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# Installation documentation

for Thermo Top Evo water heater

'Island' coolant circuit without engine preheating

Ford Focus

Left-hand drive vehicle

| Manufacturer | Model | Type | Model year | EG-BE-No. / ABE |
|---|---|---|---|---|
| Ford | Focus | DEH | from 2019 | e13* 2007/46* 1911*… |

| Motorisation | Fuel | Emission standard | Transmission type | Output [kW] | Displace-ment [cm³] | Engine code |
|---|---|---|---|---|---|---|
| 1.0P | Petrol | Euro 6d Temp | 6-speed SG | 74 | 999 | JX6G B3DA |
| 1.0P | Petrol | Euro 6d Temp | 6-speed SG | 92 | 999 | JX6G B7DA |

| Validity | Equipment variants | Model |
|---|---|---|
| | | Focus |
| Verified equipment variants | 2 zone automatic air-conditioning | x |
| | LED main headlights | x |
| | LED front fog lights | x |
| | Keyless Go | x |
| | Rear axle with independent suspension | x |
| | Rear axle as twist-beam rear suspension | x |

| Total installation time | Note |
|---|---|
| 9.8 hours | |

# Contents

# 1 List of abbreviations

| | |
|---|---|
| AAC | Automatic air-conditioning |
| ASH | Spacer bracket |
| DP | Fuel pump |
| EFIX | Exhaust end fastener |
| HG | Heater |
| SG | Manual transmission |
| SH2 | Engine compartment fuse holder for F1/F2 |
| UP | Coolant pump |

# 2 Installation notes

## 2.1 Information on Validity

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

## 2.2 Components used

| Designation | Order number |
|---|---|
| Basic delivery scope of Thermo Top Evo 4 | In accordance with price list |
| Installation kit Ford Focus 2019 1.0 petrol | 1327212A |
| Additional 'Webasto Comfort' A/C control kit for Ford Focus | 1327216_ |
| In case of Telestart, control element, as well as indicator lamp in consultation with end customer | In accordance with price list |

## 2.3 Information on Total Installation Time

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

## 2.4 Installation Recommendations

Arrange for the vehicle to be delivered with the tank only about ¼ full.
For the MultiControl CAR option, the recommended installation locations for the Telestart or ThermoCall push button should be confirmed with the end customer.
Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

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

# 3 About this document

## 3.1 Purpose of the document

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

| Thermo Top Evo heater |
|---|

## 3.2 Warranty and liability

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

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

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

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

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

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

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

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

### 3.2.1 Statutory regulations governing installation

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

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

## 3.3 Safety

### Qualifications of installation personnel

The installation personnel must have the following qualifications:

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

### Regulations and legal requirements

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

### 3.3.1 Safety information on installation

#### Danger posed by live parts

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

#### Danger of fire and leaking toxic gases due to improper installation

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

#### Danger due to sharp edges

- Lacerations
- Short circuit due to electrical wire damage

- ▶ Fit protectors on sharp edges.

## 3.4 Using this document

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

### 3.4.1 Explanatory Notes on the Document

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

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

### 3.4.2 Use of symbols

**DANGER**

Type and source of the risk

Consequences: Failure to follow the instructions can result in death

▶ Actions to protect yourself against risks.

**WARNING**

Type and source of the risk

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

▶ Actions to protect yourself against risks.

**CAUTION**

Type and source of the risk

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

▶ Actions to protect yourself against risks.

Type and source of the risk

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

▶ Actions to protect yourself against risks.

Reference to the vehicle manufacturer's specific documents.

Note on a special technical feature

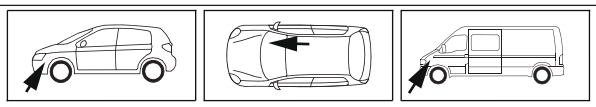
### 3.4.3 Work step identification marks

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

| Mechanical system | Electrical system | High-voltage | Coolant |
|---|---|---|---|
| | | | |

| Combustion air | Fuel | Exhaust | Software |
|---|---|---|---|
| | | | |

### 3.4.4 Orientation aid



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

### 3.4.5 Use of highlighting

| Highlight | Explanation |
|---|---|
| ▶ | 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 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

**Specified temperature for fabric heat shrink tubing**

- Shrink temperature max. 230°C

**Necessary special tools**

- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Hose clamping pliers
- Hose cutter
- Automatic wire stripper 0.2 - 6 $mm^2$
- Crimping pliers for cable lugs 0.5 – 10 $mm^2$
- Crimping pliers for male connector 0.14 – 6 $mm^2$
- Crimping pliers for connector 0.25 – 6 $mm^2$
- Torque wrench for 2.0 - 10 Nm
- Deep-hole marker
- Metric thread-setter kit
- Angle drill
- Webasto Thermo Test Diagnosis with current software

# 5 Preparing measures

## 5.1 Vehicle preparation

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

| Vehicle area | Components to be removed | Other applicable documents |
|---|---|---|
| General | ▶ Open the fuel tank cap<br>▶ Ventilate the fuel tank<br>▶ Close the fuel tank cap again<br>▶ Depressurise the cooling system | |
| Engine compartment and body | ▶ Battery<br>▶ Air filter box<br>▶ Charge-air tube between turbo charger and intercooler<br>▶ Front wheel on the front passenger's side<br>▶ Front passenger's side wheel well trim<br>▶ Engine underride protection<br>▶ Underbody underride protection on the driver's side<br>▶ Exhaust system (in case of rear axle with independent suspension)<br>▶ Tank cover on the driver's side<br>▶ Tank heat shield plate | |
| Passenger compartment | ▶ Side instrument panel trim on the driver's side<br>▶ Detach the lower instrument panel trim on the driver's side<br>▶ A/C control panel (see dismantling instructions)<br>▶ Glove box | |

## 5.2 Heater preparation

| | | |
|---|---|---|
| Engine compartment | ▶ Remove years that do not apply from the type and duplicate label<br>▶ Attach the duplicate label (type label) in the appropriate place in the engine compartment | |

# 6 Installation overview

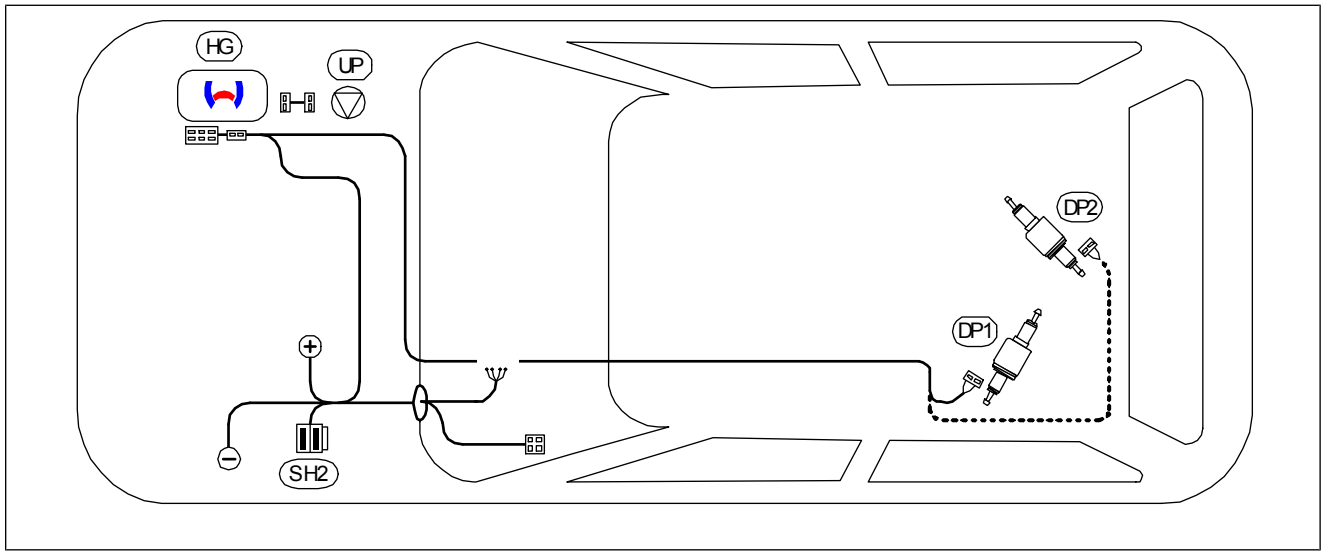



*Fig. 1*

## Legend to installation overview

| Abbreviation | Component |
|---|---|
| DP 1 | Fuel pump, version 1, rear axle with independent suspension |
| DP 2 | Fuel pump, version 2, rear axle as twist-beam rear suspension |
| HG | Heater |
| SH2 | Engine compartment fuse holder for F1/F2 |
| UP | Coolant pump |

## Heater installation location

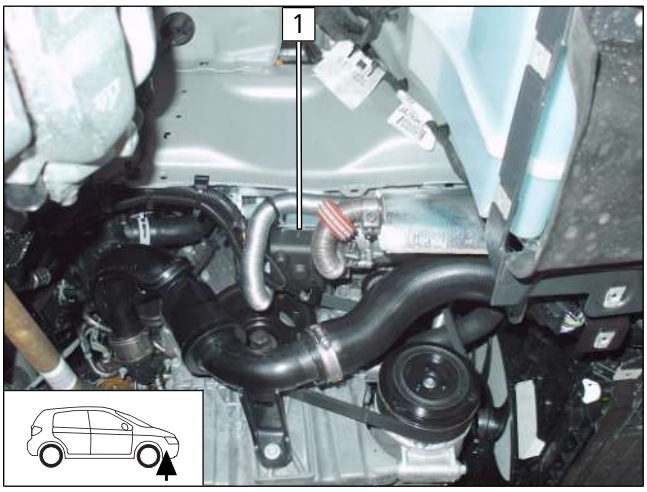



*Fig. 2*

1 Heater

# 7 Electrical system of engine compartment

## Cutting to length/ assigning corrugated tube

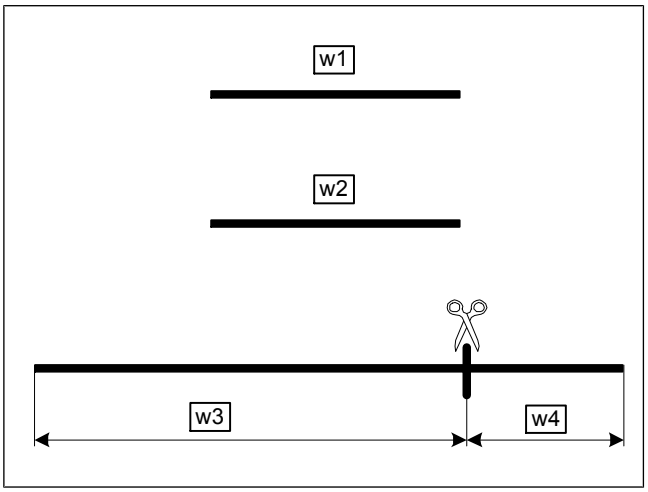



*Fig. 3*

**w1** 430 Ø10
**w2** 500 Ø13 slit
**w3** 1800 Ø10
**w4** 300 Ø10 (only in case of vehicles with independent suspension)

## Preparing wiring harness

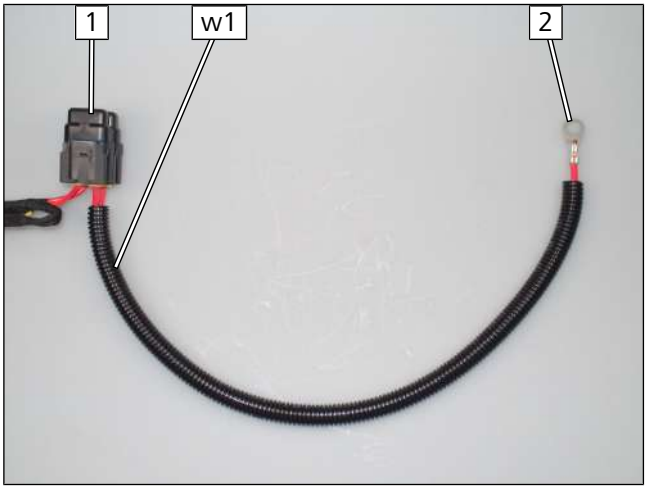



*Fig. 4*

**1** SH2
**2** Ø8 cable lug

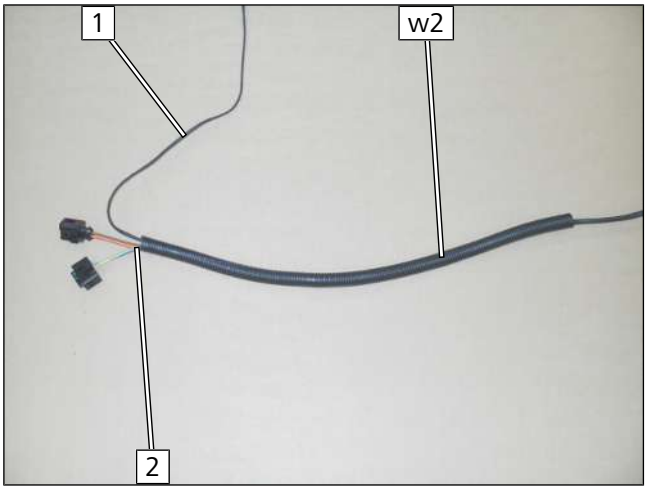



*Fig. 5*

**1** Fuel pump wiring harness
**2** Heater wiring harness

## Preparing perforated bracket

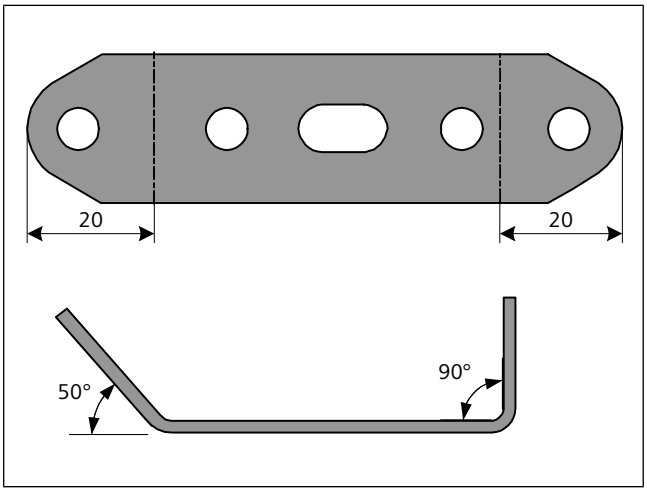



*Fig. 6*

## Premounting perforated bracket

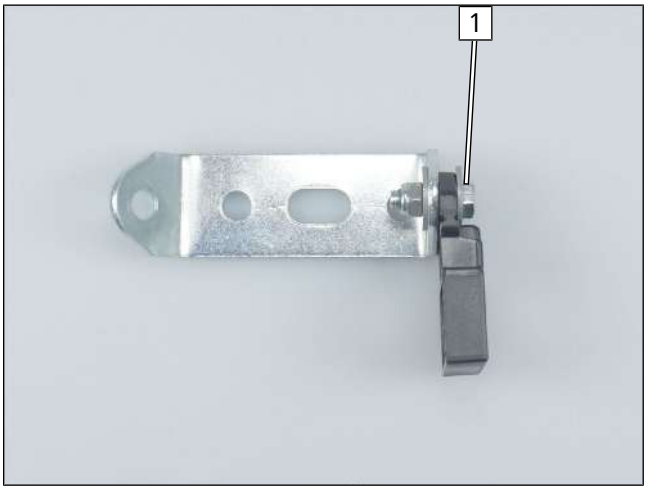



*Fig. 7*

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

## Installing SH2


*Fig. 8*

1 M6x16 bolt, premounted perforated bracket, original vehicle hole, flanged nut

2 Fuses F1 and F2

## Fastening original vehicle wiring harness

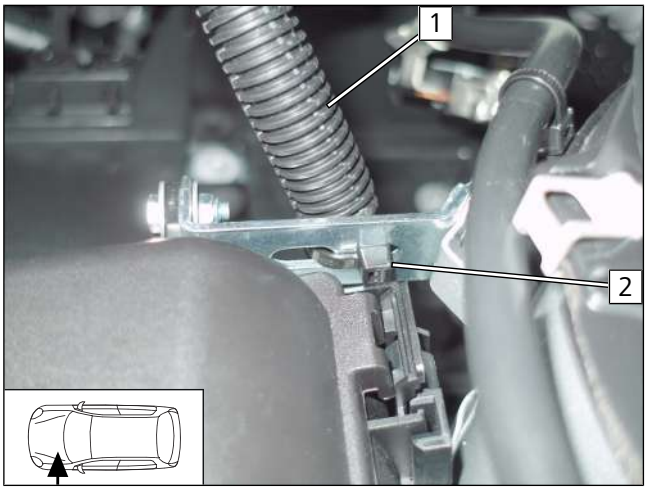



*Fig. 9*

1 Original vehicle wiring harness
2 Cable tie

## Routing wiring harnesses

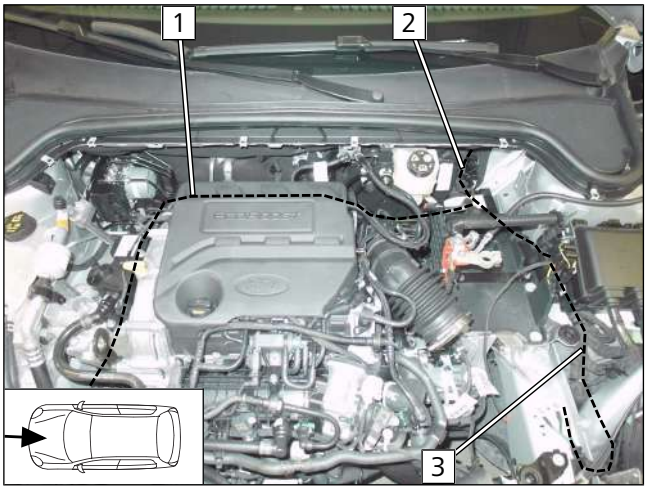



*Fig. 10*

▶ Route wiring harnesses along original vehicle lines and fasten with cable ties.

