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Installation documentation

for Thermo Top Evo water heater

'Island' coolant circuit without engine preheating

BMW 2 Series Active Tourer F45

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE
BMW	2 Series Active Tourer	F2AT (F45)	from 2019	e1* 2007/46* 1675*…

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displace-ment [cm³]	Engine code
218i	Petrol	Euro 6d Temp	AG	103	1499	B38C
220i	Petrol	Euro 6d Temp	AG	141	1998	B48B

Validity	Equipment variants	Model
		2 Series Active Tourer
Verified equipment variants	2 zone automatic air-conditioning	x
	LED main headlights	x
	LED front fog lights	x
	Additional radiator on the driver's side	x
	Brake air duct	x

Total installation time	Note
9.0 hours	

Contents

1 List of abbreviations

AAC	Automatic air-conditioning
ASH	Spacer bracket
DP	Fuel pump
EFIX	Exhaust end fastener
EPT	Telestart receiver
FF	FuelFix (tank extracting device)
Fig.	Figure
HG	Heater
SH	Fuse holder
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 BMW X2 F39 B / 2er F45 B MY 2018	1326525B
Additional 'Webasto Comfort' A/C control kit for BMW / Mini	1324388_
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list

2.3 Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

2.4 Installation Recommendations

Arrange for the vehicle to be delivered with the tank only about ¼ 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.

We recommend installing a Thermo Top Evo 4. The heater is integrated into the coolant circuit as an 'island' and heats up the vehicle passenger compartment. There is no engine pre-heating.

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	K
Vehicle-specific installation documentation of the cold start kit	M
Webasto Comfort A/C control	H
Webasto Standard A/C control	G
Tank extracting device (e.g. FuelFix)	F
Exhaust end fastener (EFIX)	E
Combustion air intake silencer	L
Spacer bracket (ASH)	S

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

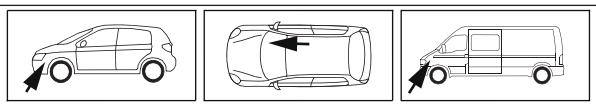
3.4.3 Work step identification marks

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 mm^2
- Crimping pliers for cable lugs 0.5 – 10 mm^2
- Crimping pliers for male connector 0.14 – 6 mm^2
- Crimping pliers for connector 0.25 – 6 mm^2
- 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	▶ Open the fuel tank cap ▶ Ventilate the fuel tank ▶ Close the fuel tank cap again ▶ Depressurise the cooling system	
Engine compartment and body	▶ Disconnect the battery ▶ Complete air filter with intake hose ▶ Water drain chamber cover ▶ Windscreen wiper cover ▶ Windscreen wiper ▶ Lower engine cover ▶ Front wheel on the driver's and front passenger's side ▶ Wheel well trim on the driver's side ▶ Detach the front part of the wheel well trim on the front passenger's side ▶ Underride protection on the front passenger's side ▶ Bumper trim ▶ Headlights on the driver's side	
Passenger compartment	▶ Rear bench seat on the front passenger's side (in case of separated seat) ▶ Complete rear seat (in case of full seat) ▶ Open the tank fitting service lid on the front passenger's side	

5.2 Heater preparation

Engine compartment	▶ 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	

6 Installation overview

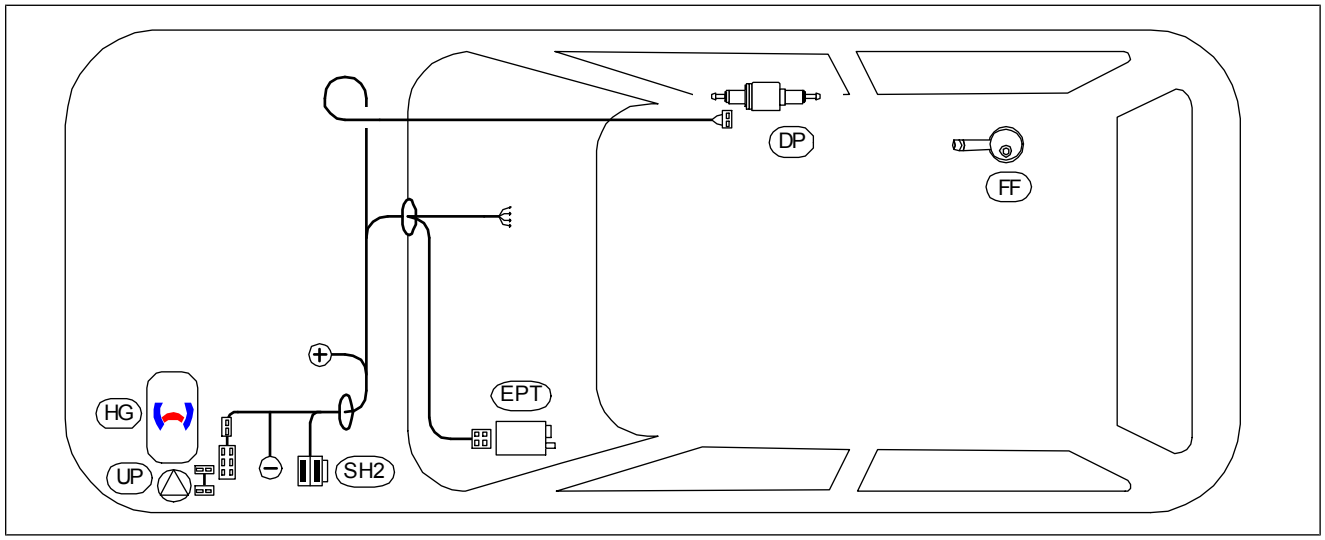


Fig. 1

Legend to installation overview

Abbreviation	Component
DP	Fuel pump
HG	Heater
EPT	Telestart receiver
FF	FuelFix
SH2	Fuse holder of engine compartment
UP	Coolant pump

Heater installation location

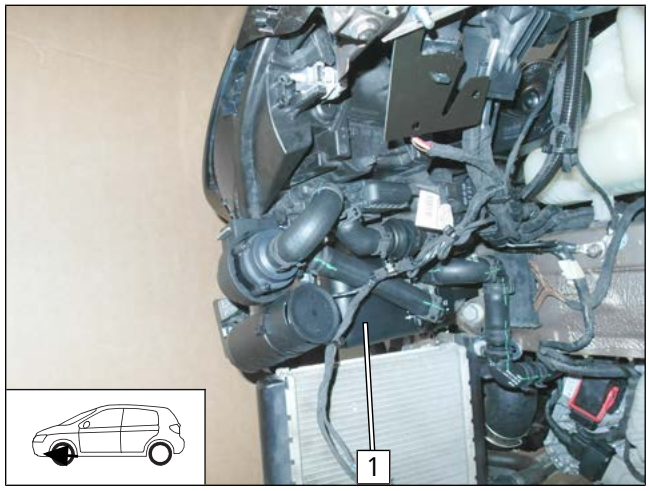


Fig. 2

1 Heater

7 Electrical system of engine compartment

Pre-assembling engine compartment fuses

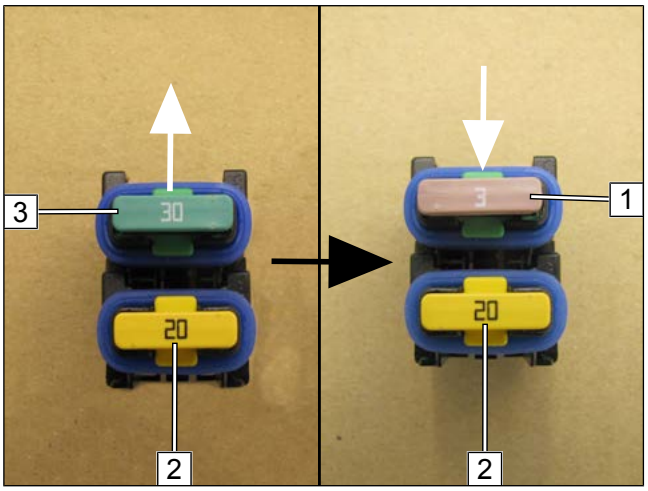


Fig. 3

▶ Replace 30A passenger compartment main fuse F2 [3] with 3A fuse [1].

[2] Fuse F1: 20A

Drilling hole in water drain chamber cover

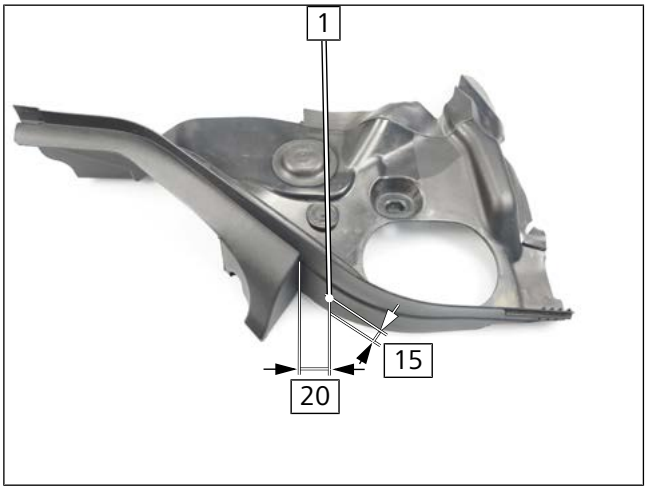


Fig. 4

[1] Ø6 hole

Mounting fuse holder retaining plate

Fig. 5

[1] M5x16 bolt, large diameter washer, retaining plate of SH, hole in water drain chamber cover, large diameter washer, nut

Wiring harness pass through in water drain chamber

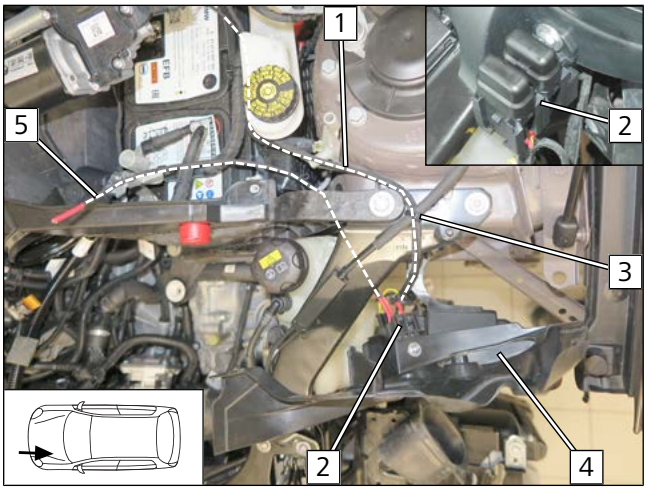


Fig. 6

▶ Attach fuse holder SH2 [2] to premounted water drain chamber cover [4] as shown. Route passenger compartment, control element wiring harnesses [1] and positive wire [5] along original vehicle wiring harness in the water drain chamber, fasten with cable tie [3].

Mounting water drain chamber cover

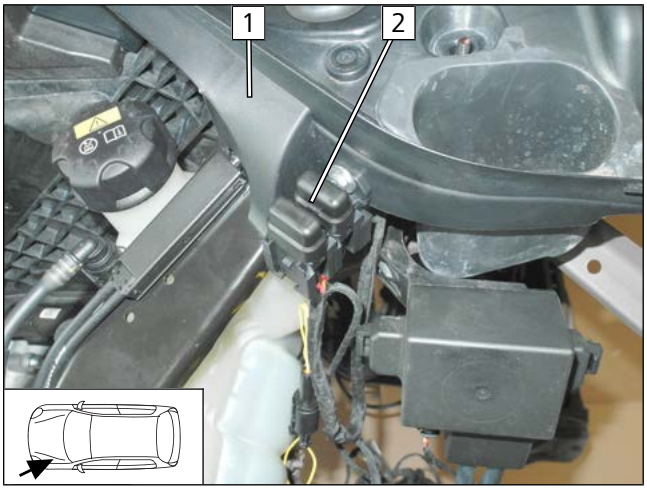


Fig. 7

[1] Water drain chamber cover
[2] Fuse holder SH2 with F1/F2

Wiring harness routing in water drain chamber

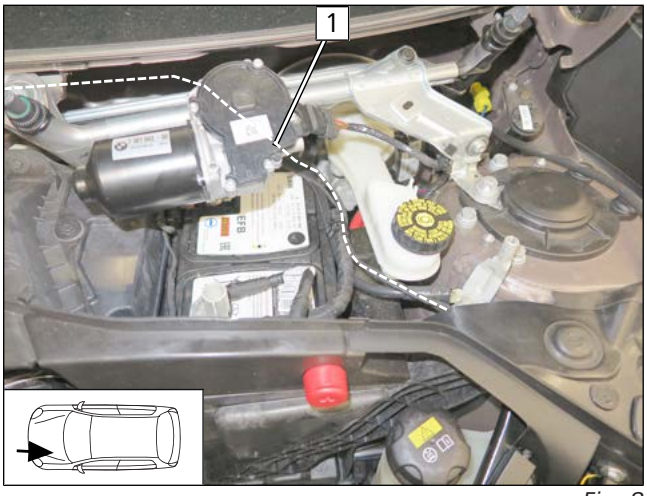


Fig. 8

▶ Route passenger compartment and control element wiring harnesses [1] in water drain chamber.

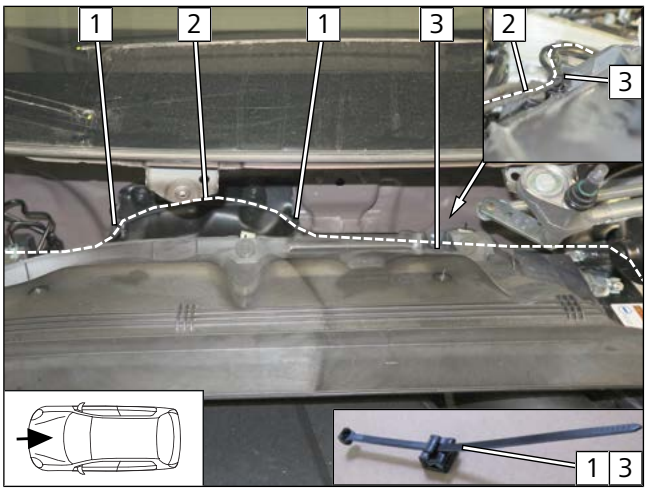


Fig. 9

▶ Route passenger compartment and control element wiring harnesses 2 in water drain chamber.

1 Edge clip cable tie

3 Edge clip cable tie, covered

Passenger compartment wiring harness pass through

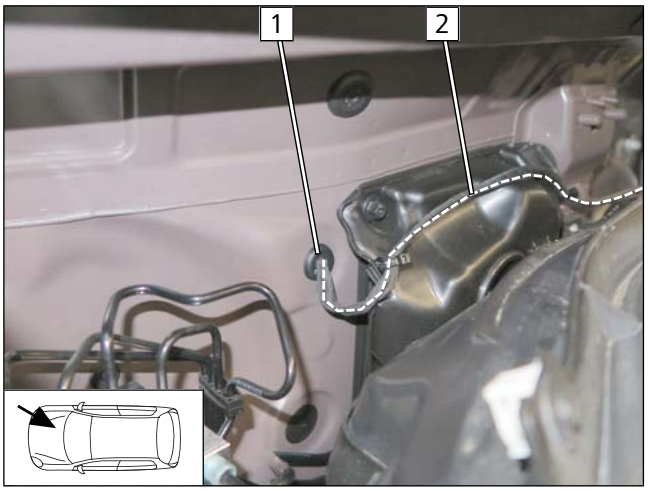


Fig. 10

▶ Route passenger compartment and control element wiring harnesses 2 through protective rubber plug 1 into the passenger compartment.

Mounting positive wire

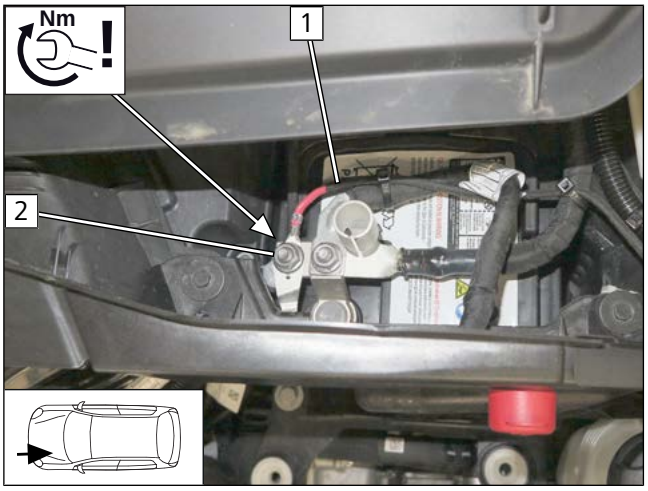


Fig. 11

DANGER

Fire hazard due to insufficient tightening torque

▶ Observe tightening torque

1 Positive wire

2 Original vehicle positive support point

Mounting earth wire

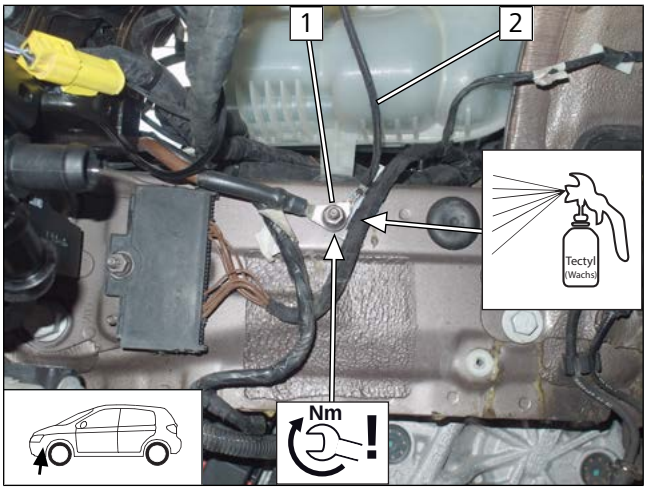


Fig. 12

DANGER

Fire hazard due to insufficient tightening torque

▶ Observe tightening torque

1 Original vehicle earth point

2 Earth wire

8 Mechanical system, part 1

8.1 Preparing installation location

Removing headlight carrier

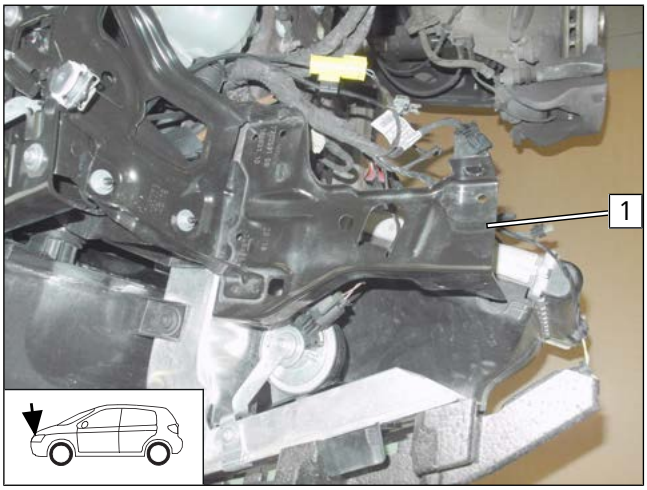


Fig. 13

1 Headlight carrier

Removing horn

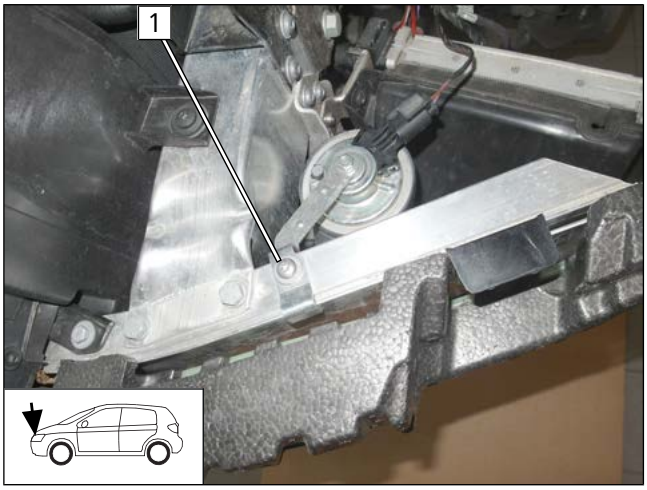


Fig. 14

▶ Discard original vehicle bolt at position **1**.

