

K Installation documentation

for Thermo Top Evo water heater

'Inline' coolant circuit with engine preheating

Toyota Corolla

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE
Toyota	Corolla	ZE1HE (EU,M)	from 2019	e6* 2007/46* 0318*...
Toyota	Corolla	ZE1EE (EU,M)	from 2019	e6* 2007/46* 0316*...

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm ³]	Engine code
1.8P Hybrid	Petrol	Euro 6d Temp	E-CVT	72	1498	2ZR-FXE

Validity	Equipment variants	Model
		Corolla
Verified equipment variants	Manual air-conditioning	X
	2 zone automatic air-conditioning	X
	LED main headlights	X
	Matrix LED main headlights	X
	LED daytime running lights	X
	LED front fog lights	X
Unverified equipment variants	Passenger compartment monitoring	X

Total installation time	Note
9.5 hours	

Contents

1	List of abbreviations	3			
2	Installation notes	4	13	Final work in engine compartment	46
2.1	Information on Validity	4	14	Electrical system of passenger compartment	48
2.2	Note for hybrid vehicles	4	14.1	Air-conditioning control	48
2.3	Components used	4	15	Electrical system of control elements	49
2.4	Information on Total Installation Time	4	15.1	MCC option	49
2.5	Installation recommendations	4	15.2	Remote option (Telestart)	49
3	About this document	5	15.3	ThermoCall option	50
3.1	Purpose of the document	5	16	Final work	52
3.2	Warranty and liability	5	17	FuelFix template	55
3.3	Safety	5			
3.4	Using this document	6			
4	Technical Information	7			
5	Preparations	8			
5.1	Vehicle preparation	8			
5.2	Heater preparation	9			
6	Installation overview	10			
7	Electrical system of engine compartment	11			
8	Mechanical system	16			
8.1	Preparing installation location	16			
8.2	Premounting heater	18			
8.3	Heater mounting	20			
9	Fuel	22			
9.1	Routing fuel line	22			
9.2	Installing FuelFix	25			
9.3	Fuel pump connection	29			
10	Coolant	30			
10.1	Hose routing diagram	30			
10.2	Coolant circuit preparation	31			
10.3	Coolant circuit installation	33			
11	Combustion air	38			
12	Exhaust	40			
12.1	Mounting exhaust pipe	40			
12.2	Mounting exhaust end fastener	42			
12.2.1	Version 1	43			
			12.2.2	Version 2	44

1 List of abbreviations

AAC	Automatic air-conditioning
AC	Manual air-conditioning
DP	Fuel pump
E-CVT	Electronically-controlled continuously variable automatic transmission
EFIX	Exhaust end fastener
FF	FuelFix (tank extracting device)
Fig.	Figure
HG	Heater
MCC	MultiControl (control element)
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 Note for hybrid vehicles



Only experts in high-voltage systems for vehicles should be authorised to carry out independent work on hybrid vehicles. High-voltage systems must be taken out of operation, secured and reactivated according to the manufacturer's instructions.

2.3 Components used

Designation	Order number
Basic delivery scope of Thermo Top Evo	In accordance with price list
Installation kit for Toyota Corolla 2019 1.8 Hybrid	1327525A
Additional 'Webasto Standard' A/C control kit for Toyota	1324414_
MultiControl installation frame, for installation of MultiControl CAR	9030077_
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list

2.4 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.

2.5 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.



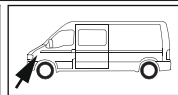
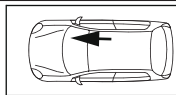
Note on a special technical feature

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.




DANGER

Take the high-voltage system out of operation as per the procedure described in the manufacturer's instructions and secure it.

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 with battery carrier ▶ Engine control unit ▶ Windscreen wiper ▶ Water drain chamber cover ▶ Windscreen wiper motor ▶ Water drain chamber ▶ Front wheel on the driver's side ▶ Front wheel well trim on the driver's side and engine compartment trim behind the wheel-well inner panel ▶ Bumper trim ▶ Front motor protection ▶ Motor protection ▶ Underride protection on the driver's side ▶ Rear underride protection on the driver's side ▶ Heat protection on tank 	
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 ▶ Upper A-pillar trim on the driver's side (in case of Telestart) ▶ Front centre tunnel trim on the driver's side ▶ Lower footwell trim on the driver's side ▶ Accelerator pedal ▶ Rear bench seat ▶ Tank fitting service lid 	

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	
--------------------	---	---

6 Installation overview

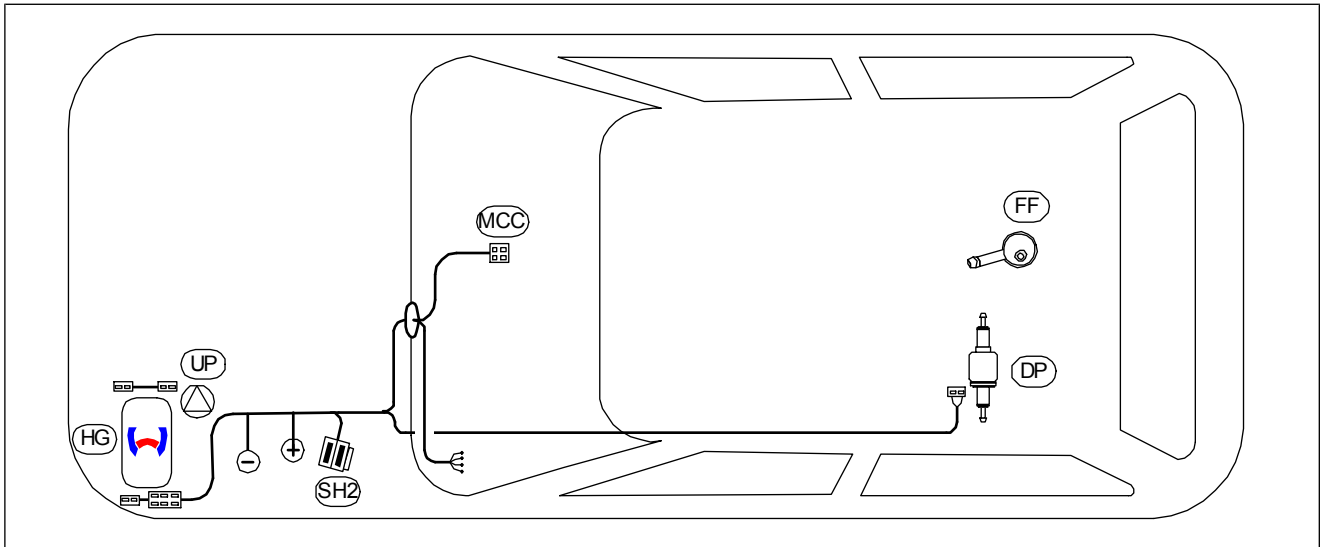
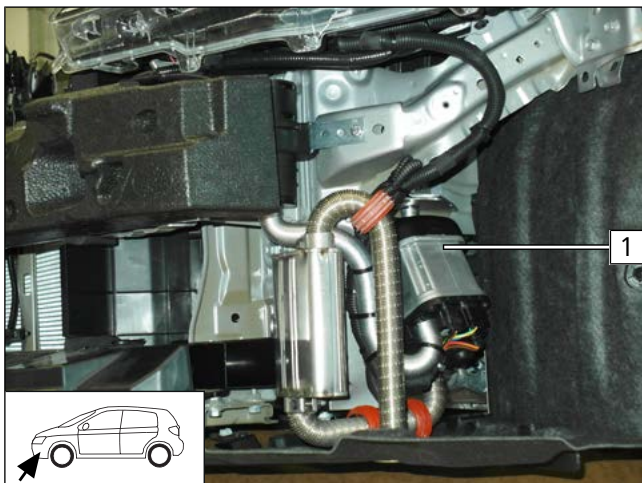


Fig. 1

Legend to installation overview

Abbreviation	Component
DP	Fuel pump
FF	FuelFix
HG	Heater
MCC	MultiControl CAR (control element)
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump

Heater installation location



1 Heater

Fig. 2



7 Electrical system of engine compartment

Cutting corrugated tube to length

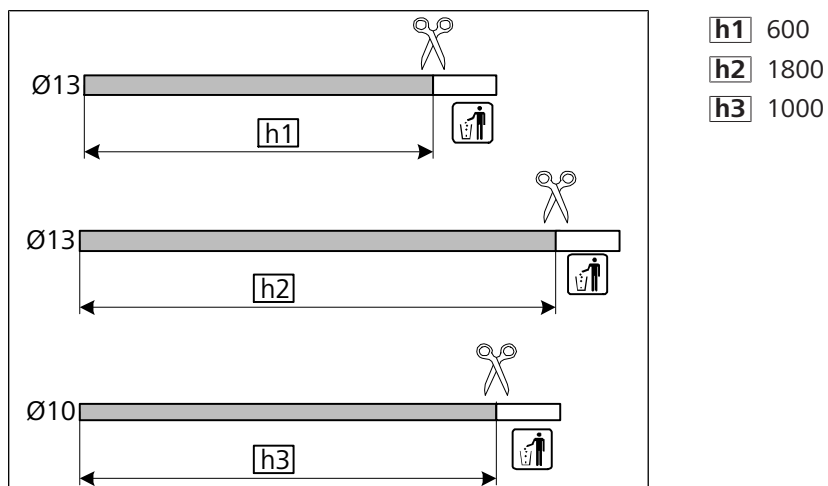


Fig. 3

Dismantling fuel pump connector X7

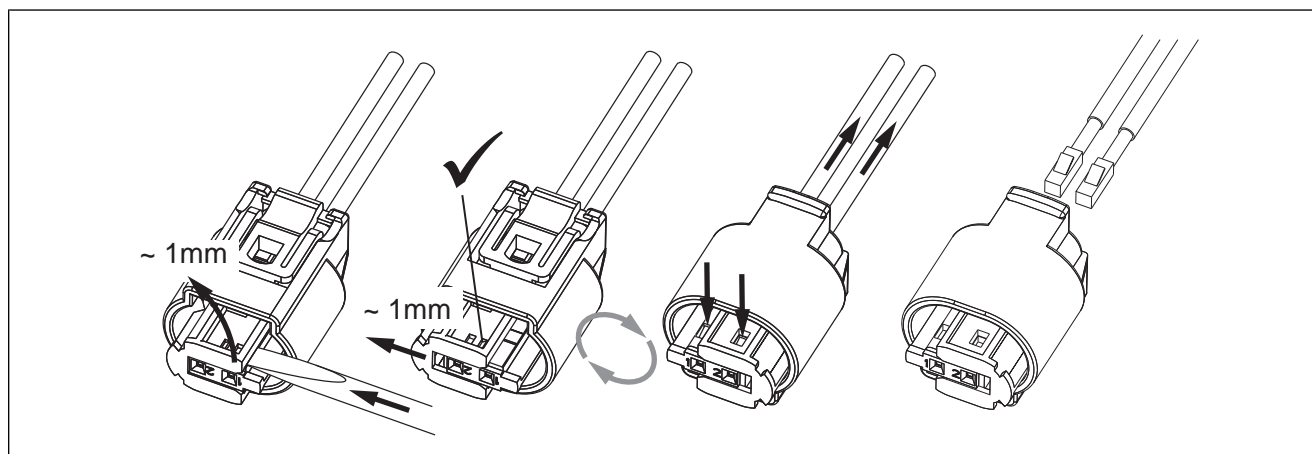


Fig. 4



Preparing wiring harness

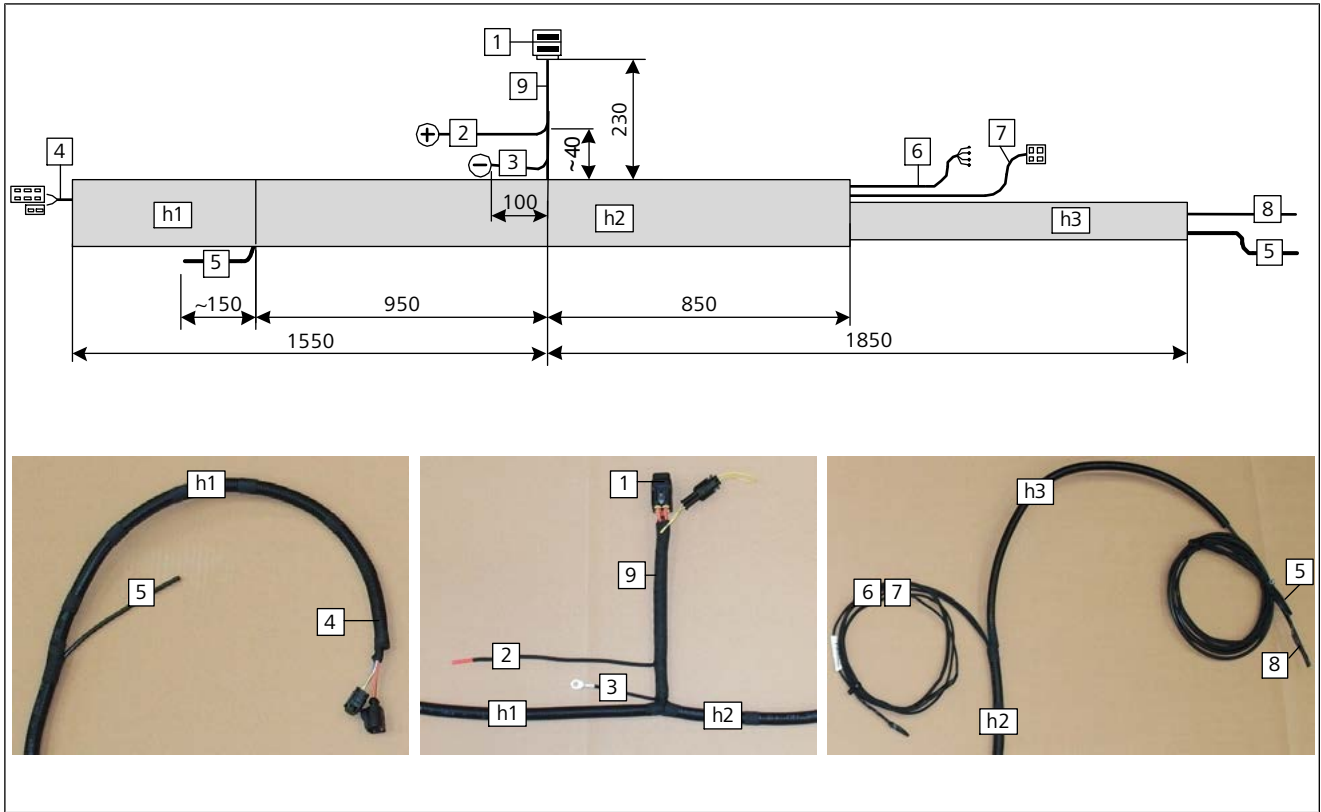


Fig. 5

- ▶ Wrap corrugated tubes **h1** and **h2** at regular intervals with insulating tape.
- ▶ Wrap wire section **9** completely with insulating tape.