1 Heater wiring harness
2 Passenger compartment and control element wiring harnesses
3 Earth wire

## Earth wire connection

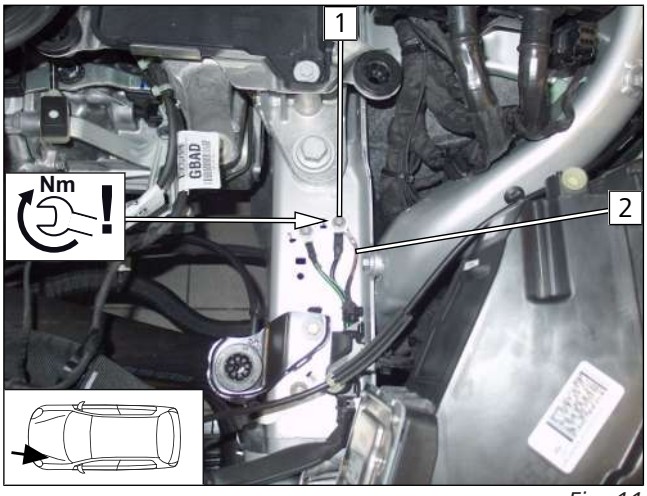



*Fig. 11*

**DANGER**

Fire hazard due to insufficient tightening torque

▶ Observe tightening torque

1 Original vehicle earth support point
2 Earth wire

## Passenger compartment wiring harness pass through

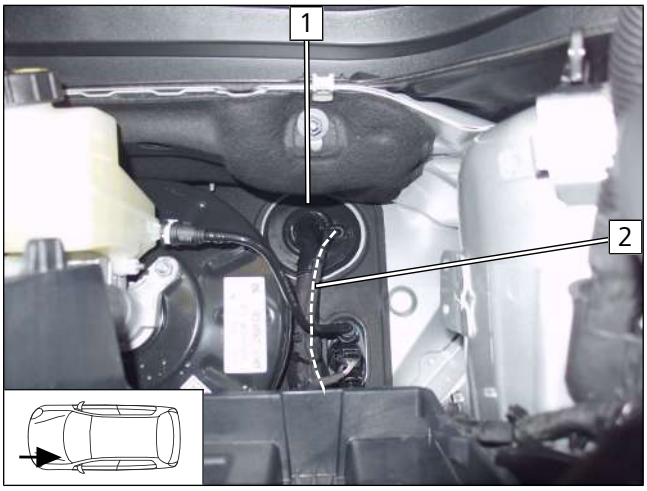



*Fig. 12*

1 Protective rubber plug

2 Passenger compartment and control element wiring harnesses

# 8 Mechanical system

## 8.1 Preparing bracket

Mounting angle bracket

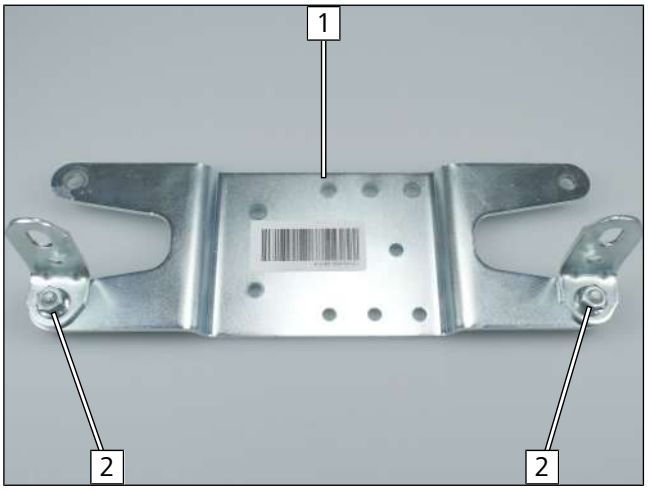



*Fig. 13*

1 Bracket

2 M6x12 bolt, bracket, angle bracket, flanged nut

## 8.2 Preparing installation location

Removing plastic clip

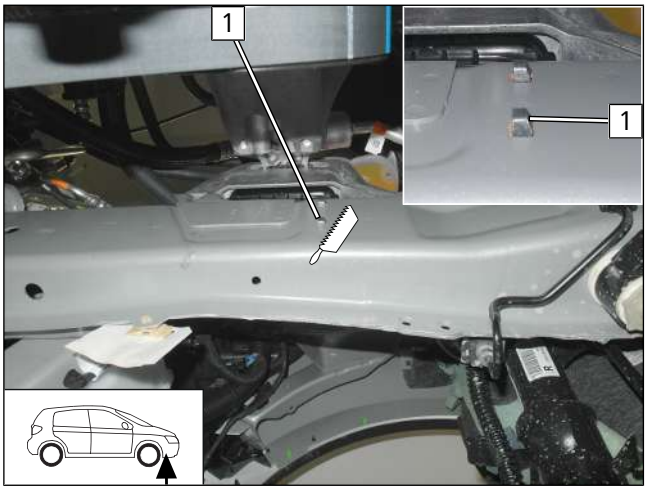



*Fig. 14*

1 Plastic clip

Drilling hole/inserting rivet nut

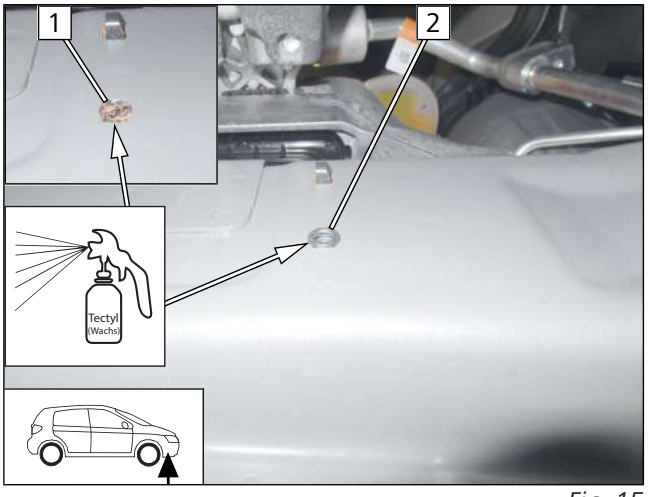



*Fig. 15*

▶ Enlarge the hole where plastic clip 1 was removed from to Ø9.

2 Rivet nut

## Copying hole pattern

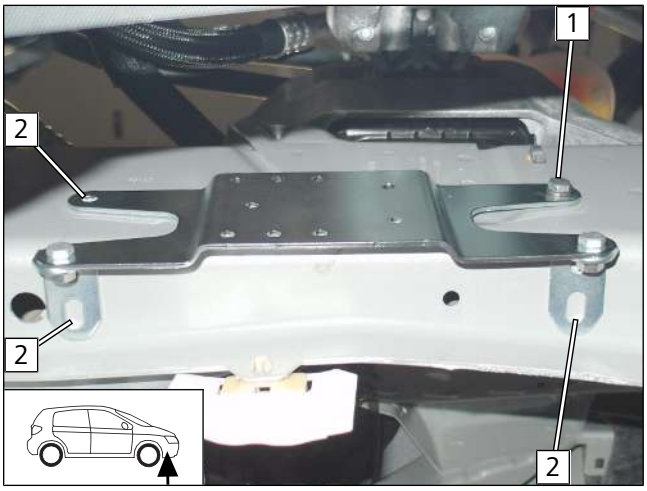



*Fig. 16*

▶ Mount bracket as shown.

[1] M6x25 bolt, spring lock washer, premounted bracket, rivet nut

[2] Copy hole pattern

## Inserting rivet nut

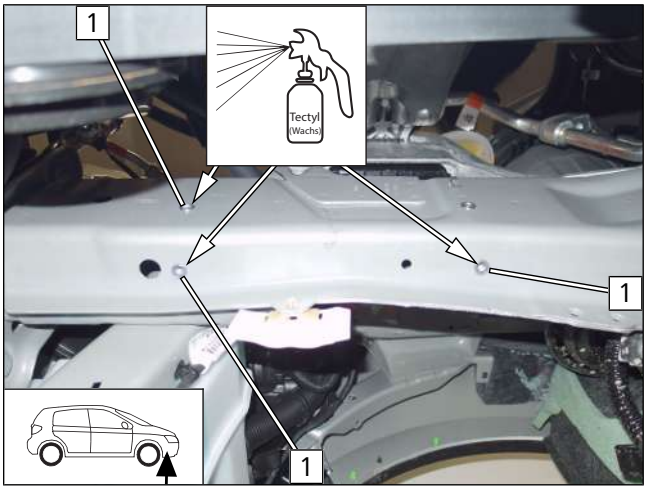



*Fig. 17*

[1] Ø9 hole, rivet nut

## Moving original vehicle tag

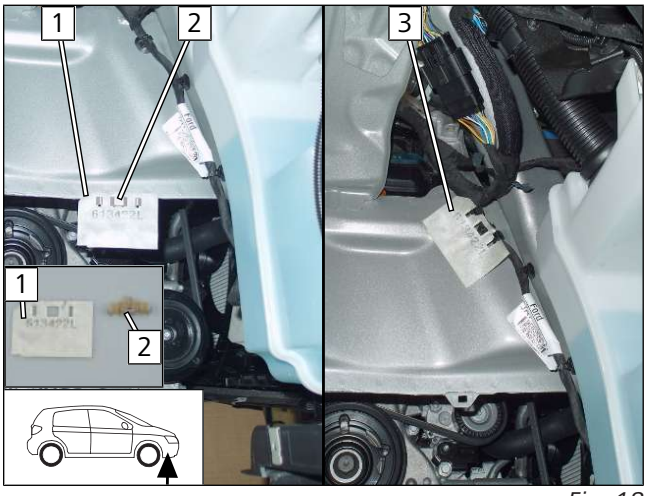



*Fig. 18*

▶ Remove original vehicle tag [1] with bracket [2]. Discard the bracket and attach the tag at position [3] to the original vehicle lines with cable ties.

## 8.3 Premounting heater

### Mounting water connection piece

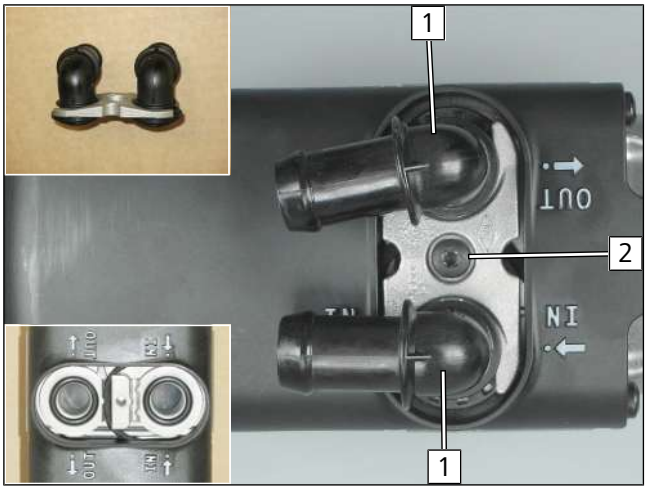



*Fig. 19*

Observe the general installation instructions of the heater.

**1** 90° water connection piece, seal

**2** 5x15 self-tapping bolt, water connection piece retaining plate

### Mounting moulded hose

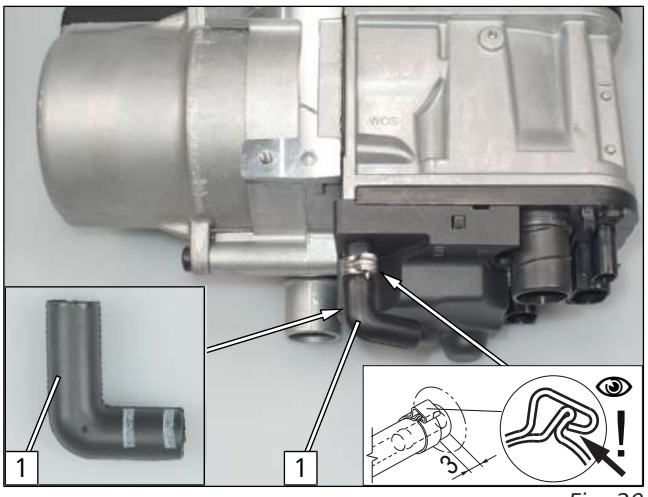



*Fig. 20*

▶ Mount long side of 90° moulded hose **1** and Ø10 clamp.

### Premounting bracket

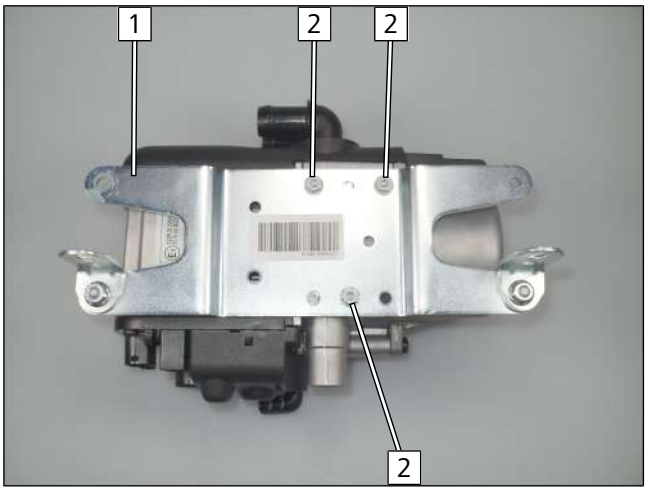



*Fig. 21*

**1** Bracket

**2** 5x13 self-tapping bolt

## 8.4 Heater mounting

### Preparing perforated bracket

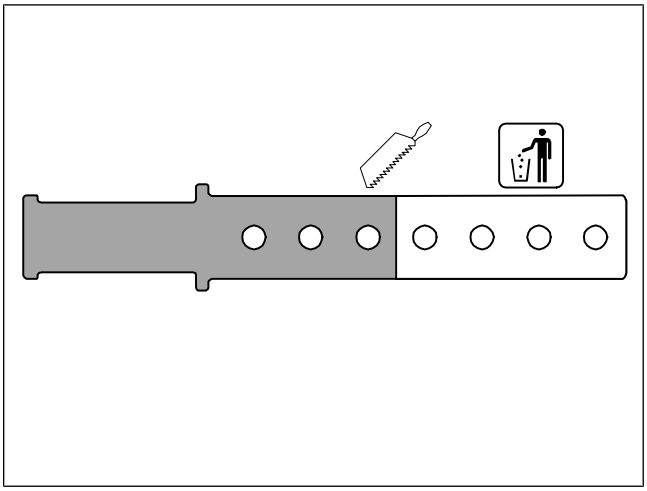


*Fig. 22*

### Mounting heater

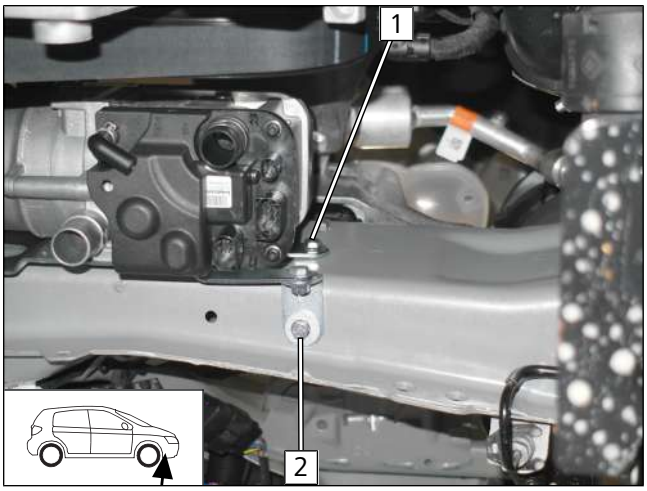



*Fig. 23*

▶ Mount the heater loosely.

- 1 M6x25 bolt, spring lock washer, bracket, rivet nut
- 2 M6x25 bolt, spring lock washer, large diameter washer, angle bracket, rivet nut

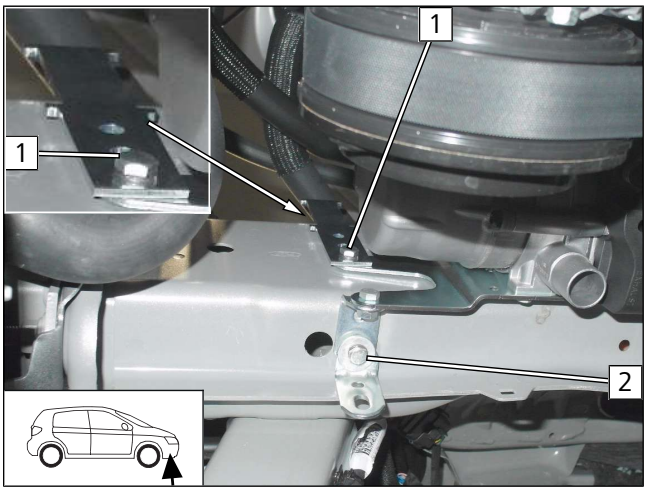



*Fig. 24*

▶ Align prepared perforated bracket at position 1 vertically.

- 1 M6x25 bolt, spring lock washer, prepared perforated bracket, bracket, rivet nut
- 2 M6x25 bolt, spring lock washer, large diameter washer, angle bracket, angle bracket, rivet nut

▶ Tighten all screw connections.

## Mounting heater wiring harness

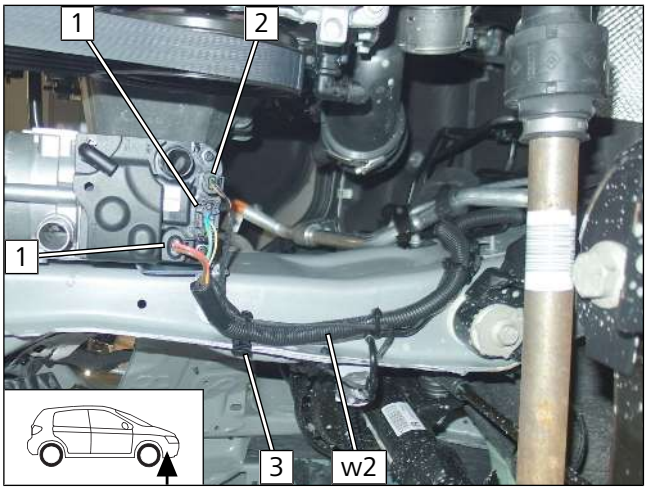



*Fig. 25*

▶ Route corrugated tube **w2** and coolant pump wiring harness along original vehicle lines as shown.

- **1** Heater wiring harness connector
- **2** Coolant pump wiring harness connector
- **3** Edge clip cable tie

## Routing coolant pump wiring harness

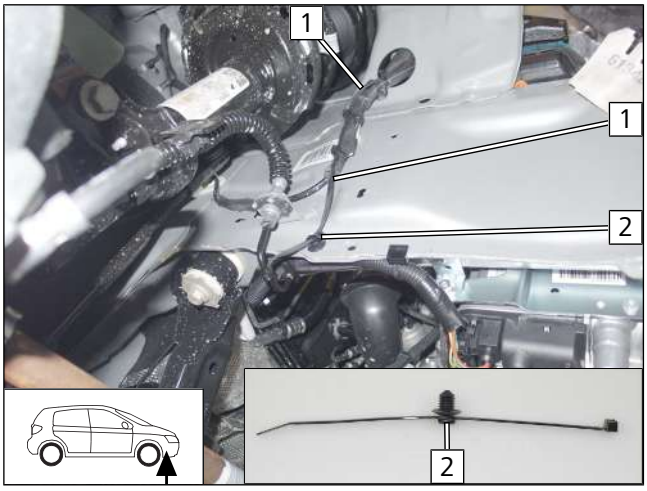



*Fig. 26*

▶ Route coolant pump wiring harness **1** along original vehicle lines in the engine compartment as shown and fasten with cable ties.