1 Horn with bracket

Removing original vehicle bolts

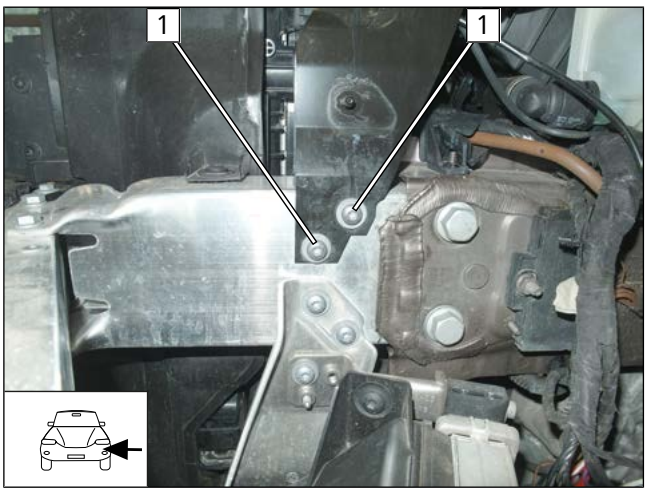


Fig. 15

▶ Remove original vehicle bolts **1**, they will be reused for the heater bracket.

Bending tab of headlight carrier

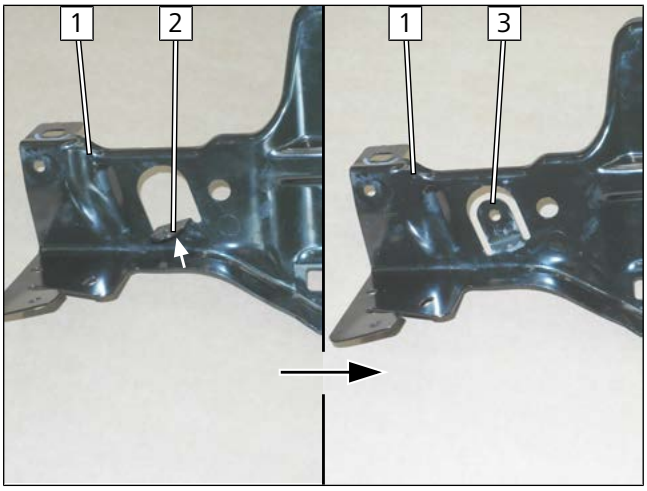


Fig. 16

1 Headlight carrier
2 Original position of tab
3 Tab, bent

Adapting headlight carrier

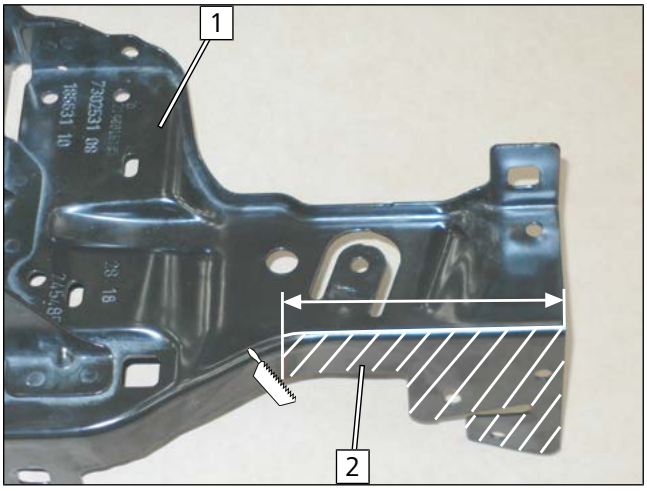


Fig. 17

▶ Adapt headlight carrier 1 as shown. Section 2 will be reused.

Shortening heater bracket

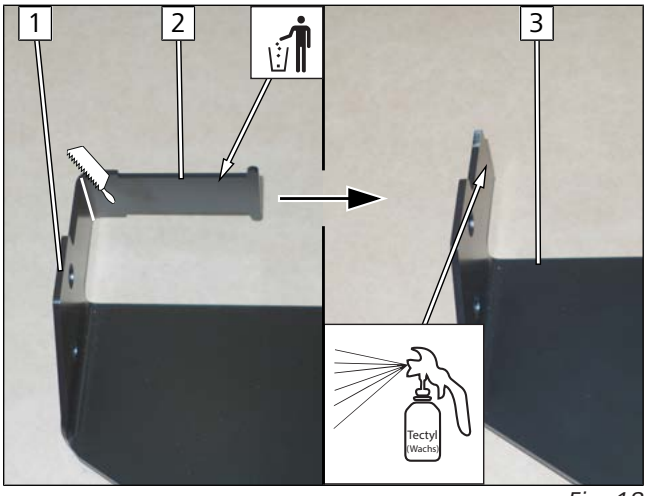


Fig. 18

▶ Cut off tab 2 as shown.

1 Original heater bracket
3 Heater bracket, shortened

Premounting heater bracket

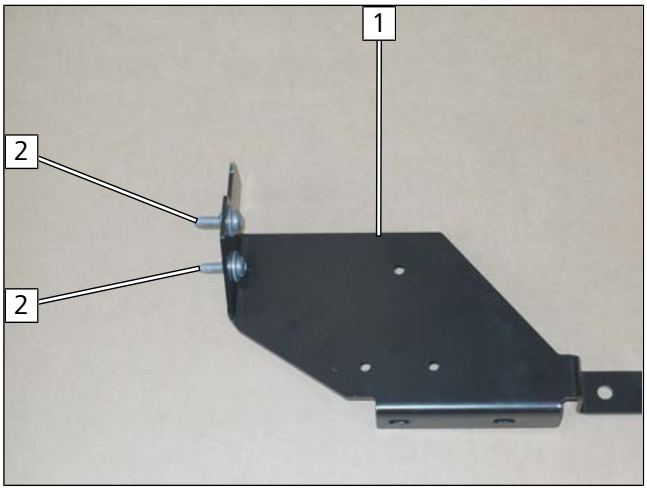


Fig. 19

1 Heater bracket

2 Original vehicle bolt, large diameter washer, lock washer

Mounting heater bracket

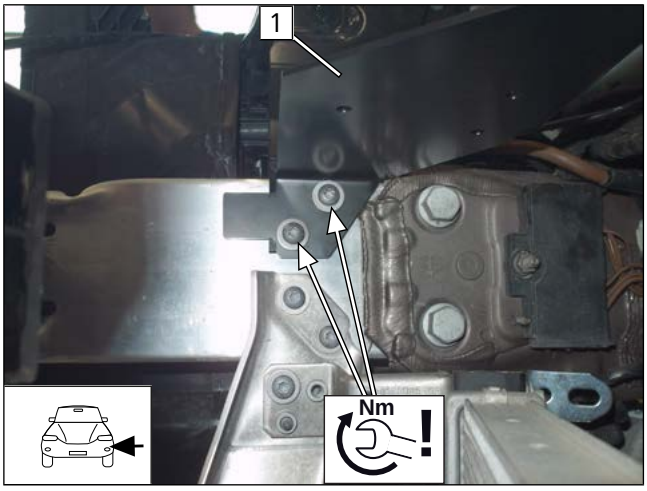


Fig. 20

1 Premounted heater bracket

Copying hole pattern

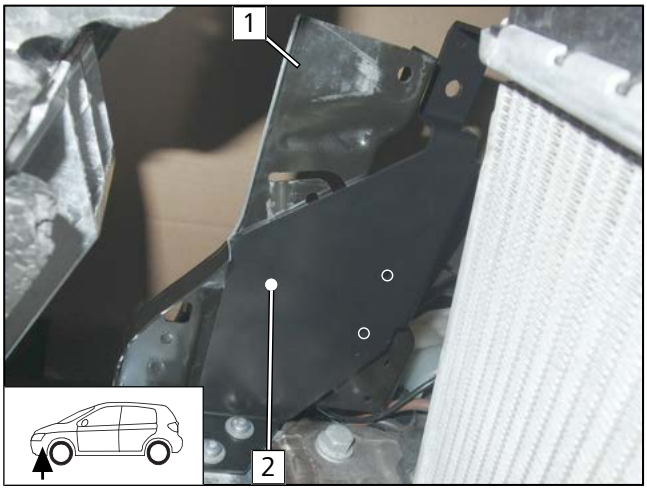


Fig. 21

- ▶ Mount headlight carrier 1 loosely and copy hole pattern 2.
- ▶ Remove headlight carrier 1 again.

Drilling hole

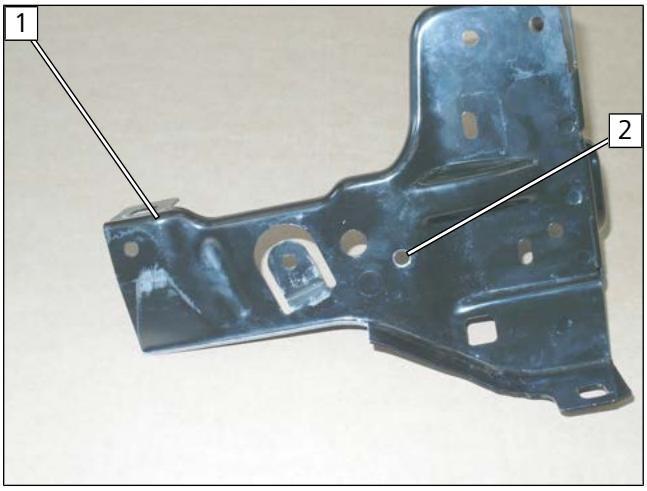


Fig. 22

1 Headlight carrier
2 Ø7 hole

8.2 Premounting heater

Mounting water connection piece

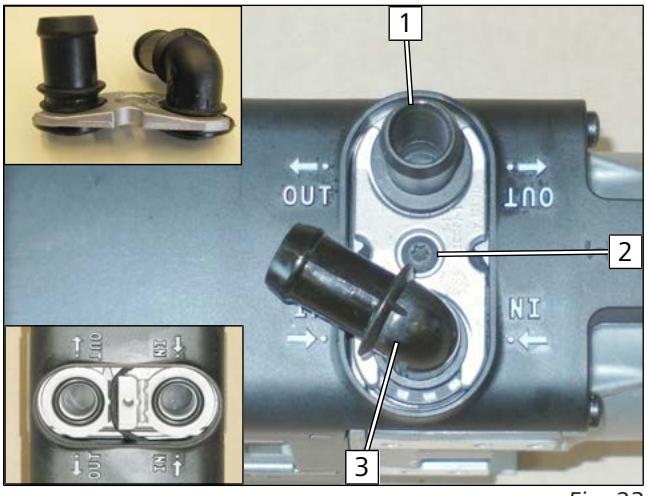


Fig. 23

Observe the general installation instructions of the heater.

1 180° water connection piece, seal
2 5x15 self-tapping bolt, water connection piece retaining plate
3 90° water connection piece, seal

8.3 Heater mounting

Mounting heater

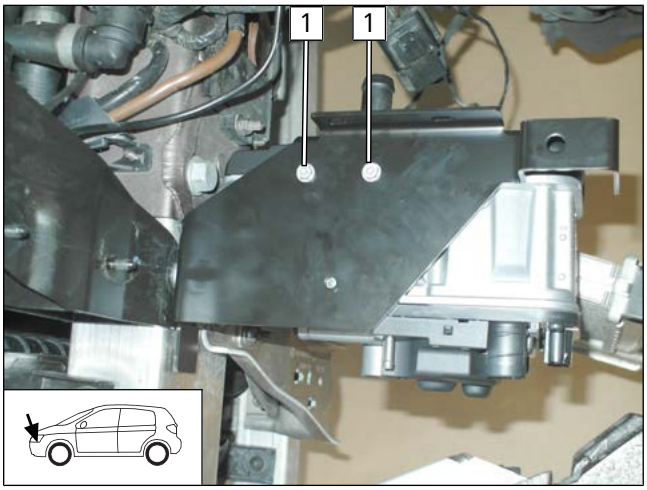


Fig. 24

1 5x13 self-tapping bolt

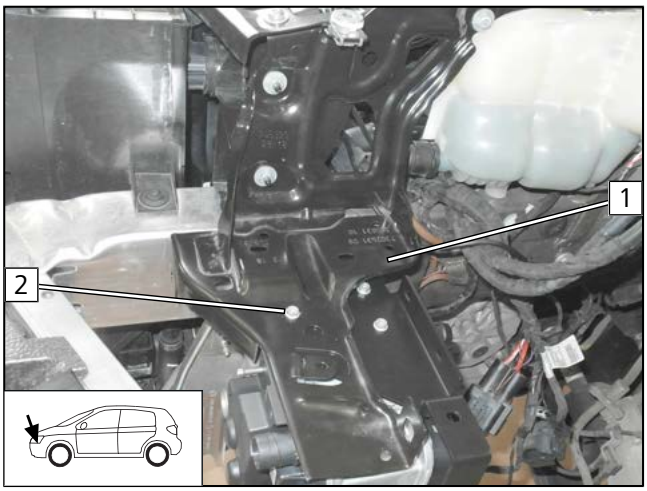


Fig. 25

▶ Mount headlight carrier **1**.

2 5x13 self-tapping bolt

Copying hole pattern onto angle bracket

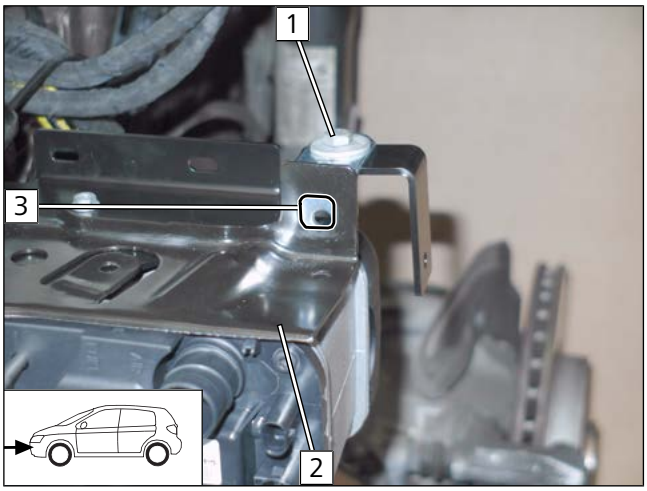


Fig. 26

▶ Copy hole pattern **3** of headlight carrier **2** onto angle bracket.

1 M6x12 bolt, large diameter washer, angle bracket, heater bracket, flanged nut

Creating hole pattern

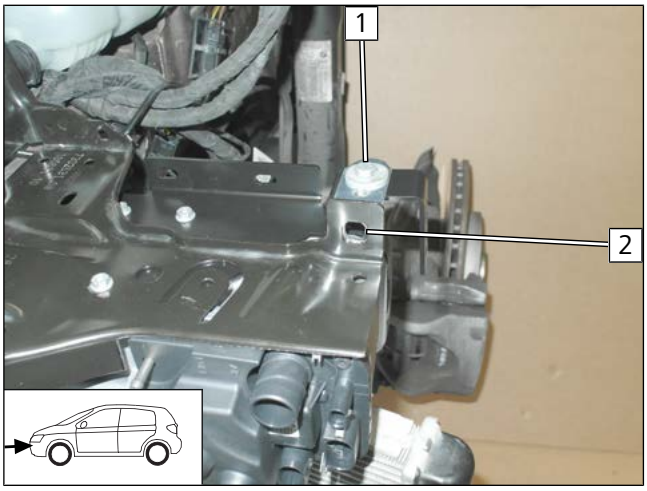


Fig. 27

▶ Remove angle bracket at position **1**, create hole pattern **2** using a file and reinstall angle bracket.

Installing wiring harness

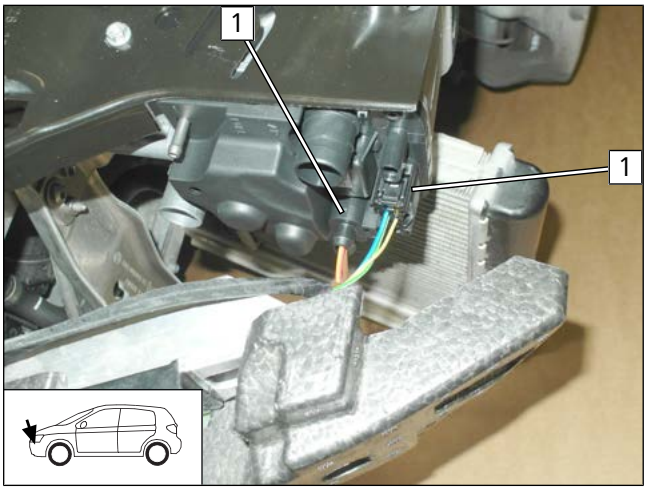


Fig. 28

1 Heater wiring harness connector

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

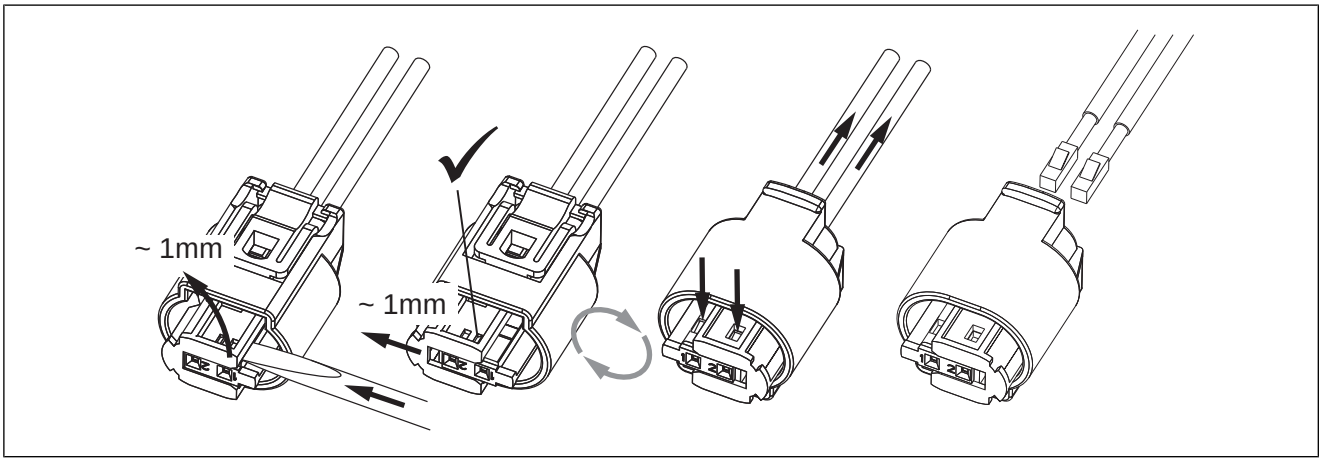


Fig. 29

9.1 Routing fuel line

Connection to heater

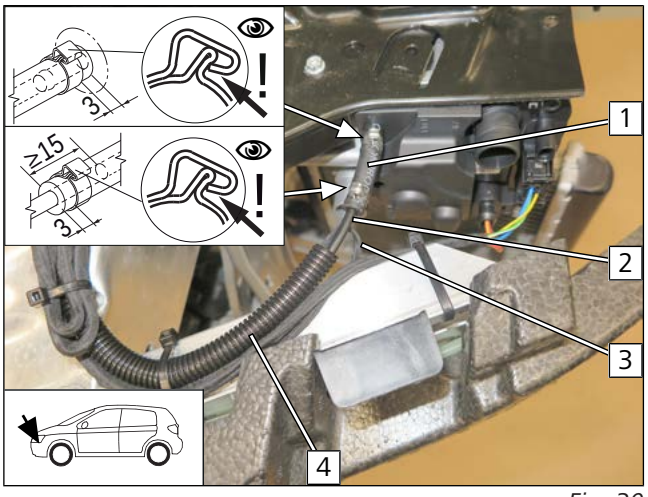


Fig. 30

1 Hose section, Ø10 clamp [2x]
2 Fuel line
3 Fuel pump wiring harness
4 Corrugated tube with fuel line and fuel pump wiring harness

Routing line

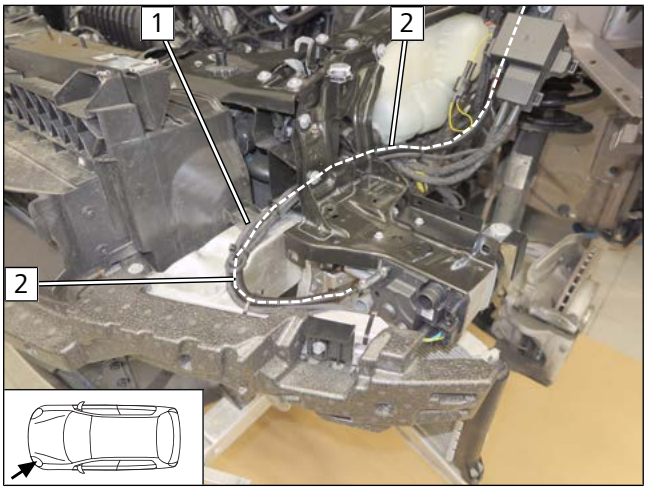


Fig. 31

▶ Route corrugated tube [2] with fuel line and fuel pump wiring harness together with excess heater wiring harness [1] as shown.

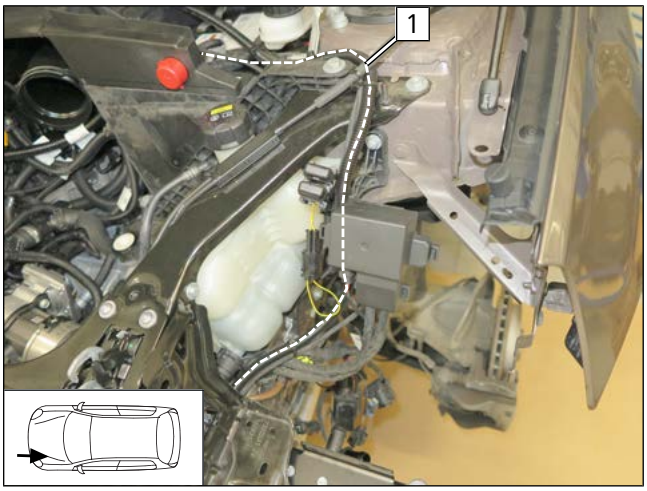


Fig. 32

▶ Route fuel line and fuel pump wiring harness in corrugated tube [1] into the water drain chamber.

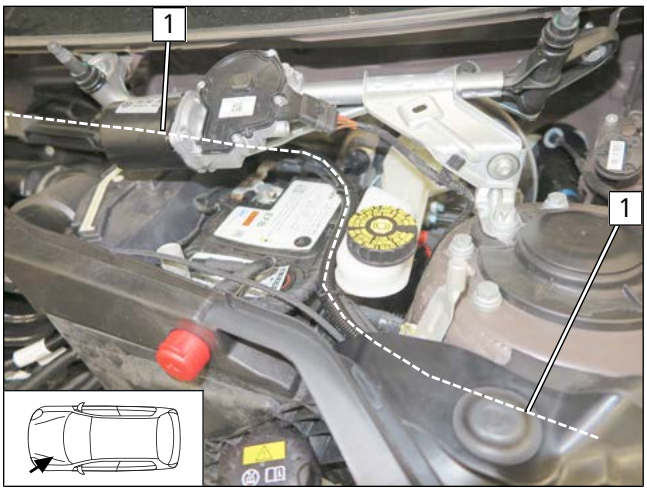


Fig. 33

▶ Route corrugated tube with fuel line and fuel pump wiring harness [1] in water drain chamber, along heater and control element wiring harnesses, to the right side of the vehicle and fasten with cable ties.

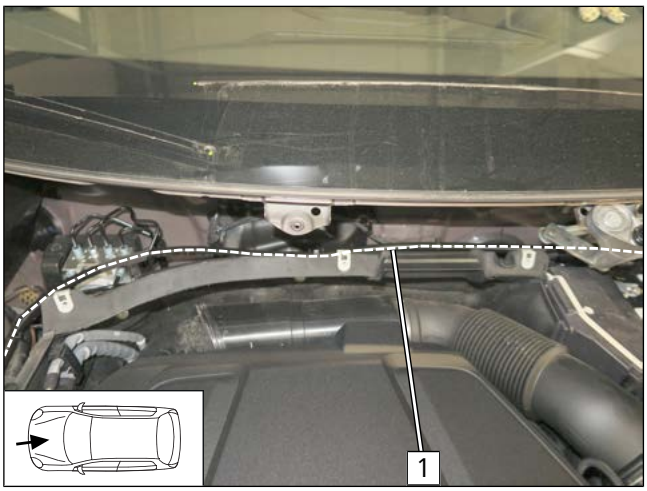


Fig. 34

- Route corrugated tube with fuel line and fuel pump wiring harness 1 in water drain chamber, along heater and control element wiring harnesses as well as original vehicle lines, to the right side of the vehicle and fasten with cable ties.

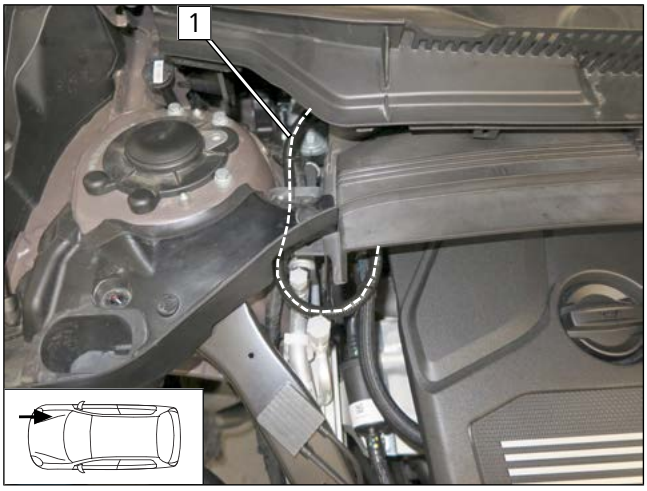


Fig. 35

- Route corrugated tube with fuel line and fuel pump wiring harness 1 to the underbody.

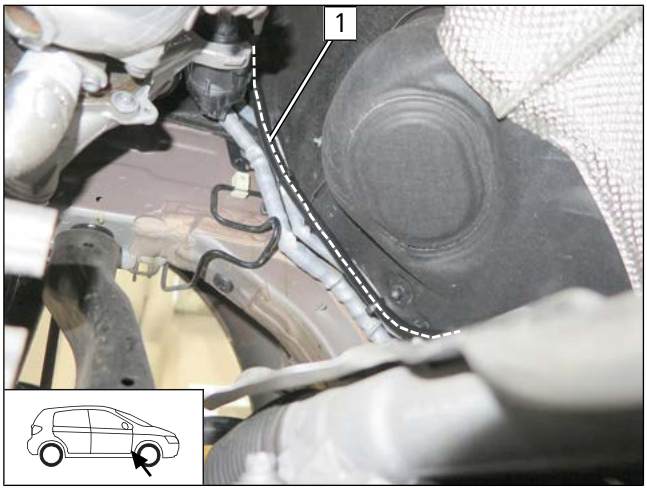


Fig. 36

- Route corrugated tube with fuel line and fuel pump wiring harness 1 to the underbody.

Inserting rivet nut

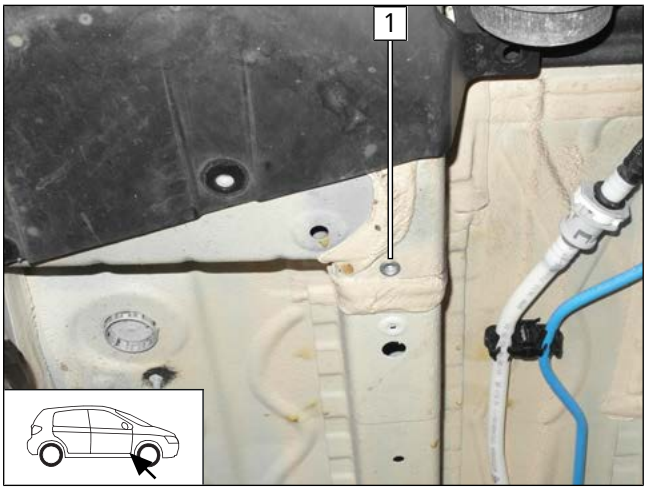


Fig. 37

Version 1

[1] M6 rivet nut in original vehicle hole

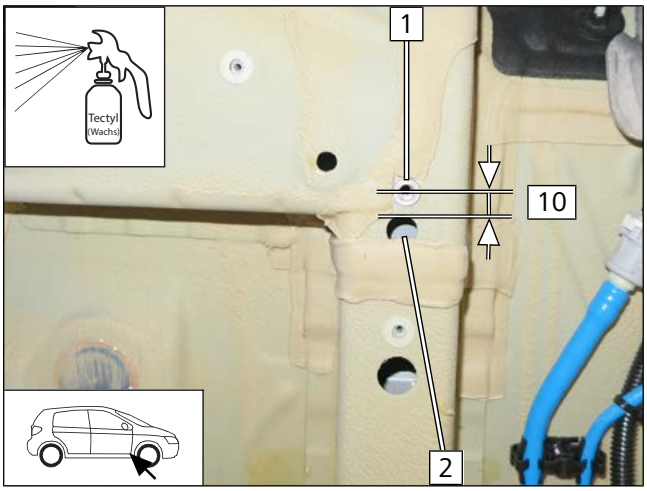


Fig. 38

Version 2

▶ If original vehicle hole [2] is larger than Ø9, drill a Ø9 hole at position [1] as shown.

[1] M6 rivet nut

Premounting fuel pump

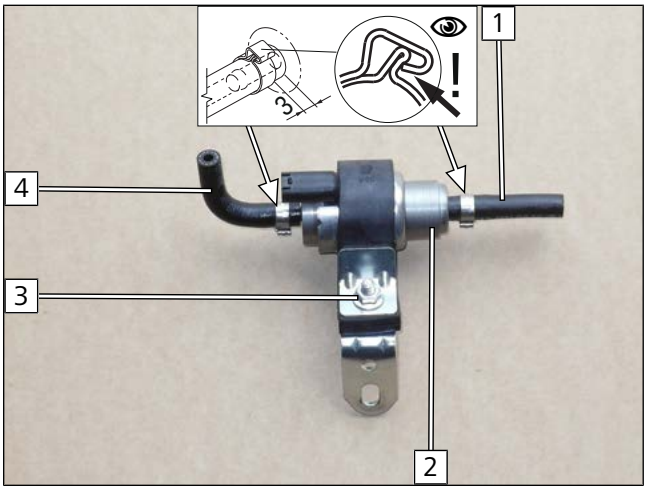


Fig. 39

All versions

[1] Hose section, Ø10 clamp
[2] Fuel pump
[3] M6x25 bolt, angle bracket, fuel pump mount, support angle bracket, flanged nut
[4] 90° hose section, Ø10 clamp

Mounting fuel pump

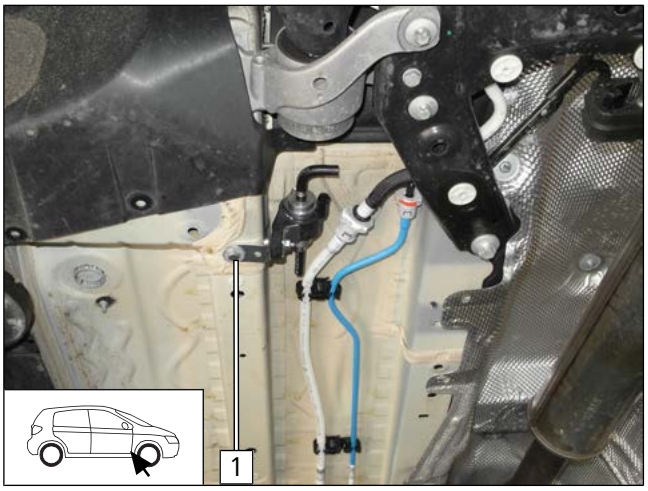


Fig. 40

1 M6x20 bolt, spring lock washer, large diameter washer, angle bracket on rivet nut, hole of version 1 or version 2

Assembling fuel pump connector X7

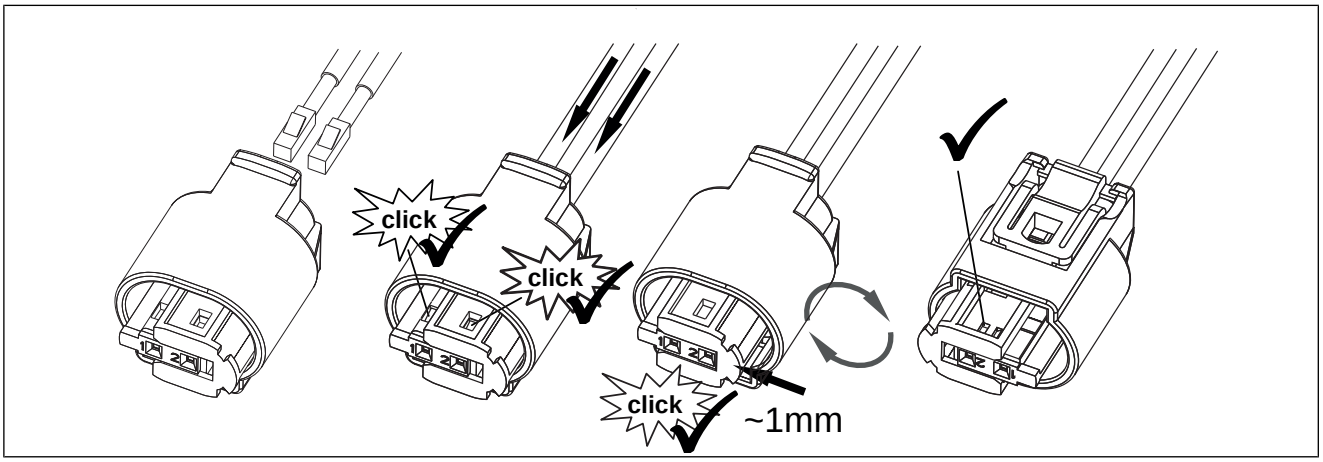


Fig. 41

Connecting fuel pump

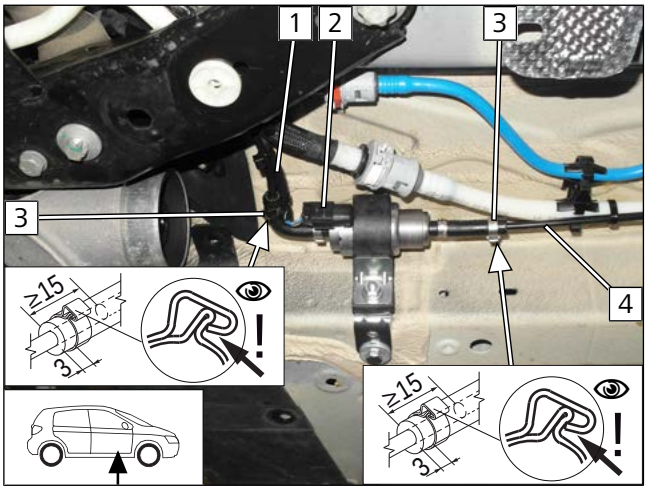


Fig. 42

Danger of damage to components

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

1 Heater fuel line

2 Fuel pump wiring harness, connector X7 mounted

3 Ø10 clamp

4 Fuel line of FuelFix

Routing line on underbody

Fig. 43

▶ Route FuelFix fuel line 1 along the original vehicle fuel line to the tank fitting.

Removing tank fitting service lid

Fig. 44

▶ Turn the tank fitting service lid to remove it.

9.2 Installing FuelFix

Preparing drilling template

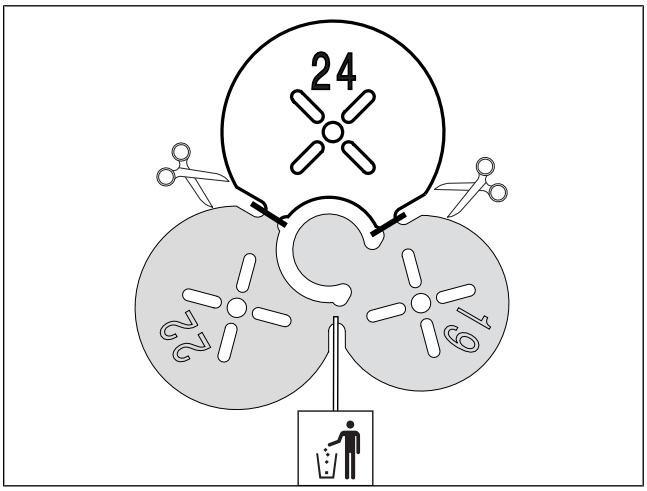


Fig. 45

Work steps F1, F2

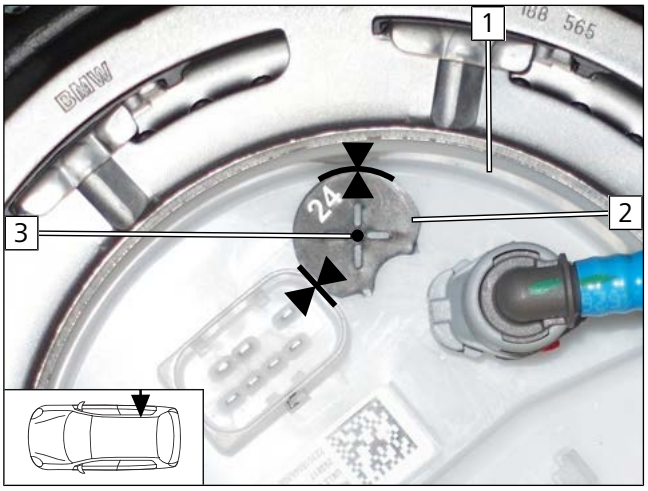


Fig. 46

Observe the installation instructions of the tank extracting device.

Connections on tank fitting may vary (1 or 2 connection pieces)

1 Tank fitting
2 Position Ø24 drilling template as shown in fig.
3 Hole pattern

Work step F3

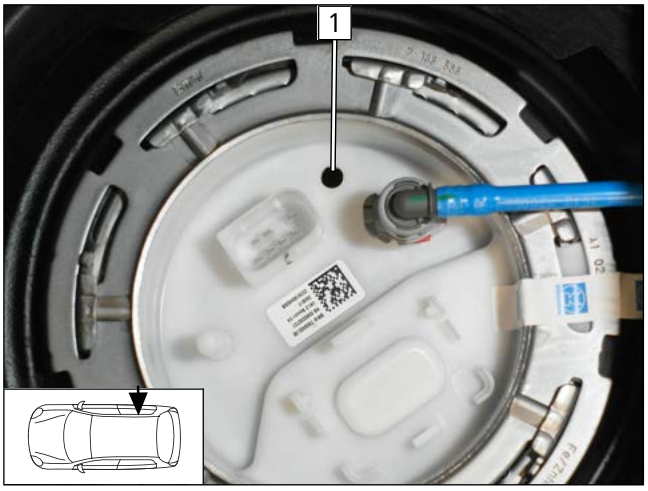


Fig. 47

DANGER

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

1 Hole made with provided drill

Work step F6.1

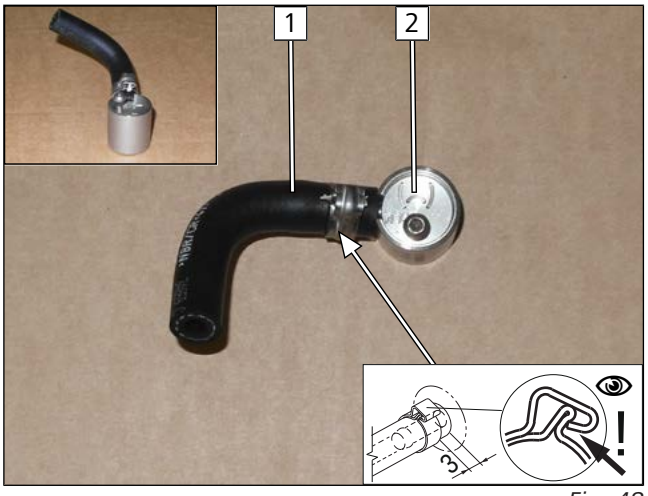


Fig. 48

1 90° moulded hose, Ø10 clamp
2 FuelFix

Work steps F4, F5

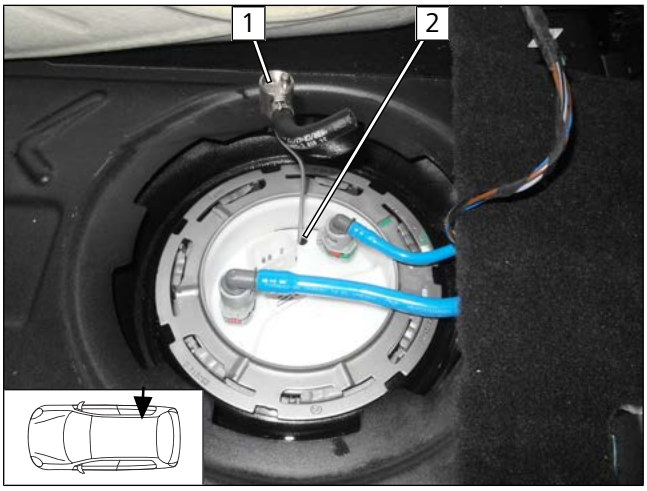


Fig. 49

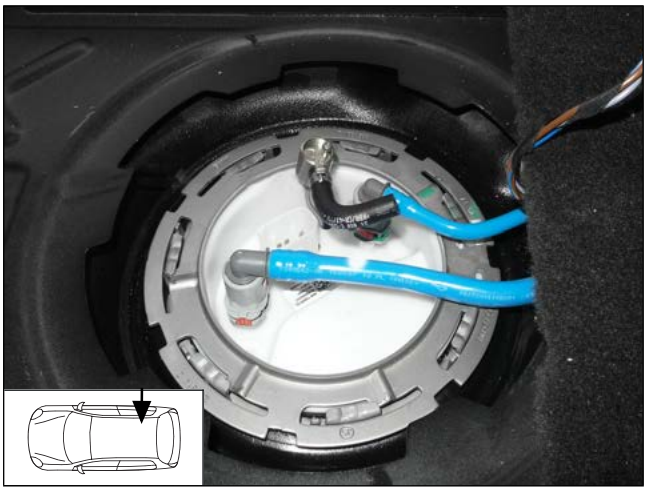


Fig. 50

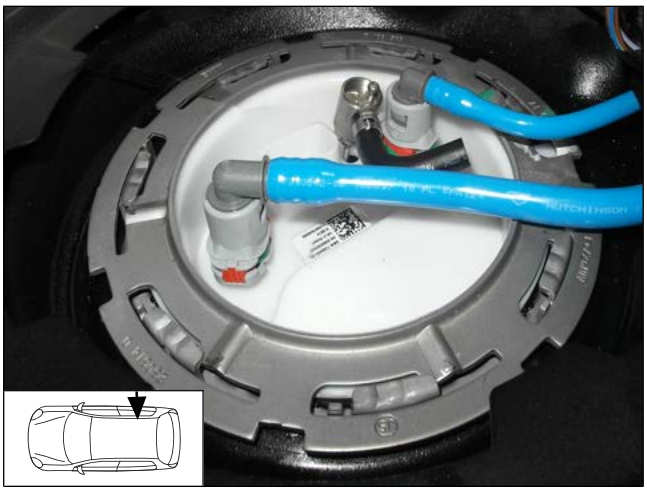


Fig. 51

▶ Bend FuelFix [1] according to template and cut to length. Insert in hole [2].

Work steps F5.3, F5.4

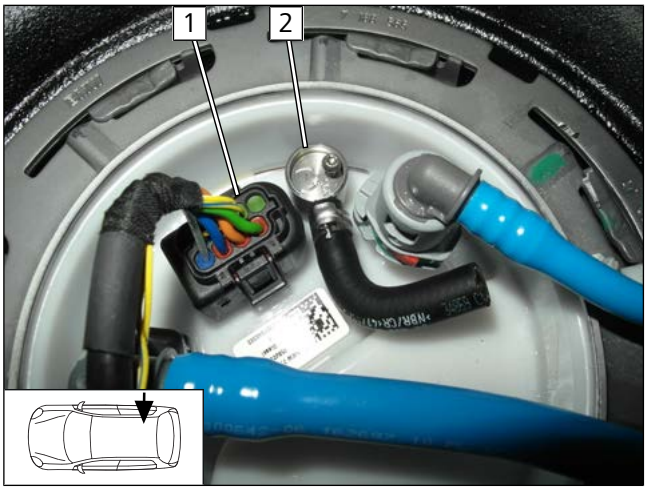


Fig. 52

- ▶ Align FuelFix [2] as shown.
- ▶ Mount connector [1].

Work step F6.2

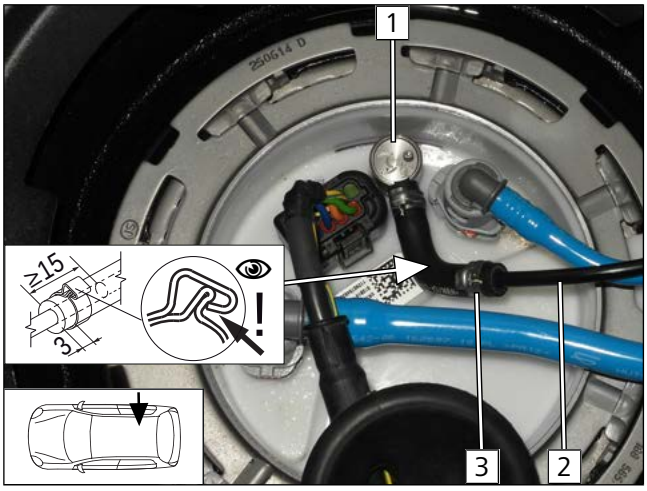


Fig. 53

- [1] FuelFix
- [2] Fuel line
- [3] Ø10 clamp

Work step F7

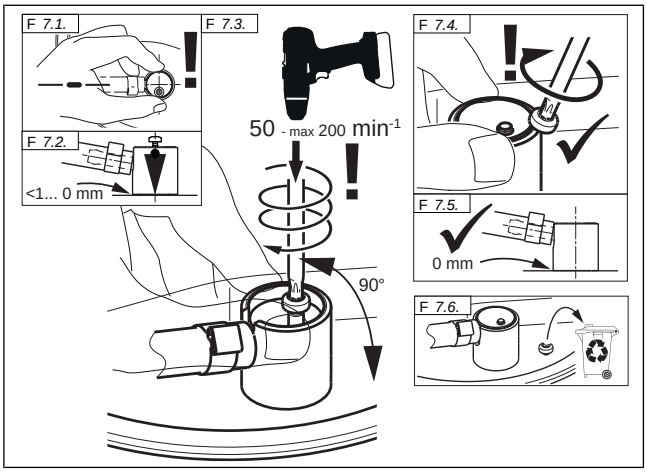


Fig. 54

DANGER

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

Work step F8

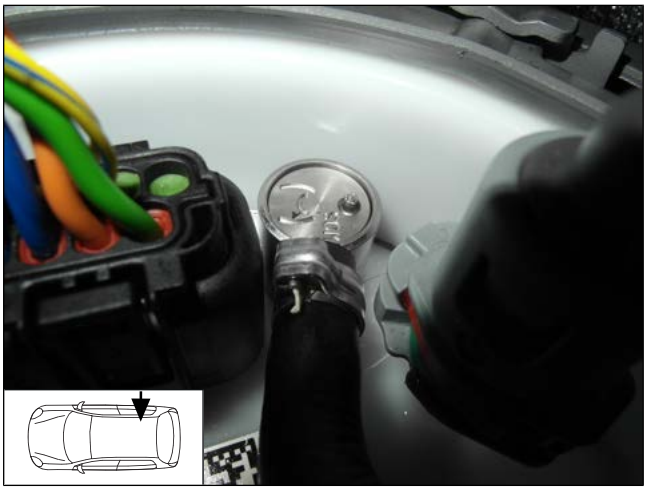


Fig. 55

Securing fuel line

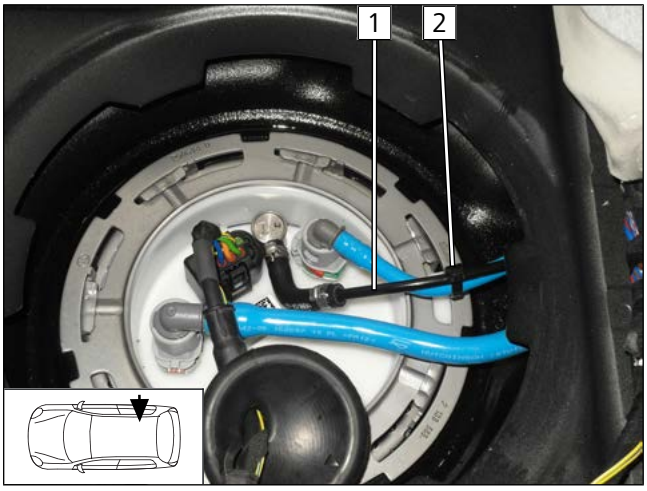


Fig. 56

1 Fuel line of FuelFix
2 Cable tie for tension relief

10 Coolant

10.1 Preliminary Work

Removing expansion tank line

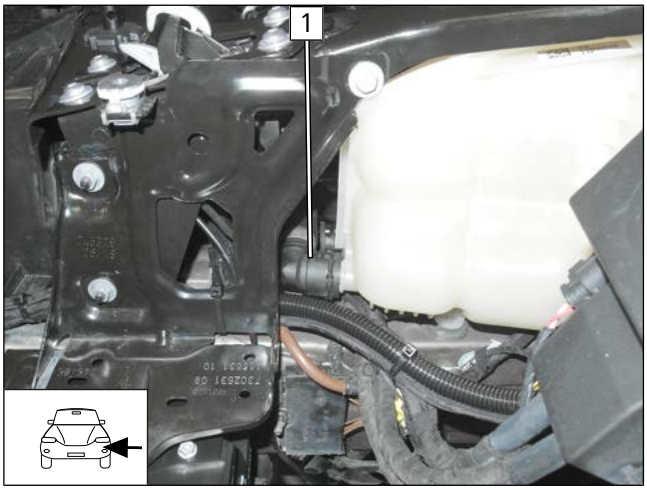


Fig. 57

▶ Remove quick-release coupling [1] from expansion tank.

Preparing angle bracket

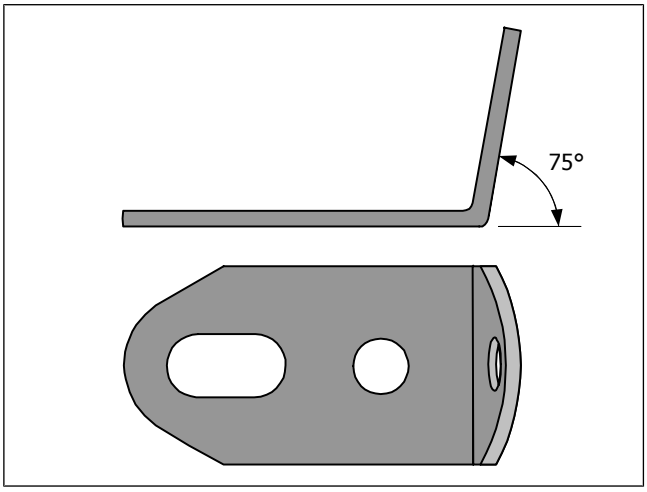


Fig. 58

Mounting angle bracket

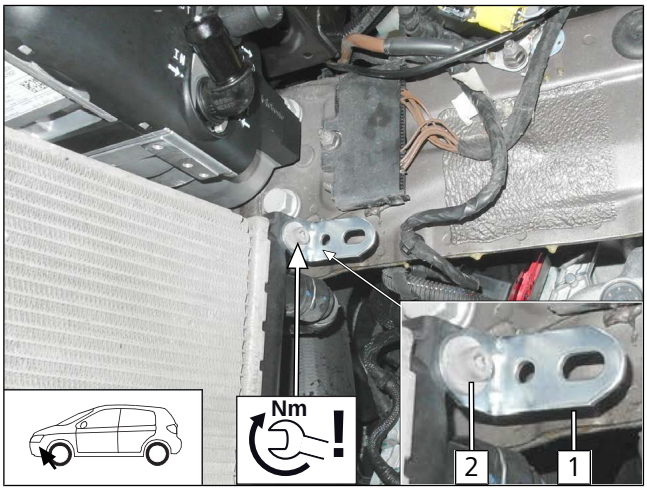


Fig. 59

[1] Angle bracket

[2] Original vehicle bolt, angle bracket, original vehicle thread

Preparing perforated bracket

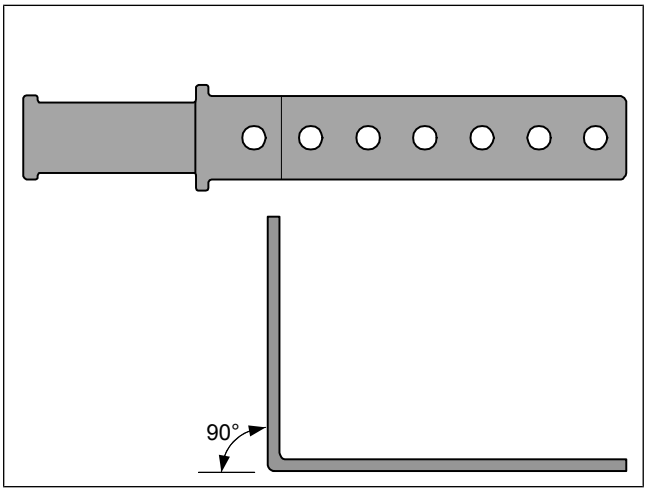


Fig. 60

Installing perforated bracket

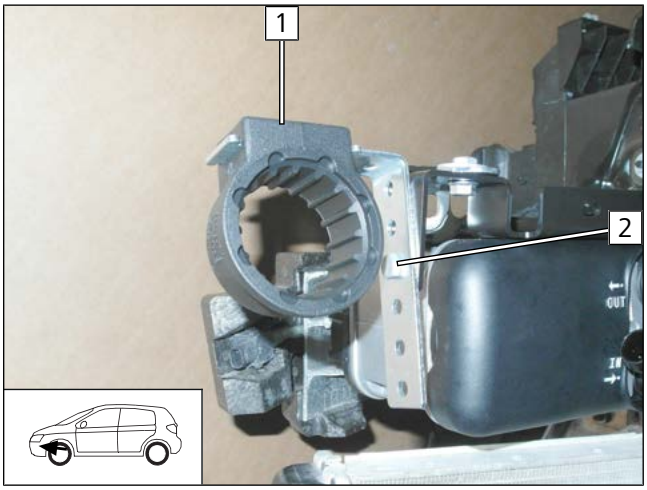


Fig. 61

1 Coolant pump mount

2 M6x12 bolt, prepared perforated bracket, hole in heater bracket, mount flanged nut loosely

Mounting coolant pump

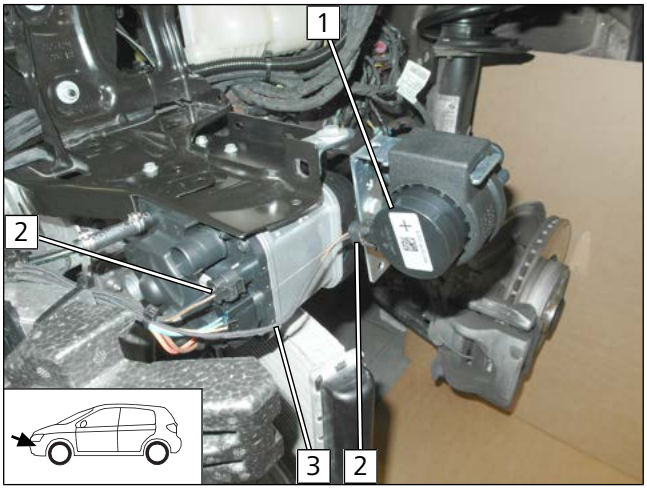


Fig. 62

1 Coolant pump

2 Coolant pump wiring harness connector

3 Coolant pump wiring harness

10.2 Hose routing diagram

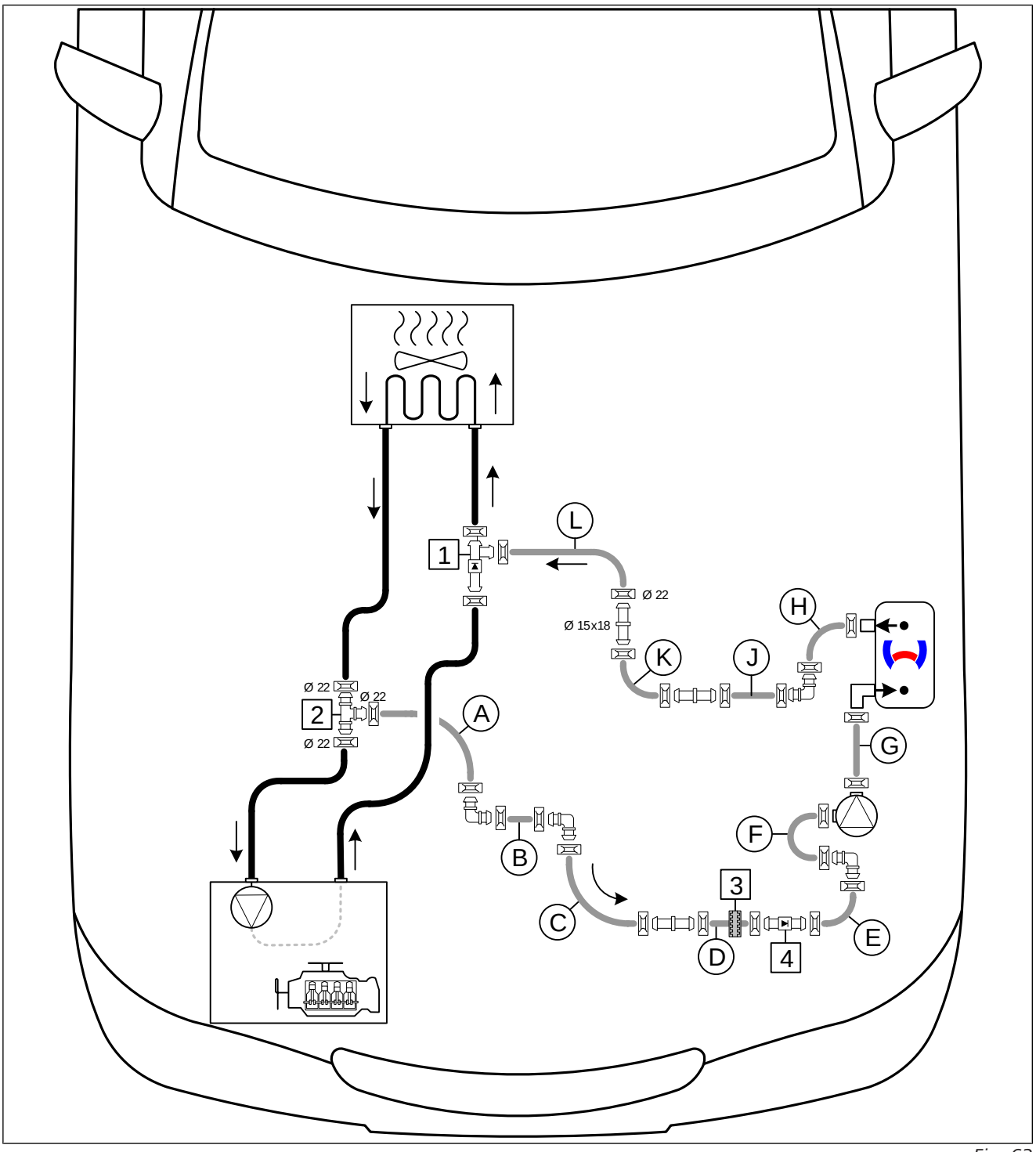


Fig. 63

▶ All spring clips without a specific designation = Ø25

▶ All connecting pipes without a specific designation or = Ø18x18

1 Ø18x18x18 non-return valve; 2 Ø15x15x15 T-piece; 3 black (sw) rubber isolator; 4 Ø18x18 non-return valve

10.3 Coolant circuit installation

Preparing moulded hose

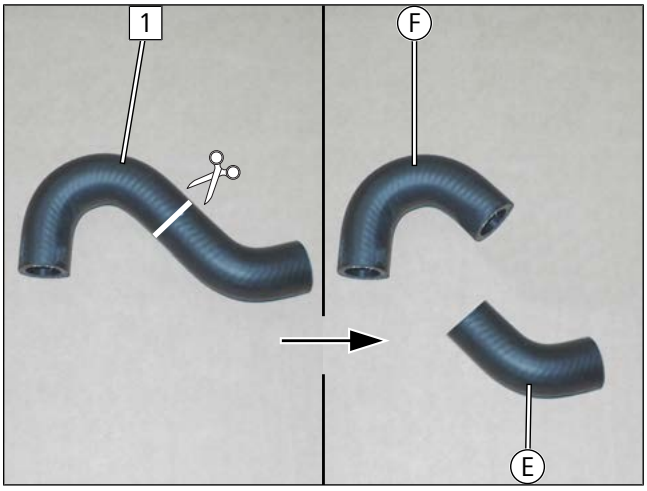


Fig. 64

▶ Cut provided moulded hose 1 as shown.

Cutting hoses to length

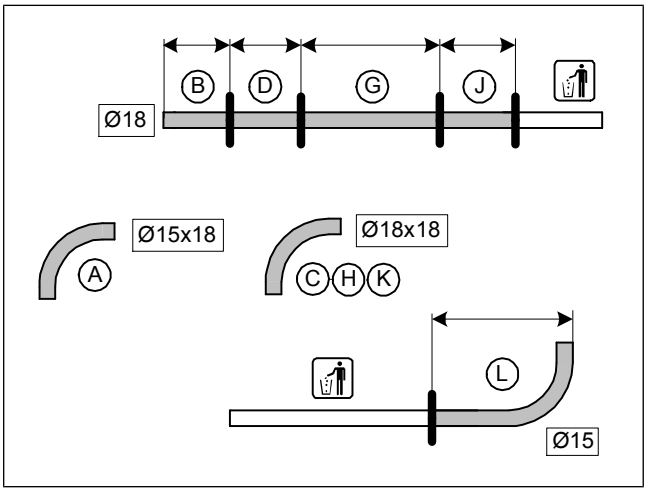


Fig. 65

A	90° moulded hose
B	90
C, H, K	90° moulded hose
D	90
E	Prepared moulded hose
F	Prepared moulded hose
G	170
J	70
L	180

Preparing non-return valve 1

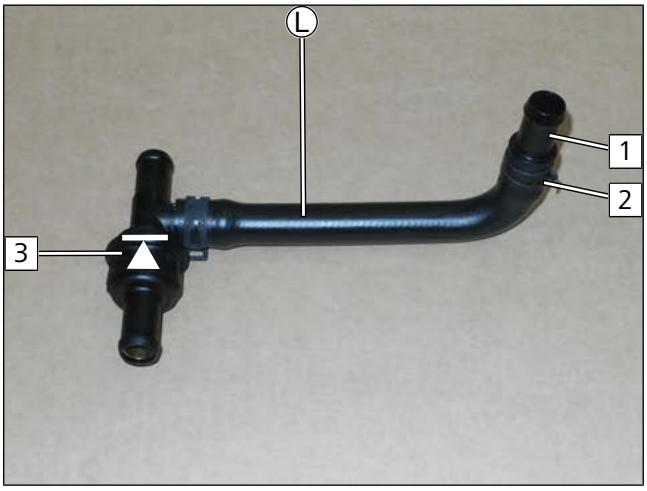


Fig. 66

1 Ø15x18 connecting pipe
2 Ø22 spring clip
3 Non-return valve 1

Cutting point 1

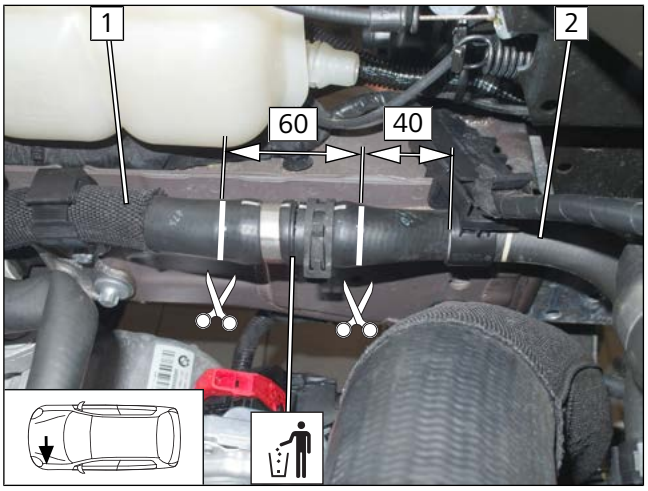


Fig. 67

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

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

Mounting non-return valve 1

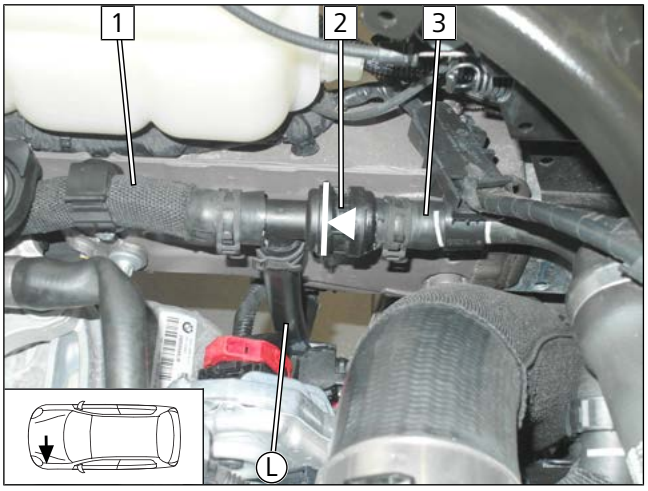


Fig. 68

- **1** Heat exchanger inlet hose section
- **2** Premounted non-return valve 1
- **3** Engine outlet hose section

Heater outlet connection

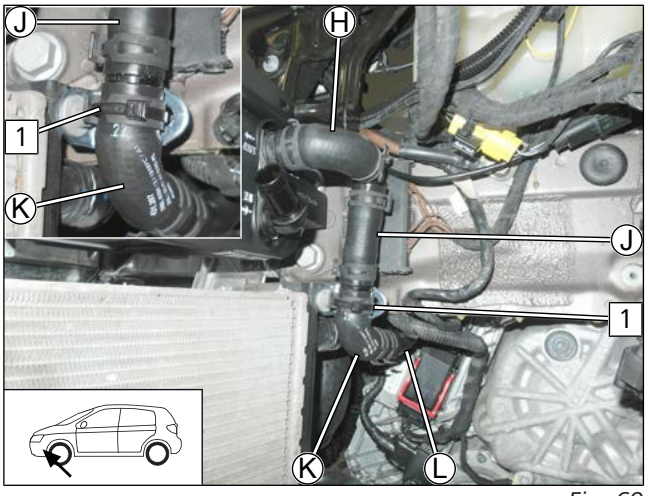


Fig. 69

▶ Fasten hoses to angle bracket with cable tie **1**.

Checking distance

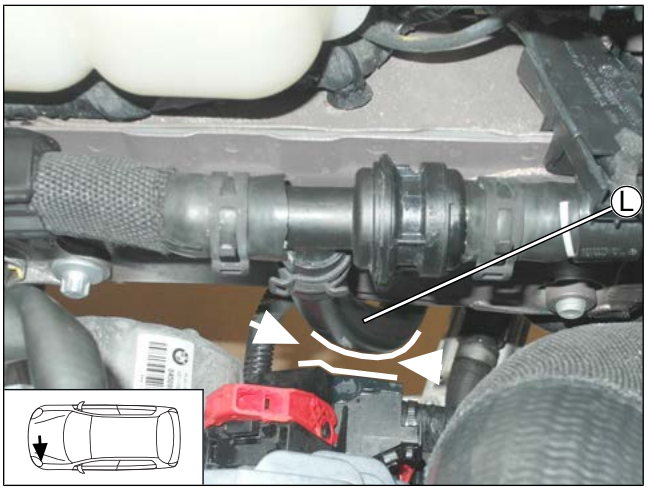


Fig. 70

Danger of damage to components

▶ Ensure sufficient distance between hose and transmission, correct if necessary.

Mounting hose Ⓖ

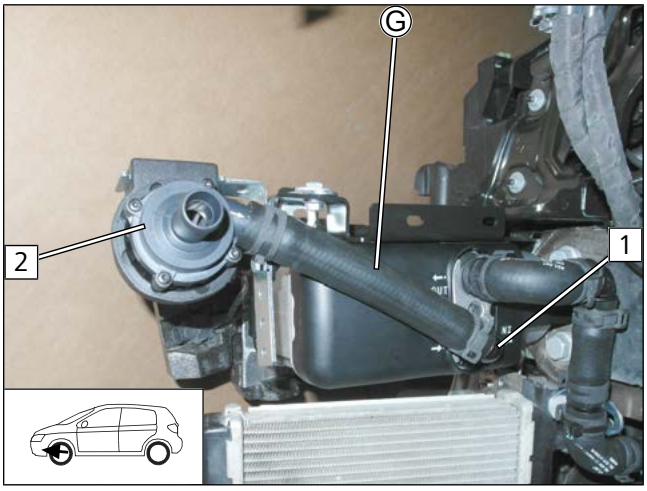


Fig. 71

1 Heater/IN connection piece
2 Coolant pump

Preparing non-return valve 2

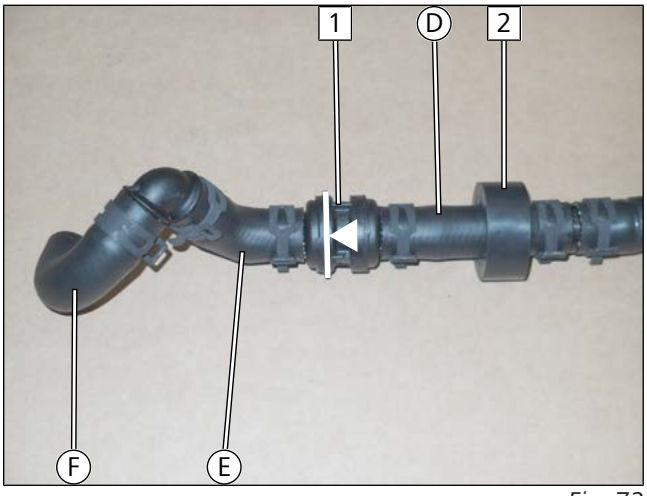


Fig. 72

1 Non-return valve 2
2 Black (sw) rubber isolator

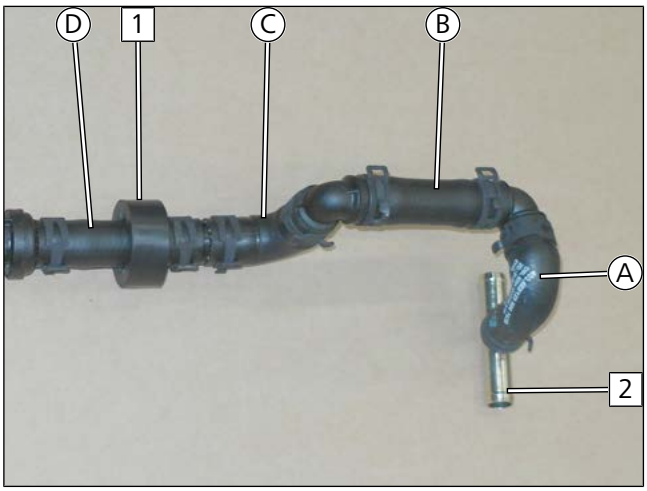


Fig. 73

1 Black (sw) rubber isolator
2 15x15x15 T-piece

Overall view of hose group

Fig. 74

Cutting point 2

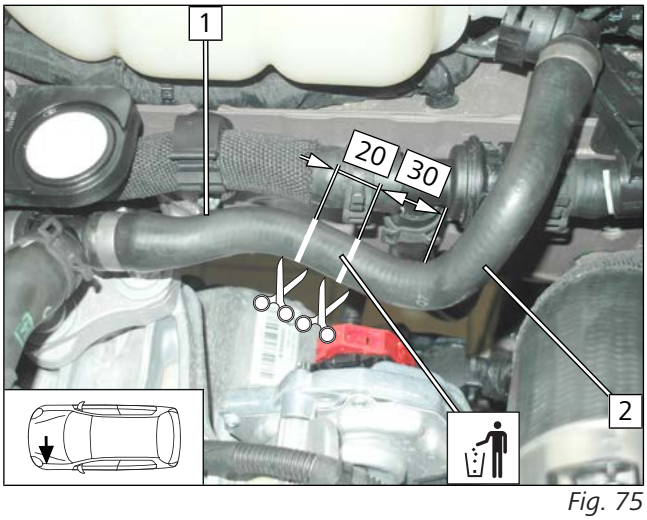


Fig. 75

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

1 Heat exchanger outlet hose section
2 Expansion tank hose section

Relocating premounted hose group with non-return valve 2

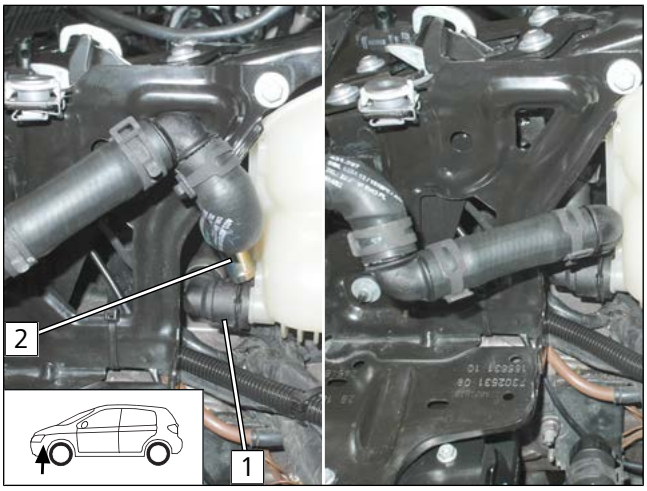


Fig. 76

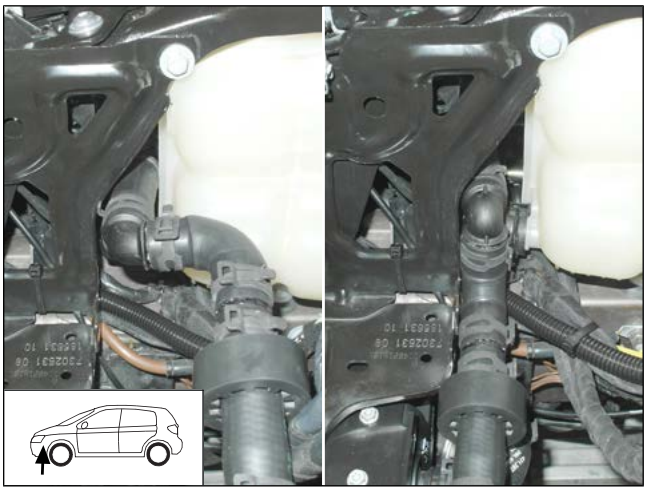


Fig. 77

- ▶ Mount quick-release coupling [1].
- ▶ Relocate premounted hose group with non-return valve 2 along the expansion tank as shown in the next figures.

[2] Premounted T-piece

Connecting T-piece

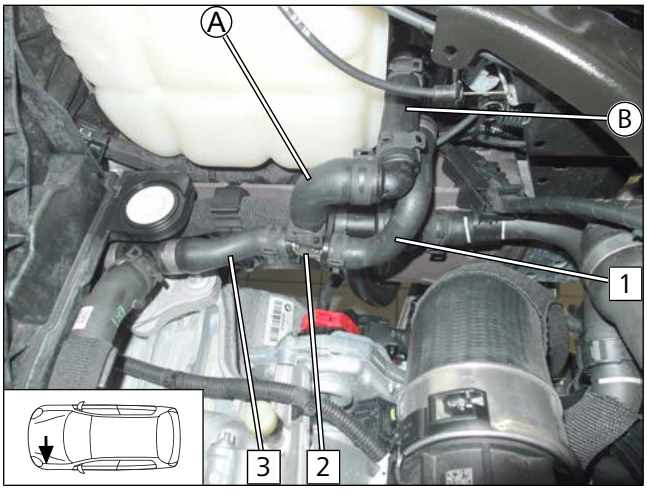


Fig. 78

[1] Expansion tank hose section
[2] T piece
[3] Heat exchanger outlet hose section

Coolant pump connection

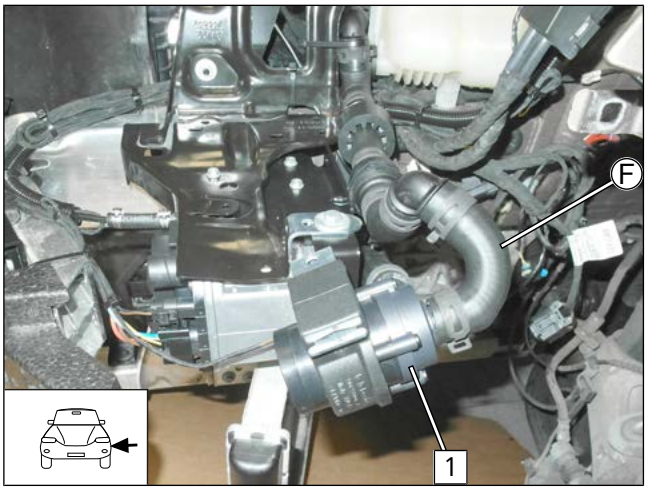


Fig. 79

1 Coolant pump

Fastening hoses

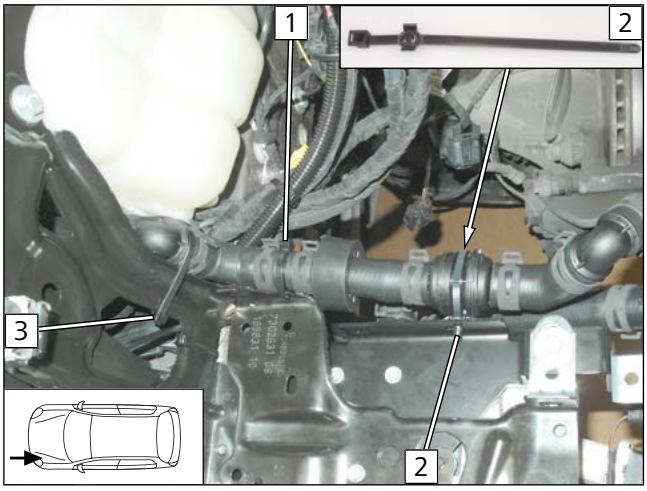


Fig. 80

1 Cable tie, existing hole
2 Eyelet cable tie, available hole
3 Cable tie

Checking distance

Fig. 81

Danger of damage to components

▶ Ensure sufficient distance between hose (B) and expansion tank, correct if necessary.

11 Combustion air

Preparing combustion air intake pipe

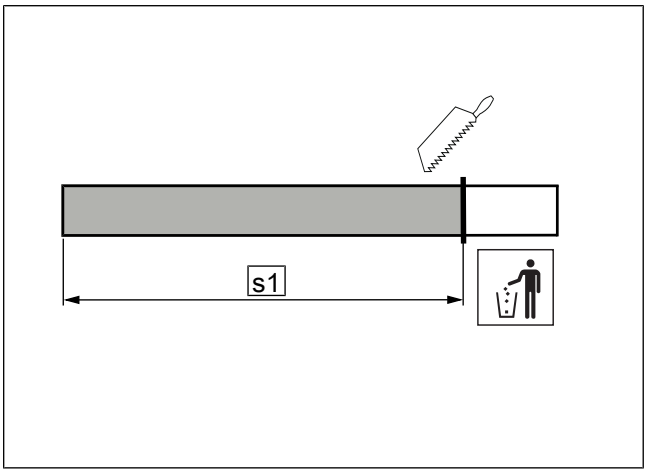


Fig. 82

s1 260

Premounting combustion air intake silencer and **s1**

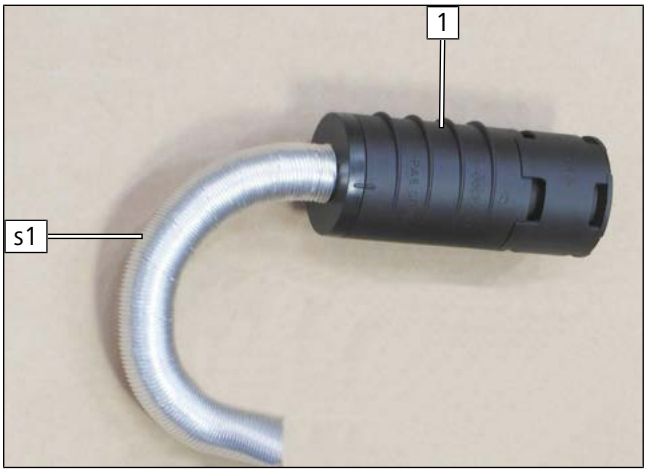


Fig. 83

1 Combustion air intake silencer

Installing cable tie

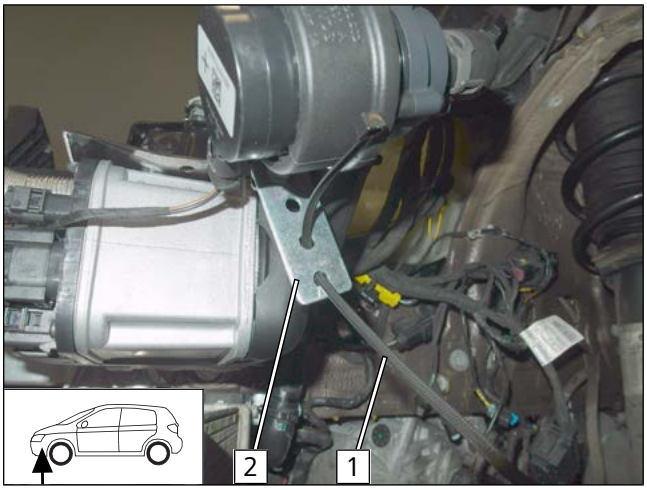


Fig. 84

1 Cable tie

2 Coolant pump perforated bracket

Mounting combustion air intake pipe **s1**

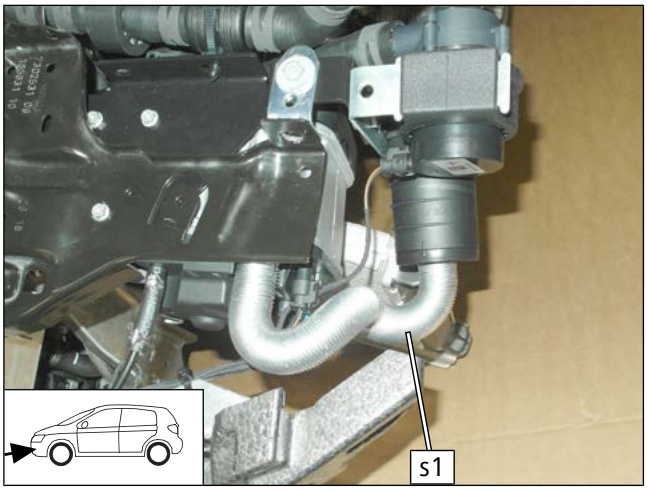


Fig. 85

Mounting combustion air intake silencer

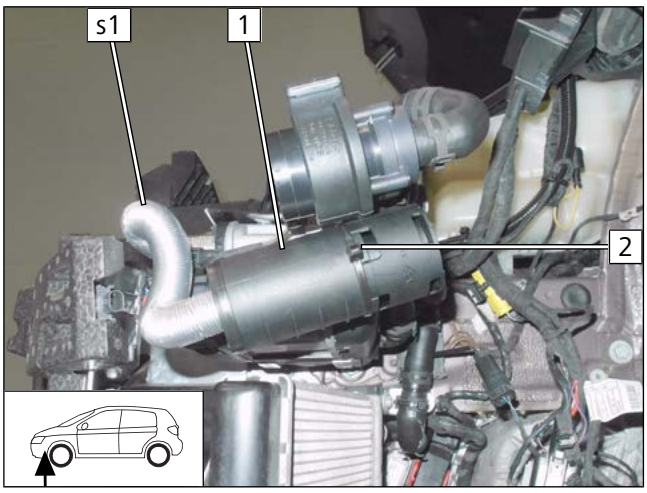


Fig. 86

1 Combustion air intake silencer

2 Cable tie

12 Exhaust part 1

Cutting exhaust pipe to length

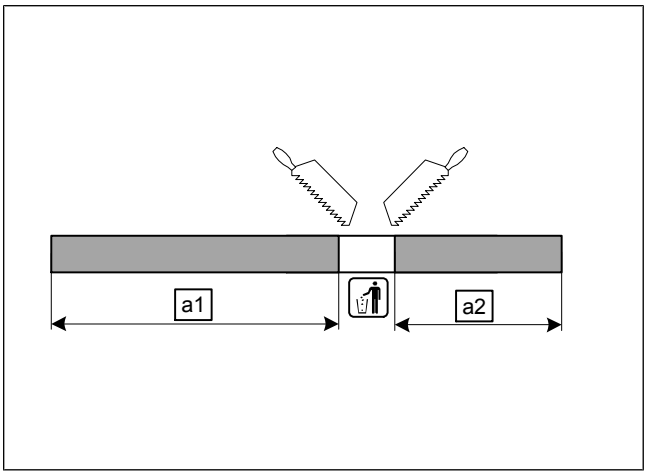


Fig. 87

	Vehicle without brake air duct	Vehicle with brake air duct
a1	520	550
a2	310	310

Bending angle bracket

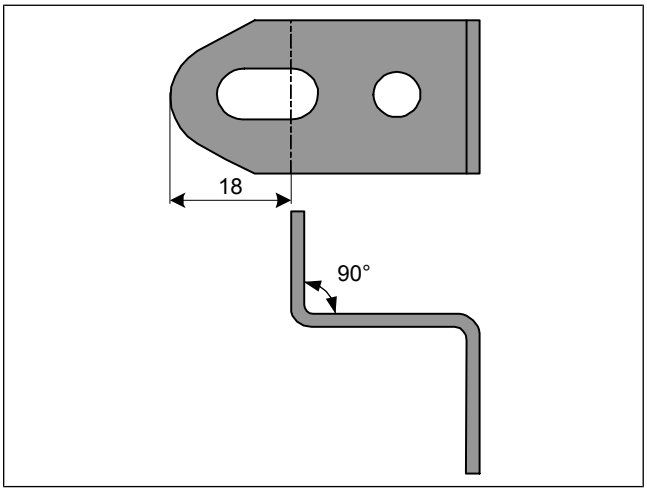


Fig. 88

Premounting exhaust silencer

Fig. 89

1 M6x16 bolt, spring lockwasher, angle bracket, exhaust silencer

Drilling hole, inserting rivet nut

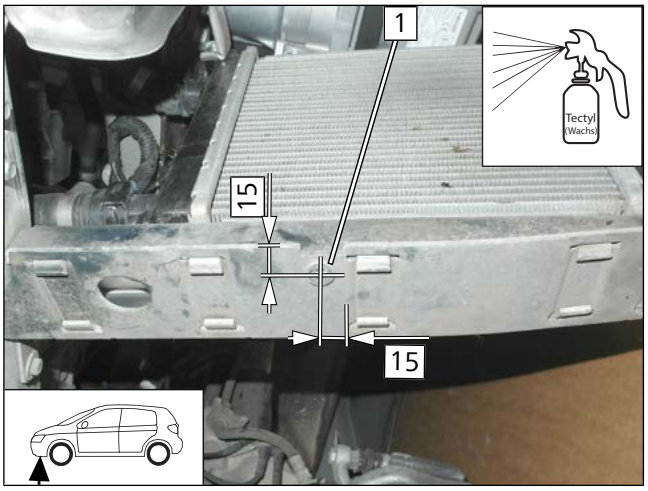


Fig. 90

1 Ø9 hole, M6 rivet nut

Adapting frame

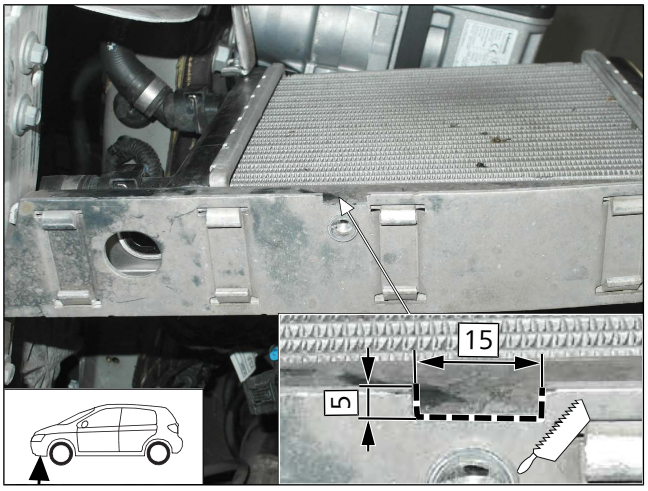


Fig. 91

Mounting and routing exhaust pipe a1

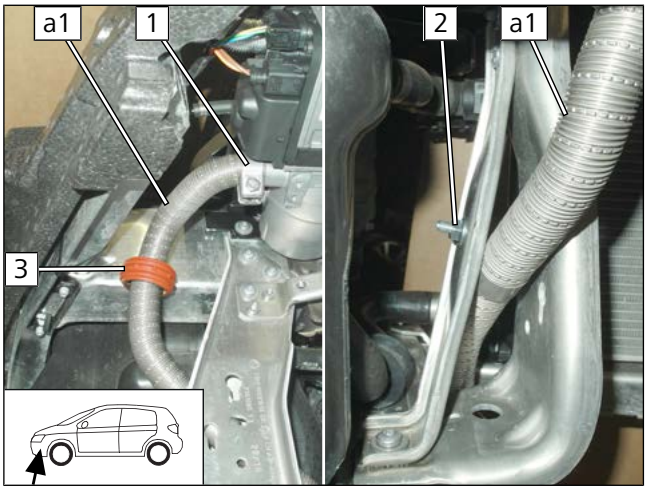


Fig. 92

Vehicle without brake air duct

1 Hose clamp
2 Clamp, M6x20 bolt, original vehicle oblong hole, flanged nut
3 Align ASH

Mounting exhaust silencer

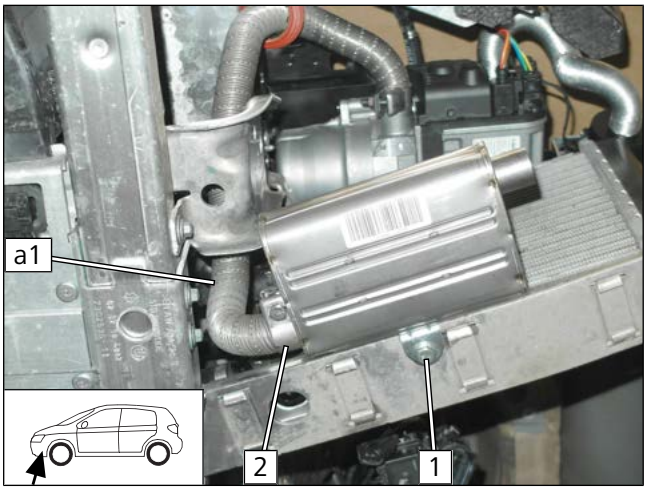


Fig. 93

1 M6x25 bolt, premounted exhaust silencer, rivet nut

2 Hose clamp

Drilling hole

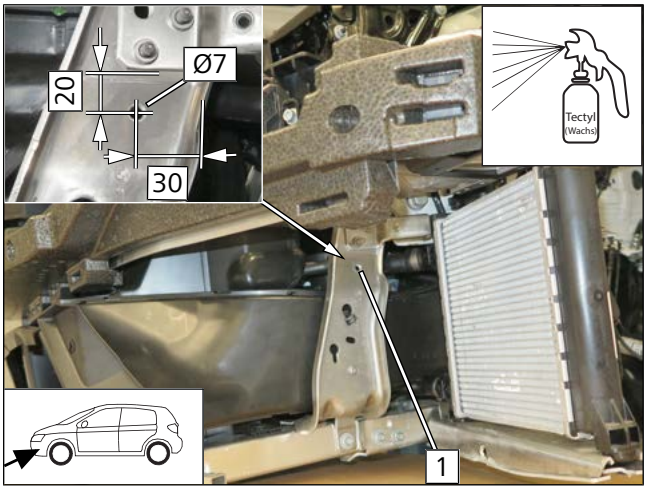


Fig. 94

Vehicle with brake air duct

1 Hole

Mounting angle bracket

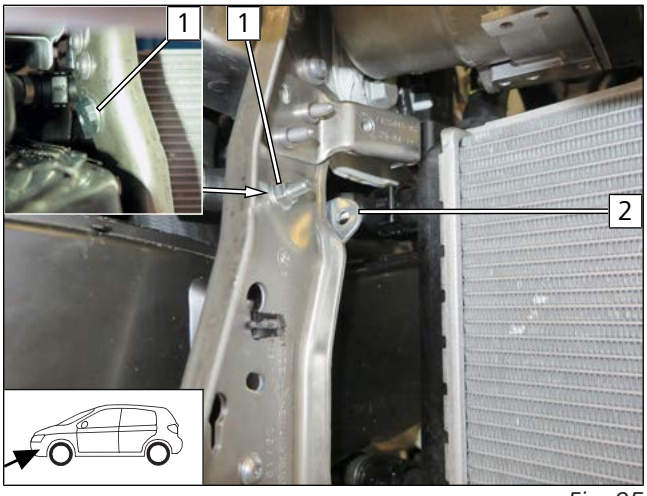


Fig. 95

1 M6x20 bolt, large diameter washer, angle bracket 2, Ø7 hole, flanged nut

Preparing exhaust pipe **a1**

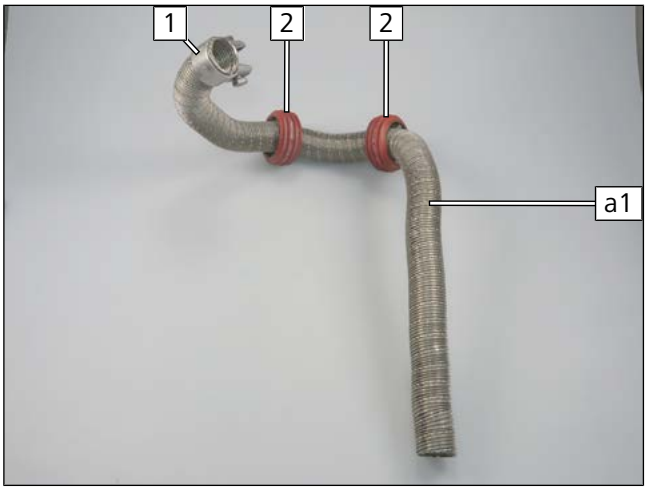


Fig. 96

1 Mount hose clamp loosely

2 Position spacer bracket as shown

Mounting exhaust pipe **a1**

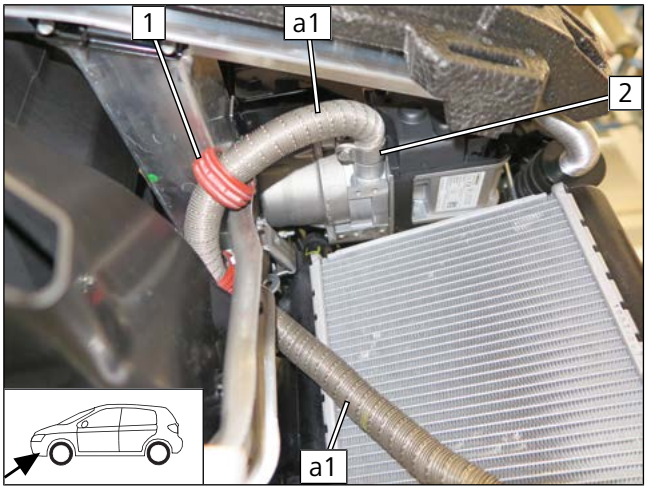


Fig. 97

Danger of damage to components

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

▶ Route exhaust pipe **a1** behind the carrier as shown.

▶ Tighten hose clamp **2**.

▶ Align spacer bracket **1** with carrier.

Routing and fastening exhaust pipe **a1**

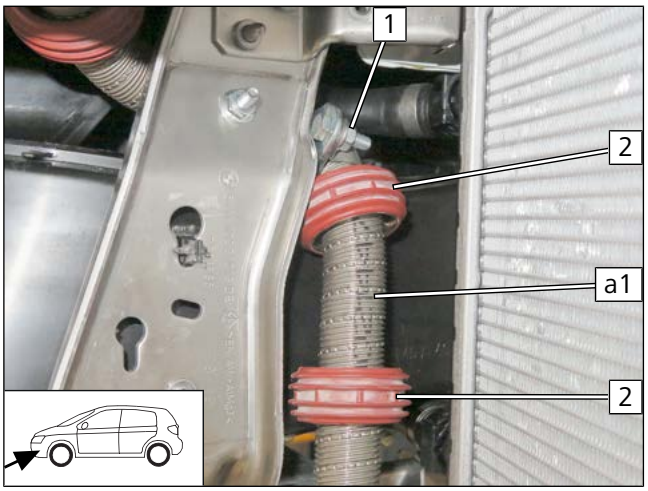


Fig. 98

▶ Mount spacer bracket **2**.

1 M6x20 bolt, angle bracket, pipe clamp, flanged nut

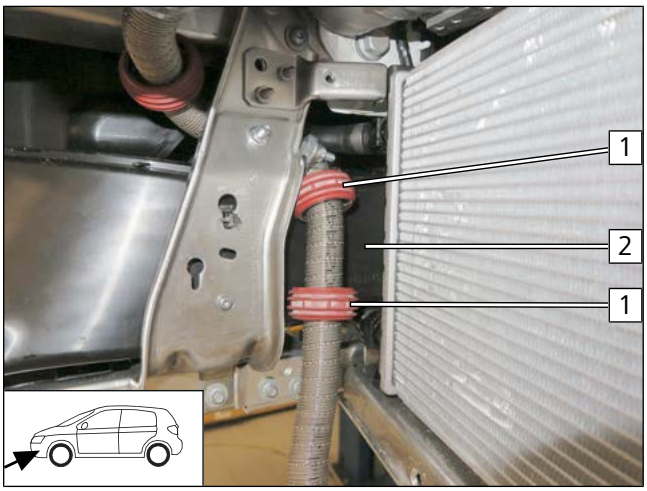


Fig. 99

▶ Align spacer bracket 1 with brake air duct 2 as shown.

Checking distance

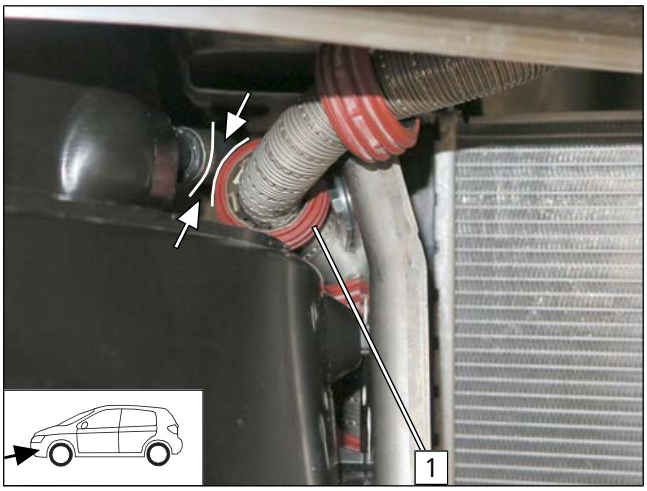


Fig. 100

Danger of damage to components

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

▶ Align spacer bracket 1 with original vehicle hose.

Mounting exhaust silencer

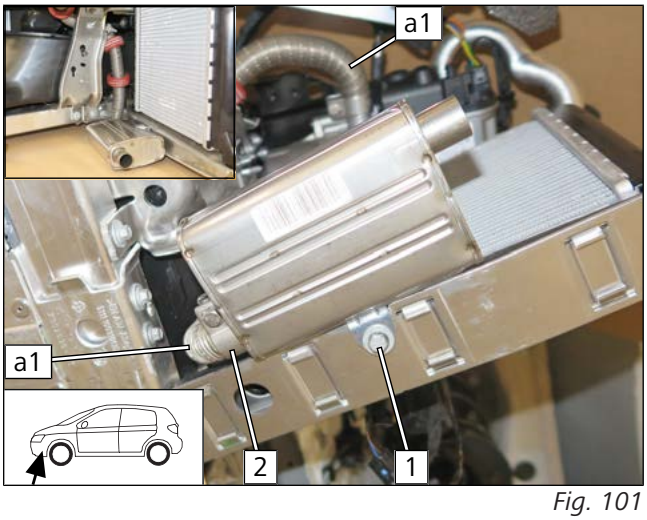


Fig. 101

1 M6x25 bolt, premounted exhaust silencer, rivet nut

2 Hose clamp

13 Mechanical system, part 2

Turning the horn bracket

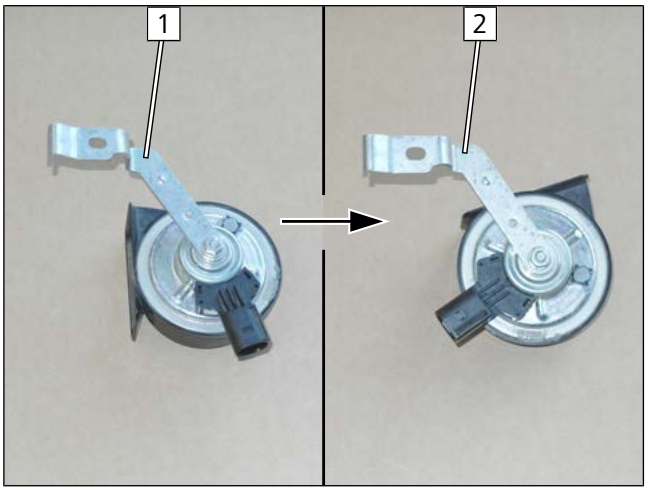


Fig. 102

1 Horn with bracket, original position
2 Horn with bracket, turned

Mounting horn

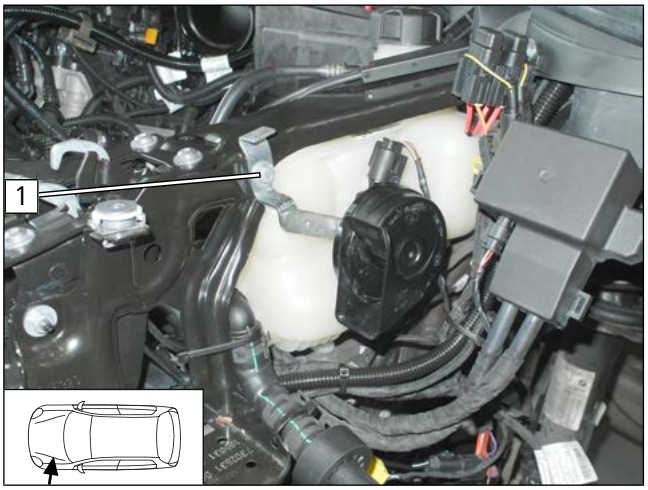


Fig. 103

1 Original vehicle bolt, premounted horn, headlight carrier

Adapting headlight carrier section

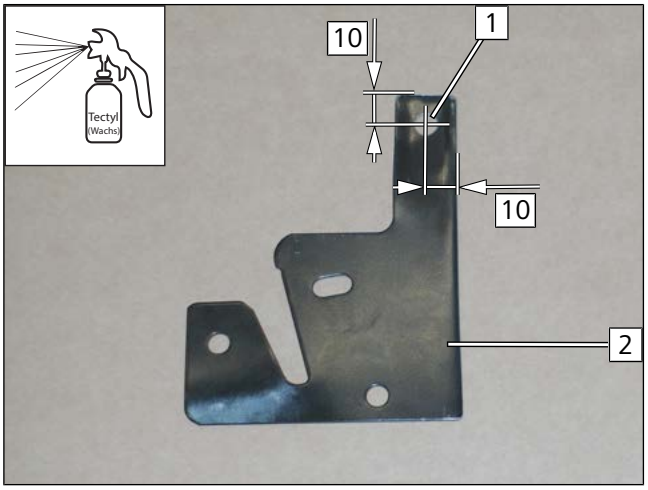


Fig. 104

1 Ø7 hole

Mounting headlight carrier section and relay

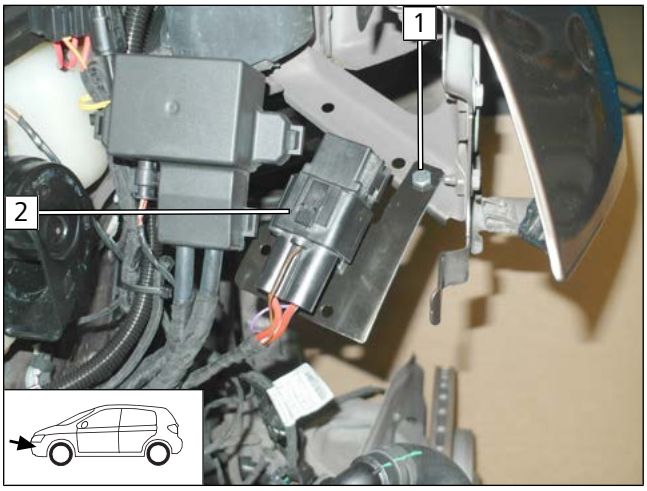


Fig. 105

1 M6x20 bolt, headlight carrier section, available hole in original vehicle cross member, flanged nut

2 Insert original vehicle relay

Fastening connector

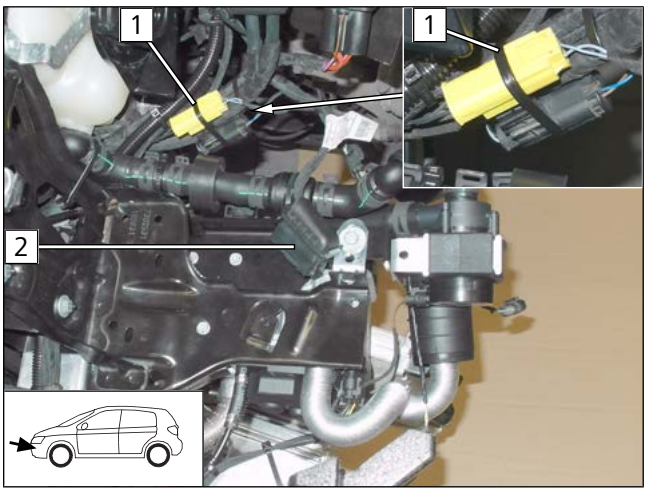


Fig. 106

▶ Fasten original vehicle connector using cable tie **1**.

2 Position headlight connector

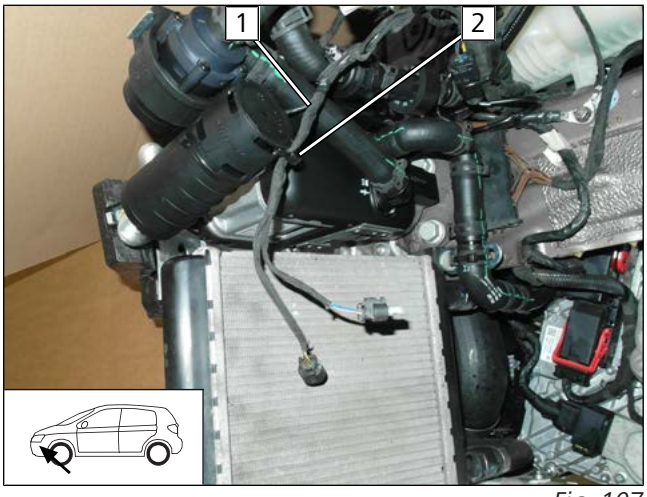


Fig. 107

▶ Route original vehicle wiring harness **1** as shown and fasten with cable tie **2** to combustion air intake silencer.

Adapting air filter box

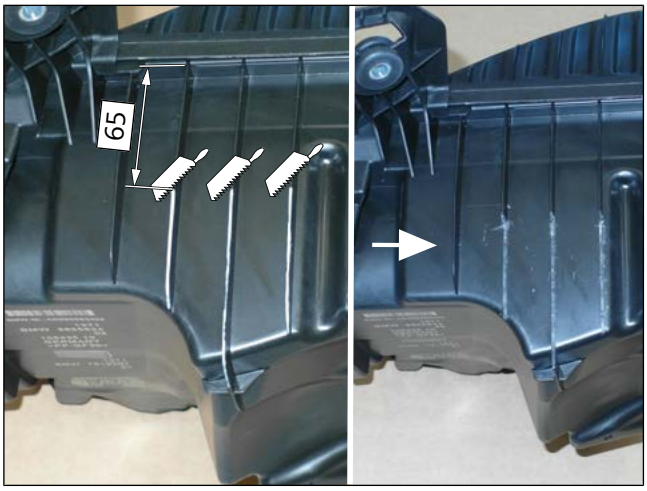


Fig. 108

▶ Cut the marked stiffening ribs flush with the surface.

Mounting headlight

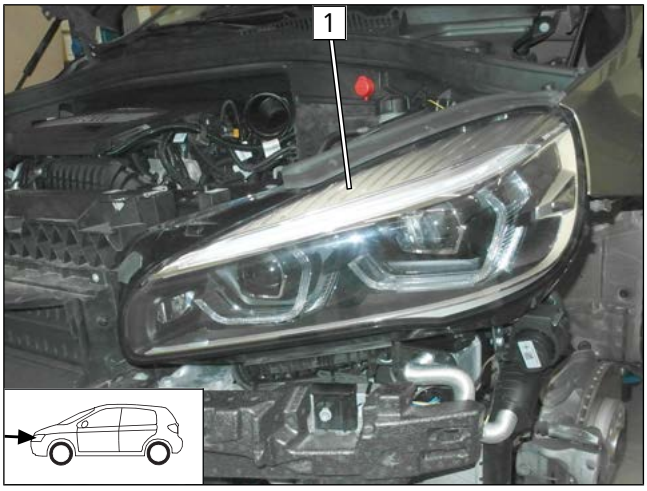


Fig. 109

1 Headlight

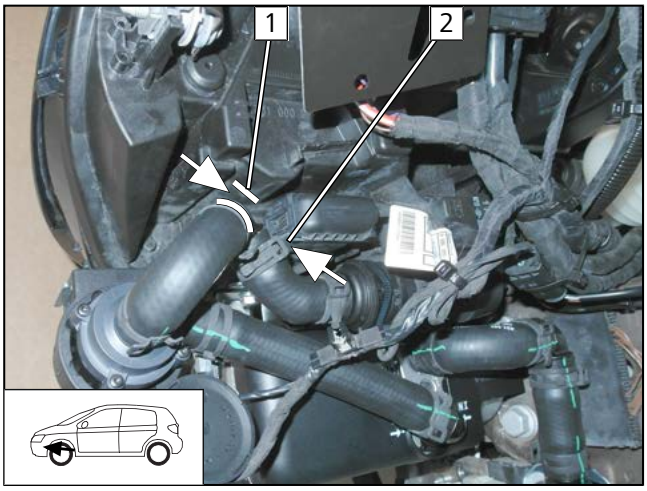


Fig. 110

Danger of damage to components

▶ Ensure sufficient distance from neighbouring components at positions **1** and **2**, correct if necessary.

▶ Tighten the perforated bracket of the coolant pump.

14 Exhaust part 2

Mounting air duct loosely

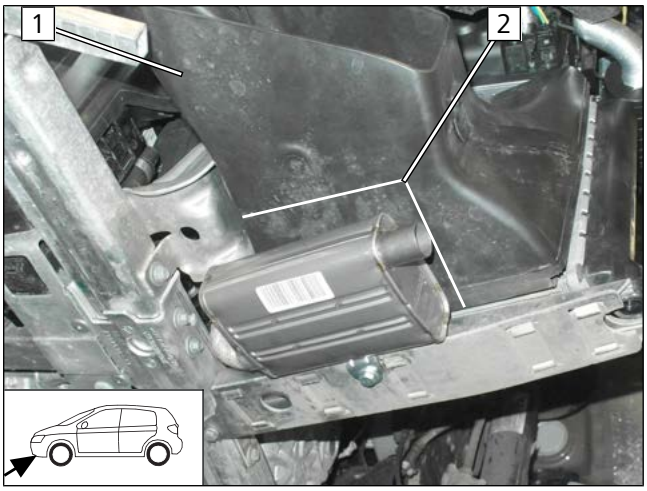


Fig. 111

- ▶ Copy outline 2 of exhaust silencer onto air duct 1 as shown.
- ▶ Remove air duct.

Sticking heat protection film in marked area

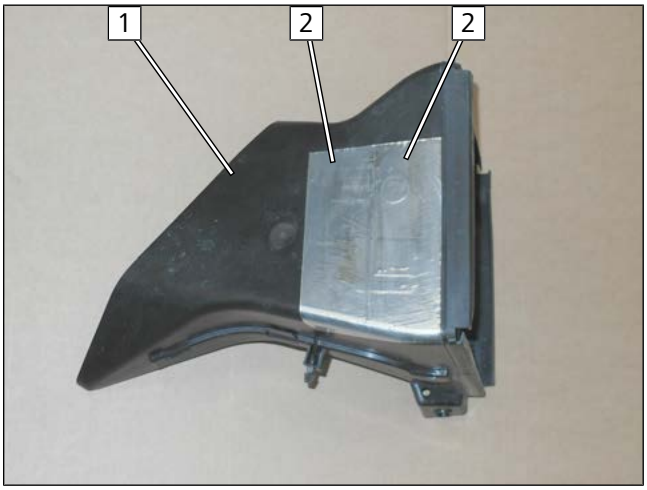


Fig. 112

1 Air duct
2 150 long heat protection film

Mounting air duct

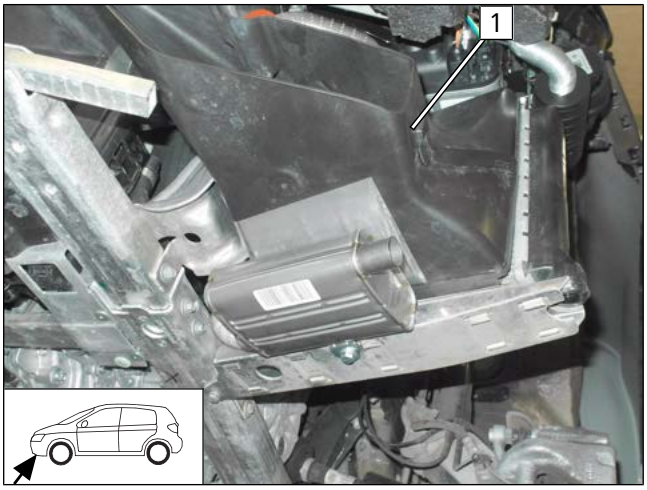


Fig. 113

1 Air duct

Work step E1

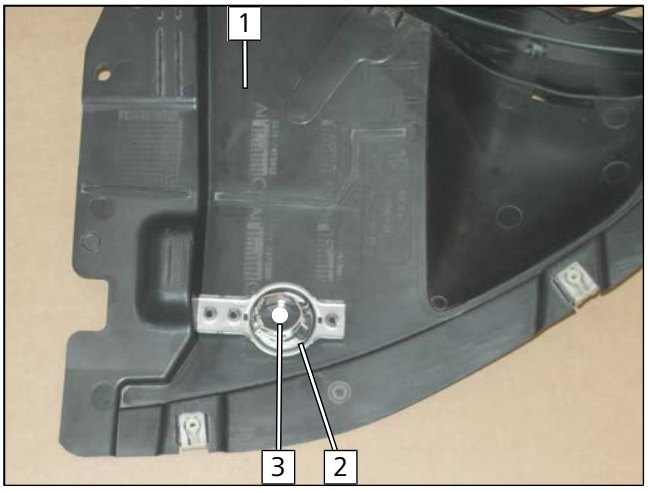


Fig. 114

Observe the EFIX installation instructions.

