



Water Heater

Thermo Top Evo Parking Heater



Installation Documentation Citroen C3

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Citroen	C3	S	From model year 2017	e2 * 2007 / 46 * 0003 * ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.2 P	Petrol	Euro 6	5-speed SG	81	1199	HN01

SG = manual transmission

Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning
Halogen main headlights
Halogen front fog lights
LED daytime running lights
Start button with keycard

Not verified: Manual air-conditioning

Total installation time: approx. 12 hours

Citroen C3

Table of Contents

Validity	1	Preparing Installation Location	18
Necessary Components	2	Preparing Heater	19
Installation Instructions	2	Installing Heater	21
Information on Total Installation Time	2	Coolant Circuit	22
Information on Operating and Installation Instructions	3	Exhaust Gas	26
Information on Validity	4	Exhaust End Fastener Installation	27
Technical Information	4	Combustion Air	29
Explanatory Notes on Document	4	Fuel	30
Preliminary Work	5	Installing FuelFix	32
Heater Installation Location	5	Final Work	36
Preparing Electrical System	6	Final Work	36
Electrical System	10	Template for Bracket A	38
Dismantling Instructions for the Passenger Compartment	11	Template for Bracket B	39
Cold Start System for 1.2P 81kW Installation	12	Installation Location Template	40
Fan Controller	12	FuelFix Template	41
Heater Control Installation	16	Operating Instructions for Automatic A/C	42
Remote Option (Telestart)	16		
ThermoCall Option	17		

Necessary Components

Description	Order No.:
Basic delivery scope of Thermo Top Evo	In accordance with price list
Installation kit for Citroen C3 1.2 Petrol 81kW MY 2017	1325698A
Heater control as well as indicator lamp for Telestart in consultation with end customer	In accordance with price list

Individual Webasto Option

Description	Order No.:
Additional kit individual Webasto auxiliary heating	1320077_
Additional kit individual Webasto Quick	9030826_
Additional kit individual Webasto Select	9030828_

Installation Instructions

Arrange for the vehicle to be delivered with the tank only about $\frac{1}{4}$ full.

The installation location of the push button in case of Telestart or ThermoCall 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.

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.

Citroen C3

Information on Validity

This installation documentation applies to Citroen C3 Petrol vehicles - for validity, see page 1 - from model year 2017 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.

Mechanics



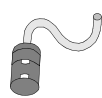
Electrics



Coolant Circuit



Combustion Air



Fuel



Exhaust



Software



Special features are highlighted using the following symbols:

Specific risk of damage to components.



Specific risk due to electrical voltage.



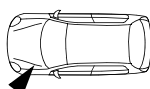
Specific risk of fire or explosion.



Reference to a special technical feature.



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



Reference to the manufacturer's vehicle-specific documents.



Reference to specific installation instructions of Webasto components (shown, for example, FuelFix).



Reference to general installation instructions of Webasto components.



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



Preliminary Work

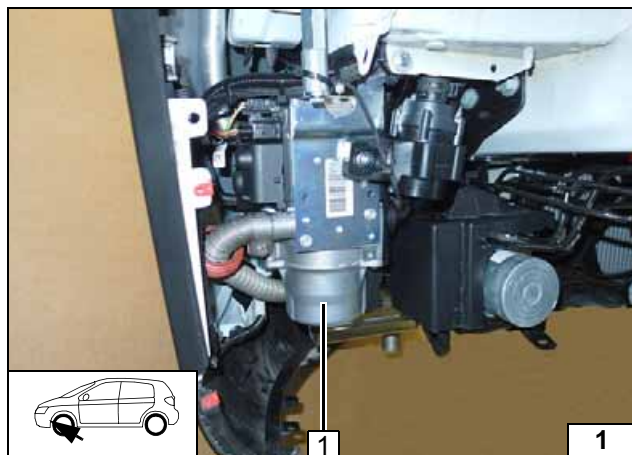
Vehicle

- 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 lower engine cover (if present).
- Remove the underride protection on the left (if present).
- Remove the left front wheel.
- Remove the wheel well trim on the left-hand side, detach it in the right front area.
- Remove the bumper trim.
- Detach the rear bench seat (clipped in).
- Remove the lower instrument panel trim on the driver's side.
- Remove the side trim of the centre console on the right and the left.
- Remove the lateral instrument panel trim on the right and the left.
- Remove the glove box.



Heater

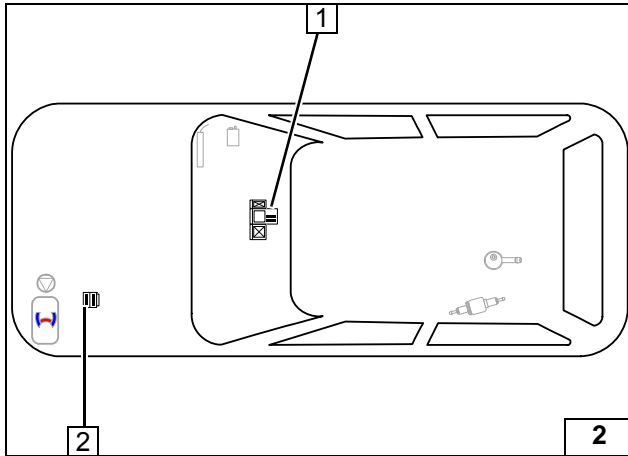
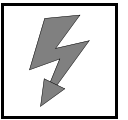
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



Heater Installation Location

- 1 Heater

Installation location

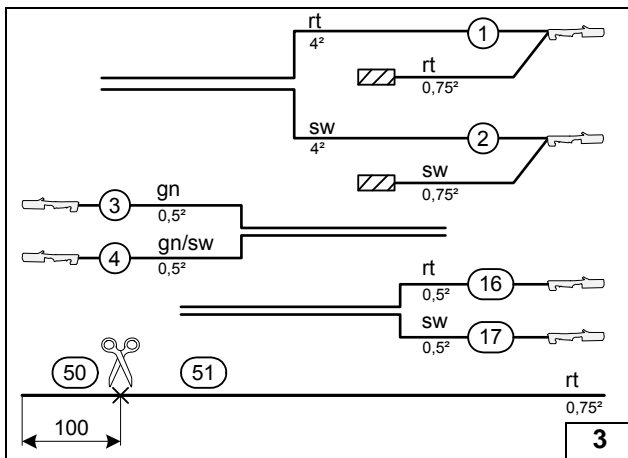


Preparing Electrical System

- 1 Passenger compartment relay and fuse holder, PWM GW, relay K2
- 2 Engine compartment fuse holder



Installation overview



Wire sections retain their numbering in the entire document.

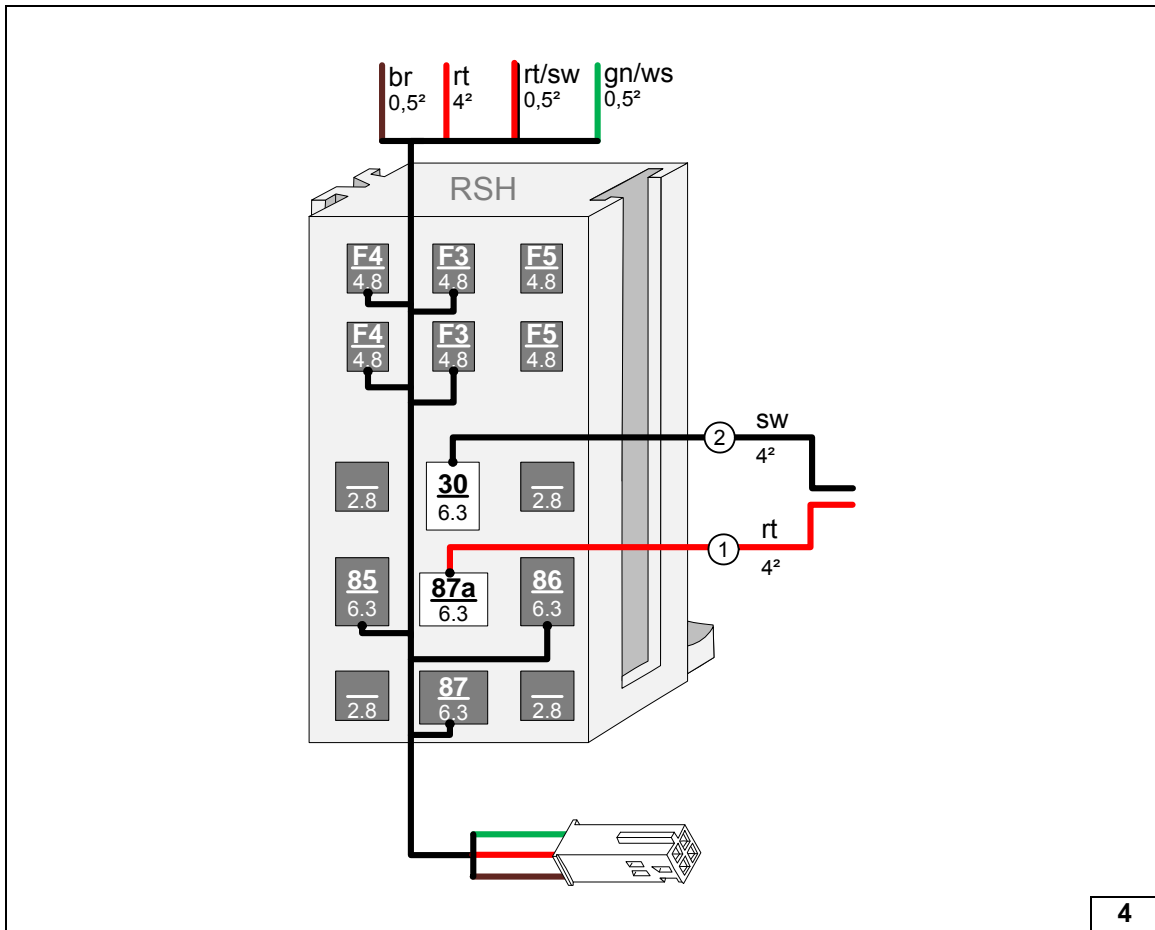
Produce all following electrical connections as shown in the wiring diagram.

Pull wire (51) into provided protective sleeving.

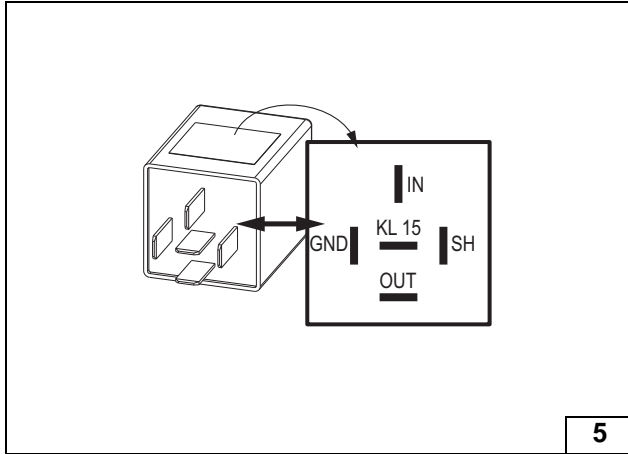
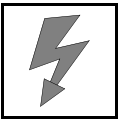
- ① Red (rt) wire of fan wiring harness
- ② Black (sw) wire of fan wiring harness
- ③ Green (gn) wire from wiring harness of PWM control
- ④ Green/black (gn/sw) wire from wiring harness of PWM control
- ⑬ Red (rt) wire of isolating relay wiring harness
- ⑭ Black (sw) wire of isolating relay wiring harness



Cutting to length / assigning wires



Connecting wires to passenger compartment relay and fuse holder



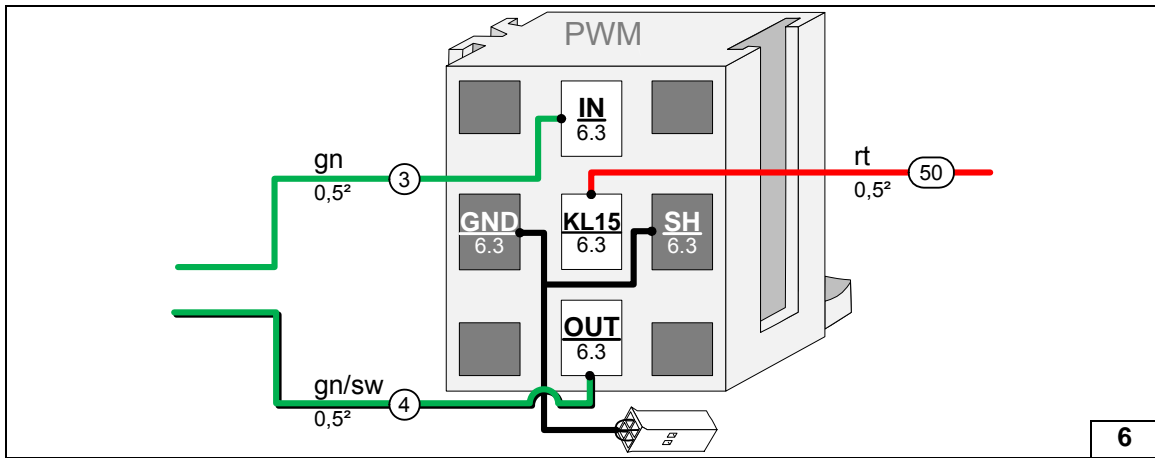
Check the PWM Gateway settings when starting up the heater and adjust if necessary.

Settings:

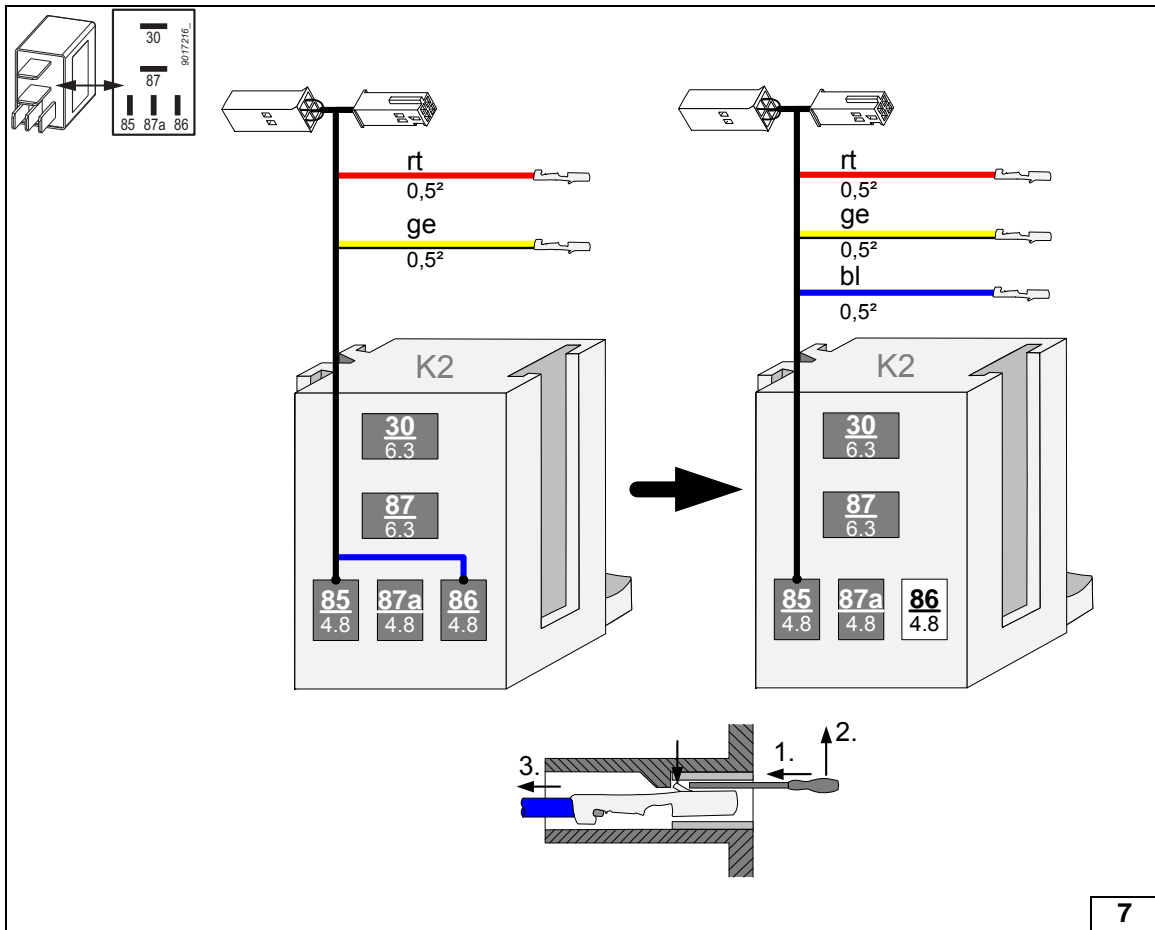
- Duty cycle: 70% (DC)
- Frequency: 400Hz
- Voltage: not relevant
- Function: Low side



View of PWM GW

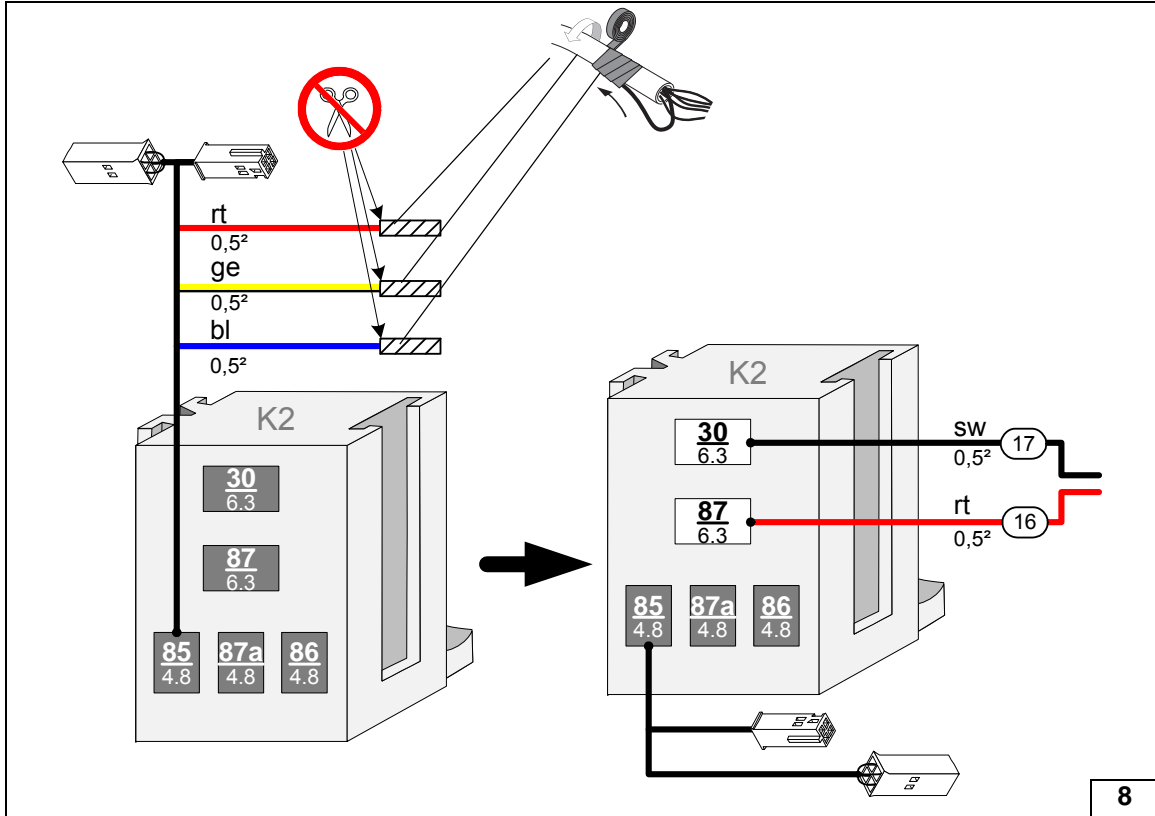
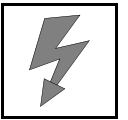