- **2** Clip-type cable tie

# 9 Fuel

## DANGER

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

The incorrect installation of the fuel extractor can cause damage and fire.

- ▶ Avoid electrostatic discharges and open fire
- ▶ When working on the fuel system, ensure sufficient ventilation and bleeding
- ▶ Open the fuel tank cap of the vehicle
- ▶ Ventilate the fuel tank
- ▶ Re-close the tank lock
- ▶ Catch any fuel running off with an appropriate container

**Danger of damage to components**

- ▶ Install fuel line and fuel pump wiring harness so that they are protected against stone impact
- ▶ Provide rub protection for fuel line and wiring harness in areas where there are sharp edges

Dismantling fuel pump connector X7

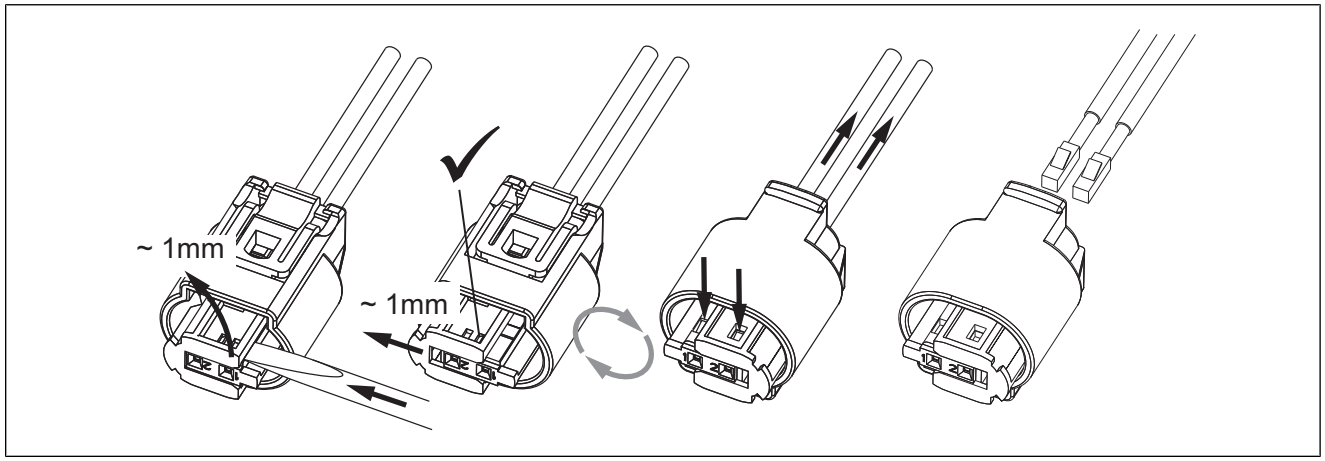



*Fig. 27*

## 9.1 Routing fuel line

Connecting heater

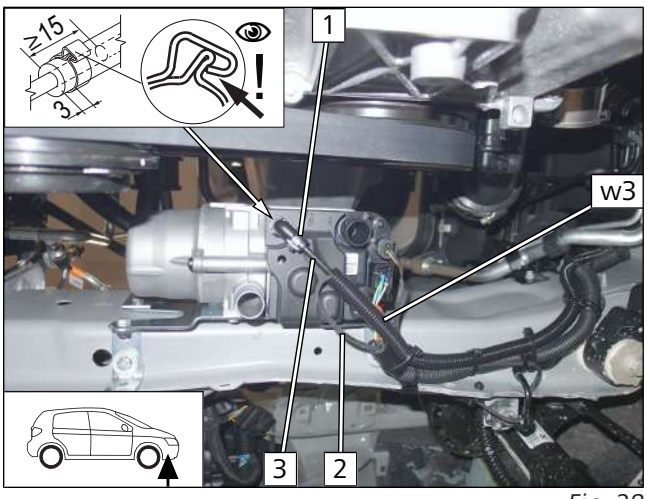



*Fig. 28*

- ▶ Draw fuel line [3] and fuel pump wiring harness [2] into corrugated tube [w3] and route in the engine compartment.

[1] Ø10 clamp

Routing in engine compartment

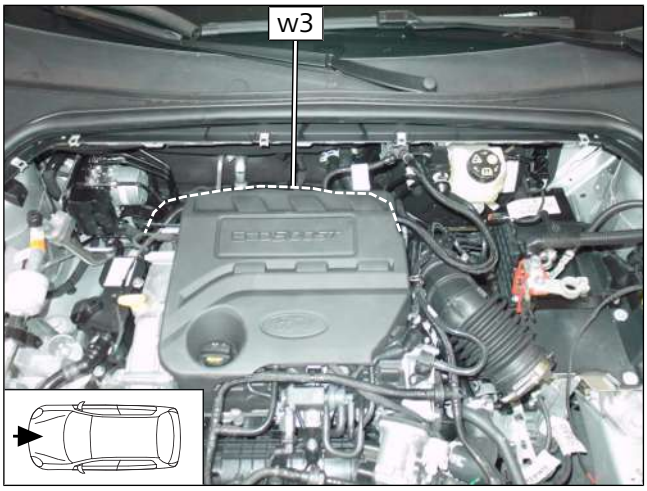



*Fig. 29*

▶ Route corrugated tube **w3** with fuel line and fuel pump wiring harness in engine compartment and further to the underbody as shown.

Routing on underbody

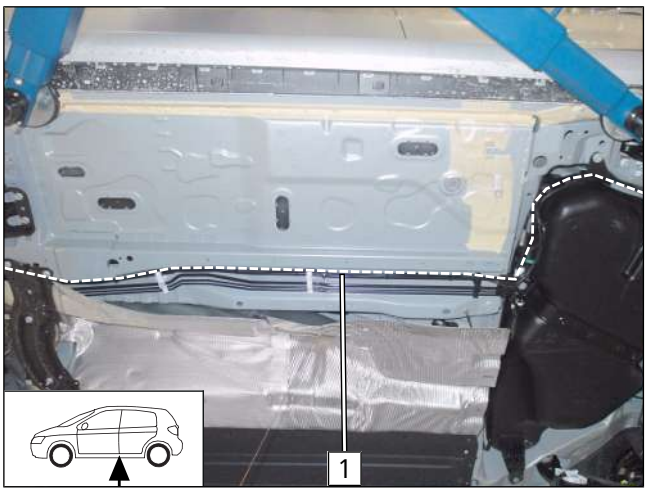



*Fig. 30*

▶ Route fuel line and fuel pump wiring harness along original vehicle fuel lines to underbody.

## 9.2 Fuel, vehicle with independent suspension

### 9.2.1 Mounting and connecting fuel pump

Preparing fuel pump perforated bracket

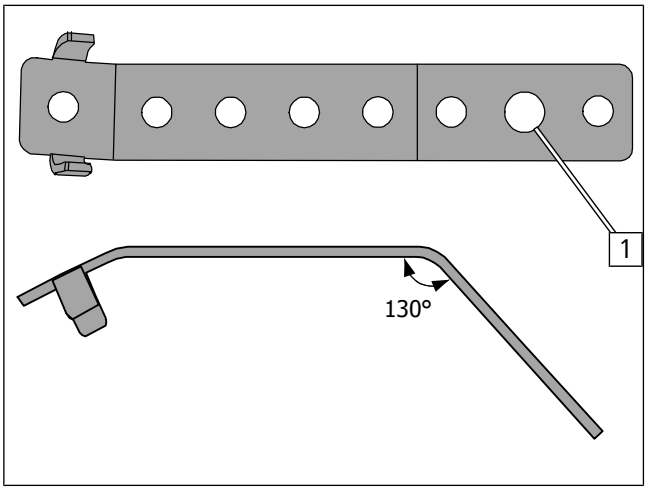



*Fig. 31*

1 Drill out hole to Ø8.5

## Premounting fuel pump

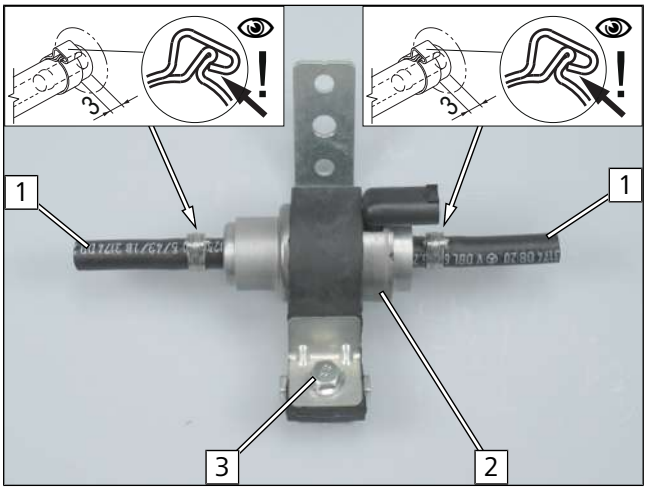



*Fig. 32*

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

## Mounting fuel pump

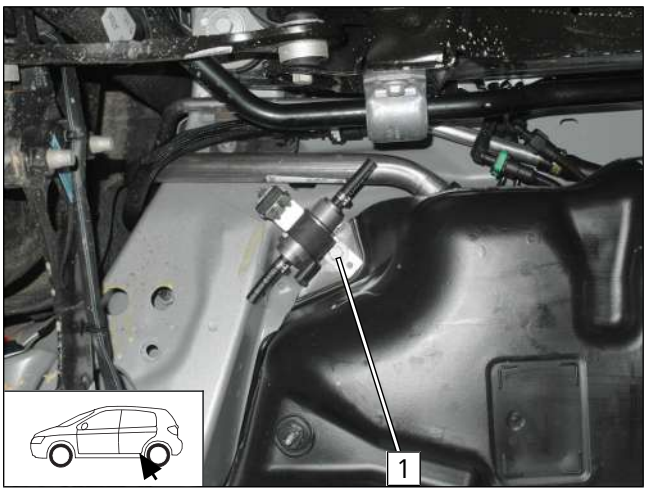



*Fig. 33*

1 Original vehicle bolt, premounted fuel pump, original vehicle thread

## Assembling fuel pump connector X7

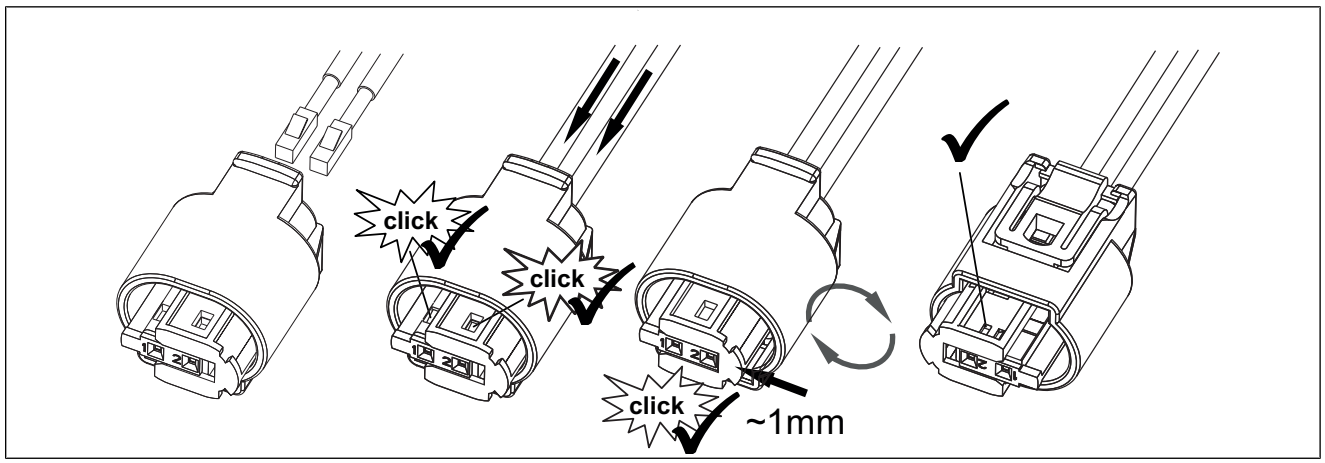



*Fig. 34*

Connecting fuel pump

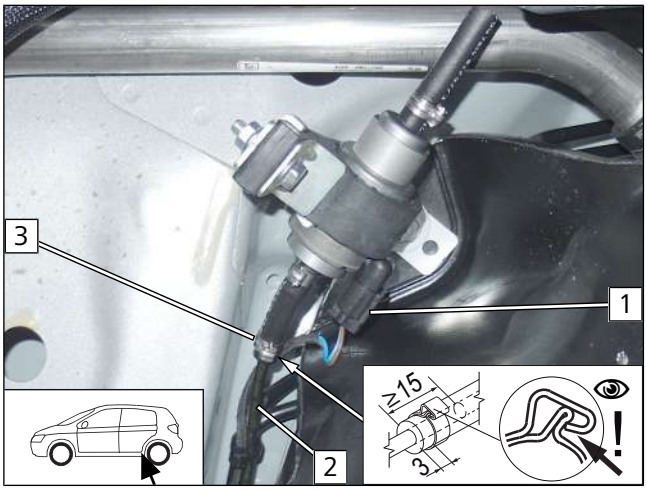



*Fig. 35*

1 Connector X7 of fuel pump wiring harness
2 Heater fuel line
3 Ø10 clamp

## 9.2.2 Installing fuel extractor

Cutting fuel extractor 1 to length

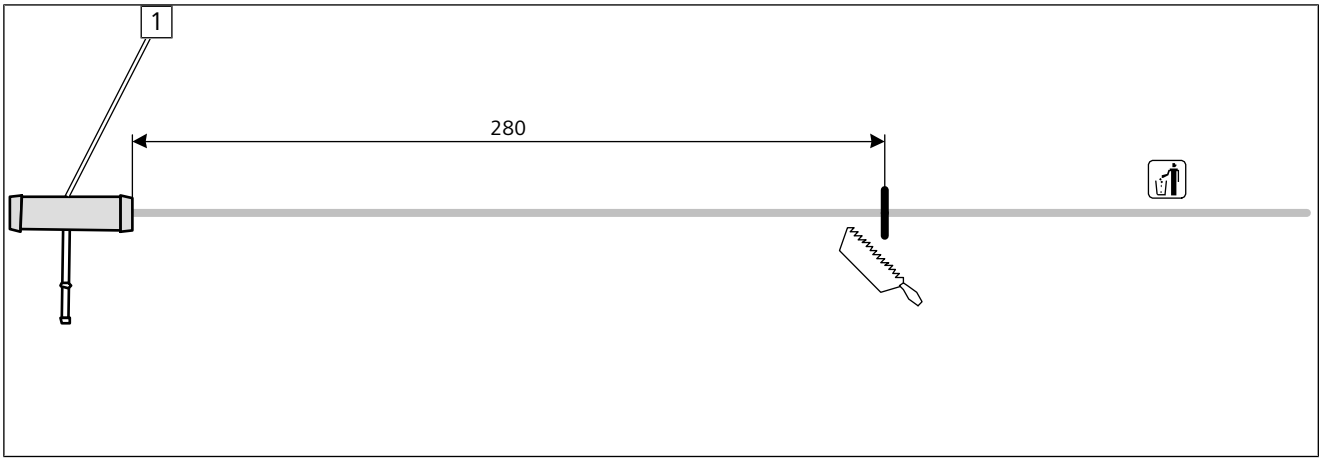



*Fig. 36*

Preparing fuel extractor

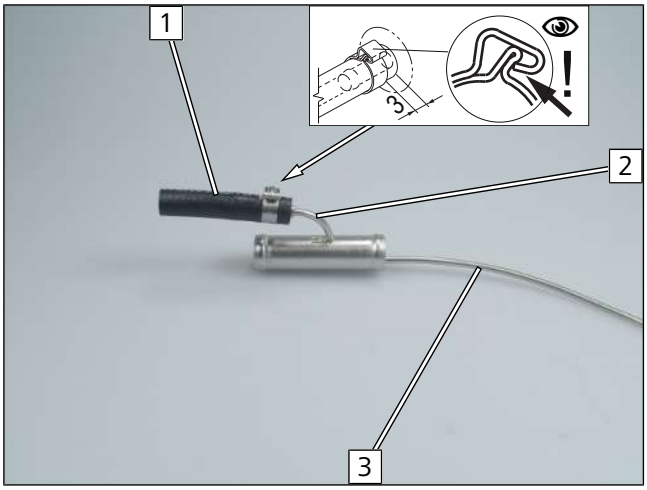



*Fig. 37*

Observe the installation instructions of the tank extracting device.

▶ Bend fuel extractor 3 as shown in template and cut to length. Bend extraction pipe 2 as shown.

1 Hose section, Ø10 clamp

## Detaching tank ventilation hose

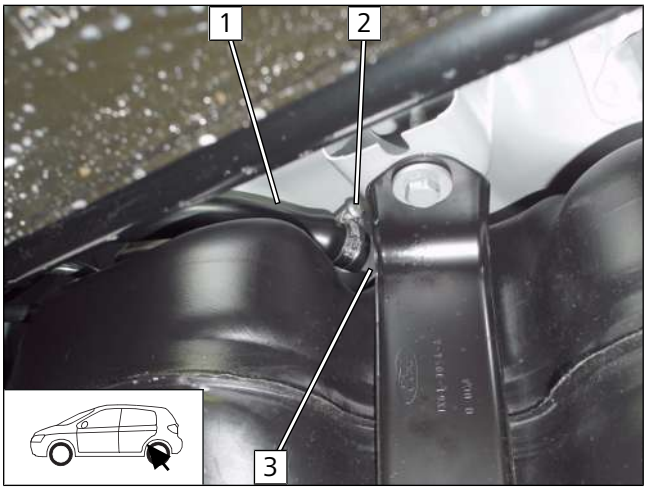



*Fig. 38*

**DANGER**

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

- ▶ Pull tank ventilation hose [1] from fuel tank connection piece [3].
- ▶ Original vehicle clamp [2] will be reused.

## Cutting tank ventilation hose

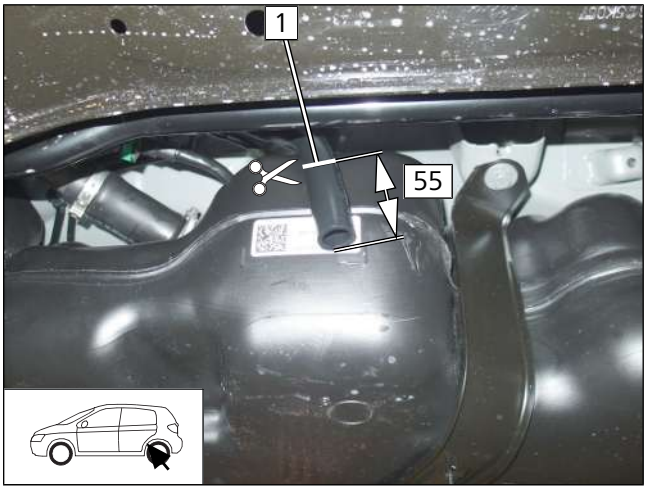



*Fig. 39*

[1] Cutting point

## Mounting hose section

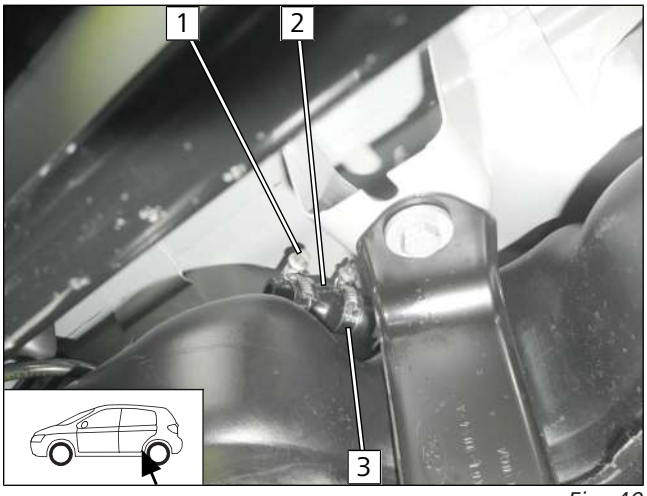



*Fig. 40*

[1] Mount Ø16-27 screw clamp loosely
[2] Cut-off hose section
[3] Original vehicle clamp

## Mounting fuel extractor

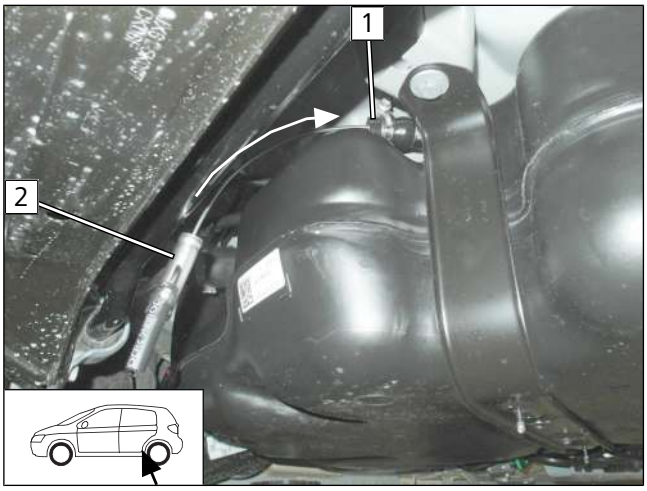



*Fig. 41*

▶ Insert fuel extractor [2] through hose section [1].

*Fig. 42*

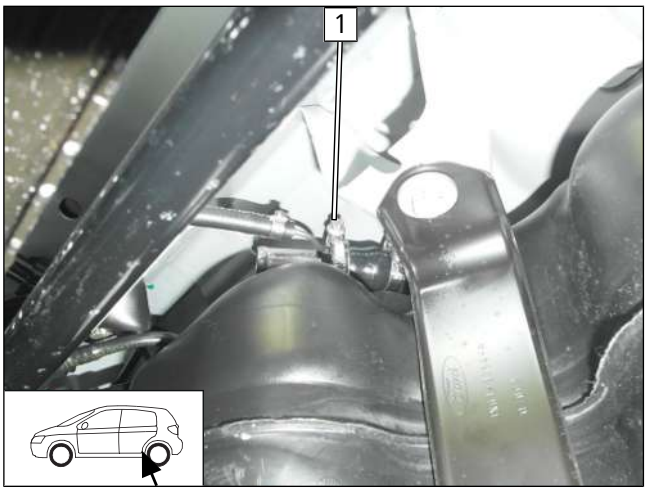



*Fig. 43*

▶ Turn to align the end of the fuel extractor in the tank toward the tank bottom.

▶ Tighten screw clamp [1].

Connecting tank ventilation hose

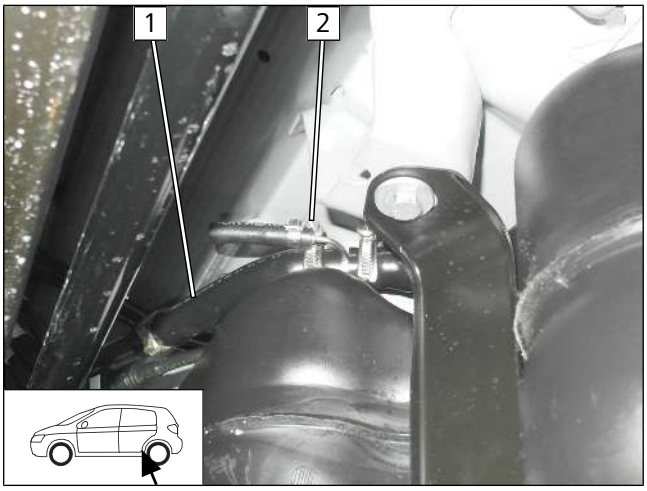



*Fig. 44*

1 Tank ventilation hose
2 Ø16-27 screw clamp

Connecting fuel extractor and fuel pump

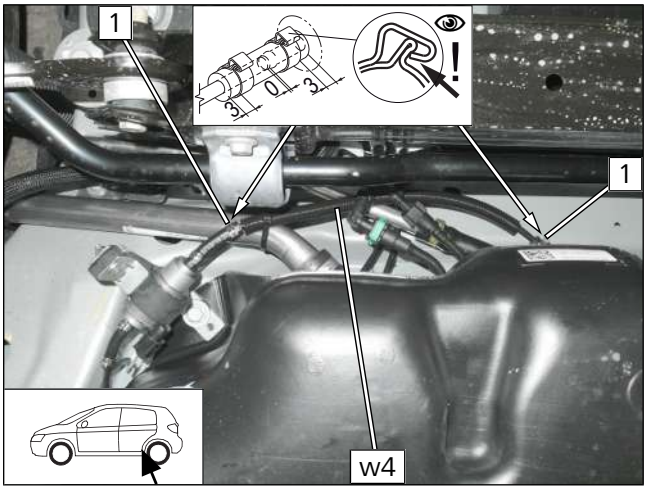



*Fig. 45*

▶ Draw fuel line into corrugated tube **w4** and attach to original vehicle lines with cable ties.

1 Ø10 clamp

## 9.3 Fuel, vehicle with twist-beam rear suspension

### 9.3.1 Mounting and connecting fuel pump

Drilling hole

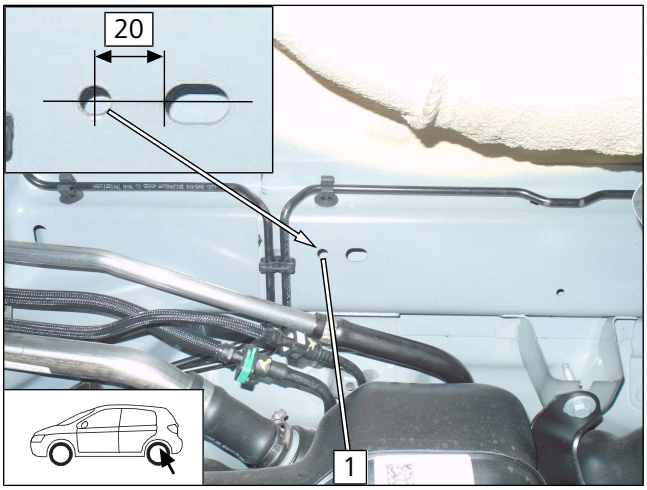



*Fig. 46*

1 Ø9 hole

## Inserting rivet nut

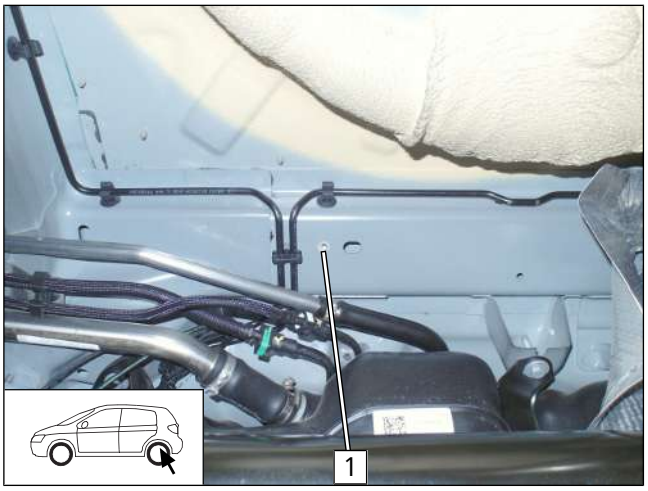



*Fig. 47*

1 Rivet nut

## Premounting fuel pump

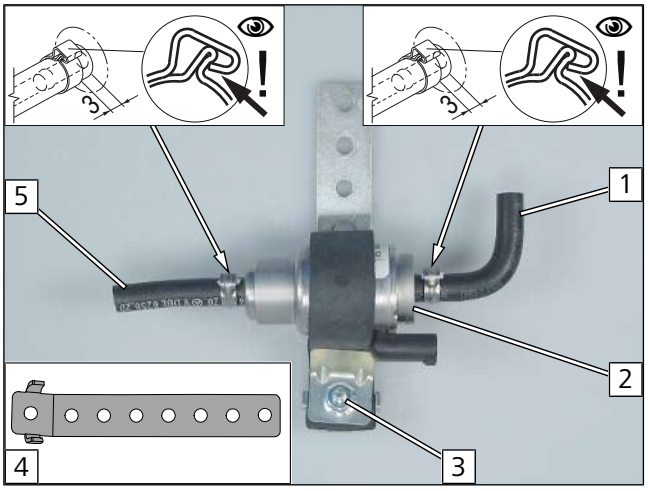



*Fig. 48*

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

## Mounting fuel pump

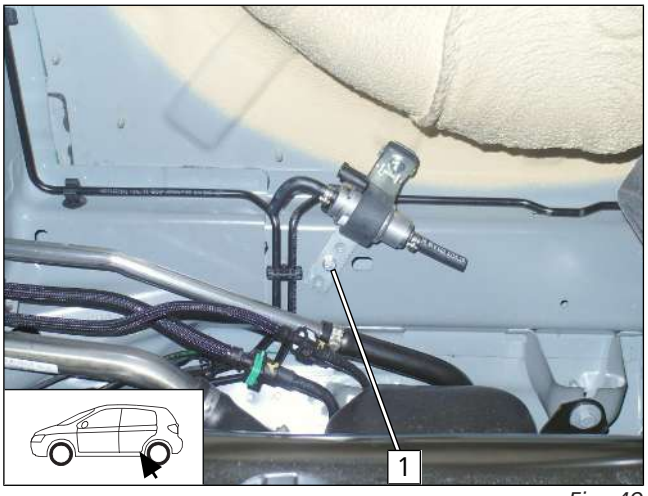



*Fig. 49*

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

Assembling fuel pump connector X7

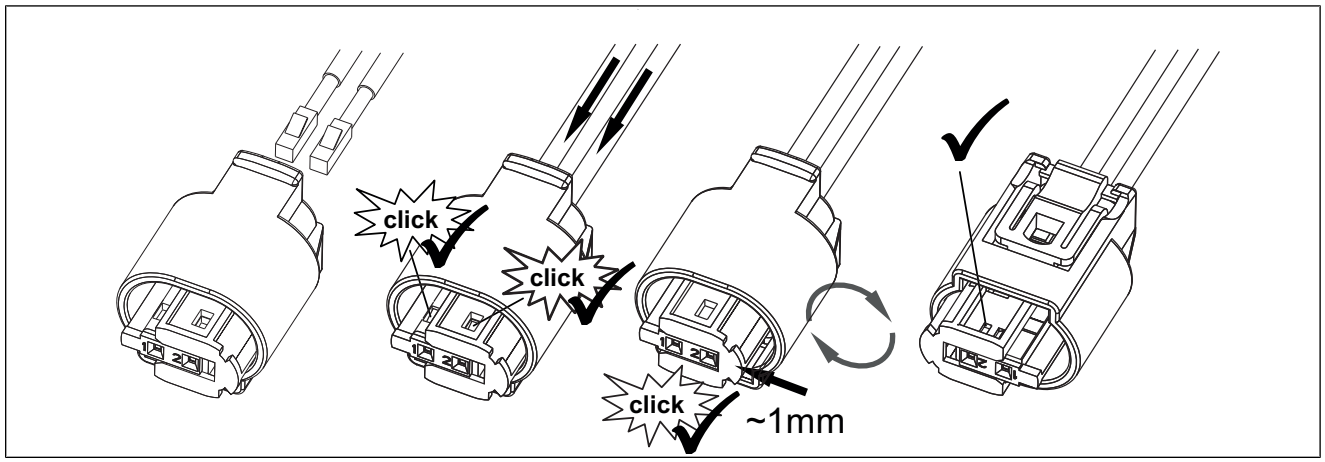



*Fig. 50*

Connecting fuel pump

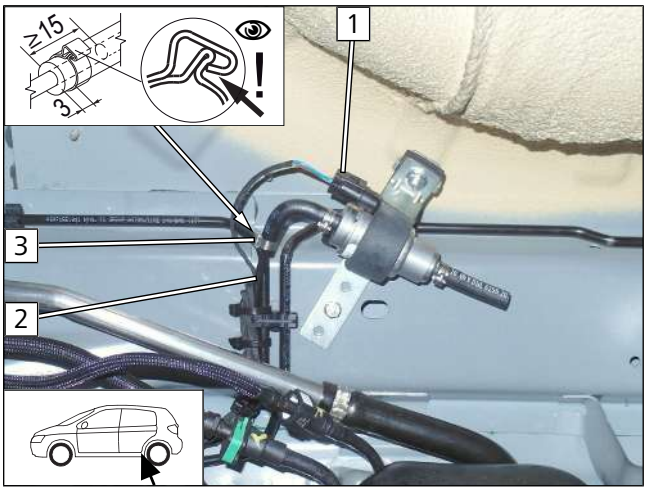



*Fig. 51*

1 Connector X7 of fuel pump wiring harness
2 Heater fuel line
3 Ø10 clamp

## 9.3.2 Installing fuel extractor

Cutting fuel extractor 1 to length

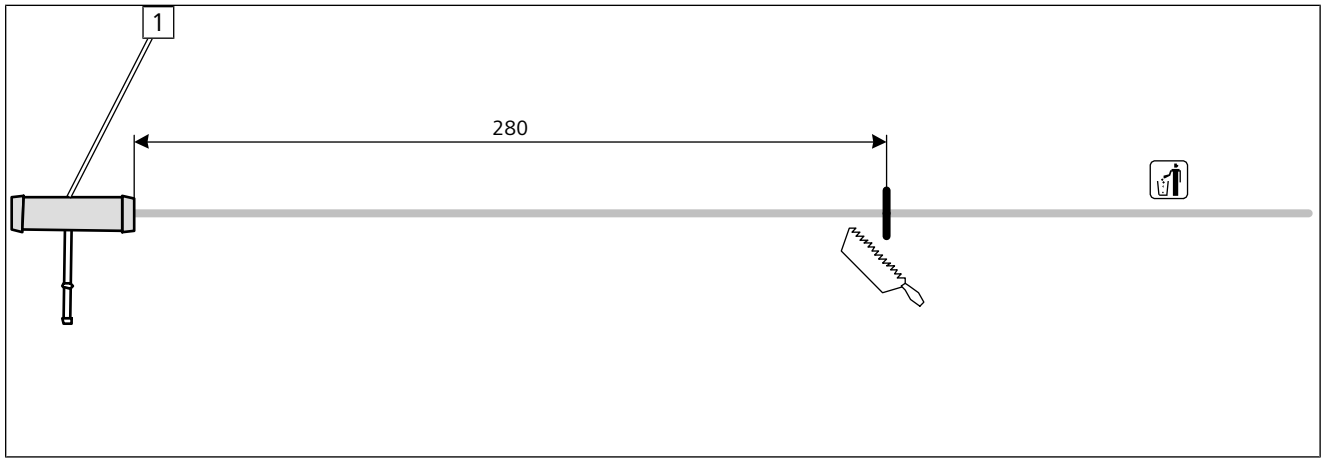



*Fig. 52*

## Preparing fuel extractor

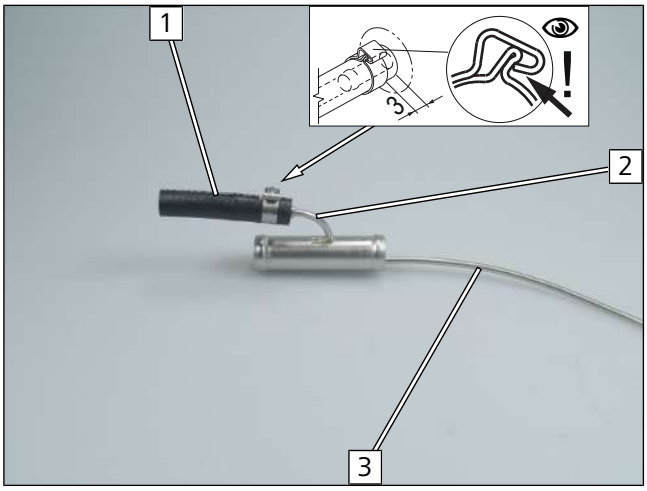



*Fig. 53*

Observe the installation instructions of the tank extracting device.

▶ Bend fuel extractor [3] as shown in template and cut to length. Bend extraction pipe [2] as shown.

[1] Hose section, Ø10 clamp

## Detaching tank ventilation hose

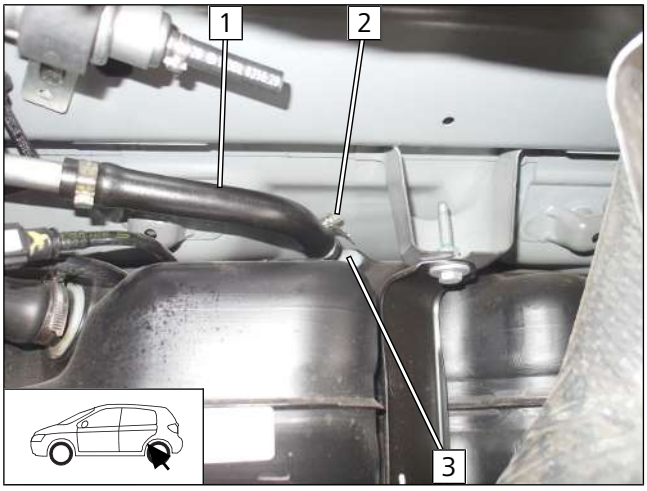



*Fig. 54*

**DANGER**

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

▶ Pull tank ventilation hose [1] from fuel tank connection piece [3].

▶ Original vehicle clamp [2] will be reused.

