

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation

Nissan Qashqai / Renault Kadjar

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Nissan	Qashqai	J11	e11 * 2007 / 46 * 0963 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.2 P	Petrol	6-speed SG	85	1197	HRA2
1.6 P	Petrol	6-speed SG	120	1618	MR16
1.5 D	Diesel	6-speed SG	81	1461	K9K

Manufacturer	Model	Type	EG-BE No. / ABE
Renault	Kadjar	RFE	e11 * 2007 / 46 * 0475

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.2 P	Petrol	6-speed SG	96	1197	HRA2

SG = Manual transmission

Nissan from model year 2014

Renault from model year 2015

Left-hand drive vehicle

Verified equipment variants: Manual air-conditioning (Qashqai only)

2 zone automatic air-conditioning

Front fog light

2 WD

LED daytime running lights

LED headlight (Kadjar only)

Start / Stop

Euro 5 / 5b+ / 6

Not verified:

Manual air-conditioning (Kadjar only)

Passenger compartment monitoring

LED headlight (Qashqai only)

4 WD

Total installation time:

approx. 7 hours without A/C control

approx. 8 hours with A/C control 'Standard' or 'Comfort'

Table of Contents

Validity	1	Preparing Installation Location	11
Necessary Components	2	Preparing Heater	13
Installation Overview	2	Installing Heater	16
Notes on Total Installation Time	2	Fuel	17
Information on Operating and Installation Instructions	3	Coolant Circuit for 1.2 Petrol Vehicles	22
Notes on Validity	4	Coolant Circuit for 1.6 Petrol Vehicles	27
Technical Instructions	4	Coolant Circuit for Diesel Vehicles	32
Explanatory Notes on Document	4	Combustion Air	35
Preliminary Work	5	Exhaust Gas	37
Heater Installation Location	5	Final Work	42
Preparing Electrical System	6	Final Work	42
Electrical System	7	Template for Fuel Standpipe	43
Qashqai Heater Controls	8		
Kadjar Heater Controls	9		

Necessary Components

- Basic delivery scope *Thermo Top Evo* based on price list
- Installation kit for Nissan Qashqai 2014 / Renault Kadjar 2015 Petrol and diesel: **1324081A**
- Additional kit Nissan A/C control 'Standard' for manual and automatic air-conditioning: **1324070_** or additional kit Renault A/C control 'Standard' for automatic air-conditioning: **1324475_** or additional kit Nissan / Renault A/C control 'Comfort' for automatic air-conditioning: **1324068_**
- 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 upon consultation with end customer

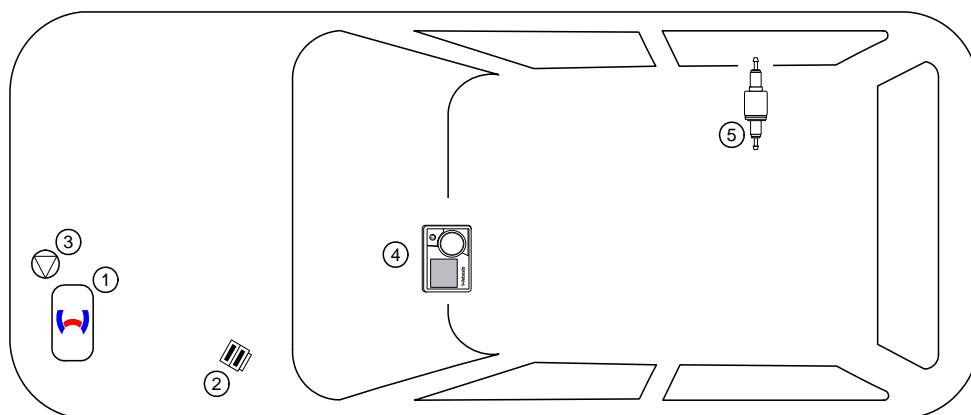
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full!
- The installation location of the push button in the case of Telestart or Thermo Call should be confirmed with the end customer.
- Depending on the space required and the manufacturer's instructions on the vehicle, we recommend the use of a vehicle battery with a higher electrical capacity!

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Circulating pump
4. MultiControl CAR (shown on Qashqai)
5. Metering pump



Notes 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 startup 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.

Notes on Validity

This installation documentation applies to Nissan Qashqai vehicles from model year 2014 and later, as well as Renault Kadjar vehicles from model year 2015 and later Petrol and diesel - for validity, see 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.

Technical Instructions

Special Tools

- Hose clamp pliers for self-clamping hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- 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 for 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque of 5x15 retaining plate of water connection piece 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 manufacturer's vehicle-specific documents or to the 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 (only in case of 'Comfort' additional kit, in case of 'Standard' additional kit the battery information can be found in the provided installation documentation).
- Remove the air filter completely with the intake hose as far as the engine.
- Remove the underride protection of the engine.
- Remove the underride protection on the underbody on the right.
- Remove the rear bench seat.



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



- Open the tank-fitting service lid.
- Remove the fuel tank sending unit in accordance with the manufacturer's instructions.

Heater

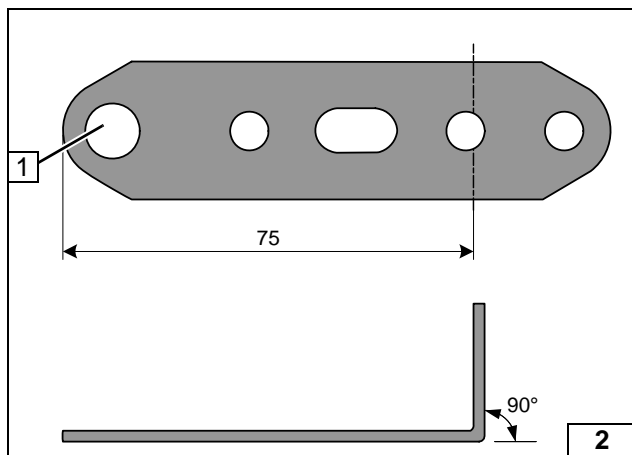
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

- 1 Heater

Installation location



Preparing Electrical System

- 1 Drill out hole to 8.5mm dia.



Preparing perforated bracket for engine compartment fuse holder

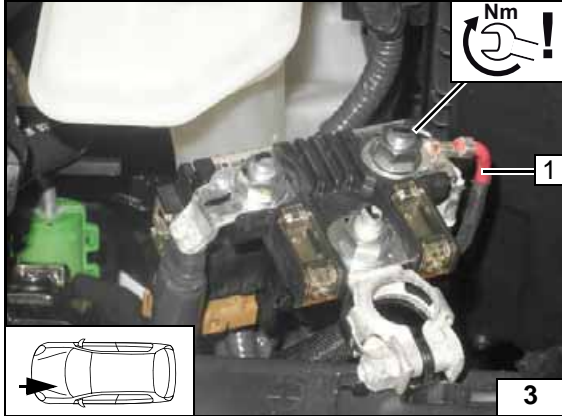


Electrical System



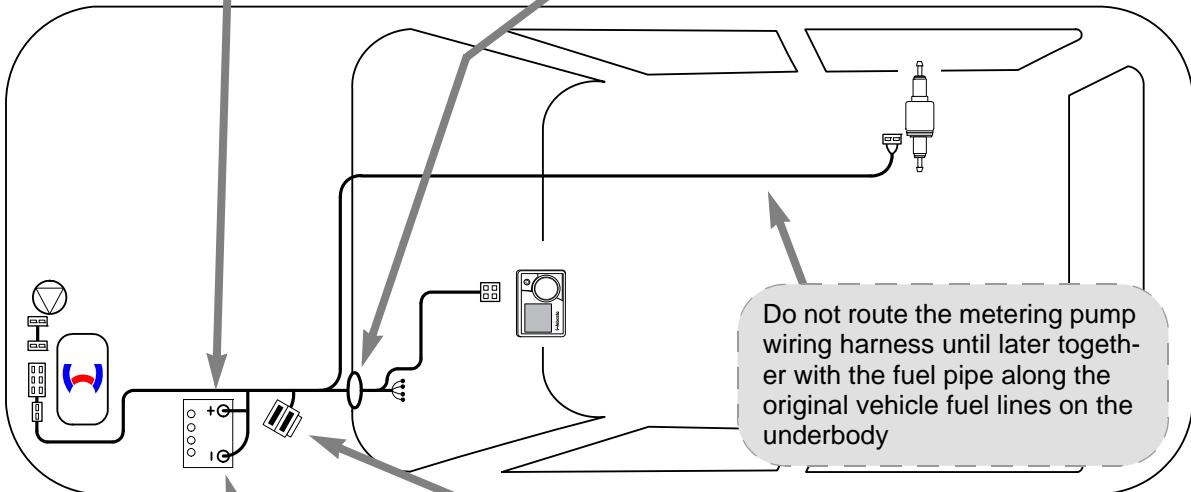
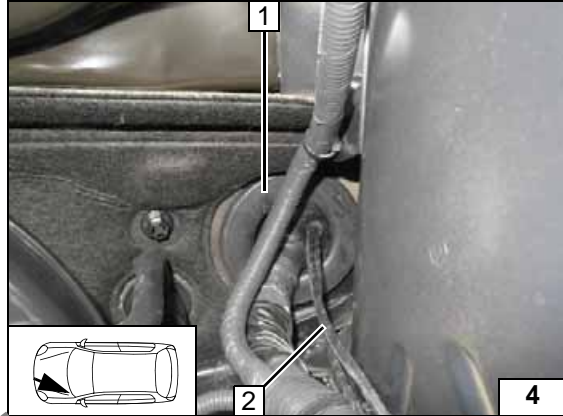
Positive wire

- 1 Positive wire on positive battery terminal

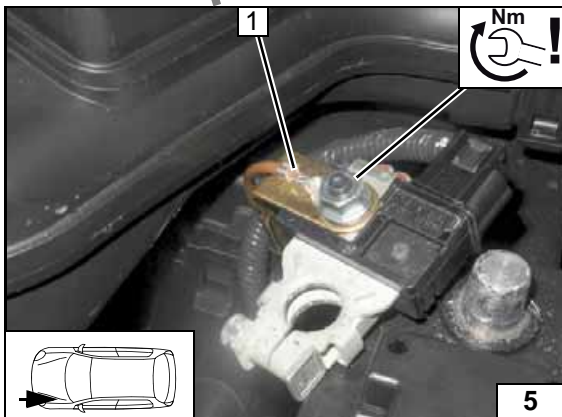


Wiring harness pass through

- 1 Protective rubber plug
- 2 Wiring harnesses of heater, heater control

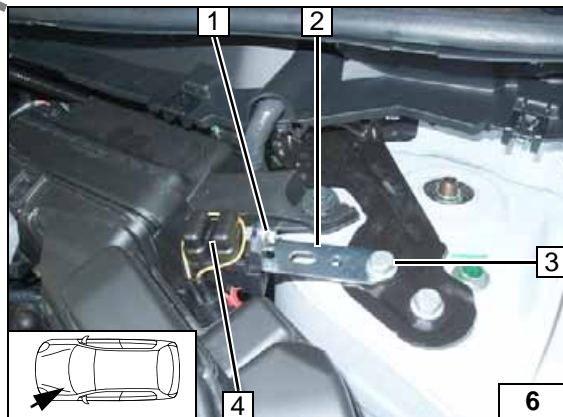


Wiring harness routing diagram



Earth wire

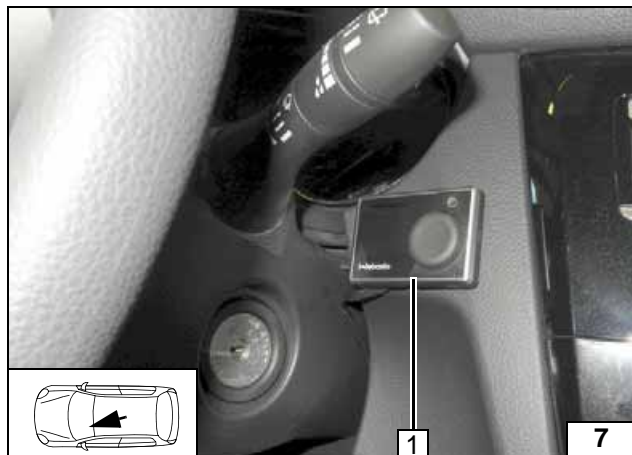
- 1 Earth wire on negative battery terminal



Fuse holder of engine compartment

- 1 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
- 2 Prepared perforated bracket
- 3 Original vehicle bolt
- 4 F1-2 fuses





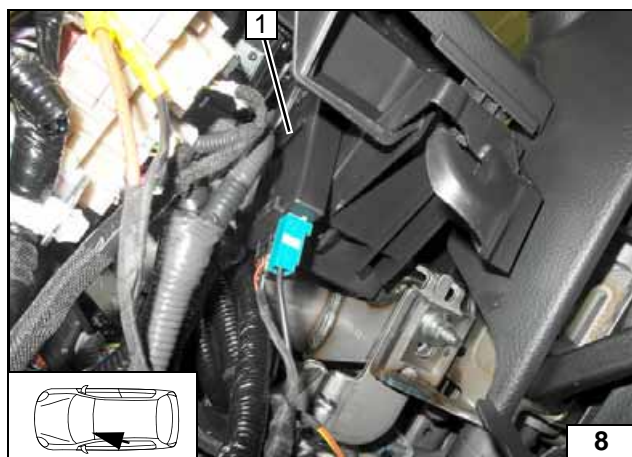
Qashqai Heater Controls

MultiControl CAR

- 1 MultiControl CAR



Installing MultiControl CAR

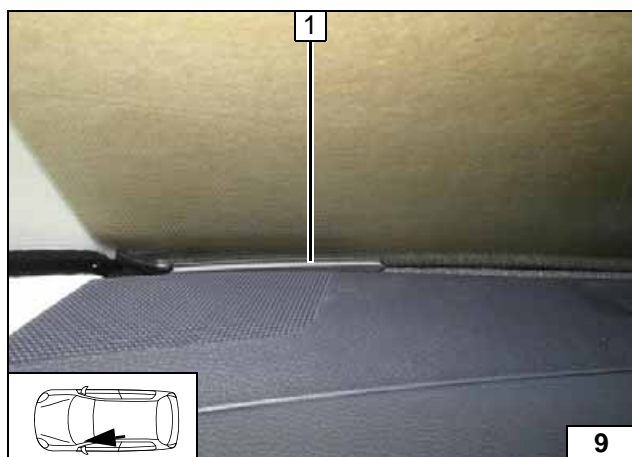


Remote Option (Telestart)

Fasten receiver 1 with adhesive tape as shown in the image.



Installing receiver

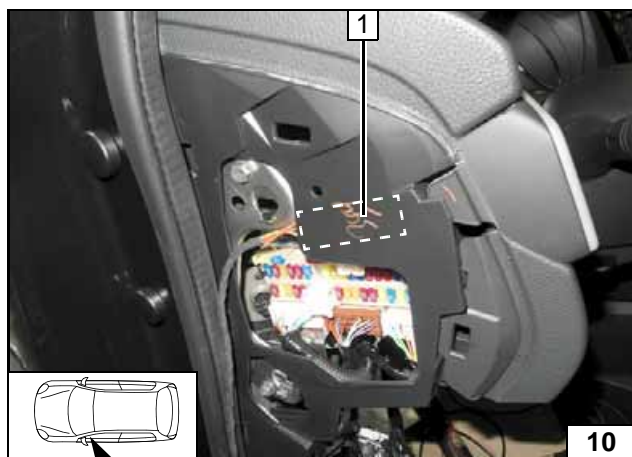


For windscreens with a special coating or heater, use only the area recommended by the manufacturer to assemble aerial.

- 1 Aerial



Mounting aerial

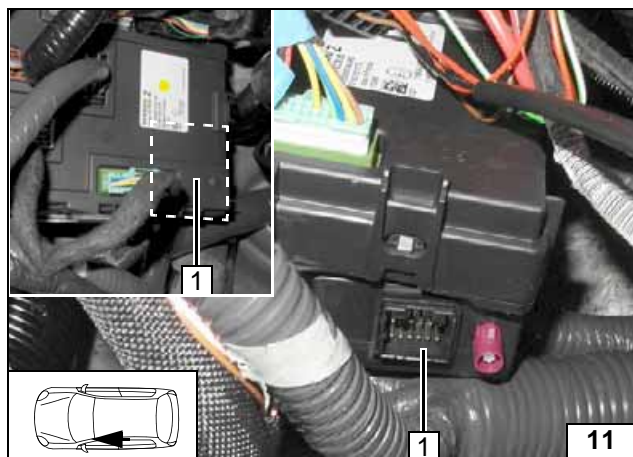


Temperature sensor T100 HTM

Secure temperature sensor 1 behind trim at the marking using adhesive tape.



Mounting temperature sensor

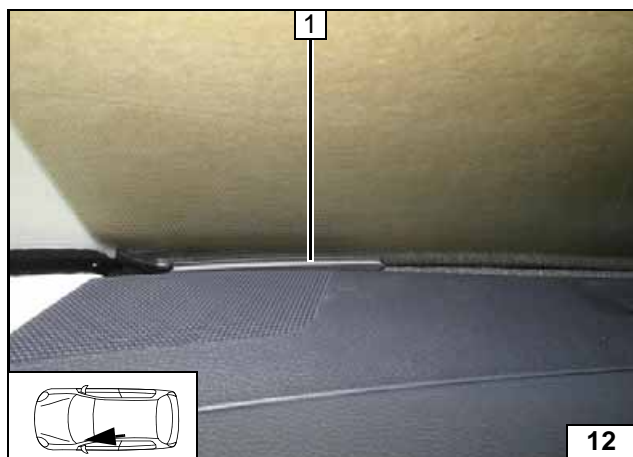


Thermo Call Option

Secure receiver 1 behind the control unit at the marking using adhesive tape.



Installing receiver

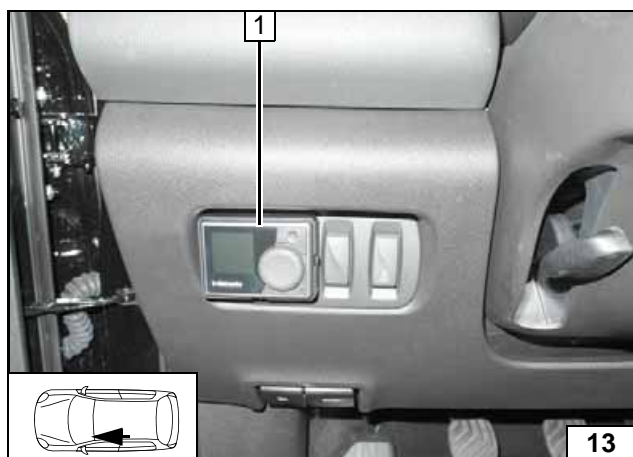


For windscreens with a special coating or heater, use only the area recommended by the manufacturer to assemble aerial.



Mounting aerial

- 1 Aerial



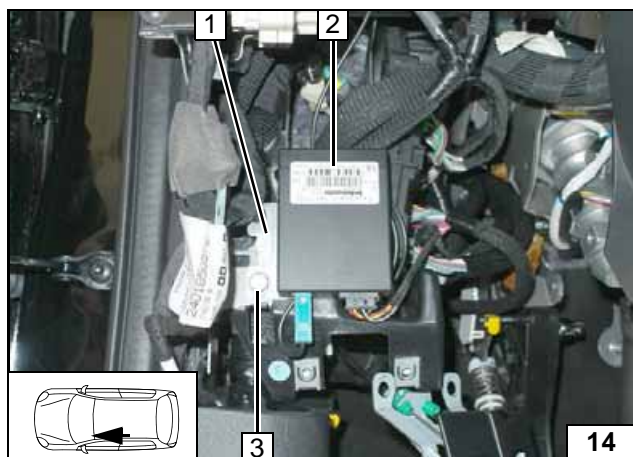
Kadjar Heater Controls

MultiControl CAR

- 1 MultiControl CAR



Installing MultiControl CAR

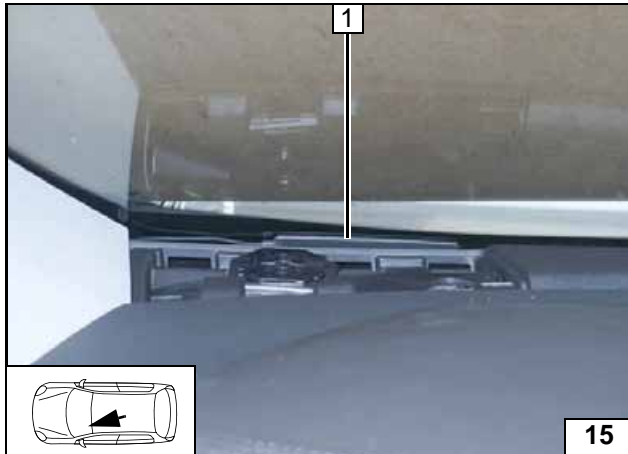
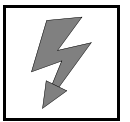


Remote Option (Telestart)

- 1 Bracket
- 2 Receiver
- 3 Original vehicle bolt



Installing receiver

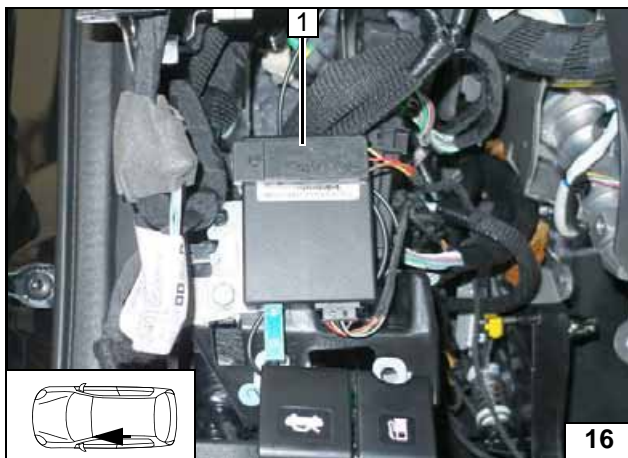


For windscreens with a special coating or heater, use only the area recommended by the manufacturer to assemble aerial.



1 Aerial

Mounting aerial

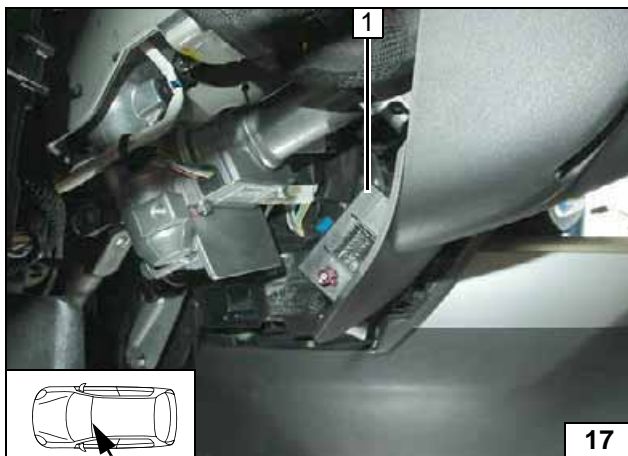


Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.



Mounting temperature sensor



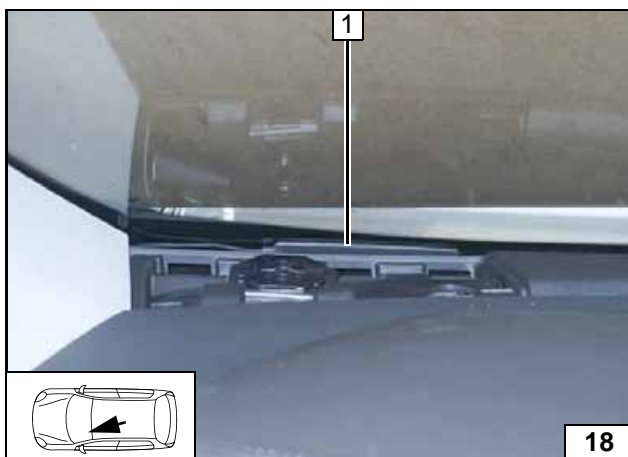
Thermo Call Option

Fasten receiver 1 with adhesive tape.



- 1 Receiver, M5x16 bolt, washer, flanged nut
- 2 5.5mm dia. hole, M5x16 bolt, flanged nut

Installing receiver

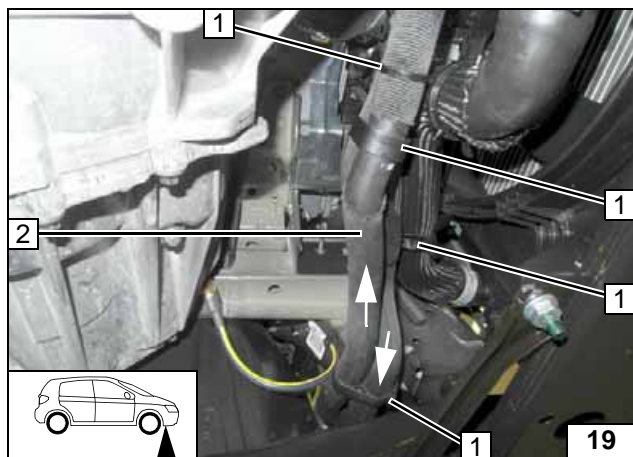


For windscreens with a special coating or heater, use only the area recommended by the manufacturer to assemble aerial.



1 Aerial

Mounting aerial



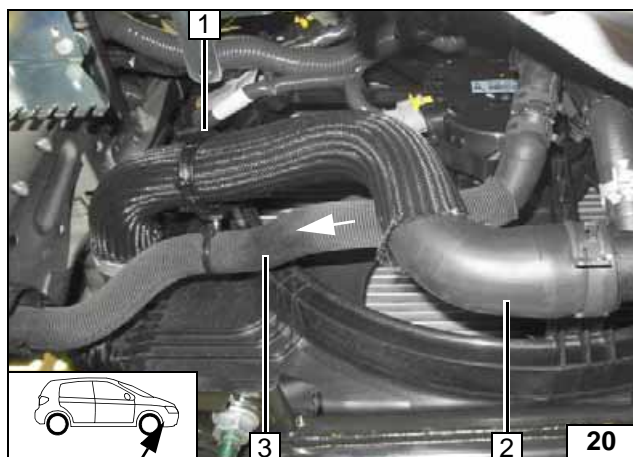
Preparing Installation Location

Diesel engine only

Label the direction of flow. Pay attention to the information on the coolant circuit for diesel vehicles. Remove original vehicle hose bracket 1 [4x], will be re-used. Remove original vehicle hose for electric auxiliary heater outlet / engine inlet 2, will be re-used.



Removing hose

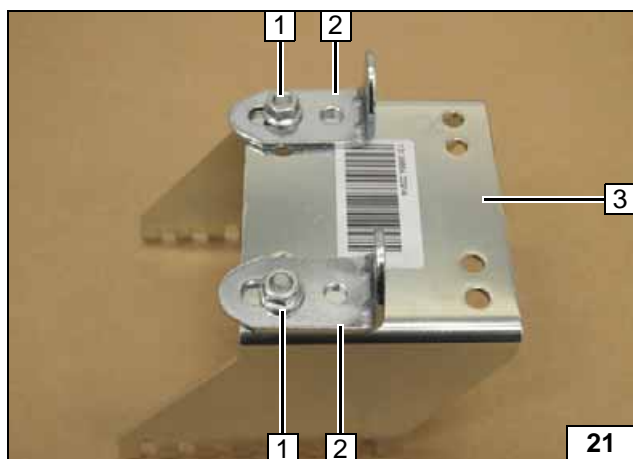


Route original vehicle hose for electric auxiliary heater inlet 3 behind the original vehicle radiator hose 2.



Routing hose

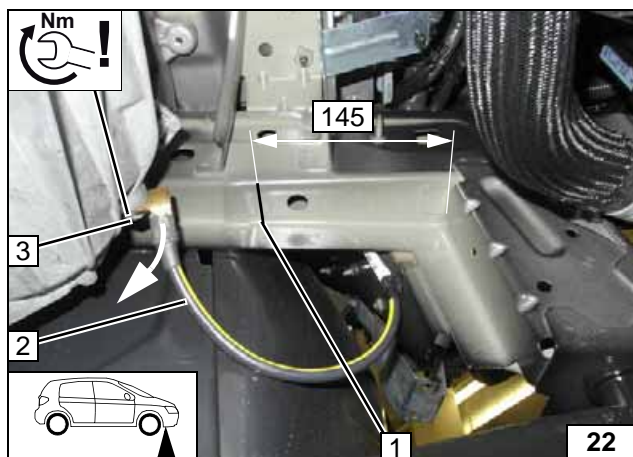
- 1 Original vehicle hose bracket



All vehicles

- 1 M6x20 bolt, flanged nut [2x each]
- 2 Loosely mount angle bracket [2x]
- 3 Bracket

Installing angle bracket

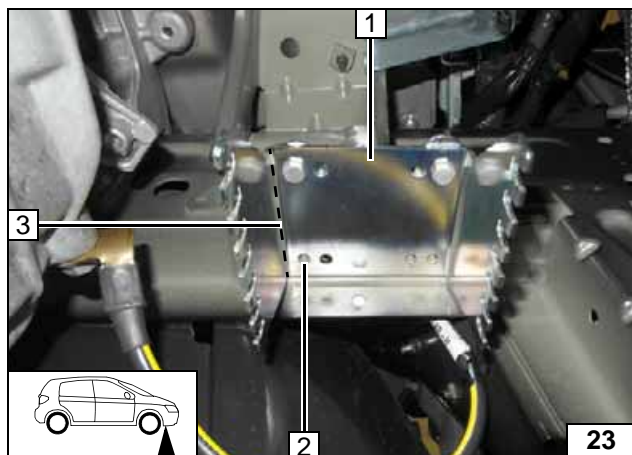


Detach original vehicle earth wire 2 on transmission at position 3, twist and secure as shown.



- 1 Marking

Twisting earth strap, drawing marking

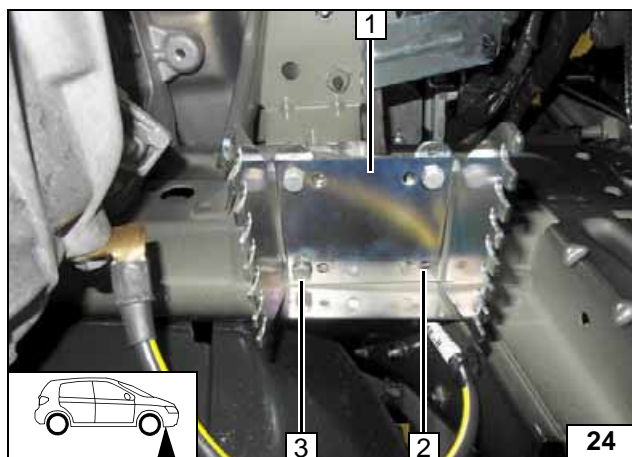


Position bracket 1 at marking 3 and align with the frame side member using angle brackets [2x].

Copy hole pattern 2. Remove bracket 1. Drill 9.1mm hole and insert rivet nut at position 2.



Installing rivet nut

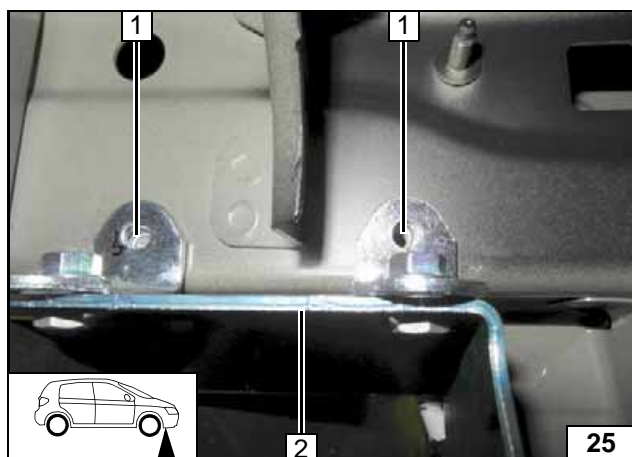


Loosely mount bracket 1.

- 2 Copy hole pattern
- 3 M6x20 bolt

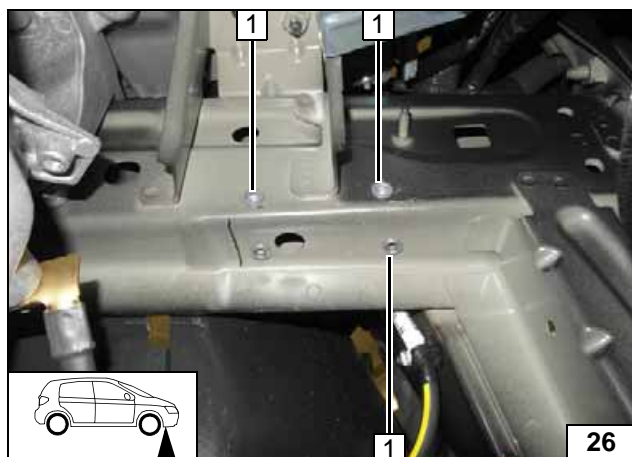


Copying hole pattern



- 1 Copy hole pattern [2x]
- 2 Bracket

Copying hole pattern

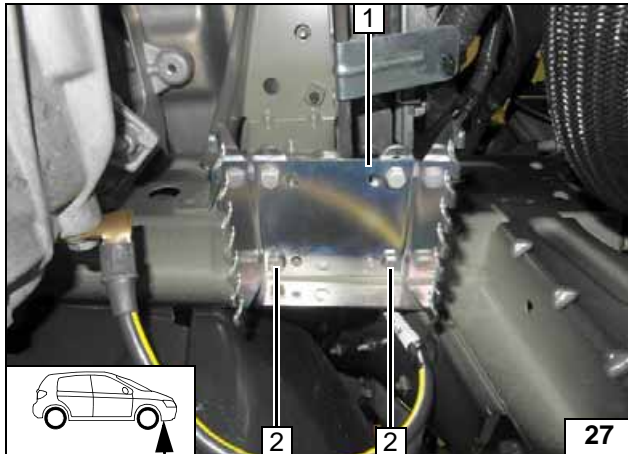
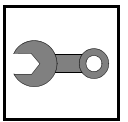


Remove bracket.

- 1 9.1mm dia. hole, rivet nut [3x]

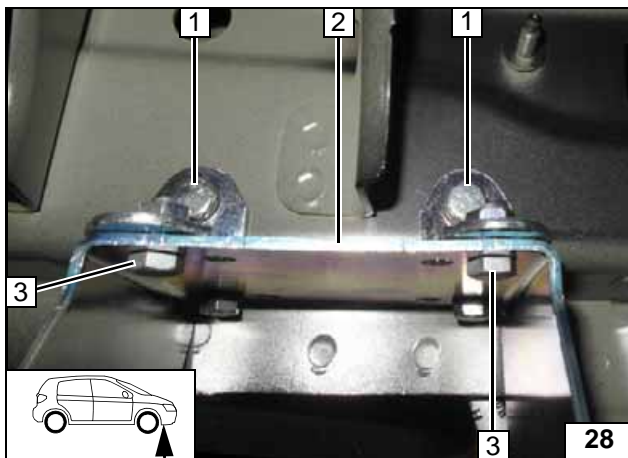


Inserting and tightening rivet nuts



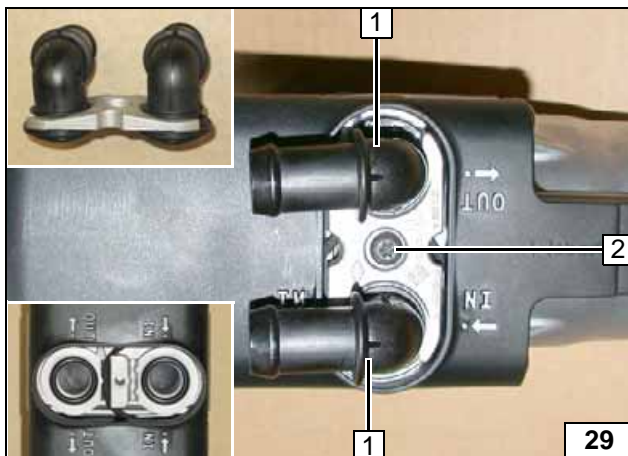
- 1 Bracket
- 2 M6x20 bolt, spring lockwasher [2x each]

Installing bracket



- 1 M6x20 bolt, spring lockwasher [2x each]
- 2 Bracket
- 3 M6x20 bolt, tighten flanged nut [2x]

Installing bracket

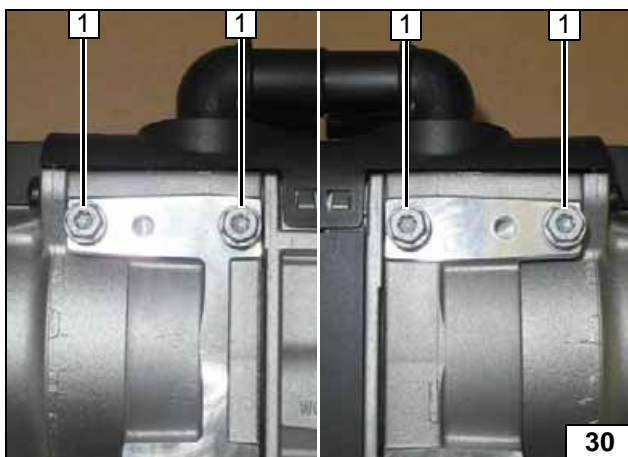


Preparing Heater

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



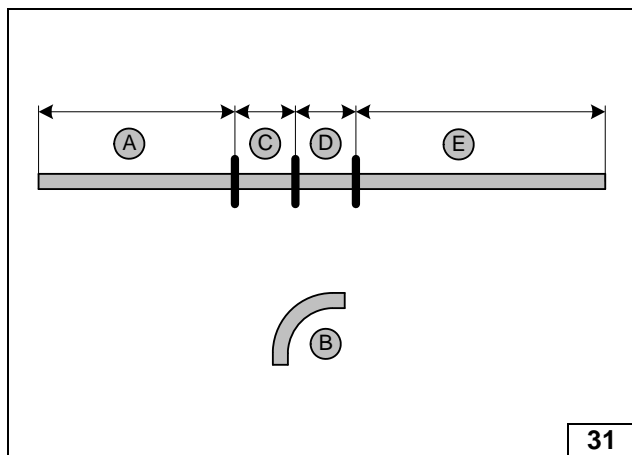
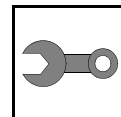
Installing water connection piece



Screw 5x13 self-tapping bolts 1 [4x] into existing holes by a maximum of 3 thread turns.



Loosely premounting bolts



31

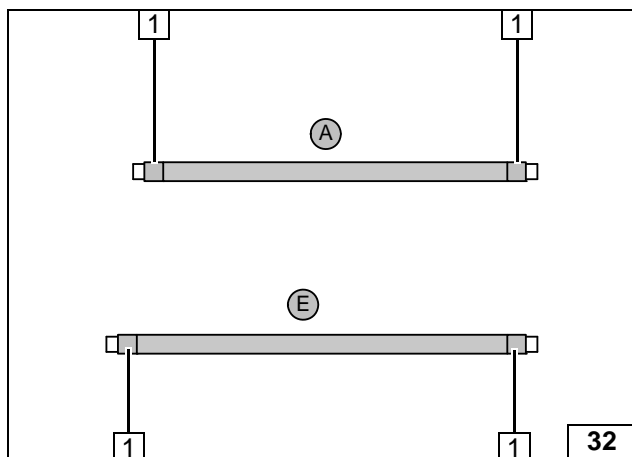
1.2 Petrol

Hose B = 90°, 18mm dia. moulded hose

- A = 620
- C = 150
- D = 120
- E = 710



Cutting hoses to length



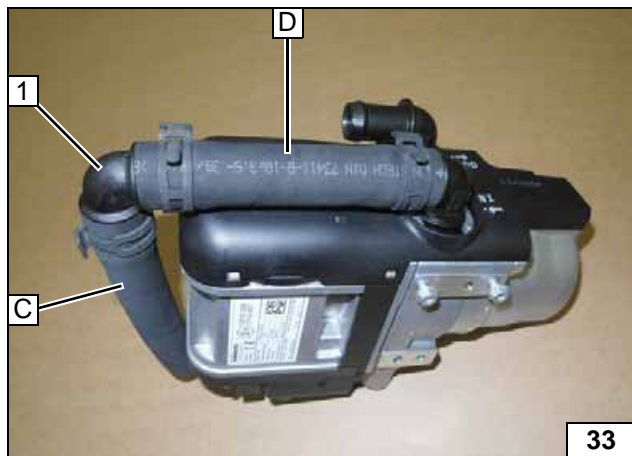
32

Push braided protection hoses onto hose A and E and cut to length. Cut heat shrink plastic tubing to length.



Preparing hoses

- 1 60mm long heat shrink plastic tubing [4x]



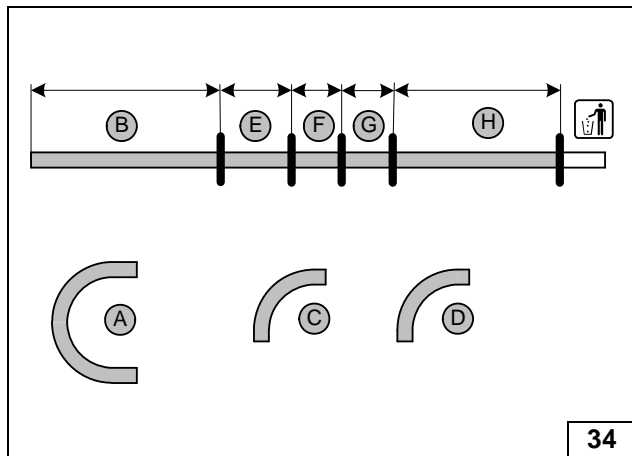
33

All spring clips = 25mm dia.

- 1 90°, 18x18mm dia. connecting pipe



Premounting hoses



34

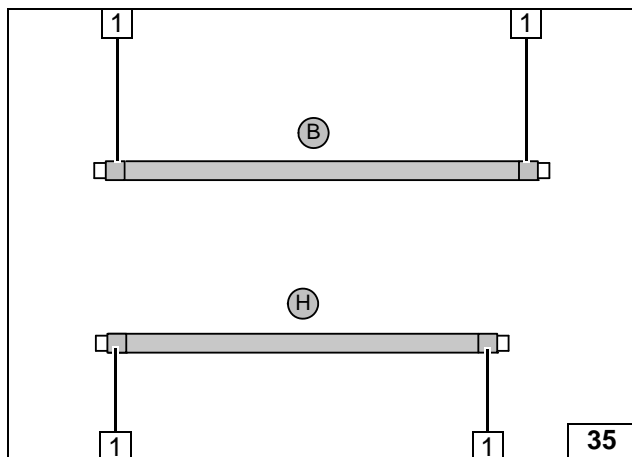
1.6 Petrol

Hose A = 180°, 18mm dia. moulded hose
 Hose C = 90°, 18mm dia. moulded hose
 Hose D = 90°, 18mm moulded hose

- B = 540
- E = 170
- F = 120
- G = 120
- H = 420



Cutting hoses to length

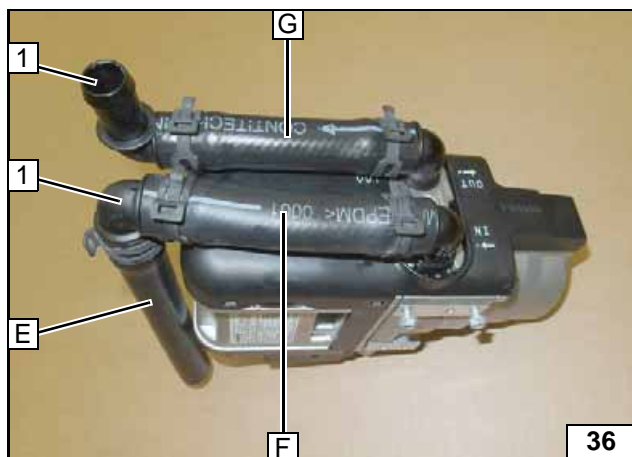


Push braided protection hoses onto hose **B** and hose **H** and cut to length. Cut heat shrink plastic tubing to length.

- 1 60mm long heat shrink plastic tubing [4x]



Preparing hoses

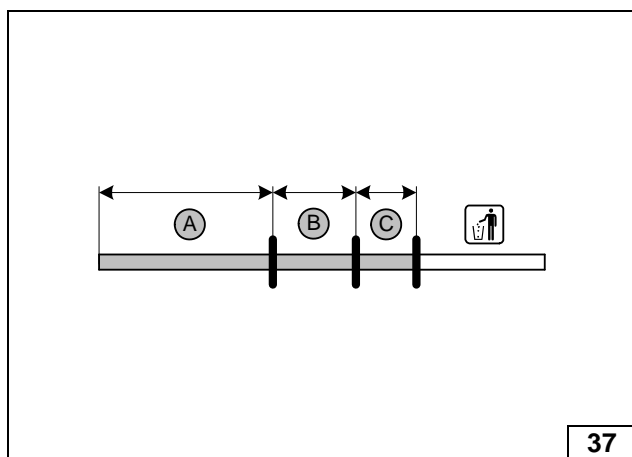


All spring clips = 25mm dia.

- 1 90°, 18x18mm dia. connecting pipe [2x]



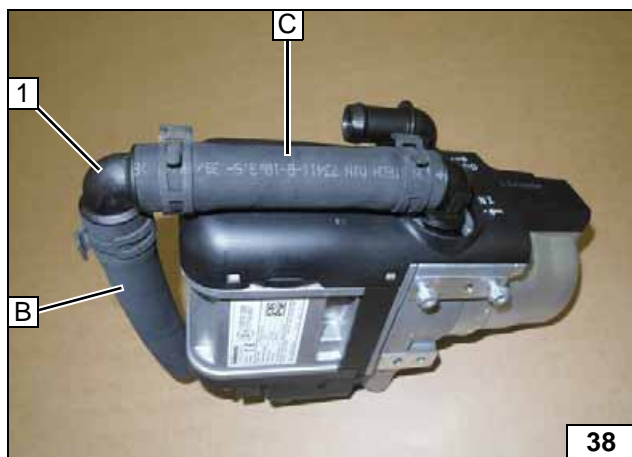
Premounting hoses



Diesel

- A = 230
- B = 150
- C = 120

Cutting hoses to length

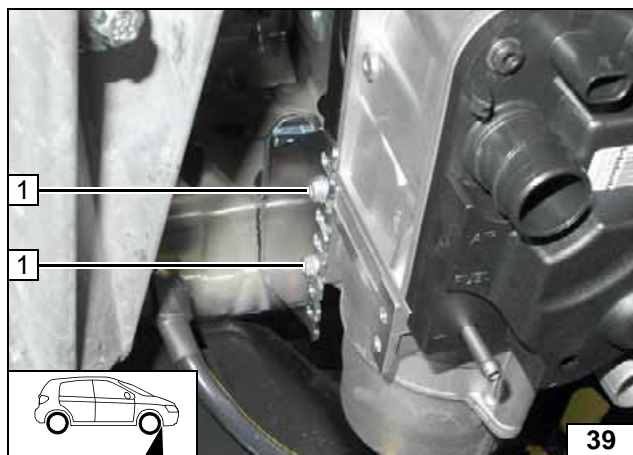


All spring clips = 25mm dia.

- 1 90°, 18x18mm dia. connecting pipe



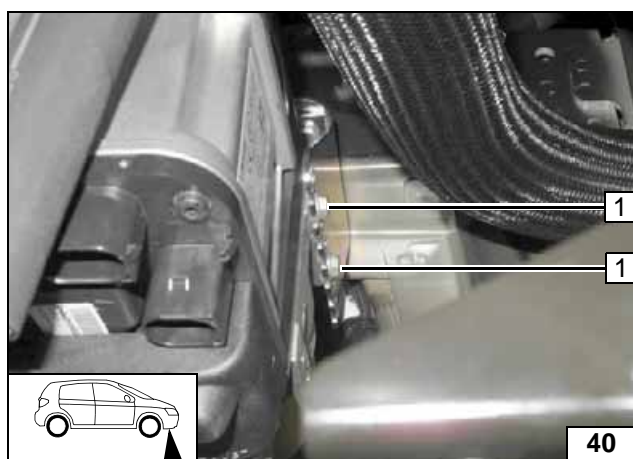
Premounting hoses



Installing Heater

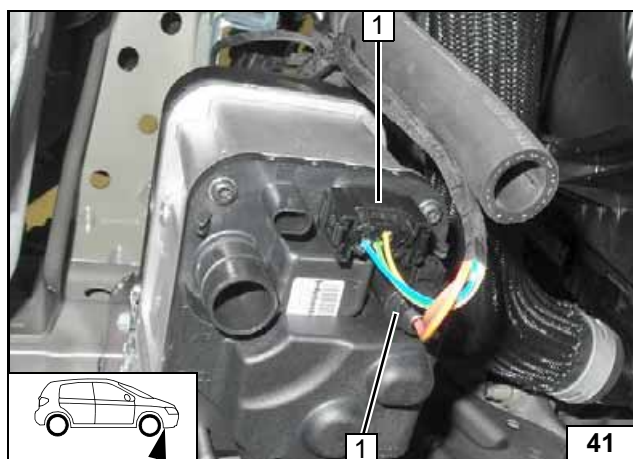
- 1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



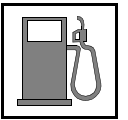
- 1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



- 1 Connector for wiring harness of heater [2x]

Installing heater wiring harness



Fuel



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

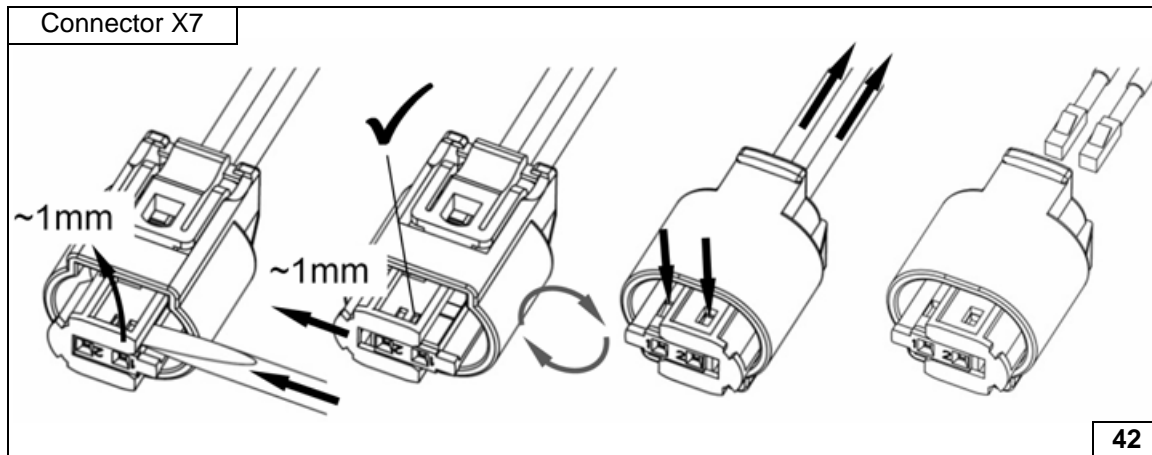
Catch any fuel running off in an appropriate container.

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

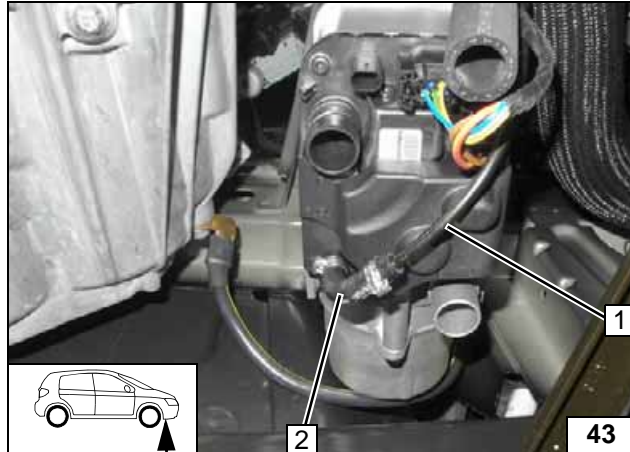


Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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

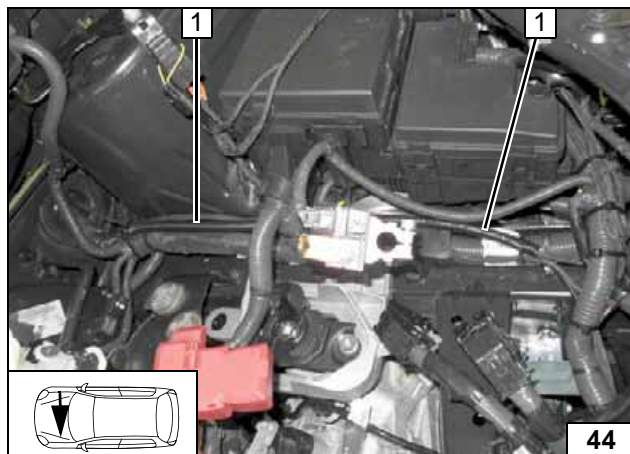


Removing metering pump connector



- 1 Route fuel line upwards
- 2 90° moulded hose, 10mm dia. clamp [2x]

Connect-ing heater



Route fuel line and wiring harness of metering pump into 10mm dia. corrugated tube 1 towards the firewall and on to the underbody along the original vehicle lines.



Routing lines

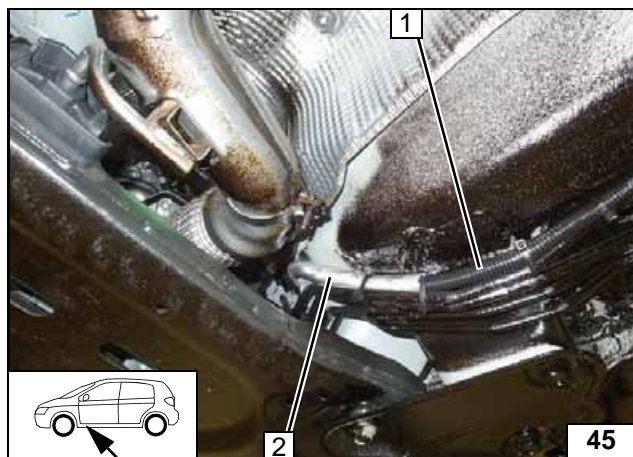


Figure shows petrol vehicle!

Slide 14mm dia. heat protection tube 2 over 10mm dia. corrugated tube 1 and attach to original vehicle fuel lines using cable ties.



Installing heat protection tube

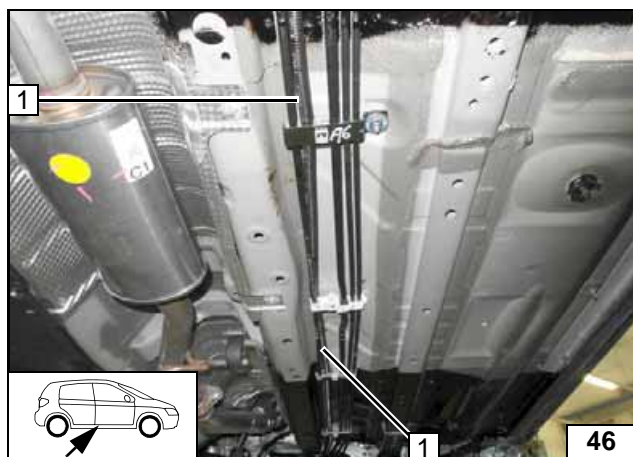
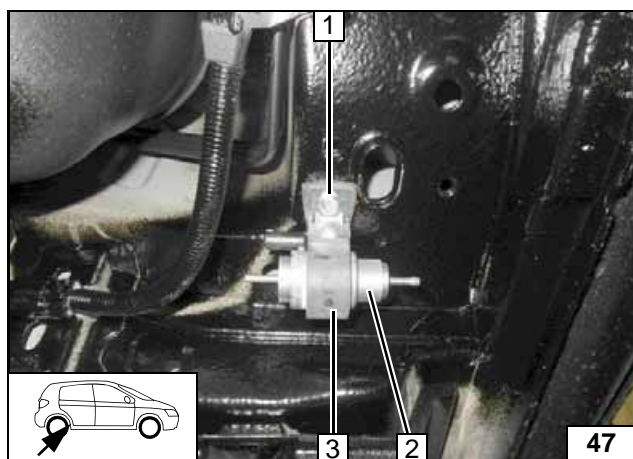


Figure shows Qashqai petrol vehicle!

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



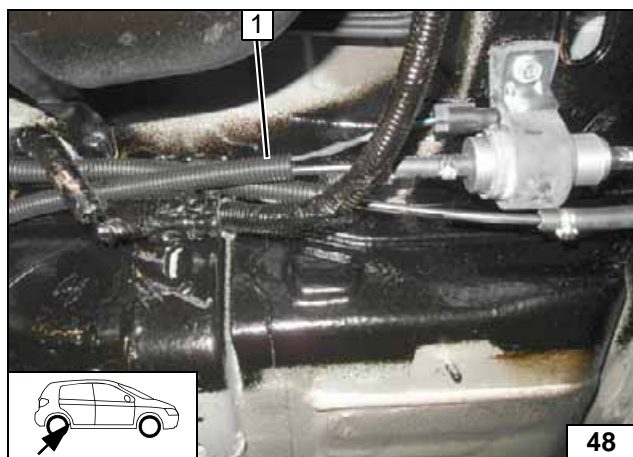
Routing lines



- 1 M6x25 bolt, support angle bracket, original vehicle threaded hole
- 2 Metering pump
- 3 Metering pump mounting bracket



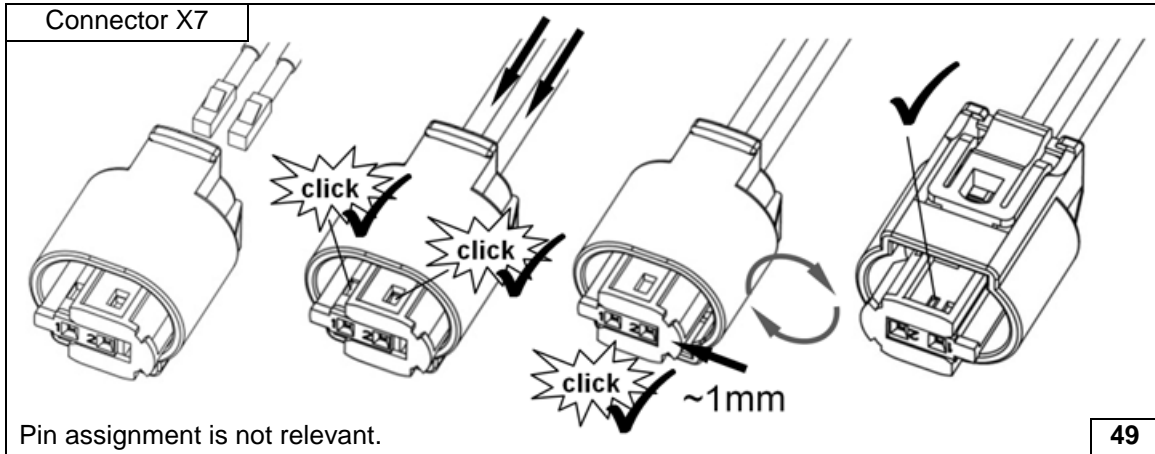
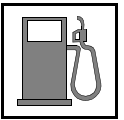
Installing metering pump



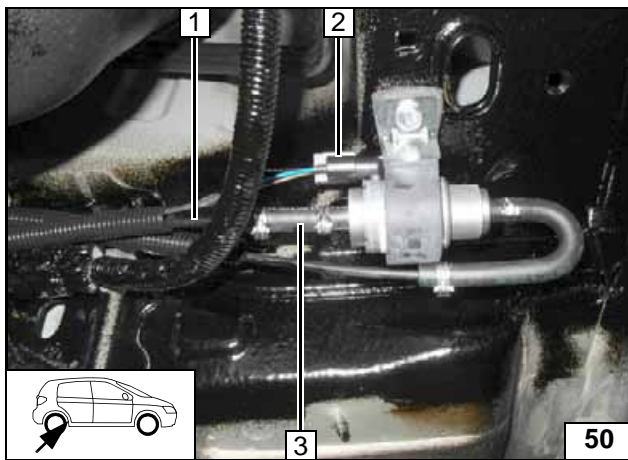
Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube 1 and route to the installation location of the metering pump.



Routing lines



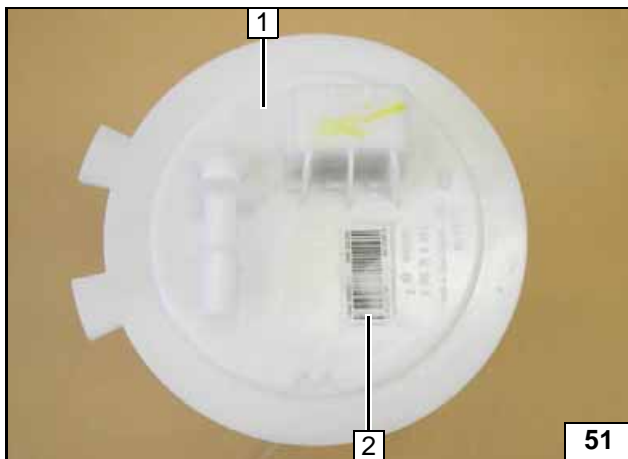
Completing metering pump connector



- 1 Fuel line of Heater
- 2 Wiring harness of metering pump, connector X7 mounted
- 3 Hose section, 10mm dia. clamp [2x]



Connecting metering pump

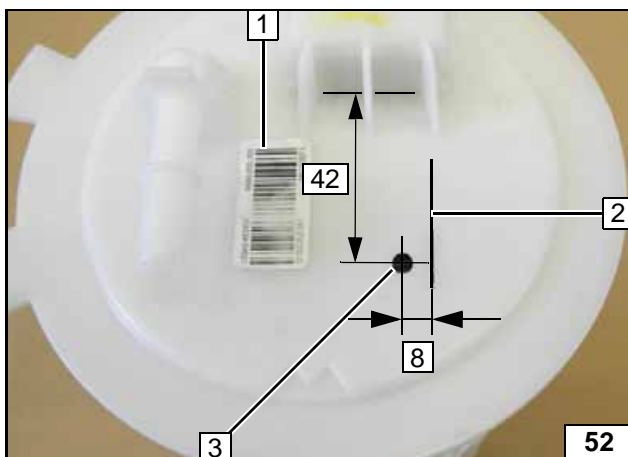


Petrol

Remove fuel tank sending unit 1 in accordance with manufacturer's instructions. Loosen sticker 2 and reaffix according to the image below.



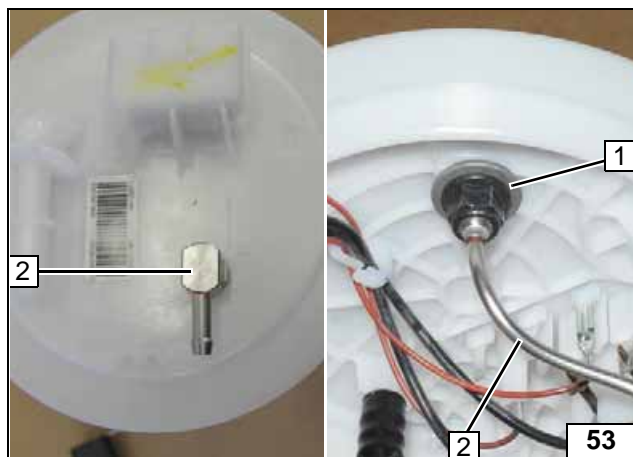
Fuel extraction



- 1 Sticker displaced
- 2 Existing formed ridge
- 3 Copy hole pattern, 6 mm dia. hole



Fuel extraction



Shape fuel standpipe **2** according to template and cut to length. Insert large diameter washer with outer dia. $d_a = 17.6\text{mm}$ **1** between fuel tank sending unit and fuel standpipe **2**.



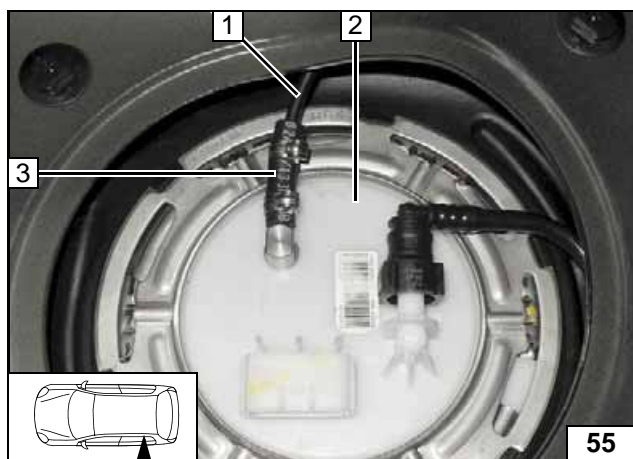
Installing fuel standpipe



Engage fuel standpipe **1** in existing groove at position **2**.



Installing fuel standpipe

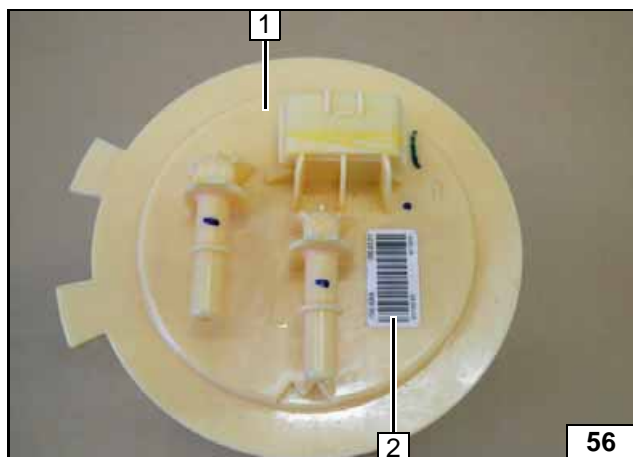


Install fuel tank sending unit **2** and connect in accordance with manufacturer's instructions.

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



Connecting fuel line

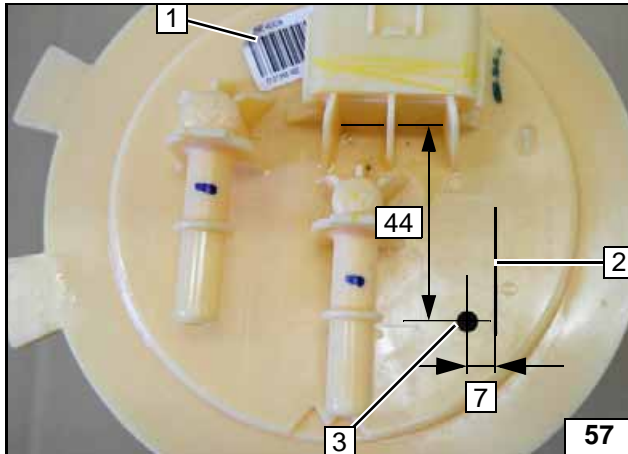
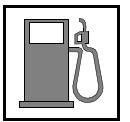


Diesel

Remove fuel tank sending unit **1** in accordance with manufacturer's instructions. Loosen sticker **2** and reaffix according to the image below.



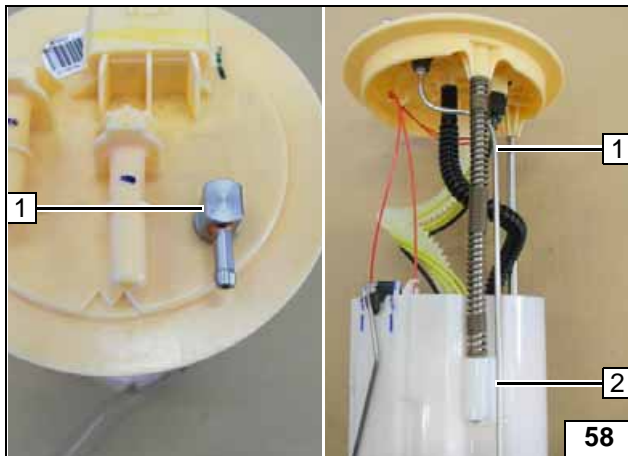
Fuel extraction



- 1 Sticker displaced
- 2 Existing formed ridge
- 3 Copy hole pattern, 6mm dia. hole



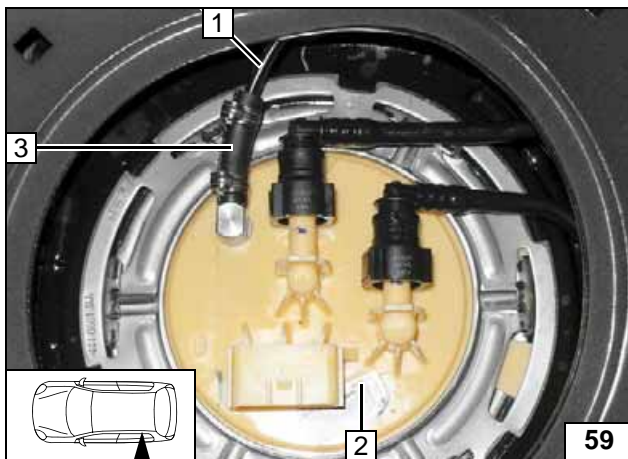
Fuel extraction



Bend fuel standpipe 1 according to template and cut to length.
Engage fuel standpipe 1 in existing groove at position 2.



Installing fuel standpipe

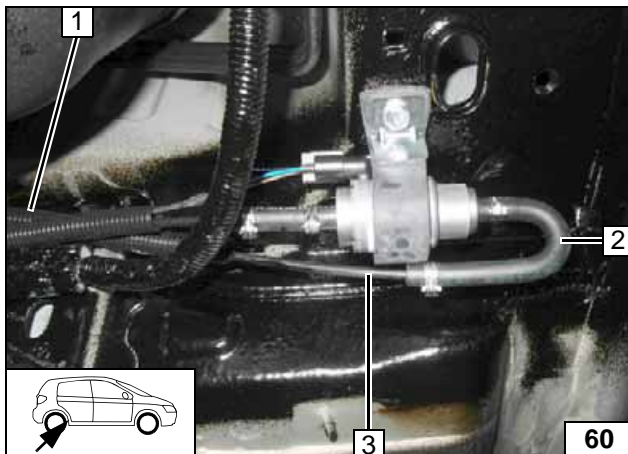


Install fuel tank sending unit 2 and connect in accordance with manufacturer's instructions.

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



Connecting fuel line



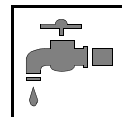
All vehicles

Slide 10mm dia. corrugated tube 1 onto fuel line of fuel standpipe 3.
Ensure sufficient distance to neighbouring components, correct if necessary.

- 2 180° moulded hose, 10mm dia. clamp [2x]



Connecting metering pump

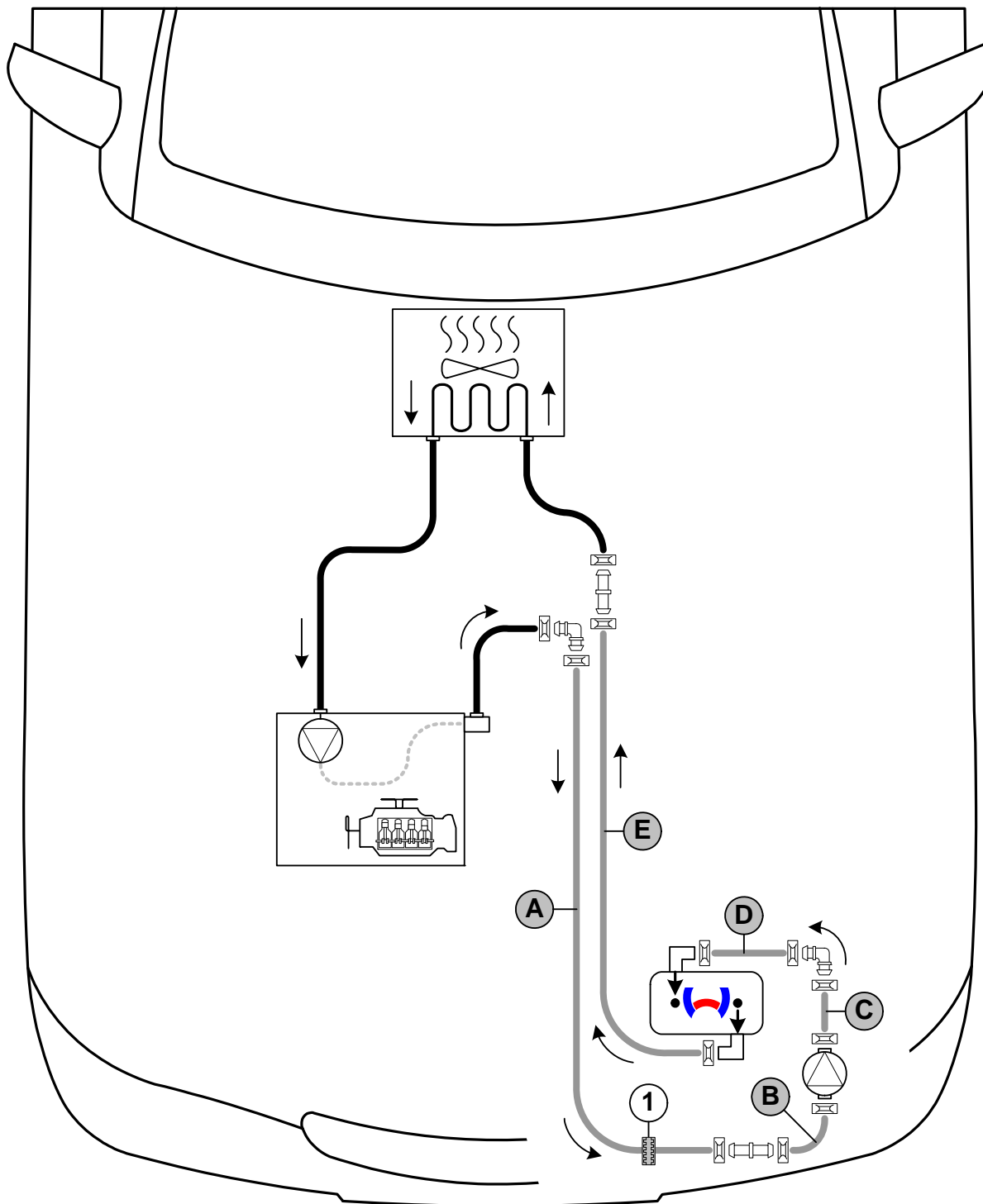


Coolant Circuit for 1.2 Petrol Vehicles







Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hoses can be damaged. When installing the hoses, the heater must be filled with coolant.

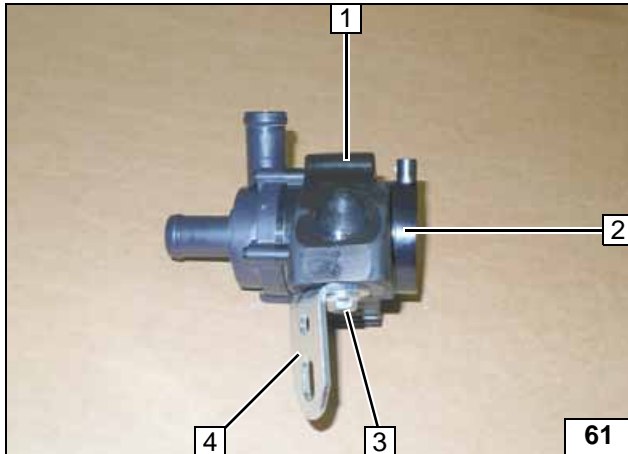
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

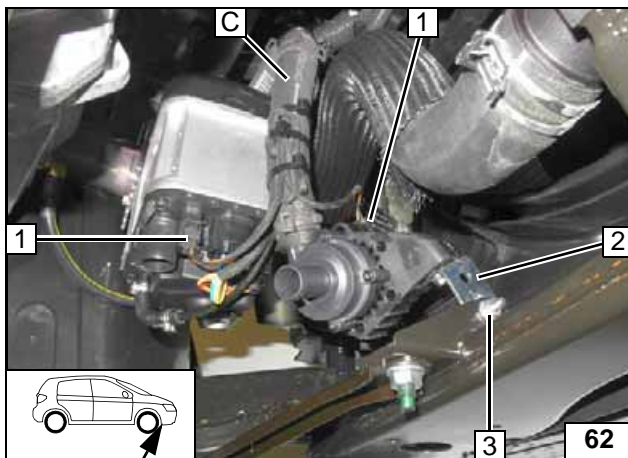
All spring clips  = 25mm dia. All connecting pipes  and  = 18x18mm dia.
 1 = black (sw) rubber isolator  (Qashqai only).





- 1 Circulating pump mounting bracket
- 2 Circulating pump
- 3 M6x25 bolt, flanged nut
- 4 Angle bracket

Premounting circulating pump

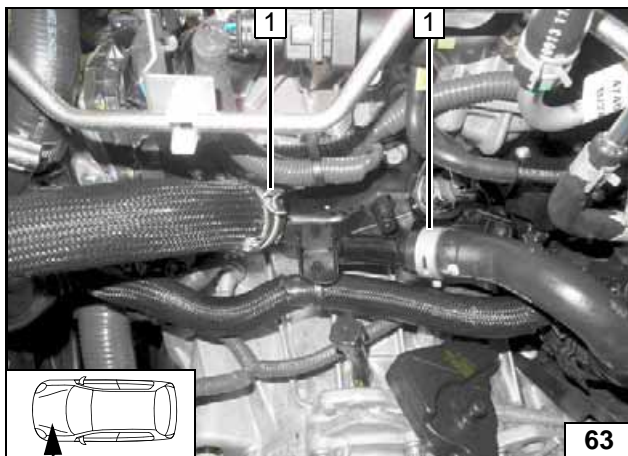


Install hose **C**. Connect wiring harness of circulating pump **1** [2x] and attach to hose **C** using cable ties.



- 2 Angle bracket
- 3 M6x20 bolt, flanged nut, original vehicle hole

Installing circulating pump

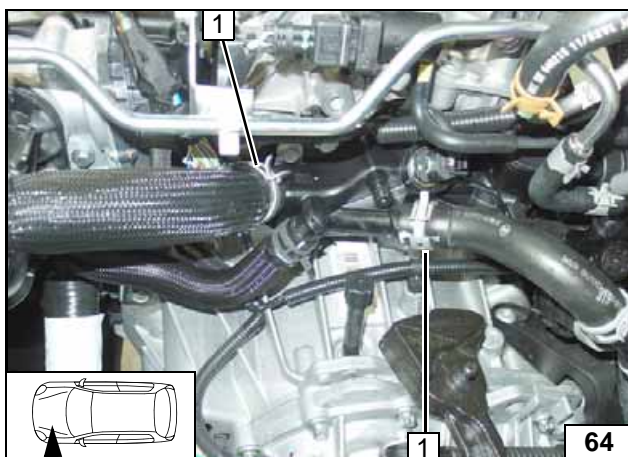


Qashqai

Align spring clips **1** [2x] as shown.



Aligning clips

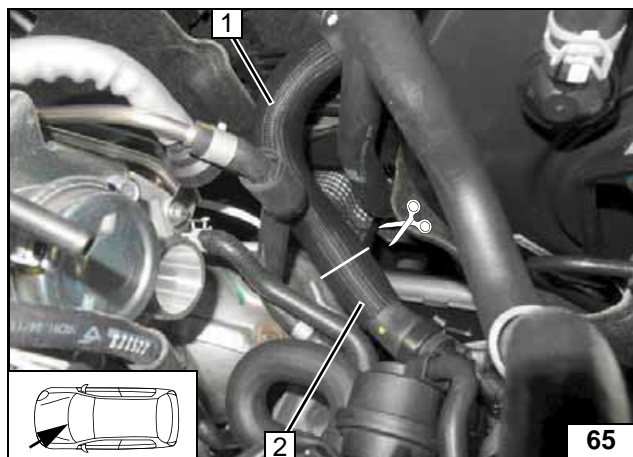
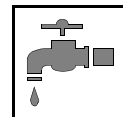


Kadjar

Align spring clips **1** [2x] as shown.



Aligning clips



All vehicles

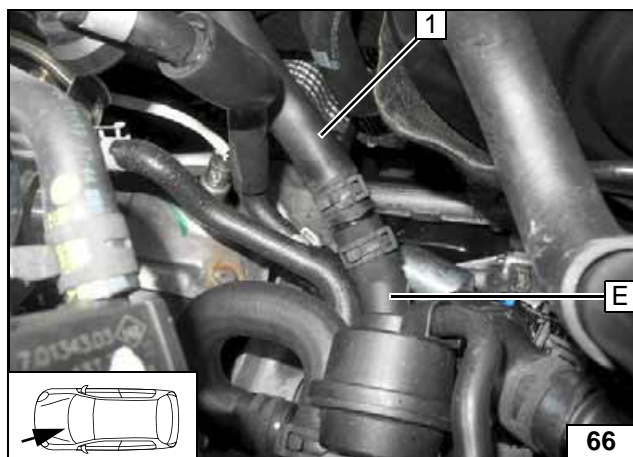
Cut engine outlet / heat exchanger inlet hose at the marking. Remove braided protection hose from the hose for the engine outlet / heat exchanger inlet.

- 1 Hose section of heat exchanger inlet
- 2 Engine outlet hose section

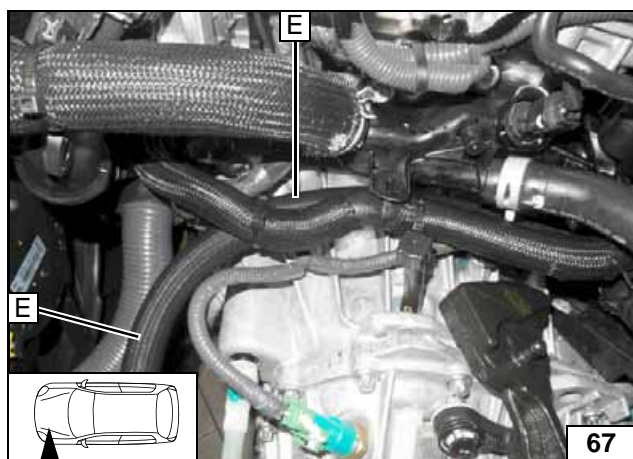


Cutting point

- 1 Hose on heat exchanger inlet

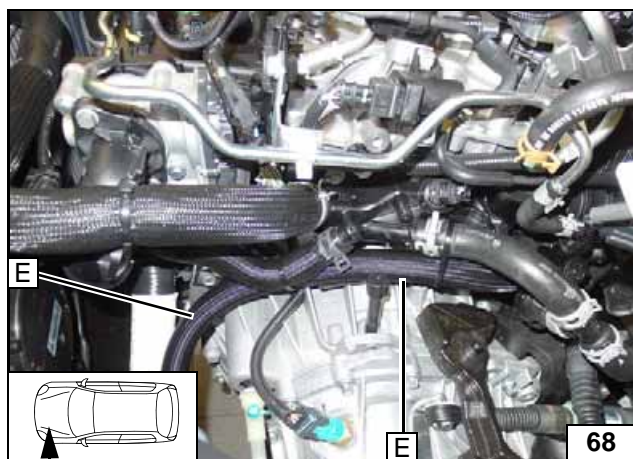


Connecting heat exchanger inlet



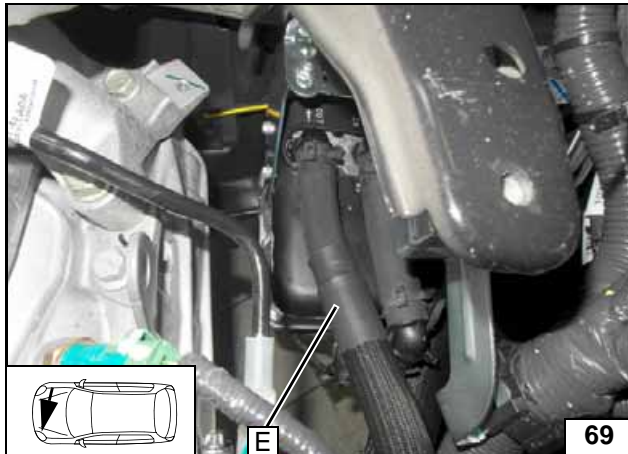
Qashqai

Routing in engine compartment



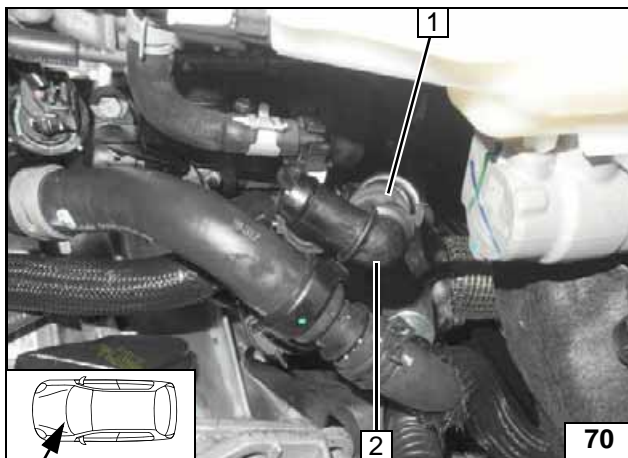
Kadjar

Routing in engine compartment



All vehicles

Connect-
ing heater
outlet

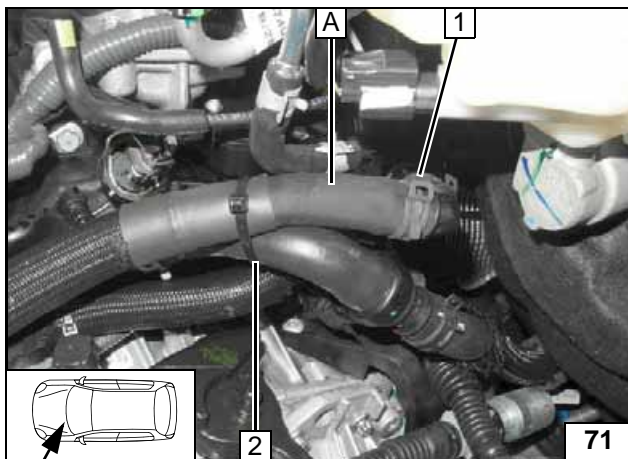


Turn the coupling piece on the engine outlet connection piece by 180°.



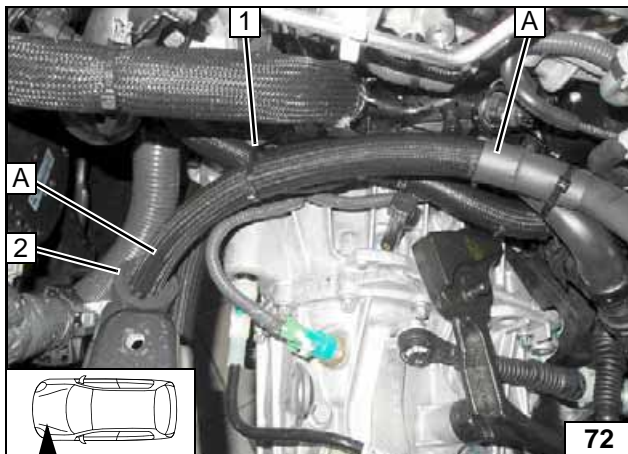
- 1 Hose of engine outlet
- 2 Assemble 90° connecting pipe

Connect-
ing engine
outlet



- 1 Hose of engine outlet
- 2 Cable tie

Connect-
ing engine
outlet



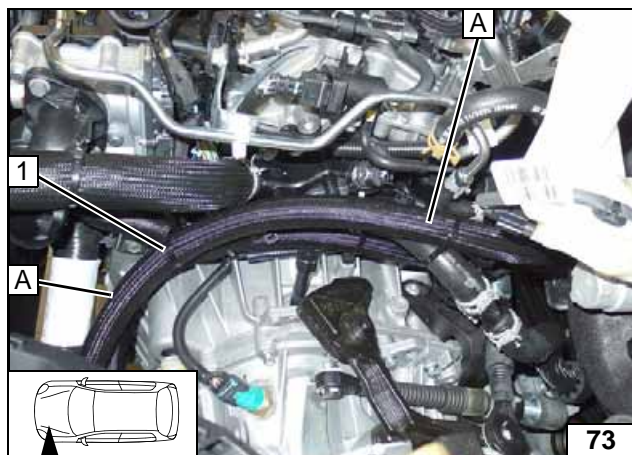
Qashqai

Slide black (sw) rubber isolator 2 onto hose A.



- 1 Cable tie

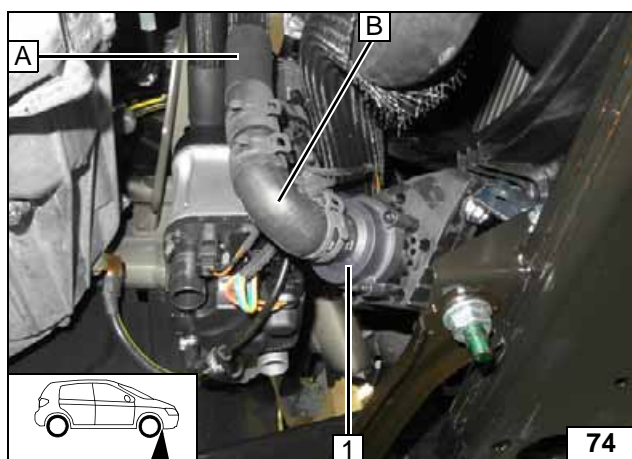
Routing in
engine
compartment



Kadjar

- 1 Cable tie

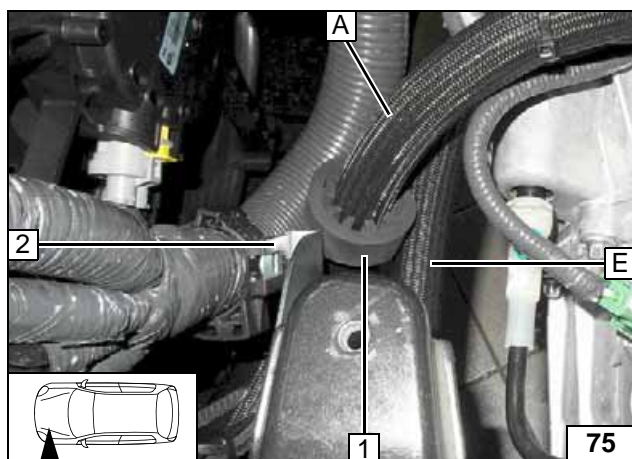
Routing in engine compartment



All vehicles

- 1 Circulating pump

Connecting circulating pump



Align black (sw) rubber isolator **1** between hose **E** and original vehicle bracket **2** (Qashqai only).
Align hoses.
Ensure sufficient distance to neighbouring components, correct if necessary.



Aligning rubber isolator

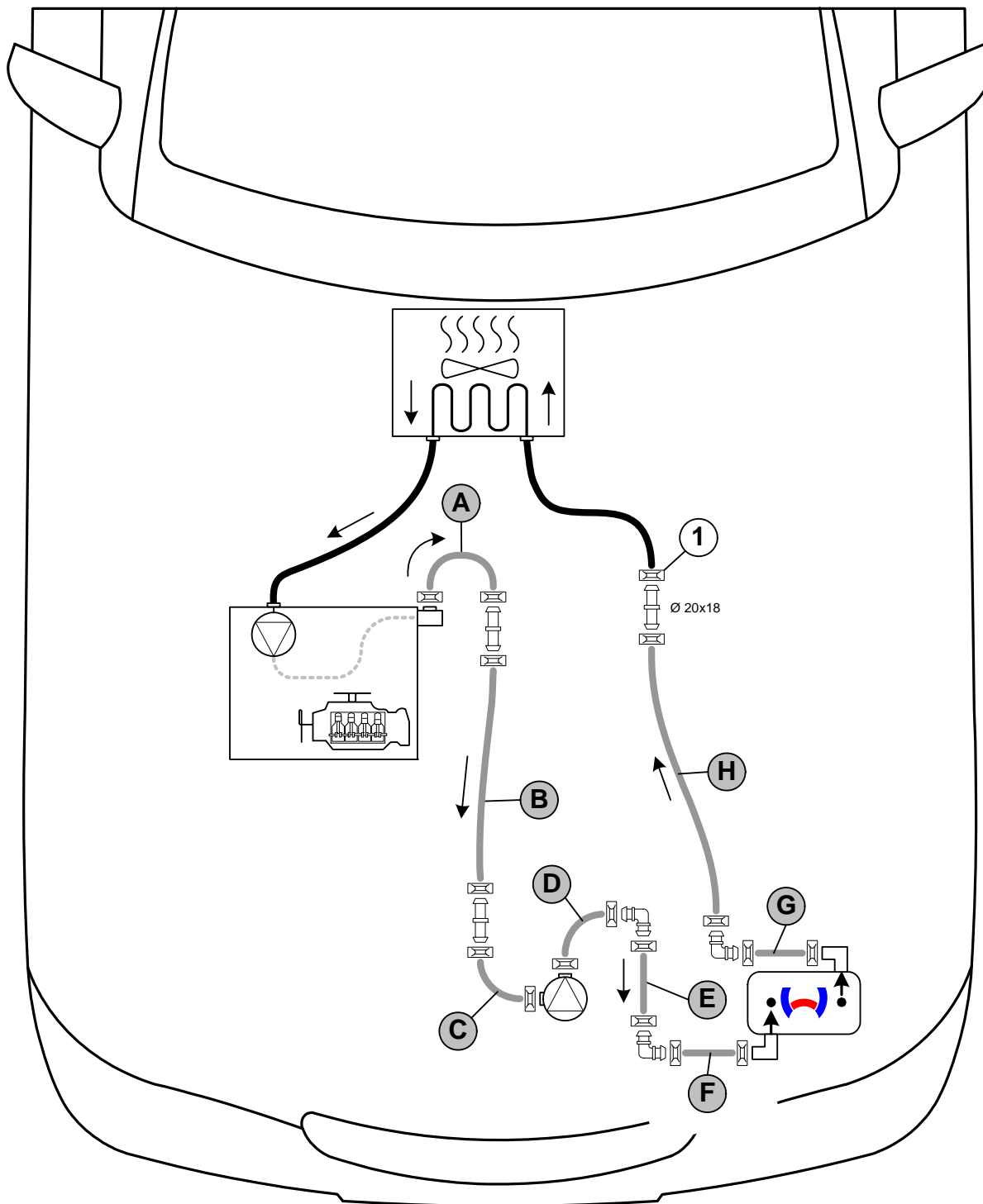


Coolant Circuit for 1.6 Petrol Vehicles







Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hoses can be damaged. When installing the hoses, the heater must be filled with coolant.

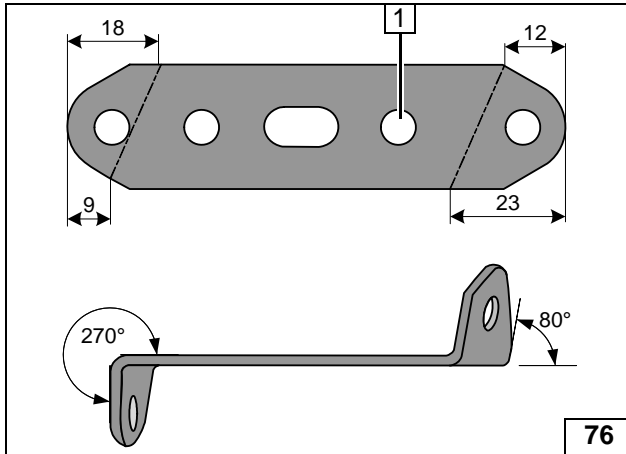
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

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

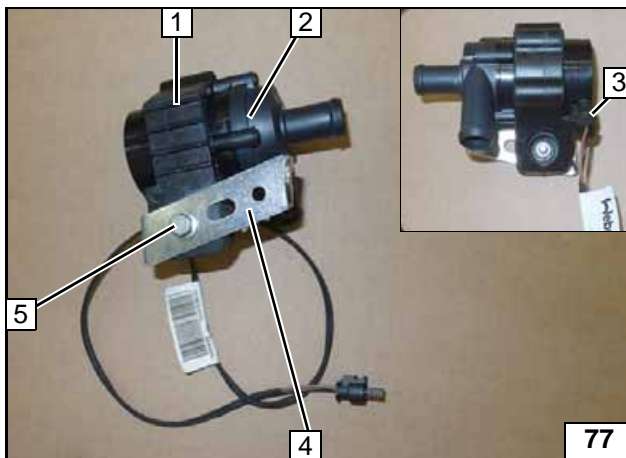




1 Mounting hole for circulating pump

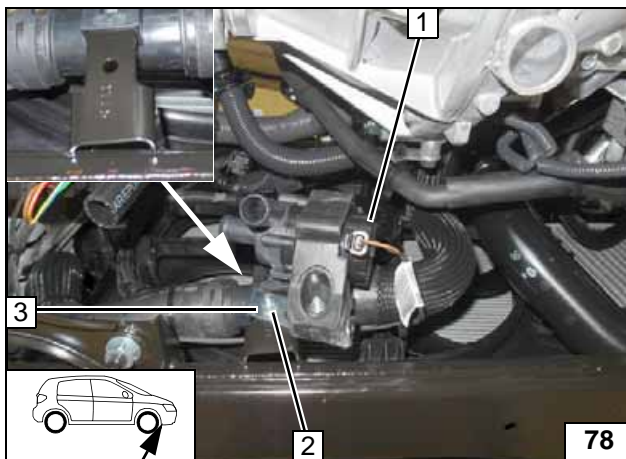


Preparing perforated bracket



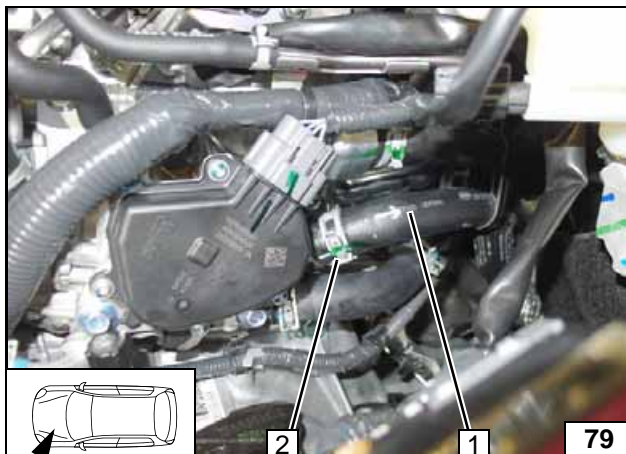
- 1 Circulating pump mounting bracket
- 2 Circulating pump
- 3 Connector of circulating pump wiring harness
- 4 Perforated bracket
- 5 M6x25 bolt, flanged nut

Premounting circulating pump



- 1 Circulating pump
- 2 M6x20 bolt, flanged nut, original vehicle hole
- 3 Perforated bracket

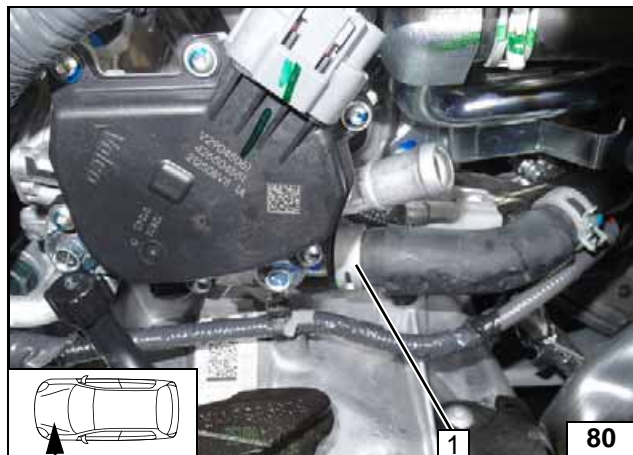
Installing circulating pump



Detach engine outlet/heat exchanger inlet hose 1 on connection piece of engine outlet. Original vehicle spring clip 2 will be re-used.



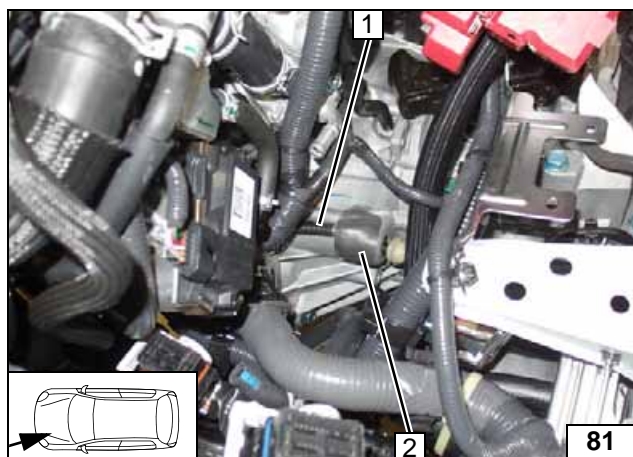
Cutting point



Align spring clip 1 as shown.

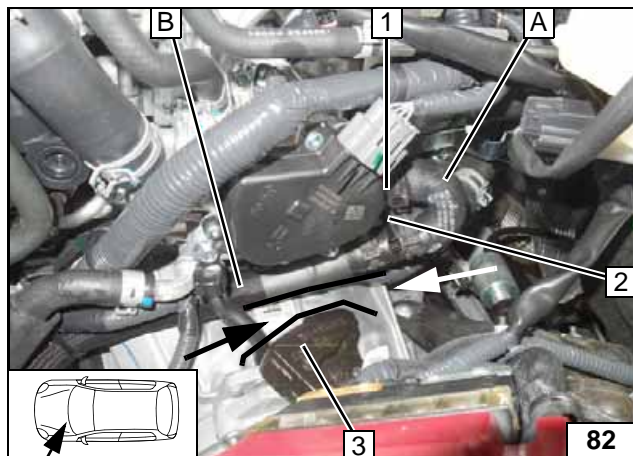


Aligning clamp



- 1 50mm edge protection
- 2 Self-adhesive foam

Installing rub protection

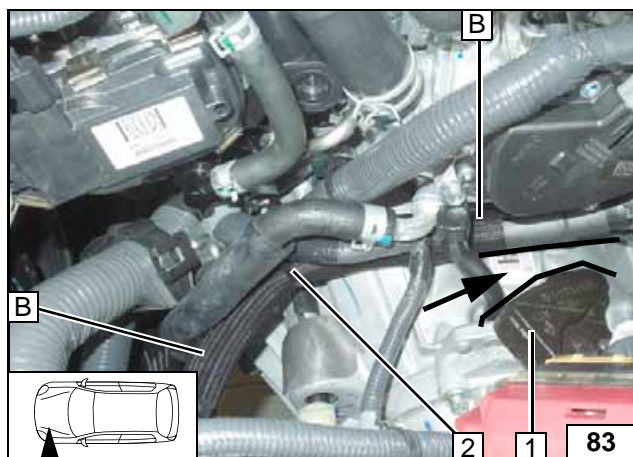


- 1 Connection piece for engine outlet
- 2 Cable tie
- 3 Counterweight for shift lever

>20



Connecting engine outlet

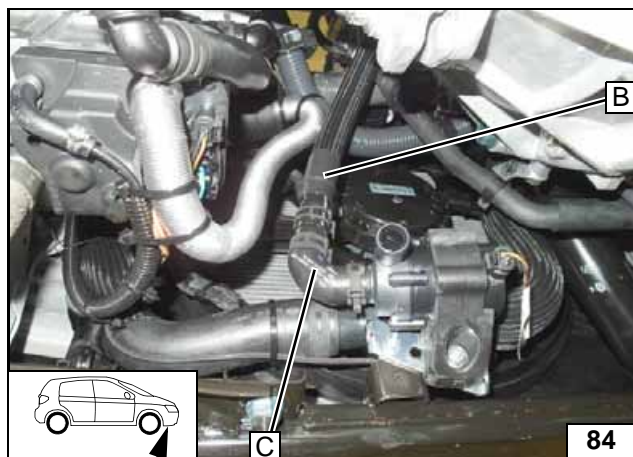


- 1 Counterweight for shift lever
- 2 Cable tie

>20



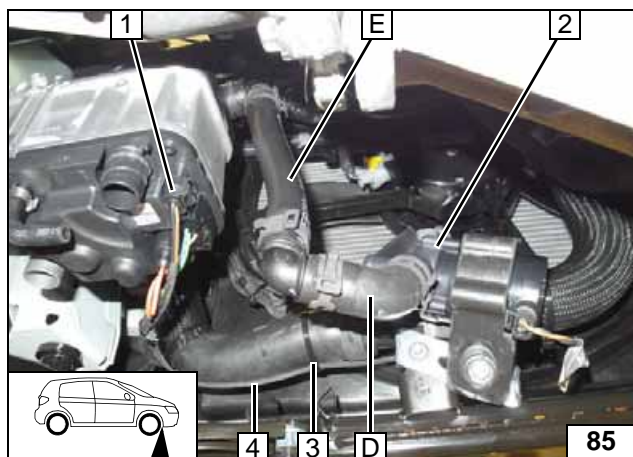
Routing in engine compartment



Combustion air pipe will be installed later.

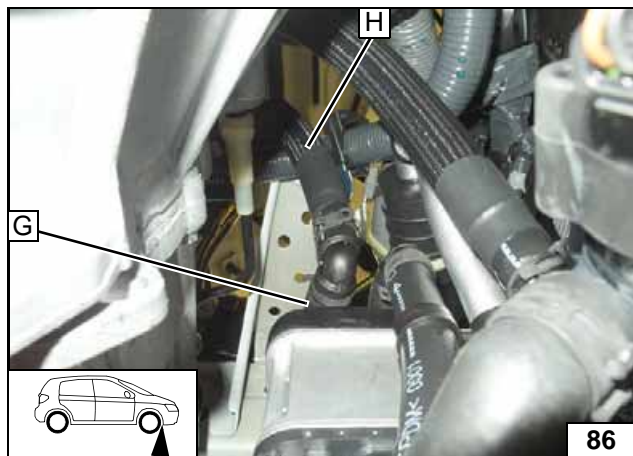


Connecting circulating pump inlet

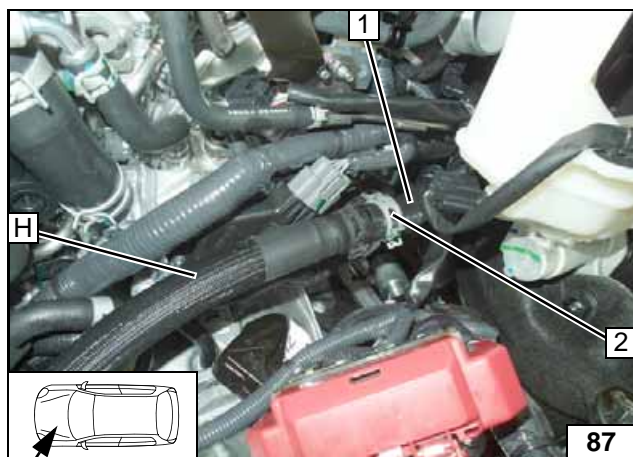


- 1 Connector of circulating pump wiring harness
- 2 Circulating pump
- 3 Cable tie
- 4 Wiring harness of circulating pump

**Connect-
ing circu-
lating
pump**

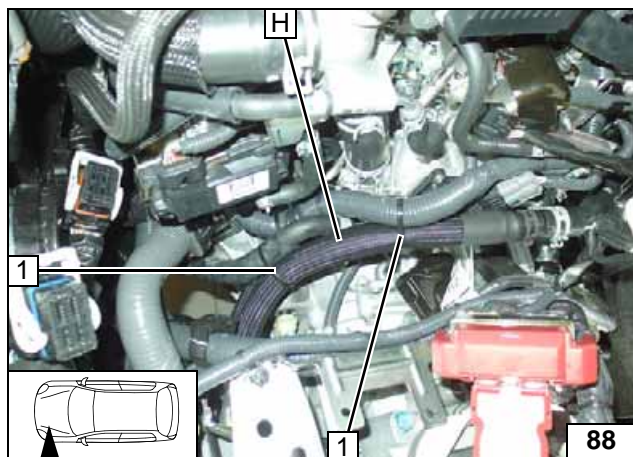


**Connect-
ing heater
outlet**



- 1 Original vehicle hose on heat exchanger inlet
- 2 Original vehicle spring clip

**Connecting
heat exchang-
er inlet**

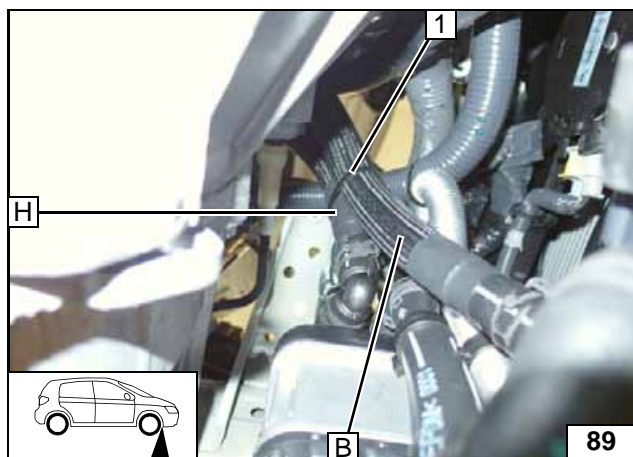


Ensure sufficient distance to neighbouring components, correct if necessary.



- 1 Cable tie [2x]

Routing in engine compartment

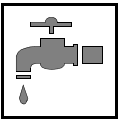


Ensure sufficient distance to neighbouring components, correct if necessary.



- 1 Cable tie

Routing in engine compartment

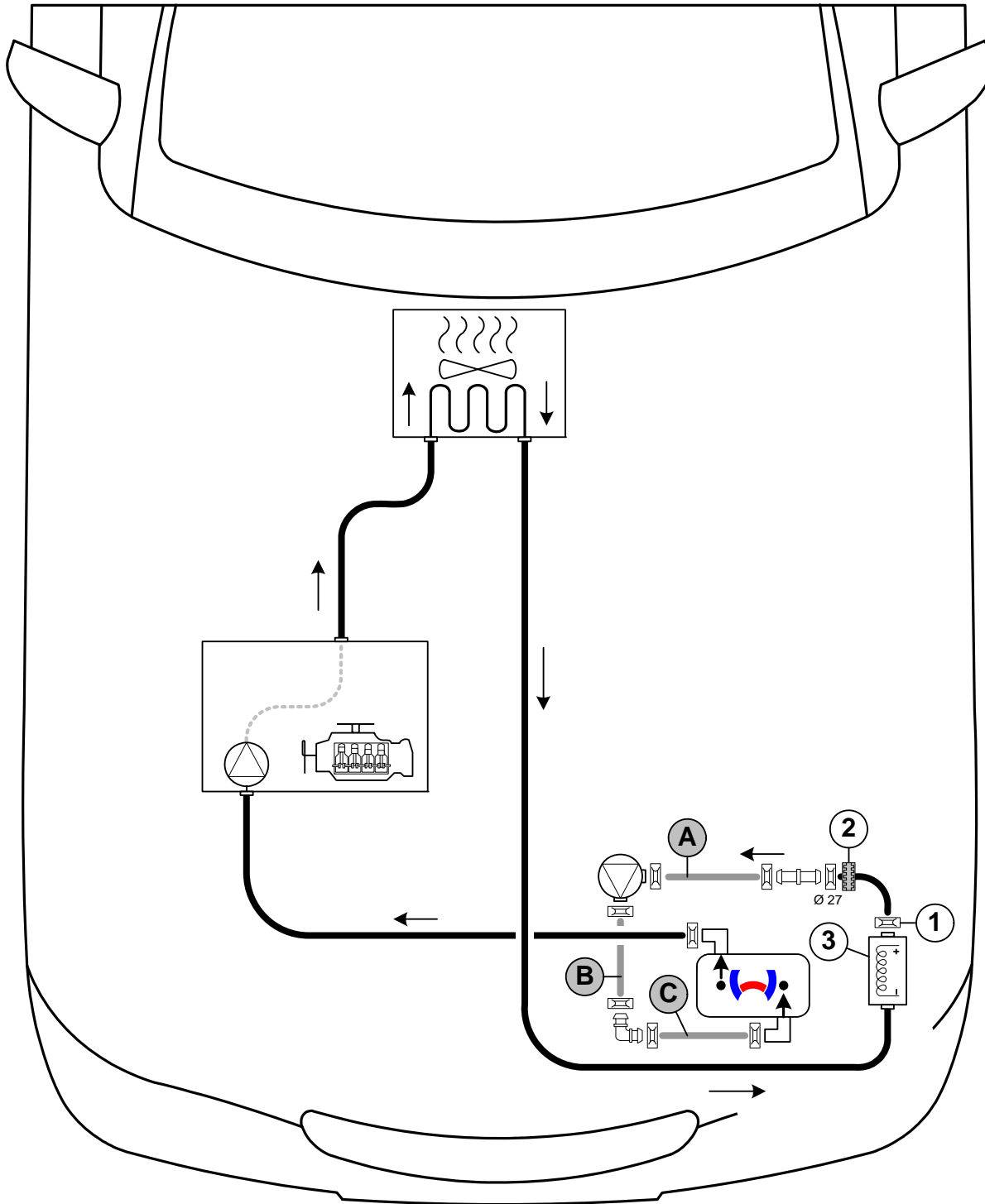


Coolant Circuit for Diesel Vehicles








Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hoses can be damaged. When installing the hoses, the heater must be filled with coolant.

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

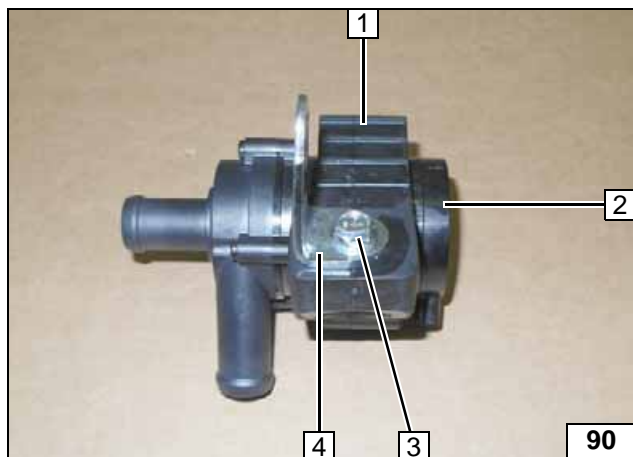


Hose routing diagram

All spring clips without a specific designation  = 25mm dia. Connecting pipe  = 18x18mm dia. Connecting pipe  = 18x20mm dia.

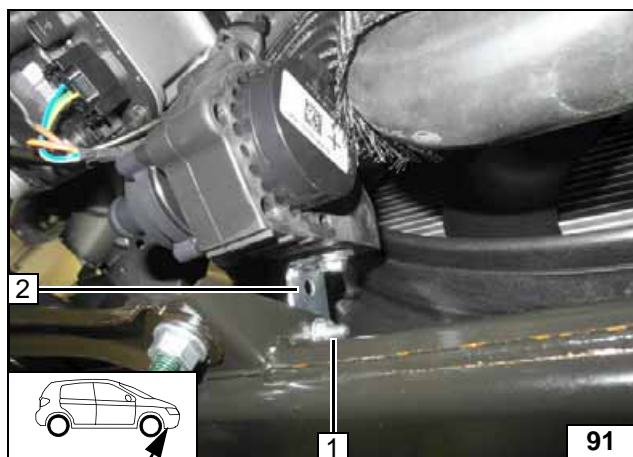
1 = Original vehicle spring clip . 2 = Black (sw) rubber isolator . 3 = Electric auxiliary heater.





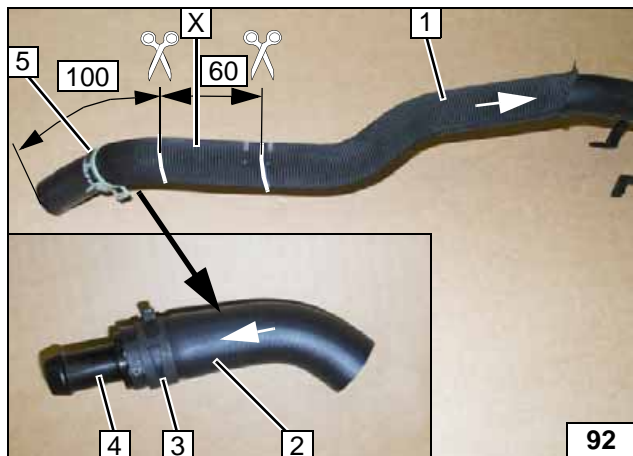
- 1 Circulating pump mounting bracket
- 2 Circulating pump
- 3 M6x25 bolt, flanged nut
- 4 Angle bracket

Premounting circulating pump



- 1 M6x20 bolt, flanged nut, original vehicle hole
- 2 Angle bracket

Installing circulating pump

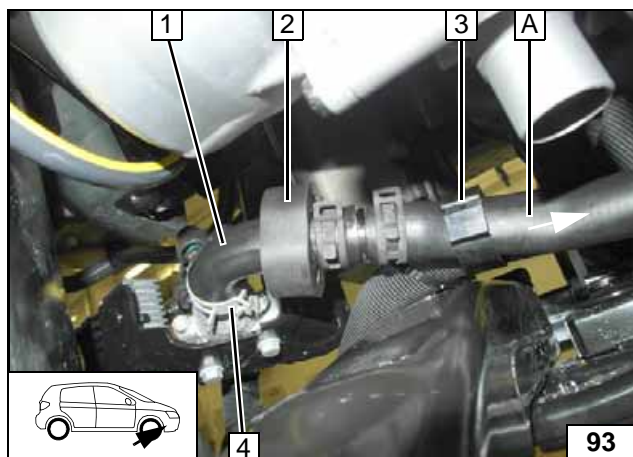


Remove fabric protective hose completely and cut hose at the markings.

- 1 Hose section for engine inlet is assembled on the engine inlet later
- 2 Mark new direction of flow on hose section for electric auxiliary heater outlet (100)
- 3 27mm dia. spring clip
- 4 20x18mm dia. connecting pipe
- 5 Original vehicle spring clip will be reused

X =

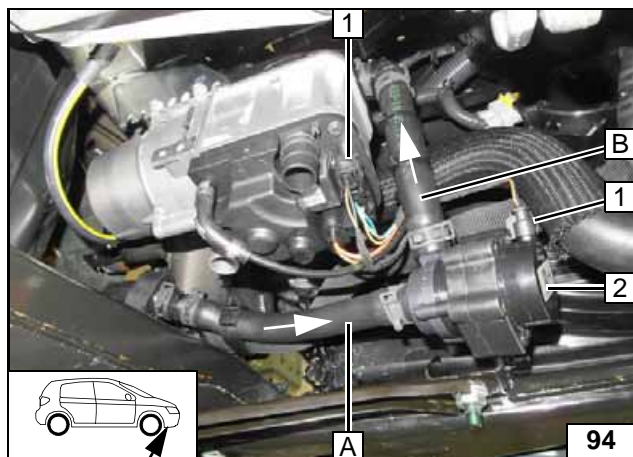
Separating hose



Slide black (sw) rubber isolator 2 onto hose section of electric auxiliary heater outlet 1 and align.

- 3 Original vehicle hose bracket
- 4 Original vehicle spring clip

Connecting electric auxiliary heater outlet

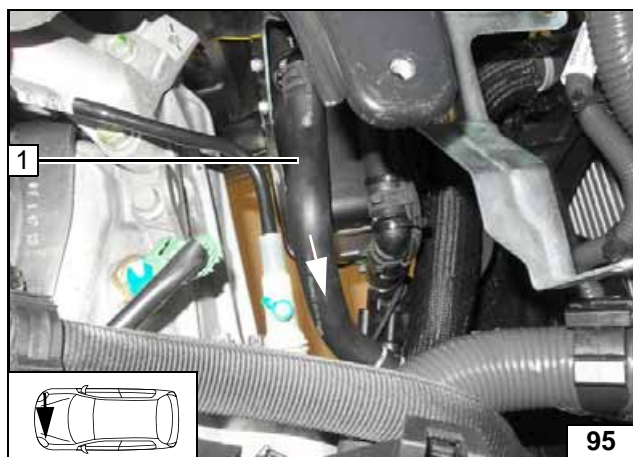


Connect wiring harness of circulating pump **1** [2x] and use cable ties to secure to hose **B**

2 Circulating pump



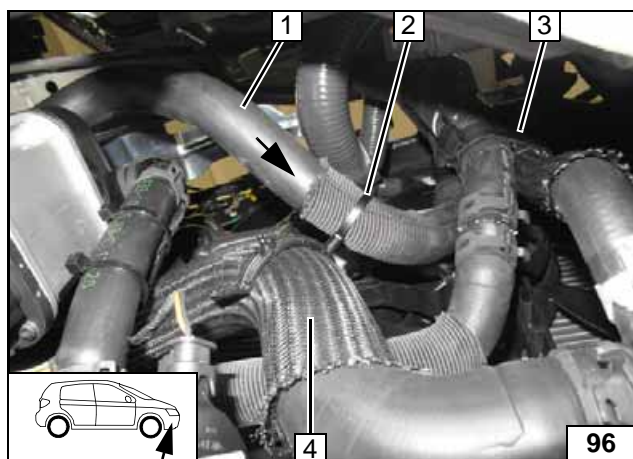
**Connect-
ing circu-
lating
pump**



Reassemble hose section for engine inlet **1** at the engine inlet, route towards the heater and connect at the heater outlet.



**Connect-
ing heater
outlet**

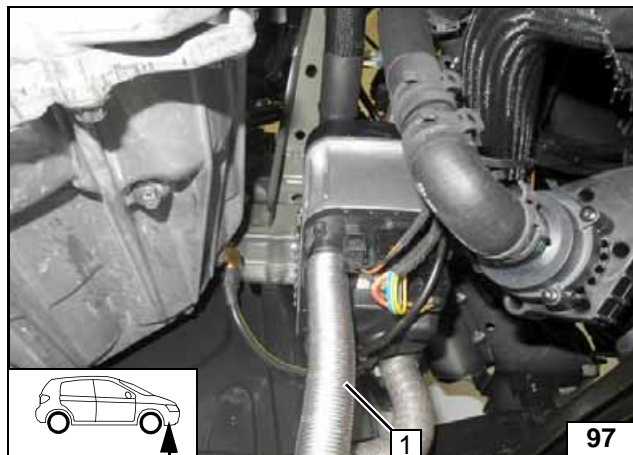
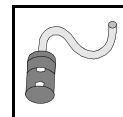


Align hoses. Ensure sufficient distance to neighbouring components, correct if necessary.

- 1** Hose on heater outlet / engine inlet
- 2** Original vehicle hose bracket
- 3** Original vehicle hose bracket
- 4** Radiator hose



**Inserting
hose
bracket**



Combustion Air

Figure shows petrol vehicle!

- 1 Combustion air pipe

Installing combustion air pipe

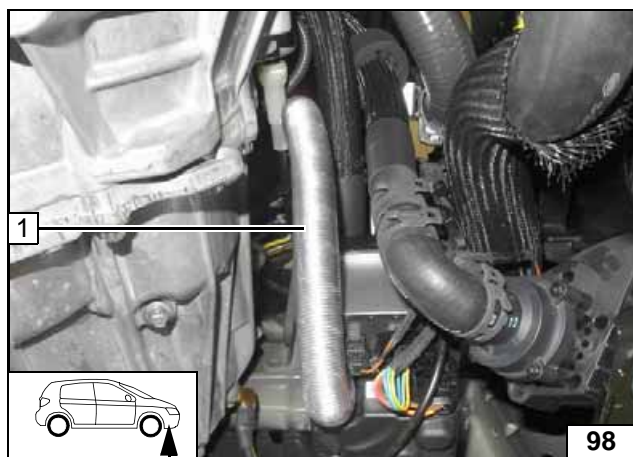
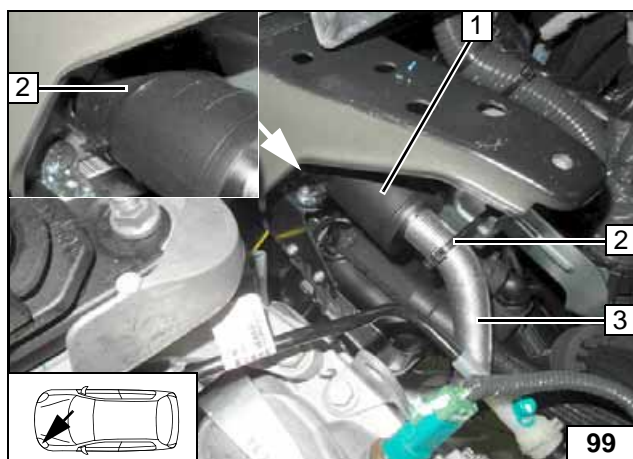


Figure shows petrol vehicle!

Route combustion air pipe 1 upwards as shown.



Installing combustion air pipe

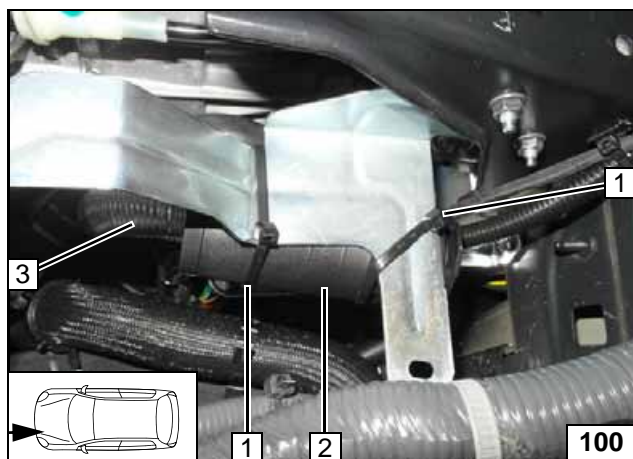


1.2 / 1.6 Petrol

- 1 Silencer
- 2 Cable tie [2x]
- 3 Combustion air pipe



Mounting silencer

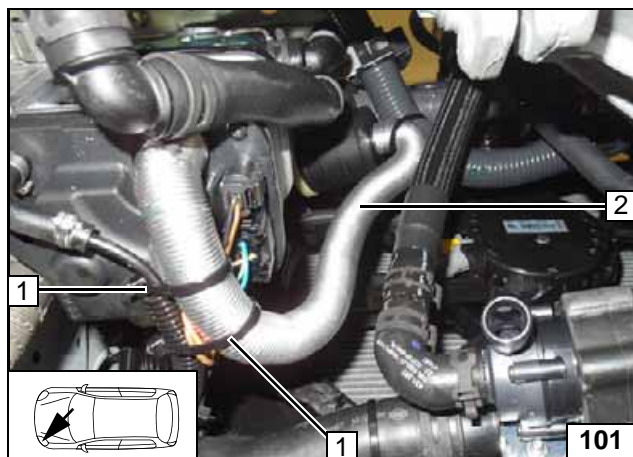
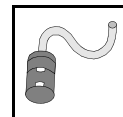


Diesel

- 1 Cable tie [2x]
- 2 Silencer
- 3 Combustion air pipe



Mounting silencer

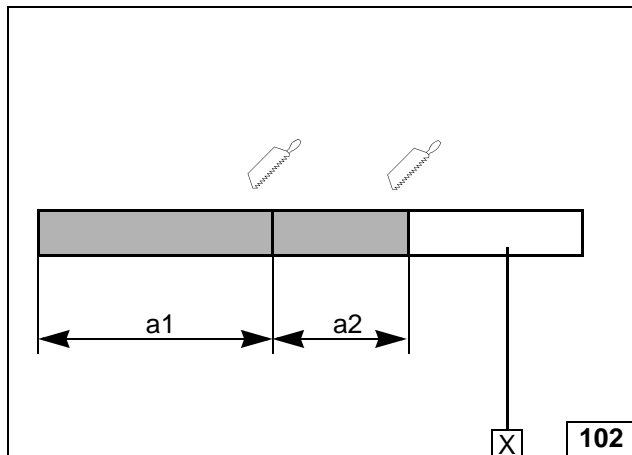
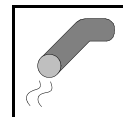


All vehicles

Figure shows petrol vehicle!

- 1 Cable tie [2x]
- 2 Combustion air pipe

**Securing
combustion
air pipe**



Exhaust Gas

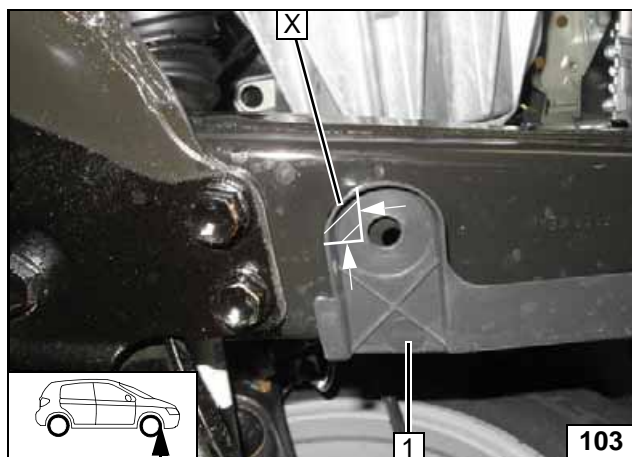
a1 = 280

a2 = 170

X =



Preparing exhaust pipe

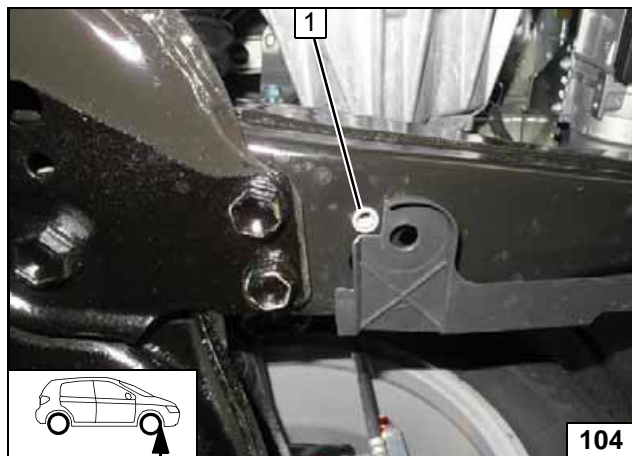


Cut out wheel well trim 1 at the marking.

X =

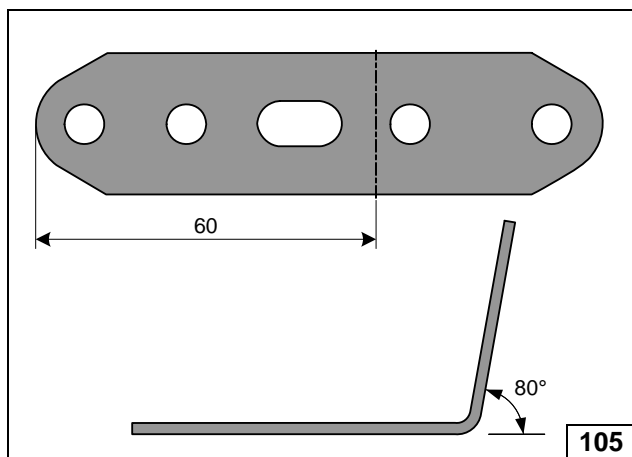


Cutting out wheel well trim

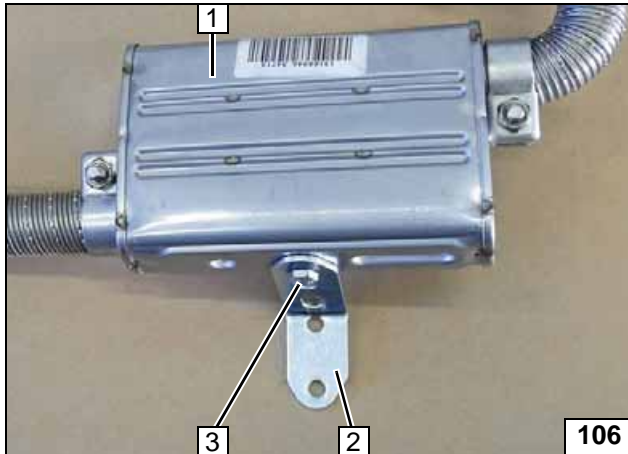
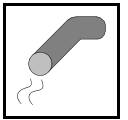


1 Drill 9.1mm dia. hole; rivet nut

Installing rivet nut

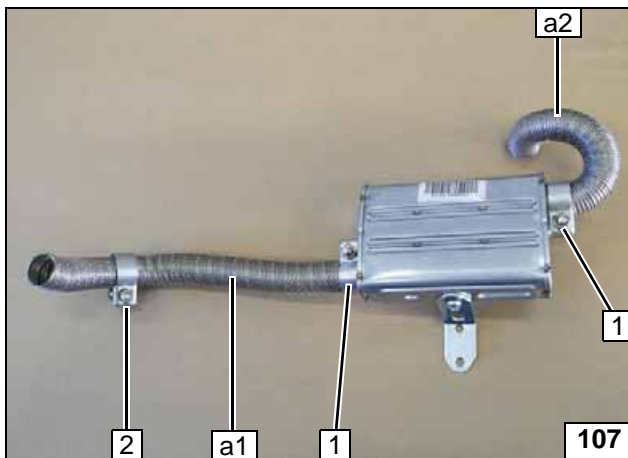


Preparing perforated bracket



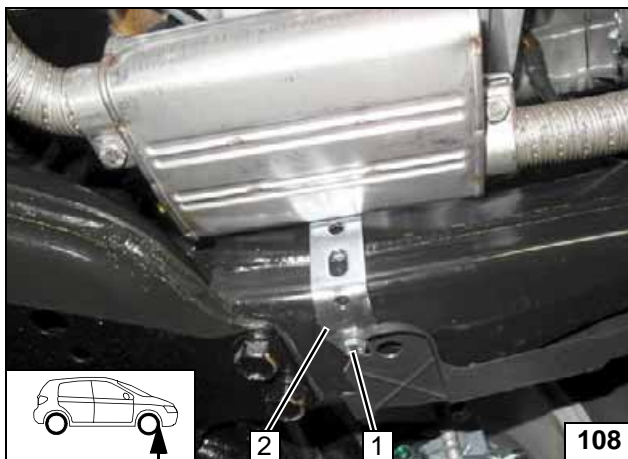
- 1 Silencer
- 2 Perforated bracket
- 3 M6x16 bolt, spring lockwasher

Premount-
ing silencer



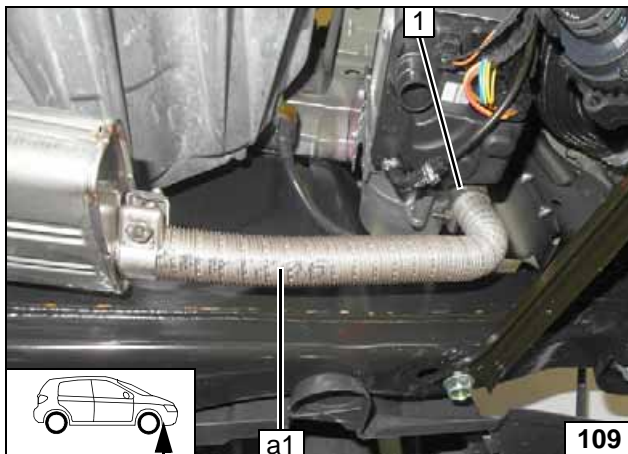
- 1 Hose clamp [2x]
- 2 Push on hose clamp

Premount-
ing exhaust
pipes a1
and a2



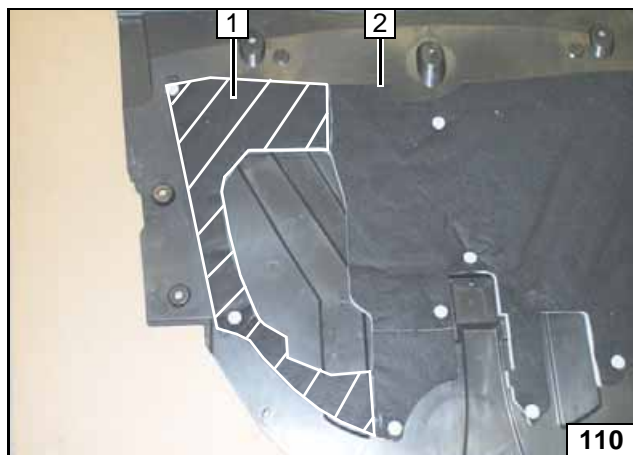
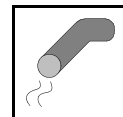
- 1 M6x20 bolt, spring lockwasher
- 2 Perforated bracket

Mounting
silencer



- 1 Hose clamp

Installing
exhaust
pipe a1

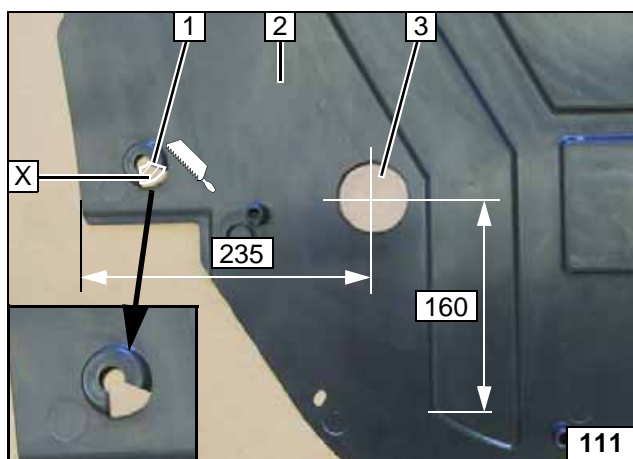


Qashqai

Remove insulation material (if present) on underride protection 2 in accordance with marking 1.



Preparing underride protection



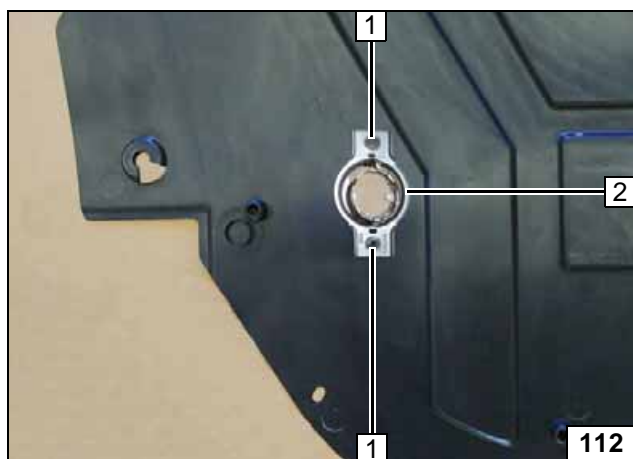
Cut out underride protection 2 at marking 1 (required to secure the exhaust silencer).



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

X =

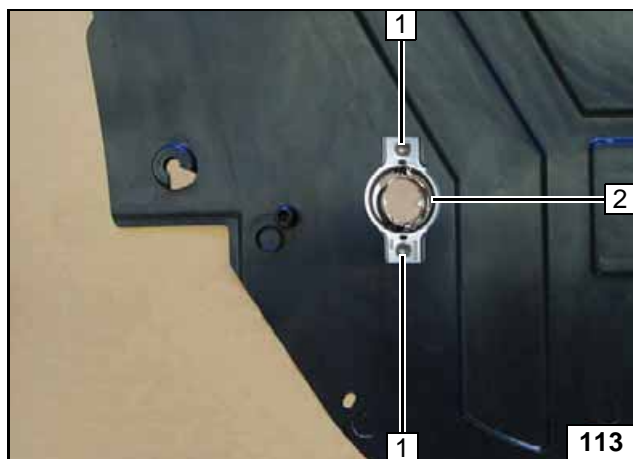
Hole in underride protection



Shorten exhaust end fastener 2. Position exhaust end fastener 2 as per work step 3 of the installation instructions, copy hole pattern 1 [2x] and drill as per work step 4 of the installation instructions.



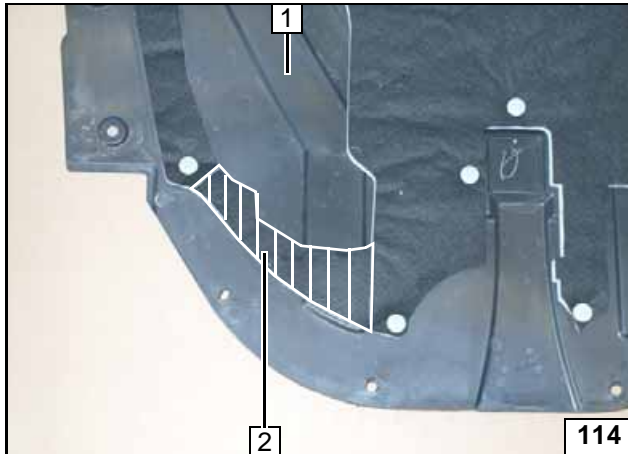
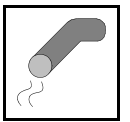
Copying hole pattern



- 1 5x13 self-tapping screw [2x] as per work step 5 of the installation instructions
- 2 Exhaust end fastener



Mounting exhaust end fastener



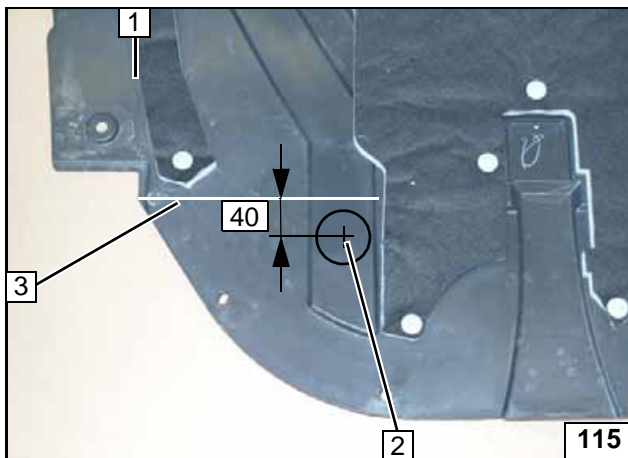
Kadjar

Remove insulation material (if present) on underride protection **1** in accordance with marking **2**.



Adapting underride protection

Draw guide line **3**.



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



Hole in underride protection



Position exhaust end fastener **1** as per work step 3 of the installation instructions, copy hole pattern **2** [2x] and drill as per work step 4 of the installation instructions.



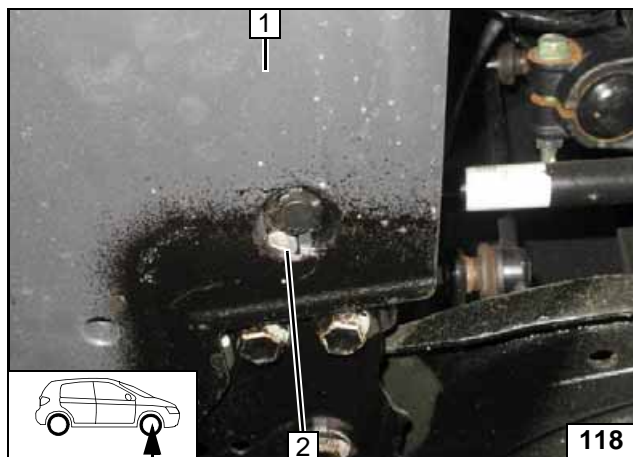
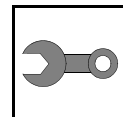
Copying hole pattern



- 1 5x13 self-tapping screw [2x] as per work step 5 of the installation instructions
- 2 Exhaust end fastener



Mounting exhaust end fastener



Final Work

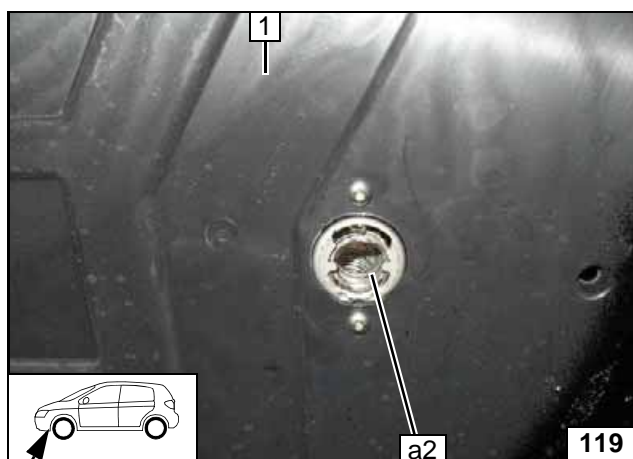
Qashqai

Recess in underbody protection **1** for M6x20 bolt and perforated bracket at position **2**. Ensure freedom of movement, re-work recess if necessary.

- 1 Underride protection



Mounting underbody protection

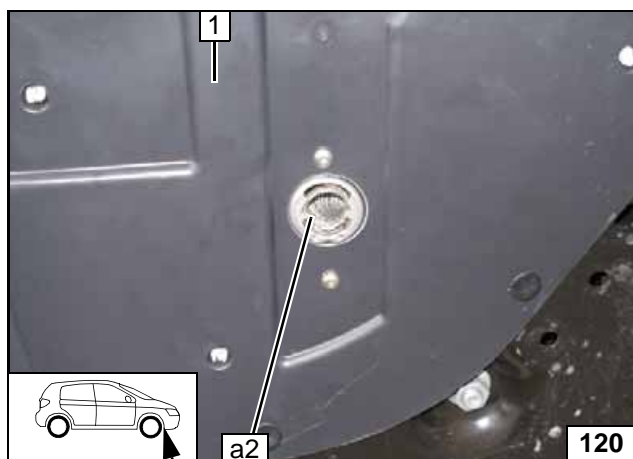


Install exhaust pipe **a2** as per work steps 6 - 8 of the installation instructions.

- 1 Underride protection



Installing exhaust pipe a2

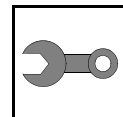


Kadjar

Install underbody protection **1**. Install exhaust pipe **a2** as per work steps 6 - 8 of the installation instructions.



Installing exhaust pipe a2



Final Work



All vehicles

Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose lines 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 specifications**
- **Program MultiControl CAR, teach Teletstart transmitter**
- **See installation instructions for initial start-up and function check**
- **If the fan function or A/C control panel settings need to be checked, see the installation documentation in the additional kit A/C control 'Standard' or 'Comfort', section 'Final Work'**
- **Apply the caution label 'Switch off parking heater before refuelling' in the area of the filler neck**





Template for Fuel Standpipe

