Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

With FuelFix

Installation Documentation
Peugeot 2008

Validity

Manufacturer	Model	Type	EG BE No. / ABE
Peugeot	2008	C	e2 * 2007 / 46 * 0070 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 PurTec	Petrol	6-speed SG	60	1199	HM01
1.6 Blue HDi 100	Diesel	SG	73	1560	BH02
1.6 Blue HDi 120	Diesel	SG	88	1560	BH01

SG = manual transmission

From model year 2015
Left-hand drive vehicle

Verified equipment variants: Manual air-conditioning
2 zone automatic air-conditioning
Front fog lights
LED daytime running lights
Start - Stop
Euro 6

Not verified: Passenger compartment monitoring

Total installation time: approx. 9.5 hours (petrol)
approx. 12.0 hours (diesel)

Peugeot 2008

Table of Contents

Necessary Components

- Basic delivery scope for Thermo Top Evo according to price list
- Installation kit with FuelFix for Peugeot 2008, MY: 2015 Petrol and diesel: **1324527A**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

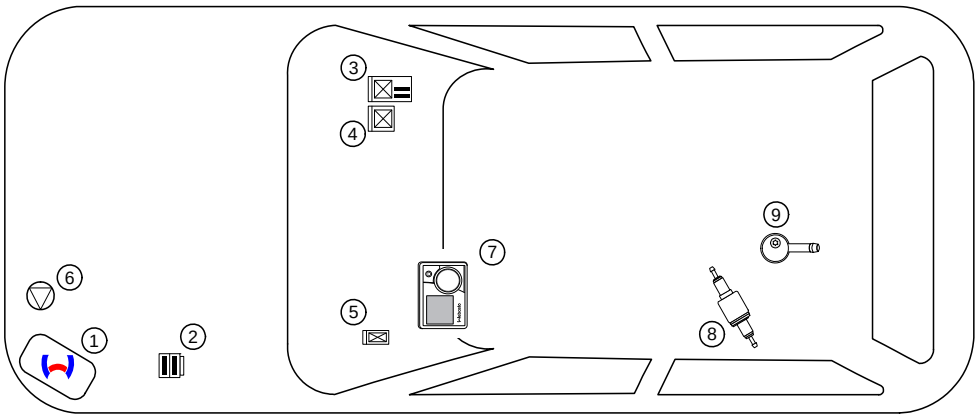
Installation instructions:

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

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment relay and fuse holder
4. PWM Gateway
5. Relay K2
6. Circulating pump
7. MultiControl CAR
8. Metering pump
9. FuelFix



Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair

The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.

Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 228).

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

1.3 Please note

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

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

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

Important

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

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

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

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

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.

Peugeot 2008

Information on Validity

This installation documentation applies to Peugeot 2008 Petrol and diesel vehicles - for validity see page 1 - from model year 2015 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this ‘installation documentation’.

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

Technical Information

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

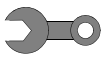
Dimensions
- All dimensions are in mm.

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

Explanatory Notes on Document

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

Mechanical System



Electrical System

Coolant Circuit

Combustion Air

Fuel

Exhaust Gas

Software

Special features are highlighted using the following symbols:

Specific risk of damage to components.

Specific risk due to electrical voltage.

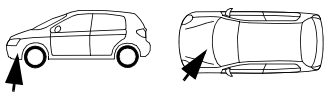
Specific risk of injury or fatal accidents.

Specific risk of fire or explosion.

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

Reference to a special technical feature.

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



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

Preliminary Work

Vehicle

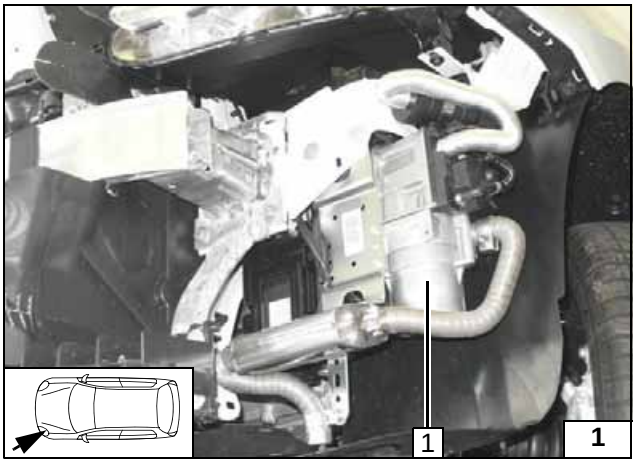
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Remove the bracket of the vacuum sensor on the brake booster.
- Remove the windscreen wiper.
- Remove the cowl panel.
- Remove the lower engine cover (if present).
- Remove the underride protection on the left (if present).
- Remove the wheel well trim on the left.
- Remove the bumper trim.
- Detach the rear bench seat (clipped in).
- Remove the lower instrument panel trim on the driver's side and front passenger's side.
- Remove the glove box.
- Loosen the A/C control panel (see installation instructions).

The following work should only be performed during the corresponding installation sequence:

- Open the tank-fitting service lid on the left.

Heater

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



Heater Installation Location

1 Heater

Installation location

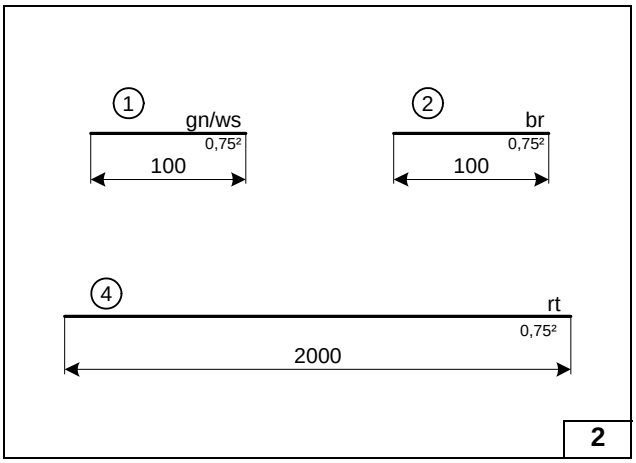
Preparing Electrical System

Wire sections retain their numbering in the entire document.

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

Install wire section ④ in supplied protective sleeving.

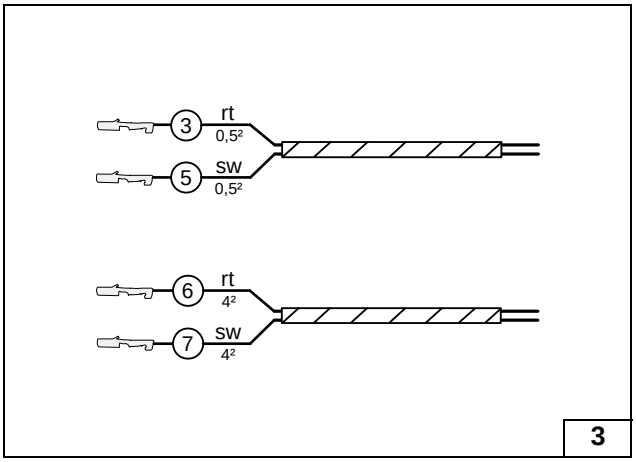
Assigning wires



2

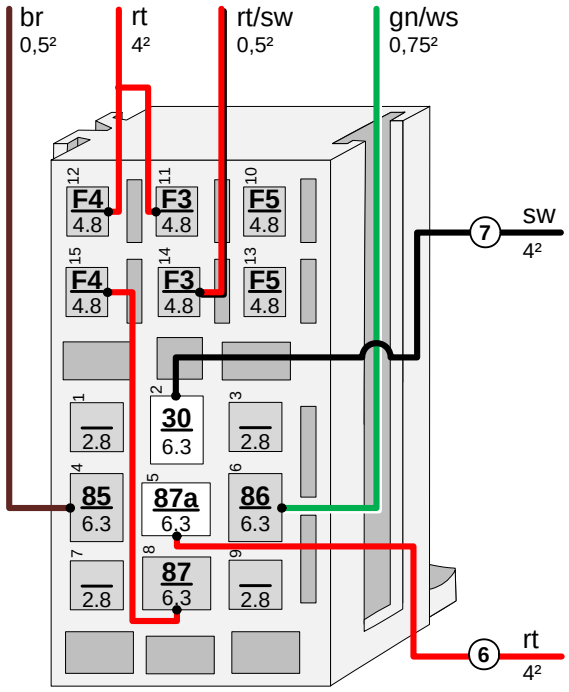
③ Red (rt) wire of wiring harness PWM control
⑤ Black (sw) wire of wiring harness PWM control
⑥ Red (rt) wire of fan wiring harness
⑦ Black (sw) wire of fan wiring harness

Assigning wiring harness



3

Connecting wires to passenger compartment relay and fuse holder



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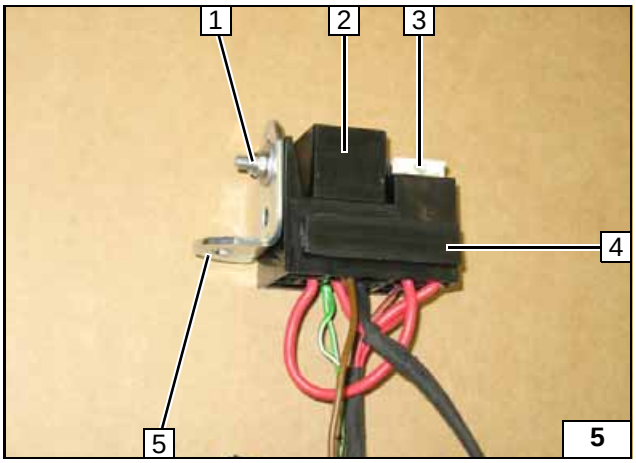
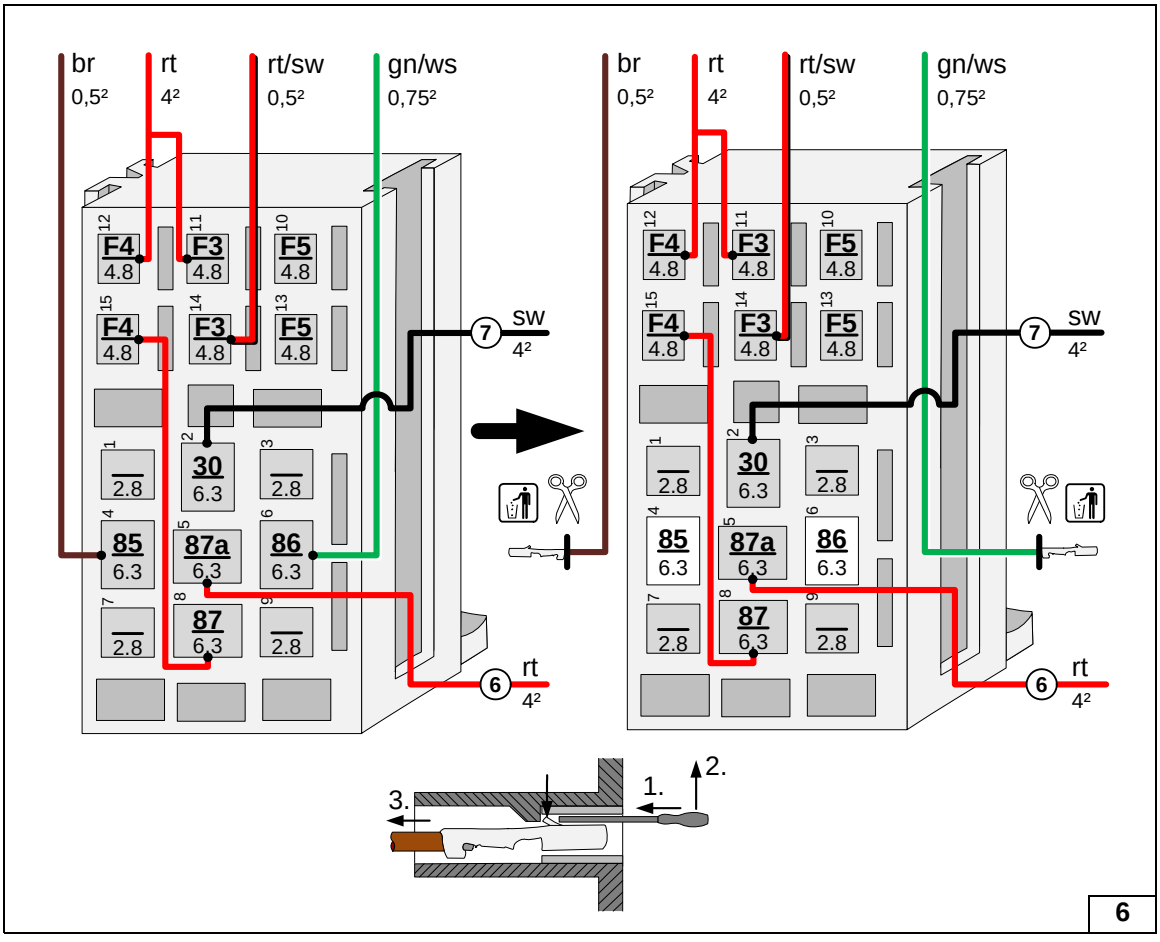
Premounting passenger compartment relay and fuse holder



5

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

Preparing passenger compartment relay and fuse holder



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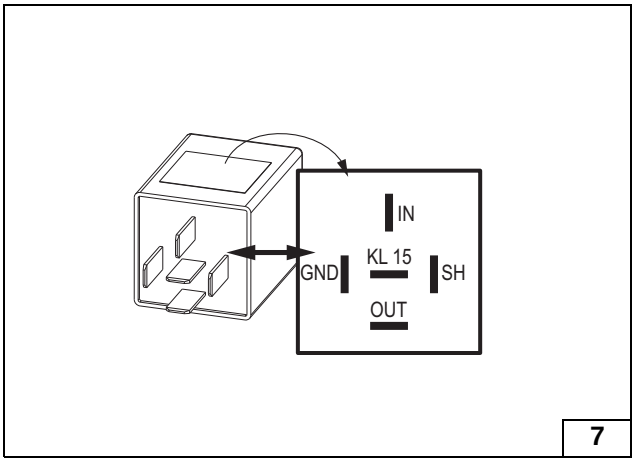
PWM Gateway

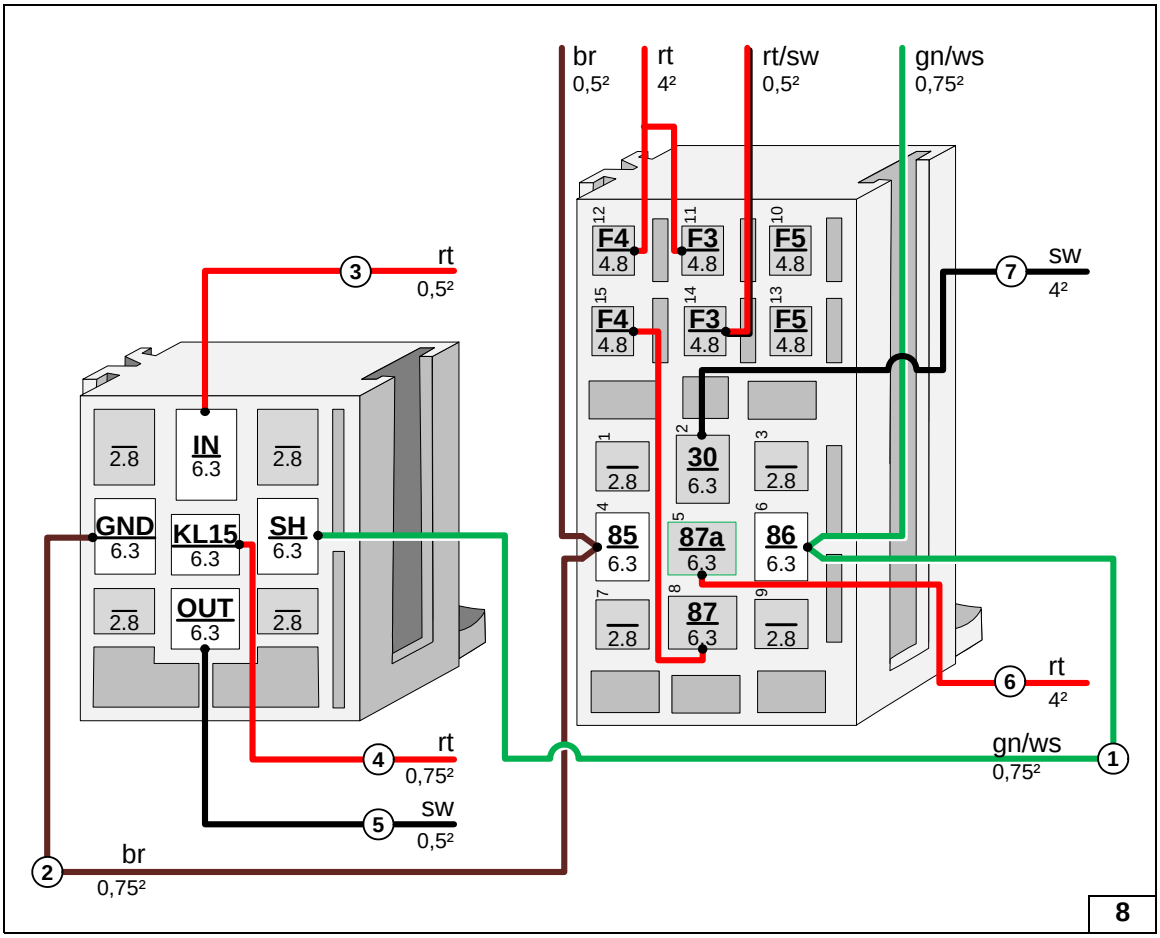


7

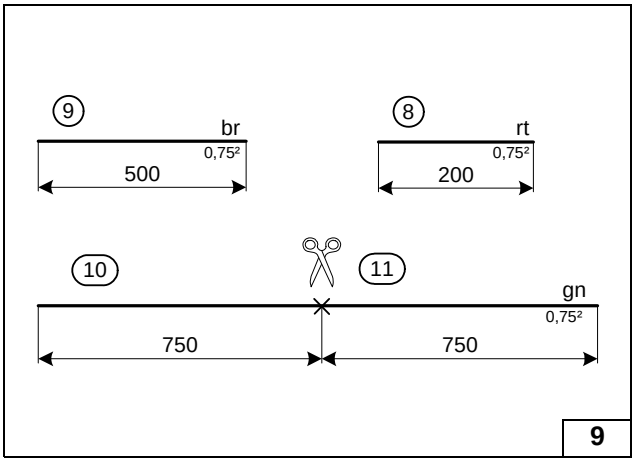
Check the PWM Gateway settings before start-up of the heater and adjust if necessary.

Settings:

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



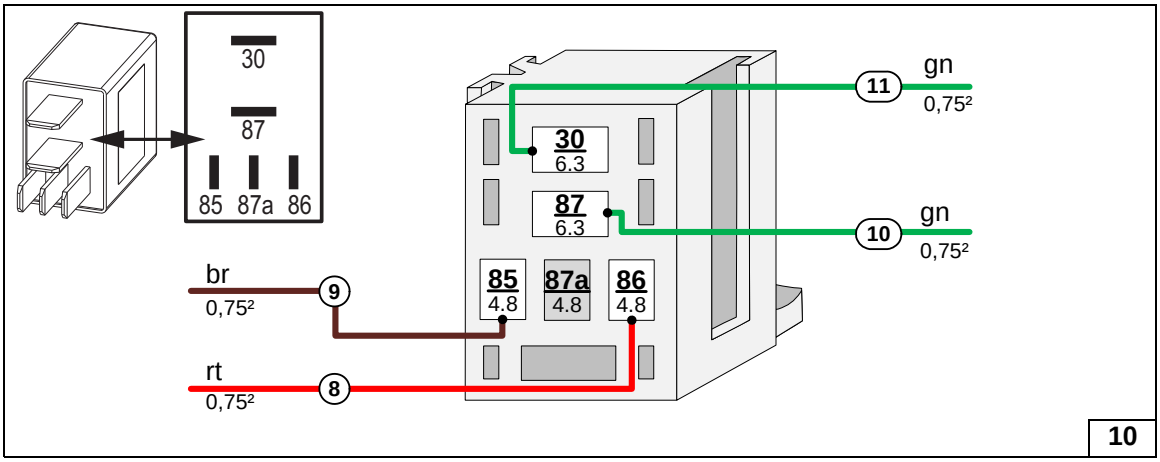
Premounting passenger compartment relay and fuse holder and PWM-GW socket



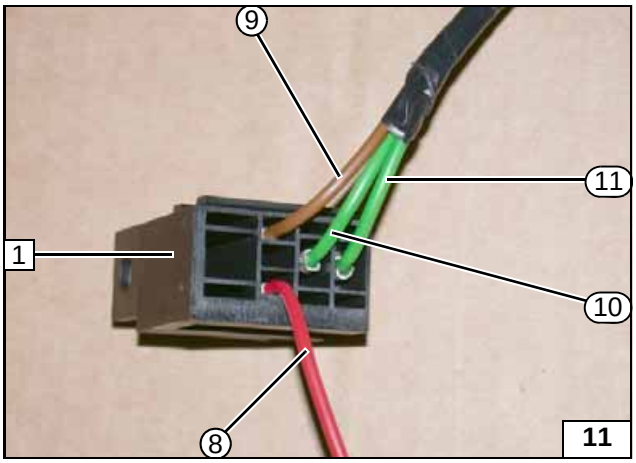
Automatic air-conditioning

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

Assigning / cutting to length relay K2 wire



Connecting wires to socket of relay K2



1 Relay K2 socket
⑧ Red (rt) wire of K2/86
⑨ Brown (br) wire of K2/85
⑩ Green (gn) wire of K2/87
⑪ Green (gn) wire of K2/30

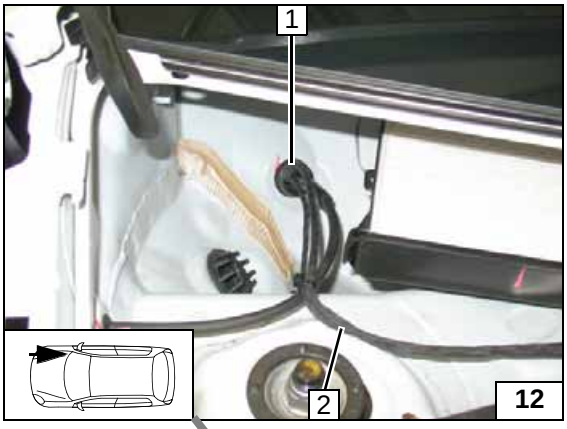
Premounting relay K2

Electrical System

Passenger compartment wiring harness pass through

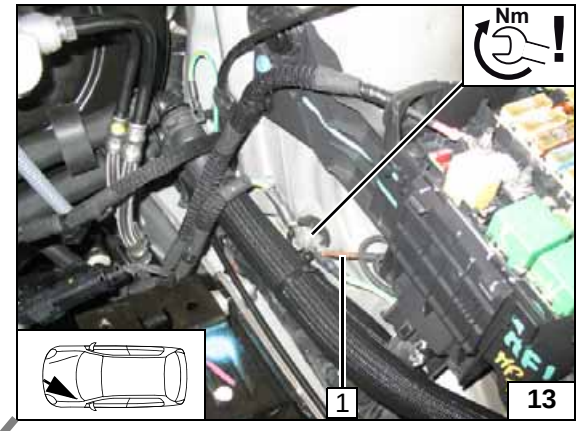
Wiring harness routing see next page.

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

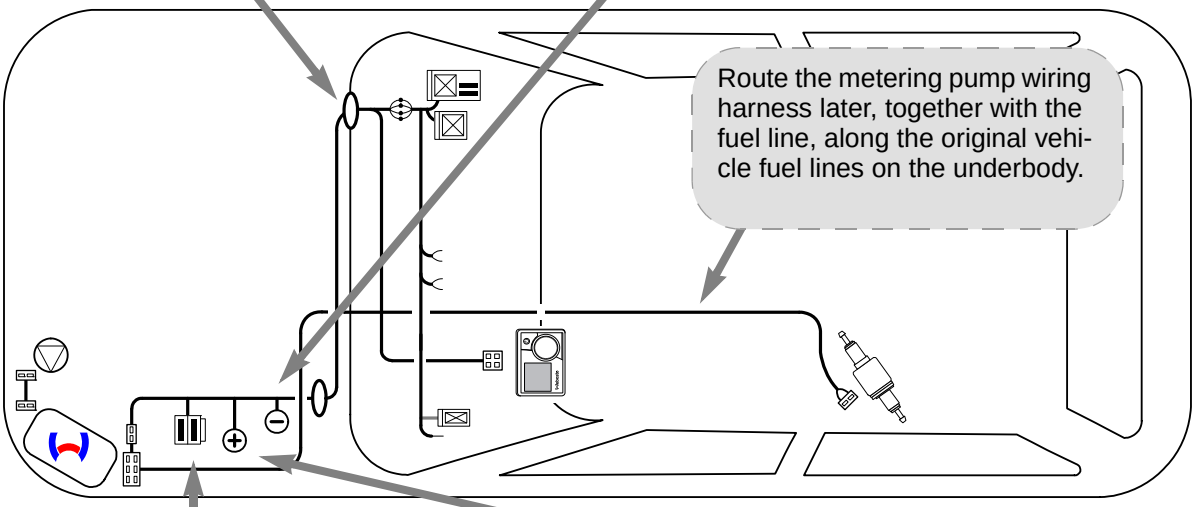


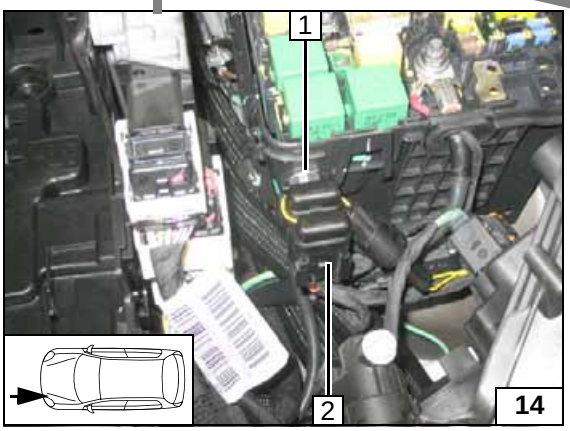
Earth wire

1 Earth wire on original vehicle earth support point



Wiring harness routing diagram

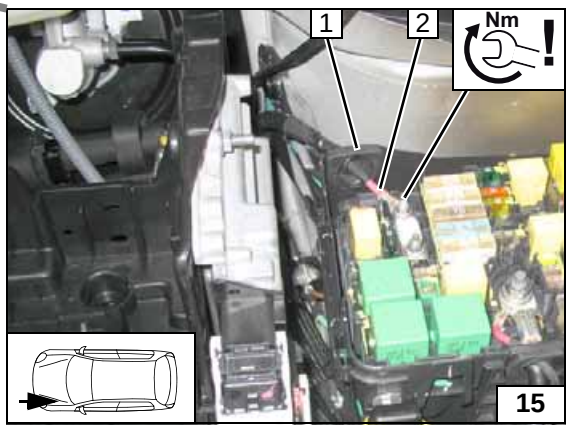




Engine compartment fuse holder

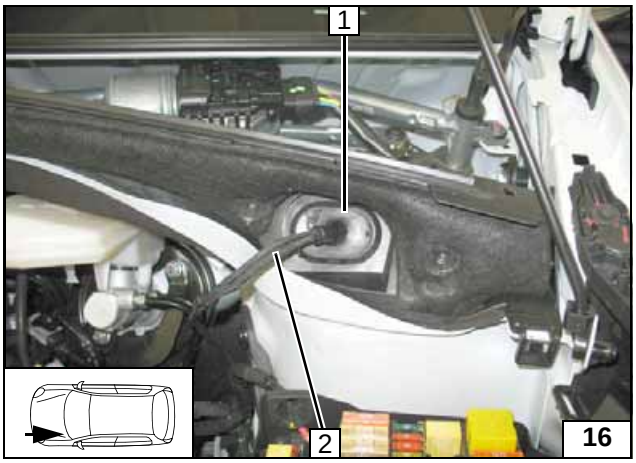
5.5 mm dia. hole at position **1**. When drilling, be careful of components located behind!

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



Positive wire

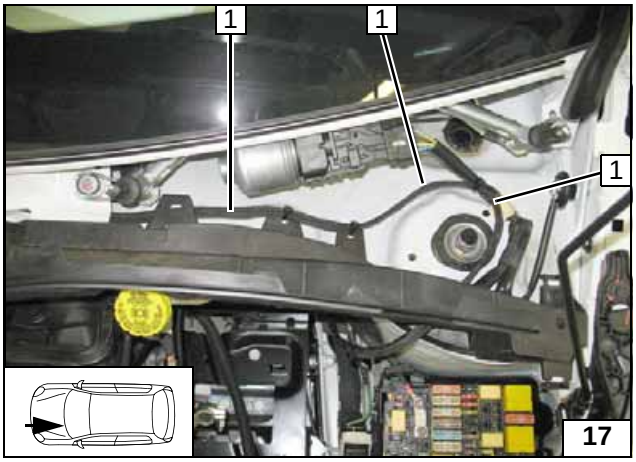
1 Protective rubber plug
2 Positive wire on original vehicle positive distributor



Wiring Harness Routing

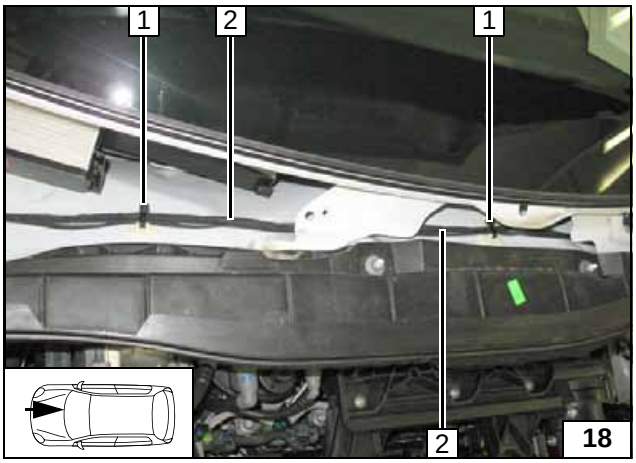
1 Original vehicle protective rubber plug
2 Wiring harnesses of heater and heater control

Cowl panel pass through



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 cowl panel



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

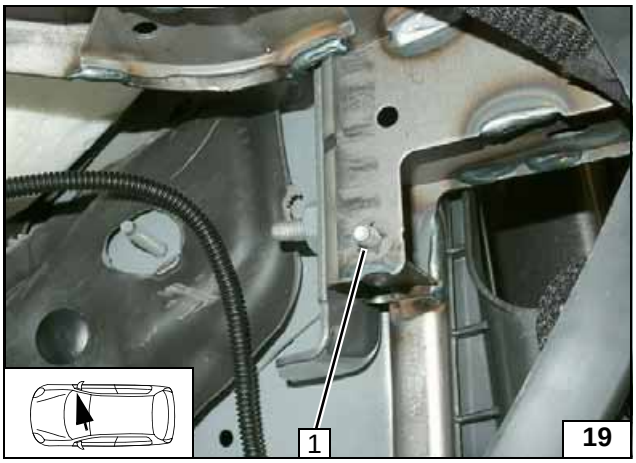
Routing in cowl panel

Passenger Compartment Relay and Fuse Holder Installation

Copying hole pattern

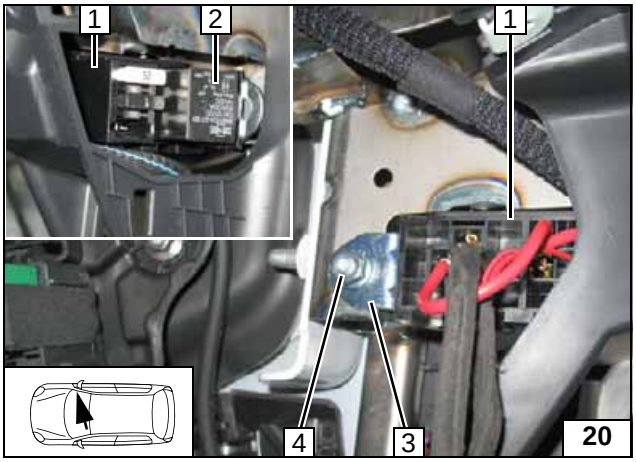
Place passenger compartment relay and fuse holder (see next figure) and copy hole pattern at position **1**. When drilling, be careful of components located behind!

1 7 mm dia. hole; M6x12 bolt, pin lock



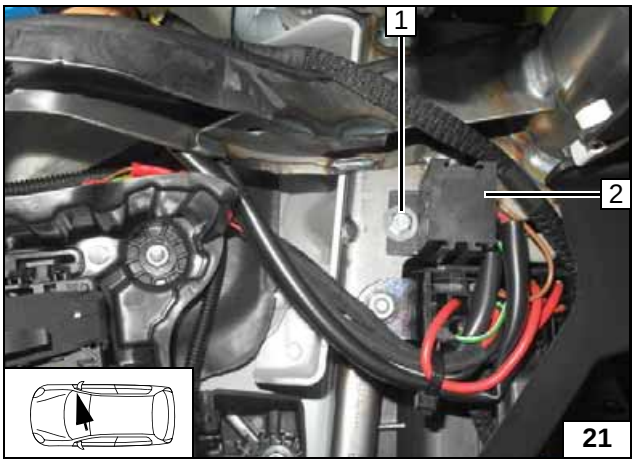
Installing passenger compartment relay and fuse holder

1 Passenger compartment relay and fuse holder
2 Relay K1 attached
3 Angle bracket
4 Flanged nut



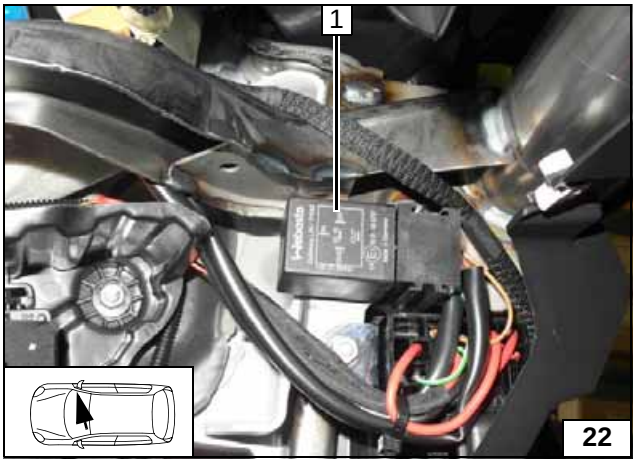
Installing PWM GW socket

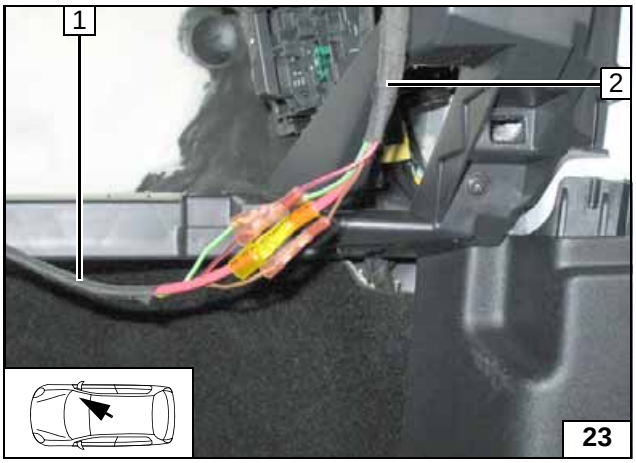
1 M5x16 bolt, large diameter washer [2x], flanged nut, existing hole
2 PWM GW socket



Inserting PWM GW

1 PWM GW



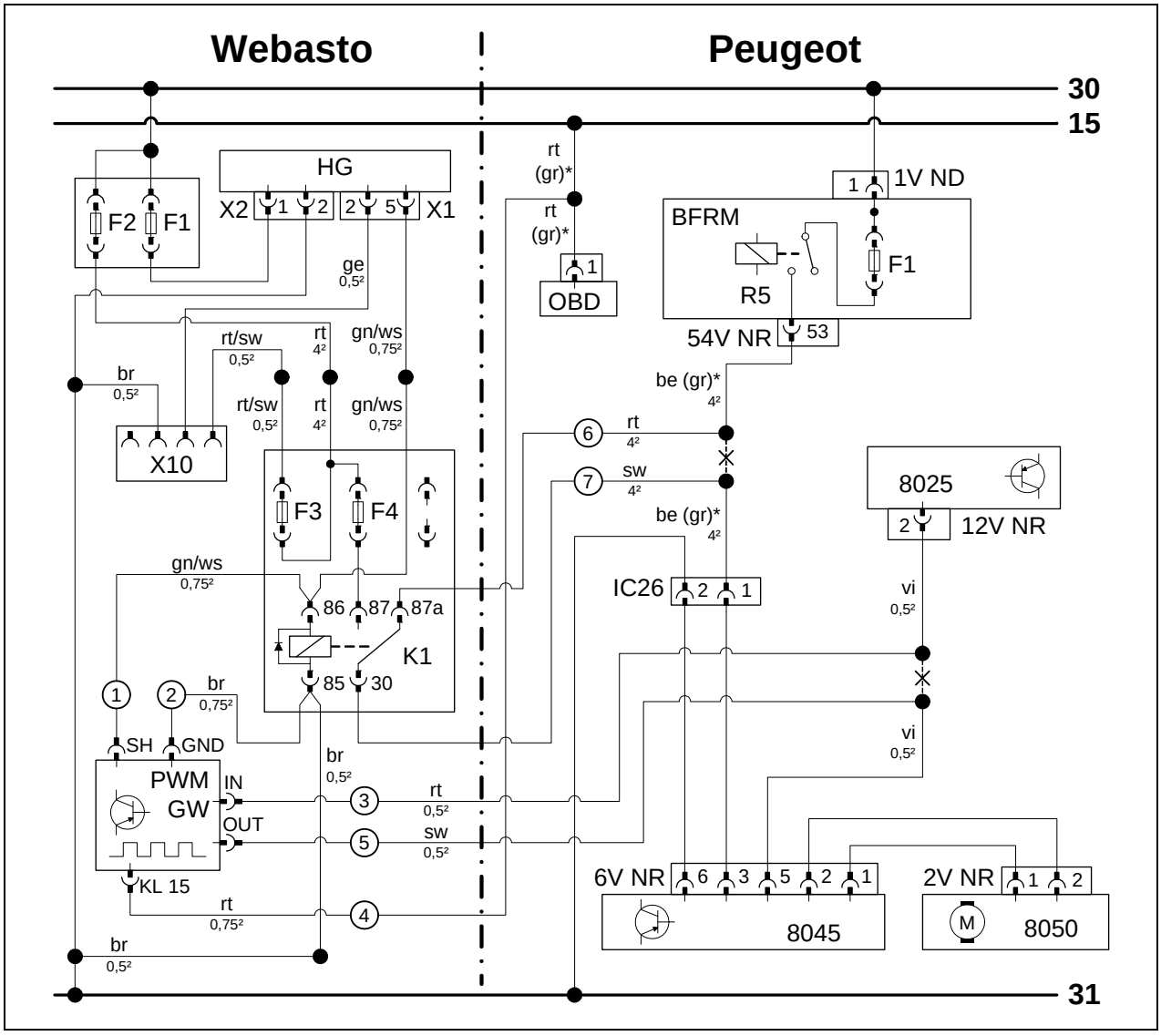


1 Heater wiring harness
2 Passenger compartment relay and fuse holder wiring harness

Connecting same colour wires of wiring harnesses

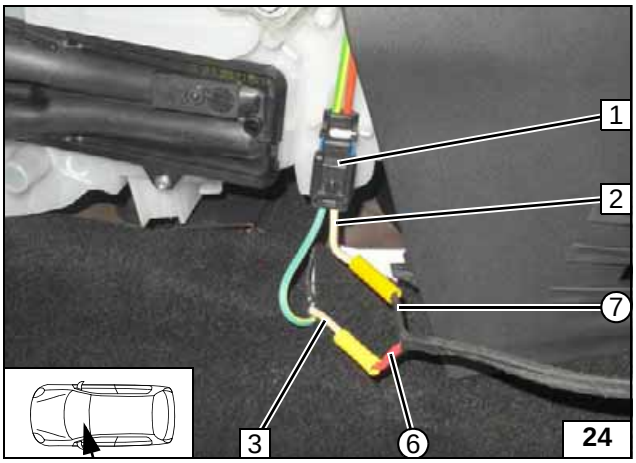
Manual Air-Conditioning Fan Controller

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	BFRM	Engine compartment fuse and relay carrier	rt	red
X1	6-pin heater connector			sw	black
X2	2-pin heater connector	F1	Fuse	ge	yellow
F1	20A fuse	R5	Relay	gn	green
F2	30A fuse	1V ND	BFRM connector	br	brown
X10	4-pin connector of heater control	54V NR	54-pin connector	ws	white
		OBD	On Bord Diagnosis	be	beige
F3	1A fuse	8025	A/C control panel	vi	violet
F4	25A fuse	12V NR	12-pin connector	gr	grey
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.

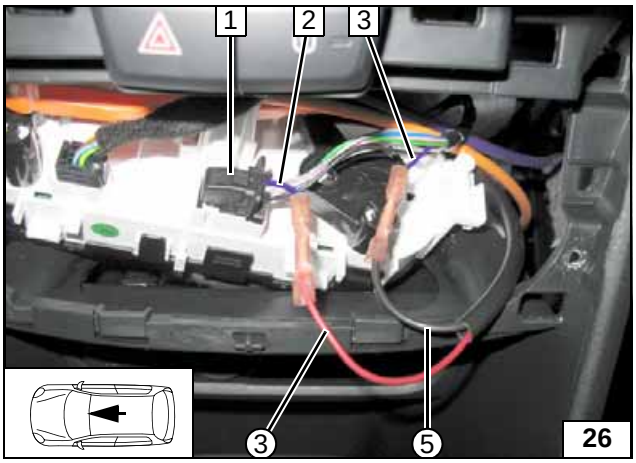
2 Beige (be) or grey (gr) wire of connector IC26, pin 1
3 Beige (be) or grey (gr) wire of fuse and relay carrier BFRM, connector 54V NR, pin 53
⑥ Red (rt) wire of K1/87a
⑦ Black (sw) wire of K1/30

Connecting fan motor

Installation Instructions for Manual A/C Control Panel

Loosen fastening points (retaining clip ○ 4x)

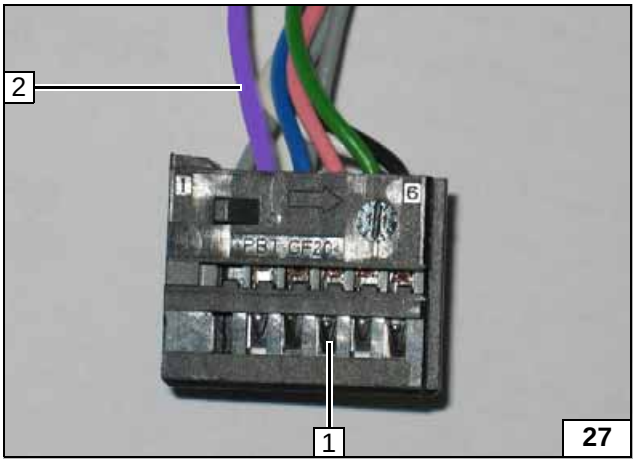
Removing trim



Connection to connector **1** of A/C control panel (see following image).

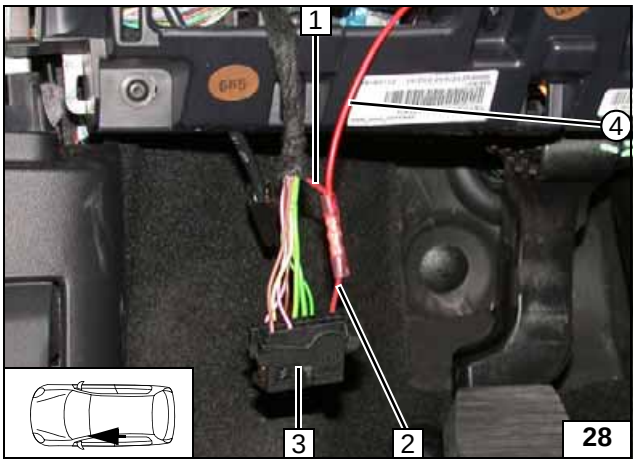
2 Violet (vi) wire of 12V connector NR, Pin 2
3 Violet (vi) wire of fan controller connector 6V NR, pin 5
③ Red (rt) wire of PWM GW/IN
⑤ Black (sw) wire of PWM GW/OUT

Connecting A/C control panel



1 Connector 12V NR
2 Violet (vi) wire of pin 2

Connector of A/C control panel



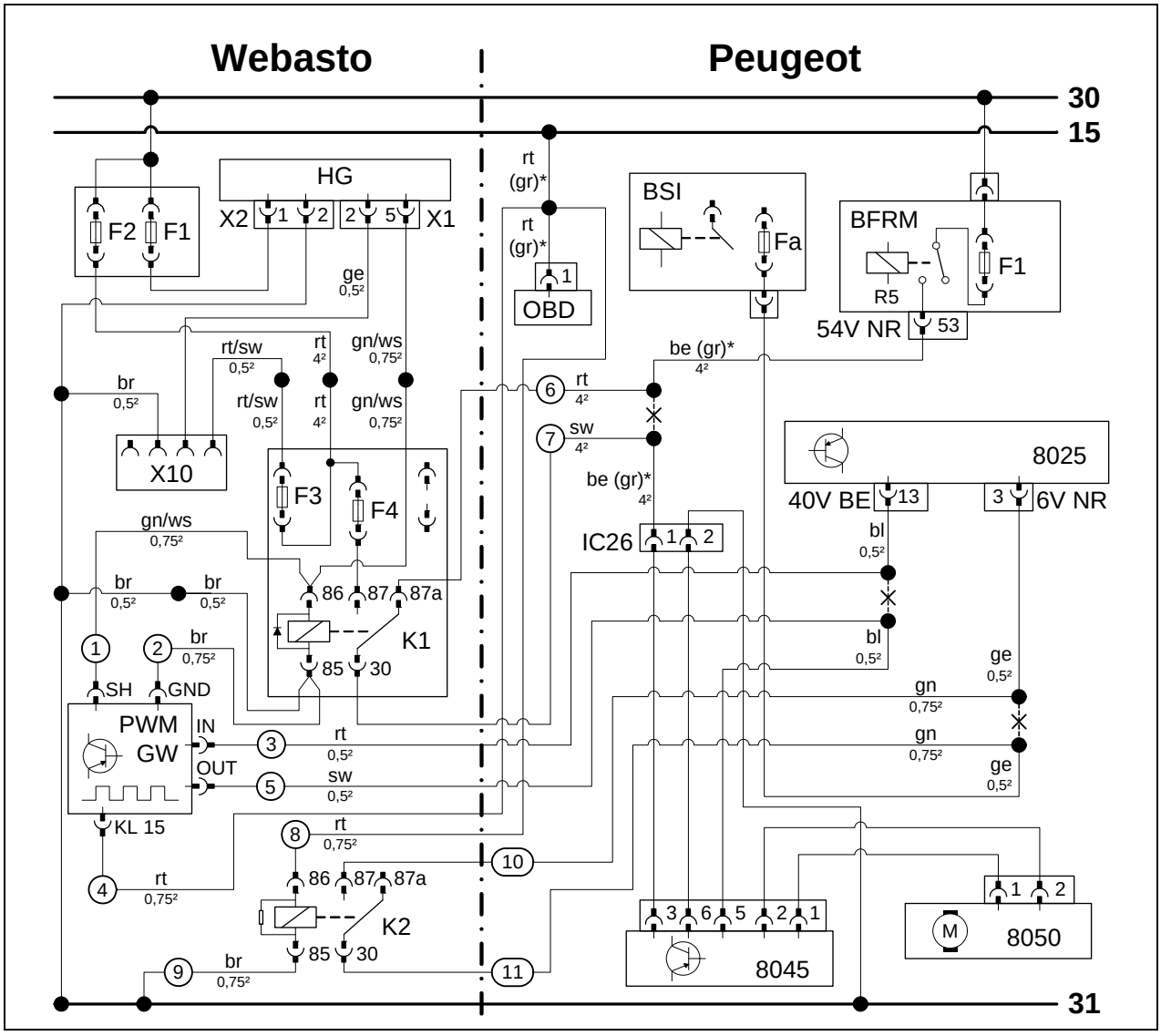
Connection to OBD-socket outlet **3**, pin 1.

1 Red (rt) or grey (gr) wire of terminal 15
2 Red (rt) or grey (gr) wire of OBD socket outlet, pin 1
④ Red (rt) wire of PWM GW/KL 15

Connecting terminal 15

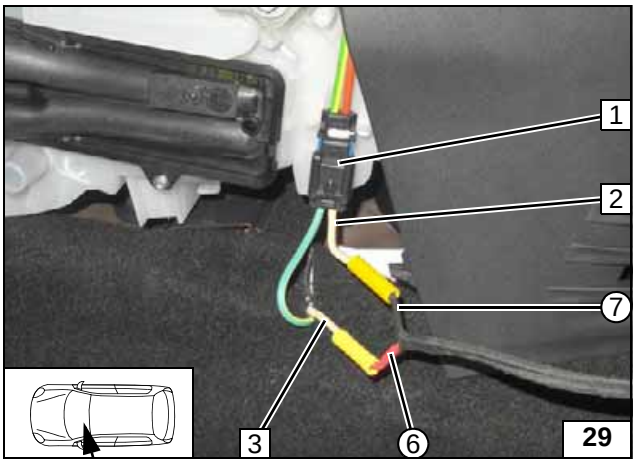
Automatic Air-Conditioning Fan Controller

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	Engine compartment fuse and relay carrier	ge	yellow
X10	4-pin connector of heater control			gn	green
		F1	Fuse	br	brown
K1	Fan relay	R5	Relay	ws	white
K2	Additional relay	54V NR	54-pin connector	be	beige
F1	20A fuse	OBD	Socket outlet	gr	grey
F2	30A fuse	8025	A/C control panel		
F3	1A fuse	40V BE	40-pin connector		
F4	25A fuse	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 necessary			**X**	Cutting point
Function:	Low side			* Wiring colours may vary.	

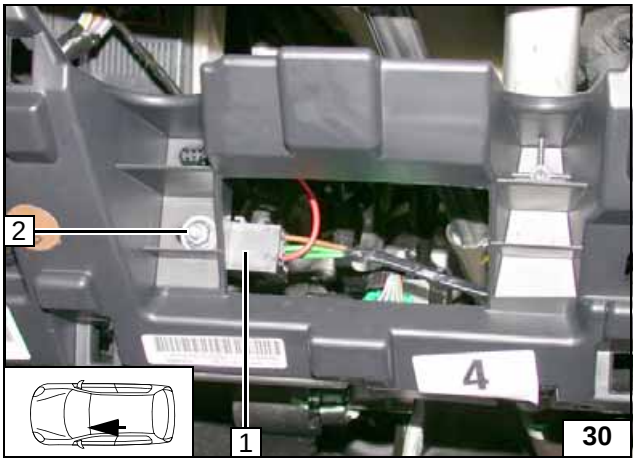
Legend



Connection to connector IC26 **1** of fan motor wiring harness.

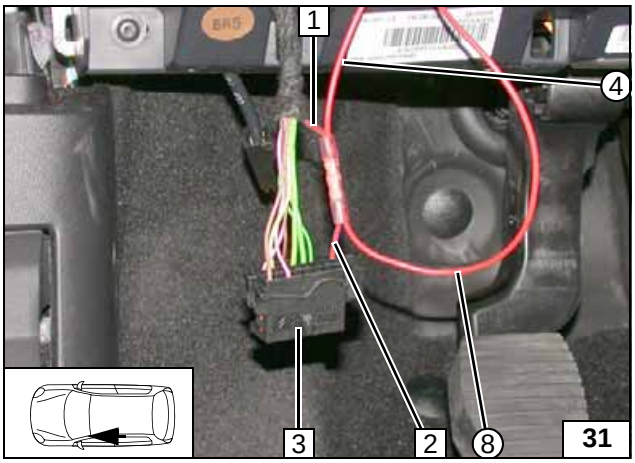
2 Beige (be) or grey (gr) wire of connector IC26, pin 1
3 Beige (be) or grey (gr) wire of fuse and relay carrier BFRM, connector 54V NR, pin 53
⑥ Red (rt) wire of K1/87a
⑦ Black (sw) wire of K1/30

Connecting fan motor



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

Installing relay K2



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

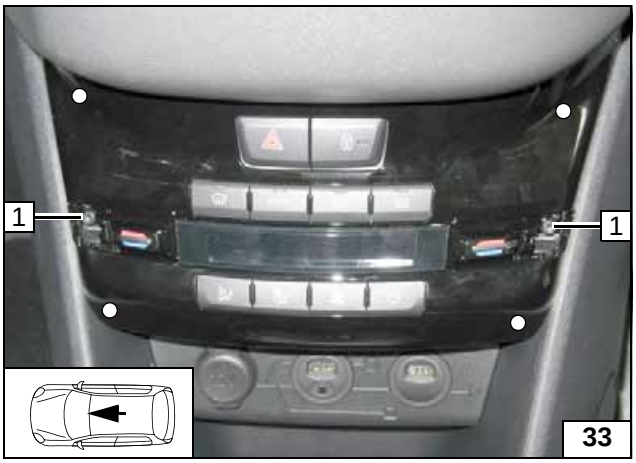
1 Red (rt) or grey (gr) wire of terminal 15
2 Red (rt) or grey (gr) wire of OBD socket outlet, pin 1
④ Red (rt) wire of PWM GW/KL 15
⑧ Red (rt) wire of K2/86

Connecting terminal 15

Controls Installation Instructions

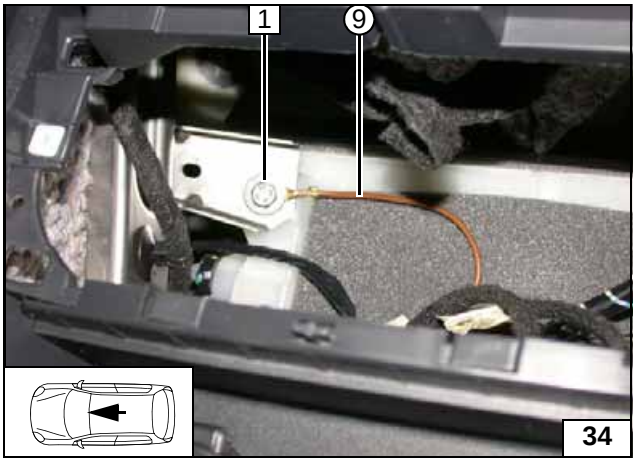
1 Remove covers [2x]

Removing covers



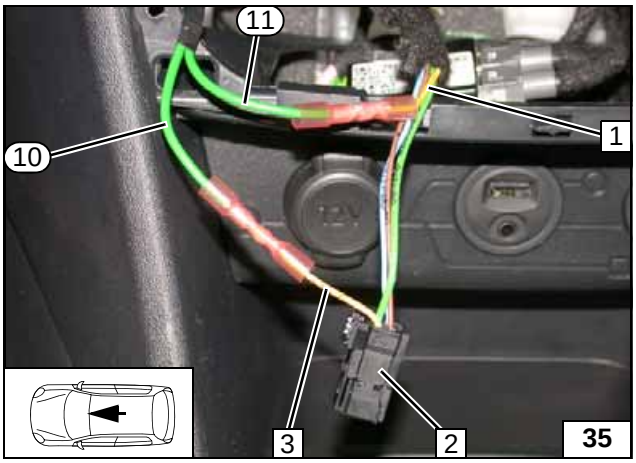
Loosen torx screws **1** [2x]. Pull off frame [retaining clip ○ 4x]. Loosen A/C control panel.

Detaching A/C control panel



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

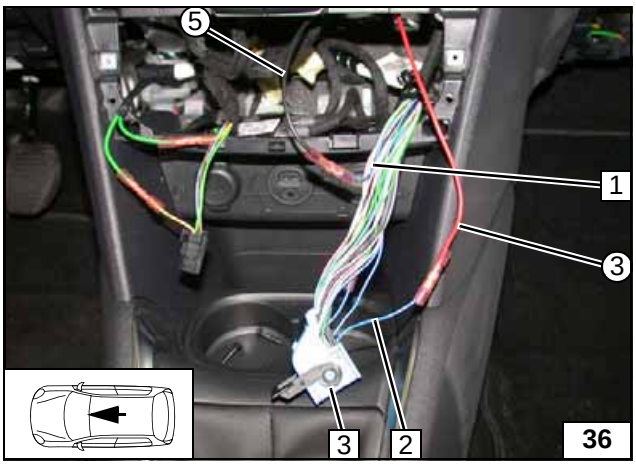
Earth connection of relay K2



Connection to connector 6V NR **2** of A/C control panel.

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

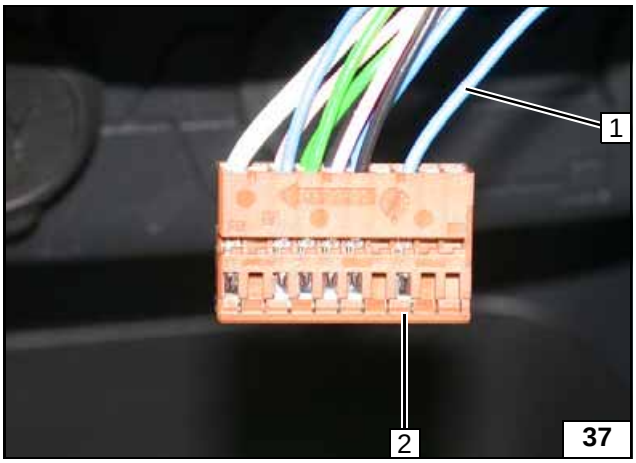
Connecting A/C control panel



Connection to 2-part connector 40V BE **3** of A/C control panel. Remove 40V connector BE (see following figure).

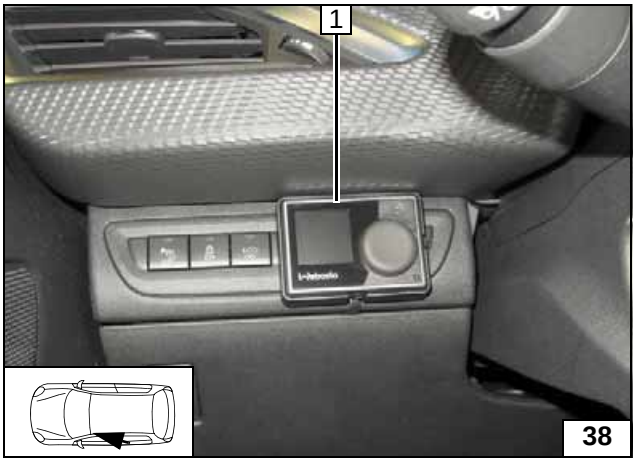
1 Blue (bl) wire of fan controller, Pin 5
2 Blue (bl) wire of connector 40V BE, pin 13
③ Red (rt) wire of PWM GW/IN
⑤ Black (sw) wire of PWM GW/OUT

Connecting A/C control panel



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

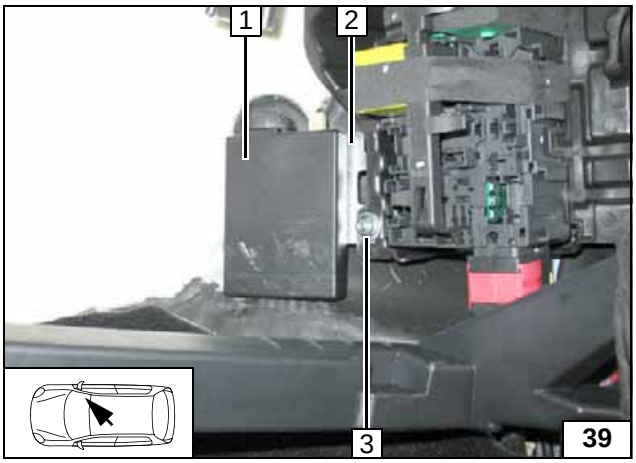
Connector of A/C control panel



MultiControl CAR Option

1 MultiControl CAR with installation frame

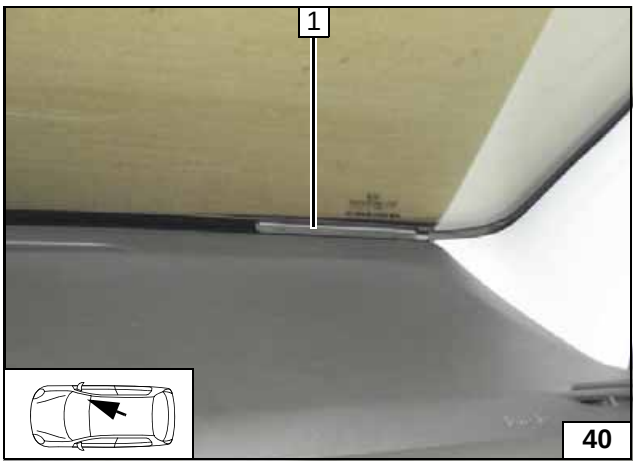
Installing MultiControl CAR



Remote Option (Telestart)

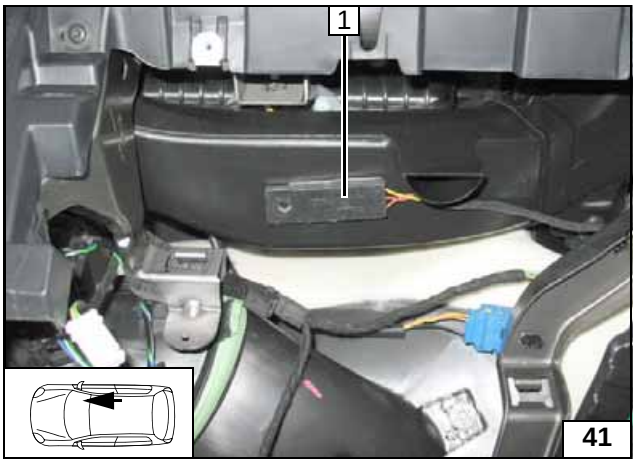
1 Receiver
2 Bracket
3 M5x16 bolt, flanged nut, existing hole

Installing receiver



1 Aerial

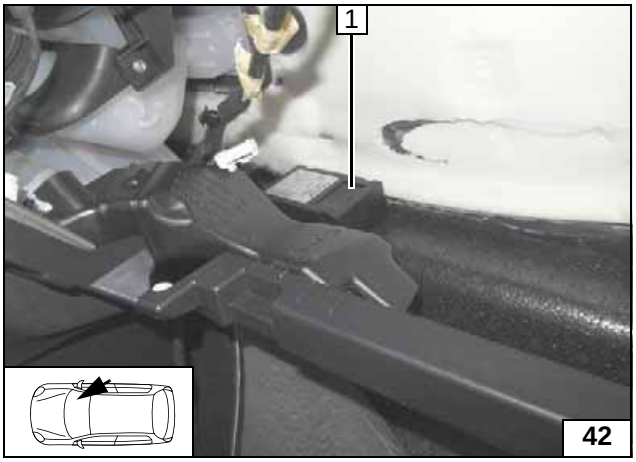
Installing aerial



Temperature sensor T100 HTM

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

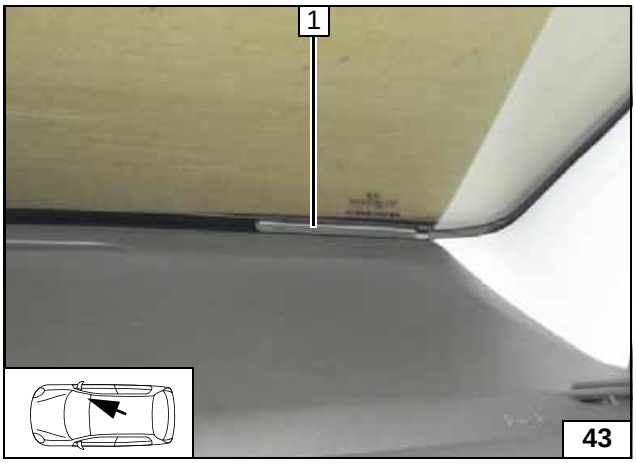
Installing temperature sensor



ThermoCall Option

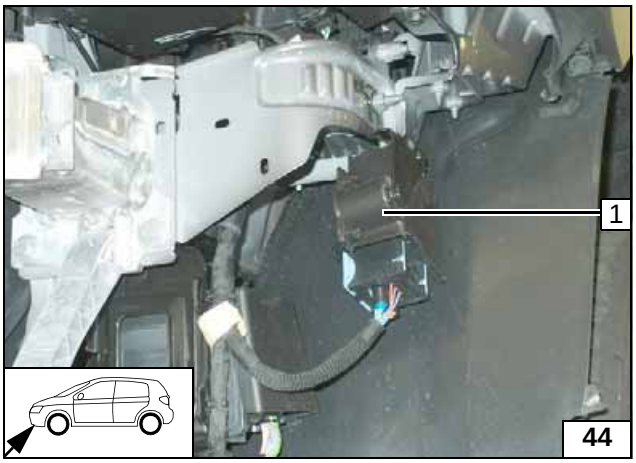
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Aerial (optional)

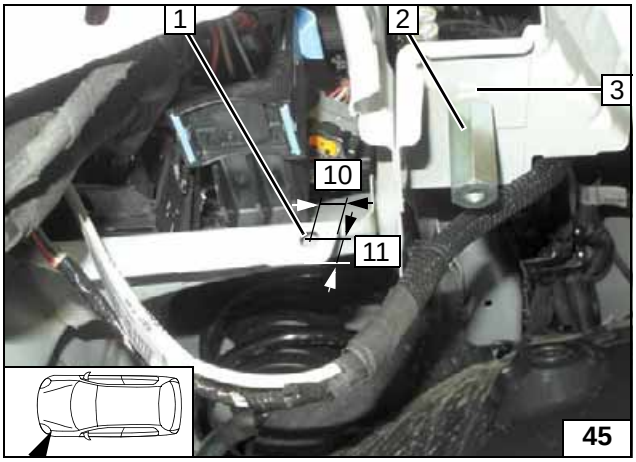
Installing aerial



Preparing Installation Location

Dismantle control unit with bracket **1**.

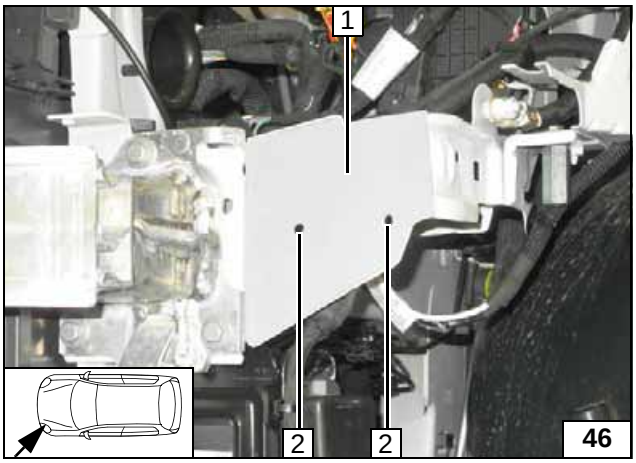
Dismantling original vehicle control unit



Remove original vehicle bolt at position **3** and discard.

1 7 mm dia. hole
2 M6x20 bolt, spring lockwasher, large diameter washer, 40 mm spacer nut

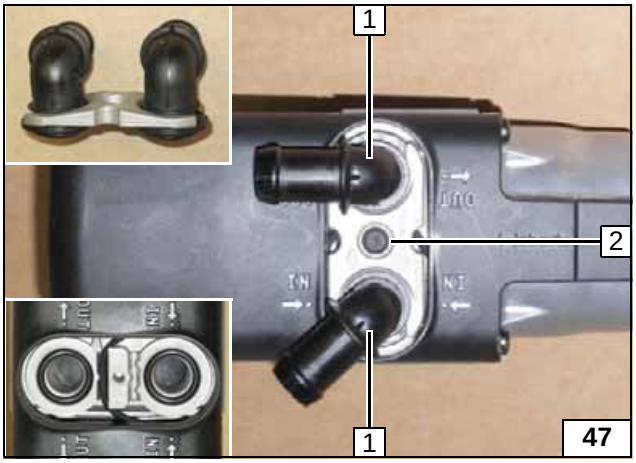
Installing spacer nut



Cut out drilling template **1**, position and copy hole pattern.

2 7 mm dia. hole [2x]

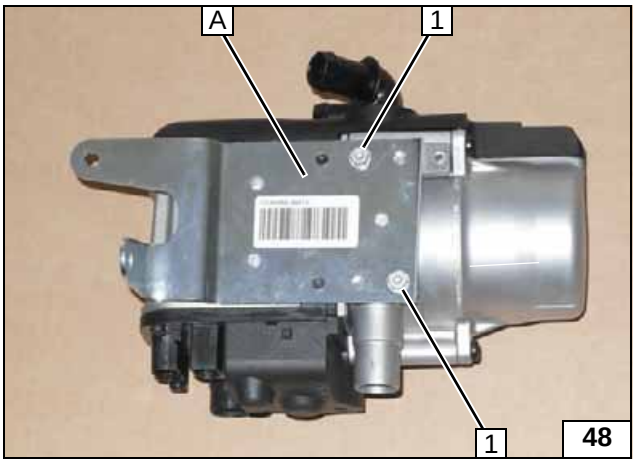
Copying hole pattern



Preparing Heater

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

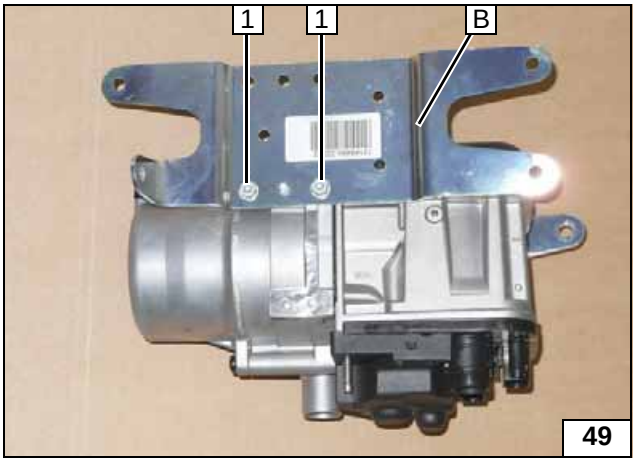
Installing water connection piece



Prepare bracket **A** according to template.

1 5x13 self-tapping bolt [2x]

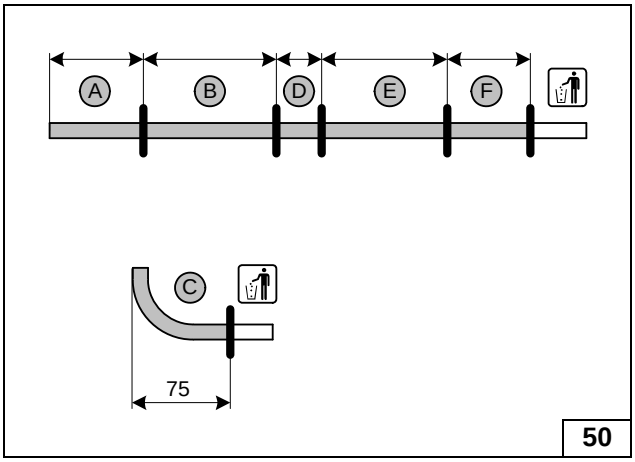
Installing bracket A



Prepare bracket **B** according to template.

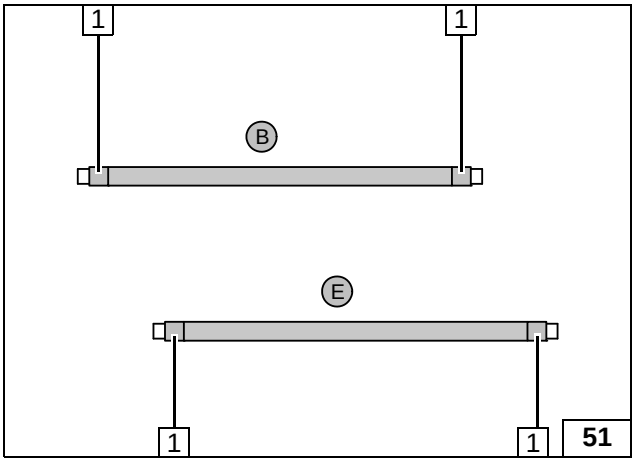
1 5x13 self-tapping bolt [2x]

Installing bracket B



	Diesel	Petrol
A	220	320
B	560	560
C	75	75
D	80	80
E	750	750
F	210	260

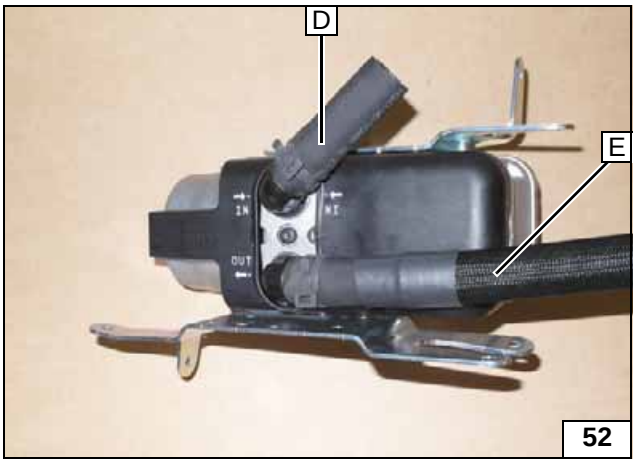
Cutting hoses to length



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

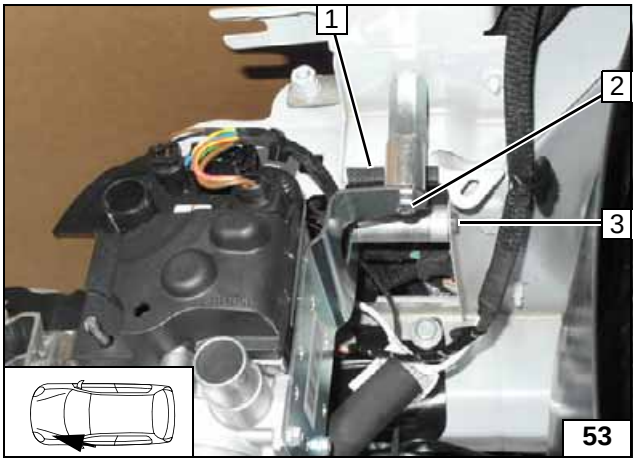
1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses



All spring clips, 25 mm dia.

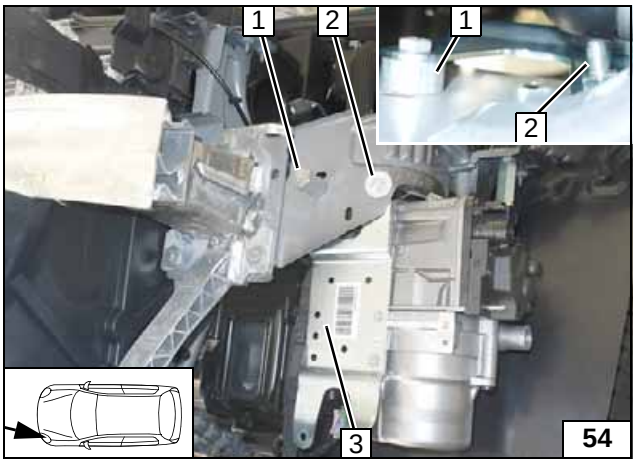
Premounting hoses



Installing Heater

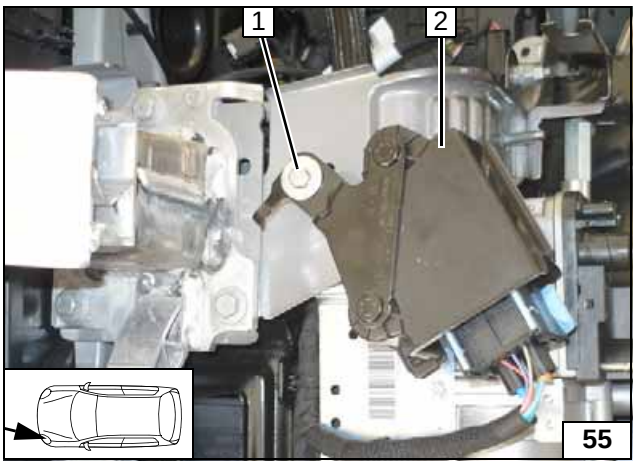
1 50mm edge protection
2 M6x40 bolt, spring lockwasher, 30 mm shim
3 M6x60 bolt, 40 mm shim, 10 mm shim, flanged nut

Installing heater



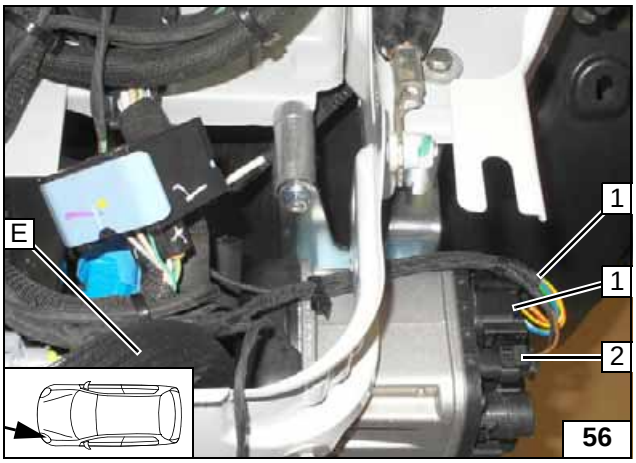
1 M6x25 bolt, bracket **3**, 10mm shim, M6x30 spacer nut
2 M6x20 bolt, large diameter washer, bracket **3**, flanged nut

Installing heater



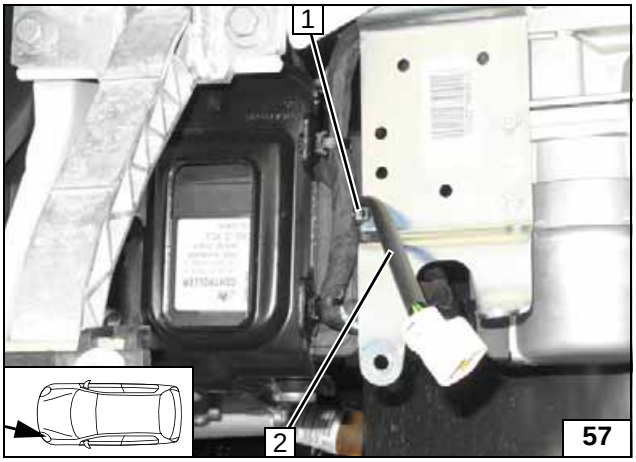
1 M6x25 bolt, large diameter washer
2 Control unit

Installing original vehicle control unit



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

Installing wiring harnesses



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

Attaching wiring harness

Fuel

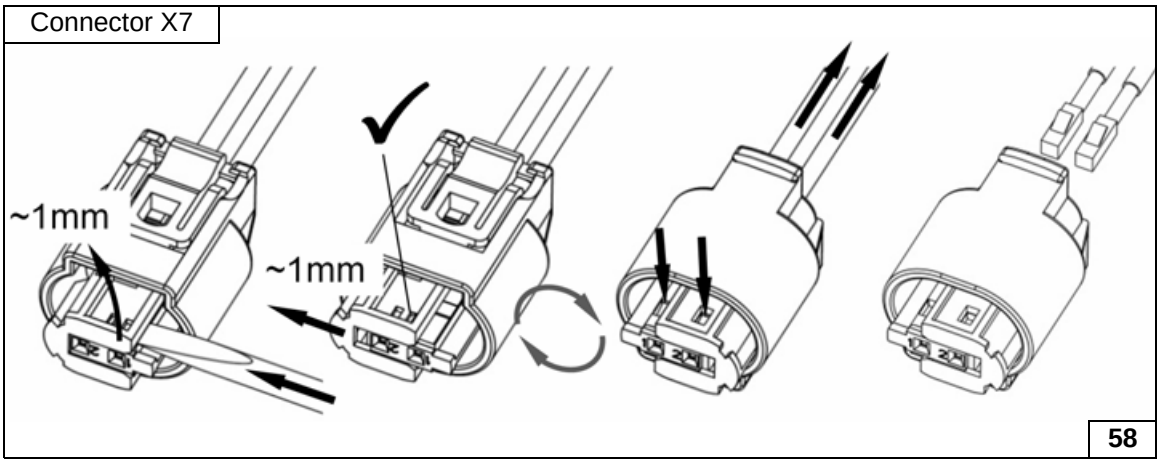
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

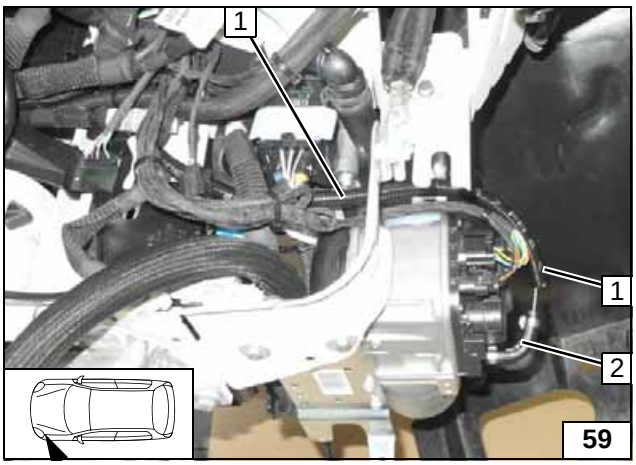
Catch any fuel running off in an appropriate container.

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

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

Dismantling metering pump connector

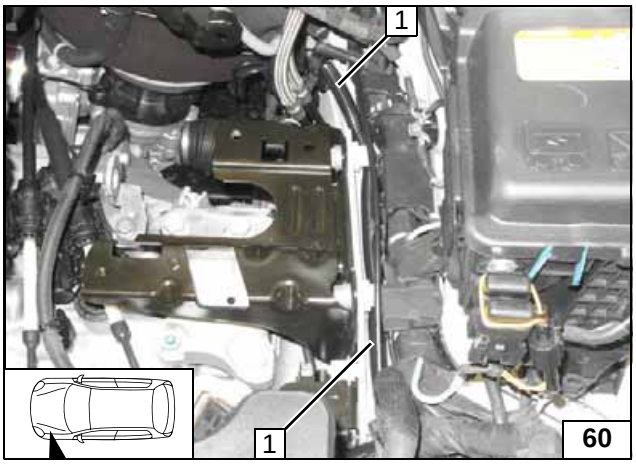




Connecting heater

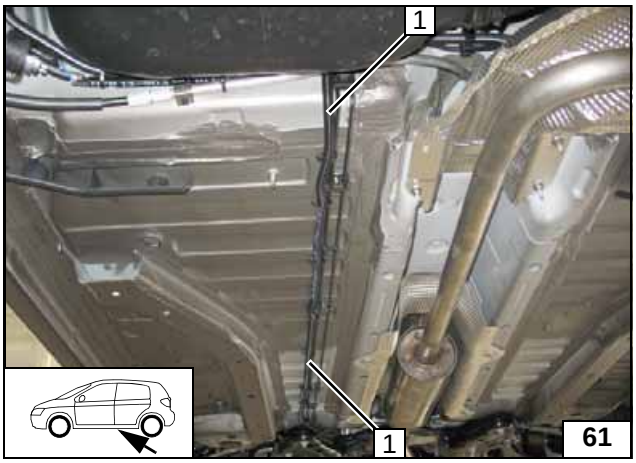
Pull fuel line and wiring harness of metering pump into 10 mm dia. corrugated tube **1** and route in engine compartment to firewall.

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



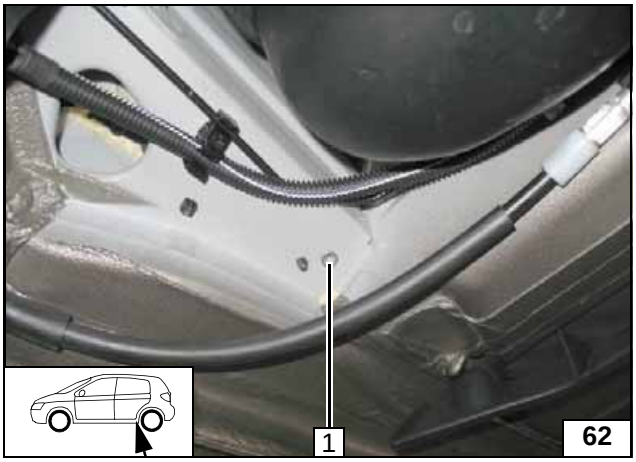
Routing lines

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



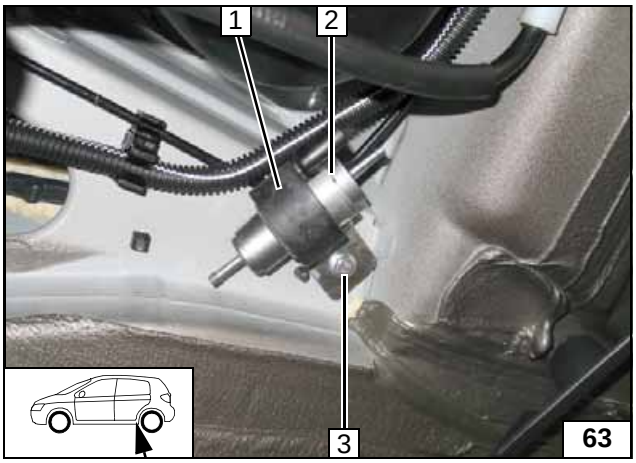
Route fuel line and wiring harness of metering pump in 10 mm dia. corrugated tube **1** on underbody to installation location of metering pump.

Routing lines



1 M6 rivet nut, existing hole

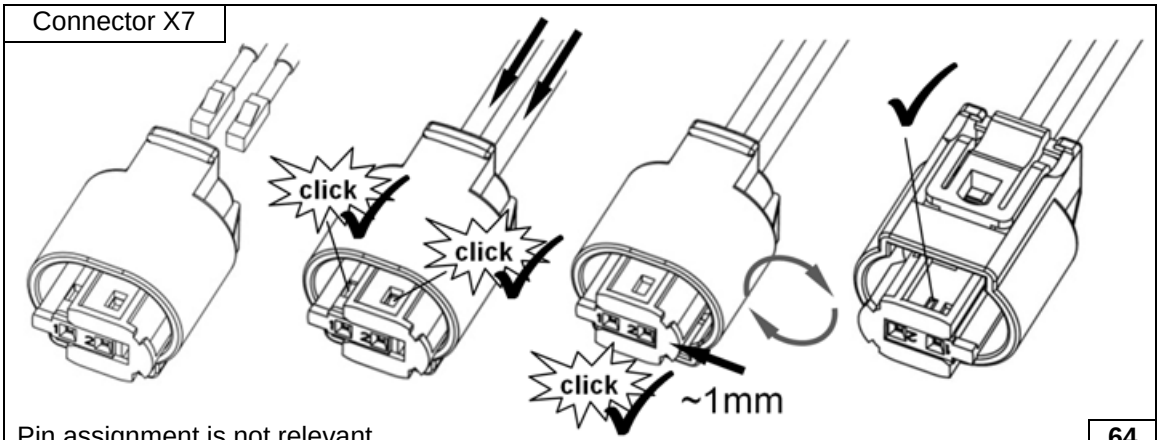
Installing rivet nut



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

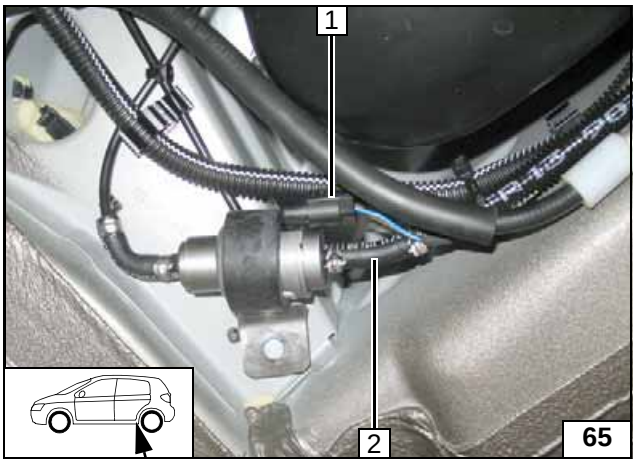
Installing metering pump

Connector X7



Pin assignment is not relevant.

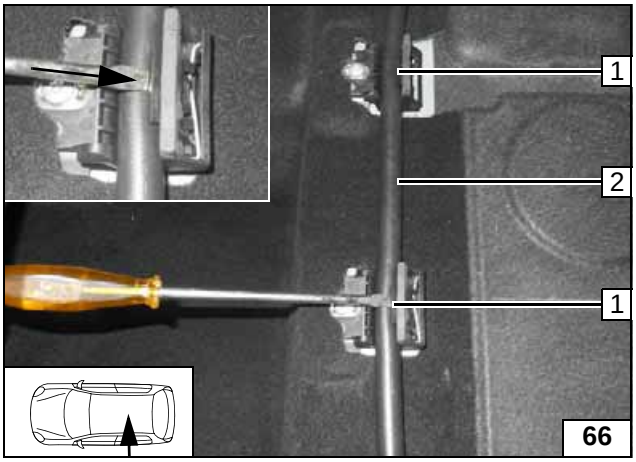
Completing metering pump connector



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

1 Metering pump wiring harness, connector X7 mounted
2 Hose section, 10mm dia. clamp [2x], fuel line of heater

Connecting metering pump

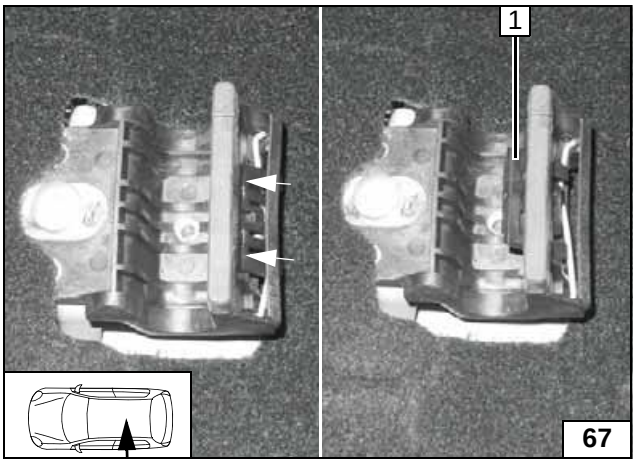


Rear Bench Seat Installation Instructions

Release latching **1** [2x] for rear bench seat bracket **2** with an appropriate tool.

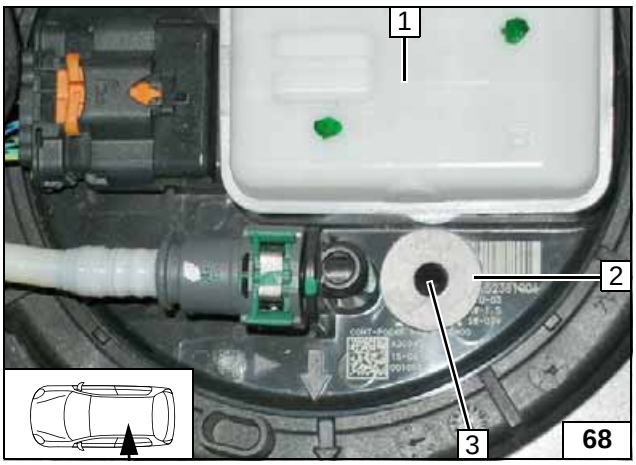
2 Rear bench seat bracket (readjusted here to provide a better view)

Removing bench seat



Prepare latching **1** for installation of the bench seat at a later time.

Removing bench seat

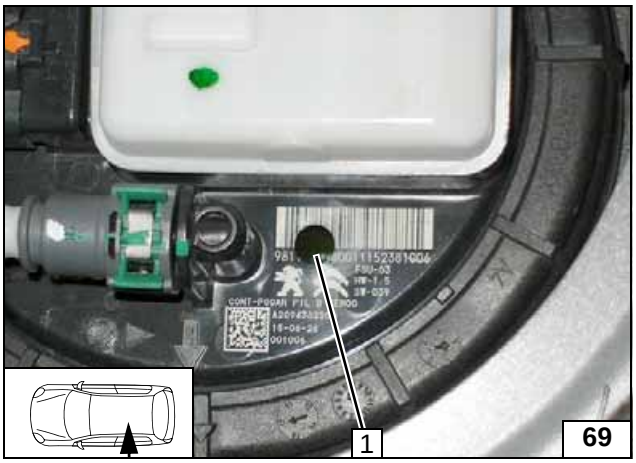


Installation of FuelFix for Diesel Vehicles

Work steps F1 and F2.

1 Fuel tank sending unit
2 Position washer with outer dia. d_a = 21.6mm, will be used as a template
3 Hole pattern

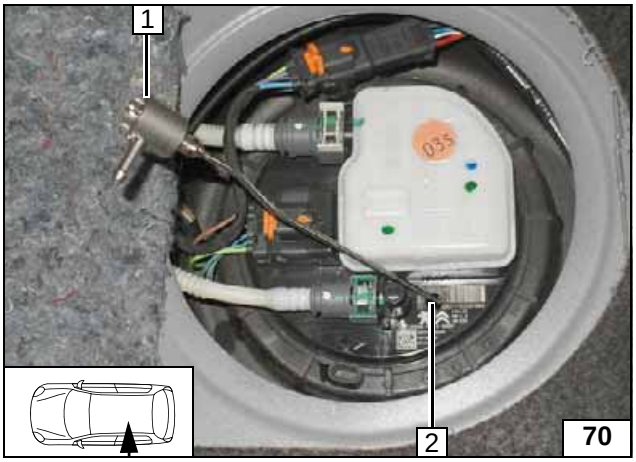
Copying hole pattern



Work step F3.

1 Hole made with provided drill

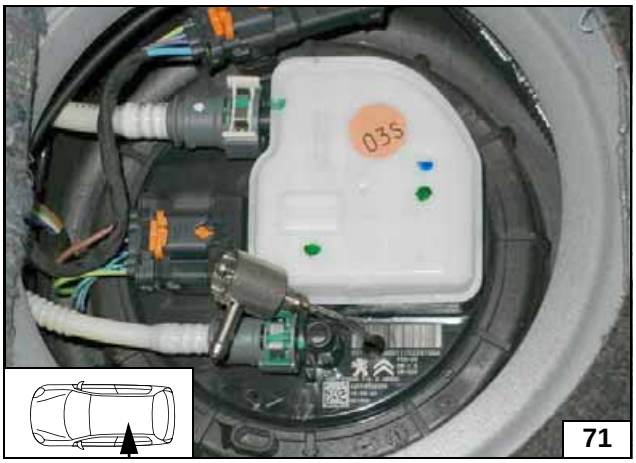
Hole for FuelFix



Work steps F4 and F5.

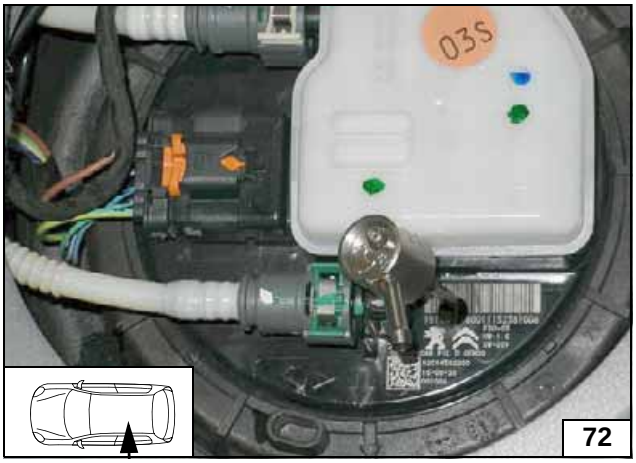
Bend FuelFix **1** according to template and cut to length.
Insert into hole **2**.

Inserting FuelFix



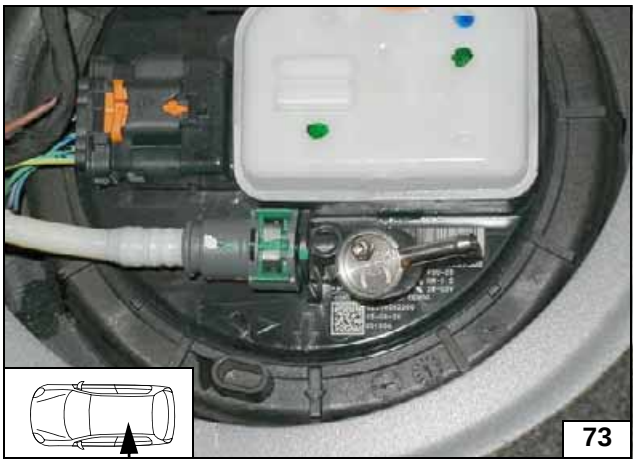
Work step F5.

Inserting FuelFix



Inserting FuelFix

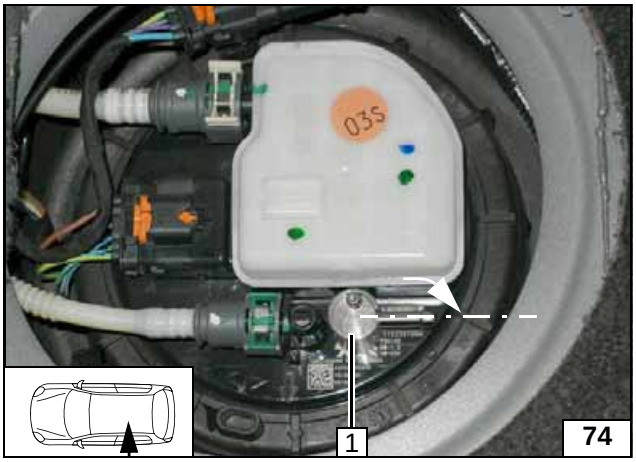
Inserting FuelFix



Work steps F5.3 and F5.4.

Turn FuelFix **1** and align as shown.

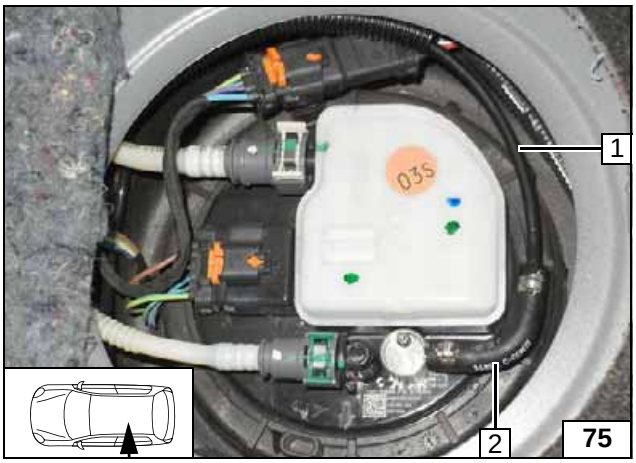
Aligning FuelFix



Work step F6.

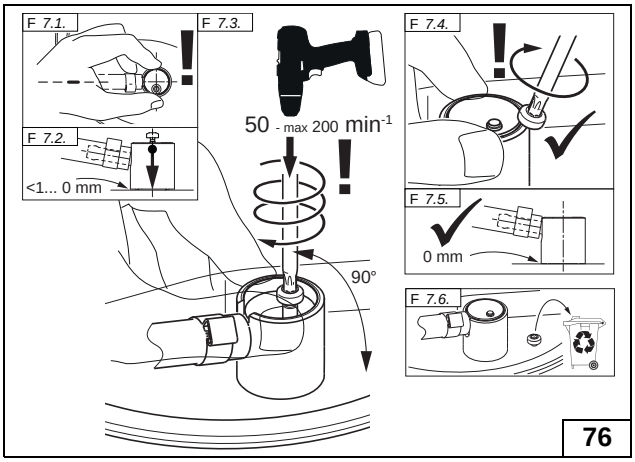
1 Fuel line
2 90° moulded hose, 10 mm dia. clamp [2x]

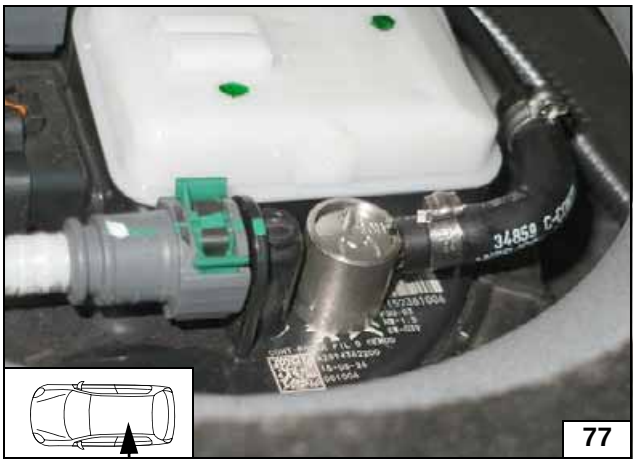
Connecting fuel line



Work step F7.

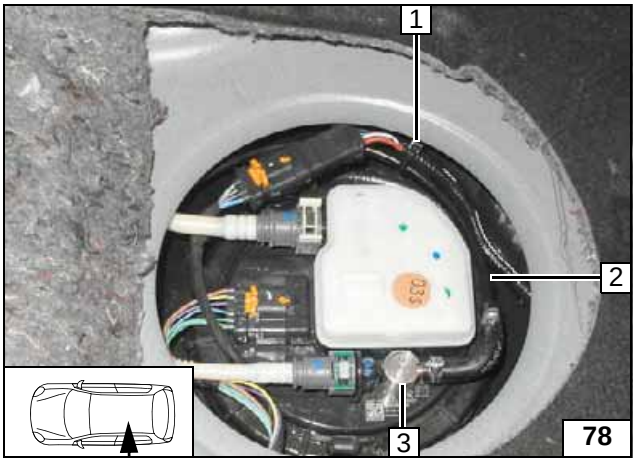
Installing FuelFix





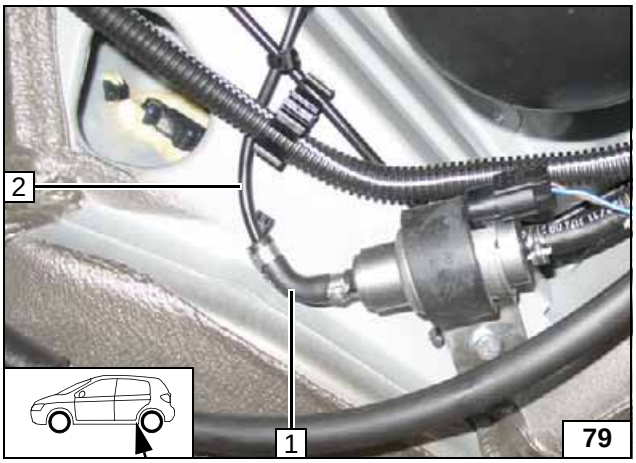
Work step F8.

Ensuring firm seating of FuelFix



1 Cable tie for strain relief
2 Fuel line of FuelFix
3 FuelFix, installed

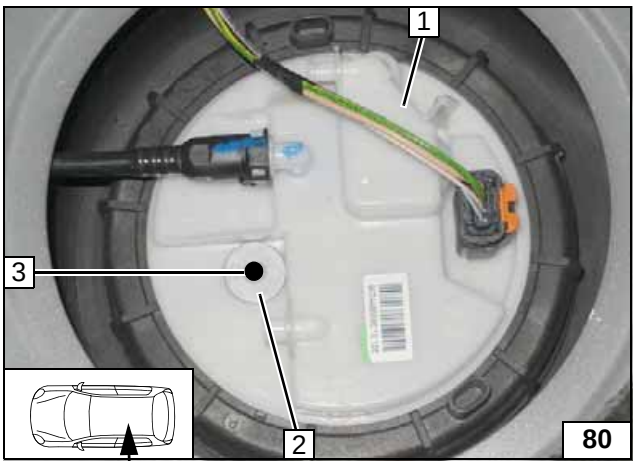
Securing fuel line



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 FuelFix

Connecting metering pump

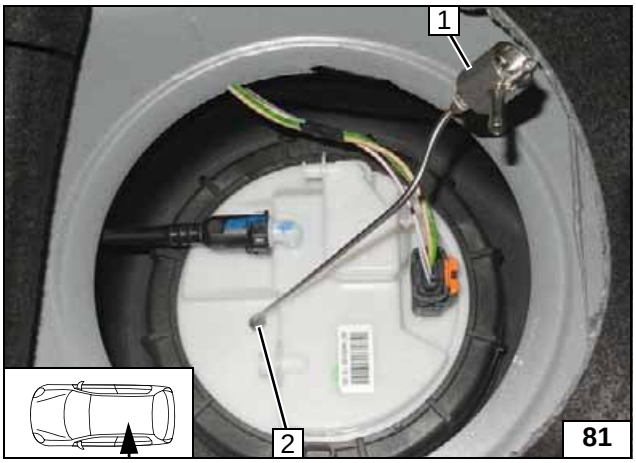


Installation of FuelFix for Petrol Vehicles

Work steps F1, F2 and F3.

1 Fuel tank sending unit
2 Position washer with outer dia. d_a = 21.6mm, will be used as a template
3 Hole pattern, hole made with provided drill

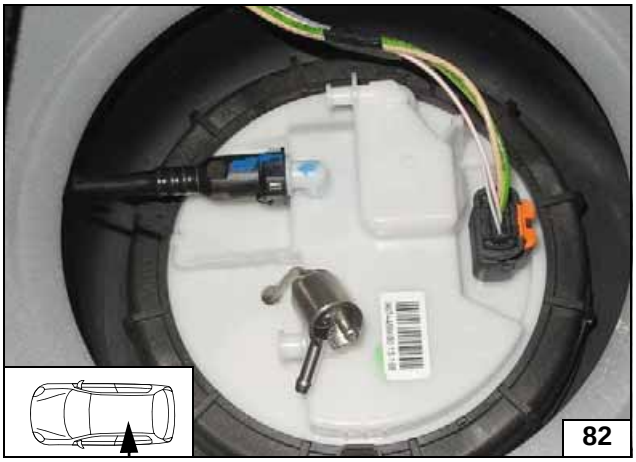
Copying hole pattern / hole for FuelFix



Work steps F4 and F5.

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

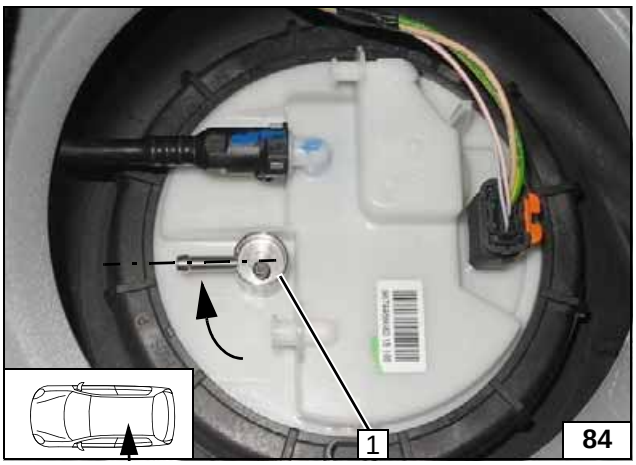
Inserting FuelFix



Work step F5.

Inserting FuelFix

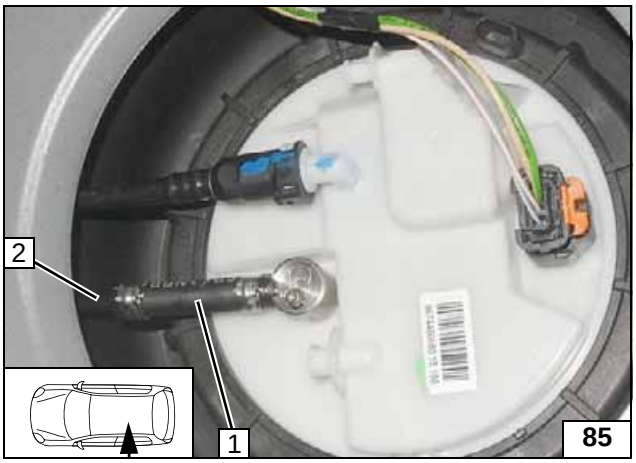
Inserting FuelFix



Work steps F5.3 and F5.4.

Turn FuelFix **1** and align as shown.

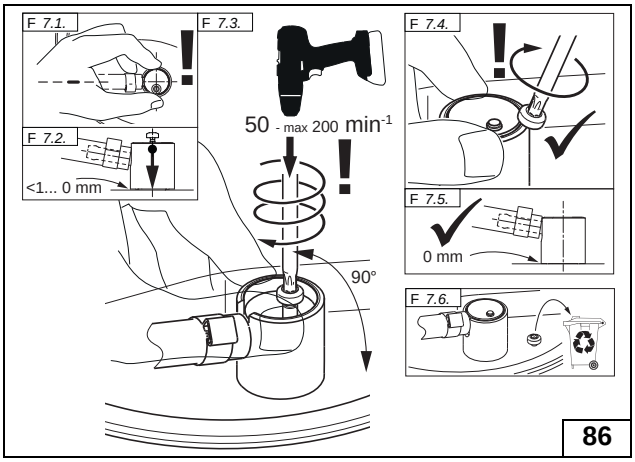
Aligning FuelFix



Work step F6.

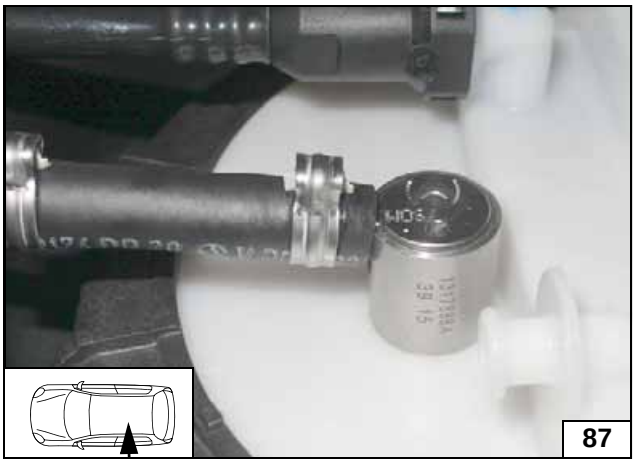
1 Moulded hose, 10 mm dia. clamp [2x]
2 Fuel line

Connecting fuel line



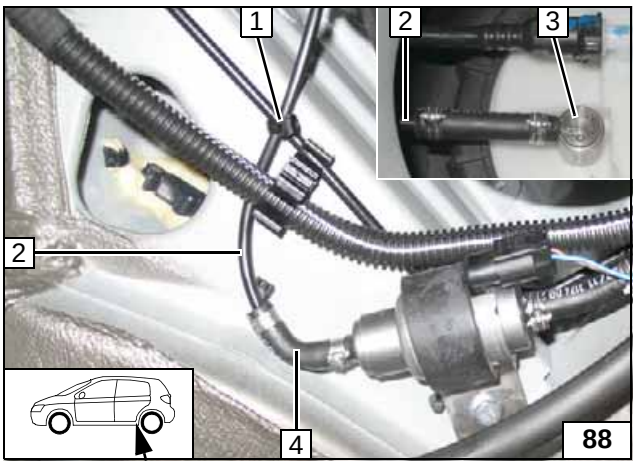
Work step F7.

Installing FuelFix



Work step F8.

Ensuring firm seating of FuelFix



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

1 Cable tie for strain relief
2 Fuel line of FuelFix
3 FuelFix, installed
4 90° moulded hose, 10 mm dia. clamp [2x]

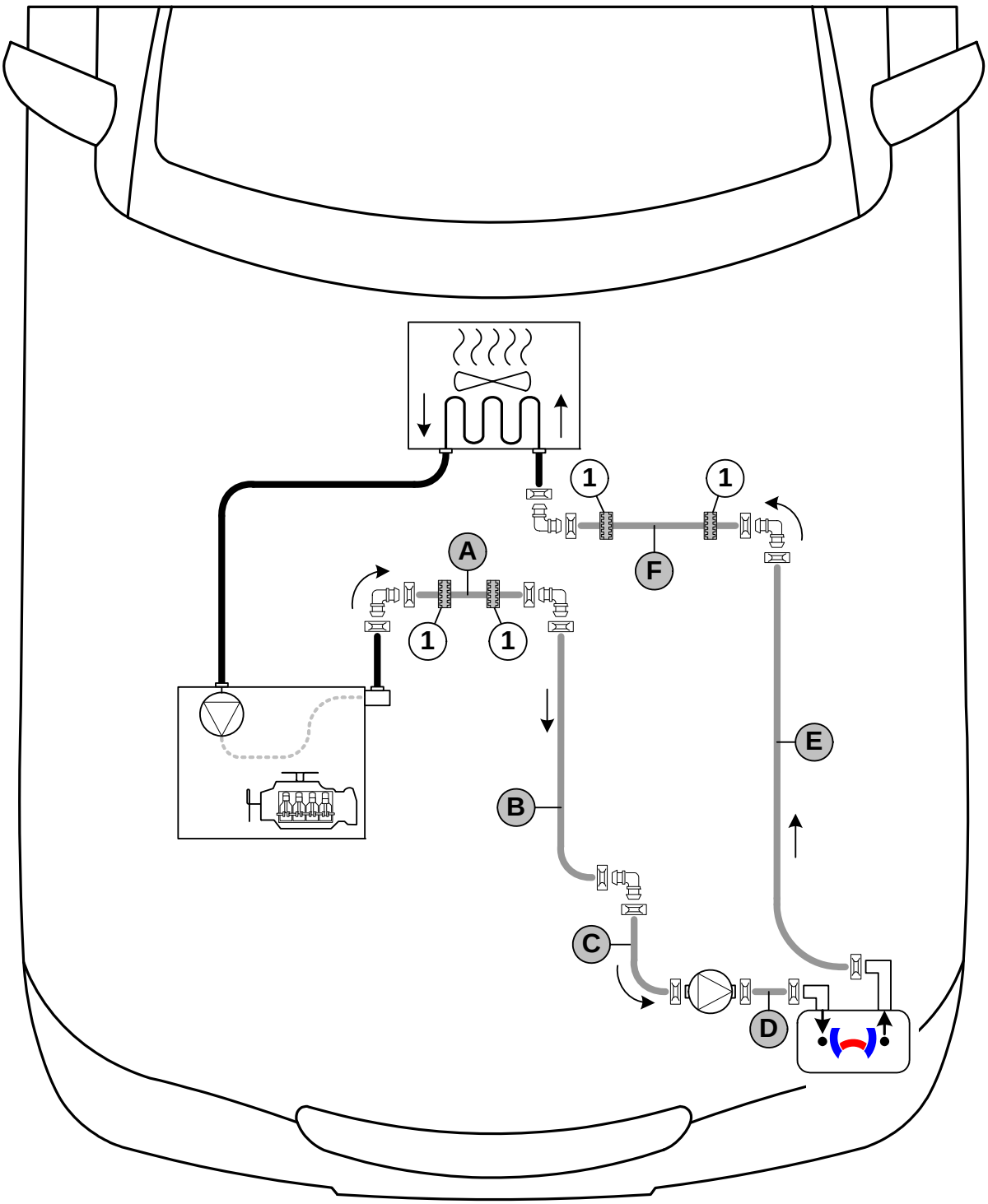
Connecting metering pump / securing fuel line

Coolant Circuit

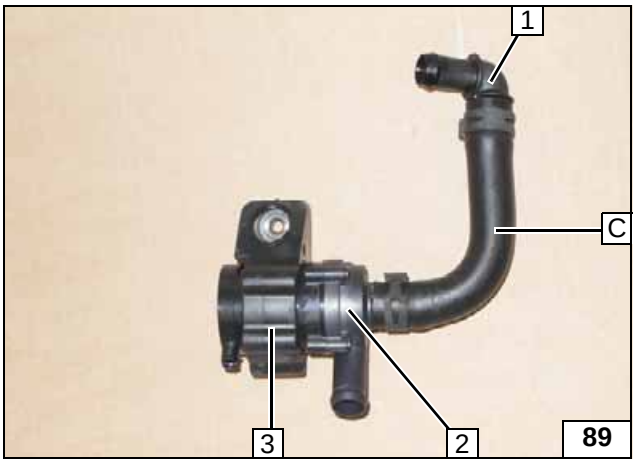
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

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

Hose routing diagram



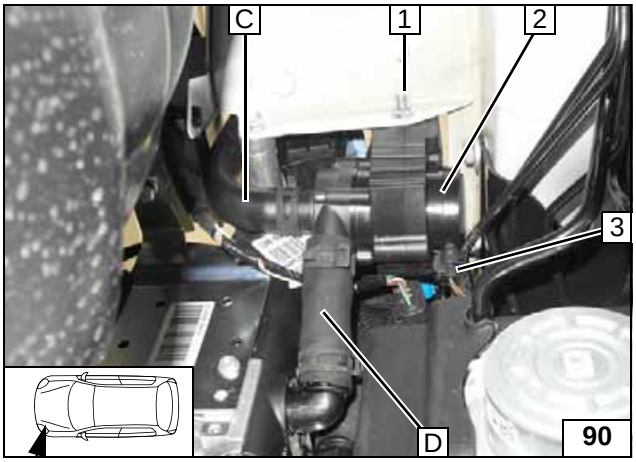
All spring clips = 25 mm dia. All connecting pipes = 18x18 mm dia.
1 = Black (sw) rubber isolator.



All vehicles

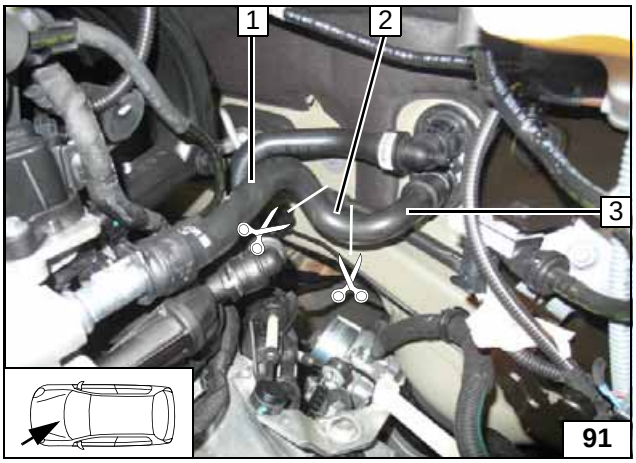
1 90° connecting pipe
2 Circulating pump
3 Circulating pump mount

Preparing circulating pump



1 M6x25 bolt, flanged nut
2 Circulating pump
3 Circulating pump wiring harness

Installation of circulating pump

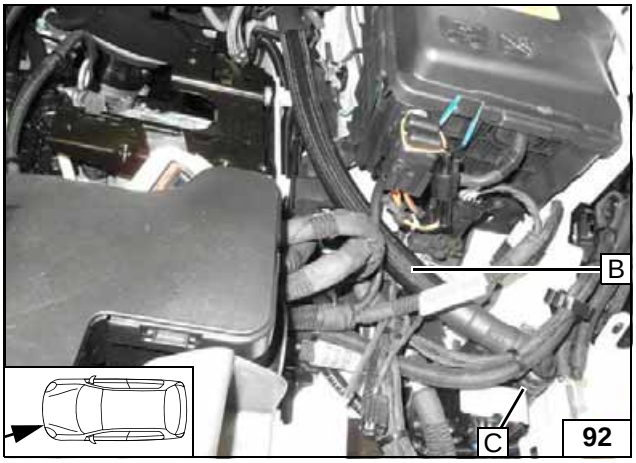


Petrol

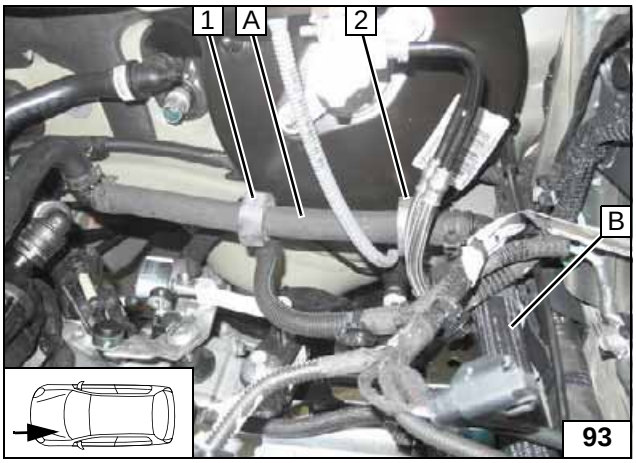
Cut off hose on engine outlet/heat exchanger inlet at markings.

1 Engine outlet hose section
2 Discard section (90° elbow)
3 Heat exchanger inlet hose section

Cutting point

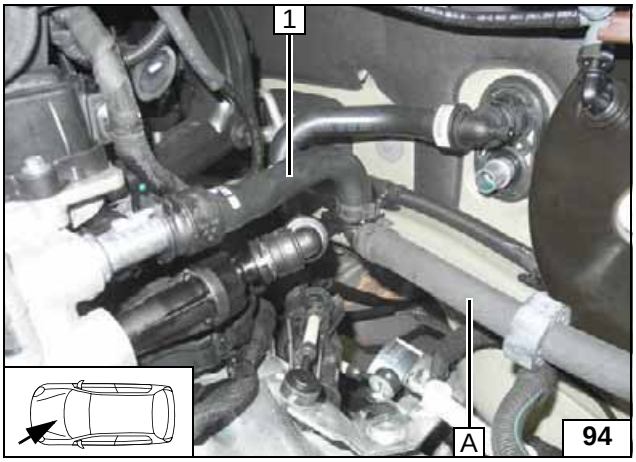


Routing in engine compartment



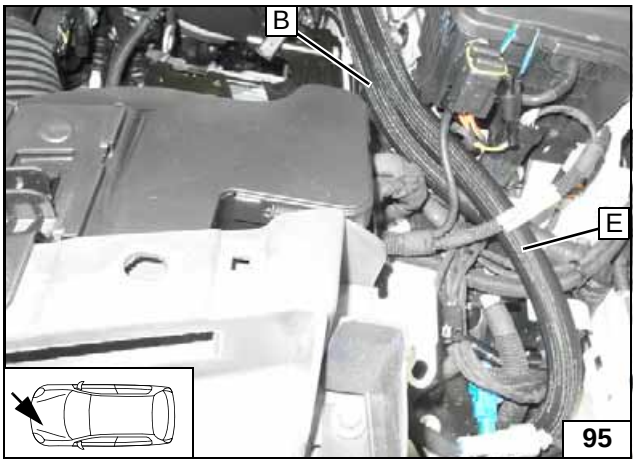
1 Slide on black (sw) rubber isolator and align with original vehicle wiring harness
2 Slide on black (sw) rubber isolator and align with original vehicle brake lines

Routing in engine compartment

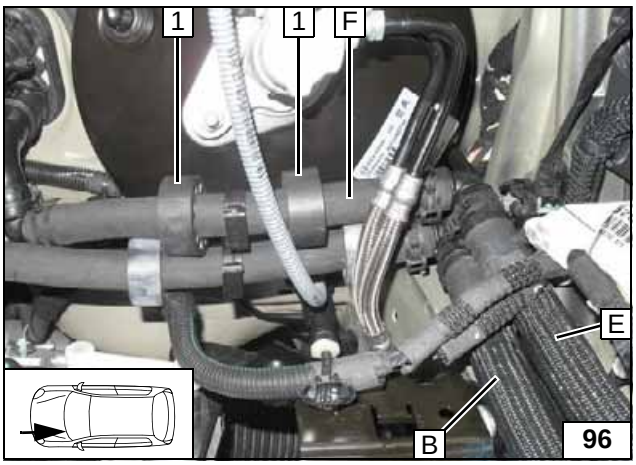


1 Engine outlet hose section

Connecting engine outlet

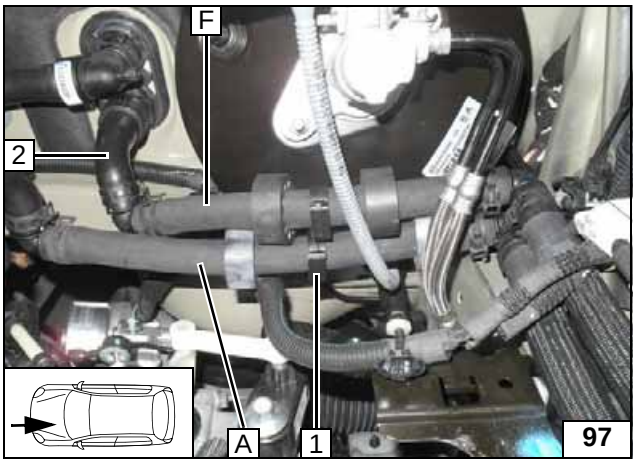


Routing in engine compartment



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

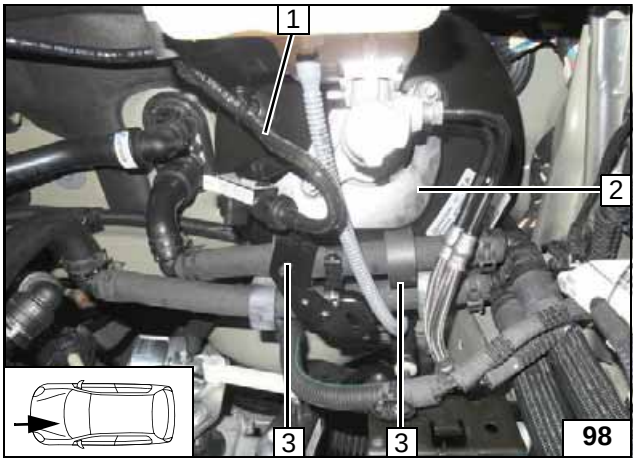
Routing in engine compartment



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

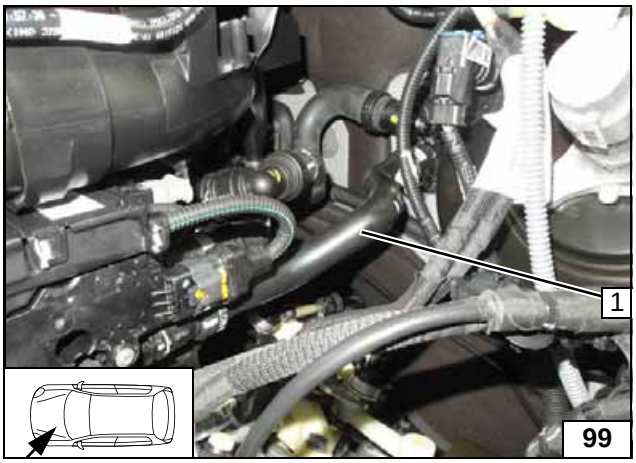
1 Insert hose bracket
2 Heat exchanger inlet hose section

Connecting heat exchanger inlet



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

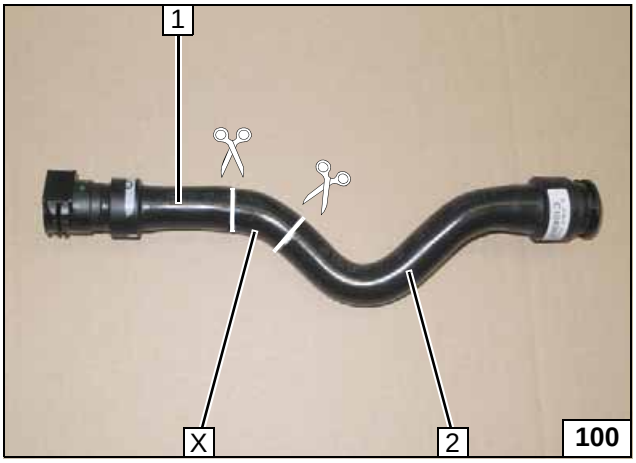
Installing bracket



Diesel

Remove hose on engine outlet / heat exchanger inlet **1**.

Cutting point

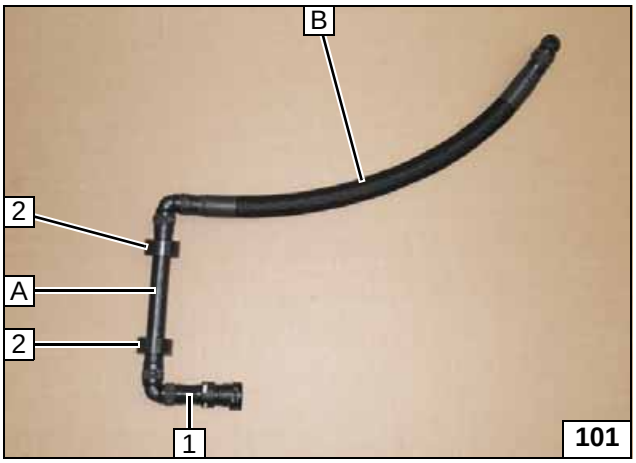


Cut off hose on engine outlet/heat exchanger inlet at markings.

1 Engine outlet hose section
2 Heat exchanger inlet hose section

X =

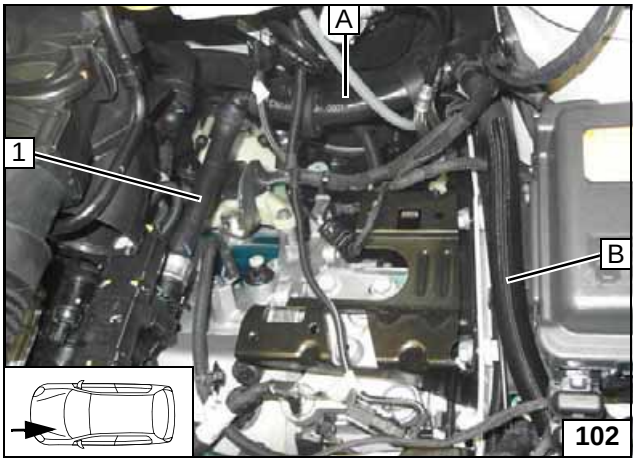
Cutting point



Slide on black (sw) rubber isolator **2** [2x] as shown!

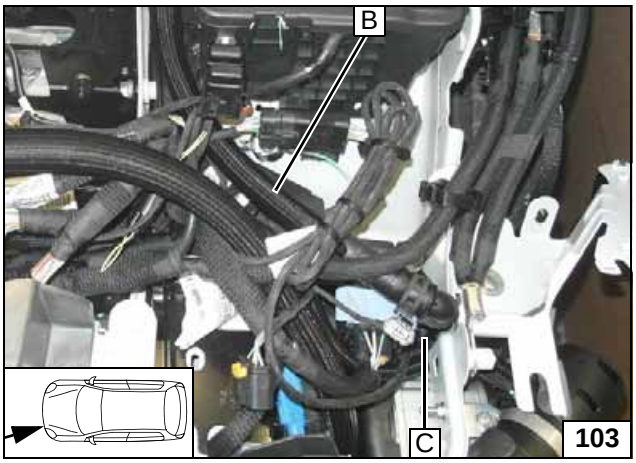
1 Engine outlet hose section

Preparing engine outlet hose

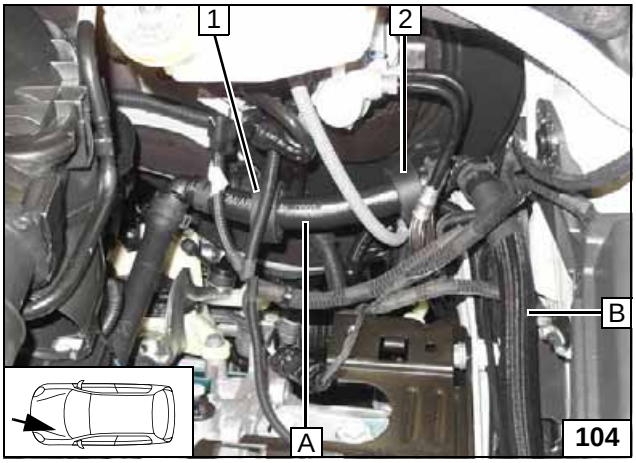


1 Engine outlet hose section

Connecting engine outlet

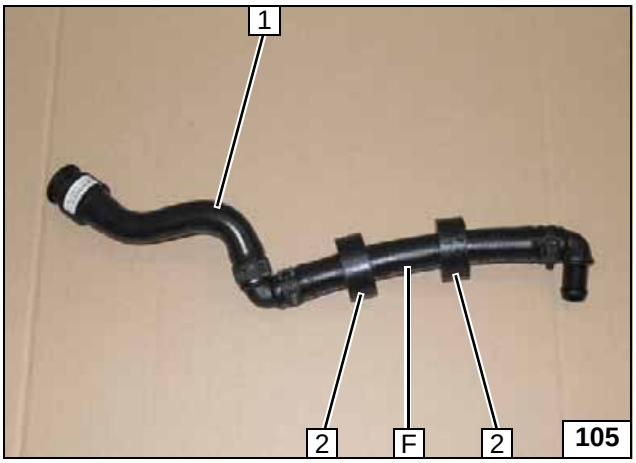


Routing in engine compartment



1 Align black (sw) rubber isolator with original vehicle wiring harness and brake booster
2 Align black (sw) rubber isolator with original vehicle brake line and brake booster

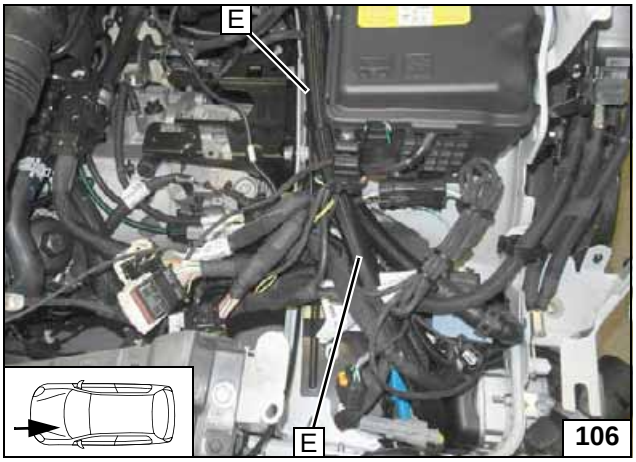
Aligning rubber isolator



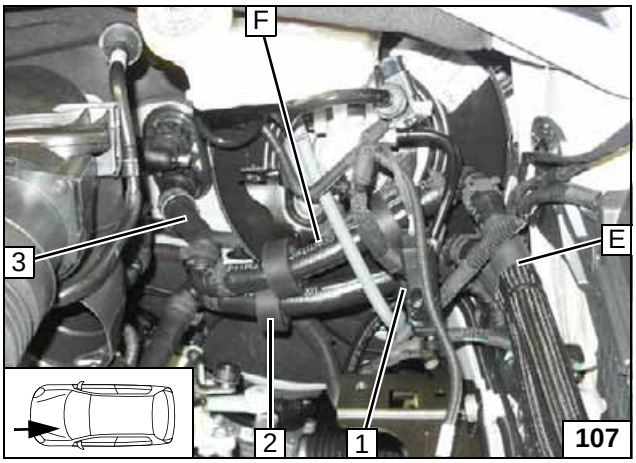
Slide on black (sw) rubber isolator **2** [2x] as shown!

1 Heat exchanger inlet hose section

Preparing hose of heat exchanger inlet

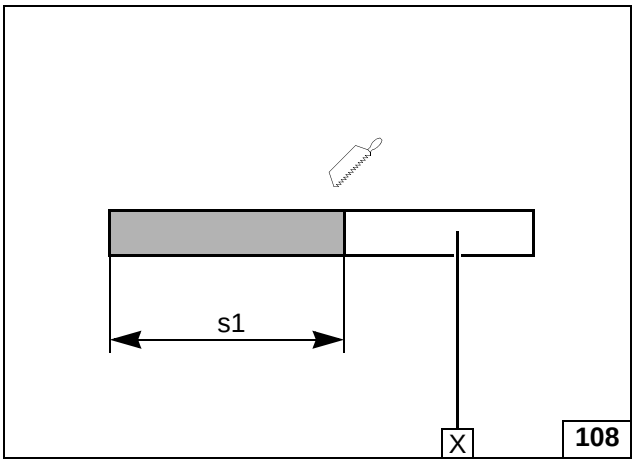


Routing hose E in engine compartment



1 Align black (sw) rubber isolator with original vehicle brake line and brake booster
2 Align black (sw) rubber isolator with original vehicle brake line and brake booster
3 Heat exchanger inlet hose section

Connecting heat exchanger inlet

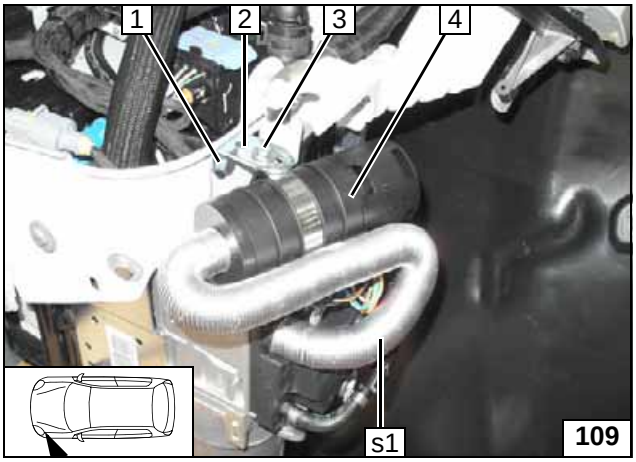


Combustion Air

s1 = 370

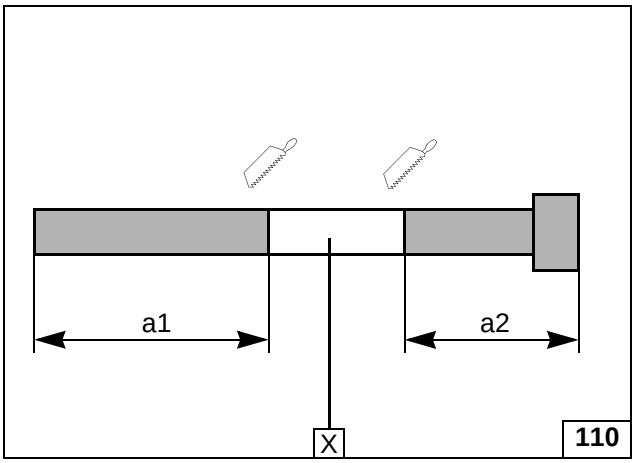
X =

Cutting combustion air pipe to length



1 Existing hole, M6x20 bolt, large diameter washer, flanged nut
2 Angle bracket
3 M5x16 bolt, 51 mm dia. p-clamp, washer, flanged nut
4 Silencer

Installing combustion air pipe s1/ silencer

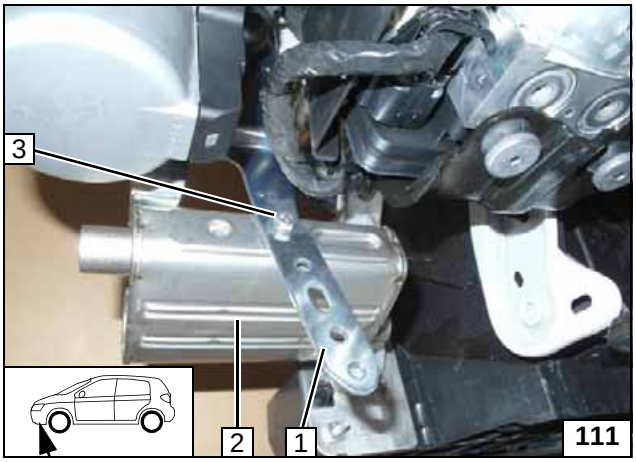


Exhaust Gas

a1 = 280
a2 = 210

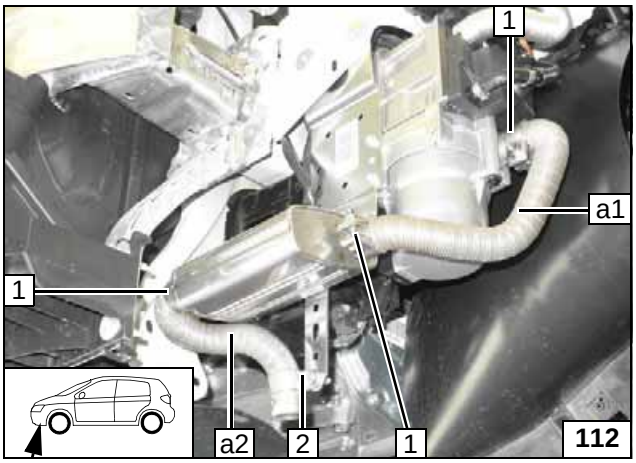
X =

Preparing exhaust pipe



1 Perforated bracket
2 Silencer
3 M6x16 bolt, spring lockwasher

Installing silencer



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

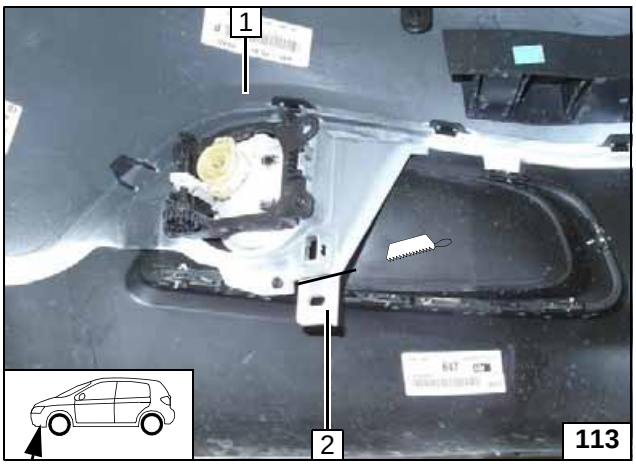
1 Hose clamp [3x]
2 M6x20 bolt, p-clamp, flanged nut

Installing exhaust pipes a1 and a2

Final Work

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

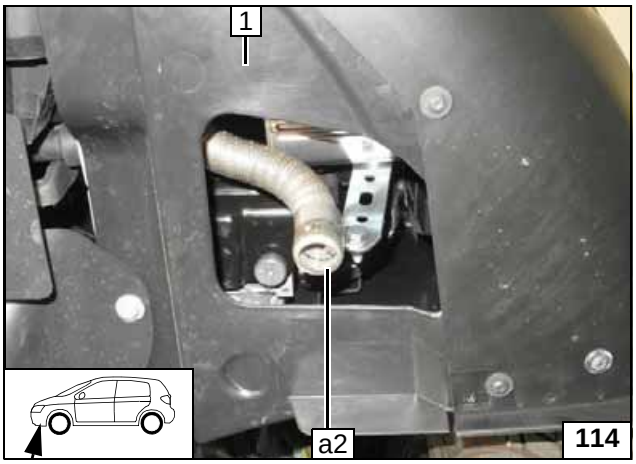
- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **For initial startup and function check, please see installation instructions.**
- **Make settings on A/C control panel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



Cut off tab **2** along the cutting line and discard.

1 Bumper (interior view)

Adapting bumper



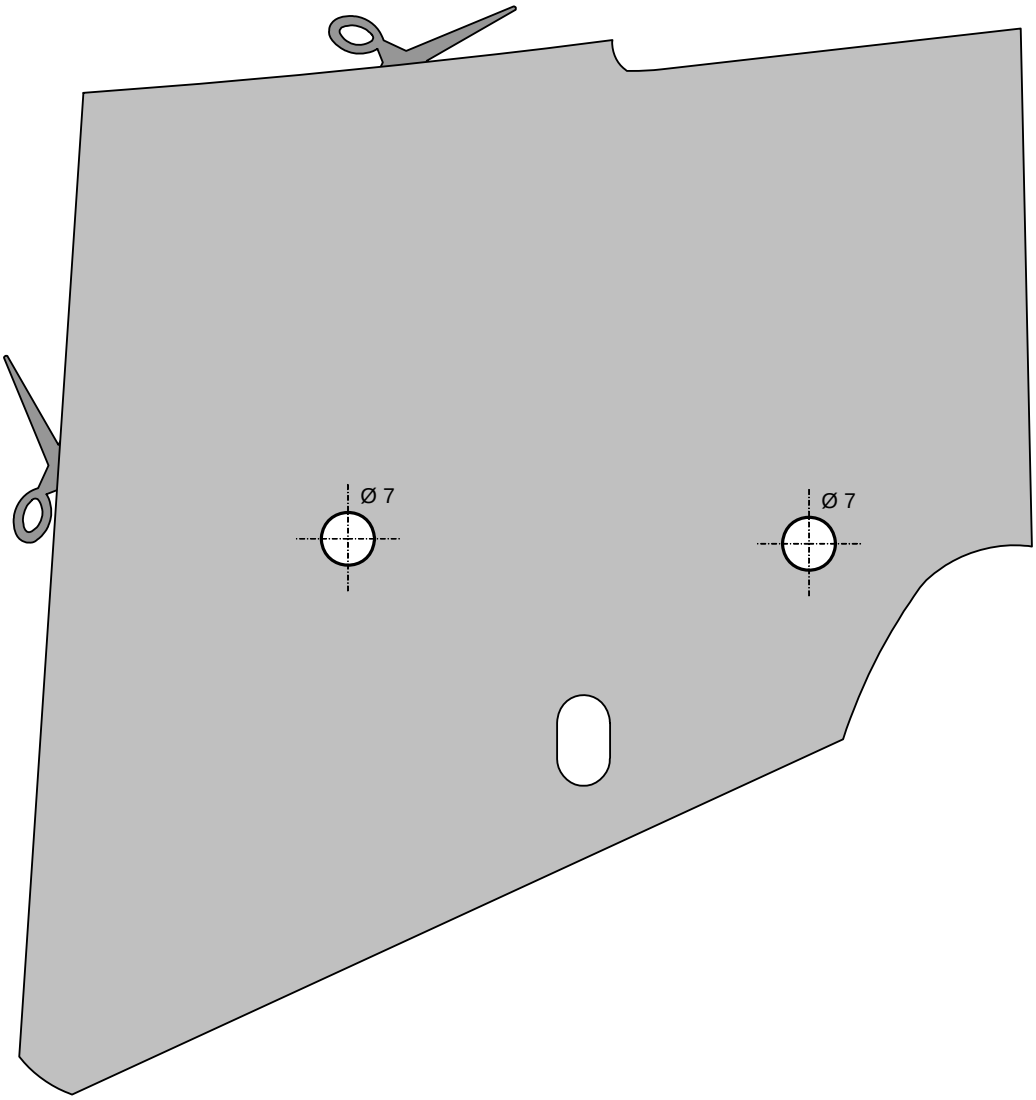
Ensure sufficient distance from adjacent components; correct if necessary.

1 Wheel well trim mounted

Aligning exhaust pipe a2

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

Drilling Template



100mm

Scale 1:1

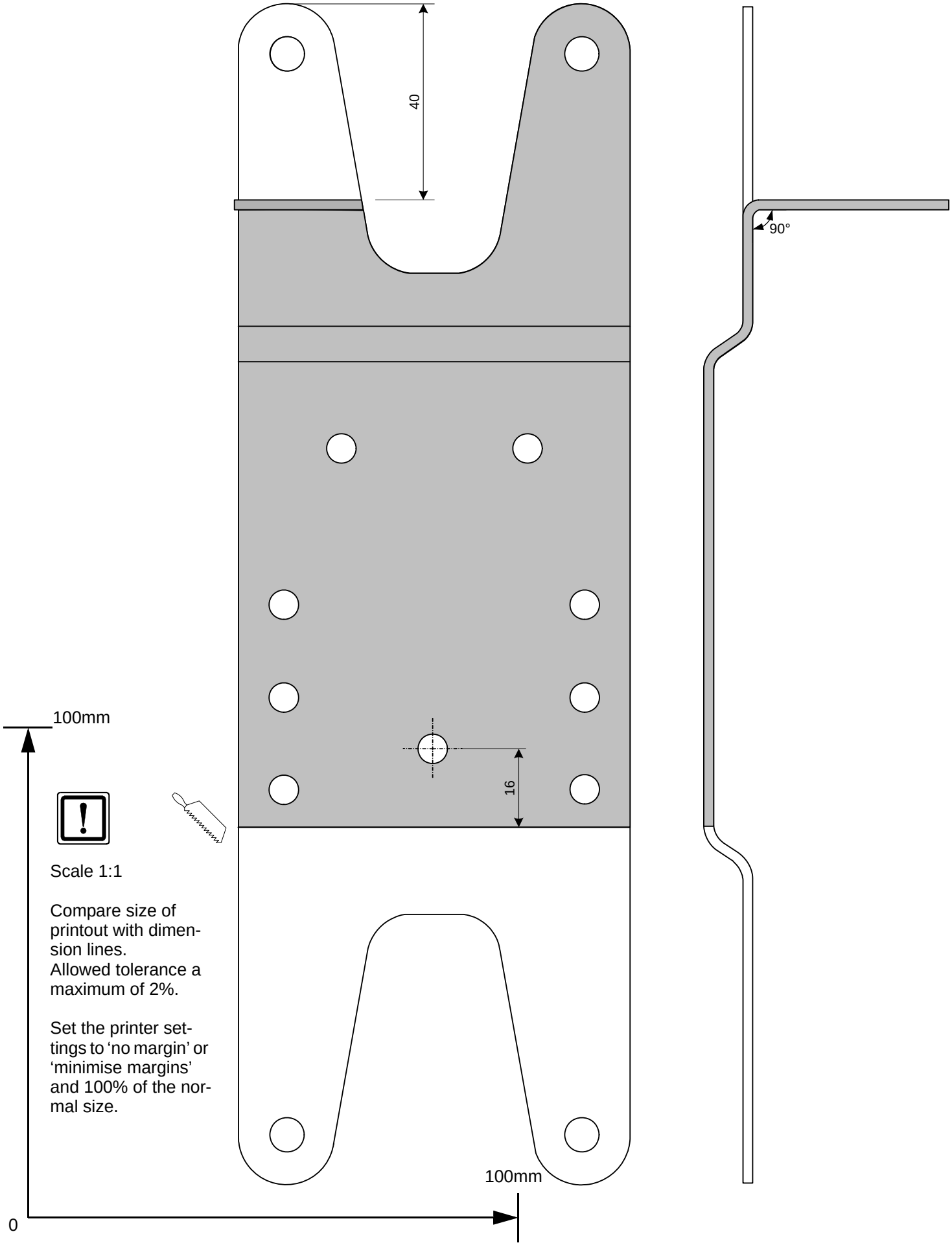
Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

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

100mm

0

Template for Bracket A

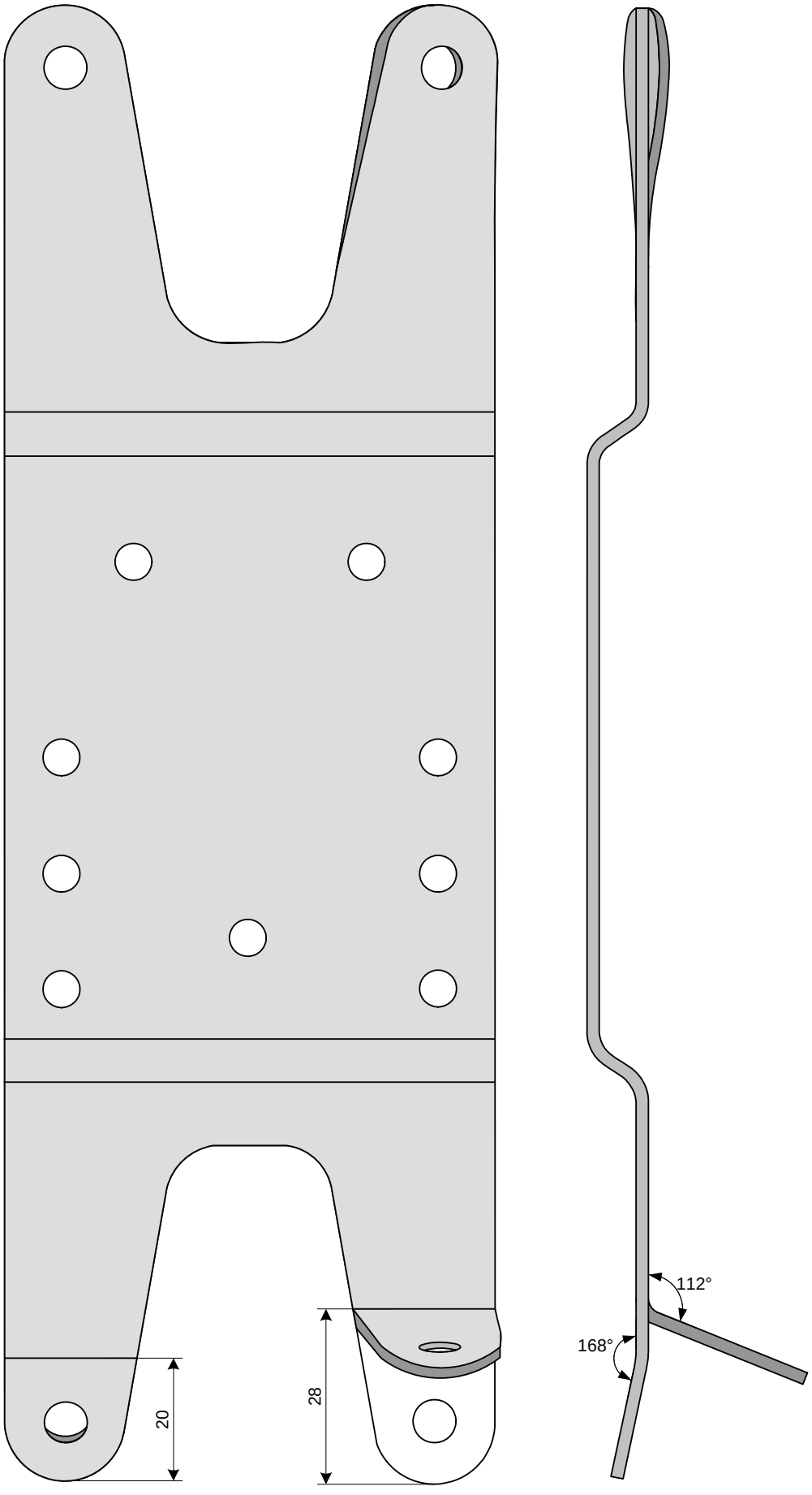


Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

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

Template for Bracket B



100mm

Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

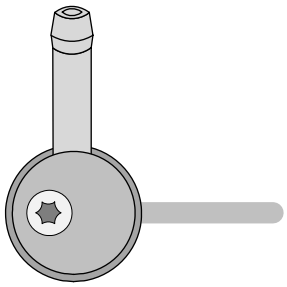
Set the printer settings to 'no margin' or 'minimise margins' and 100% of the normal size.

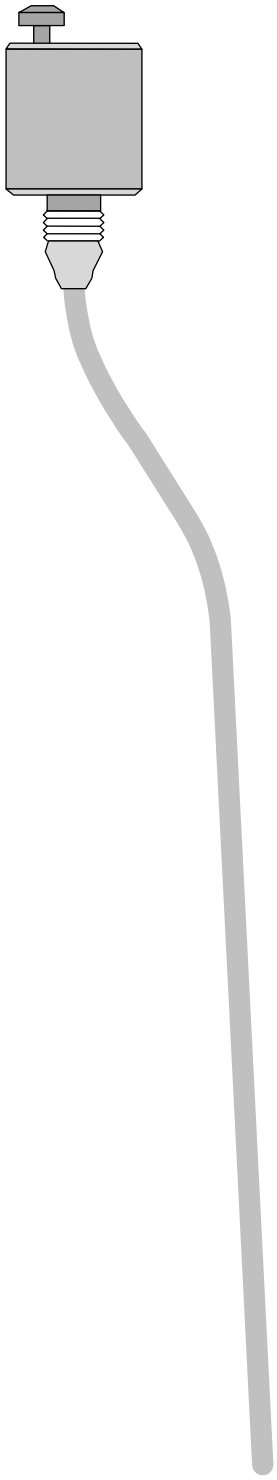
100mm

0

FuelFix Template for Diesel Vehicles

Top view





100mm

Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

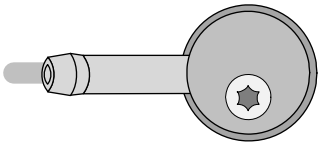
Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

100mm

0

FuelFix Template for Petrol Vehicles

Top view



100mm

Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

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

100mm

0

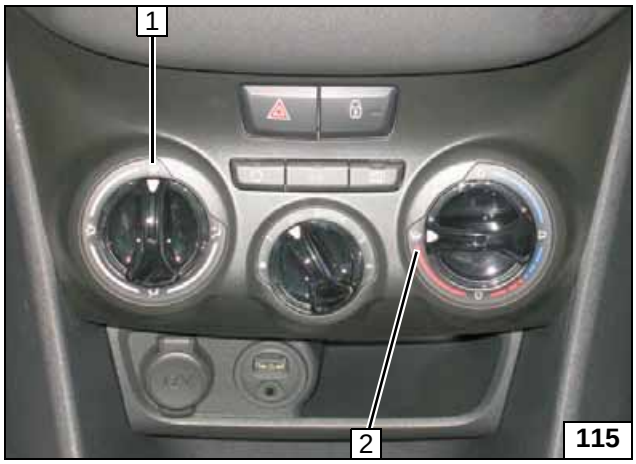
Operating Instructions for Manual Air-Conditioning

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.

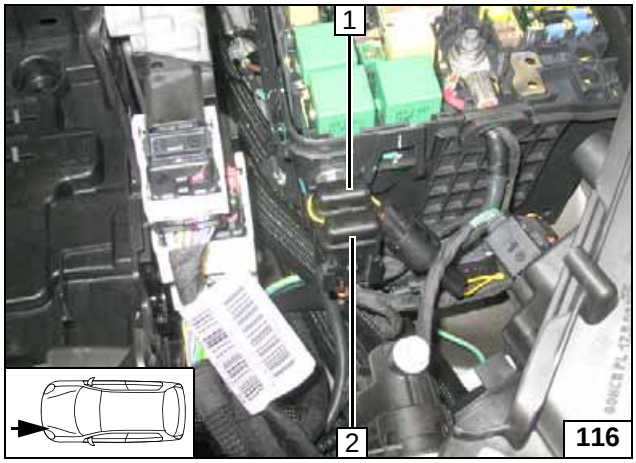
Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



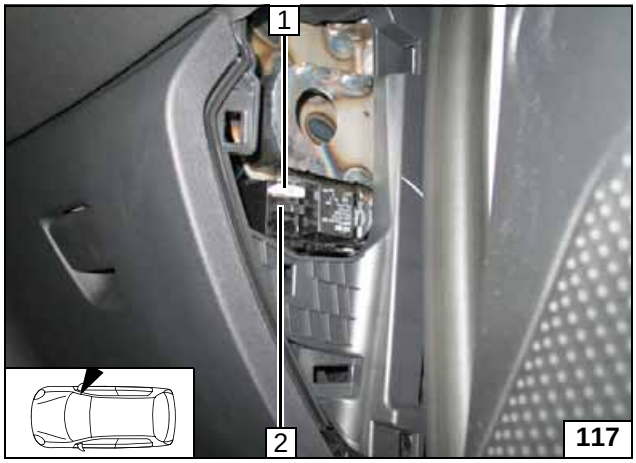
1 Air outlet to windscreen
2 Set temperature to ‘max.’

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses

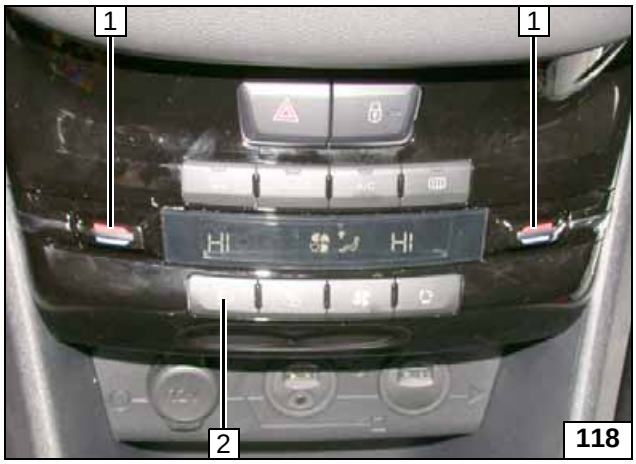
Operating Instructions for Automatic Air-Conditioning

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.

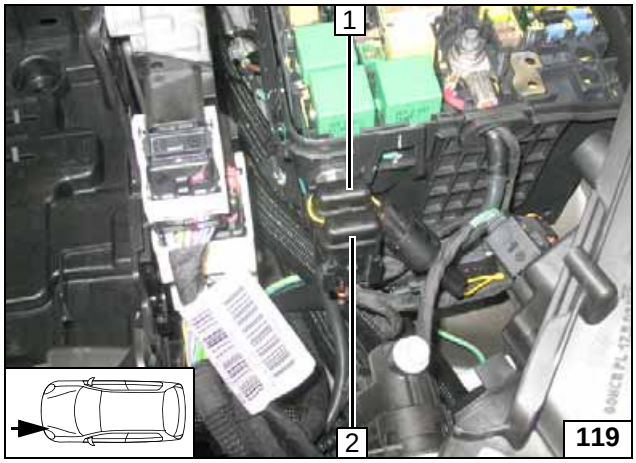
Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



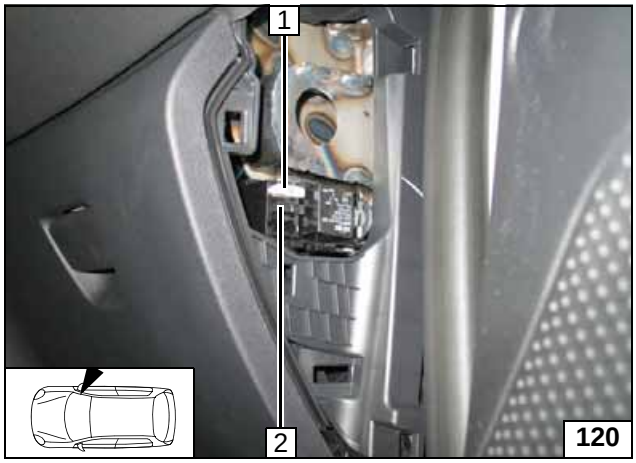
1 Set temperature on both sides to ‘HI’
2 Air outlet turned ‘upwards’

A/C control panel



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

Engine compartment fuses



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

Passenger compartment fuses