## Cutting tank ventilation hose

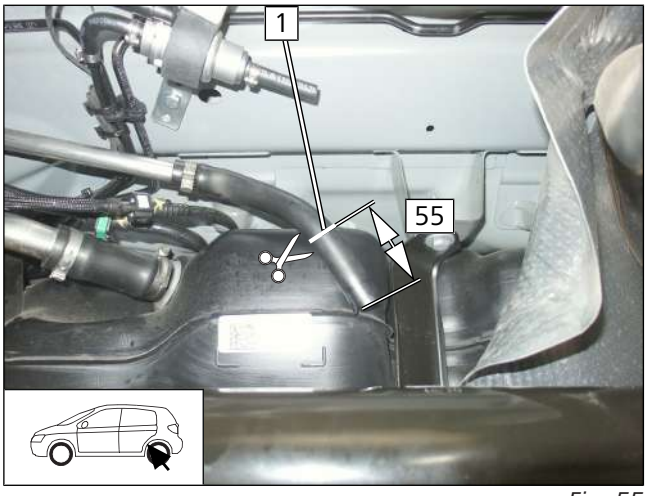



*Fig. 55*

[1] Cutting point

## Mounting hose section

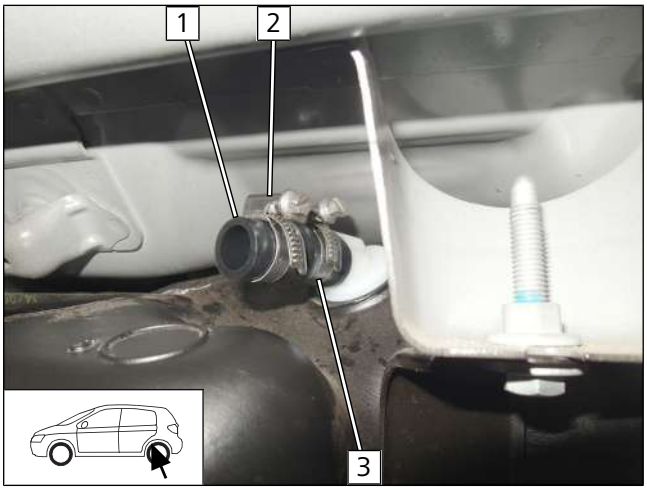



*Fig. 56*

1 Cut-off hose section
2 Mount Ø16-27 screw clamp loosely
3 Original vehicle clamp

## Mounting fuel extractor

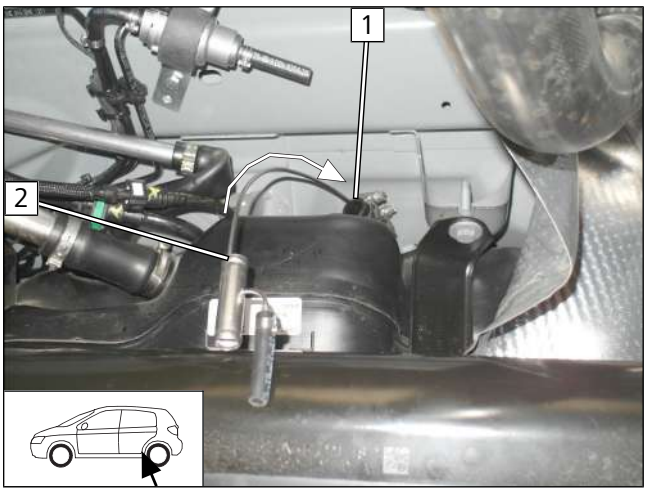



*Fig. 57*

▶ Insert fuel extractor 2 through hose section 1.

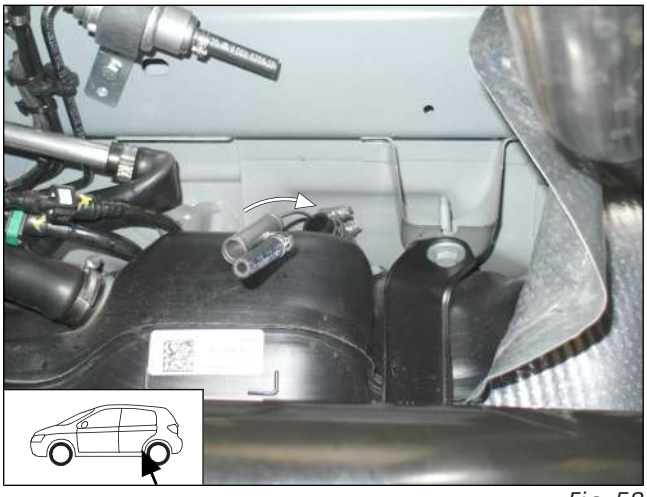


*Fig. 58*

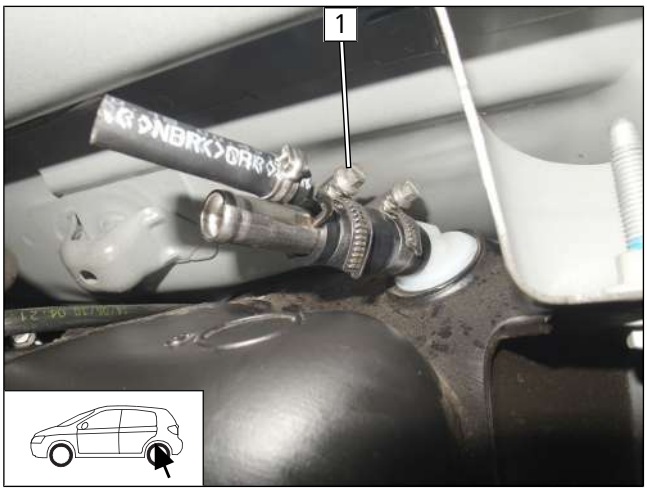



*Fig. 59*

- ▶ Turn to align the end of the fuel extractor in the tank toward the tank bottom.
- ▶ Tighten screw clamp **1**.

## Connecting tank ventilation hose

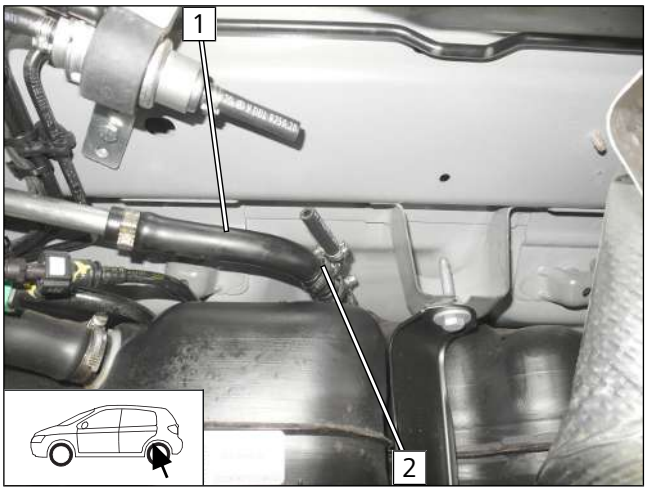



*Fig. 60*

**1** Tank ventilation hose
**2** Ø16-27 screw clamp

## Connecting fuel extractor and fuel pump

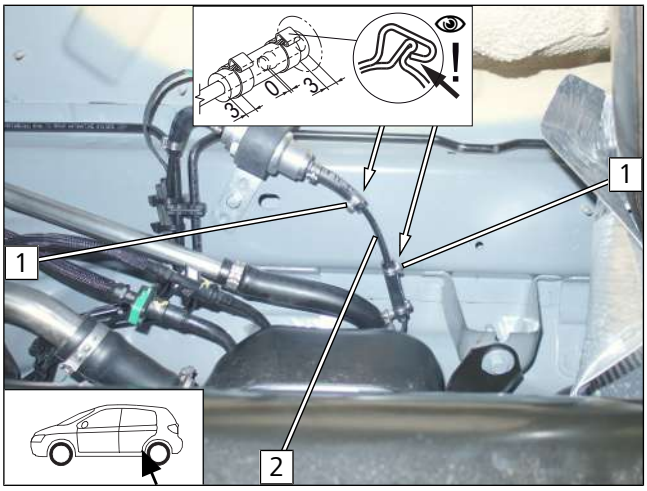



*Fig. 61*

**1** Ø10 clamp
**2** Fuel line

# 10 Coolant

## 10.1 Hose routing diagram

'Island' coolant circuit

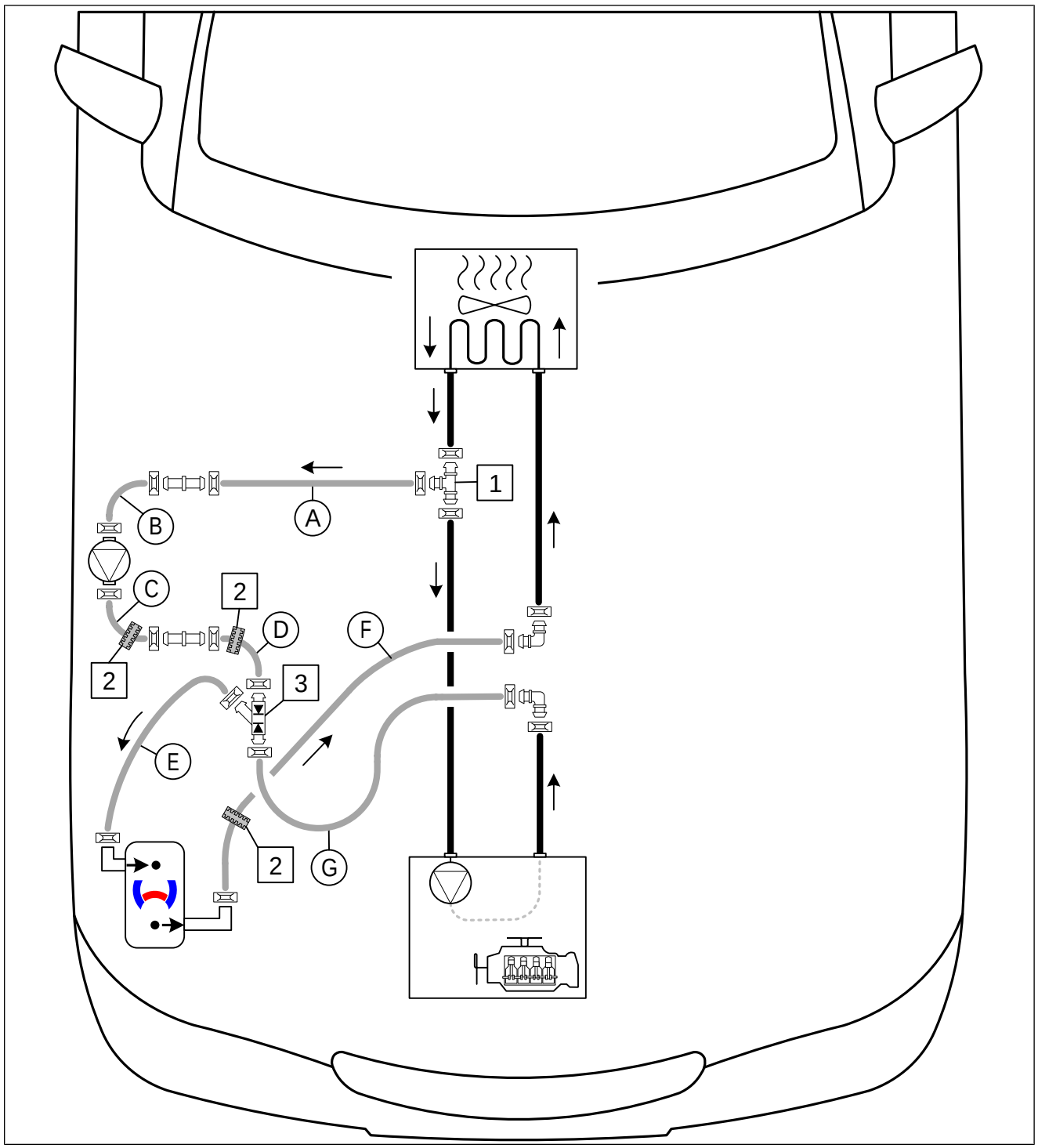



*Fig. 62*

All spring clips without a specific designation = Ø25; All connecting pipes or = Ø18x18

1 T-piece; 2 Black rubber isolator; 3 Double non-return valve

## 10.2 Coolant circuit installation

Cutting to length/assigning coolant hoses

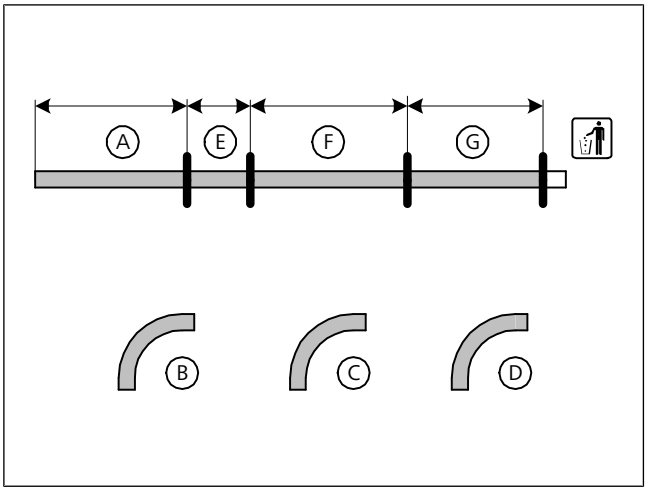



*Fig. 63*

| | |
|---|---|
| Ⓐ | 590 |
| Ⓑ | 90° |
| Ⓒ | 90° |
| Ⓓ | 90° |
| Ⓔ | 190 |
| Ⓕ | 780 |
| Ⓖ | 570 |

Preparing hoses Ⓐ, Ⓕ and Ⓖ

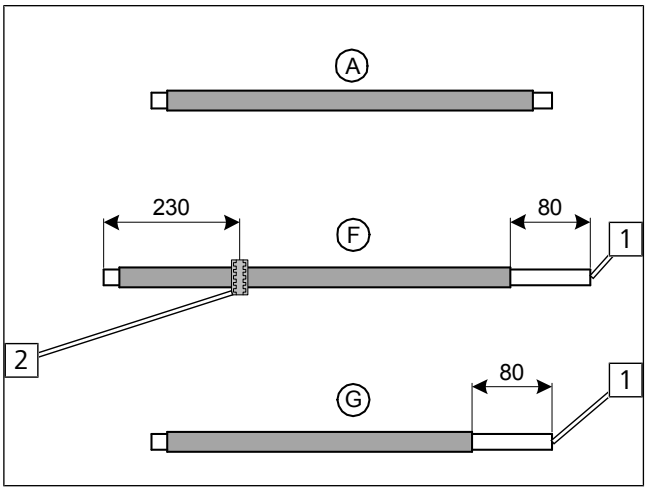



*Fig. 64*

- ▶ Pull fabric heat shrink tubings over hoses Ⓐ, Ⓕ and Ⓖ as shown and shrink.
- ▶ Position black (sw) rubber isolator 2 as shown.
- ▶ Hose ends 1 on the vehicle side.

Preparing perforated bracket 1

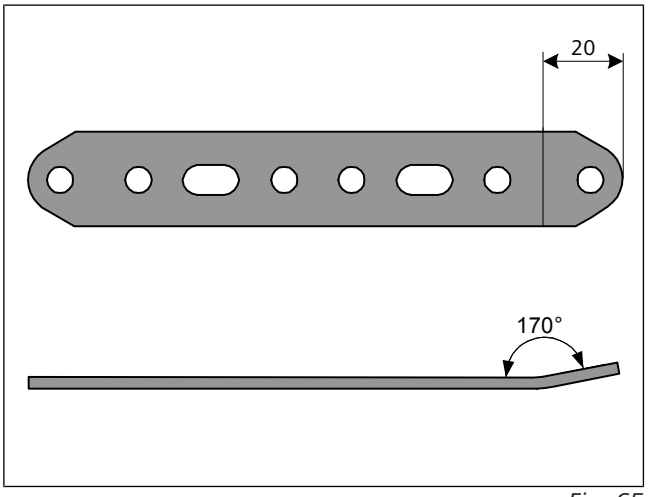



*Fig. 65*

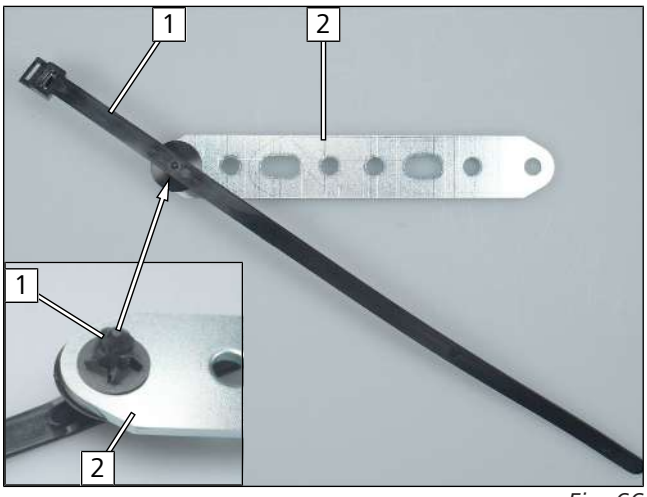



*Fig. 66*

▶ Mount clip-type cable tie **1** with lock washer as shown.

**2** Perforated bracket 1

## Preparing perforated bracket 2

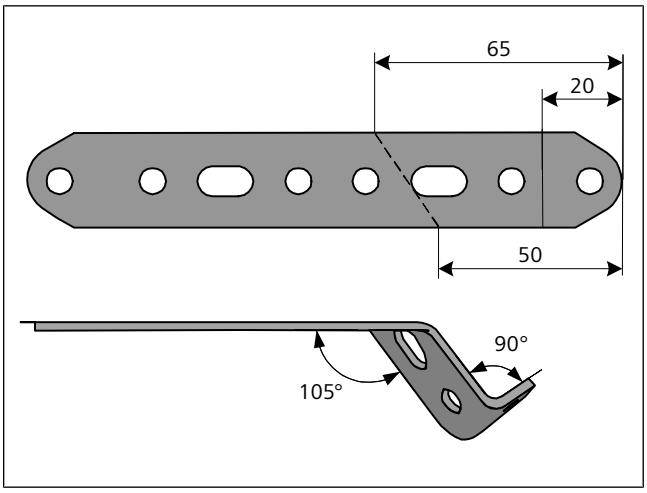



*Fig. 67*

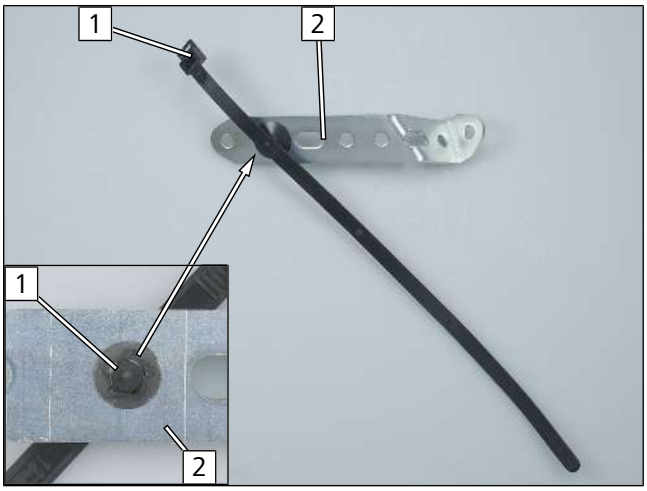



*Fig. 68*

▶ Mount clip-type cable tie **1** with lock washer as shown.

**2** Perforated bracket 2

## Preparing coolant pump perforated bracket

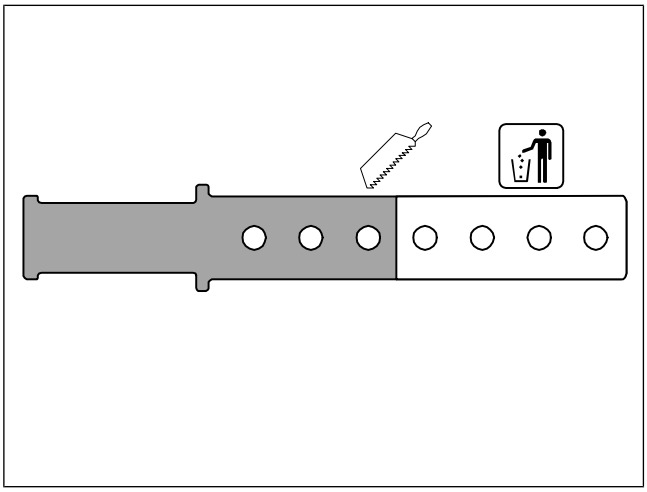


*Fig. 69*

## Premounting coolant pump


*Fig. 70*

All spring clips Ø25

**1** Coolant pump
**2** Coolant pump mount
**3** 18x18 connecting pipe

## Premounting hoses Ⓒ and Ⓓ

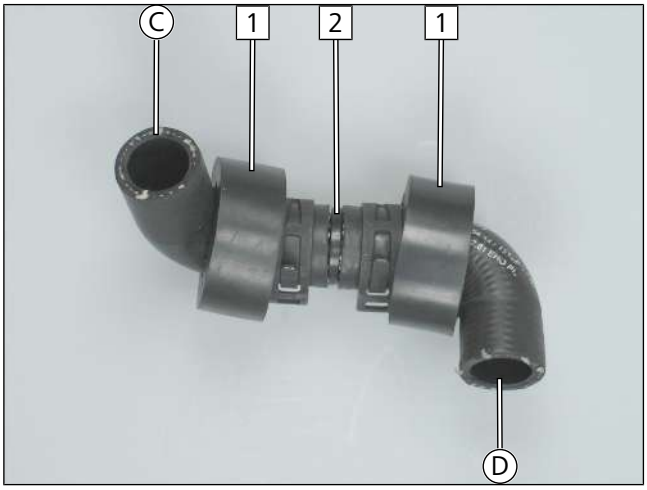



*Fig. 71*

All spring clips Ø25

**1** Black (sw) rubber isolator
**2** 18x18 connecting pipe

## Premounting double non-return valve hose group

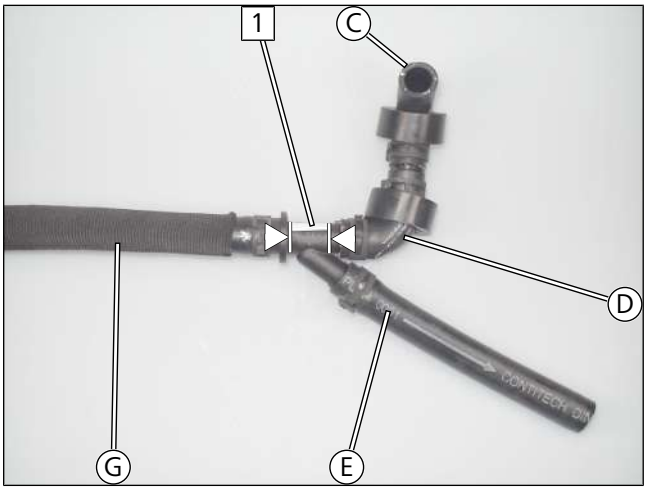



*Fig. 72*

All spring clips Ø25

**1** Double non-return valve

## Mounting perforated bracket 1 and 2

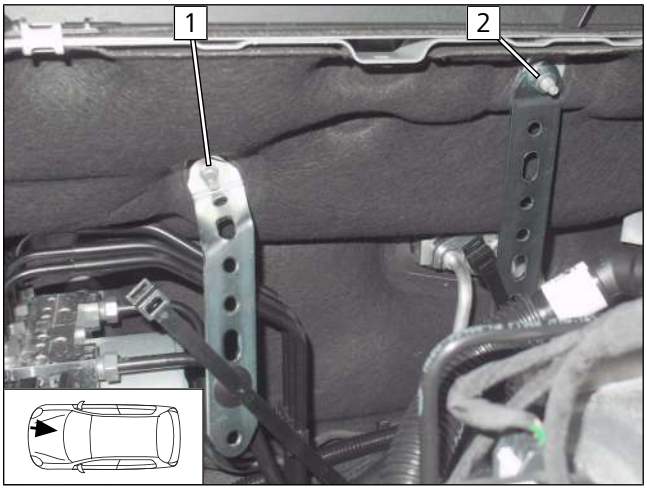



*Fig. 73*

▶ Remove and discard original vehicle plastic nut at position **1**.

**1** Original vehicle stud bolt, perforated bracket 2, plate nut

**2** Original vehicle stud bolt, perforated bracket 1, flanged nut

## Mounting coolant pump perforated bracket

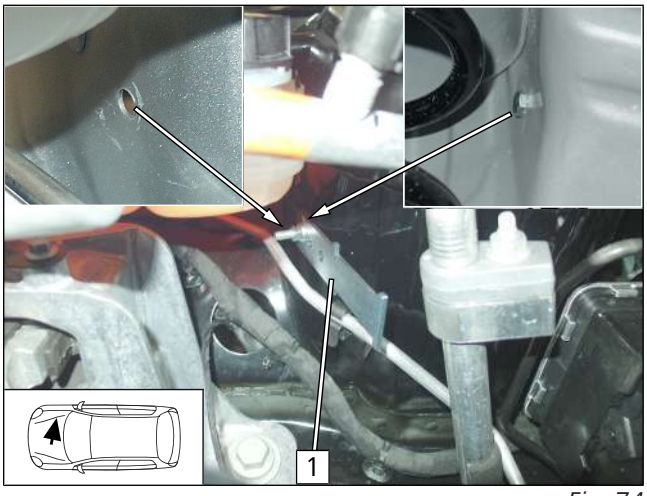



*Fig. 74*

**1** M6x20 bolt, original vehicle hole, coolant pump perforated bracket, flanged nut

## Mounting coolant pump

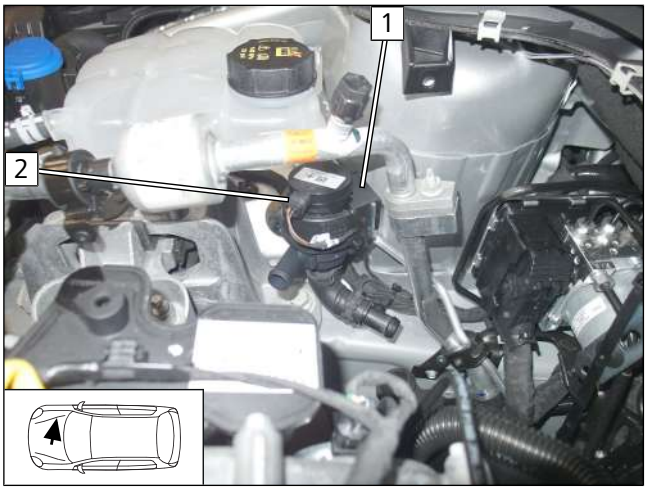



*Fig. 75*

- ▶ Push premounted coolant pump [1] onto coolant pump perforated bracket as shown.
- ▶ Connect coolant pump wiring harness [2].

## Connecting double non-return valve hose group to coolant pump

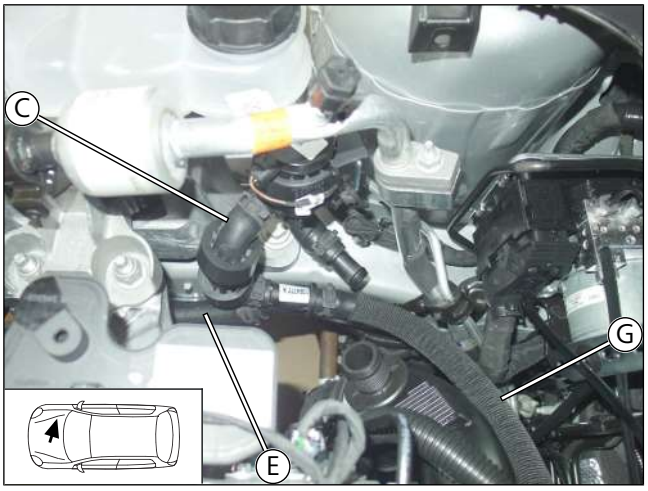



*Fig. 76*

- ▶ Route hose (E) to heater and hose (G) to cutting point.

## Connecting hose (E) to heater inlet

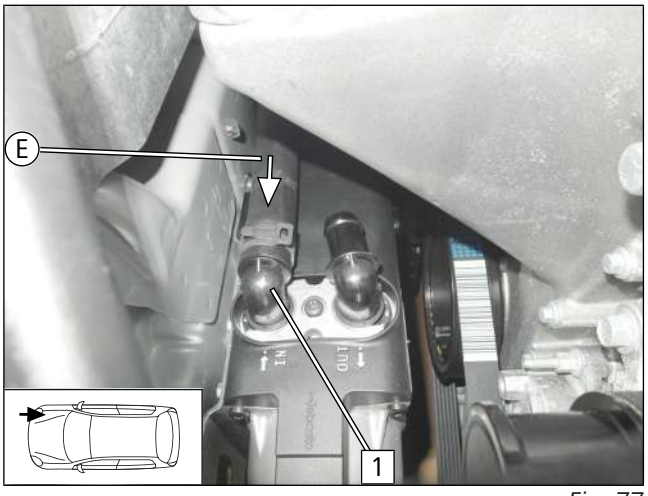



*Fig. 77*

[1] Heater inlet

## Preparing cutting point

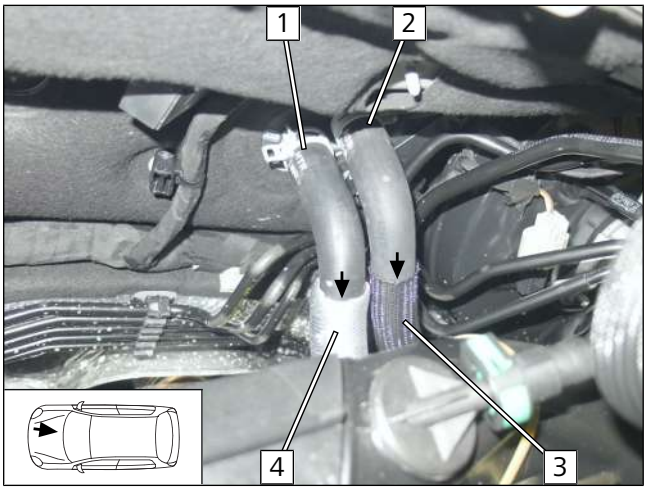



*Fig. 78*

▶ Shift braided protection hose **3** and heat protection hose **4** in the direction of the arrow towards the engine.

**1** Engine outlet / heat exchanger inlet hose

**2** Heat exchanger outlet / engine inlet hose

## Cutting point 1

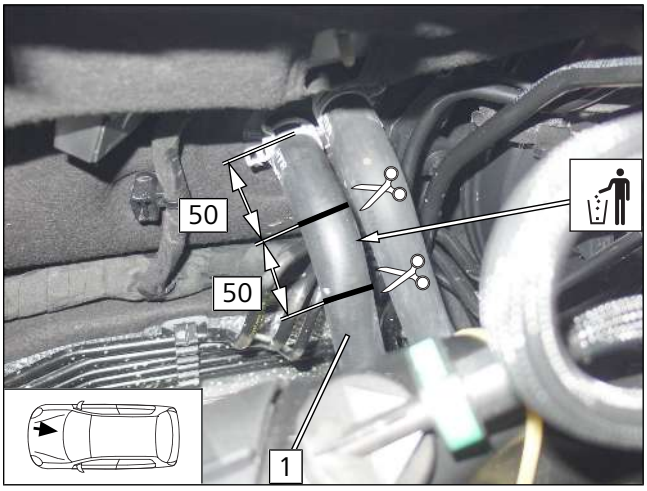



*Fig. 79*

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

## Connecting engine outlet

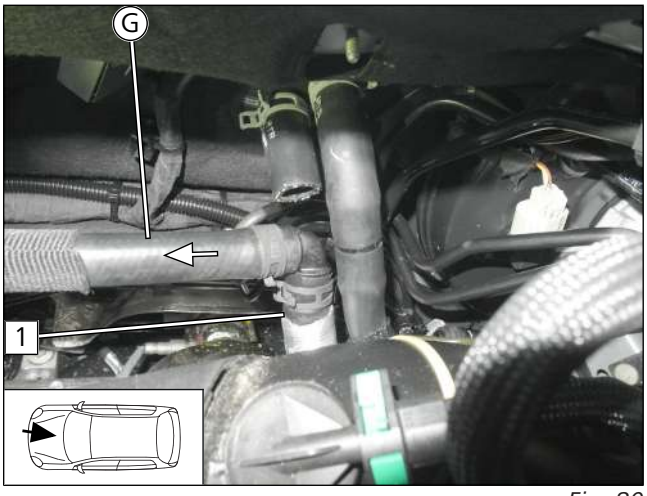



*Fig. 80*

**1** Engine outlet hose section

## Connecting heat exchanger inlet

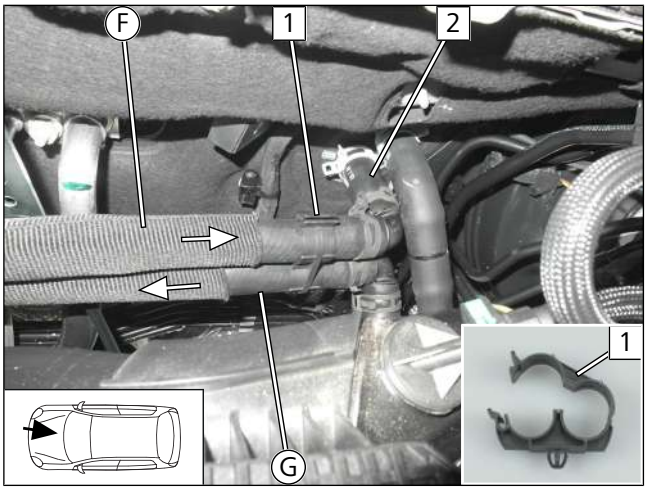



*Fig. 81*

1 Hose bracket
2 Heat exchanger inlet hose section

## Routing in engine compartment

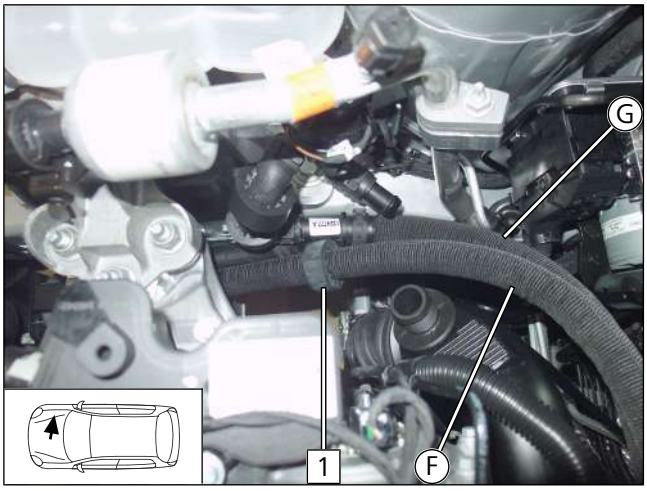



*Fig. 82*

▶ Position black (sw) rubber isolator 1 as shown.

## Connecting hose Ⓕ to heater outlet

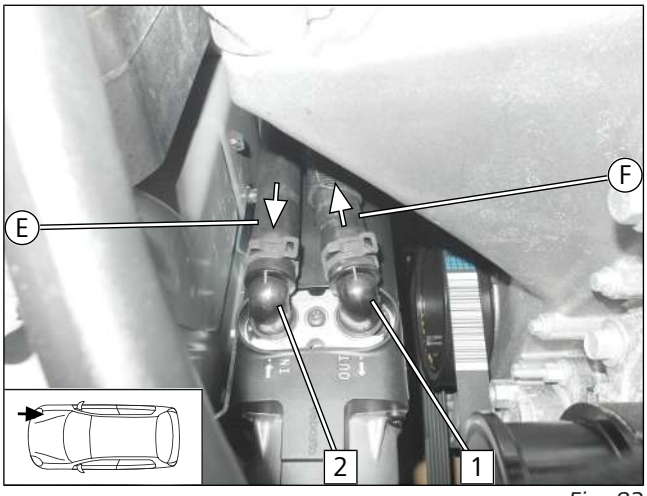



*Fig. 83*

1 Heater outlet
2 Heater inlet

## Cutting point 2

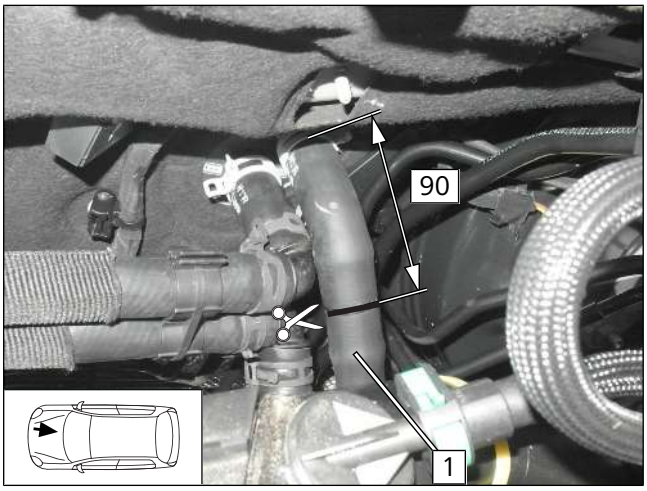



*Fig. 84*

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

## Mounting T-piece/connecting hose Ⓐ

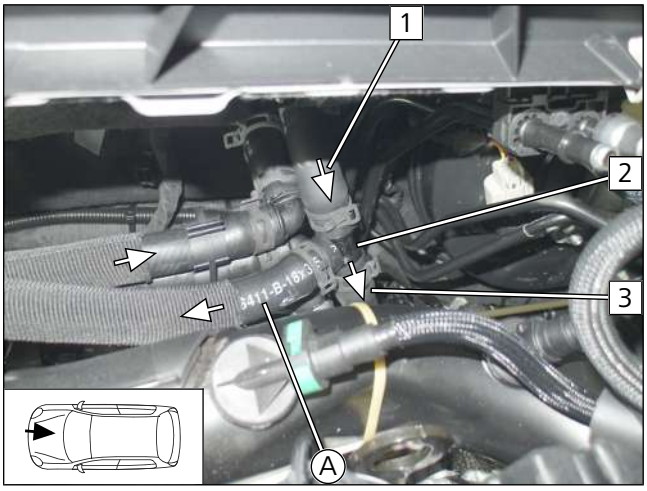



*Fig. 85*

▶ Route hose Ⓐ to coolant pump.

1 Heat exchanger outlet hose section
2 T piece
3 Engine inlet hose section

## Coolant pump inlet connection

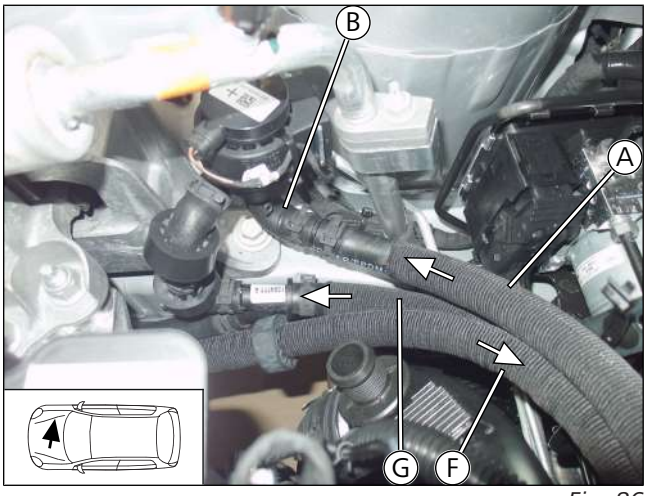



*Fig. 86*

## Aligning and fastening hoses

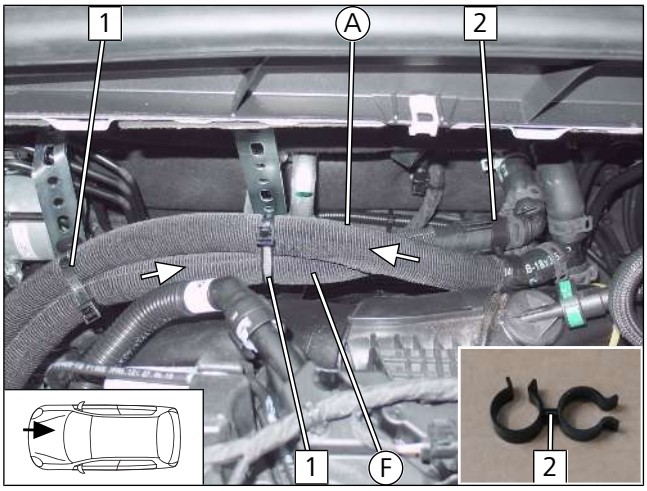



*Fig. 87*

▶ Place cable ties of perforated brackets 1 and 2 around hoses (A), (F) and (G) and tighten them.

[2] 20x20 hose bracket

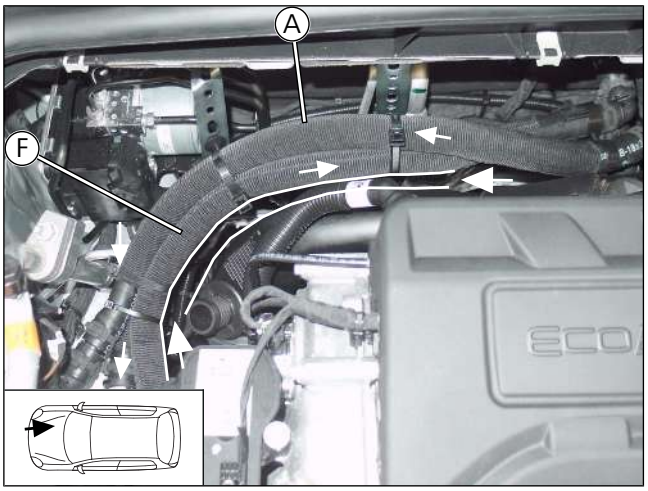



*Fig. 88*

**Danger of damage to components**

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

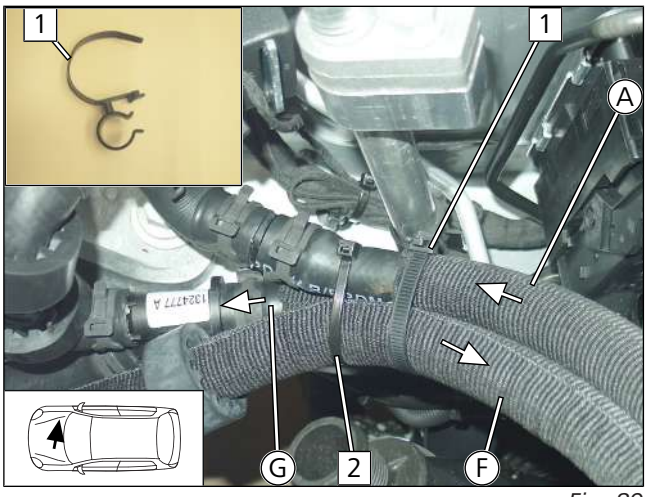



*Fig. 89*

**Danger of damage to components**

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

▶ Fasten hoses (A), (F) and (G) with cable tie of hose bracket with cable tie [1]. Fasten hose bracket of hose bracket with cable tie to original vehicle A/C line.

[1] Hose bracket with cable tie

[2] Cable tie

# 11 Combustion air

## Cutting combustion air intake pipe to length

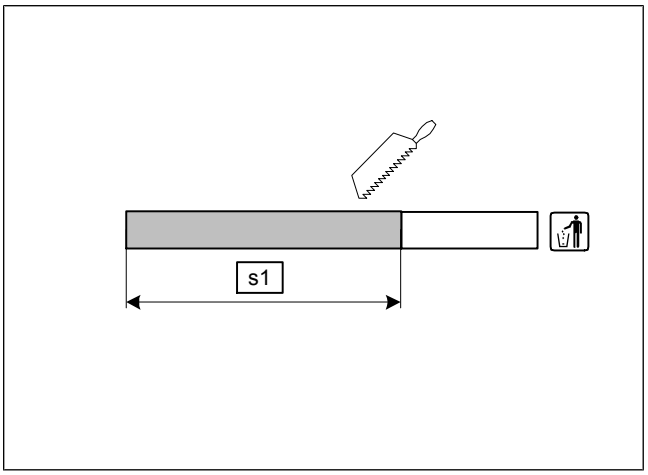



*Fig. 90*

**s1** 600

## Premounting combustion air intake silencer

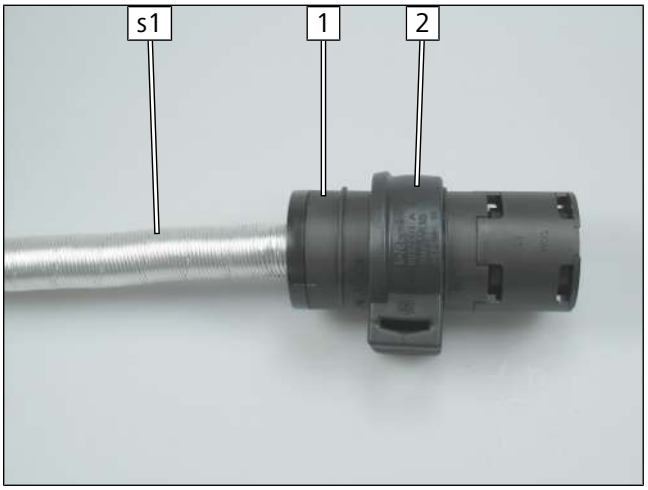



*Fig. 91*

**1** Combustion air intake silencer
**2** Combustion air intake silencer mount

## Mounting combustion air intake pipe **s1**

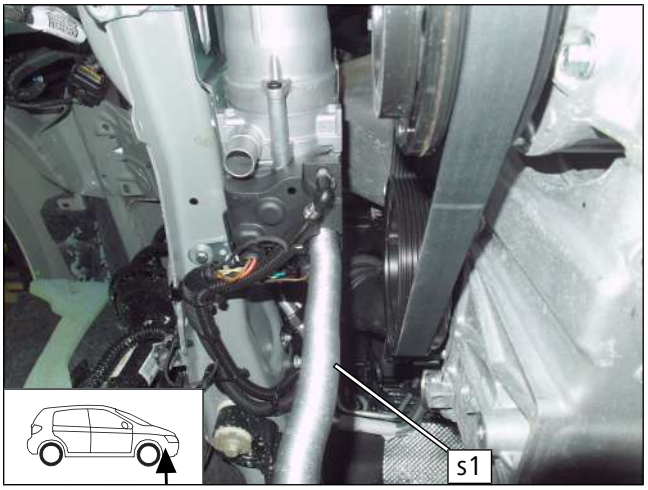



*Fig. 92*

## Routing combustion air intake pipe **s1**

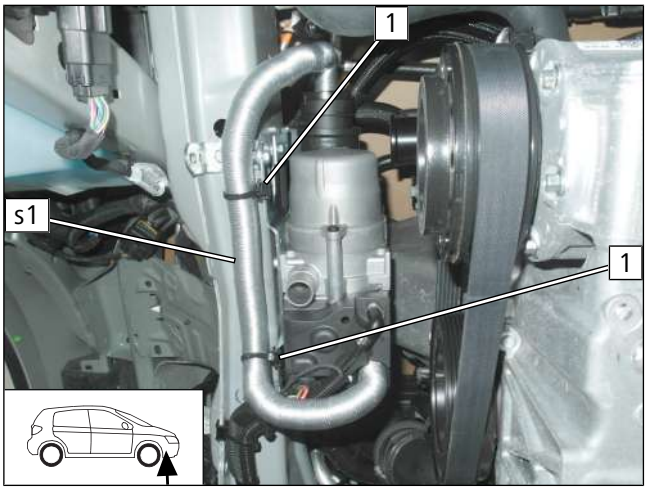



*Fig. 93*

▶ Attach combustion air intake pipe **s1** with edge clip cable tie **1** to heater bracket.

## Mounting combustion air intake silencer

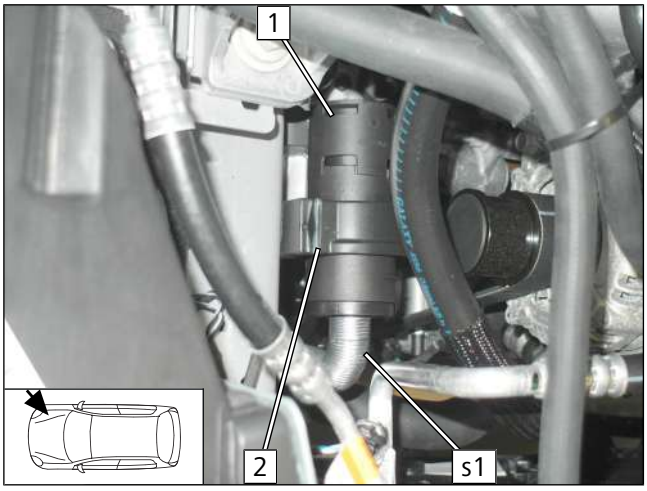



*Fig. 94*

Observe the installation instructions of the combustion air intake silencer.

▶ Push combustion air intake silencer mount **2** onto premounted perforated bracket as shown.

**1** Combustion air intake silencer

# 12 Exhaust

## 12.1 Mounting exhaust pipe

### Moving original vehicle connector

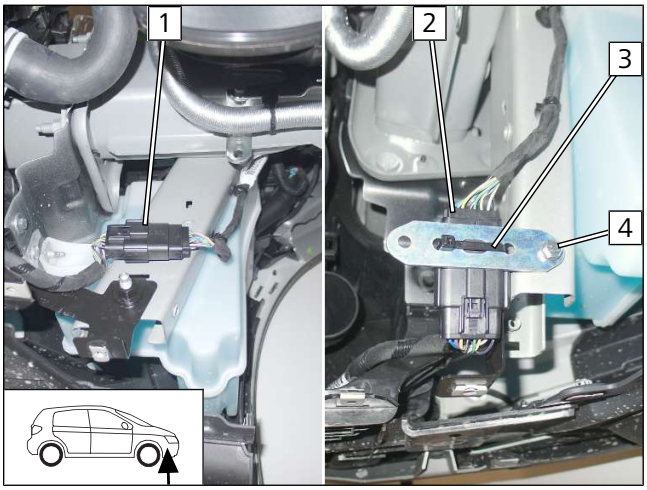



*Fig. 95*

1 Connector, original position
2 Connector, moved
3 Cable tie
4 M6x20 bolt, spring lockwasher, perforated bracket, original vehicle thread

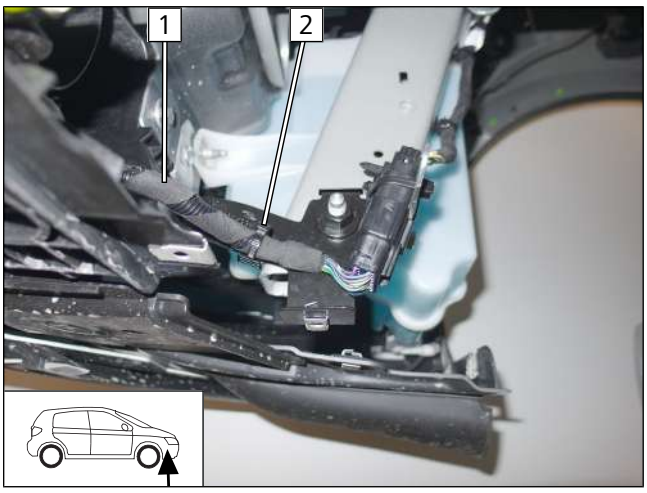



*Fig. 96*

▶ Fasten original vehicle wiring harness 1 with edge clip cable tie 2 as shown.

### Cutting exhaust pipe to length

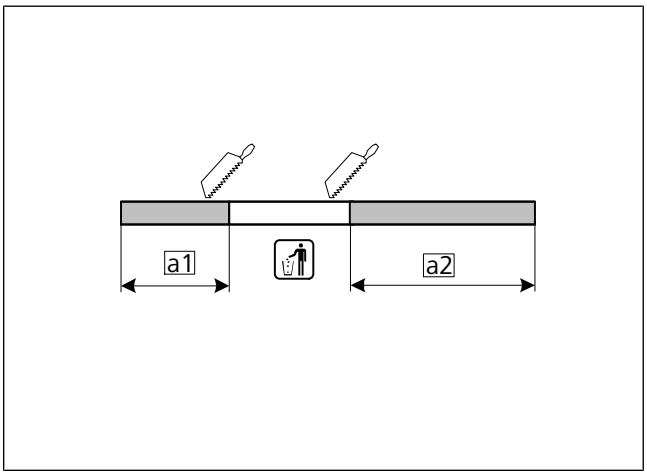



*Fig. 97*

a1 170
a2 320

Mounting exhaust silencer

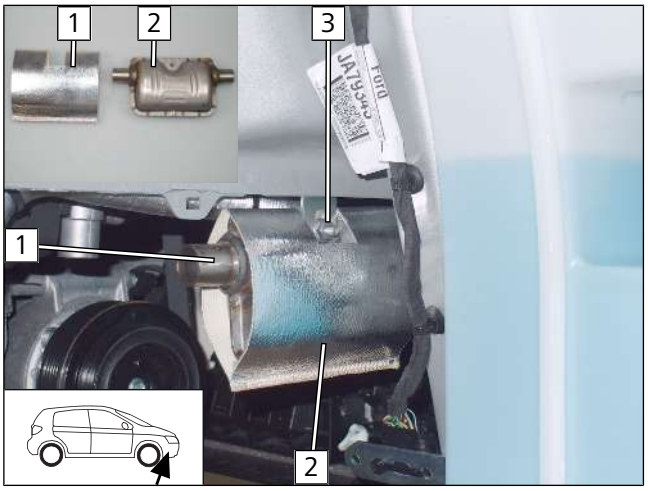



*Fig. 98*

Push heat protection **1** onto exhaust silencer **2**.

**3** M6x16 bolt, exhaust silencer, premounted angle bracket, flanged nut

Mounting exhaust pipe **a1**

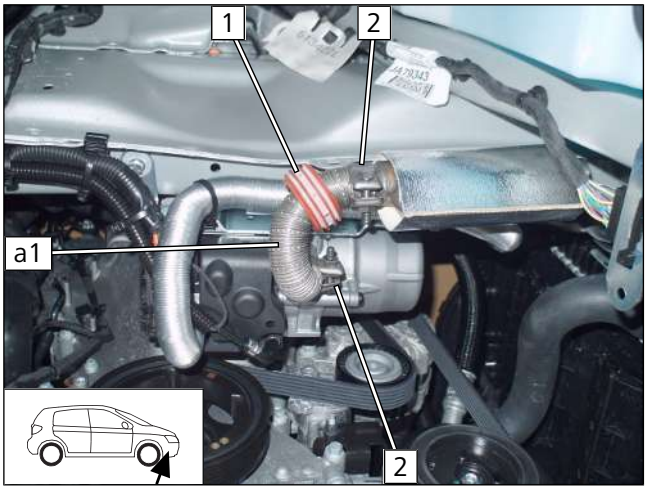



*Fig. 99*

**1** ASH

**2** Hose clamp

## 12.2 Mounting exhaust end fastener

Work step E1

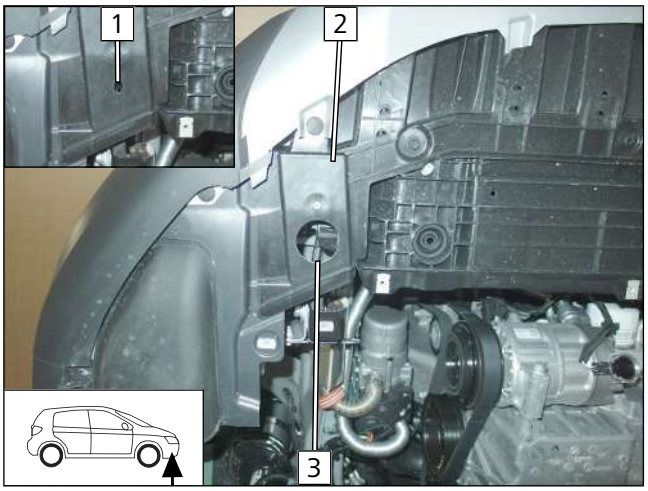



*Fig. 100*

Observe the EFIX installation instructions.

▶ Enlarge original vehicle hole **1** of lower wheel well trim **2**.