1 Wheel well trim
2 EFIX
3 Hole pattern

Work step E2

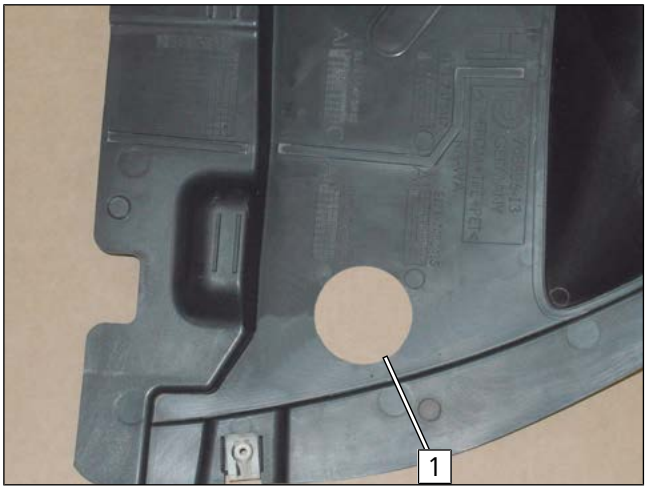


Fig. 115

1 Hole

Work step E3

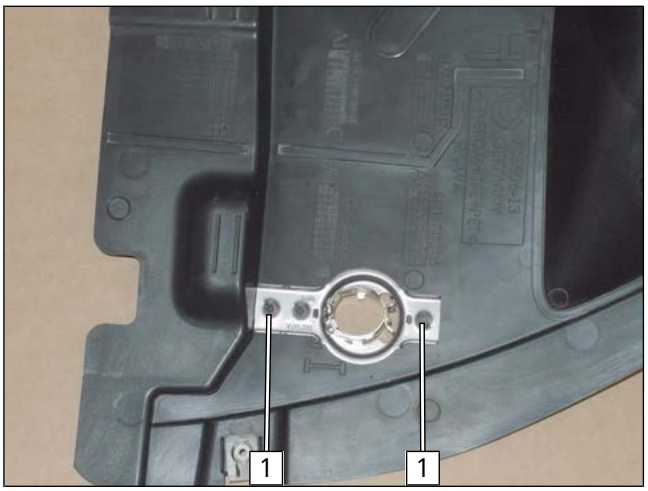


Fig. 116

1 Hole pattern

Work step E4

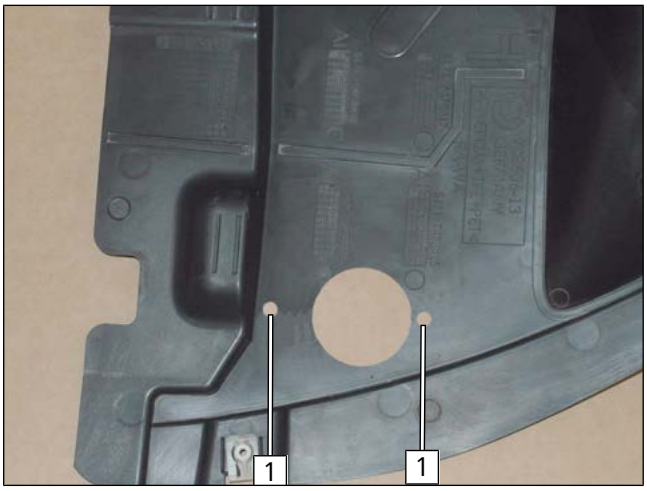


Fig. 117

1 Hole

Work step E5

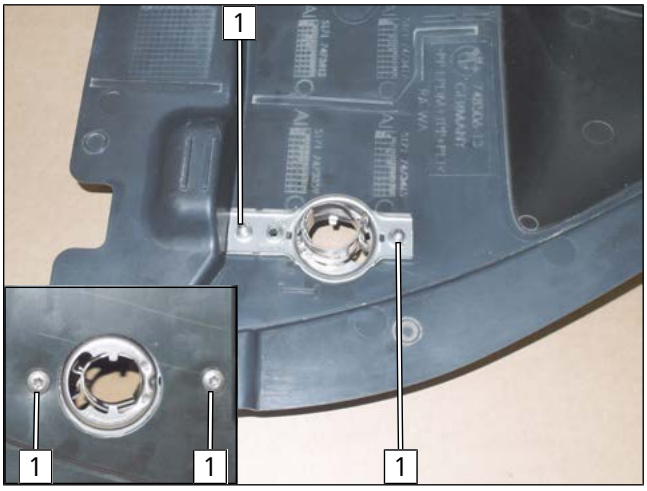


Fig. 118

1 5x13 self-tapping screw

Sticking on heat protection film

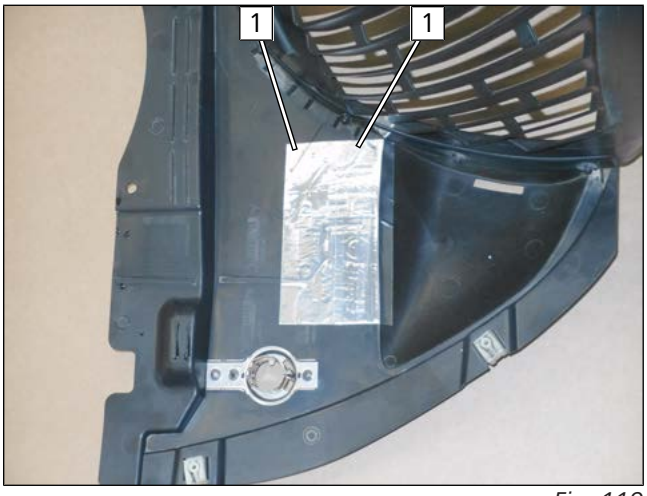


Fig. 119

▶ Stick 150 long heat protection film 1 underneath the exhaust silencer, onto the underride protection.

Installing wheel well trim

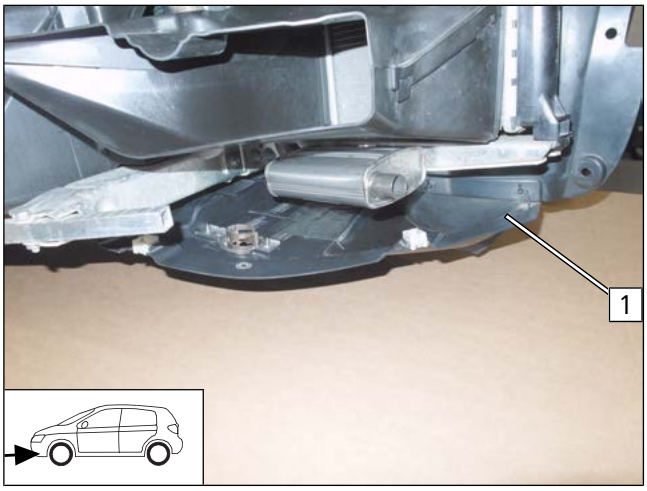


Fig. 120

1 Wheel well trim

Mounting exhaust pipe **a2**

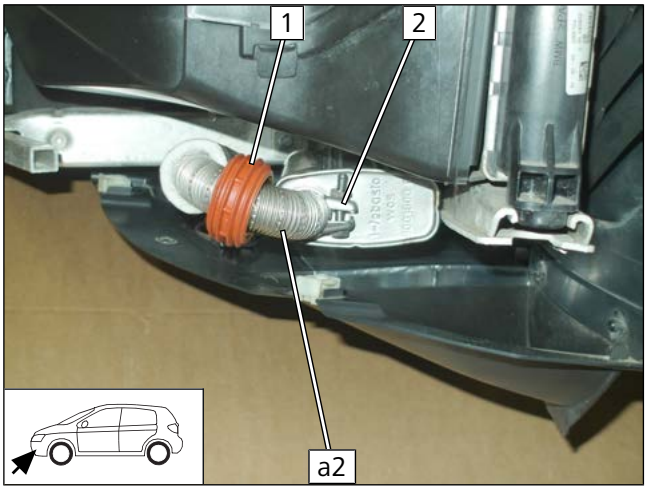


Fig. 121

1 Align ASH
2 Hose clamp

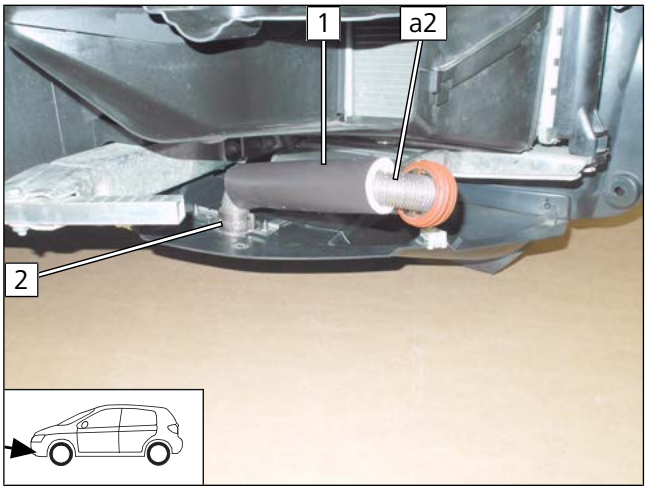


Fig. 122

1 Heat protection
2 EFIX

Aligning exhaust pipe **a2**

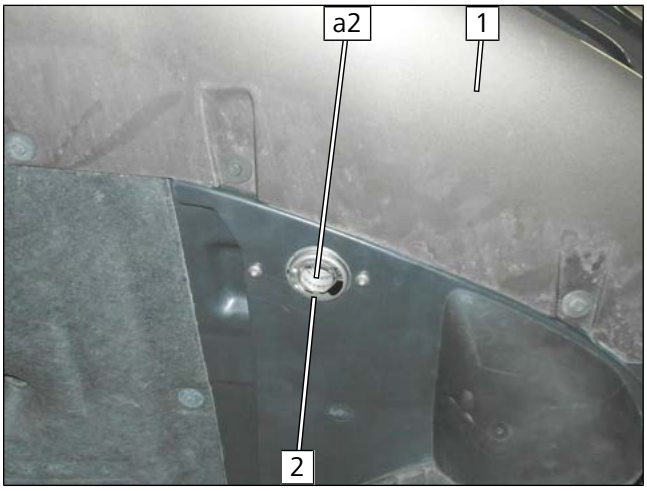


Fig. 123

Danger of damage to components

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

▶ Mount bumper **1**.

2 EFIX

15 Electrical system of passenger compartment

15.1 Air-conditioning control

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

'**Webasto Comfort**' air-conditioning control installation documentation for AAC of BMW / Mini

16 Electrical system of control elements

16.1 Remote option (Telestart)

Mounting receiver

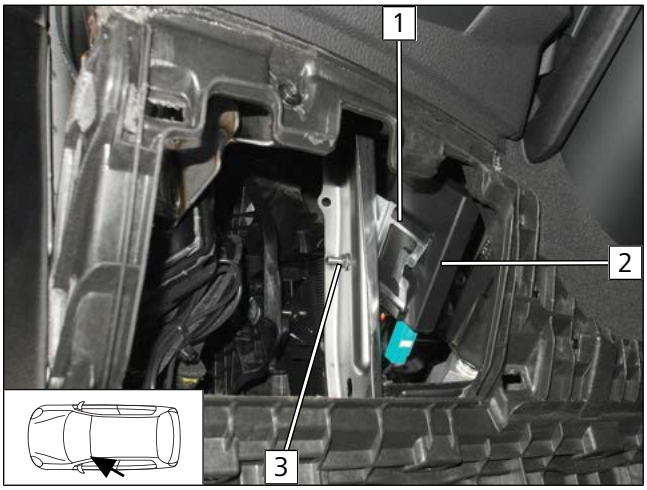


Fig. 124

Observe the Telestart installation documentation.

1 Receiver bracket
2 Receiver
3 M5x16 bolt, large diameter washer, original vehicle hole, flanged nut

Mounting temperature sensor, only in case of T100 HTM

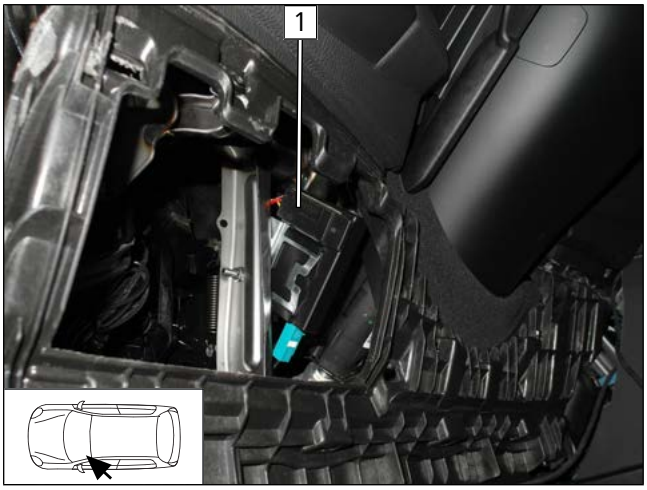


Fig. 125

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

Mounting aerial

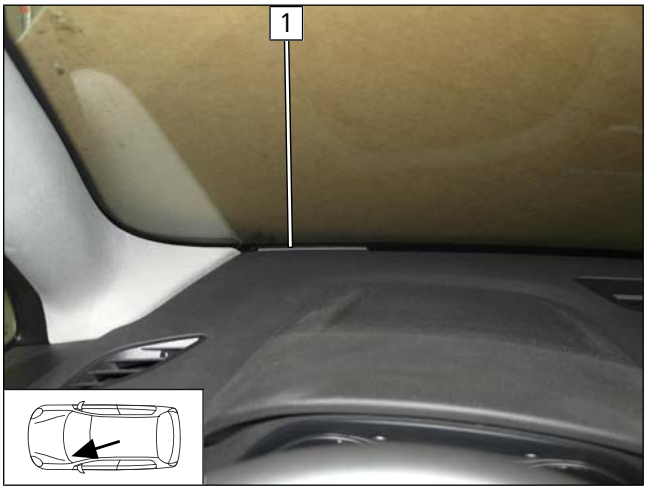


Fig. 126

1 Aerial

16.2 ThermoCall option

Mounting receiver

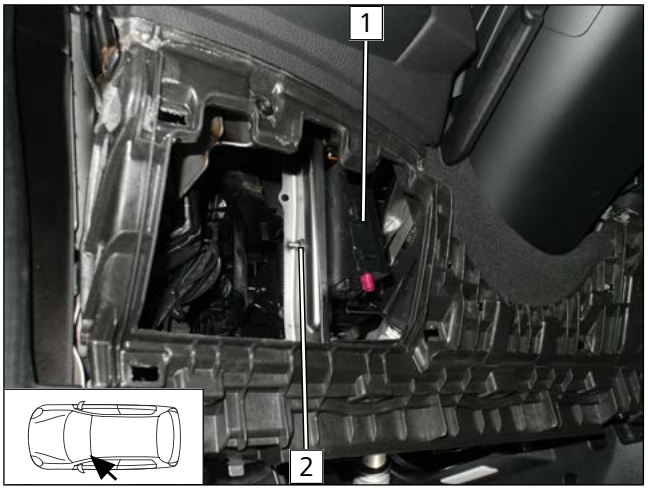


Fig. 127

Observe the ThermoCall installation documentation.

1 Receiver

2 M5x16 bolt, large diameter washer, original vehicle hole, flanged nut

Mounting aerial (optional)

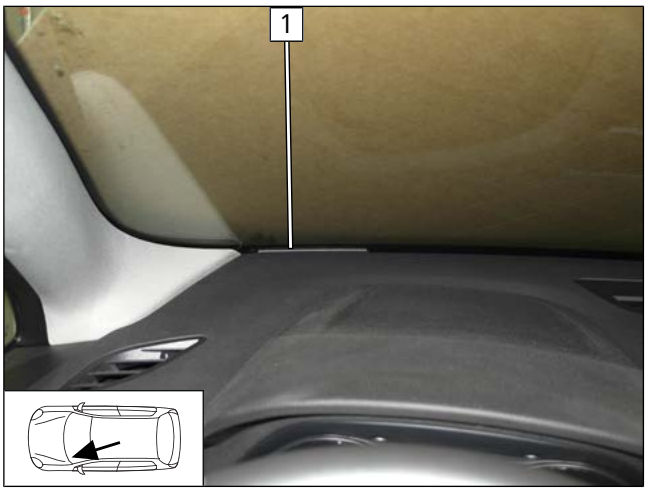


Fig. 128

1 Aerial

17 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.

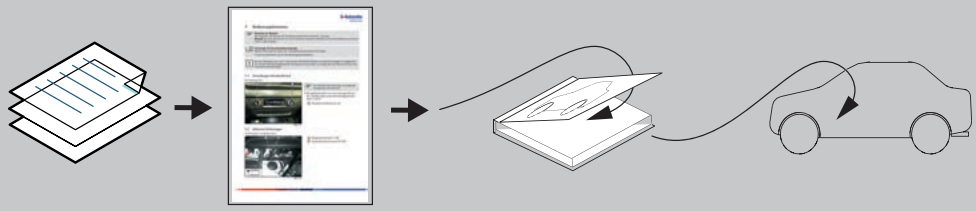
- ▶ Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.

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

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

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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82205 Gilching
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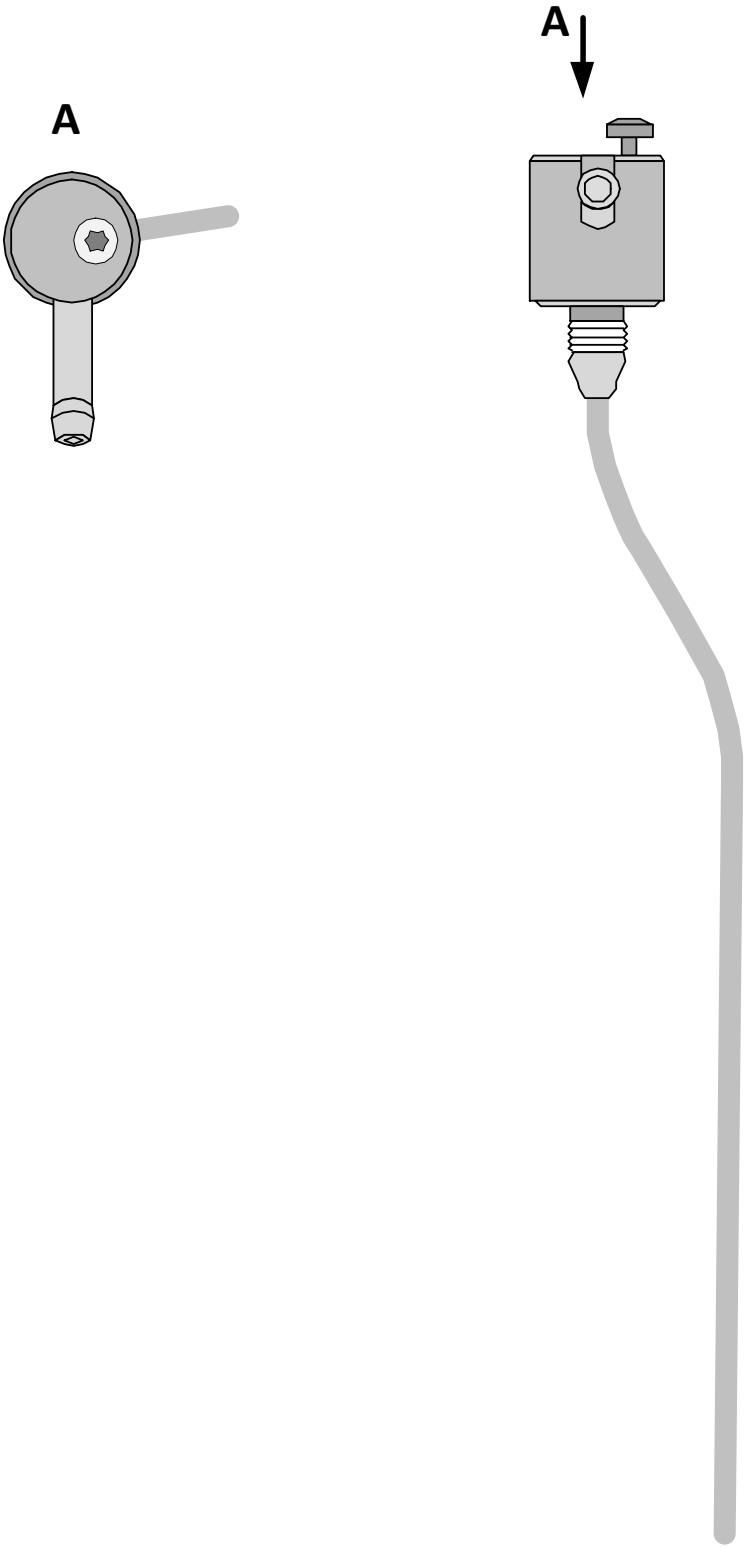
Technical Extranet: https://dealers.webasto.com

CE

WWW.WEBASTO.COM

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