Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Dacia Lodgy / Dokker

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Dacia	Lodgy	SD	e2 * 2001 / 116 * 0314 * ...
Dacia	Dokker	SD	e2 * 2001 / 116 * 0314 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2B	Petrol	5-gear SG	85	1198	H5Ft
1.6B	Petrol	5-gear SG	61	1598	K7M

SG = Manual transmission

From model year 2012
Left-hand drive vehicle

Verified equipment variants: Manual air-conditioning

Front fog light
Euro 5

Total installation time: approx. 8.5 hours without removal of fuel tank (Lodgy, Dokker)
approx. 10 hours with removal of fuel tank (Dokker Express)

Dacia Lodgy / Dokker

Table of Contents

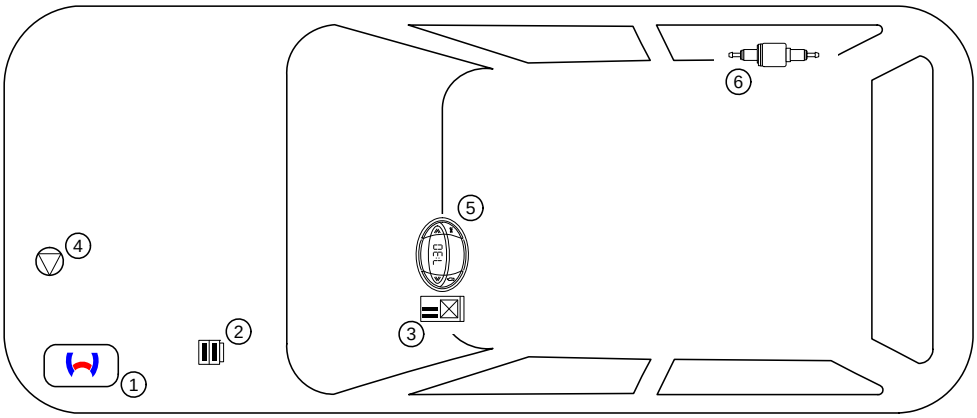
Necessary Components

- Basic delivery scope *Thermo Top Evo* based on price list
- Installation kit for Dacia Lodgy / Dokker 2012 Petrol: **1318802B**
- 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. Relay and 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. Connectors on electronic components must audibly snap into place during assembly.

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

Dacia Lodgy / Dokker

Notes on Validity

This installation documentation applies to Dacia Lodgy / Dokker Petrol vehicles - for validity, see page 1 - from model year 2012 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

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

Technical Instructions

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

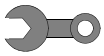
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values of heater bolts and 5x13 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

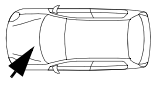
Specific risk of damage to components

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 Lodgy / Dokker

Preliminary Work

Vehicle

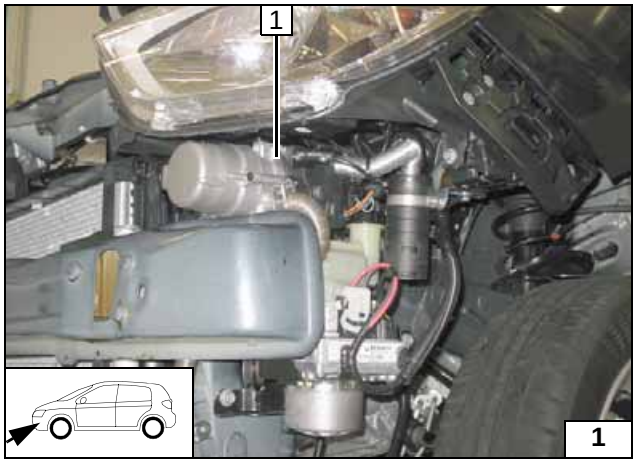
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Remove the windscreen wipers.
- Remove the cowl panel.
- Loosen the windscreen washer reservoir.
- Remove the cowl panel.
- Remove the air cleaner housing with the intake hose (only for 1.2 B)
- Remove the wheel well trim on the left and right.
- Remove the front left lateral wheel well trim.
- Remove the bumper trim.
- Loosen the left headlight.
- Remove the horn with bracket on the left-hand side.
- Remove the underride protection.
- Fold up the rear bench seat completely.
- Remove the floor covering beneath the rear bench seat.
- Remove the cover of the fuel-tank sending unit service opening.
- Remove the trim piece of the radio with the air outlet (see installation aid).
- Remove the trim piece between the A/C control panel and the radio (see installation aid).
- Remove the trim piece of the A/C control unit (see installation aid).
- Loosen the A/C control panel (see installation aid).

Only required in the appropriate installation situation:

- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the fuel tank (only for Dokker Express).

Heater

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



Heater Installation Location

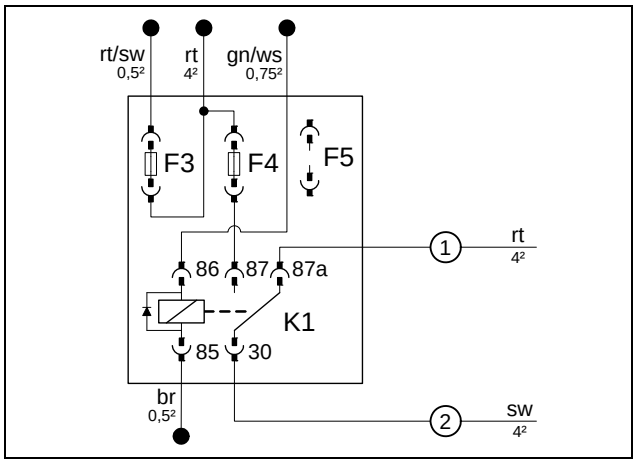
1 Heater

Installation location

Preparing Electrical System

Produce connections as shown in wiring diagram. K1 relay will only be inserted after installation of the passenger compartment relay and fuse holder.

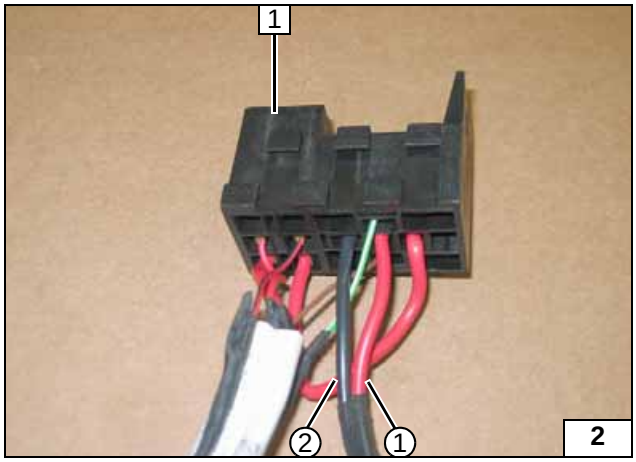
Preparing K1 relay



Connect wires as shown in the wiring diagram.

1 Relay and fuse holder of passenger compartment
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30

Connecting wires

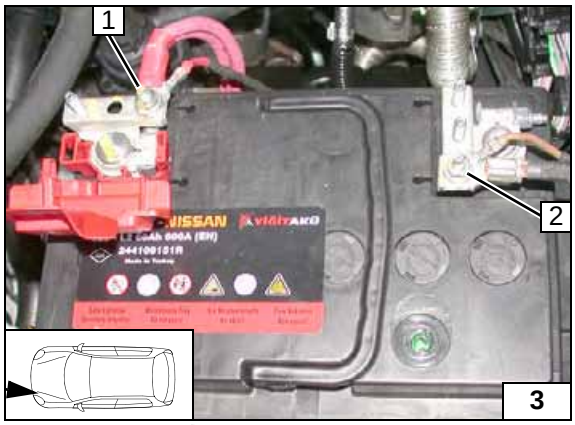


2

Electrical System

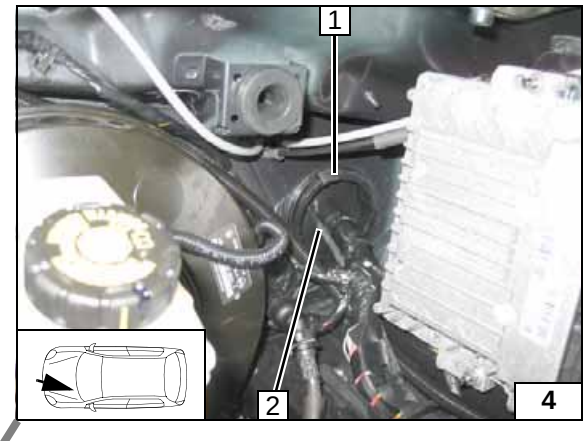
Positive and earth wire

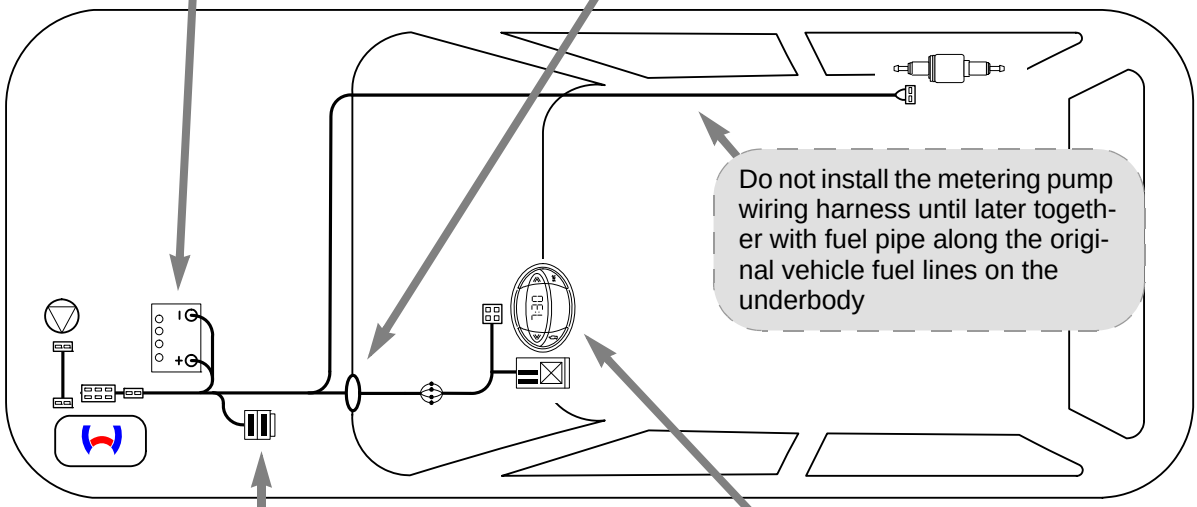
1 Positive wire on positive terminal of battery
2 Earth wire on negative terminal of battery



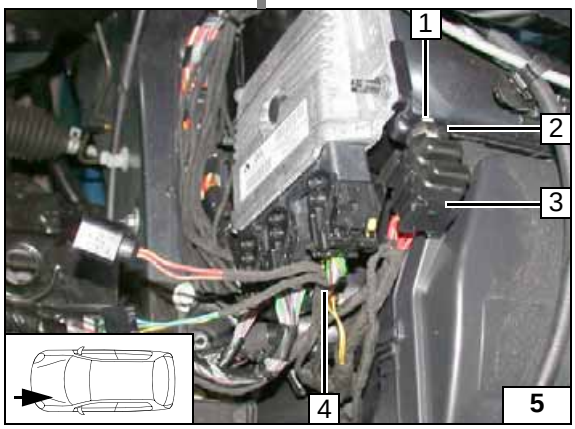
Wiring harness pass through

1 Protective rubber plug
2 Wiring harness of heater, heater control



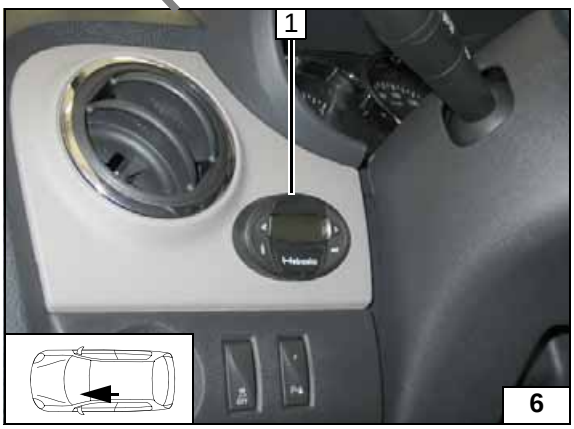


Wiring harness routing diagram



Fuse holder of engine compartment

1 M6x20 bolt, existing threaded hole
2 Retaining plate of fuse holder
3 Fuse holder with fuse F1-2
4 Fasten wiring harness of heater with cable tie

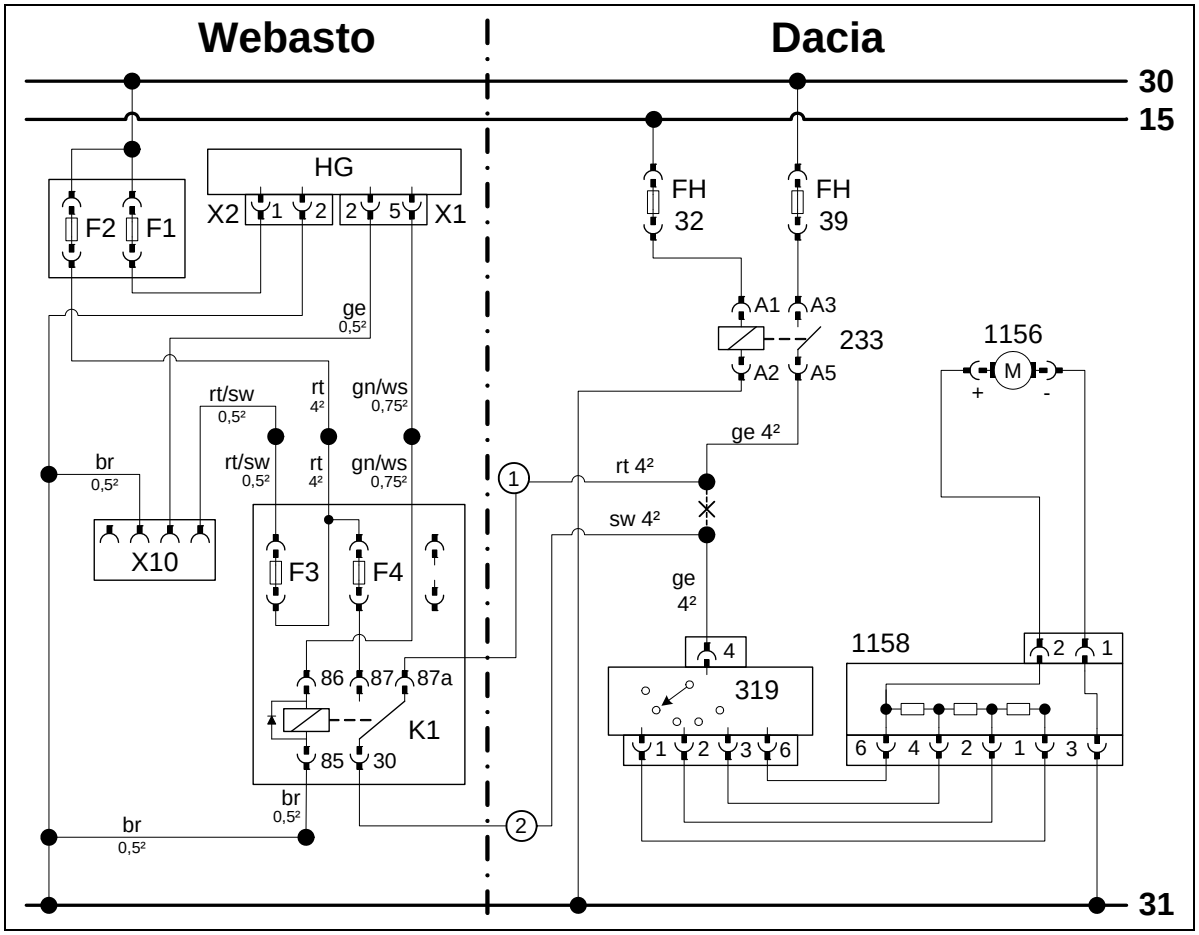


Digital timer

1 Digital timer

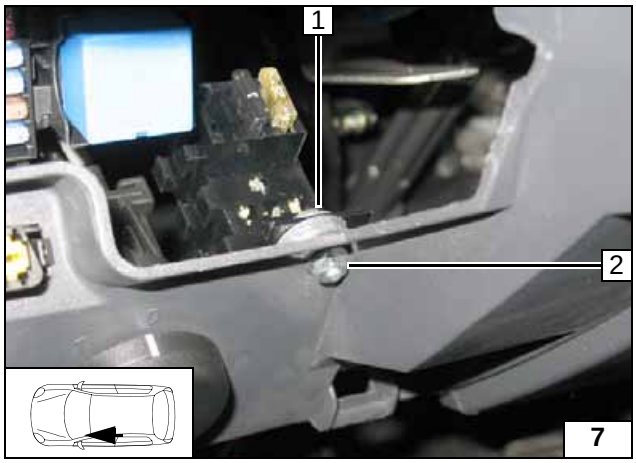
Fan Control

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	233	Fan relay	rt	red
X1	6-pin heater connector	319	A/C control panel	sw	black
X2	2-pin heater connector	1158	Resistor group	ge	yellow
X10	4-pin connector of Heater control	FH32	7.5A fuse	gn	green
		FH39	40A fuse	ws	white
K1	Fan relay			br	brown
F1	20A fuse				
F2	30A fuse				
F3	1A fuse			**X**	Cutting point
F4	25A fuse			Wiring colours may vary.	

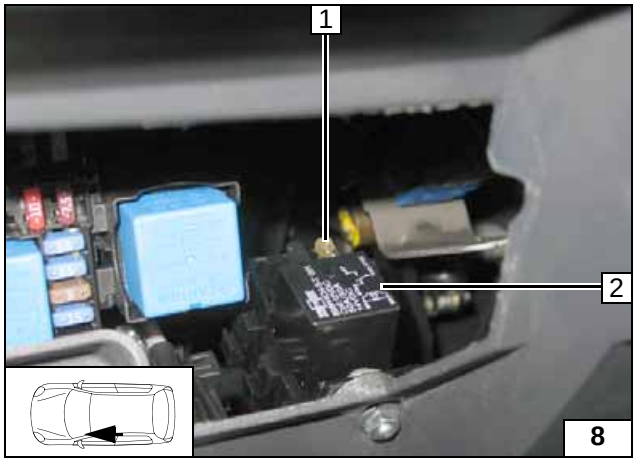
Legend



Position flanged nut **2**, copy hole pattern, drill 5.5mm dia. hole.

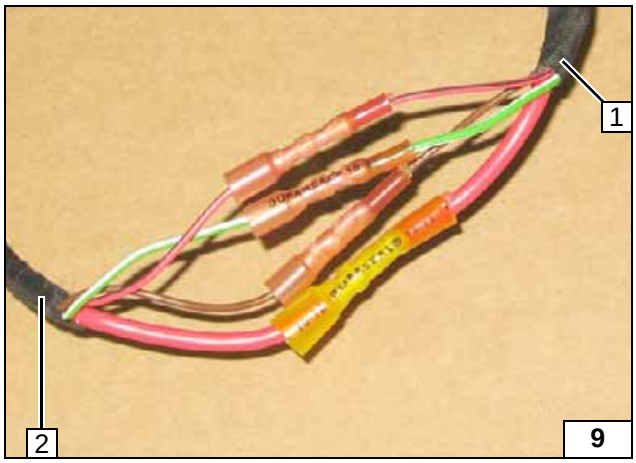
1 M5x16 bolt, relay and fuse holder of passenger compartment, 5mm shim
2 M5 flanged nut

Installing relay and fuse holder of the passenger compartment



1 25A fuse F4
2 K1 fan relay

Installing relay and fuse holder of the passenger compartment



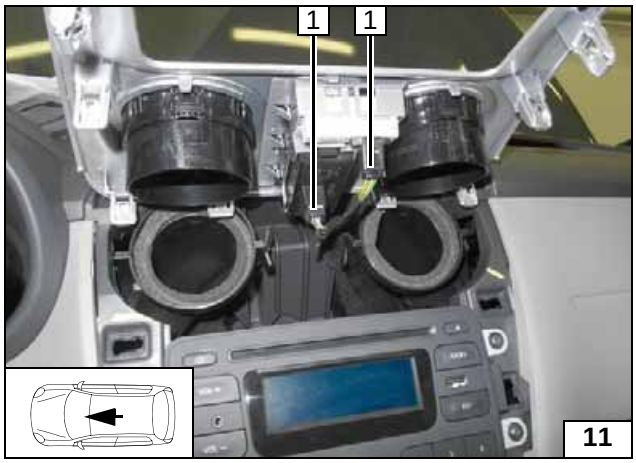
Connect same colour wires of the wiring harness of the passenger compartment relay and fuse holder **1** to those of the heater wiring harness **2** as shown in wiring diagram.

Connecting wiring harnesses

Removal of A/C Control Panel Installation Aid

Fastening points (spring clips) [11x]

Removing trim piece of radio with air outlet



1 Connector [2x]

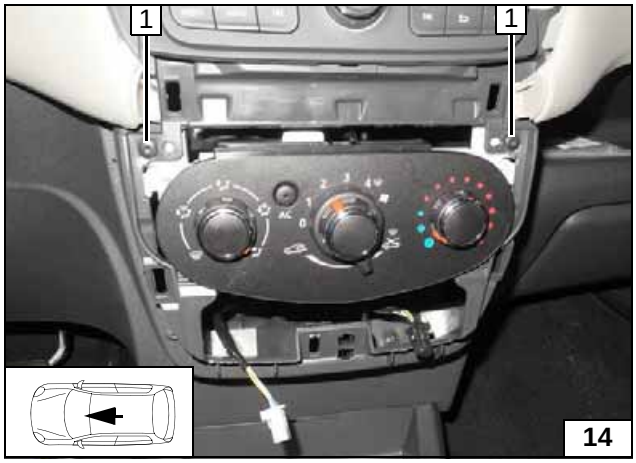
Pulling off connector

Fastening points (spring clips) [2x]

Removing trim piece between A/C control panel and radio

Fastening points (spring clips) [5x]

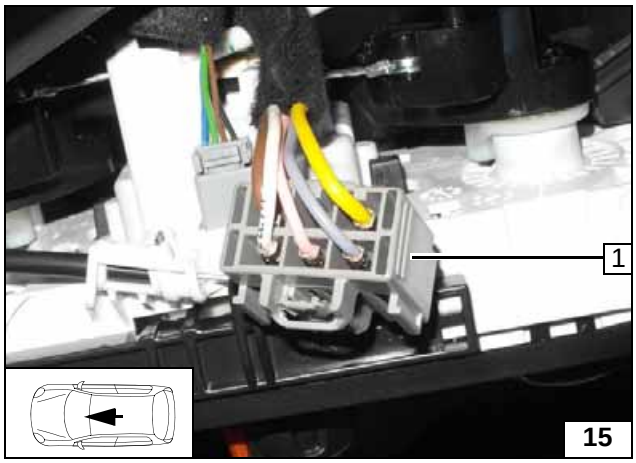
Removing trim piece of A/C control panel



Turn rotary switch of front nozzle air outlet and temperature rotary switch to cold (strain relief of Bowden cable). Remove wiring harness from mounting.

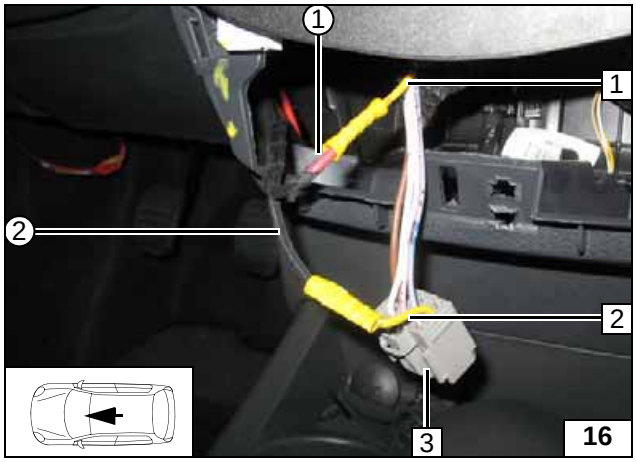
1 Bolts of the A/C control panel [2x]

Removing A/C control panel



1 6-pin connector of A/C control panel, detached

Connecting A/C control panel



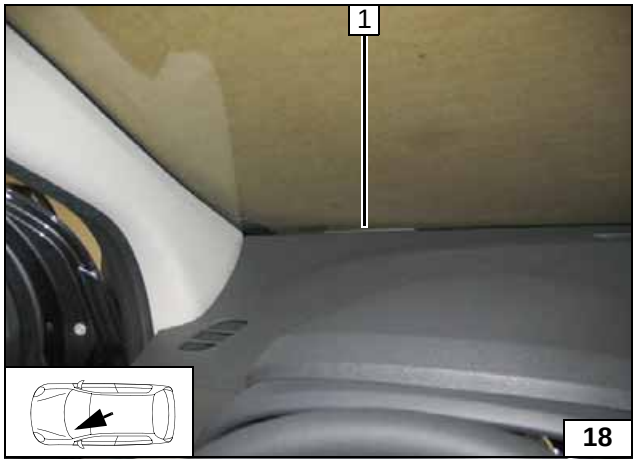
1 Yellow (ge) wire from fan relay
2 Yellow (ge) wire of 6-pin connector, Pin 4
3 6-pin connector of A/C control panel
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30

Connecting A/C control panel

Remote Option (Telestart)

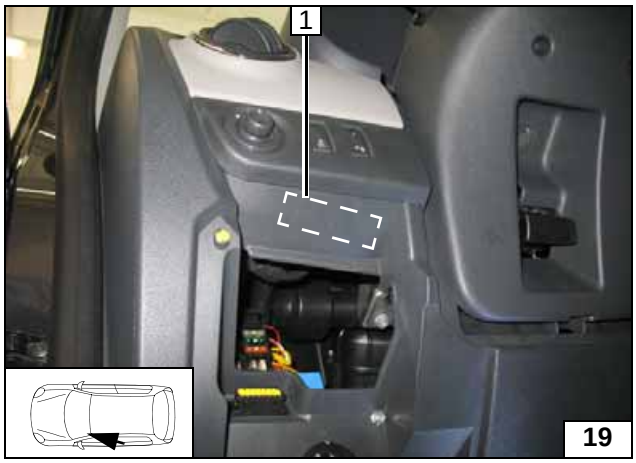
Fasten receiver **1** with adhesive tape.

Mounting receiver



1 Antenna

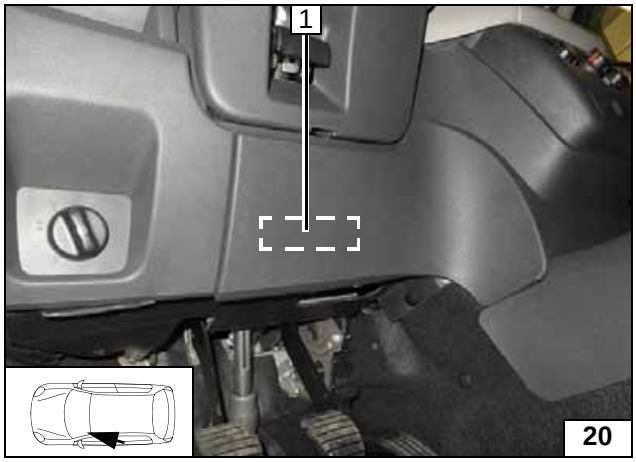
Mounting antenna



T100 HTM temperature sensor

Fasten temperature sensor **1** from behind using adhesive tape.

Installing temperature sensor



Thermo Call Option

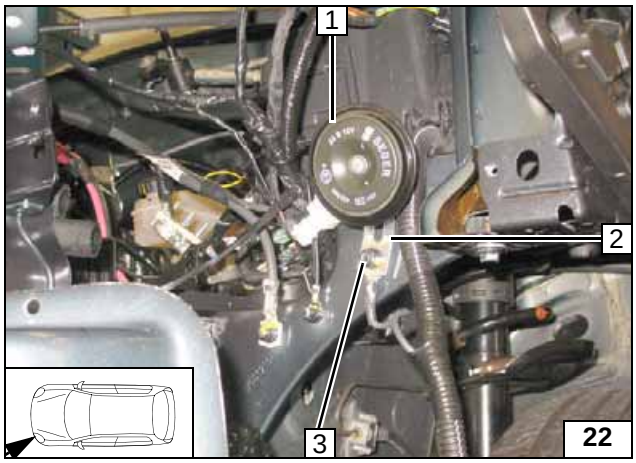
Fasten receiver of Thermo Call **1** behind the trim with adhesive tape.

Mounting receiver

1 Antenna

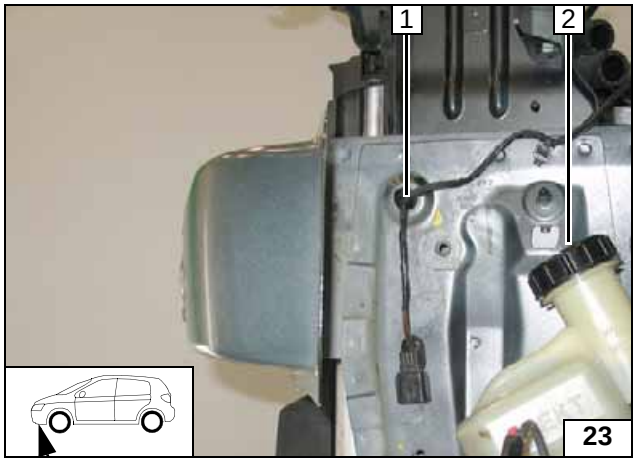
Mounting antenna

Preparing Installation Location



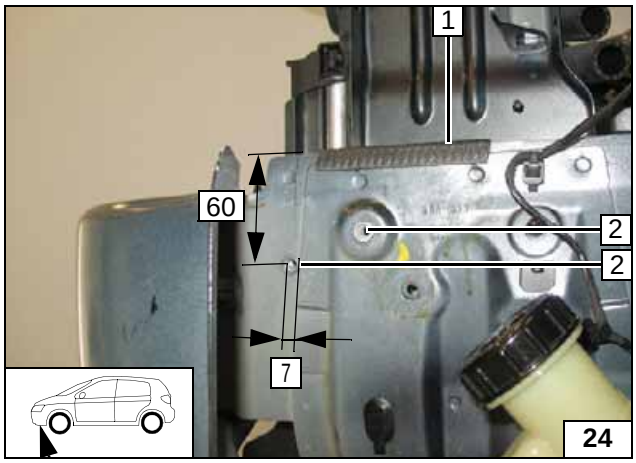
1 Horn
2 Bracket
3 Original vehicle stud bolt, earth wire, nut

Installing horn



Remove clip **1** from hole. Loosen servo container **2** and secure it using suitable means.

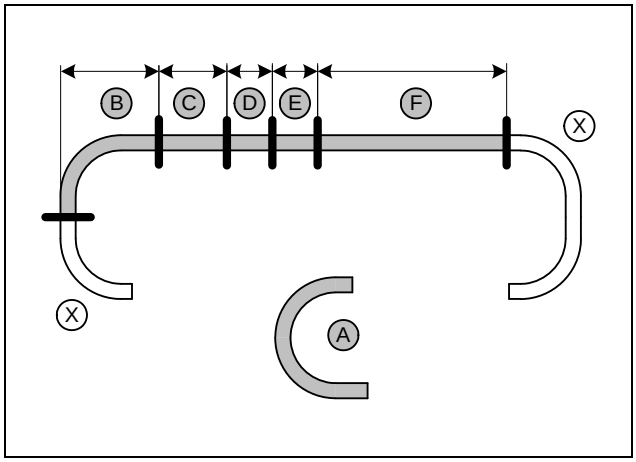
Dismantling clip



1 100mm edge protection
2 9.1mm dia. hole; rivet nut [2x]

Installing rivet nuts

Preparing Heater

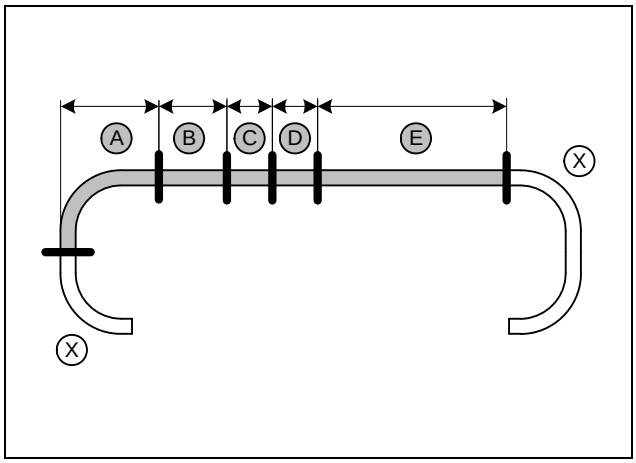


1.2 B

Discard section **X**.
Hose **A** = 180°, 20mm dia. moulded hose

B = 480
C = 270
D = 120
E = 110
F = 1120

Cutting hoses to length

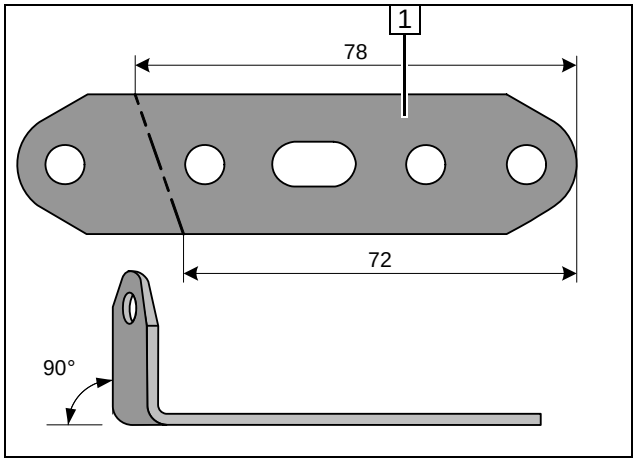


1.6 B

Discard section **X**.

A = 270
B = 270
C = 120
D = 110
E = 630

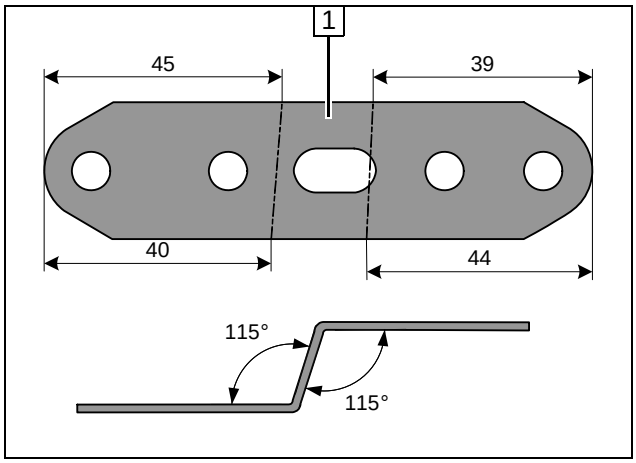
Cutting hoses to length



All vehicles

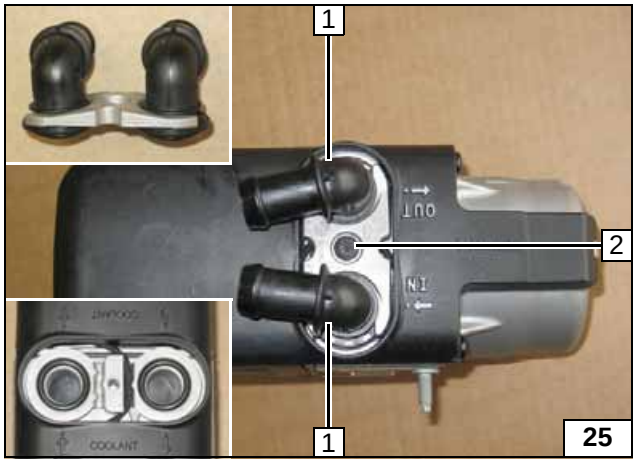
1 Bend perforated bracket **A**

Preparing perforated bracket A



1 Bend perforated bracket **B**

Preparing perforated bracket B

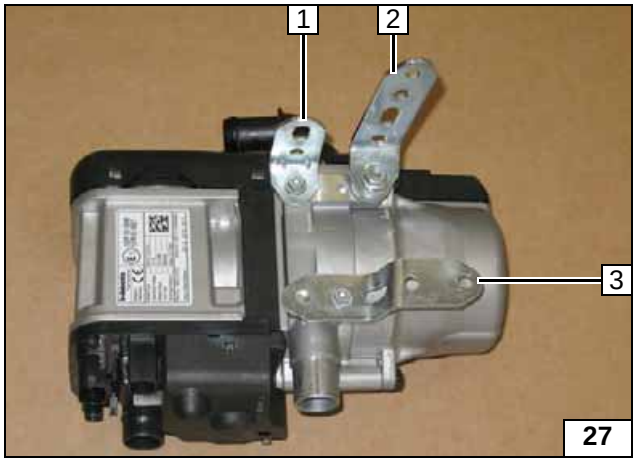


1 Water connection piece, sealing ring [2x each]
2 5x15 mm self-tapping bolt, retaining plate of water connection piece

Installing water connection pieces

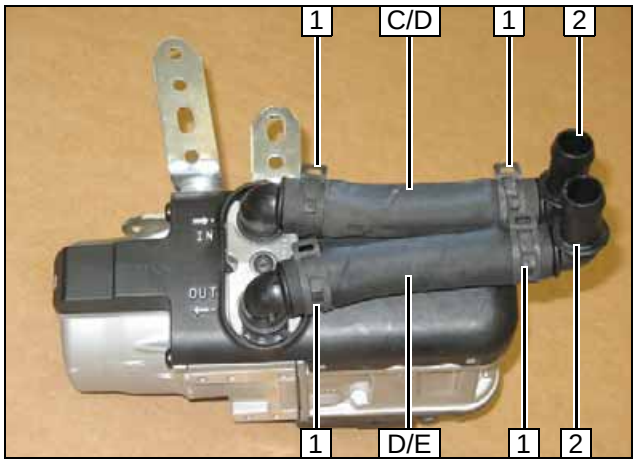
1 Stud bolt

Installing stud bolts



1 Angle bracket, 5x13 self-tapping bolt
2 5mm shim, perforated bracket **A**, M6 flanged nut
3 Perforated bracket **B**, 5x13 self-tapping bolt

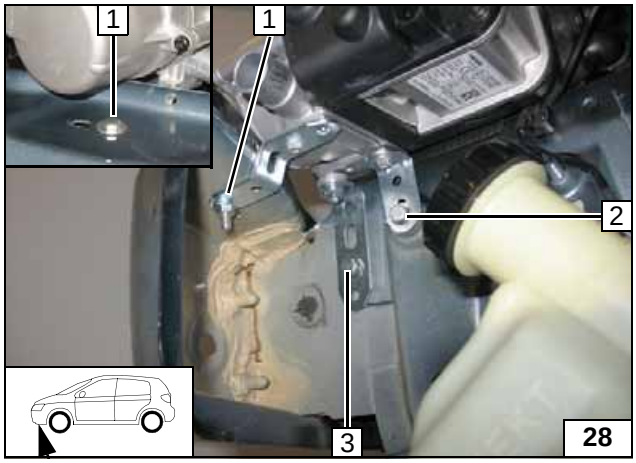
Perforated bracket, premounting angle bracket



Hose **C** and **D** = 1.6B
Hose **D** and **E** = 1.2B

1 25mm dia. spring clip [4x]
2 18mm dia. 90° connecting pipe [2x]

Installing hoses



Installing Heater

Ensure sufficient distance from adjacent components, correct if necessary.

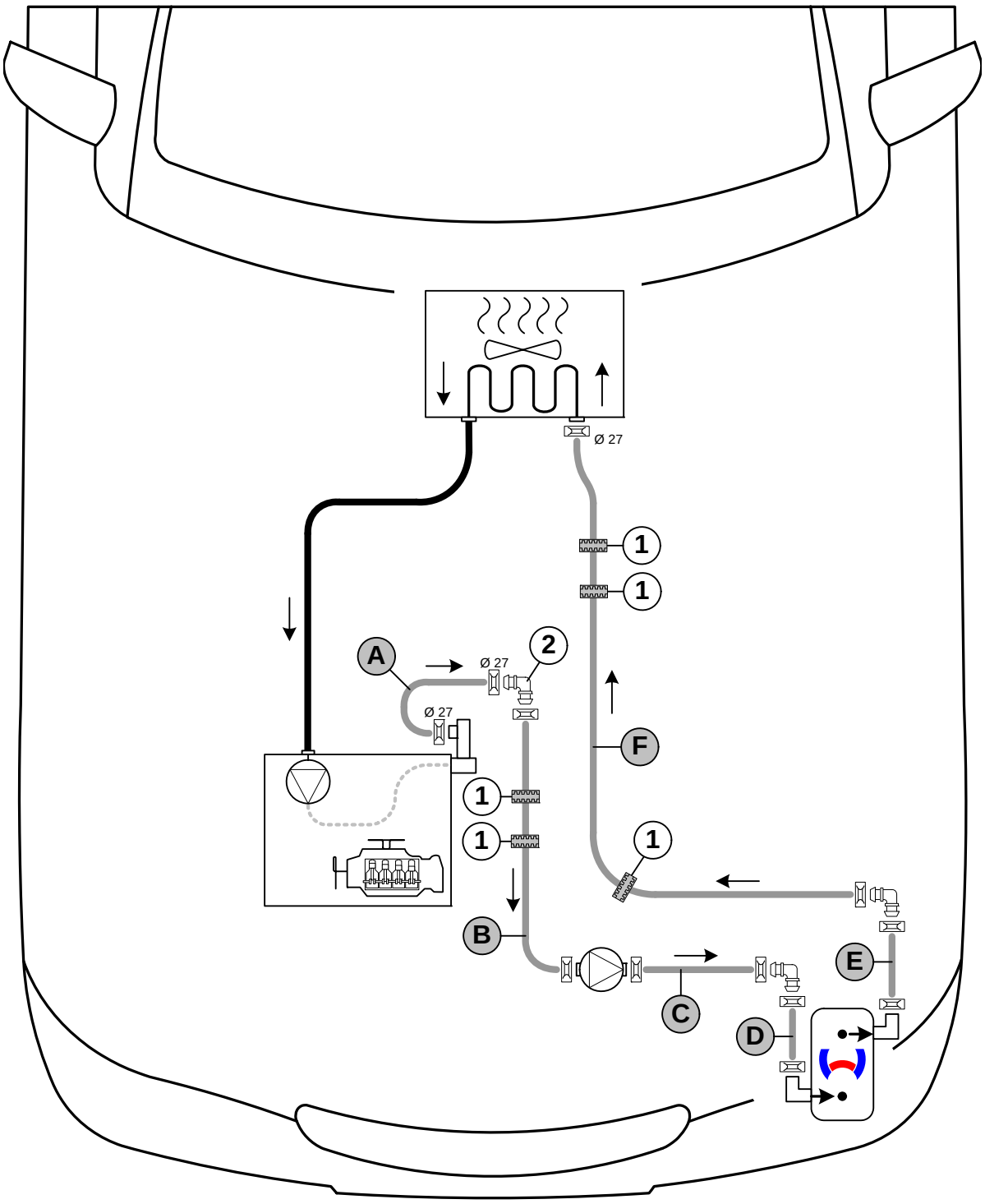
1 M6x20 bolt, existing hole, large diameter washer, perforated bracket **B**, flanged nut
2 M6x20 bolt, spring lockwasher, 5mm shim, angle bracket
3 M6x20 bolt, spring lockwasher, perforated bracket **A**

Mounting heater

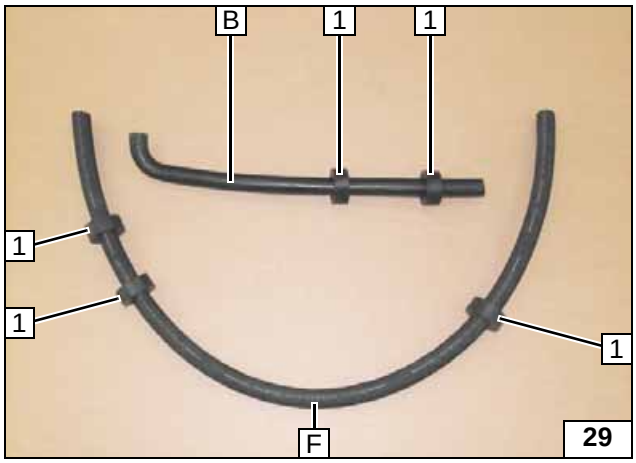
Coolant Circuit 1.2 B

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

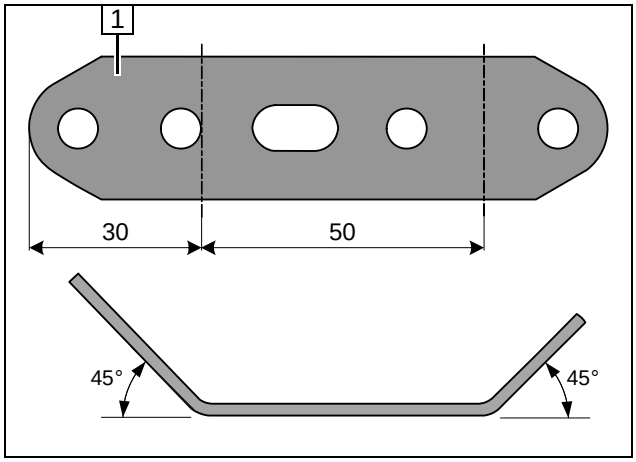


All spring clips without a specific designation = 25mm dia. **1** = Black (sw) rubber isolator [5x].
2 = Connecting pipe = 18x20mm dia. All connecting pipes without specific designation = 18x18mm dia.



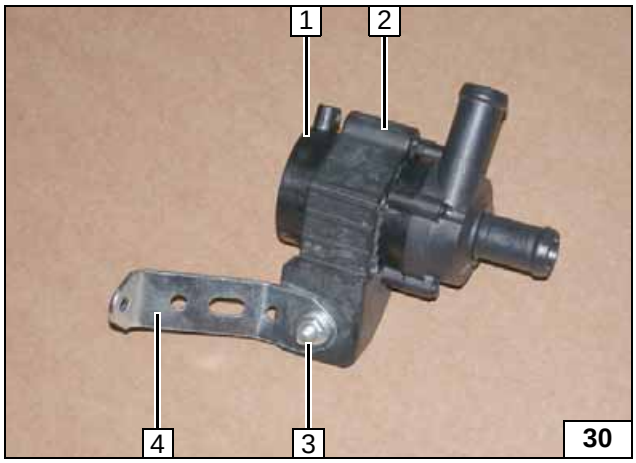
Slide black (sw) rubber isolator **1** [5x] onto hoses **B** and **F**.

Preparing hoses



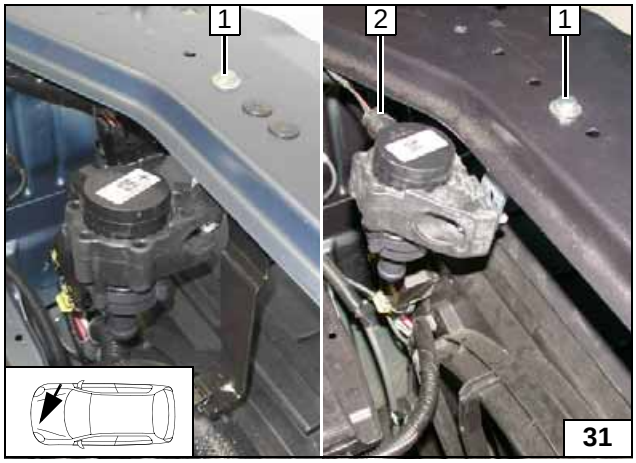
1 Bend perforated bracket of circulating pump [2x]

Preparing perforated bracket



1 Circulating pump
2 Mounting for circulating pump
3 M6x25 bolt, flanged nut
4 Perforated bracket

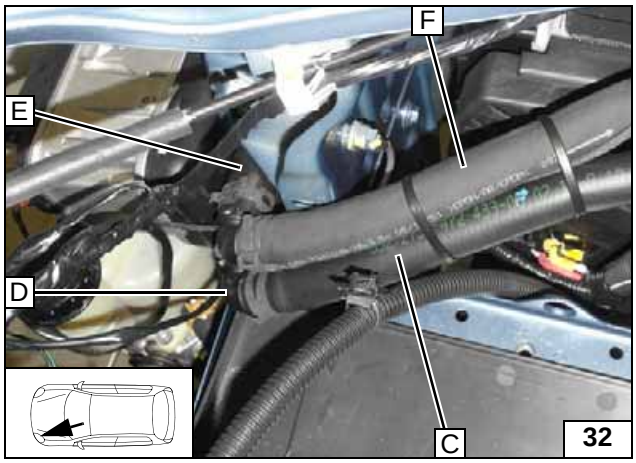
Premounting circulating pump



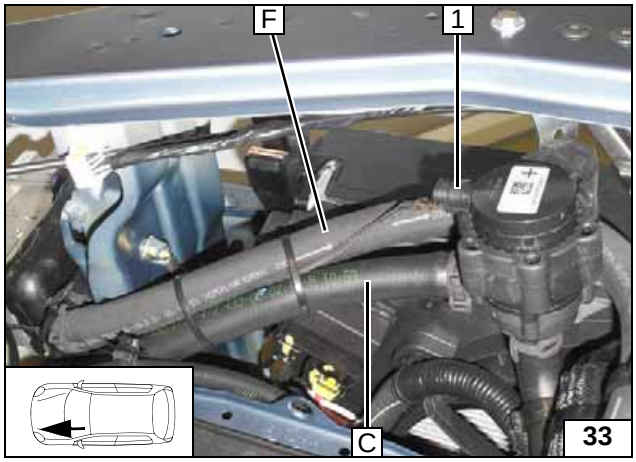
Left image shows Dokker.
Right image shows Lodgy.

1 M6x20 bolt, large diameter washer, flanged nut
2 Wiring harness of circulating pump mounted, flanged nut

Installing circulating pump

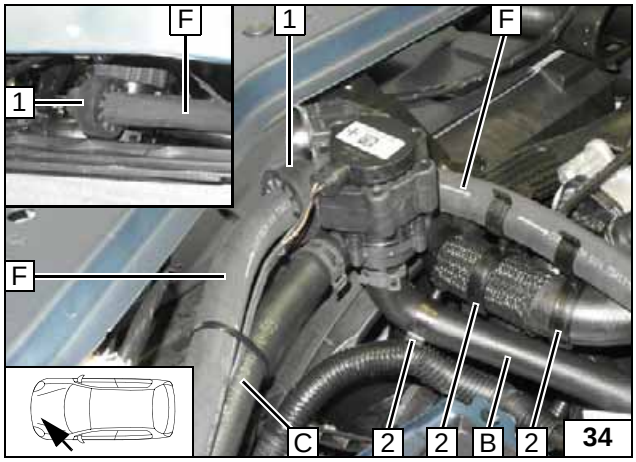


Connecting heater



1 Wiring harness of circulating pump mounted

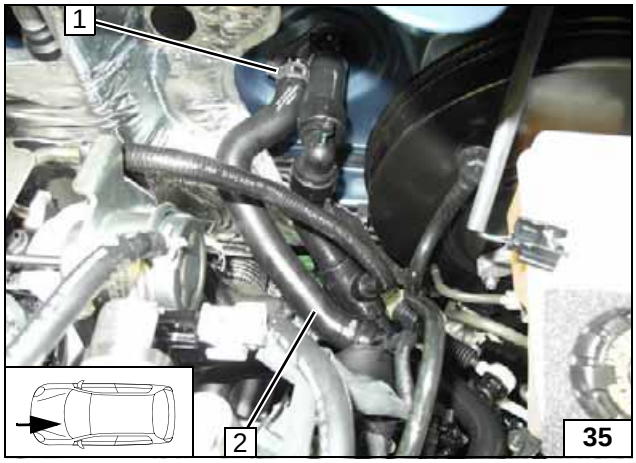
Connecting circulating pump



Align black (sw) rubber isolator **1** to circulating pump.

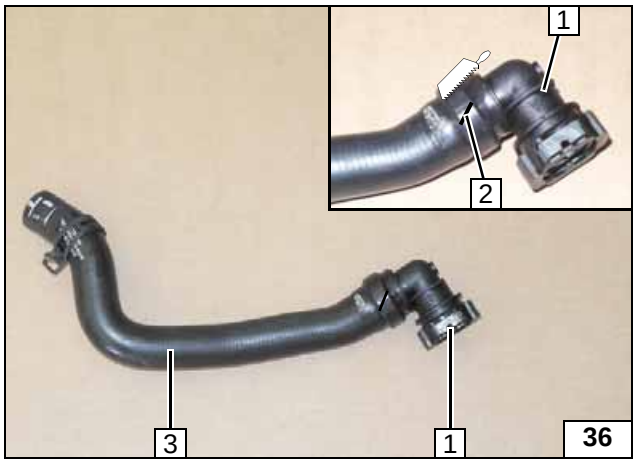
1 37x25 hose bracket [3x]

Routing in engine compartment



Remove hose of engine outlet / heat exchanger inlet **2** with coupling piece on the connection piece of the engine outlet. Spring clip **1** will not be reused.

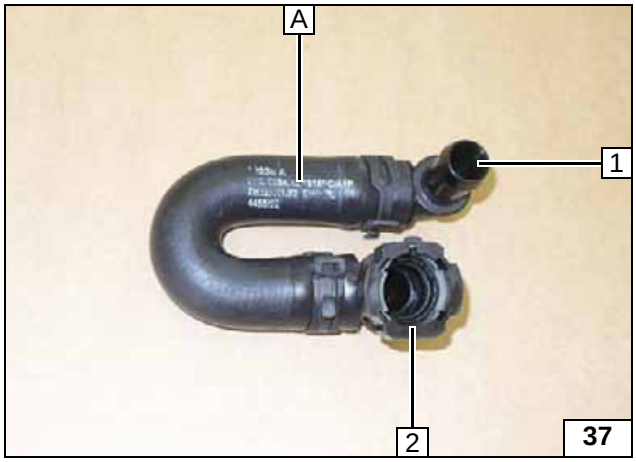
Cutting point



Carefully separate the safety ring at position **2**. Do not damage the connecting piece of coupling piece **1**.

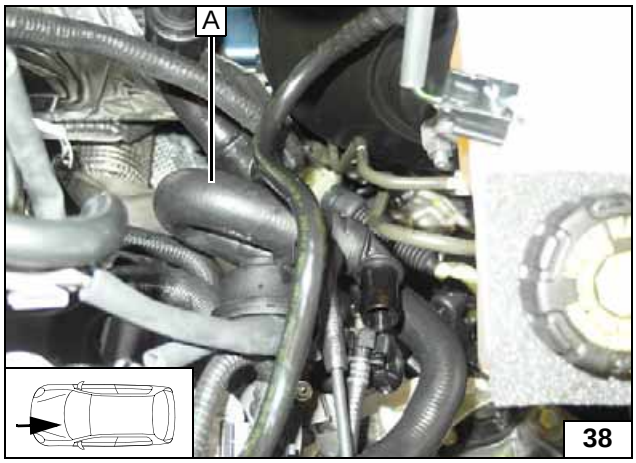
3 Discard the hose

Preparing the coupling piece



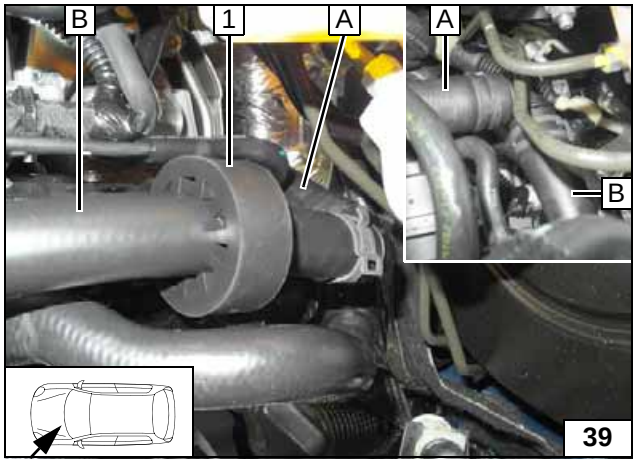
1 90°, 18x20mm dia. connecting pipe
2 Coupling piece

Preparing hose A



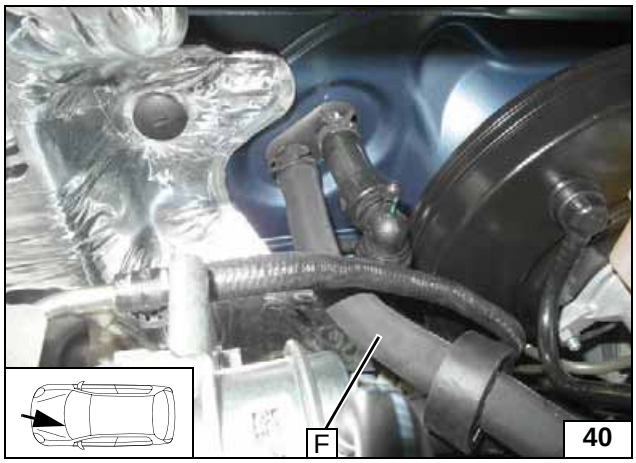
Connect hose **A** with coupling piece to the connection piece of the engine outlet.

Connecting engine outlet

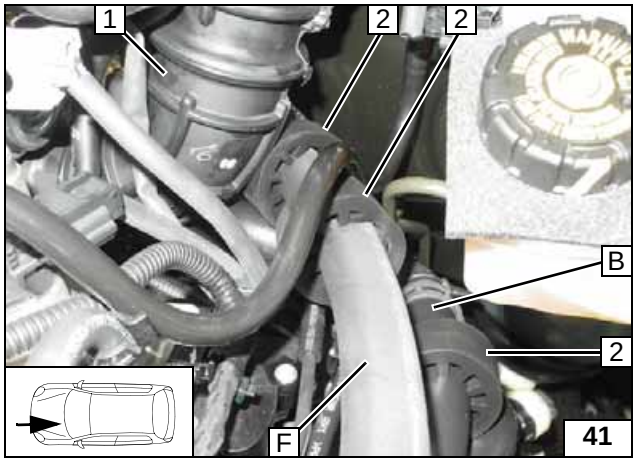


1 Black (sw) rubber isolator

Connecting engine outlet

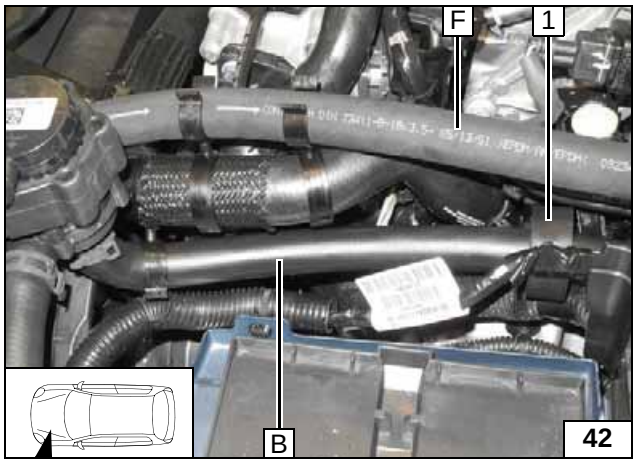


Connection of heat exchanger inlet



1 Intake hose installed
2 Align black (sw) rubber isolator [3x]

Routing in engine compartment



Ensure sufficient distance from adjacent components, correct if necessary.

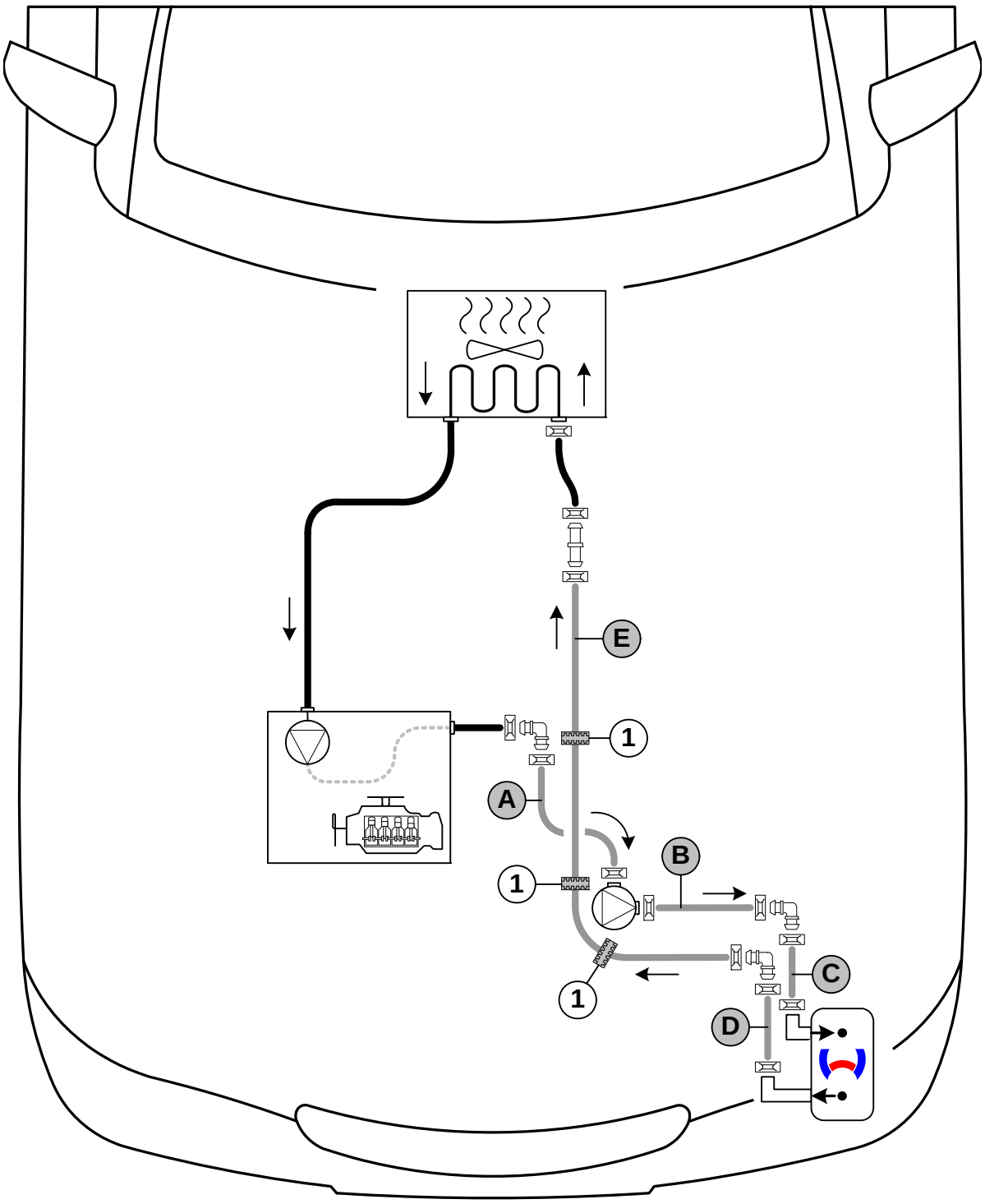
1 Align black (sw) rubber isolator

Aligning hoses

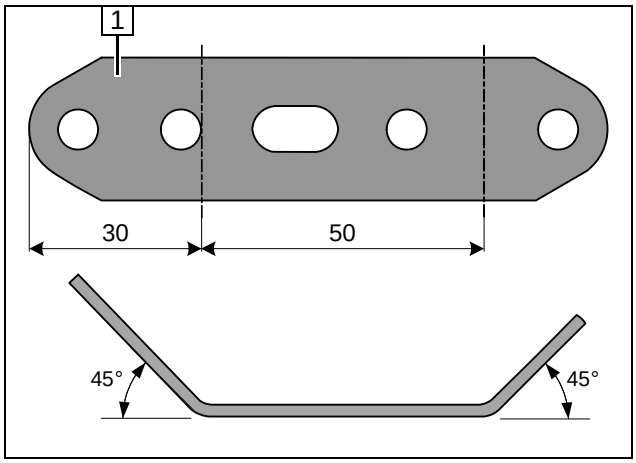
Coolant Circuit 1.6 B

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

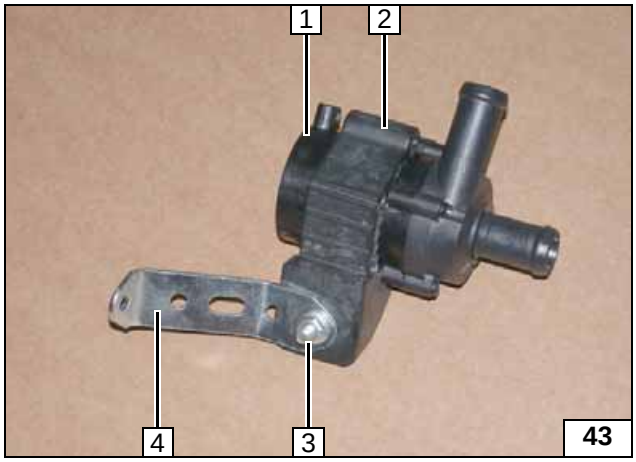


All spring clips = 25mm dia. **1** = Black (sw) rubber isolator [3x].
All connecting pipes and = 18x18 mm dia.



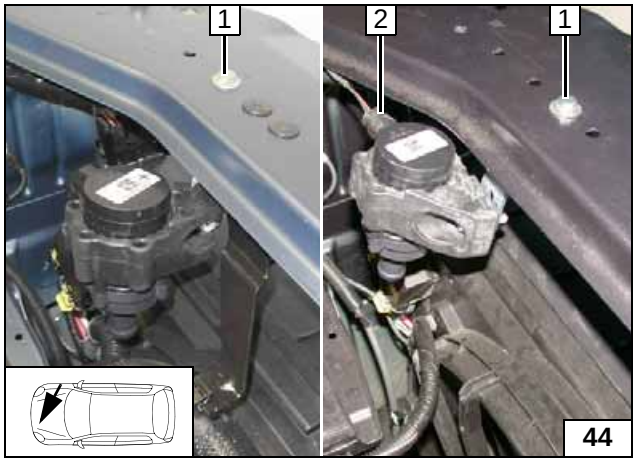
1 Bend perforated bracket of circulating pump [2x]

Preparing perforated bracket



1 Circulating pump
2 Mounting for circulating pump
3 M6x25 bolt, flanged nut
4 Perforated bracket

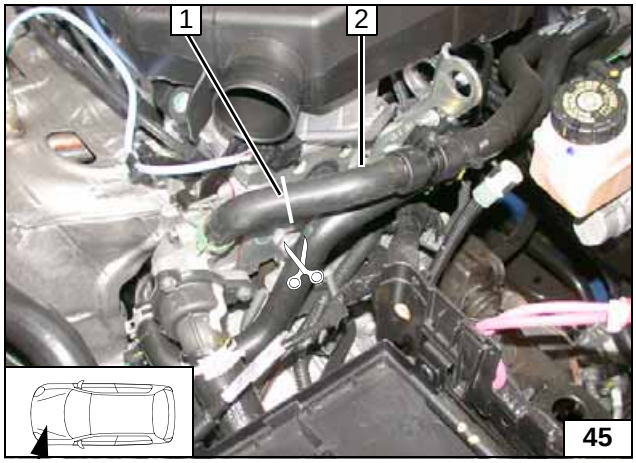
Premounting circulating pump



Left image shows Dokker.
Right image shows Lodgy.

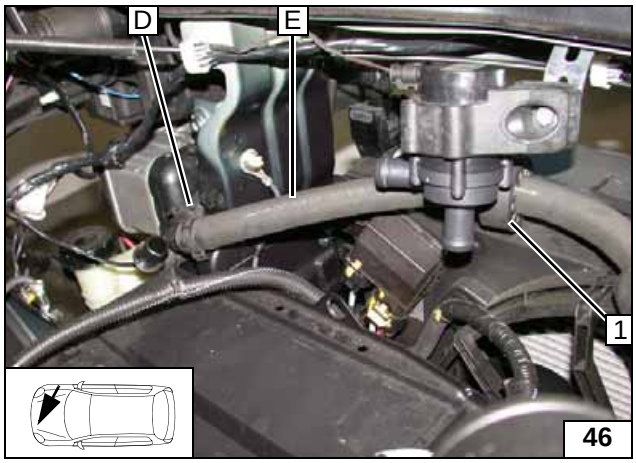
1 M6x20 bolt, large diameter washer, flanged nut
2 Wiring harness of circulating pump mounted, flanged nut

Installing circulating pump



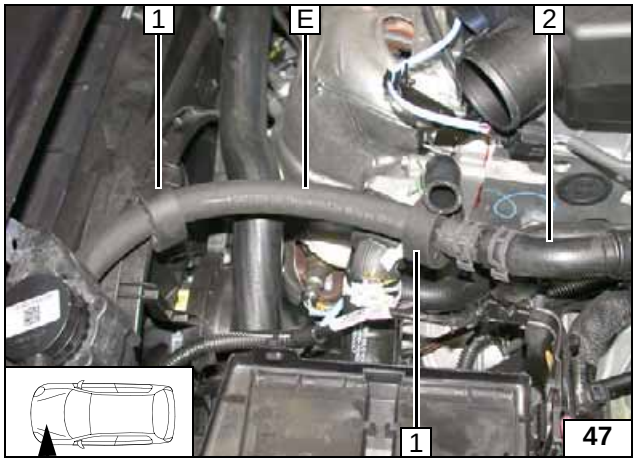
Separate hose of engine outlet / heat exchanger inlet **2** at marking **1**.

Cutting point



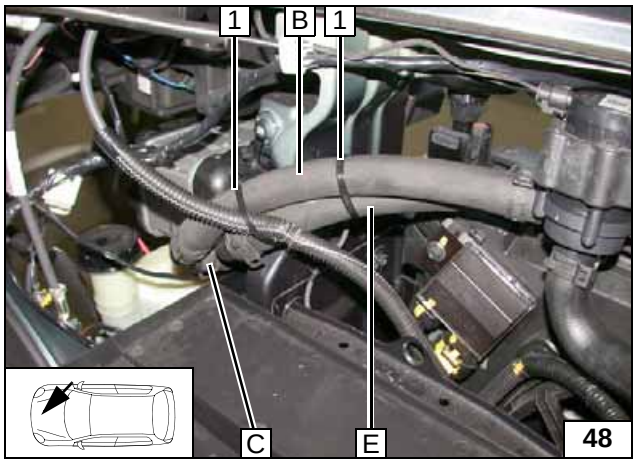
1 Position black (sw) rubber isolator

Connecting hose E



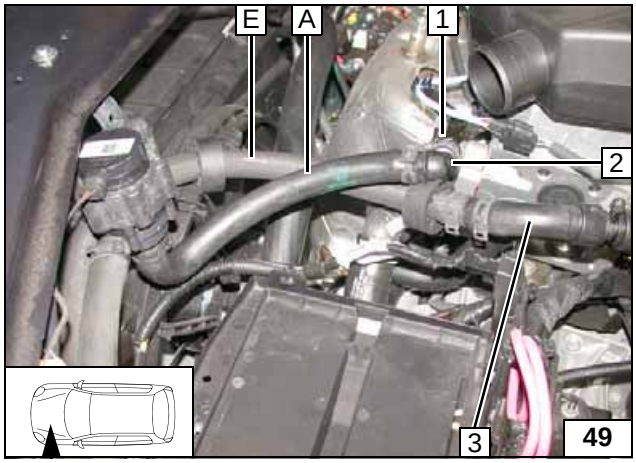
1 Black (sw) rubber isolator [2x]
2 Hose section on heat exchanger inlet

Connection of heat exchanger inlet



1 Cable tie [2x]

Connecting hose B



1 Hose section of engine outlet turned to the front
2 Cable tie
3 Hose section on heat exchanger inlet

Connecting hose A

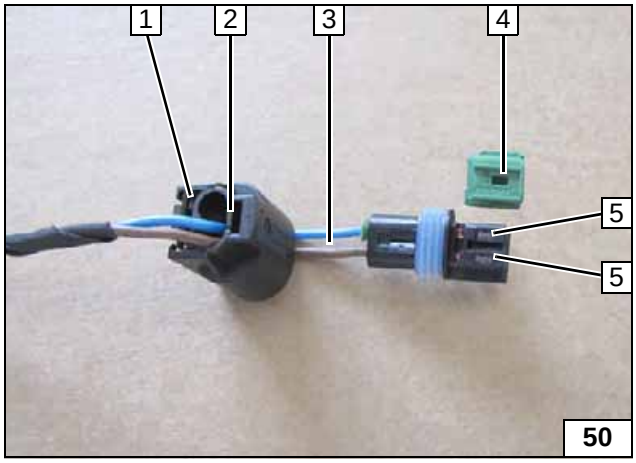
Fuel

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.

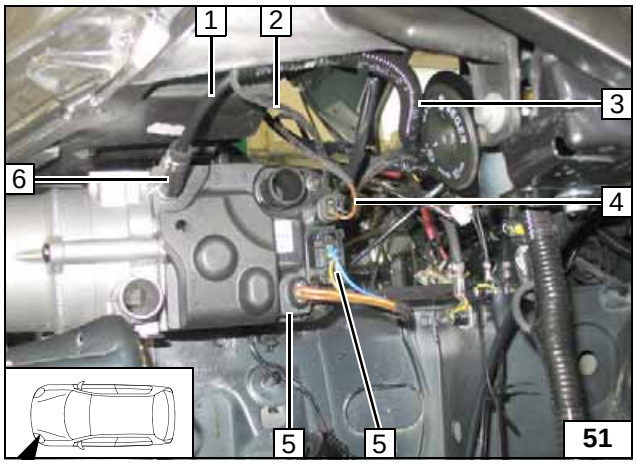
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Dismantling connector

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

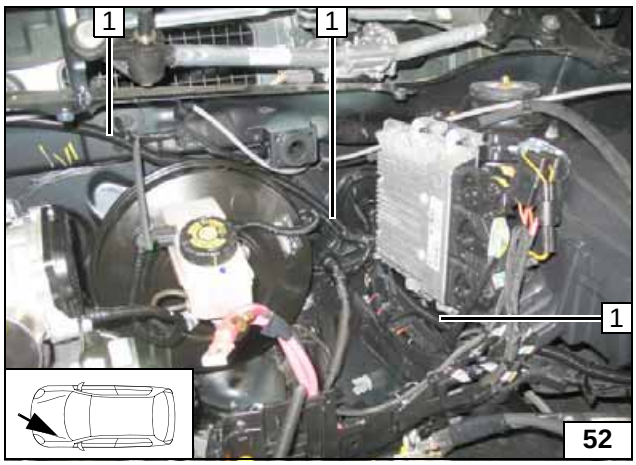
1 Connector housing
2 Lock
3 Blue/brown (bl/br) wires
4 Coding
5 Timer lock



Connecting heater

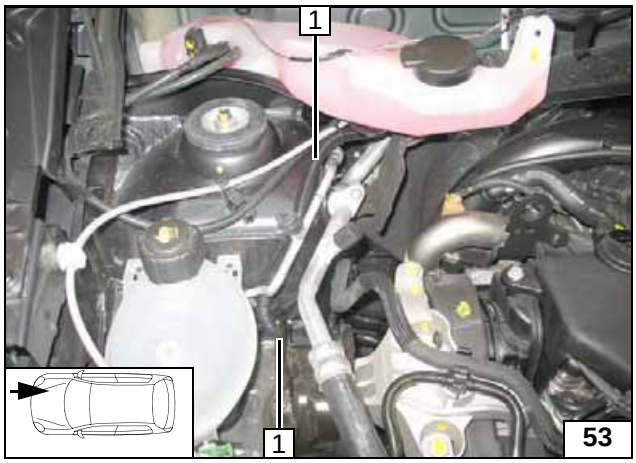
Route fuel line **1** and wiring harness of metering pump **2** to the firewall in 10mm dia. corrugated tube **3**.

4 Mount wiring harness of circulating pump
5 Attach wiring harness of heater [2x]
6 Hose section, 10 mm dia. clamp [2x]



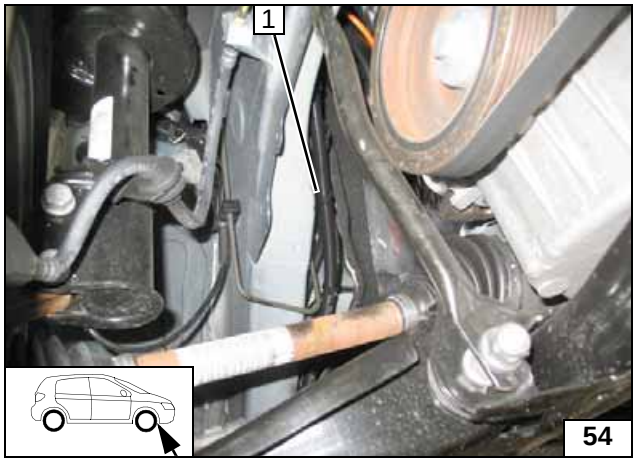
Routing lines

1 Fuel line and metering pump wiring harness in corrugated tube



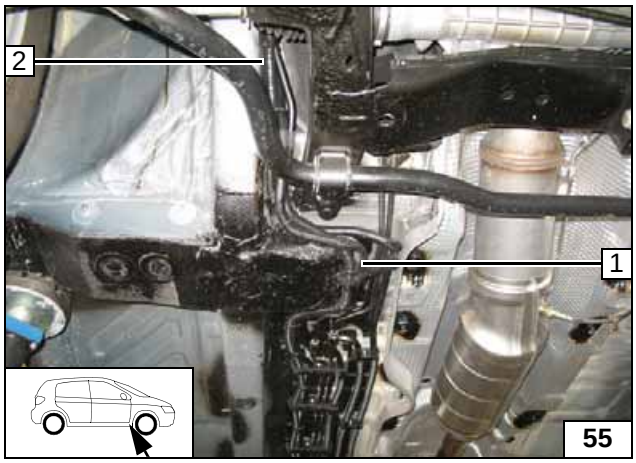
1 Fuel line and metering pump wiring harness in corrugated tube

Routing lines



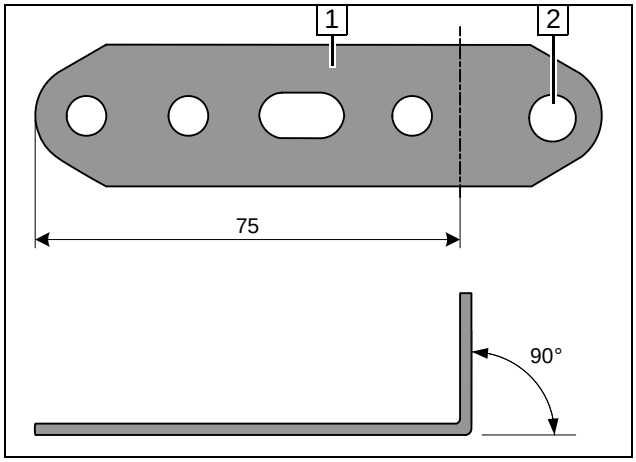
1 Fuel line and metering pump wiring harness in corrugated tube

Routing lines



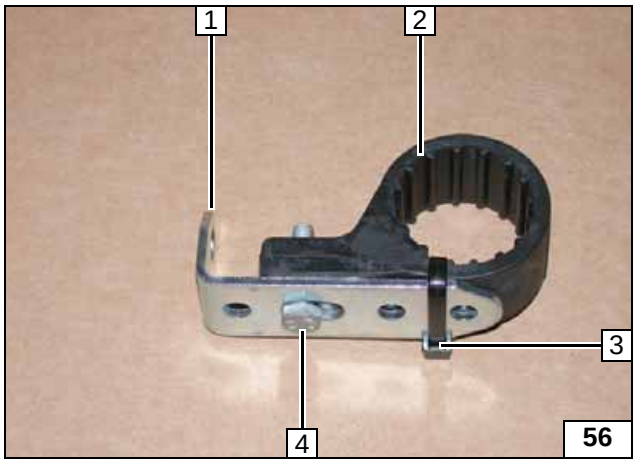
1 Original vehicle wires
2 Fuel line and metering pump wiring harness in corrugated tube

Routing lines



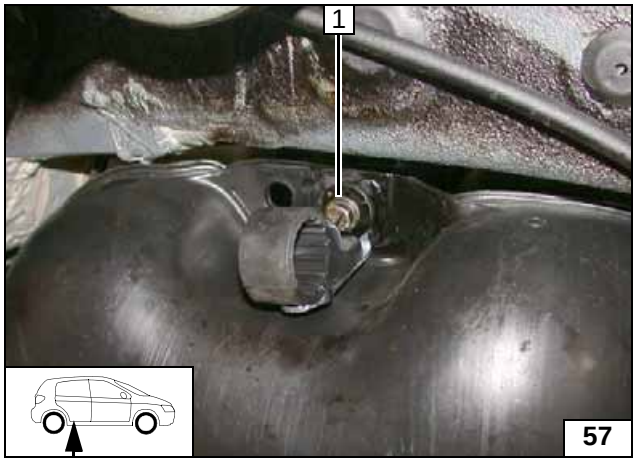
1 Bend perforated bracket of metering pump
2 Drill hole to 8.5mm dia.

Preparing perforated bracket



1 Perforated bracket
2 Metering pump mounting
3 Cable tie
4 M6x25 bolt, support angle, flanged nut

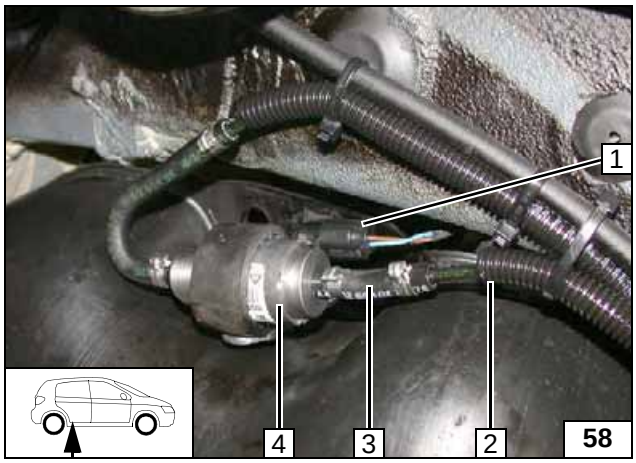
Preparing bracket of metering pump



For the Dokker Express, the installation and connection of the metering pump is done only after fuel extraction.

1 Original vehicle bolt

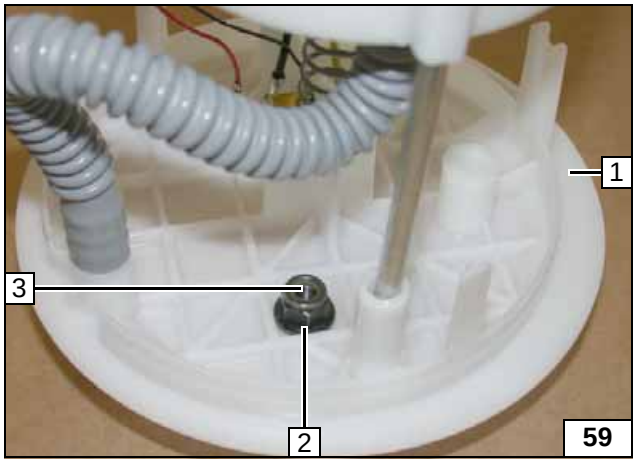
Installing bracket of metering pump



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

1 Wiring harness of metering pump, connector installed
2 Fuel line of heater, corrugated tube
3 Hose section, 10 mm dia. clamp [2x]
4 Metering pump installed

Connecting metering pump



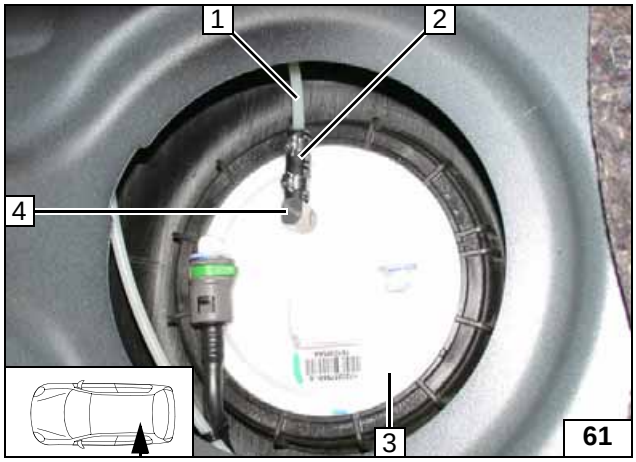
Remove fuel tank in accordance with the manufacturer's instructions, only in case of Dokker Express!
Remove fuel-tank sending unit **1** in accordance with manufacturer's instructions.

2 Self-locking nut of fuel standpipe
3 Copy hole pattern, 6 mm dia. hole

Copying hole pattern

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

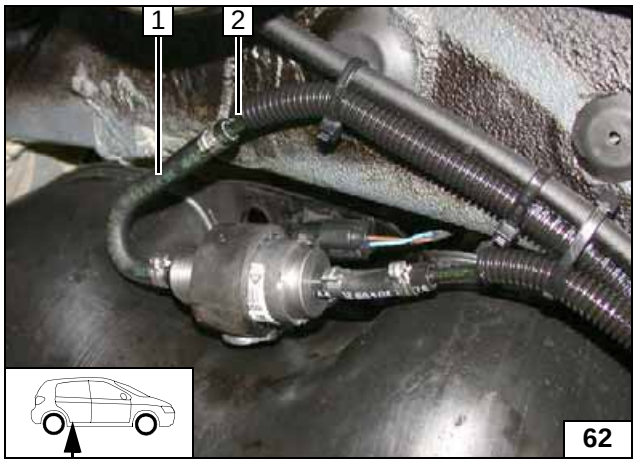
Installing fuel stand-pipe



Install fuel-tank sending unit **3** in accordance with manufacturer's instructions.
Remove fuel tank in accordance with the manufacturer's instructions, only in case of Dokker Express!

Connect-ing fuel line

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

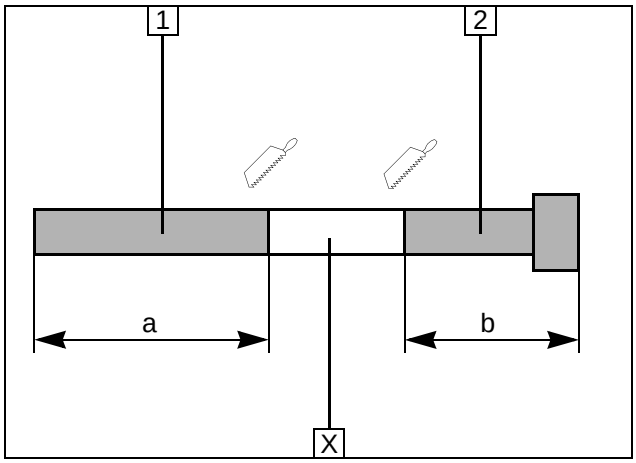


1 180° moulded hose, 10 mm dia. clamp [2x]
2 Fuel line of fuel standpipe, corrugated tube

Connect-ing meter-ing pump

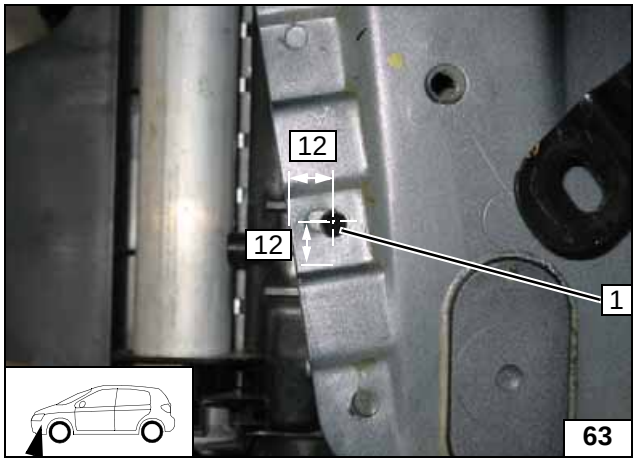
Exhaust Gas

Discard section **X**.



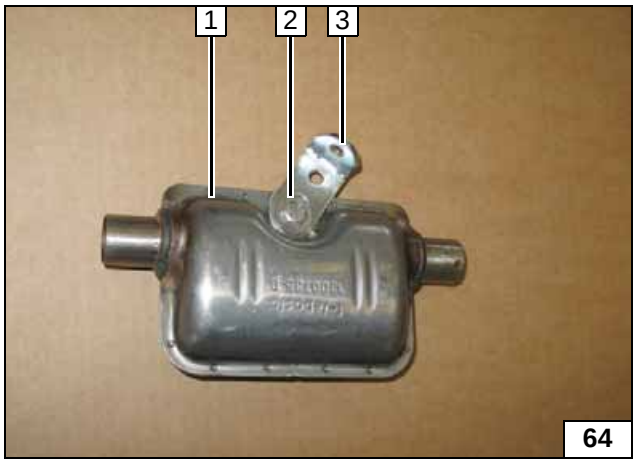
1 Exhaust pipe
a = 150
2 Exhaust end section
b = 295

Preparing exhaust pipe



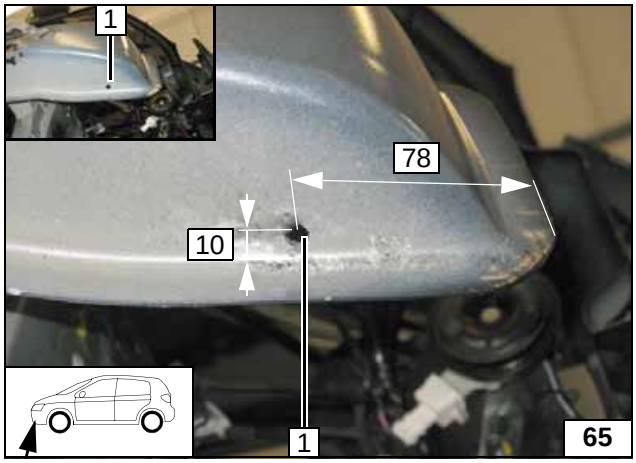
1 7mm dia. hole

Hole for exhaust pipe



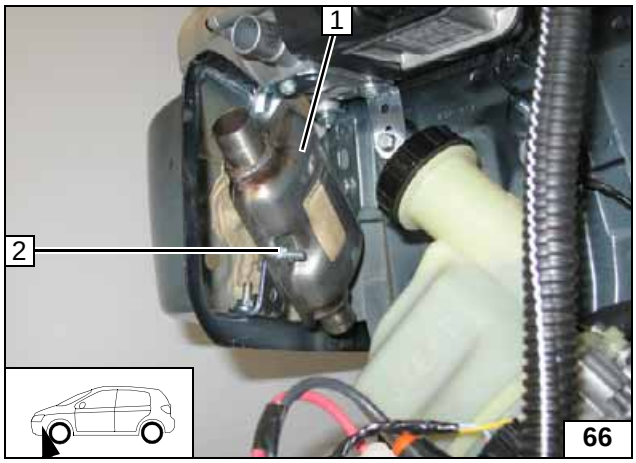
1 Exhaust silencer
2 M6x16 bolt, large diameter washer, flanged nut
3 Angle bracket

Premounting silencer



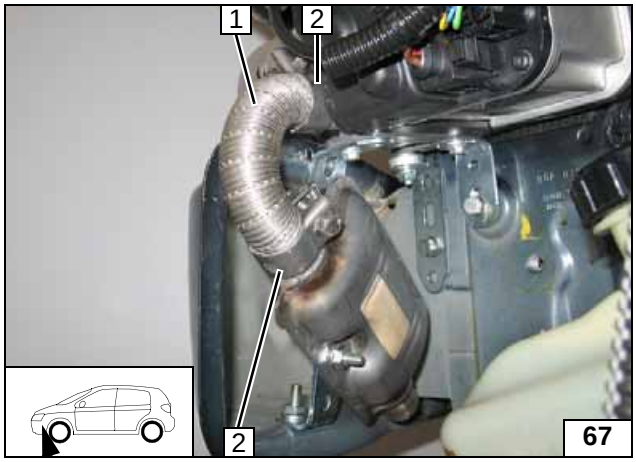
1 7mm dia. hole

Hole for exhaust silencer



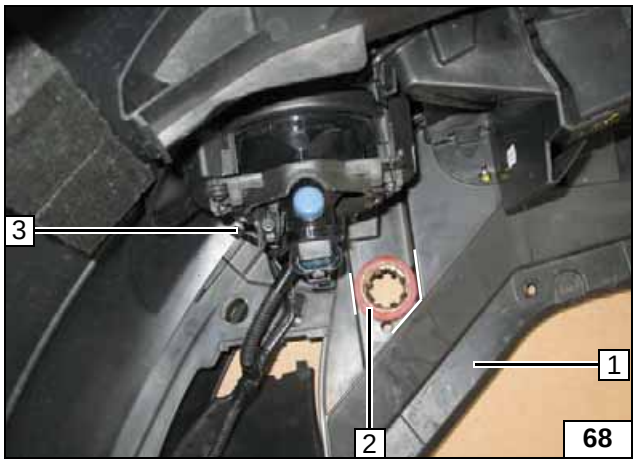
1 Exhaust silencer
2 M6x20 bolt, M6 flanged nut

Mounting exhaust silencer



1 Exhaust pipe
2 Hose clamp [2x]

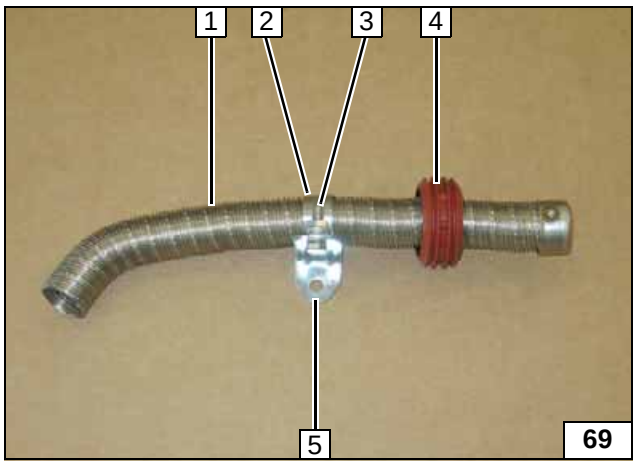
Mounting exhaust pipe



Position spacer bracket **2** on the markings and copy hole pattern, 40mm dia. hole.

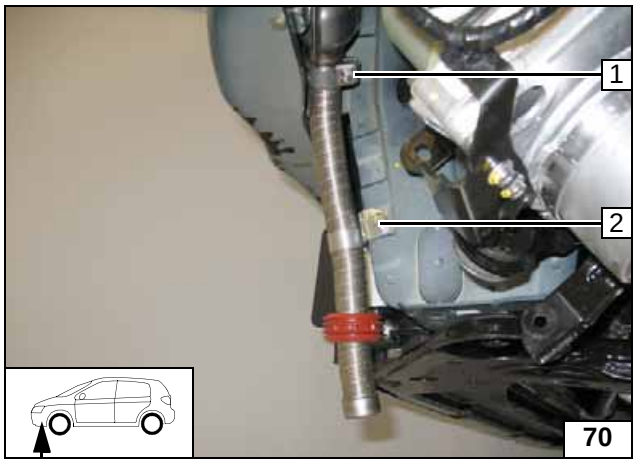
1 Bumper
3 Wiring harness of fog light, cable tie

Cutting out underride protection



1 Exhaust end section
2 P-clamp
3 M6x20 bolt, flanged nut
4 Spacer bracket
5 Angle bracket

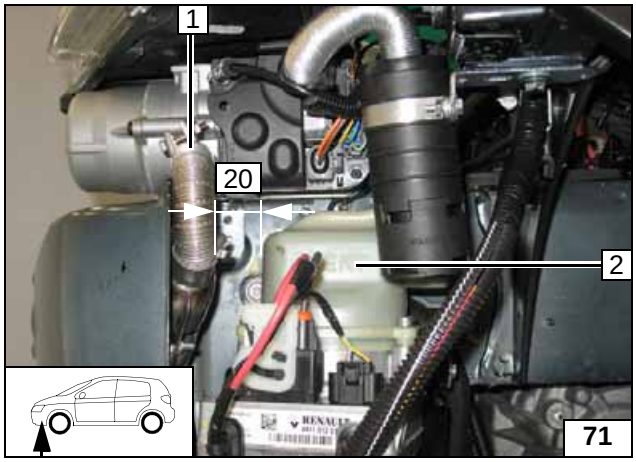
Preparing exhaust end section



Ensure sufficient distance from adjacent components, correct if necessary.

1 Hose clamp
2 Angle bracket, M6x20 bolt, flanged nut

Mounting exhaust end section



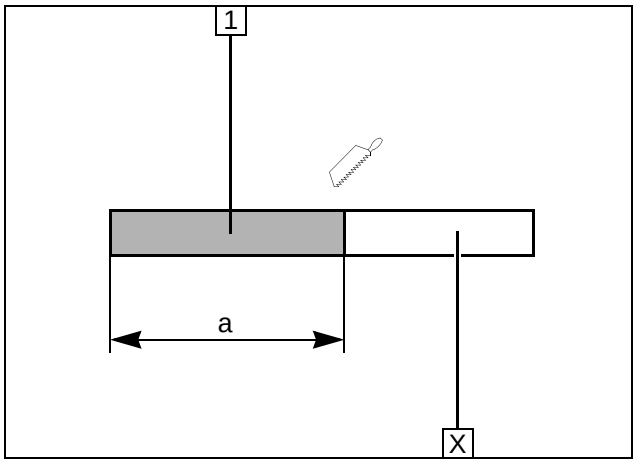
Ensure sufficient distance from adjacent components, correct if necessary.

1 Exhaust pipe
2 Servo container

Installing servo container

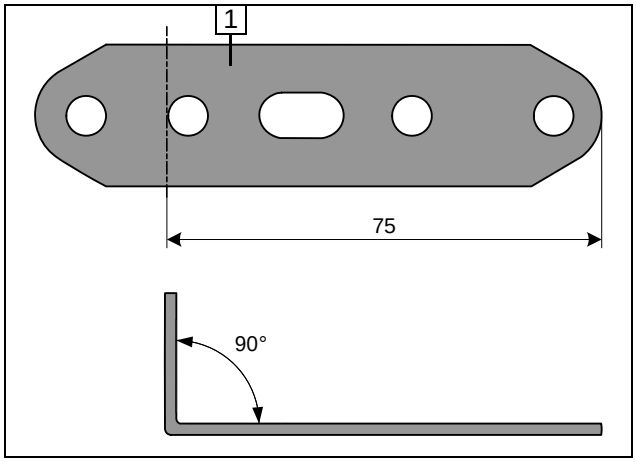
Combustion Air

Discard section **X**.



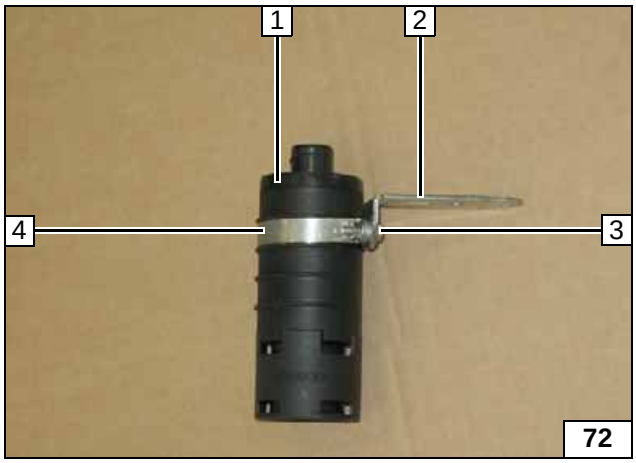
1 Combustion air pipe
a = 200

Cutting combustion air pipe to length



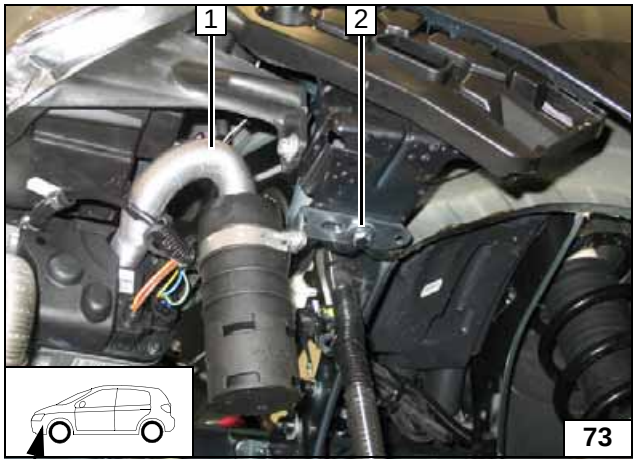
1 Bend perforated bracket

Preparing perforated bracket



1 Silencer
2 Perforated bracket
3 M5x16 bolt, flanged nut
4 51mm dia. clamp

Preparing silencer



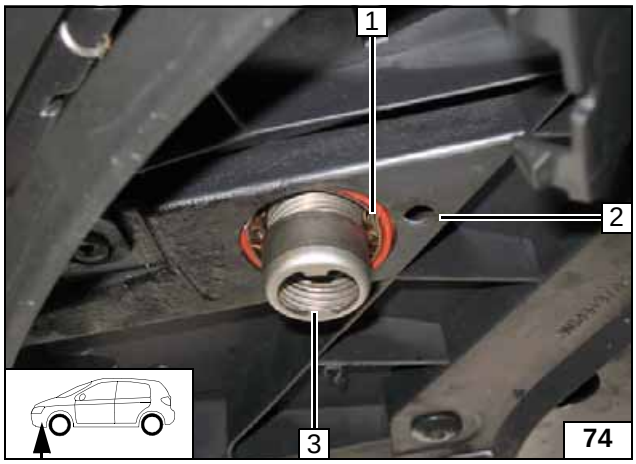
1 Combustion air pipe
2 Original vehicle bolt

Mounting silencer

Final Work

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).

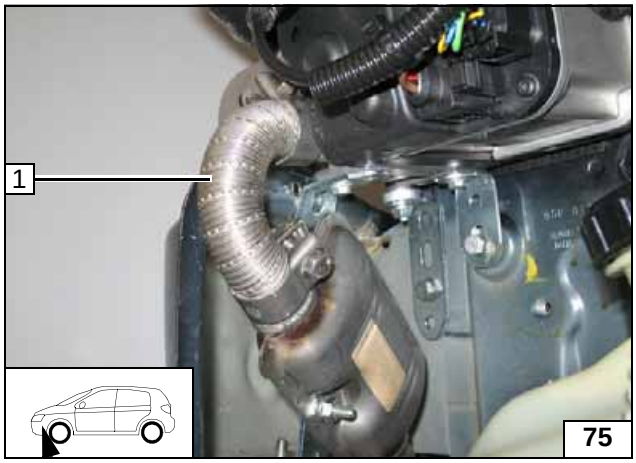
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place signboard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



Align exhaust end section **3** to underride protection **2**.

1 Align spacer bracket

Aligning exhaust end section

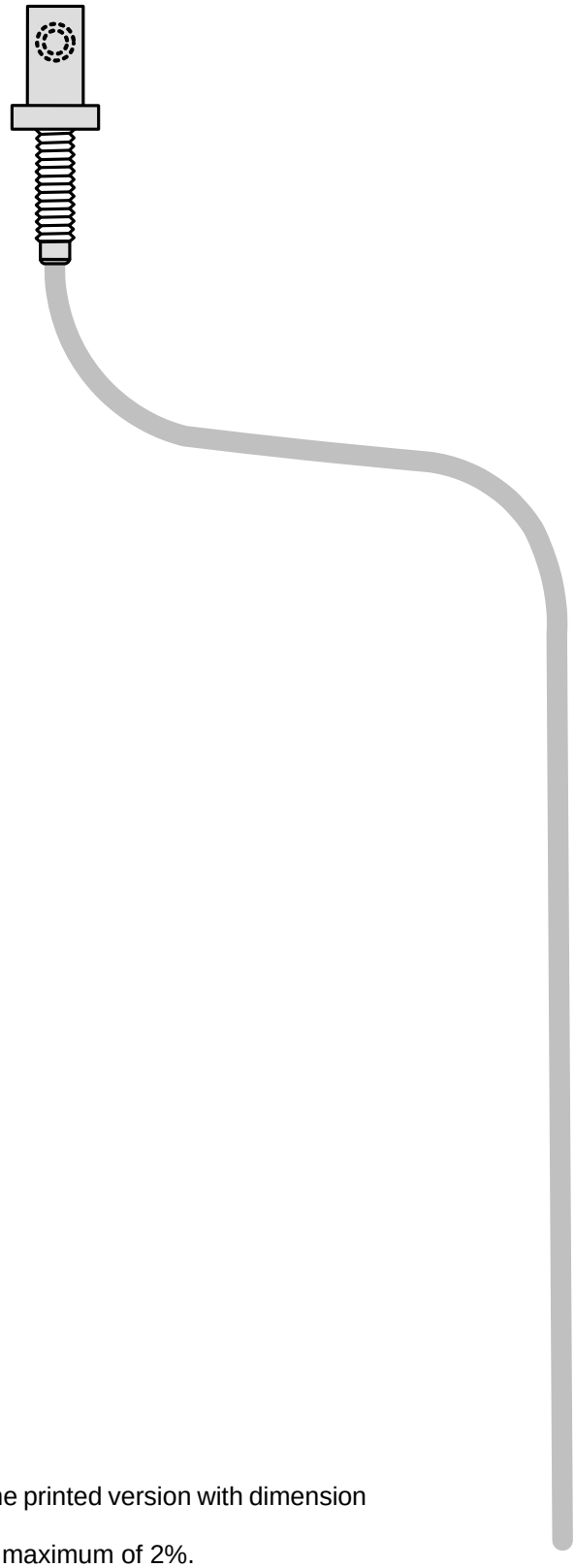


When installing the bumper, ensure sufficient distance (at least 20 mm) to the exhaust pipe at position **1**, correct if necessary.

Observing distance

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

Template for 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 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.

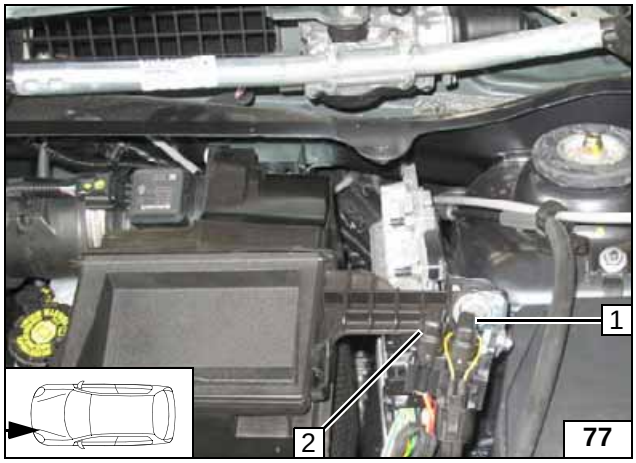
If the vehicle has passenger compartment monitoring this must be deactivated in addition to the vehicle settings for the heating operation.
Instructions on deactivation can be taken from the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

A/C control panel

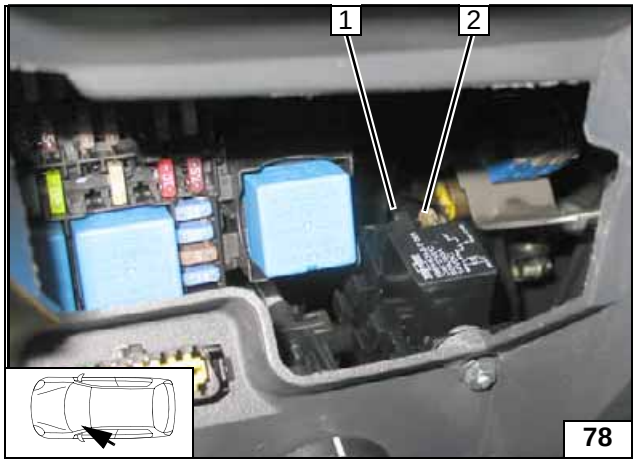
1 Set temperature to "max."
2 Set fan to level "1", or max. "2"
3 Direct air outlet towards windscreen

Fuses of engine compartment



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

Fuses of passenger compartment



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