Water Heater

Webasto
Feel the Drive

Thermo Top Evo Parking Heater

E1
00 0258

Installation Documentation
Peugeot 208

Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Peugeot	208	A9	e2 * 2007 / 46 * 0070 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.0 VTi	Petrol	5-speed SG	50	999	ZMZ0
1.2 VTi	Petrol	5-speed SG	60	1199	HMZ0
1.4 VTi	Petrol	5-speed SG	70	1398	8FP0
1.4 VTi	Petrol	5-speed SG	70	1398	8FN0
1.6 VTi	Petrol	5-speed SG	88	1598	5FS0
1.4 eHDI	Diesel	EGS5	50	1398	8HP0
1.6 eHDI	Diesel	5-speed SG	68	1560	9HP0

SG = Manual transmission
EGS5 = Electronically controlled 5 gear transmission

From model 2012
Left-hand drive vehicle

Verified equipment variants: Manual / automatic air-conditioning system
Front fog lights
Headlight washer system
Daytime running lights
Start-Stop

Not verified: Passenger compartment monitoring

Total installation time: approx. 8 hours

Peugeot 208

Table of Contents

Necessary Components

- Basic delivery scope *Thermo Top Evo* according to price list
- Installation kit Peugeot 208 2012 Petrol and diesel: **1318531E**
- 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

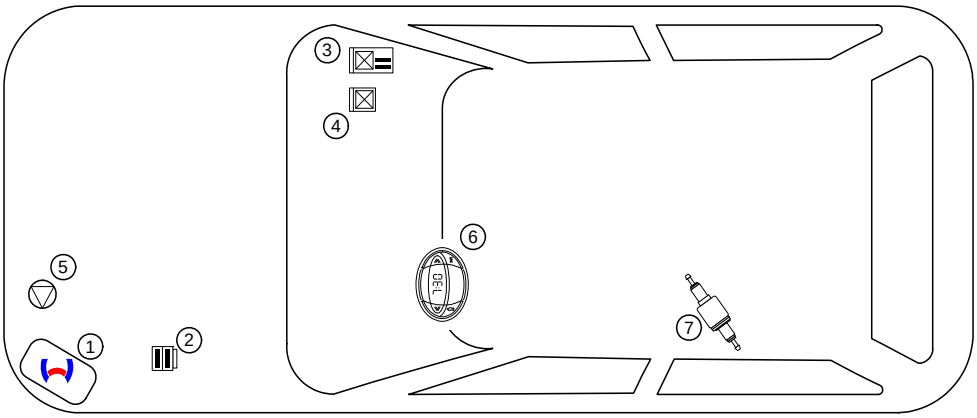
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full!
- The installation location of the push button in the 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. Fuse holder of engine compartment
3. Relay and fuse holder of passenger compartment
4. PWM-Gateway
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 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 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 must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components!

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

When installing 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.

Information on Validity

This installation documentation applies to Peugeot 208 Petrol and diesel - 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 Information

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

Dimensions
- All dimensions are in mm

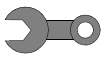
Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque values of 5x15 retaining plate of water connection piece bolts = 7Nm.
- Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

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.

Special features are highlighted using the following symbols:

Mechanical system



Electrical system

Coolant circuit

Combustion air

Fuel

Exhaust gas

Software

Specific risk of injury or fatal accidents

Specific risk due to electrical voltage

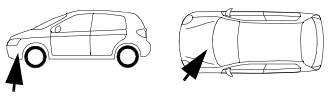
Specific risk of damage to components

Specific risk of fire or 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



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

Peugeot 208

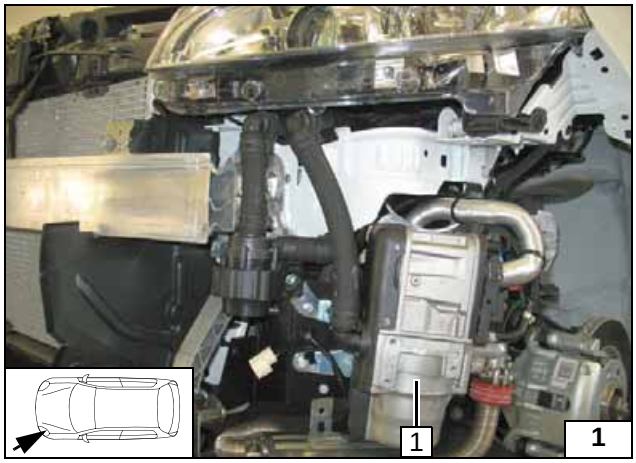
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery and remove it completely along with the carrier.
- Remove the bracket of the vacuum sensor on the brake booster.
- Remove the coolant reservoir cap.
- Remove the windscreen wiper.
- Remove the lower engine cover (if present).
- Remove the underride protection on the left-hand side (if present).
- Remove the left-hand wheel well trim.
- Remove the left front wheel.
- Remove the bumper trim.
- Loosen the rear bench seat (inserted).
- Open the tank-fitting service lid on the left-hand side.
- Remove the fuel-tank sending unit in accordance with manufacturer's instructions.
- Remove the instrument panel trim on the right-hand side.
- Remove the glove compartment.
- Remove the instrument panel trim on the right-hand side.
- Loosen the A/C control panel (see installation instructions).

Heater

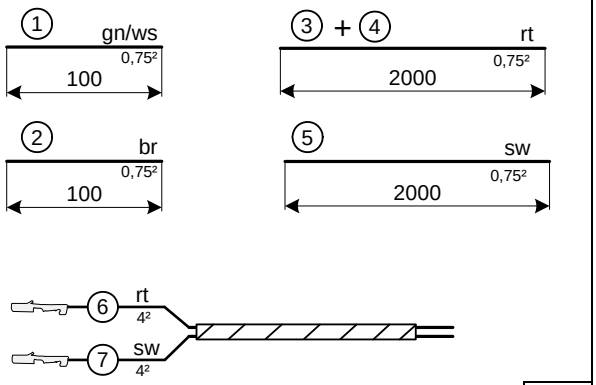
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place in the engine compartment.



Heater Installation Location

1 Heater

Installation location



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Preparing Electrical System

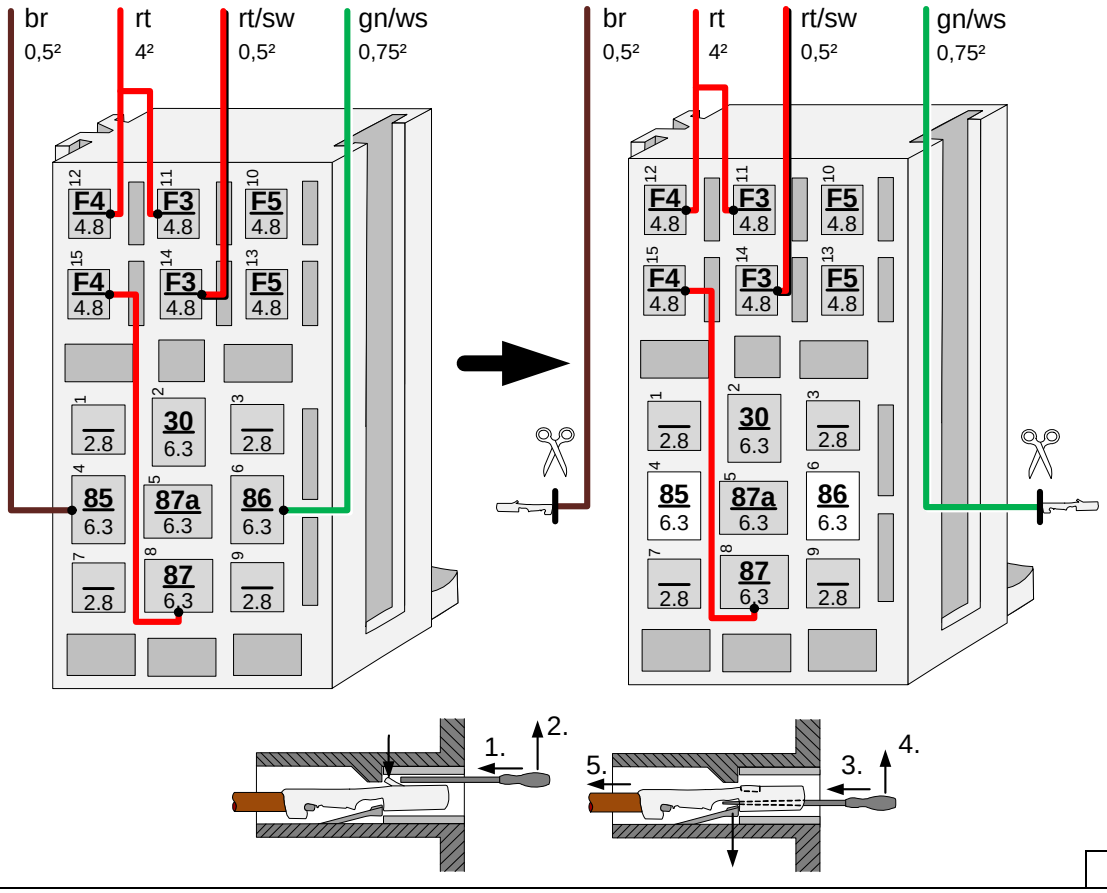
Wire sections retain their numbering in the entire document.

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

Cut 2500mm long protective sleeving in the middle.
Pull wire sections ③ and ⑤ as well as ④ each into a 1250 mm protective sleeving.

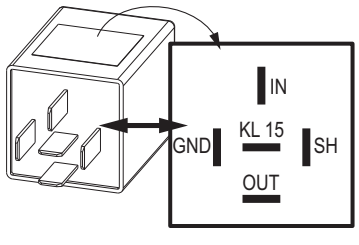
⑥ Red (rt) wire of fan wiring harness
⑦ Black (sw) wire of fan wiring harness

Assigning / preparing wires



3

Preparing passenger compart-ment relay and fuse holder



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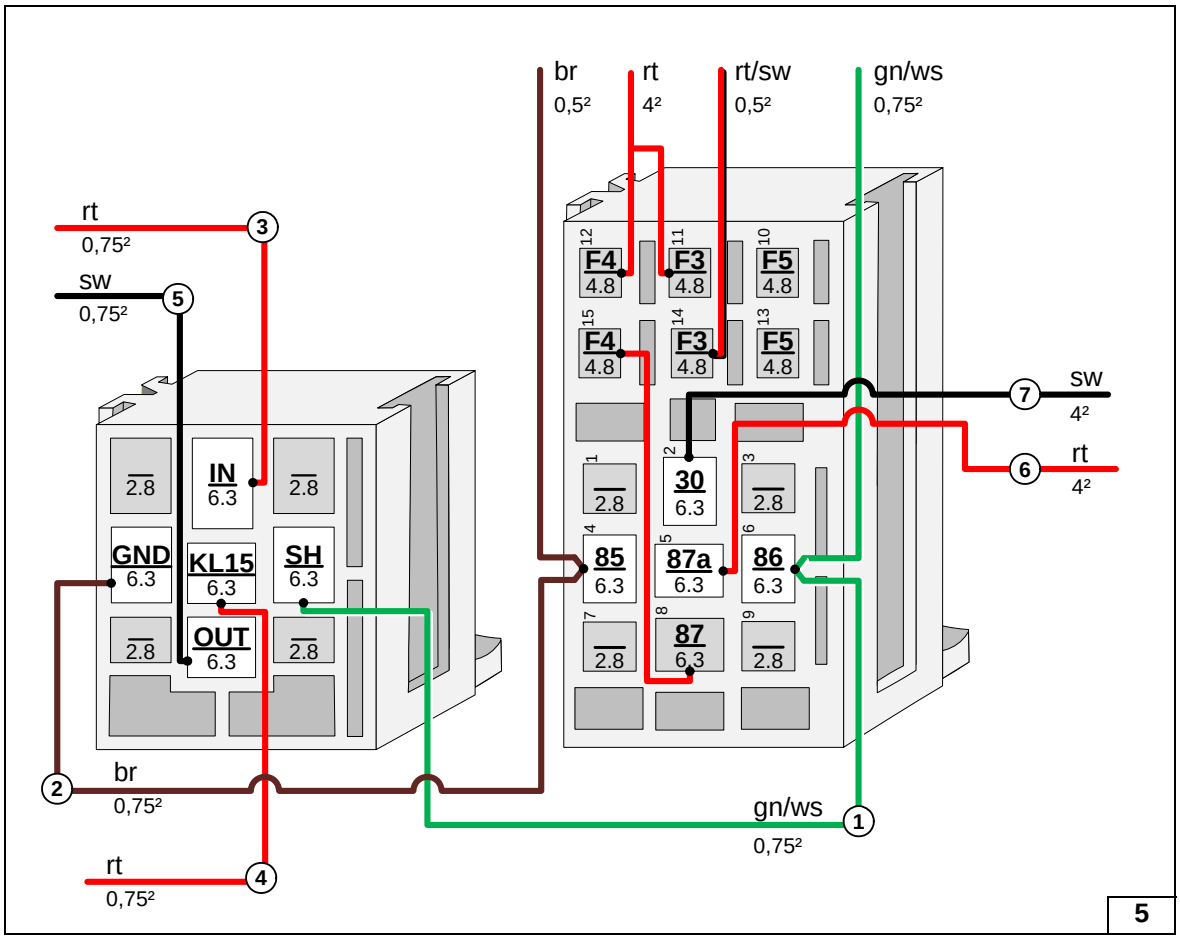
Check the PWM Gateway settings during start-up of the heater and adjust if necessary.

Settings:

Duty-Cycle: 70%
Frequency: 400Hz
Voltage: not relevant
Function: Low-side

View of PWM-GW

Connecting wires to PWM-GW socket and passenger compartment relay and fuse holder



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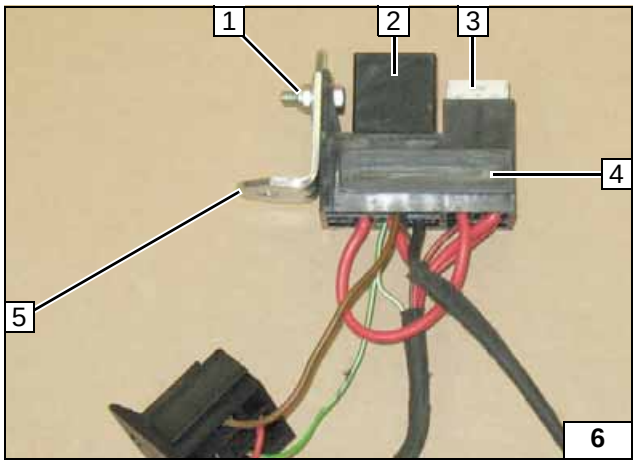
Premounting passenger compartment relay and fuse holder



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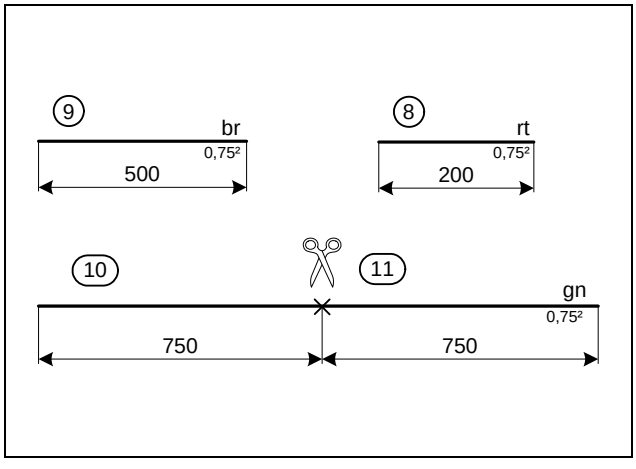
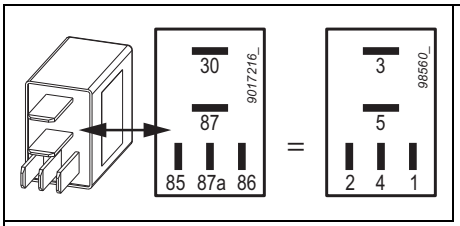
1. M5x16 bolt, large diameter washer [2x], nut
2. K1 relay
3. 25A fuse F4
4. Relay and fuse holder of passenger compartment
5. Angle bracket

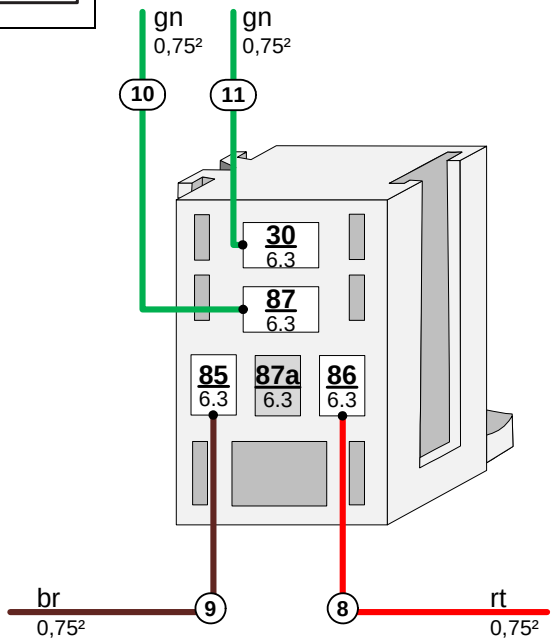
Assigning / cutting to length wires



Automatic air-conditioning

Pull wire sections (10) and (11) into a 700 mm protective sleeving and wire section (9) into a 450 mm protective sleeving.





7

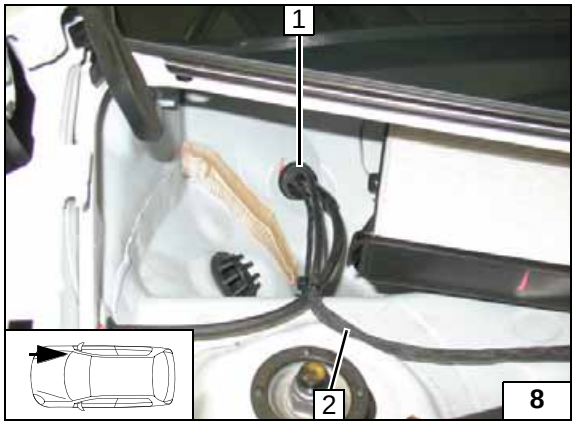
Connecting wires to socket of K2 relay

Electrical System

Wiring harness pass through of passenger compartment

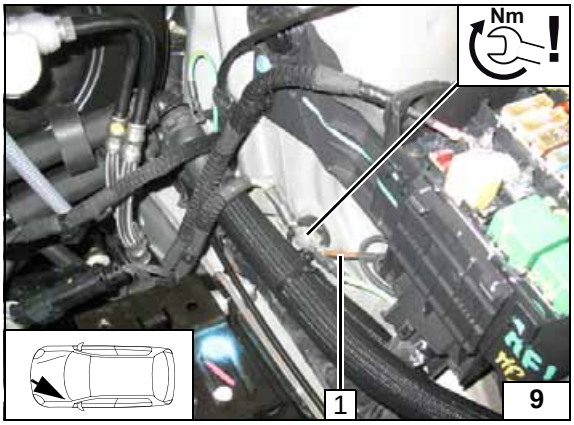
For wiring harness routing, please see following page.

