

K Installation documentation

for Thermo Top Evo water heater

'Inline' coolant circuit with engine preheating

Renault Megane

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE		
Renault	Megane	RFB	from 2019	e2* 2007/46* 0546*...		
Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm ³]	Engine code
1.5D	Diesel	Euro 6d Temp	6-speed SG	85	1461	K9K

Validity	Equipment variants	Model
		Megane
Verified equipment variants	Manual air-conditioning	x
	2 zone automatic air-conditioning	x
	Halogen main headlights	x
	Halogen front fog lights	x
	LED daytime running lights	x
	Start button with keycard	x
Unverified equipment variants	LED main headlights	x

Total installation time	Note
9.0 hours	

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1 List of abbreviations

AAC	Automatic air-conditioning
AC	Manual air-conditioning
DP	Fuel pump
EFIX	Exhaust end fastener
FF	FuelFix (tank extracting device)
Fig.	Figure
HG	Heater
SG	Manual transmission
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump

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 Thermo Top Evo	In accordance with price list
Installation kit for Renault Megane diesel	1327607A
to be ordered additionally in case of AC :	
Additional 'Webasto Standard' air-conditioning control kit for Renault Megane	1326586_
to be ordered additionally in case of AAC :	
Additional 'Webasto Standard' air-conditioning control kit for Renault Megane	1324475_
or	
Additional 'Webasto Comfort' air-conditioning control kit for Renault Megane	1324908_
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list
MultiControl installation frame, for installation of MultiControl CAR	9030077_

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.



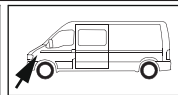
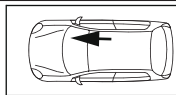
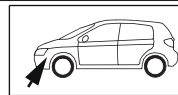
Note on a special technical feature

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
✓	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 wiring harnesses 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"> ▶ Battery and battery carrier ▶ Entire air filter box with intake hose ▶ Detach the fuse and relay box ▶ Front wheel on the front passenger's side ▶ Wheel well trim on the driver's and front passenger's side ▶ Underbody trim on the front passenger's side ▶ Front bumper ▶ Headlight on the front passenger's side ▶ Water container of the window washer system 	
Passenger compartment	<ul style="list-style-type: none"> ▶ Side instrument panel trim on the driver's side ▶ Lower instrument panel trim on the driver's side ▶ Front footwell trim at the centre console on the driver's and front passenger's side ▶ Fold back the carpet on the driver's side ▶ A-pillar trim (only in case of Telestart) ▶ Rear bench seat 	

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

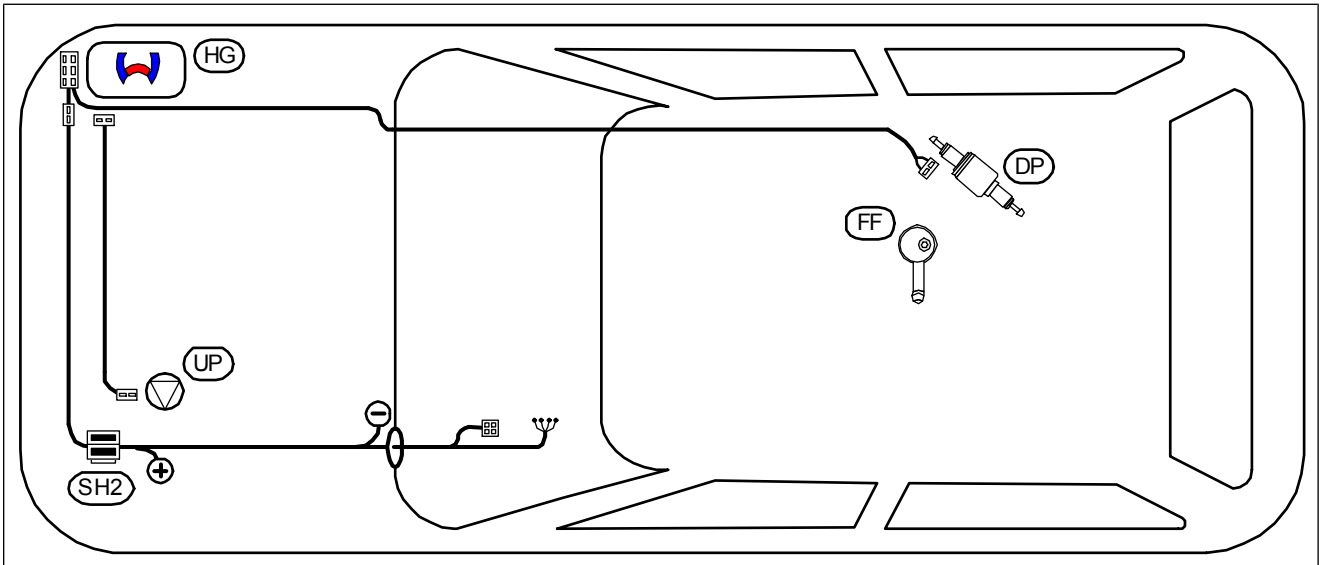
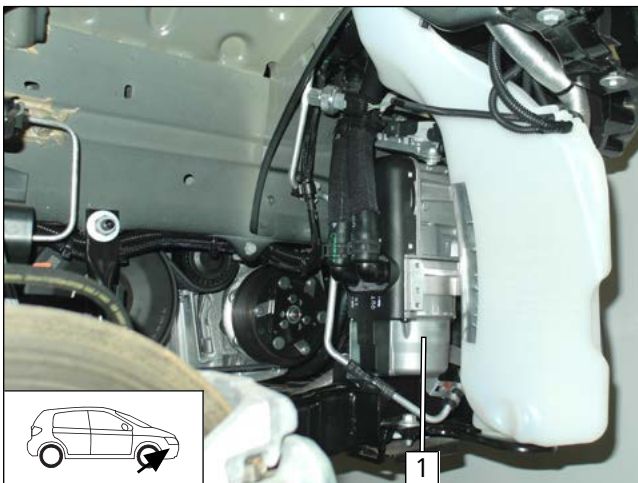


Fig. 1

Legend to installation overview

Abbr.	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

Preparing fuse holder of engine compartment

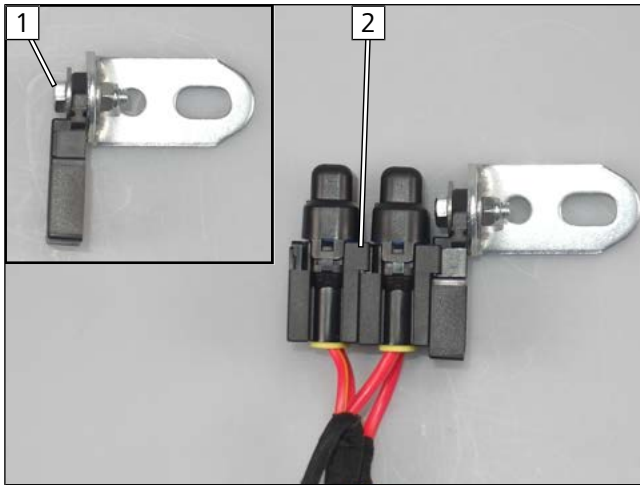


Fig. 3

- 1 M5x16 bolt, large diameter washer, retaining plate of SH2, angle bracket, large diameter washer, nut
- 2 SH2 with F1/F2 fuses

Drilling hole

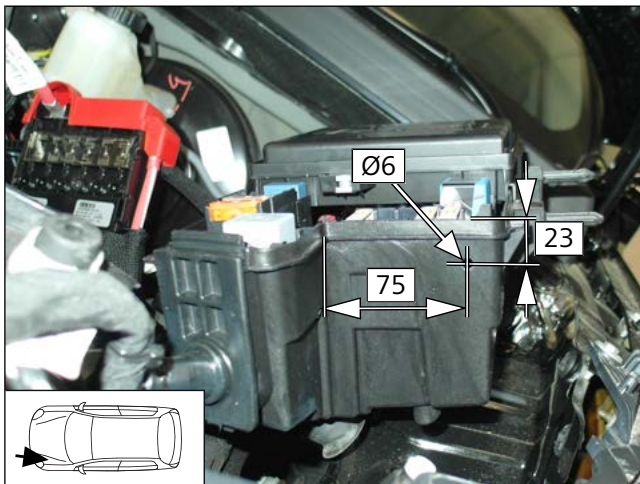
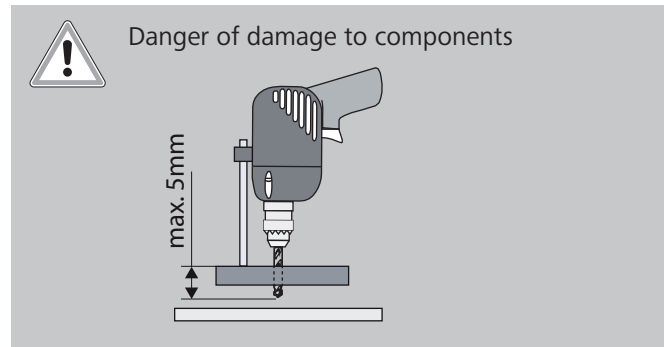


Fig. 4



Mounting SH2

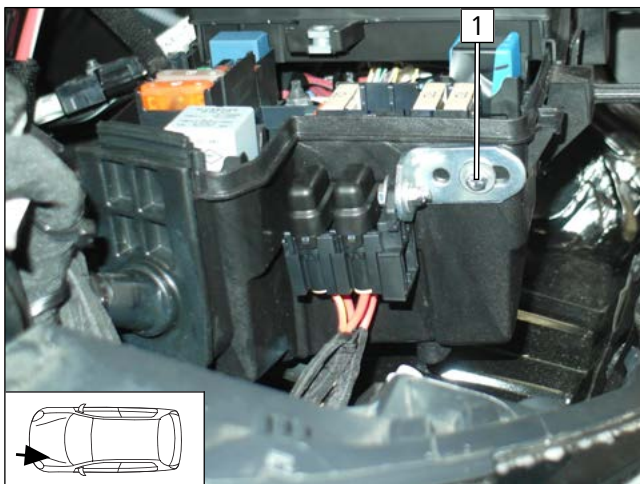


Fig. 5

- 1 M5x16 bolt, large diameter washer, premounted angle bracket, drilled hole, large diameter washer, nut



Positive wire connection

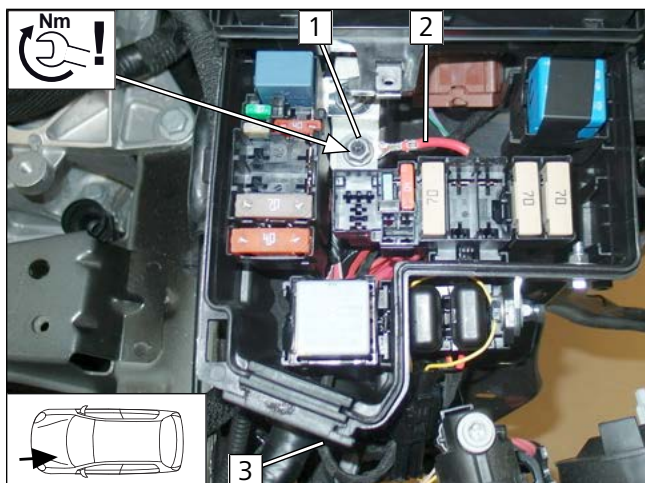


Fig. 6



DANGER

Fire hazard due to insufficient tightening torque

► Observe tightening torque

- 1 Original vehicle positive point
- 2 Route positive wire through protective rubber plug 3 into relay box

Routing HG wiring harness

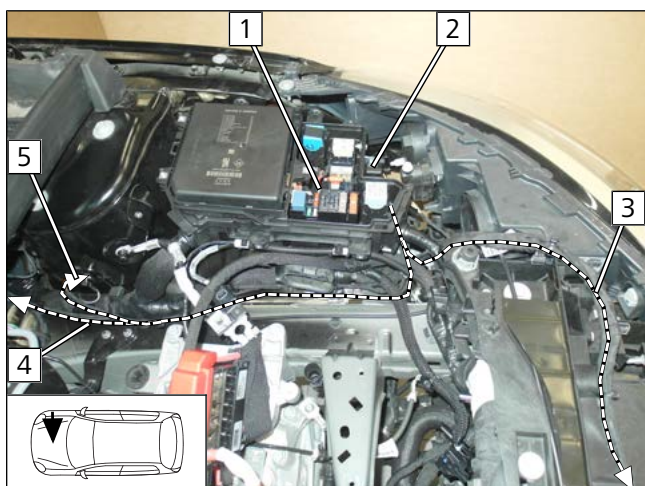


Fig. 7

- Attach HG wiring harness 3 to original vehicle wiring harness and route to HG installation location.
- Attach passenger compartment and control element wiring harnesses 4 to original vehicle wiring harness and route to the passenger compartment pass through.

- 1 Positive connection
- 2 SH2
- 5 Earth connection

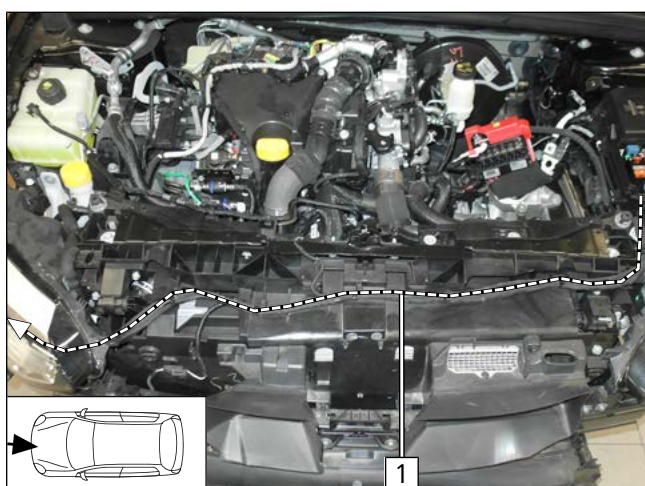


Fig. 8

- Attach HG wiring harness 1 above the bonnet lock support on original vehicle wiring harness and route under the headlight to the HG installation location.



Earth wire connection and wiring harnesses routing in passenger compartment

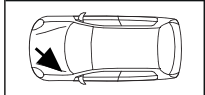
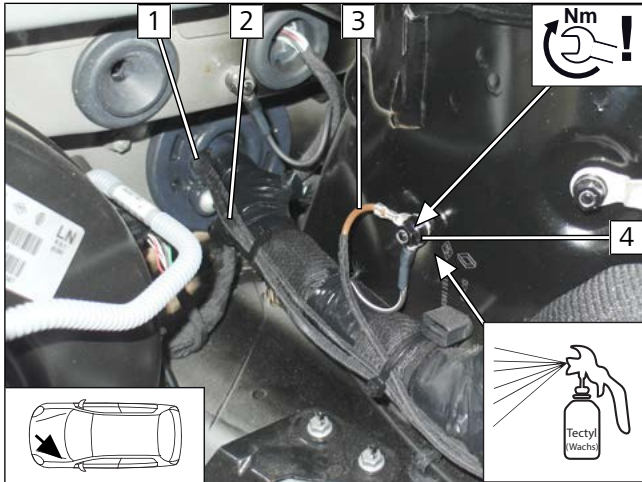


Fig. 9



DANGER

Fire hazard due to insufficient tightening torque

► Observe tightening torque

- 1 Protective rubber plug
- 2 Passenger compartment and control element wiring harnesses
- 3 Earth wire
- 4 Original vehicle earth point



8 Mechanical system

8.1 Preparing installation location

Removing control unit

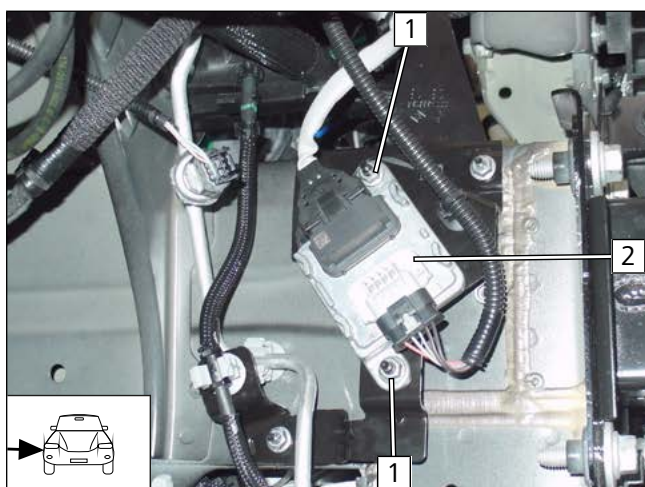


Fig. 10

- ▶ Remove control unit **2** at pos. **1**, the nuts will be re-used.

Removing control unit bracket

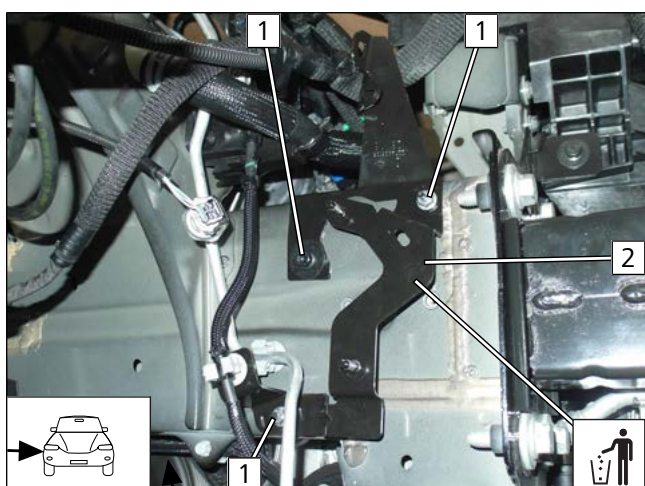


Fig. 11

- ▶ Remove control unit bracket **2** at pos. **1** and discard.