**3** Hole

Work step E3

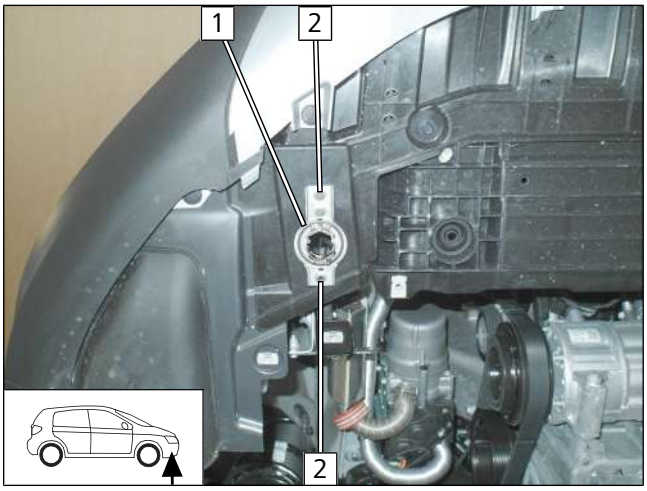



*Fig. 101*

1 EFIX
2 Hole pattern

Work step E4

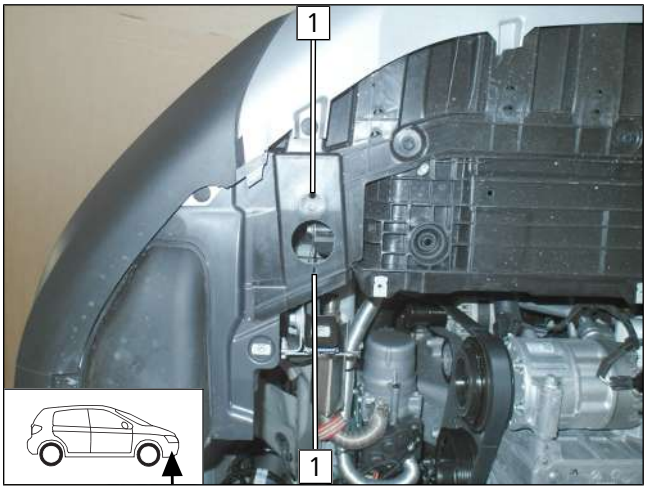



*Fig. 102*

1 Hole

Work step E5

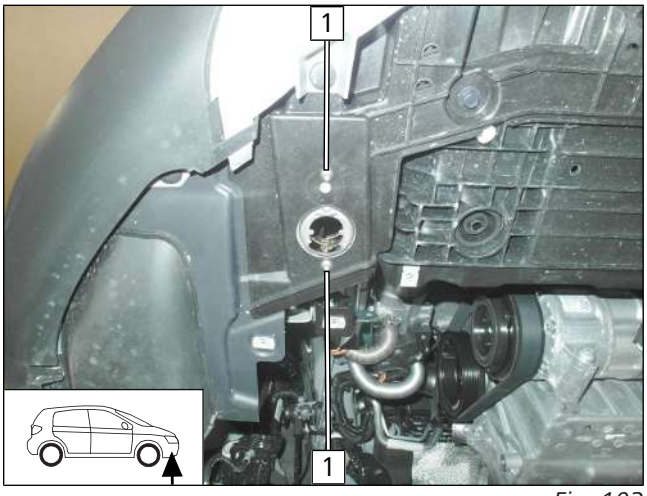



*Fig. 103*

1 5x13 self-tapping screw

## Preparing exhaust pipe **a2**

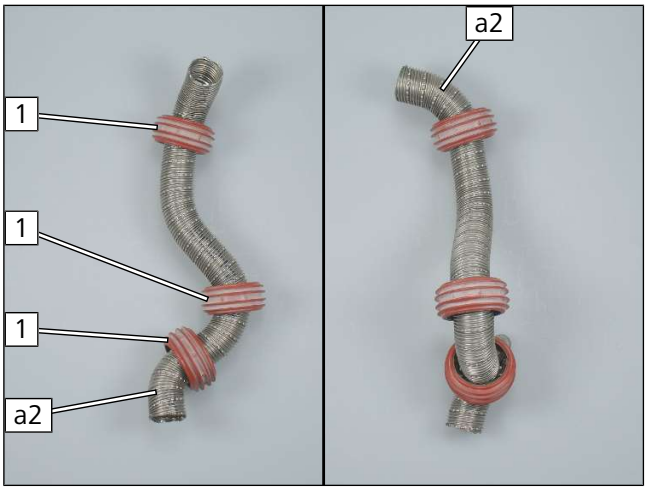



*Fig. 104*

▶ Shape exhaust pipe **a2** as shown.

**1** ASH

## Mounting exhaust pipe **a2**

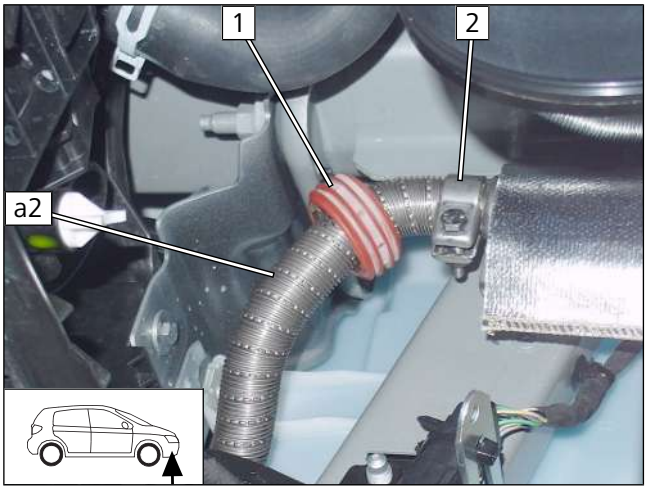



*Fig. 105*

**1** ASH

**2** Hose clamp

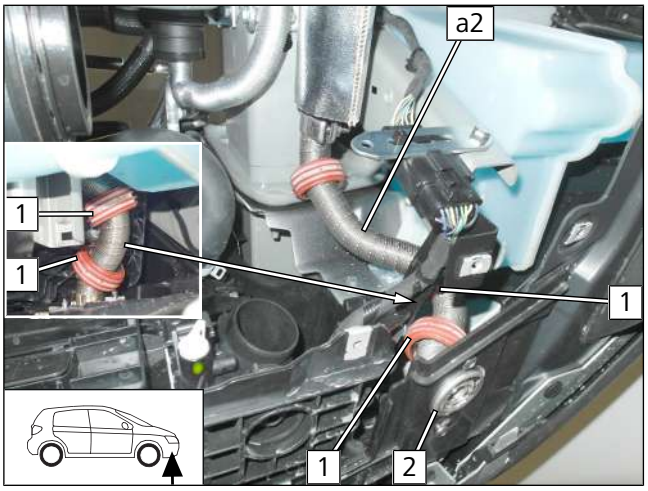



*Fig. 106*

Observe the EFIX installation instructions.

Danger of damage to components

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

▶ Align ASH **1** as shown.

**2** EFIX

## 13 Final work in engine compartment

### Positive wire connection

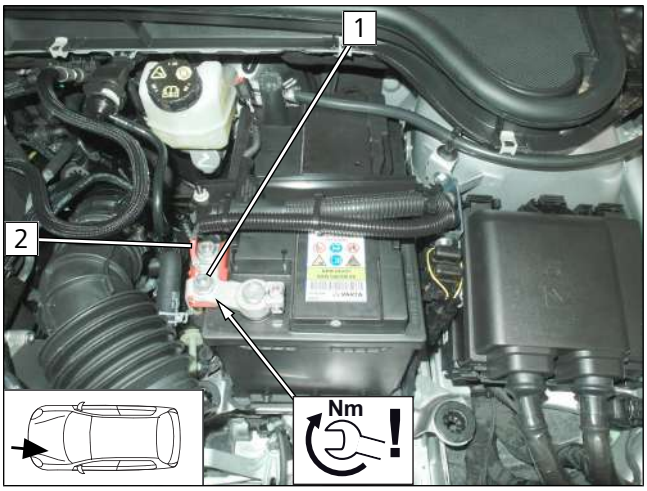



*Fig. 107*

**DANGER**

Fire hazard due to insufficient tightening torque

▶ Observe tightening torque

[1] Original vehicle positive distributor

[2] Positive wire

### Adapting positive battery terminal cover

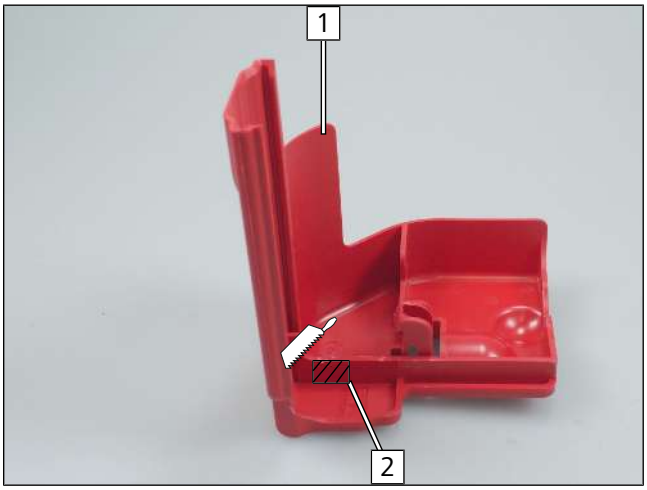



*Fig. 108*

▶ Cut positive battery terminal [1] at position [2] as shown.

### Checking distance

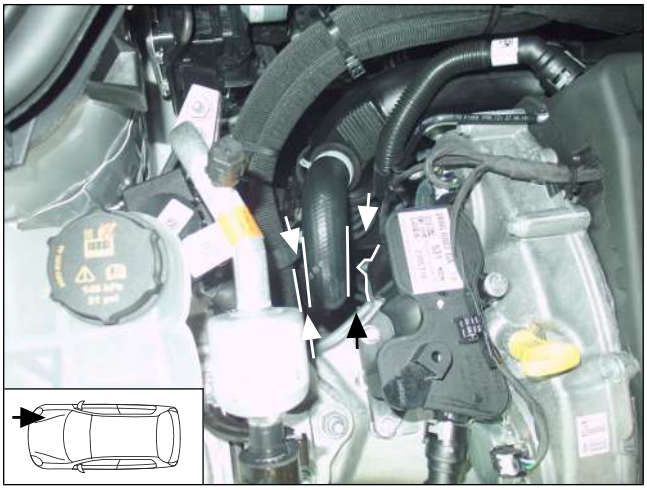


*Fig. 109*

Danger of damage to components

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

## Aligning ASH

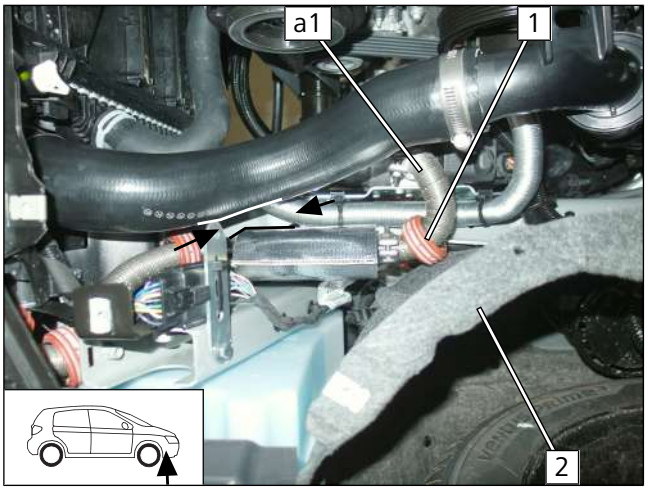



*Fig. 110*

Danger of damage to components

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

- ▶ Mount wheel-well inner panel 2. Align ASH 1 as shown.

# 14 Electrical system of passenger compartment

## 14.1 Air-conditioning control

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

'**Webasto Comfort**' A/C control installation documentation for Ford Focus with AAC

# 15 Electrical system of control elements

## 15.1 Remote option (Telestart)

### Mounting receiver

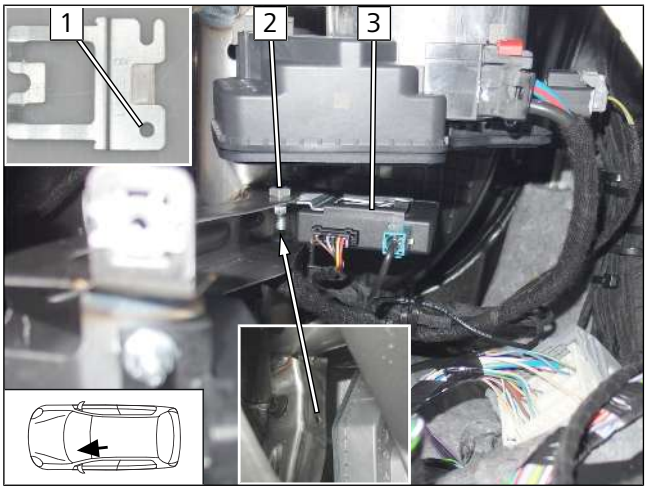



*Fig. 111*

Observe the Telestart installation documentation.

▶ Enlarge hole in receiver bracket at position 1 to Ø7.

2 M6x16 bolt, original vehicle hole, receiver bracket, flanged nut

3 Receiver

### Mounting aerial

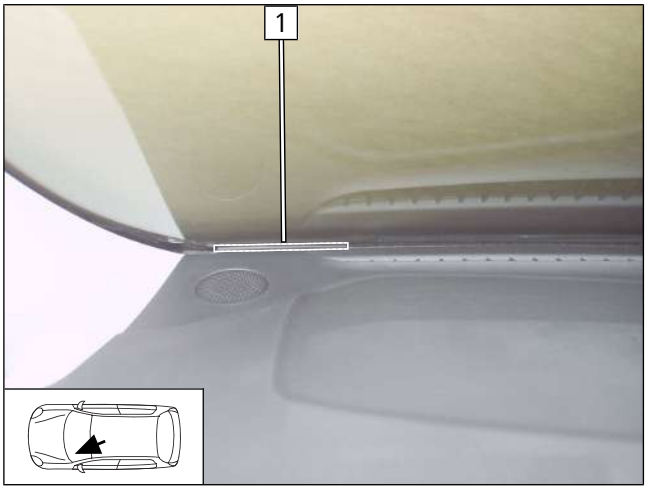



*Fig. 112*

1 Aerial

### Mounting temperature sensor, only in case of T100 HTM

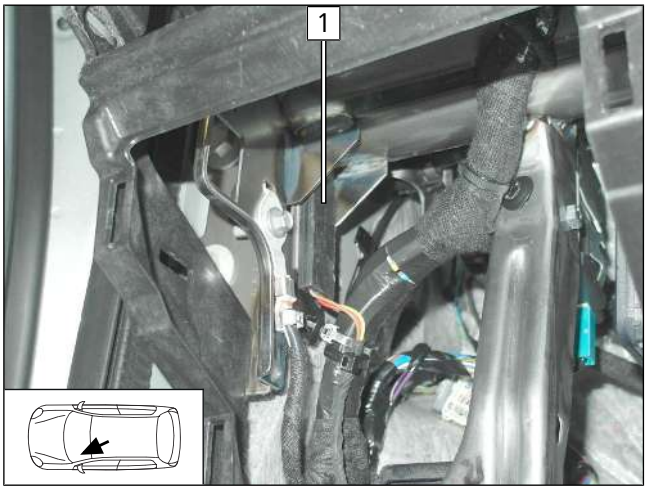



*Fig. 113*

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

## 15.2 ThermoCall option

### Mounting receiver

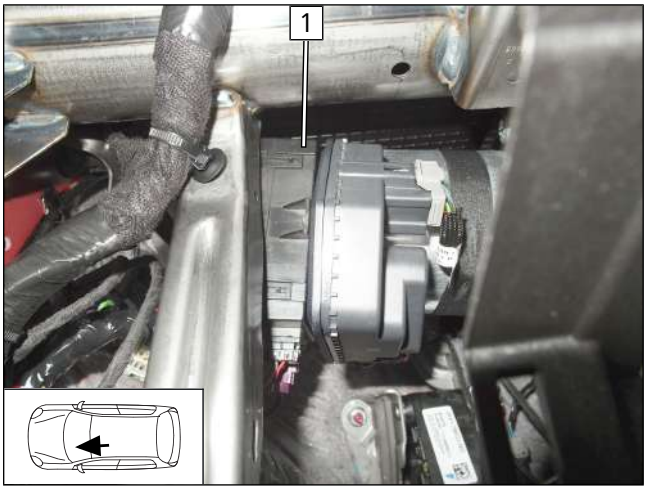



*Fig. 114*

Observe the ThermoCall installation documentation.

▶ Fasten receiver 1 with double-sided adhesive tape as shown.

### Mounting aerial (optional)

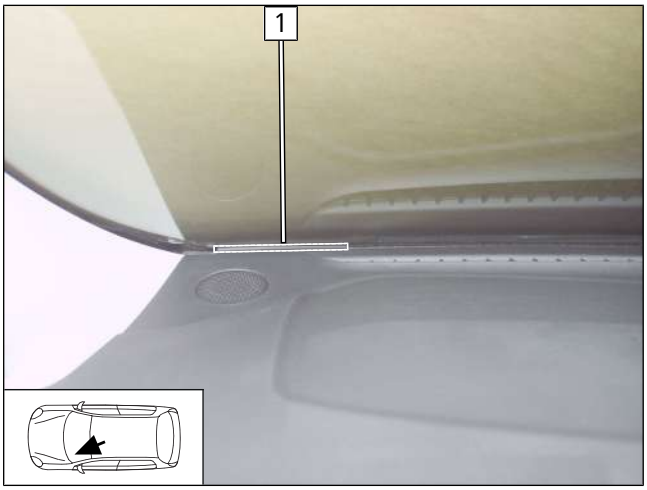



*Fig. 115*

1 Aerial

# 16 Final Work

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

- ▶ Mount removed parts in reverse order.

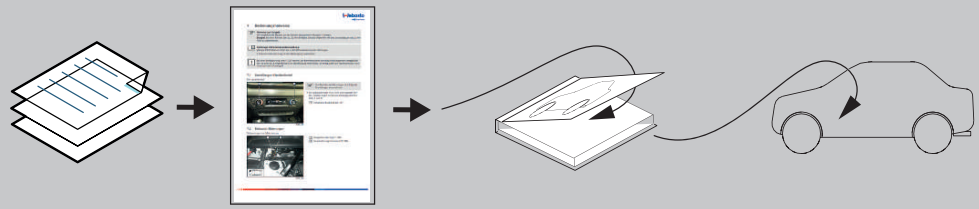
- ▶ Check all hoses, clamps and all electrical connections for firm seating.
- ▶ Insulate and tie back loose lines
- ▶ Spray heater and electrical components with anti-corrosion wax (Tectyl 100K).
- ▶ Connect the battery.


**Only use manufacturer-approved coolant.**

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

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

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



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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# 17 Fuel extractor template