



Water Heater

Thermo Top Evo Parking Heater



Installation Documentation Toyota C-HR

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Toyota	C-HR	AX1T	From model year 2017	e11 * 2007 / 46 * 3641 * ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.2 P	Petrol	Euro 6	CVT	85	1197	8NR
1.8 P hybrid	Petrol	Euro 6	E-CVT	72	1798	2ZR-FXE

CVT = continuously variable transmission (Multidrive S)

E-CVT = continuously variable transmission

Left-hand drive vehicle

Verified equipment variants: Two zone automatic A/C
LED main headlights
Halogen and LED front fog lights
LED daytime running lights
Start button with Smart Key
2WD / 4WD

Not verified: Manual air-conditioning

Total installation time: approx. 9.5 hours

Note:

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

Toyota C-HR

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Necessary Components

Description	Order No.:
Basic delivery scope of Thermo Top Evo	In accordance with price list
Installation kit Toyota C-HR 2017 Petrol	1325651B
Additional kit 'Webasto Standard' automatic A/C for Toyota	1324414_
Heater control as well as indicator lamp for Telestart, in consultation with end customer	In accordance with price list

Webasto Individual Option

Description	Order No.:
Webasto Individual Auxiliary Heating additional kit	1320077_
Webasto Individual Quick additional kit	9030826_
Webasto Individual Select additional kit	9030828_

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.

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 have to audibly click into place during installation.

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.

Toyota C-HR

Information on Validity

This installation documentation applies to Toyota C-HR Petrol 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 - 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.

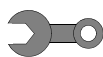
Tightening torque values

- Tightening torque values 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.

Mechanics



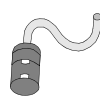
Electrics



Coolant Circuit



Combustion Air



Fuel



Exhaust Gas



Software



Special features are highlighted using the following symbols:

Specific risk of damage to components.



Specific risk due to electrical voltage.



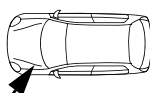
Specific risk of fire or explosion.



Reference to a special technical feature.



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



Reference to the manufacturer's vehicle-specific documents.



Reference to specific installation instructions of Webasto components (demonstrated with the example of the FuelFix).



Reference to general installation instructions of Webasto components.



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



Spray the components with anti-corrosion wax as per the vehicle-specific documents or with Tectyl 100K.



Toyota C-HR

Preliminary Work

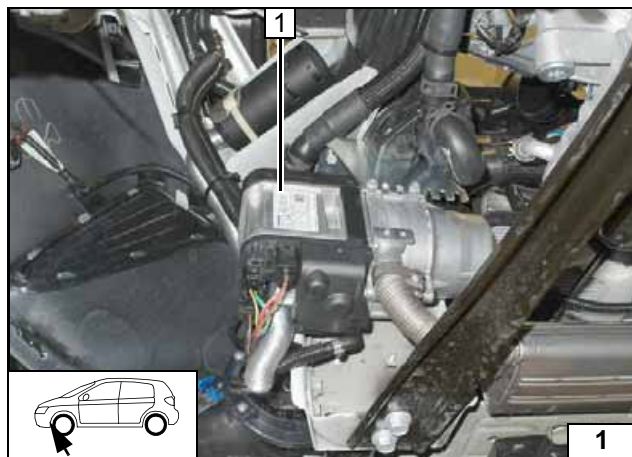
Vehicle



- Deactivate the hybrid system according to the vehicle manufacturer's workshop manual.
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery.
- Remove the lower engine trim.
- Remove the front left wheel.
- Remove the left-hand wheel well trim.
- Remove the transmission cover in the wheel well on the left.
- Remove the 12V battery and battery carrier.
- Drain off the engine coolant (upper drain screw on the radiator).
- Remove the lateral cover of the instrument panel on the left.
- Remove the upper footwell trim on the left.
- Remove the entrance strip trim on the front left side.
- Remove the left lower A-pillar trim.
- Remove the lateral trim of the centre console on the left in the footwell.
- Remove the rear bench seat.
- Open the tank-fitting service lid on the left.

Heater

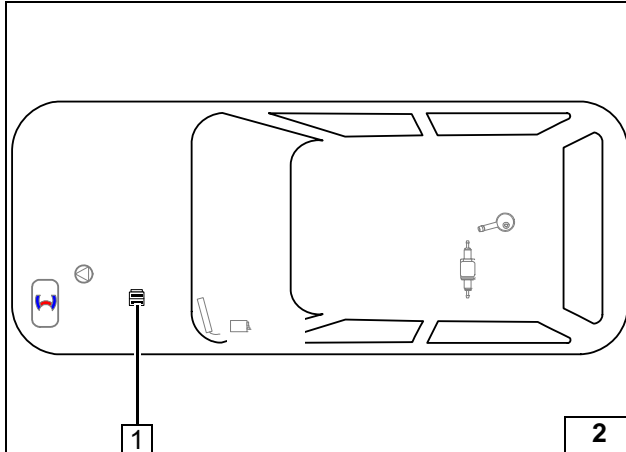
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



Heater Installation Location

- 1 Heater

Installation location

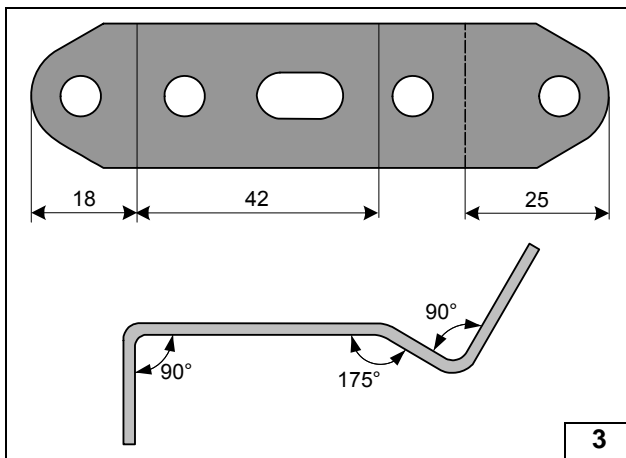


Preparing Electrical System

- 1 Engine compartment fuse holder

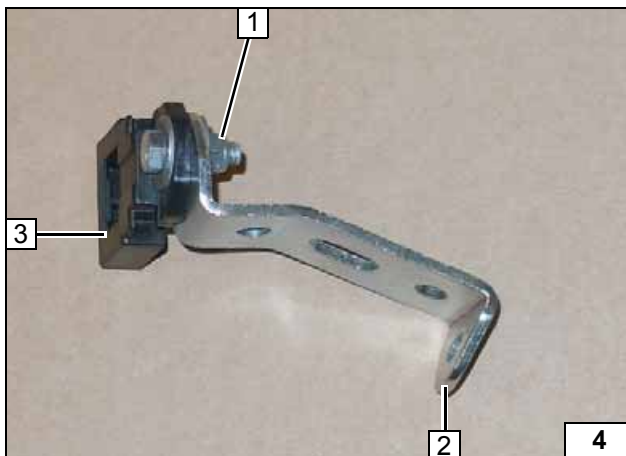


Installation overview



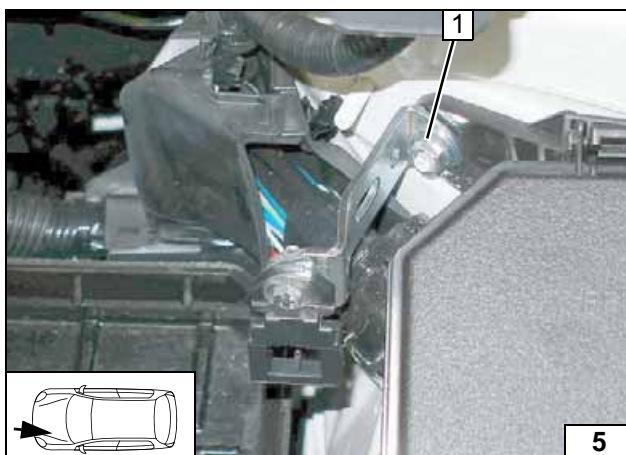
1.2 Petrol

Bending perforated bracket



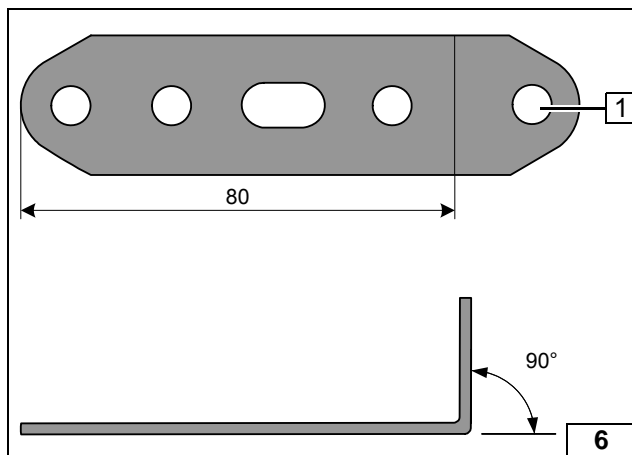
- 1 M5x16 bolt, large diameter washer [2x], nut
- 2 Perforated bracket
- 3 Retaining plate for engine compartment fuse holder

Premounting perforated bracket



- 1 Original vehicle nut

Installing engine compartment fuse holder

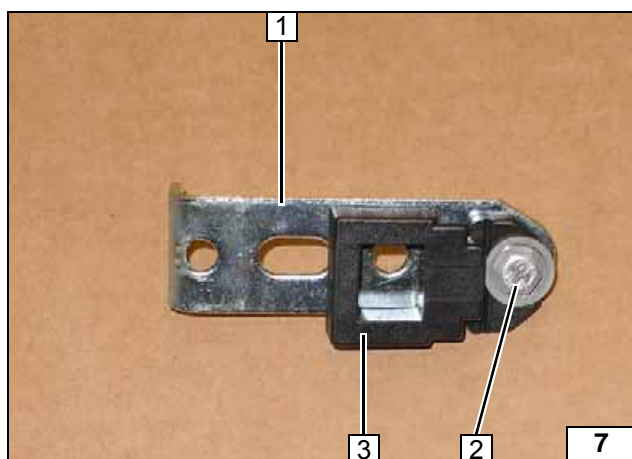


1.8 Petrol hybrid

Drill out hole 1 to 8.5mm.

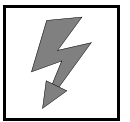


Bending perforated bracket



- 1 Perforated bracket
- 2 M5x16 bolt, large diameter washer [2x], nut
- 3 Retaining plate for engine compartment fuse holder

Premounting perforated bracket

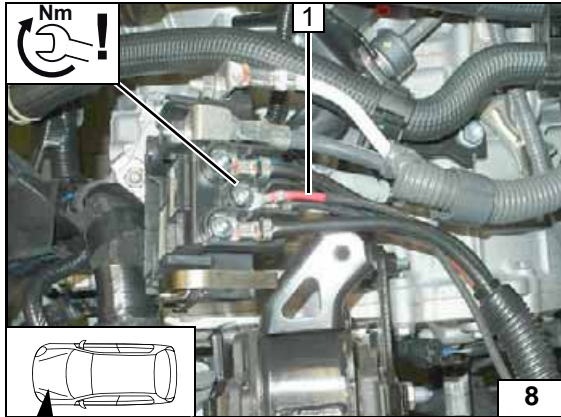


Electrical System of 1.2 Petrol Vehicles



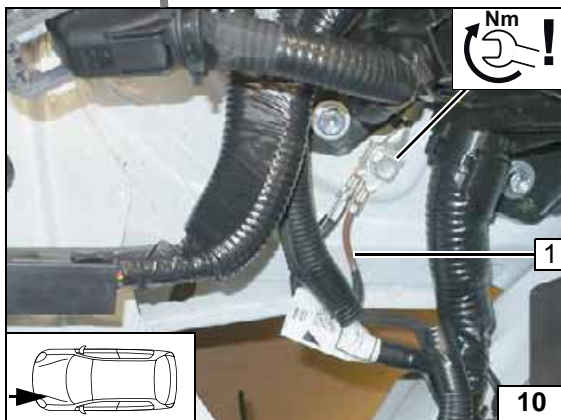
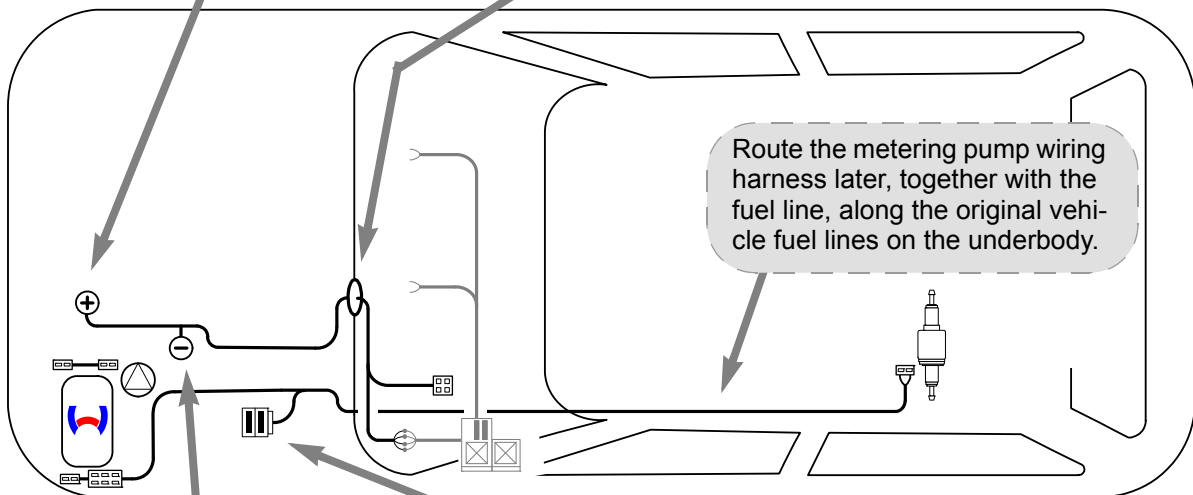
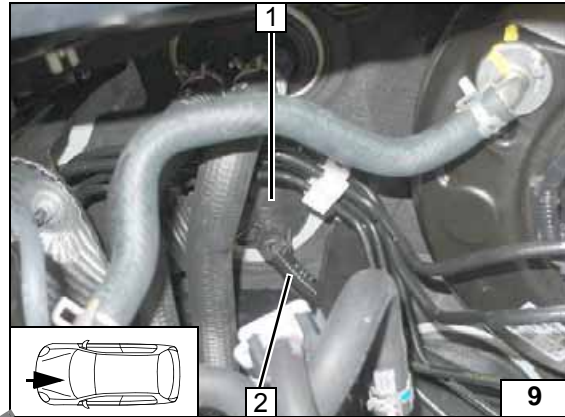
Positive wire

- 1 Draw positive wire into 10mm dia. (300mm long) corrugated tube, connect to positive support point



Wiring harness pass through

- 1 Protective rubber plug
- 2 Wiring harnesses of heater, heater control in 13mm dia. (1400mm long) corrugated tube



Earth wire

- 1 Earth wire on original vehicle earth support point



Engine compartment fuse holder

- 1 Fuses F1-2



Wiring harness routing diagram



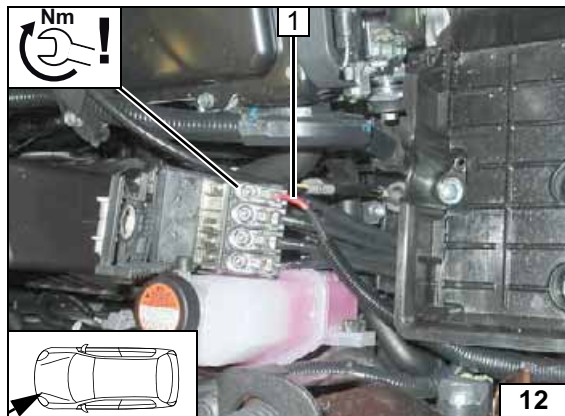


Electrical System of 1.8 Petrol Hybrid Vehicles



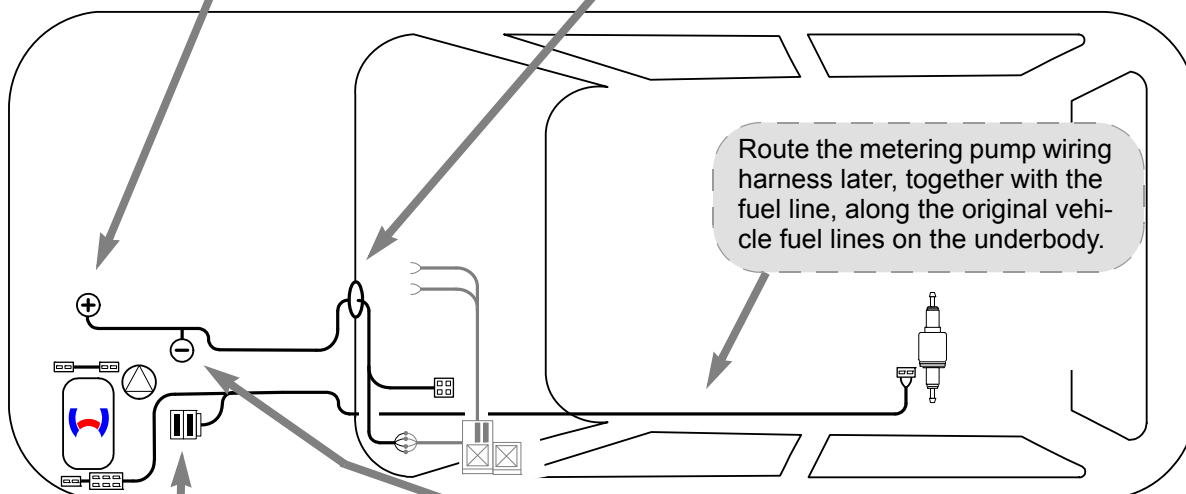
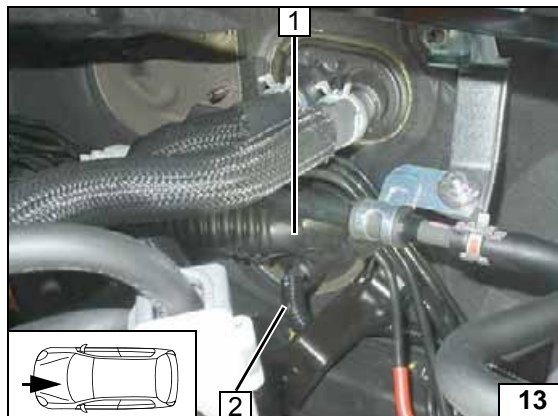
Positive wire

- 1 Draw positive wire into 10mm dia. (300mm long) corrugated tube, connect to positive support point

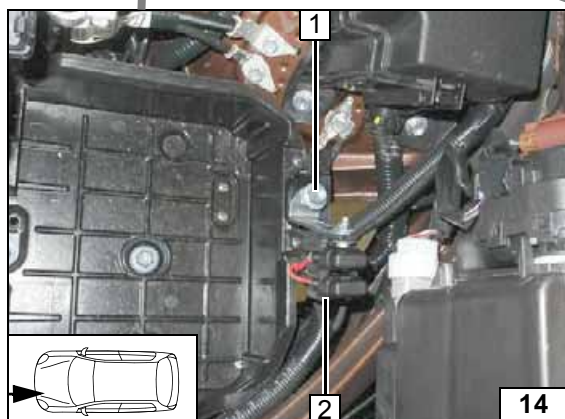


Wiring harness pass through

- 1 Protective rubber plug
- 2 Wiring harnesses of heater, heater control in 13mm dia. (1400mm long) corrugated tube

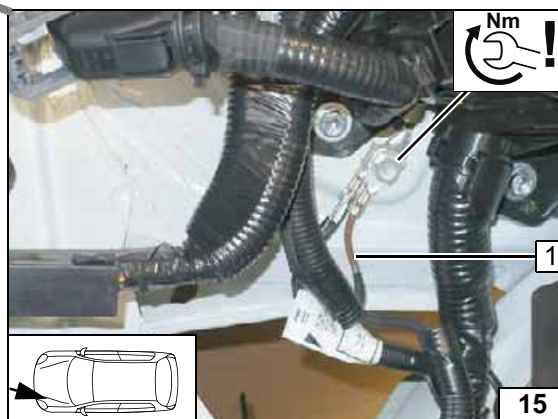


Wiring harness routing diagram



Engine compartment fuse holder

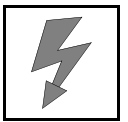
- 1 Install original vehicle bolt loosely, will be attached later during the 'Final Work' stage
- 2 Fuses F1-2



Earth wire

- 1 Earth wire on original vehicle earth support point



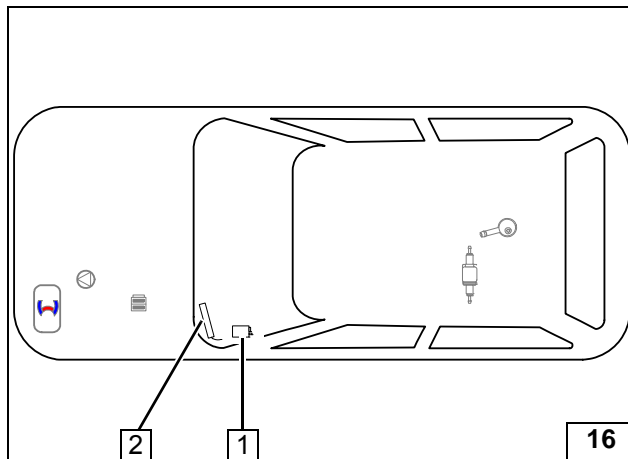


A/C Control for All Vehicles



The A/C control must be integrated as explained in the separate installation documentation:

Installation documentation '**Webasto Standard**' A/C control for Toyota with automatic A/C

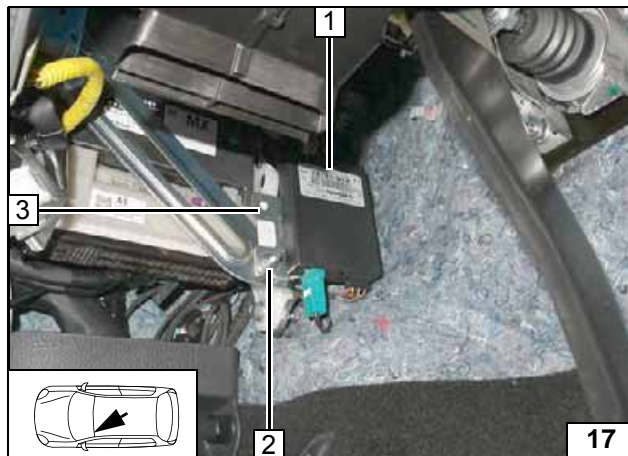


Heater Control Installation

- 1 Telestart / ThermoCall receiver
- 2 Telestart / ThermoCall aerial



Installation overview

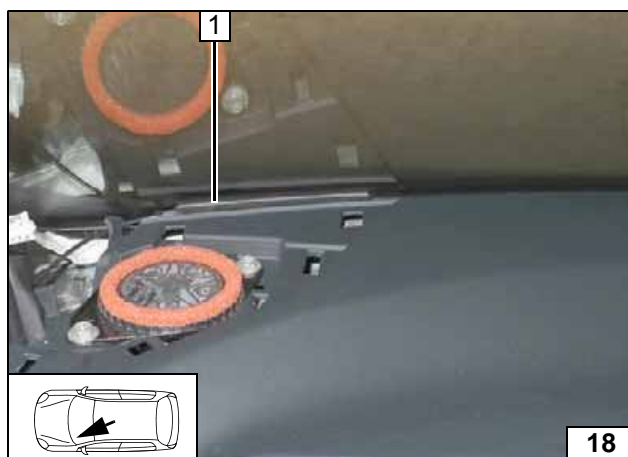


Remote Option (Telestart)

- 1 Receiver
- 2 Original vehicle hole, M5x16 bolt, large diameter washer [2x], flanged nut
- 3 Telestart bracket

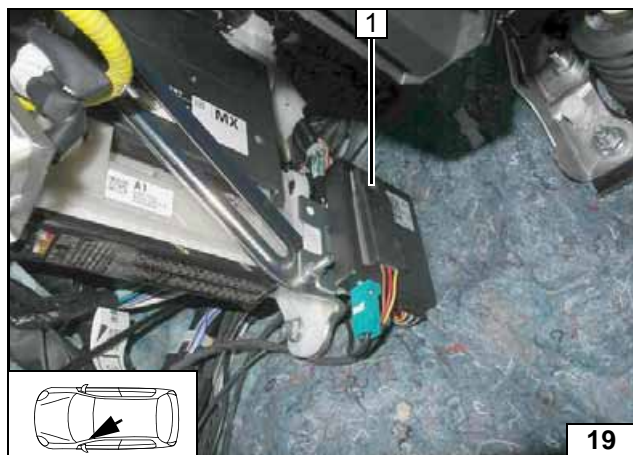


Installing receiver



- 1 Aerial

Installing aerial

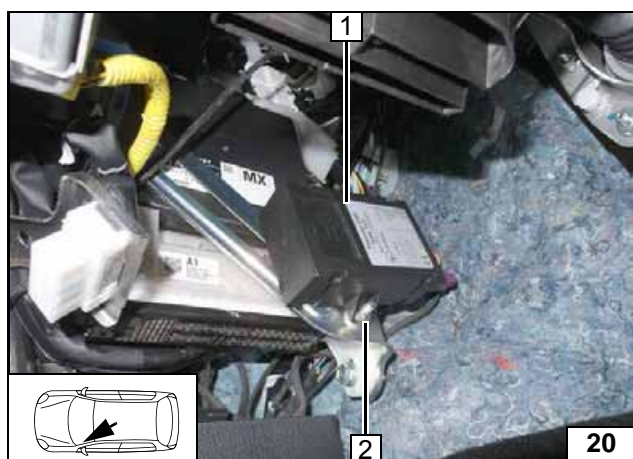


Temperature sensor T100 HTM

Fasten temperature sensor 1 with double-sided adhesive tape.



Installing temperature sensor

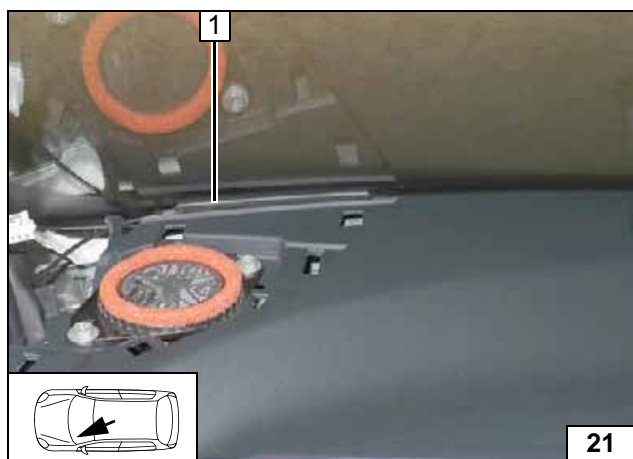


ThermoCall Option

- 1 Receiver, M5x16 bolt, washer, flanged nut
- 2 Original vehicle hole, M5x16 bolt, large diameter washer [2x], flanged nut

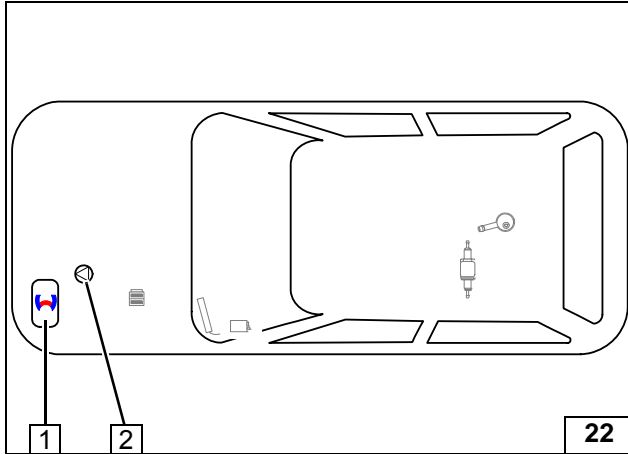
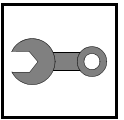


Installing receiver



- 1 Aerial (optional)

Installing aerial

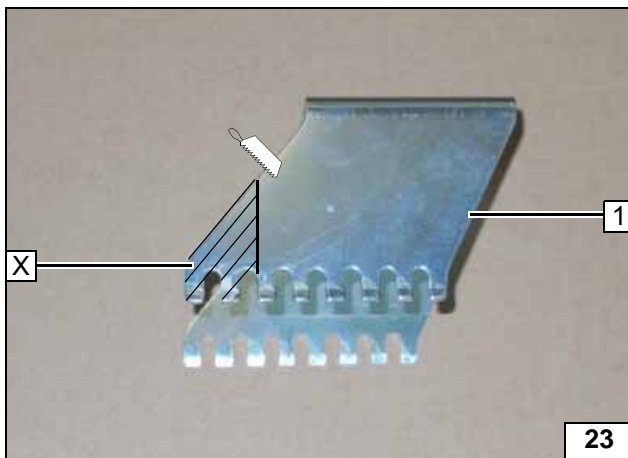


Preparing Installation Location

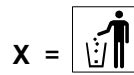
- 1 Circulating pump
- 2 Heater



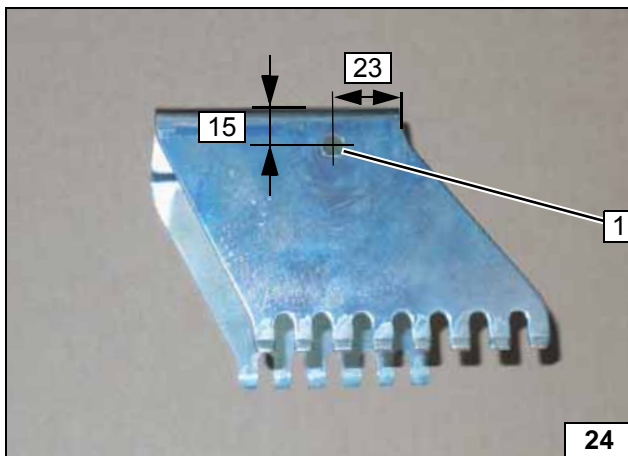
Installation overview



- 1 Bracket

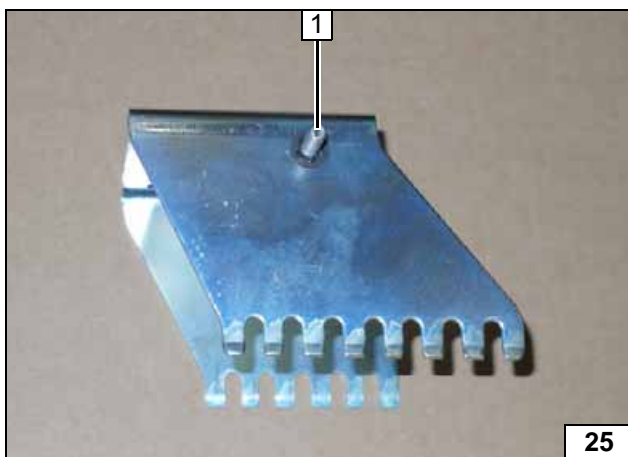


Shortening bracket



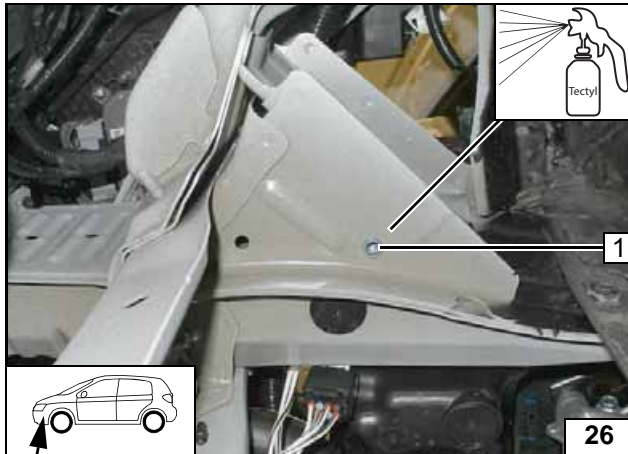
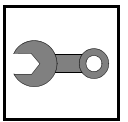
- 1 7 mm dia. hole

Drilling bracket



- 1 M6x25 bolt, lock washer

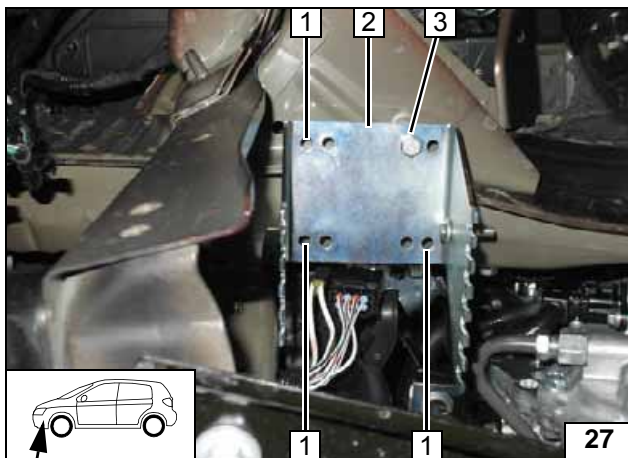
Preparing bracket



- 1 Drill out existing hole to 9mm dia., rivet nut



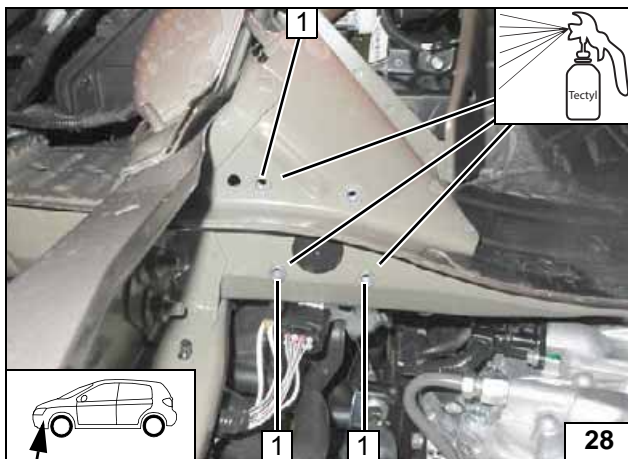
Copying hole pattern



Install bracket 2 loosely and align as shown.

- 1 Hole pattern [3x]
- 3 M6x50 bolt, 20mm shim, 5mm shim

Copying hole pattern

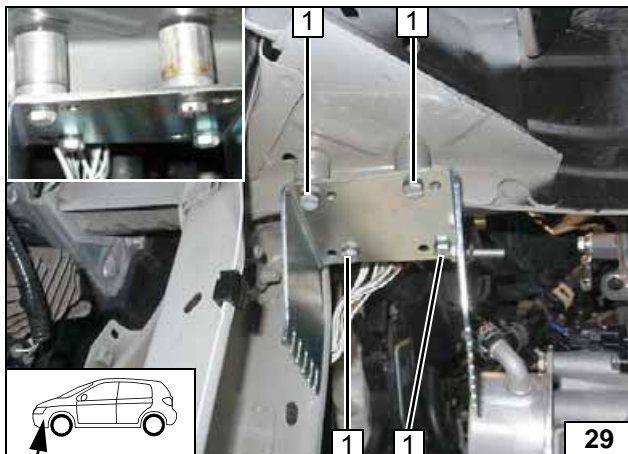


Remove bracket.

- 1 9mm dia. hole; rivet nut [3x each]

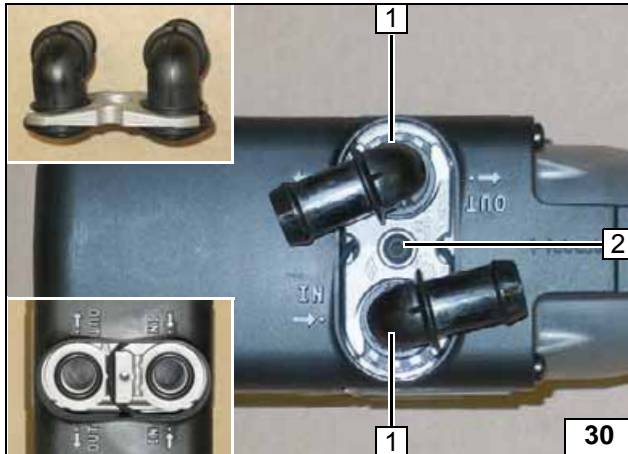
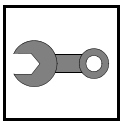


Installing rivet nut



- 1 M6x50 bolt, spring lockwasher, 5mm shim, 20mm shim [4x each]

Installing bracket

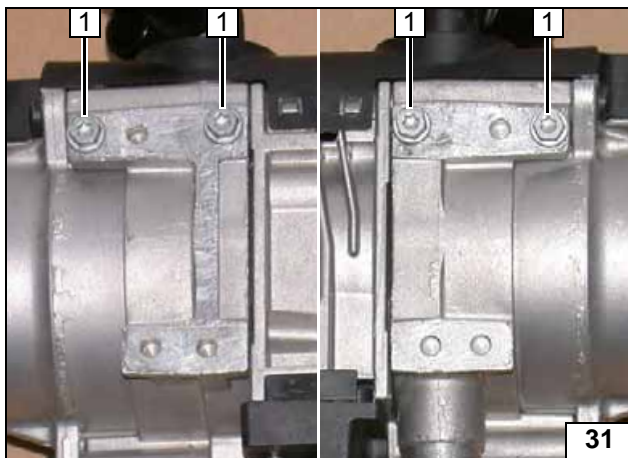


Preparing Heater

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



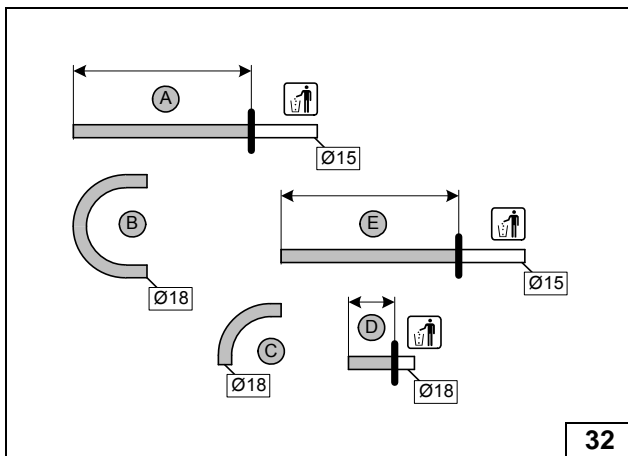
Installing water connection piece



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

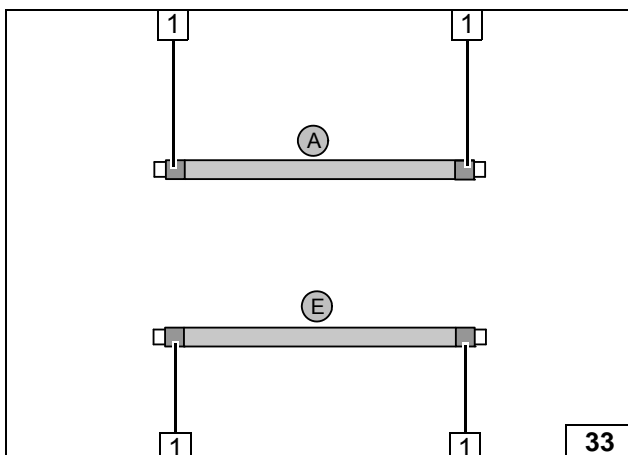


Premounting bolts loosely



	1.2 P	1.8 P hybrid
A	830	1000
D	60	60
E	900	1050

Cutting hoses to length

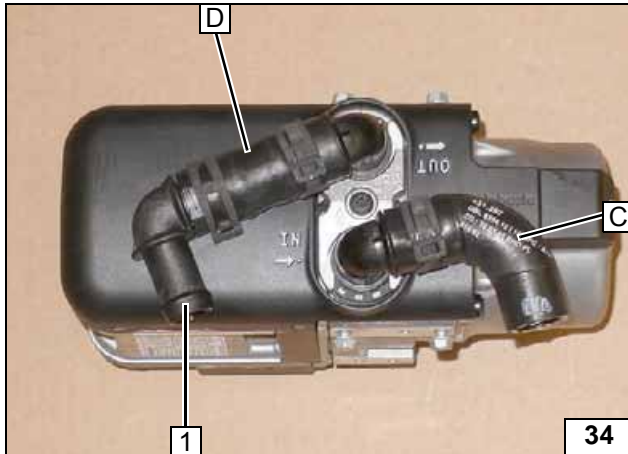
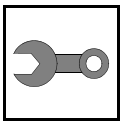


Push braided protection hoses onto hoses **A** and **E** and cut to length. Cut heat shrink plastic tubing to size.



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

Preparing hoses

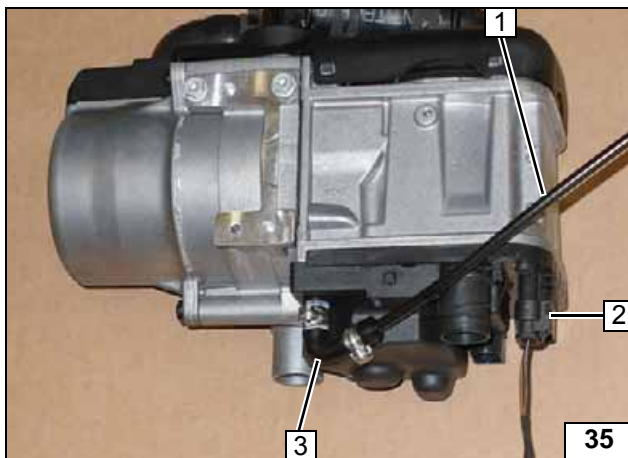


All spring clips = 25mm dia.!

- 1 90°, 18x18 mm dia. connecting pipe

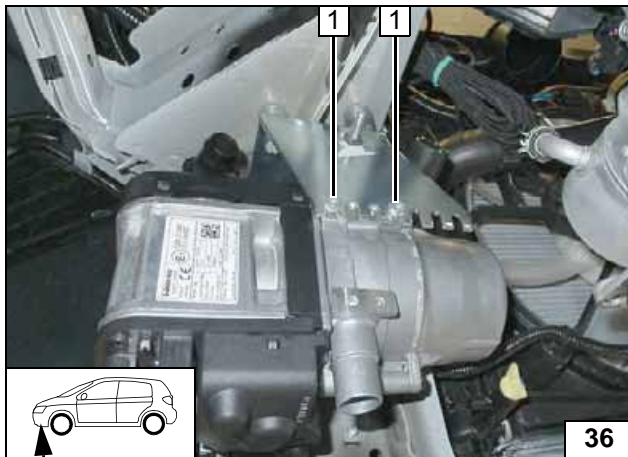


Premounting hoses



- 1 Fuel line
- 2 Connector of circulating pump wiring harness
- 3 Hose section, 10 mm dia. clamp [2x]

Premounting fuel line

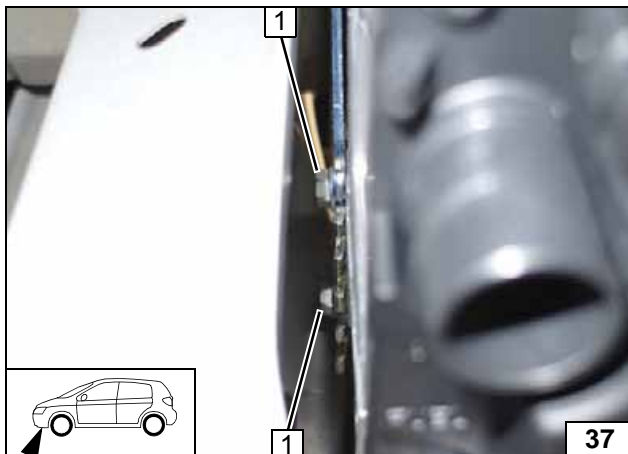


Installing Heater

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

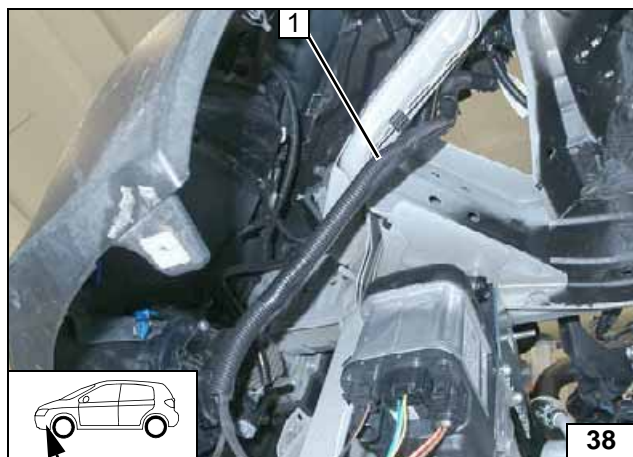


Installing heater



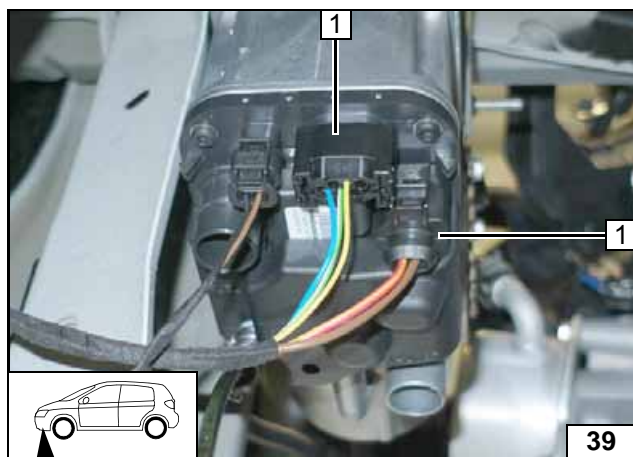
- 1 5x13 self-tapping bolt [2x]

Installing heater



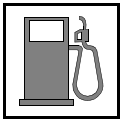
- 1 Heater wiring harness in 13mm dia. (700mm long) corrugated tube

Routing wiring harness of heater



- 1 Heater wiring harness connector [2x]

Installing heater wiring harness



Fuel



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

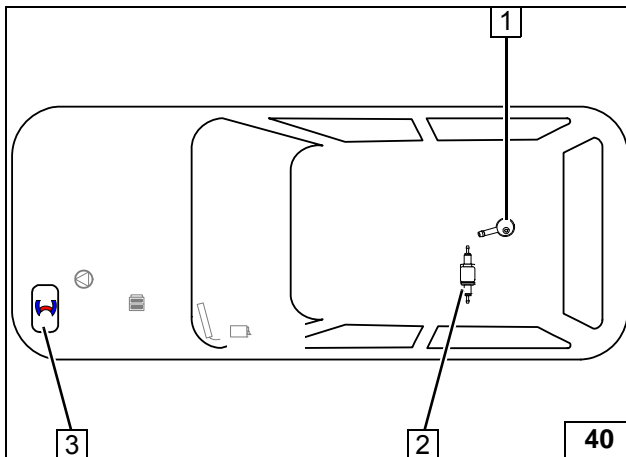
Catch any fuel running off in an appropriate container.

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



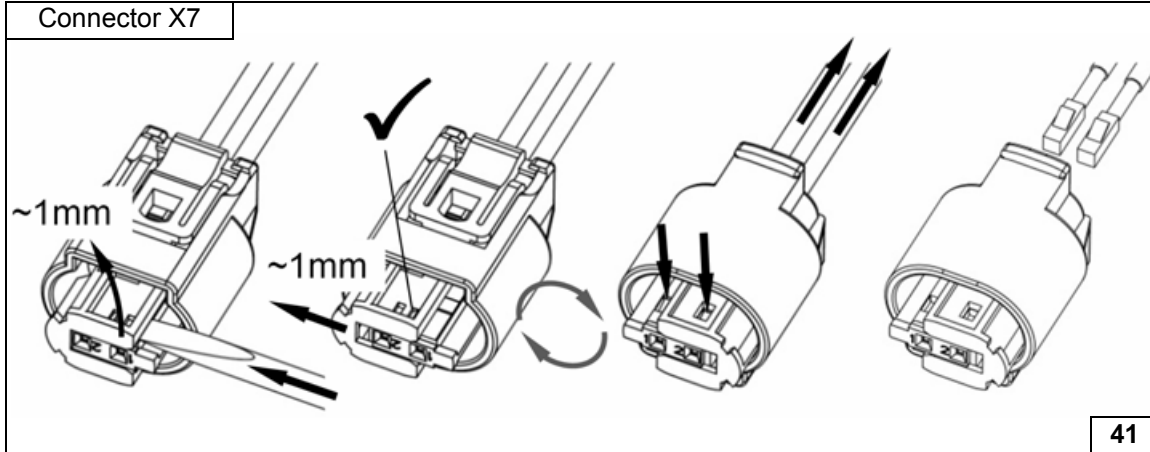
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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

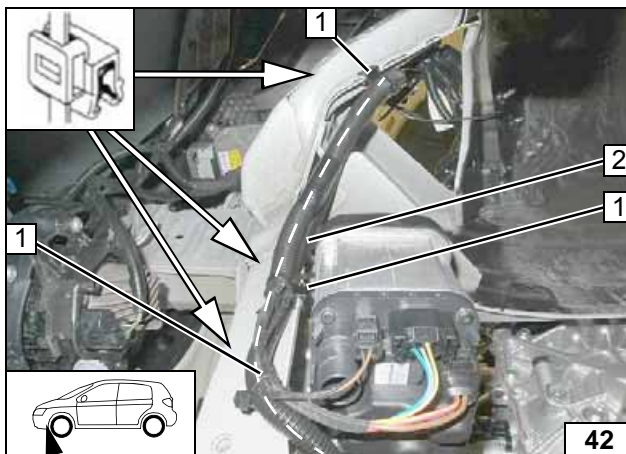


- 1 FuelFix
- 2 Metering pump
- 3 Heater

Installation overview



Dismantling metering pump connector

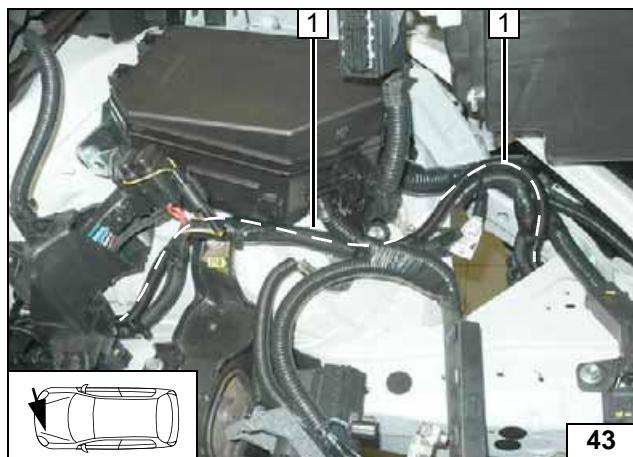


Draw fuel line and metering pump wiring harness into 10mm dia. corrugated tube 2, route in engine compartment and attach together with heater wiring harness.

- 1 Edge clip cable tie [3x]

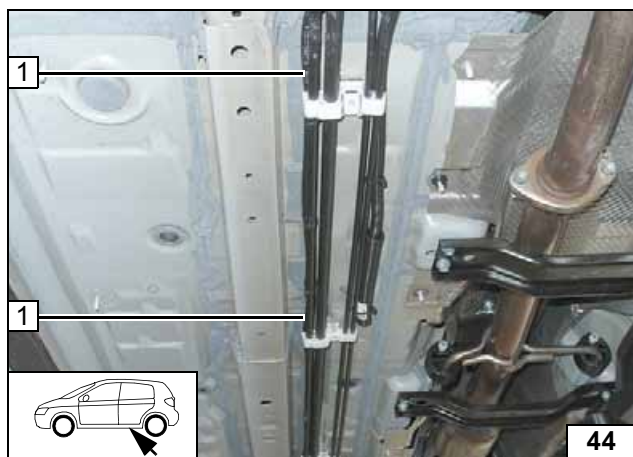
Routing lines





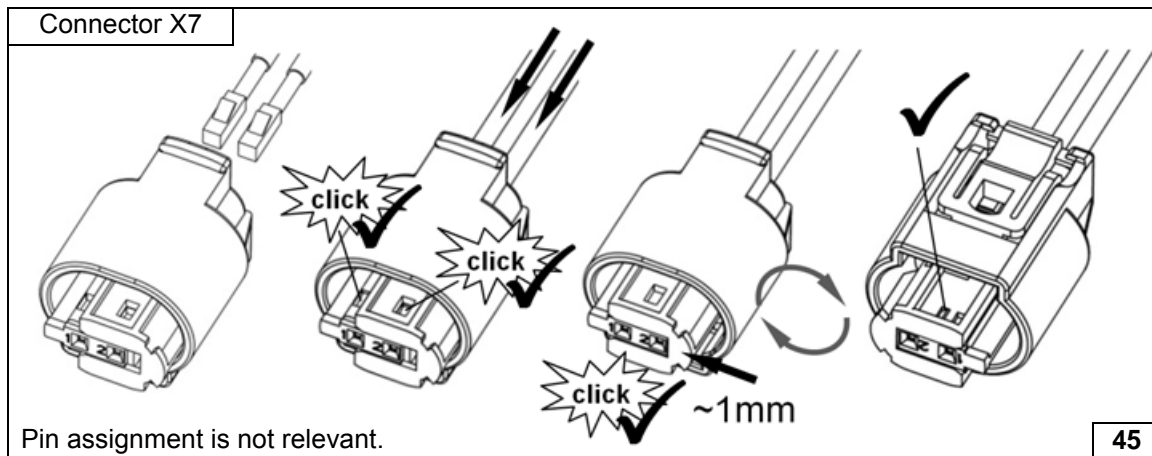
Route corrugated tube with fuel line and metering pump wiring harness 1 to the firewall and route along original vehicle fuel lines to the underbody.

Routing lines



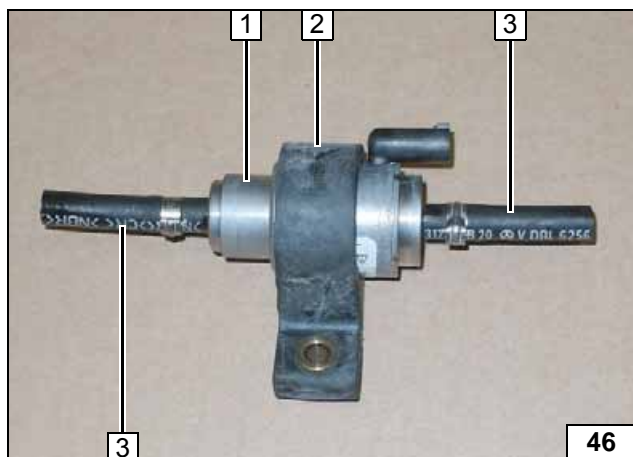
Route corrugated tube with fuel line and metering pump wiring harness 1 along original vehicle fuel lines to the installation location of the metering pump.

Routing lines



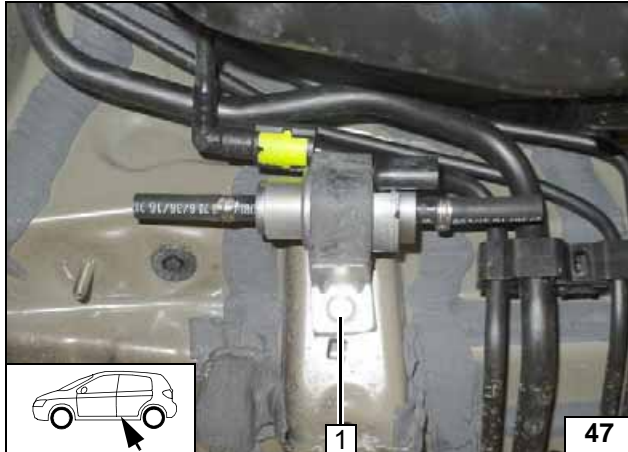
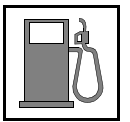
Pin assignment is not relevant.

Completing metering pump connector



- 1 Metering pump
- 2 Metering pump mount
- 3 Hose section, 10 mm dia. clamp [2x each]

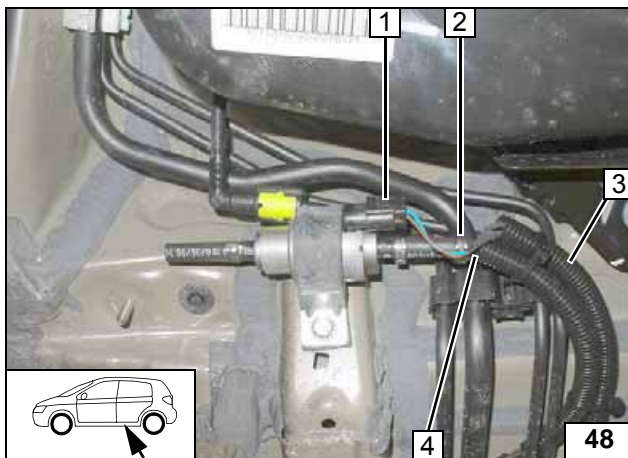
Premounting metering pump



- 1 M6x25 bolt, original vehicle thread



Installing metering pump

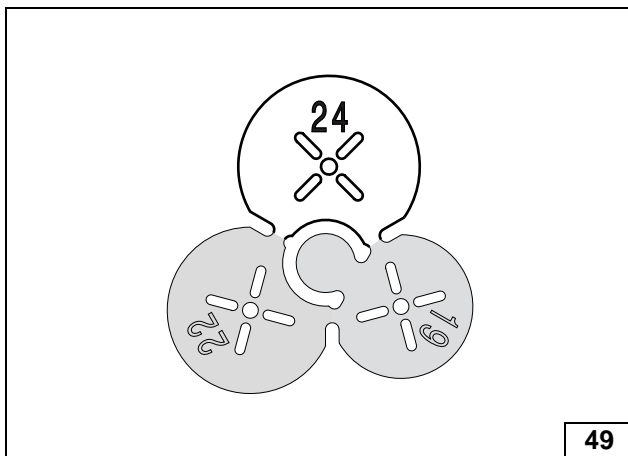


Ensure sufficient distance from neighbouring components, correct if necessary.



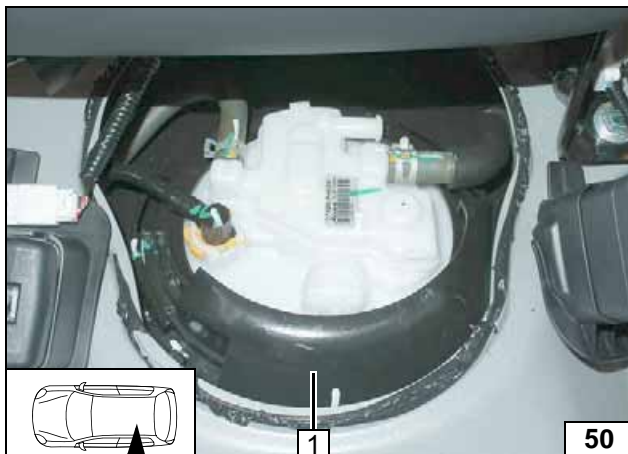
- 1 Metering pump wiring harness, connector X7 mounted
- 2 10 mm dia. clamp
- 3 Rest of metering pump wiring harness in 16mm dia. (200mm long) corrugated tube
- 4 Fuel line

Connecting metering pump



Installing FuelFix

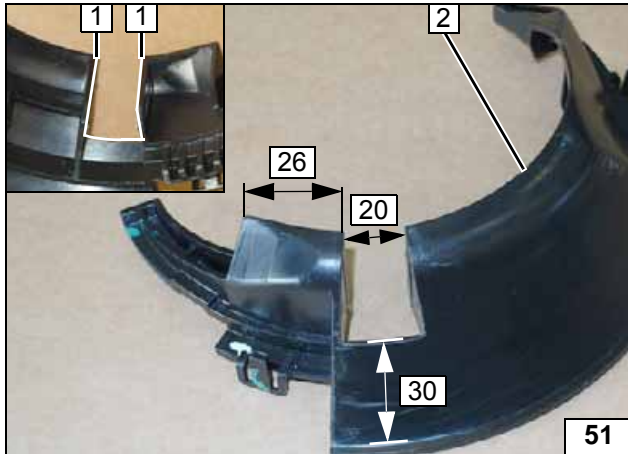
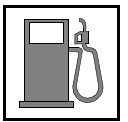
View of drilling template



1.2 petrol 2WD

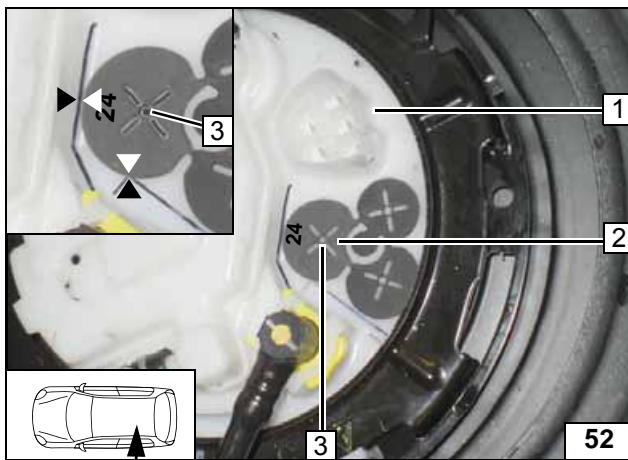
- 1 Twist protection

Removing twist protection



Cut out twist protection 2 along the raised parts 1 as shown.

Cutting out twist protection



All 1.2 petrol vehicles

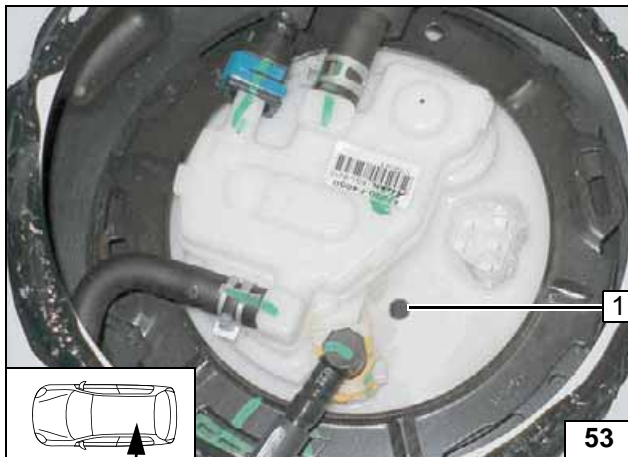
Figures show a 1.2 petrol 4WD vehicle unless otherwise specified.



Work steps F1 and F2.

Copying hole pattern

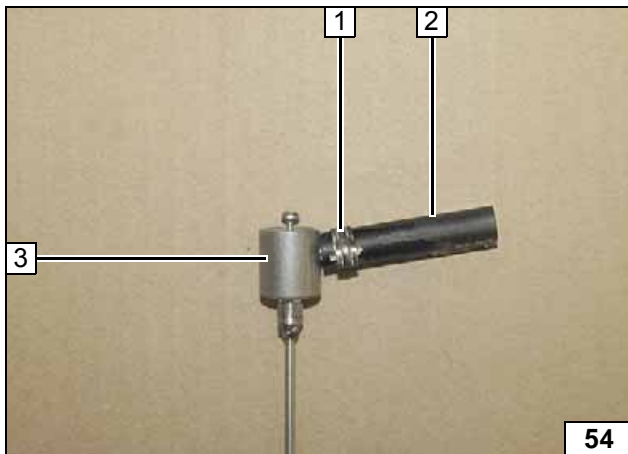
- 1 Fuel tank sending unit
- 2 Position 24mm dia. drilling template as shown (use existing ridge as guide line)
- 3 Hole pattern



Work step F3.

- 1 Hole made with provided drill

Hole for FuelFix



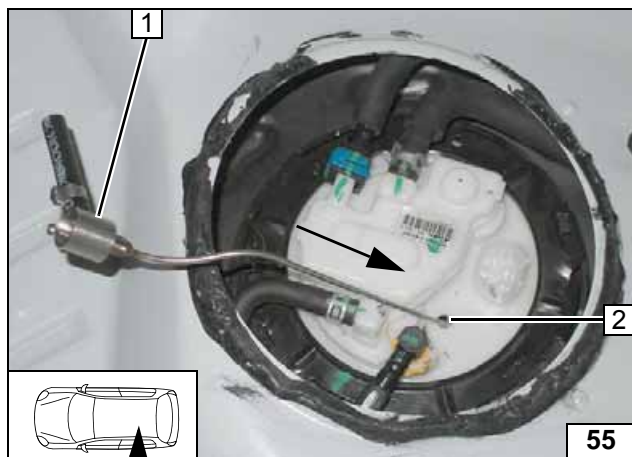
Work step F4.

Bend FuelFix 1 according to template and cut to length.

- 1 10 mm dia. clamp
- 2 Hose section
- 3 FuelFix



Installing hose section

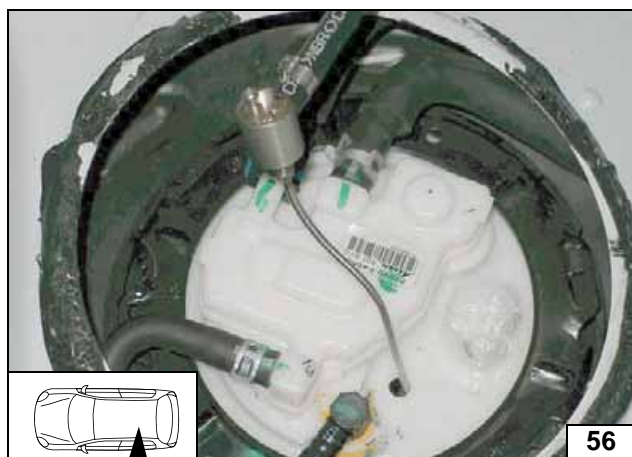


Work step F5.

Insert FuelFix 1 in hole 2.



Inserting FuelFix



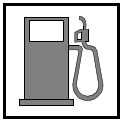
Inserting FuelFix



Inserting FuelFix



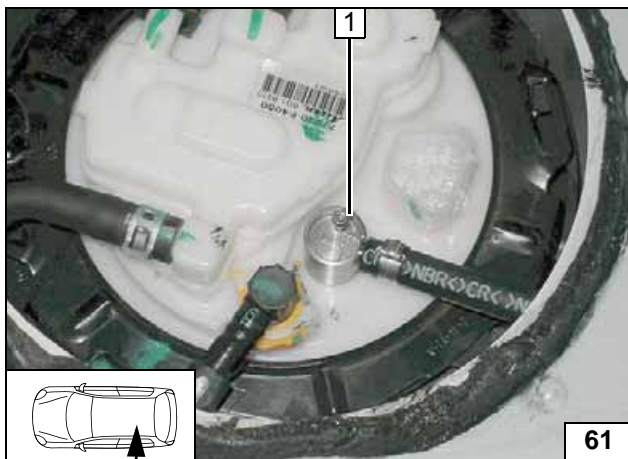
Inserting FuelFix



Inserting FuelFix



Inserting FuelFix

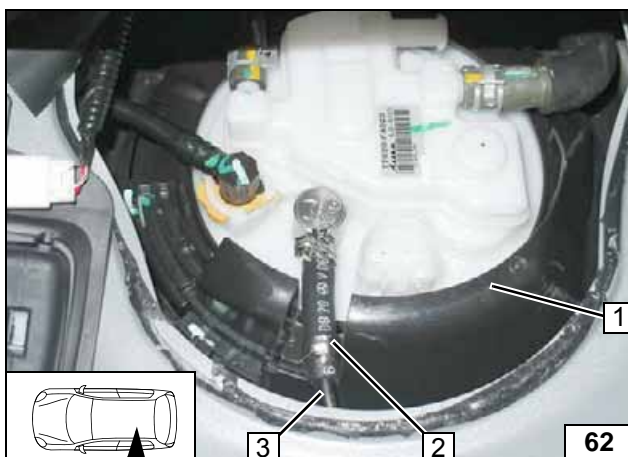


Work steps F5.3 and F5.4.

Align FuelFix 1 as shown.



Aligning FuelFix



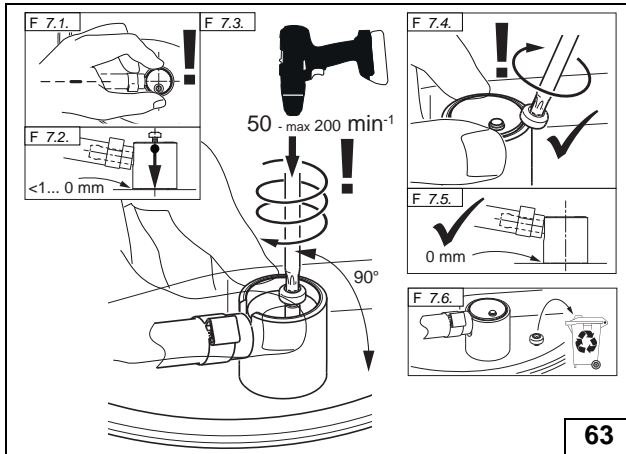
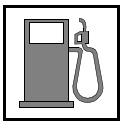
Work step F6.

Align FuelFix with the centre of the cut-out (2WD only).

- 1 Twist protection (2WD only)
- 2 10 mm dia. clamp
- 3 Fuel line



Installing twist protection / connecting fuel line



63

Work step F7.



Installing FuelFix

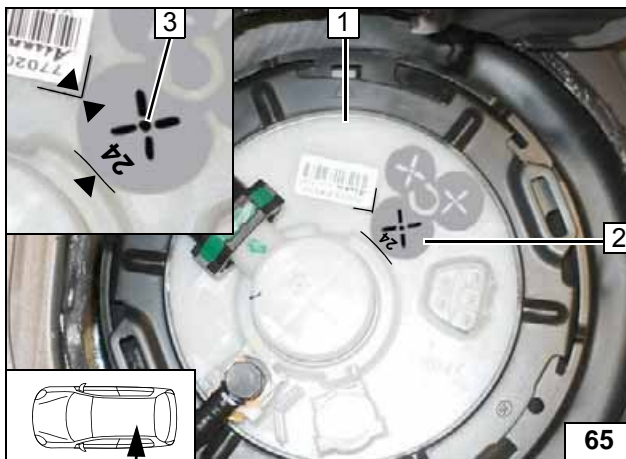


64

Work step F8.

Secure fuel line with a cable tie in a suitable location for tension relief.

Ensuring firm seating of FuelFix / securing fuel line



65

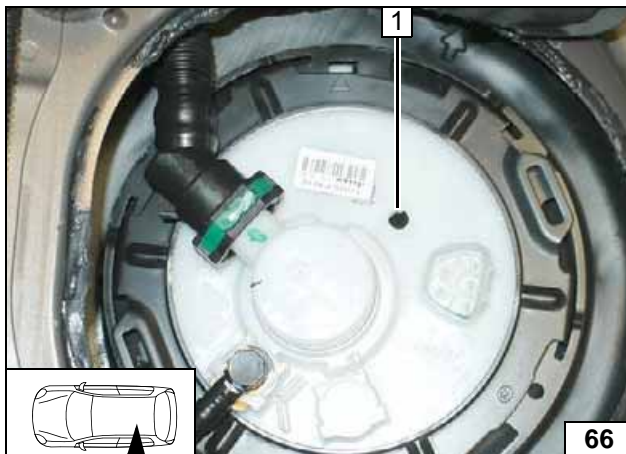
1.8 Petrol hybrid

Work steps F1 and F2.

- 1 Fuel tank sending unit
- 2 Position 24mm dia. drilling template as shown (use existing ridge as guide line)
- 3 Copy hole pattern



Copying hole pattern

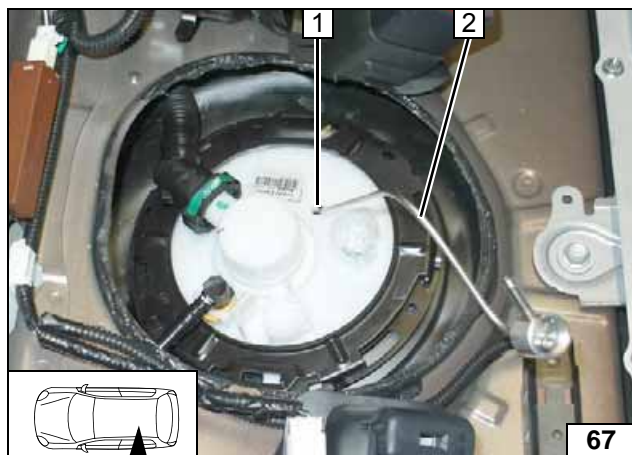


66

Work step F3.

- 1 Hole made with provided drill

Hole for FuelFix



Work steps F4 and F5.

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



Inserting FuelFix



Work step F5.

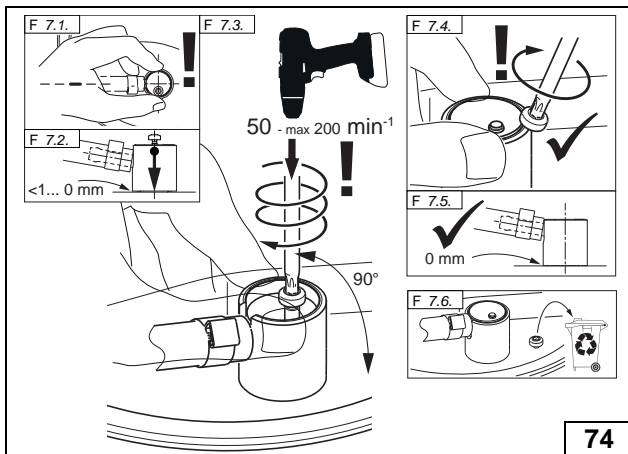
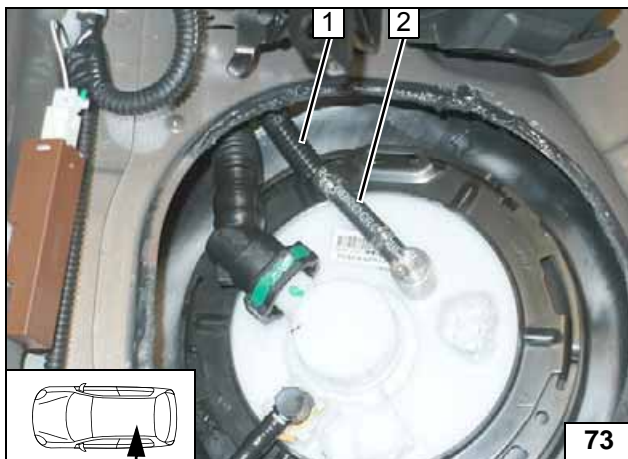
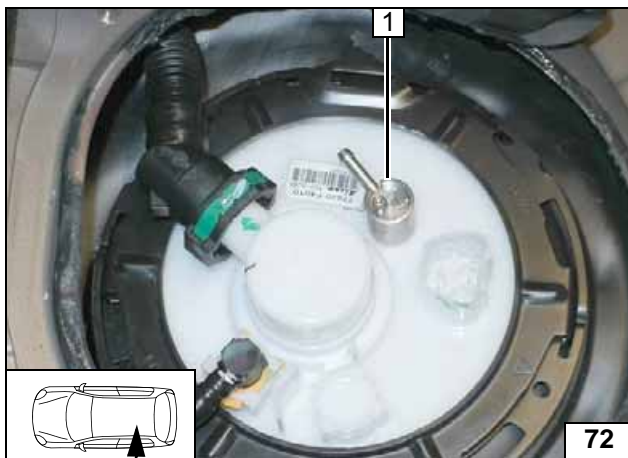
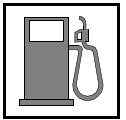
Inserting FuelFix



Inserting FuelFix



Inserting FuelFix



Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix 1 as shown.

Aligning FuelFix

Work step F6.

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

Connecting fuel line



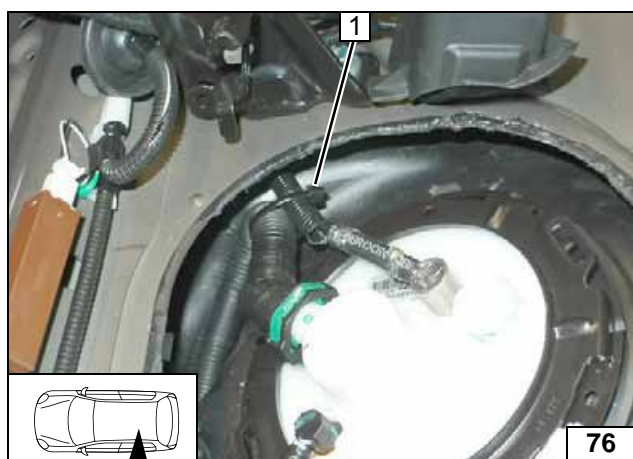
Work step F7.

Installing FuelFix



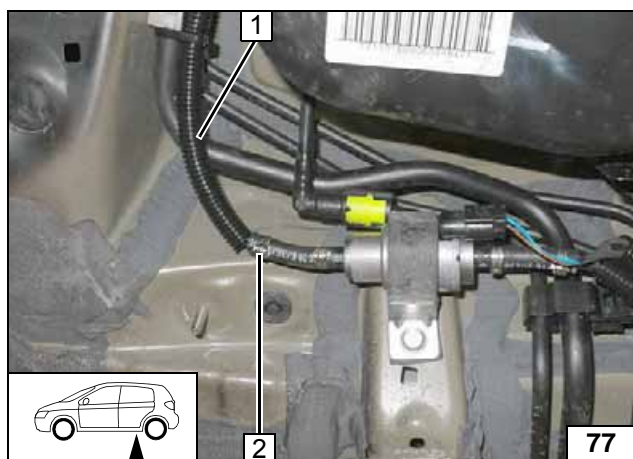
Work step F8.

Ensuring firm seating of FuelFix



1 Cable tie as tension relief

Securing fuel line



All vehicles

Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Fuel line in corrugated tube
- 2 10 mm dia. clamp



Connecting metering pump



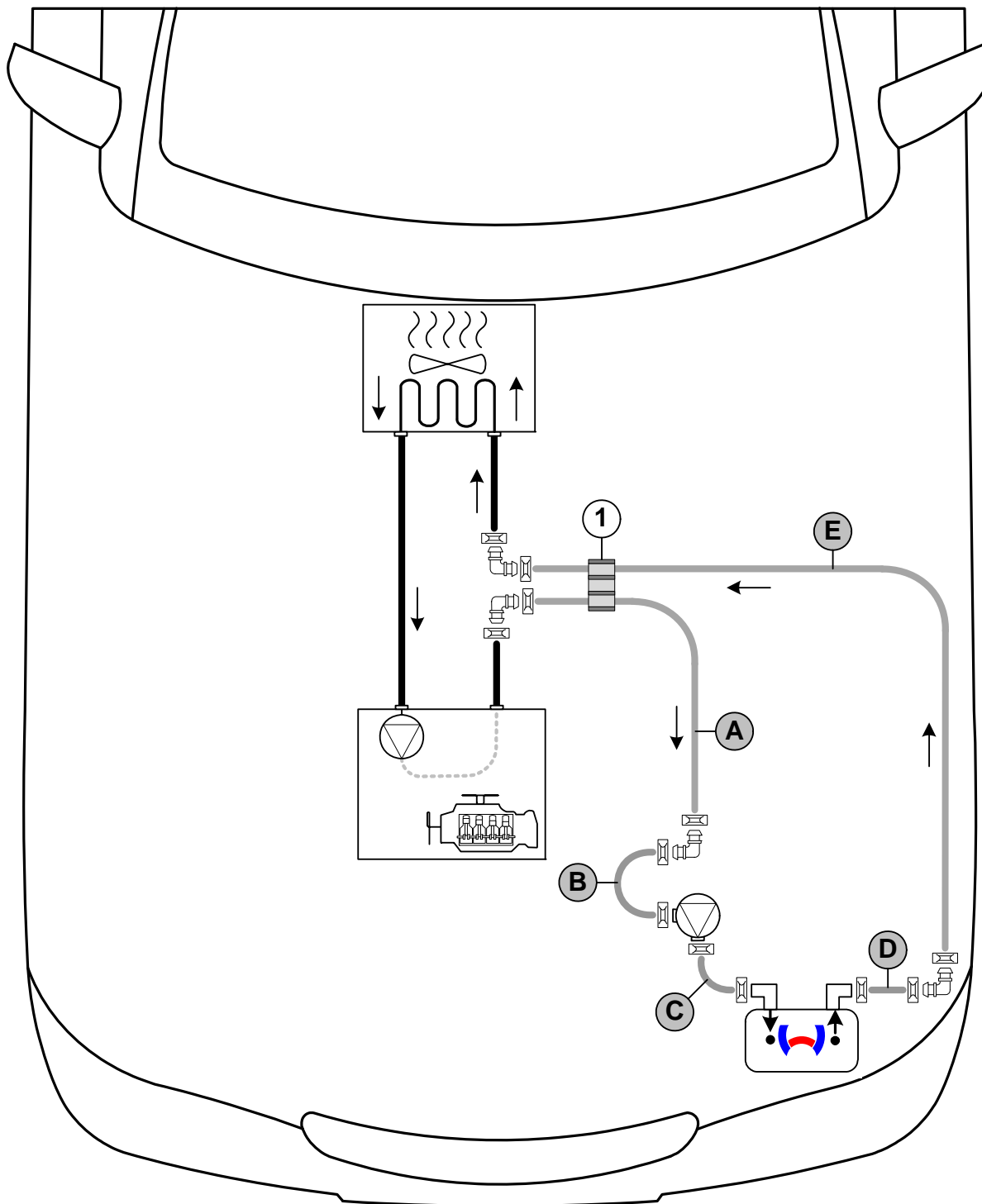
Coolant Circuit







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.



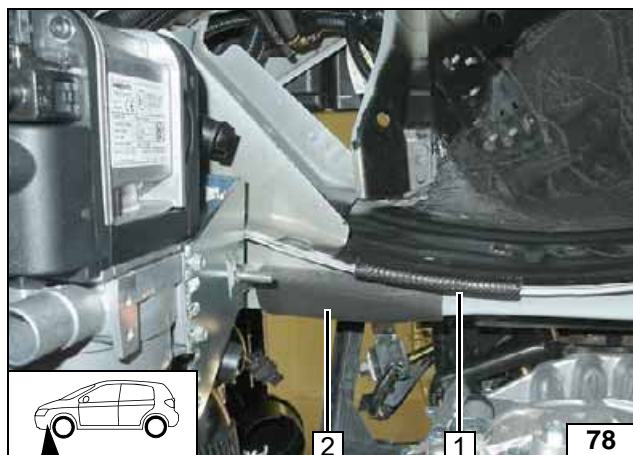
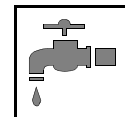
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

All spring clips  = 25 mm dia. All connecting pipes  and  = 18x18 mm dia.
 1 = Black (sw) rubber isolator  turned.

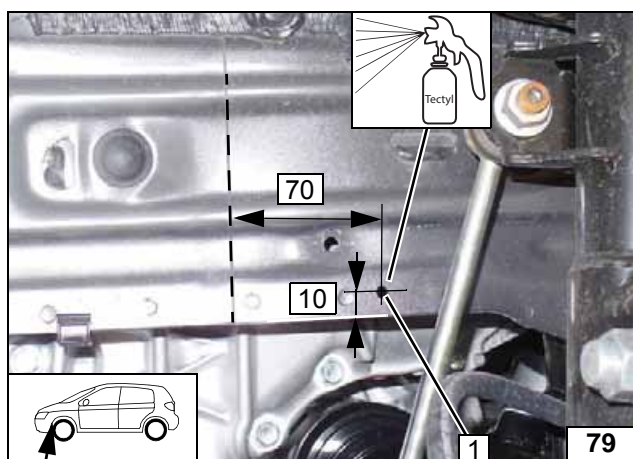




Preparing Water Hose Routing

- 1 100mm long edge protection section
- 2 Self-adhesive foam

Installing rub and rattle protection



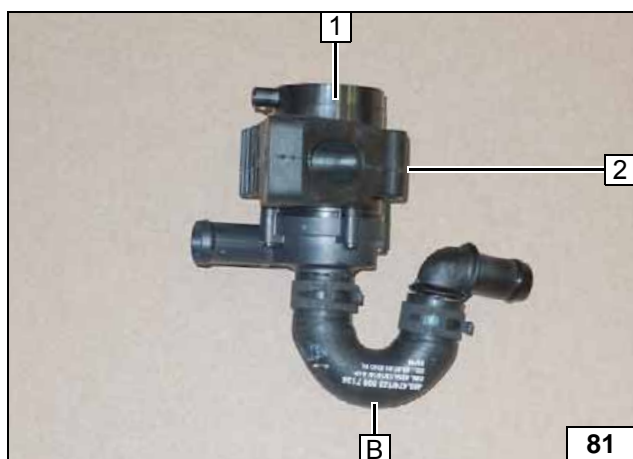
- 1 7 mm dia. hole

Drilling hole



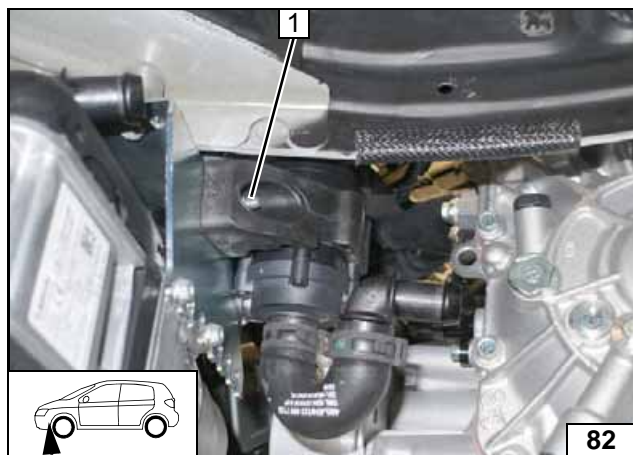
- 1 Angle bracket, M6x12 bolt, flanged nut

Installing angle bracket



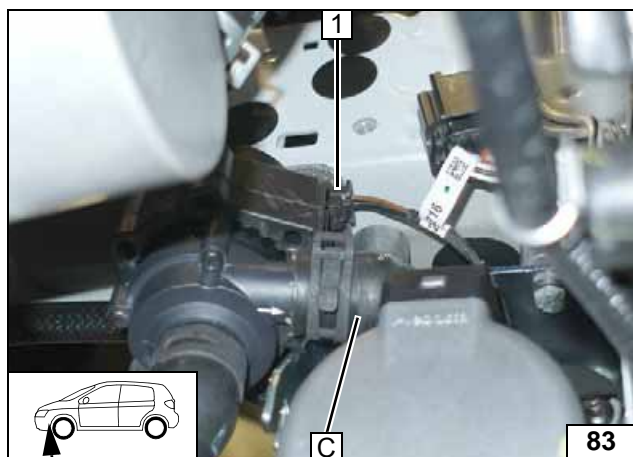
- 1 Circulating pump
- 2 Circulating pump mount

Preparing circulating pump



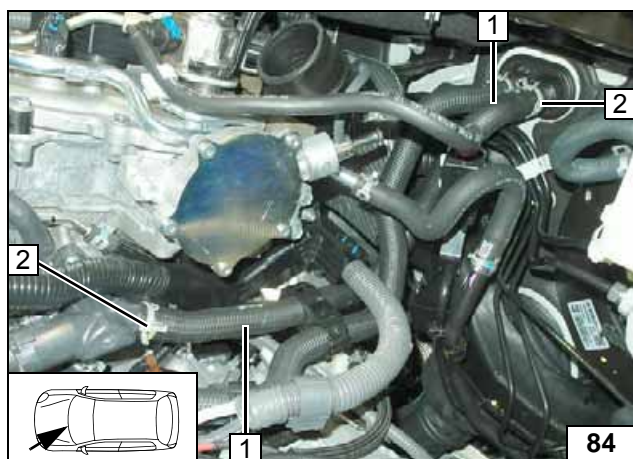
1 M6x25 bolt, flanged nut

Installing circulating pump



1 Connector of circulating pump wiring harness

Connect-ing hose C

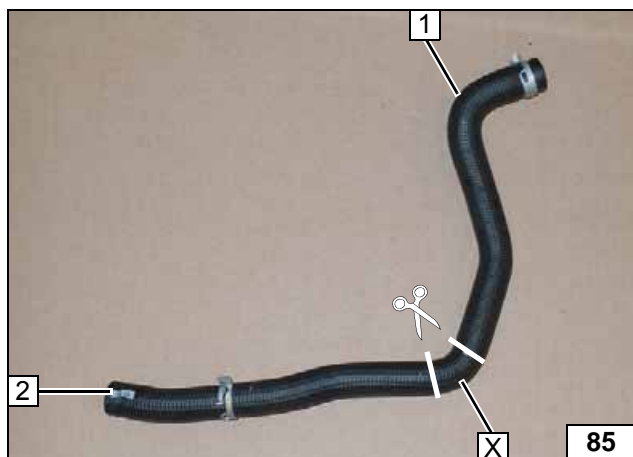


1.2 Petrol vehicles only

Remove hose on engine outlet / heat exchanger inlet 1. Original vehicle spring clip 2 [2x], will be reused.



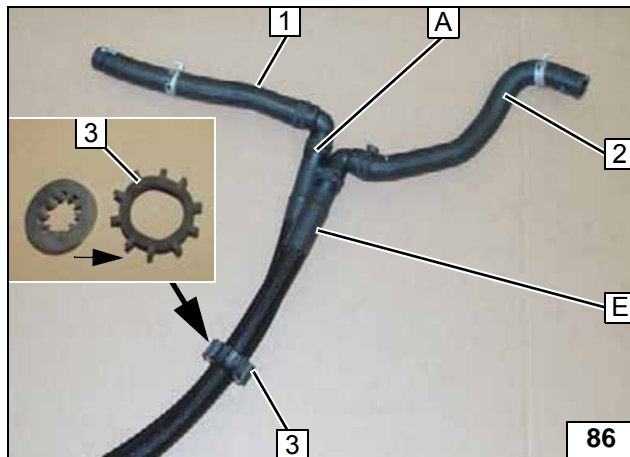
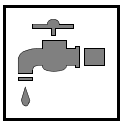
Cutting point



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

X =

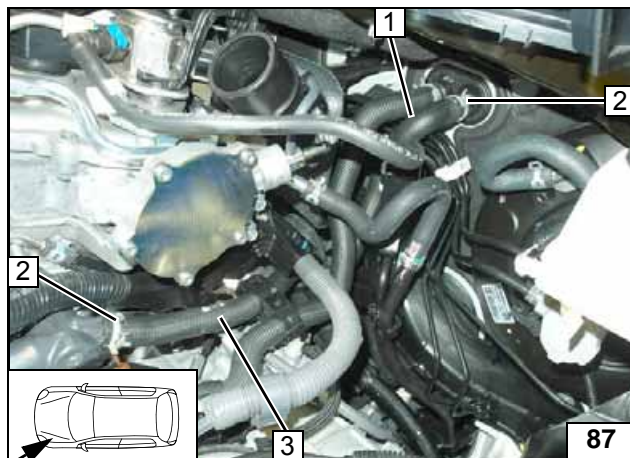
Cutting hose of engine outlet / heat exchanger inlet



Turn black (sw) rubber isolator **3** inside out and slide onto hoses **A** and **E**.

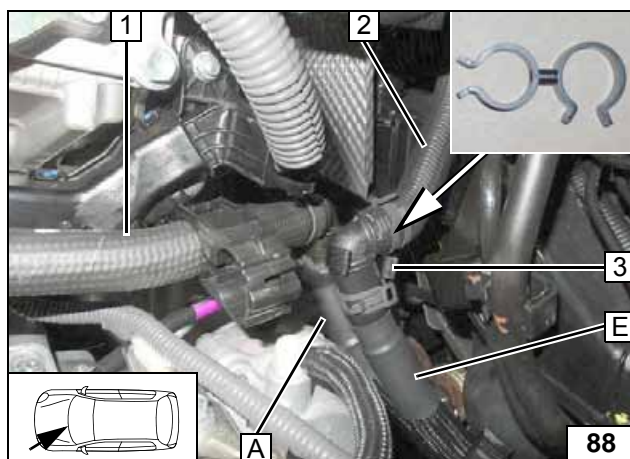
- 1 Engine outlet hose section
- 2 Hose section of heat exchanger inlet

Preparing engine outlet / heat exchanger inlet hose section



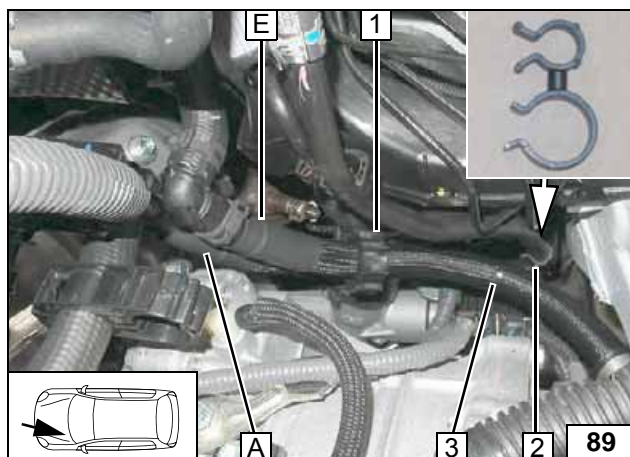
- 1 Hose section of heat exchanger inlet
- 2 Original vehicle spring clip [2x]
- 3 Engine outlet hose section

**Connect-
ing engine
outlet / heat
exchanger
inlet**



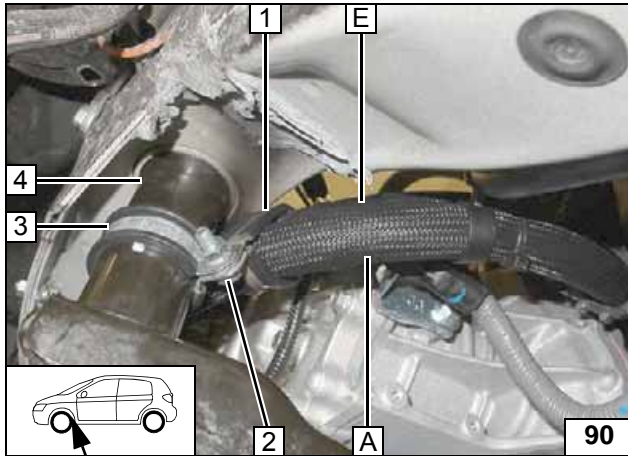
- 1 Engine outlet hose section
- 2 Hose section of heat exchanger inlet
- 3 22x25 hose bracket

**Routing in
engine
compartment**



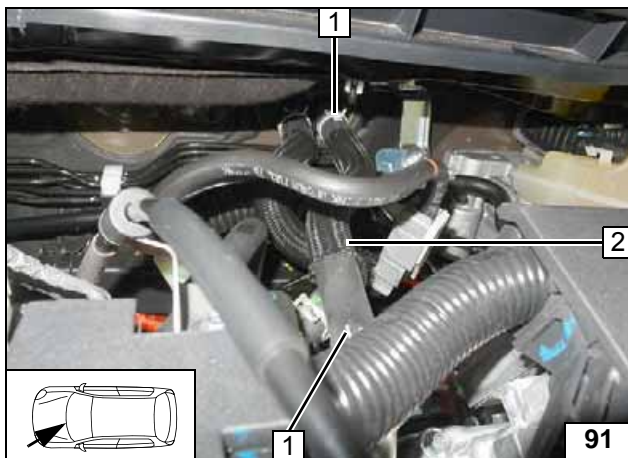
- 1 Black (sw) rubber isolator
- 2 13x22 hose bracket
- 3 Cable tie

**Routing in
engine
compartment**



- 1 38 mm dia. rubber-coated p-clamp
- 2 M6x20 bolt, flanged nut
- 3 34 mm dia. rubber-coated p-clamp
- 4 Original vehicle frame

Routing in engine compartment

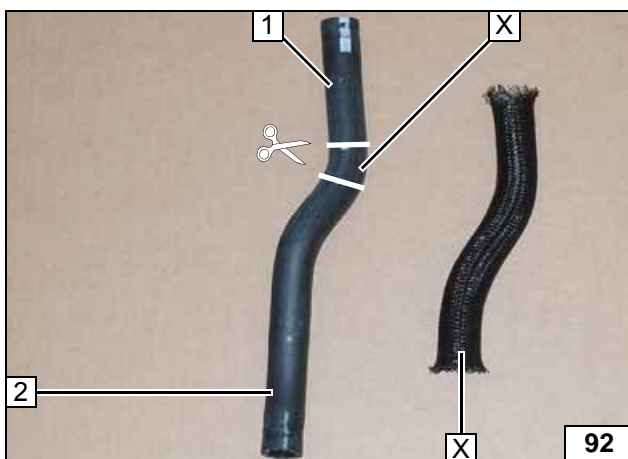


1.8 Petrol hybrid vehicles only

Remove hose on engine outlet / heat exchanger inlet 2.
Original vehicle spring clip 1 [2x], will be reused.



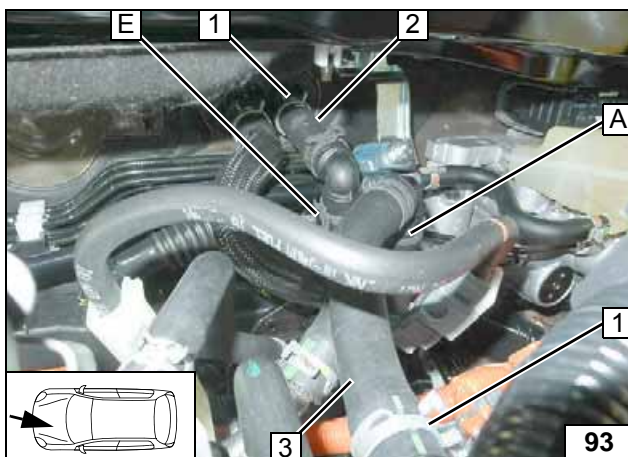
Cutting point



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

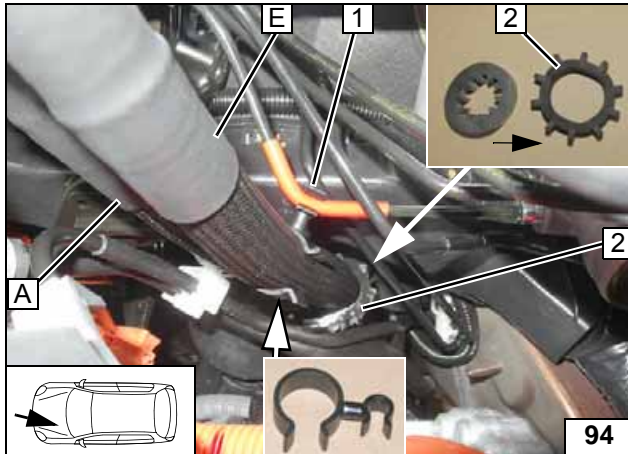
X =

Cutting hose of engine outlet / heat exchanger inlet



- 1 Original vehicle spring clip [2x]
- 2 Hose section of heat exchanger inlet
- 3 Engine outlet hose section

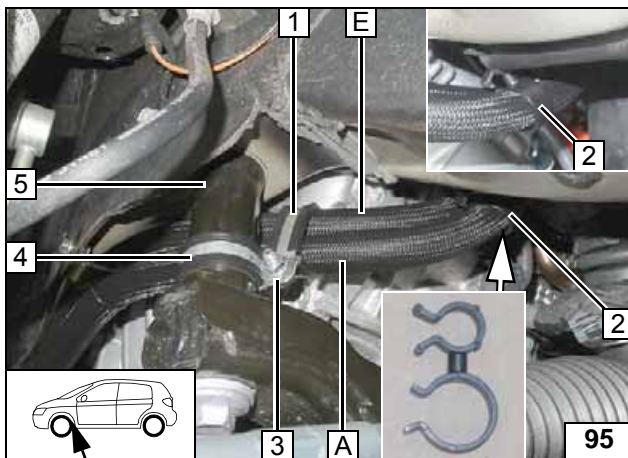
Connecting engine outlet / heat exchanger inlet



Turn black (sw) rubber isolator **2** inside out and slide onto hoses **A** and **E**.

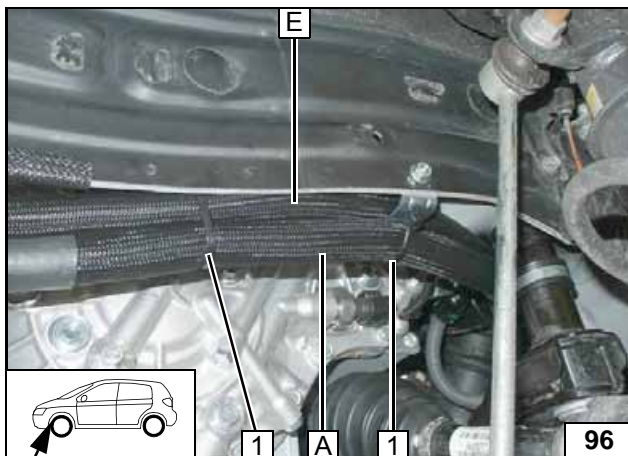
- 1 8x22 mm hose bracket

Routing in engine compartment



- 1 38 mm dia. rubber-coated p-clamp
- 2 13x22 hose bracket
- 3 M6x20 bolt, flanged nut
- 4 34mm dia. rubber-coated p-clamp
- 5 Original vehicle frame

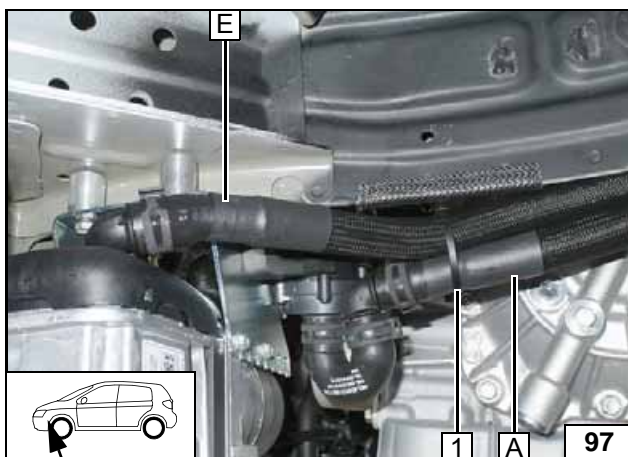
Routing in engine compartment



All vehicles

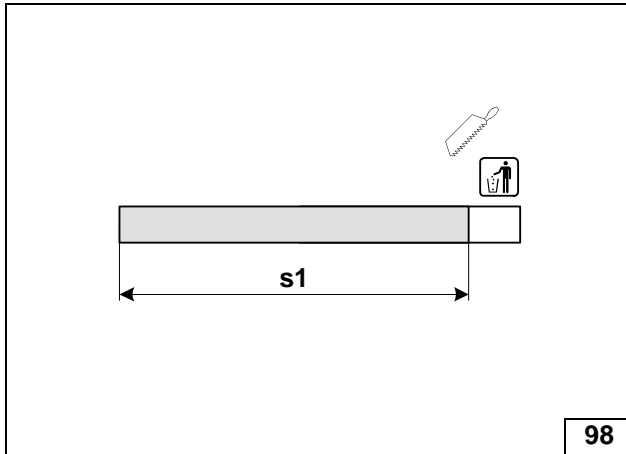
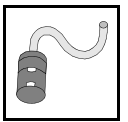
- 1 Cable tie [2x]

Routing in engine compartment



- 1 Cable tie

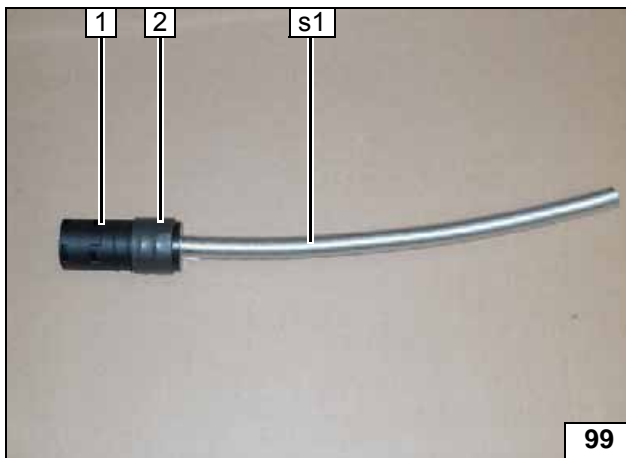
Connecting heater



Combustion Air

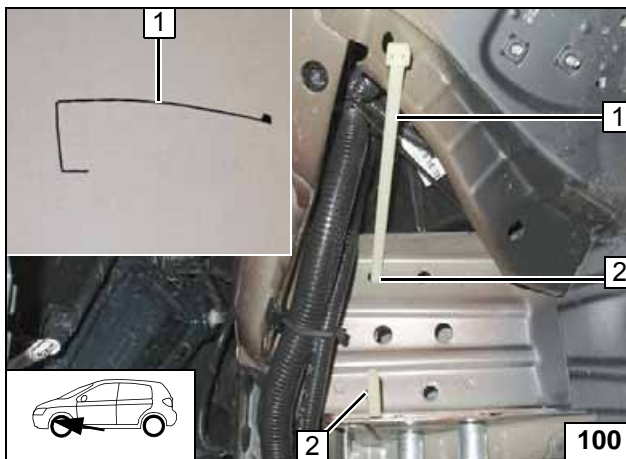
s1 = 350

Cutting combustion air pipe to length



- 1 Silencer
- 2 Self-adhesive foam

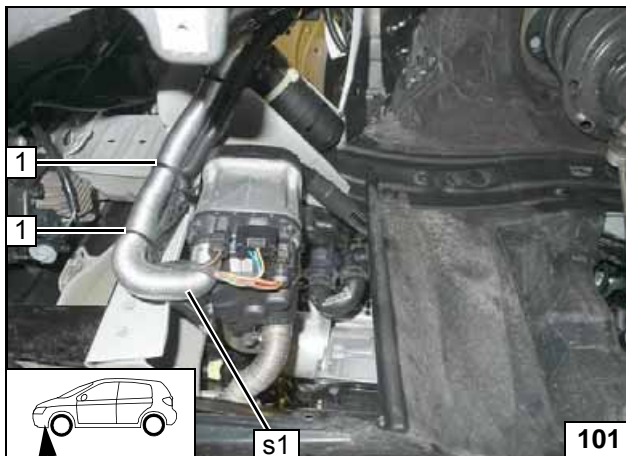
Premounting silencer



Bend cable tie 1 as shown and insert in hole 2 [2x].



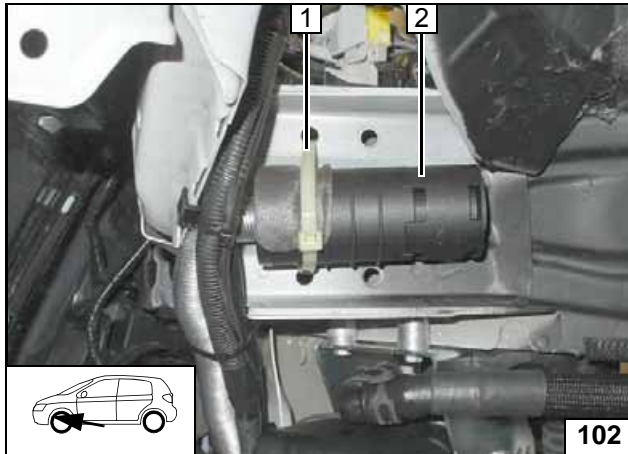
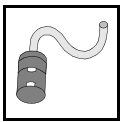
Premounting cable tie



- 1 Cable tie [2x]



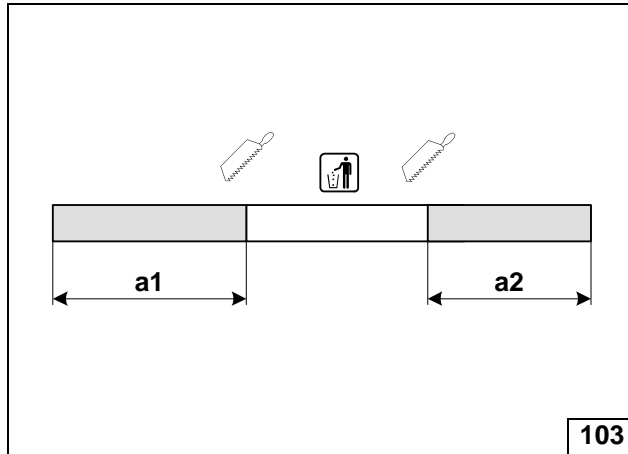
Installing combustion air pipe s1



- 1 Cable tie
- 2 Silencer



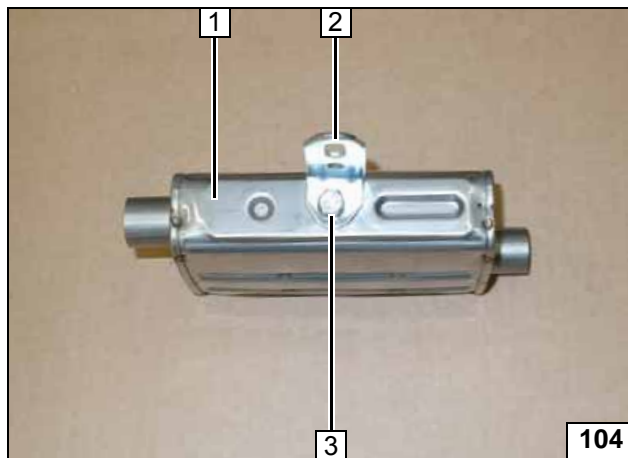
**Installing
silencer**



Exhaust Gas

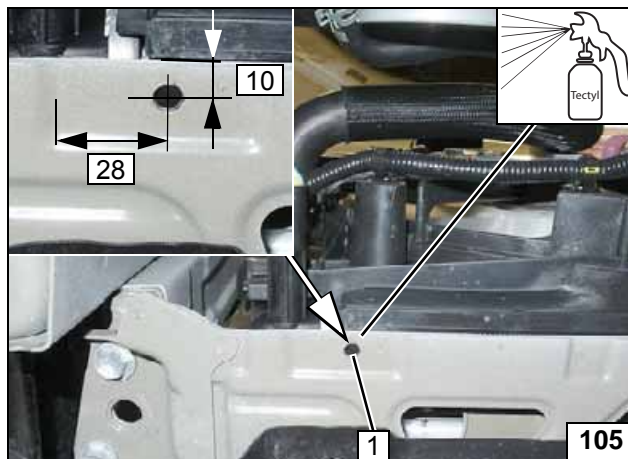
a1 = 150
a2 = 150

Preparing exhaust pipe



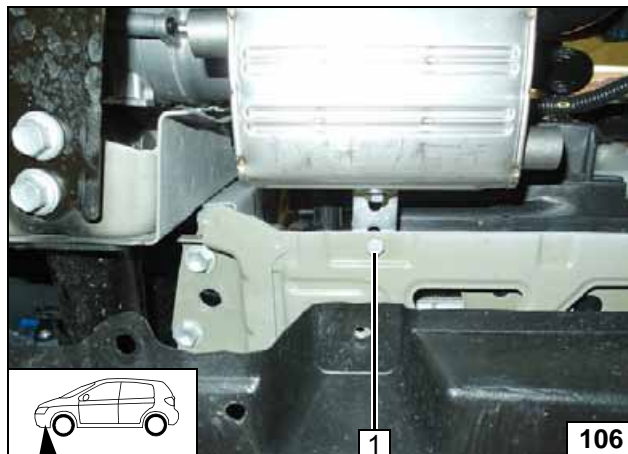
- 1 Silencer
- 2 Angle bracket
- 3 M6x16 bolt, spring lockwasher

Premounting silencer



- 1 7 mm dia. hole

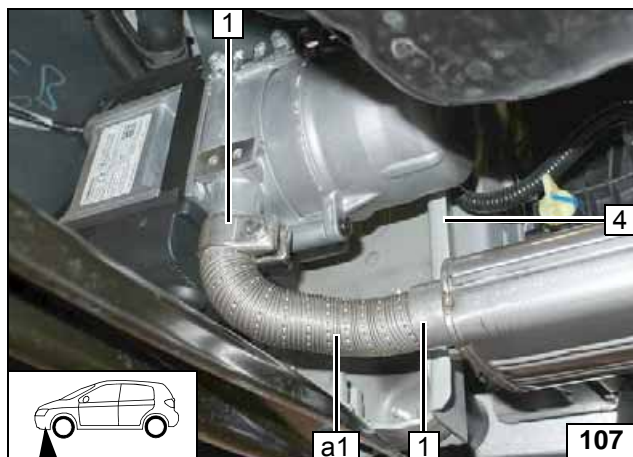
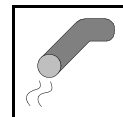
Copying hole pattern / drilling hole



- 1 M6x20 bolt, large diameter washer, flanged nut

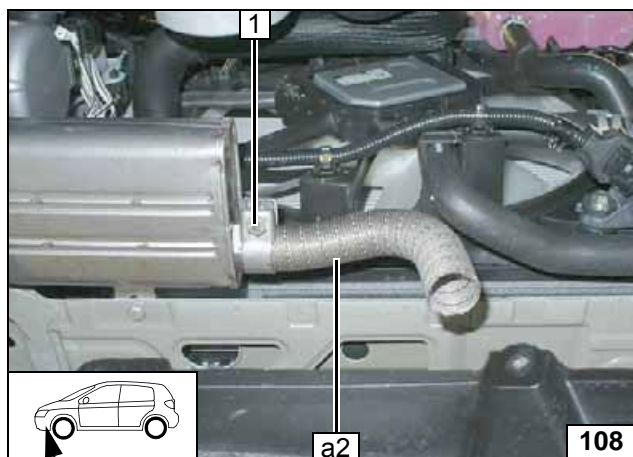


Installing silencer



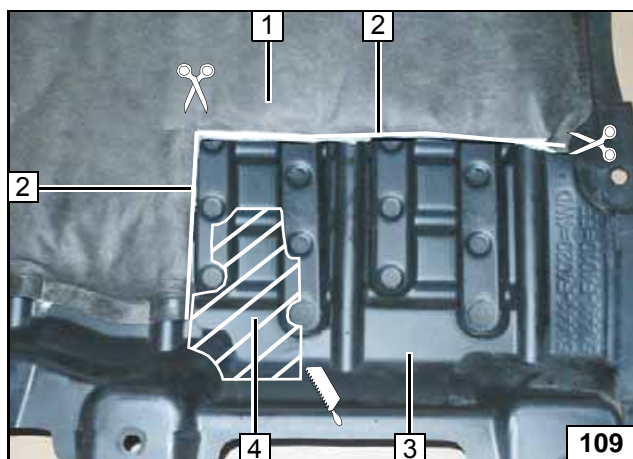
1 Hose clamp [2x]

Installing exhaust pipe a1



1 Hose clamp

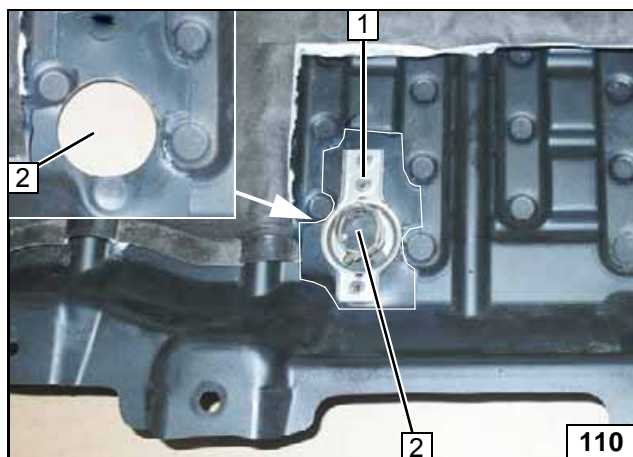
Installing exhaust pipe a2



Installing exhaust end fastener

Cut insulation 1 along line 2. Remove upper part 4 of double-walled under-ride protection 3 as shown (see also next figure).

Preparing under-ride protection



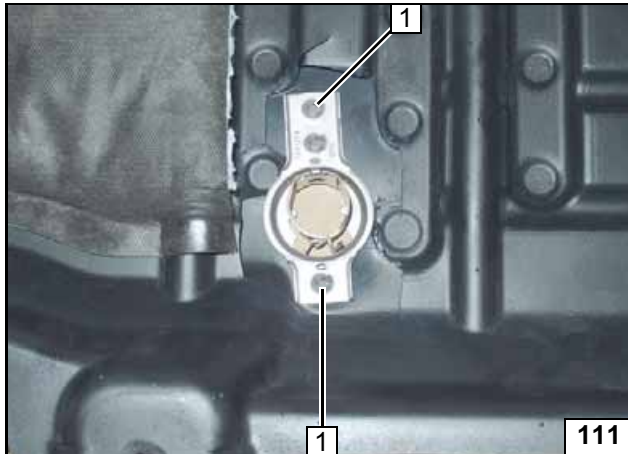
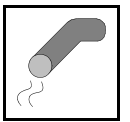
Work step E1.

Position exhaust end fastener 1 as shown.

2 Copy hole pattern, hole



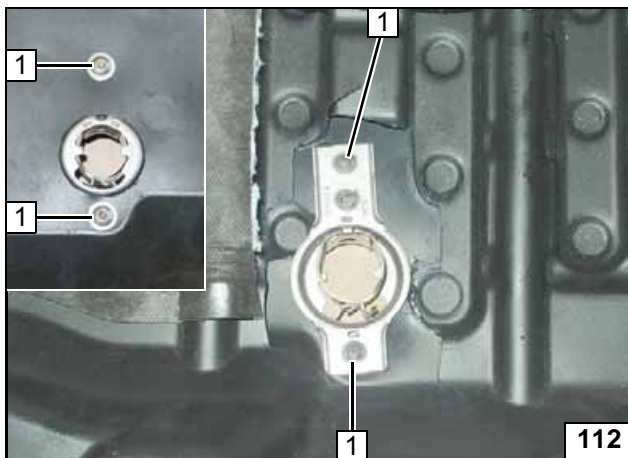
Hole in under-ride protection



Work steps E3 and E4.

- 1 Copy hole pattern, hole [2x each]

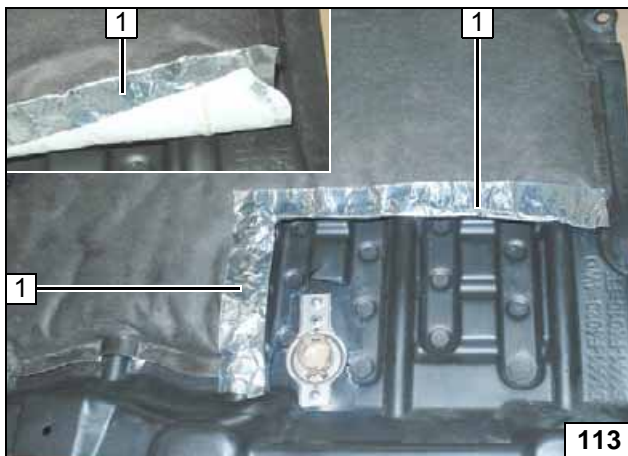
Holes in underride protection



Work step E5.

- 1 5x13 self-tapping screw, large diameter washer [2x each]

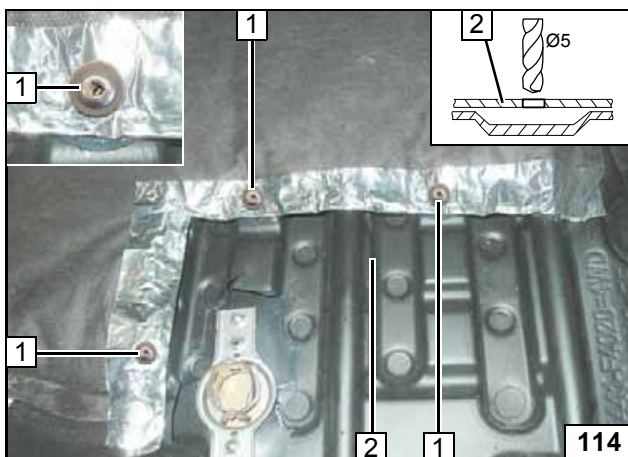
Installing exhaust end fastener



Stick heat protection film 1 [3x] around the entire cut edge of the insulation, on both sides as shown.



Sticking on heat protection film



1. Copy hole pattern [3x] at position 1 onto the insulation mat and top layer of the double-walled underride protection 2.

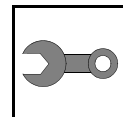
2. Fold the insulation mat up and drill a 5mm dia. hole only through the top layer of the underride protection.

3. Pierce the insulation mat (do not drill).

4. Fasten insulation mat with rivet and large diameter washer [3x each] 1.



Fixing insulation



Final Work



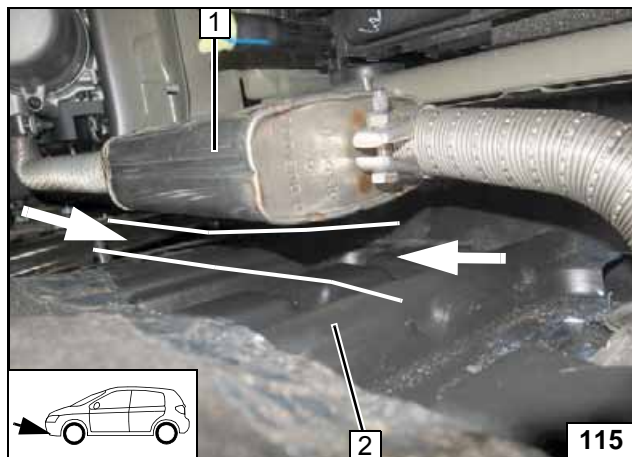
Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate loose wire ends and tie back.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).



Activation of hybrid system

The hybrid system should be re-activated prior to the connection of the 12V vehicle battery!

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

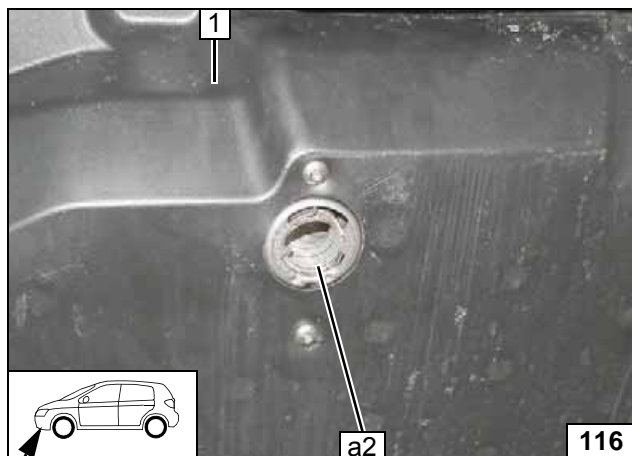


Install underride protection 2.
Ensure sufficient distance between exhaust silencer 1 and underride protection 2, correct if necessary.

≥ 20 mm



Checking distance



Work steps E6 - E8.

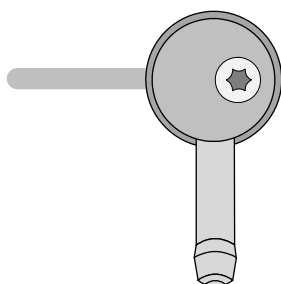


Installing exhaust pipe a2



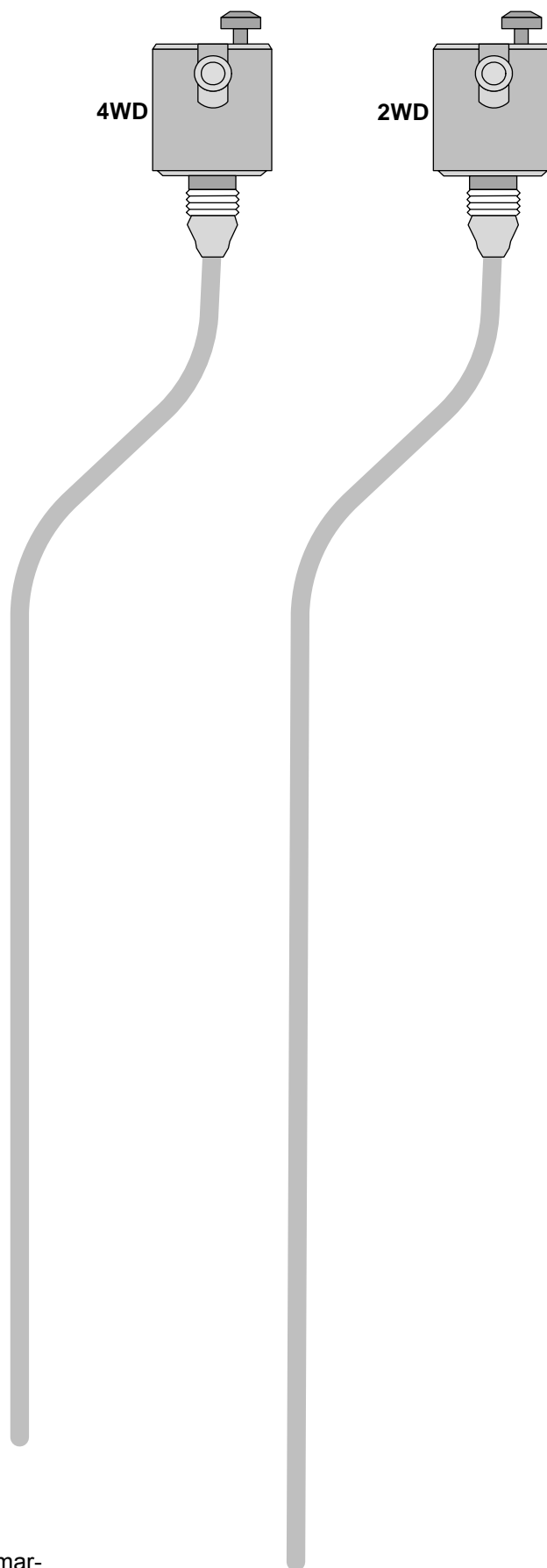
Template for 1.2 Petrol Vehicle FuelFix

Top view



4WD

2WD



100mm



Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

Set the printer settings to 'no margin' or 'minimise margins' and 100% of the normal size.

100mm

0



Template for 1.8 Petrol Hybrid Vehicle FuelFix

Top view

