Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

Installation Documentation
Mercedes E-Class BR 213

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Mercedes	E-Class	W213	from 2016	e1 * 2001 / 116 * 0501 * ...
Mercedes	E-Class	S213	from 2016	e1 * 2007 / 46 * 1560 * ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm^3	Engine code
E 200	Petrol	Euro 6	ASG	135	1991	OM274
E 220d	Diesel	Euro 6	ASG	143	1950	OM654
E 350d	Diesel	Euro 6	ASG	190	2987	OM642

ASG = automatic transmission 9G-Tronic

Left-hand drive vehicle

Verified equipment variants: 2-zone THERMATIC
2-3-zone THERMOTRONIC
LED headlight
Start / Stop
Passenger compartment monitoring

Not verified: Headlight washer system

Total installation time: Approx. 10.0 hours in case of petrol vehicles
Approx. 8.5 hours in case of diesel vehicles

Mercedes E-Class BR 213

Table of Contents

Necessary Components

Description	Order No.:
Basic delivery scope of Thermo Top Evo	In accordance with price list
Installation set for Mercedes E-Class BR 213 2016 petrol (Consisting of installation kit, additional 'Webasto Comfort' automatic A/C kit and additional cold start kit for MB)	1325497B
Installation set for Mercedes E-Class BR 213 2016 diesel (Consisting of installation kit and additional 'Webasto Comfort' automatic A/C kit)	1325503B
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	In accordance with price list

Webasto Individual Option

Description	Order No.:
Additional Webasto Individual Auxiliary Heating kit	1320077_
Additional Webasto Individual Quick kit	9030826_
Additional Webasto Individual Select 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 must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

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

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

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

2 Statutory regulations governing installation

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

Note

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Important

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

Note

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

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

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

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

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

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

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

2.2. Positioning of heater

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

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

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

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

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

2.3. Fuel supply

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

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

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

2.4. Exhaust system

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

2.5. Combustion air inlet

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

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

2.6. Heating air inlet

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

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

2.7. Heating air outlet

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

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

End of excerpt.

In multilingual versions the German language is binding.

Information on Validity

This installation documentation applies to Mercedes E-Class BR 213 Petrol and diesel vehicles - for validity, see page 1 - from model year 2016 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
- Hose clamping pliers
- Automatic wire stripper, 0.2 - 6mm²
- Crimping pliers for tab connector, 0.14 - 6mm²
- Crimping pliers for cable lug, 0.5 - 10mm²
- Crimping pliers for connector, 0.25 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- 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:

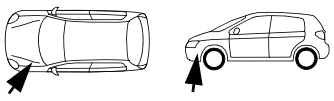
Specific risk of damage to components.

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 FuelF-ix).

Reference to general installation instructions of Webasto components.

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

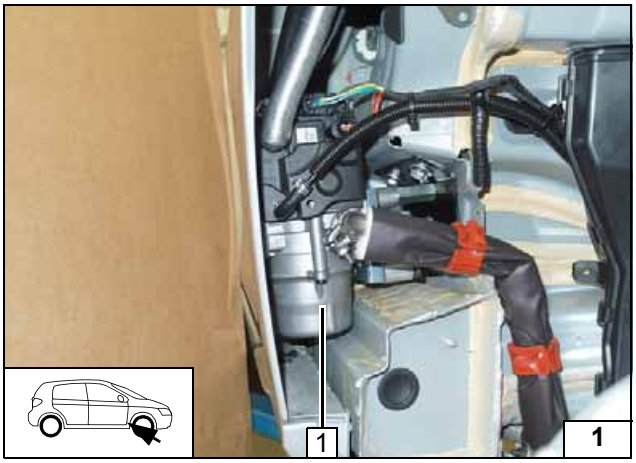
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Remove the right front wheel.
- Remove the wheel well trim on the right.
- Remove the lower engine cover.
- Remove the underbody trim on the right.
- Disconnect the battery and remove it with the battery carrier.
- Drain off the engine coolant and set aside.
- Remove the seat bench of the rear bench seat.
- Open the right-hand tank fitting service lid.

Heater

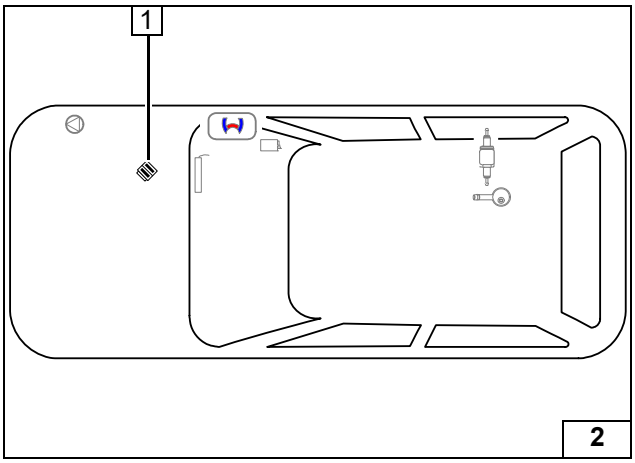
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



Heater Installation Location

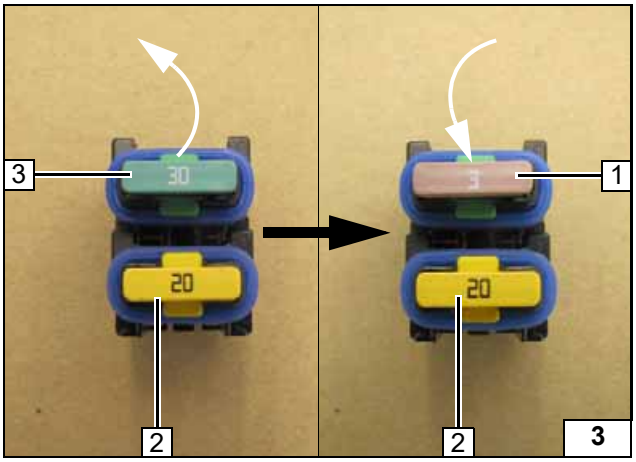
1 Heater

Installation location



Preparing Electrical System

1 Engine compartment fuse holder



Replace 30A passenger compartment main fuse F2 **3** with 3A fuse **1**.

2 20A heater fuse F1

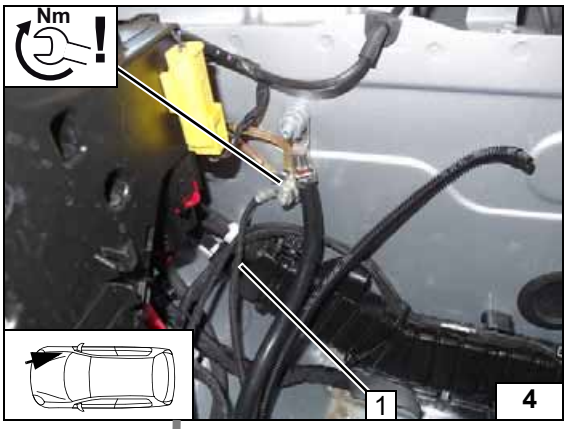
Installation overview

Preparing engine compartment fuses

Electrical System

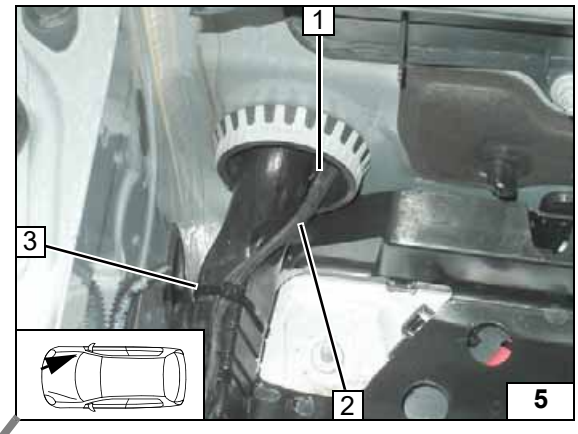
Earth wire

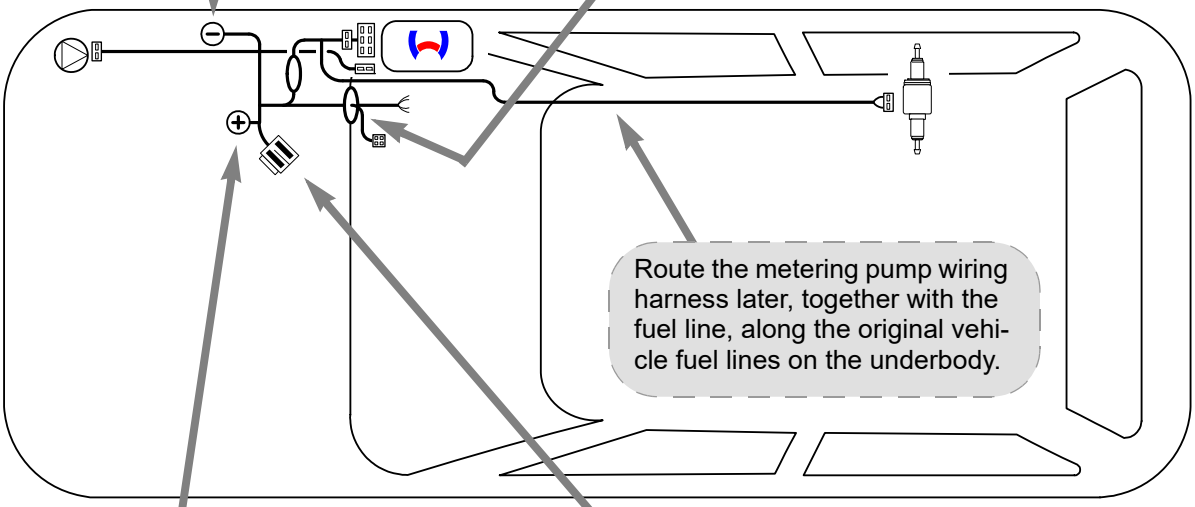
1 8mm dia. cable lug, earth wire on original vehicle earth support point



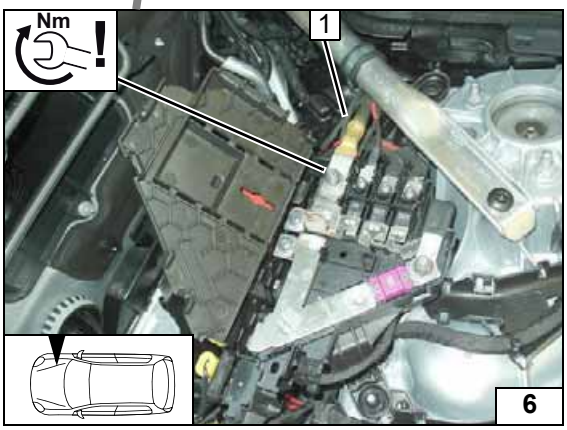
Wiring harness pass through

1 Protective rubber plug, use lower perforation
2 Wiring harnesses of heater, control element
3 Cable tie



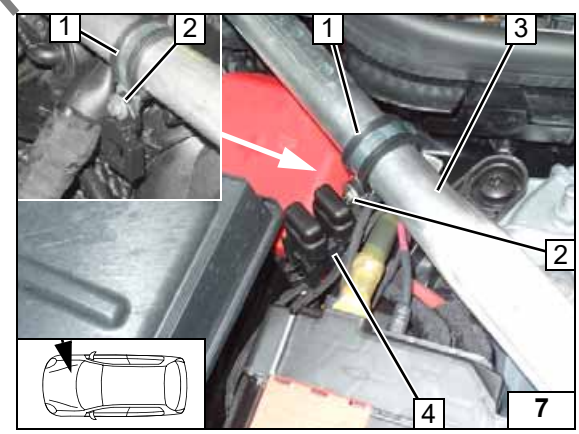


Wiring harness routing diagram



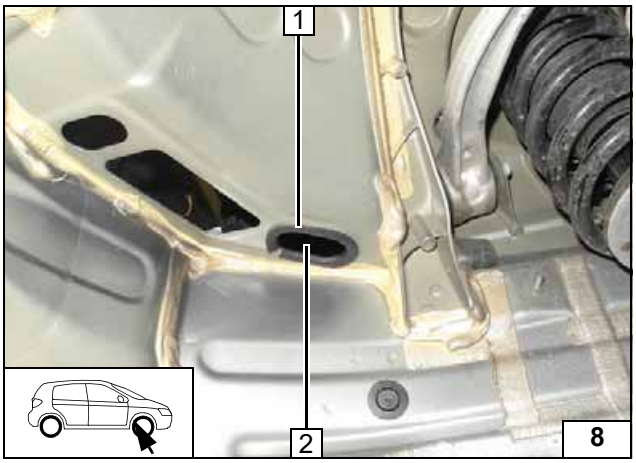
Positive wire

1 8mm dia. cable lug, positive wire on original vehicle positive support point



Engine compartment fuse holder

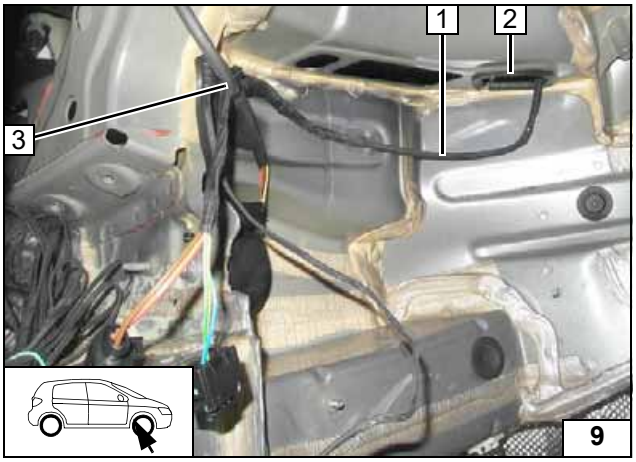
1 29 mm dia. rubber-coated p-clamp
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
3 Right engine compartment stiffening brace
4 Fuses F1-2



Drain pipe removed for documentary purposes.
Remove sealing plug at position **2**.

1 155 mm narrow edge protection

Installing edge protection



Route heater wiring harness **1** through original vehicle pass through **2** in wheel well.

3 Cable tie (if original vehicle wire is present)

Routing heater wiring harness

Installation of Cold Start System for Petrol Vehicles

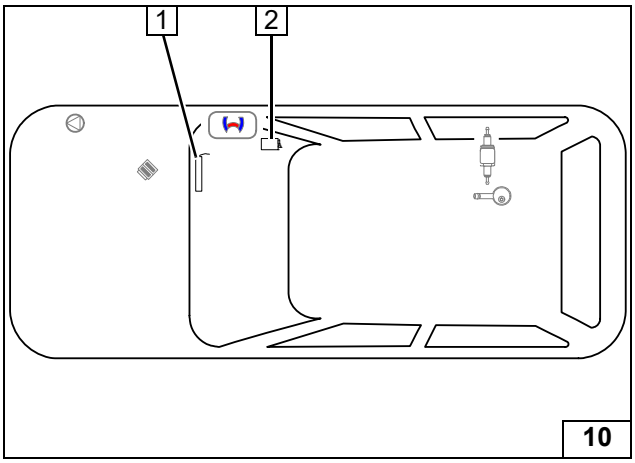
! Integrate the cold start system as explained in the separate installation documentation:

Cold start system installation documentation for Mercedes E-Class BR 213

A/C Control for All Vehicles

! Connect the A/C control in accordance with the separate installation documentation:

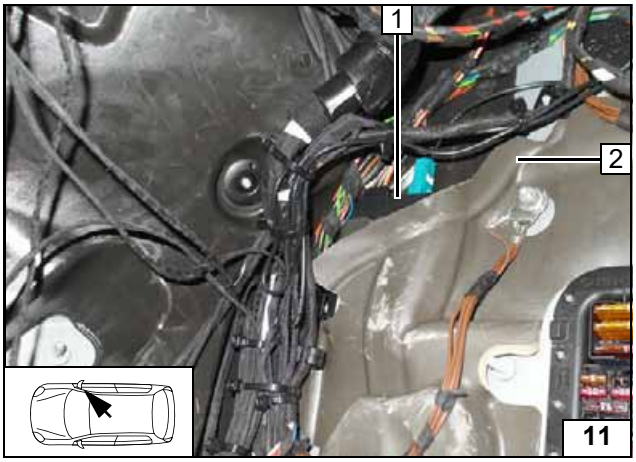
Installation documentation '**Webasto Comfort**' A/C control AAC for Mercedes E-Class BR 213



Control Element Installation

1 Telestart / ThermoCall aerial
2 Telestart / ThermoCall receiver

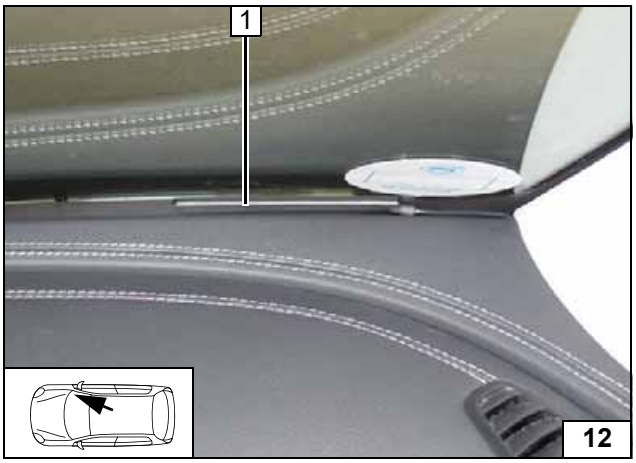
Installation overview



Remote Option (Telestart)

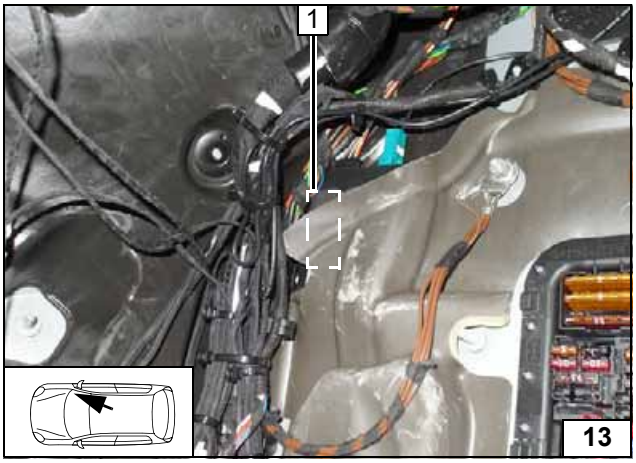
Fasten receiver **1** behind insulation **2** using double-sided adhesive tape.

Installing receiver



1 Aerial

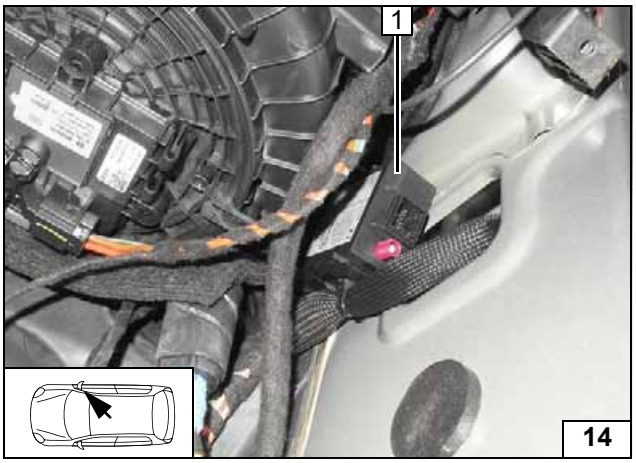
Installing aerial

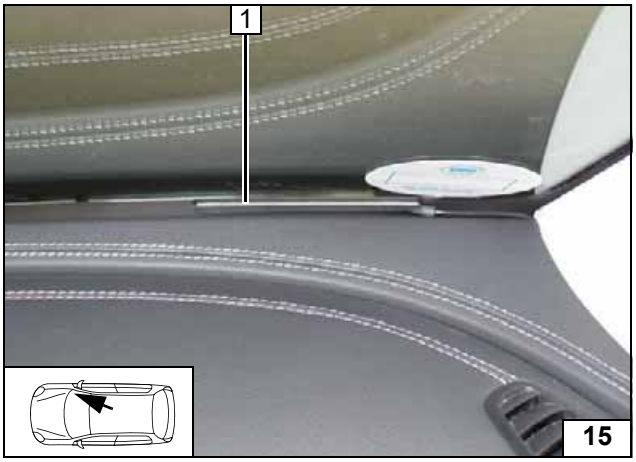


Temperature sensor T100 HTM

Fasten temperature sensor **1** with double-sided adhesive tape.

Installing temperature sensor





ThermoCall Option

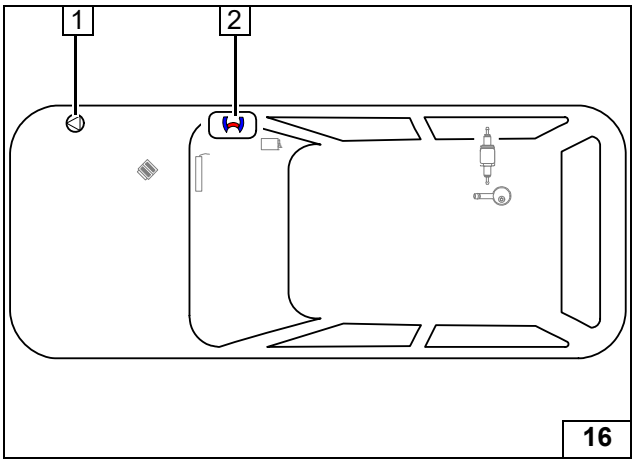
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver

1 Aerial (optional)

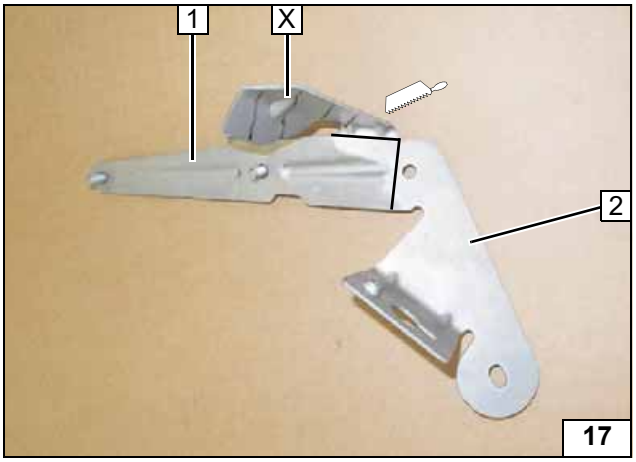
Installing aerial

Preparing Installation Location



1 Circulating pump
2 Heater

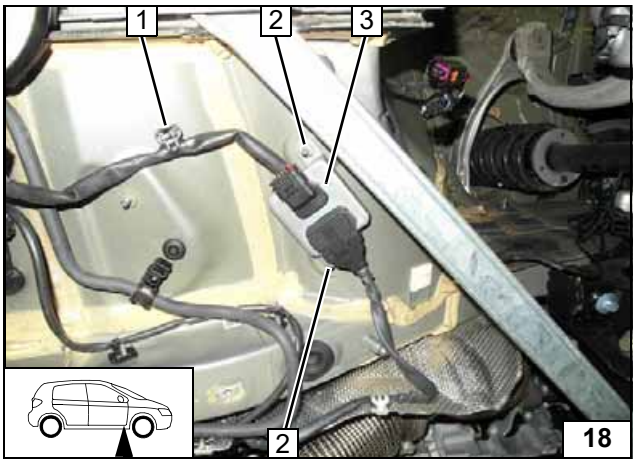
Installation overview



1 Bracket for control unit (only for vehicles with additional control unit, see next figure)
2 Bracket for exhaust silencer

X = 

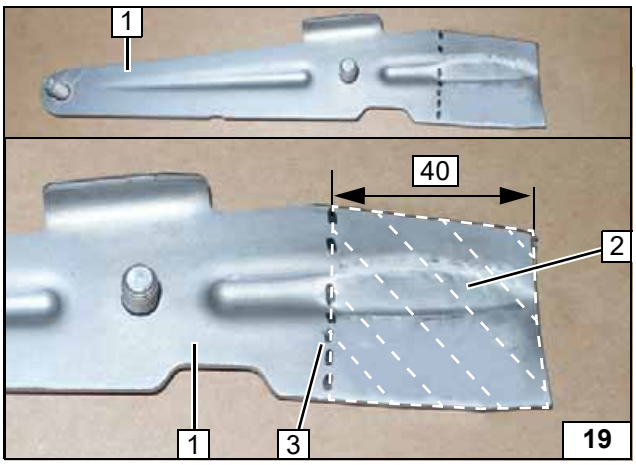
Adapting / assigning bracket



Vehicle with additional control unit

1 Detach retaining clip of stud bolt
2 Unscrew original vehicle nut [2x], will be reused
3 Control unit

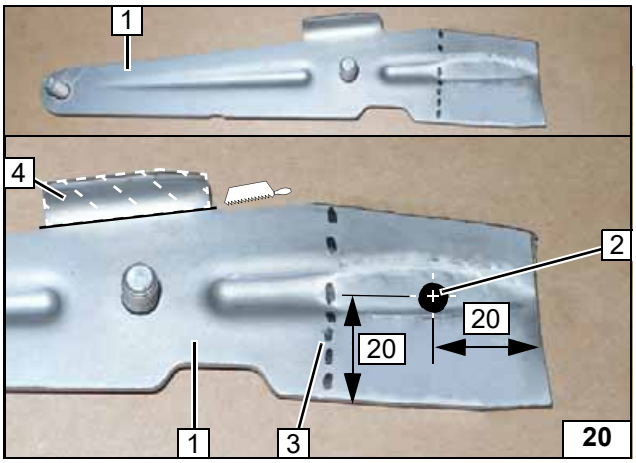
Removing control unit



Mark bending line **3** on bracket **1**.
Smooth surface **2** on the right side of the bending line.

1 Bracket for control unit

Preparing bracket

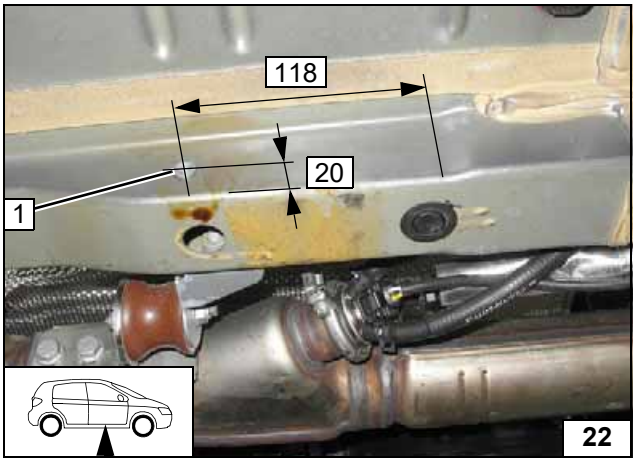


Cut off tab **4** and discard.
Bend bracket **1** upwards at bending line **3** by 90° (see next figure).

1 Bracket for control unit
2 6.5 mm dia. hole

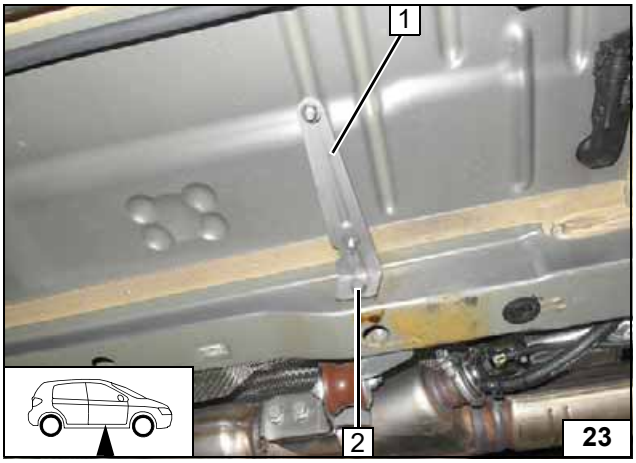
Preparing bracket

View of prepared bracket of control unit



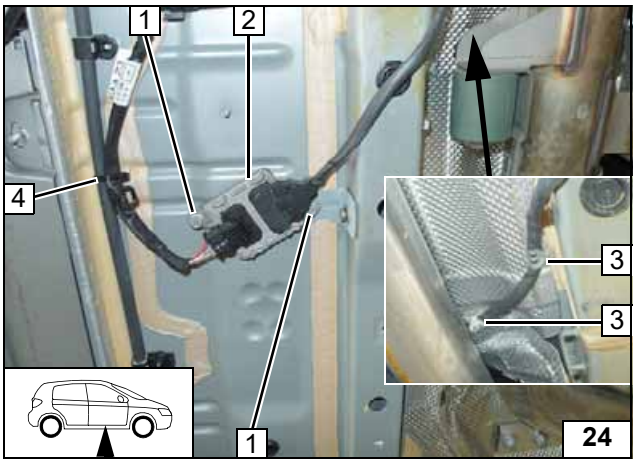
1 9.1 mm dia. hole, rivet nut

Installing rivet nut



1 Bracket
2 M6x20 bolt, spring lockwasher on rivet nut

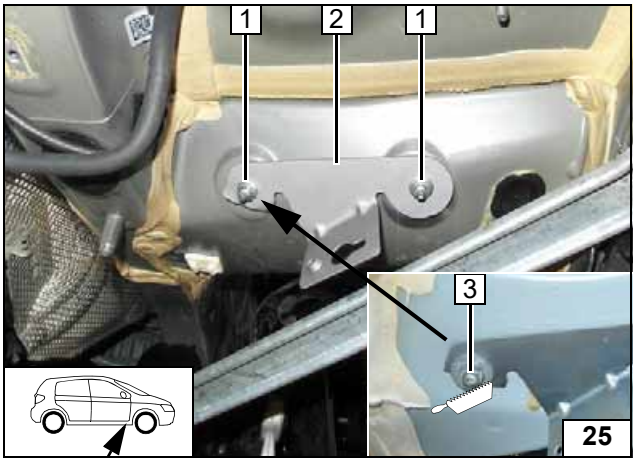
Installing bracket



Move original vehicle retaining clips **3** as shown.

1 Original vehicle nut [2x], on stud bolt of bracket
2 Control unit
4 Cable tie [2x]

Installing control unit

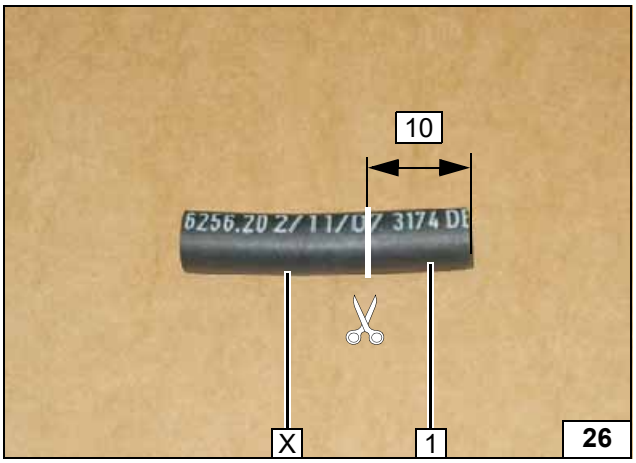


All vehicles

1 M6 flanged nut on original vehicle stud bolt [2x]
2 Bracket for exhaust silencer

Shorten stud bolt at position 3 as shown.

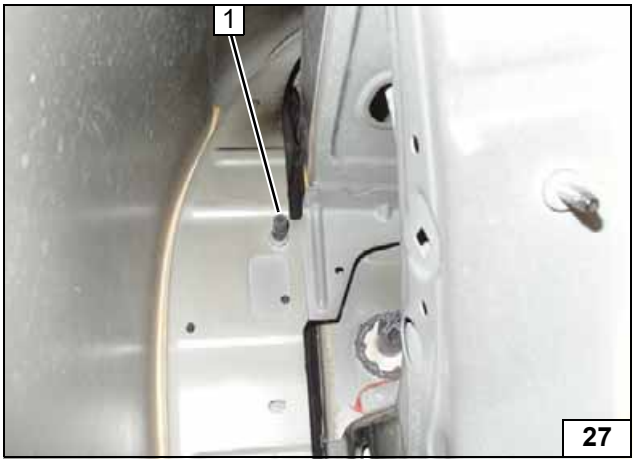
Installing bracket



1 Hose

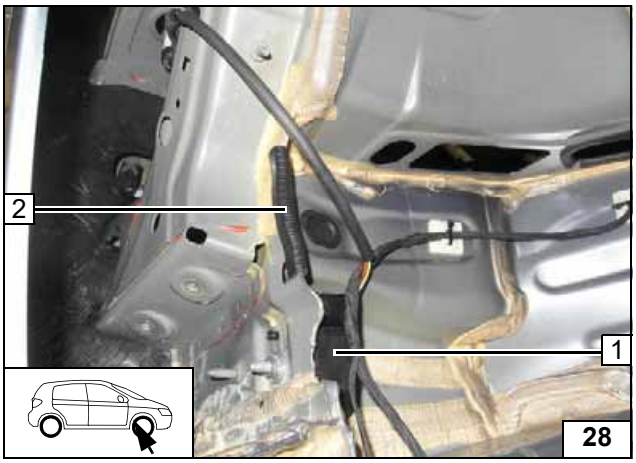
X = 

Shortening hose



1 Hose section on original vehicle stud bolt

Installing hose section



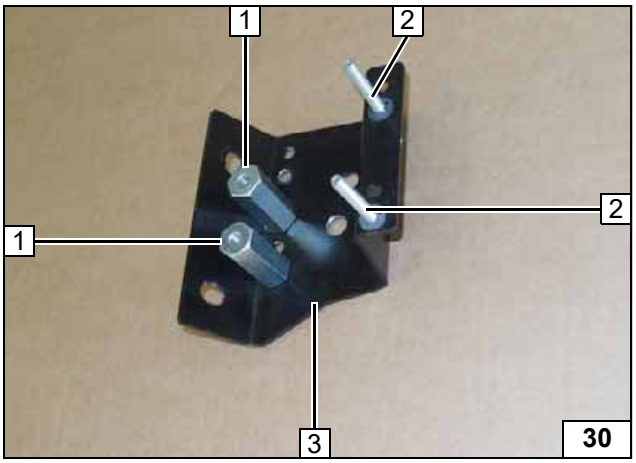
This and the following figures show a vehicle with control unit at position **1**, but the instructions apply to all models!

2 100 mm broad edge protection

Installing edge protection

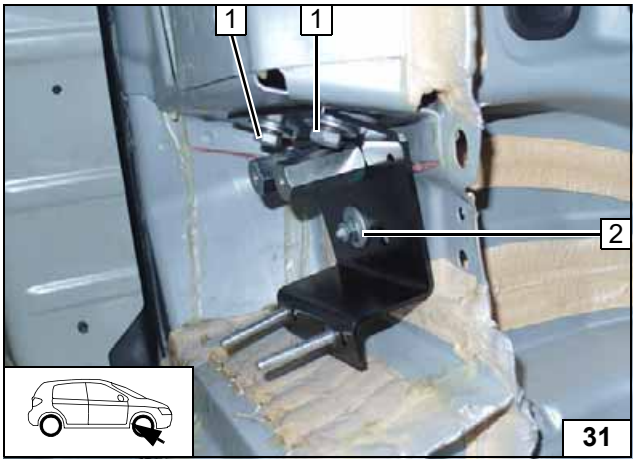
1 5 mm shim on original vehicle stud bolt

Installing shim



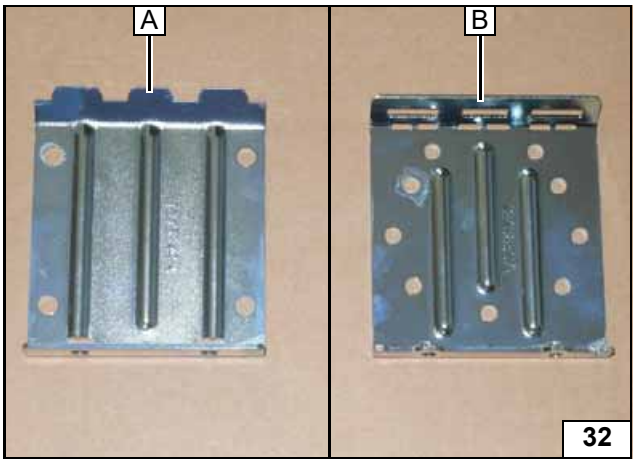
1 40mm spacer nut, M6x16 bolt, spring lockwasher [2x each]
2 M6x40 bolt, lock washer [2x each]
3 Basic holder

Premounting basic holder

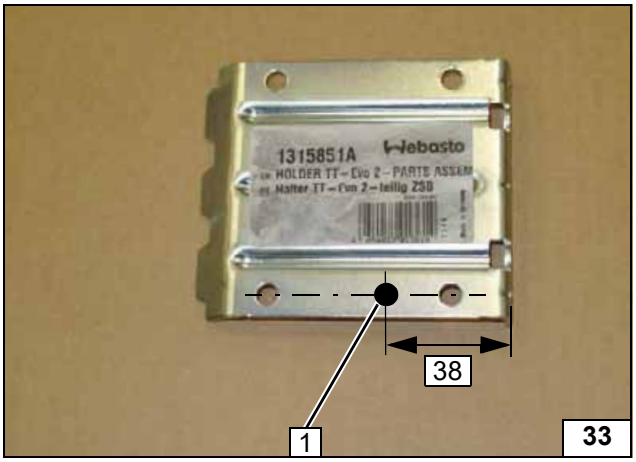


1 M8x20 bolt, spring lockwasher, large diameter washer [2x each] at existing threaded hole
2 Large diameter washer, M6 flanged nut on original vehicle stud bolt

Installing basic holder

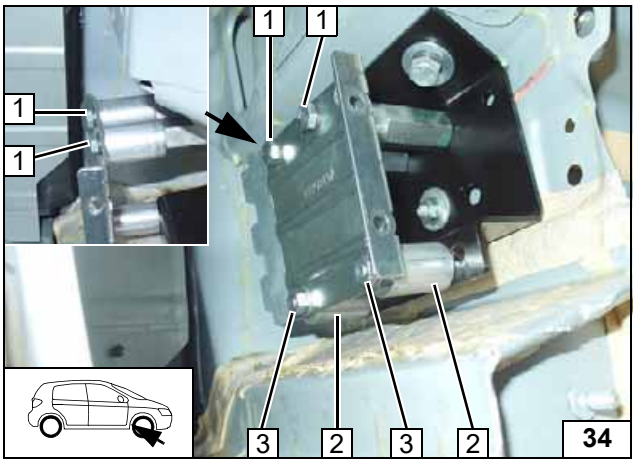


View of/ assignment of two-part bracket



1 7 mm dia. hole

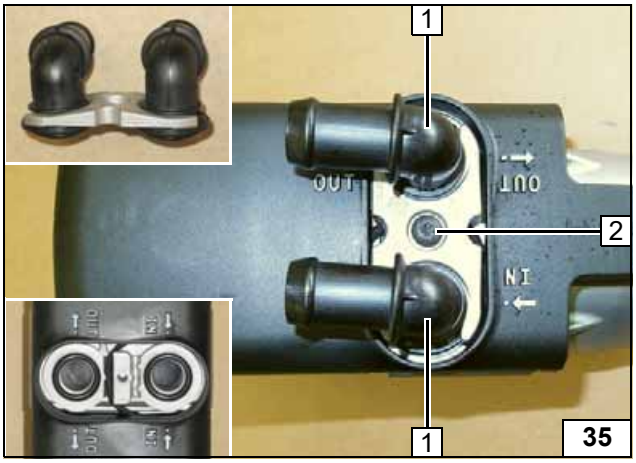
Hole in bracket A



Install 30mm spacer [2x] at position **1** between basic holder and bracket **A**.

1 M6x40 bolt, spring lockwasher, 30 mm spacer [2x each]
2 30mm spacer [2x]
3 Flanged nut M6 [2x]

Installing bracket A



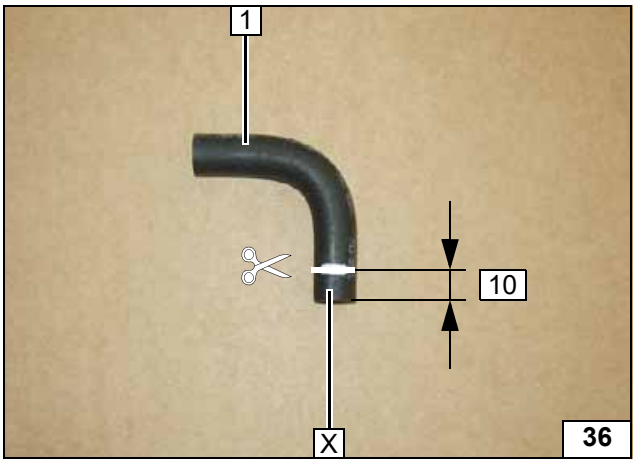
Preparing Heater

All vehicles

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

Installing water connection piece

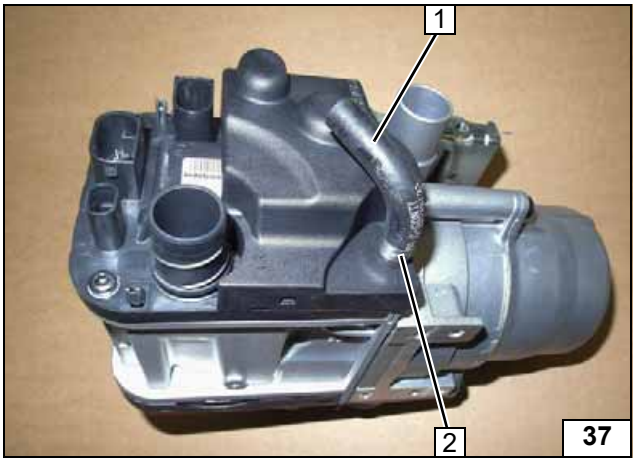
Shortening moulded hose



1 90° moulded hose

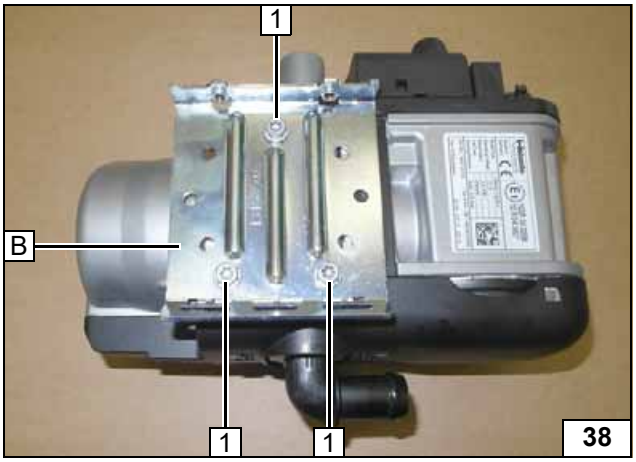
X = 

Premounting moulded hose



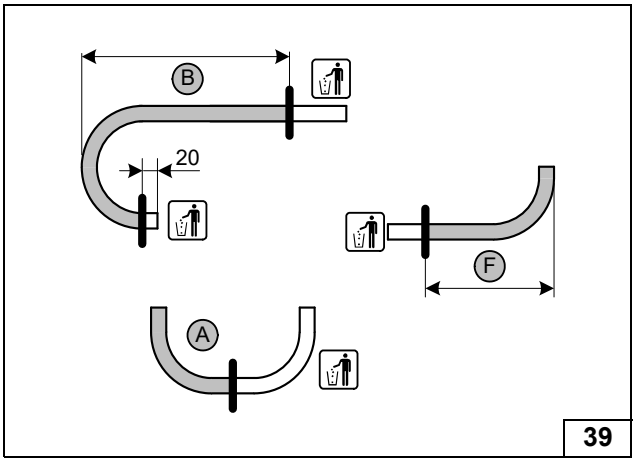
1 90° moulded hose (with shortened side on heater)
2 10 mm dia. clamp

Mounting bracket section B



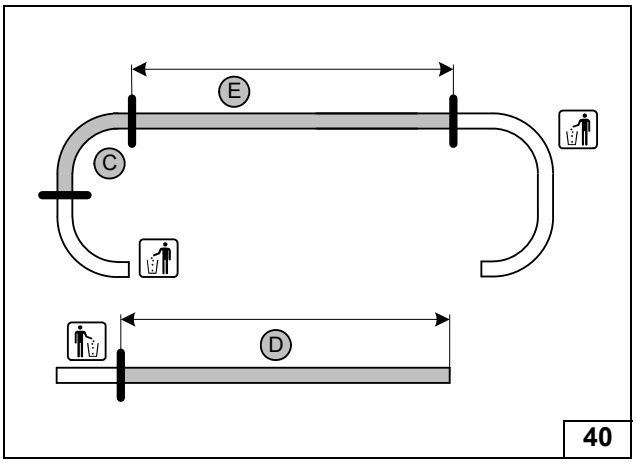
1 5x13 self-tapping bolt [3x]

Cutting hoses to length



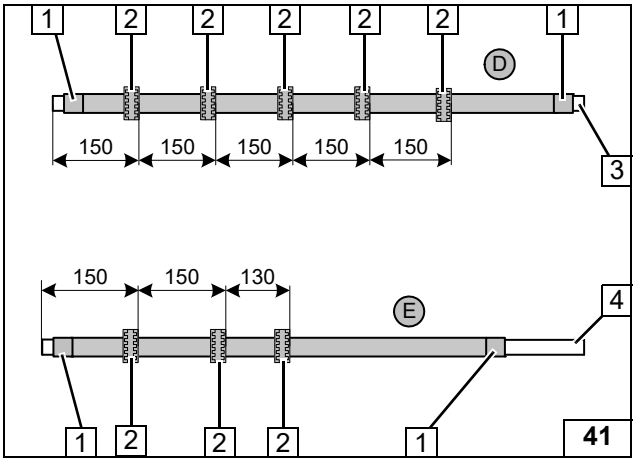
Petrol

A = 90°, 20mm dia.
B = 460
F = 220



C = 90°
D = 1450
E = 1860

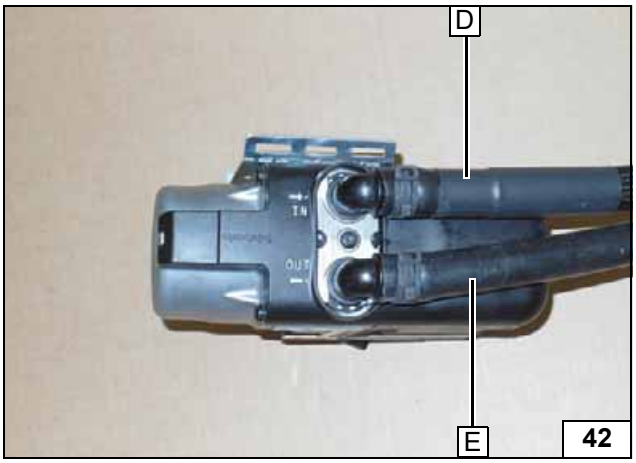
Cutting hoses to length



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

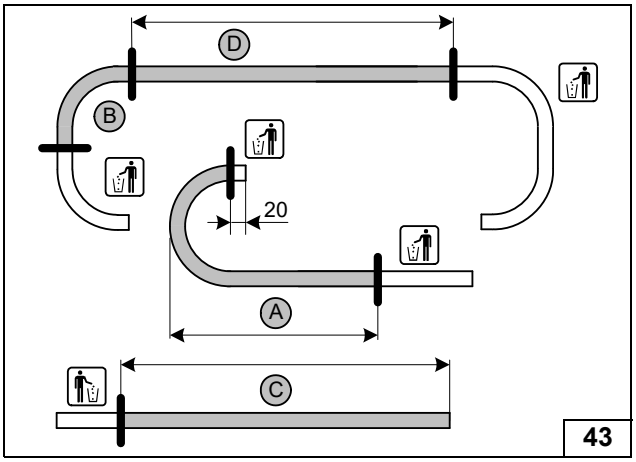
1 50 mm long heat shrink plastic tubing [4x]
2 Position black (sw) rubber isolator [8x]
3 Connection side of heater inlet
4 Connection side of heater outlet

Preparing hoses



All spring clips = 25 mm dia.

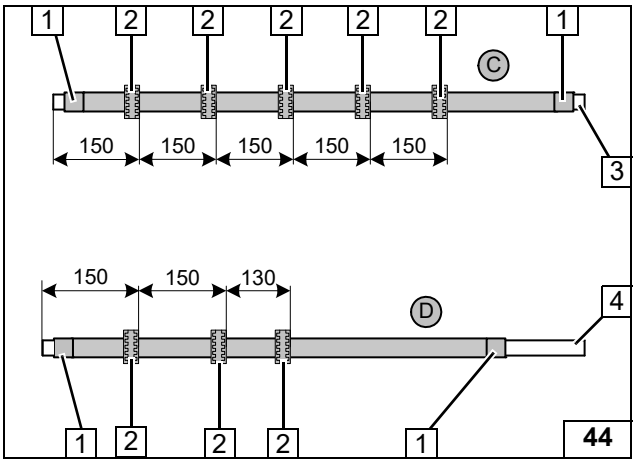
Installing hoses



Diesel

	E220d	E350d
A	340	310
B	90°	90°
C	1450	1450
D	1820	1820

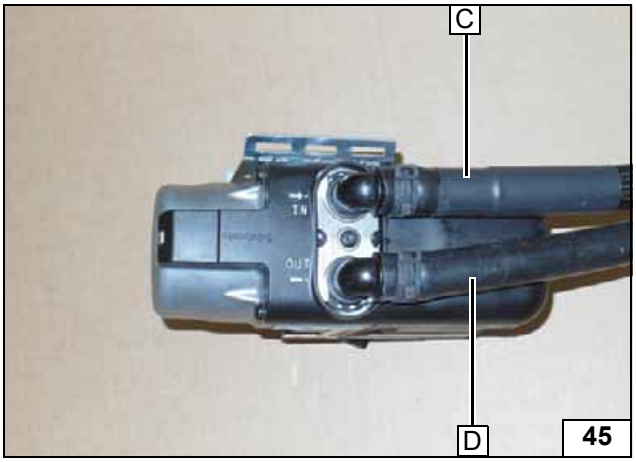
Cutting hoses to length



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

1 50 mm long heat shrink plastic tubing [4x]
2 Position black (sw) rubber isolator [8x]
3 Connection side of heater inlet
4 Connection side of heater outlet

Preparing hoses



All spring clips = 25 mm dia.

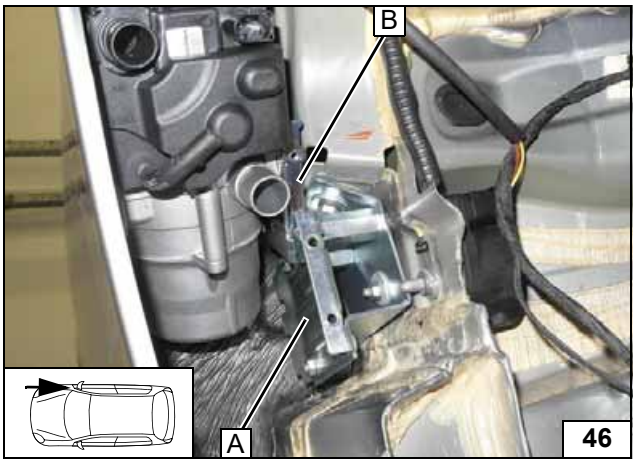
Installing hoses

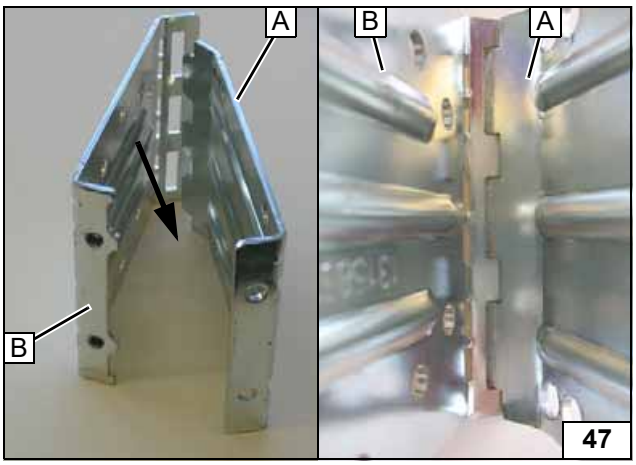
Installing Heater

All vehicles

Install heater in installation location from above (see next figure).

Installing heater

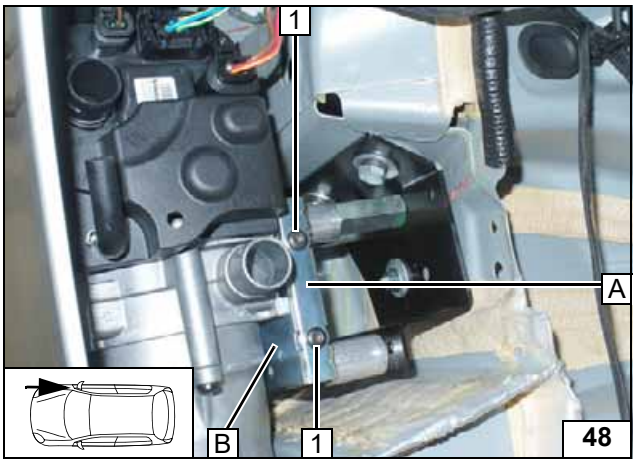




The recesses of bracket **B** must be guided over the tabs of bracket **A**.

A Bracket (installed on basic holder)
B Bracket (installed on heater)

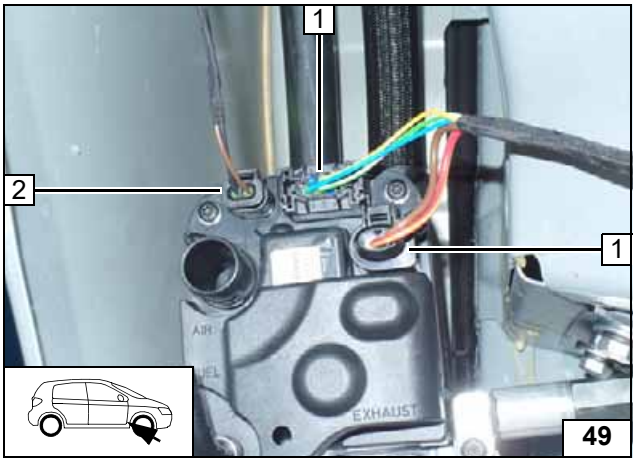
View of bracket A and B assembly



Check the assembly of bracket **B** and bracket **A**, then screw them together.

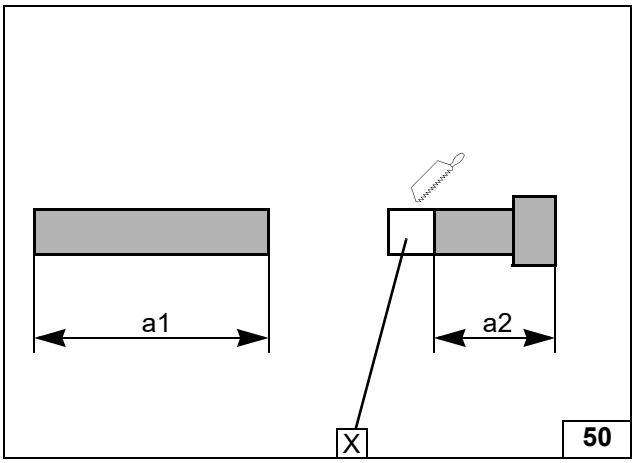
1 M5x12 torx screw [2x]

Installing heater



1 Heater wiring harness connector [2x]
2 Connector of circulating pump wiring harness

Installing heater

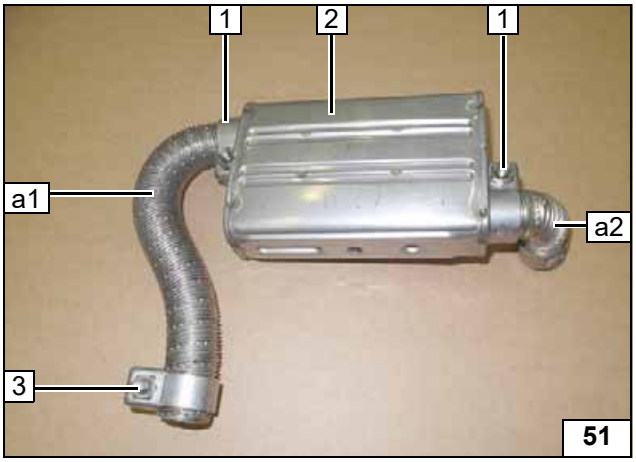


Exhaust Gas

a1 = 230
a2 = 90

X =

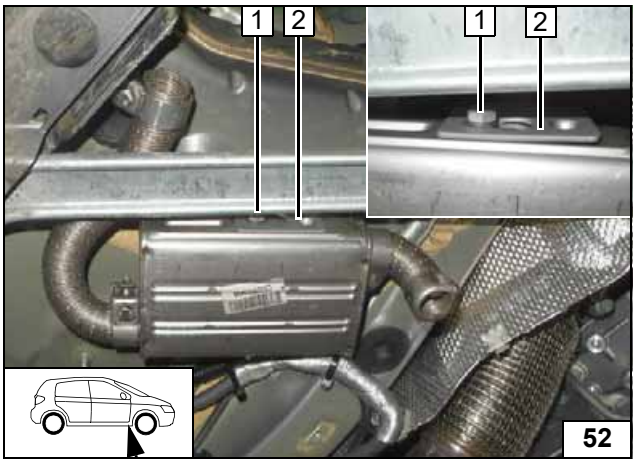
Preparing exhaust pipe



Shape exhaust pipe **a1** and **a2** as shown.

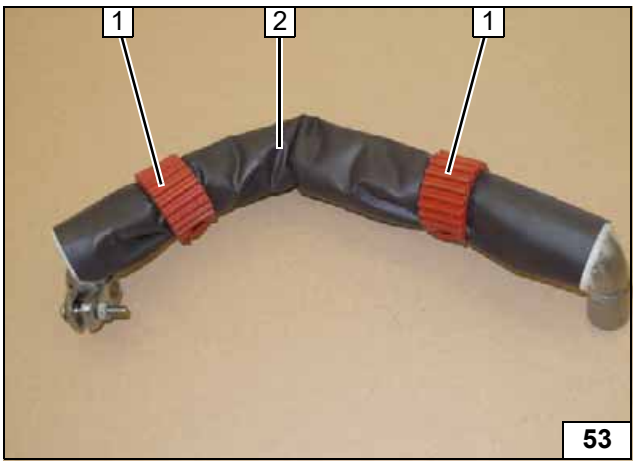
1 Hose clamp [2x]
2 Silencer
3 Hose clamp, loosely installed

Premounting silencer



1 M6x16 bolt, spring lockwasher
2 Bracket of exhaust system

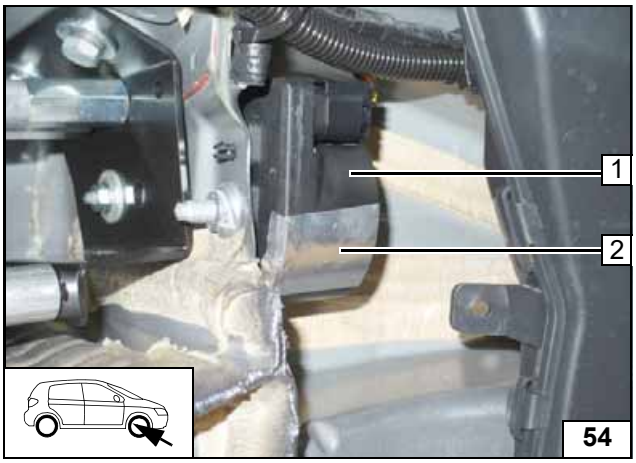
Installing silencer



Turn locking device of silicone band **1** [2x] as shown.

2 Complete exhaust tube

Checking exhaust tube

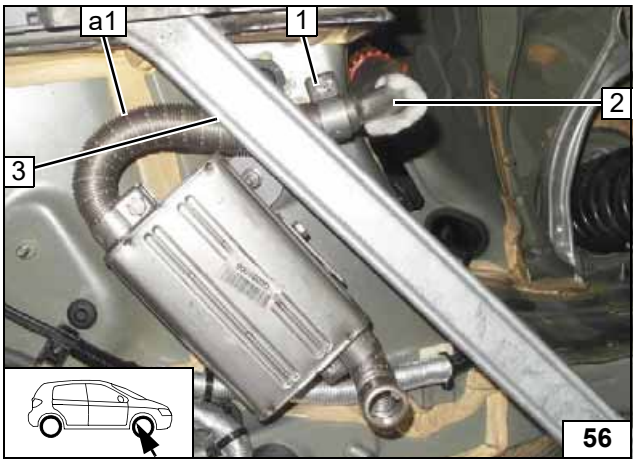


Stick heat protection film **2** onto original vehicle module **1** (if present).

Sticking on heat protection film

1 Tighten hose clamp

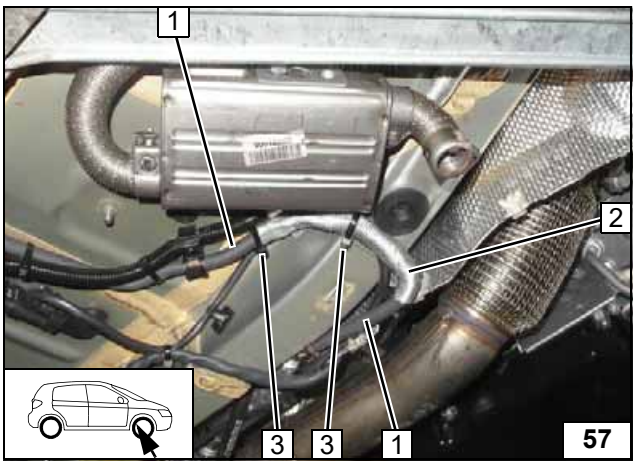
Installing exhaust tube



Check that there is freedom of movement between exhaust pipe **a1** and cross member at position **3** , correct if necessary.

1 Tighten hose clamp
2 Exhaust tube

Connecting exhaust tube and exhaust pipe a1



Only for vehicles with additional line (depends on the equipment) **1!**

Slit 300mm, 14.5mm dia. heat protection hose **2** lengthwise, slide it over original vehicle line **1** and secure with cable tie **3** [2x].

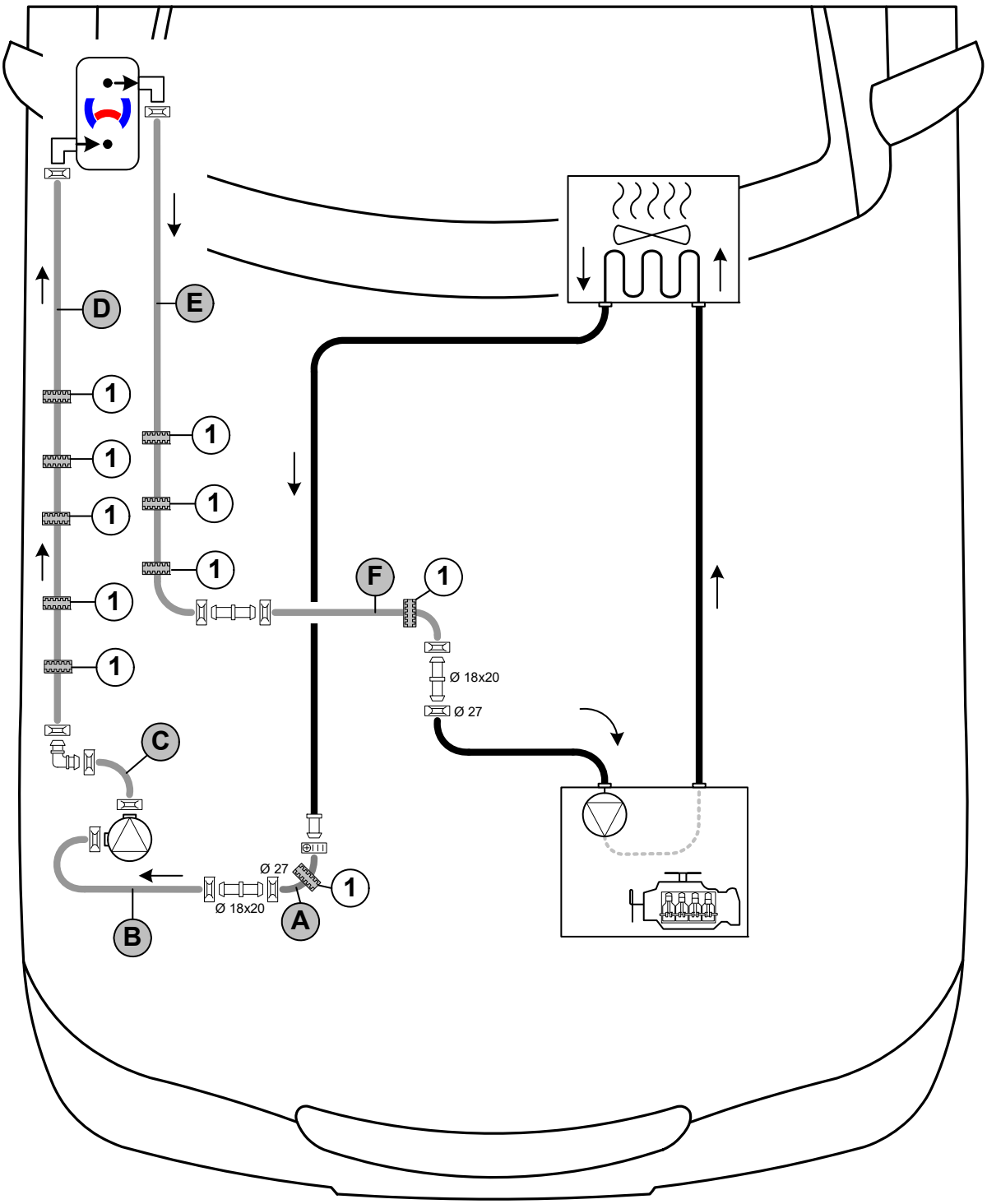
Installing heat protection hose

Coolant Circuit for Petrol Vehicles

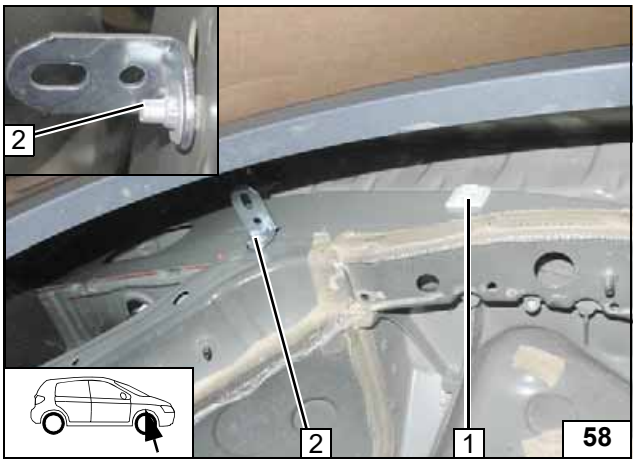
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram

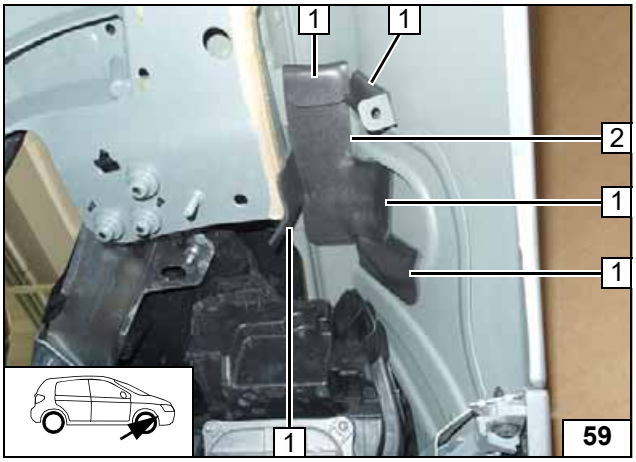


All spring clips without a specific designation = 25 mm dia.
All hose clamps without a specific designation = 20-27 mm dia.
All connecting pipes without a specific designation and = 18x18 mm dia.
1 = Black (sw) rubber isolator.



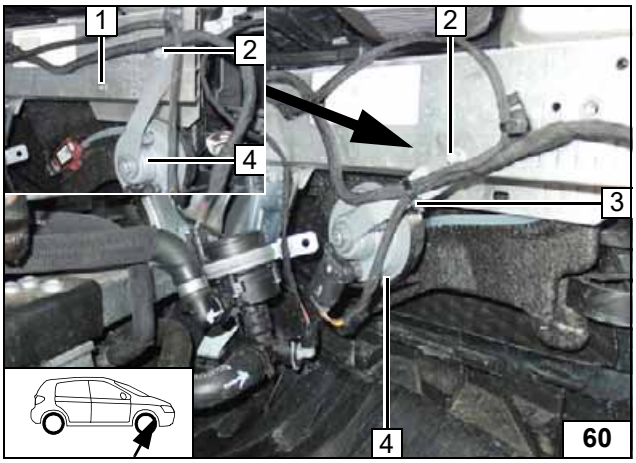
1 Self-adhesive socket
2 Plate nut, angle bracket, original vehicle stud bolt

Installing angle bracket



1 Self-adhesive foam halved [5x]
2 Self-adhesive foam

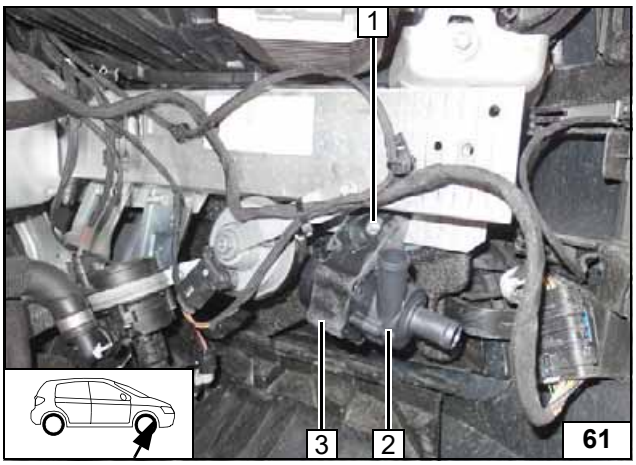
Sticking on foam



Secure original vehicle wiring harnesses using cable tie **3**.

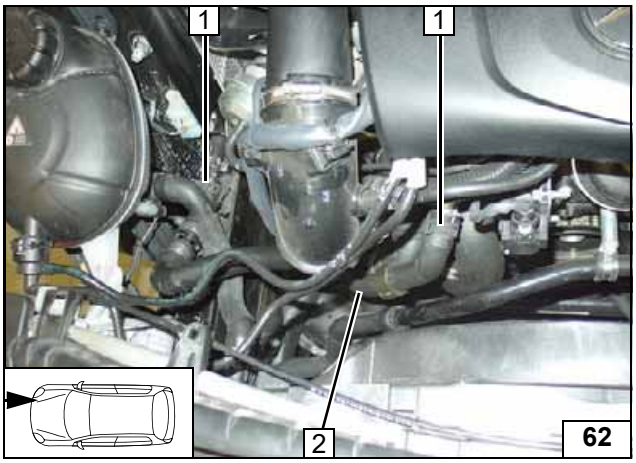
1 Original vehicle thread
2 Original vehicle bolt on original vehicle threaded hole
4 Horn

Moving horn



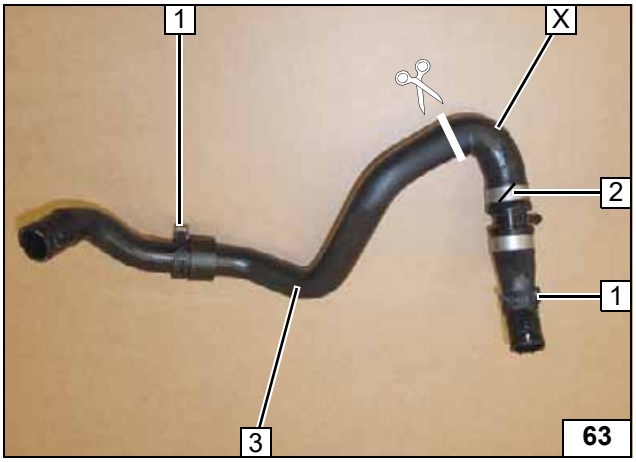
1 M6x25 bolt, large diameter washer, original vehicle hole, flanged nut
2 Circulating pump
3 Circulating pump mount

Installing circulating pump



Disconnect original vehicle hose of heat exchanger outlet / engine inlet **2**. Spring clips **1** will be reused.

Disconnecting original vehicle hose

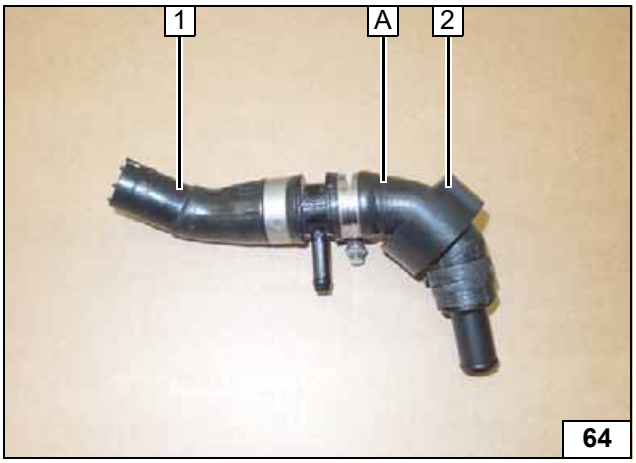


Cut original vehicle hose of heat exchanger outlet / engine inlet **3** as shown.
Saw original vehicle clamp **2** carefully open and discard!

1 Original vehicle spring clip [2x]

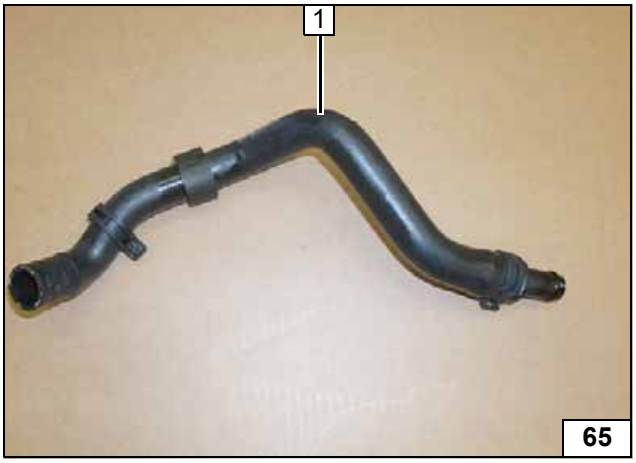
X = 

Cutting point



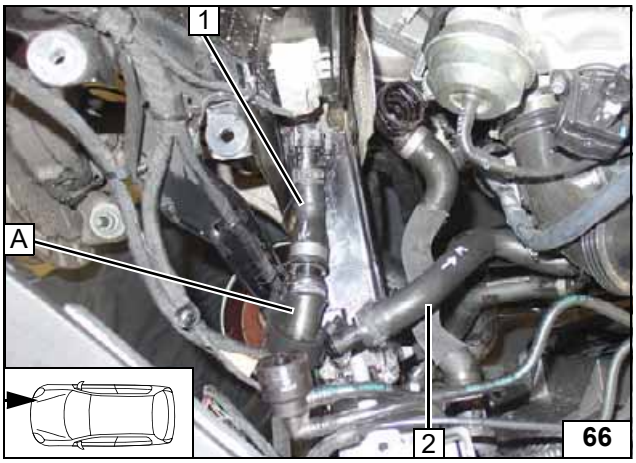
1 Hose section of heat exchanger outlet
2 Black (sw) rubber isolator

Premounting hose section of heat exchanger outlet



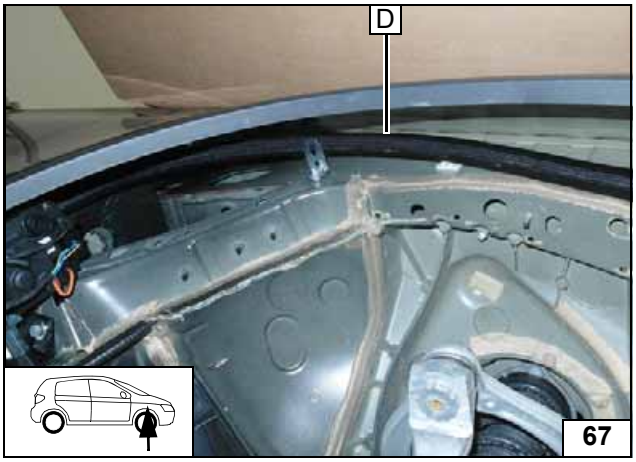
1 Hose section of engine inlet

Premounting hose section of engine inlet



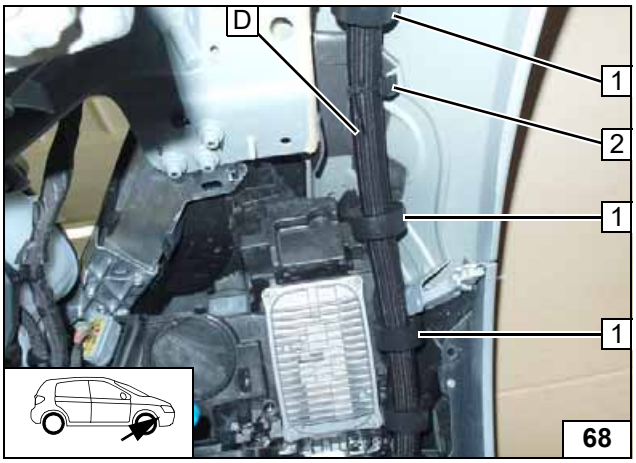
1 Hose section of heat exchanger outlet
2 Hose section of engine inlet

Installing engine inlet and heat exchanger outlet hose section



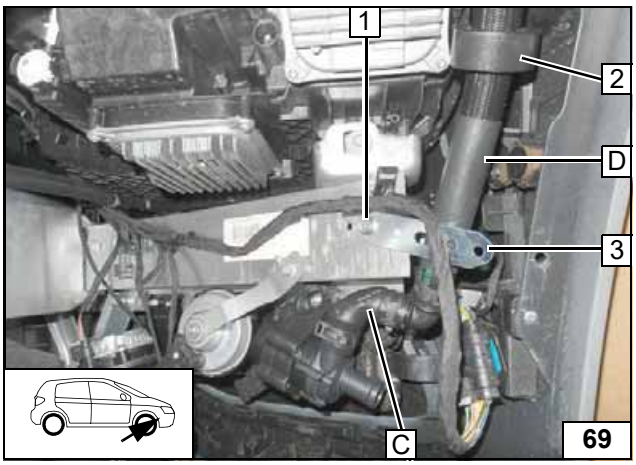
Route hose **D** in wheel well forwards.

Routing of hose D in wheel well



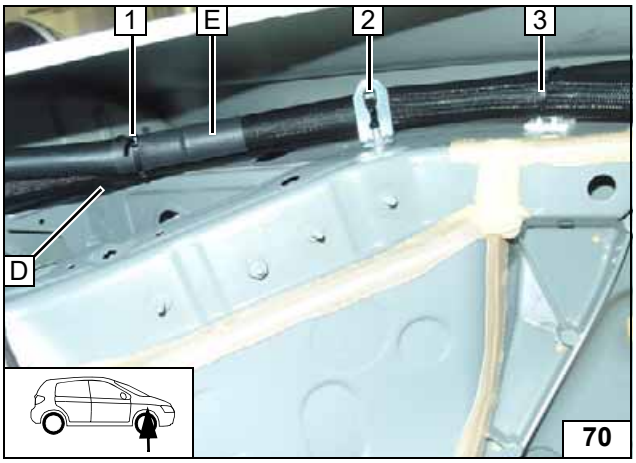
1 Align black (sw) rubber isolator [3x]
2 Edge clip cable tie

Routing of hose D in wheel well



1 M6x20 bolt, spring lockwasher, original vehicle thread
2 Align black (sw) rubber isolator
3 Perforated bracket

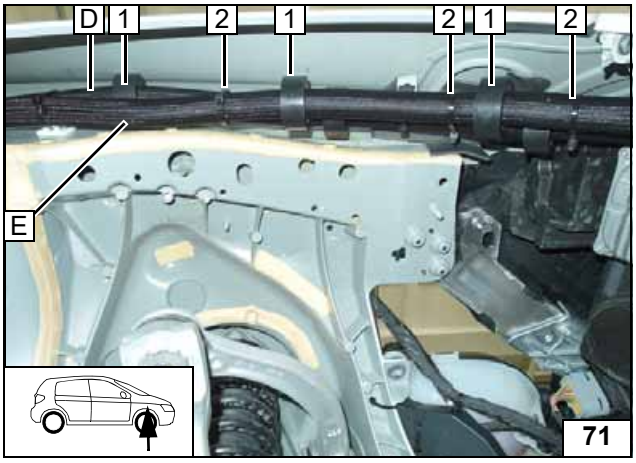
Connecting circulating pump outlet



Route hose **E** and circulating pump wiring harness in wheel well to the front.

1 Cable tie
2 Cable tie on angle bracket
3 Cable tie on adhesive base

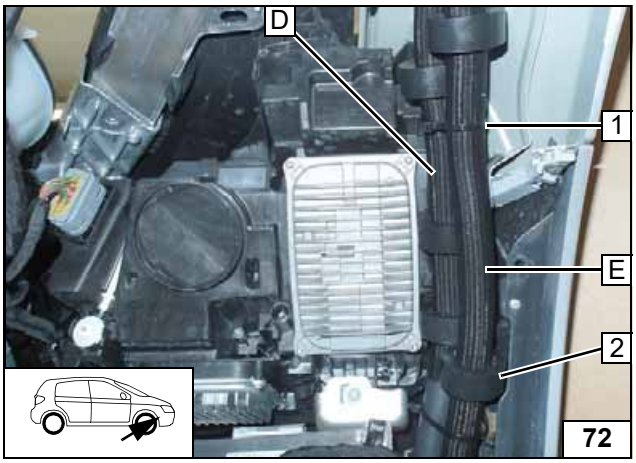
Routing of hose E in wheel well



Route hose **E** and circulating pump wiring harness in wheel well to the front.

1 Align black (sw) rubber isolator [3x]
2 Cable tie [3x]

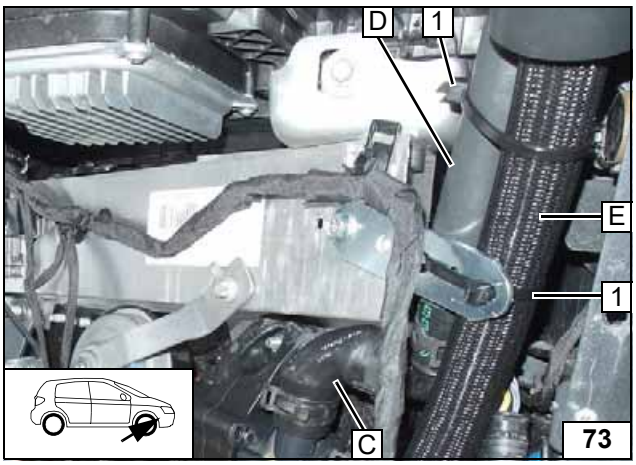
Routing of hose E in wheel well



Route hose **E** and circulating pump wiring harness in wheel well to the front.

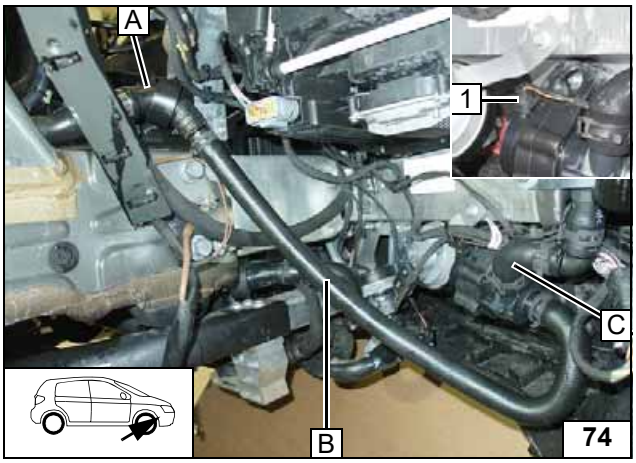
1 Cable tie
2 Align black (sw) rubber isolator

Routing of hose E in wheel well



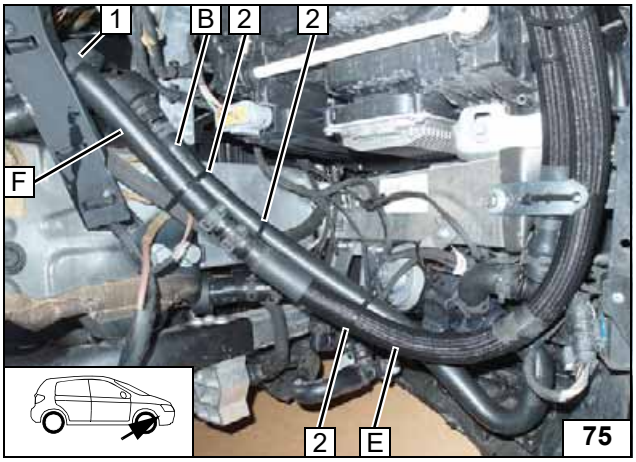
1 Cable tie [2x]

Routing of hose E in wheel well



1 Connector of circulating pump wiring harness

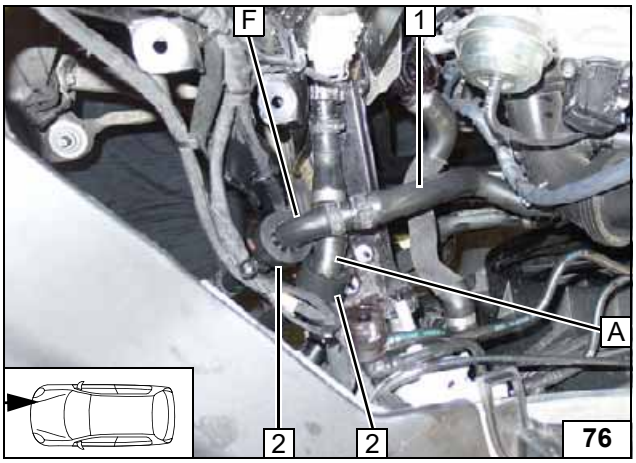
Connecting hose C



Attach hoses using cable tie **2** as shown.

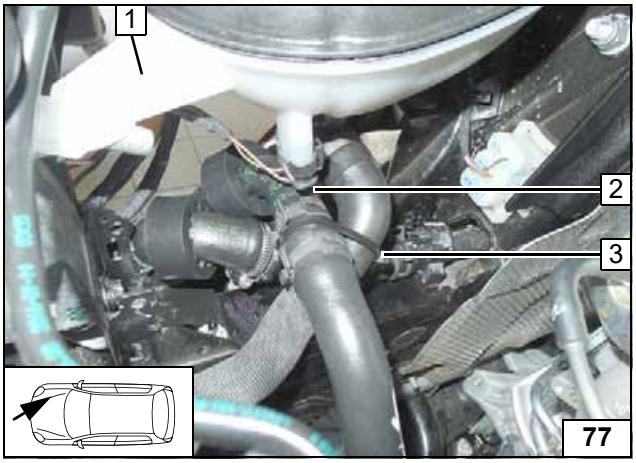
1 Black (sw) rubber isolator

Connecting hoses E and F



1 Engine inlet hose
2 Position black (sw) rubber isolator [2x]

Connection on engine inlet



Install expansion tank **1**.
Ensure sufficient distance from the water hoses at position **2**.

3 Attach hoses using cable tie

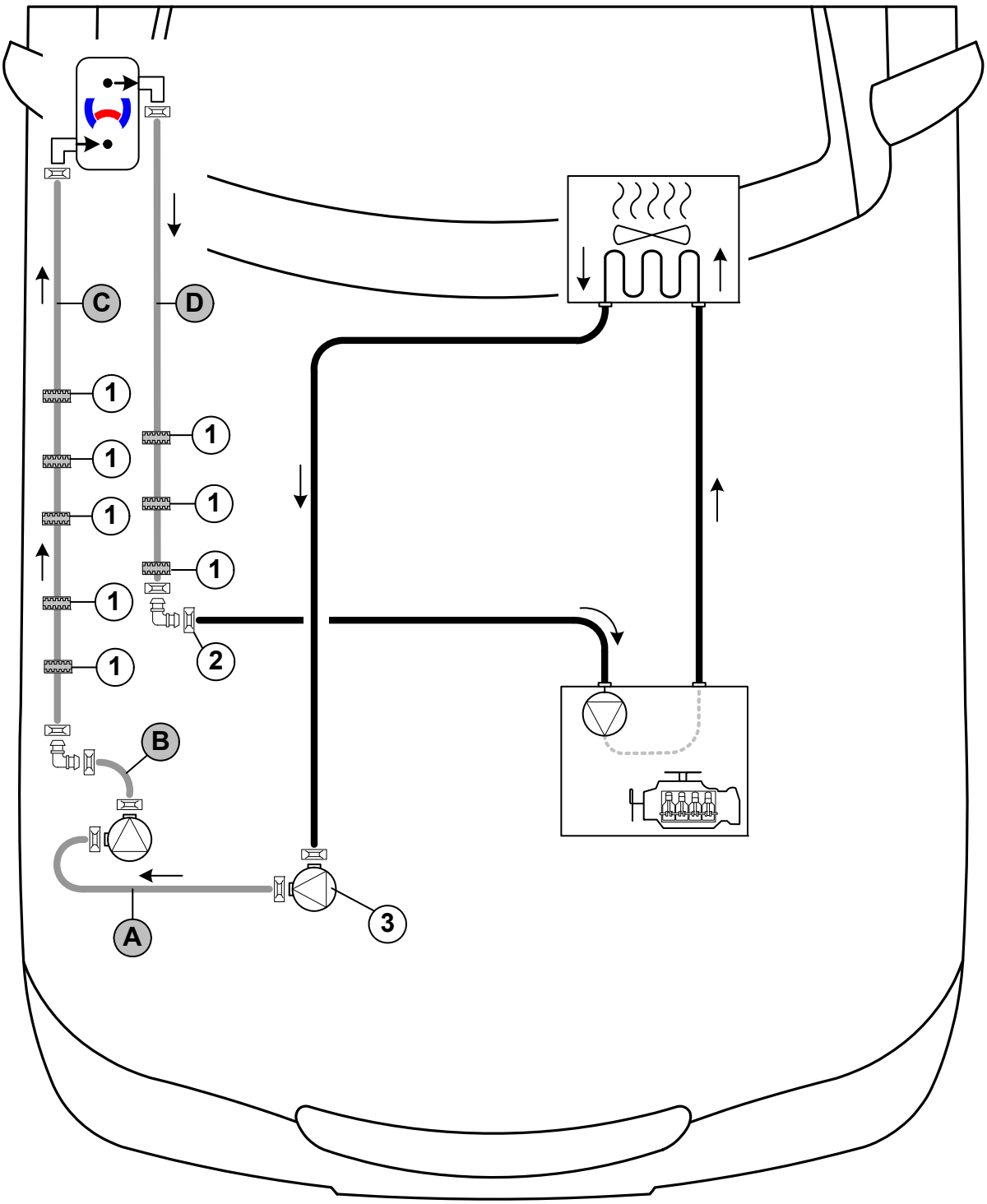
Connecting engine outlet

Coolant Circuit for Diesel Vehicles

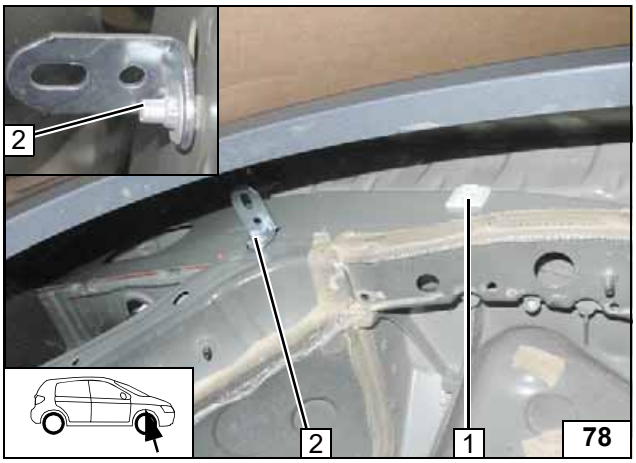
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram

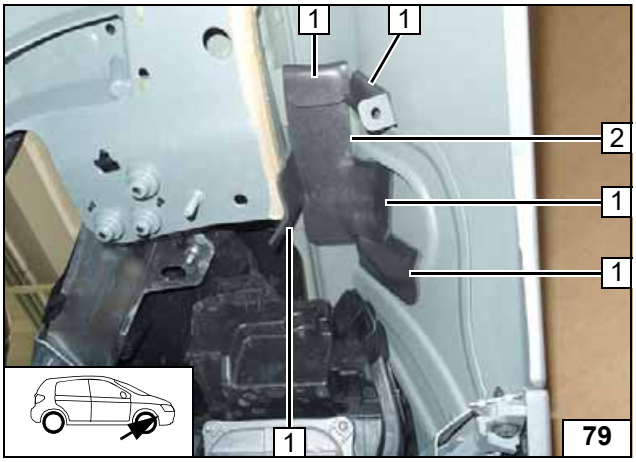


All spring clips without a specific designation = 25 mm dia.
All connecting pipes and = 18x18 mm dia.
1 = Black (sw) rubber isolator .
2 = Original vehicle spring clip .
3 = Original vehicle additional coolant pump.



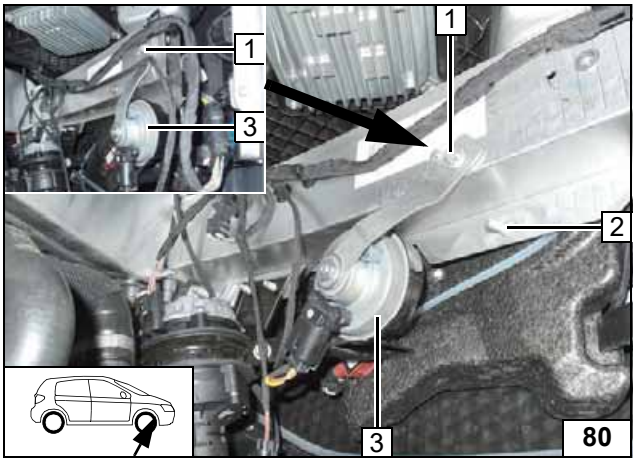
1 Self-adhesive socket
2 Plate nut, angle bracket, original vehicle stud bolt

Installing angle bracket



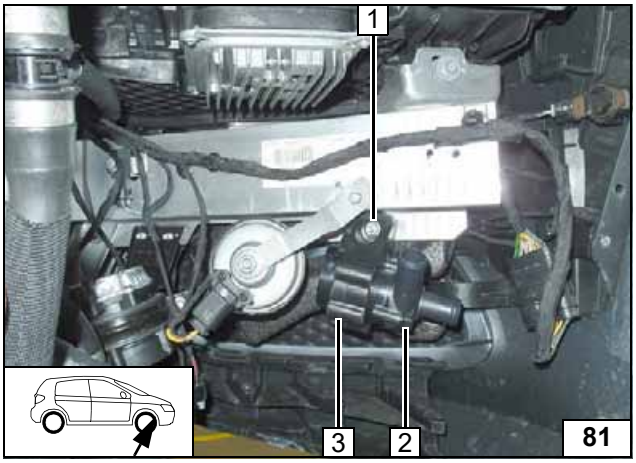
1 Self-adhesive foam halved [5x]
2 Self-adhesive foam

Sticking on foam



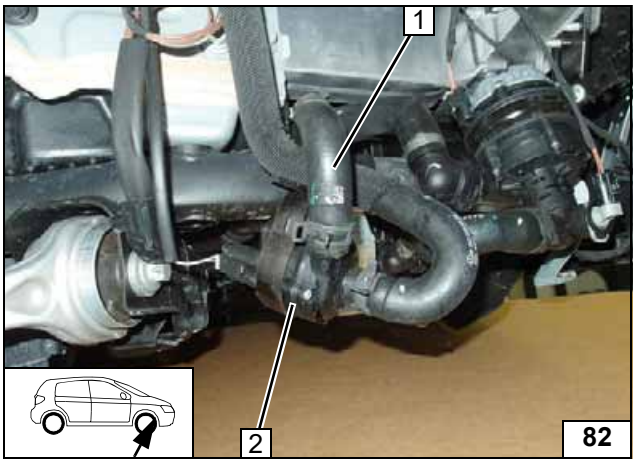
1 Original vehicle bolt on original vehicle threaded hole
2 M6x25 bolt, large diameter washer, original vehicle hole
3 Horn

Moving horn



1 Flanged nut
2 Circulating pump
3 Circulating pump mount

Installing circulating pump

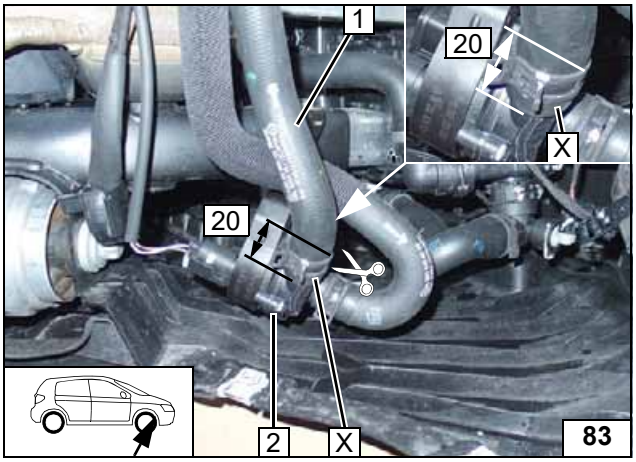


E220d

Disconnect original vehicle hose of engine inlet / additional coolant pump **1**. Spring clip will be reused.

2 Additional coolant pump

Cutting point



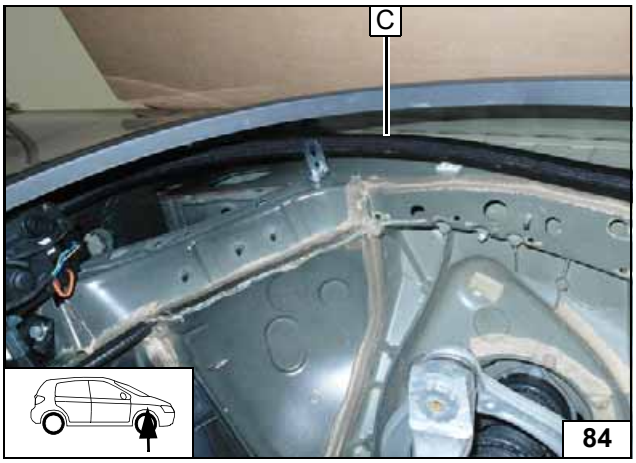
E350d

Disconnect original vehicle engine inlet / additional coolant pump hose **1** and shorten as shown. Spring clip will be reused.

2 Additional coolant pump

X = 

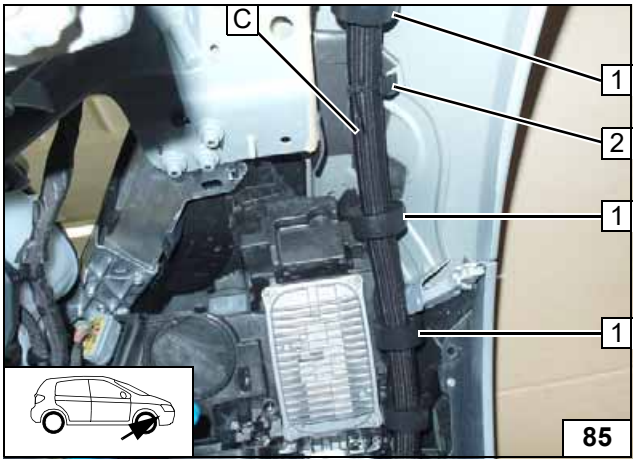
Cutting point



All diesel vehicles

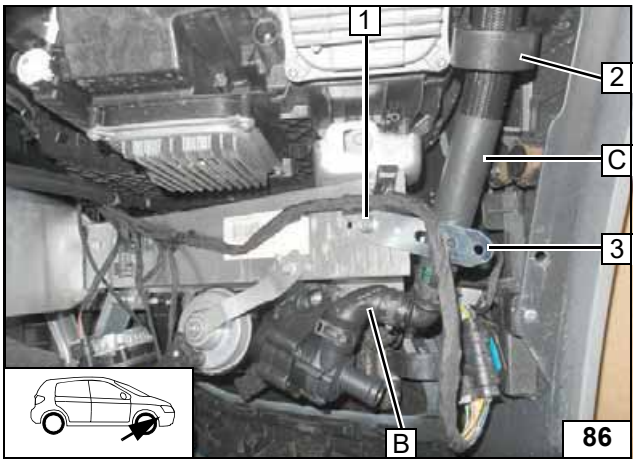
Route hose **C** in wheel well forwards.

Routing of hose C in wheel well



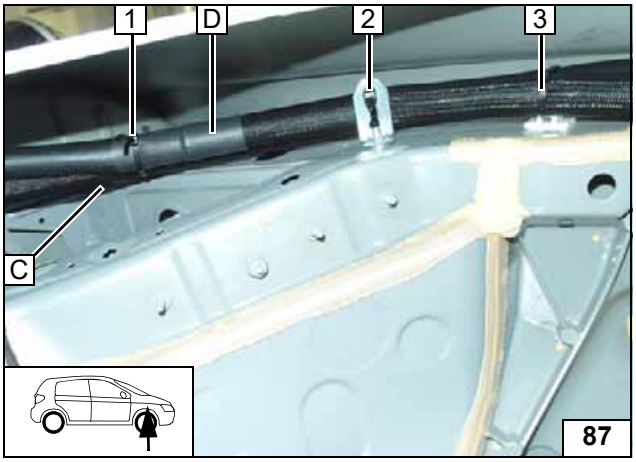
1 Align black (sw) rubber isolator [3x]
2 Edge clip cable tie

Routing of hose C in wheel well



1 M6x20 bolt, spring lockwasher, original vehicle thread
2 Align black (sw) rubber isolator
3 Perforated bracket

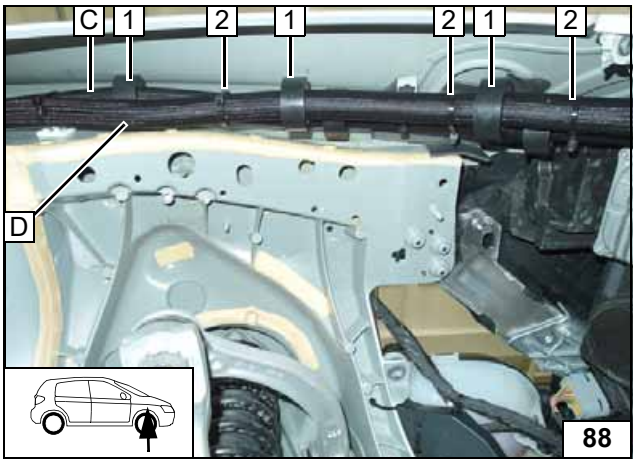
Connecting circulating pump outlet



Route hose **D** and circulating pump wiring harness in wheel well to the front.

1 Cable tie
2 Cable tie on angle bracket
3 Cable tie on adhesive base

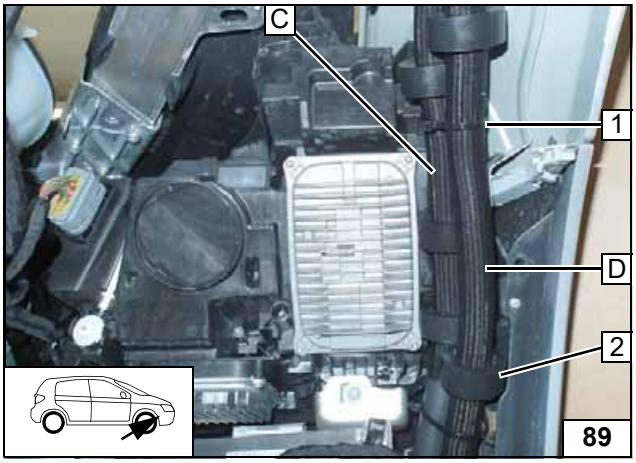
Routing of hose D in wheel well



Route hose **D** and circulating pump wiring harness in wheel well to the front.

1 Align black (sw) rubber isolator [3x]
2 Cable tie [3x]

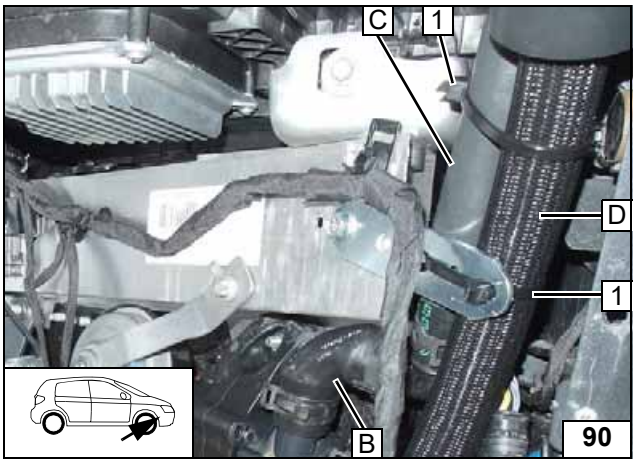
Routing of hose D in wheel well



Route hose **D** and circulating pump wiring harness in wheel well to the front.

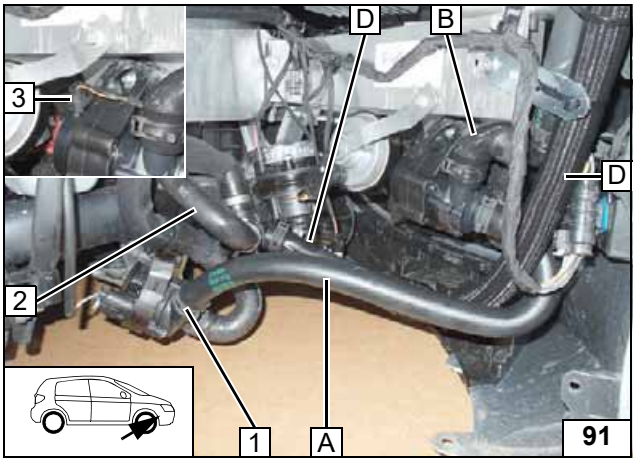
1 Cable tie
2 Align black (sw) rubber isolator

Routing of hose D in wheel well



1 Cable tie [2x]

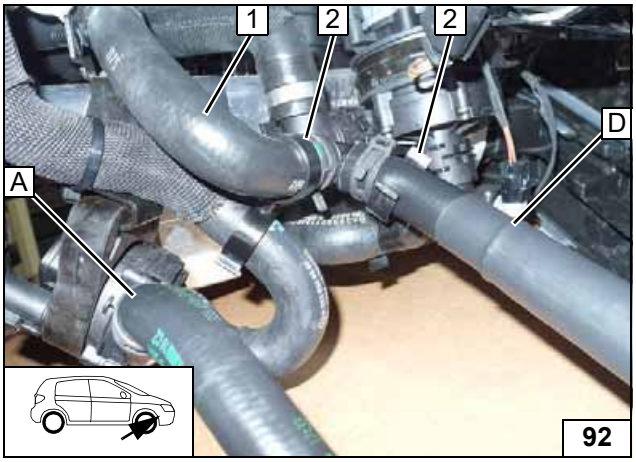
Routing of hose D in wheel well



E220d

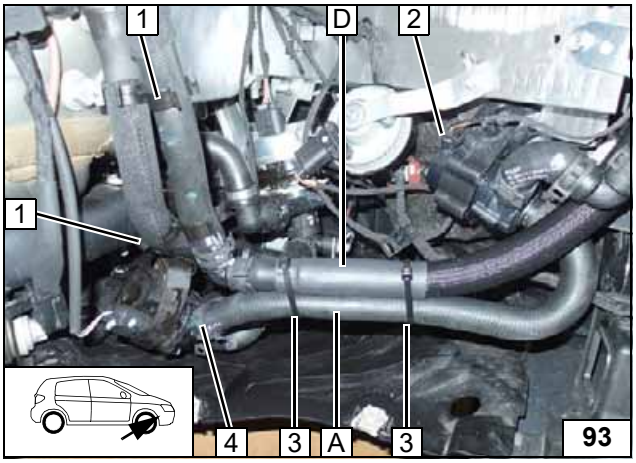
1 Additional coolant pump outlet connection piece
2 Engine inlet hose
3 Connector of circulating pump wiring harness

Connecting hoses A and D



1 Engine inlet hose
2 Hose bracket [2x]

Installing hose bracket



E350d

1 Hose bracket [2x]
2 Connector of circulating pump wiring harness
3 Cable tie [2x]
4 Additional coolant pump outlet connection piece

Connecting hoses A and D

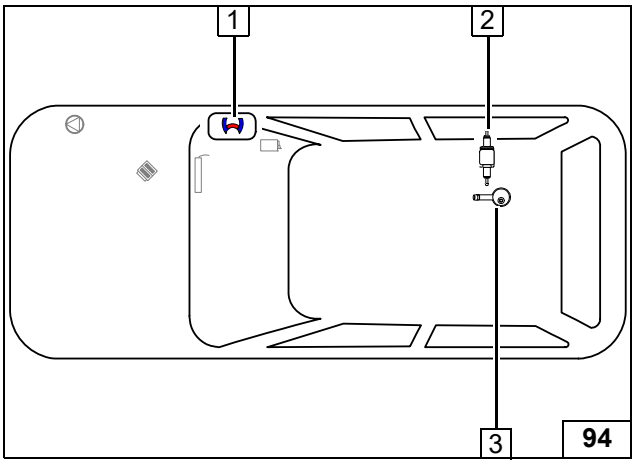
Fuel

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.

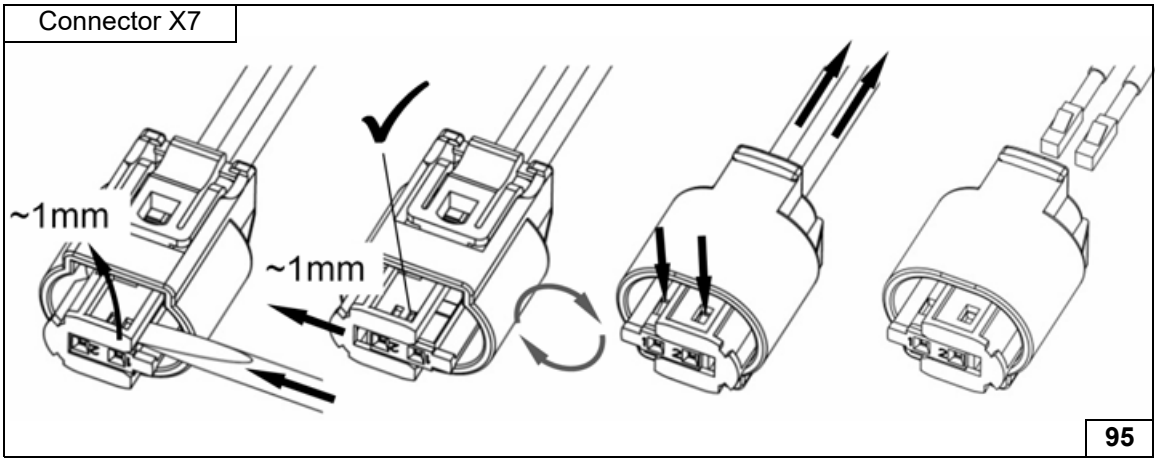
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



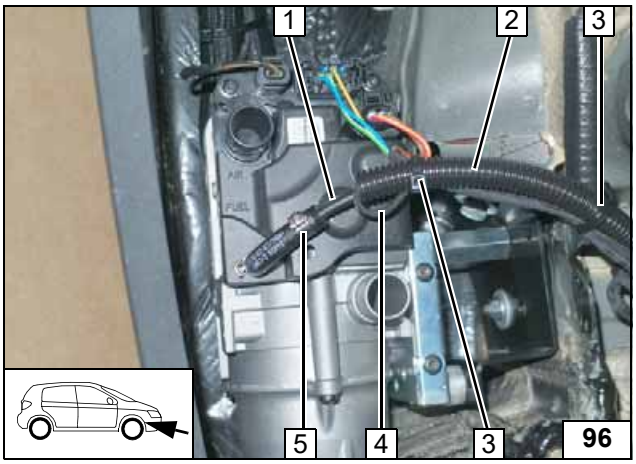
1 Heater
2 Metering pump
3 FuelFix

Installation overview

Connector X7



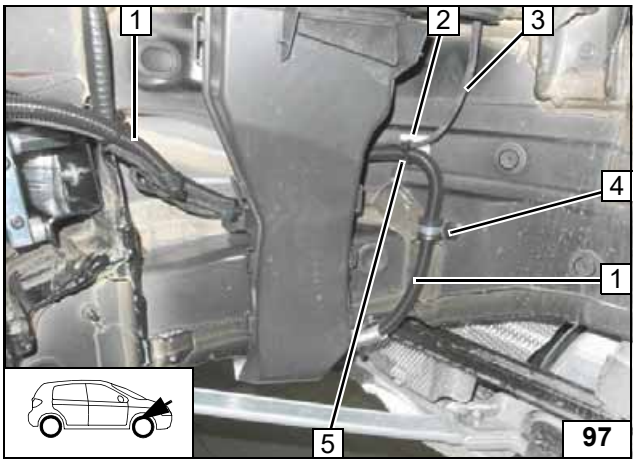
Dismantling metering pump connector



Cut fuel line to length by 1,200mm, this will be required for the connection of the FuelFix. Pull fuel line **1** and metering pump wiring harness **4** into 10 mm dia. corrugated tube **2**.

3 Cable tie [2x]
5 10 mm dia. clamp

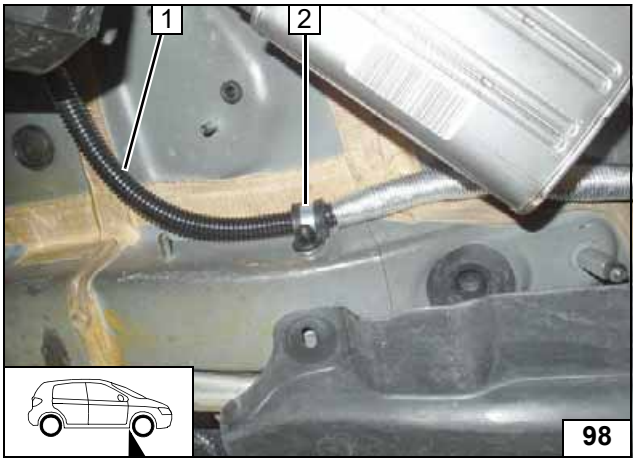
Connecting heater



Degrease bonding surfaces at position **2**.

1 Fuel line and metering pump wiring harness in 10 mm dia. corrugated tube
2 Adhesive base
3 Heater wiring harness
4 15mm dia. rubber-coated p-clamp, plastic nut, original vehicle stud bolt
5 Cable tie

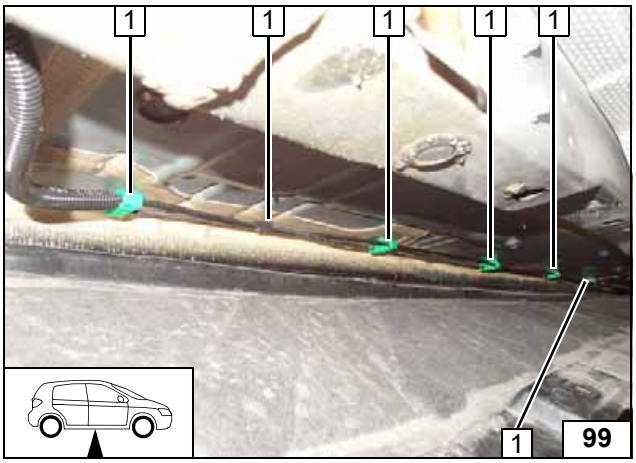
Routing lines



Petrol

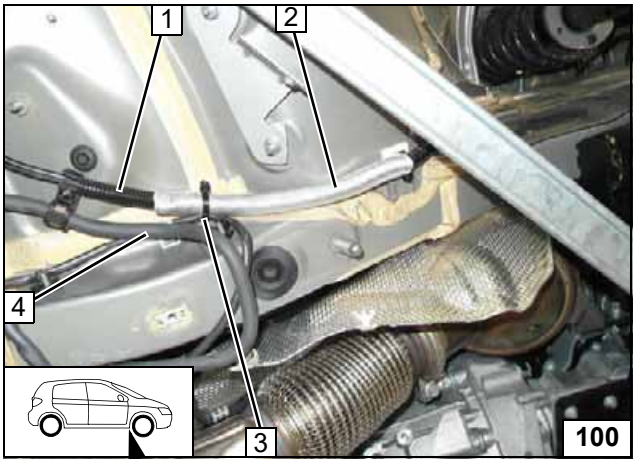
1 Fuel line and metering pump wiring harness in 10 mm dia. corrugated tube
2 15mm dia. rubber-coated p-clamp, plastic nut, original vehicle stud bolt

Routing lines



Attach line holder **1** [6x] to original vehicle stud bolts.
Attach fuel line and metering pump wiring harness to line holders and route to metering pump installation location.

Routing lines

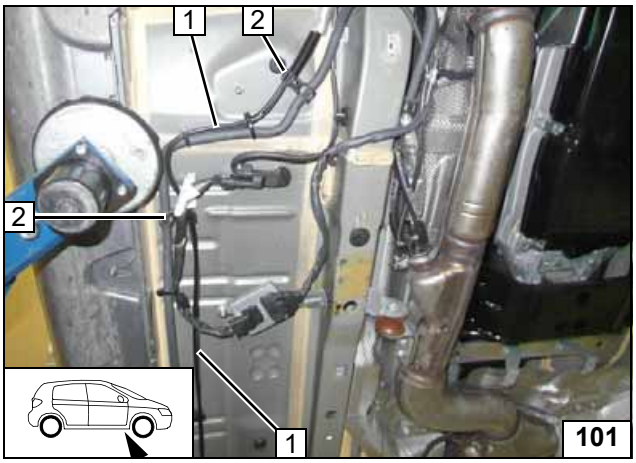


Diesel

Slide 300 mm, 14.5 mm dia. heat protection hose **2** onto 10 mm dia. corrugated tube **1** and secure with cable tie **3**.

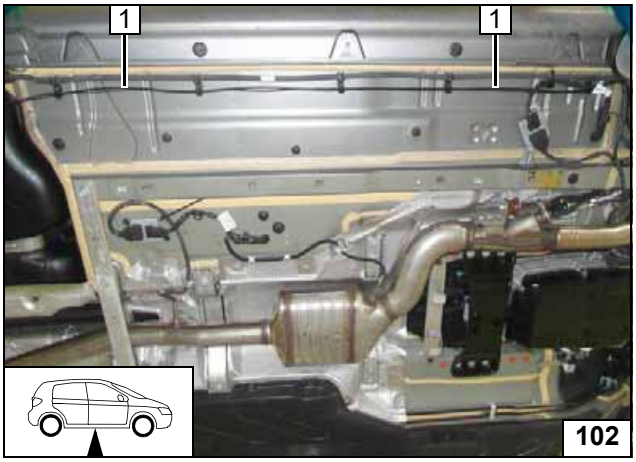
4 Additional line (depends on the equipment)

Routing lines



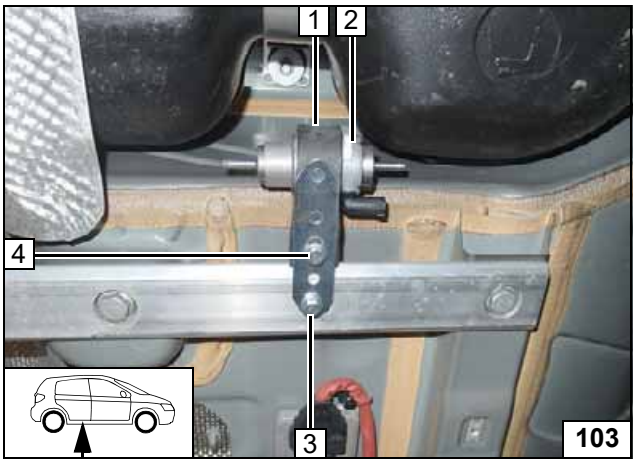
Insert fuel line and metering pump wiring harness **1** in original vehicle line holder **2**.

Routing lines



Route fuel line and metering pump wiring harness **1** along original vehicle line holders to the installation location of the metering pump.

Routing lines

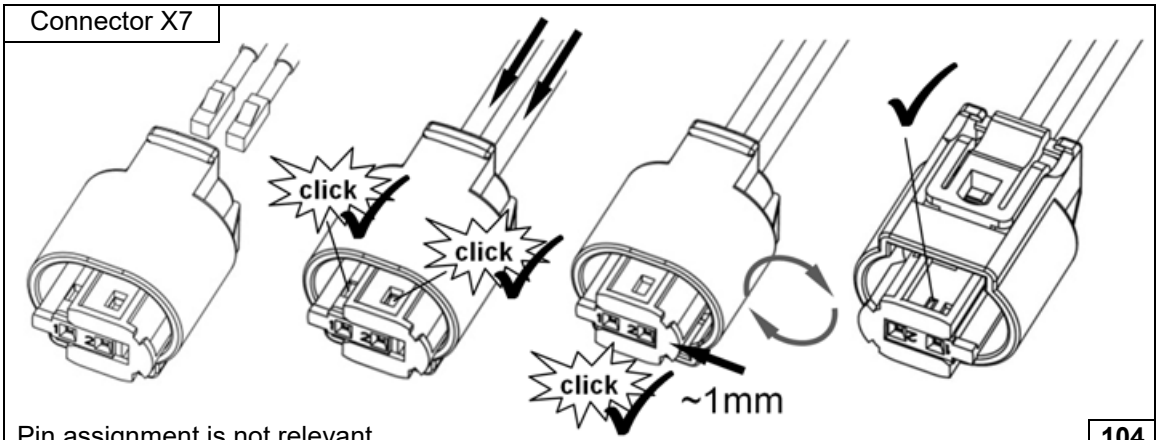


All vehicles

- **1** Metering pump mount
- **2** Metering pump
- **3** M6x30 bolt, original vehicle hole, large diameter washer, flanged nut
- **4** M6x25 bolt, support angle bracket, flanged nut

Installing metering pump

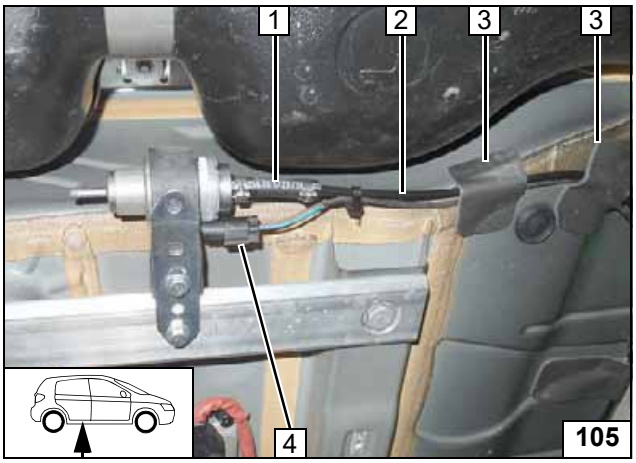
Connector X7



Pin assignment is not relevant.

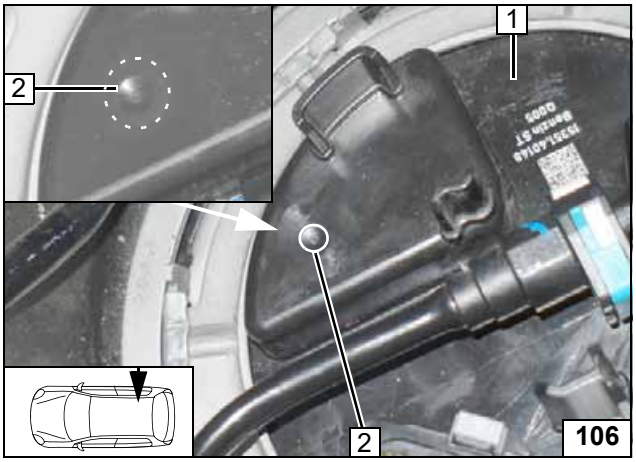
104

Completing metering pump connector



1 Hose section, 10mm dia. clamp [2x]
2 Heater fuel line
3 Self-adhesive foam [2x]
4 Metering pump wiring harness, connector X7 mounted

Connecting metering pump

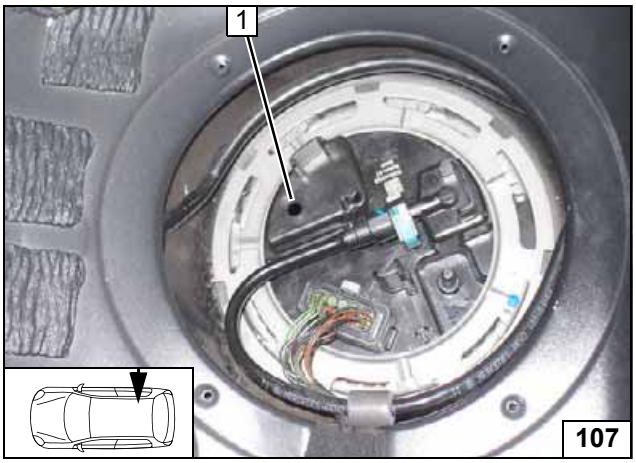


Installing FuelFix in Petrol Vehicles

Work steps F1 and F2.

1 Tank fitting
2 Hole pattern corresponds to existing embossing

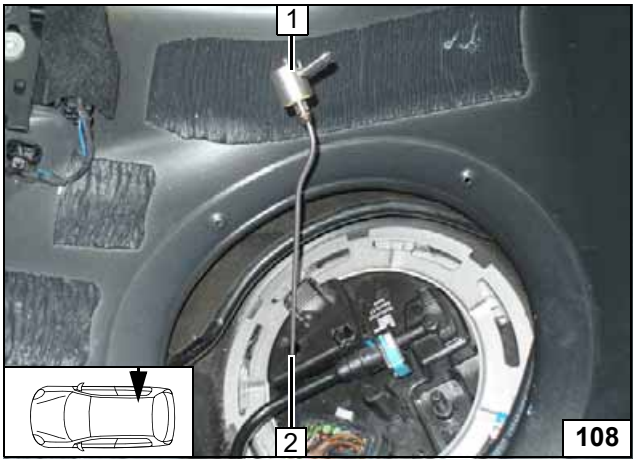
Copying hole pattern



Work step F3.

1 Hole made with provided drill

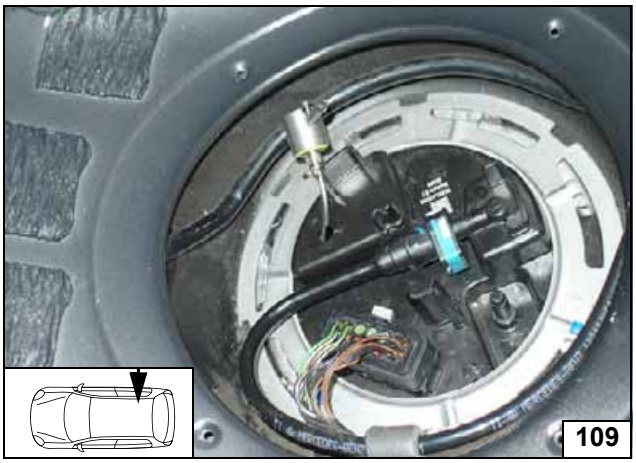
Hole for FuelFix



Work steps F4 and F5.

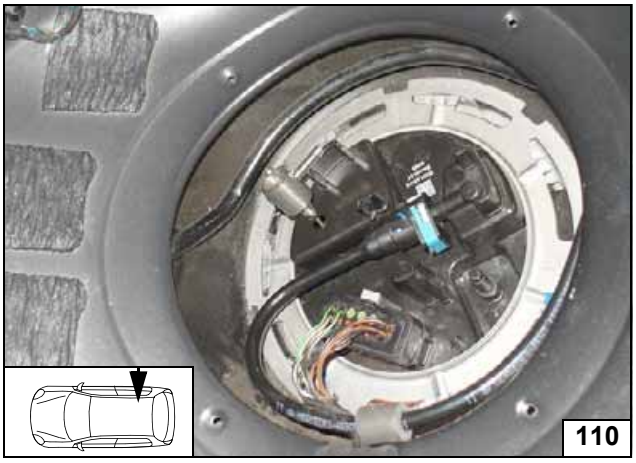
Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

Inserting FuelFix

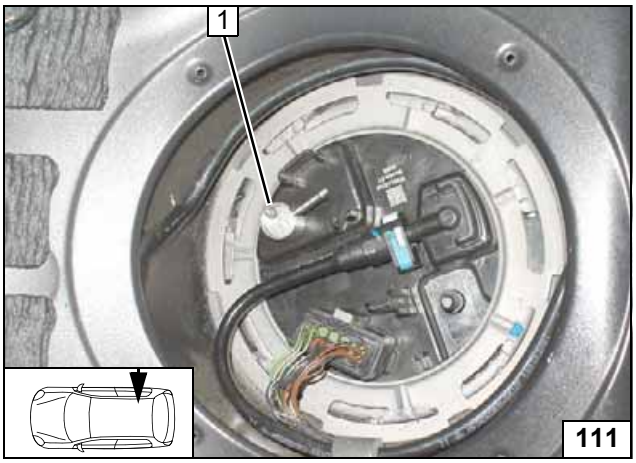


Work step F5.

Inserting FuelFix



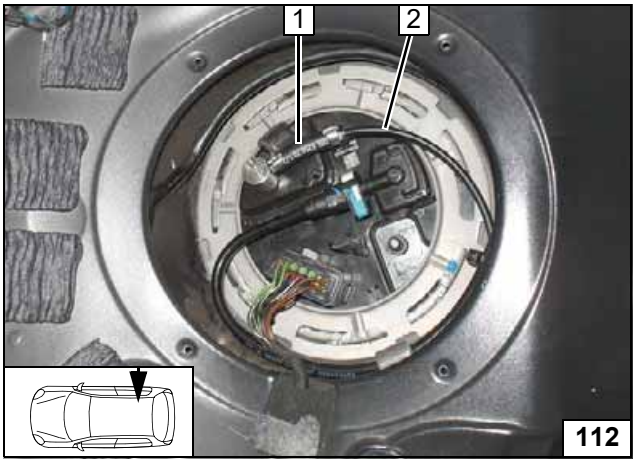
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

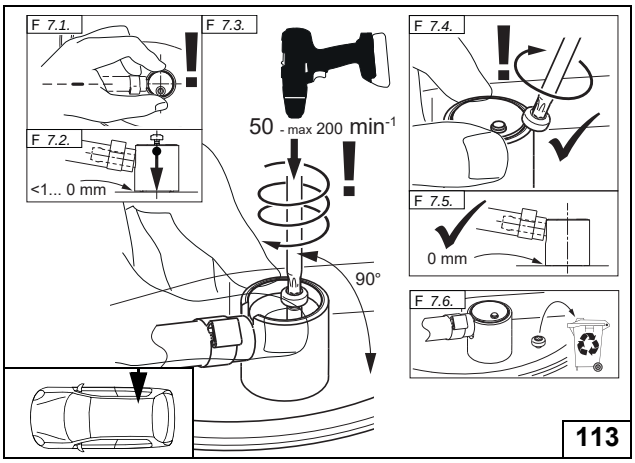
Aligning FuelFix



Work step F6.

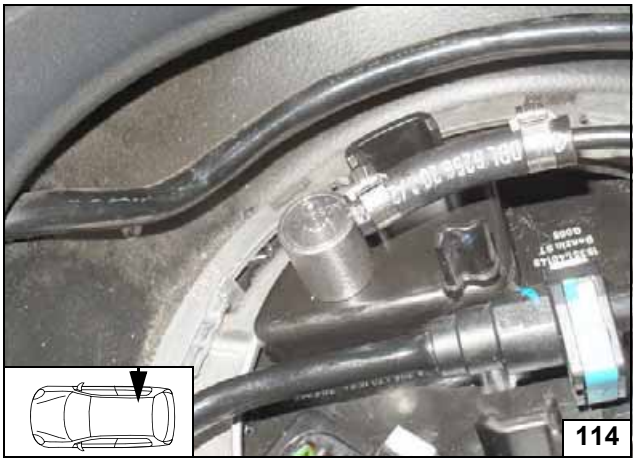
1 Hose section, 10mm dia. clamp [2x]
2 Fuel line

Connecting fuel line



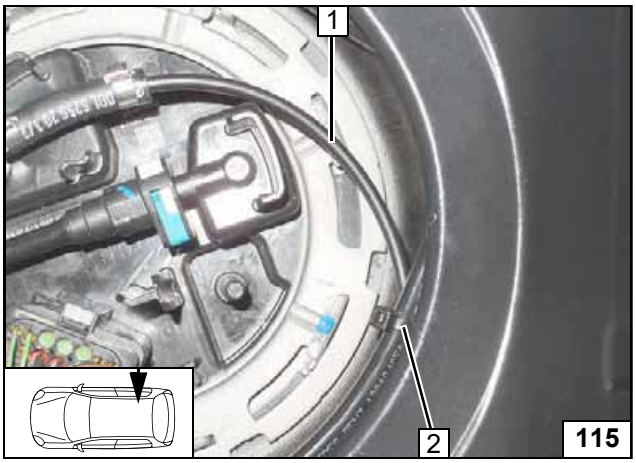
Work step F7.

Installing FuelFix



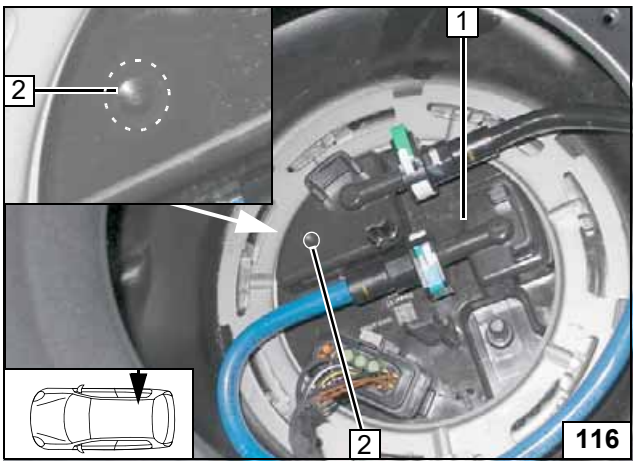
Work step F8.

Checking firm seating of FuelFix



1 Fuel line of FuelFix
2 Cable tie as tension relief

Securing fuel line

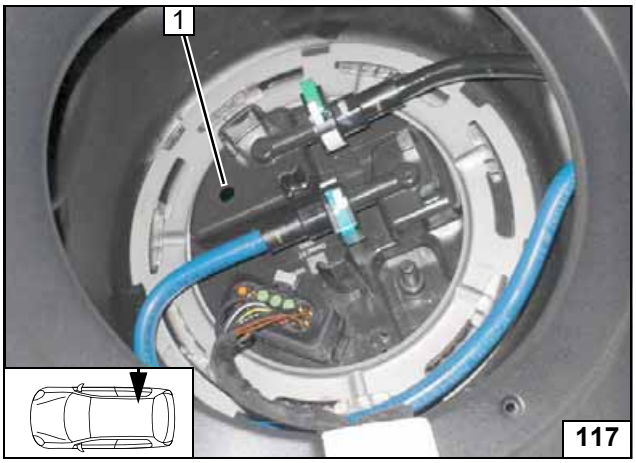


Installing FuelFix in Diesel Vehicles

Work steps F1 and F2.

1 Tank fitting
2 Hole pattern corresponds to existing embossing

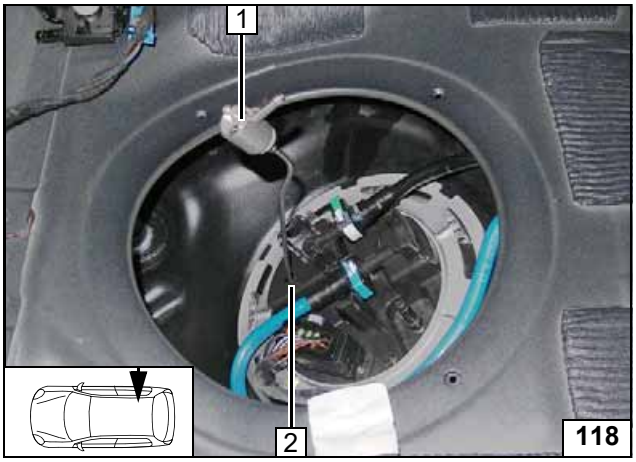
Copying hole pattern



Work step F3.

1 Hole made with provided drill

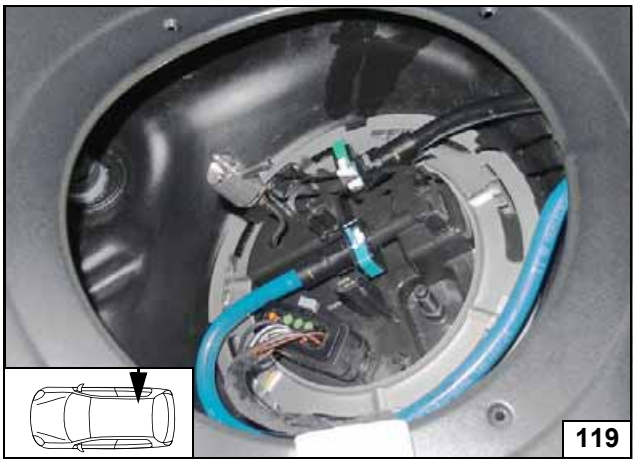
Hole for FuelFix



Work steps F4 and F5.

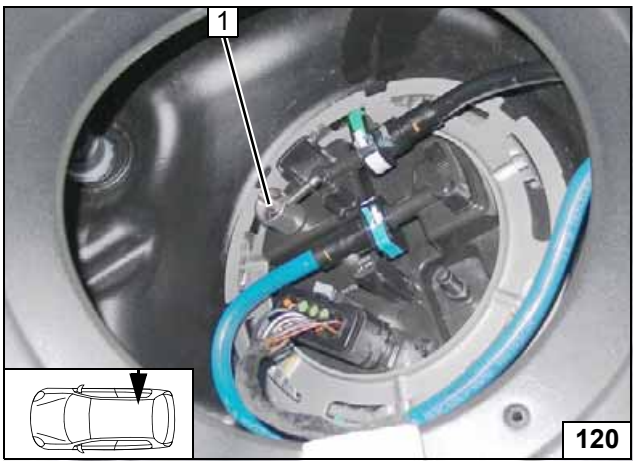
Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

Inserting FuelFix



Work step F5.

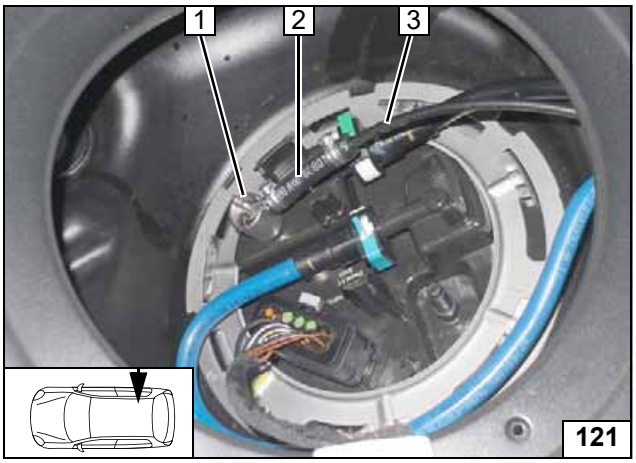
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

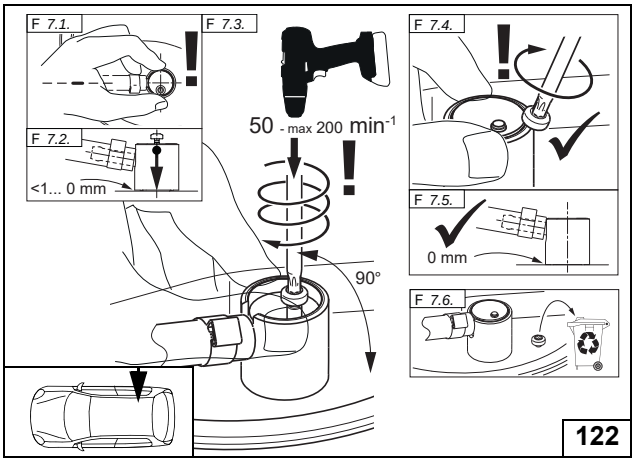
Aligning FuelFix



Work step F6.

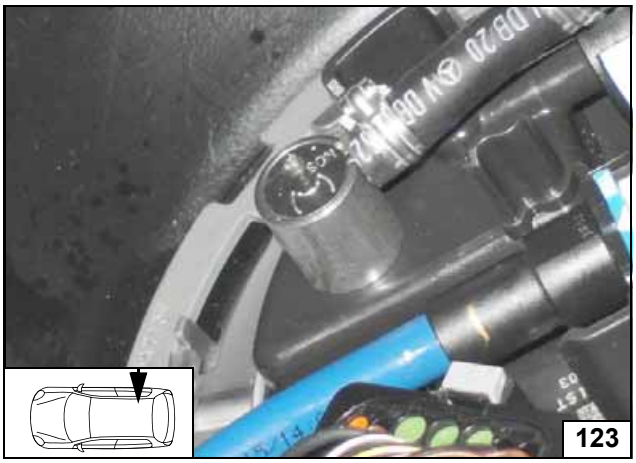
1 FuelFix
2 Hose section, 10mm dia. clamp [2x]
3 1200mm long fuel line

Connecting fuel line



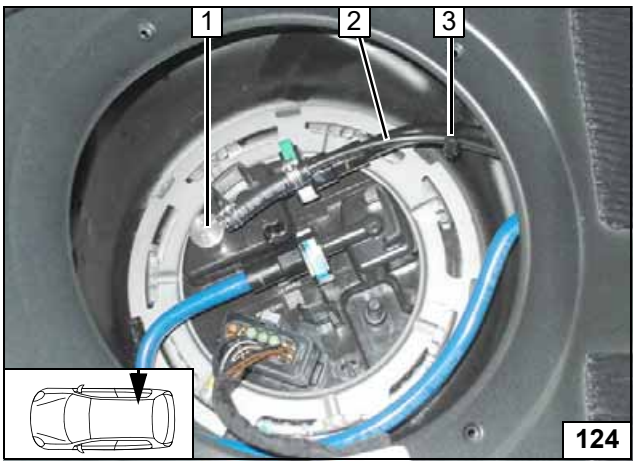
Work step F7.

Installing FuelFix



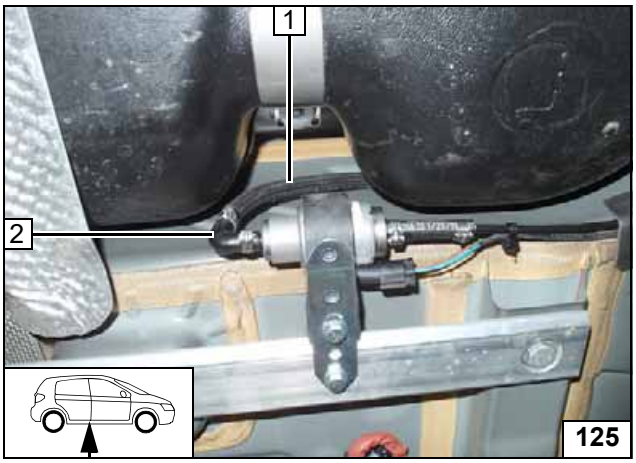
Work step F8.

Checking firm seating of FuelFix



1 FuelFix installed
2 Fuel line of FuelFix
3 Cable tie as tension relief

Securing fuel line

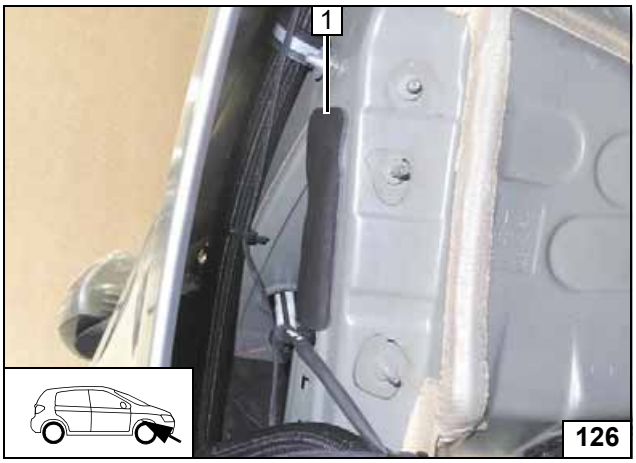


Ensure sufficient distance from neighbouring components, correct if necessary.

1 Fuel line of FuelFix in protective hose
2 90° moulded hose, 10mm dia. clamp [2x]

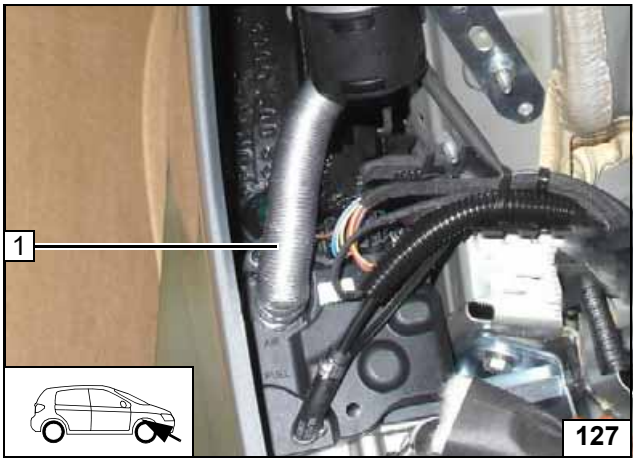
Connecting metering pump

Combustion Air



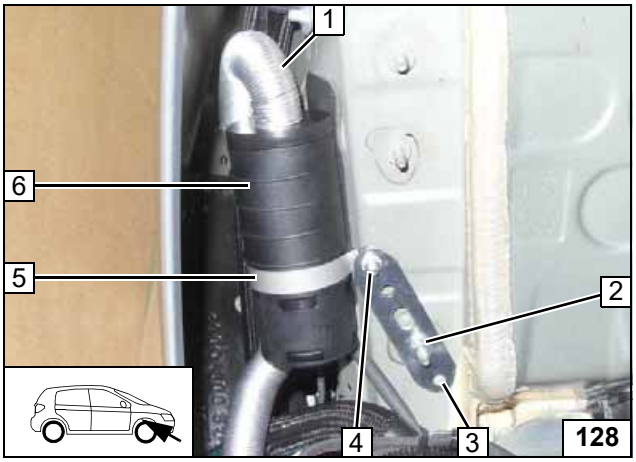
1 Insulation protection strips

Sticking on insulation protection strips



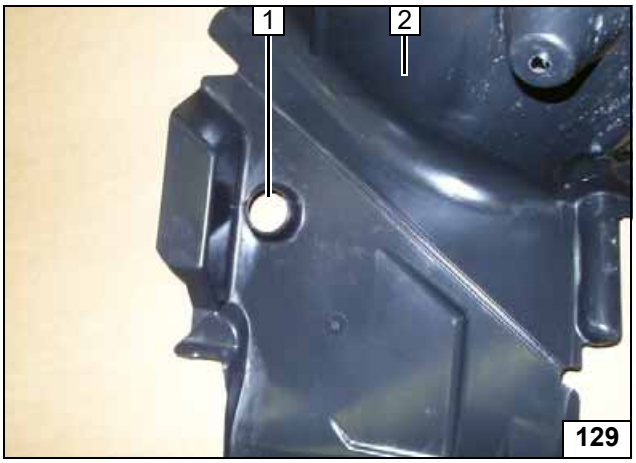
1 Combustion air pipe

Installing combus-tion air pipe



1 Combustion air pipe
2 M6 flanged nut on original vehicle stud bolt
3 Perforated bracket
4 M5x16 bolt, flanged nut
5 51 mm dia. clamp
6 Silencer

Installing silencer

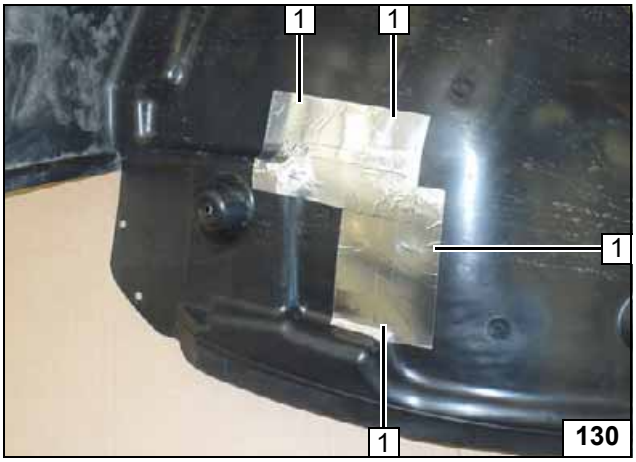


Final Work

Drill out existing opening in position **1** to 60 mm dia.

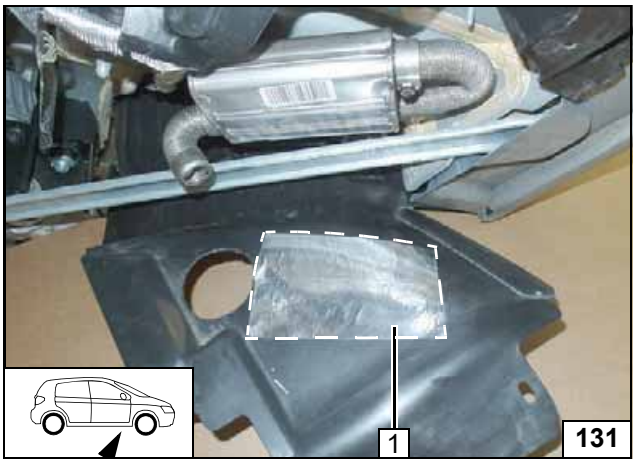
2 Rear section of the wheel well trim

Hole for exhaust pipe a2



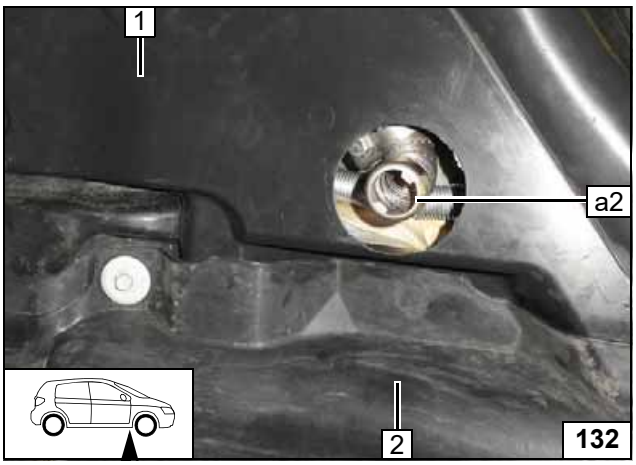
Cut heat protection strip **1** in half and stick on as shown.

Sticking on heat protection strip



Stick heat protection strip **1** on the area near the exhaust silencer as shown!

Installing underride protection



Ensure sufficient distance from neighbouring components, correct if necessary. Install wheel well trim **1**. Align exhaust pipe **a2** with the centre of the hole and flush with wheel well trim **1**.

2 Underride protection

Installing underride protection

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

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

Webasto Thermo & Comfort SE
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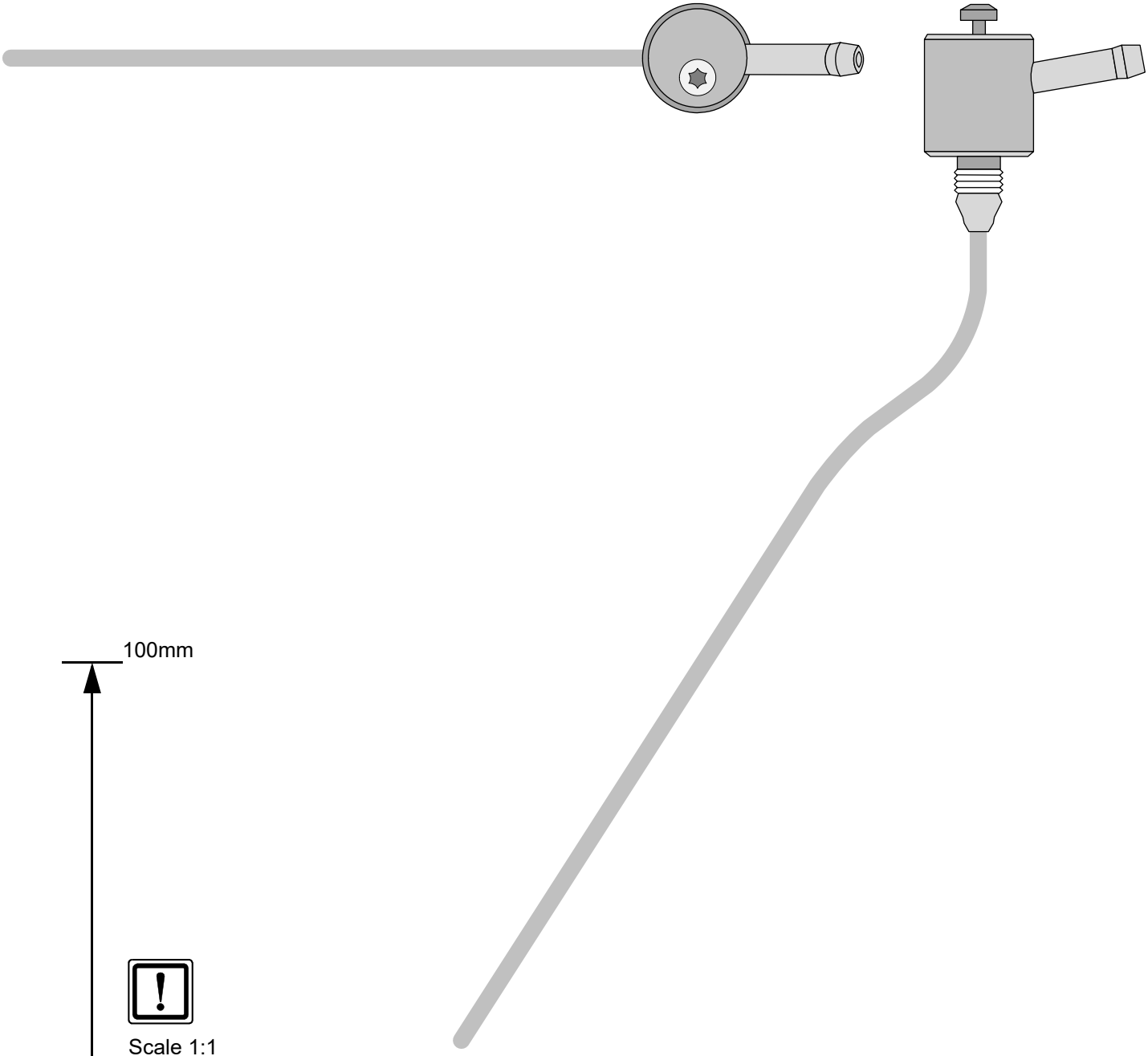
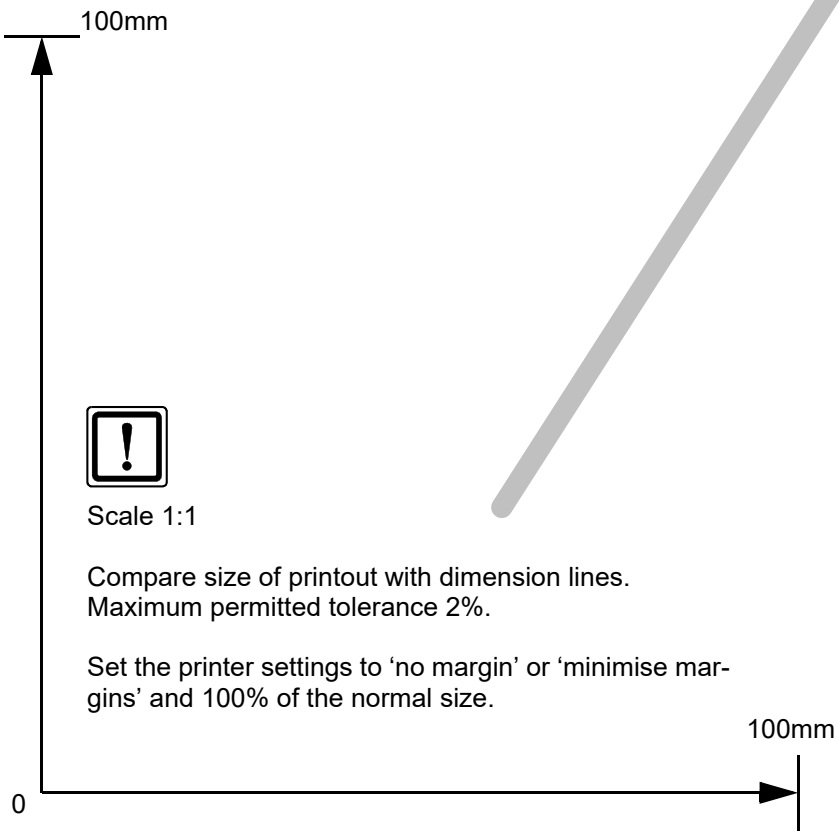
Technical Extranet:
http://dealers.webasto.com

FuelFix Template

Top view





Scale 1:1

Compare size of printout with dimension lines.
Maximum permitted tolerance 2%.

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