- 1** SH2
- 2** Positive wire
- 3** Earth wire
- 4** Heater wiring harness
- 5** Fuel line
- 6** Passenger compartment wiring harness
- 7** Control element wiring harness
- 8** Fuel pump wiring harness

Shortening and bending perforated bracket

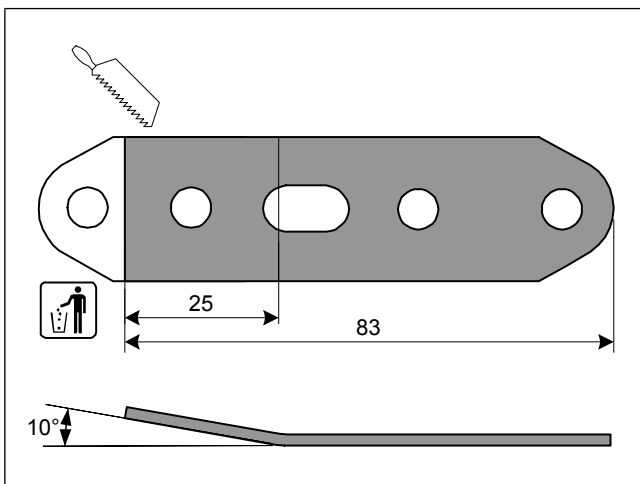


Fig. 6



Premounting SH2

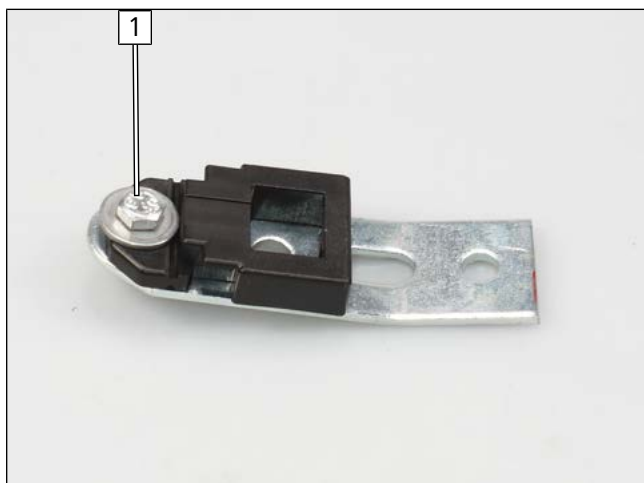


Fig. 7

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

Installing SH2



Fig. 8

► Remove original vehicle nut **2** and use it to install perforated bracket **1**.

- 2 Original vehicle stud bolt, housing of engine compartment central electrical box, perforated bracket, original vehicle nut

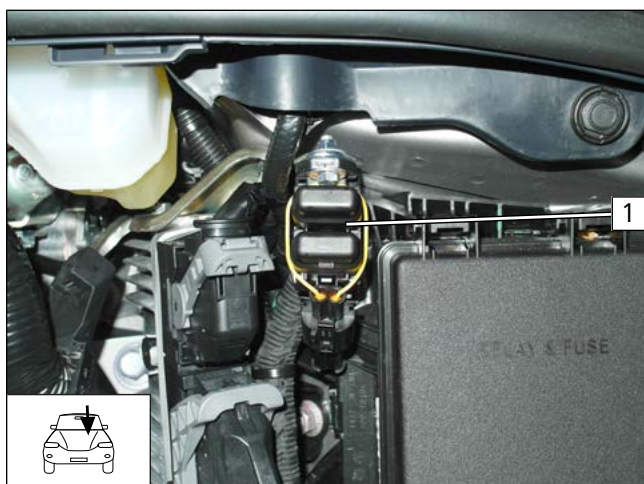


Fig. 9



For a better assembly of the SH2, turn, if necessary, the mounted perforated bracket slightly with a suitable tool.

- 1 SH2 with fuse F1 and F2



Routing heater wiring harness

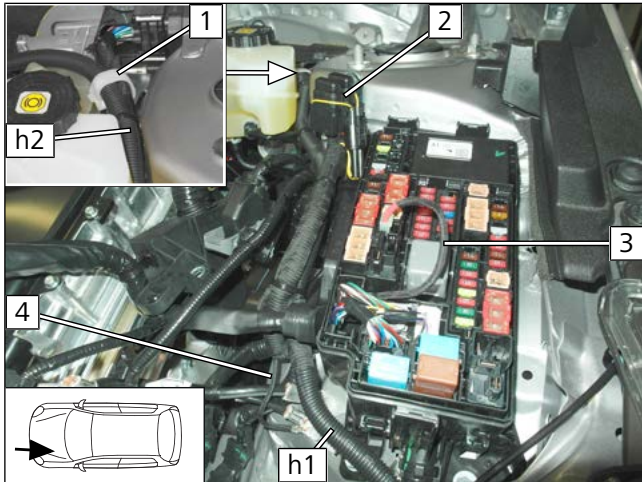


Fig. 10



Danger of mechanical damage to the fuel line

▶ Do not bend the fuel line.

- ▶ Draw corrugated tube **h2** through original vehicle clamp **1** and route to the pass through in the passenger compartment.
- ▶ Route corrugated tube **h1** with HG wiring harness and fuel line to heater installation location.

- 2** SH2
- 3** Positive wire
- 4** Earth wire

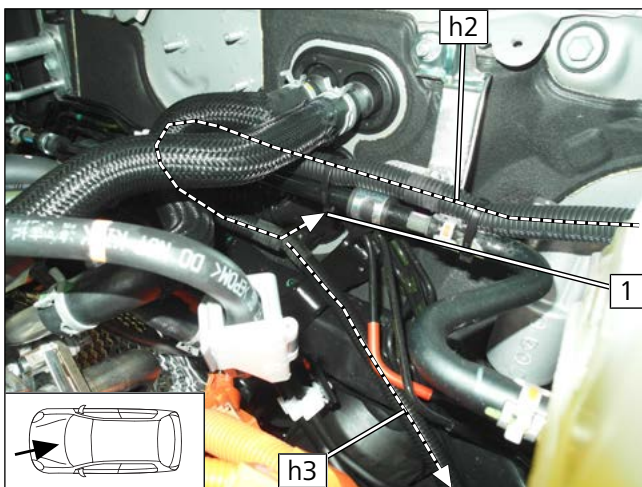


Fig. 11



Danger of mechanical damage to the fuel line

▶ Do not bend the fuel line.

- ▶ Route corrugated tube **h2** with passenger compartment and control element wiring harnesses, fuel pump wiring harness and fuel line to passenger compartment pass through **1**, then route corrugated tube **h3** with fuel pump wiring harness and fuel line along original vehicle lines to the underbody.

Passenger compartment wiring harness pass through

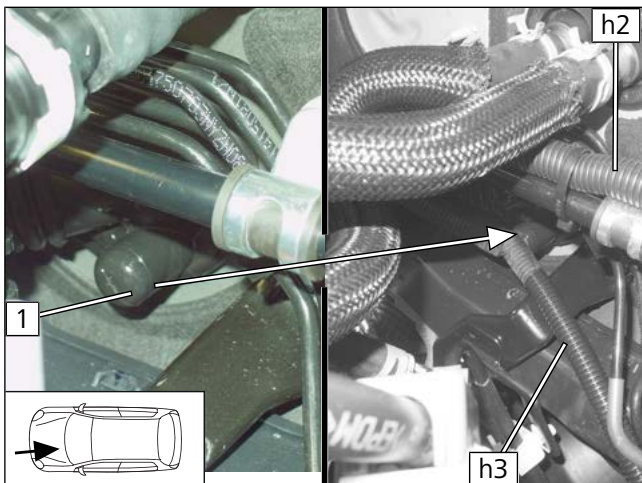


Fig. 12

- ▶ Open the pass through in the passenger compartment **1**, route the passenger compartment and control element wiring harnesses into the passenger compartment.



Mounting earth wire

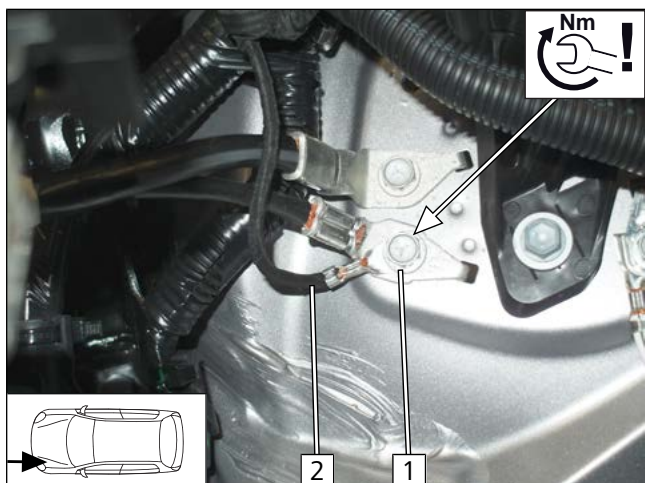


Fig. 13



DANGER

Fire hazard due to insufficient tightening torque

► Observe tightening torque

- 1 Original vehicle earth support point
- 2 Earth wire

Mounting positive wire

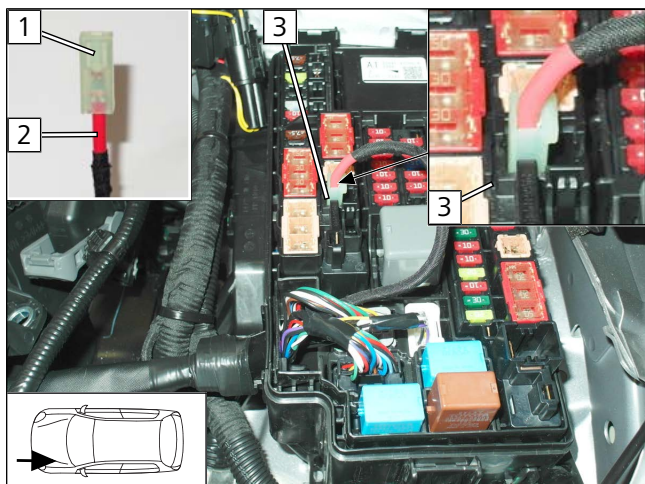


Fig. 14

- 1. Crimp 6.3 female connector on positive wire 2.
- 2. Mount female connector housing 1.
- 3. Connect positive wire to slot 3 as shown.



8 Mechanical system

8.1 Preparing installation location

Adapting HG bracket

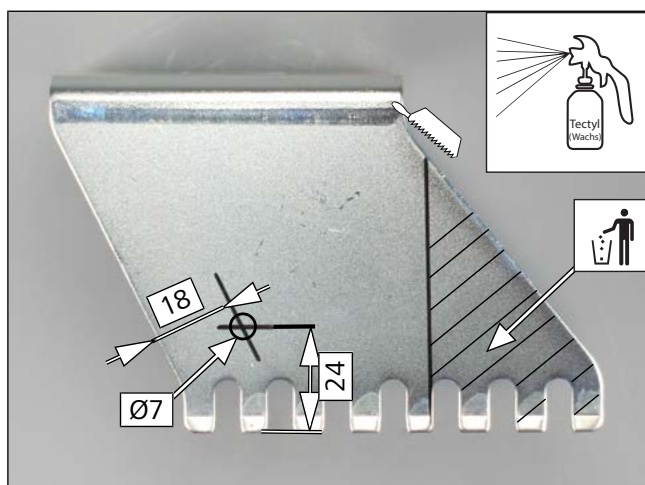


Fig. 15

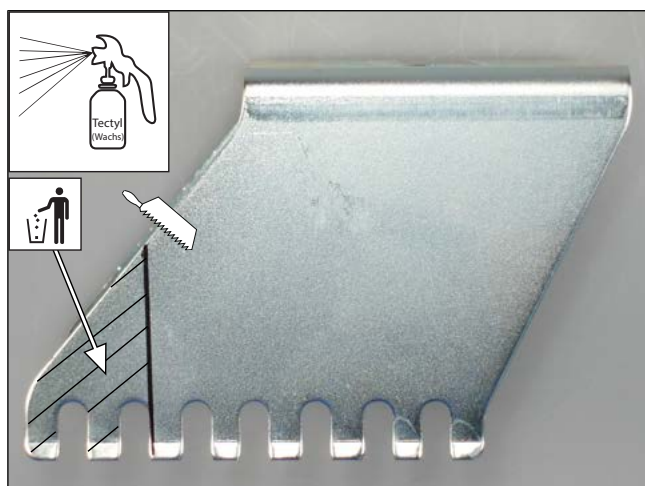


Fig. 16

Enlarging hole, inserting rivet nut

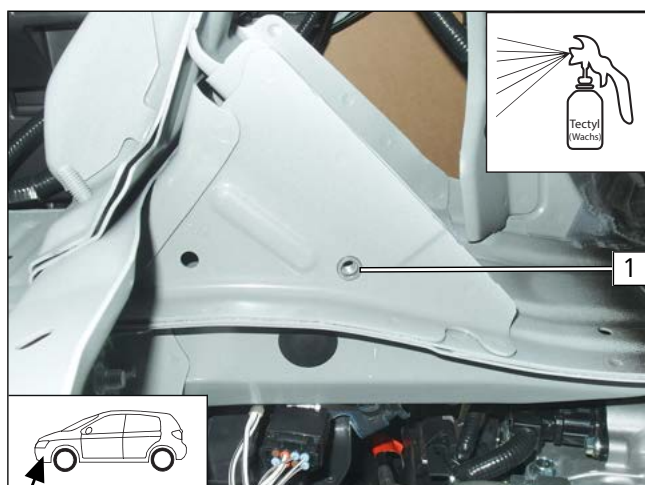


Fig. 17

► Enlarge original vehicle hole **1** to Ø9, insert rivet nut.



Copying hole pattern

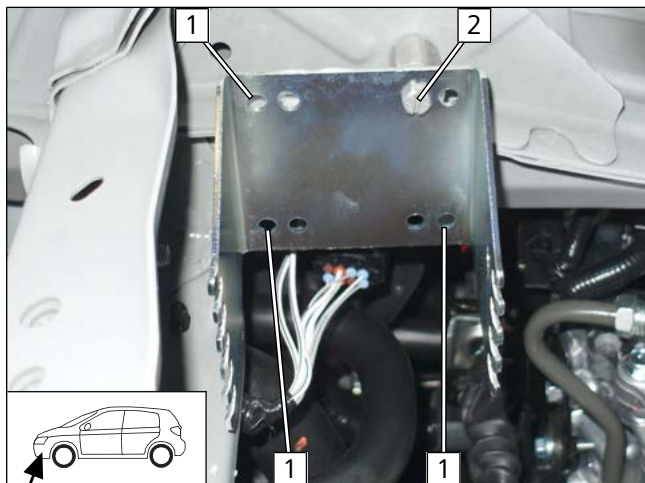


Fig. 18

► Mount bracket loosely and align as shown.

- 1 Hole pattern
- 2 M6x50 bolt, HG bracket, spacer (5), spacer (20), rivet nut

Drilling hole, inserting rivet nut

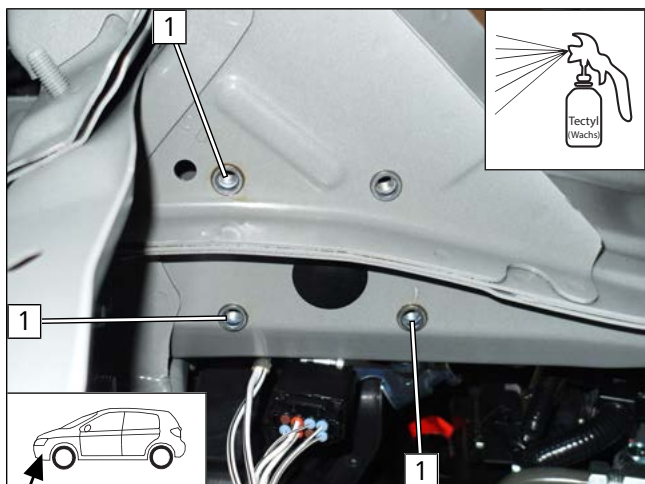


Fig. 19

► Remove bracket.

- 1 Ø9 hole, rivet nut

Mounting heater bracket

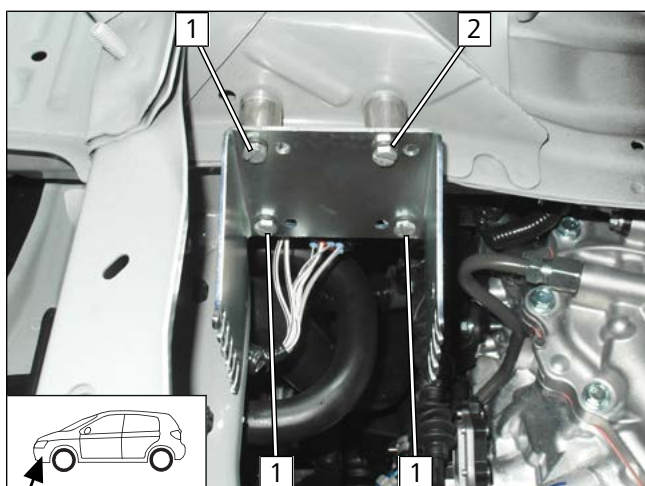


Fig. 20

- 1 M6x50 bolt, spring lock washer, bracket, spacer (20), spacer (5), rivet nut
- 2 M6x50 bolt, spring lock washer, bracket, spacer (20), spacer (5), large diameter washer, rivet nut



8.2 Premounting heater

Mounting water connection piece

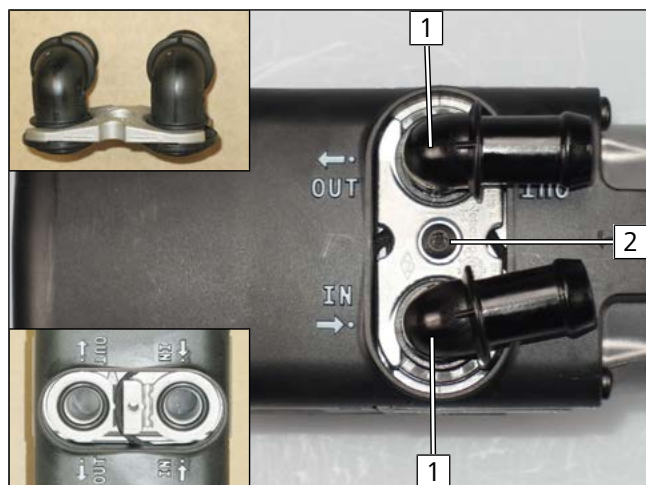


Fig. 21



Observe the general installation instructions of the heater.

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

Premounting bolts

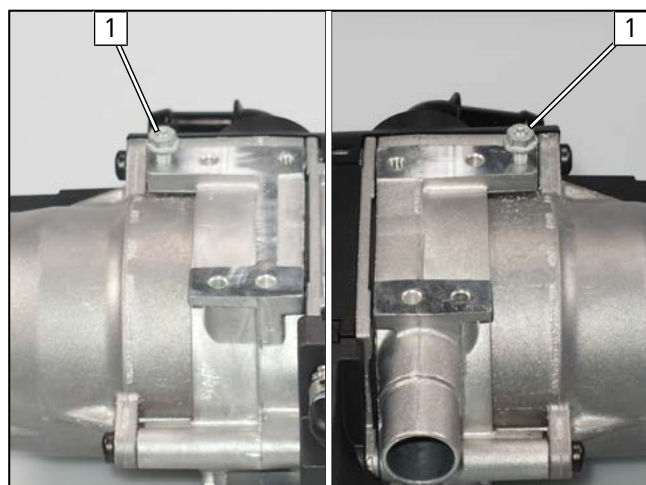


Fig. 22

- 1 5x13 self-tapping bolt, screw inwards by max. 3 threads

Mounting fuel hose

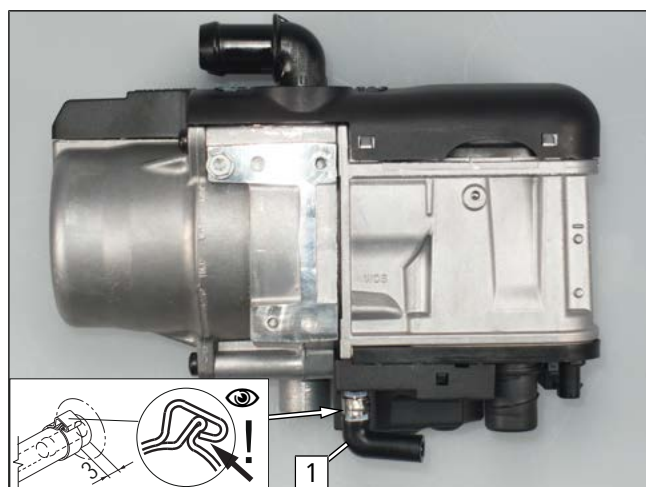
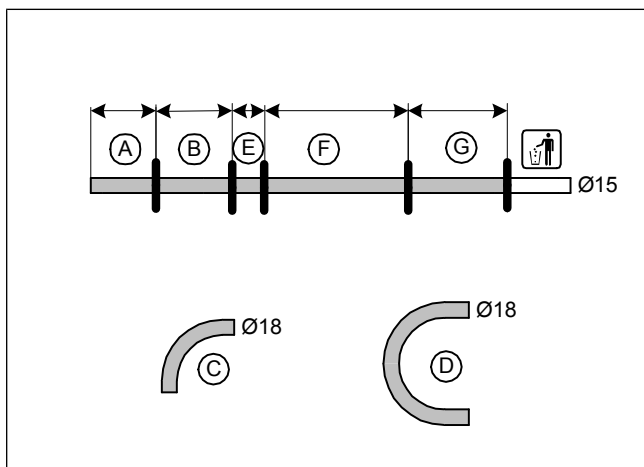


Fig. 23

- 1 Short, 90°, 4.5x4.5 moulded hose with short side on HG, Ø10 clamp



Cutting hoses to length



A	390
B	460
C	90° moulded hose
D	180° moulded hose
E	65
F	670
G	400

Fig. 24

Mounting fabric heat shrink tubing

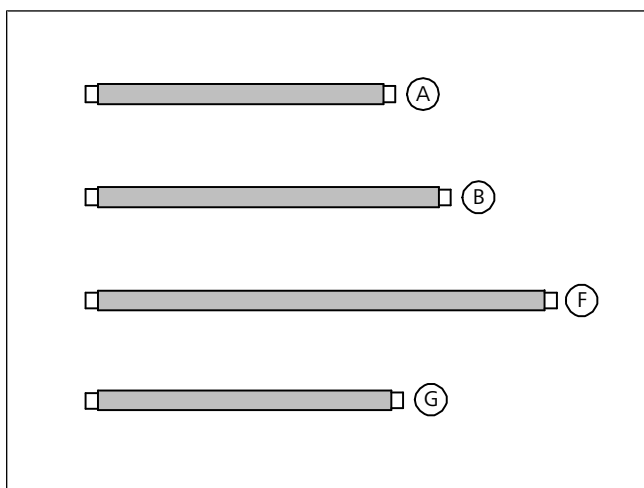


Fig. 25



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

Mounting hoses



Fig. 26



All spring clips Ø25, Ø18x18/90° connecting pipe



8.3 Heater mounting

Mounting heater

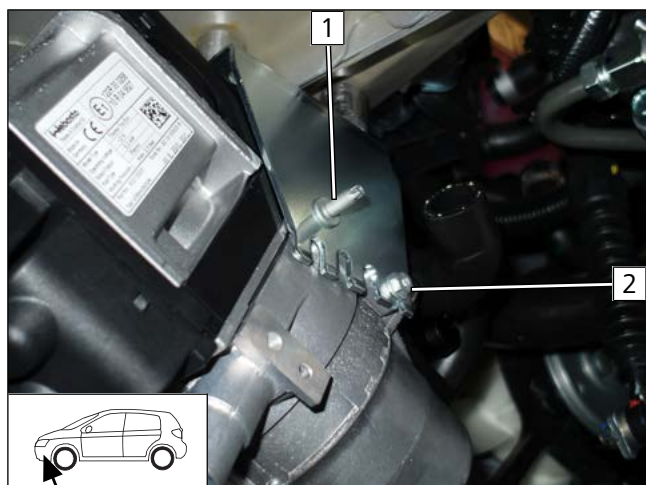


Fig. 27

- 1 Mount M5/M6x15.5 self-tapping stud bolt
- 2 Tighten premounted bolt

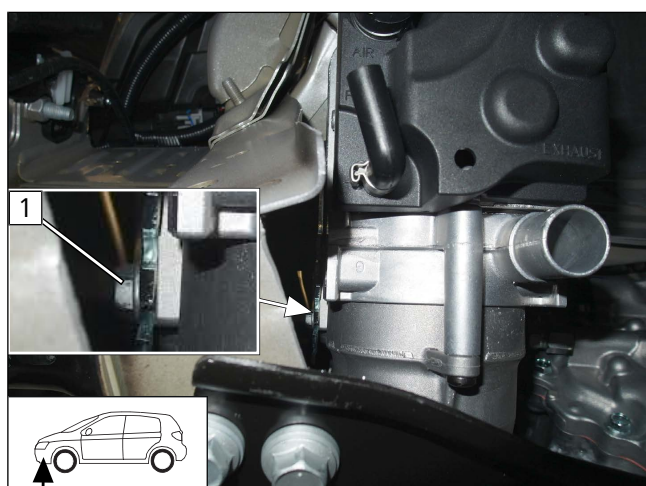


Fig. 28

- 1 Tighten premounted bolt

Fitting edge protection

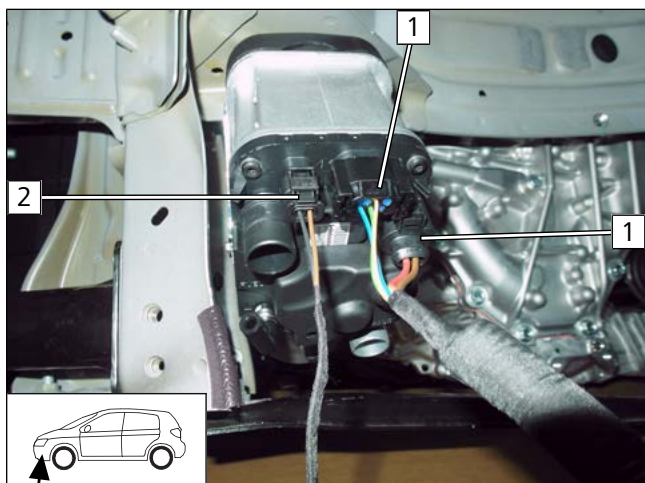


Fig. 29

- 1 50 lg. edge protection



Mounting heater wiring harness



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

Fig. 30



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

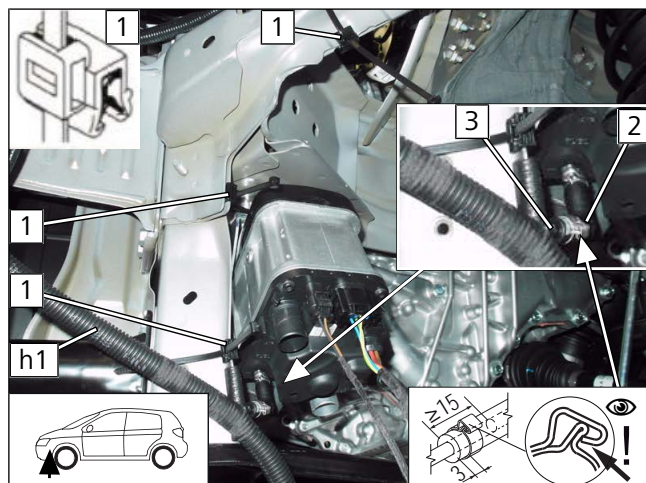


Danger of damage to components

- ▶ 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

9.1 Routing fuel line

Connection to heater, mounting edge clip cable tie



- ▶ Shorten fuel line **3** in prepared wiring harness **h1** appropriately and connect to heater.

- 1** Edge clip cable tie
- 2** Ø10 clamp

Fig. 31



Routing line

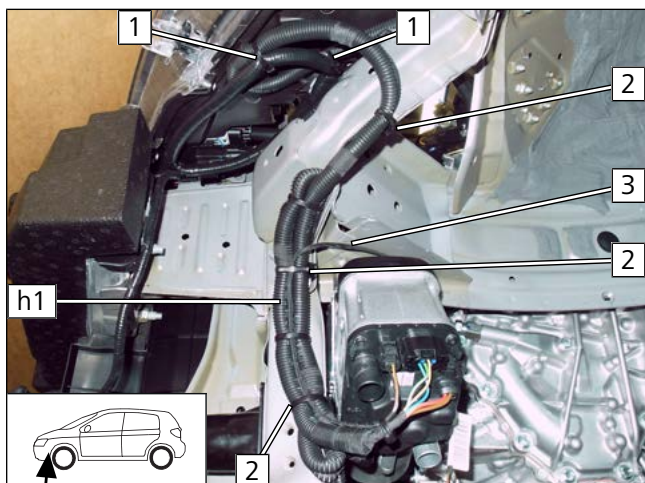


Fig. 32

► Wrap corrugated tube **h1** and fasten together with coolant pump wiring harness **3** using cable ties.

- 1** Cable tie on original vehicle wiring harnesses
- 2** Connecting edge clip cable tie

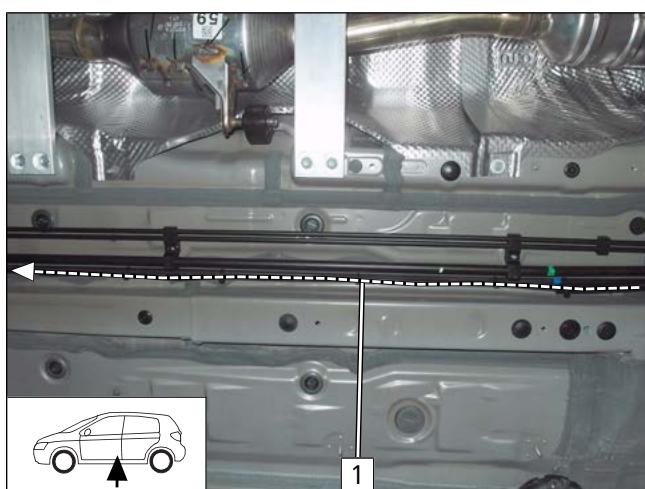


Fig. 33

► Route fuel line and fuel pump wiring harness **1** along original vehicle lines to fuel pump installation location.

