# Water Heater

Webasto
Feel the drive

***Thermo Top E* Parking Heater** e1 00 0003

***Thermo Top C* Parking Heater** e1 00 0002

# Installation documentation

# Mitsubishi Lancer / Lancer Sportback

Petrol and Diesel
from model year 2008
Left-hand drive vehicle
Manual transmission
LPG gas system "Zeikom"

**WARNING!**

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.

Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems.
Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

**NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.**

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

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

Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.

Ident. No.: 1313099H_EN Fee Euro 10.00

## Table of Contents



## Validity

| Manufacturer | Model | Type | EG-BE No./ABE |
|---|---|---|---|
| Mitsubishi | Lancer | CY | e1 * 2001/ 116 * 0441 * ... |
| Mitsubishi | Lancer | CY0 | e1 * 2001/ 116 * 0441 * ... |
| Mitsubishi | Lancer Sportback | CY0 | e1 * 2001/ 116 * 0441 * ... |
| Mitsubishi | Lancer | CY3 | e1 * 2001/ 116 * 0441 * ... |

| Engine type | Engine model | Output in kW | Displacement in cm³ |
|---|---|---|---|
| A491 | Petrol | 80 | 1499 |
| A492 | Petrol | 86 | 1590 |
| 4B10 | Petrol | 106 | 1798 |
| 4N13 | Diesel | 110 | 1798 |
| BWC | Diesel | 103 | 1968 |

Vehicle and engine types, equipment variants and national specifications not listed in this installation documentation have not been tested. However, installation according to this installation documentation may be possible.

The installation location of a digital timer and summer/winter switch should be confirmed with the end customer before installation.

## Heater/Installation Kit

| Quantity | Designation | Order No.: |
|---|---|---|
| 1 | Retail accessories *Thermo Top C / E* | See price list |
| 1 | Installation kit Mitsubishi Lancer / Lancer Sportback Petrol and Diesel | 1313095D |
| 1 | Heater control | See price list |

**Heater recommended for the respective vehicle class:**

| Vehicle | Heater |
|---|---|
| Compact car | Thermo Top E |
| Mid-size car, estate car | Thermo Top C |
| Full-size car, van, offroader | Thermo Top P |

The selection of the heater is based on the passenger compartment size of the vehicle and the level of comfort required by the customer.

## Foreword

This installation documentation applies to the Mitsubishi Lancer / Lancer Sportback Petrol and Diesel vehicles - for validity, see page 2 - from model year 2008 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.

However, the stipulations in this "installation documentation", the "operating instructions" and the "installation instructions" for the *Thermo Top C/E* must always be observed.
The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

## General Instructions

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.
Sharp edges must be provided with rub protection (cut-open fuel hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).
While installing an IPCU, the corresponding settings must be checked or adjusted before the installation.

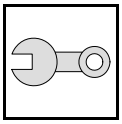
## Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers

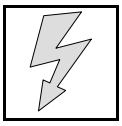
## Explanatory Notes on Document

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**

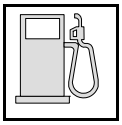


**Electrical system**



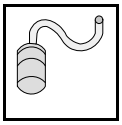
**Coolant circuit**

**Fuel**



**Exhaust gas**

**Combustion air**



**Special features are highlighted using the following symbols:**

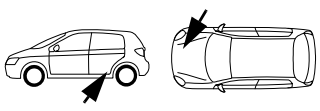
Specific risk of injury or fatal accidents.

Specific risk of damage to components.

Specific risk of fire or explosion.

Reference to general installation instructions of 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.

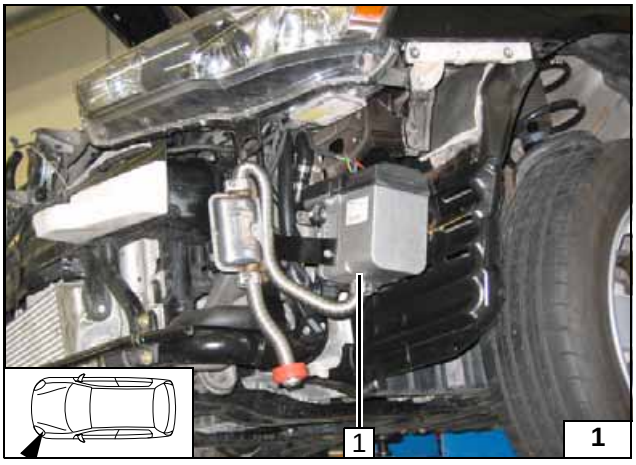
**All dimensions are in mm!**
**Tightening torque of hose clamps = 2.0 + 0.5 Nm!**
**Tightening torque of Ejot screws, Ejot studs = 10 Nm!**

## Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Remove the battery completely.
- Remove the air filter together with the intake hose.
- Remove the left-hand wheel well trim.
- Remove the bumper.
- Remove the underride protection.
- Remove the rear seat.
- Open the tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the footwell trim on the driver's and front passenger side.
- Remove the instrument panel trim on the driver's side (only with Telestart).

Remove page 43 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



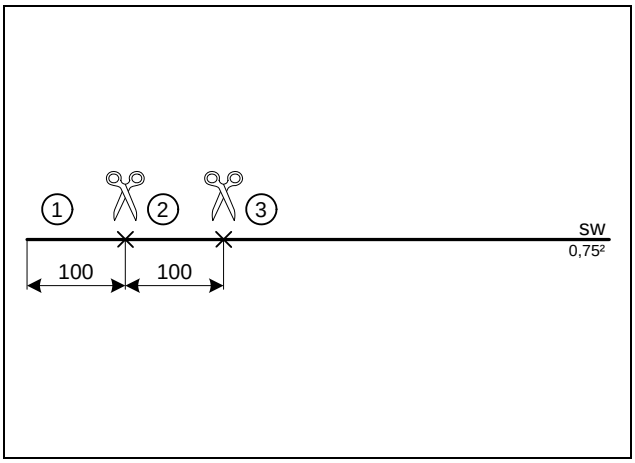

## Heater installation location

**1** Heater

**Installation location**

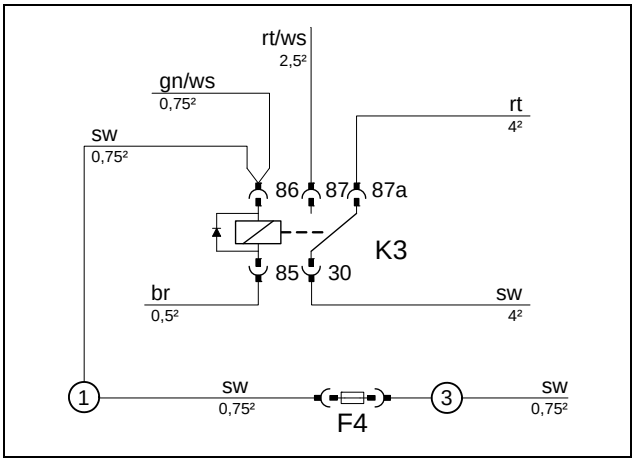
## Preparing electrical system

**Cutting wires to length**




**Preparing fuse F4**

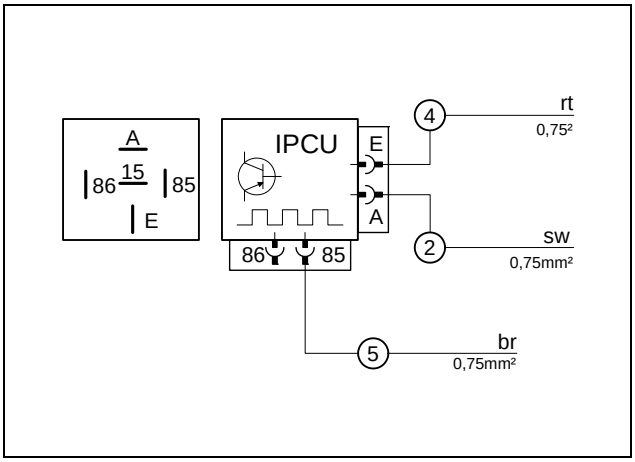
Produce connections as shown in wiring diagram. Install wire section **3** in the protective sleeving provided.




**Premounting IPCU (connector-side view)**

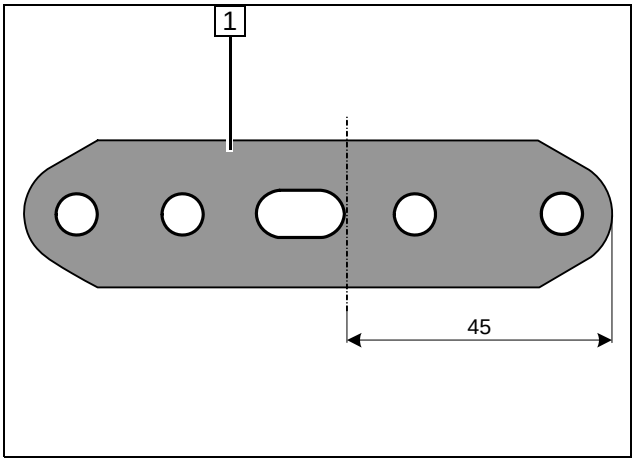
The preprogrammed data of the IPCU are mean values which can differ in individual cases. This is specified depending on the design of the fan module of the vehicle. If the fan output is too low or high, the IPCU can be reprogrammed with the Webasto diagnostic system. Change voltage in 0.1 V steps. Measure current consumption on yellow (ge) fan motor wire, 3 mm². Comply with value < 6 A.

Duty cycle: 100%
Frequency: 14KHz
Voltage: 4.5V
Function: High-side active




**Bending perforated bracket**

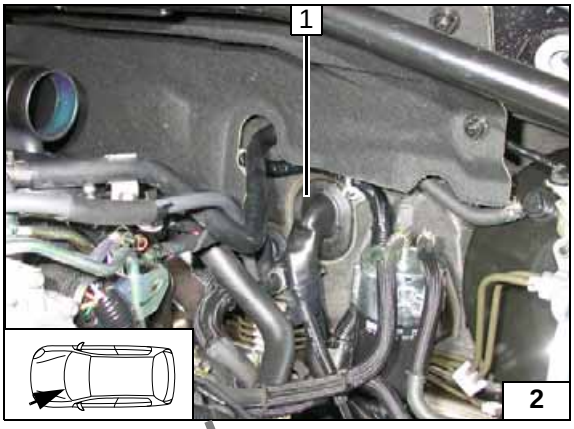
Bend perforated bracket **1** by approx. 100°.



## Electrical Connections

### Wiring harness pass through

**1** Protective rubber plug




### Summer/winter switch option

**1** Summer/winter switch, drilled hole 12 mm dia.

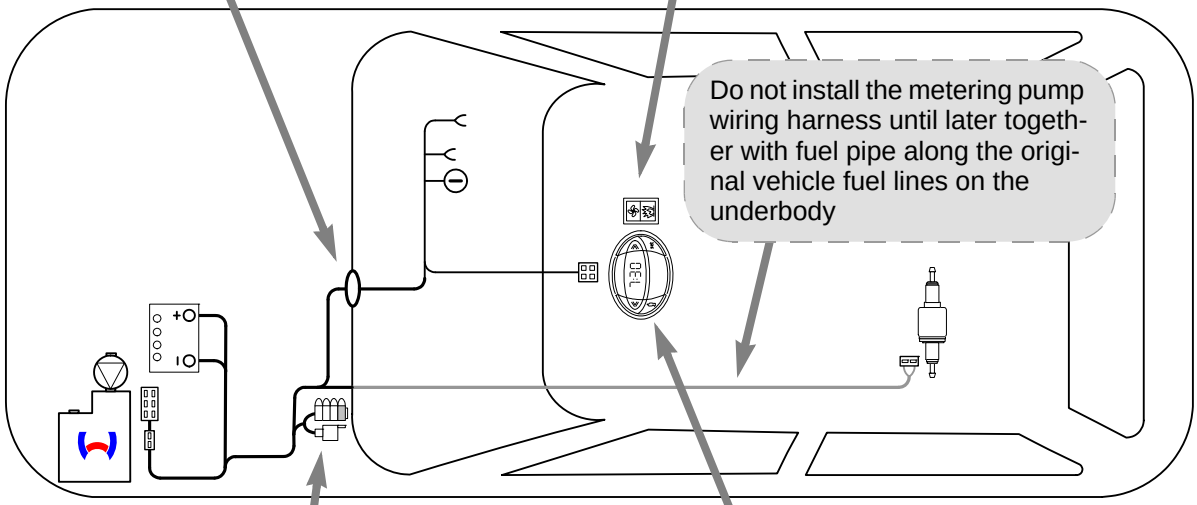
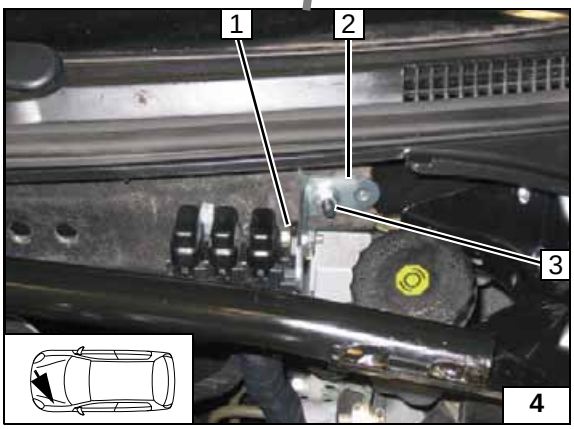
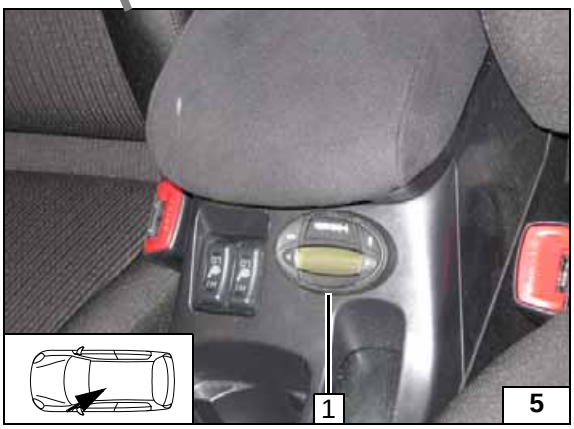




Diagram for wiring harness routing




### Fuse holder, K3 relay

**1** Retaining plate of fuse holder, M5x16 bolt, fuse holder, K3 relay, washer, flanged nut
**2** Perforated bracket
**3** Original vehicle thread, M6 flanged nut

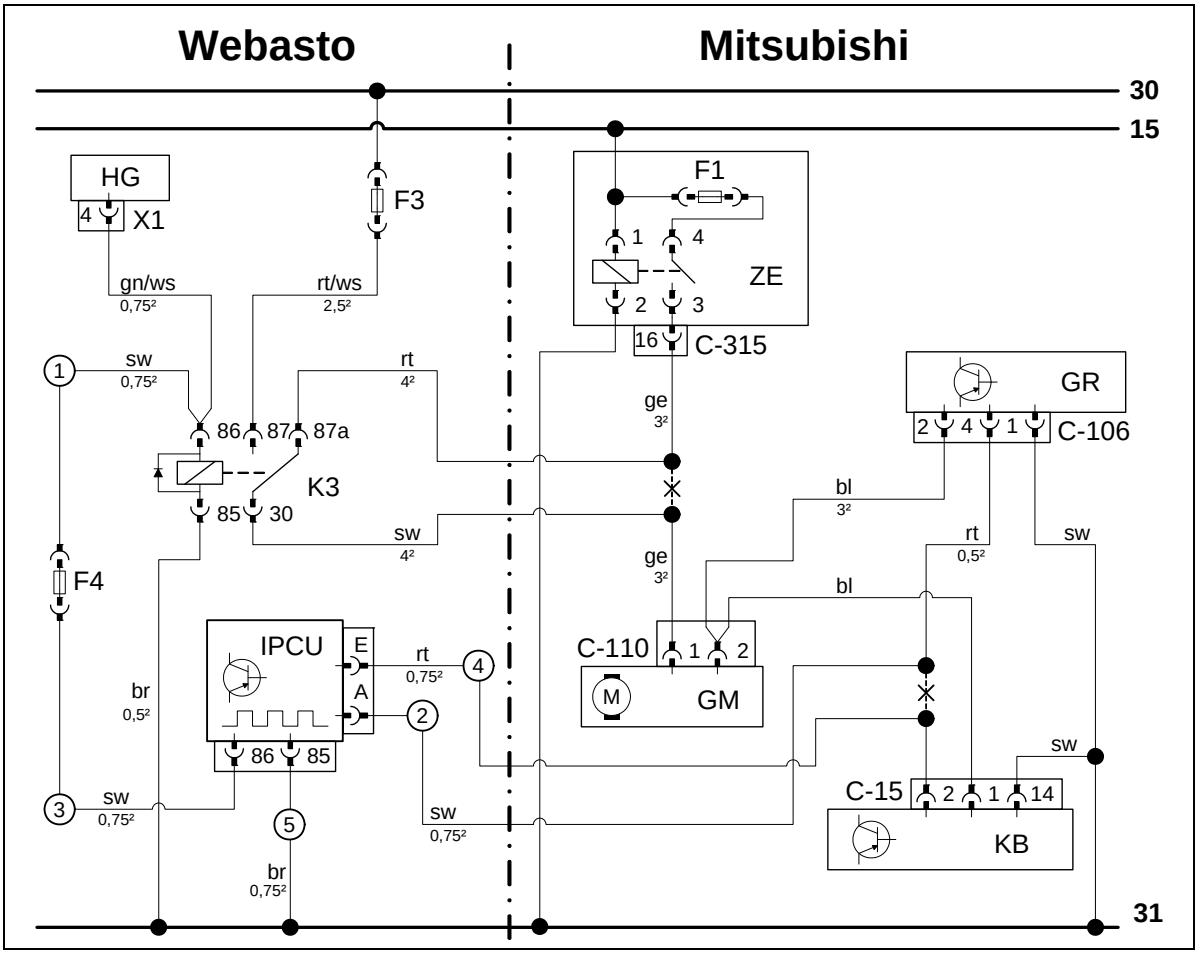



### Digital timer

**1** Digital timer

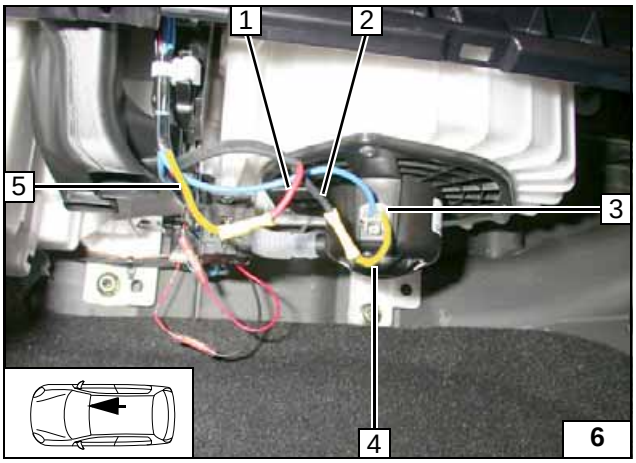
## Fan control

Wiring diagram




Legend

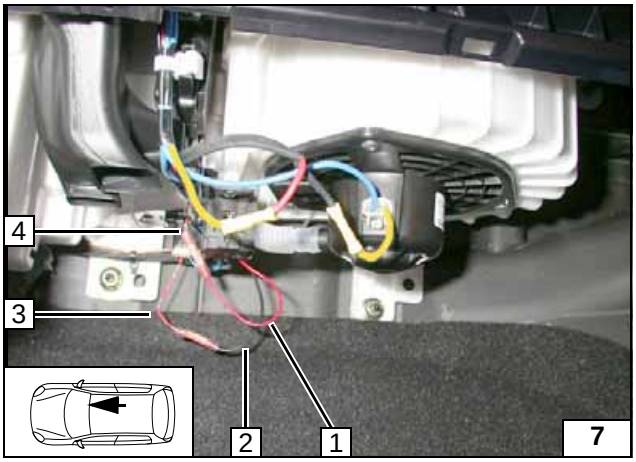
| Webasto components | | Vehicle components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | TT-C/E Heater | GM | Fan motor | rt | red |
| X1 | 6-pin connector | C-110 | 2-pin connector GM | ws | white |
| F3 | 25 A fuse | GR | Fan controller | sw | black |
| F4 | 1A fuse | C-106 | 4-pin connector GR | br | brown |
| K3 | Fan relay | KB | A/C control panel | gn | green |
| IPCU | Pulse width modulator | C-15 | 20-pin connector KB | bl | blue |
| | | ZE | Central electrical box | ge | yellow |
| **IPCU adjustment values:** | | C-315 | 19-pin connector ZE | | |
| Duty cycle: | 100% | F1 | 30A fuse | | |
| Frequency: | 14kHz | | | | |
| Voltage: | 4.5V | | | **X** | Cutting point |
| Function: | High-side | | | Wiring colours may vary. | |




Connection to 2-pin connector C-110 **3** from fan motor. Produce connections as shown in wiring diagram.

**1** Red (rt) wire from K3/87a
**2** Black (sw) wire from K3/30
**4** Yellow (ge) wire from connector C-110
**5** Yellow (ge) wire of fan relay in central electrical box

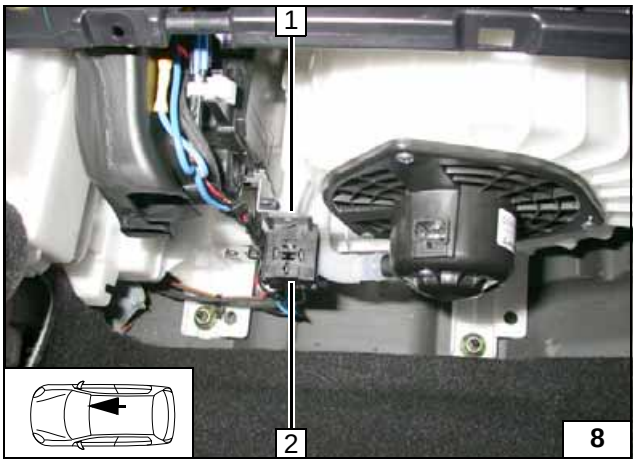
**Connecting fan motor**




Connect black (sw) wire section from fuse F4 to IPCU/86.
Produce connections as shown in wiring diagram.

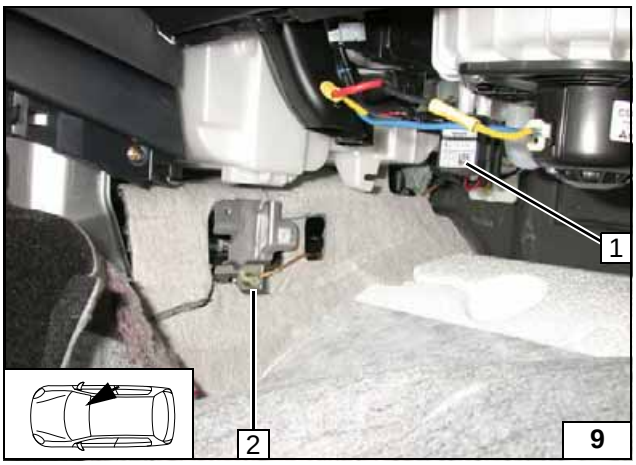
**1** Red (rt) wire of IPCU/E
**2** Black (sw) wire of IPCU/A
**3** Red (rt) wire of fan controller
**4** Red (rt) wire of A/C control panel

**Connecting IPCU**




**1** Original vehicle bolt
**2** IPCU socket

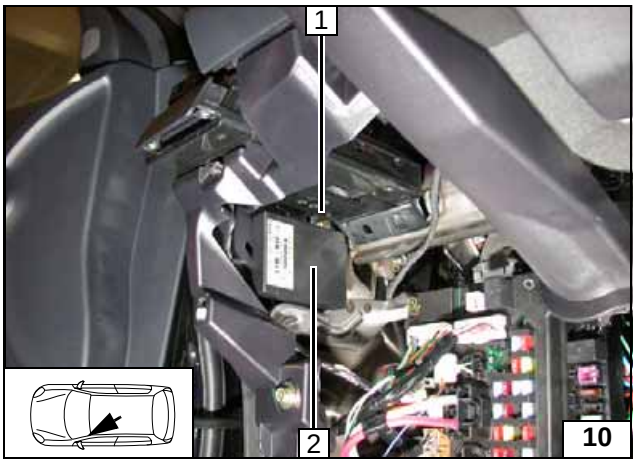
**Mounting IPCU**




Produce connections as shown in wiring diagram.

**1** Connect IPCU
**2** Brown (br) wire of IPCU/85 on original vehicle earth point

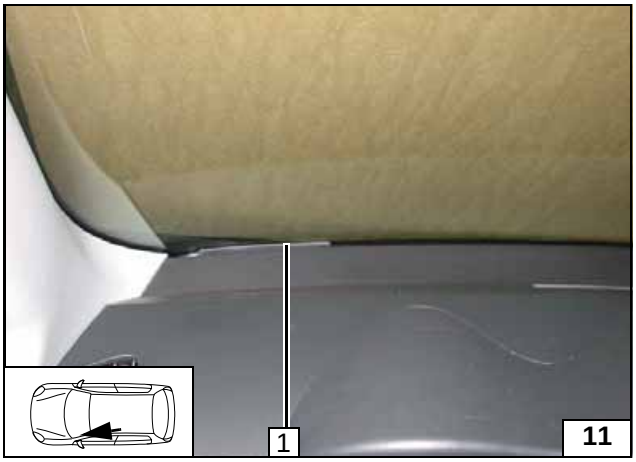
**Connecting earth wire**




## Remote option (Telestart)

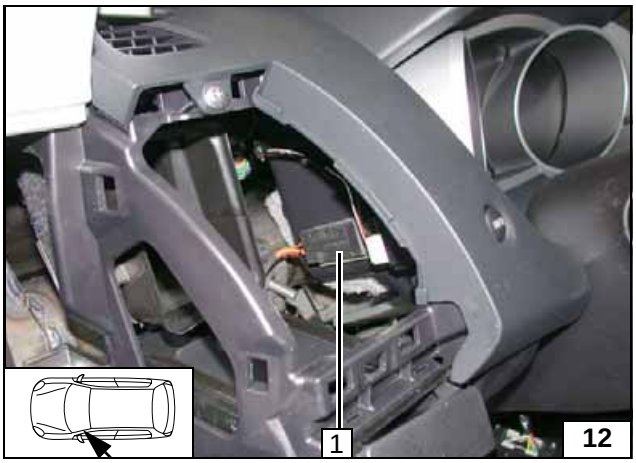
**1** Mount M5x16 bolt, bracket, flanged nut in existing hole
**2** Receiver

**Mounting receiver**




**1** Antenna

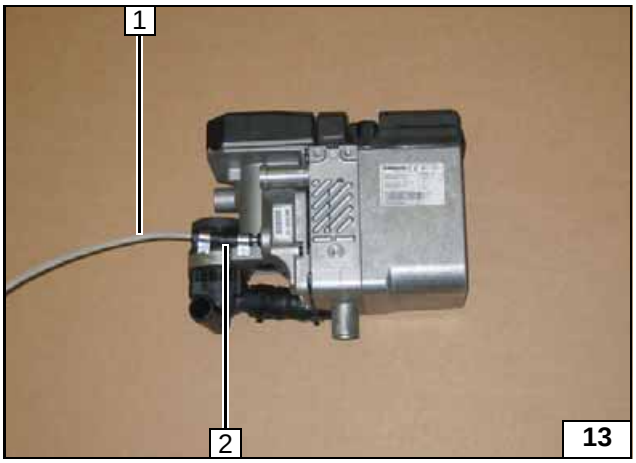
**Mounting antenna**




**Temperature sensor for HTM100 only**

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

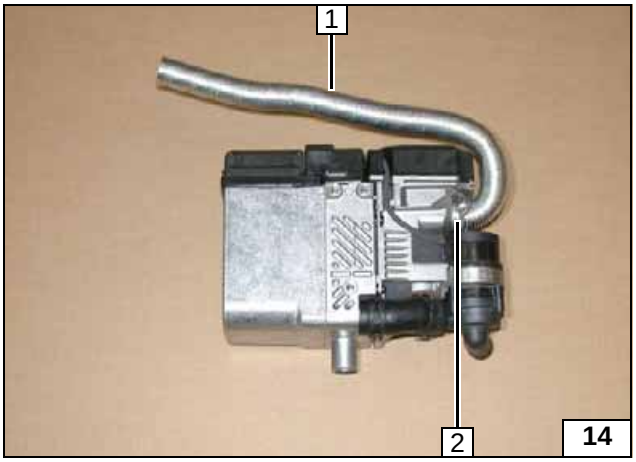
**Mounting temperature sensor**




## Preparing heater

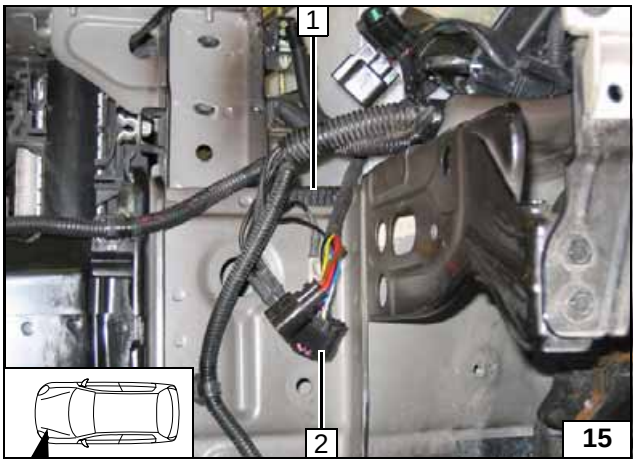
**1** Fuel line
**2** Hose section, 10 mm dia. clamp [2x]

**Premounting fuel line**




**1** Combustion-air intake pipe
**2** 27 mm dia. clamp

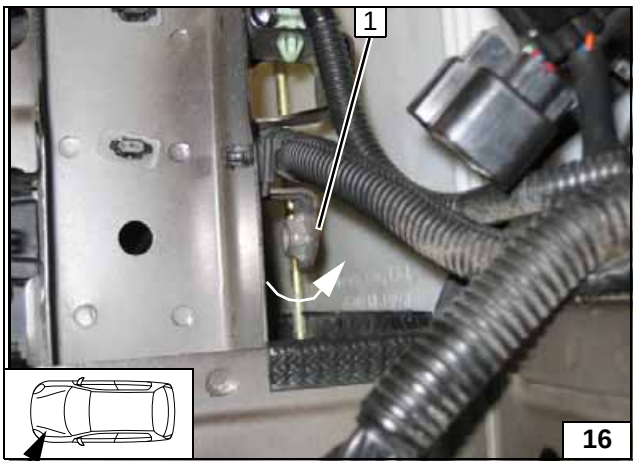
**Premounting combustion air pipe**




## Preparing installation location

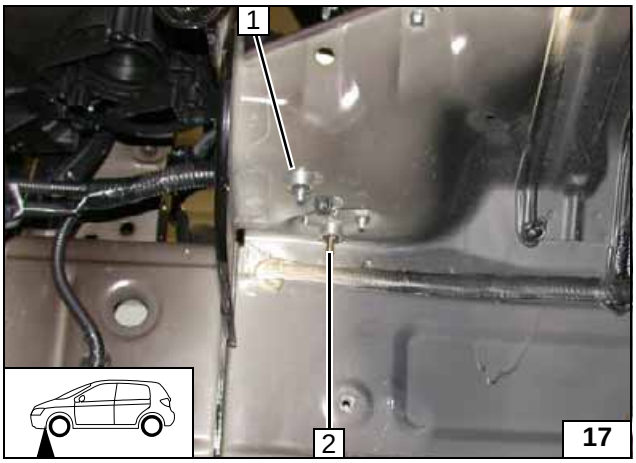
**1** Edge protection 50
**2** Wiring harness of heater

**Installing edge protection**



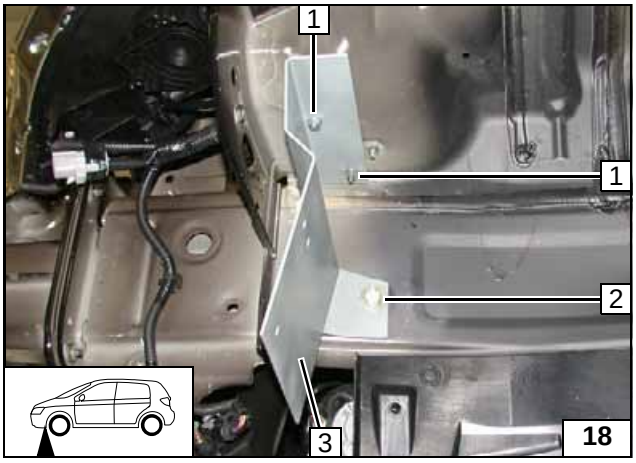

Bend angle bracket **1** by 90° as shown.

**Preparing installation location**



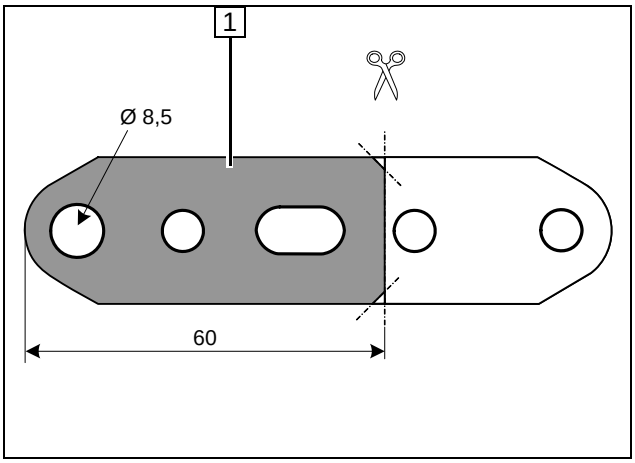

Remove original vehicle retaining clip at Position **1** and replace with M6x30 bolt, large diameter washer, 8 mm shim and pin lock. Remove original vehicle bolt at Position **2** and replace with M6x30 bolt, 5 mm shim and pin lock.

**Preparing installation location**




**1** Flanged nut [2x]
**2** M8x20 bolt, large diameter washer, spring lockwasher in existing threaded hole
**3** Bracket

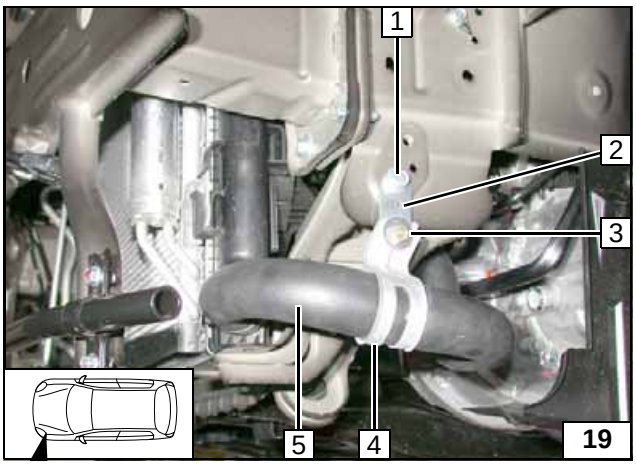
**Mounting bracket**




**Petrol**

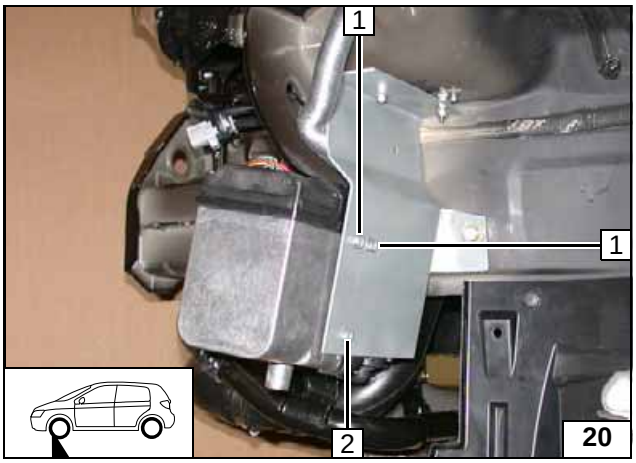
Cut perforated bracket **1** to length and drill. Cut off corners at approx. 45°.

**Cutting perforated bracket to length**




**1** Original vehicle bolt
**2** Perforated bracket
**3** M8x20 bolt, large diameter washer, M8 flanged nut

**Moving coolant hose downward**

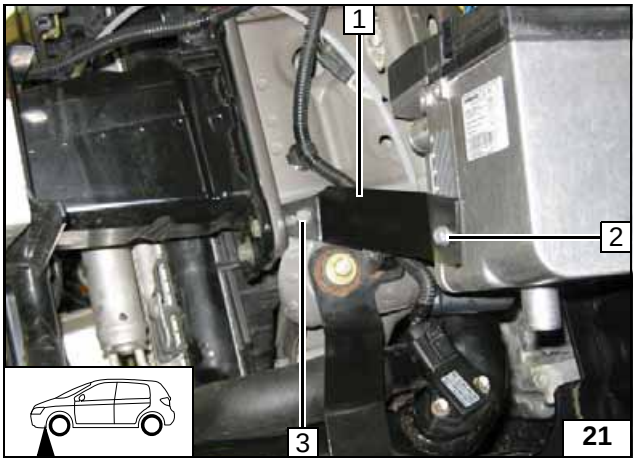



## Installing heater

Insert two washers between heater and bracket at Position **2**. Connect wiring harness of heater prior to installation.

**1** Ejot screw [2x]
**2** Ejot screw, washer [2x]

**Mounting heater**



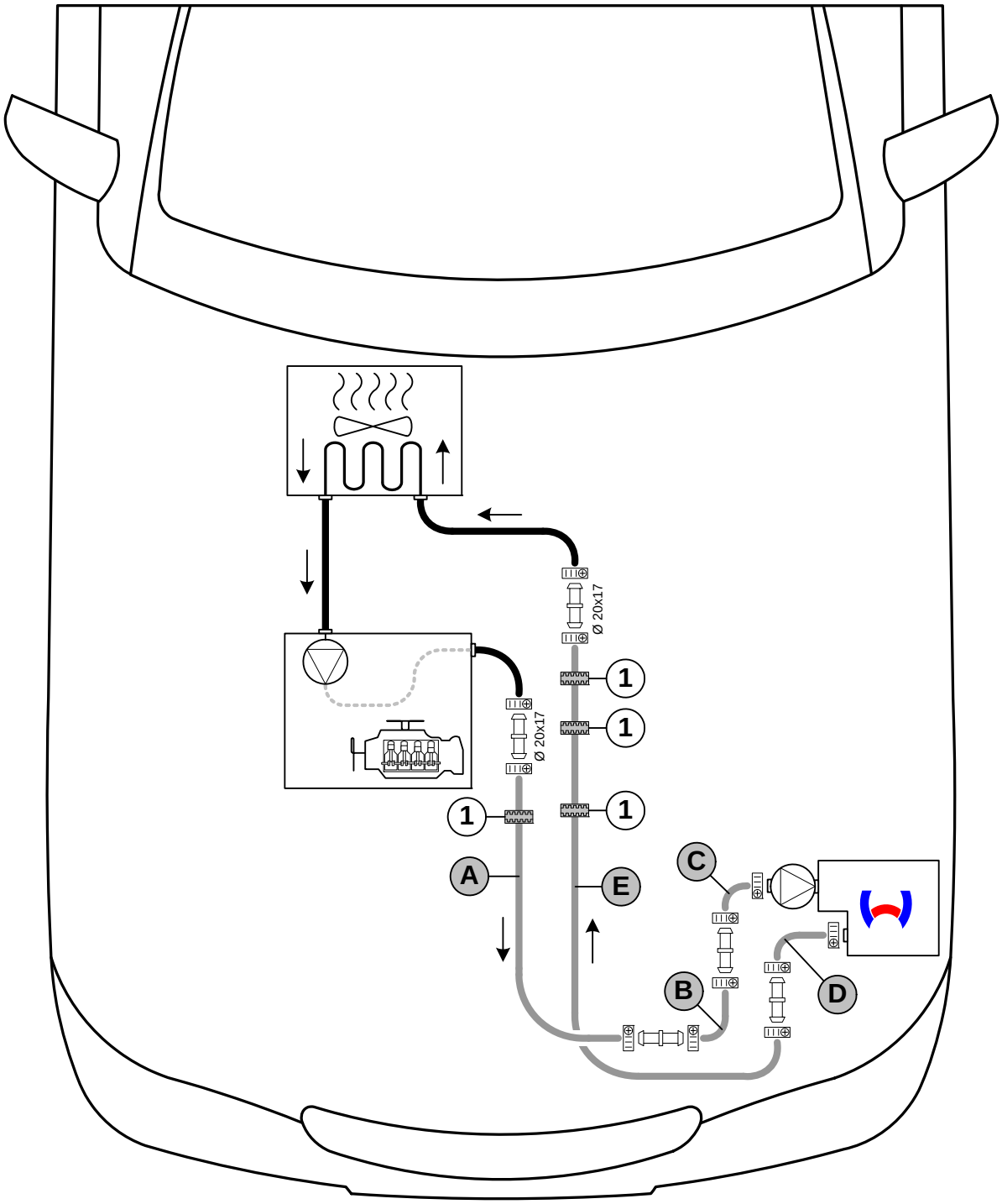

**1** Strut
**2** Ejot screw
**3** Copy hole pattern, 7 mm dia. hole, M6x20 bolt, flanged nut

**Installing strut**

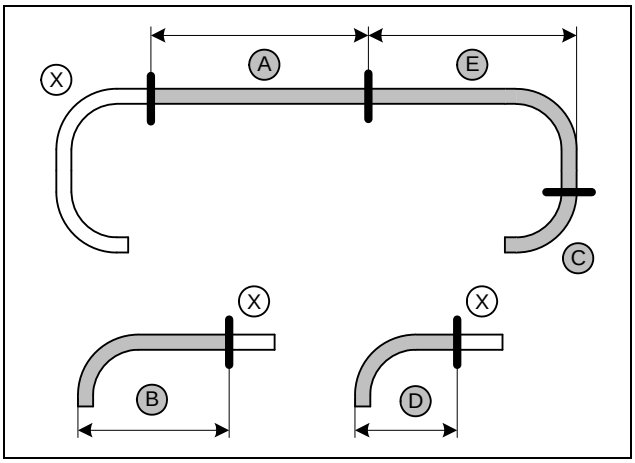
## Coolant circuit 1.5 B

**WARNING!**
Any coolant running off should be collected using an appropriate container. Route hoses so that they are 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 "inline" based on the following diagram:

**Hose routing diagram**



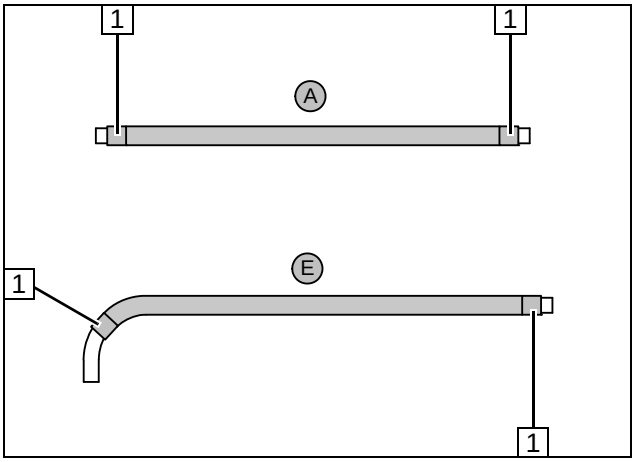

All connecting pipes without a specific designation = dia. 20x20. All hose clamps = 16-27 mm dia.
**1** = Black (sw) rubber isolator .




Shorten hose **B** = 90° moulded hose
Hose **D** = shorten 90° moulded hose
Hose **E** = with long 90° elbow
Discard section **X**.

**A** = 840
**B** = 230
**D** = 110
**E** = 980

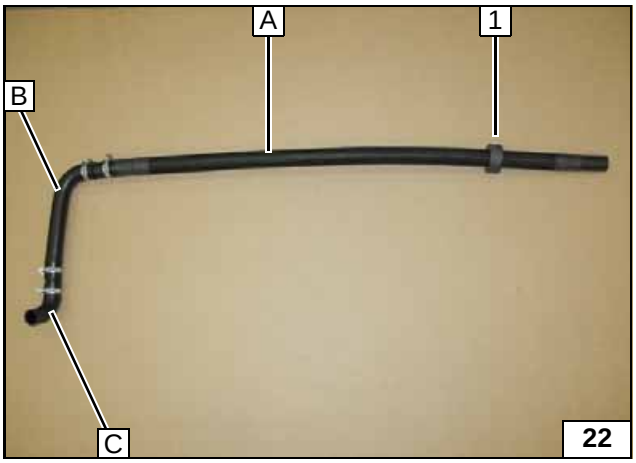
**Cutting hoses to length**




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

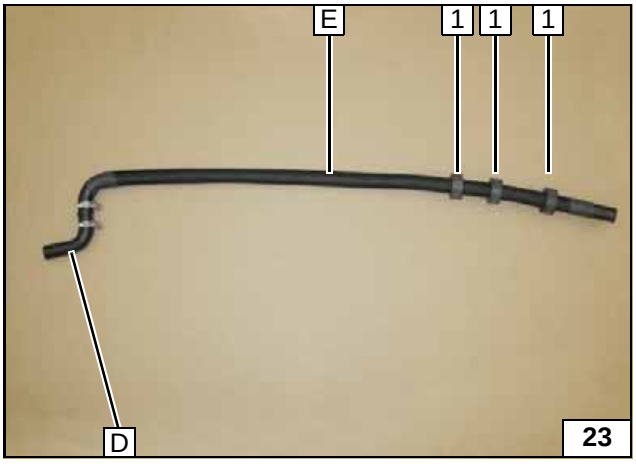
**1** 25 mm long heat shrink plastic tubing [4x]

**Preparing hoses**



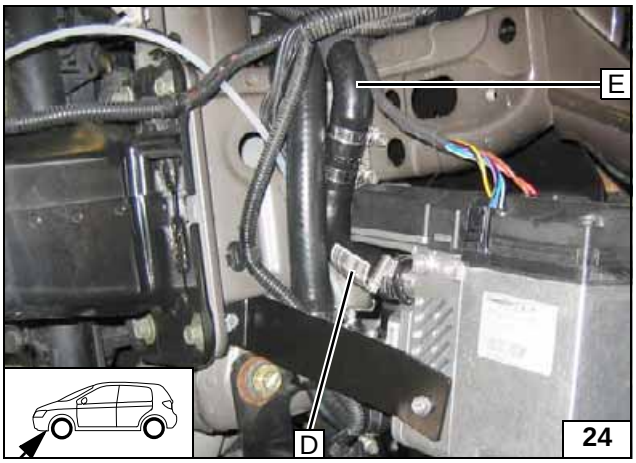

**1** Push on black (sw) rubber isolator

**Premounting hose A, B and C**

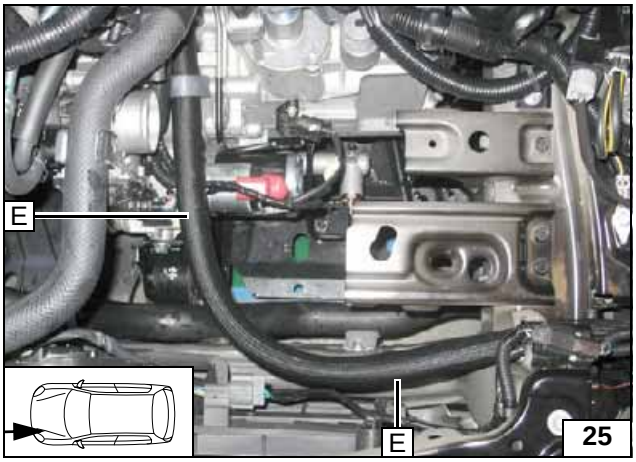



**1** Push on black (sw) rubber isolator [3x]

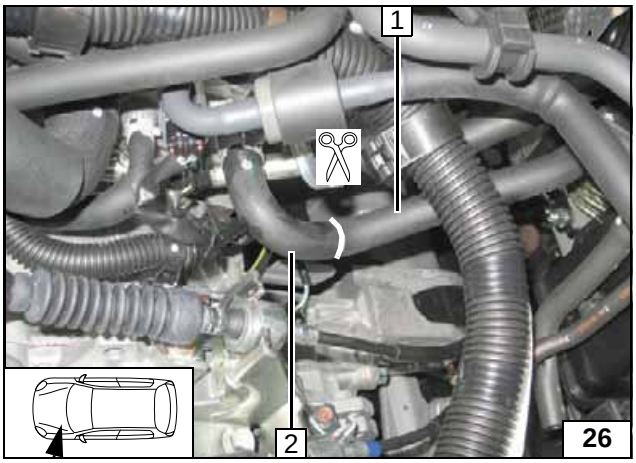
**Premounting hose D and E**




**Connecting heater outlet**



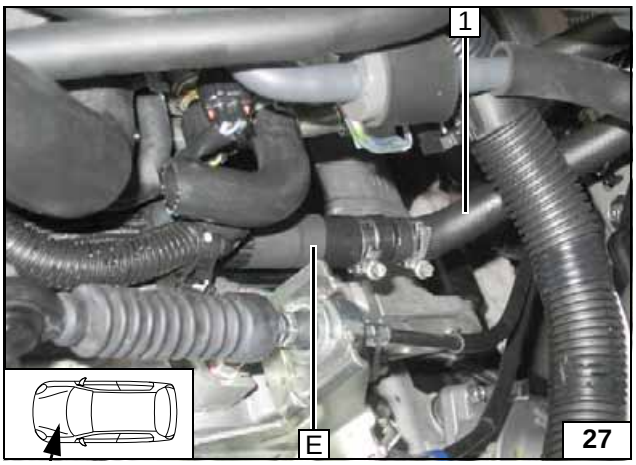

**Routing in engine compartment**




Cut off original vehicle hose of engine outlet / heat exchanger inlet at the marking. Turn hose section of engine outlet **2** on the connection piece of the engine outlet by approx.180° in the forward direction.

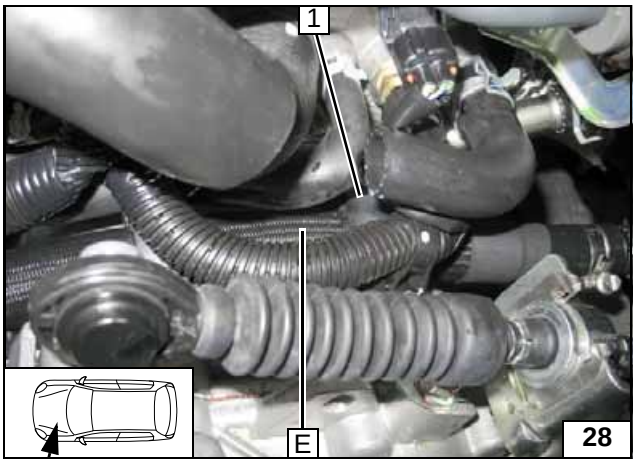
**1** Hose section of heat exchanger inlet

**Cutting point**



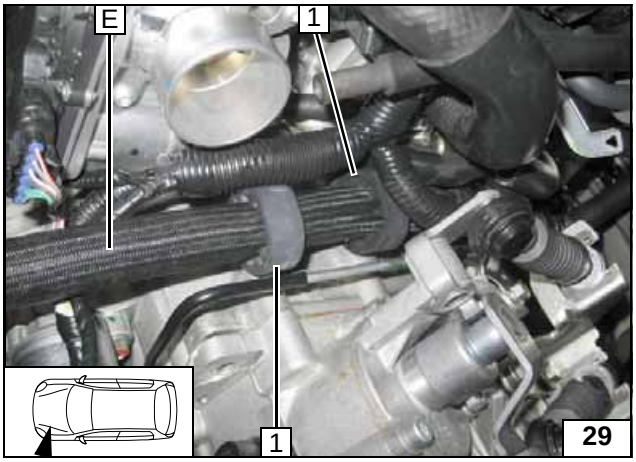

**1** Hose section of heat exchanger inlet

**Connecting heat exchanger inlet**



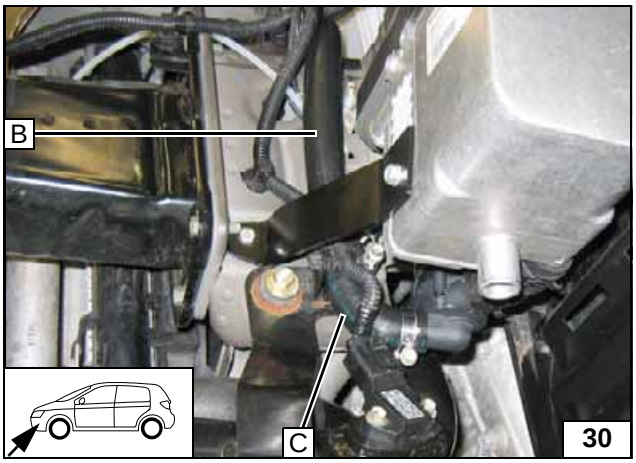

**1** Black (sw) rubber isolator

**Aligning rubber isolator**

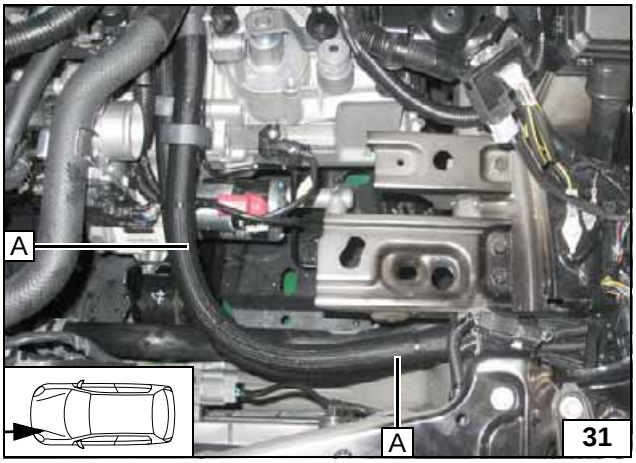



**1** Black (sw) rubber isolator [2x]

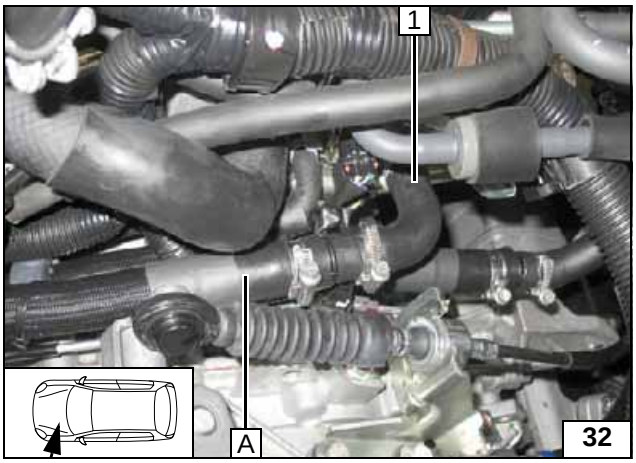
**Aligning rubber isolator**




**Connecting heater inlet**

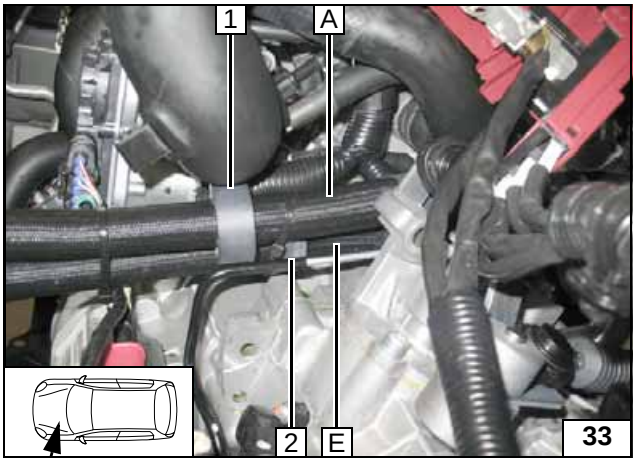



**Routing in engine compartment**




**1** Hose of engine outlet

**Connecting engine outlet**




Fasten black (sw) rubber isolator **2** with cable tie to hose **A**. Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

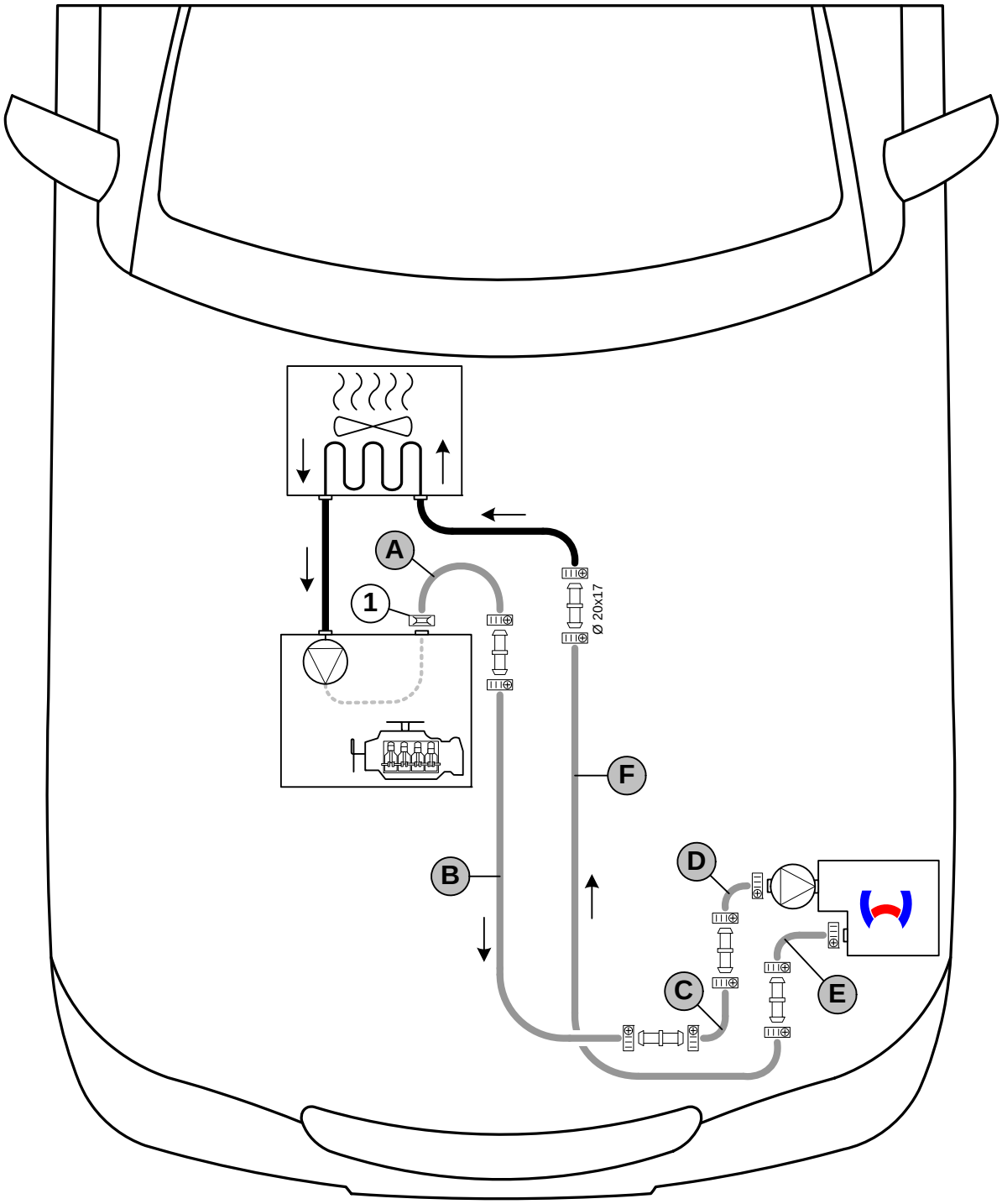
**1** Black (sw) rubber isolator

**Aligning rubber isolator**

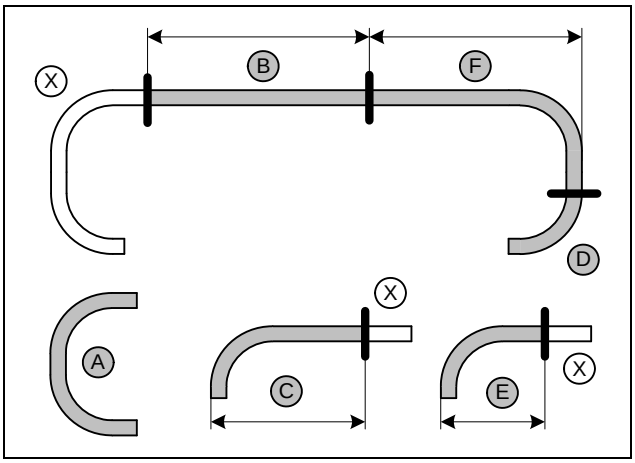
## Coolant circuit 1.8 B

**WARNING!**
Any coolant running off should be collected using an appropriate container. Route hoses so that they are 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 "inline" based on the following diagram:

**Hose routing diagram**



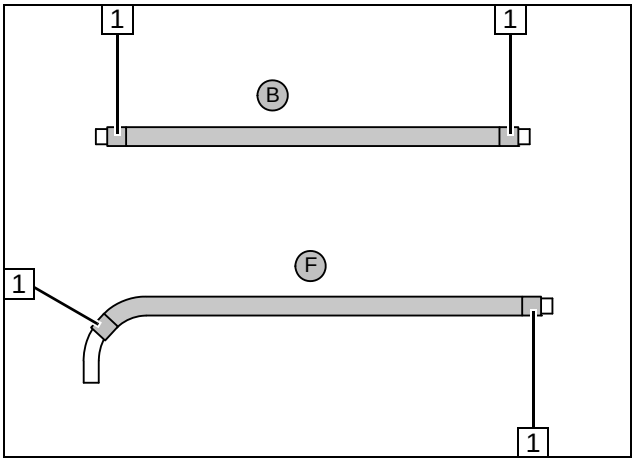

All connecting pipes without a specific designation = dia. 20x20. All hose clamps = 16-27 mm dia.
**1** = Original vehicle spring clip




Hose **A** =180° moulded hose
Shorten hose **C** = 90° moulded hose
Hose **E** = shorten 90° moulded hose
Hose **F** = with long 90° elbow
Discard section **X**.

**B** = 790
**C** = 230
**E** = 110
**F** = 970

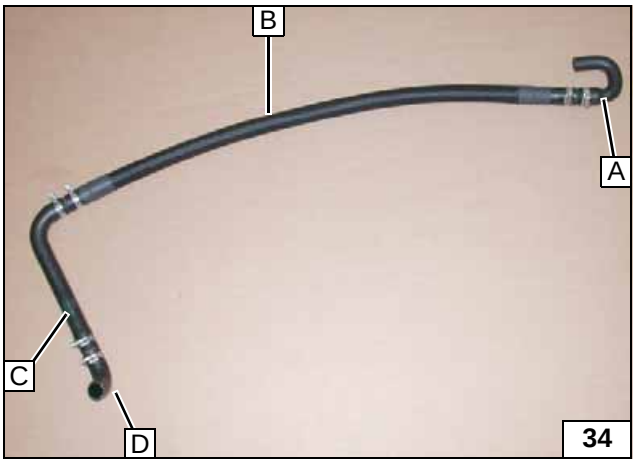
**Cutting hoses to length**



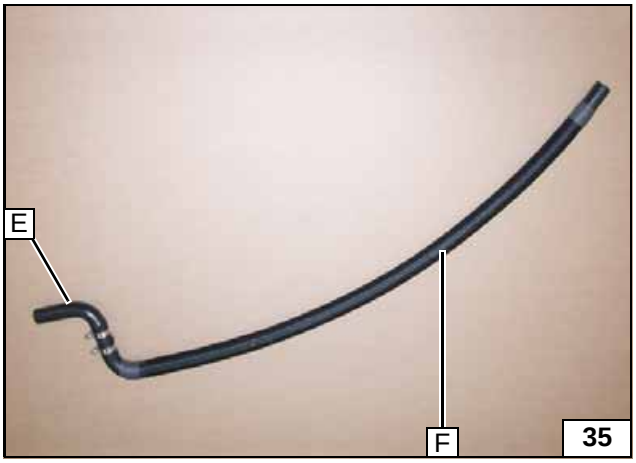

Push braided protection hoses onto hose **B** and **F** and cut to length.
Cut heat shrink plastic tubing to length.

**1** 25 mm long heat shrink plastic tubing [4x]

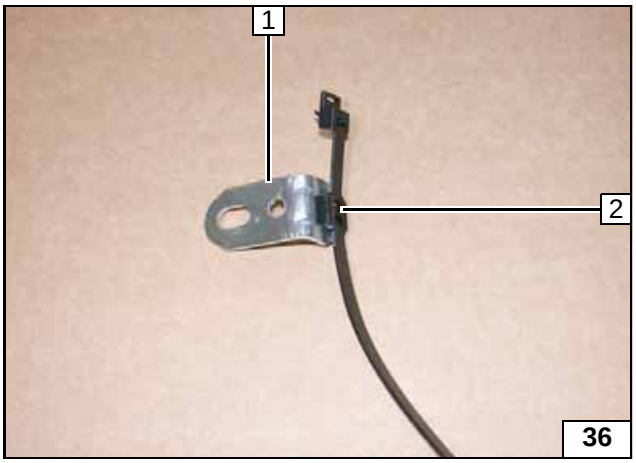
**Preparing hoses**




**Premounting hose A, B, C and D**

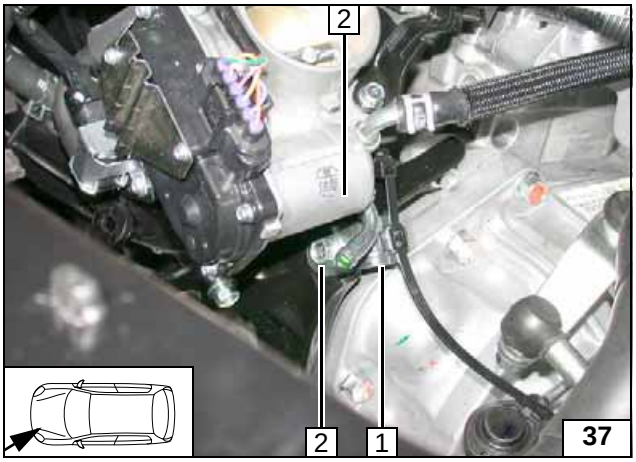



**Premounting hose E and F**



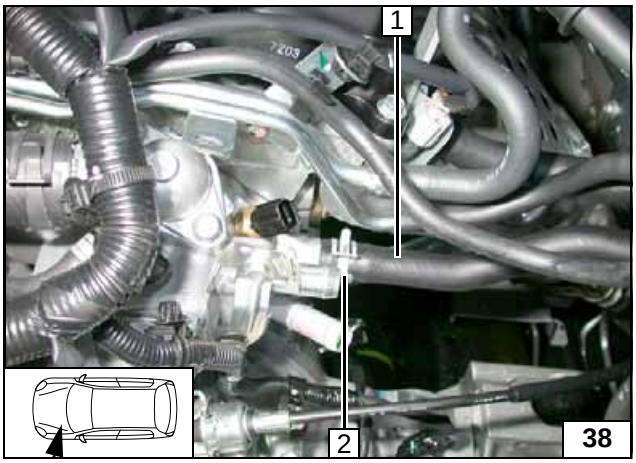

**1** Angle bracket
**2** Clip-type cable tie

**Preparing angle bracket**



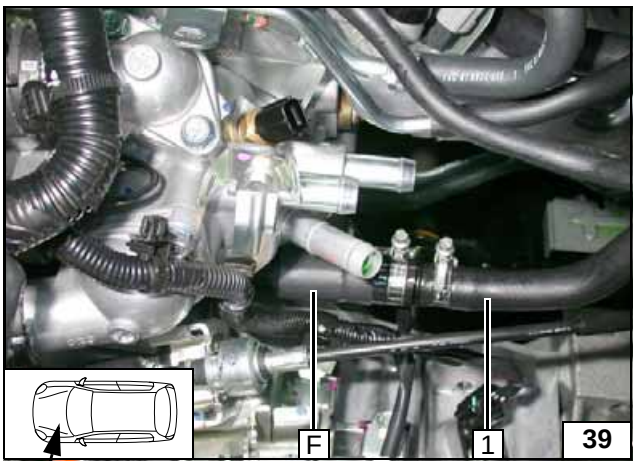

**1** Angle bracket
**2** Original vehicle bolt

**Mounting angle bracket**



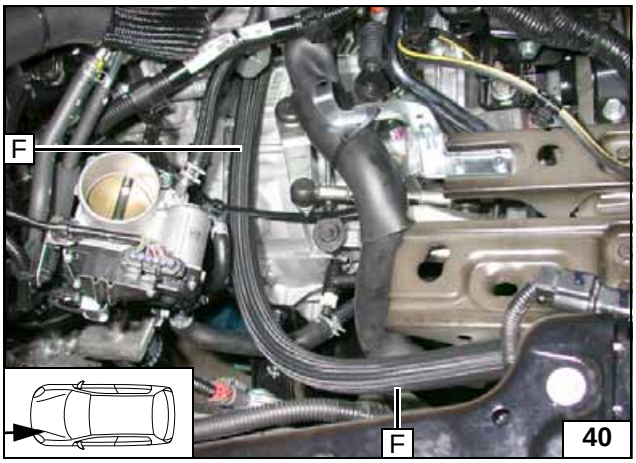

Disconnect original vehicle hose to engine outlet/heat exchanger inlet **1** at connection piece of engine outlet. Spring clip **2** will be re-used.
Original vehicle hoses only removed for demonstration purposes.

**Cutting point**

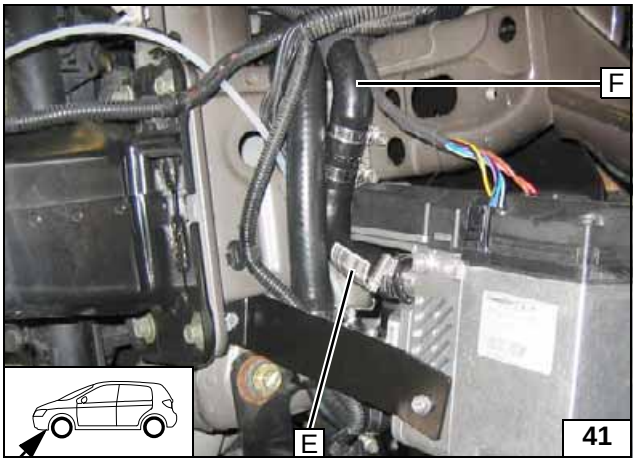



**1** Hose section of heat exchanger inlet

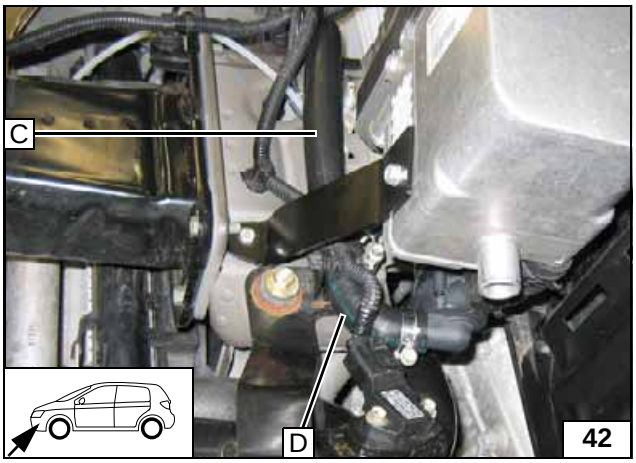
**Connecting heat exchanger inlet**



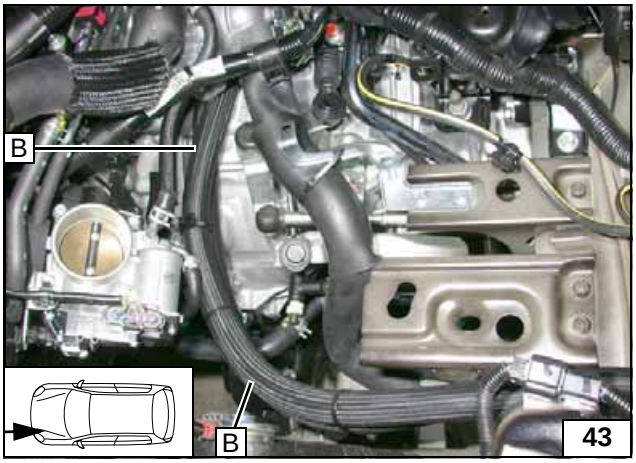

Routing in engine compartment



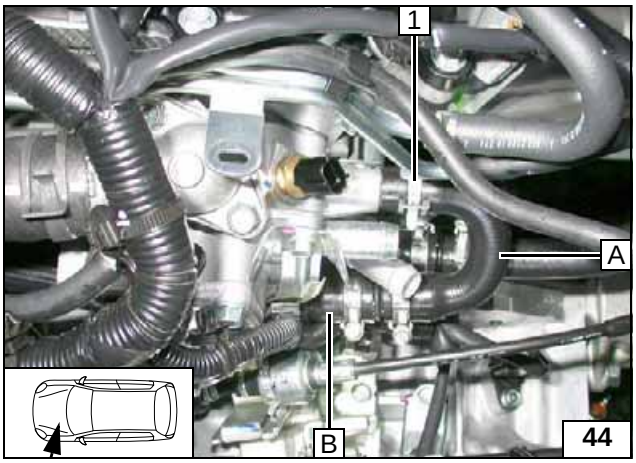

Connecting heater outlet




Connecting heater inlet

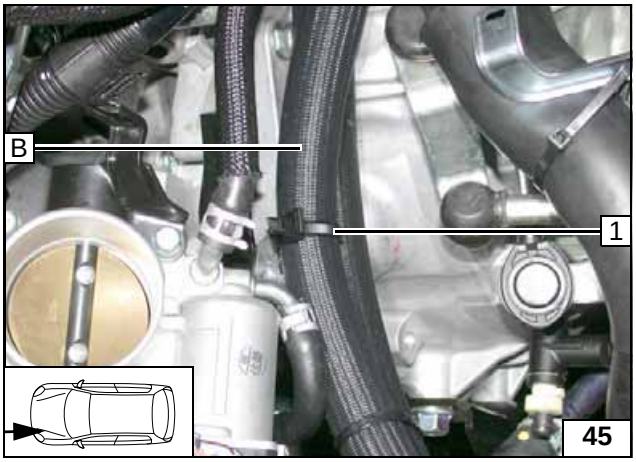



Routing in engine compartment




**1** Original vehicle spring clip

**Connecting engine outlet**




Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

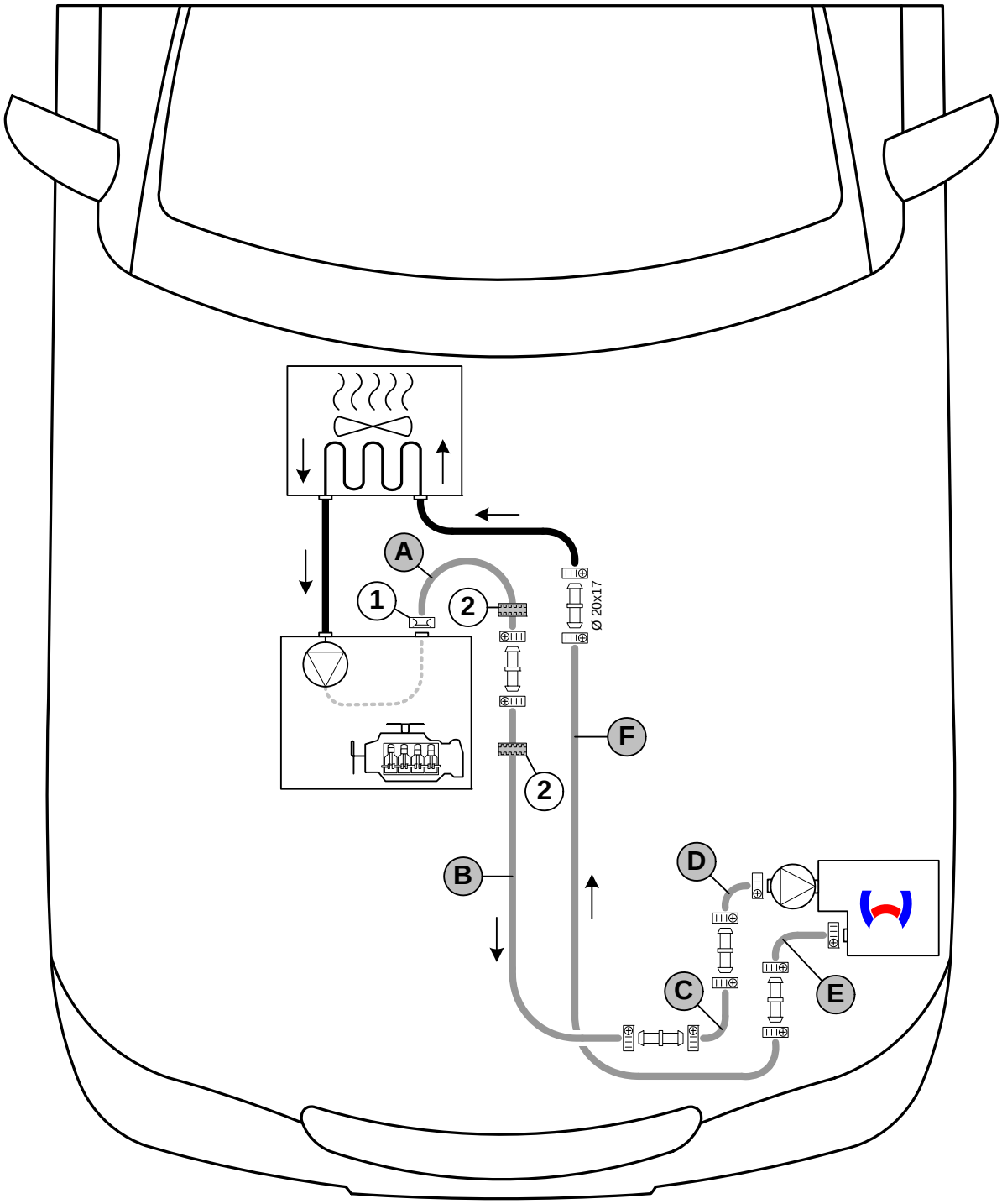
**1** Clip-type cable tie

**Fastening hose B**

## Coolant circuit 1.8 D

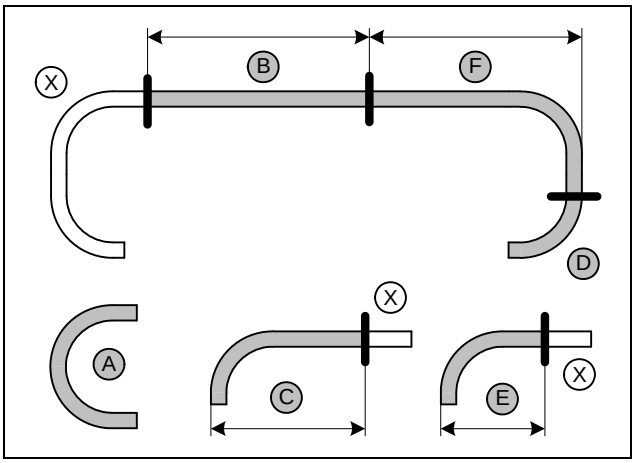
**WARNING!**
Any coolant running off should be collected using an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.
The connection should be "inline" based on the following diagram:

**Hose routing diagram**




All connecting pipes without a specific designation = dia. 20x20. All hose clamps = 16-27 mm dia.
**1** = Original vehicle spring clip **2** = Black (sw) rubber isolator.

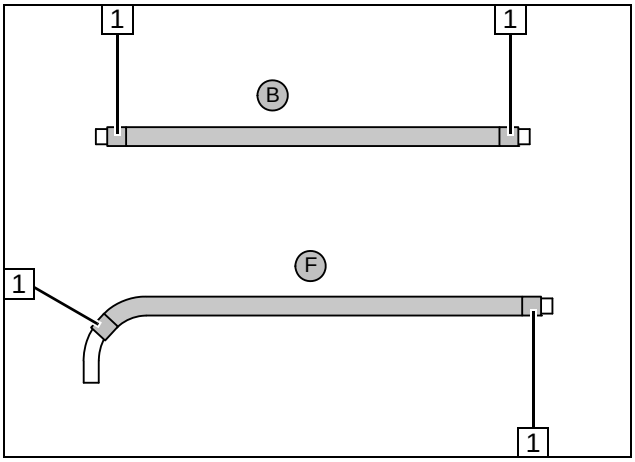
**Cutting hoses to length**




Hose **A** =180° moulded hose
Shorten hose **C** = 90° moulded hose
Hose **E** = shorten 90° moulded hose
Hose **F** = with long 90° elbow
Discard section **X**.

**B** = 840
**C** = 230
**E** = 110
**F** = 1080

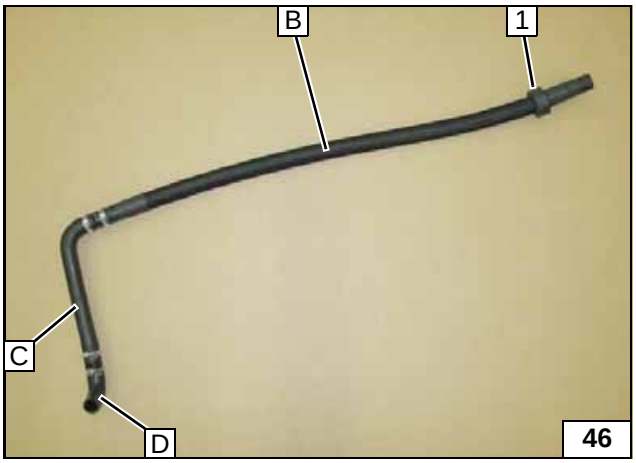
**Preparing hoses**




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

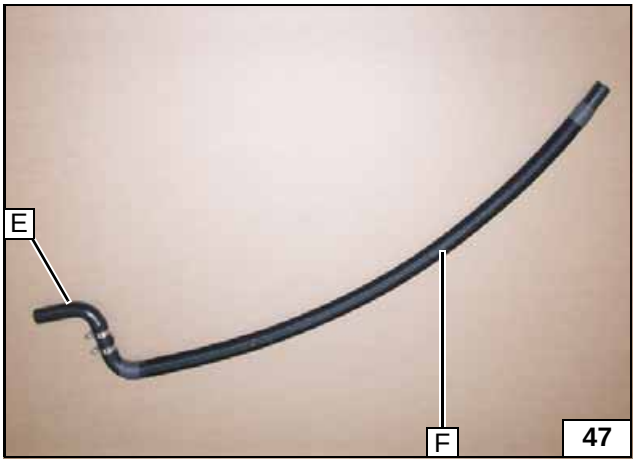
**1** 25 mm long heat shrink plastic tubing [4x]

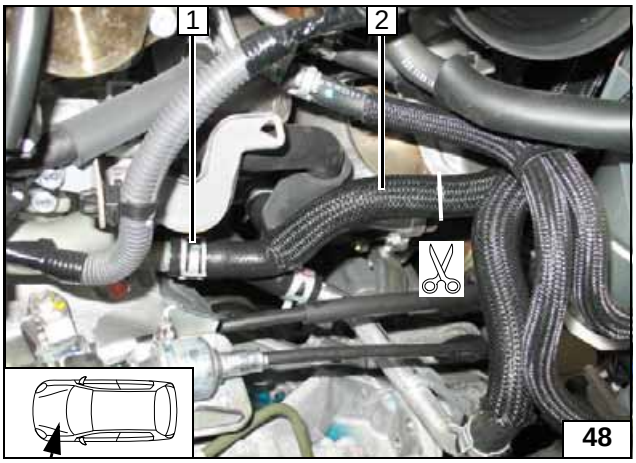
**Premounting hoses B, C and D**




**1** Push on black (sw) rubber isolator

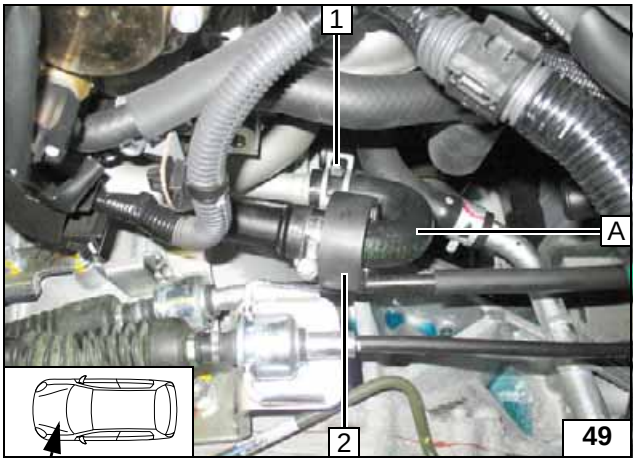
**Premounting hose E and F**





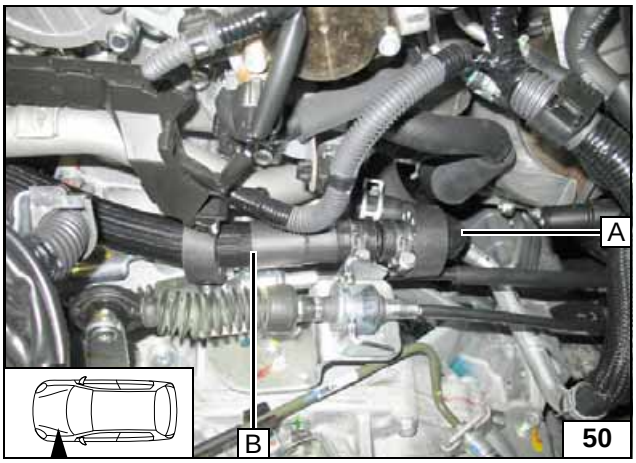

Cut off original vehicle hose **2** of engine outlet / heat exchanger inlet at the marking. Cut off 30mm of the protective hose in the cutting point area and discard remains. Spring clip **1** will be reused.

**Cutting point**

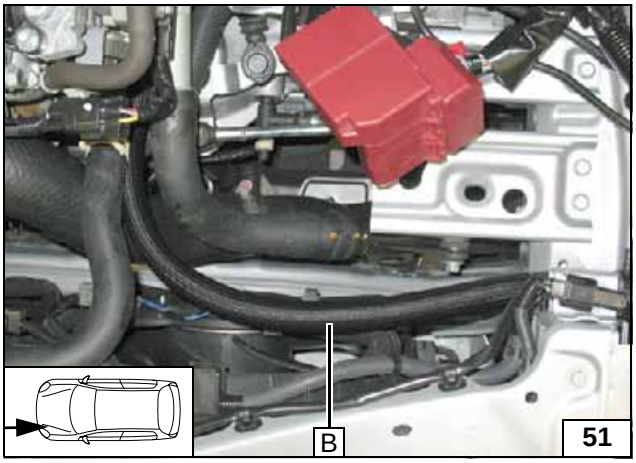



**1** Original vehicle spring clip
**2** Push on black (sw) rubber isolator

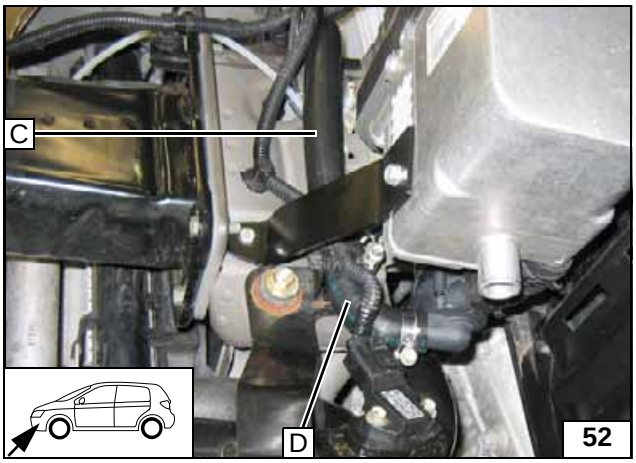
**Connecting engine outlet**



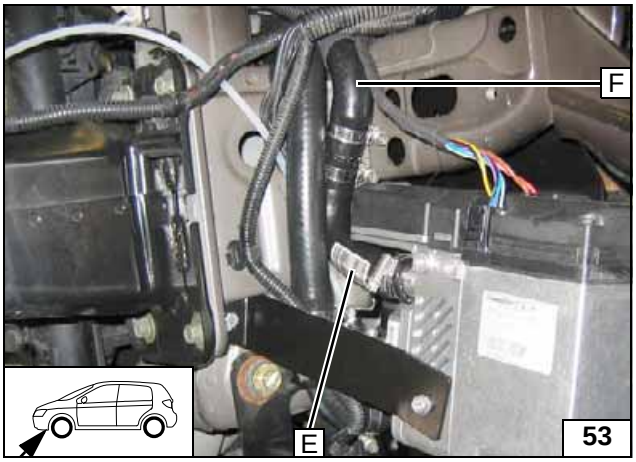

**Routing in engine compartment**



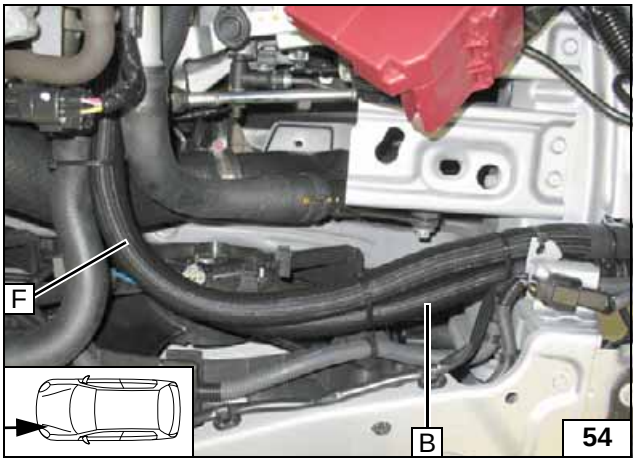

**Routing in engine compartment**



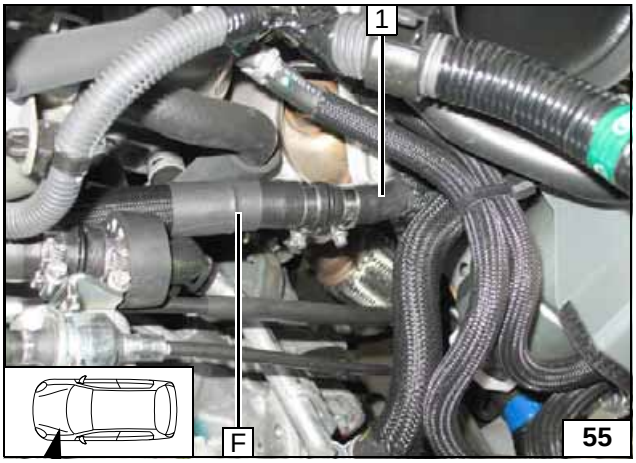

**Connecting heater inlet**




**Connecting heater outlet**

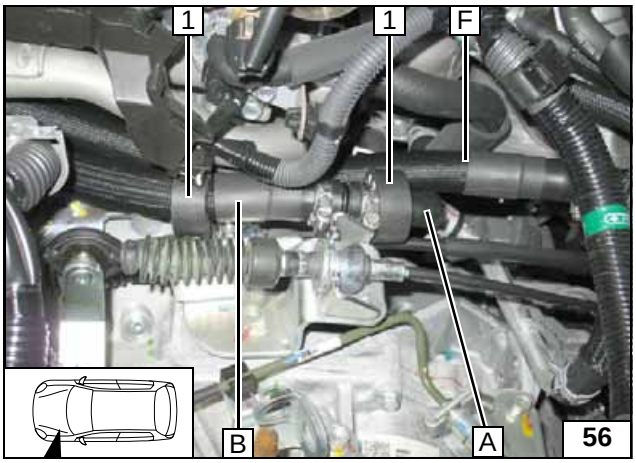



**Routing in engine compartment**




**1** Hose section of heat exchanger inlet

**Connection of heat exchanger inlet**




Ensure sufficient distance from adjacent components; correct if necessary.

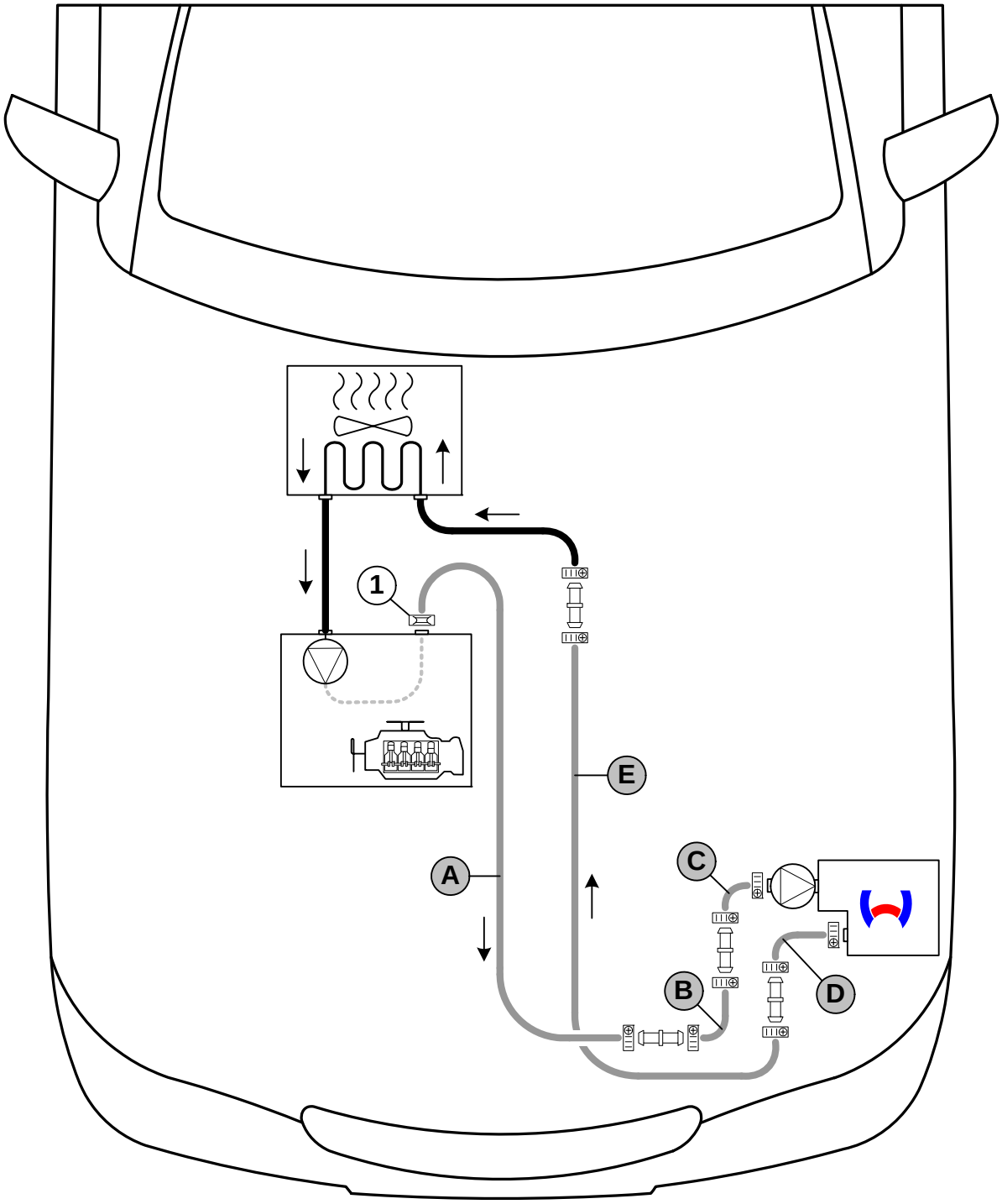
**1** Black (sw) rubber isolator [2x]

**Aligning hoses and rubber isolator**

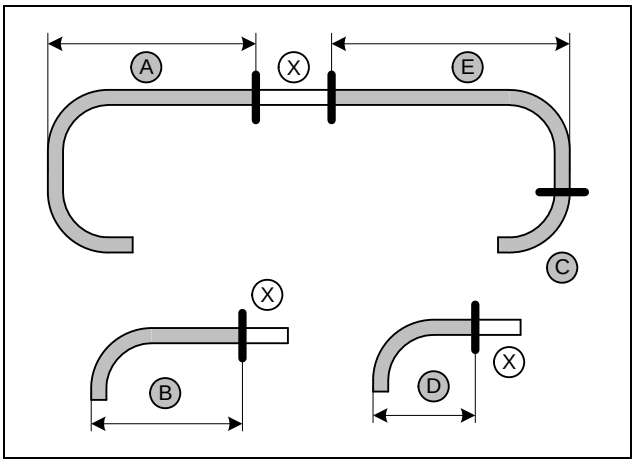
## Coolant circuit 2.0 D

**WARNING!**
Any coolant running off should be collected using an appropriate container. Route hoses so that they are 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 "inline" based on the following diagram:

**Hose routing diagram**



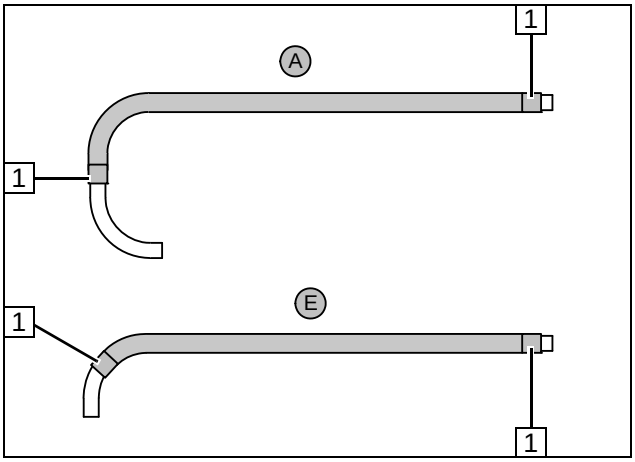

All connecting pipes = 20x20 mm dia. All hose clamps = 16-27 mm dia.
**1** = Original vehicle spring clip




Shorten hose **B** = 90° moulded hose
Hose **D** = shorten 90° moulded hose
Hose **E** = with long 90° elbow
Discard section **X**.

**A** = 880
**B** = 230
**D** = 110
**E** = 960

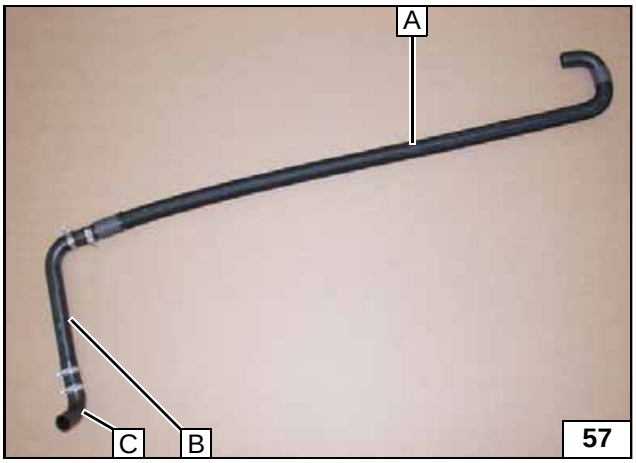
**Cutting hoses to length**



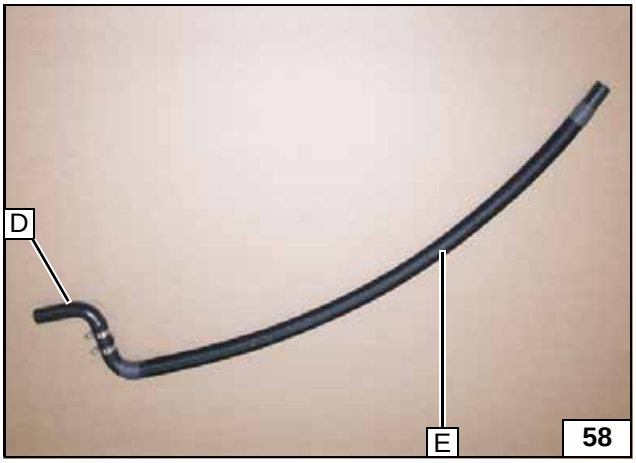

Push braided protection hoses onto hose **A** and **E** and cut to length.
Cut heat shrink plastic tubing to length.

**1** 25 mm heat shrink plastic tubing [4x]

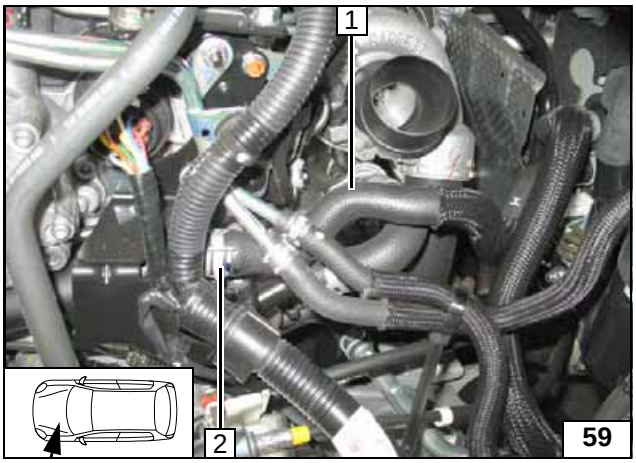
**Preparing hoses**




**Premounting hose A, B and C**

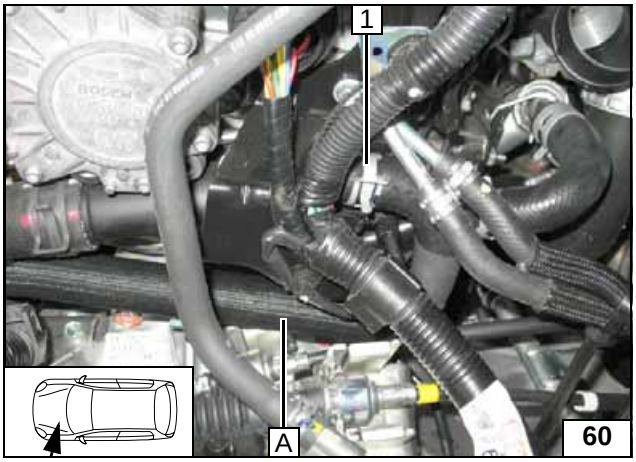



**Premounting hose D and E**



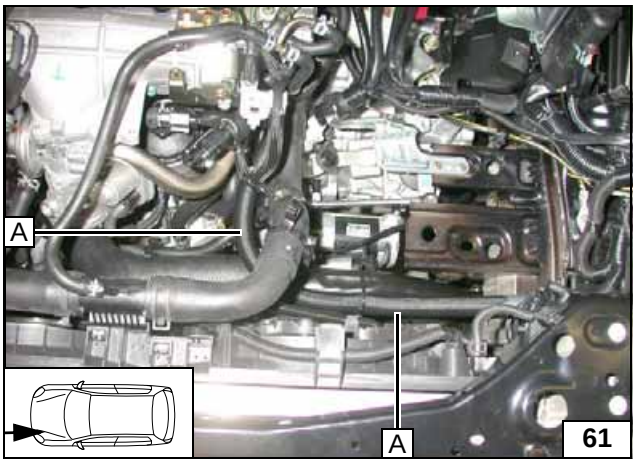

Pull original vehicle hose **1** off engine outlet/heat exchanger inlet on connection piece for engine outlet. Spring clip **2** will be reused.

**Cutting point**

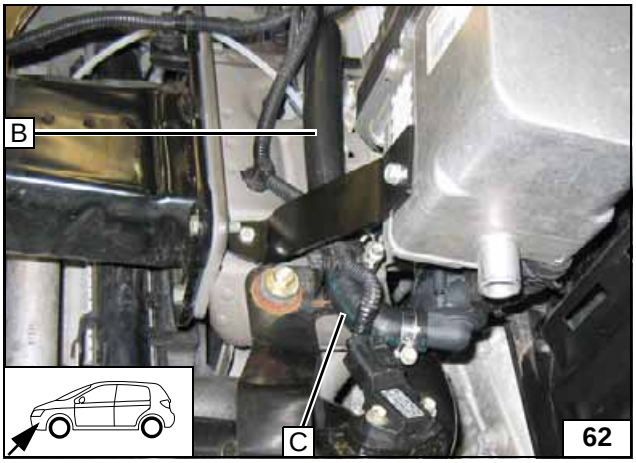



**1** Original vehicle spring clip

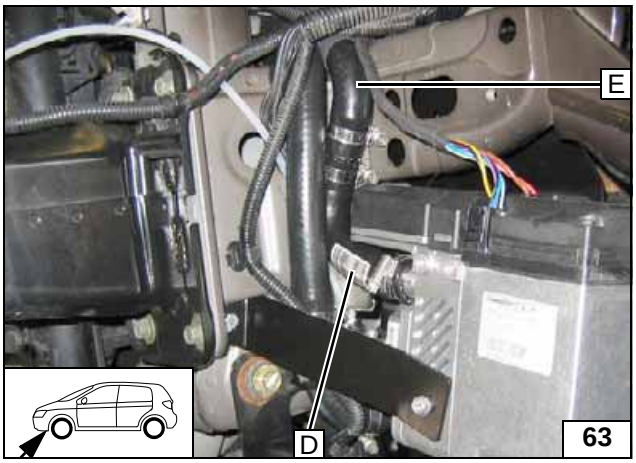
**Connecting engine outlet**



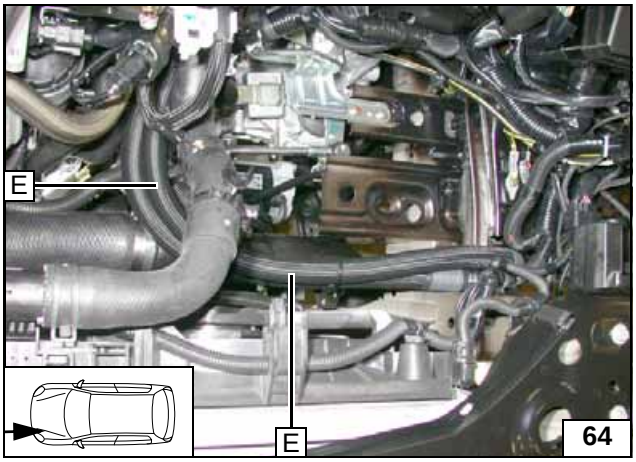

**Routing in engine compartment**



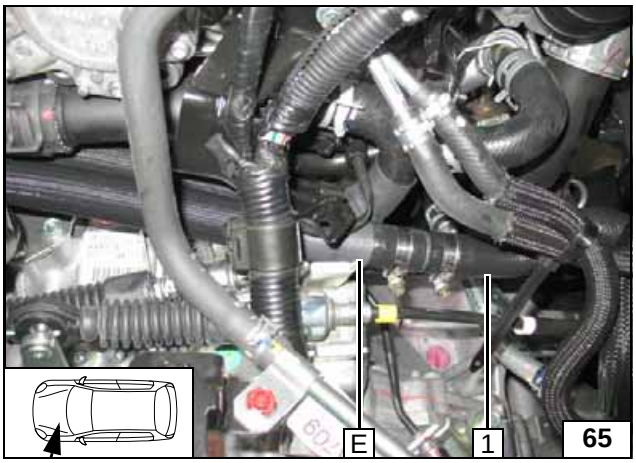

**Connecting heater inlet**




**Connecting heater outlet**




**Routing in engine compartment**




Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

**1** Hose section of heat exchanger inlet

**Connection of heat exchanger inlet**

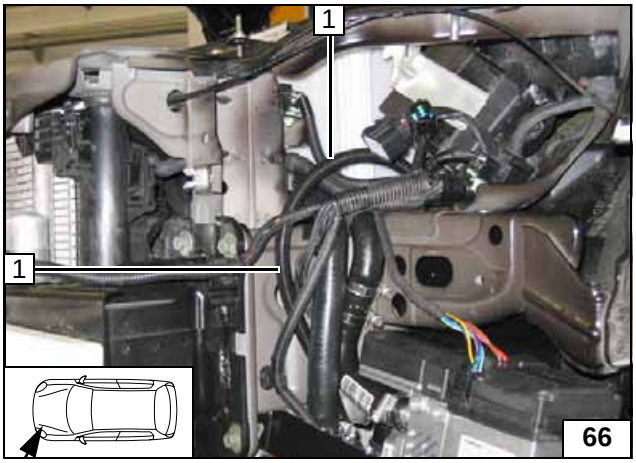
## Fuel

**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.

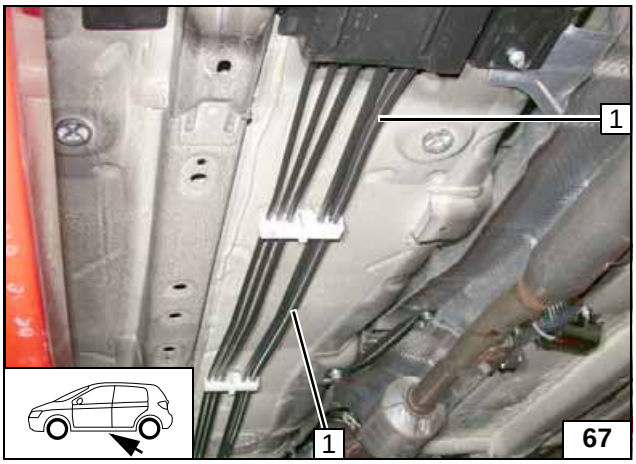



**1** Fuel line in corrugated tube

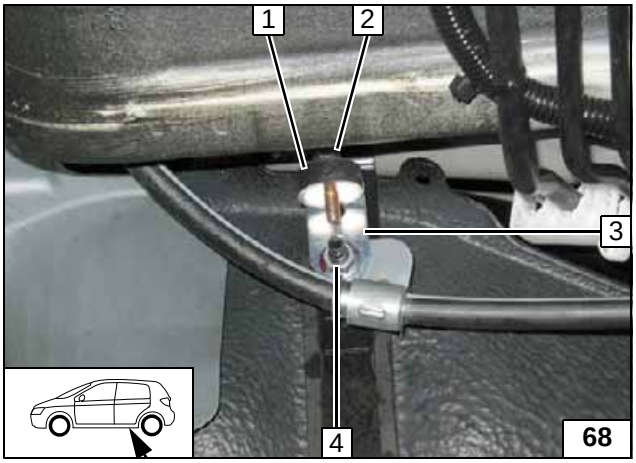
**Connecting heater**

**Petrol**

Route fuel line and wiring harness of metering pump **1** in corrugated tube from middle of firewall.

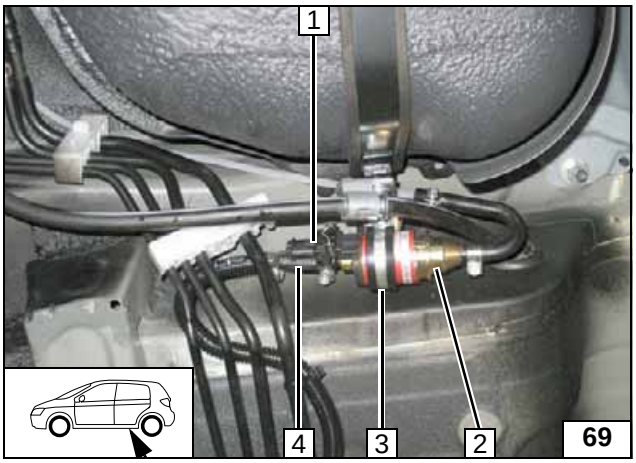



**Routing lines**



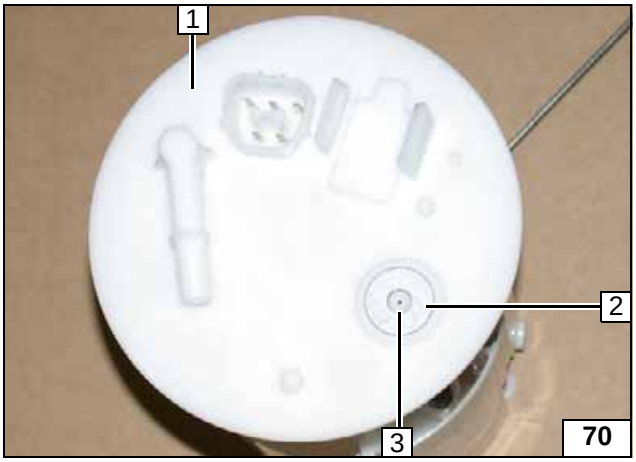

**1** Silent block
**2** Flanged nut
**3** Angle bracket
**4** Original vehicle stud bolt

**Mounting angle bracket**




**1** Wiring harness of metering pump, connector mounted
**2** Metering pump
**3** Rubber-coated p-clamp, flanged nut
**4** Fuel line, hose section, 10 mm dia. clamp [2x]

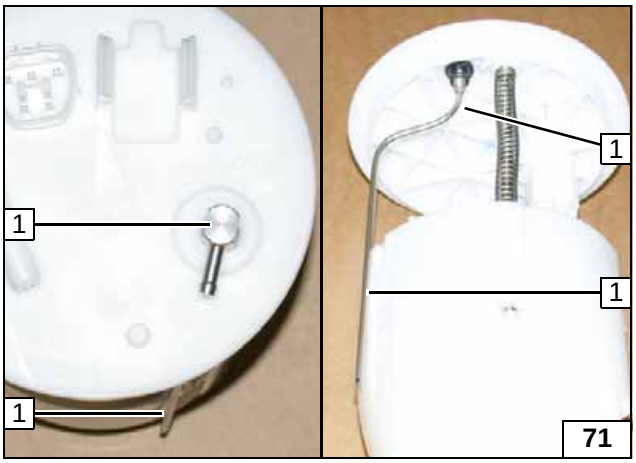
**Mounting metering pump**




Remove fuel-tank sending unit **1** in accordance with manufacturer's instructions. Watch underside of fuel-tank sending unit when copying hole pattern.

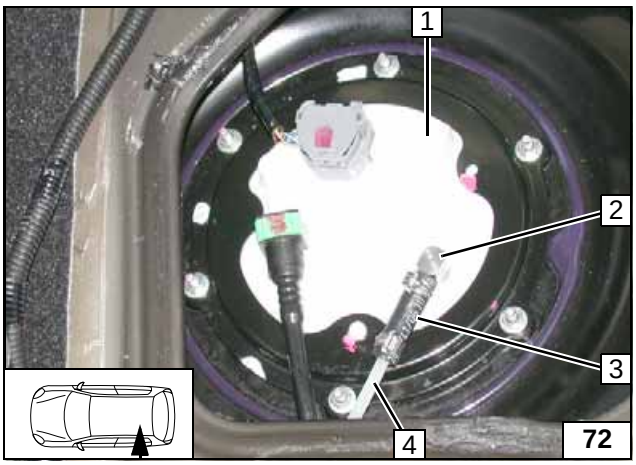
**2** Washer dia. $d_a$ = 21.6 mm
**3** Copy hole pattern, 6 mm dia. hole

**Fuel extraction**




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

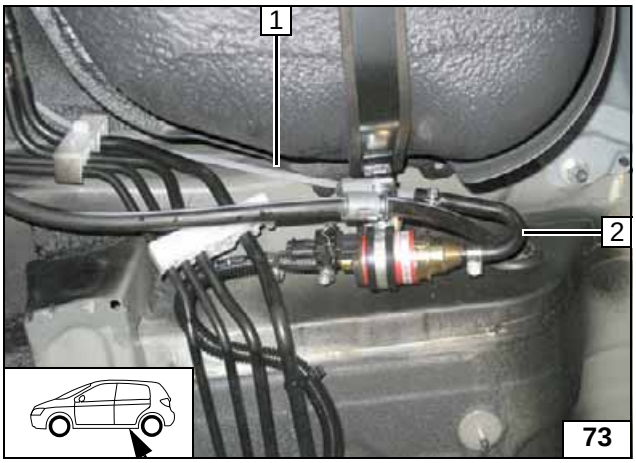
**Installing fuel standpipe**




Install fuel-tank sending unit **1** in accordance with manufacturer's instructions.

**2** Fuel standpipe
**3** Hose section, 10 mm dia. hose clamps [2x]
**4** Fuel line

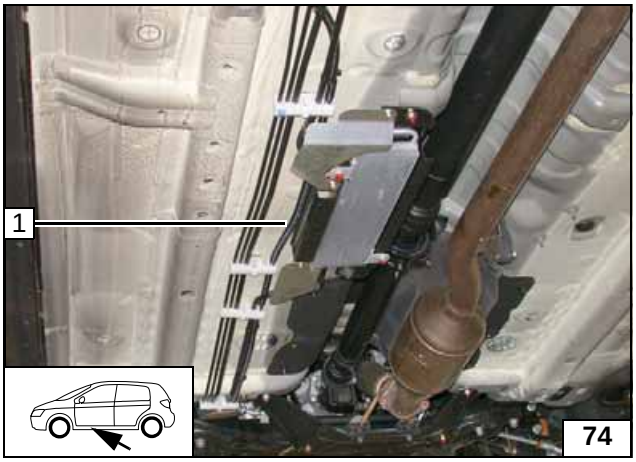
**Connecting fuel line**




Check the position of the components; adjust if necessary. Check that they have freedom of movement.

**1** Fuel line
**2** 180° moulded hose, hose clamp 10mm dia. [2x]

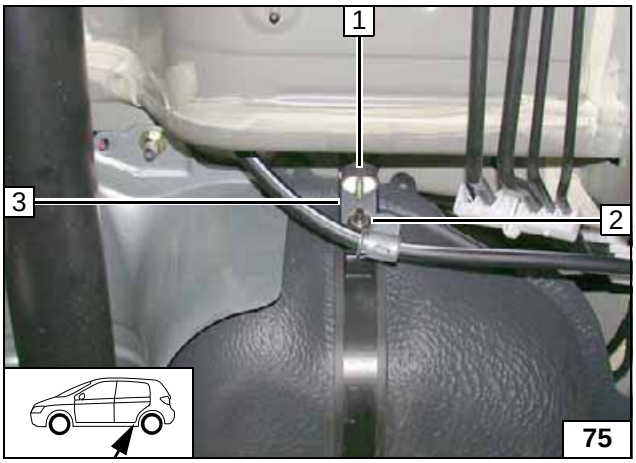
**Connecting metering pump**




**Diesel**

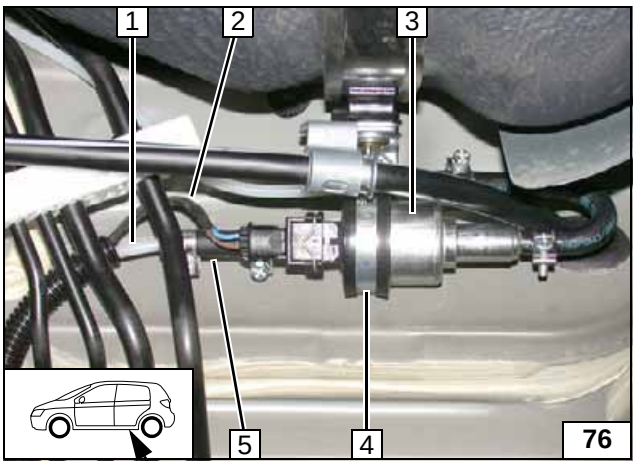
**1** Fuel line, wiring harness of metering pump in corrugated tube

**Routing lines**



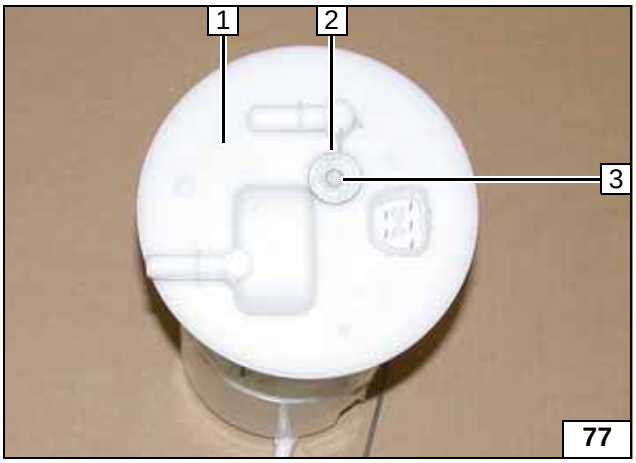

**1** Silent block, flanged nut
**2** Original vehicle bolt
**3** Angle bracket

**Installing silent block**




**1** Fuel line
**2** Wiring harness of metering pump, connector mounted
**3** Metering pump
**4** Rubber-coated p-clamp, flanged nut
**5** Hose section, 10 mm dia. hose clamps [2x]

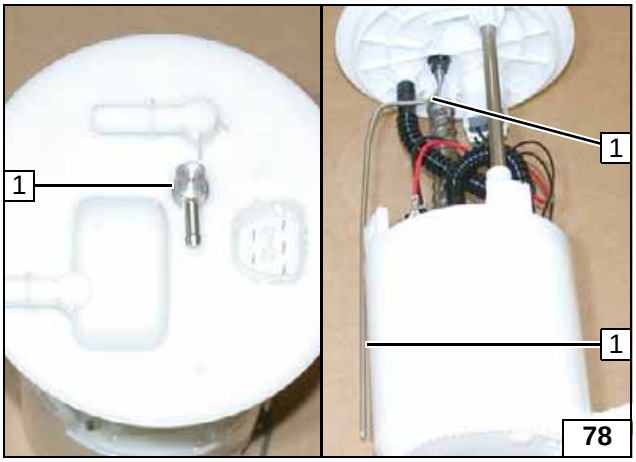
**Mounting metering pump**




Remove fuel-tank sending unit **1** in accordance with manufacturer's instructions. Watch underside of fuel-tank sending unit when copying hole pattern.

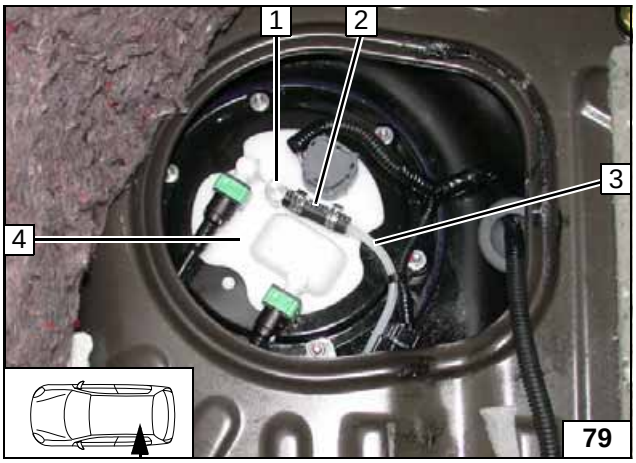
**2** Large diameter washer outside dia. = 22mm
**3** Copy hole pattern, 6 mm dia. hole

**Fuel extraction**




Shape fuel standpipe **1** according to template, cut to length and install, see "installation instructions".

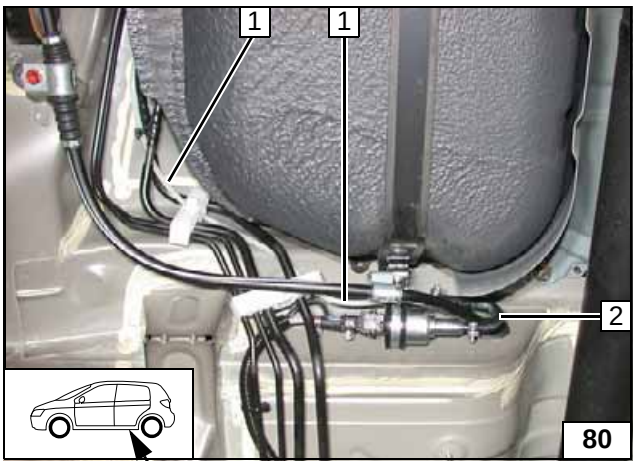
**Installing fuel standpipe**




Install fuel-tank sending unit **4** in accordance with manufacturer's instructions.

**1** Fuel standpipe
**2** Hose section, 10 mm dia. hose clamps [2x]
**3** Fuel line

**Connecting fuel line**

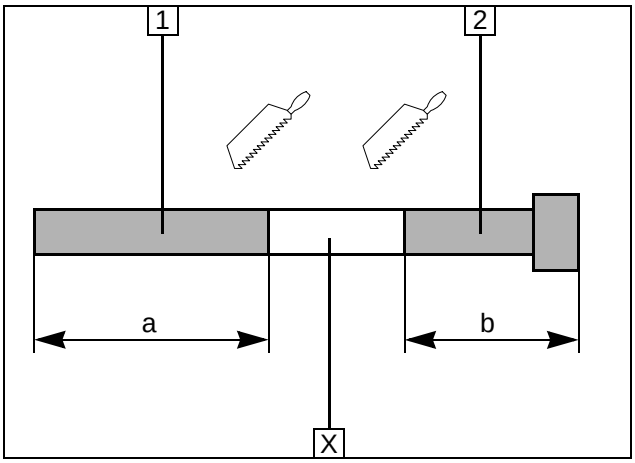



Check the position of the components; adjust if necessary. Check that they have freedom of movement.

**1** Fuel line
**2** 180° moulded hose, hose clamp 10mm dia. [2x]

**Connecting metering pump**

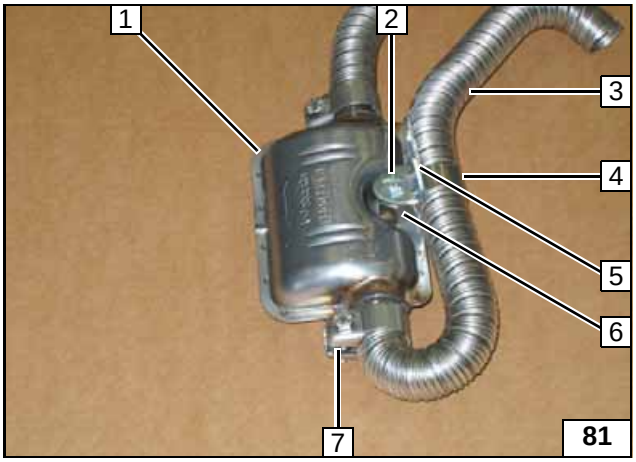
## Exhaust system




**1** Exhaust pipe
a = 490
**2** Exhaust end section
b = 190

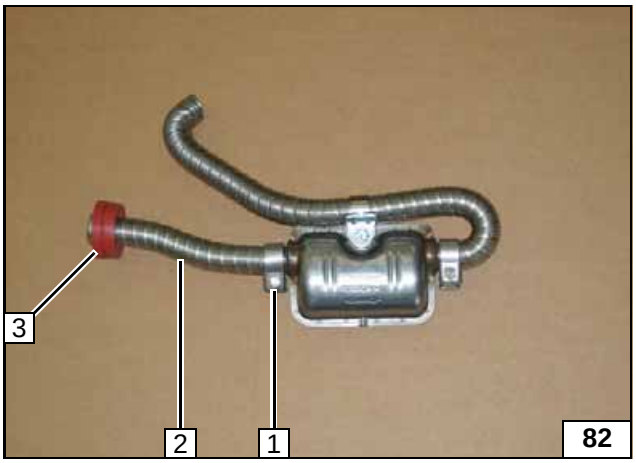
Discard section **X**

**Preparing exhaust pipe**



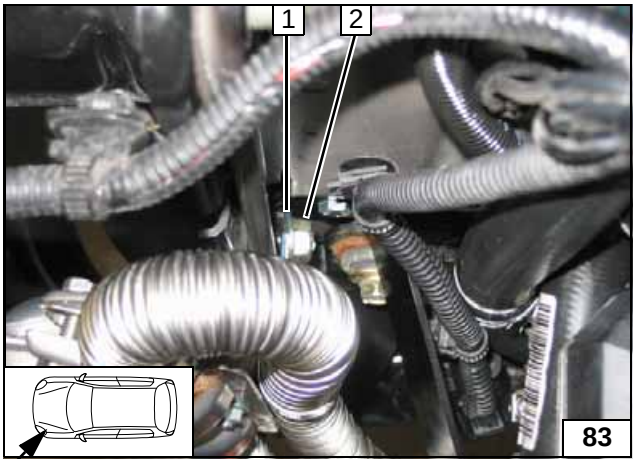

**1** Exhaust silencer
**2** M6x30 bolt, M6 flanged nut
**3** Exhaust pipe
**4** P-clamp
**5** Angle bracket
**6** 15 mm dia. spacer nut
**7** Hose clamp

**Premounting silencer**




**1** Hose clamp
**2** Exhaust end section
**3** Red (rt) rubber profile with groove

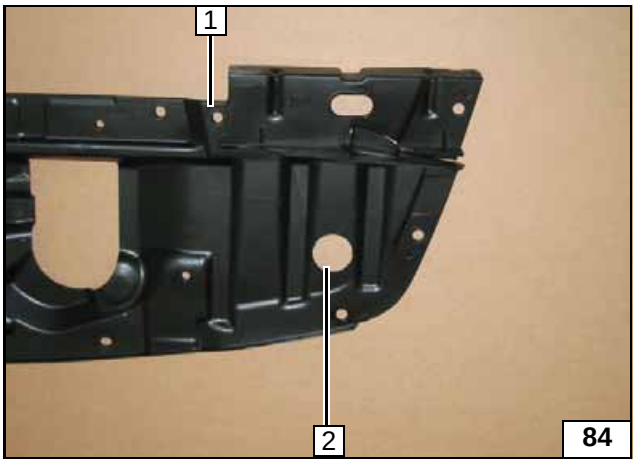
**Premounting silencer**




Ensure sufficient distance from neighbouring components.
Remove original vehicle bolt at position **2** and discard.

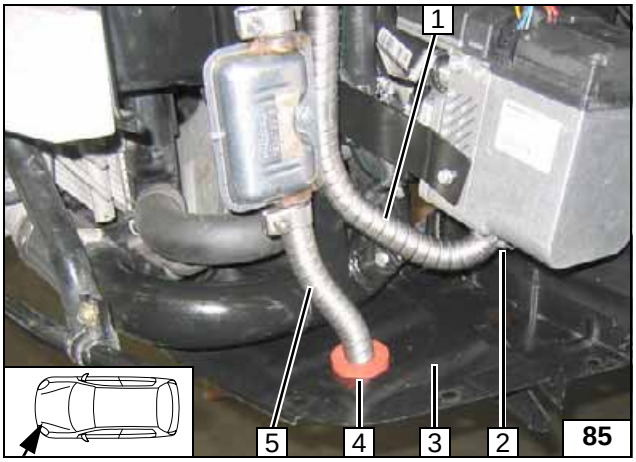
**1** Angle bracket
**2** M8x30 bolt, flanged nut

**Installing exhaust pipe and silencer**




**1** Underride protection
**2** 42 mm dia. hole

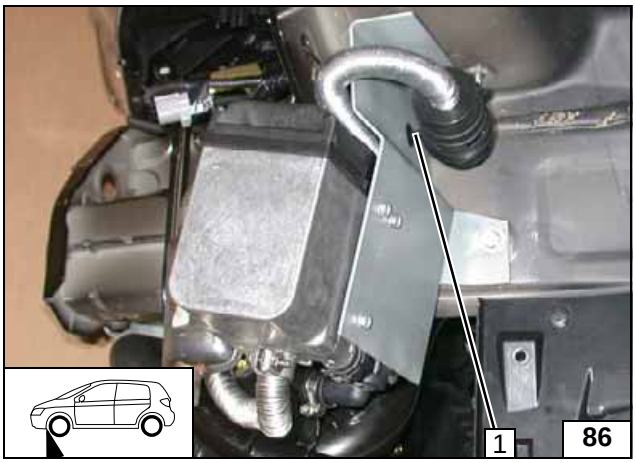
**Cutting out underride protection**




Mount red (rt) rubber isolator **4** in hole of underride protection **3**, align exhaust end section **5** to end flush.

**1** Exhaust pipe
**2** Hose clamp

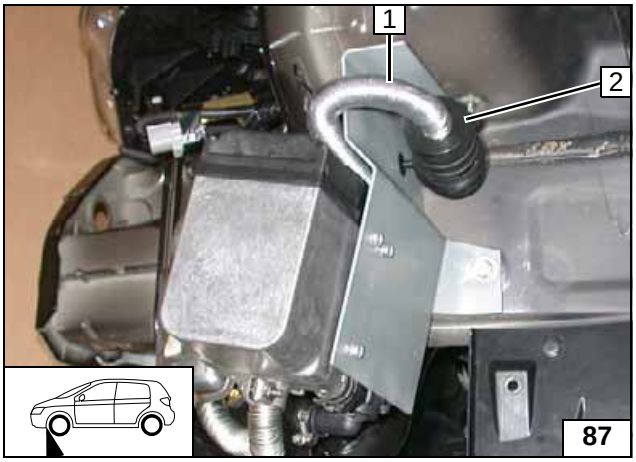
**Positioning rubber isolator**




## Combustion air

**1** Retaining clip in hole

Installing retaining clip




**1** Combustion air pipe
**2** Silencer in retaining clip

Mounting silencer

## Final Work

**WARNING!**
Mount removed parts in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.
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 the digital timer, teach telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refuelling" signboard near the filler neck.**
- **For initial start up and function check, see Installation Instructions**

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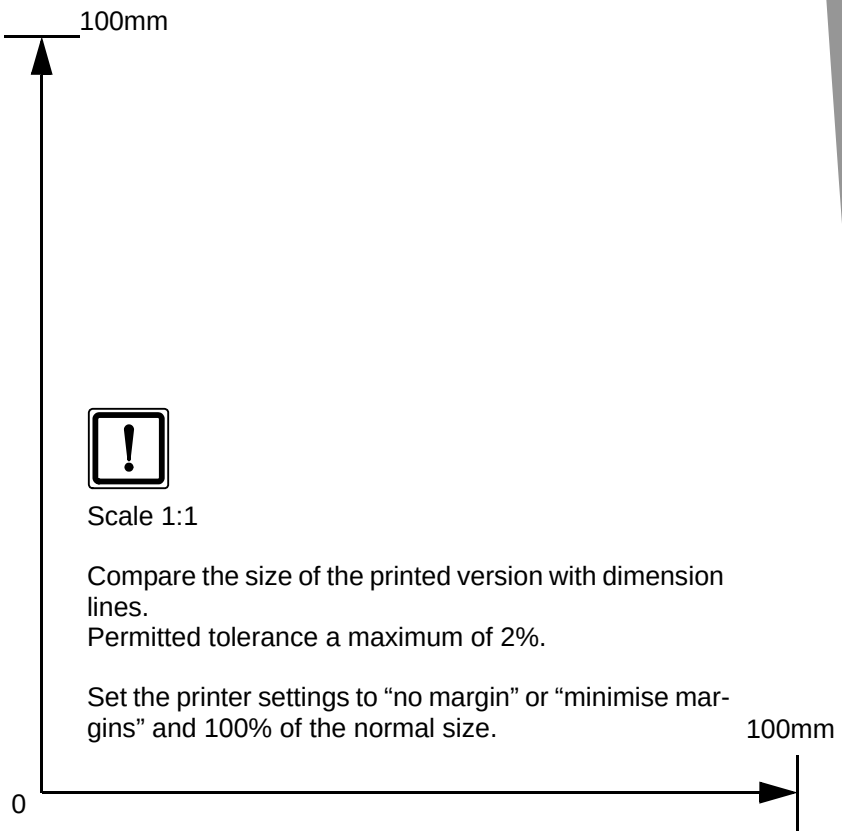
## Template for petrol fuel standpipe

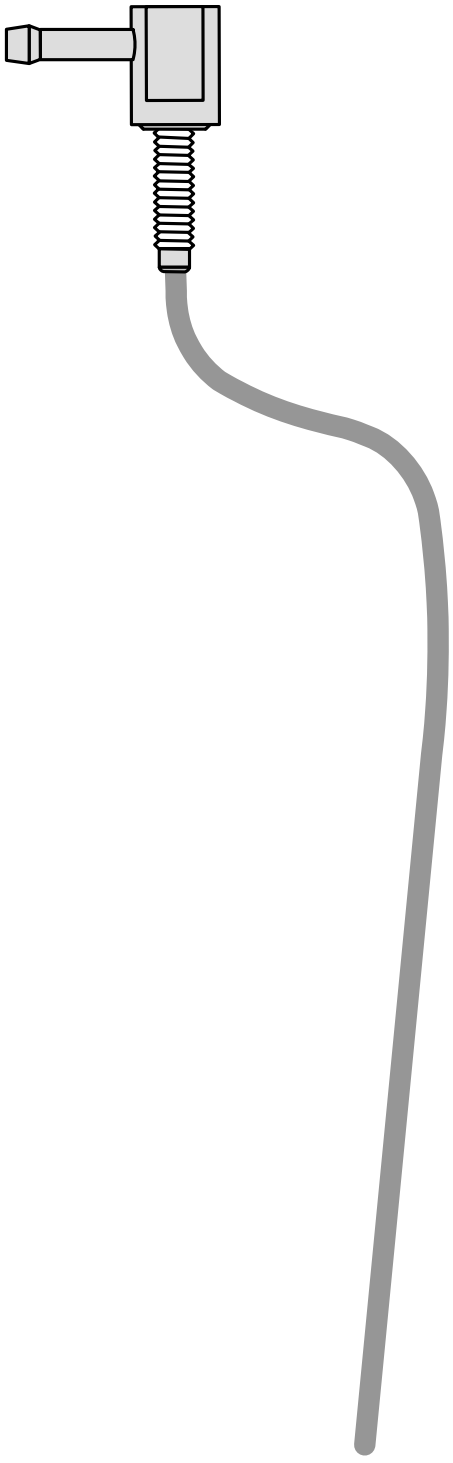



Scale 1:1

Compare the size of the printed version 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.

## Template for diesel fuel standpipe



100mm

Scale 1:1

Compare the size of the printed version 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

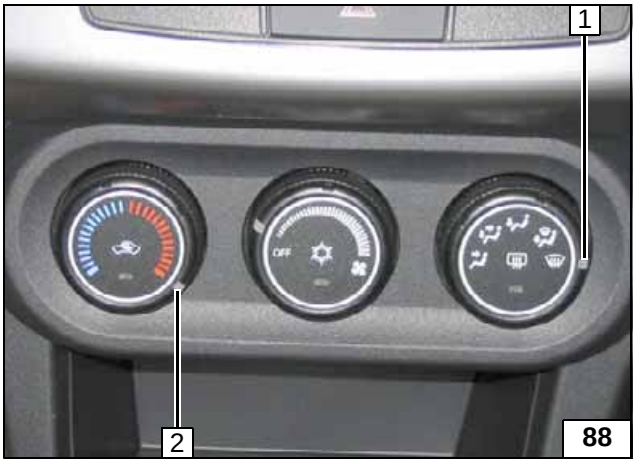
Please remove page and add to the vehicle operating instructions.

**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 the summer/winter switch option has been installed, it must be switched in accordance with the time of year. The heater will then heat in the position Winter and in the position Summer it will only switch on the vehicle fan to ventilate the vehicle interior.

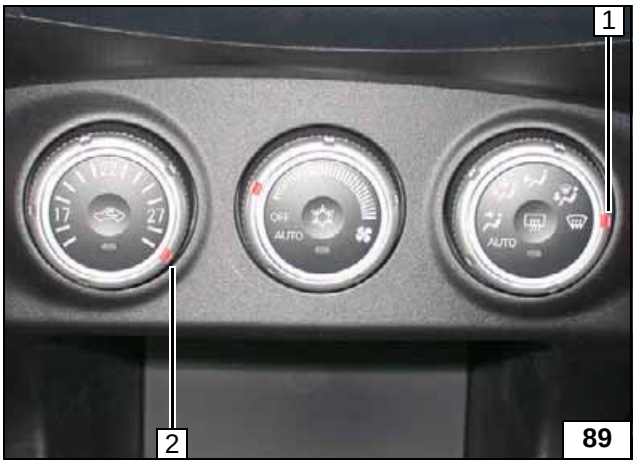
Before parking the vehicle, make the following settings:

**Manual air conditioning**




**1** Air outlet to windscreen
**2** Set temperature to "max."

**Automatic air-conditioning**




**1** Air outlet to windscreen
**2** Set temperature to "max."