Connecting wires to PWM GW socket



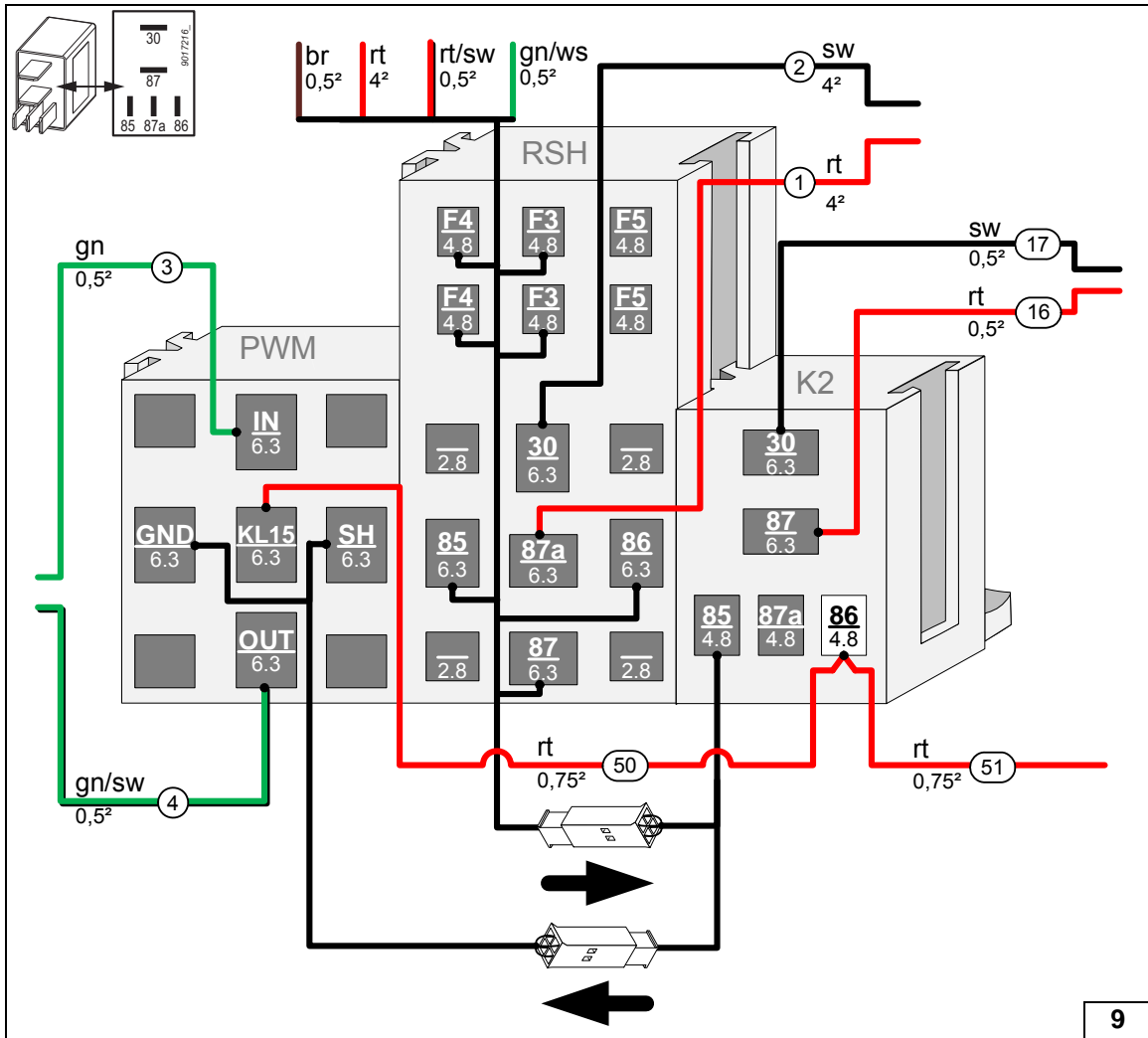
Disconnecting blue (bl) wire from relay K2 socket





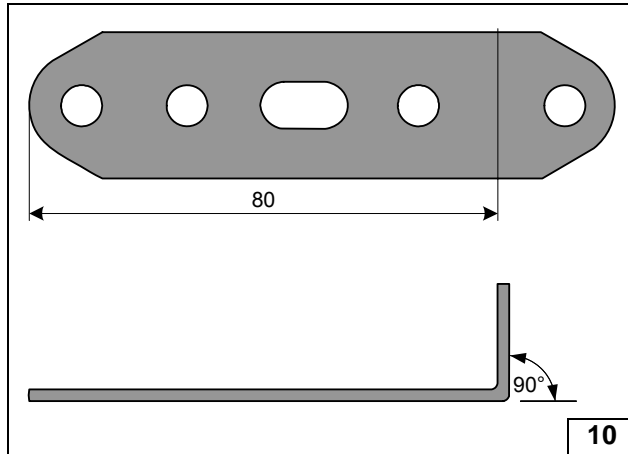
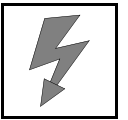
Insulating/
connecting
wires of re-
lay K2 sock-
et

8



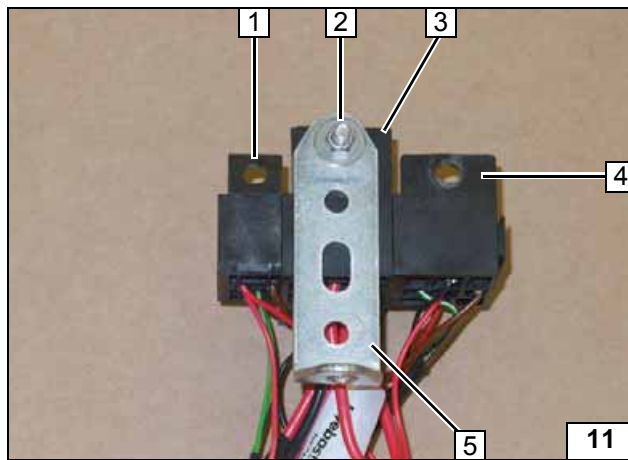
Interlocking
PWM GW, re-
lay K2 and
passenger
compartment
relay and fuse
holder sock-
ets, connect-
ing wires

9



10

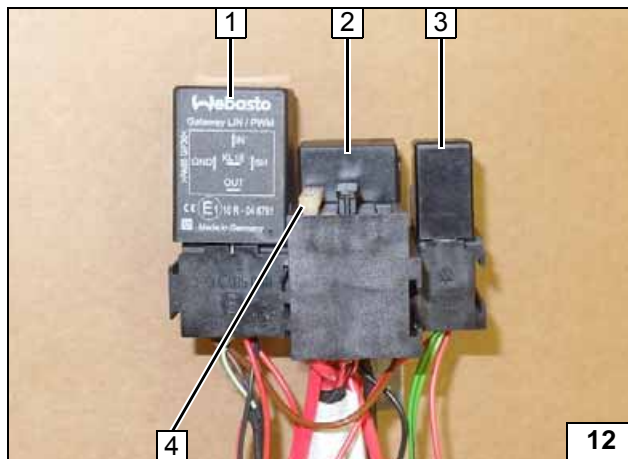
Preparing perforated bracket



11

- 1 Relay K2 socket
- 2 M5x16 bolt, large diameter washer [2x], nut
- 3 Passenger compartment relay and fuse holder socket
- 4 PWM GW socket
- 5 Perforated bracket

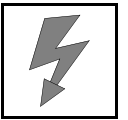
Installing perforated bracket



12

- 1 PWM GW
- 2 Relay K1
- 3 Relay K2
- 4 25A fuse F4

Installing relay K1, PWM GW and relay K2

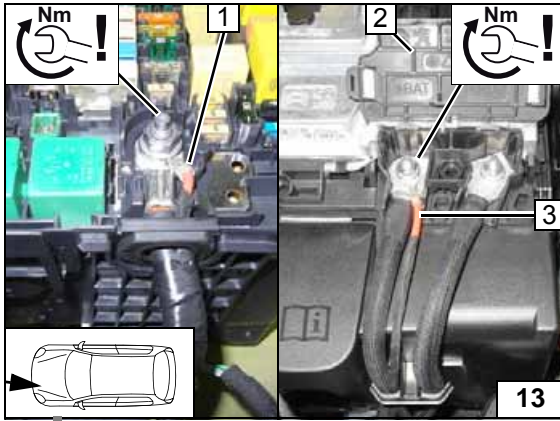


Electrical System



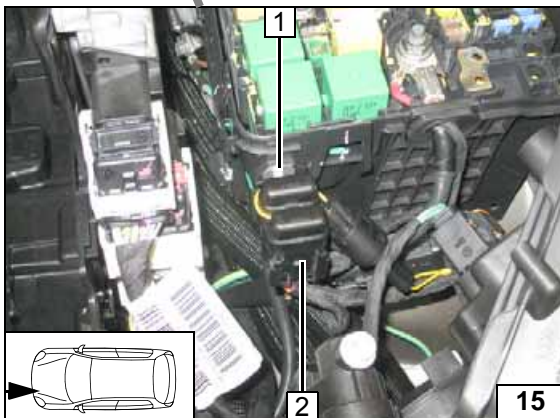
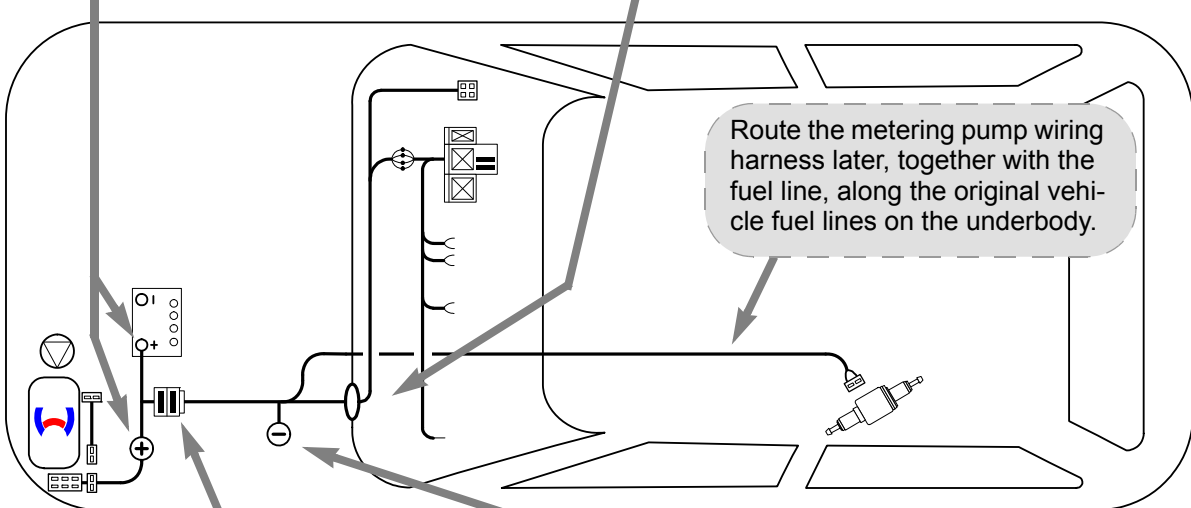
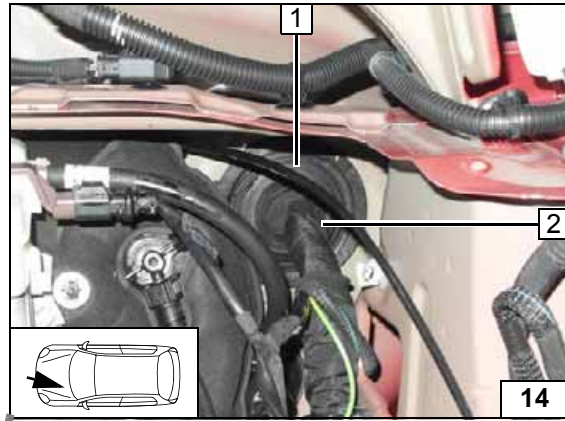
Positive wire

- 1 Positive wire on original vehicle positive distributor, without control unit 2 on battery
- 3 Positive wire on positive battery terminal, with control unit 2 on battery



Wiring harness pass through

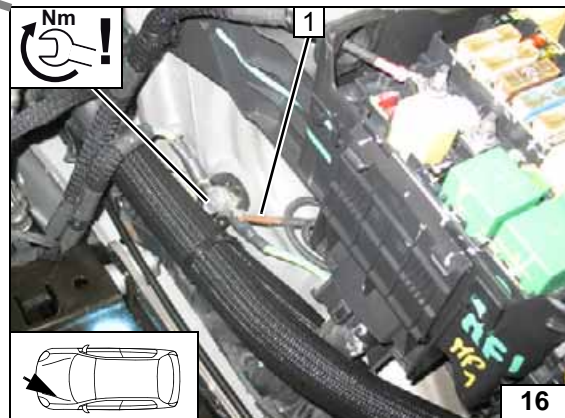
- 1 Protective rubber plug
- 2 Wiring harnesses of heater, heater control



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



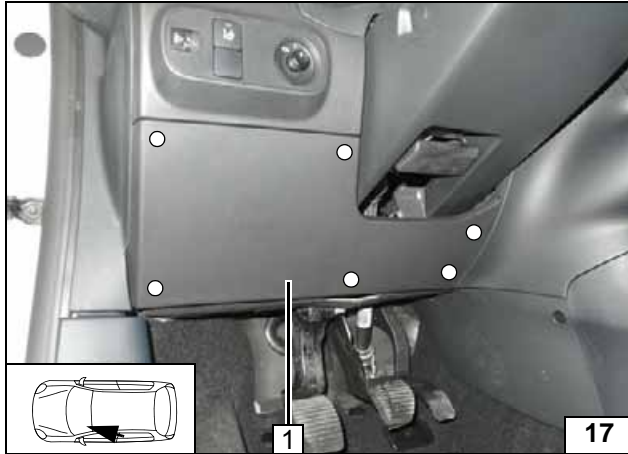
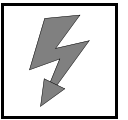
Earth wire

- 1 Earth wire on original vehicle earth support point



Wiring harness routing diagram

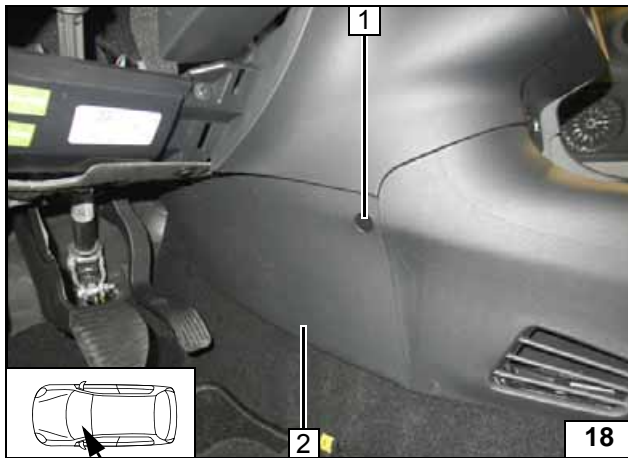




Dismantling Instructions for the Passenger Compartment

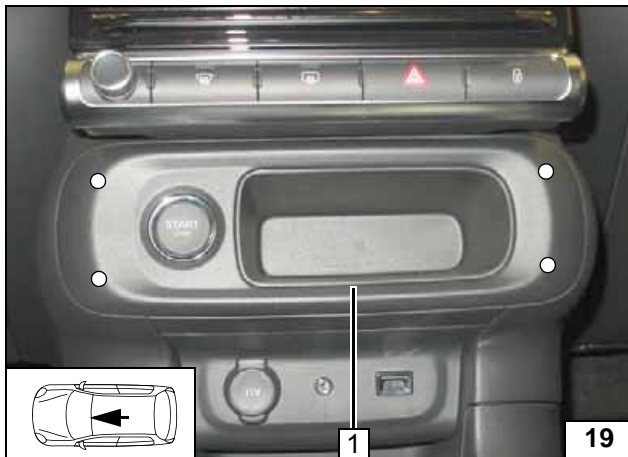
- 1 Lower instrument panel trim on driver's side
- Fastening clip [6x]

Removing lower instrument panel trim



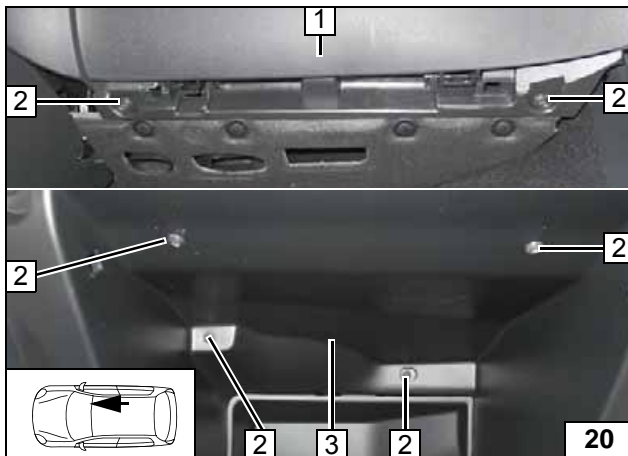
- 1 Original vehicle bolt
- 2 Detach centre console side trim from the clips on the left

Detaching centre console side trim from the clips on the left



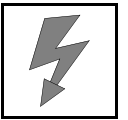
- 1 Storage compartment with starter button
- Fastening clip [4x]

Dismantling storage compartment



- 1 View of glove box from the footwell
- 2 Original vehicle bolt [6x]
- 3 Inside view of glove box

Dismantling glove box



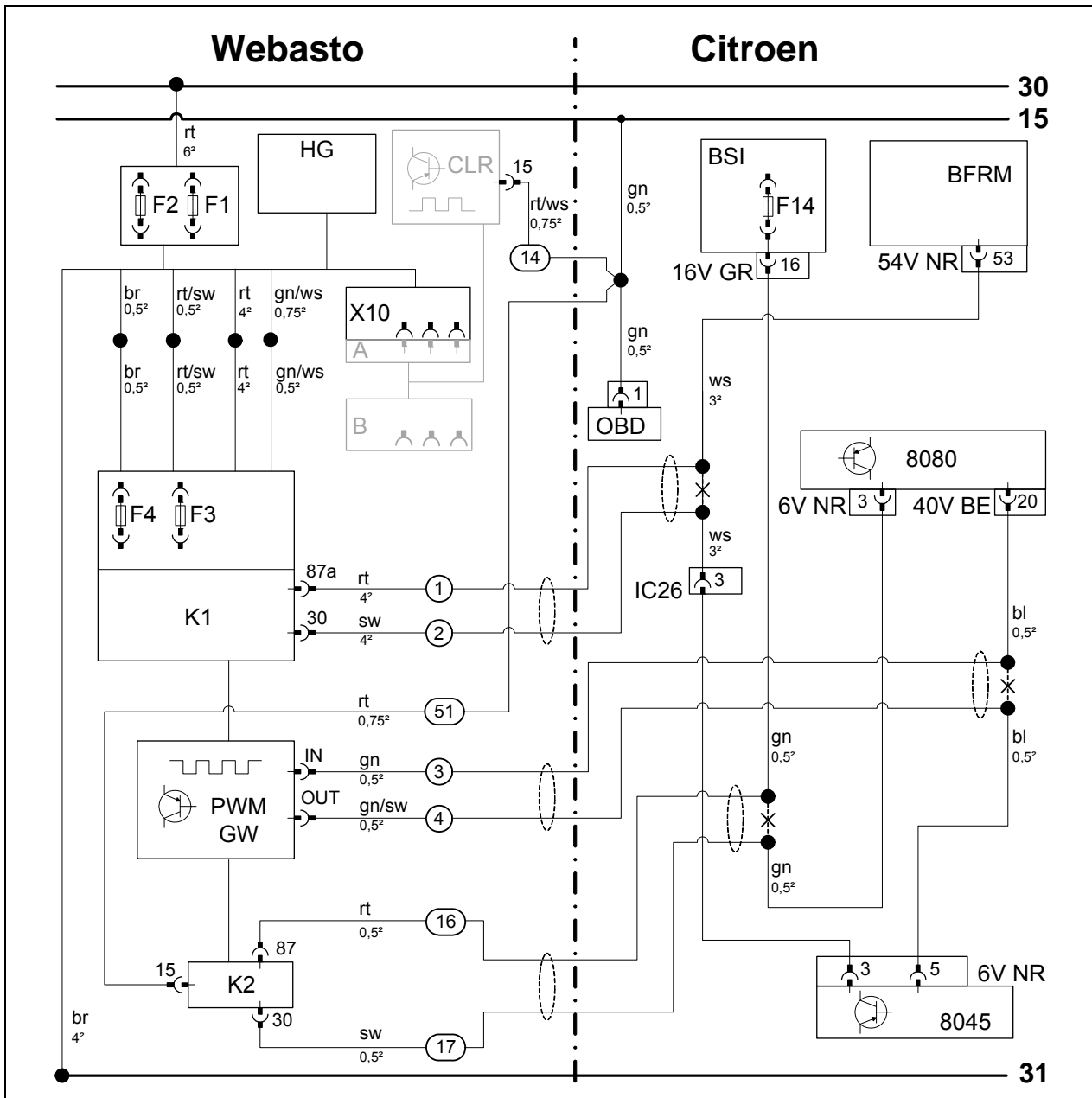
Cold Start System for 1.2P 81kW Installation

! Integrate the cold start system as per the separate installation documentation:

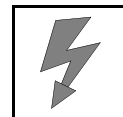
Cold start system installation documentation for PSA petrol vehicles



Fan Controller

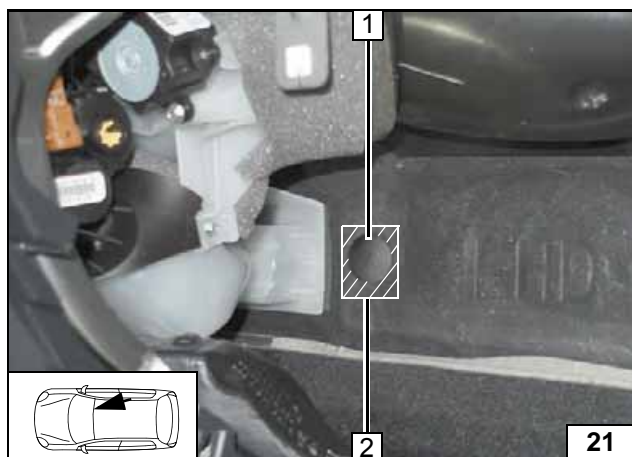


System wiring diagram



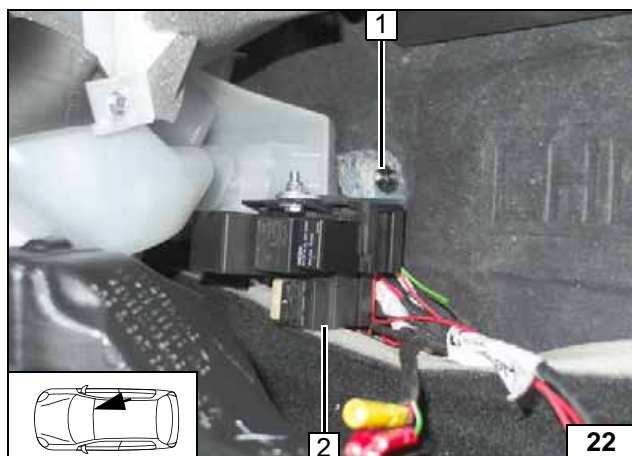
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	BFRM	Engine compartment fuse and relay carrier	rt	red
F1	20A fuse			sw	black
F2	30A fuse	54V NR	54-pin connector BFRM	bl	blue
CLR	CLR module	BSI	Central electrical box	gn	green
X10	4-pin socket of heater control	F14	Fuse	br	brown
		16V GR	16-pin connector BSI	ws	white
A	Connector of CLR module wiring harness	OBD	Socket outlet		
		8080	A/C control unit		
B	Socket of CLR module wiring harness	40V BE	40-pin connector 8025		
		6V NR	6-pin connector 8025		
F3	1A fuse	IC26	2-pin connector		
F4	25A fuse	8045	Fan controller		
K1	Fan relay	6V NR	6-pin connector 8045		
PWM-GW	Pulse width modulator				
K2	Additional relay				
Settings of PWM GW:					
Duty cycle: 70%					
Frequency: 400Hz					
Voltage: not relevant				X	Cutting point
Function: Low side				Wiring colours may vary.	

Legend



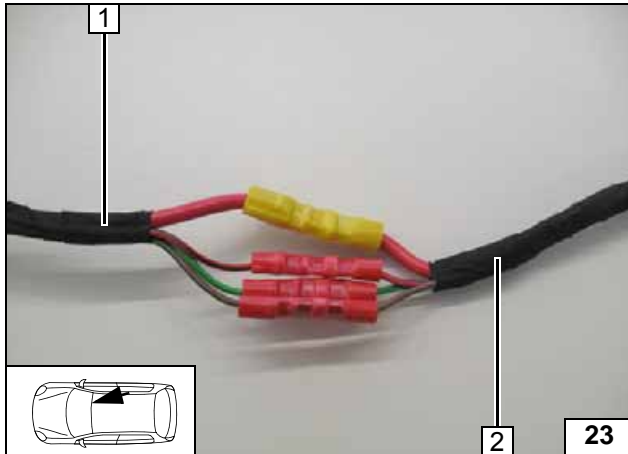
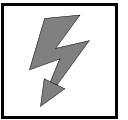
- 1 Discard original vehicle plastic nut.
- 2 Cut out insulation mat as shown

Preparing passenger compartment relay and fuse holder installation location



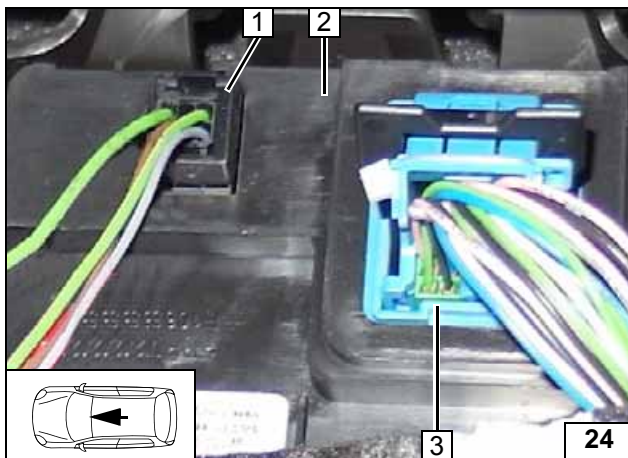
- 1 Plastic nut
- 2 Premounted passenger compartment relay and fuse holder

Installing passenger compartment relay and fuse holder



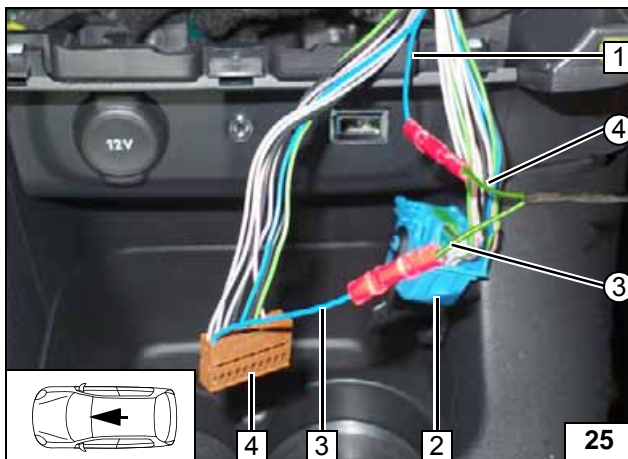
- 1 Passenger compartment relay and fuse holder wiring harness
- 2 Heater wiring harness

Connecting same colour wires of wiring harnesses



- 1 6-pin connector 6V NR
- 2 A/C control unit
- 3 40-pin connector 40V BE

Assigning A/C control unit connector

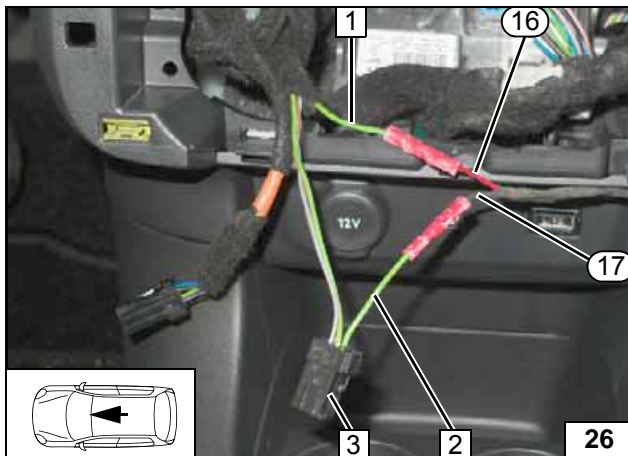


Disconnect connector 40V BE 2 from A/C control unit and disassemble!



- 1 Blue (bl) wire of fan controller connector, pin 5
- 3 Blue (bl) wire, pin 20
- 4 Brown contact strip of connector 40V BE, pin 1-20
- ③ Green (gn) wire from PWM GW/IN of PWM control wiring harness
- ④ Green/black (gn/sw) wire from PWM GW/OUT of PWM control wiring harness

Connecting fan controller

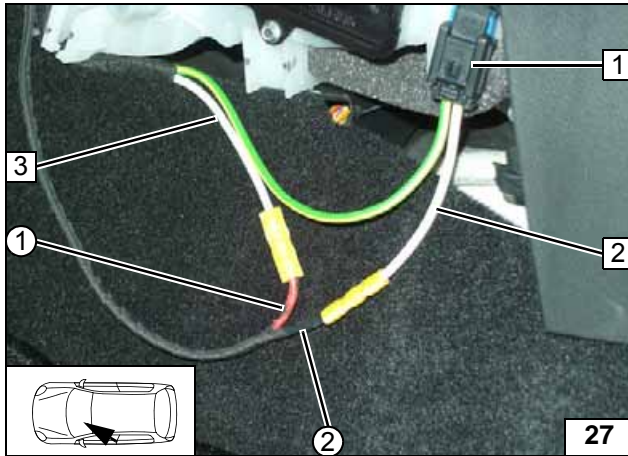
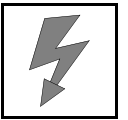


Connection to 6-pin connector 6V NR 3 from A/C control unit.



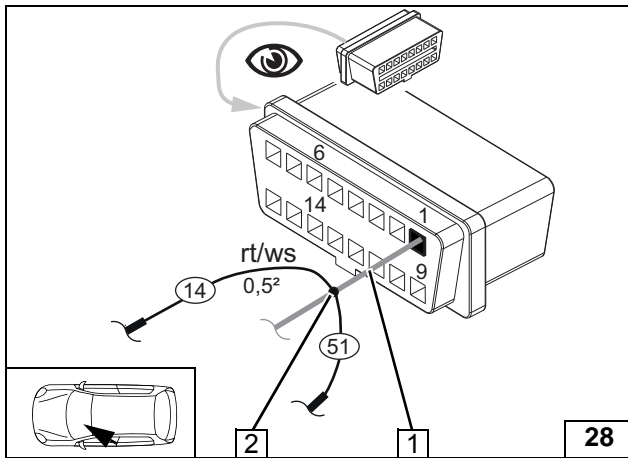
- 1 Green (gn) wire of BSI
- 2 Green (gn) wire of connector 6V NR, pin 3
- ⑯ Red (rt) wire from K2/87 of isolating relay wiring harness
- ⑰ Black (sw) wire from K2/30 of isolating relay wiring harness

Connecting A/C control unit



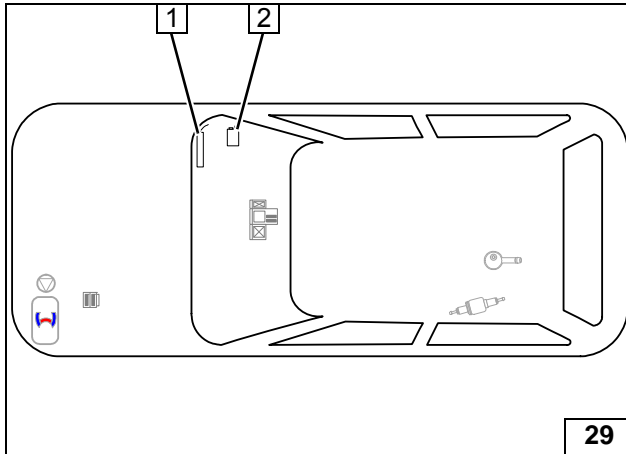
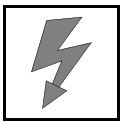
- 1 2-pin connector IC26
- 2 White (ws) wire of connector IC26, pin 3
- 3 White (ws) wire of fuse and relay carrier BFRM connector 54V NR, pin 53
- ① Red (rt) wire of K1/87a, fan wiring harness
- ② Black (sw) wire of K1/30, fan wiring harness

**Connect-
ing fan mo-
tor**



- 1 Green (gn) wire of OBD socket outlet, pin 1
- 2 Butt connector
- ⑭ Red/white (rt/ws) wire of CLR module/15 from cold start wiring harness
- ⑤① Red (rt) wire of K2/86

**Connect-
ing terminal
15**

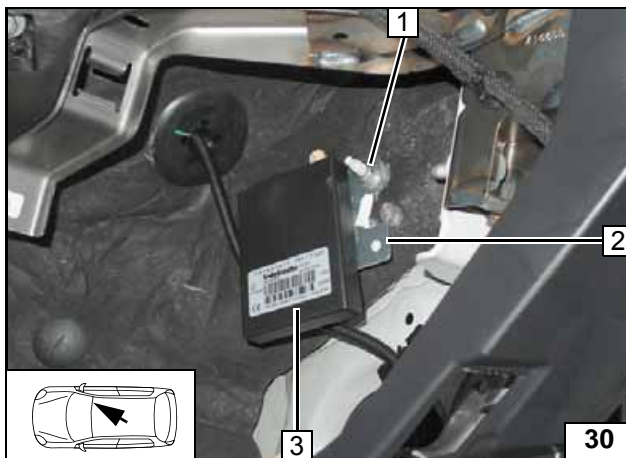


Heater Control Installation

- 1 Telestart / ThermoCall aerial
- 2 Telestart / ThermoCall receiver



Installation overview



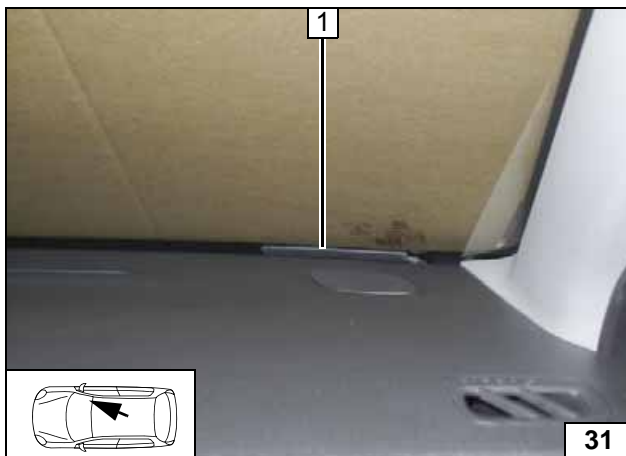
Remote Option (Telestart)

Drill out Telestart bracket 2 at position 1 to 7mm dia.
Place a 5mm spacer at position 1 between Telestart bracket and vehicle.

- 1 Flanged nut
- 3 Receiver

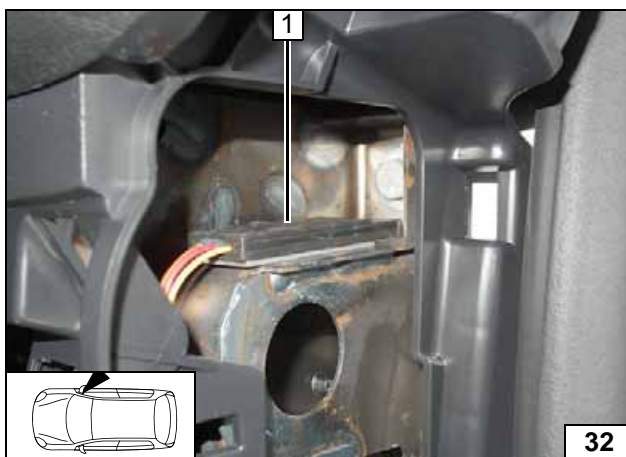


Installing receiver



- 1 Aerial

Installing aerial

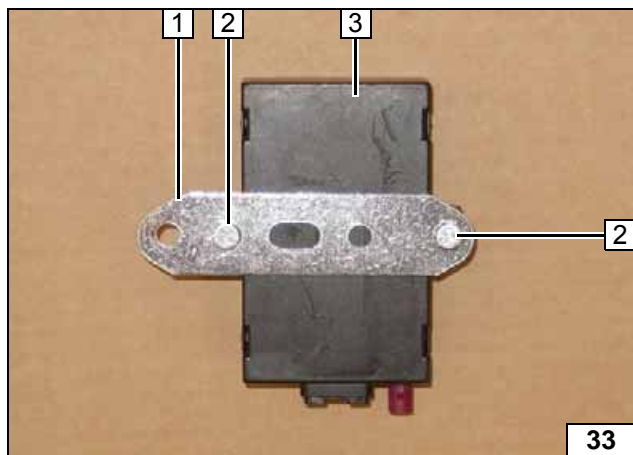
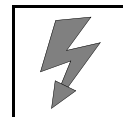


Temperature sensor T100 HTM

Fasten temperature sensor 1 with double-sided adhesive tape.



Installing temperature sensor

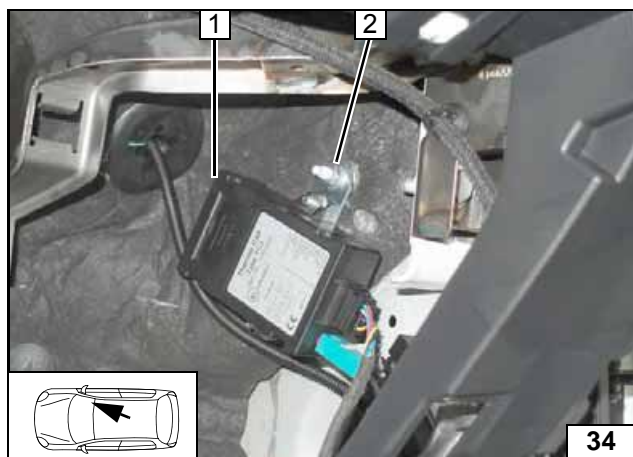


ThermoCall Option

- 1 Perforated bracket
- 2 M5x16 bolt, flanged nut
- 3 Receiver



Premounting receiver

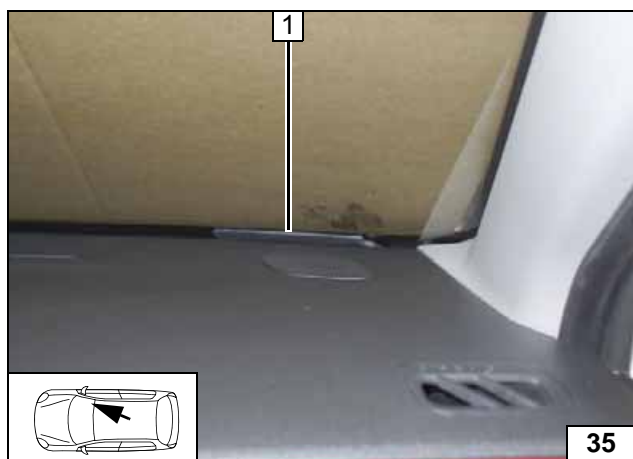


Place a 5mm spacer at position 2 between perforated bracket and vehicle.

- 1 Premounted receiver
- 2 Flanged nut

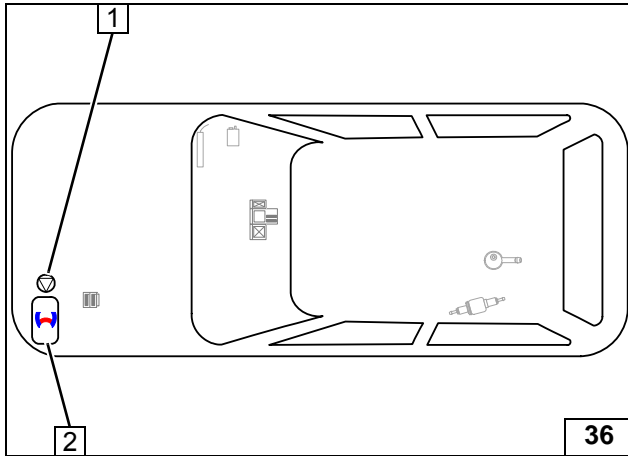
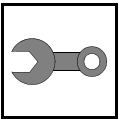


Installing receiver



- 1 Aerial (optional)

Installing aerial

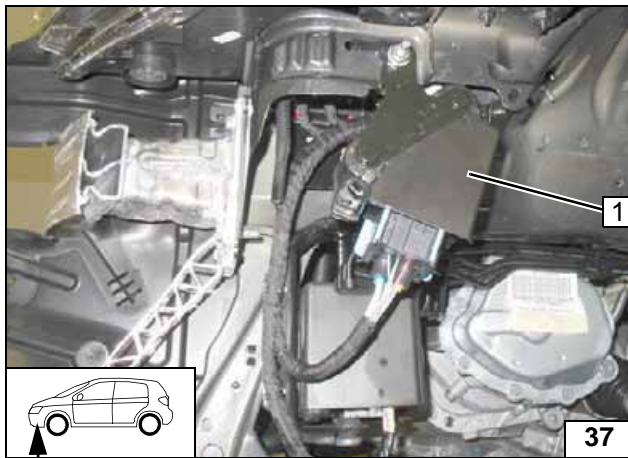


Preparing Installation Location

- 1 Circulating pump
- 2 Heater



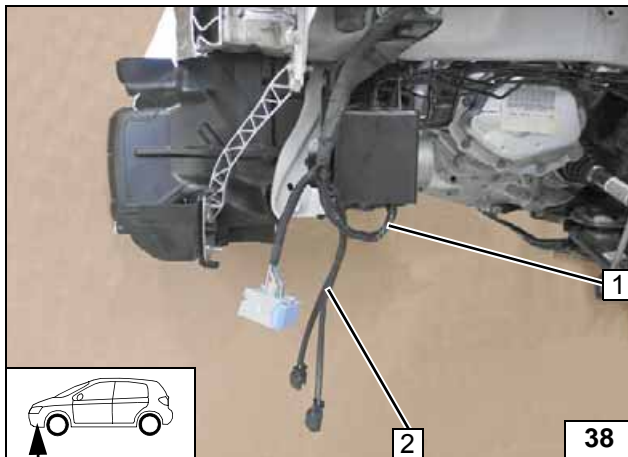
Installation overview



Remove control unit 1 with bracket, if present!



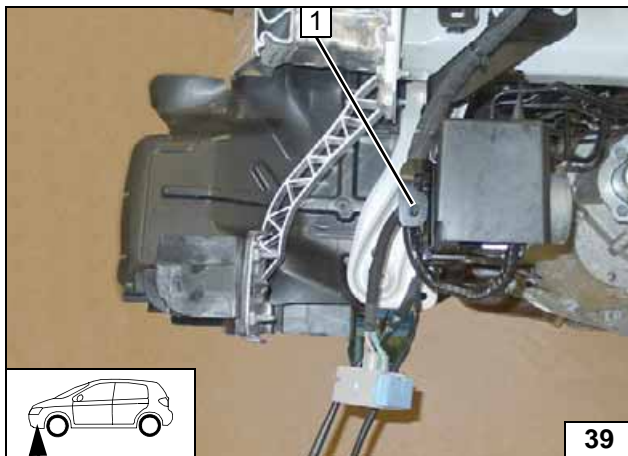
Removing original vehicle relay



Separate original vehicle wires 2 from original vehicle wiring harness 1 and insulate.

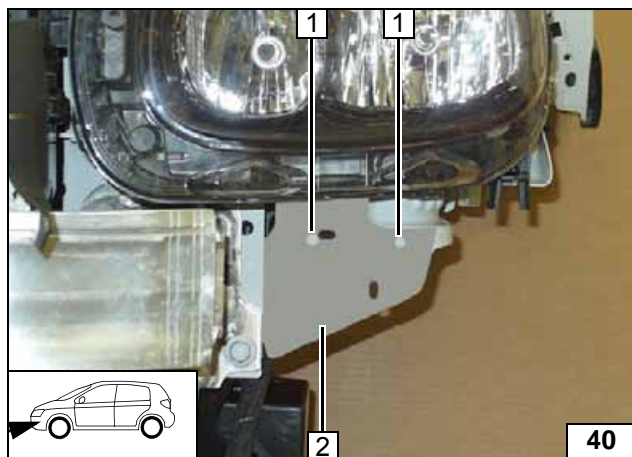
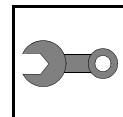


Installing original vehicle wiring harness



1 Install original vehicle clip as shown

Installing original vehicle wiring harness

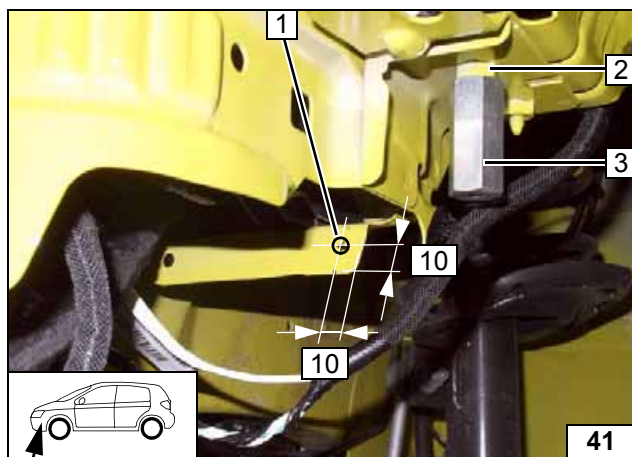


Cut out template 2, position as shown.

- 1 Copy hole pattern, 7mm dia. hole [2x each]



Copying hole pattern

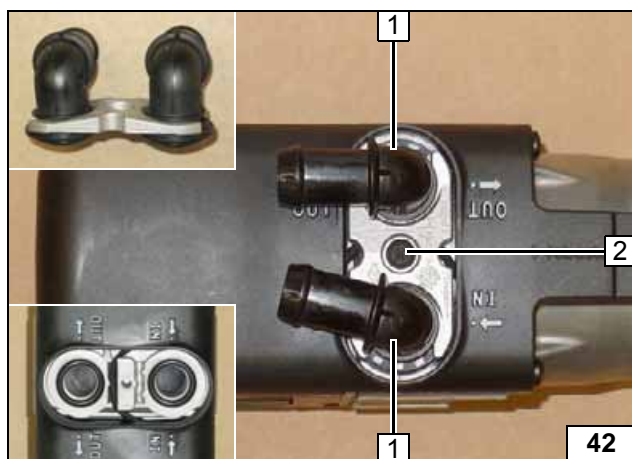


Remove bolt at position 2, will be reused!

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



Copying hole pattern

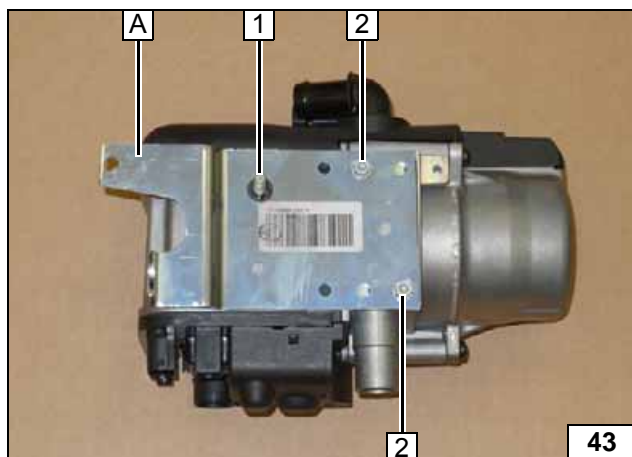


Preparing Heater

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



Installing water connection piece

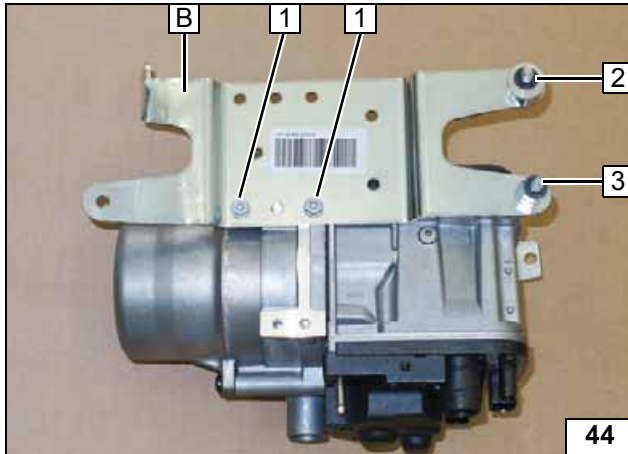
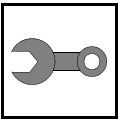


Prepare bracket A in accordance with the template!

- 1 M6x25 bolt, lock washer
- 2 5x13 self-tapping bolts [2x]



Installing bracket A

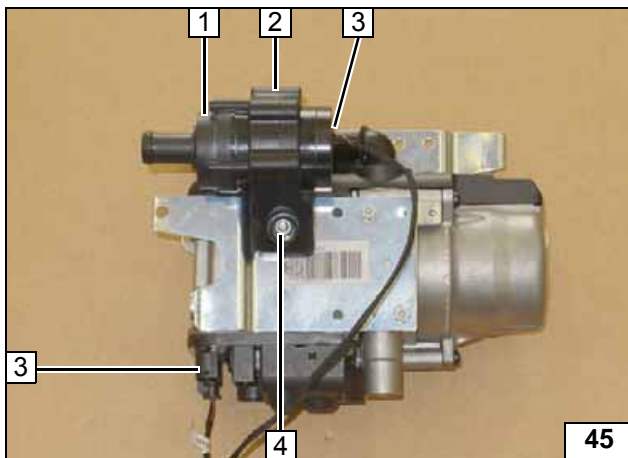


Prepare bracket **B** in accordance with the template!



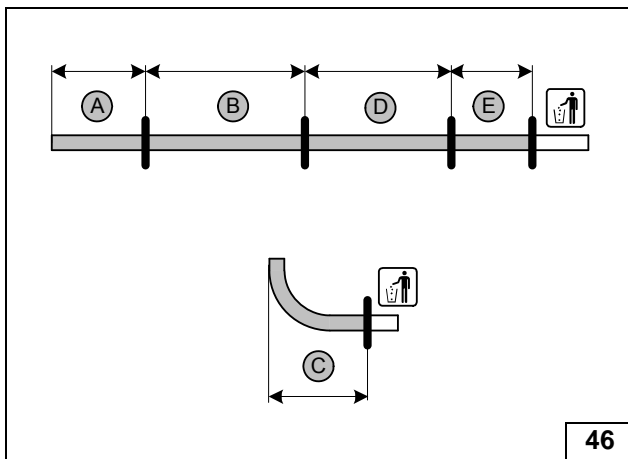
- 1 5x13 self-tapping bolts [2x]
- 2 M6x25 bolt, 10mm spacer, lock washer
- 3 M6x25 bolt, M8 nut [2x], lock washer

Installing bracket B



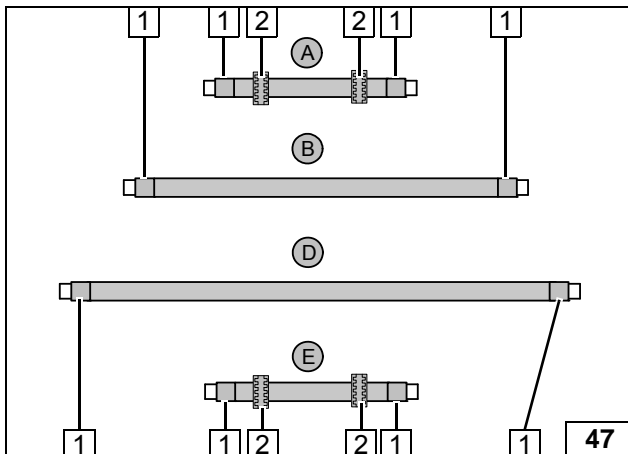
- 1 Circulating pump
- 2 Circulating pump mount
- 3 Connector of circulating pump wiring harness [2x]
- 4 Flanged nut

Installing circulating pump



- A = 240
- B = 560
- C = 100
- D = 750
- E = 230

Cutting hoses to length

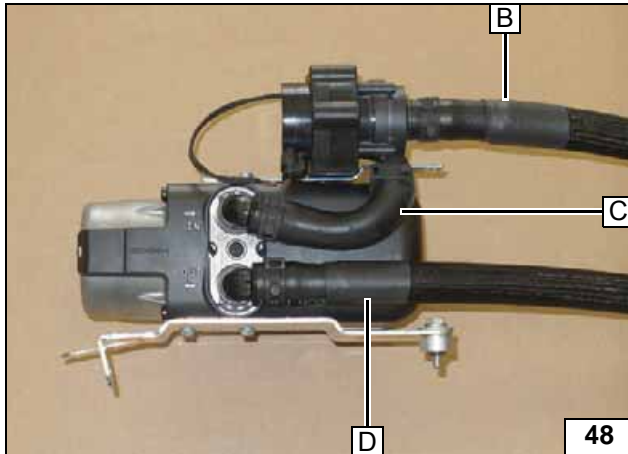
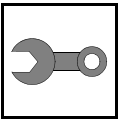


Push braided protection hoses onto hoses **A, B, D** and **E** and cut to length. Cut heat shrink plastic tubing to size.



- 1 50 mm long heat shrink plastic tubing [8x]
- 2 Black (sw) rubber isolator [4x]

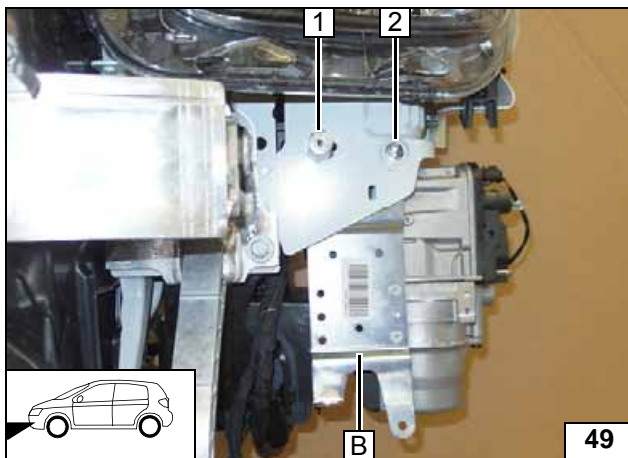
Preparing hoses



All spring clips = 25mm dia.!



Premounting hoses



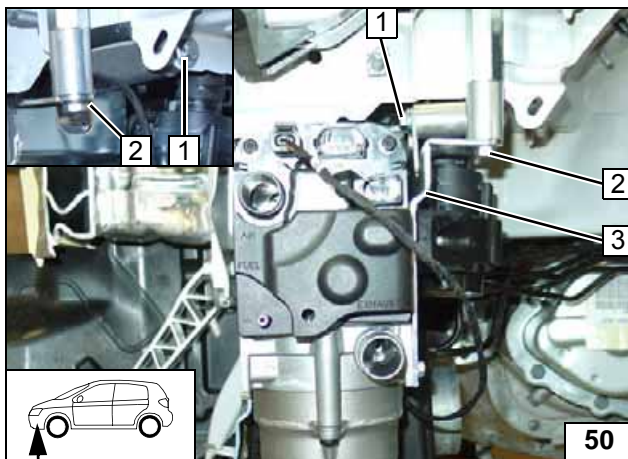
Installing Heater

Route premounted water hose in the engine compartment. Suspend heater with bracket **B** at position **1** and **2** and mount loosely.



Installing heater

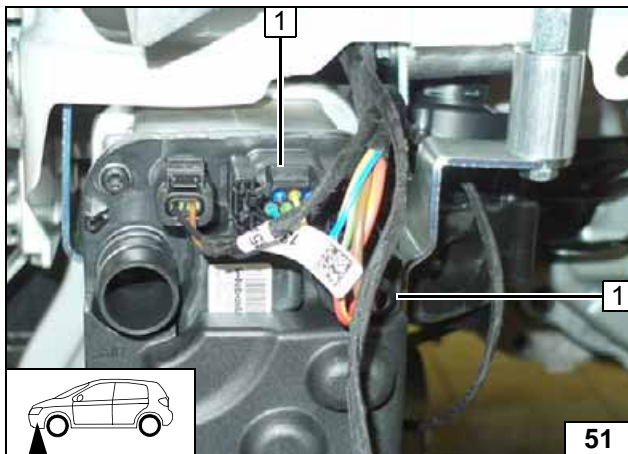
- 1 Loosely mount M6x30 spacer nut
- 2 Install large diameter washer, flanged nut loosely



- 1 Install M6x60 bolt, large diameter washer, 40mm shim, 10mm shim, flanged nut loosely
- 2 Install M6x40 bolt, spring lockwasher, 30mm shim on spacer nut loosely
- 3 Bracket **A**

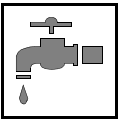
Installing heater

Align heater. Tighten all the screw connections.



- 1 Heater wiring harness connector [2x]

Installing heater wiring harness



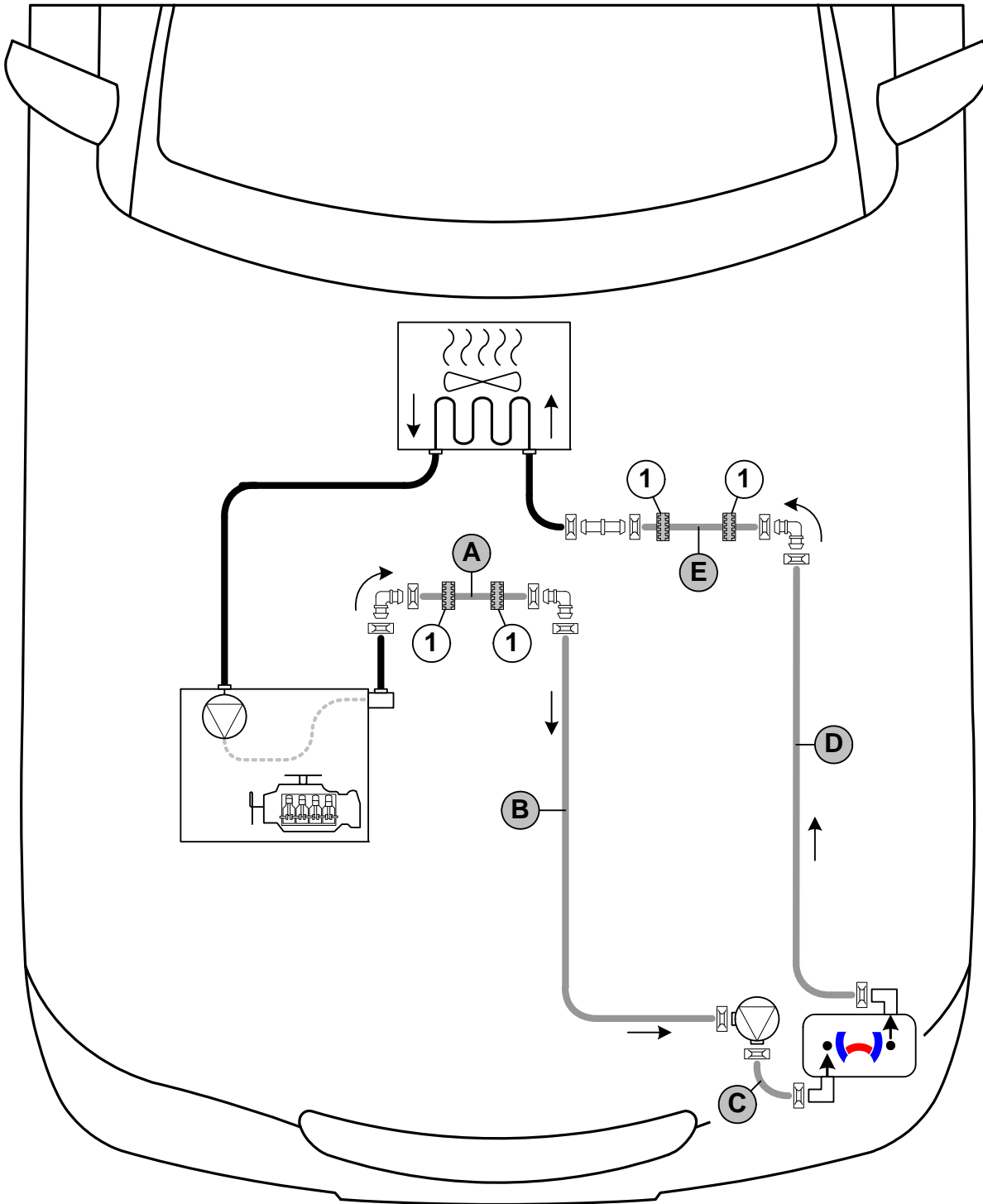
Coolant Circuit







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.



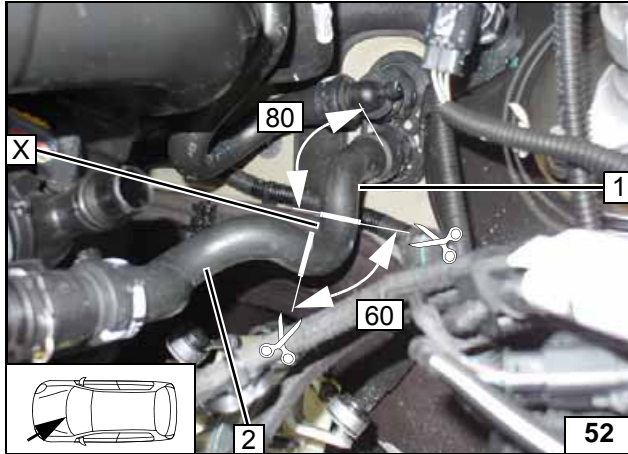
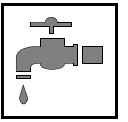
The connection should be modelled on an 'inline' circuit and based on the following diagram:



Hose routing diagram

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





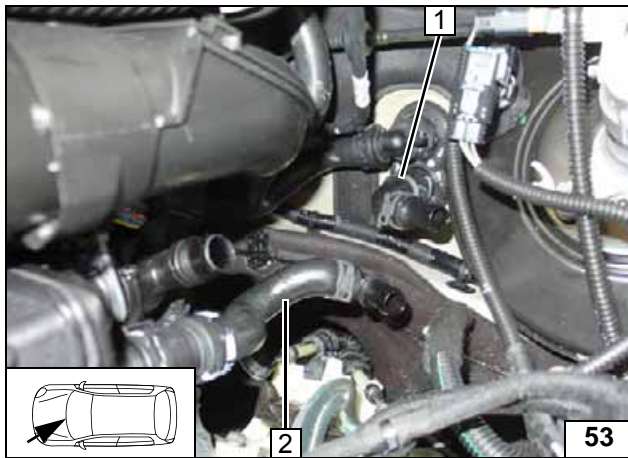
Cut hose of engine outlet/heat exchanger inlet at the markings.



- 1 Heat exchanger inlet hose section
- 2 Engine outlet hose section

X =

Cutting point



- 1 Heat exchanger inlet hose section, turned
- 2 Engine outlet hose section

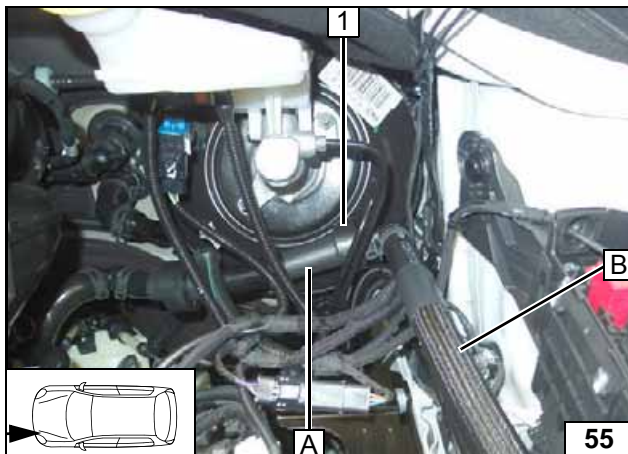
Installing connecting pipes



Route hose **B** to the firewall.

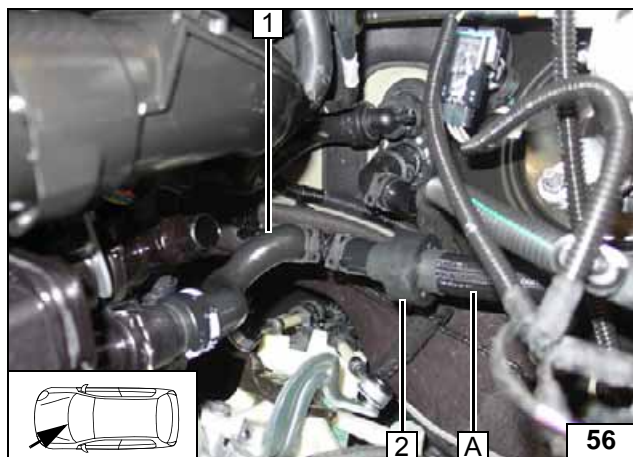
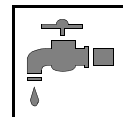


Routing of hose B



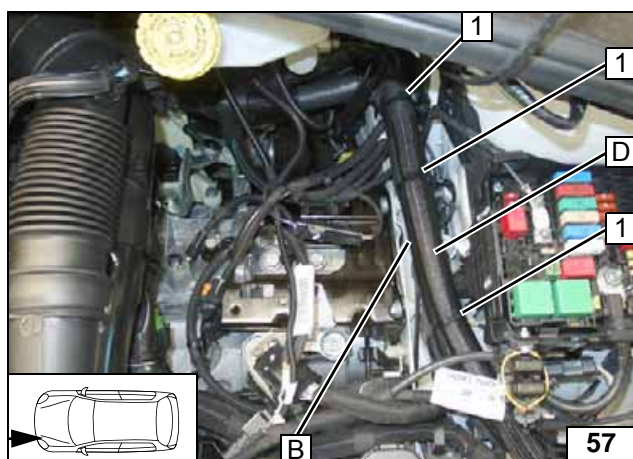
- 1 Position black (sw) rubber isolator

Connecting hose A



- 1 Engine outlet hose section
- 2 Position black (sw) rubber isolator

Connect-
ing engine
outlet

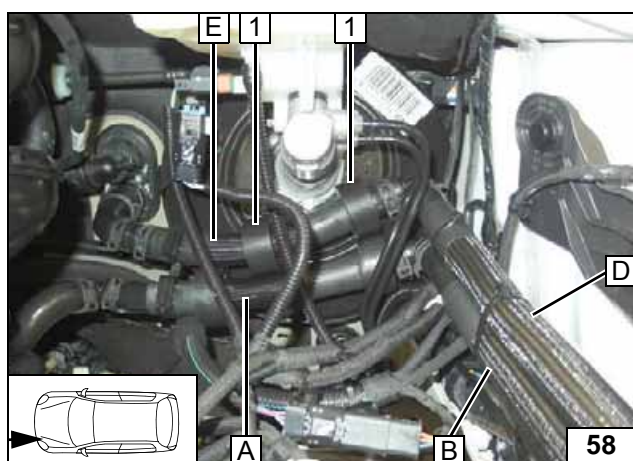


Route hose D to the firewall.

- 1 Cable tie [3x]

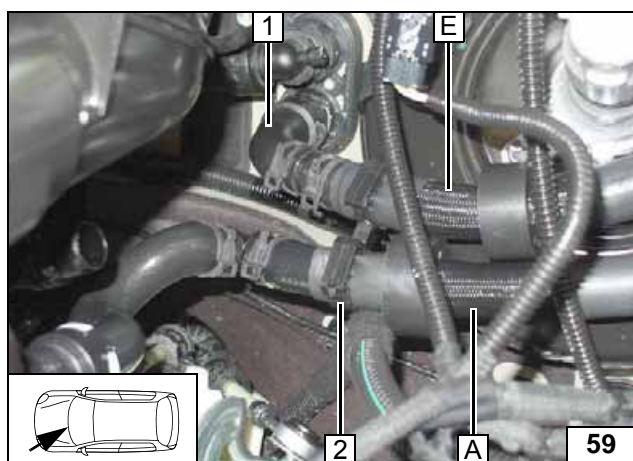


Routing of
hose D



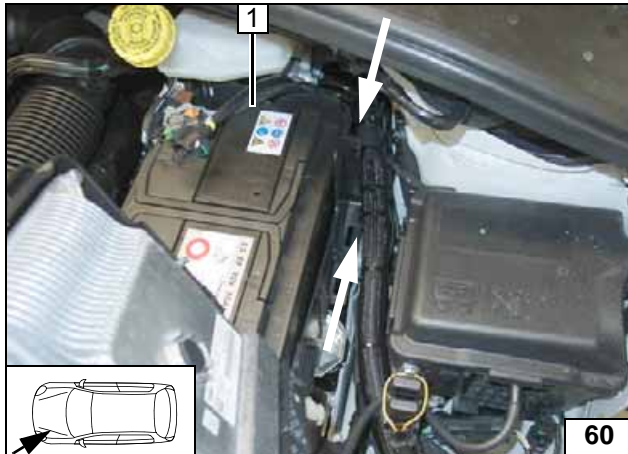
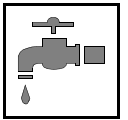
- 1 Position black (sw) rubber isolator [2x]

Connect-
ing hose E



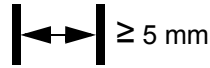
- 1 Heat exchanger inlet hose section,
turned
- 2 Hose bracket

Connect-
ing heat ex-
changer
inlet

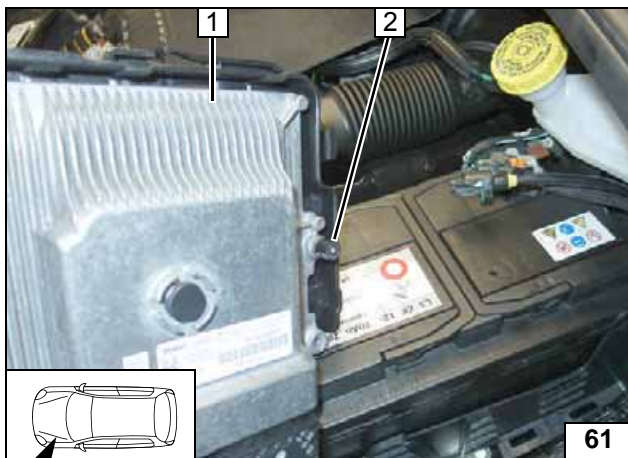


Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

1 Battery



Installing battery

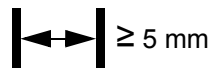
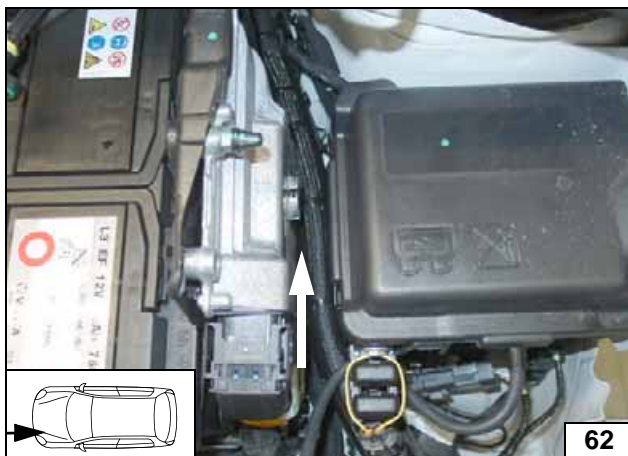


Fit 15mm long hose section 2 onto original vehicle bolt.

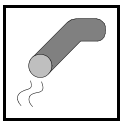
1 Engine control unit



Installing hose section

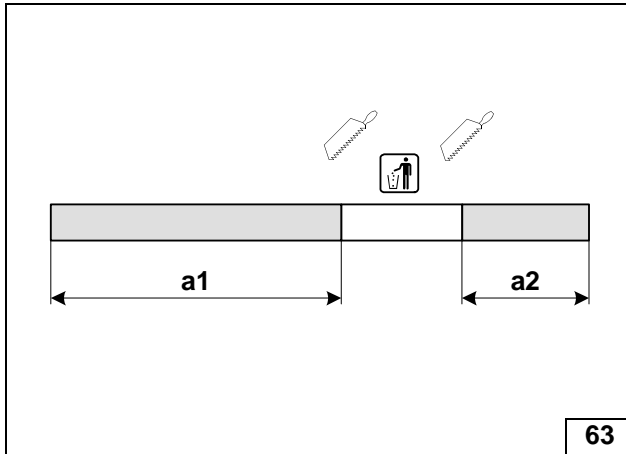


Checking distance



Exhaust Gas

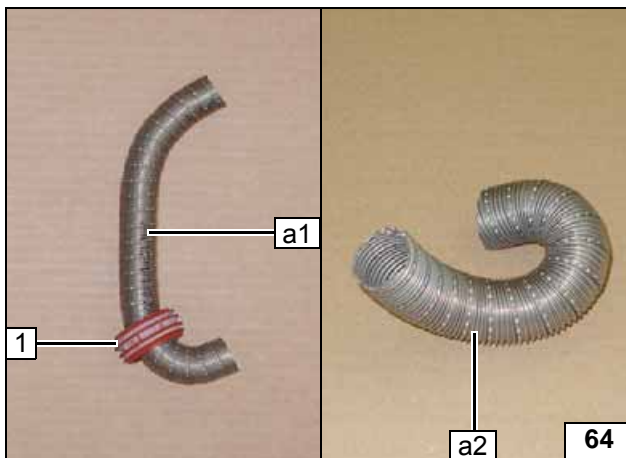
a1 = 260
a2 = 190



Preparing exhaust pipe

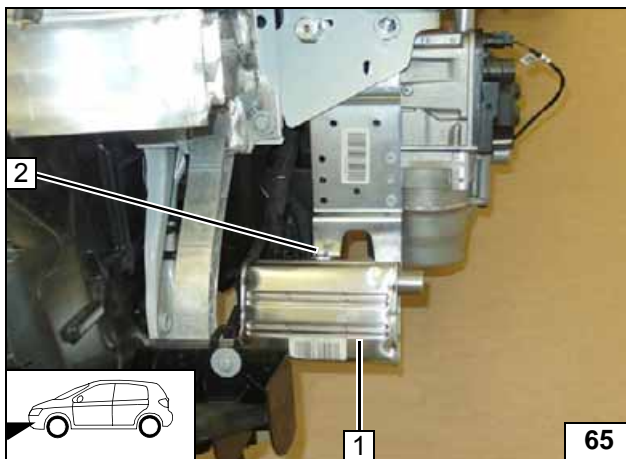
Bend exhaust pipes **a1** and **a2** as shown.

- 1 Spacer bracket



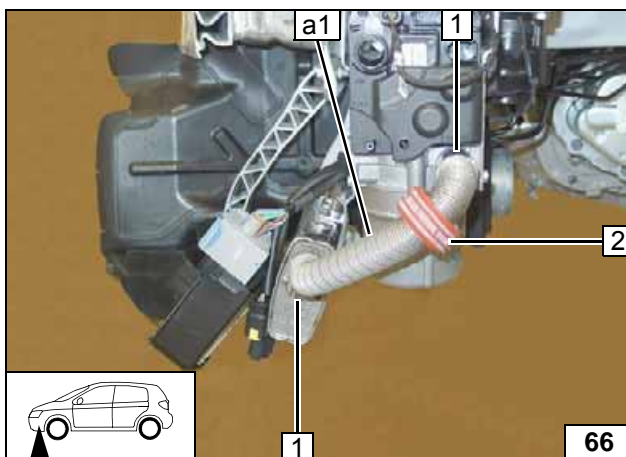
Preparing exhaust pipe a1 and a2

- 1 Silencer
- 2 M6x16 bolt, spring lockwasher

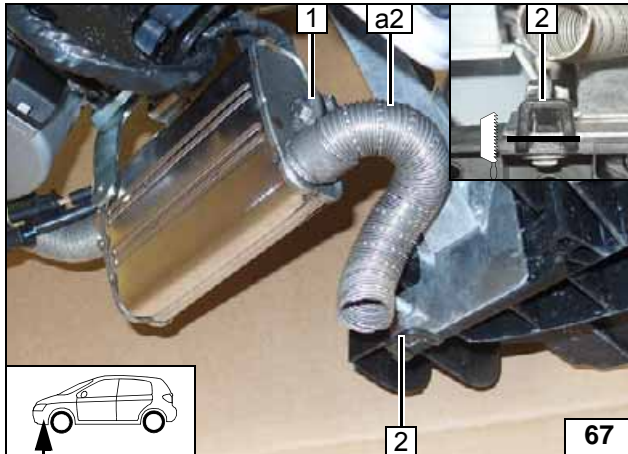
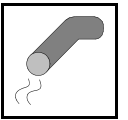


Installing silencer

- 1 Hose clamp [2x]
- 2 Spacer bracket

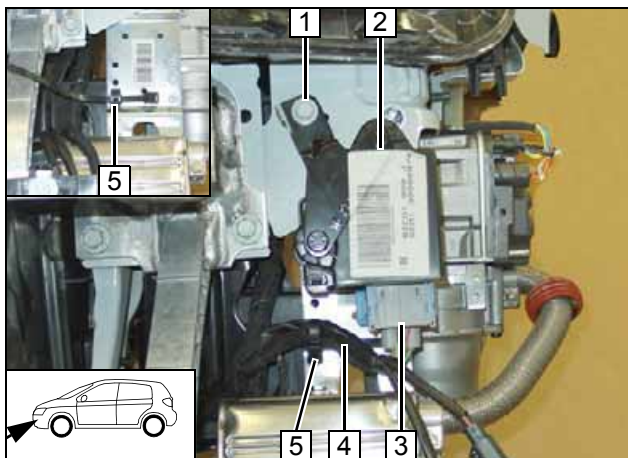


Installing exhaust pipe a1



- 1 Hose clamp
- 2 Cut off original vehicle tab and discard

Installing exhaust pipe a2

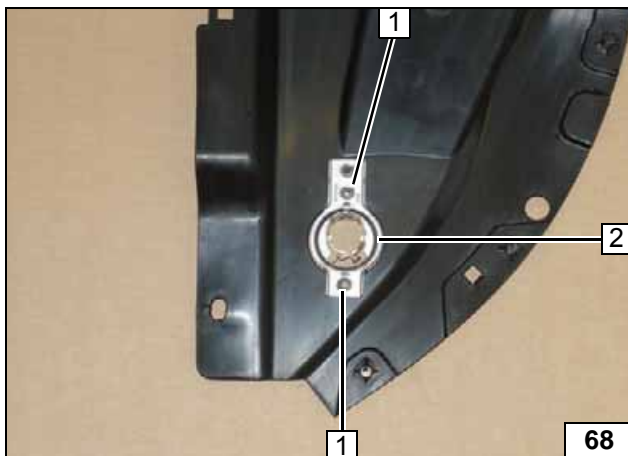


Secure original vehicle wiring harness 4 with clip-type cable tie 5.

- 1 Original vehicle bolt (see section Preparing installation location)
- 2 Control unit with bracket, if present
- 3 Connector mounted



Installing control unit



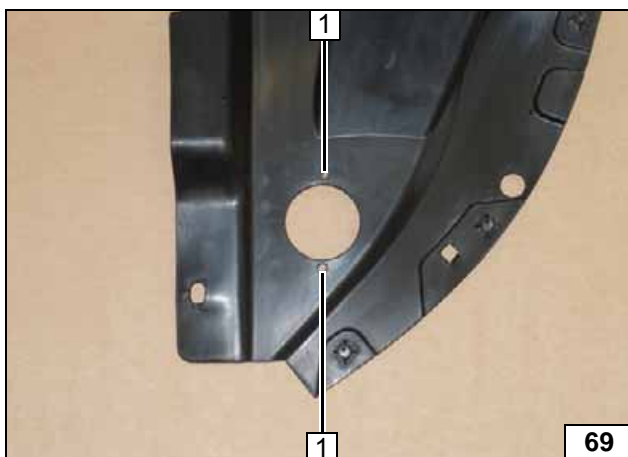
Exhaust End Fastener Installation

Work step E3.

- 1 Hole pattern [2x]
- 2 Exhaust end fastener in existing hole



Copying hole pattern

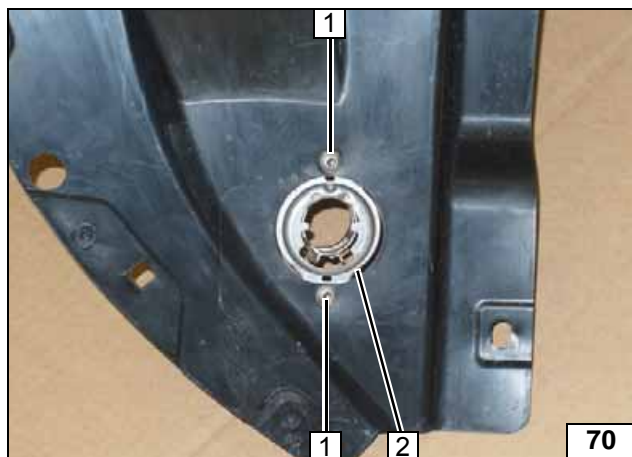
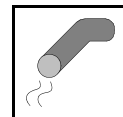


Work step E4.

- 1 Hole [2x]



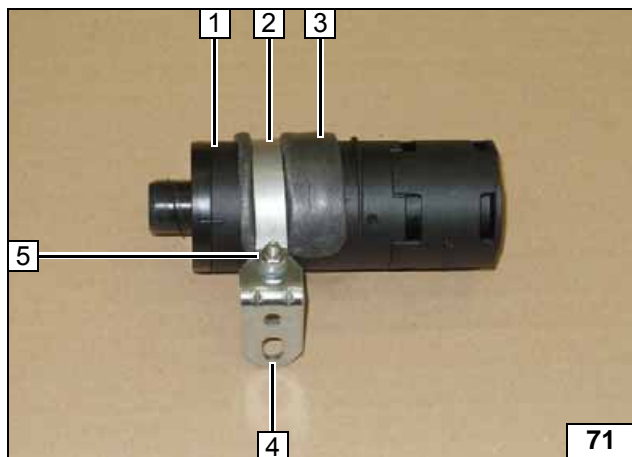
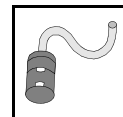
Holes in underderride protection



Work step E5.

- 1 5x13 self-tapping screw [2x]
- 2 Exhaust end fastener

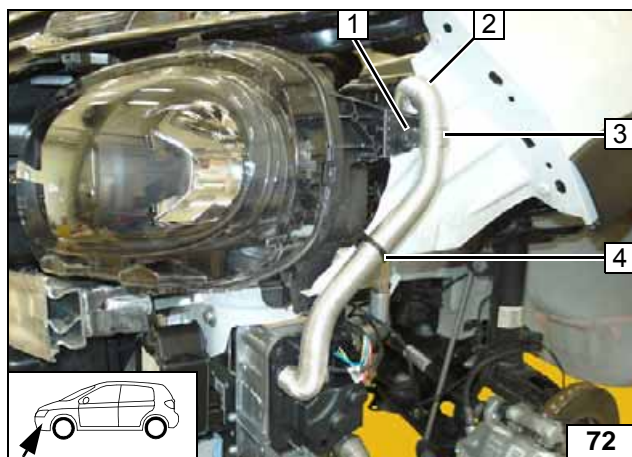
**Installing ex-
haust end
fastener**



Combustion Air

- 1 Silencer
- 2 51mm dia. clamp
- 3 Self-adhesive foam
- 4 Angle bracket
- 5 M5x16 bolt, flanged nut

Premount-
silencer



- 1 Original vehicle bolt
- 2 Combustion air pipe
- 3 24mm dia. p-clamp
- 4 Edge clip cable tie



Installing
combustion
air pipe

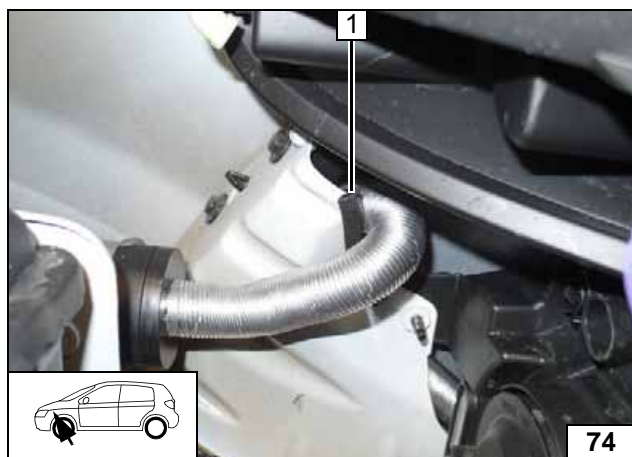


Connect silencer with combustion air pipe, then secure at position 1 as shown.

- 1 Original vehicle stud bolt, flanged nut

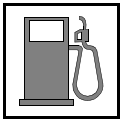


Installing
silencer



- 1 50 mm edge protection

Installing
edge pro-
tection



Fuel



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

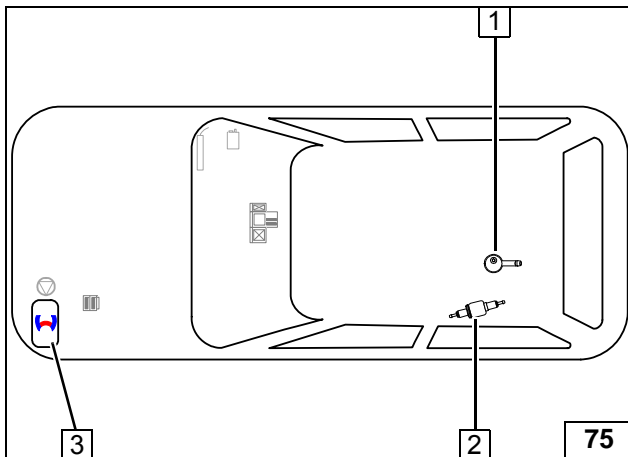
Catch any fuel running off in an appropriate container.

Route fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.



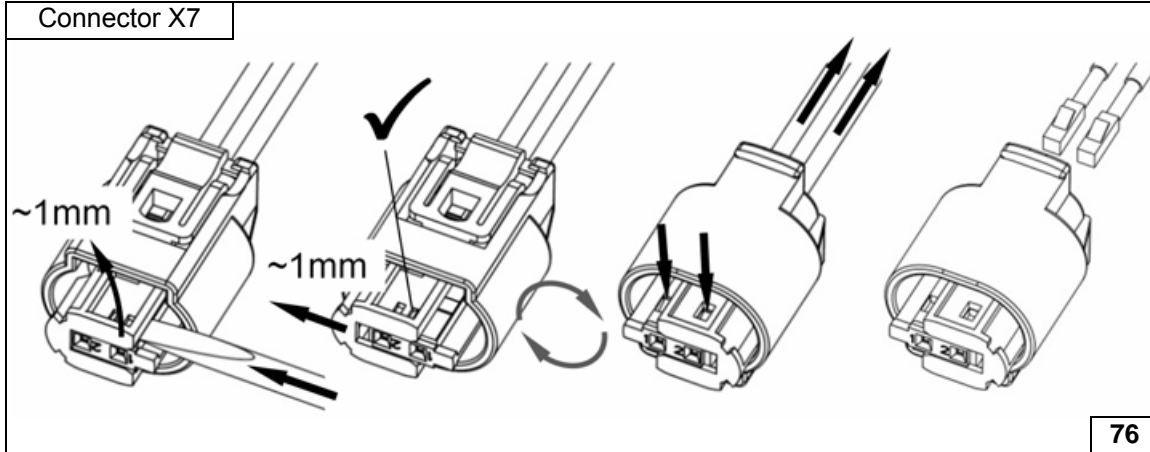
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

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

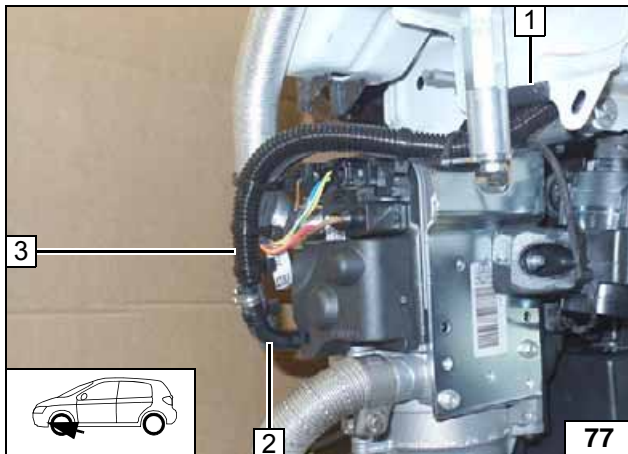


- 1 FuelFix
- 2 Metering pump
- 3 Heater

75



76



Draw fuel line and metering pump wiring harness into corrugated tube 3 and route in the engine compartment. Secure corrugated tube and heater wiring harness using cable ties.

- 1 Install 50mm edge protection
- 2 90° moulded hose, 10mm dia. clamp [2x]

77

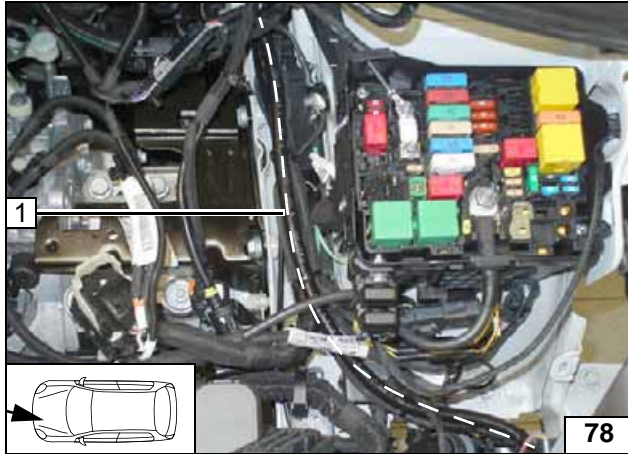
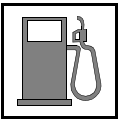


Installation overview

Dismantling metering pump connector



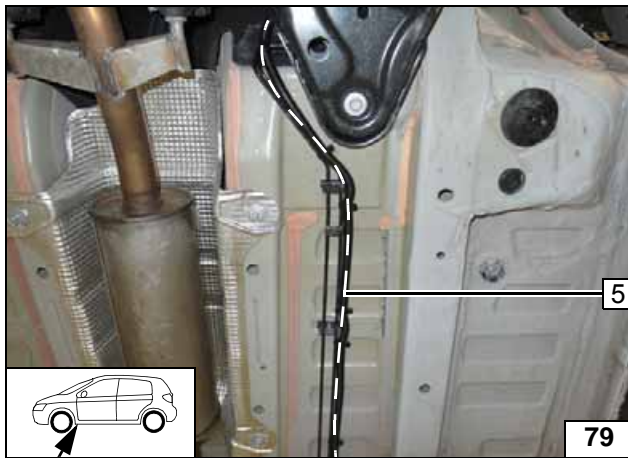
Connecting heater



Route corrugated tube 1 with fuel line and metering pump wiring harness to the bulkhead and along original vehicle brake lines to the underbody, secure using cable ties!



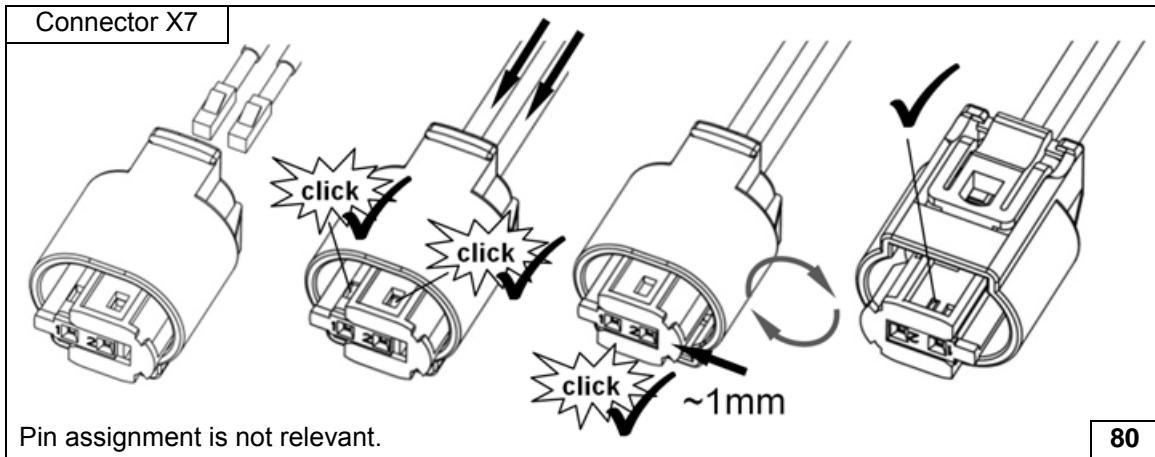
Routing lines



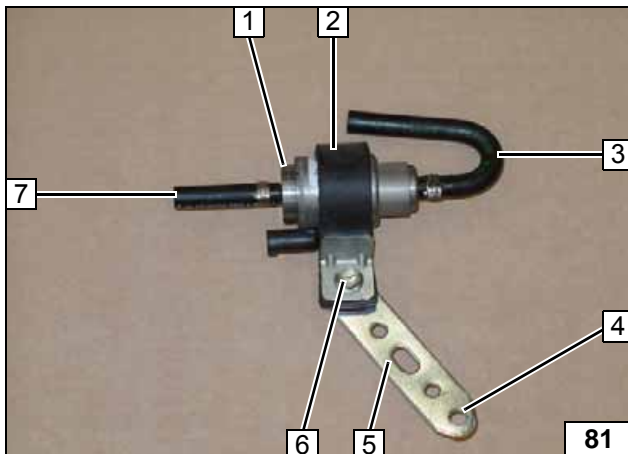
Route corrugated tube 1 with fuel line and metering pump wiring harness to the metering pump installation location and secure using cable ties!



Routing lines



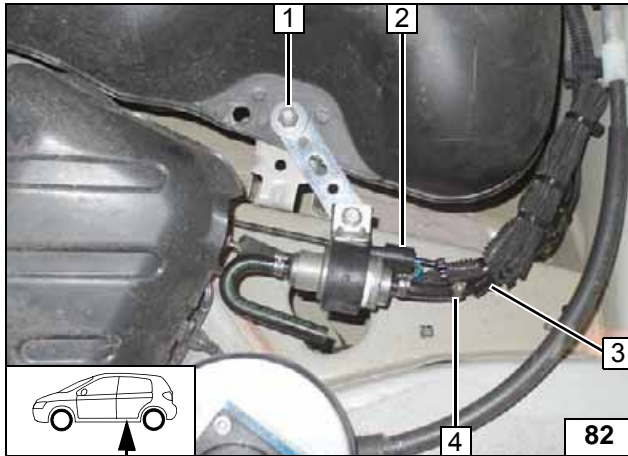
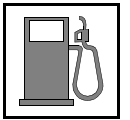
Completing metering pump connector



- 1 Metering pump
- 2 Metering pump mount
- 3 90° moulded hose, 10mm dia. clamp
- 4 Drill out hole to 8.5 mm dia.
- 5 Perforated bracket
- 6 M6x25 bolt, support angle bracket, flanged nut
- 7 Hose section, 10 mm dia. clamp

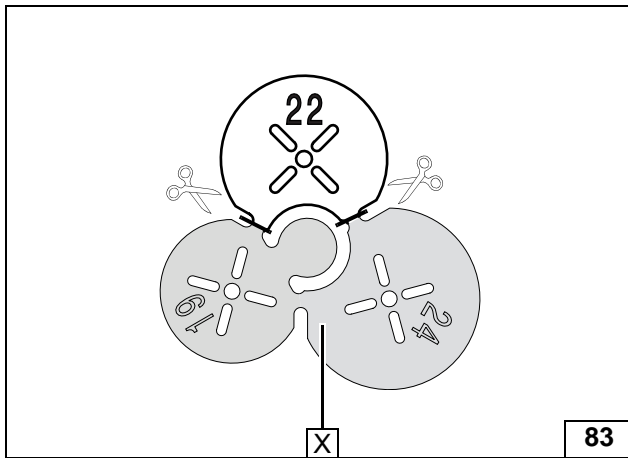


Premounting metering pump



- 1 Metering pump mount
- 2 Metering pump wiring harness, connector X7 mounted
- 3 Corrugated tube with fuel line and metering pump wiring harness
- 4 10 mm dia. clamp

Installing metering pump

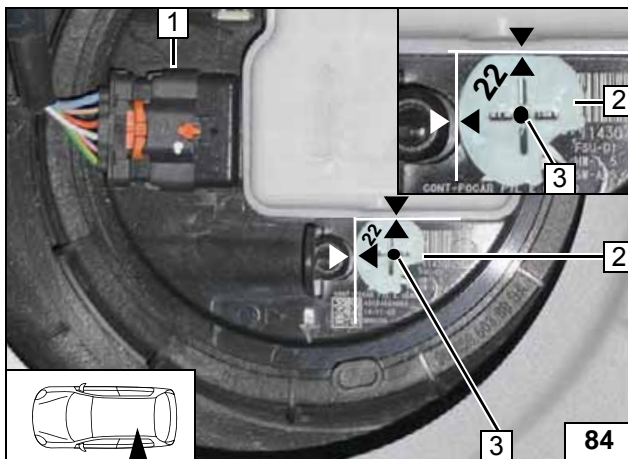


Installing FuelFix



X =

Preparing drilling template



Work steps F1 and F2.

- 1 Fuel tank sending unit
- 2 Position 22mm dia. drilling template as shown
- 3 Hole pattern

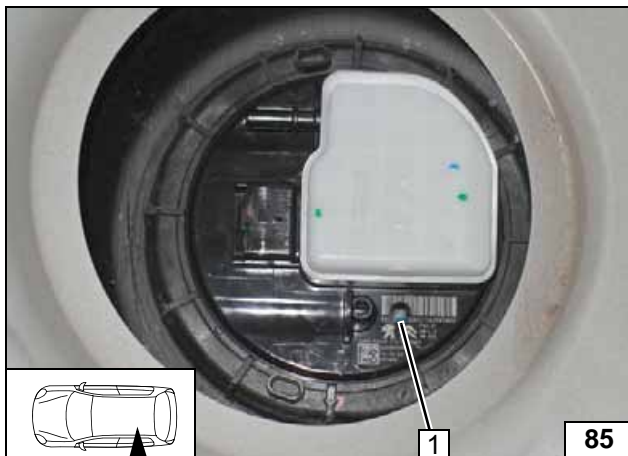


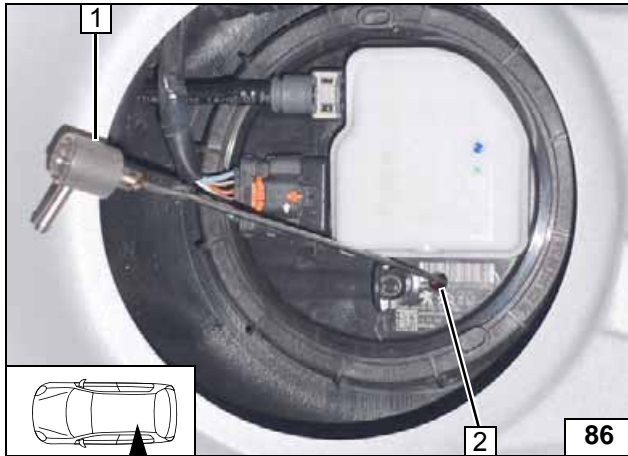
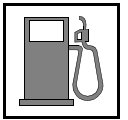
Copying hole pattern

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



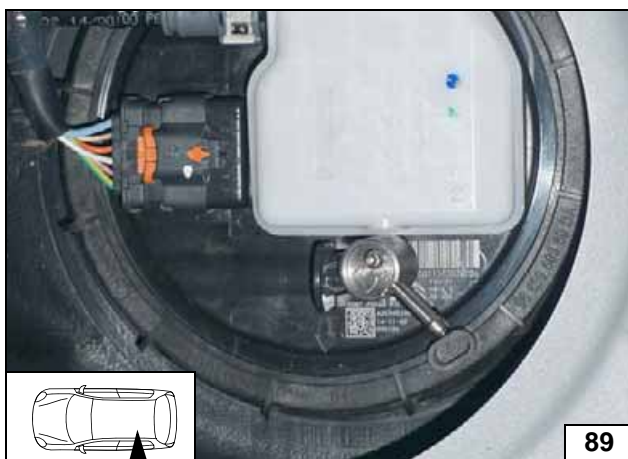
Work step F5.

Inserting FuelFix



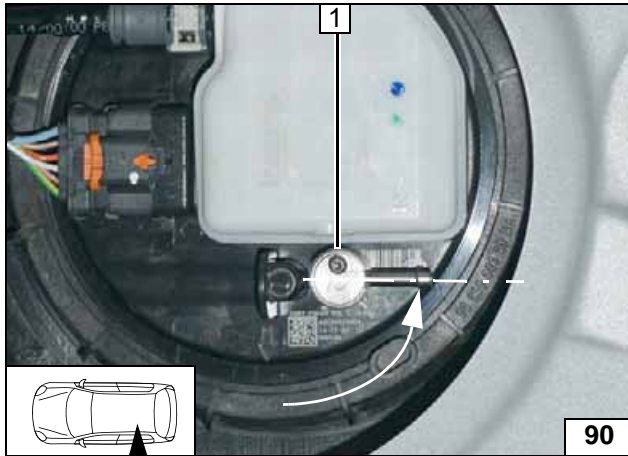
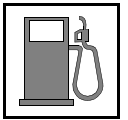
Work step F5.

Inserting FuelFix



Work step F5.

Inserting FuelFix

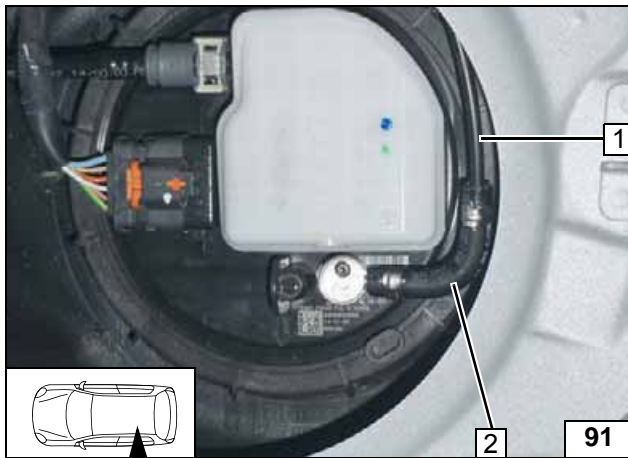


Work steps F5.3 and F5.4.

Align FuelFix 1 as shown.



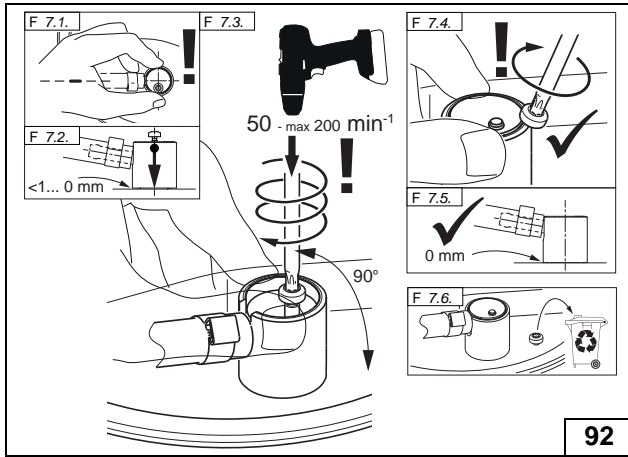
Aligning FuelFix



Work step F6.

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

**Connect-
ing fuel line**



Work step F7.

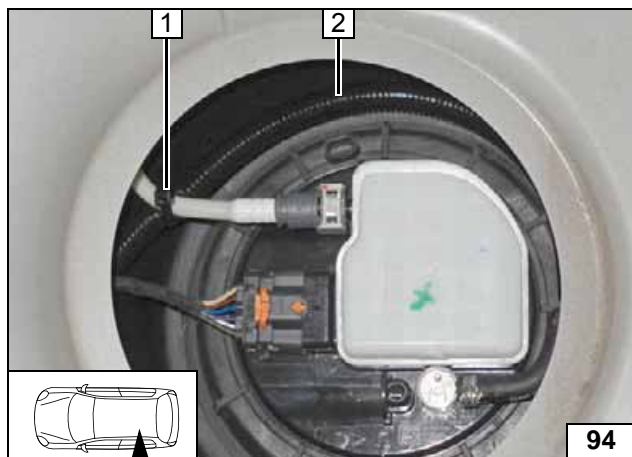
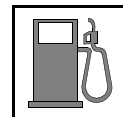


Installing FuelFix



Work step F8.

Ensuring firm seating of FuelFix

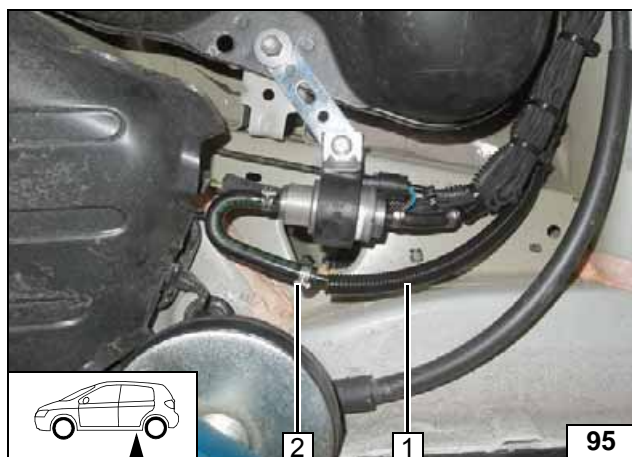


Draw fuel line of FuelFix into corrugated tube 2.

- 1 Cable tie as tension relief



Securing fuel line

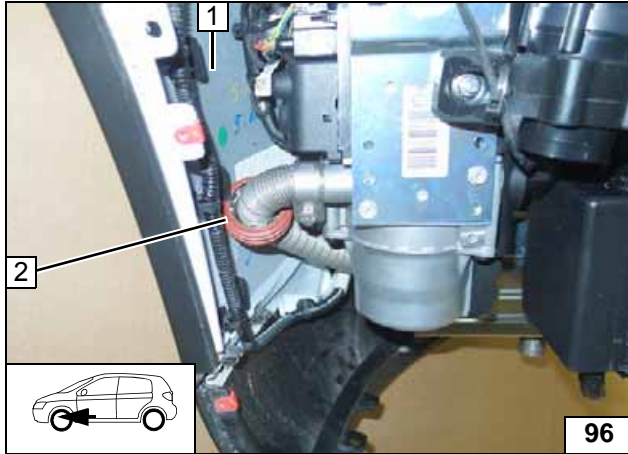
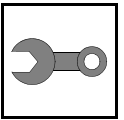


Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Fuel line in corrugated tube
- 2 10 mm dia. clamp



**Connect-
ing meter-
ing pump**



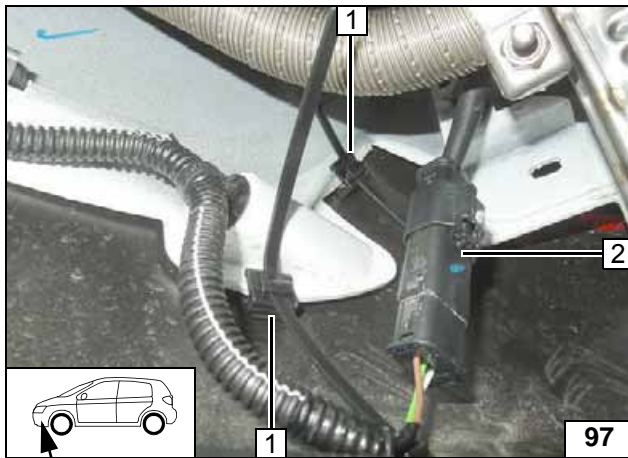
Final Work

Install bumper 1.

2 Spacer bracket



**Aligning
spacer
bracket**

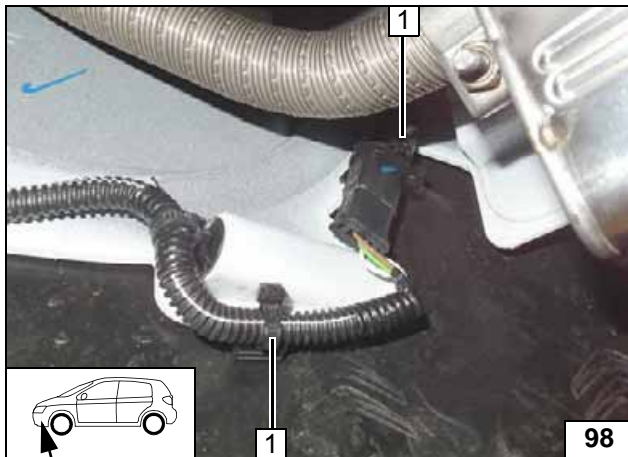


Produce connection with original vehicle connector 2.

1 Edge clip cable tie [2x]



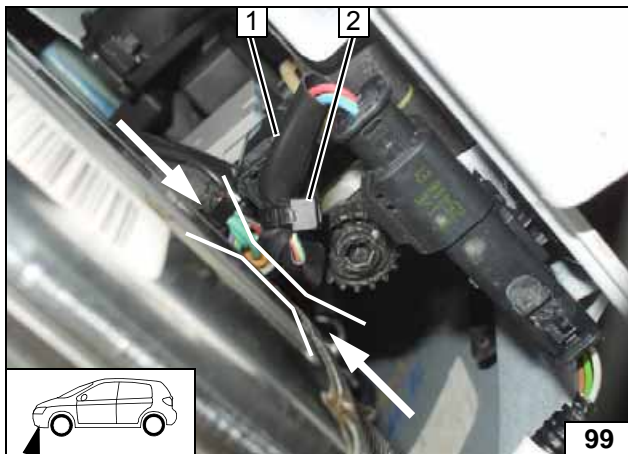
**Securing
edge clip ca-
ble tie**



Close edge clip cable tie 1 [2x].



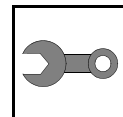
**Installing
original ve-
hicle con-
nector**



1 Original vehicle wiring harness
2 Cable tie

≥ 20 mm

**Securing
original ve-
hicle wiring
harness**

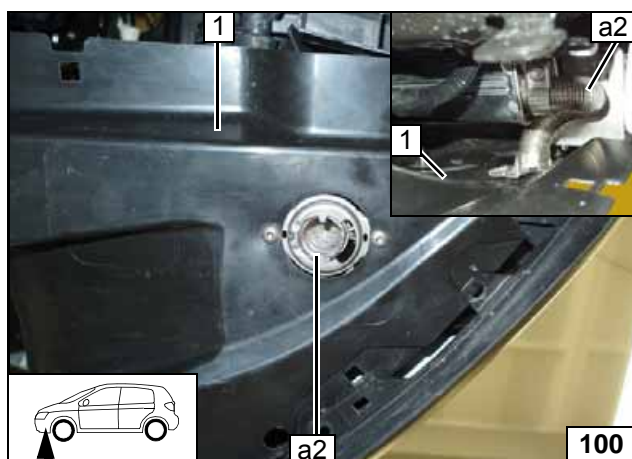


Final Work



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 the A/C control panel according to the 'operating instructions'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**

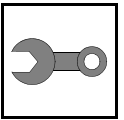


Installing wheel-well inner panel 1.

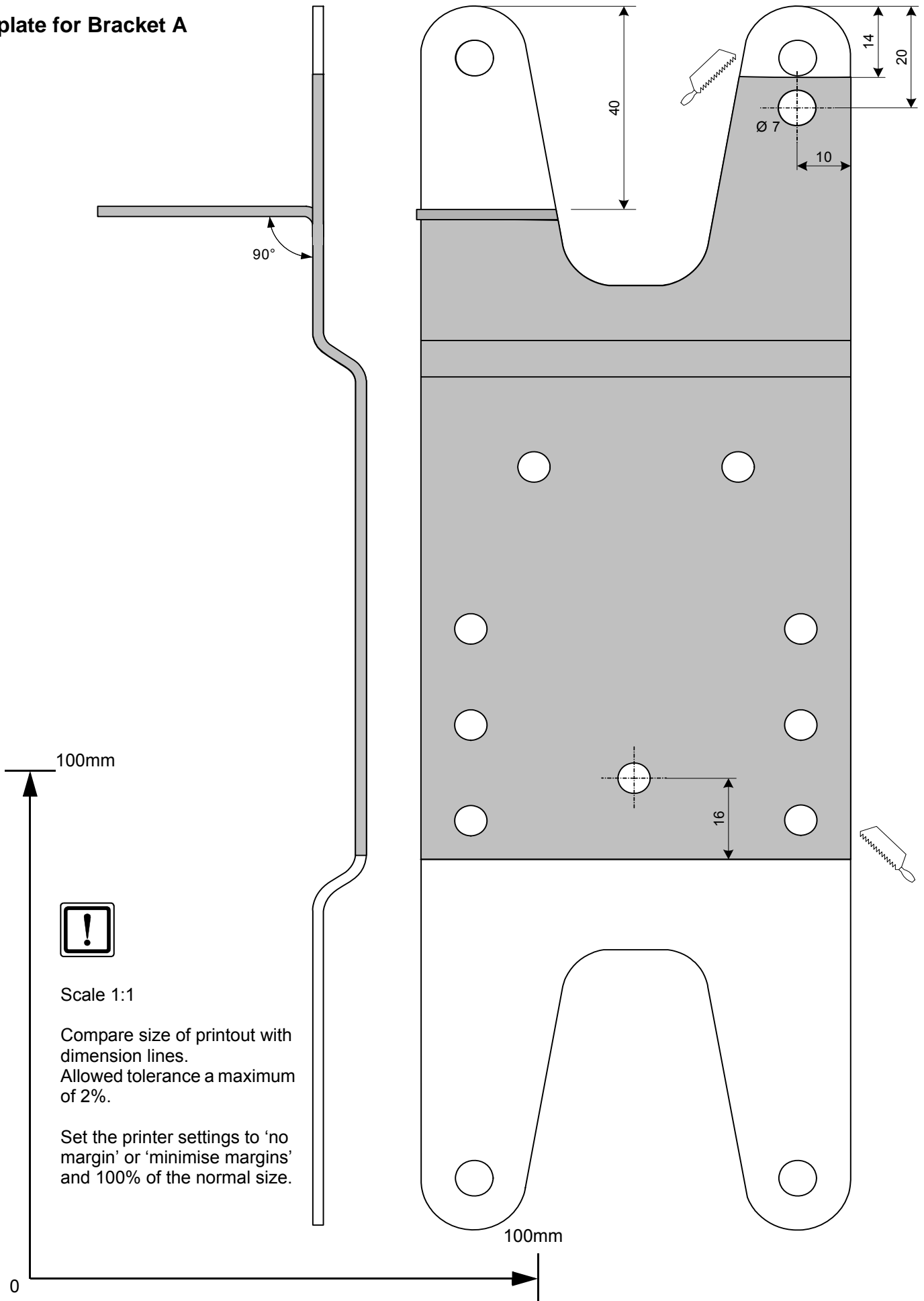
Work steps E6 - E8.

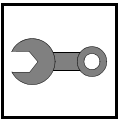


Installing
exhaust
pipe a2



Template for Bracket A





Template for Bracket B

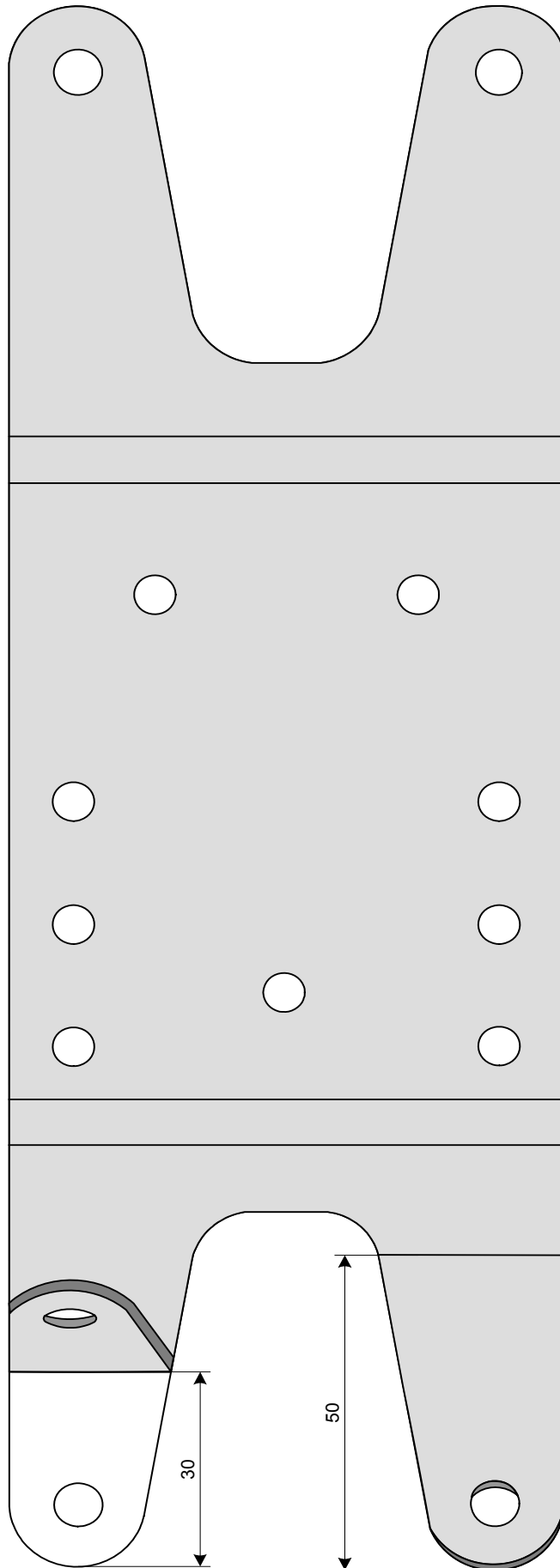
100mm



Scale 1:1

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

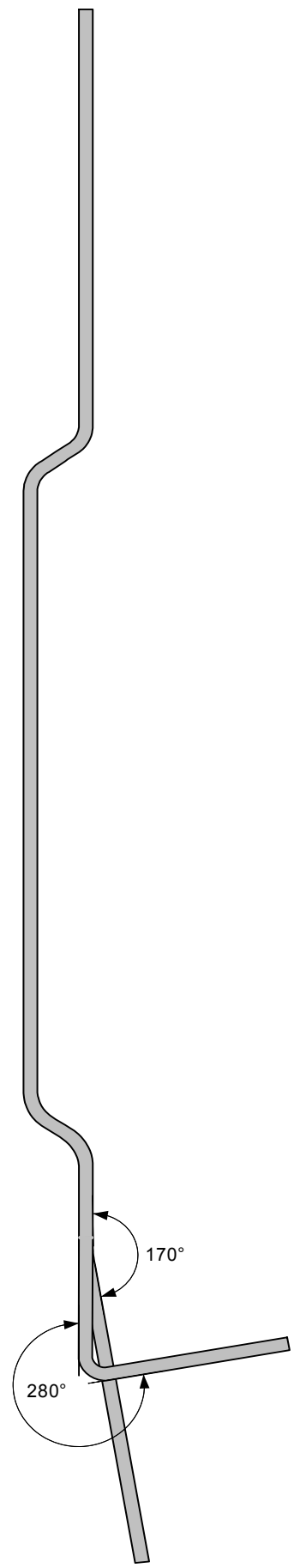
Set the printer settings to 'no margin' or 'minimise margins' and 100% of the normal size.



30

50

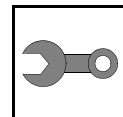
100mm



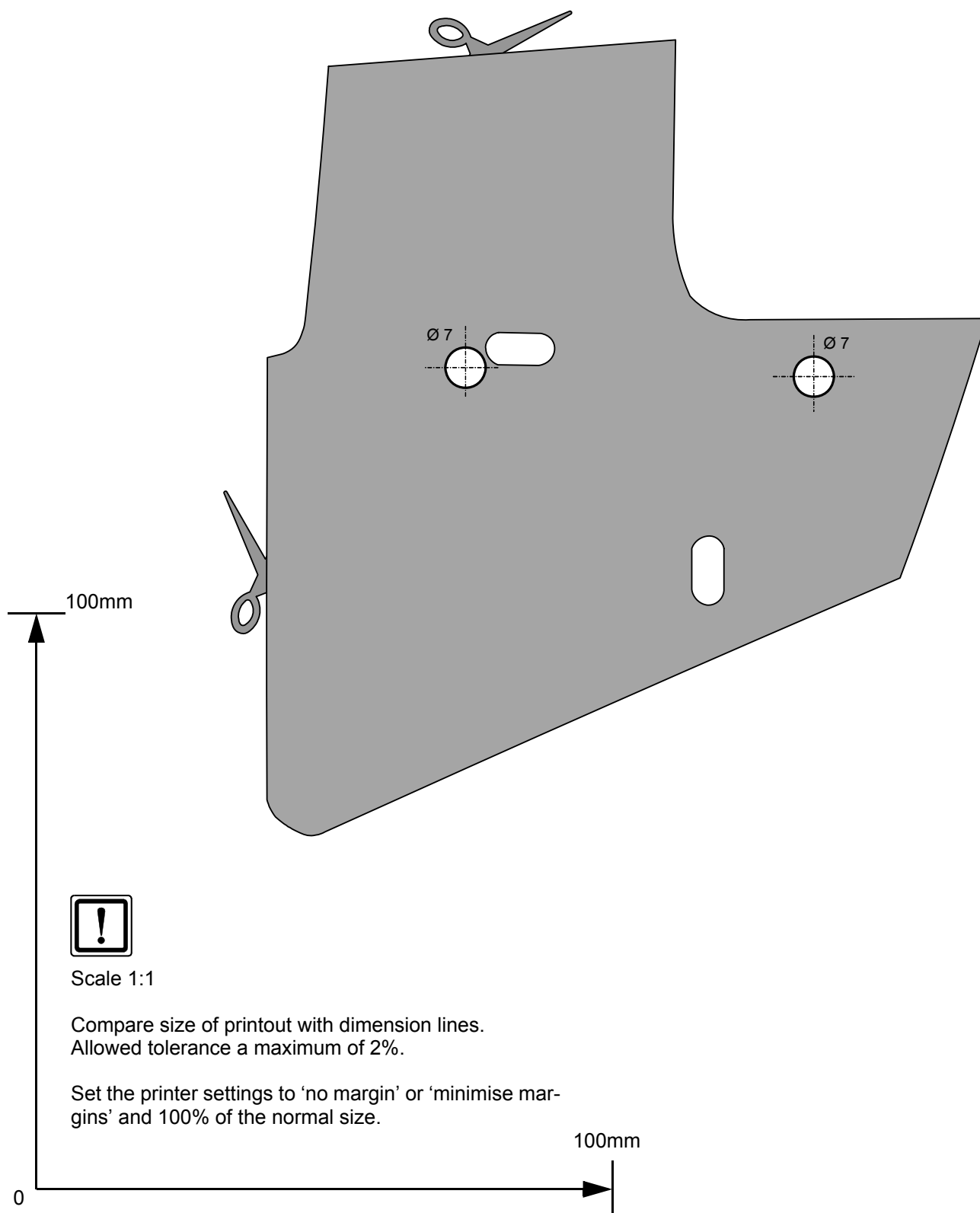
170°

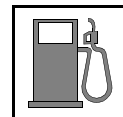
280°

0



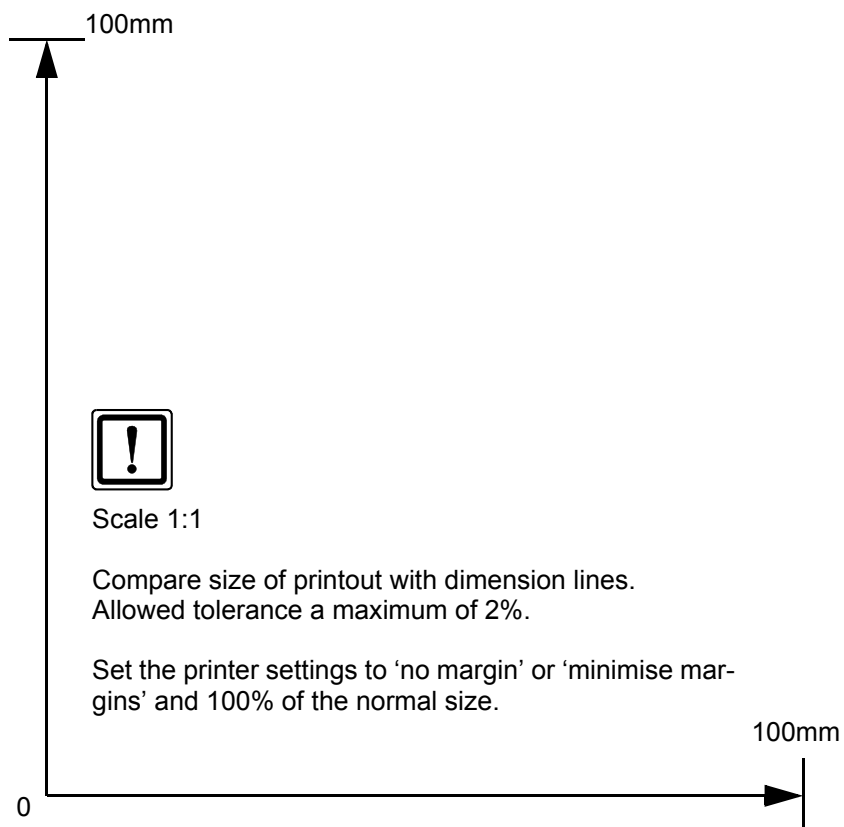
Installation Location Template





FuelFix Template

Top view



Operating Instructions for Automatic A/C

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.

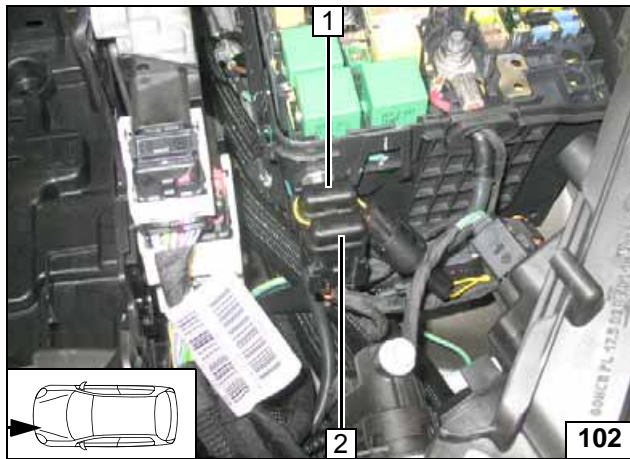
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.

For instructions on deactivation, please refer to the operating instructions of the vehicle.

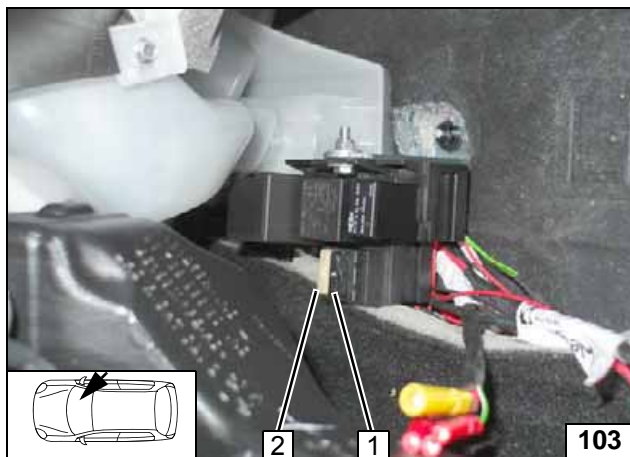
Before parking the vehicle, make the following settings:



- 1 Set temperature to 'HI'
- 2 Air outlet to windscreen



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



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



A/C control panel

Engine compartment fuses

Passenger compartment fuses