Enlarging original vehicle hole, inserting rivet nut

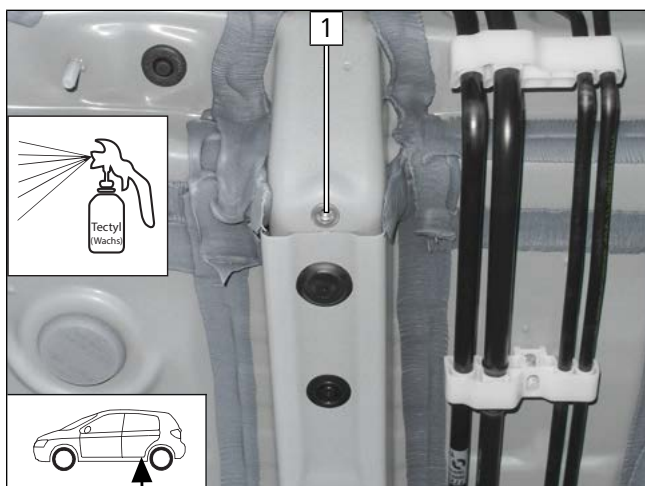


Fig. 34

- 1** Enlarge original vehicle hole to $\varnothing 9$, M6 rivet nut



Bending perforated bracket

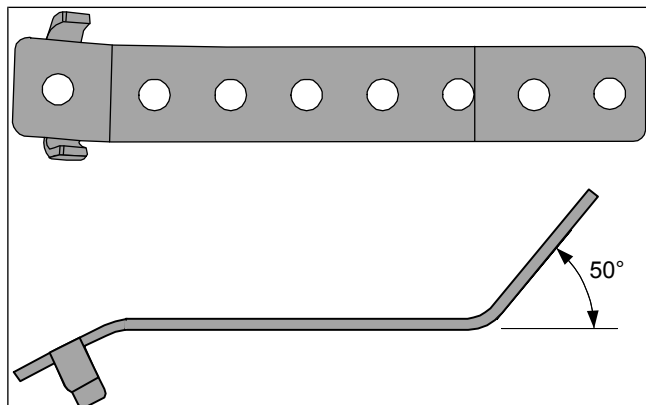


Fig. 35

Premounting fuel pump

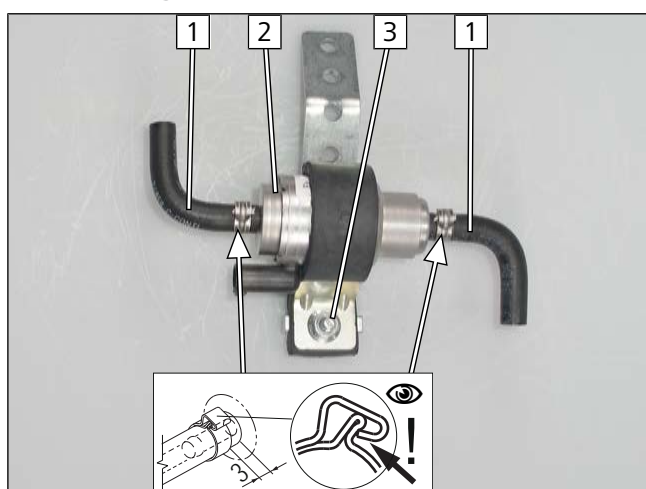


Fig. 36

- 1 90° moulded hose, Ø10 clamp
- 2 Fuel pump
- 3 M6x25 bolt, support angle bracket, fuel pump mount, perforated bracket, flanged nut

Mounting fuel pump

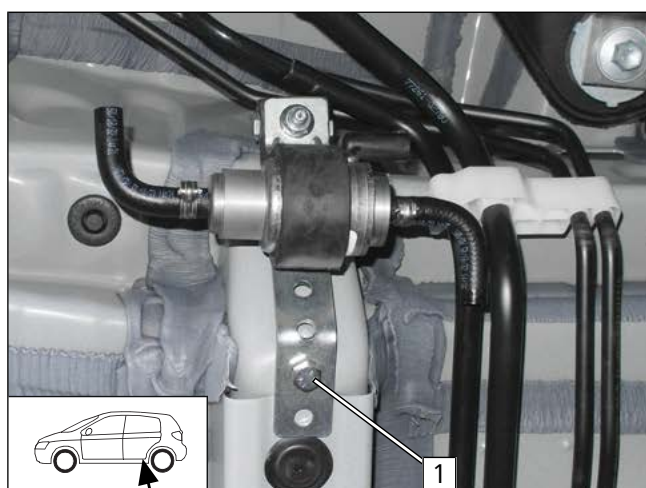


Fig. 37

- 1 M6x20 bolt, spring lockwasher, perforated bracket, rivet nut



Assembling fuel pump connector X7

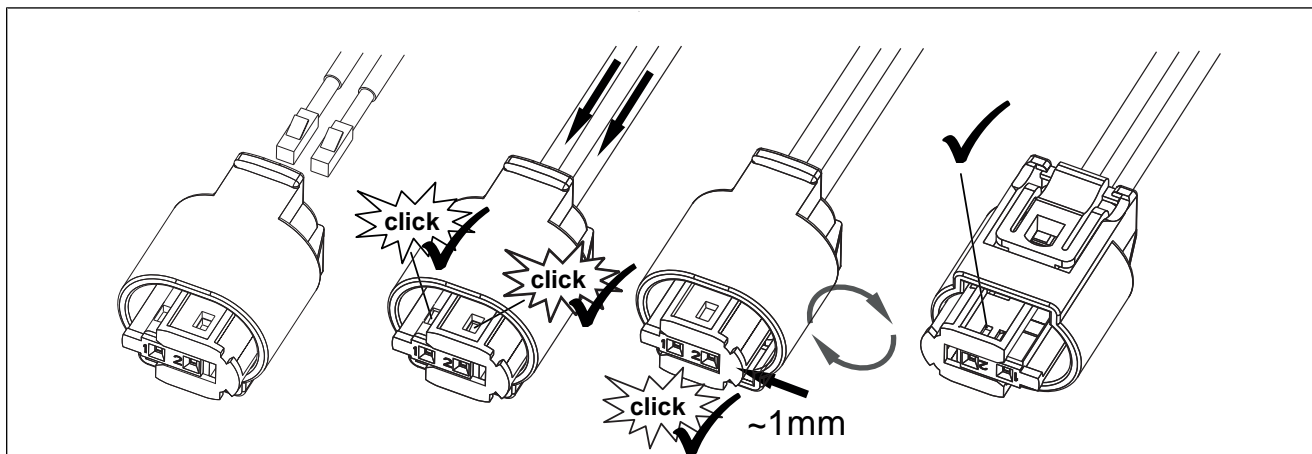


Fig. 38

Connecting fuel pump

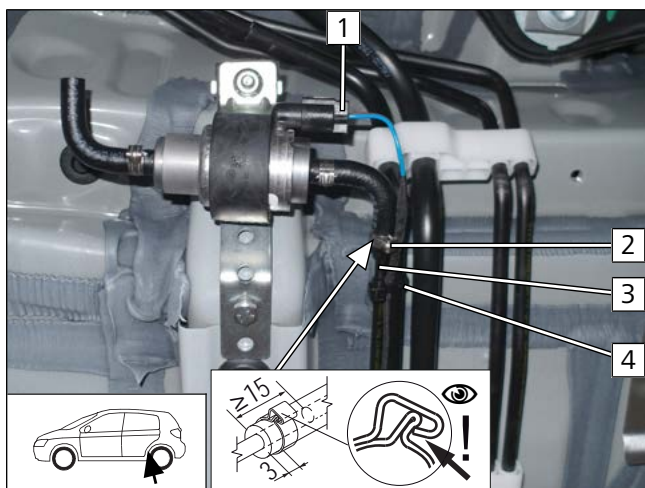


Fig. 39

- 1 Fuel pump wiring harness, connector X7 mounted
- 2 Ø10 clamp
- 3 Heater fuel line
- 4 Cable tie around fuel line and fuel pump wiring harness

9.2 Installing FuelFix

Preparing drilling template

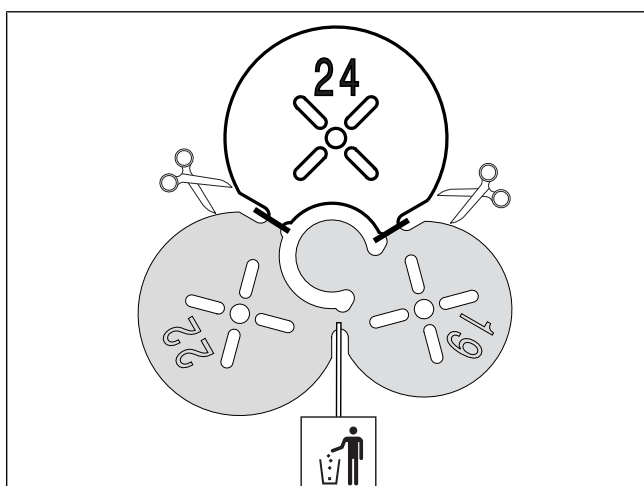


Fig. 40



Work steps F1, F2

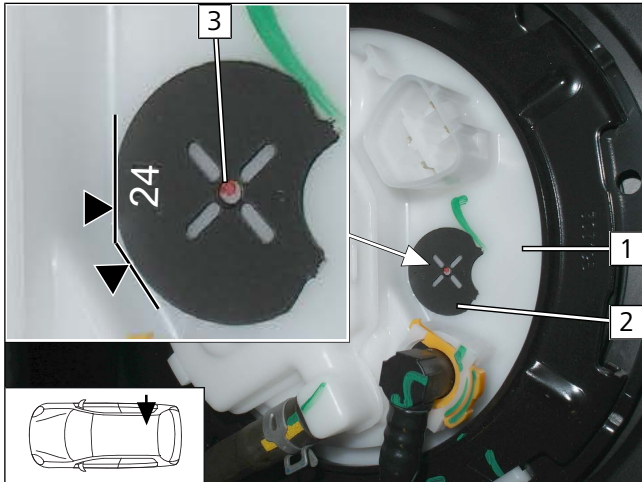


Fig. 41



Observe the installation instructions of the tank extracting device.

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

Work step F3

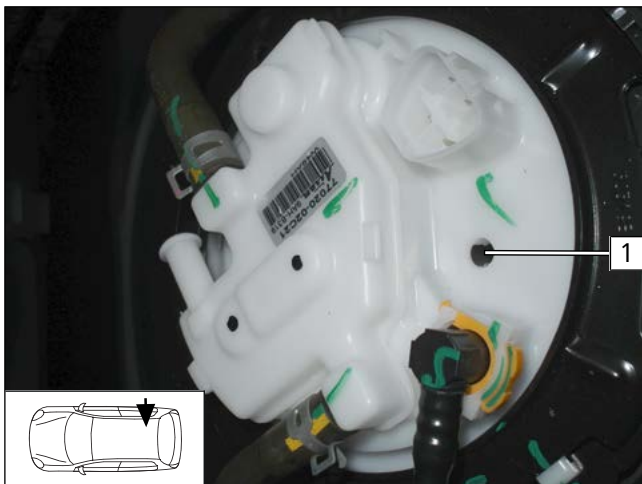


Fig. 42



DANGER

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

- 1 Hole made with provided drill

Work steps F4, F5

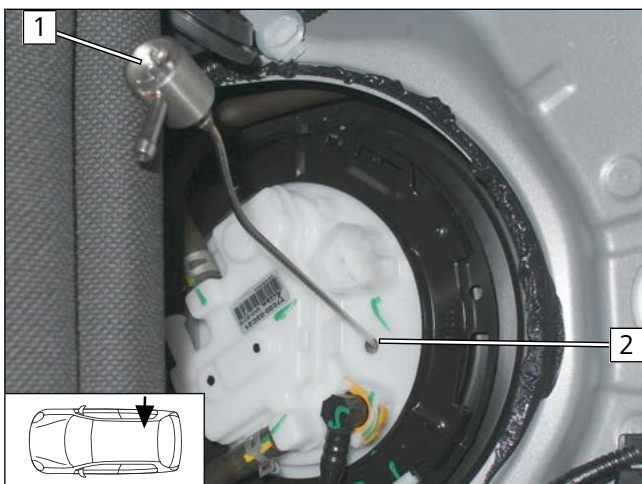


Fig. 43

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

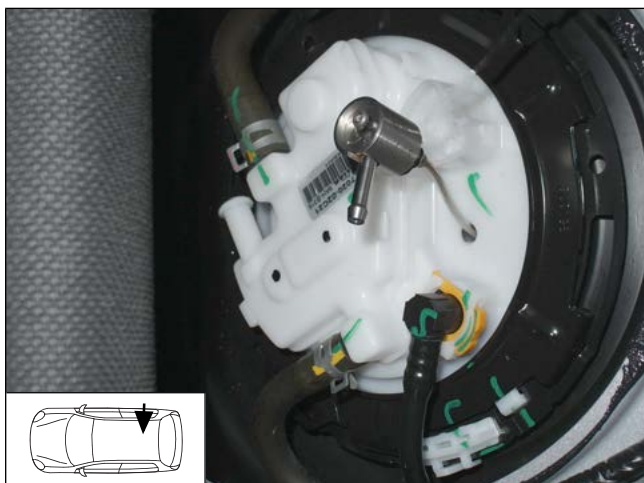


Fig. 44

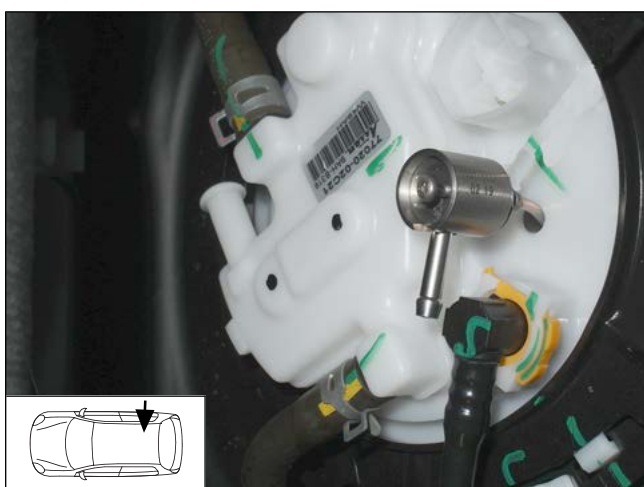


Fig. 45

Work steps F5.3, F5.4

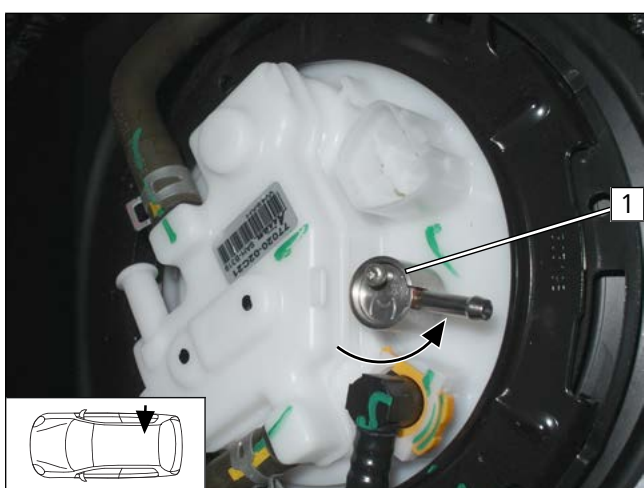
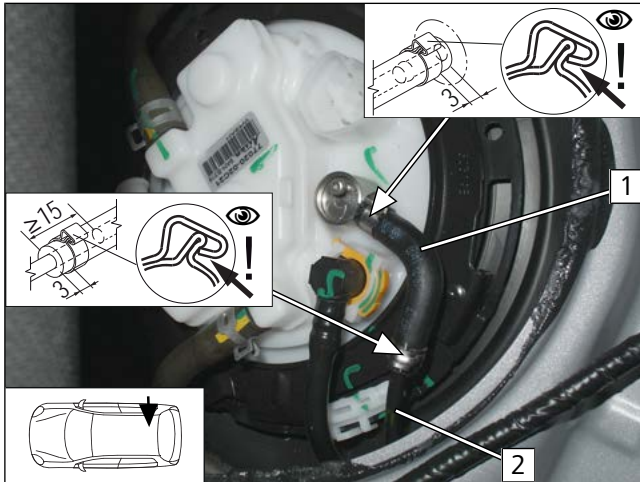


Fig. 46

► Align FuelFix **1** as shown.



Work step F6



- 1 90° moulded hose; Ø10 clamp [2x]
- 2 Fuel line

Fig. 47

Work step F7

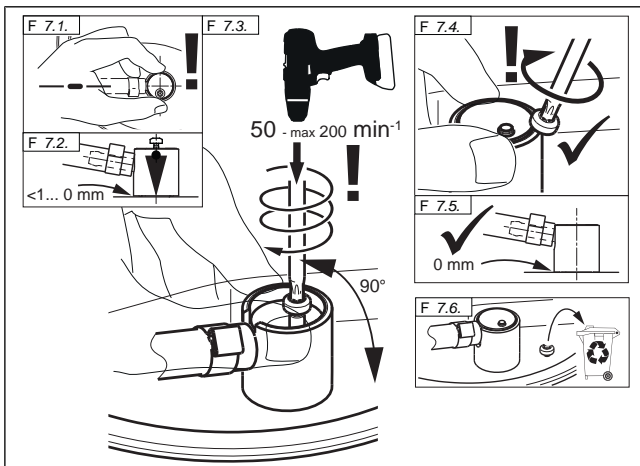


Fig. 48

Work step F8

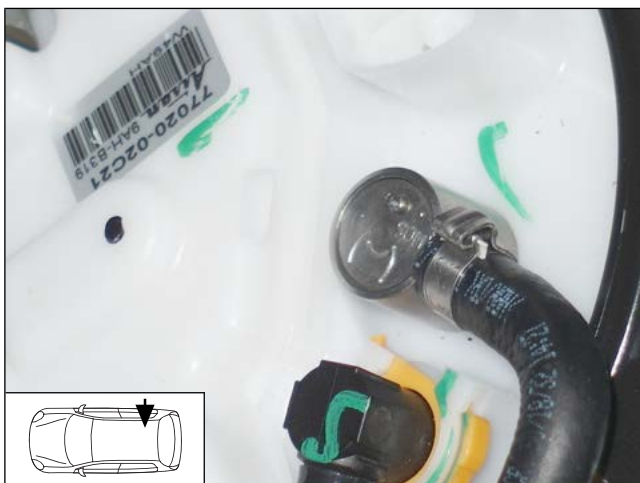



Fig. 49

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



Securing fuel line

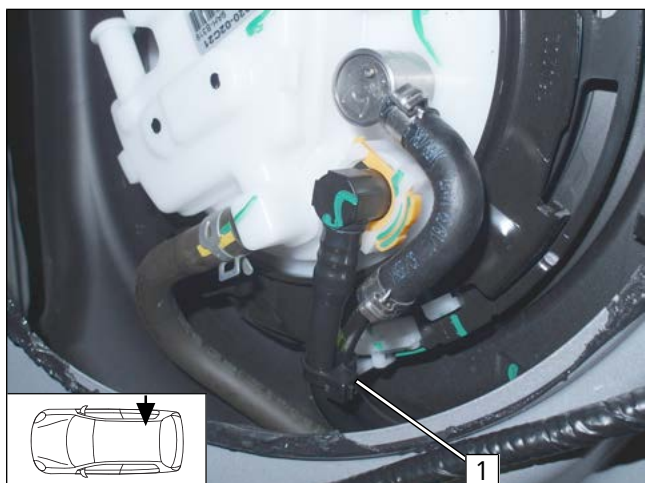


Fig. 50

► Secure fuel line **1** using a cable tie for tension relief.

9.3 Fuel pump connection

Connecting fuel line of FuelFix

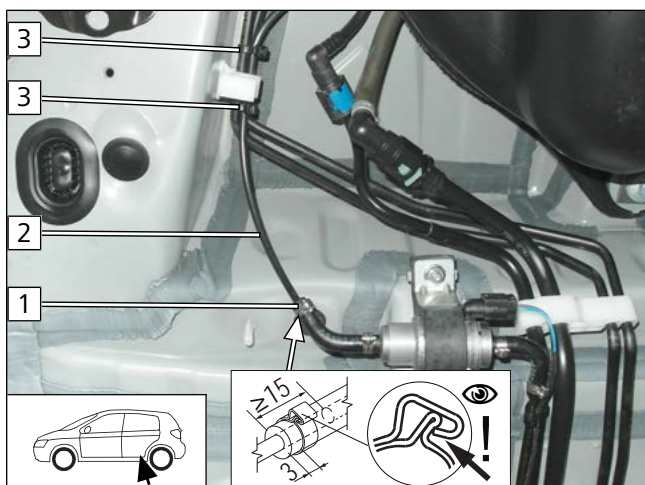


Fig. 51

- 1** Ø10 clamp
- 2** Fuel line of FuelFix
- 3** Cable tie on original vehicle lines



10 Coolant

10.1 Hose routing diagram

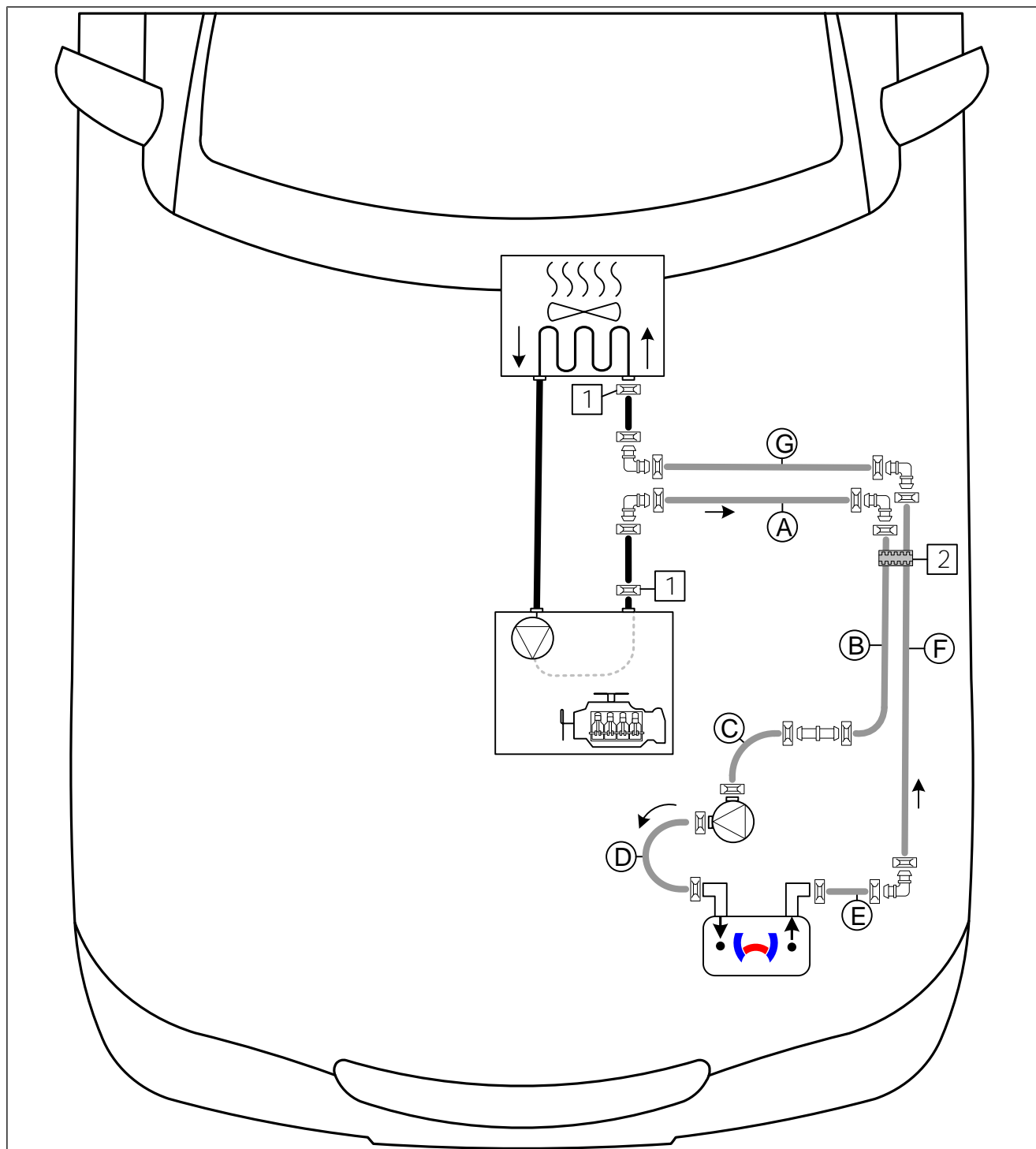




Fig. 52

All spring clips without a specific designation  = Ø25

All connecting pipes  = Ø18x18 or  = Ø18x18/90°

1 Original vehicle spring clip

2 Black (sw) rubber isolator



10.2 Coolant circuit preparation

Preparing perforated bracket

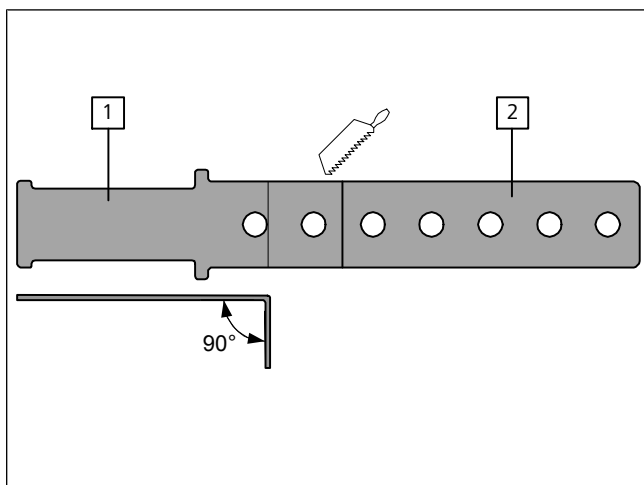


Fig. 53

- 1 Perforated bracket 1 for fastening the coolant pump
- 2 Perforated bracket 2 for fastening the coolant hoses

Premounting coolant pump

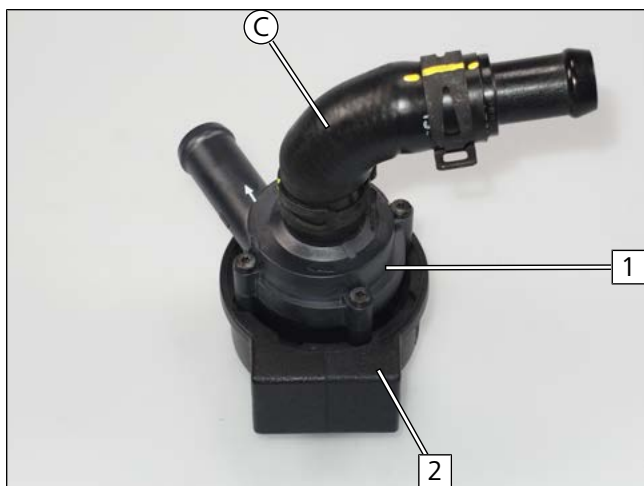


Fig. 54

- 1 Coolant pump
- 2 Coolant pump mount

Mounting perforated bracket 1

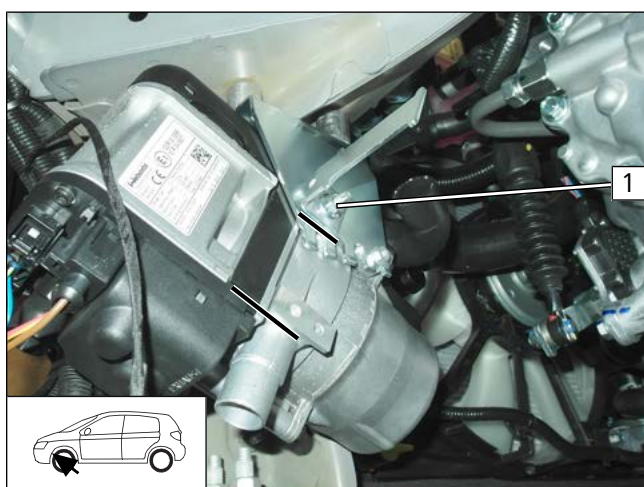


Fig. 55

- Align perforated bracket 1 parallel to heater as shown.
- 1 Stud bolt, perforated bracket 1, flanged nut



Mounting coolant pump, connecting hose **D**

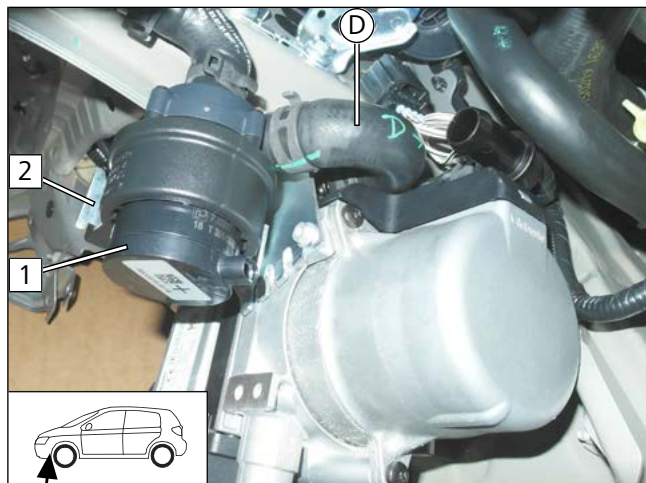


Fig. 56

► Position premounted coolant pump **1** onto perforated bracket **2**, connect hose **D**.

Mounting connector

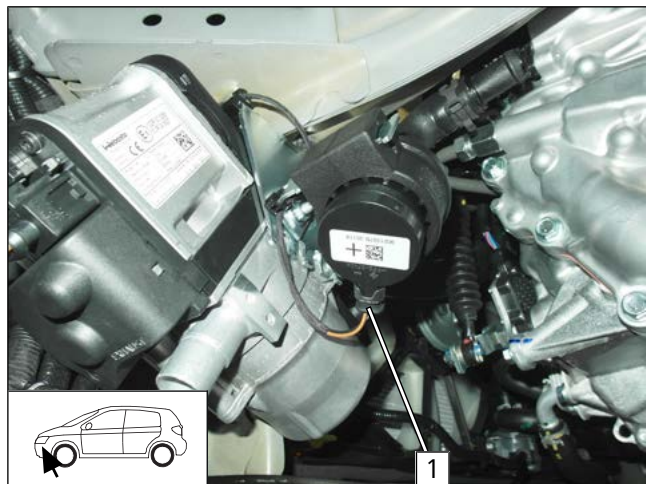


Fig. 57

1 Coolant pump wiring harness connector

Drilling hole

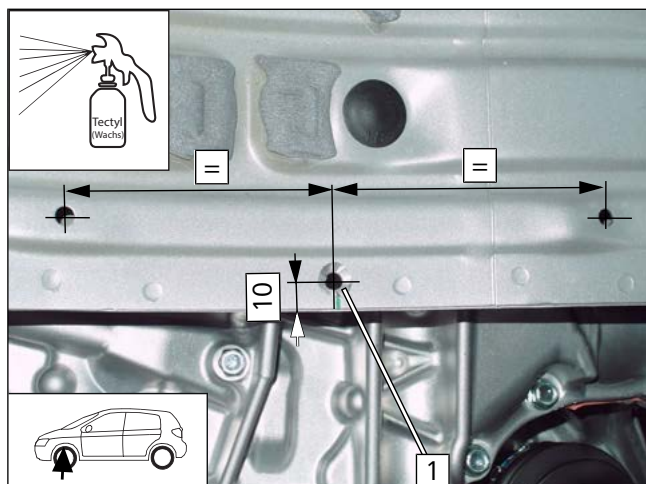


Fig. 58

1 Ø7 hole, countersunk hole for M6x25 counter-sunk head screw



10.3 Coolant circuit installation

Removing engine outlet / heat exchanger inlet hose



Fig. 59

- 1 Engine outlet / heat exchanger inlet hose

Preparing hose

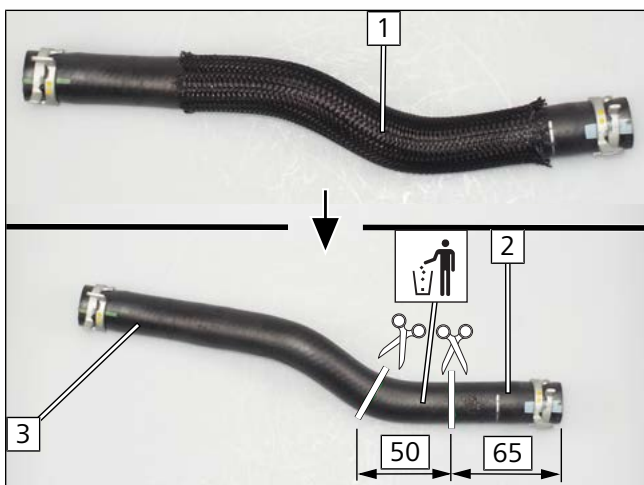


Fig. 60

- 1 Remove and discard braided protection
- 2 Heat exchanger inlet hose section, original vehicle spring clip will be reused
- 3 Engine outlet hose section, original vehicle spring clip will be reused



Fig. 61

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



Preparing hoses **A** and **G**



Fig. 62

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

Preparing hoses **B** and **F**

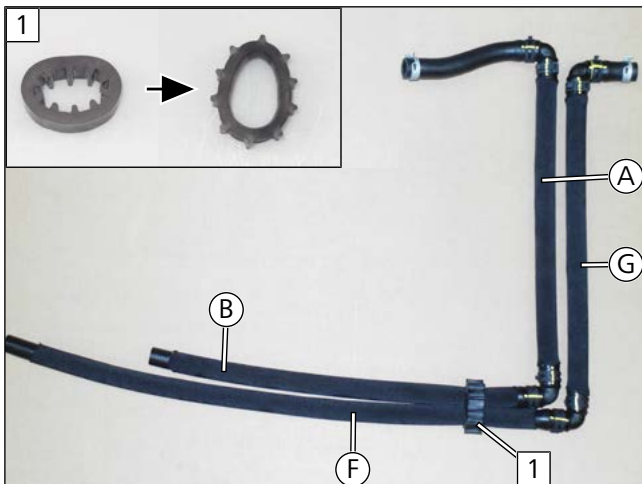


Fig. 63

- 1** Black (sw) rubber isolator, turned

Connecting hose group

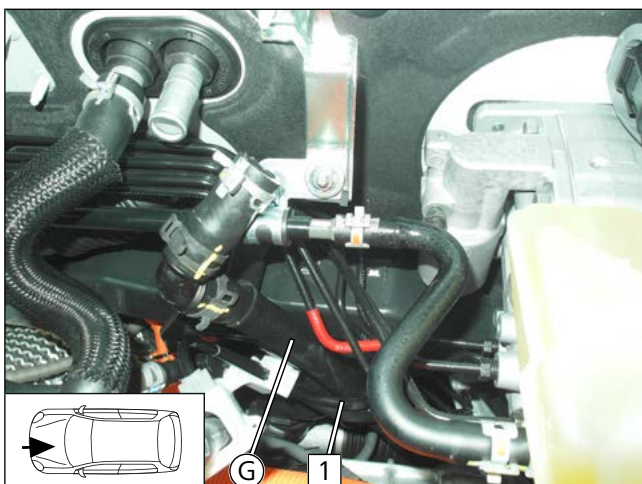


Fig. 64

- ▶ Route hose **G** behind original vehicle fuel lines **1**.

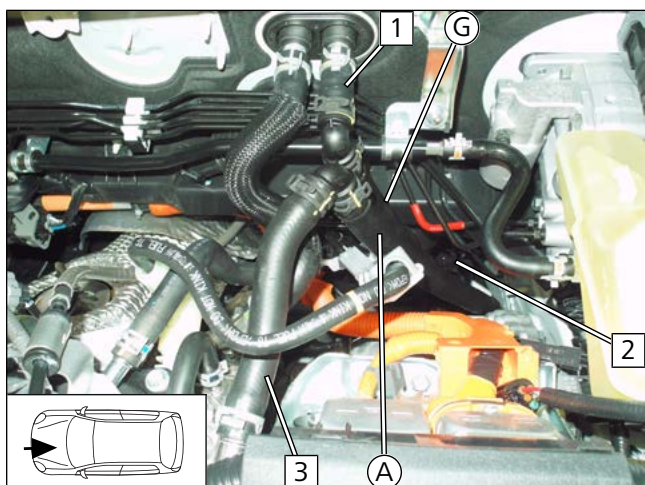


Fig. 65

- ▶ Connect heat exchanger inlet hose section **1**.
- ▶ Route hose **A** in front of original vehicle fuel lines **2**, connect engine outlet hose section **3**.

Connecting hose **B** to hose **C**

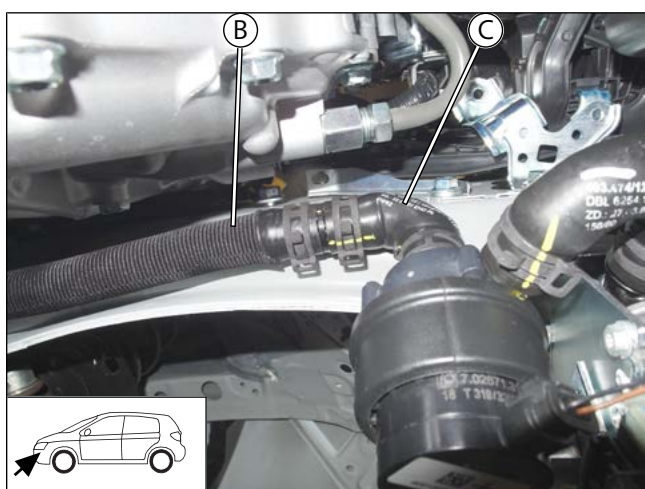


Fig. 66

Connecting hose **F** to hose **E**

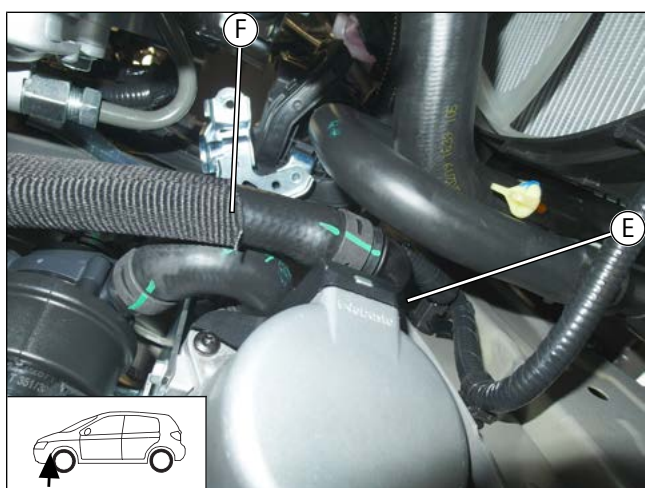


Fig. 67



Mounting perforated bracket 2, fastening hoses **B** and **F**

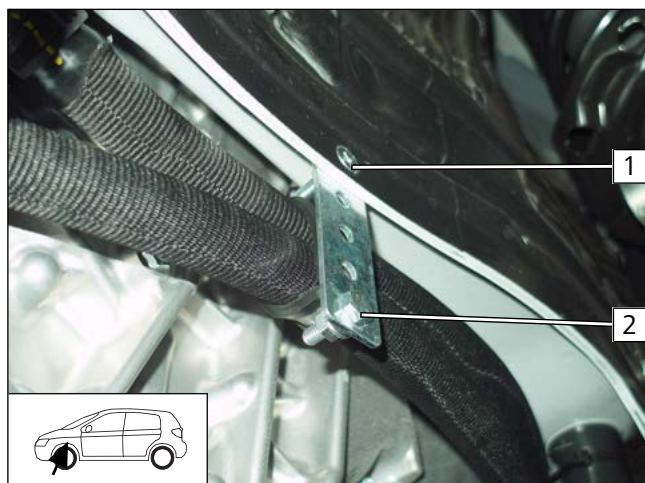


Fig. 68

- 1 M6x25 countersunk head screw, hole, perforated bracket 2, flanged nut
- 2 M6x20 bolt, Ø38 rubber-coated p-clamp, flanged nut

Fastening rubber isolator, checking distance

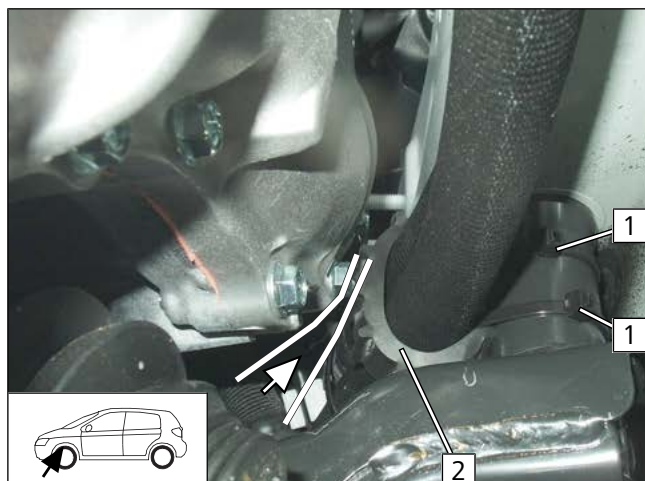


Fig. 69



Danger of damage to components

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

- 1 Cable tie through rubber isolator 2

Fastening hoses

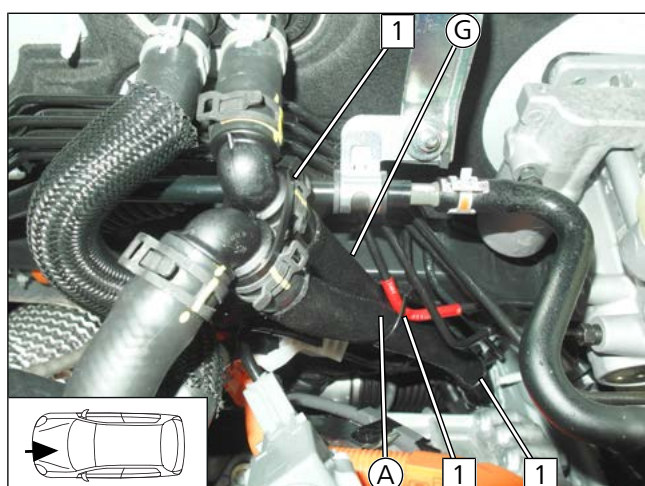


Fig. 70



Danger of damage to components

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

- 1 Cable tie

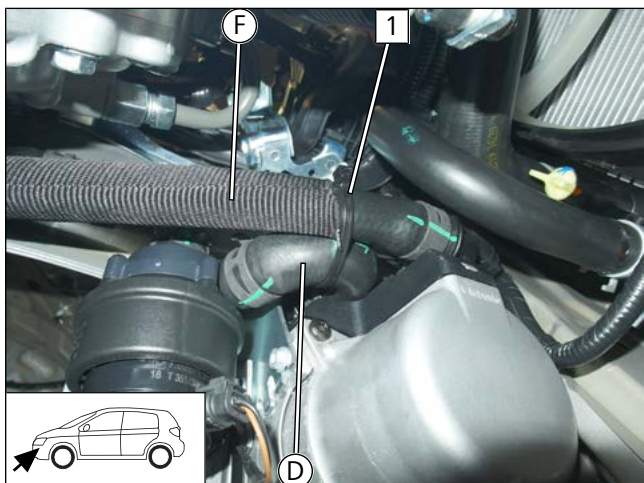


Fig. 71

1 Cable tie

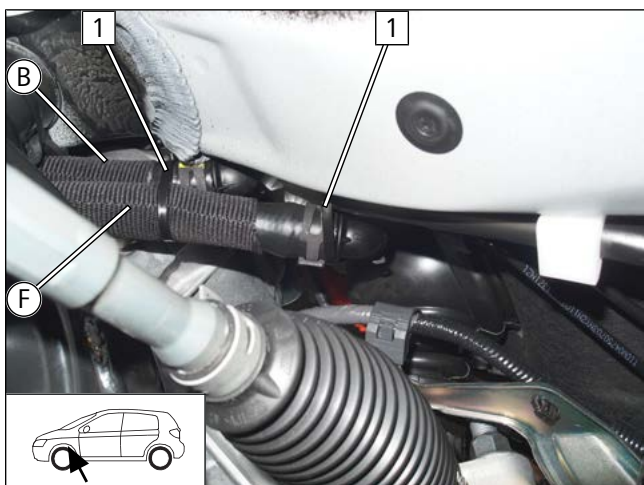


Fig. 72

1 Cable tie



11 Combustion air

Mounting angle bracket

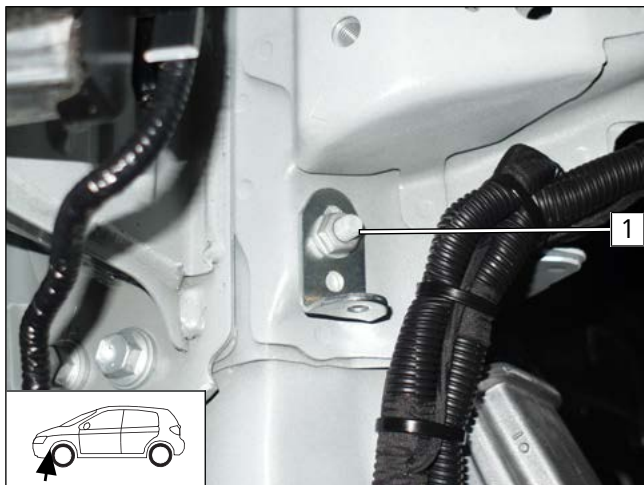


Fig. 73

► Push angle bracket as far as possible upwards in oblong hole, then mount.

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

Shortening and bending perforated bracket

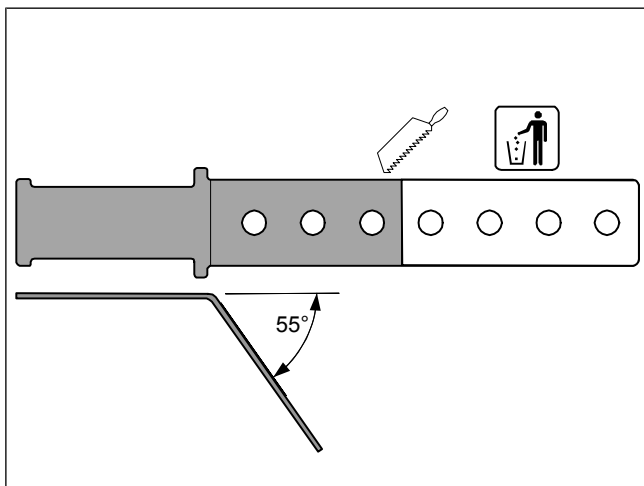


Fig. 74

Premounting combustion air intake silencer

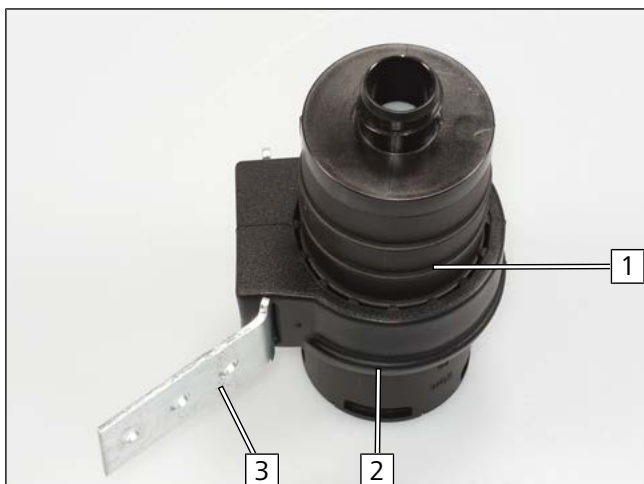


Fig. 75

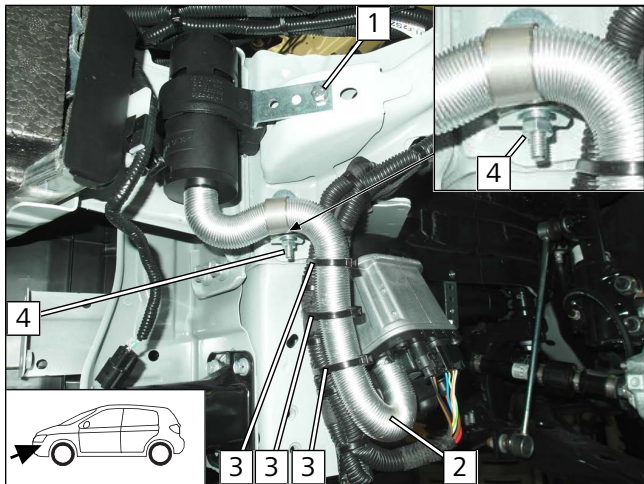


Observe the installation instructions of the combustion air intake silencer.

- 1 Combustion air intake silencer
- 2 Combustion air intake silencer mount
- 3 Perforated bracket



Mounting and fastening combustion air intake pipe



- 1** M6x20 bolt, spring lock washer, perforated bracket, original vehicle threaded hole
- 2** Combustion air intake line
- 3** Cable tie around combustion air intake pipe and wiring harness
- 4** M6x20 bolt, 25mm dia. pipe clamp, angle bracket, flanged nut

Fig. 76



12 Exhaust

12.1 Mounting exhaust pipe

Bending perforated bracket

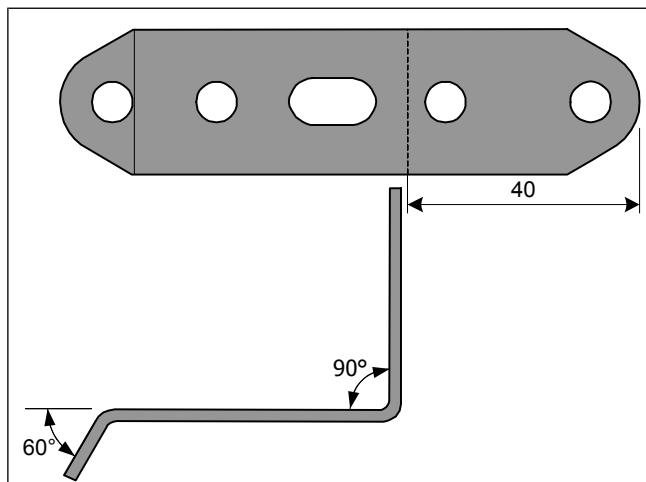
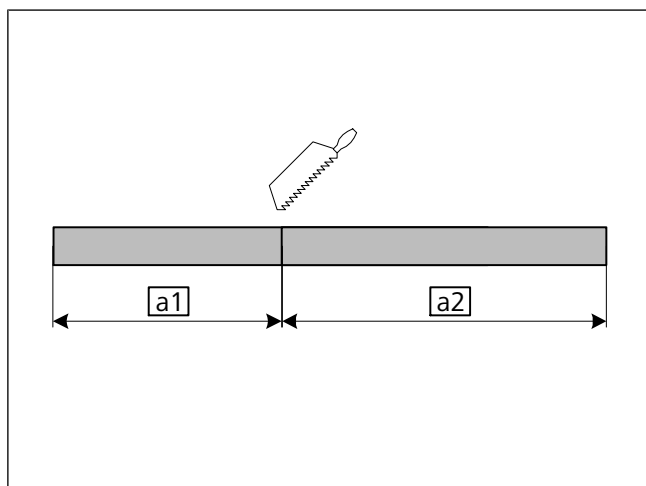


Fig. 77

Cutting exhaust pipe to length

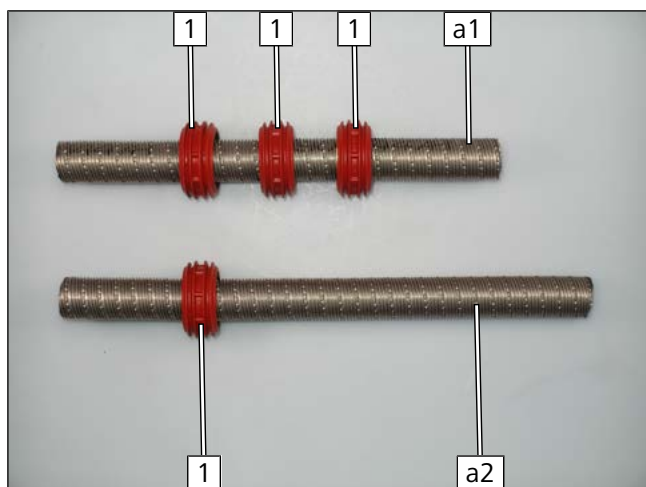


a1 270

a2 330

Fig. 78

Premounting spacer bracket



1 Spacer bracket

Fig. 79



Premounting exhaust silencer



Fig. 80

- 1 M6x16 bolt, spring lockwasher, perforated bracket, exhaust silencer

Mounting exhaust silencer

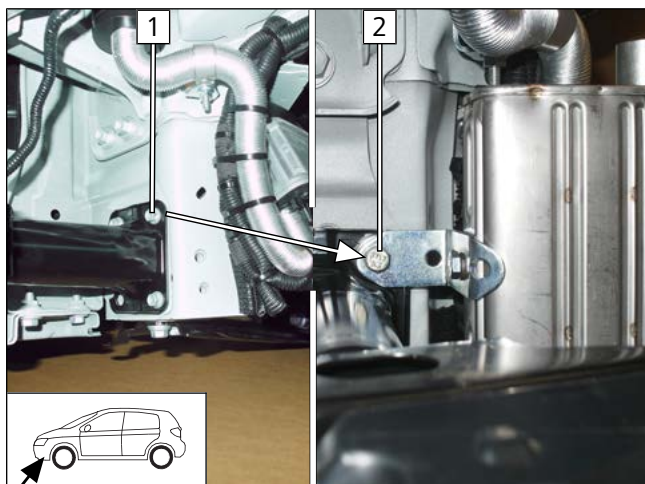


Fig. 81

- 1 Remove and discard original vehicle bolt
- 2 M6x30 bolt, spring lock washer, perforated bracket, spacer (5), original vehicle threaded hole

Mounting exhaust pipe **a1**

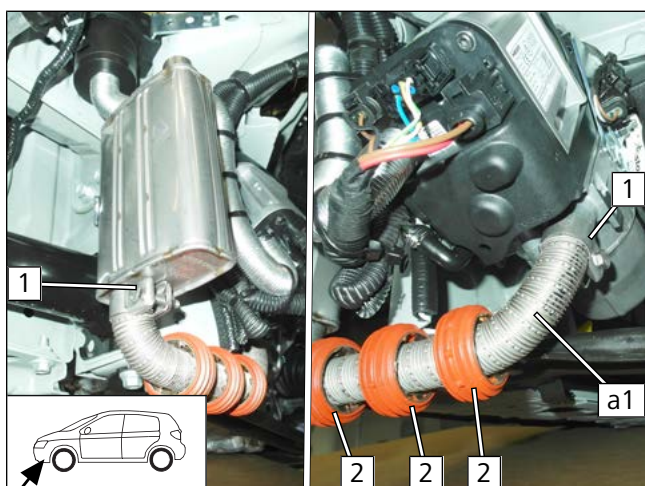


Fig. 82

- 1 Hose clamp
- 2 Spacer bracket, position as shown



Mounting exhaust pipe **a2**

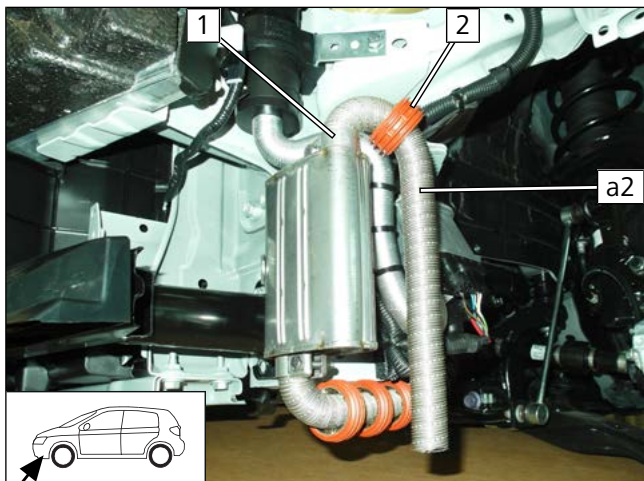


Fig. 83

- 1 Hose clamp
- 2 Spacer bracket, position as shown

12.2 Mounting exhaust end fastener

View of wheel-well inner panel version 1

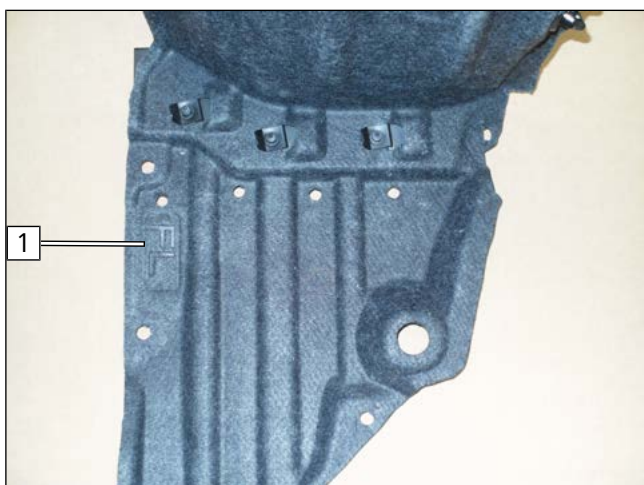


Fig. 84

- 1 Fibre composite wheel-well inner panel

View of wheel-well inner panel version 2

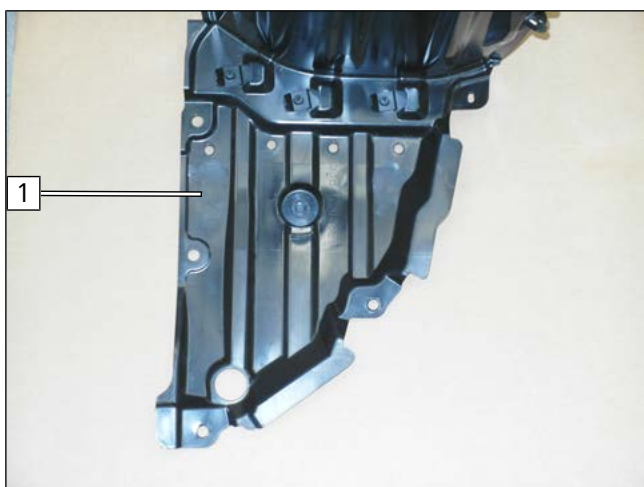


Fig. 85

- 1 Plastic wheel-well inner panel



12.2.1 Version 1

Work step E1

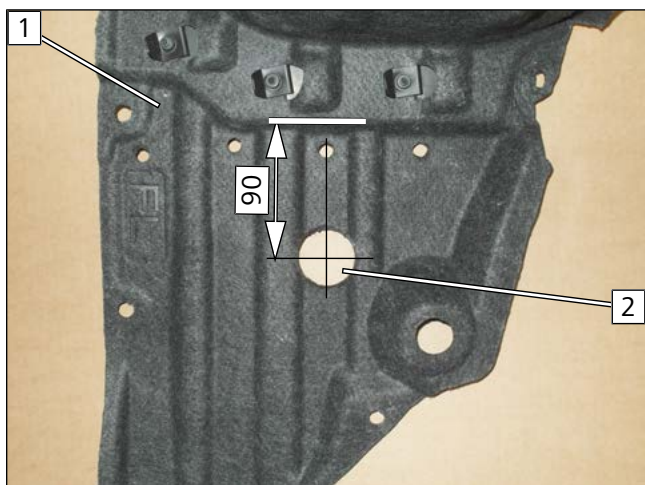


Fig. 86



Observe the EFIX installation instructions.

- 1 Wheel-well inner panel
- 2 Hole

Work steps E3-E4



Fig. 87

- 1 Copy hole pattern
- 2 EFIX
- 3 Hole

Work step E5



Fig. 88

- 1 5x13 self-tapping screw, large diameter washer (5), wheel-well inner panel, EFIX



Work steps E6-E8

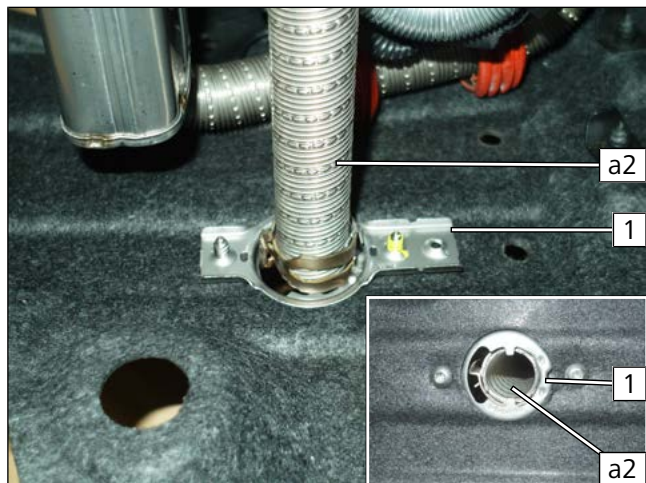


Fig. 89

1 EFIX

12.2.2 Version 2

Work step E1

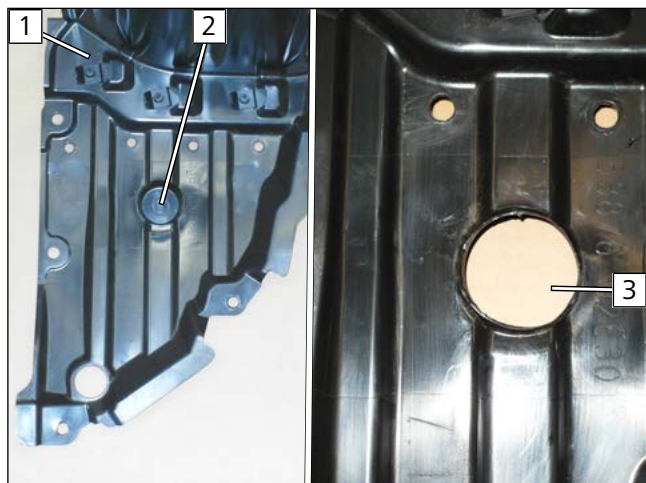


Fig. 90



Observe the EFIX installation instructions.

► At pos **2**, drill hole **3**.

1 Wheel-well inner panel

Work steps E3-E4

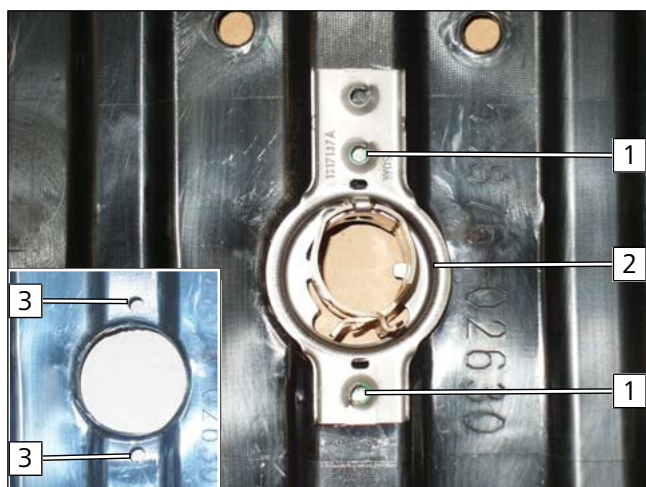


Fig. 91

1 Copy hole pattern

2 EFIX

3 Hole



Work step E5



Fig. 92

- 1 5x13 self-tapping screw, wheel-well inner panel, EFIX

Work steps E6-E8

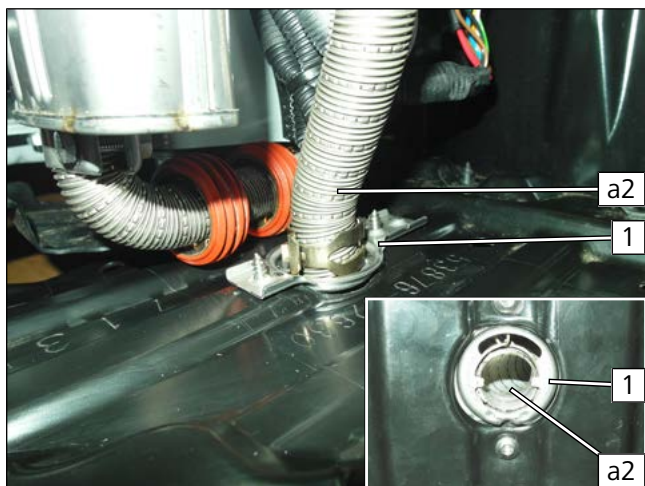


Fig. 93

- 1 EFIX



13 Final work in engine compartment

Adapting transmission trim

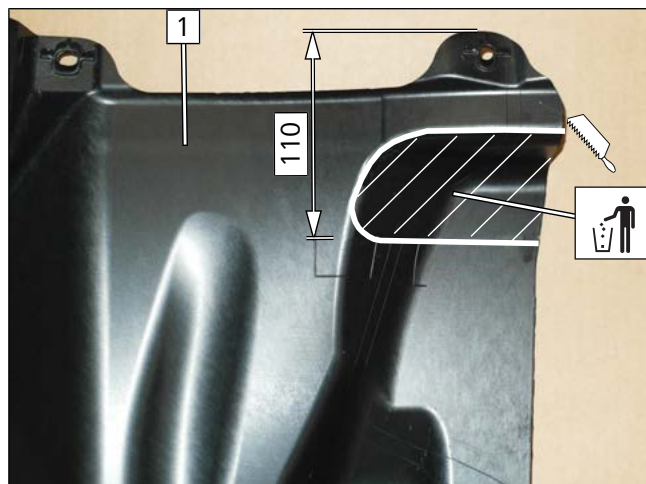


Fig. 94

► Adapt transmission trim **1** as shown.

