Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Dacia Duster / Sandero / Logan

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Dacia	Duster	SD	e2 * 2001 / 116 * 0314 * ...
Dacia	Sandero	SD	e2 * 2001 / 116 * 0314 * ...
Dacia	Logan	SD	e2 * 2001 / 116 * 0314 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.6 B	Petrol	SG	62	1598	K7M
1.6 B	Petrol	SG	77	1598	K4M

SG = Manual transmission

Duster and Logan starting with model 2011
Only 2011 and 2012 Sandero models
Left-hand drive vehicle

Verified equipment variants:	Manual air-conditioning Front fog light 2WD 5-gear manual transmission 4WD, 6-speed manual transmission Electric and hydraulic power steering
Not verified:	Passenger compartment monitoring
Total installation time:	approx. 8 hours

Dacia Duster / Sandero / Logan

Table of Contents

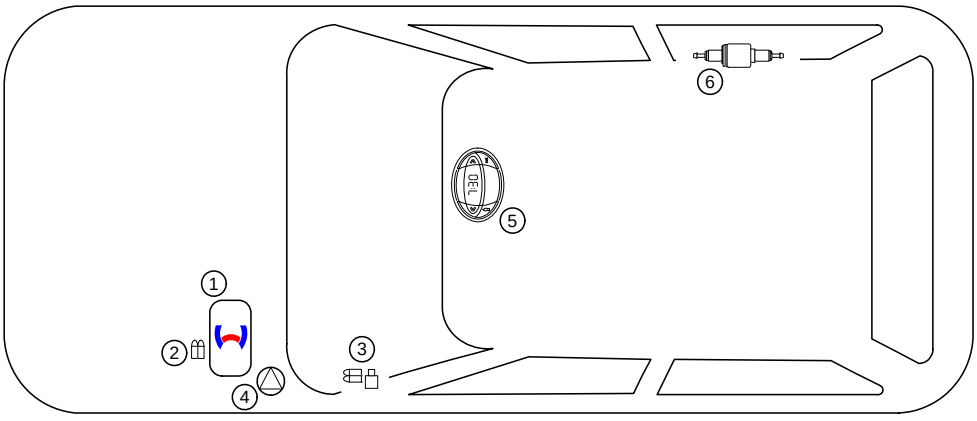
Necessary Components

- Basic delivery scope *Thermo Top Evo* based on price list
- Installation kit for Dacia Duster / Sandero / Logan 2011 Petrol: **1317364A**
- Heater control based on price list and upon consultation with end customer
- In case of Telestart, indicator lamp based on price list and upon consultation with end 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.

Notes on Validity

This installation documentation applies to the vehicles Dacia Duster and Logan Petrol starting with model year 2011 and later as well as Dacia Sandero Petrol, model years 2011 and 2012 - for validity, see page 1 - if technical changes to the vehicle do not influence the installation, excluding any liability. 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

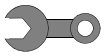
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque values of 5x15 retaining plate and 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

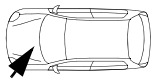
Specific risk of damage to components

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



Dacia Duster / Sandero / Logan

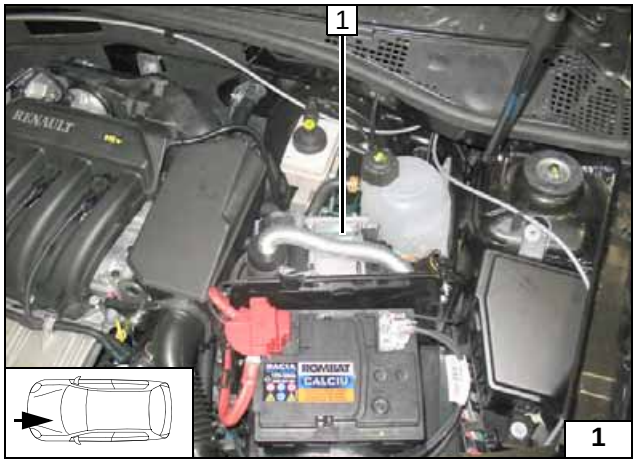
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Remove the engine control unit.
- Drain the coolant fluid.
- Remove the expansion tank.
- Fold down the rear bench seat.
- Open the tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the underride protection.
- Remove the instrument panel trim on the driver's side.
- Remove the fan controls.

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.

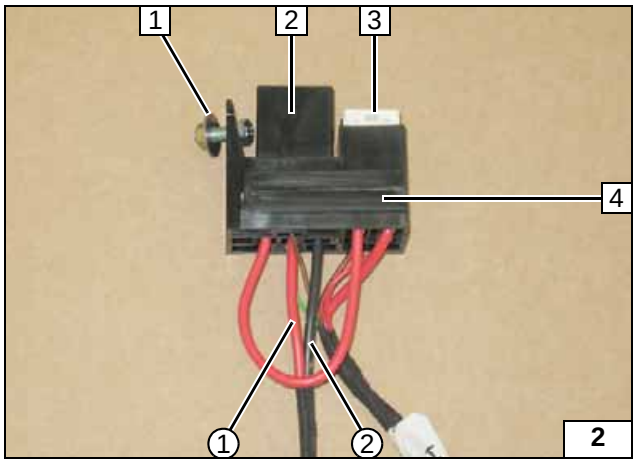


Heater Installation Location

Image shows Duster.

1 Heater

Installation location



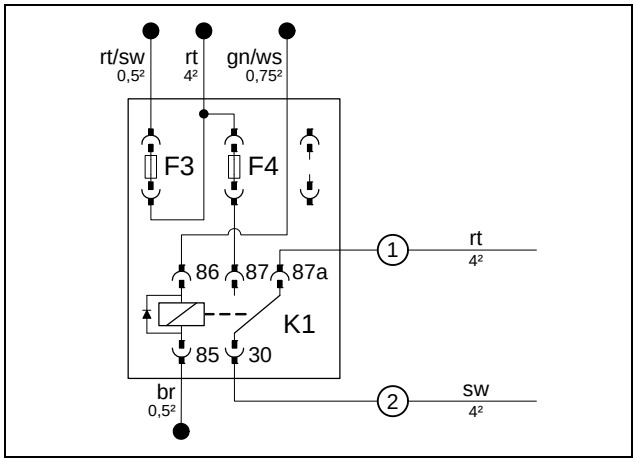
Preparing Electrical System

Wire sections retain their numbering through the entire document.

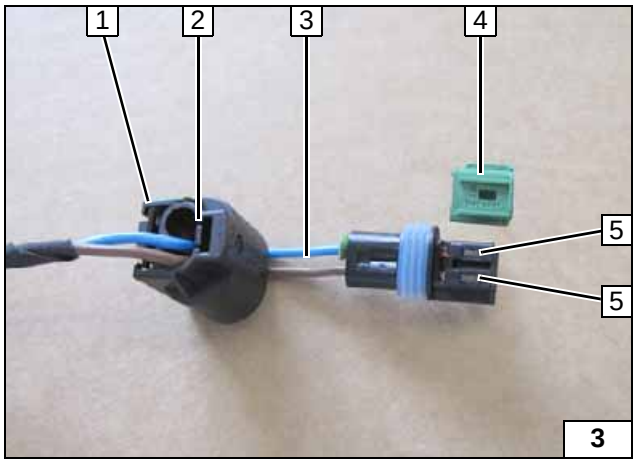
Insert red (rt) 4² wire ① into socket of K1/87a and black (sw) wire 4² ② into socket of K1/30.

1 Premount M5x16 bolt, large diameter washer [2x], nut loosely
2 Insert K1 relay
3 Insert fuse F4 25A
4 Fuse holder of passenger compartment

Premounting fuse holder of passenger compartment



Premounting fuse holder of passenger compartment



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

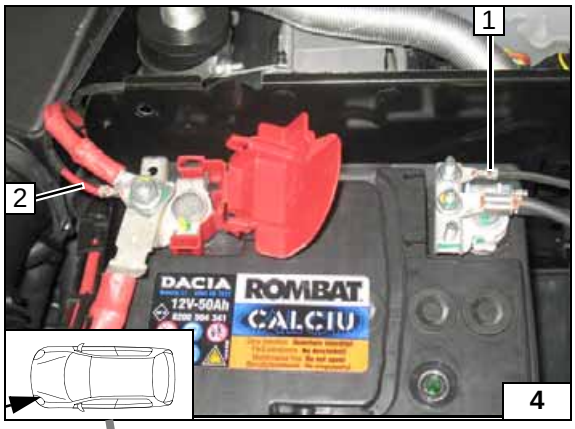
1 Connector housing
2 Lock
3 Blue/brown (bl/br) wires
4 Coding
5 Timer lock

Dismantling connector

Electrical System

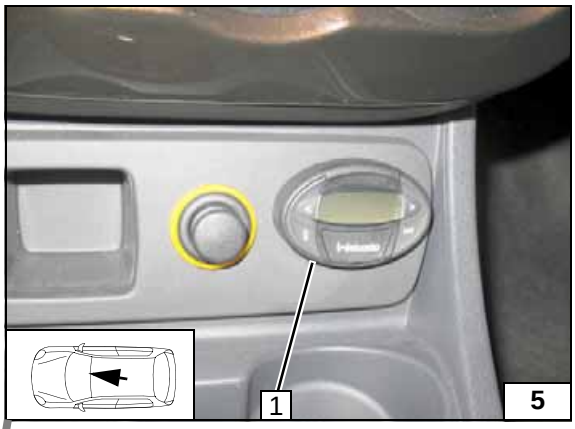
Positive and earth wire

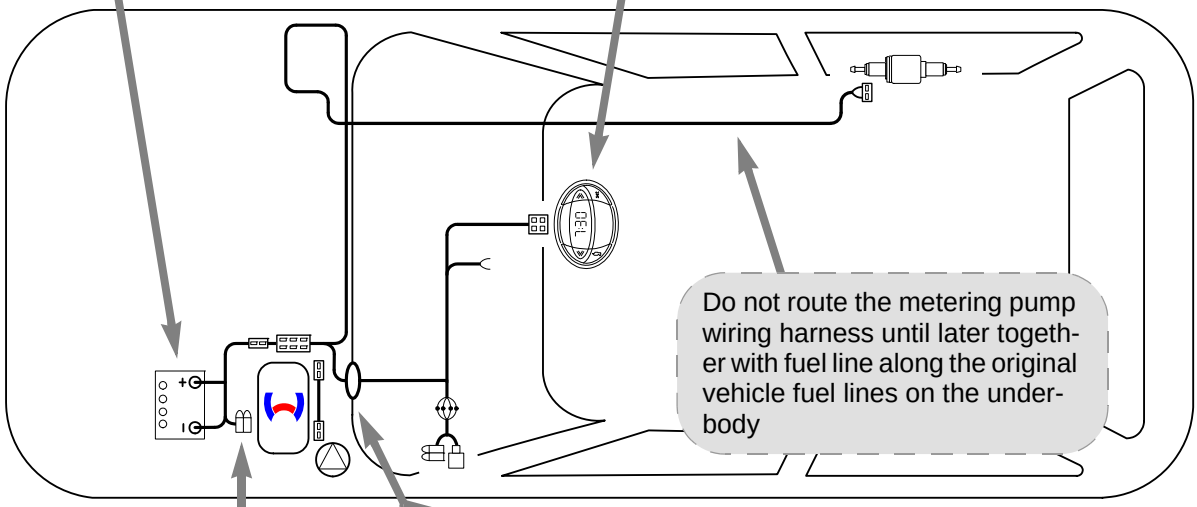
1 Earth wire
2 Positive wire



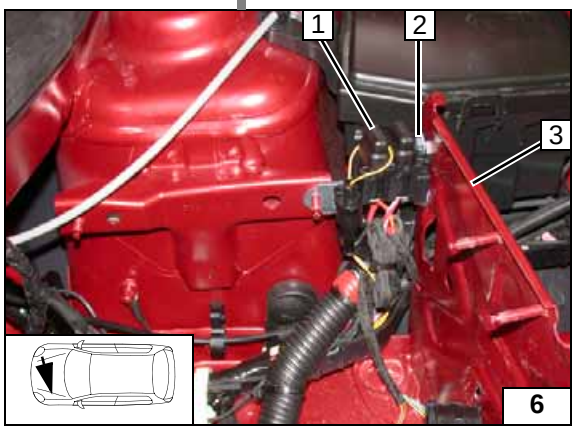
Digital timer option

1 Digital timer



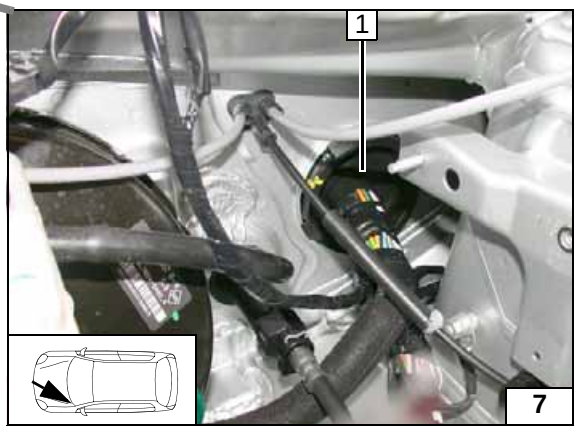


Wiring harness routing diagram



Fuse holder of engine compartment

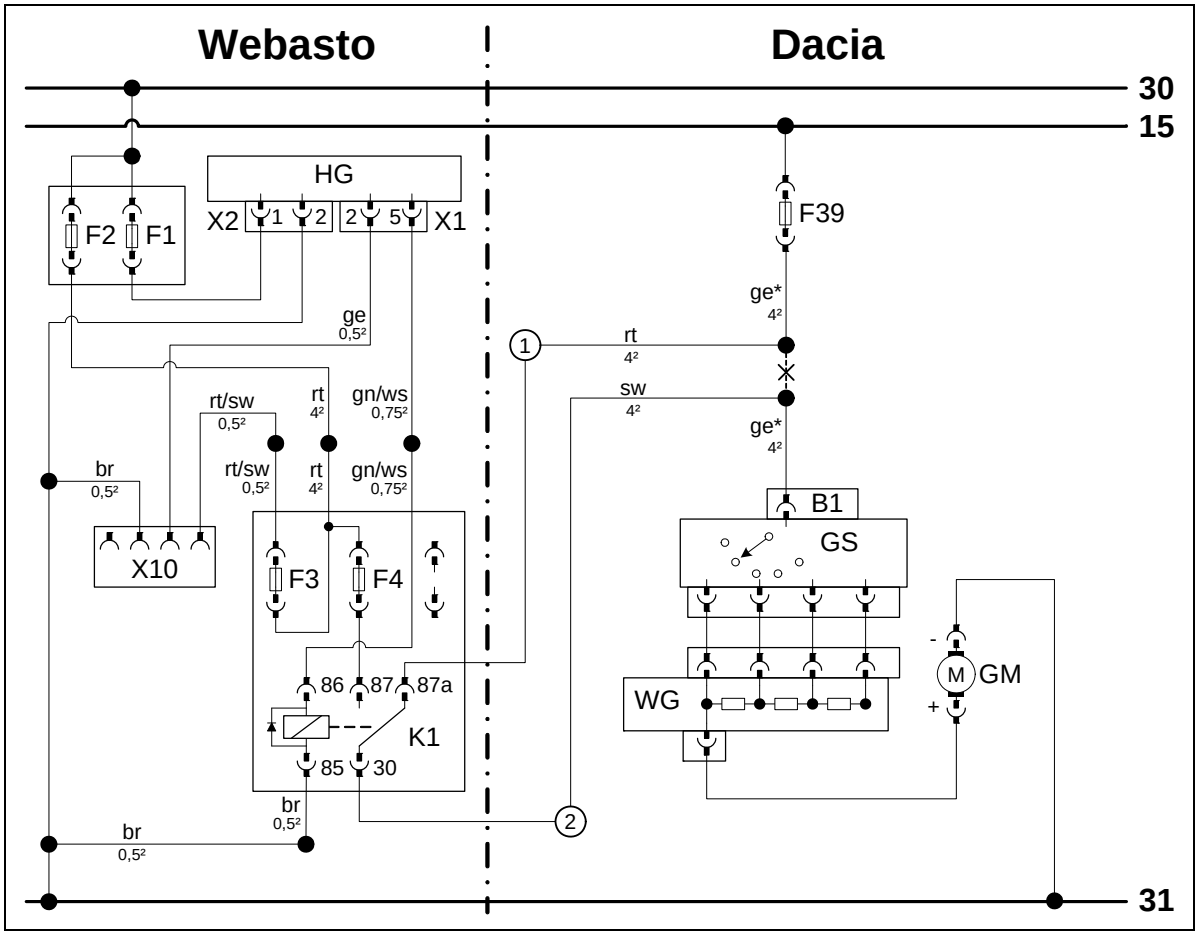
1 Fuses F1-2
2 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut, existing hole
3 Battery carrier



