

K Installation documentation

for water heater Thermo Top Evo

'Inline' coolant circuit with engine preheating

Toyota Camry / Lexus ES300h

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE
Toyota	Camry	XV7 (EU,M)	2019	e6* 2007/46* 0322*...

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm ³]	Engine code
2.5P Hybrid	Petrol	EURO6; WLTP; DG...	E-CVT	131	2487	A25A

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE
Lexus	ES300h	XZ1L (EU,M)	2019	e6* 2007/46* 0250*...

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm ³]	Engine code
2.5P Hybrid	Petrol	EURO6;WLTP;DG...	E-CVT	131	2487	A25A

Validity	Equipment variants	Model	
		Toyota Camry	Lexus ES300h
Verified equipment variants	2 zone automatic air-conditioning	X	---
	3 zone automatic air-conditioning	---	X
	LED main headlights	X	---
	LED daytime running lights	X	X
	LED front fog lights	X	X
	Start button with keycard	X	X
	Passenger compartment monitoring	---	X
	Alarm system	---	X
	Matrix LED main headlights	---	X
Headlight washer system	X	X	

Total installation time	Note
10 hours	

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1 List of abbreviations

AAC	Automatic air-conditioning
DP	Fuel pump
E-CVT	Electronically-controlled continuously variable automatic transmission
EFIX	Exhaust end fastener
Fig.	Figure
HG	Heater
OE	Original equipment
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump
Veh.	Vehicle

2 Installation notes

2.1 Information on Validity

This installation documentation applies to vehicles listed on page 1, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation. Vehicle and engine types, equipment variants and other specifications not listed in this installation documentation have not been tested. However, installation according to this installation documentation may be possible.

2.2 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 Camry/Lexus ES 300h petrol 2019	1327552A
Additional 'Webasto Standard' air-conditioning control kit for Toyota / Lexus AAC	1324414_
OE gasket for tank fitting	77169-47040
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list

2.4 Notes on installation, in coordination with the end customer

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

2.5 Information on Total Installation Time

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

The total installation time may vary for vehicle equipment other than provided.

3 About this document

3.1 Purpose of the document

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

Thermo Top Evo heater

3.2 Warranty and liability

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on electronic components must audibly snap into place during assembly.

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components.

The initial start-up is to be executed with the Webasto Thermo Test Diagnosis.

When installing a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

3.2.1 Statutory regulations governing installation

The Thermo Top Evo heater has been type-tested and approved in accordance with ECE-R 10 (EMC) and ECE-R 122 (heater). The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

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

3.3 Safety

Qualifications of installation personnel

The installation personnel must have the following qualifications:

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

Regulations and legal requirements

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

3.3.1 Safety information on installation

Danger posed by live parts

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

Danger of fire and leaking toxic gases due to improper installation

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

Danger due to sharp edges

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

3.4 Using this document

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

3.4.1 Explanatory Notes on the Document

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

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

3.4.2 Use of symbols



DANGER

Type and source of the risk

Consequences: Failure to follow the instructions can result in death

► Actions to protect yourself against risks.



WARNING

Type and source of the risk

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

► Actions to protect yourself against risks.



CAUTION

Type and source of the risk

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

► Actions to protect yourself against risks.



Type and source of the risk

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

► Actions to protect yourself against risks.



Reference to the vehicle manufacturer's specific documents.



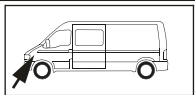
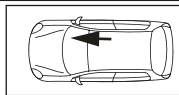
Note on a special technical feature

3.4.3 Work step identification marks

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

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

3.4.4 Orientation aid



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

3.4.5 Use of highlighting

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

4 Technical Information

Dimension specifications

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

Tightening torque specifications

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

Temperature specification for heat shrink plastic tubings

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

Necessary special tools

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

5 Preparations

5.1 Vehicle preparation



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



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"> ▶ Complete air filter box ▶ Water drain chamber cover ▶ Strut brace ▶ Front wheel and wheel-well inner panel on the driver's side ▶ Front engine underride protection ▶ Engine underride protection ▶ Front and back underbody trim on the driver's side ▶ Bumper trim 	
Passenger compartment	<ul style="list-style-type: none"> ▶ Side instrument panel trim on the driver's side ▶ Front door sill trim on the driver's side ▶ Lower A-pillar trim on the driver's side ▶ Lower instrument panel and footwell trim on the driver's side ▶ Accelerator pedal ▶ Top A-pillar trim (in case of Telestare and ThermoCall) ▶ Rear bench seat ▶ Tank fitting service lid 	



DANGER


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



Carry out the following work only during the corresponding installation sequence:

Vehicle body	<ul style="list-style-type: none"> ▶ Fuel tank 	
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5.2 Heater preparation

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

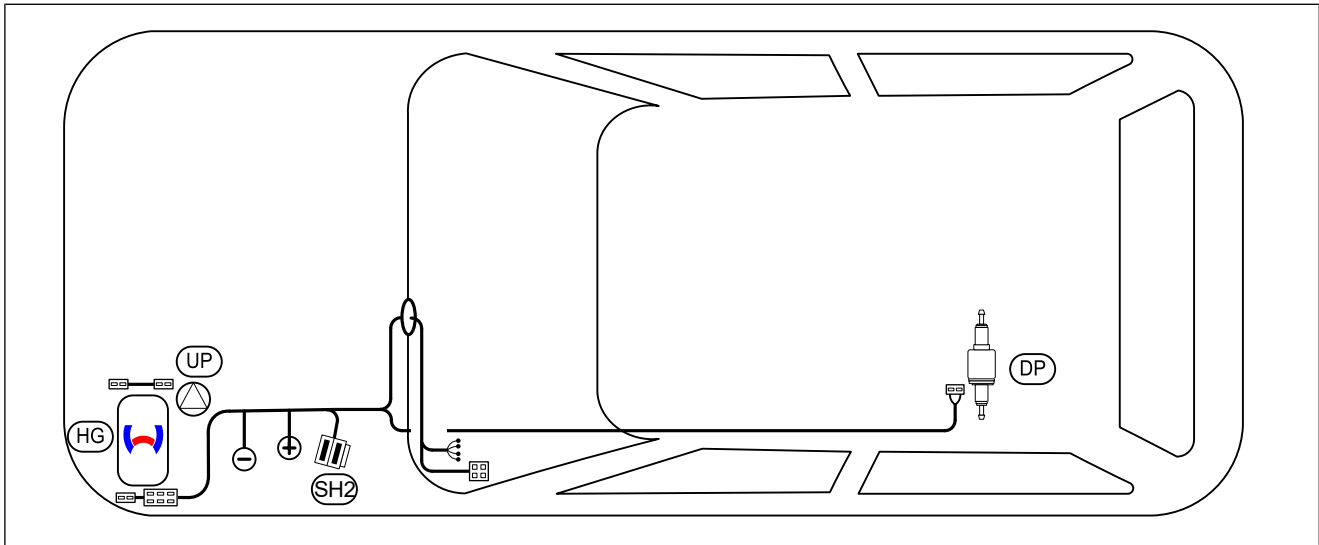
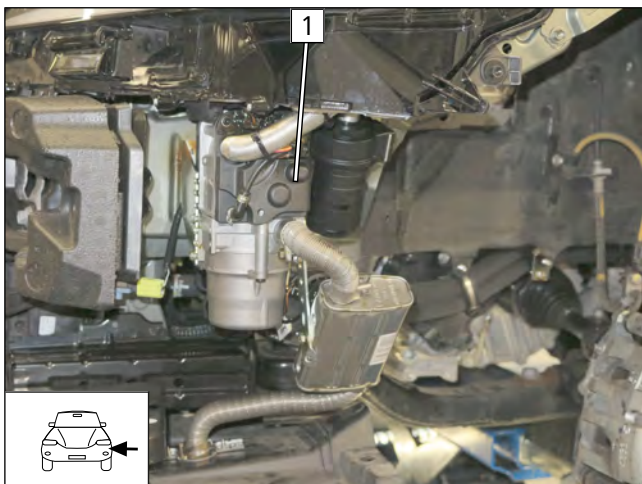


Fig. 1

Legend to installation overview

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

Heater installation location



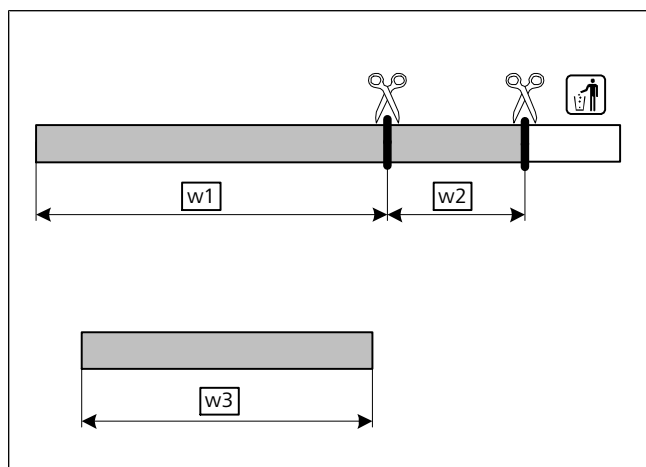
1 Heater

Fig. 2



7 Electrical system of engine compartment

Cutting corrugated tube to length



w1 1230, Ø13 slit corrugated tube

w2 530, Ø13 slit corrugated tube

w3 1130, Ø10 corrugated tube

Fig. 3

Dismantling fuel pump connector X7

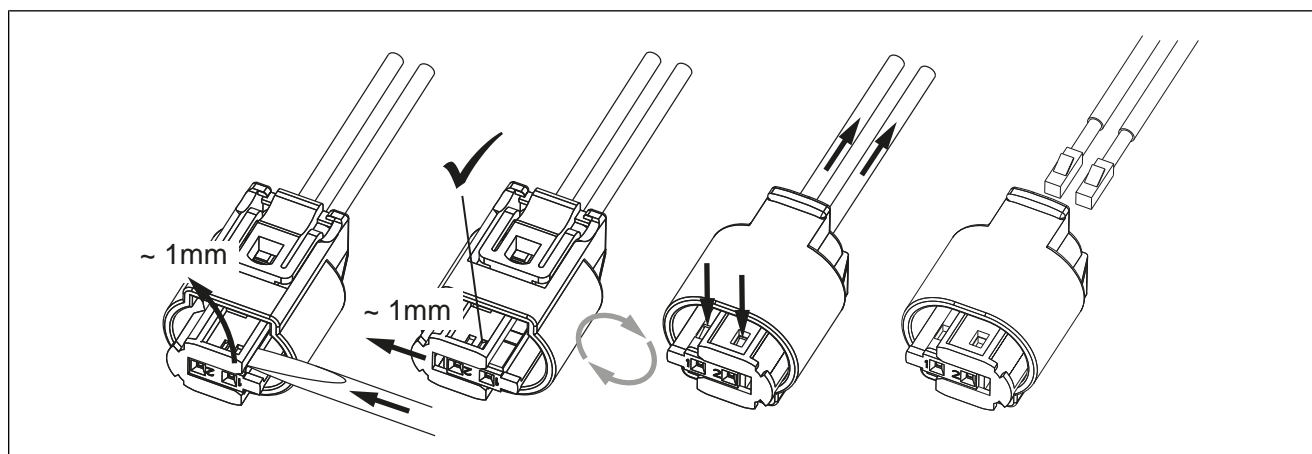


Fig. 4



Preparing wiring harness

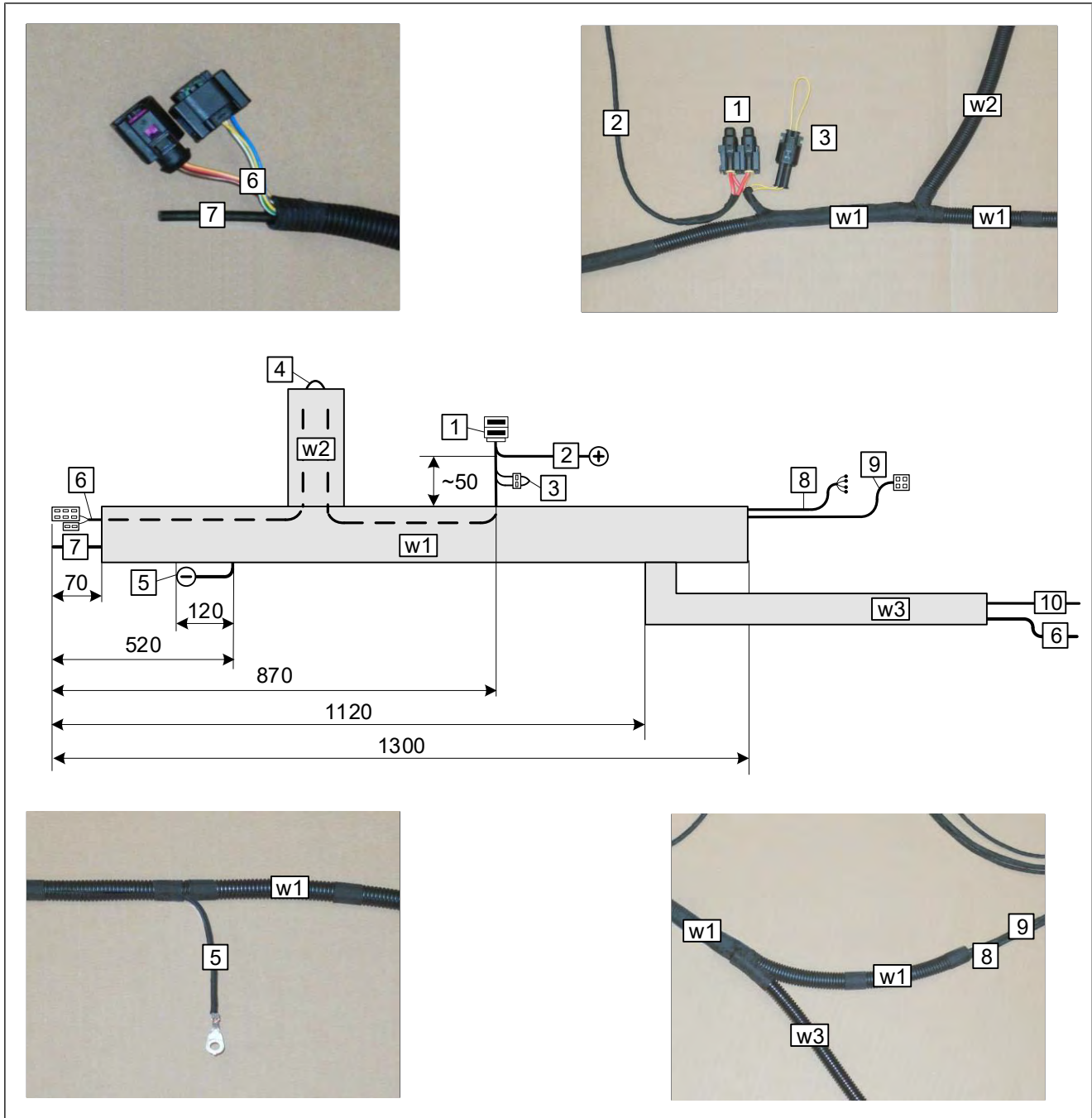


Fig. 5

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

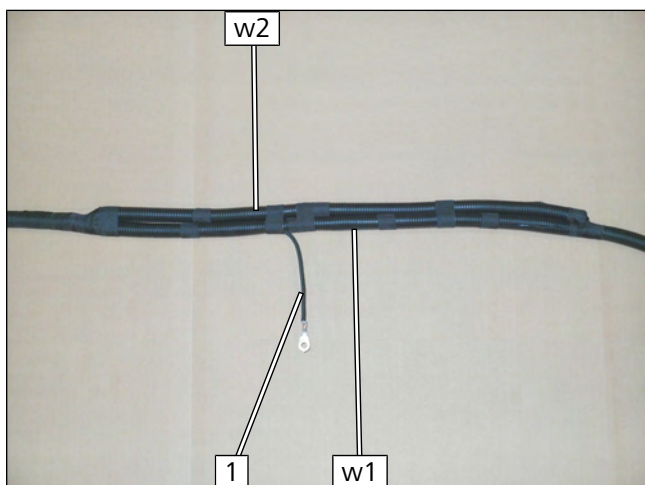


Fig. 6

► Put corrugated tubes **w1** and **w2** on top of each other as shown in Fig. and wrap at regular intervals with insulating tape.

- 1 Earth wire

Premounting retaining plate of SH2

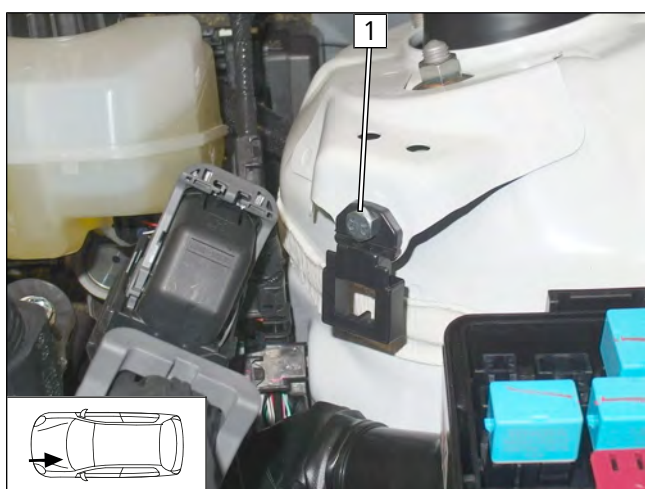


Fig. 7

- 1 M6x20 bolt, retaining plate of SH2, original vehicle thread

Installing SH2

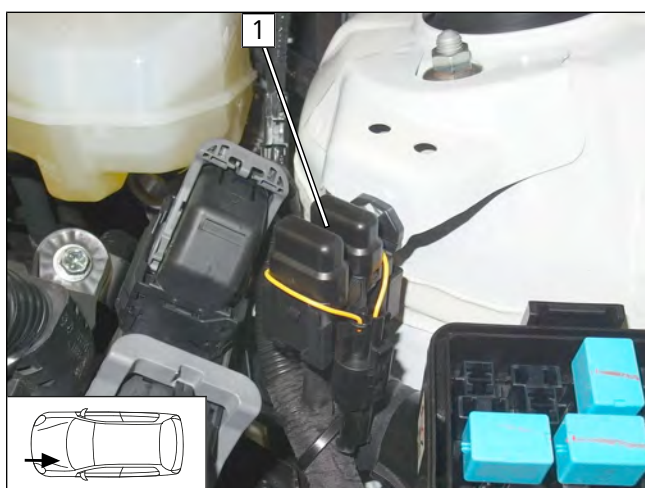


Fig. 8

- 1 SH2 with fuse F1 and F2



Passenger compartment wiring harness pass through

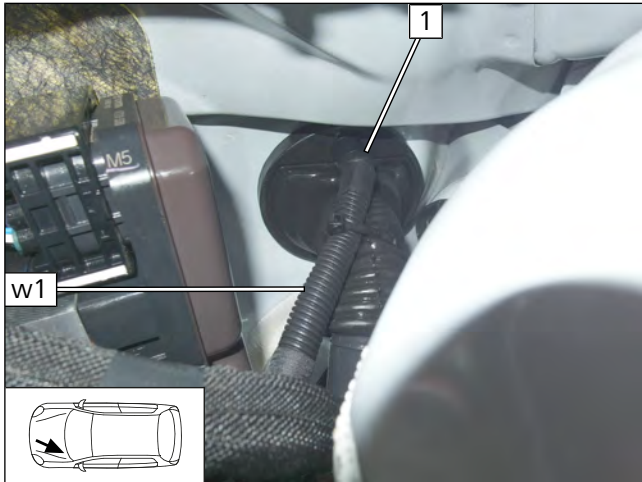


Fig. 9

- 1 Passenger compartment wiring harness pass through

Routing wiring harness

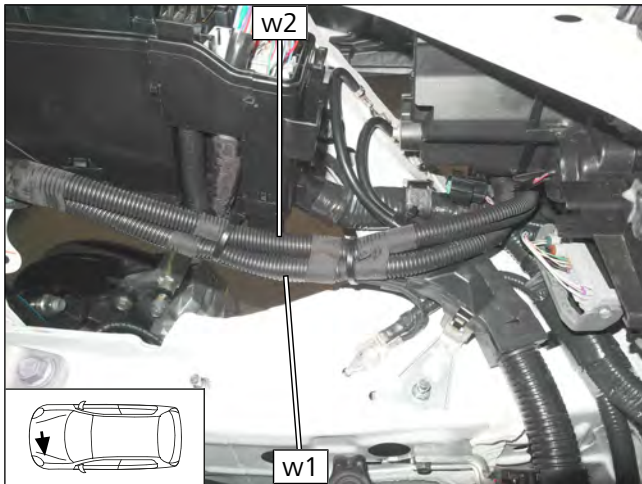


Fig. 10

Connecting earth wire

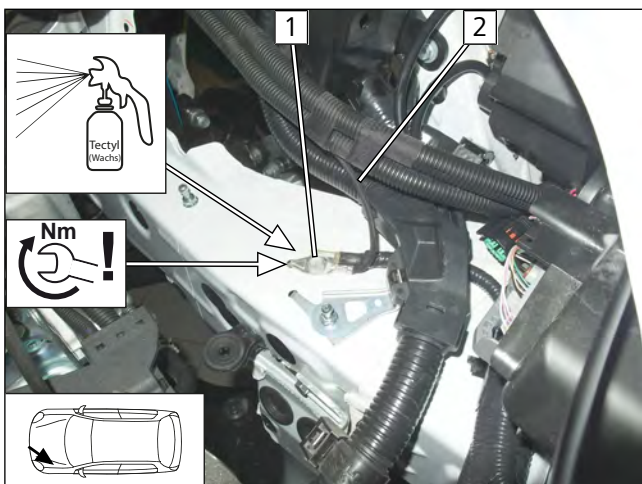


Fig. 11



DANGER

Observe tightening torque



The Fig. shows the installation situation. The battery is connected during the final work phase.

- 1 Earth support point
- 2 Earth wire



Connecting positive wire

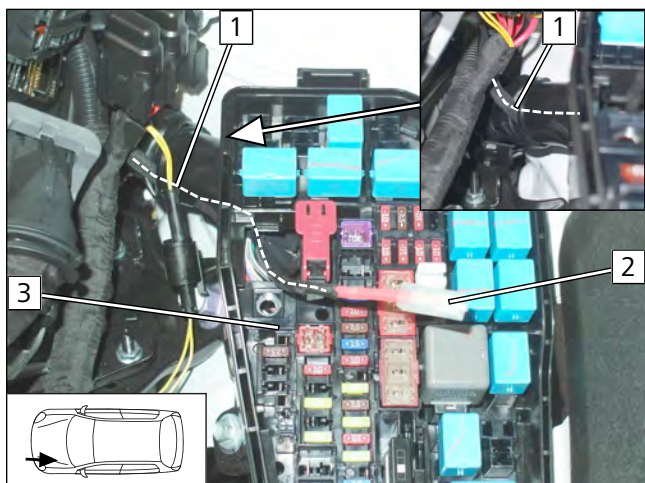


Fig. 12

► Route positive wire **1** into the engine compartment fuse and relay box **3** as shown. Mount female connector and its housing **2**.

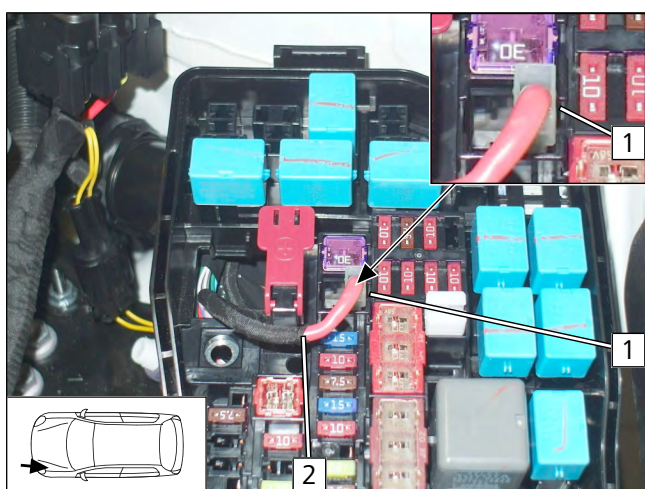


Fig. 13

- 1** Original vehicle positive terminal
- 2** Positive wire



8 Mechanical system

8.1 Preparing installation location

Routing original vehicle wiring harness

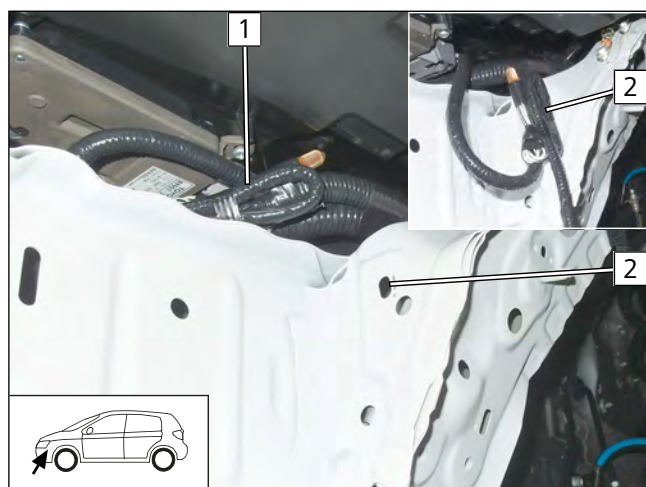


Fig. 14

- ▶ Detach original vehicle wiring harness **1** at position **2**, route as shown and fasten with cable ties to original vehicle lines.

Inserting rivet nut

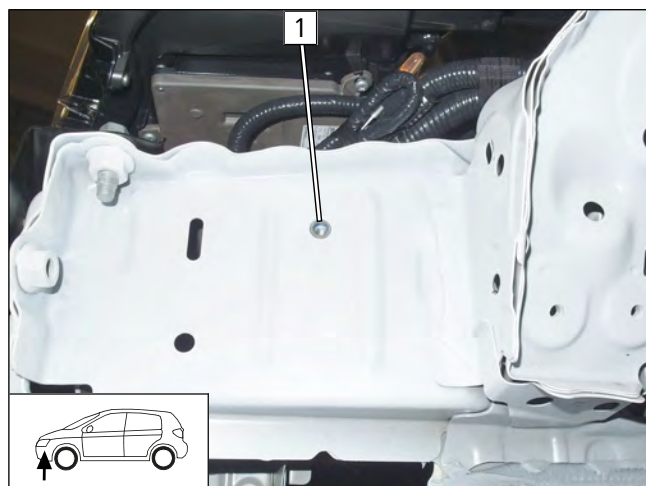


Fig. 15

- 1** Original vehicle hole, rivet nut

Copying hole pattern of bracket

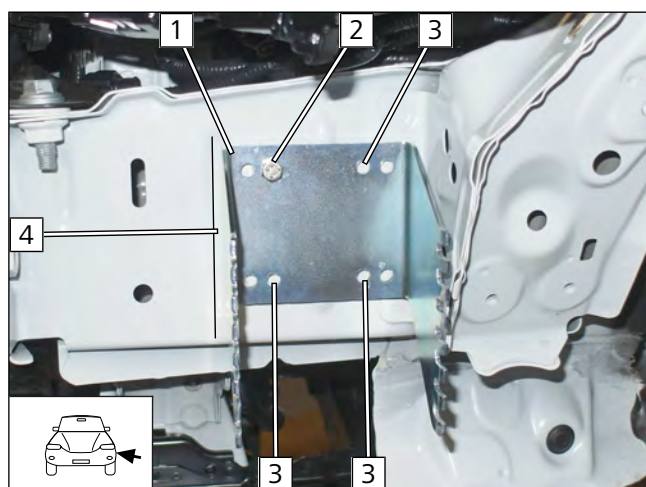


Fig. 16

- ▶ Align bracket **1** parallel with original vehicle bead at position **4**.
- 2** M6x30 bolt
- 3** Hole pattern



Inserting and tightening rivet nuts

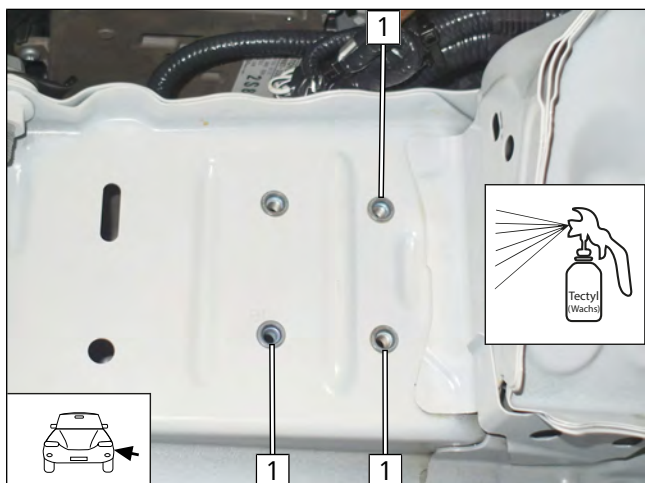


Fig. 17

- 1 Ø9 hole, rivet nut

Mounting bracket

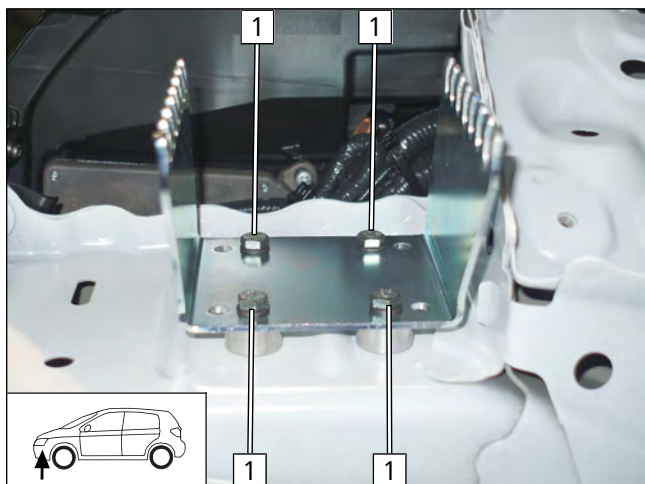


Fig. 18

- Insert a spacer (10) between bracket and frame side member at each position 1.

- 1 M6x30 bolt, spring lock washer, bracket, spacer (10), rivet nut

Fitting edge protection

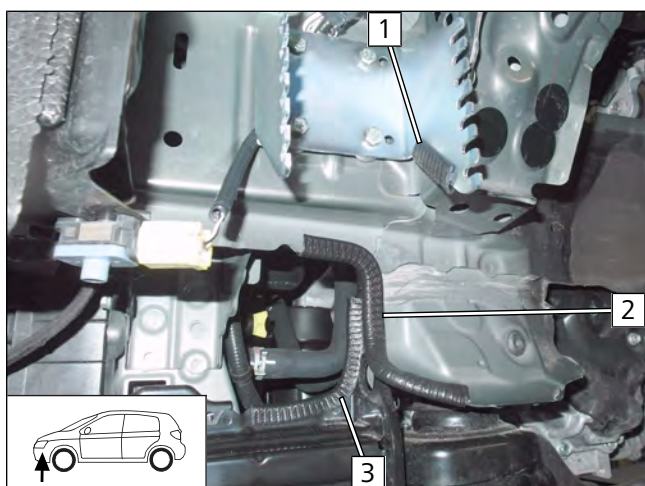


Fig. 19

- 1 50 edge protection
- 2 180 edge protection
- 3 140 edge protection



8.2 Premounting heater

Mounting water connection piece

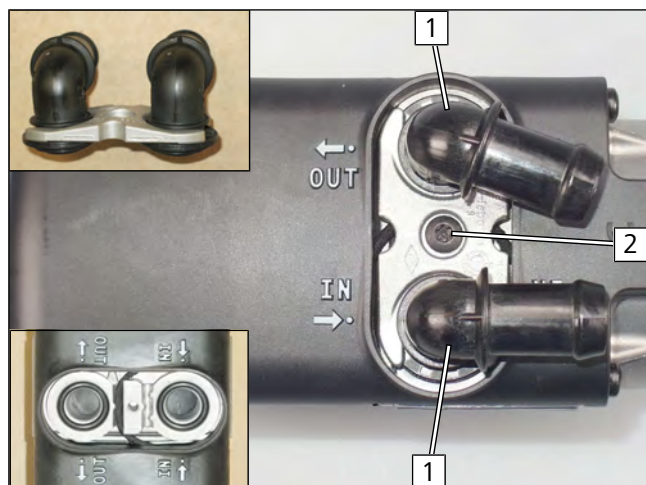


Fig. 20



Observe the general installation instructions of the heater.

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

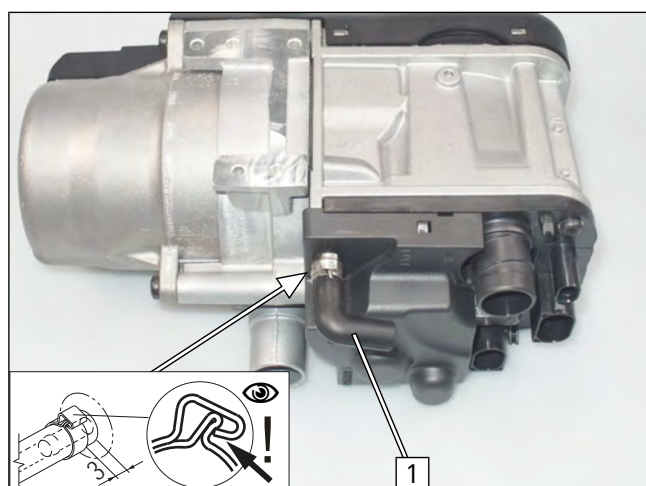


Fig. 21

- 1 90° moulded hose, Ø10 clamp

Premounting bolts

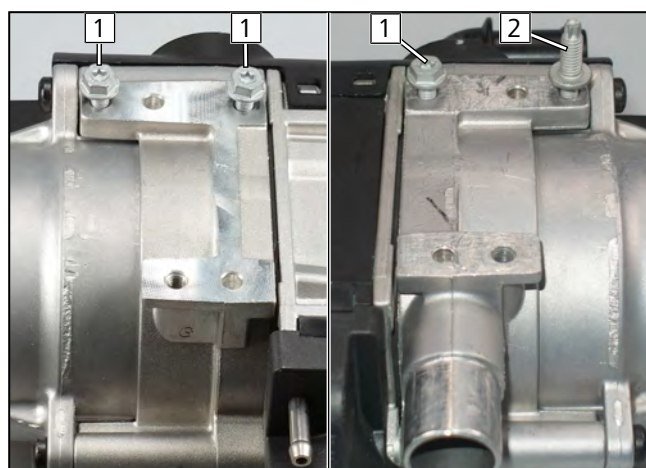


Fig. 22

- Insert 5x13 self-tapping bolts 1 and M5/M6x15 self-tapping stud bolt 2 in existing holes by a max. of 3 thread turns.



Preparing/assigning coolant pump perforated bracket

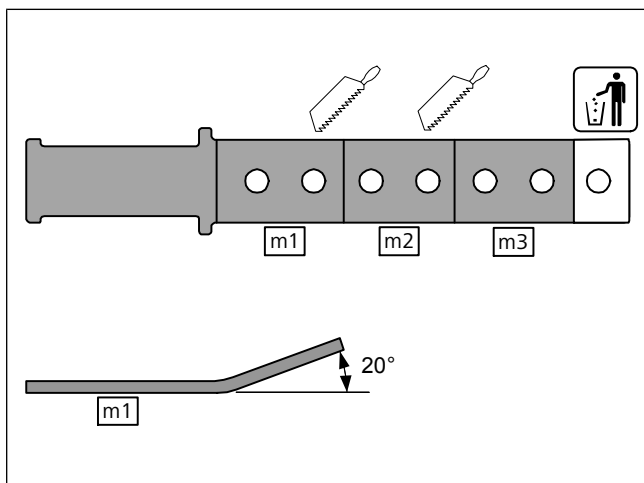


Fig. 23

- ▶ Sections **m2** and **m3** will be needed later for the routing of the coolant hoses.
- ▶ Bend perforated bracket **m1**.

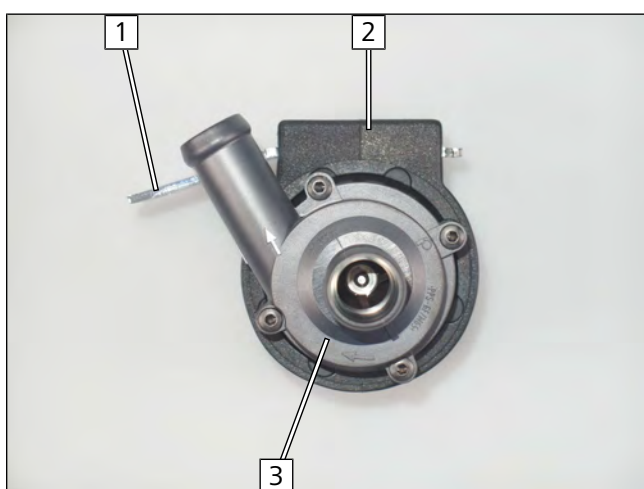


Fig. 24

- 1** Perforated bracket **m1**
- 2** Coolant pump mount
- 3** Coolant pump

Preparing hoses

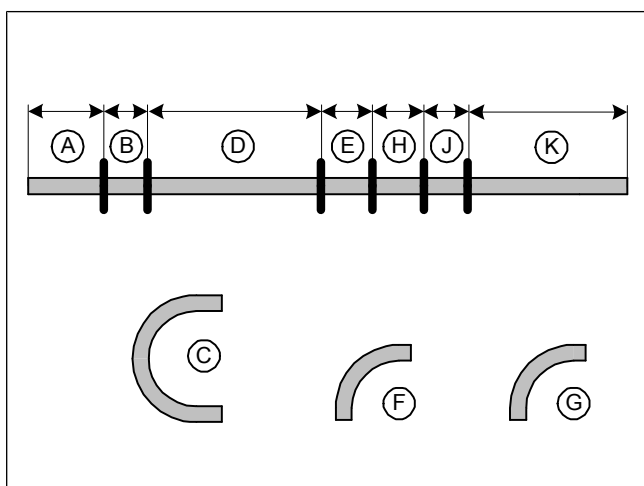


Fig. 25

A	130
B	65
C	180° moulded hose
D	1240
E	105
F	90° moulded hose
G	90° moulded hose
H	100
J	160
K	1200



Mounting hoses **E**, **F** and **G**

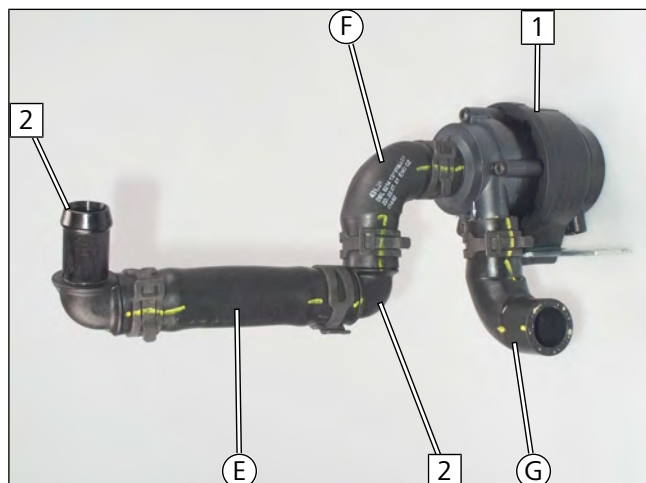


Fig. 26

All spring clips Ø25

- 1** Premounted coolant pump
- 2** 18x18, 90° connecting pipe

Connecting heater inlet

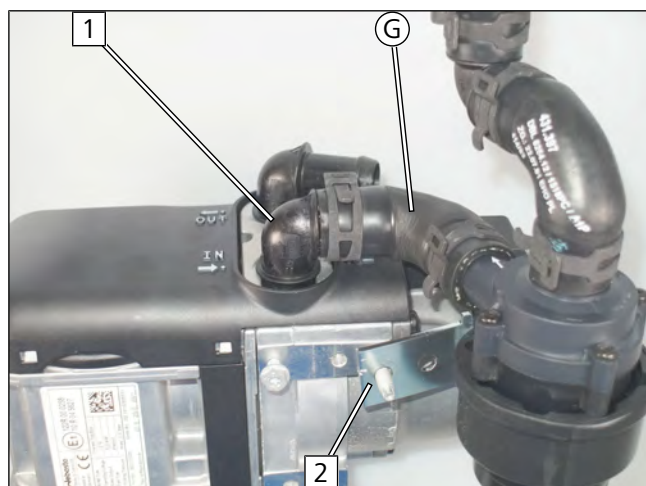


Fig. 27

All spring clips Ø25

- ▶ Position coolant pump perforated bracket **m1** at position **2** onto stud bolt.

- 1** Heater/IN connection piece

Connecting heater outlet

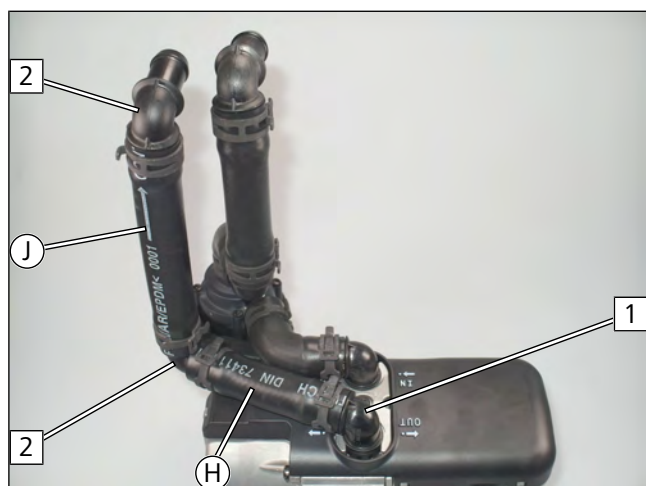


Fig. 28

All spring clips Ø25

- 1** Heater/OUT connection piece
- 2** 18x18, 90° connecting pipe



Connect coolant pump wiring harness

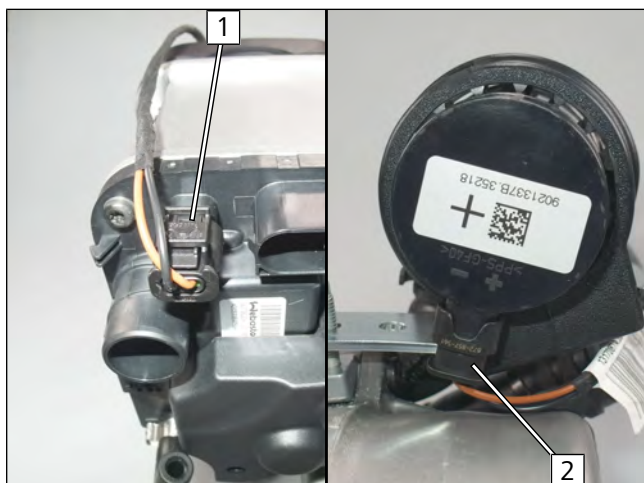


Fig. 29

- 1 Coolant pump wiring harness connector on HG
- 2 Coolant pump wiring harness connector on coolant pump

Routing and fastening coolant pump wiring harness

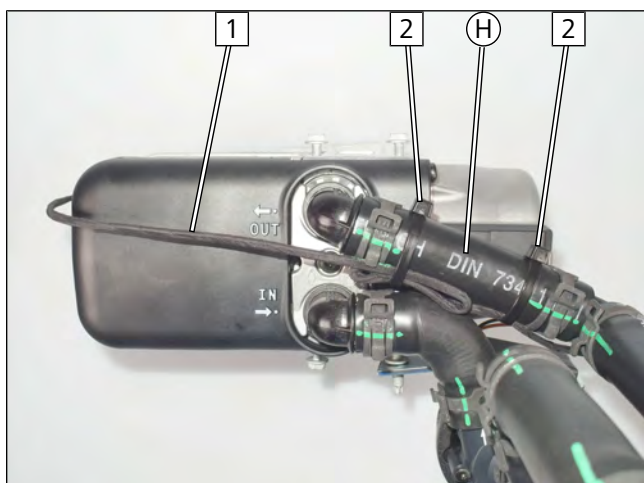


Fig. 30

- 1 Coolant pump wiring harness
- 2 Cable tie

Fastening hoses (E) and (J)

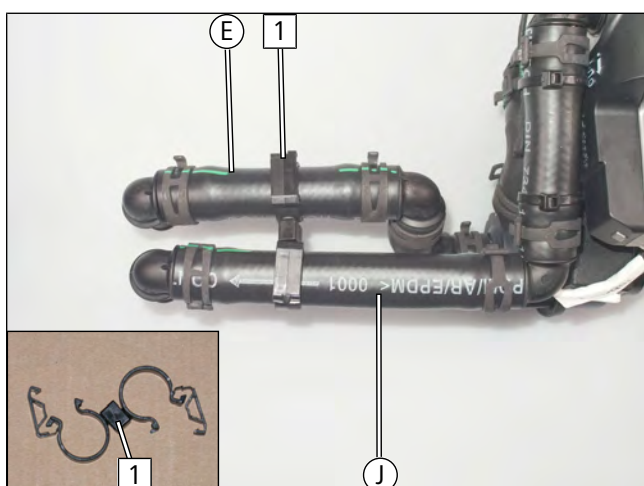


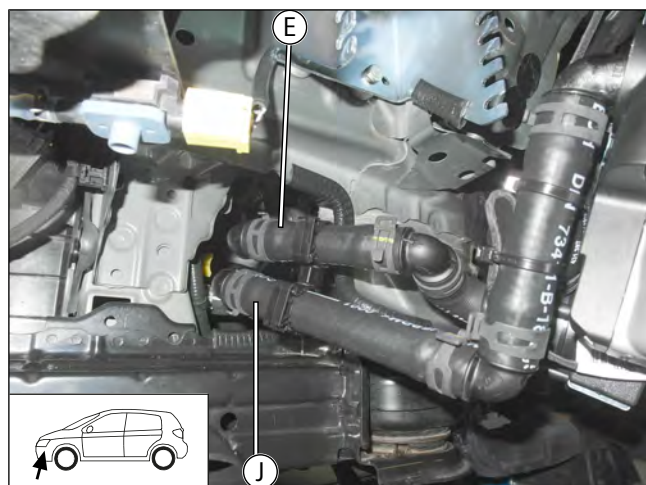
Fig. 31

- 1 Lockable hose bracket



8.3 Heater installation for Toyota Camry

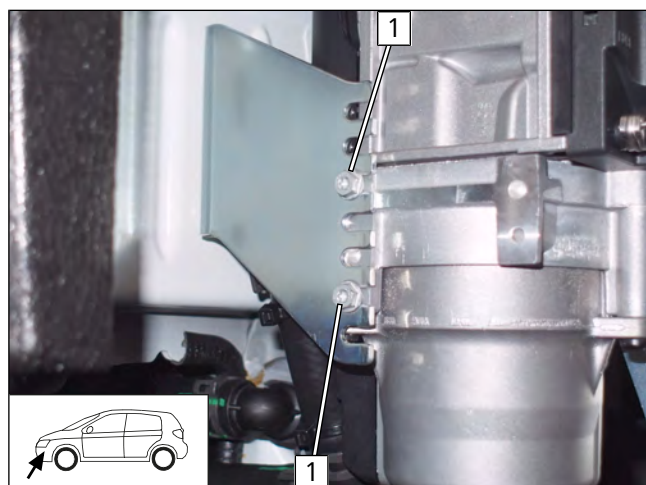
Inserting coolant hoses



- ▶ Route hoses **E** and **J** in the engine compartment as shown.

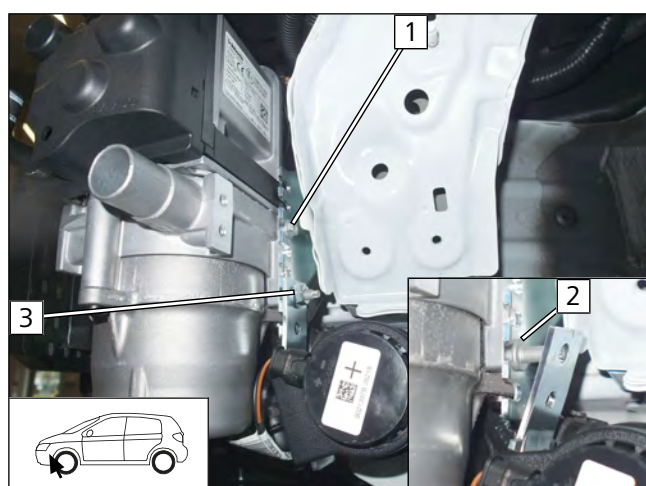
Fig. 32

Mounting heater



- 1** Tighten 5x13 self-tapping bolt

Fig. 33



- 1** Tighten 5x13 self-tapping bolt
- 2** Tighten M5/M6x15 self-tapping stud bolt
- 3** Flanged nut

Fig. 34



8.4 Heater installation for Lexus ES300h

Inserting coolant hoses

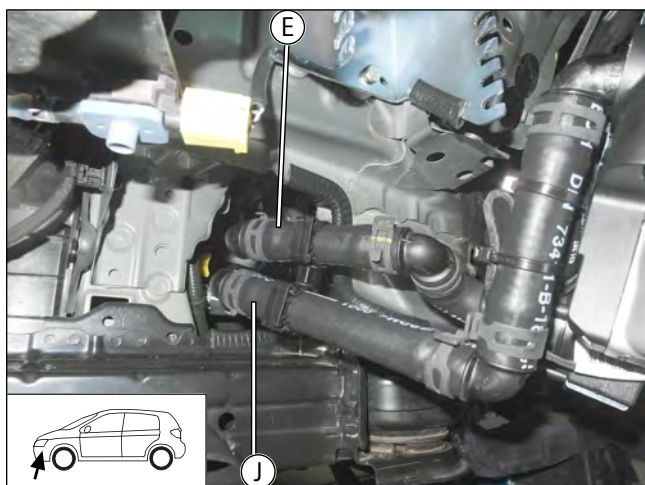


Fig. 35

► Route hoses (E) and (J) in the engine compartment as shown.

Mounting heater

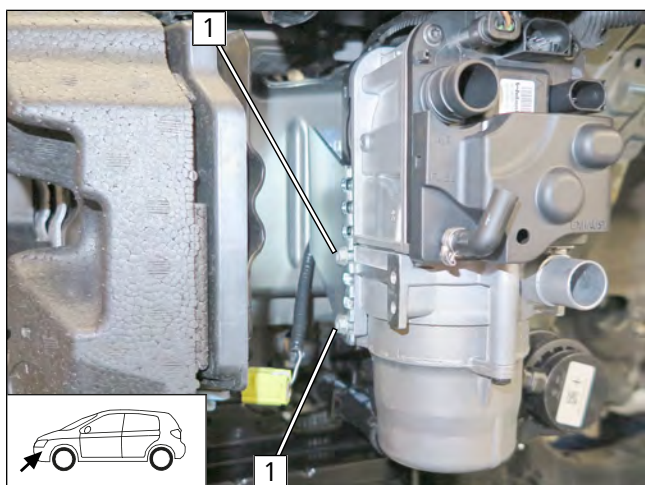


Fig. 36

1 Tighten 5x13 self-tapping bolt

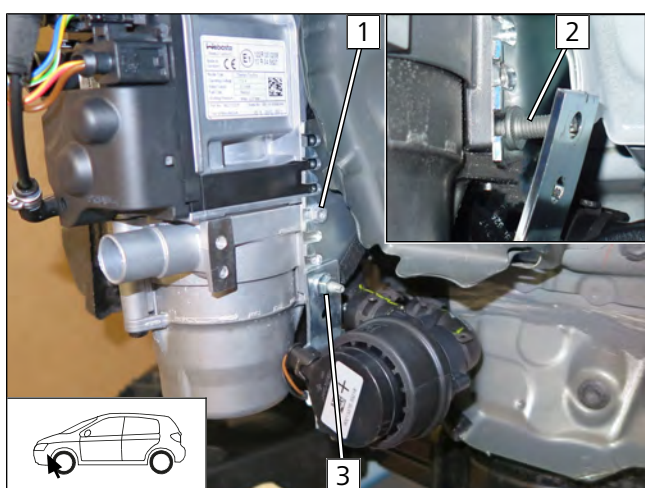


Fig. 37

- 1 Tighten 5x13 self-tapping bolt
- 2 Tighten M5/M6x15 self-tapping stud bolt
- 3 Flanged nut



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

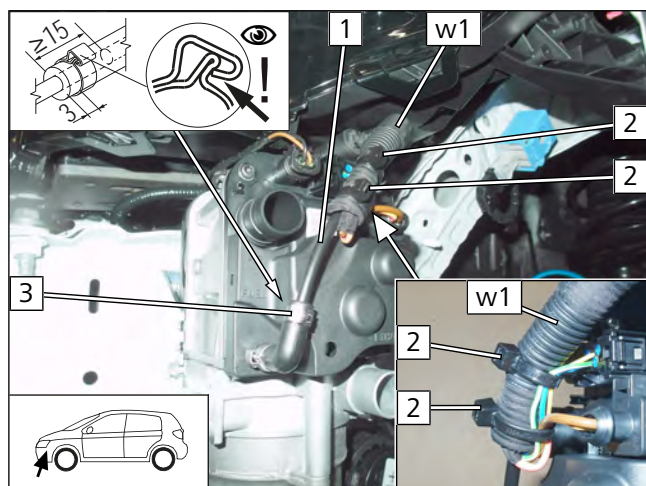


Danger of damage to components

- ▶ 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

Connecting heater



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

Fig. 38

Routing fuel line

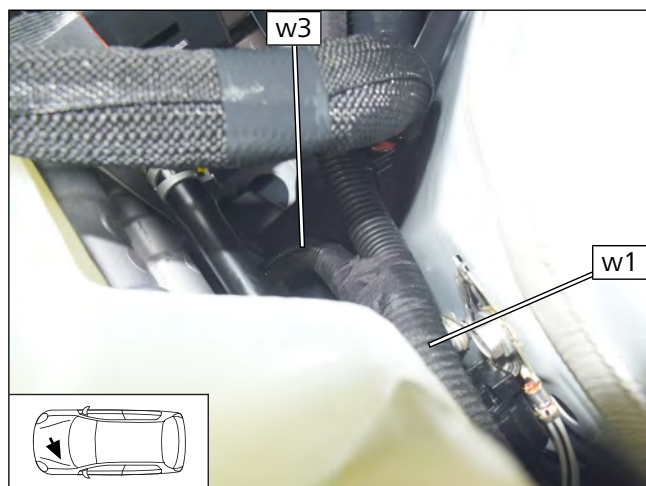


Fig. 39

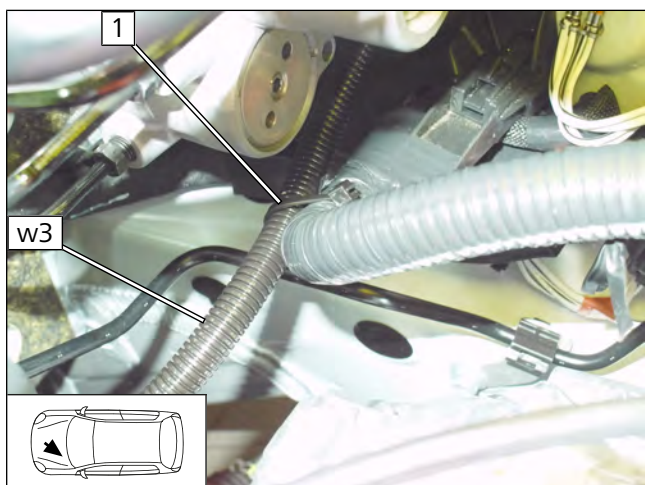


Fig. 40

- ▶ Route corrugated tube **w3** with fuel line and fuel pump wiring harness along original vehicle lines to the bulk-head and fasten with cable tie **1**.

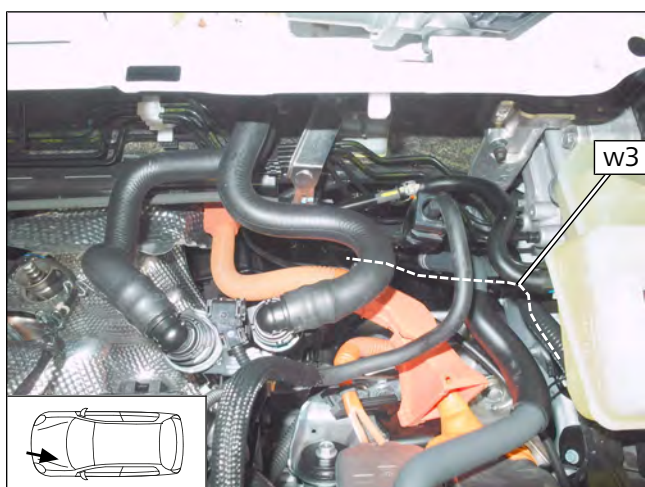


Fig. 41

- ▶ Route corrugated tube **w3** with fuel line and fuel pump wiring harness along original vehicle lines to underbody and fasten using cable ties.

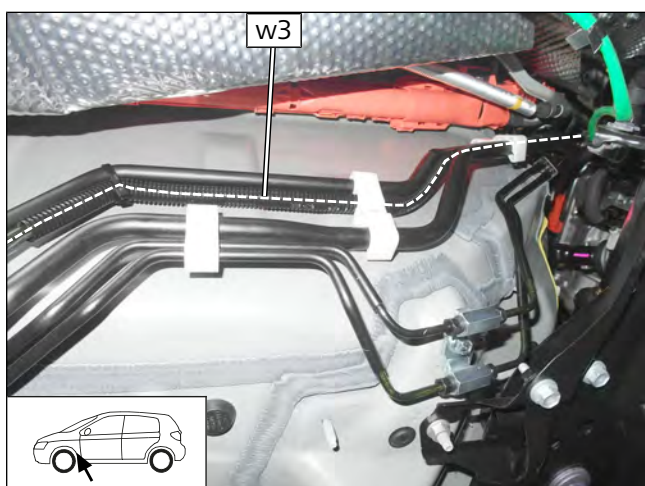


Fig. 42

- ▶ Route corrugated tube **w3** with fuel line and fuel pump wiring harness along original vehicle lines on underbody and fasten using cable ties.

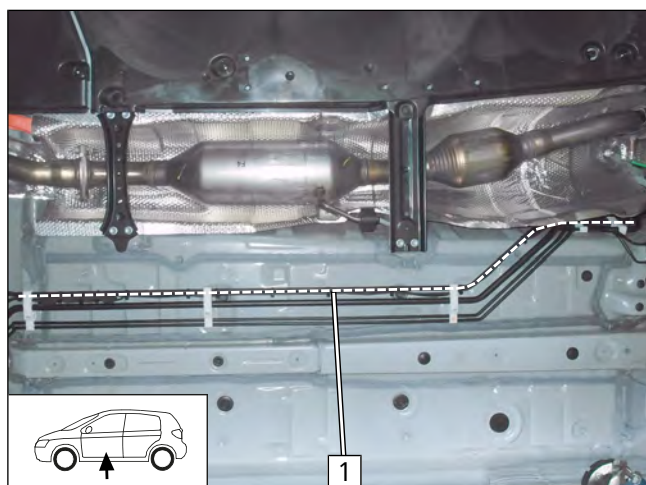


Fig. 43

- ▶ Route fuel line and fuel pump wiring harness **1** along original vehicle lines to the fuel pump installation location and attach with cable ties.

Preparing fuel pump perforated bracket

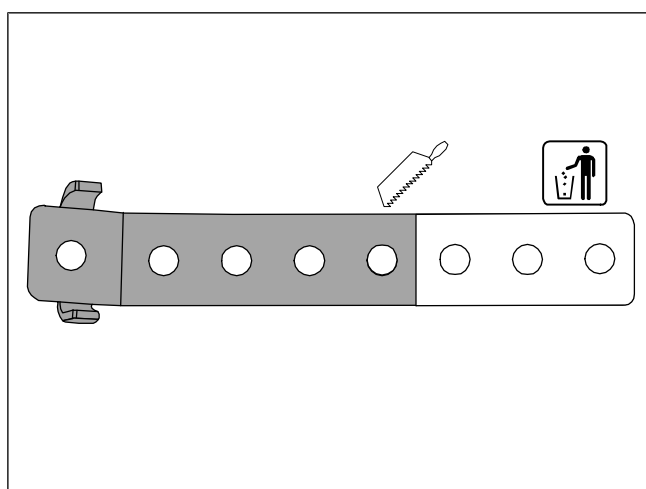


Fig. 44

Premounting fuel pump

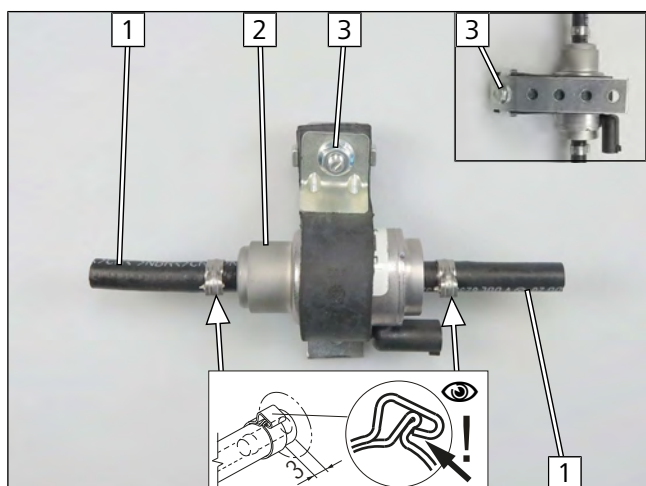


Fig. 45

- 1** Hose section, Ø10 clamp
- 2** Fuel pump
- 3** M6x25 bolt, prepared perforated bracket, fuel pump mount, support angle bracket, flanged nut



Preparing fuel pump installation location

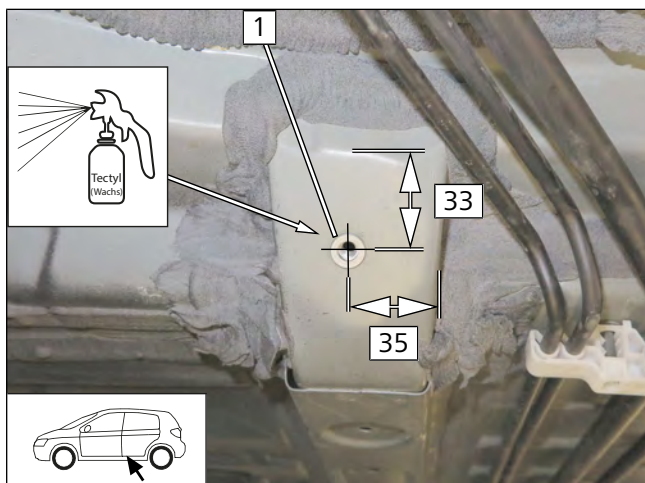


Fig. 46

- 1 Insert rivet nut into $\varnothing 9$ hole

Mounting fuel pump

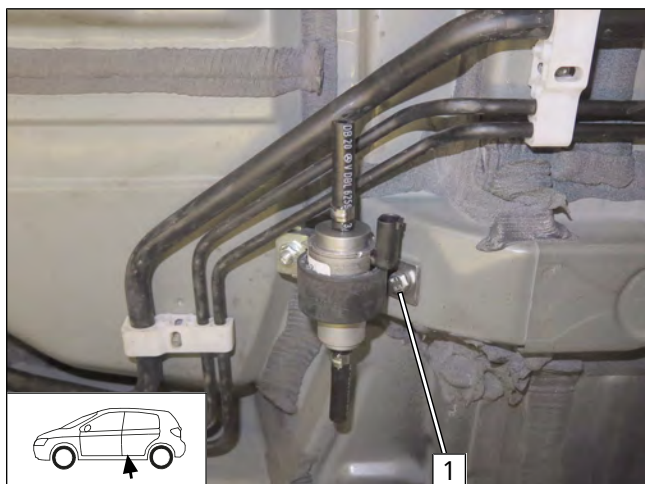


Fig. 47

- 1 M6x20 bolt, spring lock washer, premounted fuel pump, rivet nut

Assembling fuel pump connector X7

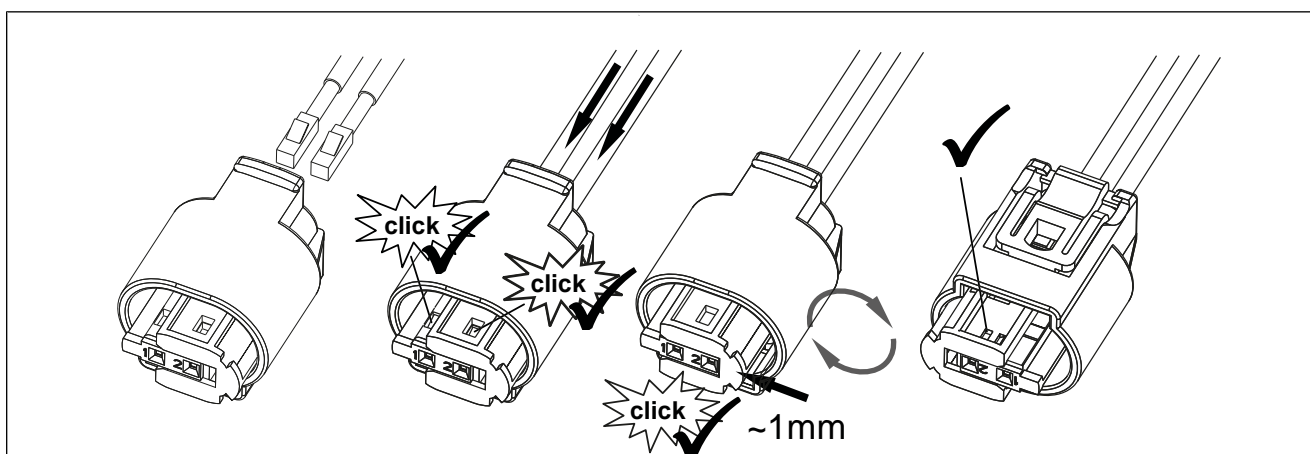


Fig. 48



Fuel pump connection

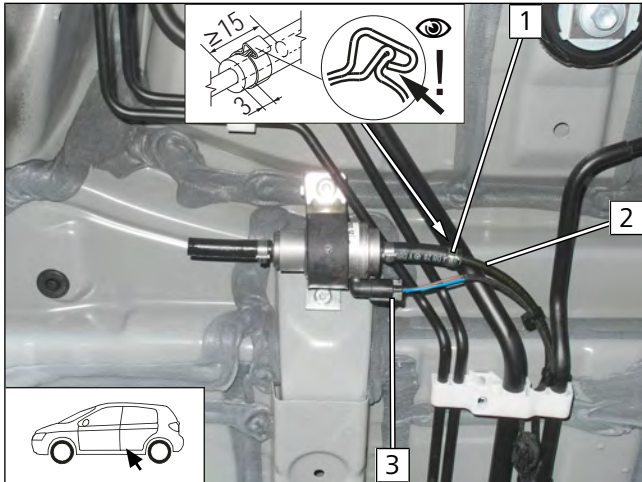


Fig. 49

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

9.2 Installing fuel extractor

Cutting fuel extractor to length

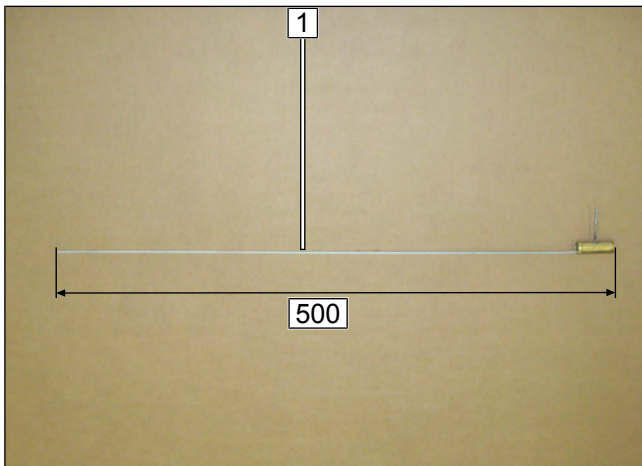


Fig. 50

- 1 Fuel extractor

Preparing fuel extractor

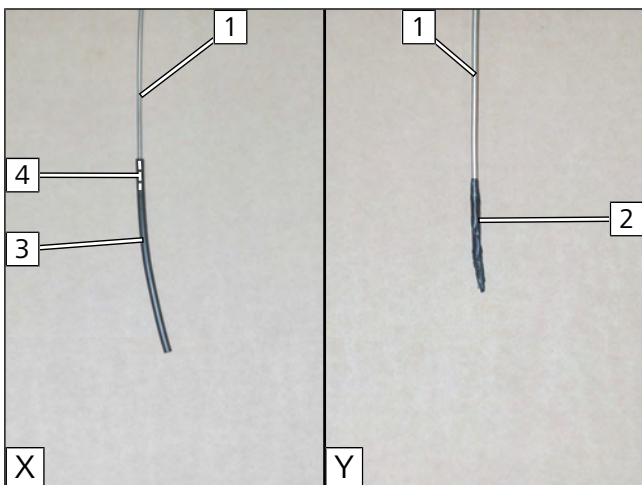


Fig. 51

- Threading aid variant 1 **X**
 Mount 100 long fuel line **3** on fuel extractor **1**. Enlarge beforehand the fuel line at position **4** to Ø3, for approx. 20mm.
- Threading aid variant 2 **Y**
 Wrap fuel extractor **1** with insulating tape **2** as shown.



Preparing fuel tank vent line

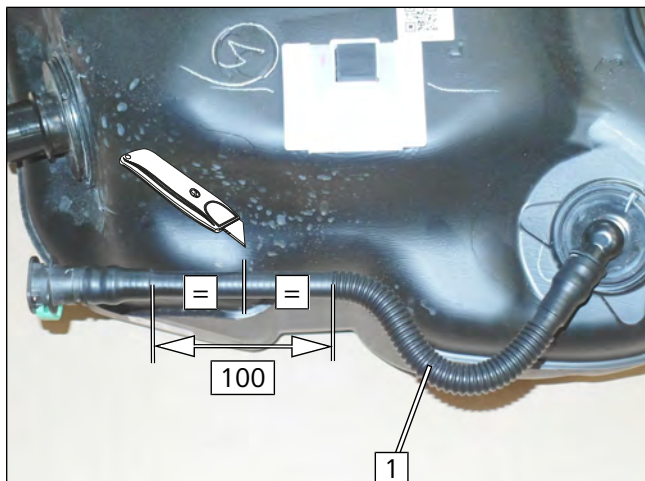


Fig. 52



DANGER

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



Dismantle tank and tank fitting in accordance with manufacturer's instructions.

- ▶ Cut fuel tank vent line **1** as shown.

Mounting fuel extractor loosely

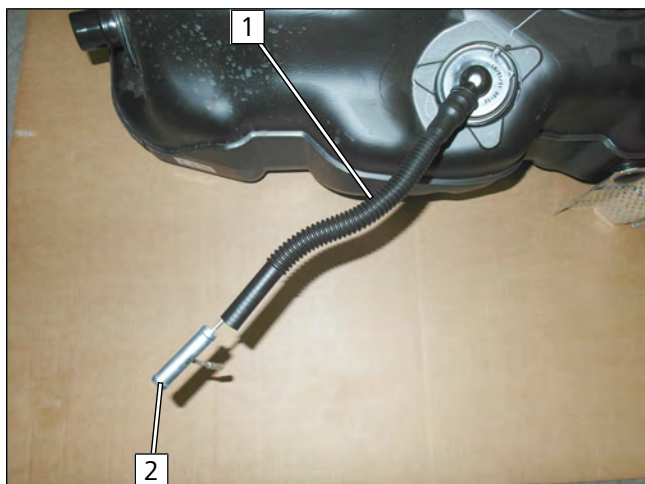


Fig. 53

- ▶ Straighten fuel tank vent line **1** as shown.
- ▶ Insert fuel extractor **2** carefully. While doing so, provide support from the inside of the tank as shown.

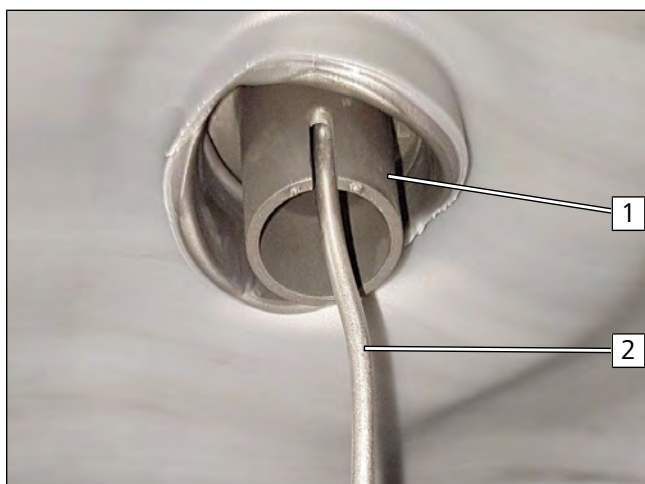


Fig. 54

- 1** Fuel tank vent line connection piece (view of tank interior)
- 2** Fuel extractor



Mounting fuel extractor in fuel tank vent line

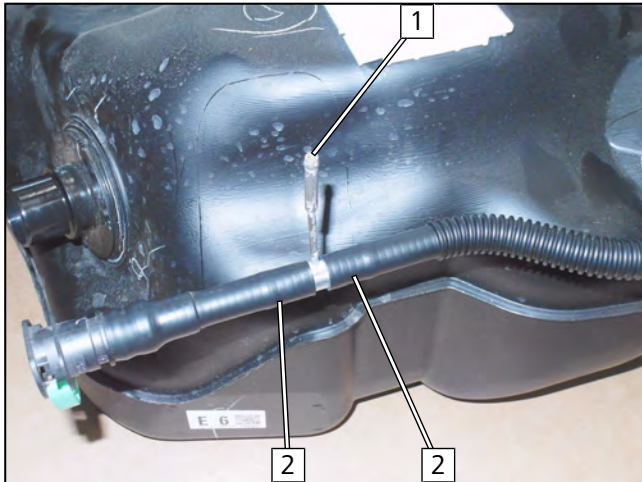


Fig. 55

- ▶ Heat fuel tank vent line at position **2** to approx. 50°C before installing fuel extractor **1**.

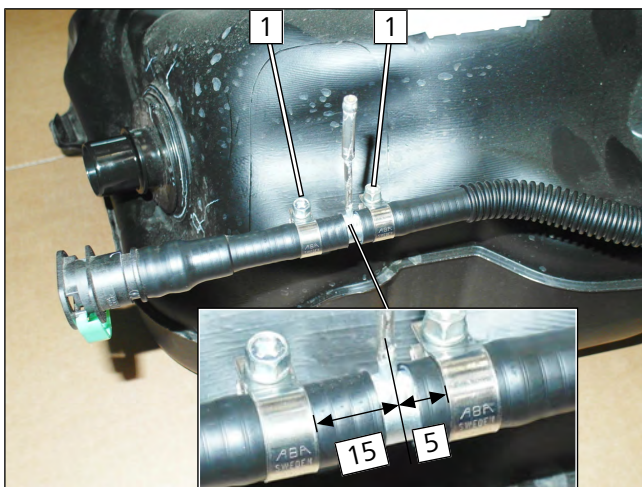


Fig. 56

- 1** Ø15 clamp

Aligning fuel extractor

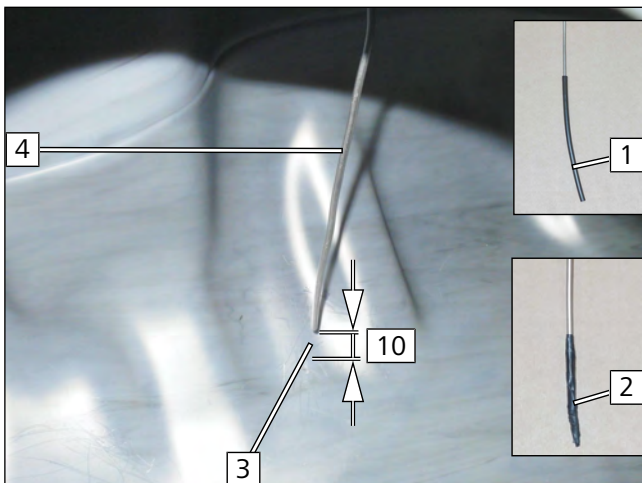


Fig. 57

- Remove threading aid variant **1** or variant **2**.

- ▶ Align fuel extractor **4** at position **3** 10mm above the tank bottom as shown.



Connecting fuel extractor

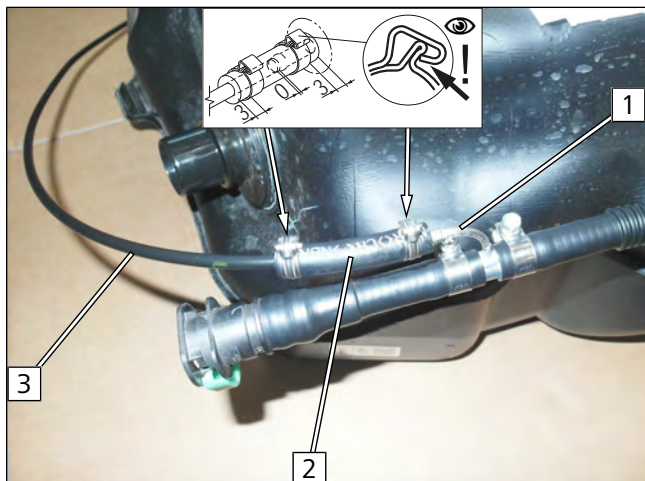


Fig. 58

► Bend fuel extractor connection piece **1** as shown.

2 Hose section, Ø10 clamp [2x]

2 Fuel line



Mount tank and tank fitting in accordance with manufacturer's instructions.

9.3 Fuel pump connection

Routing fuel line

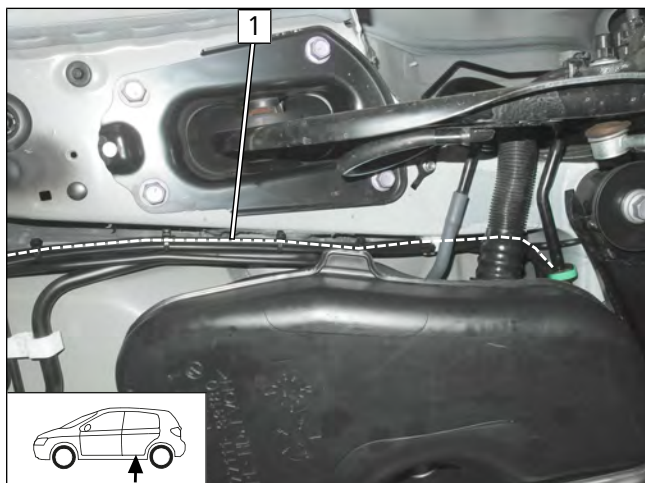


Fig. 59

► Route fuel extractor fuel line **1** to fuel pump along original vehicle lines and fasten with cable ties.

Connecting fuel extractor fuel line

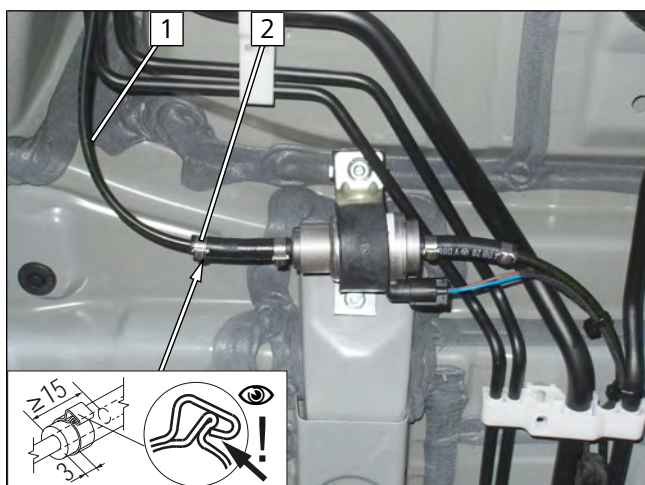


Fig. 60

1 Fuel line of fuel extractor

2 Ø10 clamp

10 Coolant

10.1 Hose routing diagram

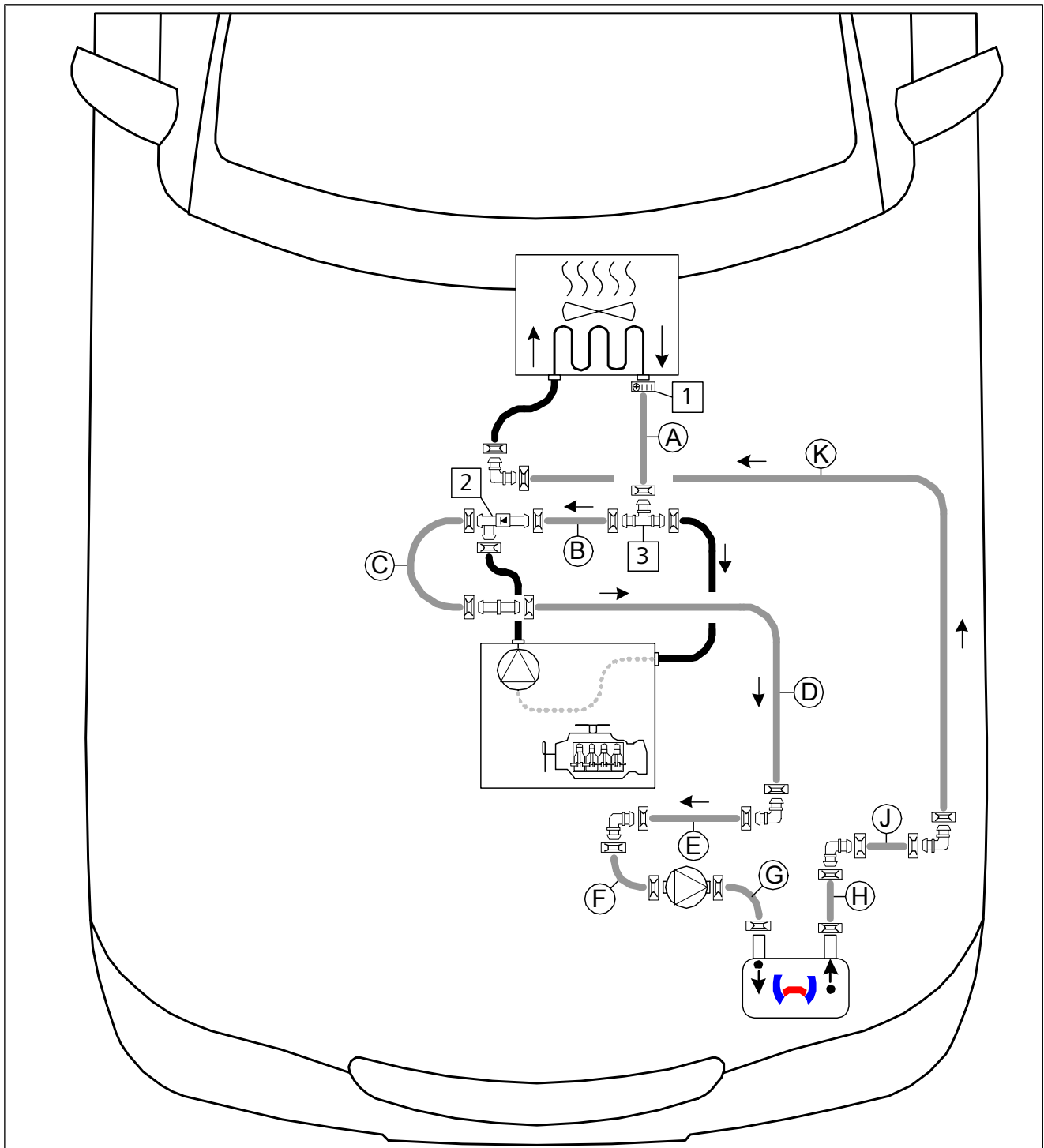





Fig. 61

All spring clips  = Ø25;

All connecting pipes  = Ø18x18 or  = Ø18x18/90°

1 16-27 screw clamp, **2** Non-return valve, **3** T-piece

10.2 Coolant circuit installation

Preparing hoses

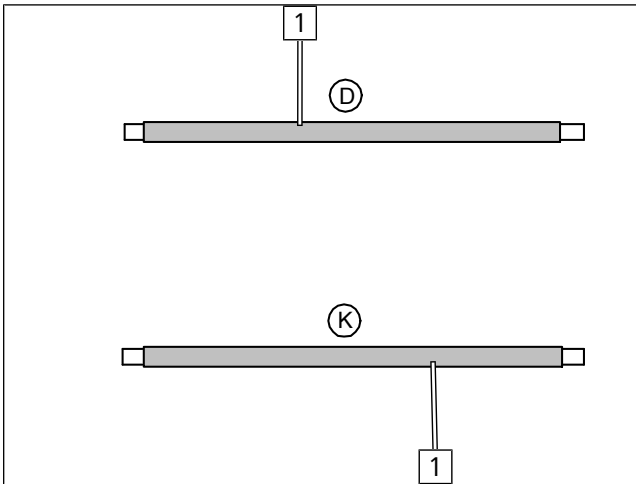


Fig. 62



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

Turning original vehicle clamp

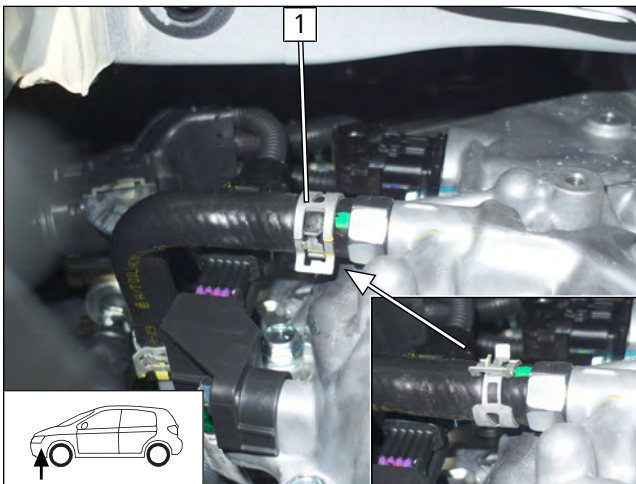


Fig. 63

► Turn original vehicle clamp as shown.

Preparing hose routing

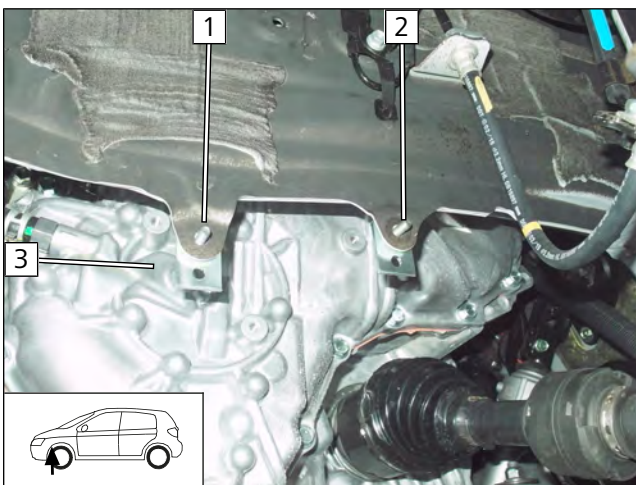


Fig. 64



Version 1

Toyota Camry without CVT transmission trim at position **3**

- 1** M6x20 bolt, spring lock washer, perforated bracket **m2**, original vehicle thread
- 2** M6x20 bolt, spring lock washer, perforated bracket **m3**, original vehicle thread

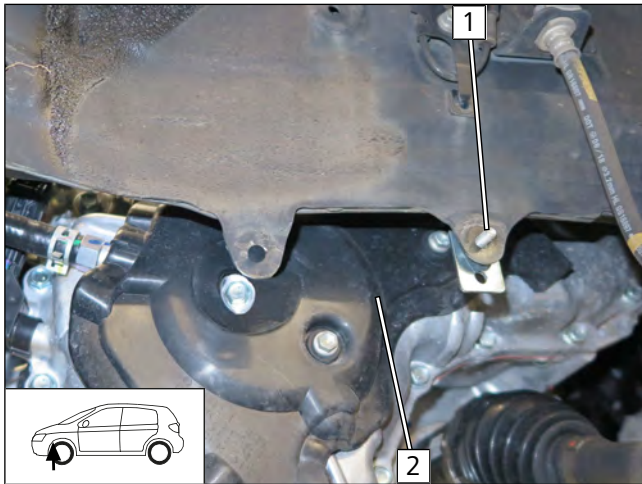


Fig. 65

Cutting point 1

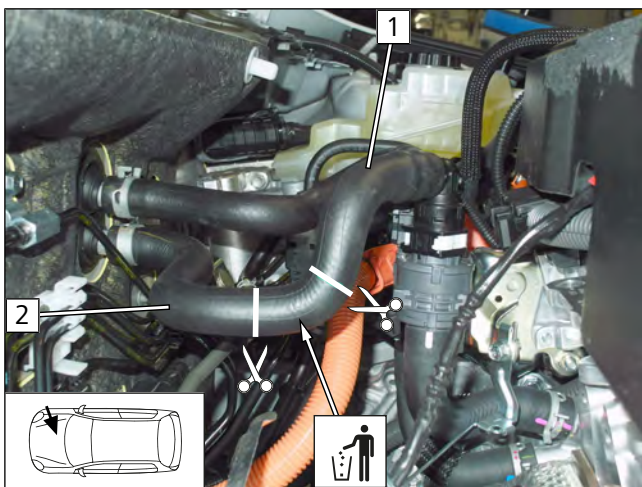


Fig. 66

Preparing hose section

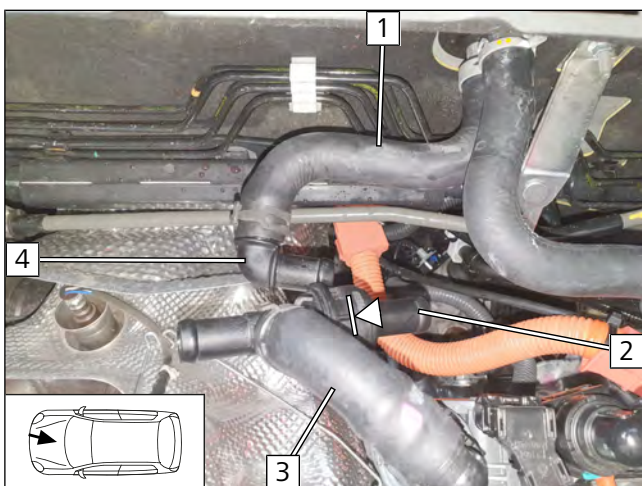



Fig. 67

 Version 2
Lexus ES 300h with CVT transmission trim at position **2**

- 1** M6x20 bolt, spring lock washer, perforated bracket **m2**, original vehicle thread

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

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

- 1** Heat exchanger inlet hose section
- 2** 18x18x18 non-return valve
- 3** Engine outlet hose section
- 4** 90° connecting pipe

Cutting point 2

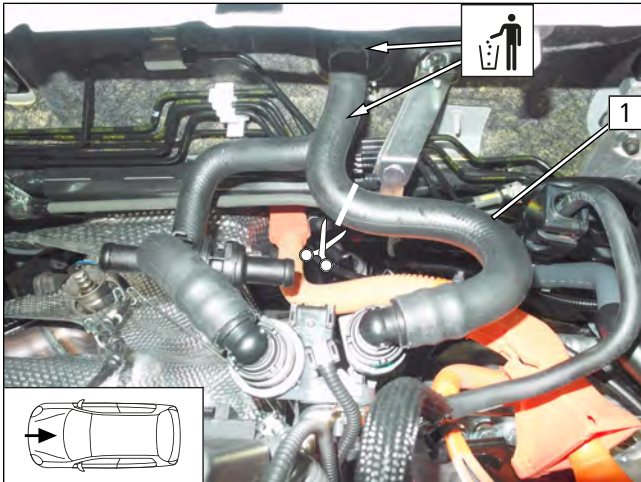


Fig. 68

► Cut heat exchanger outlet / engine inlet hose **1** as shown.

Premounting hoses **A** and **B**

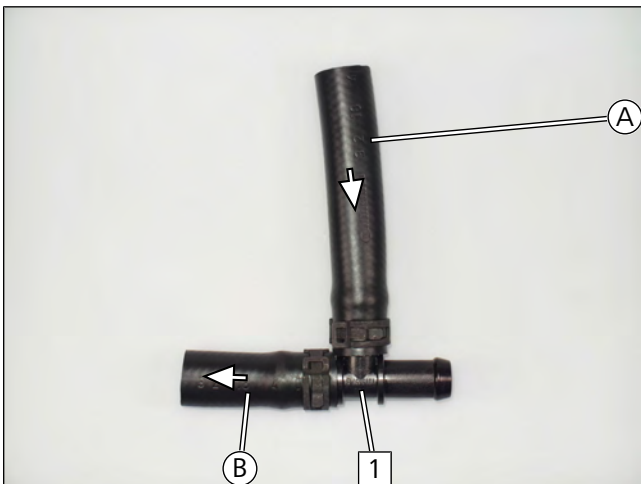


Fig. 69

1 T piece

Mounting hoses **A** and **B**

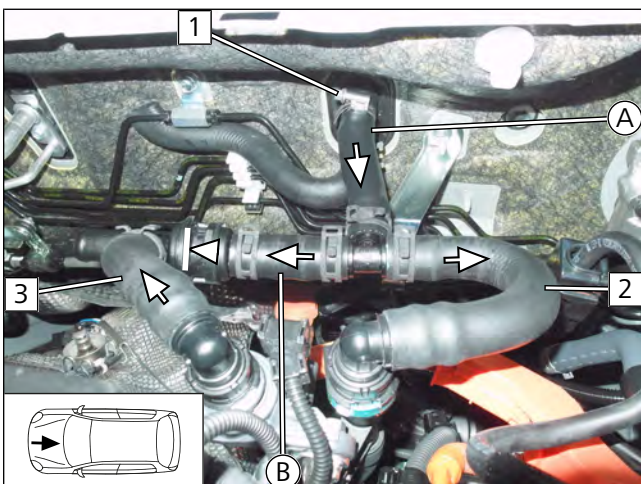


Fig. 70

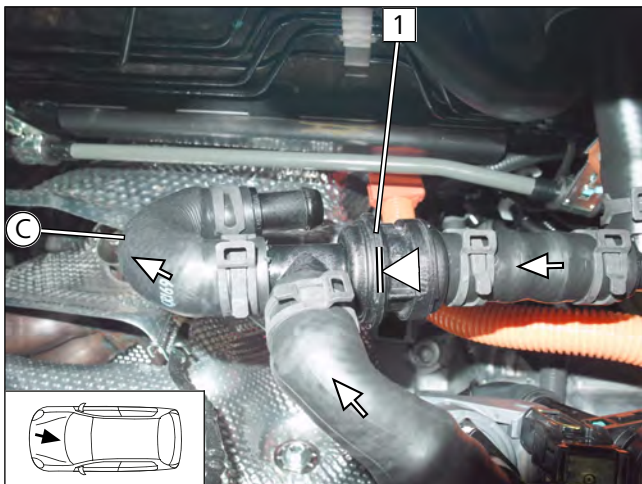
- 1** 16-27 screw clamp
- 2** Engine inlet hose section
- 3** Engine outlet hose section

Premounting hose **C**



Fig. 71

Mounting hose **C**



1 18x18x18 non-return valve

Fig. 72

Connecting hoses **C** and **D**

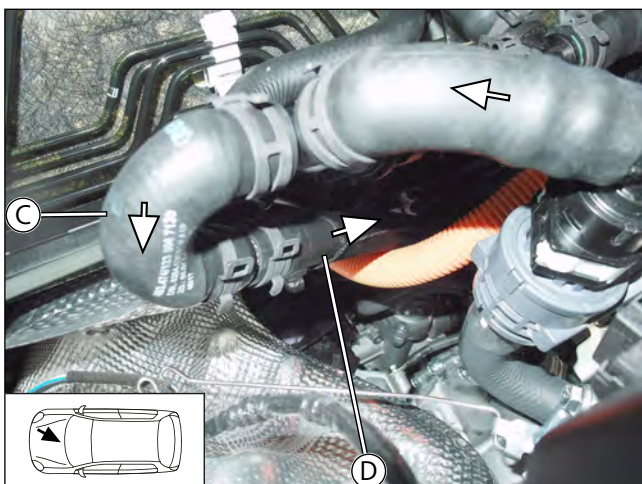
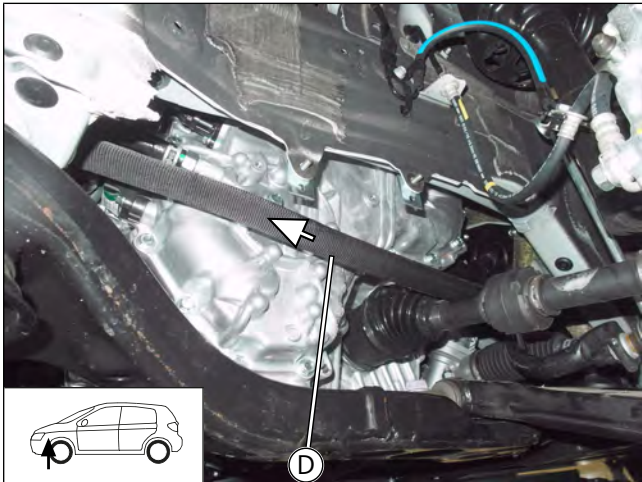


Fig. 73

Routing hose **D**



► Route hose **D** to heater as shown.

Fig. 74

Connecting hoses **D** and **E**

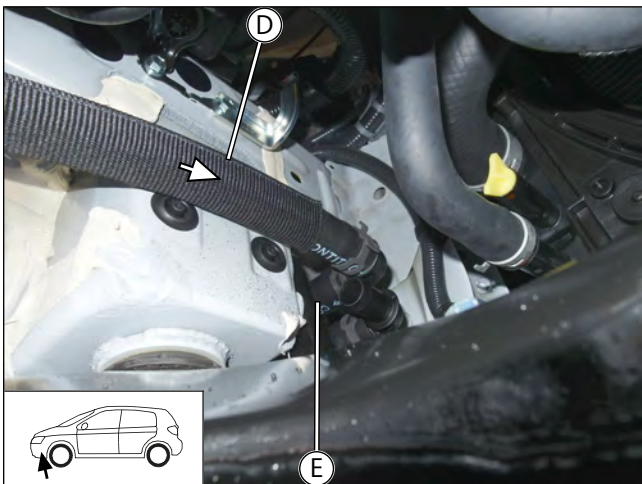


Fig. 75

Connecting hoses **J** and **K**

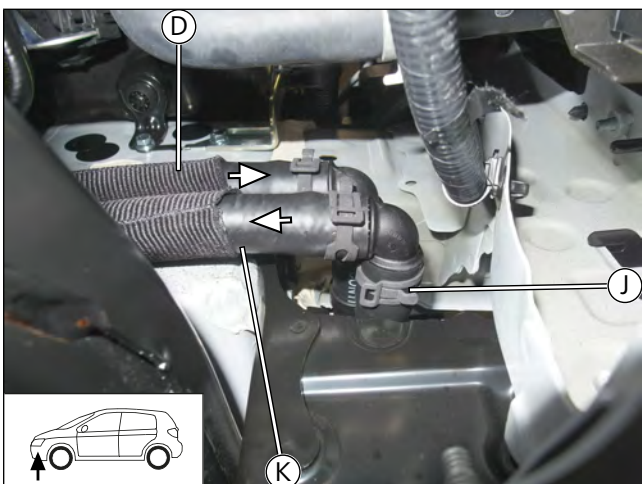


Fig. 76

Fastening hoses

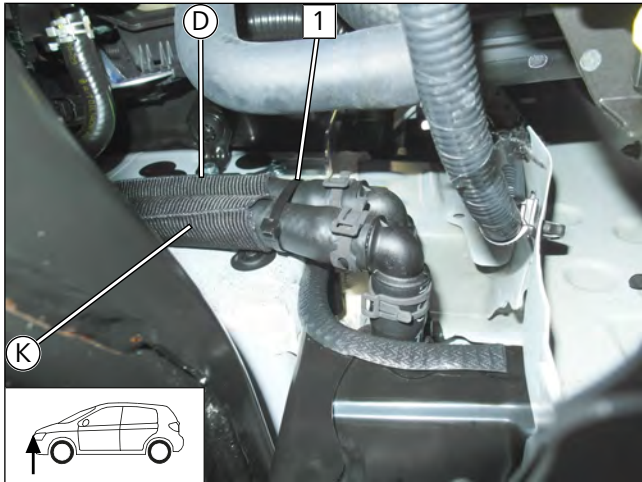


Fig. 77

- 1 Cable tie

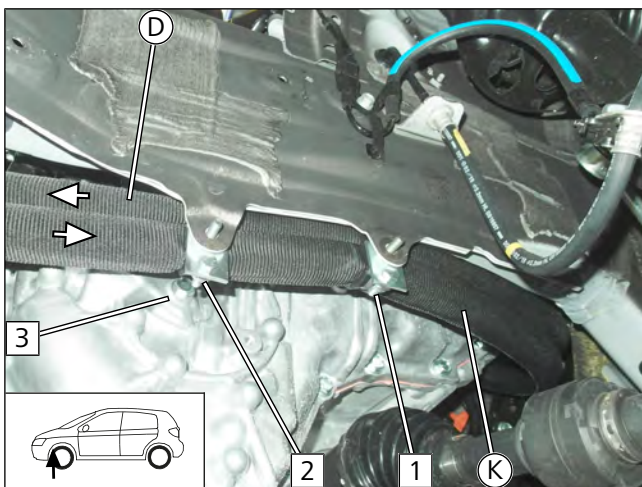


Fig. 78



Version 1

Toyota Camry without CVT transmission trim at position 3

- 1 M6x20 bolt, perforated bracket **m3**, Ø38 rubber-coated p-clamp, flanged nut
- 2 M6x20 bolt, perforated bracket **m2**, Ø38 rubber-coated p-clamp, flanged nut

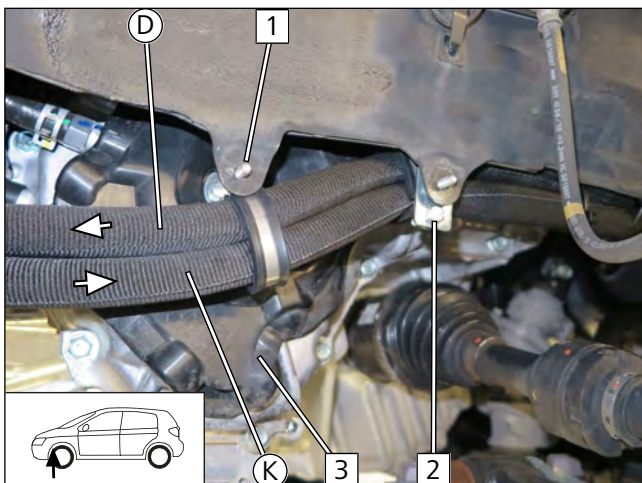


Fig. 79



Version 2

Lexus ES 300h with CVT transmission trim at position 3

- 1 M6x20 bolt, spring lock washer, Ø38 rubber-coated p-clamp, original vehicle thread
- 2 M6x20 bolt, perforated bracket **m2**, Ø38 rubber-coated p-clamp, flanged nut

Connecting heat exchanger inlet

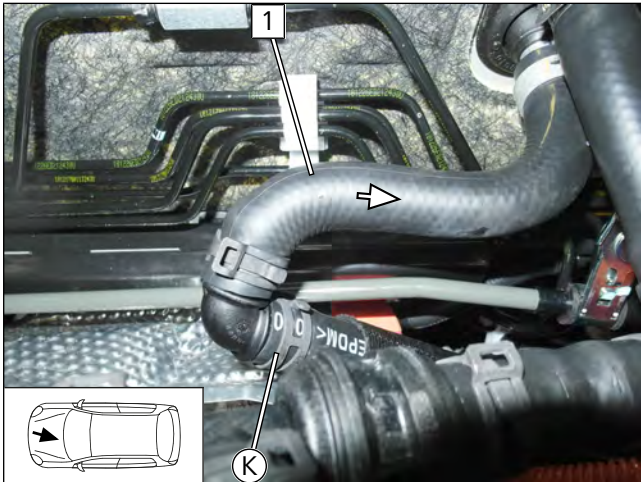


Fig. 80

- 1 Heat exchanger inlet hose section

Fastening hoses

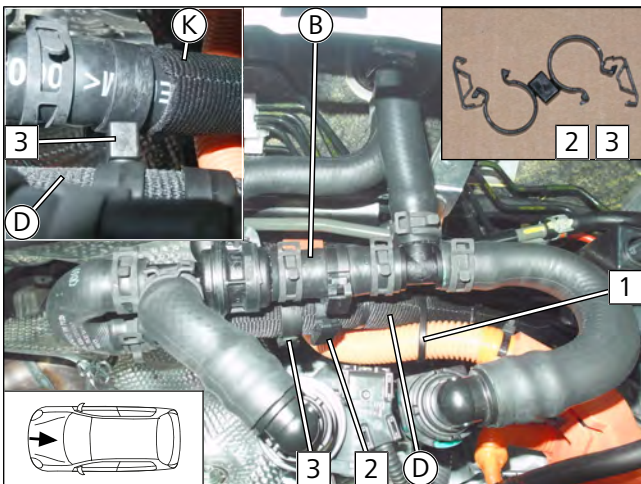


Fig. 81

- 1 Cable tie around hose (K) and original vehicle line
- 2 Spacer bracket between hoses (B) and (D)
- 3 Spacer bracket between hoses (D) and (K)

Checking distance

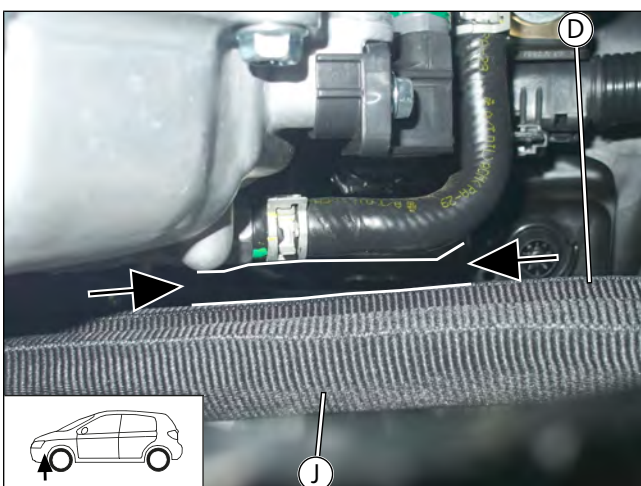


Fig. 82



Ensure sufficient distance from neighbouring components, correct if necessary.



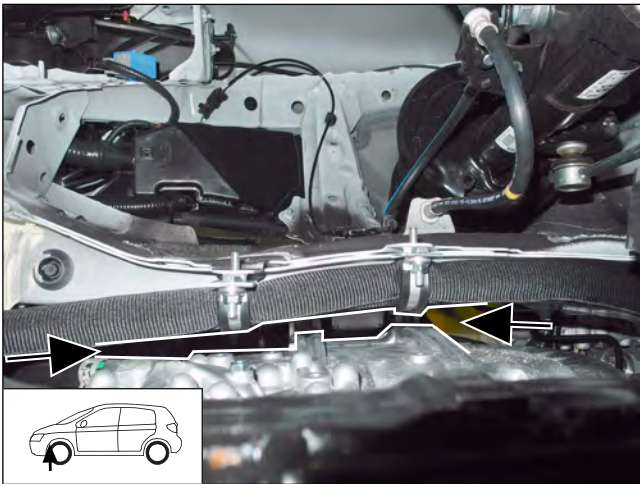


Fig. 83



Ensure sufficient distance from neighbouring components, correct if necessary.

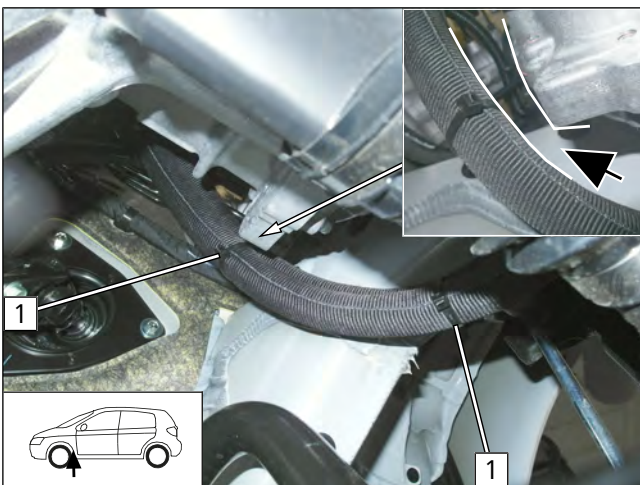


Fig. 84



Ensure sufficient distance from neighbouring components, correct if necessary.



1 Cable tie

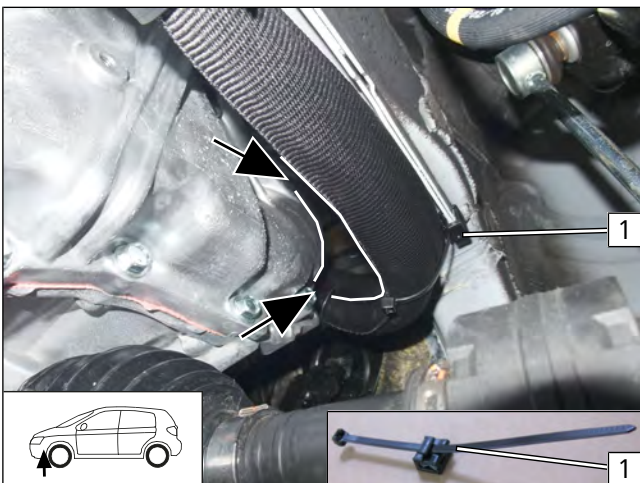


Fig. 85



Ensure sufficient distance from neighbouring components, correct if necessary.



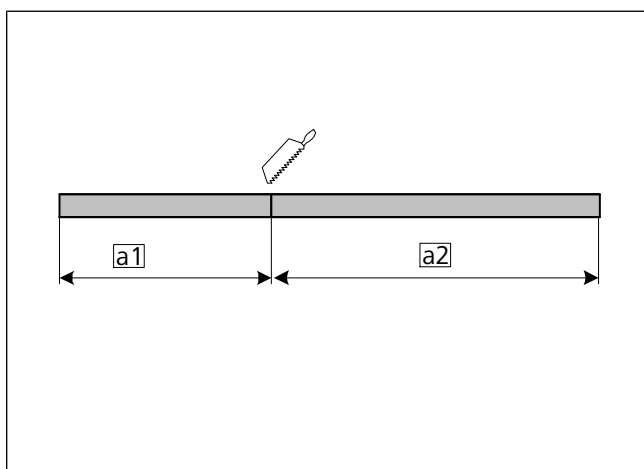
1 Edge clip cable tie



11 Exhaust

11.1 Mounting exhaust pipe

Cutting exhaust pipe to length



a1 140

a2 260

Fig. 86

Preparing perforated bracket

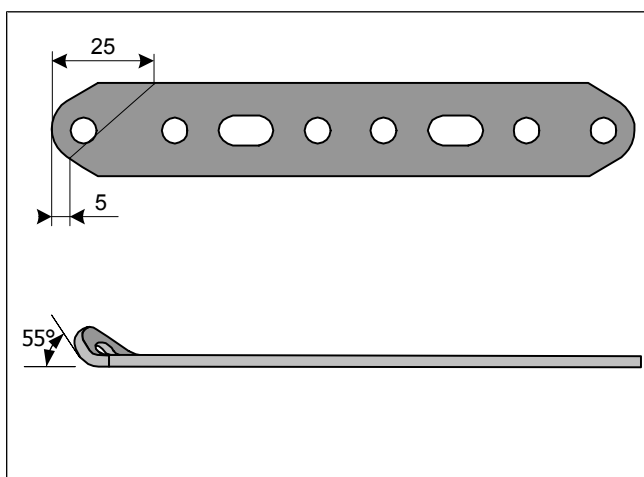
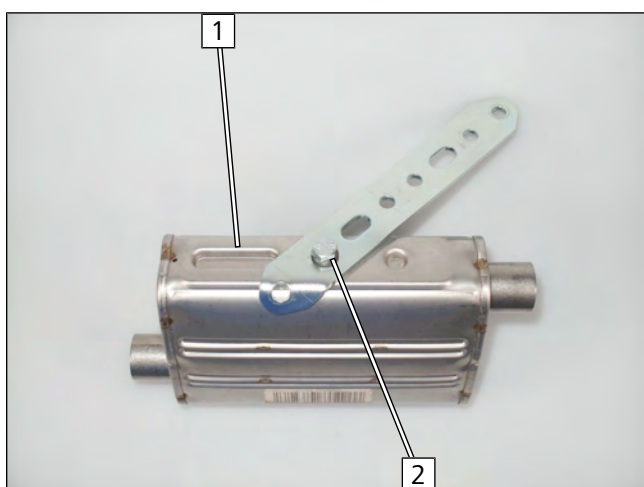


Fig. 87

Premounting exhaust silencer



1 Exhaust silencer

2 M6x16 bolt, spring lockwasher, perforated bracket

Fig. 88



Mounting exhaust silencer

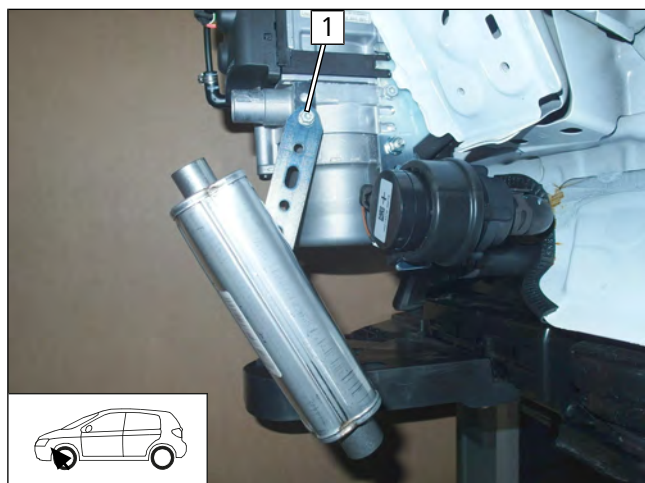


Fig. 89

- 1 5x13 self-tapping bolt, premounted exhaust silencer, heater

Mounting exhaust pipe a1

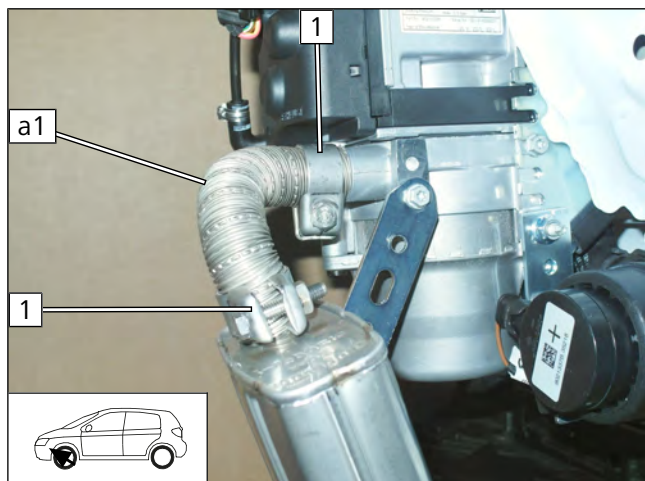


Fig. 90

- 1 Hose clamp

11.2 Mounting exhaust end fastener

Work step E1

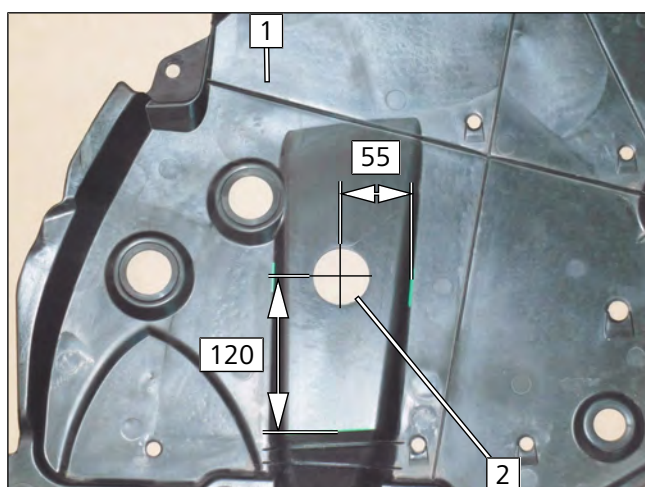


Fig. 91

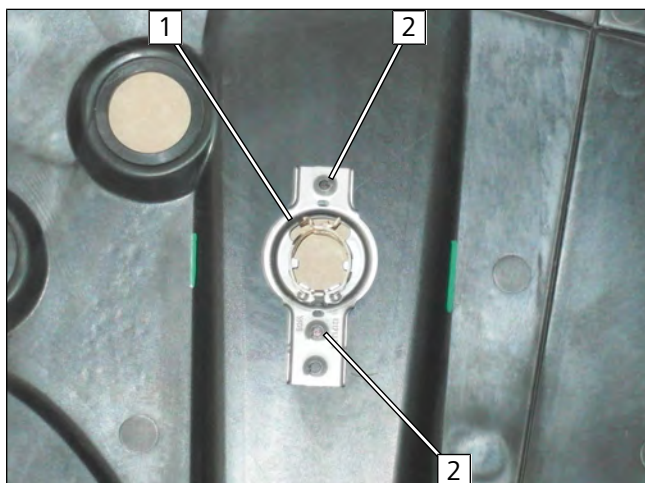


Observe the EFIX installation instructions.

- 1 Front underide protection
- 2 Hole



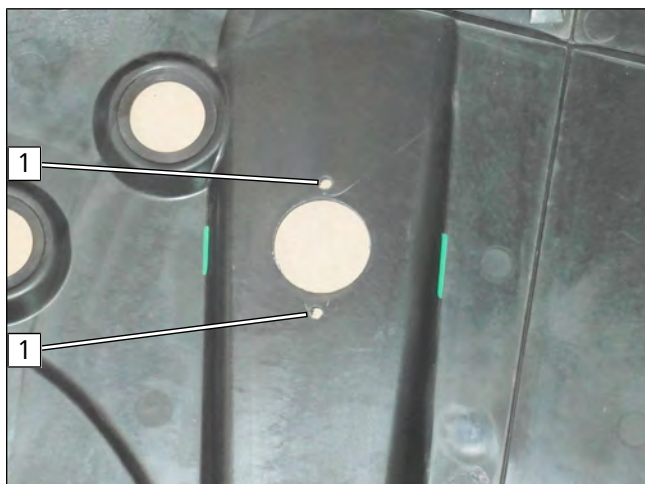
Work step E3



- 1 EFIX
- 2 Copy hole pattern

Fig. 92

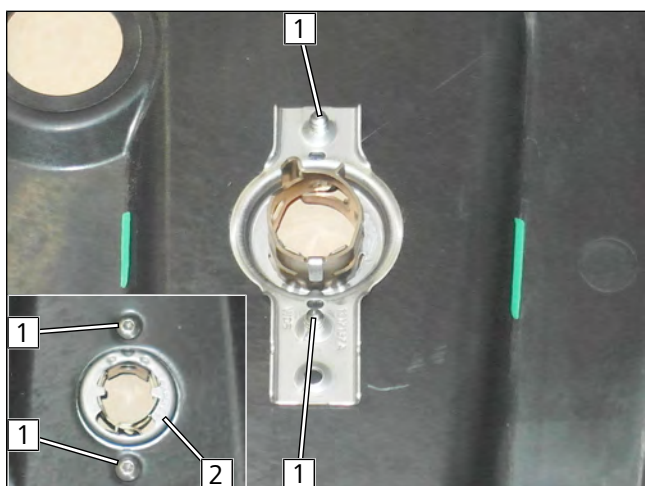
Work step E4



- 1 Hole

Fig. 93

Work step E5



- 1 5x13 self-tapping screw

Fig. 94



Work steps E6-E8

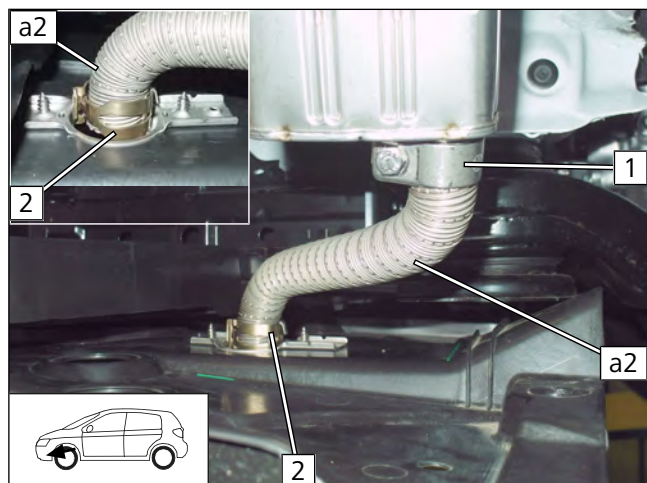


Fig. 95

- 1 Hose clamp
- 2 EFIX

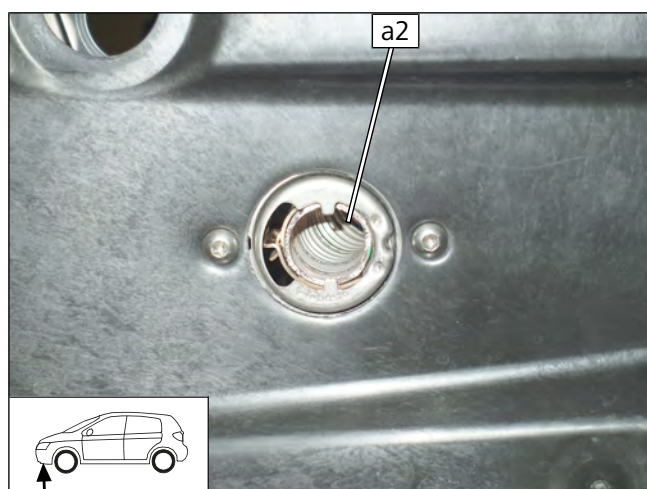


Fig. 96

Sticking on heat protection film

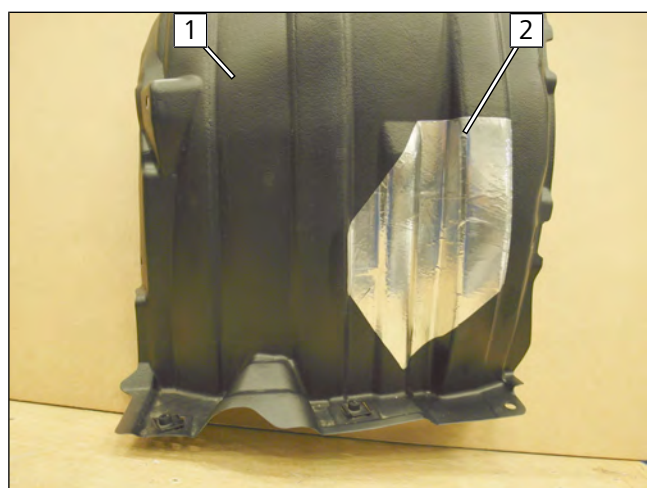
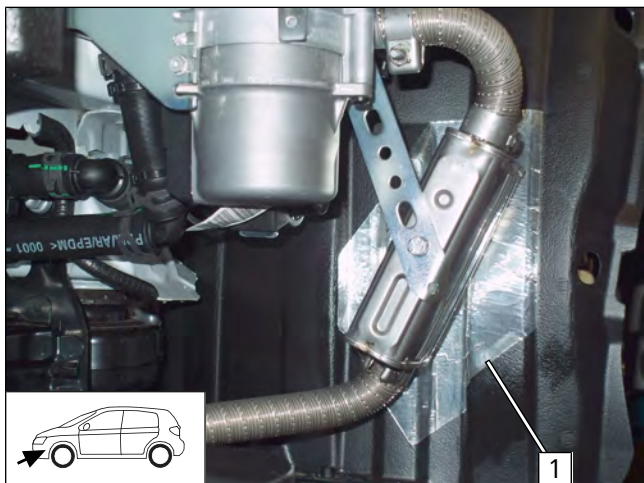


Fig. 97

- Glue heat protection film **2** on wheel-well inner panel **1** as shown.



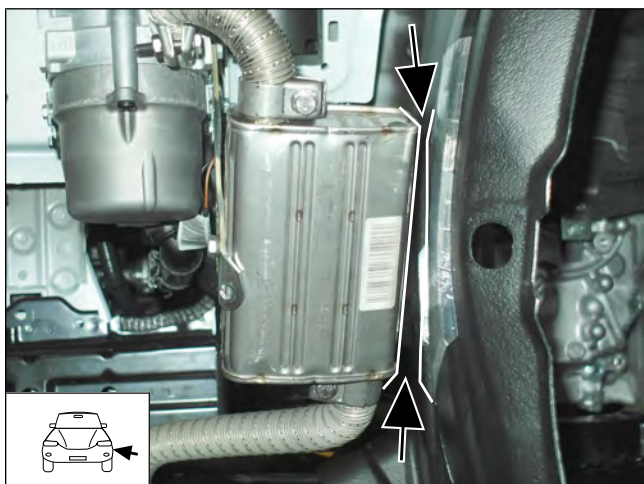
Mounting wheel-well inner panel



1 Wheel-well inner panel

Fig. 98

Checking distance



Ensure sufficient distance from neighbouring components, correct if necessary.

>10

Fig. 99



12 Combustion air

Assigning combustion air intake line

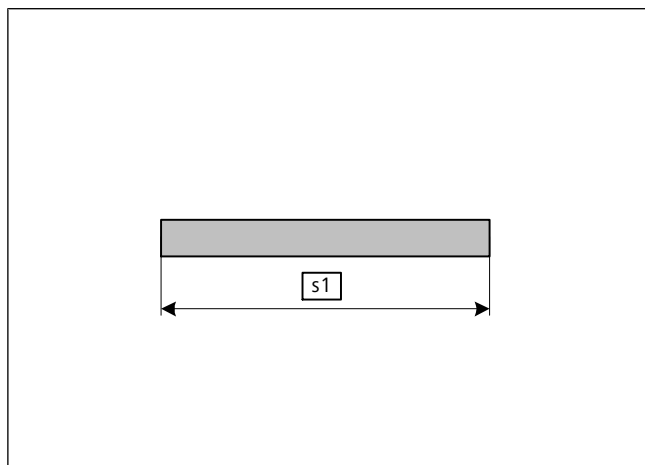


Fig. 100

Preparing perforated bracket

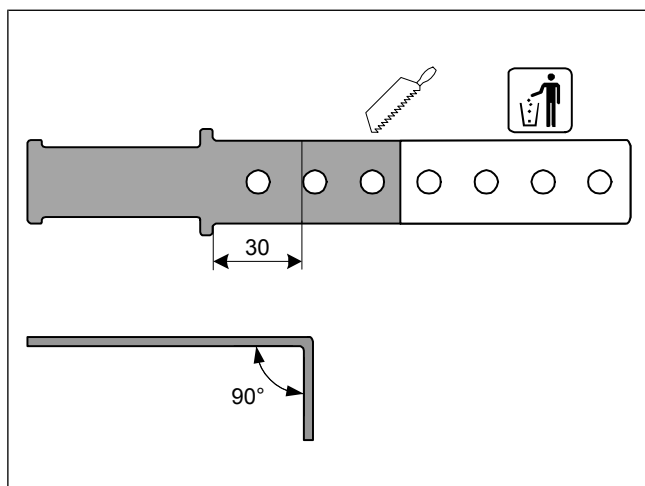


Fig. 101

Premounting combustion air intake silencer

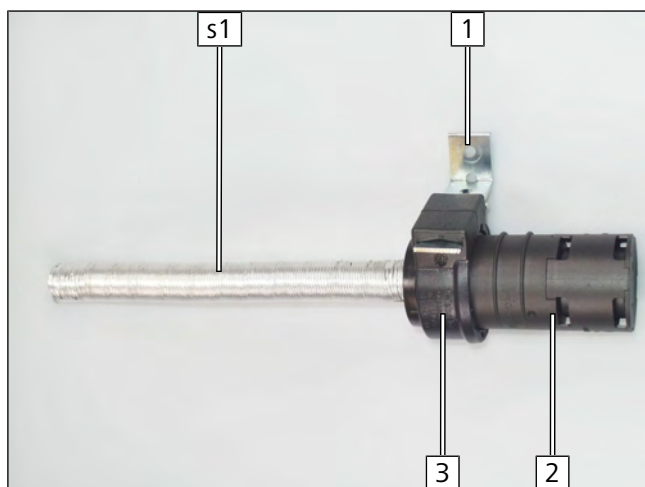


Fig. 102

- 1** Prepared perforated bracket
- 2** Combustion air intake silencer
- 3** Combustion air intake silencer mount



Mounting combustion air intake pipe **s1**

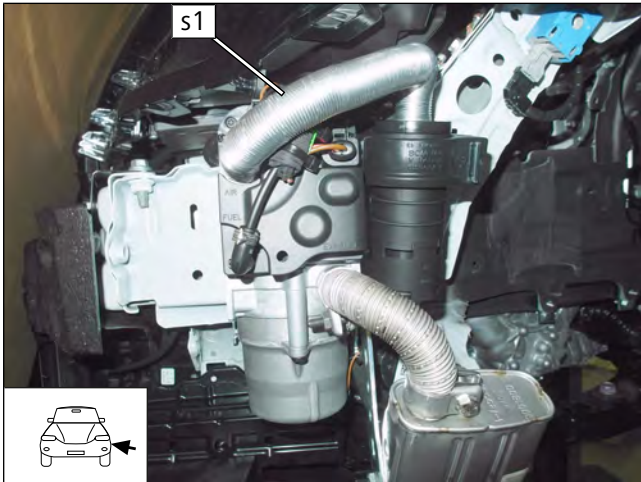


Fig. 103

Mounting combustion air intake silencer

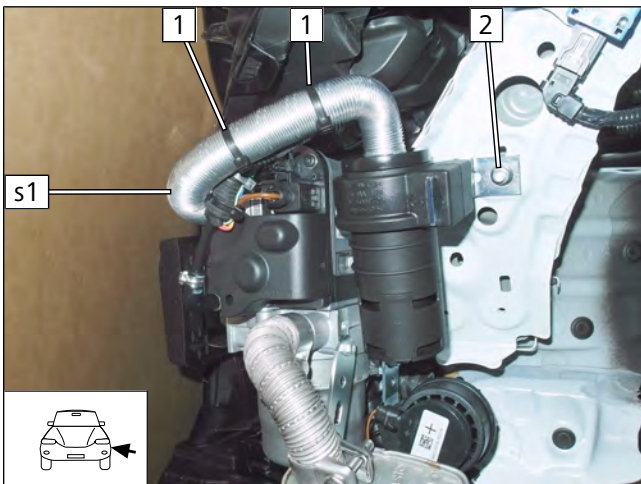


Fig. 104



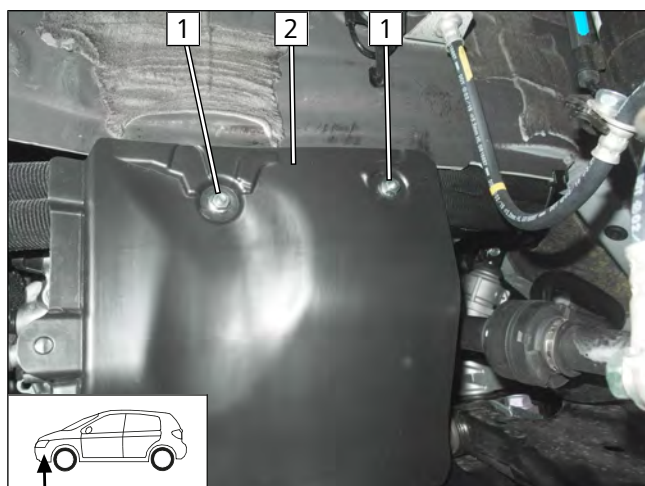
Observe the installation instructions of the combustion air intake silencer.

- 1** Cable tie
- 2** Original vehicle stud bolt, premounted combustion air intake silencer, flanged nut



13 Final work in engine compartment

Installing wheel well trim



- 1 Premounted bolt
- 2 Wheel well trim

Fig. 105



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 and Lexus with AAC



15 Electrical systems of control elements for Toyota Camry

15.1 Remote option (Telestart)

Premounting receiver

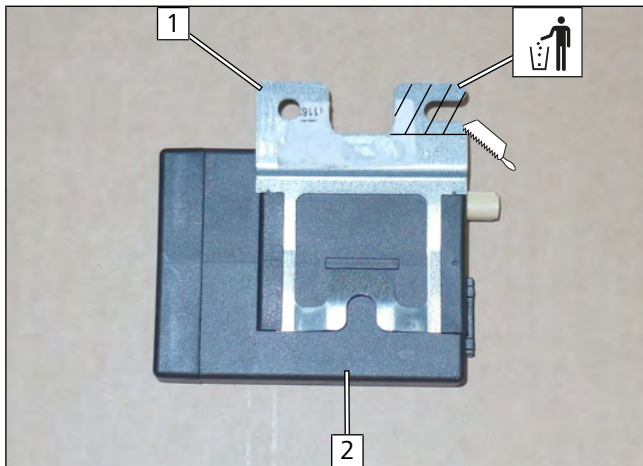


Fig. 106



Observe the Telestart installation documentation.

- 1 Receiver bracket
- 2 Receiver

Mounting receiver

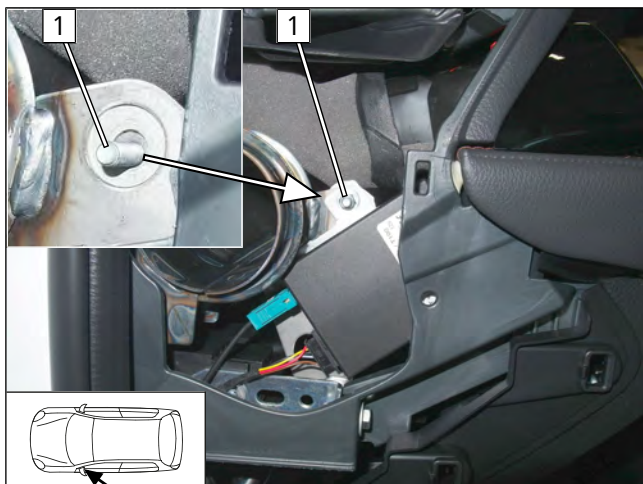


Fig. 107

- 1 M5x16 bolt, large diameter washer, original vehicle hole, premounted receiver, nut

Mounting temperature sensor, only in case of T100 HTM

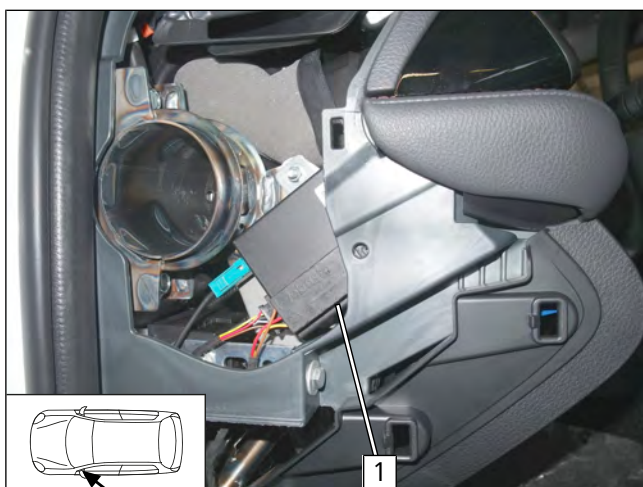


Fig. 108

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



Mounting aerial

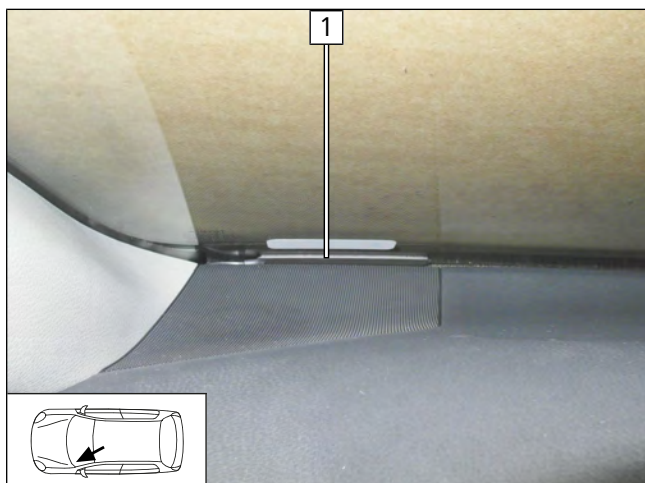


Fig. 109

1 Aerial

15.2 ThermoCall option

Mounting receiver

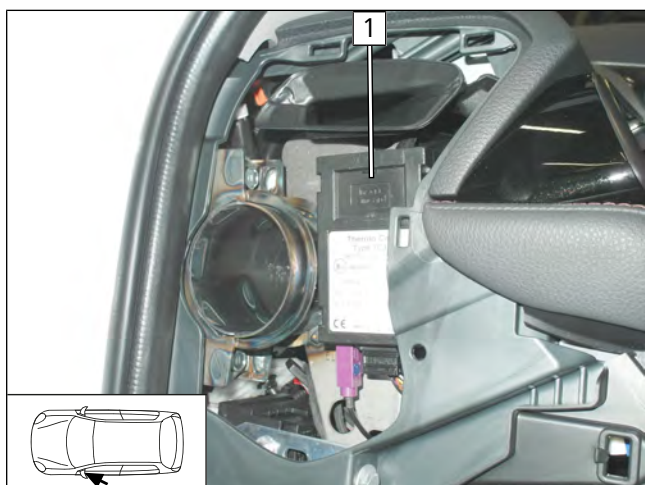


Fig. 110



Observe the ThermoCall installation documentation.

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

Mounting aerial (optional)

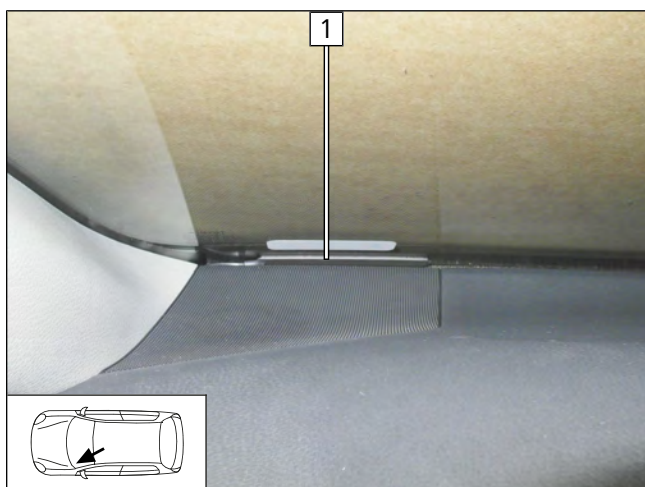


Fig. 111

1 Aerial



16 Electrical systems of control elements for Lexus ES300h

16.1 Remote option (Telestart)

Premounting receiver

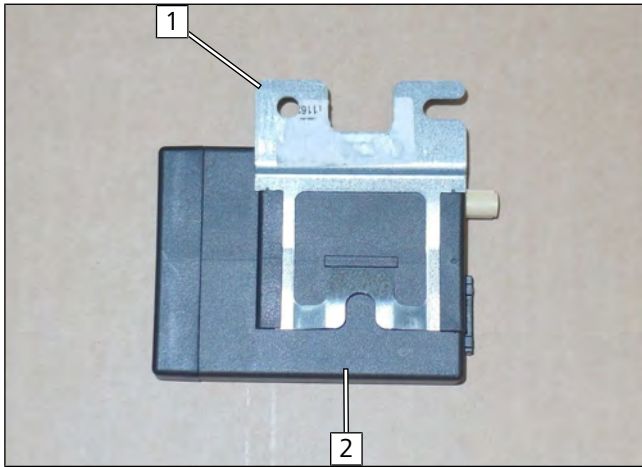


Fig. 112



Observe the Telestart installation documentation.

- 1 Receiver bracket
- 2 Receiver

Mounting receiver

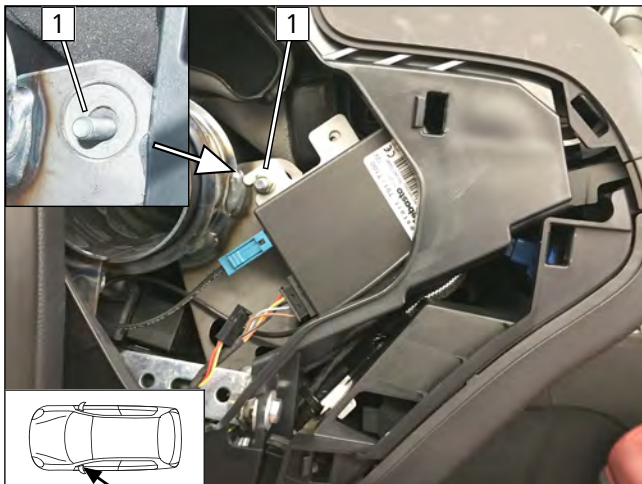


Fig. 113

- 1 M5x16 bolt, large diameter washer, original vehicle hole, premounted receiver, nut

Mounting temperature sensor, only in case of T100 HTM

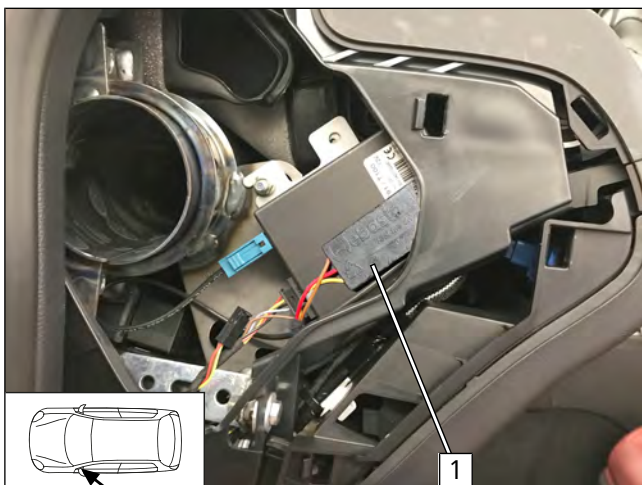


Fig. 114

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



Mounting aerial

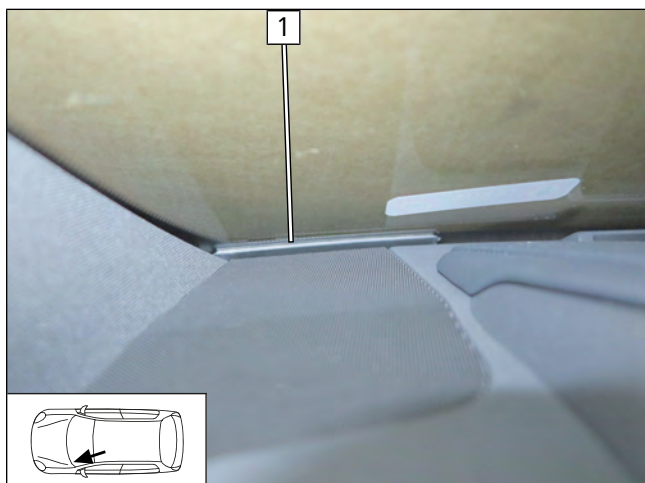


Fig. 115

1 Aerial

16.2 ThermoCall option

Mounting receiver

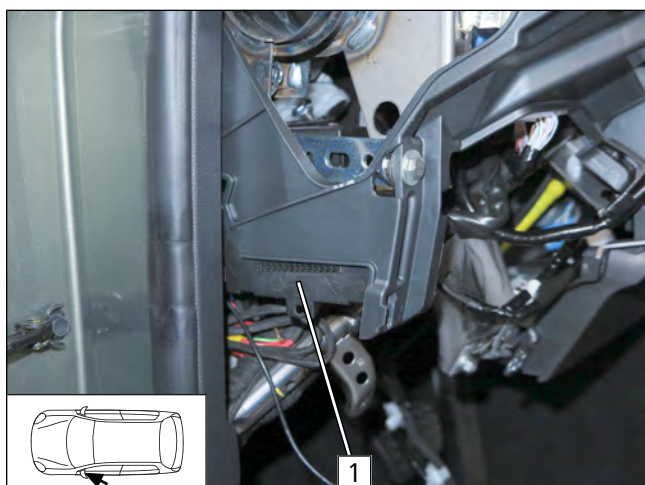


Fig. 116



Observe the ThermoCall installation documentation.

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

Mounting aerial (optional)

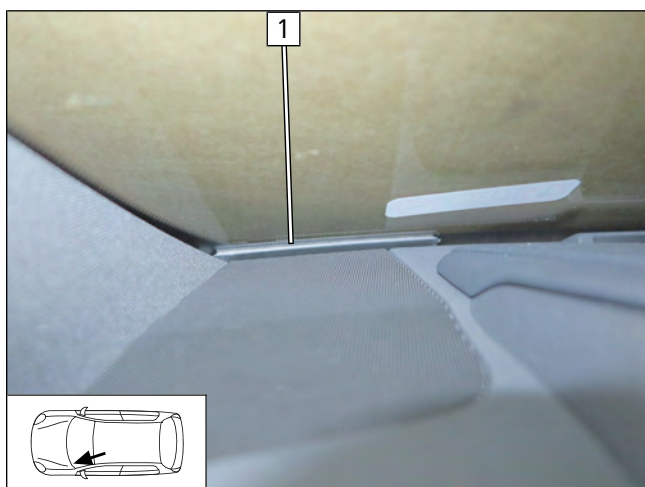


Fig. 117

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)



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

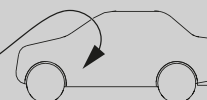
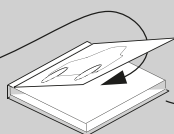
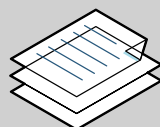
▶ Affix 'Switch off parking heater before refueling' caution label in area of filler neck



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.

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