Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Renault Koleos

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Renault	Koleos	Y	e11 * 2001 / 116 * 0261 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
2.0 D	Diesel	6-speed SG	110	1995	M9R
2.0 D	Diesel	6-speed AG	127	1995	M9R

SG = manual transmission
AG = automatic transmission

From model year 2009
Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning
Front fog lights
2WD / 4WD
Cornering light
Xenon with headlight washer system
Euro 5 Emission standard

Not verified: Manual air-conditioning
Passenger compartment monitoring

Total installation time: approx. 9 hours

Renault Koleos

Table of Contents

Necessary Components

- Basic delivery scope of *Thermo Top Evo* based on price list
- Installation kit for Renault Koleos 2009 Diesel: **1316862A**
- 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

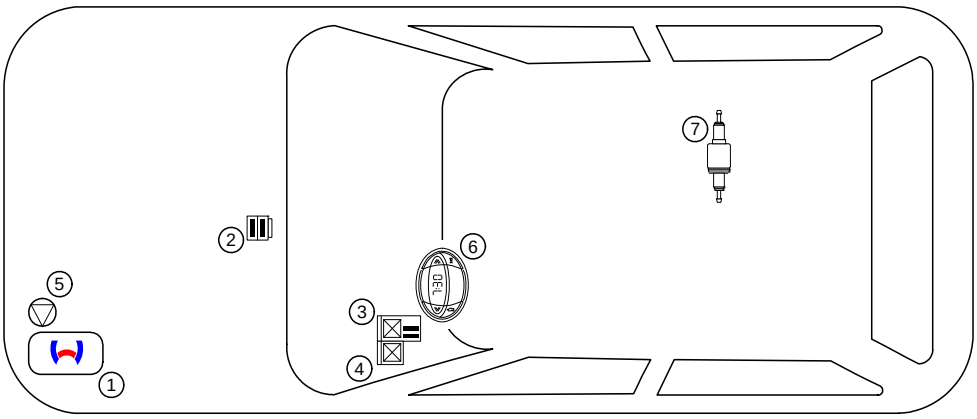
Installation instructions:

- 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 available space and manufacturer's instructions, we recommend the use of a vehicle battery with more electrical capacity.

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment relay and fuse holder
4. IPCU
5. Circulating pump
6. Digital timer
7. Metering pump



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 227).

The heater may not be cleaned with a high-pressure cleaner.

1.3 Please note

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

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

Important

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs, installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on electronic components 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 an IPCU, 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

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.

Renault Koleos

Information on Validity

This installation documentation applies to Renault Koleos Diesel vehicles - for validity, see page 1 - from model year 2009 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

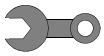
Dimensions
- All dimensions are in mm.

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 injury or fatal accidents.

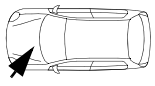
Specific risk of damage to components.

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.



Renault Koleos

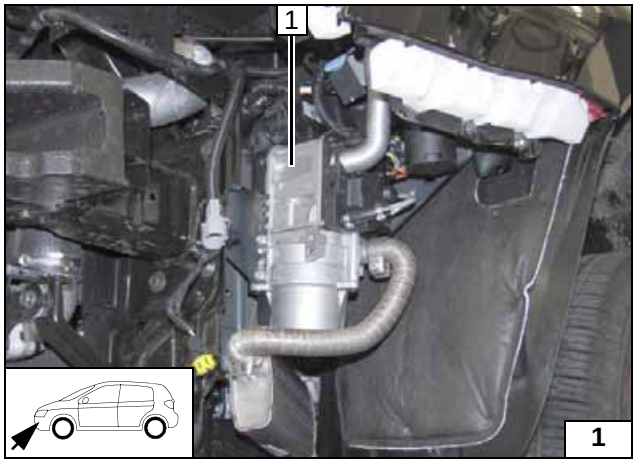
Preliminary Work

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.
- Remove the air filter completely, together with the intake hose.
- Remove the engine design cover.
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Remove the rear seat cushion.
- Open the tank-fitting service lid.
- Remove the lower cover of the instrument panel in the footwell on the left.
- Remove the side cover of the instrument panel on the left.
- Remove the lower cover of the instrument panel on the left.
- Detach the fuse carrier on the left in the passenger compartment.
- Remove the lower A-pillar trim in the footwell on the left (only with Telestart).
- Remove the A/C control panel in accordance with the manufacturer's instructions.

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

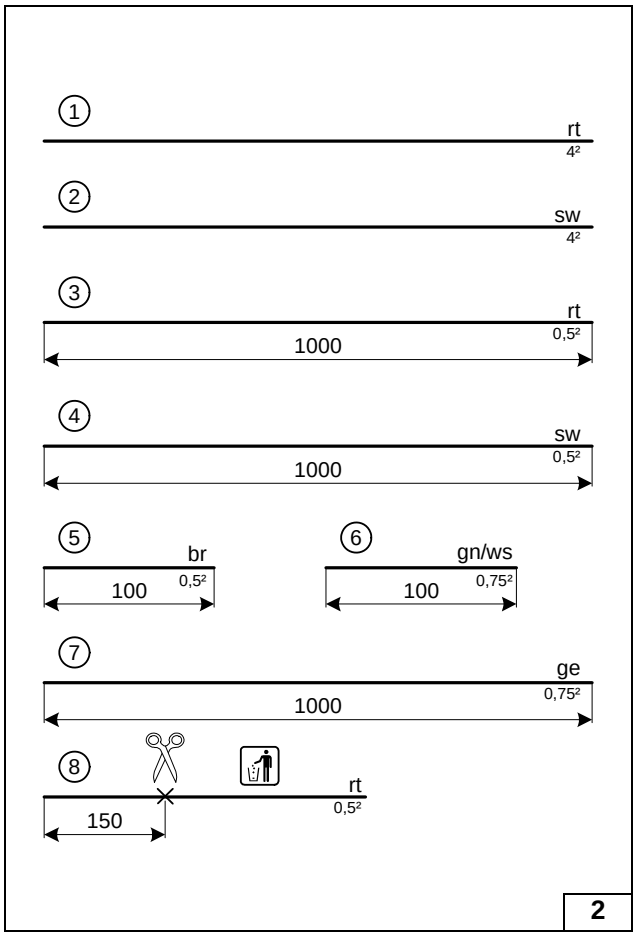
Installation location

Preparing Electrical System

Wire sections retain their numbering in the entire document.

Pull wire section ③,④ and ⑦ in protective sleeving provided.

Cutting wires to length



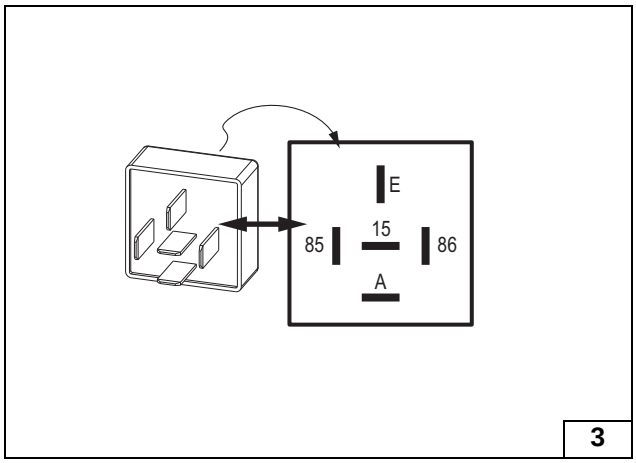
2

Check the IPCU settings upon initial operation of the heater and adjust if necessary.

Settings:

Duty cycle: 52%
Frequency: 2000Hz
Voltage: not relevant
Function: Low side

Checking IPCU

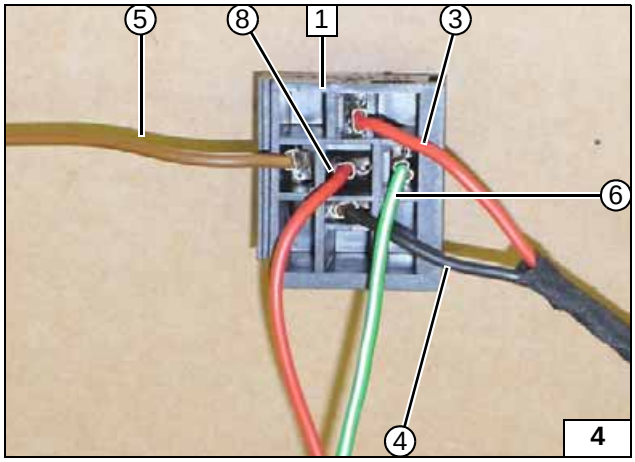


3

Connect wires according to following wiring diagram.

1 IPCU socket
③ Red (rt) wire of IPCU/E
④ Black (sw) wire of IPCU/A
⑤ Brown (br) wire of IPCU/85
⑥ Green/white (gn/ws) wire of IPCU/86
⑧ Red (rt) wire of IPCU/15

Preparing IPCU socket



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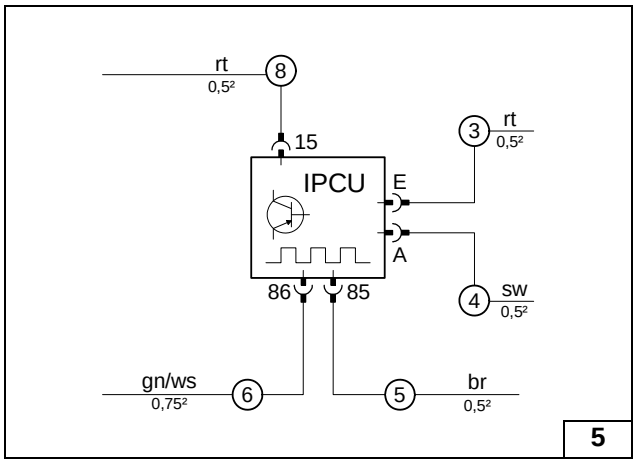

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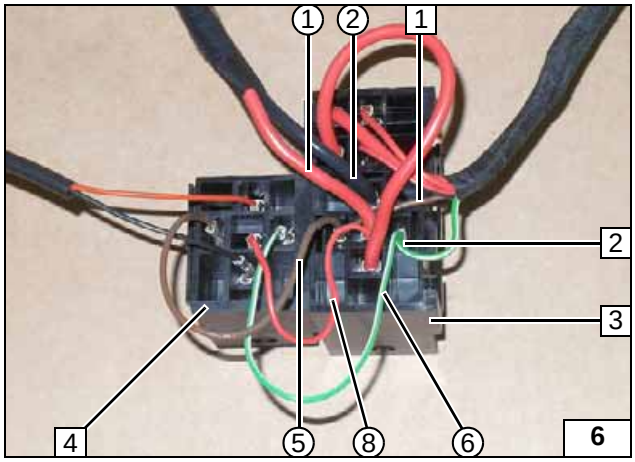
Preparing IPCU socket



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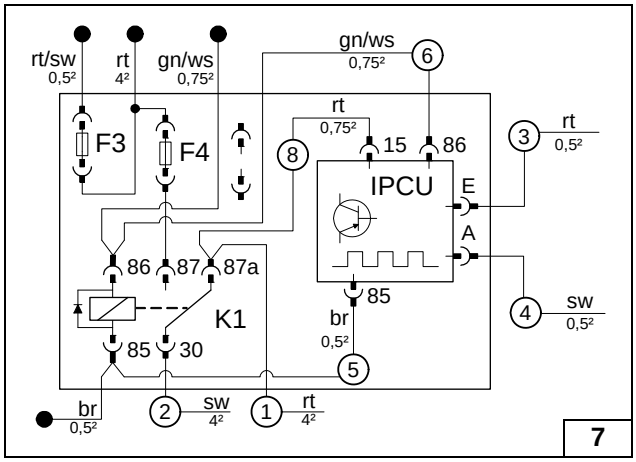
Interlock socket of IPCU **4** and passenger compartment relay and fuse holder **3**. Detach and remove contacts of K1/86 and K1/85. Connect wires according to following wiring diagram using provided contacts.

1 Brown (br) wire of K1/85
2 Green/white (gn/ws) wire of K1/86
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30
⑤ Brown (br) wire of IPCU/85 to K1/85
⑥ Green/white (gn/ws) wire of IPCU/86 to K1/86
⑧ Red (rt) wire of IPCU/15 to K1/87a

Preparing passenger compartment relay and fuse holder



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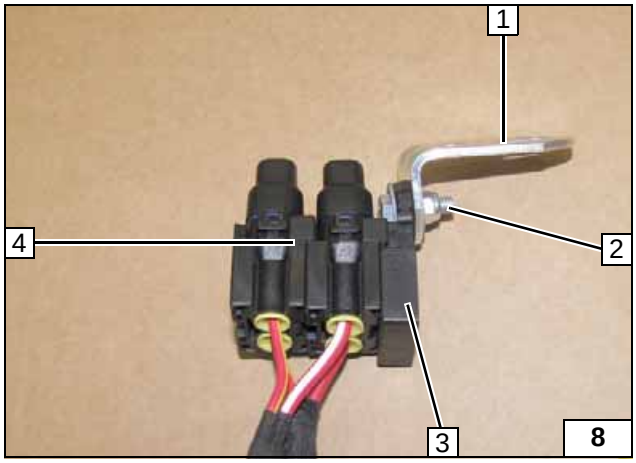
Preparing K1 relay, IPCU and F4



8

1 Angle bracket
2 M5x16 bolt, large diameter washer [2x], nut
3 Retaining plate of fuse holder
4 Fuses F1-2 mounted

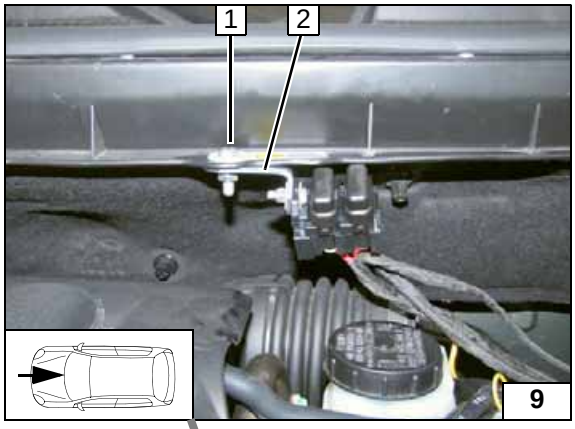
Preparing fuse holder of engine compartment

Electrical System

Engine compartment fuse holder

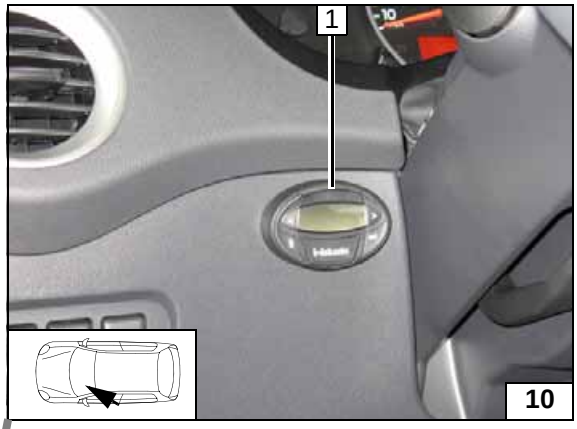
Remove the original vehicle clip on position **1**.

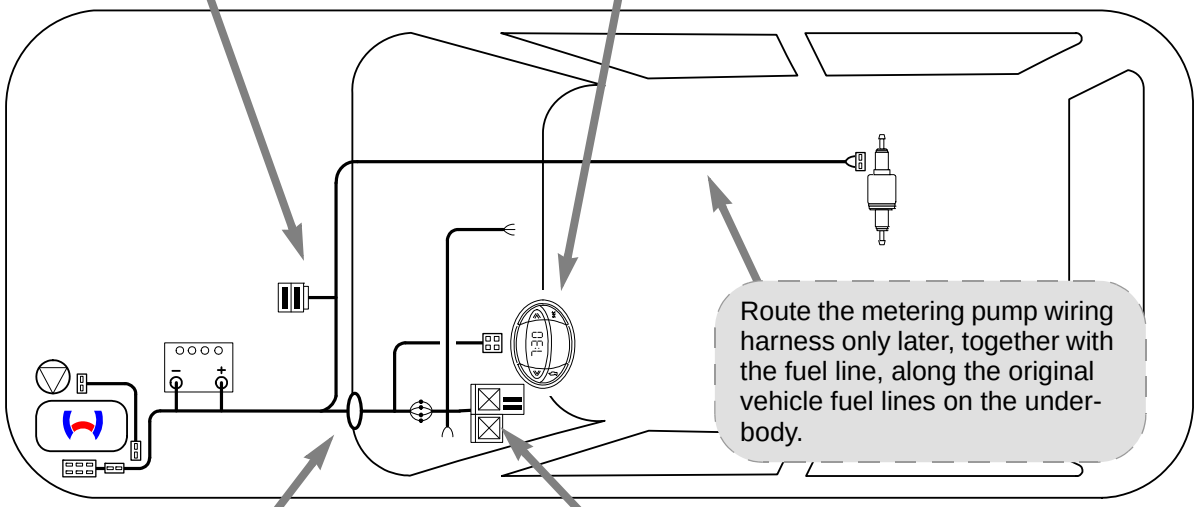
1 M6x20 bolt, large diameter washer, flanged nut, existing hole
2 Angle bracket



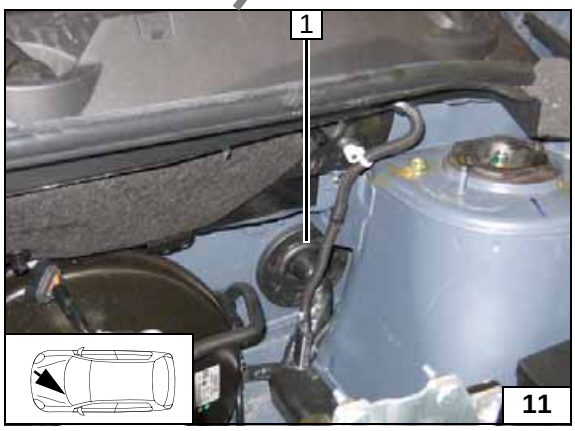
Digital timer

1 Digital timer



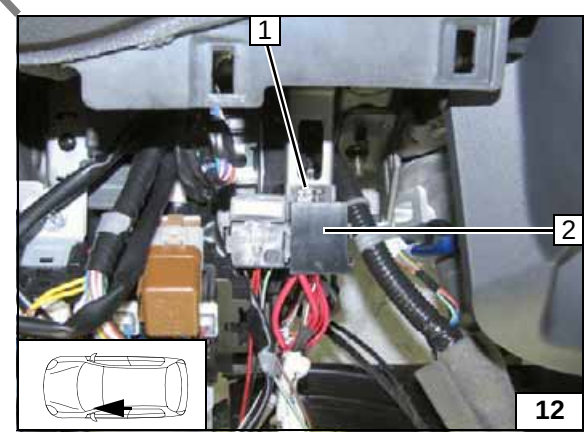


Wiring harness routing diagram



Wiring harness pass through

1 Protective rubber plug



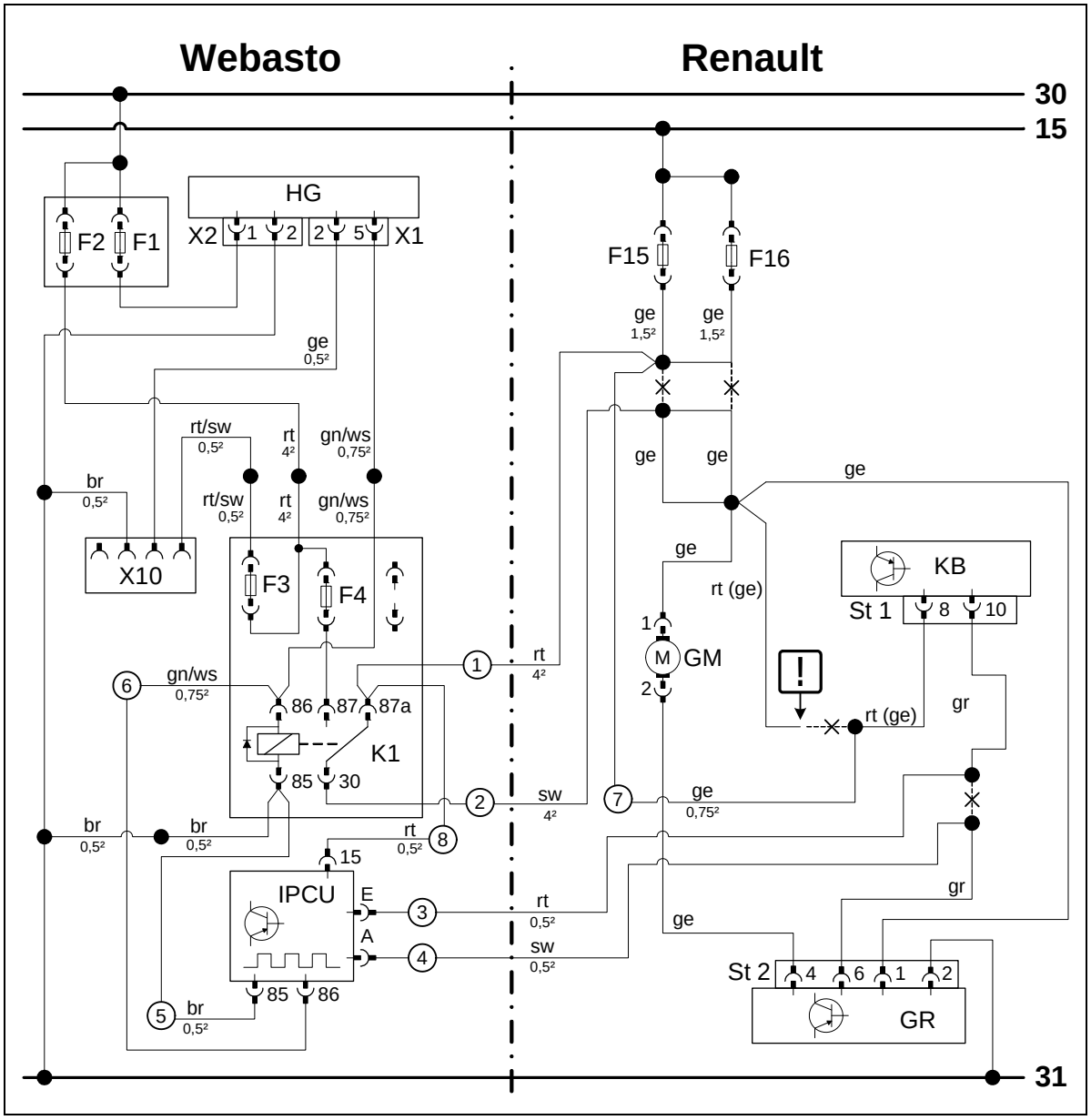
Passenger compartment relay and fuse holder

Mount K1 relay and IPCU.

1 M5x16 torx screw, existing hole
2 Passenger compartment relay and fuse holder

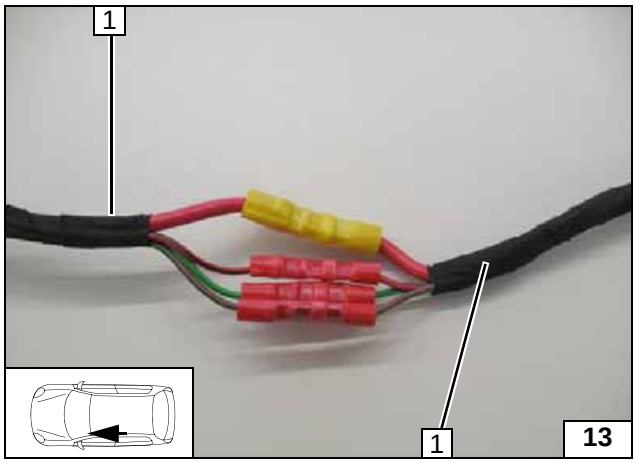
Fan Controller

Wiring diagram



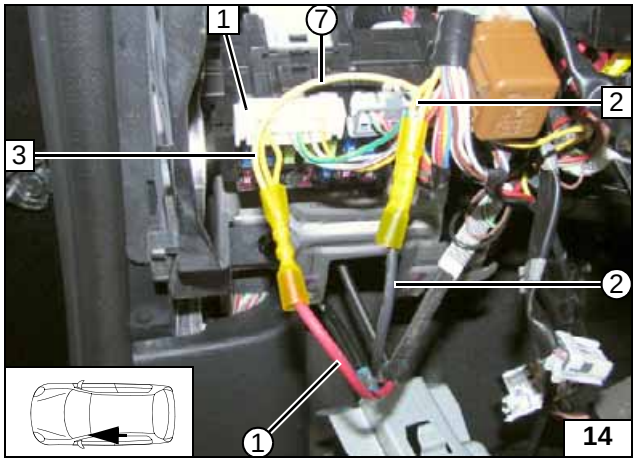
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F15	Fuse	rt	red
X1	6-pin heater connector	F16	Fuse	sw	black
X2	2-pin heater connector	KB	A/C control panel	ge	yellow
X10	4-pin connector of heater control	St 1	40-pin connector of KB	gn	green
		GM	Fan motor	br	brown
K1	Fan relay	St 2	6-pin connector GR	ws	white
F1	20A fuse	GR	Fan controller	gr	grey
F2	30A fuse				
F3	1A fuse				
F4	25A fuse				
IPCU	Pulse width modulator				
IPCU settings:					
Duty cycle: 52%				!	Insulate wire end and tie back
Frequency: 2000Hz					
Voltage: not relevant				**X**	Cutting point
Function: Low side				Wiring colours may vary.	

Legend



Connect wiring harness of passenger compartment relay and fuse holder **2** to wiring harness of heater **1** according to wiring diagram, in such a way that wires of the same colour are connected to each other.

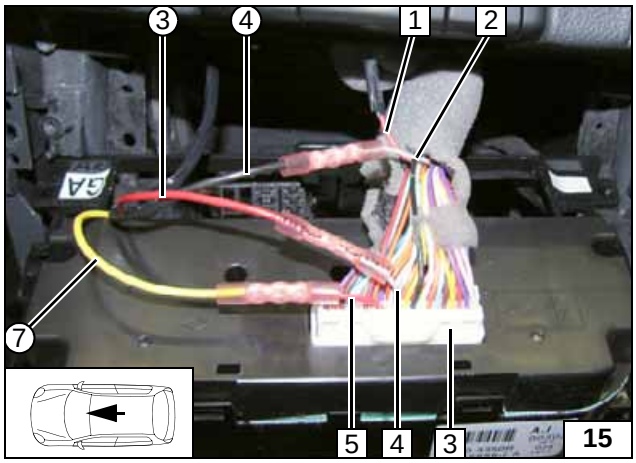
Connecting wiring harnesses



Connection on central electrical box **1** on driver's side.
Connect yellow (ge) wire ⑦ with yellow (ge) wire [2x] **3** of fuses F15 and F16 and route into the protective sleeving for the A/C control panel. Produce connections as shown in wiring diagram.

2 Yellow (ge) wire of fan motor [2x]
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30

Connecting fan motor



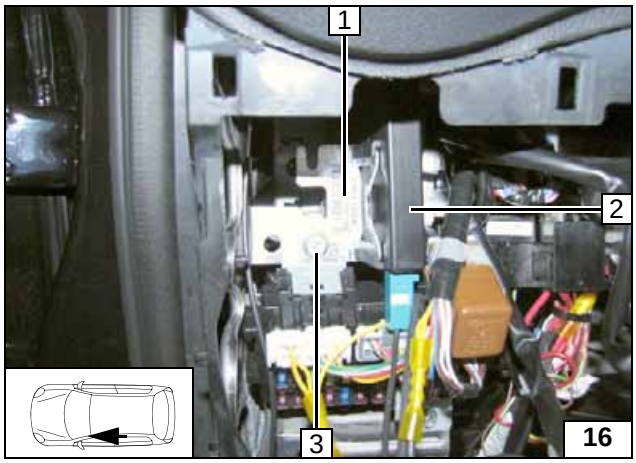
Connection to 20-pin connector **3** of A/C control panel. Insulate and tie back red (rt) or yellow (ge) wire **1** of F15 / F16. Produce connections as shown in wiring diagram.

2 Grey (gr) wire of fan controller
4 Grey (gr) wire of 20-pin connector pin 10
5 Red (rt) or yellow (ge) wire of 20-pin connector, pin 8
③ Red (rt) wire of IPCU/E
④ Black (sw) wire of IPCU/A
⑦ Yellow (ge) wire

Connecting A/C control panel

Remote Option (Telestart)

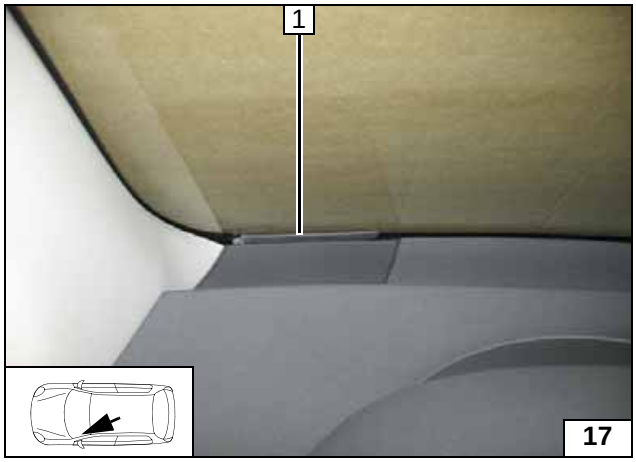
Installing receiver



Bracket **1** angled down by 90° and drilled on position **3** to 6.5 mm dia.

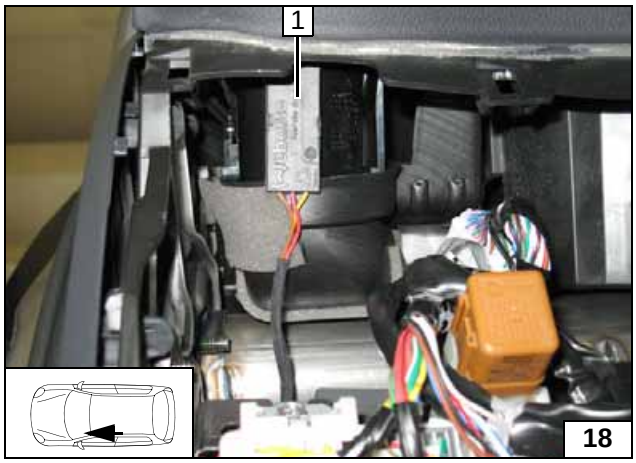
2 Receiver
3 Original vehicle bolt

Installing aerial



1 Aerial

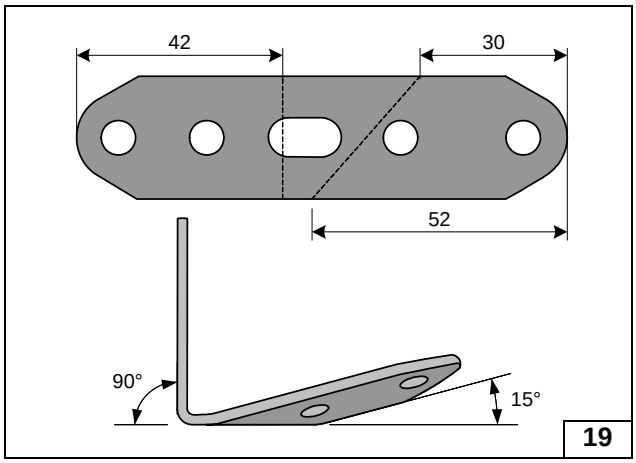
Installing temperature sensor



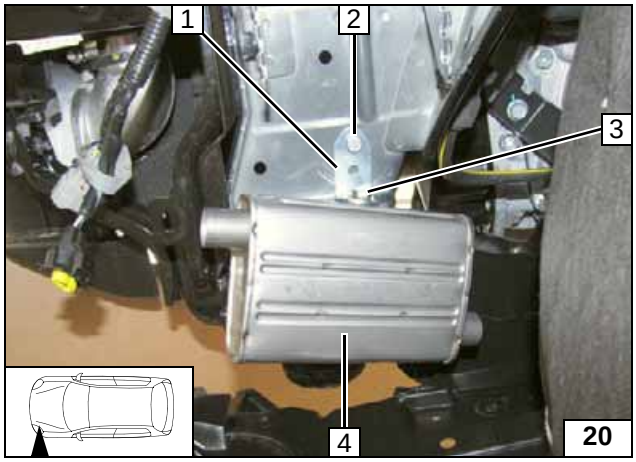
Temperature sensor only with T100 HTM

Fasten temperature sensor **1** with adhesive tape.

Preparing Installation Location

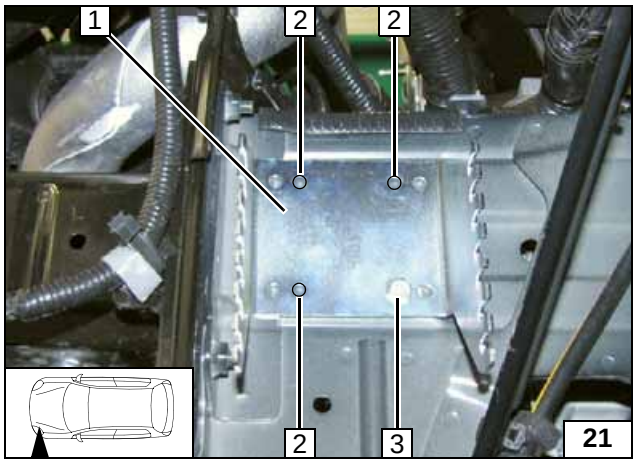


Preparing perforated bracket



1 Perforated bracket
2 M6x20 bolt, spring lockwasher, existing threaded hole
3 M6x16 bolt, spring lockwasher
4 Exhaust silencer

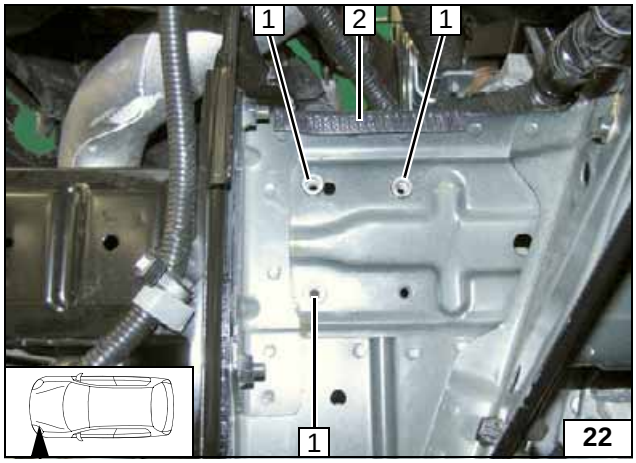
Installing silencer



Loosely mount bracket **1** and align vertically.

2 Copy hole pattern [3x]
3 M6x20 bolt, existing threaded hole

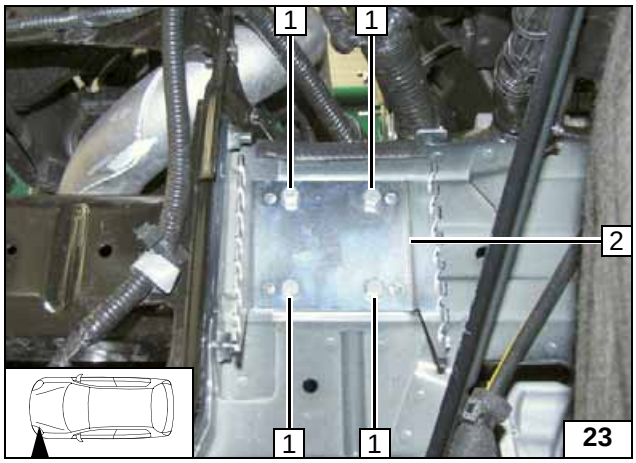
Copying hole pattern



Remove bracket.

1 9.1 mm dia. hole; rivet nut [3x each]
2 100 mm edge protection

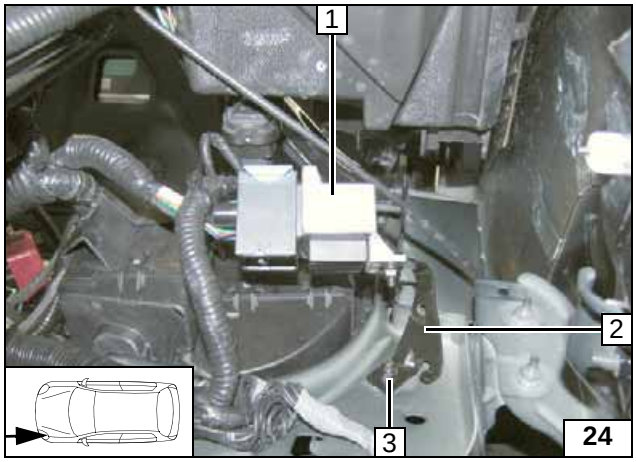
Installing rivet nut



Insert one large diameter washer each between bracket **2** and body.

1 M6x20 bolt, spring lockwasher, large diameter washer [4x each]

Installing bracket

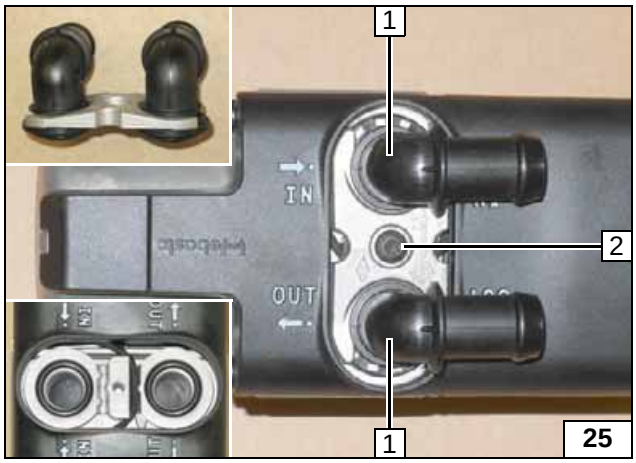


Remove control unit **1** with bracket **2** and reinstall according to the figure.

3 Original vehicle bolt

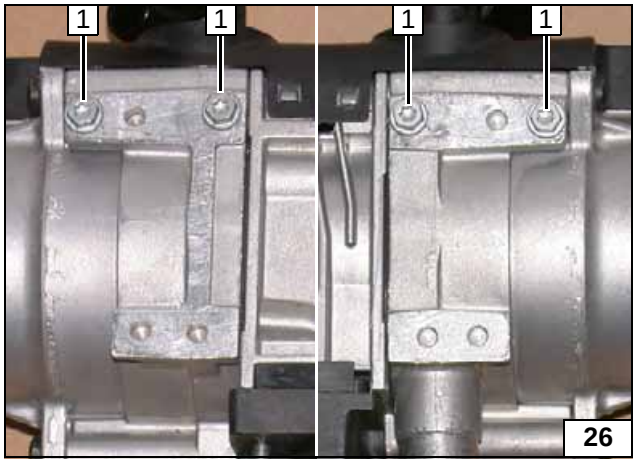
Repositioning control unit

Preparing Heater



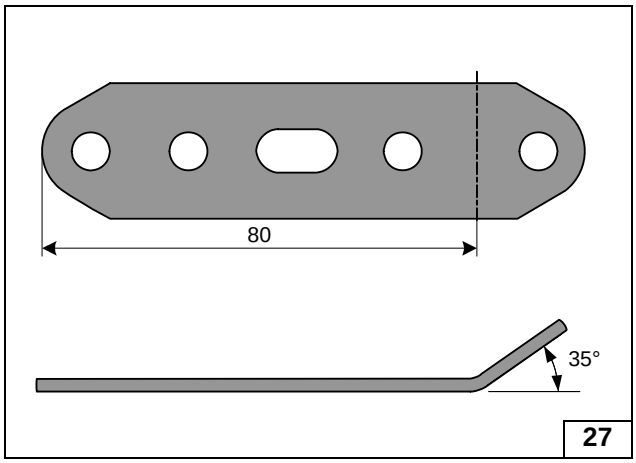
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



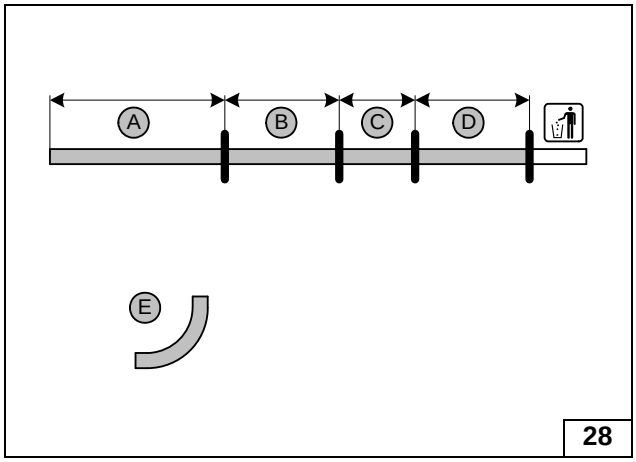
Screw 5x13 self-tapping bolts **1** [4x] into existing holes by a maximum of 3 thread turns.

Premounting bolts loosely



27

Angling down perforated bracket

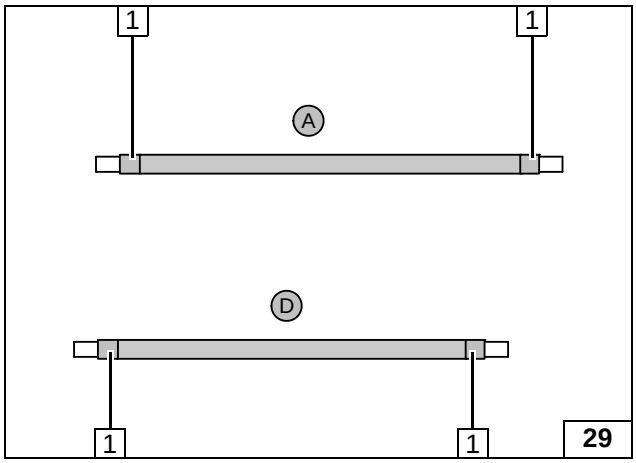


28

Hose **E** = 90°, 20 mm dia. moulded hose

A = 470
B = 130
C = 110
D = 420

Cutting hoses to length

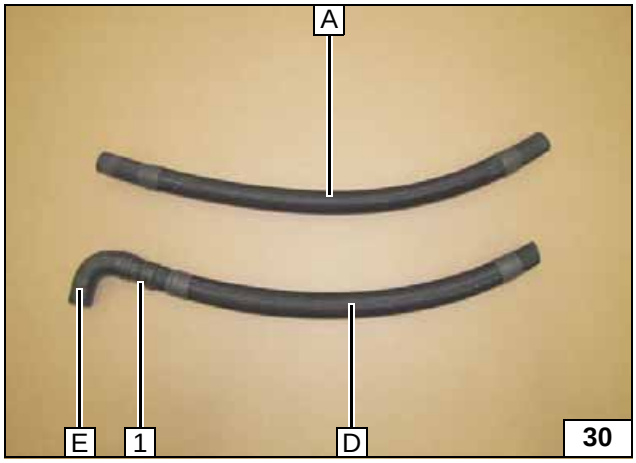


29

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

1 Heat shrink plastic tubing, 50 mm long [4x]

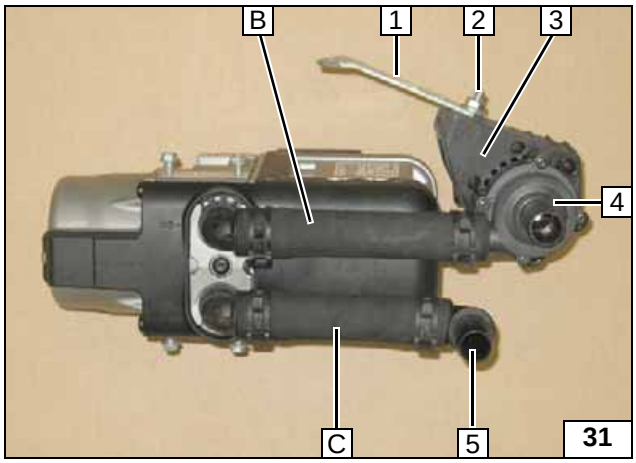
Preparing hoses



30

1 18x20 mm dia. connecting pipe, 25 mm dia. spring clip, 27 mm dia. spring clip

Preparing hoses

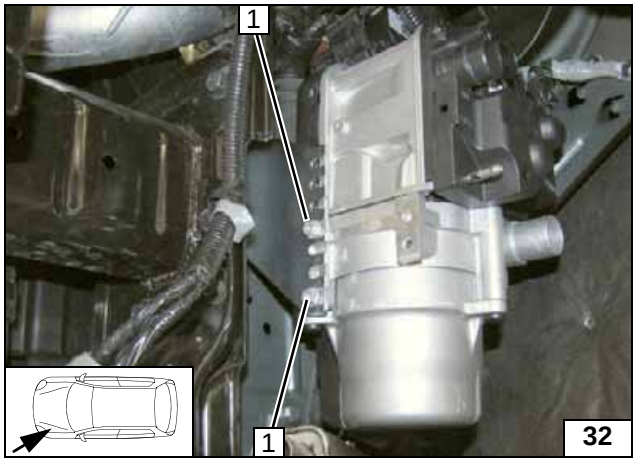


All spring clips = 25 mm dia.!

1 Bent perforated bracket
2 M6x25 bolt, flanged nut
3 Circulating pump mount
4 Circulating pump
5 90°, 18 mm dia. connecting pipe

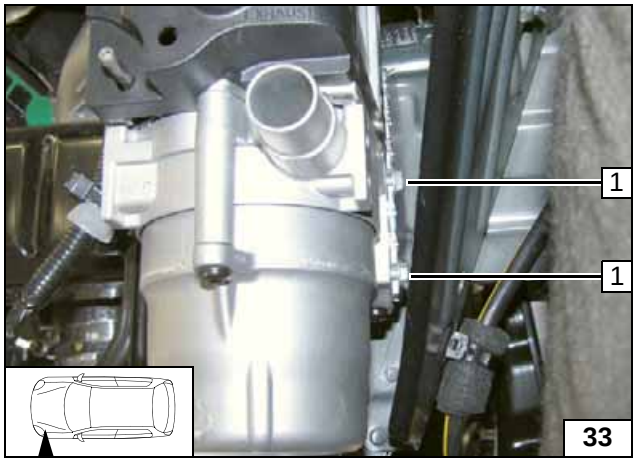
Premounting circulating pump

Installing Heater



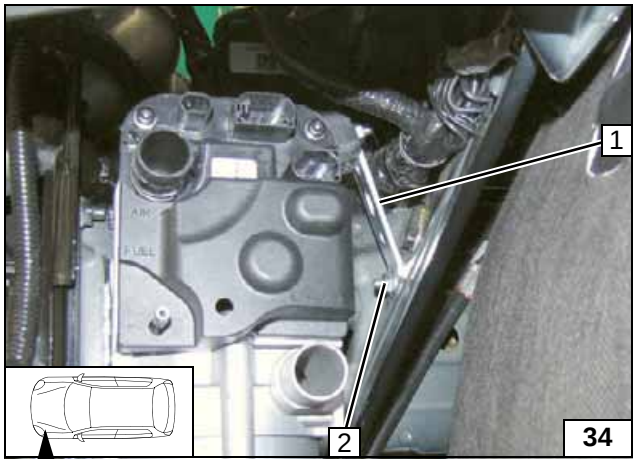
1 Tighten 5x13 mm self-tapping bolt [2x]

Installing heater



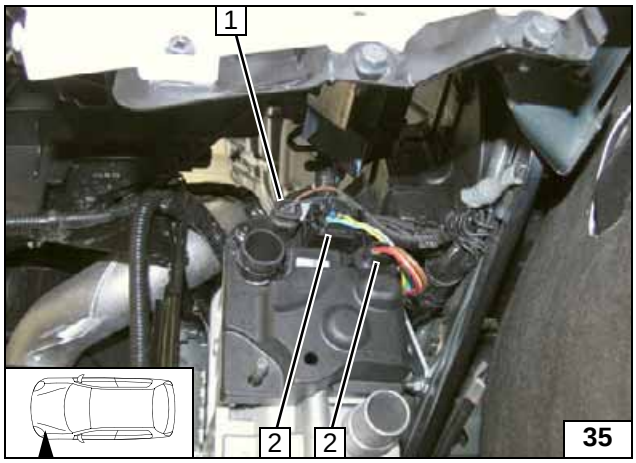
1 Tighten 5x13 mm self-tapping bolt [2x]

Installing heater



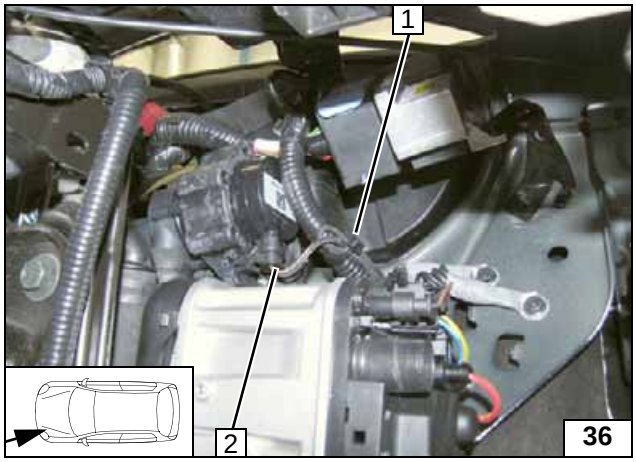
1 Perforated bracket
2 6x16 bolt, large diameter washer, flanged nut, existing hole

Installing perforated bracket



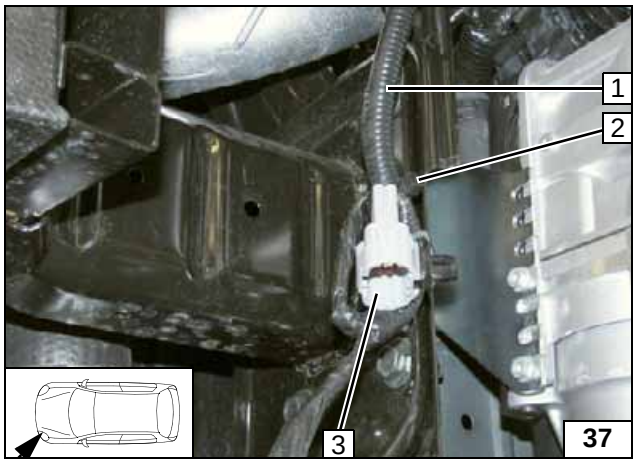
1 Circulating pump wiring harness
2 Heater wiring harness [2x]

Installing wiring harnesses



1 Cable tie
2 Circulating pump wiring harness

Installing wiring harness



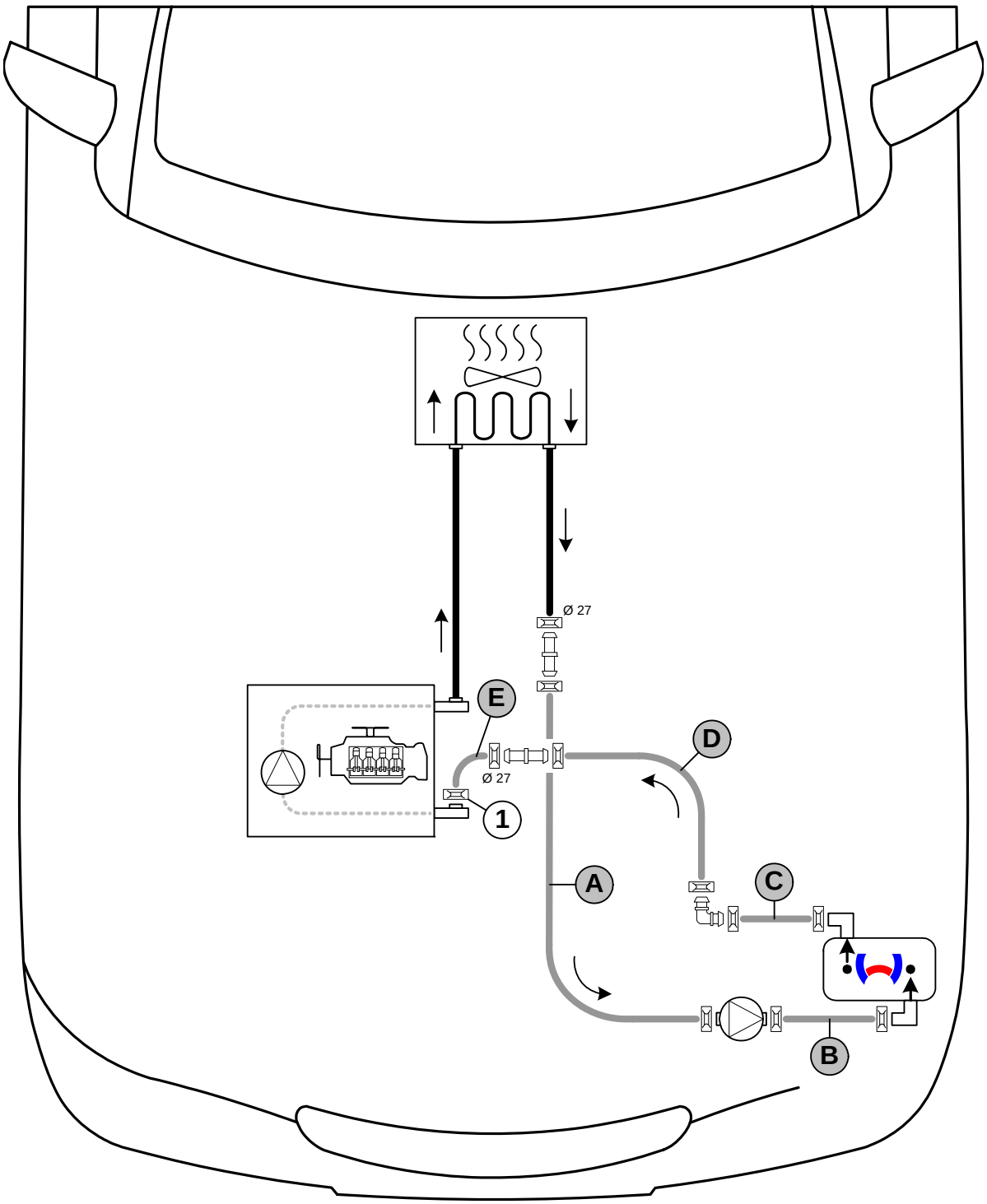
1 Original vehicle wire
2 Cable tie
3 Original vehicle connector

Attaching connector

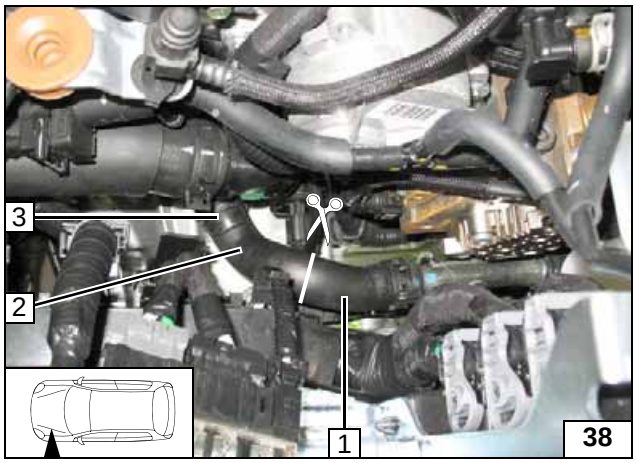
Coolant Circuit

WARNING!
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



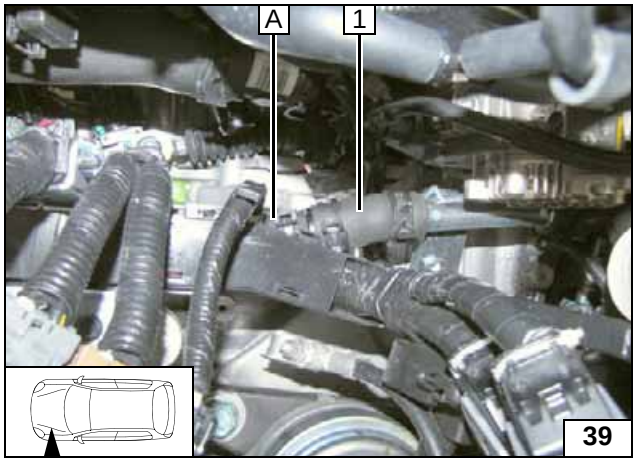
All spring clips without a specific designation = 25 mm dia.
1 = Original vehicle spring clip .
All connecting pipes = 18x20 mm dia. Connecting pipe = 18x18 mm dia.



Remove original vehicle hose of engine inlet **2** and discard. Spring clip **3** will be reused.

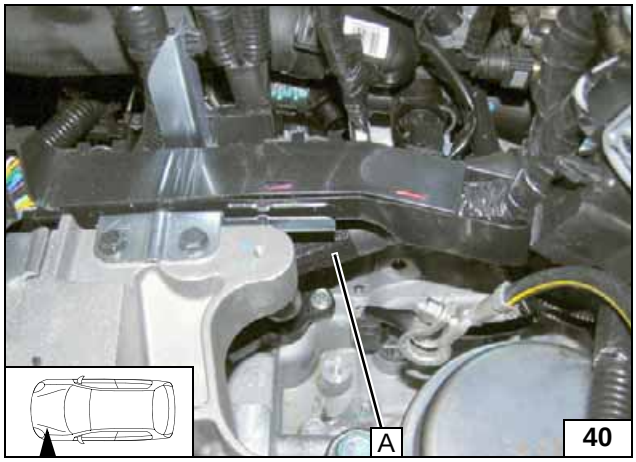
1 Hose section of heat exchanger outlet

Cutting point

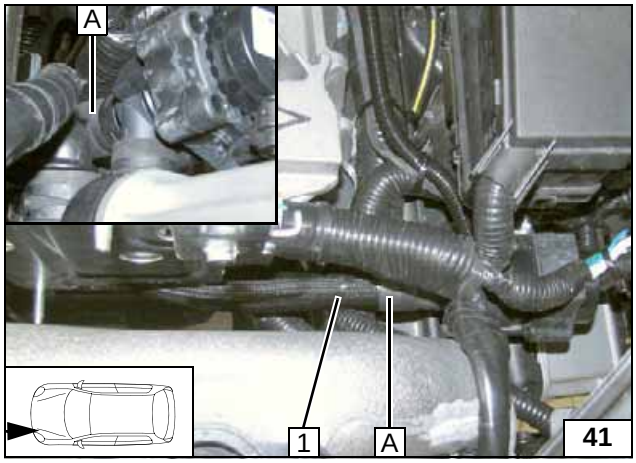


1 Hose on heat exchanger outlet

Connection on heat exchanger outlet

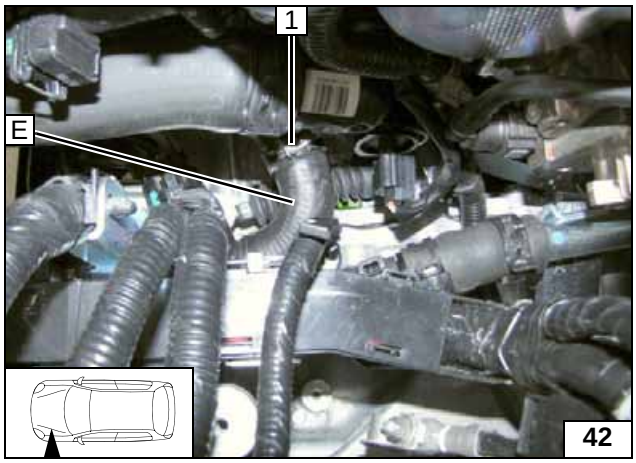


Routing in engine compartment



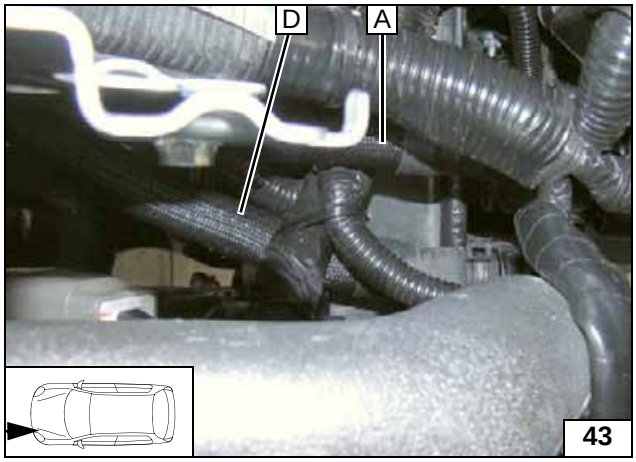
1 Cable tie

Connecting circulating pump

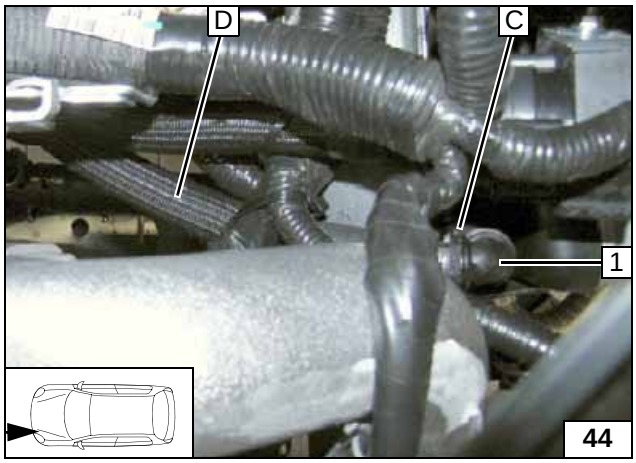


1 Original vehicle spring clip

Connection on engine inlet



Routing in engine compartment



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

1 90° connecting pipe

Connecting heater outlet

Fuel

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

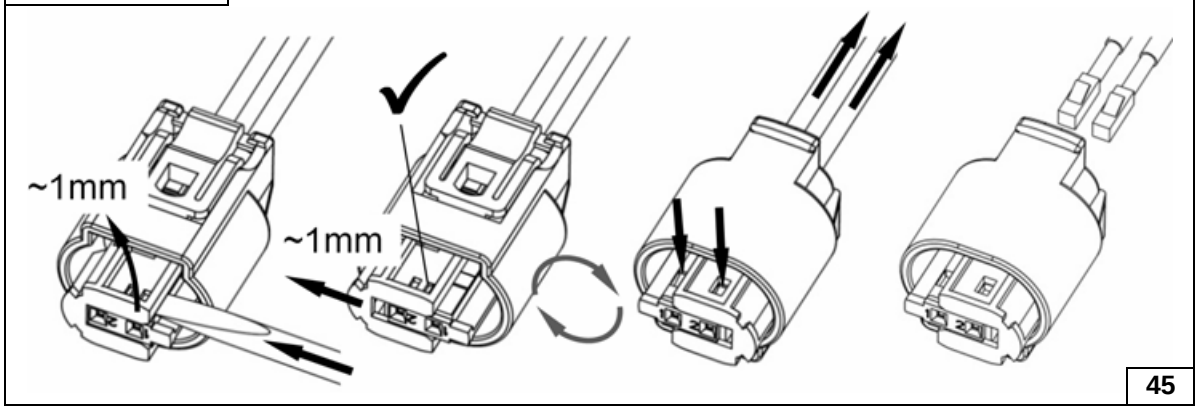
Catch any fuel running off in an appropriate container.

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

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

Dismantling metering pump connector

Connector X7



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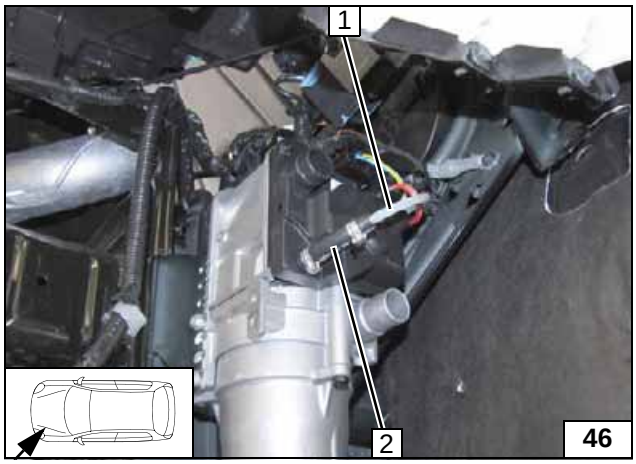
Connecting heater



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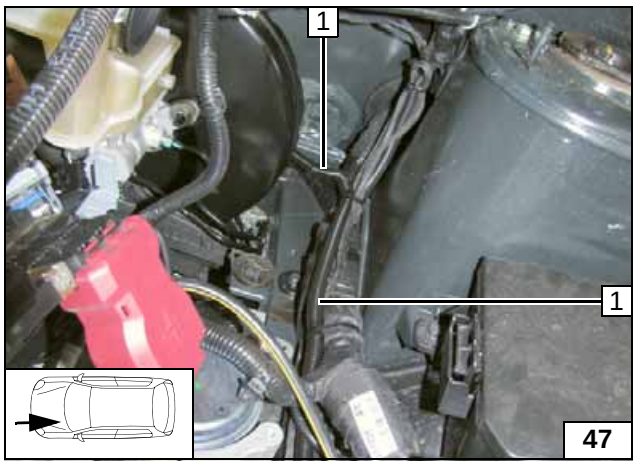
1 Fuel line
2 Hose section, 10mm dia. clamp [2x]

Routing lines



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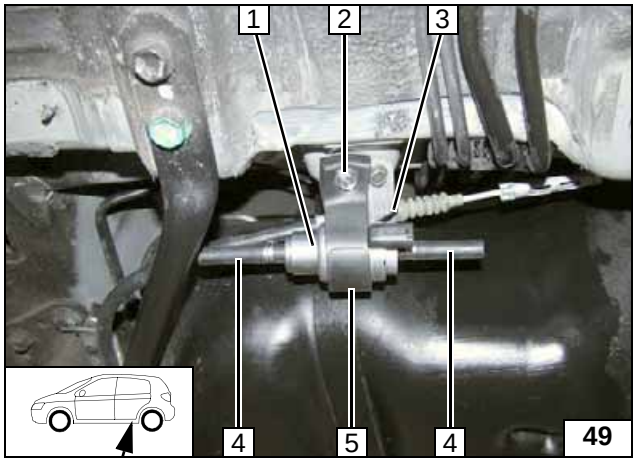
Route fuel line and metering pump wiring harness in corrugated tube **1** on original vehicle wires to underbody.

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

Routing lines

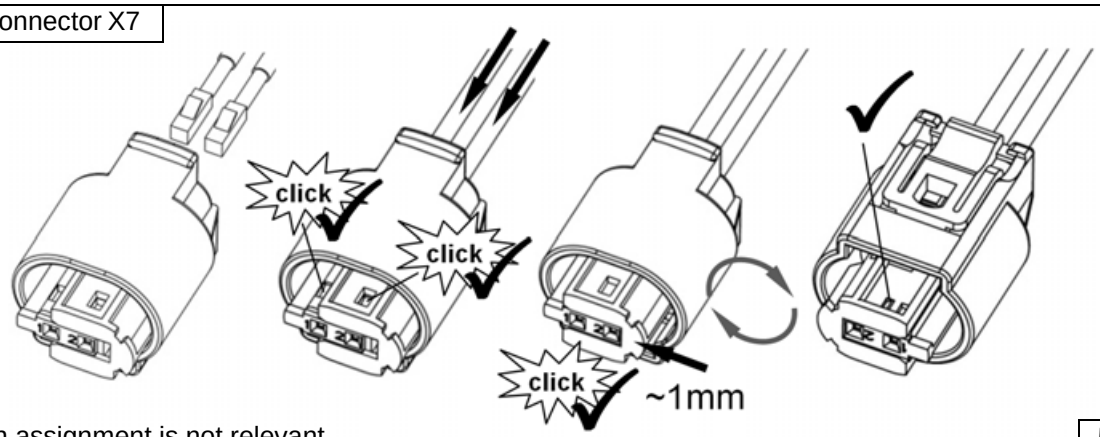


Remove original vehicle bolt at position **2** and discard.

1 Metering pump
2 M6x25 bolt, existing threaded hole
3 Cable tie
4 Hose section, 10 mm dia. clamp [2x each]
5 Metering pump mount

Installing metering pump

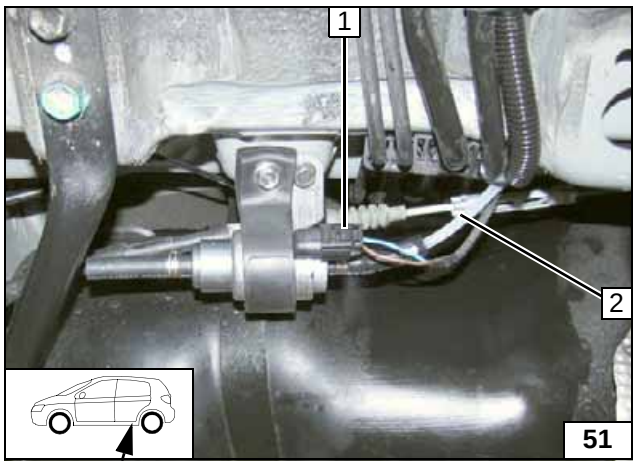
Connector X7



Pin assignment is not relevant.

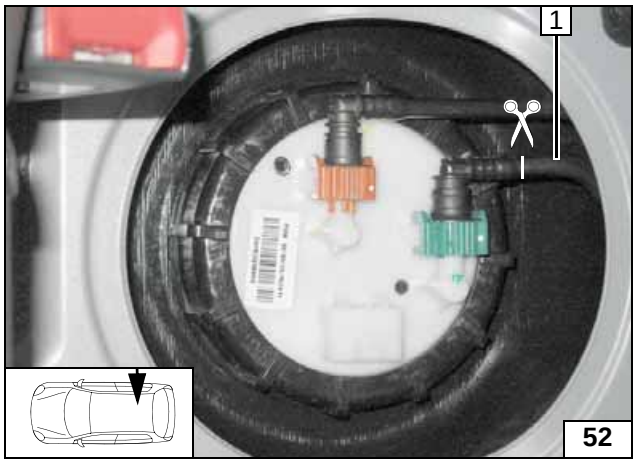
50

Completing metering pump connector



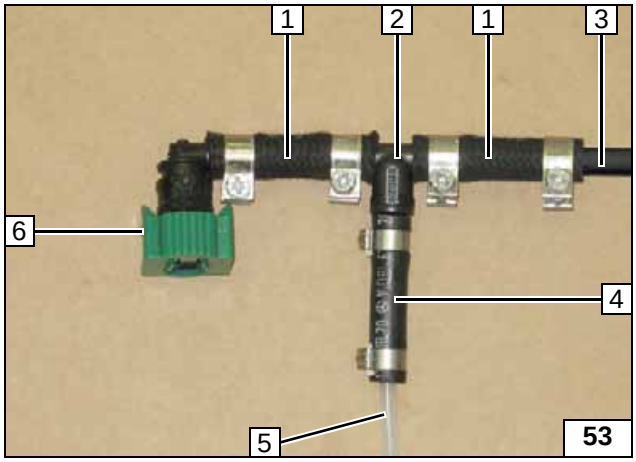
1 Metering pump wiring harness, connector mounted
2 Fuel line of heater, 10mm dia. clamp

Connecting metering pump



Completely remove fuel supply line **1** and cut on the marking directly behind the coupling piece. Remove fuel hose from coupling piece. Do not damage coupling piece!

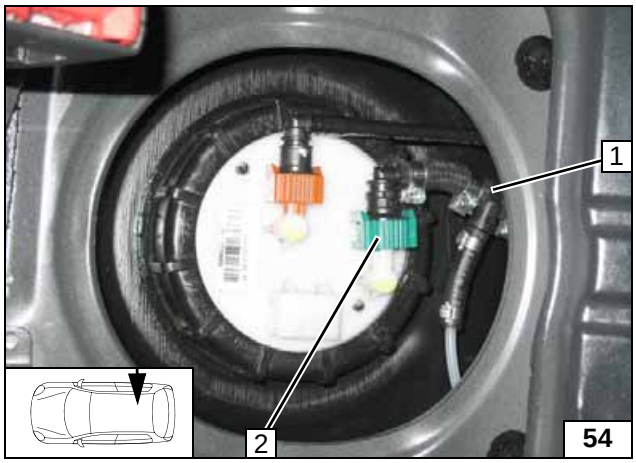
Fuel extraction



Shorten 8x12 fuel hose **1** [2x] by 20 mm. Install support sleeve in the fuel supply line **3**.

- **1** 8x12 fuel hose [2x], 12 mm dia. hose clamp [4x]
- **2** 8x5x8 mm fuel standpipe
- **4** Hose section, 10mm dia. Caillau clamp [2x]
- **5** Fuel line
- **6** Coupling piece

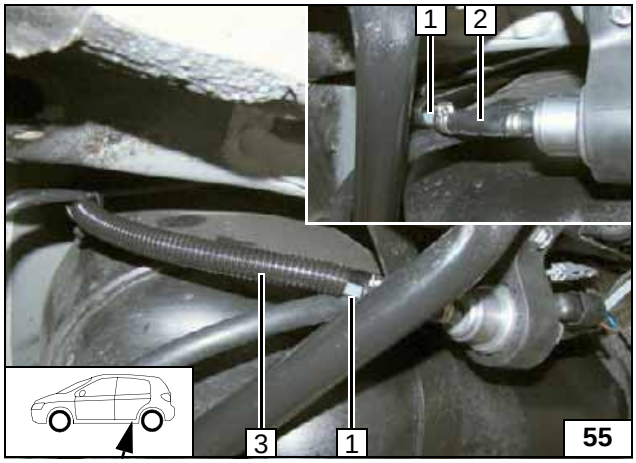
Preparing fuel standpipe



Re-install fuel supply line.

- **1** Fuel standpipe
- **2** Coupling piece mounted

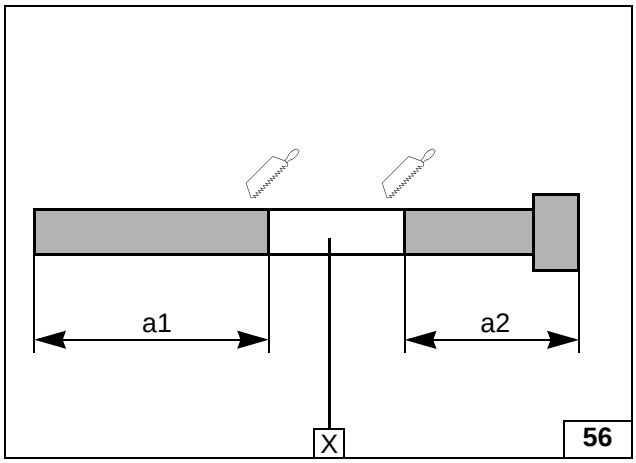
Installing fuel standpipe



Slide corrugated tube **3** onto fuel line of fuel standpipe **1**. Check the position of the components; correct if necessary. Check that they have freedom of movement.

- **2** Hose section, 10mm dia. clamp [2x]

Connecting metering pump

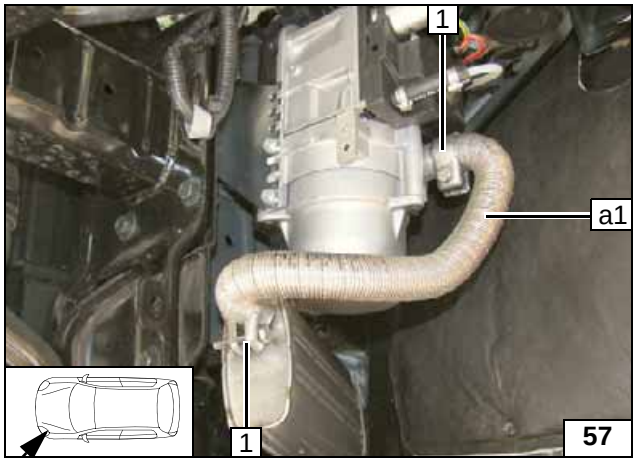


Exhaust Gas

a1 = 320
a2 = 80

X =

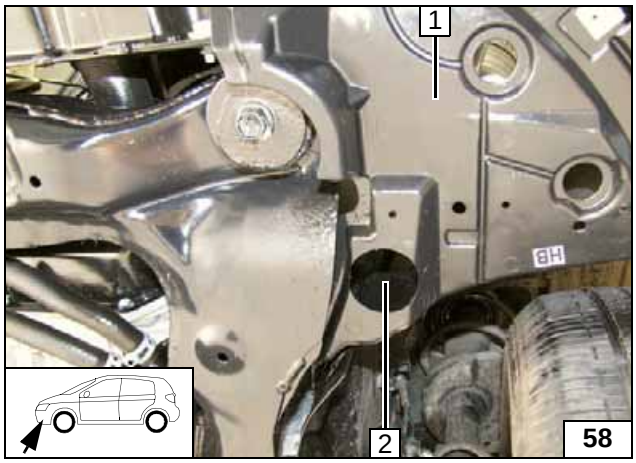
Preparing exhaust pipe



Ensure sufficient distance (at least 20 mm) to wheel-well inner panel.

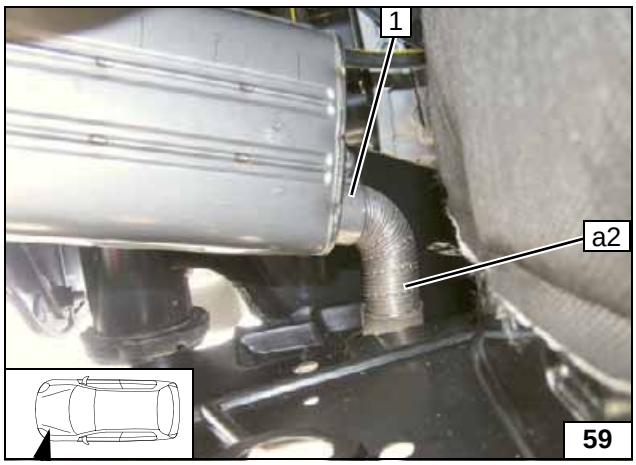
1 Hose clamp [2x]

Installing exhaust pipe a1



1 Wheel well trim
2 50 mm dia. hole

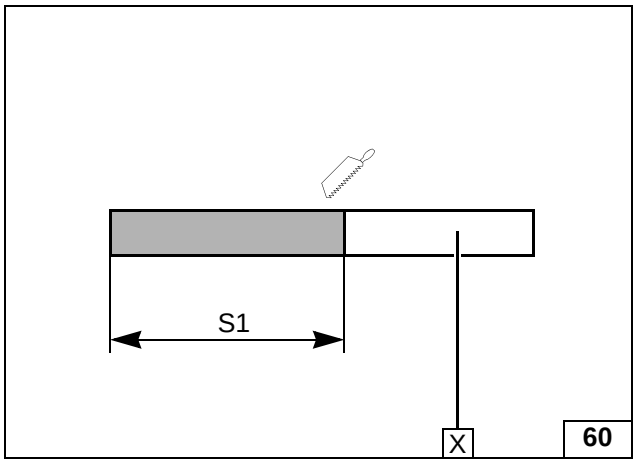
Hole in wheel well trim



Align exhaust pipe **a2** with centre of hole in wheel well trim.

1 Hose clamp

Installing exhaust pipe a2

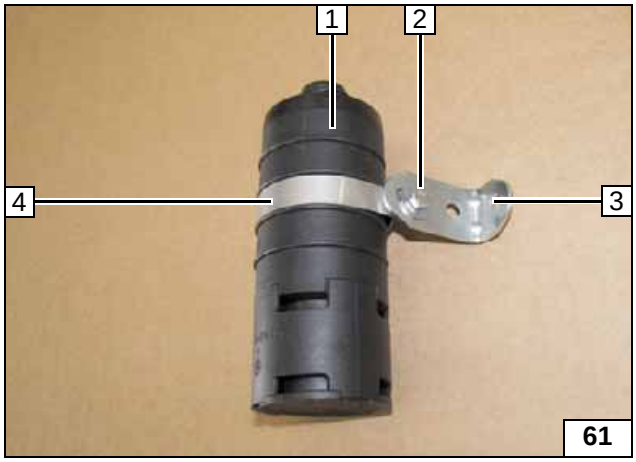


Combustion Air

s1 = 320

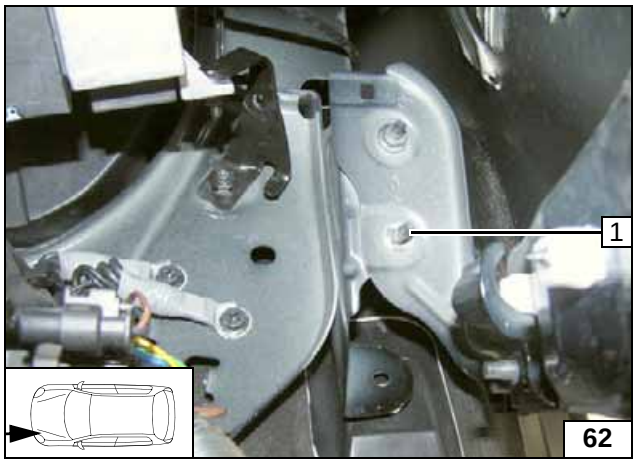
X =

Cutting combustion air pipe to length



1 Silencer
2 M5x16 bolt, large diameter washer, flanged nut
3 Angle bracket
4 51 mm dia. clamp

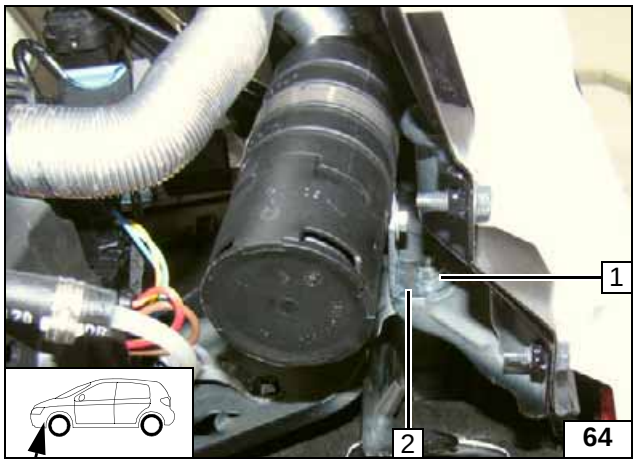
Premounting silencer



Remove original vehicle flanged nut on position **1**, it will be reused.

Removing nut

Installing combustion air pipe s1



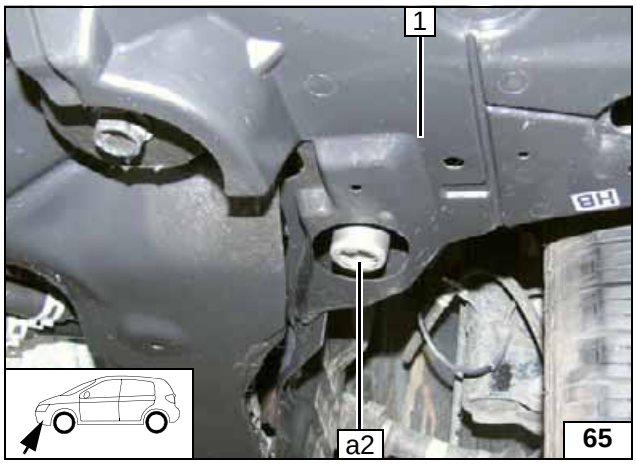
1 Original vehicle stud bolt, original vehicle flanged nut
2 Angle bracket

Fastening silencer

Final Work

WARNING!
Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose lines.
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.**
- **Adjust digital timer, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the 'Operating Instructions for End Customer'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**



Align exhaust end section **a2** with centre of hole and flush with underride protection **1**.

Aligning exhaust end section a2

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

Operating Instructions for End Customer

Please remove this page in case of automatic 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.

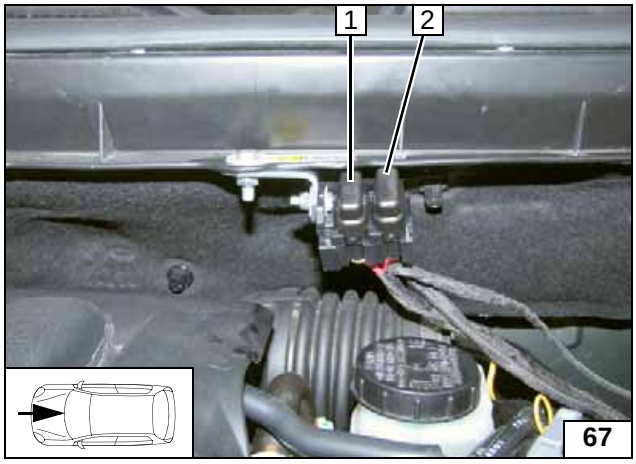
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

A/C control panel

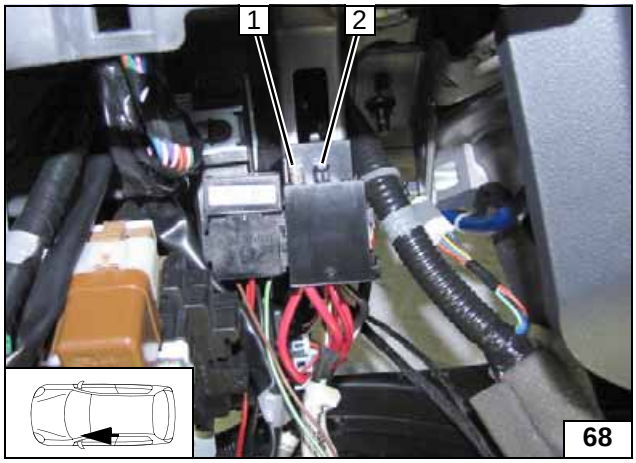
1 Air outlet ‘upward’
2 Set temperature on both sides to ‘HI’

Engine compartment fuses



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

Passenger compartment fuses



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