Water Heater

***Thermo Top Evo* Parking Heater** E1 00 0258

Installation Documentation
Alfa Romeo Mito

Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Alfa Romeo	Mito	955	e3 * 2001 / 116 * 0278 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
0.9 8V Twin Air	Petrol	SG	62	900	312A2000
1.4 16V Multi Air	Petrol	SG	77	1400	955A6000
1.4 Multi Air Turbo	Petrol	SG	125	1400	940A2000

SG = Manual transmission

From Model Year 2012
Left-hand drive vehicle

Verified equipment variants:
Manual air-conditioning
Front fog light
Headlight washer system
Daytime running lights

Not verified:
Passenger compartment monitoring
Automatic air-conditioning
Bi-Xenon Headlights

Total installation time: about 7 hours

Alfa Romeo Mito

Table of Contents

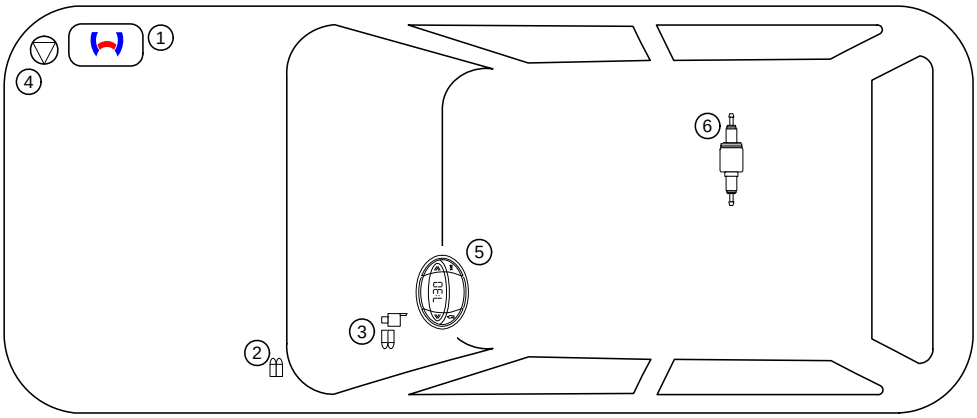
Necessary Components

- Basic delivery scope of *Thermo Top Evo*based on price list
- Installation kit for Alfa Romeo Mito 2012 Petrol: **1319089A**
- Heater control in accordance with price list and upon consultation with final customer
- In case of Telestart, indicator lamp in accordance with price list and upon consultation with final customer

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Fuse holder of passenger compartment
4. Circulating pump
5. Digital timer
6. Metering pump



Notes on Total Installation Time

The total installation time includes the time needed for mounting and demounting of 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 227).

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.

Sharp edges should be fitted with rub protection (split-open fuel hose)! Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

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

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

When installing an IPCU, the corresponding settings must be checked or adjusted before the installation.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 03 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

For vehicles with an EU permit, no entry in accordance with § 19 Sub-Section 4 of Annex VIII b to the Road Traffic Act is required.

2.1 Excerpt from the directive 2001/56/EC Appendix VII 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.

Alfa Romeo Mito

Notes on Validity

This installation documentation applies to Alfa Romeo Mito Petrol vehicles - for validity, see page 1 - from model year 2012 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 Instructions

Special Tools
- **Hose clamp pliers for self-clamping hose clamps**
- **Hose clamp pliers for Clic hose clamps of type W**
- **Automatic wire stripper 0.2 - 6mm²**
- **Crimping pliers for cable lug / tab connector 0.5 - 6mm²**
- **Torque wrench for 2.0 - 10 Nm**
- **Hose clamping pliers**
- **Metric thread-setter kit**
- **Webasto Thermo Test diagnosis with current software**

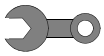
Dimensions
- **All dimensions are in mm.**

Tightening torque values
- **Tightening torque values of 5x13 heater bolts = 8Nm.**
- **Tightening torque values of 5x15 retaining plate of water connection piece bolt = 7Nm.**
- **Tighten other screw 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.

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents

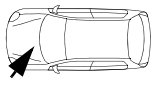
Specific risk of damage to components

Specific risk of fire and explosion

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

Reference to a special technical feature

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



Alfa Romeo Mito

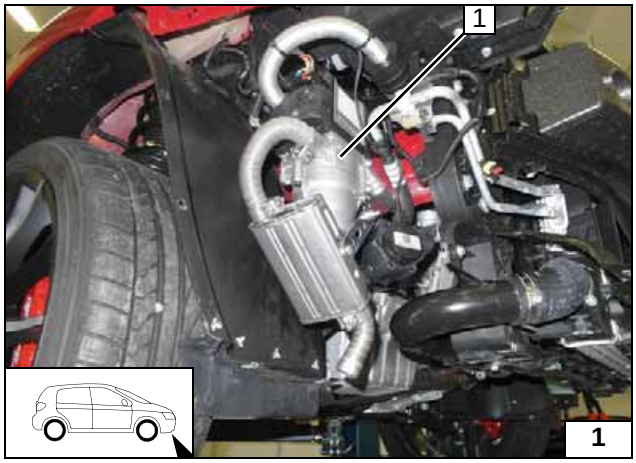
Preliminary Work

Vehicle

- **Open the fuel tank cap.**
- **Ventilate the fuel tank.**
- **Close the fuel tank cap again.**
- **Depressurise the cooling system.**
- **Disconnect the battery.**
- **Remove lower engine compartment cover (if existing).**
- **Remove the bumper trim.**
- **Remove the trim of the fuel lines on the underbody.**
- **Drain off the coolant.**
- **Loosen the coolant expansion tank screw fitting.**
- **Remove the battery.**
- **Remove the battery carrier.**
- **Remove the windscreen wiper.**
- **Remove coolant reservoir cap**
- **Fold the rear seat surface.**
- **Open the tank-fitting service lid.**
- **Remove the fuel-tank sending unit according to manufacturer's instructions.**
- **Remove cover (shelf) of the driver's side instrument panel.**

Heater

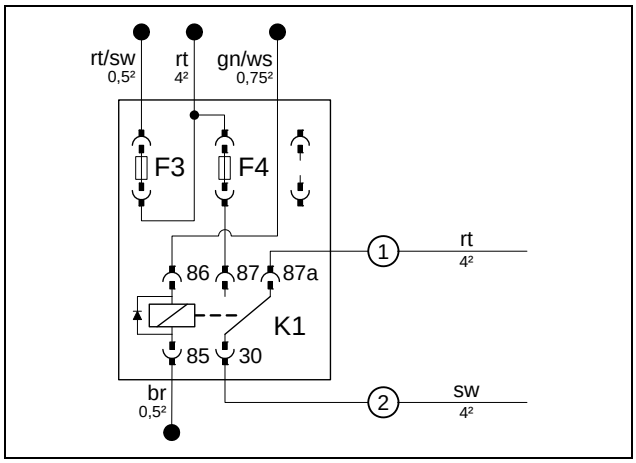
- **Remove years that do not apply from the type and duplicate label.**
- **Attach the duplicate label (type label) in the appropriate place inside the engine compartment.**



Heater Installation Location

1 Heater

Installation location

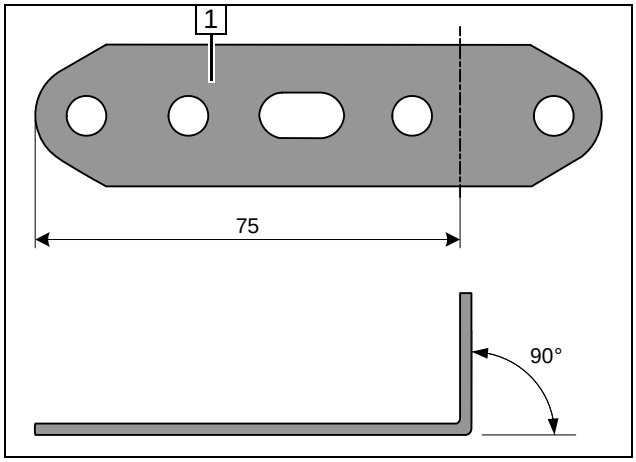


Preparing Electrical System

Manual air-conditioning

Preparing fuse holder of passenger compartment

F4 25A and K1 relay are mounted after installing the fuse holder. Insert red (rt) wire ① in the relay socket K1/87a and black (sw) wire ② in relay socket K1/30.



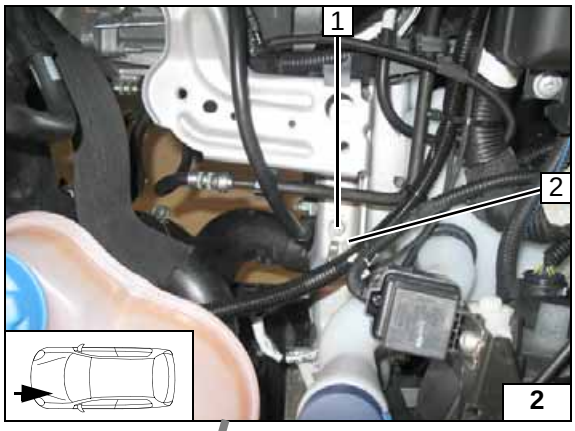
1 Perforated bracket

Bending perforated bracket

Electrical System

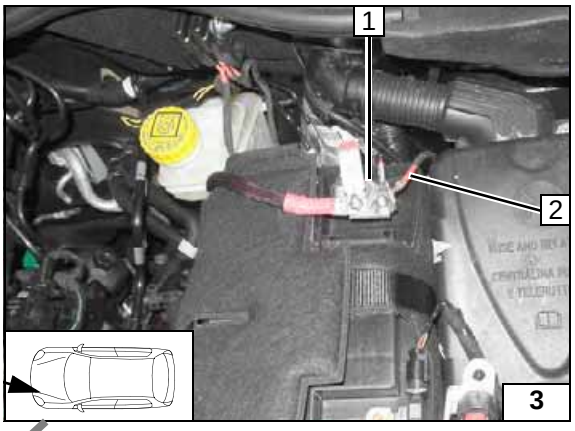
Earth wire

1 Original vehicle earth point
2 Earth cable of heater wiring harness



Positive wire

1 Positive battery terminal
2 Positive wire of heater wiring harness



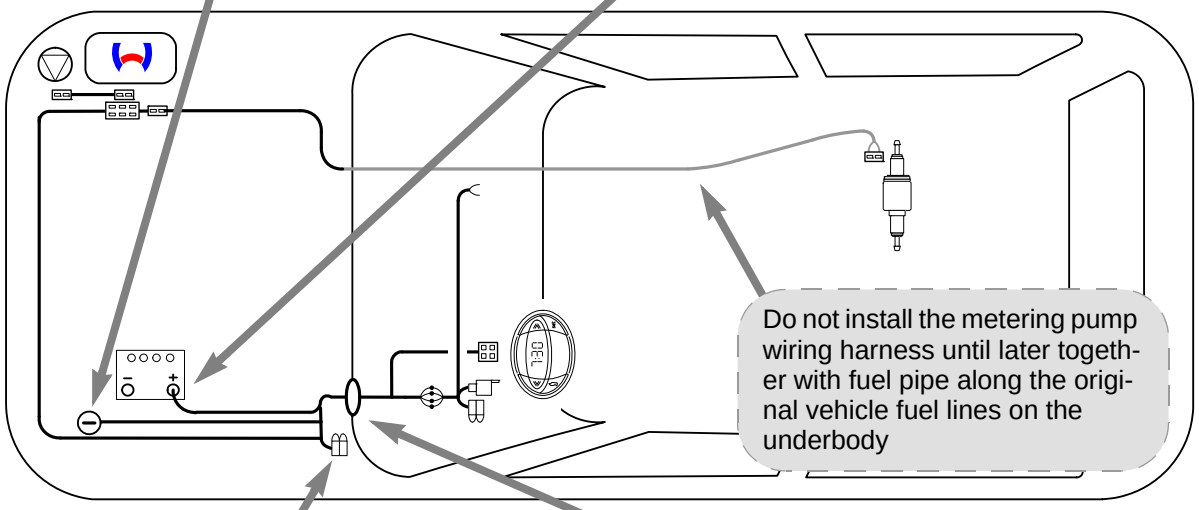
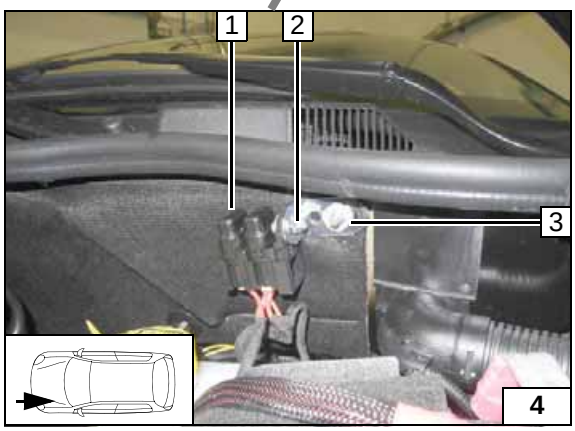


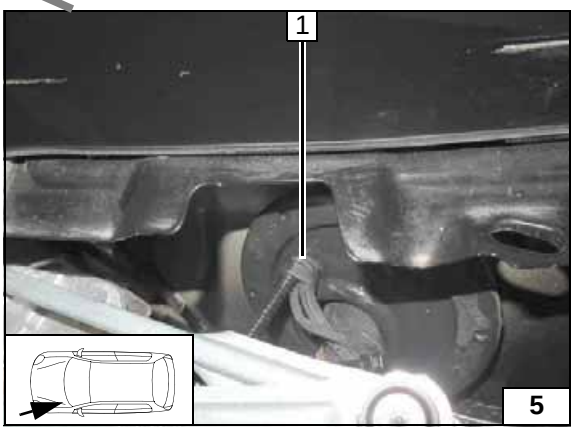
Diagram of wiring harness routing



Fuse holder of engine compartment

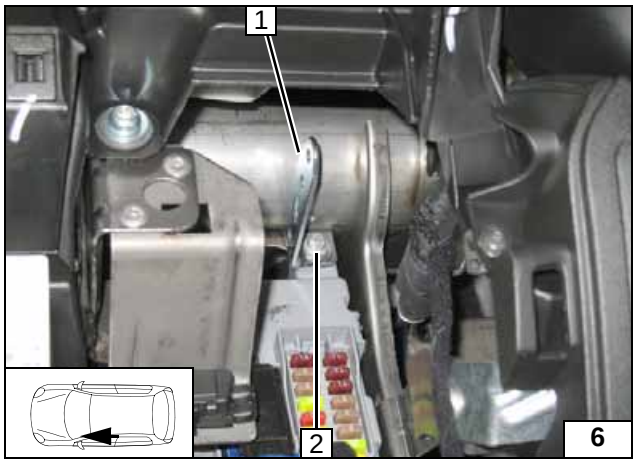
Discard original vehicle nut at position 3.

1 Fuses F1-2 connected
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
3 Original vehicle stud bolt, angle bracket, flanged nut



Wiring harness pass through

1 Protective rubber plug



1 Perforated bracket
2 Original vehicle bolt

Mounting perforated bracket

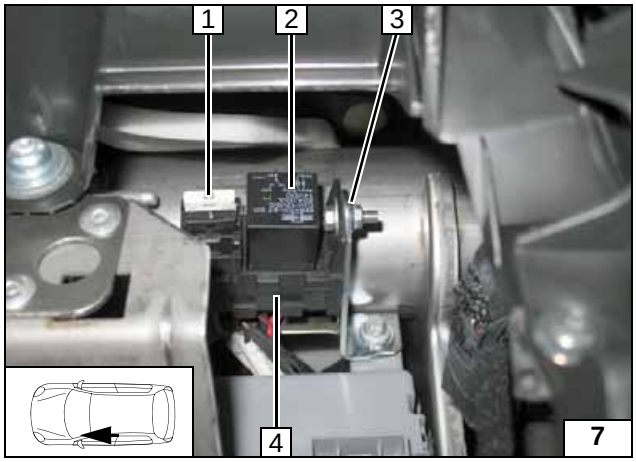
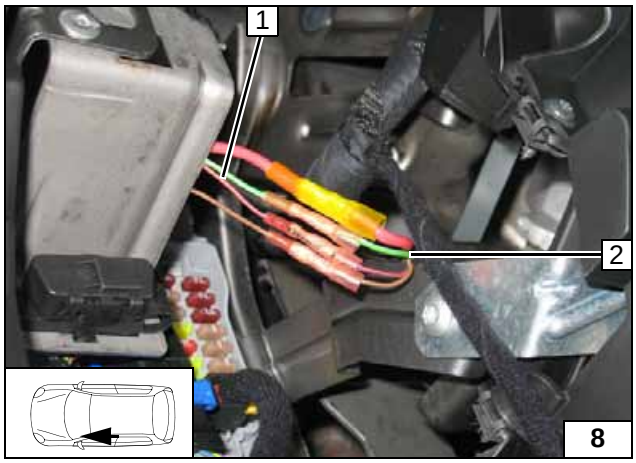


Photo shows vehicle with manual air-conditioning.

1 25A fuse F4 attached
2 K1 relay attached
3 M5x16 bolt, large diameter washer, flanged nut
4 Fuse holder of passenger compartment

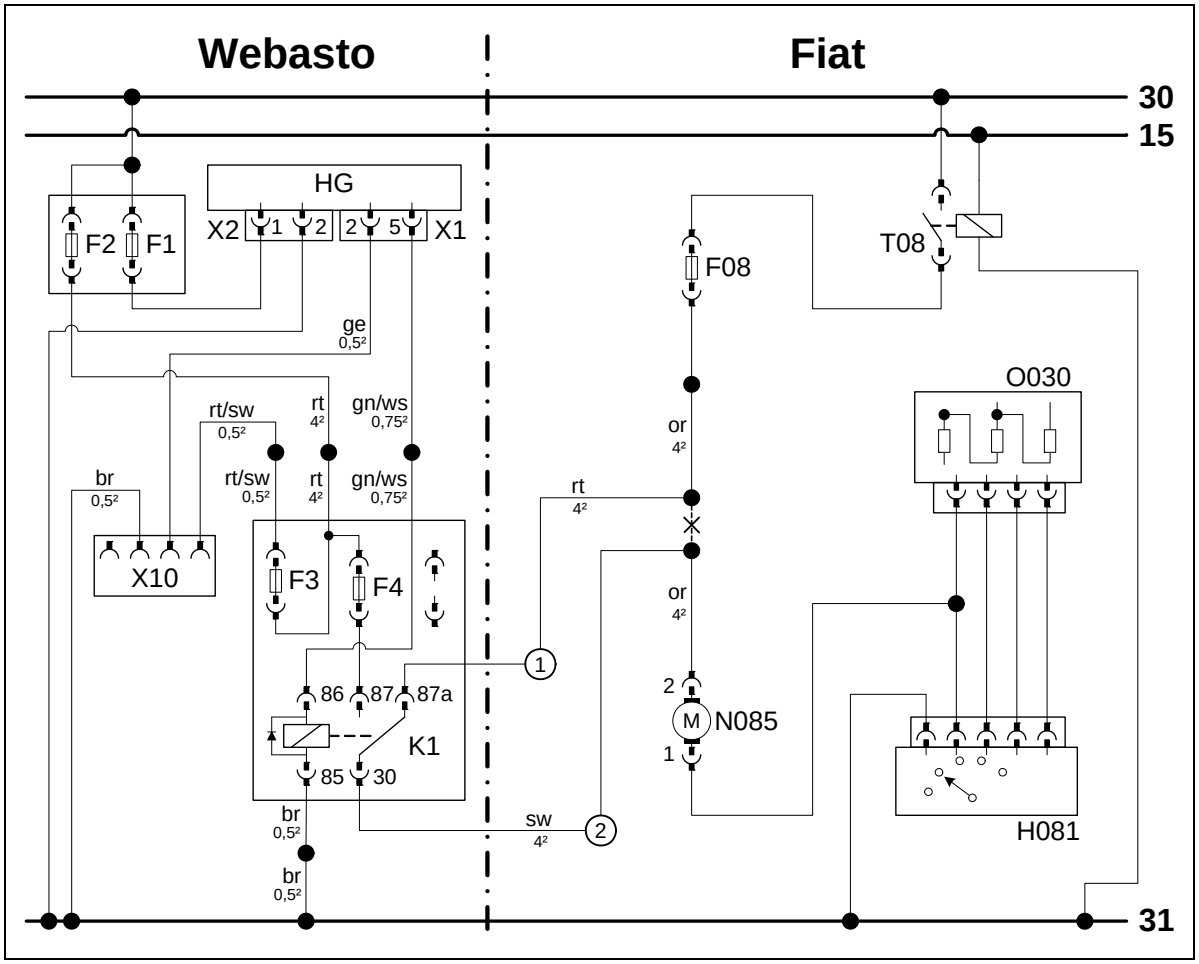
Installing fuse holder of passenger compartment



Connect the wiring harness of passenger compartment fuse holder **1** with the wiring harness of heater **2** according to the wiring diagram in such a way that the wires of the same colour are connected.

Connecting wiring harnesses

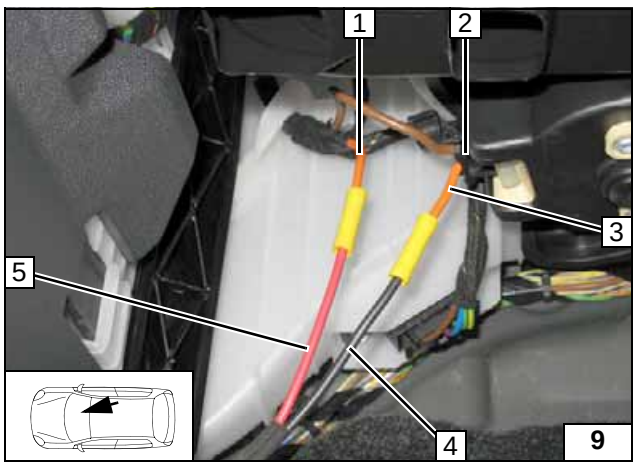
Fan Controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	N085	Fan motor	rt	red
X1	6-pin heater connector	T08	Fan relay	ws	white
X2	2-pin heater connector	O030	Resistor group	sw	black
X10	4-pin connector Heater control	H081	Fan switch	br	brown
		F08	30A fuse	gn	green
K1	Fan relay			ge	yellow
F1	20A fuse			or	orange
F2	30A fuse				
F3	1A fuse			**X**	Cutting point
F4	25A fuse			Wiring colours may vary.	

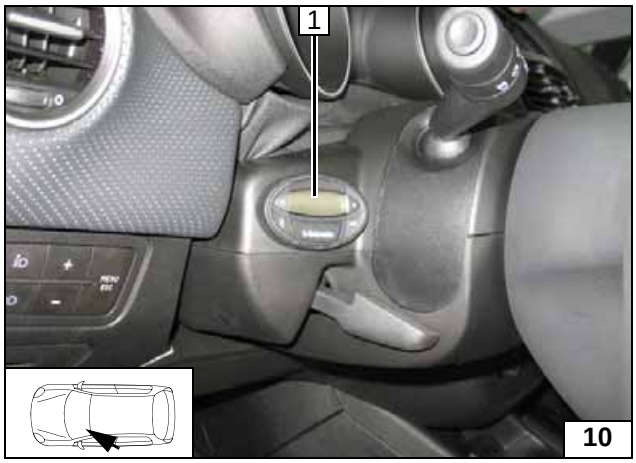
Legend



Connection to 2-pin connector **2** from fan motor. Produce connections as shown in wiring diagram.

1 orange (or) wire of F08 fuse
3 Orange (or) wire of 2-pin N085 connector
4 Black (sw) wire from K1/30
5 Red (rt) wire from K1/87a

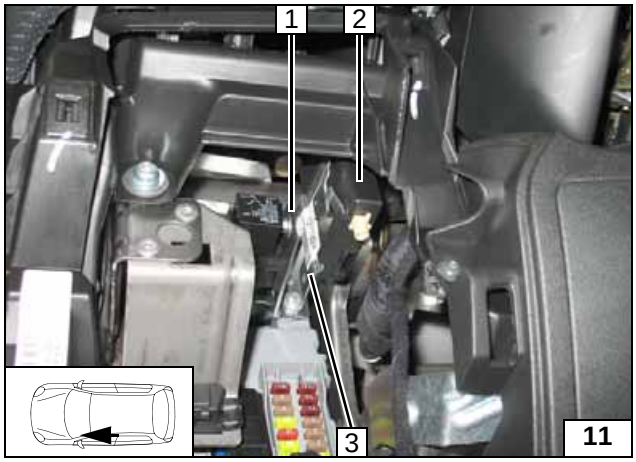
Connecting fan motor



Digital Timer

1 Digital timer

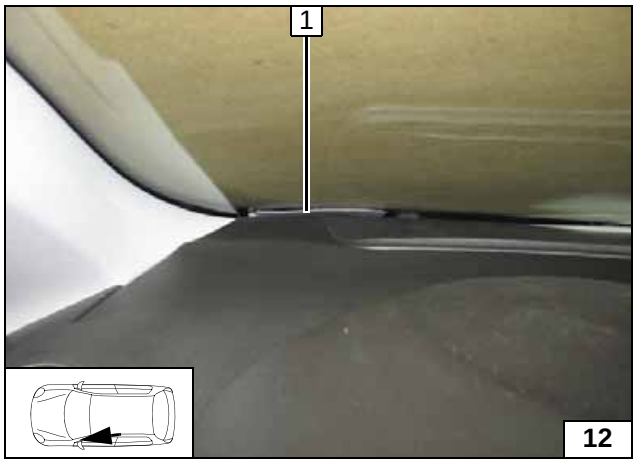
Installing digital timer



Remote Option (Telestart)

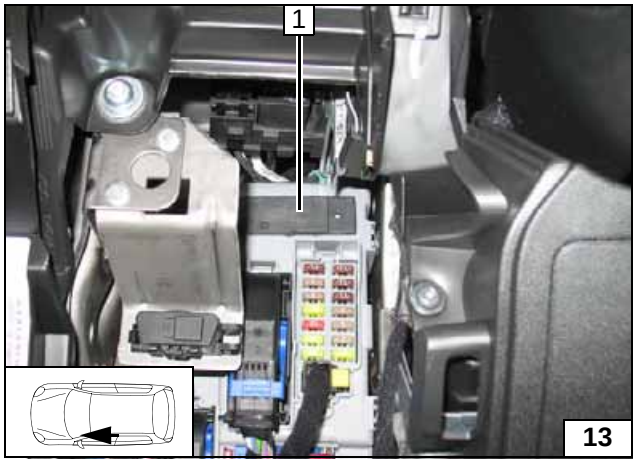
Fasten bracket **3** of receiver **2** with bolt of passenger compartment fuse holder **1**.

Installing receiver



1 Antenna

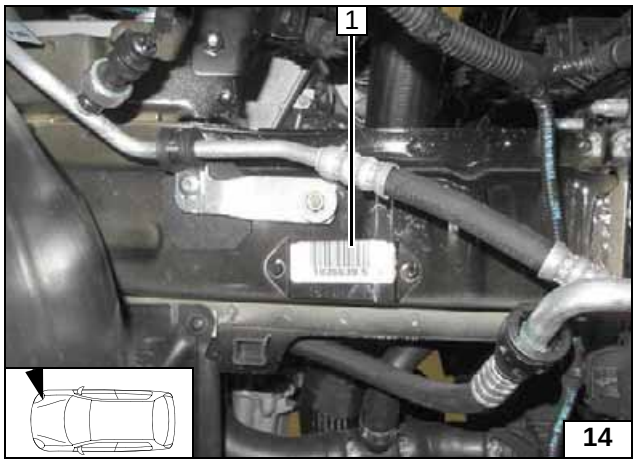
Installing antenna



Temperature sensor T100 HTM

Fasten temperature sensor **1** with adhesive tape.

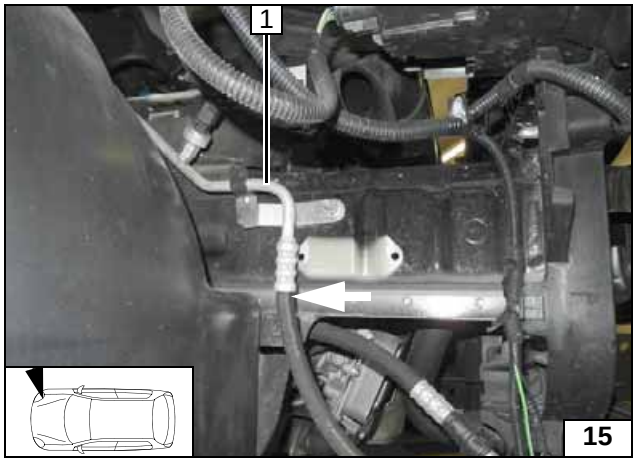
Installing temperature sensor



Preparing Installation Location

1 Remove designation plate

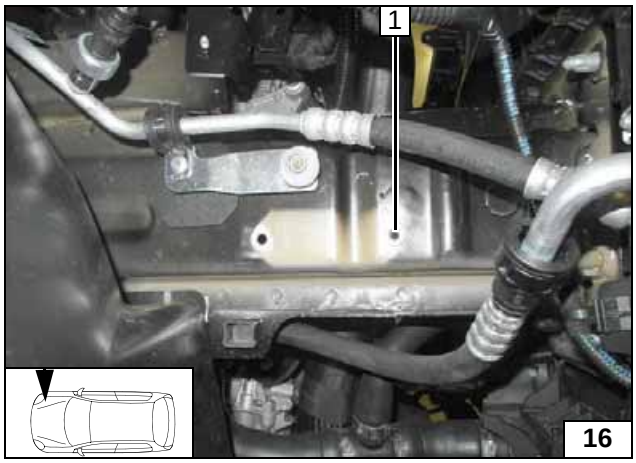
Preparing installation location



77 kW

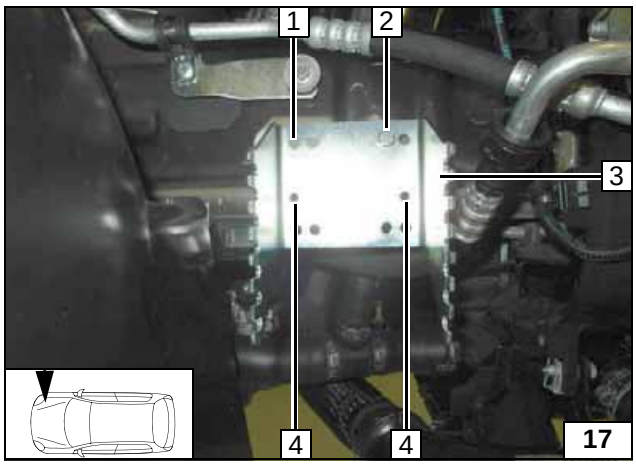
Align A/C line **1** towards the direction of the arrow.

Preparing installation location



Drill out original vehicle hole **1** to 9.1mm dia and insert M6 rivet nut.

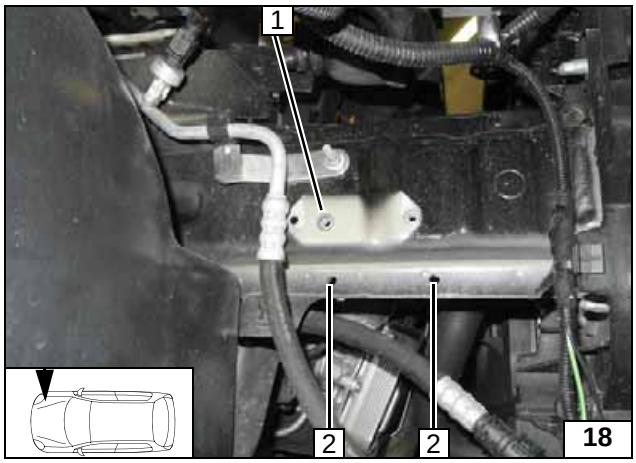
Preparing installation location



Install bracket **3** and copy hole pattern **1** for 9.1mm dia. hole and drill.

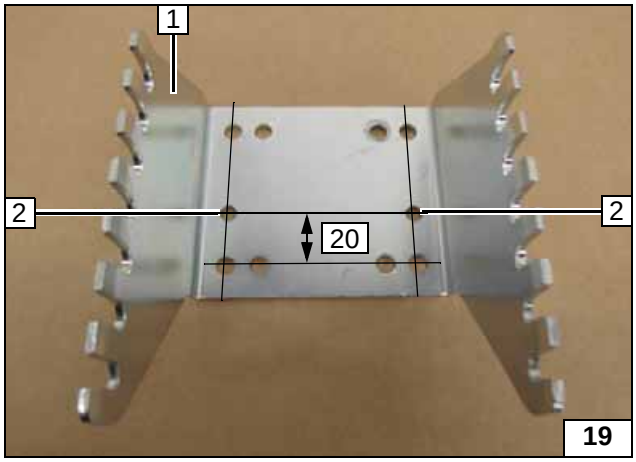
2 M6x20 bolt, M6 rivet nut
4 Copy hole pattern, 7 mm dia. hole [2x]

Copying hole pattern



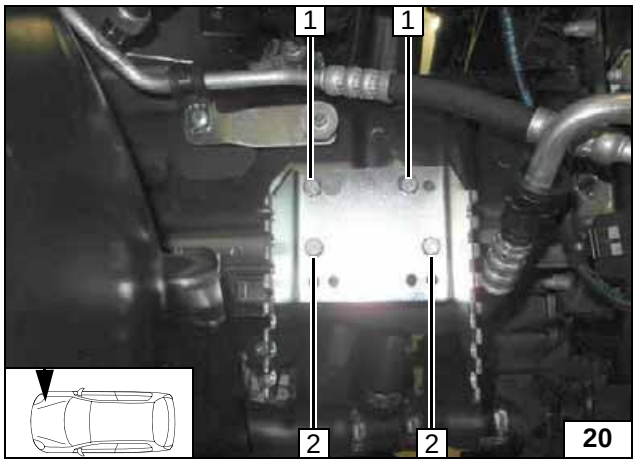
1 M6 rivet nut
2 7mm dia. hole [2x]

Inserting and tightening rivet nuts



1 Bracket
2 Copy hole pattern, 7 mm dia. hole [2x]

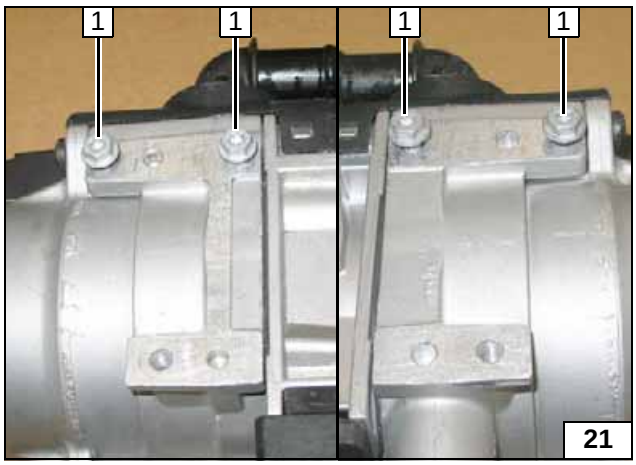
Installing bracket



Position one 30mm shim and one 5mm shim each between bracket and frame side member at position **2**.