Fitting edge protection

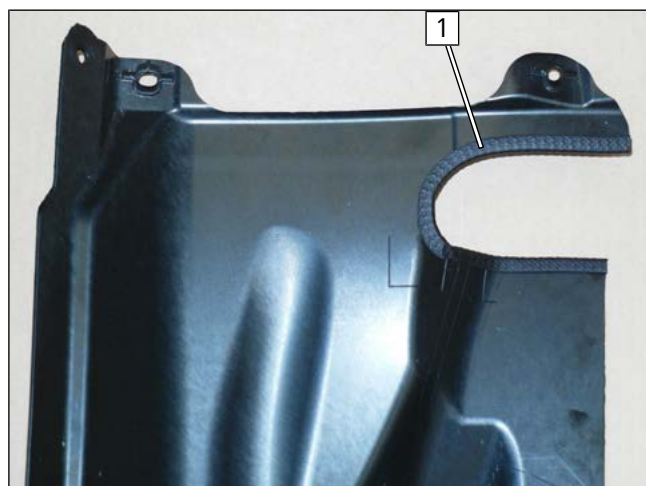


Fig. 95

1 Install edge protection (300) and cut to length

Mounting transmission trim

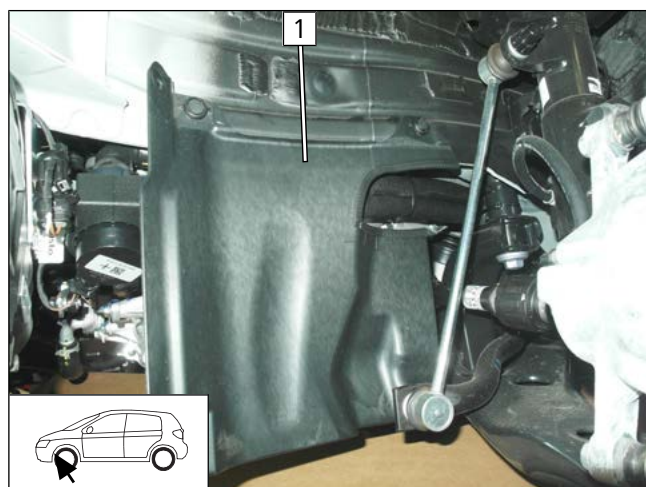


Fig. 96

1 Transmission trim



Checking distance

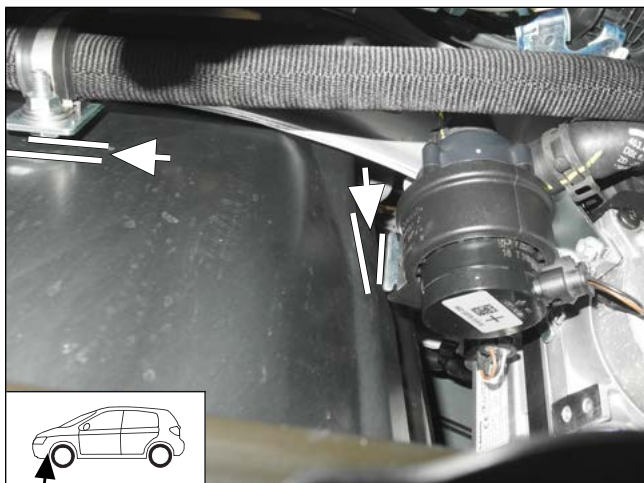


Fig. 97



Danger of damage to components

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



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 Toyota/Lexus with AC and AAC



15 Electrical system of control elements

15.1 MCC option

Mounting MCC

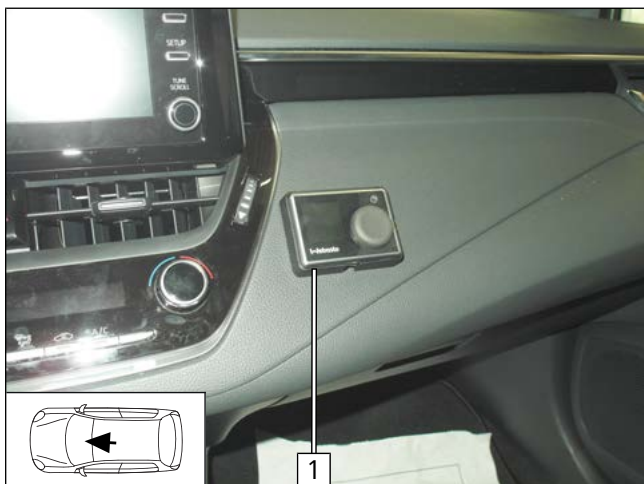


Fig. 98



Observe the MultiControl CAR installation documentation.

- 1 MCC installation frame

15.2 Remote option (Telestart)

Preparing bracket

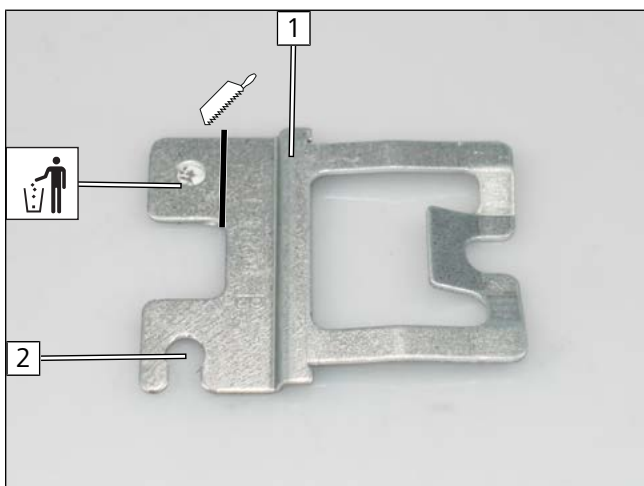


Fig. 99

- 1 Telestart bracket
- 2 Drill out hole to $\varnothing 7$

Mounting receiver

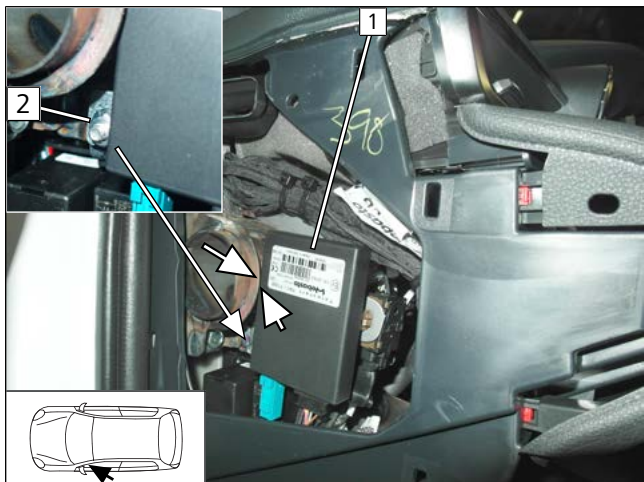


Fig. 100



Observe the Telestart installation documentation.

- 1 Receiver
- 2 Available stud bolt from relay and fuse holder, Telestart bracket, flanged nut



Mounting aerial

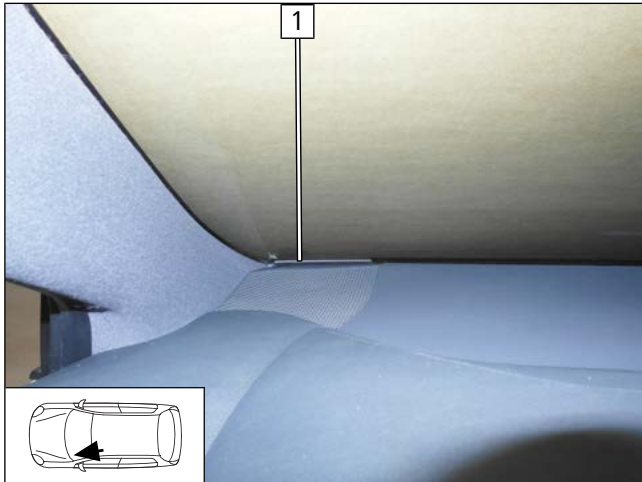


Fig. 101

1 Aerial

Mounting temperature sensor, only in case of T100 HTM



Fig. 102

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

15.3 ThermoCall option

Mounting receiver

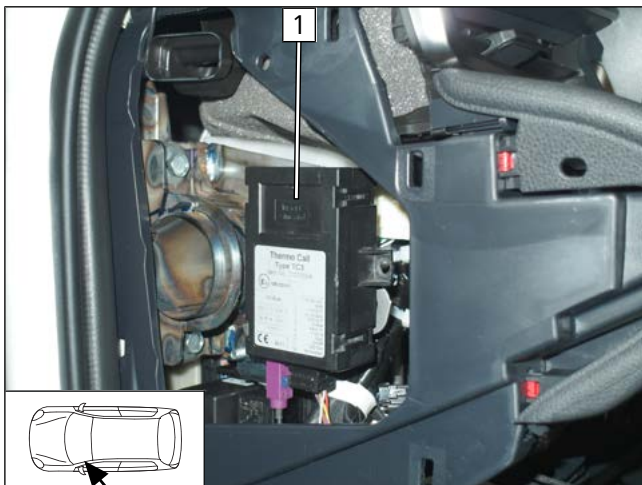


Fig. 103

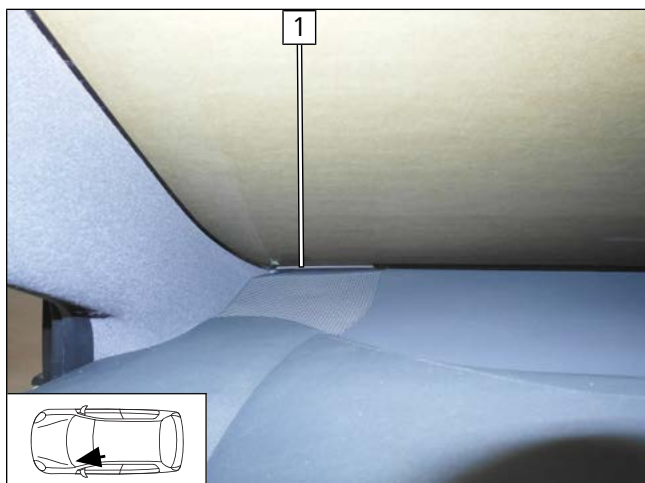


Observe the ThermoCall installation documentation.

► Fasten receiver 1 using double-sided adhesive tape.



Mounting aerial (optional)



1 Aerial

Fig. 104



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)



Activation of the hybrid system as per the manufacturer's instructions

Reactivate the hybrid system before connecting the 12V vehicle battery:

1. Activate the hybrid system
2. Connect the battery (12V)



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

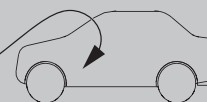
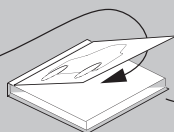
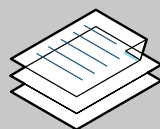
▶ Affix 'Switch off parking heater before refueling' caution label in area of filler neck



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.

Ident No. 1327526A_EN • 01/20 • Errors and omissions excepted • © Webasto Thermo & Comfort SE • 2020

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany

Company address:
Friedrichshafener Str. 9
82205 Gilching
Germany

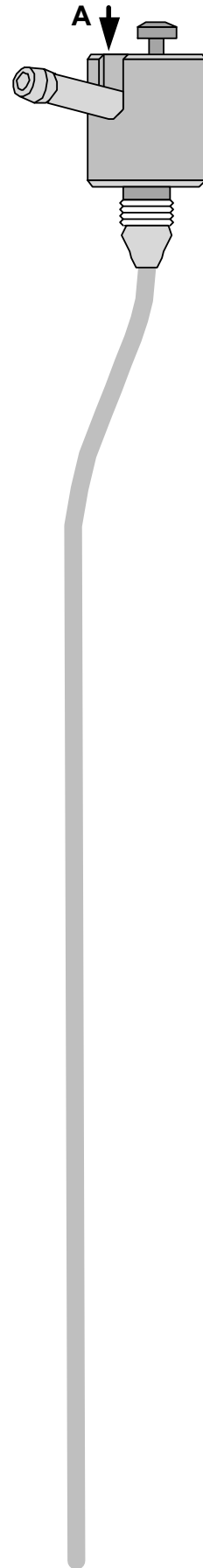
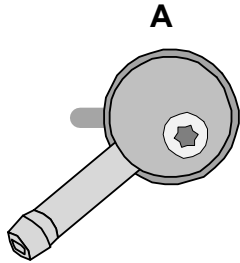
Technical Extranet: <https://dealers.webasto.com>



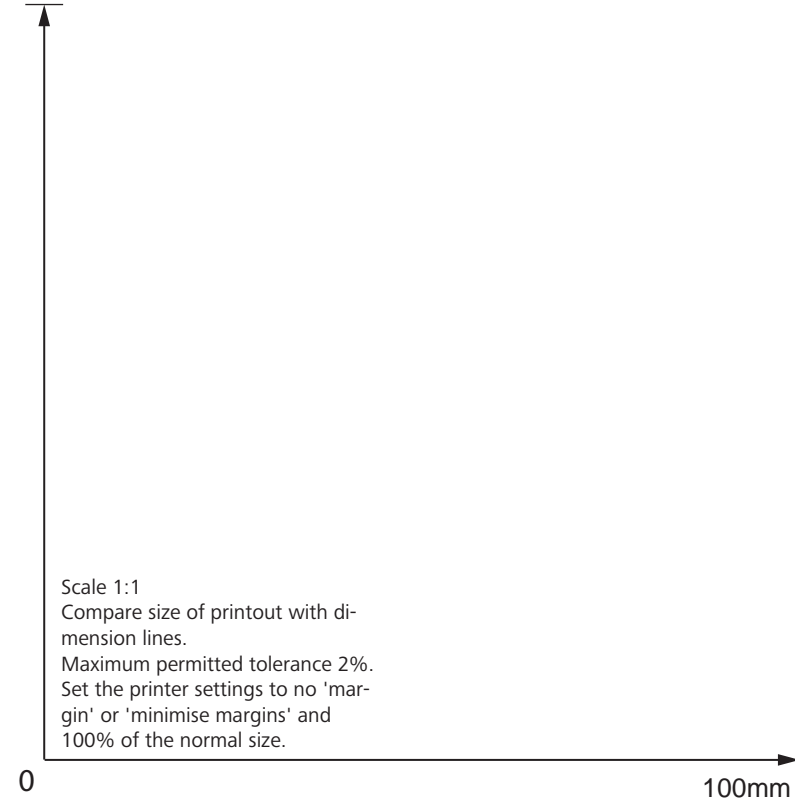
WWW.WEBASTO.COM



17 FuelFix template



100mm



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