Wiring harness pass through

1 Protective rubber plug

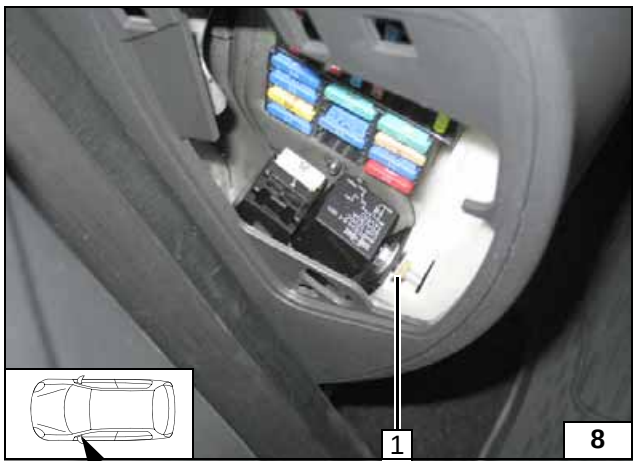
Fan Control



Wiring diagram

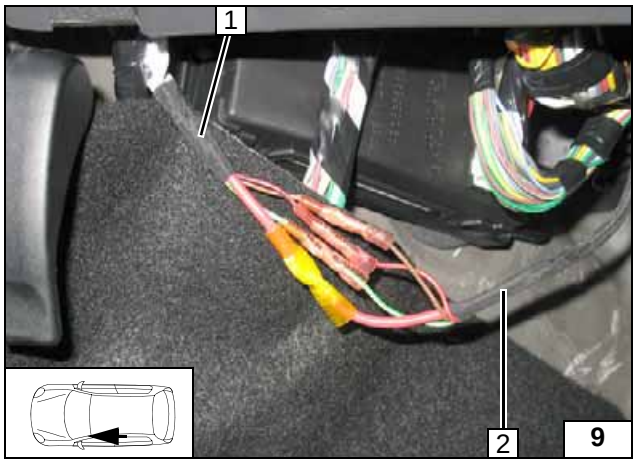
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F39	30A fuse	rt	red
X1	6-pin heater connector	B1	Connector B Pin 1	sw	black
X2	2-pin heater connector	GS	Fan switch	ge	yellow
X10	4-pin connector of Heater control	GM	Fan motor	gn	green
		WG	Resistor group	br	brown
K1	Fan relay			ws	white
F1	20A fuse			br	brown
F2	30A fuse				
F3	1A fuse			**X**	Cutting point
F4	25A fuse			*Wiring colours may vary.	

Legend



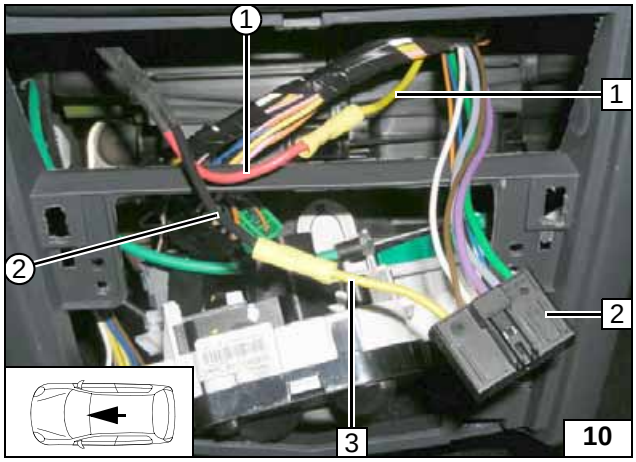
Insert fuse holder of passenger compartment into the recess, tighten bolt **1**.

Mounting fuse holder of passenger compartment



Connect same colour wires of the wiring harness of the passenger compartment fuse holder **1** to those of the heater wiring harness **2** as shown in wiring diagram.

Connecting wiring harnesses



Connection to 6-pin connector B **2** from fan switch. Produce connections as shown in wiring diagram.

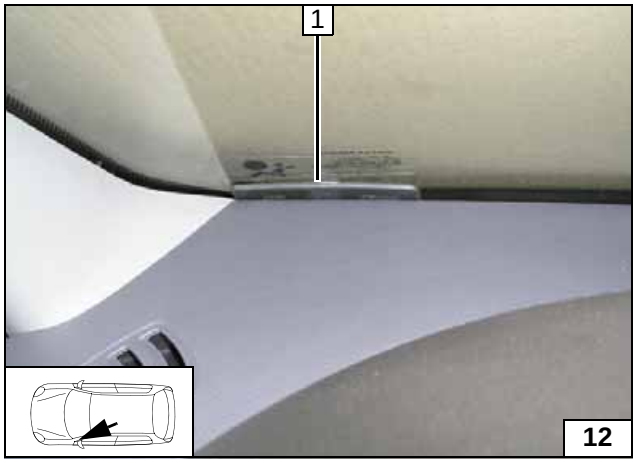
1 Yellow (ge) wire from fuse 39
3 Yellow (ge) wire from connector B1
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30

Connecting fan motor

Remote Option (Telestart)

1 Telestart bracket
2 Telestart
3 Original vehicle bolt

Mounting receiver

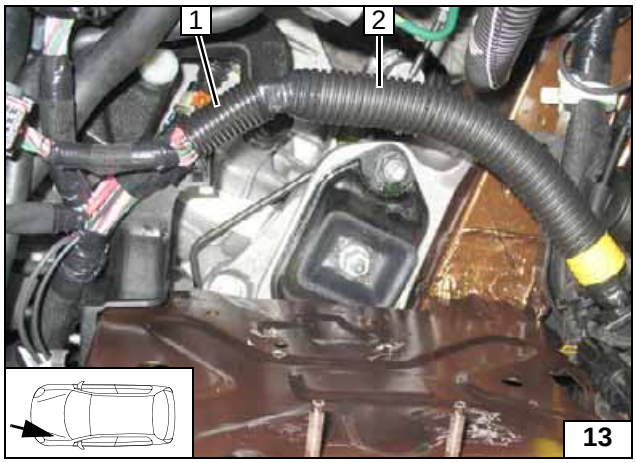


1 Antenna

Mounting antenna

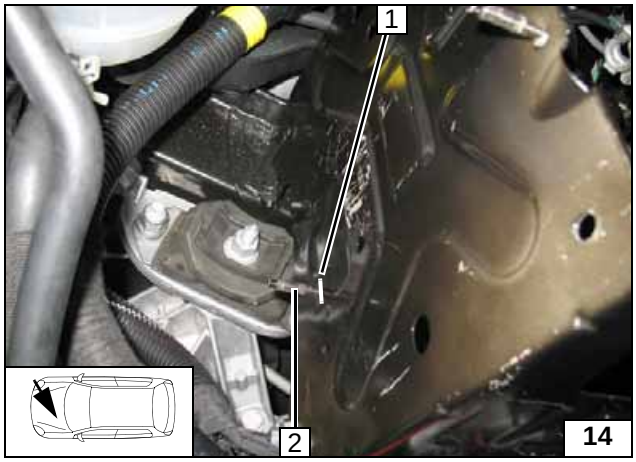
Preparing Installation Location

Preparing wiring harness



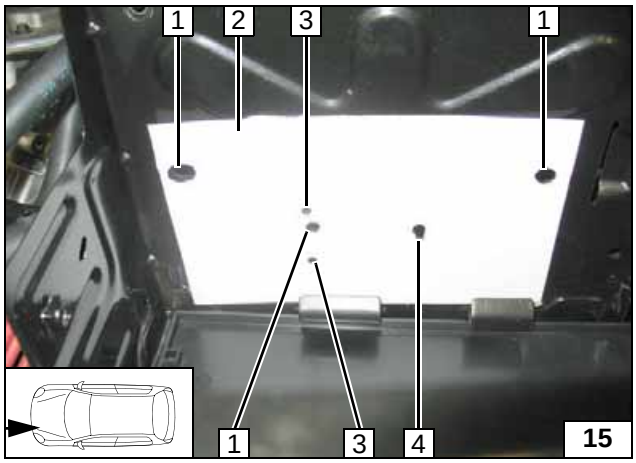
1 Cut 17mm dia. corrugated tube to length and push on
2 Form original vehicle wiring harness

Removing stud bolt



Saw off stud bolt **2** at cutting line **1** and discard it. Protect cut area against corrosion using suitable means!

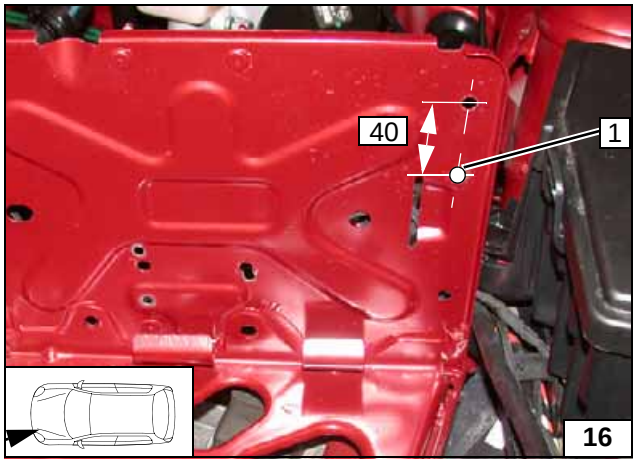
Copying hole pattern



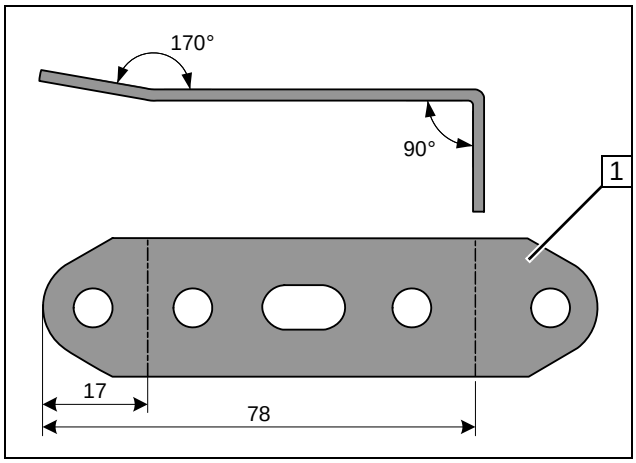
Position template **2** and align it to the existing holes **1** [3x].

3 Copy hole pattern [2x], 6 mm dia. hole
4 Transform original vehicle hole into an oblong hole

Hole in battery carrier

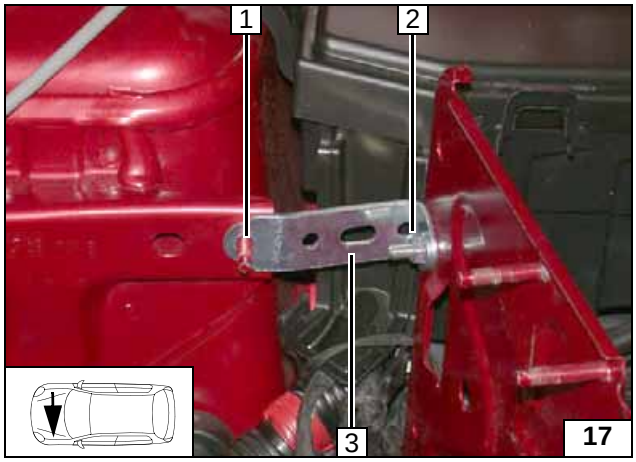


1 7mm dia. hole



1 Perforated bracket

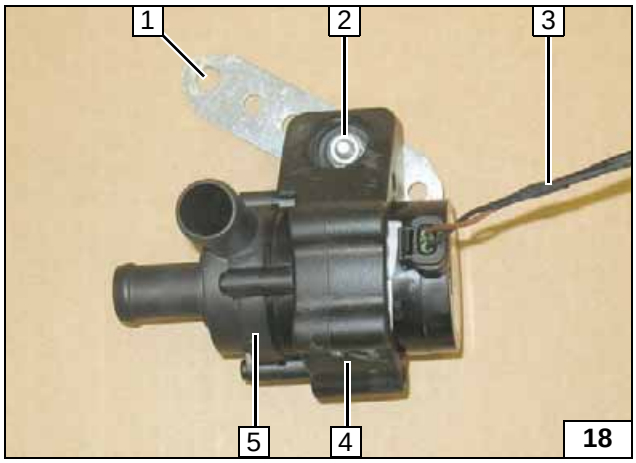
Bending down perforated bracket



1 Original vehicle stud bolt
2 M6x20 bolt, flanged nut
3 Perforated bracket

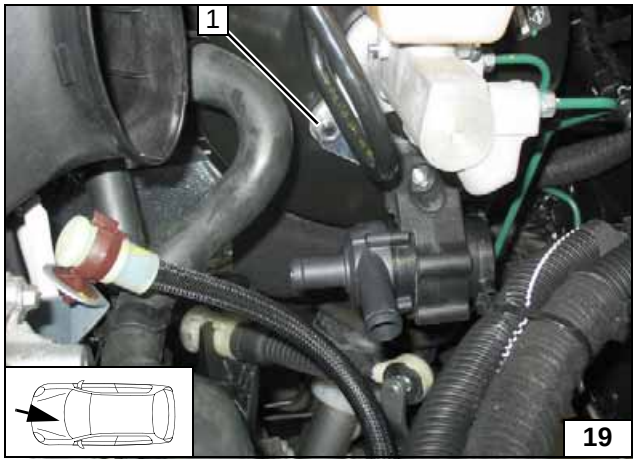
Mounting perforated bracket

Premounting circulating pump



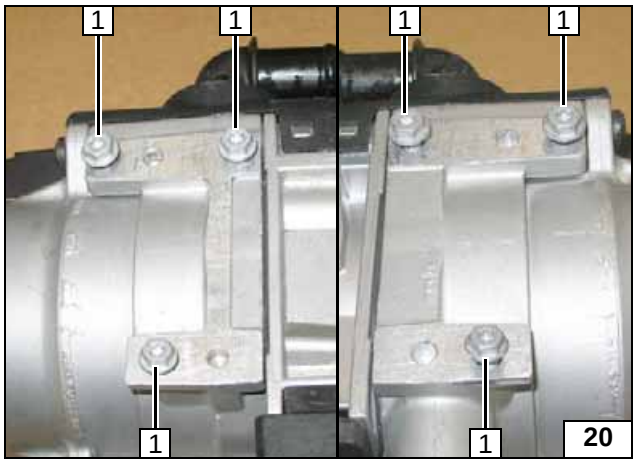
1 Perforated bracket, enlarge hole to 8.5mm dia.
2 M6x25 bolt, flanged nut
3 Wiring harness of circulating pump mounted
4 Circulating pump bracket
5 Circulating pump