1 M6x20 bolt, spring lockwasher [2x each]
2 M6x55 bolt, flanged nut

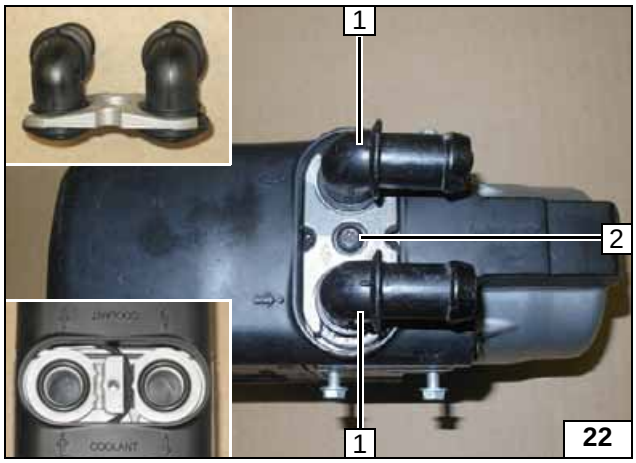
Installing bracket



Preparing Heater

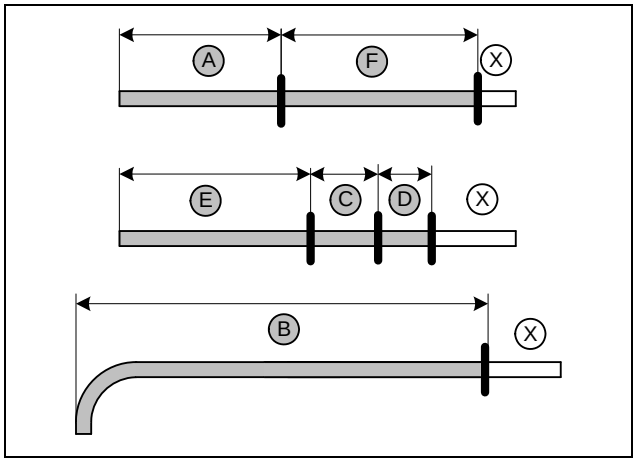
Precut thread with 5x13 self-tapping bolts **1** [4x] and mount loosely (screw in a maximum of 3 thread turns).

Loosely premounting bolts



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

Installing water connection piece

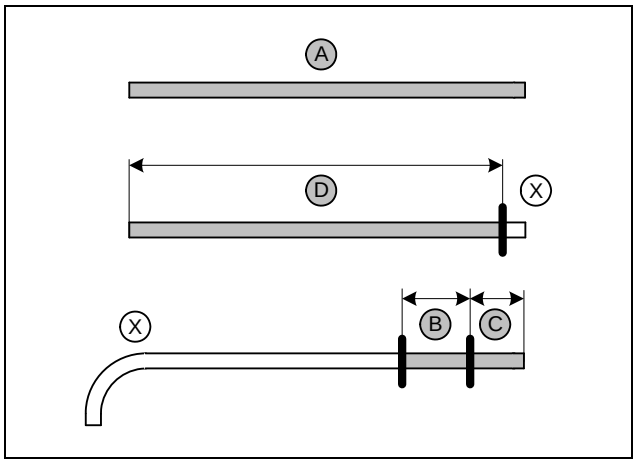


Only 0.9/62kW and 1.4/77kW

Discard section **X**.
Hose **B** = 90°, 18 mm dia. moulded hose

	62kW	77kW
A =	580	490
B =	650	760
C =	90	90
D =	60	60
E =	660	780
F =	620	490

Cutting hoses to length

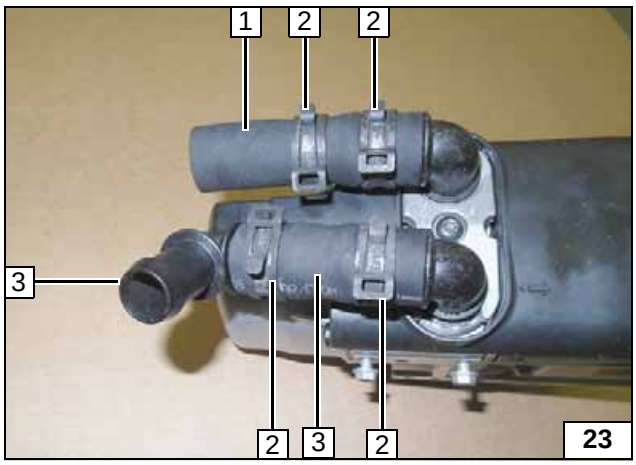


125kW

Discard section **X**.

A = 1200
B = 90
C = 60
D = 1140

Cutting hoses to length



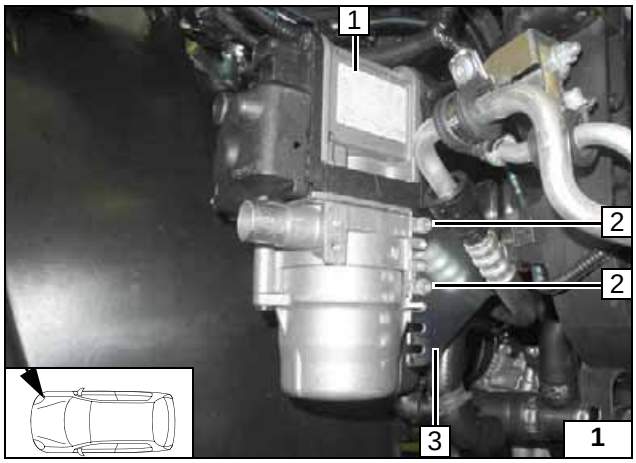
62 kW and 77kW

1 Hose section C
2 25mm dia. spring clip [4x]
3 Hose section D
4 90° 18x18 connecting pipe

125kW

1 Hose section B
2 25mm dia. spring clip [4x]
3 Hose section C
4 90° 18x18 connecting pipe

Premounting heater

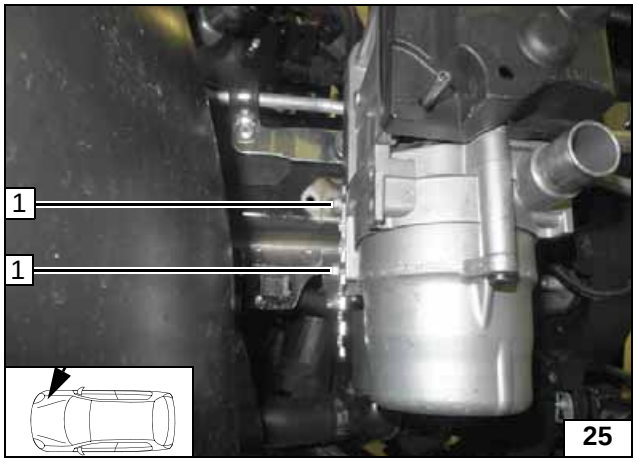


Installing Heater

Insert heater **1** into bracket **3**.

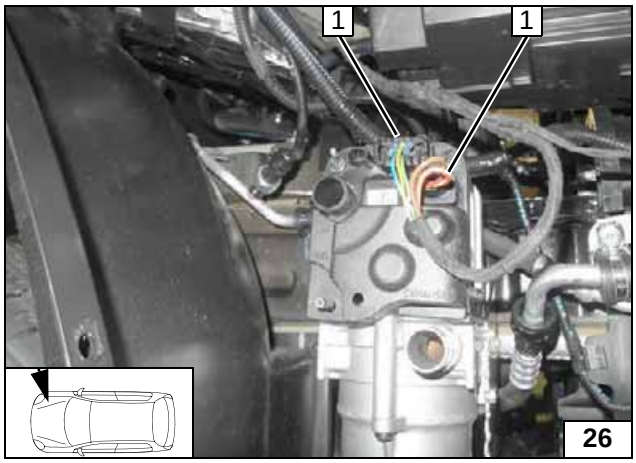
2 Tighten bolts [2x]

Installing heater



1 Tighten bolts [2x]

Installing heater



Attach connector **1** from heater wiring harness to heater.

Installing heater

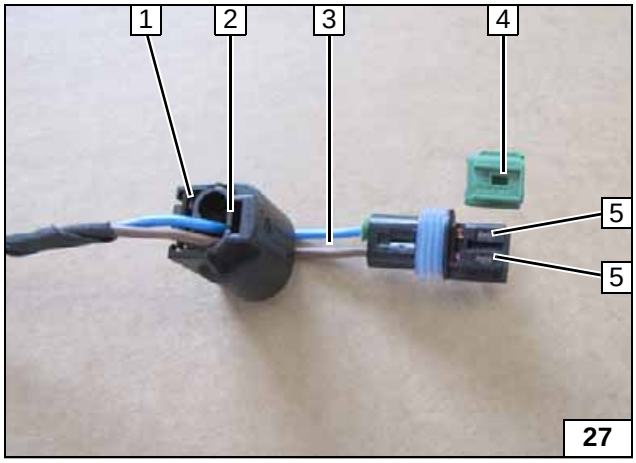
Fuel

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

Catch any fuel running off with an appropriate container.

Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

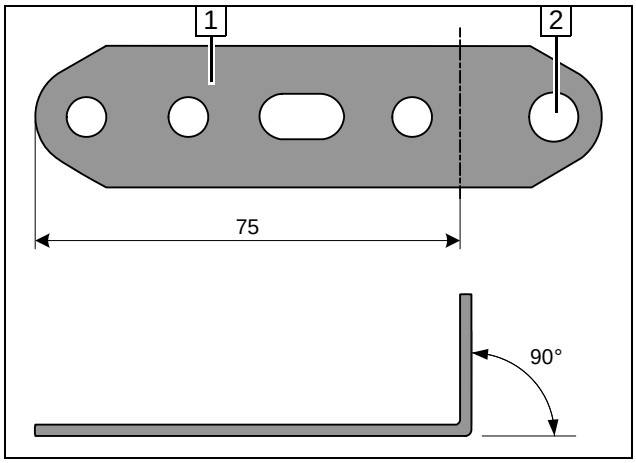
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Complete connector of metering pump after routing. Pin assignment is not relevant.

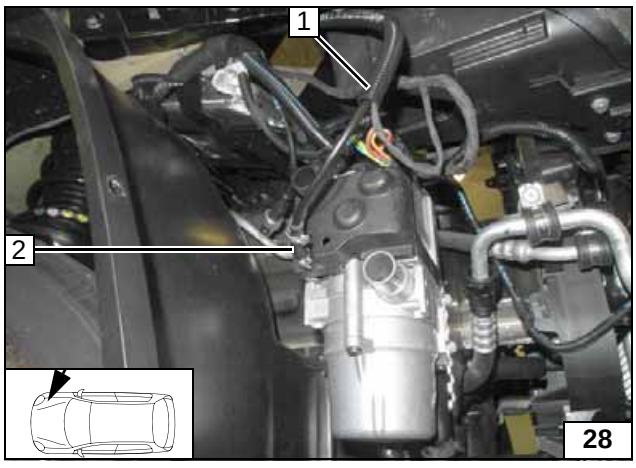
1 Connector housing
2 Lock
3 Blue/brown (bl / br) wires
4 Coding
5 Timer lock

Disassembling connector



1 Angle down perforated bracket
2 Drill out 8.5mm dia. hole

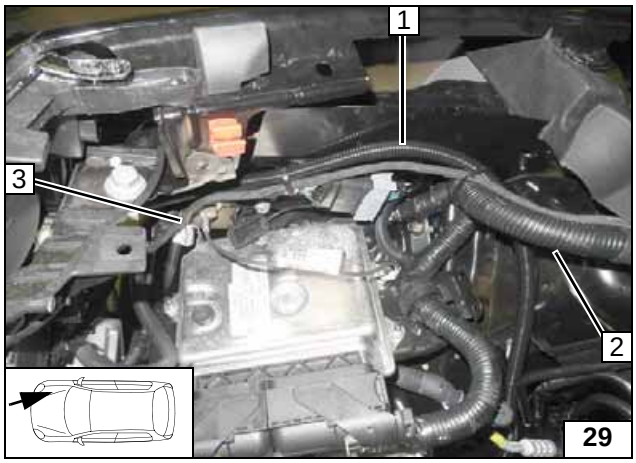
Preparing perforated bracket



Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube **1** to firewall.

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

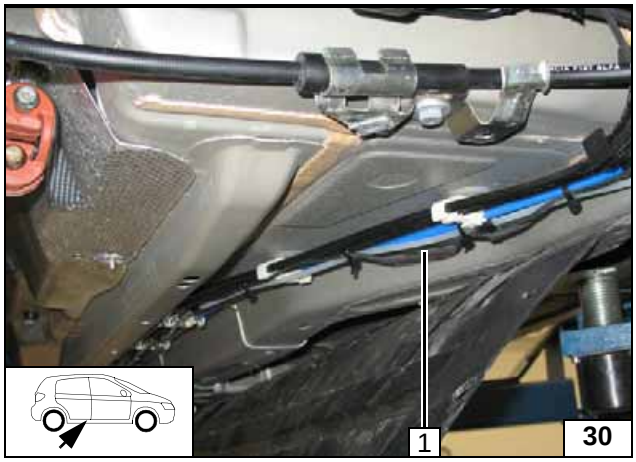
Connecting heater



Route 10mm dia. corrugated tube with fuel line and wiring harness of metering pump **1** to the vehicle underbody along original vehicle wiring harness **2** and fuel lines.

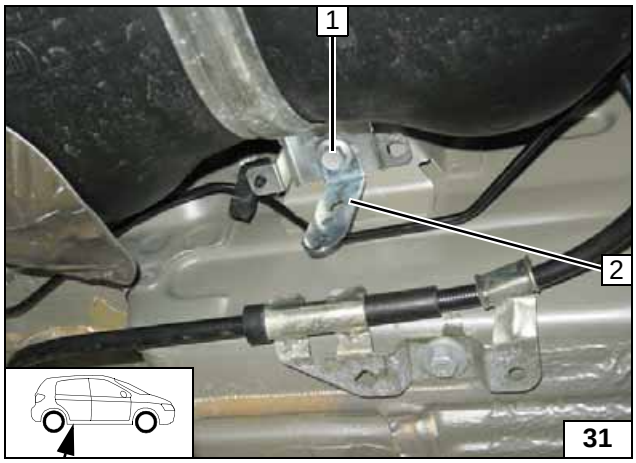
3 Wiring harness on heater

Routing in engine compart-ment



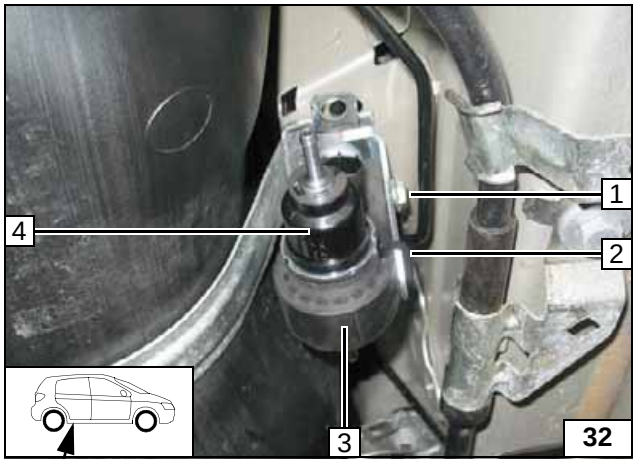
Route wiring harness of metering pump and fuel line **1** along original vehicle fuel lines.

Underbody routing



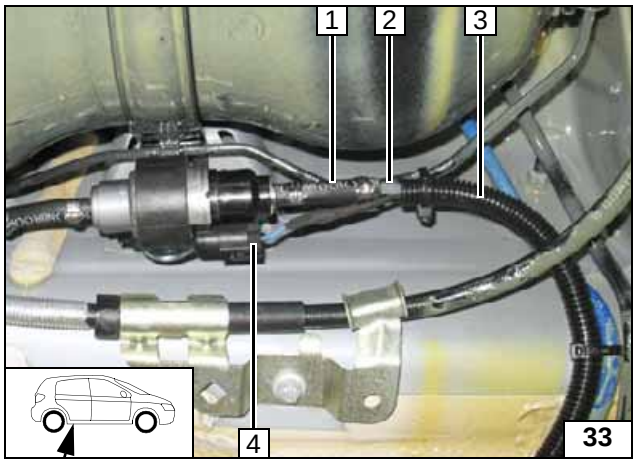
1 Original vehicle bolt of fuel-tank fastening
2 Perforated bracket

Mounting perforated bracket



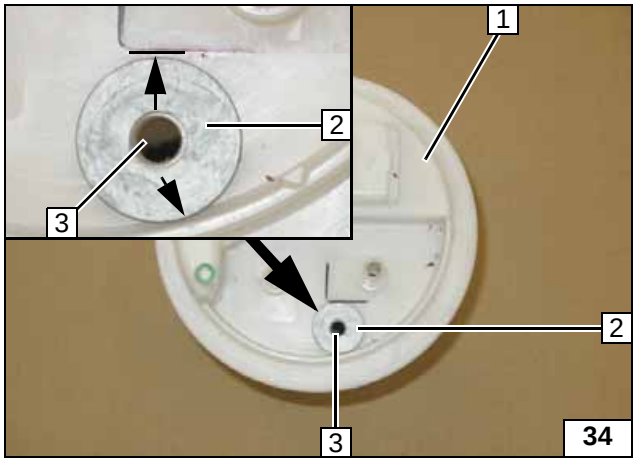
1 M6x25 bolt, flanged nut
2 Cable tie
3 Metering pump support
4 Metering pump

Installing metering pump



1 Hose section, 10 mm dia. clamp [2x]
2 Fuel line of Heater
3 10 mm dia. 300 mm long corrugated tube
4 Wiring harness of metering pump, connector mounted

Connection of metering pump

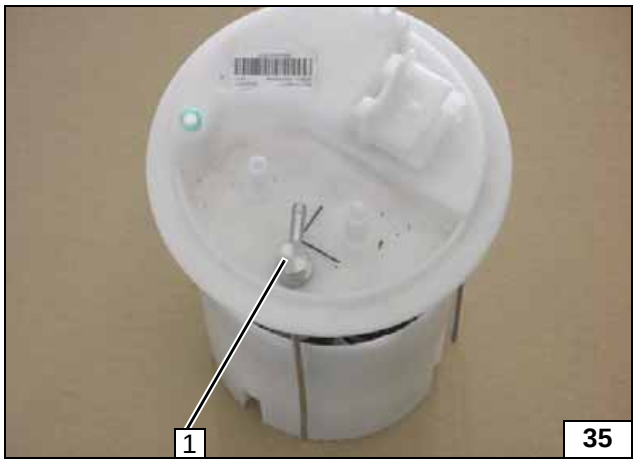


Version 1

Remove fuel-tank sending unit **1** according to manufacturer's instructions.

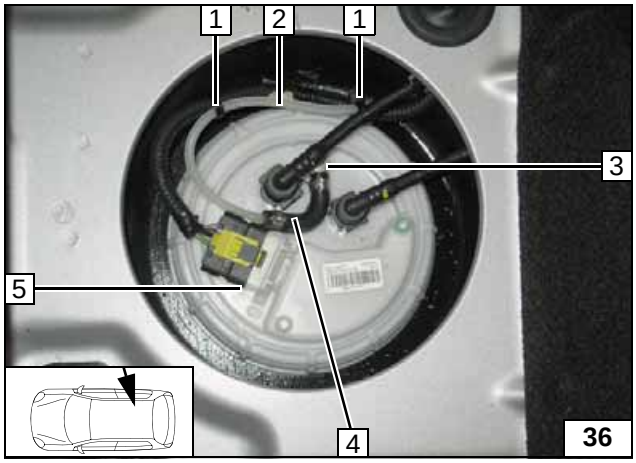
2 Large diameter washer outer dia. = 21.6mm, place as shown
3 Copy hole pattern, 6 mm dia. hole

Fuel extraction



Shape fuel standpipe **1** according to template, cut to length and install.

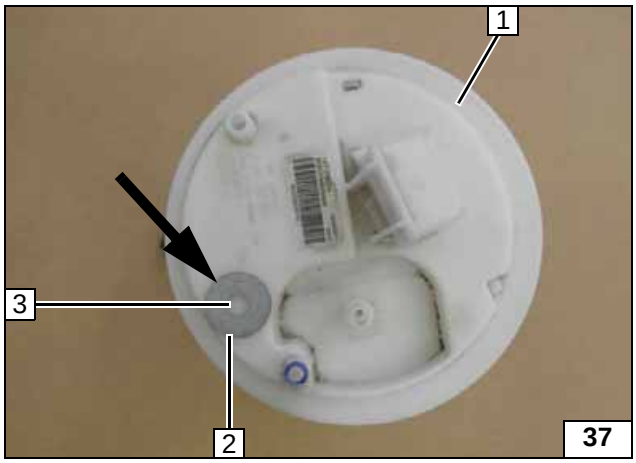
Installation of fuel standpipe



Install fuel-tank sending unit **5** according to manufacturer's specifications.

1 Cable tie [2x]
2 Fuel line
3 Fuel standpipe
4 Moulded hose, 10 mm dia. clamp [2x]

Fuel extraction

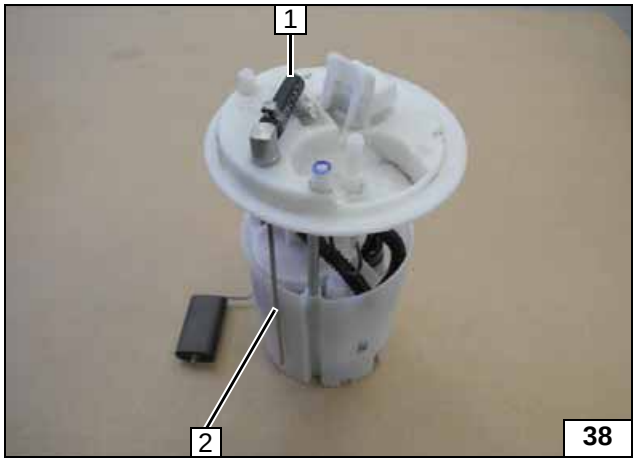


Version 2

Remove fuel-tank sending unit **1** according to manufacturer's instructions.

2 Large diameter washer outer dia. = 21.6mm, place as shown
3 Copy hole pattern, 6 mm dia. hole

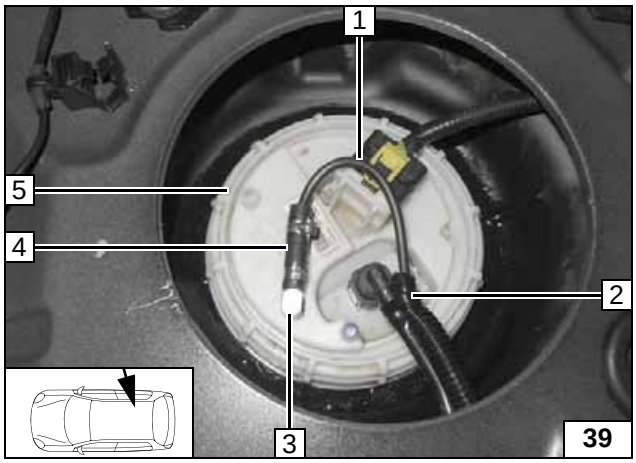
Fuel extraction



Shape fuel standpipe **2** according to template, cut to length and install.

1 Hose section, 10 mm dia. clamp

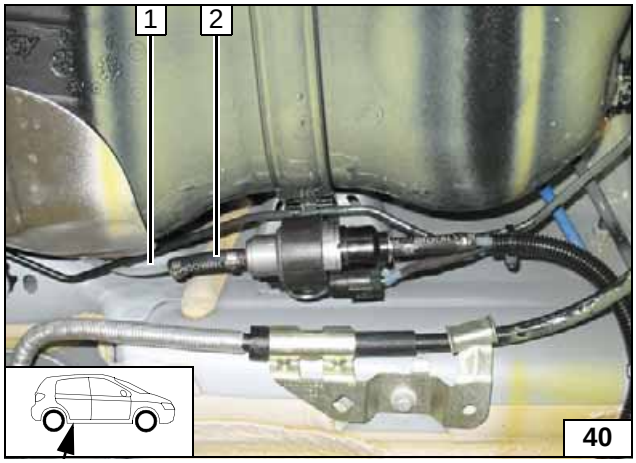
Installation of fuel standpipe



Install fuel-tank sending unit **5** according to manufacturer's specifications.

1 Fuel line in corrugated tube
2 Cable tie
3 Fuel standpipe
4 Moulded hose, 10 mm dia. clamp [2x]

Fuel extraction



All vehicles

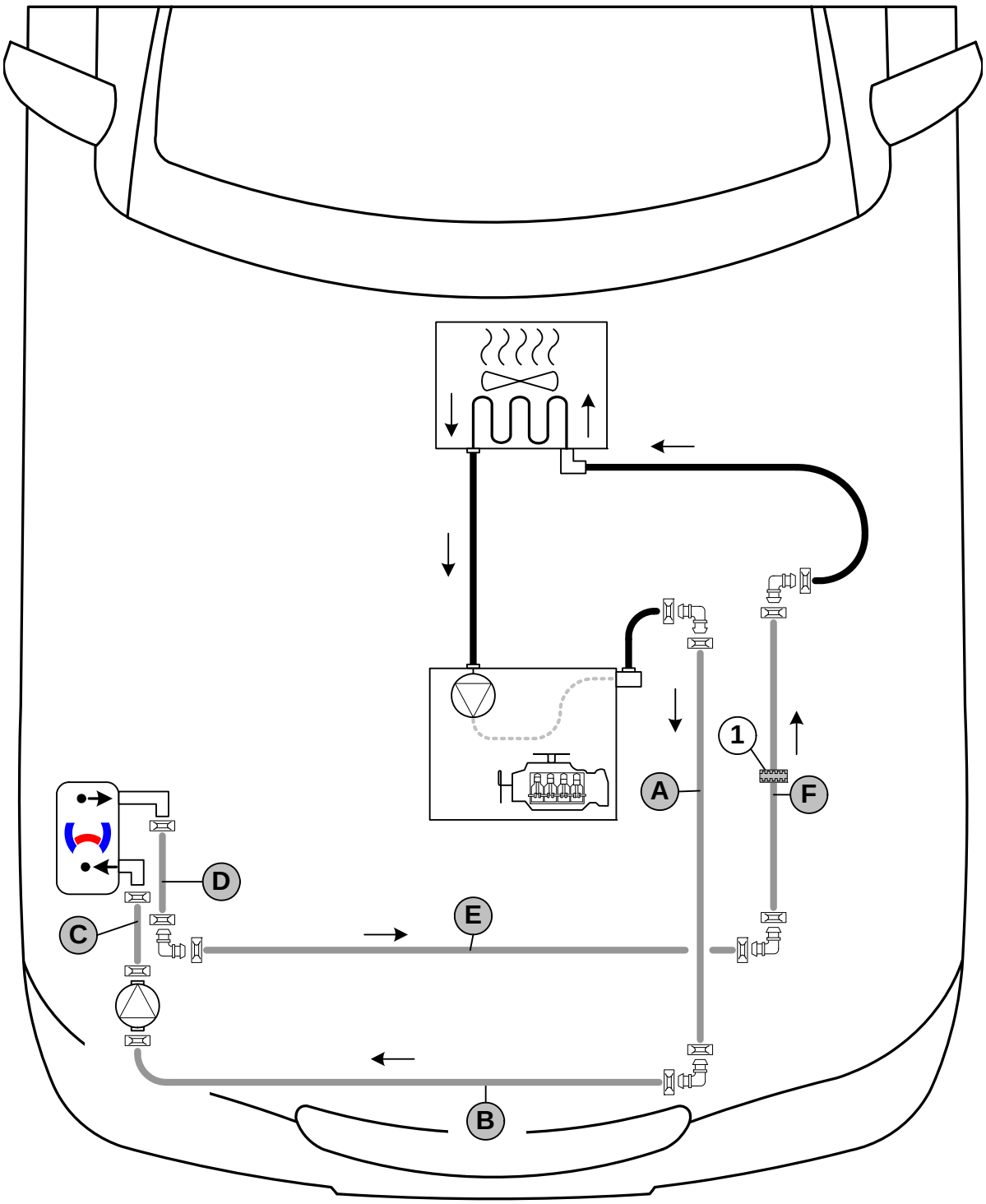
1 Fuel line of fuel standpipe
2 Hose section, 10 mm dia. clamp [2x]

Connection of metering pump

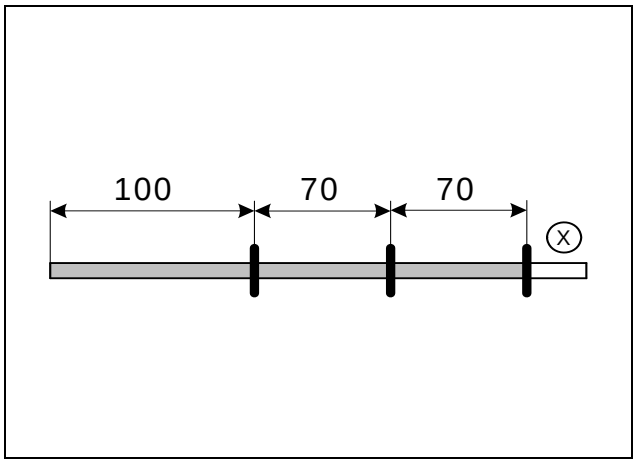
Coolant Circuit 62 kW and 77 kW

WARNING!
Any coolant running off should be collected in a suitable container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged. When installing the hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram

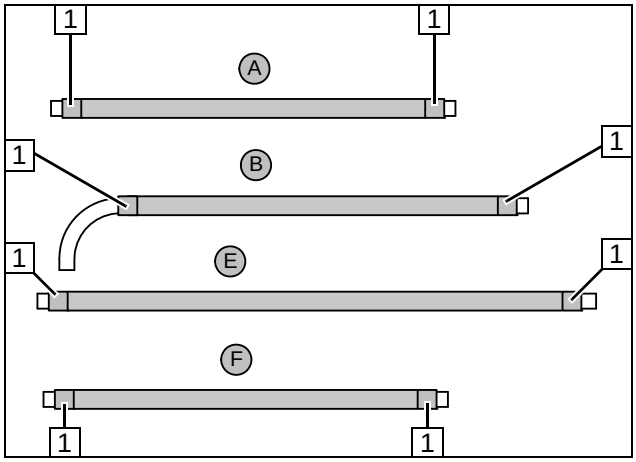


All spring clips without a specific designation = 25 mm dia. All connecting pipes = 18x18mm dia.
1 = Black (sw) rubber isolator only with 0.9/62kW



Discard section **X**.

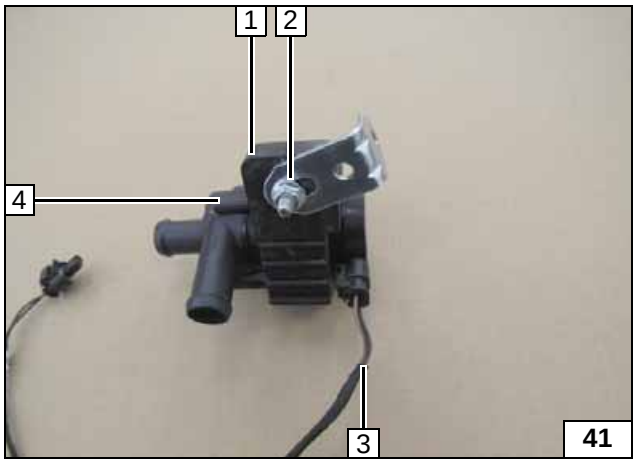
Cutting edge protection section to length



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

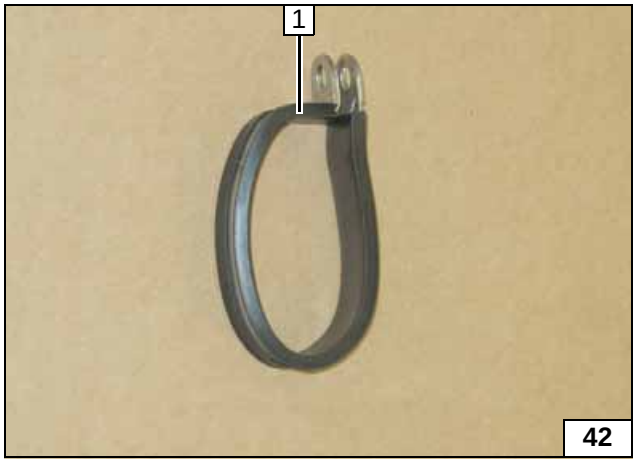
1 50 mm long heat shrink plastic tubing [8x]

Preparing hoses



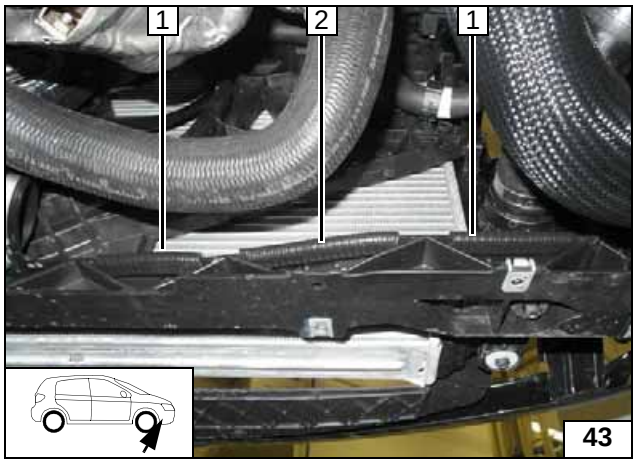
1 Circulating pump support
2 M6x25 bolt, angle bracket, flanged nut
3 Wiring harness of circulating pump
4 Circulating pump

Premounting circulating pump



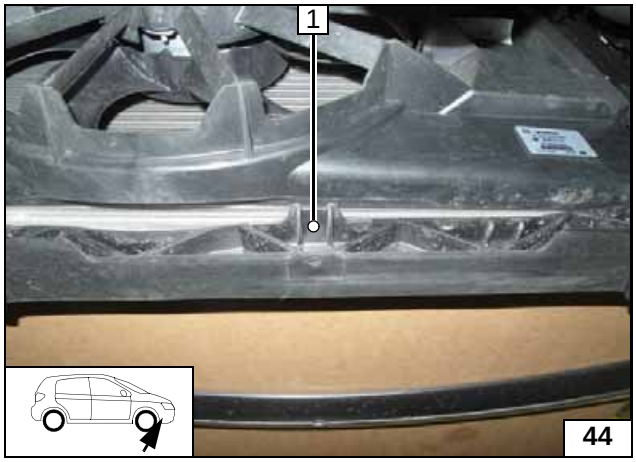
Shape 38mm dia. rubber-coated p-clamp **1** as shown [2x].

Preparing p-clamp



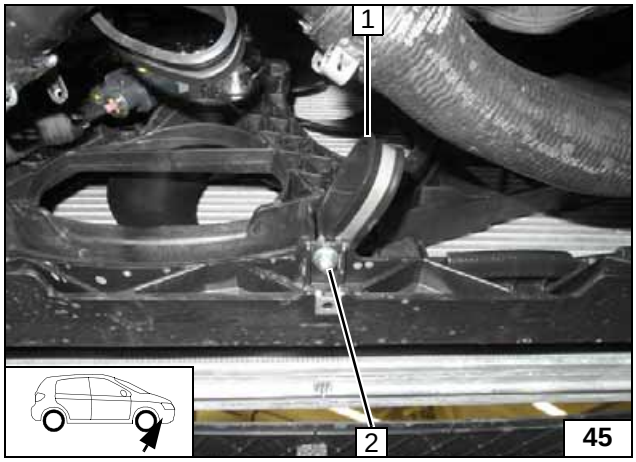
1 Edge protection section, 70mm long [2x]
2 100mm edge protection section

Preparing hose routing



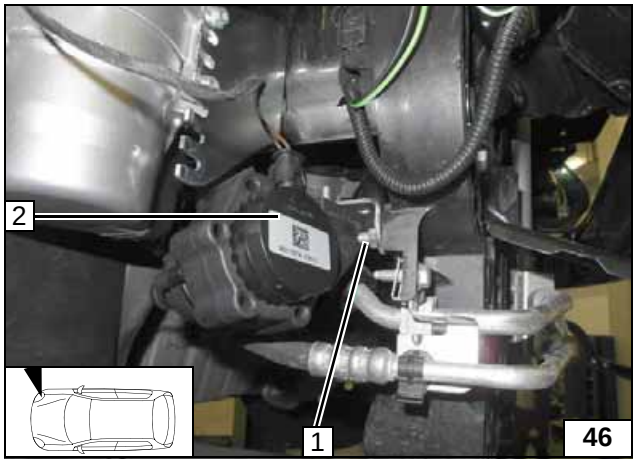
1 Centrally drill 7mm dia. hole

Preparing hose routing



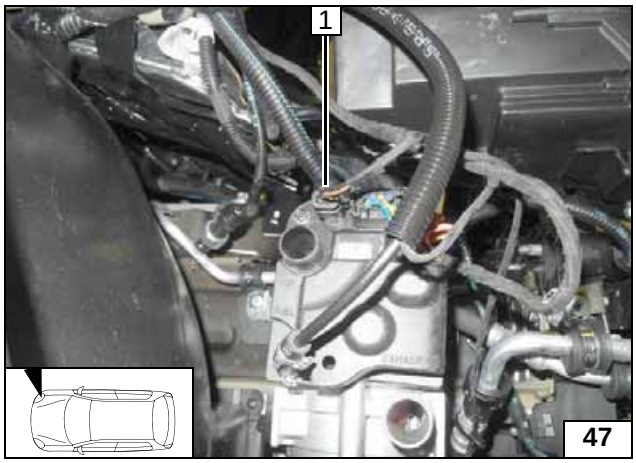
1 38mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut

Preparing hose routing



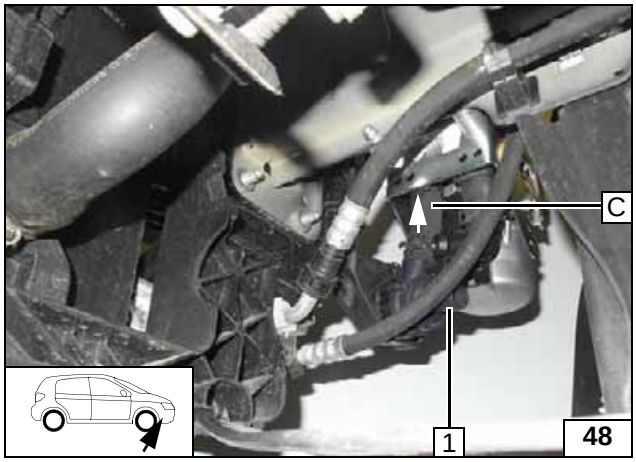
1 M6x20 bolt, original vehicle hole, flanged nut
2 Circulating pump

Installing circulating pump



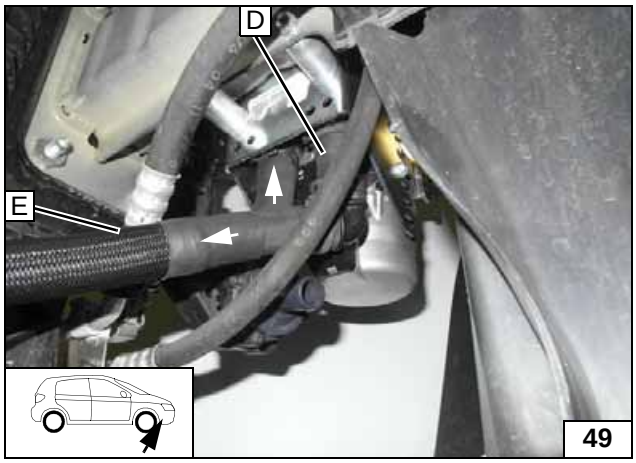
1 Wiring harness of circulating pump

Connecting circulating pump

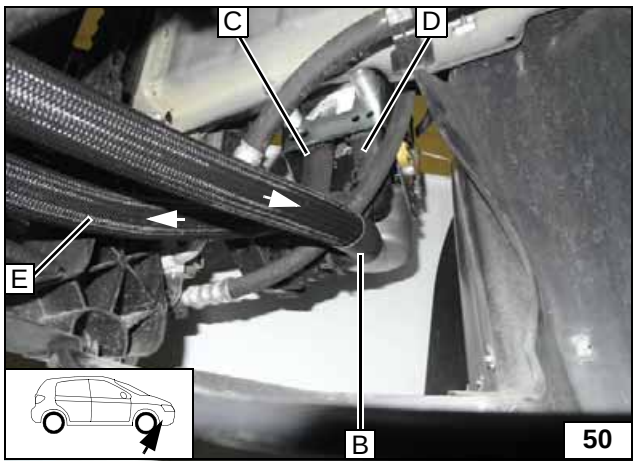


1 Circulating pump

Connecting heater / circulating pump

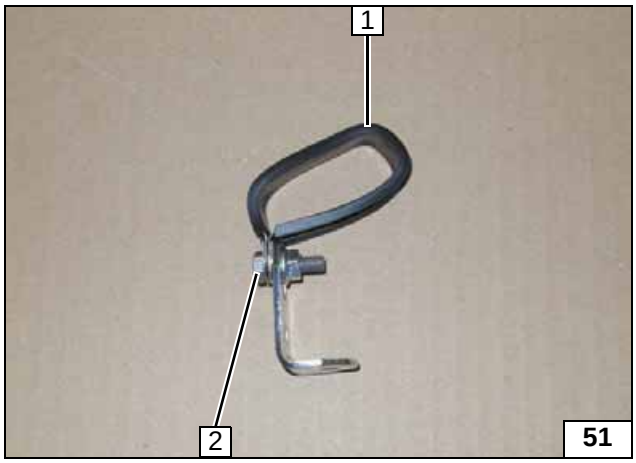


Connection of hose E



Mount hose **B** on circulating pump with 90° elbow.

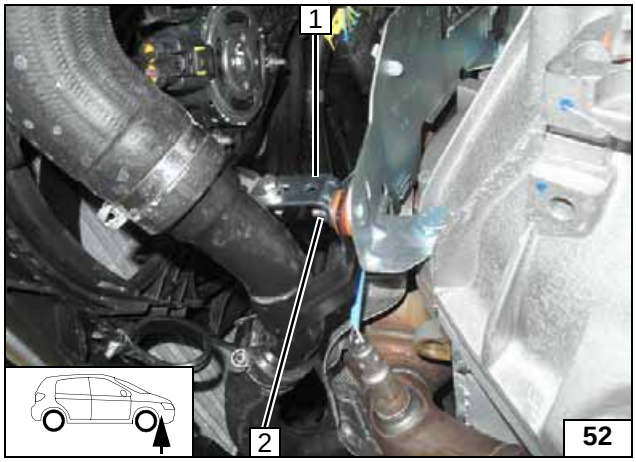
Connection of hose E



62kW

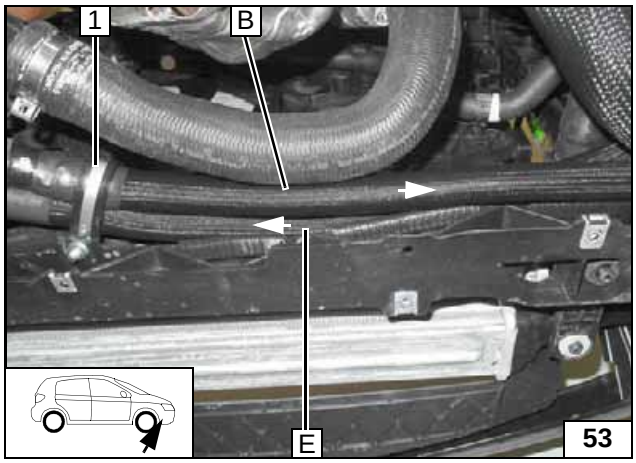
1 38 mm dia. rubber-coated p-clamp
2 M6x20 bolt, angle bracket, flanged nut

Preparation of routing



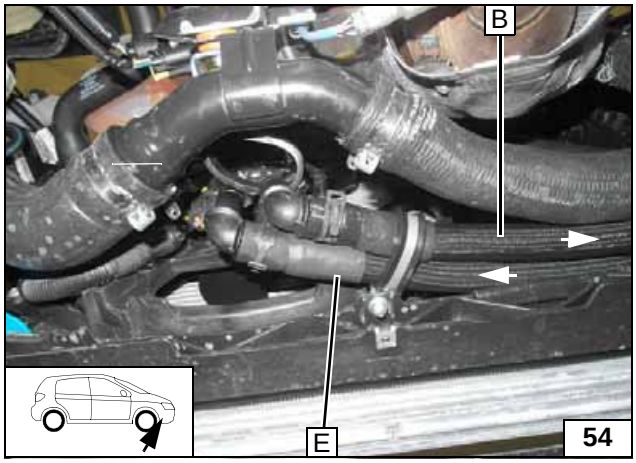
1 Premounted angle bracket with 38mm dia. rubber-coated p-clamp
2 Original vehicle nut

Preparation of routing

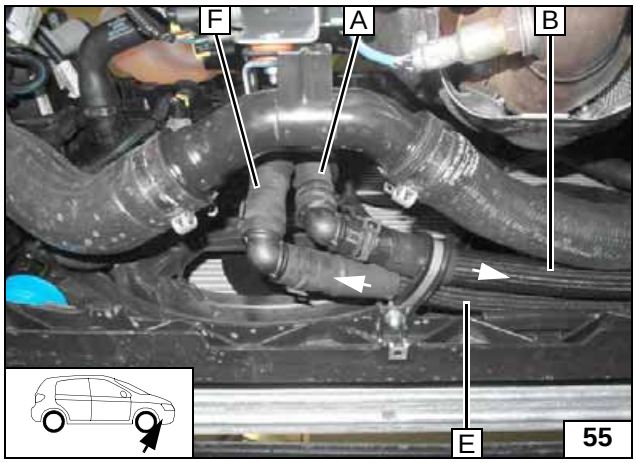


Ensure sufficient distance from neighbouring components. Route hose **B** and **E** through rubber-coated p-clamp **1**.

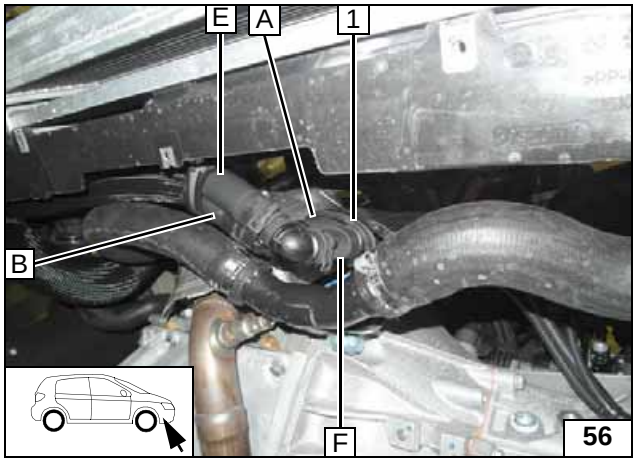
Hose routing



Hose routing

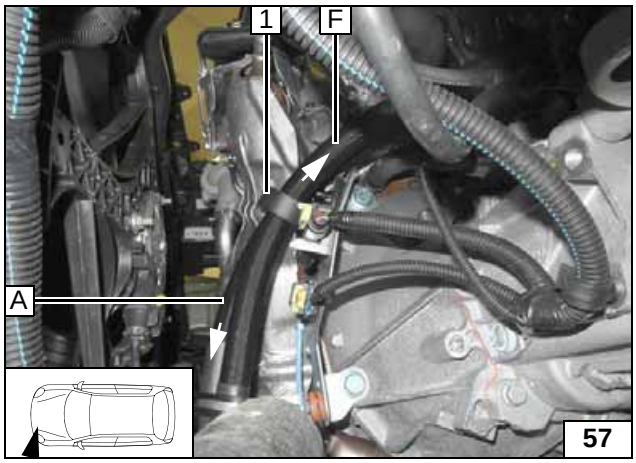


Hose routing



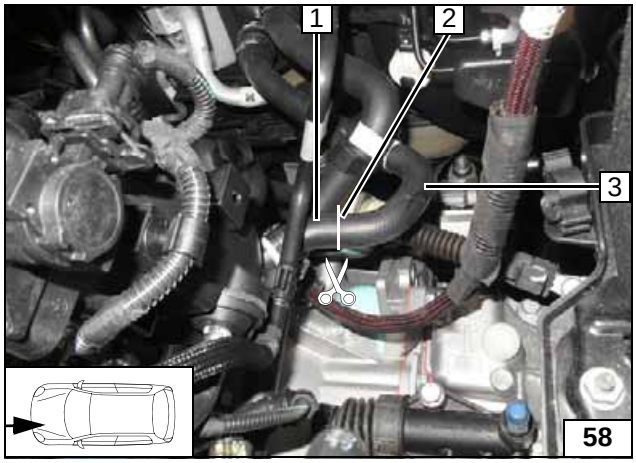
Ensure sufficient distance from neighbouring components. Route hose **A** and **F** through rubber-coated p-clamp **1**.

Hose routing



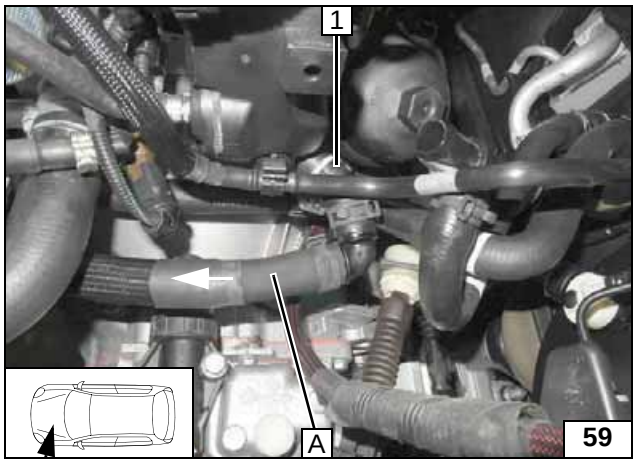
1 Black (sw) rubber isolator

Hose routing



1 Hose of engine outlet
2 Cutting point
3 Hose on heat exchanger inlet

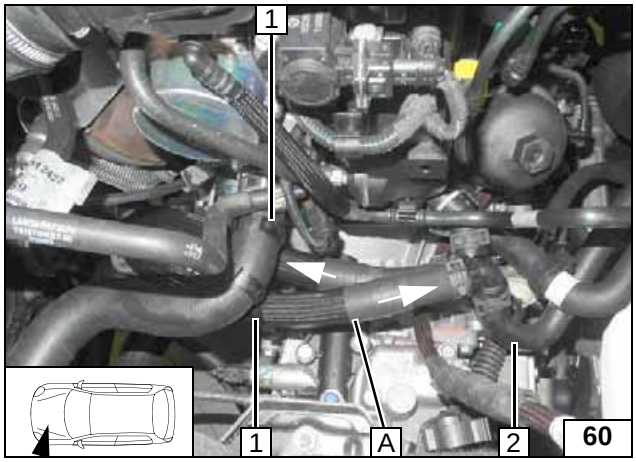
Cutting point



Ensure sufficient distance from neighbouring components.

1 Hose of engine outlet

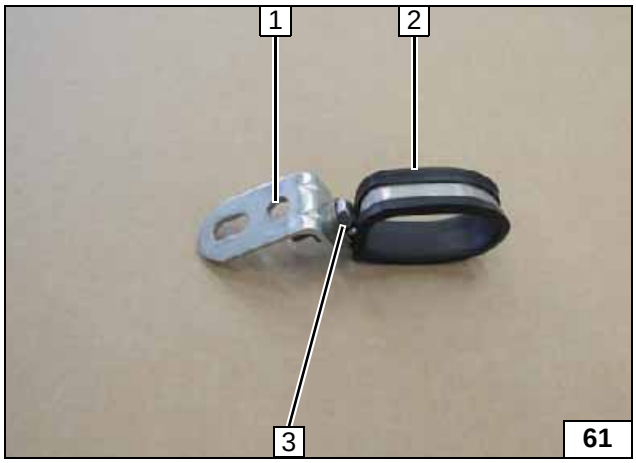
Connection of engine outlet



Ensure sufficient distance from neighbouring components.

1 Hose bracket [2x]
2 Hose on heat exchanger inlet

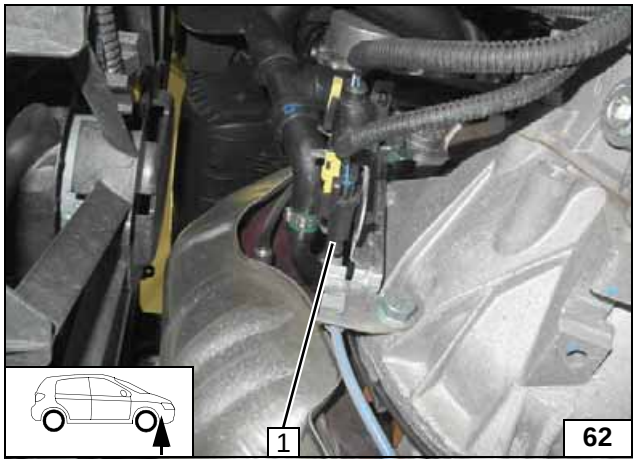
Connection of heat exchanger inlet



77kW

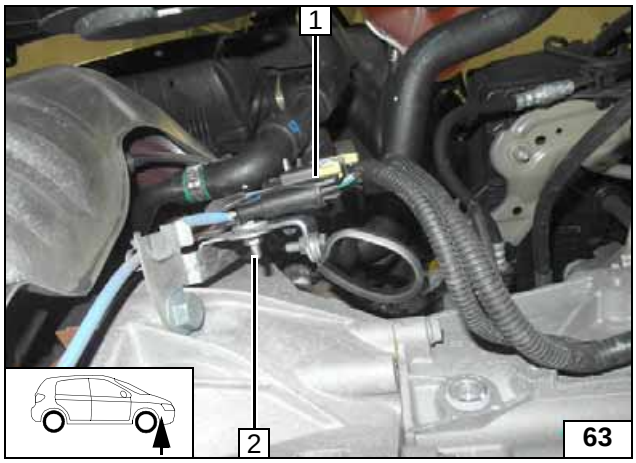
1 Expand hole to 8 mm dia.
2 38 mm dia. rubber-coated p-clamp
3 M6x20 bolt, angle bracket, flanged nut

Preparation of routing



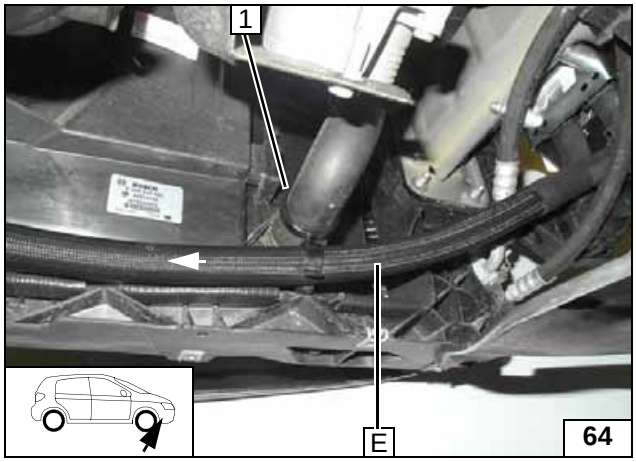
1 Detach original vehicle connector from bracket

Preparation of routing



1 Mount original vehicle connector on angle bracket
2 M6x20 bolt, large diameter washer, flanged nut

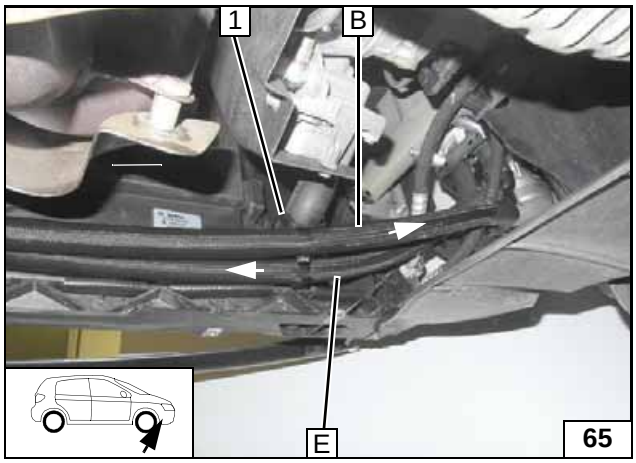
Preparation of routing



Ensure sufficient distance from neighbouring components.

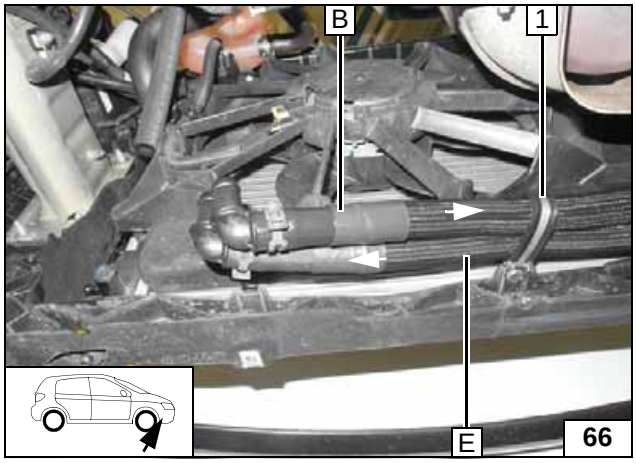
1 Hose bracket

Hose routing



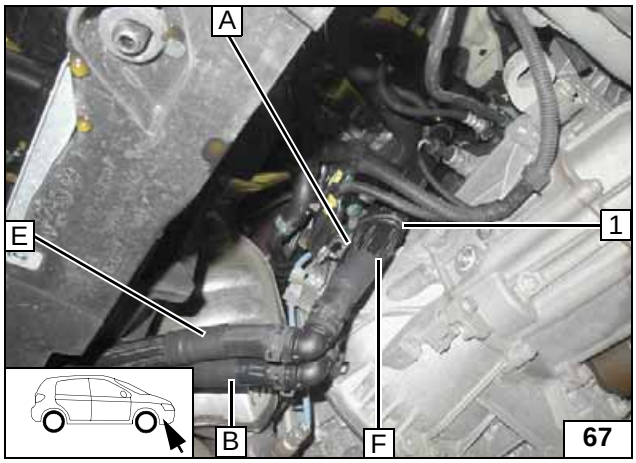
1 Hose bracket

Hose routing



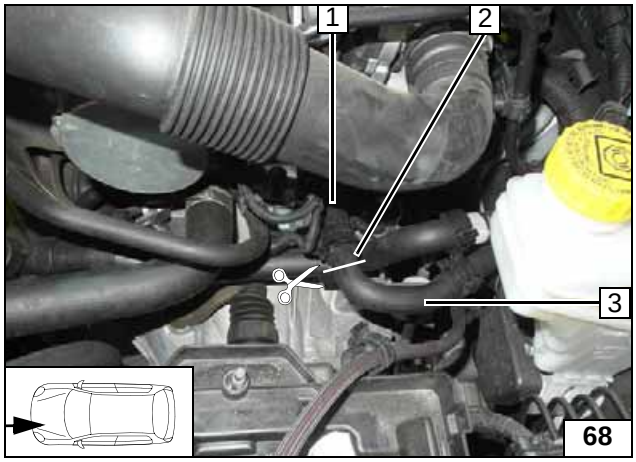
Ensure sufficient distance from neighbouring components. Route hose **B** and **E** through rubber-coated p-clamp **1**.

Hose routing



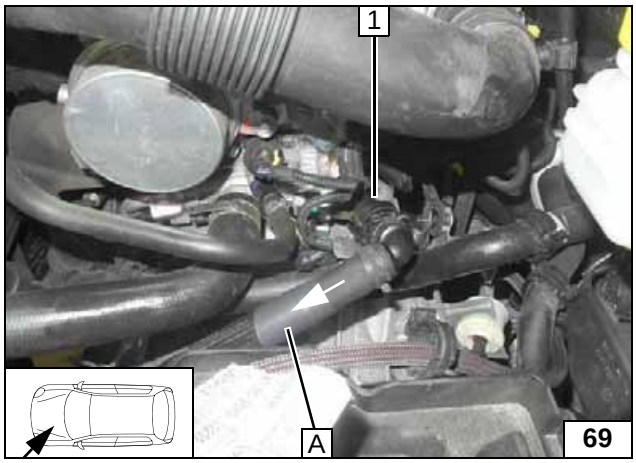
Ensure sufficient distance from neighbouring components. Route hose **A** and **F** through rubber-coated p-clamp **1**.

Hose routing



1 Hose of engine outlet
2 Cutting point
3 Hose on heat exchanger inlet

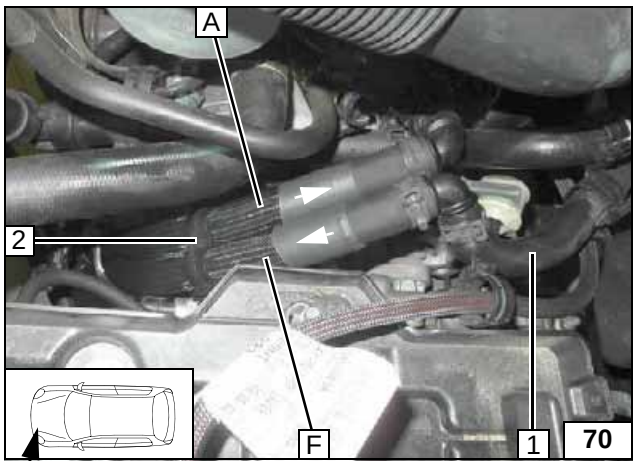
Cutting point



Ensure sufficient distance from neighbouring components.

1 Hose of engine outlet

Connecting engine outlet



Ensure sufficient distance from neighbouring components.

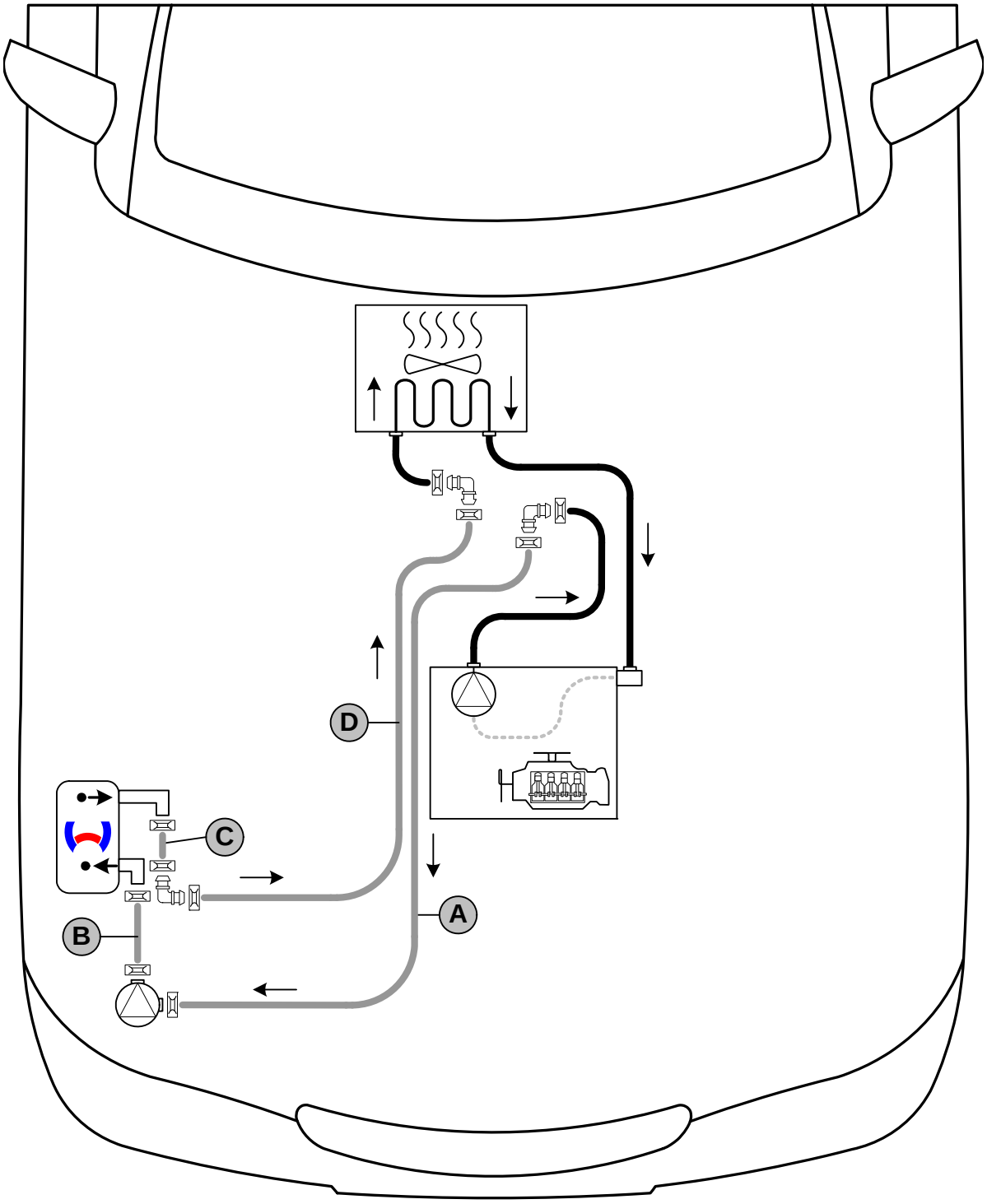
1 Hose on heat exchanger inlet
2 Installing hose bracket

Hose routing

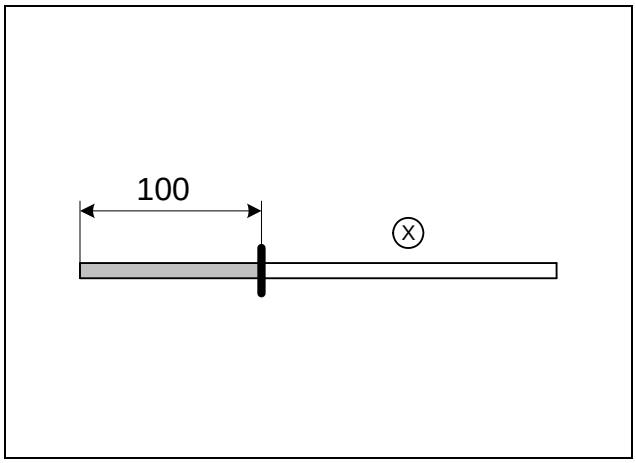
Coolant Circuit 125 kW

WARNING!
Any coolant running off should be collected in a suitable container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged. When installing the hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram

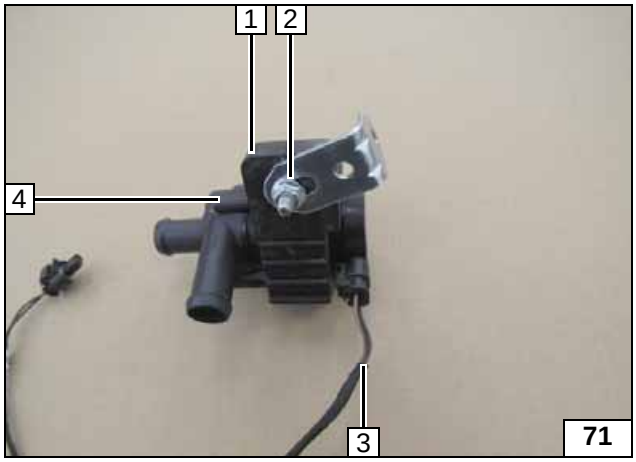


All spring clips without a specific designation = 25 mm dia. All connecting pipes = 18x18mm dia.



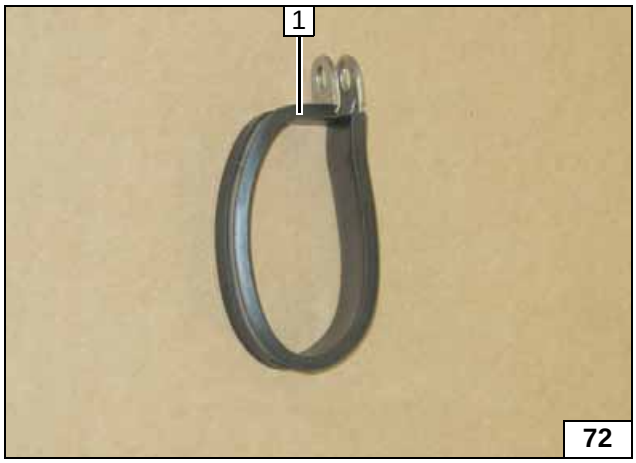
Discard section **X**.

Cutting edge protection section to length



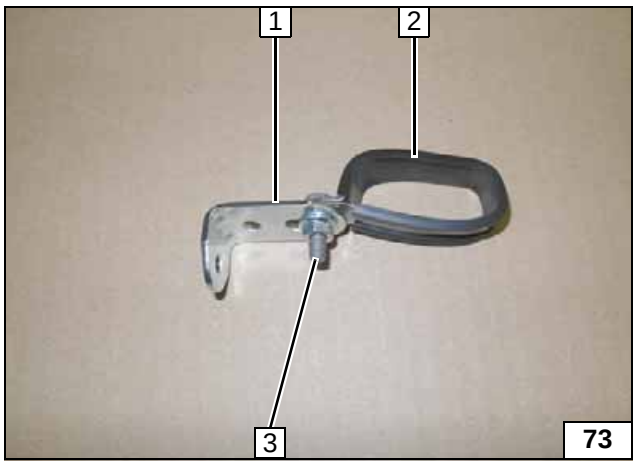
1 Circulating pump support
2 M6x25 bolt, angle bracket, flanged nut
3 Wiring harness of circulating pump
4 Circulating pump

Premounting circulating pump



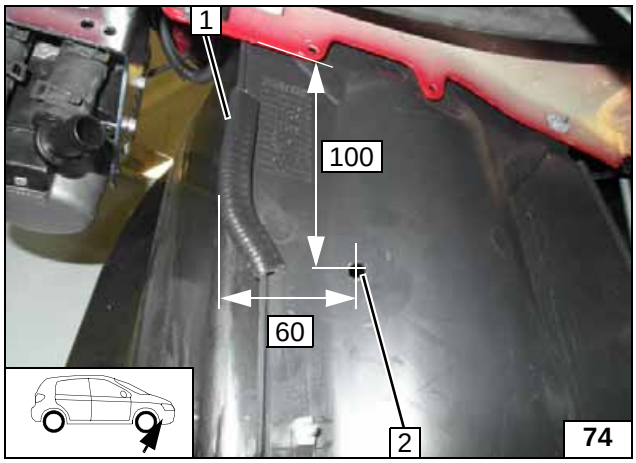
Shape 38mm dia. rubber-coated p-clamp **1** as shown [2x].

Preparing p-clamp



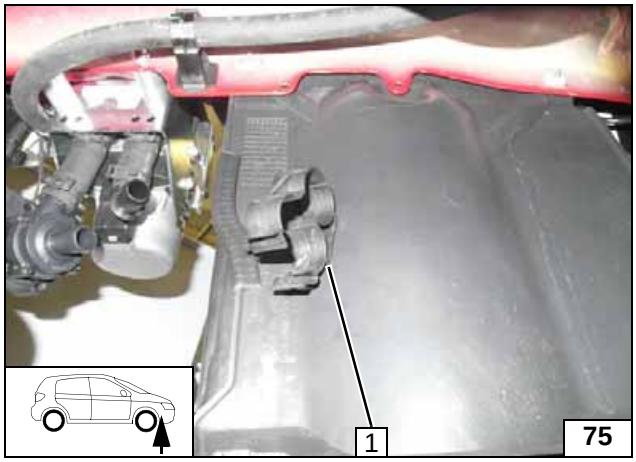
1 Angle bracket
2 38 mm dia. rubber-coated p-clamp
3 M6x20 bolt, flanged nut

Preparation of routing



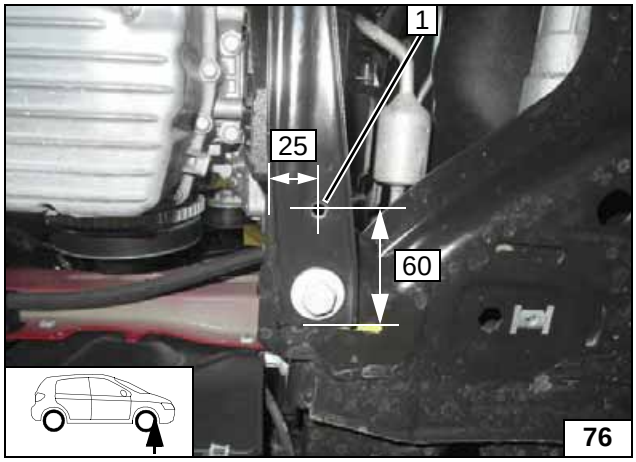
1 100 mm edge protection
2 7 mm dia. hole

Preparing hose routing



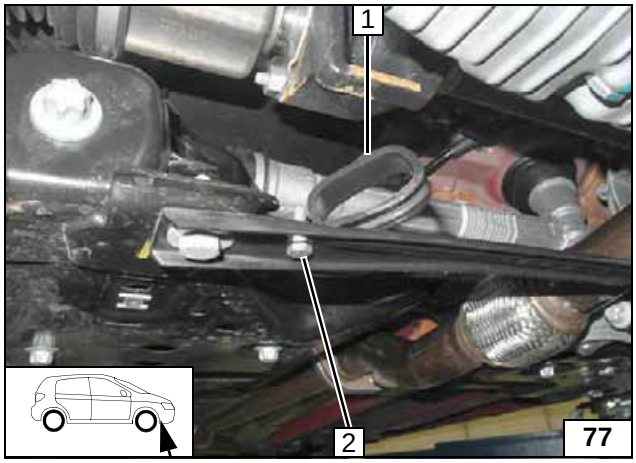
1 Hose bracket

Preparing hose routing



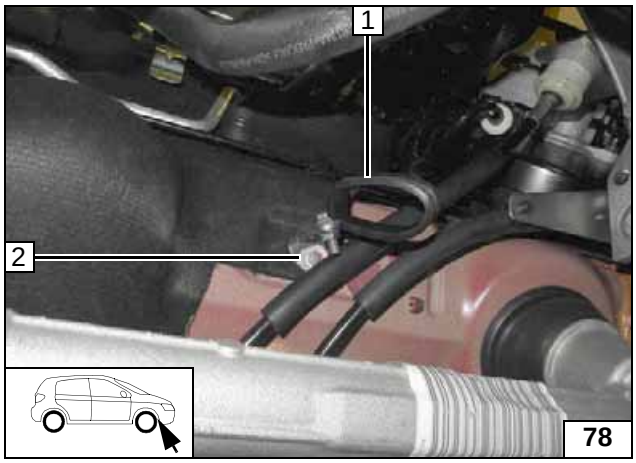
1 7 mm dia. hole

Preparing hose routing



1 38mm dia. rubber-coated p-clamp
2 M6x20 bolt, flanged nut

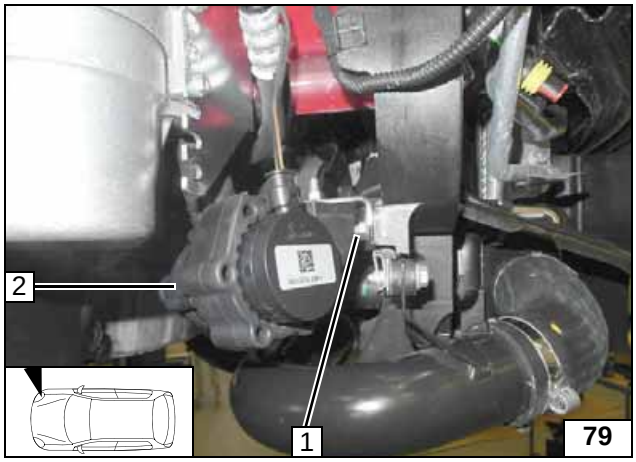
Preparing hose routing



Remove original vehicle plastic nut at position 2 and discard.

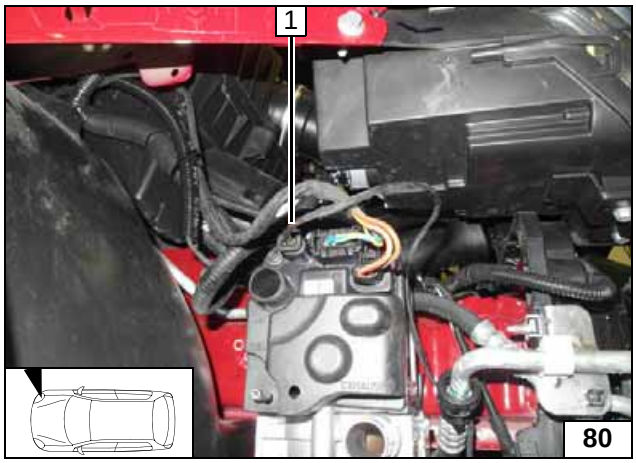
1 38mm dia. rubber-coated p-clamp
2 Original vehicle stud bolt, plate nut

Preparing hose routing



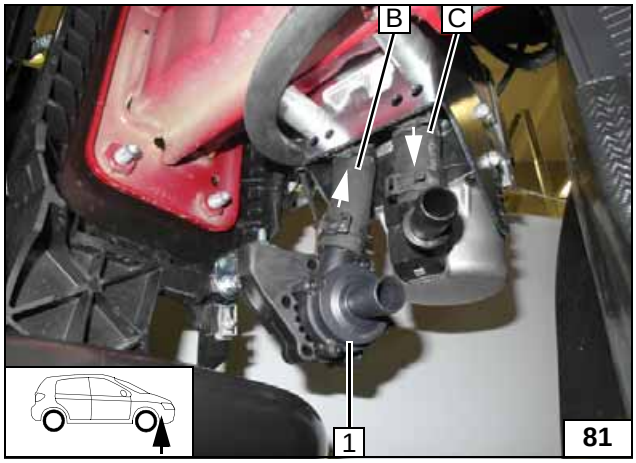
1 M6x20 bolt, original vehicle hole, flanged nut
2 Circulating pump

Installing circulating pump



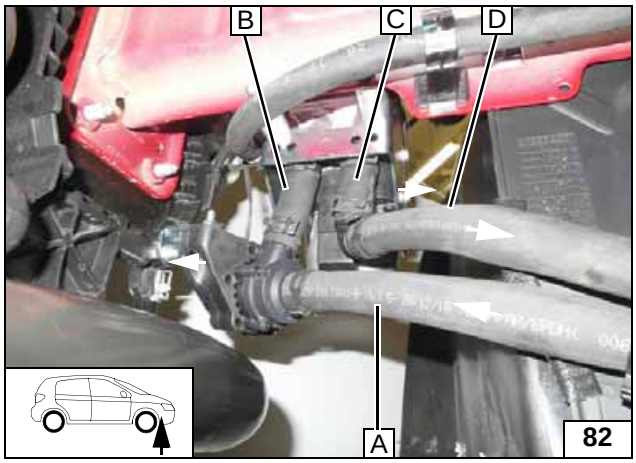
1 Wiring harness of circulating pump

Connecting circulating pump



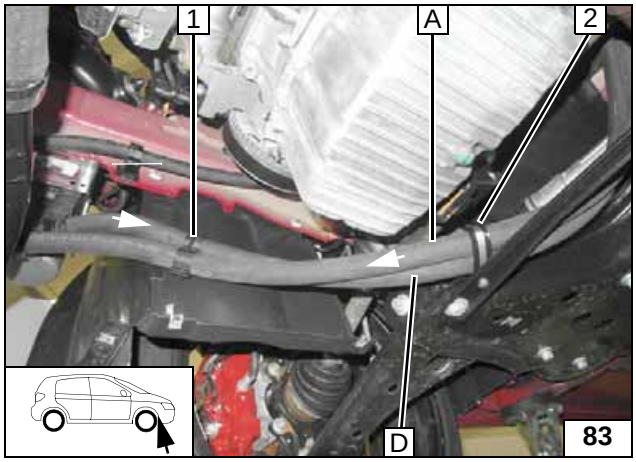
1 Circulating pump

Connecting heater / circulating pump



Ensure sufficient distance from neighbouring components.

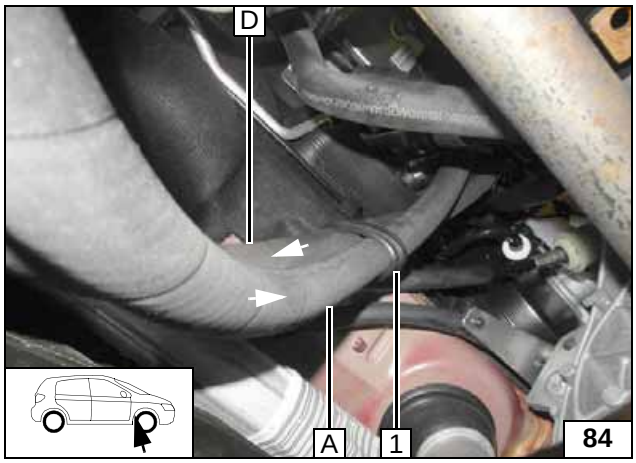
Hose routing



Ensure sufficient distance from neighbouring components. Route hose **A** and **D** through rubber-coated p-clamp **2**.

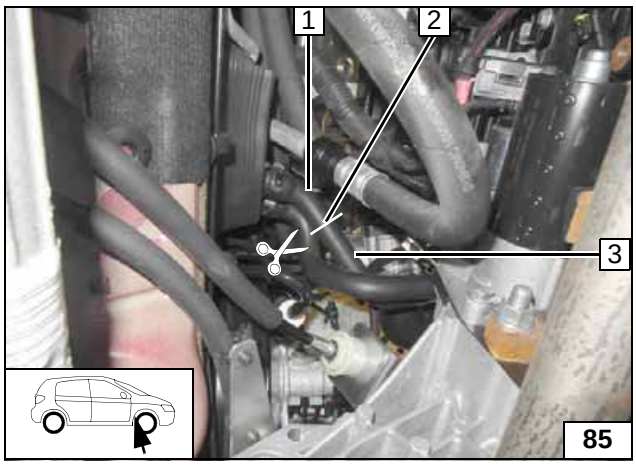
1 Hose bracket

Hose routing



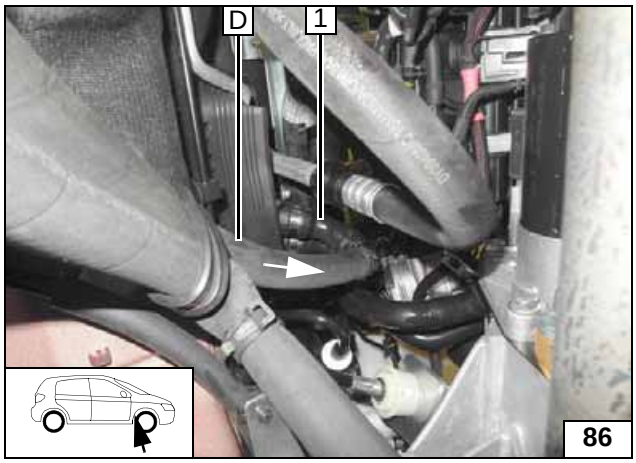
Ensure sufficient distance from neighbouring components. Route hose **A** and **D** through rubber-coated p-clamp **1**.

Hose routing



1 Hose on heat exchanger inlet
2 Cutting point
3 Hose of engine outlet

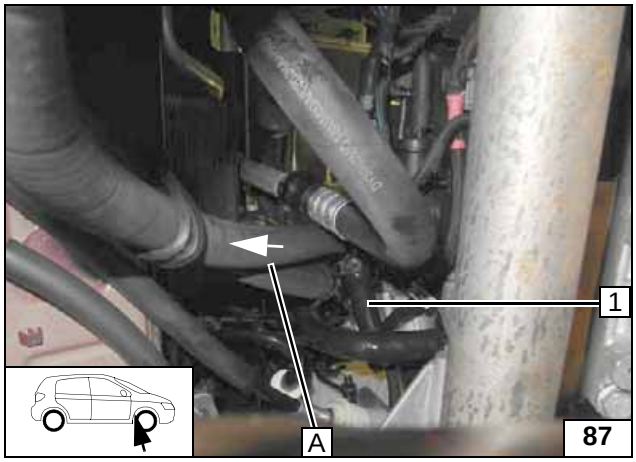
Cutting point



Ensure sufficient distance from neighbouring components.

1 Hose on heat exchanger inlet

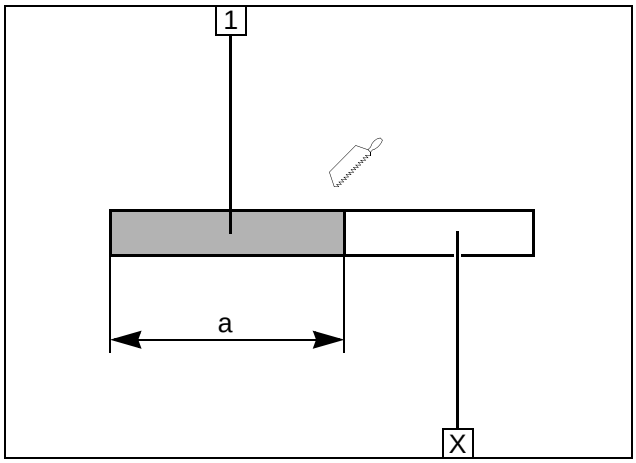
Connection of heat exchanger inlet



Ensure sufficient distance from neighbouring components.

1 Hose of engine outlet

Connection engine outlet

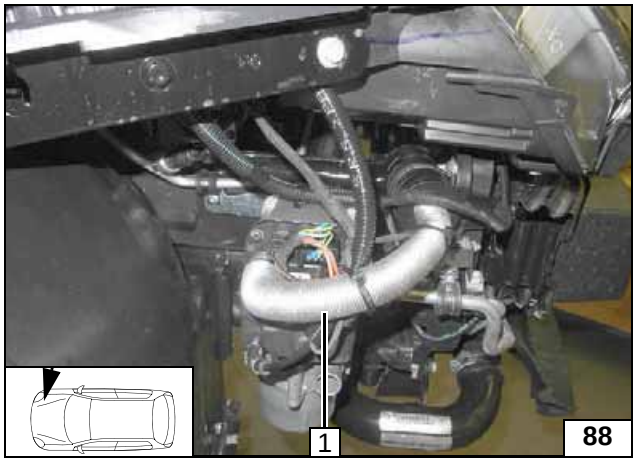


Combustion Air

Discard section **X**.

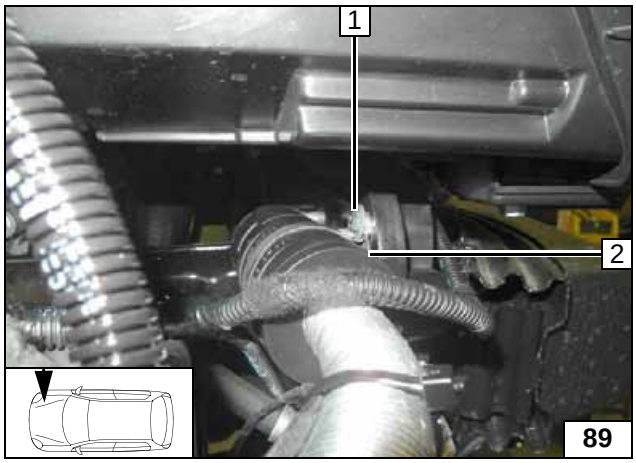
1 Combustion air pipe
a = 250

Cutting combustion air pipe to length



1 Combustion air pipe

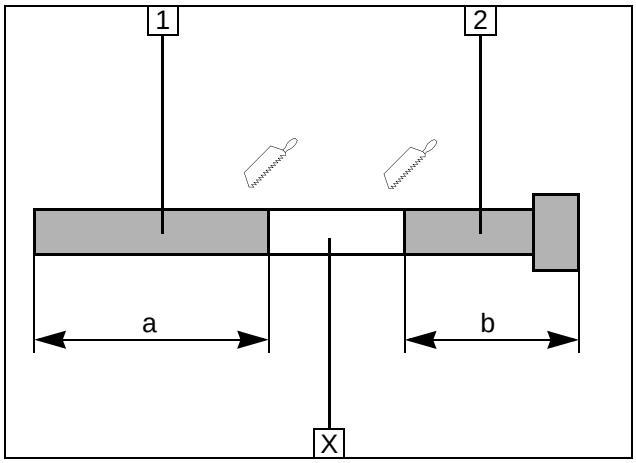
Installing combustion air pipe



Ensure sufficient distance from neighbouring components.

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

Installing silencer

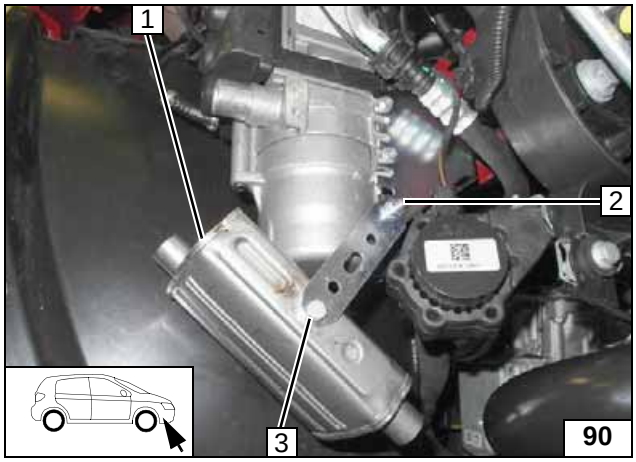


Exhaust Gas

Discard section **X**.

1 Exhaust pipe
a =180
2 Exhaust end section
b =100

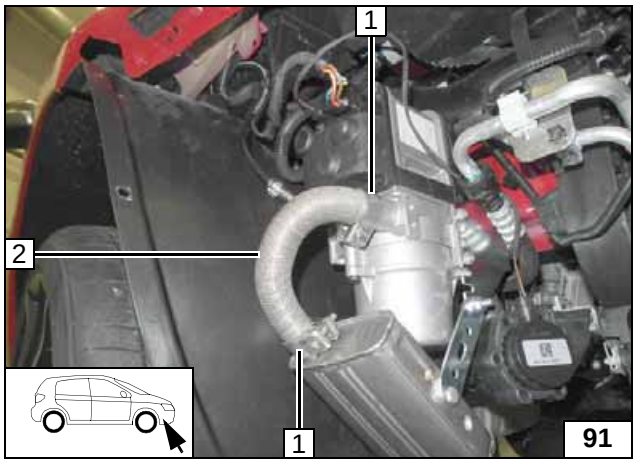
Preparing exhaust pipe



Ensure sufficient distance from neighbouring components.

1 Silencer
2 M6x20 bolt, large diameter washer, flanged nut
3 M6x16 bolt, spring lockwasher

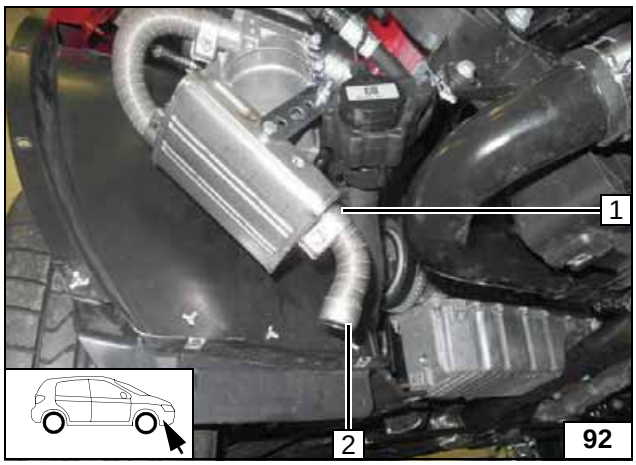
Installing silencer



Ensure sufficient distance from neighbouring components.

1 Hose clamp [2x]
2 Exhaust pipe

Installing exhaust pipe



Ensure sufficient distance from neighbouring components.

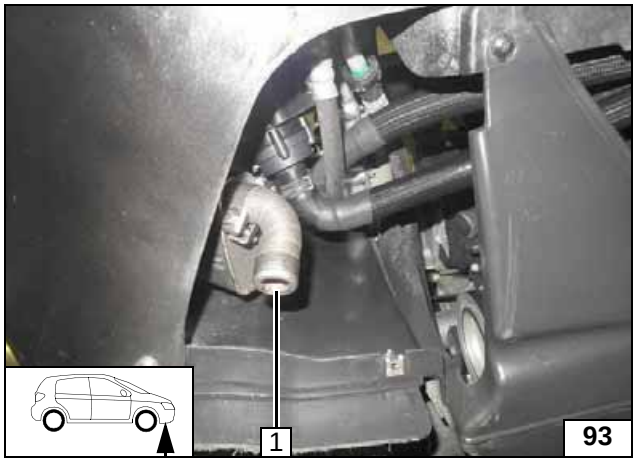
1 Hose clamp
2 Exhaust end section

Mounting exhaust end section

Final Work

WARNING!
Reassemble the components in reverse order.
Check all hoses, clamps and all electrical connections for firm seating.
Secure all loose cables using cable ties.
Only use manufacturer-approved coolant.
Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach remote Telestart transmitter.**
- **Make settings on the A/C control panel according to the "Operating Instructions for the End Customer".**
- **Place signboard "Switch off parking heater before refuelling" in the area of the filler neck.**
- **For initial start-up and function check, see installation instructions.**



Ensure sufficient distance from neighbouring components.

1 Exhaust end section

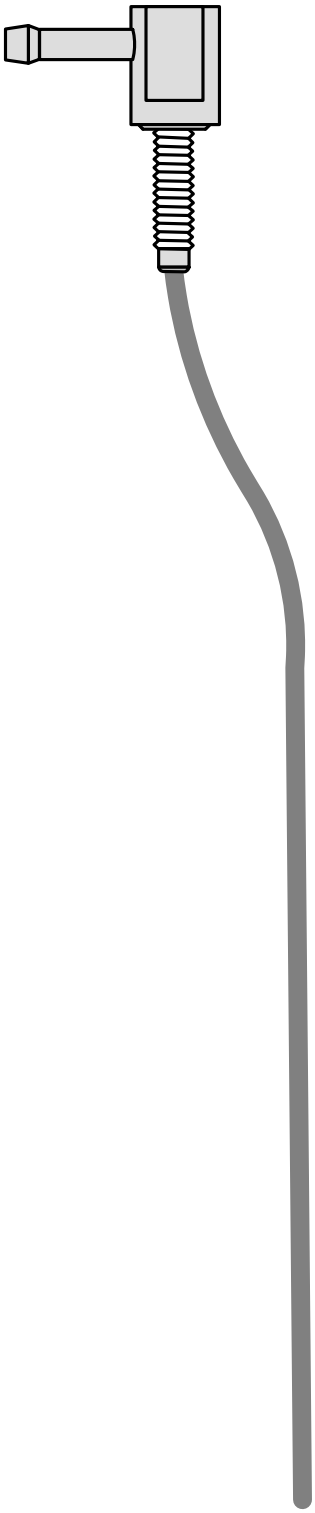
Aligning exhaust end section

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Template for Fuel Standpipe

Version 1

Version 2



100mm

1:1 scale

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

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

100mm

0

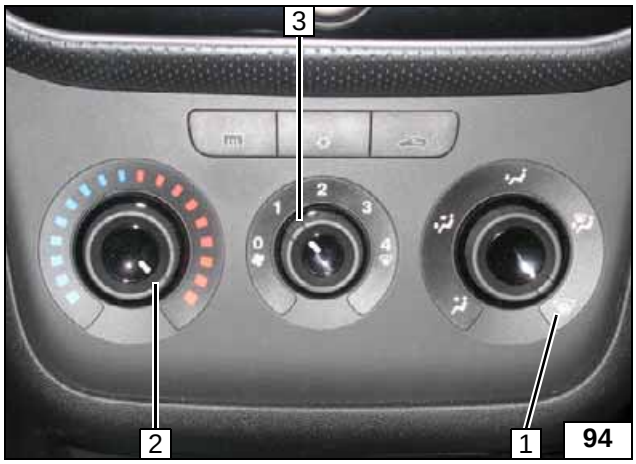
Operating Instructions for End Customer

Please remove page in case of manual air-conditioning and add it to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

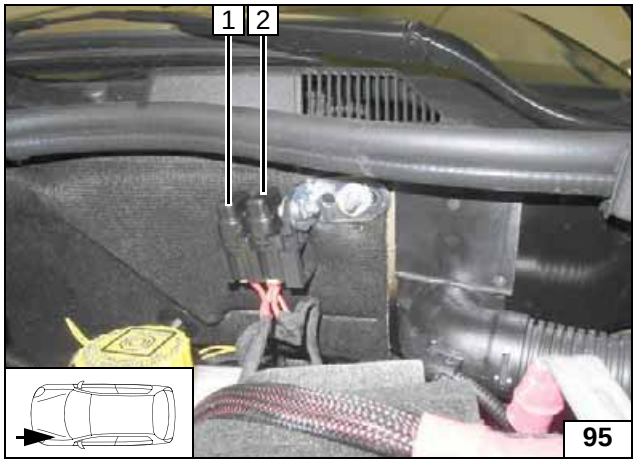
If vehicles have passenger compartment monitoring, this must be deactivated in addition to vehicle settings for the heating operation.
Deactivation instructions can be found in the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



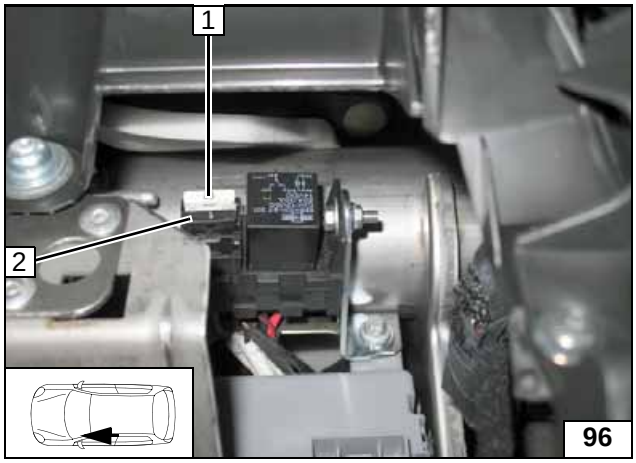
1 Air outlet to windscreen
2 Set temperature to "max."
3 Set fan to level "1", or max. "2"

A/C control panel



1 20A heater fuse F1
2 30A main fuse F2 of passenger compartment

Fuses of engine compartment



1 25A fan fuse F4
2 1A fuse F3 of heater control

Fuses of passenger compartment