

# Water Heater

## Thermo Top Evo Parking Heater



# Installation Documentation Renault Koleos

### Validity

Manufacturer	Model	Type	EG BE No. / ABE
Renault	Koleos	RZG	e11 * 2007 / 46 * 3255 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm <sup>3</sup>	Engine code
1.6 D	Diesel	6-speed SG	96	1598	R9M
2.0 D	Diesel	CVT	130	1995	M9R

SG = manual transmission

CVT = Continuously Variable Transmission

**From model year 2017**

**Left-hand drive vehicle**

**Verified equipment variants:** 2 zone automatic air-conditioning

- LED main headlights
- LED front fog lights
- LED daytime running lights
- Intelligent Key (start button)
- Euro 6
- 4WD

**Not verified:**

- Alarm system
- Halogen main headlights
- Halogen front fog lights

**Total installation time:** approx. 9.2 hours

# Renault Koleos

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## Necessary Components

- Basic delivery scope for Thermo Top Evo according to price list
- Installation kit for Renault Koleos 2017 Diesel: **1326233A**
- Additional 'Webasto Standard' A/C control kit for Renault Koleos: **1326272\_**  
or  
Additional 'Webasto Comfort' A/C control kit for Renault Koleos **1325545\_**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

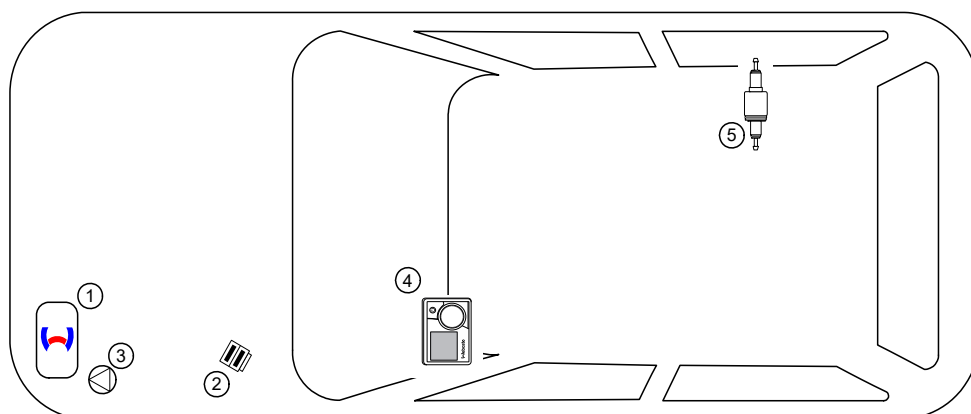
## Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or ThermoCall 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.

## Installation Overview

### Legend:

1. Heater
2. Engine compartment fuse holder
3. Circulating pump
4. MultiControl CAR
5. Metering pump



## 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.

## Information on Operating and Installation Instructions

### 1 Important information (not complete)

#### 1.1 Installation and repair



The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.



To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.



Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

#### 1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 228).

The heater may not be cleaned with a high-pressure cleaner.

#### 1.3 Please note

ALWAYS follow all Webasto installation and operating instructions and observe all warnings.

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

#### Important

**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, 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.

Sharp edges should be fitted with rub protection. 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.

### 2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

#### Note

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.

#### Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

#### Note

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

### 2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 for the installation of the heater

Beginning of excerpt.

#### ANNEX VII

#### REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

##### 1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

##### 2. VEHICLE INSTALLATION REQUIREMENTS

###### 2.1. Scope

2.1.1. Subject to paragraph 2.1.2, combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

###### 2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

###### 2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

###### 2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

###### 2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

###### 2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

###### 2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

## Information on Validity

This installation documentation applies to Renault Koleos Diesel vehicles - for validity, see page 1 - from model year 2017 and later, 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.

## Technical Information

### Special Tools

- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper, 0.2 - 6mm<sup>2</sup>
- Crimping pliers for cable lug / tab connector, 0.5 - 6mm<sup>2</sup>
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

### Dimensions

- All dimensions are in mm.

### Tightening torque values

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

## Explanatory Notes on Document

You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Special features are highlighted using the following symbols:

**Mechanical System**



**Electrical System**



**Coolant Circuit**



**Combustion Air**



**Fuel**



**Exhaust Gas**



**Software**



**Specific risk of damage to components.**



**Specific risk due to electrical voltage.**



**Specific risk of injury or fatal accidents.**



**Specific risk of fire or explosion.**



**Reference to the manufacturer's vehicle-specific documents or to the general installation instructions of Webasto components.**



**Reference to a special technical feature.**



**The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.**



**Tightening torque according to the manufacturer's vehicle-specific documents.**



## Preliminary Work

### Vehicle



- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Completely remove the air filter.
- Remove the wheel well trim on the left and right.
- Remove the engine underdrive protection.
- Remove the right underbody underdrive protection.
- Remove the bumper trim.

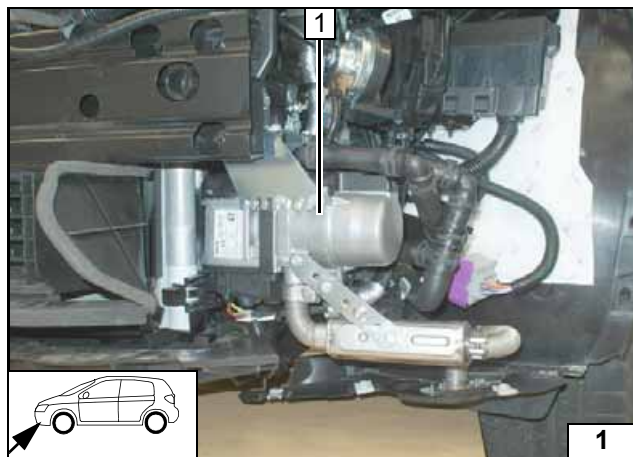


The following work should only be performed during the corresponding installation sequence:

- Remove the rear seats on the right.
- Open the tank-fitting service lid.

### Heater

- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



### Heater Installation Location

Figure shows 1.6D.

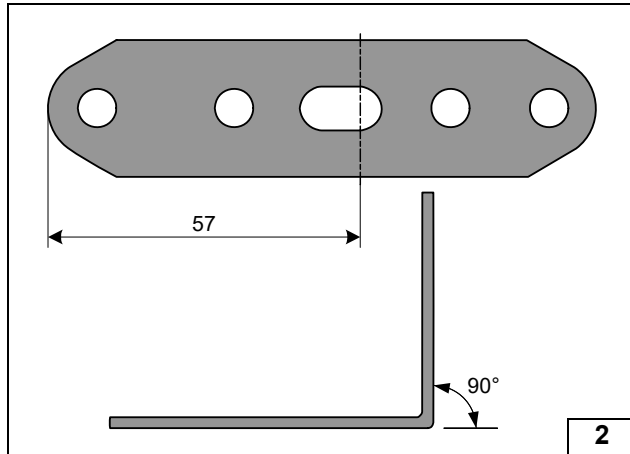
- 1 Heater



Installation location



### Preparing Electrical System



Preparing perforated bracket for engine compartment fuse holder

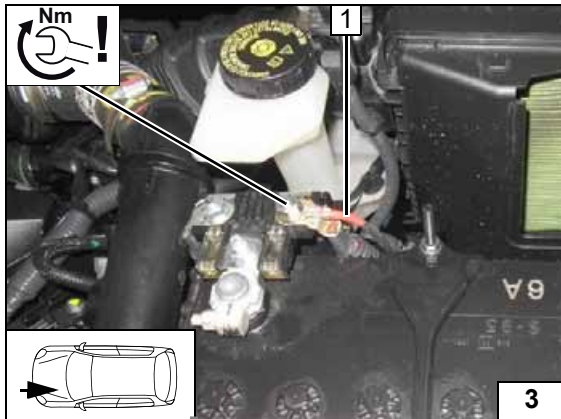


**Electrical System**



**Positive wire**

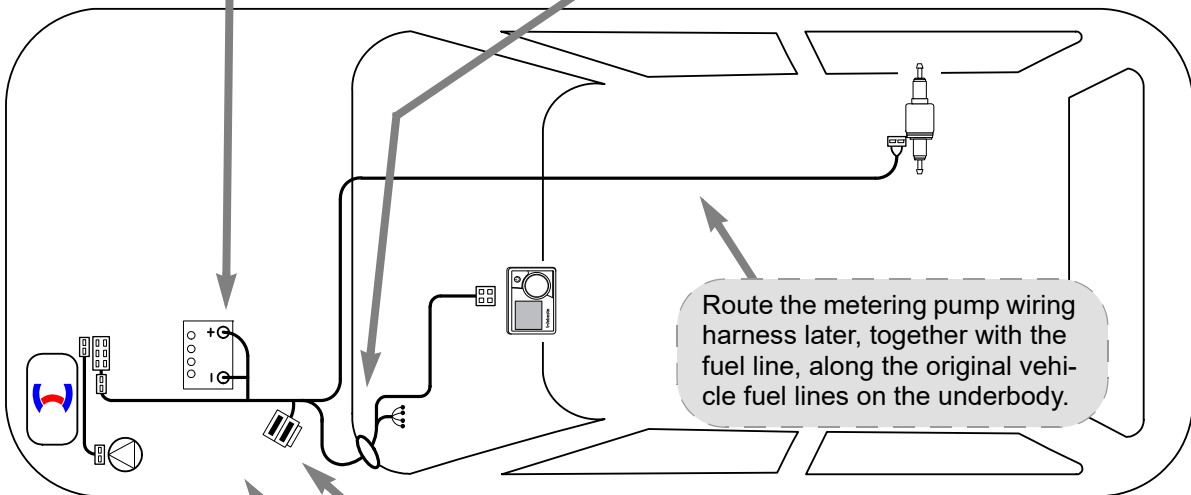
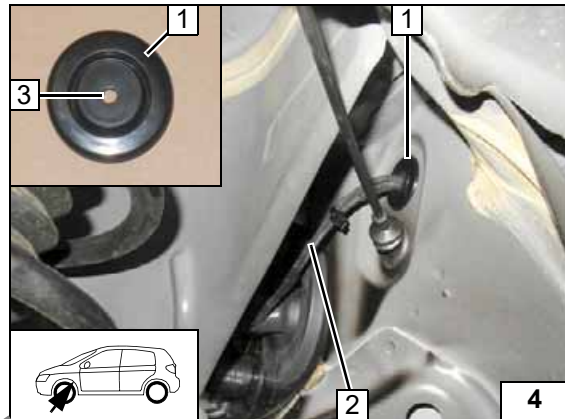
- 1 Positive wire on positive battery terminal



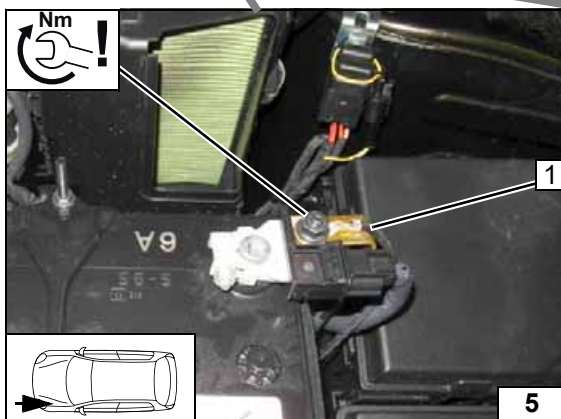
**Wiring harness pass through**

Take out rubber plug 1, punch 5mm dia. hole 3 in the centre and install together with the wiring harness.

- 2 Heater wiring harnesses, heater control

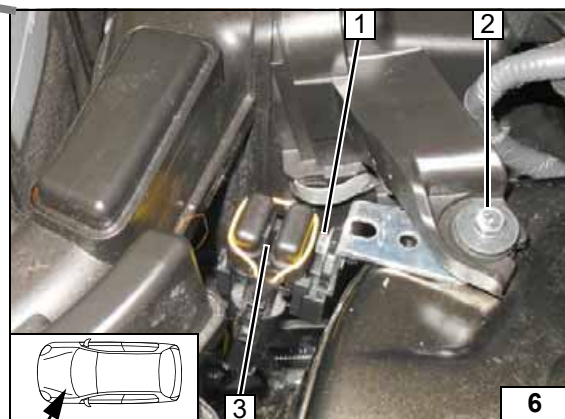


**Wiring harness routing diagram**



**Earth wire**

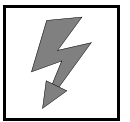
- 1 Earth wire on negative battery terminal



**Engine compartment fuse holder**

- 1 M5x16 bolt, large diameter washer, prepared perforated bracket, fuse holder retaining plate, large diameter washer, nut
- 2 Original vehicle bolt
- 3 Fuses F1-2





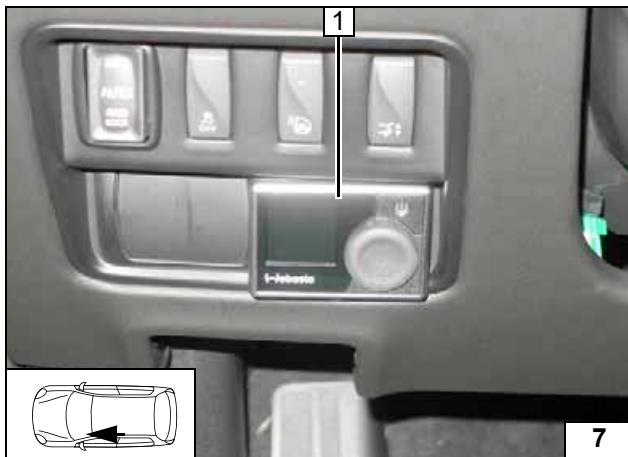
### Air-Conditioning Control

**!** Integrate the A/C control as explained in the separate installation documentation:

Installation documentation of '**Webasto Standard**' A/C control for Renault Koleos

or

Installation documentation of '**Webasto Comfort**' A/C control for Renault Koleos

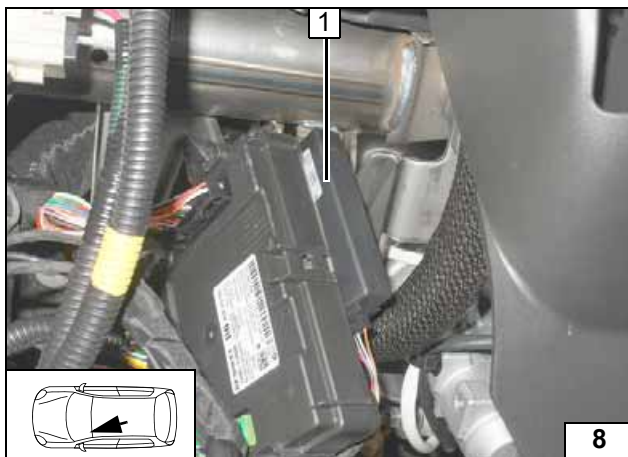


### MultiControl CAR Option

- 1 MultiControl CAR



### Installing MultiControl CAR

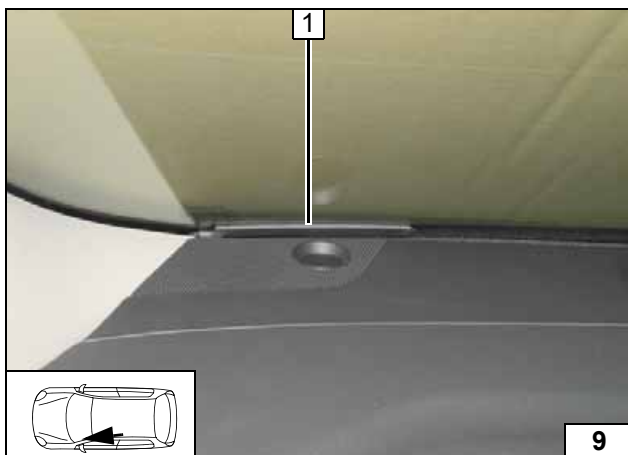


### Remote Option (Telestart)

Fasten receiver 1 on original vehicle control unit using double-sided adhesive tape.



### Installing receiver



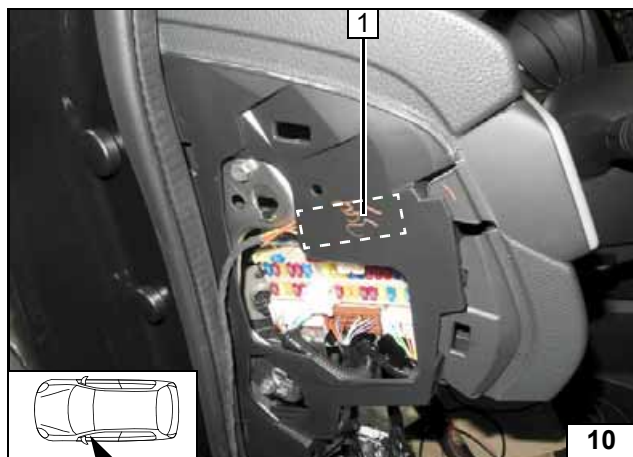
For windcreens with a special coating or heater, use only the area recommended by the manufacturer to mount the aerial.

- 1 Aerial



### Installing aerial



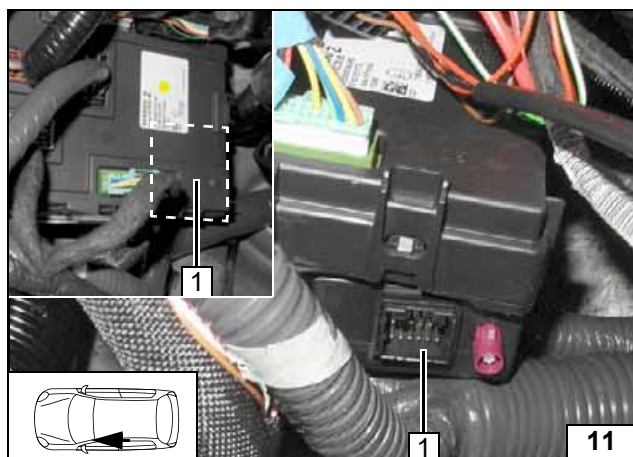


**Temperature sensor T100 HTM**

Fasten temperature sensor **1** behind the trim at the marking using double-sided adhesive tape.



**Installing temperature sensor**

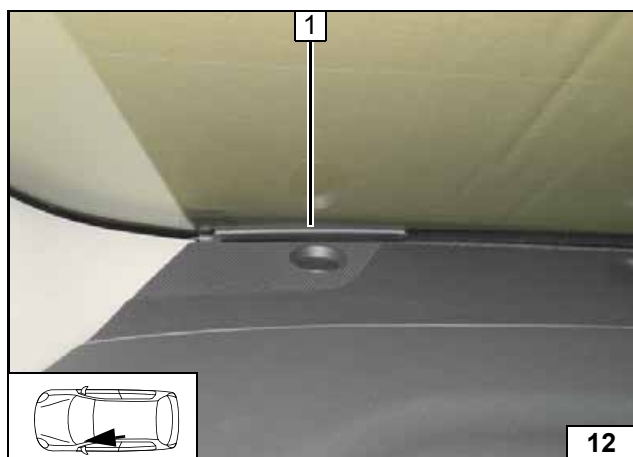


**ThermoCall Option**

Fasten receiver **1** behind the control unit at the marking using double-sided adhesive tape.



**Installing receiver**

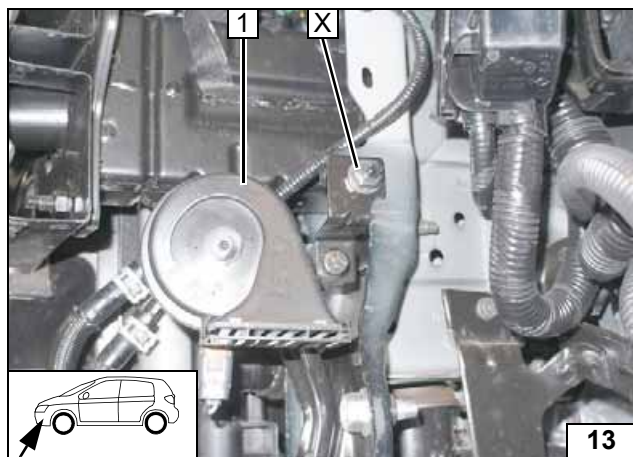
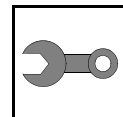


For windscreens with a special coating or heater, use only the area recommended by the manufacturer to assemble aerial.

- 1** Aerial (optional)

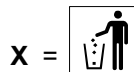


**Installing aerial**

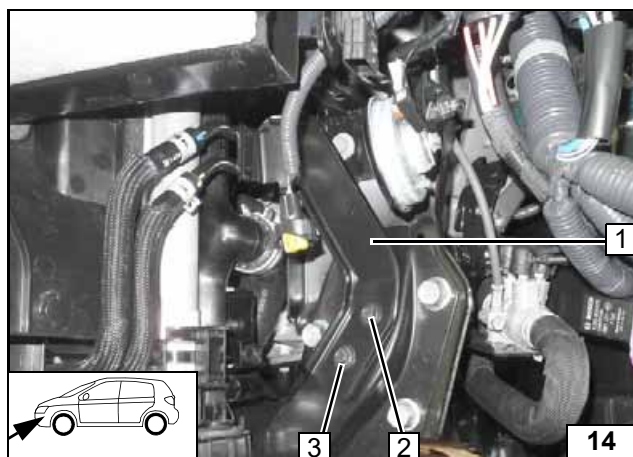


### Preparing Installation Location

- 1 Remove horn with bracket



Removing horn

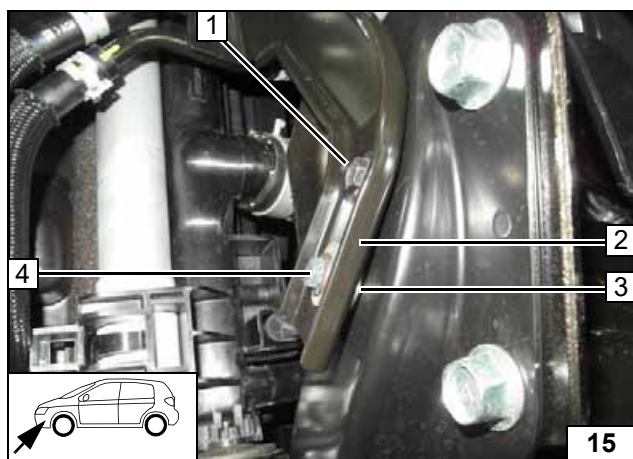


Detach original vehicle bracket for oil cooler lines 1, if present.



- 2 Remove original vehicle bolt, will be reused
- 3 Remove original vehicle bolt and discard

Detaching original vehicle bracket

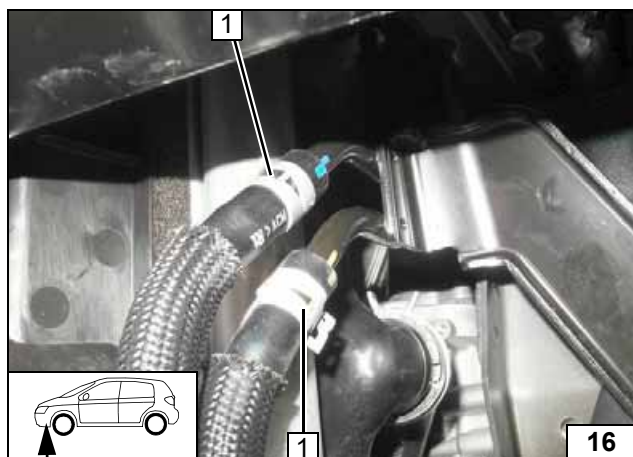


If present.



- 1 Original vehicle bolt
- 2 Original vehicle bracket for oil cooler lines
- 3 5mm shim
- 4 M6x25 bolt, spring lockwasher, large diameter washer, original vehicle bracket

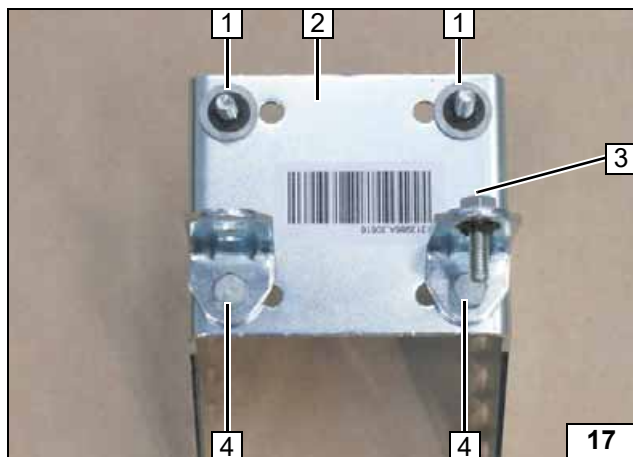
Mounting original vehicle bracket



Align, if available, original vehicle clamps 1 of oil cooler lines as shown.

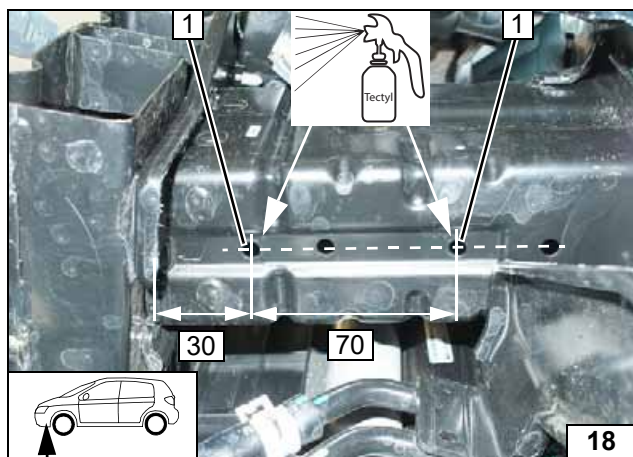


Aligning clamps



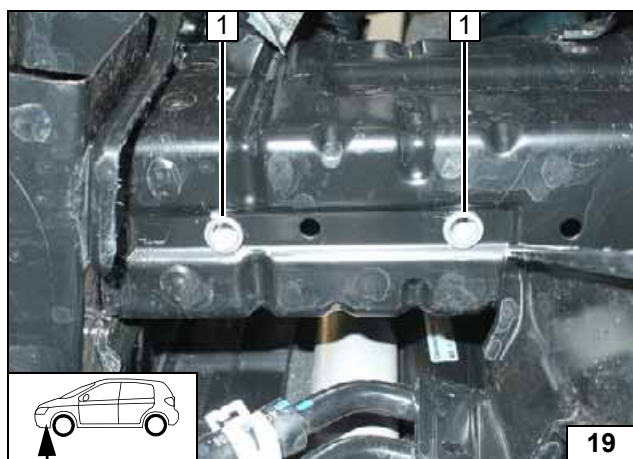
- 1 M6x20 bolt, spring lockwasher, large diameter washer with outer dia.  $d_a = 17.6\text{mm}$ ; lock washer
- 2 Bracket
- 3 M6x20 bolt, large diameter washer, angle bracket, lock washer
- 4 M6x12 bolt, angle bracket, bracket, flanged nut

**Preparing bracket**



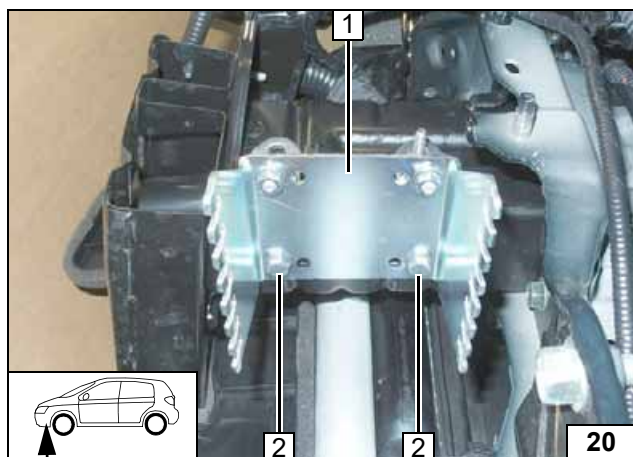
- 1 9mm dia. hole

**Holes in frame side member**



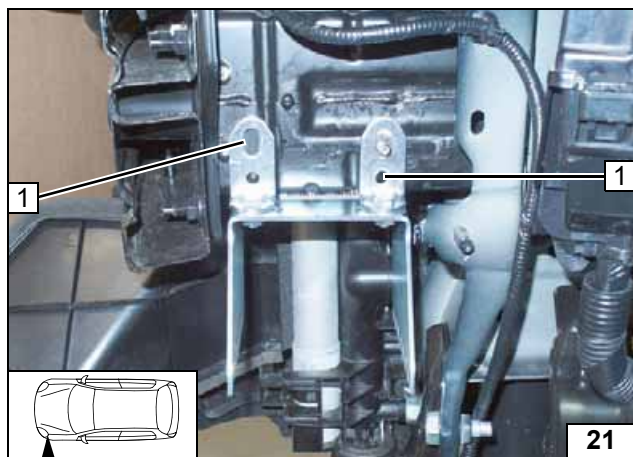
- 1 Rivet nut

**Installing rivet nut**



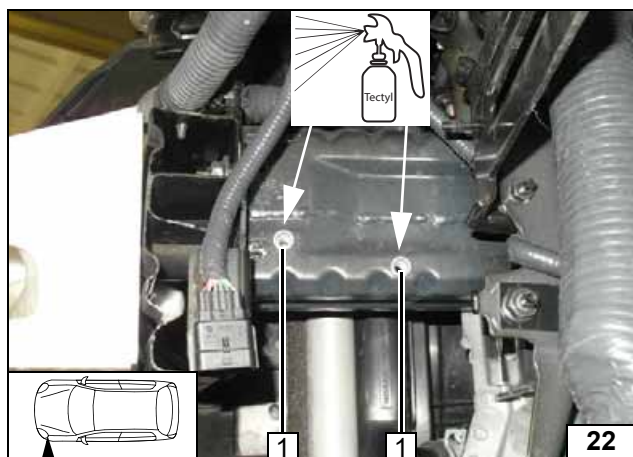
- 1 Bracket
- 2 Pre-mounted M6x20 bolts

**Installing bracket loosely**



1 Copy hole pattern

Copying hole pattern

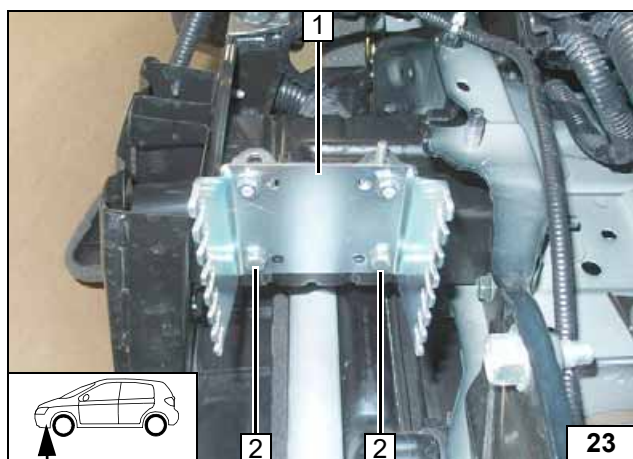


Remove bracket.

1 9mm dia. hole, rivet nut

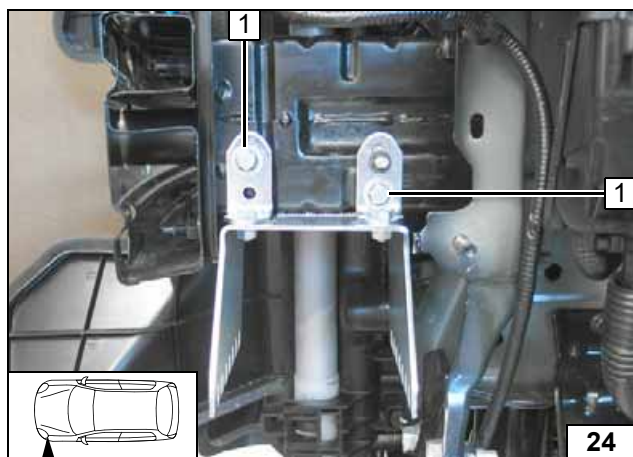


Installing rivet nut



1 Bracket  
2 Tighten premounted M6x20 bolts

Installing bracket

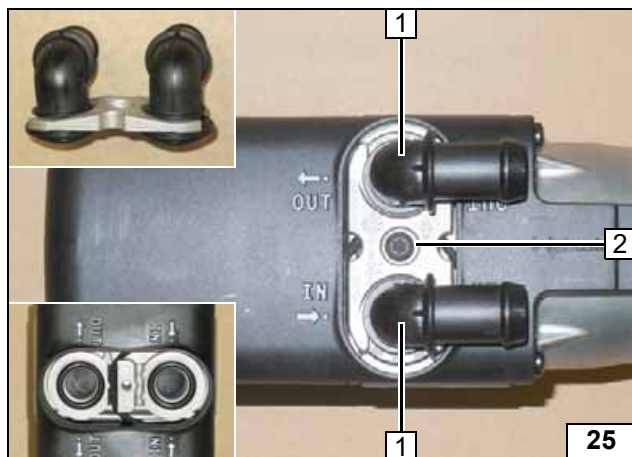
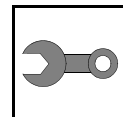


Add one 5mm spacer each between angle bracket and frame side member.

1 M6x30 bolt, spring lockwasher, large diameter washer with outer dia.  $d_a = 17.6\text{mm}$ ; 5mm spacer



Installing bracket

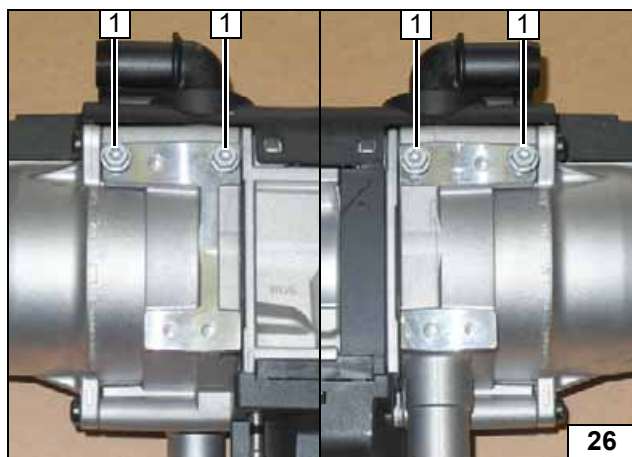


### Preparing Heater

- 1 Water connection piece, sealing ring
- 2 5x15 self-tapping bolt, retaining plate of water connection piece



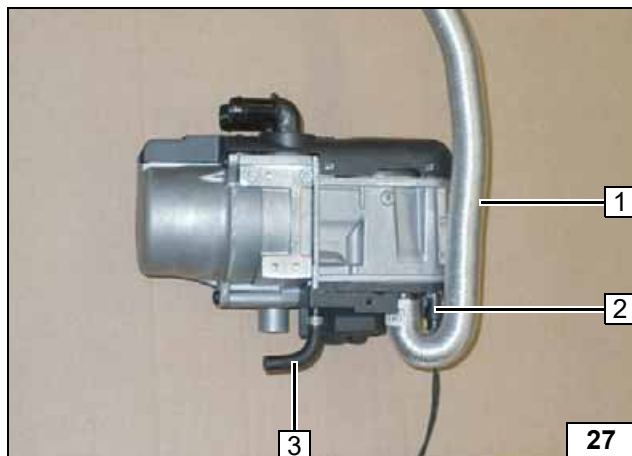
**Installing water connection piece**



Screw 5x13 self-tapping bolts **1** into existing holes by a maximum of 3 thread turns.

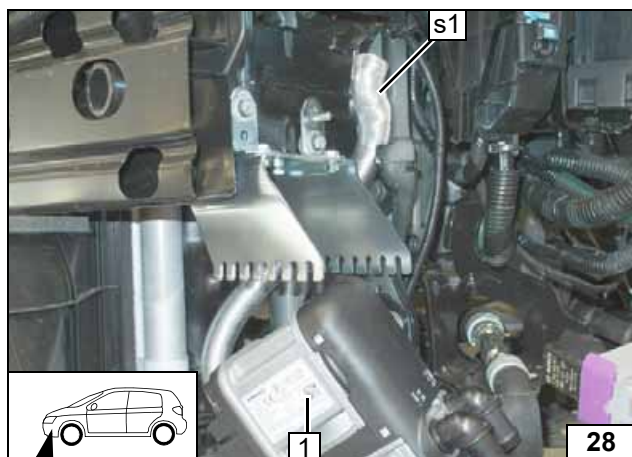


**Premounting bolts loosely**



- 1 Combustion air pipe **s1**
- 2 Connector of circulating pump wiring harness
- 3 90° moulded hose, 10 mm dia. clamp

**Premounting moulded hose, combustion air pipe and circulating pump wiring harness**

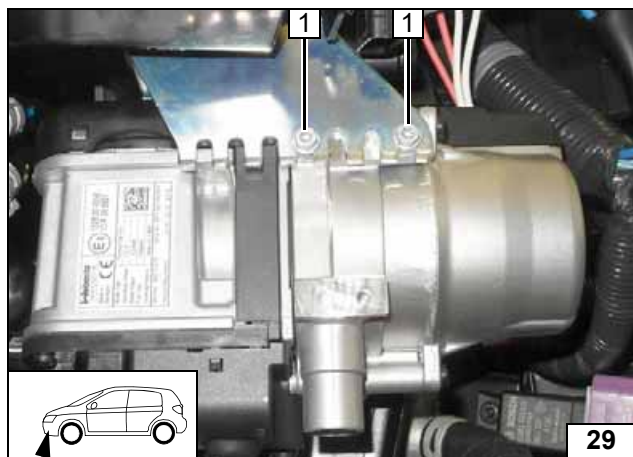
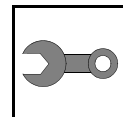


### Installing Heater

When installing heater **1**, route combustion air pipe **s1** as shown.

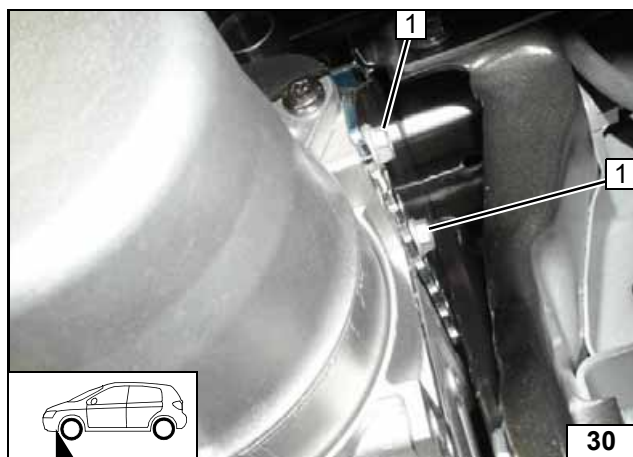


**Installing heater**



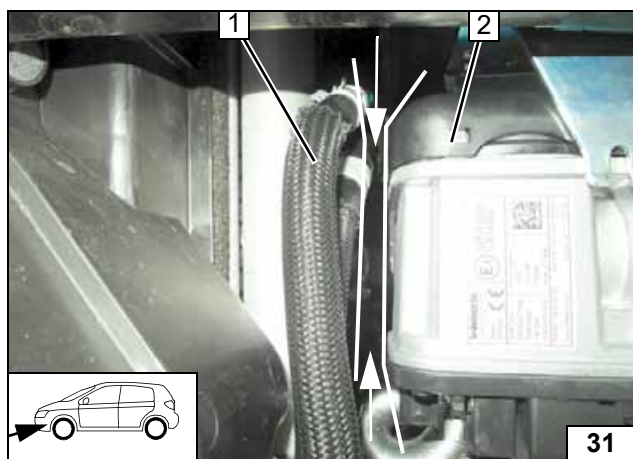
1 Tighten 5x13 self-tapping bolt

Installing heater

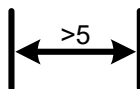


1 Tighten 5x13 self-tapping bolt

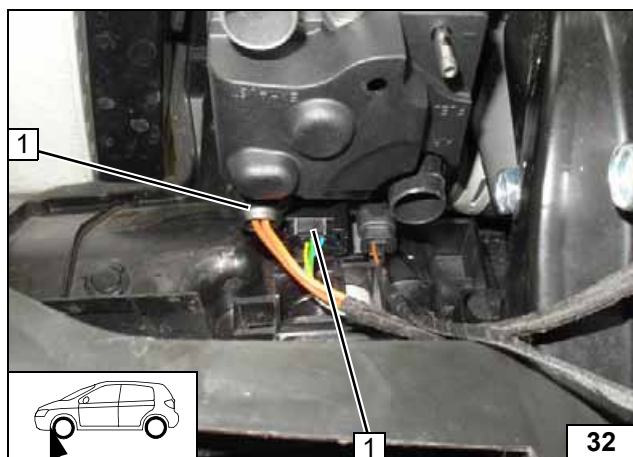
Installing heater



1 Oil cooler lines (if available)  
2 Heater

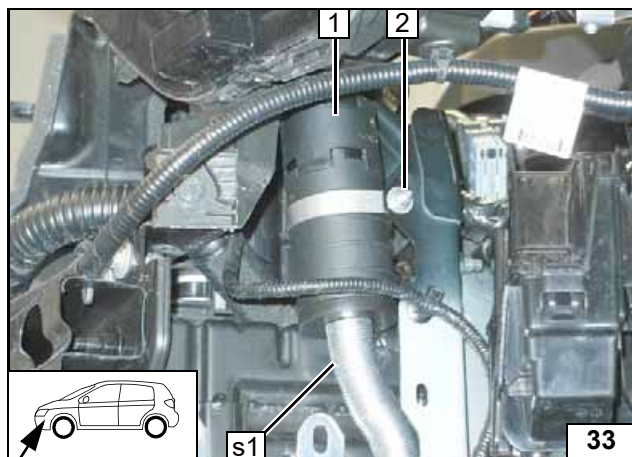
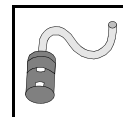


Controlling/  
dcorrecting  
distance



1 Connector of heater wiring harness

Installing wiring har-  
ness of  
heater

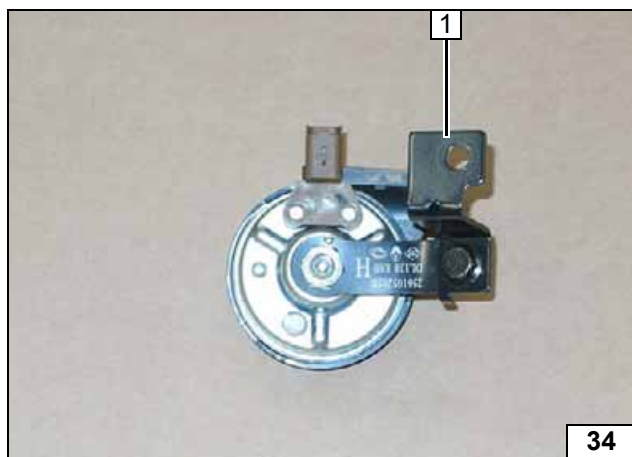


### Combustion Air

- 1 Silencer
- 2 M5x16 bolt, 51mm dia. clamp, original vehicle hole, large diameter washer, flanged nut



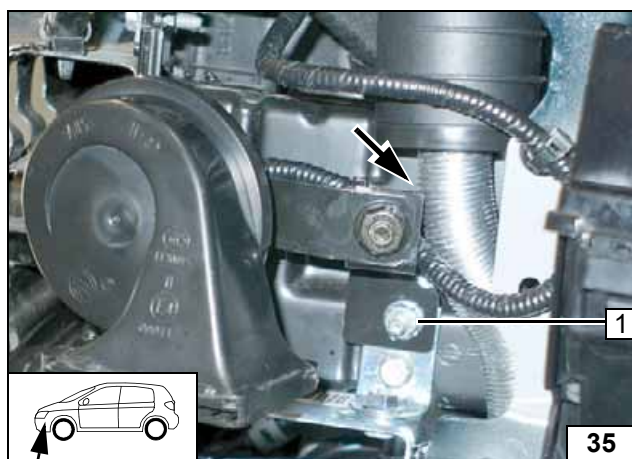
### Installing silencer



Mount horn bracket 1 as shown.



### Preparing horn

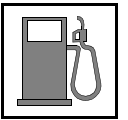


Mount connector of horn wiring harness. Ensure sufficient distance between horn bracket and combustion air pipe.

- 1 Flanged nut



### Installing horn



**Fuel**



Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

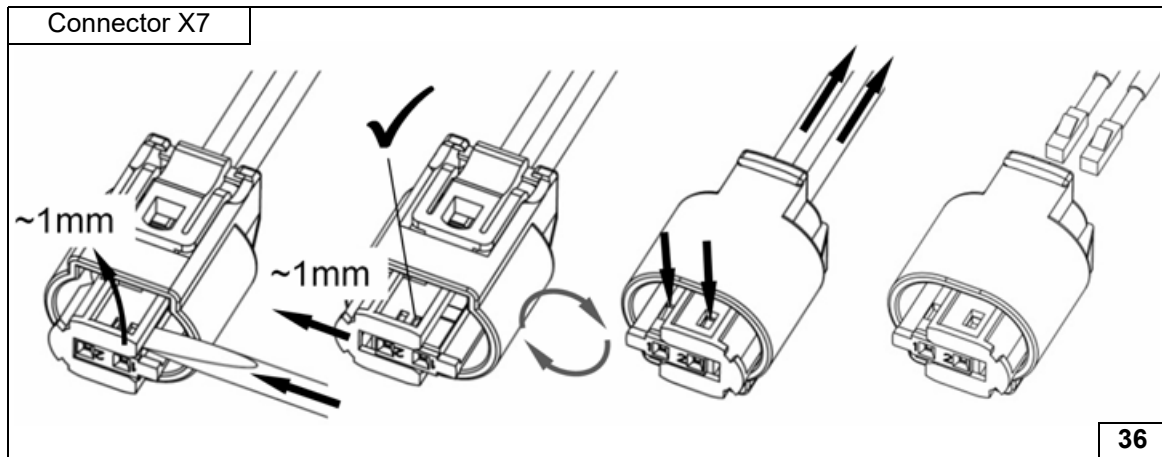
Catch any fuel running off in an appropriate container.



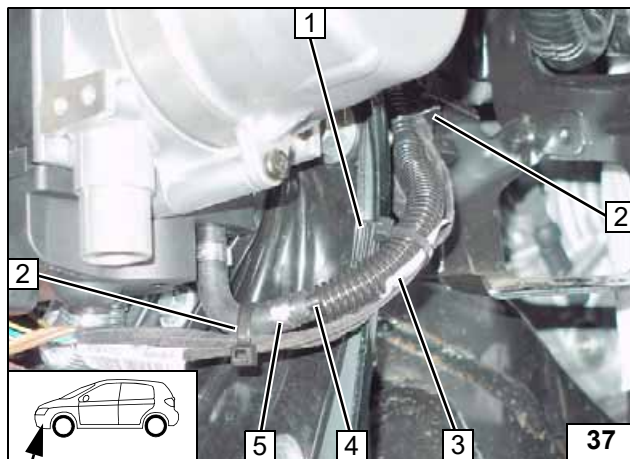
Route fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.

Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



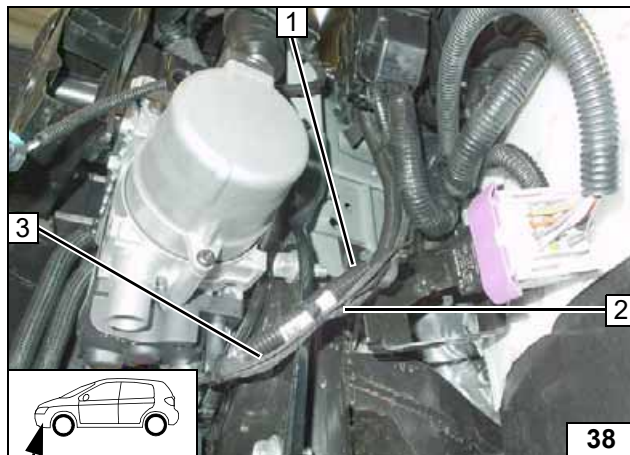
**Dismantling metering pump connector**



Draw fuel line and metering pump wiring harness 4 into 10mm dia. corrugated tube 3.

- 1 Edge clip cable tie
- 2 Cable tie
- 5 10 mm dia. clamp

**Connect-  
ing heater**

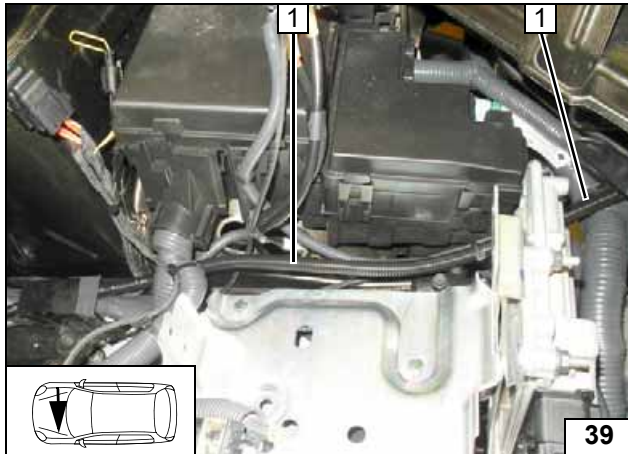


Route fuel line and metering pump wiring harness in 10mm dia. corrugated tube 1 in the engine compartment.

Fasten corrugated tube 1, heater wiring harness 2 and circulating pump wiring harness 3 to original vehicle wiring harness using cable ties.

**Routing  
lines**

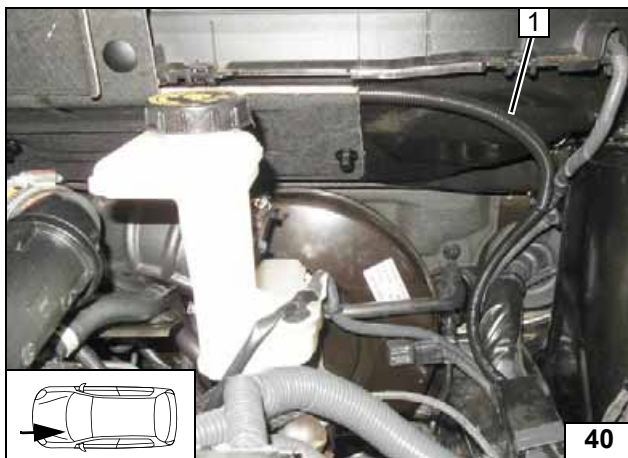




Route fuel line and metering pump wiring harness in 10mm dia. corrugated tube **1** along original vehicle lines to the firewall and fasten using cable ties.



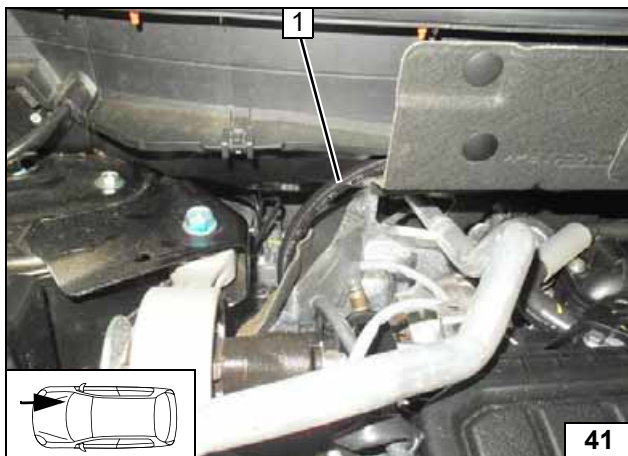
**Routing lines**



Route fuel line and metering pump wiring harness in 10mm dia. corrugated tube **1** behind the insulation to the right side of the vehicle.



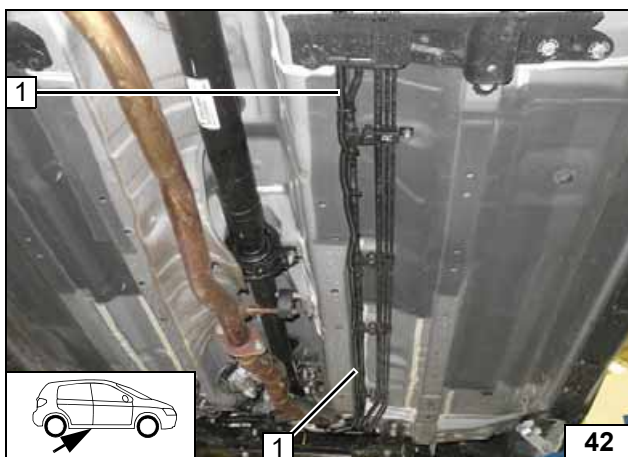
**Routing lines**



Route fuel line and metering pump wiring harness in 10mm dia. corrugated tube **1** along original vehicle lines to the underbody.



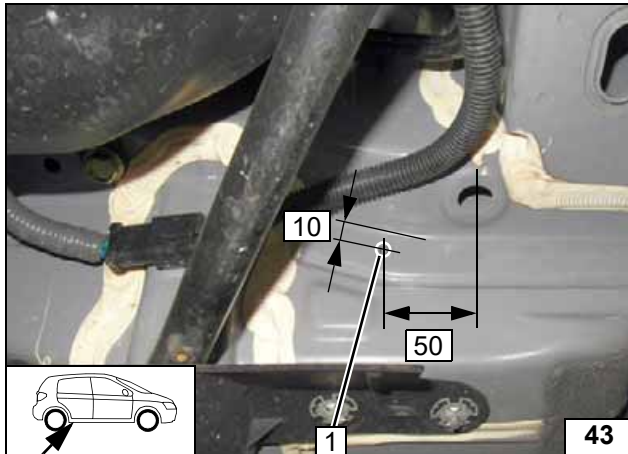
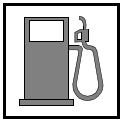
**Routing lines**



Route fuel line and metering pump wiring harness in 10 mm dia. corrugated tube **1** along original vehicle lines to the installation location of the metering pump.

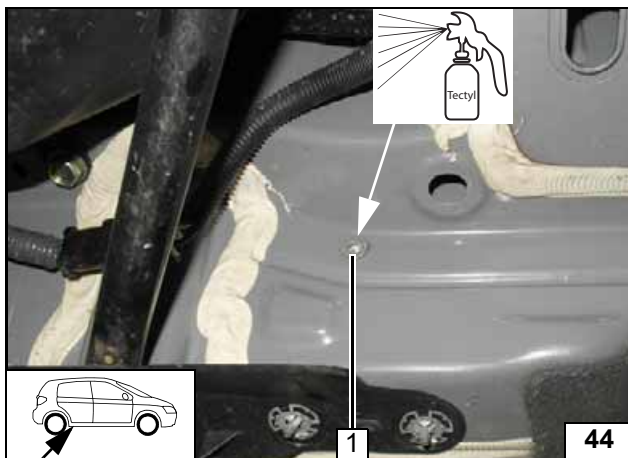


**Routing lines**



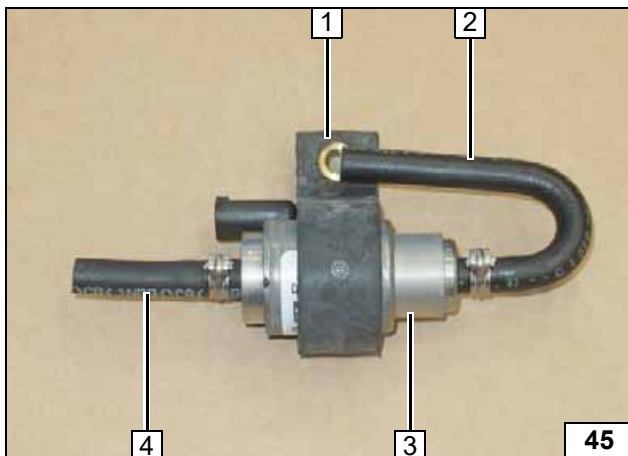
1 9mm dia. hole

Hole for metering pump



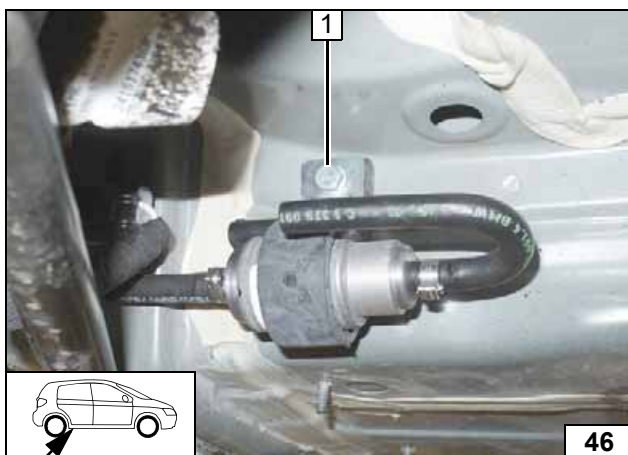
1 Rivet nut

Installing rivet nut



- 1 Metering pump mount
- 2 180° moulded hose, 10 mm dia. clamp
- 3 Metering pump
- 4 Hose section, 10mm dia. clamp

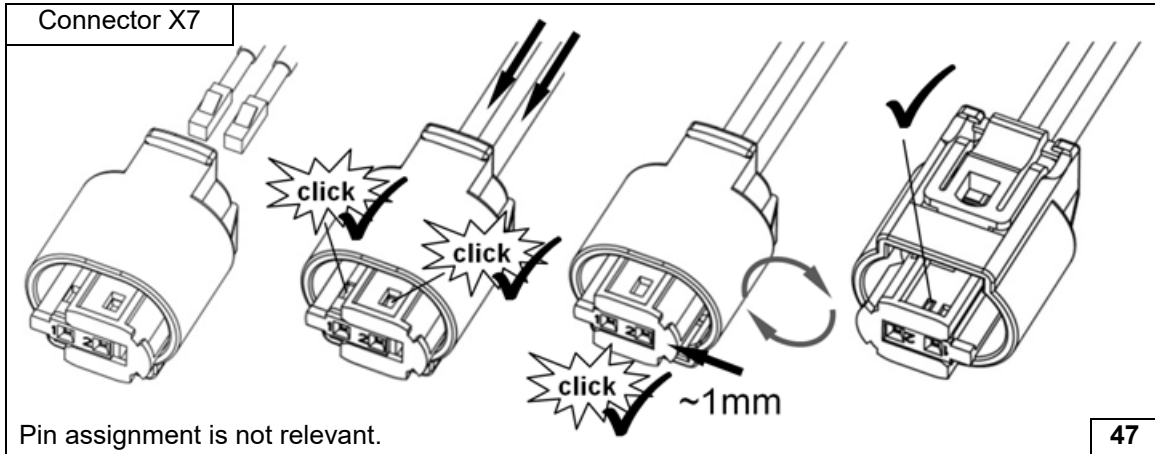
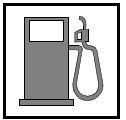
Premounting metering pump



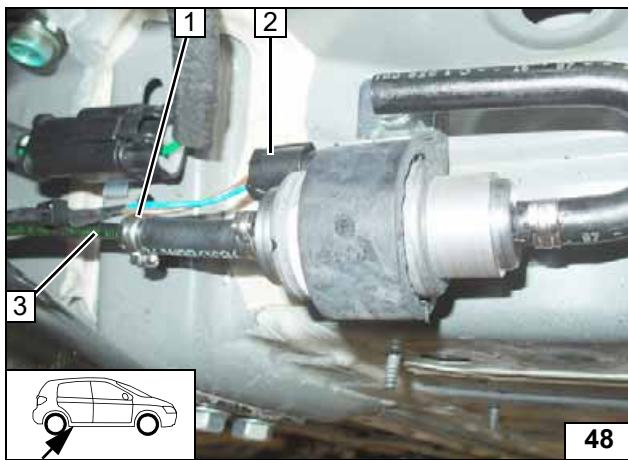
1 M6x25 bolt, support angle bracket on rivet nut



Installing metering pump



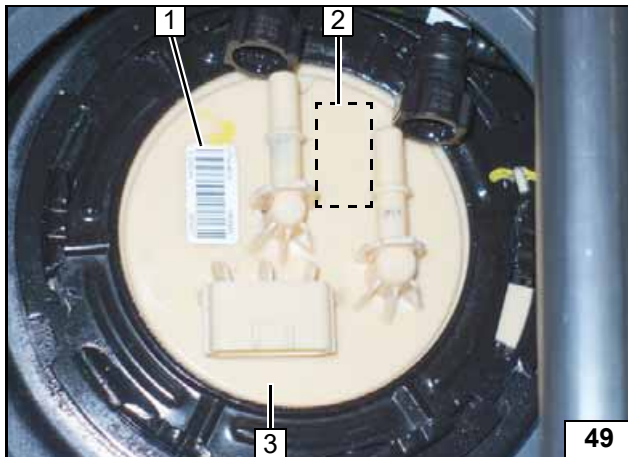
Completing metering pump connector



- 1 10 mm dia. clamp
- 2 Metering pump wiring harness, connector X7 mounted
- 3 Fuel line of heater



Connecting metering pump

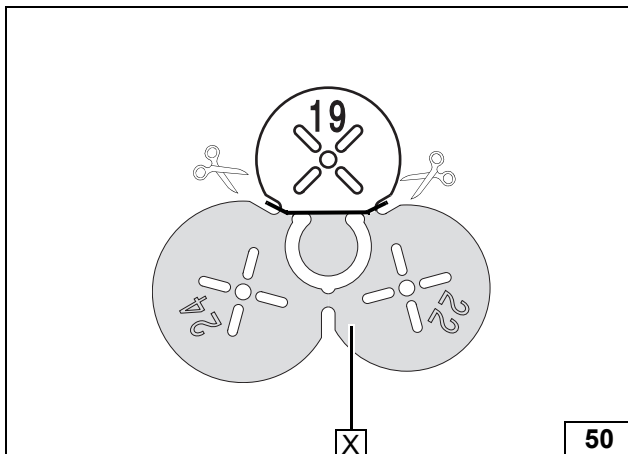


Remove sticker 1 and stick it at position 2.

- 3 Fuel tank sending unit



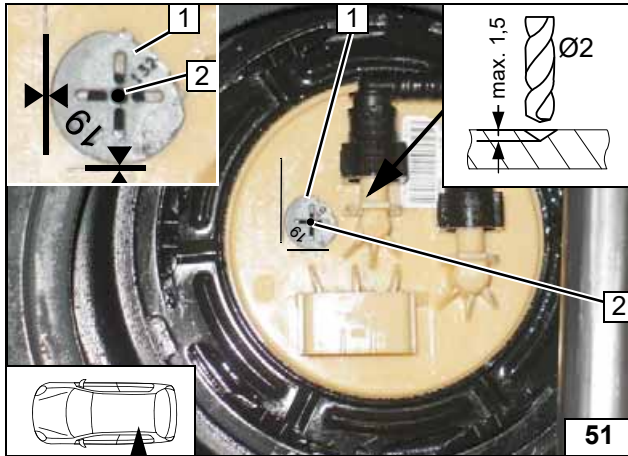
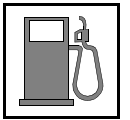
Fuel extraction



### Installing FuelFix

X =

Preparing drilling template



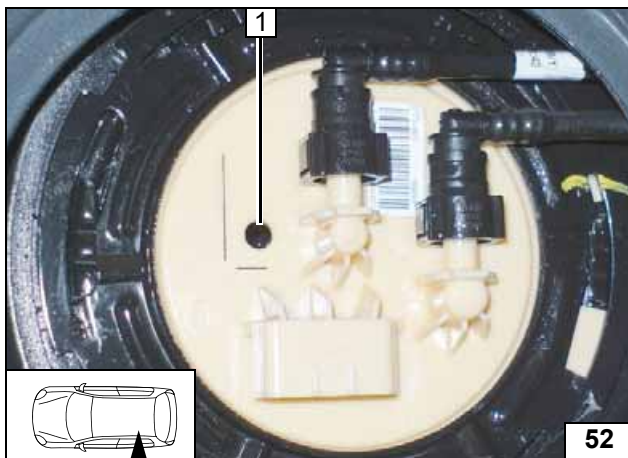
Work steps F1 and F2.

The contour of the embossed areas is outlined.

- 1 Position 19mm dia. drilling template as shown
- 2 2mm dia. centring hole



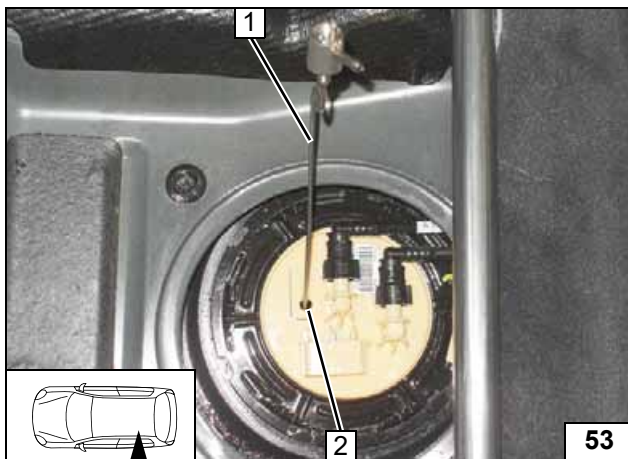
**Drilling centring hole**



Work step F3.