Preparing bracket



1 Original vehicle nut

Installing circulating pump

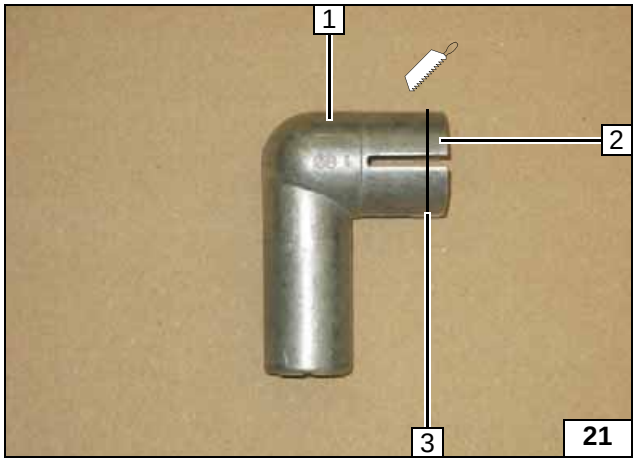


Preparing Heater

All vehicles

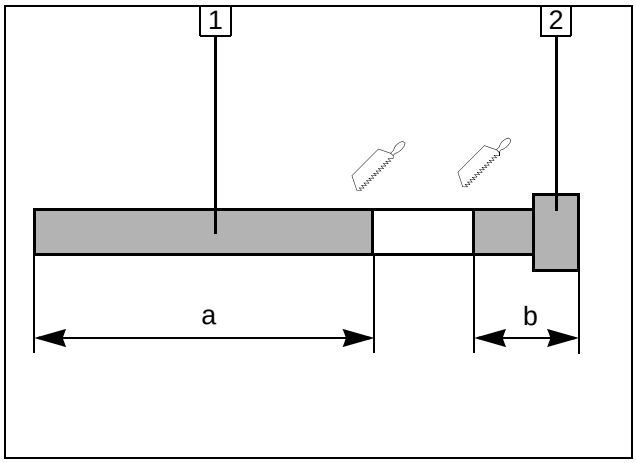
Precut threads with 5x13 self-tapping bolts **1** [6x].

Precutting threads



Shorten exhaust elbow **1** at cutting line **3** by 3mm. Discard section **2**.

Shortening exhaust elbow



Duster

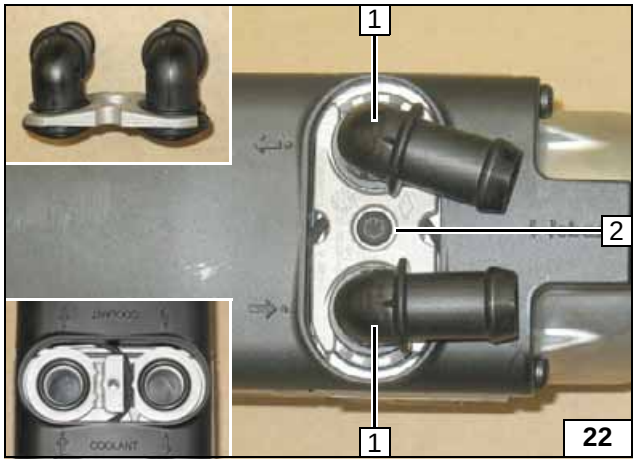
2 WD

1 Exhaust pipe
a = 750
2 Exhaust end section
b = 100

4 WD

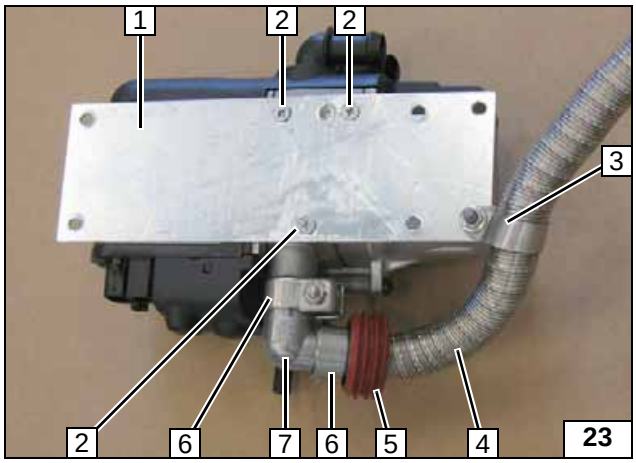
1 Exhaust pipe
a = 1080
2 Exhaust end section
b = 70

Preparing exhaust pipe



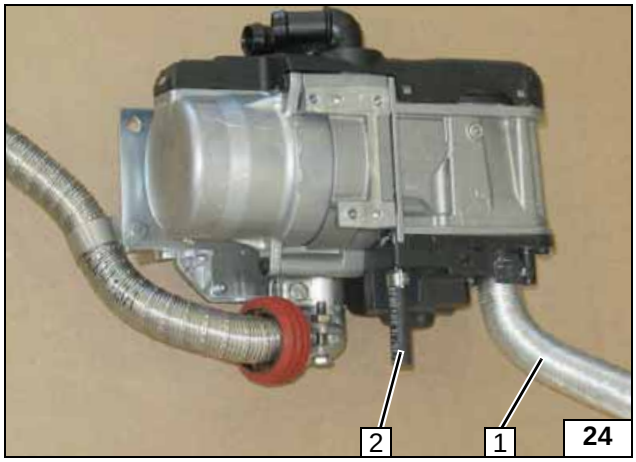
1 Water connection piece, sealing ring [2x each]
2 5x15 mm self-tapping bolt, retaining plate of water connection piece

Installing water connection pieces



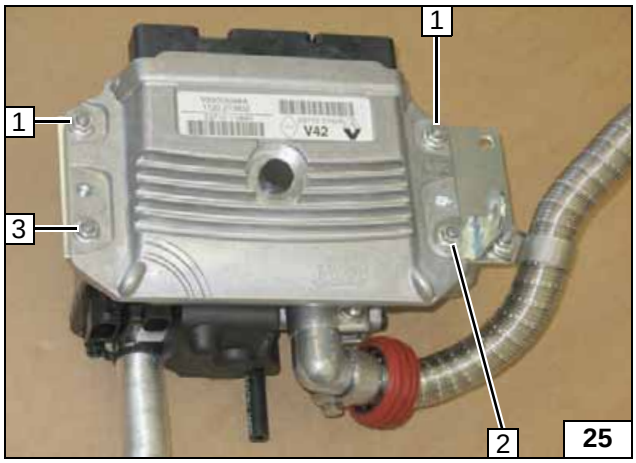
1 Retaining plate
2 M5x10 countersunk head screw [3x]
3 M6x20 bolt, clamp, flanged nut
4 Exhaust pipe
5 Spacer bracket of flexible tube
6 Hose clamp [2x]
7 Exhaust elbow

Premounting heater



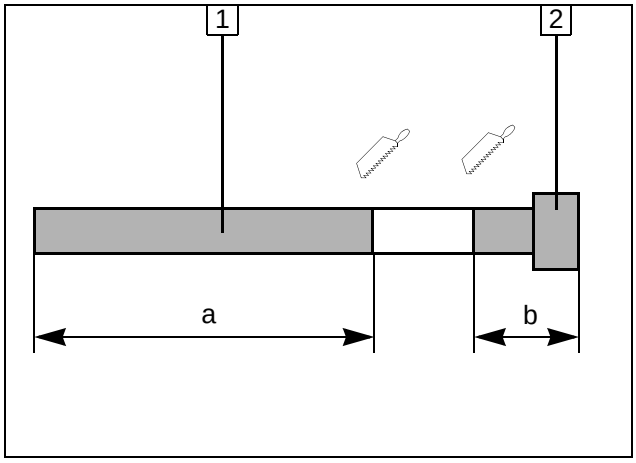
1 Combustion air pipe
2 Hose section, 10mm dia. clamp

Premounting heater



1 M6x20 bolt, original vehicle flanged nut [2x each]
2 M6x20 bolt, angle bracket (for wiring harness mounting), original vehicle flanged nut
3 M6x20 bolt, flanged nut

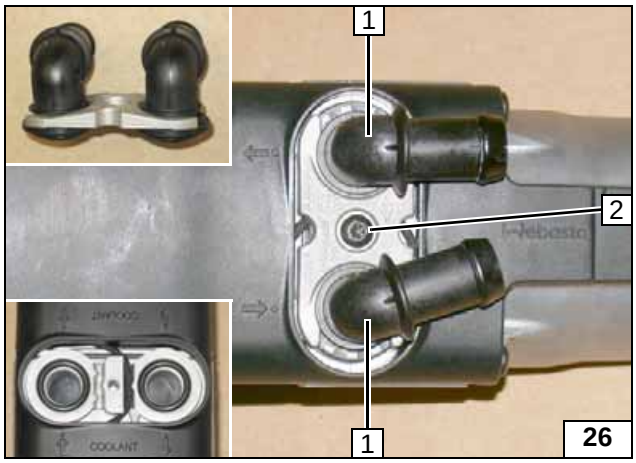
Mounting control unit



Sandero

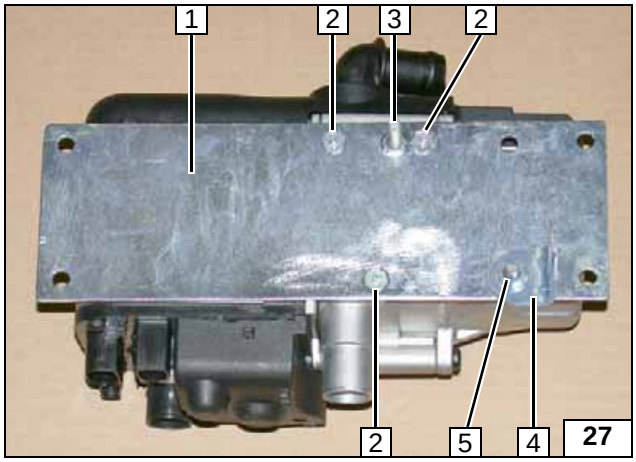
1 Exhaust pipe
a = 670
2 Exhaust end section
b = 280

Preparing exhaust pipe



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

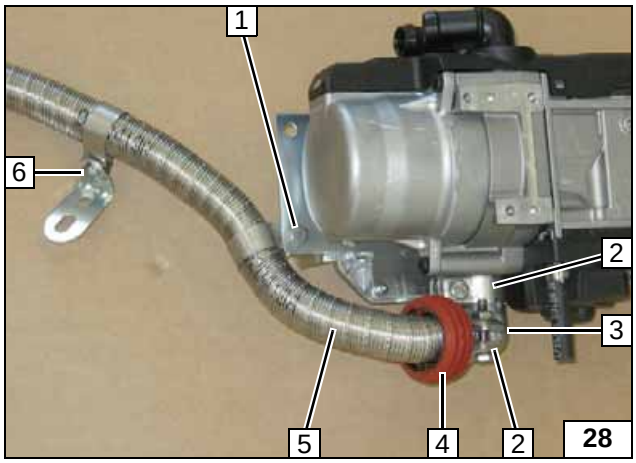
Installing water connection pieces



Insert M6x25 countersunk head screw **3** before assembly.

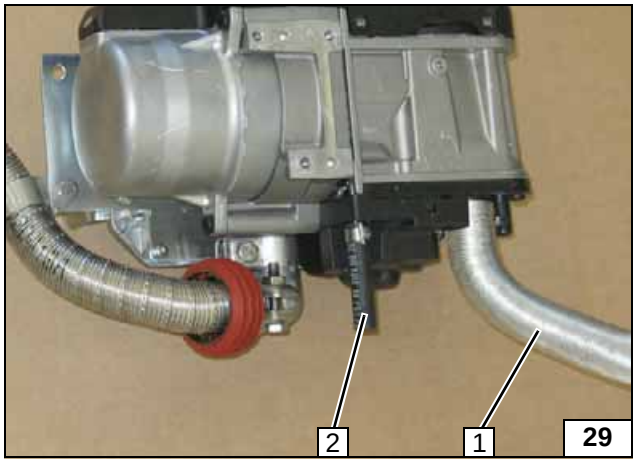
1 Retaining plate
2 M5x10 countersunk head screw [3x]
4 Angle bracket (for wiring harness mounting)
5 M6x16 bolt, flanged nut

Mounting retaining plate



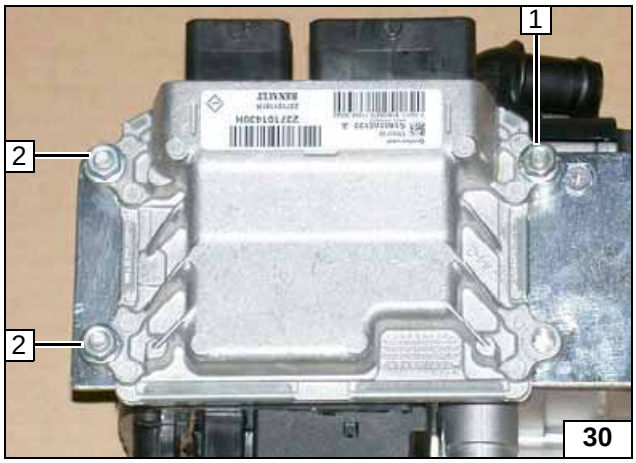
1 M6x20 bolt, clamp, flanged nut
2 Hose clamp [2x]
3 Exhaust elbow
4 Spacer bracket of flexible tube
5 Exhaust pipe
6 M6x20 bolt, angle bracket, clamp, flanged nut

Mounting exhaust pipe



1 Combustion air pipe
2 Hose section, 10mm dia. clamp

Premounting heater

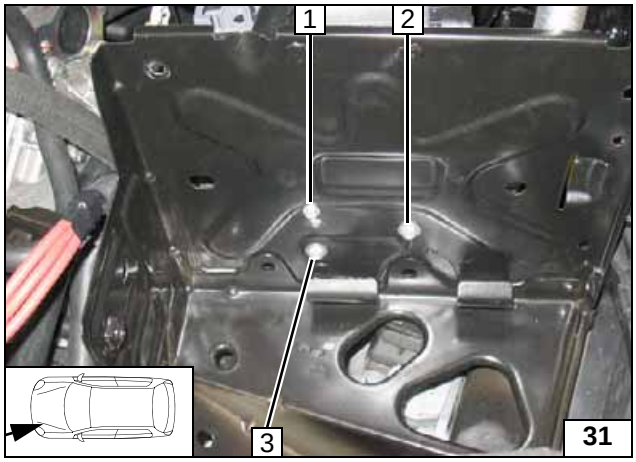


1 Original vehicle flanged nut
2 M6x25 bolt, original vehicle M6 flanged nut [2x each]

Mounting control unit

Installing Heater

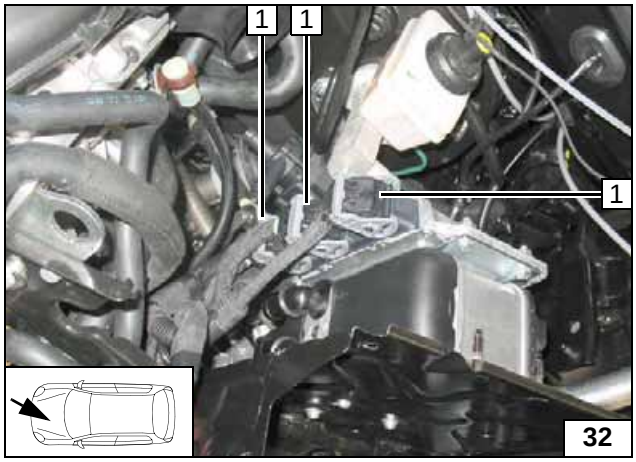
Two washers are positioned between heater and battery carrier at position **3**.