1 Protective rubber plug of window washer system
2 Wiring harnesses of heater and heater control

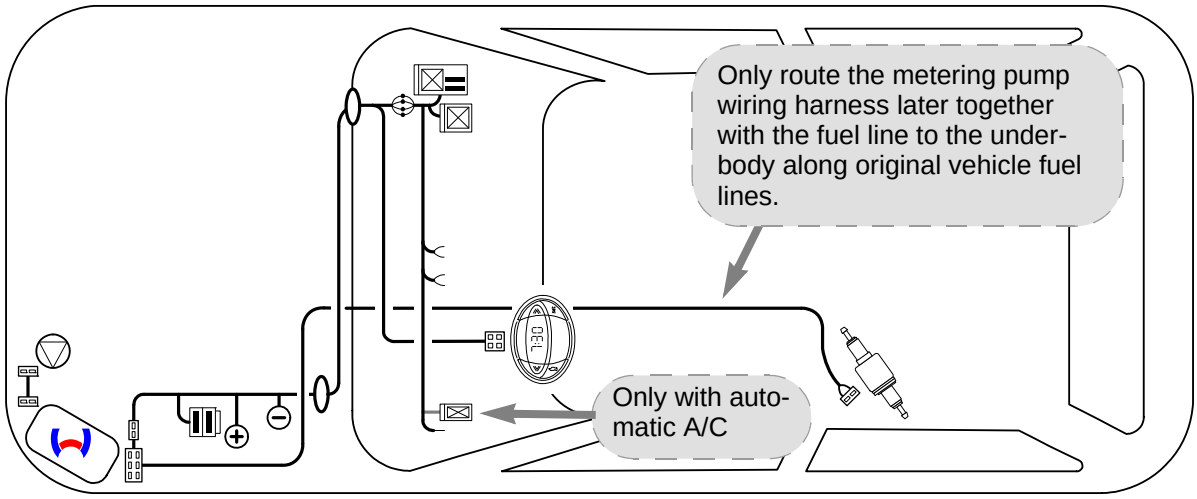


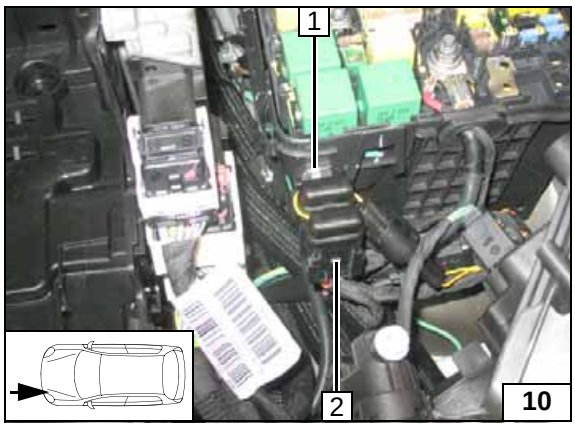
Earth wire

1 Earth wire on original vehicle earth support point



Wiring harness routing diagram

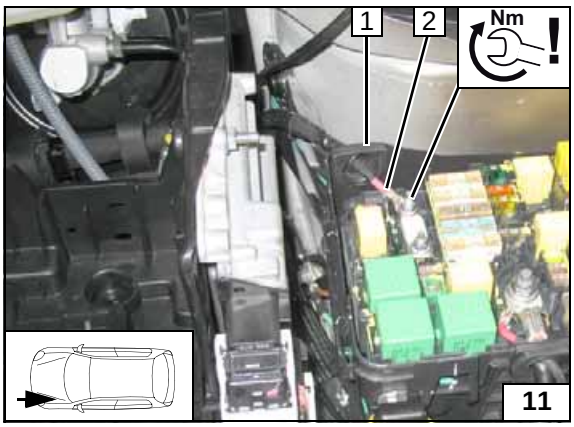




Fuse holder of engine compartment

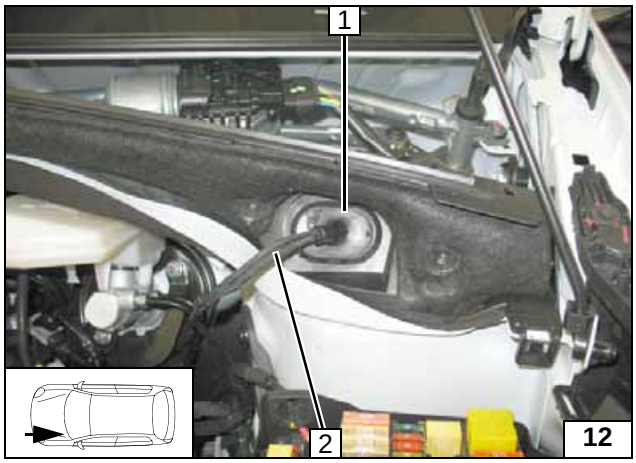
5.5 mm dia. hole at position **1**. When drilling, watch components located behind!

1 M5x16 bolt, washer [2x], retaining plate of fuse holder, nut
2 Fuses F1-2



Positive wire

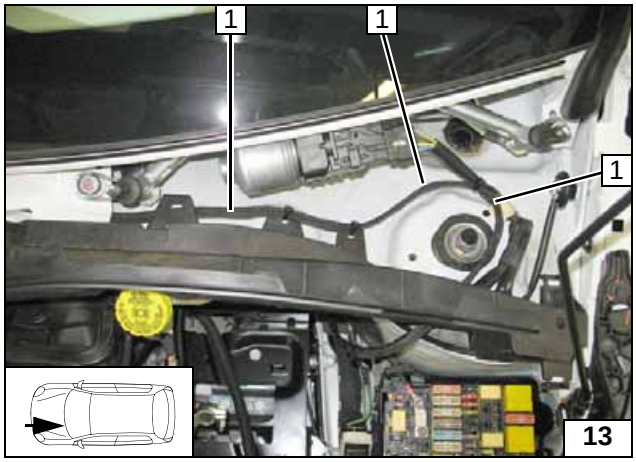
1 Protective rubber plug
2 Positive wire on original vehicle positive distributor



Wiring Harness Routing

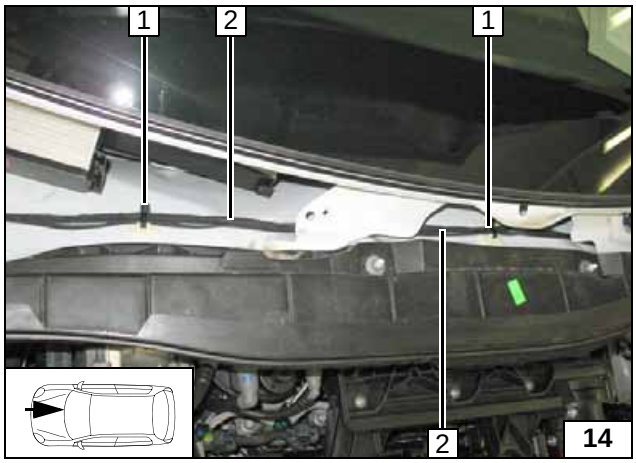
1 Original vehicle protective rubber plug
2 Wiring harnesses of heater and heater control

Pass through of coolant reservoir



Route wiring harnesses of heater and heater control **1** to the right side of the vehicle inside the coolant reservoir and secure them using cable ties.

Routing in coolant reservoir

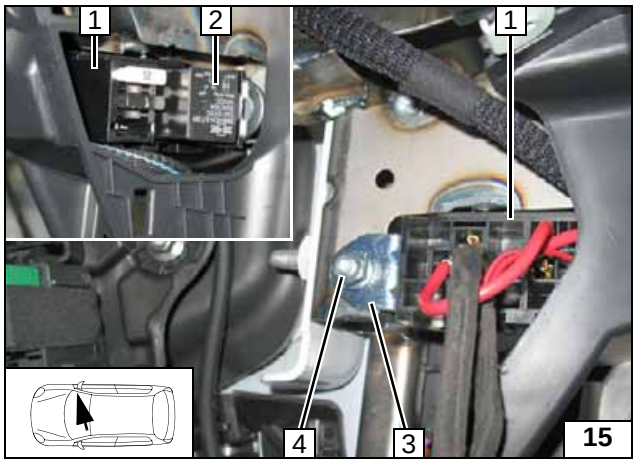


1 Adhesive base, cable tie [2x each]
2 Wiring harnesses of heater and heater control

Routing in coolant reservoir

Mounting Passenger Compartment Relay and Fuse Holder

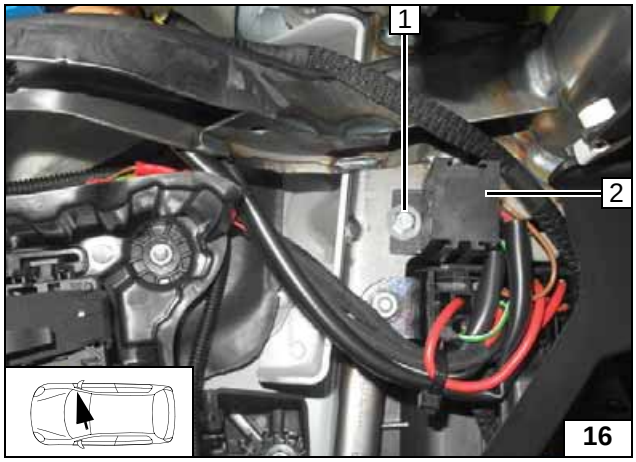
Mounting passenger compartment relay and fuse holder



Place relay and fuse holder of passenger compartment **1** and copy hole pattern at position **4**. When drilling, watch components located behind!

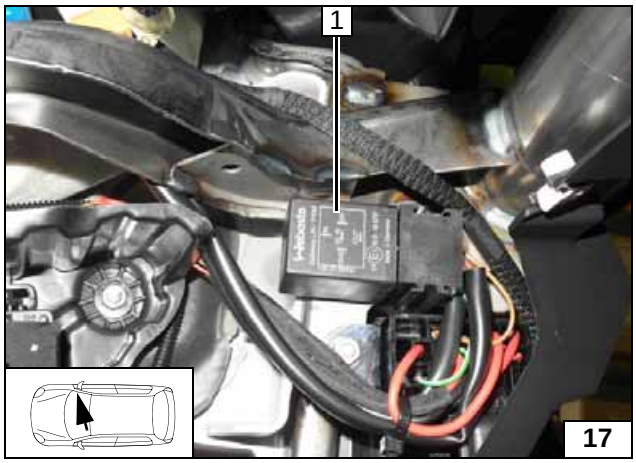
2 K1 relay attached
3 Angle bracket
4 7 mm dia. hole; M6x12 bolt, flanged nut

Mounting PWM-GW socket



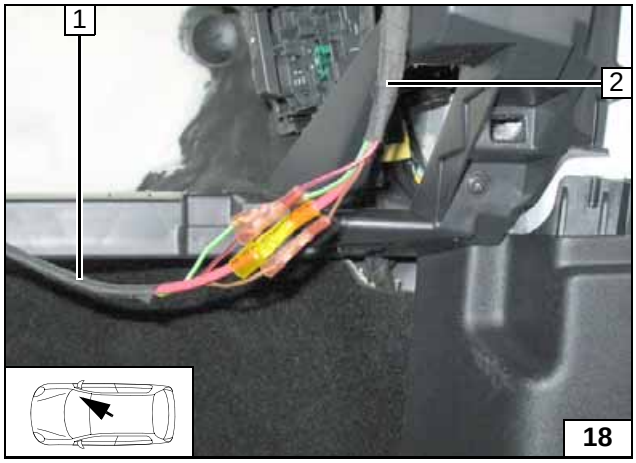
1 M5x16 bolt, large diameter washer [2x], flanged nut, existing hole
2 PWM-GW socket

Mounting PWM-GW



1 PWM-GW

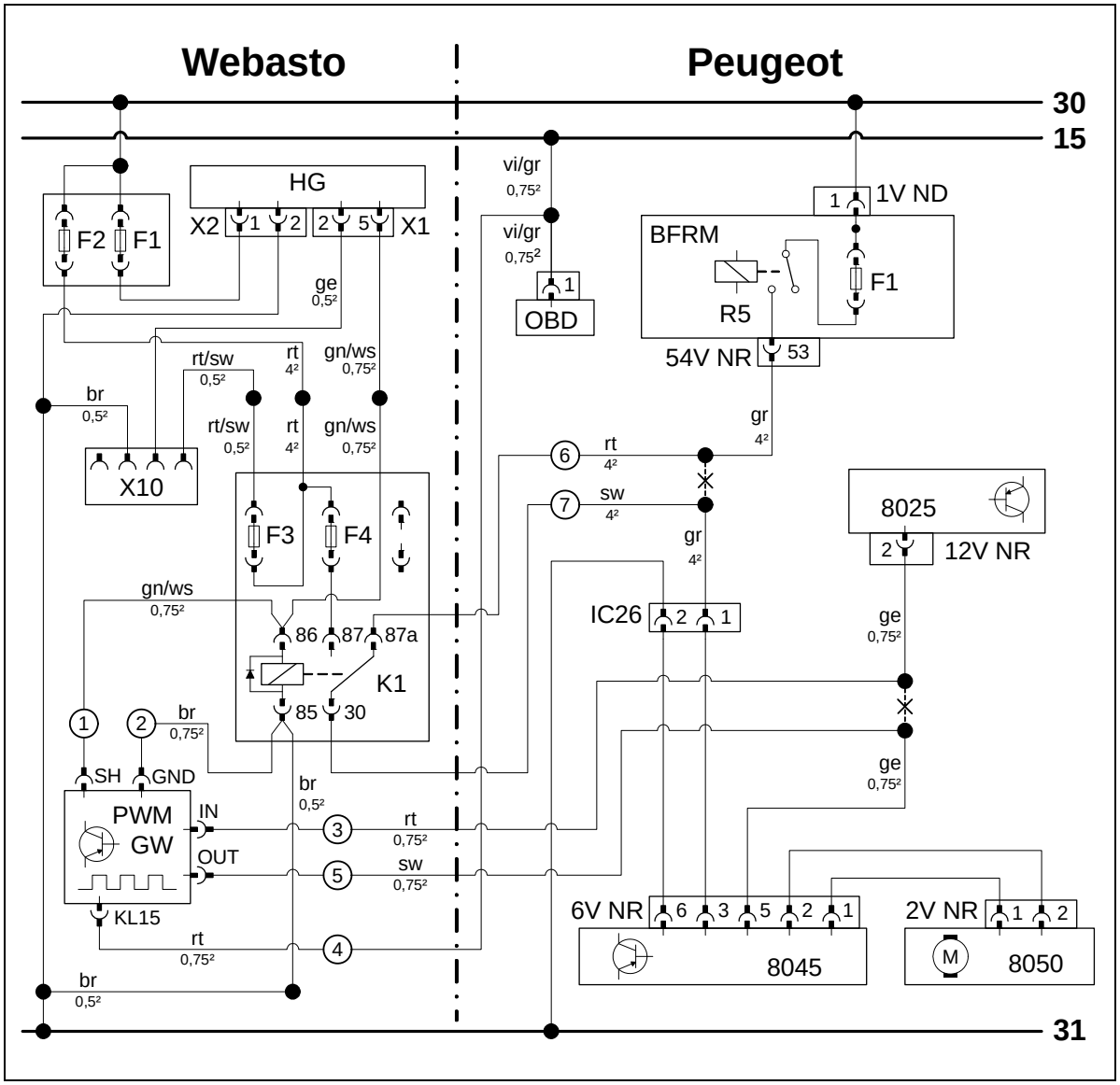
Connecting same colour wiring harnesses



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

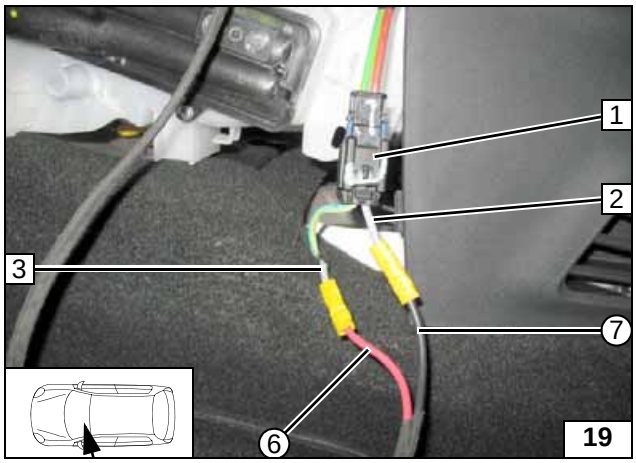
Fan Controller for Manual Air-Conditioning

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	OBD	Socket outlet	rt	red
X1	6-pin heater connector	BFRM	Fuse and relay carrier of engine compartment	sw	black
X2	2-pin heater connector			ge	yellow
F1	20A fuse	F1	Fuse	gn	green
F2	30A fuse	R5	Relay	br	brown
X10	4-pin connector of heater control	1V ND	1-pin connector	ws	white
		54V NR	54-pin connector	gr	grey
F3	1A fuse	8025	A/C control panel		
F4	25A fuse	12V NR	12-pin connector		
K1	Fan relay	IC26	2-pin connector		
PWM-GW	Pulse width modulator	8045	Fan controller		
		6V NR	6-pin connector		
PWM-GW settings:		8050	Fan motor		
Duty-Cycle: 70%		2V NR	2-pin connector		
Frequency: 400Hz					
Voltage: not relevant				**X**	Cutting point
Function: Low-side				Wiring colours may vary.	

Legend



Connection to connector IC 26 **1** of fan motor wiring harness.

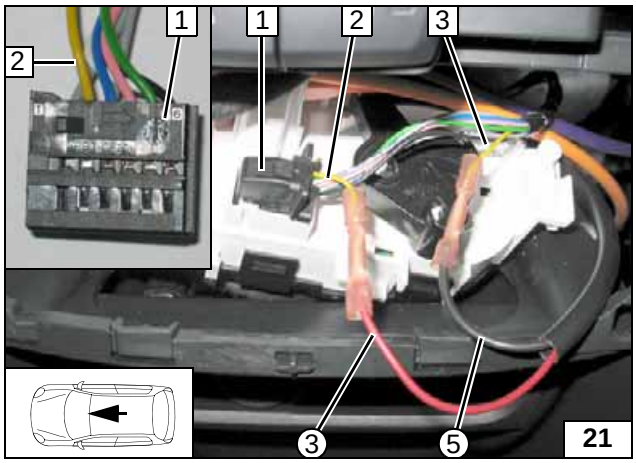
2 Grey (gr) wire of connector IC26, pin1
3 Grey (gr) wire of fuse and relay carrier BFRM, connector 54V NR, pin 53
⑥ Red (rt) wire from K1/87a
⑦ Black (sw) wire of K1/30

Connecting fan motor

Installation Instructions for Manual A/C Control Panel

Loosen fastening points (retaining clip) [4x]

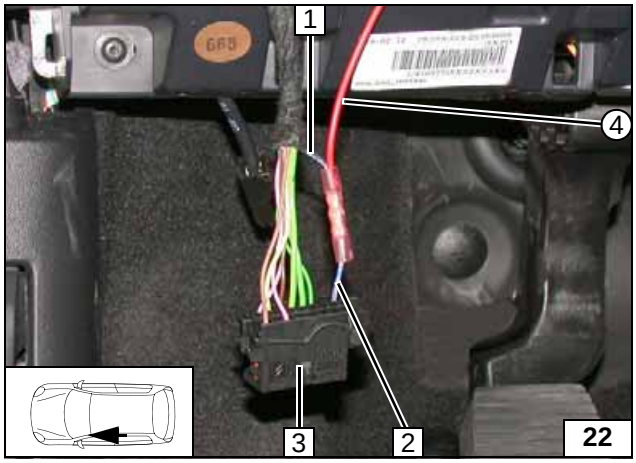
Removing trim



Connection on connector **1** from A/C control panel.