- 1 Hole made with provided drill

**Hole for FuelFix**

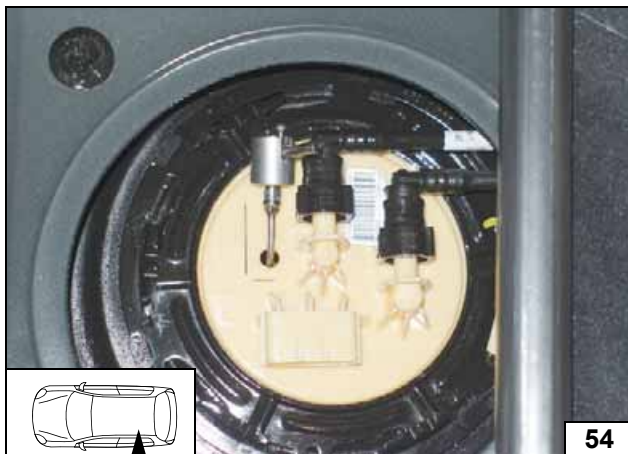


Work steps F4 and F5.

Bend FuelFix 1 according to template and cut to length.  
Insert into hole 2.

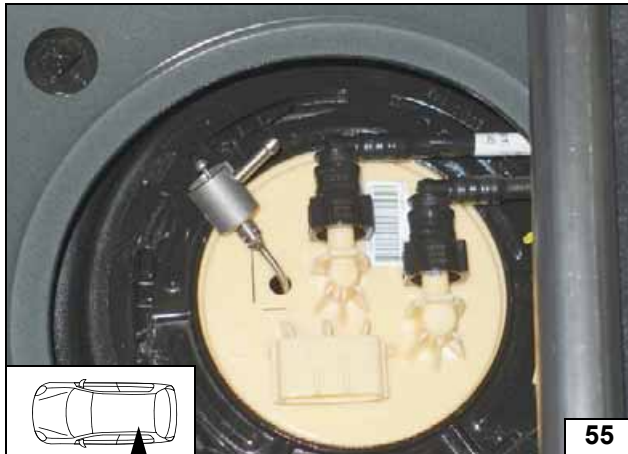


**Inserting FuelFix**



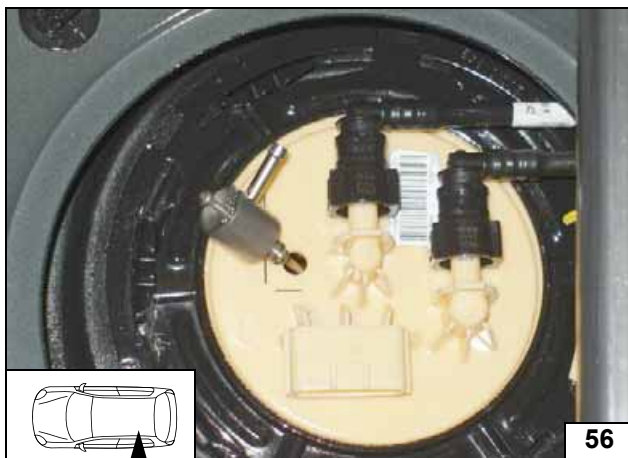
Work step F5.

**Inserting FuelFix**



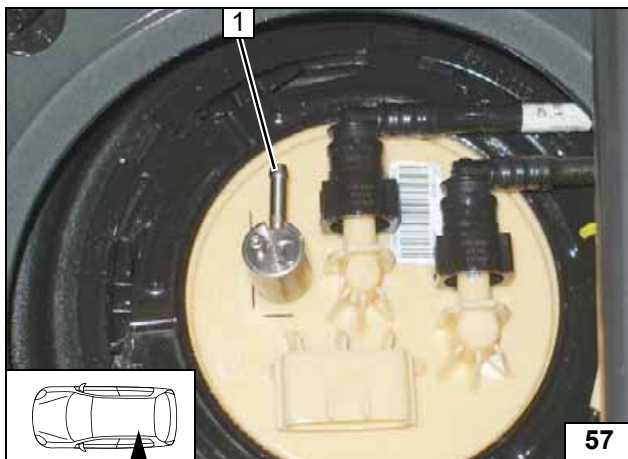
Work step F5.

Inserting FuelFix



Work step F5.

Inserting FuelFix

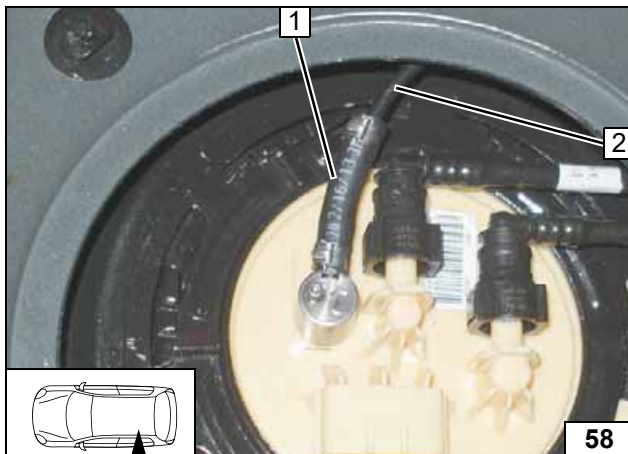


Work steps F5.3 and F5.4.

Align FuelFix 1 as shown.



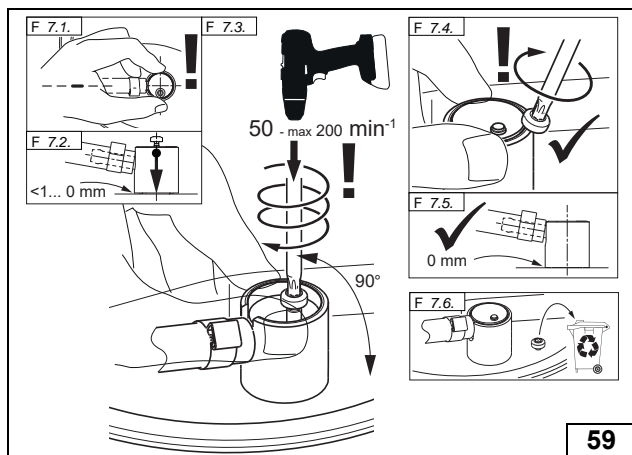
Aligning FuelFix



Work step F6.

- 1 Hose section, 10mm dia. clamp [2x]
- 2 Fuel line

Connecting fuel line

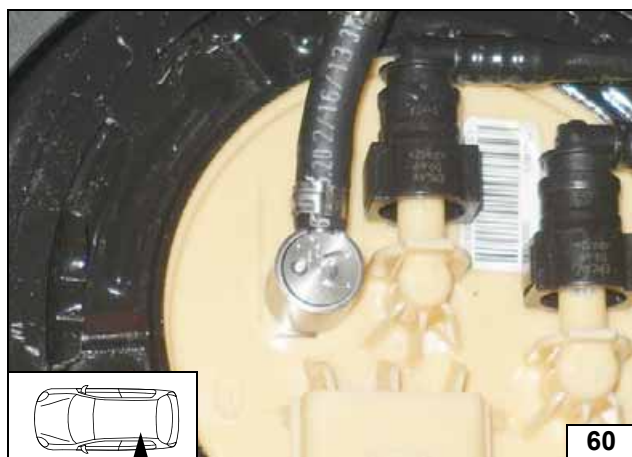


59

Work step F7.



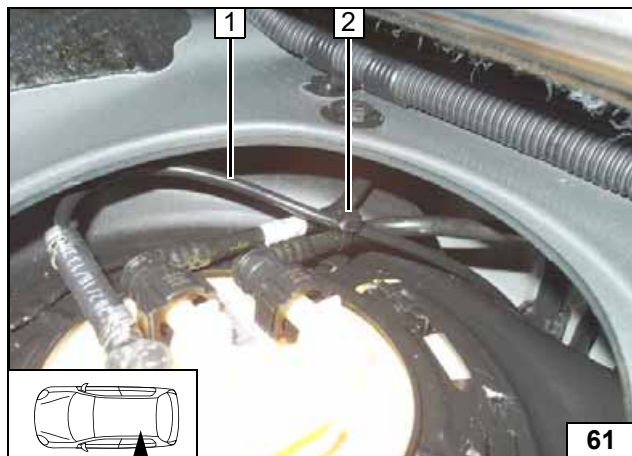
Installing FuelFix



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Work step F8.

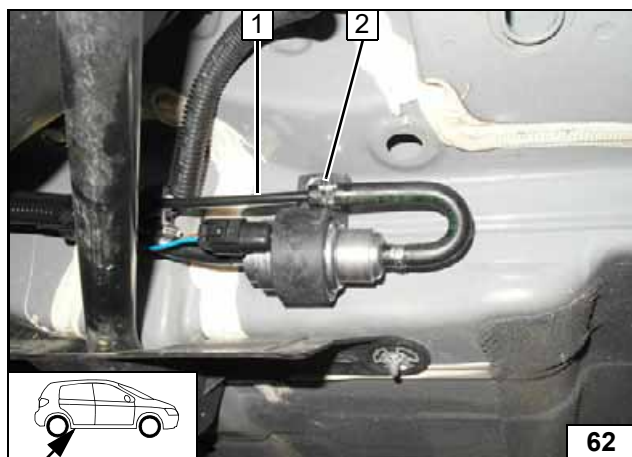
Ensuring firm seating of FuelFix



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- 1 Fuel line of FuelFix
- 2 Cable tie as tension relief

Securing fuel line

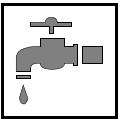


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- 1 Fuel line of fuel standpipe
- 2 10 mm dia. clamp



Connecting metering pump



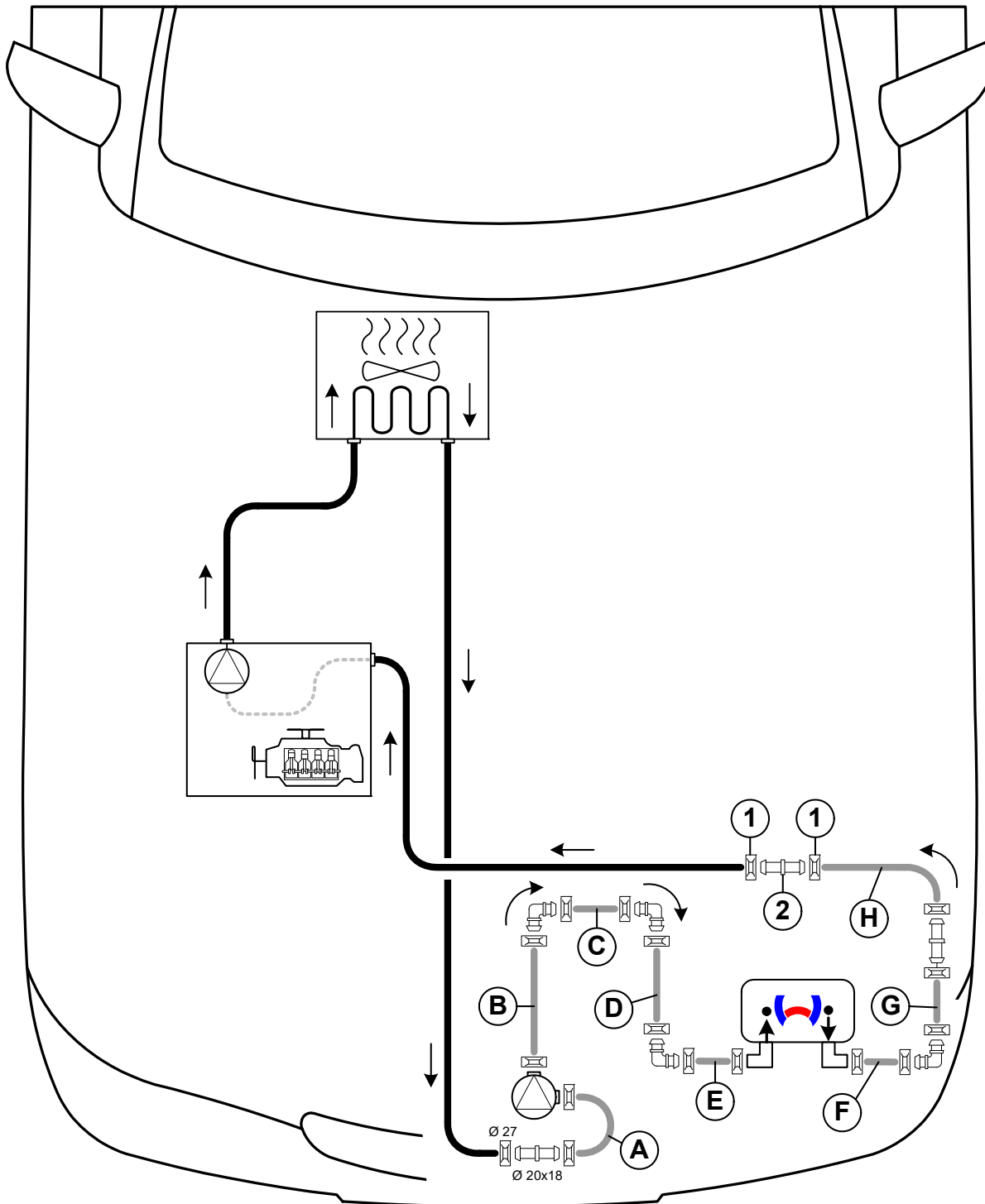
**Coolant Circuit for 1.6 Diesel**



Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.



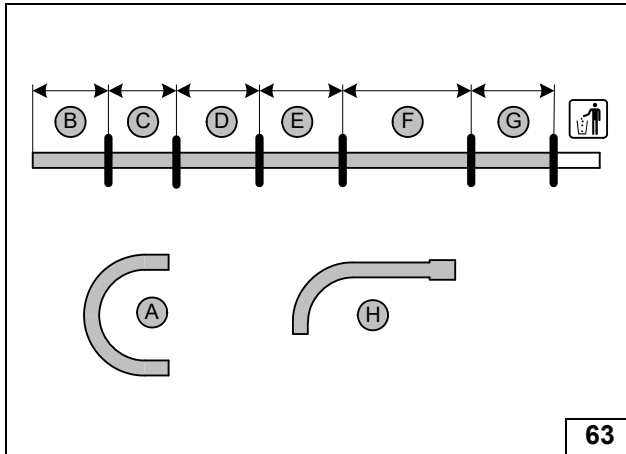
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

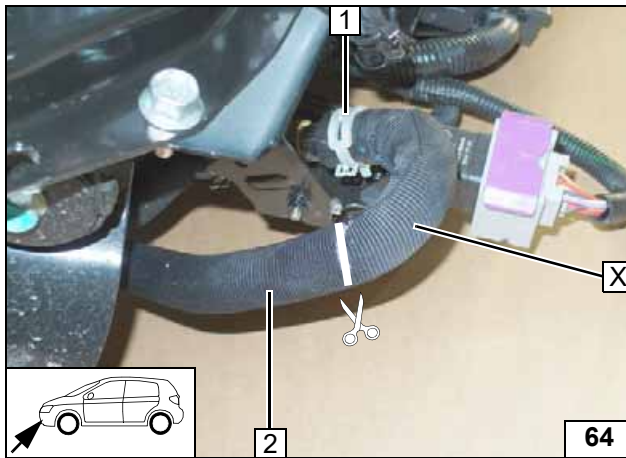
All spring clips without a specific designation = 25 mm dia.  
 All connecting pipes without a specific designation and = 18x18mm dia.  
 1 = Original vehicle spring clip .  
 2 = Original vehicle connecting pipe





- A = 180°, 18x18mm dia.
- H = 90°, 18x20mm dia.
- B = 60
- C = 80
- D = 120
- E = 110
- F = 150
- G = 60

Cutting hoses to length



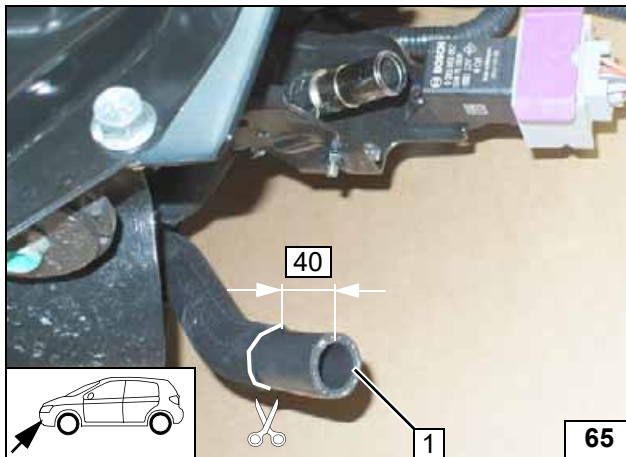
Cut original vehicle hose 2 at the marking. Spring clip 1 will be reused.



2 Hose section of heat exchanger outlet

X =

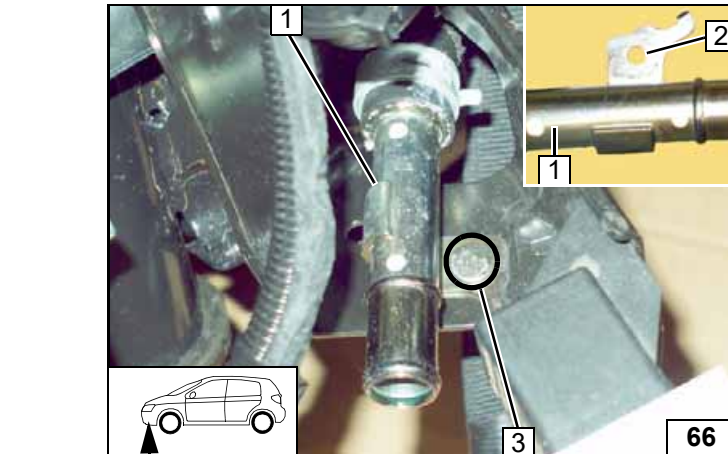
Cutting point



Remove protective hose from hose section of heat exchanger outlet 1.



Removing protective hose



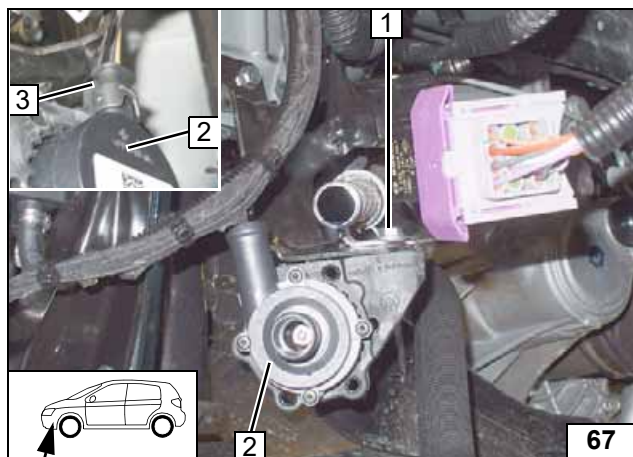
Dismount original vehicle connecting pipe 1 and remove welded bolt 3.



2 Welded bolt removed

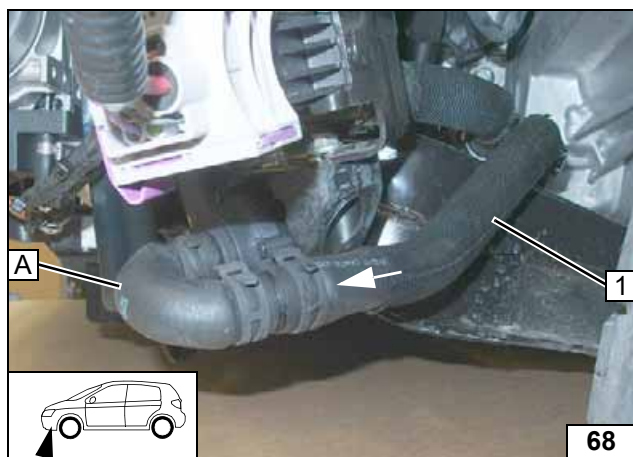
Preparing circulating pump installation





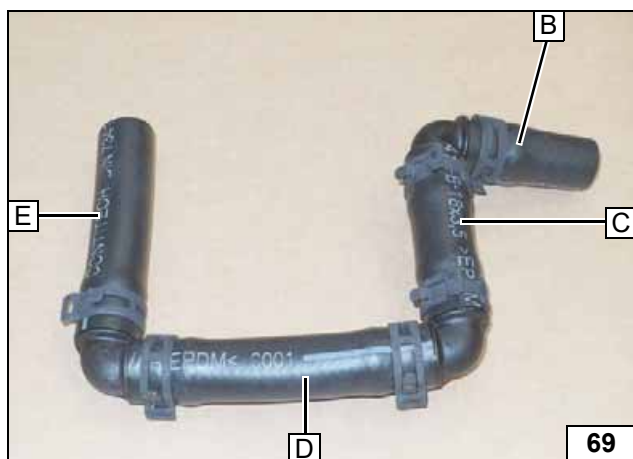
- 1 M6x25 bolt, original vehicle connecting pipe, original vehicle hole, circulating pump mount, flanged nut
- 2 Circulating pump
- 3 Circulating pump wiring harness

**Installing circulating pump**

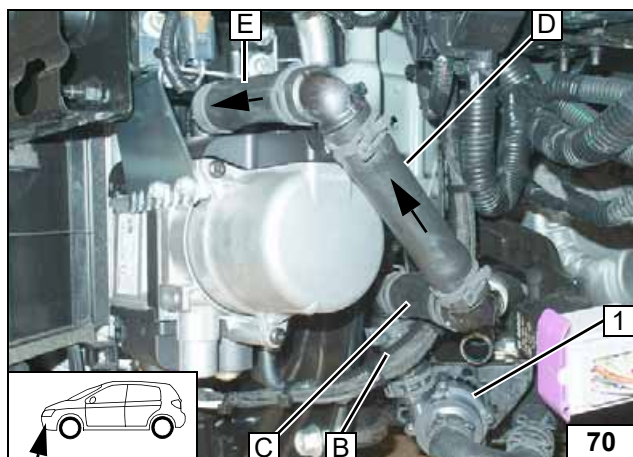


- 1 Hose section of heat exchanger outlet

**Connecting circulating pump**



**Premounting hoses B, C, D and E**

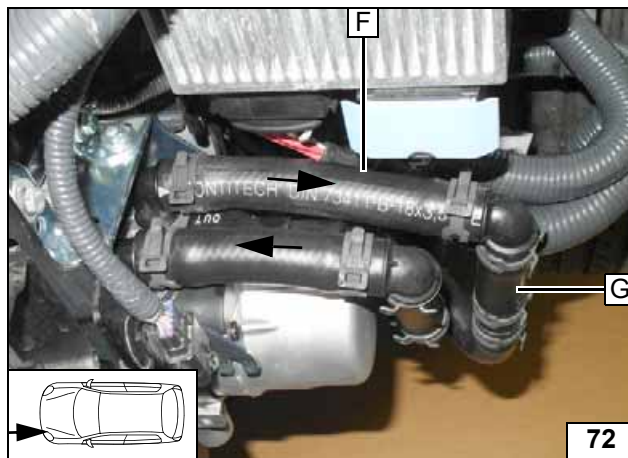


- 1 Circulating pump

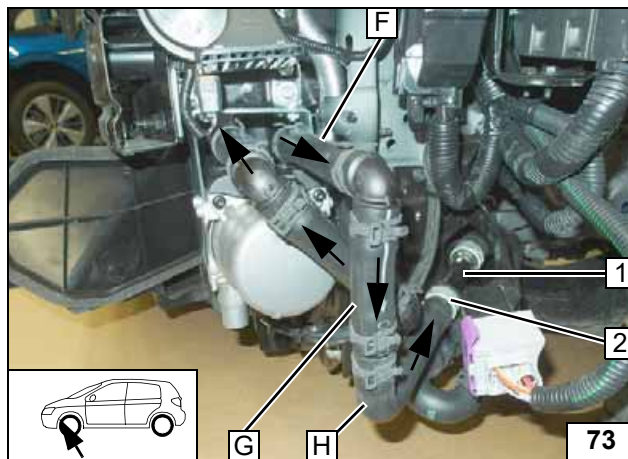
**Connecting circulating pump and heater inlet**



Premounting hoses F, G, and H



Connecting heater outlet



Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Original vehicle connecting pipe
- 2 Original vehicle spring clip



Connection on engine inlet



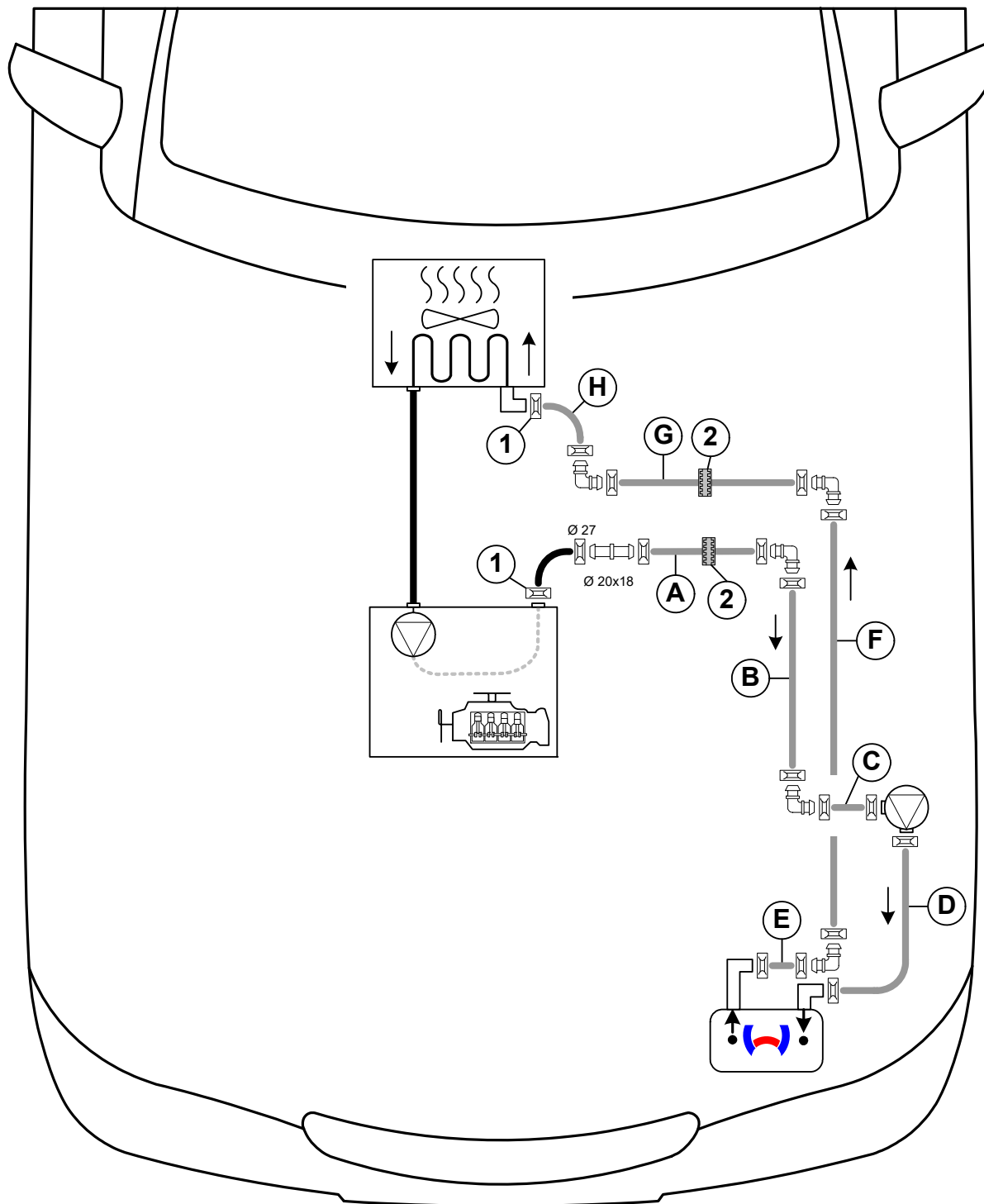
### Coolant Circuit for 2.0D






Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.



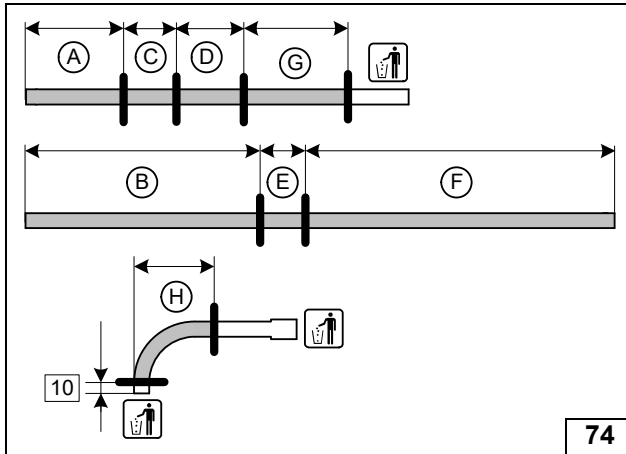
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

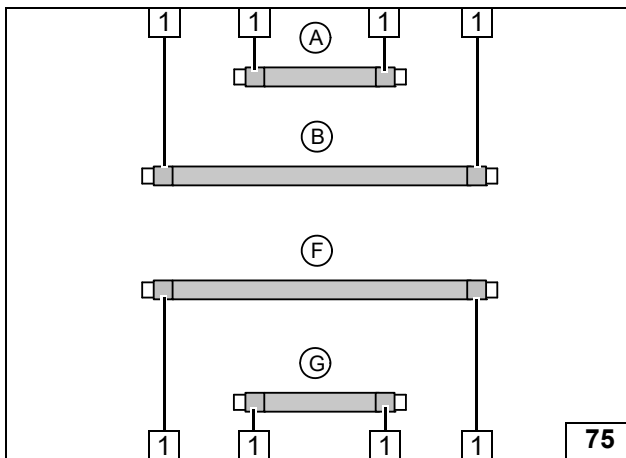
All spring clips without a specific designation  = 25 mm dia.  
 All connecting pipes without a specific designation  = 18x18 mm dia.  
 1 = Original vehicle spring clip .  
 2 = Black (sw) rubber isolator.





- A = 370
- B = 910
- C = 120
- D = 240
- E = 65
- F = 1025
- G = 380
- H = 80

Cutting hoses to length

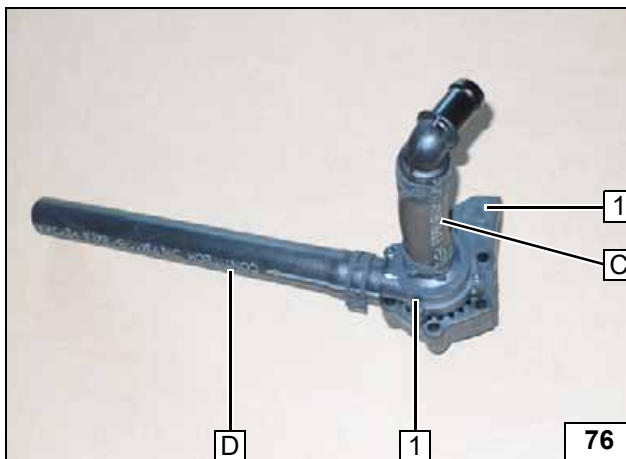


Slide on braided protection hoses and cut to length.



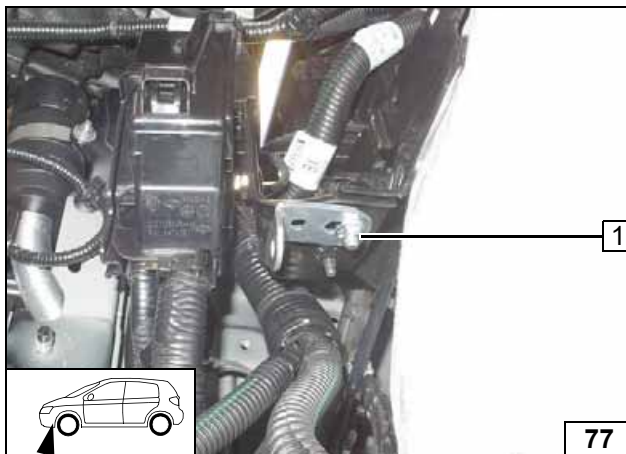
- 1 Cut heat shrink plastic tubing to size, 60mm long

Preparing hoses



- 1 Circulating pump mount
- 2 Circulating pump

Premounting circulating pump

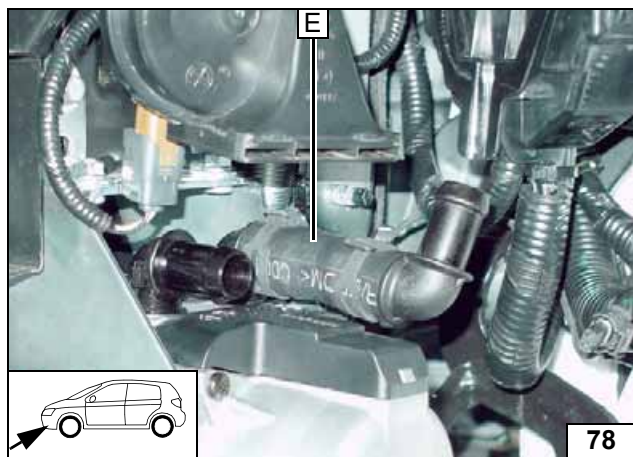


Replace original vehicle bolt at position 1 with M6x20 bolt.

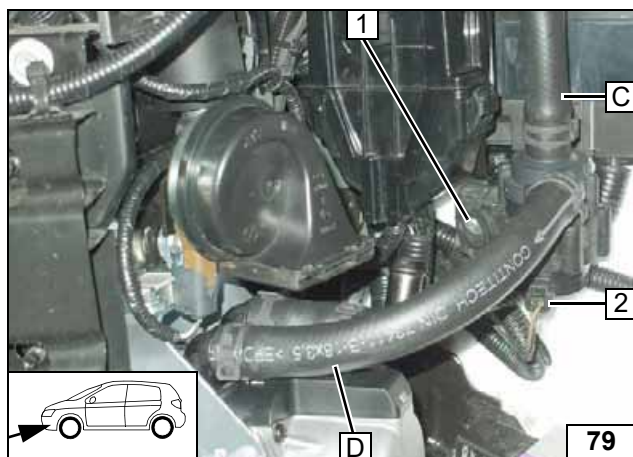


- 1 M6x20 bolt, original vehicle thread, angle bracket, flanged nut

Installing angle bracket

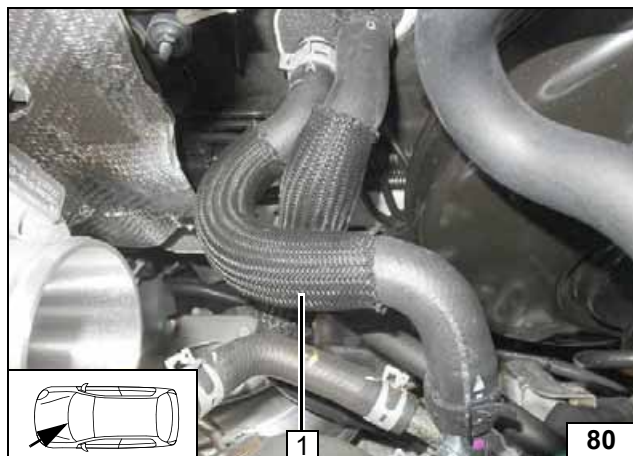


Mounting hose E



- 1 M6x25 bolt, angle bracket, circulating pump mount, flanged nut
- 2 Connector of circulating pump wiring harness

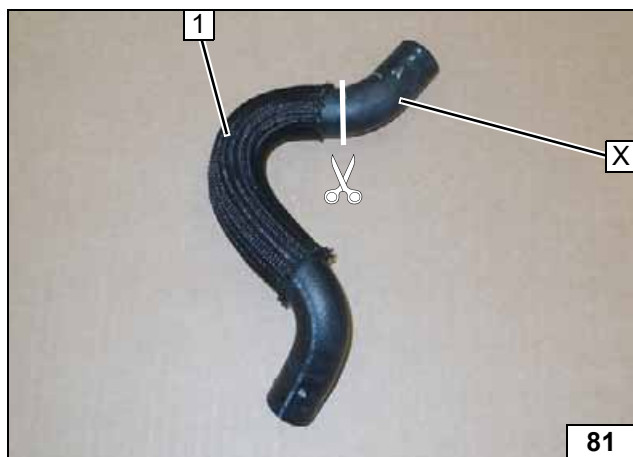
Installing circulating pump



Remove hose of engine outlet / heat exchanger inlet 1. Spring clips will be reused.



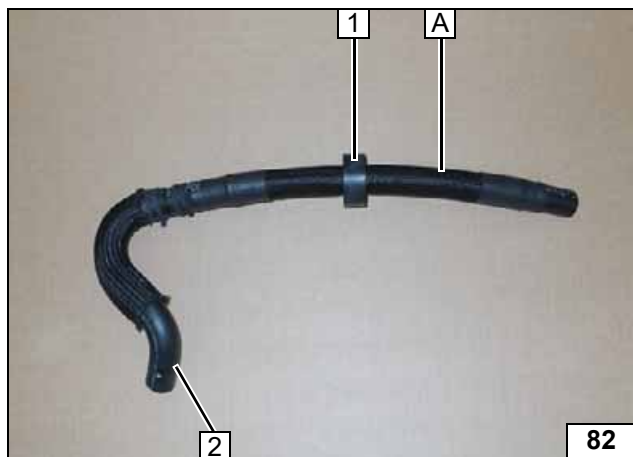
Cutting point



- 1 Engine outlet hose section

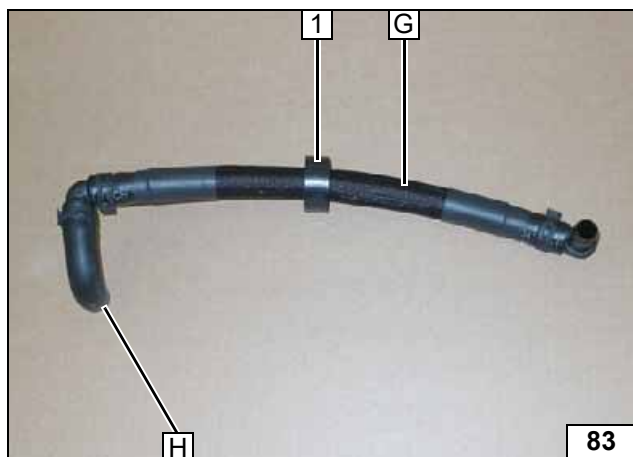
X =

Preparing engine outlet hose section



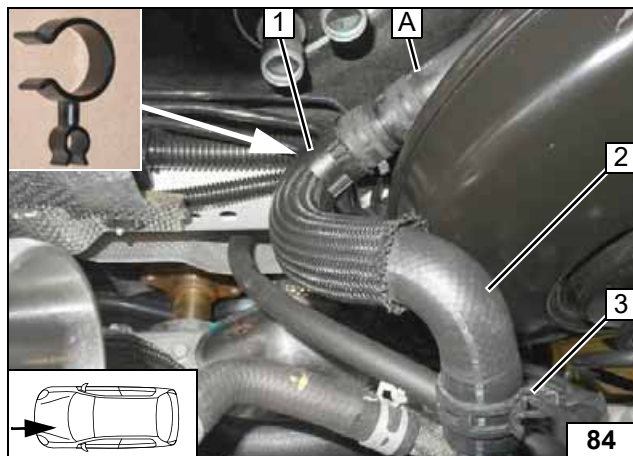
- 1 Black (sw) rubber isolator
- 2 Engine outlet hose section

Premounting hose A and engine outlet hose section



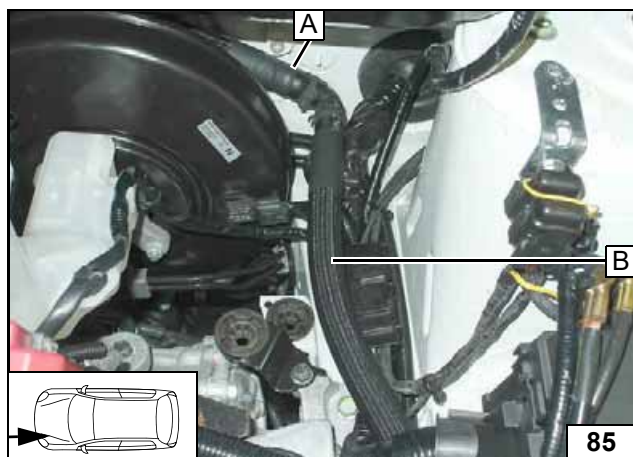
- 1 Black (sw) rubber isolator

Premounting hoses G and H

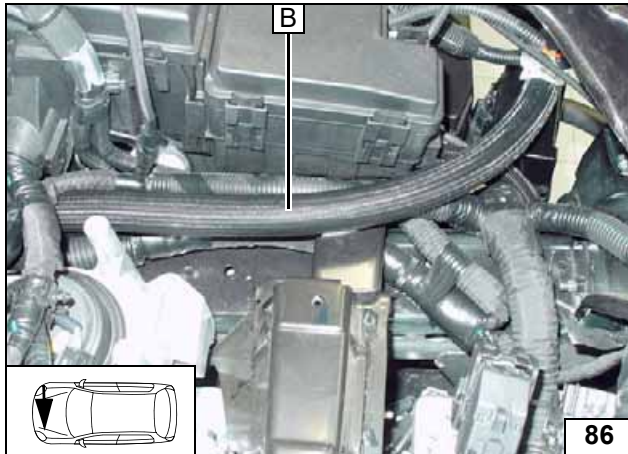
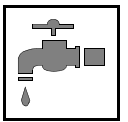


- 1 25x8mm hose bracket between hose of engine outlet and brake line
- 2 Engine outlet hose section
- 3 Original vehicle spring clip

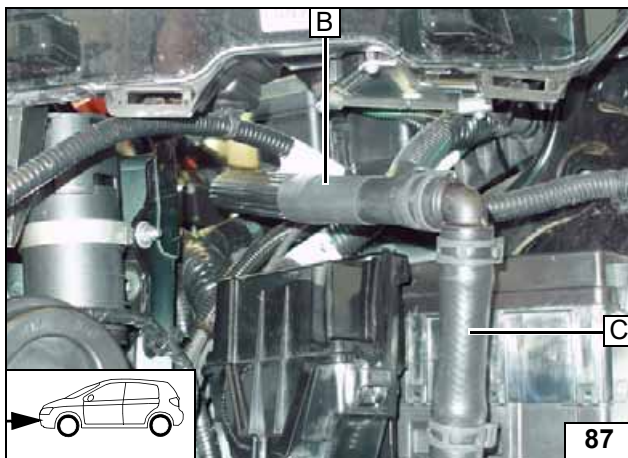
Connecting engine outlet



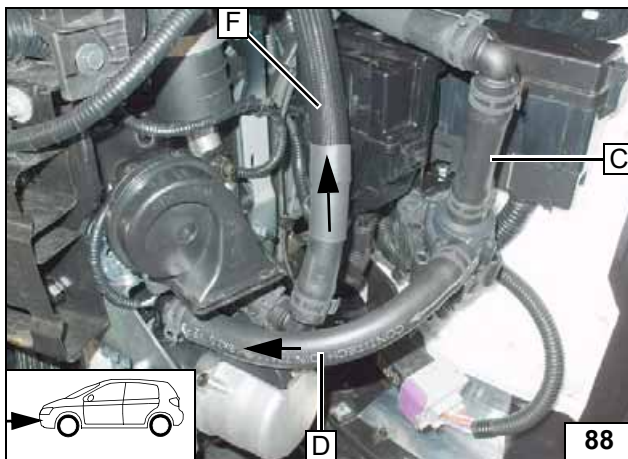
Routing in engine compartment



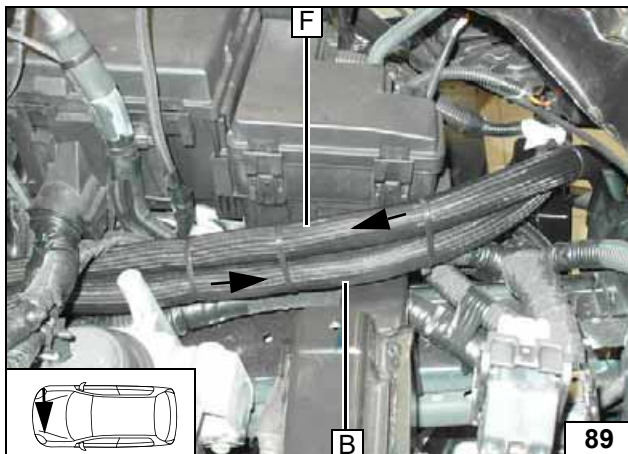
Routing in engine compartment



Connection of hoses B and C



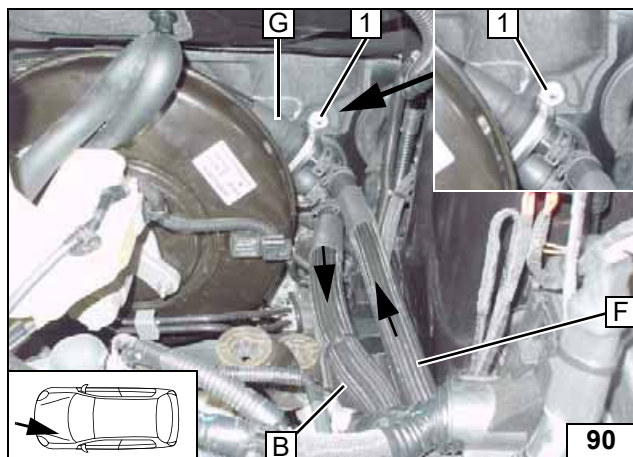
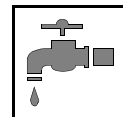
Connecting heater outlet



Fasten hoses **B** and **F** as shown using cable ties.



Routing in engine compartment

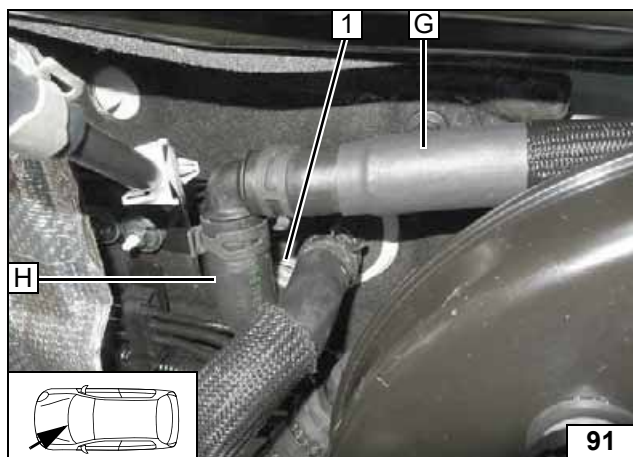


Remove original vehicle plastic nut at position **1** and discard.

- 1** Original vehicle stud bolt, 48mm dia. rubber-coated p-clamp, plate nut



**Routing in engine compartment**

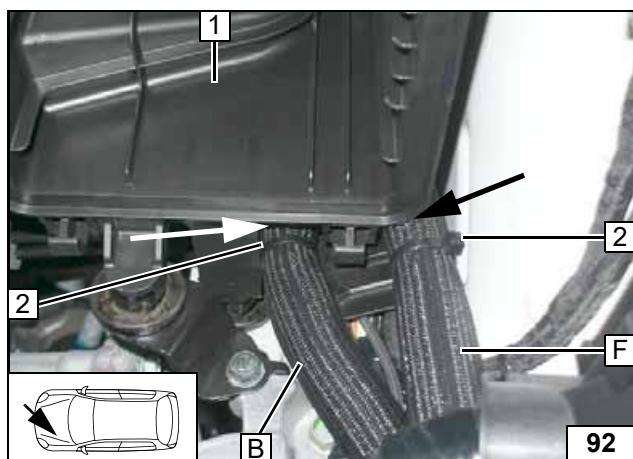


Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

- 1** Original vehicle spring clip



**Connecting heat exchanger inlet**



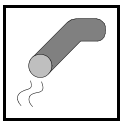
Mount air filter housing **1**. Ensure sufficient distance between air filter housing and hoses **B** and **F**, correct if necessary.

- 2** Cable tie



**Securing hoses B and F**

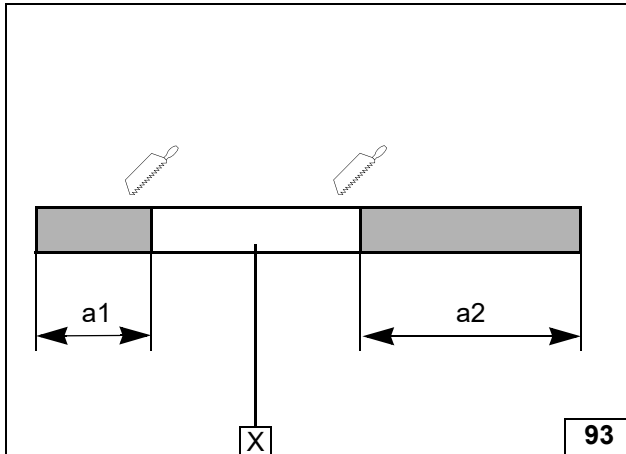




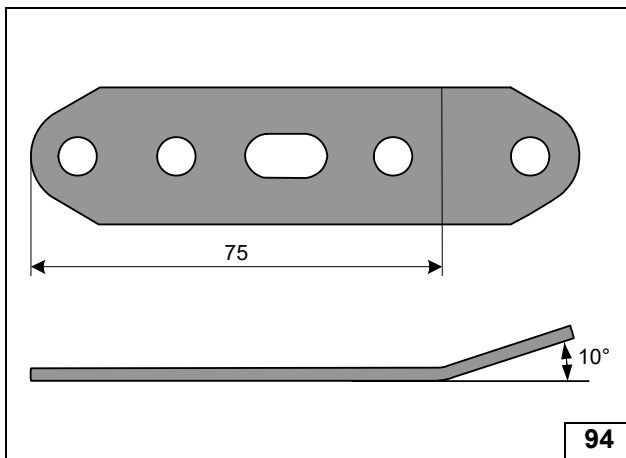
**Exhaust Gas**

a1 = 80  
a2 = 190

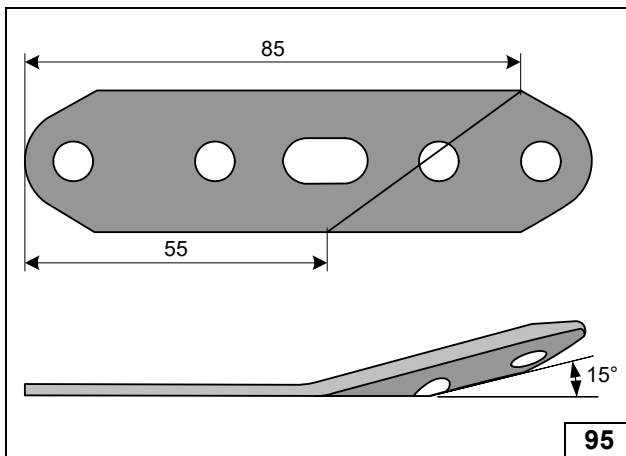
X =



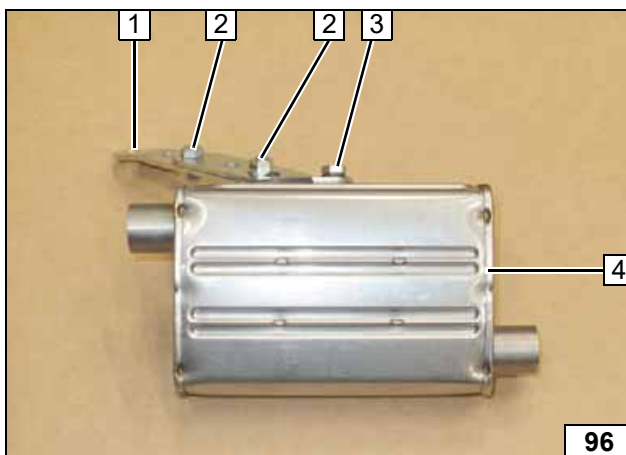
93



94



95



96

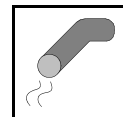
Preparing exhaust pipe

Bending perforated bracket 1

Bending perforated bracket 2

- 1 Perforated bracket 1
- 2 M6x12 bolt, perforated bracket 1 and 2, flanged nut
- 3 M6x16 bolt, spring lockwasher, perforated bracket 2
- 4 Silencer

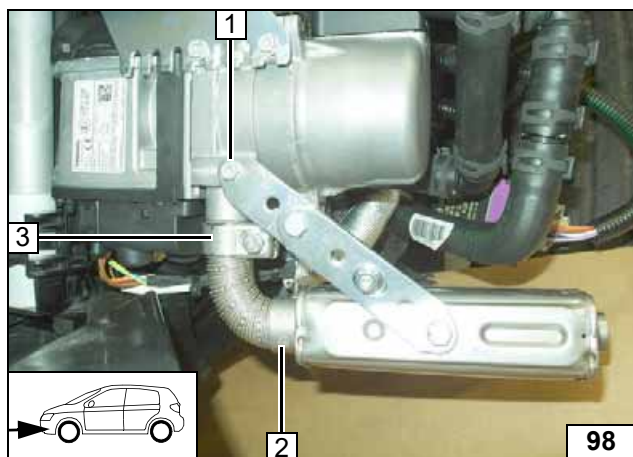
Premounting silencer



Bend exhaust pipe **a1** as shown and mount loosely.

- 1 Hose clamp

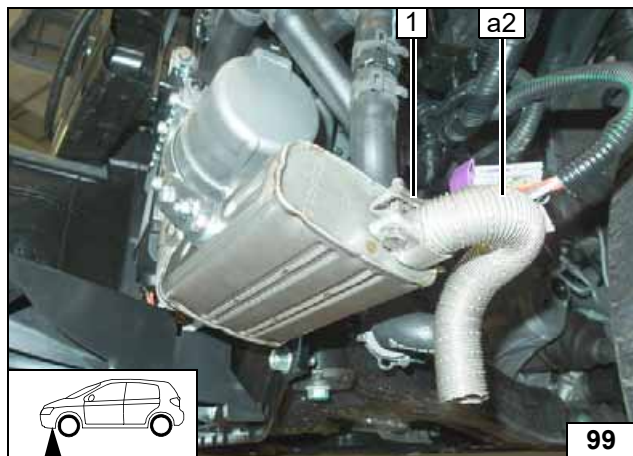
**Premounting exhaust pipe a1**



Align silencer and tighten hose clamp **2**.

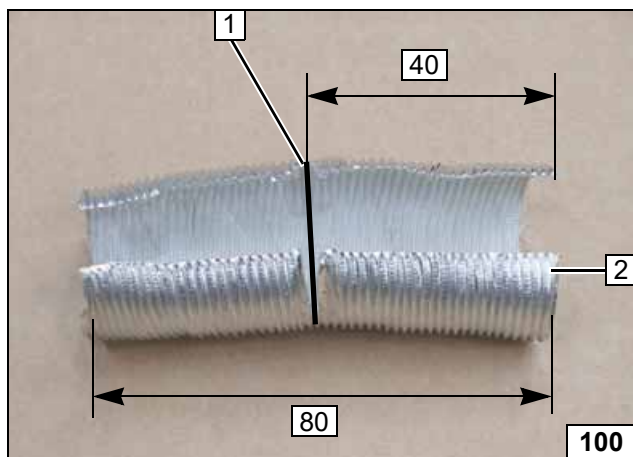
- 1 5x13mm self-tapping bolt, perforated bracket 1
- 3 Hose clamp

**Installing silencer**



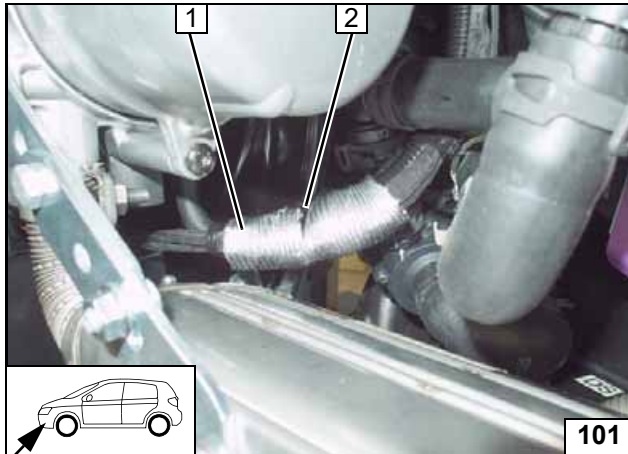
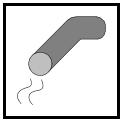
- 1 Hose clamp

**Installing exhaust pipe a2**



Slit heat protection hose **2** open lengthwise and cut a notch at position **1** as shown.

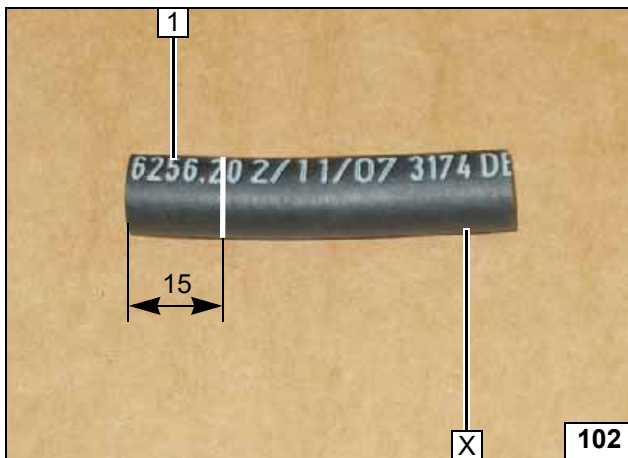
**Preparing heat protection hose**



Mount heat protection 1 with slot over edge clip cable tie 2.



Securing heat protection onto wiring harness

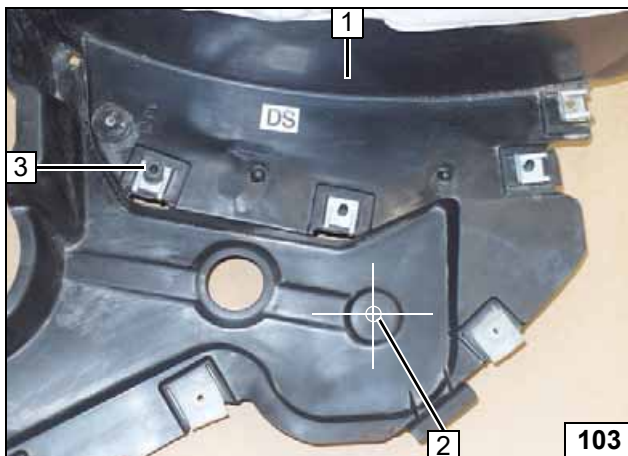


Cut hose section 1 to length as shown.

X =



Premounting exhaust pipe a1

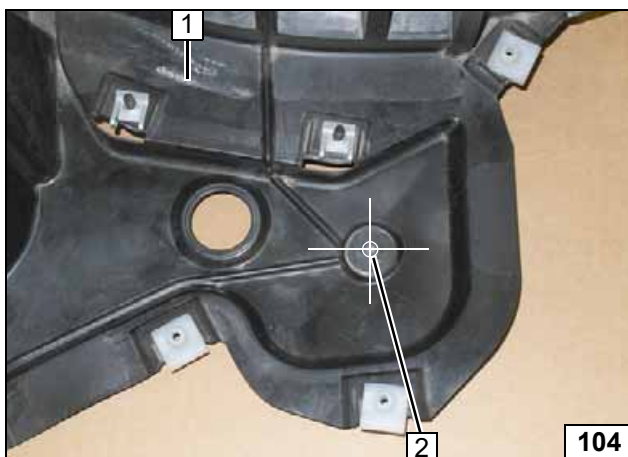


**Exhaust End Fastener Installation**

**1.6D**

- 1 Wheel well trim
- 2 Copy hole pattern in the centre of the embossed area
- 3 Shortened hose section onto original vehicle self-tapping screw

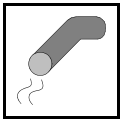
Copying hole pattern



**2.0D**

- 1 Wheel well trim
- 2 Copy hole pattern in the centre of the embossed area

Copying hole pattern



**All vehicles**

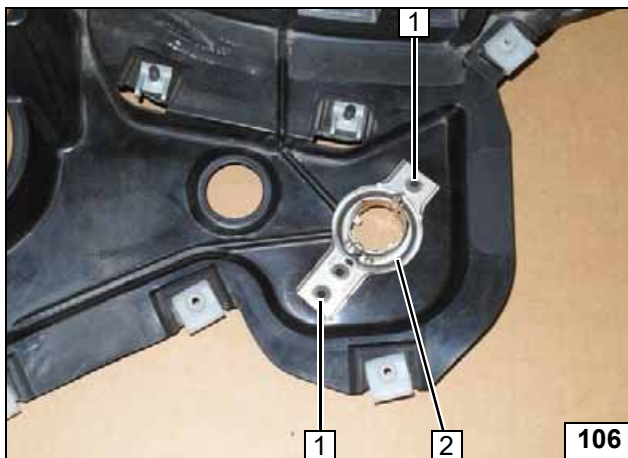
Next figures show a 2.0 D vehicle

Work step E1.

- 1 Hole (as per work step 1 of the installation instructions)



**Hole in underderride protection**



Work step E3.

- 1 Hole pattern
- 2 Exhaust end fastener

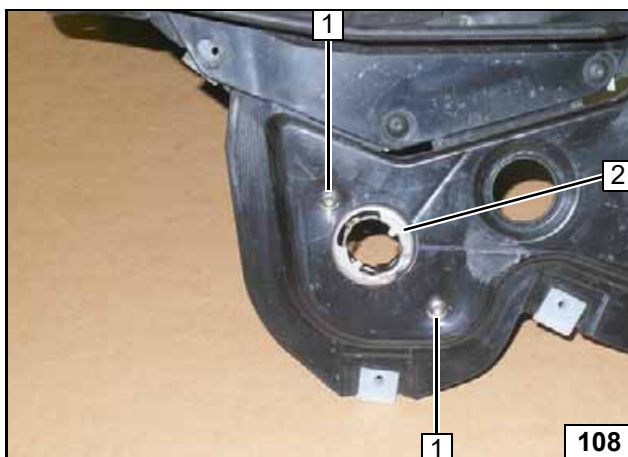
**Copying hole pattern**



Work step E4.

- 1 Hole

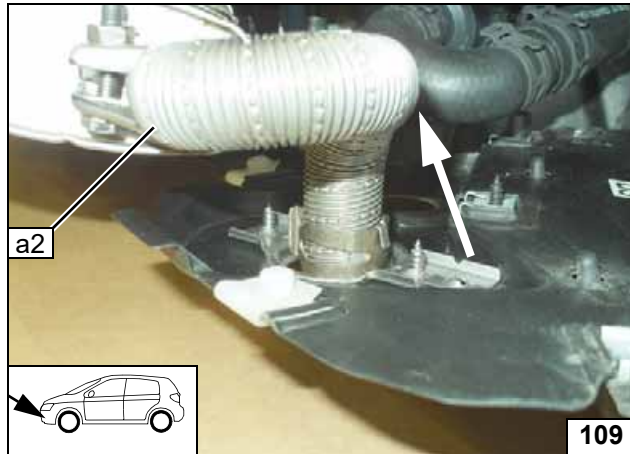
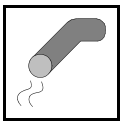
**Holes in wheel well trim**



Work step E5.

- 1 5x13 self-tapping screw
- 2 Exhaust end fastener

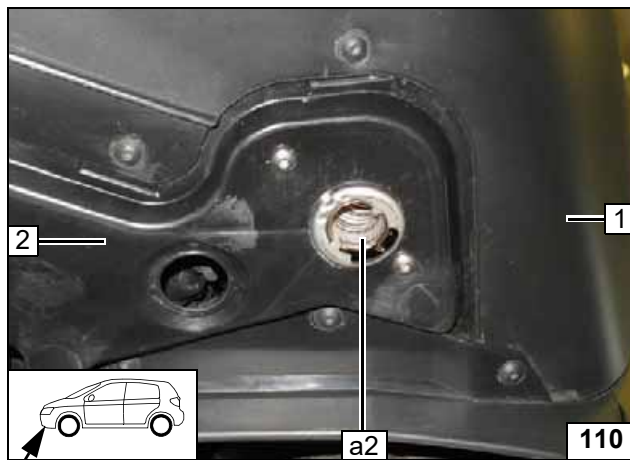
**Installing exhaust end fastener**



Ensure sufficient distance from hose A, correct if necessary.



Installing exhaust pipe a2



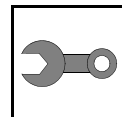
Install bumper 1.  
Mount wheel well trim 2.



Installing exhaust pipe a2

Work steps E6 - E8.





## Final Work



Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate loose wire ends and tie back.

Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **For initial start-up and function check, please see installation instructions.**
- **If the fan function or A/C control panel settings need to be checked, see the installation documentation in the additional 'Webasto Standard' or 'Webasto Comfort' A/C control kit, section 'Final Work'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**





FuelFix Template

Top view