Removing original vehicle bolts

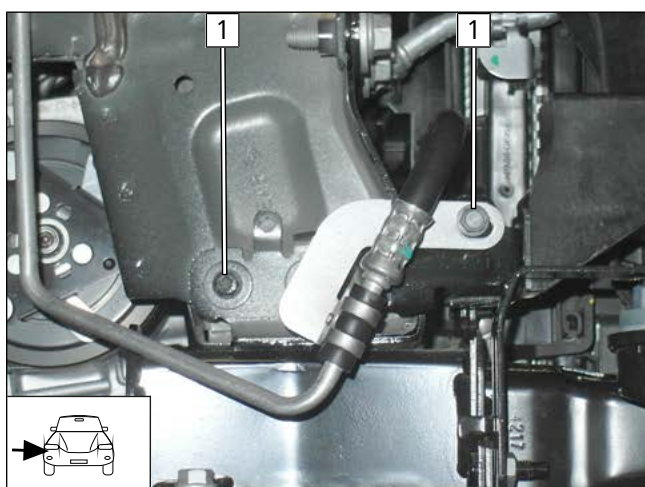


Fig. 12

- 1** Original vehicle bolt, it will be reused



Reattaching A/C line bracket

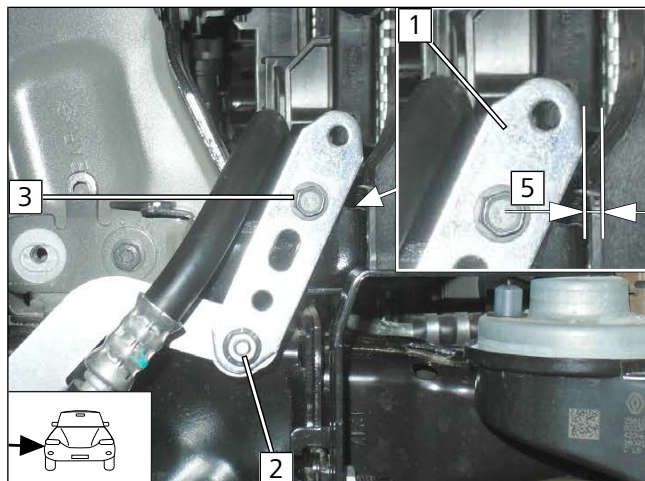


Fig. 13

► Align perforated bracket **1** as shown and mount.

- 2** M6x16 bolt, large diameter washer, A/C line bracket, perforated bracket, flanged nut
- 3** Original vehicle bolt, perforated bracket, original vehicle threaded hole

Fitting edge protection

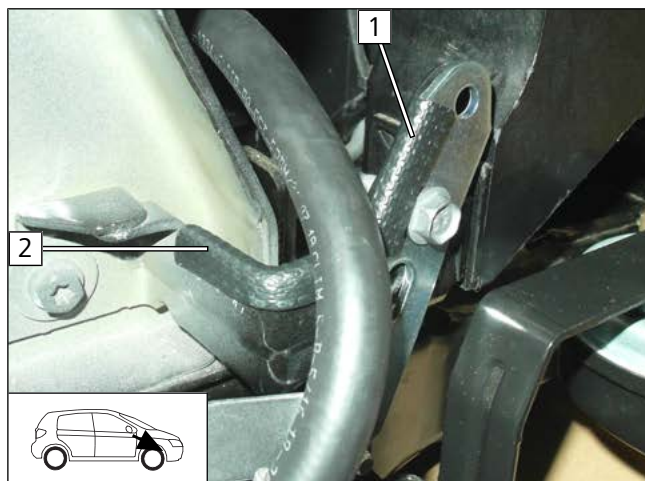


Fig. 14

- 1** 30 long, narrow edge protection
- 2** 45 long, narrow edge protection

Copying hole pattern

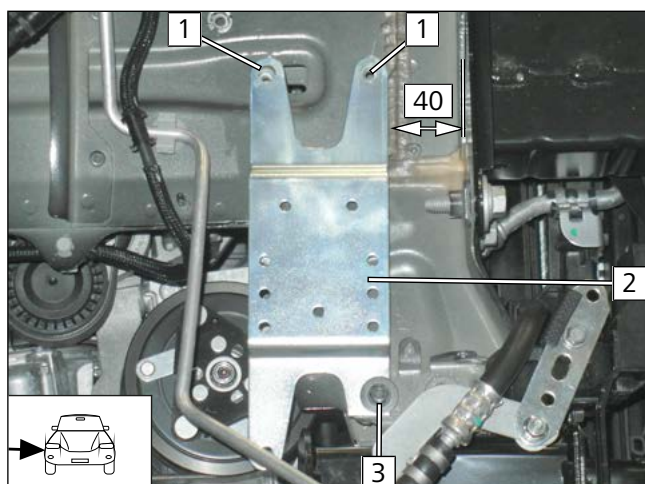


Fig. 15

► Prepare HG bracket **2** in accordance with template, align and mount loosely.

- 1** Copy hole pattern
- 3** Original vehicle bolt, bracket, original vehicle threaded hole

► Remove HG bracket **2** again, discard original vehicle bolt **3**.



Drilling hole, inserting rivet nut

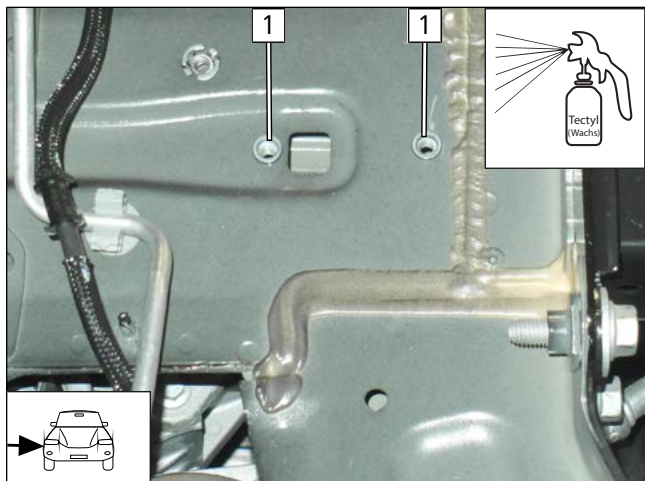


Fig. 16

- 1 Ø9 hole, rivet nut

Fitting edge protection

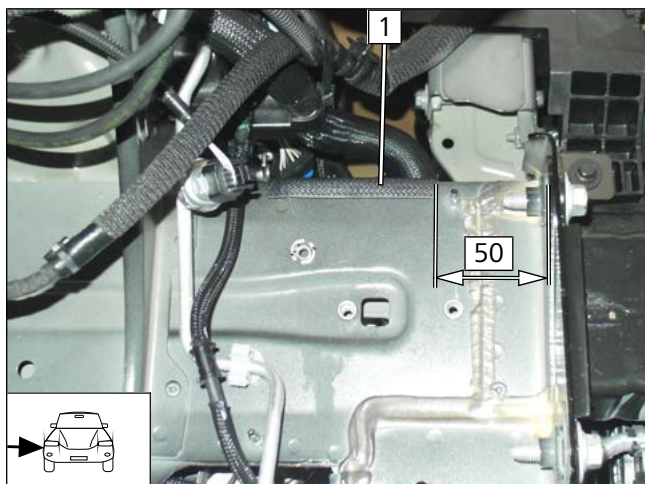


Fig. 17

- 1 100 long, wide edge protection

Mounting hose bracket

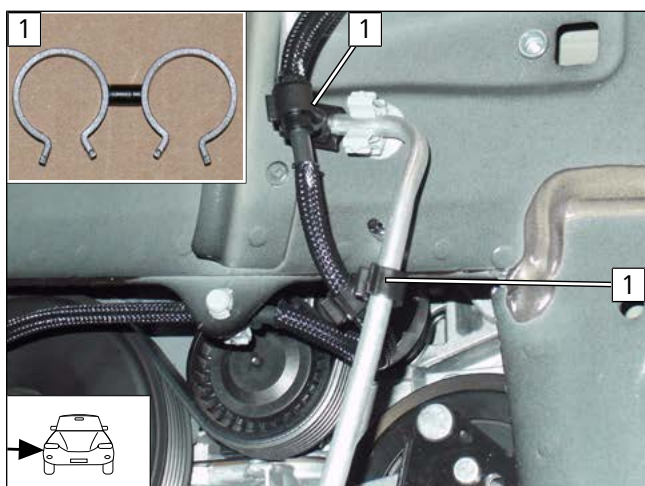


Fig. 18

- 1 Hose bracket between original vehicle lines



8.2 Premounting heater

Mounting water connection piece

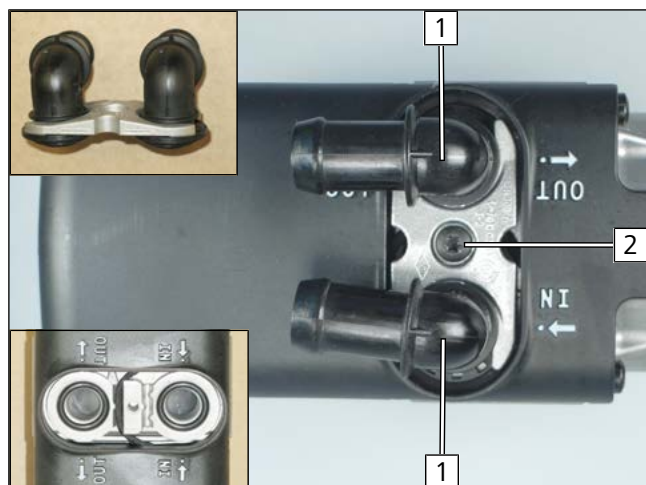


Fig. 19



Observe the general installation instructions of the heater.

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

Mounting heater bracket

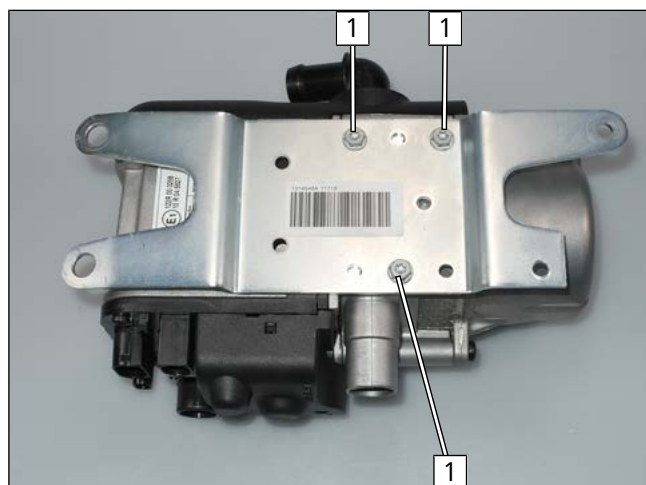


Fig. 20

- 1 5x13 self-tapping bolt, HG bracket, HG hole

Premounting bolts



Fig. 21

- 1 M6x40 bolt, spring lock washer, large diameter washer, HG bracket, spacer (20), lock washer
- 2 M6x40 bolt, spring lock washer, large diameter washer, HG bracket, spacer (15), lock washer



8.3 Heater mounting

Mounting HG wiring harness connector

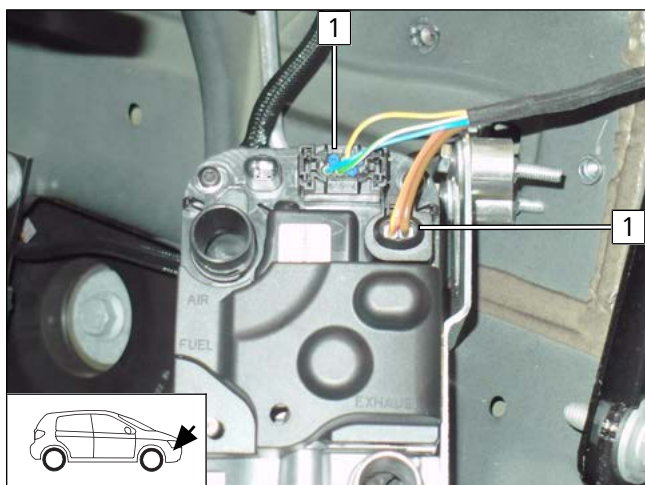


Fig. 22



Observe the general installation instructions of the heater.

- 1 Heater wiring harness connector

Mounting heater

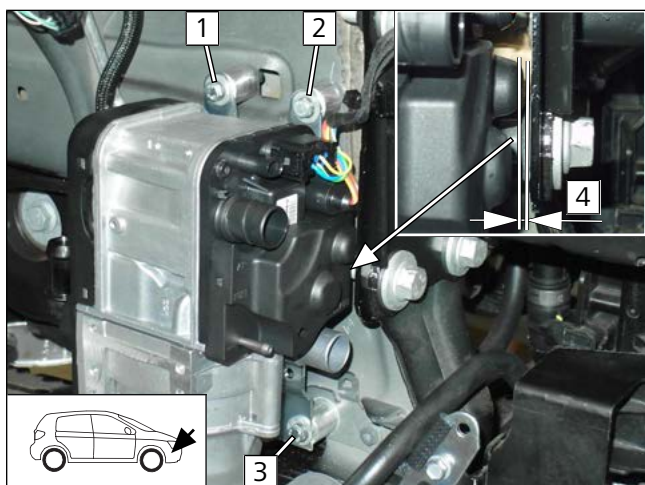


Fig. 23

► Position bolts, align HG as shown, then screw tight.

- 1 M6x40 bolt, spring lock washer, large diameter washer, HG bracket, spacer (20), rivet nut
- 2 M6x40 bolt, spring lock washer, large diameter washer, HG bracket, spacer (15), rivet nut
- 3 M6x40 bolt, spring lock washer, large diameter washer, HG bracket, spacer (20), original vehicle threaded hole

Fastening HG wiring harness

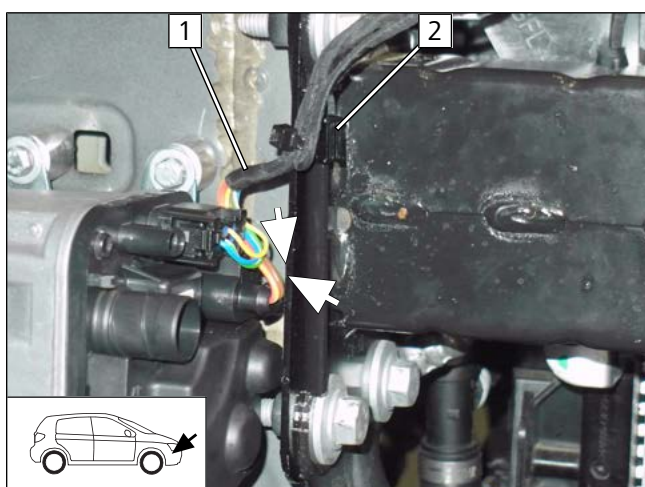


Fig. 24



Danger of damage to components

► Ensure sufficient distance when routing HG wiring harness **1**, correct if necessary.

- 2 Edge clip cable tie



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

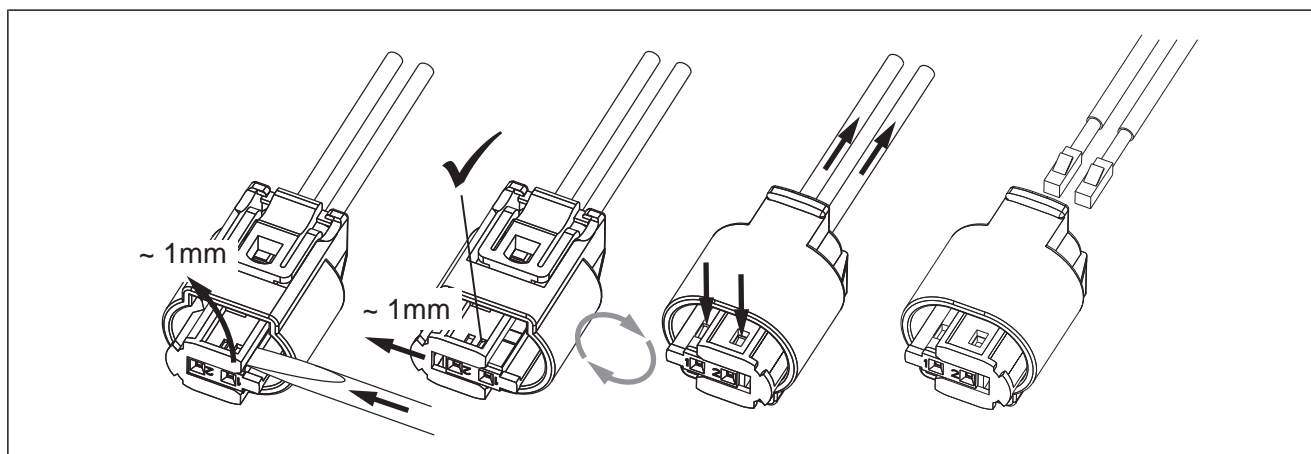
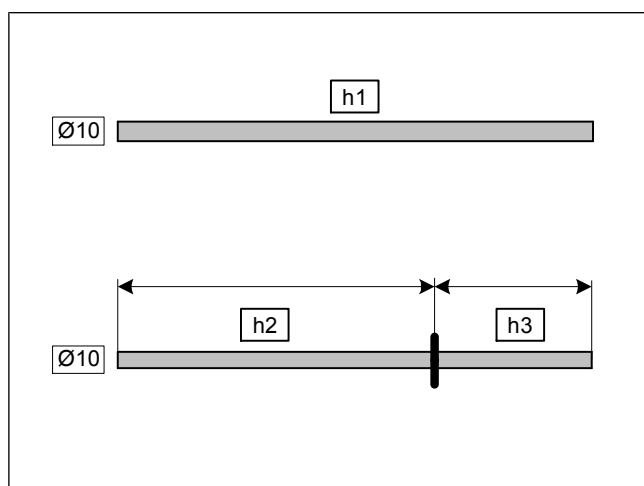


Fig. 25

9.1 Routing fuel line

Cutting to length/assigning corrugated tubes



- h1** 2100
- h2** 1300
- h3** 800

Fig. 26



Connection to heater

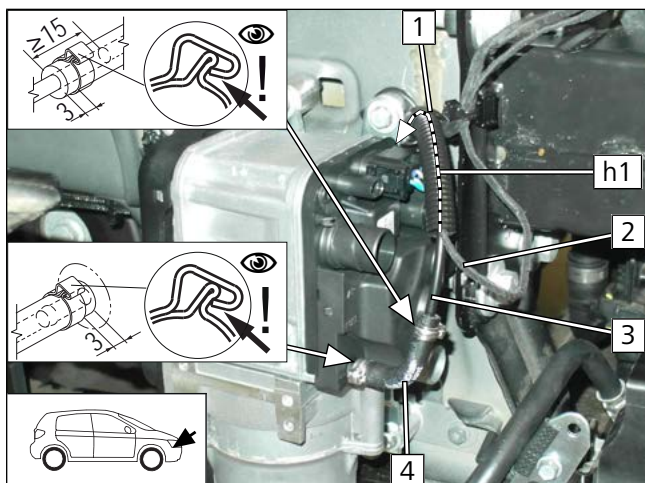


Fig. 27

► Draw fuel line **3** and fuel pump wiring harness **2** into corrugated tube **h1**.

- 1** Cable tie
- 4** 90° moulded hose, Ø10 clamp [2x]

Installing lines

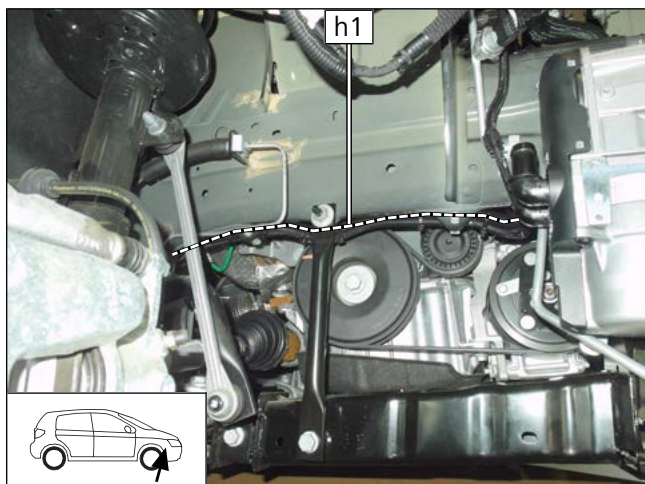


Fig. 28

► Fasten corrugated tube **h1** with fuel line and fuel pump wiring harness in engine compartment to original vehicle line using cable ties and route to underbody.

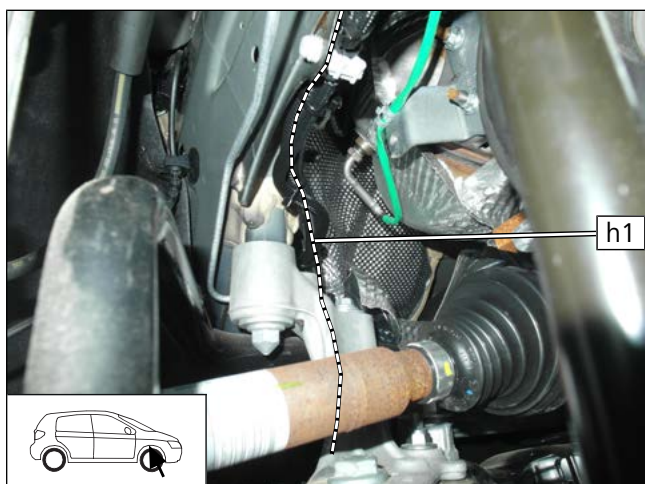
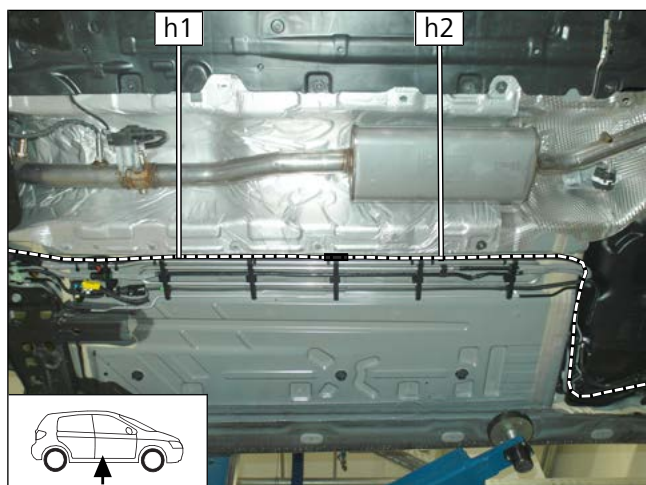


Fig. 29

► Fasten corrugated tube **h1** with fuel line and fuel pump wiring harness, along the bulkhead, to the original vehicle line using cable ties and route behind the heat protection to the underbody.

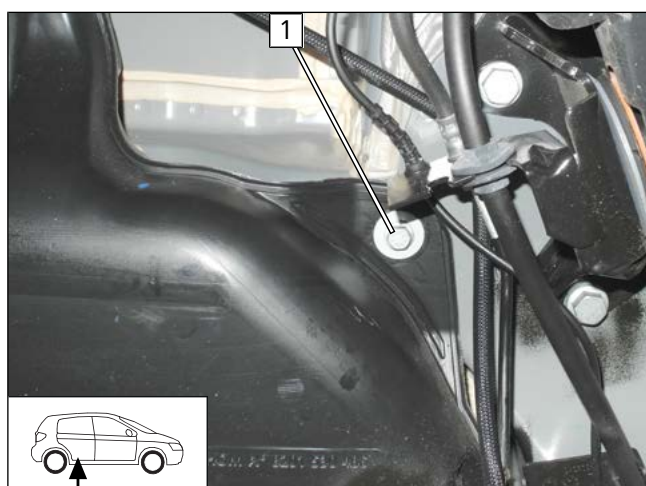


► Route corrugated tubes **h1** and **h2** with fuel line and fuel pump wiring harness on the underbody to the installation location of the fuel pump. Wrap the joint between corrugated tube **h1** and corrugated tube **h2** with insulating tape.

Fig. 30

9.2 Mounting and connecting fuel pump

Removing original vehicle bolt



1 Original vehicle bolt

Fig. 31

Enlarging perforated bracket hole, shortening and bending perforated bracket

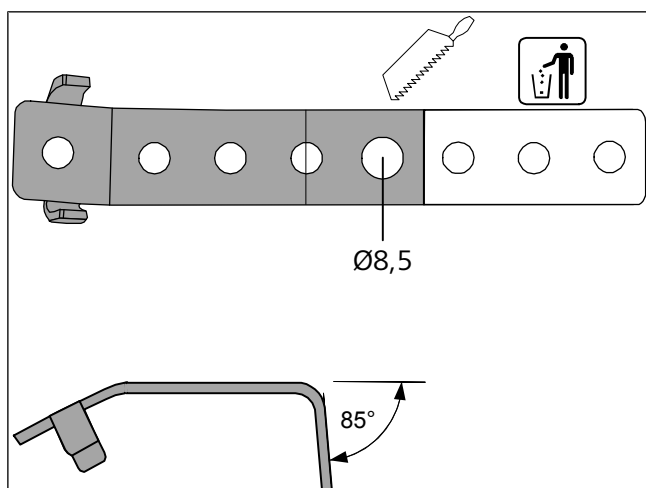


Fig. 32



Premounting perforated bracket

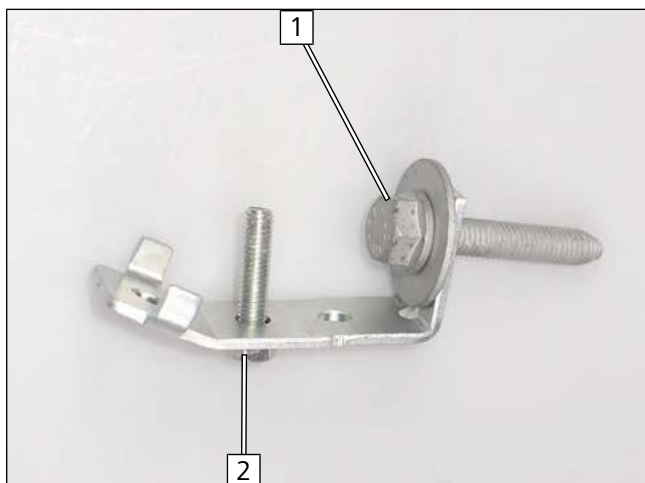


Fig. 33

- 1 Original vehicle bolt, perforated bracket
- 2 M6x25 bolt, perforated bracket

Premounting fuel pump

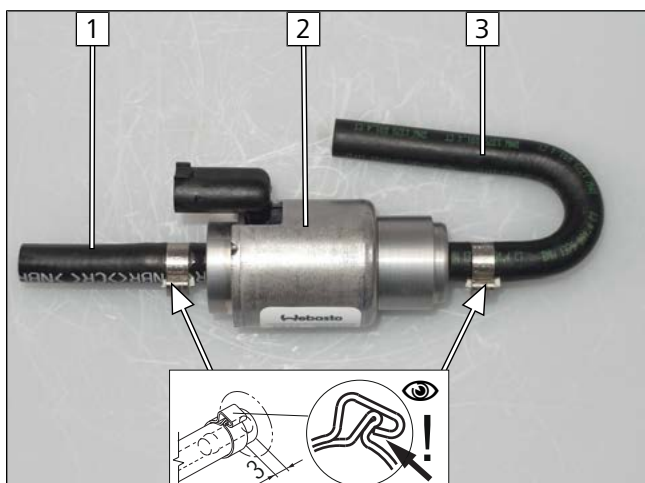


Fig. 34

- 1 Hose section, Ø10 clamp
- 2 Fuel pump
- 3 180° moulded hose, Ø10 clamp

Installing perforated bracket

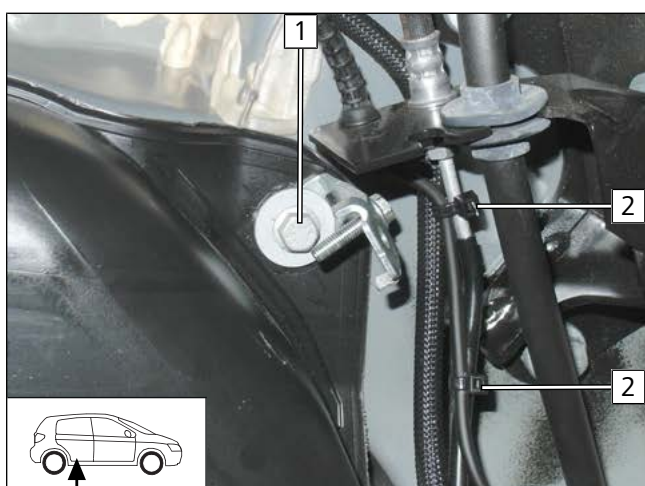


Fig. 35

- 1 Original vehicle bolt, perforated bracket, original vehicle threaded hole
- 2 Cable tie to fasten the original vehicle wire



Mounting fuel pump mount



Fig. 36

- 1 Premounted bolt in perforated bracket, fuel pump mount, support angle bracket, flanged nut

Mounting fuel pump

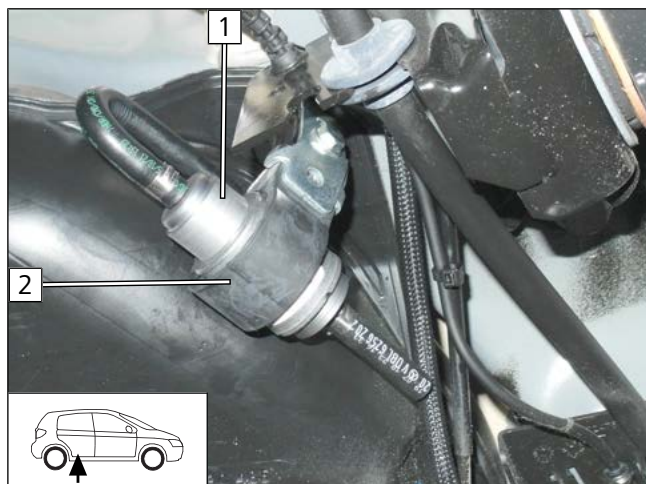


Fig. 37

- Mount fuel pump 1 in mount 2.

Assembling fuel pump connector X7

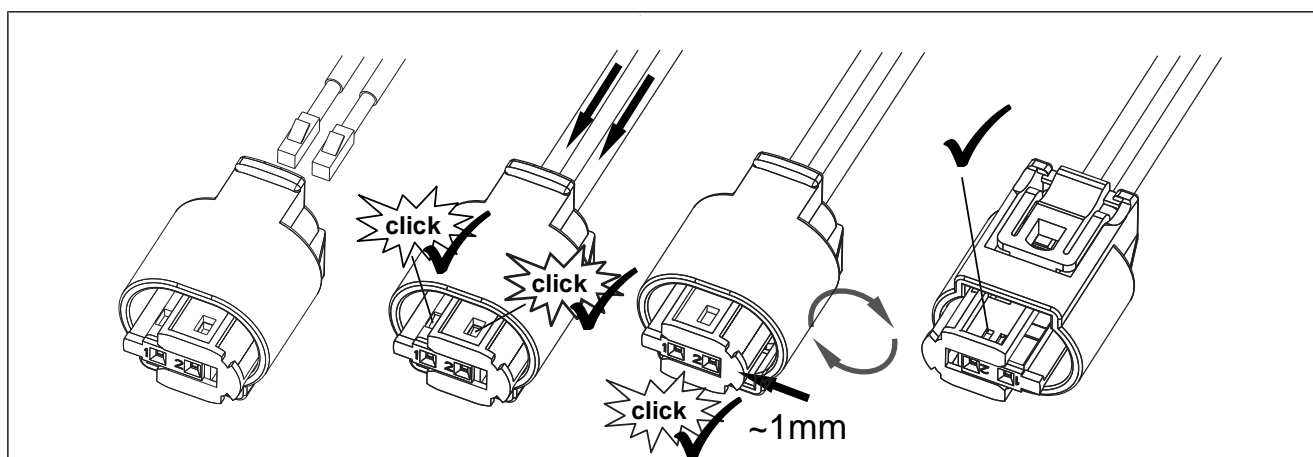


Fig. 38



Fuel pump connection

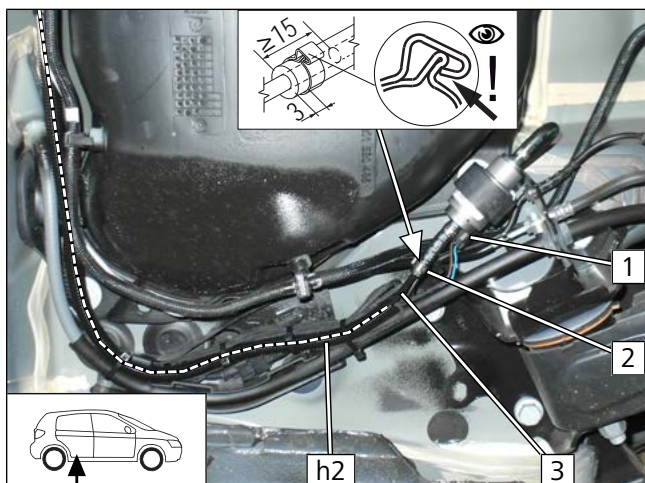


Fig. 39

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

Preparing fuel line

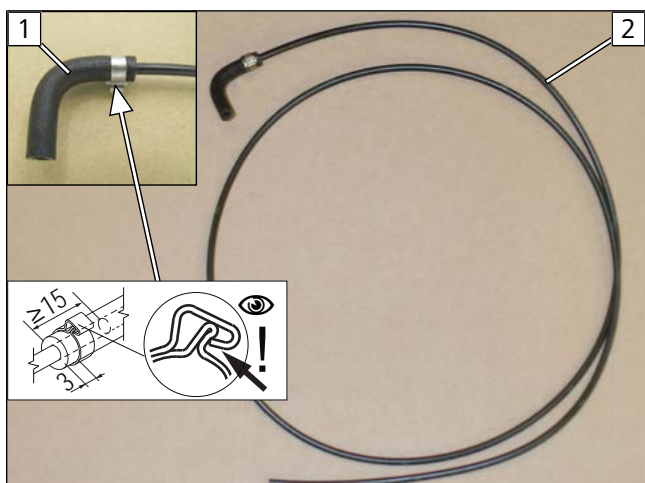


Fig. 40

- 1 90° moulded hose, Ø10 clamp
- 2 Fuel line

9.3 Installing FuelFix

Assigning drilling template

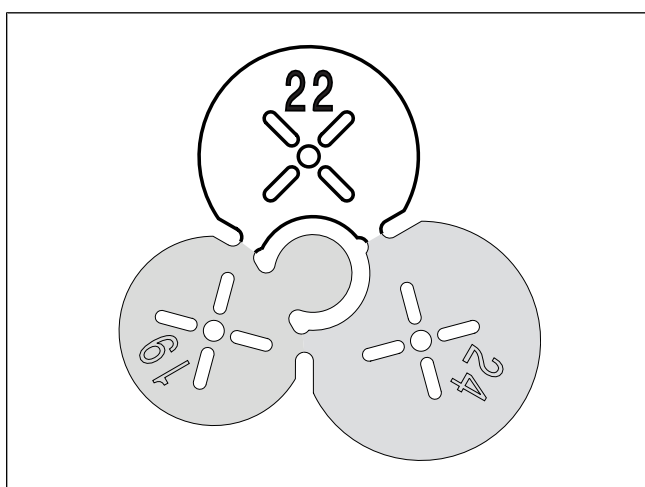


Fig. 41



Work steps F1, F2

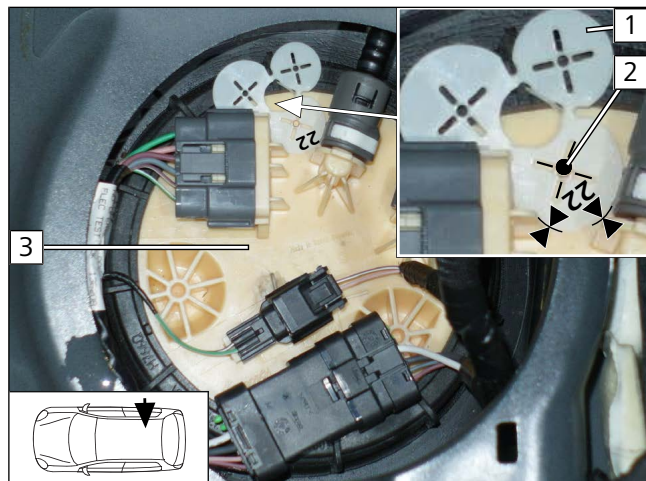


Fig. 42



Observe the installation instructions of the tank extracting device.