1 M5x13 self-tapping bolt
2 M5x13 self-tapping bolt, large diameter washer
3 M5x13 self-tapping bolt, large diameter washer, washer [2x]

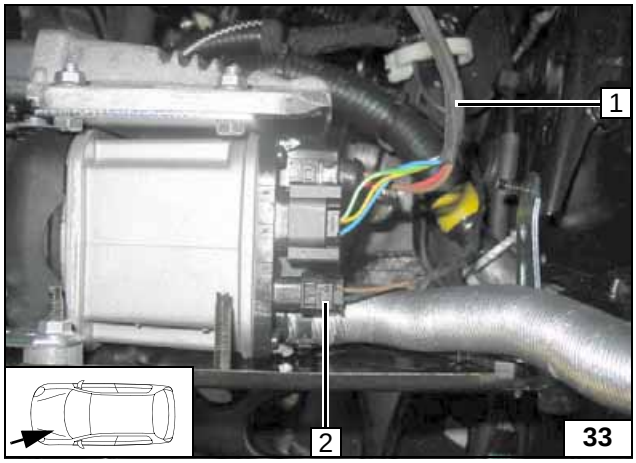
Mounting heater

Image shows Duster.



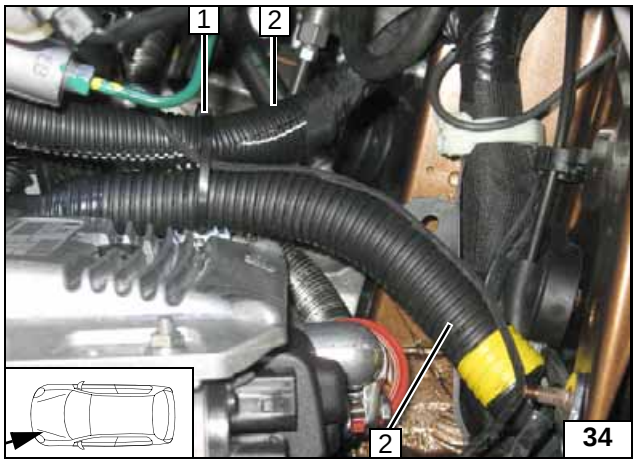
1 Attach control unit wiring harness [3x]

Mounting wiring harnesses



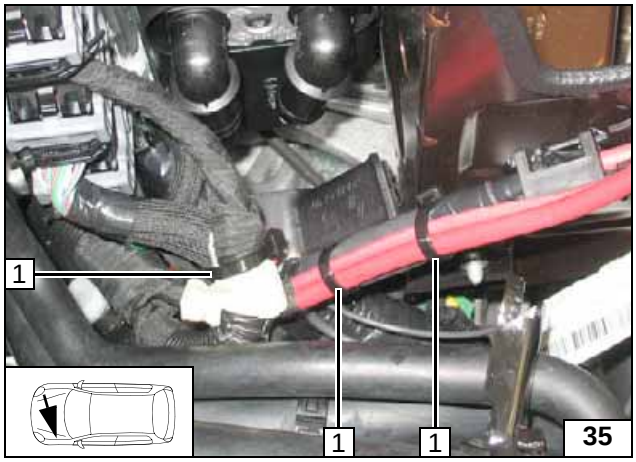
1 Wiring harness of heater [2x]
2 Wiring harness of circulating pump

Mounting wiring harnesses



Attach original vehicle wiring harness **2** [2x] to premounted angle bracket using a cable tie **1**. Ensure sufficient distance between exhaust system and neighbouring components.

Fastening wiring harness



Fasten wiring harness using cable tie **1** [3x].

Fastening wiring harness

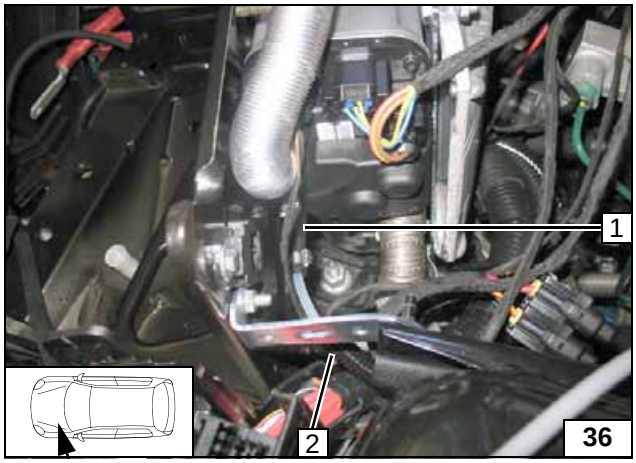
Fuel

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

Catch any fuel running off in an appropriate container.

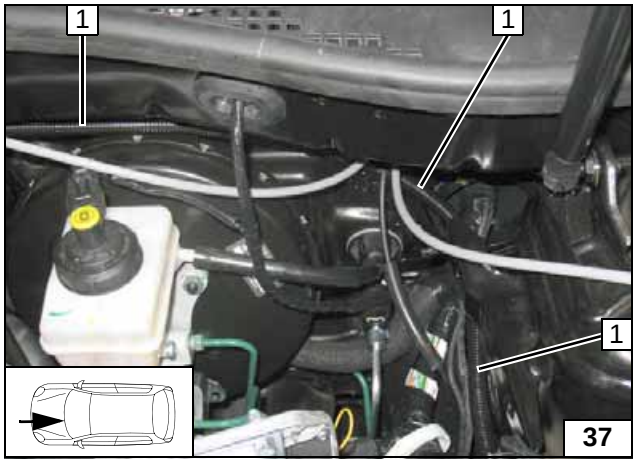
Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

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



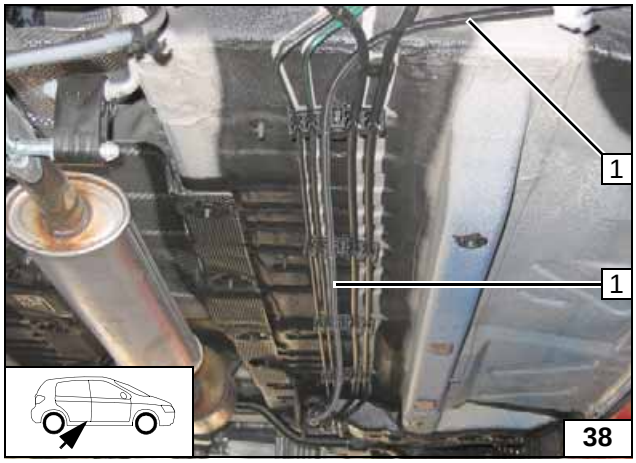
1 Premounted hose section, 10mm dia. clamp
2 Fuel line and metering pump wiring harness in corrugated tube

Connecting heater



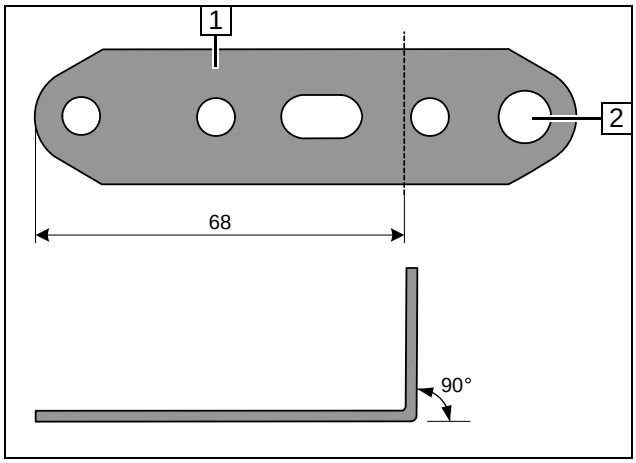
Route fuel line and metering pump wiring harness in corrugated tube **1** to the right side of the vehicle and to the underbody using original vehicle fuel lines

Routing lines



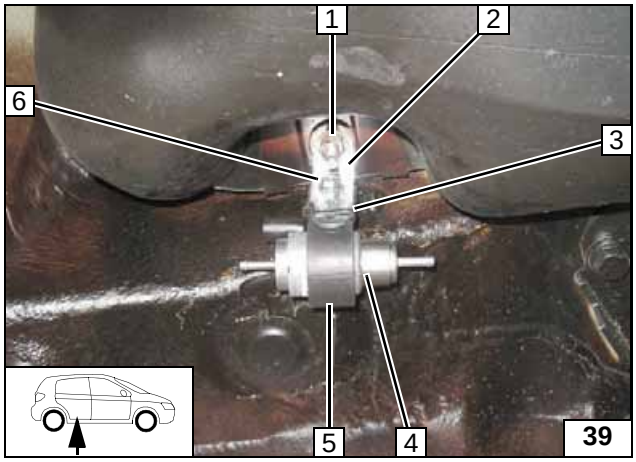
Route fuel line and wiring harness of metering pump in corrugated tube **1** to the original vehicle lines at the installation location of the metering pump.

Routing lines



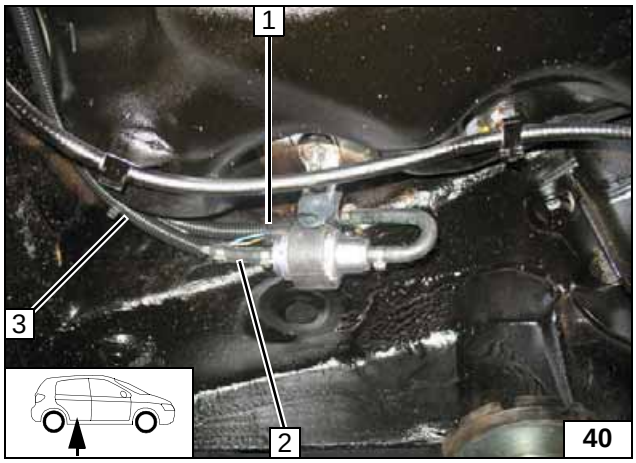
1 Perforated bracket
2 8.5mm dia. hole

Preparing perforated bracket



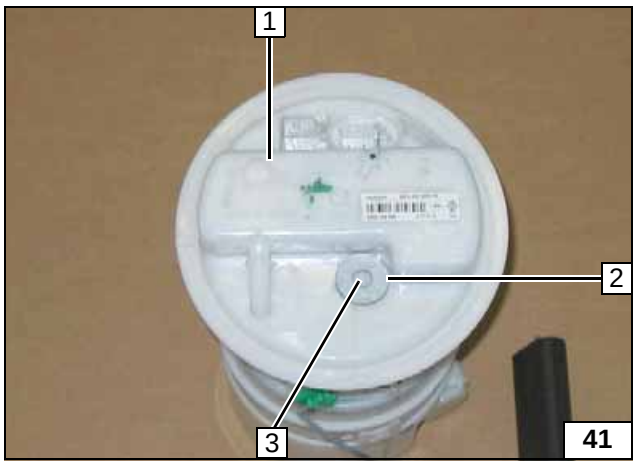
1 Original vehicle stud bolt
2 Perforated bracket
3 Cable tie
4 Metering pump
5 Metering pump mounting
6 M6x25 bolt, flanged nut

Mounting metering pump



1 Wiring harness of metering pump, connector installed
2 Hose section, 10 mm dia. clamp [2x]
3 Corrugated tube with metering pump wiring harness and fuel line

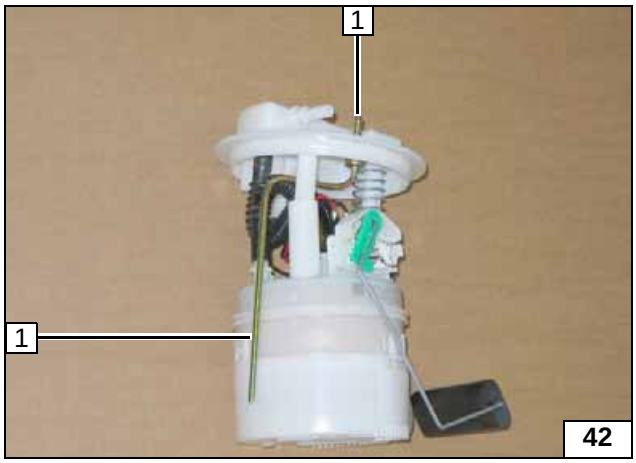
Connecting metering pump



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

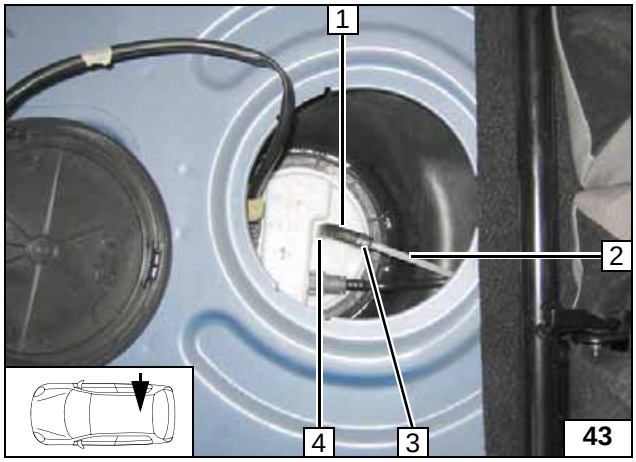
2 Place large diameter washer outer dia. d_a = 21.6mm.
3 Copy hole pattern, 6 mm dia. hole

Fuel extraction



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

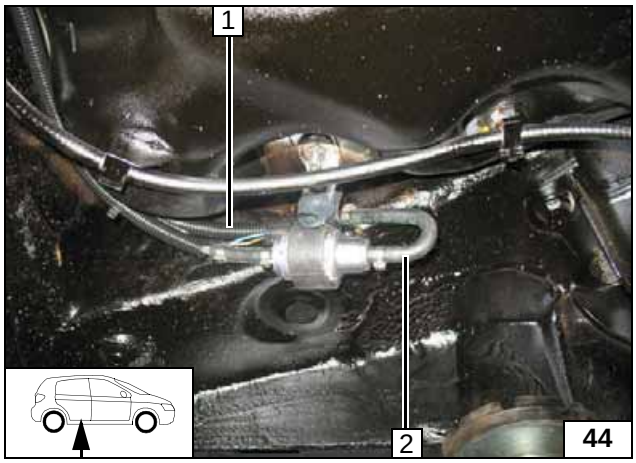
Installing fuel standpipe



Install fuel-tank sending unit according to manufacturer's instructions.

1 Moulded hose, dia. 3.5 x 4.5
2 Fuel line
3 10mm dia. clamp
4 9mm dia. clamp

Connecting fuel line



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

1 Corrugated tube with fuel line
2 180° moulded hose, 10 mm dia. clamp [2x]

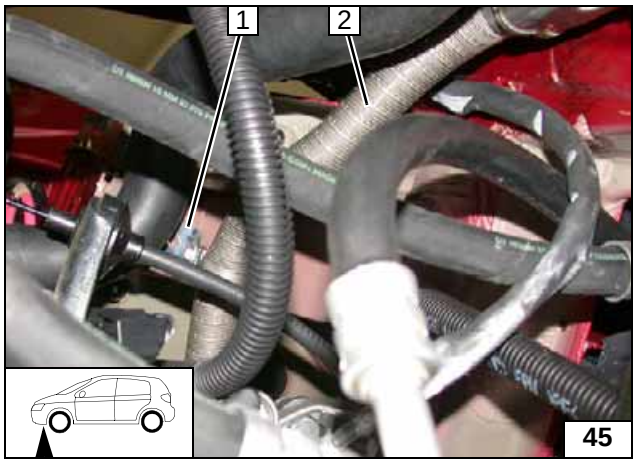
Connecting metering pump

Exhaust Gas

Sandero

Route exhaust pipe **2** using premounted angle bracket **1** as shown in the figure.

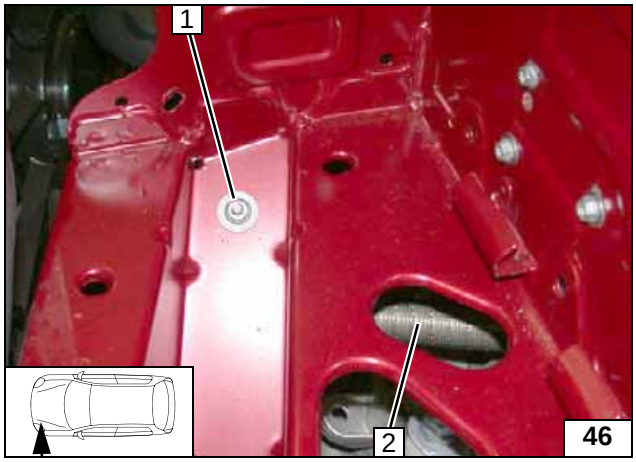
Routing exhaust pipe



Fasten premounted angle bracket of exhaust pipe **2** as shown in the figure.

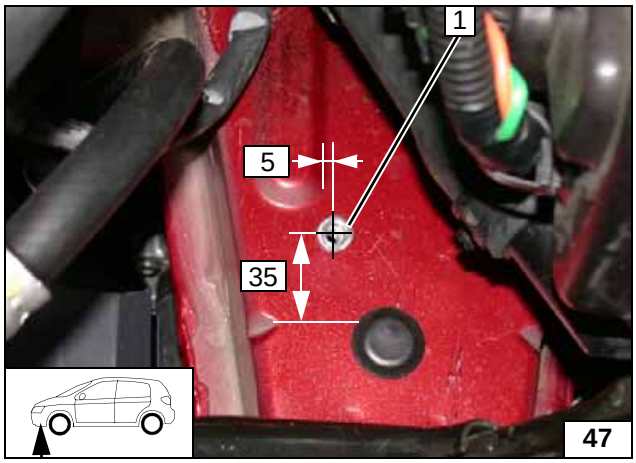
1 M6x20 bolt, large diameter washer [2x], flanged nut, existing hole

Fastening exhaust pipe



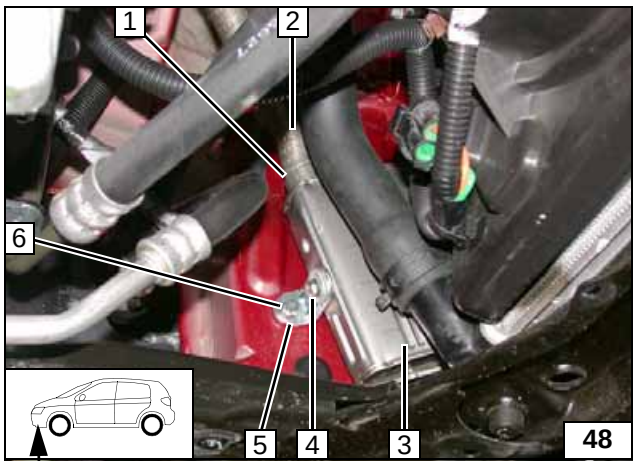
1 Copy hole pattern, 9.1 mm dia. hole, insert and tighten rivet nut

Fastening silencer

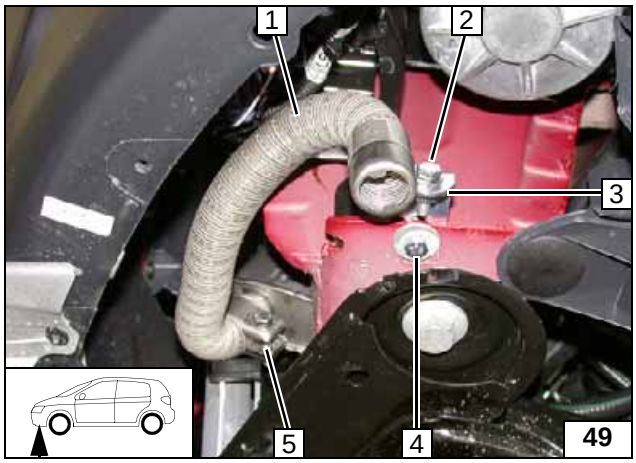


1 Hose clamp
2 Exhaust pipe
3 Silencer
4 M6x16 bolt, spring lockwasher, large diameter washer
5 Angle bracket
6 M6x20 bolt, spring lockwasher

Mounting silencer

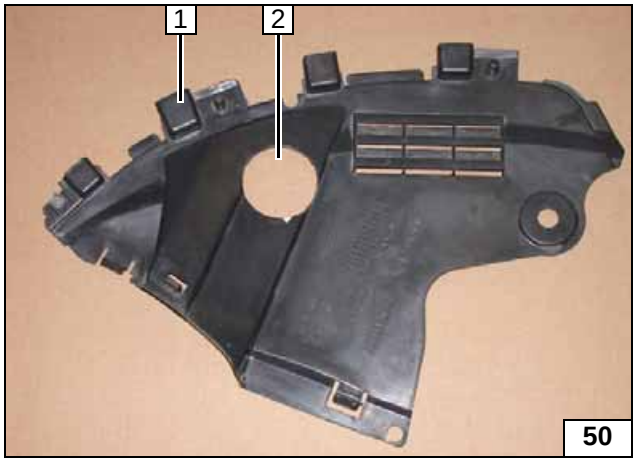


Mounting exhaust end section



1 Exhaust end section
2 M6x20 bolt, p-clamp, flanged nut
3 Angle bracket
4 M6x20 bolt, large diameter washer, flanged nut, existing hole
5 Hose clamp

Hole for exhaust end section

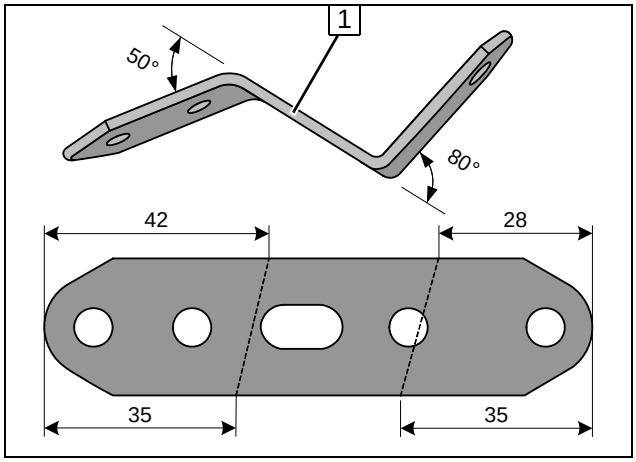


1 Lower wheel well trim
2 60mm dia. hole

Installing wheel well trim

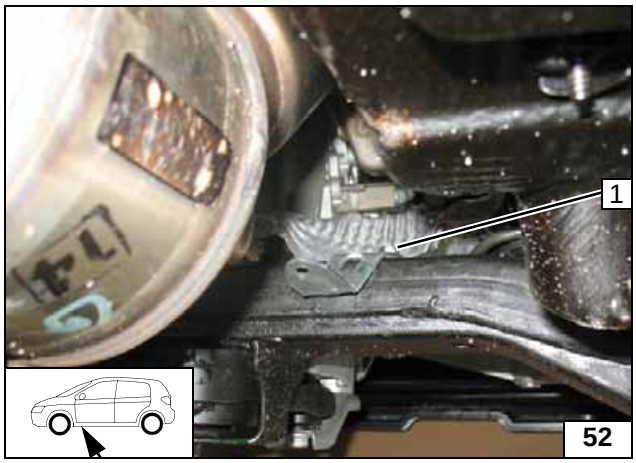
1 Align exhaust end section

Bending perforated bracket 2x



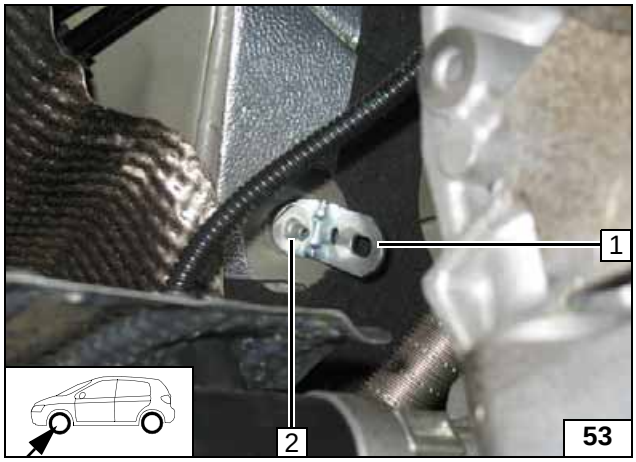
Duster 2 WD

1 Perforated bracket



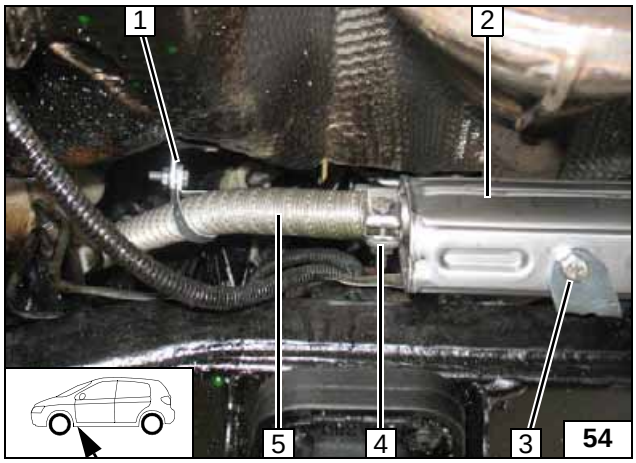
Attach long leg of perforated bracket to original vehicle bolt **1**.

Mounting perforated bracket



1 Angle bracket
2 Original vehicle stud bolt, plate nut with collar

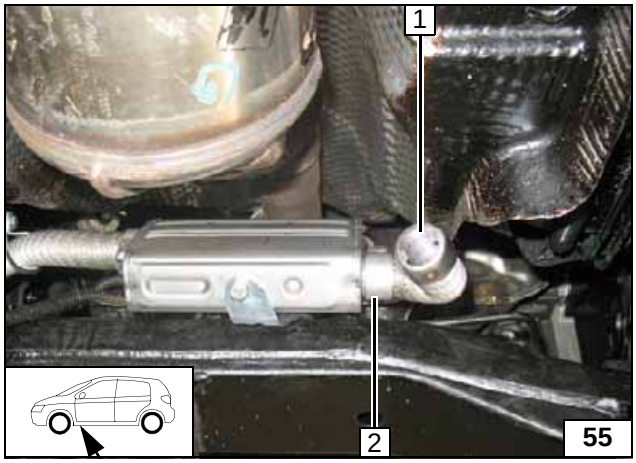
Installing angle bracket



Ensure sufficient distance from neighbouring components.

1 M6x20 bolt, flanged nut, p-clamp
2 Silencer
3 M6x16 bolt, spring lockwasher
4 Hose clamp
5 Exhaust pipe

Mounting exhaust pipe

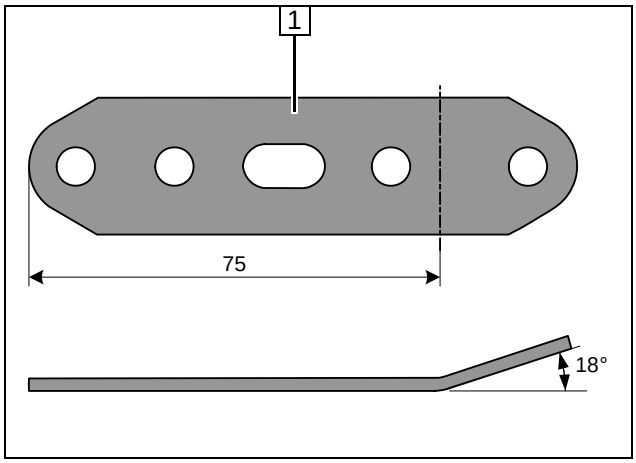


Ensure sufficient distance from neighbouring components.

1 Exhaust end section
2 Hose clamp

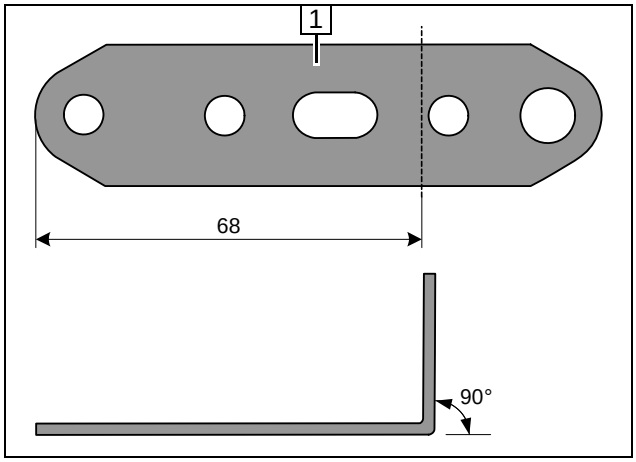
Mounting exhaust end section

Duster 4 WD



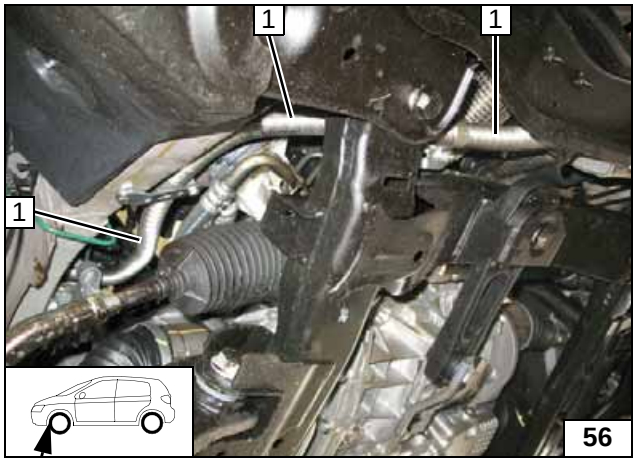
1 Perforated bracket 1

Bending perforated bracket 1



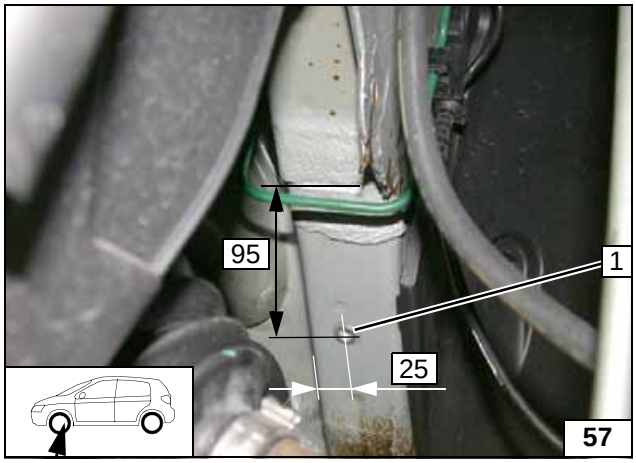
1 Perforated bracket 2

Bending perforated bracket 2



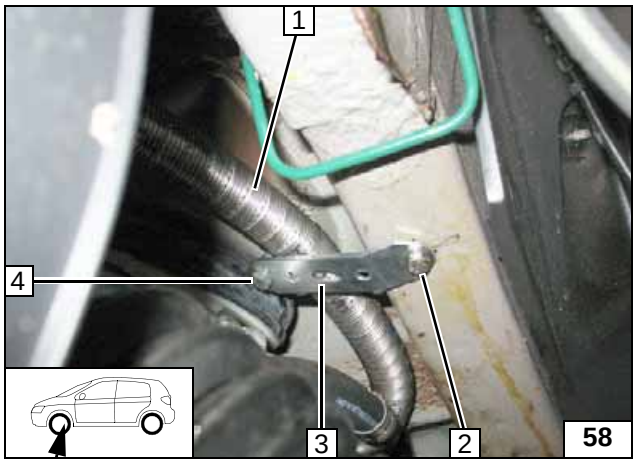
1 Exhaust pipe

Routing exhaust pipe



1 9.1mm dia. hole, rivet nut

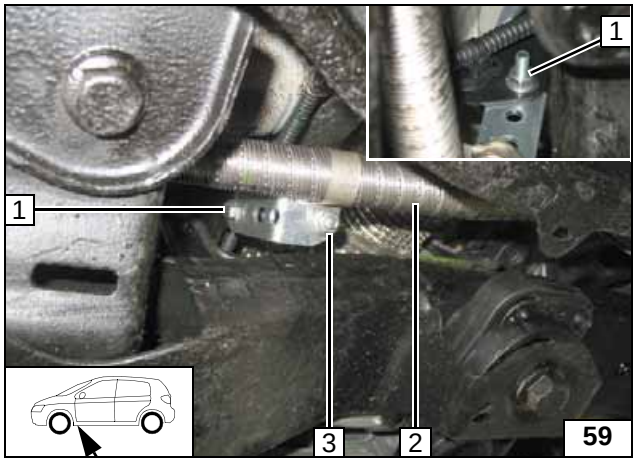
Inserting rivet nut



Ensure sufficient distance from neighbouring components.

1 Exhaust pipe
2 M6x20 bolt, spring lockwasher
3 Perforated bracket 1
4 M6x20 bolt, p-clamp, flanged nut

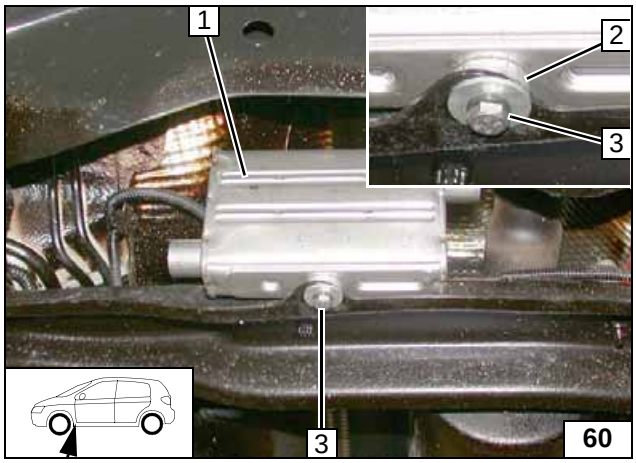
Mounting exhaust pipe



Ensure sufficient distance from neighbouring components.

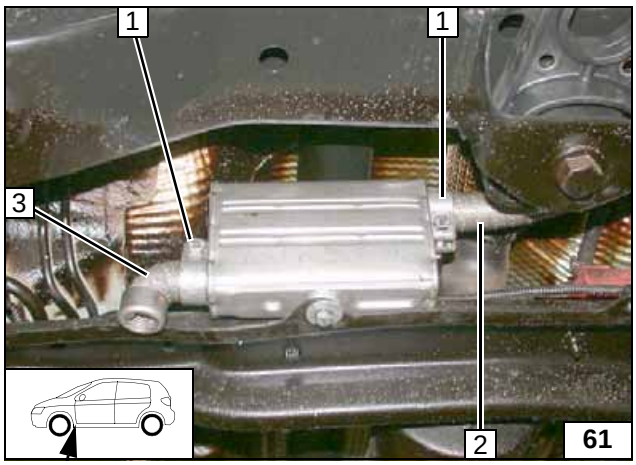
1 M6x20 bolt, perforated bracket 2, flanged nut
2 Exhaust pipe
3 M6x20 bolt, p-clamp, flanged nut

Mounting exhaust pipe



1 Silencer
2 5mm shim
3 M6x20 bolt, spring lockwasher, large diameter washer, 5mm shim, existing hole

Mounting silencer



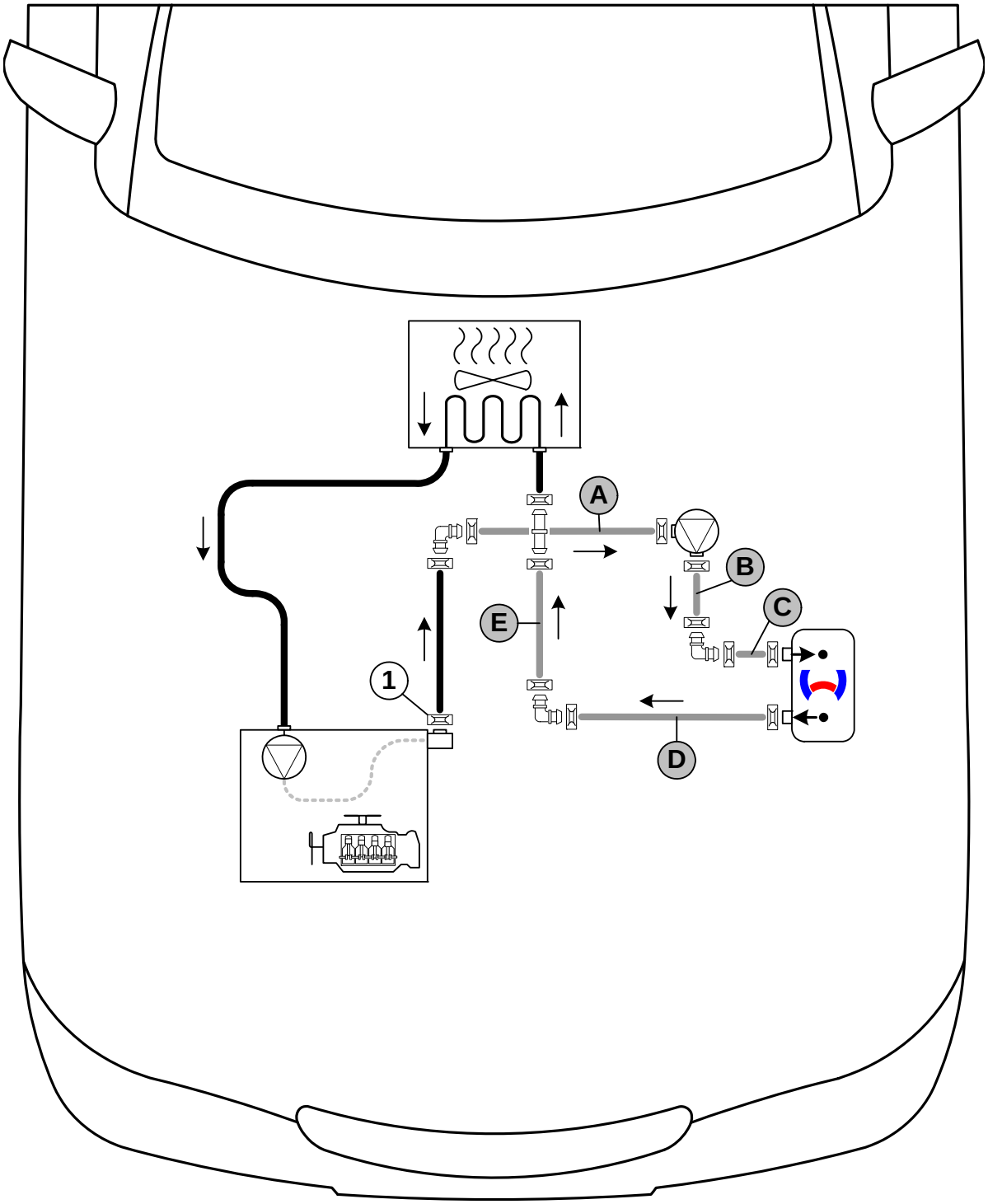
1 Hose clamp [2x]
2 Exhaust pipe
3 Exhaust end section

Mounting exhaust pipe and end section

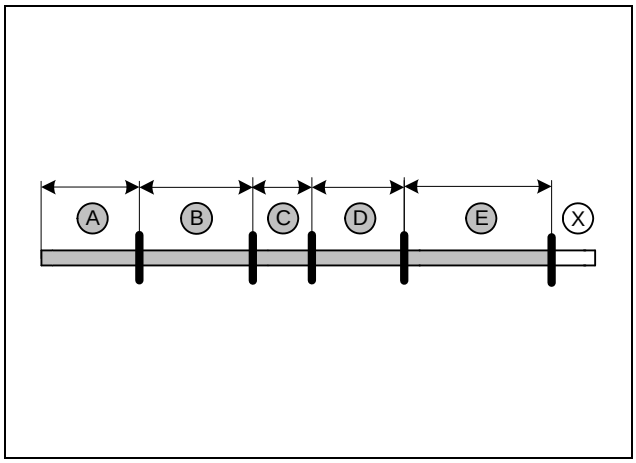
Coolant Circuit

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

Hose routing diagram



All spring clips = 25mm dia. **1** = Spring clip = 28mm dia. (only for Sandero)!
All connecting pipes without specific designation and = 18x18mm dia.

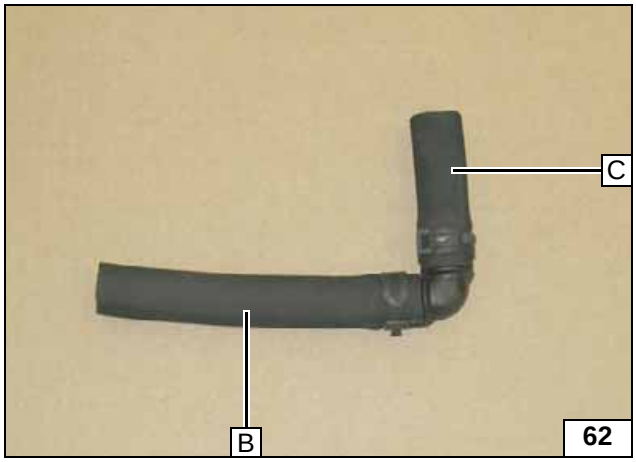


Duster

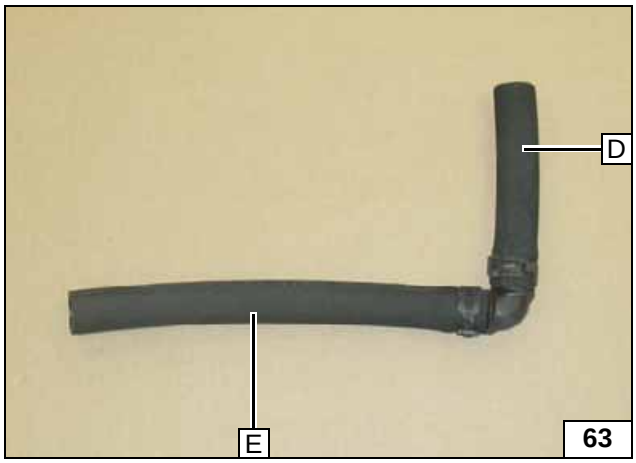
Discard section **X**.

	2 WD/5-speed SG	4 WD/6-speed SG
A =	105	105
B =	150	150
C =	80	80
D =	120	120
E =	235	255

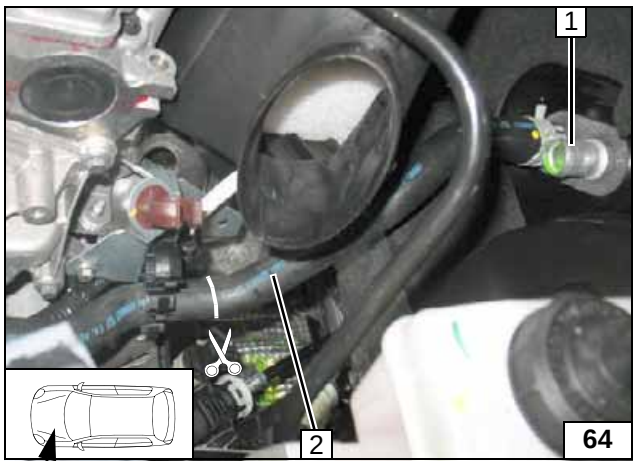
Cutting hoses to length



Preparing hoses B and C



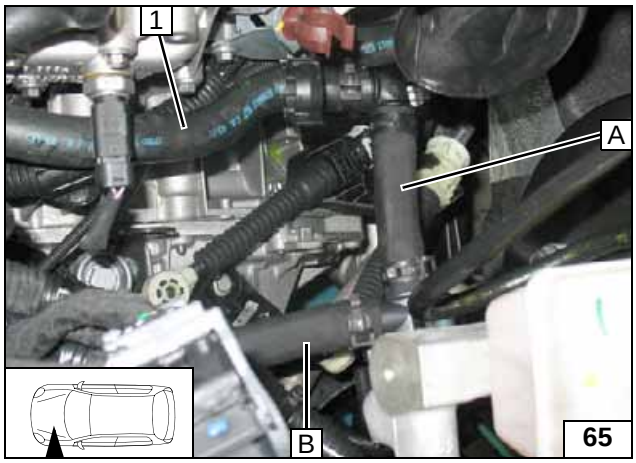
Preparing hoses D and E



Heat exchanger outlet / engine inlet hose disassembled for better installation at position **1**.

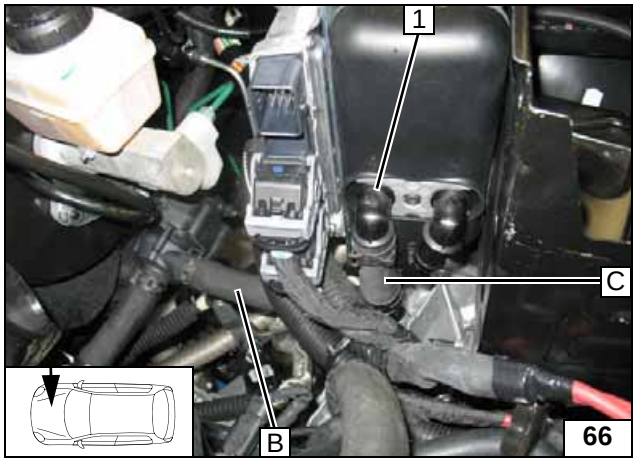
2 Hose on engine outlet / heat exchanger inlet

Cutting point



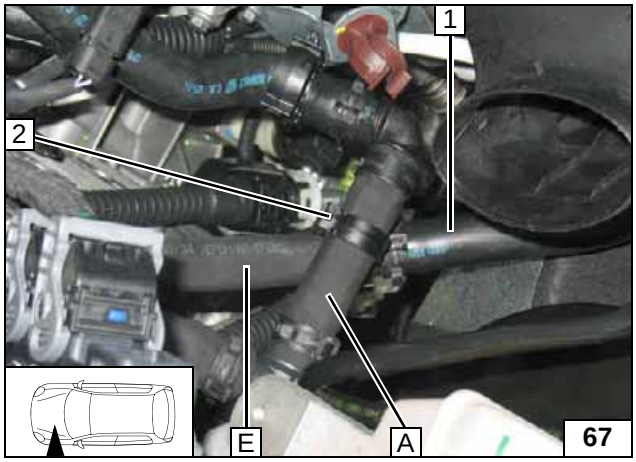
1 Hose on engine outlet

Connecting engine outlet



1 Connection pieces of heater inlet

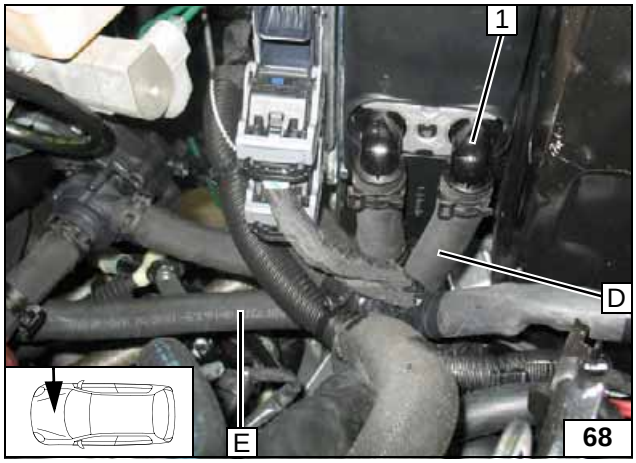
Connection of heater inlet



2WD / 5 gear manual transmission (SG)

Attach and align hose bracket **2** to heat exchanger inlet hose **1** and hose **A**.

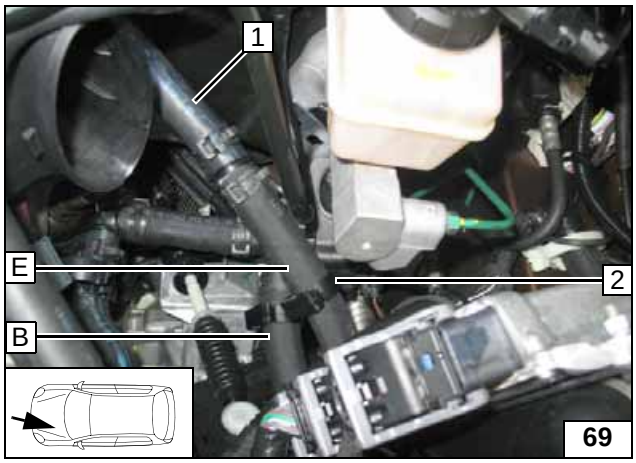
Connection of heat exchanger inlet



Align hoses. Ensure sufficient distance from neighbouring components.

1 Connection pieces of heater outlet

Connection of heater outlet

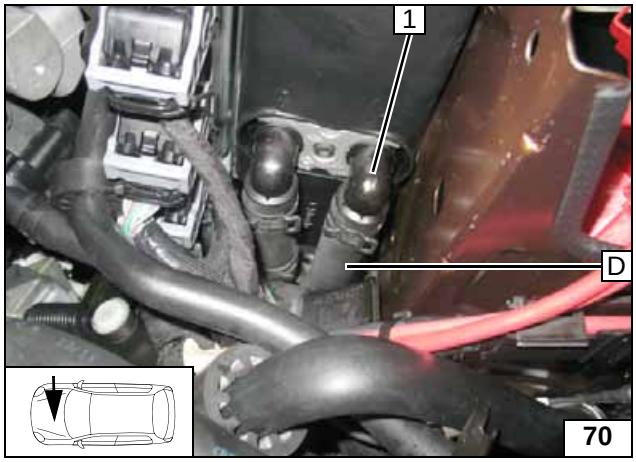


4WD / 6 gear manual transmission (SG)

Attach and align hose bracket **2** to hoses **B** and **E**.

1 Hose on heat exchanger inlet

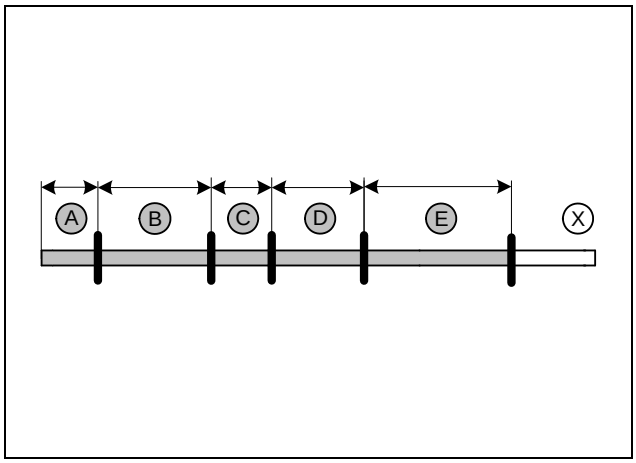
Connection of heat exchanger inlet



Align hoses. Ensure sufficient distance from neighbouring components.

1 Connection pieces of heater outlet

Connection of heater outlet

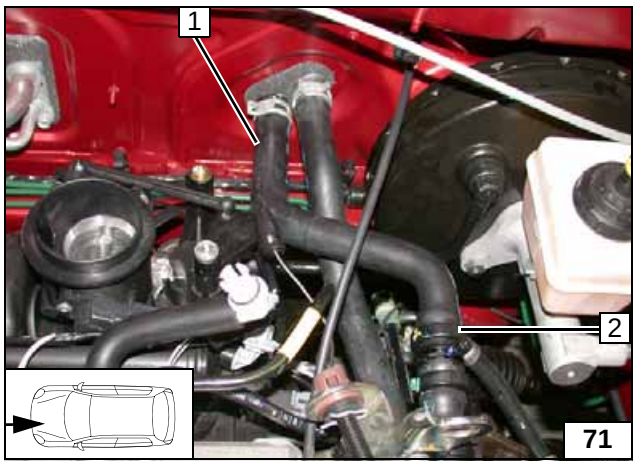


Sandero / Logan

Discard section **X**.

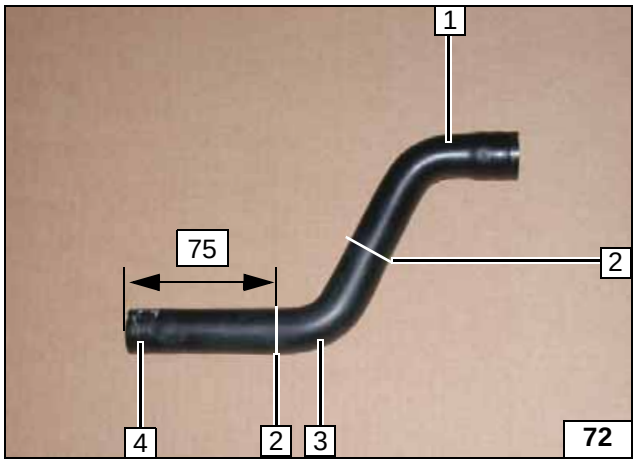
A = 60
B = 180
C = 90
D = 120
E = 420

Cutting hoses to length



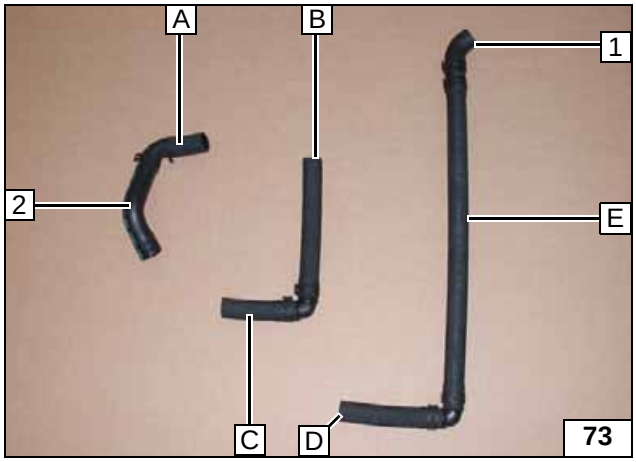
Remove hose of engine outlet / heat exchanger inlet **1**. Carefully cut open plastic clamp **2**.

Cutting point



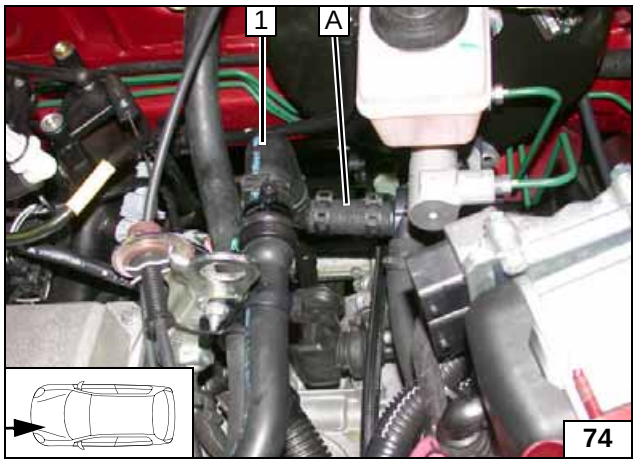
1 Hose section on engine outlet
2 Cutting point [2x]
3 Hose section on heat exchanger inlet
4 Discard hose section

Preparing hose



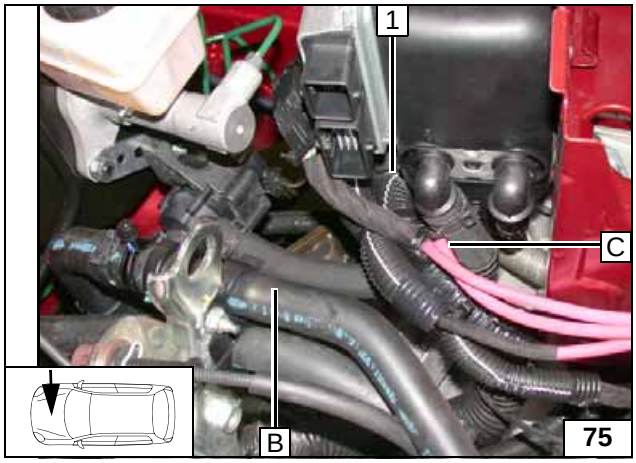
1 Hose section on heat exchanger inlet
2 Hose section on engine outlet

Preparing hoses



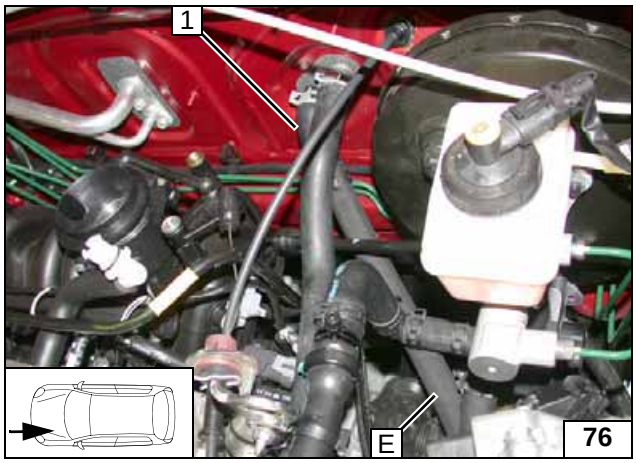
1 Hose section on engine outlet

Connecting engine outlet



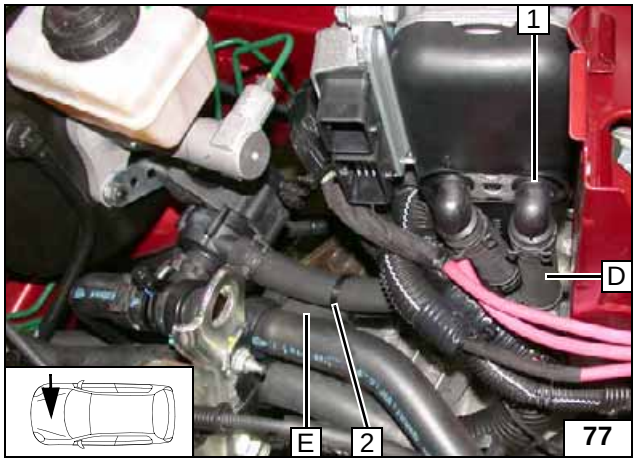
1 Connection pieces of heater inlet

Connection of heater inlet



1 Hose section on heat exchanger inlet

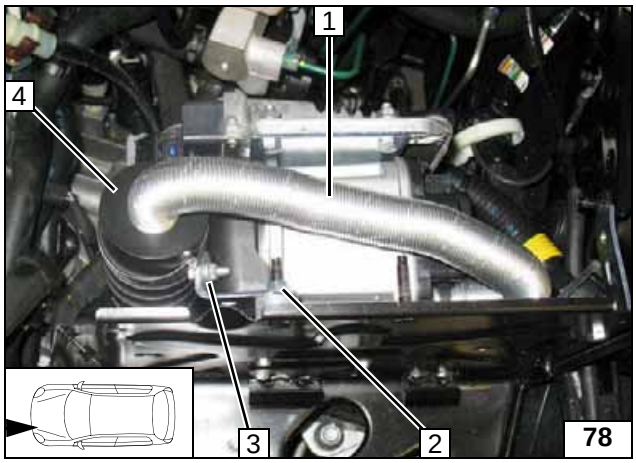
Connection of heat exchanger inlet



Align hoses. Ensure sufficient distance from neighbouring components.

1 Connection pieces of heater outlet
2 Cable tie

Connection of heater outlet



Combustion Air

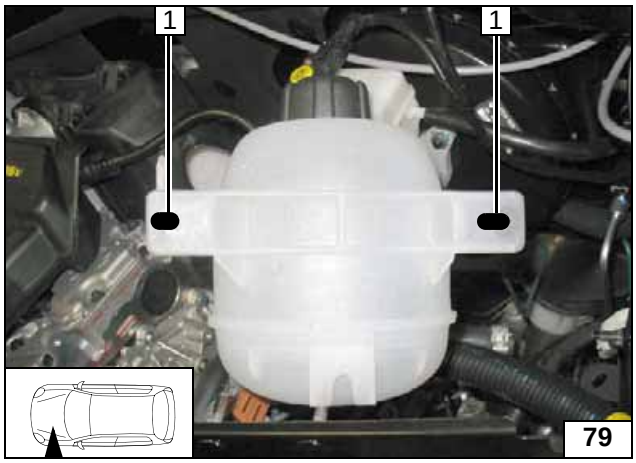
1 Combustion air pipe
2 Original vehicle stud bolt, 10mm spacer, angle bracket, flanged nut
3 M5x16 bolt, washer, 51mm dia. clamp, flanged nut
4 Silencer

Premounting silencer

Final Work

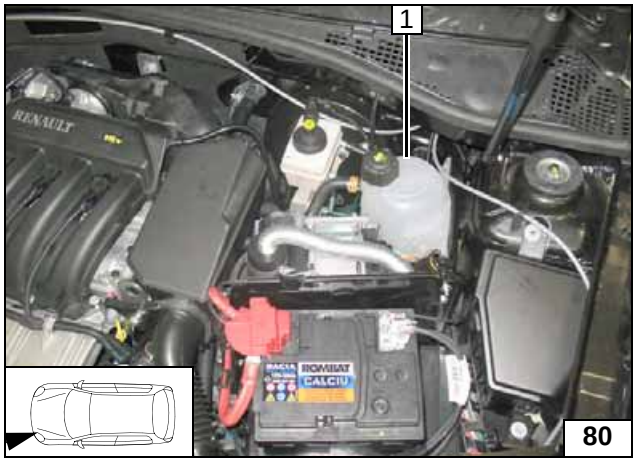
1 Produce oblong hole [2x]

Enlarging holes



Fasten expansion tank **1**. Ensure sufficient distance to heater!

Installing expansion tank

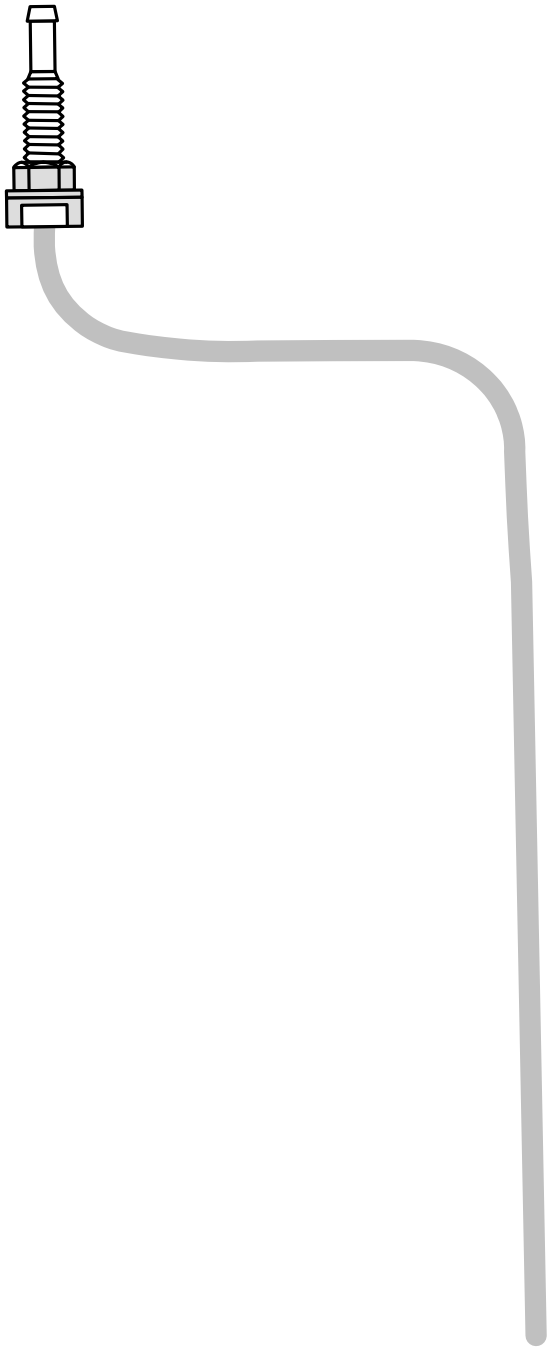


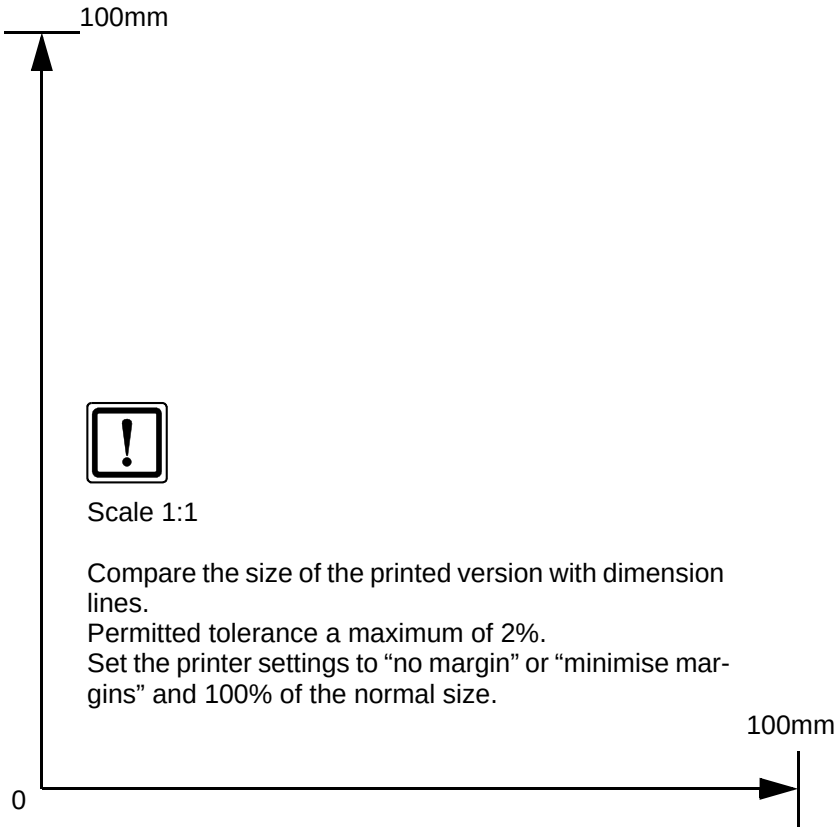
WARNING!
Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose wires and tie back.
Only use manufacturer-approved coolant. Spray heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

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

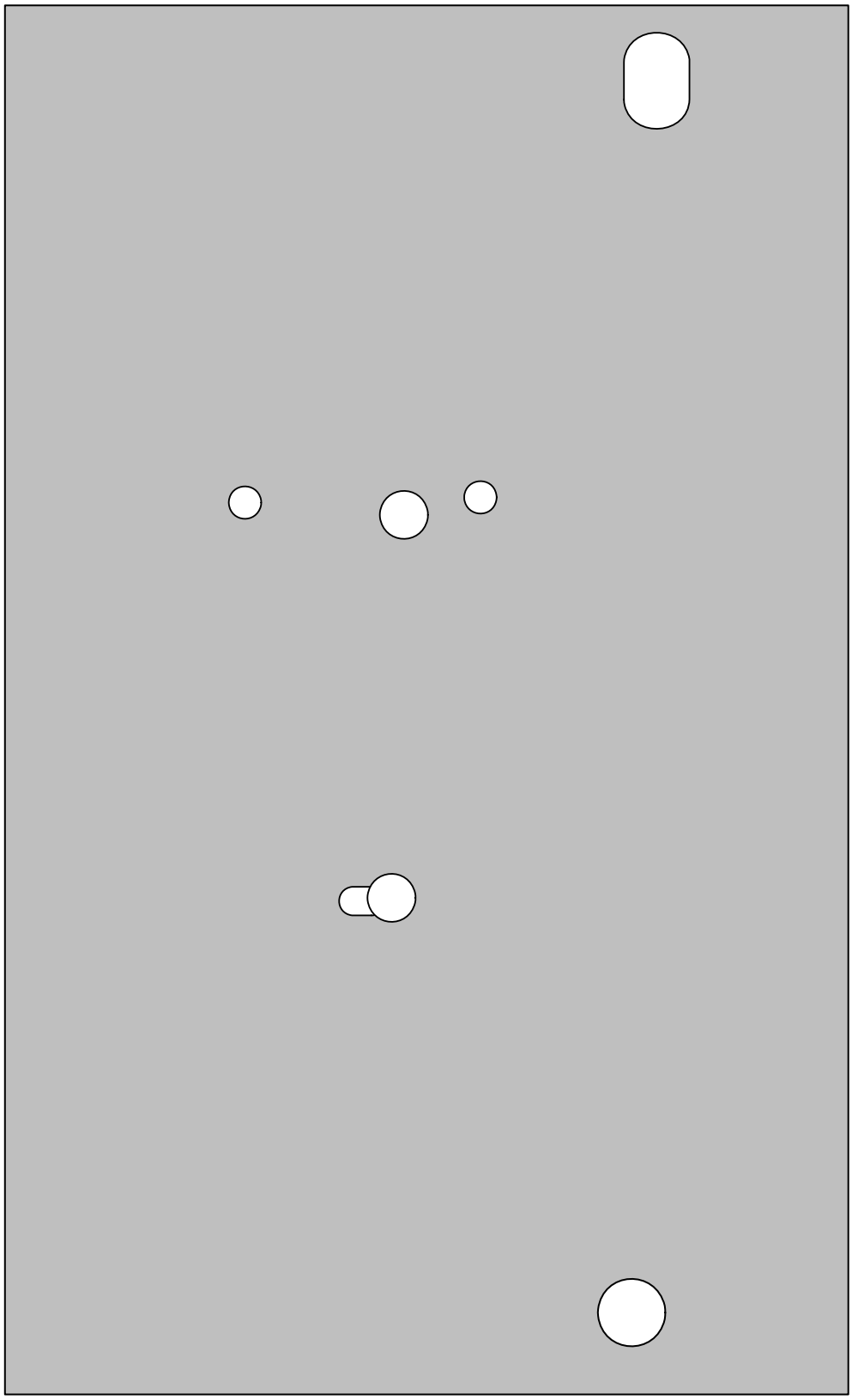
Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Template for Fuel Standpipe





Template for heater mounting



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

Webasto
Feel the Drive

Operating Instructions Dacia Sandero / Duster

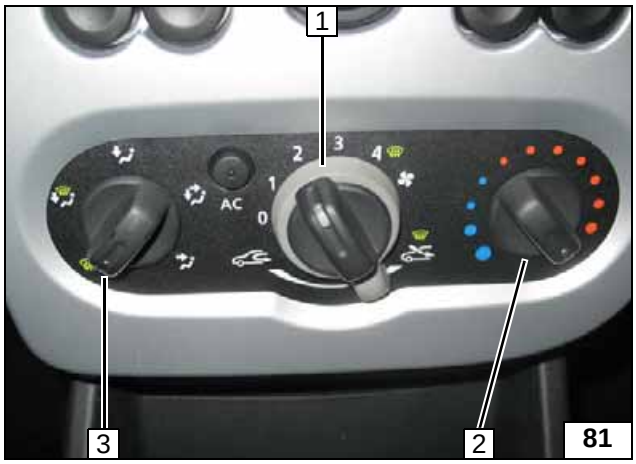
Please remove this page in case of manual air-conditioning and add it to the vehicle operating instructions.

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 the vehicle has passenger compartment monitoring this must be deactivated in addition to the vehicle settings for the heating operation.
Instructions on deactivation can be taken from the operating instructions of the vehicle.

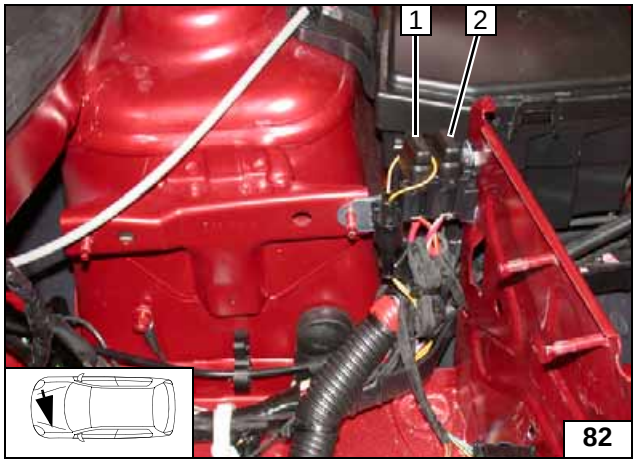
Before parking the vehicle, make the following settings:

A/C control panel



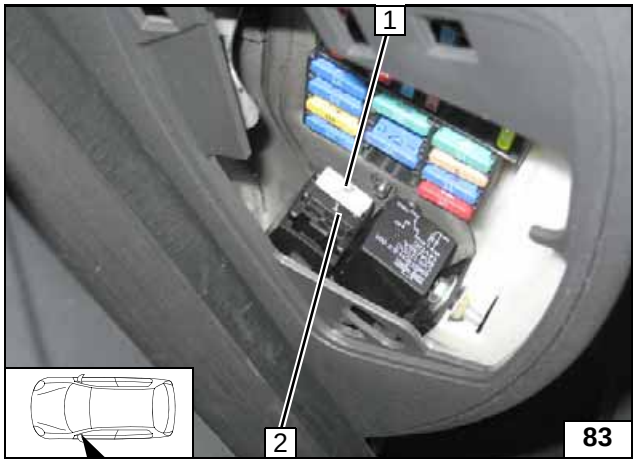
1 Set fan to level "1", or possibly "2"
2 Set temperature to "max."
3 Direct air outlet toward windscreen

Fuses of engine compartment



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

Fuses of passenger compartment



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

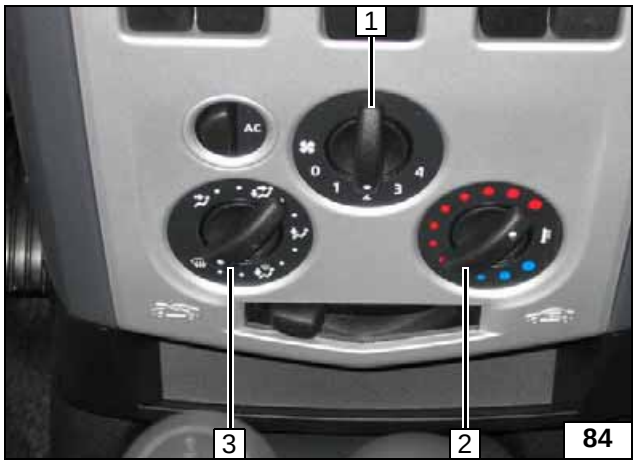
Operating Instructions Dacia Logan

Please remove this 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.

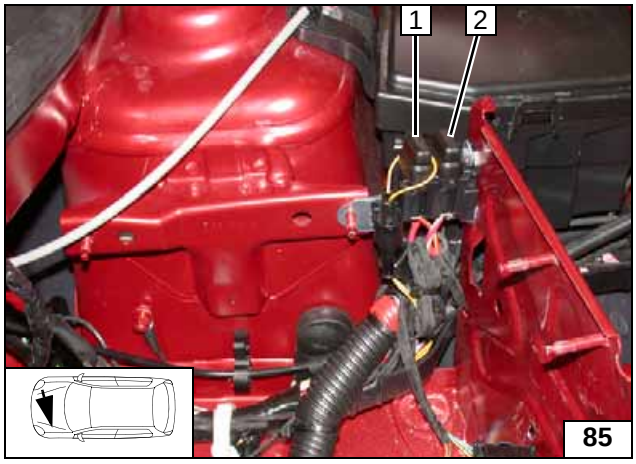
If the vehicle has passenger compartment monitoring this must be deactivated in addition to the vehicle settings for the heating operation.
Instructions on deactivation can be taken from the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



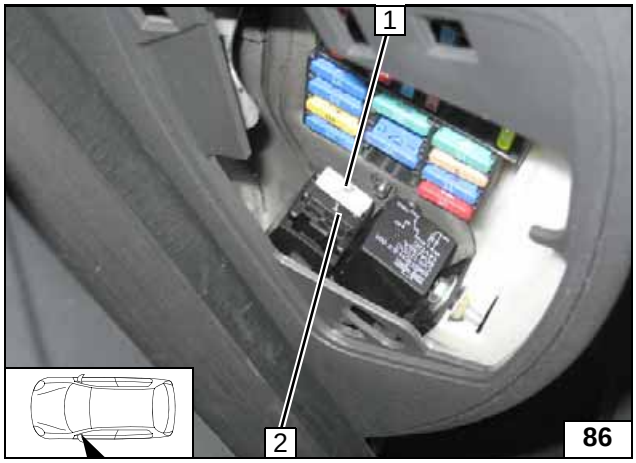
1 Set fan to level "1", or possibly "2"
2 Set temperature to "max."
3 Direct air outlet toward windscreen

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment