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 * 2007 / 46 * 0030 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.5 dCi	Diesel	5-speed SG	55	1461	K9K
1.5 dCi	Diesel	5-speed SG	66	1461	K9K
1.5 dCi	Diesel	5-speed SG	79	1461	K9K

SG = Manual transmission

Left-hand drive vehicle
Lodgy from Model Year 2012
Dokker from Model Year 2013

Verified equipment variants:
Manual air-conditioning
Front fog light
Van
Euro 5

Not verified:
Automatic air-conditioning
Front fog light
Alarm system

Total installation time:
approx. 8 hours with T-piece, in fuel supply line
approx. 8.5 hours with fuel standpipe, without fuel tank removal
approx. 10 hours with fuel standpipe, with fuel tank removal (for Express)

Dacia Lodgy / Dokker

Table of Contents

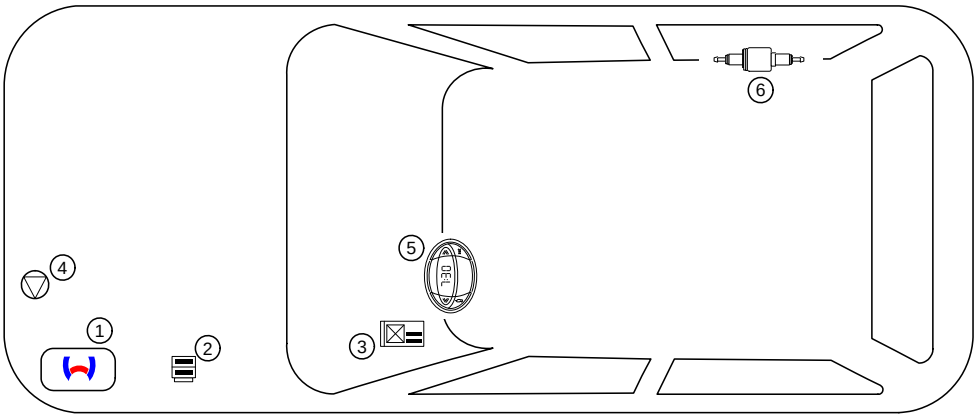
Necessary Components

- Basic delivery scope of *Thermo Top Evo*based on price list
- Installation kit for Dacia Lodgy / Dokker 2012 Diesel: **1318788B**
- Heater control in accordance with price list and upon consultation with final customer
- In case of Telestart, indicator lamp in accordance with price list and upon consultation with final customer

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. 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.

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.

Dacia Lodgy / Dokker

Notes on Validity

This installation documentation applies to Dacia Lodgy / Dokker Diesel 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

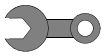
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values of heater bolts and 5x13 heater stud bolts = 8Nm.
- Tightening torque values of 5x15 retaining plate of water connection piece bolt = 7Nm.
- Tighten other screw connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Explanatory Notes on Document

You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents.

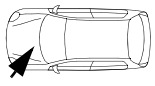
Specific risk of damage to components.

Specific risk of fire and explosion

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

Reference to a special technical feature

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



Dacia Lodgy / Dokker

Preliminary Work

Vehicle

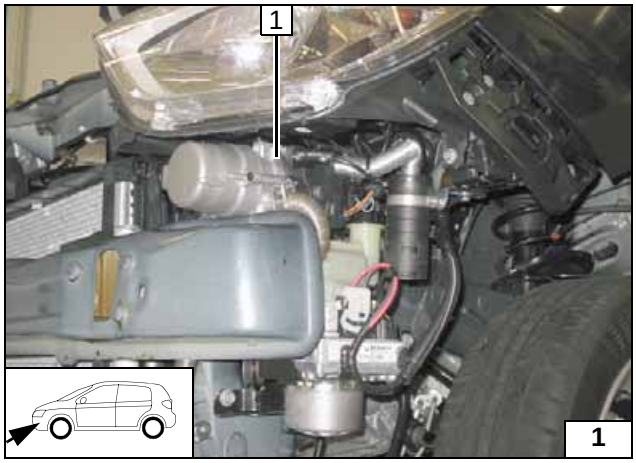
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery and completely remove it including the carrier.
- Remove the air filter including the intake hose.
- Remove the windscreen wipers.
- Remove the coolant reservoir cap.
- Loosen the windscreen washer reservoir.
- Remove the coolant reservoir.
- Remove the wheel well trim on the right and left.
- Remove the bumper trim.
- Loosen the left headlight.
- Remove the horn with bracket on the left-hand side.
- Remove the underride protection.
- Remove the A/C control panel (see installation aid).
- Fold up the rear bench seat (only for Lodgy and Dokker with rear seats).
- Remove the floor covering beneath the rear bench seat (only for Lodgy and Dokker with rear seats).
- Remove the cover of the service opening of the fuel-tank sending unit (only for Lodgy and Dokker with rear seats).

Only carry out the following steps during the corresponding installation sequence:

- Remove fuel tank in accordance with the manufacturer's instructions (only in case of Dokker Express)
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions (only for vehicles with electrical pre-feed pump in the fuel tank)

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

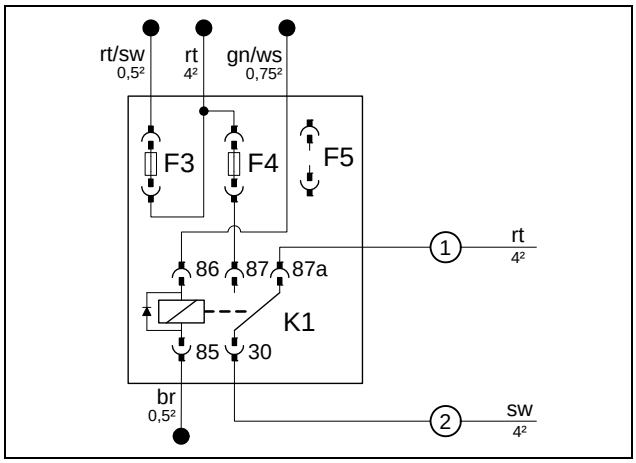
1 Heater

Installation location

Preparing Electrical System

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

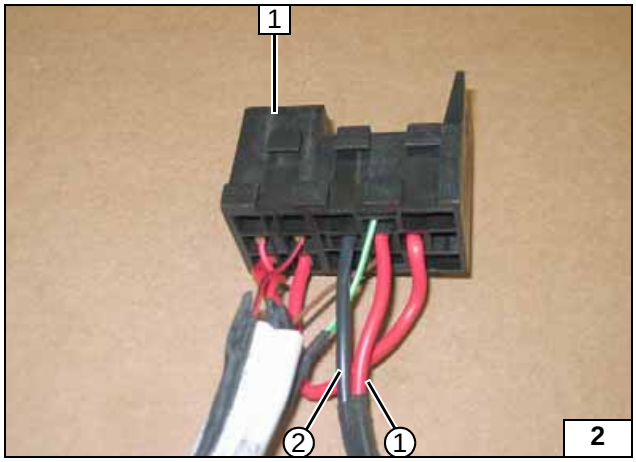
Preparing K1 relay



Connect wires according to wiring diagram.

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

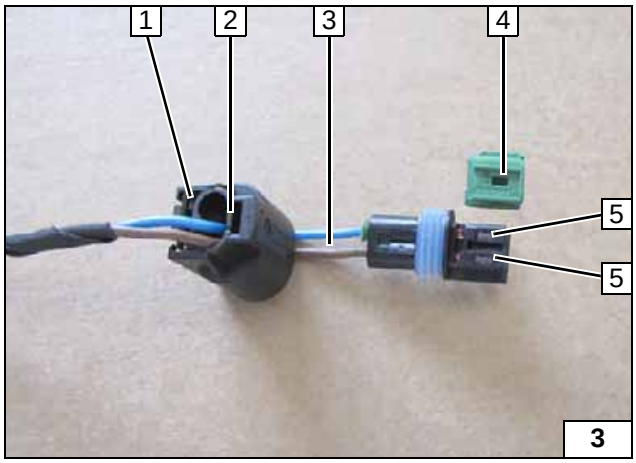
Connecting wires



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

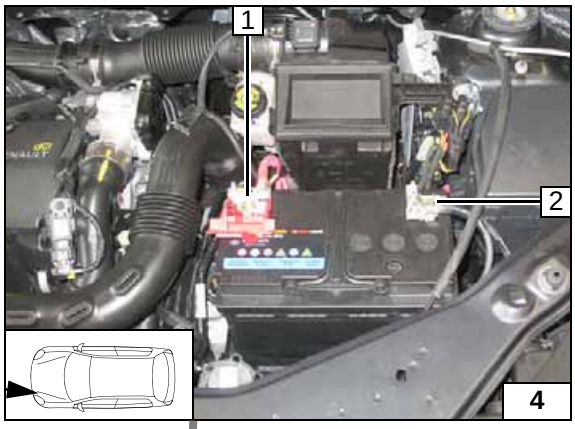
Dismounting connector



Electrical System

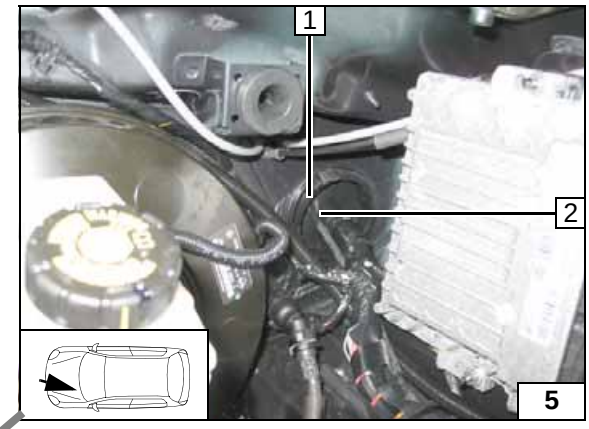
Positive and earth wire

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

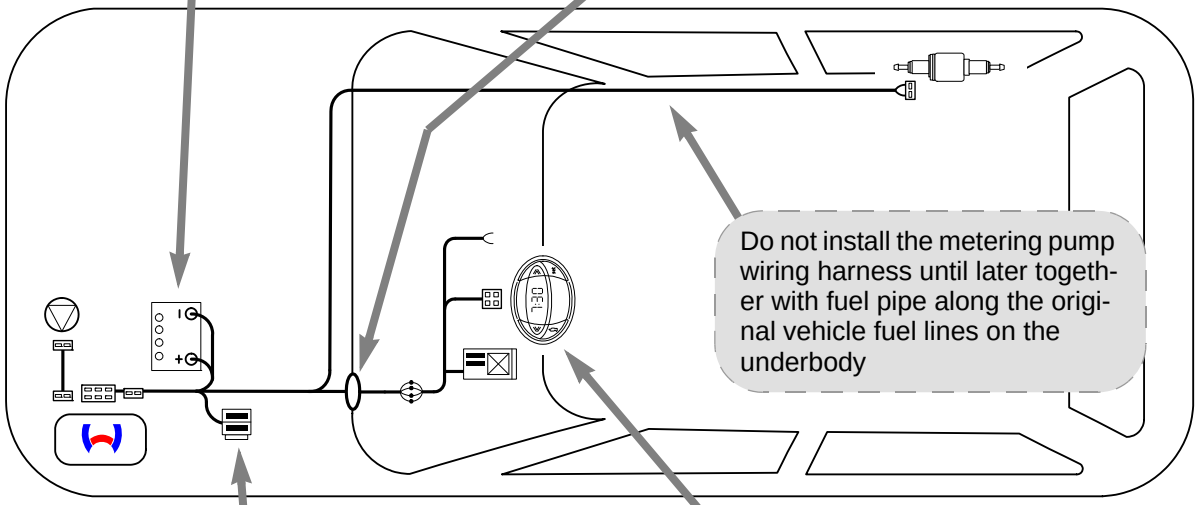


Wiring harness pass through

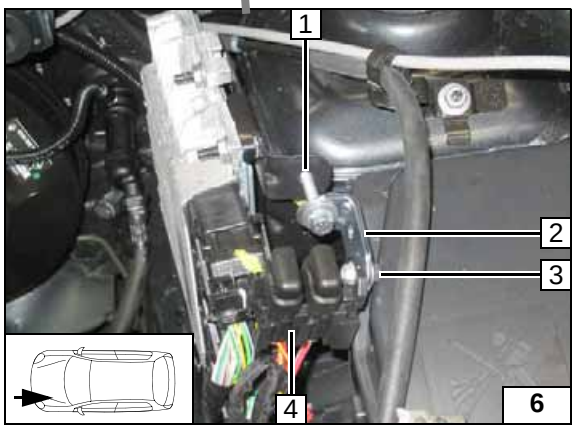
1 Protective rubber plug
2 Wiring harnesses of heater, heater control



Wiring harness routing diagram

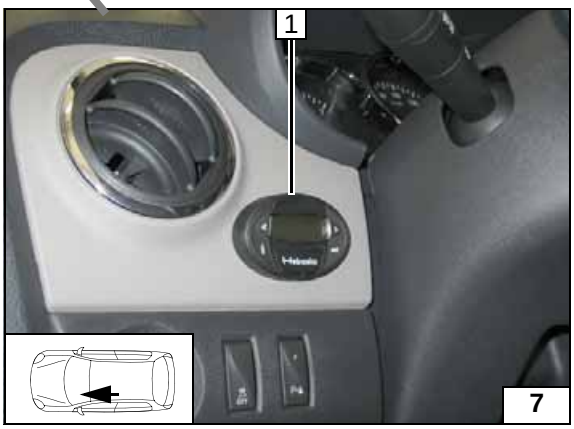


Fuse holder of engine compartment



1 Original vehicle bolt, existing threaded hole
2 Loosely mount angle bracket
3 M5x16 bolt, washer [2x], retaining plate of fuse holder, nut
4 F1-2 fuses

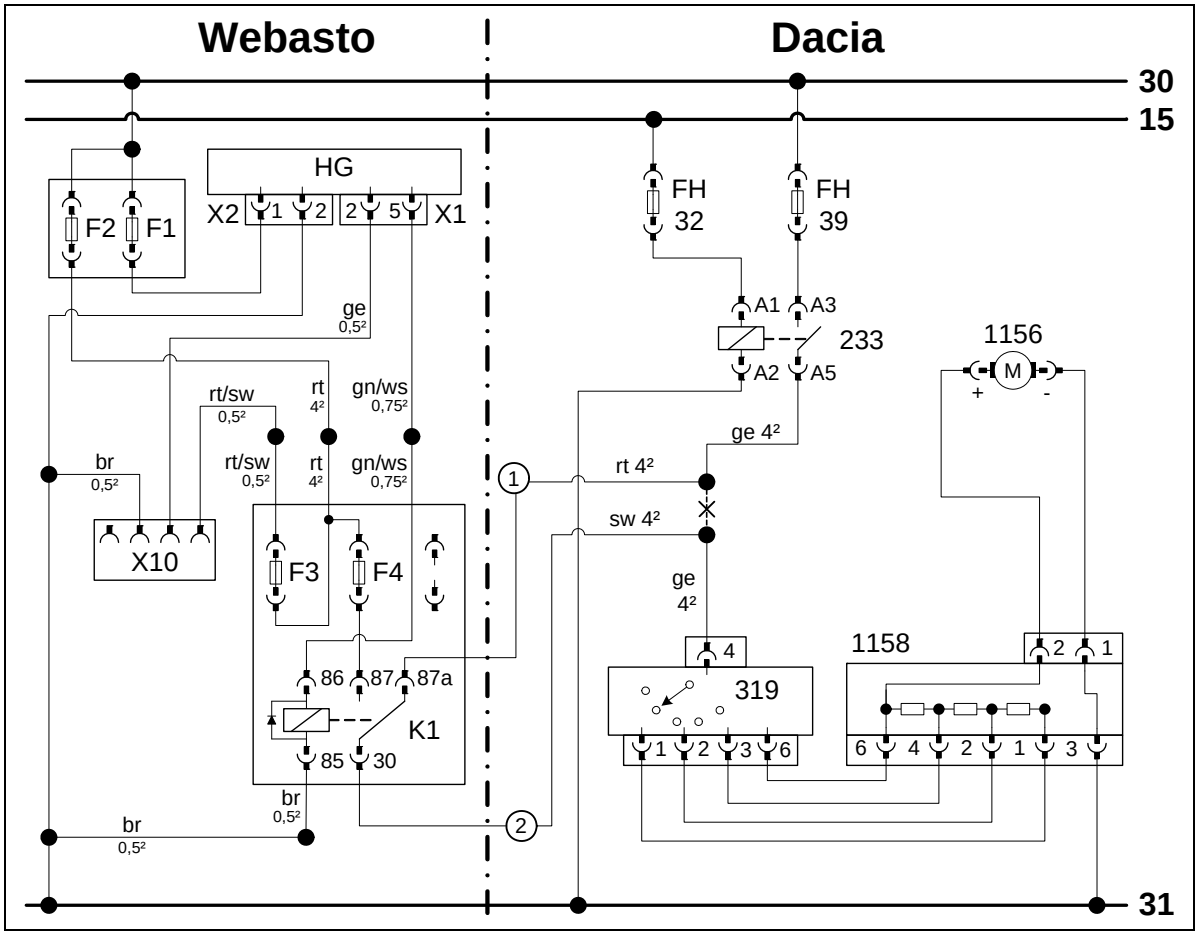
Digital Timer



1 Digital timer

Fan Controller

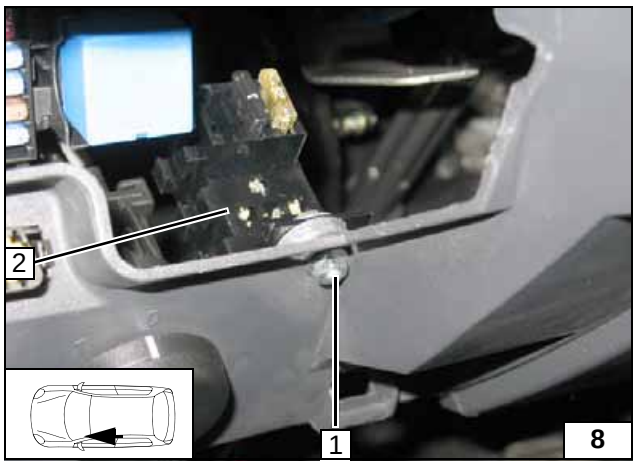
Wiring diagram



Legend

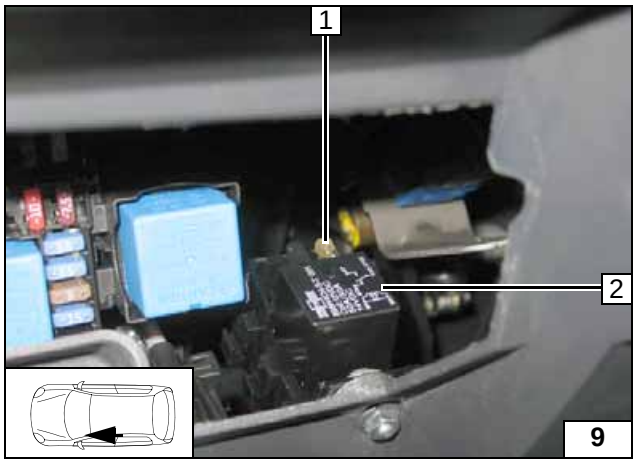
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	FH32	7.5A fuse	rt	red
X1	6-pin heater connector	FH39	40A fuse	sw	black
X2	2-pin heater connector	233	Fan relay	ge	yellow
X10	4-pin connector of heater control	1156	Fan motor	gn	green
		1158	Resistor group	ws	white
K1	Fan relay	319	A/C control panel	br	brown
F1	20A fuse				
F2	30A fuse				
F3	1A fuse			**X**	Cutting point
F4	25A fuse			Wiring colours may vary.	

Installing relay and fuse holder of passenger compartment



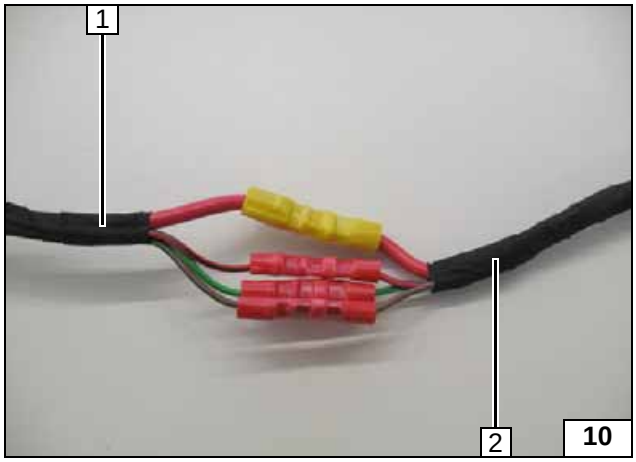
Position flanged nut M5, copy hole pattern, drill 5.5mm dia. hole.

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



1 25A fuse F4
2 K1 relay

Attaching K1 relay and F4



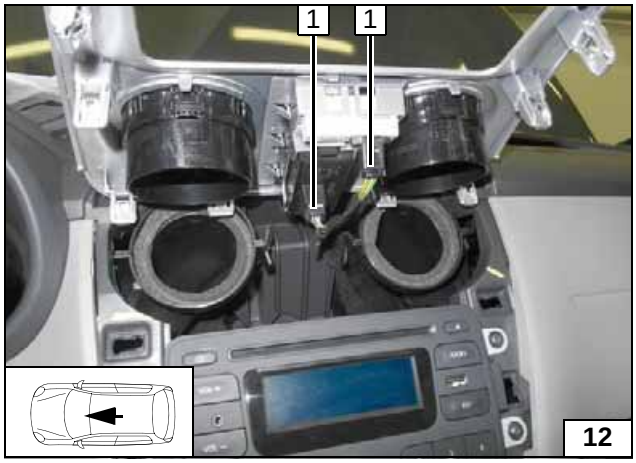
1 Wiring harness of passenger compartment relay and fuse holder
2 Wiring harness of heater

Connecting wiring harness using same colour wires

Removal of A/C Control Panel Installation Aid

Fastening points (spring clips) [11x]

Removing trim piece of radio with air outlet

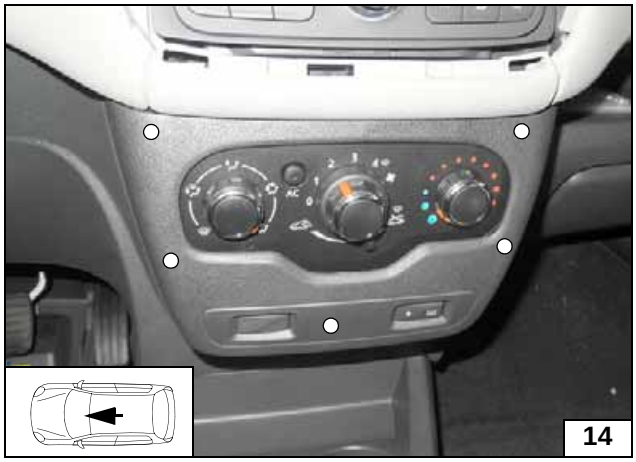


1 Connector [2x]

Pulling off connector

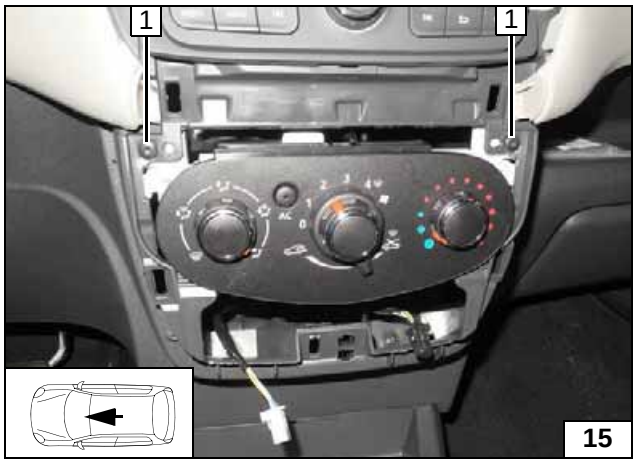
Fastening points (spring clips) [2x]

Removing trim piece between A/C control panel and radio



Fastening points (spring clips) [5x]

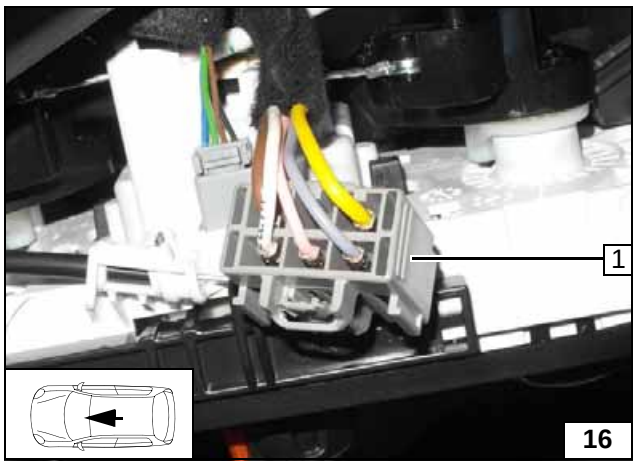
Removing trim piece of A/C control panel



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

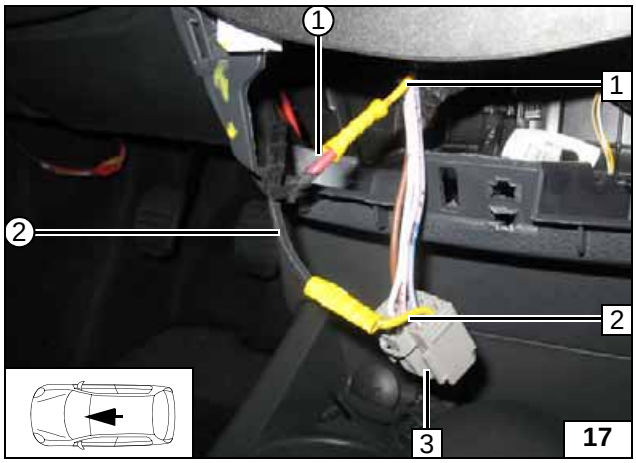
1 Bolts of the A/C control panel [2x]

Removing the A/C control panel



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

Connecting A/C control panel



Connection to 6-pin connector **3** from A/C control unit. Produce connections as shown in wiring diagram.

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

Connecting A/C control panel

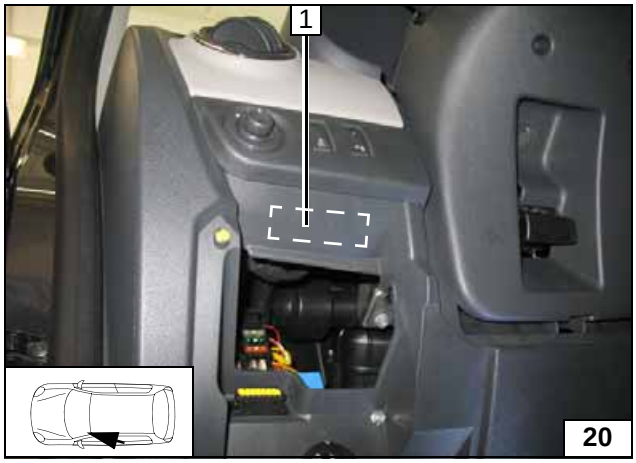
Remote Option (Telestart)

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

Installing receiver

1 Antenna

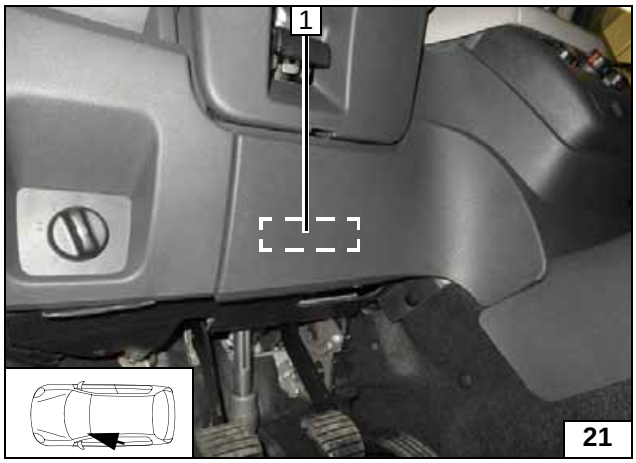
Installing antenna

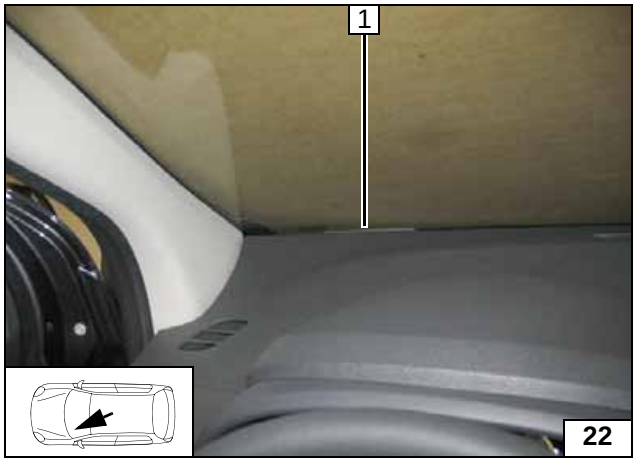


Temperature sensor T100 HTM

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

Installing temperature sensor





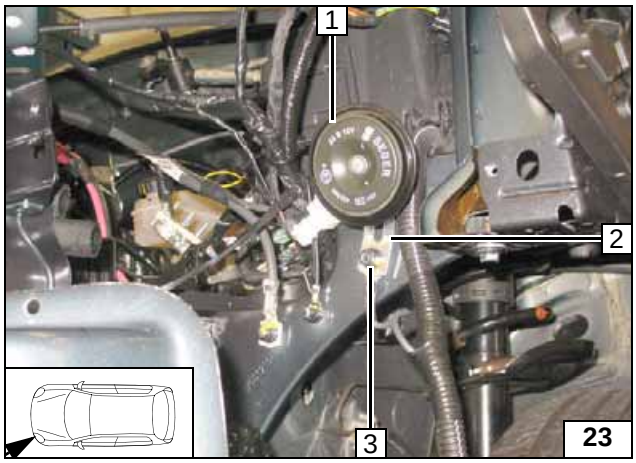
Remote Option (Thermo Call)

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

Installing receiver

1 Antenna

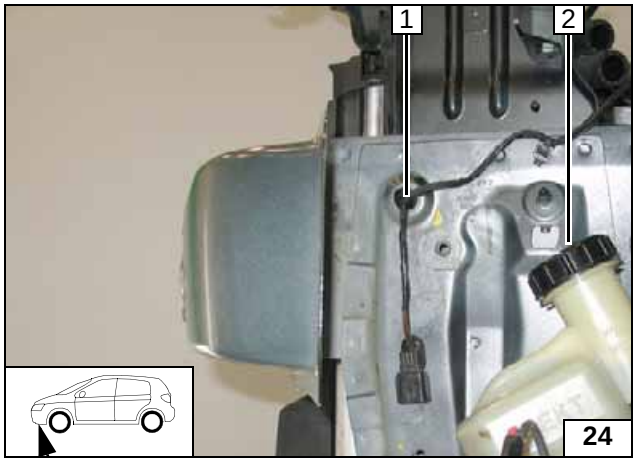
Installing antenna



Preparing Installation Location

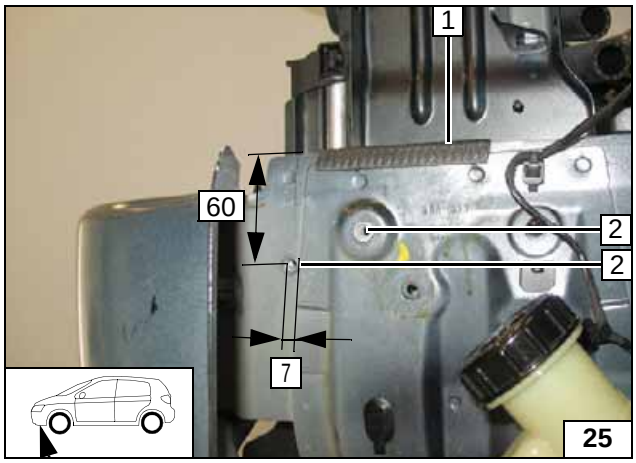
1 Horn
2 Bracket
3 Original vehicle stud bolt, original vehicle nut

Displacing/moving horn



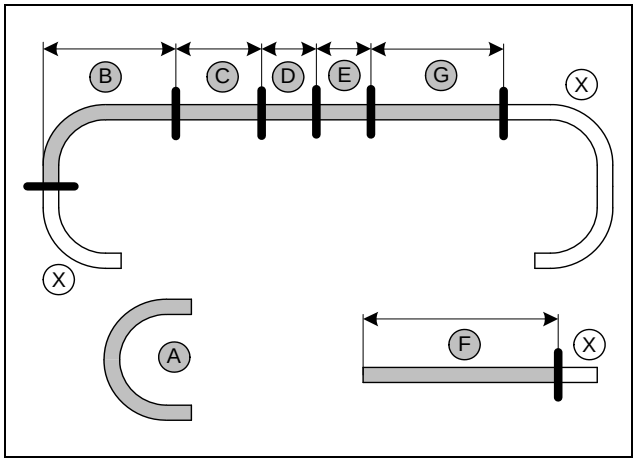
Remove clip **1** from hole. Loosen servo container **2** and secure it using suitable means.

Dismantling clip



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

Installing rivet nuts

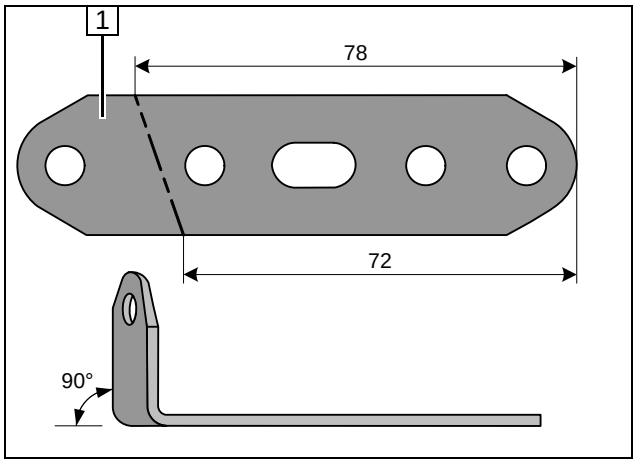


Preparing Heater

Discard section **X**.
Hose **A** = 180°, 18 mm dia. moulded hose

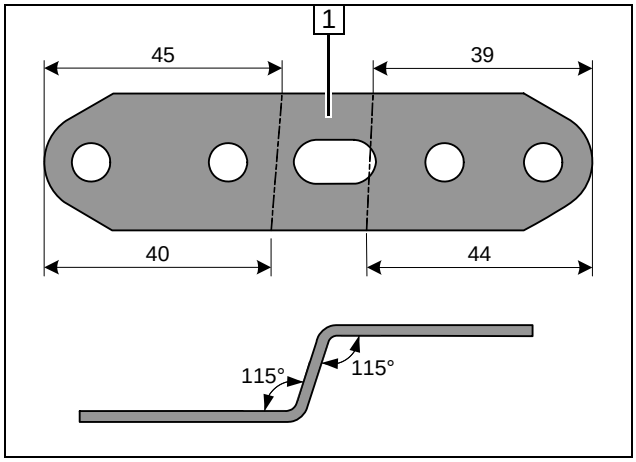
B = 650
C = 265
D = 120
E = 110
F = 385
G = 770

Cutting hoses to length



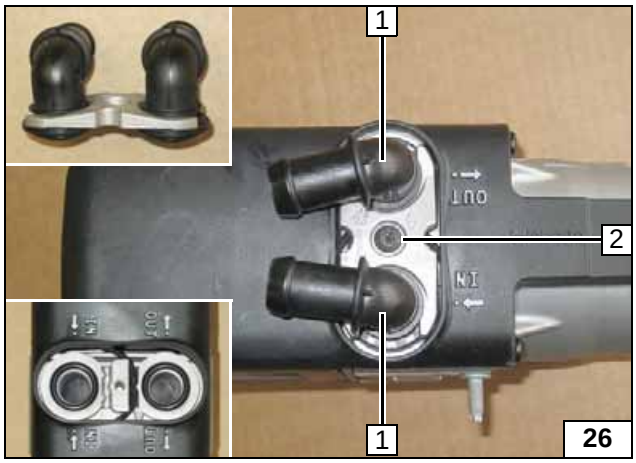
1 Bend perforated bracket **A**

Preparing perforated bracket A



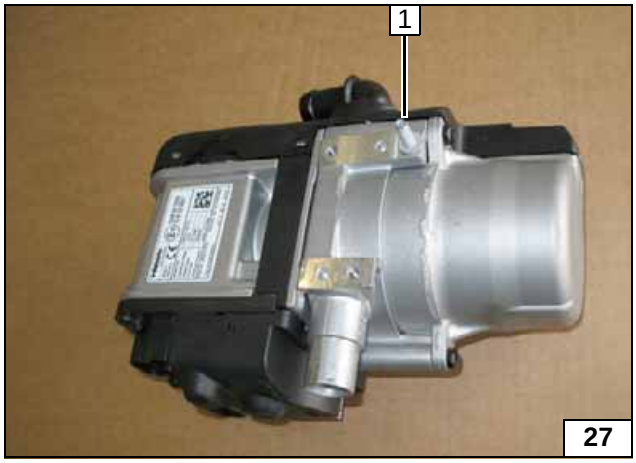
1 Bend perforated bracket **B**

Preparing perforated bracket B



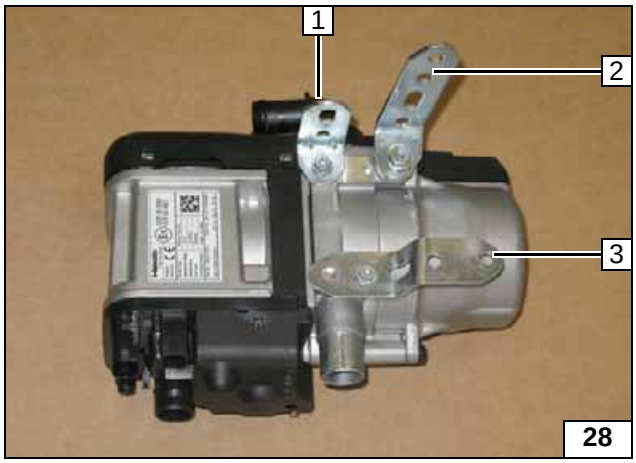
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection pieces



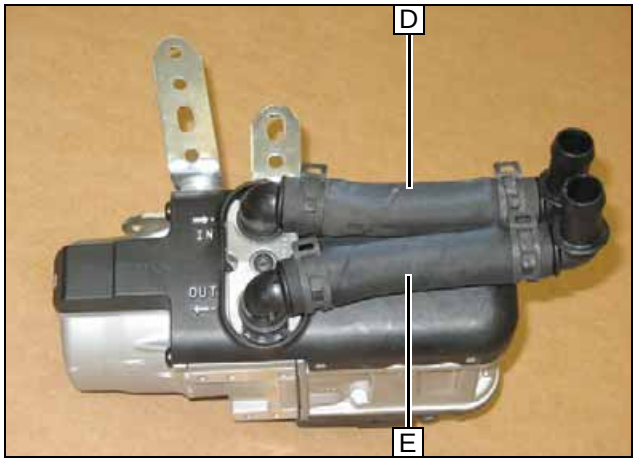
1 Stud bolt

Installing stud bolts



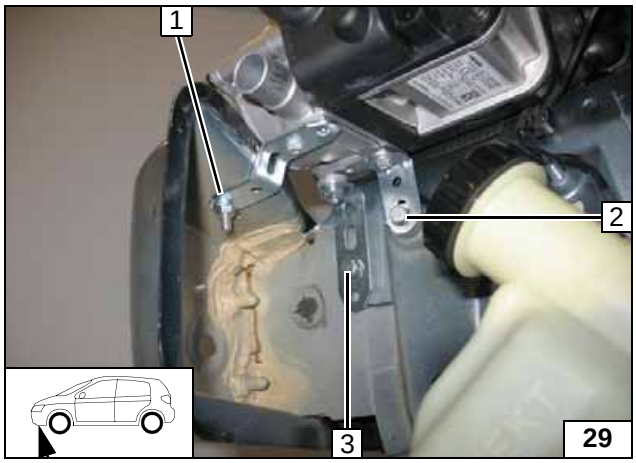
1 Angle bracket, 5x13 self-tapping bolt
2 5mm shim, perforated bracket **A**, M6 flanged nut
3 Perforated bracket **B**, 5x13 self-tapping bolt

Premounting perforated bracket, angle bracket



All spring clips = 25 mm dia. [4x]
All 90° connecting pipes = 18mm dia. [2x]

Installing hoses E and D



Installing Heater

Ensure sufficient distance to neighbouring components, correct if necessary.

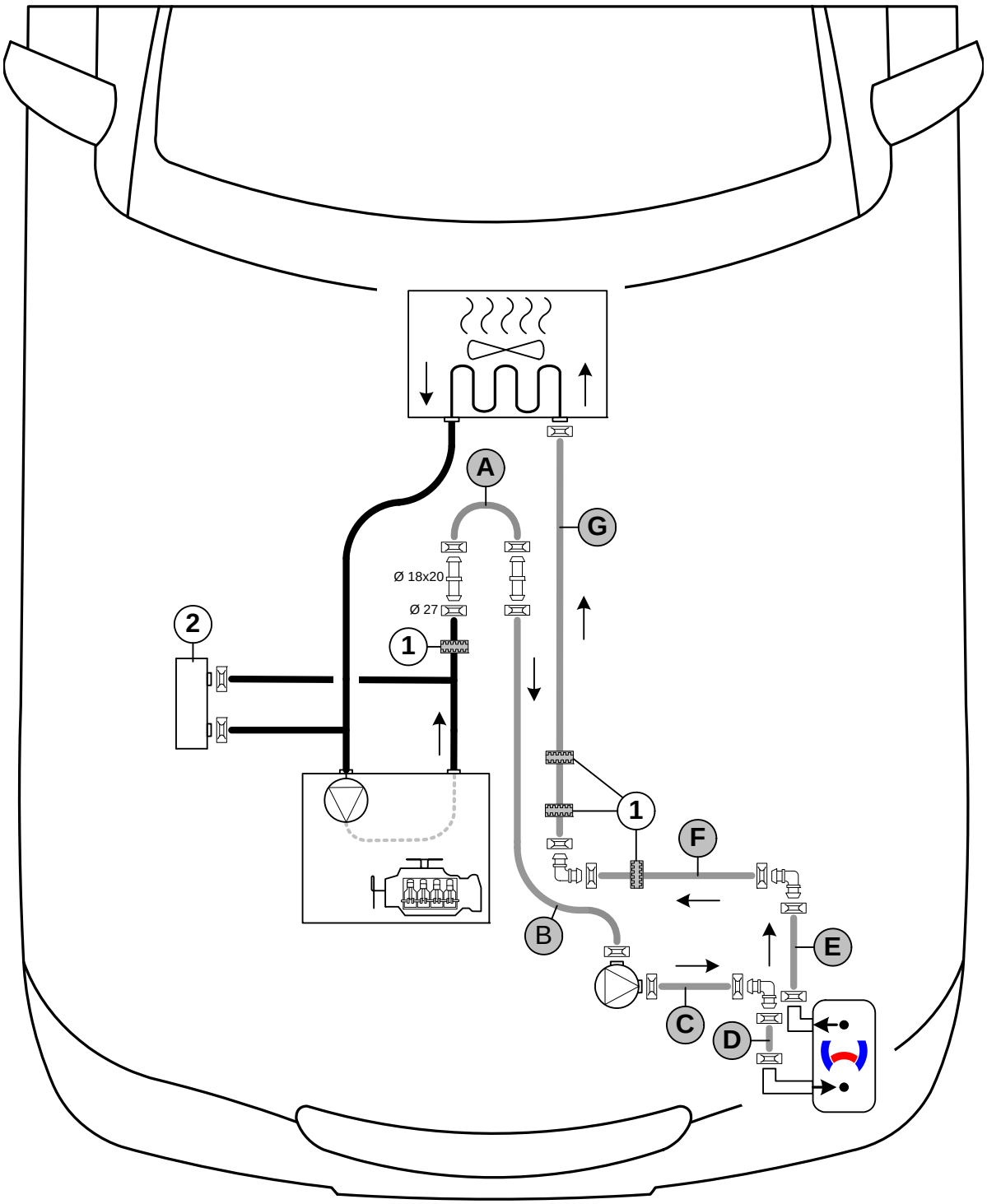
1 M6x20 bolt, existing hole, large diameter washer, flanged nut
2 M6x25 bolt, spring lockwasher, 5mm shim
3 M6x20 bolt, spring lockwasher

Installing heater

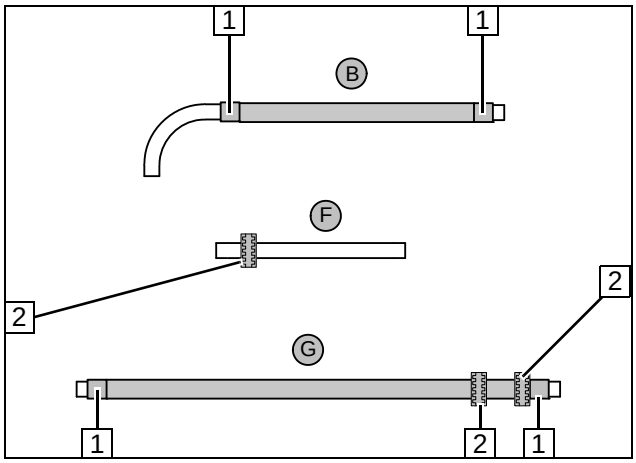
Coolant Circuit

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

Hose routing diagram



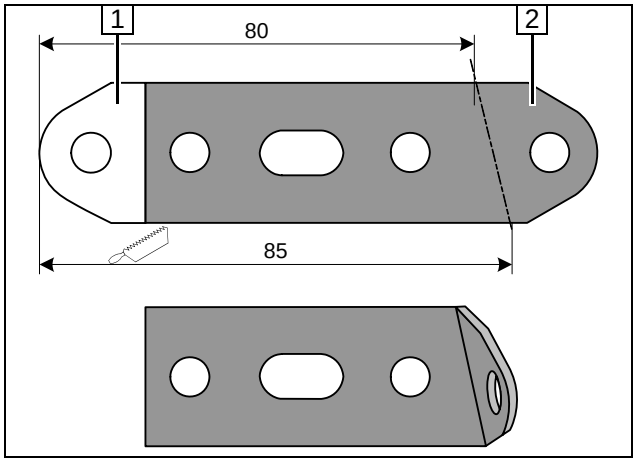
All non-designated spring clips = 25mm dia.
1 = black (sw) rubber isolator ! **2** = AGR heat exchanger!
All connecting pipes = 18x18mm dia. All connecting pipes without a specific designation = 18x18mm dia.



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

1 60mm long heat shrink plastic tubing [4x]
2 Black (sw) rubber isolator [3x]

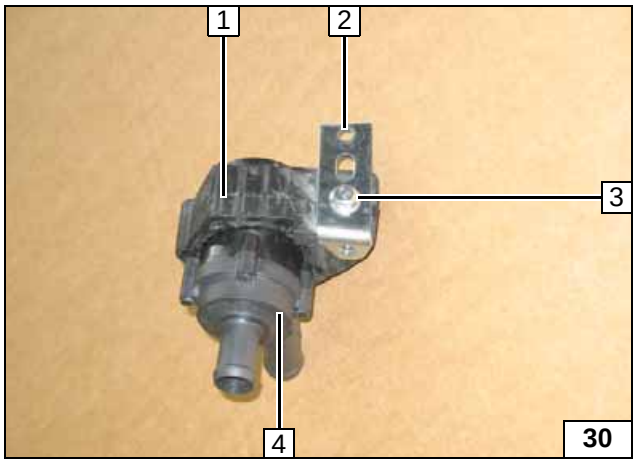
Preparing hoses



Discard section **1**.

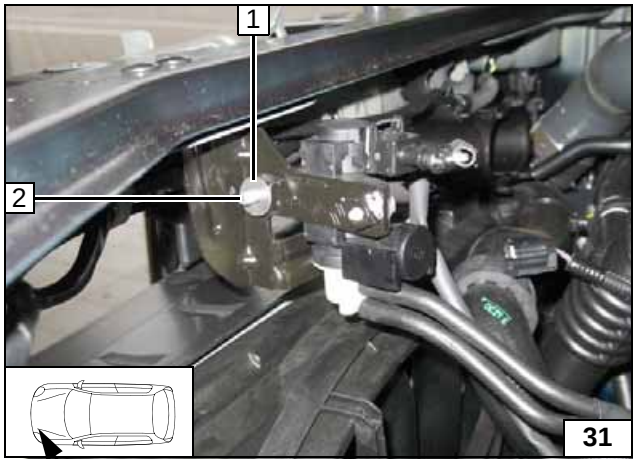
2 Bend perforated bracket of circulating pump at a 90° angle

Preparing perforated bracket



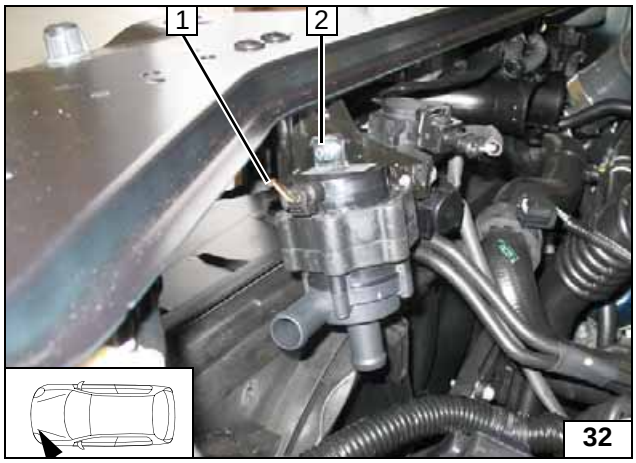
1 Mounting for circulating pump
2 Perforated bracket
3 M6x25 bolt, flanged nut
4 Circulating pump

Premounting circulating pump



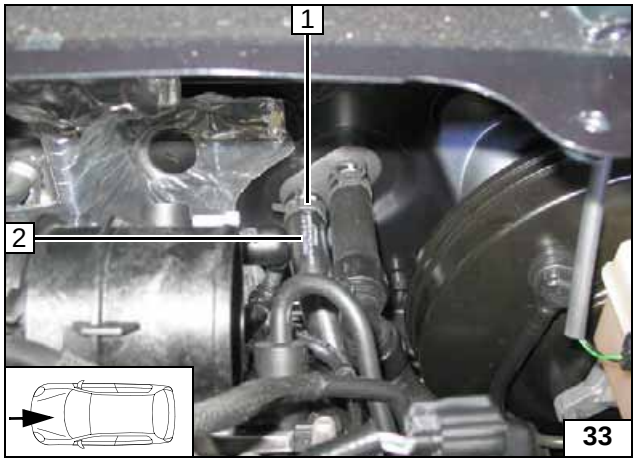
1 Large diameter washer
2 Replace original vehicle bolt by M6x25 bolt

Installing circulating pump



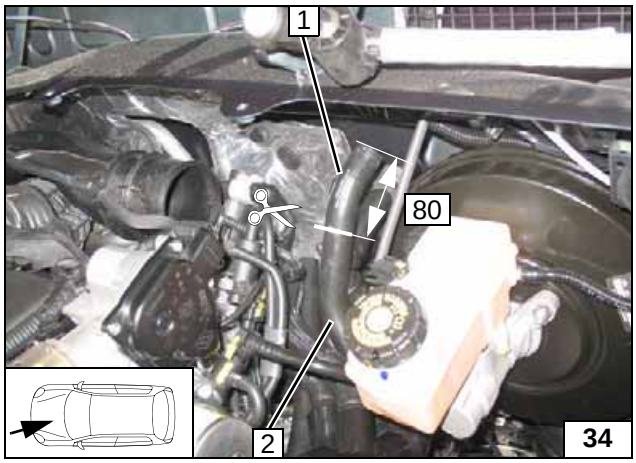
1 Wiring harness of circulating pump
2 Flanged nut

Installing circulating pump



Pull off hose of engine outlet / heat exchanger inlet **2**. Discard spring clip **1**.

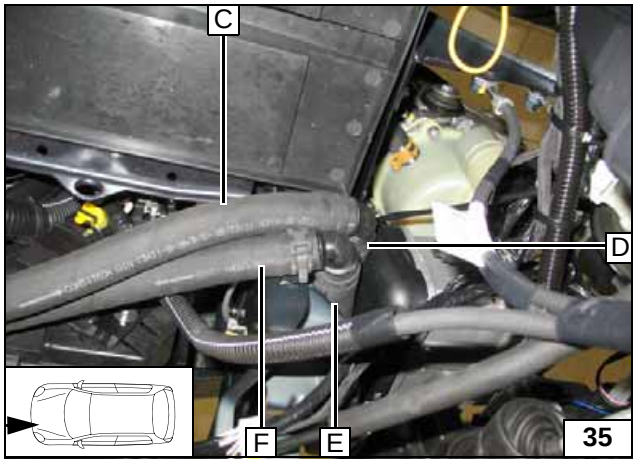
Cutting point



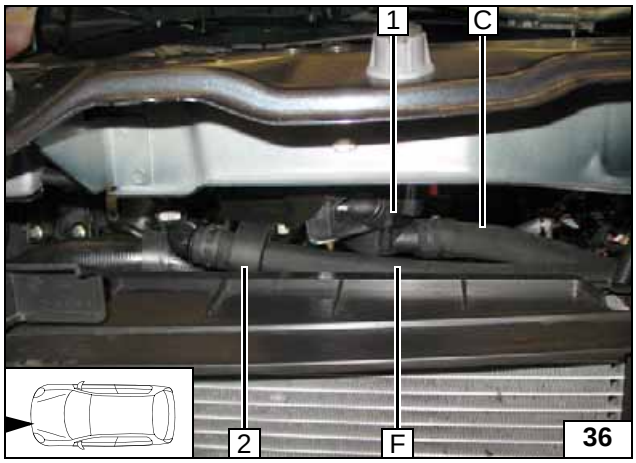
Cut hose at the marking.

1 Discard hose section of heat exchanger inlet
2 Engine outlet hose section

Cutting point

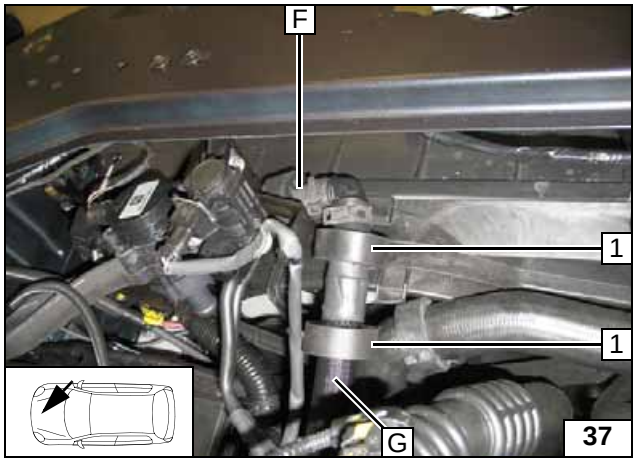


Connecting hoses C and F



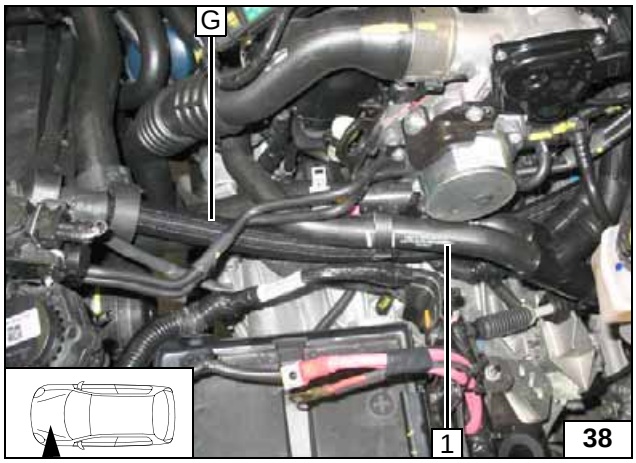
1 Circulating pump
2 Black (sw) rubber isolator

Connecting hose C



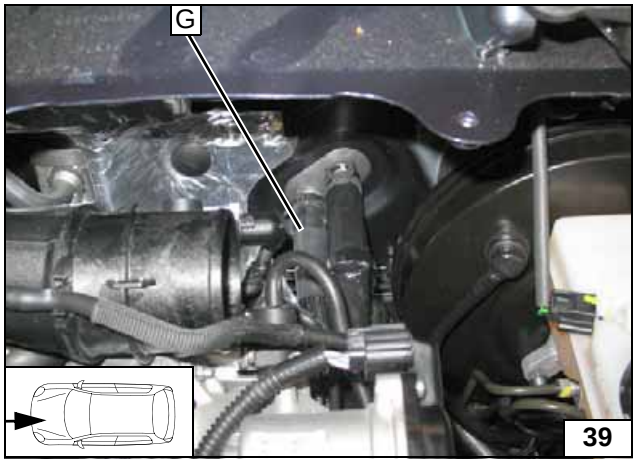
1 Position black (sw) rubber isolator [2x].

Connecting hoses F and G



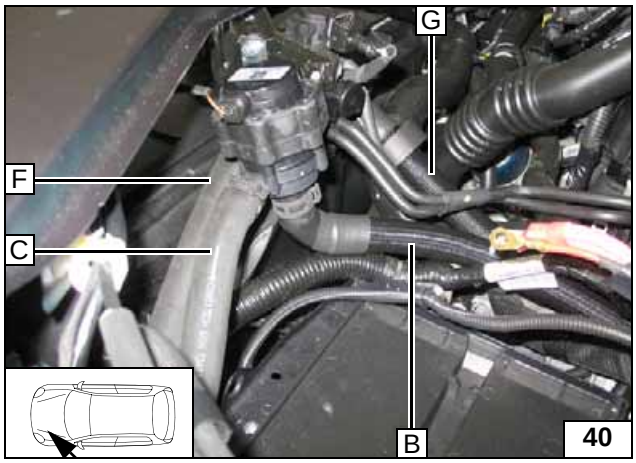
1 Original vehicle hose

Routing in engine compartment

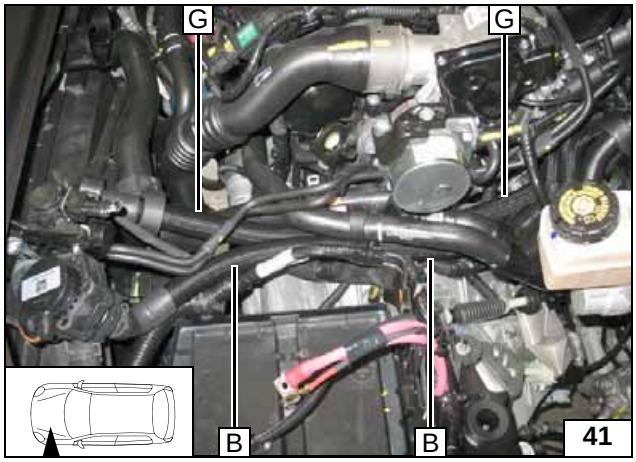


Align hoses. Ensure sufficient distance to neighbouring components, correct if necessary.

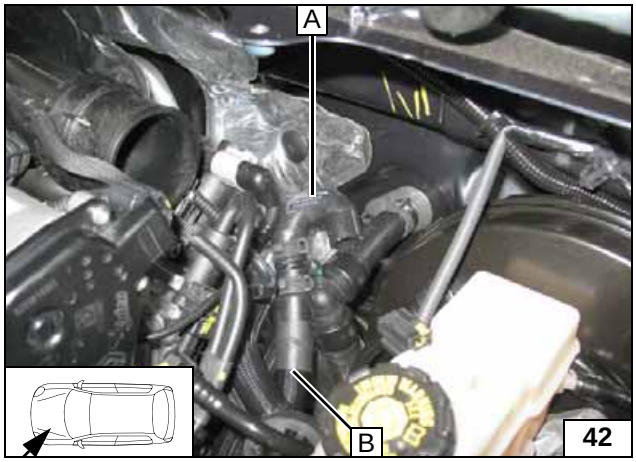
Connection of heat exchanger inlet



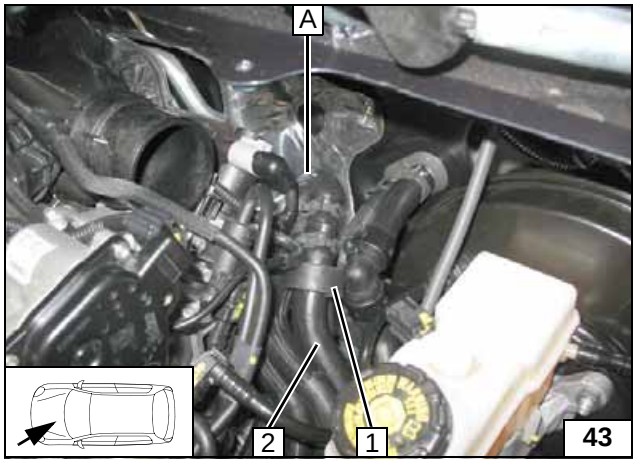
Connecting hose B



Routing in engine compartment



Connecting hose A



Position black (sw) rubber isolator **1** before connecting hose **A** to hose of engine outlet **2**.

Connecting engine outlet

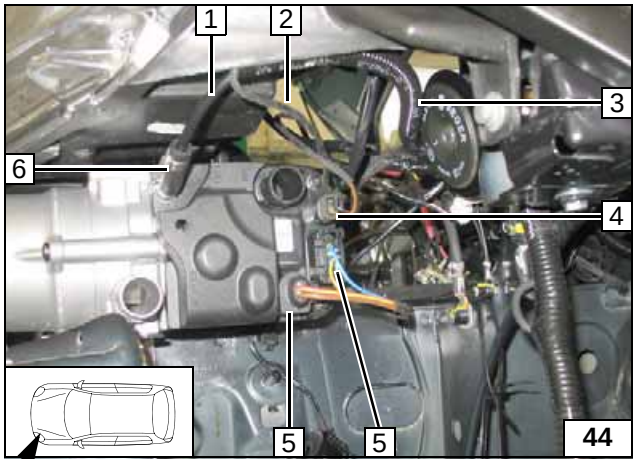
Fuel

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.

Route 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.

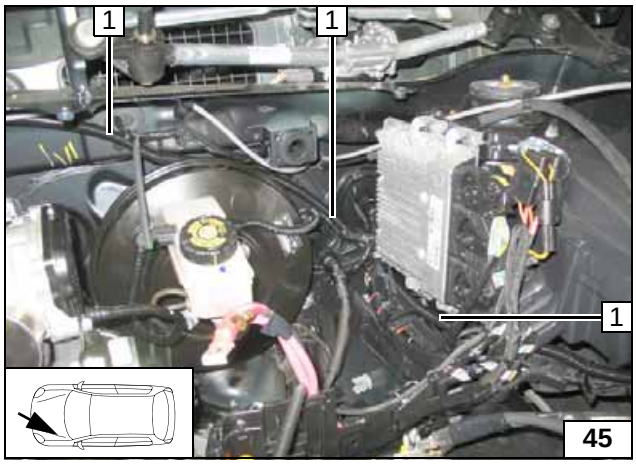
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



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

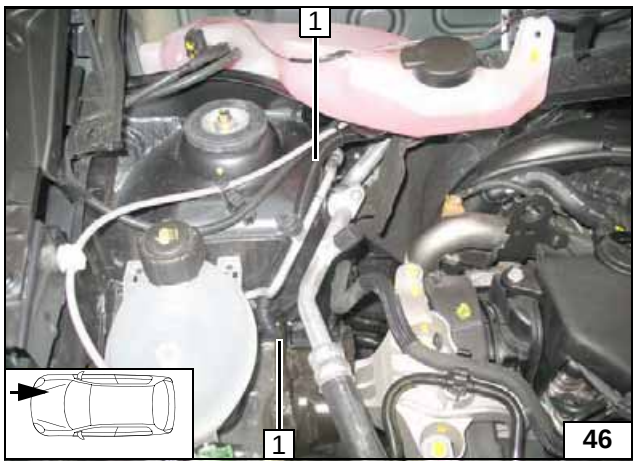
4 Connector of circulating pump wiring harness
5 Connector of heater wiring harness [2x]
6 Hose section, 10 mm dia. clamp [2x]

Connecting heater



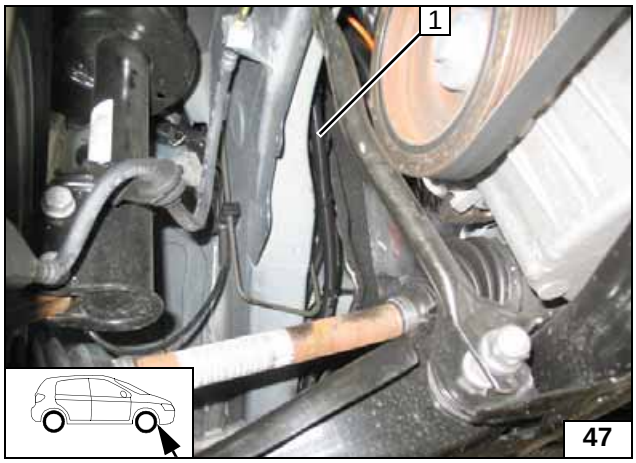
1 Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube

Routing lines



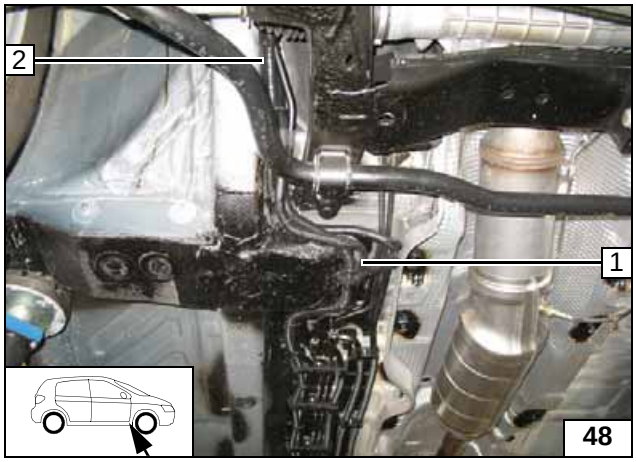
1 Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube

Routing lines



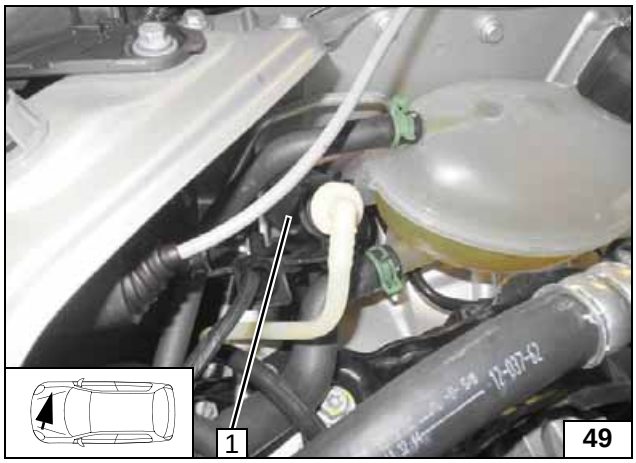
1 Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube

Routing lines



1 Original vehicle wires
2 Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube

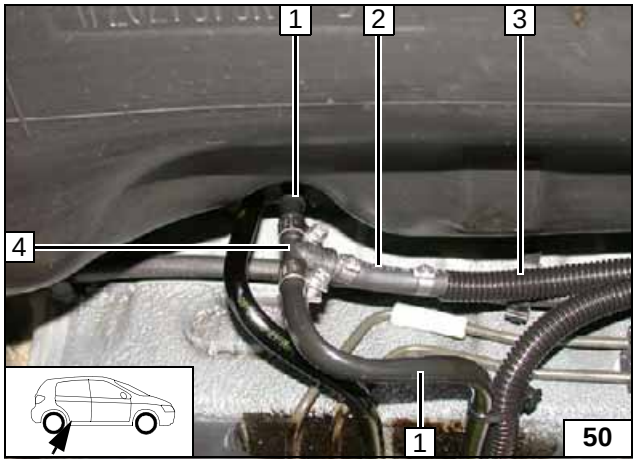
Routing lines



Variant **1**: Vehicles with manual supply pump! Fuel extraction with T-piece in fuel supply line!
Variant **2**: Vehicles with electrical pre-feed pump in fuel tank!
Fuel extraction with fuel standpipe in the lid of the fuel supply unit!

1 Manual supply pump

Fuel extraction

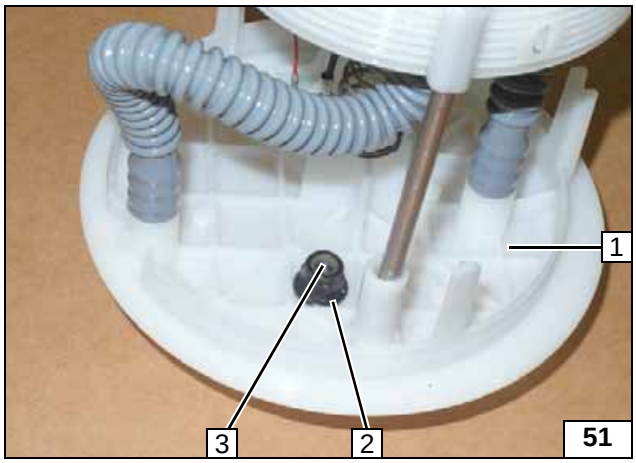


Variant 1

Separate original vehicle fuel supply line **1** at position **4**.

2 Hose section, 10mm dia. clamp [2x]
3 Fuel line in 10mm dia. corrugated tube
4 8x5x8 fuel standpipe, 10mm dia. screw clamp [2x]

Fuel extraction

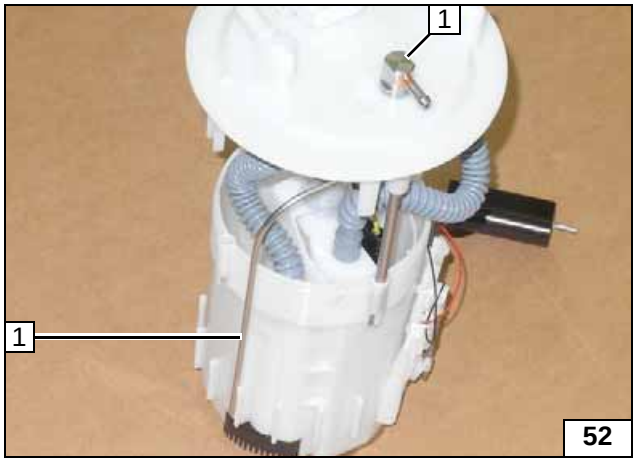


Variant 2

Only remove fuel tank in case of the Dokker Express, in accordance with the manufacturer's instructions.
Remove fuel-tank sending unit **1** according to manufacturer's instructions. Position the flanged nut of fuel standpipe **2** between the bars.

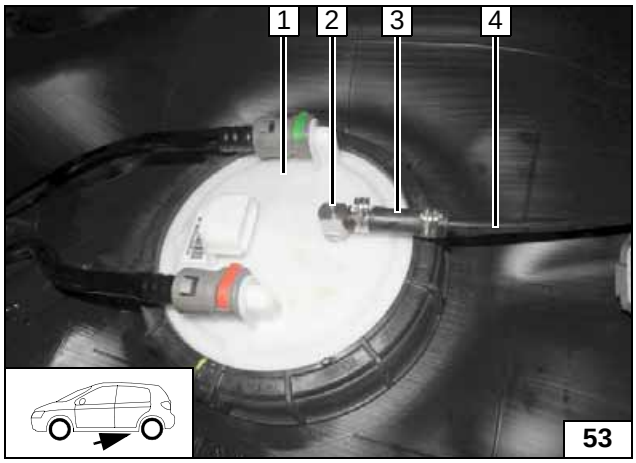
3 Copy hole pattern, 6mm dia. hole

Fuel extraction



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

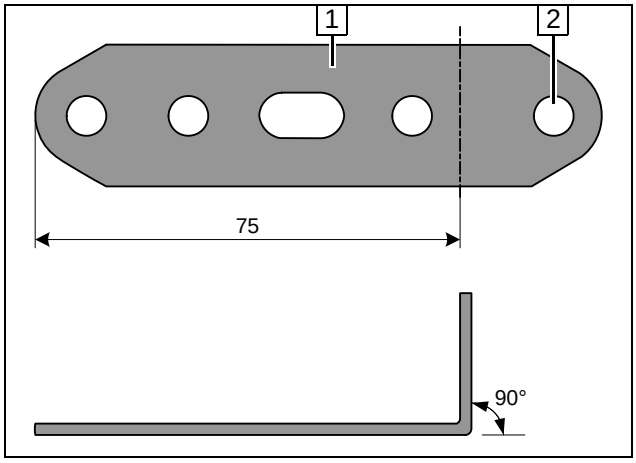
Installing fuel standpipe



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

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

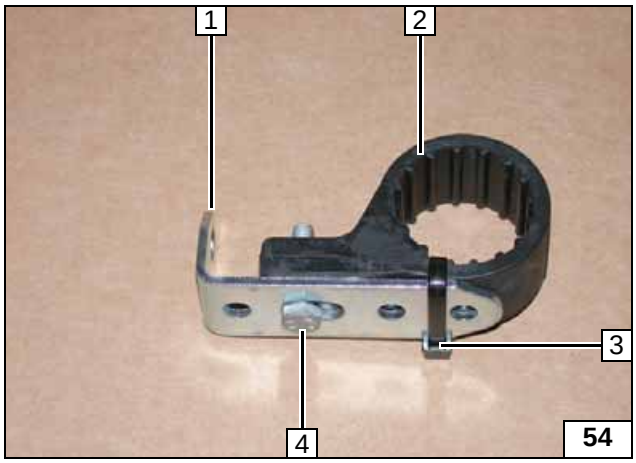
Connecting fuel line



All vehicles

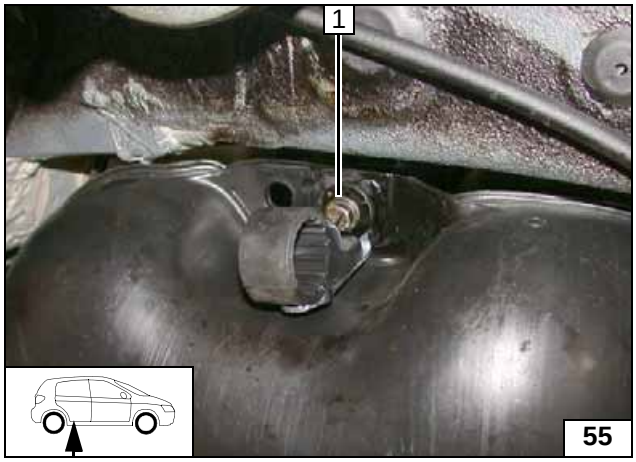
1 Perforated bracket
2 Drill out 8.5mm dia. hole

Preparing perforated bracket



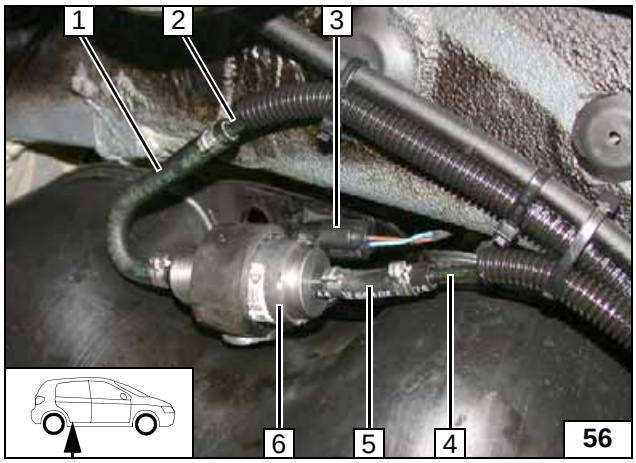
1 Perforated bracket
2 Metering pump mounting
3 Cable tie
4 M6x25 bolt, support angle bracket, flanged nut

Preparing metering pump mounting



1 Original vehicle bolt

Installing bracket of metering pump



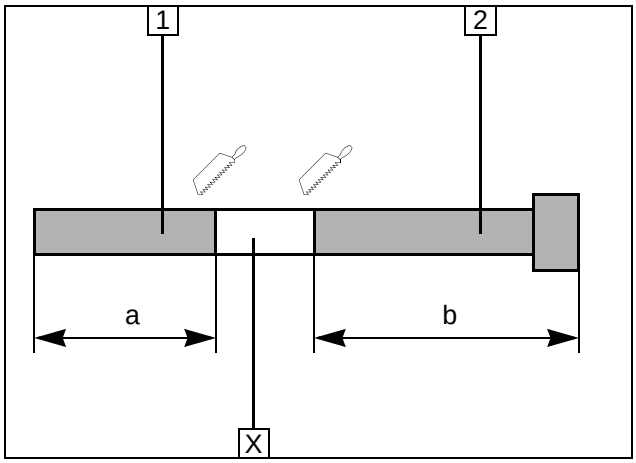
Ensure sufficient distance to neighbouring components, correct if necessary.

1 180° moulded hose, 10 mm dia. clamp [2x]
2 Fuel line of fuel standpipe / tank standpipe
3 Wiring harness of metering pump, connector mounted
4 Fuel line of heater
5 Hose section, 10mm dia. clamp [2x]
6 Metering pump installed

Connection of metering pump

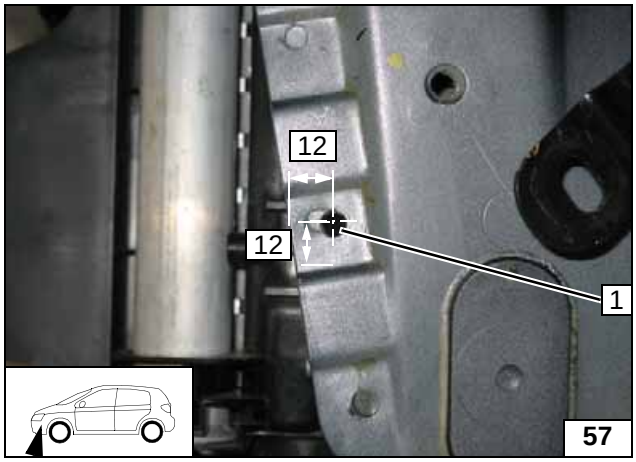
Exhaust Gas

Discard section **X**.



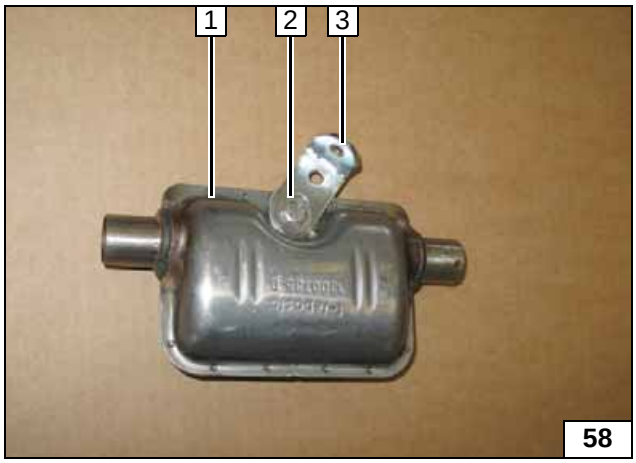
1 Exhaust pipe
a = 150
2 Exhaust end section
b = 295

Preparing exhaust pipe



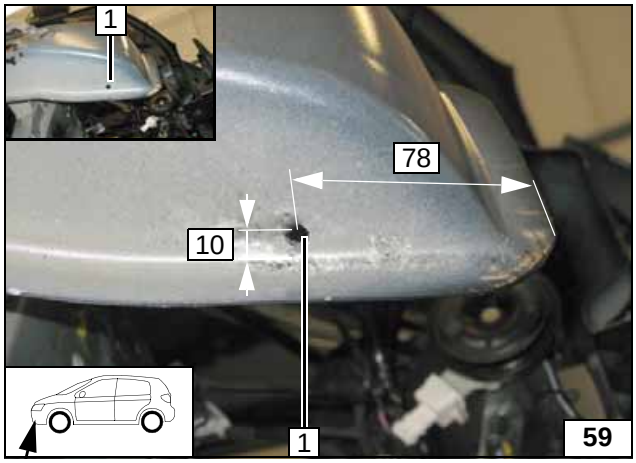
1 7mm dia. hole

Hole for exhaust pipe



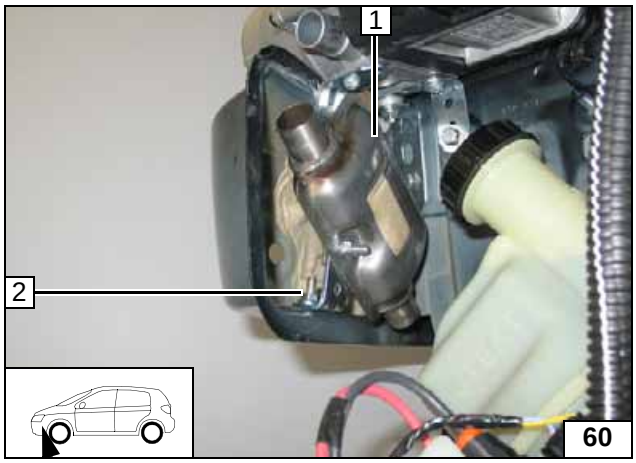
1 Exhaust silencer
2 M6x16 bolt, large diameter washer, flanged nut
3 Angle bracket

Premounting silencer



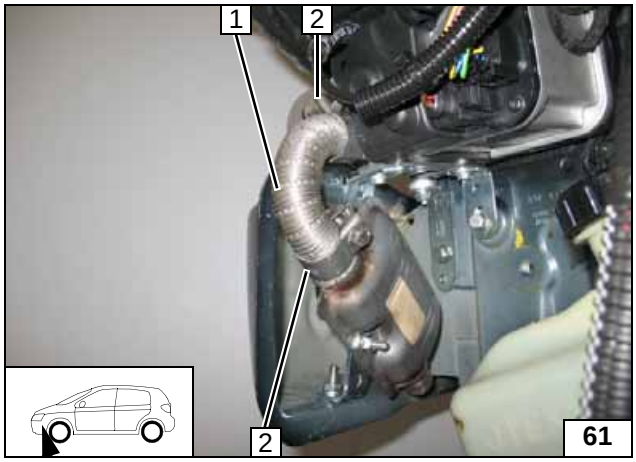
1 7mm dia. hole

Hole for exhaust silencer



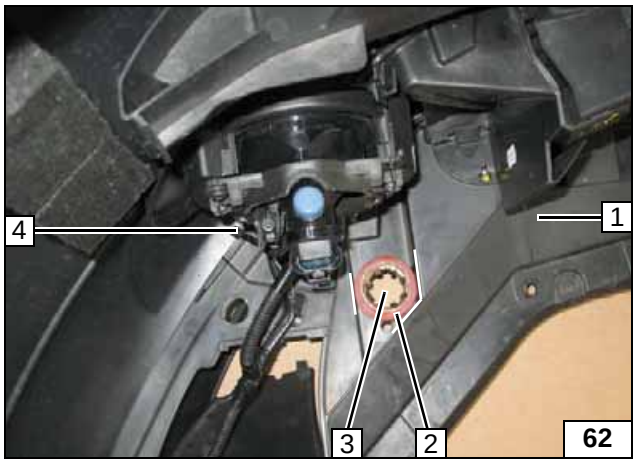
1 Exhaust silencer
2 M6x20 bolt, flanged nut M6

Mounting exhaust silencer



1 Exhaust pipe
2 Hose clamp [2x]

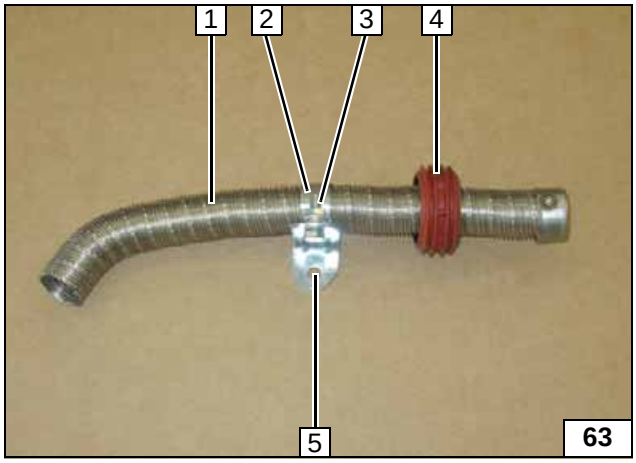
Mounting exhaust pipe



Position spacer bracket **2** on the markings, copy hole pattern **3** and drill 40mm dia. hole.

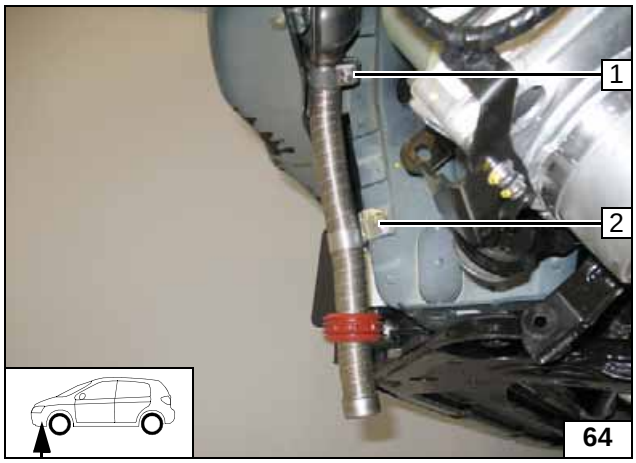
1 Bumper
3 Wiring harness of front fog light, cable tie

Cutting out underride protection



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

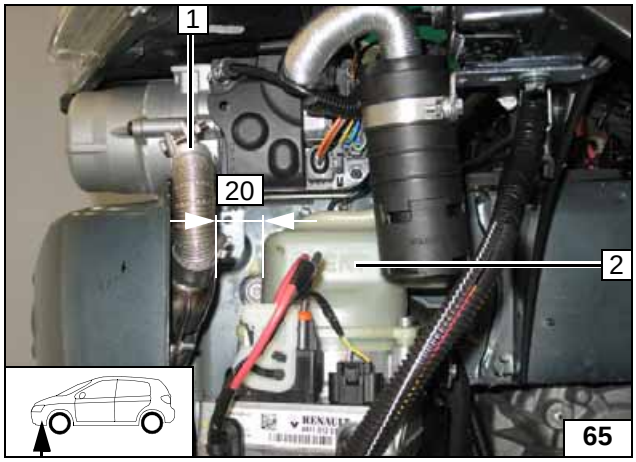
Preparing exhaust end section



Ensure sufficient distance to neighbouring components, correct if necessary.

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

Mounting exhaust end section



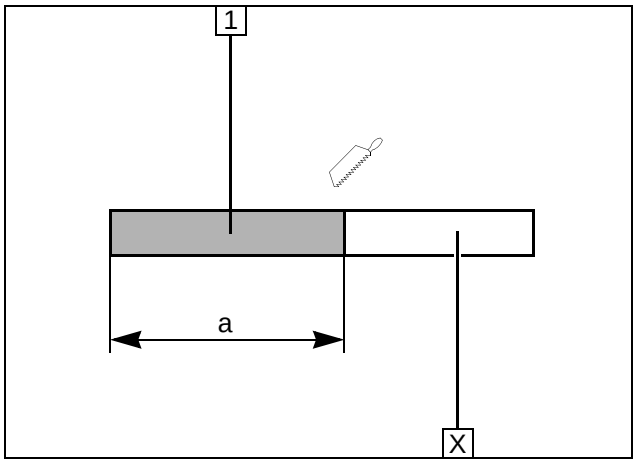
Ensure sufficient distance to neighbouring components, correct if necessary.

1 Exhaust pipe
2 Servo container

Installing servo container

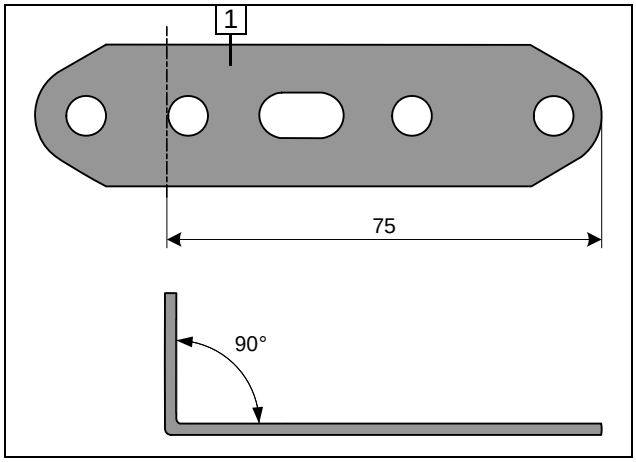
Combustion Air

Discard section **X**.



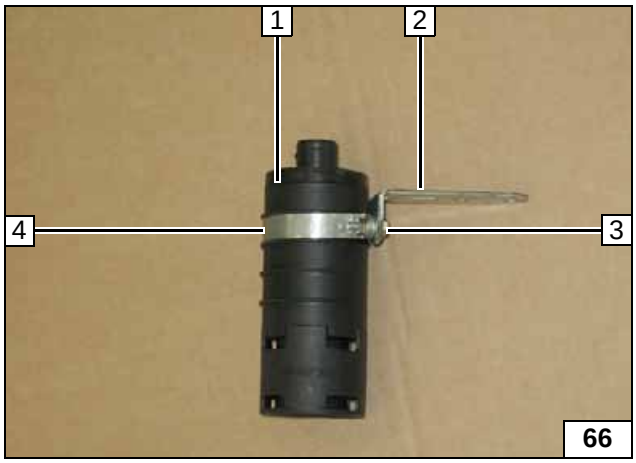
1 Combustion air pipe
a = 200

Cutting combustion air pipe to length



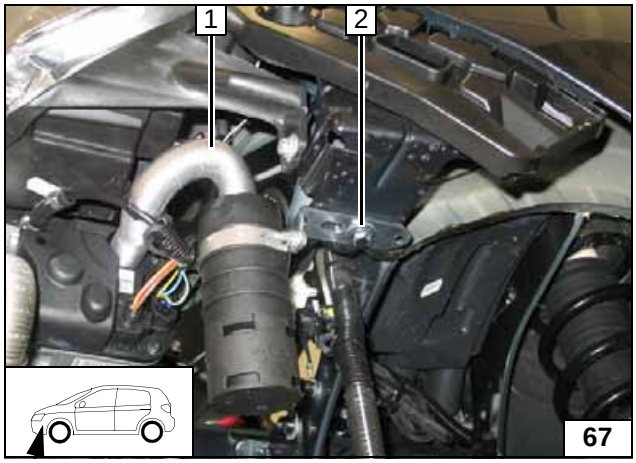
1 Bend perforated bracket

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

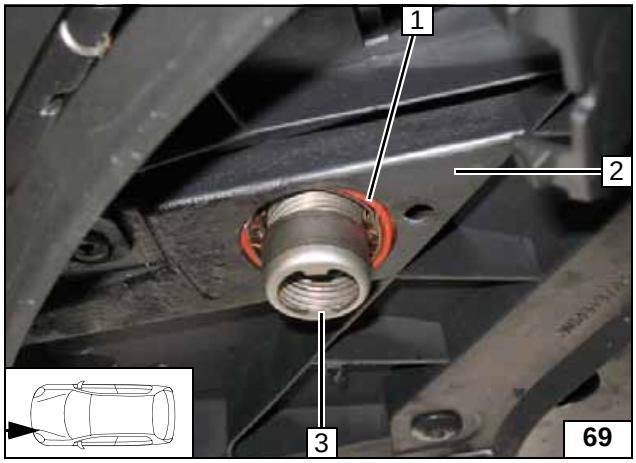
Final Work

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 instructions.**
- **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, see installation instructions.**

1 Original vehicle bolt, angle bracket
2 Air filter box

Installing fuse holder

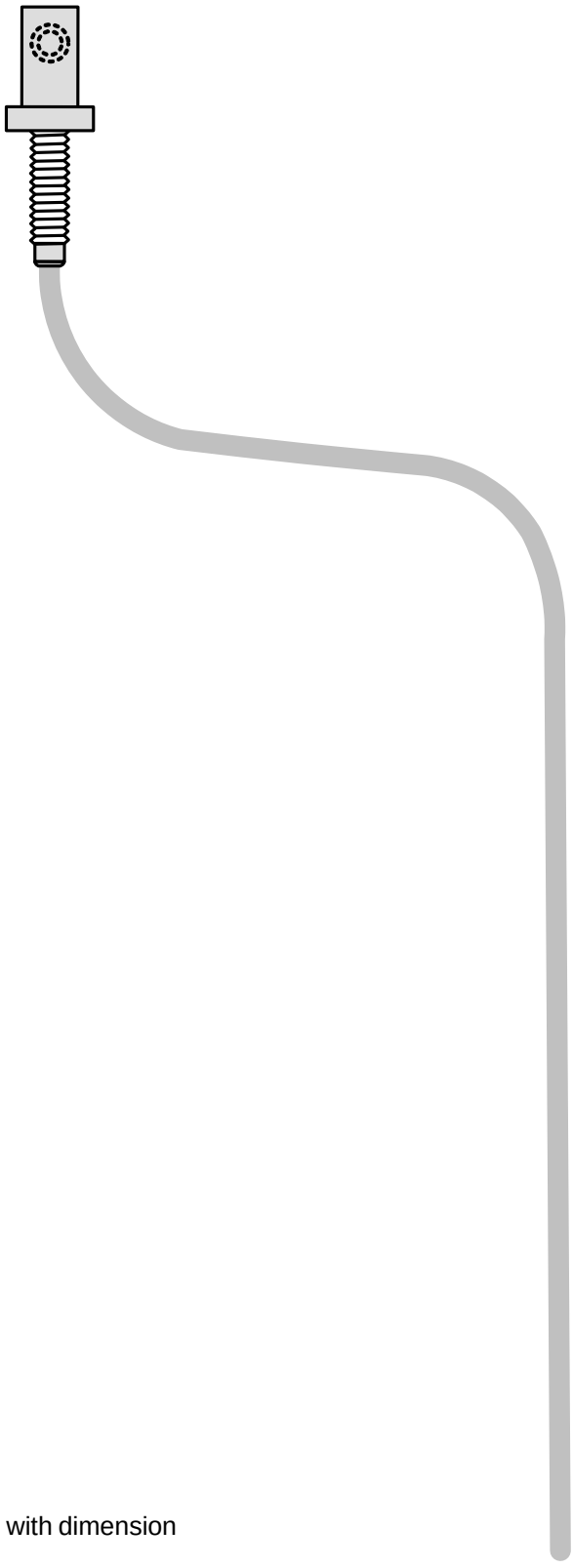


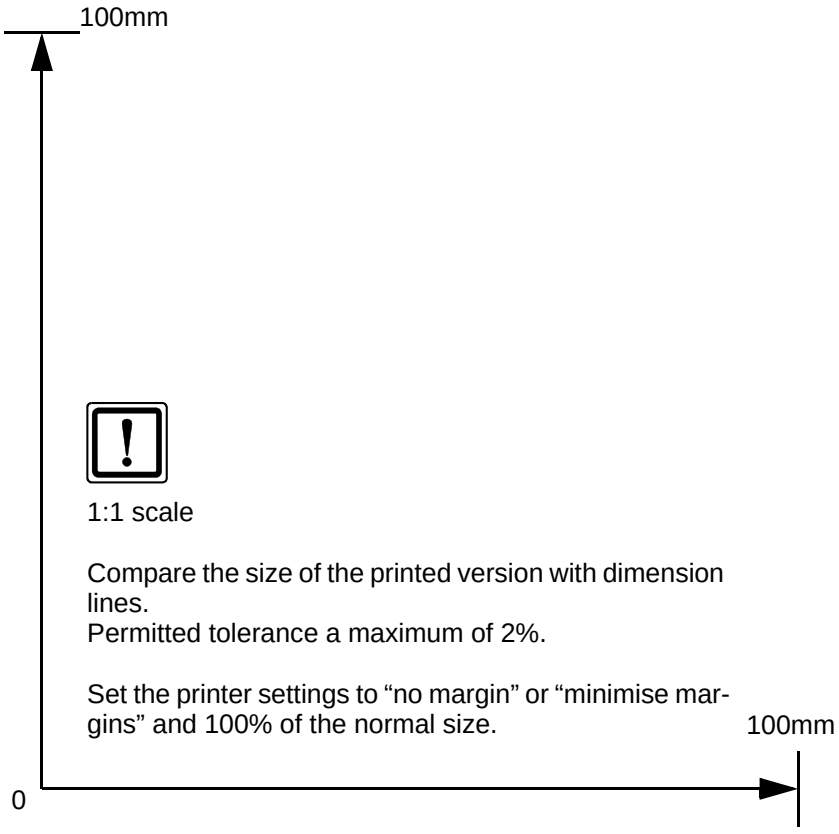
Align exhaust end section **3** with centre of hole. Align spacer bracket **1** on underride protection **2** from the inside.

Installing fuse holder

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

Template for Fuel Standpipe



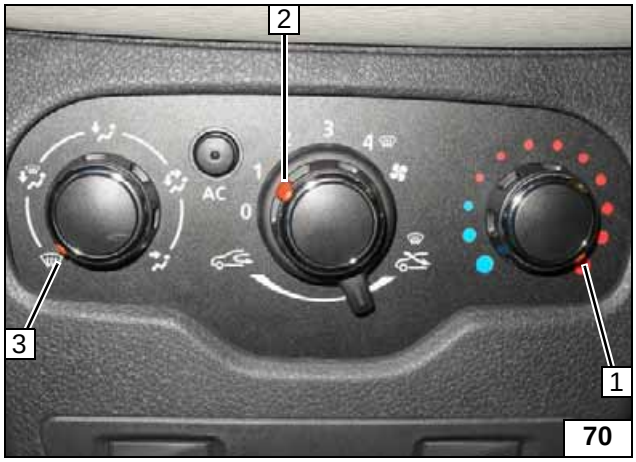


Operating Instructions for End Customer

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

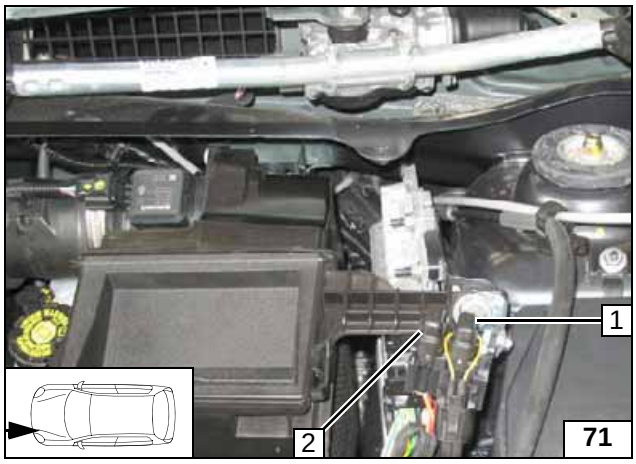
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Before parking the vehicle, make the following settings:



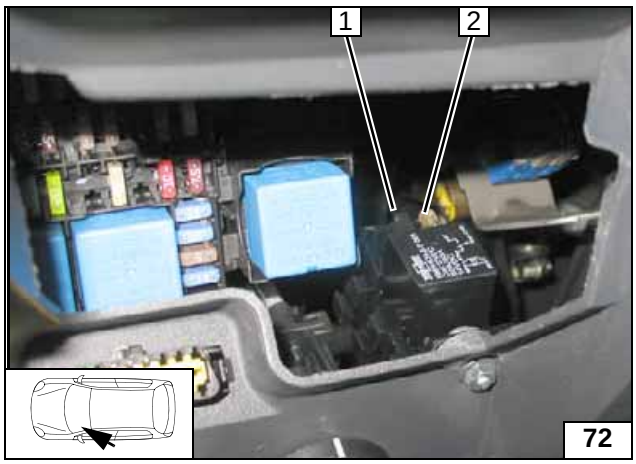
1 Set temperature to "max."
2 Set fan to level "1", or max. "2"
3 Direct air outlet towards windscreen

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment