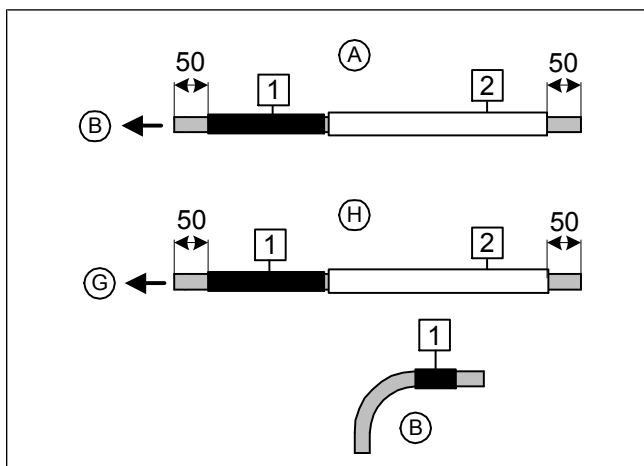


Fig. 70



Slide on fabric heat shrink tubing **1** as shown and use 230°C at most to shrink it.

► Slide on 600 long heat protection hose **2** as shown.

Preparing perforated bracket 1

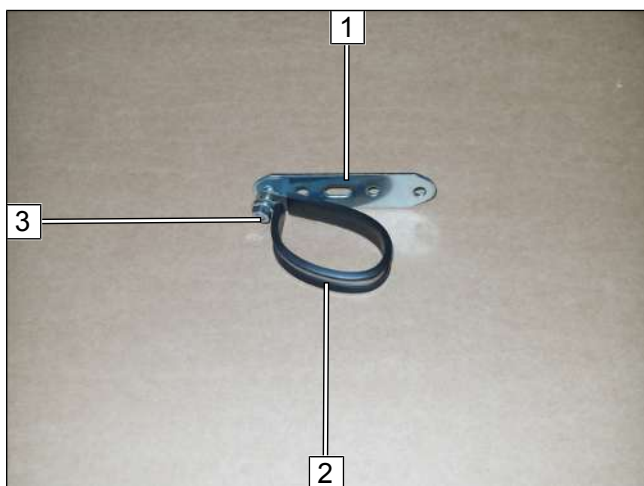


Fig. 71

- 1** Perforated bracket 1
- 2** Ø48 rubber-coated p-clamp
- 3** M6x20 bolt, flanged nut mounted loosely

Bending perforated bracket 2

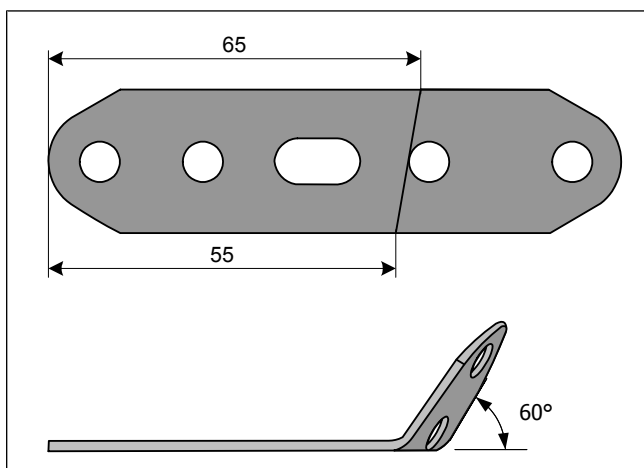


Fig. 72



Preparing perforated bracket 2

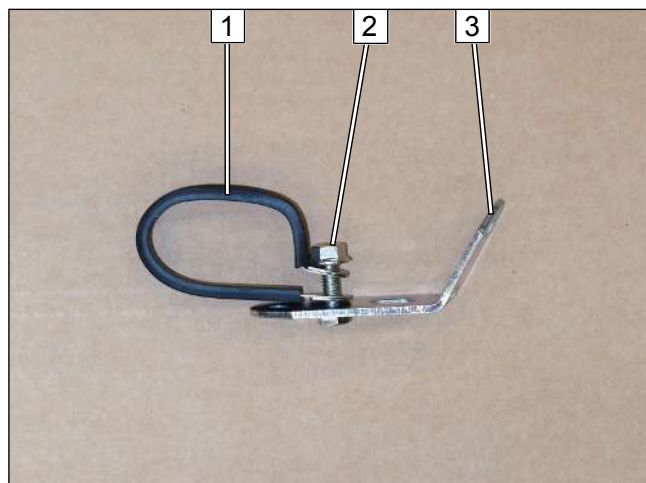


Fig. 73

- 1 Ø48 rubber-coated p-clamp
- 2 M6x20 bolt, flanged nut mounted loosely
- 3 Perforated bracket 2

Mounting perforated bracket 1

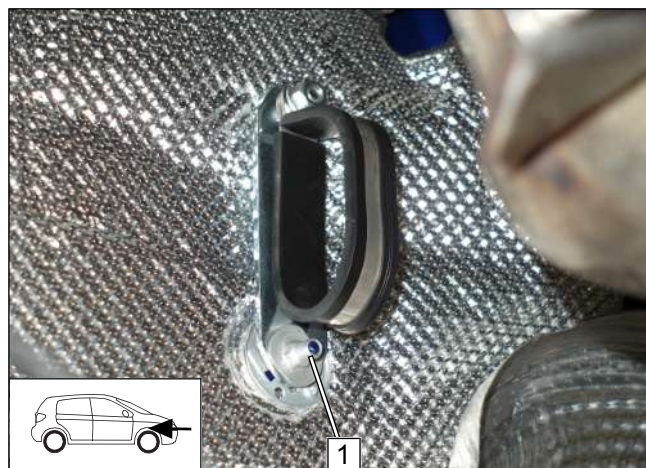


Fig. 74

- 1 Original vehicle stud bolt, pre-mounted perforated bracket, plate nut

Inserting rivet nut



Fig. 75

- 1 Aluminium rivet nut in original vehicle hole



Mounting perforated bracket 2

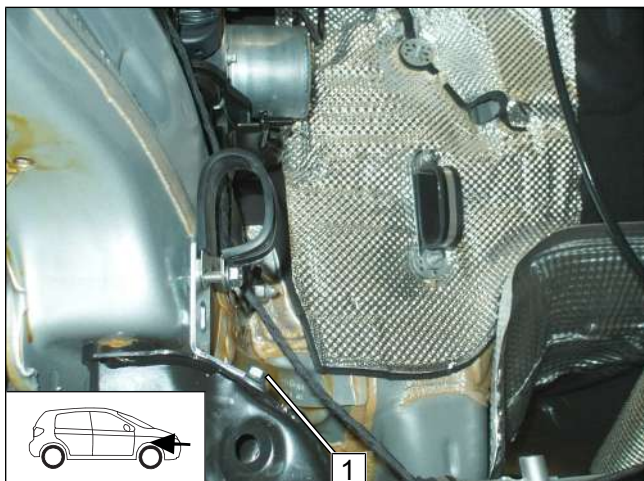


Fig. 76

- 1 M6x20 bolt, spring lockwasher, premounted perforated bracket

Premounting edge clip cable tie

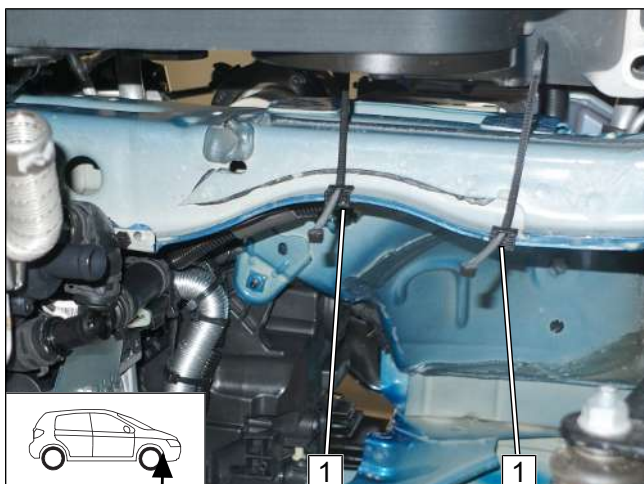


Fig. 77

- 1 Edge clip cable tie

Premounting hose **B**

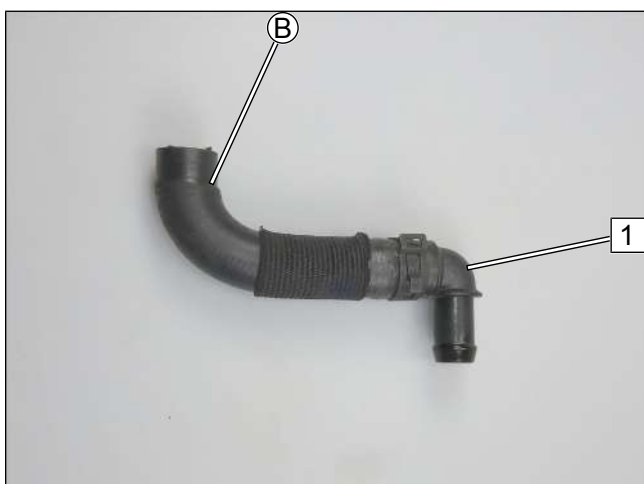


Fig. 78

- 1 90°, 18x18 connecting pipe



Mounting hose **B**

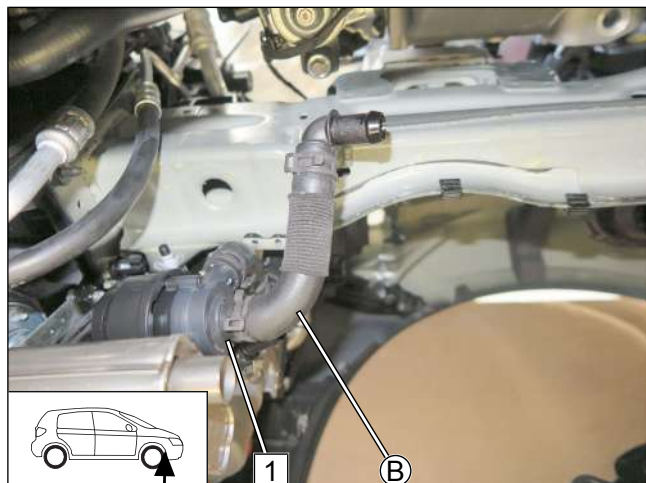


Fig. 79

1 Coolant pump

12.3 Coolant circuit installation

Removing original vehicle hose

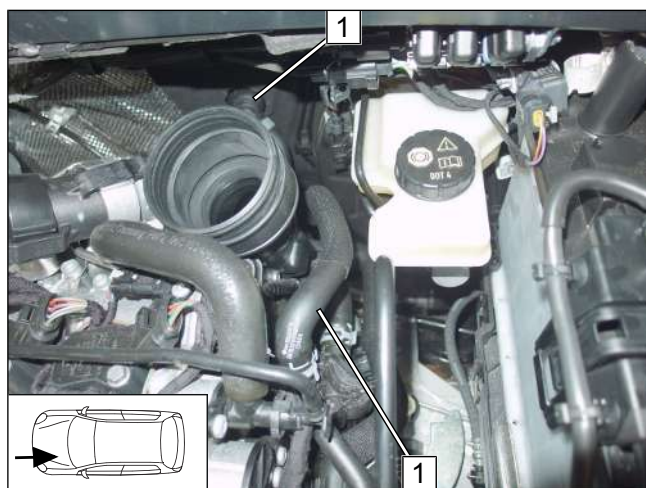


Fig. 80

► Remove hose of engine outlet / heat exchanger inlet **1**.

Preparing hose of engine outlet / heat exchanger inlet

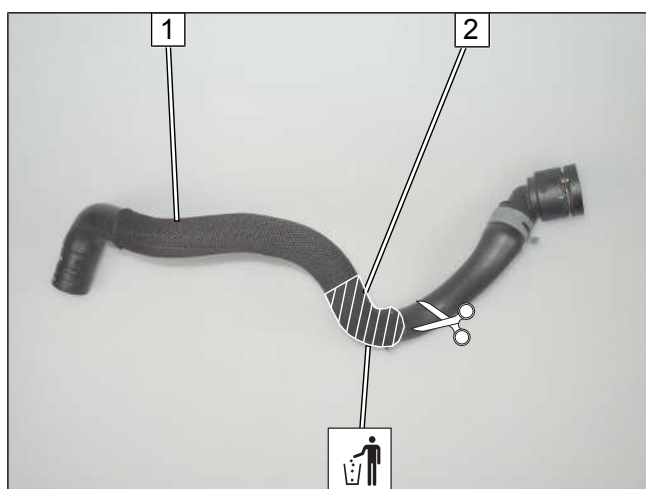


Fig. 81

► Remove braided protection (if present) from engine outlet / heat exchanger inlet hose **1** at position **2** as shown.



Cutting engine outlet / heat exchanger inlet hose to length

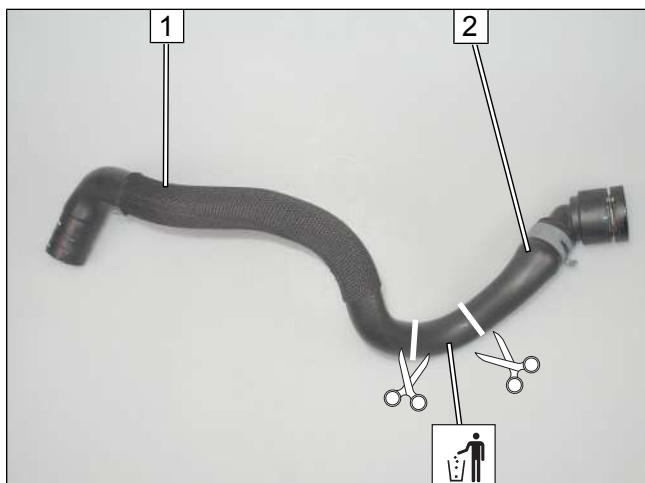


Fig. 82

- 1 Engine outlet hose section
- 2 Heat exchanger inlet hose section

Premounting hose (H)

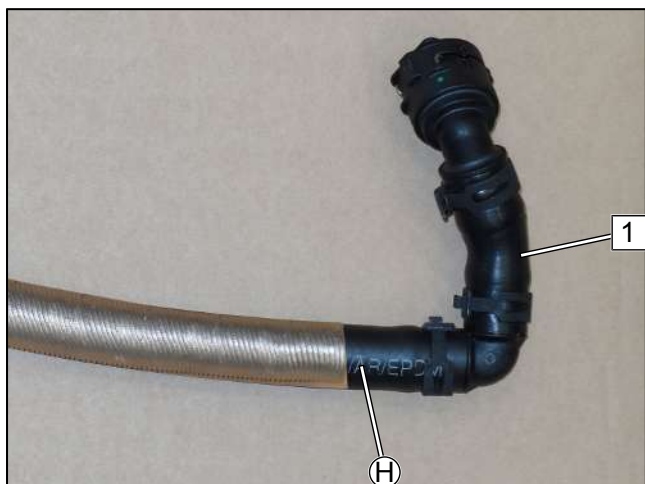


Fig. 83

- 1 Heat exchanger inlet hose section

Heat exchanger inlet connection

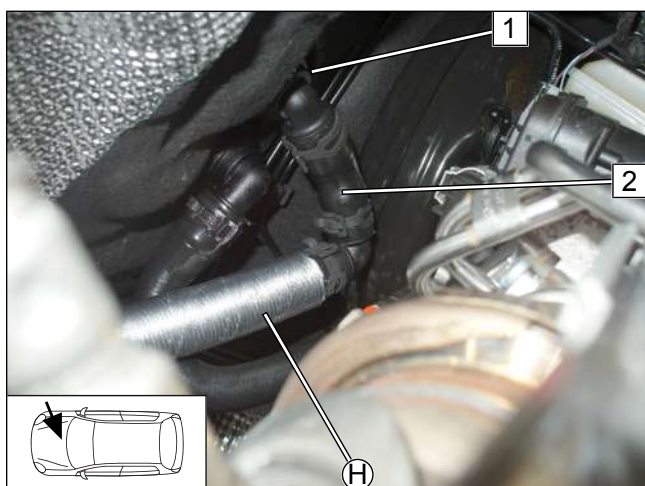


Fig. 84

- 1 Heat exchanger inlet connection piece
- 2 Heat exchanger inlet hose section



Premounting hose **A**

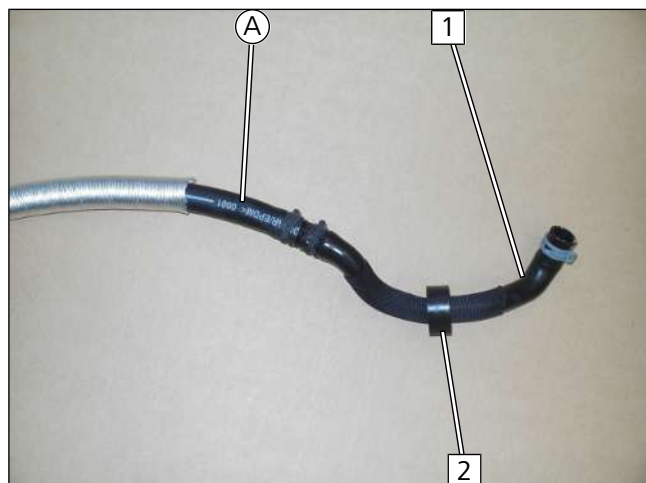


Fig. 85

- 1** Engine outlet hose section
- 2** Black (sw) rubber isolator

Engine outlet connection

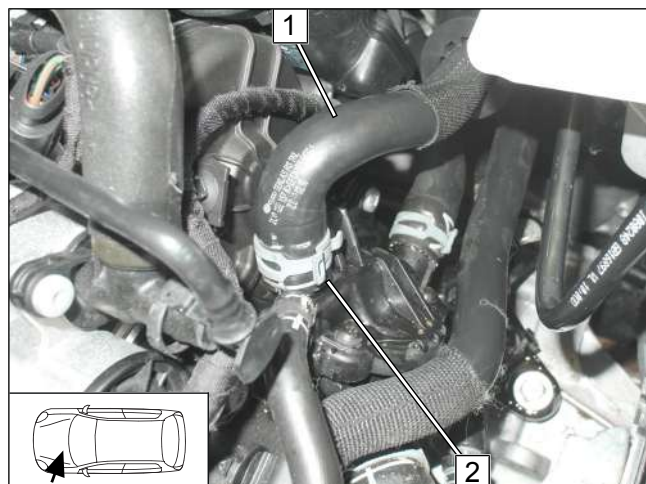


Fig. 86

- 1** Engine outlet hose section
- 2** Engine outlet connection piece

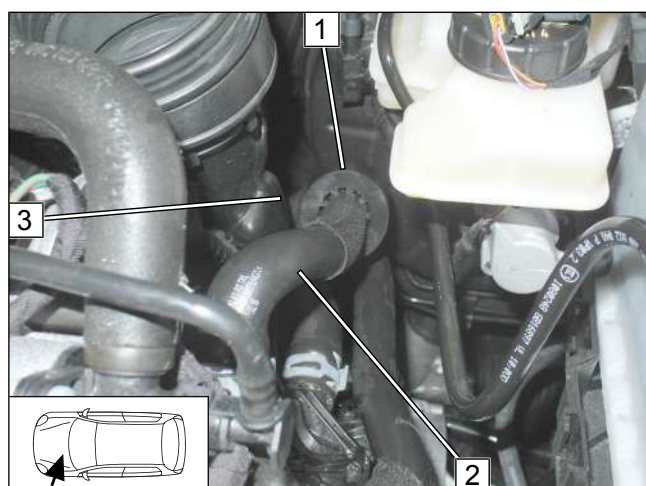


Fig. 87

- Position black rubber isolator **1** at edge **3** as shown.
- 2** Engine outlet hose section



Mounting hose bracket

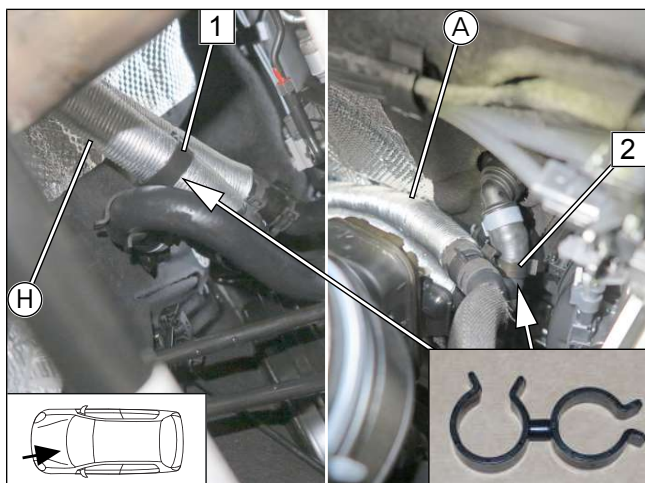


Fig. 88

 1.0 petrol vehicles only

- ▶ Mount hose bracket **1** between hose **H** and original vehicle hose.
- ▶ Mount hose bracket **2** between hose **A** and original vehicle hose.

1 Cable tie

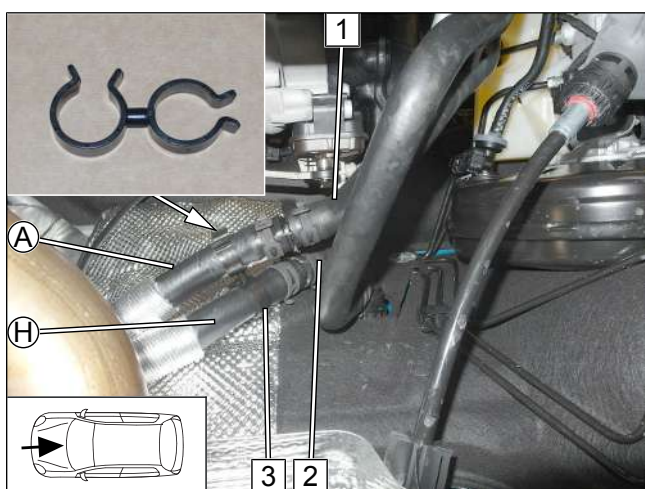


Fig. 89

 1.5 petrol vehicles only

- ▶ Mount hose bracket **3** between hose **A** and hose **H**

1 Engine outlet hose section

2 Heat exchanger inlet hose section

12.4 Routing coolant hoses and connecting heater

Routing hoses **A** and **H**

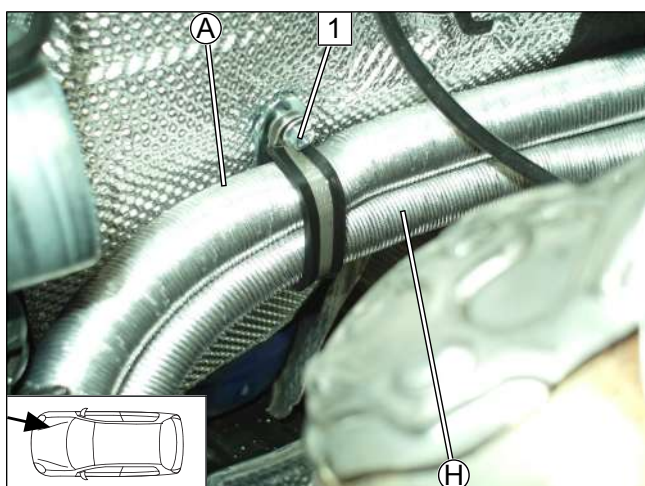



Fig. 90

 all vehicles

- 1** Ø48 rubber-coated p-clamp, M6x20 bolt, tighten flanged nut

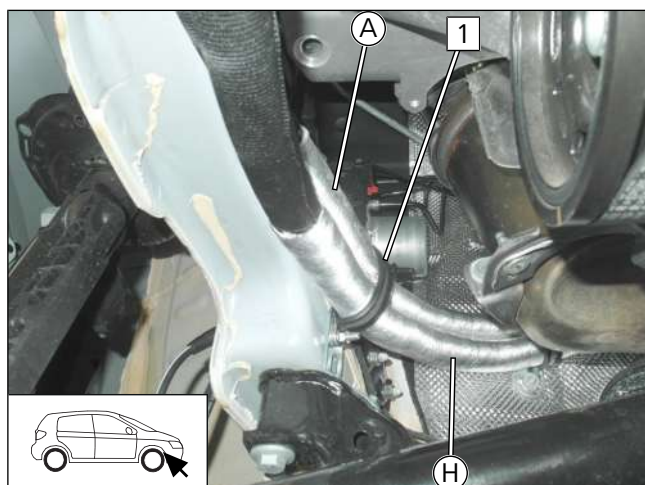


Fig. 91

- 1 Ø48 rubber-coated p-clamp, M6x20 bolt, tighten flanged nut

Mounting hose (A)

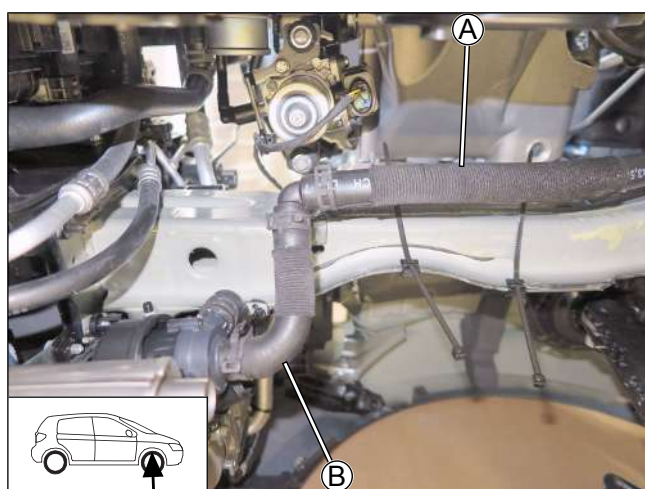


Fig. 92

Mounting hose (H)

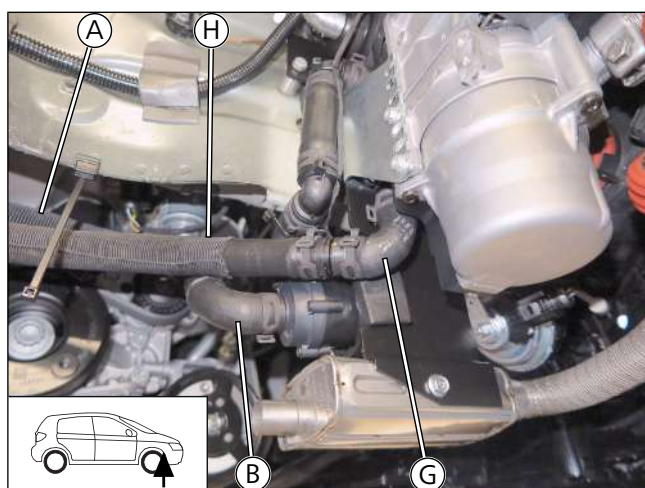


Fig. 93



Fastening hoses

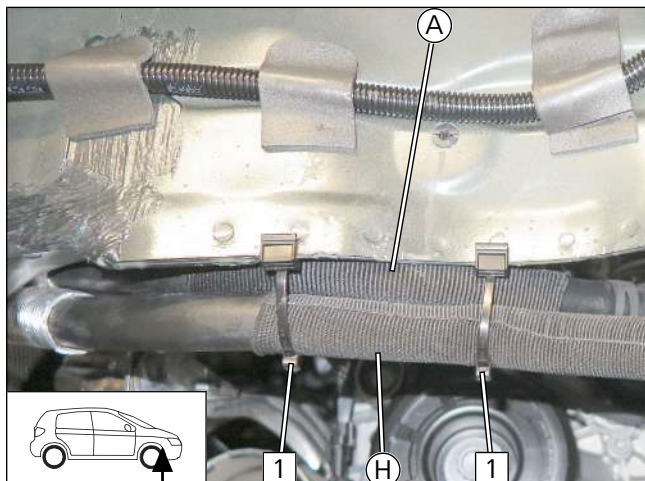


Fig. 94

1 Edge clip cable tie

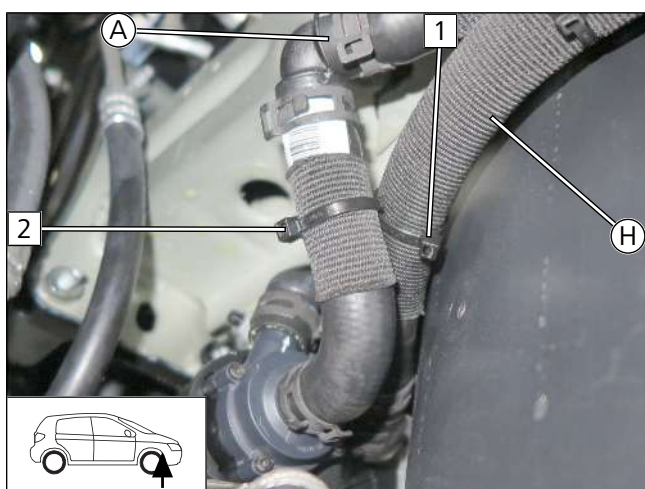


Fig. 95



Danger of damage to components

► Ensure sufficient distance from neighbouring components, correct if necessary.

1 Cable tie around hose **H** and cable tie **2**

2 Cable tie around hose **A** and cable tie **1**



13 Final work in engine compartment

Preparing wheel well trim

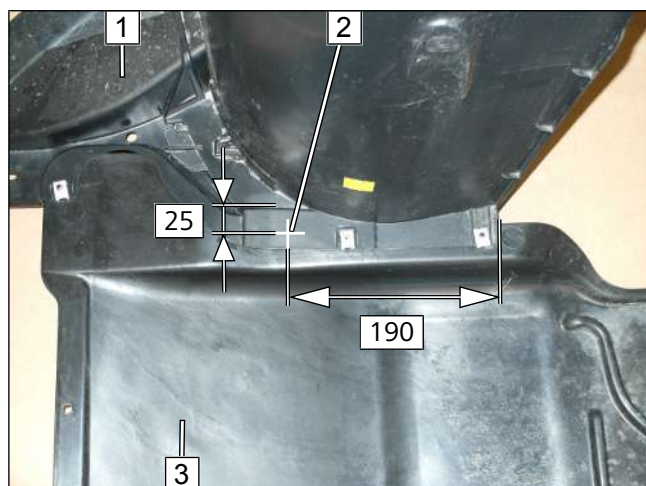


Fig. 96

- ▶ Mount wheel well trim **1** and underride protection **3**.
- ▶ Copy hole pattern **2**.

Drilling hole

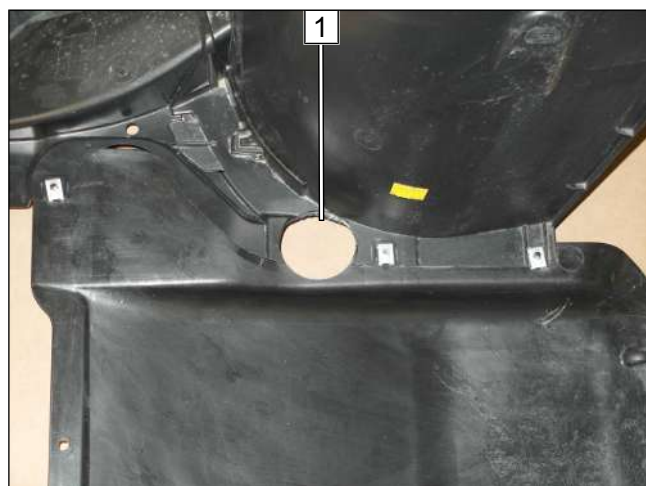


Fig. 97

- 1** Ø60 hole
- ▶ Separate wheel well trim and underride protection again.

Installing wheel well trim

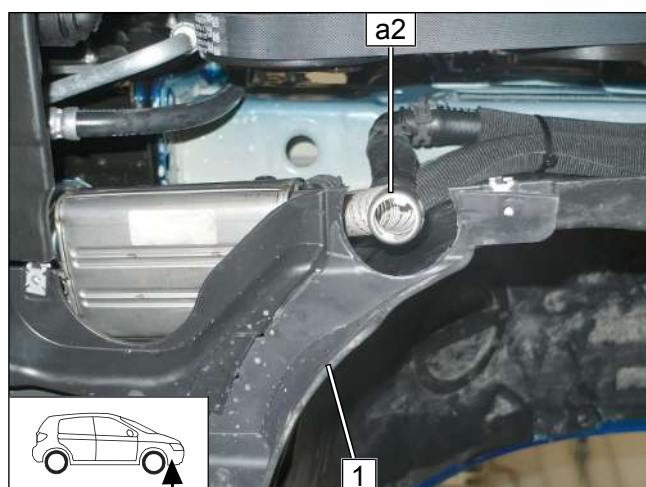


Fig. 98

- 1** Wheel well trim



Mounting underide protection

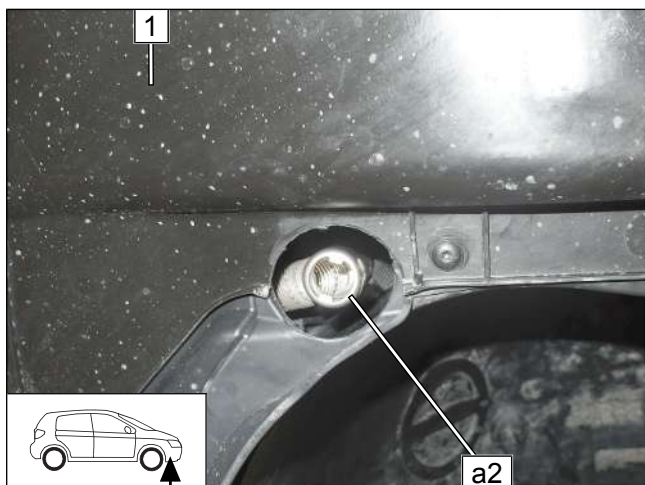


Fig. 99



Danger of damage to components

► Ensure sufficient distance from neighbouring components, correct if necessary.

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

1 Underide protection



14 Electrical system of passenger compartment

14.1 Air-conditioning control

Integrate the air-conditioning control as per the separate installation documentation:



'Webasto Standard' A/C control installation documentation for VW / Skoda / Seat MQB with AAC

or



'Webasto Comfort' A/C control installation documentation for VW / Audi / Skoda / Seat MQB with AAC



15 Electrical system of control elements

15.1 Telestart option

Mounting receiver

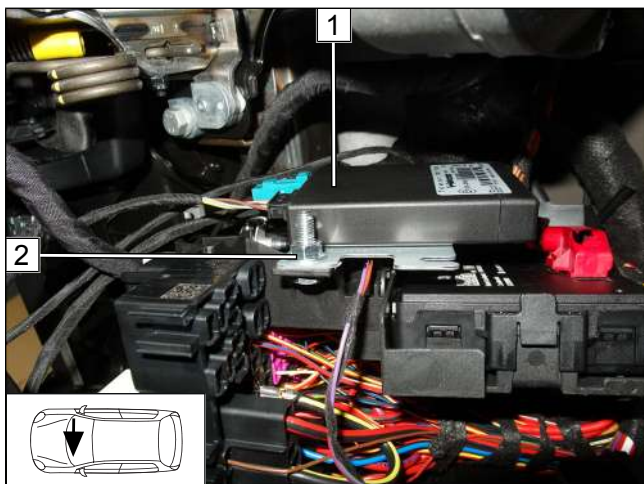


Fig. 100



Observe the Telestart installation documentation.

- 1 Receiver
- 2 M5x16 bolt, large diameter washer, original vehicle hole, receiver bracket, large diameter washer, M5 flanged nut

Mounting temperature sensor, only in case of T100 HTM

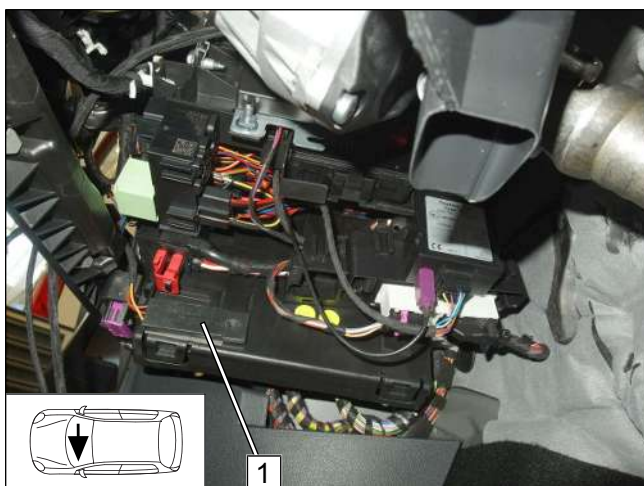


Fig. 101

- Fasten temperature sensor 1 using double-sided adhesive tape.

Mounting aerial

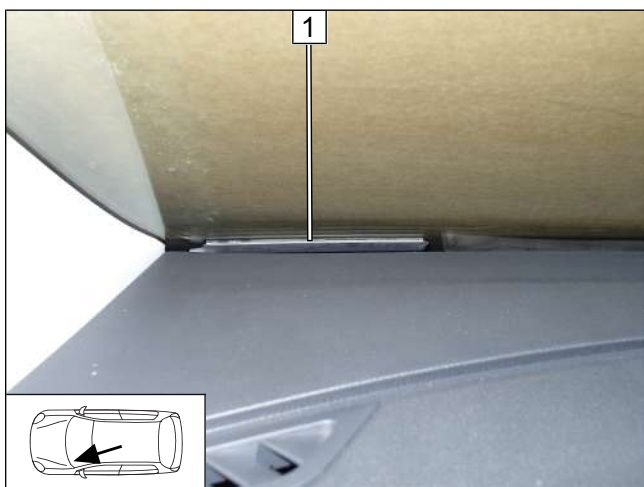


Fig. 102

- 1 Aerial



15.2 ThermoCall option

Mounting receiver

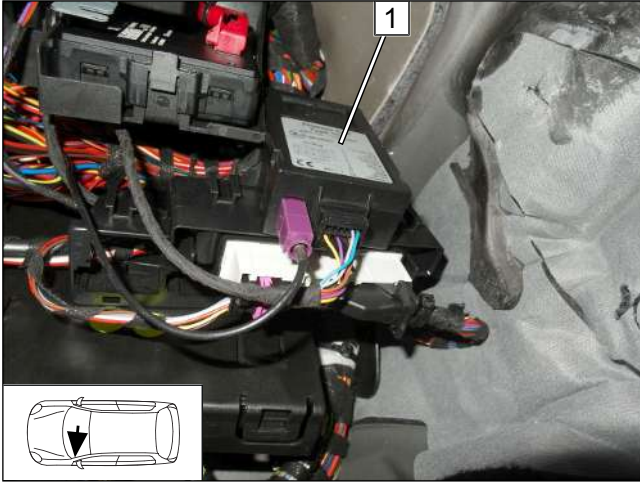


Fig. 103



Observe the ThermoCall installation documentation.

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

Mounting aerial (optional)

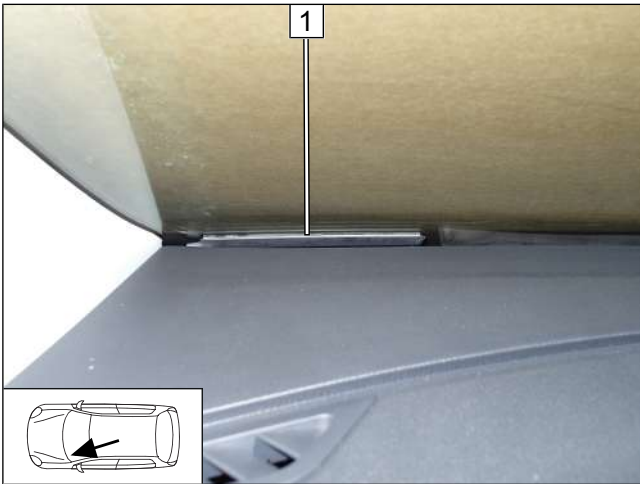


Fig. 104

1 Aerial



16 Final work



Further information can be found in the vehicle manufacturer's technical documentation.

- ▶ Mount removed parts in reverse order.



- ▶ Check all hoses, clamps and all electrical connections for firm seating.
- ▶ Insulate and tie back loose lines
- ▶ Spray heater and electrical components with anti-corrosion wax (Tectyl 100K).
- ▶ Connect the battery.



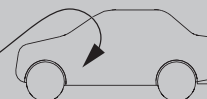
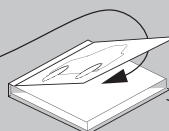
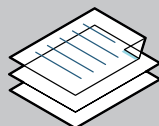
Only use manufacturer-approved coolant.

- ▶ Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.



Further information can be found in the general installation and operating instructions of the Webasto components.

- ▶ Program MultiControl CAR, teach Telestart transmitter
- ▶ If the fan function or A/C control panel settings need to be checked, see the installation documentation in the additional kit 'Webasto Standard' A/C control, section 'Final work'
- ▶ Initial start-up and function check
- ▶ Affix 'Switch off parking heater before refueling' caution label in area of filler neck



These are the original instructions. The German language is binding.
You can request your language if it is missing. The telephone number of each country can be found in the Webasto service centre leaflet or the website of the respective Webasto representative of your country.

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
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Company address:
Friedrichshafener Str. 9
82205 Gilching
Germany

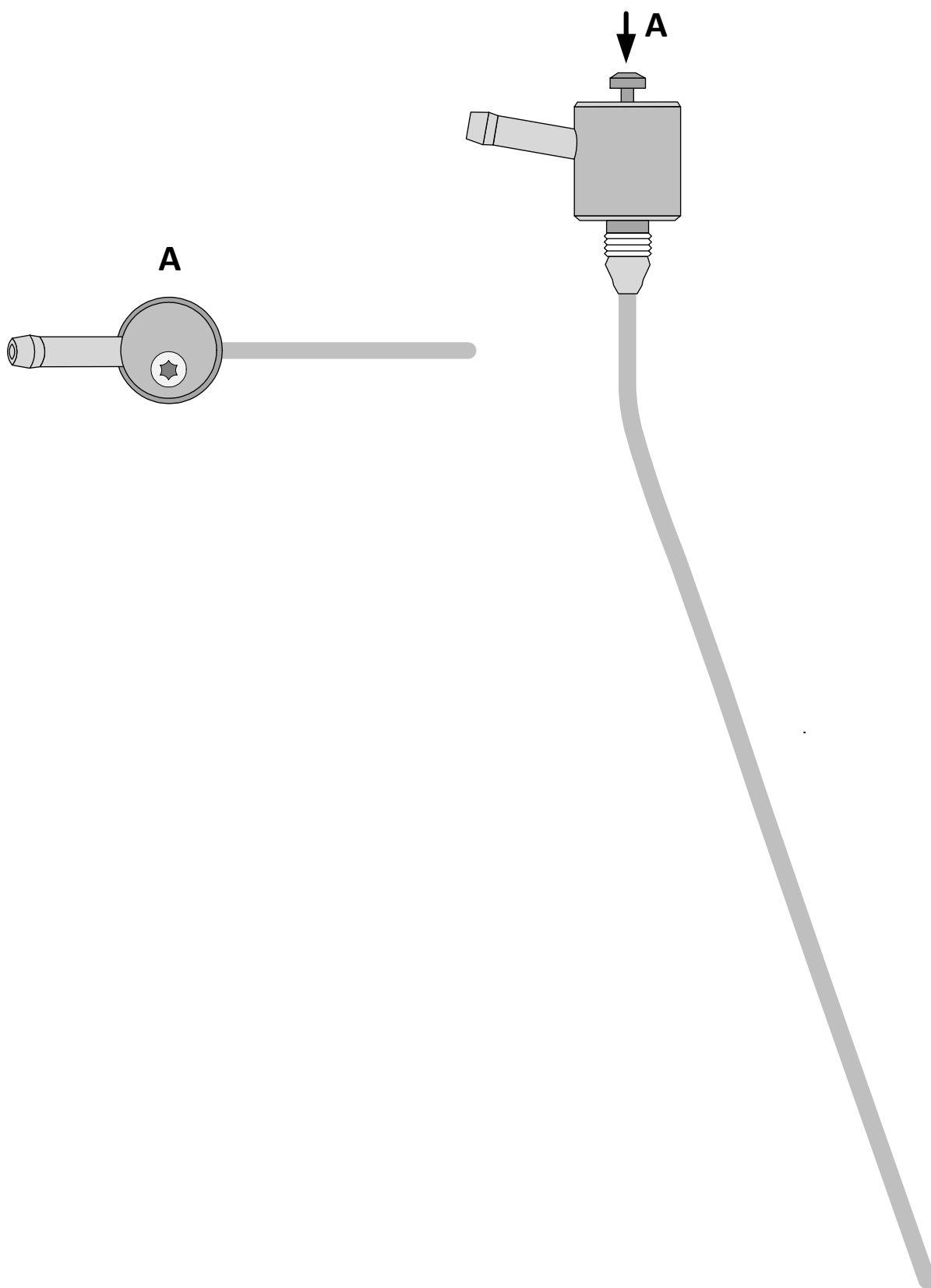
Technical Extranet: <https://dealers.webasto.com>



WWW.WEBASTO.COM



17 FuelFix template



100mm

Scale 1:1
Compare size of printout with dimension lines.
Maximum permitted tolerance 2%.
Set the printer settings to no 'margin' or 'minimise margins' and 100% of the normal size.

0

100mm

