

K Installation Documentation

for water heater Thermo Top Evo

'Inline' coolant circuit with engine preheating

Cupra Formentor

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE
Cupra	Formentor	KM	from 2021	e9* 2007/46* 4008*...

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm ³]	Engine code
1.5P	Petrol	Euro 6d Temp	DSG	110	1498	DPCA
1.5P	Petrol	Euro 6d Temp	6-speed SG	110	1498	DPCA

Validity	Equipment variants	Model
		Formentor
Verified equipment variants	Automatic air-conditioning (3-zone)	X
	Full LED	X
	Keyless Go	X
	Automatic Start-Stop system	X
	Start button	X

Total installation time	Note
8.7 hours	

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1 List of abbreviations

CR	Cronus (passenger compartment control unit)
DP	Fuel pump
DSG	Direct gear transmission
FF	FuelFix (tank extracting device)
HG	Heater
MY	Model year
SG	Manual transmission
SH2	Engine compartment fuse holder for F1/F2/F3
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
Delivery scope for VW Golf VIII / Audi A3 MY 2020 / VW Caddy / Cupra Formentor MY 2021 petrol Cronus TT-Evo	1328169D
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list
The following must also be ordered for the ThermoConnect option: retrofitting Y adapter wiring harness	1319820_

2.3 Necessary software

Designation	Download via
9040790_Software Update - Cronus VW MQB ▶ For information about the download see section 'Preparing measures'	Dealer portal

2.4 Notes on installation, in coordination with the end customer

- ▶ Arrange for the vehicle to be delivered with the tank only about ¼ full.
- ▶ The installation location of the following elements should be chosen in coordination with the end customer:
 - the Cronus push button as well as the push button in case of the Telestart and/or ThermoConnect options
 - the MultiControl CAR option

2.5 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.

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.



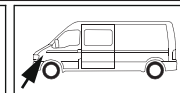
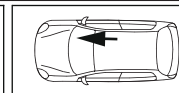
Note on a special technical feature

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
✓	Action
►	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 components as well as 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"> ▶ Disconnect the battery ▶ Engine design cover ▶ Air filter complete with intake box above the radiator ▶ Battery ▶ Battery carrier ▶ Engine compartment relay and fuse box cover ▶ Front wheel on the front passenger's side ▶ Wheel well trim on the front passenger's side (front part) ▶ Horn on front passenger's side with bracket ▶ Engine underdrive protection ▶ Underbody underdrive protection on the front passenger's side 	
Passenger compartment	<ul style="list-style-type: none"> ▶ Side instrument panel trim on the driver's and front passenger's side ▶ Glove box ▶ Shift gate trim ▶ Rear bench seat ▶ Open the tank fitting service lid on the front passenger's side 	

5.2 Preparations for Cronus

Engine compartment	<ul style="list-style-type: none"> ▶ Download the software specified in section 'Necessary software' from the Dealer portal at https://dealers.webasto.com/: <ul style="list-style-type: none"> ⇒ Dealer Portal ▶ Product Services ▶ Software & Tools ▶ Cronus Software <p>The software will be used according to section 'Final work' under the item 'Downloading software to Cronus'.</p>	
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5.3 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

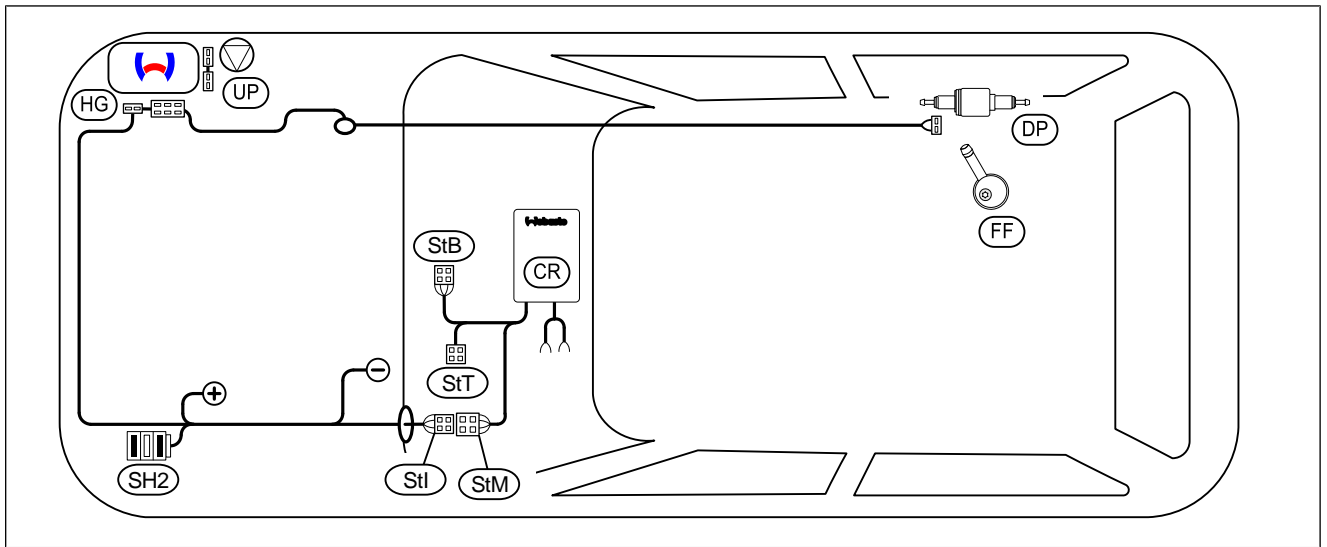
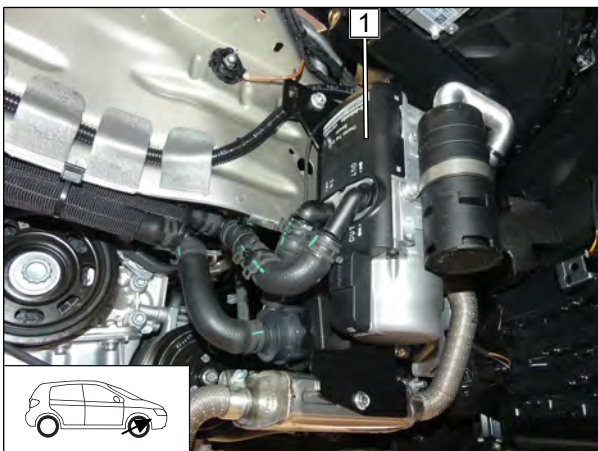


Fig. 1

Legend to installation overview

Abbreviation	Component
CR	Cronus (passenger compartment control unit)
DP	Fuel pump
FF	FuelFix
HG	Heater assembly
SH2	Engine compartment fuse holder for F1/F2/F3
StB	Female plug for control element wiring harness
StI	Female plug for passenger compartment wiring harness
StM	Male plug for engine compartment wiring harness
StT	Male plug for push button wiring harness
UP	Coolant pump

Heater assembly installation location



1 Heater assembly

Fig. 2



7 Electrical system of engine compartment

Removing cover

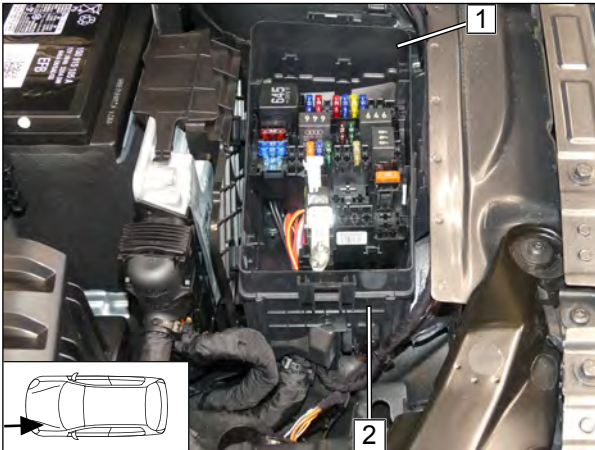


Fig. 3

- ▶ Remove front cover **2** of engine compartment fuse and relay box **1**.

Copying hole pattern, drilling hole

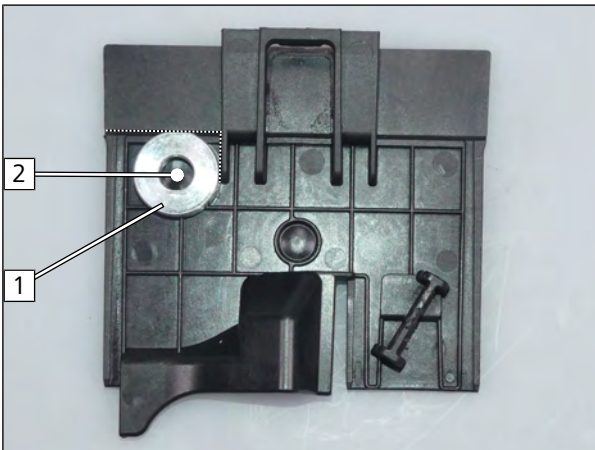


Fig. 4

- ▶ Position spacer (5) **1** on front cover, copy hole pattern **2** and drill $\varnothing 6$ hole.

Premounting retaining plate of SH2

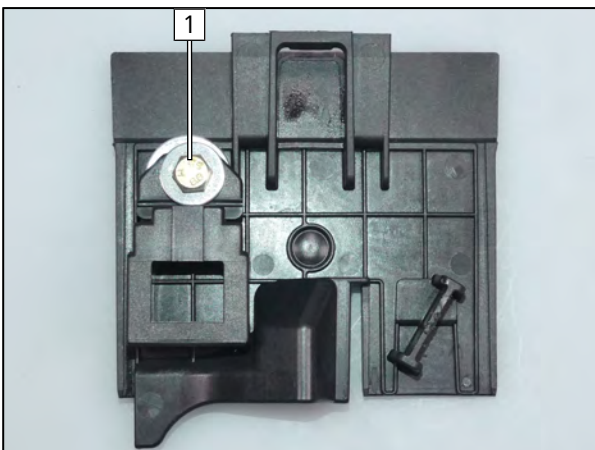


Fig. 5

- 1** M5x20 bolt, large diameter washer, SH2 retaining plate, spacer (5), front cover, retaining plate, nut



Preparing wiring harness

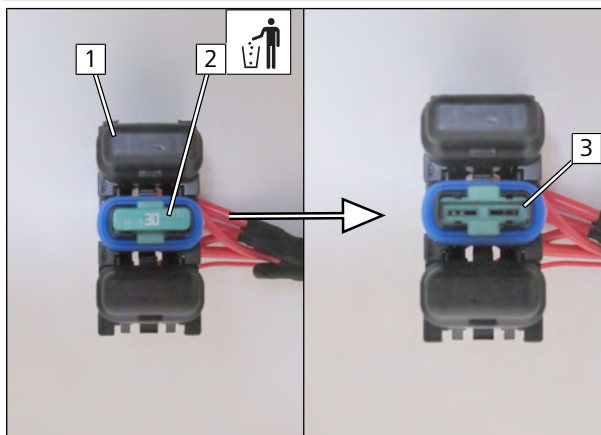


Fig. 6

Remove and discard 30A fuse **2** from SH2 **1**.

3 Fuse removed

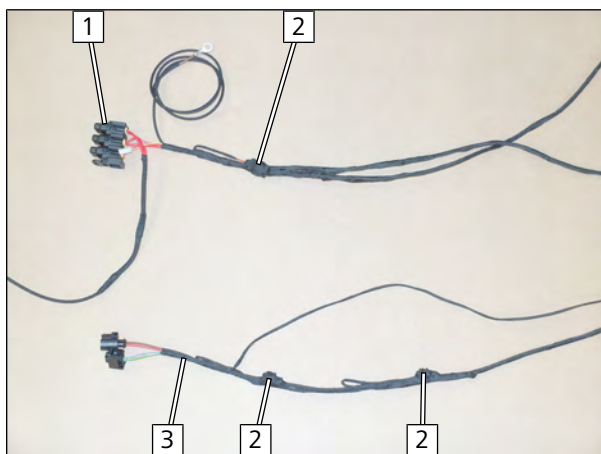


Fig. 7

Tie back connectors **2** using insulating tape, they will not be reused.

1 SH2

3 Heater wiring harness

Mounting cover and SH2

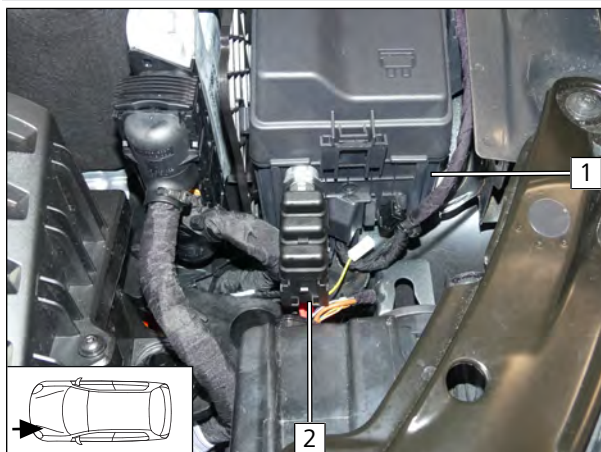


Fig. 8

1 Front cover

2 SH2 with F1, F2 (empty) and F3



Routing wiring harnesses

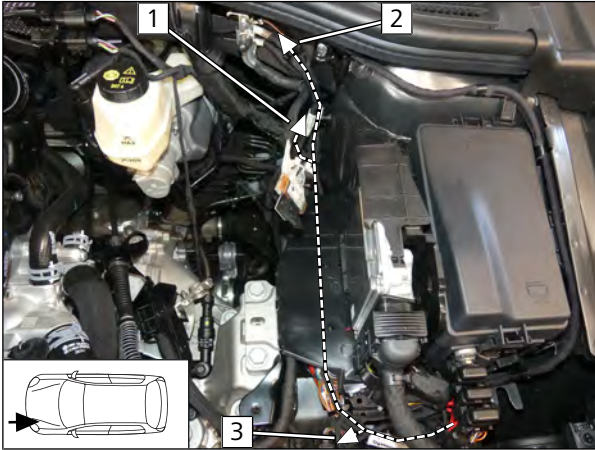


Fig. 9

- 1 Passenger compartment wiring harness
- 2 Earth wire
- 3 Heater wiring harness

Earth wire connection

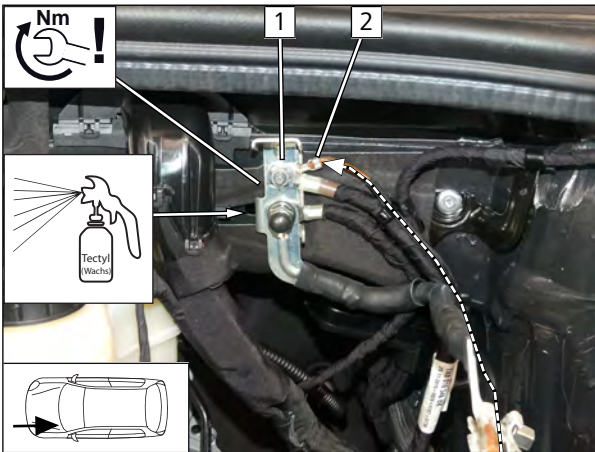


Fig. 10



DANGER

Observe tightening torque

- 1 Original vehicle earth point
- 2 Earth wire

Passenger compartment wiring harness pass through

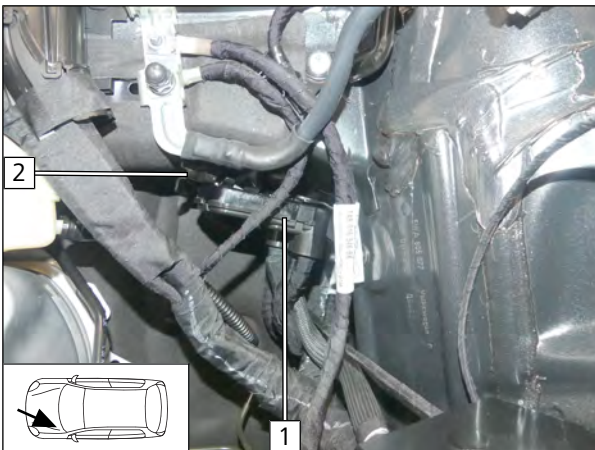
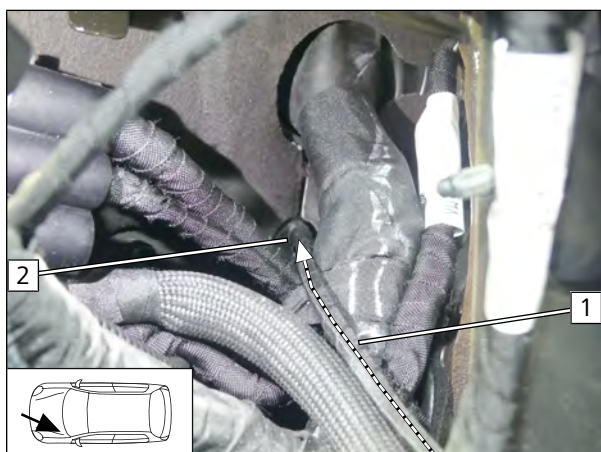


Fig. 11

- Remove positive distributor 1 from bracket 2.

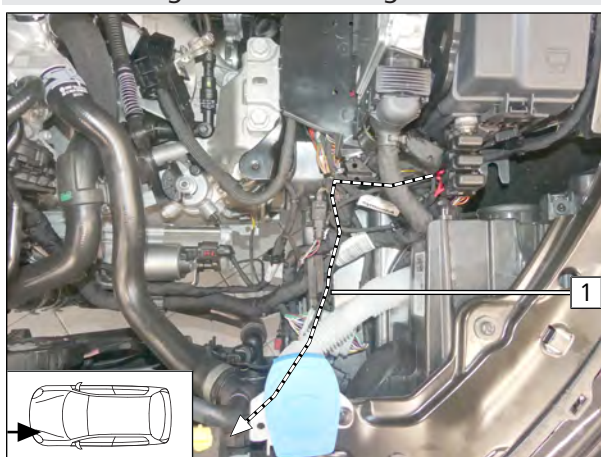


To prevent water seeping into the passenger compartment, the wiring harness must be routed upwards to the protective rubber plug and this plug must then be sealed with a suitable sealing compound.

- 1 Passenger compartment wiring harness
- 2 Pass through in protective rubber plug (open using suitable means)

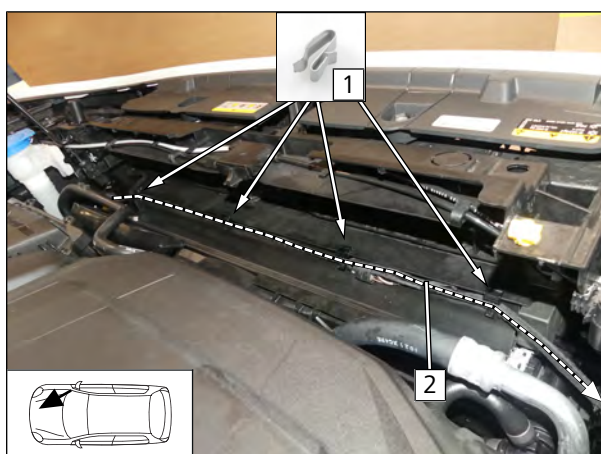
Fig. 12

Heater wiring harness routing



- 1 Heater wiring harness

Fig. 13



- 1 Edge clip
- 2 Heater wiring harness

Fig. 14

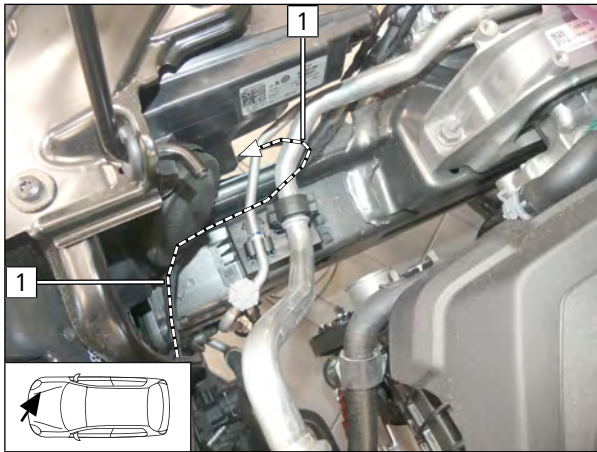


Fig. 15

- 1 Heater wiring harness

Positive wire connection

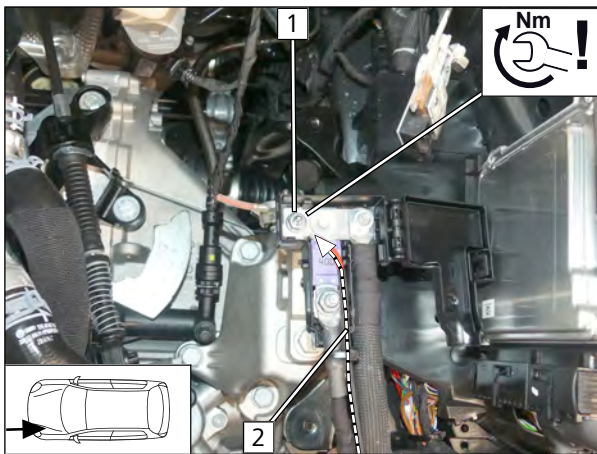


Fig. 16



DANGER

Observe tightening torque

- 1 Original vehicle positive point
- 2 Positive wire



8 Mechanical system

8.1 Installation location preparation

Removing deflector and horn, detaching original vehicle wiring harness

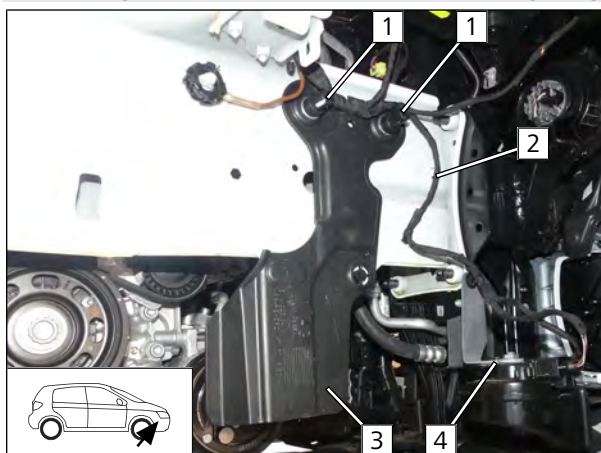


Fig. 17

- ▶ Remove and discard original vehicle wiring harness bracket **1**.
- ▶ Remove and discard deflector **3** (if present).
- ▶ Remove horn with bracket **4**.
 - 2** Original vehicle wiring harness

Mounting horn

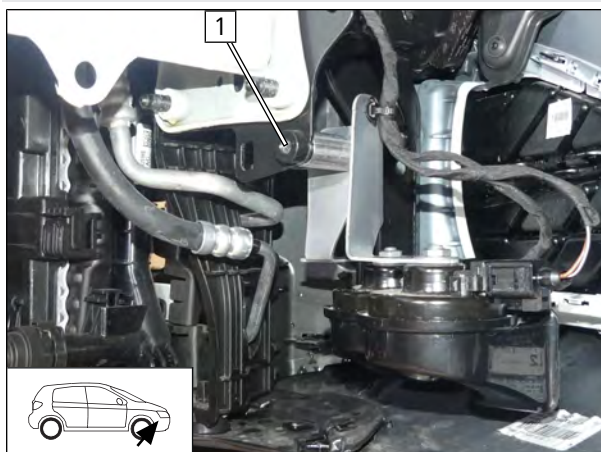


Fig. 18

- 1** M8x55 bolt, spring lock washer, horn bracket, spacer (40), original vehicle threaded hole



Danger of damage to components

- ▶ Ensure sufficient distance from neighbouring components, correct if necessary.

Routing original vehicle wiring harness

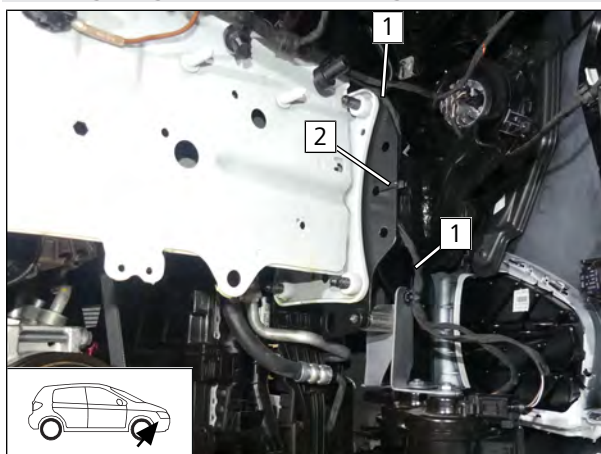


Fig. 19

- 1** Original vehicle wiring harness
- 2** Cable tie



Aligning original vehicle tab

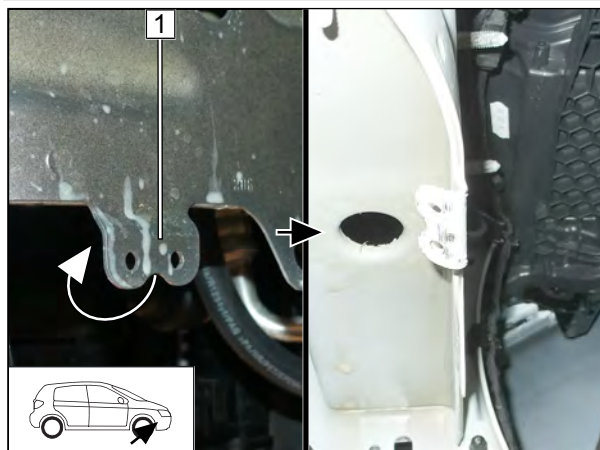


Fig. 20

► Bend original vehicle tab **1** as shown.

Positioning spacer

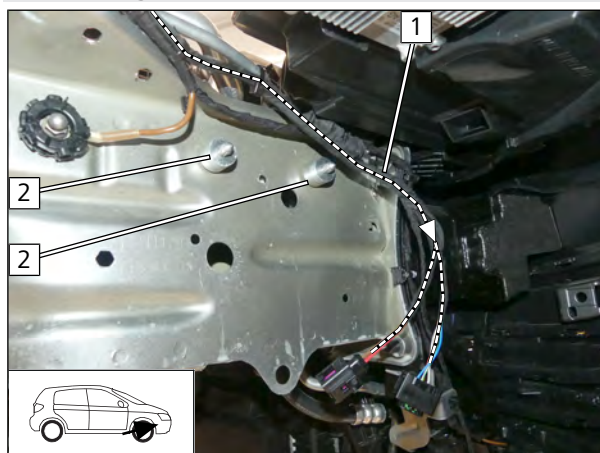


Fig. 21

- 1** Heater wiring harness
- 2** Spacer (10) and spacer (5) on original vehicle stud bolt

8.2 Heater assembly installation

View of heater assembly



Fig. 22

- 1** Heater inlet connection
- 2** Heater outlet connection
- 3** Fuel line



Assigning heater assembly hoses

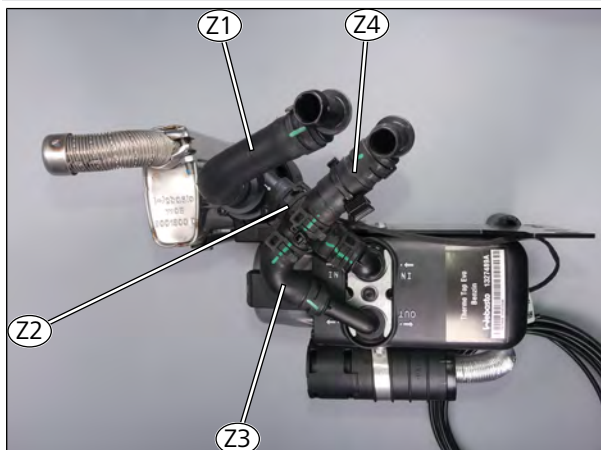


Fig. 23

- Z1** Coolant pump inlet hose section
- Z2** Coolant pump outlet/heater inlet hose section
- Z3** Heater outlet hose section
- Z4** Hose section on hose **Z3** (heater outlet)

Premounting spacer



Fig. 24

- 1** 10 spacer

Mounting HG wiring harness

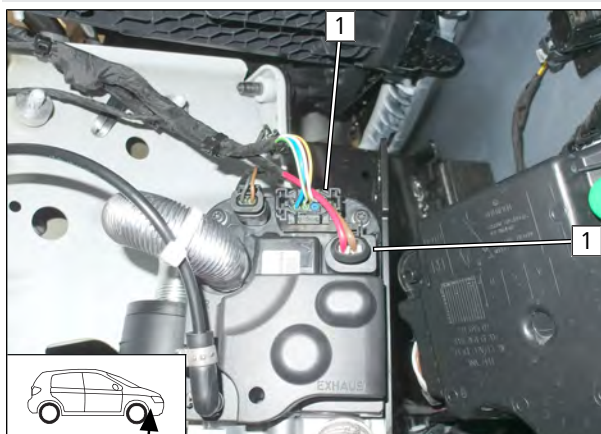


Fig. 25

- 1** Heater wiring harness connector



Heater assembly installation

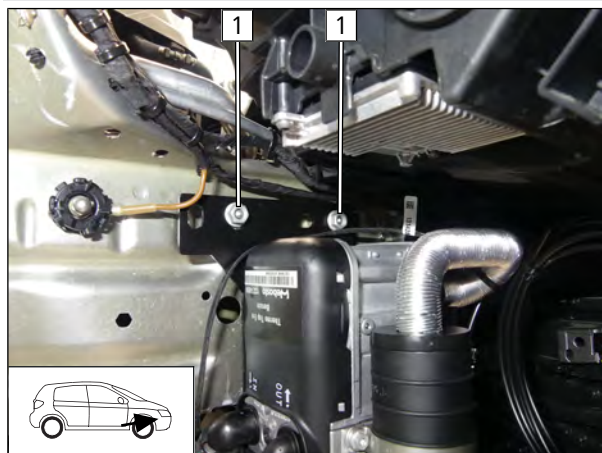


Fig. 26

► Mount flanged nut **1** loosely.

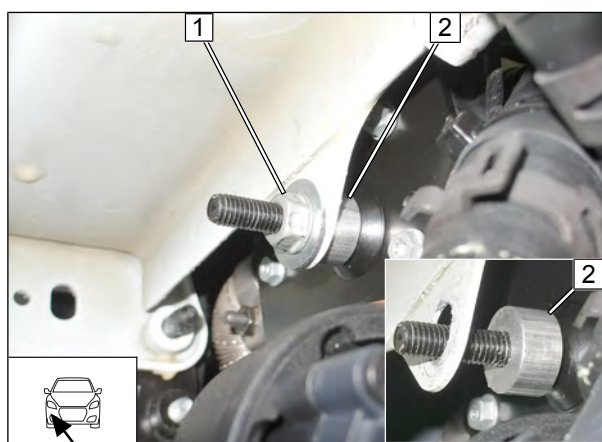


Fig. 27

- 1** Mount heater bracket stud bolt, spacer (10), original vehicle tab, large diameter washer, flanged nut loosely
- 2** Spacer (10)

Checking distance

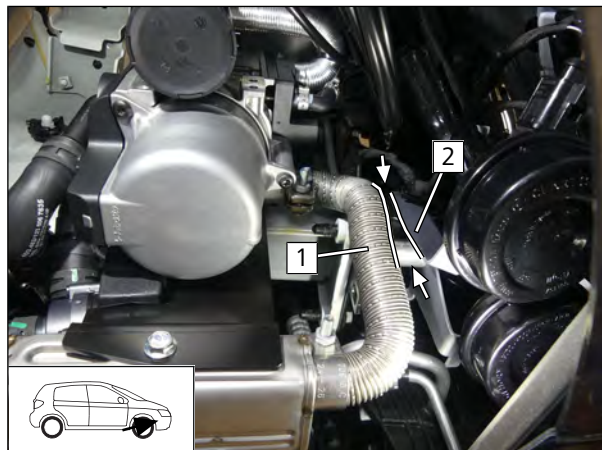


Fig. 28



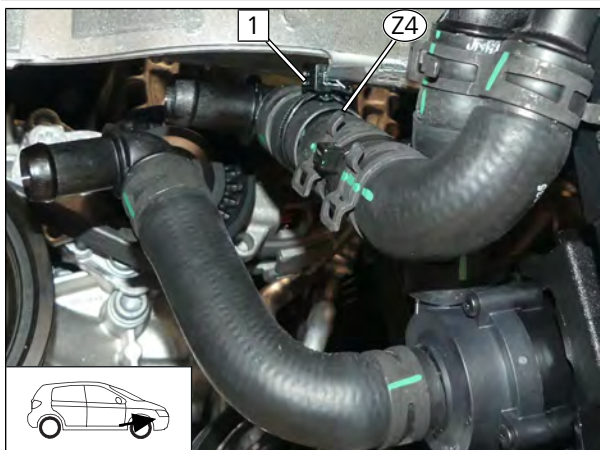
Ensure sufficient distance between exhaust pipe **1** and horn bracket **2**, correct if necessary.



Tighten all the screw connections of the heater assembly.



Fastening hose (Z4)



- 1 Attach edge clip cable tie to folded edge.

Fig. 29



9 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

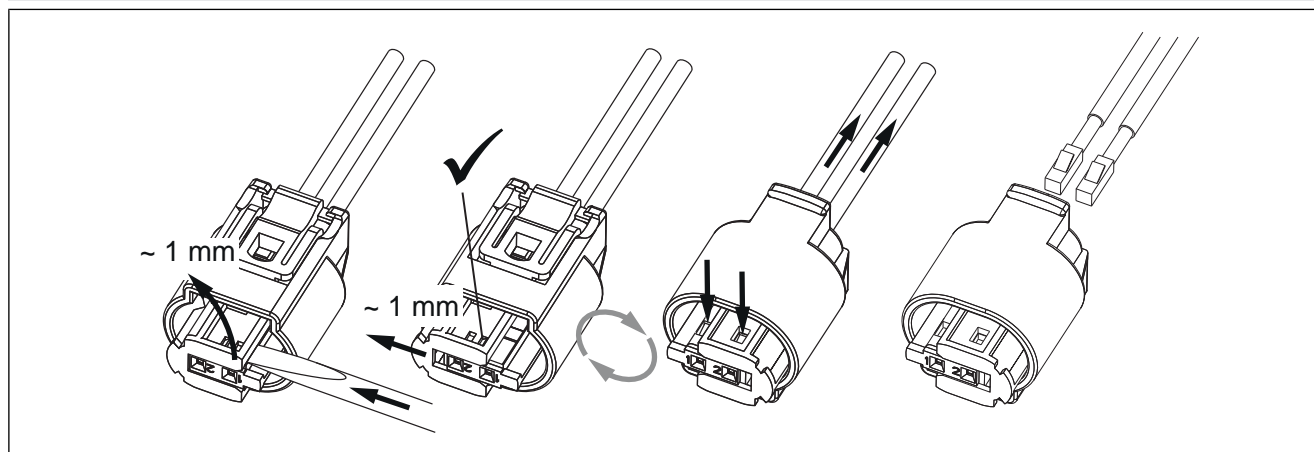


Fig. 30

9.1 Routing fuel line

Cutting to length/assigning corrugated tubes

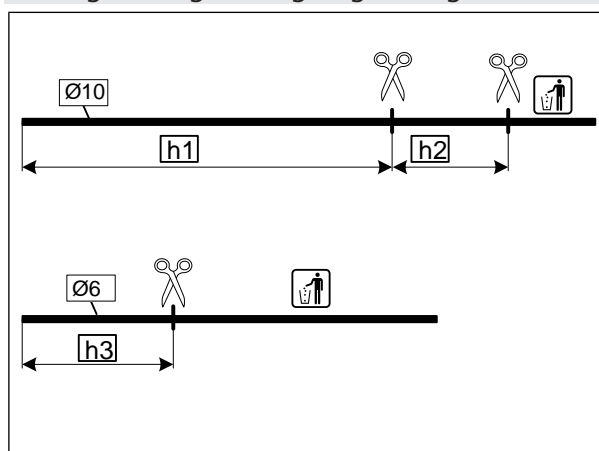


Fig. 31

h1	800
h2	120
h3	270



Routing fuel line in wheel well



Fig. 32

- 1 Fuel line and fuel pump wiring harness in corrugated tube **h1**
- 2 Cable tie

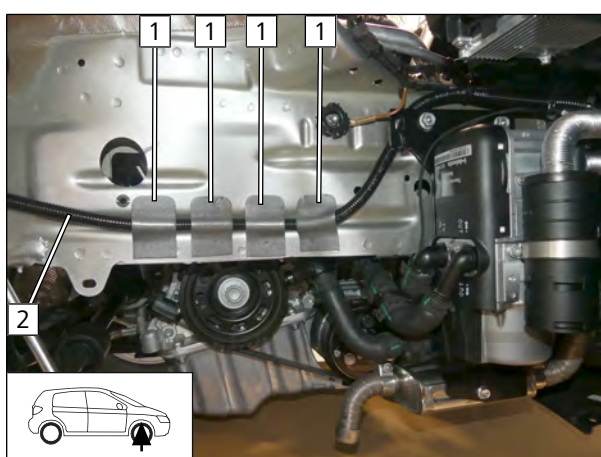


Fig. 33

- 1 Self-adhesive foam cut in half
- 2 Fuel line and fuel pump wiring harness in corrugated tube **h1**

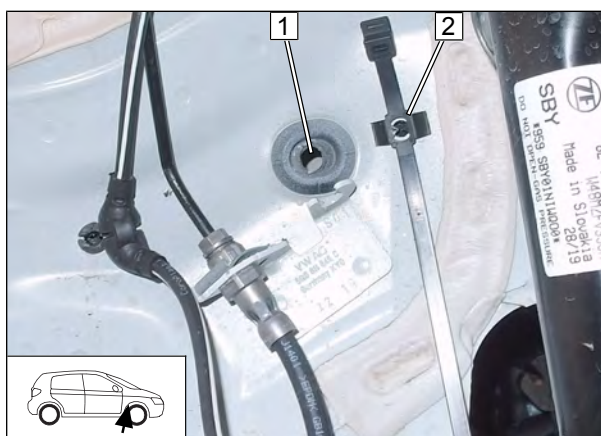


Fig. 34

- Pierce original vehicle pass through **1** in the middle as shown.
- 2 Eyelet cable tie in original vehicle hole



Routing fuel line to underbody

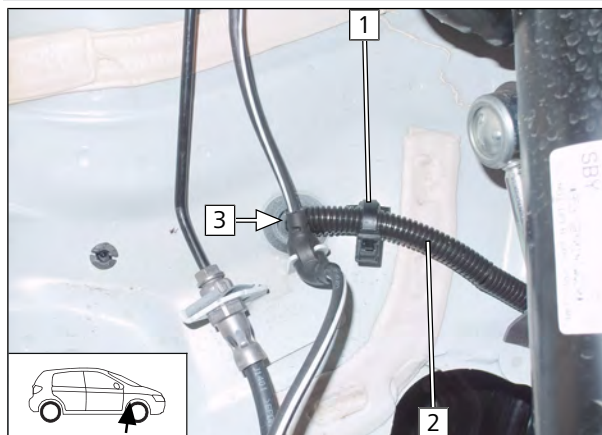


Fig. 35

► Route the fuel line and the fuel pump wiring harness through the crossbeam of the vehicle to the fuel pump installation location (see next fig.). Corrugated tube **2** ends at pass through **3**.

- 1** Close eyelet cable tie
- 2** Fuel line and fuel pump wiring harness in corrugated tube **h1**

Preparing fuel pump installation location

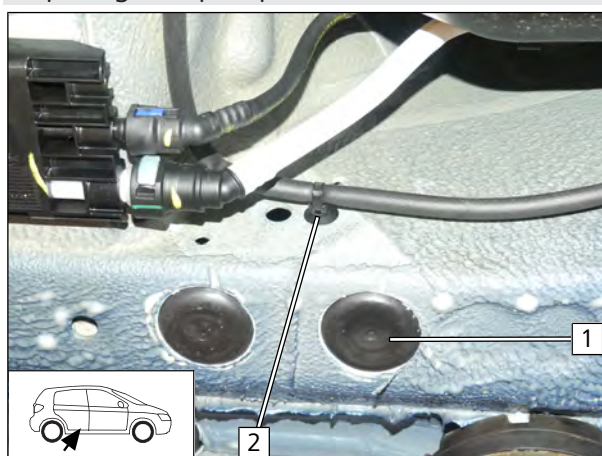


Fig. 36

► Remove clip-type cable tie **2** and plug **1**.

Premounting bolt

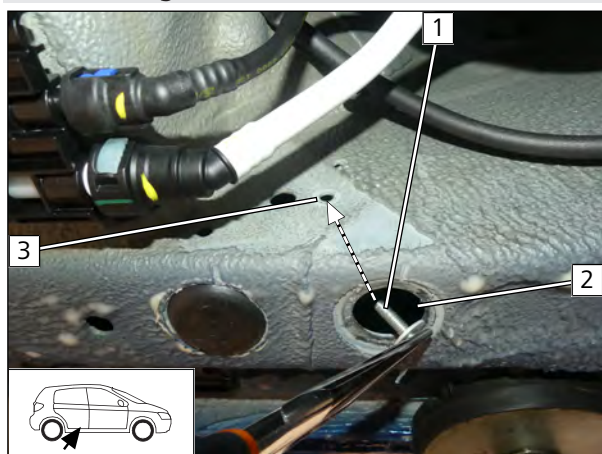


Fig. 37

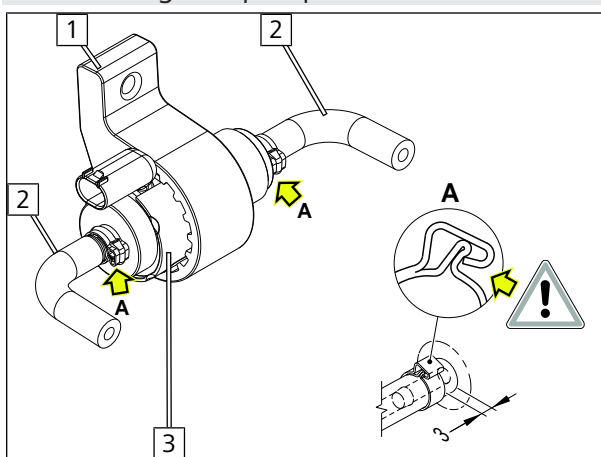
- 1** M6x20 bolt, large diameter washer
- 2** Assembly opening
- 3** Original vehicle hole



- 1 Lock washer

Fig. 38

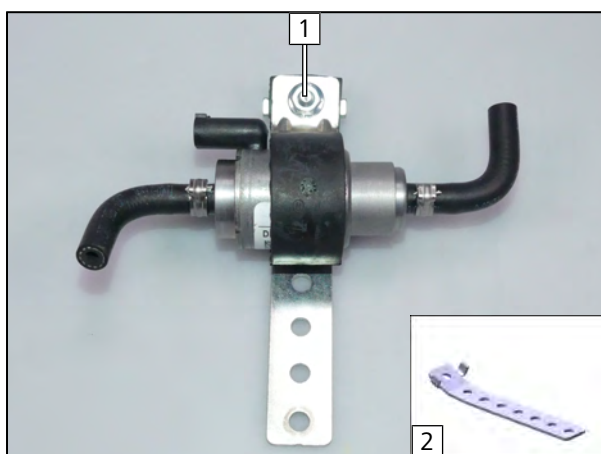
Premounting fuel pump



The alignment of the fuel pump and fuel hoses will be carried out afterwards, during the installation.

- 1 Fuel pump mount
- 2 90° moulded hose, Ø10 clamp
- 3 Fuel pump

Fig. 39



- 1 M6x25 bolt, perforated bracket 2, fuel pump mount, support angle bracket, flanged nut

Fig. 40



Assembling fuel pump connector X7

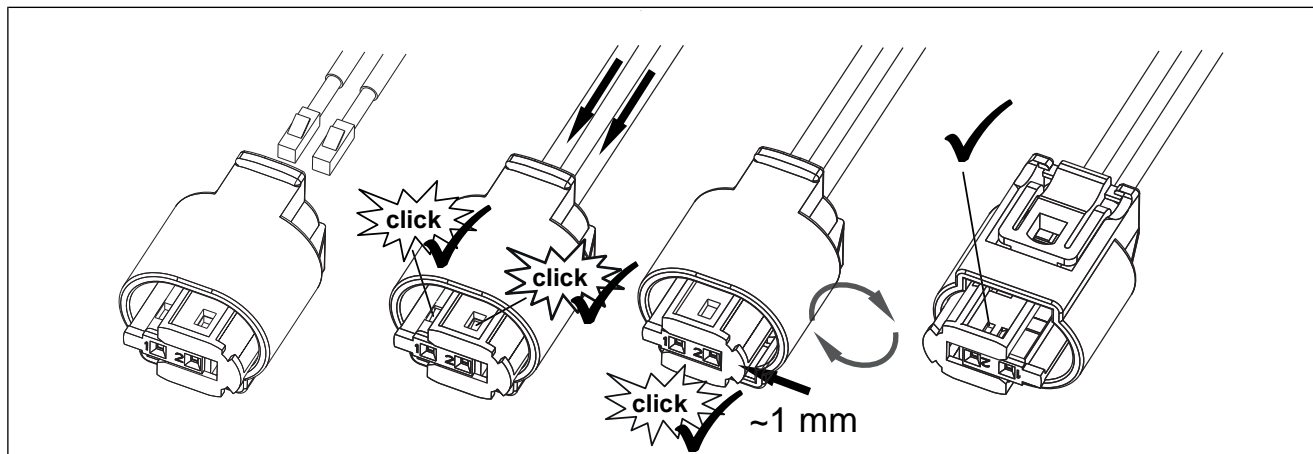


Fig. 41

Mounting and connecting fuel pump



Fig. 42

- 1 Sealing plug, mounted
- 2 Premounted fuel pump, premounted M6x20 bolt, flanged nut
- 3 Installing clip-type cable tie

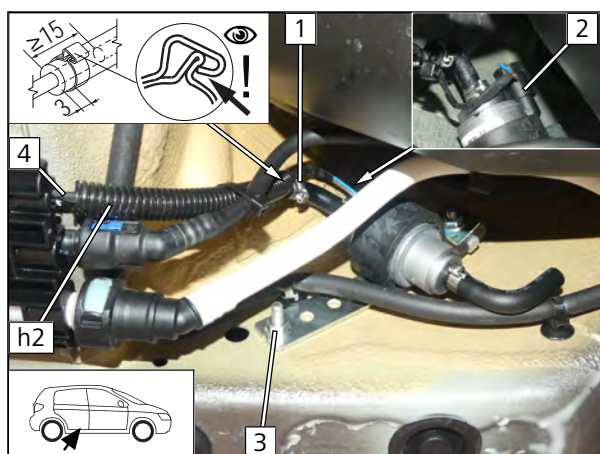


Fig. 43

- 1 Ø10 clamp
- 2 Fuel pump wiring harness, connector X7 mounted
- 3 Premounted M6x20 bolt, premounted fuel pump, flanged nut
- 4 Fuel line in corrugated tube **h2**

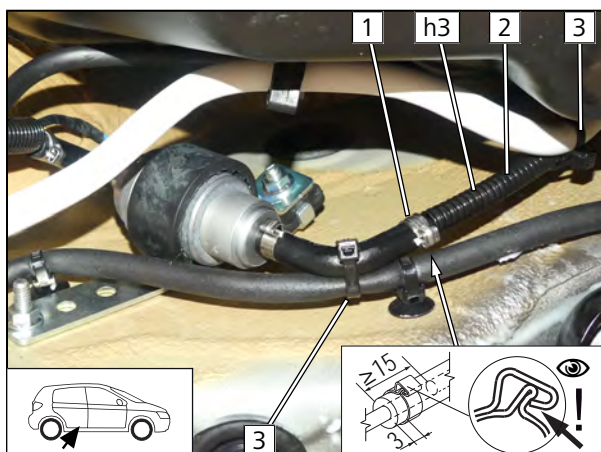


Fig. 44

► Draw fuel line into corrugated tube **h3** and route to tank fitting.

- 1** Ø10 clamp
- 2** Fuel line in corrugated tube **h3**
- 3** Cable tie

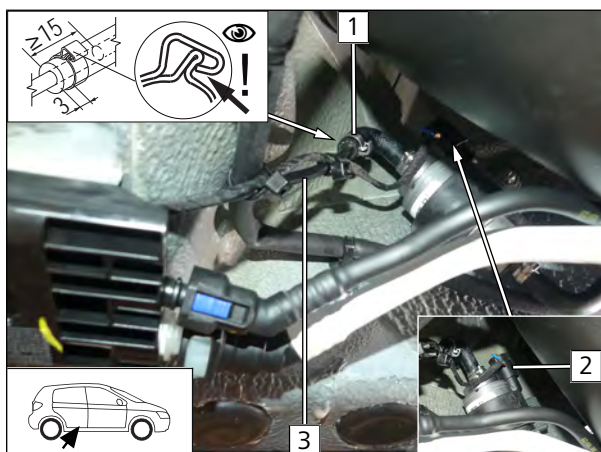


Fig. 45

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

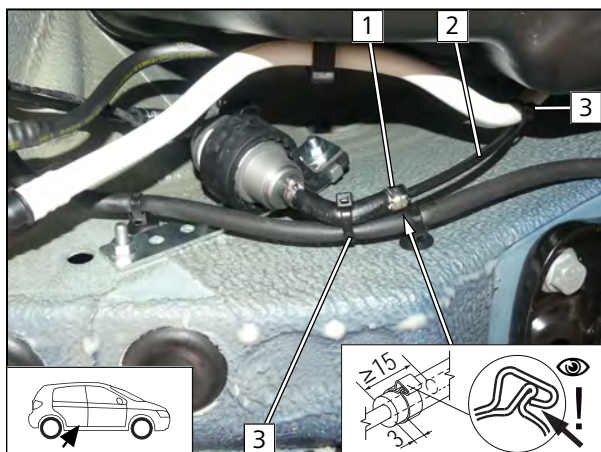


Fig. 46

- 1** Ø10 clamp
- 2** Fuel line
- 3** Cable tie



9.2 Installing FuelFix

Preparing drilling template

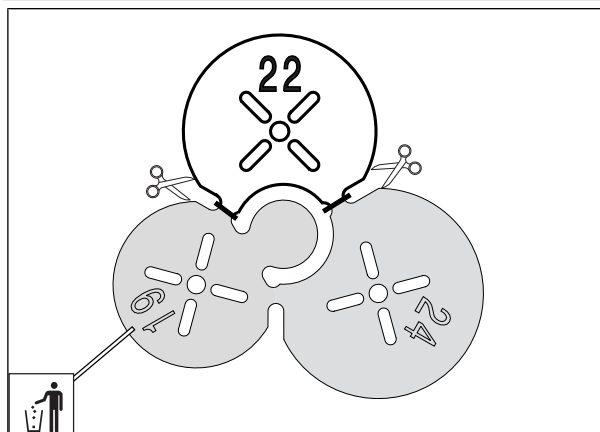


Fig. 47

Moving label

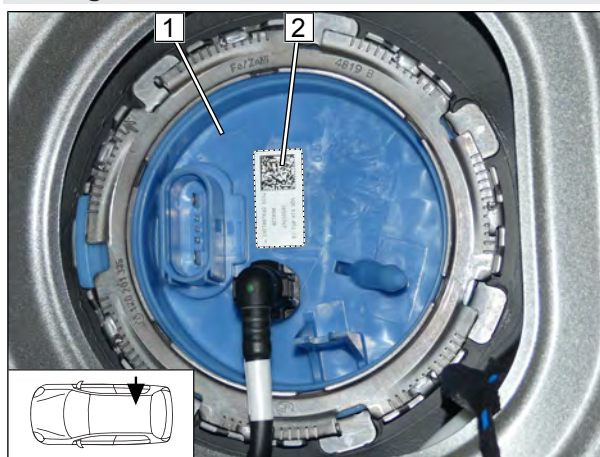


Fig. 48

► Detach label **2**, it will be glued again at a new position afterwards.

1 Tank fitting

Work steps F1, F2

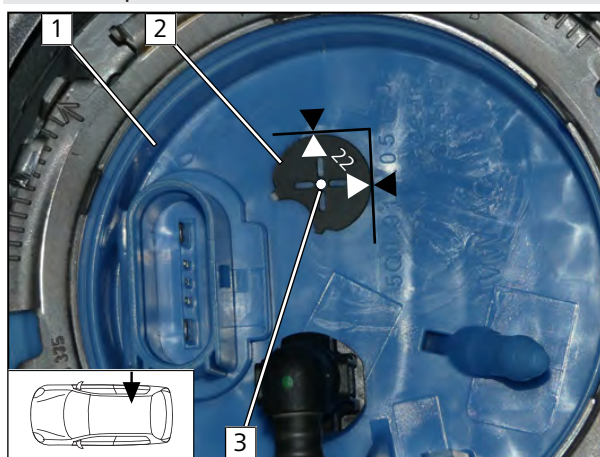


Fig. 49



Observe the installation instructions of the tank extracting device.

► Draw guide line on existing embossing.

1 Tank fitting

2 Position Ø22 drilling template as shown in fig.

3 Hole pattern



Work step F3

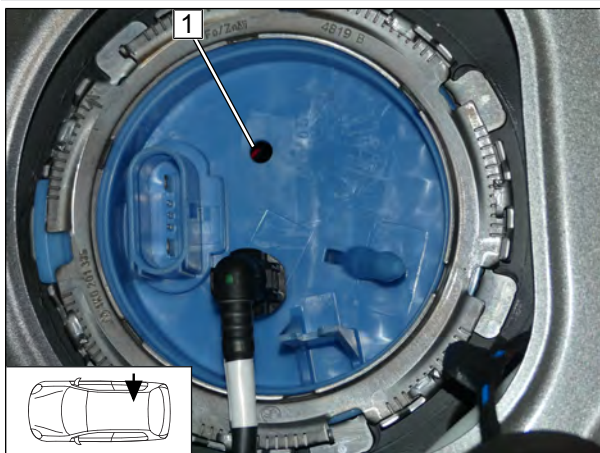


Fig. 50



DANGER

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

- 1 Hole made with provided drill

Work steps F4, F5

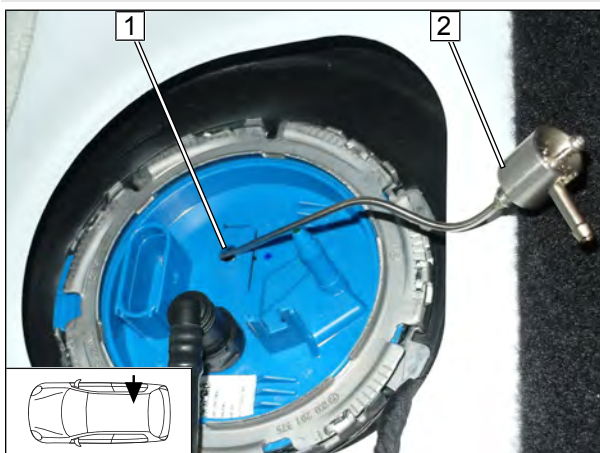


Fig. 51

- Bend FuelFix 2 according to template and cut to length. Insert in hole 1.

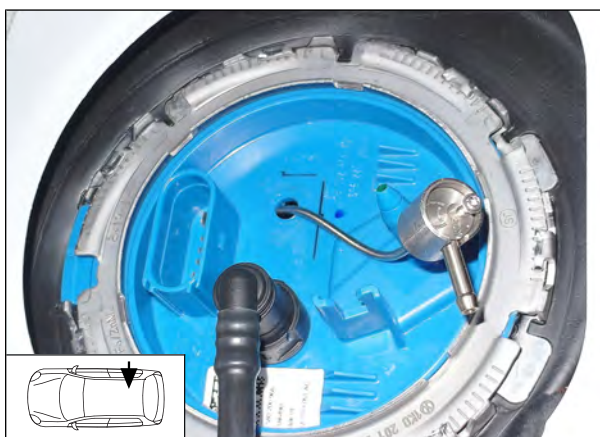


Fig. 52



Fig. 53

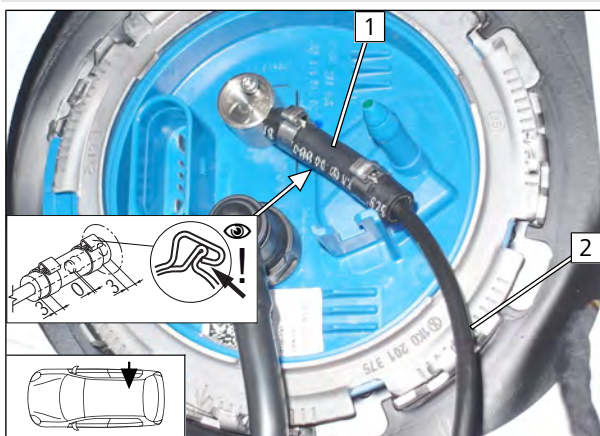
Work steps F5.3, F5.4



► Align FuelFix as shown.

Fig. 54

Work step F6



- 1** Hose section, Ø10 clamp [2x]
- 2** Fuel line

Fig. 55



Work step F7

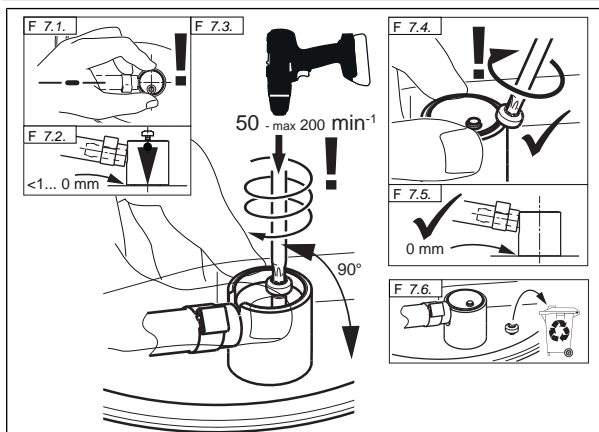


Fig. 56



DANGER

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

Work step F8

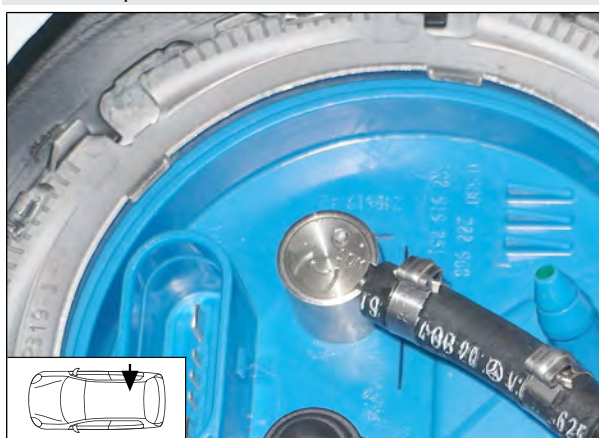


Fig. 57

Moving label

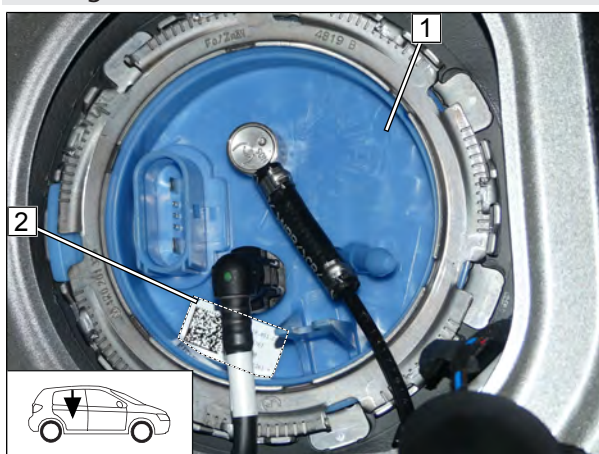


Fig. 58

- 1 Tank fitting
- 2 New position of label



Securing fuel line



► Secure fuel line **1** with cable tie **2** for tension relief.

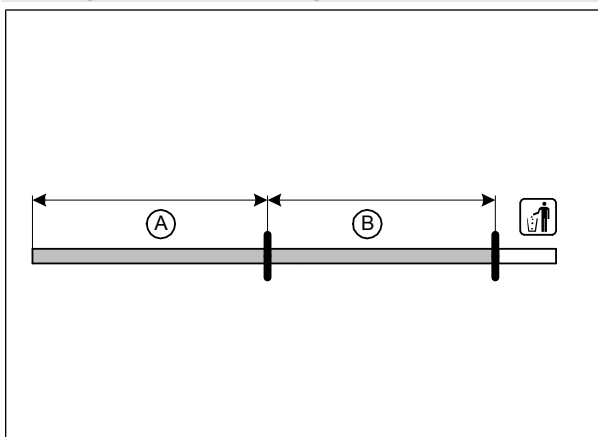
Fig. 59



10 Coolant

10.1 Preliminary Work

Cutting the hose to length

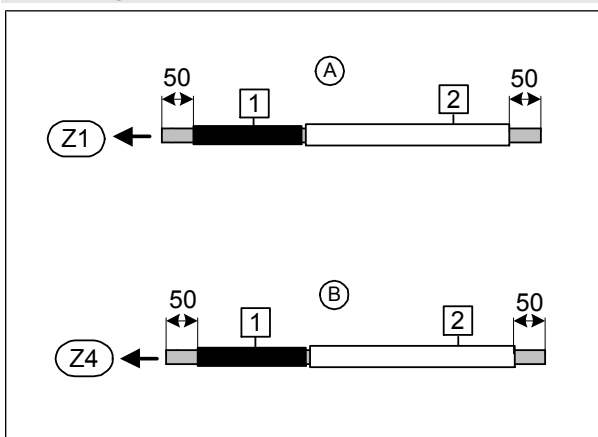


Ⓐ 900

Ⓑ 900

Fig. 60

Preparing hoses

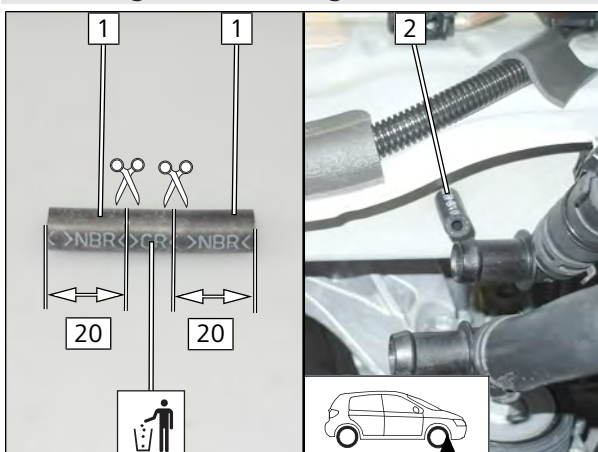


Slide on fabric heat shrink tubing **1** as shown and use 230°C at most to shrink it.

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

Fig. 61

Shortening and mounting hose section



1 Hose section \varnothing 4.5

2 Shortened hose section, original vehicle stud bolt

Fig. 62



Perforated bracket installation

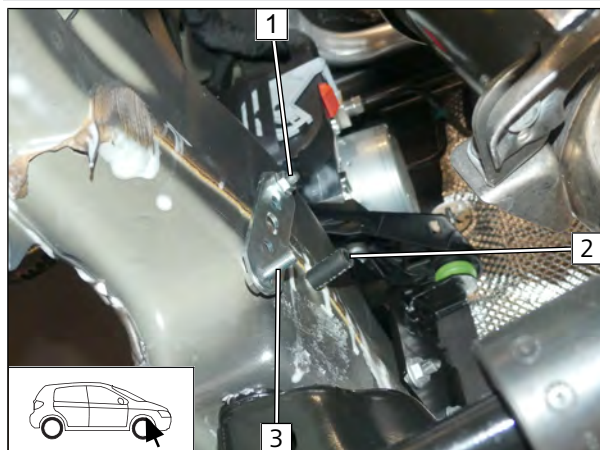


Fig. 63

- 1 Original vehicle stud bolt, perforated bracket, flanged nut
- 2 Shortened hose section
- 3 M6x20 bolt

Drilling hole

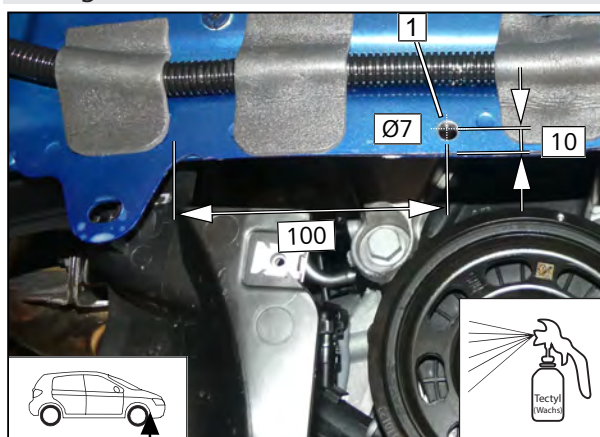


Fig. 64

- 1 Drill hole

Bending perforated bracket

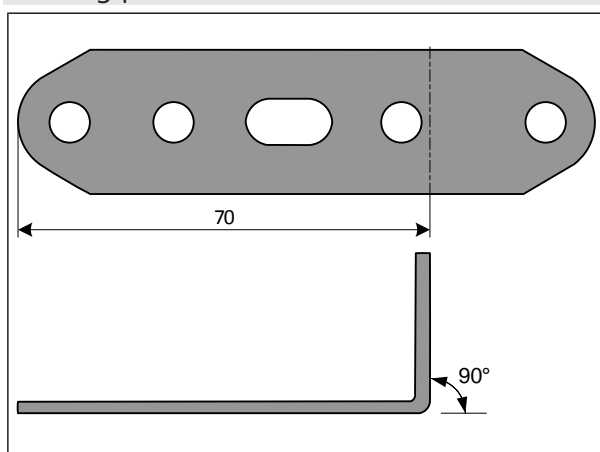


Fig. 65



Installing perforated bracket

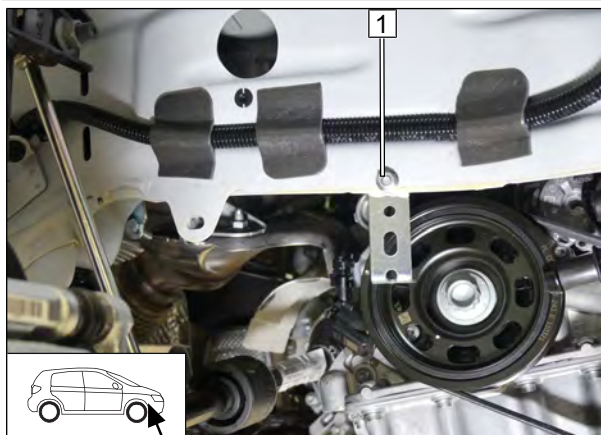


Fig. 66

- 1 M6x12 bolt, perforated bracket, drilled hole, flanged nut

Spacer nut installation

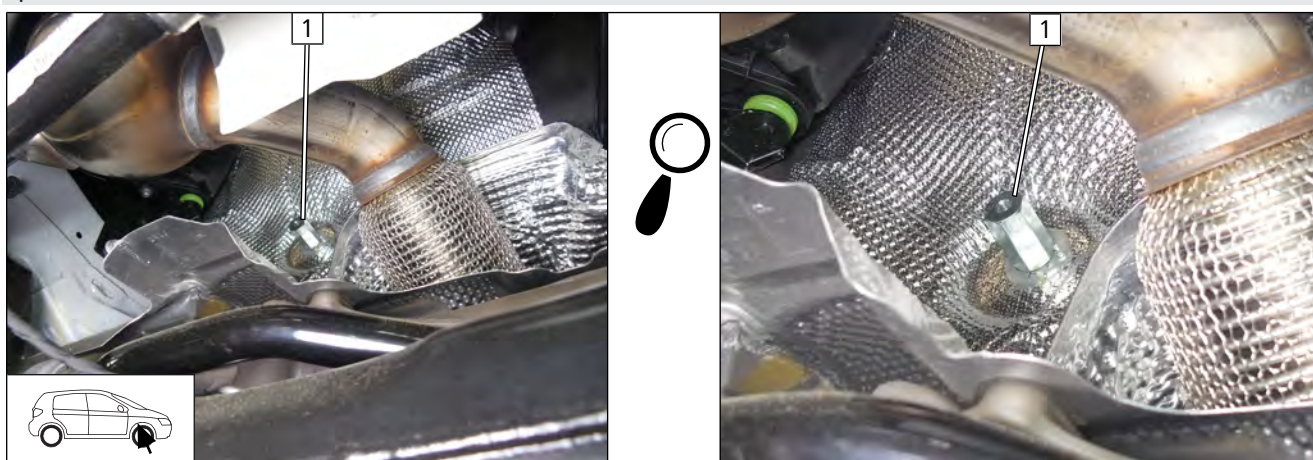


Fig. 67

- 1 M6x30 spacer nut, original vehicle stud bolt



10.2 Hose routing diagram

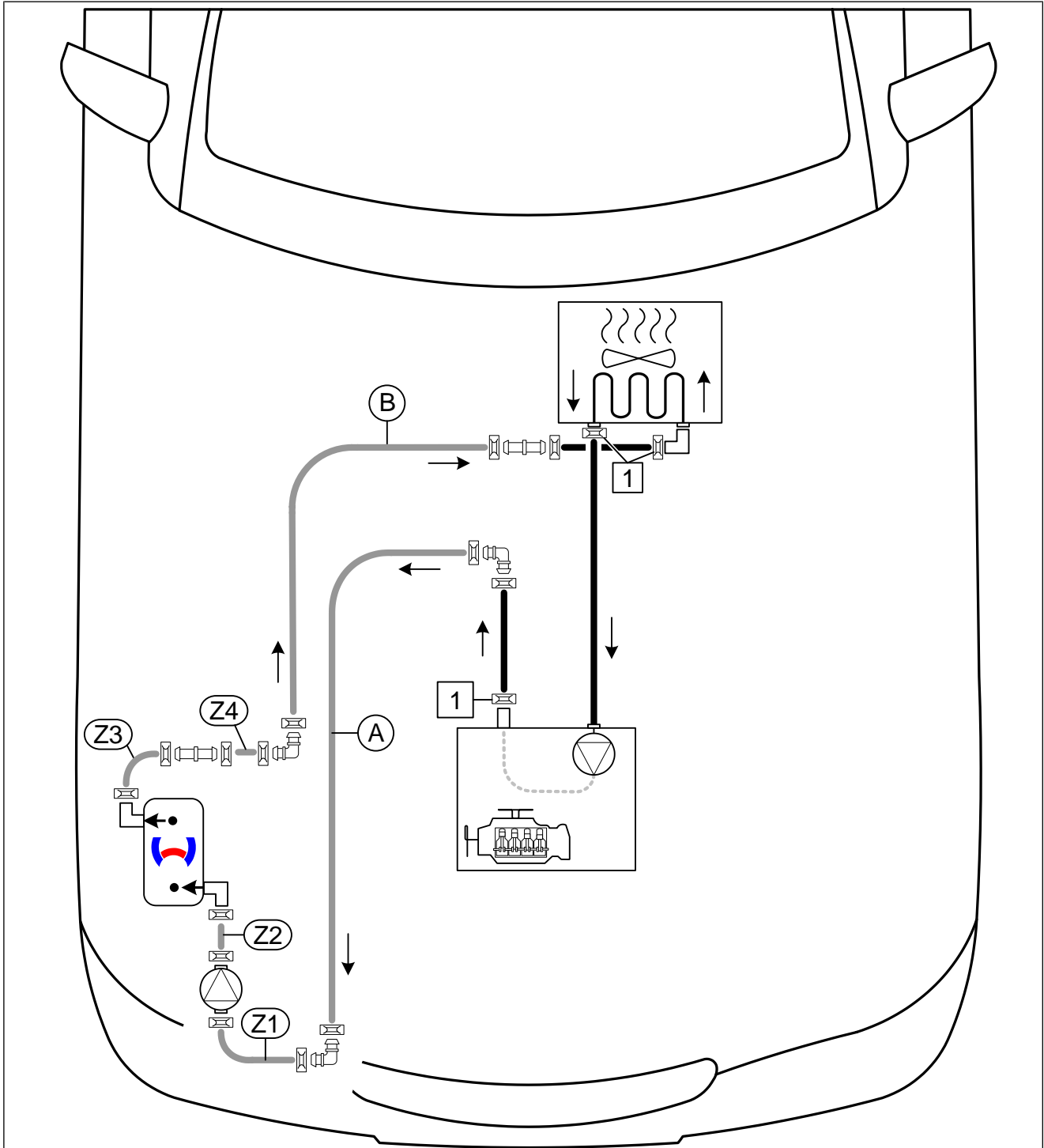




Fig. 68

All spring clips without a specific designation  = Ø25;

All connecting pipes  and  = Ø18x18

1 Original vehicle spring clip



10.3 Coolant circuit installation

Pulling off heat exchanger inlet hose

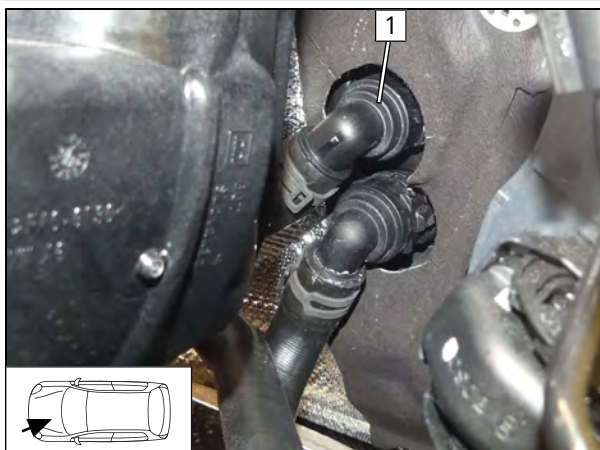


Fig. 69

- ▶ Pull engine outlet / heat exchanger inlet hose with coupling piece **1** from heat exchanger connection piece.

Aligning original vehicle spring clip

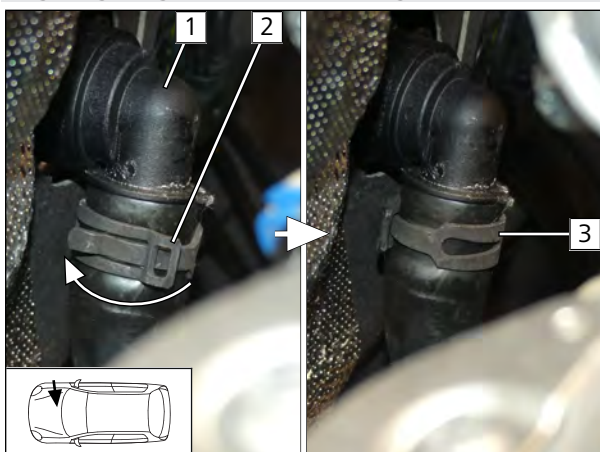


Fig. 70

- 1** Heat exchanger outlet / engine inlet coupling piece
- 2** Old position of original vehicle spring clip
- 3** Original vehicle spring clip, aligned

Cutting point

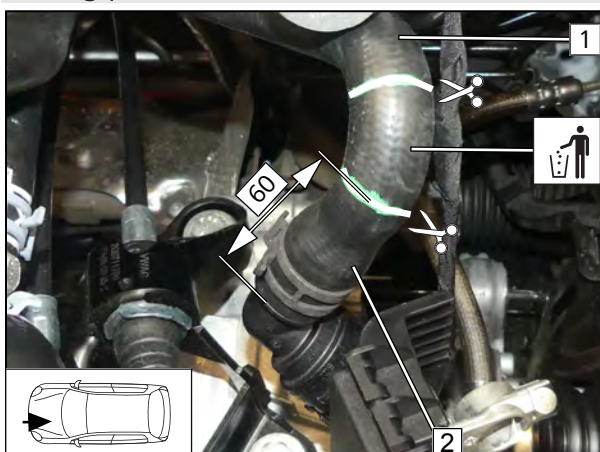


Fig. 71

- ▶ Cut original vehicle engine outlet / heat exchanger inlet hose as shown.

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



Preparing hose section of engine outlet

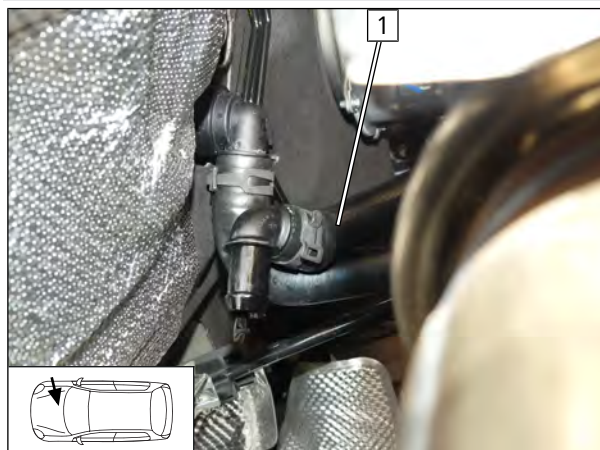


Fig. 72

- 1 Engine outlet hose section

Premounting hose **B**

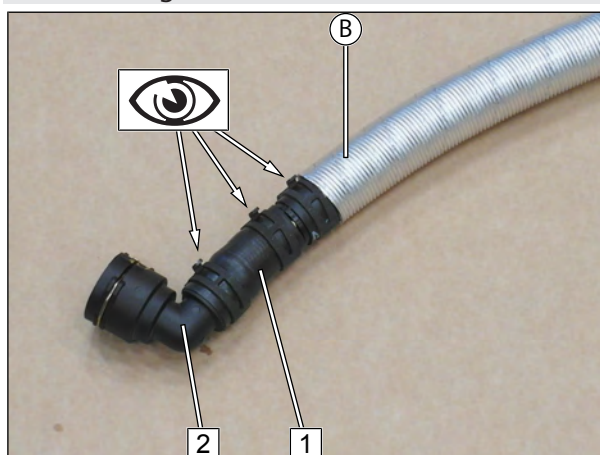


Fig. 73

- 1 Heat exchanger inlet hose section
- 2 Coupling piece

Engine outlet and heat exchanger inlet connection

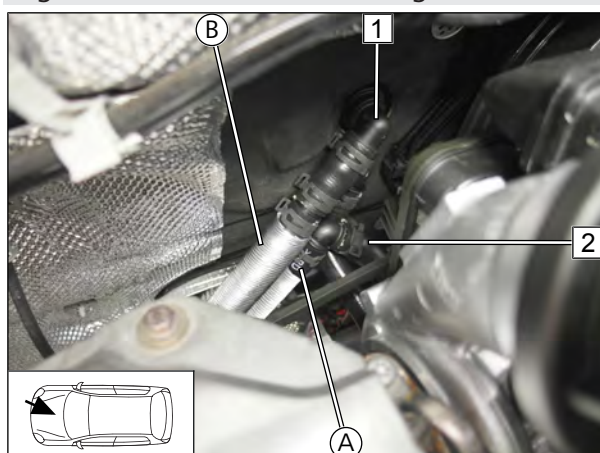


Fig. 74

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



Routing hoses **(A)** and **(B)**

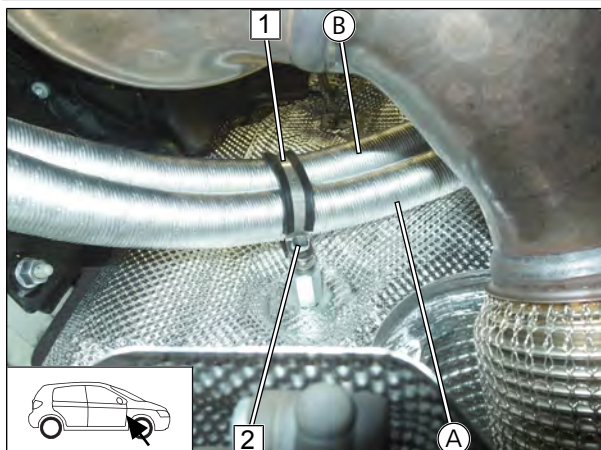


Fig. 75

- 1** Ø48 rubber-coated p-clamp
- 2** Mount M6x16 bolt, spring lock washer, rubber-coated p-clamp, loosely

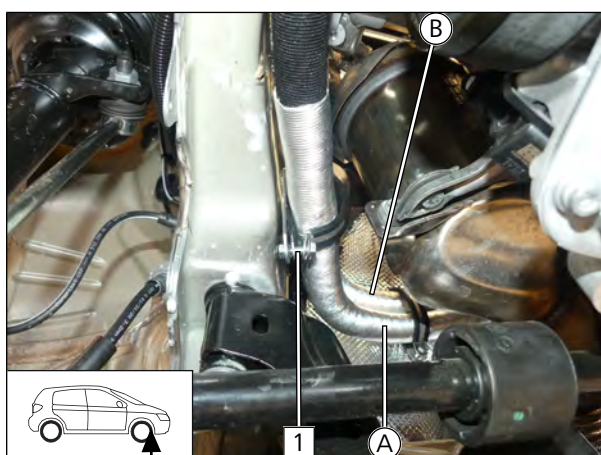


Fig. 76

- 1** M6x20 bolt, perforated bracket, 48mm dia. rubber-coated p-clamp, mount flanged nut loosely

Connecting hoses **(B)** and **(Z4)**

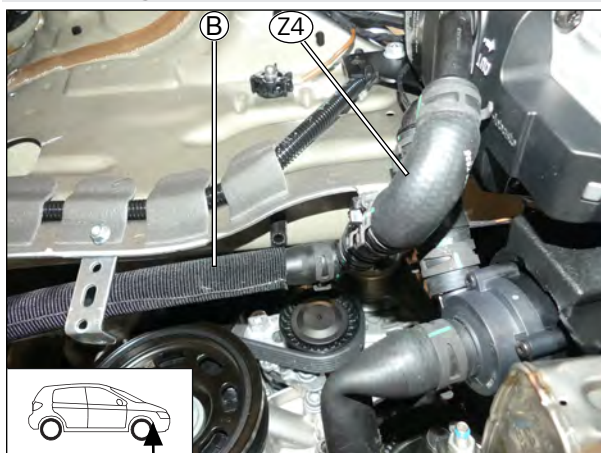


Fig. 77



Connecting hoses **A** and **Z1**

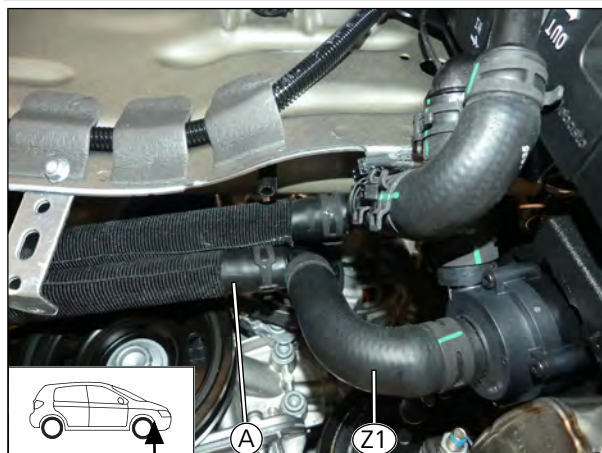


Fig. 78

Fastening hoses **A** and **B**

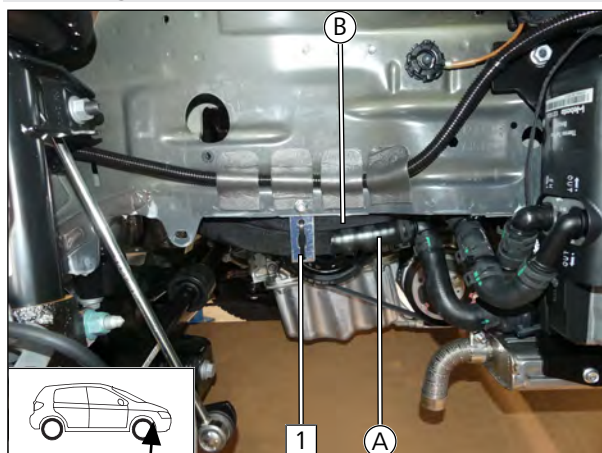


Fig. 79

- 1 Cable tie
- 2 Cable tie

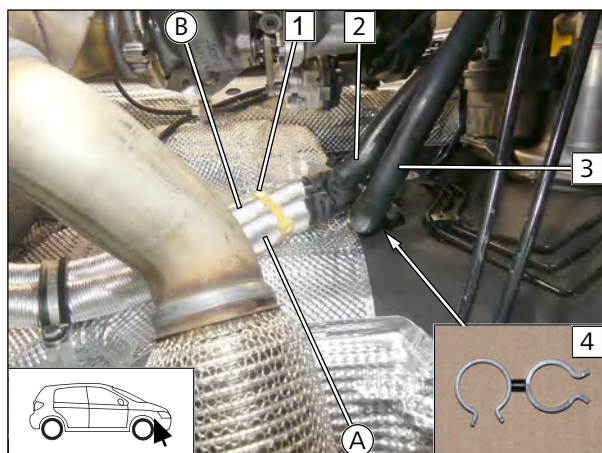
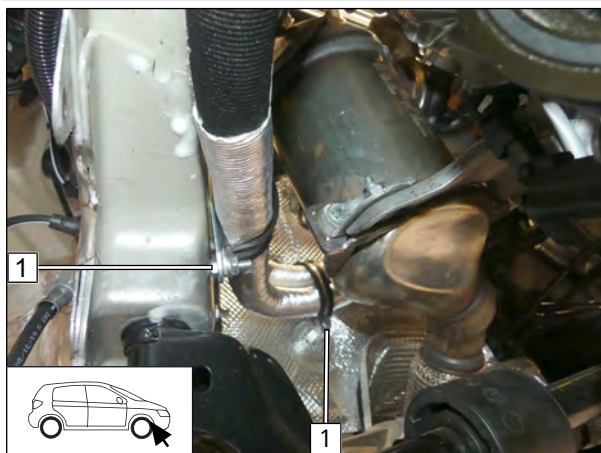


Fig. 80

- 1 White cable tie
- 2 Engine outlet hose section
- 3 Heat exchanger outlet hose section
- 4 Hose bracket



Tightening all loose screw connections



Tighten all loose screw connection of rubber-coated p-clamps **1**.

Fig. 81



11 Final work for underbody

Adapting engine underride protection

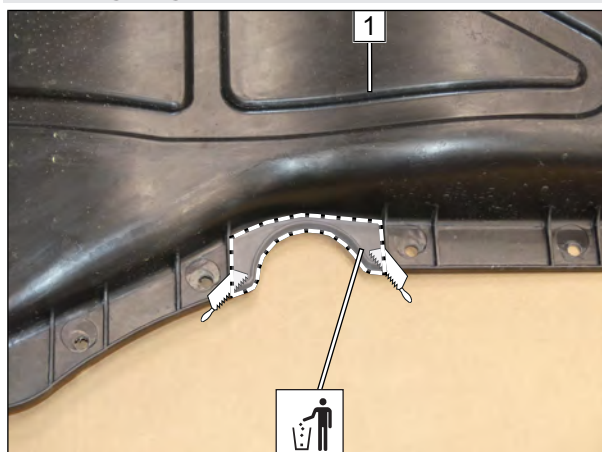


Fig. 82

1 Engine underride protection

Preparing wheel-well inner panel

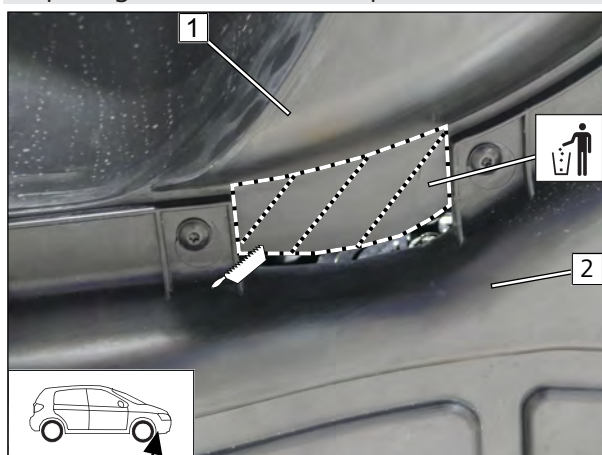


Fig. 83

- ▶ Mount wheel-well inner panel 1.
- ▶ Mount engine underride protection 2.
- ▶ Mark wheel-well inner panel 1 as shown, dismantle and cut.

Checking wheel-well inner panel distance

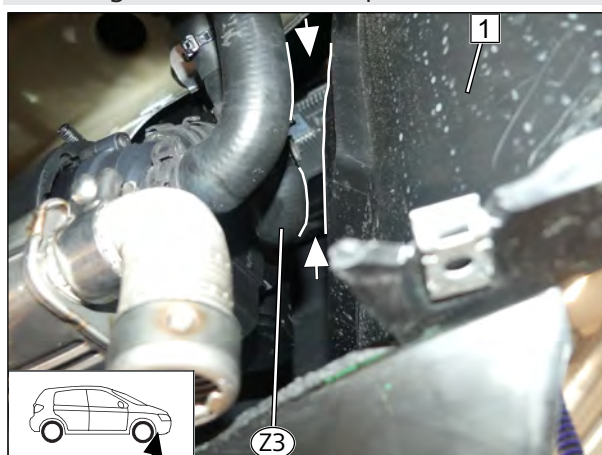


Fig. 84

- ▶ Mount wheel-well inner panel 1.

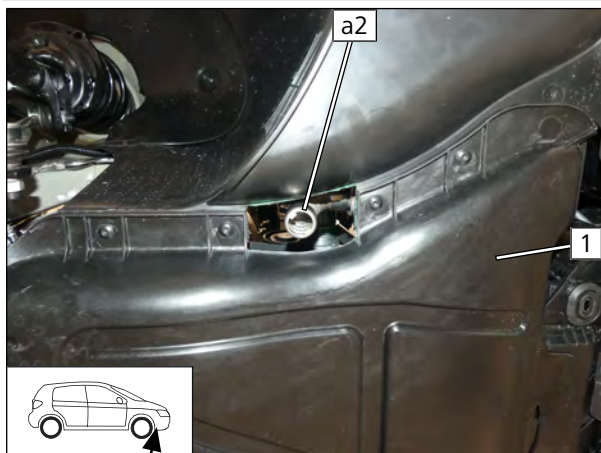


Ensure sufficient distance from neighbouring components, correct if necessary.





Aligning exhaust pipe **a2**



- ▶ Mount underside protection **1** and align exhaust pipe **a2** with the centre of the pass through.

Fig. 85



12 Electrical system of passenger compartment

12.1 Dismantling instructions

Removing centre console cover

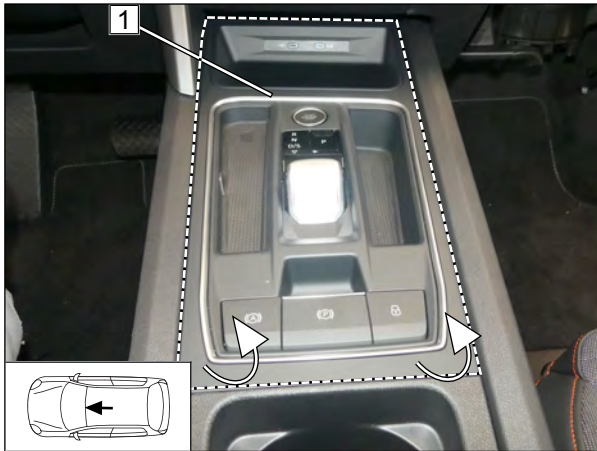


Fig. 86

- 1 Lift cover from back to front

Removing air outlet



Fig. 87

- 1 Air vent

Removing trim and cover

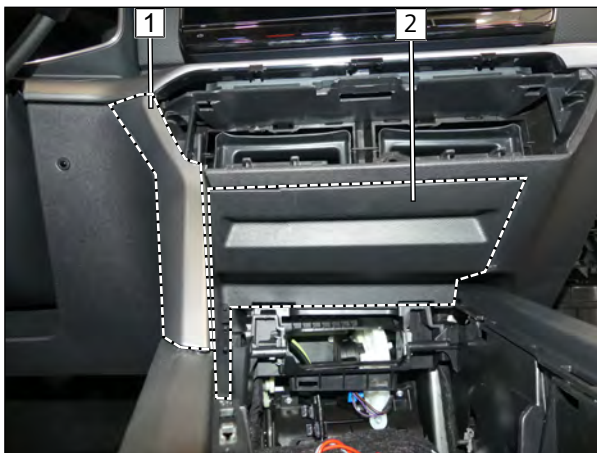


Fig. 88

- 1 Left trim of centre console
- 2 Cover



12.2 Premounting Cronus

Preparing Cronus wiring harnesses 1 and 2, assigning wires

► Insulate components, wires and connectors individually as shown and tie back.

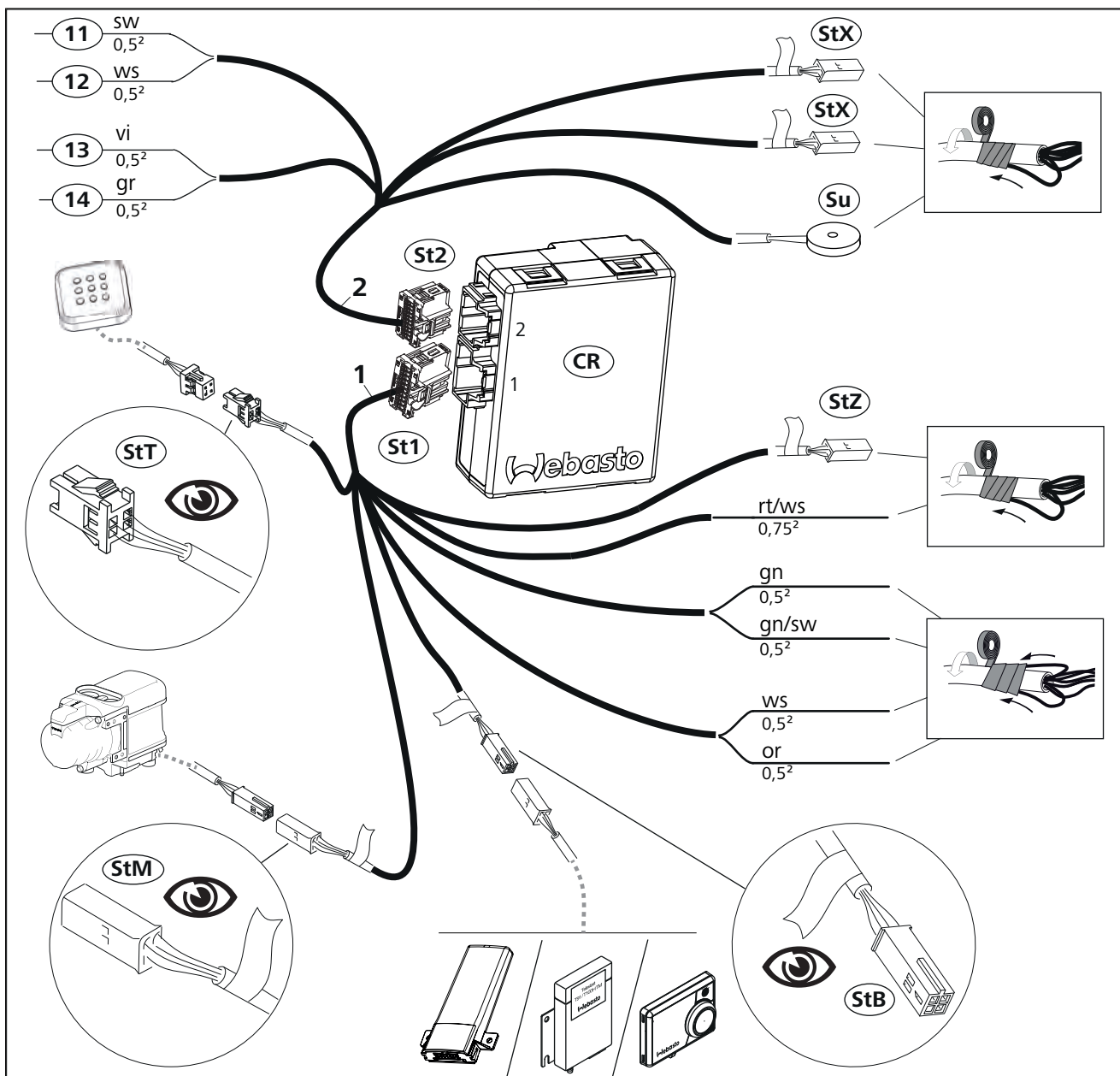


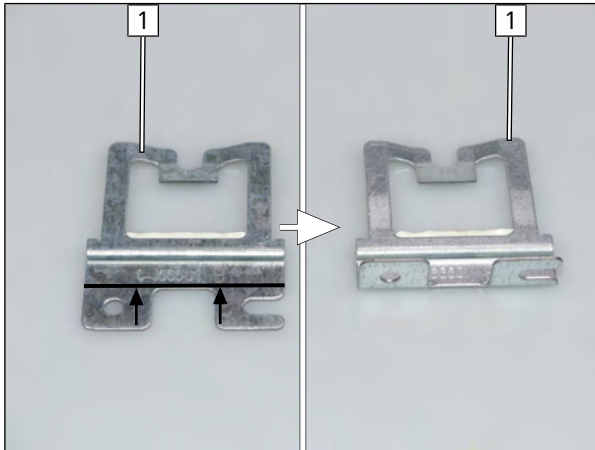
Fig. 89

Legend

Abbreviation	Component	Abbreviation	Component
CR	Cronus	StT	4-pin male plug for push button wiring harness
St1	16-pin, black connector of Cronus wiring harness 1	SU	Buzzer, will not be used
St2	12-pin, grey connector of Cronus wiring harness 2	StX	4-pin male plug, will not be used
StB	4-pin female plug for control element wiring harness	StZ	4-pin male plug for additional relay wiring harness, will not be used
StM	4-pin male plug for engine compartment wiring harness		



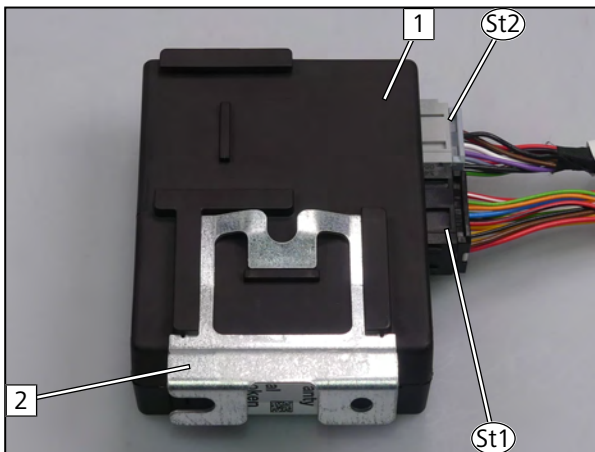
Preparing Cronus bracket



► Bend bracket **1** as shown.

Fig. 90

Premounting Cronus



- 1** Cronus
- 2** Bracket

Fig. 91



12.3 Wiring diagram

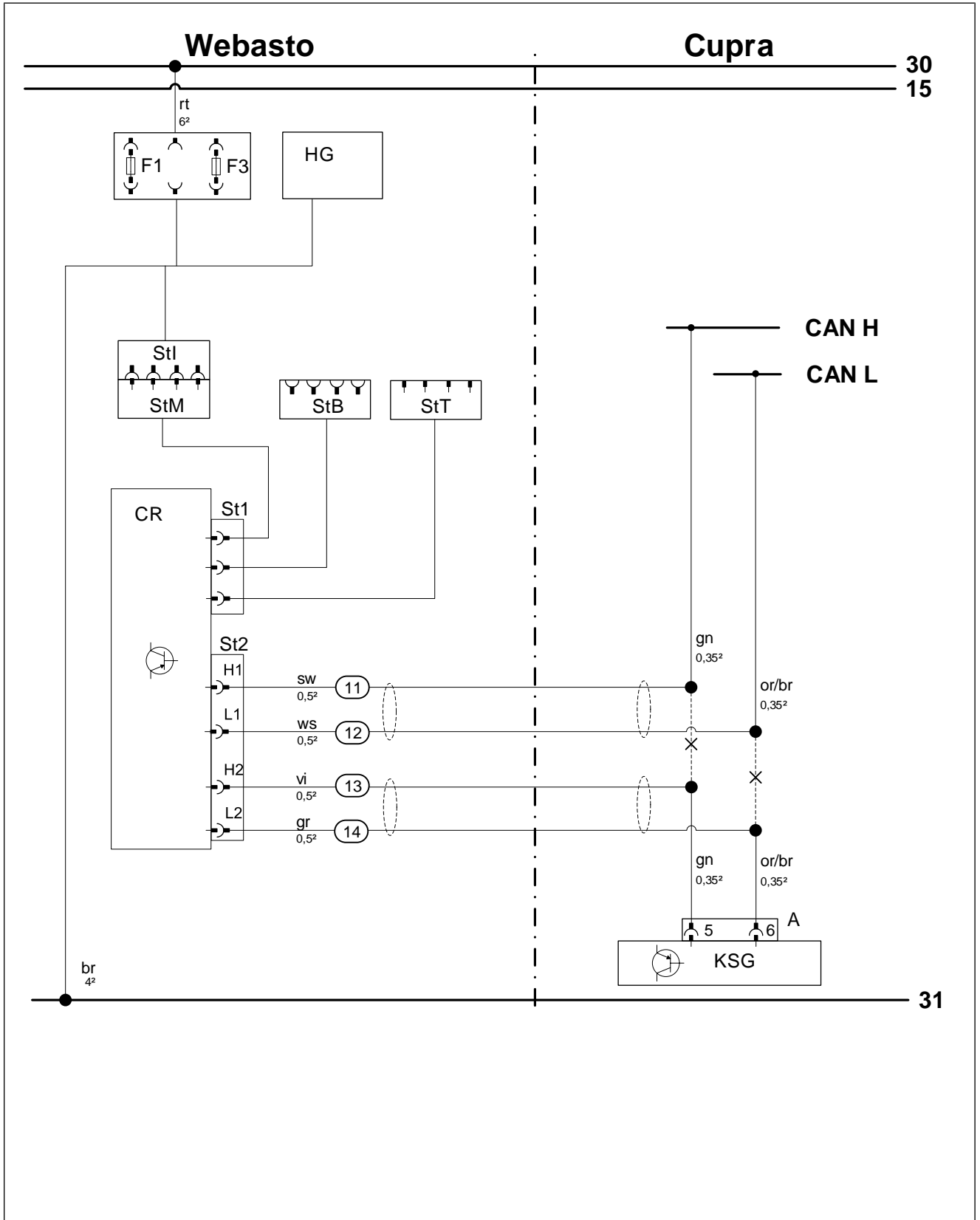


Fig. 92



12.4 Fan controller

Detaching connector

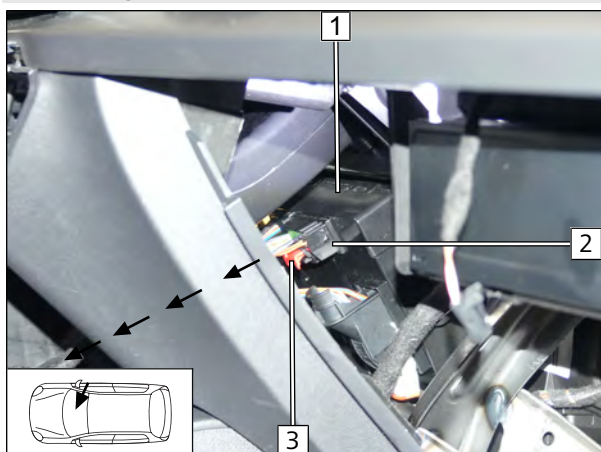


Fig. 93

► Pull out connector A **2** for centre console.

- 1** A/C control unit
- 3** Release the locking mechanism

Stripping original vehicle wiring harness

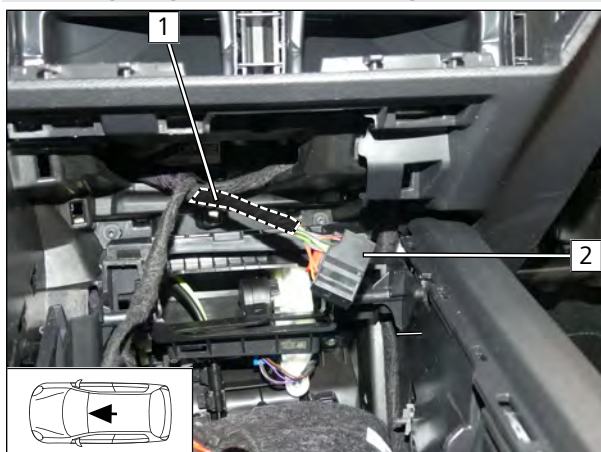


Fig. 94



► Detach part of the wiring harness wrapping carefully. Insulate and reinstall after completion.

► Locate and strip original vehicle wiring harness **1**.

- 2** Connector A

Cutting point

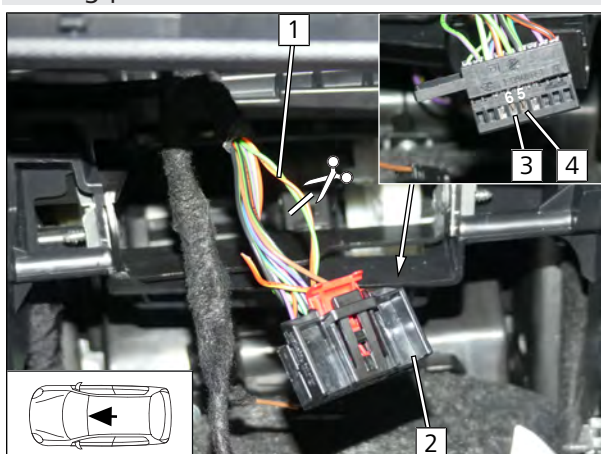


Fig. 95

► Locate and cut green (gn) and orange/brown (or/br) twisted wires **1**.

- 2** Remove connector housing A
- 3** Pin 6, orange/brown (or/br) wire
- 4** Pin 5, green (gn) wire



Installing lines

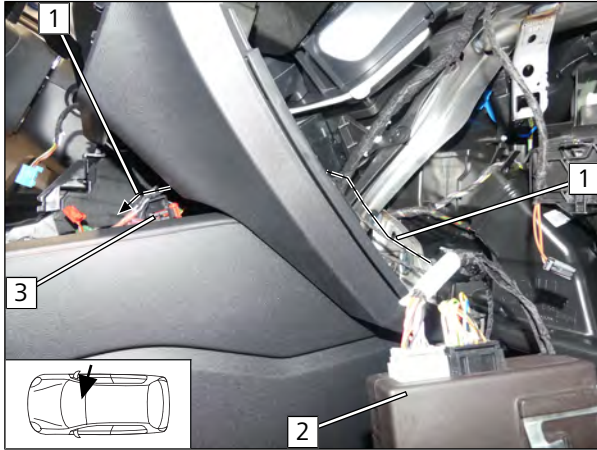


Fig. 96

► Route wires of Cronus wiring harness **1** (black (sw) wire **11** and white (ws) wire **12**) as well as violet (vi) wire **13** and grey (gr) wire **14**) to connector A.

Connection to air-conditioning control unit

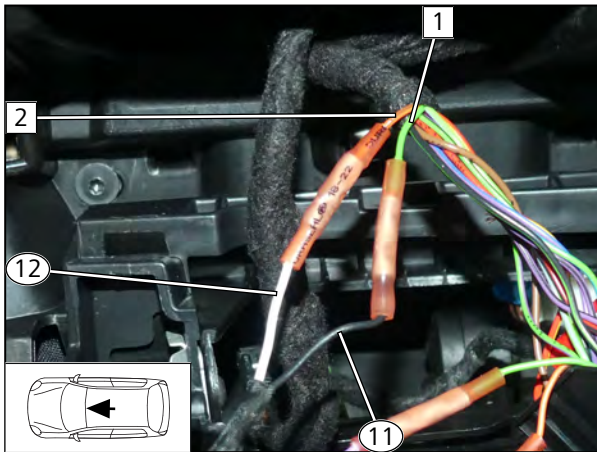


Fig. 97

- 1** Green (gn) wire of CAN High
- 2** Orange/brown (or/br) wire of CAN Low
- 11** Black (sw) wire of Cronus wiring harness 2
- 12** White (ws) wire of Cronus wiring harness 2

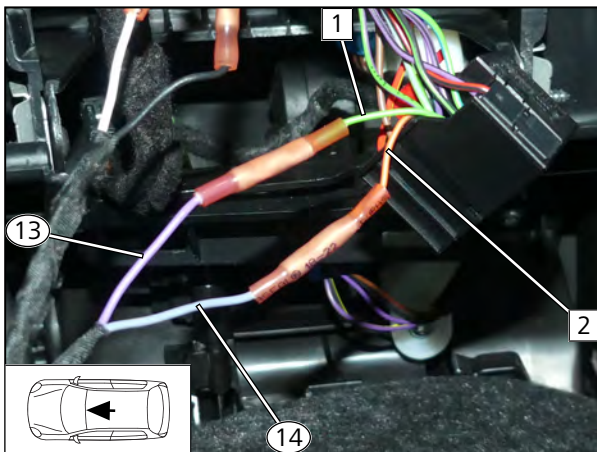
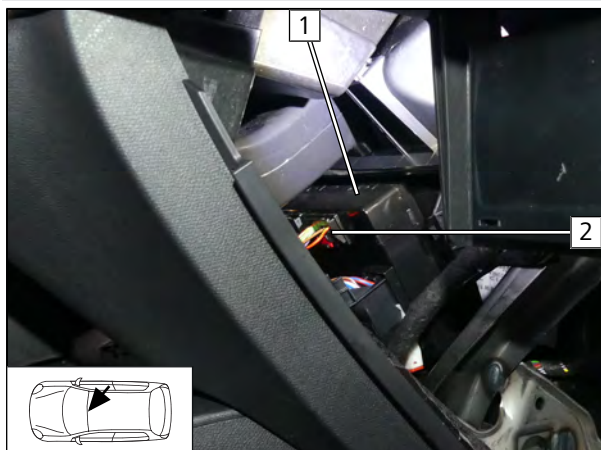


Fig. 98

- 1** Green (gn) wire of KSG connector A / pin 5
- 2** Orange/brown (or/br) wire of KSG connector A / pin 6
- 13** Violet (vi) wire of Cronus wiring harness 2
- 14** Grey (gr) wire of Cronus wiring harness 2



Mounting A/C control unit connector



- 1 Air-conditioning control unit
- 2 Connector A, mounted

Fig. 99



12.5 Mounting Cronus

Preparing installation location

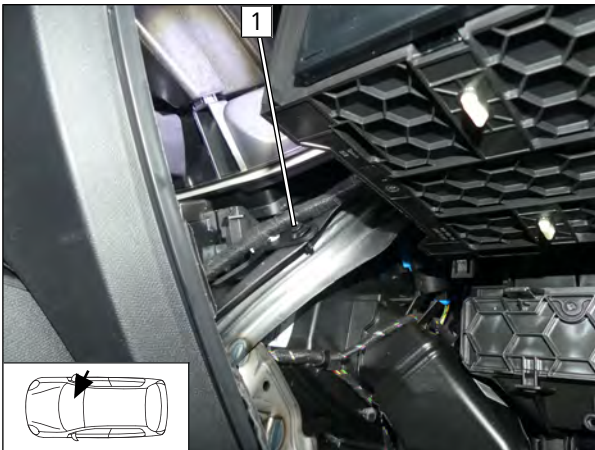


Fig. 100

- 1 Remove and discard original vehicle clip

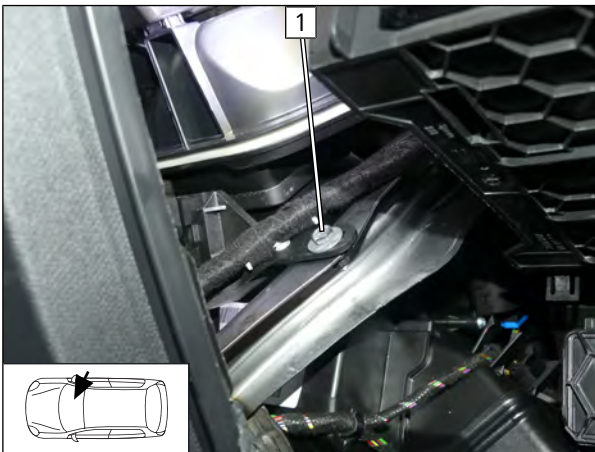


Fig. 101

- 1 Mount M5x16 bolt, large diameter washer, original vehicle bracket, original vehicle hole, large diameter washer, locking nut loosely

Mounting Cronus

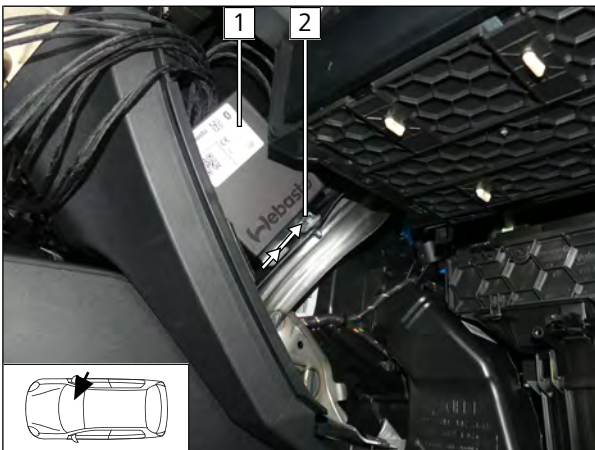


Fig. 102

- 1 Cronus
- 2 Tighten screw connections



12.6 Connection of Cronus to push button



The installation location of the Cronus push button should be confirmed with the end customer and should comply with the installation conditions.

- ▶ Mount the push button and connect male plug **StT** of Cronus wiring harness 1 with the connection plug of the Cronus push button as shown.
- ▶ When using the push button only as control element, it is necessary at this point to connect connection plug **1** of the engine compartment wiring harness with female plug **StM** of Cronus wiring harness 1.

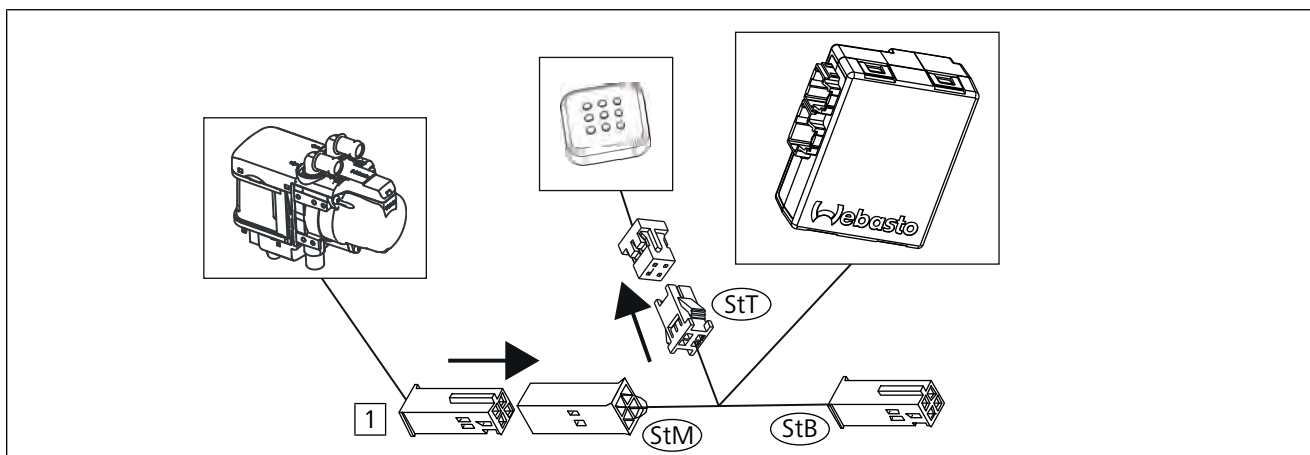


Fig. 103

12.7 Heater connection and installation of Telearstart or MultiControl AM control element



Install the control element in accordance with the provided relevant general installation documentation. The installation location of the optional control element MultiControl or the push button of the Telearstart option should be confirmed with the end customer and should comply with the installation conditions.

- ▶ Connect female plug **StM** of Cronus wiring harness 1 with connection plug **1** of the engine compartment wiring harness as shown.
- ▶ Connect female plug **StB** of Cronus wiring harness 1 with connection plug **2** of the relevant control element as shown.

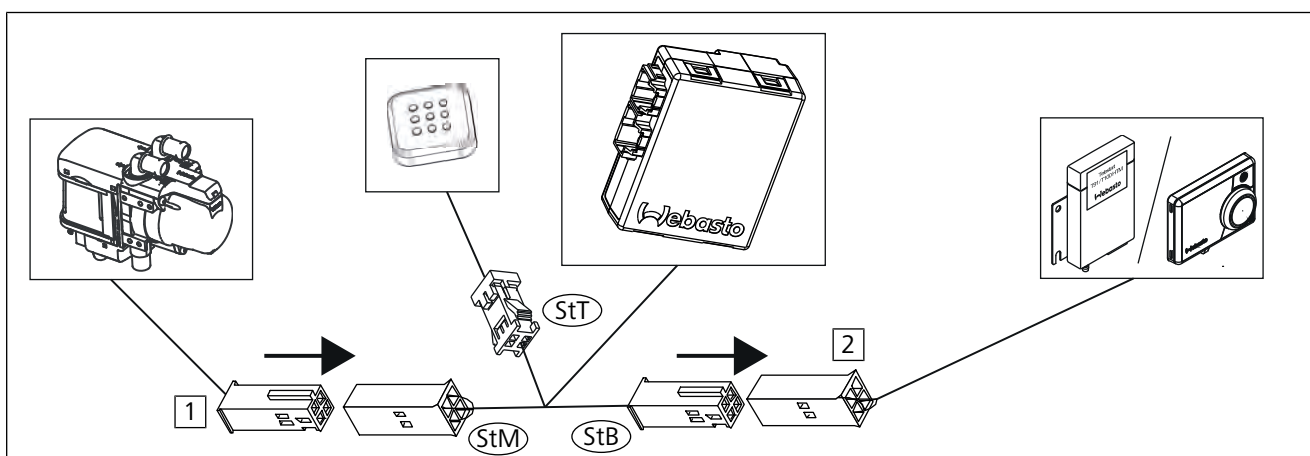


Fig. 104



12.8 Heater connection and installation of ThermoConnect control element



Install the control element in accordance with the provided relevant general installation documentation. The installation location of the push button of the ThermoConnect option should be confirmed with the end customer and should comply with the installation conditions.

Preparing Y wiring harness



The Y wiring harness mentioned in section 'Components used' must also be ordered.

- ▶ Locate connection plug **2** of ThermoConnect wiring harness on the wiring harness branch of Y wiring harness **1**.
- ▶ Detach black (sw) wire **3** from connection plug **2**, tie back and insulate.

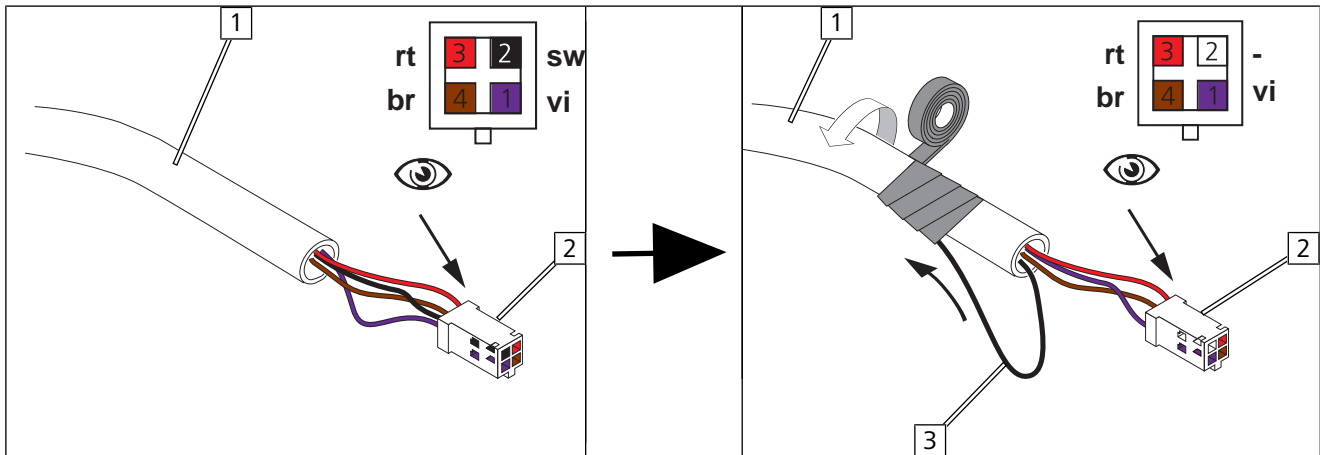


Fig. 105

Connecting wiring harnesses

- ▶ Connect female plug (**StM**) of Cronus wiring harness 1 and connection plug **1** of the engine compartment wiring harness using Y wiring harness **2** as shown.
- ▶ Connect connection plug **3** of the ThermoConnect wiring harness with prepared connector **4** of the Y wiring harness as shown.

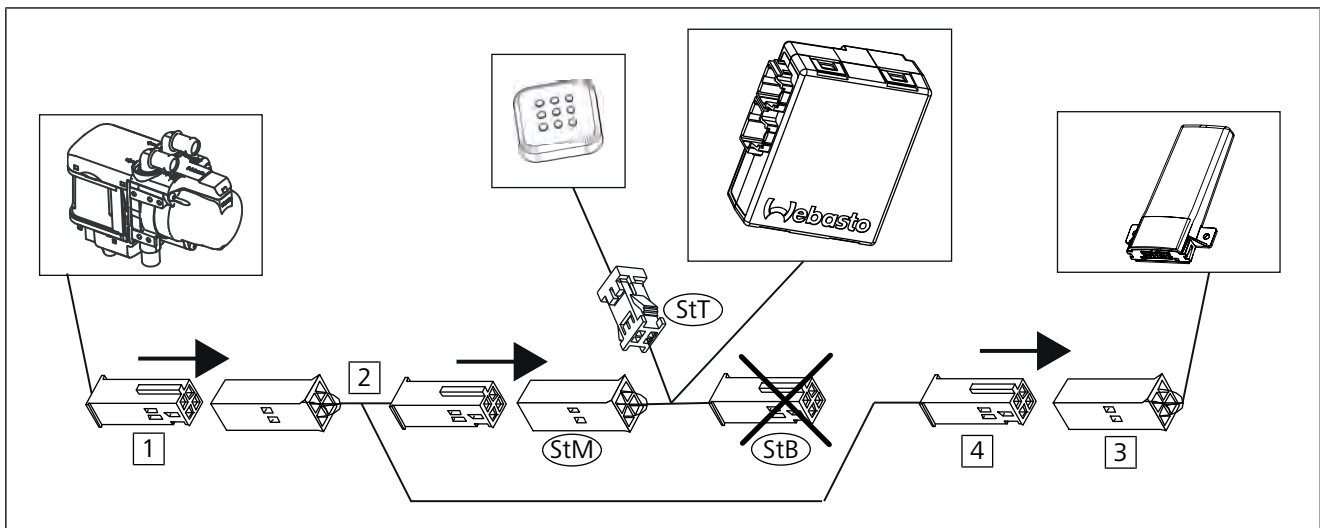


Fig. 106



13 Final Work

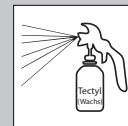


Further information can be found in the vehicle manufacturer's technical documentation.

- ▶ Reassemble the components 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.



Downloading software to Cronus

- ✓ For more information, see the instructions in the 'Software Update Cronus – PKW.pdf' file in the relevant software download folder at:
<https://dealers.webasto.com>
- ▶ Connect Webasto Thermo Test Diagnosis as described in the instructions.
- ▶ Install the Cronus software downloaded as described in section 'Preparations for Cronus' according to the instructions.
- ▶ Save or print the final report.



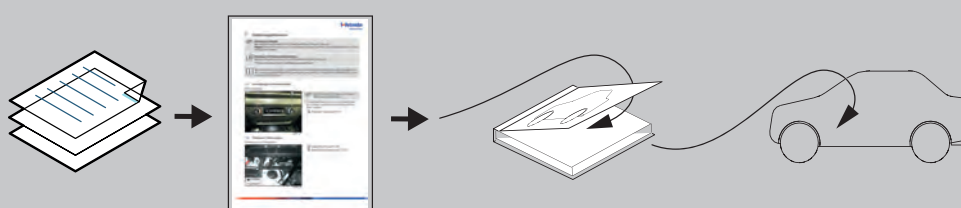
Further information can be found in the general installation and operating instructions of the Webasto components.

- ▶ Program MultiControl CAR, pair Telestart transmitter.
- ▶ Affix 'Switch off parking heater before refueling' caution label in area of filler neck.



Vehicle event log after parking heating mode

- ✓ Components of the original vehicle air conditioning system are activated during parking heating mode. Other vehicle components remain inactive, which in some circumstances may be interpreted as an error and can be filed as such in the event log. An increased power consumption (quiescent current) may also be registered for some vehicles.
- ▶ If an incorrect installation can be excluded, these entries are exclusively related to the parking heating mode situation and have no effect on the vehicle functions in driving mode.



This is a translation from the original German installation instructions.
To request this Installation Documentation in another language, please locate and contact your local Webasto dealer.
You can find your nearest dealer at: <https://dealerlocator.webasto.com/en-int>.

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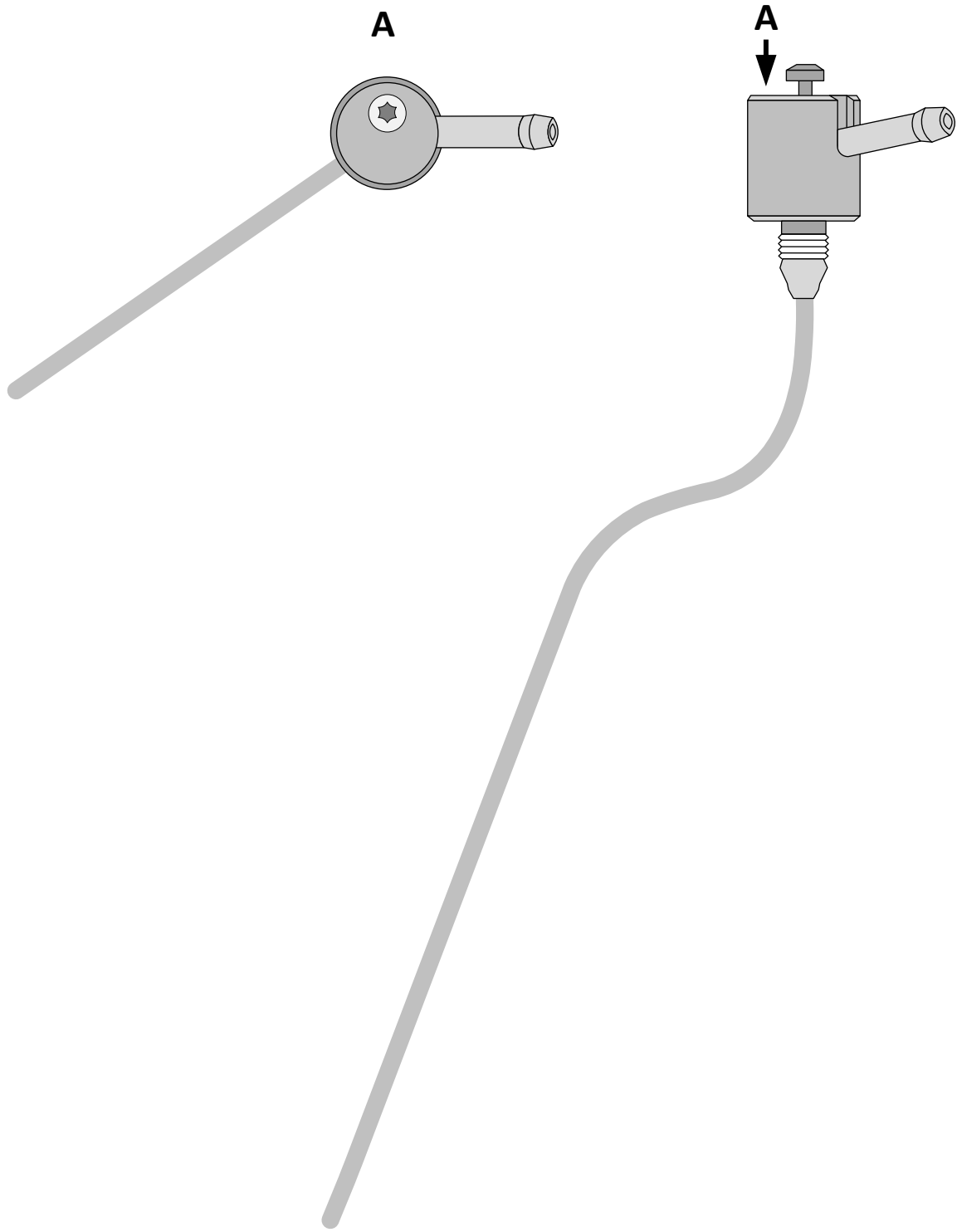
Technical Extranet: <https://dealers.webasto.com>



WWW.WEBASTO.COM



14 FuelFix template



100 mm



**Set print option to custom scale on 100%.
Check scale 1:1 for print output.**

0

100 mm

15 Operating instructions



Vehicles with passenger compartment monitoring

Further information can be found in the vehicle operating instructions.

- ▶ Deactivate passenger compartment monitoring for the heating operation.



Information regarding the heating time

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.



Notes about the A/C control panel presettings

Your vehicle is equipped with a comfort air-conditioning control. As a result, **no** settings are required on the A/C control panel when switching off the vehicle. All necessary presettings, such as fan speed, temperature and flap positions are set automatically.

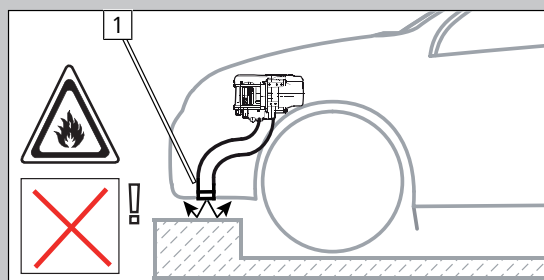
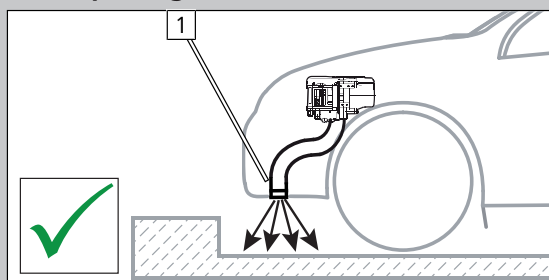


Note for parking heater function

Your vehicle is equipped with a passenger compartment and engine preheating unit.



Notes on parking heater exhaust outlet ¹



15.1 Installation location of fuses

Fuses in engine compartment



- 1** F3 - 5A Cronus main fuse
- 2** F2 - not in use
- 3** F1 - 20A heater main fuse

Fig. 107