- 1 Position $\varnothing 22$ drilling template as shown in fig.
- 2 Hole pattern
- 3 Tank fitting

Work step F3

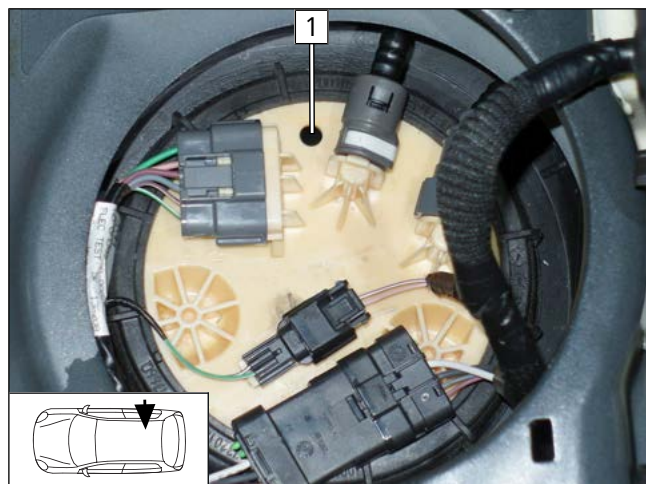


Fig. 43



DANGER

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

- 1 Hole made with provided drill

Work steps F4, F5

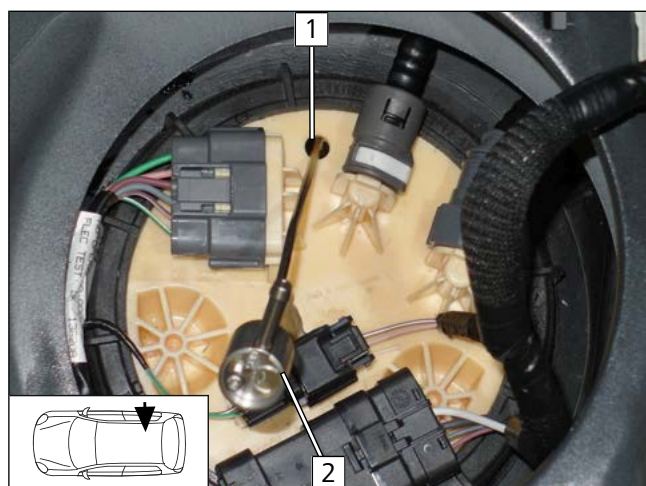


Fig. 44

- Bend FuelFix **2** according to template, cut to length and insert in hole **1**.

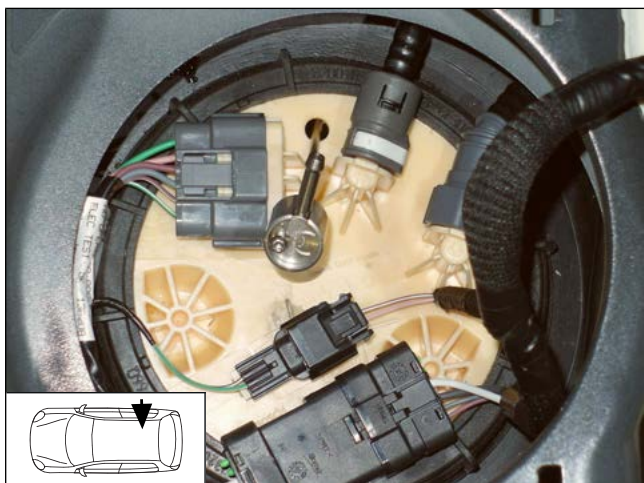


Fig. 45

Work steps F5.3, F5.4

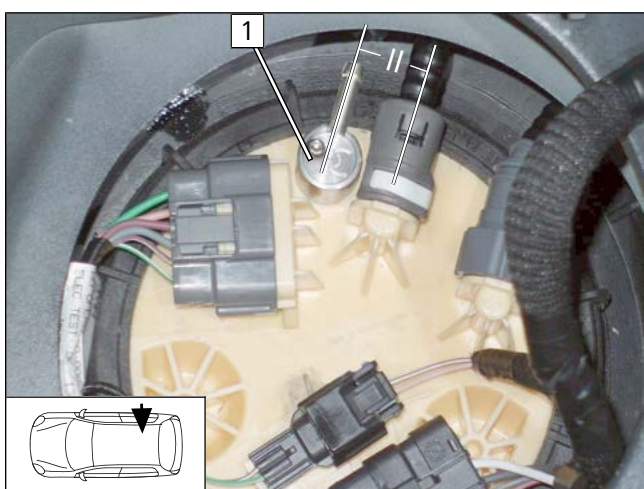


Fig. 46

► Align FuelFix **1** as shown.

Work step F6

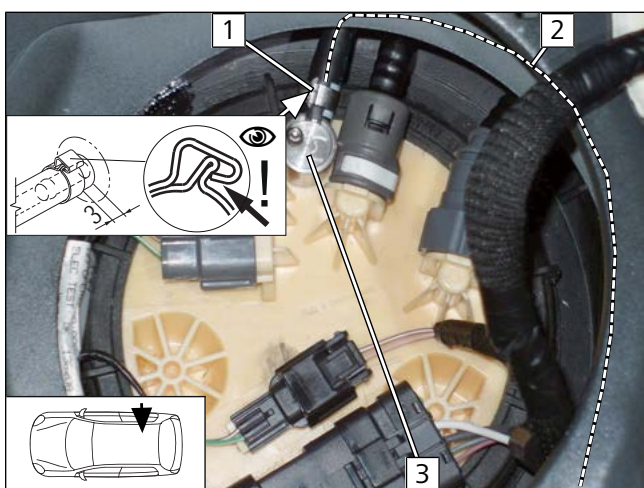


Fig. 47

- 1** Ø10 clamp
- 2** Prepared fuel line
- 3** FuelFix



Work step F7

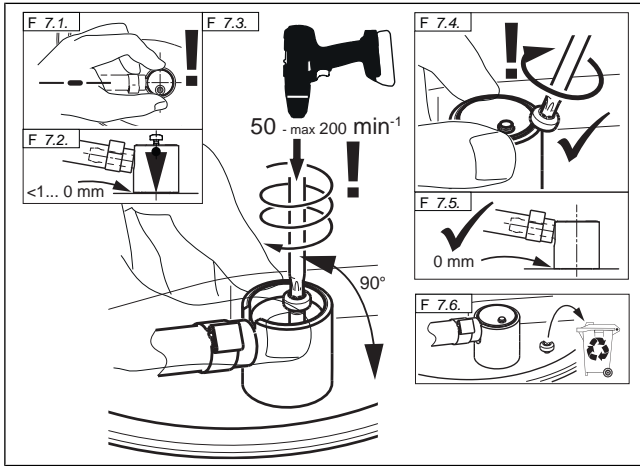


Fig. 48

Work step F8

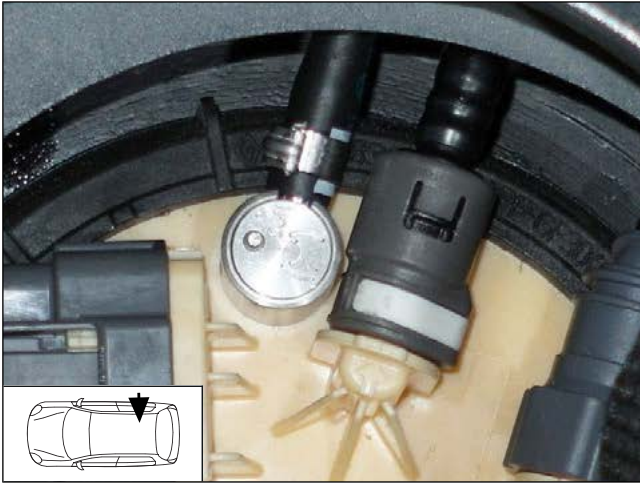


Fig. 49

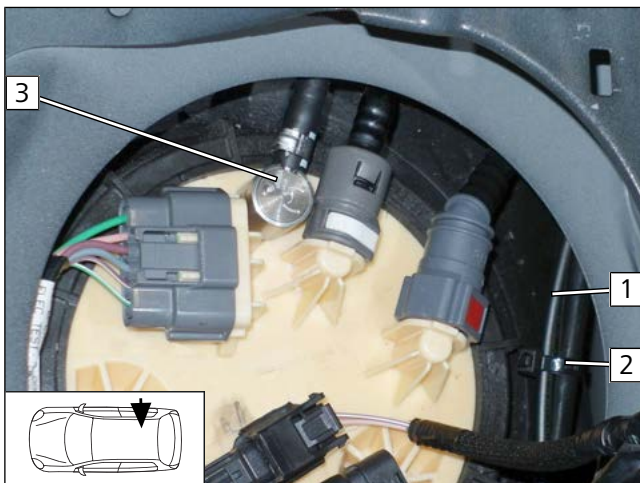


Fig. 50



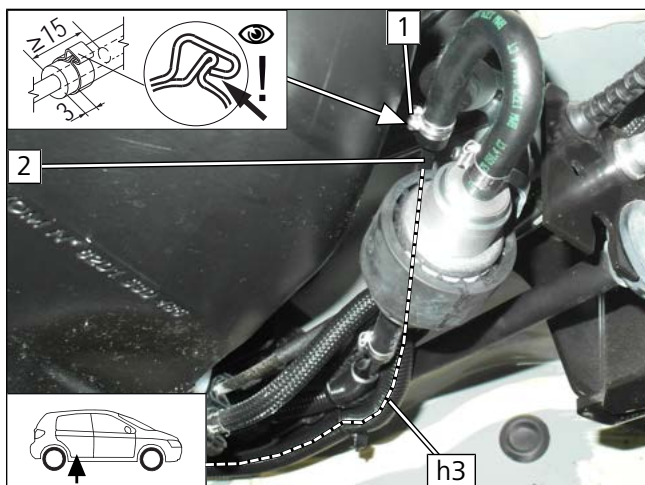
DANGER

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

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



Fuel pump connection



- 1 Ø10 clamp
- 2 Fuel line of FuelFix

Fig. 51



10 Coolant

10.1 Hose routing diagram

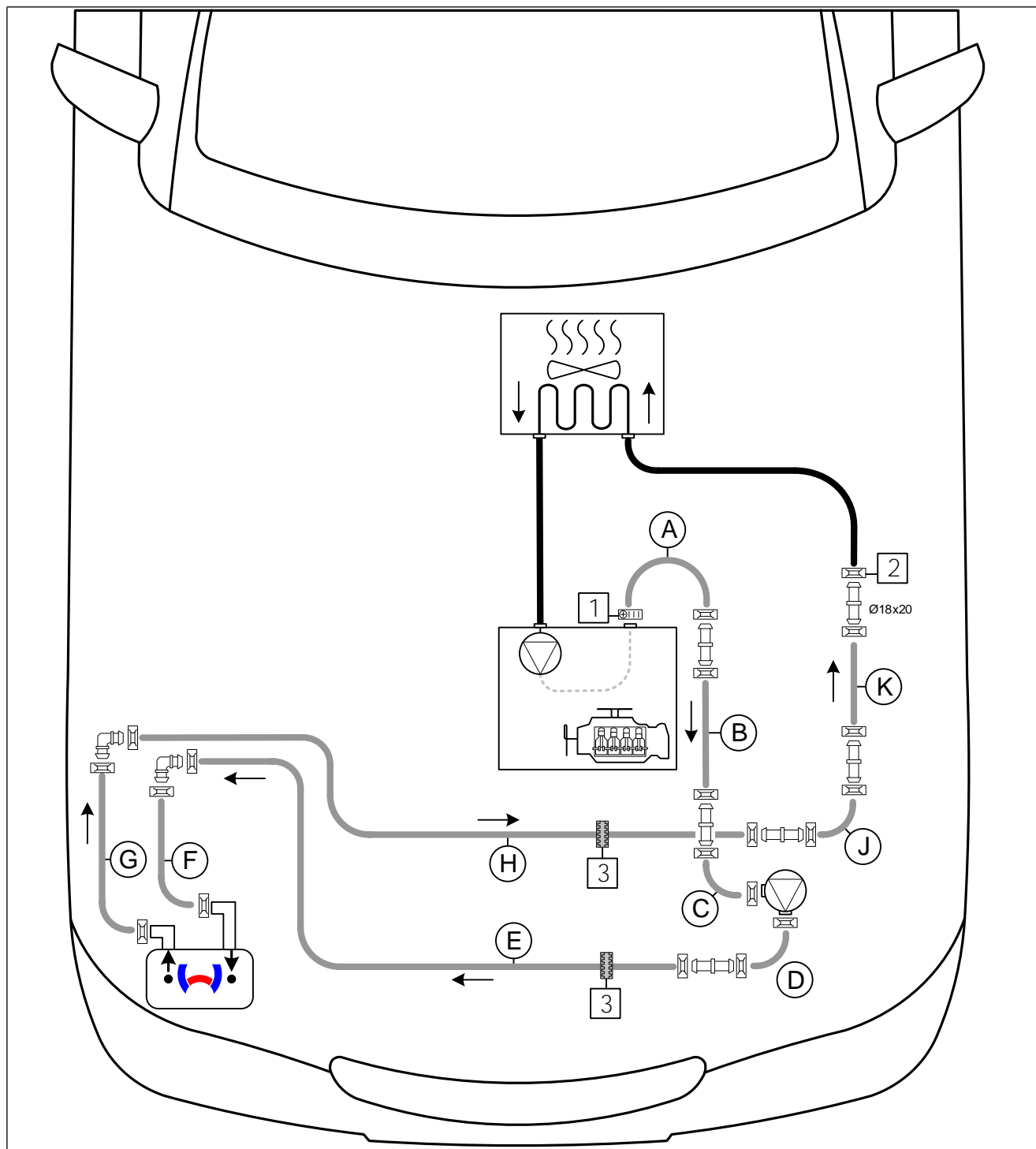


Fig. 52

All spring clips without a specific designation  = Ø25

All connecting pipes without a specific designation  = Ø18x18 or  = Ø18x18/90°

1 Ø16-27 screw clamp; **2** Original vehicle spring clip; **3** Black (sw) rubber isolator



10.2 Coolant circuit installation

Cutting hoses to length

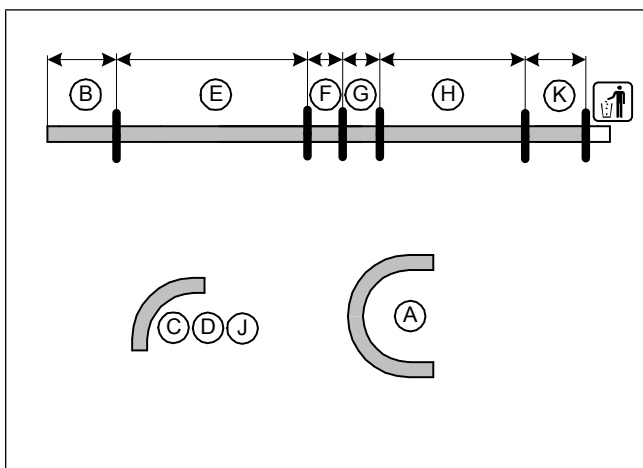


Fig. 53

(A)	180° moulded hose
(B)	350
(C) / (D) / (J)	90° moulded hose
(E)	780
(F)	200
(G)	250
(H)	790
(K)	350

Mounting fabric heat shrink tubing

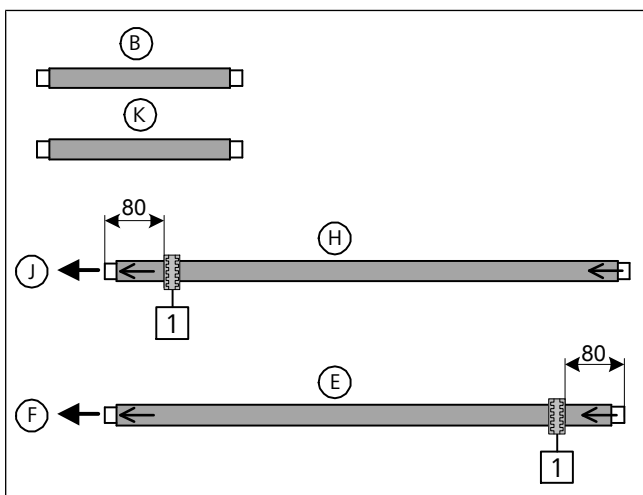


Fig. 54



- ▶ 1. Slide on and cut to length
- ▶ 2. Shrink, use at most 230 °C



- Risk of interchanging the coolant hoses
- ▶ Indicate the direction of flow on hoses **(H)** and **(E)** using suitable means.

1 Black (sw) rubber isolator

Preparing hoses **(F)** and **(G)**

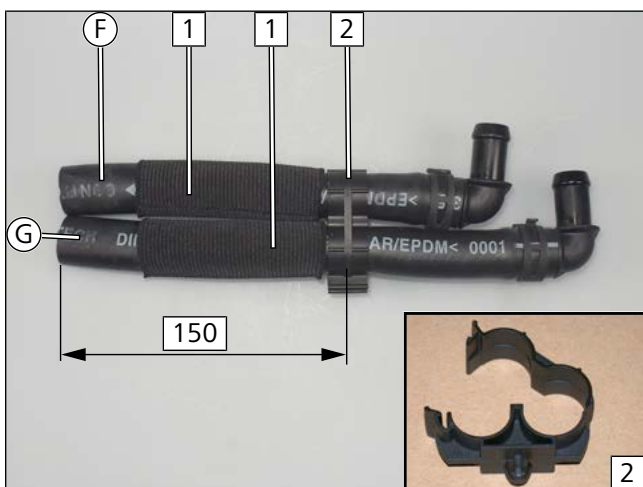


Fig. 55



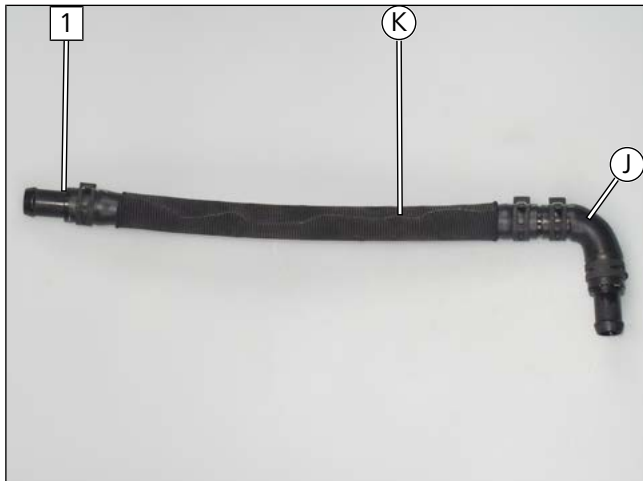
Mount fabric heat shrink tubing **1**.

- ▶ 1. Cut to length and slide on
- ▶ 2. Shrink, use at most 230 °C

1 100 long fabric heat shrink tubings
2 Hose bracket



Preparing hose group **J**, **K**



Ø18/20 connecting pipe **1**

Fig. 56

Preparing hose group **A**, **B**, **C**

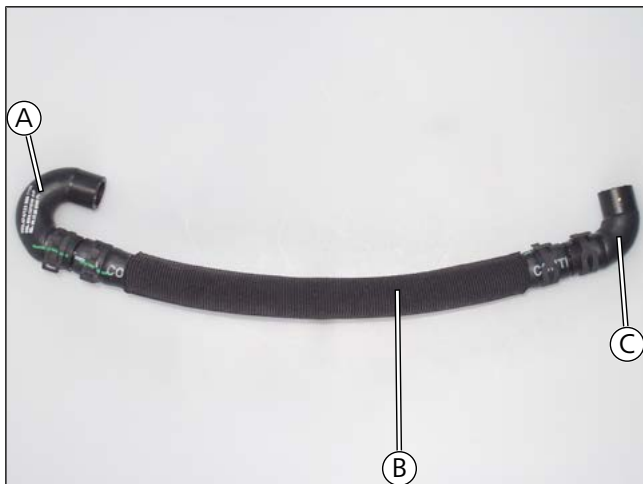


Fig. 57

Preparing perforated bracket

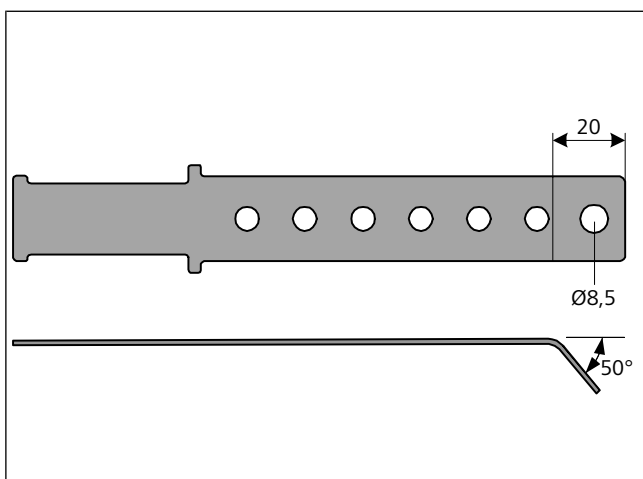


Fig. 58



Premounting coolant pump

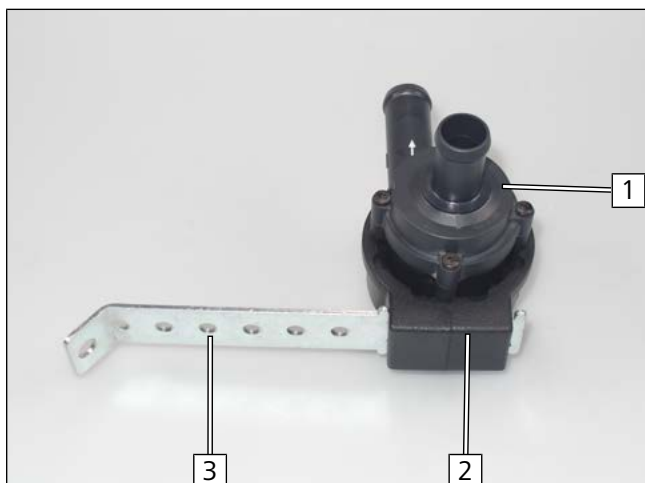


Fig. 59

- 1 Coolant pump
- 2 Coolant pump mount
- 3 Perforated bracket

Cutting point

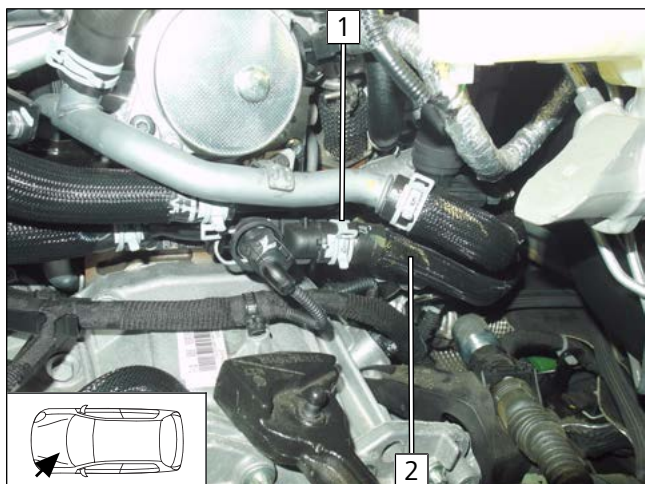


Fig. 60

- Pull engine outlet/heat exchanger inlet hose **2** from heat exchanger inlet connection piece. Original vehicle clamp **1** will be reused.

Cutting cable duct

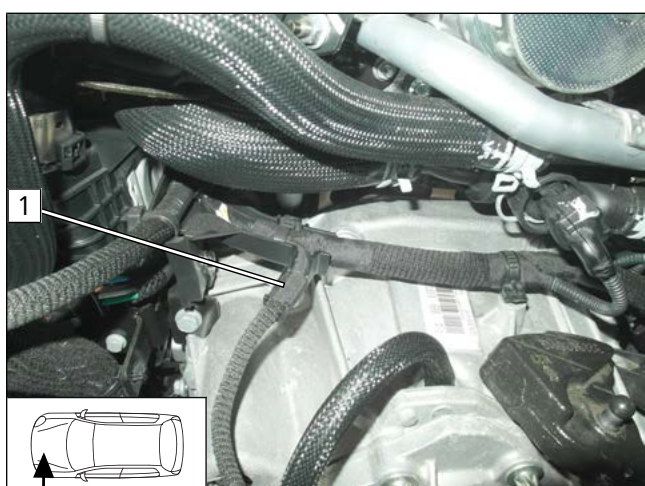


Fig. 61



Danger of damage to wires.

- Disconnect wire **1**, remove the insulating tape.

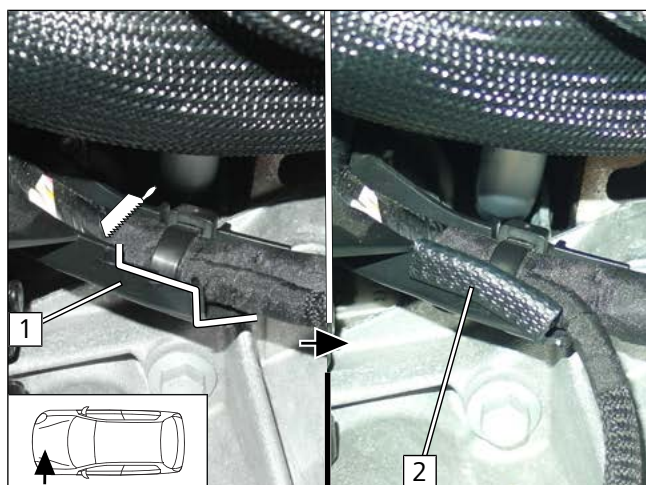


Fig. 62



Danger of damage to wires.

- ▶ Cut plastic **1** in accordance with the markings.
- ▶ Mount narrow, 30 long edge protection **2**.

Routing original vehicle wiring harness

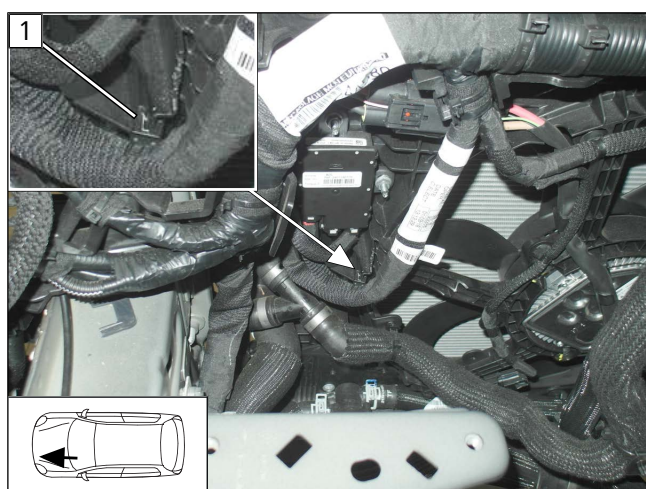


Fig. 63

- ▶ Detach original vehicle edge clip cable tie **1**.

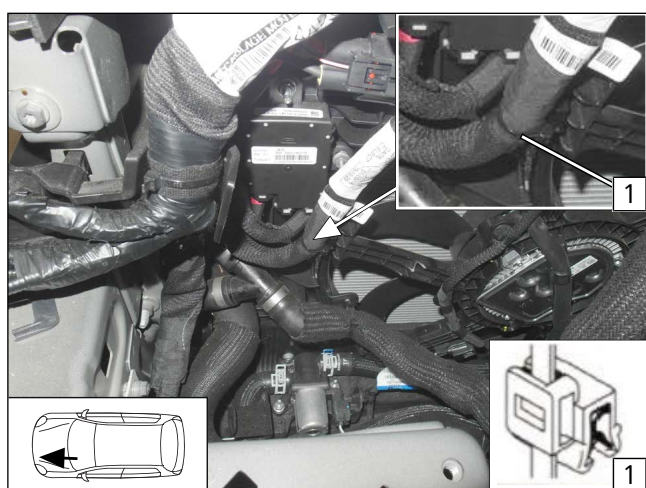


Fig. 64

- ▶ Route wiring harness, fasten with new edge clip cable tie **1**.



Connecting hoses **F** and **G** to HG

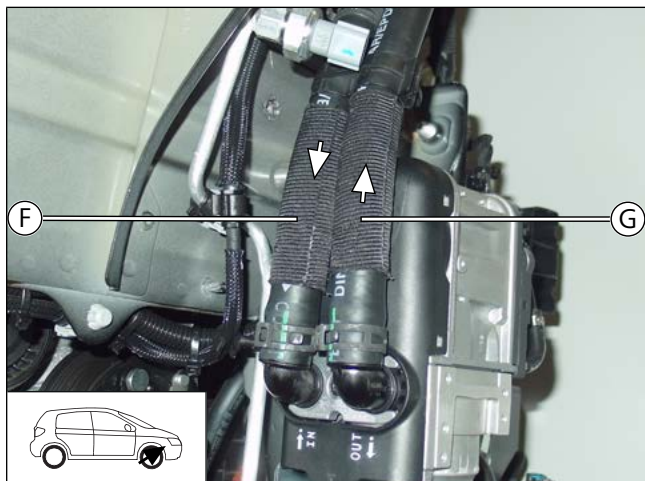


Fig. 65

Removing original vehicle bolt

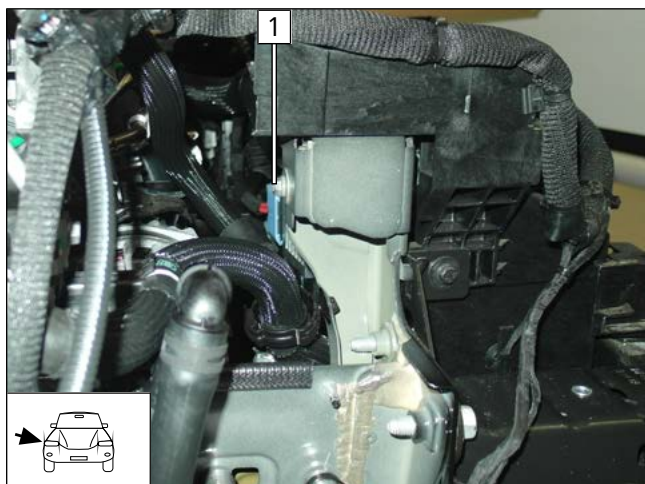


Fig. 66

► Remove and discard original vehicle bolt **1**.

Connecting hoses **E** and **H**

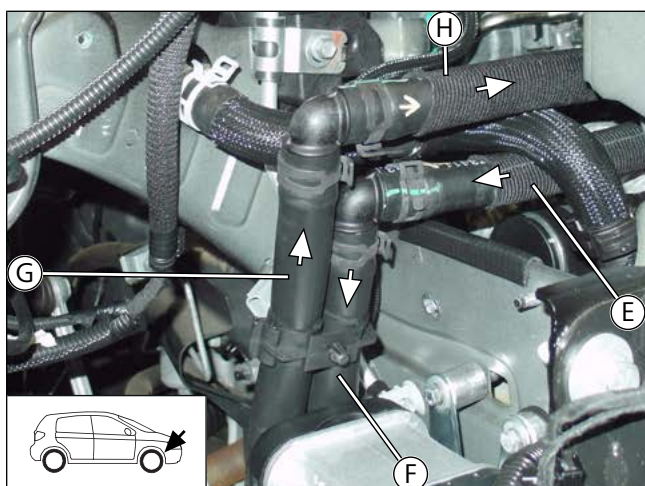


Fig. 67



Fastening hose **H**

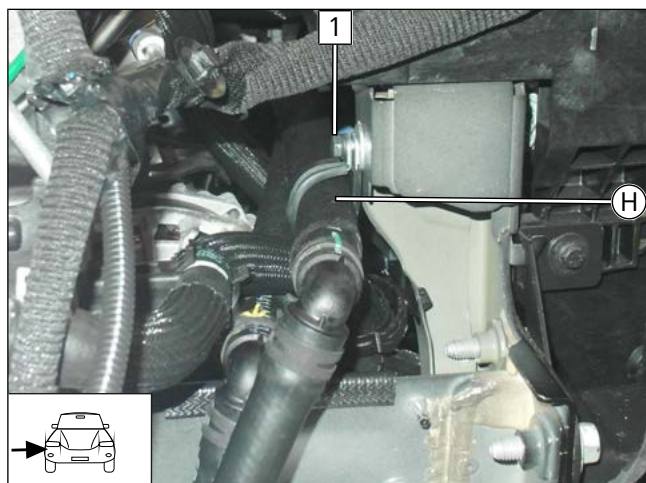


Fig. 68

- 1** Mount M6x20 bolt, spring lock washer, Ø29 rubber-coated p-clamp, large diameter washer, loosely at original vehicle thread

Connecting hose **J** to hose **H**

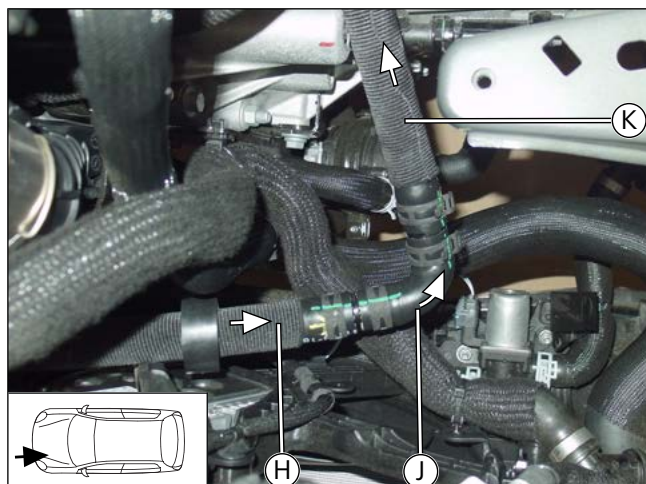


Fig. 69

Connection to heat exchanger inlet

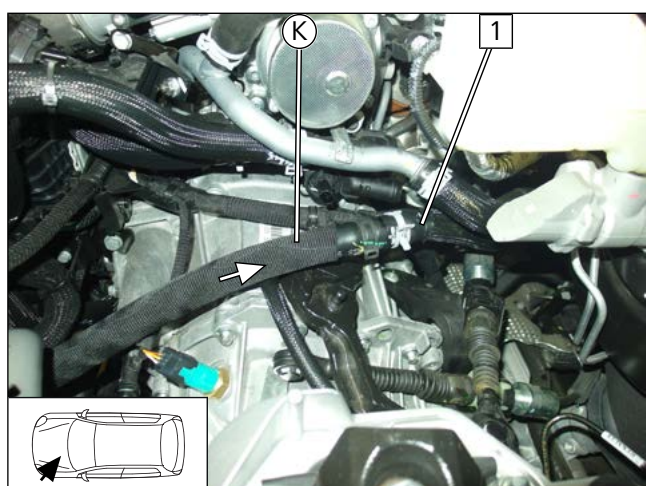


Fig. 70

- 1** Heat exchanger inlet hose with original vehicle spring clip



Mounting coolant pump

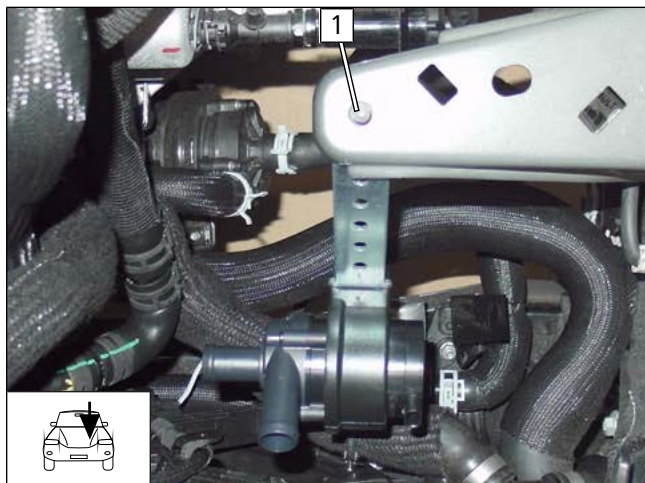


Fig. 71

► Screw in original vehicle bolt at position **1** from below.

- 1** Original vehicle bolt, perforated bracket, original vehicle threaded hole

Connection of hose **D** to coolant pump outlet

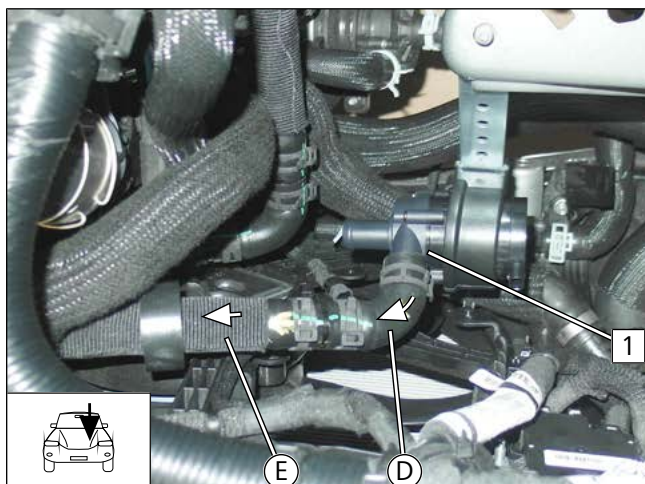


Fig. 72

- 1** Coolant pump

Connection of hose **A** to engine outlet

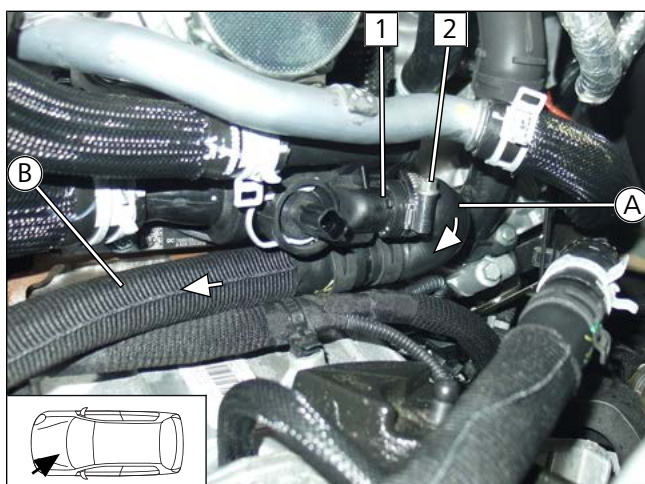


Fig. 73

- 1** Engine outlet connection piece, turn hose **A** in the direction of the engine block
- 2** Ø16-27 screw clamp



Connection of hose **C** to coolant pump inlet

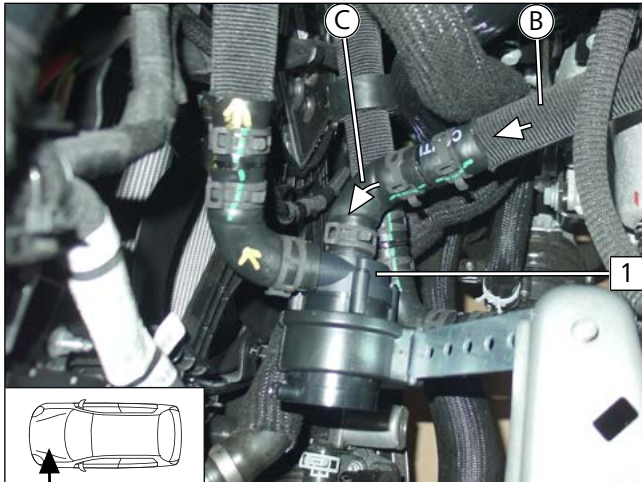


Fig. 74

- 1 Coolant pump

Fastening hoses **E** and **H**

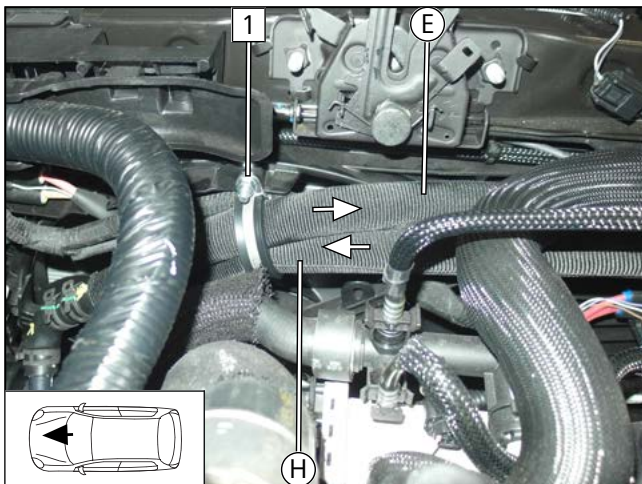


Fig. 75

- 1 M6x20 bolt, original vehicle hole in fan housing, Ø38 rubber-coated p-clamp, flanged nut

Aligning and fastening hoses

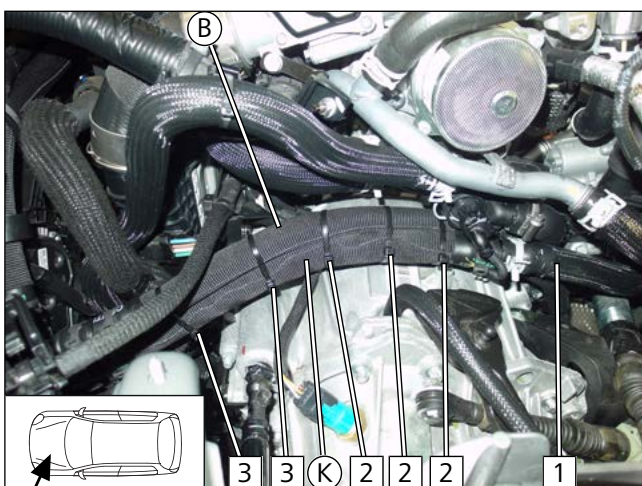


Fig. 76

- 1 Heat exchanger inlet hose
- 2 Cable tie around hoses **B**, **K** and original vehicle wiring harness
- 3 Cable tie around hoses **B** and **K**

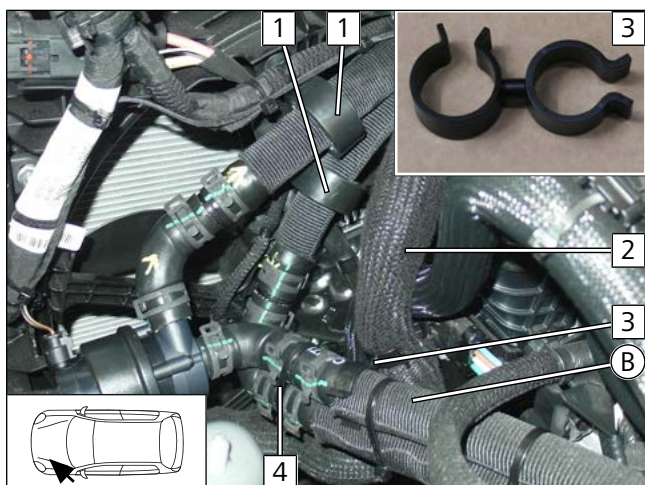


Fig. 77

- 1 Check the position of the rubber isolator in relation to the rib on the fan housing
- 3 Hose bracket between hose (B) and original vehicle hose 2
- 4 Cable tie

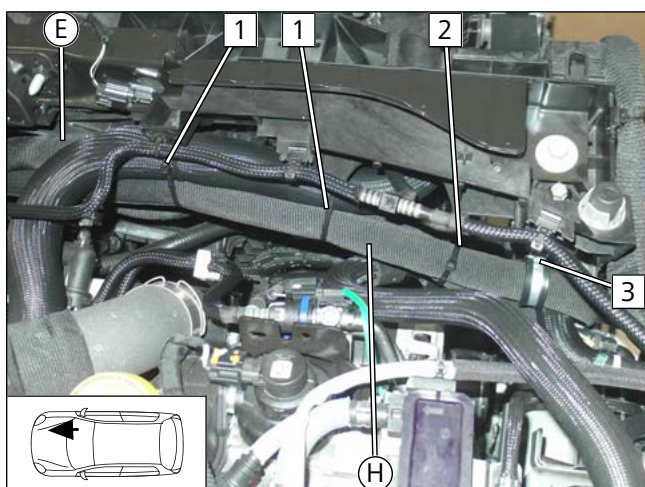


Fig. 78



Danger of damage to components

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

- 1 Cable tie around hoses (E), (H) and original vehicle hose
- 2 Cable tie around hoses (E) and (H)
- 3 Tighten bolt of rubber-coated p-clamp

Routing coolant pump wiring harness

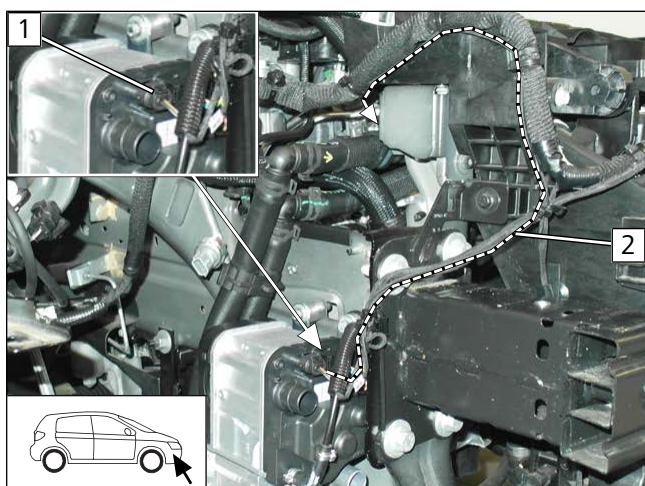


Fig. 79

- 1 Coolant pump wiring harness connector
- 2 Coolant pump wiring harness

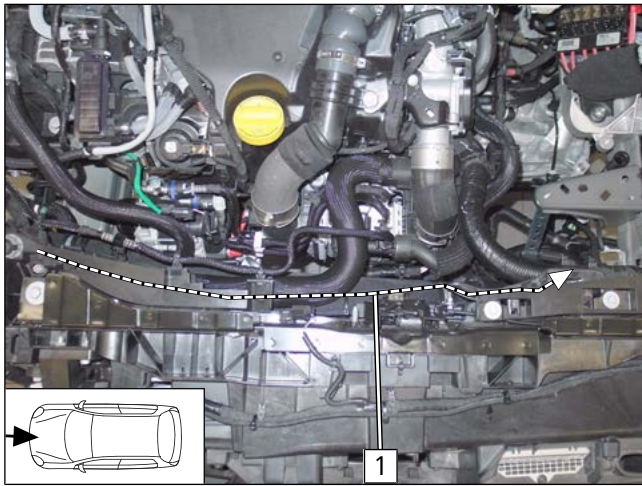


Fig. 80

► Route coolant pump wiring harness **1** along coolant hoses to coolant pump.

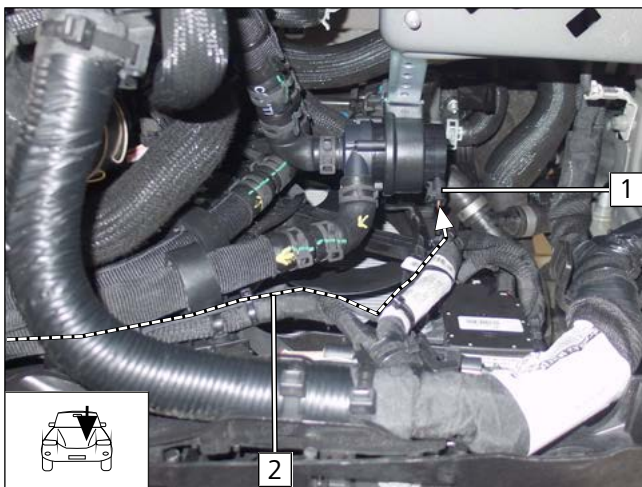


Fig. 81

- 1** Coolant pump wiring harness connector
- 2** Coolant pump wiring harness



11 Exhaust

11.1 Mounting exhaust pipe

Bending angle bracket

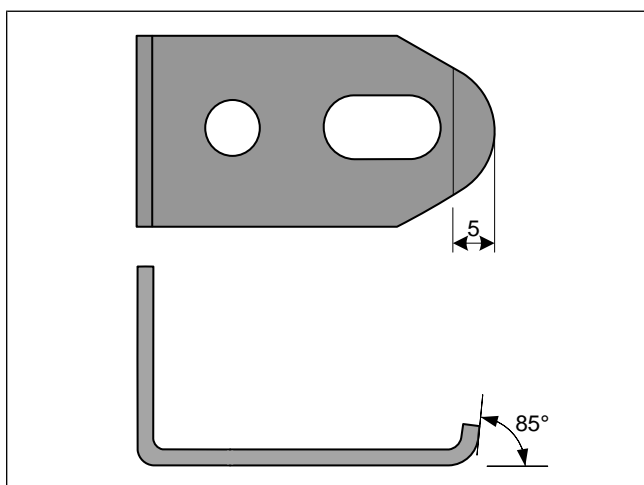


Fig. 82

Premounting angle bracket

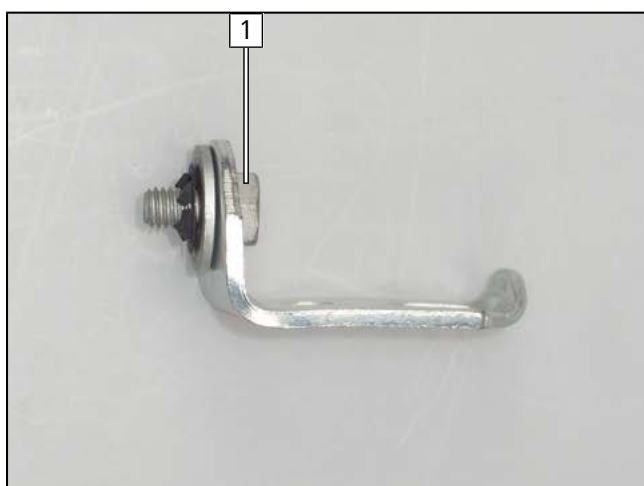


Fig. 83

- 1 M6x12 bolt, angle bracket, large diameter washer, lock washer

Premounting exhaust silencer



Fig. 84

- 1 M6x16 bolt, spring lock washer, large diameter washer, angle bracket, exhaust silencer



Drilling out hole in perforated bracket

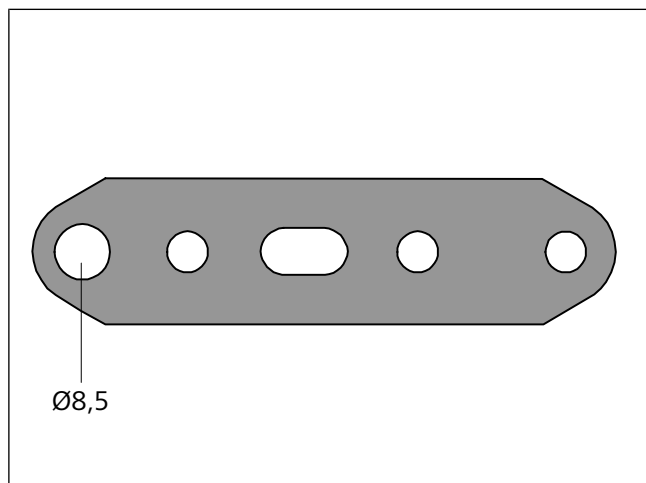
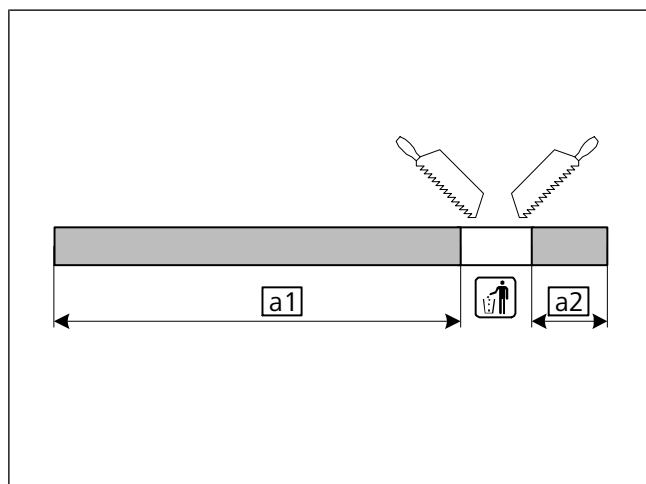


Fig. 85

Cutting exhaust pipe to length



a1 850

a2 210

Fig. 86

Preparing exhaust pipe **a1**

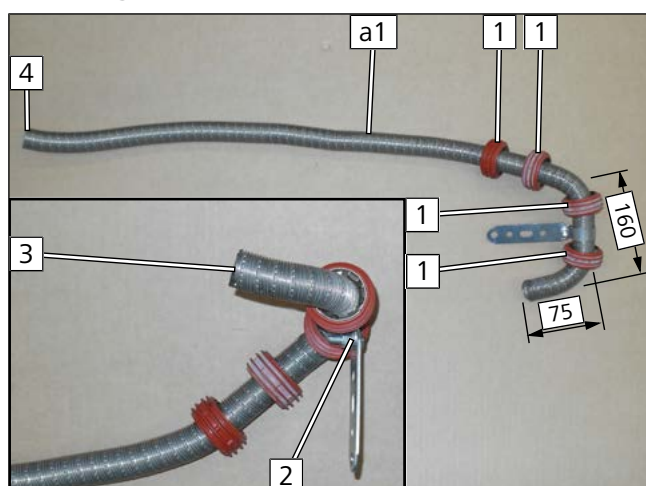


Fig. 87

► Bend exhaust pipe **a1** as shown.

- 1** Spacer bracket
- 2** Mount M6x20 bolt, perforated bracket, clamp, flanged nut loosely
- 3** Connection to HG
- 4** Connection to exhaust silencer



Preparing exhaust pipe **a2**

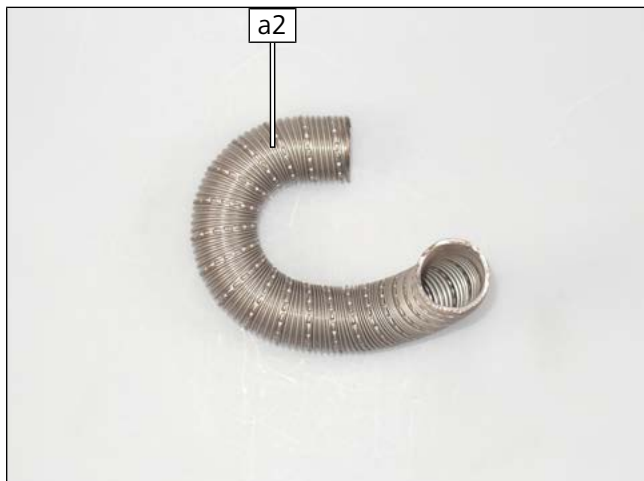


Fig. 88

► Bend exhaust pipe **a2** as shown.

Removing original vehicle nut

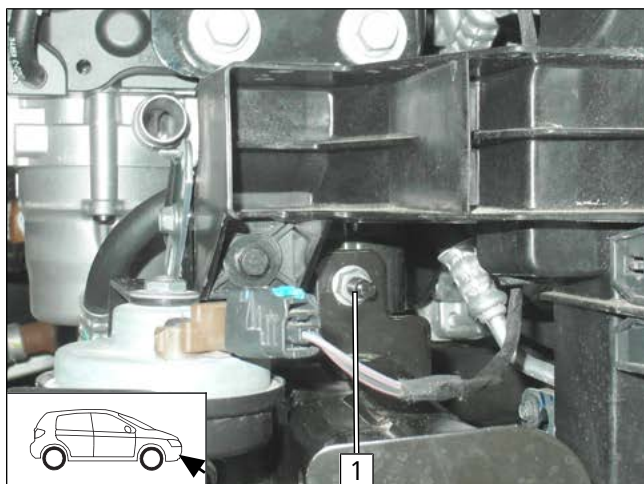


Fig. 89

1 Original vehicle nut, will be reused

Enlarging original vehicle hole, inserting rivet nut

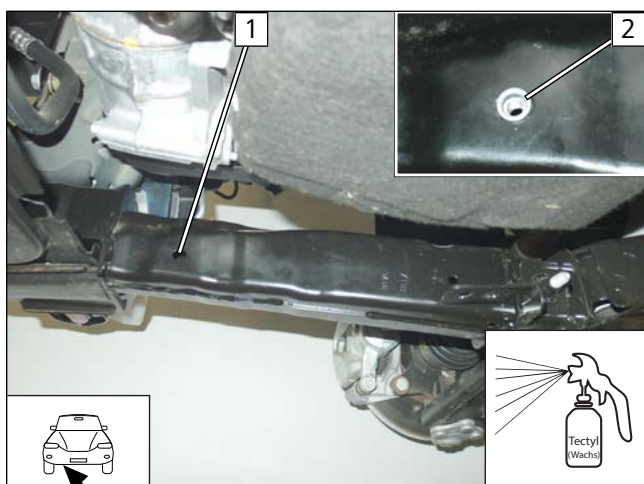


Fig. 90

1 Drill out hole to $\text{Ø}9$
2 Rivet nut



Drilling hole

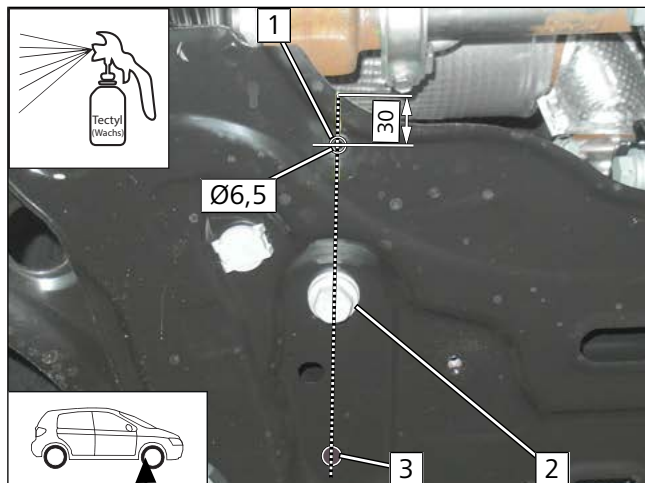


Fig. 91

- ▶ Draw a guide line over the centre of bolt **2** and existing hole **3**.
- ▶ Drill hole **1**.

Mounting exhaust silencer

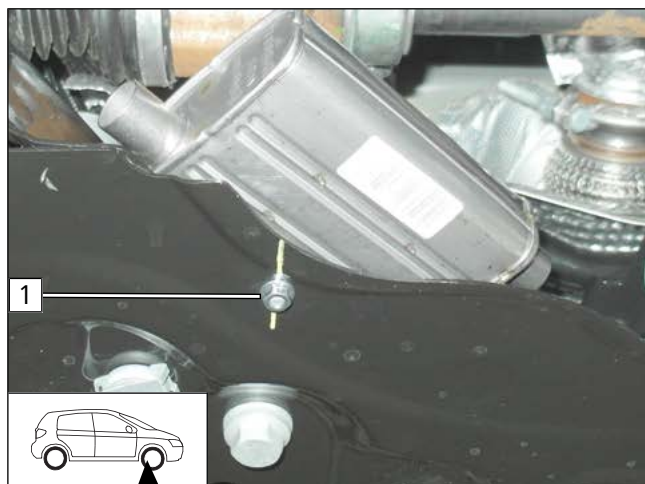


Fig. 92

- 1** Premounted exhaust silencer, drilled Ø6.5 hole, flanged nut

Mounting exhaust pipe **a1**

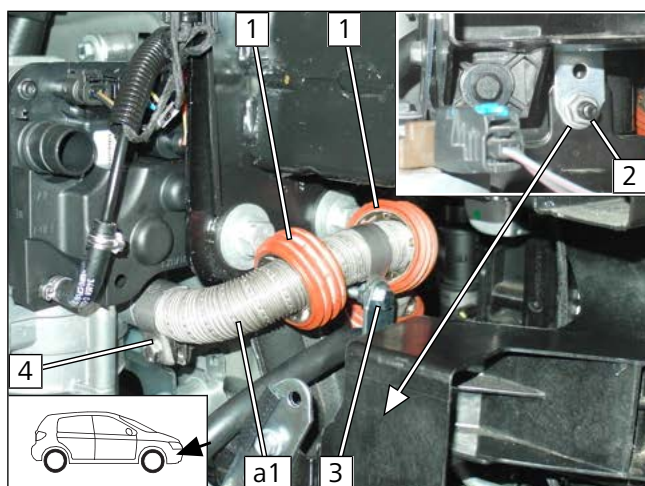


Fig. 93

- ▶ Mount exhaust pipe **a1** onto HG and route to exhaust silencer.
- 1** Align spacer bracket with bolt head
- 2** Original vehicle stud bolt, perforated bracket, original vehicle nut
- 3** Tighten bolt
- 4** Hose clamp

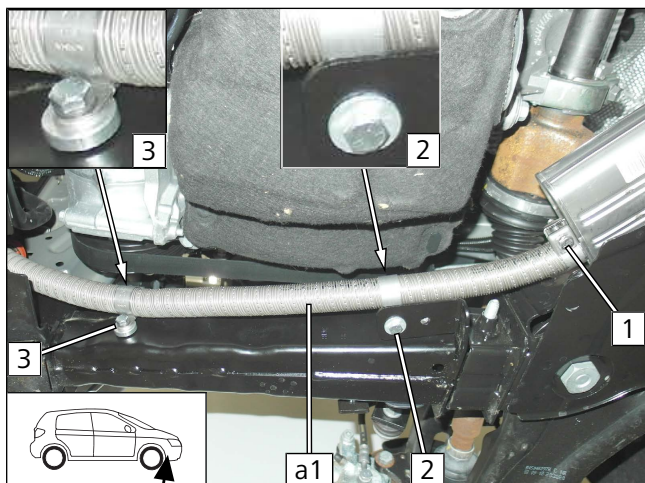


Fig. 94

- 1 Hose clamp
- 2 M6x20 bolt, large diameter washer, original vehicle oblong hole, spacer (5), p-clamp, flanged nut
- 3 M6x20 bolt, spring lock washer, p-clamp, spacer (5), rivet nut

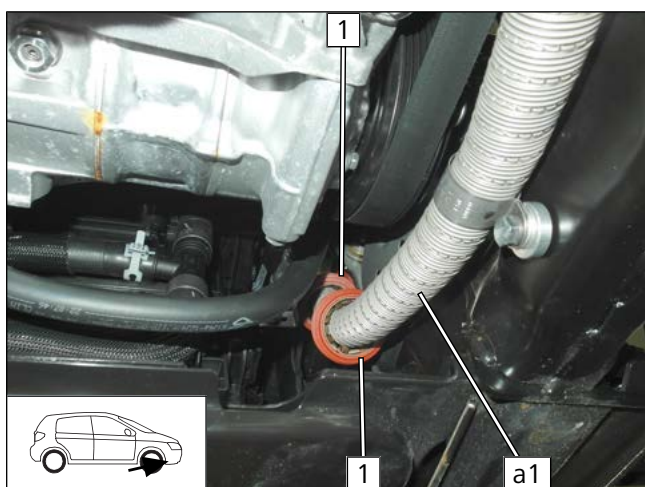


Fig. 95

- 1 Align spacer bracket with frame side member

Mounting exhaust pipe **a2**

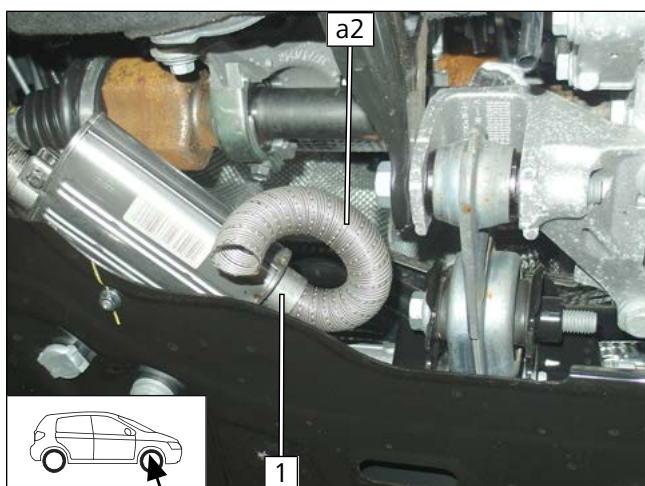


Fig. 96

- 1 Hose clamp



Enlarging hole in underride protection

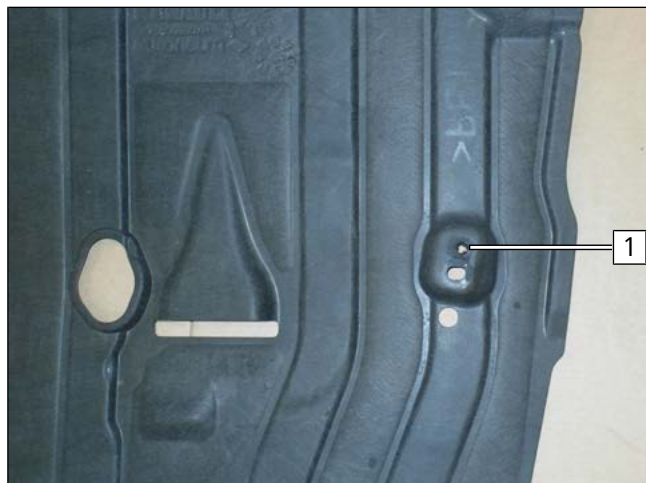


Fig. 97

- 1 Enlarge original vehicle hole to $\varnothing 14$

11.2 Mounting exhaust end fastener

Cutting EFIX to length

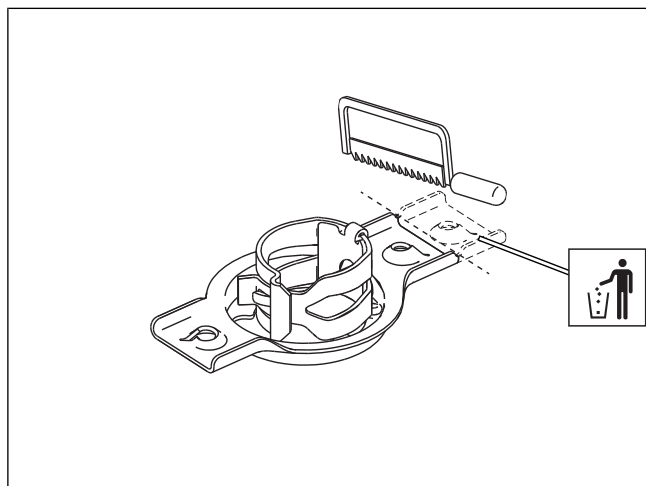


Fig. 98



Observe the EFIX installation instructions.

Work step E1

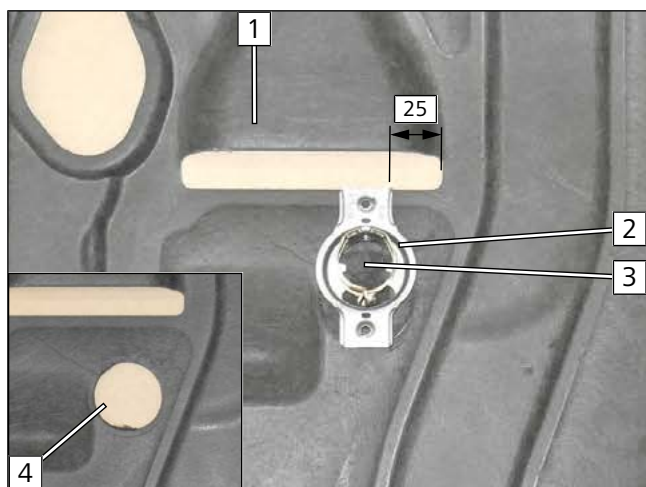


Fig. 99

- 1 Underride protection
- 2 EFIX
- 3 Copy hole pattern
- 4 Hole



Work steps E3-E4



Fig. 100

- 1** Copy hole pattern
- 2** EFIX

Work step E5



Fig. 101

- 1** 5x13 self-tapping screw, large diameter washer (5)



12 Combustion air

Sticking on heat protection film

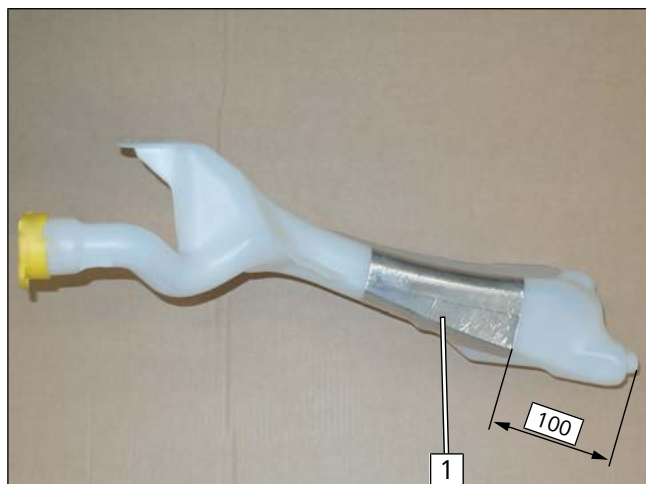


Fig. 102

- ▶ Cut heat protection film **1** in half, glue both strips, each 150 long, side by side onto the washer reservoir as shown.

Cutting combustion air intake pipe to length

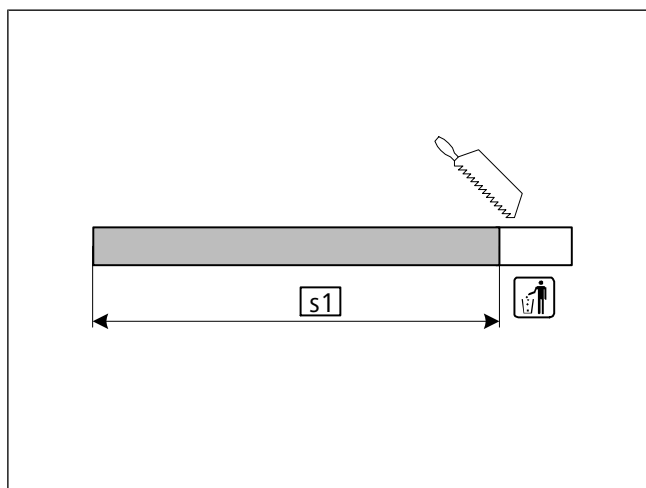


Fig. 103

s1 750

Mounting combustion air intake pipe

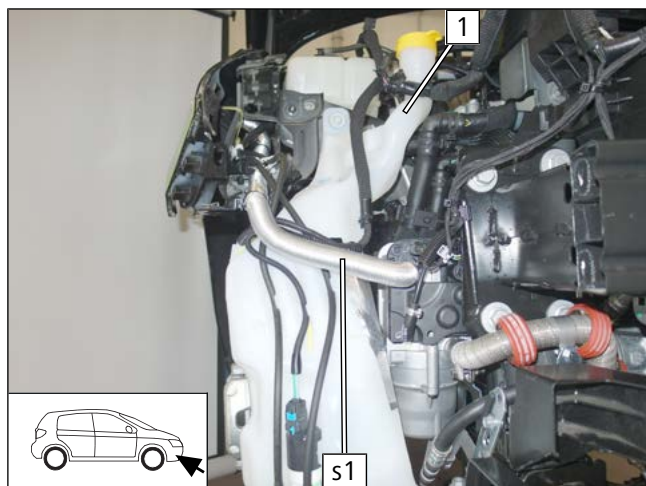


Fig. 104

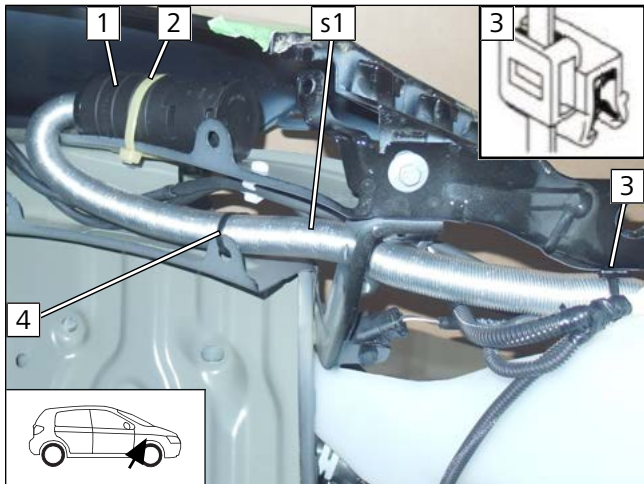


Observe the installation instructions of the combustion air intake silencer.

- ▶ Mount washer reservoir **1**.
- ▶ Mount combustion air intake pipe **s1** onto HG and route in the wheel well.



Mounting combustion air intake silencer



- 1 Combustion air intake silencer
- 2 White cable tie
- 3 Edge clip cable tie
- 4 Cable tie

Fig. 105



13 Final work in engine compartment

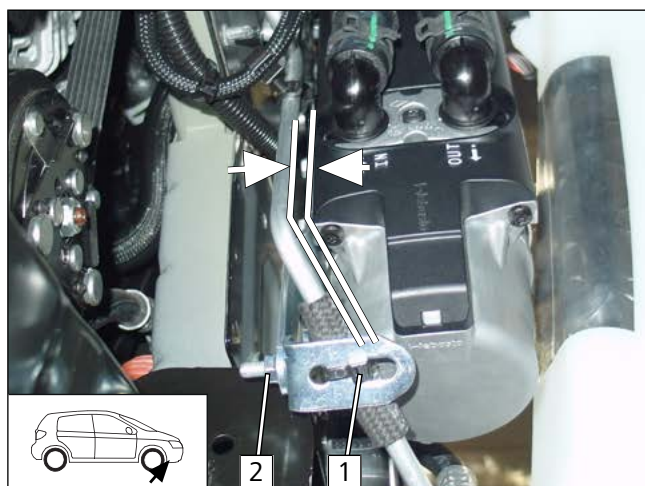
Fastening A/C line



- ▶ Cut fabric-reinforced fuel line **1** and position around A/C line.

Fig. 106

Mounting angle bracket



Danger of damage to components

- ▶ Ensure sufficient distance between A/C line and heater, correct if necessary.



- 1** Cable tie around A/C line and angle bracket
- 2** M6x20 bolt, angle bracket, HG bracket, flanged nut

Fig. 107

Bending perforated bracket

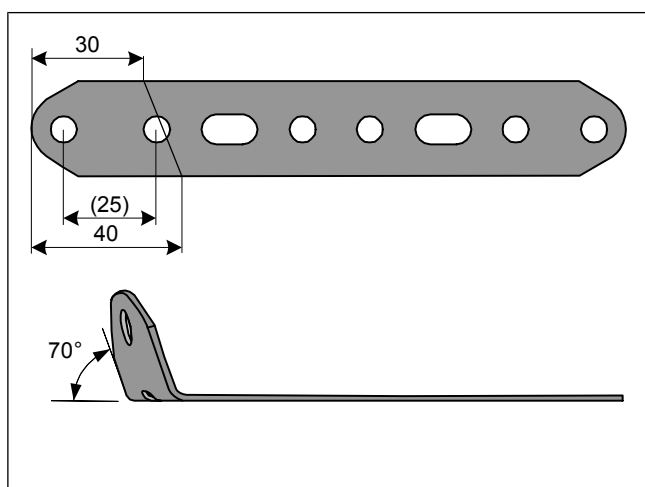


Fig. 108



Premounting control unit

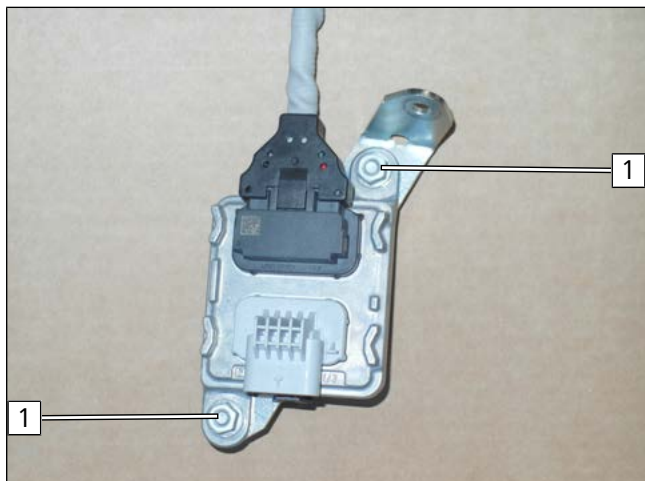


Fig. 109

- 1 M6x12 bolt, large diameter washer, perforated bracket, control unit, original vehicle nut

Mounting control unit

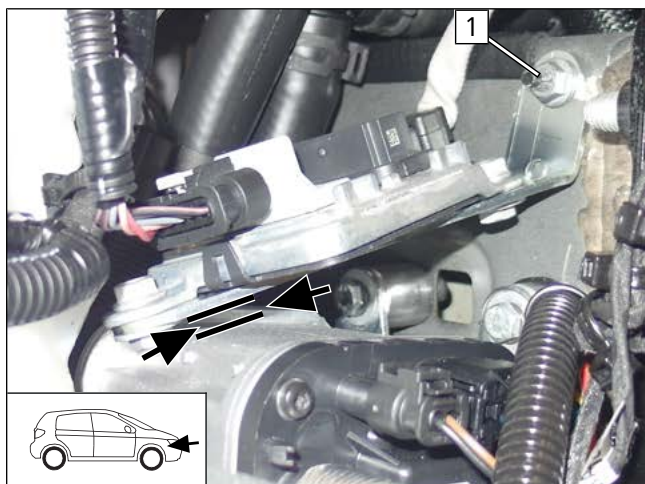


Fig. 110



Danger of damage to components

- Ensure sufficient distance between heater and perforated bracket, correct if necessary.



- 1 Original vehicle stud bolt, perforated bracket, flanged nut

Installing battery box

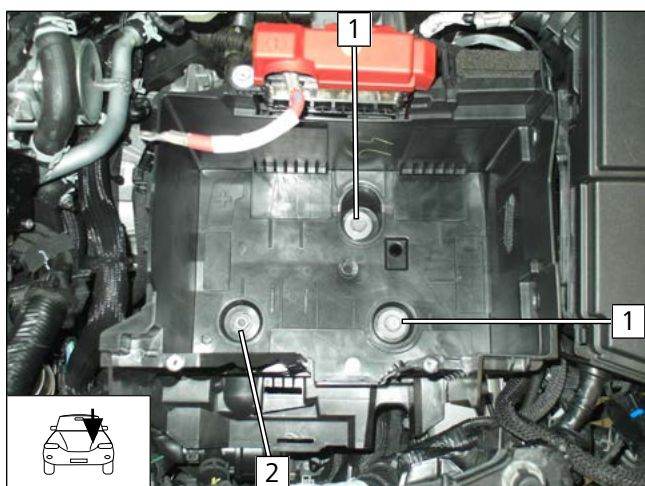
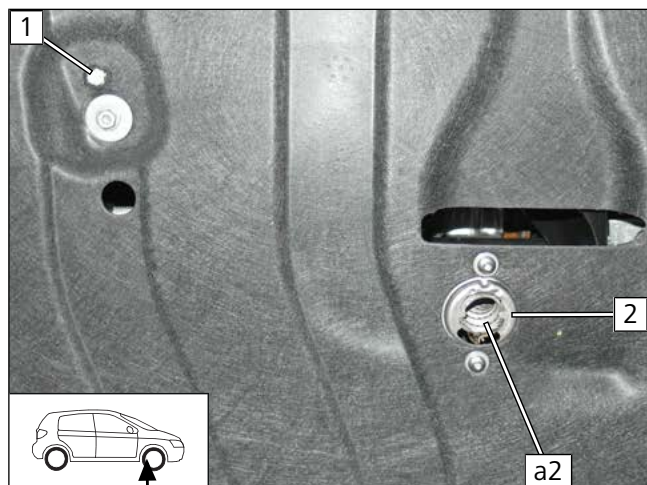


Fig. 111

- 1 Original vehicle bolt
- 2 M8 flanged nut



Mounting underide protection



► Mount exhaust pipe **a2** in EFIX **2**.

1 Bolt head through drilled Ø14 hole

Fig. 112



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 Renault Megane with AC



'**Webasto Standard**' A/C control installation documentation for Renault Megane with AAC

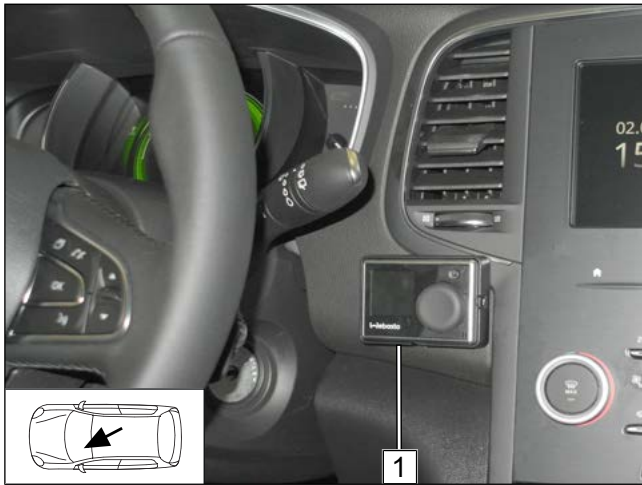



'**Webasto Comfort**' A/C control installation documentation for Renault Megane with AAC


15 Electrical system of control elements

15.1 MultiControl CAR option

Mounting MultiControl CAR



 Installation not possible in case of start button.

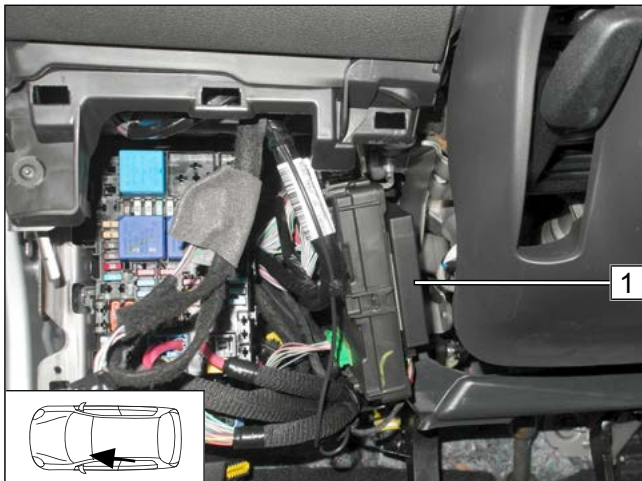
 Discuss the installation location with the customer.

1 Installation frame

Fig. 113

15.2 Telestart option

Mounting receiver

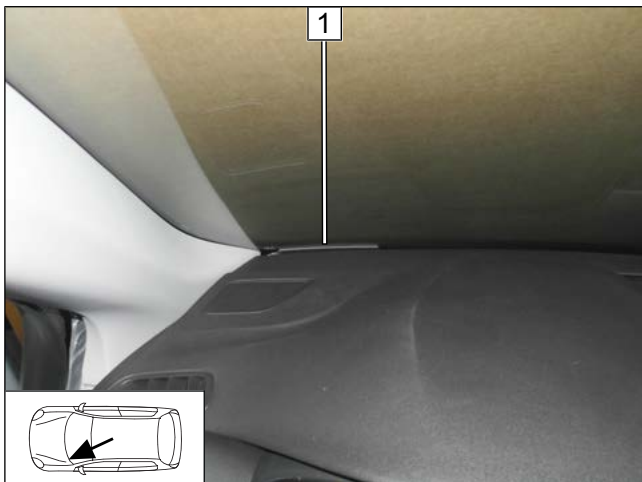


 Observe the Telestart installation documentation.

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

Fig. 114

Mounting aerial



1 Aerial

Fig. 115

Mounting temperature sensor T100 HTM

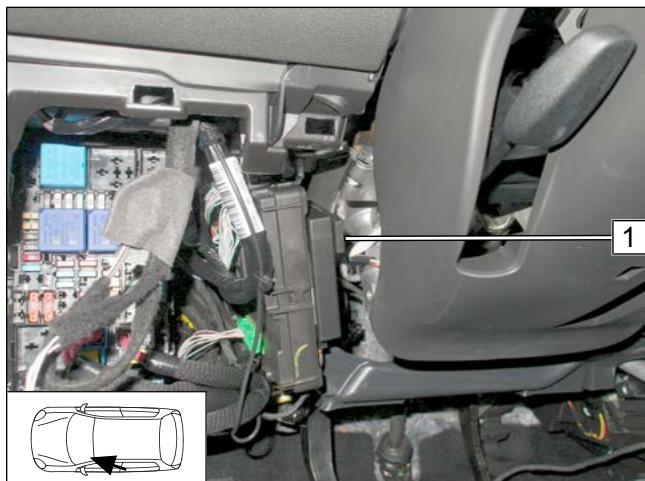


Fig. 116

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

15.3 ThermoCall option

Mounting receiver

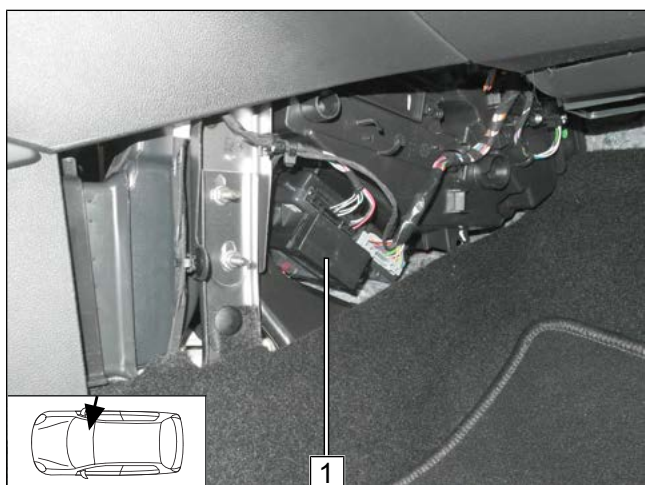


Fig. 117



Observe the ThermoCall installation documentation.

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

Mounting aerial (optional)

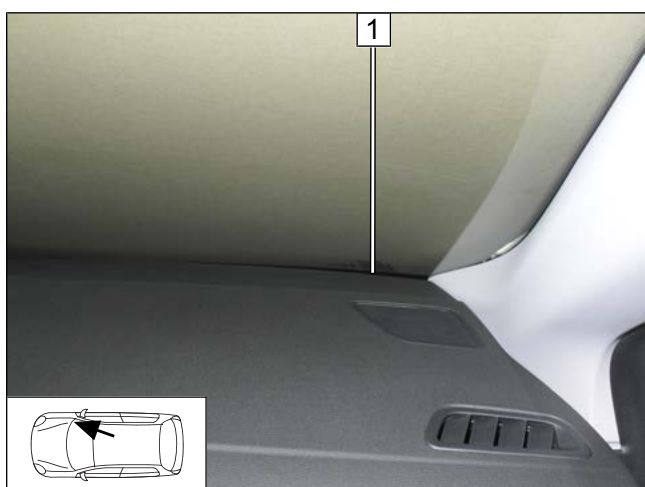


Fig. 118

- 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 'Webasto Standard' A/C control or 'Webasto Comfort' kit, section Final work

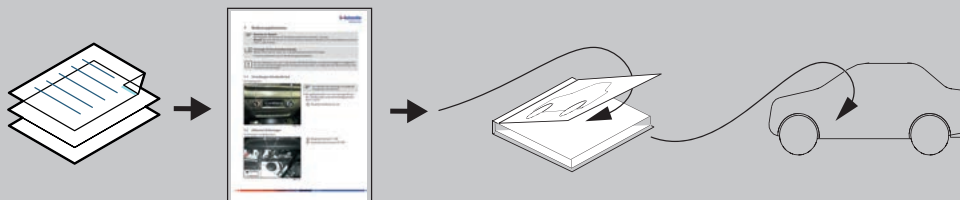
▶ Initial start-up and function check

▶ 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.



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.

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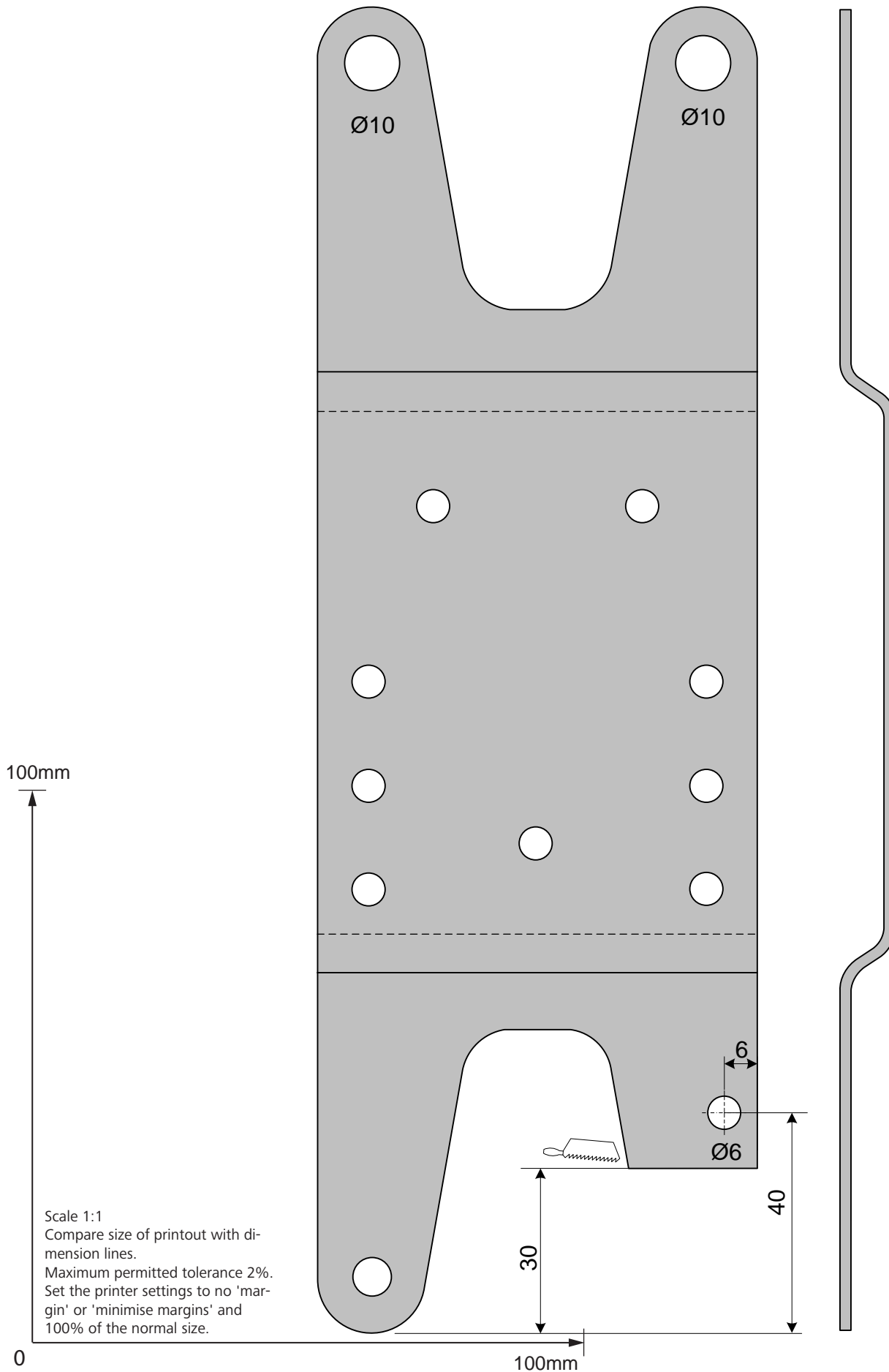
Technical Extranet: <https://dealers.webasto.com>



WWW.WEBASTO.COM

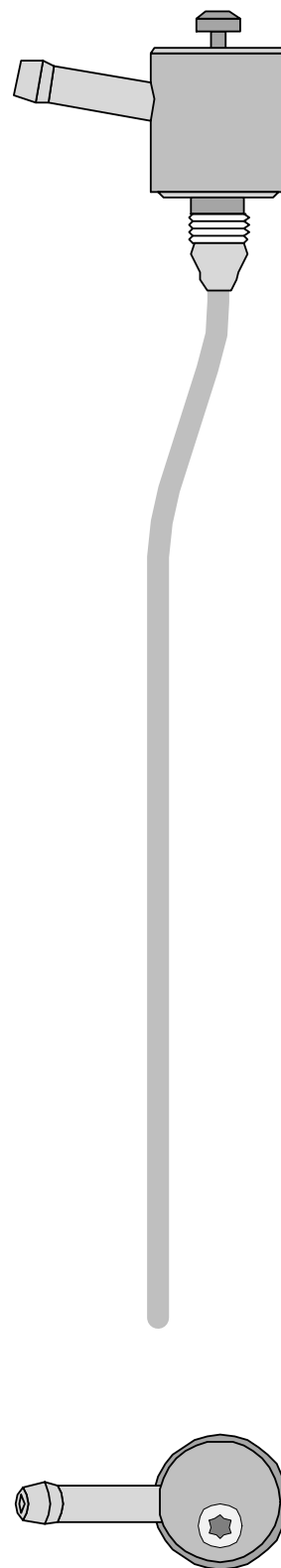


17 Heater bracket template





18 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