1 Connector 12V NR
2 Yellow (ge) wire of connector 12V NR, pin 2
3 Yellow (ge) wire of fan controller connector 6V NR, pin 5
③ Red (rt) wire of PWM-GW/IN
⑤ Black (sw) wire of PWM-GW/OUT

Connecting A/C control panel



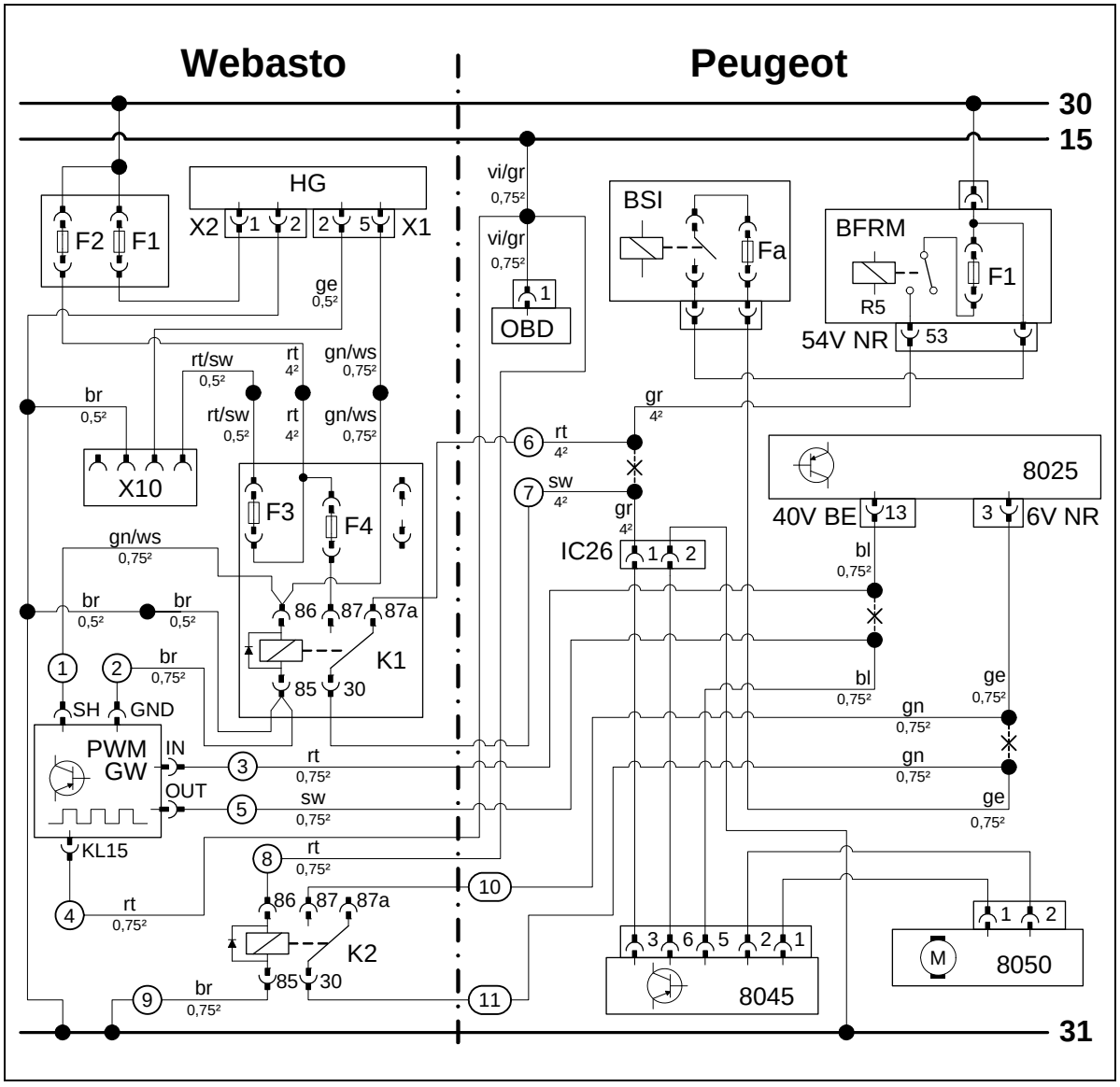
Connection on OBD-socket outlet **3**, pin 1.

1 Violet/grey (vi/gr) wire of terminal 15
2 Violet/grey (vi/gr) wire of OBD socket outlet, pin 1
④ Red (rt) wire of PWM-GW/KL15

Connecting terminal 15

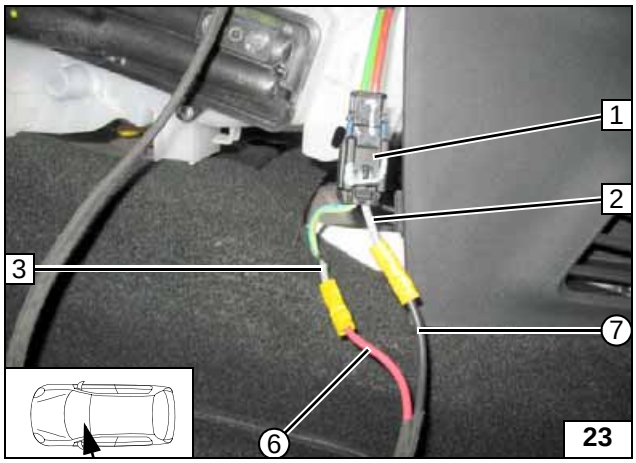
Fan Controller for Automatic Air-Conditioning

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	BSI	Central electrical box	rt	red
X1	6-pin heater connector	Fa	Fuse	sw	black
X2	2-pin heater connector	BFRM	Fuse and relay carrier of engine compartment	ge	yellow
F1	20A fuse			gn	green
F2	30A fuse	F1	Fuse	br	brown
X10	4-pin connector of heater control	R5	Relay	ws	white
		54V NR	54-pin connector	gr	grey
F3	1A fuse	OBD	Socket outlet	vi	violet
F4	25A fuse	8025	A/C control panel		
K1	Fan relay	40V BE	40-pin connector		
K2	Additional relay	6V NR	6-pin connector		
PWM-GW	Pulse width modulator	IC26	2-pin connector		
		8050	Fan motor		
PWM-GW settings:		8045	Fan controller		
Duty-Cycle: 70%					
Frequency: 400Hz					
Voltage: not required				**X**	Cutting point
Function: Low-side				Wiring colours may vary.	

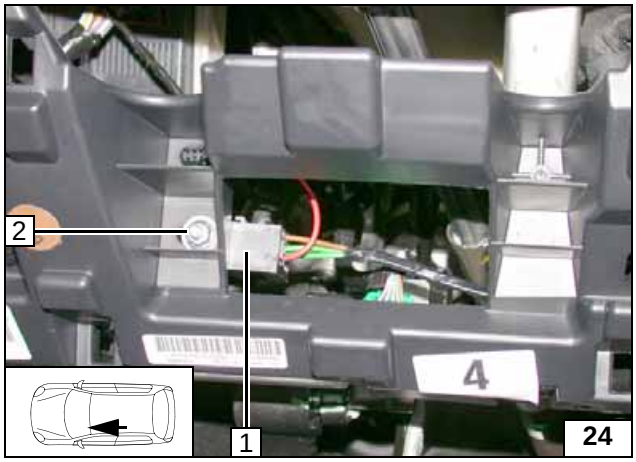
Legend



Connection to connector IC 26 **1** of fan motor wiring harness.

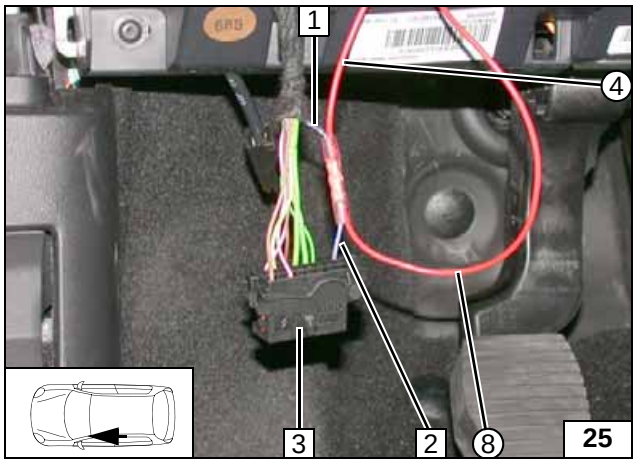
2 Grey (gr) wire of connector IC26, pin1
3 Grey (gr) wire of fuse and relay carrier BFRM, connector 54V NR, pin 53
⑥ Red (rt) wire from K1/87a
⑦ Black (sw) wire of K1/30

Connecting fan motor



1 K2 relay socket, attach K2 relay
2 M5x16 bolt, large diameter washer, existing hole

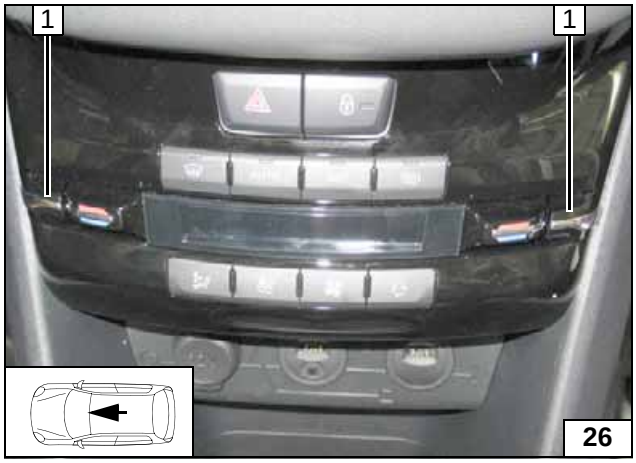
Installing K2 relay



Connection on OBD-socket outlet **3**, pin 1.

1 Violet/grey (vi/gr) wire of terminal 15
2 Violet/grey (vi/gr) wire of OBD socket outlet, pin 1
④ Red (rt) wire of PWM-GW/KL15
⑧ Red (rt) wire from K2/86

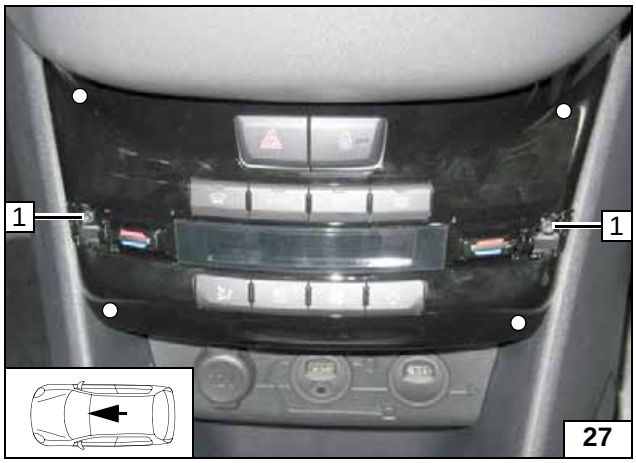
Connecting terminal 15



Installation Instructions for Automatic A/C Control Panel

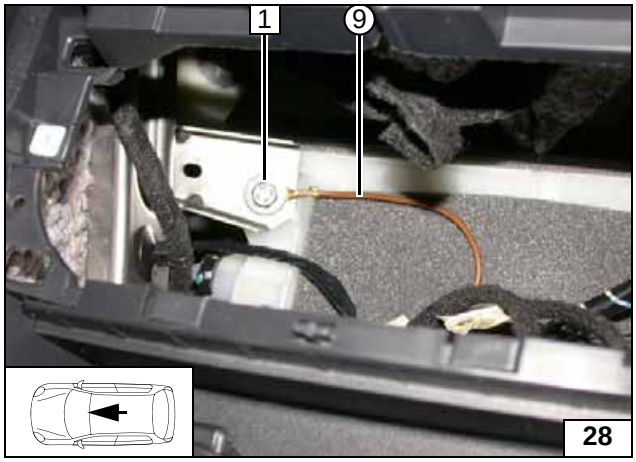
1 Remove covers [2x]

Removing covers



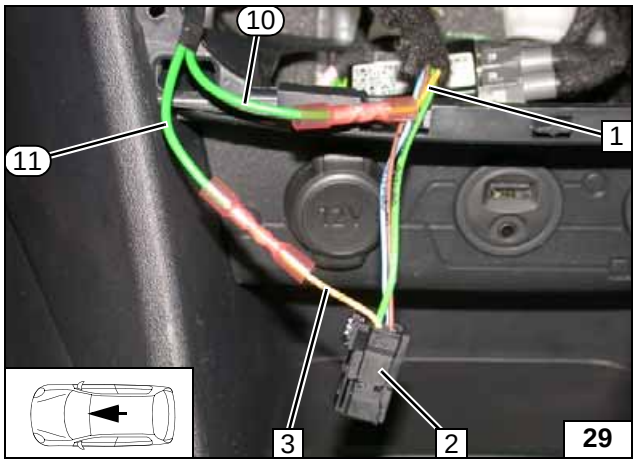
Loosen torx screws **1** [2x]. Pull off frame [retaining clip ○ 4x]. Loosen A/C control panel.

Loosening A/C control panel



1 Original vehicle bolt
⑨ Brown (br) wire of K2/85

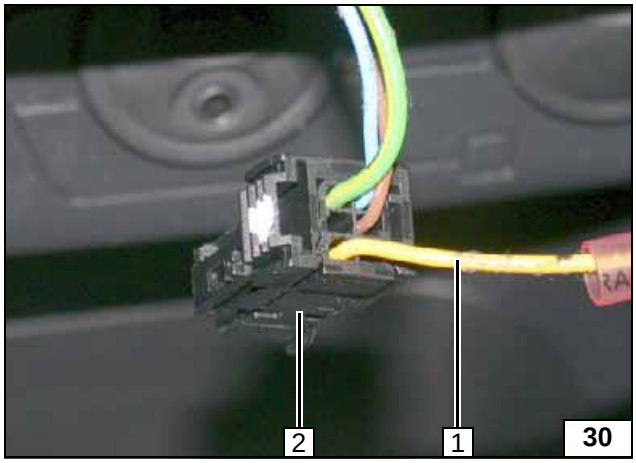
Earth connection of K2 relay



Connection to connector 6V NR pin 3 **2** of A/C control panel (see following image).

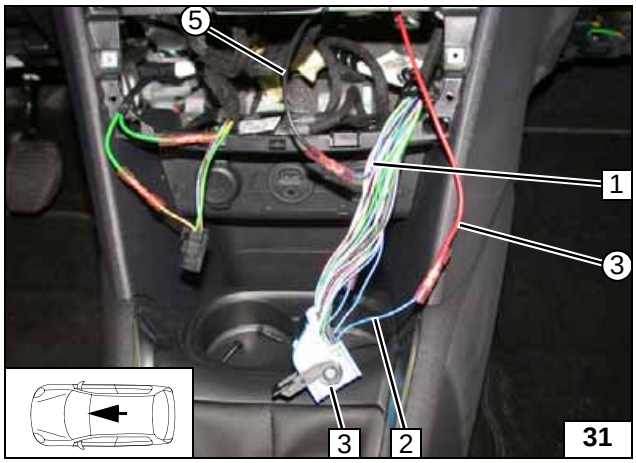
1 Yellow (ge) wire of terminal 15 (delayed)
3 Yellow (ge) wire of connector 6V NR, pin 3
⑩ Green (gn) wire of K2/87
⑪ Green (gn) wire of K2/30

Connecting A/C control panel



1 Yellow (ge) wire of pin 3
2 Connector 6V NR

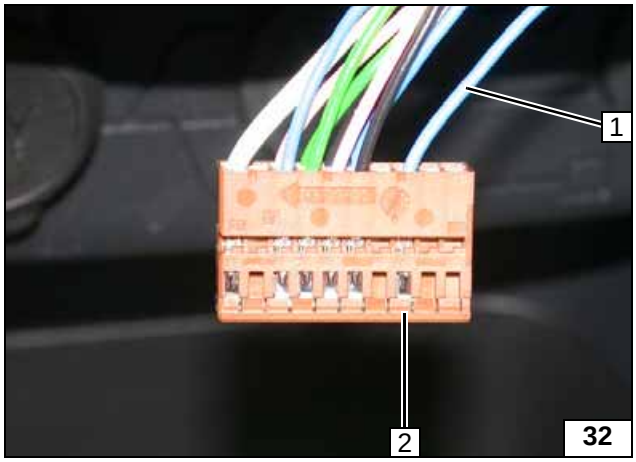
Connector of A/C control panel



Connection to 2-part connector 40V BE pin 13 **3** from A/C control panel. Remove 40V connector BE (see following image).

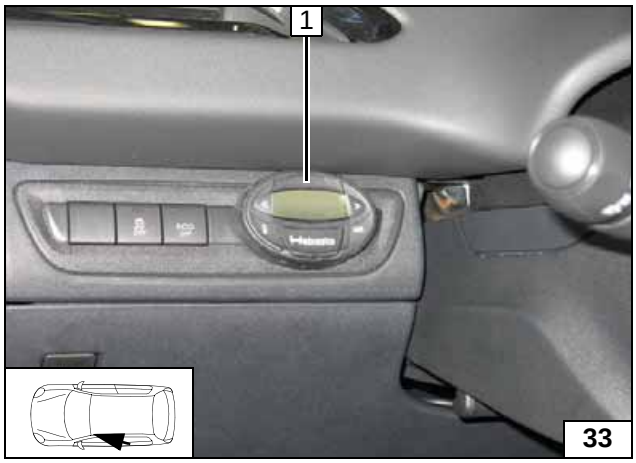
1 Blue (bl) wire of fan controller
2 Blue (bl) wire of connector 40V BE, pin 13
③ Red (rt) wire of PWM-GW/IN
⑤ Black (sw) wire of PWM-GW/OUT

Connecting A/C control panel



1 Blue (bl) wire of pin 13
2 40V connector BE

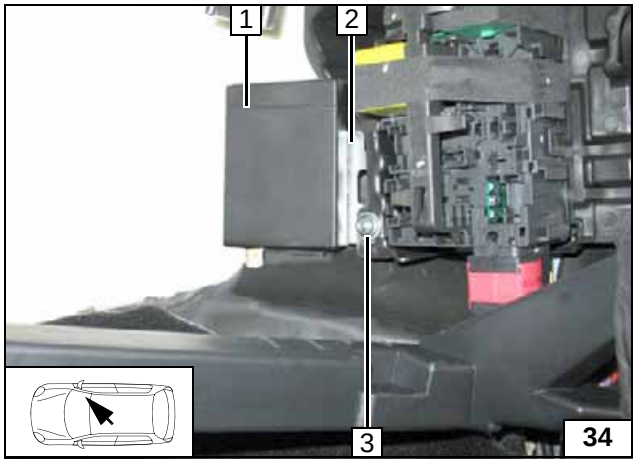
Connector of A/C control panel



Digital Timer Option

1 Digital timer

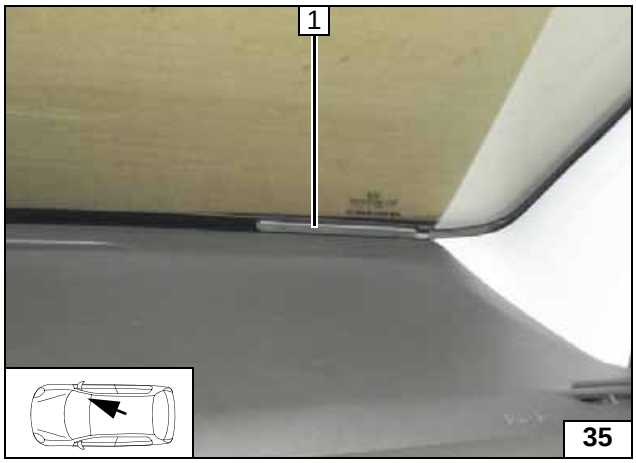
Installing digital timer



Remote Option Telestart

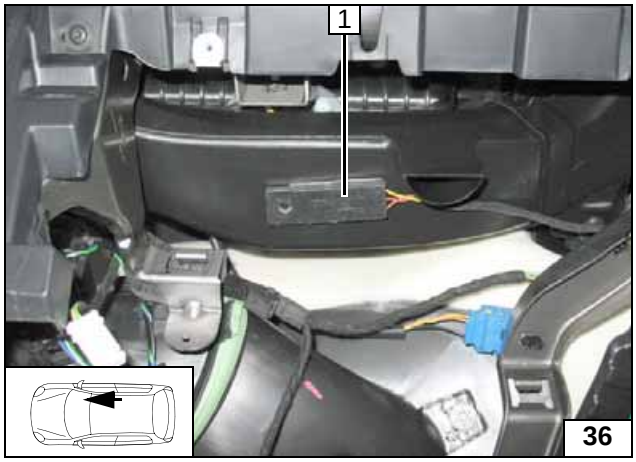
1 Receiver
2 Bracket
3 M5x16 bolt, flanged nut, existing hole

Installing receiver



1 Antenna

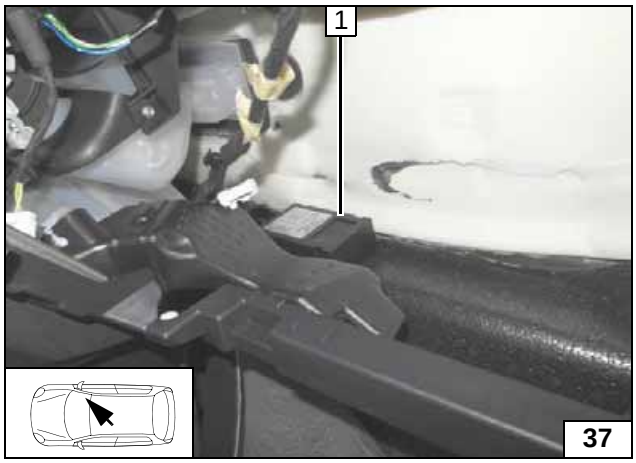
Installing antenna



Temperature sensor T100 HTM

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

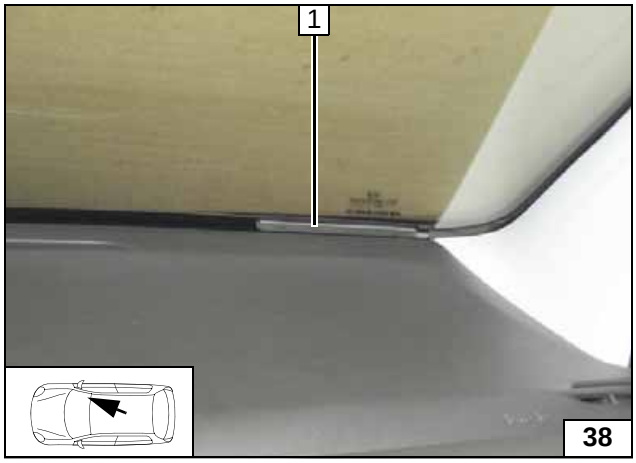
Installing tempera-ture sensor



Remote Option Thermocall TC3

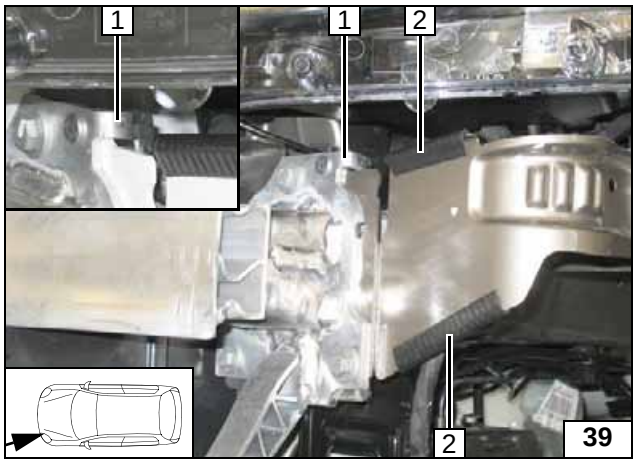
Fasten receiver **1** with adhesive tape.

Installing receiver



1 Antenna

Installing antenna



Preparing Installation Location

Image shows petrol vehicle.
Bend tab at position **1** inwards by about 90°.

2 50mm edge protection [2x]

Installing edge protection

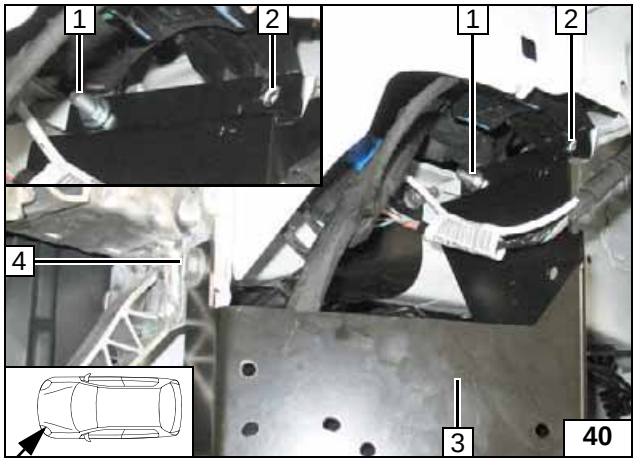


Image shows diesel vehicle.

1 M6x20 bolt, flanged nut, existing hole
2 Copy hole pattern, 7 mm dia. hole
3 Loosely mount bracket
4 Original vehicle M8 bolt

Copying hole pattern

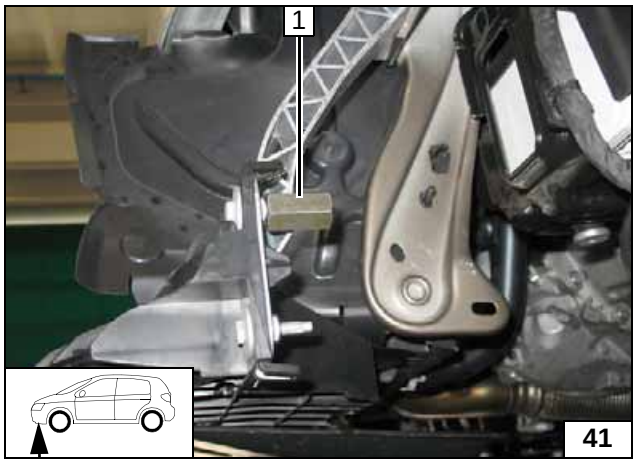
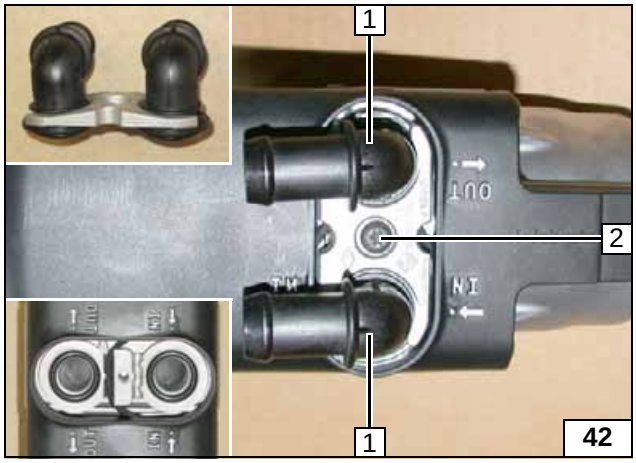


Image shows petrol vehicle.

1 M6x30 spacer nut, existing bolt

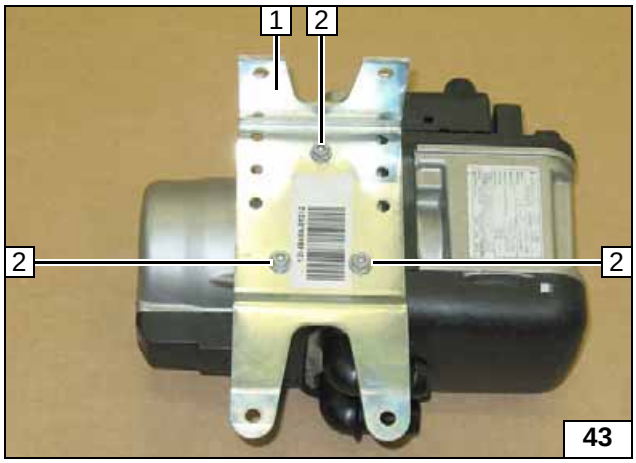
Mounting spacer nut



Preparing Heater

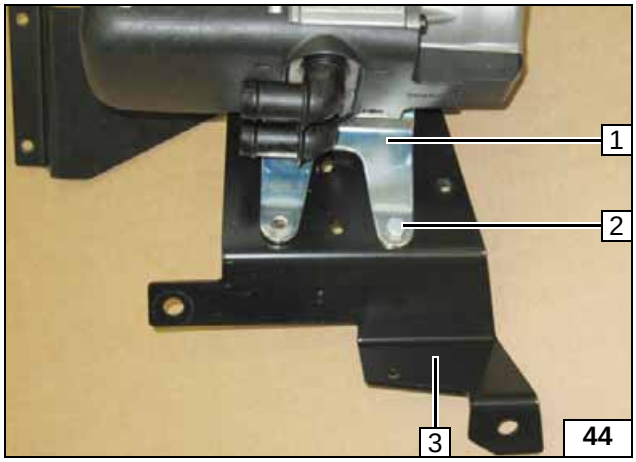
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection pieces

Installing water connection pieces



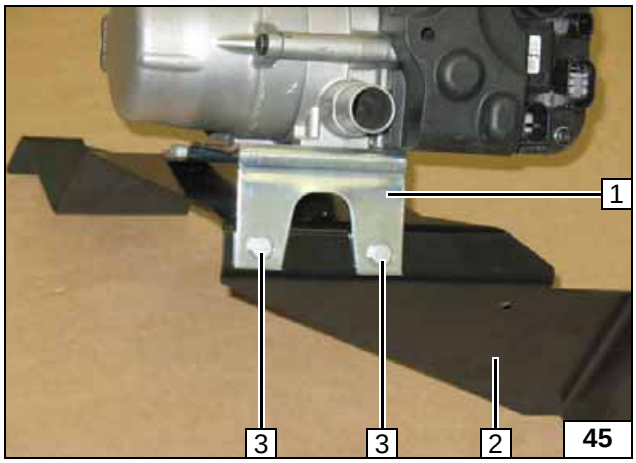
1 Additional bracket
2 5x13 self-tapping bolt [3x]

Installing additional bracket



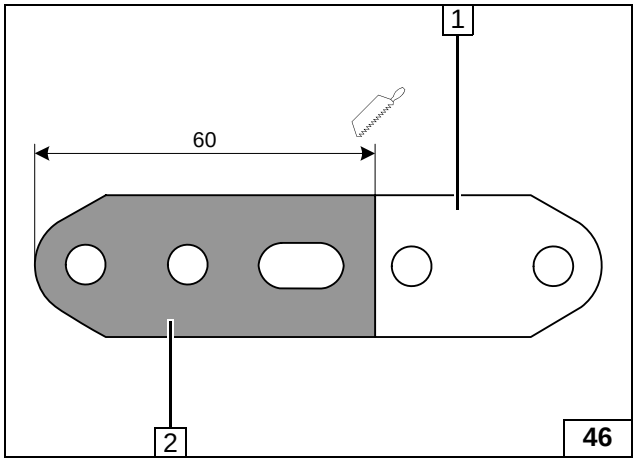
1 Additional bracket
2 M6x16 bolt, flanged nut
3 Bracket

Mounting bracket



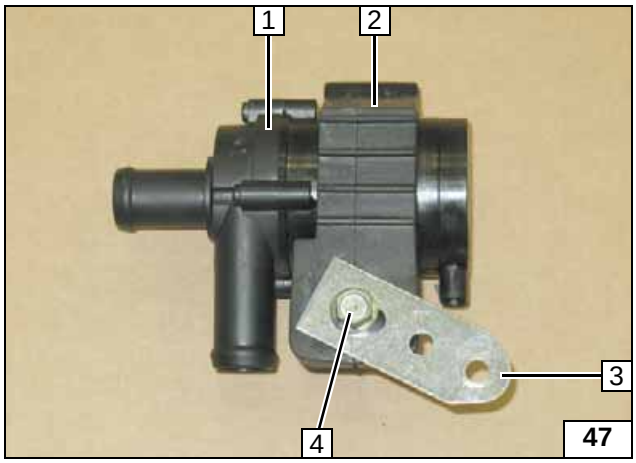
1 Additional bracket
2 Bracket
3 M6x16 bolt, flanged nut [2x each]

Mounting bracket



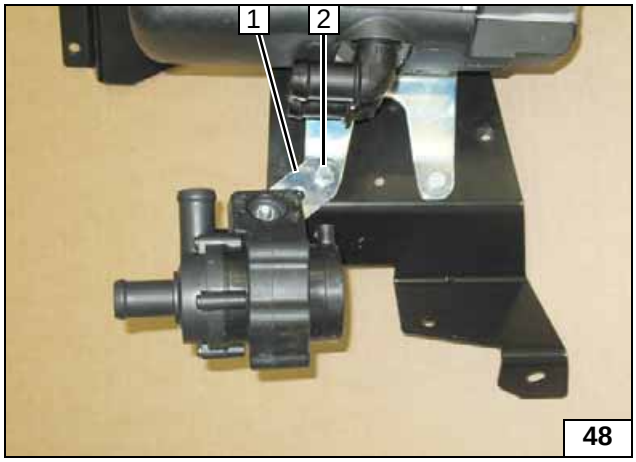
1 Discard section
2 Perforated bracket

Cutting perforated bracket to length



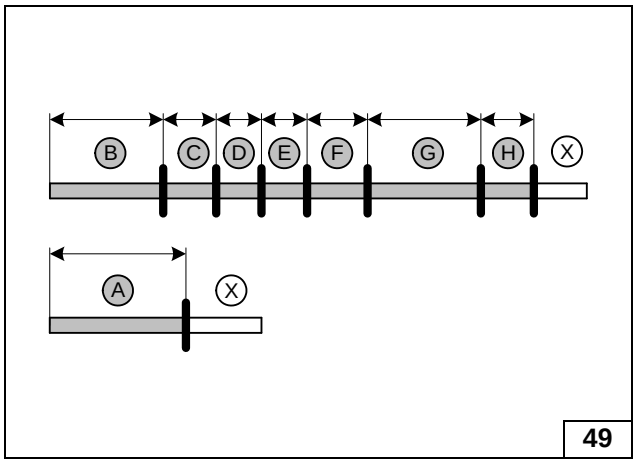
1 Circulating pump
2 Circulating pump mounting
3 Perforated bracket
4 M6x25 bolt, flanged nut

Premounting circulating pump



1 Perforated bracket
2 M6x16 bolt, flanged nut

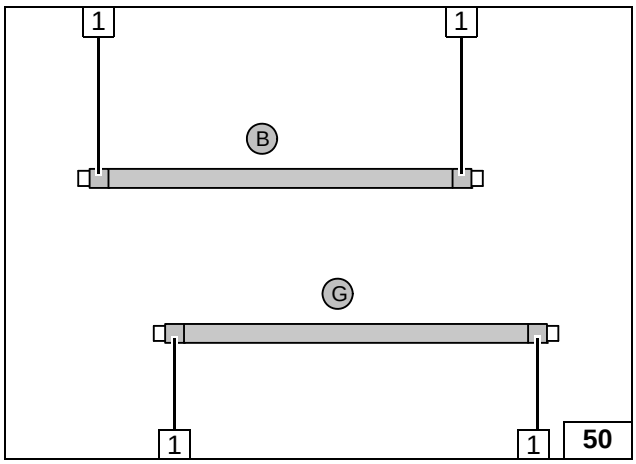
Installing circulating pump



Discard section **X**.

	all except 1.0+1.2 P	1.0+1.2 P
A =	220	320
B =	650	650
C =	100	100
D =	60	60
E =	60	60
F =	200	200
G =	650	650
H =	210	260

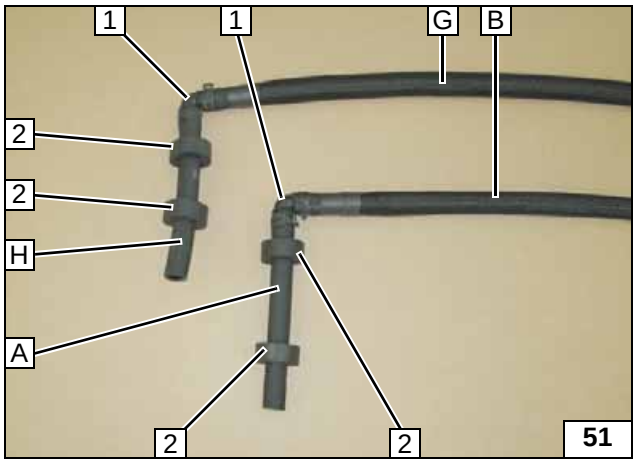
Cutting hoses to length



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

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

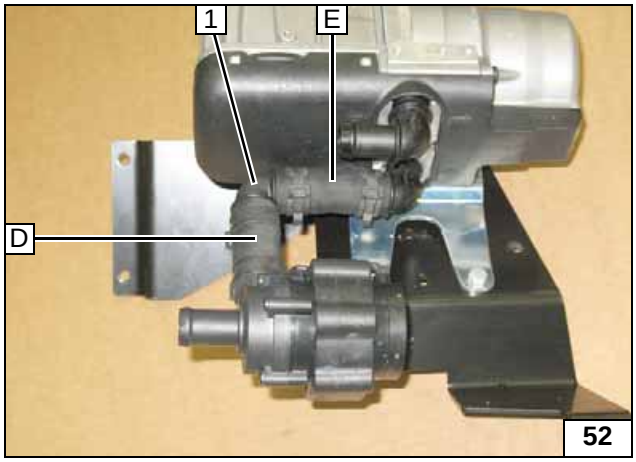
Preparing hoses



All spring clips, 25 mm dia.

1 90° connecting pipe [2x]
2 Black (sw) rubber isolator [4x]

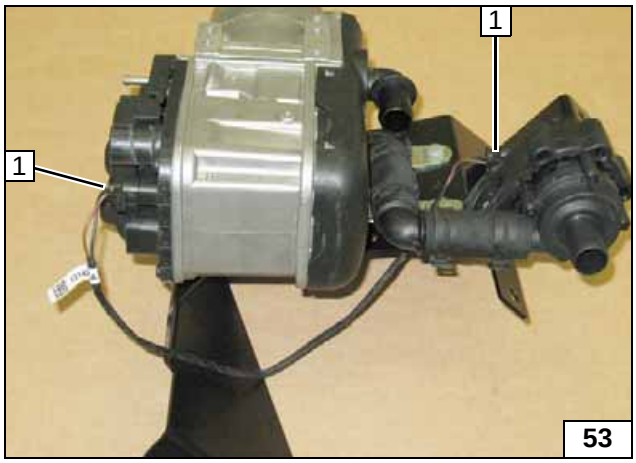
Premounting hoses



All spring clips, 25 mm dia.

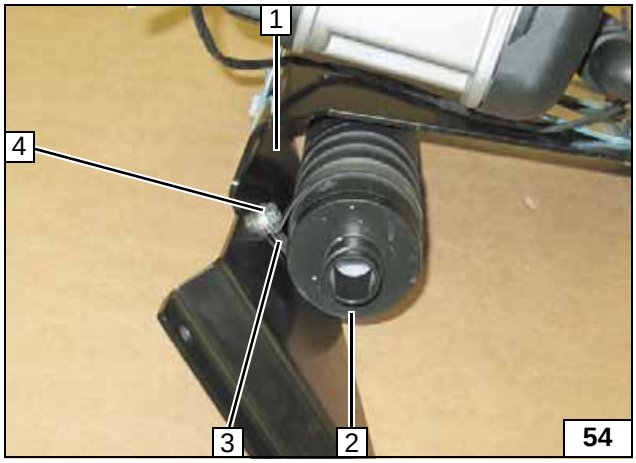
1 90° connecting pipe

Premounting hoses



1 Connector of circulating pump wiring harness [2x]

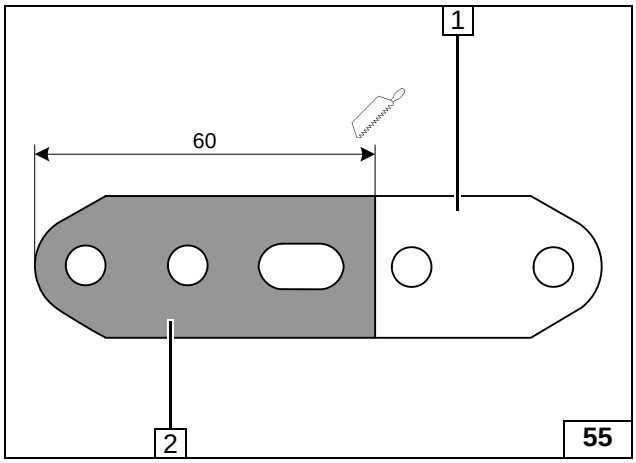
Mounting wiring harness



1 Bracket
2 Combustion air silencer
3 51 mm dia. clamp
4 M5x16 bolt, flanged nut

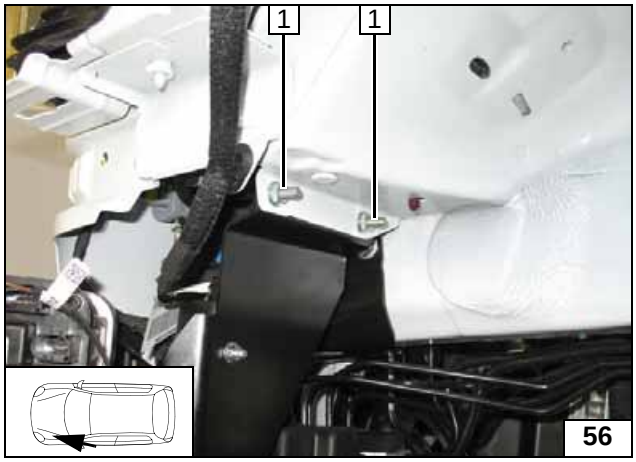
Installing combustion air silencer

Installing Heater



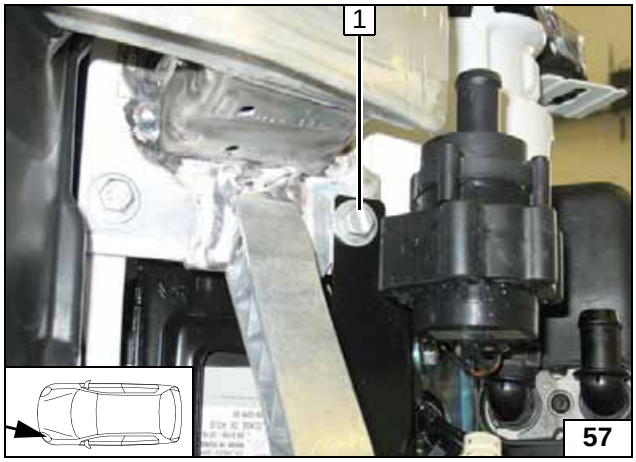
1 Discard section
2 Perforated bracket

Cutting perforated bracket to length



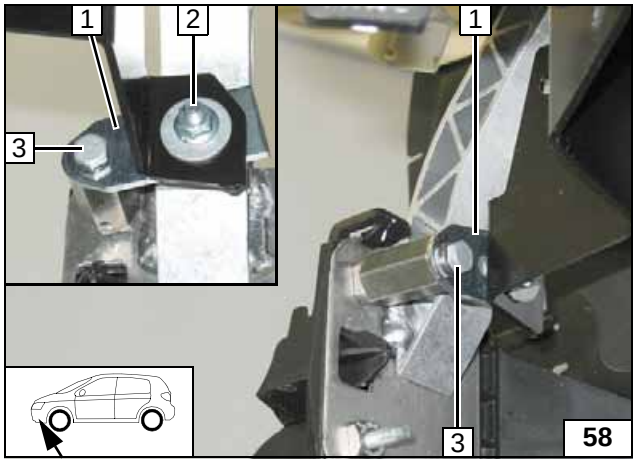
1 M6x20 bolt, flanged nut [2x each]

Mounting heater



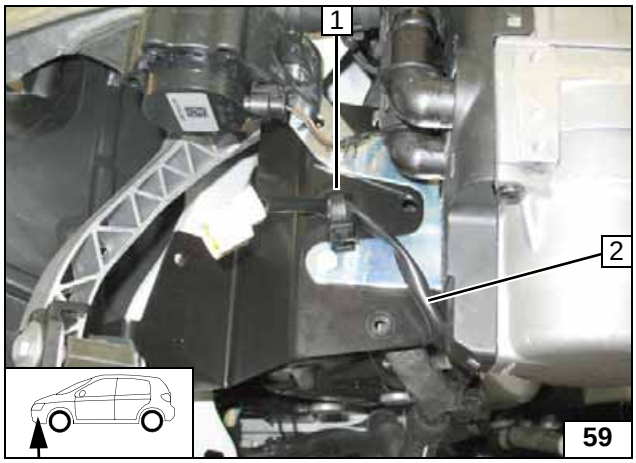
1 Original vehicle M8 bolt

Mounting heater



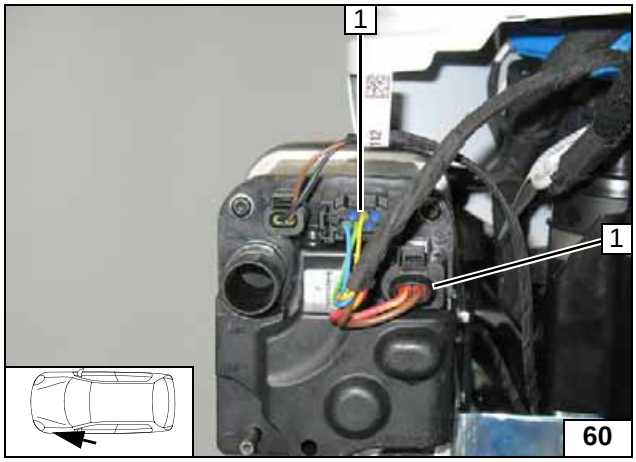
1 Perforated bracket
2 M6x20 bolt, large diameter washer [2x], flanged nut
3 M6x16 bolt, spring lockwasher

Mounting heater



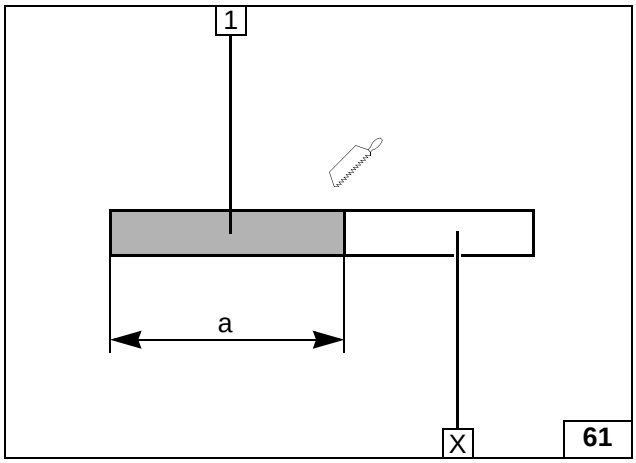
1 Hole cable tie, existing hole
2 Wiring harness of front fog light

Fastening wiring harness of front fog light



1 Connector of heater wiring harness [2x]

Installing heater wiring harness

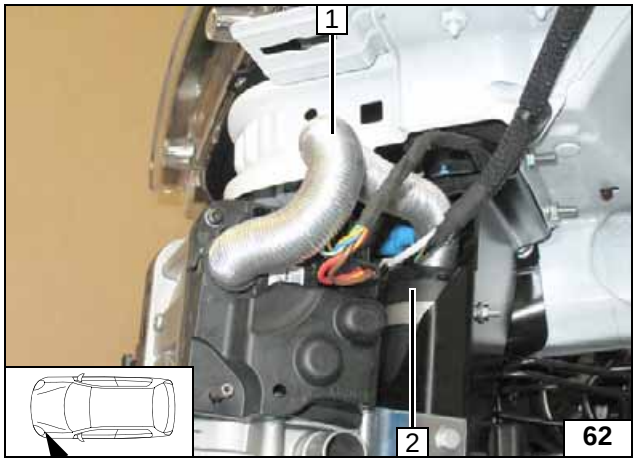


Combustion Air

Discard section **X**.

1 Combustion air pipe
a = 300

Cutting combustion air pipe to length

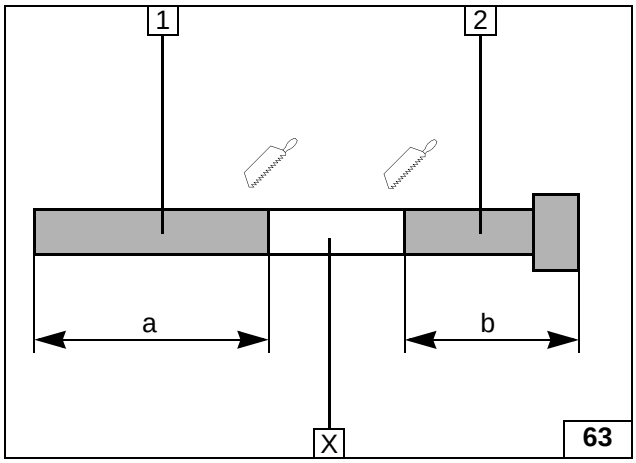


1 Combustion air pipe
2 Silencer

Mounting combustion air pipe

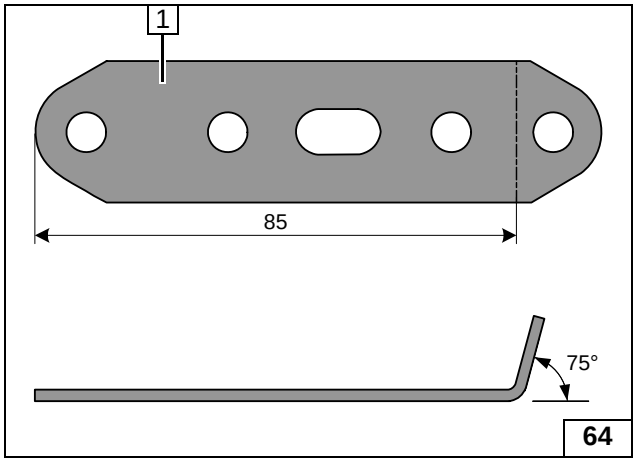
Exhaust Gas

Discard section **X**.



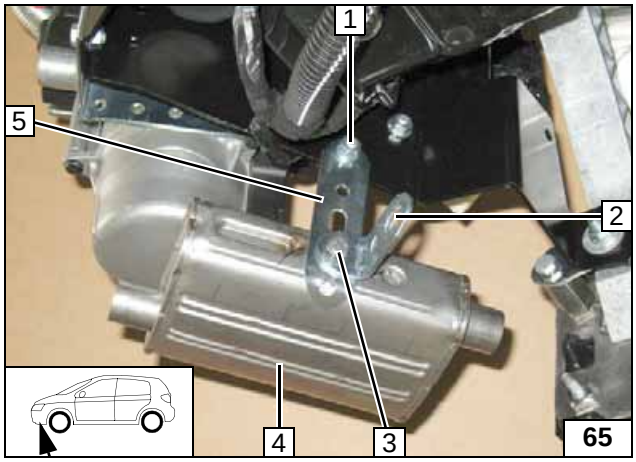
1 Exhaust pipe
a = 190
2 Exhaust end section
b = 190

Preparing exhaust pipe



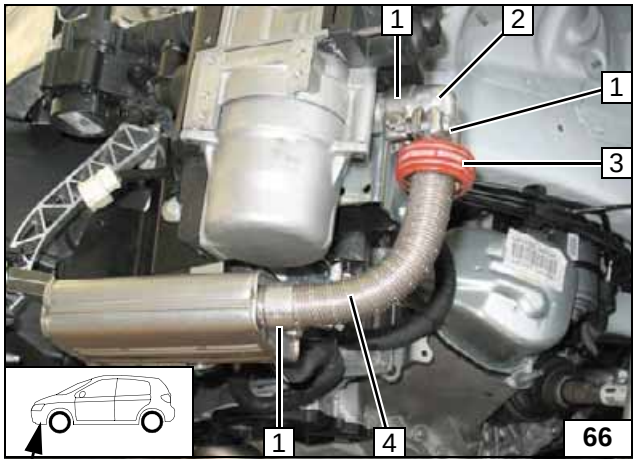
1 Perforated bracket

Angling down perforated bracket



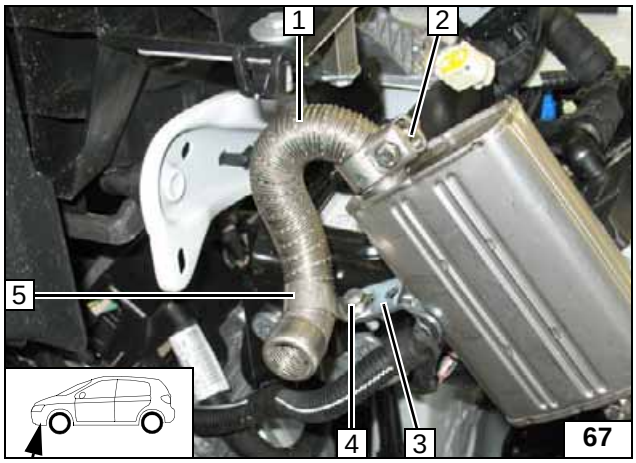
1 M6x20 bolt, flanged nut, existing hole
2 Angle bracket
3 M6x16 bolt, spring lockwasher
4 Silencer
5 Perforated bracket

Mounting silencer



1 Hose clamp [3x]
2 Exhaust elbow
3 Spacer bracket
4 Exhaust pipe

Mounting exhaust pipe



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

Installing exhaust end section

Fuel

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

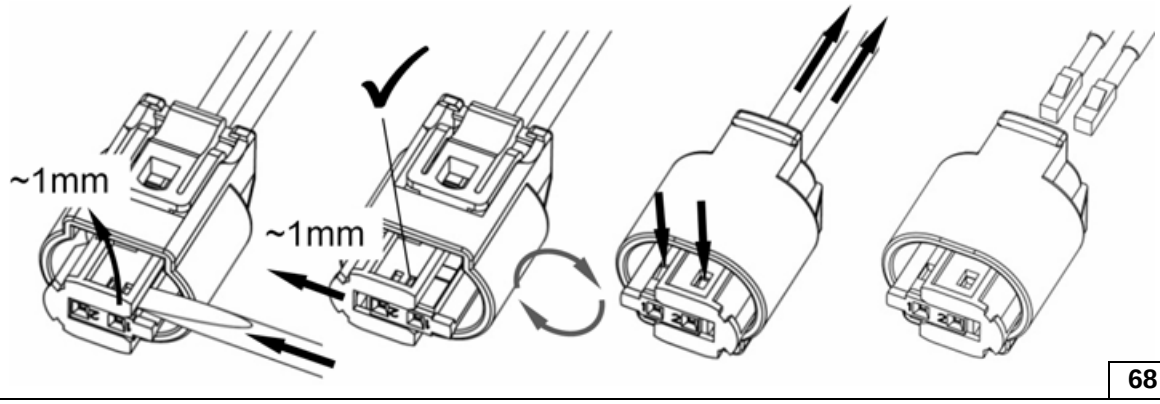
Catch any fuel running off in an appropriate container.

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 connector of metering pump

Connector X7



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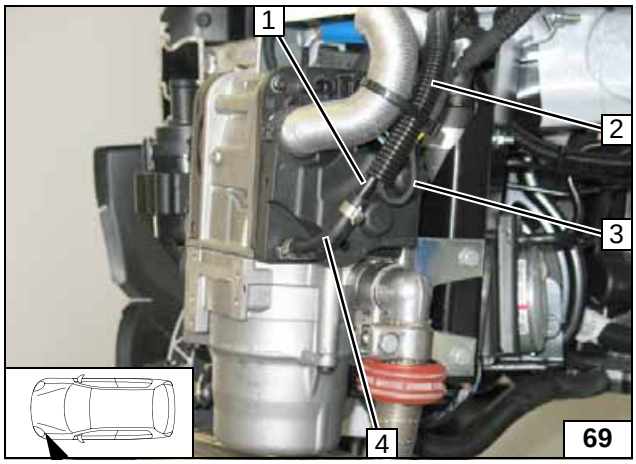
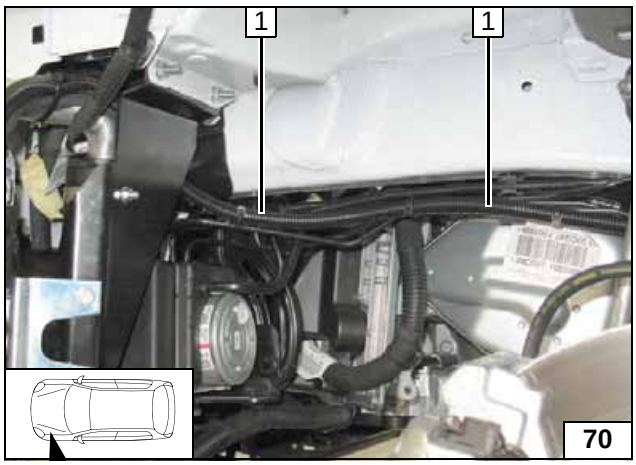


69

Pull fuel line **1** and wiring harness of metering pump **3** into 10 mm dia. corrugated tube **2** .

4 90° moulded hose, 10 mm dia. clamp [2x]

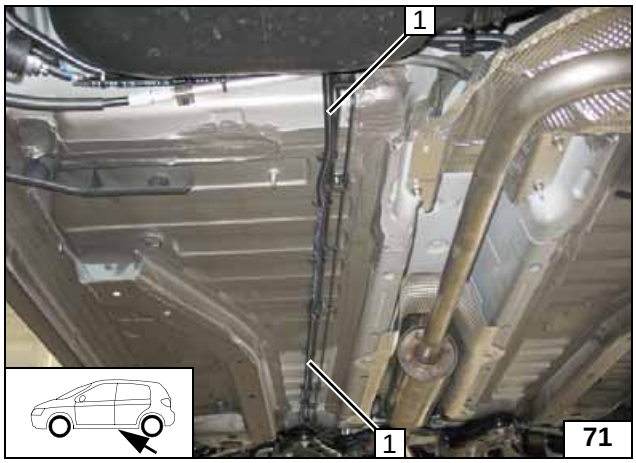
Connecting heater



70

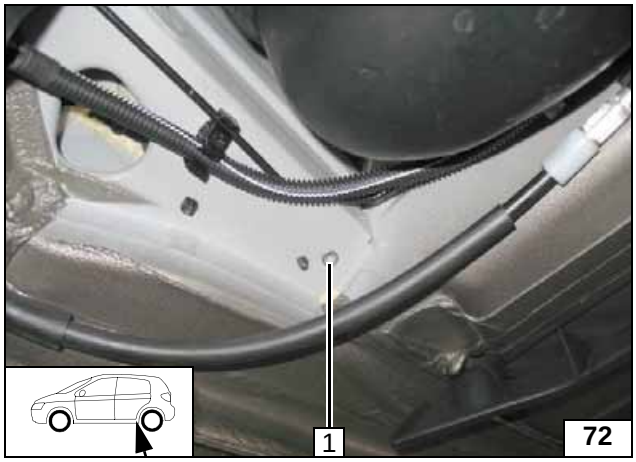
Route fuel line and wiring harness of metering pump in 10 mm dia. corrugated tube **1** along original vehicle brake line to underbody.

Routing lines



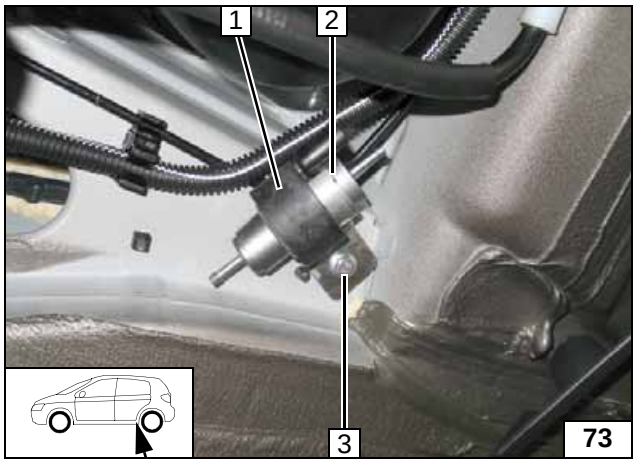
Route fuel line and wiring harness of metering pump in 10 mm dia. corrugated tube **1** on underbody to installation location of metering pump.

Routing lines



1 M6 rivet nut, existing hole

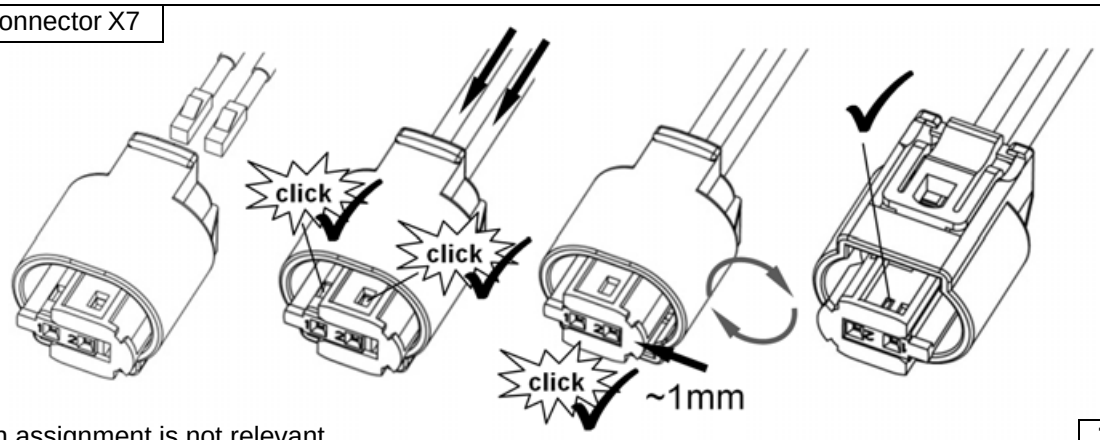
Installing rivet nut



1 Metering pump mounting
2 Metering pump
3 M6x25 bolt, support angle bracket

Mounting metering pump

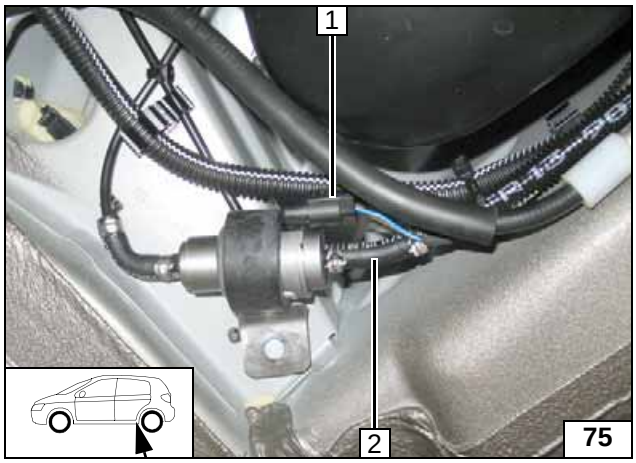
Connector X7



Pin assignment is not relevant.

74

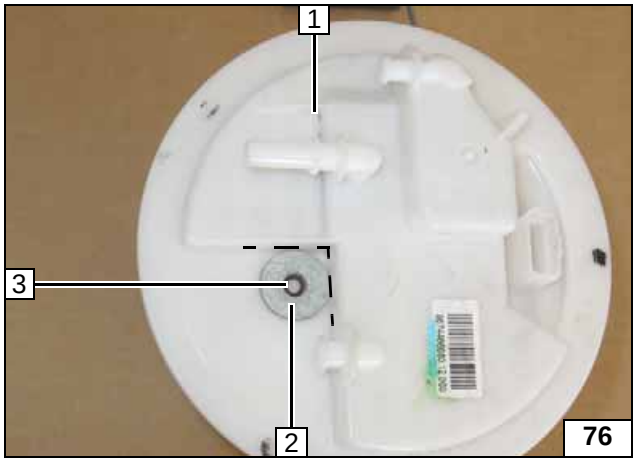
Completing connector of metering pump



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

1 Wiring harness of metering pump, connector mounted
2 Hose section, 10mm dia. clamp [2x], fuel line of heater

Connecting metering pump

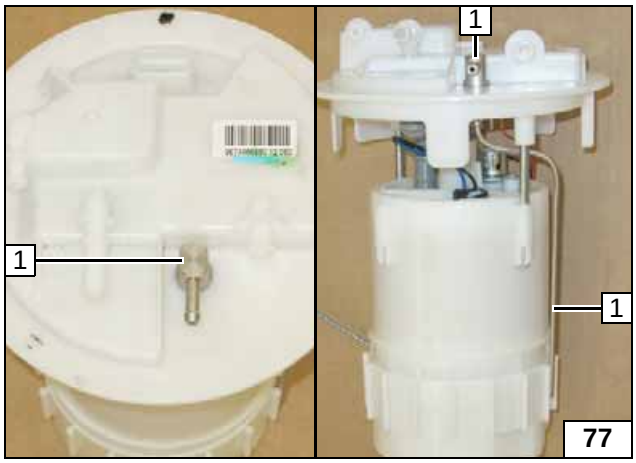


Petrol

Remove fuel-tank sending unit **1** according to manufacturer's instructions. Place large diameter washer with outer dia. d_a = 21.6 mm**2** against the ribs.

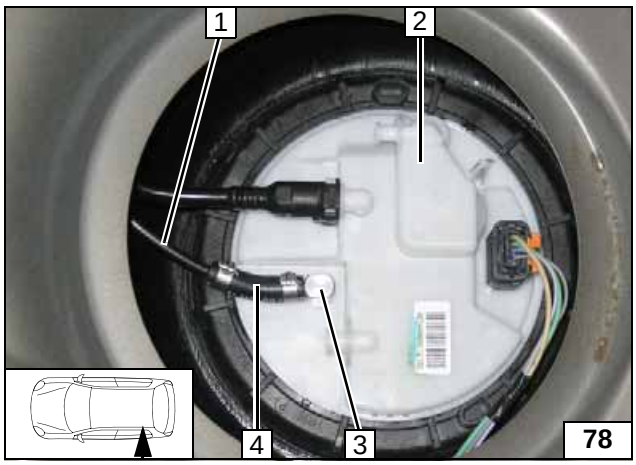
3 Copy hole pattern, 6mm dia. hole

Fuel extraction



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

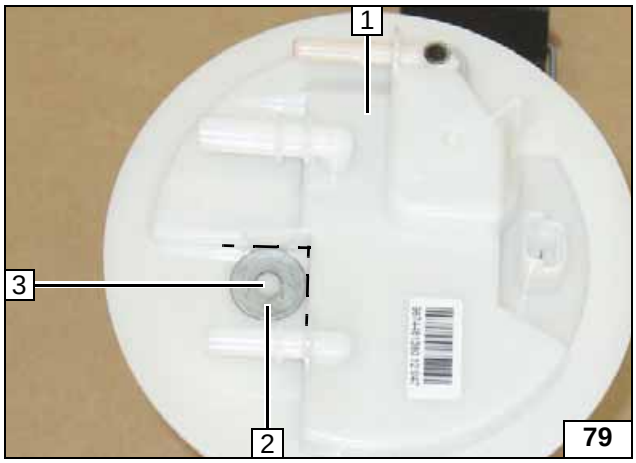
Mounting fuel standpipe



Install fuel tank sending unit **2** according to manufacturer's instructions.

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

Connecting fuel line

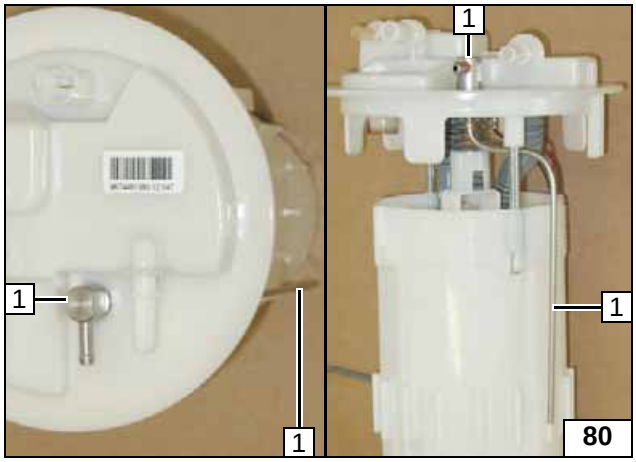


Diesel

Remove fuel-tank sending unit **1** according to manufacturer's instructions. Place large diameter washer with outer dia. d_a = 21.6 mm**2** against the ribs.

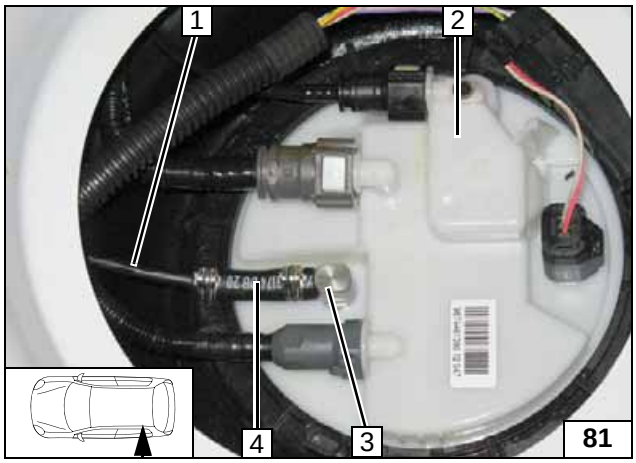
3 Copy hole pattern, 6mm dia. hole

Fuel extraction



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

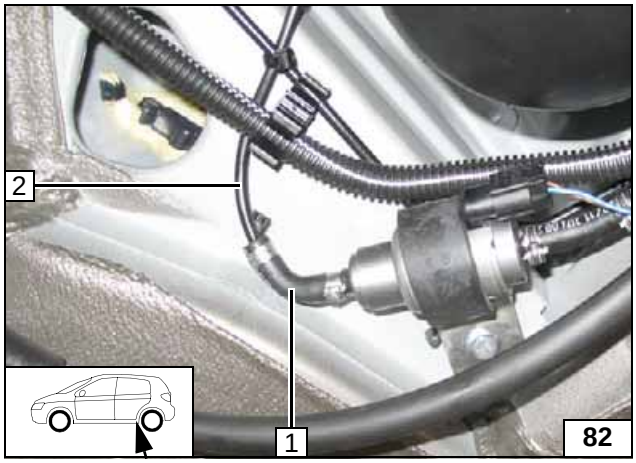
Mounting fuel standpipe



Install fuel tank sending unit **2** according to manufacturer's instructions.

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

Connecting fuel line



All vehicles

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

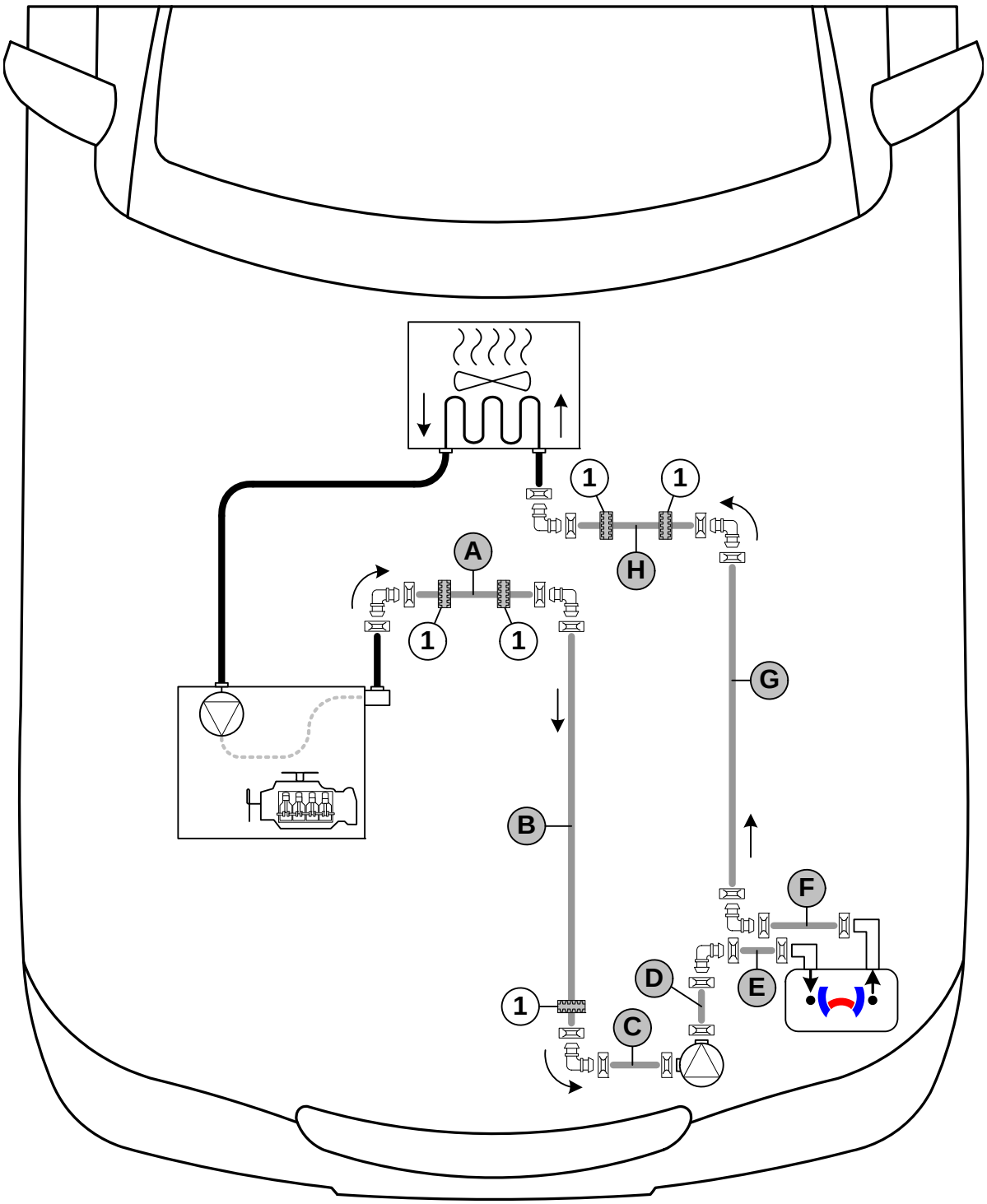
1 90° moulded hose, 10 mm dia. clamp [2x]
2 Fuel line of fuel standpipe

Connecting metering pump

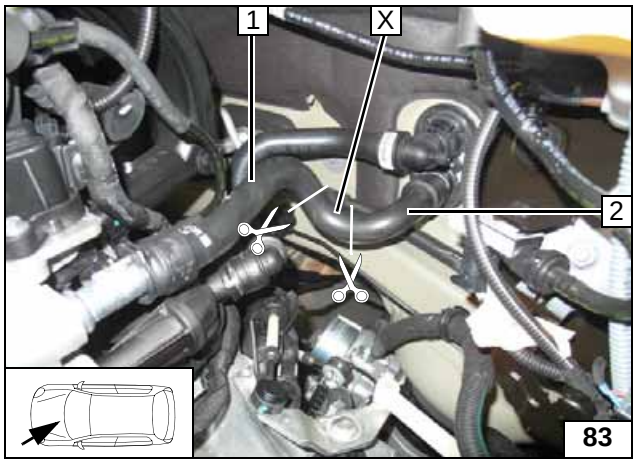
Coolant Circuit

WARNING!
Any coolant running off should be collected using an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can 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 = 25 mm dia.
1 = black (sw) rubber isolator.
All connecting pipes = 18x18mm dia.



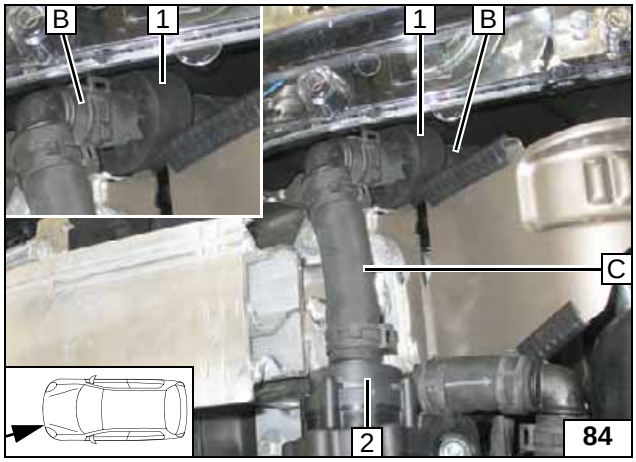
1.0 and 1.2 petrol

Cut off hose on engine outlet / heat exchanger inlet at the markings.

Discard section **X** (90° elbow).

Cutting point

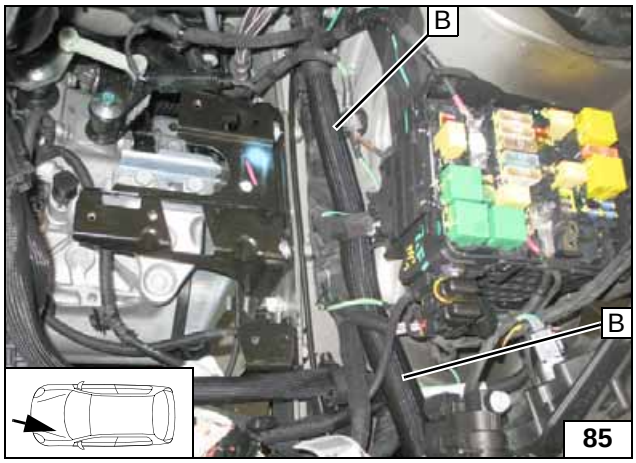
1 Hose section of engine outlet
2 Hose section of heat exchanger inlet



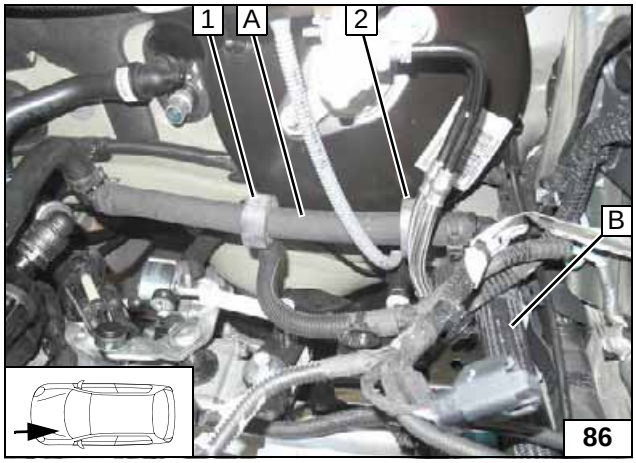
Route hose **B** from engine compartment below the headlight, push on black (sw) rubber isolator **1** and connect to hose **C**.

2 Circulating pump

Connecting circulating pump

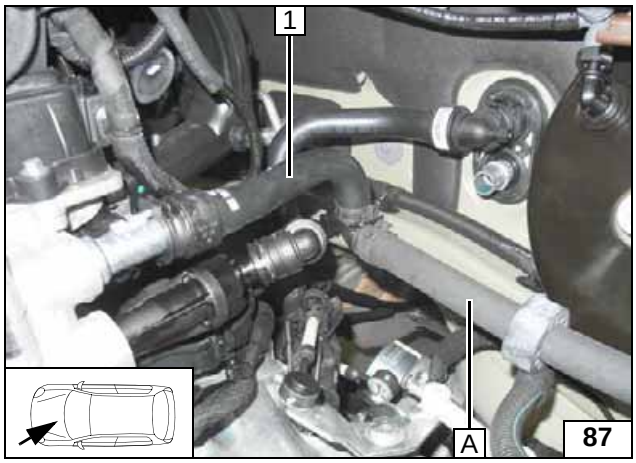


Routing hose B



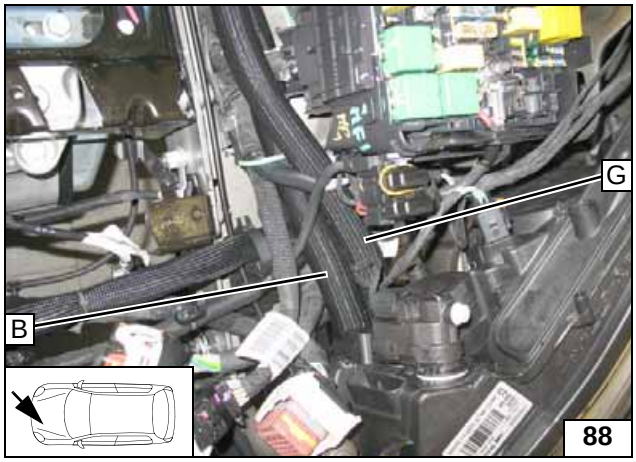
1 Align black (sw) rubber isolator to original vehicle wiring harness
2 Align black (sw) rubber isolator to original vehicle brake lines

Routing in engine compartment



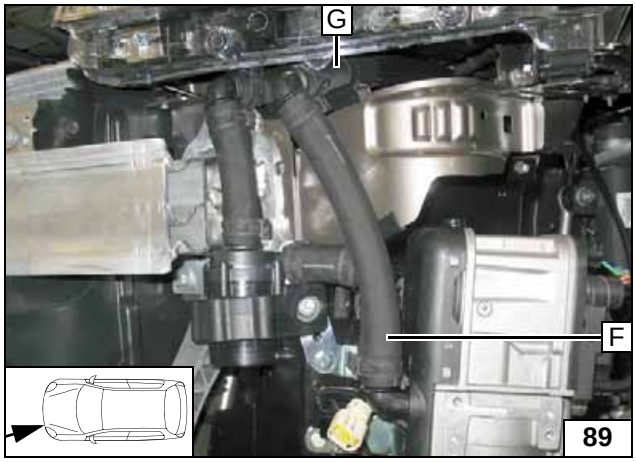
1 Hose of engine outlet

Connecting engine outlet

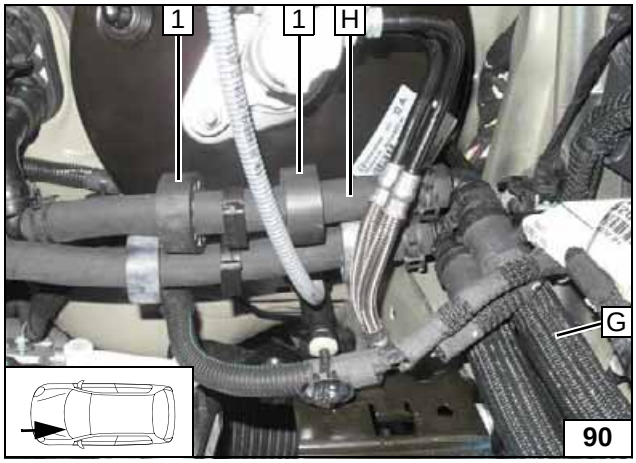


Route hose**G** to the heater below the headlight.

Routing in engine compartment

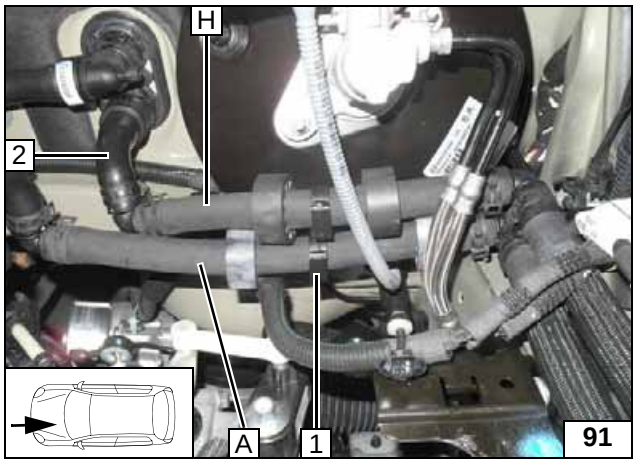


Connecting heater outlet



Align black (sw) rubber isolator [2x] **1** with brake booster.

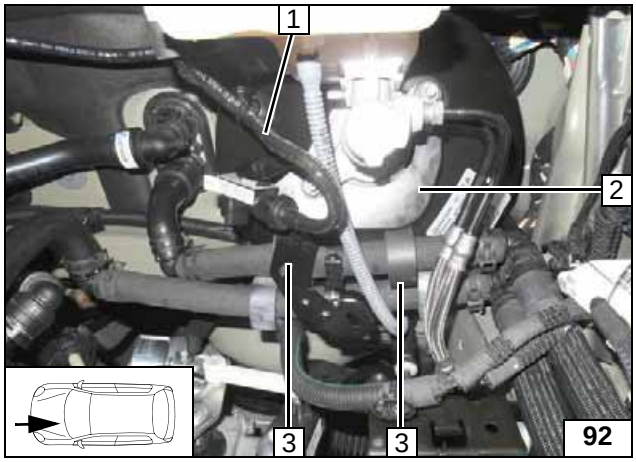
Routing in engine compartment



Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

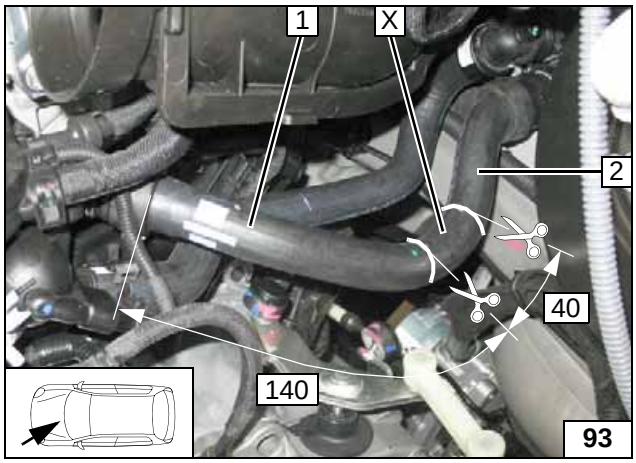
1 Install hose bracket
2 Hose of heat exchanger inlet

Connecting heat exchanger inlet



Insert original vehicle bracket **2** on brake booster. Attach original vehicle vacuum line **1**. Align black rubber isolator **3** [2x] (1x hidden behind bracket) with bracket.

Mounting bracket



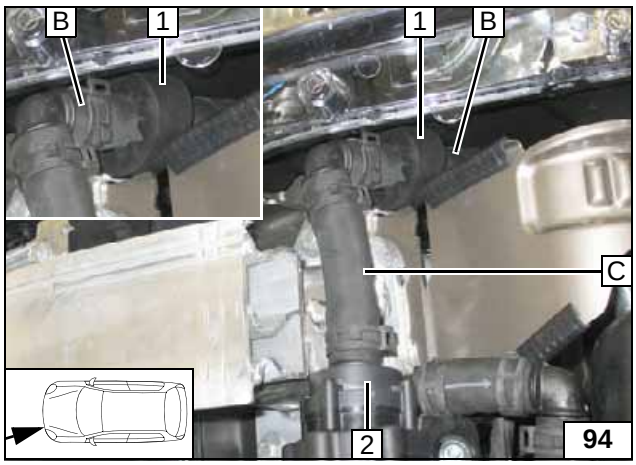
1.4 and 1.6 petrol

Cut off hose on engine outlet / heat exchanger inlet at the markings.

Discard section **X**.

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

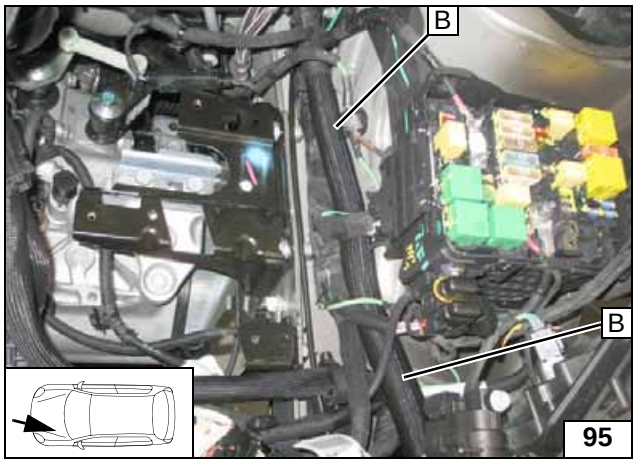
Cutting point



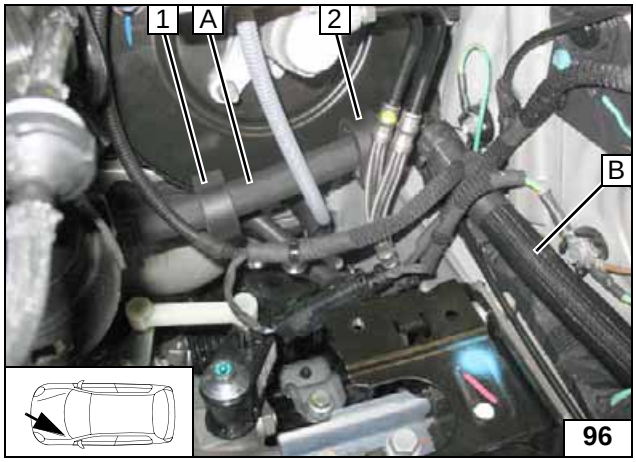
Route hose **B** from engine compartment below the headlight, push on black (sw) rubber isolator **1** and connect to hose **C**.

2 Circulating pump

Connecting circulating pump

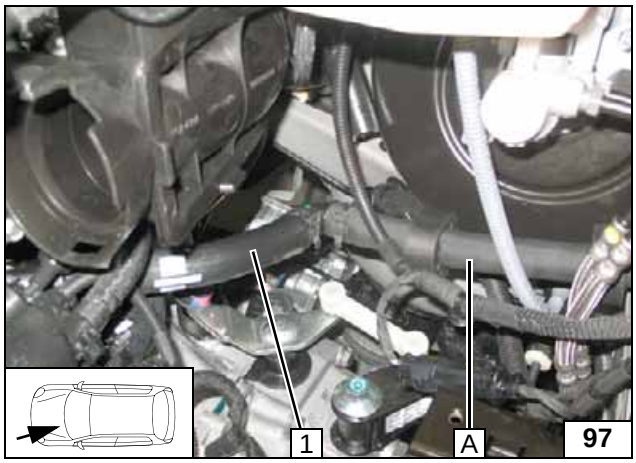


Routing hose B



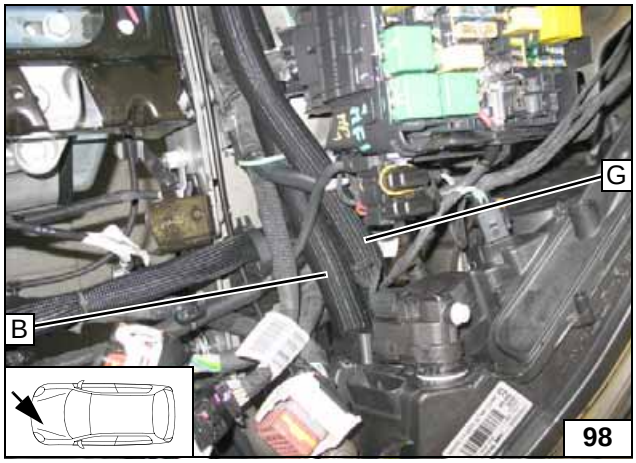
1 Align black (sw) rubber isolator to original vehicle wiring harness
2 Align black (sw) rubber isolator to original vehicle brake lines

Routing in engine compartment



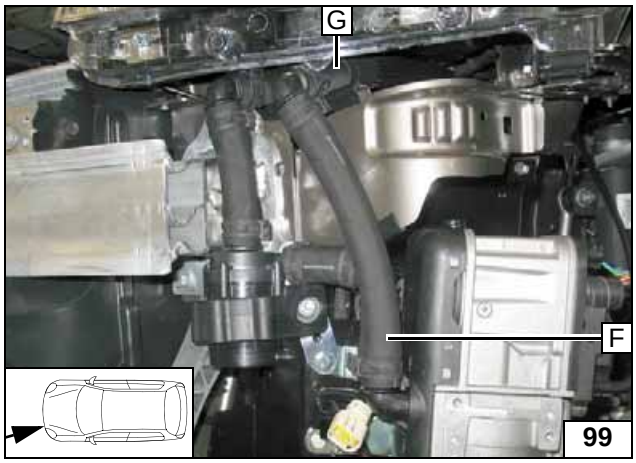
1 Hose of engine outlet

Connecting engine outlet

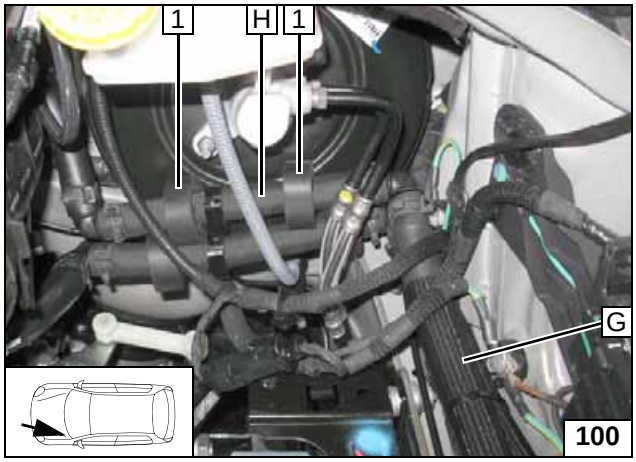


Route hose**G** to the heater below the headlight.

Routing in engine compartment

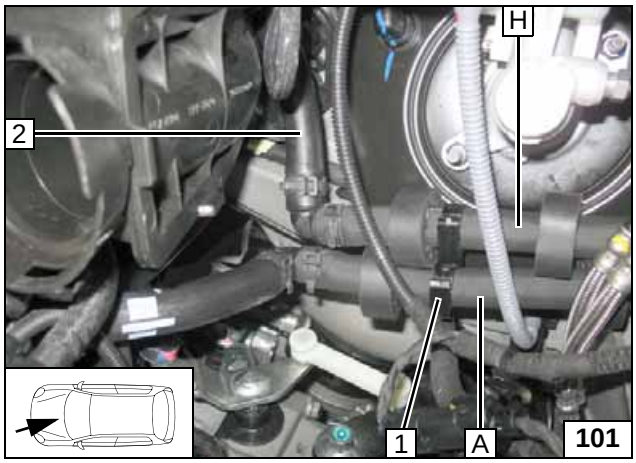


Connecting heater outlet



Align black (sw) rubber isolator [2x] **1** with brake booster.

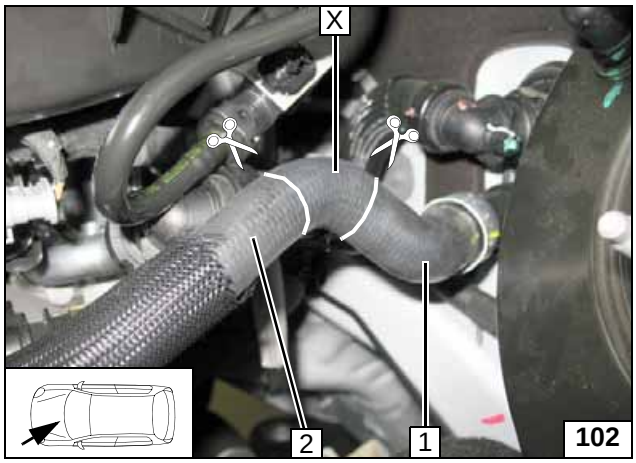
Routing in engine compartment



Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

1 Install hose bracket
2 Hose of heat exchanger inlet

Connecting heat exchanger inlet



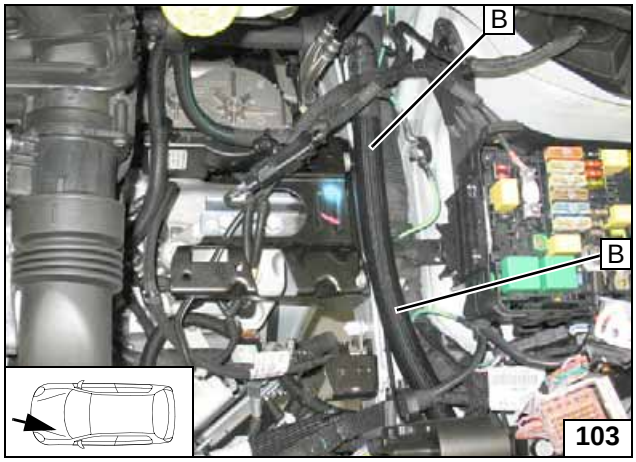
Diesel

Remove braided protection hose in the area of the cutting points. Cut off hose on engine outlet / heat exchanger inlet at the markings.

Discard section **X** (90° elbow).

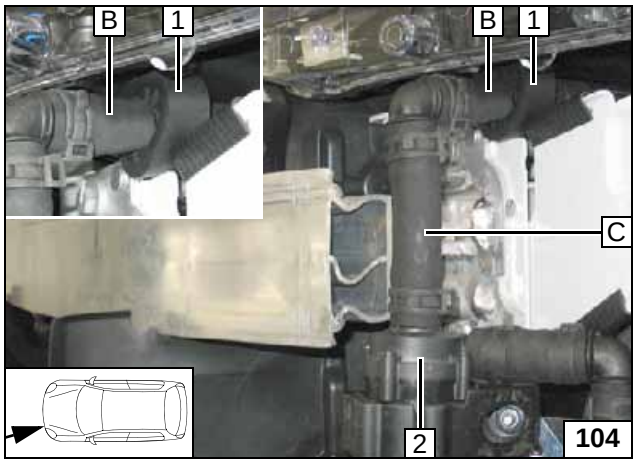
1 Hose section of heat exchanger inlet
2 Hose section of engine outlet

Cutting point



Route hose**B** to the heater below the headlight.

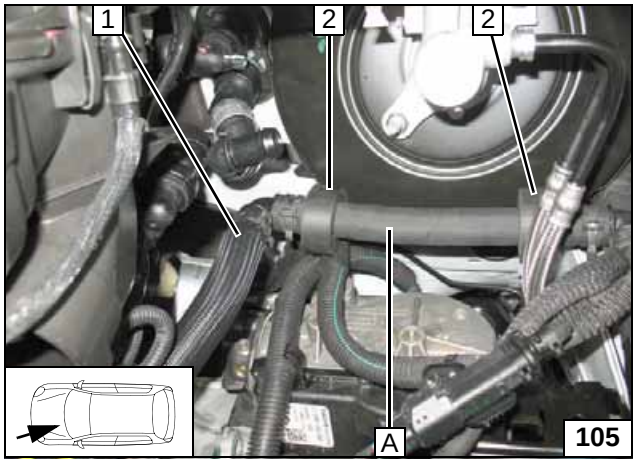
Routing hose B



Push black (sw) rubber isolator **1** onto hose **B** and align.

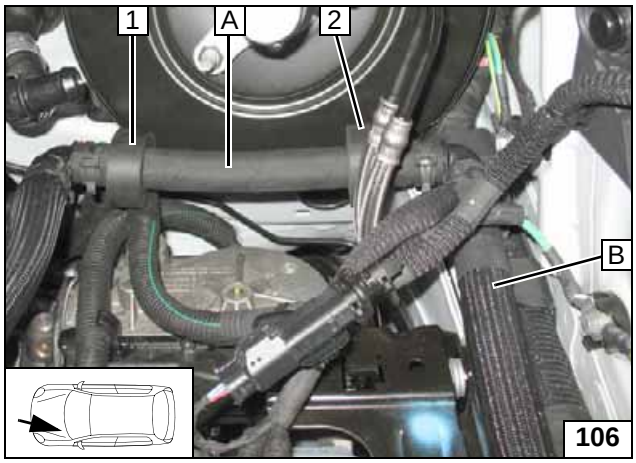
2 Circulating pump

Connecting circulating pump



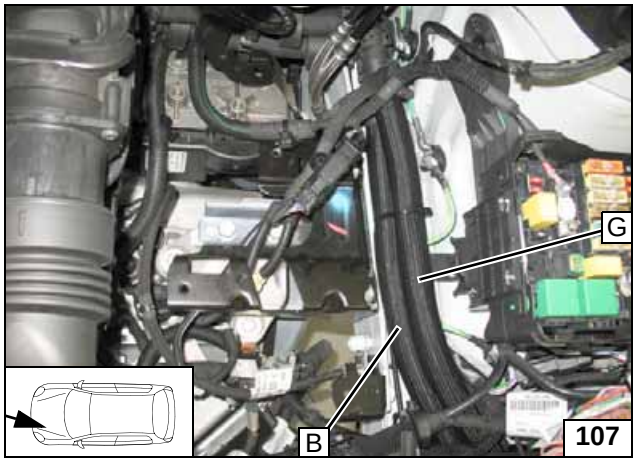
1 Hose of engine outlet
2 Slide on black (sw) rubber isolator [2x]

Connecting engine outlet



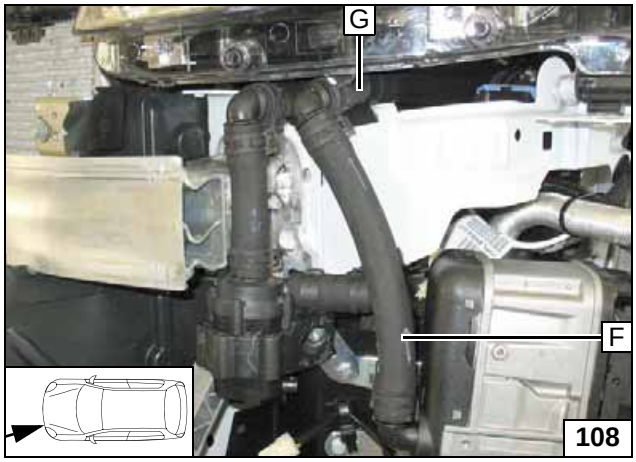
1 Align black (sw) rubber isolator to original vehicle wiring harness
2 Align black (sw) rubber isolator to original vehicle brake lines

Routing in engine compartment

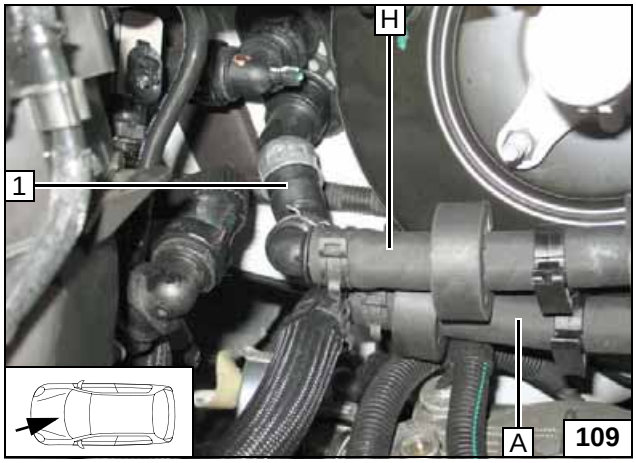


Route hose**G** to the heater below the headlight.

Routing in engine compartment

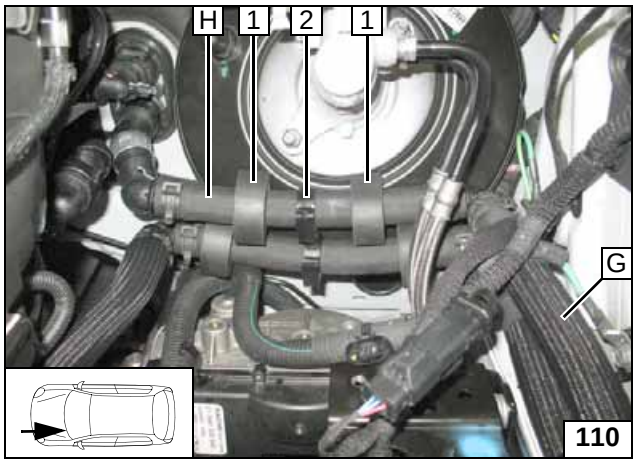


Connecting heater outlet



1 Hose of heat exchanger inlet

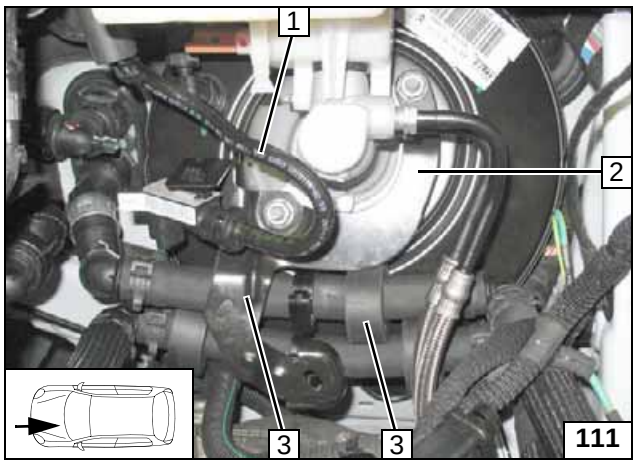
Connecting heat exchanger inlet



Push on black (sw) rubber isolator [2x] **1** and position it on the brake booster. Align hoses. Ensure sufficient distance from adjacent components; correct if necessary.

2 Install hose bracket

Routing in engine compartment



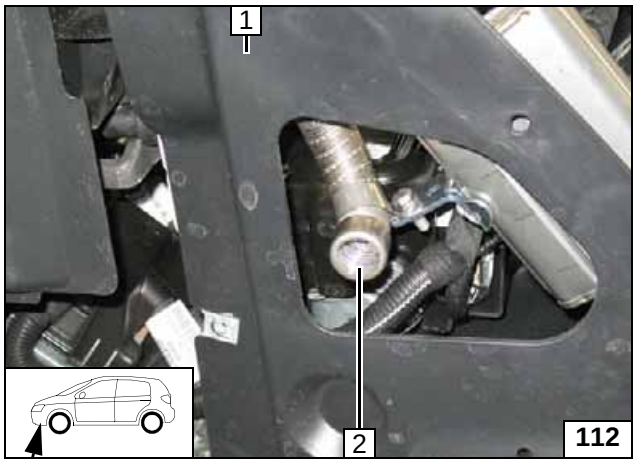
Insert original vehicle bracket **2** on brake booster. Attach original vehicle vacuum line **1**. Align black rubber isolator **3** [2x] (1x hidden behind bracket) with bracket.

Mounting bracket

Final Work

WARNING!
Mount removed parts 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 the 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 caution label "Switch off parking heater before refuelling" in the area of the filler neck.**
- **For initial startup and function check, please see installation instructions.**



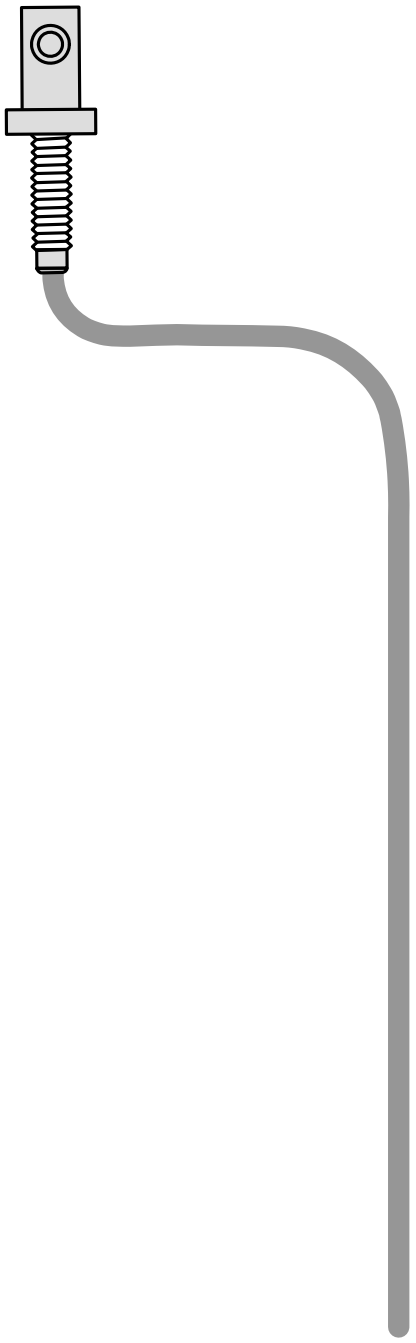
Ensure sufficient distance from adjacent components; correct if necessary.

1 Wheel well trim mounted
2 Exhaust end section

Aligning exhaust end section

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

Template for Fuel Standpipe for Petrol and Diesel



100mm

Scale 1:1

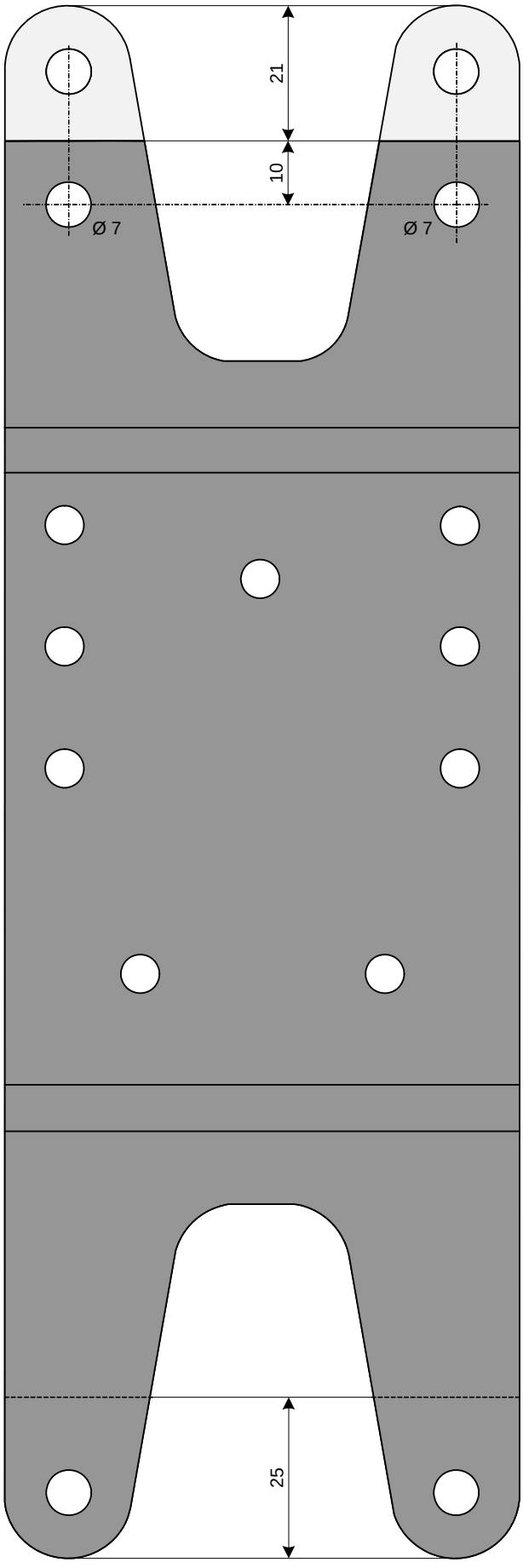
Compare size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

Set the printer settings to “no margin” or “minimise margins” and 100% of the normal size.

100mm

0

Template for Additional Bracket



100mm

100mm

0

Scale 1:1

Compare size of the printed version with dimension lines. Permitted tolerance a maximum of 2%.

Set the printer settings to “no margin” or “minimise margins” and 100% of the normal size.

Webasto
Feel the Drive

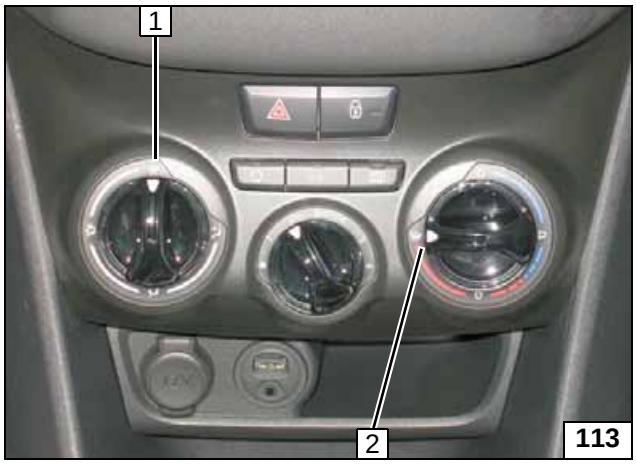
Operating Instructions for Manual Air-Conditioning

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.

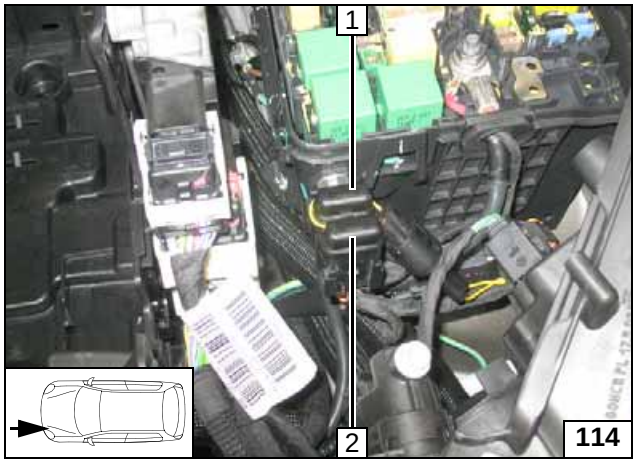
Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



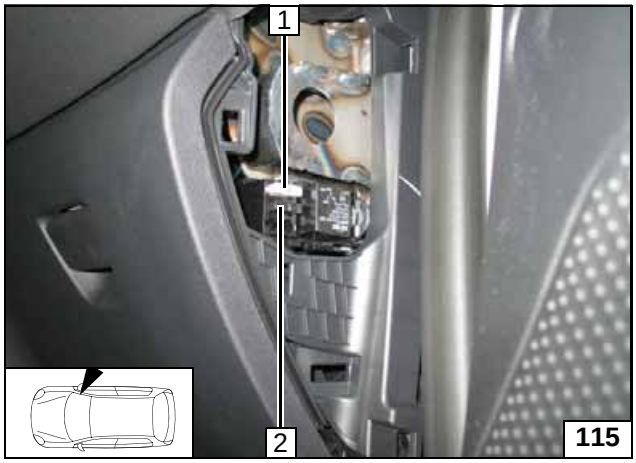
1 Air outlet to windscreen
2 Set temperature to "max."

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses

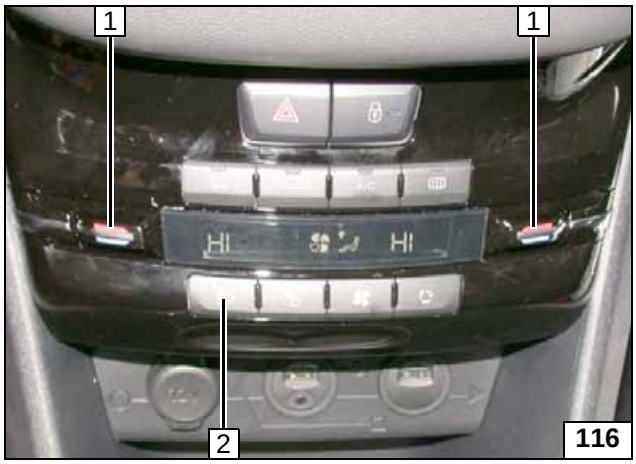
Operating Instructions for Automatic Air-Conditioning

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.

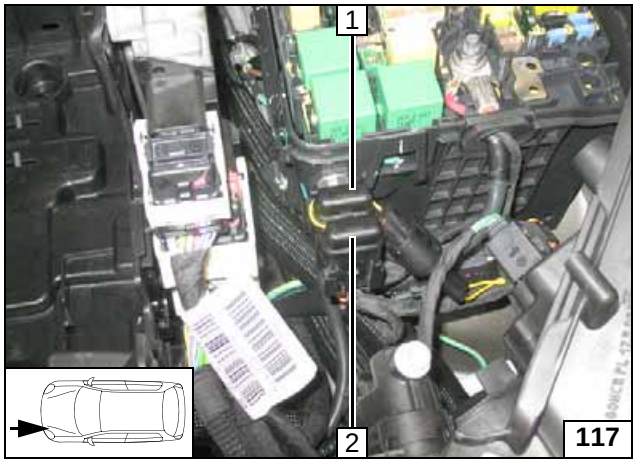
Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



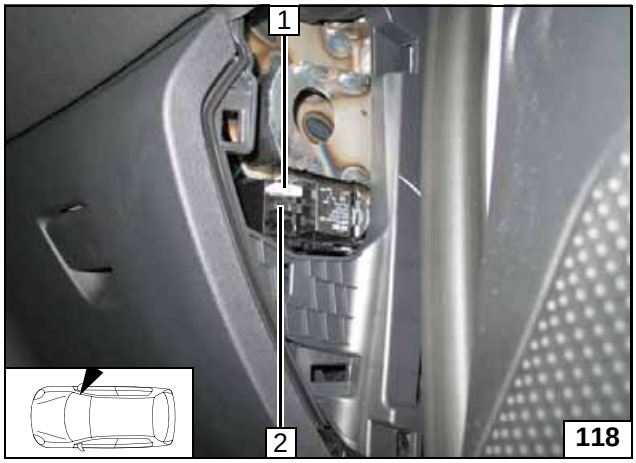
1 Set temperature on both sides to "Hi"
2 Air outlet faces "upward"

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses