Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

With FuelFix

Installation Documentation
Renault Espace

Validity

Manufacturer	Model	Type	EG BE No. / ABE
Renault	Espace	RFC	e2 * 2007 / 46 * 0470

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.6D	Diesel	AG	118	1598	R9M

AG = 6-gear EDC automatic transmission

From model year 2015
Left-hand drive vehicle

Verified equipment variants: 2 zone Automatic air-conditioning
LED main headlights
Halogen front fog lights
LED daytime running lights
Automatic Start-Stop system
Keycard
All-wheel steering

Not verified: Alarm system
Headlight washer system
Sun Protect windscreen
Heated windscreen

Total installation time: approx. 7 hours

Renault Espace

Table of Contents

Necessary Components

- Basic delivery scope of Thermo Top Evo based on price list
- Installation kit with FuelFix for Renault Espace 2015 Diesel: **1324173A**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

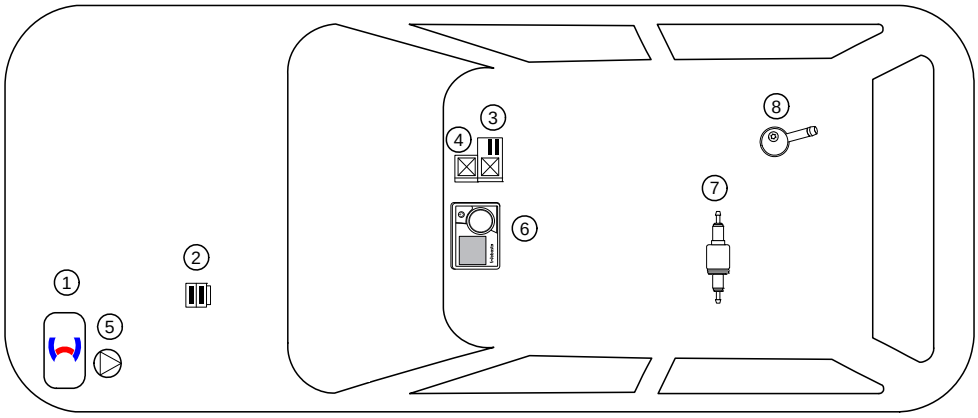
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or Thermo Call should be confirmed with the end customer.
- Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment relay and fuse holder
4. LIN-Gateway
5. Circulating pump
6. MultiControl CAR
7. Metering pump
8. FuelFix



Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting 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 228).

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 have to audibly click into place during installation.

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

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 a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 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

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 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.

Renault Espace

Information on Validity

This installation documentation applies to Renault Espace Diesel vehicles - for validity, see page 1 - from model year 2015 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 Information

Special Tools
- Hose clamp pliers for auto-tightening 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
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

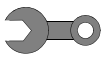
Dimensions
- All dimensions are in mm.

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque value of 5x15 water connection piece retaining plate bolt = 7Nm.
- Tighten other bolt 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 damage to components.

Specific risk due to electrical voltage.

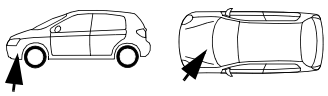
Specific risk of injury or fatal accidents.

Specific risk of fire or explosion.

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

Reference to a special technical feature.

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



Tightening torque according to the manufacturer's vehicle-specific documents.

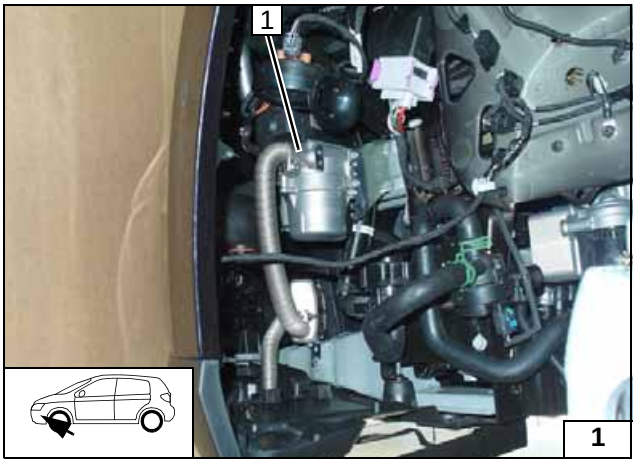
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery, including the carrier.
- Completely remove the air filter.
- Remove the wheel on the left side.
- Remove the wheel well trim on the left side.
- Remove the lower engine cover.
- Remove the underride protection on the right side.
- Remove the rear bench seat in the middle and on the right side.
- Open the right-hand tank-fitting service lid.
- Remove the centre console trim in the footwell on the right and on the left.
- Detach the centre console shift lever trim.
- Remove the lower instrument panel trim on the left side.
- Remove the door sill trim on the left side.
- Remove the A-pillar trim on the left side.

Heater

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



Heater Installation Location

1 Heater

Installation location

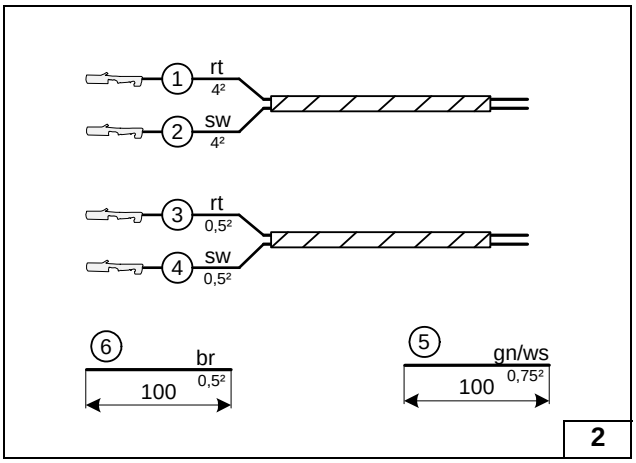
Preparing Electrical System

Wire sections retain their numbering in the entire document.

Produce all following electrical connections as shown in the wiring diagram.

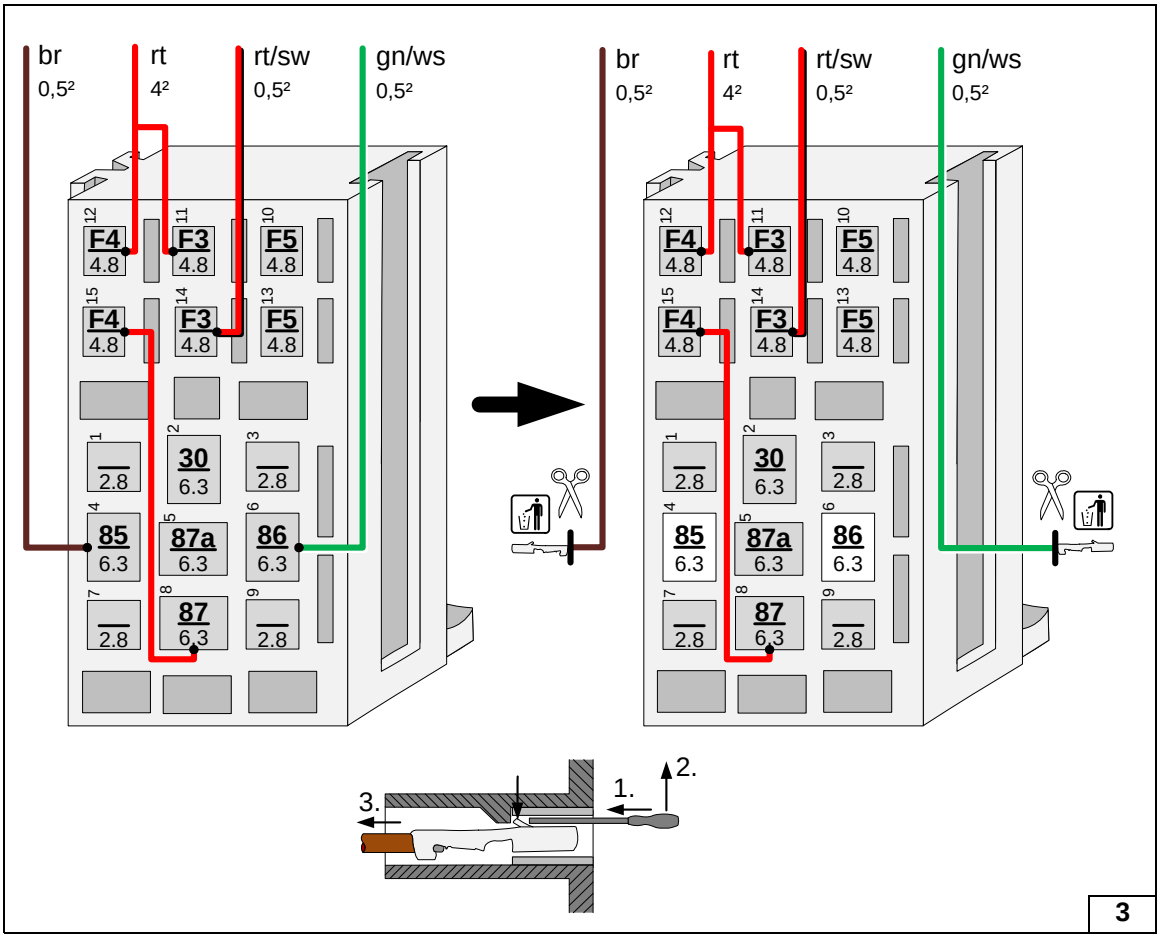
① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness
③ Red (rt) wire of LIN control system wiring harness
④ Black (sw) wire of LIN control system wiring harness

Cutting to length / assigning wires



2

Preparing passenger compartment relay and fuse holder



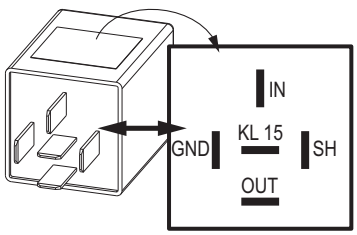
3

Check the LIN Gateway settings when starting up the heater and adjust if necessary.

Settings:

Duty Cycle: not relevant
Frequency: not relevant
Voltage: 5.3V
Function: LIN

View of LIN GW



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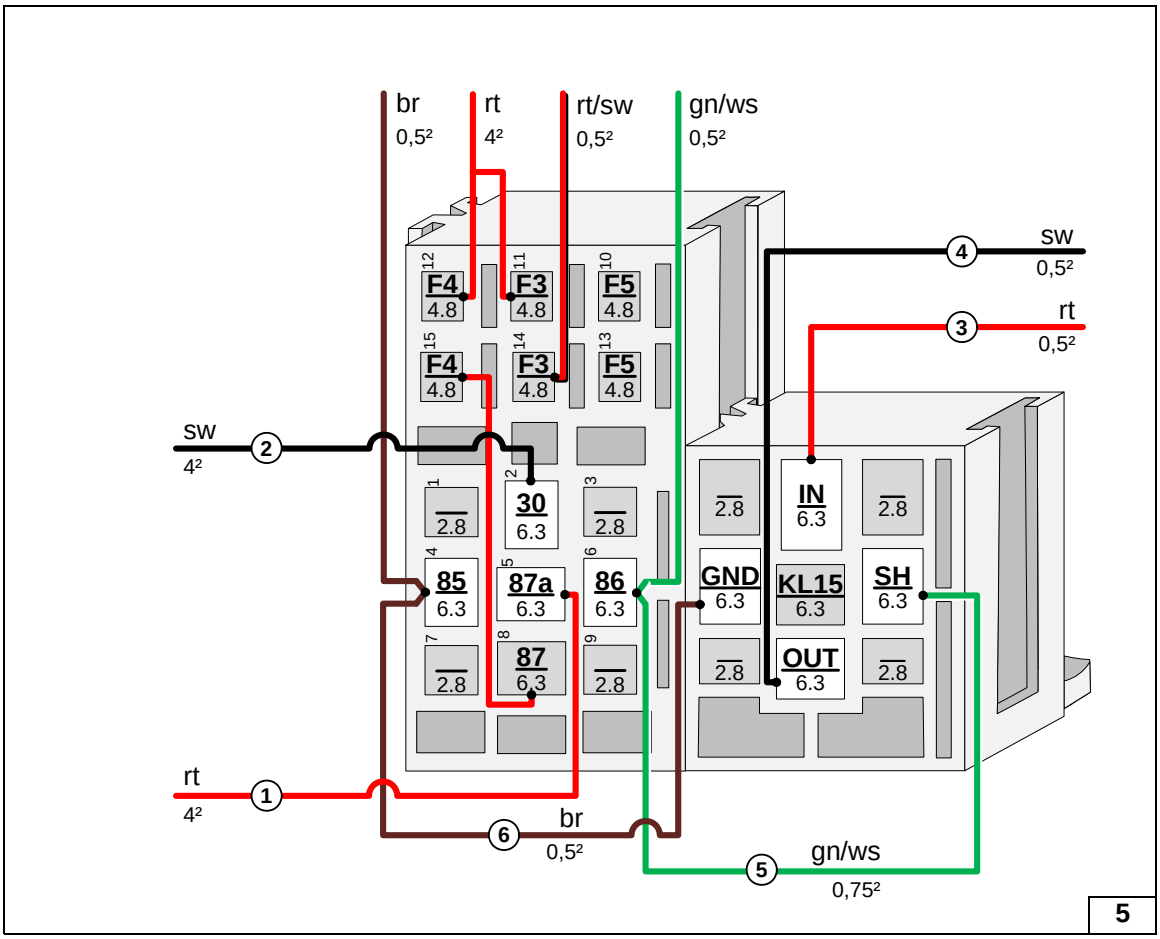
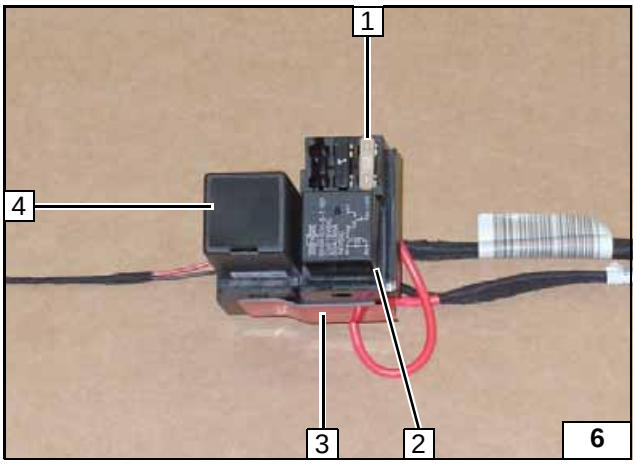


5

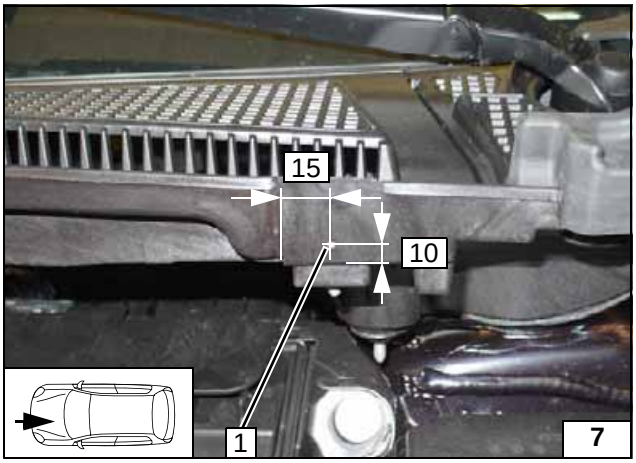
Interlocking LIN GW socket and passenger compartment relay and fuse holder, connecting wires



6

1 25A fuse F4
2 Relay K1
3 Apply double-sided adhesive tape
4 LIN-GW

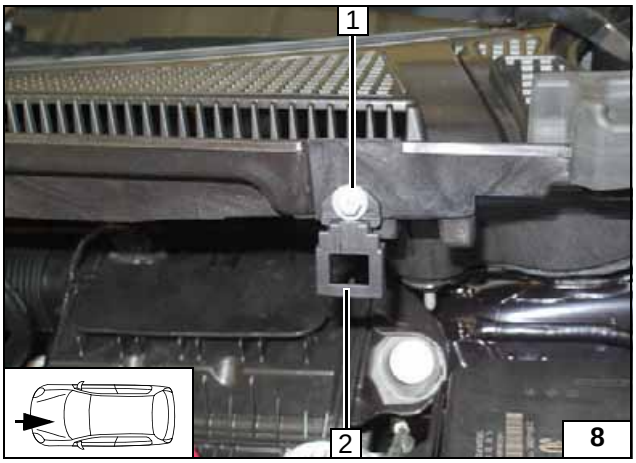
Installing fuse F4, relay K1 and LIN GW



7

1 6 mm dia. hole

Hole for engine compartment fuse holder

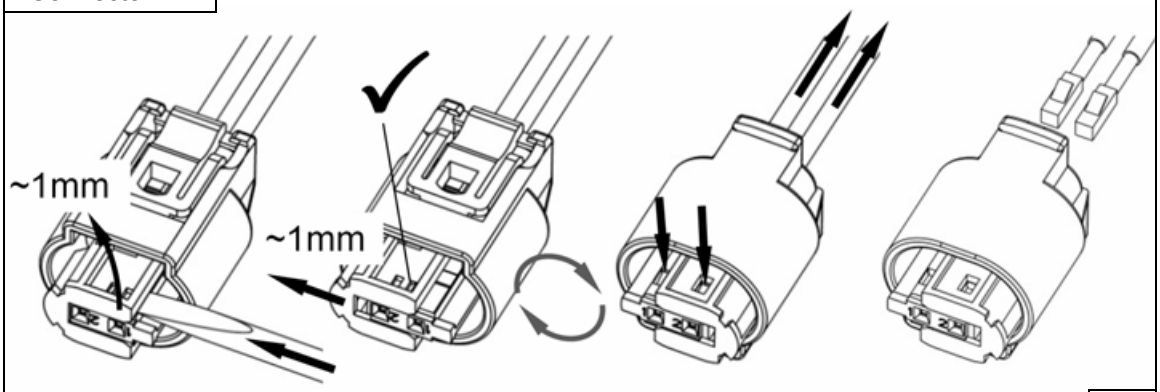


8

1 M5x16 bolt, large diameter washer [2x], nut
2 Retaining plate of engine compartment fuse holder

Installing retaining plate

Connector X7



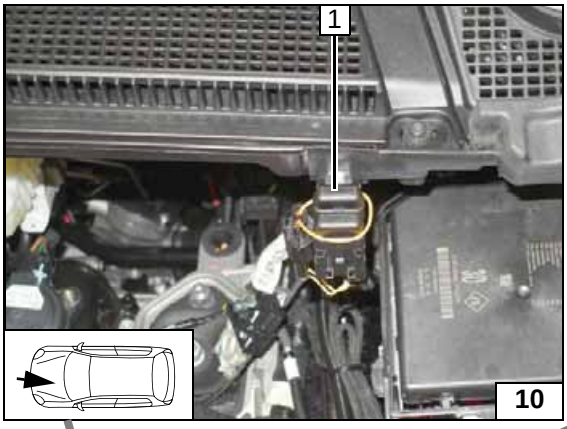
9

Dismantling metering pump connector

Electrical System

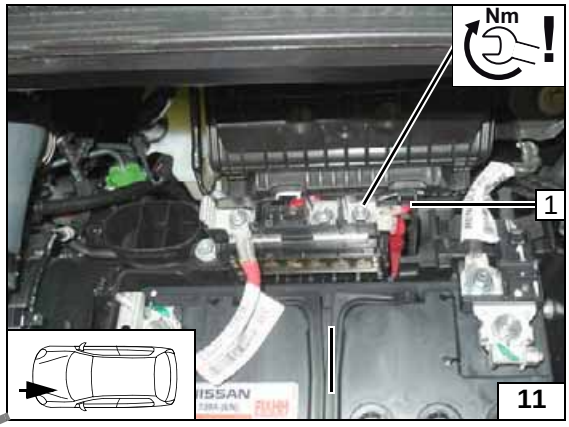
Engine compartment fuse holder

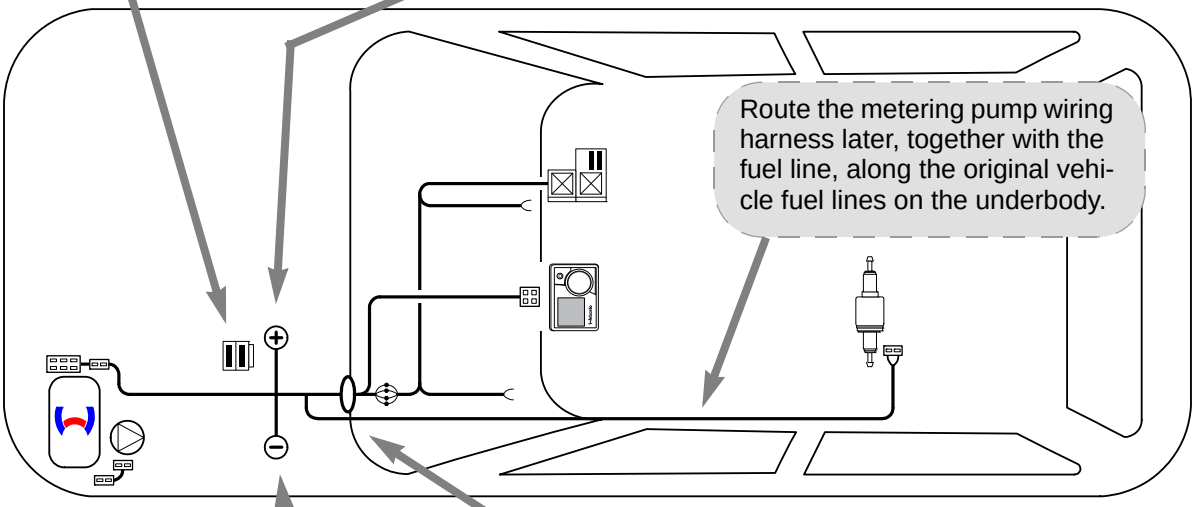
1 Fuses F1-2



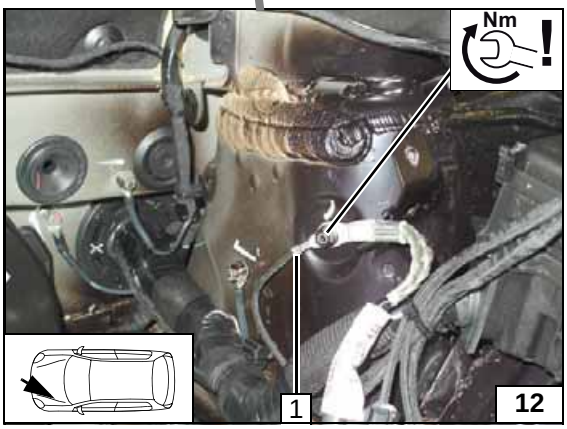
Positive wire

1 Positive wire on positive distributor



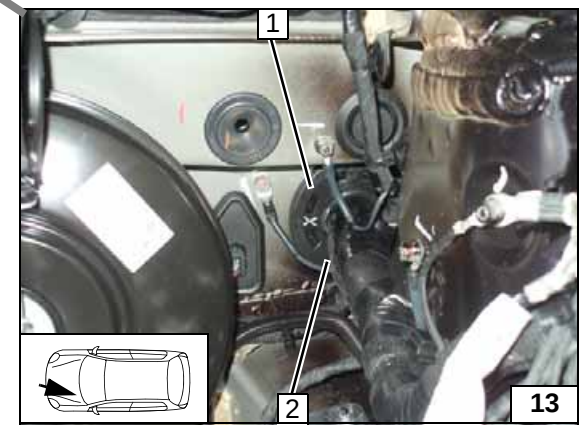


Wiring harness routing diagram



Earth wire

1 Earth wire on original vehicle earth support point

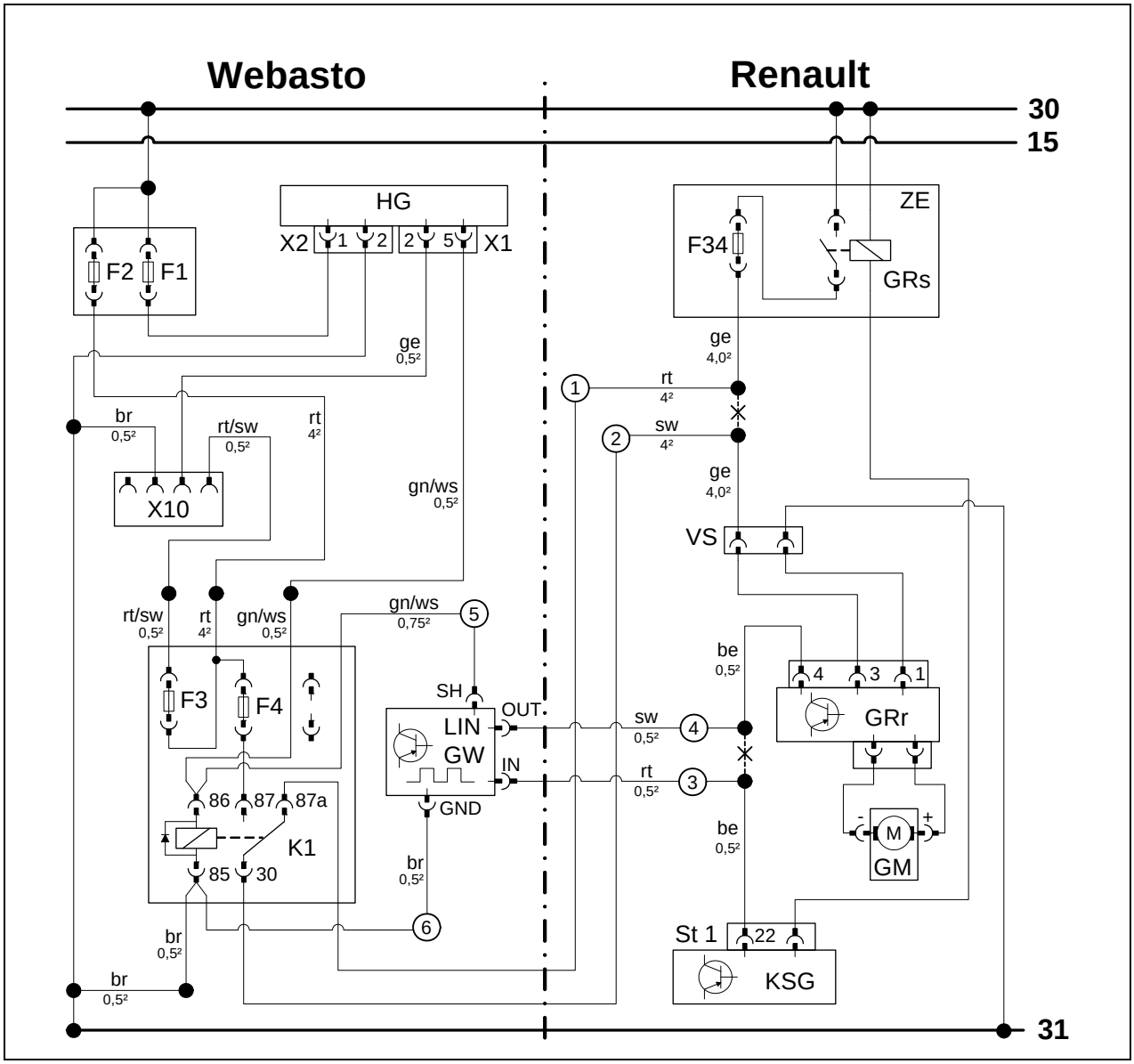


Wiring harness pass through

1 Protective rubber plug
2 Heater wiring harnesses, heater control

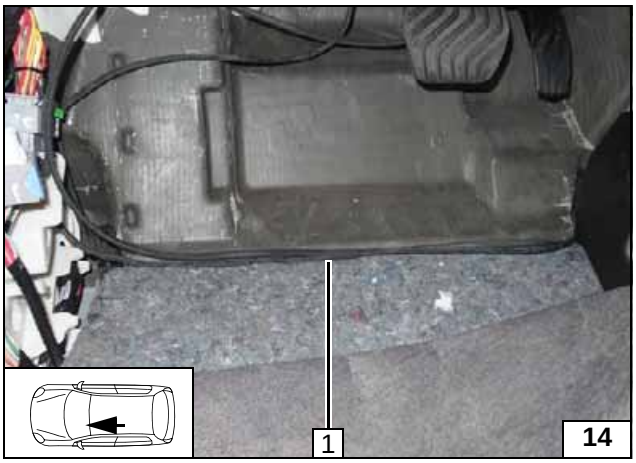
Automatic Air-Conditioning Fan Controller

Wiring diagram



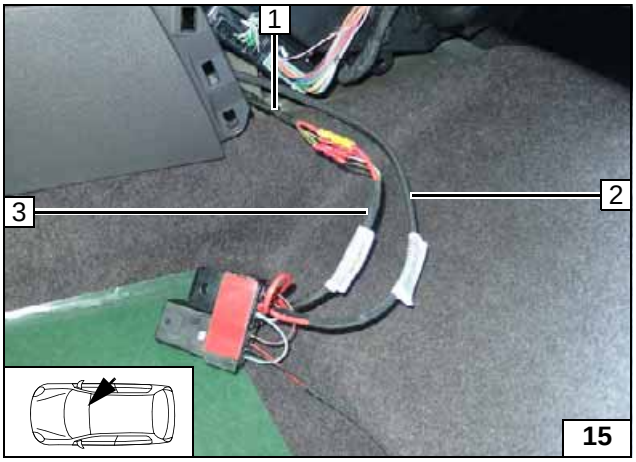
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	ZE	Central electrical box	rt	red
X1	6-pin heater connector	F34	40A fuse	sw	black
X2	2-pin heater connector	GRs	Fan relay	ge	yellow
F1	20A fuse	VS	Connector	be	beige
F2	30A fuse	GRr	Fan controller	ws	white
X10	4-pin connector of heater control	GM	Fan motor	br	brown
		KSG	A/C control unit	gn	green
F3	1A fuse	St 1	Grey 40-pin connector of KB		
F4	25A fuse				
LIN GW	LIN Gateway				
K1	Fan relay				
LIN GW settings:					
Duty Cycle: not relevant				!	Insulate wire end and tie back
Frequency: not relevant					
Voltage: 5.3V				**X**	Cutting point
Function: LIN				Wiring colours may vary.	

Legend



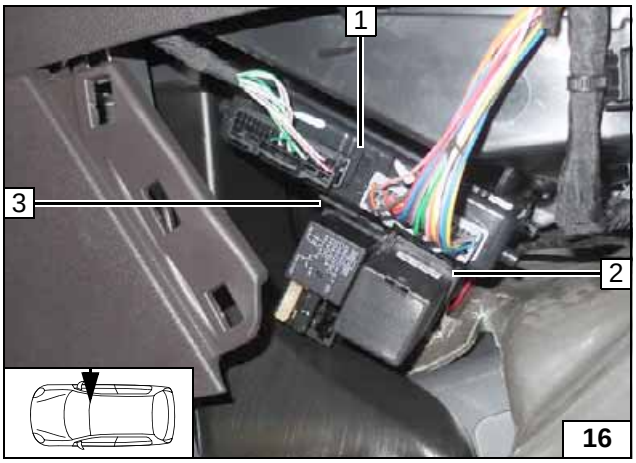
Route wiring harness of heater **1** in the right-hand footwell

Routing lines



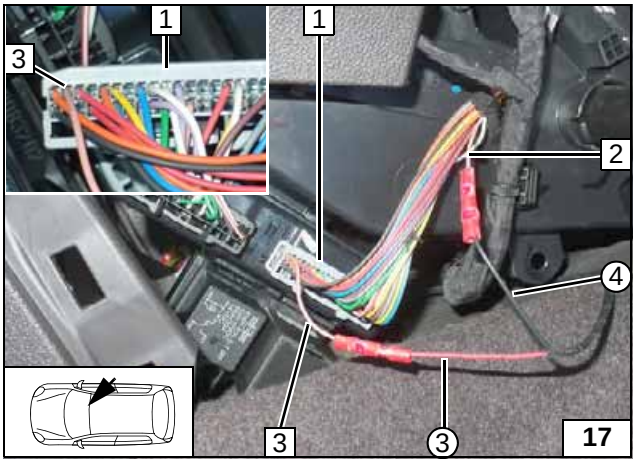
1 Heater wiring harness
2 Route the fan wiring harness in the left-hand footwell
3 Passenger compartment relay and fuse holder wiring harness

Connecting same colour wires of wiring harnesses



Stick passenger compartment fuse holder socket **3** and LIN-GW socket **2** onto A/C control unit **1**.

Installing passenger compartment relay and fuse holder

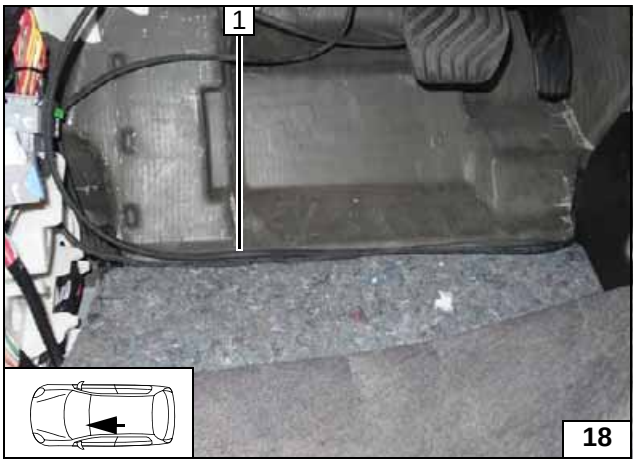


1 Grey (gr) 40-pin connector ST1 of A/C control unit
2 Beige (be) wire of fan controller
3 Beige (be) wire of KSG/pin 22
③ Red (rt) wire of LIN control system wiring harness
④ Black (sw) wire of LIN control system wiring harness

Connector St 1 on wiring side:

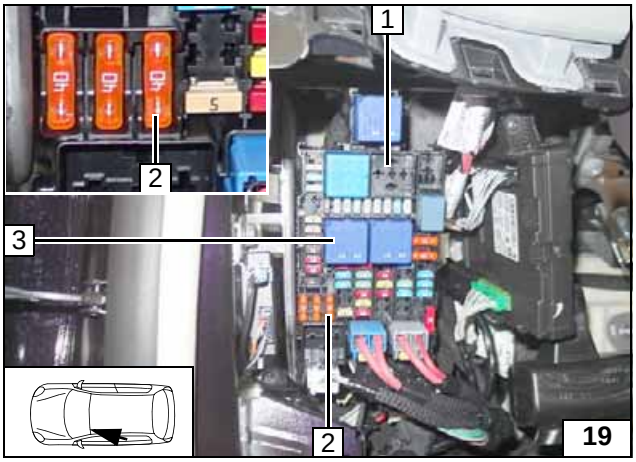
21	22	23		25	26		28	29	30	31				35	36			39	40
1			4	5	6	7	8	9	10	11	12				16			19	20

Connecting A/C control unit



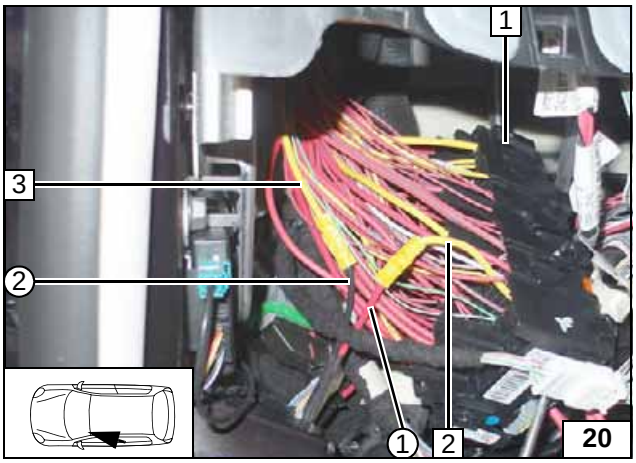
Route fan wiring harness **1** to passenger compartment central electrical box.

Routing lines



1 Central electrical box
2 Original vehicle 40A fan fuse
3 Original vehicle fan relay

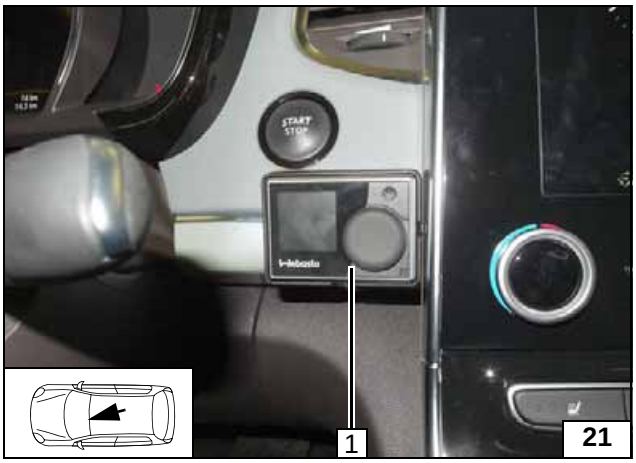
Detaching passenger compartment central electrical box



Connection of passenger compartment central electrical box **1**.

2 Yellow (ge) wire of fuse F34
3 Yellow (ge) wire of connector from VS
① Red (rt) wire of K1/87a, fan wiring harness
② Black (sw) wire of K1/30, fan wiring harness

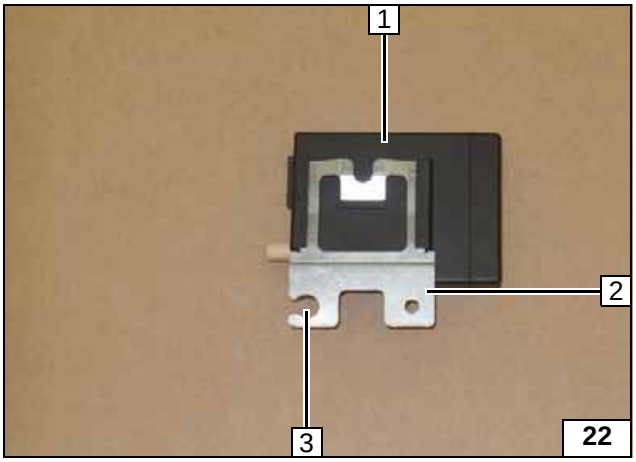
Connecting fan motor



MultiControl CAR Option

1 MultiControl CAR

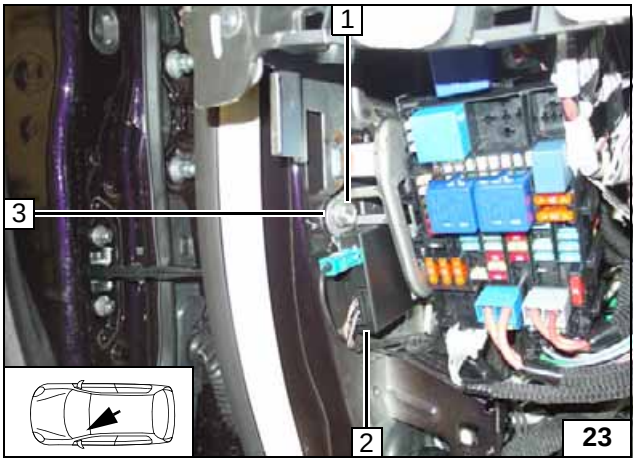
Installing MultiControl CAR



Remote Option (Telestart)

1 Receiver
2 Bracket
3 8.5 mm dia. hole

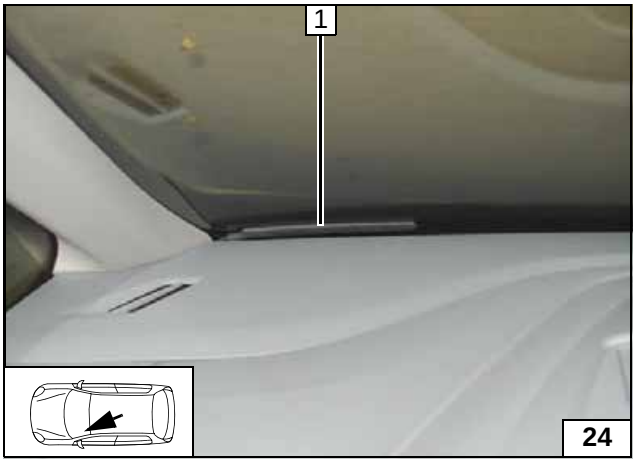
Preparing receiver



Remove original vehicle bolt **1**, position Telestart bracket between vehicle and original vehicle retaining plate at position **3** and secure using original vehicle bolt.

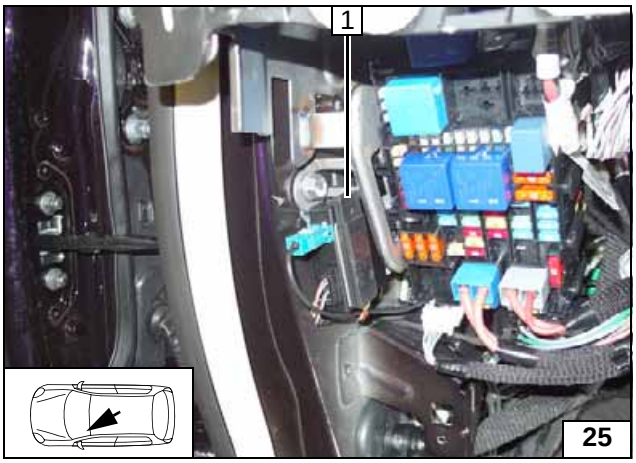
2 Receiver

Installing receiver



1 Aerial

Installing aerial

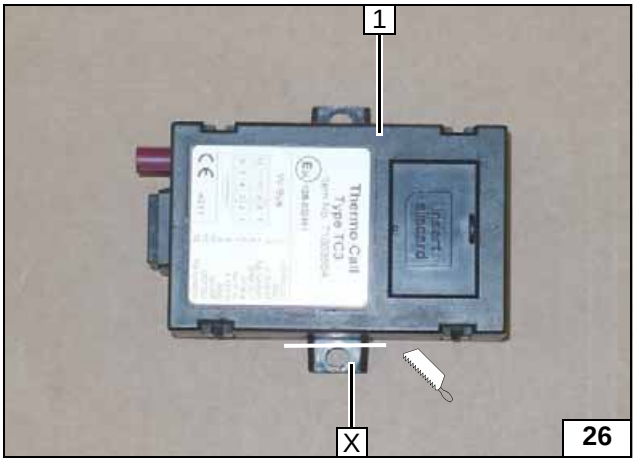


Temperature sensor T100 HTM

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

Installing temperature sensor

ThermoCall Option

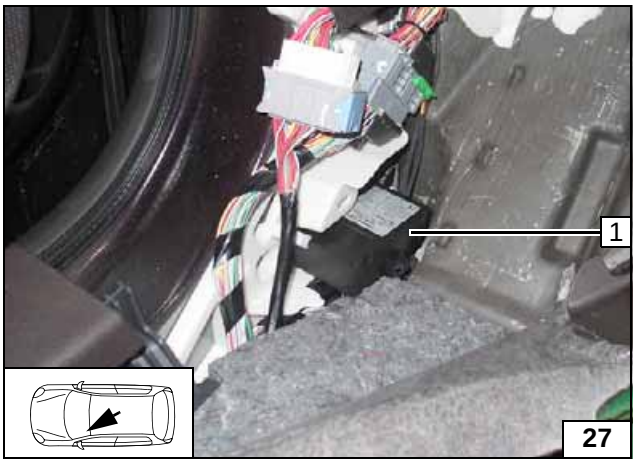


Carefully remove the mounting tab on the receiver!

1 Receiver

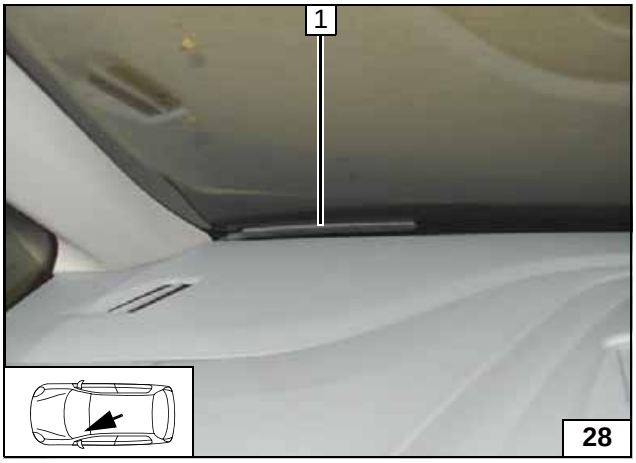
X = 

Preparing receiver



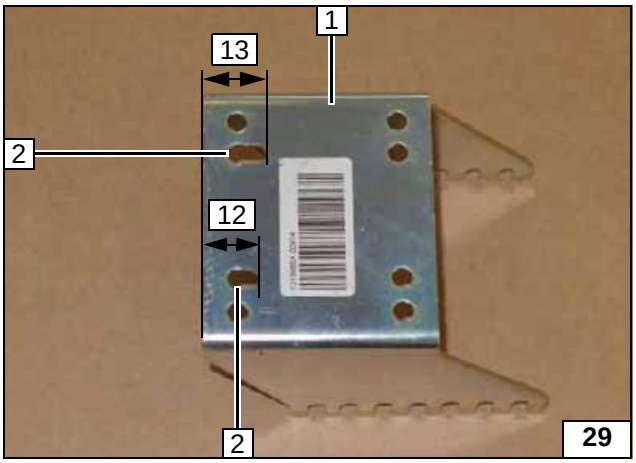
Fasten receiver **1** in line duct using double-sided adhesive tape.

Installing receiver



1 Aerial (optional)

Installing aerial

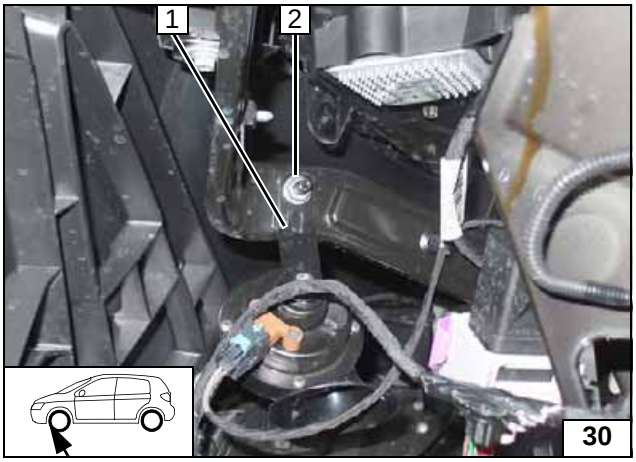


Preparing Bracket

Adapt existing holes **2** as shown to obtain oblong holes [2x].

1 Bracket

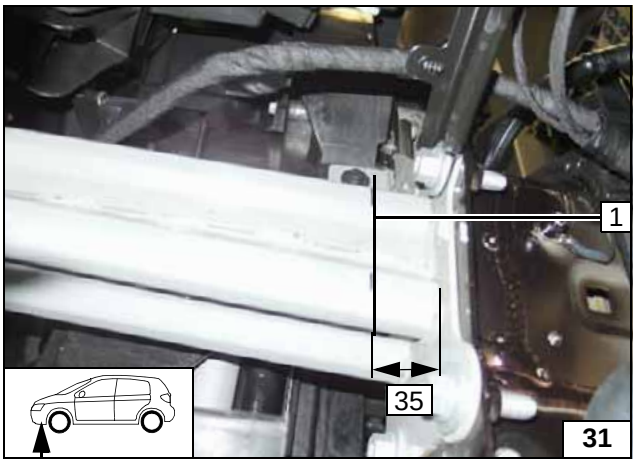
Preparing bracket



Preparing Installation Location

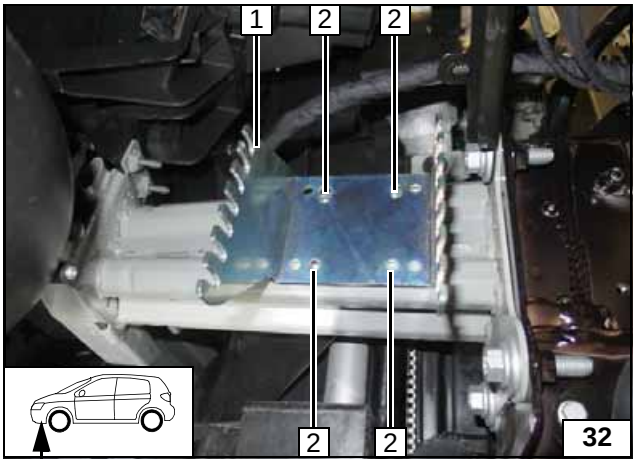
Disassemble horn with bracket **1**. Original vehicle nut **2** will be reused!

Disassembling horn



1 Draw a guide line

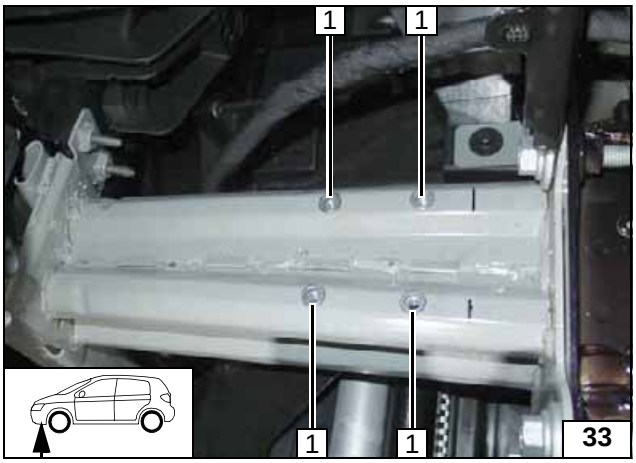
Preparing bracket installation



Position bracket **1** at the guide line and centre on the frame side member (see next figure).

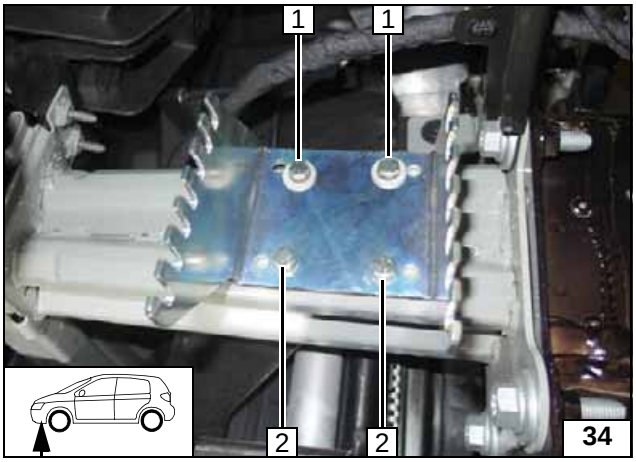
2 Copy hole pattern [4x]

Copying hole pattern



1 9.1 mm dia. hole, insert rivet nut [4x each]

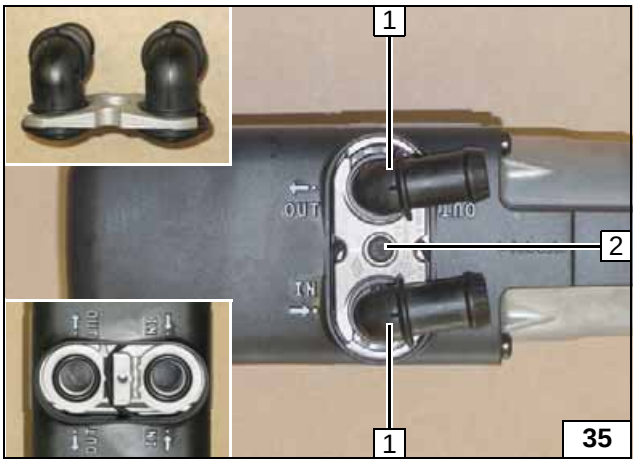
Installing rivet nut



1 M6x20 bolt, spring lockwasher, large diameter washer [2x]
2 M6x20 bolt, spring lockwasher [2x]

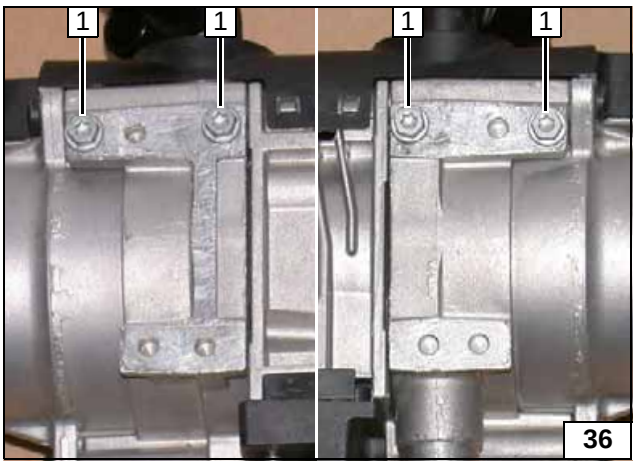
Installing bracket

Preparing Heater



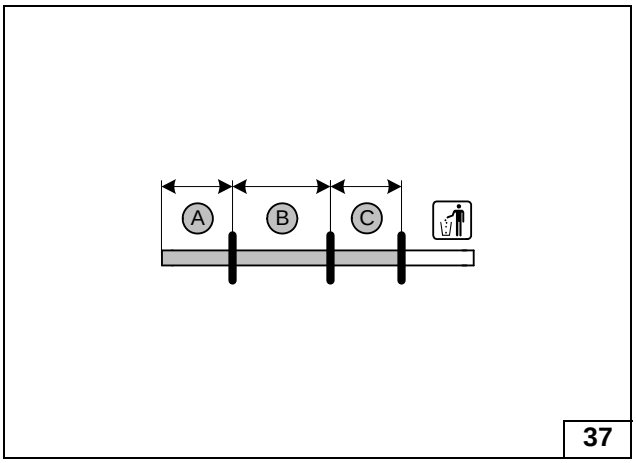
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



Screw 5x13 self-tapping bolts **1** [4x] into existing holes by a maximum of 3 thread turns.

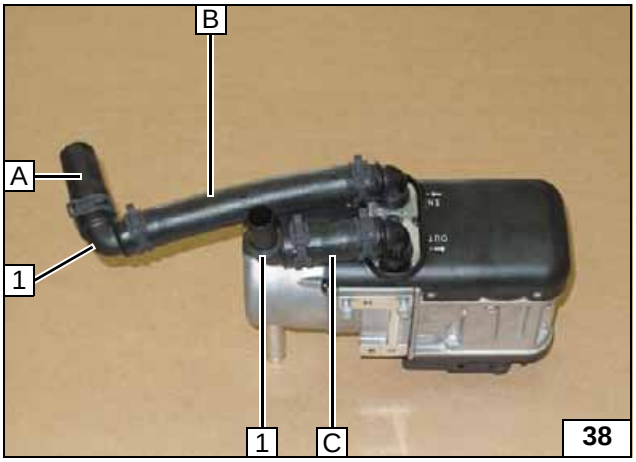
Premounting bolts loosely



37

A = 60
B = 170
C = 60

Cutting hoses to length



38

All spring clips 25 mm dia.

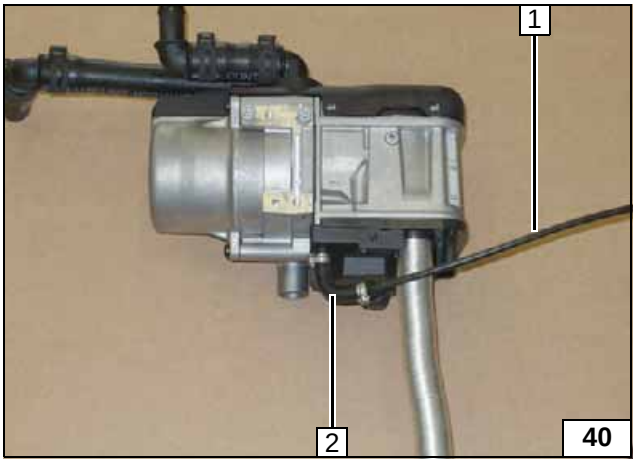
1 90°, 18x18mm connecting pipe [2x]

Premounting hoses

39

1 Combustion air pipe

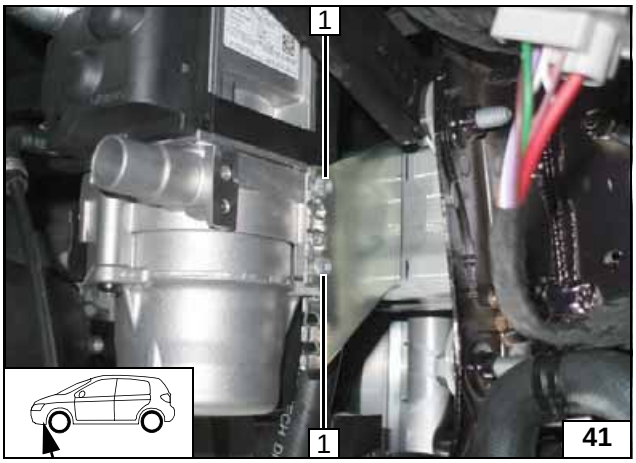
Installing combustion air pipe



40

1 5000 mm long fuel line
2 90° moulded hose, 10mm dia. clamp [2x]

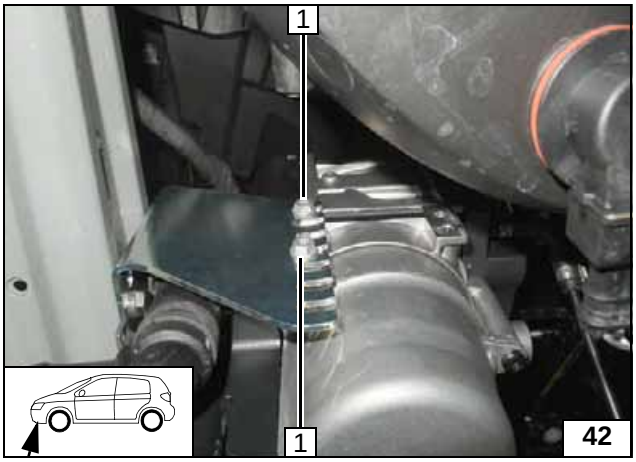
Premounting fuel line



Installing Heater

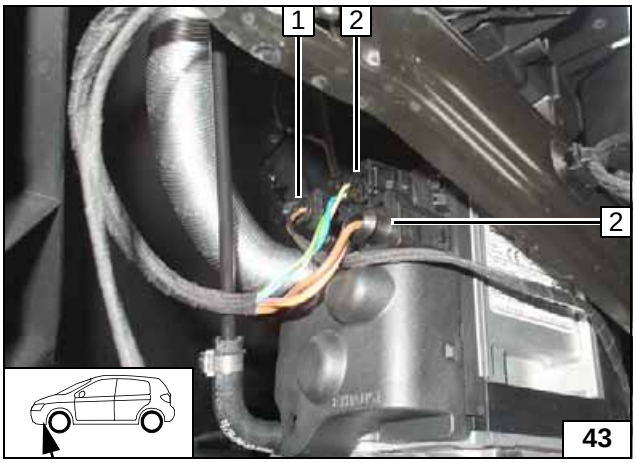
1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



1 Connector of circulating pump wiring harness
2 Heater wiring harness connector [2x]

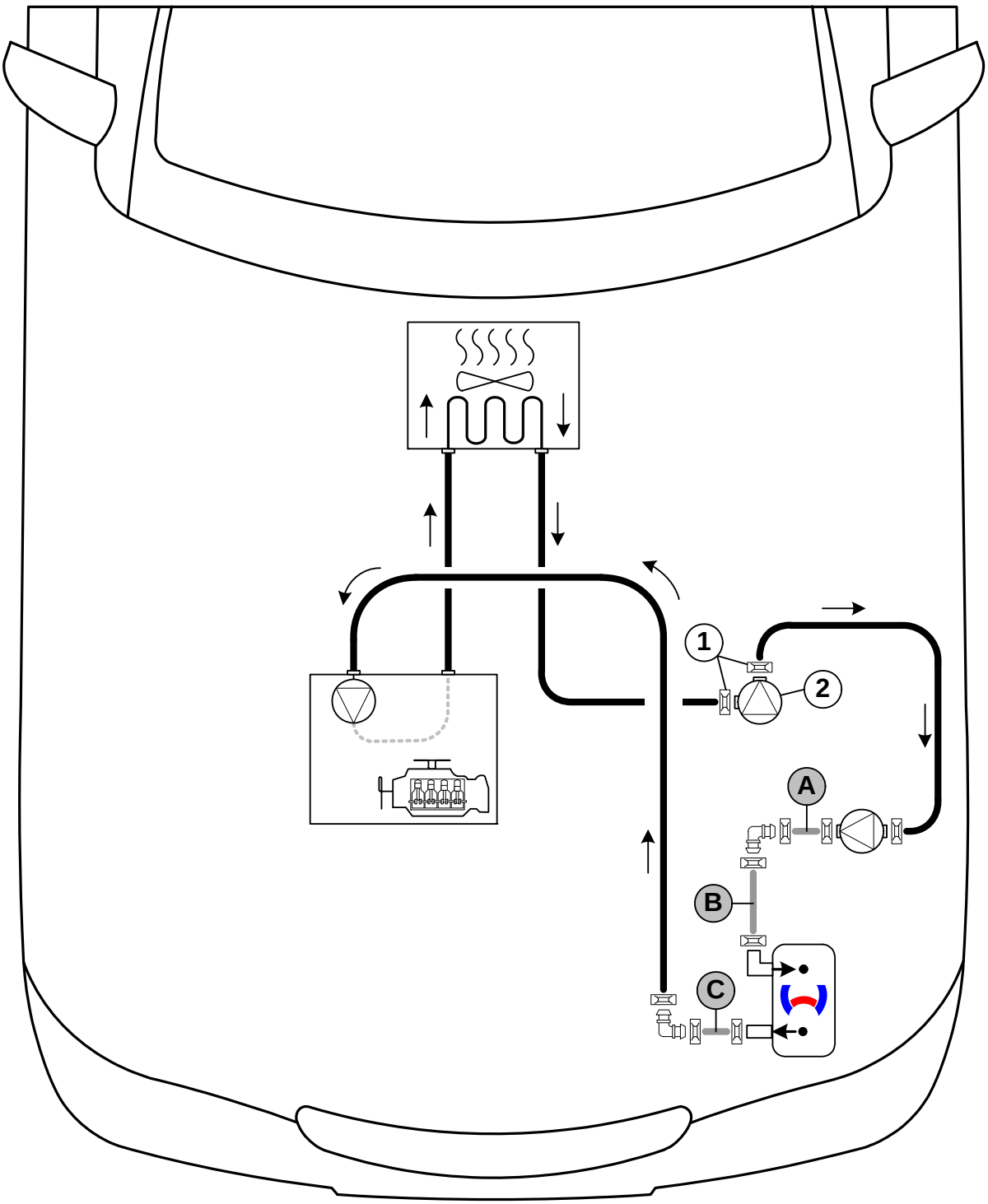
Installing wiring harness of heater

Coolant Circuit

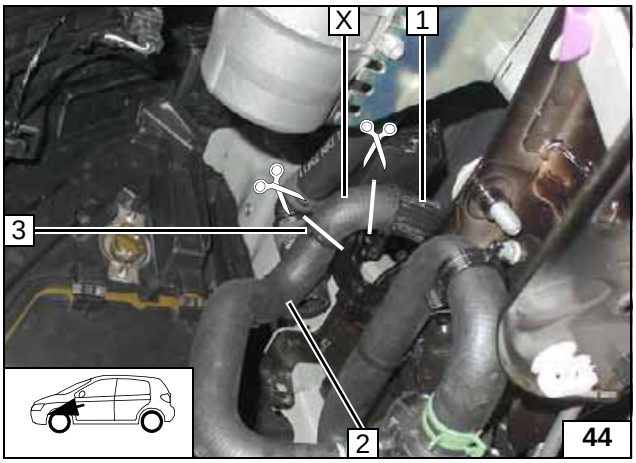
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram



All spring clips without a specific designation = 25 mm dia. All connecting pipes = 18x18 mm dia.
1 = original vehicle spring clips .
2 = Original vehicle circulating pump.

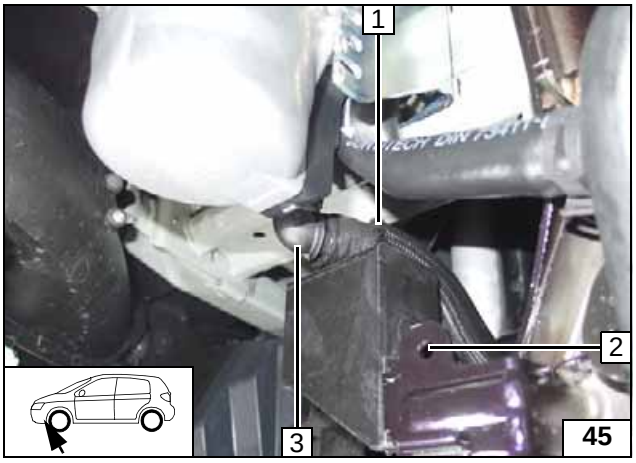


Cut hose of original vehicle circulating pump / engine inlet **1** at the marking.

1 Hose section of engine inlet
2 Hose section of original vehicle circulating pump (heat exchanger outlet)
3 Remove cable tie and discard

X = 

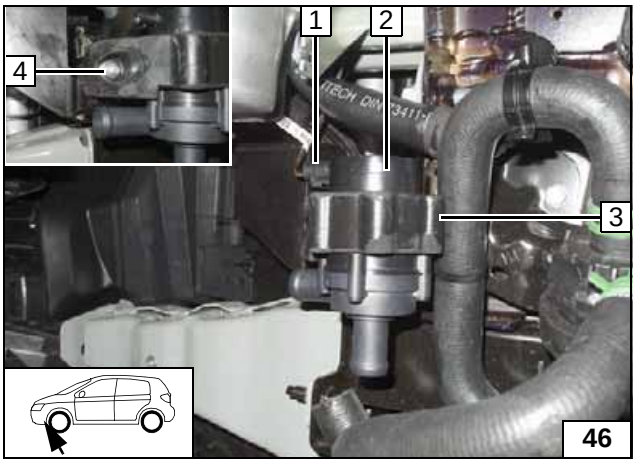
Cutting point



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

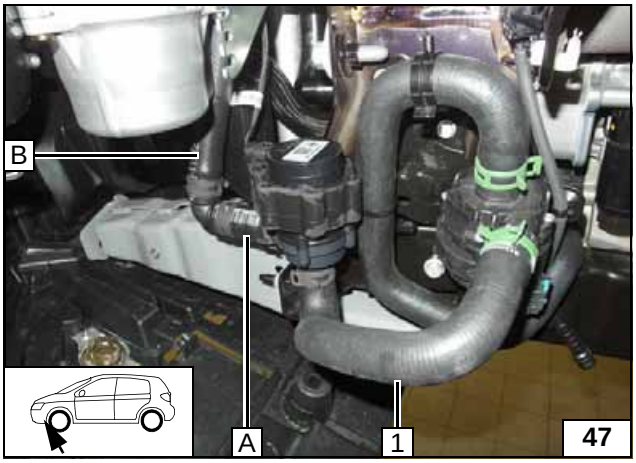
1 Hose section of engine inlet
2 Original vehicle hole for circulating pump
3 Hose C with 90° connecting pipe

Connection on engine inlet



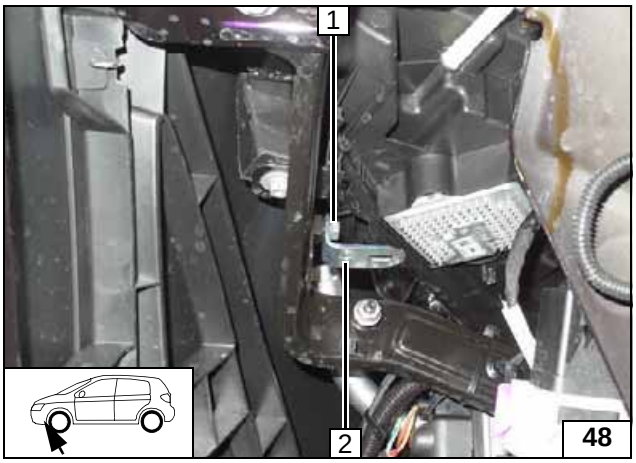
1 Connector of circulating pump wiring harness
2 Circulating pump
3 Circulating pump mount
4 M6x25 bolt, original vehicle hole, flanged nut

Installing circulating pump



1 Hose section of original vehicle circulating pump (heat exchanger outlet)

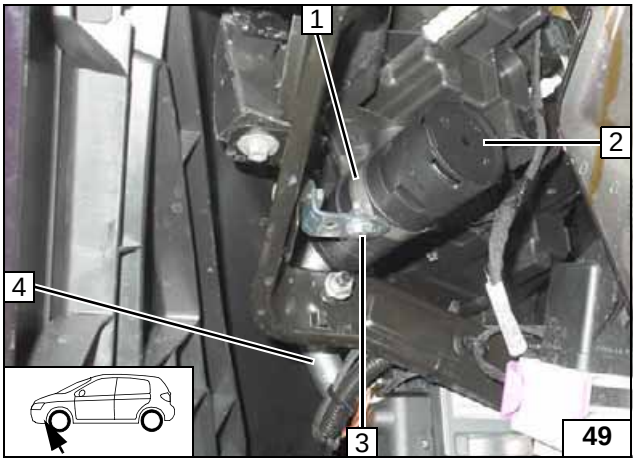
Connecting heat exchanger inlet



Combustion Air

1 Original vehicle bolt, flanged nut
2 Angle bracket

Installing angle bracket



1 51mm dia. clamp
2 Screw silencer onto combustion air pipe
3 M5x16 bolt, large diameter washer, flanged nut
4 Combustion air pipe

Installing silencer

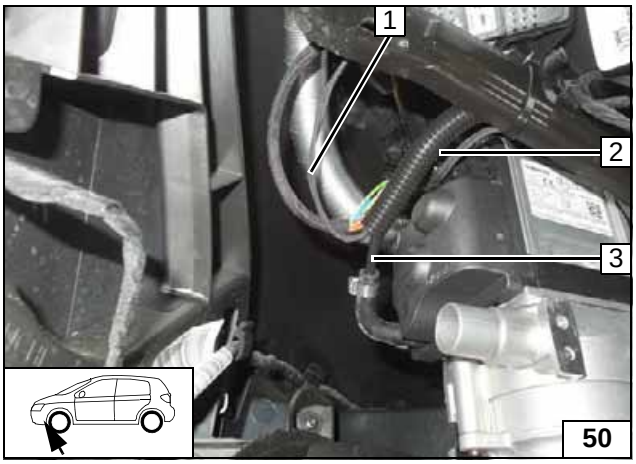
Fuel

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.

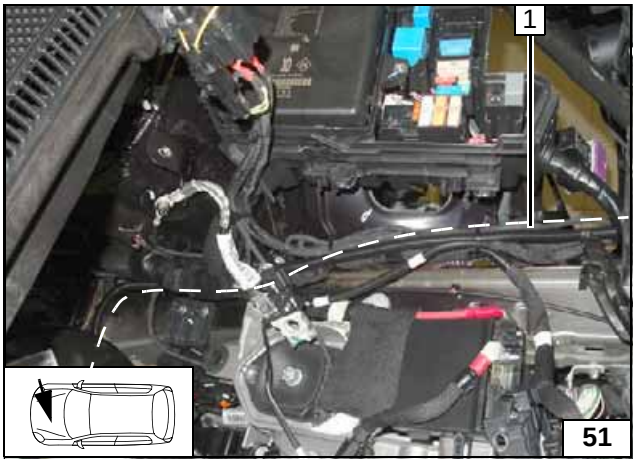
Route fuel line and metering pump wiring harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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



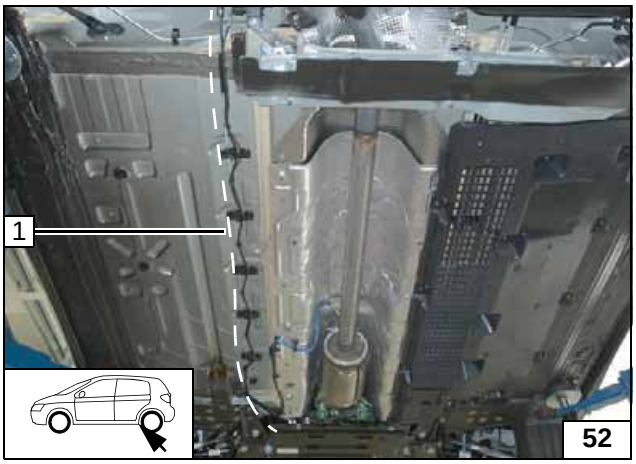
Route wiring harness of metering pump **1** and fuel line **3** in 2100mm corrugated tube **2** to the engine compartment.

Routing lines



Route corrugated tube **1** with wiring harness of metering pump and fuel line along original vehicle lines to the firewall.
Then route along the brake line to the underbody.

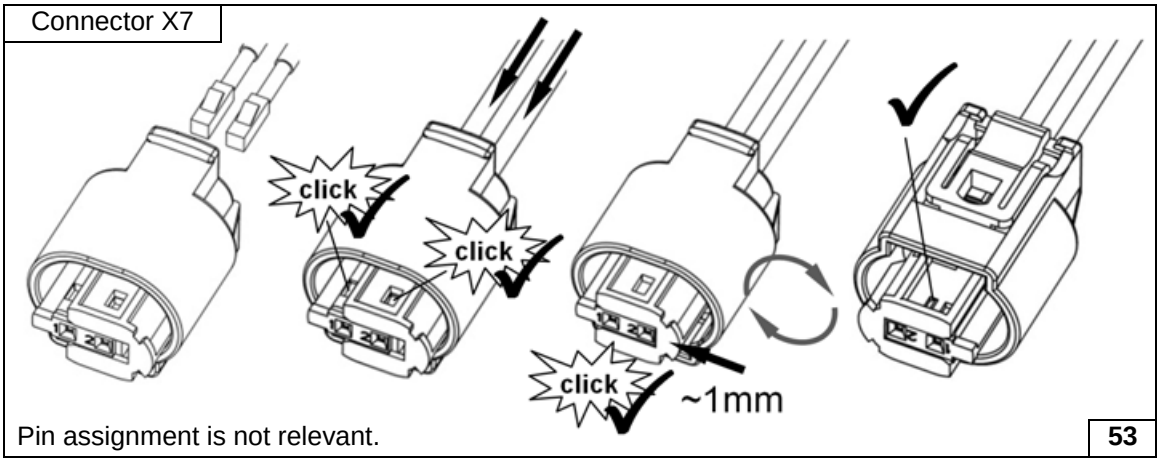
Routing lines



1 Fuel line and wiring harness of metering pump

Routing lines

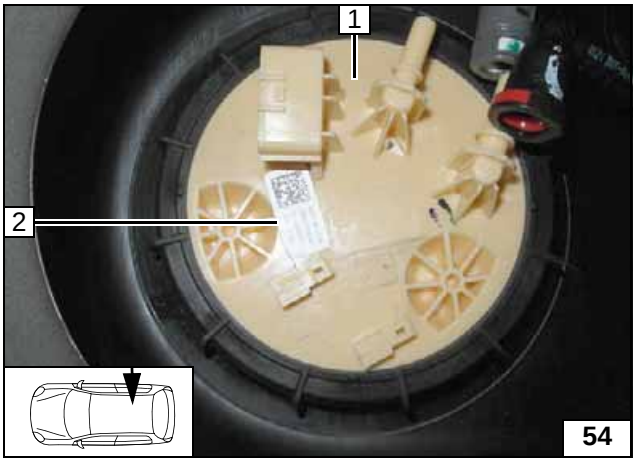
Connector X7



Pin assignment is not relevant.

53

Completing metering pump connector



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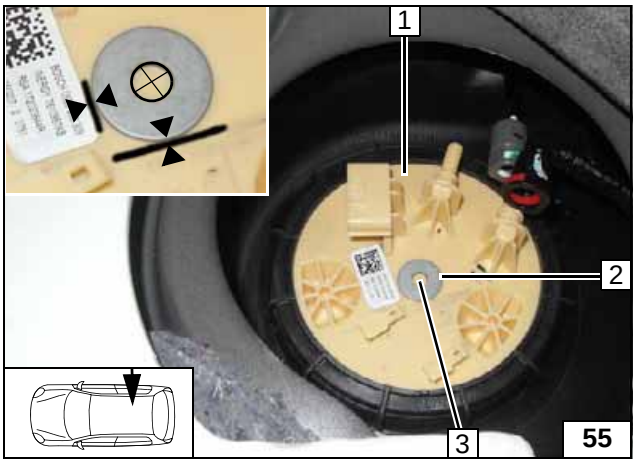
Installing FuelFix

Work step F1.

1 Fuel tank sending unit
2 Reposition sticker

Moving sticker

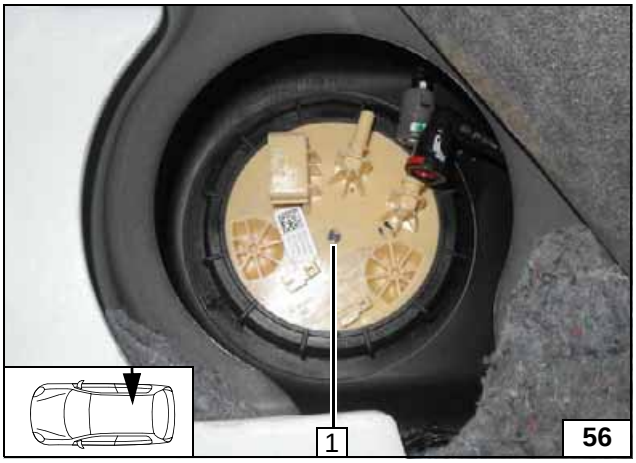


55

Work step F2.

1 Fuel tank sending unit
2 Position washer with outer dia. d_a = 21.6 mm as template against the raised parts
3 Hole pattern

Copying hole pattern

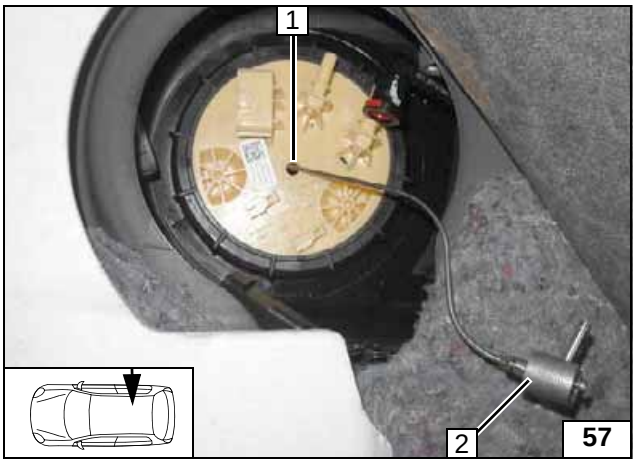


56

Work step F3.

1 Hole made with provided drill

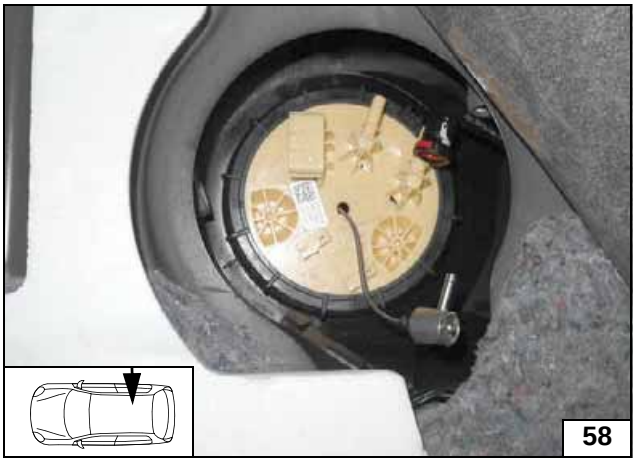
Hole for FuelFix



Work steps F4 and F5.

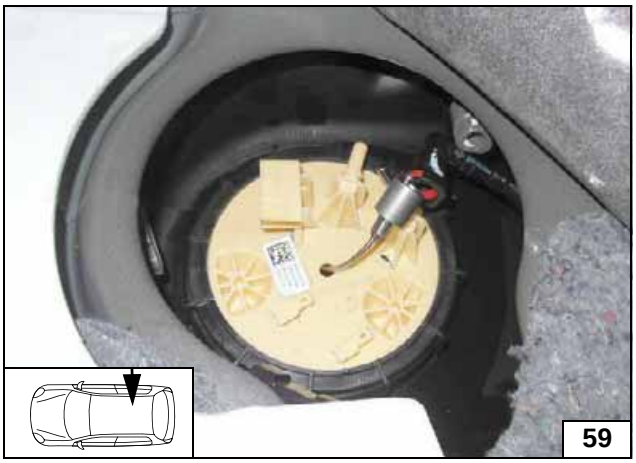
Bend FuelFix **2** according to template and cut to length.
Insert into hole **1**.

Inserting FuelFix



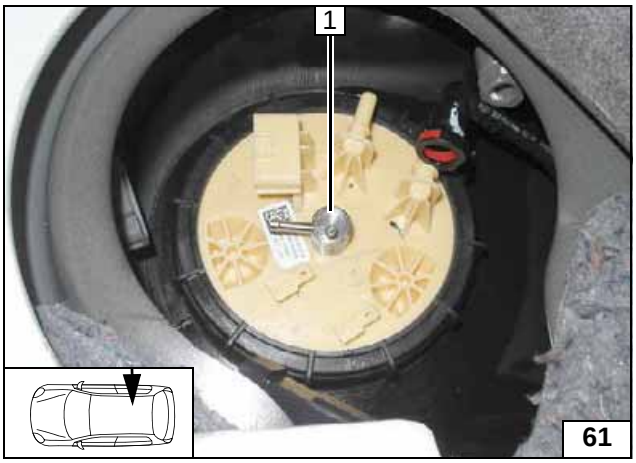
Work step 5.

Inserting FuelFix



Inserting FuelFix

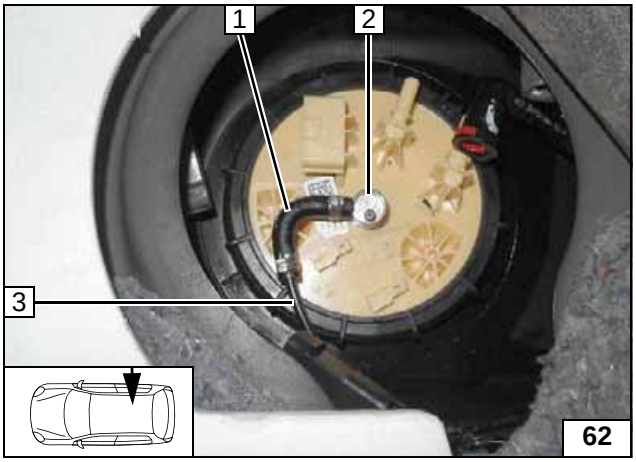
Inserting FuelFix



Work steps F5.3 and F5.4.

Align FuelFix **1** as shown.

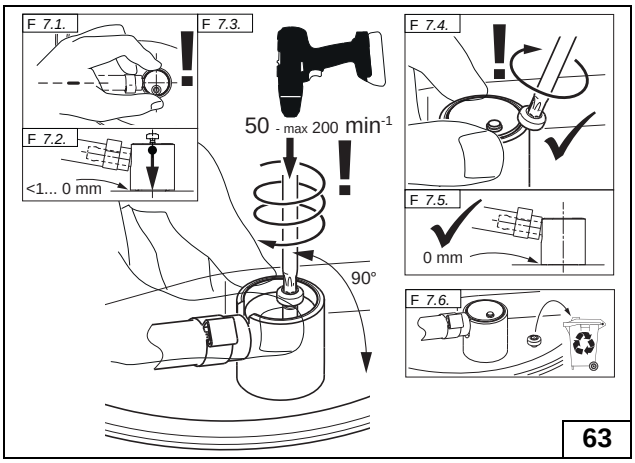
Aligning FuelFix



Work step F6.

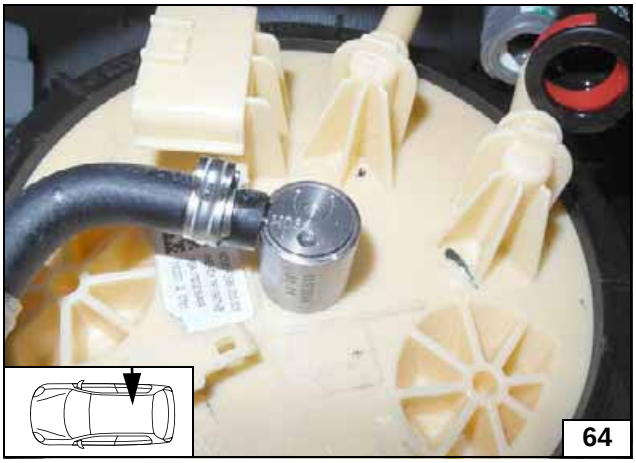
1 90° moulded hose, 10 mm dia. clamp [2x]
2 FuelFix
3 1500 mm fuel line

Connecting fuel line



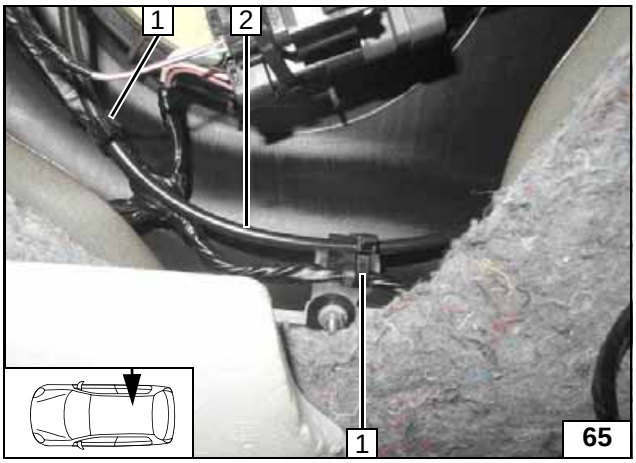
Work step F7.

Installing FuelFix



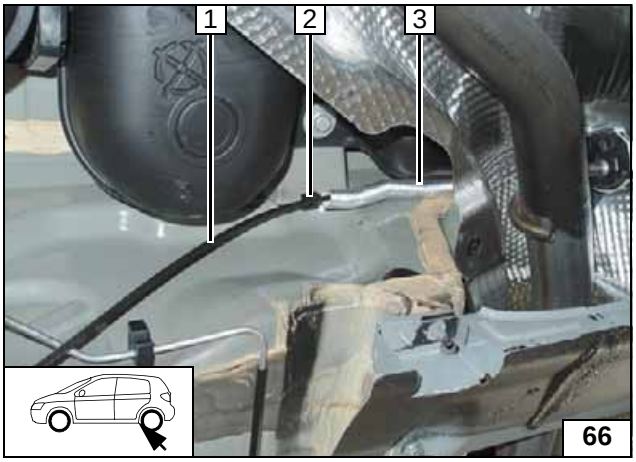
Work step F8.

Ensuring firm seating of FuelFix



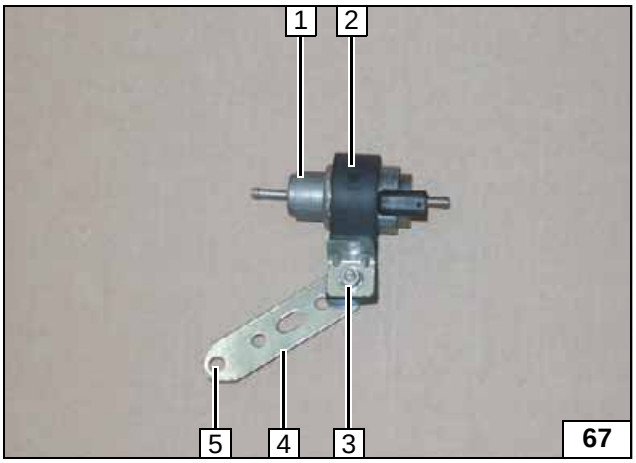
1 Cable tie for strain relief [2x]
2 Fuel line of FuelFix

Securing fuel line



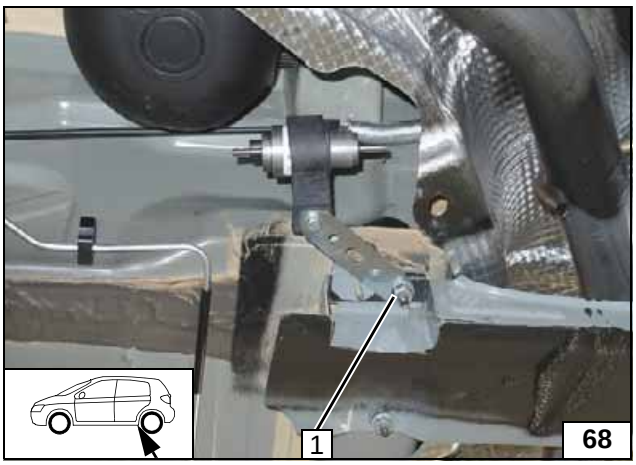
1 Fuel line of FuelFix
2 Clip-type cable tie
3 Heat protection hose

Routing lines



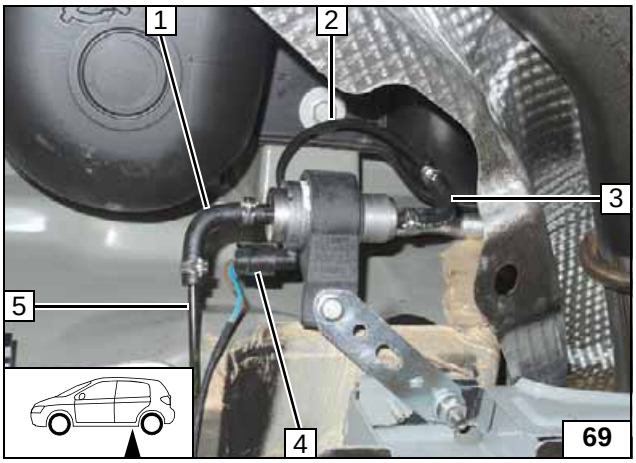
1 Metering pump
2 Metering pump mount
3 M6x25 bolt, support angle bracket, flanged nut
4 Perforated bracket
5 Drill out hole to 8.5 mm dia.

Premounting metering pump



1 Original vehicle stud bolt with nut

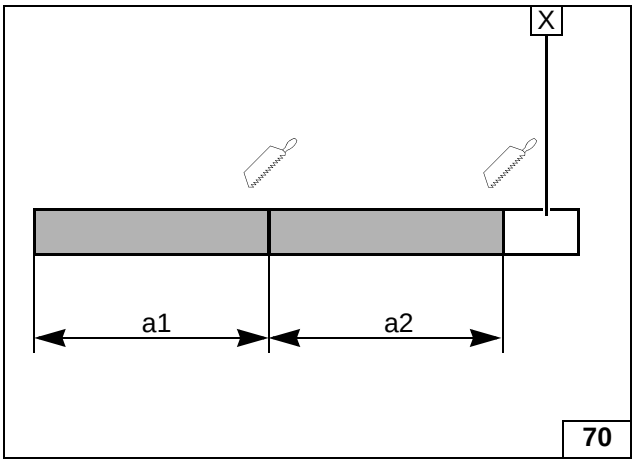
Installing metering pump



Ensure sufficient distance from neighbouring components, correct if necessary.

1 90° moulded hose, 10 mm dia. clamp [2x]
2 Fuel line of FuelFix
3 90° moulded hose, 10 mm dia. clamp [2x]
4 Wiring harness of metering pump, connector
5 Fuel line of heater

Connecting metering pump

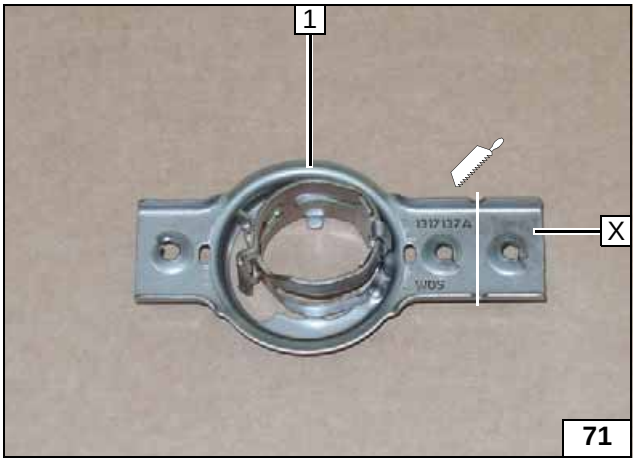


Exhaust Gas

a1 = 330
a2 = 380

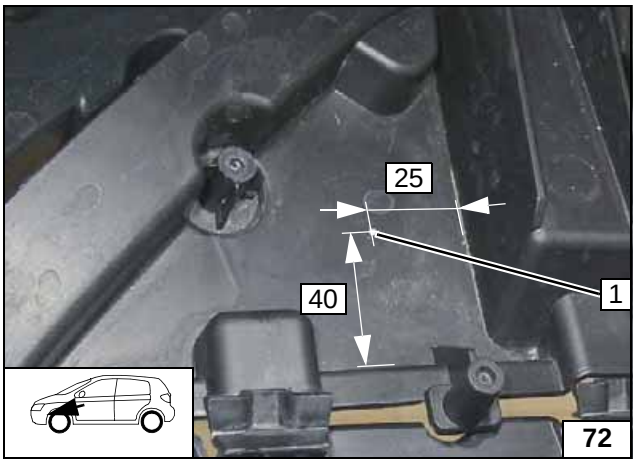
X =

Preparing exhaust pipe



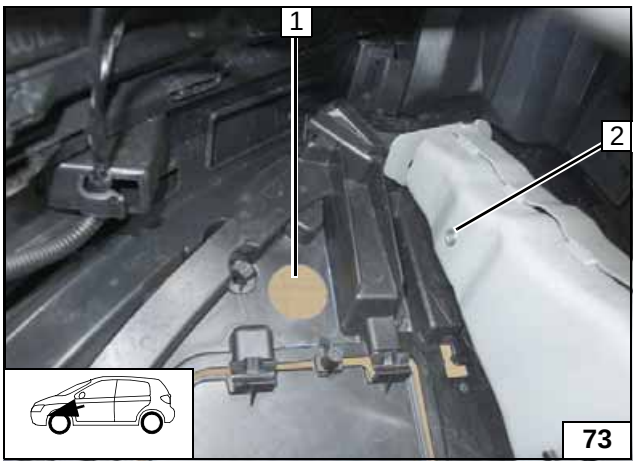
X =

Preparing exhaust end fastener



Work step 1 of the installation instructions.
Copy hole pattern **1**.

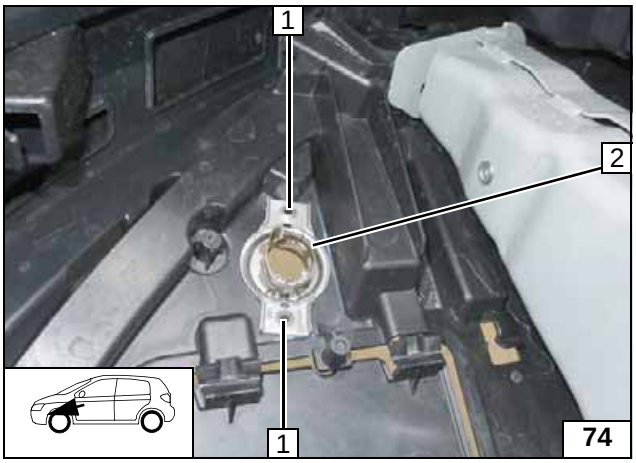
Preparing exhaust installation



Hole **1** as per work step 1 of the installation instructions.

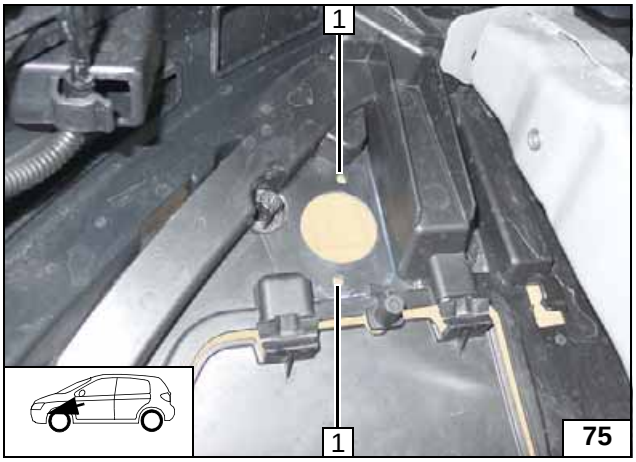
2 Insert rivet nut, existing hole

Hole in splash guard



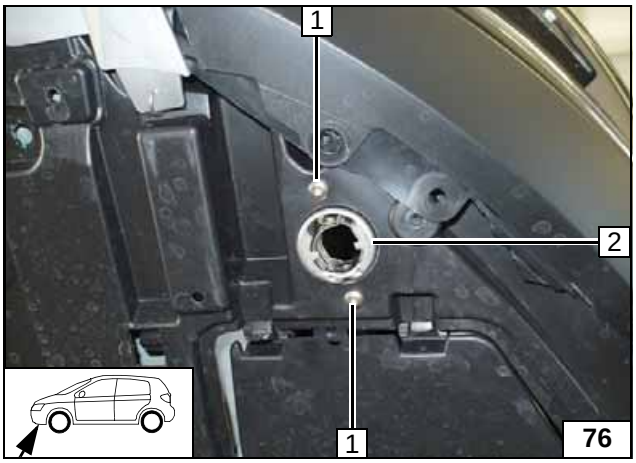
Position exhaust end fastener **2** as per work step 3 of the installation instructions and copy hole pattern **1** [2x].

Copying hole pattern



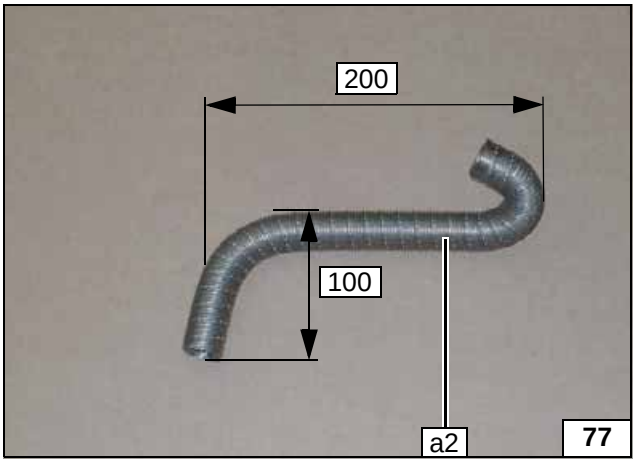
Hole **1** [2x] as per work step 4 of the installation instructions.

Hole in splash guard

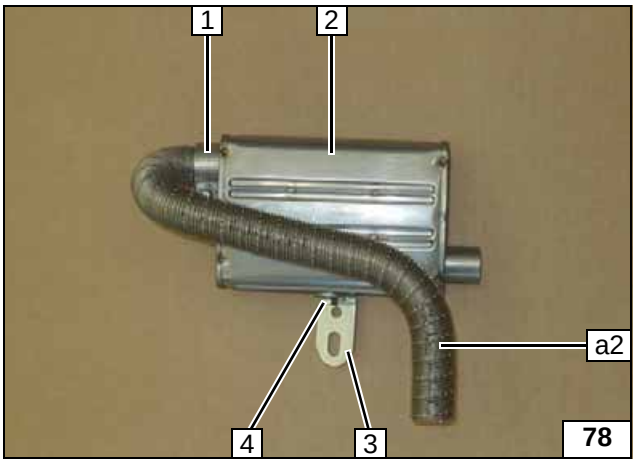


1 5x13 self-tapping screw [2x] as per work step 5 of the installation instructions
2 Exhaust end fastener

Installing exhaust end fastener

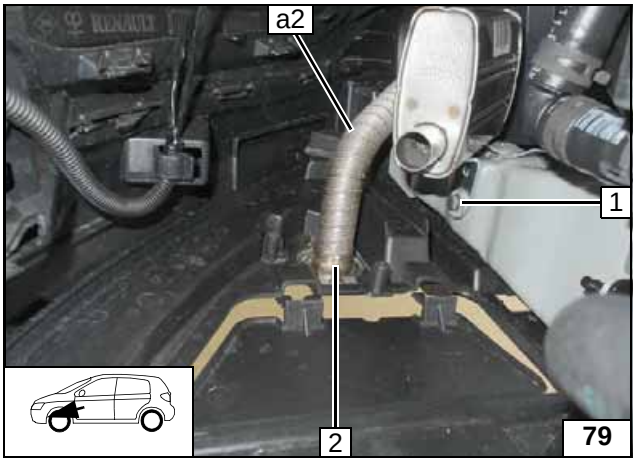


Bending exhaust pipe a2



1 Hose clamp
2 Silencer
3 Angle bracket
4 M6x16 bolt, spring lockwasher

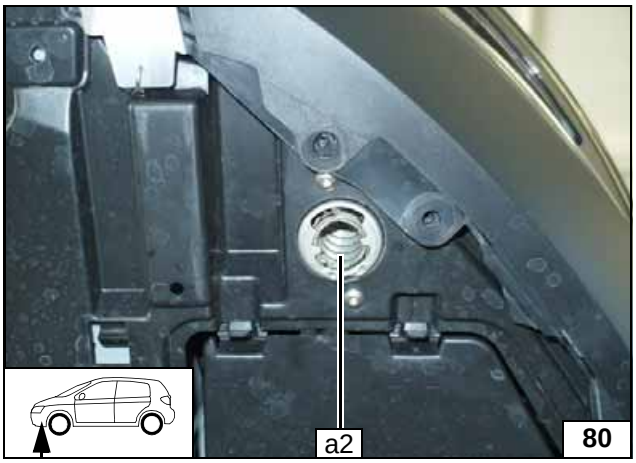
Premounting exhaust silencer



Ensure sufficient distance from neighbouring components, correct if necessary.

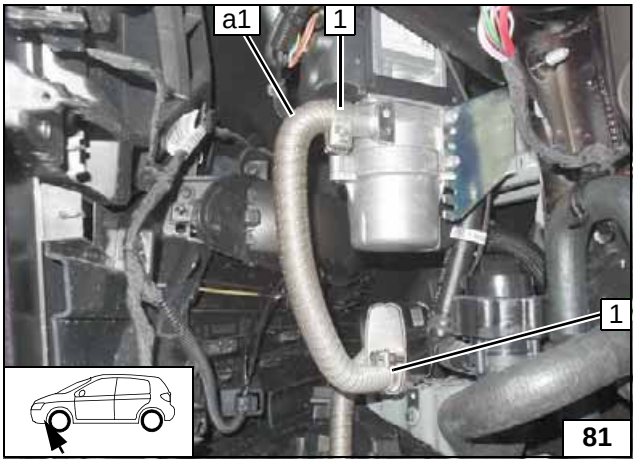
1 M6x20 bolt, spring lockwasher, large diameter washer
2 Exhaust end fastener

Aligning exhaust pipe a2



Install exhaust pipe **a2** as per work steps 6 - 8 of the installation instructions.

Installing exhaust pipe a2



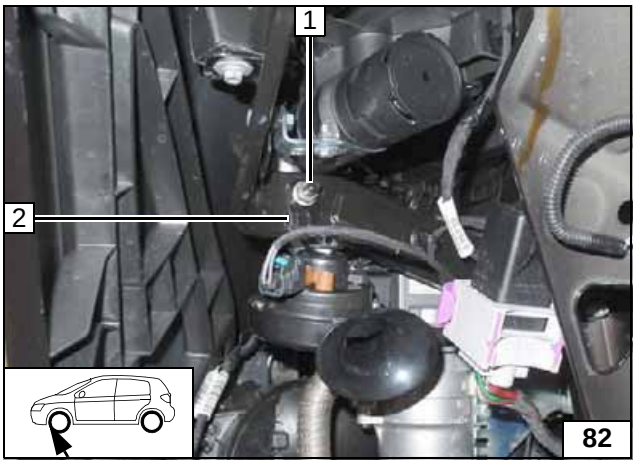
1 Hose clamp [2x]

Installing exhaust pipe a1

Final Work

Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate loose wire ends and tie back.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **Make settings on the A/C control panel according to the 'operating instructions'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**



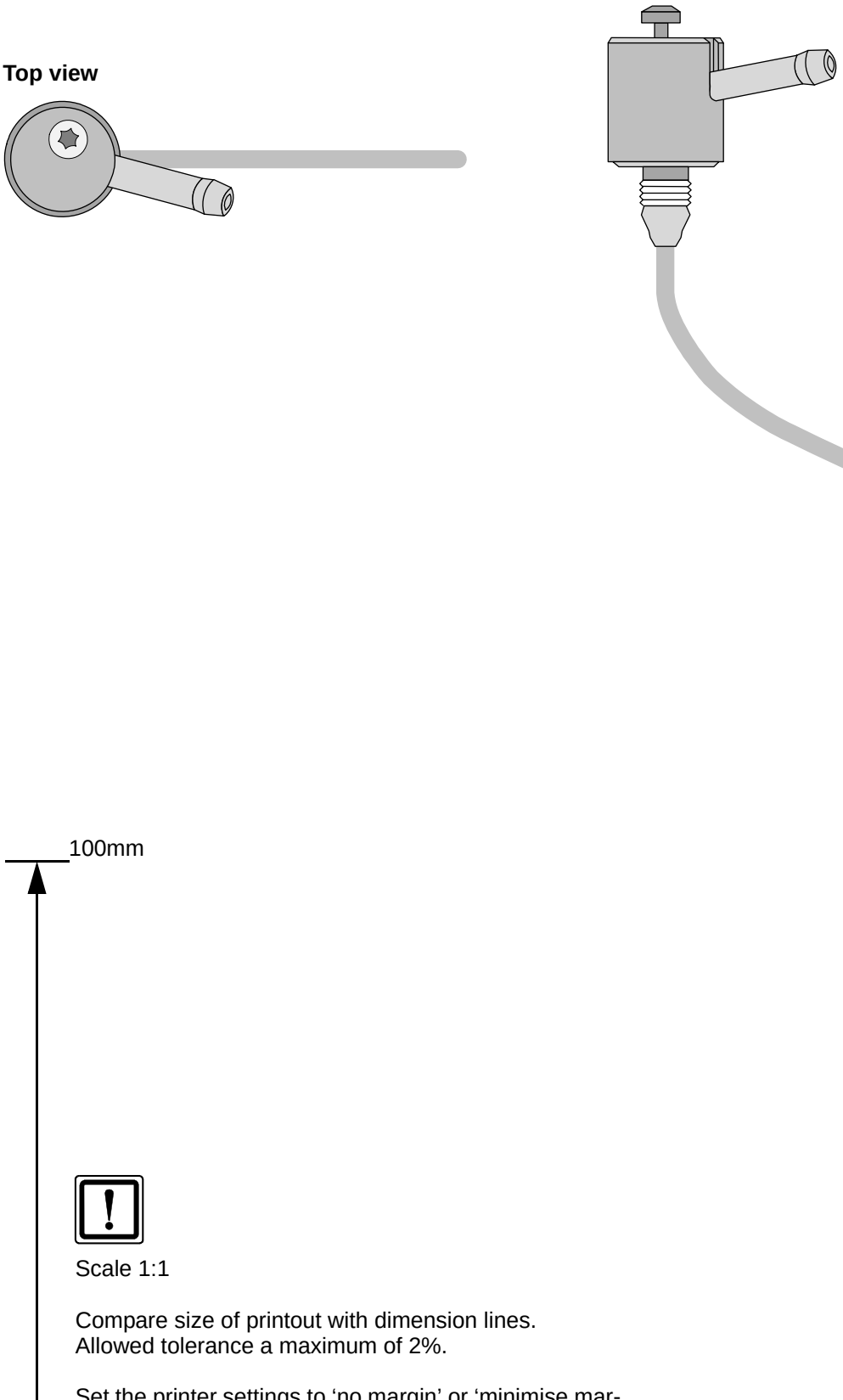
Install horn with bracket **2** and original vehicle nut **1**. Align horn bracket by bending it in doing so ensure sufficient distance from neighbouring components.

Installing horn

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

FuelFix Template

Top view



100mm

Scale 1:1

Compare size of printout with dimension lines.
Allowed 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

Please remove page and add to the vehicle operating instructions.

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

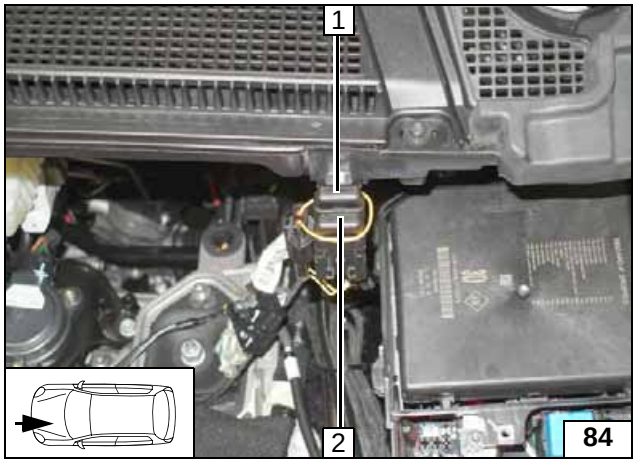
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

A/C control panel

1 Air outlet to windscreen
2 Set temperature on both sides to ‘HI’

Engine compartment fuses



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

Passenger compartment fuses

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